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THE WISCONSIN FARMER

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VOL. XLV. NO. 1. THURSDAY, JANUARY 6, 1916. WHOLE NO. 1771

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CURRENT EVENTS

THE British cabinet has decided on conscription as the only available means by which to get the men necessary to carry on the war against Germany and Austria. A conscription bill will be recommended by the cabinet and every effort will be made to push it through parliament at an early date. It is argued that the war will be won, in the long run, by the nation which has the best available man supply, and, while the upper and the lower classes in England are enlisting in satisfactory number, the great middle class has not rallied to the support of the government as it should. Hence the bill which, if finally passed, will take men from all walks of life for military service, single men first and the married ones later on, as they are needed. In the meantime, actual fighting in the field has been delayed somewhat by the rigors of winter, so that little progress has been made by either side. The danger of the Teutons advancing into Greek territory and attacking the allied troops at Saloniki now seems remote, as nothing of the sort has been attempted, although frequently rumored. Seventy-five thousand Serbs have been reformed at Scutari and Eloasan and in Albania and the Montenegrin army, which heretofore has been debarred geographically from taking any large part in the war, is now throwing itself energetically into the contest against the Austrians.

COMPULSORY military service in the United States, compelling every able-bodied man to bear arms, is forecasted by the recommendations of the secretary of war, who maintains that for proper "preparedness" the United States must forsake the paths of peace and follow in the footsteps of the military nations of Europe. The war department will urge upon congress the proposition that it is vital that a definite statement of military policy for the United States be put through at this session, and that machinery be created for the organization of a citizen army, volunteers to begin with, but based on universal military service. It was learned last week that the administration's continental army plan is designed to operate with either the volunteer or the universal service system. It is known that the continental army plan is regarded in its present form by its framers as a preparatory measure, paving the way to a decision by the people at large for or against universal military service. In determining his plan Secretary Garrison is known to have consulted every general officer of the active army and many officers of lower rank. The virtually unanimous opinion of the commissioned personnel of the army, as well as the civil officials of the war department, is said to be that adequate preparedness can only be secured on the basis of universal service. That the recommendations will precipitate a big fight is a foregone conclusion, as they are diametrically opposed to every American principle and precept.

SERIOUS splits in the Ford peace party abroad have jeopardized any hopes of success that may have been entertained when the expedition sailed from the United States some three weeks ago. Because of a nervous breakdown, the leader, Henry Ford, was obliged to leave the party early, returning to the United States. Hardly had he left the ship before his followers started quarreling among themselves, over the manner in which the peace overtures to the warring nations were to be made, over the question of authority and so on. One of the prominent women members, a suffrage leader, left the ship soon after Mr. Ford, issuing a public statement in which she said: "An organization was not formed until three days before the end of the voyage. To that fact I trace all misunderstandings, dissensions, mistakes in policy, inefficiency and inability to get the idea of a mediating peace congress in comprehensive shape before the public. The organization, when finally formed, was abortive. The Scandinavian public, who expected clear thinking and a definite program, were skeptical about the serious-mindedness of the delegates. At the meetings the discussions have been purely private, with the result of ill-feeling, suspicion and condemnation." The plan was unquestionably a sincere and well-meant effort on the part of Mr. Ford to get the men out of the trenches by Christmas or soon thereafter, but little or nothing has been accomplished, on the face at least. A committee of seven is to be appointed to go to The Hague later and do what it can for peace, with what results remains to be seen.

THE British press, which in the early stages of the war supported the national administration without dissension, is now engaged in paying its respects in no uncertain tones to those in authority and to alleging slowness, improvidence, indecision and bungling in some of the most important campaigns in which England has participated. The newspapers generally hold Premier Asquith responsible for the conduct of affairs, David Lloyd George being the only one universally praised and commended for promotion. The two latest counts of the indictment of the cabinet are the postponement until after the holidays of the munitions bill and the postponement of giving the country any insight into Lord Derby's report on his recruiting results. In the meantime the verdict of union labor on Mr. George's appeal to relax union rules in munitions works to permit of the entry of 80,000 unskilled laborers is awaited with interest. One hundred and fifty delegates of the Engineering Society met in London to consider terms for settling all differences with the government. There is a general feeling throughout England that too much politics is being played and that the men in power are not rising to the emergency and proving their bigness as men in such critical times and situations should.

JUST to what extent the German Humanity League represents the people and the sentiment of the kaiser's land it is impossible here and now to say. It is interesting, to say the least, to note the language of the appeal for peace issued by that organization. Here is a quotation from the document: "Our homes are being desolated in a campaign waged not in lawful defense of German territory but to satisfy the insatiable savagery and greed of Prussian conspirators. We again appeal to every wage earner not yet stirred to the heat by these awful holocausts to register a vow no longer to remain silent spectators of the stupendous crimes which have robbed us of our sons and brothers and left upon the truthful pages of history an indelible stain. Napoleon failed and the kaiser must fail. There can be no peace until he is deposed from the throne he has fouled and his fellow conspirators meet their fate at the hands of an executioner." There has been much peace talk of late, but no tangible evidences of any early cessation of the titanic struggle.

RAILROADS operating between the Mississippi and Missouri rivers and the Rocky mountains were granted increases in freight rates by the interstate commerce commission on many commodities, including agricultural implements, canned goods and boots and shoes. No estimate of the additional revenue the roads will derive from the advances is contained in the commission's report on the case, but it will mount into the hundreds of thousands annually, despite the fact that numerous increases sought were denied. The increase proposed on agricultural implements was about 2 cents per 100 pounds; on canned goods about 1 cent per 100 pounds; on flue lining about 3 cents per 100 pounds; on eggs about 3 cents per 100 pounds; on cider and vinegar from 2 to 7 cents per 100 pounds; on bauxite ore about 20 cents per gross ton; on boots and shoes, about 2½ cents per 100 pounds; on dried fruits, about 5 cents per 100 pounds; on furniture, 7 cents per 100 pounds. The transit charge allowed on fruits and vegetables amounts to 1½ cents per 100 pounds for storage in transit with a minimum charge of $5 per car.

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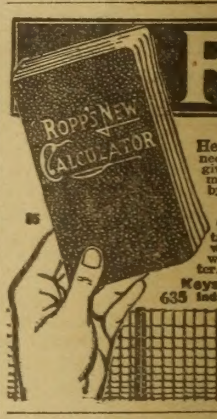

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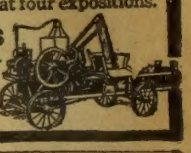

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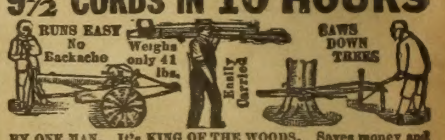

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The Wisconsin Farmer

THURSDAY, JANUARY 6, 1916.

FAMILY CIRCLE TALKS BY THE PUBLISHER

THE TAX ON GASOLINE.

IT IS quite apparent to me that our congressmen are hearing from the folks "back home," particularly the farmers. They are not nearly so anxious to raise revenue by imposing a federal tax upon gasoline and automobiles as they were a few weeks ago.

I presume some of our lawmakers had no idea the farmers of this nation would be so directly and vitally affected by the proposed taxes. They live in cities, they know little or nothing of conditions in the country. They see the famous captains of industry, the men who have grown rich behind the barrier of privilege, riding to and from their work in their fine limousines, with a liveried chauffeur at the wheel. They decided that a tax upon automobiles and gasoline would serve a double purpose; first, it would raise the necessary funds for the government; second, it would prove immensely popular with the rank and file of the people, being a slap at the rich man and his luxuries. But those congressmen who had such thoughts as these are being rudely disillusioned these days and the farmers who ride to town in motor cars and who use gasoline, by the hundreds of thousands of gallons, for automobiles and gas engines, are doing the disillusioning. They are finding out—what they should have known before—that fully 50 per cent of the automobiles manufactured today are being sold to farmers, that gasoline is a necessity on the farm fully as much as in the city, that the automobile is no longer the rich man's plaything and that the country will positively not stand for increased taxes on necessities when there are so many other and more legitimate ways of raising the necessary revenue.

I am indebted to one of the high officials of the National Automobile Chamber of Commerce for some information in regard to the automobile industry and the manner in which the proposed tax would affect the rank and file of the people, so interesting and pertinent I pass it on to you:

The general impression that profits are uniformly large in automobile manufacture is a mistake. Our investigations show that within the last four years 600 manufacturers of automobiles either went into the hands of receivers or discontinued business. There are now actually fewer manufacturers of automobiles than there were three years ago. The industry was much depressed in 1913 and 1914. The large profits of a few companies have misled the public

Another false impression in regard to the proposed tax is that the burden would fall mainly on a few states, known as heavy manufacturers of machines, and that many sections of the country would hardly feel the weight of such a law. Statistics already assembled by us show that there are automobile manufactories in thirty-four states. There are 30,000 automobile dealers and garages scattered throughout the country. The raw and fabricated materials which go into the production of the automobile come from all the states of the Union.

Another important issue is the way labor will be affected if such a law is passed. Tracing labor put into all material in the automobile back to its source, it is estimated that 90 per cent of the automobile is labor.

A federal tax on gasoline would fall directly on 2,225,000 users of automobiles in the United States. These may by no means be put in the wealthy class. The average retail price of the automobile during the last fiscal year was but a little more than $800. This shows plainly that it is no longer a rich man's toy. It is used principally by people of moderate means and is largely an actual necessity in their business. Approximately 50 per cent of last year's output was sold to farmers

I believe in luxuries bearing the burden of taxation and necessities being held exempt so long as possible. The automibile is not the luxury today that it was a half dozen years ago, neither is gasoline a commodity without which the farmer can get along and production be held up to its present standard. The farmer already pays a sufficiently high state tax on his automobile; the city man pays this state tax and often a city license or tax in addition. To impose a federal tax on top of all this is unnecessary and altogether wrong, in my opinion. If the government must raise more funds let it be on inheritances, on large incomes and by a direct tax on articles which are plainly luxuries, beyond all question. But let us leave bank checks, automobiles and gasoline alone, for there is no emergency confronting us today great enough to make it advisable, necessary or just to tax such necessities of our everyday life and work.

A FARM LOAN BILL.

AS I PREDICTED some weeks ago, congress is taking up the question of farm credits much more extensively than has ever been done before. A land loan bill, which is expected to have the approval of the administration, has been drawn up and is to be presented to the joint committee on rural credits, of the senate and the house, this week. Inasmuch as this is a very important subject and we should all keep posted I will give you the terms of the proposed bill as well as I can.

The bill would provide a farm mortgage credit system under the control and supervision of a federal land bank board of five members, to be appointed by the president with the approval of the senate. The country would be divided into twelve districts, each with a regional land bank having a capital stock of $500,000, to be issued in $10 shares for purchase by the public. Any such stock not taken within ninety days by private capital or by a local loan organization contemplated by the bill would be subscribed by the federal government.

Business would be done directly between the regional banks and the local bodies which farmers would be authorized to organize in the form of co-operative farm loan associations or joint stock banks, charters for which would be passed on by the land bank board. Application for loans approved by the local organizations of farmers would be recommended to the regional bank of the district. The banks would be authorized to loan out capital stock or to sell bonds to obtain sufficient funds to make the loans, and the farmers would be charged as interest the interest on the bonds, plus 1 per cent. In order to reduce the rate of interest on the bonds the bill will provide they must be acceptable by the banks as security for the deposit of public funds.

The borrowing associations would be divided into two classes, those organized with limited liability and those with unlimited liability. They would appraise the land on which a farmer sought to obtain money and would themselves become liable for the loan. Thus, the bonds would be backed by the regional banks, the local association, the borrowing farmer and a mortgage on the land given to the association. Out of their profits regional banks ultimately would refund to the government such money as it may have invested in the enterprise. Payment of the mortgages by borrowers would be made on the installment plan, running for a period of not exceeding thirty-six years.

I am not prepared now to say that this bill meets with my approval, for I have not had an opportunity to read the full text of the measure and to give it careful scrutiny in order to assure myself there are no jokers and that the farmer's interests are really and truly conserved. But I want you all to keep posted on this matter as congress works upon it, hence the outline which I have given above. We are all united on one thing, that is, the importance of making it easy for the farmer to obtain money necessary to enlarge his farming operations and make production larger and surer. Some of us differ on how this is to be brought about. We should all approach the subject with an open mind and be willing to learn from one another. Congress will have done us all a good turn if it adds to our knowledge on this important matter, whether it ultimately adopts such a bill as is proposed or not.

GETTING A START.

NOTHING gives me greater pleasure than to have my readers write and ask my advice on subjects which are perplexing them. I am not always able to answer their questions as fully as I should like, but I appreciate the confidence reposed in me and I invariably do my best to give advice which is sound and practical. All this entails work, but it is work into which I put my whole soul and which I like better than anything else that the day brings to me. By means of these letters from my farmer friends I keep in touch with the farming situation throughout practically the entire country. I can feel the pulse of the countryside beating through these welcome letters, which come to my desk every day in such increasing number. And what a variety of matters they cover: Practical affairs of every-day farming, heart affairs, financial affairs and so on and on. Here, for example, is one which I have just finished reading, which brings up an old problem in a new manner. Let me quote a few sentences:

I am nineteen years of age. I was born on my father's seven-acre farm. I removed with him to a sixty-acre farm at the age of eight; then, at the age of twelve, to the thirty-acre farm where we now live. My father is seventy years old and a very strong man yet. I would like to have your advice on a very important matter. Do you think I do wrong, for when my father does not need me I do outside work? Most of our land is seeded down, so I have considerable time outside. I work on the railroad three months steady; then do whatever I can on other farms or at odd jobs wherever I can get them. I saved up $162 and still have $131 in the bank. When I get more I want to buy a farm of my own, either here in the grain belt or in some new section. I don't seem to be like other boys at my age; most of them seem to find their enjoyment in town. I never lived in town nor do I care ever to do so. Town has no attraction for me. I have been to town on Saturday night but twice in the last year. I go to town to do trading and such, but that is all.

I thank my young friend for bringing this matter to my attention. His letter rings true; he seems to be possessed of those qualities which will cause him to make good in the world, for he is industrious, anxious to get ahead and apparently able to turn his back upon harmful pleasures and those things which distract the mind from necessary work. At the same time, I hope he does not forget that all work and no play makes Jack a dull boy. Youth is entitled to its harmless pleasures, its little vacation breathing spells. Perhaps it will be just as well if he associates with young people now and then, being careful, of course, to pick only the best companions. I do not believe in young folks allowing themselves to grow old before their time. An evening or an afternoon off, now and then, to attend the sessions of some neighborhood club, a farmers' institute, a short course or perhaps a picnic, is time well spent, the way most of these social affairs are managed nowadays. I am delighted at the tendency of the times in this respect and give the bulk of the credit to those who have made our farmers' neighborhood clubs so popular and practical. There is often much of positive inspiration in the coming together of people whose work and tastes are in common, for we learn by association with congenial spirits. Hence, while I am proud of the fact that my young correspondent is not wasting any time around pool halls and moving picture shows in town, I do want to caution him against holding himself too much aloof from his fellows; it can easily become a habit which he will regret later on in life. Just be careful to get in with the right sort of companions and to insist that all the amusements be harmless and uplifting if possible.

As to his doing wrong in taking outside work, when his father does not need him, I cannot see it in that light at all. I am sure his father must be proud that his son is so anxious to get ahead, so willing to do whatever the hand finds waiting to be done, whether it is plowing, feeding the stock or working as a section hand on the railroad. Of course, I am assuming that the lad does not leave home when his father needs his companionship, that he does not let his aged father stay alone and unattended. When one gets to be past seventy he craves the companionship of his children more than ever before in all his life; the boy should stay at his father's side, if there is no one else there, no matter what outside opportunities to make money are awaiting him. But if his companionship is not actually needed I am sure the father is glad to see his boy working steadily, laying his money aside and planning for the farm which will one day be his own, the fruit of his own industry.

Nothing is more pleasing to me than to see the young folks getting ahead in the world. I have a system or plan in my family by which I reward my sons for their thrift by giving them a certain amount of money when they have saved a certain amount, thus rewarding their saving instinct and making the results large enough to cause them to see that thrift is well worth while. I consider it money well invested to do this, for every dollar that I give them is matched by a dollar which they save, and makes them buckle down to work still harder, determined to make their savings grow bigger day by day.

It will not do for us men who are growing old (in years, I mean, not in spirit, for we can keep our spirit young, no matter what the years) to get the idea that prosperity depends upon us alone; the prosperity of the future will be based upon the industry, perseverance and thrift of our boys and girls, rather than upon us. Let us do what we can, while there is still time, to induce them to work hard and to garner the fruits of their labor. After all, it is not what we earn, but the way we spend our earnings and what we save which is the foundation stone of individual and national prosperity.

James M. Pierce

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THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

301 Locust Street
Des Moines, Ia.

201 Washington Bldg.
Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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A Word to the Rock County Supervisors.

IN THE judgment of The Wisconsin Farmer it is a mistake for the county board of Rock county to turn down the proposition to inaugurate the county agent system. The business men of Janesville and Beloit are interested to the extent of putting up their share of the money to meet the requirements of the Smith-Lever bill. It remains for the board to say that the county will stand its share. As we understand it the only objection to the county agent is expense. There may be a few who have a prejudice against the system proposed, but there is probably not a single farmer in Rock county who believes that he will be injured in any way by a county agricultural adviser. Taxes are high in Wisconsin and farmers, at least some of them, fail to see that the advantages of a county agent will more than overbalance the expense. With their eyes almost shut to the real service which is proposed to be given, they shy from the county agent on the one sticking point that it will mean increased taxes.

The increased tax in Rock county per farm has been very carefully figured out and it will not run more than 15 cents a year to the farm. Now if the county agent doesn't do anything more than get some good literature for the boys and girls in the next year he has earned this 15 cents, which is only the price of a half dozen eggs or a half pound of butter. If the county agent would sit in his office most of the time and simply look after the details of distributing literature and information collected by the federal department of agriculture an the Wisconsin Department of Agriculture, he would be worth more than 16 cents a year per farm.

Supposing the soil is yielding less than it did in former years? Isn't it worth while to have a man near at hand who will examine it and tell you the remedy? The farmer must not think that the county agent simply comes to dispense his own ideas alone. He may not know as much as the average farmer—in many cases he does not, but he has at his command all the scientific knowledge which it has cost this government fifty years of hard study and $250,000,000 of hard cash to collect. Part of the tax money which our Wisconsin farmers are paying goes toward piling up information at Madison, both in the college of agriculture, and under the state department of agriculture. Isn't it worth 15 cents per year per farm to help carry this information back to Rock county? The county agent is simply a student, with the benefit of a great deal of study by others back of him, [illegible] and a dispenser of the same. As such he is worth a good deal more than 15 cents per year per farm in Rock county, if he is any kind of a man at all.

Treating the Wrong Patient.

THE objections which we have previously urged against the recent decisions of the Interstate Commerce Commission permitting increases in passenger and freight rates, because there never was a time when the railroads needed such help less than right now, is borne out by information from a most reliable source.

A careful estimate just made by the trustworthy Bureau of Railway News and Statistics shows that in the year just closed the revenues of American railways increased $101,528,294, while at the same time their operating expenses decreased $69,347,883, making a total increase in net income of $170,876,177 for the year 1915.

In 1914 the railroads paid out a little over $450,000,000 in dividends, which was an average of 8 per cent on their combined capitalizations, including an immense amount of watered securities. It would seem to the man on the farm as though 8 per cent might be considered quite a satisfactory return on such an investment. But in addition to that the railroads now show an increase in net income of $170,876,177 during 1915 as noted above, which is over 35 per cent of their total dividends of 1914.

This increase, which has come largely from greater volume of business and economy in operation, is most commendable and is regarded with approval by the general public. It is also pleasant to note the certainty that even greater rewards are in store for the railroads in the coming year owing to increased traffic, as indicated by the wonderful business revival the country over in the past few months and the resulting increase of freight business which the railroads are utterly unable to handle because of its magnitude. It is also probable that much greater good may be accomplished by more efficient management, and that, having made a saving of nearly $70,000,000 by this means in the year just closed, the railroad companies will not neglect to go further along this line so as to effect even greater savings in 1916 without deteriorating the quality of their service to the public. All these signs of increasing railroad prosperity we regard not only with equanimity, but with pleasure, as healthful and favorable symptoms of general business soundness.

It is only when the Interstate Commerce Commission, under these conditions, grants the railroads an increase in passenger rates that will add 25 per cent to their net earnings in 1916 and an increase in their freight rates that will form another appreciable increase in their profits, that we raise our voice in vigorous protest on behalf of the farmers of the middle West, out of whose pockets these greatly increased earnings must come in the end, since they are the greatest producer of real wealth in the country. It is high time that the commission were informing itself regarding the dividends which these great wealth producers are earning. When it does so it will find that grain-belt farmers are not earning anywhere near so high a rate of interest on their investments as that which the railroad companies will pay this year.

It is the shipping and traveling public which most needs the commission's help at this time—not the railroads. The doctor is skillful enough and has the right medicine in his case, but he is treating a patient who has long since recovered, while another is fast growing weaker for lack of his attention.

Wisconsin Law on Sheep-Killing Dogs.

IN THE past the sheep raiser has had no legal protection whatever against the dogs which were allowed to run at large about the country. It is practically impossible to locate the owner of a sheep-killing dog or at best to collect damages from him. Until 1915 it has seemed impossible to get any sort of a law on the statute books which would effectively control the movements of stray dogs.

At the last session of the legislature the Wisconsin Sheep Breeders' Association strongly urged the passage of an adequate dog law and the movement was supported by stockmen from all parts of the state. The result was that an old statute of little or no value was amended so as to provide:

That any person may pursue and kill upon the premises of the owner or keeper or elsewhere any dog found killing, wounding or worrying any horse, cattle beast, sheep, lamb or other domestic animal.

That when a dog has been known to kill, wound or worry any farm animal and its owner permits it, negligently or otherwise, to leave his premises, he can be punished by a fine of not less than $10 nor more than $25 in addition to being liable for damages.

That, any owner or keeper of any dog who has been informed, verbally or in writing, that such dog has killed, wounded or worried any farm animal, shall, in addition to being liable under the law for damages, be punished by a fine of not less than $25 nor more than $50. In case any one of these fines is not paid the owner shall be committed to the county jail until it is paid, but not to exceed twenty days.

Realizing that the state offers great opportunities for sheep raising, the Wisconsin Live Stock Breeders' Association has been doing much to encourage the industry. Last summer the experienced shepherd who accompanied the "More and Better Live Stock Special" was able to assure farmers who desired to go into the sheep business that they would have protection from dogs, and reports, particularly those from Upper Wisconsin, indicate that sheep raising is becoming an important activity.

Prominent Badgers Farm Bred.

"IT IS the country boy who becomes the brilliant man in nine cases out of ten, because he comes to the city expecting to work and have a hard time. He takes a small room; he spends no money on pleasures; he goes to bed early. He concentrates—and concentration is the greatest virtue. That is what makes for success, not genius, for genius without application soon goes to seed." Thus recently declared a leading religious leader. In Wisconsin the truth of this assertion is found on every hand, as in all walks of life the leaders are frequently men and women who were born and raised in country communities.

Many of the statesmen, educators, leading business and professional men of Wisconsin were farm bred. A brief list of a few of the many noted Wisconsin residents who came originally from small towns or who were born on farms follows:

Congressmen Henry A. Cooper, Irvine L. Lenroot, James A. Frear, Thomas F. Konop, Michael K. Reilly, John J. Esch, John M. Nelson, Senator Robert M. LaFollette, Gov. Emanuel L. Philipp, Ex-Gov. Francis E. McGovern, Hon. W. D. Hoard, Fort Atkinson; Dr. S. M. Babcock; Dr. Charles R. Van Rise; John R. Commons, Richard T. Ely, Edward A. Ross, H. L. Russell, University of Wisconsin; Dr. Samuel Plantz, Lawrence University; Edward D. Eaton, Beloit College; Hamlin Garland, author, West Salem; Zona Gale, authoress, Portage; and Eben E. Rexford, author of "Silver Threads Among the Gold," Shiocton.

Wisconsin Man Is President.

F. M. WHITE, of the agricultural engineering divisions, University of Wisconsin, was chosen president of the American Society of Agricultural Engineers at the annual meeting of the society held last week in Chicago. Mr. White had previously been secretary and treasurer, and this work now falls upon C. K. Shedd, assistant professor in agricultural engineering at Iowa State College, Ames, Iowa.

Other officers for the year are: Spencer Otis, Barrington, Ill., first vice president; M. M. Baker, Peoria, Ill., manager of the Holt Manufacturing Company, second vice president; F. S. Harris, director of agricultural engineering, state agricultural college, Logan, Utah, and William Louden, Fairfield, Iowa, councilmen.

The meeting just held was the twelfth annual session of the association, which was organized at Madison, Wisconsin, with the object of promoting the art and science of engineering as applied to farming.

Ensilage Not Injurious to Teeth.

TALES have been told and retold regarding the bad effect of feeding ensilage on the health of farm animals. Two decades ago the idea prevailed in many quarters that ensilage impaired the breeding qualities of animals, while it was a common notion that the feeding of ensilage injured the teeth, thereby shortening the lives of animals. The silo has practically lived down all such evil reputations and it is rarely that we find a case reported where good ensilage has in any way injured any animal.

In the following communication an Illinois subscriber gives a somewhat detailed though brief description of the character of cattle teeth, and points out that ignorance in regard to the real nature of teeth has sometimes led to a false acceptation as to the injurious effect of certain kinds of food, particularly ensilage. He writes:

On general principles the teeth of young cattle always should be examined when an animal fails to thrive as it should. I used to know an old gentleman who made the rounds of the community once a year and examined the mouth of all young cattle. His job was to remove milk-tooth crowns, which often lodge on top of incoming permanent molars and make the chewing of feed painful and imperfect. For all animals thus treated he received 25 cents each. This may be novel reading to some, but it is well worth remembering and acting upon.

The teeth of all adult cattle are loose. They have to be loose—shovel-shaped, and set in at an angle, else they would lacerate the cartilaginous pad, which takes the place of upper incisor teeth in cattle. Once a farmer told me that he had suddenly discovered that the teeth of his sick cow were loose, and he suspected mercurial poisoning. This looseness also has given rise in part to the false accusation that silage loosens the teeth and causes them to drop out. Such is not the case. This is proved by the success of thousands of dairymen in the feeding of corn silage. In fact, the silo is now a necessity on every dairy farm.

Incisor teeth of full grown cattle have narrow or small necks and wide, flat crowns. They gradually wear down as the animal ages, and when a cow is well past twelve years of age examination will show that she is chewing with the small collar-stud-like necks of her teeth. Jaws with such vestiges of incisor teeth may be found at almost any slaughterhouse where old canner cows are made into the "sinews of war." Such cows, no longer fit for dairying, or having gone wrong in their udder, commonly are sold to the butcher or fattened for sale. [illegible] that makes them fail to chew well. The molars or grinding teeth are irregular in shape, and need attention. Sharp points should be cut off and the teeth worn down, then the old cow may take a new lease on life.

Instances have been called to our attention where the cutting of corn in too short lengths has resulted in sore gums, because in that case the fiber of the corn frequently inserted inself between the molars. Animals in such a case could not avoid chewing, as it were, against the grain of the fiber, but that difficulty has been obviated by cutting the corn into sufficient lengths so that it could be masticated without wedging itself in between the teeth, thereby irritating the gums and causing soreness.

Unquestionably too little attention is paid to the molars of cattle. Just as soon as a horse gets out of condition the owner looks for trouble in the mouth, but in the case of cattle a condition of unthrift that persists for a few weeks sinply results in the animal being marketed for what it is worth. Of course, it is the work of an expert to undertake a task of this kind, though it is altogether likely that the benefit that would be derived from the proper care of the teeth would much more than pay for the services of such an individual.

PULL TOGETHER FOR PROFITS.

When Business Men of Columbus, Columbia County, Saw Dairy Dividends Diminishing They Supplied the Co-operation Which Is Making Dairying in That Section More Profitable.

GUERNSEY HERD OF DR. L. A. WRIGHT COLUMBIA COUNTY.

THAT concerted, co-operative effort will do in any community toward improving general agricultural conditions is being splendidly exemplified in eastern Columbia and western Dodge counties, a district of which Columbus is the hub. Here the farmers who a few years ago were going out of the dairy business rather than into it when it appeared the salvation of the situation are building up their herds to higher stages of efficiency; are making more money from their farms and are building better homes; improving their barns, etc.

Three years ago the business men dependent upon this section for its farmer trade began to realize that farming conditions were not as they should be; that grain production had fallen and that farmers were no longer receiving thousands of dollars every fall from this source; that neither the dairy or meat cattle industry had been developed to replace the loss in income from the sale of grain. Investigation at the creameries revealed that cream checks were not so alluring as they were two decades ago, indicating that the farmers were getting away from dairying rather than into dairying. Occasionally a creamery had failed and perhaps left an unpaid note and no funds in the banks to meet outstanding checks. Many farmers were gradually reducing their dairy herds because they thought dairying unprofitable, and this in spite of the fact that the Columbus section adjoined that part of southern Wisconsin which is growing rich from dairy farmng.

The more the business men looked into the situation the worse they found it.

Columbia and Dodge county, these Columbus men knew, were as fertile as any spot in Wisconsin. Farming could be made to pay better with the introduction of new and modern methods: better dairy cows and organization. The farmers knew it too, so the Columbus Dairy Improvement Association came into existence three years ago.

Much of the credit as the "man behind the gun" goes to Mr. J. R. Wheeler, vice president and cashier of the Farmers & Merchants' Union Bank of Columbus. Mr. Wheeler, before anyone else, saw the condition confronting the business interests of that community. Mr. Wheeler, as a banker, in intimate touch with the farming, creamery and mercantile interests, had been watching and studying the situation for many years. He had visited other sections of the state, making some interesting comparisons and concluding that dairying was the salvation of the situation he began to enlist the aid of farmers and business men whose effort resulted in the organization of the organization of the Columbus Association. Mr. Wheeler called together the Columbus Business Men's Association and outlined a plan, pointing out the need of improving the soil and conserving fertility. He emphasized the importance of better bred cattle and necessity of testing and weighing the milk and feed in order that unprofitable cows would be cleaned and dairy farming placed on a profitable basis. He pointed out the value to the creamery man of the increased quantity of milk that would be delivered showing that the increase in volume could be taken care of without any increase in over-head expense in operating the creamery and with the profits increased the creamery man could afford to pay the farmers more for their milk, thus increasing the farmer's profits. And finally, he urged the merchants to consider the change in their situation when the farmers began to receive a steady monthly income from the sale of large quantities of milk.

The business men gladly set aside $300 for prizes to encourage the farmers to join the dairy association it was planned to form. Meetings were called at several near-by creameries and one at the City Hall in Columbus where large numbers of farmers congregated and were addressed by experts in dairying and live stock farming, and the plan was unfolded. The result was that on September 1, 1913, the Columbus Dairy Improvement Association sprang into existence. Then followed the formation of a cow-testing association.

One of the first works of the association was to hold a dairy development contest for which the Columbus Advancement Association had set aside $300. The results of this contest were startling, to say the least, as it developed that practically every herd had some cows of splendid productive ability and every herd had some that were not of the best. Some cows that were thought to be the best proved the poorest, and some thought to be "boarders" proved the best. Three cows were sold the first year by one member for $30 apiece more than the owner would have asked if he had not had their records. One member bought three cows that produced more than the seven he sold, and in a number of cases improved feeding methods were introduced with splendid results.

Already the association has practically eliminated all except pure-bred registered bulls and has induced the purchase of pure-bred Holstein, Guernsey and Jersey females in limited numbers with the certainty of having a large number of pure-bred herds eventually owned and managed by farmers who appreciate the value of breeding and of testing and measuring a cow's production. The greatest result probably has been in perfecting an organization of men who are interested in the same thing, the building of a big, profitable dairy and cattle industry. The energy and ability of the members will determine the success of the industry and with the improvement made in three years it is hoped to see Columbus the center of the greatest dairy center in the country.

The contest was not continued the second year as it served its purpose in awakening the interest of the farmers. Some members dropped out the first year, but their places were soon filled. The dues to the improvement association are 50 cents a year, while the cow testing is done on the $1.25 plan per cow, which is in vogue throughout the state. The association is now planning to hold an annual cattle sale at Columbus. Both pure breds and grades will be offered at the sale, and this will tend to increase more interest in better dairying and the value of good cows.

One of the master strokes of the association and Mr. Wheeler was an automobile tour of twenty-two farmers to some of the crack farms in Wauwesha, Walworth and Jefferson counties. Here they saw good blood everywhere; finely equipped barns; well paying farms, etc., and they returned home with new inspirations and ideals. Another tour was planned for last fall and some time ago when one of the farmers who made the trip met Mr. Wheeler on the bank steps, Mr. Wheeler asked:

"Going to make the trip with us again this year, aren't you?"

"No, I don't believe I can afford it," he replied. "That trip last year cost me over $300."

Mr. Wheeler, surprised, as the cost was less than $2 a day, inquired why the cost was so great, and the farmer replied that when he got home he had to make his barn over and that he wasn't satisfied any more with old conditions.

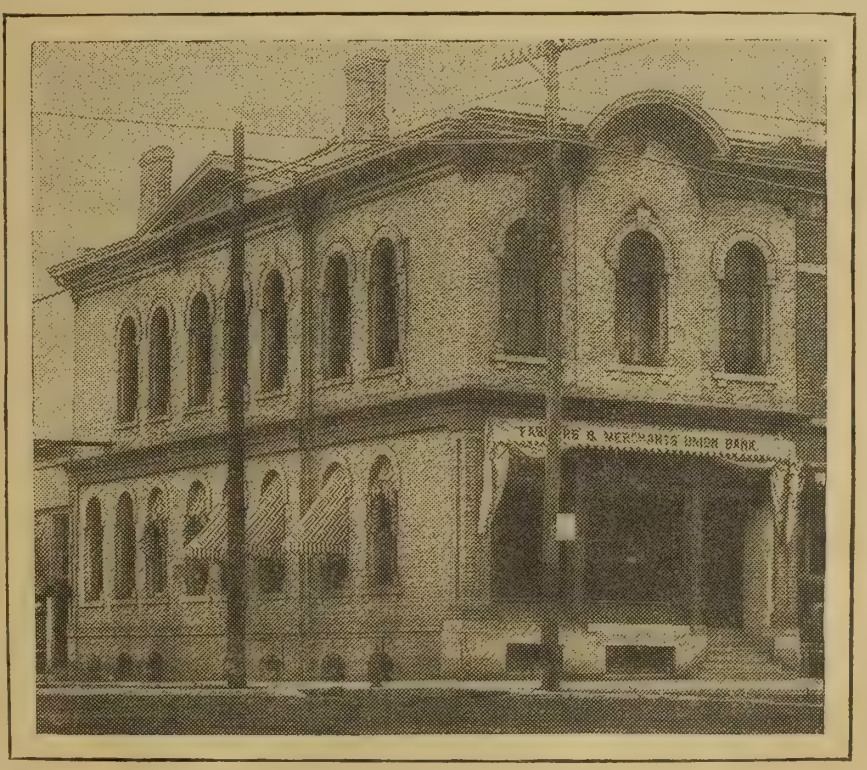
Creamery men in that community report much better conditions; cream checks are getting bigger and the farmers who are getting good blood into their herds are appreciating the profit on sales of young stock, etc. This report on the results of the contest shows the difference between the best and poorest herd of ten cows in the association:

The best herd made a net profit of	$604.23
The best cow in this herd made	94.08
The poorest cow in this herd made	17.25
If all were as good as the best, total profit would have been..	940.80
The poorest herd among the prize winners made	279.28
The best cow in the herd made.	61.41
The poorest cow in the herd lost	8.65
If all were as good as the best, profits would have been.....	614.10

The present officers of the Dairy Improvement Association are: President, G. H. Weber, Hubbleton; vice president, John Swarthout, Fall River; secretary and treasurer, Ralph Webster, Columbus. Directors: John Sennhenn, Columbus; Harvey Huggett, Fall River; W. J. Klug, Columbus; Henry Westphal, Columbus.

Relph Webster is also secretary of the Columbus Cow-Testing Association.

MR. J. R. WHEELER, COLUMBUS.



FARMERS AND MERCHANTS UNION BANK.
Where plans were laid for building up a great cattle industry in vicinity of Columbus, Wis.

FARM HOME OF MR. JOHN J. SWARTHOUT, FALL RIVER, WIS.
Mr. Swarthout is a Holstein breeder and vice president of the Columbus Dairy Improvement Association.

In and Around Wisconsin

Many Community Breeders' Meetings Will Be Held This Month Followed by State Gatherings at Madison in February.

Tobacco buyers who are now riding the tobacco country report that the acreage in Wisconsin next year will be large despite the fact that the crop was poor this year and the prices a trifle off. The farmers figure that the short crop this year with improved business conditions everywhere is bound to raise the prices next year, and for that reason there will be money in tobacco in 1916.

Reports from the sugar beet factories which operated in Wisconsin this year indicated a big year for the farmers who grew this crop. The factory at Menominee, Mich., paid out $485,000 to farmers in that vicinity, many of whom lived in Marinette county, Wisconsin. This company contracted for 9,000 acres and 7,200 acres were actually grown. Similar encouraging reports come from the factories in this state.

The recent report of John S. Klinka, county agricultural representative of Polk county, shows the value of such work to the farmers of that county during the past year. This was the first year of agricultural work and Mr. Klinka carried on many experiments and aided the farmers in numerous ways. Nine preliminary surveys of marshes were made during the year; eighteen herds were tested for tuberculosis; two short courses were held; eight herds consisting of ninety-five head were vaccinated for blackleg; seventeen farmers were assisted in spraying their potato fields; five experimental plots were conducted; milk testing was inaugurated in the graded schools with the co-operation of the county superintendent and a ten weeks' course in agriculture in the training school was conducted in addition to the numerous calls which were answered and conferences and meetings held.

Wisconsin winners in Golden Glow corn at the corn show in St. Paul were announced as follows:

District No. 1—1st S. S. Foster, New Richmond; 2d R. H. Brunner, Hudson; 3d Roy McDonald, Dunn; 4th Tom McDonald, Dunn.

District No. 2—1st S. P. Markle, La Crosse; 2d Fred Smith, River Falls; 3d J. Van Loone, Shelby; 4th William Willinger, Galesville.

The Sauk Prairie Farmer's Club, Sauk county, held its annual meeting recently and elected officers for the coming year. J. H. Hill was chosen president; S. Premo, vice president; Mrs. R. C. Kindschi, secretary, and W. Welch, treasurer. The year closed with ninety-four names on the membership roll, and the officers expect this to be increased to more than 100 this year.

The annual meeting of the Wisconsin Live Stock Breeders' Association will be held at Madison on February 10th in connection with Farm and Home week at the college of agriculture. During this week, on February 9th, the meetings of the Western Guernsey Breeders' Association; the Wisconsin Jersey Breeders' Association and the Wisconsin Holstein Breeders' Association will also be held at Madison.

Dunn county farms which have been registered recently are the following:

Hazel Hurst Stock Farm, Frank Stewart, Menomonie.
Grassland Farm, Paul C. Wilson, Red Cedar.
Bubbling Spring Farm, T. B. Wilson, secretary, Lucas.
Highland Farm, Alfred Thomas, Menomonie.
Clover Leaf Guernsey Farm, Henry Miller, Weston.
Valley View Farm, Paul C. Wilson, Lucas.
Fair View Farm, John McGiltor, Tainter.
Hampshire Park Farm, C. V. Goff, Tiffany.
Willow Brook Farm, S. W. Cronk, Dunn.
Lake View Farm, M. F. Stevens, Dunn.
Oakwood Farm, Ole Clementson, Red Cedar.
Oak Grove Farm, L. G. Stevens, Dunn.
Woodland Farm, George Chrislow, Spring Brook.
Fern Hill Guernsey Farm, John Cramer, Red Cedar.

Waukesha county Guernsey breeders, members of the Waukesha county Guernsey Breeders' Association, will gather at the Resthaven hotel, Waukesha, on Thursday, January 27th for their annual winter meeting. The officers are making plans to take care of about 200 Guernsey enthusiasts at the banquet which will be held at noon, preceded by a business session in the forenoon and followed by a program in the afternoon. The program speakers have not been announced, but among the guests and speakers will be Gov. E. L. Philipp, who had planned to attend last winter, but was prevented by official business. All breeders, whether interested entirely in the Guernsey breed or not, are invited to attend and a big time awaits those who can attend. The business men of the county have also been invited to be present.

The annual winter meeting of the Waukesha County Holstein-Friesian Breeders' Association will be held Tuesday, January 11th, at the Resthaven Hotel, Waukesha, and all members and breeders are urged to be present. The business meeting will start at 10 a. m.; followed by a banquet at noon and a program in the afternoon. Prof. E. B. Hart, of Madison, will be one of the principal speakers and has been assigned the subject, "The Specific Effects of Feed in Animal Nutrition." Mr. W. L. Baird, secretary, in writing The Wisconsin Farmer concerning the plans for the coming meeting, says that activity in Holsteins has been particularly marked throughout the county the past year. He says Holstein breeders frequently are criticised for not paying sufficient attention to yearly records, but the report from R. T. Harris shows that within the county (and Waukesha county is noted for several dairy breeds) that out of 203 yearly records made 121 or 60 per cent were made on Holsteins. Fifteen per cent of all the official testing in the state was done in Waukesha county. Membership to the association has increased 25 per cent within the past year.

A very successful grain and corn show was held recently at Knapp, Dunn county. Some splendid grains were on exhibit and the sweepstakes prize was awarded to Will Hart, of Boyceville, and the silver loving cup to Ole Alderson, of Downing. The following awards were announced:

Yellow Dent Corn—1st Roy McDonald, Menomonie, R. R. 5; 2d Elmer Kopp, Caryville; 3d Fred Price, Boyceville, R. F. D.
White Dent Corn—1st Elmer Kopp; 2d Roy McDonald.
Wheat—1st John McClelland, Knapp; 2d Fred Price; 3d Roy McDonald.
Potatoes—1st August Casper, Knapp; 2d Will Hart; 3d Ole Anderson.
Oats—1st R. J. Leischer, Knapp; 2d August Casper; 3d Carl Sabatke, Boyceville, R. F. D.
Barley—1st Carl Sabatke; 2d Fred Price; 3d Will Hart.
Timothy—1st August Casper; 2d Will Hart.
Clover—1st Will Hart.

F. H. Scribner, the well-known extension worker and breeder of purebred Jerseys, has sold his farm at Rosendale, Fond du Lac county, to Frank Lawson, who will take possession on April 1st. The farm sold for $175 an acre and consisted of 87½ acres. The farm will be under the direction after April 1st of Mr. Lawson's son, Frank. The Scribner farm will be under the direction after April 1st of Mr. Lawson's son, Frank. The Scribner farm has been operated for some time by R. M. Scribner, the son of F. H. Scribner, and before they give possession there will be a public sale of the Scribner herd of Jerseys. Mr. Scribner is well known thoughout Wisconsin because of his connection for years with the United States department of agriculture and the farmers' institutes. He has been a familiar figure at all important farmer's gatherings for years and his sale of the farm means his retirement from active farm life, but it will give him more time for his extension work.

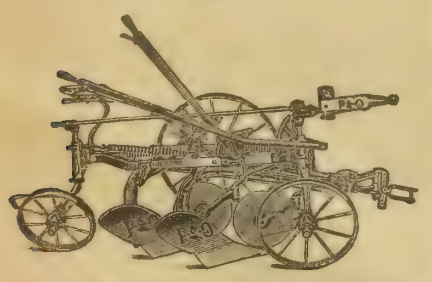
Dunn county boosters have taken hold of the affairs of the Dunn County Agricultural Society and it looks as if a reorganization is to be perfected which will result in a good fair next year. The members have decided to continue the organization as a stock company with $10,000 capital, and if their plans are carried out the future of the fair is assured. These shares will sell for $10 and it is hoped to dispose of 1,000 shares soon.

The Waupun Hemp Growers' Association held its annual meeting recently at Waupun and the meeting was well attended by farmers who are interested in this comparatively new industry in this state. Waupun is one of the three principal hemp-growing sections. The association decided to incorporate for $10,000; the stock to be sold in $50 shares with a limit of 10 per cent for any one person. It was also decided to permit the farmers to have first choice in the purchase of stock and to draft a constitution and by-laws. The question of buying hemp seed through the association was left to the directors.

P & O

Diamond Riding Plows

Sulky or Gang, right or left hand, all standard sizes, all styles of bottoms, according to the requirements of different sections. For eighteen years the leading riding plow in this country. "It's the Way We Build Them."



High lift, light draft, automatic control and perfect bottoms. Removable dust proof wheel boxes with hard oil screw caps. Beams are high in the throat, giving ample clearance in deep plowing. Double bails hold plow steady and rigid, making it run absolutely true and leaving a smooth, level furrow bottom. Only truly automatic rear wheel control ever put on a plow; holds rear wheel rigid regardless of ordinary weaving of team, but allows it to castor naturally on the turn, making a square turn possible.

Collars and linch pins inside the screw caps take end thrust off of boxes. Bottoms so hung in frame as to throw weight of plow, dirt and driver all on wheel, insuring light draft. Spring washers prevent nuts from working loose. High grade coulters with chilled cone take-up bearings, and quickly adjustable clamps.

Powerful foot lift. Hitch adjustable without removing bolts or pins. Bottoms are built on double ribbed malleable frogs, the strongest made; strong in the bend where steel frogs are weak. Different types of P & O bottoms interchangeable. P & O Diamond Plows have every convenience and adjustment for the performance of perfect plowing.

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Canton, Illinois.

Know the Joys of Motorcycling

SUNSHINY spring with that invigorating tang in the air will soon be here. *Then* you should know the joys of motorcycling, and feel the freedom of going where you wish, when you wish, either alone or with the boys.

You can ride for the sheer joy of riding, leisurely if you wish, or you can open the throttle and travel at the speed of the wind to any desired place, even though it be miles and miles away.

"After hours" and Sundays will be all too short for you with your

Harley-Davidson

You can go where you will, with perfect confidence in yourself and your mount, for fourteen years of real service, together with contests of every description, have proven the Harley-Davidson to be the master motorcycle.

Its three-speed transmission enables you to negotiate every road, to make play of any hill or long stretch of sand or heavy mud. As to speed, you will have more than the average rider will ever have the opportunity to use.

If you knew all that a Harley-Davidson motorcycle would do for you, you too, would realize that it is easier to own one than to do without.

Most dealers will make terms to suit your convenience. If you do not know your Harley-Davidson dealer, write to us direct for catalog and full particulars.

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Monarch Steel Stump Puller
Sold On 5 Year Guarantee—Investigate

Made of steel. Has all modern improvements. Easy to operate. Triple and Double Power Machines clear 1 to 5 acres per day including stumps up to 7 ft. in diameter. It will pay you to get our catalog and guarantee. Zimmerman Steel Co., Bettendorf, Iowa. Dept. WS

REO

The New REO the Fifth

The Incomparable Four

$875 f.o.b. Lansing Mich.

Reo Quality Is Uniform—Every Reo Car Is a Good Car

YOUR REO MOTOR—the motor that will go into your Reo—into every Reo car—is dynamometer tested. Perhaps you don't catch the full significance of that statement—sounds like "shop talk" to you.

ALL RIGHT, WE'LL EXPLAIN: And in the explanation perhaps we can show you why Reo quality is uniform—why every Reo is just as good—just as powerful, just as sweet-running and just as low in upkeep cost as the best Reo we ever made.

MOST MAKERS CONSIDER it sufficient to subject every tenth or every fifteenth and in some cases every one-hundredth motor to the dynamometer test. (Of course we are speaking now of those leading makers who have this expensive equipment. Many scarcely know the meaning of the term.) It is considered sufficient gauge of the accuracy of workmanship and the power of motor to test one "about every so often."

IF THAT ONE PROVES UP it is assumed that the rest of that day's run will average about the same. If it falls below the requirements in the test it is in like manner assumed that the rest are below standard—and measures are taken to correct it in the next batch.

MEANTIME YOU MIGHT be one of those to get one of those that didn't prove up.

NO; WE REO FOLK do not consider that kind of testing sufficient. It isn't sufficient, for example, that the Reo we sell you "averages up." The Reo standard says your Reo must be as good in every respect as any Reo ever turned out of the factory—a little better if possible, since today's cars ought to be better than yesterday's.

AND SO YOU CAN KNOW—you can feel absolutely sure—that the individual car we deliver to you, has, itself and its every part, passed through the most rigid tests.

IF YOU COULD VISIT the big 30-acre Reo plant at Lansing, Michigan, and see the four rows of dynamometers with meters and other electrical equipment, you would exclaim, "What an expensive testing equipment!"

BUT WHEN YOU DRIVE YOUR Reo car you will appreciate the economy of a testing system that guarantees every buyer the utmost satisfaction for his money and makes you and every other Reo owner a booster for Reo.

IS YOUR ORDER IN the hands of your Reo dealer? If it isn't, you may be disappointed. Demand is tremendous, and only those who order well in advance can hope to get a Reo.

Reo Motor Car Company, Lansing, Michigan, U. S. A.

$1250 f.o.b. Lansing, Mich.

The New REO "SIX"

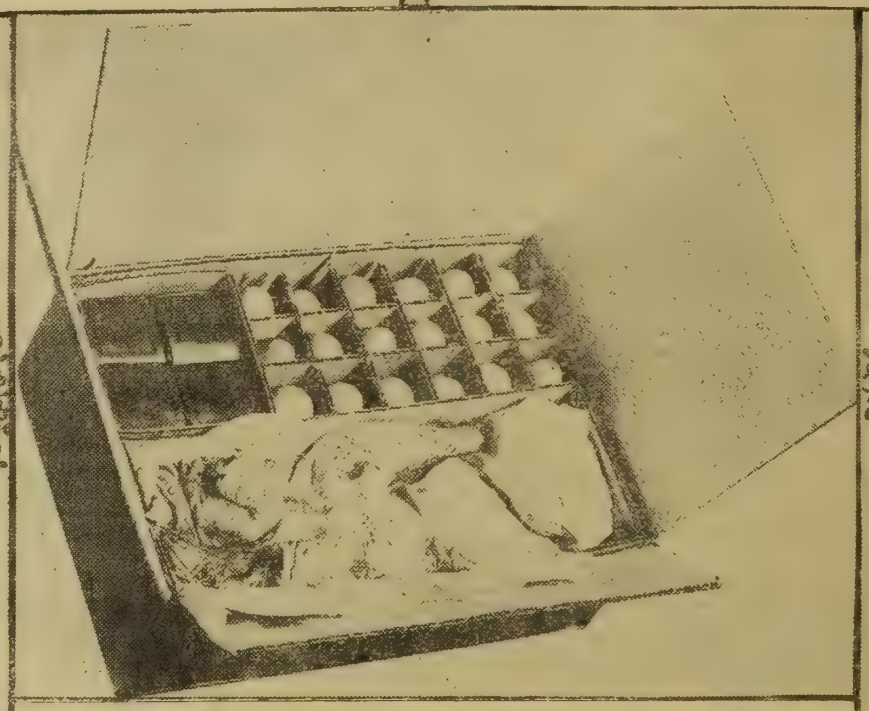
111-C

The Farm World Through the Camera

Packing up to move to Wisconsin. These cars were loaded at Palatine, Ill., for Marinette county, Wis. Moving to a prosperous country.

Pure-bred Shropshires on the Arthur Broughton & Son farm near Albany, Wis. These sheep were sold by Broughton and shipped out to Idaho.

Miss Ivy Moss, Kempster, Wis., and silver cup she won at Grand Rapids potato show in 1914.

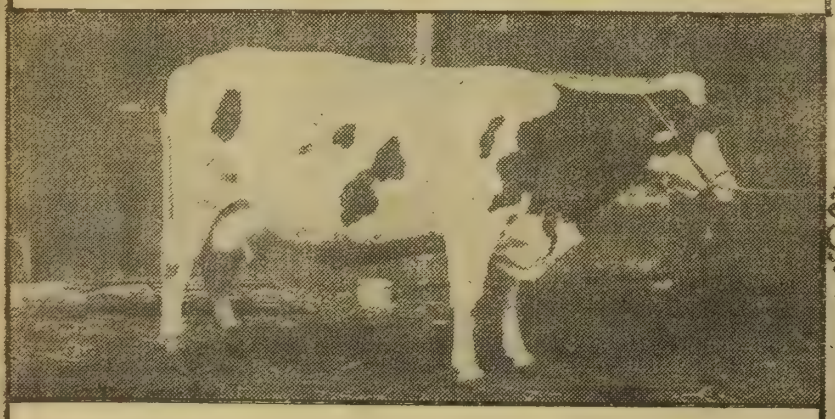


Sample package of poultry produce arranged for transportation through mail by parcel post. Part of exhibit at Wisconsin poultry show this week.

Making soap on the farm—Mother imparts her soap-making knowledge to her daughter.

Buses in front of Frederic, Wis., school. Capacity twenty—Average haul country children, four miles—Rural children are also taken back and forth to evening entertainments.

Athletics and agriculture go hand in hand at the school in Frederic, Wis. They make a good team. The country boys show up well in each division.



Fannie Woldorf De Kol 61604, owned by Cedar Lawn Stock Farm, Burlington, Wis. A good type of the profitable dairy cow in this state.

Herd of Holstein-Friesian cattle, owned by Cedar Lawn Stock Farm, near Burlington, Wis. Tests show some extra good animals in this herd.

Organization For Dairy Farmer.

From an Address by Charles E. Reed, of Neillsville, Before the Cheesemakers' Convention at Marshfield.

NEED of being organized. What does it mean? Need of: First, as far as my experience has gone I shall try to discuss the need of being organized in a body for the good of the dairy interests and then follow up with the manner in which such association should be carried out and sustained.

One great need for organization is for education in the arts of cheese and buttermaking, and also in dairying in general, by forming an organization for this end. We will all meet at the general meeting and listen to carefully prepared addresses upon certain subjects pertaining to the interests, for which the meeting is called, and there enter upon discussions of the subject so that in that way we will each and everyone be able to learn a great deal from so doing.

In cheesemaking one will tell his experience and then another; and from that each one may take good points home and put them to practical use. The same with the buttermaker and also the dairy farmer. He will be told how to produce the greatest amount of raw material from the most economical standpoint, and not only that but also a good, clean, pure article, and thereby help the manufacturer manifold, because there is a small chance of making a good article if the raw material is not right. Thus you see organization means education of every one; and it is an established fact that education is the most important part of each and every person's life, that is, keeping up with the times in which he lives, and not falling into a rut what is by use worn so deep that he cannot steer out. Next, in organization we find power. Power to do and power to cause to be done; for in union there is stength. We will then stand as the old, old saying of the bundle of sticks, united in one bundle they cannot be broken by the strength of a giant, but take one separate stick, the same may easily be broken. By being united you have the power to see that the best legislation is brought about, for the interests for which you work and also that the objectional stuff is thrown out. For who knows best what laws should be enacted for us: The representative in the legislature, or the man in the field, who has had to live and work under such laws?

Every little business of today has its union or advancement association, all working for the best interests of each other in their particular business. Take also the manufacturers of your city, each is an organization in itself, each machine and each man has his particular part to do in turning out the finished product. Take for instance, the chair in which you sit, and think it out for yourself, and see if it does not work out as one article—the end of an organization. But the one for the dairy interests is for a broader nature in all, in that we must take in a much broader and deeper field of work.

We must eliminate the word "protective" and insert "advancement," for it is advancement we wish for, and when we get that we will have all the protection that is necessary, just from being united, and striving for a right end. The watchword of the present day is co-operation. When we organize the dairy farmer and all the manufacturers of dairy products in one body for the good of each other and for all, we have then perfected the best-known line of co-operation; for then the dairyman will produce good, clean, pure milk and will have his premises kept in accordance with the production of the same. Then we will have attained the one great end we are working for, which is: To put Wisconsin above where she is, by raising the standard of our manufactured products to the highest mark of efficiency and will also have all the cheese and butter made in Wisconsin of a uniform quality, because, we as manufacturers will then all be working on the same basis and all have the same or nearly the same quality of good milk to make up, and therefore get better and more uniform prices; that is in each locality that is so organized and I hope to see in the near future the whole state organized as we are over in Clark county, Cheese and buttermakers and dairymen in general all united in an association for the one great purpose of what article ten of our constitution reads: "Any person who takes a vital interest in the development and betterment of the dairy interests of Wisconsin is eligible to membership."

That, you will readily see, in time will mean the whole community, and community development for the main interest of Wisconsin which is dairying, because the lumberman's ax is beginning to be but an echo. And by being so organized we can then interest the wholesaler and the banker, and in fact, nearly all lines of business to turn in and work with us. Show me the man, woman or child who is a citizen of our great state that does not look with pleasure upon Wisconsin's being in the lead in her productions.

The new license law which I understand will be discussed here is one step in the right direction for uniformity of quality and in being united for co-operation. I believe we should not look too much for individual profit and should let the so-called middleman stand where he is, because he has made a life study of his business which would take time and money, should we as communities try to take upon ourselves his place, for we can then soon produce a product that will sell itself, and for the top-notch prices.

Again organization is co-operation; then why not all parts of the state form such and all become members of same? Then form a state-wide dairy board of trade where every pound manufactured will be sold under penalty of a statute of the state of Wisconsin, making it compulsory, where all of Wisconsin uniform and standardized cheese and butter made, will be sold for uniform prices that are governed by the laws of supply and demand.

In so doing the big interests will not be able to dictate, as we all know they do. There will be only way out. They can buy or some one else will, and then we have solved a great problem in the Wisconsin Dairy Market. On May 8, 1915, at Granton, Wis., there was formed by a dozen enterprising cheesemakers, the first and only existing association of this kind in the state. At the present time the whole county is talking about its meetings and the good it is doing and striving to do.

Winter pruning is more essential for fungous growth in apple trees than for insect, according to a bulletin from the Connecticut station. Of course, one of the chief reasons for pruning is to take out unnecessary and interfering branches and shape up the tree. This also improves the dry air drainage whereby infection by fungi is lessened.

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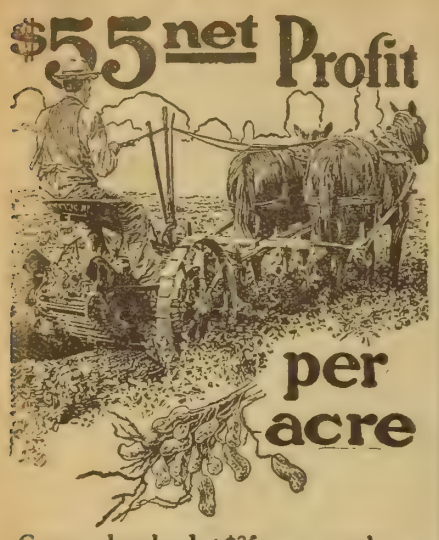

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are doing it. Wherever accurate reports are kept, the net profit per acre on peanuts averages well above $50 per acre. J. T. Walker, near Jonesboro, Ark., made 45 bu. of threshed peanuts and 27 bales of peanut hay per acre, bringing $1 per bu. and $1 per bale. It cost him only $17 for planting, growing, threshing and harvest, leaving $55 per acre net. J. M. Story got $63 per acre net. Land like Mr. Story's, costs only $35 to $50 per acre now.

It's the character of the land and climate that makes peanuts so profitable a crop down there; and the same conditions make other crops extra profitable. Take ribbon cane, for instance: J. F. Chenault, near Redwater, Tex., makes over 400 gallons of syrup per acre from ribbon cane, netting him $200 profit per acre.

Frank Federer came south to Brinkley, Ark., to escape the long, raw springs of Wisconsin; he says he can raise as much there on $15 land as he did in Wisconsin on $200 land—because the soil is just as rich, the crop season is much longer and short winters cut every expense.

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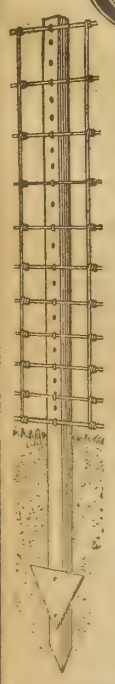

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STATE AID TO WOODLAND OWNERS IN WISCONSIN.

The forestry branch of the newly created conservation commission desires to co-operate with the owners of woodlots and timber tracts and is now prepared to give special attention to the different phases of forestry that are of interest to those who desire to improve their wooded or bare areas by planting trees or by introducing practical forestry methods.

On request to the commission an expert forester will make a personal examination of the land in company with the owner, tenant or farm superintendent. Where the tracts are small the entire area will be carefully cruised and such trees marked for cutting as would bring about the desired results from the standpoint of proper forestry practice. If the tracts are 100 acres or more in extent the forester will lay off sample plots of suitable size to demonstrate the proper handling of the woods in each type of the stand and trees of undesirable species will be marked for removal. Recommendations for management of the areas, no matter how small, will be embodied in a brief report and forwarded to the owner as soon as practicable after the examination.

Similarly, advice will be given as to the best methods of replanting open lands, the replanting of areas cut over, planting among thin stands and underplanting to preserve or create good forest conditions.

The more important features of a planting plan are: Location, area of site to be planted, purpose of plantation, detailed recommendations for planting, which include cost of plant stock, cost of planting, method of planting, care and protection, species and spacing and methods of subsequent treatment.

The commission is also glad to furnish a speaker for any organization wishing to arrange a lecture on forestry. It is urged that wherever possible the meeting be preceded or followed by a field excursion, in which the lecturer can make final suggestions, as a field trip greatly increases the helpfulness of a meeting. Application for advice and co-operation should be addressed to the conservation commission, Madison, Wisconsin. The only expense connected with the inspection and lecture work will be the necessary traveling expenses and maintenance from the nearest previous inspection.

In order to encourage farmers and other landowners to plant idle and waste land in this state the conservation commission is growing trees for forest planting on a large scale, which will be sold at the approximate cost of raising. Trees of the following species are available for distribution:

	Per M.
White pine transplants, 4-yr.	$4.00
White pine transplants, 3-yr.	3.50
White pine seedlings, 2-yr.	1.50
Scotch pine transplants, 4-yr.	4.00
Scotch pine transplants, 3-yr.	3.50
Scotch pine seedlings, 2-yr.	1.50
Norway spruce transplants, 4-yr.	4.00
Norway spruce transplants, 3-yr.	3.50
Norway spruce seedlings, 2-yr.	1.50
Red pine transplants, 4-yr.	4.00
Red pine transplants, 3-yr.	3.50
Red pine seedlings, 2-yr.	1.50

The commission will need to know the character of the land as regards topography, kind of soil, original growth, present growth and previous use of land.

Write the conservation commission for an application blank for forest trees and indicate the number, kind and age of stock desired. A bulletin on forest planting in Wisconsin will soon be available and may be obtained on request.

INSPECTION OF APIARIES.

To the Editor:—More complete inspection of apiaries, better education in beekeeping and more complete co-operation on the part of the beekeepers of the state are the things most needed to develop the bee industry of Wisconsin, according to N. E. France, state inspector of apiaries. In an address before the Wisconsin Beekeepers' Association which met in Madison on December 9th and 10th Mr. France reported progress which has been made during the past year. At the convention held here in 1914 it was decided that conditions among the apiaries of the state demanded that beekeepers be instructed in methods of managing bees and in the handling and marketing of the products. Accordingly, meetings and demonstrations were held in any county in which the keepers applied for such service.

Meetings were held in Winnebago, Rusk, Pierce, Clark, Green and Dane counties at which nearly 9,000 colonies were inspected. Many of the beemen who attended these gatherings were being troubled with American or European "foul brood." As a result of campaigns started at these conferences the diseases are well under control and conditions have been improved.

Mr. France urged the members to support the strict observance of a law which makes it illegal to move colonies of bees which are diseased or to sell honey which is liable in any way to infect other colonies of bees. He said in part as follows:

If this law is strictly observed a great deal can be done toward totally wiping out the disease. Another source of contagion is the use of second-hand honey cans which many of the members agreed should be prohibited by law, as cans shipped from the West are almost invariably infested with foul brood in one or both of the two forms.

The inspector predicted a successful future for the bee industry of Wisconsin.

Clyde Hopkins.
Dane Co., Wisconsin.

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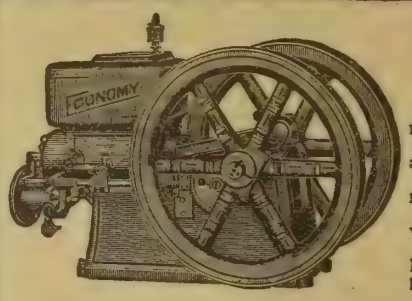

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If you are interested in gasoline engines, write for our special January and February Engine Proposition No. 74W16.

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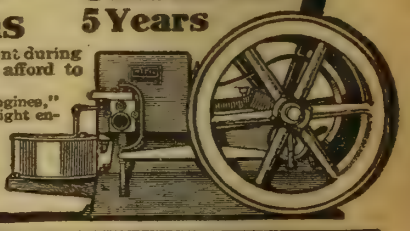

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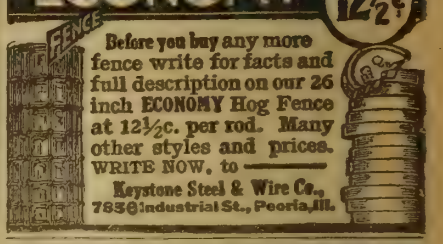

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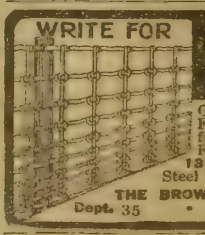

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UPPER WISCONSIN

IN THE MELLEN COUNTRY.

The Mellen Weekly, of Mellen, Wisconsin, Ashland county, recently published a special harvest edition. One of the interesting features of this edition was the page of actual experiences of pioneer farmers in Ashland county. In is interesting to note that most of the farmers who recount their successes on this page came from some other section of the state. There is no doubt but that there are many other good farmers who would be glad to avail themselves of the advantages in Upper Wisconsin. There is not much use in sending our farm boys to the far West to get land when there is plenty of it here at home.

The Andrew Seipel family went to Manitowoc county twelve years ago and settled in the neighborhood of Mellen. Mr. Seipel wanted more land for his boys. He bought a half-section of Hartley cut-over hardwood land and proceeded to clear the same of brush and stumps, and farm it. As his boys grew up, he acquired more land and now he and his sons and sons-in-law own 1,000 acres, a large part of which is improved. The Seipels spent most of their time for the first five years logging, lumbering and clearing land. In the past six years they have combined all their efforts in farming. They have splendid improvements on their several farms, including new farm buildings and silos and also are raising pure-bred live stock.

August C. Schmidt was formerly a gardener near Milwaukee. He moved to Ashland county in 1914. He had previously always been a renter. He bought a 102-acre, partly improved farm, five miles from Mellen. He brought with him a span of working horses, a cow, hogs and poultry. He was occupied during the winter getting wood and logs, and in the early spring started to farm. He blew out stumps and stones with dynamite and put about twenty-five acres under the plow. He raised oats, barley, wheat, corn, potatoes and a variety of garden truck. A good deal of his stuff was marketed at the summer cottages which surround Lake Herbert. Mr. Schmidt built several cottages during the spring, renting them to recreation seekers. He is getting his land into good shape and expects to make a specialty of pure-bred live stock for market and to grow Green Mountain and Rural New Yorker potatoes for seed.

Robert Mattson bought land in Ashland county in 1901 and erected a small log house. He had no money nor tools of any kind. In five years he had done remarkably well but had the misfortune to be burned out by a forest fire. He lost all his buildings, hay and timber. He started over again and at the end of the next five years refused $10,000 for his place. He says he has received the best results from hay, oats and potatoes and from dairying. He has raised wheat [illegible] for [illegible] of a crop, no matter what the weather conditions may be. In the fall of 1915 a measured field of two acres on the Mattson farm threshed out 112 bushels of Swedish Select oats to the acre, and the oats weighed forty-two pounds to the bushel.

These instances might be multiplied. There are many exceptionally fine improvements going up in Ashland county. The farmers in the Mellen country are taking advantage of the new law to name their farms, and registrations have been made this year as follows:

Billy Creek, C. B. Morse, Highbridge.
Brookside Farm, Alex Nyberg, Mellen.
Burr Oak, J. H. Smart, Butternut.
Forest Farm, John Oestricher, Marengo Valley.
Fair View Farm, W. E. Smith, Highbridge.
Greendale, August C. Schmidt, Mellen.
Glenwood, Eugene Pierrelee, Mellen.
Lake Side Farm, John J. Hayden, Butternut.
Mellen Dairy, B. J. Gehrman, Mellen.
Meadowbrook Farm, Carl Grage, Mellen.
Meadow View, John M. Johnson, Marengo Valley.
Marengo River Stock Farm, Louis J. Deere, Marengo Valley.
Oak Grove, John Russell, Marengo Valley.
Poplar Grove Farm, Joseph Kreinsteiber, Highbridge.
River Side Farm, Cornielius Seiple, Mellen.
Silver Creek Farm, John N. Delfield, Highbridge.
Spring Creek Stock Farm, Ole Olson, Mineral Lake District.
Troutmere Farm, Theodore W. Werder, Marengo Valley.
Hillcrest, L. W. Krake, Glidden.
Silver Brook, Frank Faber, Mellen.
Valley View, Ed Krause, Mellen.
Morningside Dairy, E. W. Luebke, Mellen.
Poplar Grove, Dan Schrauth, Mellen.
Maple Grove, Ed Edwards, Mellen.
Marengo Stock Farm, R. C. Mallory, Marengo.
Lake View, Tom Larson, Mellen.

COMMUNITY EFFORT IN WISCONSIN.

One of the most promising signs of progress in the settlement of Upper Wisconsin is to be found in community or co-operative efforts. Movements of this sort are apparent in some form or other in nearly all of the Upper Wisconsin counties to which there has been a flow of settlers in recent years. The more extensive the settlement has been the more pronounced is the movement.

Recently the new settlers in the vicinity of Pembine, Marinette county, formed a permanent community organization with the purpose of social and agricultural betterment in their locality. The spirit which resulted in the formation of the organization was generated at a community picnic held last fall. Officers of the Pembine association were named, as follows: President, Joseph E. Dixon; vice president, John D. Roche; secretary, A. Mottard; treasurer, W. G. Burkhart.

While the organization is not formal, Cedarville, another new settlement in Marinette county, has made remarkable progress because of its community work. Although the first settler located there only in 1913, the place now has a school, postoffice, station on the main line of the Milwaukee railroad, general store and storage warehouse. Meetings are held practically every week in the schoolhouse, and community betterment is always the general topic under discussion.

Land clearing bees, ownership of stump pullers or tractors by communities rather than individuals, better social life, and more material progress are only a few of the benefits that follow community work, such as Pembine and Cedarville are carrying out.

The Pembine organization will be affiliated shortly with some national farmers' organization, such as the Grange, Society of Equity, Gleaners or Farmers' Union.

BUY CATTLE CO-OPERATIVELY.

Sec. D. S. Bullock, of the Marinette county, Wisconsin, Co-operative Cattle Buyers' Association, recently returned from southern Wisconsin with another carload of pure-bred and grade dairy cattle purchased for Marinette county farmers through the association. In all, four cars, numbering eighty head of cattle, have been purchased during the year of 1915. In addition twenty head were bought through the association in Marinette county. The banks of the county extend the funds with which the cattle are purchased, and the farmers pay it back as it is earned by the cows. The Marinette county plan has been so successful that it is now being copied in counties of Illinois, Iowa, Texas and Massachusetts.

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Did you ever see any other 8 H. P. Engine two men could carry? Cushman engines are the lightest weight farm engines in the world—easy to move around and put to work anywhere. No longer necessary to put up with old-style, back-breaking, heavy weight engines, with their violent explosions and their fast and slow speeds. The Cushman weighs only about one-fifth as much, per horsepower, but with its modern design, accurate balance and Throttle Governor, it runs much more steadily and quietly.

Cushman Light Weight Engines
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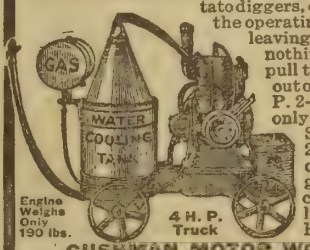
The 4 H. P. weighs only 190 lbs. Mounted on iron truck, as shown below, it may be pulled around anywhere. Besides doing all other work, it may be attached to moving machines in the field, such as grain and corn binders, potato diggers, etc., driving the operating part and leaving the horses nothing to do but pull the machine out of gear. 8 H. P. 2-cyl. weighs only 320 pounds. Sizes up to 20 H. P. Not cheap engines, but cheap in the long run. Book free.



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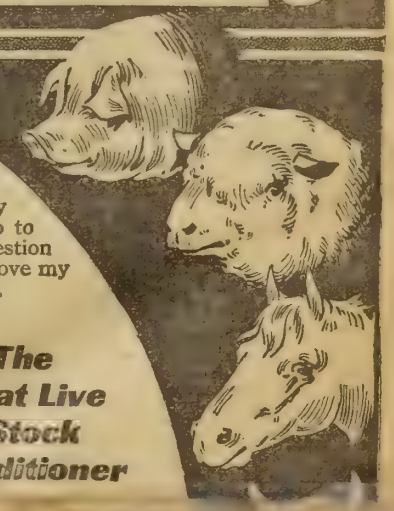

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JOHN E. TEMPLIN, Blanchester, Ohio.

(247)

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PRACTICAL POTATO HINTS.

Wisconsin Growers Tell of Their Experiences With This Important Crop—Spraying Is Declared to Be an Essential to Aid Yields and Dispel Diseases.

Practical Potato Growing Hints.

A NUMBER of farmers of Wisconsin who are specializing, some of them in a small way, in potatoes, have written letters telling of their practical experiences and giving their views on seed selection, cultivating, grading, sorting, marketing, etc. Several of these letters are given herewith and more will be published next week. Other readers of The Wisconsin Farmer are invited to join in this discussion. If you have new pictures send them in with your letters, being careful to label the picture properly with your name and address on the back. This is only one of several discussions of practical topics which have been carried on through the columns of The Wisconsin Farmer, and there will be others just as interesting and profitable to follow. In the meantime we are anxious to get letters also on any farm subject for the Farm Forum column.

Proves Spraying Pays.

To the Editor:—Our potatoes on clover sod are plowed four inches deep in the fall. I follow a four-year rotation, grain, hay two years and then potatoes. In the spring the land is double disked, crossing the furrows the first time. Then the spring-tooth harrow is used, crossing once each way. The potatoes are planted in rows thirty-two inches apart, hills about sixteen inches apart in the rows and four inches deep. Care is exercised in selecting seed potatoes of medium size and true to variety type. It is also very important to get seed free from disease. We throw out both oversized and small stuff, being confident that best yields are secured where best seed is used. In the future our plan will be to hill select at the time of digging. Potatoes are cut two eyes to the piece. After planting every effort is made to keep down the weeds. The land is dragged with a spike-toothed harrow at least twice and oftener in some seasons. We drag both lengthwise and crosswise, tipping the drag forward. We believe in plenty of cultivating and keep it up until the potatoes are in blossom. Then we hill slightly with a wing-shovel plow. Experience has taught us that hilling not only keeps some potatoes from getting green but also makes digging with the digger much easier. For this county I believe the earlier potatoes are planted the better, from May 10th to 20th being preferred. When potatoes are planted late I find that in the average season they are often unripe at digging time and skin badly. In fighting bugs I have used successfully a spray mixture made of two tablespoonfuls of arsenate of lead and one of Paris green to two gallons of water. This is used in the knapsack type of sprayer. The arsenate of lead is a good sticker, but does not kill quite as rapidly as Paris green.

The past summer in co-operation with our county agricultural representative a very convincing demonstration was conducted on my farm. I had never sprayed with Bordeaux mixture for blight. As a matter of fact, I didn't think there was much to it. But this summer's experience fully convinced me that it was worth while. Potatoes were sprayed three times at ten-day intervals, beginning August 1st. A noticeable difference could be seen in the appearance of the vines as the season advanced. The rows sprayed with Bordeaux were more thrifty looking and growthy than those unsprayed. Care was taken when spraying to keep the pressure high in the tank and also to get the spray material on all portions of the vines, the under side as well as the upper. This we were advised was very important. To prove the value of spraying a certain number of rows were sprayed and an equal number left unsprayed. At digging time the potatoes were carefully weighed. The three sprayed rows yielded 11.1 bushels and the three unsprayed rows yielded 7.66 bushels. The acre yield for sprayed portion was 172 bushels and the acre yield of the unsprayed portion was 118¼ bushels. This is a gain in favor of spraying of 53¾ bushels to the acre. At 60 cents per bushel, the present price on our local market, the spraying was worth $32.25 an acre to us. The expense of spraying materials was as follows:

Blue vitriol	$2.00
Lime	.20
Total	$2.20

This left a balance in favor of spraying of $30.05 per acre. The picture sent herewith shows the yield from sprayed and unsprayed rows, the sprayed rows on the right and the unsprayed rows on the left.

George Keech.

Langlade Co., Wisconsin.

PROOF THAT SPRAYING PAYS.

Produce of three unsprayed rows at left. Three rows sprayed with Bordeaux mixture produced the six big sacks at the right.

Less Acres and Larger Yields.

To the Editor:—One of the pictures enclosed is a view from my field of Rural New Yorkers. My Rurals from this field took seventh place out of sixty-three entries in the individual class at the Marinette Potato Show, held last November. This field was broken three years ago and potatoes planted on breaking, then seeded to oats and sixteen pounds of a mixture including six pounds red clover, five pounds alfalfa, two pounds alsike and three pounds of timothy seed per acre. This seed came up very nicely and about May 28th was plowed under. The ground then was disked four times and dragged twice with a smoothing harrow, and about June 10th (a little late I admit, but I waited to get all the green clover I possibly could to turn under) the seed potatoes were planted with a potato planter and about 600 pounds of 2-8-10 fertilizer was drilled in. While the yield was not large, the potatoes were very nice and smooth and of even size and fine texture. My seed potatoes were rather large and I cut off and discarded the stem end on most of the potatoes. I think this will be practiced more as we gain more experience. Hill selection and an acre plat for seed potatoes are absolutely necessary for better potatoes. My motto is "Less acres and larger yields."

My other photograph was taken in a field of Triumphs last August, planted six weeks. On the night after the picture was taken the vines were frozen to the ground. The land was broken the year before. It is muck land and very soft and hard to get the proper drainage, as the land lying in front of it is undeveloped, at least part of it, and owners cannot agree on draining. I have a small ditch and if the other property owners do not open it up will try to pump the water out. On this muck land a 1-8-10 fertilizer was used and if we had not had frost so early we would have raised a good crop. The seed used on this land was small potatoes. This is bad in one way, but it insures a good stand, as whole potatoes will not rot in wet soil as cut ones do. These were also planted with a planter and when the disk threw up the soil to cover it was left that way to give better drainage. We had a nice stand even in the spots where we could not ride on the planter, as both the planter and horses would mire. The ground, however, was free from weeds, otherwise there would be too much work with the hoe to keep them clean.

I am vitally interested in the improvement of farm products both as a grower and shipper. I was born on a farm in Denmark and came to this country and Waupaca county twenty-eight years ago. I was then fourteen years of age. I worked on my father's farm near Waupaca for twelve years. At that time there was some talk, as there is now, about the middlemen's profits and the problems of marketing our products at a price nearer what the consumer pays, taking into consideration, of course, the cost of transportation, handling, wholesalers and retailers' profits. We heard that the farmer got 30 cents a bushel for potatoes for which his relatives in Chicago paid 90 cents or 25 cents a peck which would be $1 a bushel, or 2 cents a pound which would be $1.20 per bushel. According to these reports, middlemen were getting rich without doing any real work. In listening to these arguments I decided to do some investigation on my own hook. It is a long story, some sixteen years of it which I might tell at some other time, and still there are a lot of things to overcome and learn. I realize that we are far from marketing our farm products the most economical way, in spite of the big farmers' organizations and the marketing organizations at the other end of the line. The chief drawbacks are waste and service—waste with the produce and service given the customer.

C. N. Christensen.

Waupaca Co., Wisconsin.

FIELD OF RURAL NEW YORKERS.

Potatoes from this field on the Christensen farm, Waupaca county, won seventh place at Wisconsin Potato Show in individual class of sixty-three entries.

FROST GOT THESE TRIUMPHS.

After six weeks this field of Triumphs on the Christensen farm looked very promising, but frost killed all the vines and cut down the yield.

Important to Wisconsin Growers.

To the Editor:—The past year has been full of disappointment to the potato growers here, and, as I learn, to many of the northern growers. With a cold, wet, backward summer we had also to contend with the many diseases which have come up in our fields. These included leaf roll, blackleg, Rizoctonia, early and late blight, to say nothing of the common scab. Although the most of these diseases may be prevented in a large measure it seems the growers are slow to take advantage of the remedies. This is

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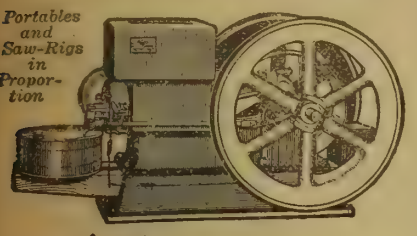

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Sectional View

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partly due to ignorance of the diseases and the remedies therefor, but I believe more from the fact that in the past we have been able to raise fairly successful crops without resorting to control measures. The growers are not very willing to add further burdens to their already arduous duties. The few years just past seem to point to the necessity of concerted action throughout the state looking to the eradication of diseases and also toward the standardization of varieties in Wisconsin. Potatoes are Wisconsin's main cash crop and they fit in very nicely with our big dairying industry.

I believe it possible for Wisconsin to produce the very best quality of potatoes and with regret I look at the market quotations where our neighbors are receiving from 2 to 10 cents a bushel more for their stock than we are getting here. There must be a reason. I believe one of the main reasons is the large number of varieties and the poor qualities of many of these varieties. Many of our growers are raising two varieties, one for their own table and another for the market, and I shall expect them to continue to do so until the potato market is governed by quality instead of the number of bushels per acre. A farmer cannot be expected to plant something that promises an inferior yield unless he is assured a better market price per bushel. I believe our state is taking a long stride forward in the matter of seed certification, although this matter is as yet in its infancy. It seems to me that in local co-operation, a try-out of the several standard varieties, strict adherance to these varieties and a determined effort to stamp out disease lies the improvement of our potato industry in Wisconsin.

John T. Somers.
Barron Co., Wisconsin.

Taylor County Man's Views.

To the Editor:—The potato subject is somewhat aggravating at times, more so than it is possible to give in detail. I would advise every farmer to select his seed potatoes in the fall and to choose only those free from disease, true to type and medium size. Practice seed selection on the field every fall. Never plant potatoes twice on the small plot of ground, for if you do you may expect ill-shaped, diseased stock and about half a crop.

In the spring see to it that your potatoes are a trifle sprouted before cutting begins. You may wonder why, but there is one advantage to be gained and that is you have an opportunity to discard potatoes which do not show a strong and vigorous sprout. If your field conditions are not exactly perfect the tiny sprouts may never come up after they are in the ground. And even if it does the tuber which it produces is not likely to be a marketable one. Have a good-sized plant with at least two strong and vigorous sprouts.

The soil should be a clover sod turned in the fall. There should be a liberal amount of manure applied before disking. Have the ground prepared two weeks before you plan to put in your seed. This tilting the soil before planting will not only make the soil mellow but will kill millions of weeds and last, but not least, will let in the sunbeam to warm up the soil.

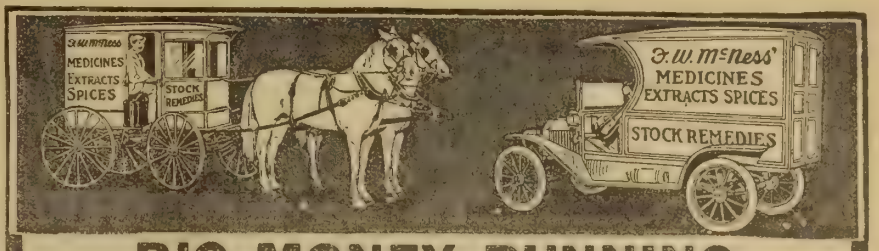
I do not plant very deep for our rain period usually causes the soil to pack too hard, thus keeping the seed too cold. When it dries up nicely after a rain we take a peg-tooth harrow and bring the hills to a nice mulch. A mulch between the hills at all times is advantageous and will stop the evaporation of moisture and I believe in hilling the plants even when in full bloom. By this time the weeds will be overcome by cultivation.

Frank Halopka.
Taylor Co., Wisconsin.

Selection of Seed Potatoes.

To the Editor:—Potatoes must not be allowed to overgrow before being hilled. They must be cultivated at least four times and should be hilled before they are blossomed out. They should not be touched when blossoming. They should be sprayed for bugs if there are too many, but not too strong, at least not so they will be burned. They should be picked over before blossoming time to see whether there are any stray varieties or diseases in them. The bad vines should be picked out and destroyed. If a man wants pure-bred seed he should never put any two varieties close to each other. There are many diseases which I have given study on my own place and at other farmers' patches where I have helped to pick potatoes. They include silver scurf, which shows small black spots. When scraped off it shows a silverish color. Then there is the root rot where the vines rot off between the potato and the vines outside. Then there is another disease where the whole stem turns yellow and in a short time dies away. And the little potatoes also rot. Then there is the early and late blight which must be looked out for. In the late blight part of the vine turns a blackish color like it had been frozen. This blight goes from the leaf through the stem, then to the potato in the ground. In about two weeks it will destroy the whole plant. We have gotten into the practice of sorting our potatoes in the field. We sort to get rid of the little fellows and culls and decayed ones. Blight must be killed with Bordeaux mixture. Now I must tell you what I know of the shape of the Rural New Yorkers, color of the vine and blossom. The blossom is of a purplish color. The vine is stout and a very dark green color and does not grow into a large cluster. The potato itself should be of a flat, oval shape and the ends must be a little more nearly square. The potatoes for seed should be cut through the seed end, so as to divide it equally. Each seed should have at least two eyes. A seed potato should never be cut through the eye. A potato that weighs from ten to twelve ounces is the largest fit for seed. These large potatoes must be cut into three to four parts. A potato should have a sort of hairy and fine, glossy skin and not a shiny and glassy skin. Such potatoes must only be selected for seed.

Anton Opichka.
Langlade Co., Wisconsin.



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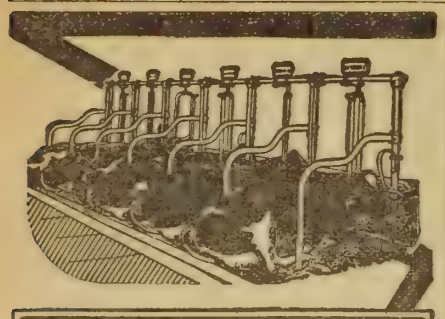

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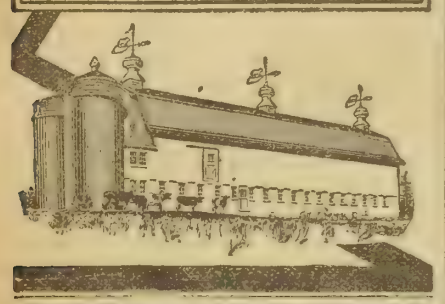

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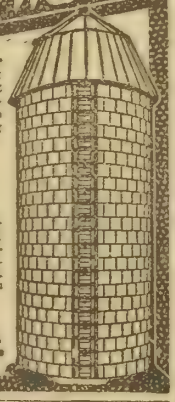

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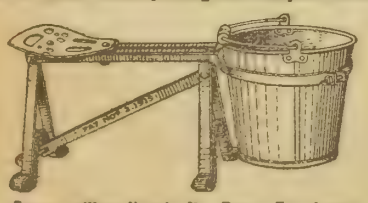


Every milker Needs It—Pays For Itself

Just invented and patents granted. Has all the latest features and conveniences. Big improvement over any other stool. Made of strong, durable metal, aluminum painted. Fully guaranteed. Swinging pail holder, adjustable for any size pail. Pail swings out of way if cow kicks or moves. Sliding seat gives milker four inches backward or forward movement. Can be hung on peg when not in use.
PRICE $1.50 each. Send for circular. AGENTS, this stool sells wherever demonstrated. Write for special price.

J.A.PAUL, 903 Washington St., Waterloo, Iowa

DRINK PURE WATER

—not from a Storage Tank but "direct from the well," spring or cistern, by means of a Milwaukee Air Power Water System. Never freezes. Always ready—any hour of the day or night. Costs but little to install in old or new house. Just what you have been looking for. Write for catalog, prices and full particulars—today.

MILWAUKEE AIR POWER PUMP CO.
805 Third Street Milwaukee, Wis.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

GOOD PRODUCERS WERE ALL FED GRAIN.

The value of proper feeding in securing good production is brought out in the October report of the Langlade County Cow-Testing Association. During this month the Jerseys led in the forty pound list and it can be said that this county boasts of some very fine herds of Jerseys.

Out of sixteen cows in the forty-pound list, thirteen were Jerseys, one of the number a five year old owned by Harry Guenthner, producing sixty-one pounds of fat, from 1,131 pounds of milk.

The milk production of these thirteen varied from 515 to 1,131 pounds and the butter fat from 40.6 to sixty-one pounds. If perchance one farmer had been fortunate to own the thirteen his cream check for the month at present prices for butter would have been $207.80, a snug little sum from so small a herd. In addition the skim milk from the above cows at 25 cents per hundred would have brought $21.15, making the total $228.85.

A study of the list reveals that the owners of the forty-pound cows have for years been using pure-bred sires, proof that their high poducing animals are not accidents. but the result of careful methods of breeding.

The value of right feeding also enters for the men with the forty-pound cows are also good feeders. Grain forms a part of the ration on each of the farms. Harry Guenthner is feeding clover silage, clover hay and ground oats. Finding his cows are losing flesh on this, he plans to add a third ground corn to the grain ration. Mr. Ings is feeding ground barley and oats about half and half, with clover hay. As soon as available he will get pea-vine silage. He admits that his cows, though doing well, are not producing as heavily as if they were getting some silage.

More and more Langlade county dairymen are coming to recognize the importance of feeding the balanced ration to get best returns.

HARRY GUENTHNER.

Jerseys	Age	Milk	B. fat
Seven Up	14	1123	52.8
Brindle	7	736	42.7
Daisy	5	1049	53.5
Jersey	5	1131	61.0
Blue Bell	5	1044	49.1
Tronble	2	612	41.9
E. QUINLAN.			
Gr. and Reg. Jerseys			
Thelma of Fairview	14	796	47.4
Spot	6	991	50.5
Marion	3	953	45.7
Thelma's Golden	4	515	40.6
HENRY INGS.			
Gr. Jerseys			
Judy	4	764	44.3
Jennie	6	587	41.6
JOS. GUENTHNER.			
No. 21, Gr. Jer.	8	875	48.1
WALTER HEAD.			
Yaska, Gr. Guernsey	9	1178	48.3
ED NORDMAN.			
No. 23, Gr. Guernsey	5	897	43.0
G. J. ARENTSON & SON.			
Nellie, Native	9	913	42.0

Hitherto unpublished September list.

H. B. KELLOGG.			
Rose, S. H.		882	44.1
Peach, Gr. R. P.		897	40.3
Nellie, Native		771	40.8
Nigger, Gr. Hol.		920	43.2
CHAS. SCHOTTE.			
Tessie, Gr. Jersey		757	40.1
Nancy, Gr. Jersey		503	42.7
HARRY GUENTHNER.			
Seven Up, Gr. Jersey		1130	45.2
Daisy		1122	53.8
Sunbeam		648	42.1
HENRY INGS.			
Judy, Gr. Jer.		795	40.3
Jennie, Gr. Jer.		673	41.7
E. QUINLAN.			
Spot, Gr. Jersey		1313	56.4
B. G. STEWART.			
Marion of Edgewood Reg. Jersey		717	49.1

YEARS OF TESTING.

The report of the official tester of the Dunn County Cow-Testing Association No. 1 shows that during the past year five herds averaged better than 340 pounds of fat, the average for the best five herds being 355 pounds with an average profit of $69.60. The poorest three herds under test averaged 117 pounds of fat with an average profit of $28.75.

Charles Harshman's herd averaged 373 pounds of butter fat per cow; Roach Bros.' herd 357 pounds; Sam Ausman's herd 349 pounds; Alvin Webert's herd 348 pounds and John M. Cramer's herd 340 pounds.

The report for the last month of cows which produced more than forty pounds of fat follows:

Owner, name and breed	Age	Months after freshening	Lbs. milk	Per cent fat	Pounds butter fat
Sam Erb					
Beauty, G. H.	4	1	1206	3.8	45.8
Charles Harshman					
Rose, G. G.	6	6	648	6.3	40.8
Jennie, G. G.	6	2	918	4.4	40.4
Mary, G. G.	6	1	1014	4.9	44.7
A. F. Klatt					
Dollie, G. G.	4	1	1110	5.4	60.0
George Mars					
Peggy, G. G.	5	1	982	4.4	43.2
Hugh Campbell					
Buttercup, G. G.	8	1	819	5.0	40.9
E. C. Jacobs					

Skyscrapers and Silos

The tallest office building in the world is the Woolworth Building, New York City. It is 55 stories high, cost $7,500,000, and is fireproofed with over 30,000 tons of NATCO Hollow Tile. Safe against fire, wind pressure and shock and built for all time, it is a lesson to *you*, Mr. Farmer, when figuring on a silo and other farm buildings. The same material with which we have fireproofed the majority of skyscrapers of North America is being used extensively for the construction of the NATCO Imperishable Silo and all other types of farm buildings. For permanency, service and economy

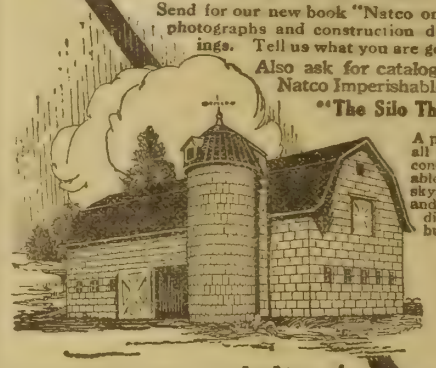
Build With Natco Hollow Tile

Best for the city and best for the farm. NATCO buildings are weather proof, decayproof, fireproof and frost-resisting. They are attractive, too—buildings you'll be proud of.

Send for our new book "Natco on the Farm." Fully illustrated from photographs and construction details of all types of farm buildings. Tell us what you are going to build.

Also ask for catalog describing the ever popular Natco Imperishable Silo—

"The Silo That Lasts For Generations"



A perfect ensilage preserver in all parts, through all weather conditions. Handsome, durable, convenient is "the skyscraper of the farm" and a most valuable addition to your farm buildings.

Natco Silo Wall Note perforated shell providing firm anchorage for mortar joints

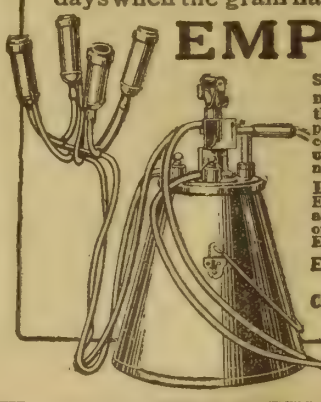
Tell us what you are thinking of building. We have plans for barns, corn cribs, garages, etc. free.

National Fire Proofing Company
1123 Fulton Building
Pittsburgh, Pa.
23 Factories—Short hauls—Prompt shipments.

An Hour Longer in the Fields

DON'T knock off so early for milking. Install an Empire Mechanical Milker. Keep your team, yourself and your men in the fields working an hour longer. It means real money, especially on busy days when the grain has just *got* to be taken care of. The

EMPIRE MECHANICAL MILKER



saves time, labor, expense and eliminates all the drudgery of milking. It increases the milk flow—means purer milk—bigger profits. One double or two-cow unit will milk 20 to 30 cows an hour. One man can take care of two double units. Cows stand content for the Empire. The natural air pressure teat massage is firm and gentle.

Let us send you description and pictures of Empire Milkers and Empire Cream Separators that are making good in many fine dairies. Ask also for our offer on the Empire Gasoline Engines and Empire Star Feed Mills. Ask for Catalog No. 56

EMPIRE CREAM SEPARATOR COMPANY
Bloomfield, N. J.
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Raised Without Milk!

Her name is "Daisy" and her owner, W. A. Riddle, of Chapin, Iowa, raised her on Blatchford's Calf Meal, which costs less than half as much as milk.

Blatchford's Calf Meal

A useful preventive of scouring. Calves raised "The Blatchford's Way" are heavier, bigger-boned and healthier. Known as the complete milk substitute since the year 1875. Sold by your dealer or direct from the manufacturer.

Blatchford's Pig Meal insures rapid, sturdy growth of young pigs at weaning time. Prevents setback.

See Actual Figures —based on results—that show you how to increase your calf profits. Write today.
Blatchford Calf Meal Factory, Dept. 4481 Waukegan, Illinois

Lotty S., P. B. J.12	3	661	6.6	43.6
J. F. Ausman				
Marvelous, G. J. 5	3	888	5.4	47.9
Ed Webert				
Glossie, G. J.... 3	1	919	5.0	46.0
M. T. Jenson				
Daisy, G. G.... 5	1	1074	3.8	40.8
Frank Rossler				
Brindle, N. 7	2	900	4.8	43.2
Kent Bros.				
No. 19, G. G.... 7	2	1002	4.4	44.0
No. 14, G. G. .. 3	1	987	4.2	41.4
F. V. Clark				
Pet, G. J. 5	1	801	5.6	44.8

RIVER FALLS TESTING.

The following cows in the River Falls and Roberts Cow-Testing Association produced more than forty pounds of fat during the period of thirty days ending November 30th:

Owner, name and breed	Age	When fresh 1915	Lbs. milk	Per cent fat	Lbs. B. fat
Alton Bros.					
Ella, H. 7		9-12	1065	3.8	40.5
Maid, H. 2		10-13	945	4.3	40.6
Nell, H. 5		10-15	1410	4.0	56.4
H. R. Taylor					
Bloom, R. S. H..6		8-15	960	4.2	40.3
Lark, S. H. 9		9-20	1110	4.0	44.4
Sis, S. H. 5		9-4	900	6.0	54.0
J. Chapman					
Daisy, H. 5		4-4	990	4.1	40.6
Martha, H. 4		10-15	1800	3.5	63.0
Rose, S. H. 3		10-3	1170	4.3	50.3
Roan, S. H. 3		5-10	1065	4.3	45.8
Cherry, S. H.....6		9-21	1305	4.7	61.3
Clover, H. 3		9-19	1710	3.4	58.1
Nell, H. 2		6-8	1290	3.2	41.3
W. A. Chapman					
Bessie, H. 4		9-1	1200	4.5	54.0
Colantha, R. H..2		4-1	1095	3.7	40.5
Johanna, H 4		9-29	1680	3.5	58.8
Nancy, H. 4		10-13	1770	3.6	63.7
Sally, H. 8		5-27	1170	3.6	42.1
Auldin Holmes					
Star, H.		11-3	1125	3.6	40.5
G. L. Battin					
Boss, G. 4		9-26	900	5.8	52.2
F. T. Wilford					
Maude, G. 6		10-19	1005	5.1	51.3
Maggie, G. 7		10-25	915	5.0	45.8
H. A. Rundell					
Lillie, J.		10-16	900	5.5	49.5
O. R. Schwalen					
Pansy, R. G.....2		10-24	855	5.2	54.9
Bloom, R. G.....4		10-10	870	4.6	40.0
W. W. Wilcox					
Louisa, H. 2		10-23	900	4.8	43.2
F. W. Bliss					
Daisy, H. 5		11-14	1065	4.1	43.7
D. E. Flower					
Lady, R. H. 4		9-28	1425	3.2	45.6
Salma, R. H. 4		10-30	1605	4.2	67.4
Star, R. H. 4		10-19	1725	3.8	65.6
Maude, H. 3		10-27	1575	4.1	64.6
Belle, R. H.....2		10-21	1155	4.5	52.0
Wm. Prisk					
Silver, H. 4		11-15	885	5.1	45.1
O. Weiss					
Eva, S. H. 7		10-20	990	4.1	40.6
Nellie, S. H. 5		11-12	1005	4.7	47.2

P. B. Van Horns, Tester.

THE DAIRY COW THE SETTLERS' OPPORTUNITY.

To the Editor:—Every year there are hundreds of farmers coming into Wisconsin from the states of Illinois and Iowa where land is high in price, to settle upon the cheap land in the northern part of the state. In many cases these farmers have but limited means and must start their farming in a very modest way.

To these men opportunity knocks not only once but is fairly calling to them through the voice of the dairy cow. She is the one sure road to success. It is possible to start with but little capital and in a few years build up a herd of cows that will be real money-makers.

There are many examples of this in Wisconsin. I know one farmer that started about fifteen years ago on a mortgaged farm. Now he has a fine farm valued at $30,000. And he has done it with the aid of the dairy cow. His success is typical of many others.

In dairying there is no large outlay of capital, and money is coming in regular through the sale of dairy products. This has many advantages over grain raising or beef raising, to the man with small capital. Also it solves the question of fertility, which is too important to be overlooked.

Of course, dairying is not a sure means to riches to anyone who can buy a cow, but to the man who will give dairying careful attention, it offers a good living. It will make any man's farming a success who keeps the best kind of cows in the right way.

Did you ever stop to think that the dairy farmer does not need as much land as the farmer who grows grain for a living? The grain grower is doing well if he gets $20 an acre. The dairyman can make three times that amount from an acre under average conditions.

Alfalfa and the modern silo have done more to make dairying a profitable business than any other thing. They have cheapened the cost of milk production until today dairying is the best paying branch of agriculture. The man who does not grow alfalfa and feed silage is miles behind his progressive neighbor who does. Also he almost always owns an automobile first.

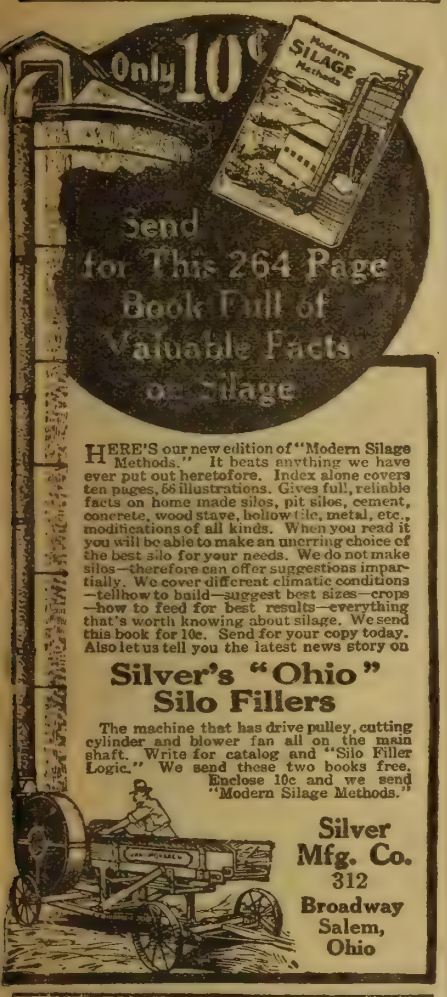
Wisconsin is a land filled with opportunity. There is no place where brains and muscle will win as much. Thousands of settlers who have become prosperous farmers are proof of this. There is room for many more and he should adopt this quaint bit of verse, familiar to us all as his motto. And may the singing of it bring him success in his battle for a home.

A little farm well tilled,
A dairy cow well filled,
A hearty farmer well willed.

Bernard E. Coffin.

The second annual convention of the Minnesota Cheesemakers will be held in Pine Island, Minnesota, February 8th. John J. Roch, of Zumbrota, is chairman.

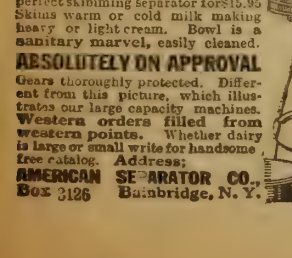
Farmers' Week at Madison, February 7th to 12th, will probably be the most complete in the history of the state. Farmers and others interested in farms will do well to attend these meetings.



HERE'S our new edition of "Modern Silage Methods." It beats anything we have ever put out heretofore. Index alone covers ten pages, 56 illustrations. Gives full, reliable facts on home made silos, pit silos, cement, concrete, wood stave, hollow tile, metal, etc., modifications of all kinds. When you read it you will be able to make an unerring choice of the best silo for your needs. We do not make silos—therefore can offer suggestions impartially. We cover different climatic conditions—tell how to build—suggest best sizes—crops—how to feed for best results—everything that's worth knowing about silage. We send this book for 10c. Send for your copy today. Also let us tell you the latest news story on

Silver's "Ohio" Silo Fillers

The machine that has drive pulley, cutting cylinder and blower fan all on the main shaft. Write for catalog and "Silo Filler Logic." We send these two books free. Enclose 10c and we send "Modern Silage Methods."



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B. V. T. Silo

Dead air is the best insulation against frost. The B.V.T.'s three dead air spaces keep Jack Frost away from silage. Note the tile. Large middle spaces hold lots of dead air. Narrow outside spaces are plugged at both ends of tile by mortar joint. Sealed absolutely air-tight and forming strong tongue-and-groove joint. Nothing like it in any other tile. It's patented. Why the B.V.T. Silo is the strongest, most permanent and most efficient silo fully explained and illustrated in our Silo Book E. Send for it.

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A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk making heavy or light cream. Bowl is a sanitary marvel, easily cleaned.

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Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address:

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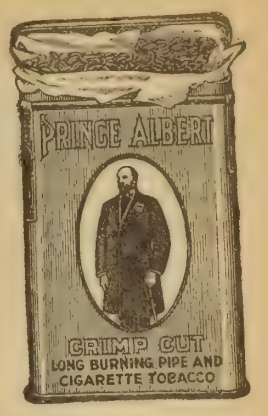
Prince Albert paves the way



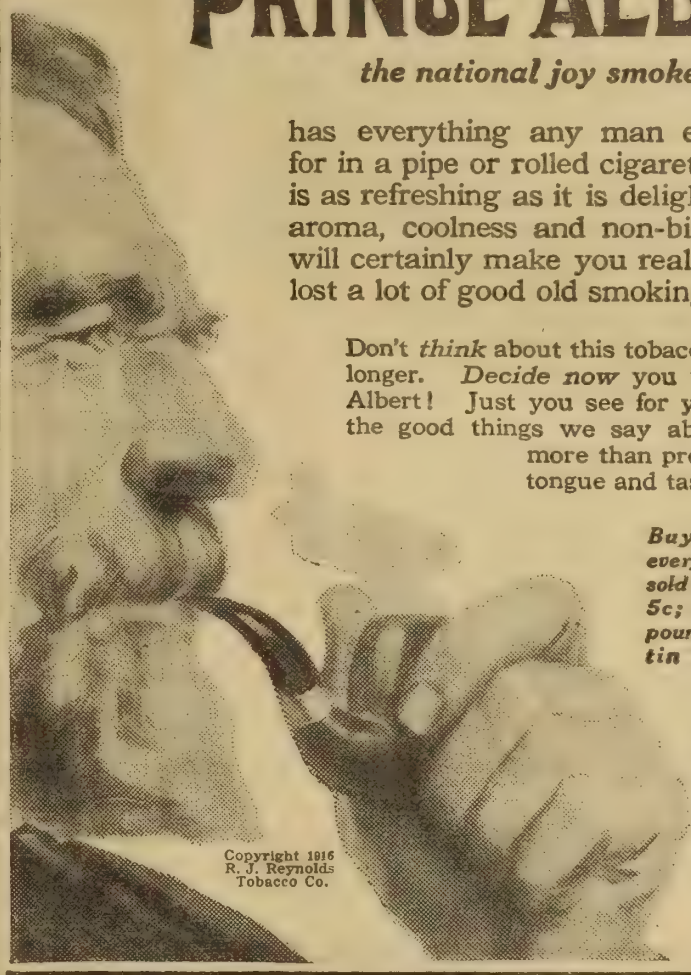
for men to get a new and cheerful understanding of how good a pipe or rolled cigarette can be. If you *think* you can't smoke a pipe or a makin's cigarette; if you are taste-tired, we tell you Prince Albert will bring you back without any fuss or feathers—quick! The patented process fixes that—and cuts out bite and parch!

PRINCE ALBERT

the national joy smoke

has everything any man ever yearned for in a pipe or rolled cigarette. Its flavor is as refreshing as it is delightful; and its aroma, coolness and non-biting qualities will certainly make you realize you have lost a lot of good old smoking time!

Don't *think* about this tobacco question any longer. *Decide now* you will try Prince Albert! Just you see for yourself that all the good things we say about P. A. will more than prove out to your tongue and taste!



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R. J. REYNOLDS TOBACCO CO.
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The Automobile Center
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44 Automobile Factories. They all know and endorse our school. Students can go through them, including Detroit Electric Service Department, without extra charge. Remember, ours is the Old Reliable School, in the heart of the Automobile Industry. Start course anytime. Write for full particulars, guarantee and copy of "Auto School News" and new pictorial catalog—just out—ALL FREE. Or better still, jump on a train and come to Detroit, as hundreds have done.

Learn the automobile business in Detroit and learn it right.

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TABER LINED SILO

Non-Shrinkable—Practically Everlasting, Rot-Proof, Worm-Proof, Storm-Proof, Acid-Proof.

The latest improved Silo. A woodstave Silo; choice of lumber. Entire Silo creosoted. Special paint for outside. Acid-Proof Lining for coating inside after erection. The finest door and door frame on the market.

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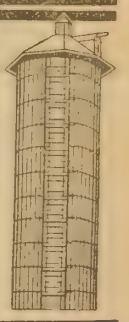

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Rewinding Magneto.

I have a Splitdorf low-tension magneto. Can it be rewound so as to make a high tension magneto out of it?

Answer.—It cannot.

The Sleeve Valve Motor.

What are the advantages or disadvantages of the sleeve valve motor compared with the poppet valve type?

Answer.—The advantages are freedom from noise, a quick opening and closing of the intake and exhaust ports, less liability to carbon trouble and several other minor features tending to make a quiet and efficient motor. The chief disadvantage is the cost.

Lights from Ford Magneto.

Would it hurt a 1912 Ford touring car to run lights from the magneto? If so, in what way? What should be the voltage of the lights?

Answer. — The Ford Company is strictly opposed to the idea of running lights from the magneto on cars built previous to November, 1914. They claim that what extra power the magneto has should be kept in reserve for ignition purposes. Many owners are operating lights from the magneto without serious results. Six volts, ten candle power lights are used.

Cylinder Types.

What are the advantages or disadvantages of casting cylinders single, in pairs or en bloc?

Answer.—It is less expensive to replace a single cylinder when worn or scored than to replace all of them, as must be done if the cylinders are cast en bloc. However, cylinders cast en bloc greatly strengthen the crank case, preventing springing of the crank shaft, thereby making the bearings wear longer. The cylinders cast in pairs are more easily cast and less expensive to replace than cylinders en bloc, but they have comparatively little stiffening effect upon the crank case.

Running Feed Grinder with Auto.

I have a twenty-two-horse-power Metz roadster in good condition. How large a feed grinder would this engine run? Could I use the self starter sprocket wheel to drive with? How large would the grinder pulley have to be? Would the same size chain used on the starter be strong enough?

Answer.—Your engine should run successfully any feed grinder that does not require more than twelve horse power. We would not advise you to drive the grinder by a chain from the starting sprocket. It would be better to mount a jack shaft under a platform, the jack shaft being provided with a belt pulley and also two wide-face pulleys, the same distance apart as the rear wheels of the auto. Drive the jack shaft by allowing the rear wheels of the auto to rest upon the pulleys, blocking the front end of the car securely. The driving pulleys should be about the same diameter as the auto wheels, and the belt pulley about eight inches in diameter and six or eight inches in diameter of the grinder pulley in inches, divide 2800 by the R. P. M. the grinder pulley should make.

Automobile Drive Shafts.

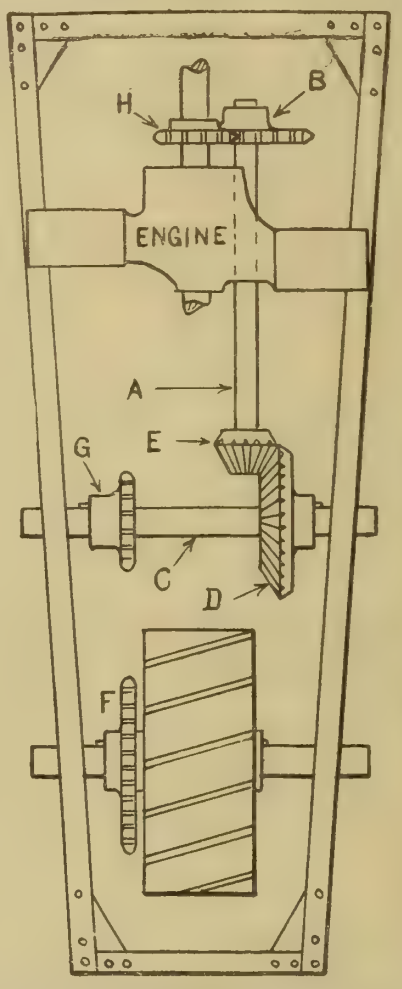
What resists the twisting action on the rear axle housing when the brakes are applied? I notice on some cars that the lower half of the springs have backward and forward play; therefore, it seems to me that all of the strain is on the driving axle. Is more than one universal joint necessary if the transmission gears are at the rear axle? I know of one car having three universal joints, the gears being under the front seat. It is a "three unit" system. Is there any desirable advantage in this?

Answer.—The twisting action when the brakes are applied is taken by the driving axle housing, often called a "radius tube" or "torsion tube." Only one universal joint is necessary when the transmission is on the rear axle. There is no advantage in a three-unit system. The general trend of opinion favors the unit power plant, combining engine and transmission in one unit. However, this is largely a manufacturer's problem, the purchaser being little affected if the details of the design are well worked out.

The Buick Tractor.

In your last issue I saw where a man wanted to make a tractor out of an old Model F Buick. I have made a three-wheel tractor of this kind, using an old header wheel, sprockets and chain and a Buick engine and transmission mounted crosswise of the frame. I would call it a success on level land, but it is not balanced right for hilly ground where there are ditches to cross. I might improve mine by making it shorter—setting the front wheels back—and adding extra weight to the rear. I enclose a sketch of my machine.

Answer.—We much appreciate the above letter, also the letter following. It is very interesting and instructive to see what has been actually done



and what results have been obtained. The sketch of the above machine is shown in the figure. It is simple and well arranged. The engine is mounted across the frame, the transmission side toward the front. A shaft, A, is mounted under the engine. Sprocket B is keyed to this shaft, B being driven from the transmission sprocket H. Shaft C is driven by shaft A through the bevel gears D and E. The drive wheel sprocket F is driven by a chain from sprocket G on shaft C. No differential is required, as there is only one drive wheel. Sprocket B is the sprocket used on the Buick differential. The bevel gears have a two to one reduction.

Another Tractor.

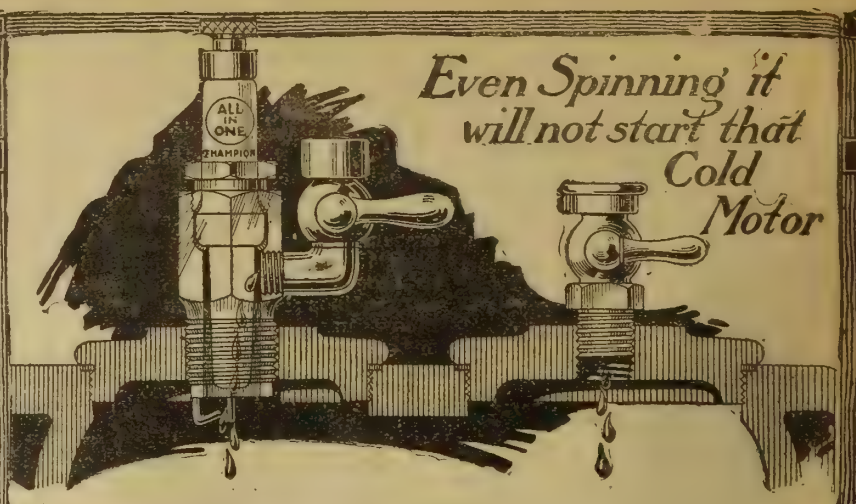
Along in the early summer I wrote you in regard to making a tractor of a Cartercar auto. Your reply was in one of the August numbers. I have just got the machine put together and am trying it out. It is surprising what it will pull. The only thing seriously wrong is that it is so light in front that it steers hard under load. It weighs 2,160 pounds. It will probably have to add dead weight as far ahead as possible. My idea is to carry considerable water for cooling in addition to the radiator, and set the gasoline tank by the engine, as near the carburetor as possible. Ahead of the radiator I will also place a box into which I can shovel dirt if necessary to hold it down. I intend to begin hauling oats with my rig in a day or two if the roads continue good. I expect to haul three wagons easily at four miles per hour. My rig has cost me $150. I am using cast chain and sprockets at present. It would probably pay me to put on steel sprockets and roller chain at an expense of $75 additional. My drive wheels are forty-eight inches in diameter. The gear ratio is 28 to 1.

Answer.—This letter contains some very good suggestions. We have no doubt but that much useful work will be done by the tractor.

The Motor Sleigh.

I am thinking of making a motor sled, using four runners; also two wheels thirty inches high with lugs on them to run in the snow. It weighs 600 pounds. Would a one and one-half horse power engine pull it? Do you think it is practical? What speed would it travel if the engine makes 750 revolutions per minute?

Answer.—We rather doubt that this idea is practical. Even if this sort of drive is practical for a sleigh, the engine should have not less than four horse power; eight would be better. With a six-to-one gear reduction between the engine and drive wheel, the sleigh would travel about ten miles per hour.



Even Spinning it will not start that Cold Motor

—not if it's a really cold day.

Not even if you prime through the priming cup or by removing the plugs.

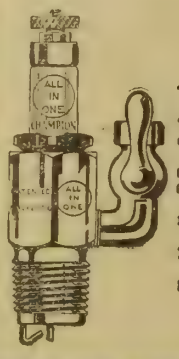
But there is a sure way.

Tho' gasoline will not vaporize fast enough in a cold cylinder to spread across the combustion chamber—to reach the ignition point—

You can put it *right at the spark gap* of an

"All-in-One" Champion Priming Plug

"TOLEDO MADE FOR THE WHOLE WORLD'S TRADE"



That's the sure way.

No need to prime and prime again in the old way—no need to freeze your fingers—no need to lose time.

The All-in-One Champion is a combination spark plug and priming cup. The gasoline runsdown through the center of the plug and actually collects on the electrodes—right where the spark flashes.

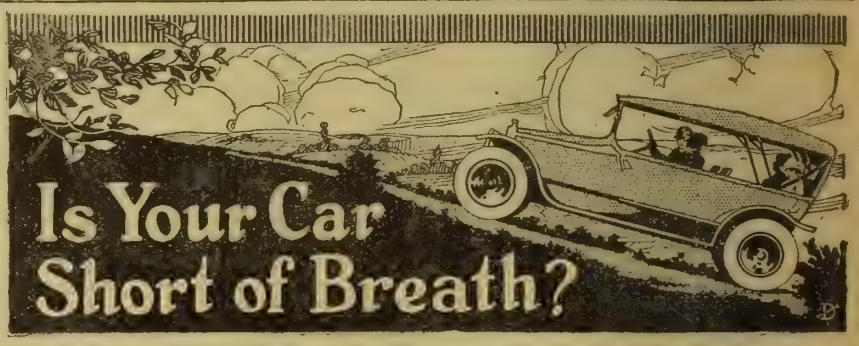
It spreads around the rim and entirely surrounds the spark gap with a cloud of rich vapor, so when the *first spark* jumps, there's an explosion—and your motor starts, every time.

Get a set today and assure the *instant* service of your automobile, regardless of the weather.

Your dealer will supply you with the kind especially designed to serve your motor. The price is $1.25 each.

The name "Champion" on the porcelain—not just on the box—is your guarantee of spark plug dependability.

Champion Spark Plug Company,
502 Avondale Avenue Toledo, Ohio



Is Your Car Short of Breath?

Pants up hills—lags on the level—eats up gasoline—always a tail-ender. That's a sign that the piston rings in the motor are worn out and the compression is weak. You can cure the trouble by installing

McQUAY-NORRIS **LEAK-PROOF PISTON RINGS**

LEAK-PROOF Rings will stop those compression losses and restore the full power of the motor. And they'll keep it free from carbon—make it run sweet and true. They save gasoline and oil, reduce motor wear and last as long as the motor.

LEAK-PROOF Piston Rings are made in all sizes—easily installed. You can get them from your supply dealer. If he hasn't them—write us, giving his name. We'll see that you are supplied.

McQuay-Norris Mfg. Co., 2820 Locust St., St. Louis, Mo.

Send for FREE booklet—"To Have and to Hold Power." It tells all about compression and what LEAK-PROOF efficiency means.

Fruits and Garden

THE KEIFER PEAR.

The Keifer pear can be grown successfully and is well worth growing. It is adapted to a wide range of country extending far north of the habitat of the bulk of pear varieties. Its hardiness of tree and vigor of growth make it a conspicuous object in northern orchards.

The Keifer sometimes blights, especially if grown upon rich manured soils. So it is advisable to plant upon poor soils and after the trees are well started do not cultivate. It is so vigorous that it needs no stimulants in the way of culture and enrichment.

Fruiting begins at about the tenth year and crops will be more prolific if other varieties are set with it, for its bloom is not well supplied with pollen. Blight will often strike the trees after they have borne a few crops, especially if they are crowded and have poor air circulation. The best location for the trees is upon high land.

But even if blight comes so that some trees die plant two more for every one you lose. It is common to see old trees which are half dead—or more, and the few living branches will be loaded with fine pears. It is not advisable to cut an old tree even if its looks are disreputable.

As is well known, the Keifer is not an early pear, not meant for summer use, and therein is its chief value. It will keep and be useful in early winter. There was never yet a Keifer grown in this latitude and fit to eat or use at time of gathering. The fruit is to be picked about mid October before there comes a heavy freeze. Put it at once in piles of five or six bushels either on the barn floor or along side of a haystack. Then cover with a foot of straw or several old blankets. This is needed because they mellow up much better if kept in the dark. After two or three weeks sort them over and pick out the ones which have turned yellow. These will be found in fine condition for cooking or table use. And they will be just right for marketing if you have a surplus.

There is nothing good about a Keifer when it is green and hard. It is then no better than a green peach—as unpalatable and worthless as anything which can be named. But as they ripen there is a marvelous change. They become mellow and rich. Not as good as first-class pears growing on southern trees, too tender for our rigid clime, but they are good enough for a desert fruit, appreciated by all the family and especially by the kids.

Sometimes there is a little sandiness about the core, but the Keifer is all right. A store of them may be kept and serve the family for every meal from November 1st to Christmas.

Every farm home should have a dozen pear trees about it and if the reliability of the Keifer were better understood they would have them. It is a pity to see so many people going without this important fruit when they can be grown at a cost of 25 cents per bushel.

It is not necessary to pay more than 10 cents each for thrifty two-year-old trees and any homemaker who will plant and protect them will live to thank his friends for the hint.

THE PROGRESSIVE STRAWBERRY.

Among the many varieties of the fall or everbearing strawberries the Progressive is by far the favorite with those who have had the most experience. It has the following good qualities to recommend it: The fruit is large and is borne in profusion; it is a good plant maker and as hardy as any variety. The berry is good in quality and ripens evenly. The color is a dark red and the deep-set seeds make the surface look wrinkled, quite in contrast with those varieties which have a perfectly smooth and varnished surface.

The form of this berry is not round, but rather triangular. The fruit stems are of moderate length, but not strong enough to hold up the heavy bunch of berries, so perhaps mulching will always be advisable.

It is needless to add that the yield of fruit is very large. Mr. Clarence Wedge, of Minnesota, than whom there is no better authority, tells of what he did with one square rod of this berry. The plants were set May 1st, ten by twenty inches. He cultivated carefully and cut all bloom and runners until July. Then during the drouth and heat of that month he irrigated the patch thoroughly five times. He began to pick fruit about July 20th. The berries were weighed carefully each picking until the close of the season in October. And the total was 1,345 ounces, or seventy-four quarts, allowing eighteen ounces to a dry measure quart.

It was a total of two and one-third bushels and an average of one quart per day for the picking season. And note this result was obtained the same season that the plants were set.

Picking began in about fifty days after planting. As a rule, we plant berries in April and we have to wait over 400 days to get a crop. Even a cross-eyed man can see some advantage in this.

But this is not the end of it, for after the first crop if the runners are encouraged in the fall the bed will be in splendid shape for the second crop beginning the following June. And with favorable conditions the second crop will be double the first. With proper care this berry will certainly produce enormous crops in July, August and September. In some seasons watering will be necessary, because in those months we usually get our dry times.

This much may be said with certainty: Every family, that is, every country family, can provide itself with strawberries for every day in the summer and fall up to the time of heavy frosts.

The question occurs, will it be possible to make a commercial success with this berry? At the rate of yield named above an acre would produce over 10,000 quarts, and sold at the moderate price of 12½ cents would yield a total of over $250. And that is the first of planting. The second year with good care the yield would easily be doubled.

It is doubtful if very high prices can be obtained as a rule, because fall berries will be in competition with grapes, peaches and other fruits.

Still, there are many people who are so exceedingly fond of strawberries that they will buy them at any time.

You Can Depend On These Brands

NORTHRUP, KING & CO.'S SEEDS

FOR over 30 years we have been growing and selling seeds suitable for northern conditions. Our reputation for supplying seeds of fine quality, strong germination and high purity, together with a policy of square dealing, has built up a constantly increasing volume of business.

To protect our customers and the high reputation of our seeds, the word "Sterling" to designate the very best obtainable in seeds, was adopted several years ago as a trade mark. We now offer two new brands, for which trade marks have been registered in the United States Patent Office at Washington. Our customers may always depend on these three brands being uniform in quality and up to the standard set for each.

What Our Three Brands Stand For

"Sterling Brand" Seeds For those who want the best. Unexcelled for purity, germination, plumpness and color. Sold only in sealed bags. LOOK FOR THE STERLING TRADE-MARK.

"Northland Brand" Seeds The greatest value for a reasonable price, of uniformly superior quality, carefully selected for high purity and strong germination. THE NORTHLAND GOOSE IS ON EVERY BAG.

"Viking Brand" Seeds Lowest in price, consistent with dependable quality. Strictly recleaned and tested for purity and germination. EVERY BAG BRANDED WITH THE VIKING SHIP.

32nd Annual Catalogue

This is the best book we have ever issued. It has been enlarged by the addition of many new varieties, illustrations and cultural directions. Every seed user will find it valuable, as it contains practical ideas and suggestions for the garden, farm and lawn.

A copy will be mailed you free, upon request.

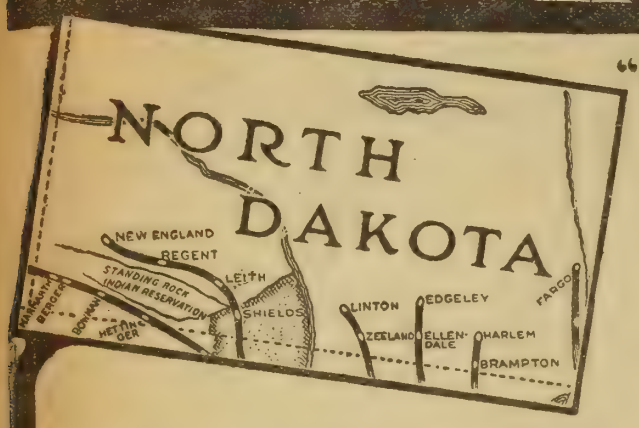
Sold by 15,000 Dealers

In nearly every community in the Northwest there is a dealer who sells our seeds. This wide distribution makes it easy for every planter to buy Northrup, King & Co.'s tested seeds. Your dealer will take your order for any variety of seed you want.

We have arranged to ship orders immediately to dealers so you will be caused neither inconvenience nor delay. Order early.

NORTHRUP, KING & CO., Seedsmen. Hennepin Ave. at First St. Minneapolis, Minn.

North Dakota



"No Better Place than this to Build a Home"

That is the opinion of Mr. Harley Jennings, a Minnesota man, who moved to North Dakota in 1907, filing on Government land. He has been engaged in farming and stock raising ever since.

"Splendid future as a stock and farming country," says Mr. Jennings. "50 acres in crop this year could not look better"—"A good class of people have settled here"—"There are good schools and churches"—"I could not ask for better neighbors, and in my opinion *there is no better place in the world than this to build a home.*"

Another settler, Mr. H. P. Heath, who came here from Cass County, Iowa, in 1905 writes that his oats this year yielded 70 bushels and wheat 35 bushels an acre. He says, "I have made good since coming here and have no desire to leave; my faith in the future of this country is stronger than ever."

We have many such enthusiastic letters from men who feel that they have found here a region where conditions permit the man with small means to acquire a highly productive farm which will not only yield a good living but insure his future. They are all published in our North and South Dakota book which can be secured free upon request to the undersigned.

Chicago, Milwaukee & St. Paul Railway

GEO. B. HAYNES, General Passenger Agent, Chicago

H. F. HUNTER, General Agent, 613 Railway Exchange, Chicago

Start Tractor Farming

Bigger Crops—Less Expense—Easier Work

A TRACTOR gives you the power you need to practice best farming methods plow deep and do all your work in the right way at just the right time, which means bigger crops. Gives you power that doesn't need to stop for rest—power that hot weather and hard ground can't stop—power in a concentrated form that one man can handle. You can't turn a switch and stop a horse eating. But a tractor stops eating when it stops work, and when it is working it costs you less than to feed enough horses to do the same work.

There's a Size Avery Tractor to Fit Your Size Farm

Avery Tractors are built in sizes to fit any size farm. They have sliding frames, double drives, two-speed gears, low speed heavy duty tractor motors, extra large crankshafts, renewable inner cylinder walls, no pumps or fan.

Prices: They are sold at low prices as follows: 3-Plow Tractor, $760 cash; 4-Plow Tractor, $1120 cash; 5-Plow, $1680; 6-Plow, $2145; 8-10-Plow, $2475. Avery "Self-Lift" Plows and "Yellow-Fellow" Threshers are also built in sizes to fit any of above size tractors. We also build a special smaller size tractor for $295 cash. All built and backed by an established company owning a large factory and many branch houses which insure permanent and prompt repair and expert service.

Write Now for New, Free, 1916 Avery Tractor, Plow and Thresher Catalog and learn all the facts about Tractor Farming, Threshing, Road Building, etc., with an Avery Outfit.

Avery Company, 1312 Iowa St., Peoria, Ill.

Ask for Address of Nearest Branch or Jobber

AVERY

"One Man Outfits 6 Sizes Fit Any Size Farm

GUARANTEED Seed Corn

THE ADAMS SEED CO. **BOX 50, DECORAH, IOWA**

The fall berry is a great acquisition and it will be widely planted. The price of plants has been very high, but it will soon decline, for it multiplies like the Warfield or Dunlap. But even $5 per hundred is not more than they are worth to get a start.

SLOW IN ADOPTING ADVANCED ORCHARD METHODS.

To the Editor:—The man who causes two blades of grass to grow where only one grew before has been called a public benefactor. We do not dare to apply that to the growing of apples, for we are raising too many now—such as they are, but if every farmer would succeed in growing a sound apple where he is growing a wormy or scabby one now a big question would be solved. Remember I am speaking from the standpoint of the farm orchardist. The specialist or commercial grower has learned this lesson long ago and the ones who have not learned it have dropped out or are trailing along at the rear of the procession.

The average farmer is sometimes a little slow in adopting advanced methods. He wants to "be shown." We remember the slow progress of the silo in its early day. Our own silo was one of the first hundred in the state and farmers came for miles to inspect silo, contents and stock and their comments were very amusing. One was sure the cows would not survive the winter; another would wait and see how long their teeth would withstand the action of the acid in the silage.

What was the principal factor in the later growth of the silo? While the farm institute and agricultural press must be given much credit, the successful silo, the first in its neighborhood, did more than anything else. When a farmer sees that his neighbor is beating him along any particular line he wants to know the reason, and if that reason is the silo he is going to have one of his own.

We believe that one successful farm orchard in a community will do more to correct the present abuse along this line than anything else. How are we to get it? Here is one plan: The farmer with several boys may have one that is horticulturally inclined. Turn over the orchard to him; make him responsible for everything; buy him a year's membership in the state horticultural society for 50 cents; put him in the way of getting all of the free bulletins and circulars given out by the society; encourage him to exhibit at the fairs—there is no educator like the show ring, where there is a competent judge. We believe he will make a bigger return on the investment than in any other line on the farm, and we venture the opinion that it won't be long before he will be imitated by many boys in the neighborhood. If we can get the boys started right in this it will be of more vital importance than converting older ones.

The present season has been a very discouraging one for the farm orchardist, and for several reasons. The same combination of events may not happen again for a long time. The crop of early apples was one of the largest ever raised, with the keeping quality much below normal, many varieties being almost as perishable as small fruits. Added to this was the immense peach crop shipped into apple territory and sold in some instances at less than apple prices.

The habit of farm orchards in bearing only one crop in two years is another thing that can be remedied to a certain extent. In my own orchard we always have annual crops; not always the same, for the climatic conditions vary each year to a certain extent, but the condition of the tree controls to a great extent. The tree in the farm orchard that is left to shift for itself soon produces too large a bearing surface, and after bearing an abnormal crop, if it has not been properly nourished, is in no condition for a crop the next year. Judicious pruning and fertilizing will correct these conditions.

The marketing of the crop is the one big unsolved question that confronts us all, and we hope to see in the near future a state-wide organization to handle this department. We believe the members of the state horticultural society are coming to the next annual meeting with the determination to "start something." Let us all be "boosters." H. C. Melcher.

My Low Prices And High Quality Cause Big Sensation

Below are samples. Read them over. Compare them and remember everything I sell is first-class and I guarantee it. More customers is what I want. My prices get them, my quality holds them. Listen! Small profit, small selling expense for cash, no bad accounts for you to help pay for, no commissions to agents, very little advertising expense and because I am an actual grower, not a jobber, and sell direct from nursery to you is why I can make such low prices and save you 30 to 50 per cent. Read on.

100 Windbreak Evergreens Prepaid. $1.50

The finest quality evergreens I ever grew. Hardy and tough little trees, root pruned and ready to set in your nursery row. Guaranteed to reach you alive and in growing condition. A bargain that will please and satisfy—the kind that make Ferris customers for life.

APPLE TREES
4 to 6 Ft. Finest Quality

The biggest bargain ever offered. Really worth 30c each. Not a mark or blemish on them. Every tree in perfect growing condition. 25 varieties to select from, and here they are: Duchess, Early Ripe, Yellow Transparent, Whitney, Wolf River, Oklahoma, Peerless, Iowa Blush, Wealthy, Wineasp, Patten's Greening, Price's Sweet, Peter, Northwestern Greening, Salome, Talman Sweet, Arkansas Black, Baldwin, Tewaukee, Jonathan, Grimes Golden, Roman Stem, Stayman's Winesap, Gano and Ben Davis, and in any quantity you may want from ten trees up. Every tree true to name and guaranteed to reach you in good condition. **10c**

STRAWBERRIES—300 FOR $1.00 I have thousands and thousands of first-class plants, popular variety. Cheap at $1 per 100. At my special price they are a bargain that you should accept quick. Now. Today.

98c DON'T MISS THIS BARGAIN By Parcel Post, Prepaid

for following collection: 50 of our new Jones strawberries, 12 Cumberland raspberries, 2 Concord grapevines, two years old; 2 Niagara grapevines, two years old, all for 98c; if ordered at once 1 Crimson Rambler rose bush, two years old, free. Send your order for any or all of these bargains, direct from this ad. You are absolutely safe and will be treated square because all ads in this paper guaranteed by publisher. WRITE FOR FREE CATALOG full of bargains. Printed in colors. Different from most catalogs. Contains suggestions for planting and growing. Address

EARL FERRIS NURSERY CO.,
265 Bridge St. Hampton, Iowa

$3,000.00 IN ONE YEAR

Make it repairing automobile tires. Punctures and blowouts are common. Tires need retreading and vulcanizing.

EACH AUTO SOLD MEANS MORE TIRES TO MEND.

Auto tire repair field a hundred times bigger and better than old bicycle days. Johnson, Tex. writes: "I made as high as $13 profit in one day." Investigate today. Ask for FREE catalog.

BAYWOOD TIRE AND EQUIPMENT CO.
1078 Capitol Ave. Indianapolis, Ind.

Fill It Only Once A Week

Clean it only once a year. No wick. No glass globe. No danger even if rolled around in straw. Can't explode. Can't spill. Use it around barns, cow sheds, chicken houses, cellars, etc. The

COLEMAN GAS LANTERN

Makes and burns its own gas. Gives 300 candle power of strong steady light. Can't blow out or smoke. Made of heavily nickeled brass, Mica Globe. Guaranteed for five years. Ask your dealer—if not on sale in your town yet, write for catalog of 20 different kinds Gas Lanterns, Table Lamps, etc. Dealers or agents wanted in every locality.

THE COLEMAN LAMP COMPANY
208 St. Francis Sa., Wichita, Kansas
283 E. Sixth Street, St. Paul, Minn.
1013 Summit Street, Toledo, Ohio
417 Akard Street, Dallas, Texas
31 South Clinton St., Chicago, Ill.

Galloways Porterhouse Tomato

Send ten cents for large packet Galloway's New Porterhouse Tomato. One grower says, "Solid balls of luscious meat. I never saw its equal." Great size, firm and meaty. Just like a beefsteak. You also get my 1916 FOUR-COLOR PURE SEED BOOK AND PLANTING GUIDE FREE. Everything from A to Z for Field, vegetable, flower seeds; fruits, shrubbery, trees, plants—all kinds. Lowest wholesale prices.

GALLOWAY BROS. & CO., 35 Galloway Sta., Waterloo, Iowa

Free for Testing

A pair of mated EVERBEARING STRAWBERRY PLANTS FREE. If you will report as to your success with them. Will bear loads of big, red, berries from June to November. We have counted 480 berries, blossoms and buds on a single plant. A postal will bring the plants, also enough seed of the new CEREAL PETERITA to plant a rod square of ground. Also a pkt. of perennial ORIENTAL POPPY seed. Send 10 cts for mailing expense or not, as you please. Write today and get acquainted with

THE GARDNER NURSERY COMPANY
Box 730, Osage, Iowa.

"More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR.
BOX 1 STERLING, ILL.

THE HOME

LETTERS intended for publication should be accompanied by the name and address of the writer not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., The Wisconsin Farmer, Madison, Wisconsin.

THE LADY OF TEARS.

Through valley and hamlet and city,
Wherever humanity dwells,
With a heart full of infinite pity,
A breast that with sympathy swells,
She walks in her beauty immortal.
Each household grows sad as she nears,
But she crosses at length every portal,
The mystical Lady of Tears.

If never this vision of sorrow
Has shadowed your life in the past,
You will meet her, I know, some to-morrow,
She visits all hearthstones at last.
To hovel, and cottage, and palace,
To servant and king she appears,
And offers the gall of her chalice—
The unwelcome Lady of Tears.

To the eyes that have smiled but in gladness,
To the souls that have basked in the sun,
She seems in her garments of sadness,
A creature to dread and to shun.
And lips that have drunk but of pleasure,
Grow pallid and tremble with fears,
As she portions the gall from her measure,
The merciless Lady of Tears.

But in midnight, lone hearts that are quaking,
With the agonized numbness of grief,
Are saved from the torture of breaking,
By her bitter-sweet draft for relief.
Oh, then do all graces enfold her;
Like a goddess she looks and appears,
And the eyes overflow that behold her,
The beautiful Lady of Tears.

—Ella Wheeler Wilcox.

TRAINING CHILDREN IN GENTLE MANNERS.

It is the general opinion that young people are inconsiderate guests. They close doors noisily, leave lights burning, their rooms in disorder, and in various ways annoy their hostess and other members of the household. But the child can scarcely be blamed altogether for this state of affairs. Children learn largely through imitation and if those who are responsible for their training are remiss in observing rules of hospitality and gentle manners, they cannot expect the children to be model of gentleness and consideration. Manners are hard to cultivate when one is grown, but they are easy to cultivate or change in a child, and what the child learns when young he does not easily forget.

One day a mother was commended on the beautiful manners of her little five-year-old daughter. A friend asked the mother at what age she commenced to train her daughter and this was the answer: "I think it was some time before the stork brought her to me. I know that I was very careful about her manners the very day the stork brought her to me."

Parents who wish their children to be distinguished for their gentle manners should begin by being good examples. They should not be noisy and rude before them and expect them to be quiet and well bred. As one noisy youngster said when he was censured for talking loudly, "Mother makes all the noise she wants to and I do not see why I should not be given the same right."

As a rule children have, naturally, soft voices and quiet manners, and it is only when they are surrounded by persons who are careless and noisy that they become loud and boisterous. A mother who is courteous to her friends and those near to her should insist that her children give the same thoughtful care to playmates and those in the home. "If you please" and "I thank you" are simple words, but they make life sweeter.

When you notice your child becoming careless and forgetful about these matters, do not let it pass by. Be sure to correct him, but do it in a gentle way and, above all, when you are alone with the child. A child is sensitive and resents being corrected in public and, besides, it will not take him long to learn that that very act is a breach of good manners on your part. Explain that the main difference between a gentle and an ill-bred man or woman is the difference in manners. Because of this the one is sought after and the other shunned.

CROCHET STITCHES.

Since we began giving directions for different crochet patterns in the Home Department we have had a large number of letters from readers who have never done any crochet work and who ask for instruction as to how to make the stitches. For the benefit of these we give herewith an explanation of the different crochet stitches:

Chain (ch)—Make a slip knot on needle, draw thread through this loop. Again draw thread through this second loop and continue until the chain is of length desired.

Slip Stitch (sl st)—Put hook through work at stitch indicated in directions; draw thread through work and loop on needle at same time.

Double (d)—Put hook through work, thread over hook and draw through, making two loops on needle; thread over again and draw through both loops.

Half Treble (h t)—Thread over needle, hook through work, thread over and draw through, giving three stitches on needle, thread over and draw through the three stitches at once.

Treble (t)—Thread over the needle, hook through work, thread over and draw through, giving three stitches on needle; thread over, draw through two, over again and draw through remaining two.

Double Treble (d t)—Thread over twice, hook through work, thread over and draw through, giving four stitches on needle, *thread over and draw through two; repeat from * twice.

Long Treble (l t)—Thread over three times, hook through work, thread over and draw through, giving five stitches on needle, thread over and work all off by twos.

Picot (p)—A picot is formed on a chain by joining the last four stitches (or any given number) in a ring by working a double in the fourth stitch, counting from hook. In making picots on doubles around the edge of a pattern, the picot is worked in the top of the last double.

HOW TO WASH WOOLEN GOODS, AND WHY.

To wash woolen goods successfully the water should be soft and warm, not hot, and of uniform temperature throughout the operation. Never put soap directly on the fabric and use only the milder kinds. Make a nice suds before putting the garment in the water. Scrub gently and wring through loosely-set wringers.

Once washed, the goods should be immediately hung up to dry and never allowed to lie about wet. It is best to dry woolens out of doors if the air is dry and the temperature above freezing.

The reason for this careful treatment is found in the peculiar nature of the wool fiber. Its outer layer is made up of minute serrations which are arranged in some such manner as the scales on a fish. These scales are softened and opened up by hot water and by such alkalies as are found in the harsher soaps. While in this softened condition the pressure due to hard scrubbing is sufficient to cause the serrated edges of the fibers to interlock or felt, and felted fibers

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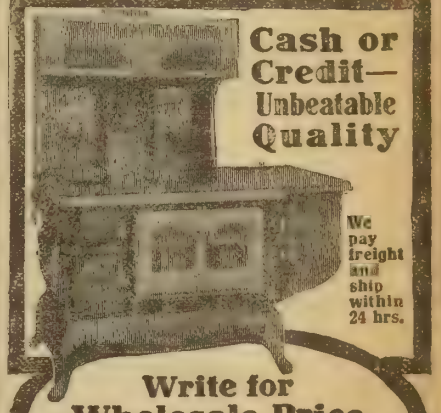

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are usually hard and brittle. This is because the alkali which has helped in the felting process has removed from the cells certain fatty substances which serve to make the fiber soft and pliable.

Fabrics which have become hard and felted have not only lost their attractiveness, but also most of their usefulness as a protection from the cold. This latter quality is due to the "air blanket" which forms in the spaces between the fibers, for quiet air is, as is well known, a very poor conductor of heat and cold. Therefore, when the fibers have become interlocked or felted and the air spaces are lost, the fabric is no longer able to materially aid the body to retain its heat.

1916 IS BABY YEAR.

The facts about American babies, the needs of American babies and America's responsibility to her babies will this year be known as never before, because the first week in March will be Baby Week throughout the country.

More than 400 communities representing every state in the Union are already laying their plans for Baby Week, according to the Children's Bureau of the U. S. Department of Labor, in order that during those seven days the needs of the babies may be so presented that all the parents in those communities will learn a little better how to care for their babies and all the citizens will realize that they have a special obligation to safeguard the conditions surrounding babies. And it is confidently believed by those who are interested in this nation-wide Baby Week that the remainder of the year will be marked by a strengthening of all community activities for saving babies' lives and giving them a better chance to grow to a healthy maturity.

The Baby Week idea originated in Chicago not quite two years ago. Then New York had a Baby Week, and Pittsburgh and other cities. Such practical benefit has in each case resulted that the General Federation of Women's Clubs has undertaken to promote this nation-wide observance. State health officials and national organizations interested in public health and child welfare have taken up the plan and in various ways are giving it not only their sanction but their active co-operation. The extension divisions of the state universities have promised special assistance in interesting and helping Baby Weeks in rural communities.

The Federal Children's Bureau believes that Baby Week will give more parents a chance to learn the accepted principles of infant care and will awaken every American to his responsibility for the deaths of the 300,000 babies who, according to the census estimates, die every year before they are twelve months old. Therefore, the children's bureau has prepared a special bulletin of practical suggestions for Baby Week campaigns, adapted to the varying needs of communities of different types. Copies of this bulletin may be had free of charge from the Children's Bureau at Washington.

SANDWICHES FOR THE SCHOOL LUNCH.

Well-prepared sandwiches should form an important part of every school lunch. They are easily made and should be very wholesome and palatable. Variety is needed and there should be at least two kinds of sandwiches in each lunch.

The bread for sandwiches should be cut in thin slices of uniform thickness and the butter should be spread evenly over both slices in order to keep it moist and prevent any fruit filling that may be used from making the sandwiches soggy or indigestible. Sandwiches which must be made several hours before they are to be eaten should be wrapped in a moist cloth and kept in a cool place or wrapped in wax paper to prevent them from drying out or absorbing odors.

Miss Bab Bell, of the University of Missouri, gives the following directions for making a variety of sandwiches other than meat:

SANDWICH MATERIALS.

Bread and Butter.—Cut the bread in thin slices. Spread the butter evenly on both slices and press together.

Lettuce.—Make a bread and butter sandwich and place a leaf of crisp lettuce, washed and thoroughly dried, between the two slices. Put a teaspoonful of mayonnaise dressing on the lettuce leaf.

Nuts.—Make a lettuce sandwich, spread one side with nuts, chopped fine, and mixed with good dressing.

Chicken.—Chop cold, boiled chicken and moisten with mayonnaise dressing. Spread between bread. Add a lettuce leaf.

Eggs.—Chop the white of hard boiled eggs very fine. Mix the yolks with mayonnaise dressing and season with pepper and salt. Add the whites and spread between bread. Lettuce may be used also.

Dates.—Make a filling of one-half cup of stoned dates, one-half cup of sweet cream; spread between slices of buttered bread.

Pimento and Cheese.—Make a filling of one-half cup of cream cheese and one-fourth cup of chopped pimento, two tablespoons salad dressing, salt and pepper. Spread on butter evenly. Cottage cheese may be used or the pimento may be left out.

Peanut Butter.—Peanuts ground and mixed with a salad dressing make an excellent filling. The commercial peanut butter may also be used. Spread evenly between buttered bread. A crisp lettuce leaf adds to the attractiveness of this sandwich.

RECIPES.

Orange Marmalade.—Select thick-skinned oranges. Use six oranges and two lemons. Slice about an eighth of an inch thick and cover with water. Let stand twenty-four hours. Set on stove and boil twenty minutes; then let stand another twenty-four hours. Measure, and use an equal amount of sugar. Drain juice from fruit. Put sugar in juice, boil and skim; add fruit and cook slowly until clear and jellied.

Date Cake.—Pour one cupful of boiling water over one cupful of dates (stoned but not chopped). Add one level teaspoonful soda and let stand while you make the cake. For cake use one cupful of sugar, one tablespoonful of butter or lard, one and one-half cupfuls of flour. Add dates and beat well. Bake in moderate oven. Good for children's lunch.—Miss K. DeG.

Foamy Sauce for Plain Pudding.—Beat one tablespoonful of butter with one cupful of powdered sugar. Add two beaten yolks and little by little a small amount of grape juice and a little grated nutmeg. Set the bowl into the top of the teakettle of boiling water and heat for a minute or two. Serve at once.

Cream of Carrot Soup.—Wash the carrots and scrape them, cut in thin slices, until you have two cupfuls, using only the red part. Put in a stewpan with a tablespoonful of butter, one tablespoonful of sugar and salt to taste. Cover with water and cook until tender; then rub through a sieve. Thicken with a thickening made of one quart of milk, one and one-half tablespoonfuls flour and one tablespoonful of butter. Season with salt and a dash of paprika. Serve with a sprinkling of chopped parsley.

Cranberry Pudding.—Three-fourths cupful of sugar, one cupful of milk, one teaspoonful of butter, two and one-half cupfuls flour, two teaspoonfuls baking powder, one cupful cranberries, one egg. Cream the butter and sugar, add beaten egg, milk and flour sifted with baking powder. Then add the cranberries, which have been picked over, washed, dried and rolled in flour. Pour into a buttered mold and steam for two hours.

Sauce for Cranberry Pudding.—One-half cupful of sugar, two cupfuls of boiling water, three tablespoonfuls flour, one tablespoonful of butter, one teaspoonful of vanilla, one-half teaspooonful of lemon flavoring, a pinch of salt. Mix sugar and flour, add water gradually, stirring constantly. Let it boil a few minutes, then add butter, salt, lemon and vanilla.

A New Salad.—Wash sweet peppers, either green or red; remove seeds and the white strings from the inside. Set the pepper on ice or in cold place for an hour, then fill with grape fruit pulp, chopped nuts and minced celery that has been mixed with mayonnaise. Serve very cold.

HELPS FOR THE HOUSEWIFE.

Yolks of eggs should be beaten until a spoonful can be taken up clear from strings.

The mica in stoves can be made clear by washing with vinegar slightly diluted. If the black does not come off immediately, allow the mica to remain in the vinegar a short time.

Vegetables, to be tender, should be cooked slowly.

In making French dressing use twice as much oil as vinegar.

An old piano stool will be found useful in the kitchen, as it can be adjusted to different heights.

Dingy overshoes can be made to

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FRESH FISH: Clearwater brand Herring at $3.25 per 100 lbs. in sacks: $3.50 per 100 lbs. in boxes: Pickerel at $6.25 per 100 lbs.; Pike at $9.25 per 100 lbs. Salted Clearwater Herring at $3.25 per 100 pound keg, net. Tulibees $6.25 per 100 lbs. Orders shipped promptly. Duluth Fish Company, Box 57, Duluth, Minn. Ref. Northern National Bank.

FRESH frozen Lake Superior Herring (Family White Fish). Direct delivery to customer. Fresh frozen, $3 per 100 lbs.; packed in box, 50 lbs. $1.75; New Salted, in kegs, per 100 lbs. $2.75, 50 lbs. $1.75. Nick Nelson Co., Box 929, Two Harbors, Minn.

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shine if wiped off with a cloth wrung out of ammonia water.

To thoroughly clean an aluminum pan in which vegetables have been cooked, boil a half lemon in it for a few minutes, or a tomato, and the inside will become bright again after a good scrub with soap.

Buy a 10-cent pair of rubber heels and when you want to wear a low-heeled shoe with high-heeled rubbers, put them in the heels of the rubbers. This saves the rubbers and adds to the comfort in walking.

Make pan holders square and of very heavy cloth. Leave one of the four sides open so that the hand can be slipped in as into a pocket. This protects the back of the hand as well as the palm. This will be found useful when baking and very convenient also as a protection against the steam of kettles and the like.

WEIGHTS AND MEASURES.

One-half kitchen cupful equals one gill.

One kitchen cupful equals one-half pint or two gills.

Four kitchen cupfuls equal one quart.

Two cupfuls of granulated sugar equal one pound.

Two and one-half cupfuls of powdered sugar equal one pound.

One heaping tablespoonful of butter equals one ounce.

One heaping tablespoonful of sugar equals two ounces or one-quarter cupful.

One cupful of butter equals one-half pound.

Four cupfuls of flour (one heaping quart) equals one pound.

Eight round tablespoonfuls of dry material equal one cupful.

Sixteen tablespoonfuls of liquid equal one cupful.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

HANSEL AND GRETEL.

The story of Hansel and Gretel is familiar to some of our Young Folks, but others haven't heard it yet and some who do know it like to hear it over again, and so we are going to tell it once more.

Once upon a time there lived a little boy and a little girl whose names were Hansel and Gretel. Their mother had died and their father had married again. The woman he married was not kind to the children and one day when the bread was almost gone, for they were very poor, she said to her husband:

"There is bread enough for two, but not enough for four. When we go out into the woods today to gather fagots to sell, I will give each of the children a crust of bread. Then, when they are tired, we will get them to lie down by the fire to sleep. We will gather our fagots and leave the children in the forest."

Now, the father loved his children and did not want to treat them that way. But his wife insisted and insisted and finally he agreed to her plan. Hansel was not asleep as they thought he was and heard every word that the stepmother had said. So when he knew that his father and she were asleep, he got up quietly, opened the door and slipped out. Around the house were many smooth, white pebbles, with which he filled his pockets.

Next morning, bright and early, the stepmother called them harshly to hurry and dress quickly. They were going to the woods to gather fagots. She gave them each a crust of bread and Gretel put both of these in her pocket, for Hansel's pockets were full of stones. They all started away together.

Hansel kept looking back so often that the stepmother said to him:

"What are you looking back for?"

"My little white pigeon is waving good-by to me from the housetop," he replied.

"Nonsense," she said. "That is only the sun shining!"

Just the same, Hansel managed to drop one of the white pebbles now and then. Finally they reached a clear spot in the forest.

"Now gather wood and we will build a fire, and you can rest," said the stepmother.

They built a fire and gathered around to eat their crusts. The father and stepmother went out to gather fagots. Soon the children fell asleep and when they awakened it was dark—very dark, and no father or stepmother was near to take them home.

Little Gretel began to cry, but Hansel said:

"Never mind, sister, just wait until the moon comes up and we will be able to find our way home." Sure enough, when the moon came up they were able to see every little white stone that Hansel had dropped. They followed the path of stones until finally they reached their home safely. There they opened the door, slipped in quietly and went to bed. The next morning when the father and stepmother wakened, there were the children in their beds. As they had their fagots to sell they would have enough money to live on for a little while longer.

The children were happy for a few days. Then one day the money was all gone again and so the stepmother said:

"Now, tomorrow we will take the children farther into the woods and this time they won't be able to come back."

Hansel heard what she said again and tried to get out to pick up more white pebbles. But this time the stepmother had locked the door and put the key in her pocket. When he told Gretel she cried and Hansel comforted her:

"Never mind, sister. She said she would give us a crust of bread. I will break mine into tiny crumbs and scatter them along the way. Then we can follow those for a path home."

So they went with their father and stepmother and went farther into the woods this time. Almost with each step, Hansel would crumble his bread and drop the white crumbs, but the birds in the woods were so hungry that they ate the crumbs as fast as they were dropped. At length the woman made a fire and left the children to sit by it. Gretel gave her brother half of her bread and soon the children were fast asleep. When they awakened it was dark as before and Gretel was frightened.

"Never mind, sister," said Hansel, "wait until the moon comes up."

But when the moon came up, they could not find the crumbs, for the birds had eaten every one. The children wandered this way and that through the woods all night. In the morning they saw a clear spot where stood a little house built of sugar, candies and cookies.

"Ah," said Hansel, "now we will have a feast."

They went over to the little house and Hansel began picking cakes off the roof for himself, while little Gretel broke off an icicle of candy and began eating it. While they were having a feast a little old woman came to the door and said:

"Ah, children. How are you? Come inside, I have lots of good things here."

So they went inside and ate some of the good things she had and were put to bed in little soft beds. They were so tired that they went to sleep right away. When they got up the old woman was not as kind. She took Hansel by the collar, dragged him outside and locked him up in a little shed. Then she said to Gretel:

"Get wood and build me a fire. I am going to fatten your brother and then some day soon I am going to eat him. After that I will fatten and eat you, too."

Poor little Gretel was so frightened that she trembled so she could hardly carry the wood. Gradually she grew a little less afraid of the old woman.

Every day the old woman would go to the door of the shed and say to Hansel:

"Stick your finger out and let me see if you have any more meat on you."

The old woman could not see very well, so instead of sticking out his finger Hansel stuck out a bone that he had found in the yard. The old woman would feel the bone and when she could not feel much meat she would say:

"It is pretty hard. I will let you wait a day or two."

Each day she would give him the best to eat and hoped she could fatten him. At last she said to Gretel:

"Build me a good fire and get my oven hot. I am going to roast Hansel today, whether he is lean or fat."

When she got the oven all hot she said:

"Step in the oven here, Gretel, and see if it is hot."

"Ah," said Gretel, "I don't know how."

"Oh, yes, you do."

"No, show me," said Gretel.

As the old woman jumped in to show her how, Gretel slammed the oven door and left the old woman in there to roast. Then she got the keys and ran out quickly and called to Hansel:

"Oh, brother, the old woman is roasting. Come out."

Hansel Gretel went into the house to see what they could find to take with them, for they knew that it would take a long time to find their way home. There in the witch's hut they found a box full of jewels and money in another box, cakes and rich food. Gretel filled a big lunch box for them and Hansel strapped a box of jewels on his back. For days they wandered about the woods and at last found their father's door.

Their stepmother, in the meantime, had died and their father was lonely for his children. Hansel and Gretel told their story and showed him their jewels and money. There was enough so that they were no longer poor and left the little old hut in the forest for a nice big home, and had everything they wanted.

International Sunday School Lesson

Lesson for January 9, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE COMING OF THE HOLY SPIRIT.

LESSON TEXT—Acts 2:1-13.

GOLDEN TEXT—Know ye not that ye are a temple of God, and that the spirit of God dwelleth in you?—I Cor. 3:16 R. V.

Good teaching demands the use of the concrete; objective teaching is fundamental and essential. The incarnation is God's objective teaching, "God manifest," (a) to reveal Himself, John 14:9; (b) to take away sin, I John 3:5; (c) to destroy the works of the devil, I John 3:8. So likewise Pentecost is a great objective lesson. This chapter has been divided as follows: (1) The Coming of Power (vv. 1-13), (2) The Empowered Witness (vv. 14-36), (3) A Powerful Result (vv. 37-47).

I. Power, 1-4. At the end of our last lesson the disciples were in prayer. The Lord's promise (1:5) was conditioned upon obedience. At last "the day" arrived (Lev. 23:15-21). Their hearts were fused and the fundamental requirement for service, the baptism of the spirit, came upon them. There has been no need since then to tarry any time at all to receive a like blessing. Lack of unity has much to do with our not receiving the spirit now and the consequent lack of power. Suddenly from out of heaven came a mighty sound (v. 2) and it is such a wind that the church needs today. There were three manifestations at this time and one other subsequently (See 2:44, 4:34, 35; 5:4). (1) **Wind.** Let us keep clear the difference between symbol and spirit. The manifestation was "as wind." Wind is mysterious, universal and mighty, but like Elijah on the mountain God is not alone as a mighty tempest. The sound filled the whole house. Wind is figurative of judgment (Jer. 22:22, Hos. 13:15) of the Spirit (John 3:8), also of heresy (Eph. 4:18). This last suggests the vagaries and imitations suggested or abetted by Satan to keep us from the truth. (2) **Fire.** This symbolizes power, light, heat and purifying, but the fire was not the spirit nor do we recall another such manifestation since (3) **Tongues.** The fire took the form of tongues which parted or portioned themselves out to "each one of them" though Peter is alone subsequently more prominent.

Every manifestation of the spirit is

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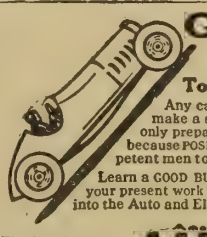

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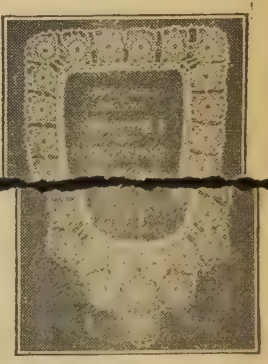

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always that of some new power for Christ (I Cor. 14:2-19).

11. Perplexity, vv. 5-13. The question may arise, had the spirit been seen before? And the answer is "yes" (Matt. 3:16, Jno. 1:32). What then was new? The answer to this is the program of power. The first evidence of power was the gathering of the people (v. 6). The disciples at once testified to each of the sixteen classes mentioned (9-11) of the "mighty works of God." Not of the gift, but the giver, a different sort of testimony than that given by many who today profess to have the gift of tongues. The second result was an amazed people, "perplexed," for them as now the world cannot understand the spirit-filled man. These spirit-filled men forgot self and were lost in their testimony (v. 11).

It is of interest to note that they did not even say much if anything about the spirit himself. Their testimony, for which many later gave their lives, was regarding God's mighty work of the resurrection of Jesus from the dead (vv. 24, 32).

The spirit-filled man is sure to emphasize this mighty work and the evidence of the spirit in a man's life is his loyalty to a crucified, risen and ascended Lord.

A third result was that people misunderstood and charged drunkenness, a fact seized upon later by Paul to teach us the truth (Eph. 5:18). The only sure cure for intemperance, or any other evil, is an infilling of the holy spirit. The final and complete fulfillment of the prophecy (vv. 14-21, Joel 2:28, 29) of which Pentecost was a partial fulfillment will be in the "day of the Lord." But then, as now, all who call upon him shall be saved (v. 13, Rom. 10:13). "Some mocked," even as today ridicule or parody are the enemy's choicest weapons. Pentecost is an event well attested, that marked the ushering in of a new dispensation, that was misunderstood, but one that can be verified by experience.

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When we are spirit-filled the Lord Jesus Christ will occupy the whole horizon of our experience, our testimony and will control our service. The spirit-filled servant can exclaim "The Lord (Jesus) is my shepherd," He is Lord, He is my shepherd; He is, not has been or will be, but He is my shepherd.

The gift of the spirit must not be confused with the spirit's "gifts" (I Cor. 12) whereby we are enabled to do the work He directs in order to glorify the Son—not the church, nor man, nor a religious experience, but the Lord Jesus (Gal. 2:20, II Tim. 1:7).

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7118 Ladies' Skirt. Cut in sizes 22 to 32 inches waist measure. In this handsome walking skirt the front gore forms a panel, extending from the belt to the hem. At sides and back there is a deep yoke and below this the skirt is plain, with reversed plait at the sides and in the center of the back.

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7499 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. Smart but simple this dress has a plain blouse, with side front closing and either high neck with straight collar or low neck with wide collar, or using both. The four-gore skirt has either raised or regulation waistline.

6893 Boys' Overcoat.—Cut in sizes 6, 8, 10 and 12 years. Cheviot, serge or chinchilla can be used to make this overcoat. The sleeves extend to the neck edge. Either the plain or patch pockets may be used. The cuffs and belt may be omitted, if desired.

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7240 Girls' Dress.—Cut in sizes 6, 8, 10 and 12 years. The two-gore skirt of this frock is joined to an underwaist and over both is worn the jacket tunic which closes in front, spreading a little after passing the bust. At the open neck is a small, flat collar and the sleeves may be long or short.

7120 Ladies' Dress.—Cut in sizes 34 to 44 inches bust measure. This model has the blouse closed in front, with a small vest panel below the yoke line. A turnover collar finishes the high neck and the sleeves are either full length or short. The skirt is cut in one piece.

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Winning the Wilderness

By Margaret Hill McCarter

Author of "The Price of the Prairie," "A Wall of Men," "The Peace of the Solomon Valley," etc.

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CHAPTER XXII—Continued.

Twelve hundred men rose no more from that bloody field before Yang-Tsun. The fighting force, sixteen thousand strong, was wearing off at the rate of almost a regiment and a half a day, and it was yet a hundred miles to Peking.

All about Thaine were men with faces grimy as his own; their lips, like his, split and purple from the alkali dust. They had had no water to drink in all that long day's twelve miles of marching and six hours of fighting. Fearful is the price paid out when the wilderness goes forth to war! And heroic, sublimely heroic, may be the Christianity of the battlefield.

"We must help these fellows," Thaine said to his comrades as the wail for water went up from wounded men.

"The river is this way," McLearn declared. "Hurry! the boys are dying."

So over countless forms they hurried to the river's brink for water. Thaine and Tasker and Boehringer were accustomed to muddy streams, for the prairie waters are never clear. But Goodrich from Boston had a memory of mountain brooks. The Pennsylvania man, McLearn, the cold springs of the Alleghanies, and for Binford there was old Broad Ripple out beyond Indianapolis. All these men came down with dry canteens to the Peiho by Yang-Tsun. The river was choked with dead Chinamen and dead dogs and horses. They must push aside the bodies to find room to dip in their canteens.

"You have one more lesson. You must learn to be a Christian."

Somehow the words seemed to ring round and round just out of Thaine's mental sight.

"Vasser! Vasser!" cried a big German soldier before him.

Thaine stooped to give him a drink, and as he lifted up the man's head he saw the stained face of Hans Wyker.

"It's very goot," Hans murmured, licking his lips for more. "Wisky not so goot as vasser," and then he trailed off into a delirium. "Don't tell. Don't tell," he pleaded. "I nefer mean to get Schmitt. I not know he would be der yet. I hide for Yacob, an' I get Schmitt in der back and I only want Yacob. He send me to der pen for sure yet next time. I hate Yon Yacob."

A little silence, then Hans murmured:

"I didn't go to Kansas City. I coom back to Gretchen's home by Little Wolf. I hide where I watch for Yacob. I shoot twice to be sure of Yacob, an' Schmitt, hidin' in der crack by der roat, get one shot. So I coom to Yermany and enlist. Gretchen, she coom too an' she stay der. Vell! I help fight Boxer some. Mine Gott, forgif me. I do once some goot for der world dis day.

And that was the last of Wyker.

The twilight hour was near. The wounded had been borne away by busy Red Cross angels of mercy. Wide away across the Chinese plain the big red sun slipped down the amber summer sky into a bath of molten flame. Then out of sight behind the edge of the world it turned all the west into one magnificent surge of scarlet glory, touching to beauty the tiny gray cloud flecks far away to the eastward; while long rivers of golden light by rivers of roseate glow mingled at last along the zenith in one vast sweep of mother-of-pearl. A cool breeze came singing in from the sea—fanning the fevered faces of the weary soldiers. The desolate places were hidden by the deepening shadows, and the serenity of the twilight hour fell on the battlefield.

Then the men of each nationality went out to bury their dead. Swiftly the little brown Japanese digged and filled up the graves into which their comrades were deftly heaped. The Russian and Siberian Cossack lunged their fallen ones in heavily and unfeelingly. The Bengalese and Sikhs thrust their own out of sight as they were planting for an uncertain harvest. Each soldier from France who lost his life on that battlefield fell on his own grave and there his countrymen covered him over, an unmarked spot in a foreign land.

Thaine straightened a minute above his spade. The cool breezes were grateful to his heated brow. The after-sunset glow seemed like a benediction of the Infinite on the closing act of the day. He saw the hurried and unfeeling dumping of bodies into the holes awaiting them. Then his heart grew big and something unspeakable as he noted how in all that irreverent and unsympathetic action the American and English soldiery alone were serving as brother for brother. In the long trenches prepared for them their dead were laid with reverent dignity and gentleness. Each one's place was carefully marked with a numbered slab that in a future day the sacred dust might be carried back to the soil of the homeland. As the sunset deepened to richer coloring and the battlefield grew still and still, far along the lines the bands of the English Royal Artillery and the Welsh Fusiliers, with the bagpipes of the Scottish Highlanders, mingled their music with the music of the splendid band of the Fourteenth American Infantry in the sweet and sacred strains of the beloved old hymn:

Nearer, my God to Thee,
Nearer to Thee.
E'en though it be a cross
That raiseth me.
Still all my song shall be
Nearer, my God to Thee,
Nearer to Thee.

And Thaine Aydelot knew that his last and biggest lesson was learned.

CHAPTER XXIII.

The End of the Wilderness.

Have I named one single river? Have I claimed one single acre?
Have I kept one single nugget (barring samples)? No, not I.
Because my price was paid me ten times over by my Maker.
Buy you wouldn't understand it. You go up and occupy.—The Explorer.

THE victory at Yang-Tsun had come with a tremendous loss of life. To go on now promised the cutting to pieces of the entire army. To stay here and await reinforcements would mean the slaughter of all the foreigners in Peking. In a council of war the next day English and Indian, Russian, German, Japanese, Italian and French, general after general declared for the wisdom of waiting at Yang-Tsun for reinforcements.

Up spoke then General Chaffee, of the American command:

"I will not wait while the Boxers massacre the helpless Christians. Stay here or go back to your own countries, as you please. My army will go on to Peking, if it must go alone."

And his will prevailed.

Followed then a memorable march, with the Stars and Stripes ever leading the line. The strength of the force was thirteen thousand now and one thousand of these fell by the way before the end of the journey.

After Yang-Tsun, for the only time in this ten days' campaign, the soldiers undressed and bathed themselves like Christians in the unchristian Peiho, and on the next day, which was the Sabbath, they listened to the military service. Six days they forged onward with the same cruel heat, and scalding air, and alkali dust, and poison water, over dreary plains, through deserted villages, twenty, twenty-five, and even thirty miles a day, they pushed on toward the Chinese capital.

And ever before them the Boxers slowly receded, stinging grievously as they moved. Sure were they that at last only dire calamity could await that slender column moving across the plains, led under a flag of red, white and blue, with bands ever playing The Star-Spangled Banner, while from line on line rolled out that wierd battle cry of "Rock Chalk! Jay Hawk! K U!" Sure were they that this stubborn little band of soldiers foolishly following the receding Boxer must at last crush itself like dead-ripe fruit against the ancient and invincible walls of Peking.

On the evening of the sixth day from Yang-Tsun the twelve thousand men of the Allied Armies, flower of the world's soldiery, stumbled into camp with their outposts in sight of the great walls of the City of Peking. This had been the longest and hottest of all the days, with the weariest length of march. A great storm cloud was rising in the west and the air hung hot and still before it.

Thaine Aydelot and his comrades threw themselves down, too exhausted to care for what might happen next.

"This is the hottest day I ever knew," declared McLearn wearily, as he lay prone on the ground looking up at the hot sky with unblinking eyes.

"I reckon you never hit the National pike on an August day, out between Green Castle and Terre Haute down in Indianny," Binford suggested.

"Nor St. Marys-by-the-Kaw," Boehringer, a Kansas man, added. "There's where you get real summery weather."

"Oh, kill him, Aydelot, he's worse than a Boxer. Don't you know I'm from Boston originally, which is only a State of Mind?" Goodrich urged.

"No matter what state you are from originally, you are in China now, which is in a state of insurrection that we must get ready for a state of resurrection tomorrow. What are you thinking about, T. Aydelot? You look like Moses and the prophets." McLearn half turned over with the question.

Thaine, who was lying on his side, supporting his head on his hand, quoted softly:

"'Oh, the prairies' air so quiet, an' there's allers lots of room
In the golden fields of Kansas, when the Sun
Flowers
Bloom.'"

A low boom of thunder rolled across the western sky; a twilight darkness fell on the earth, and a long night of storm and stress began for the army of deliverance encamped before Peking.

Outside the city the Boxers massed in numbers. Inside more than a hundred thousand waited the coming of hardly more than one-tenth of their number. No wonder they felt secure behind their centuries-old ways.

Thaine Aydelot was accustomed to sleeping tentless on the ground and

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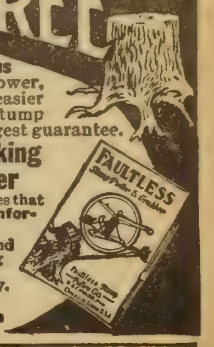

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to being beaten by rains. He was a sound sleeper and he was very weary. But tonight he could not sleep. The morrow would see world movements that should change all future history; in which movements he was a tiny unit, as every furrow that his father, Asher Aydelot, had run across the face of the prairie had by so much won it from wilderness to fruitfulness.

All night long the rain poured in torrents upon the camp. A terrific cannonade of thunder shook the earth. The lightning tore through the clouds in jagged tongues of flame. Where Thaine lay he could see with every flash the great frowning black walls of Peking looming up only a few miles away. In the lull of the thunder a more dreadful cannonading could be heard, hour after hour. Thaine knew that inside the walls the Boxers were besieging the Compound. And inside that Compound, if he were yet alive, was his old teacher, Pryor Gaines. He wondered if the God of Battles that had led the armies all this long hard way would fail them now when one more blow might bring deliverance to His Children. He remembered again the blessing with which his father had sent him forth:

"As thy day so shall thy strength be. The Eternal God is thy refuge, and underneath are the everlasting arms."

The memory brought peace, and at length, wrapped round in the blessing of an absolute trust, he fell asleep.

Inside of the City of Peking on that dreadful night the madness of the Boxer forces was comparable to nothing human. Nor jungle beasts starving for food and drink, frenzied with the smell of blood and the sight of water, could have raged in more maniac fury than the fury possessing the demon minds of these fanatics in their supreme struggle to flood the streets of Peking with rivers of Christian blood. For such as these the Christ died on the Cross of Calvary. For such as these the missionary is offered up. A human jungle, untamed and waiting, to whose wilderness the soldier became a light-bearer, albeit he brought the gospel of gunpowder to aid him.

The great walls about Peking enclose an area some fourteen miles in length and twelve miles in width. Within these walls lie several cities, separated from each other by walls of lesser strength, intended, with one exception, in the opening of the twentieth century, not so much for defense as for boundary lines.

The exception is the Imperial City, inside whose sacred precincts it was firmly believed a foreigner might not set foot and not be stricken dead by the gods. This City within a city had defenses the allied armies were yet to come against. It lies on the north, inside the great wall. Just east of it, along the north wall, was the Foreign Legation, whose south and east bounds were lesser structures of brick and earth. Here all the foreigners and many native Christians had been shut in for six long weeks, with the infuriated Boxers hammering daily at their gates, mad for massacre.

Here they had barricaded themselves with all the meager means available. They had forfeited every gate with whatever might stop a bullet or check a cannon ball. They filled up the broken places in the walls with piles of earth; they dug deep trenches inside these walls, and inside these trenches they had built up heaps of earthworks. Daily they strengthened the weaker places and watched and prayed. No word from the big world outside seemingly could come to them —a little handful of the Lord's children, forgotten of Him, and locked dungeon deep from human aid. They had sent out a cry for help and had sent up prayers for deliverance. Frowning walls besieged by enemies lay all around them. They could only look up and lift up helpless hands in prayer to the hot, unpitying August skies above them. Sickness stalked in over the walls. Hunger tore its way through the gates. Death swooped down, and sorrow seeped up, and despair lay in wait. But hope, and trust, and faith, and love failed not.

They ate dogs and horses. They went half naked that they might make sand bags of their clothes for greater defense. They exhausted every means for protection and life, but they forgot not to pray.

On this August night, while unknown to the besieged the Allied Armies encamped only six miles away, the reign of terror reached its height for the little Christian stronghold.

The storm beat pitilessly on the starved and ragged captives. The rain softened the earthworks and the rivers of water in the trenches threatened to undermine the walls. Across these walls the incessant attack of cannon and roar of rifles was beyond anything the six weeks' siege had known, and only the power of Omnipotence could stay the bloody hands. So the long hours of the dreadful night dragged on.

At length came daydawn. The storm had rolled away. A lull in the besieging guns gave the Legation a little rest of mind. Hungry and helpless, it waited the passing of another day. A silence seemed to fill the city and the wiser ones wondered anxiously what it might portend.

Suddenly, in the midst of it, a great gun boomed out to the northeast. Another gun, and another. Then came a pause and the besieged listened eagerly, for their own walls felt no shock. Again came the bellow of cannon, nearer and heavier, repeated and repeated, and the roll of smoke and the rattling fusillade of bullet shots told that a battle was on. Outside the gates? An army come against Peking! The Army of Deliverance! They were here fighting for the Christians! Oh, the music of bird's song, of rippling waters, of gently pulsing zephyrs, the music of old cathedral chimes, of grandest orchestras—nothing of them all could sound so like to the music that the morning stars sang together as this deafening peal of cannon, this ripping rhythm of Krag rifles.

With bursting hearts they waited and watched the great wall to the north. It is sixty feet high and fully as wide at its base, tapering to twenty-five feet across the top. Could the gates be stormed? Could this wall be shaken? From the highest points inside the Compound eager eyes scanned the northeast as the battle raged on with crash of shells and whir of bullets. Then down to the waiting ones came a message that seemed to fly to every ear in the besieged city, making men and women drop to the ground in a very ecstasy of joy.

"They've run up the Stars and Stripes on the northeast wall!"

The sword of the Lord and of Gideon was come again to Peking, as it came once long ago to the Valley of Jezrell.

The Allied Armies broke camp on the morning of August fourteen in the year of nineteen hundred. Six miles away stood the most impassable defense an army of the West might ever storm. Yet the twelve thousand men did not hesitate. With General Chaffee's troops in the front of the line they fought through fiercely skirmishing forces up to the hoary old city's gates, the Fourteenth United States Infantry leading the way. The American guns cleared the Chinese soldiery from the top of the walls, and the American cannon were in line ready to blow open the huge gates.

"I want to know what's on the other side before I open up the gates," General Chaffee declared.

So the command was given for a volunteer to scale the wall, to stand up a target for the Chinese rifles! To be blown to pieces by Chinese cannon! Yet the armies must know what awaited them. There must be no debouching into a death-trap for a wholesale massacre.

Thaine Aydelot had cherished one hope since the twilight hour on the battlefield at Yang-Tsun—that when this day should come the Americans might lead the way through the Peking gates and be first to enter the strange old city. Not merely because he was an American patriot, but because to him the American soldiers with all their sins and follies of youth and military life were yet world missionaries.

Thaine knew his comrades shared his hope, whether for the same high purpose he could not have asked. He had no longer dreams of military glory for himself. His joy was in achievement, no matter by whose hand.

"There's an order for somebody to go up on the wall."

The word was passed along the line. Before it reached Thaine and his

comrades a young soldier had leaped forward to obey the order.

"Glory be, America first!" Goodrich said fervently.

"And a Kansan. A Jayhawker!"

Thaine did not know who said it. He saw the soldier, young Calvin Titus, a Kansas boy, leap after the Japanese coolies who ran forward toward the wall with the long bamboo scaling ladders. And for one instant's flash of time the old level prairies came swooping into view, the winding line of Grass River with the sand dunes beyond; the wheat fields, the windbreaks, the sunflowers beside the trail, and far away the three headlands veiled in the golden haze of an August morning. A Kansas boy the hero of the day—first of all that army to stand on top of that hoary old wall! The prairies had grown another name for the annals of history.

(To be continued.)

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

COMING WISCONSIN SHOWS.

Madison, Wis., January 3d to 6th, Jas. Tucker and W. E. Stanfield, judges; J. G. Halpin, secretary.

Sheboygan Poultry and Pet Stock Association, January 3d to 8th, G. L. Spratt, secretary; Geo. W. Hackett and F. Borchert, Jr., judges.

Waterford, Wis., January 3d to 8th, Geo. W. Hackett, judge; F. J. Albrecht, secretary.

Stanley, Wis., January 4th to 6th, W. H. Laabs, judge; Rev. D. W. Davis, secretary.

Marion, Wis., January 5th to 8th, F. S. Lindlow, secretary; J. E. Greenwald, judge.

DePere, Wis., January 5th to 9th, Geo. Wells, judge; Chas. Behrendt, Jr., secretary, Green Bay, Wis.

Manawa, Wis., Manawa Poultry Association, January 10th to 13th, W. H. Laabs, judge; A. C. Lindsay, secretary.

Eau Claire County Poultry Association, Augusta, Wis., January 10th to 13th, H. B. Seville, secretary; Geo. W. Hackett, judge.

Sparta, Wis., Progressive Poultry and Pet Stock Association, January 10th to 15th, E. H. Hoffman, Judge; J. L. Herbst, secretary.

Mineral Point, Wis., January 11th to 13th, G. M. Wells, judge; Mr. Tucker, secretary.

Stevens Point, Wis., January 11th to 15th, F. J. Blood, secretary; J. E. Greenwald, judge.

Augusta, Wis., January 10th to 14th, Geo. W. Hackett, judge; F. B. Seville, secretary.

Racine, Wis., January 10th to 15th, Geo. H. Northrup, judge; E. J. Amundson, secretary.

Antigo, Wis., January 13th and 16th, Geo. W. Hackett, judge; R. E. Krause, secretary.

Fond du Lac, Wis., January 13th to 16th, J. A. Tucker and Geo. M. Wells, judges; Wm. P. Kennedy, secretary.

Janesville, Wis., January 17th to 22d, Laabs and Stanfield, judges; E. P. Wilcox, secretary.

Sun Prairie, Wis., January 18th to 20th, Geo. M. Wells, judge; Leo. Dott, secretary.

Wausau, Wis., January 18th to 23d, Geo. W. Hackett, judge; L. H. Cook, secretary.

Green Bay, Wis., Northeastern Poultry and Pet Stock Association, January 19th to 23d, D. E. Hale, judge; L. H. Hebel, secretary. Comparison show.

Milwaukee, Wis., January 21st to 26th, Geo. W. Hackett, judge; Theo. Hewes, secretary.

Appleton, Wis., January 27th to 30th, Dr. W. L. Farrand, secretary; Greenwald and Laabs, judges.

Wild Rose, Wis., February 9th to 11th, Geo. M. Wells, judge; F. W. Crowe, secretary.

WISCONSIN POULTRY FACTS.

Estimated annual value Wisconsin poultry products $15,000,000.

Fifty million dozen eggs marketed annually by Wisconsin farmers who raise poultry.

One hundred and fifty thousand Wisconsin farmers raise poultry.

Three hundred young men and women are studying poultry husbandry at the Wisconsin College of Agriculture.

Sixty poultry shows are held in Wisconsin every year.

BADGER POULTRY PRIZES.

Poultry raised in Wisconsin come in for a large number of championships at the Great Mid-West Poultry and Pet Stock Association show recently held in Chicago. Many of the exhibitors whose fowls carried off first honors are members of the Wisconsin Poultry Association.

James G. Halpin, who as secretary of the Wisconsin organization is one of the managers of the forthcoming show, is arranging for the exhibition of as many as possible of these prize pens.

Wisconsin poultrymen who won at Chicago are:

White Plymouth Rocks, H. W. Halbach, Waterford; Partridge Plymouth Rocks, Ed J. Wagner, Arlington and J. W. Hunt & Son, Stoughton; Golden Wyandottes, F. L. Clausen, Oconomowoc, and Chas. Love, Waukesha; White Wyandottes, Charles Prei, Waukesha; Buff Wyandottes, J. R. Love, Waukesha; Partridge Wyandottes, W. W. Day, Janesville; Columbian Wyandottes, O. R. Eddy, Oconomowoc; Single Comb Rhode Island Red, A. J. Schloerb, Omro; Light Brahmas, Roy Beck, Galesville; Rouen Ducks, W. W. Day, Janesville.

Wm. Bell, of Arlington, won premiums on his Single Comb Brown Leghorns, Single Comb Buff Leghorns and Single Comb Black Leghorns.

SPECIAL CARE SHOULD BE GIVEN FOWLS IN COLD WEATHER.

To obtain good results from a flock of poultry during the winter all houses and coops should be put in good condition, only healthy fowls placed in the buildings and good care given to the poultry. The houses should be thoroughly cleaned, disinfected and made tight for winter. If the house has a dirt floor it is well to remove three or four inches from the top and substitute fresh gravel or sand. If the floor is cement or wood remove all litter and dirt and put in four or five inches of fresh straw or litter. Be sure that the house is tight on three sides and that there is no chance for a draft to strike the hens. If hens roost or are placed in a draft during the fall and winter colds are sure to develop which may result in roup and other troubles. The south side, or front, of the poultry house may be left comparatively open, but should be under control, so that the openings may be closed gradually as the weather becomes cold. Have muslin curtains in the front of the house, or leave a window partly open even on the coldest nights to allow some ventilation in the house. Fowls will stand considerable cold air provided it is dry and ventilation will keep the air thoroughly dry in the house.

The pullets should be brought in off the range and put in winter quarters, but before they are mixed with the older fowls be sure that the hens are banded or that the web of the foot is punched in some way so as to distinguish between the pullets and the hens. In this way the older stock may be culled out whenever it appears desirable and the young hens kept for further laying. Cull the chickens which are brought into the laying house carefully and fatten and market all chickens which are small, poorly developed or in poor condition. These small, poorly developed chickens are apt to catch cold if put in with the other poultry and develop diseases which quickly spread through the flock. Market all surplus cockerels or older male birds which are not desired for breeding or not wanted for a later market.

Feed the grain in a deep litter on the floor and make the hens exercise for all of their grain. The mash may be fed either wet or dry and should be so regulated that the fowls will get about equal parts of mash and of the scratch grains. It is necessary to give the fowls plenty to eat to get good results, but the birds should always be eager for each feed. In cold weather feed about one-third of the scratch grains in the morning and two-thirds at night. In this way the

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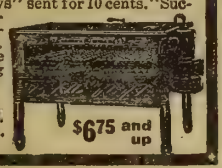

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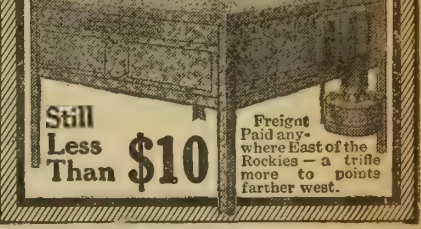

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BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys and guineas.
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hens are forced to exercise more than if they receive all the grain they desire at the morning feed. Scratch grains, mash or ground grains, animal protein, green feed, grit and shell should be supplied in the winter. A good scratch mixture may be made of equal parts, by weight, of cracked corn, wheat and oats; and a mash may be made of two parts corn meal and one part each of wheat bran, wheat middlings and beef scrap. Green feed, such as cabbages, mangel wurzel beets, cut alfalfa or sprouted oats should be supplied to replace the green feed which the fowls have been securing in the fields; and beef scrap, skim milk, cut green bone, or some similar feed is needed to replace the bugs which the fowls have been getting on the range. Beef scrap or feed of this nature is very essential in securing a good supply of eggs during the winter months.

Clean the dropping boards at least once a week and spray the roosts with kerosene or some commercial preparation for killing mites once a month during the winter. Have a good supply of sand or dry dirt on hand to use on the dropping boards during the winter.

If any of the birds develop colds put as much potassium permanganate as will remain on the surface of a dime into a gallon of water and keep this mixture in their drinking water for several days, or until the symptoms of the colds have disappeared. Remove any sick birds from the flock as soon as they are noted and treat them in coops by themselves or kill and bury them if they are not worth treating.

Examine the pullets and hens for lice, and dust thoroughly with a good insect powder or apply a mixture of two parts of vaseline and one part of mercurial or blue ointment, about the size of a pea, one inch below the vent of the bird, rubbing the mixture lightly on the skin. An application of this ointment two or three times a year will keep the fowls free from lice. Where insect powder is used it should be applied three or four times a year, or oftener if the fowls become infested. Provide a small box in the house partly filled with dry road dust or fine dirt in which the hens may dust, thus helping to keep themselves free from lice.—[Department of agriculture bulletin.

FEEDING FORMULA FOR LAYING HENS.

The poultry department of the Connecticut station is now in the midst of its fifth egg-laying contest. As the ration is the most important factor in a contest of this kind our readers will be interested in what the hens in this contest are receiving in the form of mash, as well as dry grain. The dry mash is composed of wheat bran, 100 pounds; corn meal, 100 pounds; ground oats, 100 pounds; flour middlings, 100 pounds; fish scrap, fifty pounds; beef scrap, fifty pounds. In addition, they are fed dry grain composed of equal parts of wheat and cracked corn.

By simply varying the proportion of grain to mash, it is believed that these rations can be easily adapted to a number of different breeds. During the first two years the grain ration was fed in a well-known automatic feeder which was open a part or nearly all day, depending somewhat on daily climatic conditions, but largely on the season. While the hoppers gave fair satisfaction, the management of the contest feels that an experienced man always on the job is able to keep in closer touch with the birds and get better results by hand feeding, and in consequence the latter practice is now being followed. During the greater part of the year, the principal feed is given about four o'clock in the afternoon, but in winter one or more light feeds should be given in the morning to induce exercise. Dry mash is kept before the birds at all times in earthenware hoppers which are supplied with a wire grate to prevent the feed from being scratched out and wasted.

It will be noted from the mash formula that both fish and beef scrap are used; if either is omitted the other should be doubled. If sour milk can be supplied abundantly, the meat part of the ration may well be reduced by one-half or more. Grit, shell, and charcoal are supplied freely in rectangular boxes with three compartments each containing about a quart. Green food during the winter consists principally of mangel beets fed daily; in summer the birds have grass runs. Rape and Swiss chard are grown to supplement the summer supply of natural green food.

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The real anti-tip sleigh that will at once appeal to sleigh users. Runners turn on pivots just below the beam which always carries load directly over runners regardless of how team is turned and always carrying load on four corners.

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has, besides the anti-tip features, many other features, individual to this sleigh only. It is very flexible—pulls out of ruts much easier—takes the pulling and backing strain off runners and distributes it uniformly through center of sleigh which makes sleigh run easier and back freely like a wagon. It dodges trees and obstructions far easier. It is stronger and more durable owing to weight distribution. Requires no bolsters, which brings box 6 inches closer to ground, yet gives higher clearance below beam. Simplicity gives it durability far beyond any other sleigh. It has been tried out and found to be perfect in every respect.

Ask your dealer to show you a West Bend ANTI-TIP or write us for full details.

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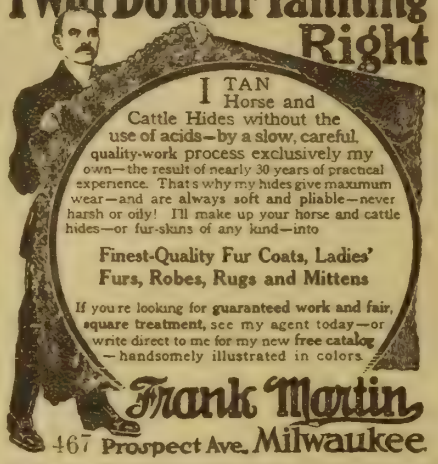

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Here is the low priced famous **Detroit Incubator**—a wizard egg hatching machine, simple and reliable. Big hatches a sure thing. Large production makes my price low. Send Post Card now for my free book and **startling price offer.**

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60 BREEDS Valuable Poultry Book Free—New 100-page 22nd Annual Edition. Fine pure bred chickens, ducks, geese and turkeys—Northern raised, hardy, beautiful. Fowls, Eggs and Incubators, low prices. America's greatest poultry farm. Write today for **Free Book.**
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Conkey's Poultry Tonic turns listless, run-down, lazy hens into busy, happy winter layers. Try it. Conkey Co., Cleveland.

SHOW AT SUPERIOR.

The Douglas County Poultry Association will hold its annual show at Superior January 18th-21st. This was decided at a recent meeting of the association when Robert Kardman was elected superintendent of the show. About $800 in prize money will be given out this year. This is about $300 more than the list last year and about $200 more than has ever been given out before. Programs and prize lists will be ready for distribution in about a week. Members of the association are very enthusiastic over the prospects for the show and it is expected that this will be the largest exhibition ever held in the county.

FOND DU LAC SHOW.

The Fond du Lac Poultry and Pet Stock Association will hold the 1916 show January 13th to 16th inclusive in the armory. It is also planned to have a kennel exhibit on the last two days, the dogs to be quartered in a separate hall, probably one of the big rooms in the armory basement. Prospects for a record-breaking show are unusually bright.

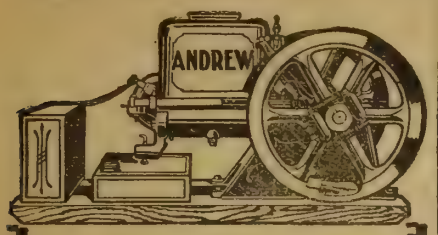
LAW QUESTIONS.

Tile in Roadway.

A Subscriber, Muscoda, Wis.—I have a pond on my farm which I wish to tile drain, but in order to do this I must lay tile along a public highway to the river for an outlet. Said highway passes through land owned by a neighbor. Must I get the consent of my neighbor, or of the town board in order to place tile along the side of the highway?

Answer.—You should get the permission of the town board and the road overseer to place the tile in the road.

When writing to advertisers please mention The Wisconsin Farmer.



ANDREW

Gasoline Engine

Here's an engine built specially to meet the conditions of small engine work. Cylinder is cast separately from the frame and made of the same close-grained iron used in six-cylinder automobiles—giving great strength with light weight. All parts are constructed of the best material obtainable. Crank shaft and piston are ground to ⅛ and ¼ one-thousandths of an inch. All gears machined and accurately cut. Fly wheels make up about half of weight and are fully machined and carefully balanced.

Only one size—

11-2 Horse Power

equipped with battery or magneto, as specified.

The more you know about gasoline engines the better you will like the ANDREW ENGINE. It gives maximum power for size of bore and stroke, has large water hopper and is extremely simple in design. It operates with ease on the farm or elsewhere all the various machines usually run by an engine of this size—churns, separators, pumps, feed cutters, polishing wheels, dynamos, etc.

Write for our new booklet and get full specifications. **Dealers Wanted.**

Andrew Motor Mfg. Co.

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RADIOSENE

Wickless Lamp $7.50

Burns vaporized kerosene by means of mantle—newly invented process. First valveless, wickless kerosene lamp on the market. Gives more light than Tungsten electric bulb, from cheapest, safest of fuels—10c worth of oil lasts average week. Simple and reliable to use; perfectly safe, lighted or extinguished. Radiosene rays called scientific sunlight, "next thing to nature's own—brilliant, steady and restful to the eyes." The ideal light for any home.

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More Comfortable Healthful and Convenient than the Out-Door Privy

Eliminates the out-door privy, open vault and cesspool. They are breeding places for germs. Have a warm, sanitary, odorless toilet right in your house. No going out in cold weather. A boon to invalids. Endorsed by State Boards of Health.

ABSOLUTELY ODORLESS

Put It Anywhere In The House

The germs are killed by a chemical process in water in the container, which you empty once a month. Absolutely no odor. No more trouble to empty than dishwater. Closet absolutely guaranteed. Write for full description and price.

ROWE SANITARY MFG. CO.
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Ask about the Ro-San Washstand—Hot and Cold Running Water Without Plumbing

FOR SALE

BY OWNER

Twenty-two 80-acre cut-over, hardwood timber farms within three miles of town.

PRICES $18 TO $22 PER ACRE

Can give terms if desired. Write for descriptive booklet.

THE O. O. WHITED CO.
Radisson Wisconsin

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

WISCONSIN SOIL SURVEY.

A survey of the soils of the state is being made—county by county—through the co-operation of the United States Department of Agriculture, the agricultural experiment station, and the Wisconsin geological and natural history survey.

While it will take a period of years to complete the work much progress is being made. The Wisconsin surveys are being made on a basis very similar to that followed in the various states in which such work is being undertaken.

The survey in this state, according to W. J. Geib, who is engaged in the work, is being made along two lines; first, a general survey of the northern and less well-developed portions of the state, and second, a detailed survey of the southern and older portions. The northern part of the state has been divided into five areas.

The first area includes Portage, Wood, Clark, Taylor, Marathon, Lincoln and portions of Price and Langlade counties. This area, the general survey of which was made a number of years ago, is being revised and mapped in greater detail, and a new report will be available soon.

The second area includes Polk, Barron, Rusk, Chippewa, Eau Claire Dunn, Pepin, Pierce and St. Croix counties, and the map together with a report on this area has been widely distributed but the supply is now exhausted.

The third area includes Burnett, Washburn, Sawyer, Douglas, Bayfield and most of Ashland counties. This report is now being distributed.

The fourth area includes Forest, Florence, Marinette, Oconto, Langlade and Shawano counties. The analysis of the soil in this area has not been completed, but the map and report will probably be ready for distribution some time during this winter.

The fifth area, including Oneida, Vilas, Iron, Price and the eastern portion of Ashland counties has been surveyed, and the map and report will probably be ready for distribution next summer.

In the detailed survey in the southern part of the state the field work has been completed in Waushara, Waukesha, Iowa, Fond du Lac, Buffalo, Columbia, Juneau, La Crosse, Kewaunee, Jefferson and Dane counties. The reports on Waukesha, Waushara, Iowa, Kewaunee, La Crosse, Fond du Lac, Juneau, Dane, Buffalo, Jefferson and Columbia counties are now available.

A special report has been prepared on the northeastern portion of Bayfield county along the bay and including the islands, in which considerable development of the fruit industry is taking place. This is now available for distribution.

Available reports may be secured from A. R. Whitson, of Madison, or from the bureau of soils in Washington.

The soil surveys are becoming more detailed and complete. Northern Wisconsin has some very rich and virgin soil, and by results obtained by the agricultural experiment stations and the farmers, it will be shown that those who have ignored northern Wisconsin for Canada and other sections of the country have overlooked regions of rich and promising lands.

Dane Co., Wis. Fred H. All.

Ask your neighbor to subscribe for The Wisconsin Farmer.

GOLDEN PRAIRIE FARMS

FOR RENT Several improved farms, 160 to 640 acres, on shares. Also 1280 acre stock farm suitable for dairying, for low cash rent. Address, for list and literature descriptive of the Golden Prairie District, Federal Land Company, 100 West 17th St., Cheyenne, Wyoming.

LANDOLOGY FREE A magazine giving the FACTS in regard to the land situation. 3 months' trial subscription free. If for a home or investment you are thinking of buying good farm land, simply write me a letter marking it "*Personal*" and say "*Mail Landology and all particulars free.*"

Address: **LLOYD M. SKINNER, Gen. Mgr.**
Skidmore Land Co., 23 Hall Ave., Marinette, Wis.

FOR SALE BY OWNER on easy terms, a good section of land in Foster county, North Dakota. Address Geo. Heaton, 950 Lincoln Ave., St. Paul, Minnesota.

FOR SALE by owner—80 acres about half improved. All new buildings. 3½ miles from good town. Address A. J. Miller, Route 3, Augusta, Wisconsin.

Just Off The Press--Your Copy Is Ready!

A Postal Gets It!

This Book Will Save You $100 to $500 in 1916

THIS BOOK IS YOURS FOR THE ASKING

Get this big, new, four-color book of Galloway bargains. A postal brings it to you. Compare the prices and quality of goods I offer with those you're used to buying and figure out the saving for yourself. Big saving on household goods, implements, machinery, vehicles, harness, clothing, etc., in addition to wonderful bargains in Gasoline Engines, Cream Separators and Manure Spreaders. Mail the postal today.

1916 Sanitary Cream Separators

If you knew all there is to know about separators you couldn't build a better one—one that would run easier, skim closer or be better in material, more durable or more satisfactory. You couldn't build as good a one at a lower price, either. Where other machines are good the New Sanitary is as good, or better. Where they're wrong, it's right. If the New Sanitary is as good as I say it is, you can't afford to buy any other. If it isn't, I couldn't afford to offer it on ninety days' trial and guarantee for ten years against defective material and workmanship. Read the complete description in this big, new, 250-page book of bargains.

Masterpiece Engines at

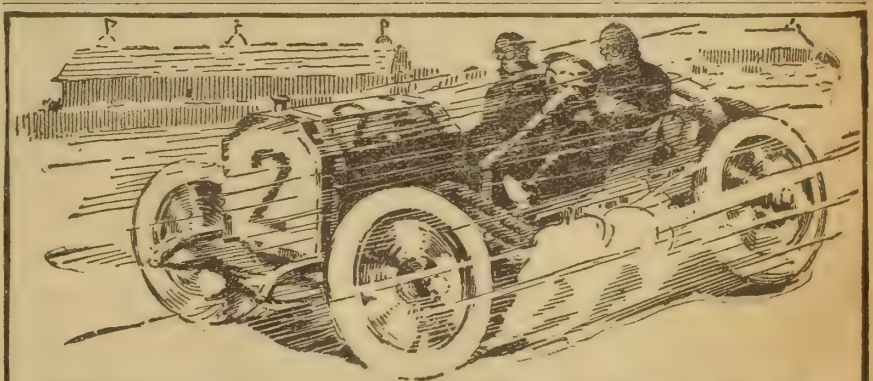
26.75 - 34.50 - 39.50 - 72.50 - 98.75

My unequalled, 1916 Model, Masterpiece Six Horsepower Engines have taken the field by storm. Biggest of all engine values. Other Models from Four to Sixteen Horsepower equally good. One and Three-fourths to Two and One-fourth Horsepower pumping and light work engines built right and priced right. Don't get fooled on high speed, light weight engines. Insist on heavy weight, large bore, long stroke and slow speed when you buy. The new 250-page book tells why—write for it.

New 1916 Spreaders Now Ready

Wider, finer spreading than ever. All steel, double pulverizing beater. Lighter draft, low down, double chain drive, cut under front wheels, channel steel frame, trussed like a steel bridge, steel tongue, endless apron, force feed, top of box 42 inches high, latest model V-rake. Five selling plans—cash or note. All fully described and priced in the Galloway book.

WILLIAM GALLOWAY COMPANY
37 GALLOWAY STATION WATERLOO, IOWA 64.75 up



FAST going doesn't bother AC Spark Plugs. They're made to stand the fastest going or the heaviest pull. The following manufacturers regularly equip with these plugs:

Apperson	Cole	Haynes	Marmon	Packard	Scripps-Booth
Brockway Truck	Davis	Hudson	Maxwell	Paterson	Simplex
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Cadillac	Dodge Brothers	Jackson	Monroe	Pierce-Arrow	Stutz
CaseTractors	Dort	Kissel Kar	Moon	Pilot	Velie
Chalmers	Enger	Knox	National	Reo	Westcott
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Chevrolet	Glide	Lexington-Howard	Oldsmobile		
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AC Spark Plugs

Guaranteed Gas-Tight

For owners who have cars not regularly equipped with these plugs, such as Ford, Overland and Studebaker, there is a special A C which will increase the efficiency of these cars.

Champion Ignition Company, Flint, Mich.

BEST IN MINNESOTA. $25 PER ACRE 640 ACRES Choice clay loam soil, lays practically level; 75 miles from St. Paul and Minneapolis; 1½ miles from good town of 2500; now covered with heavy growth of native grasses. Most of this land has only small brush and is easily cleared. Will develop into very fine farm. Beautiful grove about 15 acres of evergreens for building spot. About 60 acres fine natural hay meadow. Best bargain in Minnesota. Easy terms
OLD COLONY LAND COMPANY,
512 McKnight Building, Minneapolis, Minn.

WANTED to hear from owners of farms for sale. Information free. Kubat Realty & Investment Co., Desk 10, Chippewa Falls, Wis.

EASTERN FARMS can be bought cheaply. For direct communication with owners, write Eastern Farms Co., Box 765, Buffalo, N. Y.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

POOR MAN'S CHANCE—$5.00 monthly buys 40 acres good land, South Missouri. $10.00 monthly buys 80 acres. Will make good homes. Several counties to select from; free list and literature. Box 425-H, Carthage, Mo.

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

The Closed Car on the Farm.

THE old-style closed car was built chiefly for show. It was very high in price and the cost of operation was excessive. For these reasons the closed car earned the reputation of being extravagant. Farmers did not take to it. The big, heavy top encouraged swaying, and after a few weeks of driving over country roads, such a car would develop so many squeaks and rattles and groans as to spoil the pleasure of riding. But a new kind of closed car has come into existence which is popular both among the farmers and in town. One leader of the new "school" is the Jeffery Sedan, made by the Thomas B. Jeffery Company, of Kenosha, Wis. The top weighs only 200 pounds, and the complete enclosed car, taking into consideration the removal of the summer top, which weighs nearly 100 pounds, tips the scale at only about 100 pounds more than the open car. Four years ago the Jeffery people felt the demand for an entirely closed car, protecting all passengers from the weather. The man who drives his own car does not like to drive from the outside, as is the practice in the limousine type, particularly in snow storms or in zero weather. Accordingly the Jeffery Company built an entirely closed car. The front seats were divided, doing away with the necessity of foredoors and permitting larger forward windows. This gives the driver a broader vision. The Jeffery people held a contest, and the name which won was "Sedan." The type of car proved popular and the name soon became common to all cars of similar type. The top of this Jeffery is built entirely in the Jeffery factory, expressly to fit each car as it comes through. By this method the squeaks and rattles are eliminated. The top is easily removed, giving an open touring car at the first suggestion of warm spring weather. One important feature of the new Jeffery is the low price. So it is that farmers with their wives and daughters are traveling this winter in real warmth and comfort—safely sheltered from bleak winds and driving snow, sleet and rain—warm as toast—with wide panes of crystal glass to protect and give an unobstructed view instead of troublesome and leaky curtains to obstruct their vision. Hence the increasing popularity of the closed car on the farm. —Adv.

Pinehurst Dairy Guernsey Herd.

THE Pinehurst Dairy, Sheboygan Falls, Wis., is one of the finest if not the finest dairies in the middle West. This dairy is owned by Peter Reiss, Sheboygan, Wis., of the well-known firm of C. Reiss Coal Co. Several years ago Mr. Reiss purchased one of the best farms and herds of cattle in Sheboygan county. It lays right on the edge of the residence section of Sheboygan Falls, and consists of close to 500 acres of land. Not content with the fine buildings which were already on the farm Mr. Reiss set out to erect the most modern and sanitary dairy buildings that experts could devise. No pains or money were spared to install the most modern equipment. A few choice Guernsey cows are kept in addition to the herd of Holsteins. The Guernsey herd is headed by Imp. Royal George of the Isle 30551, and a number of his yearling sons are now offered for sale. These bulls are well grown, of good type and well marked. They are out of imported cows of Governor of the Chien line of breeding. Pictures and description of these bulls will be sent on application. See this page.—Adv.

Laird's Hampshire Sale.

A PUBLIC sale of Hampshire swine will be held by A. M. Laird, Prairie du Chien, Wis., on January 21st. We especially call our reader's attention to this sale, as the animals to be sold are of exceptional merit. The sale will consist of forty head of bred sows and gilts. The majority of these are daughters of "Laird's Rexall" a boar of outstanding merit. Mr. Laird recently sold this boar for $250 to Joseph Clemens, Kansasville, Wis. These sows and gilts are not only of choice breeding, but are safe in pig to Mr. Laird's junior herd boar, Kornfalfa King, that took junior champion honors at the 1915 Wisconsin State Fair. He is a boar of exceptional merit, having a deep, wide barrel, deep, thick hams, a short, wide head and heavy bone. Litters sired by him will prove very valuable. Attend this sale if in the market for Hampshires. See advertisement on page 29.—Adv.

Green View Short-horns.

THE Green View Stock Farm, Spring Green, Wis., owned by J. H. Bear & Son are offering some very attractive bulls for sale on page 31. One of these is Royal Sultan 390142, a grandson of the noted bull, Whitehall Sultan. He is an excellent individual and a credit to his worthy grandsire. His sire, Spicy Sultan is one of the few remaining sons of the great bull. Royal Sultan is a bull of excellent quality and great size, weighing 2,250 pounds the day he was three years old. He is a massive, deep-bodied animal of roan color. Several of his yearling sows ready for service are also being offered for sale and are red, roan and white in color. They are out of cows of Duchess of Gloster, Arabella, Favorite Beauty and Bates breeding. They are of good size and of smooth, fine quality. For further information in regard to breeding and price write to the above address.—Adv.

Upland Farms Holsteins.

THE Upland Farms, Walworth, Wis., are advertising some exceptionally good yearling bulls for sale on page 31. These bulls were sired by Sir Pontiac Artis Duke 77994 a richly bred bull of good individual merit. His sire, Sir Korndyke Pontiac Artis, has forty-five A. R. O. daughters, twenty-three with records from twenty to 30.13 pounds of butter in seven days. His sire's sire, Sir Korndyke Manor De Kol, has forty-seven A. R. O. daughters, three with records over thirty pounds. His sire's dam, Pontiac Artis is a 31.71-pound daughter of Hengerveld De Kol, that has 117 A. R. O. daughters, nine with records over thirty pounds. His own dam, Pleasant Hill Nellie Veeman Duchess made 27.14 pounds of butter in seven days and has two A. R. O. daughters, one with a record of 28.36. His dam's sire, Sir Veeman Hengerveld, has sixty-six A. R. O. daughters, seven with records above thirty pounds and forty-two with records from twenty to 33.69 pounds. From the foregoing it will be seen that this bull is backed by exceptionally high producing blood. The young bulls themselves are good individuals in every way, being well grown, of good, straight type and well marked. Several of them are out of A. R. O. dams, with creditable records. Pictures, description and extended pedigrees will be sent on application.—Adv.

ONE OF THE GUERNSEY BULLS ADVERTISED FOR SALE ON THIS PAGE BY PINEHURST FARM, SHEBOYGAN FALLS, WIS.

Truttschel Brothers' Holsteins.

TRUTTSCHEL BROS., Sheboygan Falls, Wis., have an exceptionally fine herd of Holstein cattle. The cows are of good type, large size and heavy producers. The latter fact was demonstrated last year when thirteen cows made records that averaged over twenty-three pounds of butter in seven days, three of these cows were two year olds and only one had attained full age. The bull at the head of the herd is Elmer Johanna Wit, a richly bred bull, whose dam is a 100 per cent the same blood as the forty-pound cow, Johanna De Kol Van Beers. They are now advertising yearling bulls ready for service and some younger bulls for sale on page 31. These were sired by Elmer Johanna Wit and are out of cows with records of 21.70, 21.67, 23.77 and 24.48. For extended pedigrees and further information write to the above address.—Adv.

McNutt's Holsteins.

REGISTERED Holstein heifers, heifer calves and young cows are advertised for sale on page 31 by H. F. McNutt, Oxford, Wis. They are choicely bred, tracing to such bulls as Hengerveld De Kol, that has 116 A. R. O. daughters, nine with records above thirty pounds. The heifers and cows are bred to the forty-pound bull, Johanna King Segis, that is a son of the first forty-pound cow of the breed, Johanna De Kol Van Beers. She and three of her sons sold for a total of $62,000. Yearling bulls ready for immediate service from A. R. O. dams with records from fourteen to thirty pounds of butter in seven days are also offered for sale. For extended pedigree and further information in regard to these animals write to the above address.—Adv.

Knudson's Guernseys and Durocs.

THE Guernsey cattle and Duroc swine advertised by Allie S. Knudson, Broadhead, Wis., are as good as will be found in the state of Wisconsin. They are well bred and of excellent individual type. The Guernseys are of Rilma, May Rose and Glenwood lines of breeding. The Durocs were sired by Village G., a litter brother to the $2,000 champion boar, Illustrator, and are out of dam of Crimson Wonder and Colonel lines of breeding. Village G. is one of the best boars of the breed. He weighs 1,000 pounds and yet is of good, smooth quality. He has a short, wide head, wide, deep body and thick, deep hams. Our readers will be highly satisfied with any animals purchased from this farm. See this page.—Adv.

Bloomington's Big Horse Sale.

THE breeders' sale, January 25th-28th, will be held in the Coliseum at Bloomington, Ill. Catalog has gone to the press. There will be offered some of the very best bred Percherons, Belgians, Shires, Clydesdales and trotting bred horses, Shetland and Welsh Ponies from noted breeders, who have agreed to bring some of their stallions and mares for this sale. Manager Hunt writes: "We will probably not have the large number of previous years, but will have the largest sale of draft horses that will assemble in 1916, with more quality and finish and breeding of the best. Among the consignors will be Maple-L-Stock Farm, Innisfail Farm, D. Augstin & Sons, Sunny Plain Farm, Rowe Bros., G. B. Loper & Sons, Wm. Day, H. G. Bowers, E. R. McKown, A. W. Blue, J. W. Otto, Leroy Knight, C. Becker, Harold Keys, H. J. Campbell, Albert Klett, J. W. Barclay & Son, W. H. Coultrip, John McClelland, Alfred Phillips, Walter Severs, W. C. Seibel, F. E. Tollinger, R. G. Crum, A. H. Springer, D. S. Forrest, A. E. White, O. R. Thompson, Lewis Lang, W. L. Candor, Dr. C. A. Hendrickson, John W. Stubblefield & Sons, I. C. Evans and sixty other consignors. We have a number of imported stallions and mares in this sale. We also have stallions of all breeds that are fit to head any stud, and mares of the same class. Ponies and trotters will be of the usual number and sell on Friday, January 28th. They are consigned by: W. C. Adams, Dixon Pony Farm, Jones Bros., M. P. Lantz, Chas. M. Strawn, R. B. Ross, and others. Catalogs ready January 12th, and everyone urged to be present at the sale." Catalog can be secured by addressing C. W. Hurt, manager, Arrowsmith, Ill., as per the advertisement on page 30. Kindly mention this paper when you write.—Adv

Denver Short-horn Bull Sale.

FIFTY registered Short-horn bulls of strong ages will be offered at public sale at the Western Live Stock Show, Denver, Colo., Wednesday, January 19th, under the auspices of the American Short-horn Breeders' Association. Consignments will be made by Carpenter & Ross, C. A. Saunders, W. R. Mansfield, A. O. Stanley, E. W. Harmon, H. Rees & Sons, Wm. Herkelmann, Theo. Martin, Henry Stunkel, D. Warnock & Son, and C. C. Cockran & Sons. This is an offering of good individuals and should draw buyers requiring a good class of registered Short-horn bulls. The auctioneers are Carey M. Jones and Theo. Martin. Any desired information can be secured by addressing American Short-horn Breeders' Association, Union Stockyards, Chicago, Ill.—Adv.

Lorenz's Holsteins.

TEN registered Holstein heifers, two registered cows and four high grade are advertised for sale on page 31 by Adam Lorenz, Sheboygan Falls, Wis. The heifers range from one to four months of age, are well marked and of good straight type. The two registered cows are both short one-quarter of an udder and are being priced very reasonably on that account. This will furnish an opportunity for beginners to get a foundation herd at very little expense. Mr. Lorenz is also offering yearling bulls ready for service that are well bred and of good type. For pedigrees and further information write to the above address.—Adv.

Connor's Yorkshires and Poland Chinas.

YORKSHIRE and Poland China fall pigs eight weeks of age are advertised for sale at very reasonable prices on page 30 by R. C. Connor Company, Marshfield, Wis. They have one of the best herds of Yorkshire swine in the middle West, having selected their breeding stock with care and discrimination and develop the young stock into large, growthy individuals. Our readers who wish to get into the breeding of registered swine at very little expense are offered an exceptional opportunity. For further information write to the above address.—Adv.

Edgewater Stock Farm.

HIGH-GRADE Holstein and Guernsey springers and fresh cows and bred yearling heifers are advertised for sale on page 31 by the Edgewater Stock Farm, Ft. Atkinson, Wis. They maintain a herd of over 300 animals of heavy production ability and good individual merit. Whatever our readers may need in the line of registered or high-grade Guernseys or Holsteins may be found at this farm. For further information in regard to the animals now being offered for sale write to the above address.—Adv.

Percherons and Belgians.

THOSE of our readers who are thinking of purchasing a good, imported or home-bred Percheron or Belgian stallion, should by all means visit the barns of Hart Bros., at Osceola, Iowa. These gentlemen have a splendid lot of stallions on hand, as well as a lot of imported and home-bred Percheron and Belgian mares. Their barns are located right in town where these horses can be seen at any time. They will be pleased to correspond with you and will tell you what they have on hand. When writing them kindly mention this paper. See page 30.—Adv.

Butts' Chester Whites.

CHOLERA immune Chester White spring gilts and yearling sows bred for March and April farrow are advertised for sale on page 30 by William F. Butts, Evansville, Wis. The females offered for sale are bred to a son of Hinshaw, that won championship honors at the 1914 Wisconsin State Fair. For pedigrees, description and further information write to the above address. —Adv.

Capener's Guernseys.

REGISTERED Guernsey bulls, ready for immediate service, are advertised for sale on page 31 by Clifford Capener, Baraboo, Wis. These young bulls are well bred and good individuals throughout. They are being priced reasonably and we advise our readers to act quick if they want one. For pedigrees and description write to the above address.—Adv.

Schoenfelds Short-horns and Poland Chinas.

REGISTERED Short-horn bulls and heifers and Poland China boars and sows are advertised for sale on page 31 by C. J. Schoenfeld & Sons, Fox Lake, Wis. For further information write to the above address.—Adv.

Drake's Short-horns.

SHORT-HORN bulls of Scotch and Scotch-top strains are advertised for sale on page 31 by H. B. Drake & Sons.

TOO LATE TO CLASSIFY.

Durocs and Guernseys

30 BIG, growthy, bred spring and fall gilts, mostly sired by Valley G., one of the largest, heaviest boned and best breeding boars of the breed. Bred to Valley G.'s Col. Defender and Crimson Again. Write me if you want the best Guernsey bulls from one to fourteen months old. Glenwood May Rose and Rilma breeding. Some from A. R. O. dams. Address

Allie S. Knudson **Brodhead, Wisconsin**

REGISTERED GUERNSEY BULLS

OF serviceable age. Sired by the richly-bred bull, Imp. Royal George of the Isle 30551, and out of imported cows of Gov. of the Chene breeding. Send for pictures, pedigrees and description. Prices reasonable. Address

Pinehurst Dairy **Sheboygan Falls, Wis.**

Registered HOLSTEIN

HEIFERS and bulls for sale. Sired by Byronia Pontiac Julip 111179. Prices reasonable.

G. L. Finkle **Appleton, Wisconsin**

15,000 IN USE PROVE THEM BEST

DON'T BE HUMBUGGED. Gabel's two-size Pig Forcep is sold on 30 days free trial. Guaranteed to save the pigs alive and also the mother where all others fail. Agents wanted. Price of So EZ $1; 20th Century $2.50; Two-size Never Fail $3.50 GABEL MFG. CO. Hawkeye, Ia.

THE PALMER FARM HERD

COMBINES individuality, breeding and high production. Two service bulls, bull calves and yearling heifers priced to sell. Come or write.

A. G. Palmer **Elkhorn, Wisconsin**

PURE-BRED BULL CALVES

FOR SALE. Sired by a 30-pound bull, several out of A. R. O. dams. Also a few high-grade heifer calves from one to twelve months old.

S. J. Lauderdale **Elkhorn, Wisconsin**

REG. HOLSTEIN BULL CALVES

FROM 3 months to 18 months old, at prices from $40 to $70. Sired by son of Mutual Piebe De Kol from 840 lb. 3-year-old dam. Herd now headed by the 31.37 lb. bull, Finderne Hengerveld Jewel Pontiac. Address

E. A. Paddock **Elkhorn, Wis.**

HOLSTEINS

REGISTERED bull calves, great grandsons of Belle Korndyke; also high-grade heifers, two years old for sale.

E. J. Stearns **Elkhorn, Wisconsin**

24.10 Lb. Son of BEAUTY WALKER PIETERTJE KING 84482

WHOSE seven nearest dams average 28 pounds of butter in seven days. Bulls from six to ten months by the same sire and from A. R. O. dams with records from 16 to 24 pounds. Prices reasonable.

A. G. Palmer & Sons **Lake Geneva, Wis.**

HOLSTEIN BULLS

SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address

H. J. Barker **Elkhorn, Wisconsin**

$150.00

WILL buy a bull out of a dam whose record is 25.14 lb. butter in 7 days, and his sire is Beauty Walker Pietertje King 84482—whose 7 nearest dams average 28.724 lbs. butter. Some good A. R. O. cows and heifers for sale at $150 to $250 bred to our herd bulls. Address

Harry D. Dunbar **Elkhorn, Wisconsin**

Farm 2½ miles southeast of Elkhorn.

THREE HEIFERS FOR SALE

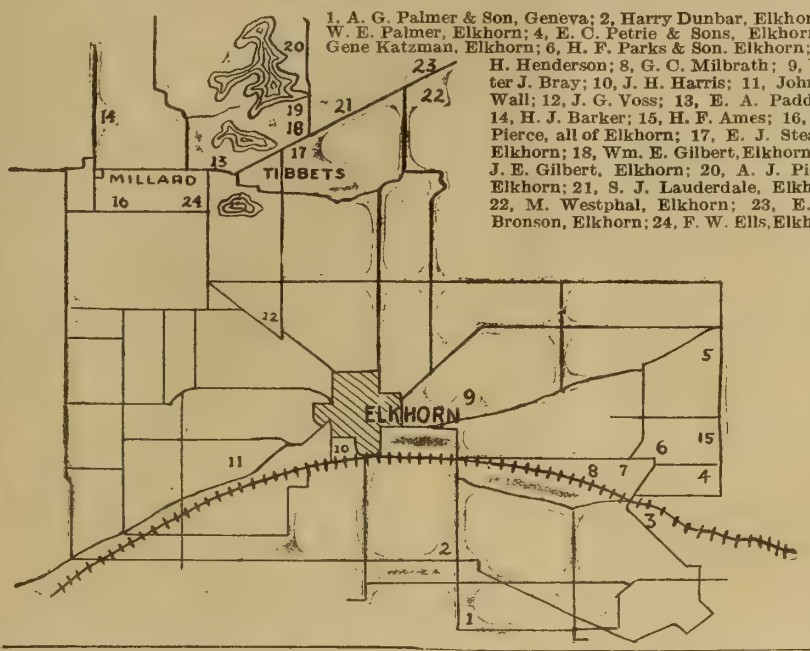
NEARLY a year old and five bulls of serviceable age, all sired by a 28-pound bull, Every one a good individual and more white than black; also the 26.41-lb. son of the 31-lb. bull Pabst Burke De Kol King 89760. Address

E. C. Petrie & Sons **Elkhorn, Wisconsin**

AN EXCEPTIONAL HERD SIRE

WESTSIDE LADOGA PRINCE 77130, practically perfect individual, proven sire, splendid breeder, 4 yrs. old, will be sold due to fact that he cannot be used longer in herd. Pedigree has no weak spots. His dam is a 27.38-lb. junior 3 year old, his nearest three dams average 27 lbs. and his nearest seven dams average 22 lbs. His paternal ancestors are likewise strong, the nearest three in particular have large number of A. R. O. daughters. Two Holstein bulls sired by Westside Ladoga Prince are also offered for sale.

J.H. Harris, Holstein Dairy Farm, Elkhorn, Wis.



1, A. G. Palmer & Son, Geneva; 2, Harry Dunbar, Elkhorn; 3, W. E. Palmer, Elkhorn; 4, E. C. Petrie & Sons, Elkhorn, 5, Gene Katzman, Elkhorn; 6, H. F. Parks & Son. Elkhorn; 7, J. H. Henderson; 8, G. C. Milbrath; 9, Walter J. Bray; 10, J. H. Harris; 11, John H. Wall; 12, J. G. Voss; 13, E. A. Paddock; 14, H. J. Barker; 15, H. F. Ames; 16, Earl Pierce, all of Elkhorn; 17, E. J. Stearns, Elkhorn; 18, Wm. E. Gilbert, Elkhorn; 19, J. E. Gilbert, Elkhorn; 20, A. J. Pierce, Elkhorn; 21, S. J. Lauderdale, Elkhorn; 22, M. Westphal, Elkhorn; 23, E. H. Bronson, Elkhorn; 24, F. W. Ells, Elkhorn.

A. J. PIERCE Elkhorn, Wis.

REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

J. G. VOSS ELKHORN, WIS.

BREEDER of registered Holstein-Friesian cattle of outstanding individuality and high production ability. Write me when you are looking for Holsteins.

19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.

H. F. Parks & Son **Elkhorn, Wisconsin**

877 POUNDS BUTTER

IN a year. The record of the dam of the bull I am offering for sale. He is 9-10 white; born May 13, 1914; good individual; good server. Sired by King Bess of Rock, that won 1st prize at the National Dairy Show and New York State Fair. A well-bred bull and good individual. Price, $125.00. Send for pedigree and description. Address

Earl Pierce **Elkhorn, Wisconsin**

MEADOW SPRING FARM

is offering some fine registered

HOLSTEIN BULLS

SEVERAL sired by a 30.18-pound bull. One 15-16 pure, ⅛ white, a fine individual from high producing dams. Also a fine flock of R. C. R. I. Red. Cockerels $1 each. Visitors welcome.

M. Westphal **Route 6, Elkhorn, Wis.**

ONE FINE YEARLING HOLSTEIN BULL

WELL grown, one-half white. Price $65.00. Also some Duroc Jersey boars, spring pigs and yearlings. Address

H. F. Ames **Elkhorn, Wisconsin**

REGISTERED HOLSTEINS FOR SALE

EITHER sex. Sired by Champion Johanna Colantha, he being a son of the 35-lb. bull, Colantha Johanna Champion. Also some Chester White spring boars. Address

Gene Katzman **Elkhorn, Wisconsin**

F. W. Ells, Elkhorn

Breeder of registered cattle. Stock for sale at all times.

FOUR GRADE HOLSTEIN HEIFERS

TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn, Wisconsin.

Two Bulls For Sale

SIRED by Canary Homestead Frisby; also ten nicely marked, high-grade heifers coming 2 years old. Address

Walter J. Bray **Elkhorn, Wisconsin**

WELL MARKED

7-8 WHITE. yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address

G. C. Milbrath **Elkhorn, Wisconsin**

30-LB. HERD BULL FOR SALE

CANARY Fobes Sunnyside 89470, born April 22, 1911, sired by Canary Paul Fobes Homestead 65751, dam, Jesse Fobes Sunnyside De Kol 100740, whose record is 30.51 lbs. of butter in 7 days. Fine individual. Would exchange for a bull of equal breeding. Also have four yearling grade heifers sired by him. Write for particulars.

J. E. Gilbert **Elkhorn, Wis.**

REGISTERED BULL

CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address

Wm. E. Gilbert **Elkhorn, Wisconsin**

Beaver Dam, Wis. These were sired by Broadhook's Prince, a 2,400-pound grandson of Whitehall Sultan. Mr. Drake will also price a carload of registered Short-horn cows and heifers of good individual merit and heavy production ability. For further information in regard to these animals write to the above address.—Adv.

Simon's Chester Whites.

ATTENTION is called to the advertisement on page 30 of John Simon, Campbellsport, Wis. He is offering some especially good bred sows, boars and early fall pigs of either sex. These are being priced very reasonably and will give our readers satisfaction. For further information write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

Lewis' Guernseys.

SOME exceptionally well-bred Guernsey bulls, ready for immediate service, are advertised for sale on page 31 by Ray Lewis, West Salem, Wis. Two of these were sired by King Bell 4th, a son of King Bell, champion bull at the National Dairy Show. Mr. Lewis is also offering a two-year-old son of the noted bull, Imp. Robert's Boy, and two bull calves sired by King of the Roses. Extended pedigree and prices will be sent on application.—Adv.

Jewett's Durocs.

HARRY JEWETT, Bangor, Wis., is advertising Duroc spring boars and gilts for sale on page 30. These were sired by Disturber 52d, first-prize senior yearling boar, at the 1915 Wisconsin State Fair. He is a son of the 1,020-pound grand champion boar, Disturber, that won so many honors at the leading state fairs in 1914. The animals offered for sale are well grown, deep-bodied, deep, thick hams and heavy bone and will please all who purchase them. For pedigrees and description write to the above address.—Adv.

Little's Short-horns.

HARVEY H. LITTLE, Evansville, Wis., offers eight good dual-purpose Short-horn bulls for sale on page 31. These range in age from twelve to eighteen months. They are of good red and roan color and come from heavy producing strains of blood. For pedigrees and further information write to the above address.—Adv.

Finkle's Holsteins.

YEARLING Holstein heifers and bulls are advertised for sale on page 28 by G. L. Finkle, Appleton, Wis. These are sired by Byronia Pontiac Julip 111179 and mostly from daughters of Prince Cedarside De Kol 69072. For further information in regard to breeding, markings and description write to the above address. When writing mention The Wisconsin Farmer.—Adv.

SIR PONTIAC ARTIS DE KOL 77994, sire of the yearling bulls advertised for sale on page 31 by The Upland Farms, Walworth, Wisconsin.

HAMPSHIRE SWINE.

40 Reg. Hampshire

SOWS and gilts, of royal blood and highest quality; bred to Kornfalfa King 28549, Junior Champion Wisconsin State Fair, 1915, sell at public auction Friday, January 21, 1916. For catalog and Hampshire booklet, address

A. M. LAIRD **PRAIRIE DU CHIEN, WISCONSIN**

SHEEP.

HICKORY DALE SHROPSHIRES

Champion Flock of America

SIRES in service: Tanner's Royal; Minton 1037; Minton 51; Breeder's Friend. Ram and ewe lambs for sale that for breeding, style and true Shropshire character cannot be excelled.

Arthur Broughton & Sons **Albany, Wis**

Reg. Jersey Bulls

ing dams of good type. Priced to sell. Addres

Rollie Vandervort **Tomah, Wis**

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Chariton, Iowa.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY

Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

RED POLLED CATTLE.

FOUR REGISTERED RED POLLED BULLS

TEN to fifteen months old, sired by McGovern out of producing Cows of choice breeding.

M. J. Rowlands & Son. Cambria, Wisconsin

SALE DATES.

All Breeds of Draft Horses.

Jan. 25-26-27-28, Breeders' Sale, Bloomington, Ill., C. W. Hurt, Mgr.

Poland China Swine.

Feb. 8, Wm. Smiley & Son, Albany, Wis.

Feb. 9, J. C. Hendricks, Hazel Green, Wis.

Feb. 10, E. W. Hendricks, Hazel Green, Wis.

Feb. 11, M. Madson & Sons, Madison, Wis.

Hampshire Swine.

Jan. 21, A. M. Laird, Prairie du Chien, Wis.

Mar. 8. R. L. Currie, Vida, Wis.

Holstein-Friesian Cattle.

May, 2-3, Lake Mills Holstein Breeders' Sale Co.

DUROC JERSEY SWINE.

Duroc Sows and Gilts

FROM the greatest boars of the breed; by Joe Orion 2d, Volunteer, King the Col., Illustrator, Big Wonder, Defender III, etc., and bred to Top Col. Defender, Chief's Col. Fisher, Critic King the Col. and Volunteer Defender. Tried brood sows and large, well-grown gilts, bred for March and April farrow. If you want a good one write me. **John L. Fisher, Janesville, Wisconsin.**

SUGAR RIVER STOCK FARM

GUERNSEYS

A CHANCE of a lifetime to get good A. R. Guernseys. We will sell one or two cows and some bred heifers. Your choice of 30 head; 15 of them have A. R. records up to 565 lbs. fat. Price $175 and up. 12 bull calves up to 10 months old and some heifer calves, good individuals, nicely marked. Glenwood. Rilma and May Rose breeding.

DUROC JERSEYS

40 DUROC fall and spring boars and 50 spring gilts. Some are good enough to win in strongest competition. Sired by the great 1,000-lb. Valley G, that is a litter brother to the $2,000 champion, Illustrator, and other good boars. Defender, Crimson Wonder and Colonel breeding.

Don't pay unreasonable prices when you can buy animals with most popular blood lines for prices that are reasonable. **Phone 239F, R.F.D. 5. ALLIC S. KNUDSON, PROP., BRODHEAD, WIS.**

WELL-GROWN QUALITY WELL-BRED

DESCRIBES the Duroc spring boars I am offering. Proven blood lines and developed on butter milk has done it. Golden Model Lad, Lee's Defender and Corrector sired these pigs.
J. W. Thomas **North Bend, Wisconsin**

BURN BRAE FARM

ROSEDALE, WIS.

CHAS. A. PETERSON, Prop.

DUROC SPRING BOARS weighing 275 pounds. Bred spring gilts of choice breeding, sired by Burn Brae Distinction and Hazelhurst Col. Bred for March and April farrow to Burn Brae Golden Model. Mention Wisconsin Farmer when writing.

OPEN DUROC SPRING GILTS

SIRED by W. C.'s Disturber, a son of the 1,020-pound boar, Disturber, by Colonel's Choice and by Corrector's Chief. Also a few spring boars for sale. Address
W. C. Jenkins **Bangor, Wisconsin**

QUALITY DUROCS

AT prices you can't afford to overlook. Spring boars, gilts and mature sows of Defender, Ohio King and Colonel breeding. Two Bates Milking

SHORT-HORN BULLS

18 months of age, from high producing dams. Prices right for quick sale. Address
B. W. LITTLE **JANESVILLE, WIS.**

DUROC BOARS SHIPPED C. O. D.

OUR spring boars are good enough to ship C. O. D. They are big, typey, with heavy bone. They are sons of King the Col., Lincoln Model, Golden Choice and Crimson Model. Write for description. Price $20 to $30. Address
Stubbs & Hyzer **West Salem, Wisconsin**

DISTURBER 52d

1ST prize senior yearling boar, 1915 Wisconsin state fair, sired the fine Duroc spring boars and gilts I have for sale. He was by the 1020 pound grand champion boar, Disturber. Also have a four-year-old Guernsey bull sired by Clara's Sequel for sale. Address
Harry Jewett **Bangor, Wisconsin**

DUROC BOARS AND GILTS

FARROWED in April. Sired by Professor II, and out of sows of Chief J.E.D., Ohio Chief and Grant's Col. breeding. Price $20 and up.
W. T. Green **Orfordville, Wisconsin**

DUROC BOARS and GILTS

GROWTHY Duroc boars and bred gilts for March farrow at prices to move. Address
W. W. Vaughn & Son **Lyons, Wisconsin**

DUROC JERSEYS Pure-bred, both sexes, reasonable prices. Pedigrees furnished. E. F. Berkley, Augusta, Wisconsin.

OTTER CREEK FARM

OFFERS some exceptionally well bred, well grown DUROC SPRING BOARS and GILTS. Prices low. Address
B. M. ARRIES - AUGUSTA, WISCONSIN

POLAND CHINA SWINE.

SEMI-BIG-TYPE POLAND CHINA SPRING GILTS

FOR SALE. Bred for March and April farrow. Sired by Wisconsin Jumbo 220255, 1st prize boar at Wisconsin State Fair, 1914, and from some of the best sows sold in L. P. Martiny's sale in 1915. Gilts are bred to a big-type boar sired by Larson's Big Orange 199563 by Big Orange 145509, bred by Peter Mouw. Dam, B. B. Surprise 481322 by Black Big Bone 179671. Price of gilts $25 to $35. Registered, crated and f.o.b. on G. B. & Western or on Soo Line railroads. Also some registered and high-grade Jersey females, all ages, Two in Reg. of Merit. Also field peas. Address all orders to
E. P. TOBIE **AMHERST JUNCTION, WISCONSIN**

We Wish to Thank Our Friends and Customers for their liberal patronage, and hope to hear from them again.

Our Poland Chinas are all sold, and can spare but one more.

We wish to thank The Wisconsin Farmer for the good help given us in selling, and recommend it to anyone having good things for sale. We especially thank Mr. H. S. Hoard for his good help.

Again thanking you all and wishing you a prosperous New Year, we are

Yours very truly,
DOBSON & EASTMAN, Lancaster, Wis.

Poland China Bred Gilts

AND yearlings from litters that average ten. Sired by Black Bone 212501, with 11 inch bone, sired by the $1,100 Black Big Bone, 1st at Minn. Fair; Square Deal by the 1,000-lb. Lakewood Ideal, and Black Model by Black Orange. These gilts are the large, smooth kind with length and heavy bone. Are bred to Black Model and Big Ben, a choice yearling of 9 inch bone. Priced to move them soon. Rose Comb Rhode Island Red cockerels. Address
P. N. Collins, Box 55, River Falls, Wisconsin

LARSON'S BIG-TYPE POLANDS. Spring boars and gilts, real big type, of good quality. L.'s Big Orange, largest hog in county. Fall pigs. Priced for quick sale. J. LeRoy Larson, Iola, Wis.

CHESTER WHITE SWINE.

CHESTER WHITES

SPRING boars of the kind and type so much in demand by farmers and breeders. A few choice sows also for sale. Write for prices.
Adolph Nuttleman **West Salem, Wis.**

Poland China Sow Sale Feb. 8

YOU will buy big-type Poland Chinas eventually. Why not our sow sale February 8th. Send for catalog. Address
WM. SMILEY **ALBANY, WISCONSIN**

CHOLERA IMMUNE CHESTER WHITES

SPRING gilts and yearling sows bred for March and April farrow to a son of Hinshaw, the 1914 Wisconsin State Fair champion. Address
WM. F. BUTTS, EVANSVILLE, WISCONSIN

Registered POLAND CHINAS

A FEW good spring boars ready for service. Bred gilts now. All priced for quick sale. Will ship on approval. Registered Holsteins. Address
Marinette County Asylum, **Peshtigo, Wis.**

CHESTER WHITES

BARGAINS in pedigreed Chester Whites. Herd boars, bred sows and early fall pigs. Address
JOHN SIMON **CAMPBELLSPORT, WIS.**

Big-Type Polands

SPRING and fall boars that combine large size with good quality, good back, hams and heavy bone. "The profitable kind." Farmer's prices.
Wm. Bowe **Fox Lake, Wisconsin**

CHESTER WHITE SPRING BOARS AND GILTS

SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address
W. F. Miller **West Salem, Wis.**

Poland Chinas

BRED gilts for sale; also fall pigs at bargain prices. Address
James Derivan **Fox Lake, Wis.**

CHESTER WHITE

SPRING boars and gilts sired by Highland Joker, Eagle Chief, White Eagle Chief and out of show sows. These are well grown and typey. Prices reasonable. **W. C. Scheibe, Burlington, Wis.**

Big-Type Poland China Hogs

MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address
W. T. Hartley, **R. 3, La Crosse, Wisconsin**

HORSES.

FRANK IAMS'

"Peaches and Cream" Horses are "Town Talk"

Horsemen—1916 is the **"Get Rich Quick"** year for **Horse Breeders** and **Stallioners.** Get into the **"Money-Making Game"** of Breeding Draft Horses. **Europe "doffs"** her **"War Cap"** to **U. S. Horses. Europe** buys **500 Horses daily of U. S.** (at $125 to $200). Europe will buy **"a MILLION"** Horses of U. S. You make **more "Easy Money"** in **Breeding Horses** than any other business for **next ten years.**

His 34 years of success in *Importing, Breeding* and Selling *5,640 registered horses*—his "50 trips" across the ocean—make Iams *a safe man* to buy *stallions from.* His "*old customers*" are "*best Page advertisers,*" his *Breeding Guarantee* backed by "*1-2 Milion Dollars.*" *Iams' Imported* and *Home-bred horses* are "*classy, model big drafters*" of *large bone, fine form, quality, finish,* and *flash movers.* Several European

"Gold Medal and State Prize-Winners,"

"*Iams' kind,*" and in the "*Pink of Condition.*"

Bought at "*bargain prices*" and *must be sold.* "*Iams sells horses on honor.*" A lady can buy as cheap as a man. *Iams is not in "stallion trust,"* and is *selling more pounds of "model draft horse"* for the *money* than any *competitor. Iams* is *cutting the middle* out of *high prices* on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected" by Governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse. Iams sells

IMPORTED STALLIONS AT $1,000 AND $1,400

(few higher). **"Home-Breds" come cheapest.** Registered 1,800 to 2,100-lb. mares at $700 to $1,000. **Terms cash, or one year's time at 7 per cent; land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare;** gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads. with a **$500 guarantee** that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

Breeders' Sale of 300 Reg. Horses

IN COLISEUM, BLOOMINGTON, ILL.

JANUARY 25, 26, 27, 28

200 IMPORTED and native-bred registered Percheron, Belgian, French Draft, Shire and Clydesdale stallions and mares. 100 head of imported and registered stallions and mares of the very choicest breeding. 50 head of the best registered mares that ever went into an auction ring. 50 registered stallions of the very choicest breeding and individuality. 50 registered trotters, grade draft stallions and mares. 60 head of ponies—imported and native-bred registered Shetland and Welsh. Entries close December 20th. Catalog ready January 10, 1916.

D. AUGUSTIN, Pres. **C. W. HURT, Mgr., Arrowsmith, Ill**

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

YORKSHIRE SWINE.

WE OFFER

50 full blooded

YORKSHIRE PIGS

that can be registered and 12

POLAND CHINA PIGS

six weeks to eight weeks old at

$5.00 EACH

R. C. CONNOR CO., MARSHFIELD, WIS.

PERCHERON STALLION

BLACK grey; foaled June, 1913; wt. 1,900; sired by Royalist, 1st prize 3 year old and grand champion stallion over all ages at the Wis. State Fair, 1907. This colt was 1st prize 2-year-old stallion at the North Wis. State Fair this fall. Will be sold at a bargain.
L. P. MARTINY, CHIPPEWA FALLS, WIS.

LEFEBURE'S BELGIANS

LARGEST collection on earth, horses in 15 different pastures. Catalog and circulars free.
H. LEFEBURE & SONS, FAIRFAX, IA.
8 miles west of Cedar Rapids

Four Mammoth Jacks

THREE and four years old; black. Also registered saddle stallions. Will sell cheap or exchange for dairy cows or big horses. Address
C. C. JUDY **TALLULA, ILLINOIS**

BERKSHIRES.

CORTTE'S BERKSHIRES

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NEVER before have we been able to place before the public such a large bunch of imported and American bred stallions. We own six farms—1,180 acres devoted to the horse business. A lifetime in the horse business has taught us that the best is none too good for the American farmer, and we are making no strong claim when we say that our horses are among the best that will be seen in any importing barn this season. Our horses are all ages, sizes and colors; weigh from 1,800 to 2,300 lbs. Anyone thinking of buying a stallion will save money by writing for our prices and descriptions. We can supply you whether you need one or a carload. We have all our own help, therefore, this 1,180 acres enables us to raise all our own feed. We handle all our horses, do all our selling, have no middlemen to divide profits with. Consequently we can save you more money in buying a stallion than our competitors. Lawler is in north central part of state, easily accessible from all points in northern Iowa and Minn. Best of R.R. facilities, being on I.N.D.Div. of C.M.& St.P. between Mason City and McGregor. All stock guaranteed breeders. **FRANK P. SHEKLETON & SONS, LAWLER, IOWA.**

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OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir KorndykePontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

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ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026. a richly-bred Ormsby bull. Address

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A 23-POUND Holstein bull ready for immediate service. A splendid individual, mostly white, right in every way. Sired by Daisy Hengerveld Piebe Champion. Dam, a granddaughter of Homestead Jr. De Kol. Can also spare a few A. R. O. cows and heifers. Send for prices and extended pedigrees. Address

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SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 20 months old. Out of heavy producing dams.

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INKA DE KOL AKKRUMMER 163119

BORN December 28, 1914. Sire, Daisy Johanna 5th, the 1st prize two-year-old bull at the 1915 Wisconsin State Fair. Dam, a 27-pound daughter of the show sire, Johanna Pontiac De Kol.

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OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address

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7 DAYS was made by the dam of **SIR NETHERLAND LONGFIELD.** Well marked, well grown bull calves from one to six months old, sired by the above bull, for sale. Write me your wants in registered Holsteins.

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HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

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a son of the $1,000 bull, Canary Paul, and out of Nellie Alacartra Rue, that made 23 pounds butter in 7 days and 874 pounds in a year. Send for pedigrees and price. Address

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Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69—24.65—22.35—20.46—16.96. Here are bulls that will improve the pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

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WELL MARKED; seven-eighths white; well grown. Send for pedigree. Address

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NEW pamphlet Short-horn prize-winners, illustrated, historical and experience articles mailed free, also Vol. No. 1, Year Book, Milking Short-horns. Send in your applications before January 10th for your Short-horns over one year old. 13 Dexter Park Ave., Chicago, Ill.

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Spring boars and gilts ready for fall breeding.

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SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

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AND younger from A. R. O. cows with records of 21.70-21.67-23.77-24.48 lbs. of butter in 7 days. These are sired by Elmer Johanna Wit, whose dam is 100% the same blood as the 40-lb. cow, Johanna De Kol Van Beers. Write for pedigree, price and description. Address

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Some with A. R. O. records. Choicely bred and of straight, large conformation.

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Sucking colts—2 year old—5 year old. Write for pedigrees and price.

Beautiful full marked sable and white Collie pups, males from natural workers, 10 weeks old. Price $5. Pedigree furnished. Address

Paddock Bros. – **Augusta, Wisconsin**

5 REG HOLSTEIN COWS 5

4 YEARLING heifers and 3 yearling bulls of serviceable age from A. R. O. cows. Yearling animals sired by a grandson of the noted bull

KING OF THE PONTIACS

that has 164 A. R. O. daughters. Chester White boars and gilts for sale.

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1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

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COWS, yearling heifers and bulls, ready for service. Yearlings sired by the 31.11 pound bull, Briar Abberkerk De Kol 76694; well marked and good type. C. E. Ward, Palmyra, Wisconsin.

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READY for service. Their sire is a grandson of King Segis and De Kol Burke, out of a 21-lb. dam. Also can spare some females. Address

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HIGH-GRADE Holstein calves, either sex, 3 to 4 weeks old. $17 each, crated. BURR OAK FARM, Whitewater, Wisconsin.

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TEN very good Scotch bulls for sale. All sired by Strathallen King 296426, that is one of the best grandsons of Whitehall Sultan. Address

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BULLS of serviceable age, sired by Oakland lad; and out of Profitable Oxford Bloom and and Young Mary cows. Will also sell a few yearling heifers and cows with calves at foot. Can supply a carload. Address

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WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address

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50 REGISTERED Short-horn bulls and heifers. 100 big-boned Poland China boars and sows. Call at Prairie Lawn Stock Farm or write.

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CHOICE Short-horn bulls 1 to 14 months. Poland China swine of all ages. Write A. Menke, Route 1, Markesan, Wisconsin.

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At the Present Time

I OFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.

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OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address

Ray Lewis **West Salem, Wis**

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SIRED by Primsose Endymion 11619, whose full sister made 656 pounds of fat, and whose dam made 500 pounds fat, and whose sire was grand champion at the National Dairy Show, 1907. A few younger bulls and a few females for sale.

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FROM Advanced Registry dams with records as high as 613 pounds of fat in a year. Sired by Richmond's Coralord, a grandson of Masher's Sequel. Three ready for service. Address

M. B. Magoon **Whitewater, Wis.**

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TEN bulls, grandsons of Governor of the Chien; fron 1 to 15 months; mostly from A. R. O. cows with records up to 566 lbs. fat. Prices reasonable.

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SIRED by King of the Meadows. Dam [illegible] Sired by Eagle's Glenwood Boy of Haddon. He traces three times to Glenwood Boy of Haddon. One younger bull for sale. Priced right for quick sale. W. D. Sandman, Holmen, Wisconsin.

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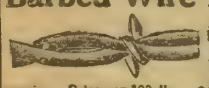

New Galvanized heavy weight barbed wire put up on reels of about 100 lbs. 2 point barbs. Strong and well made for long service. Price per 100 lbs., $2.95. Order by lot No. A J-35.

Galvanized Barbed Wire, light weight, first grade and best made, put up in exactly 80 rods to the reel. 2 point barbs. Price per reel, $1.75. Order by lot No. AJ-36. Best quality, painted barbed wire, per 100 lbs., $2.35. Order by lot No. AJ-12.

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Smooth galvanized wire. Suitable for fences, stay wires, grape vine and all purposes for which wire is generally used. Put up in rolls of irregular lengths ranging from 50 to 250 feet. This low price is for 100 pounds of our No. 9 gauge, the standard size mostly in demand. We have every desired size. Order by lot No. AJ-37.

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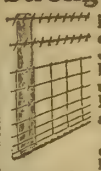
Strong Fencing 15c Per Rod



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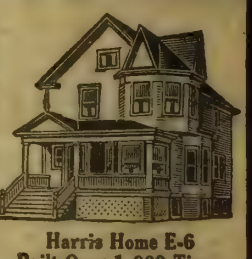

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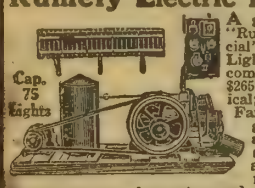

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Think of it. Only $29.50 for a "RUMELY" 500 lb. The patented distributing blades make this the best disc Separator made. Capacity 500 lbs. Skims a gallon per minute. Good for 20 years—quiet smooth-running; no delicate mechanism, simple strong, interchangeable parts, always easily obtained. Skims closely—thick or thin cream, as desired; no loss of butter fat. Guaranteed perfect—brand new—satisfactory; order lot No. AJ-1101—**$29.50**. Get our offers on larger sizes at lowest Rumely Speciel Bargain Sale Prices.

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You certainly should avail yourself of this splendid opportunity. Bear in mind these are real Rumely products and this great sale gives them to you at tremendous savings.

This 8-in Rumely Mill—weight 325 lbs.—is the greatest value ever offered at $11.00. Simply can't be best for sturdiness, ease of operation and economy. Few parts. Special burrs a feature of grinding ear corn and small grains, course, medium or fine. Six inch mill for shelled corn at $5.50; 10 and 12 inch sizes, proportionately low prices. Send for bargain offers. Order by lot No. AJ1286, 8-inch, $11.00. 8-10 and 12 in. are grinders and cob crushers.

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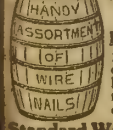


Never before such a chance to save big money on nails. Buy liberally.

Standard Wire Nails, put up in 100 lb. kegs, all kinds and sizes mixed. Price, per keg, $1.50. Order by lot No. AJ-45. 10D, regular new wire nails, 100 lb. keg, $2.10. Order lot No. AJ-46.

Wallboard Snap $1.39 Per 100 Sq. Ft.

First quality, 5-ply wall board of the splendid "Celtite" manufacture. Sized and ready for decorating. Can be papered, tinted, frescoed, paneled or painted. Made of 3 fibre board sheets and 2 asphalt walls built up—5 ply, firm, smooth and rigid. Samples free. Lot No. 10 AJ-1830. Price 100 sq. ft., $1.39.

Harris Mixed Paint 89c Per gal.

Harris high grade ready mixed house paint represents a splendid formula that always gives complete satisfaction. Order by lot No. AJ-41. For best ready mixed house paint at 89c per gallon. Harris Barn Paint at 59c per gallon. Lot No. AJ-42. Write for Free Paint Book

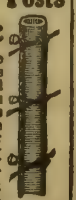
Our Great Purchase of RUMELY Merchandise

Our recent gigantic purchase of Rumely stock of Gasoline Engines, Cream Separators, Electric Lighting Plants, Ensilage Cutters, Feed Mills, Corn Huskers, Corn Shellers and Hay Balers enables us to offer these high grade, brand new articles direct to you at less than dealers used to pay in carload lots.

Never in our 23 years of Price Wrecking have we offered such wonderful bargains. We believe in truthful advertising. An army of satisfied customers know it! So when we say to our customers everywhere "Here and now is the greatest opportunity we have ever placed before you in merchandise of this kind," every one awake to opportunity is bound to take notice of our words.

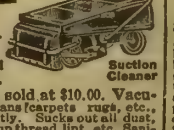
Limited space here renders impossible any effort we may make to place before you all of this material or even a small part of it. Above we offer four random selections to give you some idea of the bargains represented. Remember these are real Rumely products at these low prices that should convince the most skeptical of the great importance of this sale. Ask today for complete list of the great Rumely Purchase.

Steel Fence Posts Bargain Each 17c



A big fortunate purchase brings these tubular steel fence posts to you at a tremendous saving. Complete with wire attaching clamps. Strong durable construction—well made. Price above is for 6ft. length, all other sizes at low prices. Order by lot No. AJ97. Our wire and fence book below tells more.

Vacuum Cleaner $3.59



Wonderful value! Thousands sold at $10.00. Vacuum cleans carpets rugs, etc., perfectly. Sucks out all dust, takes up thread, lint, etc. Sanitary steel body beautiful mahogany finish; rubber tire, ball bearings, smooth running wheels. Price complete with handle, only $3.59. Order by lot No. AJ-47. Suction Cleaner

Buy This Door Now Only 98c

Lot No. AJ-27. This splendid door bargain is but one of our building material snaps. Consider this—a good and substantial, four panel, painted door for 98c. Ask for our catalog of lumber and millwork bargains. You will get all the building information you require. Low prices.

Shingle Bargains per 1000 $2.77

Lot No. AJ-923. 10 in. Clear 5-2, 16 in. Washington red cedar shingles, per 1000, $2.77. Lot No. AJ-924. Extra Star "A" Star, 6-2 16 in. Washington red cedar shingles, per 1000, $2.99. Lot No. AJ-925. Extra clear 6-2, 16 in. Washington red cedar shingles. Absolutely clear. Per 1000, $3.37.

Heating Plant Snap As low as $67.00

You can easily install your own heating plant with the assistance of our free expert engineering service. We show you how to eliminate much useless and unnecessary expense. Warm air as low as $67, steam $134 and hot water $154. Send for our Free Heating Book today.

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Good Designs 65c

Finest Rugs from auctions all grades, sizes, and patterns and colors. Biggest rug, linoleum, and carpet bargains ever offered; see them in actual colors in our book. 9x12 ft. rugs $3.38. Axminster Rugs 65c. Our free home furnishing book tells more.

Closet Outfit Now Only $9.98

Elegant low tank closet outfit of guaranteed "A" grade material; nickel plated trimmings. Golden oak seat. Well constructed throughout. Perfect acting flush. All complete at this low price. LOT NO. 5-AJ-902. Other Like Savings in FREE Plumbing Book.

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Combination tool consisting of vise, drill, anvil and handle. Works easily. Quickly adjusted. Steel faced jaws, open 6 in. Width of jaws, 8 1-4 in. Case hardened anvil. Drills hold up to 1-2 in. lot No. AJ-7221. Drills not supplied.

Fine Incubator $4.75

"Little Giant" 60-egg, all metal incubator of strong, solid construction. Every requirement of a good, successful incubator will be found. Shaped round—no corners for stagnant air pockets. Heavy plate glass top. Double wafer thermostat—hot water system. Order lot No. 8AJ-299. "Little Giant" 60 Chick Brooder. No. 8AJ-297. $2.45.

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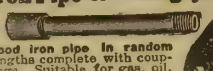
Made of 20 gauge galvanized steel: won't rust; strongly riveted seams. Lot No. AJ-1801. Cap. 3½ Bbls. $4.55. Lot No. AJ-1804. Cap. 9 Bbls. $6.95. Larger sizes at proportionate prices. $4.55

Bath Tubs Complete $13.00

Best white enameled, cast iron one piece, heavy roll rim bath tub; 5 feet long; latest style nickel plated trimmings, including Fuller double bath cocks for hot and cold water, nickel plated connected waste and overflow and nickel-plated supply pipes. Order lot No. AJ-101.

Iron Pipe & Fittings, 3c Ft.



Good iron pipe in random lengths complete with couplings. Suitable for gas, oil, water and conveyance of all liquids. Size 3-8 to 12 in. Our price on 1 in., per foot, 3c. 1 1-4 in., 3 1-2c ft. Complete stock of valves and fittings. Send us specifications and name your needs.

50,000 MONEY SAVERS

Strong Hog Troughs 85c

Durable Troughs for hogs and cattle. Heavy galvanized cross bars and legs, securely riveted. Round bottom; easily cleaned. 56 in. long by 16 gauge. Each 85c. Order by lot No. AJ-43. Heaviest galvanized iron, standard size, 6 ft. long. Each, $1.25. AJ-44.

Kitchen Sinks 87c

Guaranteed "A" grade cast iron. No flaws or defects. Complete with nickel-plated strainer and iron sink collar and bolts. Standard size connection. Order lot No. AJ-89. Painted Sinks, 18x24 in., 87c. Order lot No. AJ-40. Enameled Sinks, $2.55.

Dining Table Snap $5.45

Just as illustrated, well made and finished a rich golden, 42-inch top. Order by lot No. AJ-49. Price only $5.45. Less than wholesale.

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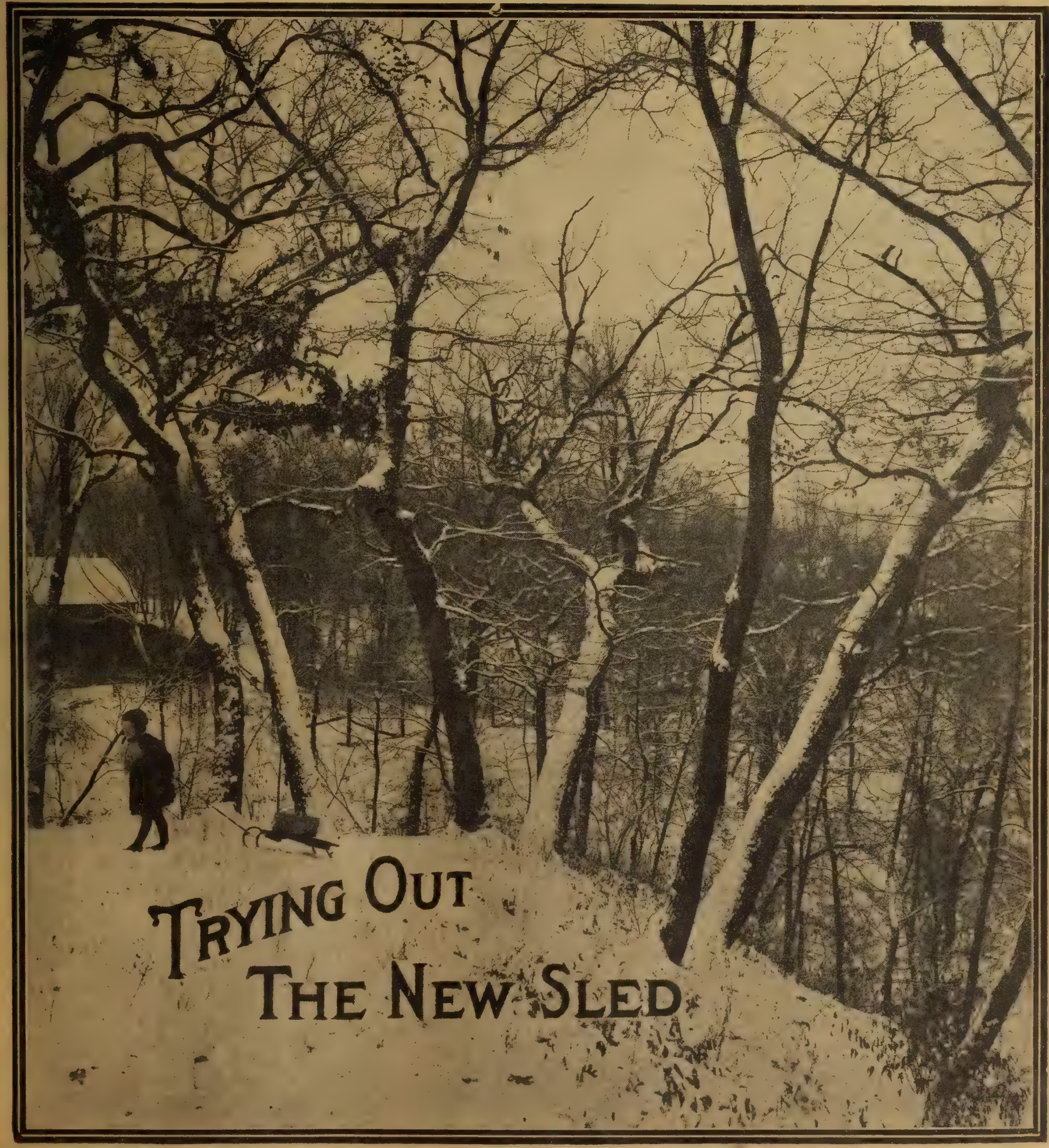
THE WISCONSIN FARMER

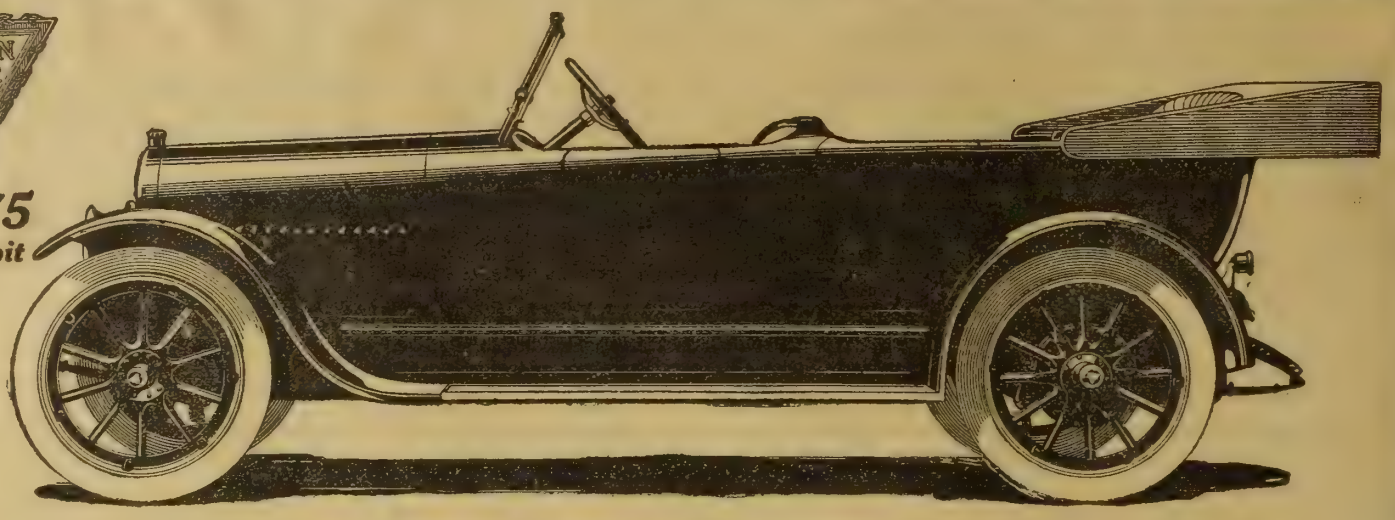
VOL. XLV. NO. 2. THURSDAY, JANUARY 13, 1916. WHOLE NO. 1772



TRYING OUT THE NEW SLED

HUDSON SUPER SIX TRADE NAME REG

$1375 at Detroit



7-Passenger Phaeton—$1375 at Detroit

We Now Present the

Patented by Hudson
December 28, 1915
Patent No. 1165801

Hudson Super-Six

76 Horsepower—an Added 80% Without Any Added Size

These Stock Car Records Officially Broken

The Hudson Super-Six—7-passenger touring car model—at Sheepshead Bay Speedway in November, officially broke all stock car records up to 100 miles. Also all records for quick acceleration, under American Automobile Association supervision—as follows:

100 miles in 80 minutes, 21.4 seconds, averaging ***74.67 miles per hour,*** with driver and passenger.

The previous best record was made with driver only, with a larger motor and more cylinders.

75.69 miles in one hour with driver and passenger.

Standing start to 50 miles per hour in 16.2 seconds.

Mark what those records mean.

No other stock car in history has equalled that performance. No other like-size motor has ever developed such power.

The Super-Six has proved itself the greatest engine ever built. It has outrivaled Eights and Twelves. It has almost doubled the efficiency of Sixes.

And this motor is a Hudson patent, found in Hudsons only. So it means that Hudson cars hereafter hold the highest place in Motordom.

80 PER CENT MORE POWER

Let us compare it with the Hudson Six-40, long the leader among Sixes. That Six-40, by its matchless performance, in two years quadrupled Hudson sales.

The Super-Six is identical in size. No added cylinders, no extra complications. Lightness and economy remain.

But the Super-Six develops 76 horsepower. Best earlier type sixes of like size developed but 42 h. p.

And all that increase—that added 80 per cent—comes through wiping out vibration.

ADVANTAGES OF HIGH POWER

You ask why you need that 76 horsepower if you don't care for high speed.

You need it because it means vast reserve power, to mount hills without effort, to make hard roads easy, to avoid changing gears. Also it enables you to creep on high gear, and to pick up with record quickness.

And it all comes through lack of vibration. So it brings with it bird-like motion. The motor is so smooth that the car seems to move by magic.

OTHER TYPES DISCARDED

We stopped production on former Hudsons when the Super-Six proved this supremacy. Thus we lost over $6,000,000 in sales last fall. We also stopped our experiments on Eights and Twelves.

Then we doubled our factory to meet a doubled demand. And we bought materials for $42,000,000 worth of these new cars for this season.

All because the Super-Six is bound to dominate hereafter. Its performance is resistless. Any buyer of a high-grade car will choose it when he knows the facts It will also win thousands from lower-grade cars to the Hudson.

A LUXURIOUS CAR

The Super-Six looks its supremacy. In every detail we attain luxury's limit, regardless of the cost. The new body lines are perfect. The finish is superb. In the upholstery we use a rare grade of grain leather. Each compartment of the Phaeton has a rounded, finished dash.

At no price is it possible to offer more of luxury and beauty. Yet our mammoth production brings the price to $1375. That for a car which must be conceded the greatest car built today. Go see it at the nearest Hudson Showroom.

7-Passenger Phaeton, $1375 at Detroit
Five Other Styles of Bodies
Ask for our Super-Six Catalog—just out.

HUDSON MOTOR CAR COMPANY
DETROIT, MICH.

We have dealers everywhere. These are a few in your vicinity:

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Antigo—John English.
Appleton—Appleton Motor Car Co.
Baraboo—Mueller Bros.
Beaver Dam—Arthur D. Holbing.
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Evansville—J. F. Hedler.
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Janesville—Albert Schaller.
Jefferson—A. F. Haberman.
LaCrosse—Law Auto Co.
Madison—Ritter Automobile Co., 245 State St.
Menomonie—Pieper & Gordon.
Milwaukee—Jesse A. Smith Auto Co., 213-15 Wisconsin St.
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Rhinelander—T. C. Wood Hardware Co.
Richland Center—Grant Ross.
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Sheboygan—Rummels Auto Co.
Stoughton—Oliver Christenson.
Sturgeon Bay—LaMere Bros.
Two Rivers—J. Hamacheck & Sons.
Waterloo—Waterloo Auto Supply Co.
Watertown—The Service Garage.
Waupun—Ed Van Loo.
West Bend—Lochen & Heindl.

The Wisconsin Farmer

THURSDAY, JANUARY 13, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

GOOD CLUB TOPICS.

I AM quite interested in the discussion of a farmers' neighborhood club of which I know. The program committee is certainly giving the members splendid programs this winter, arranging a number of practical, interesting topics and having them discussed by the men best posted.

For instance, here is a brief report of the last meeting, kindly sent me by one of the club members:

Our club, after considerable discussion, went on record in favor of the installation of rural ice routes and the delivery of ice to farm homes. The club also favored the elimination of the franking privilege granted congressmen as a means of increasing the revenue of the postoffice department. The club will debate at the next meeting the question of whether a co-operative laundry could be maintained successfully in the country and whether it would be advisable for farmers to set aside a few acres in which catalpa and other lasting varieties of timber could be grown for wood and posts.

A program which includes such topics as these is valuable and interesting, indeed. I do not know of any factor in country life betterment today in which I have greater faith or which I believe destined to greater success than these farmers' neighborhood clubs discussing just such subjects as these. None of the mail which comes daily to my desk gives me greater pleasure in the reading than just such letters, telling of such neighborhood club meetings. I want to urge on all my friends that they give me reports of their clubs; they are interesting and inspirational to me in the highest degree.

I do not want to proffer unasked information or advice, but I do want to suggest to those who are interested in the question of co-operative laundries that they investigate the success of the plant at Chatfield, Minnesota. You may recall that we printed a full-page feature story, with pictures, describing the working of this laundry, in this paper about two years ago. If those who are interested have not preserved the paper containing this article they can probably get the desired information by writing direct to the manager at Chatfield. The last report I had showed the experiment to be a splendid success, dispensing with "blue Monday" in many a farm home around Chatfield.

I have had reports of very successful rural ice routes which have operated in Kansas for the last two or three years. It is a little chilly to be thinking about ice nowadays, but next July and August ice will be a positive necessity on hundreds of thousands of farms. We do well to discuss it while there is time and opportunity to insure a good supply for next summer. Personally I favor the idea of such ice routes throughout the country, and from what I hear they are extremely popular wherever tried.

Let us make our neighborhood clubs a forum for such discussions as these. They will then be still more important factors in making the farm a better place in which to live.

A JUMBLED MESS.

THE R. F. D. situation is becoming more muddled daily, owing to the persistence of the postoffice department in combining routes and its apparent refusal to consider farmers' protests. As I pointed out a few weeks ago, the matter is to be threshed out on the floors of congress, but in the meantime the farmer continues to get the worst of it.

My attention has just been called to the letter of a grain-belt farmer who asserts that since the rural route which serves him and his neighbors has been changed the patrons of that one route alone will have to travel more than 10,000 miles a year further than they did before to get their mail. The farmer who figured this out pertinently adds: "That is farther than the carrier has to travel during the whole year in making all his deliveries. But this is not all. There are only three patrons on the old route who have better mail service than before the change."

The idea underlying the R. F. D. service is that farmers shall have mail delivered daily as near to their homes as is possible. Farmers are not asking that the R. F. D. carriers drive up the lanes to their very doors, deposit the mail and then drive back again to the main road. But they are asking —and if they take my advice they will demand it, in the strongest way possible—that the routes be so arranged and maintained that the mail be left as near their places as possible, so as to necessitate little driving or walking on their part in order to secure it. When it is necessary to traverse a lane, a branch road and even some distance on the main road to reach the mail-box the value and the efficiency of the R. F. D. service have been so impaired as to be near the vanishing point. The farmer is entitled to far better service than this. Yet this is what the postoffice department is asking farmers to be satisfied with since they started the system of combining routes into fifty-mile ones, attempting to cover them, in all sorts of weather, with one carrier.

Nor is the trouble of going a considerable distance for the mail the only one nowadays. Another farmer-patron writes to complain that the present system is "the worst jumbled up mess I ever saw; our mail is from one to two days behind." This should not be permitted to continue, and I want to urge on all my readers that they write their congressmen, protesting vigorously against such inefficiency, no matter whether the change in policy affects them individually or not. It will affect them, in due time, if the postoffice department is not made to see the grave mistake it is making. But let us pull together to help the farmers who are affected, whether the trouble has reached us yet ourselves or not. For the good of farmers and farming generally the R. F. D. service should be maintained, not crippled; improved, not impaired.

EVIDENCES OF PROSPERITY.

EVIDENCES multiply, I rejoice to say, that prosperity is almost certain to continue throughout 1916, barring the unforeseen and the contingencies over which man has no control. I think it will not be time wasted if we consider some of these evidences for a minute, even if they do not deal with farmers and farming directly.

Last week, I note by the press dispatches, the United States Steel Corporation granted a 10 per cent wage increase, which means an expenditure of $15,000,000 more annually. The men at the head of this great concern are not public benefactors to the extent of granting this big increase if they did not see another year of contnued good times upon us, sufficient, in all probability, to bring them in many times the amount they have voluntarily decided to pay their workers. The official announcement of the wage increase attributes it to the "prosperous conditions now existing."

I frequently come across items in the various newspapers these days telling of railroads ordering new and better rolling stock and laying plans for the improvement of their roadbeds. They see big freight shipments and heavy passenger traffic ahead of them, good signs of prosperity. And here come the monthly reports from the twelve federal reserve bank districts, those from the grain belt being summarized in the press dispatches as follows:

Chicago reported general improvement in business, with manufacturers, retailers and wholesalers doing business on "an even more than normal basis."

Prospects throughout the St. Louis district were declared to be excellent in virtually every industry. Business men were reported generally optimistic, with wholesale interests in many lines showing gains. Railroads are employing more men, are showing increased earnings, and are buying more freely than for some time past.

The outlook for 1916 in the Minneapolis district was reported as excellent with all lines of business optimistic. The lumber trade continues to revive and again is approaching normal.

Kansas City reported that probably at no time in the history of the district had wholesale trade been so active and satisfactory. Unprecedented sales are being made by jobbers, and collections are far above the average. There had been a general movement of wheat to the market and, while the quality was somewhat disappointing, the price has more than offset that. Railroads in the district are using practically all their full rolling motive equipment.

My friends, I need hardly call your attention to the fact that all these signs of good times are most gratifying to me. Last year the farmers of America raised the most valuable corn crop and the largest wheat and oats crop ever grown. That insured prosperity for the farmers, a prosperity which is now reflected in a score of ways in other industries. Back of all these prosperity evidences (save, perhaps, the steel wage-increase, for which the European war may be largely responsible) looms the prosperity of the farm, upon which is based our permanent national wealth. So whether we are farmers or townsfolk we can look upon the reports of prosperity of our fellowmen and find comfort and cheer therein, for industries are so interwoven today that as one rises so do they all, as one falls so do they all. So whatever our calling in life, as we stand at the threshold of the new year, we can look about us and see good times abounding on ev[illegible] hand.

A GREAT, BIG, HAPPY FAMILY.

I AM in receipt of a Christmas letter from a cousin of mine in Ohio, a maiden lady whose beautiful and unselfish life is an inspiration to all who have the pleasure to know her. One sentence of what she wrote impresses itself particularly upon me. It is this:

To me there is a certain loneliness about the holiday season; I just have a sort of homesick feeling for the old days, when we were all at home, a great, big, happy family, out on the farm.

Are there not many among us who feel this way, at this season of the year? Are there not many who would give everything they possess, no matter how much of this world's goods, to have granted to them the plea of the poet:

Backward, turn backward, O Time, in your flight,
Make me a child again just for tonight!
Mother, come back from the echoless shore,
Take me again to your heart as of yore;
Kiss from my forehead the furrows of care,
Smooth the few silver threads out of my hair;
Over my slumbers your loving watch keep;—
Rock me to sleep, mother—rock me to sleep!

The family circle has a special significance during the holiday season. We miss those who have gone on ahead, either across the Great River or into the new lands where hope and fortune have beckoned them. There could be no Christmas gift to compare with their coming back home, to pull the accustomed chair from its long-idle place against the wall and to gather around the family table as of yore, before ambition, love, or that grim visitor who will not be forbidden, took them from our midst. Yes, there is a sadness about the season of the year which is the most glad; there is a vacant place at the table, or one is gone from our midst never to return, and we look at the picture on the wall through tears, the joy of living tempered with sorrow for those who have gone.

I imagine that my experience is a common one; as I grow older I find myself thinking more of childhood days and associates, of the things which had escaped my memory until now, when the hair is silvered and the years are many. At no time of the year do these thoughts come surging over me so overwhelmingly as during the holiday season. I long, with all my heart, once more to be, as my cousin so feelingly puts it, a member of the "great, big, happy family, out on the farm." With all that life has brought me, with all that it may still have in store for me, I cannot think of anything that would give me greater pleasure than to be "a child again," even if "just for tonight," and back where my childhood's happy hours were spent, the family circle still complete, before those awful years when sorrow stalked over the land, when a nation was in mourning, when my father, hearing the call of his country and answering it without hesitation, marched away, never to return, lying today in an unknown, unmarked grave, somewhere in the sunny southland. The family circle has been rudely shattered since those days, and never does the fact bear down upon me so heavily as at the time when all the world is gayest and hearts are beating highest because of holiday joy. The stockings hanging on the mantle, put there with childish faith in Santa Claus or adult indulgence in juvenile gayety, bear mute testimony to the ones who once did just as we are doing now, but who have left us and whose absence is so sorely missed at the holiday merrymaking. We think of them all the year around, but when Christmas comes we miss them with a poignant grief which sinks deeper into our hearts at this time than any other. We all go about pretending to be merry, even though at times our hearts are sad and lonely, but we must not mar the joys of the little folks with any word or look.

Still, there is a danger which we must all avoid; the danger of too much retrospection, too much living in the past. The sun is rising for another day and another and another; it is as bright as when I was a boy, life is full of promise and happiness. Let us all turn our faces toward the rising sun and at the threshold of the new year dedicate ourselves anew to making happy those around us before they, too, yearn for the days which are gone and the loved ones gone with them.

Backward, flow backward, O tide of the years!
I am so weary of toil and of tears,—
Toil without recompense, tears all in vain—
Take them and give me my childhood again!
I have grown weary of dust and decay—
Weary of flinging my soul-wealth away;
Weary of sowing for others to reap;—
Rock me to sleep, mother,—rock me to sleep!

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

301 Locust Street Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Teaching Wisconsin Boys to Know Good Live Stock.

THE farmer who can walk into a strange herd of cattle and pick out the good ones offhand has an advantage which every breeder should endeavor to attain. There is no doubt but that many breeders, unable to judge good stock, have found this one of the great obstacles to overcome in the business, and the farmer with the knowledge of what constitutes a good animal is always at an advantage in either buying or selling. Of course, none of us can judge a cow's productiveness by merely looking at her or judge the speed of a horse with the eye, but the man familiar with the requirements of a good animal is pretty likely to hit a better bargain than the man who has to take the other fellow's word. So it is for this reason that the courses in judging which are now being given in the ninety odd high schools of the state with agricultural departments and the seven agricultural schools should prove of great value. Hundreds of farm boys are learning how to pick good stock and to encourage this work in judging the state has been divided into districts for the purpose of district contests which will be followed with a final state runoff during the Farm and Home week at Madison in February. These boys are not being trained especially for the business of stock judging, but are being shown this art with the hope that when they become breeders, buyers and sellers that they will, for their own good, be able to pick out stock which is up to standard. Every farm boy who has the opportunity to study stock judging should do so and should enter the contests which are held in connection with the county fairs, etc.

The contests now being conducted by the schools will create additional interest in the judging courses, and the plan is to pick teams of three men each who have been trained particularly in dairy cattle, swine and draft horse judging. Later it is planned to include all classes of live stock. The state has been divided into nineteen districts with district leaders and the winning teams from these districts will compete in the state roundup. The district leaders are: H. J. Ramlow, Bayfield; W. Hansen, St. Croix Falls; J. M. Hammer, Roberts; E. M. Boerke, Cumberland; W. W. Clark, Grand Rapids; James Coyner, Mondovi; Emil Rouchenstein, Omro; R. H. Cameron, Green Bay; A. C. Kingsford, Baraboo; T. H. Campion, Onalaska; Louis Schreiber, Sun Prairie; A. B. West, Janesville; F. A. Maas, Waldo; John Oosterhuis, Wauwatosa; Ralph Brown, Stanley; Paul Brown, Patch Grove; H. W. Jones, Dodgeville; T. G. Brown, Viroqua; C. E. Fawcett, Rochester.

The state committee consists of T. L. Bewick, of Madison; H. M. Goddard, state superintendent of schools; J. M. Gabagen, of Milton, and W. W. Clark, of the agricultural school at Grand Rapids. There is also a state advisory committee and it is expected that the state contest will develop much interest and at the same time instruct a large number of young men in the essentials of stock judging.

Wisconsin County Organization.

GEORGE C. HUMPHREY, of the animal husbandry department of the College of Agriculture, Madison, Wisconsin, spoke recently before the American Society of Animal Production at the annual meeting held at Manhattan, Kansas. He reviewed at considerable length the community organization's work for live stock improvement in Wisconsin. He expressed the opinion that community organization effects a saving of energy, time and money, and produces greater profit for all concerned. Such organization is of great educational force in bringing together people of a community and giving them an opportunity to profit by learning one another's experiences and hearing addresses on subjects pertaining to standards and practices of breeding, feeding and management. In closing his address, Mr. Humphrey said:

Community organization for live stock improvement offers most excellent opportunities for disseminating and introducing into practice results of investigations and research work.

In dairy cattle associations it encourages cow-testing work, places milk production on a business-like basis and forms a standard which cannot be excelled as a guide for the selection of breeding animals.

It provides a most economical system of advertising and offers special inducement for buyers seeking carload lots of animals.

It creates a greater demand for stock of superior merit and secures better prices.

In communities where better herds must be established it offers better opportunities for men to co-operate in buying and operating foundation stock.

It encourages a fight against disease and the adoption of methods for the prevention of disease.

It creates an interest in more permanent ownership of land and in community welfare.

It gives the farmer new ideas toward which to work and makes farm work more fascinating and enjoyable.

It affords better farm homes and a degree of prosperity that makes farm life most satisfactory and productive of highest results.

From the standpoint of research workers, it may be said that results of investigations which are of value in promoting animal production are of little importance until they are disseminated and become a part of actual practice on live stock farms.

Wisconsin Dairy Anniversary.

A SPECIAL feature will be made this year for creamery men, cheesemakers and dairymen in the short course at the Wisconsin College of Agriculture, February 7th to 16th. This is the twenty-fifth anniversary of the discovery of the Babcock milk test. Inasmuch as Dr. Babcock was connected with the Wisconsin College of Agriculture at the time the discovery was made, and is still an emeritus professor, it is very fitting that special prominence be given to this dairy course on the twenty-fifth anniversary. The first instruction in the use of the Babcock test was given at the Wisconsin College of Agriculture. Now the Babcock test is used around the world.

In connection with the special course at Madison there will be held an exhibit of dairy products and machinery in the stock-judging pavilion of the agricultural college. This will illustrate the development of dairying during the past quarter of a century and various stages of manufacture through which many of the pieces of dairy machinery have passed. All divisions of the dairy department will be in full operation during the week of this special course.

Announcement concerning the course state that there will be daily conferences on dairying and cheesemaking. There will be demonstrations on grading, testing and cheesemaking. There will be demonstrations on grading, testing and pasteurization, by both the holder and the continuous processes. During the special course cheese will be made daily, so that the experienced cheesemaker may follow the process from beginning to end.

Some of the points to be emphasized are the following:

1. The influence of moisture content of the curd on the quality of the cheese.
2. A method of branding cheese.
3. Pasteurized milk cheese. A good supply of pasteurized milk cheese for scoring will be on hand and the characterized uniform quality as well as the increase in yield of such cheese will be discussed.
4. Paying for milk by its test at cheese factories. A new plan of payment for rich and thin milk at the same factory has been worked out and this will be discussed in detail as well as a simple method of keeping the cheese factory daily records.

Many Good Things to Read.

AS USUAL The Wisconsin Farmer presents many interesting articles this week for the farmers of this great state. There are now more farmers taking this paper than any other farm paper published in this state, and the publisher and editors feel an added sense of responsibility. It is our purpose to make The Wisconsin Farmer more interesting this year than ever before and to keep pace with the rapidly developing farming interests of the state.

Reports of the Wisconsin State Horticultural Society meeting and show, the Wisconsin Poultry Association meeting and show and the Wisconsin Cheesemakers' meetings will be found in this issue. On account of the liberal advertising patronage this week The Wisconsin Farmer is forty pages. The Wisconsin Farmer publishes many more pages during the year than any other Wisconsin farm paper, and also many more columns of reading matter and many more illustrations.

Our letters from subscribers found in this issue and other issues will be of great interest and should be read by every farmer. In this way we carry the views of our readers from one to another.

The Wisconsin Farmer appreciates the splendid co-operation which its readers have shown in the work of making up a good farm paper and we are deeply indebted to those subscribers who have contributed good, practical letters. We are proud to record the fact that the very best talent in the state, as well as from adjoining states, has assisted us during the past year. The paper is stronger each year by reason of the good friends it makes and let it be understood that these good friends are appreciated. The policy of The Wisconsin Farmer is to keep continually paying, as far as possible, its debt to its loyal readers and supporters by improving the quality of the articles presented in these columns. The Wisconsin Farmer is not content to overcrowd the paper with advertisements, but we aim to think of the reader first, knowing that the advertiser is smart enough to discover a good paper and place his appeal in its columns.

The Wisconsin Farmer is proud of its advertisers and it is the aim of the publisher to keep the advertising columns just as truthful as the news columns. Many thousands of dollars are refused every year by the publisher of The Wisconsin Farmer, because he will not permit false and misleading advertisements to appear in these columns.

Wisconsin School-teacher Making Good as Farmer.

F. F. SHOWERS, of Walworth county, who taught school until he was twenty-three years of age, is now making good as a farmer. The December bulletin issued by the Wisconsin Bankers' Association, discusses Mr. Showers' farm methods and the things which he believes point to better farming.

In the first place, according to Mr. Showers' view, the farmer cannot expect to suceed and keep "union" hours. He must love and enjoy his work to the extent that most of the time he will forget that he has a hard task before him. Produce, care for, and raise only the very best, no matter what your specialty in farming may be, is the Showers plan. Mr. Showers has a dairy herd which has netted him $72 per year per cow. He is farming only forty acres, but he is farming it all and making every lick count. Some of the pointers which the successful farmer gives out in the bankers' bulletin are as follows:

I study each field so that I know what crop it will produce to best advantage. A farmer can do this on the small farm since it is possible to utilize the smallest possible fields. The farmer on the small farm must utilize all the corners of the farm. The returns from some fields on a small farm will be equal to the wastes upon many large farms.

If my soil is acid, I use lime. If my field is wet or poorly drained, I tile it. A farmer can fertilize the field, plow it, prepare the seed bed as it should be prepared and get the soil in the best condition for plant food and the maintenance of the moisture.

The farmer on a small farm must raise crops which are best adapted for his soil and from which the best returns in milk, pork, beef or whatever you have to market, can be secured. Often the surplus roughage or hay can be sold and feeds bought which will produce more milk or meat than this hay or roughage would have done.

I found that I could grow alfalfa on my farm and get good returns. I made a study of the plant, found that it needed a well-drained soil, and that it required a well-prepared seed bed. I knew that I had a well-drained soil and that it was necessary for me to supply the seed bed. The farmers who drove past, stared at me when I harrowed and harrowed the field I was preparing for alfalfa. I went over the ground eleven times until it was as mellow as a well-worked garden.

Sweet clover was growing three or four feet high along the roadside, so I inoculated my alfalfa field with the soil in which the clover had been growing. The stand did not satisfy me, so that when I planted my second field I fertilized the field before plowing it in the fall, disking and harrowing in the spring.

My first field yielded five tons to the acre, but it did not satisfy me. I bought a lime sower and ground limestone, and inoculated with soil from the old field at the rate of 500 pounds of soil to 2,000 pounds of ground limestone. I sowed twenty pounds of alfalfa and twenty-five pounds of barley to the acre. Because of the thorough preparation of the seed bed, the barley yielded forty bushels to the acre.

Upon this field last year eight tons of alfalfa hay were cut from every acre. My profit was $98.40 an acre, after deducting the interest on the land at $200 an acre, the taxes, the cost of plowing, disking, planting, fertilizing and liming, besides the expense of cutting, tedding, raking, cocking, capping, shaking out and hauling the hay.

In curing alfalfa to get the largest return I cut the hay as soon as the dew is off in the morning and start tedding so that I can cock and cap the hay in the afternoon. About three o'clock the alfalfa is raked into windrows, carefully cocked (not tumbled) and then capped. I leave the hay in the cocks from eight to ten days, depending on the weather. (If necessary to leave the hay in cock for several days the cocks should be moved about so as not to weaken the plants under them.) Then the cocks are opened up, but not scattered out, and the hay placed in layers so that the leaves do not become brittle and rattle off. An hour or two later I begin putting the hay in the mow. It is surprising how the alfalfa retains its color until it is thrown out of the mow the following summer.

I try to run my farm as the best business men run their business. Most business men would not feed their cows hay just because it happened to be on hand if they could sell that hay and buy other feed which would produce more milk. Last year I sold $300 worth of alfalfa and purchased feed valued at $296.95. I did this so I could have a balanced ration, and I know my cows like a change in feed.

I try to make each cow as comfortable as possible. I give her a soft bed, plenty of bedding, curry her and speak to her kindly. I find that these increase the dividend from my milk pails.

I make a difference in the amount of feed I give to a cow weighing 1,000 pounds and one weighing 1,200 pounds. Reason shows me that, although the larger cow may not produce the largest amount of butter fat, more feed is required for her maintenance. This food, of course, will vary from the kind of food fed for butter fat. I think that the secret of success or failure in the dairy business lies in the worth of the individual cow.

I know it is possible and profitable to have one

head of stock on each acre. My silo and alfalfa fields have helped me to unlock the secret of money-making on a small farm.

Our Next Serial.

"HEPSEY BURKE," a sister to David Harum, written by the brother of the man who wrote the original, will be our next serial, publication to begin in these columns in the next two or three weeks. We confidently assert that "Hepsey Burke" is the most interesting serial which any farm paper has ever given to its subscribers, and we look forward to its publication in these columns with the greatest of pleasure.

No book ever won a large audience more quickly, or held its audience more steadily and for a greater length of time, than "David Harum." The author of "David Harum" died before the book was off the press. The present story, "Hepsey Burke," was written by F. N. Wescott, a brother of E. N. Westcott, the author of the original "David Harum." With her homespun philosophy, her kindly digs at folks and things and her unfailing good humor, "Hepsey Burke" is sure to be a success with the readers of The Wisconsin Farmer. If you liked "David Harum" you will love "Hepsey Burke." Be sure to watch for the opening installment and read every word of this interesting serial.

Interest in Automobile Shows.

FARMERS in this state are becoming more and more interested each year in the annual automobile show at Milwaukee. The 1916 show is on this week. It has been one of the best shows ever seen in the country. Wisconsin will have 100,000 automobiles in another year and it is fitting that the season of western auto shows start in Milwaukee. Milwaukee has a number of enterprising and hustling distributors who have helped put Wisconsin on the automobile map of the nation.

The automobile is coming into such general use on the farm that the farmer finds it not only enjoyable but profitable to attend the shows and make a study of the machines and accessories there displayed. There are two other automobile shows in the near future which will be attended by a good many Wisconsin people. The Chicago show will be held in the Coliseum and First Regiment Armory under the auspices of the National Automobile Chamber of Commerce, January 22d-29th. The Minneapols show will be held the week following, the dates being January 25th to February 5th. The show will be held in the National Guard Armory under the auspices of the Minneapolis Automobile Trade Association.

Serum Treatment Effective in Thousands of Cases.

IN 1913 THE federal government began a series of hog cholera control work in three counties to determine the practicability of eradicating hog cholera from selected sections of the country. Incidentally the department had in mind ascertaining the feasibility of enlisting the aid of farmers themselves in efforts to combat this disease. The following year, that is in 1914, the work was extended to seventeen counties in different sections of the country.

At each of these stations the work is conducted by one veterinary inspector in charge and two assistant veterinarians. The methods employed in these counties have varied considerably to suit the conditions that were more or less local in character. In some counties, for example, all of the inoculation work was done with serum alone. In other counties the simultaneous system was used. Where herds were infected, serum alone was used, whereas the hogs which appeared well at the time of treatment were given the simultaneous inoculation.

Secretary Houston's recent report summarizes the results of the experimental work carried on in 1913 and 1914. During this period there were 9,686 hogs treated with serum alone, and of this number thirty-four died. On the other hand, there were 8,010 hogs treated with simultaneous system, and out of this number fourteen died. In all there were 17,696 hogs treated, and forty-eight died, or approximately one-quarter of 1 per cent of the hogs treated. The above results were obtained with hogs that were apparently well when treated but were regarded by the field inspector as having been exposed.

During the same period, that is, during 1913 and 1914, 53,485 sick hogs were treated with serum alone, and out of this number 15,570 died, or 29 per cent. On the other hand, among herds where cholera existed but where well animals were treated, 44,277 hogs were given the simultaneous system, and of this number 1,298 died, or 2.9 per cent. There were 40,662 well hogs from diseased herds treated with serum alone, and of this number 2,077 died, or 5.1 per cent. It would seem from the latter figures that even in the case of exposed hogs the simultaneous system affords a greater production than the serum alone plan. Of the whole number treated in herds where the disease existed, 38 per cent of the hogs were sick when treated and yet the loss out of the whole number was only 13.7 per cent. This would indicate that the serum has a distinct curative action when administered in the early stages of the disease.

Secretary Houston calls attention to the fact that extensive observations and comparisons of treated and untreated sows in Dallas county, Iowa, during a two-year period led to the conclusion that the simultaneous method, when properly applied, does not produce sterility in sows. Out of 1,746 sows in 126 herds treated by the simultaneous system ninety-eight, or 5.62 per cent, proved sterile, while seventy-four untreated sows out of 1,103 in eighty-seven herds were sterile. In the latter case 6 per cent of the untreated sows were sterile, which is a slightly larger percentage than in the case of the treated sows.

It has been found that hog cholera was spread from farm to farm in 23 per cent of the cases by exchanging labor and by visiting infected premises. In eight cases out of 100 exposure of sick hogs on adjoining farms spread the disease. Dogs were responsible for carrying it in nine cases out of each 100. It was traced to birds in seventeen cases. Other means of spreading the disease were by infected cars, the purchasing of new stock, and contaminated streams. The conclusion has been reached as the result of a great deal of experimental work that the serum alone treatment produces an immunity which lasts from three weeks to three months, while the simultaneous system produces immunity which, in most cases, seems to last during the lifetime of the animal.

Silage Alone as Roughage For Breeding Herd.

AN INTERESTING line of investigational work in handling beef cattle is being carried on at the Pennsylvania station, the prime object of which is to ascertain the cost of feeding a beef herd for a year. The latest experiment was undertaken with ten Short-horn and ten Aberdeen Angus cows. In cold weather these cows were allowed to run in the basement of a barn open on the south. During the winter months these cows were fed all the ensilage that they would eat twice daily. This was determined by the amount that would be consumed within one hour after feeding them. In addition, cottonseed meal was fed at the rate of one pound daily per cow.

The results of a six months' winter feeding period are most interesting, because they show that the animals in each group actually gained in weight. For example, the Short-horn cows weighed 1,179 pounds at the beginning of winter and 1,230 at the end, whereas the Angus cows weighed 1,142 pounds in the begining and 1,189 at the end. In the one case there was a gain of fifty-one pounds made per head, and in the other forty-six pounds. During the six months' period the Short-horn cows consumed an average of fifty-nine pounds of ensilage daily, whereas the Angus cows consumed fifty-eight pounds. The amount of cottonseed meal was the same in each case, namely, one pound per cow daily. Computing the value of ensilage at $3.50 per ton, the roughage alone during the six months' period cost, in the case of the Short-horns, $15.96, and in the case of the Angus $15.73. The value of the cottonseed meal consumed during the winter period was $2.32 in each case. Charging up the value of the bedding at $8 per ton and the labor at $2.34, and crediting the cows with manure valued at $7.33, it was found that the net cost of wintering a cow during a six months' period was $19.14 in the case of the Short-horns and $18.91 in the case of the Angus. The difference is so slight that the cost may be regarded as practically the same in each case. These cattle wintered on ensilage and a small amount of cottonseed meal relished their feed at all times, and at no time did they show any tendency to lack an appetite for it.

The Short-horn calves from these cows weighed at one year of age 669 pounds, while the Angus calves weighed 585 pounds. The Short-horn calves during the first year made an average daily gain of 1.68 pounds and the Angus calves 1.40 pounds. Fifty per cent of the Short-horn cows raised calves and 79 per cent of the Angus cows. There was some abortion in the herd, and this, no doubt, in part, accounts for the relatively small number of calves raised from each group of cows. An account was kept of the cost of grazing the cows during the remaining six months of the year, and this amounted to $7.22 per cow in the case of the Short-horns and $7.50 for the Angus. Adding to the feed items the cost of the service of sire and the interest on the value of the cows, it was found that it cost $33.76 to care for a Short-horn cow for a year and $33.81 for an Angus cow. That two acres was sufficient pasture for one cow. The land upon which these cows pastured was valued at $56 per acre, so that corn-belt farmers, in computing interest on investment, will have to make allowance for a larger land valuation.

It becomes apparent at once that even with this inexpensive winter ration and low-priced pasture land that the breeder would have to succeed in raising a larger percentage of calves than resulted in the case of the Short-horns if he succeeded in producing baby beef at a profit, because there would be in this instance taxed up to each calf at one year old an approximate cost for the keep of two dams of $67. This would be reduced to half this amount if ten calves could be raised from the ten cows.

High-Type Citizenship Follows Stock Raising.

[This is the fourth of a series of articles on "Opportunities for Live Stock in Wisconsin," which is being prepared for The Wisconsin Farmer by Stephen A. Baird, president of the Wisconsin Live Stock Breeders' Association.]

LIVE stock farming means the raising of profitable animals—animals which pay for their keep and return a profit. Profit-producing animals mean pure-bred, carefully selected sires, mated with females of a particular type for a particular purpose. Intelligent feeding, proper care and good management are essentials that must have attention, else selection and breeding do not count.

Such problems are difficult ones. They challenge a man's best talent and skill. They make him wide awake, progressive and resourceful. The many business details connected with the industry require a wide knowledge and experience and develop executive ability that makes leaders. Why shouldn't stockmen lead?

How many successful stockmen did you ever see who groomed the cows with a milk stool or coaxed the steers to the feeding rack with a "black snake" or kicked the lambs out of the way. A real stockman's voice, manners and actions are kind and gentle. His love of animal life keeps him with his stock, often when he knows that there is nothing lacking to make them comfortable. His animals feel his gentleness and kindness and respond to it. He spreads it in his home and among his neighbors and finds it responded to there.

Go into any community where live stock has reached a high state of development and what do you find? Has not citizenship kept pace? Is not the community orderly and well governed? Who are the community leaders? The most modern and best governed states are live stock states.

The steady decrease of farm population has been viewed with much alarm. Just how far the social disadvantages of country life affect the problem it is hard to say, but it is certain that in stock raising communities there is less movement from the farms to the towns and cities. Farm animals have an attraction for most boys and girls, and the social life in the stock raising community seems to be stronger knit. Only last summer the Wisconsin Live Stock Breeders' Associaton provided speakers for about fifty summer picnics of community breeders in every part of the state, and there were probably twice as many more held.

The stock breeder's calling is a manly, splendid and ennobling one. The man who engages in it along the lines he must follow in order to make a success of his undertaking is helping the Creator's great work; he is playing well his part; he is feeding his brethren; he is improving the health and strength of his fellowmen, adding to the manliness of man and increasing the wealth and prosperity of the world.

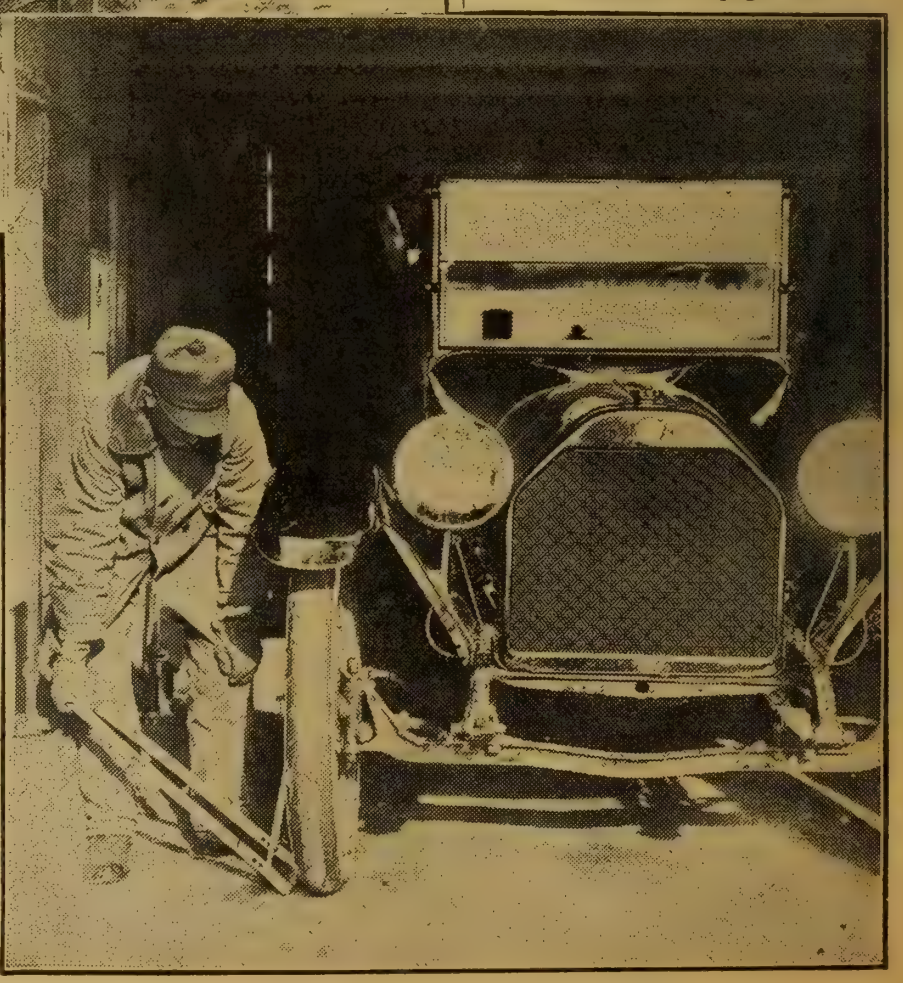
Exporting Pure-Bred Drafters.

SIXTEEN months of conflict between nations on the continent has resulted in making vast changes in agricultural and industrial conditions. Regardless of the fact that motor trucks and automobiles have been extensively used as an aid to the butchering process that continues unabated, the horse's part in warfare is still an important one. Approximately 5,000,000 head of horses have been used by the warring nations up to the present time, and some authorities have predicted that in the end it will be the number of horses available that will determine which is the winning side.

America has been drawn upon heavily, and already close to half a million American horses have been put under fire. In the main, this draft has been made upon a class of horses that we can spare, and we could even part with more without crippling our agricultural or industrial conditions. Not only have nondescript horses of foreign nations been used extensively, but the pure-bred drafters have been commandeered by the thousands, with the result that some of their breeds of draft horses are being so thinned out that the help of American breeders has already been sought.

In a cablegram to the secretary of the Percheron Society of America, President Aveline, of the Percheron Society of France, announces that the importation of 200 stallions foaled in 1912 or earlier has been recommended by the authorities. Thus we find that within a period of sixteen months we have changed from an importing to an exporting nation. Whether this order will be filled or not remains to be seen, but the receipt of this cablegram is a compliment to American draft horse breeders. They have been bringing the good ones from France for a generation, and while most of the stallions have been used in what might be called "work horse" breeding, we have nevertheless a fine nucleus of pure-bred Percherons, and from this the demand will be supplied regardless of where it comes from.

THE MOTOR CAR IN WINTER.



TIME was when the motor car was considered only in warm weather. If any advice was given at all during the winter season it ran something like this: "Take the tires from the rims and wrap them well to exclude moisture and light; paint the rims and cover the car itself completely with a good canvas cover." The man who owns a car exclusively for pleasure driving may treat his car that way, with the coming of winter, but the farmer does not. The car of the farmer is bought for use, for business as well as for pleasure, and it is not laid away for winter, as if it were a frail, delicate thing, unable to stand the snows and freezes of a winter season.

This makes the seventh winter of car driving for me, and each one has been looked upon with less timidity in so far as the use of the car is concerned. Of course, there are times when car driving is out of the question, because of deep-mud roads or when a freeze-up with the roads in a very rough condition means taking more out of the car than the trip in question is worth, but aside from these impossibilities, you'll be surprised, in counting up the days of winter, to find how few there have been when the car could not have been used. There are a few cares and precautions, especially applicable to the use of the car in winter, that experience has taught me. Perhaps the car-owning readers of this paper will be interested in a brief account of what a brother farmer has "run up against" during the six past winters of car using, always on country roads and under average farm conditions.

First of all, there is the freezing proposition to be taken into consideration. Let me advise you to by all means make and use an anti-freezing solution for use in your radiator. I worried along with plain water for several winters, and while I never did forget to drain the radiator and never had a serious mishap by the water freezing, the thought that it might freeze continually haunted me, and now, with a cheaply and easily made anti-freezing solution, I forget this care and cease to worry. Denatured alcohol and water is all that's needed to make it, although some add glycerin. The object of the latter is to retard evaporation of the alcohol, but it is harmful to the hose connections, and I would rather add alcohol from time to time than to keep renewing hose connections. This winter, for a dollar, I bought and am using what is known as a "freeze-ometer," which is a contrivance on the hydrometer order, and with it you can make a test of your anti-freeze solution at any time you wish and by its reading you can tell at exactly what temperature the mixture will freeze. As alcohol evaporates much quicker than water, it is a dollar well spent for one of these little contrivances, for by its use you are safe and know when to add more alcohol and what amount to suit the temperature. However, if you have no tester, you can make a solution of 40 per cent alcohol and 60 per cent water and know that it will not freeze until it is 20 below zero. As you run your car and heat this mixture, though, some of the alcohol will evaporate, and when you add to the contents of the radiator add more alcohol than you do water. A good plan is to draw some of the mixture from the radiator into a bottle and set this beside the car. You can thus tell by watching this when there is a tendency to freeze because of the mixture becoming weak in alcohol.

A roll-up hood for the front of the radiator is a good thing for the winter. It permits warming up the engine sooner on the road and keeping it warm. It may be rolled up or down to admit more or less air, as the need may be. Such a hood may be bought ready made or can be made from a good grade of black oil cloth, lined with any thick, soft cloth. By keeping your engine warmer you get more power from your gasoline, so a radiator hood will soon pay for itself in gasoline saved.

Cuts and bruises on the tires are more common when the roads are rough and frozen, yet a good tire, well inflated, will stand more bad road abuse than seems possible. I have long since learned there is little to be saved by a too judicious care of the tires so far as not using them is concerned, as a tire will rot out by standing in about such a time, and the average farmer usually does not more than make the guaranteed mileage in this length of time. Of course, I do not mean to run fast over rocks and frozen, icy roads, on the theory that the tires will rot out before use wears them out, but I do mean that one can be so careful of them that the use one should have from them is not received, simply because the rubber and fabric rots in storage in such a time, anyhow. I find a set of storage or "tire saving" jacks a good investment. There are many kinds of these on the market, or you can make them yourself out of good hardwood and scrap iron, but to be of good service they should be quickly operated or you will get out of the habit of using them except when the car will stand for some length of time. The weight of the car on an idle tire is a great and constant strain on the fabric. Relieved of the weight and bearing only the required pressure of air, a tire loses little in idleness compared with what it loses when bearing air pressure and weight of the car combined. A friend who has kept book account both ways tells me he has received 35 per cent more mileage from a set of tires that were relieved of the weight of the car except when in use than from a set of the same style and make that carried the weight of the car in idleness as well as in use. You can buy a set of all steel storage jacks, one for each wheel, that are easily and quickly operated, for less than $3 for all four. Certainly you can find no "accessory" that is more worth the price or that will more quickly "make back" its cost than this.

A small vulcanizer is a great expense saver for the farmer-car owner. You can soon learn the use of one, then can fix your own tubes, thus each puncture or blow-out does not mean 50 or 75 cents to the repair man to fix tube alone. Casing repairs can be made in a limited way with a small vulcanizer, and I have long since found that larger repairs, such as are beyond the scope of the small vulcanizer is usually throwing money away. Better use a good blow-out patch inside the casing when a blow-out occurs and apply the price of a vulcanized section on the cost of a new tire, for new sections vulcanized in old tires invariably fail to give the service their cost should justify. A small vulcanizer, costing from $2.50 to $8, will soon pay for itself in tube repairs, and with two or three extra tubes, you can manage to do the work on rainy days. A vulcanized patch on a tube will stay, but a cemented patch burns off sooner or later, and needless to say it always does it just when you would rather it would not. Keep a small supply of raw or vulcanizing rubber on hand, and when a casing

(Concluded on page 19.)

Upper Illustration—Small places, fixed while they are yet small, postpone the coming of large ones.

Center Illustration—A motor car is a warmer means of travel than anything else on the farm.

Lower Illustration—You can buy a set of all steel storage jacks for less than $3.

Every Wisconsin Farmer Should Read This Announcement

For it tells of a Great Land Opening that will enable a farmer at a glance to make up his mind whether or not this is an opportunity for him to build a Better Home—Earn a Better Living and Lead a Better Life than he is now doing.

When the United States Government throws open its lands for settlement, the people recognize the great opportunity; and filing applications often outnumber possible claims at the ratio of 100 to 1. There is a reason for this, and this reason is: "The American farmer knows the value of a new country and new land." This announcement is very similar to a Government enterprise in this respect.

Suppose you could transplant your farm, with the very surroundings amid which you have lived for so many years, to a newer climate where your acreage might produce for you three crops per year. Wouldn't you gladly embrace the opportunity? The land we want to tell you about is located in Beauregard Parish (County), Southwestern Louisiana. These lands lie high, are naturally well drained and are virgin in every sense of the word. No plow has ever pierced the breast of the acres we will soon throw open for settlement. No farmer has ever taken from this soil any of its pristine value. Beauregard Parish (County), around that great center known as the De Ridder, Ludington and Bonami District, enjoys all the sterling qualities of the famous state of Louisiana, without suffering from the drawbacks which have obtained in the past in other regions of this noble state. Beauregard Parish lies in the very heart of what is know as the Ozone Belt of Louisiana's famous highlands. Singularly free is this region from rigorous climate and the effects of stagnant water. There is no river overflow, nor backwater to create swamps. To the ordinary farmer of the state, except for new delightful foliage of trees, plants, etc., the contour of this section would remind him of his own land.

Corn has become Louisiana's staple product, in point of acreage devoted to it, quality produced and value. From a yield of 19,516,500 bushels in 1913, it has increased to more than 48,000,000 bushels in the year just passed. There is a reason for this enormous development—and that reason is the influx of Northern farmers into this wonderful state.

It is said that Louisiana has more miles of navigable streams than any other state in the Union. Its lands consist of 29,610,000 acres, which were once gigantic forests. Louisiana has been slower in developing, than those farm regions, where lumber was not necessary to remove, in order that such lands might be cultivated. The fame of Louisiana, the building of railroads through the heart of the forests, the ever increasing demand for its excellent lumber, has, year after year, thrown open for settlement great quantities of virgin farm land; and each year finds the total of taxation in the state sufficient to enable the great parishes—which are the same as Northern counties—to extend the work of improvement into all lines, such as roads, schools, extension work, etc. If you could go to De Ridder today, with some of **your** school commissioners, and see there what Beauregard Parish is doing in the matter of school work, you would surprise and even shame your own county in this regard.

The United States Government has established an Agricultural Field Agent in this section at De Ridder; the Parish (County) Commissioners and Principals of schools are extending the work of agriculture to the school room. The children are gathered together from great distances by County conveyances, and thus carried to school. No condition of time, distance nor climate stands in the way of education in this great region.

THESE LANDS

Let us tell you briefly something of the lands, about which we want to focus your attention in this announcement. The timber from these lands has been removed by Long-Bell Lumber Company operations. Most of this timber has been cut off for a period of five years. It is a well-known fact that, when land is exposed that has been tree-covered, and the trees taken from the soil, such land passes through a reconstruction period. It becomes sick, so to speak, and the chemical forces within it set to work to build up a newer, better soil. Gradually it turns itself over and over. It takes time to do this, and the great difficulty has been, with land of this character, that agriculture follows too closely behind the woodman's ax. In this region however, sufficient time has passed to prepare the soil for the plow. Here, to this very spot, great transportation companies have been attracted by the traffic of lumber. Three great railroads traverse this fertile Parish **now**, while lumber railroads form a network of lines between them. To the South, sixty-five miles "as the crow flies," lies the great Gulf of Mexico. Its winds temper the atmosphere to a point one hundred miles inland. At night this cooling Gulf wind enables one to sleep during the hottest part of the summer with comfort, and the same wind that acts as a shield in the summer throws a protecting blanket over this region during the fall and winter months. It is a sort of an air cushion that stands the buffeting of the air currents hurled upon it from the North, East and West.

LARGE CAPITAL AND FARMS

There is approximately from twelve to sixteen years' more work for the lumber mills in Louisiana. The railroads have followed the saw mill and logging camps. Great capital is soon to be shorn of its earning power derived from the products of the forest. Capital has realized this fact; the United States Government has realized it; the State of Louisiana has realized it. We then find that all the large influences and financial interests have really awakened to the necessity of placing crops where once stood the forest tree.

MIXED FARMING AND READY MONEY

The charm of this section lies in a great degree with the fact that the Northern farmer can grow corn, oats, hay, the clovers, velvet beans, cowpeas and other legumes, and with less competition, than in almost any section of the North. There is need for the dairy cow; there is need for market cattle; there is a crying need for pork and sheep; and, while all these necessities await only the **Man-quality** to bring them into profitable being, there is the climate which makes possible the planting around a man's home of a few of the semi-tropical staples as by-products to his farm. Such crops are oranges, kumquats, figs, grapes, pecans, vegetables, melons, ground fruits, etc., which will swell his opportunity to make a small acreage, with ordinary effort, yield tremendously.

This Company is a sister corporation to the Long-Bell Lumber Company, which concern needs no introduction to the American people, as it has no superior in the lumber business of our land. Any financial institution—no matter where you are located—has the means at hand to determine the value of the Long-Bell Lumber Company's name. The same excellence which obtains with this company will be the steadfast rule of the Long-Bell Farm Land Corporation, whose lands we are now describing. This being an assured fact, that which is to follow should be of particular appeal to everyone.

OUR PLAN

It is our purpose to throw open for settlement 100,000 acres during the year 1916; 100,000 acres during the year 1917; to be followed by an additional 100,000 acres in 1918. The first block of land, 100,000 acres, will be offered under our plan of settlement in about thirty days. We are today making this announcement in many sections of this country to the American farmer. We have so timed this publicity that the public will have identical opportunity for investigation at the same hour. In other words, the man who lives in the State of Washington will have the same opportunity, under our unique plan of selling, as the man in Ohio, Indiana, Illinois and Iowa. We have a UNIQUE plan, but because of the very facts stated above, we cannot unfold this plan in this publication, at this early date. All that we can do is to call your attention to our announcement in full, which will appear in the columns of this paper on the 27th day of January, 1916. It is our purpose to sell these lands in blocks of 40, 80, 120 and 160 acres. We will sell no land to any man unless we are assured that such an individual has the means to improve his land, and to cover his expenses for such a period until the farm can return to him a profit necessary to the work of making virgin acres—a producing farm. We want no idlers, nor people fascinated with false dreams. **We want men and women who are as good as the soil and climate.** No matter how rich the land, science always finds that a certain proportion of mankind fails under any and all conditions. A great worker of this country, connected with the United States Agricultural Department, said of the Southern land: "Seventy-five per cent of the value of the South is climate; fifteen per cent soil, and ten per cent man; but if you do not give the soil and the climate the ten per cent man-quality, the South cannot take advantage of the remaining ninety per cent of its producing value."

We want to free this announcement of any glamour or imaginings that will paint landscapes in the brain of the cool and collected man; and thus sway his judgment against his real duties to himself, his family and his future. On the other hand, we do not want stable, competent, equipped Northern farmers to confuse this project with some kind of colonization work that has been carried on in the South in the past—to a failure.

This Company reserves the right to know as much about its colonists as its colonists desire to know about it. This may sound like high-handedness, but we know the effect of "one bad apple in the barrel." We know that one failure among twenty or thirty strictly energetic settlers breeds discontent, and we do not intend to let a man, who is not equipped for success, run headlong upon the rocks of his own ignorance.

This land will be sold at a remarkable figure, and upon very interesting terms. When you read the announcement of our plan you will be convinced that the Company has struck the very keynote to the needs of land development. The first requirement will be that the settler is allowed as much use of his money as is possible. Land payments will not be allowed to exhaust development funds. He will receive from the Company all the co-operation that may be expected, to bring about the successful tilling of his acres. The Company has a demonstration farm where the question of soil has already been proven, and where the Company's expert is equipped to illustrate his words by growing tests made over a period of eight years. **You can see his success with your own eyes.** Every need of the very acres and the very soil upon which a settler will locate has been solved already by this Company. Having accomplished these things to our own satisfaction, we are prepared to place the right kind of men and women on the land, at terms that will permit them to pay for the land out of its earnings. Possession will be granted at once after first payment. By reading our great announcement in this paper on the 27th day of January, 1916, you will learn exactly what these terms are, and no word of ours will be necessary to show you the value of your opportunity. You can see it at a glance.

You must rest assured that everything stated in this announcement is stated by a commercial enterprise whose influence, in the business world, is so well established that your own banker will prove to be as large a testimonial as anyone would care to offer. To the curiosity seeker, the skeptic, the pessimist or the idler, we have nothing to offer. To the man who knows farm conditions, whose judgment has led him to success in the past, and to hope of continuous success in the future, we **do** want to appeal—and we want to appeal as strongly as we may. This land will all be sold, and sold to the right kind of people; and these people will be successful. If you are one of such, then we want to call your attention particularly to the issue of this publication which will appear on the 27th day of January, 1916. We want you to read this issue and to act on it at once. It will have an offer that will be very attractive to everyone, provided he is alive to opportunity and takes time by the forelock. If, for any reason, you believe you will not see this issue, then by all means clip the coupon below and send to us **NOW.** We will place your name on our mailing list and send our literature to you. In this literature you will receive not only the same facts contained in our announcement, but you will obtain photographs and reproductions of the very sights you will view when you go down to visit the lands of this Company. We will keep your name and send this literature to you so that it will arrive, wherever you desire it to arrive, at approximately the same time as our announcement in this publication. In this way we will give you an equal advantage with the thousands of persons who will anxiously await the data pertaining to this New Land Opening in Louisiana.

Here is Prosperity Proof

Upper photo illustrates High School Building at De Ridder, La. Lower photo is a typical district school of the section.

No matter who you are, or where you live—whether you are a reader of this paper, or the friend of a reader of this paper—you cannot afford to miss the opening announcement of the Long-Bell Farm Lands located in the ozone belt of Louisiana's Famous Highlands.

SEND THIS COUPON TODAY AND BE SAFE

Long-Bell Farm Land Corporation

SUITE 407 R. A. LONG BUILDING

KANSAS CITY, MISSOURI

NOTE:—If you want to know the commercial value of the company standing responsible for this announcement, you may refer to any bank, express company or the commercial agencies, such as Dunn or Bradstreet, or you may address the Editor, Publisher or Business Manager of this publication.

FREE Book Coupon

LONG-BELL FARM LAND CORPORATION

Suite 407 R. A. Long Building, KANSAS CITY, MISSOURI

Please send me your big book "Where Soil and Climate are Never Idle," together with your terms and conditions of the Louisiana Land Opening.

Name .....

P. O. ..... State .....

CURRENT EVENTS

THE embargo on public discussion of international relations of the United States, incident to the European war was lifted in the senate last week and President Wilson's foreign policy was condemned and commended in a half dozen ringing and vitriolic speeches which undoubtedly mark the beginning of the political campaign for the presidential succession. Party lines were not strictly drawn, however. Senator Jones, of Washington, republican, denounced as "unpatriotic," American citizens who imperiled the nation by taking passage on belligerent vessels. Senator Works, of California, republican, asserted that the government of the United States was "hypocritically" claiming to be neutral when it was in fact participating in the war through the sale of munitions. Senator Lodge, of Massachusetts, ranking republican member of the foreign relations committee, declared that to place an embargo on arms now would be worth more to Germany than a million men, that it would be a "grossly unneutral act," and would, in fact, make the United States the ally of Germany. Senators O'Gorman, of New York, and Hitchcock, of Nebraska, both democrats, urged the advisability of an embargo on munitions. For the last fifteen months congress and the public generally have heeded President Wilson's request that absolute neutrality be preserved, even in private talk. With this outbreak on the part of congress it is a foregone conclusion that sides will be taken by the public generally, with what effect on international complications remains to be seen.

RELATIONS with Austria, as a result of the sinking of two ocean liners in the last month, are becoming more strained every day. No sooner had Austria made proper apology and promised ample reparation for the sinking of the Italian liner, Ancona, than word came from the Mediterranean sea that the British liner, Persia, had been sunk with considerable loss of life. Only two American passengers were aboard the Persia, but one of them, Robert N. McNeely, recently appointed consul to Aden, Arabia, is among the missing. President Wilson and Secretary Lansing immediately ordered the United States ambassador at Vienna to make full investigation, pending which official action is being withheld. Should it develop, however, that an Austrian submarine sank the Persia without notification or giving the passengers ample time to be taken off in safety, there can hardly help but be a break between the two countries. It will be recalled that the United States gave the Austrian minister, Dr. Dumba, his passports because of his pernicious participation in labor matters in this country, endeavoring to cause strikes in munition factories. The sinking of the two vessels complicates the misunderstanding due to Dr. Dumba's actions, so that affairs between the United States and Austria are more critical today than they ever were between the United States and Germany, which have now been happily settled.

JOSEPH R. LAMAR, associate justice of the United States supreme court, died during the past week, at the age of fifty-eight years. He had been on the supreme bench five years, having been appointed by President Taft as one of the democratic members of that high tribunal. Justice Lamar was buried at his former home in Augusta, Georgia. His death will make a vacancy in the supreme court which President Wilson will fill without delay because of the large number of important cases pending on the docket. It is expected that a southern democrat will be named for the position. Fred W. Lehmann, of St. Louis, is prominently mentioned in this connection. He served with Justice Lamar as one of the American commissioners to the Niagara Falls mediation conference. Mr. Lehmann has frequently been mentioned for this high office and his appointment would give the grain belt the representation on the supreme bench which is now lacking.

GEN. GRENVILLE M. DODGE, the last of the army commanders of the North in the civil war, died at his home in Council Bluffs last week, at the age of eighty-four years. General Dodge was buried with high military honors befitting one of his rank. When Gen. Daniel E. Sickles died a year ago Major General Dodge was left as the only surviving army-corps commander who commanded during active service. His fame did not rest, however, on his military achievements alone, for he was equally conspicuous as a railroad builder. The Union Pacific was built by him under great difficulties, the rails being literally forced through a country held by hostile Indians, with many difficulties to overcome. General Dodge built many other railroads, among them the following: Texas & Pacific; Missouri, Kansas & Texas; International & Great Northern; New Orleans & Pacific; Des Moines, Northern & Western; Oriental & Mexican Southern (partially); Fort Worth & Denver; Denver, Texas & Fort Worth, and several other lines in which he was more or less interested. From 1874 to 1879 he spent a portion of each year abroad, and was consulted by the builders of the great Russian transcontinental line from St. Petersburg through Siberia to the Pacific ocean, and on other foreign enterprises. He was asked to take charge of a system of internal improvements in China, but the project failed at first on account of the death of Anson Burlingame, former United States minister to China, who had it in charge, and when the Chinese government again asked him to go to China for this purpose, in 1886, he was unable to go. He was one of the most notable figures of the grain belt.

HENRY FORD returned to the United States last week. His ideas of war have undergone a material change. Mr. Ford no longer believes that the bitter struggle in Europe is being continued by the political intrigues and personal ambitions of the monarchs, but by the criminal indifference of the people themselves. When Mr. Ford left on his peace ship a few weeks ago he was of the opinion that bankers and manufacturers of munitions were responsible for the continuation of the war. Since his return, however, he frankly admits that the men doing the fighting have been too content to let those who lead them do their thinking and have not taken advantage of their divine right to say themselves what they shall do and think. "Republics are no better than monarchies in this respect," he says now. "Even in the United States we let those whom we have elected to office be swerved from their duty. We do not assert ourselves. Personally, I have been a voter thirty-one years and in all that time I have voted only six times and then because my wife made me." Of the eventual success of the peace mission, Mr. Ford declares he has no doubt. "The movement is now organized and under way," he says. "People are talking about it, and while some criticise, when people talk they think and when they think they think right." Mr. Ford's peace party visited The Hague last week, after which it officially disbanded, the majority of the members being now on their way back to this country. While there are few, if any, tangible results of the expedition, Mr. Ford is satisfied, having aroused public opinion, that being a considerable feat in itself.

PROSPERITY throughout the entire country on a scale not experienced for a decade is indicated for 1916 from the reports to the National Chamber of Commerce from every section of the country and from practically every industry and field of labor and commerce. These reports gathered upon a nonpolitical basis, show a striking contrast from the conditions prevailing at this time a year ago. "There are localities where much caution and conservatism yet remain," says the general report on business conditions over the nation. "But broadly speaking, it may be said the spirit of optimism and hopefulness prevails to a degree that has not been apparent for nearly a decade and the general belief and expectation is for such prosperity during 1916 as will recompense the people of this country for all their past misfortunes. The crop yields in general, other than cotton, exceed those of any year known in our history. This is true especially of the small grains, as a whole, and particularly of all of the forage crops that are in abundance beyond precedent. This latter fact is one that is most significant and of very large moment to the country as a whole. It is of the utmost value and importance to the farmer to have cheap and abundant feed for his live stock through the coming winter, and this state of affairs at present exists as one of the stable foundations for that commercial prosperity which seems definitely to have arrived."

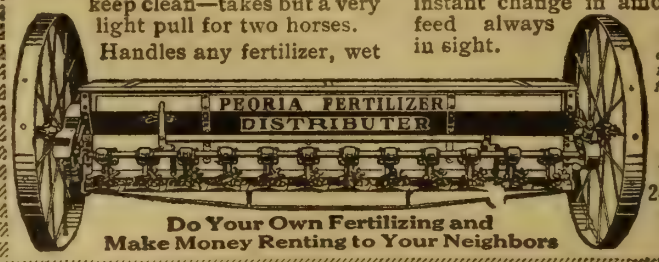
The New Peoria Fertilizer Sower

—the Only Machine That Will Sow Damp Lime and Other Damp Fertilizer

Being able to sow damp fertilizer is one of the most important points that you can look for in a fertilizer sower. It's the point we experimented on for two years to give you in the New Peoria. We produced it in the shaker bar and sight force feed, which keeps the material moving.

Absolutely Prevents Caking or Clogging

The mecnanism is simple—easy to get at without tools—easy to keep clean—takes but a very light pull for two horses. Handles any fertilizer, wet or dry. Covers a strip half a rod wide—holds 7¾ bushels—allows instant change in amount sown; feed always in sight.



Works where all others have failed. Write for circular.

Peoria Drill & Seeder Co.
2483N. Perry St.
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Do Your Own Fertilizing and Make Money Renting to Your Neighbors

Ship Your Furs Now To
Funsten
More Cash For Furs!

Largest in the World in Our Line

Big Money in Trapping skunk, coon, mink, muskrat, fox, etc. You can trap furs—we teach you how. **Funsten Animal Baits** guaranteed to increase your catch. $1.00 a can postpaid. The **Funsten Perfect Smoker** "smokes 'em out." Price $1.50; parcel post 30 cents extra. Both guaranteed satisfactory or money back. **Traps at factory prices.**

FREE 3 books in one (trapper's guide—game laws—supply catalog). Tells how, when, where to trap, how to remove, prepare and ship skins. Will send you fur market reports, shipping tags and big book **FREE—Write today. We tan hides and furs for coats, robes and garments.**

FUNSTEN BROS. & CO., 860 Funsten Bldg., St. Louis, Mo.

I Will Do Your Tanning Right

I TAN Horse and Cattle Hides without the use of acids—by a slow, careful, quality-work process exclusively my own—the result of nearly 30 years of practical experience. That's why my hides give maximum wear—and are always soft and pliable—never harsh or oily! I'll make up your horse and cattle hides—or fur-skins of any kind—into

Finest-Quality Fur Coats, Ladies' Furs, Robes, Rugs and Mittens

If you're looking for guaranteed work and fair, square treatment, see my agent today—or write direct to me for my new free catalog—handsomely illustrated in colors.

Frank Martin
467 Prospect Ave. Milwaukee

I Will Do Your Tanning Right

A FINE, warm fur coat, thoroughly well made from a perfectly-tanned hide, or a big robe, handsomely lined with a Martin plush or felt lining.

You Couldn't Ask for Anything Better for Cold Weather!

And the cost is mighty low! You furnish the horse or cattle hide—or fur skins—and I'll do the rest. I'll make you a coat, robe or rug you'll be proud to own—or Cap, Gloves, Mittens or Ladies' Furs. **And I'll guarantee to satisfy you absolutely.** Write today for free samples—handsome booklet—full information.

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You can be sure of the highest possible price for

Hides, Furs, Pelts, Etc.

if you ship to the old reliable

Northwestern Hide and Fur Co.
Est. 1890
Minneapolis, Minnesota

Send for quotation price list and catalog of Trappers Supplies. We give a good luck watch fob free for every shipment or purchase of $5.00 or over. Reference: Any bank in Minneapolis

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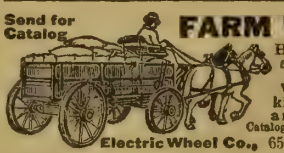
FARM WAGONS



High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 65 Elm St., Quincy, Ill.

Concrete Mixer Plans FREE

Blue prints and instructions for building the best practical home-made concrete mixer invented. Your name on post card brings all ABSOLUTELY FREE. WRITE.

Sheldon Mfg. Co., Box 1193, Nehawka, Neb.

THE FARMER'S OPEN FORUM

POTATO GROWING BY A WISCONSIN CORPORATION.

To the Editor:—It is a very short time since Wisconsin just grew spuds, and thought that spuds were only spuds—that was about all there was to it. One thing the farmers did experience in that line of farming was that their potatoes would "run out," as they put it, every once in a while, providing they did not change seed. And that was true. The writer knows of some cases where they would hardly get the seed. Where the land was in fair condition they would get about 80 per cent of small tubers. The major part of those conditions were due to a lack of good seed. Even though they started with good seed, in a few years their crop would start to decrease in both quality and quantity. They did not know there was anything like breeding to a standard in the potato, such as to type, uniformity of size and color. Those are three functions which we must breed to if we are to keep the potato up to its standard. We hope that about all who are growing potatoes, either for their own use or for the market, are out of that old rut and understand that by breeding up to standard their potatoes will keep from running out.

Speaking from actual experience, the potato is one of Wisconsin's best-paying crops, providing we give it the care necessary. It does not need more care than corn, but I would like this understood—that a whole lot more corn could be raised per acre if it received better care than it does in most cases. The same applies to the potato. First, we must have good seed. Second, we must have the seed-bed in good shape. Third, we must keep weeds out of field. Fourth, we must keep a dust mulch, so the moisture can not pass away so freely.

Now, before I go any further, I will introduce this corporation, their start and success with potato growing. This corporation has its officers and general manager. Five stockholders own the entire stock. Each member has his department to take care of and is responsible for it. I wish to make this part clear. Some may think that we are raising only one crop—the potato—that is not true. Beside the potato we grow corn, clover and cows. We bought the farm from our parents. As they were getting well along in years we thought it would be a good plan to buy the place, and the parents were satisfied with the offer we gave them, so we bought the place. They had farmed the place for thirty years and grew potatoes every year with good success. Even though father and mother are not financially interested in the farm they still take a great deal of interest in our operations.

When we started, dad told us that he always found the Rural New Yorker to be best adapted to our soil and climate, so we decided to give this variety a trial, which we are still growing. Then we knew to get good results we must plant good seed. We bought seed from a reliable grower so as to be sure we had good seed to start with. We practiced hill selection every year. One day last season when our men were digging potatoes dad came to the field, looked up and down the rows, shook his head—"Boys," he said, "never in the thirty years have we had such a crop as that is, even on new land." This made the hired men smile, just to think that conditions in Wisconsin were really improving instead of degenerating. We attribute the largest part of our success to good seed selection and good care, which covers the four principles of potato raising stated above.

We so often hear this remark made by potato growers, "What is the use to grow better potatoes? I get just as much as the fellow that does grow better potatoes." They do not think that by growing better potatoes they increase both the quality and quantity of their crop. If a buyer can get one carload, or any amount so long as it is not less than one carload, of good stock, he will be willing to pay from 5 to 10 cents per bushel more for them than for ordinary stock.

We, as potato growers, owe a whole lot of thanks to Prof. J. G. Milward, secretary of the Wisconsin Potato Growers' Association, and also Prof. F. J. Hicks, president of this association, for all the good work they have done for us, and in fact all the potato interests of the United States. Their greatest wish is to get a large membership so they can get their good work and help as many potato growers as possible.

C. J. Huser,
Sec. Union Grove Dairy Farm Asso.

PROTEST AGAINST REMITTING TAXES.

To the Editor:—A reply to Pres. R. H. Posten, of the St. Croix Valley Association, as regards taxation of pure-bred bulls and stallions. Mr. Posten must be the owner of some pure-bred bulls or stallions or possibly both, to be so enthusiastic about having them exempt from taxation.

A law compelling farmers, handicapped by mortgages, to buy expensive pure-bred bulls or pay high prices for sire service to pure breeders seems to me to be out of all reason.

The time is coming, if it is not already here, that breeders of registered stock cannot find a market for either bulls or heifers and will now try to make a market through the state legislature to dispose of their surplus stock. The poor farmer is to be the goat.

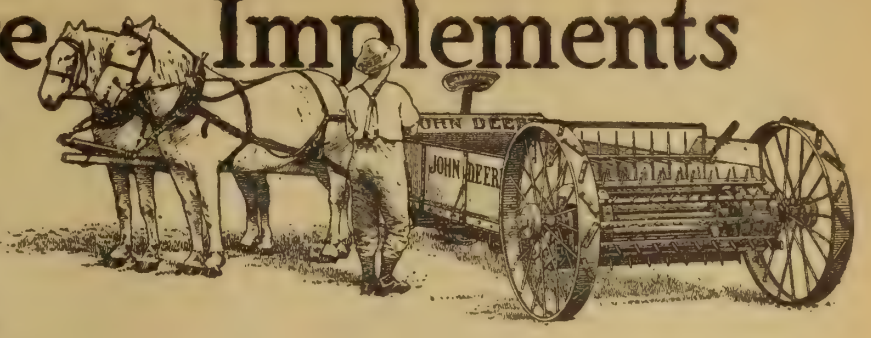
According to my views, a breeder of registered stock is not looking after the welfare of any community or of the state, but is simply looking for the money. It is always the rich man that dodges taxes and this seems to be another case of tax-dodging.

I am in favor of farmers having the best possible stock of any denomination they choose, but I firmly believe it is not right to compel any farmer to buy or go into debt for any pure-bred sire of any kind. If such a law is passed as Mr. R. H. Posten and other pure breeders advocate you will see the farmers' finish. It will make a golden opportunity for land grabbers.

Peter M. Kaad.
Columbia Co., Wisconsin.

How many of the trees and shrubs in your own neighborhood do you know? This is a good time to study them.

John Deere Implements



John Deere Spreader
The Spreader with the Beater on the Axle

ONLY hip high to the top, but has big drive wheels. Wheels out of the way when loading.

Beater drive works on the principle of a horse power. No clutches, no chains, no trouble. Mounting the beater on the axle (a patented feature) does away with half the types of castings.

Three exclusive features of the John Deere Spreader: [1] Beater on the axle—simply revolutionary in spreader building. Nothing else like it. Doubles the value of the spreader by all practical tests. Makes the John Deere Spreader possible. [1]

[2] Revolving Rake—entirely new and original. Load moving back to beater revolves the rake. The teeth down in the load hold the manure while the beater pulverizes it. Draft actually less. Even spread—no bunching. [2

[3] Ball Bearing Eccentric—apron driven without friction. This ball bearing apron drive requires no attention, not even oiling, but it performs wonders in the working of the Spreader. [3]

Write for John Deere Spreader booklet. Tells all about farm manures and fertilizers, how to store manure, its value, and how to spread it most economically. Also contains illustration in colors.

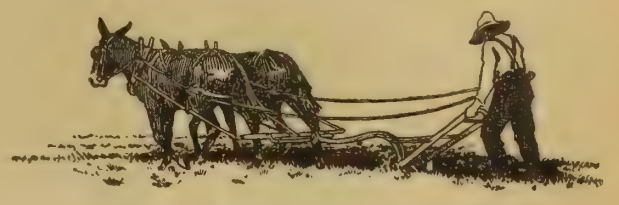
John Deere Corn Planter
The Accurate "Natural Drop" Planter

ACCURATE—because it has the "Natural Selection" drop.

Kernels don't have to be tipped on edge to enter cells. Surface of hopper bottom and openings to seed cells are oblique, or sloping. The kernels naturally move toward and fill the cells.

A full variable drop. Merely shift foot lever to plant two, three or four kernels per hill. Drilling distances varied and change from hilling to drilling or back to hilling made just as easily.

Write for free booklet, "More and Better Corn."



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The Plows with Perfect Fitting Parts

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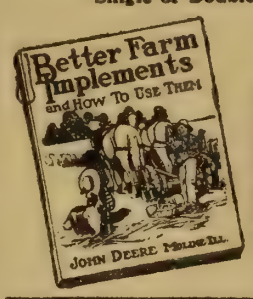

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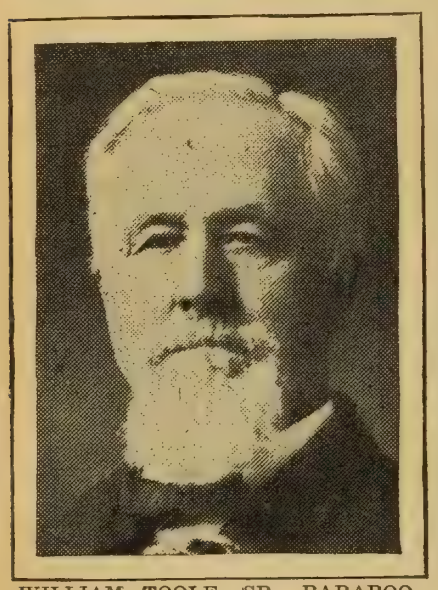
Wisconsin Horticulturists Meet.

Oldest Organization in Wisconsin Interested in Better Farming Methods---Fine Display of Fruit This Year at the State Show.

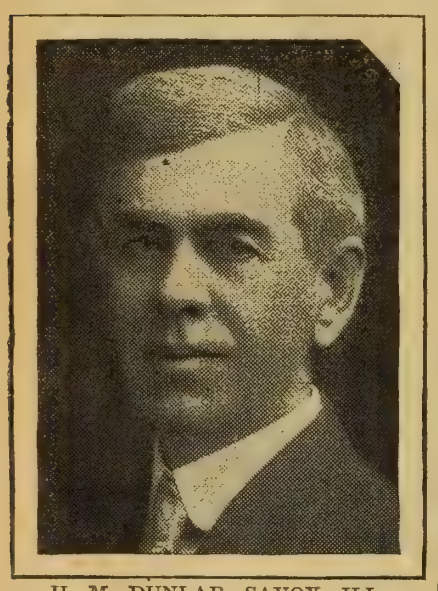
WISCONSIN farmers interested in orcharding, commercial fruit growers, lovers of flowers and others interested in horticulture who were so unfortunate as to be unable to attend the annual convention of the Wisconsin State Horticultural Society at Madison last week missed a rare treat. Although the attendance was not so large as formerly because of the epidemic of grip in the state, the program was of very fine quality and the addresses, which touched on all points of interest to the horticulturist, were of the very best. About 100 members attended the three-day sessions which were held in the assembly chambers.



WILLIAM TOOLE, SR., BARABOO, WIS.

C. L. RICHARDSON, CHIPPEWA FALLS, WIS.

The Wisconsin State Horticultural Society has the distinction of being the oldest organization in the state interested in improving farming conditions. Of course, its activities are not devoted entirely to the farm, but almost every farmer is in some way or other interested in horticulture or fruit growing and it is in this respect that the state association is listed as the pioneer agricultural organization of Wisconsin. It was more than a half century ago when this association sprung into existence and much of the advancement Wisconsin has made in fruit growing is the result of its work. Today the association has about 1,500 members and is now entering upon what it is hoped will be its most successful year.



H. M. DUNLAP, SAVOY, ILL.

C. A. HOFMANN, BARABOO, WIS.

Never was a finer display of fruit seen in connection with the society convention than was on display in the assembly parlor. The past year was a good one for the fruit growers of the state, although thousands of bushels of apples rotted on the ground. The growers took the proper care of their orchards and produced the good fruit, found a ready market for it at a good price and the necessity of producing good stock in order to make a profit was never more forcibly emphasized than last year. This was the word which all the delegates brought to the convention and it was generally conceded that orchardists who were complaining of the low prices and their inability to dispose of their crop did not have the fruit which the public demanded. Sec. Frederic Cranefield told an editor of The Wisconsin Farmer who had the pleasure to attend some of the sessions that the display of apples was the best ever gotten together at a meeting of the society.

Apple raising is on the increase in Wisconsin as well as other branches of orcharding and with an ideal climate and soil and other favorable conditions more growers are going into the industry each year on a larger scale. Marketing is also getting more attention now than ever before and the farmer who has an orchard too big for his family needs and which he does not have time to properly care for is being advised by many prominent horticulturists of the state to cut out some of the trees and care for just enough to supply his family and neighbors. If the grower of apples is to make money from this fruit the orchard must have attention the same as the cornfield and the keynote of many of the addresses of the convention were to this effect. The apple business of Wisconsin is now estimated at a million dollars a year.

The program of the convention was very interesting, starting with a splendid talk on orcharding conditions in the state by Gov. E. L. Philipp, who surprised some of the delegates with his knowledge of this branch of farming. Governor Philipp has an orchard on his farm and spoke of his experiences and the need of the proper care of orchards if the owner is to succeed. The great trouble with the orcharding business in Wisconsin, he said, is that it is too frequently considered a sideline on the farm with the result that thousands of orchards were neglected and the owners were then disappointed at the yield and the prices.

Climate, soil and accessibility to markets make fruit raising a natural industry for Wisconsin, as the governor explained, but this industry can never become what it should become if orchards are to be neglected and fruit growing considered a side line. Governor Philipp said that the need above all things in Wisconsin is more interest in good quality, cultivation and honest marketing and that a big market can never be built up for Wisconsin fruits if the growers put too good apples in the ends of the barrels and windfalls and wormy apples in the center.

Cultivation of orchards is another important matter, the governor explained, and predicted that at least nine-tenths of the orchards in the state are not cultivated. Often one sees apple trees in a hog yard and the governor emphasized that the farmer or orchardist who can't give an orchard the proper attention it demands should retire to some other occupation. The trimming and spraying of trees he also pointed out is quite important and predicted that with favorable climate, soil and market conditions that Wisconsin would win new laurels as a fruit state when the majority of the orchards were cultivated, sprayed and trimmed and the trees given the necessary attention.

The practical side of fruit growing was touched upon at length in addresses on spraying, the fight against insects, the codling moth, etc. George F. Potter, of the horticultural department of the college of agriculture, explained the use of sprays. In making up an arsenate of lead spray Mr. Potter recommended using powdered arsenate instead of paste arsenate, as it is not so much trouble and gives the same results. The proper proportions are from one and a fourth to one and a half pounds of arsenate to fifty gallons of water. Bordeaux and lime sulphur are the fungicide sprays and Mr. Potter explained the different uses of them. Bordeaux is best made at home, using four pounds of clean stone lime and four pounds of copper sulphate to fifty gallons of water. Lime sulphur is made up of one part lime sulphur to forty parts of water. Mr. Potter said that lime sulphur is used

(Concluded on page 35.)

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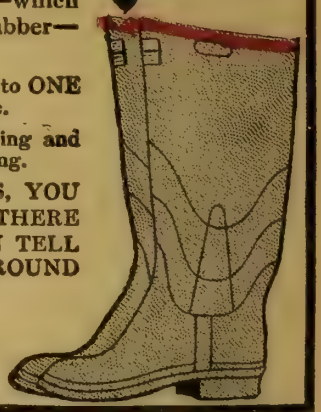

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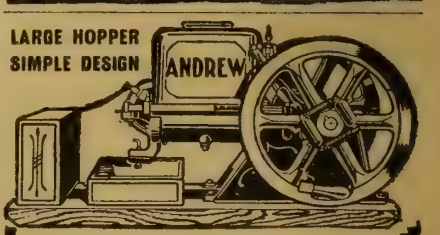

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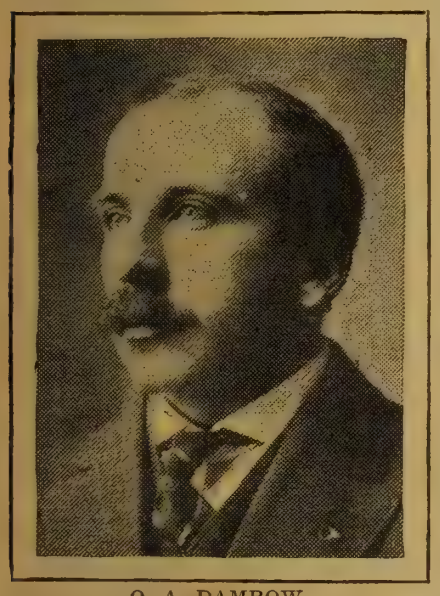
Talk Over the Cheese Situation.

State Cheesemakers Meet in Annual Session at Milwaukee and Have a Very Profitable Gathering.

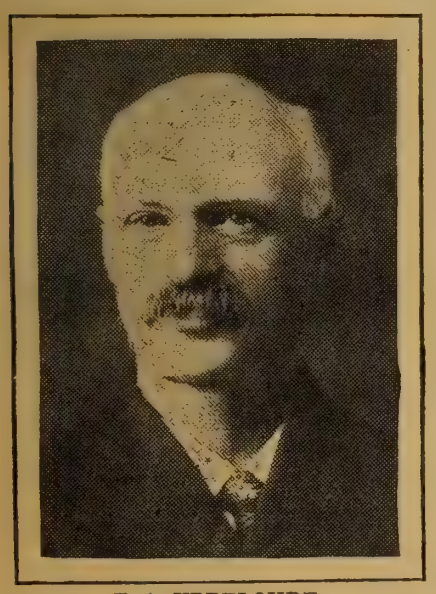
AS A FITTING climax to a very successful year in the cheese industry in Wisconsin, the Wisconsin Cheesemakers' Association last week held the largest and most successful convention and cheese exhibit in its history at Milwaukee. There are now about 2,200 cheese factories in the state, and conservative estimates are that 200,000,000 pounds were produced in 1915.

Prosperous conditions undoubtedly had much to do with the success of the convention last week, the twenty-fourth gathering of this organization which has had so much to do in the last two decades in building up this industry and in establishing for Wisconsin cheese an enviable reputation. Prices have been good the past year



O. A. DAMROW,
Retiring president Wisconsin Cheesemakers' Association.

following a period of depression due to the war and the product is moving very fast now. It was reported at the convention that every pound of cheese now in Wisconsin warehouses has a ready market waiting for it and the export trade the past twelve months has been especially heavy. What was lost at the beginning of the war by the decreased trade in the South has been more than made up by the renewed activity of the southern markets and the increased export sales. Canadian markets are also showing a decline and in addition to reports of a good year just past the convention delegates received reports of bright

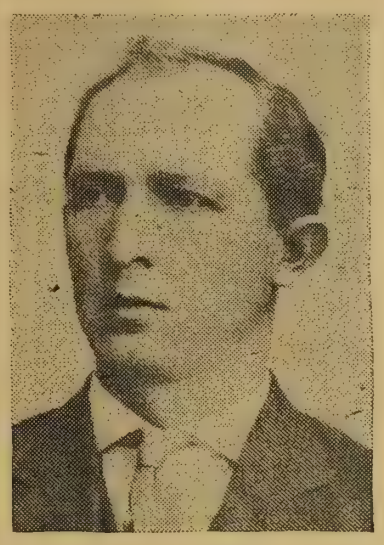


T. A. UBBELOHDE,
Treasurer Wisconsin Cheesemakers' Association.

prospects for the coming year with increased markets. Wisconsin factories are producing better than 55 per cent of the cheese made in America. The attendance was larger than at any previous gathering, there being more than 600 delegates in attendance. Likewise the interest was keener as the association is striving harder than ever for a better quality of cheese, and more makers and dealers are realizing the value of producing and handling a better product. Wisconsin produces as fine cheese as can be found anywhere, but some factories are not turning out as good cheese as they can turn out, and when all the cheese produced reaches the standard now set by the best cheese there will be a constant demand at a good price for every pound manufactured.

In connection with the convention there was held the usual cheese exhibit which was the largest ever held by the association. One hundred and eighty-nine cheesemakers exhibited their product. The showing in the American class, which included cheddars, twins, daisies, long-horns, prints and young Americas, was very strong and there were some splendid samples of Swiss, block, limburger and brick on display. Fred Marty, of Monroe, superintendent of the exhibit, told an editor of The Wisconsin Farmer who had the pleasure to attend the convention, that the quality of the cheese shown was exceedingly free and that it was the best and largest exhibit ever held in connection with the convention.

The importance of good milk if good cheese is to be manufactured was emphasized throughout the convention and it is here that the farmers can lend their assistance in raising to even higher levels the standard of this Wisconsin product. Without good milk good cheese is an impossibility and E. B. Williams, of Richland Center, who won first in the American class with a score of 97½ on his cheddar, told the delegates that good milk had much to do with his success in making the prize-winning cheese. Mr. Williams said that 75 per cent of his patrons had springs on their farms in which to set their cans of milk to keep it sweet and fresh and that such milk came to his factory in good condition. His prize-winning cheese was made on May 19th and has been in cold storage since that time. This cheese was not made specially for exhibition purposes. Mr. Williams, at that time, was handling about 4,000 pounds of milk daily. Other speakers pointed out the necessity of the farmers supplying good milk if good cheese is to be made and that this co-operation between farmer and cheesemaker is necessary. The better the cheese the better the price and an increase of as little as a quarter of a cent a pound would increase the cheese income in Wisconsin $500,000 a year. By supplying the proper kind of milk to bring about



A. T. BRUHN,
Retiring secretary Wisconsin Cheesemakers' Association.

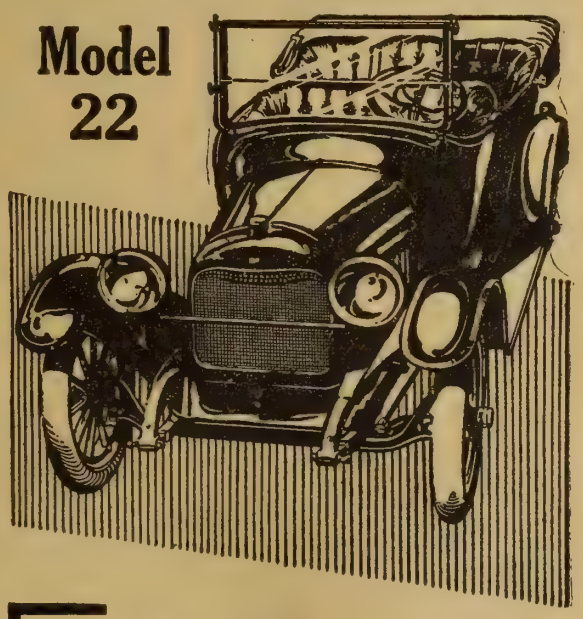
this increased price the farmer will share in the additional income as the factory will be able to pay a better price for the raw product as it comes from the farm.

The past year has been very successful for the association which has increased its membership about 15 per cent, now having more than 500 members. The treasurer's report showed a balance in the treasury of $259 when the convention opened and the pro rata premium fund for exhibitors was increased to $500 when two years ago it was only $200. O. A. Damrow, of Sheboygan Falls, and A. T. Bruhn, of Spring Green, who have been president and secretary respectively for the past three years, retired and Charles Reade, of Neillsville, was chosen president, and Gus Sherick, of Plymouth, secretary to succeed them. Fred Marty, of Monroe, who was chosen secretary, had to decline the place, and Mr. Sherick was elected. H. P. A. Chaplin, of Plymouth, was elected vice president; T. A. Ubbelhode, of Glenbeulah, was again elected treasurer, and A. J. Noyes, of Muscoda, was named a director. Fond du Lac was chosen as the place for holding the 1917 convention. This will be the first meeting of the association outside of Milwaukee.

More local associations as a means of boosting the industry was recommended by many speakers, led by Mr. Damrow. The state organizations can be given great assistance through community organizations and it is hoped to form many local associations the coming year. These local associations are in closer touch with the farmer whose co-operation in producing better milk is essential and also afford the delegate who can't find time to ask questions at the state meeting an opportunity to air his views. They also provide a good means for exchanging ideas for the mutual benefit of all, and as auxiliaries of the state association they can do much towards improving conditions and prices.

Much interest was shown in the exhibit and the winning exhibits scored high. American cheeses were judged by J. D. Cannon, of New London and E. L. Aderhold, of Neenah, and the foreign cheese by G. Marty, of Madison, and Alex Schaller, of Barneveld. For showing the best American cheese Mr. Williams secured a cup, a gold watch and a chair. P. H. Casper, of Bear Creek, who was second with a score of 97¼, won a cup, and $50 in cash; and Fred Swenick, of Lloyd, who was third, received a cup and a gold watch. Robert Emmenegger, of Gratiot, who

Model 22



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showed the best round Swiss had a score of 96¾, while Rudolph Walti, of Barnaveld, showed the best block Swiss. First for brick and Muenster went to Anton Sutter, of Cambria; for brick to Fred Baertschi, of Mayville, and for limburger to Carl Frehner, of Beloit.

The program was well balanced and throughout the discussions the proposal of limiting the percentage of moisture was often heard. Mr. Aderhold said that the menace to the business today was cheese containing 44 per cent moisture, and some delegates favored a law limiting moisture when a happy medium had been struck. Some makers blamed the dealers for buying high moisture cheese and not paying any more for better grades of cheese than for this kind of cheese. Luther Noyes, of Muscoda, who spoke on "the business side of cheesemaking," told of his experiences with firm and soft cheese and said that it always paid to handle the firm stock, as it never came back from the retailers.

Discussions on the new license law occupied an entire afternoon and it was generally agreed that this will

JACOB KARLEN, JR.,
Director Wisconsin Cheesemakers' Association.

place cheesemaking upon a firmer business basis and likewise improve the Wisconsin standard. Prof. J. L. Sammis, of the college of agriculture, spoke of the future market for Wisconsin cheese and the payment of milk according to the yield of cheese. Wisconsin's principal competitors today, he said, are the 1,007 large factories in Ontario, which handle on an average 6,000 pounds of milk daily despite the fact that the Canadian production has fallen off 10 per cent in recent years. This, accordingly, widens Wisconsin's market.

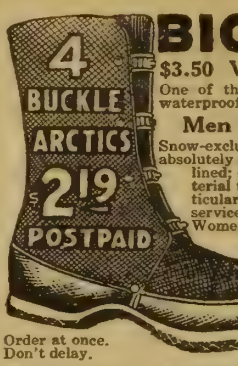
The awards and scores of cheese exhibited follow:

AMERICAN, 1916.

E. B. Williams, Richland Center, Wis. (Cheddar), 97½.
P. H. Casper, Bear Creek, Wis. (Flat), 97¼.
Fred Swenick, Loyd, Wis. (Flat), 97.
A. C. Werth, Appleton, Wis. (Y. Am.), 96¾.
P. H. Greiner, Little Chute, Wis. (Flat), 96½.

J. L. SAMMIS, MADISON, WIS.

John Fischer, Boaz, Wis. (Flat), 96.
Andrew Peterson, Lone Rock, Wis. (Flat), 96.
P. J. McCloud, Bear Creek, Wis. (Daisy), 96.
J. J. Stocken, Dale, Wis. (Daisy), 96.
Emil H. Peters, Boyd, Wis. (Daisy), 95¾.
C. A. Voigt, Chili, Wis. (L. H.), 95¾.
Frank W. Wonn, Avoca, Wis. (Daisy), 95½.
Louis Hessel, Barneveld, Wis. (Daisy), 95½.
G. A. Wicke, Two Rivers, Wis. (Daisy), 95½.
Joseph Henseler, Marshfield, Wis. (L. H.), 95½.
L. F. Roeslen, Bear Creek, Wis. (Daisy), 95½.
B. W. Radel, Richland Center, Wis. (Flat), 95.
J. L. Dicker, Greenwood, Wis. (Daisy), 94¾.
Math. Meyer, Stanley, Wis. (Cheddar), 94¾.
John Mellon, Richland Center, Wis. (Flat), 94¾.
Elmer Peterson, Richland Center, Wis. (Flat), 94½.
Mathem C. Berres, Edgar, Wis. (Daisy), 94½.
C. H. Schneider, Heller, Wis. (Flat), 94½.
John Greiner, Kaukauna, Wis. (Flat), 94¼.
A. F. Peterson, Appleton, Wis, (Flat), 94¼.
Austin Marley, Spring Green, Wis. (Daisy), 94¼.
Geo. Wright, Loyd, Wis. (Flat), 94¼.
O. E. Dix, Stratford, Wis. (Daisy), 94¼.
A. F. Schwartz, Lyndhurst, Wis. (Daisy), 94¼.
Mrs. L. C. Dix, Auburndale, Wis. (Daisy), 94⅛.
A. J. Schulte, Marshfield, Wis. (Daisy), 94.
Wm. Winder, Richland Center, Wis. (Daisy), 94.
William Preuss, Campbellsport, Wis. (Daisy), 94.
Emil Boeing, Woodstock, Wis. (Flat), 94.
Leo Gebhardt, West Bend, Wis. (Daisy), 94.
Frank Oskey, Appleton, Wis. (Daisy), 94.
John J. Henseler, Marshfield, Wis. (L. H.), 94.
Northern Wis. Produce Co., Manitowoc, Wis. (Daisy), 93¾.
W. Millen, Mineral Point, Wis. (Daisy), 93¾.
A. J. Blahnik, Kewaunee, Wis. (Print), 93¾.
A. J. Natzke, Cecil, Wis. (Daisy), 93½.
A. J. Blahnik, Kewaunee, Wis. (L. Horn), 93½.
Louis J. Blahnik, Kewaunee, Wis. (Daisy), 93½.
Herman Kalkofen, Greenwood, Wis. (Daisy), 93½.
Gottlieb Kaufmann, Fond du Lac, Wis. (Flat), 93½.
Ernest Boll, Sheboygan, Wis. (Y. Am.), 93½.
H. C. Schneider, Kewaunee, Wis. (Print), 93½.
C. M. Engebretson, So. Wayne, Wis, (Daisy), 93¼.
Thomas Troxal, Muscoda, Wis. (Flat), 93¼.
Math. Meyers, Stanley, Wis. (L. Horn), 93¼.
C. R. Schwenn, Marshfield, Wis. (L. H.), 93¼.
Aug. C. Ipsen, Cobb, Wis. (Daisy), 93¼.
Mrs. L. C. Dix, Auburndale, Wis. (L. H.), 93¼.
Peter Schmidt, Bear Valley, Wis. (Y. Am.), 93¼.
Louis C. Wagner, Oconto Falls, Wis. (Daisy), 93¼.
C. A. Kraak, Avoca, Wis. (Flat), 93¼.
H. L. Naumann, Plain, Wis. (Daisy), 93¼.
Thos. Olson, New Richmond, Wis. (Daisy), 93.
J. L. Gibbs, Muscoda, Wis. (Daisy), 93.
C. R. Miller, Dodgeville, Wis. (Flat), 93.
Arthur Philp, Mineral Point, Wis. (Flat), 93.
O. B. Schwander, Clintonville, Wis. (Daisy), 93.
Oscar H. Tappon, Hillsdale, Wis. (Flat), 93.
Gifford Kittleson, New Richmond, Wis, (Daisy), 92¾.
R. W. Carson, Star Prairie, Wis. (Flat), 92¾.
Andy Huggler, Platteville, Wis. (Daisy), 92¾.
Frank Schurnate, Moscoda, Wis. (Daisy), 92¾.
H. A. Kuschel, Marion, Wis. (Daisy), 92¾.
Arthur Philp, Mineral Point, Wis. (Daisy), 92¾.
Andrew Nelson, Wittenberg, Wis. (Daisy), 92¾.
Geo. J. Robinson, Sturgeon Bay, Wis. (Daisy), 92½.
Ernest F. Hrudka, Manitowoc, Wis. (L. H.), 92½.
Anton Benishek, Manitowoc, Wis. (Daisy), 92½.
Jule Boulanger, Brussels, Wis. (Daisy), 92½.
M. H. Martin, Kaukauna, Wis. (Y. Am.), 92½.
Thomas S. Martin, Bear Creek, Wis. (Y. Am.), 92½.
H. A. Kalk, Sheboygan Falls, Wis. (L. H.), 92½.
Wm. G. Mayerl, Lena, Wis. (Daisy), 92½.
Emil Sonnenburg, Manitowoc, Wis. (Daisy), 92½.
Aug. Klessig, Woodford, Wis. (Daisy), 92½.
Jos. Konz, Elkhart, Wis. (Cheddar), 92½.
Otto Voeks, Sturgeon Bay, Wis. (Daisy), 92½.
A. A. Schuester, Shawano, Wis. (Daisy), 92½.
O. H. Swenink, Dalton, Wis. (Flat), 92½.
Geo. J. Buchen, Marshfield, Wis. (Daisy), 92½.
Robert Nauman, Two Rivers, Wis. (L. Horn), 92½.
J. C. Andenbrenner, Marshfield, Wis. (Daisy), 92½.
L. H. Stern, Cascade, Wis. (Daisy), 92¼.



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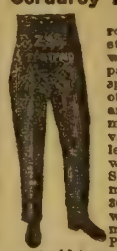

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In and Around Wisconsin

The main building of the Watertown Creamery Company at Watertown was destroyed by fire recently at a loss of $6,000, partly covered by insurance. About 800 pounds of butter which was in stock, not including about 300 pounds in the shape of unchurned butter fat, was also destroyed.

Albert Fuller, of North Lake, Waukesha county, was elected president of the Milwaukee Milk Shippers' Association at the recent annual meeting. The farmers who are shipping to the Milwaukee market this winter complain that the prices are too low and Mr. Fuller predicts that unless better prices are obtained soon that a new market will be sought.

C. W. Harvey, secretary of the Dodge County Fair Association, announces that the 1916 fair will be held as usual at Beaver Dam on September 25th-29th inclusive. The Dodge County Fair, which ranks with the very best in the country, is growing better each year and the selection of the dates is the signal for the commencement of the advertising campaign for the 1916 exposition. Blotters and literature entitled "First Shot for 1916. World's Greatest County Fair" have already been printed and are now being distributed throughout the state and adjoining states.

The first annual meeting of the Wood County Cow-Testing Association was held recently at Vesper with a large attendance. Great enthusiasm was shown by the farmers in attendance and the old officers were all honored with re-election. E. E. Butters is president; J. C. Kieffer, vice president; W. W. Clark, secretary, and A. P. Bean, treasurer. The outlook for the coming year is very bright. Thirty-eight herds with nearly 500 cows are entered. Several new members were admitted and an expression of regret that William Bassler cannot continue this year in charge of the testing was voted. Farm management books were also distributed and several members entered the state farm management contest.

The annual report of E. R. Zamzow, of the Fond du Lac County Fair Association, brings out some very interesting facts. Principal among these is that the actual count shows that thirty-five more head of stock were shown at the fair at Fond du Lac last fall than were exhibited at the state fair at Milwaukee. The year was a very successful one for the association which paid off an indebtedness of $2,400 and received $2,500 in state aid. The increased stock exhibit required an expense for forage of $757, compared with $354 in 1914, and the total issue of premiums last fall was $4,509, compared with $3,100 in 1914. Improvements on the grounds cost $3,496 and the fair association starts the new year in good condition and with prospects for a big fair the coming fall.

Plans are readily forming for the annual convention of the Wisconsin Buttermakers' Association which will be held in Eau Claire the first week in February. G. H. Benkendorf, secretary, announces that the premium fund will total $750 which will be divided the same as last year—$2 to each exhibitor regularly enrolled, regardless of his score, and the remainder will be divided pro rata to butter scoring 90 or better. George J. Weigle, dairy and food commissioner, has offered a gold watch to the buttermaker receiving the highest score at the show. At first he offered a silver cup, but he later decided that a watch would prove more useful. All butter in order to be entered regularly must be sent not later than January 26th to C. J. Dodge, Eau Claire, Wisconsin. Butter shipped with bill of lading bearing date later than January 26th will be given a complimentary score only and will not be allowed to participate in the premium fund nor to compete for the prizes. In addition to the five state prizes previously announced thirty district prizes will also be awarded, which ought to make the butter exhibition a successful one. The program, entry blanks, tags, etc., will be mailed from Milwaukee in a few days. The convention judges will be C. E. Lee, assistant dairy and food commissioner, Madison; Wm. Schnieder, Johnson Creek, Wisconsin, and O. A. Storvick, United States Department of Agriculture, Albert Lea, Minn. The rules require that each exhibit must be a twenty-pound tub of butter. A ten-pound package will only be accepted for a complimentary score.

The Wisconsin Hemp Growers' Association at a recent meeting at Waupun, decided to change the name to the Waupun Hemp Company, incorporated with a capital stock of $20,000. Nine stockholders were appointed as managing directors. They are J. F. Mielke, G. Greenfield, J. H. Redeker, Wm. Abercrombie, A. F. Mielke, C. Lemmenes, A. F. Schultz, C. Prange, M. A. Vande Zande.

For the purpose of enlarging the scope of the fair at New Richmond, St. Croix county, a committee has been appointed there to incorporate a fair association and sell the necessary stock to put the fair upon a better basis. The same plan is being carried out in Dunn county. The new organization at New Richmond will have a capital stock of $10,000, divided into 1,000 shares with a limit of ten shares to a subscriber.

The sixth annual corn show and dairy school at Mosinee, Marathon county, will be held January 27th-28th and the program will be one of the best ever conducted there. Mosinee has won recognition as holding one of the best grain shows in the state and the speakers assigned there include L. F. Graber, Prof. G. C. Humphrey and H. W. Ullsberger, of the college of agriculture, and H. H. Humphrey, county field representative, and A. C. Burg, of the county school of agriculture.

The Brown County Guernsey Breeders' Association was organized recently with seventy-one charter members at a meeting which was held at the court house in Green Bay. The gathering was addressed by Prof. George C. Humphrey, of the college of agriculture, who pointed out the benefits of community associations and what other organizations along this line are doing for their respective counties. The meeting was well attended by Guernsey breeders and the following officers were elected for the first year: President, Charles Schmidt; vice president, Emil Jacobson; secretary, George O. Lucia; treasurer, Leon J. Delahant; directors, J. D. McAllister and A. H. Anderson.

LAW QUESTIONS.

Suit for Damages.

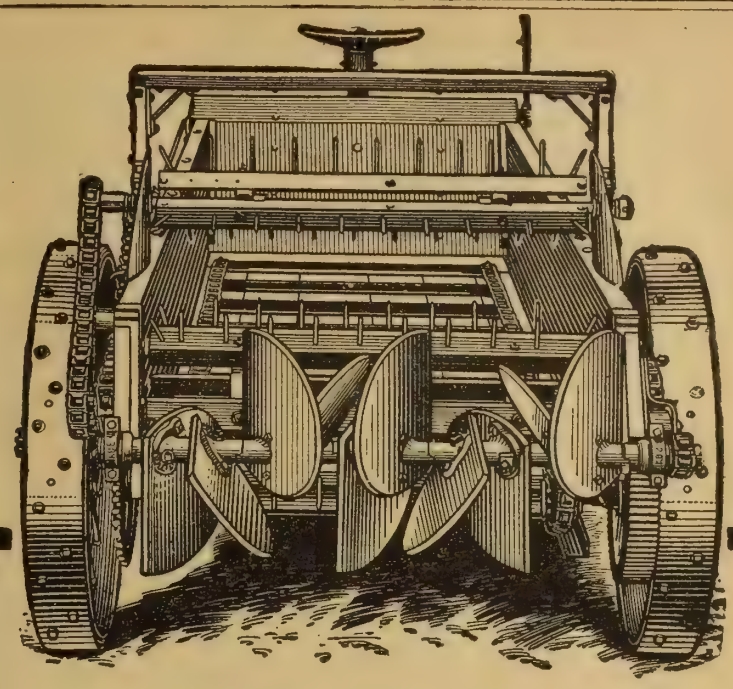
A Subscriber, Butterfield, Minn.—I had shipped to me from a tile company within this state a carload of No. 2 drain tile, and when the car arrived at the station I found 126 pieces of the tile broken. I had the railroad agent view the damages and he marked the car number and the amount of broken tile and I had to send the freight receipt to the tile company for freight allowance. Should I have done anything more in order to receive payment for the broken tile?

Answer.—If you are not paid for the loss occasioned by the broken tile you will have to employ a lawyer to bring suit for the loss.

Boundary Line—Adverse Possession.

A Subscriber, Caledonia, Wis.—The division fence between the farms of A and B has stood on the same line for forty-two years and has always been considered as the rightful and lawful partition fence by both landowners, in good faith, and without protest or interference by either. A uses a strip on his own land, a rod wide, running along the fence, as a lane and has so used it for twenty years. B sold his farm and the new owner had the land surveyed and claims a strip of A's land a rod wide, taking in said lane. Has he a right to move the line fence to include said strip in his farm?

Answer.—The new owner of B's farm has no right to move the fence to include the one-rod strip. The partition fence between the lands having been recognized by both owners as the division line for more than twenty years has become the lawful line by lapse of time, even if it is not on the original line, and each owner is entitled to hold the land up to said fence by adverse possession.



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To be most effective manure must be spread promptly and evenly, and the only way this can be done is by the use of the proper kind of spreader.

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You get all these features and many others in the improved and patented

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the spreader that's backed by 16 years' experience. It's 43 inches high at the highest point, and can be loaded with an easy throw of the fork. The chain conveyor brings every bit of manure to the double cylinder, where it is finely pulverized. No chance of clogging. There is a 17-inch clearance under conveyor and the wheels track for light draft.

From the cylinders the pulverized manure is thrown onto the revolving paddles of the steel distributor. These spread it 7 ft. as finely and evenly as though it were sown, The New Idea covers *three corn rows at once* and spreads out beyond the wagon tracks.

A Successful Chain-Drive Spreader

No gears or gear transmission. Conveying and spreading mechanisms are driven by a strong chain which will last for years. There is nothing to break or get out of order. Our conveyor does not rattle and will not race when going up hill. Without leaving his seat the driver can easily reach a lever which regulates the feed 3, 6, 9, 12, 15, 18 loads per acre. Pressure of a foot latch shuts off the feed. The New Idea is strongly braced at every point, especially in the rear, to prevent the frame from buckling under strain.

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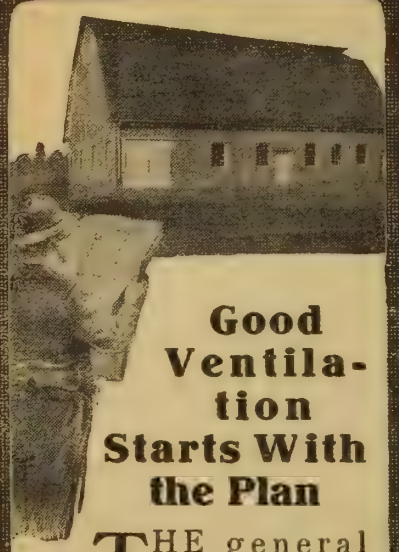

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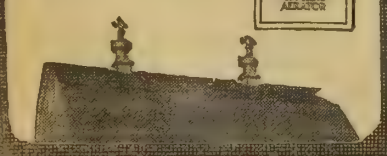
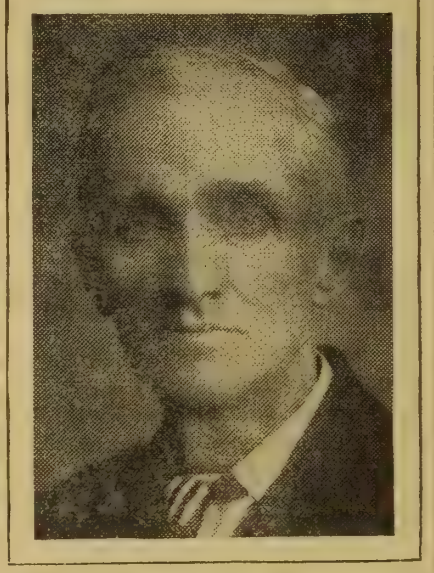


THE KING AERATORS on the Roof are the first part of the King Ventilating System

Wisconsin Poultry Show.

Birds of Fine Quality Shown at Madison Last Week—Awards and Exhibitors Lists—There Were About 800 Fowls Exhibited at the Show.

NEVER were birds of better quality shown at Madison than those exhibited last week at the annual show of the Wisconsin Poultry Association. The state association has held larger shows, but none better and what was lost in quantity this year was more than made up in the increased quality. Something like 800 fowls were exhibited by 108 exhibitors who came from all parts of the state, these exhibitors bringing only their very best stock so that



JOHN F. JOHNS, DODGEVILLE, WIS.

those who won at Madison can well feel proud of their birds.

The show was held in the live stock pavilion at the college of agriculture and a more ideal location could hardly be secured. The weather was not so good as it might have been and this cut down the attendance on the opening days.

For some reason not known to the fanciers most of the poultry shows this year are showing a falling off in the number of entries and the Madison state show proved no exception. The Chicago show this year was almost 1,000 birds short, but in every case the quality of the birds shown has improved. This is indeed an encouraging sign, as the fancier is beginning to realize that it is better to bring his best stock and leave those birds which have no chance to get into the money at home. To enter them means a useless expense for transportation, entrance fee, etc., and breeders who formerly brought thirty and forty birds to the Madison show are now bringing ten to twelve or fifteen of their best and returning home with just as much prize money. This has had a tendency to raise the quality of the show and make the competition all the keener.

In all the principal classes the competition at the state show at Madison last week was especially keen and several breeders who took firsts at the Chicago show and expected to sweep the boards at Madison had to be content with seconds and thirds, as several Chicago winners went down to defeat there. This was especially true in the Partridge classes and in the Barred Rocks, which was the largest class shown. The awarding of the ribbons was hotly contested. The Rhode Island Reds did not prove so strong in numbers this year at Madison as formerly, but some splendid birds were shown and we doubt if the quality as a whole was ever better. Last year the Reds led the Barred Rocks in number of entries.

Judging was by comparison and the ribbons were placed by W. E. Stanfield, of Hillsdale, Mich., and James A. Tucker, of Concord, Mich. Both judges were profuse in their praise of the quality of the fowls shown and Mr. Tucker remarked that the Barred Rocks were the best he had ever handled. Mr. Tucker also handled the White and Partridge Rocks, White and Partridge Wyandottes, Rhode Island Reds, Leghorns, Langshans, Campines and Sussex, while Mr. Stanfield judged the Buff Rocks, Buff, Silver, Golden and Columbian Wyandottes, Light Brahmas, Orpingtons, Polish, Andalusians and Minorcas.

Individual honors of the show went to John F. Johns, of Dodgeville, with his Barred Rocks and Black Langshans. Mr. Johns won six of the special awards, while T. O. Evans was a close competitor for individual honors with his White Wyandottes.

Mr. Johns won the bronze medal for the best cockerel in the show on his Barred Rock, the special gold premium for champion male in the American class on a Barred Rock and also the special for the champion male in the Asiatic class with a Black Langshan. Mr. Johns also had the best display of Langshans and won the American Poultry Association special for the best cockerel with a Barred Rock and he won the Langshan cup. Mr. Evans took the president's cup with his White Wyandottes for the best display in the American class, the $50 trophy for the best display of one variety, the best display of Wyandottes, the bronze medal for the best hen and also for the best pen.

L. I. Fairman, of Brodhead, had the best cock in the show on Black Orpingtons, the champion male in the English class on the same variety; William Bell, of Arlington, had the champion male in the Mediterranean class on Single Comb White Orpingtons in addition to the best display of Leghorns; Charles D. Love, of Waukesha, had the best pullet in the show on Golden Wyandotte; and F. W. Kramer, of Fort Atkinson, took the cup of the State Buff Plymouth Rock Club for the best cock, hen, cockerel and pullet and also the cup for best pen and silver cup for champion Buff Rock male. Honors for the best display of Plymouth Rocks went to J. W. Hunt, of Stoughton; for best display of Rhode Island Reds to John F. Mueller, of Fort Atkinson; for best display of Orpingtons to E. L. Bemis,

EXHIBITED BY JOHN F. JOHNS, OF DODGEVILLE, WIS.

of Fond du Lac; for best display of Brahmas to Mrs. L. A. Ross, of Belleville.

The Madison Business Men's cup, which must be won twice, for the best display of one variety went to Mr. Evans. It was won last year by E. L. Bemis, of Fond du Lac. Mr. Evans also won the president's cup for the

"BABY DOLL," EXHIBITED BY PRE FONTAINE.

best display in the American class, which cup last year was won by J. W. Hunt. It must be won three years. Mr. Johns with the best pen of Black Langshans has now won the Rowley cup twice in succession and must win it another year to become the permanent owner. Mr. Bemis, of Fond du Lac, with the best display of Orpingtons, becomes the possessor of the special cup which he won last year for the first time. John Mueller, of Fort Atkinson, also becomes owner of the

C. L. PRE FONTAINE, FOND DU LAC, WIS.

cup which he has won the second time this year with the best display of Rose Comb Rhode Island Reds.

The officers in charge of the show were:

President—M. C. Gerard, Stoughton.
First Vice President—W. H. Ashcraft, Janesville.
Second Vice President—John F. Johns, Dodgeville.
Secretary—James G. Halpin, Madison.
Treasurer—J. H. Durfee, Madison.
Directors—William Bell, Arlington; J. R. Love, Waukesha; Frank A. Cooper, Merrimack; Mrs. L. A. Ross, Belleville; C. L. Pre Fontaine, Fond du Lac.

Fanciers who exhibited were:

A. P. Anderson, Sparta; Geo. Beckmann, Ixonia; B. A. Beach, Madison; Wm. Bell, Arlington; E. L. Bemis, Fond du Lac; Elmer Biddick, Livingston; H. R. Bird, Ridgeway; John Blanchard, Columbus; Julius D. Bossmann, Horicoon; Geo. A. Buckstaff, Oshkosh; H. R. Burrington, Sun Prairie; W. Buth, Sullivan; N. Roy Beckmann, Albany; F. H. Chamberlain, Sparta; Chanticleer Farm, Oconomowoc; P. M. Chapman, Alma Center; L. R. Clarke, Janesville; F. S. Clausen, Oconomowoc; Thos. L. Clayton, Dodgeville; E. S. Conry, Sun Prairie; C. E. Copeland, Jefferson; D. D. Culham & Son, Stoughton; Wm. Davenport, Stoughton; W. W. Day, Janesville; John W. Dixon, Hazel Green; Joseph Edwards, Elroy; W. H. Eldridge, Plymouth; Elmcroft Yards, Fort Atkinson; T. O. Evans, Dousman; Freund Bros. Cedarburg; J. A. Fiedler, Cuba City; Clause Fischer, Evansville; Jos. Fix, 931 Center Ave., Madison; John J. Flad, Madison; James Flint, Oregon; F. H. Fjeld, Madison; M. C. Gerard, Stoughton; Dr. Z. W. Gilbert, Melrose; E. O. Gilfillan, Blaire; W. F. Gruetzmacher, Watertown; J. G. Halpin, Madison; L. L. Hare, Monroe; John D. Hayes, Madison; L. A. Henry, Wonewoc; J. L. Herbst, Sparta; F. J. Holt, Sun Prairie; Geo. L. Hunt, Boscobel; J. W. Hunt & Son, Stoughton; Walter P. Jagow, La Crosse; John F. Johns, Dodgeville; F. L. Johns, Platteville; Geo. C. Johnson, Oconomowoc; Paul Johnson, Stoughton; Hunt and Kilmer, Kingston; Chas. King, Dewey St., Madison; F. W. Kramer, Fort Atkinson; R. E. Krause, Antigo; Gabriel Lewis, Hollandale; Jas. Livingston, R. 8, Milwaukee; Chas. D. Love, Waukesha; J. R. Love, Waukesha; Fred Massey, Fairchild; H. A. Marscheck, Madison; Pierce Martiny, Baraboo; E. S. McKay, 1315 Drake St., Madison; John F. Mueller, Fort Atkinson; L. C. Oostermann, Delafield; J. V. Pottier & Son, Green Bay; Daniel T. Pederson, Stoughton; C. L. Pre Fontaine, Fond du Lac; Robert Pribbenow, Arlington; Will & Remmel, Fort Atkinson; Ricks Bros., Boscobel; H. C. Risdon, 1250 26th St., Milwaukee; Mrs. L. A. Ross, Belleville; Alvin R. Schroeder, Watertown; H. W. Shepherd, Columbus; Leslie St. Claire; La Valle; Urban B. Steil, Fort Atkinson; Fred Streber, 111 S. Warren St., Madison; Strobel Bros., 381 Hanover St., Milwaukee; J. N. Sommerfield, Sparta; H. L. Templeton, Lima Center; Will Thomas, Belleville; Ed J. Wagner, Arlington; A. J. Walker, Wautoma; Walter Weber, Lancaster; C. C. Brace, Lone Rock; J. C. Elliott, Madison; Fred Cooper, Reedsburg; Ed-

(Concluded on page 26.)

Some Practical Potato Hints.

A Continuation of the Series of Letters From Growers, the First of Which Were Published in The Wisconsin Farmer Last Week.

Is Partial to the Russet.

To the Editor:—I am greatly interested in what the farmer is doing and as our subject leads us mainly to potato culture I will give you my experience in this line. I have one acre of land I have used for the last fourteen years as a truck garden. Two on which I have tried every variety of potatoes that are grown in Wisconsin with various results. My land being in fine condition I always had an enormous yield, but the stock never looked to me like perfect stock should look, so I cast about for a reason and soon discovered that my ground was too rich for successful potato growing of the ordinary varieties, such as Green Mountain, Triumph, Cobblers and Rurals, Early Ohio, Early Rose. I finally concluded to try the Russets, of which I am now going to speak. The first year, this being in 1911, I planted two bushels of this seed in the very best part of the garden where I had potatoes the year before. This, you will say, is not a wise plan. I know it, but I was determined to try the Russet out. What was my surprise when I came to digging those potatoes in the latter part of September no one can imagine. I had eighty bushels of the finest and cleanest potatoes that ever came out of the ground. Since then I have given my attention to this variety almost entirely.

Now as to the method of culture. Here is the way I do it: I plant about the 20th of May, no later. Some say this is too early, but let me tell you that there are more mistakes made in planting too late than too early. Some will tell you the bugs are worse on early planting, but you can fight the bug easier than the frost and you will have a better tuber and a tuber that will not peal off at digging time, the source of all your trouble marketing time is getting your price. But back to my plan, if you want to try the Russet plant as above stated the 20th of May, three feet apart in rows six inches deep. They need plenty of room, as the tubers spread. Have your ground good and rich and keep the ground loose and free from weeds and if you fail the fault is yours.

There is no better potato raised in the United States than the Russet. They will keep the year round with ordinary care. Will sell for a better price than other potatoes. Try them and be convinced. Charles Gehrke.

Langlade Co., Wisconsin.

A Waupaca Grower's Experience.

To the Editor:—In the matter of raising potatoes the same general rules apply as in all other branches of farm activity. It matters not if the farmer is confining himself to some special line of farm operations or following a general system of mixed farming with the ordinary crops and one or more lines of live stock there are certain fundamental rules that apply and must be observed in order to obtain the best results. In offering a few suggestions I do not wish to pose as a critic or as an expert, and yet we will all agree that a farmer, or anyone else, for that matter, cannot follow up any line of work for a number of years with any great amount of interest without learning something unless he is a past master of the "know-it-all" club or a fit candidate for the insane asylum. Almost any fertile, well-drained soil will raise potatoes, but some soils are better than others. Perhaps a sandy loam soil is the very best, but success with potatoes does not depend so much upon the natural composition of the soil as it does upon the management of that soil and also of the crop. Whatever the soil may be it must be well drained, rich and mellow. We hear much objection to a heavy clay soil for potatoes, but our belief is that it is not a matter of soil as much as of the way that soil is managed. At any rate, the farmer must use such soil as he has and the first step in any event is the preparation of that soil. First, plow deep, the heavier the soil the deeper it should be plowed and plow the heavy soils in the fall, particularly so if there is a heavy sod. We prefer clover sod to a heavier timothy or June grass sod. If possible, plow under the second crop of clover, there is nothing equal to that. Barnyard manure is good if not too fresh. Our experience convinces us that fresh barnyard manure produces favorable conditions for the scab germ. We prefer to apply our manure to the clover land a year ahead of our potato crop. By so doing we kill two birds with one stone. We increase our hay crop and relatively the clover roots which give a large amount of vegetable matter in the soil and also this large clover root development leaves the soil in the very best condition. (Let me digress just enough to say that it is our opinion that a great many farmers fail to appreciate the mechanical effect upon the soil of the root system of the clover and alfalfa plants, their effect upon the water supply both in draining and supplying, as well as in the air supply of the soil, which again affects the temperature of the soil. These tiny rootlets assisted by other things just as small and apparently insignificant produce the great forces of nature). After the land is plowed it should be thoroughly pulverized with disk, roller and harrow, either one or all, as the conditions demand. Now comes the seed problem and right here is the place where many farmers fall down. All I will say is this: Use the same care with your potato seed as you do with your live stock breeding, always bearing in mind this, "like produces like." First, plant your seed, that is, seed free from varietal mixture. Second, plant seed free from disease, of good size and good type. Seed from hill-selected stock, of course, is the best. If your land is poor and your trouble is that your potatoes do not grow large enough cut your seed to one good, strong eye to the hill. If, on the other hand, your potatoes grow too large, plant whole potatoes and plant thicker together. These things being done, just take good care of the crop. Harrow the field thoroughly just as the potatoes are coming up. Do this with a good weeder or a light harrow, then cultivate. Keep the surface fine, level and mellow. Keep out the weeds and feed the bugs Paris green or arsenate of lead. This with favorable weather conditions should insure a satisfactory crop.

F. R. Constance.

Waupaca Co., Wisconsin.

Most persons, if asked which we use the more of, salt or sugar, probably would say sugar, but the statisticians at Washington figure that the per capita consumption of salt in the United States last year was almost exactly 100 pounds, and of sugar 89.14. The statement is, however, somewhat misleading. No person could eat two pounds of salt a week and expect to live. Much that is set down to the per capita consumption is really used in curing meat and fish that later on are exported, and in making pickles and freezing ice cream. We consume more ice cream than all the rest of the world put together.

Several fruit growers stated at the horticultural society's meeting that they were able to get top prices for fruit sold through commission men. Inquiry showed that these men have established a reputation for good packing and good fruit, and the commission men are anxious to get their fruit.

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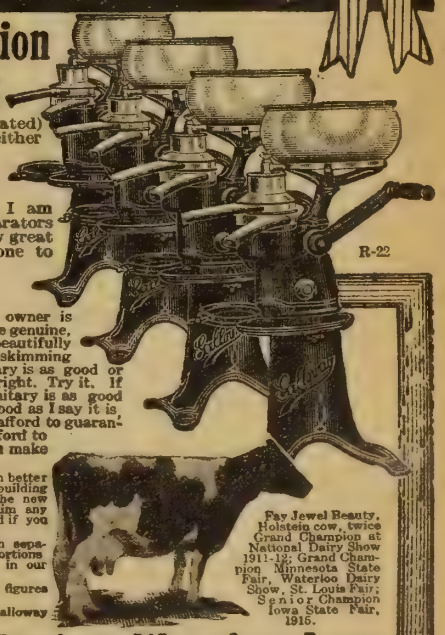

R-22

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Nona Spencer, Ayrshire heifer. Grand Champion over all females Iowa and Minnesota State Fairs, Waterloo Dairy Show; Junior Champion St. Louis, 1915.

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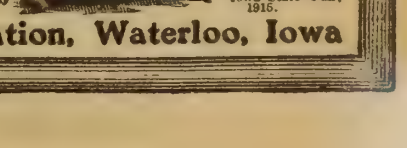

Fay Jewel Beauty, Holstein cow, twice Grand Champion at National Dairy Show 1911-12; Grand Champion Minnesota State Fair, Waterloo Dairy Show, St. Louis Fair; Senior Champion Iowa State Fair, 1915.

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Fruit and Garden

SEED POTATO CERTIFICATION IN WISCONSIN.

The second year of seed potato certification work in Wisconsin has been completed and certificates are now being issued by the horticultural department of the college of agriculture to those growers whose seed was found satisfactory. The growth of this service during the past year has been phenomenal and a great work has been done in elevating the potato industry in Wisconsin. During the past year 1,225 acres of seed potatoes were inspected compared with 350 acres the previous year and certificates are being issued to 106 growers as compared with forty-eight certificates last year. Mr. J. G. Milward, who has been in charge of the inspection work, reports a very satisfactory year, and with prospects for a much larger inspection area this year.

The stock certified amounts in total to 57,000 bushels divided on a variety estimate as follows: Rural New Yorker, 35,000 bushels; Green Mountain, 18,000 bushels; the balance of 6,000 bushels represents the combined stock of Burbank, Peerless, Early Ohio and Irish Cobbler. Mr. Milward's books show that there were 172 applicants for certificates, of which 106 were issued and sixty-six either withdrawn or rejected. The general causes for rejection were mixtures, diseases and undesirable cultural conditions. Of the total acreage of 1,225 acres 650 acres were certified and 575 rejected.

In the handling of the season's work the successful applicants for certificates on the whole did careful work. The standard of the certified seed available is far above that commonly offered for sale, notwithstanding a season when serious losses resulted from late blight, rot and field frost. Mr. Milward reports that there is still considerable misunderstanding between the seed growing and seed buying interests as to what conditions should be allowed under the certificate. This confusion is in part unavoidable, but the commercial exhibits in Wisconsin showing certified seed as offered for sale will be of service in establishing a more uniform understanding of seed standards. This condition led to the exhibit at the Marinette convention last fall of certified seed showing the stock just as it can be purchased from the growers.

In a circular which is now on the press and which will be ready for distribution soon the attention of growers and buyers is called to the important features of the standard under which certificates were issued. This circular also gives the list of those who were given certificates and discusses the effect of the early frosts and disease on the crop. Copies of this circular can be secured from the horticultural department of the college of agriculture at Madison.

Damage from late blight rot and field frost were unusually severe in several sections of the state. The final inspection of the seed stock in the bin, however, shows that on the whole, applicants for certificates have sorted carefully and the inspectors are confident that a large amount of high-class seed will be available for distribution.

The early frosts, which occurred during August 27th-29th, shortened the crop materially in several sections of the state. As a result, many fields which showed excellent vine growth and vigor at the first inspection have yielded a high percentage of small or medium-sized stock. The inspection service regards clean, sound stock of this character valuable for seed, and has adopted a liberal interpretation on size standards.

These early frosts actually benefited general conditions in such sections by checking the development of late blight, and as a result, frosted fields showed a very small percentage of loss from rot.

The inspection service urges upon holders of certificates the necessity of strict conformity to the standard required under the certificate. The issuance of a certificate implies a responsibility upon the inspection service that the seed stock shall be true to name and safe for seed from the standpoint of disease infestation. Special care has been taken in Wisconsin to adopt a standard which should be consistent with the possibilities of potato production under good conditions of culture. It seems apparent that any plan of certification to be of service in potato development work must make the holder of a certificate directly responsible for the final grade of seed shipments.

In justice to this work, the seed buying public should also understand that certified seed is not selected to such a uniform size and shape as is exhibit stock, shown at state potato exhibits. Some confusion and difficulty has been encountered through the common misunderstanding that such is the case. Some of the best seed stock will range from three to seven ounces.

Common scab, rhizoctonia, late blight rot, leaf roll troubles and black leg have been found under the very best cultural conditions. Serious infestation has resulted in the refusal to issue certificates to about sixty applicants. Some certificates have been issued involving as a condition special instructions on the removal of common scab, rhizoctonia, and dry rot.

The inspection service also recommends to growers with certificates that they use special seed potato shipping tags which can be secured from a Madison firm. The cost ranges from $1.50 for fifty tags to $6.50 for 1,000 tags. Special burlap sacks can also be obtained; one bushel sizes at $70 per thousand; two bushel size at $87.50 and half bushel size at $55. On these bags will be printed the name of the grower, postoffice address and variety for $2 per thousand or less quantity.

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2:00-2:30	Secretary's report, L. F. Graber, Madison.
2:30-3:00	"Alfalfa Growing in South Dakota," A. C. Johnson, passenger traffic manager of North-Western, who has big alfalfa farm there.
3:00-4:00	"Alfalfa on Every Farm," Prof. P. G. Holden, director of agricultural extension I. H. C.

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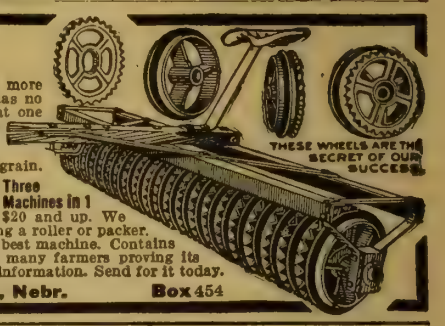

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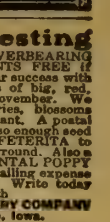

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Farmer-Banker Co-operation.

Plans Which Have Been Worked Out at Blooming Prairie, Minnesota, Have Proved to Be Profitable to All Concerned.

NO BETTER example of the co-operation between banker and farmer, with profit to each, could be asked for than is to be found in Blooming Prairie, Minn., where Sam A Rask, the hustling vice president and cashier of the First National Bank, has installed and furnished a community club room designed particularly for farmers and their families, without any cost whatever to those who benefit by his generosity. Mr. Rask has long been of the opinion that such a club room was needed. Consequently, when the First National Bank had under consideration the erection of a new building Mr. Rask's idea for a community center and rest room was incorporated in the plans. We are indebted to the Blooming Prairie Times for the following description of the rooms which Mr. Rask has provided not only for farmer patrons of his bank but for farmers generally.

HANDSOME NEW HOME OF THE FIRST NATIONAL BANK, BLOOMING PRAIRIE, MINN.

The entrance to the room is by the door leading to the hallway on the east side of the First National Bank building. The hallway leads to about the center of the building, where a stairway leads to the basement. At the foot of the stairs as you enter the basement are coat and hat hooks. On turning to the left you see a large opening without doors leading directly into the club room. On your left as you enter and at the end of the hall leading to the large room is a well-equipped lavatory with sanitary drinking fountain, wash bowl, sanitary paper towels and other modern conveniences.

The spacious club room is light, well ventilated, steam heated and gives an impression of comfort, cleanliness and convenience. The walls and ceiling are plastered and finished in pure white, the cement floor is to be painted in some appropriate color. The walls are hung with a profusion of pictures of prize-winning animals of all kinds. A electric clock is always announcing the correct time; an electric fan relieves the heat and aids in keeping the air in motion when necessary; a telephone hangs in a convenient place for the free use of the public; a bulletin board has the latest publications from the agricultural schools or other important announcements that would be interesting to the public and especially to the farmers. A large writing table is provided with pens, ink and stationery, as well as a liberal amount of reading matter, such as the latest magazines, the local papers, and the more bulky agricultural bulletins. Near this table Professor McCall has a desk and will be found here on Saturdays and when there are no school duties to hinder him and will here be ready to meet the farmers for consultation and advice.

FARMERS' REST ROOMS, FIRST NATIONAL BANK, BLOOMING PRAIRIE, MINN.

The club rooms are proving popular beyond even the expectations of Mr. Rask and his associates in the bank, and are filling a long-felt want. Mr. Rask has some earnest and definite convictions on the duties of members of the community to every other member, and expresses them in this manner:

Obviously, we did not figure on any direct profit from our rooms. It has always been my opinion that anyone who lives in a community and who makes money in that community owes something to the people of that community. Actually, therefore, we are only paying a just debt; if not a legal one, then surely a moral one. It would seem to me that this proposition would hold good in any locality. In my mind, the community spirit should be encouraged and fostered, not only by the people of the country, but by the people of the towns and cities. The best way to do this is to provide facilities and opportunities for getting together.

It is sincerely to be hoped that the example of the First National Bank and of Mr. Rask will be followed generally. No matter is of more importance than this of providing proper rest rooms and accommodations for both sexes for the comfort and convenience of farmers and their families while in town. Nor is the cost prohibitive to any banker or merchant who may wish to do what Mr. Rask has done. The rooms which are prodided at Blooming Prairie could have been rented by the first National Bank for $15, this being the sum offered them. In addition, the bank furnishes heat, light, telephone service and janitor, the total cost aggregating about $25 a month. In view of the community spirit fostered, the comfort of hundreds of rural visitors and the satisfaction of doing a much-needed work, the cost is small indeed.

If you were unfortunate enough to miss the meeting of the state horticultural society early in December, make a special effort to attend the farmers' short course at University Farm, January 3d-8th. The week's expenses, including board, etc., at the farm, need not exceed $6. You can't very often put in a week so filled with good things at that price.—[L. Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

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Your cows should be prepared for calving time. Heifers especially need help. Dr. Roberts, during his more than 25 years' veterinary practice, compounded a prescription which is a wonderful aid to cows in this dangerous period. It has an affinity for the genital organs and puts them in a breeding condition. Give your cows this help which they so much need. Feed in small quantities during pregnancy—it will mean strong, healthy calves. They will be dropped naturally—least injury to cows, less chance for abortion and complications. Cows fed Breeding Tonic do not retain the afterbirth. Breeding Tonic gives to breeding mares, ewes and sows the same help it does to cows. Get Breeding Tonic from your druggist.

Cow Tonic to tone and keep your animals in condition, aid digestion and keep up appetite.

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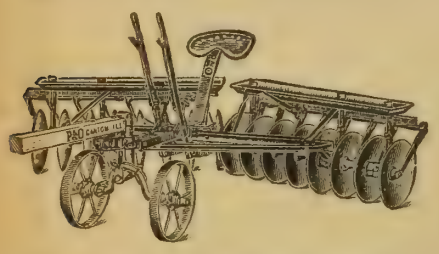

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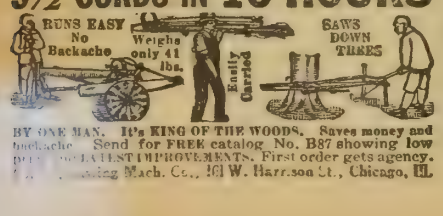

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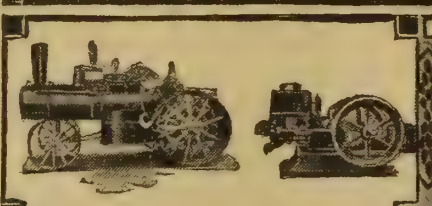
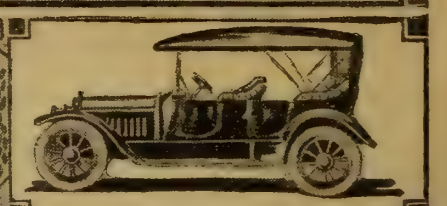


Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department



QUESTIONS AND ANSWERS.

Bosch Magneto for Lighting.

Can a Bosch high-tension magneto be used to run two lights?

Answer.—It cannot.

Carburetor Trouble.

I have a model 1916 Oldsmobile equipped with a Marvel carburetor. When on a hard pull it starts to spit and keeps it up for a minute or two. I have to be very careful not to flood it. It is not dirt, as I have taken it apart several times without finding anything. What is the cause?

Answer.—Adjust the suction damper so as to give less suction and more air. Evidently the suction is now so great that it draws too much gasoline out of the spraying nozzle, causing the carburetor to flood and making the mixture too rich.

Clutch "Spins."

The other day when running my car I found it impossible to shift from high to intermediate. The next day I had no trouble. There was a Buick driver who told me he had the same experience. How can it be explained?

Answer.—The trouble was due to a "spinning" clutch, that is, the clutch keeps running when released, due to friction between the clutch and the engine shaft. The trouble can be overcome by placing a leather-faced pad in such a position that the back of the clutch cone rubs against it when the clutch is released, forming a brake. The clutch should be nearly still when the gears are shifted.

Rings Worn Out.

I have a Fairbanks-Morse gas engine. It has been in use six years for pumping water for stock. About three weeks ago it began to lose speed. It exhausts heavily four or five times and then slows down till it almost stops and then exhausts again. I have cleaned it, but cannot find the trouble. Can you help me?

Answer.—The piston rings have become worn so that too much oil works past them into the combustion chamber. Do not use quite so much oil. If your engine continues to smoke it will be necessary to obtain new rings and possibly a new piston. If the cylinder is worn badly out of round have it rebored and a new piston fitted.

An Air Leak.

I have a 1910 Model T Ford. Cylinder number one misses when the throttle is down six or eight notches. When running idle with the throttle open three or four notches and the spark retarded, it seems to fire perfectly. When on the road pulling up grade five miles per hour it fires perfectly with the spark either advanced or retarded. It fires weak in number one cylinder as soon as it speeds up to eight miles per hour I have a new coil. I have changed the units about and have tested for weak valve springs. The compression seems equal on all the cylinders. I have used kerosene to remove the carbon. It misses just the same with a clean spark plug. What is wrong?

Answer.—The most probable cause is an air leak either at the joint between the inlet manifold and the cylinder or around the inlet valve stems. Poor contact at the commutator points, due to wear, dirt or oil, or a weak exhaust valve spring would cause the same trouble.

Engine for Ensilage Cutter.

I have a thirty-five-horse-power Mitchell auto engine. Would this engine have power enough to pull an eighteen-inch ensilage cutter? I have raised the engine level in the frame and have installed a shaft at the back end, driven by a clutch and universal joint. I will mount a pulley on the end of the shaft. Is this practical? What size pulley should I use? What is the speed of the engine? What horse power should the engine develop? The ensilage cutter should run 800 revolutions per minute.

Answer.—If the engine is in fair condition it has enough power to run the ensilage cutter. The engine should develop thirty-five horse power at a speed of 1,500 R. P. M. For a steady load it should not be run at over 1,000 R. P. M. At this speed it should deliver twenty to twenty-five horse power. Use a pulley on the shaft eight inches in diameter and having a six-inch face. The pulley on the cutter should be somewhat larger, say ten inches in diameter. Your plan is practical if the shaft is supported so as not to put too much strain on the universal joint.

Lights Burn Out.

How can I prevent my dash light bulb on my Ford car from burning out when operated from the magneto?

Answer.—Use bulbs of greater voltage. The higher the voltage the less danger of burning out, but also the less the light, especially at slow speeds. There are automatic voltage regulators on the market for Ford cars. If you are interested in these consult your auto dealer.

Speed of Two-Cycle Engine.

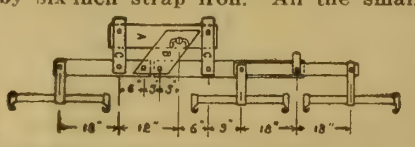
I have a two-cycle gas engine that runs fairly well, but does not have the speed that I desire. What can I do to give it more speed? What is the difference between a "high-speed" and a "low-speed" carburetor? Should the "plus" terminal of a storage battery be connected to the coil, the timer, or the ground?

Answer.—Two-cycle motors are slow compared with four-cycle motors. The speed may be increased by increasing the size of the inlet and exhaust ports and using as weak a check valve spring as practical. A high-speed carburetor has its best adjustment at high speed. A low-speed carburetor works best at low speed. A carburetor seldom works equally well at all speeds. Either terminal of a storage battery may be grounded, the other terminal being connected with the coil.

A Three-Horse Evener.

Please give me the measurements for making a three-horse evener for a wagon.

Answer.—The figure shows the principal length dimensions, the dimensions being given in inches. The doubletree, A, may be made from a piece of two-by-six-inch oak. There should be two plates shaped like B, one on the top, the other on the bottom. B may be made of one-half inch by six-inch strap iron. All the small



squares represent the heads of machine bolts, five-eighths of an inch in diameter. CC are U-shaped straps made from one-half by two-inch iron. The doubletree for the two horses rests on top of the evener. Ordinary singletrees should be used, connected by the usual link or hook. Unless you have nearly all the parts it will not pay you to make this evener, as a pressed steel evener somewhat like the above may be purchased from your implement dealer for $6.25.

A Homemade Tractor.

I am thinking of making a tractor and would like your opinion of my idea. I have a ten-horse-power Birdsal steam traction engine. I am thinking of buying a new forty-five-horse-power auto motor and using the gears, steering gear, front wheels and drivers of the steam engine, replacing any gears necessary to obtain a speed of two and one-half miles per hour. I would use heavy channel iron for the frame and use heavy parts wherever possible so as to give weight to the machine. The drivers are five feet high and ten inches wide. Are the drivers wide enough? How heavy should the machine be? How many horse power should it deliver at the drawbar? How many plows would it pull? How many tons would it pull in one wagon on an average road? Do you think it would pay me to buy the engine and do the work myself, or buy a new tractor? I have a blacksmith shop, and can do all the work.

Answer.—Your plan seems practical as far as you have outlined it. Gear the machine so that it will travel two miles per hour at 800 R. P. M. of the engine. The machine should pull two fourteen-inch plows under any condition and three fourteen-inch plows under ordinary conditions. The drivers are wide enough for the two fourteen-inch plows, but when pulling three plows you might need extension rims. The tractor should deliver twelve to fifteen horse power at the drawbar. The tractor should weigh between 4,000 and 5,000 pounds. It should pull two tons easily. If you are familiar with this class of work it may pay you to make your own tractor. As a general thing we would say that it would not pay. There are several fair tractors on the market for less than $1,000 capable of pulling two plows. The manufacturers of these machines have learned by dear experience what it takes to make a successful tractor. The farmer building his own machine begins at about the same place they did and he, too, is likely to buy some dear experience.

Motor Misses at Low Speed.

I have a 1913 Ford car equipped with an Atwater-Kent system. When the engine is not pulling hard it will miss, but when going at a good speed up hill it runs fine. I found oil in the two front cylinders when I removed the cylinder head. What is your advice as to the trouble?

Answer.—Increase the gap at the spark plug points and clean the plugs. See that the distance between push rod and valve stem is not over one-thirty-second of an inch. Examine the intake manifold for air leaks. See that the carburetor and vibrator points are properly adjusted. If you have trouble with smoke and fouled plugs in the two front cylinders use larger pistons.

Using a Level.

I have a small farm level on a tripod. In some of my work with it I have allowed it to stand in one position for several hours. When standing thus the bubble invariably shifts so as to indicate that it is not level. I suppose this variation is due to the sun's attraction for the liquid in the tube. But how is one to avoid the errors that are sure to result from such a varying standard?

Answer.—If the instrument is carefully leveled just before the observation is taken the results will be accurate enough for practical purposes. Very accurate scientific work is done in basements, the instruments being mounted on heavy concrete foundations to avoid vibration and temperature changes.

Use of Magneto Distributor.

What is gained or why is it necessary to have both a timer and a distributor on a magneto? Does not the distributor do the same work as the timer, besides distributing the current?

Answer.—The timer makes or breaks the low tension current at the correct instant to ignite the charge. The use of the distributor is to send the high-tension current to the proper cylinder. The high-tension current is produced at the instant the timer closes or breaks the low-tension current, depending upon the type of magneto. The distributor does not time the spark. The timing must be done with the low-tension current, owing to the tendency of the high-tension current to "jump."

Vaccination by a new and very advantageous method has been fully investigated and reported upon favorably by Dr. H. W. Hill. These experiments were begun by Dr. Hill several years ago while he was epidemiologist of the state board of health, and have just been finished at London, Ontario. The method is known as acupuncture. A drop of vaccine is placed on the cleansed arm, then a sterile needle is introduced through the vaccine into the upper layer of the skin only, in several places. It does not go deep enough to draw blood. This method eliminates sore arms and the possibility of developing tetanus. With this convenient and safe manner of protection no one should hesitate to become protected against small pox. —[Dr. I. J. Murphy, secretary, Minnesota Public Health Association.

PLAN TO AID SETTLERS.

To the Editor:—I am very much pleased to note the interest you are taking in the development of Upper Wisconsin and the welfare of the farmers, and hope you will continue to push the good work on until the last acre is developed.

My suggestion for the speedy development of Upper Wisconsin would be some means of credit for the settler to enable him to stay at home to clear and develop his farm and not have to go and look for work to get money to feed and clothe his family, pay interest and taxes. A man that has to do this will be a long time clearing and paying for his farm, although there are a great number of settlers doing this and making good, but it is a shame to allow this to go on when help can be had, as life is too short and a man working under these conditions spends the best part of his life to get his farm well improved, and that is speaking well for him and the country at that. I have made an investigation of conditions in the wooded country all over the United States and find that Upper Wisconsin, Michigan and Minnesota have a great many advantages over the rest of the country. There is plenty of good water, the mining district furnishes the best of markets and the clover, which is the best and cheapest method to keep land up, and the backbone of a dairy country, grows in abundance all through the brush where the heavy timber has been cut off.

We have plenty of men working in our cities with a small amount of money saved up who were raised on farms and would gladly go back to the farm if there was some help in sight. These are the men we want on the farms in this country. They will make good, as they, themselves, will do the work of improving.

The trouble with so many men with money going on land from the cities and not making what they ought to is they have no experience in clearing and developing the farm; they have to depend all on hired help, which proves very costly.

As to providing money to help these people clear and improve their land, why not have the county issue a special improvement bond, in denominations, say from $100 up, so that people could buy, the settler in turn to bond his land to the county for a given sum per acre, to be set by a commission appointed by the county board or the governor of the state and the money to be paid to the settler when proof is presented to the county treasurer that the land is under the plow. If some such plan as this could be carried out it would work wonders and no doubt in our time we would see this whole country developed into the most beautiful country the sun shone on. J. K. Flynn.

Douglas Co., Wisconsin.

DANISH BROTHERS SUCCEED IN UPPER WISCONSIN.

To the Editor:—A few years ago three Danish brothers came to Wisconsin. There is nothing remarkable in that fact—thousands of Danes had come to Wisconsin before and most of them made good, both in city and country. But these Danes did better than many of their countrymen who have come in recent years. They did not go to the city as has been the more recent habit of foreigners who come to Uncle Sam's domain. They went to the country—to the best new country they could find, i. e., to Upper Wisconsin.

Two of these Danish brothers—Nils and Mangus Christianson—bought 280 acres of land, an amount that usually is thought to be too much. But Henry Peterson, of the Superior Telegram, who recently visited the Christiansons, says that they have 180 acres under the plow—fifty of which was cleared in 1915; that they have a fine home and a magnificent barn in which they care for more than fifty head of cattle, thirty of which are milk cows.

The other brother bought 160 acres, and, although he began two years ago, has fifty acres improved and good buildings and is caring for twenty-nine head of stock.

These men might have worked all their lives in the old country or in cities of this country, and in the end have half what they already accomplished in Upper Wisconsin. Their homes near Wentworth, Douglas county, are looked upon as striking examples of what can be accomplished in Upper Wisconsin.

But, passing what this means to the Christiansons, what does it mean to the community and to the state? The trading and banking center of that portion of the state is Superior, a giant young city. Superior needs food supplies grown in the locality—imported foodstuffs never properly supplied a city. It needs trade and deposits of the farmers who are starting in its territory. The county needs the taxes these men and others will pay in the future. And their prosperity will make them cheerful taxpayers.

These men will be contributors to the state exchequer and they will be too busy marketing dairy products to take much interest in the number of inspectors there may be in the various police bureaus of the state. They will help build up a new community and they will contribute to the business of the railroads so the state may tax them a little more.

In fact, it is such people that make a state rich and prosperous and famous. And yet there are politicians who will say that state development is not a political question, just as the bankers' question. But that time is passing. Some time a real statesman will make it a state issue—and win.

But the great point is that what the Christiansons have done to Wentworth thousands of others have done all over Upper Wisconsin and tens of thousands more will do in the next ten years.

They will build up great communities, enriching themselves, their communities, counties and the state. Instead of having a few thousand and more milk cows than any other state, we will have twice as many and better ones, for no people anywhere are so anxious for better stock as those of Upper Wisconsin. In that new country there is a higher percentage of improved stock than in any other portion of the middle West. The greatest market for the better stock of the older counties is in Upper Wisconsin.

It is but a short time ago that the agricultural merits of Upper Wisconsin were discovered. It was thought of and talked about as a wilderness that would be useless when the timber was removed—in fact, it was supposed that most of the timber was pine instead of hardwood, as is the case.

A. D. Campbell,
Manager Wisconsin Advancement Association.

THE MOTOR CAR IN WINTER.

(Continued from page 6.)

is torn in the tread, clean the place with gasoline, fill the hole with rubber and vulcanize with a 275 degree heat for twenty minutes. Small places, fixed while they are yet small, postpone the coming of larger ones.

As cold weather comes you find starting is harder. Just because your car is equipped with a self-starter, is no reason for prolonging its use when a little priming will help it to a quicker start. I have seen motorists keep their starter going for four and five minutes to secure a start that could be secured by a mere push after priming. An extravagant use of the starter means a quickly drained storage battery. Better prime and make the starting easy than to always be up against the bother and expense of weak batteries. Unless your battery is fully charged it is a good plan, in very cold weather, to disconnect and take it to the cellar or some place where it will not freeze. A badly run-down battery freezes, and if very hard, the plates may be warped and the jars broken. It is a good plan to go into the winter with a fully charged battery.

On a very cold morning priming alone may not be sufficient to secure an easy start. Have a teakettle filled with hot water, and rather than to abuse your self-starter by a long-continued use of it or sprain your back by twisting at the crank, warm the carburetor and the gasoline that is in it by dousing with the hot water. If there is a small vent leading into the bowl of your carburetor—if you'll hunt for it you'll probably find one—stick a small splinter or a toothpick into it before dousing on the water or some of it will surely get in with the gasoline, then you'll sure enough have fun in getting started. When started be sure to pull out the splinter, for the vent is there for a purpose and must not be stopped. You will be surprised at the new life a carburetor that has just received a warm bath will give to a cold motor. If you do not use an anti-freeze solution in your radiator, filling with warmed water also means an easier start, and less "warming up" necessary after starting, but be sure your water is not too hot when the motor is cold. Cylinder jackets have been cracked when very cold by the sudden contact of very warm water.

Many motors require a heavier oil for summer than for winter. To continue on into the winter with the heavy oil may mean trouble, as the heavy oil will not flow fast enough to thoroughly lubricate all the bearings. If in doubt, better change to a lighter oil, as it is better to use a little too much oil than not enough, for oil is cheaper than new bearings and a much too generous sized bill for making the replacement. I also like to use a thin transmission grease during the cold months. A thick grease gets so hard in cold weather that the gears only cut paths through it, and soon are running with insufficient lubrication. Use grease thin enough to flow upon being churned in any temperature that the car will be used.

With the windshield tight, the top up and curtains well fitted, a motor car is a warmer means of travel than anything else on the farm. Time was when motor cars were underpowered, and users hesitated about putting on the curtains, especially if going against a hard wind, but nowadays, if a motor car lacks power it is because it is out of trim or is in the hands of a poor driver, so tops and curtains and windshields are not sparingly used. The heat of the motor keeps the floor of the car warmed, and those in the front seat get heat enough so a robe is seldom necessary if all curtains are on. The idea that a motor car is a cold thing in which to ride dates back to the time when it was the custom to "take the wind," with the top down and perhaps no doors to protect the front. From a thing of pleasure, purchased only by the rich and used only when the days were warm, the motor car has become a practical means of conveyance considered almost a necessity by thousands of farmers, who make almost daily use of it, regardless of heat or cold, just so the roads permit. There is no "closed season" for the motor car owned by a farmer. —[Henry Hatch.

"Made on the Farm"

One of the extensive Hawthorn Dairy Farms in Illinois — Sam'l L. Insull, Prop.

Hawthorn Farm
Lake County, Ill.

December 25, 1915

Arcady Farms, Lake Forest, Illinois

Dear Sirs:
Your letter of the 21st inst. has been received and contents noted. We would have liked very much to have placed an order for 5 cars of Arcady feed at this time if we had not lost our dairy herd. We used 5 cars of Arcady feed last Winter and we think it is the best and cheapest feed and the best milk producing feed that we have ever been able to buy.

Yours truly,
Andrew Efinger.

Cut Down Your Dairy Feed Bills

Do as such dairy farmers as J. A. & W. W. Watson of Youngstown, Ohio—Knollwood Farm, Granger Farwell, Prop., Lake Forest, Ill.—Mariondale Farm, Grover Kull, Prop., Geneva Junction, Wis.—and scores upon scores of other money-making dairy farmers have done—use R K D Dairy Feeds. They have learned by experience that the use of

R K D
DAIRY FEEDS

is *economical*—that it *increases* milk yields—that it fattens their dairy profits. And they have found that their use actually does *cut down* the cost *of dairy feed.*

What's more, they know that in spite of the increase in the milk yield it brings, feeding R K D to the herd *keeps the cows in excellent flesh*—in top notch condition.

Write us for *complete evidence* of the superior value of RKD Dairy Feeds. *Ask your dealer* to supply you. If he cannot, write us direct.

Arcady Farms Milling Co., Box 55, Rondout, Illinois

FINE FARMS IN LANGLADE.

This Upper Wisconsin County, Only a Few Years Ago Covered With Stumps and Second Growth Timber, Is Setting a Fast Pace in Agricultural Development—Many New Barns, Silos and Homes.

PROBABLY no county in Wisconsin is showing a more rapid development in an agricultural sense than Langlade county. Although there are only 1,450 farms in the county and less than a tenth of the tillable soil has been developed into farms, this county is setting a pace that is the equal almost of any community, not only in Upper Wisconsin but in the state as a whole.

During the past summer more than sixty new barns of the most modern type were erected in the county. Silo construction has also been at its height, as about forty new silos were built during the summer. Had the corn situation been more favorable at least 50 per cent more silos would have gone up, as this was the first time in many years that Langlade county has failed to secure a good corn crop. More than forty barns were equipped during the past season with the most modern equipment on the market and scores of new farm homes were erected.

Where one finds new barns, new homes, silos, etc., under construction and old as well as new barns being equipped with modern equipment it is certainly a sign of prosperity. Considering that only a few years ago Langlade county was in the hands of the loggers and the lumber jacks it certainly is a testimonial to its adaptability to farming to see such fine farm buildings and fine herds and flocks which the writer had the pleasure to view recently in an automobile trip through the county with Mr. F. G. Swoboda, county agricultural representative.

Great work is being accomplished in the county by the county agricultural representative, the county superintendent of schools and others interested in opening up Langlade county to farms. The day of the scrub sire has almost passed and in his place are pure-bred bulls and stallions. There are also many pure-bred swine herds, a few beef cattle and sheep, but as the future of the county, like most of the other upper counties, lies in the development of dairying this class of live stock farming predominates. Mr. Swoboda estimates that there are now seventy-five pure-bred Holstein sires in the county in addition to twenty pure-bred Jersey sires and fifteen pure-bred Guernsey sires. Very seldom does one hear any more of a scrub sire in this community, as the farmers have learned the value of good blood and are seeking the very best when breeding.

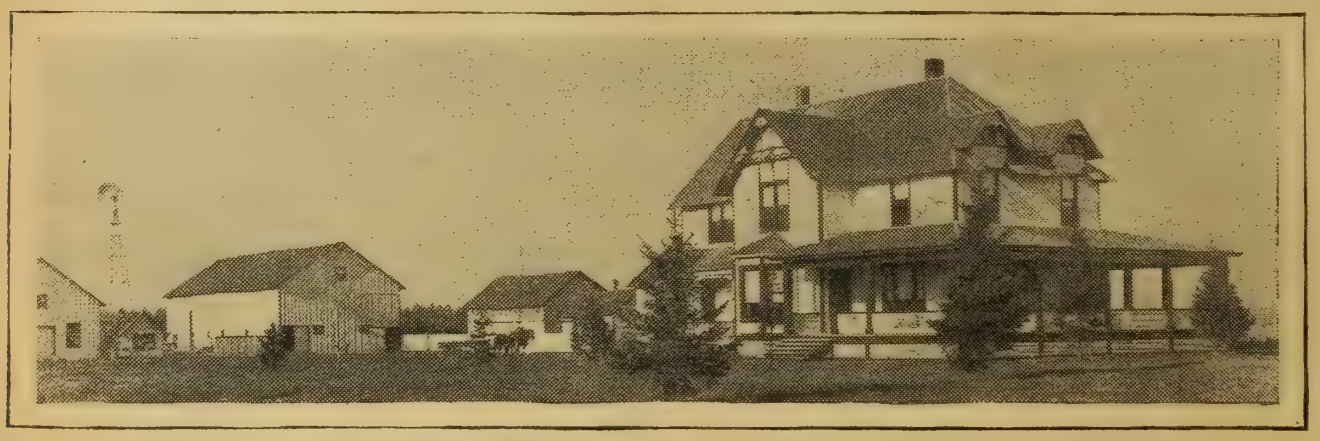
Great stress is being laid constantly on the value of profitable live stock and with thirteen cheese factories and six creameries in the county to take the product of the cows dairying is becoming more and more popular as well as more profitable. The cow-testing association is doing excellent work and in addition many farmers who are unable to join the association because of being too distant are weighing their milk and having it tested at one of the near-by rural schools or by the county representative. There is that desire among the farmers that means a better agriculture—a desire to do those things which will increase their profits. No doubt much of this desire has been created by the extension work being carried on in the county and too much credit cannot be given Mr. Swoboda for the splendid work he has been carrying on during the past two years. Mr. Swoboda takes a great personal interest in his work. He went to Langlade county after several years of farming in Waukesha county and he carried with him much of the enthusiasm that has made that a great dairying community.

Potato growing is one of the big farming operations of the county, although some wonderful grains are grown. John C. Johnson, of Antigo, threshed 950 bushels of oats this year off nine acres, while sixty-five bushels, machine measure, is very common. Another farmer threshed 3,800 bushels of oats from forty-five acres, while barley runs from forty to fifty-five bushels. Clover that runs five tons to the acre for two cuttings is not uncommon, while the spring wheat crop this year was very good, some running thirty bushels to the acre. It is an exceptional year that corn does not ripen and there is almost always plenty for the silos. Considerable attention has been paid to alfalfa by Mr. Swoboda, there being about fifty acres this fall. This runs about a ton better to the acre than clover. Of potatoes the Rurals lead in acreage with the Triumphs and Cobblers next and this year seven farmers grew certified potato seed.

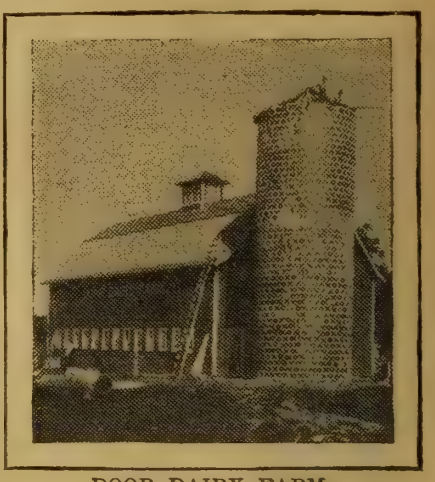
Alton Follstad, of Elcho, vice president of the Wisconsin Potato Growers' Association, has one of the fine pure-bred Guernsey herds in the county. Other good Guernsey herds are found on the farms of Walter and Henry Head, of Antigo; Anton Greisinger, of Bryant; Charles Metcalf and others. These are only a few of the fine Guernsey herds in the county and these are all being built up to a higher standard each year by using pure-bred sires.

Considerable attention has been given to the advantage of stable-raised calves and those of the Head farm shown at the county fair this fall certainly proved it worth while to raise them indoors in this community.

The dairymen are all organized, there being a Holstein, Jersey and Guernsey breeders' association and these organizations are doing much to encourage better dairying. Blaine Stewart, of Antigo, who is president of the Jersey breeders, has a pure-bred herd from which he has supplied many of the pure-bred Jerseys in the county, as he was the original Jersey breeder. Among the Holstein breeders are two brothers, Alois Stengl and Joseph Stengl, of Antigo, who are



HOME OF CHARLES METCALF, LANGLADE COUNTY GUERNSEY AND PERCHERON BREEDER.



DOOR DAIRY FARM.

FROM THE HERD OF FRED GOEMAN, ANTIGO.

FEW OF MR. METCALF'S PURE-BRED PERCHERONS.

ONE SILO NOT ENOUGH IN LANGLADE COUNTY.
(Farm buildings of William Heckman, Antigo.)

BARN RAISED CALVES OF WALTER HEAD, ANTIGO.

having fine success at farming. Alois Stengl is now building a new barn which will rank with the best, while his brother has just completed a fine, modern barn.

Although there are some fine swine in the county, this side of live stock farming has not had the attention that dairying has had. Lawrence Guenthner and Charles Parsons, of Antigo,

SWEEPSTAKE BULL AT 1914 COUNTY FAIR. OWNED BY GRESCH BROS.

both have pure-bred herds of Poland Chinas, while Charles Lade, of Polar, and John Smith, of Kent, had pure-bred Duroc Jerseys. These two breeds predominate and the success of these breeders indicates a growing swine industry.

Langlade county is also strong in good horses and has ideal conditions for horse breeding. There are ten pure-bred stallions in the county, against five grades and four scrubs. This percentage of pure breds and scrubs is much better than many older communities. Seven of these ten pure breds are Percherons and three are Standard bred. Percheron owners are Henry Boettcher, Antigo; H. A. and P. S. Carley, of Elmhurst; E. P. Hoeft, of Ormsby; Charles Metcalf, A. J. Rolo, J. W. Prosser and Jacob Price, all of Antigo. Standard bred owners are J. V. Bassett, of Antigo; John Groth, of Polar, and F. K. Voss, of Antigo.

Langlade county farmers, with the aid of Mr. Swoboda, are interested in numerous activities which will lead to more profits. These include everything from experiments with commercial fertilizer to experiments with alfalfa, etc., the holding of short courses, farmers' meetings, etc. Other activities include the promotion of interest in the use of pure-bred sires, proper care of new-born foals, better raising of calves, regular weighing and testing of milk, fighting noxious weeds, better ventilation of stables, testing of skim milk to determine whether separators are working properly, keeping a system of farm accounts, planting pure varieties of potatoes, regular use of road drag, value of sweet clover, alfalfa and soy beans as valuable crops, the value and importance of the silo, crop rotation, system, etc.

This interest among the farmers will show up in the future in Langlade county with increased returns per farm and is a sure sign that this county will be heard from in the future.

Talk Seed Corn in Polk County.

Splendid Work Along Agricultural Lines Is Being Done at the Osceola High School---Corn Show Held in December.

GOOD seed corn was the principal feature of the Second Annual Corn Show and Agricultural Exhibit of the Osceola, Polk county, High School, held in the town hall in December. Ideal weather brought out a good crowd of farmers and townspeople to see the exhibits and to listen to the program. In the forenoon John Klinka, county representative for Polk county, and Frank D. Otis, of Barron, judged the products and placed the awards. The winners were:

CORN.

50-Ear Contest—1st James Hanson; 2d Edd Lundburg; 3d C. E. Swanson.
10-Ear Contest—1st H. Nanson; 2d P. Duff; 3d O. A. Swanson.
1-Ear Contest—1st Paul Duff; 2d Ed Lundberg; 3d Leon Dohm.

POTATOES.

5-Potato Contest—1st Howard Combackeo, Russets; 2d Herman Hanson, Rurals; 3d Joe Nagler, Green Mountains.
Bushel Contest—1st E. Wurst, Green Mountains; 2d H. Brocker, Rurals; 3d L. Dohm, Burbanks.
Barley—1st Irving Newton; 2d Carl Nagler; 3d E. Wurst.
Oats—1st E. Wurst; 2d Dr. Mitchell; 3d E. Seemann.

A sauerkraut dinner was served at noon by the agricultural class, and furnished a splendid lesson in skillful marketing. This fall they had in their school garden a quantity of cabbage for which they had no market. Instead of allowing it to go to waste, they made it into sauerkraut under the direction of their agricultural teacher, Mr. E. Vernon Miller. The sauerkraut dinner followed, was patronized by 150 people at 25c a plate.

In the afternoon Mr. Klinka spoke of the dirth of good seed corn threatened for next spring, and urged that Polk county seed be reserved for Polk county farmers. He then reviewed the work of the judges, emphasizing the importance of selecting mature samples that conform to standard type, that are uniform in size and shape, and that are free from disease.

Frank D. Otis, Barron, followed in a talk upon "Successful Corn-Growing." He said that next year's corn crop depends upon this year's seed, and advised fire drying the seed in a well-ventilated room. Fall plowed clover sod worked as early in the spring as possible gives best results. The early cultivation breaks up the winter crust and prevents evaporation with consequent earlier warming up of the soil. This promotes more rapid germination of the weed seeds and later cultivations kill many of them before the corn is planted. It was especially brought out in the discussion that frequent cultivation after the corn is planted and continued until the corn is too large, deep at first and shallower as the corn grows, is of vital importance, and may be the deciding factor in the success of the crop.

Too much commendation cannot be given to Prin. Martin Anderson and his agricultural assistant, E. Vernon Miller, for their successful management of the entire program.

POTATO AWARDS IN MINNESOTA.

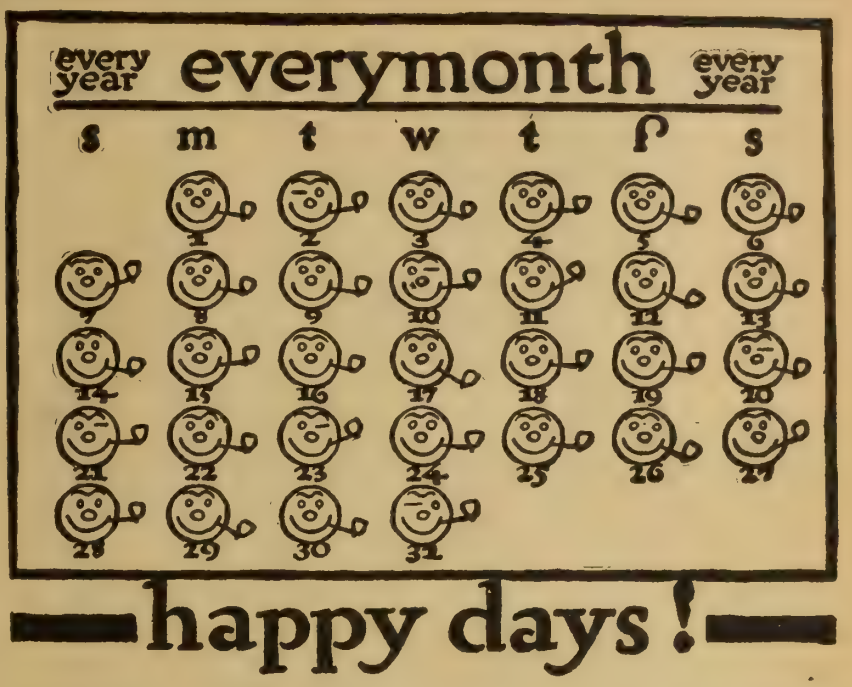
Final awards have been made in northern Minnesota boys' and girls' potato contests promoted by the Northern Minnesota Development Association, and carried on under the direction of the extension division of the Minnesota College of Agriculture.

Oscar Larson, of Viking, Marshall county, won the championship, as grower of Green Mountain potatoes and made something of a record, obtaining 75 2-3 bushels from one-eighth of an acre. This is at the rate of 605 1-3 bushels to the acre. Audrey Howe, of Merrifield, Crow Wing county, was second with a yield of at the rate of 406.8 bushels to the acre. Robert Lessard, of Grand Rapids, Itasca county, was third with 410.64 bushels to the acre, and Allen Strand, of Sawyer, Carlton county, was fourth with a yield of 360 bushels to the acre.

Both the first and second prizes in the Rural New Yorkers class were taken by girls—Elizabeth Tofte, of Tofte, Cook county, was first with a yield at the rate of 504 bushels to the acre, and Ruth Enstrom, Carlton, Carlton county, was second with a yield of 378.96 bushels to the acre. Frithiof Anderson, Moose Lake, Carlton county, came third with a yield of 388¾ bushels to the acre, and Martin Kateranta, of Sawyer, Carlton county, was awarded fourth prize with a yield of 384 bushels to the acre.

The cost of production has not been worked out in all cases, but Oscar Larson, at Viking, produced his 75 2-3 bushels at a total cost of 12 cents to the bushel. Robert Lessard, of Grand Rapids, did still better with a cost of 10 cents per bushel. Elizabeth Tofte's cost rate was 18 cents, and Ruth Enstrom's, 11 cents. Martin Kateranta reduced his cost almost to a minimum at 5 cents a bushel.

The club prizes were awarded as follows: First, Grand Rapids, Boys' and Girls' Club, Itasca county; second, Mission Club, Crow Wing county; third, Boys' and Girls' Club, of Embarrass, St. Louis county; fourth, Boys and Girls' Club of Ray, Koochiching county.



happy days!

"Tux" is the happy smoke. It just packs the smoker's calendar so plumb full of fragrant delight that a gloomy day can't crowd itself in edgewise. That mild, soothing taste of "Tux" has introduced many a man to the joy of pipe-smoking and a regular unending procession of happy days.

Tuxedo

The Perfect Tobacco for Pipe and Cigarette

By far the most pleasant pipe-smoke in the world is Tuxedo. Think of the supreme satisfaction of being able to smoke your pipe all day, and day after day, without a particle of discomfort! You can do it with Tuxedo—because Tuxedo is made wonderfully mild and absolutely biteless by the *original* "Tuxedo Process."

That process is what makes Tuxedo different from any other tobacco made. Others have tried to imitate it, but never successfully. Just try Tuxedo for a week and you'll smoke it ever after.

YOU CAN BUY TUXEDO EVERYWHERE

Convenient, glassine wrapped, moisture-proof pouch . . . 5c
In Tin Humidors, 40c and 80c

Famous green tin with gold lettering, curved to fit pocket 10c
In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY

Kirstin ONE-MAN STUMP PULLER
Makes Land Clearing Easy, Economical, Practical

You can't realize the wonderful *strength, speed and power* of the new Double Leverage Model Kirstin until you see one at work. Compound leverage gives any man the strength of a giant—enables him to quickly pull biggest stumps with ease. The Kirstin way is quickest, easiest and cheapest way to clear stump land. No heavy cumbersome machines to pull around, tip over or get stuck in boggy places. No sweeps to break, no horses to risk, no dynamite, no danger. With a Kirstin you simply walk into your stump field and "clean it up" in no time at all. You can

Try The KIRSTIN For Ten Days

Used Anywhere—Hills, Swamps, Rough Ground or Thick Timber.

Prove to yourself that it clears your land cheaper. Let the Kirstin's superior features demonstrate their value right on your own farm. Less weight—greater strength—lower cost—greater speed—all these valuable qualities are made possible by the Kirstin Quick-Detachable Connections, Auto Release, Non-Twisting Cable and other Kirstin patented features.

Write Today For The Big New Kirstin Catalog

which gives you full details about the Improved Double Leverage Kirstin One-Man Stump Pullers, Kirstin Service, Free Information Bureau, Time Payment Plans, etc. *Agents Wanted.*

A. J. KIRSTIN CO.
5526 Ludington St., Escanaba, Mich.

Pull Stumps 10 Days-FREE

You can clear from 10 to 50 acres in ten days with the Faultless Stump Puller, and then decide whether you want to keep it or not—before you pay us any money. The Faultless Stump Puller develops greater power, with less strain on the team and the machine, and is easier and safer to handle than any other stump puller made. Backed by the strongest guarantee.

You Get a Complete Outfit Ready for Work

Right Now We Are Making A Special Low Price Offer

It means a slash in stump puller prices that will surprise you. Write for full information at once and save money.

Our Free Book gives much valuable and reliable information on clearing stump land, with numerous illustrations. Write for it today.

Faultless Stump Puller Co.
Dept. W Cresco, Iowa

DAIRY

MILK PLANT SANITATION.

There are some details in milk-plant sanitation which are not given on any scorecard. If the floors, walls and ceiling are smooth and are made of sound and durable materials they may be easily kept free from dirt and dust. Concrete floors are very satisfactory, for they can be flushed often with water, there is no danger of rotting and if properly constructed there will be no cracks in which dirt can collect. Iron plates laid in cement are sanitary and are more durable than concrete.

A separate room for handling the milk apart from all other operations is essential and all doors must be kept closed to exclude flies and impure air. It is better to provide pure air by means of a modern system of ventilation. Even when the air is pure the vats, pasteurizers, coolers, fillers and other apparatus should be covered to prevent all unnecessary contact with the air.

The milk must be kept cool after it is received at the plant and not be allowed to stand long before bottling. If not used at once the cans should be put into a refrigerator or the milk stored in tanks made for this purpose. These tanks must be in a cool place or be surrounded with a jacket of ice water or brine. Strainers of cheesecloth are more satisfactory and more easily cleaned than those of wire gauze, but the use of strainers of any kind should be avoided as much as possible. Some dealers strain the milk after it is pasteurized before it is run into the filler. This may increase the bacterial count, and, furthermore, is unnecessary if the milk is properly clarified or filtered before pasteurizing and if the apparatus is clean.

A filter of cheesecloth and cotton, if used, must be changed several times during the day. The cheesecloth must be washed, sterilized and kept where the air is pure. It can be used a few days before throwing away, but the cotton, of course, should be used only once. As soon as the milk is put up all parts of the apparatus should be thoroughly cleaned by first rinsing in cool water, then washing with hot water to which washing powder has been added, and finally sterilizing with boiling water or steam. The pumps and pipes can be rinsed by pumping water through them immediately after using. They must then be taken down and thoroughly washed. This can easily be done if there are several couplings in the pipes. All joints and couplings must be kept tight and free from dirt, rust and corrosion. Battered and rusty apparatus or cans afford good lodging places for bacteria, and, being hard to clean, should not be used.

The pasteurizer is one of the most difficult pieces of machinery to keep clean, as the milk sometimes sticks to the sides and, if not properly cleaned, a cooked layer forms on the inside, which grows worse each day. The dairy division of the government bureau of animal industry will send a score card upon request.

SELLING COWS ON THEIR MERITS.

A dairy cow's real value depends upon her ability to make good at the milk pail. Her yields of milk or butter fat constitute the real test of her ability to make money for her owner. Men who purchase cows are learning to require that cows have an established record of performance. Buyers will pay a handsome premium for cows whose records are creditable. This is true of grade cows wanted for the farm dairy. It is even more true of pure-bred stock wanted for breeding purposes. The story has been recently related that a cow which had been secured for a very ordinary price was put on record. Her records show a very remarkable production. Later she was again offered at auction, at which sale she sold for $2,400 more than she had sold for before records had been kept on her. One of the cows which held a world record for a time sold for a very small price before she showed to the world that she was one of the greatest cows of her time.

Cows with records can be sold strictly according to their merits. Without records cows are unknown quantities. Certain things go to back up a cow's record. They are dairy type and breed. Type alone, although the cows have the five essential points to a marked degree does not prove the dairy cow. Breeding of itself is not sufficient. Pure-bred cows in some instances have been failures as producers. Yet the heavy producers will be found in cows possessing dairy characteristics and they will be found in cows which are pure bred or which have a strong percentage of dairy blood.

The man who knows his cows and who can give a statement with the sale of each showing what she has been doing for him and indicating what she will do in the future certainly will reap better prices.

CLOSING EXERCISES AND BANQUET.

To the Editor:—On January 27, 1916, the 162 winter dairy course students of the University of Wisconsin will hold their annual banquet.

This will be the closing exercise of the three months' course. Many pleasant acquaintances have been made among the buttermakers and cheesemakers this year and while this banquet is going to be a jolly good time it is something like "breaking home ties" to stop the daily routine at the end of school and start out in 162 directions to creameries and cheese factories in which these men expect to work.

All former students and friends are cordially invited to come to Madison on January 27, 1916, to attend the closing exercises of the winter dairy course and the evening banquet.

E. H. Farrington.
Wisconsin Dairy School.

WISCONSIN BUTTERMAKERS, ATTTENTION.

To the Editor: — The Fifteenth annual meeting of the Wisconsin Buttermakers' Association will be held at Eau Claire, February 1, 2 and 3, 1916. Notices concerning this convention will be forthcoming in succeeding issues of the dairy press.

We are pleased to announce at this time that Santa Claus was very good to our association this year. Several firms have notified us that they will contribute to our premium fund.

The H. C. Christians Company, Johnson Creek, buyers of large quantities of butter will contribute $10,000 to this fund.

The Diamond Crystal Salt Company, St. Clair, Mich., and the Worcester Salt Company, Chicago, each contribute $10, and we have also been informed that the Clifford L. Niles Company, Anamosa, Iowa, manufacturers of cream aerators and blowers will contribute $10 to the premium fund.

These contributions are particularly acceptable in view of the fact that we do not receive any financial aid from the city of Eau Claire such as we have received from cities in the past.

We have many side contributions. Of course, our boys will be pleased to learn that Hon. S. A. Cook, of Neenah, will again give four nice leather chairs for the best four pieces of butter exhibited. Hon. Cook was not even approached concerning the chairs but came forward of his own free will, which shows his deep interest in the cause of dairying in Wisconsin. We know that the boys appreciate his good will and no doubt will be greatly stimulated to produce better butter on account of the prizes he offers every year.

The Two Rivers Plating Works, Two Rivers, Wis., offer $5 worth of work to the creamery whose buttermaker gets the best score at the convention.

We are also pleased to announce that the J. B. Ford Company, Wyandotte, Mich., have again offered ten district prizes as they have so generously done in the past. The prizes this year will be sets of military brushes, and parties who have seen them pronounce them to be of exceptional quality.

Another contributor to our premiums is the Hon. Geo. J. Weigle, dairy and food commissioner, who offers a handsome silver cup to the party receiving the highest score at the convention. The deep interest that he is showing in the improvement of the dairy industry in this state is evidenced by the fact that Mr. Weigle of his own volition comes forward and offers this prize to help the boys along in the good work.

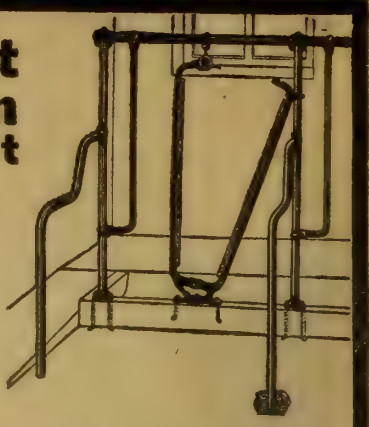
The officers of the association are very grateful to these many donors and we know the members appreciate their good will.

G. H. Benkendort.

CALF RENNETS WORTH SAVING.

There are probably over 100,000 calves killed in Wisconsin, on the farm and by local butchers, each year, and if the rennets were all saved they would represent a value of about $10,000. They bring now about 10 cents each on the market and can easily be sold to manufacturers of rennet extract. Many farmers, of course, kill only very few calves, so it might not pay them to handle the rennets, but

JAMES Equipment In a Good Barn Means Cow Comfort —Bigger Profits



HERE'S a typical JAMES stall, a JAMES designed barn, and JAMES Sanitary Barn Equipment in actual use—a combination that will save labor and make more money for any dairyman.

This $4.75 stall has the same steel piping and square horizontal pipe, dust-proof fittings, Triple Curve Stall Partitions; same heavy galvanized stanchion anchors; same system of anchors for quick, easy erection; same JAMES stanchion, cow-proof lock door-knob type, lock open clip, everlasting hinge, double chain hanger with flat links, wood lining; same baked-on enamel finish; same system of shipping assembled; same style and durability found in JAMES complete feature-equipped stalls. It is the JAMES $10 stall without some of the special features.

JAMES Barn Plan Service will help you wonderfully in building or remodeling. It starts you *right.*

JAMES equipment, designed and built by the originators of sanitary barn equipment ideas, includes Stalls, Stanchions, Pens, Carriers, Ventilators, Watering Buckets, etc. Stall prices range from $4 to $10, depending on number of special features wanted. Quality, finish and system of inspection the same in *all* JAMES equipment.

Tell us how many cows you own and when you expect to build or remodel and receive copy of JAMESWAY Book—FREE.

James Manufacturing Co.
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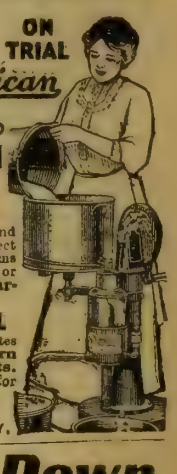

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they would no doubt be glad to give them to some enterprising boy in the neighborhood who could collect them from several farmers.

It takes very little time to handle rennets, as all that is necessary is to squeeze out the contents, slit them open and then salt well on both sides. A couple of inches of the narrow end (the neck) is generally cut off and the fat should be removed. If the rennets should dry out after they are salted it will do no harm; in fact, they will keep longer if dried, but there is very little danger of getting the salted rennets spoiled as long as they are kept cool.

BUTTER OVERRUN.

The terms "butter" and "butter fat" are always confusing to one who does not understand the meaning of each one. Butter fat is the pure fat or oil found in milk and its products and is the chief constituent of butter, as shown in the following:

AVERAGE COMPOSITION OF BUTTER.

Fat	84 per cent
Water	12.73 per cent
Curd	1.3 per cent
Salt and ash	1.97 per cent

In studying the above analysis it is obvious that "butter" and "butter fat" are not one and the same thing, and that when cream containing a pound of butter fat is churned more than a pound of butter will be made. Ordinarily we say that one pound of butter fat will make one and one-sixth pounds of butter. This one-sixth of a pound is termed surplus or overrun. The amount of overrun obtainable from a certain amount of cream containing a certain per cent of butter fat depends on the amount of butter fat lost during churning due to spilling of cream, loss of fat in the buttermilk, etc., and to the amount of water, curd and salt which the butter is made to contain. Two per cent salt in butter usually suits the trade. The curd content is always about 1 per cent. This leaves the moisture content as the factor which can vary and which largely determines the overrun. The law allows 15.9 per cent moisture in butter.

The buttermaker depends largely upon the overrun to pay running expenses and his profit.

The pounds overrun is found by subtracting the amount of butter fat which went to make a batch of butter from the butter itself. The per cent of overrun is found by dividing the pounds overrun by the pounds butter fat which went into making the butter.

Problem I. Forty pounds of cream, testing 30 per cent butter fat made 14½ pounds of butter. Find the overrun and per cent overrun.

40 times 30 equals 12 pounds butter fat in 40 pounds 30 per cent cream.

14.5 minus 12 equals 2.5 pounds overrun.

2.5 divided 12 equals 20.8 per cent overrun.

Problem II. A proprietary creamery makes in one year 500,000 pounds of butter, securing an average overrun of 20 per cent. An average price of 38 cents per pound is paid for butter fat, and the butter is sold for 38 cents per pound. Did the overrun yield the owner any profit; if so, how much?

500,000 times .20 equals 100,000 pounds overrun.

500,000 minus 100,000 equals 400,000 pounds butter fat bought.

400,000 times $.38 equals $152,000 paid for fat.

500,000 times $.06 equals $30,000, cost of making.

$152,000 plus $30,000 equals $182,000, total expense.

500,000 times $.38 equals $190,000, receipts from butter.

$190,000 minus $182,000 equals $8,000, profit to owner.—[H. F. Judkins.

RIVER FALLS REPORT.

Thirty-six cows in the River Falls and Roberts Cow-Testing Association made the forty-pound list during November, the report of P. B. Van Horne having just been made public. First honors for butter fat production went to a Holstein in the herd of D. E. Fowler with 67.4 pounds. The report follows:

Owner, name and breed	Age	When fresh 1915	Lbs. milk	Per cent fat	Lbs. B. fat
Alton Bros.					
Ella, H.	7	9-12	1065	3.8	40.5
Maid, H.	2	10-13	945	4.3	40.6
Nell, H.	5	10-15	1410	4.0	56.4
H. R. Taylor					
Bloom, R. S. H.	6	8-15	960	4.2	40.3
Lark, S. H.	9	9-20	1110	4.0	44.4
Sis, S. H.	5	9-4	900	6 0	54.0
John L. Chapman					
Daisy, H.	5	4-4	990	4.1	40.6
Martha, H.	4	10-15	1800	3.5	63.0
Rose, S. H.	3	10-3	1170	4.3	50.3
Netta, H.	3	9-20	1395	3.7	51.6
Roan, S. H.	3	5-10	1065	4.3	45.8
Cherry, S. H.	6	9-21	1305	4.7	61.3
Clover, H.	3	9-19	1710	3.4	58.1
Nell, H.	2	6-8	1290	3.2	41.3
W. A. Chapman					
Bessie, H.	4	9-1	1200	4.5	54.0
Colantha, R. H.	2	4-1	1095	3.7	40.5
Johanna, H.	4	9-29	1680	3.5	58.8
Nancy, H.	4	10-13	1770	3.6	63.7
Sally, H.	8	5-27	1170	3.6	42.1
Auldin Holmes					
Star, H.	5	11-3	1125	3.6	40.5
G. L. Battin					
Boss, G.	4	9-26	900	5.8	52.2
F. F. Wilford					
Maude, G.	6	10-19	1005	5.1	51.3
Maggie, G.	7	10-25	915	5.0	45.8
H. A. Randall					
Lillie, J.	5	10-16	900	5.5	49.5
O. R. Schwalen					
Pansy, R. G.	2	10-24	855	5.2	54.9
Bloom, R. G.	4	10-10	870	4.6	40.0
W. W. Wilcox					
Louisa, H.	2	10-23	900	4.8	43.2
F. W. Bliss					
Daisy, H.	5	11-14	1065	4.1	43.7
D. E. Flower					
Lady, R. H.	4	9-28	1425	3.2	45.6
Salma, R. H.	4	10-30	1605	4.2	67.4
Star, R. H.	4	10-19	1725	3.8	65.6
Maude, H.	3	10-27	1575	4.1	64.6
Belle, R. H.	2	10-21	1155	4.5	52.0
Wm. Prisk					
Silver, H.	4	11-15	885	5.1	45.1
Oscar Weis					
Eva, S. H.	7	10-20	990	4.1	40.6
Nellie, S. H.	5	11-12	1005	4.7	47.2

TESTING IN MANITOWOC.

The December report of the Manitowoc Cow-Testing Association which covers the thirty-day period ending December 19th is very encouraging for the time of year. Sixteen cows produced better than forty pounds. The report follows:

Owner and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
E. A. Knutson				
G. Ayrshire	4	1012	4.4	44.5
G. Ayrshire	5	921	4.4	40.5
Robt. Rabenhorst				
G. Holstein	2	1455	3.4	49.4
G. Holstein	6	1505	3.0	45.1
G. Holstein	9	1414	3.4	48.0
G. Holstein	4	1283	3.2	41.0
G. Holstein	3	1436	3.1	44.5
T. A. Thompson				
G. Holstein	9	1173	4.0	46.9
P. B. Holstein	8	1417	3.6	51.0
Otis Marken				
P. Guernsey	2	800	5.0	40.0
P. Guernsey	3	1480	5.4	45.8
P. Guernsey	4	1171	4.6	53.9
P. Guernsey	2	923	4.6	42.7
P. Guernsey	2	911	5.0	45.5
Adolph Otto				
P. B. Holstein	3	1528	3.2	48.9
P. B. Holstein	9	1451	3.4	49.3

Jesse A. Bauders, Official Tester.
Ed A. Knutson, Secretary.

NORTH BEND TESTING.

The report of R. B. Durham official tester for the North Bend Cow-Testing Association, for the thirty-day period ending December 10th shows the following cows in the forty-pound list:

Owner and breed	Lbs. milk	Per cent	Lbs. fat	Days in milk
U. Anderson				
G. Holstein	1071	6.0	64.2	5
O. Marshall				
G. Holstein	1188	4.7	55.8	30
P. Johnson				
G. Holstein	1137	4.8	54.5	7
J. D. McDonald				
R. Holstein	1266	4.1	51.9	13
R. Holstein	1059	4.9	50.9	30
O. Marshall				
G. Holstein	1113	4.6	51.1	75
R. Holstein	1203	4.2	50.5	4
H. Marshall				
R. Holstein	1284	3.8	48.8	150
T. Biddy				
G. Holstein	1134	4.3	49.7	75
W. Quackenbush				
G. Holstein	1248	3.8	47.4	90
J. D. McDonald				
R. Holstein	1440	3.2	46.1	30
R. Holstein	1152	3.8	43.8	90
R. Holstein	996	4.4	43.8	9
J. Baird				
G. Holstein	1134	3.8	43.1	90
J. Patterson				
G. Holstein	1263	3.4	42.9	15
L. Waller				
G. Durham	855	5.0	42.7	30
B. Emerson				
G. Holstein	887	4.7	41.6	25
J. Baird				
G. Holstein	1143	3.6	41.1	90
J. Bullock				
G. Jersey	792	5.1	40.4	30
H. Quackenbush				
G. Jersey	1056	3.8	40.1	60

NETTLE HILL REPORT.

The following table gives the names of the cows in the Nettle Hill Cow-Testing Association which have produced more than forty pounds of butter fat or 787 pounds of milk during the period of thirty days ending October 31, 1915:

Owner and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
Phil Sickinger				
Native	11	784	4.3	42.3
P. S. Cahill				
G. Holstein	6	946	4.3	40.7
G. Holstein	8	940	4.4	41.4
G. Holstein	9	978	4.3	42.0
G. Holstein	7	970	4.9	47.5
G. Holstein	7	971	5.1	49.5
W. H. Connell & Sons				
G. Holstein	5	787	5.1	41.7
Theo. Pritzel				
G. Holstein	3	1240	4.3	53.3
John Pritzel				
G. Guernsey	5	953	5.6	53.4

Manford D. Pease, Official Tester.
Geo. W. Kiel, Secretary.

The agricultural instructor at Browns Valley, Minnesota, did much to make his town a better place in which to live by conducting a lawn contest and encouraging the setting out of street trees. The commercial club furnished the trees, the agricultural class boys staked the streets. Some 500 trees were set. The boys also cleared up the park and it was afterward kept in shape by the Boy Scouts.

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Touching Poultry Problems.

Well-Known Farmers and Poultry Breeders Contribute to Wisconsin Farmer Symposium on Important Subject of Interest to Raisers.

Editor's Note:—These letters from well-known poultry breeders and farmers of Wisconsin continue a series which has been running in The Wisconsin Farmer for several weeks and will continue for some time. Important subjects open for discussion in these letters are:

Ration for winter egg production.

Preventives and cures of mites and lice.

Handling of roup.

Open air housing.

How shall we get rid of the stale egg?.

Other poultry raisers are invited to contribute, send in photographs, etc. The subjects suggested here may be chosen, or other problems which come up in everyday experience may be discussed. Address, Wisconsin Farmer, Madison, Wis. Please mark all pictures plainly with name and postoffice address on the back so they may be returned.

WILLIAM WICHERN, PLOWING UNDER CLOVER FOR POTATOES.

ISOLATION FOR ROUP VICTIMS.

To the Editor:—My method of feeding hens for winter egg production is as follows: In the morning they have oats scattered in a litter of alfalfa leaves and straw; at noon, two or three times a week, a warm mash consisting of boiled potatoes and peelings mixed up with a ground feed of oats and corn. A little salt is usually added to the mash. When they do not have the mash they are fed wheat. At night a feed of corn is usually given.

One hopper contains grit and oyster shells and another a dry mash consisting of bran, middlings, oil meal, beef scrap, corn meal and ground oats. Any of the standard dry mash formulas will do for this.

Every morning mangel wurzels are cut in halves and stuck onto spikes.

A LA CROSSE WINNER.
Second Rhode Island Red cockerel at La Crosse, 1914, owned by William Wichern.

The hens like these and eat all but the shell.

A dust box is placed in a sunny place and charcoal is given occasionally. Fresh water is supplied two or three times a day.

This care, of course, means considerable work, but the results justify the trouble.

In regard to housing, I was at one time an open front advocate, but after having some of my choicest cockerels freeze their combs I decided that in our rigorous climate one must suit the house to weather conditions. I now have part of the windows with glass panes for the sake of sunshine and part are fitted with muslin-covered frames with hinges, so that I can give the birds air through the cloth windows when the weather is severe. At other times the cloth frames are hooked back and the house is then practically open front.

Lice and mites, I am glad to say, are the least of my troubles. When I use hens for incubating I always keep them well dusted with insect powder, and, if necessary, I use a little powder or sweet oil on the little chicks, but after the chicks are once feathered out they always have easy access to dust baths and keep themselves free from lice.

In the past I have had my troubles

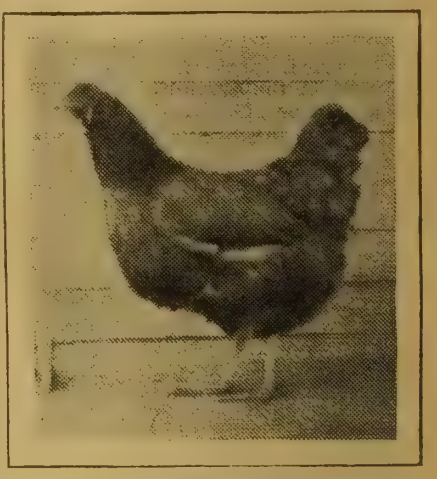
PRIZE WINNER AND MASTER.
On the William Wichern farm, Sauk county, Wis.

with the mites, but haven't seen one for several years. Every spring, with an old paint brush I go over the roosts and other fixtures with a preparation called carbolineum roost paint. This mixture seems to be quite discouraging to the mites, for they never show up where I use it.

I seldom have a case of real roup, but here, as in other things, prevention is better than cure. If the birds are not overcrowded and have all the fresh air and exercise they need they are not apt to be troubled with roup, but if a bird that is not especially valuable contracts this disease the safest and easiest method is to get rid of it at once. However, I have cured several valuable birds in the following manner: I place the bird by itself in a house that is airy, but not too cold, and frequently inject peroxide diluted with water into the eyes and nostrils. Soft, nourishing food is given and a little permanganate of potassium in the drinking water.

I once cured a bird in this way that had both eyes swelled shut so I had to feed and water it by hand in order to keep it from starving. But this treatment requires time and patience and, as I said before, unless the bird is an especially valuable one, I usually get rid of it at once.

In regard to the sale of decayed eggs, nothing has been done in this locality to prevent it, but I believe that reading the farm and poultry papers, the farmers are gradually becoming educated as to the desirability of selling only strictly fresh eggs.



IN FIRST PEN.
Rhode Island Red pullet in first pen at La Crosse Poultry Show, last winter.

Personally, we never send out an uncertain egg, but put such by themselves and try them, using the good ourselves and discarding the rest.

As long as the same price is paid for fresh eggs, cold storage eggs and uncertain eggs, as is now the case in many of our markets, there is no great inducement for our farmers to be overparticular in regard to their eggs, but we hope for better things in this direction in the near future.

Sauk Co., Wis. Wm. Wichern.

OPPOSES OPEN-AIR HOUSING.

To the Editor:—My method of feeding for winter eggs is as follows: A dry mash in a hopper, a scratch feed in a litter, plenty of cabbage and mangel beets.

I keep my laying hens in a good, warm house. I do not believe in the so-called open-air system of housing. I find that poultry do better in a warm house not overcrowded.

I keep my poultry houses thoroughly cleaned and disinfect them about once a month. I keep my nest boxes well dusted with some good commercial lice powder and I am not bothered with either lice or mites at any time.

Roup is something that will appear quite often in the winter months. If taken in time it is very easily cured by using some good roup remedy. The remedy should be used in the drinking

A FEW POULTRY TROPHIES, PERMANENT RESIDENTS ON THE WILLIAM WICHERN FARM.

water during the winter months. It should be given about every fifteen days as a prevention.

There have not been any attempts made to prevent the sale of decayed eggs, to my knowledge. Honest poultrymen wouldn't attempt to sell decayed eggs, for it would hurt their business.

Great care should be taken in selecting stock in the fall of the year. All of the best developed pullets should be put into the laying house by themselves. No male birds should be allowed to run with them until the proper time for mating comes. Great care should be taken at mating time in selecting the females. In selecting a male bird nothing but the very best type, size and color should be used as a breeder. To produce high-class stock not more than eight females should be used in a breeding pen of the heavy breeds, and not more than fifteen females should be used in the breeding pen of the lighter breeds.

Beloit, Wis. Fred Krinkey.

TONICS FOR HENS ADD TO PROFITS.

To get the best results from the poultry yard, great care must be used to protect chickens from diseases induced by changes in the weather, by poor ventilation, exposure to drafts, and other things. One means of securing such protection is the use of tonics. A tonic of tried quality is suggested by N. E. Chapman, poultry specialist of the agricultural extension division of the Minnesota College of Agriculture. It is made as follows:

Magnesium sulphate, 10 ounces; magnesium oxide, 1 ounce; iron sulphate, 2 ounces; ground ginger, 2 ounces; sulphur, 3 ounces.

One tablespoonful of this mixture in moist mash is a dose for twelve birds. Such a dose should be given each morning for three mornings, and then discontinued for a week or ten days.

Permanganate of potash may also be used in the drinking water—as much as can be piled on a ten-cent piece, in a gallon of water.

Apparently, chickens are subject to much the same ills that afflict human beings at this season of the year—colds, catarrh, bronchitis, pneumonia, diphtheria and roup.

The careful poultryman will visit his roosts at night and look and listen for signs of colds. He will at once remove any birds showing symptoms of disease, in order that the rest of the flock may not be infected. Labored breathing, wheezing, rattling in the throat, gaping and sneezing are symptoms to be looked for. The bird showing these symptoms should be treated at once with one of the following mixtures: Zenoleum and kerosene, equal parts; sweet oil and kerosene, equal parts; or chloroform, one part, and cottonseed oil, three parts. The head of the chicken should be immersed in the mixture for a moment, or a small amount of the mixture should be injected through the nostrils and mouth. This should be supplemented with the tonic already recommended, or with epsom salts in moist mash—one teaspoonful to each bird. The bird should then be kept in dry quarters and fed bread soaked in milk, and cabbage leaves.

If the roup develops, with a fetid odor, infected birds should be killed and burned, and all birds and chicken houses should be thoroughly disinfected.

MAKING A PROFIT FROM FEATHERS.

To the Editor:—Tons of feathers are lost each year in small amounts because farmers and poultrymen do not think it worth while to save the few ounces plucked from birds used at home and for local market. Another reason probably is that the prices are thought to be too small to make saving these few feathers seem worth while.

If a few minutes be taken when plucking is done to separate the various grades and to practice the best methods of curing them there is no reason why a nice little sum could not be saved and the aggregate make a considerable advance in the annual returns from poultry.

Chicken and duck, as well as goose feathers, are always in demand and should be saved, but ought to be kept separate and the larger feathers placed by themselves. In no case should chicken and turkey feathers be scalded, because the hot water removes the animal oil and reduces the grade. Such feathers scalded command only a fraction of the price paid for dry-picked ones.

Another good point is to keep the white separate from the colored feathers, because white stock brings a higher price than dark. After being plucked the feathers should be spread out until the moisture is thoroughly dried out of them. During this time they should be turned every day if they are spread at all thickly. Turkey body feathers, while too large as they come from the bird, are often chopped and used in cheap pillows.

Not long since I heard a dealer state that hen and turkey body feathers have only saving value when dry picked. They should be laid out on the floor, which should first be swept thoroughly and forked over daily and should be in a marketable condition in about three days, when they can be shipped in burlap sacks.

Chicken quills should be thrown away, never mixed with softer body feathers, because they will spoil the grade. Turkey quills should be graded, the long tails put in one box, those from the first two joints of the wings in another and those from the last joint in a third. The shorter quills and those from the rump ranging from five to eight inches placed in a burlap bag. After a thorough airing they may be packed for shipment. Moisture allowed to remain in quills rots them very quickly and thus reduces the grade. Subscriber.

CLIPPING TURKEY WINGS ADVISED.

To the Editor:—The best and easiest way to raise turkeys is to let the turkey hens hatch and raise the poults. The turkey is the farmer's friend and with the song birds and quail will rid the fields of the bugs and worms that destroy the crops. Little, if any, damage is done the grain, as they prefer bugs to anything else.

The greatest drawback, no doubt, is the hen desire to nest away from home. She distrusts her owner and will hide her nest from him, yet lay by the roadside in sight of passing teams or in the open when dogs and crows can destroy the nest. A crow may steal the eggs day after day and she will persist in laying in the same nest, but let her owner take the egg once and not leave a decoy and she will never go near the nest again.

A good way is to clip a wing during the winter and the hens will take to the henhouse to roost.

Then about nesting time place them in a yard with a fence high enough to keep them in. Some barrels placed with the openings turned so they may enter without being observed make good nests.

A little feed thrown in and plenty of fresh water keep them content. However, it is best to release them about four o'clock every afternoon or earlier if the hens have laid. They are soon at home in their new quarters and if any have been released too soon will come back to their nest to deposit the egg.

If no place is made for roosting they will have to be carried to the yard each morning. This takes only a few minutes, while locating a nest often takes a week. The nests are always safe and in a desirable place at hatching time. When the hen learns the nest she cannot drag the poults through the long, wet grass and lose or chill them. After the poults are spry enough to follow their mother all may be released to roam at will.

When the first hen wants to sit she may be given a nest of eggs and some set under Biddy. All the poults may be given the turkey hen to raise.

By this method some of the hens will need lay more than one clutch, but even then the poults will come early enough.

If the hens have been accustomed to roosting in the henhouse they will soon bring their young to roost there, too. A Farmer's Wife.

BIG FOUR POULTRY JOURNAL—the Practical Poultry Paper for Practical Poultry Raisers; only paper devoted exclusively to the poultry interests of Ill., Ind., Mich. and Wis. It's **your** paper; you should read it. Bright, Snappy, Live. **Special Offer:** 6 mo. trial Sub. 15c. Send stamps. Big Four Poultry Journal, Desk 28, Chicago.

H. H. Johnson

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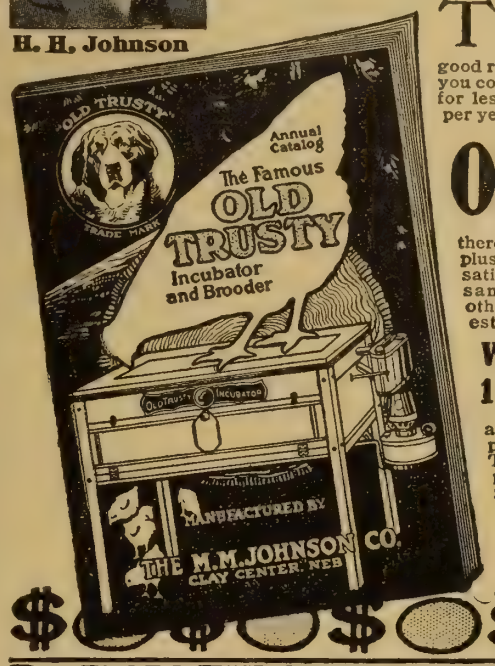

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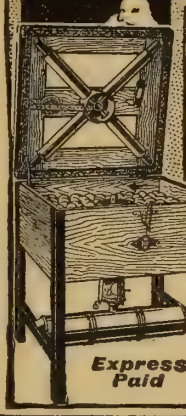

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Make Farm Poultry-Raising Profitable

$60 East of Rockies DELIVERED Pacific Coast $7.00 Delivered

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The 1916 "Peerless-66"

delivered to your home for $6.60, is the only practical, all-metal, fire-proof, everlasting hatcher produced. *Heat, moisture and ventilation* are perfect. **Hot water or hot air heat at the same price.** The famous Sheer Heat Distributor, Sheer Wafer Thermostat. Entire top removes without disturbing lamp or regulation. Sheer Lamp automatic, safe, simple, large capacity, instantly accessible. The Peerless-66 is **guaranteed to hatch every hatchable egg.** No matter what incubator you now use, or how big or little your poultry raising, you can use this hatcher and put big profits in your pockets. IT'S THE REAL FARM INCUBATOR.

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LARGE, dark ruby red, farm range birds. Score from 90 to 93½. Several blue ribbon winners. I produce the big kind. A card will bring price list.
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WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

FAHA'S SILVER WYANDOTTES. "The Aristocrats." Cocks, hens, cockerels, pullets. Pens. Write your wants. Catalog free. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

CHOICE Rouen drakes for sale at $1.50, trios $5; weight 7 to 9 pounds. Can please you. Address August Peterson, Churdan, Iowa.

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FERRETS drive rabbits, mink, etc. from holes; exterminate rats. Circular for stamp. Augustine Bros., Drawer A., Whitehall, Wisconsin

POULTRY.

BARRED Rock Cockerels, Bradley and Latham strain direct. Full of quality, big bone, farm birds at maturity weigh 12 and 13 lbs. $2 per 1; $10 per 6. Exhibition prize winners extra. A few large farm yearling hens $1.50 to $3 according to size and quality. Noted winter layers with egg record. Sat. guaranteed. H. F. Strickler, Mt. Carroll, Ill.

S. C. R. I. REDS FOR SALE
BRED from prize winners. Ready for delivery. 50 pullets that will lay within a month. None disqualified. Good breeders $2.50 up. Cockerels $2 up. Exhibition birds at reasonable prices. Won 9 ribbons on 15 birds at the Wisconsin State Fair, 1915. Winnebago Poultry Yards, R.23, Omro, Wis.

HOUNDS Coon, Skunk, Fox, Wolf, Deer and Rabbit hounds, pedigreed and eligible to register. Sold on ten days trial, with money-back guarantee. Otis Slater & Son, Oconee, Ill. Successors to R. F. Johnson, Assumption, Illinois.

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BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys and guineas.
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WISCONSIN POULTRY SHOW.

(Continued from page 14.)

mund Huebrig, Reedsburg; Wm. F. Belda, De Forest; Howard Anderson, Madison; W. H. Hunt, Madison; Roy E. Cable, Windsor; L. I. Fairman, Brodhead; Dan Strickland, Fort Atkinson; Al Busse, Madison; R. D. Warner, Whitewater; Art Bruening, Whitewater; C. H. Krugman, Madison.

The awards as announced by Secretary Halpin follow:

BARRED PLYMOUTH ROCKS.
(Exhibition.)

D. D. Culham & Son—1st cock.
W. H. Eldridge— 2d hen, 1st and 5th pullet.
Freund Bros—3d hen and 3d pullet.
L. L. Hare—3d cock, 4th hen and 4th cockerel.
Walter P. Jagow—2d cock, 2d cockerel and 2d pullet.
John F. Johns—1st and 3d cockerel, 1st hen and 4th pullet. Best shaped and best colored male and best shaped female.
Wm. F. Belda—4th cock, 5th hen and 5th cockerel.

BARRED PLYMOUTH ROCKS.
(Cockerel Bred.)

D. D. Culham & Son—3d pullet.
John W. Dixon—3d hen.
Jos. Fix—2d and 5th pullet.
L. L. Hare—1st hen, 4th pullet and 1st pen.
John F. Johns—1st pullet.
R. D. Warner—2d hen.

BARRED PLYMOUTH ROCKS.
(Pullet Bred.)

Wm. Davenport—3d cockerel.
W. H. Eldridge—4th cockerel.
Freund Bros.—2d cock.
L. L. Hare—3d and 5th cockerel and 1st pen.
Walter P. Jagow—1st cockerel.
John F. Johns—1st cock.
J. N. Sommerfield—2d cockerel.

WHITE PLYMOUTH ROCKS.

John J. Flad—1st hen, 1st cockerel, 1st and 3d pullet. Best colored male and best shaped female.
M. C. Gerard—1st cock and 5th hen.
F. J. Holt—4th cockerel.
Urban B. Steil—2d cock; 2d and 3d hen, 2d cockerel and 2d and 4th pullet. Best shaped male and best colored female.
Edmund Huebrig—3d cock, 4th hen, 3d cockerel and 5th pullet.

BUFF PLYMOUTH ROCKS.

F. W. Kramer—1st, 2d and 4th cock, 1st, 3d, 4th and 5th hen, 3d, 4th and 5th cockerel, 2d, 3d and 5th pullet, 1st pen. Best shaped made and best shaped female.
A. J. Walker—3d and 5th cock, 2d hen, 1st pullet, 2d pen. Best colored female.
Edmund Huebrig—1st and 2d cockerel, 4th pullet. Best colored males.

PARTRIDGE PLYMOUTH ROCKS.

W. Buth—4th cock.
James Flint—1st and 2d cock, 5th hen, 1st cockerel and 1st pullet. Best shaped and best colored male.
M. C. Gerard—5th cock, 1st and 2d hen, 3d cockerel and 4th and 5th pullet. Best shaped and best colored female.
J. W. Hunt & Son—3d cock, 3d hen, 2d and 4th cockerel, 2d and 3d pullet, 1st and 2d pen.
H. A. Marscheck—5th cockerel.
Ed J. Wagner—4th hen.

WHITE WYANDOTTES.

T. O. Evans—1st cock, 1st and 4th hen, 1st, 4th and 5th pullet, and 1st pen. Best shaped male and best shaped female.
Elmcroft Yards—1st cockerel, 3d pullet. Best colored male and best colored female.
Paul Johnson—2d and 5th cock, 2d and 3d hen, 3d cockerel and 2d pen.
Fred Massey—5th hen.
Pierce Martiny—3d pen and 4th cockerel.
H. C. Risdon—2d cockerel and 2d pullet.
H. L. Templeton—4th cock and 5th cockerel.
Fred Cooper—3d cock.

BUFF WYANDOTTES.

Thos L. Clayton—1st, 2d, 3d and 5th cock, 1st hen, 2d, 3d, 4th and 5th cockerel, 1st, 2d and 4th pullet, 1st pen. Best shaped and colored male. Best shaped and colored female.
F. L. Johns—2d hen.
Jas. Livingston—3d hen.
J. R. Love—4th cock, 4th and 5th hen, 1st cockerel, 3d and 5th pullet.

BLACK WYANDOTTES.

E. S. Conry—2d cock, 1st cockerel, 1st and 2d pullet.
Robert Pribbenow—1st cock, 1st hen, 3d pullet.

SILVER WYANDOTTES.

Geo. Beckmann—2d cock, 1st and 2d hen, 1st and 2d pullet.
H. R. Burrington—3d cock.
Robert Pribbenow—5th hen.
Will Thomas—1st cock, 3d and 4th hen, 1st, 2d, 3d and 4th cockerel, 3d, 4th and 5th pullet.

GOLDEN WYANDOTTES.

F. S. Clausen—2d cock, 3d and 4th hen, 1st and 5th cockerel, 3d, 4th and 5th pullet.
Gabriel Lewis—1st cock and 5th hen.
Chas. D. Love—3d cock, 1st and 2d hen, 2d, 3d and 4th cockerel, 1st and 2d pullet, and 1st pen.

PARTRIDGE WYANDOTTES.

A. P. Anderson—2d hen.
W. W. Day—2d cock, 3d and 4th hen, 1st, 2d and 4th cockerel, 1st and 3d pullet, 1st pen.
F. H. Field—4th cock, 1st hen, 2d pullet.
J. V. Pottier & Son—1st cock, 3d and 5th cockerel.
Robert Pribbenow—3d cock, 5th hen.

SILVER PENCILED WYANDOTTES.

Robert Pribbenow—1st cock and 1st hen.

COLUMBIA WYANDOTTES.

Robert Pribbenow—2d cock, 2d cockerel, 2d pullet and 1st hen.

SINGLE COMB RHODE ISLAND REDS.

B. A. Beach—1st cockerel, 2d hen, 2d and 3d pullet.
F. H. Chamberlain—1st cock and 1st pullet.
C. E. Copeland—3d cock, 2d cockerel, 1st hen and 4th pullet.
A. C. Busse—2d cock.
C. C. Brace—3d and 4th cockerel and 5th pullet.

ROSE COMB RHODE ISLAND REDS.

H. R. Bird—3d cock.
J. L. Herbst—1st and 4th cock.
John F. Mueller—2d cock, 1st hen, 1st and 2d cockerel, 1st and 2d pullet.

DOMINIQUES.

John Blanchard—1st cockerel, 1st and 2d pullet.

RHODE ISLAND WHITES.

H. W. Shepherd—2d cockerel, 3d and 4th pullet.
Walter Weber—1st cockerel, 1st, 2d and 5th pullet.

LIGHT BRAHMAS.

Mrs. L. A. Ross—1st pen, 1st cock, 2d, 3d, 4th and 5th hen.
Geo. C. Johnson—1st hen, 1st cockerel, 1st and 2d pullet.

BUFF BRAHMAS.

Robert Pribbenow—1st pen.

BLACK LANGSHANS.

Geo. L. Hunt—2d hen, 4th cockerel, and 3d pullet.
John F. Johns—1st cock, 1st hen, 1st, 2d and 3d cockerel, 1st and 2d pullet, 1st pen.

BUFF ORPINGTONS.

E. L. Bemis—3d and 4th cock, 1st, 2d and 3d hen, 2d, 3d and 4th cockerel, 1st and 3d pullet, 2d pen.
Elmer Biddick—4th hen, 2d and 4th pullet, 1st pen.
Claude Fischer—2d cock and 5th cockerel.
J. R. Love—1st cock, 5th hen, 1st cockerel and 5th pullet.

WHITE ORPINGTONS.

N. Roy Beckmann—3d cock, 4th cockerel, and 3d pullet.
W. F. Gruetzmacher—1st, 3d and 5th hen, 5th cockerel, 1st and 4th pullet.
Chas. King—1st and 2d cock, 4th hen, 1st, 2d and 3d cockerel, 2d and 5th pullet.
Ricks Bros.—2d hen.

BLACK ORPINGTONS.

R. E. Krause—3d and 5th hen, 3d cockerel, 2d and 4th pullet, and 1st pen.
Dan Strickland—4th hen, 2d cockerel, 3d and 5th pullet.
L. I. Fairman—1st cock, 1st and 2d hen, 1st cockerel, 1st pullet and 2d pen.

BLUE ORPINGTONS.

E. O. Gilfillan—1st and 2d pullet.

RED SUSSEX.

W. H. Eldridge—1st cockerel and 1st pullet.

SPECKLED SUSSEX.

J. A. Fiedler—1st hen, 1st cock and 2d pullet.
J. G. Halpin—2d hen, 1st cockerel and 1st pullet.

SINGLE COMB WHITE LEGHORNS.

Wm. Bell—1st and 2d cock, 1st, 2d and 3d hen, 1st, 2d, 4th and 5th cockerel, 1st and 2d pullet.
Chanticleer Farm—1st pen.
L. A. Henry—4th pullet.
Leslie St. Claire—3d cockerel; and 3d pullet.
Howard Anderson—5th pullet.

BUFF LEGHORNS.

Wm. Bell—1st and 2d cock, 1st, 2d and 3d hen, 1st and 2d cockerel; 2d, 3d and 4th pullet.
P. M. Chapman—1st and 5th pullet.

SINGLE COMB BROWN LEGHORNS.

Wm. Bell—1st and 2d cock, 1st and 2d hen, 1st and 2d cockerel, 1st, 2d and 3d pullet.

ROSE COMB BROWN LEGHORNS.

L. R. Clarke—1st cockerel and 1st pullet.
J. A. Fiedler—1st cock, 2d cockerel, 1st hen and 2d pullet.

BLACK LEGHORNS.

Wm. Bell—1st ck., 1st hen, 1st cockerel and 1st pullet.

SINGLE COMB BLACK MINORCAS.

Will & Remmel—1st and 2d hen, 1st cock, 1st cockerel and 1st pullet.

ANCONAS.

Dr. Z. W. Gilbert—1st cock, 1st hen, 1st cockerel and 1st pullet.
Alvin R. Schroeder—2d hen, 2d and 3d pullet.

HOUDANS.

W. H. Hunt—1st cock, 1st and 2d hen, 3d cockerel and 1st pullet.

SILVER CAMPINES.

Julius D. Bossman—1st cock, 1st hen, 1st, 2d and 3d cockerel, 1st, 2d, 3d, 4th and 5th pullet.

GOLDEN CAMPINES.

Richs Bros.—1st and 2d hen, 1st cockerel.

SILVER SPANGLED HAMBURGS.

L. C. Oostermann—1st and 2d hen, 1st pullet.

BLACK TAILED JAPANESE BANTAMS.

Ricks Bros.—1st hen and 1st cockerel.

SICILIAN BUTTERCUPS.

Elmcroft Yards—1st cock, 1st and 2d pullet.

BOURBON RED TURKEYS.

Pierce Martiny—1st cockerel and 1st pullet.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Winners in Soap-Making Contest.

Mrs. G. W. May, Cambridge, Wis., Is Awarded First Prize—List of Others Who Were Awarded Cash Prizes by the Judges.

JUDGING from the number of entries in The Wisconsin Farmer soap-making contest, there must be a considerable number of our readers who are making soap at home. Out of the hundreds of entries received there were, of course, a great many very excellent samples. Of these the best pieces of soap were taken out and submitted to the editor of the Home Department, and she has awarded the following prizes:

First prize, $20—Mrs. G. W. May, Cambridge, Wis.

Second prize, $15—Mrs. Henry J. Drydyke, Milwaukee, Wis.

Third prize, $10—Mrs. Louis Ansrud, Westby, Wis.

Fourth prize, $5—Mrs. F. Opichka, Cooperstown, Wis.

Fifth and sixth prizes, $2.50 each—Mrs. Richard Grimseed, Westby, Wis., and Mrs. Josephine, Rudie, Westby, Wis.

Seventh, eighth, ninth, tenth and eleventh prizes, $2 each—Miss Mary Reilly, Stoughton, Wis.; Miss Ida Berstad, Fergus Falls, Minn.; Mrs. Florence Brainard, Lone Rock, Wis.; Mrs. W. A. Lindquist, Olivia, Minn., and Mrs. John North, Kilbourn, Wis.

Thirty-five prizes of $1 each were awarded as follows:

Martha S. Bloy, Sherwood, Wis.
Mrs. Wm. Pink, Lancaster, Wis.
Mrs. Arthur F. Seefeldt, Plymouth, Wis.
Mrs. Wm. F. Lambrecht, Lena, Wis.
Mrs. M. W. Fell, Valley Junction, Wis.
Mrs. M. V. Obert, Battle Lake, Wis.
Mrs. M. H. Malloy, Plaza, N. D.
Mrs. G. Laarman, Oostburg, Wis.
Mrs. Herman Nohns, Platteville, Wis.
Mrs. John Michelet, Westby, Wis.
Miss Mabel P. Lund, Mt. Horeb, Wis.
Mrs. C. P. Ruliffson, Russell, Minn.
Mrs. H. M. Strand, Baldwin, Wis.
Mrs. J. Heeger, Prairie Farm, Wis.
Mrs. Christ Halverson, Kendall, Wis.
Mrs. Herman Dusell, Beaver Dam, Wis.
Mrs. H. G. Claseman, Long Prairie, Minn.
Mrs. H. H. Traveller, Forest River, N. D.
Mrs. Adolph Klammer, Stewart, Minn.
Mrs. Herman G. Strasburg, Fall Creek, Wis.
Mrs. C. W. Gebhardt, Sullivan, Wis.
Miss Ella E. Mueller, Muscoda, Wis.
Mrs. John Mueller, Muscoda, Wis.
Mrs. W. Blahnik, Lena, Wis.
Mrs. F. A. Wilcox, Knowlton, Wis.
Mrs. Erick Resvick, Doyon, N. D.
Lucy D. Brown, Ellsworth, Wis.
Mrs. Gustav Koebrick, Stewart, Minn.
Mrs. Bertha Koch, Summit, Wis.
Mrs. Anton Theine, Menominee Falls, Wis.
Mrs. Margaret Pellkofer, Peshtigo, Wis.
E. H. Shafer, Hales Corners, Wis.
Rosie Bencher, South Germantown, Wis.
Mrs. Ed Holverson, Neillsville, Wis.
Mrs. Oliver Johnson, MacFarland, Wis.

Those who were not included in the list of prize winners have by this time received from The Wisconsin Farmer the needlecase promised to every woman who entered the contest. If, for any reason, anyone entering failed to receive the needlecase The Wisconsin Farmer will appreciate being advised at once.

The publishers take this opportunity to thank all who took part in the contest.

The paper-white narcissus should be coming into bloom. It may be grown in jars containing rocks and water. The bulb should just touch the water.

Wreaths of spruce and red ruscus may be made at home. If the evergreen carries cones the arrangement may be prettier. Tie the green to an apple barrel hoop.

Comfort Indoor Closet

ODORLESS SANITARY GERM-PROOF

Every home without sewerage needs one. Most convenient, meritorious home necessity in a century. A boon to sick people. Can be placed anywhere in house.

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Put a warm Comfort Toilet in your home; a guarantee of healthy, sanitary conditions. Germ-life killed by chemicals in retort. Emptied once a month—no more trouble than throwing out coffee grounds. Needs no other attention. Boards of Health endorse it. Write now for literature, prices, etc. **Agents wanted—exclusive territory.**

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FREE 1916 PLANTING GUIDE AND PURE SEED BOOK

This 116-page four color book describes all new 1916 varieties vegetable and grain crops. Hundreds of illustrations, beautiful grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. All about alfalfa, clover, vetch, modern varieties field corn. A dictionary of gardening, encyclopedia of field crops! A flower lover's delight! A berry grower's book! An orchardist's manual! Most wonderful gardening guide-catalog ever published. A postal brings it to your home. Don't miss this book!

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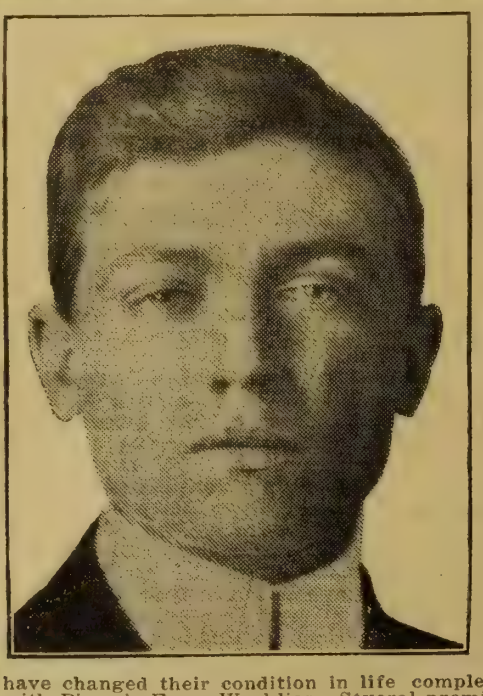

He Earned More Than $350 During Nov. and Dec. 1915 Soliciting Subscriptions

C. H. Miller has at last found the money-making opportunity that he was looking for. In October, 1915, he started soliciting subscriptions to Pierce's Farm Weeklies, and during the following months of November and December he earned more than $350 as a subscription solicitor, which is probably twice as much as he could have earned at any other kind of work. His period of "stinting" and "doing without" the things he actually needs is over with, for he now has plenty of money and can earn more, faster and easier than ever before.

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The valuable course of training we give our representatives teaches them how to become successful salesmen, and good salesmen are always in demand at a good salary. The Wisconsin Farmer, published at Madison, Wis., can use a few reliable men in Wisconsin. It is the leading agricultural paper in its territory and is easily sold to farmers. Write at once for particulars.

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Pierce's Farm Weeklies are composed of the following well-known publications:

The Wisconsin Farmer, Madison, Wis.
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The Farmer and Stockman, Kansas City, Mo.

THE HOME

LETTERS intended for publication should be accompanied by the name and address of the writer not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., The Wisconsin Farmer, Madison, Wisconsin.

THE INFLUENCE OF COLOR IN HOUSE FURNISHINGS.

Pretty soon we are all going to be thinking about housecleaning again and fixing up the shabby places in the house. Some rooms will need new curtains this spring some new rugs, new paper or new draperies. Whatever they need, the thing most to be desired is a harmonious effect when the work of redecorating is completed.

There is always so much hard work to do at housecleaning time that it is a good plan to have all the details worked out well in advance. The housekeeper who has a well-ordered, harmonious, restful looking room in her mind's eye when she starts is half through the worry of housecleaning before she even begins.

One of the things to think about when planning the redecorating of a room is the color scheme. Lack of harmony in color does more to mar the beauty, comfort and service of home furnishings than any other one thing. Moreover, scientists have gone to the trouble to prove for us that various colors affect the human nervous system in different ways. For instance, red excites the nerves and in extreme cases constant association with it has been known to cause insanity. On the other hand, blue is depressing, while yellow has a cheering effect. Green, which is a combination of yellow and blue, produces a restful influence upon the human system.

Besides this, it has been found that the natural qualities of the various colors divide them into two general groups, first, those which are termed warm or advancing colors, and, second, those which are known as cool or receding colors.

In the group of warm colors are red, yellow, orange and the different shades and tints of these colors. It is supposed that the term "warm" was used originally because of the association of these colors with the sun and fire; the term "advancing" because of the effect of nearness which they produce when used over large areas.

The cool or receding colors include blue, green, violet and all shades and tints of the same. The terms "cool" and "receding" are used because of the association of these colors with the sky, trees and water and the effect of distance which they produce in a small area.

It will readily be seen, then, that color plays an important part in securing the desired effect in any given room. For instance, a large room will look smaller and more cozy if done in warm colors, while, on the other hand, a small, cramped room may be made to appear larger if cool or receding colors like gray, green, blue and mauve are used in paper or hangings. Also, a cheerless north room may be brightened by the use of warm tints. or a south room cooled by employing cool grays or greens. All the shades of brown, tan, cream, russet and yellow-green are the exponents of the warm colors.

With this as a basis, the next thing to consider is a combination of colors to produce a harmonious effect. A room done all in green of one shade would be tiresome, as would one in a single shade of brown or blue. Nature has demonstrated that certain combinations are harmonious, so that we may assume what is known as sets of complementary colors. For example, red and green, yellow and violet, blue and orange. All of these combinations are found in nature and the colors in each group, or the shades or tints of such colors, blend in with one another in a way pleasing to the eye. A practical application of this knowledge of complementary colors may be made in house decoration, by combining the tones which come from these sets of complements. For example, plum and buff is a pleasing combination, or russet and sage, or slate and citron.

The charm of any creation lies in the contrast of variety of its proportions, value and color. By variety in proportion is meant the irregular breaking of the whole surface into various sizes and parts, but with such a subtle relation of those parts that they combine to make a pleasing whole. The broadest field for gaining contrast and variety is by means of color, but unless color combinations are carefully made they cease to be harmonious. There are three ways of gaining contrast by color, namely, by related tones, that is tints and shades of the same color, by complementary colors, and by combining plain and figured surfaces. In this connection it may be said that there is more danger in having too much contrast by figures than not enough. When the wall space is divided by molding, both parts should never be covered with figured paper. It should be remembered, too, that large-figured paper is out of place for the average-sized room, and that naturalistic representations of flowers and fruit are also impossible for wall coverings. If figured paper is used at all, or rugs either, for that matter, the small, indistinct figure is more suitable for a home.

Every housekeeper should plan the redecorating of her home this spring so as to produce the greatest degree of comfort and beauty with the means at her command, and in doing this color should receive due consideration. Simple draperies or curtains of the right material, a new rug that harmonizes with the paper or paper that harmonizes with the rug, a different cushion or table cover may make all the difference in the world in the looks of a room. And if all these details are planned now and the new materials gotten together the real work of housecleaning and decorating will be more of a pleasure than a drudgery. It will mean the working out of a definite plan of making the home more livable and more beautiful, rather than the hard work of getting rid of the accumulated dust and dinginess of winter.

A SCORE CARD FOR BREAD.

It would be a good plan for housekeepers to score their bread, suggests Miss Nola K. Fromme, of the home economics department of the Colorado State College. Following a score card would soon bring up the standard. The following card is recommended by Miss Fromme:

Flavor	35
Lightness	15
Grain and texture	20
Crust—color, depth, texture	10
Crumb—color, moisture	10
Shape and size	10
Total	100

Flavor is most important, for the value of bread depends largely upon its taste.

The bread should be light throughout determined largely by use of the proper amount of yeast, and allowing bread to rise the proper length of time (until it just doubles its bulk).

Grain and texture are decided largely by the kneading which evenly distributes the yeast, thus insuring a fine, even grain.

The crumb should be creamy white, not dingy and gray, and should be moist and elastic, with no doughiness.

The crust should be thin, golden brown and flaky.

The loaf should not be too large to bake well in the center. A moderately stiff dough in an oven neither too hot nor too slow should give good results.

STOP WORRYING.

Did you know that worrying was one of the most unhealthful habits you can have? Worry, the doctors tell us, is more a question of hygiene than of religion, and it is definitely known to seriously injure the body. They say than many of the most distressing of our physical ailments are due to worry alone.

You will find that the pulse of a man who has the worry habit is irregular, he sighs frequently, his respiration is repressed and he is apt to be pale of face and his extremities cold.

The doctors' explanation for this is that through the influence which mind exercises over matter, the worry has affected the heart, impairing the circulation. And the worst of it is that if the worry is not gotten rid of a case of chronic heart disease will be the result.

Worry has the same effect on the stomach, causing loss of appetite and general derangement of the digestion. Haven't you known many a dyspeptic who was at the same time a chronic worrier?

All this being true, it is just as important to guard against the habit of worry as it is to guard against wet feet or a drafty room. This may call for the exercise of a good deal of will power, but that, also, might be good for the average individual.

A DAY WITH LEFT OVERS.

Left overs are like the poor, they are always with us.

There are none who care to know that they are being served with left overs no matter how appetizing these may be made. Yet even in the best-regulated families there are bits of left-over food, which if care and thought is used, may be served again without a suspicion that they are rehashed.

The soup kettle has been aptly termed the kitchen waste basket, receiving many a choice culinary manuscript which might otherwise go for naught. Foods thrown away by extravagant cooks would feed an entire family, and well.

Girls should be taught, as they are taught religion, that waste is a crime and that nothing should be thrown away that can be used.

If one inquires into the history of certain families that are still without a bank account after years of prosperity, a visit to their garbage can supplies the reason. The homely saying is here in force—"More is thrown out of the back door with a tablespoon than is brought in the front door in a wheelbarrow."

It is as necessary that the young woman should be trained to spend money wisely and use economy as it is that the young man should supply the money for her use.

Now for a few examples. The bones and carcass of a turkey cracked and put into cold water, then brought to the simmering point and cooked for several hours makes a good-flavored broth which may be used in any number of ways—to make soup, as a liquid for meat sauces and as a flavor for gravy. The bits of meat left on the bones by the carver, if cut in bits, added to thick, well-seasoned gravy (also a left over) placed in a baking dish and covered with seasoned mashed potatoes, brushed with egg to make a nice brown crust, then baked, is a dish which the entire family will like.

A half cupful of stewed tomato more or less may be added to the turkey bone broth with celery salt, salt, pepper and two tablespoonfuls of boiled rice and you have a fine hot soup to serve on a cold night.

A half cupful of canned salmon is left from a previous meal. Shred the fish with two forks, add a chopped sour pickle, or a few olives, some chopped cabbage and a little celery with a simple boiled dressing, the result is a most appetizing salad which may be served on lettuce or shredded cabbage. Tuna fish is especially good served this way or hot with riced potatoes. Place the hot fish in the center of a hot platter, surround with seasoned riced potatoes, then around this pour a thick, rich, white sauce.

When cooking carrots to serve in any ordinary way reserve a few cooked whole, then later serve them cut in strips seasoned with butter and lemon juice. Serve very hot. A grating of nutmeg or a dash or two of cayenne pepper is liked by some for a little zest.

Any small amount of cranberry jelly if cut in cubes may be served as a pudding garnish with hard sauce or whipped cream.

Fruit juice left from canned fruit will make delicious pudding sauces or as liquid in fruit cake and as salad dressings for fruit, particularly if it is light in color like peach, pear or pineapple juice.

Small pieces of fruit cake or plum pudding if crumbed and mixed with chopped nuts, then stirred into sweetened and flavored whipped cream, makes a most dainty and enjoyable dessert. This may be served in sher-

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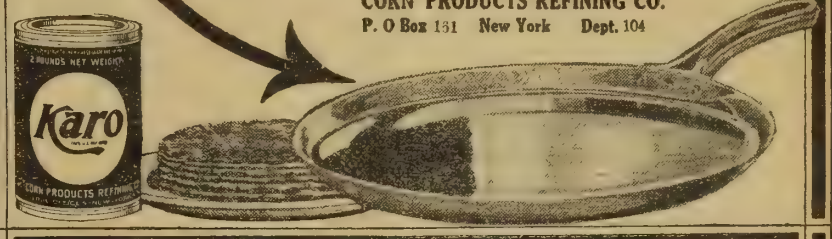

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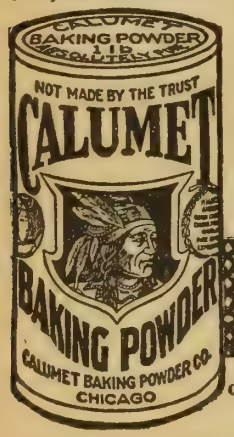

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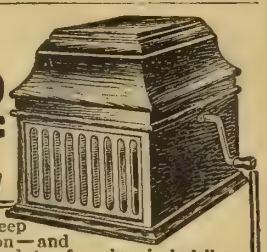

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bet cups garnished with a cherry or bit of preserved ginger.

Though the subject of left overs is by no means exhausted, these suggestions may prove helpful in solving some difficulties. And we have the best of authority for using economy for the Good Book says, "Gather up the fragments that remain that nothing be lost."—[Nellie Maxwell.

RECIPES.

Fried Oysters.—Drain the juice from one pint of oysters; add to this juice an equal amount of milk or cream, one egg beaten light, salt and pepper to taste, and flour to make batter as for pancakes. Turn oysters in batter, drop one oyster in spoonful of batter into deep fat. Fry a delicate brown.

Simple Fried Oysters.—Select choice oysters, roll in egg and cracker crumbs, and fry a delicate brown in butter.

Oyster Omelet.—One teacup oysters drained and chopped, three eggs (yolks and whites beaten separately), salt and pepper, one tablespoonful of thick cream. Pour eggs and seasoning in hot buttered pans. When the eggs ars set turn in the oysters and roll up.

Escalloped Sweet Potatoes and Apples (A southern dish).—Use ordinary apple sauce and boiled sweet potatoes sliced thin. Fill a baking dish with alternate layers, placing the potatoes on top. Sprinkle with sugar and dot with butter and bake one hour. The apple juice will cook to the top and form a rich brown crust. This is especially fine with wild duck or other game.

Apple Roll.—Two medium sized sour apples, three-fourths cup sugar, one cup water. Make a rich baking powder dough. Roll out about one-half inch thick, spread the sliced apples over the dough and sprinkle with a very little sugar. Roll as for cinnamon rolls, cut off slices about one-half inch thick. Boil the sugar and water two or three minutes. Pour it into the bottom of a shallow baking pan. Lay the apple roll in it. Sprinkle a little cinnamon and sugar over all. Bake in moderate oven until apples are done and crust a golden brown. Serve with thick sirup or cream.

Salmon Loaf.—One can salmon. Pour off the liquor, pick out the bones and skin and mix smoothly. Add four teaspoonfuls melted butter, one-half cup fine rolled crackers, and season with pepper and salt and a little grated onion. Beat three eggs thoroughly and add to the mixture. Steam in a round can one hour and a quarter. Always tie a cloth on the under cover of the steamer to absorb the beads of water. When ready to use lay the roll on a platter, garnish with parsley, and serve in slices with tomato sauce. Cold salmon loaf, made the day before using, can be reheated and is excellent.

Tomato Sauce for Salmon Loaf.—Boil one pint of canned tomatoes with one cup of water and several slices of onion, according to taste. After cooking ten or fifteen minutes, rub through a sieve, pulp and all, except seeds. Blend a large tablespoon of butter with flour in a frying pan, add the tomato juice and make a creamlike sauce. Season well, cook thoroughly and serve hot in a gravy bowl.

Apple Whip.—One cup unsweetened apple sauce, whites of three eggs, three tablespoons powdered sugar, one-fourth teaspoon baking powder, juice and rind of one-half lemon. Beat eggs until stiff, add sugar and baking powder. Cut and fold in the apple sauce mixed with the lemon. Turn into buttered dish, set dish in pan of water, bake in slow oven until firm to the touch.

SUGGESTIONS FOR THE HOUSEWIFE.

Boiling water poured over raisins makes them seed easily.

A dish of water in a hot oven will prevent food from burning.

For convenience in cleaning lamp chimneys nothing is nicer than a small sponge attached to the end of a stick.

Keep an apple in the cake box. It will impart moisture to the cake and keep it from drying.

To make your hands smooth and pliable after being in suds or lye use vinegar.

If brooms are wet once a week in boiling suds they will become very tough, will not cut a carpet, will last much longer and will always sweep like a new broom.

When a knife has been used to cut onions wipe it with a damp cloth and rub it briskly with coarse salt. The objectionable smell will then entirely disappear.

Do not throw away your egg shells; they are very useful when cleaning decanters. Crush the shells into small bits and shake them well in the decanters when they are three parts filled with water.

To separate stamps that have become stuck together try the following method: Lay a thin piece of paper over them and run a hot iron along it. This will make them come apart easily and the gum will still remain.

When making French fried potatoes they are often too hard all the way through, or too soft, and not crisp on the outside. This can be prevented if they are soaked first in cold water, then put for a moment in hot water, and then dried on cheesecloth. Potatoes prepared in this way will be crisp and light brown on the outside and soft in the inside.

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THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

MISS DOLLY HAS A CARRIAGE.

Dear Young Folks:—I read your letters in the paper and like them very much. I thought I would like to write to you and see if I could join your circle.

I live on a farm about a mile and a half from town. We have fourteen horses and ten cows. I have a pony for my very own and he is just about as small as a Shetland pony. His name is Blackey. I also have a dog and a cat. My dog's name is Fannie. I can drive her just like a pony. My uncle made me a harness and a cart that I put my doll in.

I go to school and am in the fourth grade. I will write again if I see my letter in the paper. —Susie.

HELPS WITH THE MILKING AND THE COOKING.

Dear Young Folks:—I enjoy reading your letters very much. I live on a farm of 120 acres. Our farm is five miles from town. My sister and I go to school. Our house is only eighty rods from the school. I am twelve years old and am in the seventh grade. There are twenty-eight in our school and we had a fine program the 23d of December.

I milk three cows and feed the chickens and the geese. We raise chickens, geese, pigs and cows. This year we raised 400 young chickens. We have three horses and eleven head of cattle.

I help with the meals every day.
—Vivian.

SAVES COVERS FOR DRAWING SKETCHES.

Dear Young Folks:—As I have read the Young Folks' page for several years and always enjoy it I think it is my turn to entertain the young people. The first thing I look for when papa brings the paper home is the Young Folks' page. Then I turn and look at the cover of the paper. And I can praise the editor for something—the cover always shows a beautiful farm scene. I enjoy saving these for drawing sketches.

We live in town and own a beautiful home. We have a Ford car, one cow, two stallions and a little pet dog. We have only been in town two years and papa says that just as soon as we have finished school he is going back on the farm.

I am in the seventh grade, but cannot study very much on account of my eyes. I have always had to wear glasses and sometimes I have to miss school in order to rest my eyes.

I have a piano and will take up the fifth grade of music some time in Feb-

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ruary. I can also do several kinds of needlework.

My letter is getting long, so I will drop off, but will come again some other day. —Elizabeth.

International Sunday School Lesson

Lesson for January 16, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

PETER'S SERMON AT PENTECOST.

LESSON TEXT—Acts 2:14-47.

GOLDEN TEXT—Whosoever shall call on the name of the Lord shall be saved.—Act 2:21.

Comparing verse one (R. V.) with the last clause of verse 15, we conclude that this was one early morning prayer meeting which drew a crowd. In this crowd (vv. 9, 10) and on this occasion we see in miniature the evangelism of the world. What Peter hoped to accomplish is an interesting speculation and is answered by his manner and mode of testimony. His famous "sermon" consists of twelve verses, and the balance is quotations from Joel, Psalms, etc.

I. The Empowered Witness, vv. 14-36. (1) Peter testified that Jesus is alive. (a) These men, speaking by the power of the Spirit, are not drunken, but are speaking in a soberness of a great fact. (b) This that they hear "is that" prophecied by Joel (2:28, 29). This Jesus of whom they have been speaking had fulfilled this prophecy by mighty deeds (v. 22), by having risen from the dead (v. 23) and of this the disciples were all witnesses (v. 32); he had also been "exalted" (v. 33), and his glory Peter had witnessed upon the mount (II Peter 1:16-18). Peter asserts that whosoever believes in Jesus as Lord and Christ, the Anointed One, the Messiah, shall be saved (vv. 21, 36). (a) He shall be saved from sin and misery in this world; (b) saved unto a life eternal; (c) he shall receive this same power the disciples had received. Peter's witnessing is the same as Jesus has a right to expect of us, the testimony of personal experience, backed up by the word of God. Jesus was indorsed by his miracles, the testimony of those who had seen him as the risen Lord and by his fulfillment of Messianic prophecy.

He has also exalted in the testimony given in all tongues by the empowering spirit.

II. The Powerful Result, vv. 37-42. The truth of Peter's words was carried home by the Holy Spirit producing deep conviction of sin. (1) **Conversion.** The question of verse 37 was a result. They had seen the place of Jesus in the plan of prophecy of God. They saw the boldness of these disciples and they also saw their sin. (2) **Confession.** Peter's answer to their question was plain and simple. (a) "Repent," i. e., change their minds and their attitude towards Jesus, from that which had caused his crucifixion, to one of absolute surrender, of repentance and renunciation of sin; the surrender of the will to Jesus as Lord. (2) "Be baptised." Outward water baptism is involved, but it is the symbol of the inward change of heart, of the renunciation of sin, death to self (Rom. 6:4) and the putting on of Christ (Gal. 3:26,27). (3) **Continuance (v. 42).** Having accepted and confessed Christ, they were to teach others, to have fellowship with believers in prayer and in breaking of bread, to continue "in the way."

III. Added Evidence of Power, vv. 43-47. This passage is not a brief for communism. It is interesting to note that this communism was among believers (v. 44). It was for a special occasion, for they had "tarried at Jerusalem" many days, and beyond doubt had not provided for a long visit. It was according as each "had need." It was purely voluntary (5: 4,9). The Holy Spirit, however, does bring unity and altruism among believers which expresses itself in social relations and service. There is a difference between the gift of the Holy Spirit and the Holy Spirit's gifts (I Cor. 12). The baptism of the Holy Spirit or "the gift of the Holy Ghost" is always dependent upon **real repentance and is accompanied by remission of sins.** This experience is the blood-bought right of every believer in the Lord Jesus Christ. To "receive" is to take or to claim, and by simple prayer and faith that to which we have a right (Acts 4:31; 8: 15, 16; Luke 11:13; I John 5:14, 15). By making Jesus Lord and Christ we shall receive the promise (v. 39) which, Peter declared, was for Jewish believers, their children for coming generations, and "all that are afar off, even as many as the Lord our God shall call," i. e., Gentiles of every coming century.

In other words, Pentecost was but an episode which ushered in an age, the age of the Holy Spirit, and he is for every child of God, Jewish and Gentile, in every age and in every church.

During that apostolic age every new manifestation of the spirit through its accompanying addition to the number of believers—"The Lord added day by day those that were saved . . . many believers; believers were the more added . . . multitudes of both men and women . . . the word of God increased; a great company of the priests were obedient to the faith."

Peter's sermon honors the Scripture, Christ and the Holy Spirit. The spirit can and does use the living word in preparing men for the kingdom of God.

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6937 Ladies' Waist.—Cut in sizes 34 to 44 inches bust measure. This natty shirt waist has back and shoulder yoke in one, while the fronts are gathered at the top and open in the center, displaying a plain vest cut in one with the collar.

7370 Girls' Dress.—Cut in sizes 6, 8, 10, 12 and 14 years. This simple frock is made with a plain blouse, closing in the center of the front, with a wide collar at the high neck and with turnback cuffs finishing the sleeves, which may be full length or shorter. The skirt is cut in two pieces.

7168 Boys' Dutch Suit.—Cut in sizes 2, 4, 6 and 8 years. One of the novelties is shown in this model. The shirt is very plain and snug with front closing and large collar at the neck. The sleeves may be long or short. The trousers are buttoned on the outside of the waist at a raised waistline.

6946 Ladies' Apron and Cap.—Cut in sizes 34 to 44 inches bust measure. This smart bungalow apron can replace the dress if desired. It has a deep yoke in front and back, short sleeves and plain front and back, joined to the yoke without fullness. The gathered cap has a plain band edge.

7506 Girl's Dress.—Cut in sizes 8, 10, 12 and 14 years. Quite a dressy frock is here obtained by the use of two materials. The waist and the underskirt are of plain serge, while the tunic and collar and cuffs are of plaid. There is an applied box plait down the center of the front.

7496 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. This stylish one-piece dress has a full length tuck at each side of the waist with the closing under the left one. The neck may be plain and high, or low with wide collar. The skirt has four gores.

6935 Girls' Dress.—Cut in sizes 6 to 14 years. This frock has a shoulder yoke cut in one with the sleeves which are of three-quarter length and finished with a cuff. The fronts are full, and so also is the back. The waist has a body lining.

7525 Ladies' Night Gown.—Cut in sizes 34 to 44 inches bust measure. In this simple gown the material is gathered at the neck in both front and back and the neck is made either high or low. The sleeves are full, with gathers at shoulder and wrist. Such materials as cambric, muslin, outing flannel and albatross are used for these garments.

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Winning the Wilderness

By Margaret Hill McCarter

Author of "The Price of the Prairie," "A Wall of Men," "The Peace of the Solomon Valley," etc.

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CHAPTER XXIII—Continued.

Before him were the little brown coolies holding the ladder, and up its slender swaying height, round by round, went young Titus nimbly as a squirrel up a cottonwood limb.

The Kansas men went wild.

"Rock Chalk! Jay Hawk! K U! oo!" they shouted again and again, ending in the long quavering wail as the University yell must always end.

Up and up went Titus, sixty feet, to the top of the wall. Then as he stood above the strange old Oriental city, filled now with frenzied fighters; above the twelve thousand soldiers sent hither from the far homelands beyond the seas to rescue human beings from deadly peril. As he stood over all these, a target for a hundred guns, the khaki-clad young Kansas lifted his right hand high above his head and swung out the Stars and Stripes to all the breezes of that August morning.

Then came the belching of cannon, the bursting of huge timbers, the groaning of twisting iron, and through the splintered gates the Allied Armies had entered the city.

Inside the walls the hundred thousand Boxers renewed the strife. The walls and gates of the Foreign Legation were as stubbornly defended by the Chinese fanatics on the outside now as the besieged Christians had defended them against the Chinese on the inside. Entrance was made at last through the sluiceway, or open sewer, draining out under the city walls.

It was a strange looking line of creatures who came crawling, waist-deep in filth, through the sewer's channel. The old Aydelot sense of humor had saved Thaine many a time. And he wondered afterward if he had not seen by chance the ludicrous picture of himself in a huge mirror, if his heart would not have burst with grief when Pryor Gaines came toward him, mute and pallid, with outstretched hands.

The little group of soldiers who had fought and marched together had not had off their clothes for seven days, A stubby two weeks' beard was on each face. Their feet were raw from hard marching. Rain and dust and mud and powder smoke had trimmed their uniforms, and now the baptism by immersion in the Compound sewer had given them the finishing touches. But the gaunt-faced men and women, the pitiful, big-eyed children, whose emaciated forms told the tale of the six weeks' imprisonment, made them forget as these poor rescued Christians hugged and kissed their brave rescuers.

Thaine hadn't kissed any woman except his mother since the evening when he and Leigh Shirley had lingered on the Purple Notches in a sad-sweet moment of separation. It lifted the pressure crushing round his heart when he saw Goodrich, with shining eyes, bending to let a poor little missionary stroke his grimy cheek.

The Boxers retired by degrees before the superior force, entrenching themselves inside the Imperial City. Never in its history, centuries on centuries old, had this Imperial City's sacred precincts been defiled by foreign feet. Here the Boxer felt himself secure. Here the gods of his fathers would permit no foreigner to enter. On these hoary old walls no Christian would dare to stand. On three sides of the Imperial City these walls were invincible. The fourth was equipped with six heavy gates.

In a council of the Powers the impossibility of storming these gates was fully made clear. The number of soldiers was carefully estimated—American, Japanese, Russian, German, French, and Italian, Sikh and Sepoy, Bengalese, Scotchman, Welch and Royal Englishmen. All had suffered heavily in this campaign. None more grievously than the Americans.

The decision of the council was overwhelming that the Imperial City could not be taken by this little force outside its battlements. Only General Chaffee protested against giving up the attempt.

"Can your men take those walls?" The query came from the leaders.

"My men can take hell," General Chaffee replied, with less of profanity than of truth in his terms. And the attempt was given over to the Americans.

One of the six gates stood wide open, a death trap laid by the wily Boxer, believing that the foreign forces would rush through it to be shot down like rats in a hole. Beyond it was a paved court five hundred yards wide, reaching up to a second wall, equipped likewise with six great gates.

Thaine's company was singled out to go inside the open gate and draw the Boxer fire toward themselves while the American army stormed the closed gates. The little group of men lay flat on the pavement, defending themselves and harrassing the enemy. They knew why they had been sent in, but they were seasoned soldiers. Thaine looked down the line of less than a hundred men, McLearn, and Boehringer, Tasker, Goodrich, and Binford, all were in that line. He felt a thrill of soldier pride as he said to himself:

"We are fit. They have chosen us for the sacrifice. We'll prove ourselves." Then he thought of nothing else but duty all that day.

The capture of the first wall opened the way to a second with a paved court beyond it, and beyond that lay a third, and a fourth, and a fifth; wall and court, wall and court, through which and across which the American army forced its way by heaviest bombarding under heaviest fire, leaving a clean rear for the other armies to follow in. Only the sixth and last wall remained. General Chaffee's men had not failed. The flag of red, white and blue had led steadily on 'mid a storm of shells and a deluge of bullets.

One more onslaught and the last gates would burst wide open. Eagerly the American soldiers waited the command to finish the task. But it was not given. The leaders of the other armies had counseled together and prevailed against further advance, whether moved by military prudence or governed by jealousy of the ability of General Chaffee and the magnificent record of the American soldiers in the Orient, the privates could not know.

Just as the command to retire was sounded Japanese coolies had run with scaling ladders to the last wall. It was the supreme moment for Thaine Aydelot. He was only a private, but in that instant all the old dominant Cavalier blood of the Thaines, all of the old fearless independence of the Huguenot Aydelots, all the calm poise and courage of the Quaker Penningtons throbbed again in his every pulse-beat. He threw aside his soldier obligation and stood up a man, guided alone by the light within him.

"It is a far cry from the green Kansas prairies to the heart of old China," he declared to himself. "Yet, I'll go to the heart of that heart now, and I'll show the Stars and Stripes of a free people, so help me God!"

He turned and sped to the last wall, snatching the flag from a color-bearer as he ran. At the foot of the ladder the men holding it wavered a little. Thaine threw the flag up to a coolie who was already climbing.

"Take it up. If I don't get up, wave it there if you die for it," he cried as he sprang up the ladder behind the color-bearer.

The shots were thick about them as up and up they went until at last Thaine stood beside the indomitable little Japanese who had carried the American flag up the ladder.

Below the Kansas boy lay the holy city of an ancient civilization in all its breadth of ingenuity and narrowness of spirit. Standing there, a target for every gun, waving the Star-Spangled Banner out over that old stronghold, he cried:

"This is the end of the wilderness! Look up and see the token of light and hope and love. Other hands than mine will bear them to you, but I have shown you their symbol. I, Thaine Aydelot, of Kansas, first of all the world, have dared to stand on your most sacred walls with Old Glory in my hand. Wherever its shadow falls there is life, liberty and the pursuit of happiness. In God's good time they

will all come to you in peace as they have come to you now in warfare. Mine today has been the soldier service, and mine today the great reward."

CHAPTER XXIV.

The Call of the Sunflower.

Sons and daughters of the prairie,
Dreaming, dreaming,
Of the starry nights that vary,
Gleaming, gleaming!
You may wander o'er your country
where the vales and mountains be,
You may dwell in lands far distant, out
beyond the surging sea.
But ah! just a yellow sunflower, though
across the world you roam,
Will take you back to Kansas and the
sun-kissed fields of home.
—Nancy Parker.

THAINE AYDELOT sat with Doctor Carey and Pryor Gaines in the latter's home in the Foreign Compound in Peking. "I have done my work here," Pryor was saying. "I have only one wish—to go back to old Grass River in Kansas and spend my days with Jim Shirley. We two will both live to be old because we are useless; and Leigh will be marrying one of these times, if the Lord ever made a man good enough for her. So Jim and I can chum along down the years together."

"It is the place for you, Pryor," Doctor Carey asserted. "And now that the ranch is making money while Jim sleeps, you two will be happy and busy as bees. Every neighborhood needs a man or two without family ties. You'll be the most useful citizens in that corner of the prairies. And think of cating Jim Shirley's cooking after this."

"And you, Thaine? What now?" Pryor asked as he looked fondly at the young battle-tried soldier.

"I have done my work here," Thaine quoted his words. "I've only one wish—to go back to old Grass River in Kansas to take my place on the prairie and win the soil to its best uses; to do as good a work as my father has done."

Thaine's dark eyes were luminous with hopefulness, and if a line of pathos for a loss in his life that nothing could fill had settled about his firm mouth, it took nothing from the manliness of the strong young face.

"And you, Carey?" Pryor asked.

Doctor Carey did not reply at once. A strange weariness had crept over his countenance, and a far-away look was in his eyes. The man who had forgotten himself in his service for others was coming swiftly toward his reward. But neither of his friends noted the change now. At last he said:

"Years ago I loved a girl as I never could care for any other girl. She would have loved me sooner or later if something hadn't happened. A message from the man she cared for most fell into my hands one day long ago; a withered flower and a little card. I could have kept them back and won her for my wife, but I didn't. I sent the message to her by a servant boy—and she has been happy always in her love."

Doctor Carey turned his face away for the moment. Thaine Aydelot's eyes were so much like Virginia Thaine's to him just then. Presently he went on:

"Sometimes the things we fail to get help us to know better how to live and live happily. You will not be a coward, Thaine, when you come, year by year, to know the greater wilderness inside yourself. You will go back to the prairies where you belong, as you say, and you will do a man's part in the big world that's always needing men."

Thaine recalled the evening hour when he and Leigh were on the Purple Notches and he had declared in the pride of his nineteen years that he wanted to go out into the big world that is needing men and do a man's part there.

"If the big world needs men anywhere, it is on the old prairies," he declared, and the doctor continued: "I have found my future already. I shall not leave China again. Grass River may miss me as a friend, but not as a doctor of medicine. Doctors are too plentiful there. My place is here henceforth, and I'm still young. I came to the Philippines to be with Thaine"—Horace Carey's voice was low, and the same old winning smile was on his face—"because I love the boy and because I wanted to protect him if it should be my fortune to do it. I saved him from the waters of the Rio Grande and helped to pull him out of the hospital at Manila. He doesn't need me now, for he goes to do a big work, and I stay here to do a big work."

"Out of love for me alone?" Thaine asked affectionately, throwing one arm about Horace Carey's shoulder.

"No, not you alone," Carey answered frankly, "but because something in your face always reminds me of a face I loved long ago. Of one for whose sake I have cared for you here. You are going home a brave man. I believe your life will be full of service and of happiness."

The silence that followed was broken by Pryor Gaines saying:

"All this time—such a tragical time—I have forgotten, Thaine, that I have a message for you, a little package that reached here late last May. It was sent to me because the sender thought you were coming to China soon, and I was asked to keep it for you. You didn't come, and mails ceased to leave Peking—and then came the siege, the struggle to keep up the defenses, the sickness, the starvation, the deaths, the constant attacks, the final sight of Old Glory on the outer walls, and your triumphal entry through the sewer. You see why I forgot."

He took a little package from his writing desk and gave it into Thaine Aydelot's hand.

The young soldier tried to open it with steady fingers, for the address was in a handwriting he knew well. Inside a flat little box was a card bearing the words:

To Prince Quippi, Beyond the Purple Notches.

And underneath that lay a withered little yellow sunflower.

Two evenings later as the three men sat together, Horace Carey suddenly gripped Thaine's hand in his, then sank back in his chair with eyes that seemed looking straight into eternal peace; and the same smile that had won men to him seemed winning the angels to welcome him heavenward. In the midst of his busy, useful years his big work was done.

The sunflowers were just beginning to blossom along the old Grass River Trail. The line of timber following every stream was in the full leafage of May. The wheat lay like a yellow-green sea over all the wide prairies. The breeze came singing down the valley, a morning song of gladness.

Leigh Shirley had come up early to the Sunflower Ranch to spend the day and night with Virginia Aydelot, while Asher and her uncle Jim took a two days' business trip to Big Wolf with Darley Champers. Jim had brought Virginia a big bunch of exquisite roses which nobody but Jim Shirley could ever have grown to such perfection.

Virginia went into the house to find the tall cut-glass vase Doctor Carey had sent to her when he started West, while Leigh went to the gate of the side lot to pet a pretty black colt that whinnied to her.

"You beautiful Juno!" she cried, patting the creature's nose. "Mrs. Aydelot says you are as graceful and well-bred as all your grandmothers have been since the time a Juno long ago followed a prairie schooner down the old Grass River Trail to a little sod shack on a treeless claim in the wilderness. This is too fine a morning to go indoors," she added as she came back to the front lawn to the seat under the fragrant white honeysuckle.

She was as sweet as a blossom herself this morning, with her soft brown-gold hair waving back from her face, and her blue eyes full of light.

Somebody had turned from the road and was coming up the walk with springing step. Leigh turned her head to see who it might be, as she reached for a spray of the fragrant honeysuckle, and found Thaine Aydelot standing before her.

With a glad cry, she dropped the blossoms and sprang to her feet.

"Prince Quippi couldn't come nor write, so he sent me. Will I do for an answer, Leighlie? I was coming back to the blessed old prairies, anyhow; to my father and mother and the life of a farmer. I have come to see at last through Asher Aydelot's eyes that wars in any cause are short-lived, and, even with a Christian soldiery, very brutal; that after the wars come the empire-makers, who really conquer, and that the man who patiently wins from the soil its hundredfold of increase may be a king among men. I can see such big things to be done here, but, oh, Leigh, are you sure you want me here?"

Thaine was holding her hands in a gentle grip, looking with love-hungry eyes down into her face.

"I've always been sure I wanted you," Leigh said softly, "and I've always hoped you would come back here to the prairies again. But, Thaine, I'm so proud of you, too, for all the heroic things you have helped to do in the Philippines and in China. I am glad now you did go for a while. You have been a part of a history-making that shall change all the future years."

Thaine put his arm about her and drew her close to him as he said:

"Then we'll go and build a house on the Purple Notches, a purple velvet house with gold knobs, and all that yellow prairie away to the west that was only grass land four years ago we'll turn to wheat fields like Asher Aydelot's here. John Jacobs was holding that ground for somebody like you and me. We'll buy it of his estate. We'll show the fathers what the sons can do."

A thrill of happiness lighted Leigh's face for a moment, then a shadow fell over it as she said:

"Thaine, Darley Champers and I have kept a secret for a year."

"You kept it well. What was it?" Thaine asked gaily.

"Jane Aydelot, who died last year, left me all her property," Leigh began.

"Good for Jennie," Thaine broke in, but Leigh hurried on.

"I always knew she meant to do it, and that was one reason why I sent you away. I wouldn't have your money and I felt if you knew you wouldn't ask me for fear I'd think—Oh, money you don't earn or inherit squarely is such a grief," Leigh paused.

"So you wouldn't let me have any hope because of this junk in Ohio that you were afraid you'd get and I'd seem to be wanting if I married you, and you thought I ought to have and you'd seem to be marrying me to get. If I ever have an estate I'll leave it to foreign missions. I'd like to make trouble for the cuss that got me at the Rio Grande. Money might do it," Thaine declared.

Leigh did not laugh.

"You are right, Thaine. I was so unhappy about it all. For since I first came to Uncle Jim's I knew I ought not to have Miss Jane's love and the farm that you would have had if she knew you."

"You've known this all these years and never told even me. You silent little sub-soiler!" Thaine exclaimed.

"It grew in my mind from an almost babyhood impression to a woman's

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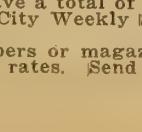

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CLUB NO. 6.

Housewife	$ .50
St. Louis Twice-a-Week Republic	.50
Wisconsin Farmer	1.00
Regular price per year	$2.00

Our Price For All Three **$1.10** You Save 90c

CLUB NO. 7.

Pictorial Review	$1.50
Metropolitan	1.50
Wisconsin Farmer	1.00
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CLUB NO. 8.

People's Popular Monthly	$ .25
Woman's World	.35
Wisconsin Farmer	1.00
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Our Price For All Three **$1.05** You Save 55c

CLUB NO. 9.

People's Home Journal	$ .50
St. Louis Twice-a-Week Republic	.50
Wisconsin Farmer	1.00
Regular price per year	$2.00

Our Price For All Three **$1.20** You Save 80c

CLUB NO. 10.

McCall's Magazine	$ .50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
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CLUB NO. 11

Mothers' Magazine	$1.50
McCall's Magazine	.50
Ladies' World	1.00
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Our Price For All Four **$2.25** You Save $1.75

CLUB NO. 12.

Today's Magazine	$ .50
Boy's Magazine	1.00
People's Popular Monthly	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Four **$1.40** You Save $1.35

CLUB NO. 13.

Kansas City Weekly Star	$ .25
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.25

Our Price For All Three **$1.15** You Save $1.10

CLUB NO. 14.

Woman's World	$ .35
Boy's Magazine	1.00
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McCall's Magazine
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People's Popular Monthly
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McCall's Magazine

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And a beautiful Popular Girl Calendar free if you send your order by January 25th.

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principle," Leigh declared. "I never thought of telling anybody. But there was another thing that kept me firm that day on the Purple Notches. Years ago, when I was a baby girl, I remember dimly seeing two men in an awful fight one night just at dusk down on the railroad track by Clover Creek in Ohio. I thought one of them was my father. Miss Jane would never tell me anything about it, and made me promise never to speak of it. So I grew up sure that my father had committed some dreadful crime, and, Thaine, until I knew better, I couldn't take the risk of disgracing your name, the proud name of Aydelot."

"Oh, Leigh, it is no matter what our forefathers do—they were all a bad lot if we go back far enough. It's what we do that counts. It's what I do as Thaine Aydelot, not as Asher Aydelot's son, that I must stand or fall by. It's how far we win our wilderness, little girl, not the wilderness our fathers won or lost."

Thaine was sitting beside Leigh now, under the perfumy white honeysuckle blossoms.

"But, Thaine, the bans are all lifted now."

Leigh sat with face aglow. "Your grandfather wouldn't let his property go to a child of Virginia Aydelot, so Miss Jane couldn't give it to you. She left it to me—all her property, provided, or hoping, I would—you should —" she hesitated.

"Yes, we should, and we will," Thaine finished the sentence. "Bless her good soul! I've always been rather fond of her, anyhow!"

"And Darley Champers found out that my father was accidentally drowned long ago in Clover Creek. Uncle Jim says he never could swim, and so that burden is lifted. But, Thaine, will you want to go back to Ohio to the Aydelot homestead? I could sell it for a club house to the Cloverdale Country Club, but I waited till you should come, to know what to do."

There was just a little quaver in Leigh's voice.

"Do you want to go back to Ohio?" Thaine inquired. "Unless you do, the country clubbers may have the place. There is no homestead there for me. This is my homestead. I want that open ranch-land beyond the Purple Notches. But, Leigh, if my father as administrator and trustee for John Jacobs' estate can sell me the ground and your inheritance from Jane Aydelot pays for it, what is there left for me to do, after all? I can't take favors and give none. I'll run away and enlist with the Regulars first."

A rueful look came over his face now, and behind the words Leigh read a determined will.

"The real thing is left to you," she replied, "the biggest work of all. You must go out and tame the soil. Your father bought his first quarter with money his father had left him by will, but he had no inheritance to buy all the other quarters that make the big Aydelot wheat fields of the Sunflower Ranch. If every acre of the prairie was covered with a layer of eastern capital, borrowed or inherited, it would not make one stalk of wheat grow nor ripen one ear of corn. But you may turn up the soil with your plow and find silver dollars in the furrow. You may herd cattle on the plains, and their dun hides will bring you cloth-of-gold. You may seed the brown fields with alfalfa and it will take away the fear of protest or overdraft, as the Coburn book says it will. I know, because I've tried and proved it. Oh, Thaine, with all your grand battles in the East which is always our West, Luzon is still a jungle and China isn't yet in the light. You have only prepared the way for the big things that are to follow. I never hear the old civil war veterans telling of their achievements in a grand army meeting without wishing that, after the great story is told, the grand army of the prairies would tell their tale of how the men and women fought out the battles here with no music of drums nor roar of cannon, nor bugle calls, nor shoulder straps, nor comradeship, nor inspiring heroic climaxes, and straight, fierce campaigns to victory. But just loneliness, and discouragements, and long waiting, and big, foolish-seeming dreams of what might be, with only the reality of the unfriendly land to work upon. I'm so glad you want to stay here and to take that open prairie beyond the Purple Notches for our kingdom."

The happiness in Leigh Shirley's eyes took from Thaine's mind the memory of all the hardship and tragedy of his two years on the battlefield. Her pride in his achievements, her joy in his return and her dream of their future together in a work so full of service, filled his soul with rejoicing, as the May morning opened for these two its paradise of youth and love.

Asher and Virginia Aydelot had come out on the veranda to look for Leigh. A moment they waited, then Asher said softly:

"He has forgotten us, but he has come back to the life we love."

"And he will come back to us tenfold more ours, because his heart is here," Virginia answered, and the two stole softly indoors.

"See the roses Jim brought; they seem to belong to that beautiful vase," Virginia said, as they stood at the door of the dining room. "I think Jim must have meant them for Leigh and Thaine."

"Yes, he brought us sunflowers in an old tin peach can wrapped with a newspaper, and we had no mahogany dining room set and not so much cut-glass and china and silver in our cupboard, nor quite such a good rug on our hardwood floor," Asher replied.

"But we had each other and the vision to see all these things coming to us," Virginia said, as she looked up into her husband's face with love-lighted eyes. "I wonder where Jim is."

"Jim is present." Jim Shirley came in quietly from the side porch. "He prepared your wedding supper for you. He buried your first-born, and now he comes to give you a daughter. He's been first aid to the Aydelots all along the line, as he will hope to continue to be, world without end, and a little more."

The homestead on the Purple Notches looks out on a level land stretching away in an unbroken line to the far westward horizon. Broad fields of wheat grow golden in the summer sunshine, and acres of dark alfalfa perfume the air above them. With a clearer vision of what reward farm life may bring for him who goes forth and earns that reward, the man whom the Tondo road made a soldier, Caloocan a patriot, and Yang-Tsun a Christian, has found in the conquest of the soil a life of usefulness and power.

And the father and mother, Asher and Virginia Aydelot, who, through labor and loneliness and hopes long deferred, won a desert to fruitfulness, a wilderness to beauty—these two, in the zenith of their days, have proven their service not in vain, for that they have also won the second generation back to the kingdom whose scepter is the hoe.

Not in vain did the scout of half a century ago drive back the savage Indian from the plains; not in vain did Funston and his "Fighting Twentieth" wade the Tulijan and swim the Marilao; not in vain did Chaffee's army burst the gates of Peking, nor Calvin Titus fling out Old Glory above its frowning walls.

Behind the scout came a patient, brave-hearted band of settlers who, against loneliness and distances and drouth and prairie fire and plague and boom, slowly but gloriously won the wilderness. Into the jungles of Luzon will go the saw and spade and spelling book. Upon the Chinese republic has a new light shined.

Not more to him who drives back the frontier than to him who follows after and wins that wilderness with sword re-shaped to a plow-share does the promise to Asher of old stand evermore secure!

Thy shoes shall be iron and brass; and as thy days, so shall thy strength be. The eternal God is thy refuge, and underneath are the everlasting arms.

The End.

The Wisconsin Farmer is anxious to get letters from Wisconsin farmers telling of their experiences. Readers are interested in what their neighbors write and the neighbor will also be interested in your communication.

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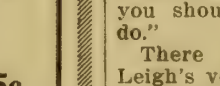

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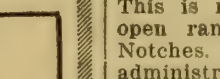
JOHNSON, HENDRICKSON & CO.
Two Harbors Minnesota



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FRESH FROZEN HERRING

IN sacks $3.25 per 100 lbs. $3.50 per 100 lbs. in boxes. Pickerel at $6.25 per 100 lbs. Pike at $9.25 per 100 lbs. Newly Salted Herring at $3.25 per 100 lbs. Salt Trout $7.50 per 100 lbs. Tulibees $6.25 per 100 lbs. Order from the Old Reliable Fish Firm, LAKE SUPERIOR FISH CO., 208 E. 1st St., Duluth, Minn. Reference—American Exchange National Bank.

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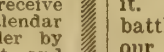
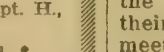


FRESH frozen Lake Superior Herring (Family White Fish). Direct delivery to customer Fresh frozen, $3 per 100 lbs.; packed in box, 50 lbs. $1.75; New Salted, in kegs, per 100 lbs. $2.75, 50 lbs. $1.75. Nick Nelson Co., Box 929, Two Harbors, Minn.



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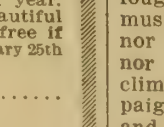
AERIAL FISH CO. DULUTH, MINN.



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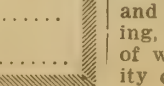

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AILING ANIMALS.

Simultaneously Treated Hog.

Please let me know how long after a hog has the double treatment before he can be put with safety into a herd that is not immuned. Also how long is a hog immuned by giving him the single treatment?

A simultaneously or double-treated hog should not be placed with a herd that has not been treated for thirty days following the date of such treatment. It is safe to place such an animal with an untreated herd after this length of time provided the treated hog has not been sick within the thirty-day period. The single treatment usually protects the hog for about six weeks. Young pigs are protected for a shorter period and older shoats and hogs are sometimes protected for a longer time. The average length of immunity produced by the single treatment is about six weeks.

Thumps.

I am asking for information in regard to thumps among hogs. I have lost three head of fine spring shoats with thumps.

This condition usually indicates indigestion due to overfeeding or to faulty feeding. When such is the cause of a lessened ration or a change of feed usually helps to correct it. At this time of the year many shoats are reported as thumpy or having died with the thumps, which on post-mortem examination show that the thumpy condition was a result of pneumonia. Medication of the hog for any condition is difficult and with the exception of giving laxatives when needed is seldom advisable. Careful feeding and housing, plenty of pure water and exercise usually correct these conditions.

Simultaneous Treatment.

Please publish what is meant by simultaneous treatment and how the treatment is administered with reference to hogs.

The simultaneous treatment of hogs to produce immunity against hog cholera means the application or injection of anti-hog cholera serum and cholera virus at the same time. The treatment is administered by holding the hog in such position as to render the inside of the hams or the arm pits accessible for cleansing and injection. These are the usual points selected for the injection of the serum and virus. They are first cleansed thoroughly with a disinfectant solution, preferably a 3 per cent solution of compound cresol, after which the serum is injected into the hams or injected into the opposite ham or axillary space. The virus is then injected into the opposite ham or axillary space. The dose of serum and of virus varies with the weight of the hog, usually 45 to 50 cc of serum and 2 cc of virus for a 100-pound shoat.

Spavin.

I bought a horse a short time ago that has a swelling on her hind leg. One side is soft and puffy, but the other side is hard. She isn't lame, but I fear she will get lame in time. The swelling has been there four years or more. She is seven years old. I don't think very much has been done for it though something may have been put on it some time. I am of the opinion it is a spavin.

Your suggestion of spavin may be the correct diagnosis of the swelling. If the mare has had this swelling for four years without going lame it is not likely she will develop lameness from it now without an injury to the part. Your description of a soft and a hard portion indicates both bog and bone spavin. Should the mare become lame you could probably overcome it by the application of some blistering agent, such as cantharides ointment or liniment. A preparation of iodine and mercury is also useful. However, the best treatment is the use of the firing iron. In case one firing does not overcome the lameness it should be repeated. This operation should be attempted only by a competent veterinarian.

Shoe Boil.

My mare has shoe boils on both front legs. They came about four weeks ago while we were working her on binder. One bunch went away, but the other broke open and matter kept running for about two weeks, which reduced the size greatly. It has now closed up and left a hard bunch. The mare is five years old and very valuable. She was shod at the time the boils came on, but had shoes removed right away and I do not think the shoes had anything to do with it.

Whenever a shoe boil assumes the character of a hard tumor such as you describe, it is best to resort to a surgical operation for its removal. Sometimes it is possible to reduce the swelling by application of blisters, followed by poultices, then by making free incisions and keeping the wound cleaned with an antiseptic solution, such as bichloride of mercury 1 to 1,000. You should not undertake the removal of the tumor surgically, but should call a veterinary surgeon for this operation.

Paralysis.

I have three little Berkshire pigs, six weeks old, which seem to be weak in their hind quarters. While they walk around they fall from one side to the other in back and sometimes drag themselves. They seem healthy otherwise, for they eat as well as others. What is the cause and remedy?

The description you give does not indicate cholera, but rather a failure to control the hind legs. There is nothing known definitely as the cause nor is a cure for it known as yet. Many experiments have been conducted to determine the cause and to find a cure for the condition, but without much success as yet. The following treatment has proven beneficial in many cases and is worth a trial: Tincture of nux vomica, two ounces; tincture of jalap, two ounces; tincture of myrrh, one ounce; Fowler's solution of arsenic, two ounces. Give each pig a teaspoonful three times daily in the swill. Feed no dry feed of any kind. Also give no corn. Oats soaked or bran mash or shorts will give better results. Tankage is also beneficial.

Mange—Scab.

I have two Holstein cows and they are getting bare spots on their bodies. The hair falls off. The cows seem to lick the bare spots until they bleed. What can I do to cure it? I think it is ringworm. I have noticed some of my cows have scabs on their legs and shoulders. Some scabs are larger than a silver dollar and some much smaller. What is the cause of the scabs and how can they be cured? Will the scabs go away without treatment? Is it a dangerous disease?

These conditions may be the common form or a more severe form of mange. You may be able to determine which form by placing some of the scab on a piece of dark or black paper and heating it in the sun or near the stove; after a while the little white mites may be seen crawling around. A magnifying glass would aid you in seeing the mites more distinctly. Should you discover these mites it would indicate the common form of mange.

The domodectic mange is more severe. It is quite common in some localities. It is caused by a parasite which lives in the hair follicles, producing pimples which render the hides less valuable. Treatment for demodectic mange is difficult and scarcely practicable.

Treatment for common mange should be by dipping in a lime and sulphur, a tobacco and sulphur, or carbolic dips. If lime and sulphur is used the dip should consist of eight pounds of lime, twenty-four pounds of sulphur, for each 100 gallons of water. The cattle should be dipped, not merely smeared.

To treat ringworm remove all crusts by washing with soap and water, then apply acetic acid, sulphur ointment, or tincture of iodine once a day. Cleanse the stable and whitewash it to destroy the spores scattered by the crusts.

Paralysis of Bladder.

I see through your valuable paper many good remedies for farm animals. I have a six months colt that from birth does not close its bladder properly and there is slight constant drain of the urine, which causes an irritation of the fleshy parts. The colt is as large and healthy as any colt of its age, except this. It is a mare colt.

Sometimes the bladder proper becomes paralyzed, but most often only the neck of the bladder. Paralysis of the neck of the bladder is characterized by inability to retain the urine which dribbles away as fast as it is secreted. The cause of this condition may be disease of the rectum, tumors growing within the pelvic cavity or injury to the spinal cord, etc. Treatment can be successful only when the cause of the troubles can be remedied. Blisters (mustard) on the loins may be helpful. You may also give internally one half dram of copaiba, or one-half dram tincture of cantharides daily. In case these fail the use of electric currents are recommended.

Knuckling or Cocked Ankles.

I have a colt coming two years old in the spring. About five months ago she began to get cocked ankles in front and now her ankles are drawn so far ahead that she stands on her toes, and her hoofs are becoming deformed. When I first noticed it she was running on blue grass pasture and I gave her three quarts of oats night and morning. I have been using a liniment composed of wood alcohol and witch hazel, recommended by a local veterinarian, but it doesn't seem to do any good. The cords seem to be drawn clear to her shoulders. There does not seem to be any fever or swelling.

From your description it would seem this case is so pronounced as to render successful treatment highly improbable. Your best course is to secure the services of a competent veterinary surgeon and have tendons divided between the fetlock and the knee. Firing and blistering usually are helpful when done in time. Proper shoeing also is of great benefit. This is accomplished by using a shoe with a thin toe and high heels.

In case these measures do not bring satisfactory results the destruction of the animal should not be delayed, as the condition would be too far advanced to respond to treatment.

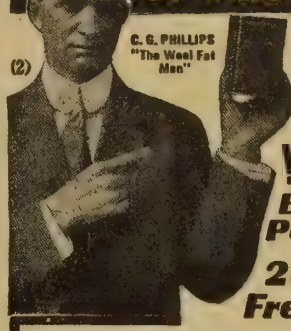
Diabetes, Sugar in Urine.

I would like some advice concerning a four-year-old mare. She has a scruff on her body that I cannot get rid of. She eats heartily of corn or oats. I feed her well and she has plenty of exercise, but her legs are usually swollen in the mornings, and if driven or ridden a short distance she puffs and pants as if short of breath. She does not sweat easily, but has a moisture on her hair of mornings, especially her neck. I have used a dip on her to get rid of the dandruff. It seemed to help a little at first, but is as bad as ever again.

It is impossible to definitely diagnose such a condition without making an analysis of the urine. However, diabetes is strongly indicated by the symptoms you describe. The liver is assumed to be at fault and treatment offered accordingly. The animal should be provided with a warm, sunny, well-ventilated stall or stable. You should give laxatives, such as sulphate of soda, one ounce, and carbonate of potassium, one-fourth ounce daily. You should also apply mild blisters over the region of the last ribs. The diet should be mainly bran mashes or middlings and milk, either skimmed or butter milk, in liberal quantities. A tonic made of nux vomica, twenty grains; powdered gentian, four drams, and phosphate of iron, two drams and administered daily with the feed should be beneficial.

When the war is over there will be a flow of emigrants to the United States and Canada if history is any criterion. And our northern neighbor plans to seize the opportunity to populate her prairie provinces. An estimate of possible farm lands in these provinces still available is placed by the Grand Trunk Pacific Railway at 272,892,000 acres, of which there are 105,217,000 acres in Alberta, 93,459,000 acres in Saskatchewan and 74,216,000 in Manitoba. At the time of the last official census of the dominion the land ocupied as farm land included 12,220,233 acres in Manitoba, 28,642,000 acres in Saskatchewan and 17,751,899 acres in Alberta. At the time of the taking of this census the percentage of arable land under cultivation or occupied as farm lands in the three provinces showed a total of over 55,000,000 acres and it was then estimated that of the land still vacant the arable would be 50 per cent in Manitoba, 60 per cent in Saskatchewan and 65 per cent in Alberta.

I Want to Send Every Reader of This Paper a Big Can of CORONA WOOL FAT By Mail—Postpaid—on 20 Days' Free Trial



I don't even ask you to risk a penny for postage. I want to prove to you before you pay and at my risk, that Corona Wool Fat is the greatest healing compound ever used on the farm for all kinds of hoof and skin diseases. Produced from the skin and wool of the sheep, this great natural remedy has no equal as a cure for Hard and Contracted Feet, Mud Fever, Split Hoofs, Corns, Grease Heel, Thrush, Quarter Crack, Barb Wire Cuts, Galled Shoulders, Sore Teats of Cows, Ulcers, etc. It

Heals Without a Scar

—grows hair over cuts and sores—makes new hoofs. Often worth hundreds of dollars by saving injured animals from lameness and permanent blemish.

Send No Money—I Pay the Postage

If you have never sent for a trial can, just drop me a postcard or letter saying you want to try Corona Wool Fat 20 days at my risk. Use it according to directions and when the 20 days are up if you find it does what I claim, send only 50c as payment in full—if you are not pleased, simply say so—I'll take your word for it and cancel the charge. Write today. Mention ailment you intend to use it on.

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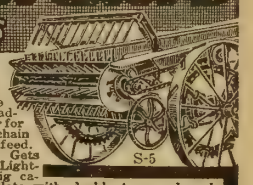
CORONA MFG. CO.
44 Corona Block, Kenton, O.

BIGGER CROPS Greater Profits



Prices slashed for mid-summer. Manure spreading time is all the time. You know this yourself. My new No. 8 Low Down manure spreader is my greatest spreader triumph—the best spreader for the least money. Double chain drive. Endless apron. Force feed. Front wheels cut under load. Gets into any corner. Close hitch. Lightest draft of any low down. Big capacity. All steel gear complete with double trees and neck yoke. Steel wheels. Gears coupled with channel steel, trussed like steel bridge. Box rests on steel trucks. 42 in. high. K. K. Foust, Ashley, Ohio, writes: "I saved $21.80 and got just what I was looking after."

MY BOOK "STREAK OF GOLD" FREE

Tells all about handling manure for greatest profit. Do not buy a spreader of any make at any price until you have asked for this great book worth $1.00 (costs you nothing) and my big special spreader catalog mailed free. Spreaders shipped from Chicago, Waterloo, Kansas City, Council Bluffs or Minneapolis.

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Last a Lifetime — Drive Like a Stake

No Auger or Driving Cap Needed

Will save you the cost of an automobile in fencing a half section.

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12½¢ ECONOMY FENCE

Before you buy any more fence, write for facts about our 26-inch ECONOMY HOG FENCE at 12½c. per rod. Many other styles and prices.

Keystone Steel & Wire Co.,
5856 Industrial St. PEORIA, ILL.

LIVE STOCK NOTES.

Every person seriously engaged in the raising of bred-for-production live stock should be encouraged and protected in every way possible. "He is rendering a service to mankind by enabling himself and others to increase the production of their herds and at the same time reduce the cost to the consumer of very necessary human foods. He is making it possible to produce this food at a less cost, and by reason of the increased production return a greater profit to the producer.

R. M. Murphy, specialist in animal husbandry for the Tennessee College of Agriculture, recently inquired of the Wisconsin Live Stock Breeders' Association, concerning the whereabouts of carload lots of Short-horn cattle and Duroc Jersey hogs. He was immediately put in touch with breeders, and writes that he has already received a number of replies from Wisconsin stockmen which indicate that they have what he is looking for. Mr. Murphy is quite certain that Wisconsin will get the business.

O. E. Reed, dairy husbandman for the Kansas Agricultural College, came to Wisconsin recently and bought Guernsey and Holstein heifers and cows from various sections of the state to be shipped back to his state. Kansas is one of Wisconsin's best customers in the dairy cattle field.

A large dairy farm near New Germany, Minnesota, is negotiating with several of Wisconsin's community breeders' associations for the purchase of fifty head of bred Holstein heifers and a pure-bred Holstein bull.

Between August 1st and December 31, 1915, 437 double-deck carloads of sheep and lambs, more than 130,000 head, passed through the Edgerton sheep feeding yards. Edgerton is only five hours' run from Chicago and originally these yards constituted a feeding station where western sheepmen unloaded their stock for feed and rest before placing them on the Chicago market. This year foot-and-mouth quarantine conditions at the Union Stockyards in Chicago prevented the shipment of feeders back to the country. Live stock commission merchants and lamb and sheep feeders were seriously handicapped by this condition, but they were able to partly overcome the difficulty by filling orders from the Edgerton yards, creating a new phase of the sheep industry in Wisconsin.

C. C. Biederman, manager of the Edgerton plant, says that they have already booked for their winter feeding and shearing operations more than 40,000 head. They have a feeding capacity of 10,000 head at once, and can graze 25,000 head.

Grant county is to be still better known for its herds of profit-producing Short-horn cattle and its market-topping steers. That was decided at a meeting of stockmen recently held at the county seat, when the plans so successfully followed in many of the dairy districts of Wisconsin were adopted and will be put in full force in this section. A county Short-horn Breeders' Association, similar to the community dairy associations, has been organized and its members expect to make it a vital force in still further developing the beef cattle interests of southwestern Wisconsin. Similar organizations have recently been formed in Buffalo and Sauk counties. Oscar A. Hitt, of Alma, is secretary of the Buffalo county and Frank Horley, of Baraboo, of the Sauk County Short-horn Breeders' Association. Former Assemblyman George Carpenter is the president of the Sauk County Club.

Carleton College, Northfield, Minnesota, is starting herds of both pure-bred Holsteins and Guernseys. The object is to supply the dormitory tables with pure dairy products and incidentally furnish labor for needy students who are working their way through college. They recently purchased the well-known Guernsey show bull, Victory of Sarnia, to head their Guernsey herd. This bull was one of the Wisconsin animals to win fame for the state by winning grand championship honors outside of the state in 1914. He was grand champion at Indiana, North Dakota and Memphis, Tennessee state fairs that year.

Jean DuLuth Pear, a Red Polled cow owned by the Jean DuLuth Farm in Minnesota, recently completed a yearly record of 16,598 pounds of milk, containing 707 pounds of butter fat, under a test directed by the Red Polled Cattle Club of America. This cow is a half sister to Protor Knott, probably the most famous living Red Polled bull in America. Both animals were bred by J. W. Martin, Gotham, Wisconsin, and were sired by Corporal, perhaps the greatest sire of the breed ever known in this country.

J. R. Danks, who is now doing field work for the animal husbandry department of the University of Wisconsin, judged the Jersey and Guernsey classes at the Pacific International Live Stock Show at Portland.

Three carloads of high-grade Holstein heifers were recently purchased and shipped from Rosendale in Fond du Lac county to Montana. They were purchased by the well-known Hereford breeder, A. B. Cook, who expects to use them as nurse cows for his Hereford calves.

R. G. Murphy, a graduate of the short course in agriculture at the University of Wisconsin, who has been herdsman of well-known Guernsey farms, has rented the celebrated Bell Vernon Farm, Willoughby, Ohio, and will continue there the breeding of pure-bred Guernsey and produce high-grade milk for the Cleveland market.

SUCCESSOR TO MURPHY IN WALWORTH COUNTY.

L. L. Oldham has been appointed by the regents of the university as county agent for Walworth county. He succeeds J. H. Murphy, who has resigned to act as manager of a large stock farm in the same county.

Mr. Oldham has been employed in agricultural extension work for the Great Northern Railway and later was manager of a large farm owned by James J. Hill. He is a native of Dane county, Wisconsin, and a graduate of the University of Wisconsin.

The position of county representative in Walworth county carries much responsibility, as this region is one of

L. L. OLDHAM.
County agricultural agent succeeding J. H. Murphy in Walworth county.

the best developed agriculturally of any in Wisconsin and the farms are largely equipped in modern style and operated according to the best methods. Dairying and other live stock raising predominate.

Upon the recommendation of a committee representing the Sawyer county board the regents named C. P. West as agricultural representative of that county. Mr. West has specialized in the marketing of farm crops, having visited Denmark and Norway for the purpose of studying methods of farming carried on in these countries.

OUR NEXT SERIAL

"Hepsey Burke," a Sister to David Harum.

Written by the brother of the man who wrote the original, the most interesting and best selling book of the last 30 years.

Did You Ever Read "David Harum?"

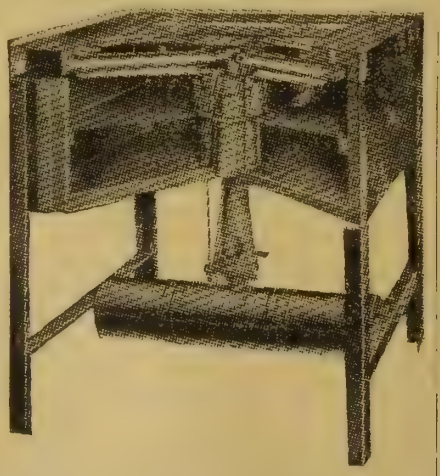
If so, you will not want to miss a page of "Hepsey Burke." If not, you will enjoy your introduction to the family. In either event you have a big treat in store, for "Hepsey Burke" is far and away the best serial ever run in any farm paper.

We will begin the serial publication of "Hepsey Burke" in these pages in two or three weeks.

Watch For Further Announcements

X-Ray Incubators.

MOST of our readers will recognize this X-Ray incubator—the incubator having fifteen special and individual features. The big special feature is the famous X-Ray Duplex heater, which knocks out all the cold corners in the X-Ray machine. The ingenuous construction of the heater overcomes the possibility of cold corners. Those pipes, or tubes, you see in the illustration convey a gentle heat to every point in the hatching chamber, diffusing this heat with positive certainty and absolute equality. Incubator men everywhere will appreciate the magnitude of this achievement. Equal distribution of heat has been the bugbear of manufacturers for years. The feat



is now accomplished in the X-Ray incubator. The X-Ray Company may well feel an immense gratification over the fact that they have attained a point close to perfection in their X-Ray Duplex heater. The new X-Ray vapor generator is a big feature, too. It's a fact that this generator actually duplicates the natural conditions found under the sitting hen. The heat, thanks to this generator, gets to the egg moisture laden. Heat from the hen's body, like that from any live body, is a moist heat. Dry heat is unnatural. Moist heat reduces the number of dead-in-the-shell chicks to a minimum. Then there's the X-Ray egg tray—another simple thing, and made simpler than ever in the X-Ray incubator. Listen, poultrymen, here's an egg tray that doesn't sag. You know what that means for egg protection, for making every inch of space available, for developing the chicks. Turning and airing the eggs in an X-Ray incubator is comparatively an easy matter. Equalized heat and a level tray—most extraordinary and most desirable to say the least. The X-Ray automatic trip is another special feature. Poultrymen will also be interested in the big X-Ray oil tank, which holds more than enough oil to make the entire hatch. The X-Ray hinged glass top means more than just an easy way to view the eggs. Glass makes a better deflector than anything else that could be used. It increases, intensifies and has a tendency to more evenly distribute the heat. The convenience of having eggs, chicks, thermometer and everything in the egg chamber so they can be seen at a glance is a convenience and a benefit that cannot be overestimated. The X-Ray construction is exclusive in many ways and takes a high place in the list of special features. Of course, only thoroughly dry California Redwoods are used. But the style of construction calls for special remark. The cover of the X-Ray incubator, to be specific, is the remarkable part. It is also the most costly individual part. Upon the accuracy and durability of the X-Ray cover depend the results of hatches—the success and profits they bring. The X-Ray Company takes especial pains with the construction of their cover. The precious heating device—X-Ray Duplex heater—which is really the heart and soul of the machine—is fastened firmly to this cover. When the cover is raised the radiator, the thermometer and part of the regulating apparatus is raised with it, and when the cover is closed down the central hood of the radiator telescopes down over the top of the flue, making a perfectly sealed connection. A very fine quality of insulating material is placed over this lid or cover. The X-Ray incubator by its scientific mechanism and excellent construction makes poultry raising a practical certainty. Get full information from headquarters. Drop a card bearing your name and address to the X-Ray Incubator Co., Des Moines, Iowa. See page 25.—Adv.

Personal to Our Readers.

ON page 7 of this issue appears an announcement of the opening of Louisiana lands to northern settlement by the Long-Bell Farm Lands Corporation. We direct the attention of our readers to this announcement not so much to call your attention to it from the standpoint of an advertisement, but to impress upon you the validity and integrity of this corporation, which is a sister corporation of the Long-Bell Lumber Company, which ranks as second most important manufacturer of lumber in the United States, if not in the world. When a company of this magnitude acts, with years of commercial integrity—whose standing in the world of finance is beyond comparison—this fact alone carries with it the assurance that anything contained in said agreement is capable of earnest and truthful consideration. With this end in view, this paper wants to assure its readers that it would not accept ordinary advertisements of this character where so much depends upon the co-operation of the company developing it, unless it felt assured that this corporation was amply able to carry out its promises made to prospective colonists or settlers.—Adv.

WISCONSIN HORTICULTURISTS MEET.

(Continued from page 10.)

very little against fungous diseases and recommended that the cherry grower always use Bordeaux instead. In Door county, he said, the best results have been obtained with Bordeaux.

One of the interesting addresses from the farmer's standpoint was that of E. H. Niles, of Oconomowoc, on "Plans for Farm Homes." Mr. Niles is a landscape architect and went into some detail as to advising the farmer how to lay out his grounds, choose the proper trees and shrubs, etc. There is no question as to the value to be derived from beautifying the farm home. What passer-by is not always attracted when he passes a home that sits like a picture among the trees, the shrubs and the flowers? The proper laying out of the grounds and the selection of the trees and shrubs has much to do with the after effect and Mr. Niles, whose paper we will publish in full in a later issue of The Wisconsin Farmer, went into all of these details. Miss E. M. Goelzer, of Oakwood, gave some valuable hints in her talk, "Just Flowers," pointing out the varieties which are hardy in Wisconsin, their habits, care needed, etc. Mrs. George Fratt, of Burlington, discussed, "The Home Garden," recommending that every farmer and every city dweller enjoy the comforts of a home garden. Lovers of dahlias were treated to a splendid talk on the new varieties by J. T. Fitchett, of Janesville, and C. A. Hofman, of Baraboo, discussed "Summer Flowering Bulbs."

The farmer and his fruit garden was very capably discussed by C. L. Richardson, of Chippewa Falls, who went into detail in explaining how a farmer could successfully have a fruit garden, give it the required attention and not make much time from other duties about the farm. Mr. Richardson favors an orchard and garden from a quarter to three-fourths of an acre, the length of which should be greater than the width to permit of free cultivation. At each end there should also be free turning spaces. In choosing the location the northeast slope is always preferable to the southwest slope, as this affords better winter and summer protection and this is an important factor which many orchardists and gardeners do not consider. The trees should be arranged in rows the long way of the plot, preferably north and scuth, and in the absence of local conditions to the contrary, the plums, being hardier, should be placed west of the apples. Currant and gooseberry bushes may be planted between the trees in the row and strawberries and raspberries in rows between the rows of trees. Mr. Richardson warns against crowding of trees. Twenty to twenty-four feet is close for apples, and eighteen to twenty feet for the plums. This gives room to plant two gooseberry bushes, three currants or a grape vine or two between trees. The strawberry bed he considers of first importance and 500 plants is not too many for the average farm. Cultivation once in two weeks or oftener until August is recommended in addition to hoeing four or five times in order to swing the runners into rows one to two feet wide. Mr. Richardson also went into other details of strawberry culture, such as mulching, etc., and said that any farmer, by giving such a patch the proper care, could make it pay him well.

H. M. Dunlap, of Savoy, Ill., owner of several hundred acres of orchards and well versed in orcharding conditions, gave one of the treats of the convention. Mr. Dunlap spoke upon "Commercial Orcharding in the middle West," in which he went into this matter at great detail, pointing out what must be done if the Wisconsin growers are to get the best returns from their orchards. He also discussed spraying and the farmer with an orchard that stands neglected through the spring and summer and at the mercy of insects would have realized quickly how he could improve his profits by hearing Mr. Dunlap's experiences. Spraying is one of the important duties of the orchard owner and if the trees and fruits are to be left to the ravages of the insect world the best fruit cannot be expected. William Toole, Sr., of Baraboo, told of the beauties of Wisconsin and said that with the beautiful landscape with which nature has endowed Wisconsin that it should become, with the help of man, the most beautiful state in the world. Wisconsin has lakes, rivers, valleys, hills and everything to make it a beauty spot and he urged every farmer and every farm home to lend to the improvement of this natural landscape by beautifying their homes and farms.

John Howie, of Waunakee, and C. O. Ruste, of Blue Mounds, spoke on the farmer and the farm orchards and Prof. Thomas Bewick, who is in charge of the boys and girls' club work in the state, urged that every farm boy and girl be interested in growing berries and fruits. Mr. Bewick told of plans for the exhibit next year at the state fair and predicted the greatest showing of boys and girls' club work ever seen in the United States. This work the association will assist with prizes, etc.

"The Codling Moth" was discussed very capably by Prof. H. F. Wilson, who succeeded Professor Sanders at the college of agriculture. Arsenate of lead is now the standard spray for combating the codling moth and Mr. Wilson said that the following practice should prove satisfactory in cases of spraying:

1. Never spray when your engine is running under 150 pounds pressure.
2. A forceful spray, whether driving or mist, is absolutely essential for thorough work and penetration to all parts of the tree.
3. A driving spray should be used for the calyx application in order to reach the inner cup.
4. A mist spray, being more economical than the driving and just as effective, should be used for later applications.

Unsuccessful control of the codling moth he said may usually be found due to one or more of these factors:

1. Lack of personal supervision of the actual spraying operations.
2. Inefficient spray outfits.
3. Careless application of spray and lack of thoroughness.
4. Lack of knowledge of the habits and life history of the insect.

Secretary Cranefield reported that experiments with trial orchards had proved that only the hardiest apples, such as Duchess, Longfield, Malindas, Hibernal and Charlamoff can be grown successfully in Upper Wisconsin, excepting certain portions of Bayfield and Door counties. Cherries cannot be fruited at all north of the forty-fifth parallel and only native plums will respond to cultivation. President Rasmussen in his report recommended a larger state appropriation and the solving of the marketing problem. "A home garden and orchard on every farm, but no farm on orchard on any farm," he suggested as a much-needed slogan.

The present officers, excepting three members of the executive committee, were re-elected. The official board for the coming year follows:

N. A. Rasmussen, president, Oshkosh.
D. E. Bingham, vice president, Sturgeon Bay.
L. G. Kellogg, treasurer, Ripon.
F. Cranefield, secretary, Madison.

EXECUTIVE COMMITTEE.

N. A. Rasmussen, Ex-officio.
D. E. Bingham, Ex-officio.
L. G. Kellogg, Ex-Officio.
F. Cranefield, Ex-officio.
1st Dist., H. C. Melcher, Oconomowoc.
2d Dist., R. J. Coe, Ft. Atkinson.
3d Dist., J. A. Hays, Gays Mills.
4th Dist., Henry Wilke, Milwaukee.
5th Dist., C. V. Holsinger, Wauwatosa.
6th Dist., H. C. Christensen, Oshkosh.
7th Dist., Wm. Toole, Sr., Baraboo.
8th Dist., C. M. Secker, Tomah.
9th Dist., A. C. Greaves, Sturgeon Bay.
10th Dist., C. L. Richardson, Chippewa Falls.
11th Dist., J. F. Hauser, Bayfield.

In the fruit exhibit J. S. Palmer, of Baraboo, won first for best collection of apples; Fremont Lounsberry, of Watertown, second; Rudolph Schultz, of Lake Mills, third, and Balghein Bros., of Twin Bluffs, fourth. Mr. Palmer also won first for the best five plates; A. D. Brown, of Baraboo, second; J. E. Baer, of Baraboo, third, and A. N. Kelly, of Mineral Point, fourth. In pecks the following first awards were announced:

Fameuse—Ludwig Bethke, Richland Center.
Gano—J. E. Baer, Baraboo.
Gem—A. D. Brown, Baraboo.
Golden Russet—H. C. Melcher, Oconomowoc.
Grimes Golden, Jonathan and McIntosh—Ludwig Bethke.
Northwestern Greening—J. E. Baer.
Tolman—J. S. Palmer, Baraboo.
Wealthy—J. W. Roe, Oshkosh.
Windsor—H. R. Platt, Baraboo.
Wolf River—J. E. Baer.
Salome—Rudolph Schultz.

First prize for the best seedling apple was awarded to Fremon Lounsberry.

The first winners in the plate displays were:

Ben Davis—Theodore Kurtz, Cedarburg.
Fameuse—Balghein Bros., Twin Bluffs.
Gano—J. E. Baer, Baraboo.
Gem—A. D. Brown, Baraboo.
Gideon—J. W. Roe, Oshkosh.
Golden Russet—Theodore Kurtz, Cedarburg.
Grimes Golden—Ludwig Bethke, Richland Center.
Jonathan—Fremont Lounsberry, Watertown.
Longfield—H. H. Harris, Warren.
McIntosh—Ludwig Bethke, Richland Center.
McMahan—Ludwig Bethke.
Newell—H. H. Harris, Warren.
Northern Spy—Theodore Kurtz, Cedarburg.
Northwestern Greening—N. A. Rasmussen, Oshkosh.
Patten—H. C. Melcher, Oconomowoc.
Pewaukee—J. S. Palmer, Baraboo.
Salome—Rudolph Schultz, Lake Mills.
Seek-No-Further—J. S. Palmer, Baraboo.
Scot Winter—J. E. Baer, Baraboo.
Tolman—J. S. Palmer, Baraboo.
Twenty Ounce—Fremont Lounsberry, Watertown.
Utter—Rudolph Schultz, Lake Mills.
Wagener—Ludwig Bethke, Richland Center.
Wealthy—N. A. Rasmussen, Oshkosh.
Windsor—H. R. Platt, Baraboo.
Wolf River—H. H. Harris, Warren.
Imperial and Boiken—J. S. Palmer, Baraboo.

Much interest was shown in the students' speaking contest and many important subjects were discussed. First prize of $25 was awarded to Miss Dorothy Loomis on, "Does it Pay to Beautify the Farm;" second prize of $15 to C. B. Blosser on, "Birds in Horticulture," and third prize of $10 to J. E. Richardson on, "Orchard Winter Injury." James Sedgwick with a paper on, "The Orchard Police," was given fourth honors.

The closing day was devoted to the commercial side of horticulture and addresses were made by M. S. Kellogg, of Janesville; Charles Haralson, of Excelsior, Minn.; R. J. Coe, Lewis Post, Prof. J. G. Sanders, C. V. Holsinger, C. L. Richardson and H. C. Christensen. Cranberry culture was discussed by Charles Lewis, Jr., of Cranmoor; C. M. Secker, of Mather, and Miss Lydia M. Huych, of Cranmoor.

The marketing session proved very interesting and a discussion of this important point was participated in by F. Kern, manager Bayfield Peninsula Fruit Association, Bayfield; A. C. Greaves, manager Door County Fruit Exchange, Sturgeon Bay; C. M. Secker, sales manager Cranberry Growers' Association, Mather; G. H. Townsend, apple grower, Richland Center; C. V. Holsinger, horticulturist, Milwaukee County School of Agriculture, Wauwatosa; J. S. Palmer, apple grower and shipper, Baraboo, and others.

The Wheat Yield Tells the Story

of Western Canada's Rapid Progress

160 ACRE FARMS IN WESTERN CANADA FREE

The heavy crops in Western Canada have caused new records to be made in the handling of grains by railroads. For while the movement of these heavy shipments has been wonderfully rapid, the resources of the different roads, despite enlarged equipments and increased facilities, have been strained as never before, and previous records have thus been broken in all directions. The largest Canadian wheat shipments through New York ever known are reported for the period up to October 15th,

upwards of four and a quarter million bushels being exported in less than six weeks,

and this was but the overflow of shipments to Montreal, through which point shipments were much larger than to New York.

Yields as high as 60 bushels of wheat per acre are reported from all parts of the country; while yields of 45 bushels per acre are common.

Thousands of American farmers have taken part in this wonderful production. Land prices are still low and free homestead lands are easily secured in good localities, convenient to churches, schools, markets, railways, etc.

There is no war tax on land and no conscription.

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GEORGE A. HALL, 125 Second St., Milwaukee, Wis.

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Start a Bank Account for Baby or Any of the Children

I will give you the *first dollar* to start a bank account for your baby or any of your children. It will cost you no money at all. This is a wonderful offer and you should not let it pass. All that I ask is a little of your time. You will be surprised when you see how easy it is. Every member of the family can help and every child can start his or her own bank account with a little effort. I will give the first dollar to start each one and I will help them get more dollars to add to it.

Encourge Your Children to Earn and Save

Write me today and find out how you can secure the first dollar for a little easy work.

SECRETARY, CHILDREN'S SAVINGS CLUB, DEPT. A., DES MOINES, IOWA

FOR SALE BY OWNER

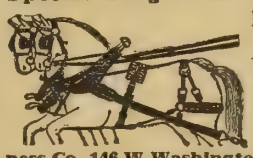
Twenty-two 80-acre cut-over, hardwood timber farms within three miles of town.

PRICES $18 TO $22 PER ACRE

Can give terms if desired. Write for descriptive booklet.

THE O. O. WHITED CO.
Radisson Wisconsin

Special Bargain in Brass Trimmed Farm Harness $34.75



YOU cannot afford to overlook this BARGAIN. Write for illustrated catalog. Address South Side Harness Co., 146 W. Washington St., Monroe, Wis.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

SALESMEN wanted to canvass the farming and threshing trade, soliciting order for Lubricating Oils, Greases and Paints. Previous experience unnecessary. Excellent opportunity for right party. Address The Victor Oil Company, Cleveland, Ohio.

POOR MAN'S CHANCE—$5 down, $5 monthly buys 40 acres grain, fruit, poultry land; near town, healthy location, some timber. Price $200. Write for list. Box 425-H, Carthage, Missouri.

FOR SALE BY OWNER on easy terms, a good section of land in Hettinger county, North Dakota. E. WILLIS, 53 E. 6th St., St. Paul, Minnesota.

CLEANER MILK? With an Ekvall Strainer. No cloth or cotton. Write for special offer today. E. S. P. Co., 12 N. State, Elgin, Ill.

SWEET CLOVER seed, special scarified, hulled and unhulled. Circular and prices on request. John A. Sheehan, Route 4, Falmouth, Kentucky.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

FARMER AGENTS: Write for 1916 agency for Diddie-Blitzen Rods—best Lightning Rod Sold. L. F. Diddie Co., Marshfield, Wis.

WANTED to hear from owner of farm or fruit ranch for sale. Address O. O. Mattson, 88 Andrus Bldg., Minneapolis, Minn.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Tempe Court, Minnea polis, Minnesota.

Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

Atwater's Duroc Gilt Sale.

THE annual sale of Duroc bred sows of L. F. Atwater, Bangor, Wis., will be held Tuesday, February 1st. These annual sales have become an event looked forward to by Duroc breeders throughout the middle West. The offering this year is of the same high quality as the animals which have won so consistently for Mr. Atwater at the leading state and county fairs in this territory. This year's offering more than ever before is made up of grand champion and prize-winning blood lines. There will be close to fifty head offered two-thirds of which are either daughters of Lee's Defender or out of daughters of this noted sire. He, it will be remembered was grand champion at the 1914 Wisconsin State Fair. The balance are daughters of Corrector, first-prize yearling at the 1914 Wisconsin State Fair, of Lucky Col. and Select Advancer. These are bred to Lee's Defender. The daughters and granddaughters of Lee's Defender are bred to Prince Illustrator, grand champion at the 1915 Wisconsin State Fair. He is by Model King by High Model by Golden Model and out of a King of Col. dam. The combination of these two grand champion boars is an offering that our readers should consider very carefully. The reputation that this herd has gained in the show ring gives added value to these animals and the development and type which they possess are proof that they will transmit the good characteristics which they have inherited. Mr. Atwater advises the writer that he will offer Lee's Defender at private sale. Here is an unusual opportunity to purchase a grand champion sire of outstanding individual merit. Catalogs giving breeding, pictures and description are now ready and will be mailed on application. When writing for catalog kindly mention The Wisconsin Farmer. See advertisement on this page.—Adv.

Trade Revival in Western Canada.

REPORTS come of a general trade revival in the prairie provinces of western Canada, including Manitoba, Saskatchewan and Alberta. The farmers in this section of the country are in good shape on account of the big crops this year. They have harvested a record crop of wheat which enriches them to the extent of about $400,000,000. Business is generally on the hustle in the western Canada country. Bank clearings have been the largest in history, exceeding in some weeks the banks of Montreal and Toronto. Grain shipments have been the biggest in the history of Winnipeg and the twin ports, Fort William and Port Arthur. The conditions of western Canada at the close of 1915 is one of optimistic prosperity. On page 35 of this issue will be found an interesting statement by George A. Hall, 125 Second street, Milwaukee, Wis., who is a Canadian government agent. Mr. Hall's advertisement tells something about the western Canada crops this year, and will be of interest. An illustrated pamphlet will be furnished to any of our readers upon request. Please mention this paper when you write to Mr. Hall.—Adv.

The Joys of Motorcycling.

A PERSON who has not tried it cannot begin to appreciate the joys of motorcycle riding or the zest and energy a spin in the fresh air puts into you. Motorcycles are a great convenience on the farm, too, and save many hours and dollars in running errands to the neighbors and in making hasty trips to town. With the basket attachment more than one member of the family can go at a time and while so very much cheaper, both in original cost and in operation, than an automobile, they are just as invigorating and as dependable. Harley-Davidson motorcycles are standards everywhere. They are built with three speed transmission, which enables them to climb the steepest hills with ease and gives a flexibility of speed control equal to the automobile. If you knew about a Harley-Davidson motorcycle you'd want one. You can find out all about it by writing for free catalog and other information which will be sent on request addressed to Harley-Davidson Motor Co., 1145 A. St., Milwaukee, Wis.—Adv.

Grundy's Bates' Milking Short-horns.

BATES milking Short-horn heifers and yearling bulls are advertised for sale on page 38 by A. T. Grundy, Oshkosh, Wis. These were sired by Beauty Duke E. 341325, that was by Oxford Duke E. and out of Beauty by Pennsylvania Duke. On his dam's side he traces to Janesville Champion Rose, a noted milk and butter producing cow. These heifers and bulls are out of daughters of Hillside Duke 302173 by Pennsylvania Duke and out of Little Maid 2d, also of the Janesville Champion, Rose family. It will be seen that these young bulls and heifers are therefore, richly bred along milking strains and their use in a herd will prove very valuable for improving the milking ability of the offspring. Big-type Poland China boars and gilts are also offered for sale.—Adv.

Kirkpatrick Brothers' Holsteins.

REGISTERED Holstein cows, yearling heifers and yearling bulls ready for service are advertised for sale on page 38 by Kirkpatrick Bros., Reedsburg, Wis. The yearling heifers and bulls are out of A. R. O. cows and were sired by a grandson of a noted bull, King of the Pontiacs, that has 164 A. R. O. daughters, nine with records above thirty pounds. Chester White boars and gilts are also offered for sale. For pedigrees and further information in regard to these animals write to the above address.—Adv.

Stubbs & Hyzer's Duroc Sale.

THE sale of Duroc bred gilts of Stubbs & Hyzer, West Salem, Wis., will be held Monday, January 31st. The offering is one of special merit on account of the choice breeding of the animals offered. It is largely an offering of daughters and granddaughters of the noted boar, King of Cols. This boar is one of the greatest transmitting boars of the breed. He has sired more noted prize winners than any other boar of the breed. There are also several daughters of Lee's Defender, grand champion boar at the 1914 Wisconsin State Fair. These gilts are bred to Lincoln's Model and King the Cols. Again. Lincoln's Model is an outstanding boar of Ohio Chief breeding. He himself won seven first and grand champion prizes at leading county fairs in Wisconsin this year and won second at Wisconsin State Fair against very heavy competition. Competent judges declared him to be one of the best boars on the grounds. The offering consists of thirty bred spring gilts and twenty aged and yearling sows. The sale will be held right in the city of West Salem, so that no driving will be necessary. The sale will be held in a heated, well-lighted sale pavilion, so that everything will be comfortable regardless of weather conditions. The railroad service is excellent to West Salem, it being on the main line of the C. & N. W. and C., M. & St. P. railroads. Trains leaving Portage or Madison Monday morning will get to West Salem in ample time for the sale. Catalog giving description, pictures and pedigrees are now ready and will be sent on application. When writing for catalog kindly mention The Wisconsin Farmer. See this page.—Adv.

B. W. Little's Durocs.

THE Duroc gilts advertised for sale on page 39 by B. W. Little, Janesville, Wis., are a fine lot of well-developed, choicely-bred individuals. Mr. Little has been breeding Durocs for a great many years and by careful selection and good management has built up a fine herd. He has always purchased sires of proven blood lines, using such good boars as sons of Defender, twice grand champion at the International, Advance a grand champion boar, Proud Advance a grand champion boar and others of equal merit. His present offering is of such foundation stock. They are out of daughters of Ohio King, Little Wonder and Defiance. They are bred for March and April farrow to Critic Top Col. half brother to the grand champion boar at the 1912 Nebraska State Fair, that also sired the grand champion boar at the 1915 Nebraska State Fair. Critic Top Col. is a son of the 1,000-pound boar, Dusty Critic 2d by Dusty Critic. His dam is Royal Belle, a granddaughter of Top Notcher Again, grand champion at the Illinois and Indiana State Fairs. It will be seen that the gilts offered for sale are of grand champion blood on both sides and that they carry litters sired by a boar of grand champion breeding. Mr. Little is also a breeder of Bates milking Short-horns and recently added a very valuable bull to this herd. He is a son of Oxford Duke 3d and out of 22d Duchess of Wapsie by Major Roughish Eyes. In this bull are combined the two great producing Wapsie and Oxford strains.—Adv.

McDonald's Poland Chinas.

THE Poland China herd of J. D. McDonald, North Bend, Wis., won sixty-one ribbons at the 1915 Wisconsin State Fair. This included three champions and one grand champion, as well as a large number of first prizes. Boars and sows of all ages are advertised for sale on page 39. These were out of big, prolific sows that weigh up to 800 pounds and had litters averaging ten pigs to a litter. Mr. McDonald is a careful, discriminating judge of Poland Chinas and in selecting breeding stock has shown excellent judgment. He has purchased animals of proven blood lines and of popular and well-known lines of breeding. Boars and sows not related can be furnished or sows bred for March and April farrow.—Adv.

Burn Brae Durocs.

THE Burn Brae Farm owned by Chas. A. Peterson, Rosendale, Wis., is the home of a fine herd of Duroc swine. Not only are the individuals well developed, but they are also backed by well-known and proven lines of blood. The gilts offered for sale on page 39 are daughters of Burn Brae's Distinction, Hazel Hurst Col. and Burn Brae's Model Col. They are bred for March and April farrow to Burn Brae's Golden Model. Several fine spring boars, weighing 275 pounds are also offered for sale. For further information in regard to breeding and description write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

A Reliable Commission House.

YEARS of successful operation have made Clay, Robinson & Co., easily the live stock commission house of the country. With offices at every leading live stock market, backed up by the work of the most expert salesmen in every line of live stock they can be depended upon to give the customers the very last word in service and secure for them the top price. Clay, Robinson & Co. is essentially a house of service and responsibility.—Adv

Thompson's Holsteins.

TWO registered Holstein cows are advertised for sale on page 37 by Thomas A. Thompson, Argyle, Wis. One of the cows is just fresh and has a fine heifer calf at foot. The three head are being offered very reasonably and will prove a profitable investment. Mr. Thompson is also offering three high-grade cows that are due to freshen soon and registered bull calves sired by King Pontiac Pioneer, a grandson of the noted bull, King of the Pontiacs, that has 165 A. R. O. daughters.—Adv.

Metz & Sons' Percherons.

IMPORTED and home-bred Percheron stallions and mares are offered by S. Metz & Sons, Homewood, Ill., who announce they have a lot of two, three and four year olds with size, bone and quality on which they will make prices and terms right. They also have a fine good aged stallion for sale worth the money. See their advertisement on page 39 and write them, mentioning The Wisconsin Farmer.—Adv.

Klassy's Holsteins.

THIRTY-TWO pounds of butter in seven days was made by the dam of Sir Netherland Longfield, the sire of the young bulls advertised for sale on page 38 by J. C. Klassy, Monroe, Wis. These young bulls range from one to six months of age, are well marked and in nice growing condition. They are from heavy producing dams of choice breeding and good individual merit. For pedigree and description write to the above address.—Adv.

North's Holsteins.

REGISTERED Holstein heifers and bull calves from three to ten months old are advertised for sale on page 38 by John North, Kilbourn, Wis. These were sired by King Clover De Kol Burke and by Oak Homestead Fobes, whose three nearest dams average over thirty pounds of butter in

STUBBS & HYZER'S SALE

BRED DUROC GILTS AND SOWS

WEST SALEM, WISCONSIN

MONDAY, JAN. 31, '16

50 BRED GILTS AND SOWS sired by **King the Cols.**, the sire of more prize winners than any other sire of the breed; **King the Cols. 2d,** a son of King the Cols.; **Lee's Defender,** grand champion at the 1914 Wisconsin State Fair. These are bred for March and April farrow to **Lincoln's Model,** that won second at the 1915 Wisconsin State Fair. He is a richly bred Ohio Chief strain boar. Sale held in the city. No driving. Send for catalog. I. E. Stickelman, auctioneer. H. S. Hoard will represent The Wisconsin Farmer.

STUBBS & HYZER -:- WEST SALEM, WIS.

L. F. ATWATER'S GREAT DUROC

BRED SOW SALE

BANGOR, WIS., FEBRUARY 1, 1916

47 HEAD OF CHAMPIONSHIP CALIBER AND BREEDING

30 GILTS OUT OF BLUE RIBBON SOWS

These are sired by the great Lee's Defender, and their dams are the sows I won my ribbons on at the state fairs this last summer.

10 GILTS OUT OF LEE'S DEFENDER SOWS

Their sire is Select Advancer, he by Chief Select, a full brother to Cherry Chief. Here is breeding unexcelled anywhere.

5 GILTS BY CORRECTOR

He by Sensation Wonder and out of a Golden Model 2nd dam. These five are bred to Lee's Defender; they are sure grand champion stuff, as Lee's Defender and Corrector were twice awarded the purple ribbons.

2 GREAT FALL SOWS

Sired by Lee's Defender; their dam a full sister to the sow that won three grand championships at the big fairs in 1915. These two sows themselves were first and second and trophy winners at two of the big shows in 1915.

Remember, two-thirds of this offering bred to farrow in March. I. E. Stickelman, Auctioneer. H. S. Hoard, Wisconsin Farmer field man. Send for my Catalog today.

L. F. ATWATER BANGOR, WISCONSIN

HAMPSHIRE SWINE.

40 Reg. Hampshire

SOWS and gilts, of royal blood and highest quality; bred to Kornfalfa King 28549, Junior Champion Wisconsin State Fair, 1915, sell at public auction Friday, January 21, 1916. For catalog and Hampshire booklet, address

A. M. LAIRD PRAIRIE DU CHIEN, WISCONSIN

BERKSHIRES.

CORTTE'S BERKSHIRES

WELL developed March boars and gilts of popular blood lines. Prices right. Address

A. P. Cortte Lomira, Wisconsin

Berkshires and Jerseys

THREE high-class, ten-months-old boars ready for service. Two extra good bull calves. Prices low for quick sale. Mention Wisconsin Farmer.

J. F. EGERTON, FOOTVILLE, WISCONSIN

RED POLLED CATTLE.

FOUR REGISTERED RED POLLED BULLS

TEN to fifteen months old, sired by McGovern out of producing Cows of choice breeding.

M. J. Rowlands & Son, Cambria, Wisconsin

High Grade Holsteins
A few heifers and cows usually for sale. Address **ALBERT VOGT, Oconomowoc, Wisconsin.**

HIGH GRADE HOLSTEIN CATTLE
for sale. Address **ALBERT DAVY, Oconomowoc, Wisconsin.**

HOLSTEINS
REGISTERED and high grade Holsteins for sale at all times. Address
W. G. STEEL - Oconomowoc, Wisconsin

25-LB. HOLSTEIN BULL
BORN December 2, 1914. Well marked, well grown, straight and right. Sire, King Segis Butter Boy. Dam, Blue Bell De Kol. A. R. O. record 23.50 pounds. Can spare a few heifers.
John Douglas Oconomowoc, Wis.

FOR SALE Registered Holstein bull 2 years old, and two 2-year-old colts and seed barley. Address
W. E. Bliss Oconomowoc, Wisconsin

4 WELL-BRED HOLSTEIN BULLS
READY for service, and a fine lot of bull calves, one two years old. His dam has a three year old record of 501.9 pounds of milk and 20.748 pounds of butter. These bulls are all well grown and well-marked and priced for quick sale. Address
Campbell & Messerschmidt, Hartland, Wis.

Fairlawn Farm
OFFERS 25 pure-bred females of all ages; 2 serviceable show bulls, some younger; all from A. R. O. dams. A choice offering, but priced to sell. Can also furnish 100 or more high-grade cows due to freshen this fall.
W. H. S. RHODA
OCONOMOWOC - WISCONSIN

River Vale Farm
OFFERS a few registered Holstein heifers and young cows. Some with A. R. O. records and due to freshen this fall to the service of the 26-lb.
KORNDYKE PONTIAC PIEBE BURKE
a grandson of Piebe De Kol Burke. Write for pedigrees and prices. Address
George H. Gibson Nashota, Wisconsin

REGISTERED
HolsteinBulls
FROM A. R. O. and untested dams. Bred for high production. Address
JOHN STEEL
OCONOMOWOC - WISCONSIN

WELL-MARKED HIGH GRADE HOLSTEINS
for sale. Address **J. J. O'NEIL, Oconomowoc, Wisconsin**

HOLSTEINS
WE offer several registered and high-grade cows and bull calves. Also pure-bred Embden geese, Rouen ducks and White Orpingtons.
Rosenow Brothers Oconomowoc, Wis.

REGISTERED AND HIGH GRADE HOLSTEINS for sale. Address **WM. PEEBLES, Oconomowoc, Wisconsin.**

BADGER STOCK FARMS
OFFER choice selections from the world's famous, Colantha Changeling Lad, whose dam has a 30.73 record as a junior four year old, four of whose dams average over 30 pounds. Over sixty head to select from. Address
Lawrence F. Murphy Hartford, Wis.

YOU WILL SAVE
TIME AND EXPENSE
When looking for HOLSTEIN CATTLE by coming to
Oconomowoc, Wis.
(Waukesha, County)
Here are 50 herds of Registered and High-Grade animals in which you will find a large selection of the type of animals for which you are looking.
Everything from grade heifer calves to 30-pound bulls are advertised here.

HOLSTEIN BULL
ONE year old, from a 14.24 pound two-year-old and by a son of a 34.96 pound sire. Price $115. Others of serviceable age cheaper. Mrs. Maria E. Gunderson & Sons, Oconomowoc, Wis.

ASHBURN HERD
A NUMBER of choice Holstein males and females out of granddaughters of King Segis and by Tritomia Ormsby. Write for description and prices. Address
J. J. Reid & Son Oconomowoc, Wis.

Registered Holstein Bulls
HIGH GRADE COWS AND HEIFERS for sale. Address
GEORGE CRAIG & SONS
Oconomowoc - Wisconsin

HOLSTEINS
BEING large breeders of Holstein cattle we always have a great number of cows and heifers for sale. All cattle bred to and sired by registered bulls. If you wish to buy of reliable farmers look us up.
Grand View Stock Farm, Oconomowoc, Wis.

ONE good high-grade cow, more white than black. Will freshen January 22, 1916. Easy milker. Address Mrs. S. Spoerke & Sons. Oconomowoc, Wisconsin.

TEAM OF BAY MARES
FOR sale, three and five years old, weigh about 1,200 lbs. each. Address August Borchardt, breeder of Holstein cattle, Oconomowoc, Wis.

FOR SALE
ONE heifer calf six weeks of age, sired by B. P. Prince; one heifer calf twelve weeks old and one bull calf out of Ormsby Duchess Marie, 21.32 pounds butter in seven days and sired by Beauty Pietertje Prince. All are nicely marked. Price $500.00. Address
C. B. Reddelien, North Lake, Wis.

We offer four yearling Holsteins sired by
ALDESLEY HOMESTEAD JOHANNA LAD
from 60-pound dams.

One 1,600-pound
Dappled Gray Horse
9 years old. Guarantee him true and sound.
W. A. Reid & Son, R. 2, Oconomowoc, Wis

La Belle View Farm
has world's record blood for you, a handsome young Holstein bull from splendid A. R. O. dam. Sire, Hillvale Champion, that has fifty per cent the blood of the grand old bull, Sir Ormsby Hengerveld De Kol, that has world's record daughters and granddaughters. Prices low. Herd sire is cousin to the new Dairy Queen of the world.
Earl E. Rosenkrans Oconomowoc, Wis.

WORLD'S CHAMPIONS
A SON of Paul Ormsby is sire of Ormsby Jane Segis Aaggie, world's champion seven day butter cow (44.42 lbs. butter.) A son of Sir Ormsby Hengerveld De Kol is sire of Duchess Skylark Ormsby, world's champion yearly cow (1506 lbs. butter.) Both these bulls were used in our herd. One of the best sons of each is used now. Such a combination of Ormsby breeding has never been effected in any herd in the world. A bull for every need, and our prices give you more bull for your money than any other breeder in the state. Investigate. Address
H. E. Reddelien Oconomowoc, Wis.

PABST STOCK FARM
EVERYTHING in Black and White. Herd of over 200 head of registered Holsteins. Young bulls from high-testing dams for sale. Three and a half miles east of Oconomowoc, Wisconsin.

FIFTY HEAD OF
PURE-BRED
Serviceable bulls from A. R. O. dams for sale.
Dopp Brothers, Ixonia, Wis.

seven days. Mr. North is also offering a few high-grade Holstein cows and heifers. For pedigrees and description of these animals write to the above address.—Adv.

Burt Farms Durocs.

THE Burt Farms, Brodhead, Wis., owned by F. H. Burt & Sons, has long been famed as the home of good Durocs. A fine line of breeding has been established. The ideal of a profitable farmer's hog has been constantly kept in mind, combining size with quality. Great care in feeding and development is taken, using alfalfa pasture to give the exercise and protein for muscle and growth. Big type and big litters are the kind bred. In connection with this I want to mention that a very interesting booklet is issued giving a description of the boars and sows in this herd. It gives the size of litters and description of the animals in the litters. The boars now in service are Professor B., a grandson of the noted boar, Professor, a great boar whose influence in the breed has been of much value. Crimson Correct, a son of Corrector, first-prize yearling at the Wisconsin State Fair; Burt's Special, a grandson of Fancy Col. A fine lot of gilts are advertised for sale on page 39. These are bred for March and April farrow to Model Wonder 182445 by Jud King, first prize and grand champion at the 1915 Minnesota State Fair. For further information in regard to these animals write to above address.—Adv.

Mankato Incubators for $7.25.

THE Mankato incubator comes all set up, with its triple walls, asbestos lining, heavy, pure copper tank, safety lamp, tested thermometer, etc., already for use. It is made of California redwood and thousands in daily use are giving satisfaction everywhere. They cost only $7.25 and are backed by a strong guarantee. You can find out all about this unusual proposition by answering their advertisement on page 24 and writing Mankato Incubator Co., Box 708, Mankato, Minn., and mentioning this paper.—Adv.

Eighty Per Cent More Power in Hudson.

ANNOUNCEMENT of the Hudson Super-Six appears in this issue and it will be of very great interest to anyone who has any intention of looking over the automobile offerings. The Hudson car now offered has 80 per cent more power—seventy-six horse power to be accurate, and yet the price has been greatly reduced and the car has been made much more popular because of the added refinements. It is not necessary to coach the average car driver as to the advantages which may be gained by this added horse power. The Hudson people have employed the most experienced engineers which money has been able to buy and have been leaders in striking changes for the better in the beauty of their car. The Super-Six, an illustration of which may be seen below, is certainly a beauty and with the reduction in price becomes an exceptionally attractive automobile offering. This new car is large enough to go anywhere that a car can be expected to go. It has beauty and ease of motion and simplicity of control. It is indeed a luxurious car. Dealers in this state and vicinity will be glad to give demonstrations of this new car at any time. A list of dealers will be found in the advertisement on page 2. Please write to the Hudson Motor Car Co., Detroit, Mich., and ask for new catalog describing the Super-Six. Kindly mention this paper when you write.—Adv.

Parker's Cholera-Immune Durocs.

THE Duroc spring gilts advertised for sale on page 39 by E. H. Parker, Janesville, Wis., have been made cholera immune. Mr. Parker has been very successful in his treatment and has used it for several years. The gilts offered for sale are well grown, weighing 225 pounds or more. They are of good type, wide and deep throughout. In breeding they are of the best, for they were sired by Defender's Golden Model, a son of Lee's Defender, grand champion at the Wisconsin State Fair, both in 1914 and 1915. Some were sired by Wonder Boy by Marion's Wonder, grand champion at the 1912 Wisconsin State Fair. The dams of these gilts were daughters of Illustrator, the $2,000 grand champion at the Illinois State Fair. Dominant Col., the 1912 Illinois State Fair grand champion and daughter's of Lee's Defender and Marion's Wonder. Mr. Parker recently sold fifteen gilts and a boar to one

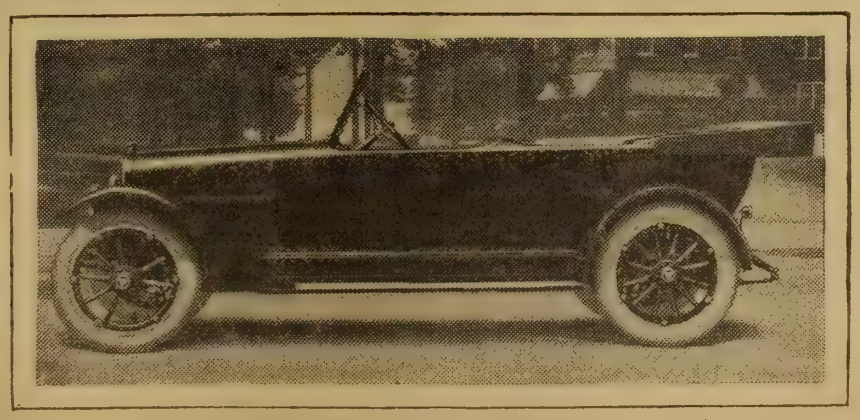
DAIRYMAID'S KING.

SIRE of the yearling Guernsey bulls advertised for sale on page 38 by M. L. Welles, Rosendale, Wis.

man, which is evidence that his gilts are of outstanding good type. For pedigrees and further information in regard to these animals write to the above address.—Adv.

Birchwood Guernseys.

THE herd of Guernsey cattle owned by M. L. Welles, Rosendale, Wis., is one of which any breeder might well feel proud. His herd numbers about seventy-five head of registered animals, all of which are choicely bred and of high individual merit. For the past eleven years semiofficial testing has been done every month with the exception of one month, so that practically every animal on the farm of milking age has an A. R. record. Mr. Welles is a careful, discriminating judge of good cattle and has developed an excellent herd. The sire at the head of the herd is Dairymaid's King, an outstanding bull of great size, capacity and constitution. He is full brother to the former world's record cow, Dairymaid of Pinehurst, the first cow of the breed at her age to make 910 pounds of butter fat in a year. His sire was Glenwood Boy of Haddon, that has twenty-six A. R. daughters. His dam was Dairymaid of Elmplace, that made 668 pounds of fat in a year. Dairymaid's King is not only backed by good production blood, but he has transmitted this ability to his offspring. He now has nine A. R. daughters. The cows in this herd are of equally choice breeding. There are a number sired by Penwyn 2d, a half brother to Dairymaid of Pinehurst and a number closely related to Masher's Sequel. The yearling bulls advertised for sale are well grown and from A. R. dams. They are being priced very reasonably and our readers should not overlook this opportunity if in the market for a herd sire. See advertisement on page 38.—Adv.



THE NEW HUDSON SUPER-SIX.

TOO LATE TO CLASSIFY.

At Reasonable Prices
REGISTERED HOLSTEIN bulls from 1 to 11 months old. Sired by King Pontiac Pioneer, that is backed by the world's champion cow.
Thos. A. Thompson Argyle, Wisconsin

POLAND CHINA
BRED SOWS. Prices very reasonable if taken within thirty days. Address
W. H. Esterly Whitewater, Wisconsin

A Handy Business Calculator.

THE Keystone Steel and Wire Co., are offering to do two things for you in their advertisement on page 33. If you will write for it they will send you free a copy of Ropp's New Calculator, which gives the answer to any business problem that can be settled by arithmetic, quickly and accurately, and they will also tell you the advantages of their "Square Deal" fence. All you need to do is to address Keystone Steel & Wire Co., 5856 Industrial St., Peoria, Ill., and mention this paper.—Adv.

HOLSTEIN-FRIESIAN CATTLE.

Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir KorndykePontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

22.27-POUND HOLSTEIN BULLS

BORN March 18, 1915. Mostly white. Dam's A. R. O. record at 26 months old, 22.67 pounds of butter in seven days; grandam 26.93 pounds. Every dam in pedigree tested, all with records over 21 pounds. Write for pedigree, price and description. Mention Wisconsin Farmer. Address
Truttschel Bros., Sheboygan Falls, Wisconsin

REGISTERED HOLSTEIN HEIFERS

ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026, a richly-bred Ormsby bull. Address
Jacobson Bros. **Menomonie, Wisconsin**

PONDEROSA HOLSTEINS

A 23-POUND Holstein bull ready for immediate service. A splendid individual, mostly white, right in every way. Sired by Daisy Hengerveld Piebe Champion. Dam, a granddaughter of Homestead Jr. De Kol. Can also spare a few A. R. O. cows and heifers. Send for prices and extended pedigrees. Address
W. P. Kissinger **Waupaca, Wisconsin**

SONS OF THE 32-LB. HOLSTEIN BULL
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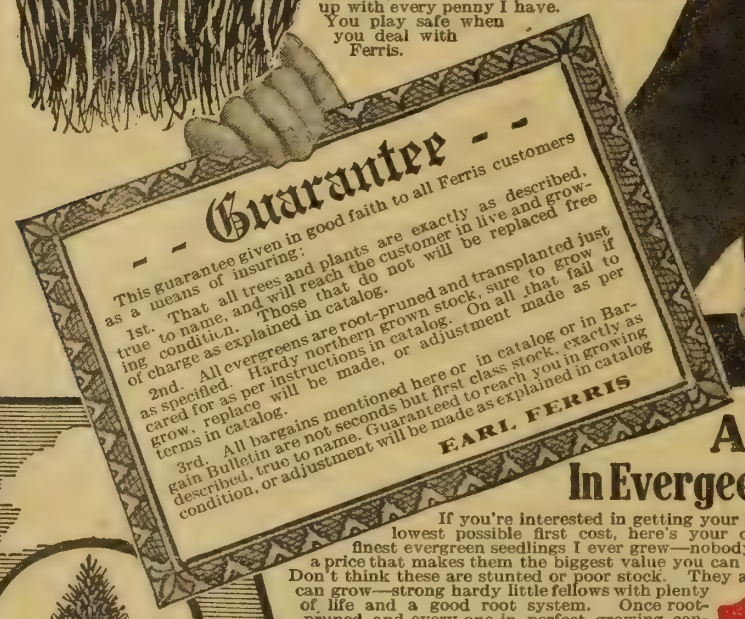

LISTEN

I don't care where you buy or how, you cannot buy better trees than I am offering you. You'll never beat Ferris trees for quality—better ones don't grow. I know how to grow strong, hardy trees that are full of vitality—I've studied trees for forty years. Ferris trees will **grow for you**—they have the stamina and life in them that **insures** growth.

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Read carefully the bargain offers I'm making on this page. **You cannot buy more for the money anywhere.** They're special bargains for readers of my ads—order right from the ad. Don't overlook these big values. My great guarantee makes you safe. Mail your order today and save money on the finest stock that grows.

My Customers Call Me the "Evergreen Specialist"

My specialty is evergreens. I've learned how to grow them **right** by long experience and scientific study. Ferris evergreens are cultivated by modern methods and there are, today, no better ones grown than I can show you right here in my nursery.

For any man who wants a windbreak on his farm Ferris evergreens solve the problem. They will grow for you—for anybody. Hundreds of groves of my trees are now growing where the owners had despaired of getting evergreens to grow. My trees are root-pruned and transplanted until they have great masses of roots that will nourish the young tree in almost any soil. Note the pictures in the small circles. They show the development of the root system of a Ferris evergreen. It's these big masses of small roots that insure growth. That's the secret of sure-to-grow evergreens.

Yes, there is a reason why my trees grow. They grow because my knowledge and experience in evergreen culture enables me to grow stronger, better, hardier trees than other methods can produce.

A Bargain In Evergeen Seedlings

If you're interested in getting your windbreak started at the lowest possible first cost, here's your chance. I'm selling the finest evergreen seedlings I ever grew—nobody grows better ones—at a price that makes them the biggest value you can ever buy in seedlings. Don't think these are stunted or poor stock. They are as good as seedlings can grow—strong hardy little fellows with plenty of life and a good root system. Once root-pruned and every one in perfect growing condition. They'll reach you alive and will grow. You can't start a windbreak row any cheaper than with these Ferris seedlings. See our catalog for transplanting directions.

100 trees for $1.50

GET MY BIG CATALOG FREE

I want you to have a copy of the new Ferris catalog. It's a book you need if you are interested in nursery stock. Printed in colors. Gives you valuable suggestions about planting and caring for nursery stock. Write for the catalog and look over the big bargains I'm offering. You'll find something that will interest you. Most complete guide in planting and caring for nursery stock ever printed.

100 ROOT-PRUNED TRANSPLANTED EVERGREENS $4.50

Genuine, sure-to-grow, Ferris evergreens. Every tree perfect—not a weak one in the bunch. Strong—vigorous—hardy. These evergreens have big root systems—have all been root-pruned and transplanted until the strength of the tree is in the roots. They will grow in your windbreak row and grow fast because they have the vitality that makes growth sure. Biggest value offered.

Sold under the big, satisfaction-or-replace guarantee.

Order Now

Fine Apple Trees 10¢

The apple tree bargain of the season. Your choice of 25 standard varieties of apples—10 or more trees—at a price one-third the value of the trees. Northern-grown, hardy trees 4 ft. or over in height and in perfect condition—every one actually worth 30c of anybody's money. Save 20c a tree and get guaranteed trees, now.

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$1.00 for 300 Standard varieties of strawberry plants. Hardy, fast-growing. Big producers of large, delicious berries. Regular price, 100 for $1.00. I'll save you $2.00 if you order now. Here is a Ferris bargain that can't be beat.

EARL FERRIS NURSERY CO.

265 **Bridge Street** **Hampton, Iowa**

BARGAIN NO. 1

50 of our new Jones Strawberries, 12 Cumberland Raspberries, 2 Concord Grapes, 2 years old; 2 Niagara Grapes, 2 years old. If ordered at once, one Crimson Rambler Rose Bush **FREE.** This combination by parcel post, prepaid

98C POST PAID

BARGAIN NO. 3

This bargain is made up of the hardiest and best flowering shrubs we grow. They are all good strong plants that will give absolute satisfaction and are all one year field grown plants which makes them suitable for sending by parcel post. This is a collection that an agent would sell for $3.50. See our new catalog for full description and transplanting directions. 1 Hydrangea, 1 Common Snowball, 1 Japan Snowball, 1 Yucca Filamentosa, 1 Dorthea Perkins Rose, 1 Crimson Rambler Rose, 1 White Perkins Rose, 1 Purple Lilac. Our special price, if ordered at once, by parcel post

$1.68 POST PAID

BARGAIN NO. 2

Agents are selling St. Regis everbearing red raspberries for $5 per dozen and would ask for a collection of this kind $7 or more. Now, we will give these 48 choice raspberry and blackberry plants, 12 Stone's Hardy Blackberries, 12 Cumberland Black Raspberries, 12 Loudon Best Red Raspberries, 12 St. Regis Everbearing Red Raspberries. Do not over look this wonderful bargain. If ordered at once the entire collection will be sent you by parcels post, prepaid, at our special price of

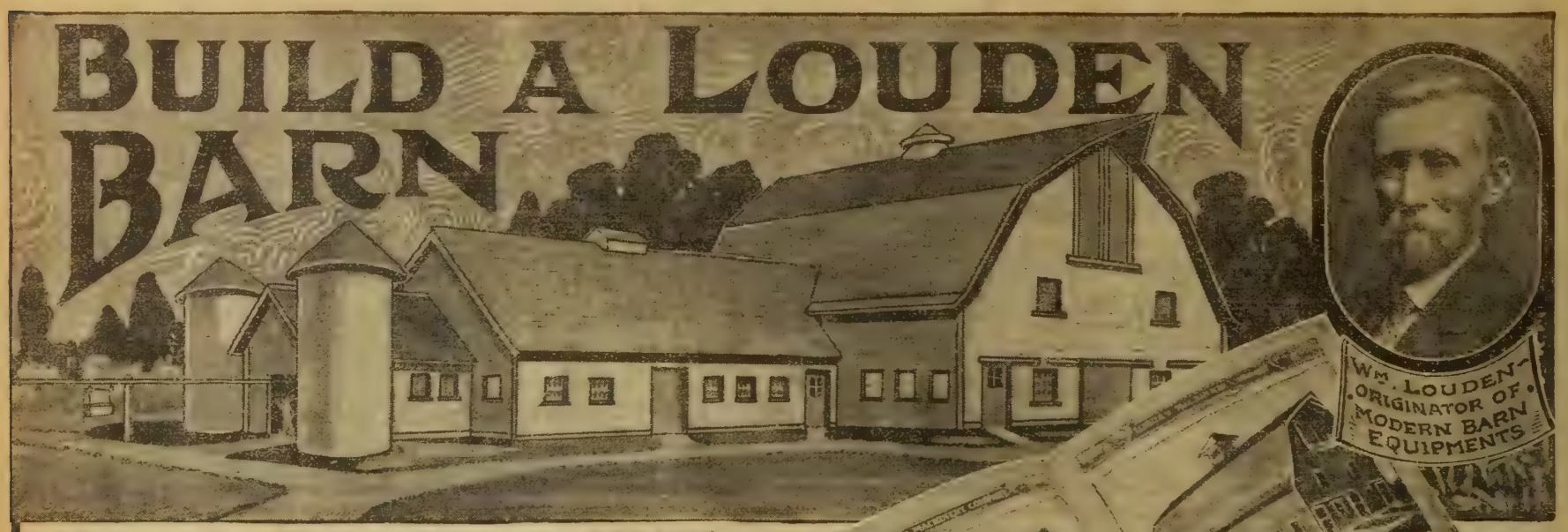
$1.86 POST PAID

THE WISCONSIN FARMER

VOL. XLV. NO. 3. THURSDAY, JANUARY 20, 1916. WHOLE NO. 1773

A
GOOD SUBJECT

BUILD A LOUDEN BARN



BOOK OF BARN PLANS FREE

If You Are Going to Build a New Barn or Remodel an Old One You Should Have This Book

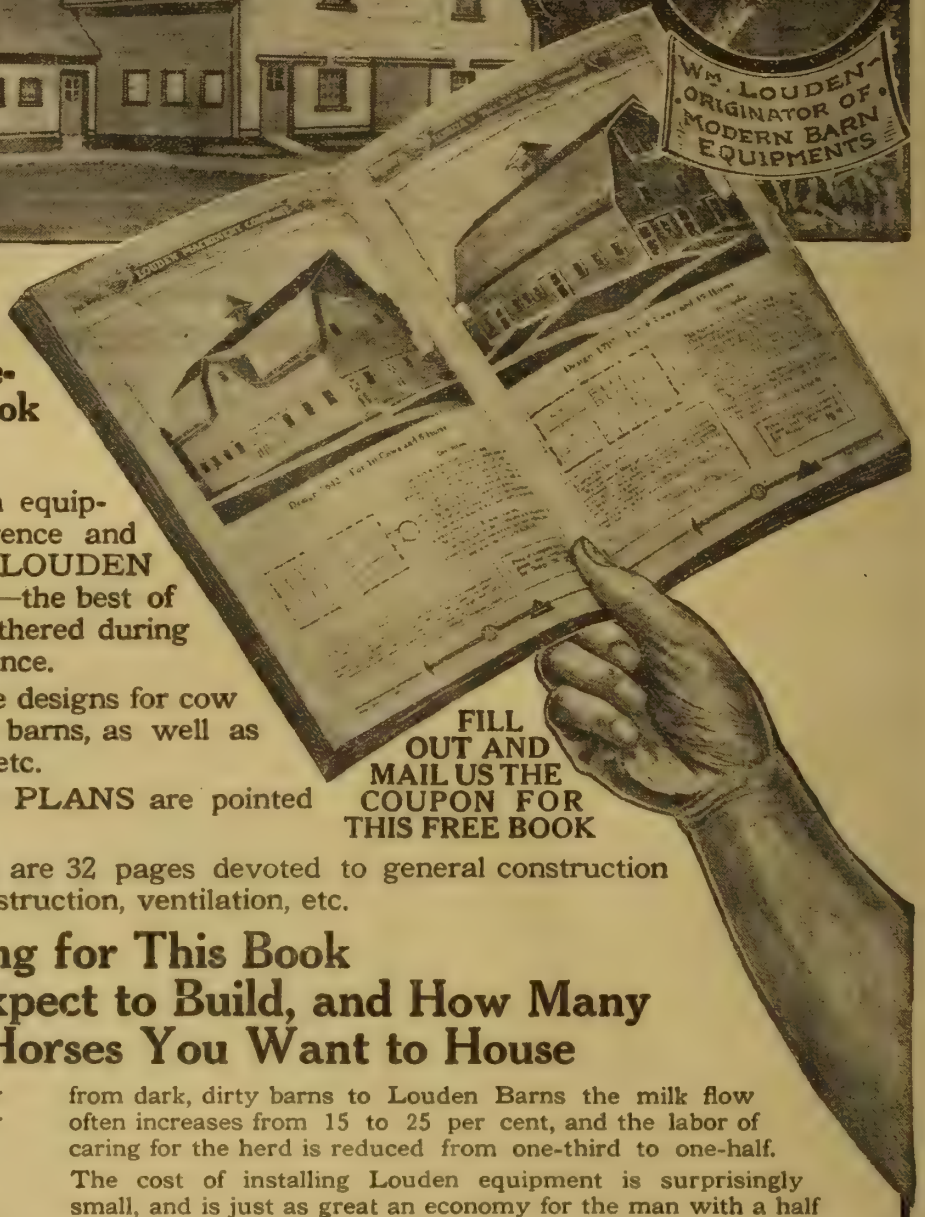
Why Not Build This Season?

LOUDEN BARN PLANS is not a catalog of barn equipment. It is a complete and valuable book of reference and instruction on barn construction. The 112 pages of LOUDEN BARN PLANS are full of dollar-saving information—the best of the building ideas that the Louden Company has gathered during 48 years of barn-building and barn-equipment experience.

LOUDEN BARN PLANS contains 51 representative designs for cow barns, horse barns, combination and general purpose barns, as well as many other designs for hog barns, pens, hay sheds, etc.

The advantages of each design in LOUDEN BARN PLANS are pointed out, and estimate of construction cost is given.

In addition to the barn plans shown in the book, there are 32 pages devoted to general construction problems, such as concrete work, laying floors, roof construction, ventilation, etc.



FILL OUT AND MAIL US THE COUPON FOR THIS FREE BOOK

When Writing for This Book Please State When You Expect to Build, and How Many Cows and How Many Horses You Want to House

WE HAVE DESIGNS FOR NEARLY 4,000 BARNS and our architects will give your letter personal attention if we learn your exact requirements.

LOUDEN BARN EQUIPMENT

Louden equipment makes possible a clean, sanitary barn with a minimum of expense for upkeep. When cows are transferred from dark, dirty barns to Louden Barns the milk flow often increases from 15 to 25 per cent, and the labor of caring for the herd is reduced from one-third to one-half.

The cost of installing Louden equipment is surprisingly small, and is just as great an economy for the man with a half dozen head of stock as for the man with hundreds of animals. The percentage of labor saved is the same.

The Louden Line of Sanitary Steel Equipment Includes:

Litter Carriers
Feed Carriers
Milk Can Carriers
Harness Carriers
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Feed Trucks
Cow Stalls
Horse Stalls
Mangers
Manger Divisions
Feed Racks
Hay Loft Equipment
Cow Pens
Calf Pens
Bull Pens
Hog Pens
Sheep Pens
Bird Proof Barn Door Hangers
Water Basins
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Interior view of the new round barn of the Hershey Company, of Hershey, Pa., manufacturers of the famous Hershey Milk Chocolates. This barn is fitted throughout with Louden Equipment.

CATALOGS FREE

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State time _____

Size for _____ *Cows and* _____ *Horses*

Name _____

P. O. _____ *State* _____

The Wisconsin Farmer

THURSDAY, JANUARY 20, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

PREPAREDNESS IS DOOMED.

IT IS VERY evident to me that the "powers that be" at Washington have been learning the temper of the people—especially of the farmers—here in the middle West on this question of national preparedness. I notice by one of the large daily newspapers today that the president is planning on making a tour through the middle West in the spring, speaking in the larger cities of the grain belt, for the express purpose of counteracting the sentiment against preparedness. The newspaper adds that the president has discovered, to his amazement, that the opposition is much stronger here in the grain belt than any place else, and he realizes that with this portion of the country almost a unit against the plan it cannot possibly succeed. This newspaper story coincides with another one which states that the chairman of the house military committee has advised the president that the preparedness plan is losing strength every day and stands but little chance of passing congress.

Why is it, my friends, that conditions are found to be thus? Solely because the farmers of this great, fertile section of the country, which no one better than the president knows to be the incubator of patriotism and of sound economic ideas, have been thinking over the matter and cannot find anything in the present crisis sufficiently grave to cause us as a nation to abandon the path along which we have trod to such unparalleled prosperity and to force us into the rocky road which leads to compulsory military service, imperialism and general militarism. I do not believe there has been any issue in the last twenty years, unless it was that of one-sided Canadian reciprocity, upon which the farmers of the grain belt, and I believe of the entire United States, have agreed with so little dissension. We are a peaceful, law-abiding nation, respected by every other organized government in the world; we are the ones to whom the warring nations are looking not only for a continuation of their foodstuffs, but as an asylum for their war-sick men and women, once this barbaric struggle is at an end; likewise as the one place in all the wide world where the torch of liberty is expected to be kept burning brightly, unquenched by the poisonous fumes and gases which belch from the mouths of millions of guns and cannons over in Europe. Shall we turn our backs upon our responsibilities, be false to all these trusts, when the only call for us to abandon our peaceful paths and vocations comes, I believe, from those who have a selfish, monetary interest in the matter or who are temporarily carried away by a wave of false patriotism?

My friends, I feel very deeply on this subject; that is one reason why I keep it before you so much of the time, here in my page of heart-to-heart talks. I believe you agree with me, for the letters which come to my desk, literally by the scores and hundreds every week, are almost all written in the same vein: Approval of what I am doing. Here, for instance, is one of the last, written by Mr. W. F. Porter, of La Plata, Missouri, after reading my article answering the soldier, on the Texas border, who wrote to inquire why the farmer should have any more to say on a nation's preparing for war than a soldier should be expected to judge Poland China hogs or Jersey cattle. Mr. Porter, a good farmer and a good patriot, writes as follows:

> In your last week's paper you have answered the soldier fairly and without harshness. His letter evidently showed the prevailing contempt for those engaged in peaceful pursuits by those of his profession. The soldier is scarcely to blame for adopting such a view, for writers of fiction, of history and speakers from the forum have for ages magnified the importance of the soldier. And in saying this I do not mean to detract one iota from the credit due to the defenders of our country, nor would I have my friend, the professional soldier, forget that in every crisis of our country the farm and shop have not only cheerfully contributed to the needs of the armies in the field, but have as promptly furnished the men for the firing line, and history proves that there they were the bulwark of our nation's defense. If ever the time comes when the soldiery of our nation succeeds in divorcing itself from the producers of material things, as seems to be the incessant cry of a few war heroes, then may God pity this country, for its decay will be sudden and swift. Every homemaker is a home protector, and while in his patriotism home and country are so blended that his protection extends as freely, yes, I may say as fiercely, for the one as the other, a country so protected is safe against attack from without or within. But, let the army become a burden upon the people because of its size and expenditures and the people will say, "Let *them* fight; that is what we have been keeping them up for," and the feeling of personal interest and personal responsibility will lessen and in time cease. If there were reasonable possibilities of need for extra preparedness there would be no objections raised by the farmer. But we are not caring to rush in and overwhelm the war-depleted powers of Europe, and they will be in no condition, nor have any inclination to make attack upon our peace. Then why this extravagant, blustering rush to arms?

Shall we not continue to harbor high ideals, to strive after what we believe to be right and best, to hold the ship of state true to the course which reaches toward the haven of peace, plenty and prosperity and turn our backs on those who would lure us into blood-filled trenches and over blood-stained battlefields? With the rank and file of American farmers united, we can crush the military spirit which seeks to become rampant and can keep our nation an agricultural and industrial one, given over to the useful pursuits of peace, rather than to the destructive ones of awful, useless war.

CONFIDENCE IN THE BANKER

I SPENT a very enjoyable half hour last night reading an address delivered before the Farmers' Institute of Mills county, Iowa, by Fred Durbin, a man of lifetime experience in farming and sixteen years' experience in the banking business. Mr. Durbin spoke on the relations of the farmer and banker, a subject which is always intensely interesting to me. I congratulate him on his very excellent address.

One point Mr. Durbin brought out was that no man has greater confidence in the country banker than has the farmer. He illustrated this by telling of a farmer, one of the bank's customers, who came in during the panic of 1907, when clearing house certificates were being issued in lieu of money quite generally throughout the country, and said he would like to use $5 of the sum he had on deposit, but if the bank did not want to let him have it he would get along without it somehow. Mr. Durbin adds this pertinent comment:

> If all depositors were as fair as this one, banking would be a bed of roses. In contrast to this incident, a man sat in our bank one day during that panic and said that if he had any funds in a bank and that bank refused to pay them out, he would close the doors of that bank. This man should have been told to close the door from the outside, for I had personal knowledge that he had almost closed the doors of a bank, for, by his own plunging, he had lost them many thousands of dollars. I know we owe it to the farmers of our community that the banks of Malvern were not forced to limit the payments of checks during that panic. They realized the fact that their own institutions were at stake and rallied to the support of the banks even though they were not stockholders in the institutions.

In another portion of his address Mr. Durbin raises the interesting point, extremely well taken, I think, that when you are a depositor in any bank you are a partner in that institution just as much as though you were a stockholder or a director. It is your money that is keeping the bank solvent, that is enabling the banker to carry on his business. You have an interest in that bank, therefore, just as much as if you owned a block of stock or were an official thereof.

I have always contended that it was the grain belt which saved the nation from serious financial panic back in 1907. The East was extremely hard hit; we confronted one of the most serious crises in our history. But the sound, substantial, reliable middle West refused to lose its head, refused to let the panicky feeling rob it of its good sense and by rushing money from the middle West—where depositors had faith in their banks and bankers—back to the East, where the danger was most imminent, the panic was averted and the nation rallied. It was the confidence which the farmers of the grain belt felt in their home-town banker that saved the day and the nation.

Do you think for a minute that if the farmer, who comprises more than one-half the population of the middle West, did not have absolute confidence in his banker the number of banks in seven states here in the grain belt (Wisconsin, Illinois, Iowa, Missouri, Kansas, Nebraska and North Dakota) would have increased 232 in the last year, or that the deposits in nine of the ten grain-belt states would have increased over $220,000,000 in the state and savings banks in the same time? Banks are not being established if there is no business in sight; depositors are not putting their money away in annually increasing amount unless they have absolute confidence in the men to whom they entrust their earnings. Mr. Durbin is right, indeed, when he concludes his address with these words:

> There are nearly 150,000 bankers in the United States and several million farmers. Every man is a power in his community. Can you imagine the tremendous influence these men would have upon our agricultural and commercial life if they became better acquainted with each other and helped each other to become more efficient?
>
> The banking institutions of this country are open to you.
>
> Get acquainted with your banker, enjoy his hospitality, use him when you need him and help him when you can and by so doing your farm lands will grow richer, your sons and daughters will be provided for and your banking institutions will grow stronger and the union between farmers and bankers will be complete.

THE VALUE OF SAVINGS.

I WANT to say just a word to some of my young readers on the subject of thrift. I sometimes fear the present generation does not sufficiently realize the value of the pennies.

Of course, the farm boy working at home, who does not receive a regular wage, does not have the chance to start and maintain a bank account as does the city boy. Yet I have the honor to know any number of farmers, now well-to-do, who started on their own hook with nothing more than a pig or a calf their fathers had given them, or who were allowed the product of some one acre, and by hoarding their small earnings soon found themselves in a position where the home-town banker was knowing them by sight, through seeing them come in every now and then with their little deposit, adding to their savings account. One of my editors, who recently spent a day on the farm of Frank Gotch, the world's champion heavyweight wrestler, told me that Gotch's fortune today, conservatively estimated at a quarter of a million dollars, is due as much to his thrift as to his big earnings on the wrestling mat. If Gotch won $10,000 or $15,000 one day wrestling and had a chance to make $50 more the next day by exhibiting in a theater he invariably took the smaller job and the smaller sum, no matter how big had been the earnings the day before. Don't despise the little amounts, my young friends, just because you made a bigger amount yesterday, or think you have a larger stake coming in soon.

I was quite interested, in reading one of the current magazines, to see how small savings ultimately develop into large ones. This magazine goes on to say that if a young man deposited $5 every week he would see the day, in twenty-five years, when he could retire from active work and have an income as large as that from which he saved the $5 weekly in the beginning. It is quite interesting to see how it figures out. At the end of the first six months of the weekly deposits of $5, the young saver would have $130. At the end of the first year he would have $262.60, including the 4 per cent interest allowed by the bank. The magazine then has him invest his savings in a real estate mortgage, drawing 6 per cent, with the following result:

> Having made the investment, at the end of the fourth year of his saving, the young man would look forward to saving, the first six months of the fifth year, the following: First, of course, his regular weekly deposit of $5, or $130; second, the six months' interest at 4 per cent on $123.89 (the amount left after he had drawn out $1,000), which would amount to $2.46; third, the interest at 6 per cent, earned by his real estate mortgage, or $30. This would make a total of $162.46, added to the $123.89 left in the bank after drawing out the $1,000, and the total would amount to $286.35. By the end of the fifth year, this sum would have increased to $452.08—almost half enough to buy another $1,000 mortgage with.
>
> He would be able to buy his second $1,000 mortgage at the end of the seventh year. It would not be very long after this before he would arrive at the point where he could buy the $1,000 mortgages with greater frequency. If he continued the plan for twenty-five years he would own fourteen mortgages and have a bank account amounting to $761.33. By using the accumulated interest on these two, together with the regular $5 weekly saving, he would at this time be able to buy a $1,000 mortgage every six months.
>
> By this time he would have reached his forty-seventh year, provided he started saving when he was twenty-two years old. Suppose he continued until he was fifty years of age. At this time he would own $17,000 in 6 per cent mortgages, and have a bank account amounting to $799.22. He could easily retire then. Figure the income from his capital. Four per cent a year on $799.22 would amount to $31.17. Six per cent a year on $17,000 is $1,020. Add them, and you find that he receives an annual income of $1,051.17 or $20.21 a week.

I am not going to say that many farm boys can do this, keeping it up uninterruptedly. I do maintain, however, that this shows in striking manner the possibilities of small savings. My young friends, save your pennies and nickels, invest them carefully and the day will come when your money will work while you rest at ease.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

301 Locust Street Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

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Wisconsin Live Stock Organizations Should Not Die.

THE latest figures furnished The Wisconsin Farmer by the Wisconsin Live Stock Breeders' Association shows that 122 community live stock breeders' associations have been organized in this state. This puts Wisconsin in the lead in this state, and we wish to urge the members of those organizations which are dying out to wake up; put them back on their feet and get into the game of improving farming and stock conditions in their communities. No organization can live without enthusiasm; without the interest of its members and where one of these community organizations is dying from lack of interest someone should assume the leadership and apply the remedy immediately.

Mention is made of this matter at this time because we learn from the secretaries of some of the community organizations that no winter meetings are being held, as some of the members have "dropped out," others "moved away," others "disinterested" and "will not attend," etc. Several secretaries have written The Wisconsin Farmer that their organizations are in a state of coma—just sleeping peacefully when they should be actively engaged in interesting every farmer in their community in better stock, in better farming methods and in other things which will tend to increase the farmer's profits and in turn the profits of the community.

Every movement must have a leader, and without a leader any movement will die. So every organization, whether township, county or state, must have a leader, and if you see the interest in an already organized association dying out it should be your duty to assume the leadership and put your shoulder to the wheel and insist on the co-operation of others. There has not been a community association formed in Wisconsin that should not continue. If there was ever any reason for the organization there is reason to keep it alive. In Wisconsin there are scores of these organizations which are not only doing a great work for the farming business of the state but are making better profits for themselves by bringing their communities to the front. Waukesha county has won a national reputation as a dairy center because of its county dairy organizations. Waukesha county had good dairy stock for sale and advertised the fact to the world, and as the farmers found the market growing they increased and improved their herds and asked and received better prices for their stock. Sheboygan county, Jefferson county and many others have done and are doing the same thing, and there are scores of counties with fine herds and fine farms which are today unheralded and in which the breeders are taking lower prices than they would have to take were they better known. The advertising feature is only one of the many functions of the community organization, and we should not like to see a single one of the 122 which have been organized go out of business. If your organization is sleeping take upon yourself the duties of leadership, apply the enthusiasm to make it a success. Waiting for the other fellow to do it never results in getting anything done. There is also room for many more of these organizations; in fact the need is very urgent in many communities, and there lies the opportunity for some wide-awake booster to do his community a favor by putting the ball into motion.

Where One Cow Is Worth Seventy-three Cows.

IF THERE remains a dairy farmer in Wisconsin who does not consider it worth while to test his cows we believe the report of the official tester of the River Falls and Roberts Cow-Testing Association for the year ending last February will prove an eye opener to him. This report shows that the owner of the poorest cow in the association would have to milk seventy-three cows of her stripe in order to equal the profit of the one cow which was first in the association. The report also brought out the fact that in the association there was a cow in one herd which produced 317 pounds less milk but yielded 210 pounds more butter fat, which at 31 cents a pound, leaves a difference of $65 in favor of the cow producing the smaller yield of milk. So it is seen that the small milk producers are not always the lowest fat producers, and the only way by which the difference can be determined is with the scales and the test. Certainly no better illustrations can be given of the value of the test of why the unprofitable cow should be consigned to the shambles.

The poorest cow in the association returned to her owner a profit of $1.64 above feed. For a year's shelter, care and feed she contributed just $1.64 from ninety-seven pounds of butter fat. On the other hand the best cow produced 570 pounds of butter fat and gave her owner a profit above feed of $116.65. The poorest cow produced her butter fat at a cost of 30 cents per pound; the best cow at a cost of 10 cents per pound. Undoubtedly the owner of this poorest cow will dispose of her immediately unless he is in dairying for the fun of it, as one cow like the best in the association would return him as much profit as seventy-three cows with the same productive ability of this poorest cow. We are pleased to note that all of his cows were not of the poor character and the report shows that the poorest herd averaged 177 pounds, which is a pound or two better than the average for the state.

The figures show that it cost more to feed the good producers than the poor producers, which bears out the oft-repeated statement that the good dairymen are good feeders. However, by spending $3.70 more for feed the best cow produced $40.09 more profit, which certainly warrants the additional feed expense. The length of time a cow is milked also has something to do with her profit and the best cows in this association for the year had a lactation period of 10½ months against an average of nine months for the poorest cows. The best results also came from the cows about six and seven years of age.

The fact that after a year of testing it was shown that some of the smaller milk producers returned more profit on butter fat than those cows with the heavy flow proves conclusively the need of the test, even if the test had no other recommendation.

Wisconsin Banks Show Gain in Business.

BANK statements are always taken as a reflector of the financial conditions of a community, and the annual report of the Wisconsin commissioner, Mr. A. E. Kuolt, certainly bespeaks the prosperity of Wisconsin. This state enters the year 1916 in the very best condition, financially, following a year of big crop yields and satisfactory business conditions which have fully adjusted themselves following the short depression during the outbreak of the war in 1914. Mr. Kuolt has just filed his report with the governor.

During the year deposits in the state banks, those under state supervision, increased $14,897,317 as compared with a year ago while loans and discounts only increased $6,270,218. The average reserve held in the banks has been raised from 19 to 21 per cent and the aggregate capital invested has increased to $22,898,250, a gain during the twelve months of $1,078,300. Their total resources are $253,941,928, which shows a gain in resources for the year of $15,380,195. During the year forty-three new banks were chartered, bringing the total up to 688 state banks, four mutual savings banks and fifteen trust companies.

Certainly with increased deposits and combined resources of $253,941,000 there is no need to look back upon 1915 with disfavor. It must be borne in mind that these figures do not show the gains which must have been made by the national banks and certainly Wisconsin's prosperity cannot be questioned with such a showing. Mr. Kuolt reported that the heavy demands upon the resources of the banks during the previous year of financial disturbance have been entirely adjusted and a return to normal conditions is shown by the increase in bills payable and rediscounts. The banks are also in a position to supply their customers with sufficient funds to take care of reasonable demands, and the increase in the reserves indicates an ability to take care of the farmers with loans when the time arrives.

Warn Wisconsin Orchardists Against Red Cedar.

A WARNING has been sent out to orchardists in southern and western Wisconsin that they must get rid of the red cedar. The charge is made that the red cedar is responsible for a considerable amount of apple rust in the sections of the state where it grows. This lowly member of the evergreen family is frequently found on knolls and bluffs of the southern and western portions of this state. The red cedar harbors and feeds apple rust, which is a fungous disease attacking the apple leaves and in severe cases causing them to fall in mid-winter. This weakens the tree. All varieties of apples are susceptible to apple rust, but the popular Wealthy seems to have suffered most. Doubtless this is because the Wealthy, under proper conditions, does so well in southern Wisconsin that it is more noticeable when it suffers from rust. Apple rust causes the gradual death of the tree.

L. R. Jones and R. F. Vaughan, of the agricultural experiment station at Madison, have been making a careful study of apple rust and have come to the conclusion that orchards may be kept free from rust by observing the following conditions:

1. Choosing a site where no red cedars exist.
2. Cutting down and burning red cedars wherever they are found.
3. Planting varieties of apples which have strong resistance to rust.

There are more or less red cedars throughout the state in sections where apples and other fruits should grow best. Notable exceptions are Door and Bayfield counties, which are outside of the red cedar district. Both Dr. Jones and Mr. Vaughan say that the control of apple rust is very difficult, for the reason that rust attacks the apples in spring and summer and lives over winter upon the cedars. Unfortunately, spraying has not given satisfactory results in controlling this particular disease. Spraying is regarded as an unsatisfactory and impractical remedy where the red cedars are allowed to remain. Varieties which are susceptible to rust are as follows: Wealthy, Dudley, Jonathan, Peerless Sweet, Plum Cider, Sweet Wine, Whitney and Yellow Bellflower. There are a number of stronger varieties more strongly resistant to rust, and these include the following: Fameuse, McMahon, Duchess of Oldenburg, Red Astrakahn, McIntosh and Northwestern Greening.

Our New Serial Starts.

WE BEGIN the serial publication this week of "Hepsey Burke," a sister to David Harum, written by Frank N. Wescott, the brother of the man who wrote "David Harum." We are confident that readers of The Wisconsin Farmer will find "Hepsey Burke" by far the most interesting of the serials which have been run in this paper within the last two years. Hepsey Burke, with her homespun philosophy, her kindly digs at folks and things and her unfailing good humor is sure to be popular with our readers. If you liked "David Harum" you will love "Hepsey Burke.'

The first installment of this splendid new story will be found on page 16. The principal characters are introduced and the reader gets a good idea of the homely settings of the story. A chapter will be published each week until the entire book has been given to our readers. Do not fail to read this first installment. After that you will need no urging to continue until the last of this sweet, philosophical and humorous rural story has been read by you.

For Cleaner Milk and Better Milk Products.

AS OUR cheesemakers, buttermakers and factory owners understand the new state license laws more thoroughly we notice less objection from those affected. The new law is now in force and the dairy and food commission is issuing as rapidly as possible the necessary licenses, The Wisconsin Farmer is pleased to note the change in feeling towards this law, which certainly will be to the advantage of the dairy industry of the state. The new law injures only one fellow—the fellow who has an unworthy establishment. The clean, sanitary factory or operator has nothing to fear from the operation of the new law. Instead he and his factory are protected against the factory and operator who is turning out an unworthy product. In the past, we regret to say, some operators have preferred to make an unworthy product and pay a small fine occasionally. Now such an operator and his factory can be put out of business by the refusal of the dairy and food commission to issue the required license.

Not long ago we overheard several cheesemakers remark that Wisconsin should pass a law compelling every farmer to produce nothing but clean, sanitary milk. Right here lies the opportunity of the cheesemaker and the buttermaker who wishes to produce a high-grade product, for it is within his power to work directly with his patrons; show them that good cheese and good butter can only be made from good milk and cream and that if the farmer is to receive more pay for his milk and cream he must co-operate to this extent with the factory men. The license law goes a long way towards improving conditions, and every cheese and buttermaker should make it his duty to inspect regularly all cow barns and herds from which comes his milk supply; to insist that all cans and receptacles are promptly and properly cleansed and scalded with boiling water, and reasonable precautions taken to insure the delivery of a clean milk supply. This personal co-operation has done wonders in many sections of our state toward providing good, clean, sanitary cow homes on our farms, and we are sure every farmer is willing to do all within his power to produce a good milk supply.

Our cheesemakers and buttermakers should get their patrons to study the question of proper ventilation and light; proper barns in which to house milk cows, and how to feed them properly so as

to get the best results from the feed that is fed. Last but not least let them undersand that dirt cannot be strained from milk and that they must keep milk clean, which means that it must come from clean cows, kept in a clean barn, and handled by clean people. The prize American cheese at the recent Milwaukee convention, so the winning Richland county cheesemaker told the delegates, was made from milk that came to his factory in perfect condition. It was not only clean, wholesome milk but it had been properly cooled and this was largely accounted for by the fact that three-fourths of his patrons had springs in which to cool their milk. Of course, much depends upon the experience and ability of the cheese and buttermaker after he secures his milk supply, but the fact must not be lost sight of that no operator can make good, wholesome cheese and butter without a good raw product with which to work. And this can be produced only in clean, well-ventilated barns, from herds that are well cared for and by farmers who take the necessary precautions after the milk has been drawn from the cow. The license law, with the licensed operators working with their patrons to improve the milk supply, can do much towards raising the standard of this already great and important industry in Wisconsin.

Community Organizations in Wisconsin.

THE first rural social organization in Wisconsin was started in 1890, according to information furnished by C. J. Galpin, of Madison. Mr. Galpin is making an effort to gather statistics regarding such organizations in the state. This pioneer society was known as the La Crosse County Agricultural and Horticultural Association. The purpose of the organization was to combine business with pleasure. Another of the successful clubs of this kind is the Skillet Creek Farmers' Club, of Sauk county, which was organized in 1905 and which has for several years maintained a position of special prominence among community organizations, having about thirty-five, all told, and an exceptionally well-directed country-life association. This Sauk County County-Life Association has an annual picnic in which all of the neighborhood societies join, and this annual gathering is one of the best of its kind in the whole country. According to Mr. Galpin, the counties of the state which lead in social organization are Sauk, Manitowoc, Walworth, Washburn, Waupaca, Douglas and Polk. The purpose of these organizations is to make the community a better place in which to live. It is the ambition of the leaders in the Wisconsin country-life conferences to eventually organize a community society in every township in the state. Whether these societies are successes or failures, however, depends more on the local people than the leaders at Madison. It is all right for Professor Galpin and his associates to make suggestions, but no community society can be a success without one or more leaders in the neighborhood. Some farmer, or teacher, or minister sacrifices some of his time for the benefit of the society. It is not often there are more than one or two men in a township who have the inclination or ability to direct such work. If any farmer, or teacher or minister, or good housewife feels a "call" along this line it is well to confer with Professor Galpin and secure the details of organization which have been worked out. We need more of these community societies, but the demand must come from the farmers themselves.

Wisconsin Farmers Show Interest in Poultry.

ALTHOUGH the state poultry shows, as a rule, are not maintaining their previous records this winter for number of entries, the writer has noticed an increased interest among the farmers of Wisconsin in better poultry, as the farmers are attending better than ever before the various shows. This indicates that the farmer who is raising poultry is beginning to see the possibilities of producing good stock and that an old hen without anything back of her costs just as much to keep as a hen of blooded strain. In the past it seems that the greatest fanciers and lovers of fine poultry lived in the cities or on acreage nearby, but at the shows this winter many farmers are showing, and are taking away their share of the prize money.

We do not wish to convey the impression that a farm woman cannot make money out of her chickens if they are not of blooded stock. But we do know that it costs no more, once a flock is established, to raise good chickens than poor chickens. The eggs can always be sold at market prices, but there is the additional advantage of getting a fancy price for settings, of breeding a cockerel or a pullet which will prove a prize winner and thereby be worth several times the market value for the frying pan. Chicks, if they are to be a profitable investment anywhere, must have care and attention the same as any other stock on the farm. This probably accounts, no doubt, for much of the success of the city fancier who doesn't have any cows to milk, milk to separate, milk houses to keep clean, etc. With many of them his chickens are his recreation, and we can reasonably expect these fanciers to predominate at the shows, for they are willing to pay the high prices for young birds when the farmer would not. This does not keep the farmer out of the blooded field though, for there is the same market for him for settings and young stock as there is for the city fancier, and if he has the goods he can command just as good prices.

It is not necessary that a farmer become a show ring fancier, and we doubt if many of them have the time from their other numerous farm duties to devote to showing poultry, but while he is raising chickens is it not just as easy to rear those of a good strain, those which are good egg producers, good frys or broilers and for which there is a good market for breeding purposes? Too many of our farmers just "keep poultry" when they could with a little more care and attention be making this sideline of the farm pay them well. They are better situated than the city fancier who must buy all his feed, but too many of them keep no records of costs, etc., and have no idea whether their chickens are costing them money or making them a profit. We are pleased to note more interest by the farmers in the shows and are sure they will derive much benefit from attending them.

Farm Prosperity in South Dakota.

THE fifteenth annual review of the progress of the state of South Dakota has just been issued by the department of history. The production of grain for the past season and value of the same is given as follows:

Wheat, 62,520,000 bu.	$ 53,767,200
Corn, 96,300,000 bu.	52,928,000
Oats, 68,124,000 bu.	18,928,000
Barley, 25,856,000 bu.	10,859,520
Flax, 3,800,000 bu.	6,004,000
Potatoes, 7,680,000 bu.	2,611,200
Total	$145,563,400

Other items from the report of the United States Department of Agriculture:

Vegetables and fruits	$ 2,750,000
Hay, 3,330,000 tons	16,650,000
Dairy products	10,000,000
Poultry products	9,750,000
Live stock	51,250,000
Minerals	8,200,000
Total	$ 98,600,000
Grand total for 1915	$244,163,400
Grand total for 1914	212,423,000
Increase	31,740,000

This is a good showing for our western neighbor. South Dakota has had an occasional bad year, of which 1912 was probably the most conspicuous. But the state is settled up with good farmers. It is no longer a one-crop state. The increase in live stock has put farming on a much more substantial basis. South Dakota has still a great deal of room to develop.

Overproduction of Live Stock Impossible.

IT IS OFTEN necessary to bolster up the courage of stockmen. Important as is the live stock industry in its relation to production generally, it is to be deplored that the ranks of stockmen are subject to such never-ending change. This is due, of course, to a variety of factors, chief among which is the violent fluctuation of values of finished animals. No way has ever been discovered to regulate the number of animals that are marketed at any particular season of the year, and herein lies the secret of changing values, not that the law of supply and demand is wholly operative but, rather, that the changing supply furnishes those who control the markets with the opportunity and the excuse for filling coolers with a low-priced product. Arthur G. Leonard, president of the Union Stockyards, has recently given in the Drovers Journal his views regarding the live stock outlook for the year 1916. According to Mr. Leonard there will almost certainly be a general scarcity of fat cattle and sheep of all kinds during the whole of 1916. Disease and the fear of disease, together with poor corn, have driven many out of the feeding business, and the prospect is not good for feed lots to be filled before another crop is available, at least in all the northern corn-belt states.

A moderate run of range cattle and sheep may be expected when the next season arrives, but with a favorable prospect for the next corn crop, many of them will be needed for feed lot use, and the beef and mutton supply from every source bids fair to be light for most of the coming year. A word of caution against marketing too many half-fat yearling steers may be needed before the year is over, choice ones always being in demand, but not the inferior kind, so that they should be well finished before being sent to market.

Because of heavy shipments on account of 1915 corn crop conditions and the present relatively low prices for hogs, only a moderate crop of pigs may be expected during the coming spring months. It is probable that all the pork raised during the next year will be needed at satisfactory prices.

Those who are fortunate enough to have on hand good breeding stock of any kind, and who will purchase suitable pure-bred sires of individual merit at the present relatively low prices for such stock, and then keep them in good, thrifty condition and raise all the progeny from them which their farms can carry, will have no reason to regret having followed such a course, which is according to the advice of the best minds in the business.

If in addition to the above they will build silos and raise crops of grain to fill them, so as to provide abundance of economical feed, they will have still more reason to be satisfied with the final returns from such gradual improvement.

American finances are now in good shape and labor is well employed. Our own population is constantly growing, with no corresponding increase of live stock to furnish it with an adequate supply of meats, milk, leather, wool and other animal products and by-products, while, with the shortage of live stock in other countries to be recovered from there, and all Europe to feed in the meantime, no material foreign competition is possible for at least another decade to come.

What this country most needs today is a larger number of farmers who will adopt modern, up-to-date methods in the production of more and better crops, with more and better improvements upon the land which they now own, rather than seek to own more land without a corresponding increase in the capacity to develop and use it, or than to remove to other regions with the conditions of which they are not so well acquainted, and where they will be farther from market, with all the disadvantages of a new country and strange climate to contend with.

There is no better assurance of permanent comfort and success than good breeding and growing stock on the farm that raises abundance of feed, with a silo to help preserve it all for use, and a manure spreader to prevent waste of fertilizing elements, thus turning everything into money and gradually raising the producing capacity of the farm.

The conclusion, from a careful survey of the whole situation, is that overproduction of live stock is possible. On the other hand, present conditions and future indications all point to a continuous heavy demand and good prices for all the farm animals which this country can produce for many years to come.

Feeding Cattle a Science.

CATTLE feeding is a science, and anyone who can do the work successfully is more or less of a scientist. Feeding is almost if not quite as precise as mathematics, as certain feeds produce certain results, and it takes a well-posted man to know how to feed, this, that and all together to get the best results. This is where the science comes in. Then, there are combative forces with which to contend, such as storms, mud, severe cold, disease, hard feeding animals, and fluctuations in the markets of feed and the animals themselves when ready to market. The one who can do these things and still make money feeding cattle is a scientist. Each part of the process is necessary and the results are certain, under normal conditions, almost as sure as if you cut six inches off from a stick it will be just six inches shorter, no more, no less.

The work should be regular and steady. In the beginning make haste slowly. Do not overfeed. Too much corn will throw them off feed, and set them back a week or two and sometimes it is with much difficulty that they ever recover. Feed lightly at first on corn and add a little more gradually each day until they are on full feed, giving them when on full feed all they will clean up two or three times a day. Feed no moldy feeds of any kind to fattening cattle.

Watch your cattle closely and see the effects of your methods of feeding. Too much grain will cause scours, and if continued your steers will lose instead of gaining in flesh. This loses you money. Feed so that they will be as ready for the next feed as they were for the last. It is "good methods" to have all cleaned up each feed and satisfied cattle at the end of each feed.

Do not feed heavily at one time and lightly the next, as you will lose money if you try that. The feeding business is so doubtful that no one can afford to do anything that he knows is not the best for the interest of the cattle.

If you are compelled to make any changes in feed do it slowly and gradually. The fewer the changes made the better. Look well to the condition of your cattle. It is the indicator that tells the effects of your methods of feeding. Look well after your supply of water. Keep it clean, fresh and an abundance always on hand, for it is the cheapest and greatest element in beef production. It should never be scarce except under foot or in the sleeping quarters. There it is detrimental and actually costs you cash to tolerate its presence.

Get your cattle used to salt, and when used to it keep it where they can always get it. It causes them to eat and drink more. To fatten fast they must drink much and eat much. In cold weather the cattle usually drink too little. The tank heater will help this fault.

Keep enough shoats and hogs running after your cattle to take care of all the waste. This will fatten your hogs, and with the manure for your land you will be paid well for your efforts, if you feed right and use the proper feeds. Suffice it to say here that the ration should be well balanced if the best results are to be obtained.

Careful feeders linger, at least a while, around the feed lot each day looking for ailments of the cattle or hogs. A little such time spent with eyes wide open will enable you to see any ailments and give you nearly an even start with it. You can also see the good or bad effects of your feeding and likely enable you to study out the cause why one does well and another poorly. A little time spent in lingering is by no means wasted and pays big dividends. It does not pay to feed quickly and go at another chore without looking well at the cattle and hogs. One is almost as necessary as another.

You may look for months and find nothing wrong, then all at once something will happen. You see it soon and by prompt action you may save a $75 to $100 animal that you would have lost had you not looked constantly for ailments.

Adding Interest to School Work

Rural School Contests in Oconto County, Wisconsin, Have Been a Great Source of Profit and Enjoyment.

MADE THE CLOTHES THEY ARE WEARING.
Two Oconto county, Wis., girls who made their own dresses and won prizes in the county contest.

FEW county superintendents of schools in the country have been able to interest school patrons and scholars to such an extent in contest work as has Ellen B. McDonald, county superintendent of Oconto county, Wisconsin. Any person who might imagine that school work is any ways backward in this Upper Wisconsin county is certainly sadly mistaken. Under the direction of Miss McDonald and members of her teaching staff in the county scores of pupils have become interested in better farming. This woman does not claim to be an expert agriculturist, but she has succeeded in taking extraordinary advantage of the opportunities afforded for branching out in rural school work. There are few counties in the United States where so many bulletins on agriculture and live stock topics are distributed. As a matter of fact, all county superintendents have the same source of information on agricultural topics that the county superintendent of Oconto county has. The federal department of agriculture will assist any county superintendent with literature and suggestions as to the best way to work out county contests for the education of the rural young people. The Wisconsin College of Agriculture has special departments and experts devoted to extension work of this character. Other states, notably Iowa, Minnesota, Nebraska, Kansas and Oklahoma, have taken up this problem. Miss McDonald has availed herself of various experiences and supplied herself with their bulletins. She has advised teachers in the districts throughout her county where information on such subjects can be secured without cost. In this manner she has brought the rural school-teachers of Oconto county into close connection with the most advanced thought of the day on rural education. There are a number of teachers in Oconto county who can readily tell any farmer or his children where they may secure the best bulletins on almost any crop in which they are interested.

Contest work was started in Oconto county several years ago and it has developed to include a large per cent of the rural districts. Although Oconto county is considered some distance north, boys who have entered the school contests have raised 125 and more bushels of good corn to the acre. Girls who have engaged in the sewing contests have learned to make all their own clothes. As a result of these contests there have been larger yields of beets, peas, beans and potatoes on a number of farms in Oconto county. There has been more interest in poultry and in gardens.

Asked concerning the effect of these contests on the pupils and their parents, Miss McDonald advises that she did not have the smoothest kind of sledding at the start. But the effect of the contests was so soon apparent and so satisfactory that now it is an exception for any of the districts to show a lack of interest. The first good effect of this contest work was to provide something interesting for the pupils as a sort of relaxation from steady work on their textbooks. The contest feature of the agricultural work carried on in Oconto county put life and competition into school duties. While for the most part, at first, no prizes were offered, except ribbons. These seemed to be as attractive as larger cash prizes. The contest provided an end toward which the pupils worked with increasing interest until the final decision of the judges. The interest from the standpoint of the parents was a natural outcome of the interest which the pupils took in the contests. For a time the farmers did not pay any considerable attention to the suggestions which came to them from their children. But when the boys raised 125 bushels of corn to the acre and the farmer had been in the habit of getting twenty-five or thirty bushels, the parent began to show some interest in the contest work. There was at first a disposition on the part of the mothers to feel that they were best equipped to teach their daughters cooking and sewing and canning of fruits and vegetables. But when it was discovered that the girls were getting a new interest in such work by their experience at the schoolhouse the mothers welcomed this new interest and were enthusiastic in helping it along. It did not take long for the farmers and their wives to become more interested in the school-teacher who was carrying on this new kind of work. One feature of the contest

ELLEN B. M'DONALD.
County superintendent of Oconto, Wis.

work is the exhibit. This, of course, comes at the end of the growing season. Before it becomes time for the exhibit the contest work has been pretty well advertised throughout the district. Not only are the pupils anxious to learn who will win the prizes but the parents also. When two or three years of this special work has been carried on the pupils, teachers and parents seem to fall very naturally into the spirit of the whole movement.

But the contest work in Oconto county has not only interested those in the immediate districts affected. The farmer goes to town and is beaming with enthusiasm because his boy has raised the best corn or the best potatoes. He drops into the local bank, or newspaper office, or general store and tells all about it. With contests going on in a number of districts it becomes only a question of a short time until there are a good many boosters for the work. Superintendent McDonald was quite surprised one day when a wealthy man of her county

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TABULATED SURVEY OF OCONTO COUNTY, WISCONSIN.
(Compiled from information gathered by rural school children of the county.)

	Farms	Silo	Alf.	Che.	Club	Phone	Eng.	Mills	Sep.	Bin.	Oil.
Armstrong	81	3	3	1	3	29	15	9	14	3	13
Brazeau	137	5	2	3	3	24	24	7	44	3	7
Breed	120	1	4	1	1	4	13	7	32	5	23
Chase	174	39	10½	3	6	31	47	14	113	40	17
Gillett	136	21	14	3	3	45	49	42	67	13	16
How	146	19	143	3	3	98	39	34	102	23	24
Lena	164	21	9	5	6	62	19	17	48	12	48
L. River	252	22	12	4	3	49	22	21	82	39	23
L. Suamico	244	41	6½	1	2	33	49	1	158	32	30
Maple Valley	240	27	37½	4	4	94	26	35	134	29	34
Morgan	104	20	21	5	2	30	16	19	69	18	16
Oconto	226	29	13½	3	4	86	25	18	108	40	31
Oconto Falls	112	14	8	2	2	29	25	19	69	14	16
Pensaukee	353	17	6	2	1	66	43	14	219	21	41
Spruce	203	28	23½	5	5	74	47	28	77	32	25
Stiles	124	22	10¼	2	3	32	13	14	66	14	23
Underhill	125	15	6	2	3	56	44	28	58	10	16
Wheeler	13	0	½	0	0	11	6	0	8	1	14

Keynote—Alf., Alfalfa; Che., Cheese Factories; Phone, Telephones; Eng., Gasoline Engines; Mills., Windmills; Sep., Separators; Bin., Binders; Oil., Oilstoves.

TEACHER HELPS MEASURE CORN ACRE.
Louis Lempke, corn contestant in Oconto county, Wisconsin, and his teacher, Miss Angus.

More Farmers at Auto Show.

Big Event at Milwaukee Is Featured by Larger Attendance of Rural Automobile Drivers--The Auto Show a Big Success.

FARMERS are the largest buyers of automobiles in Wisconsin, and it is fitting that they should display each year more interest in the automobile shows. Being such general users of the motor driven vehicles they should be as much interested as the merchant and the city man in the new models and the increased attendance of farmers at the show this year in Milwaukee indicates an increased rural interest in the coming season and a widened market for the automobile.

The show which closed in Milwaukee last week was better attended by farmers than any previous show. Dealers and manufacturers reported an increased number of inquiries from the tillers of our soil and the breeders of our stock and Mr. Bart Ruddle, show secretary, told an editor of The Wisconsin Farmer who attended the show that he had never seen so large an out-of-town attendance as this year. On the second day of the show the corridor was crowded before the doors were thrown open and it is the farmers and their wives who come early and stay late. As a rule, the farmers do not begin to attend until the third and fourth day, and Mr. Ruddle construed this early attendance this year as an indication of an increased interest by the rural population in the new models and the automobile in general. The farmer has begun to realize that the automobile to him annihilates distance and time, and with the advance of the good road movement it is becoming indispensible on the farm.

The statistics in the office of the secretary of state show a registration of 79,000 automobiles last year, which is almost double the number of cars registered in Wisconsin the previous year when 43,000 licenses were issued. At the present time applications for 1916 licenses are pouring in at the rate of 600 a day, which indicates that at the end of the present year Wisconsin will have more than 100,000 automobiles, and the dealers are preparing to sell at least this number of cars. If the ratio of increase of 1914 is maintained the number of cars licensed this year would far exceed 100,000, but the dealers are discounting somewhat the increase last year and are preparing for a 25 per cent increase in the market this year. The larger portion of this increase will come from the farmers, as they are the largest class of buyers, and with a good season to their record they can be expected to buy heavily this year.

Following the automobile show at the state fair last year, so Mr. Ruddle informed the writer, the Milwaukee Automobile Dealers' Association attempted to ascertain the number of farm-owned automobiles in the state. It was found that 48 per cent of the cars owned in Wisconsin at that time were licensed by men living on rural routes, which means that almost half of the automobiles belonged to farmers. Other figures were also compiled which showed that 73 per cent of the automobiles were owned by rural residents—that is, by farmers and persons living in towns or villages of less than 1,000 population. These totals were arrived at by dividing the state into districts and striking an average by counties and are probably as correct as any that can be secured.

Certainly with 73 per cent of the cars in the hands of the rural population and 48 per cent owned on rural routes it is no surprise to find the farmers attending the automobile shows better than ever before. The farmer has the buying power and he is buying better cars every year. Mr. Ruddle, who is in very close touch with the market, expressed the belief that the type of car being bought now by the farmers of Wisconsin averages as good as the car bought by the average business man.

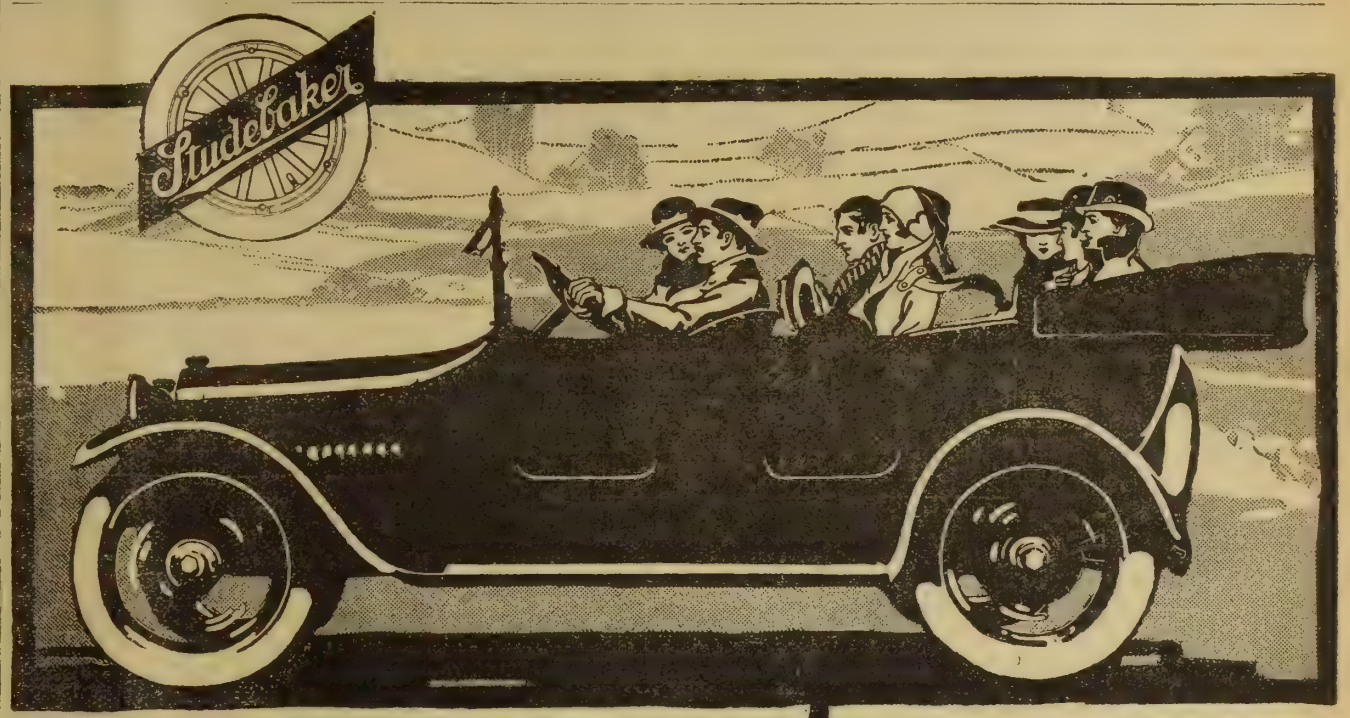
Road improvement, combined with increased prosperity, has done much in Wisconsin to encourage the automobile on the farm, and with more state roads and better county roads being constructed each year the list of farm owners is certain to increase. The farmer has discovered that he cannot only find much pleasure in owning a car but he has found them useful on the farm. Dealers at the Milwaukee show reported many inquiries by farmers for light trucks and roadsters which would be used for the family on a trip to the village and for light hauling during the week.

Much as the success of the show meant to the thousands of prospective car owners and those who contemplate buying new cars this year and to the men who staged the exposition it proved a record breaker from the standpoint of the dealers. On every hand complete satisfaction was expressed by the dealers with the results, and they are convinced that the coming season will be one of heavy sales and good profits. Hundreds of country dealers who are in direct and personal touch with the farmers attended the show and all reported that increased interest of the farmer and with a return to normal financial conditions, combined with good crops, and $15,000,000 more on deposits in the saving and state banks than on January 1st a year ago they contracted heavily, not only for cars but for tires and other accessories.

The retail trade was equally good and the show closed with an attendance of about 41,000. The extremely cold weather of the last few days cut down the attendance to some extent but did not dim the interest, and hundreds of persons picked out their cars for the coming year, there being everything on display from the more modest-priced roadsters and touring cars to the high-priced electrics and limousines. There was more to interest the farmer than at any previous show, and the managers, who had begun to plan the 1917 show and the exhibit at the state fair this fall, almost before the show closed, are planning to make the show even more attractive to the rural buyers next year, realizing that the farmers are one of the largest buyers of automobiles in the state and that they are buying cars that are the equal of those bought by the average business man.

Several agency managers interviewed by the writer, including Overland, Hudson, Reo, Studebaker, Page, Jeffrey, Allen, Jackson, King, Velie, Hupp, Dort, Pullman, Regal and others, expressed the belief that the automobile business will be a record breaker this year. All agreed that trade prospects could not be better and that the show had been a big booster, especially for the new six and eight-cylinder models. The general expression of the agency managers was that they had done more business than they had anticipated. Not only were the sellers of pleasure cars greatly pleased but the truck dealers reported a great number of inquiries and sales and a greater interest by the farmers, who, with good roads, are

(Concluded on page 15.)



Why the NEW Series 17 Studebaker is the GREAT Value of the Year

To any man who knows cars or who has kept in touch with the new cars of the year in any way whatever, there is no necessity for our saying more than "Read the reasons listed at the side".

Buying a car is merely a matter of getting the biggest value, the most satisfactory car for the price you pay. Every man who owns or operates a farm knows from long experience the QUALITY that the name of Studebaker insures. And the unexcelled manufacturing facilities, the GREAT financial resources, the long manufacturing experience and the largely increased volume that the remarkable popularity of the new cars has produced has made possible many refinements and a REDUCTION in price to $845 that makes this new SERIES 17 Studebaker FOUR the GREAT value of the year. See it before you decide on any car. Handsome catalog on request.

STUDEBAKER

South Bend, Ind. Detroit, Mich. Walkerville, Ont.

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More than 207,000 Studebaker Cars now in use

Six-Cylinder Models	
Touring Car, 7-pass. -	$1050
Roadster, 3-passenger -	1025
Landau-Roadster, 3-pass.	1350
Coupe, 4-passenger -	1600
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Four-Cylinder Models	
Touring Car, 7-passenger	$845
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Panel Delivery Car - -	$875
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Bus, 16-pass., full equip.	1400

—a remarkable price of

$845

—a 3 7/8-inch bore by 5-inch stroke, FORTY horse power motor;

—ROOM for SEVEN passengers—and comfort for every one of them

—beauty of design and finish;

—and many new refinements including:

Gas tank transferred from the cowl to rear of chassis

Stewart Vacuum Feed System set on intake manifold

DIVIDED front seats that are adjustable fore and aft to the passenger's comfort

MORE room everywhere in the car

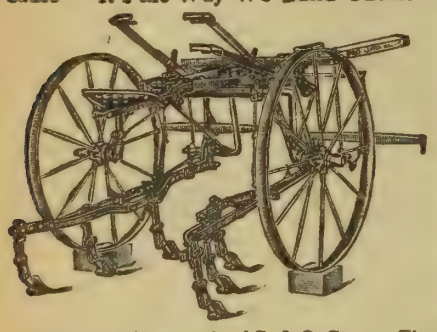
Overlapping windshield, completely storm-proof

Instruments even more conveniently arranged on dash, indirectly lighted.

P&O

WIGGLETAIL CULTIVATOR

A cultivator combining the advantages of pivot seat, pivot tongue, parallel gang movement, and horse lift. The best, because—"It's the Way We Build Them."



Equipped with any style of P. & O. Gangs. The wheels are adjustable from 40 to 54 inch track, so that the Wiggletail can be used in crops other than corn. Can be furnished with Handle Attachment, permitting use as Combined Rider and Walker. High wheels, with flat or concave tires.

Tougue pivoted in socket at front end of frame, and also pivoted on arch. When rear end of tongue is moved sidewise by the shifting of the seat, frame is carried in opposite direction, and with it the arch and gangs. This constitutes the "Wiggletail" feature, and makes this one of the easiest cultivators to ride and operate ever built. An ideal cultivator for use in crooked rows or on hillsides.

Only one lever to operate at ends of the row. It raises both the gangs and maintains balance. Cone pivot gang couplings permit taking up all lost motion due to wear. Beams can be set up or down for different depths. Seat folds over out of way when using cultivator as a walker. The seat bars can be locked, making frame rigid. Adjustable hitch. Direct pull from the gangs. Gangs work under spring pressure, are always parallel and have a wide range of side swing. Operator always in position to see his work, with a clear view ahead. The operator's weight glides on rollers when swinging seat bars in dodging. Telescope axle provides neat and easy means of setting wheels for wide or narrow track. Frame shift squares gangs with each hill, cultivating them all even and at an equal depth. High clearance under arch. Each gang has a depth lever.

Ask Your Dealer or Write Us.

Parlin & Orendorff Co.
Canton, Illinois.

P&O
Light Draft Plows
Are Backed
By An
Unqualified
Guarantee

BUCKEYE GRAIN DRILLS

Have a Double Run Force Grain Feed—sows any kind of oats, wheat, rye, rice, barley, peas, beans of all kinds and sizes, beets, etc.

The Buckeye Non-corrosive Glass Cone Fertilizer Feed successfully sows in wide range of quantity all brands of standard commercial fertilizers, having an agitator that always keeps the fertilizer moving; a fertilizer hopper lined with galvanized metal.

The Buckeye Frame is made of square tubular steel; will not warp or sag.

The Buckeye Nested Cone Gear Grain Drive. No lost motion. Positive drive. Change of quantity instantly made.

Buckeye Furrow Openers—Any style wanted. Single Disc, open or closed delivery; Double Disc, Hoe or Shoe.

Sizes—Any size from one-horse up.

Buckeye Drills are simple in construction, very light draft, and plant the seed at an even depth.

Send for the Buckeye Catalogue and then go to your local dealer and insist on seeing the Buckeye Drill.

"The Buckeye—
A Wise Buy."

THE AMERICAN SEEDING MACHINE CO.
INCORPORATED
SPRINGFIELD, OHIO.
U.S.A.

In And Around Wisconsin.

Eau Claire Chosen as Place for Holding Next State Potato Show and Convention—Other Items of Interest to Farmers.

The new co-operative packing plant at Wausau, Marathon county, is now operating, the first shipment consisting of two carloads of hogs.

J. R. Wheeler, vice president and cashier of the Farmers & Merchants Bank, at Columbus, has been honored again by appointment to membership on the agricultural commission of the American Bankers' Association. Mr. Wheeler is well known throughout the state in his work for better agriculture.

Thirty-seven new members were added at the annual meeting of the Central Wisconsin Cheese, Butter and Dairymen's Association, which was held at Auburndale, Wood county. This was the first anniversary of the organization of the association and a very successful meeting was held. The association went on record commending the National Dairy Union and the National Buttermakers' Association in their fight on the "oleomargarine evil."

Following adjournment of the Wisconsin cheesemakers' convention at Milwaukee recently, sixty shippers from all parts of the state met and formed the National Cheese Shippers' Traffic Association, with H. G. Davis, of Plymouth, as president; vice president, Jess Willard, Plymouth; secretary, A. A. Jones, Fond du Lac; treasurer, Christ Roth, Brodhead; directors, John Kirkpatrick, Sheboygan; Christ Roth, Brodhead; John Kirkpatrick, Richland Center; F. C. Westphal, Randolph; P. J. Schafer, Marshfield, and C. A. Cebell, Watertown.

The Fond du Lac County Agricultural Society, at its annual meeting recently, honored all of the old officers with re-election. The association has also decided to continue the 50-cent admission fee this year, with children free. It was proposed to return to the 35-cent admission, but the fair officials believe they are putting on a 50-cent show and that the patrons will be willing to pay that amount. The officers for the coming year are: President, C. W. Keys, Empire; vice president, L. G. Kellogg, Ripon; secretary, E. R. Zamzow, Fond du Lac; trustees, Peter Schrooten, Auburn; John McGowan, North Fond du Lac; E. W. Phelps, T. E. Ahern, L. A. William, Fond du Lac; W. L. Calvy, Osceola.

Oneida county, whose potatoes carried off honors at both the state and national shows, is still winning honors and recently W. D. Juday, county representative, received this letter relative to a shipment sent to Ames, Iowa: "The shipment of potatoes came to hand in fine shape, except a few of the Bliss's Triumph, which had split open, due, I presume, to excessive changes in temperature. They were very much admired at our state show and at the close of the meeting I packed them up and brought them on to Ames, where we plan to use them at our short course the last of this month. I think it was a good move in sending them to Iowa, as it will help to put Oneida county on our map. Yours, A. T. Erwin."

Although the past year has been an unsatisfactory one for the tobacco growers of Wisconsin, it is believed a good acreage will be devoted to this crop next year. The brightest ray of hope now held up, says the Tobacco Reporter at Edgerton, is the fact that before another crop can be produced the stock of old leaf suitable for cigar purposes is very likely to be entirely absorbed, leaving an excellent prospect for a strong demand for binder leaf for some time to come. In the nature of things Wisconsin ought to be due for another good crop in 1916. There are still a few thousand cases of the 1913 crop yet in the hands of the packers, but the supply is far short of the needs of the binder trade before the 1916 crop can be placed on the market. The 1914 crop, thought to be largely a filler proposition and taken over at reasonable rates, has proven a big investment for the packers since the unsatisfactory yield the past season.

J. R. Danks, formerly in charge of the Christiansen farm in La Crosse county, has been appointed assistant in animal husbandry extension work at the University of Wisconsin.

The Inter-County Holstein Breeders' Association met recently at Watertown and it was decided to ask the state association to hold its state meeting next year in Watertown as the guests of this organization. S. E. Jones is president of the Inter-County association and those present represented nearly 1,500 of the pure-bred Holsteins of that community. Another meeting was called for January 22d at Watertown, when additional plans will be laid for securing the state Holstein gathering.

Mr. A. D. Campbell, of the Wisconsin Advancement Association, has discovered a farmer in southwestern Wisconsin who makes the statement that quack grass brought him $100 per acre. The quack grass had gotten the start in his field and defied all efforts at extermination. Finally, yielding to advice which a few years ago would have been ridiculed, this farmer seeded the plot to alfalfa and this year took off a crop worth $100. So he insists that the quack grass is responsible for the $100-per-acre crop. Mr. Campbell does not argue the question, but says if there is no other or better way to prove to farmers the value of alfalfa they may find it out by using it as an exterminator of quack grass.

The report of the financial affairs of the La Crosse Co-operative Packing Company at the annual meeting last week indicates that the plant is on a more substantial basis than ever before. The directors ventured the opinion that the plant had passed its crisis successfully, has shown a profit since October 1st, although a losing proposition the first few months. The financial statement shows a profit for $1,800 in December and at the present time the plant is handling on an average of 500 hogs and fifty cattle per week. About $1,500 worth of meat is sold each day. It was announced the company finds a ready market for all of its products and could easily dispose now of an increased output.

Eau Claire has been selected as the place for holding the 1916 convention and show of the Wisconsin Potato Growers' Association. Final action in selection of a convention seat was left to the board of directors at the convention at Marinette last fall. Fournier's Hall at Eau Claire will be used. Chippewa Falls was very seriously considered, but after a visit of the executive committee to that city it was decided there was not a hall large enough to take care of the coming show. J. G. Milward, secretary, expects at least twenty-five counties at the 1916 show, as the holding of the show at Eau Claire will stimulate many western and northwestern counties to enter, while central and eastern counties will also be represented.

In 1911 the records of Green county showed 199 automobiles. There are now assessed 199 automobiles in the city of Monroe alone, while the total of the county is 979. The increase in automobiles in Green county has been phenomenal. Starting with 199 in 1911 the number increased to 277 in 1912, 440 in 1913, 599 in 1914 and 979 in 1915. The largest per cent of increase in this period has been in the past year. This has doubtless been due to the fact that there are now so many good cars to be had at a reasonable price. There has been about the same per cent of increase of horses in the county each year, so that it may not be truthfully said that the automobile is supplanting the horse. Green county farmers go in extensively for dairying. The farmers of this county are uniformly well fixed and amply able to increase their stock of good horses and at the same time buy automobiles.

A new co-operative creamery is to be organized at Antigo at a mass meeting to be held in the court house January 22d.

J. C. Sikhart, of Muscoda, has been appointed assistant chemist in the soils department of the University of Wisconsin for two months.

A good poultry show in which farmers were the chief participants was held late in December at Footville. There were 198 birds exhibited and the attendance was very satisfactory. Rev. Laramore, of Footville, was the judge.

The bankers of the state are planning another excursion in Upper Wisconsin in 1916. Secretary Bartlett, of the state bankers' association, has given the matter some attention and it seems likely that the excursion will start from some central southwestern point about the third week in June. The date has not been definitely set. About 100 bankers made the trip last year, but there were about 600 who were not able to go. The bankers who will make the trip will be chiefly from southern Wisconsin counties and the purpose of the tour is to convince these bankers of the loan value of Upper Wisconsin farm property. Those who went on the last trip were very easily convinced of Upper Wisconsin farm values.

E. R. Jones, secretary of the Wisconsin Drainage Association, will conduct a series of lectures, demonstrations and conferences on the subject of drainage at Madison during farm and home week, February 11th and 12th. As suggestions of a few difficulties to be met and considered in tile drainage work, a statement from Mr. Jones is given in the following paragraphs:

As roots of trees often clog tile, it is best to remove trees that are near the drainage line.

In muck or peat soils, tile should be laid below the frost line, because these soils may expand enough on freezing to heave the tile to a damaging degree.

Unglazed tile are just as good as glazed tile except where an outlet is exposed to the weather. At such points glazed tile or wooden flumes bear the exposure with the least injury.

Tiles, the walls of which can be split into thin flakes, or those containing specks of lime are to be avoided. When laid, four-inch tile, with walls five-eighths of an inch thick, are just as good as heavier tile, but, of course they are subject to breakage by handling. The breakage, however, should not exceed 4 per cent.

"Boosters for the breeds" will meet at Madison on Wednesday, Thursday and Friday of the Wisconsin Farm and Home Week, February 7th-12th, to transact business and to congratulate themselves upon a successful live stock season in the face of rather adverse conditions. Besides the regular session of the Wisconsin Live Stock Breeders' Association there will be meetings, special or regular, of the following breed organizations: Wisconsin Aberdeen Angus Breeders' Association, W. A. Connell, Menomonee Falls, secretary; Wisconsin Shorthorn Breeders' Association, J. L. Tormey, Madison, secretary; Wisconsin Red Polled Breeders' Association, L. C. Underwood, Avoca, secretary; Western Guernsey Breeders' Association, Charles L. Hill, Rosendale, secretary; Wisconsin Holstein-Friesian Breeders' Association, Chris Schroeder, Racine, secretary; Wisconsin Horse Breeders' Association, J. G. Fuller, Madison, secretary; Wisconsin Sheep Breeders' Association, Gavin McKerrow, Pewaukee, secretary; Wisconsin Berkshire Breeders' Association, J. H. Kitchen, Eldorado, secretary; Wisconsin Duroc Jersey Breeders' Association, J. D. Grant, Delavan, secretary; Wisconsin Poland China Breeders' Association, E. E. Jones, Rockland, secretary; Wisconsin Chester White Breeders' Association, A.

(Concluded on page 14.)

THE FARMER'S OPEN FORUM

Believes Wheat Will Go Higher.

To the Editor:—It is common talk among the best farmers that there is a great deal said in the farm papers about how to produce a large crop, but very little about how to get a good price for it—a very essential thing. All large grain dealers, exporters and speculators have their agents in the grain-growing states circulating "bearish" news and urging the farmers to dump their wheat on the market early at about the cost of production, and then they buy it and hold it for a high price, making millions of dollars that the farmers should have and would get if the farm papers would come to the rescue and issue a word of warning against these robbers of the fruits of the farmers' toil and advise them to hold for a better price.

The farmers write you instead of complaining among themselves. But the farmer who keeps posted and knows the conditions and would write is not fooled by these paid agents and so-called statisticians in the employ of the speculators. He sets the price and holds for it, but it is the thousands who are not well informed in the world's wants who need your help and advice.

When the farmers were dumping their wheat on the market at between 90 cents and $1 one farm paper advised them to set a minimum price of $1.25 per bushel. Many of them took the advice and had the pleasure of seeing the price climb up to that point. And now this and all other farm papers can safely say that if enough farmers will hold for $1.50 per bushel they will get it long before the next harvest.

By a united effort of the farm papers millions of dollars per annum could be saved to the producers and thus gain their everlasting gratitude. The consumer is not benefited by these low prices, for he pays the speculator's price.

The government monthly report makes a big display about the bumper crop and record yield, but not a word about the millions of bushels of wheat made unfit for market by the wet harvest, or the decreased acreage this year, or the greatest world's war in history and the millions of soldiers to be fed, causing the greatest demand for foodstuffs the world has ever seen, but lets the report go to the public in a one-sided manner to the interest of the speculator and against the producer.

The farmer sees but little in his farm paper about the unprecedented world's condition that causes the greatest demand for foodstuffs the world has ever seen, with the resultant high prices to follow, and lets the wheat go out of his hands. Then the speculator takes advantage of the situation and makes millions of dollars that the farmers could have made if they had set a good price and held for it.

You are at liberty to publish this letter if you wish and ask the farmers if they want the millions that the speculators make. If they do and will ask for it they will get it.

Madison, Indiana. A. S. Custer.

Both Stump Pullers and Dynamite.

To the Editor:—We have millions of stumps in this state. We would all like to get rid of them, but we don't all agree on what is the best way.

I believe in dynamite myself. I have found it cheaper, quicker and more of a labor saver than any other method.

A good many men swear by stump pullers. I ran across a farmer a short time ago that was using one. Asked him about what it was costing him per acre to clear his land. He said about $20. I asked him if it would be worth $12 per acre to him to have them loosened and split so that they could be easily pulled. He said it would, so I blasted for him a day and a half in which time I finished two and three-quarters acres. The next day we were able to pull two acres because the stumps came out easily.

This farmer then admitted that it paid to use dynamite to assist his stump puller. What do your readers that have cleared land think of this? Don't most of them think this is the best way? Otto Samuelson.

Galloway, Wisconsin.

Recipe for Soap Making.

To the Editor:—As I read in your last paper that a recipe for good soap is asked for, I will send you one which I have used for years and passed on to a good many friends. It makes the washing easy, besides there is no settling or left overs.

But to make soap out of skins or hog meat is something I never heard of, as neither skins or meat have any lard or grease. If anyone wants soap out of such as that they ought to boil it first and set to cool and take off the grease and see how much fun it is, for otherwise there will be no soap. But there will be no settling in soap, as all scraps of meat will float on top after it has boiled and can be taken out of the soap with a skimmer. My recipe is:

32 quarts of rainwater.
4 boxes lye.
14 pints of lard or tallow, free from salt and melted.
2 pounds of borax.
2 pounds of rosin.

Put all in a big kettle, boil for an hour and twenty minutes, then dip in molds or a flat box and cut when cold.

This makes about a bushel of soap good enough for a king.

Mrs. John Fritz.

Dodge Co., Wisconsin.

A short course conducted in 1913 in a north central Wisconsin county by the agricultural representative led a student to undertake the remodeling of the home barn, the construction of a manure pit, the rearrangement of crop rotation schemes and a good start with alfalfa, all of which has added to the permanent value of the home place.

A seed corn selecting excursion was recently made up in Eau Claire county with the county agricultural representative in charge. By actually husking the corn, weighing it and making their own determinations the class was more forcibly impressed with the importance of seed selection and breeding than would have been the case had they simply listened to lecturers or read books on the subject.

John Deere Implements

John Deere Corn Planter

The Accurate "Natural Drop" Planter

ACCURATE—because it has the "Natural-Selection" drop—an improvement over all other methods.

Kernels do not have to be tipped on edge to enter the cells. Surface of hopper bottom and openings to seed cells are oblique, or sloping. The kernels naturally move toward and fill the cells.

A full—variable drop planter. Plants two, three or four kernels as desired—all you do to change number in the hill is to move foot lever.

Drilling distances varied, and change from hilling to drilling or back to hilling made just as easily.

All corn plates for this planter have 16 cells. Therefore, the same drilling distances are obtained with one plate as can be secured on other planters that require 8, 12 and 16 cell plates.

The gears are always in mesh and can be shifted at any time (even when in operation) to change drop or drilling distances.

Investigate the John Deere tip-over hoppers, quick detachable furrow openers, underhung reel and disc marker without rope.

Write for free booklet, "More and Better Corn."

Van Brunt Drills and Seeders

With Adjustable Gate Force Feed

VAN Brunt Drills plant any small seed, alfalfa to bearded oats, peas or beans.

Amount sown per acre easily regulated merely by shifting feed gauge levers.

All the ground sown, because the Van Brunt adjustable gate force feed compels seed to leave hopper in even, continuous streams—no bunching or choking up—and an equal amount goes into each furrow.

An even stand of grain is secured, because pressure springs compel all the discs to cut furrows of equal depth, and the forward closed delivery places seed at bottom of these furrows.

Van Brunt Drills never clog up. Scrapers keep discs absolutely clean. The high grade discs have bearings that are guaranteed to last lifetime of drill.

Smooth running—each wheel drives half the feeds, equally distributing the work. A direct, double gear drive from the continuous axle.

Grass seeder attachment can be furnished which will drill or sow broadcast as desired.

Van Brunt Broadcast Seeders are just as positive in their operation as Van Brunt Drills.

Write us for free booklets describing Van Brunt Single or Double Disc Drills, or Broadcast Seeders.

John Deere Spreader

The Spreader with the Beater on the Axle

ONLY hip high to the top. Wheels out of way when loading. Mounting the beater on the axle is patented. Write for Spreader booklet.

Three exclusive John Deere Spreader features:

[1] Beater on the axle—nothing else like it. [1]

[2] Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching. [2]

[3] Ball Bearing Eccentric Apron Drive—requires no attention. Performs wonders in the working of the spreader. [3]

John Deere Disc Harrow

The Flexible Spring Pressure Disc

MODEL B—the only disc that cuts at even depth its entire width. It has a patented spring pressure lever. With this lever, pressure can be regulated at inner ends of gangs to cut out dead furrows or disc ridges without burying the harrow.

The Model "B" does not crowd toward the bottom on hillsides or in overlapping. The gangs are independent of each other and can be given the proper angle to work right under such conditions.

Write for free booklet, "Bigger Crops from Better Seed Beds."

Dain System Side Rake

The Left Hand Rake

THE tool that is revolutionizing hay making. Left hand instead of right—follows the mower closely, places hay upon clean stubble and puts it in medium size windrows with bulk of leaves inside and majority of stems outside.

This means uniform curing and leaves don't dry up and fall off. They cure in the shade.

Hay is air-cured, not sun-scorched, retains its color, nutrition, feeding value and sells for more money.

Write for free booklet describing the Dain System of Air Curing Hay.

John Deere Dealers Everywhere

Better Farm Implements and How to Use Them

BOOK FREE—168 page reference book—tells all about a complete line of farm implements and how to adjust and use many of them. A practical encyclopedia of farm implements. Worth dollars. Describes and illustrates: Plows for Light Tractors; Steel and Chilled Walking and Riding Plows; Disc Plows; Cultivators; Spring Tooth and Spike Tooth Harrows; Lister Plows and Cultivators; Disc Harrows; Alfalfa and Beet Tools; Farm and Mountain Wagons; Teaming Gears; Manure Spreaders; Inside Cup and Portable Grain Elevators; Corn Shellers; Hay Loaders, Stackers, Sweep Rakes, Mowers, Self-Dump Sulky and Side Delivery Rakes; Hay Presses; Kaffir Headers; Grain Drills and Seeders; Grain Binders; Corn Binders; Gasoline Engines. This book sent free to every one who states what special implements he is interested in and asks for Package No. X-64.

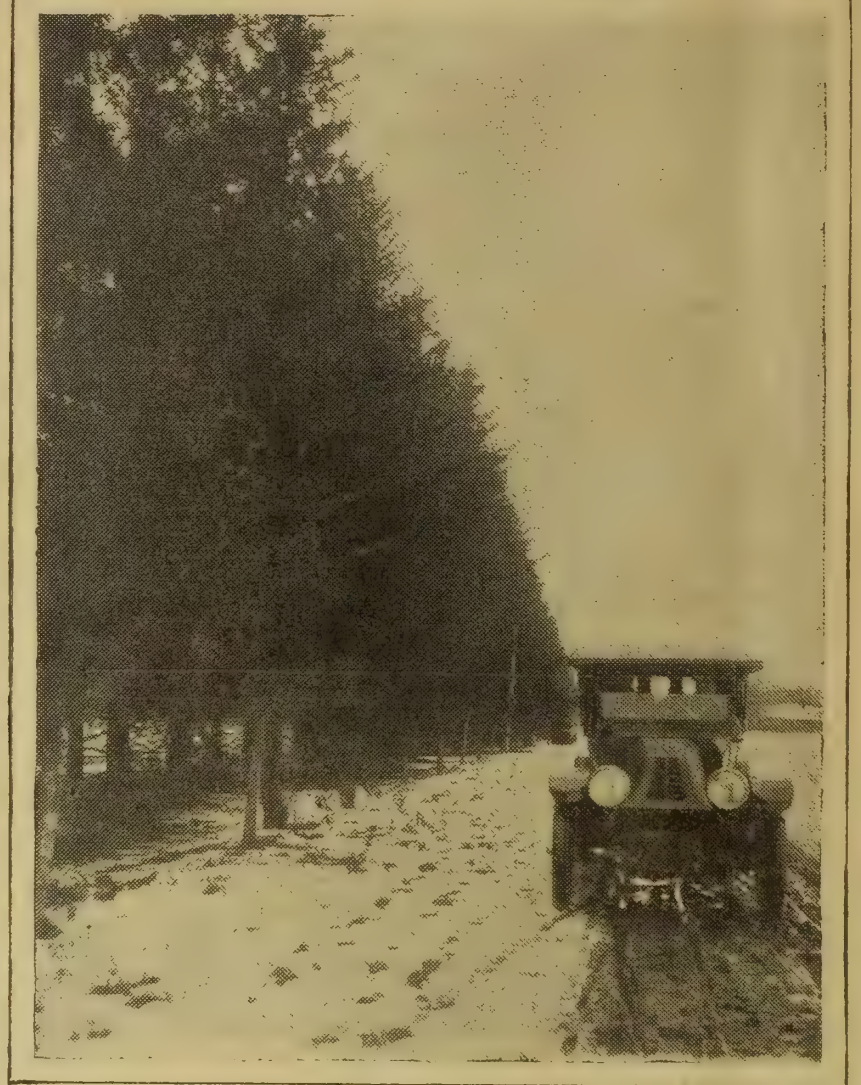
JOHN DEERE MOLINE, ILL.
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

John Deere, Moline, Illinois

The Camera at Work in Wisconsin.

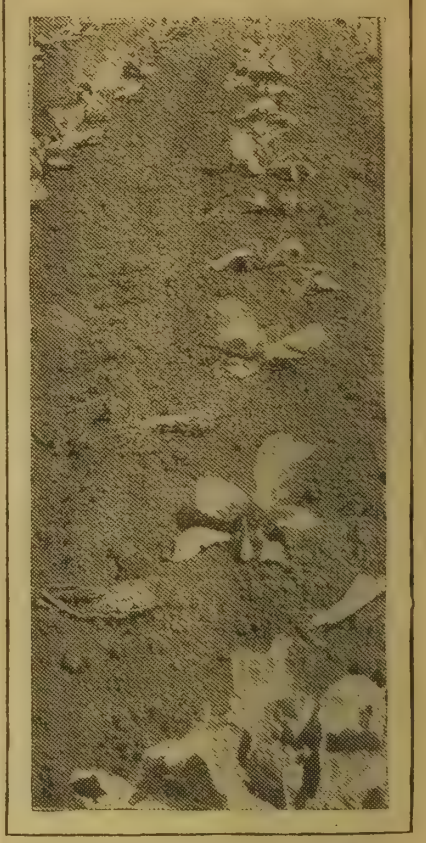
PROFITABLE CABBAGE FIELD.

Cabbage is a highly profitable crop in Wisconsin provided it can be raised free from disease. This cabbage was photographed when it was in fine condition and representative of the best that Wisconsin affords. It was grown on rich, deep black soil and in a well-drained field. This picture was taken after the first plowing.



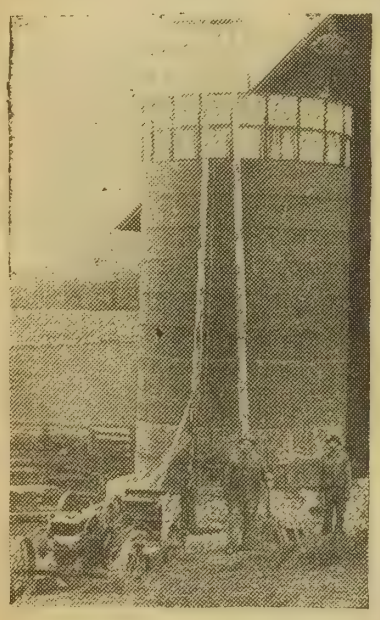
BREAKING WINTER'S WINDS.

This fine windbreak of Norway Spruce has been sheltering a farm home and set of farm buildings for a quarter of a century and is easily good for another twenty-five years. Many a Wisconsin farmer would be glad to have such a row protecting his place and his cattle from the chill winds of the north and west. A windbreak of this character is worth many times its cost. It is ornamental, but its greatest service is protection from winter. Farmers who do not have such a windbreak will do well to look into the matter. They are not expensive and evergreens will grow even and fine if properly selected. Care should be taken to get healthy looking young trees with a hardy stock and with plenty of roots. The strong root growth comes from transplanting and the evergreen taken from the woods is not likely to grow.



BEGINNING OF YELLOWS.

This was the second successive crop of cabbage on new land. Note the old cabbage stumps on the ground. The plant in the foreground is healthy, but the next eight in this row all showed "yellows." Note dwarfing and shedding of lower leaves. Probably a single plant in this place, possibly one of these stumps, was diseased the previous year. Spots like this, scattered throughout the field, mean the end of profitable cabbage culture on this land. The Wisconsin College of Agriculture has issued a comprehensive treatise on cabbage diseases and a copy of this bulletin may be secured by addressing Dr. L. R. Jones, Plant Pathology Department, College of Agriculture, Madison, Wis. The New Wisconsin Hollander disease resistant cabbage seed which is to be tried out this season may put an end to such patches as this in the cabbage sections.



SHAWANO COUNTY SILO.

This silo, erected on the farm of Ed Spriegel, Shawano county, Wisconsin, is 12x38 feet and has ample capacity.

WISCONSIN RED CEDARS.

It is charged the red cedar fosters apple rust. The dots shown in this drawing show the red cedar sections of Wisconsin. To get the best apples we must get rid of the red cedar in southern and western Wisconsin.

SCHOOL POTATO CONTESTS AND THE RESULT.

This picture illustrates what school children can do raising better potatoes when they get the enthusiasm which comes in contest work. This banner was won this year by Langlade county.

Waukesha Holstein Meeting.

Breeders Hold Annual Winter Session at the Resthaven Hotel--Prospects Bright For Good Year For Society Members.

THE eighth annual meeting of the Waukesha County Holstein-Friesian Breeders' Association was held on Tuesday, January 11th, at the beautiful Resthaven hotel at Waukesha. The attendance was large and representative and this meeting will go down in history as one of the most successful winter meetings in the history of this pioneer Holstein community organization in Wisconsin. All of the 130 breeders and their wives enjoyed the banquet at noon, which was a sumptuous feast, to say the least, and was followed by a program of splendid addresses.

A visitor to one of the meetings of this association does not have to wonder long why it has been so successful. Every member is a booster and an enthusiast for the Holstein cow and realizes that through community effort the greatest good is to be accomplished. The past year has been very successful for the association and with a good demand now in that county for Holstein females and bulls there is every reason to expect that the coming year will be very profitable to the Waukesha county breeders.

W. L. Baird, of Waukesha, secretary, reported that during the past six weeks there has been a big demand for stock and that five or six carloads have been sold during that period and that there are many inquiries now on file with the association. The forepart of the year saw a depression in the market for animals but Mr. Baird looks for a big winter business because of the big demand and many sales during the past few weeks. Interest in the Holstein in Waukesha county during the year has been especially keen, and 60 per cent of the 203 official tests made during 1915 in that county was in Holstein herds. Thirteen per cent of all the official testing done in Wisconsin was done in Waukesha county, which Mr. Baird said places that county second in the state in this respect. During the year the association handled 180 inquiries for stock. Female buyers came for carload lots while those in search of bulls to head their herds wished an opportunity for selection, and with many animals for sale these inquirers were able to travel about the county and usually find the bull they were looking for. Mr. Baird said that outside buyers of bulls always seemed better pleased when they could make their selections in this manner.

The meeting last week, as a result, was the climax to this good year in the industry and the attendance doubtless would have been much better except for the great amount of grip which is prevalent in that county as elsewhere. Five new members were admitted to membership, which brings the roll up to more than 140 members. Owing to plans for incorporating the association as a corporate body the annual election was postponed until January 22d, when a meeting will be held for this purpose at the courthouse in Waukesha at ten o'clock. The association will be incorporated without capital and the meeting on January 22d is to comply with the law and finally approve the incorporation. A nominating committee composed of E. E. Rosenkraz, of Oconomowoc; S. A. Baird, of Waukesha and Ed Schley, of Waukesha, was named to suggest officers for election at the coming meeting. New members elected were R. W. Bradford, of Dousman; Gustav Pabst, of Oconomowoc; Charles Chapman, of Waukesha; Joseph L. Walker, of Caledonia; and Stewart Reed, of Oconomowoc. The business meeting was held in the forenoon and several matters of importance to the association were brought up and considered.

S. Paul Jones, county secretary of the Y. M. C. A., outlined the plans for a county calf contest and asked the co-operation of the association which was given. Charles J. Will, of Menomonee Falls, president, was appointed a committee of one to represent the Holstein association, and the other breeders' organizations will be asked to co-operate also. It was the consensus of opinion that such a contest will prove of great value to the dairy industry, and as one speaker declared "calf raising is an art and a science and some of us who are no longer boys can learn a great deal ourselves." The plan is to include both the dairy and beef breeds and all boys between the ages of ten and eighteen years will be eligible. They will take a calf at birth and rear it until it is five or six months old. In addition to being in the county contest the boys will be eligible for the state contest. The prizes will be awarded on the basis of 25 per cent to trueness of type of the breed; 25 per cent on the daily gain; 25 per cent on the economy of production and 25 per cent on the record kept by the contestants.

WAUKESHA COUNTY BARN.
On the Charles J. Will farm near Menomonee Falls. Mr. Will is president of the Waukesha County Holstein Breeders' Association.

S. S. Cramer, of Milwaukee, vice president, outlined a plan for Waukesha county to secure a director on the board of the national association at the meeting in Detroit in June and was delegated to carry the proxies of breeders who could not attend. Mr. Cramer urged that every breeder who could possibly do so attend this national gathering and said that at least twenty members of the association should make the trip. "If that many can go we will certainly put Waukeshe county on the map," he said.

The Holstein breeders also approved the campaign for a county agricultural representative which it was pointed out could be of inestimable value to the breeders as well as to the general farming industry of the county. The county board voted down the proposal at a recent meeting but it is thought that such a representative can be secured at a reconsideration of the subject as the defeat, the breeders believe, was due to the board members not being fully acquainted with all the facts.

Following the banquet served at noon Prof. E. B. Hart, head of the agricultural chemistry department at the college of agriculture, spoke on

(Concluded on page 21.)

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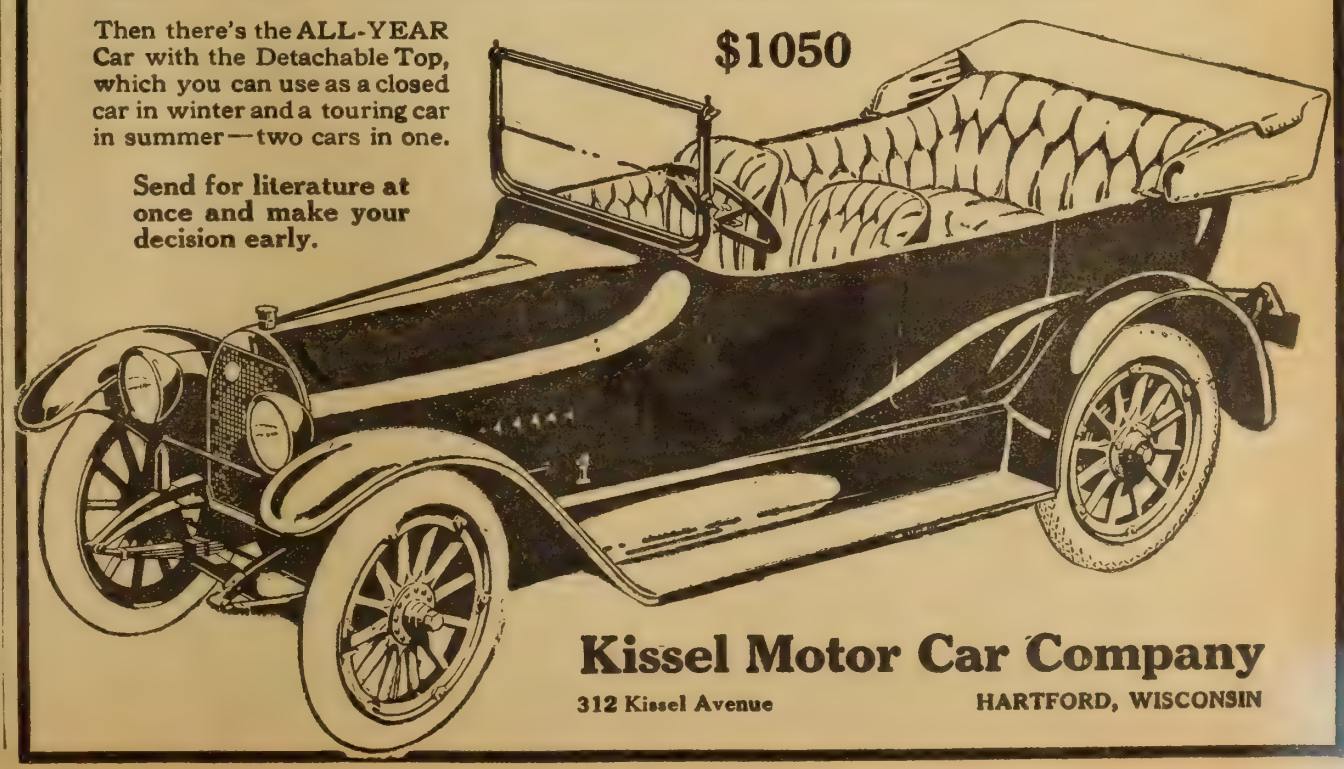

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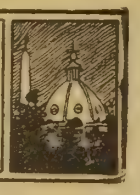
CURRENT EVENTS



THE massacre of nineteen Americans (employed in Mexican mines) by a general of the Villa faction, has resulted in threatened intervention again in Mexico and by urgent demands upon Carranza for an immediate investigation of the whole affair. Senator Stone, of Missouri, chairman of the foreign relations committee, publicly admitted that if Carranza, after a fair trial, failed to protect foreigners in Mexico intervention was inevitable. Secretary Lansing, after sending a demand for satisfaction to General Carranza, issued a statement declaring it was to be deplored that the Americans had not followed the state department's warning against exposing their lives in the guerrilla warfare region. The nineteen men were taken forcibly from the train upon which they were traveling, were lined up and shot down in cold blood. The act is said to be in general line with the Villa policy not to permit foreigners to return to Mexico and resume their work so long as Carranza is being recognized by the United States and other nations as the head of the government. Mexican affairs promise to be troublous once more, with stirring times ahead unless Carranza handles things firmly.

CETTINJE, the capital of Montenegro, the little Balkan kingdom which has never been conquered in all its history, now seems likely to suffer the fate of Belgrade, capital of Serbia, and to fall before the onrushing Teutons. At last reports they had captured an eminence but five miles from the capital and were sweeping irresistibly onward. As in Serbia's case the British and French press finds it inexplicable why Italian assistance was not sent long ago to Lovcen, Montenegro, which, it is said, easily could have been rendered impregnable. The reduction of Montenegro, the press points out, will enable Austria not only to command the Adriatic, but also to threaten the flank of any advance from Saloniki and prevent any effective move by the entente forces through Albania. For Italy the new Austrian success has a most serious aspect. The long, narrow Italian peninsula is peculiarly vulnerable to an attack from the sea. While this victory is being scored for the Teutons in the Balkans, the Russians continue to be active once more in Galicia, where extremely bloody fighting is in progress. It is doubtful, however, if the Russian gains there are sufficient to offset the German-Austrian gains in the Balkans, while during the week the English have abandoned the Dardanelles campaign altogether, withdrawing all their men, being unable to push the Turks from their fortresses and force the straits.

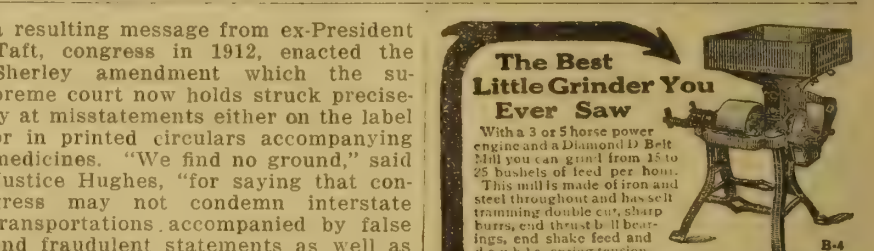
ENGLAND is face to face with compulsory military service for the first time in its history. The conscription bill, agreed upon by the cabinet, passed the house of commons last week by a vote of 403 to 105. The tide was turned toward victory by the appeal of Lord Balfour, head of the admiralty, who pleaded with the lawmakers: "Let this vote tonight show that we are a united people. Do not let us give a false impression to the world that in the moment of the country's greatest emergency we are divided one against another. Abandon your abstract theories, and remember we are dealing with stern realities which call for great sacrifices." The bill has not yet become a law, but unless the sentiment of parliament undergoes a marked change it will soon be a law. There has been some talk of putting the matter up squarely to the people in a general election, but the government will hardly go to this extreme, notwithstanding the fact that the British unions are almost a unit against conscription. Organized labor, sitting in congress at London the very day the house of commons passed the conscription bill, decided against the government's action by the overwhelming vote of 1,998,000 to 783,000. The labor congress was in many ways the most important body of the kind ever assembled. More than 1,000 delegates were present, representing 400 unions and 3,000,000 workers. In addition to the formal vote against the government's compulsion bill, the congress rejected by four to one a motion pledging support to the principle of compulsion for single men, and passed by two to one another motion directing the labor party to oppose the bill in all its stages in the house of commons.

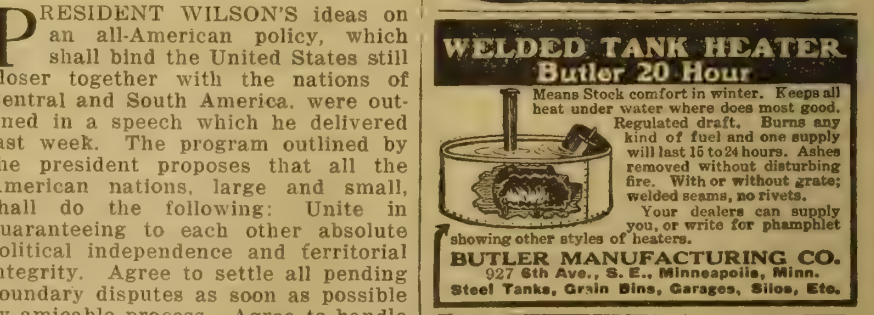
THE progressive party will hold its national convention in Chicago on June 7th, the date and place being the same as that selected for the republican national convention. The idea of the progressives is that perhaps both parties may agree on the same candidate for president. This action was decided upon last week. Forty-seven of the forty-eight states were represented at the meeting. Before adjourning the national committee adopted a declaration of principles in which the administration of President Wilson was criticised for its alleged failure to deal adequately with national honor and industrial welfare, and the progressive party went on record as favoring a complete preparedness consisting of military armament as well as a mobilization of all the country's resources with a view of the unification of American citizenship. A message was read from Col. Theodore Roosevelt urging the necessity for adequate preparedness which was enthusiastically applauded. The action of the progressive committee will undoubtedly boom the presidential stock of Theodore Roosevelt, who has been flirting with the republican nomination for some time past. Should the republicans name him as their standard bearer the progressives would undoubtedly do the same, presenting a united front to President Wilson and democracy.

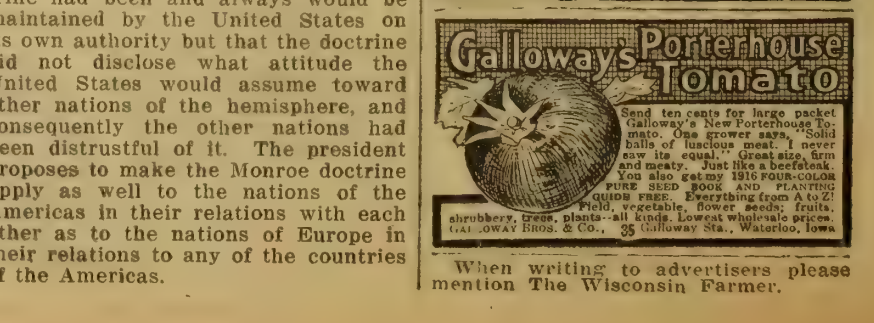
GERMANY has finally and positively agreed to pay an indemnity for the Americans lost in the Lusitania disaster, bringing to an end the long-drawn-out diplomatic negotiations on this subject and restoring the friendly relations between the two governments. Under the terms of the proposal submitted for the approval of the United States, Germany, while offering to pay an indemnity, makes the reservation that no admission of wrong doing thereby is involved. It is contended that the Lusitania was sunk as an act of reprisal for the British blockade of Germany. While Secretary Lansing is understood not to have indicated to Count von Bernstorff whether the proposal was satisfactory a number of officials in a position to be familiar with the American attitude indicated that it would be accepted. While the German situation is thus cleared, the Austrian remains obscure, with official Washington hoping things will terminate as satisfactorily as they have done with the kaiser's government. In the meantime, Austrian submarines continue active in the Mediterranean, directing their energies mainly against freight and troop ships, however.

THE United States Supreme Court has ruled that congress has a perfect right to restrict interstate shipments of drugs which are falsely labeled with claims for cure-all qualities which they do not possess. This puts the pure food and drug law on a firm and stable footing, so that it can be rigidly enforced. The litigation which is now ended has been in progress for ten years. It is expected that numerous actions against drug concerns will immediately ensue. For a time it was urged by government officials that the 1906 pure food law designated as misbranded drugs or medicines which were accompanied in interstate commerce by knowingly false statements about the curative effects of the compounds. The supreme court decided, however, that the 1906 law applied only to misbranding as to the identity or composition of drugs. In response to a resulting message from ex-President Taft, congress in 1912, enacted the Sherley amendment which the supreme court now holds struck precisely at misstatements either on the label or in printed circulars accompanying medicines. "We find no ground," said Justice Hughes, "for saying that congress may not condemn interstate transportations accompanied by false and fraudulent statements as well as lottery tickets." The harmful effects of misbranded drugs, which arouse unfounded hopes in the minds of the sick, can hardly be overestimated. Congress and the courts have now put an effective stop to this swindling.

PRESIDENT WILSON'S ideas on an all-American policy, which shall bind the United States still closer together with the nations of Central and South America, were outlined in a speech which he delivered last week. The program outlined by the president proposes that all the American nations, large and small, shall do the following: Unite in guaranteeing to each other absolute political independence and territorial integrity. Agree to settle all pending boundary disputes as soon as possible by amicable process. Agree to handle all disputes arising among them by patient, impartial investigation and to settle them by arbitration. Agree that no revolutionary expedition shall be outfitted against or supplies for revolutionists shipped to neighboring states. "These are very practical suggestions," said the president, "and I, for my part, believe that they are going to lead the way to something that America has prayed for for many a generation." He said the Monroe doctrine had been and always would be maintained by the United States on its own authority but that the doctrine did not disclose what attitude the United States would assume toward other nations of the hemisphere, and consequently the other nations had been distrustful of it. The president proposes to make the Monroe doctrine apply as well to the nations of the Americas in their relations with each other as to the nations of Europe in their relations to any of the countries of the Americas.







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SOME MARKETING PROBLEMS

Notes From an Address by B. H. Hibbard, of Wisconsin College of Agriculture, Before Grain Dealers of Nebraska.

DID it ever occur to you that price fixing at your home town is more often of consequence, or of more consequence, than that of the distant market. For example, the estimates of savings due to the establishment of co-operative elevators varies from 2 to 6 cents a bushel on all kinds of grain. Taking as a rough compromise 3 cents, and reckoning the average price of all kinds of grain at 75 cents, we have an added income of 4 per cent from all the grain fields of 30,000 farmers. This margin is a very important one representing a clear grain probably equal to the net profits of a vast number of these grain growers. The co-operative elevator movement has put out of business the great share of line elevators of the country, and by by so doing has reduced the possibilities of price-fixing in the grain business by certainly more than 50 per cent. Under the methods of the line elevators the shading of a price for wheat to the extent of 5 cents a bushel was not a hard matter. The farmer, half of the time, did not know the grade of the wheat. He did not know how much dirt it contained, and certainly did not know how it was regarded by the millers as a material for making flour.

With all of these unknowns it was not a difficult matter, where competition was quiet, to make the farmer believe that he was getting the full value of his product when as a matter of fact he was getting well below that amount. This was much easier than fixing prices in the central markets where eager millers and exporters were bidding for grain, and where price-making forces were balancing the scales between supply and demand. Should we come to the point some day of using all our wheat at home, and should a tariff wall protect us from the foreign product it would conceivably be possible for the millers to get together, squeeze out the little fellows, monopolize the business, and to get together, squeeze out the little fellows, monopolize the business, and set prices. This is substantially what has been done in other fields. It is what a great many people think has been done in the case of the packers and the meat supply. However, an inquiry carried on for ten years by the government against the packers brought little of a convincing nature to light. But we do not have to go to Chicago to find price-fixing in the live stock market. It is often more easily found nearer home. Not so often in the vicinity of Omaha, or anywhere within the great stock feeding districts as around the fringes of this district, however. Here are some undoubted facts.

A stock shipper in a neighboring state found the business profitable, and decided to have a goodly portion of it to himself. He put men at each of half a dozen stations, gave them an interest in the business and outlined the plan to be followed. Where there was little competition he took $1 margin on hogs and cattle, and $2 or $3 on calves. Where competition developed he satisfied himself with less and was especially skillful in getting his opponent to bid more than stock was worth and letting him have it in large amounts. For example, in one case, this monopolist lost $5,000 at a given station one year, but for several years after that he made $5,000 a year, with expenses not a third of that sum. He has substantial control of the business in six stations in a row on one line of railroad. At one of these he broke up a farmers' co-operative company. This he did by paying so much that there was an advantage in co-operative operations. The company is likely to remain a long time dead, and he can recover his extra investment at leisure.

In another case a group of farmers having a large number of veals for which they had never received over 6 cents a pound organized a co-operative company, and during the first two years received 8 cents on an average. Here was price fixing with a vengeance. Had there been anything a quarter as big as this in the packers' profits the government investigations should have been able to make out a case in a tenth of the time they were at work. Whatever case may be made against the packer it has to be admitted that their prices go up and down with logical curves conforming pretty well to receipts. This does not prove that they do not have an undue advantage in price making. It does, however, suggest very strongly that he does not have a perfectly arbitrary and free price-making privilege. At all events out of the wide margin of 40 per cent between the farmers' and the consumers' price, taken as 100 per cent, the retailer gets twice as much as does the packer.

Without doubt it is easier to fix prices in the small town, in the retail trade, than in the wholesale trade in a city. For example, a few store keepers get together and agree in a friendly way to sell certain canned goods at 10 cents straight instead of three for a quarter. There is not one chance in ten that their customers will either find it out or quit trading with them in case they should. Yet in this little agreement a difference of 20 per cent has resulted. Or one merchant may take the lead and others follow, thus making any sort of agreement unnecessary. This leading merchant not infrequently sets his prices a full 10 per cent above those of neighboring towns, and yet his customers do not, except in rare cases, go to the neighboring towns to trade, and the smaller merchants of his own town follow his lead in their charges.

The reason why their price-making forces work so well in the small town is in some respects similar to the case of the grist mills run by water power. In all the early years of such work the dams were made on the small streams. Every tributary of the upper Mississippi had its mill; the main stream was not dammed until a very few years ago. Now the power furnished at Keokuk is greater than that of all the little streams above it, but this is true only because the utilization of the little streams is unprofitable, for there is more power in them than in the great river itself. In the case of price fixing the situation is not quite analogous. It is still profitable to get everything possible out of the little branches. Our greatest waters are near home.

In one line of business in Wisconsin, involving price fixing, we have made a careful study. This is in the cheese business. Here we have an industry involving some $25,000,000 a year. It was the belief of many farmers that the prices of cheese followed the self-interest and caprices of a small group of cheese dealers who thwarted the operation of the law of supply and demand. These men who seemed to occupy such a powerful position in the market were accused of putting prices down just as the heavy rush of production began in the early summer when it was time to buy for storage, and after the storage houses were full, perhaps in November, these gentlemen arbitrarily raised the price to a convenient figure at which to sell not only the current product but millions of pounds which they had stored during the summer. One of these men in the year 1912 paid a state income tax of $853, which you will agree suggests a rather large income for a man in a small country town. He had speculated in cheese; the price had advanced; he had reaped a reward. The summer of that year brought matters to a crisis. One morning in May the cheese dealers met in a board meeting. It was presumably an open board on which cheese was freely offered and purchased. Those who had done so well for a few years had apparently decided that it was too good a thing to pass around liberally, and had made it harder for a new buyer to enter. On this particular morning things seemed about as usual to the observer. Cheese had been selling at 15 cents. It was time to expect some decline but no one was prepared for what happened. The highest bid was 12 cents. The price for a week at least was thus lowered 20 per cent. On the amount of cheese then coming into the market this was enough to cut off $15,000 in the payments to the farmers of a single county.

How, it will very properly be asked, were these men, some fifteen in number, able to make such a change in the price. They had for the moment been able to exclude other buyers, and, therefore, having the market to themselves, became the price makers. What would such action do with reference to other market forces? To begin with a farmer asked one of the dealers if it would not have been wiser to let the price down more gently and avoid the shock of such a sudden crop. "Yes," said he, " that is what I told the rest of the dealers." There were three possible outcomes. One was that nothing in particular might have happened. The farmers might have accepted the cut as they had many times before, and the consumer would have had no advantage from it, the margin being absorbed by the dealers. A second possibility was that other dealers and wholesale merchants might have broken into the market and raised the price, thus breaking up the monopoly of the members of the board. The third possibility was the one that did happen, the farmers broke away from the leading strings and made their way to the general market, leaving the board out.

The story of the farmers' cheese selling organization in Sheboygan county, Wisconsin, is one full of information respecting the relation of the producer to the middleman and the consumer. Briefly stated the farmers organized half of the cheese factories of the county into a federation. They put up a warehouse and cold storage building costing over $25,000; hired a manager at $2,500 a year, and went into the business of selling cheese to the wholesale trade. They now have two years of history behind them. They have handled some 7,000,000 pounds of cheese a year, at a saving of a quarter or half cent a pound. What about the 3 cents, or even the 1 cent of which they talk? Let us see what happened to the cheese dealers. Even before the farmers' company was started the princely incomes of the cheese dealers vanished. Not because of the opposition but because the facts of the market went against them. The man who had paid $853 income tax, next paid $53, then was bankrupt, then died, it is said because of worry. Cheese failed to rise in price in the winter, speculators lost. The farmers do not speculate. They do not sell so as to gain much of the spread of 12 cents between producers' and consumers' prices. They sell to the wholesale trade at a small saving. Best of all they have learned what the market for cheese really is. They now know what can be done and what cannot. The little game of price fixing has been exposed, and the farmers are marketing intelligently. But the necessary middleman costs still absorb the main part of the 12 cents. The retail dealer gets nearly half of it, and the cheese producers cannot go into the actual business. The solution of that riddle is another story.

Schoolhouse lectures, illustrated with lantern slides and movies are a feature of the local work of G. R. Ingalls, Eau Claire county's agricultural representative. Live stock, dairying, potato diseases and farmers' club organizations were the topics discussed at recent meetings.

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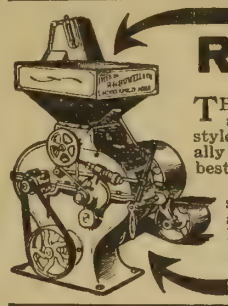

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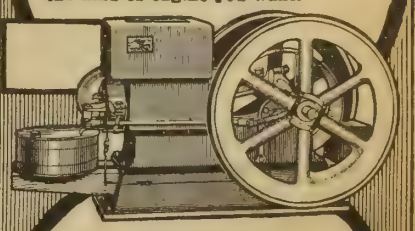

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Matter Is Considered of Such Importance in Wisconsin That a Special Course Has Been Provided for Farmers' Week.

A NUMBER of Wisconsin farmers of a mechanical turn of mind will take a six days' course in the construction and operation of gasoline and kerosene engines, tractors, and automobiles during the Farm and Home Week, college of agriculture, February 7th-12th.

The coming age of power machinery is felt in advance, and many foresighted farmers desire to become familiar with engines and learn to operate them without hesitation or lack of confidence in their own ability. To such men this course offers great opportunities, as the farmer-students will put on overalls and spend most of their time in actual work with many types of machines now so frequently used in various operations from pumping to plowing, and which make life on farms and in the homes more enjoyable.

The agricultural engineering department, where the course will be held, has splendid equipment for the work. Its main engine room, 60 by 100 feet, is filled with gas and kerosene engines and farm tractors of many kinds. The room is ventilated with a new system leading directly from each engine on the floor, thus doing away with noxious gases. There are in all twenty-three farm power engines of stationary type, ranging from one to eighteen horse power, three auto motors and four tractors from sixteen to thirty horse power capacity. Prony brakes are provided with which to make engine tests. All necessary equipment is at hand for extensive study in operating and repairing the various machines.

Besides F. M. White, head of the department, and president of the American Society of Agricultural Engineers, the course will be directed by P. S. Rose, assistant editor of The American Thresherman, who will give a series of lectures on carburetion and fuels. Former students, E. E. Jewett, now of the International Harvester Company; and H. E. Roethe, with the Fuller & Johnson Manufacturing Company, will assist in the instruction work, as well as Mr. Sauve, Mr. Griffith and Mr. Jones, of the department.

The program, as announced by Mr. White:

February 7th—Principles and Construction of Gas Engines, F. M. White. Laboratory work in engine construction. Carburetors, P. S. Rose.

February 8th—Ignition Systems, F. M. White. Laboratory work in timing valves and ignition, and outdoor engine operation. Carburetion and Fuels, P. S. Rose.

February 9th—High Tension Ignition Systems, F. M. White. Laboratory work in timing valves and ignition, and outdoor engine operation. Carburetion and Fuels, P. S. Rose.

February 10th—Magneto Ignition, F. M. White. Welding and tempering work, details of tractor construction. Babbitting and repair of boxes. Carburetion and Fuels, P. S. Rose.

February 11th—Tractor Types, P. S. Rose. Testing tractors in laboratory. Magneto Ignition, F. M. White.

February 12th—Good and Bad Features in Gas Engine Construction, F. M. White. Laboratory work in auto wiring and operation. Special trip to gas engine factories in Madison.

The course is limited to fifty students only, and those desiring to take the work should apply at once in order to make sure of a place. No fees whatever will be charged.

IN AND AROUND WISCONSIN.

(Continued from page 8.)

H. Kuhlman, Madison, secretary; Wisconsin Ayrshire Breeders' Association, Frank T. Stare, Ladysmith, secretary, and Wisconsin Hereford Breeders' Association, C. W. Thompson, Lake Geneva, secretary.

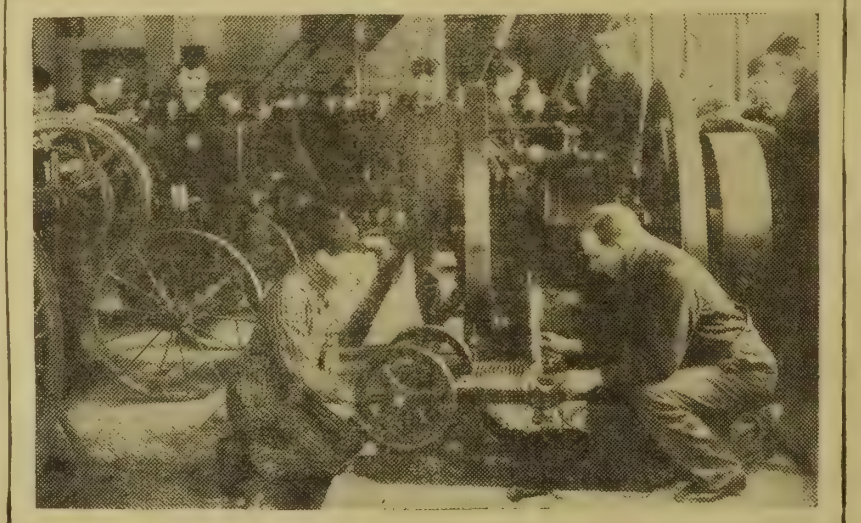
There is considerable interest throughout the state in the exhibit of the Wisconsin Agricultural Experiment Association, to be held at Madison February 11th and 12th. Winners of one or more premiums in previous exhibits will be barred from competing in the open classes of the grain show. The following is a list of those who have heretofore won one or more first premiums:

Oats—J. P. Bonzelet, Eden; E. T. Biggs, Fond du Lac; F. L. Dreger, Madison; V. G. Ellis, Evansville; O. C. Fethers, Manawa; F. B. Grebe, Fox Lake; J. H. Hendricks, Campbellsport; Chas. Howitt, Randolph; A. J. Klein, Lomira; H. F. Kramer, Bloomer; H. F. Marthaler, Beaver Dam; Gust Parsh, Wausau; Noyes Raessler, Beloit; J. H. Sattler, Rosendale; Otto Toepfer, Madison; H. T. Draher, Beaver Dam.

Barley—Anton Bohl, Beaver Dam; J. P. Bonzelet, Eden; E. T. Briggs, Fond du Lac; Chas. Howitt, Randolph; O. R. Jones, Beaver Dam; H. E. Krueger, Beaver Dam; J. R. Thorpe, Tavera; Otto Toepfer, Madison; Chester Wilcox, McMillan.

Corn—Andrew Finsness, Stoughton; H. T. Draheim, Gotham; F. P. Grebe, Fox Lake; Chas. Howitt, Randolph; V. W. Post, Sextonville; Renk Bros., Sun Prairie; J. R. Thorpe, Tavera; Ike Blood, Mukwonago; F. B. Jones, Alma Center; H. W. Longley, Dousman; S. P. Markle, La Crosse; Noyes Raessler, Beloit; H. E. Rosenow, Oconomowoc; J. E. Brunker, Ridgeway; O. R. Frauenheim, Random Lake; Wm. Schwandt, Deer Park; John Van Loon, La Crosse; George Leonard, Jefferson; W. P. Leonard, Fort Atkinson; Fred Grebe, Jefferson; W. R. Ward, Fort Atkinson; Joe Hans, Jefferson.

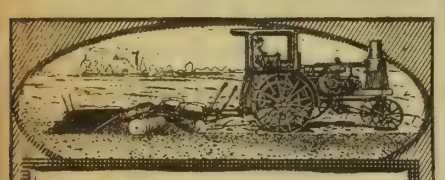
Pedigree Rye—Lloyd Hubbard, Evansville; Noyes Raessler, Beloit; A. L. Wagner, Haven; H. E. Krueger, Beaver Dam; J. M. Bohl, Beaver Dam.



STUDYING THE GASOLINE ENGINE.

The annual stockmen's "round-up" will be held in Madison on February 10th this year, when Wisconsin stockmen from all part of the state gather at Madison for the yearly sessions of the Wisconsin Live Stock Breeders' Association and auxiliary organizations. We are advised that the meetings this year will be of particular interest, especially so since none could be held last year on account of foot-and-mouth disease. Later notices regarding the details of the program will appear in these columns.

Read the poultry department of The Wisconsin Farmer. This week letters from prominent poultry raisers in this state are appearing. The series will be kept up for some weeks.



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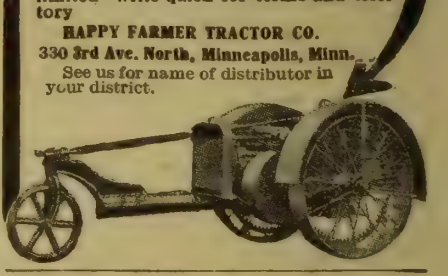

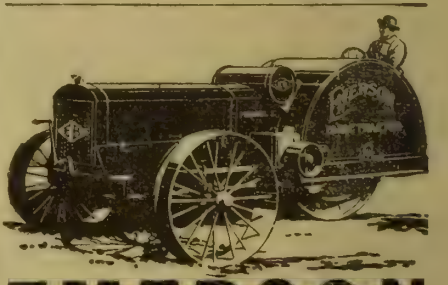

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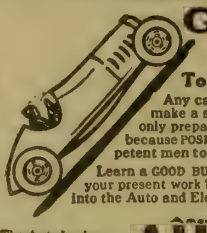

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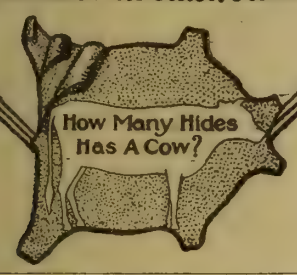

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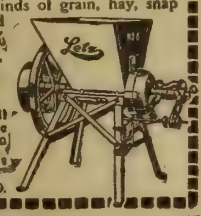

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When writing to advertisers please mention The Wisconsin Farmer.

MORE FARMERS AT AUTO SHOW.

(Continued from page 7.)

seeing the value of the truck when there is much hauling to be done. Several light trucks were contracted for by several creamery companies in the state who will use the trucks for gathering the milk and cream the coming season. There seems to be a rapidly growing use of the truck for this purpose, as the creamery men are learning that it is to their advantage to get the raw product from the farm to the creamery as rapidly as possible and in the very best condition and the truck solves the problem, especially where the roads are in good condition. The representative of one body building concern said he had arranged for eleven state agencies during the show and an exhibitor of a trailer announced he had contracted at the show for the disposal of 200 trailers this year.

Everything from four to twelve-cylinder cars were on exhibition and the show in every respect ranked with that of New York and Chicago. About 4,000 feet of floor space in the Auditorium was devoted to the exhibits which were valued at $500,000, Seventy-nine manufacturers were represented by forty-two pleasure car exhibitors. There were 193 different models on exhibition with sixteen commercial vehicle exhibitors representing twenty-four manufacturers with forty models. In addition there were numerous exhibits of trailers, tractors, oils, gasoline, greases, spark plugs, etc.

None of the standard tires were exhibited per the agreement of the manufacturers to show only at the New York, Chicago and Philadelphia shows, but nevertheless the tire agencies reported a splendid business during the show from those who called at the Milwaukee salesrooms.

Inquiry by the writer at the Firestone Tire & Rubber Company branch on Jefferson street as to the advantage of the show to the tire business brought forth the information that trade conditions are splendid and that the coming year will be a record breaker in Wisconsin. The Firestone Company closed up many contracts with agents throughout the state and their show rooms were crowded during most of the time with agents who desired to look over the various lines while attending the show and before making their plans for the coming season. The display of accessories was very good and practically all lines, excepting the manufacturers of bearings, were represented. The Hyatt Roller Bearing Company, whose offices are in the Germania Building, did not exhibit, but their offices were the mecca for many supply men who came to the show and a good business was reported.

Milwaukee has a very live bunch of dealers in the Milwaukee association and much of the credit for the success of the show goes to the committee consisting of Frank J. Edwards as chairman, Bart J. Ruddle as show secretary and A. W. L. Gilpin and Jesse A. Smith. The auditorium was decorated to represent a Venetian garden and we doubt if a more ideal setting could have been provided for the half million dollars' worth of cars on display.

During the week the Wisconsin State Automobile Association held its annual meeting and decided to continue its fight for better roads. All members were unanimous in stating that the organization is doing splendid work for the motorists of the state and when they speak of motorists they include a large percentage of the farmers of the state. The association has practically fathered the good roads movement in Wisconsin and the campaign for a permanent system of highways will be continued.

WISCONSIN BUTTERMAKERS' ATTENTION.

To the Editor:—Attention is called to the fact that butter for the convention to be held at Eau Claire February 1st, 2d and 3d must be shipped not later than January 26th. The executive committee, as previously announced, will look up the date on the bill of lading and any shipment bearing a later date than January 26th will be entered for complimentary score only and will not be allowed to participate in the premium fund nor to compete for the prizes. In view of the fact that as in the past thirty district prizes are offered and also five state prizes it behooves all buttermakers to be careful to see that their butter is shipped on time. Judges will begin to score Friday, January 28th.

Any buttermaker who has not received his program with entry blanks, tags, etc., should write the secretary at Madison at once. Kindly bear in mind, so that there will be no misunderstanding, that your butter must be shipped not later than January 26th.

Also remember to get your twenty-pound exhibition tub at an early date. If for any reason you cannot get a twenty-pound tub send a sixty-pound tub and you will be reimbursed for the excess butter over the twenty-pound tub exhibition size.

G. H. Benkendorf, Sec.

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Consider what this involves. The telephone company must forecast the needs of the public. It must calculate increases in population in city and country. It must figure the growth of business districts. It must estimate the number of possible telephone users and their approximate location everywhere.

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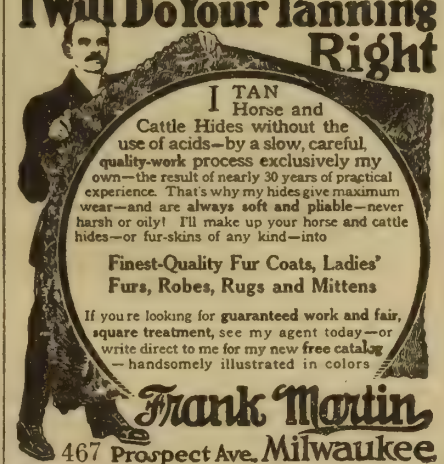

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HEPSEY BURKE---A Sister to David Harum.

By F. N. Westcott, the Brother of the Author of "David Harum."

(Copyright, 1915.)

CHAPTER I.

Hepsey Burke.

THE noisy, loose-jointed train pulled out of the station, leaving behind it a solitary young man, enveloped in smoke and cinders. In the middle of the platform stood a little building with a curb roof, pointed at both ends like a Noah's Ark; and the visitor felt that if he could only manage to lift up one side of the roof he would find the animals "two by two," together with the cylindrical Noah and the rest of his family. There was no one in sight but the station-master, who called out from the ticket office:

"Did you want to go to the village? The 'bus won't be down till the next train, but maybe you can ride up on the ice wagon."

"Thanks," the stranger replied. "I think I'll wait for the 'bus, if it's not too long."

"Twenty minutes or so, if Sam don't have to collect the passengers goin' West, and wait for a lot o' women that forget their handbags and have to get out and go after 'em."

The new arrival was good to look at—a handsome, well-built fellow of about twenty-five, dressed in a gray suit which was non-committal as to his profession, with a clean-shaven face which bore the unmistakable stamp of good breeding and unlimited good nature. He tilted his suitcase on end and sat down on it; then he filled his briar pipe, crossed his legs, and looked about to take stock of the situation. He gazed about curiously, but there was nothing of any special interest in sight, except, painfully conspicuous on the face of a grass terrace, the name of the village picked out in large letters composed of oyster shells and the bottoms of protruding beer bottles stuck in the ground. The stranger found himself wondering where a sufficient number of bottles could be found to complete such an elaborate pattern. The only other marked feature of the landscape in the way of artistic decoration was the corrugated base of an old stove, painted white, which served as a flower vase. From this grew a huge bunch of scarlet geraniums, staring defiantly, and seemingly fairly to sizzle in the hot, vibrant atmosphere, which was as still as the calm of a moonlit night.

As the man on the suitcase gazed about him at the general air of dilapidation and neglect characteristic of a country town on the down grade, and recalled the congenial life of the city which he had left, with all its busy competition, with all its absorbing activities, the companionship of the men he loved, and the restful, inspiring intimacy with a certain young woman, he felt, for the moment, a pang of homesickness. If the station were a sample of the village itself, then life in such a place must be deadening to every finer sensibility and ambition; it must throw a man back on himself and make him morbid.

The momentary depression was relieved by the station-master, who suddenly appeared at the door of the Ark and called out:

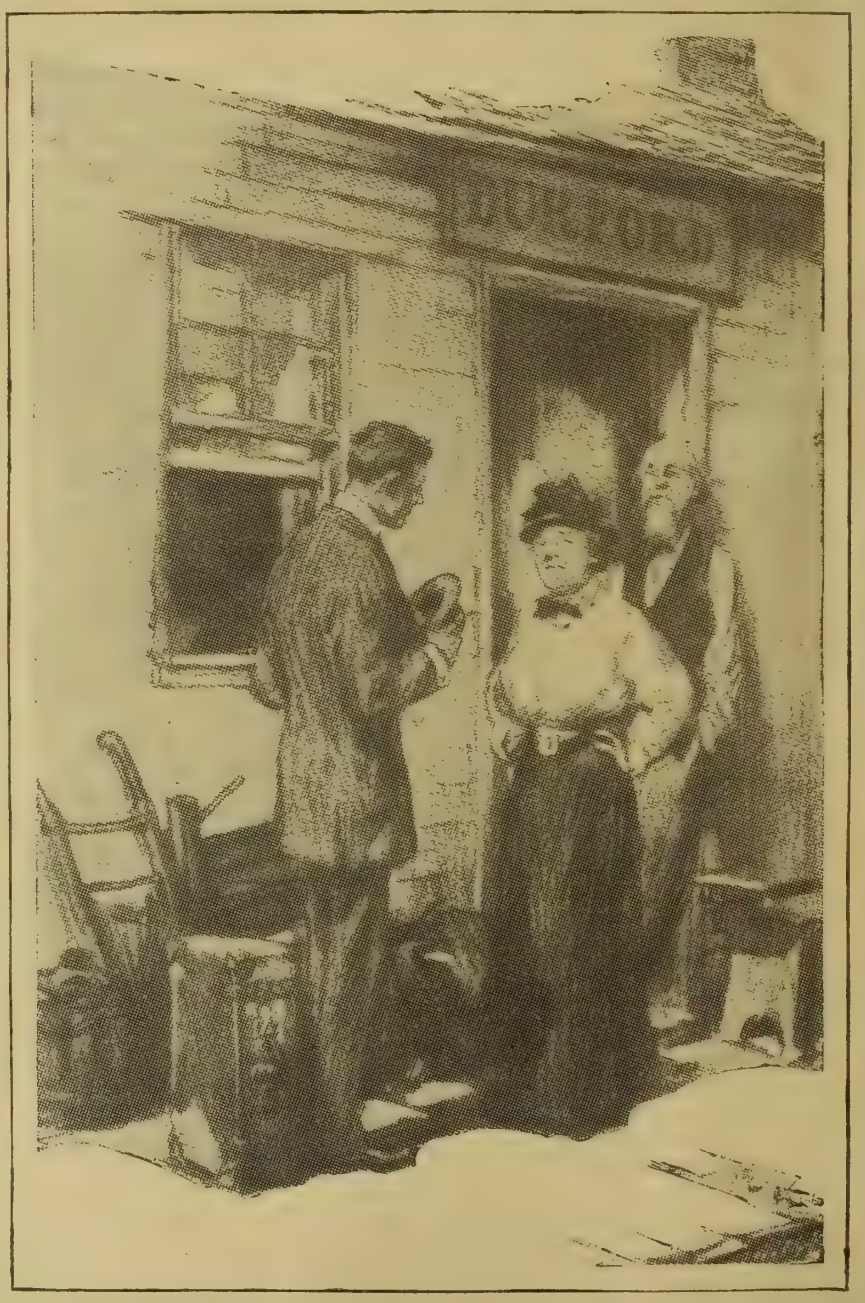
"Here comes Hepsey Burke. Maybe she'll take you up; that'll be a sight more comfortable than Lipkin's 'bus."

There was nothing to be seen but a cloud of dust, advancing with the rapidity of a whirlwind along the highway, from which there gradually emerged a team and a "democrat," containing a woman, a boy about fourteen and a middle-aged man.

As the turnout drew up the man took the reins from Mrs. Burke, who jumped out of the wagon with remarkable agility for one of her size and years, and, nodding to the station-master, came on to the platform.

Hepsey Burke was rather stout, and the lines from her nose to the corners of her mouth, and the wisps of gray hair which had blown about her face, indicated that she had passed the meridian of life. At first glance there was nothing striking about her appearance, but there was a subtle expression about the mouth, a twinkle about the large gray eyes behind the glasses she wore that indicated a sense of humor which had probably been a God-send to her. She was strong and well and carried with her an air of indomitable conviction that things worked themselves out all right in the long run.

The boy was obviously her son, and in spite of his overalls and frayed straw hat he was a handsome little chap. He looked at you shyly from under a little crop of curly hair, with half-closed eyes, giving you the impression that you were being "sized up" by a very discriminating individual, and when he smiled, as he did frequently, he revealed a set of very white and perfect teeth. When he was silent there was a little lifting of the inner brow which gave him a



"YOU HAVEN'T SEEN ANYTHING THAT LOOKED LIKE A PARSON, HAVE YOU? YOU CAN GENERALLY SPOT 'EM EVERY TIME."

thoughtful look quite beyond his years, and you were sadly mistaken if you imagined that you could form a correct impression of Nicholas Burke at the first interview.

The man wore a sandy beard, but no mustache, and had a downcast, meekly submissive air, probably the depressing effect of many years of severe domestic discipline.

Mrs. Burke was evidently surprised to find no one there but the man on the suitcase, but as he rose and lifted his hat she hesitated a moment, exclaiming:

"I beg pardon, but I was lookin' for a parson who was to arrive on this train. You haven't seen anything that looked like a parson, have you? You can generally spot 'em every time."

The young man smiled.

"Well, no; I seem to be the only passenger who got off the train, and, though I'm a clergyman, you don't seem to find it easy to 'spot' me."

Mrs. Burke, with a characteristic gesture, pulled her glasses forward with a jerk and settled them firmly back again on the bridge of her nose. She surveyed the speaker critically as she questioned:

"But you don't seem to show the usual symptoms—collar buttoned behind, and all that."

"I am sorry to disappoint you, madam, but I never travel in clerical uniform. Can't afford it."

"Well, you've got more sense than most parsons, if I may say so. Maybe you're the one I'm lookin' for: Mr. Donald Maxwell."

"That is my name, and I'm sure you must be Mrs. Burke."

"Sure thing!"—shaking his outstretched hand heartily. "Now you come right along with me, Mr. Maxwell, and get into the democrat and make yourself comfortable." They walked round to the front of the station. "This, Mr. Maxwell, is Jonathan Jackson, the Junior Warden; and this is my son Nicholas, generally known as Nickey, except when I am about to spank him. Say, Jonathan, you just h'ist that trunk into the back of the wagon, and, Nickey, you take the parson's suitcase."

The Junior Warden grinned goodnaturedly as he shook hands with the new arrival. But Hepsey continued briskly: "Now, Jonathan, you get in the back seat with Nickey, and Mr. Maxwell, you sit with me on the front seat so that I can talk to you. Jonathan means well, but his talk's limited to crops and symptoms, even if he is an old friend, my next door neighbor, and the Junior Warden."

Jonathan obeyed orders, and, as he got into the wagon, winked at Maxwell and remarked:

"You see we have to take a back seat when Hepsey drives; and we have to hold on with both hands. She's a pacer."

"Don't you let him frighten you, Mr. Maxwell." Hepsey replied. "Jonathan would probably hold on with both hands if he lay flat on his back in a ten-acre lot. He's just that fearless and enterprisin'."

Then, starting the horses with a cluck, she turned to Maxwell and continued:

"I guess I didn't tell you I was glad to see you, but I am. I got your note tellin' me when you were comin', but I didn't get down to the station in time, as the men are killin' hogs today, and until I get the in'ards off my hands I haven't time for anything."

"I am sorry to have put you to the trouble of coming at all. I'm sure it's very good of you."

"No trouble, not the least. I generally look after the visitin' parsons and I'm quite used to it. You can get used to 'most anything."

Maxwell laughed as he responded:

"You speak as if it weren't always a pleasure, Mrs. Burke."

"Well, I must admit that there are parsons and parsons. They are pretty much of a lottery, and it is generally my luck to draw blanks. But don't you worry about that; you don't look a bit like a parson."

"I think that's a rather doubtful compliment."

"Oh, well, you know what I mean. There are three kinds of people in the world; men, women and parsons; and I like a parson who is a man first and a parson afterwards; not one who is a parson first and a man two weeks Tuesday come Michaelmas."

Donald laughed; he felt sure he was going to make friends with this shrewd, yet open-hearted, member of his flock. The pace slackened as the road began a steep ascent. Mrs. Burke let the horses walk up the hill, the slackened reins held in one hand; in the other lolled the whip, which now and then she raised, tightening her grasp upon it as if for use, on second thought dropping it to idleness again and clucking to the horse instead. It was typical of her character—the means of chastisement held handy, but in reserve, and usually displaced by other methods of suasion.

As they turned down over the brow of the hill they drove rapidly, and as the splendid landscape of rolling country, tilled fields and pasture, stretching on to distant wooded mountains, spread out before him, Maxwell exclaimed enthusiastically, drawing a deep breath of the exhilarating air:

"How beautiful it is up here! You must have a delightful climate."

"Well," she replied, "I don't know as we have much climate to speak of We have just a job lot of weather, and we take it regular—once after each meal, once before goin' to bed, and repeat if necessary before mornin'. I won't say but it's pretty good medicine at that. There'd be no show for the doctor if it wasn't fashionable to invite him in at the beginnin' and the end of things."

Jonathan, who up to this time had been silent, felt it incumbent to break into the conversation a bit, and interposed:

"I suppose you've never been up in these parts before?"

"No," Maxwell responded, "but I've always intended to come up during the season for a little hunting some time. Was there much sport last year?"

"Well, I can't say as there was, and I can't say as there wasn't. The most I recollect was that two city fellers shot a guide and another feller. But then it was a poor season last fall, anyway."

Maxwell gave the Junior Warden a quick look, but there was not a trace of a smile on his face, and Hepsey

(Continued on page 32.)

Fruits and Garden

ORCHARD EXPERIENCES.

Swiss Farmer Tells of Some Mistakes and Successes in Wisconsin.

To the Editor:—Having been raised in the fruitful valley of Lake Zurich, Switzerland, I naturally inherited a desire to grow fruit. Accordingly, when we bought our farm sixteen years ago, I decided to plant an apple orchard. To be sure, our place had always been a stock farm, but there had been a very prolific orchard on the place, which, however, through sheer neglect, had all but gone out of existence, only a few scraggy trees remaining. I was aware at the time that stock farming and orcharding combined was condemned as impractical. Nevertheless, in two years I was ready to plant the first installment of apple trees. As the state horticultural society at that time advised planting native plums, I planted some of those as well as some of the hardiest of the European kinds, which my neighbor, Mr. Wm. Toole, propagated at the time. We bought the apple trees from a neighboring nursery. I prefer this method because I can plant immediately, thereby retaining all the vitality of the trees, and also by being present at digging can make sure of getting trees true to name. Substituting has often proved disastrous. My first mistake was to take the nurseryman's advice about variety, for he naturally gave me a few trees of nearly everything he had in stock. If one is planting an orchard for home use or local market it does not matter so much, as often unmarketable varieties are the best for home use, but if one intends to grow apples for market let him make a careful list of such kinds as the market demands, considering keeping quality especially. Apples of the Wealthy type, if well grown, even though they ripen during the glut of the market, bring a fairly remunerative price, because they will stand in cold storage. We planted our trees with the good, old-fashioned spade-and-shovel method, and, really, if you are willing to apply plenty of energy and elbow grease, a good job can be done. We had the pleasure of seeing our trees start off nicely, and made a satisfactory growth during the season. We planted the ground between with hoed crops, cultivated well, and continued with that method until trees were in good bearing.

However, let me here record our second mistake. We again took the advice of the state horticultural society and set trees about twenty-four feet apart, only to find that as soon as they became of bearing age some of the trees would interlace, thereby shading one another and consequently producing much undersized and poorly colored fruit. Aside from the early summer apples, of which only a limited number should be planted, from thirty to thirty-five feet each way is not too much. Of course, we were aware of the danger of ravages by vermin, such as mice, also rabbits, and if one values his trees he may well spend a little time and money to avoid serious damage during, say, the first six years. We sometimes wrapped the trunks with burlap; sometimes I rubbed on a little axle grease, or even going through your orchard now and then and tramping the snow around the trees will save them from serious damage.

While yet a young man, during a trip through the Pacific states and during my six months' stay there, I noted the importance which fruitmen attached to proper pruning. Their trees were evenly balanced, the inside limbs scrupulously kept out, and limbs and trunks were smooth. Rough, scaly bark harbors insects and their eggs, also fungous germs. These should be dislodged from the bark by scraping, thus giving the subsequent spray a chance to do its work thoroughly. By cutting out branches where they grow too thickly, and clipping back too rank growth, we not only get rid of undesirable fruit, which never would have had the chance to fully develop, but also save the tree from certain exhaustion. Having brought the trees to bearing age, we, of course, discontinued planting crops between rows. However, we plow every year, though as shallow as we can near the trees, and drag and cultivate the fore part of the season, after which we let the weeds grow, and mow them a couple of times as they head out their seed stocks. A better way to secure this cover crop might be in sowing oats or millet or other grain or annual grass.

I must not omit to state that we have spread a light coat of stable manure throughout the orchard every year. In spraying we have followed mostly the formulas given out by different experimental stations. In the dormant season we use lime sulphur mixture (commercial) at the rate of one to eight or ten, and have been quite successful in eradicating oyster shell bark louse, tent caterpillar, aphis, etc. Later sprays we apply just before blossoms open and again when petals fall, and we spray more or less until calyx closes. For these later sprays we use lime sulphur at the rate of 1 to 35, or of Bordeaux mixture we have used the 4-5-50 rate, but are inclined to favor a little weaker mixture and put it on more copiously. We use the same spray for plums with very good results.

We have now before us the task of securing and disposing of the fruit. Much has been written on this subject lately by more experienced fruitmen than I am, but to my mind we will never be recognized in the markets as a fruit state as long as we persist in dumping inferior and even

STROLLING IN THE ORCHARD.
Scene on the J. E. Baer farm, near Baraboo, Sauk county, Wisconsin.

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culled fruit on the market in such quantities as has been done the past season. I am aware that some of our fruit growers do not agree with me. Nevertheless, I would say, eliminate seconds and cull down to the smallest possible per cent, or if you must grow them, keep them at home, for they will never bring any remunerative return, and by doing so you will help make a paying market for the really good fruit. J. E. Baer.

Sauk Co., Wis.

APPETIZERS FOR THE WINTER MONTHS.

To the Editor:—Many of the people living on the farm and in the small village are content to go without "green stuff" on their tables from the middle of November or the first of December until March, when with a very little trouble plenty of fresh vegetables might be had. How often the housewife sighs for a little of some fresh vegetable to break the monotony of the meal of canned vegetable and cured meat? They think that fresh vegetables are only for the people near at hand to the great forcing houses and the large cities, when a veritable garden could be maintained within their houses supplying the table with many a dish usually considered utterly impossible at that season. The house cellar or any other cellar can, if properly handled, be made to supply plenty of the highest quality rhubarb, asparagus, chicory, seakale and other greens.

How welcome in the spring is the first rhubarb pie, especially if the apple crop the preceding year has been a failure and the store of fresh fruit long been depleted? The wise man of the house will see to it that he may be supplied with this delicacy from Christmas time on until the outdoor crop is over. Ask the lover of the tender asparagus shoots and he will tell you that the season of that vegetable is entirely too short. You say canned asparagus, but the canned material cannot compare with the fresh material in any way. Yet with a little judicious use of the cellar the asparagus season can be lengthened by several months and at a time when other fresh fruits are hard to get.

In the forcing of most of these materials light is not an essential, but, in fact, quite a detriment to the production of crisp, tender stalks. The essentials for forcing rhubarb are a dark place with little or no light, a temperature of 40 to 65 degrees, although the variation may be from 40 to 80 degrees, and moisture in not too large an amount. The cellar is almost an ideal place for the combination of all of the above. It is dark and generally moist, at least the atmosphere is humid and the temperature can be kept sufficiently high with a small gasoline stove or even just a kerosene lamp if the cellar is not too large.

Take for forcing roots of rhubarb that are at least two years old and allow them to freeze; then pack them tightly in a corner of the cellar in such a manner that the product can be conveniently picked. Cover them over with a little loose, mellow earth just so that the crowns of the plants are at the surface of the ground and water them down well. It is absolutely essential that the roots have been frozen before they are brought in to force as the nature of the plant seems to demand this or else a long period before it will grow rapidly again. From now on the control of light, temperature and moisture determine the time of maturity. If the product is desired in a short time keep it quite dark and run the temperature at about 60 to 65 degrees. This will hasten the crop about a week, but the stalks are apt to be small and spindly instead of the thick, stocky stalks produced at a temperature of 40 degrees. The temperature can easily be maintained either with kerosene lamps or a small gasoline stove. J. E. Morse says that some of the finest rhubarb he had ever seen was forced in a house cellar 36x54 feet in which the only heat was that of two large kerosene lamps. If lamps are used it is a good plan to smoke the globes, as otherwise the light is usually sufficient to cause a curving of the stalks and a slight toughening of those nearest to it. In the darkness the leaf develops little or none and the stalk is formed from food stored in the root, while in the light the leaf grows at the expense of the stalk and the crop takes a long time to mature. Several waterings may be necessary if the atmosphere is not very humid. The ventilation is of very little importance. That caused by the entering of the room is sufficient to bring the plants along all right. A single root will bear from eighteen to fifty stalks ranging over a period of from four to five or more weeks. If a succession of the produce is desired it is necessary to plant some roots at a later date. In this manner rhubarb may be had from Christmas on until the outdoor crop is ready.

The forcing is very hard on the roots and they cannot be used again until they have been left to recuperate several years in the open ground. Hence it is necessary to either plant seed to secure new plants or divide the plants already present. If seed is used almost a year may be gained by planting it in August and then transplanting it the next spring. The roots are then ready to force a year from the next fall.

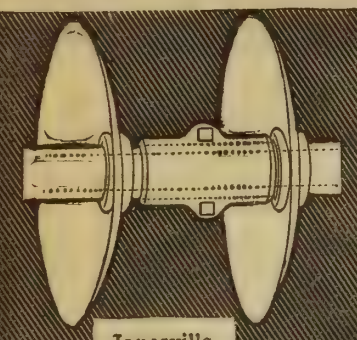
In forcing asparagus many of the same conditions are essential as for forcing except that the temperature cannot vary as much as in the case of rhubarb and still produce good, thick shoots. Pick out good three-year-old asparagus roots or older if they are available and store them, before the ground freezes, where they will not dry out. It is not essential that they be frozen, although it is conceded that freezing increases the size and the quality of the crop. In placing the roots in the cellar they are not placed like rhubarb directly on the floor, but upon a layer of four to six inches of a light soil. The roots are then packed in tightly and covered with about three inches of good mellow light soil. If the shoots are desired blanched this top covering of earth can be increased to six or eight inches. Many consider that asparagus growing is hard, but it is the easiest and most reliable plant to force that is known. In some cases it may be necessary to lay some tile drains in the bottom layer of the soil, as the crop requires plenty of water, but it should not stand in the soil. Never use cold water.

The temperature of the asparagus bed should run a trifle higher than that of the rhubarb bed, being about a constant 50 to 55 degrees. This can be accomplished by placing on tip of the bed a layer of decaying leaves that not only impart but also conserve heat. The heat for the asparagus should always be gentle and constant and never strong bottom heat, as the latter produces weak, spindly growths. The shoots usually start to grow about a week after they are set and soon the first crop is ready. The shoots of cutting size last for about two months or beginning in December last to February. Hence, with a second planting in January the season is prolonged until the outdoor season is reached. The biggest question is the keeping up of the asparagus plants for forcing. However, generally enough three-year-old plants can be set aside each year to supply all of the "grass" needed for the family.

Seakale and chicory are forced under much the same conditions as asparagus, blanching the leaves with either straw or leaves. The leaves to make a good, tender salad or green should be cut when six to eight inches high and when used at this time make a salad considered far superior to any lettuce salad. For the lover of beet greens this product can easily be produced by placing the beet bulbs gathered the previous fall in a layer of light earth and watering quite freely. Soon the leaves will grow and several cuttings of the greens can be obtained.

If the entire cellar is not available for forcing due to storage of fruits or vegetables, wall off a portion of it, as the pleasure of "green stuff" on the bill of fare will amply repay the work of fixing up the place. Besides the pleasure there may be some profit, as any extra material will bring a fancy price due to its being out of season.

Now, who will chide if the dinner is late due to the housewife stopping a while down cellar to gaze at the growing vegetables as the snow blows and the wind whistles outside, for the pie and asparagus on toast will only taste all the better. J. T. Raine.



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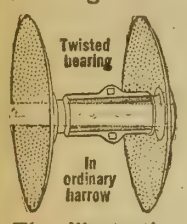

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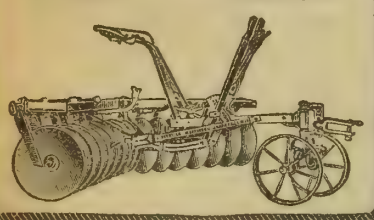

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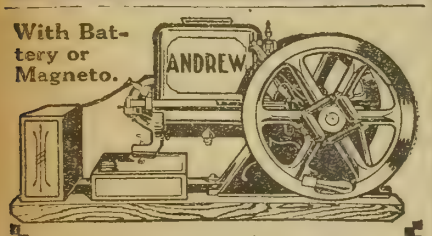

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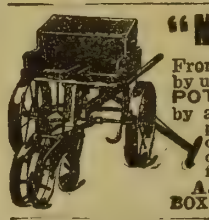

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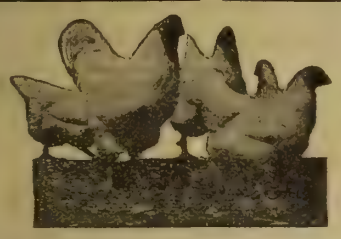

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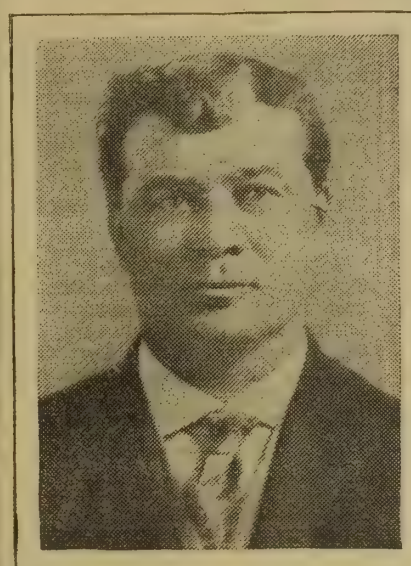
EXEMPTING PURE-BRED SIRES FROM TAXATION.

To the Editor:—I believe the state should do something more than is being done at present to encourage the use of pure-bred sires among the farmers in breeding better horses and cattle, and I am quite sure that if the registered bull and stallion could be exempt from taxation for a period of ten years it would be a great help to those who would like to own or use a pure-bred sire, and the difference in taxes to the state would be very little. It is not very encouraging to the farmer in some localities where the bull is assessed for about twice what he should be. Many farmers hesitate to buy a registered bull on that account. Many of them would buy if they could keep them without paying any taxes on them. Then I think if a man who was using a scrub bull and paying taxes on him knew that his neighbor across the way who had a pure-bred bull was paying no taxes at all, it would be some inducement for the man with the scrub to make a change and buy a pure bred. He could keep a good bull with less expense than he could a scrub. Some would say that such a law would not be right, for the man who is able to keep a pure-bred sire is more able to pay taxes on him than the man who has a scrub. Such an argument has no virtue in it for we all know that it is not the man who is the most able financially who buys the pure-bred animal, neither is it always the poor man who keeps the scrub sire, or uses the grade or scrub horse. We would not wish to do anyone any harm or injustice by having such a law passed,



R. H. POSTON, NEW RICHMOND, WIS.

but we do want to see the day of scrub sires pass away. When it does everybody will then say that the exemption law was a good one, just as they say now about the wide-tired wagon. The farmer who keeps a scrub bull ought not to oppose such a law, for it is taking nothing from him and is making it easier for him to keep a pure-bred bull. I think it is wrong for a man who is breeding high-grade cattle of any breed and keeps a pure-bred sire at the head of the herd to sell or offer for sale a grade bull, for every grade bull that goes into a herd takes the place where a pure bred ought to be. I don't consider that such work is any help to the pure-bred business.

I think that there should be a law passed soon to prohibit the use of crub stallions, not allow them to be used for public service, and that the grades should have at least five top crosses before they could stand for public service. The only thing that ought to prevent such a law from passing would be that it might cause a shortage in stallions for public service, as for grades, but the scrub stallion surely could go and not be missed.

Such laws may seem wrong to many of the stockmen, but if we expect to keep up our standing in the state and make the progress that we should they must come, and I think will come in a short time. Farmers seem to be very slow to purchase pure-bred bulls and some step should be taken to encourage the use of them. The state and government can spend a mint of money to keep men in the field talking to farmers about better stock, but the only way to make some people take notice is to touch their pocketbook, and I notice when you touch it in the way of taxes they act quickly and make a big noise. I think it would be interesting to know just how many farmers in the state are using pure-bred bulls and how many are using grades, also how many scrubs are in use.

I don't think there is any excuse for the use of a scrub sire of any kind now when you can buy a registered sire old enough for service for $100, and secure the service of a good, sound pure-bred stallion for $15 or $20. It is not because farmers can't afford better sires. It is simply because they don't know the value of good blood and better breeding. I would like to see a pure-bred campaign started for 1916. Let us get a check on the scrub bull and put him in the can, and the scrub stallion in the harness. There is where 1917 should find the last one of them.

St. Croix Co., Wis. R. H. Poston.

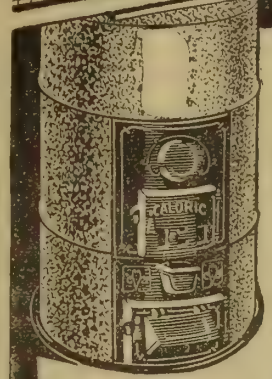
SAUK COUNTY CONFERENCE.

The fifth annual meeting of the Sauk County Country Life Association was held in the Al Ringling Theater in Baraboo January 7th and 8th. The beautiful new building was filled with interested farmers, townspeople and teachers. Topics of general interest to farm men and women were discussed. Community singing was led by Mr. Witts. Among the interesting speakers were Prof. C. J. Galpin, Prof. D. H. Otis, C. P. Norgord, commissioner of agriculture, and A. R. Hirst, state highway engineer. "Springs of Happiness," by Prof. Wm. H. Kiekhofer, was filled with humor and spirit. Miss Ethel Rodwell, a special teacher of music in rural schools, and her pupils, showed what might be accomplished in music.

A goodly number attended the banquet Friday evening. Music, toasts and goodfellowship were included in the evening's merriment. Later, community songs were sung at the theater, and a group of men dressed as farmers sang several selections pleasingly. An illustrated lecture, "Rural Life in Scotland," by Dr. A. S. Alexander, was a rare treat enjoyed by all.

Club pennants were displayed, and the talks on "What Others Are Doing," showed what each club in the country is doing.

One Register (Patented) Heats Your Entire House



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Why pay for furnace pipes you don't need? The Caloric Pipeless Furnace makes pipes and flues unnecessary. It has just one register. Heat circulates through the entire house, giving upstairs, downstairs and halls the same degree of warmth. There is no danger of catching cold by going through rooms of varying temperature.

You save money on installation because all you have to do is put **Caloric Pipeless Furnace** in your cellar and cut a hole in the floor immediately above for the only register that is required. You do not have to cut a lot of holes in your house and spend time and money putting in pipes. Even if your house is already built you will find it easy to put in the

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The Caloric Pipeless Furnace is guaranteed to save 35% of your fuel. This is because there are no pipes to absorb heat, and our special double ribbed firepot has 600 square inches greater heat radiation. Our single register furnace increases the heating capacity 64%. Our guarantee of 35% fuel saving is very conservative. You can pay for the Caloric Pipeless Furnace out of the money you save on fuel.

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This is a hot air furnace and you do not have to bother keeping water in a boiler. Our firepot is guaranteed for five years. The Caloric Pipeless Furnace produces a healthful heat, because the warmed air is moist and every room and hall in the house is heated to equal temperature. It is the one furnace that will not spoil produce in your basement. It lessens fire danger, which is an important consideration, especially where there are children.

Our Strong Guarantee

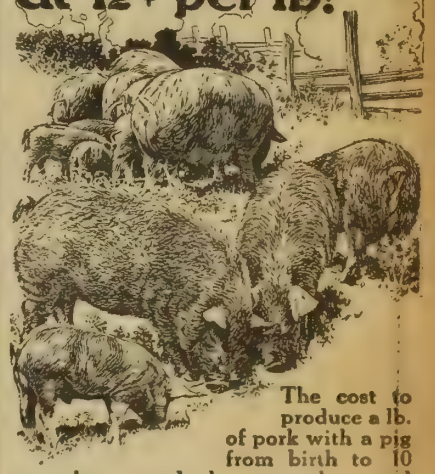
You get this furnace at our risk. We guarantee its results. We freely offer to let you put the Caloric Pipeless Furnace in your house and give it a fair test.

If quality and material are not up to our guarantee—if the Caloric Pipeless Furnace is not as represented, we will make it right at any time within a year.

FREE BOOK tells all about the Caloric Pipeless Furnace. Shows why you can heat your entire house comfortably with no pipes and only one register. The Caloric dealer in your town will gladly demonstrate this furnace. If there is no dealer, write for this free book and get details of our protective guarantee.

THE MONITOR STOVE & RANGE CO., 254 East St., CINCINNATI, OHIO

Hogs fattened at 1½¢ per lb!



The cost to produce a lb. of pork with a pig from birth to 10 months, on red clover, sorghum and peanuts and 6 3-5 bu. of corn is only 1½c per lb. along the

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There isn't a section in America where you can fatten stock of any kind at less cost. This is due to the low cost of land, short mild winters, long pasture season and the great yield and variety of forage crops. Hogs run upon the mast until near Christmas and cattle require little feeding during winter months.

Walter S. Whetstone of Rector, Ark. who came from Ohio, says: "There isn't a finer place in the world for stock—plenty of feed, clover, alfalfa, etc. and very mild winters." And his stock proves it—I never saw finer hogs outside of a stock show.

Its the mild climate, and big crop yields on low priced land that makes farming of any sort so profitable in Arkansas and East Texas now? If you could talk to Mr. Burton or Mr. Barron of Blytheville, Ark. who make 60 bu. corn crops and 2 tons of clover per acre right along; or if you could visit Tilson's farm, near Texarkana, Tex. who gets $50 per acre yields of alfalfa; and then go and price the land and find it costing only half as much as equally good land up north—you'd realize what a rich opportunity there is in Arkansas and East Texas for you now. Look into this.

Two free books!

A farmer wrote them; and he knows what you want to know about a section new to you. They tell about the character and cost of lands, climate, crops raised, etc., and about schools, churches, towns, social conditions. Brimful of photograph pictures taken on the ground. Send me your name and address on a postal card today and get these free books now.

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No Holes To Dig with APEX Steel Drive Posts

SIMPLY drive them into place with a few blows of the sledge while you stand in the wagon. Can you imagine anything easier? What could save you more work? You can save money, too—8 to 10 cents on the setting of each post. With steel posts you can burn fence rows clean—protect your stock from lightning. Write for booklets and read how you can save money, time and hard work.

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The swinging joint leaves the line wires flexible. Easier to put up than any other fence that we know of. Does not bind, buckle, sag or snap. Stays are reinforced to double strength at every joint. Strong, rigid stays and thorough galvanizing make Apex fence last for many years.

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about steel drive posts and building fence the "Apex Way." If your dealer does not carry the Apex line tell us your needs for fence, gates and posts.

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The modern way of fence building. No holes to dig or posts to set if you use Chicago Steel Fence Posts. Driving 320 posts a day is an easy job for a man and a boy. Then you're ready to staple up the wire and fence your land in one-fifth the time. There is no breaking, no wearing out. Your

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You can burn out your fence rows, destroying weeds and insects, and give your farm a clean, prosperous appearance. No danger of having your stock killed by lightning during a storm, because Chicago Steel Posts ground lightning. Don't wait till all wood posts rot to build an entire new fence. Replace rotten wooden posts with **guaranteed Chicago Steel Posts** now. You'll soon have a new all-steel fence. Write today and let us send you the best book you ever saw on fencing.

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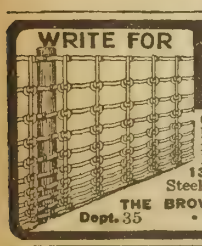

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12½¢ ECONOMY FENCE

Before you buy any more fence, write for facts about our **26-inch ECONOMY HOG FENCE** at 12½c. per rod. Many other styles and prices.

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ADDING INTEREST TO SCHOOL WORK.

(Continued from page 6.)

called at her office and asked for the privilege of donating cash every year for the purpose of furthering the contest work in the rural schools. This man had no direct interest in the rural schools aside from his general interest in the welfare of the people of the county. He remarked that he had heard so much about the contest work and about the interest among the children and parents that he wished to help the thing along. He refused to permit the use of his name, but every year, about the same time, he brings in the check. Bankers and business men of the county have become interested in the contest work and have been glad to aid with the numerous harvest festivals which have been held.

There are many opportunities for good work in the rural school contests. In the first place, these contests prove to the young people that there is something to "better agriculture." The following from one of Miss McDonald's letters addressed to the members of the farm and home clubs of Oconto county will give a little insight into the interest which this notable woman takes in this work:

It is with real pleasure that we send you your club pin which you have earned this year.

The members of the club have done much good work this year. When we planned the club we wanted to have something that would bring the home and the school nearer, something that would help you to be a real helper in the home; and at the same time show you in what a good place you were living. Did your work do that? Did you enjoy helping with the seed corn at home, or keeping the milk sheet, or finding out if alfalfa would grow on your home farm? Did you enjoy making—all alone—something that you could wear, or helping with the housework? And did you enjoy the good times that you had at the club meetings, and learn that good times and work con go together?

I must tell you what the pin means, so you can explain it to others. It is the "Corn Lady's" design. The clover and the kernel of corn stand for the farm crops that will help bring prosperity; "Oconto" in the center and "Wis." on the stem stand for your county and your state, to which you must be true; the three "H.'s" mean "head," "hand" and "heart," we must educate the head, and we do that when we study our daily lessons; we must educate the hand, and we do that when we learn to sew, cook, write, test corn, tie knots, operate the tester and so on; and above all we must educate the heart, we do that when we learn to live together, at home and school, as good friends and citizens—and if we do these we shall have a happy home, which is best of all. Will your pin mean all this to you? I am sure it will. Very sincerely yours, Ellen R. McDonald.

Superintendent McDonald has, of course, had a great deal of detail work in connection with the arrangement of the contests, both for boys and girls, and the distribution of literature on various agricultural and live stock topics. She receives no additional compensation for this work which she has voluntarily placed on her own shoulders, but she enjoys it and the people of the county are very proud of her. One phase of the special school work is an effort to gather valuable information concerning farms and farming in Oconto county. This information covers a wide range of subjects. It has been tabulated as shown by the table on page 6.

BEST TEN EARS OF CORN.
Raymond Rabe, youthful corn grower of Oconto county. Ray Rabe raised 125 bushels of corn to the acre.

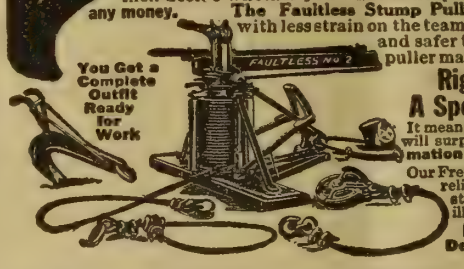
By the use of this table one may learn the number of farmers in every township in the county, the number of silos in every township, the number of farms where alfalfa is grown, the number of farms which have self-binders, the number of cheese factories in each township, the number of telephones on farms in each township, the number of gasoline engines, windmills, separators and oil stoves on each farm in each township. In addition, there has been devised a map of the county showing the number and location of farm and home clubs in each township.

About eighty acres of ginseng with an approximate valuation of $250,000 is under cultivation in Langlade county, which produces annually about $75,000 worth of dry roots. The major portion goes to the commission merchants of New York city and finds its market in China. Within five years the price for good roots has averaged $6 per pound.

A net gain of fifty-four bushels to the acre, which after subtracting the cost of materials, meant a probable saving of $20 for each acre, is one of the results of potato spraying trials in Langlade county. Bordeaux mixture was used by F. G. Swoboda, the county agricultural representative.

Pull Stumps 10 Days-FREE

You can clear from 10 to 50 acres in ten days with the Faultless Stump Puller, and then decide whether you want to keep it or not—before you pay us any money. The Faultless Stump Puller develops greater power, with less strain on the team and the machine, and is easier and safer to handle than any other stump puller made. Backed by the strongest guarantee.



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Right Now We Are Making A Special Low Price Offer

It means a slash in stump puller prices that will surprise you. **Write for full information at once and save money.**

Our Free Book gives much valuable and reliable information on clearing stump land, with numerous illustrations. **Write for it today.**

Faultless Stump Puller Co.
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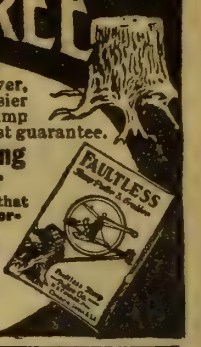

A Stump Puller That Is No Experiment

THE NEW IMPROVED ZIMMERMAN MIGHTY MONARCH STEEL STUMP PULLER, now known and admitted to be "Best on Earth." Different in construction, far ahead on improvements. Pulls 200 to 600 stumps a day. Pulls ANY stump. Cheaper to use than dynamite; safest and fastest method of clearing. Unbreakable. Simple—child can operate it. Write for new free catalog describing the latest model with all modern improvements. Investigate the Zimmerman Mighty Monarch before you buy any stump puller.
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Pull Out Stumps With the Famous Hercules!
Triple-Power

Pull an acre or more of stumps a day. Pull any stump in 5 minutes or less. Don't have loafer land when it's so easy and cheap to *pull the stumps out!* Make 1000% profit by using the Hercules. $1281.00 the *first year* on 40 acres! $750.00 every year after. Let us *prove* it.

Low Price and Book Free!

Get the facts. Read our book. Tells what all steel, triple power means. Shows many features of the Hercules. Shows many photos and letters from owners. Postal will do.

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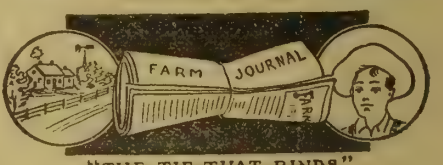

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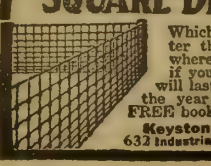
We are giving Ropp's New Calculator FREE to every farmer or land owner who has not yet sent for a copy. Ropp's Calculator should be in the hands of every farmer. It will instantly give the correct answer to any business problem that can be settled by arithmetic. We will also send you our free illustrated catalog on

(32) **SQUARE DEAL FENCE**



Which tells you why it is better than any other fence and where to get it. Land owners, if you want a farm fence that will last, and stay trim and tight the year round, write for these FREE books today.

Keystone Steel and Wire Co.
632 Industrial St. PEORIA, ILL.

WAUKESHA HOLSTEIN MEETING.

(Continued from page 11.)

"Specific Effects of Feed on Animal Nutrition," showing by the use of slides the effects of certain feeds in tests made at the college. His address, though technical, was intensely interesting to the man interested in getting the best results at the lowest cost in feeding and Mr. Hart pointed out the reasons for balancing rations, etc. Reproduction, he said, is the standard of the efficiency of the female, and he showed the effect of reproduction where only corn, wheat, oats, etc., were fed singly and where there was no mixture or balanced ration. Wheat fed without anything else fails, he explained, while fed with a legume or clover hay it provides a fair success with the offspring. In the investigations now under way he said that new fields are rapidly being opened up for compounding rations which results will be very interesting to the breeder and feeder.

Supt. A. J. Hutton, of the state industrial school, served as toastmaster and acquitted himself with honor. President Will, in his annual address, outlined the work of the association during the last year and predicted greater success the coming year but warned the Waukesha breeders that learned that the fundamental of the pure-bred swine game was pork, and now considers the fundamental of the dairy game to be milk. "You must not lose sight of the fact that the function of the cow is to give milk," he said, "and the cow that can give the best milk, the most milk and the cheapest milk is the best cow. That cow I consider to be the Holstein." Mr. Riordan said he found just two criticisms of the Holstein breeder. One is the breeder who thinks that his cow isn't any good if she isn't a thirty to a forty-five pounder. The other the breeder who has a fifteen pounder that is the best in his herd and because of this he considers her a world-beater.

Burt Williams, of the treasury department at Madison, spoke on the co-operation between business man, banker and farmer. He praised in glowing terms the value of the community organization, pointing out that there are now 122 of these in Wisconsin, of which fifty-one are Holstein; thirty-seven Guernsey; twenty-one Jersey; three Short-horn and the remainder general. Since 1910 he said in Waukesha the number of cows had increased almost 50 per cent and that the number of cows per farm had increased from nine to fourteen. Owing to the lateness of the hour Alfred Fuller, of North Lake, postponed his

ANOTHER VIEW OF THE WILL BARN, WAUKESHA COUNTY, WIS.

other Wisconsin counties were on the jump and that if Waukesha is to keep in the lead they must keep boosting and boosting as in the past.

J. P. Riordan, manager of Harvest farms at Maysville, a Holstein breeder, spoke very entertainingly on "The Holstein-Friesian Cow." Mr. Riordan took charge of 1,100 acres which had been run down and cropped out, and when he decided that the soil fertility must be improved he picked the Holstein to do it. He hailed her as the dairy queen, and his reason for choosing the Holstein after much investigation was that she was easily handled; gets along nicely in large groups and that, in his opinion, no other cow does better by her owner. Another big problem, especially for the large breeder, he explained, is the question of a market for the young stock, and he does not believe any cow has a broader, more reasonable market than the Holstein. The same is true with swine breeding and he related his experience when a young man as a Poland China leader. He bought the best boars available and soon found himself with a lot of pure-bred Polands in a country where there was no market. The result was he turned them to pork at the top of the market prices, and at that time he paper, "The Milwaukee Milk Market," until a future meeting.

Music was furnished during the afternoon by a quartet composed of Misses Marjorie Douglass and Marion Harter; Messrs. C. Callow and William Christoph, with Miss Nina Belle Smith as accompanist. The report of George A. Martin, of Dousman, treasurer, showed a balance in the treasury of $91.20.

Interesting Fence Facts.

CHICAGO steel fence posts are made of the same substantial material as old black wire. They are easy to install and last a lifetime without repair. They protect your crops against the insects that live and hatch in wooden posts and enable you to burn the grass clean through the fence, destroying instects completely without fence damage. Furthermore, as grounders of lightning they protect your cattle in a way wooden posts will not do. There are lots more interesting and valuable facts about fence construction which the makers of these posts would like to tell you if you will write them in reply to their advertisement on page 20. addressing Chicago Steel Post Co., Dept. J., Continental and Commercial Bank Bldg., Chicago, Ill., and mentioning this paper.—Adv.

Big Value in This Automobile.

THE KisselKar is regarded by students of the automobile and by owners who drive the car as an exceptional value, considering the price. This car is made by the Kissel Motor Company, 312 Kissel Avenue, Hartford, Wis. This company has made every effort to master the building of a perfect engine and spent considerable time on the study of engines before attempting to put out a finished automobile. All vital parts of the KisselKar are made at the Hartford, Wis., factories. The manufacturers lay special stress upon the Kissel-built axles, which have caused practically no trouble to KisselKar owners. The KisselKar is sold at $1,050. It is substantial throughout and a beautiful car in appearance. Furthermore, it provides that comfort in riding which is so much desired by motorists. The illustration of the 1916 KisselKar will be found on page 11. Catalogs describing this car in detail will be sent to any address upon request. Please mention this paper when you write.—Adv.

A Well-Tested Incubator.

QUEEN incubators have stood up under some of the most exacting tests that could be put on them and have always lived up to their reputation for big percentage returns. They are built to run with the least trouble and a maximum of hatching efficiency. In their advertisement on page 24 is a typical testimonial from one of their users. A free book about Queen incubators will be sent on request to Queen Incubator Co., 153 Bryan Ave., Lincoln, Neb. In writing please mention this paper.—Adv.

A Good Chicken Coop.

THE Lawn Park coop, which opens on the principle of a telescope and covers an area 18x48 inches and then closes for night or bad weather, is a unique protection not only for the little chicks, but for the hen as well. This is an economical, inexpensive way of handling the brood, which appeals to everyone as roomy, light, durable, sanitary. For further information, with illustrated literature, our readers should write Cyclone Manufacturing Co., Dept. 21, Urbana, Ind., and mention their advertisement on page 25.—Adv.

Heavy Mail at Hickory, N. C.

International Harvester Cream Separators Lily—Primrose

DO you realize the great interest there is in modern, profit-building dairy methods just now? At a big Farmers' Union Meeting, comprising 18 counties in North Carolina, 20 of our booklets, "Facts and Figures on Dairying," were passed through the crowd from man to man. Those desiring copies were asked to write to the Catawba Creamery, Hickory, North Carolina.

In 25 days, 462 requests for booklets were received.

Farmers are realizing that three cows with a good cream separator are as profitable as four without one. A good separator is one that gets all the cream down to one drop in each gallon of skim milk. That's efficiency—and that's the reason for the popularity of **International Harvester separators, Lily** and **Primrose.**

Lily and **Primrose separators** skim to this fine standard for years, because they are built on a sane design, strong, simple, reliable, sanitary. The few easy adjustments necessary, anyone can make. The single automatic oiling arrangement takes care of every bearing and sidesteps trouble.

"Facts and Figures on Dairying" will help you, too. Write for it and for a catalogue. See the **I H C** dealer who can furnish you with a **Lily** or a **Primrose separator.**

International Harvester Company of America
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The Only Non-Poisonous Exterminator of Rats and Mice

Perfectly harmless to man, bird or beast, but quickly and surely destroys the RAT and MOUSE pest.

Price per Box, 10c all over the U. S.
Per Doz. Boxes, $1.00 east of Mississippi
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Satisfaction guaranteed or money back

Ask your dealer, or send us his name with price, and we will fill your order promptly.
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DAIRY

PLAN OF MILK PAYMENT.

[The following notes were taken from n address by J. L. Sammis before the ecent Wisconsin Cheesemakers' Con- ention at Milwaukee.]

The cheese factory should aim to ay each patron according to the yield f weight of cheese obtained from his nilk. It is well known that the yield f cheese depends to a great extent on he fat content of the milk.

It is important to understand that where the different patrons' fat tests liffer widely in the same months as rom 3 per cent to 5 per cent fat it s more difficult to figure the pay- nents correctly than when the fat ests differ less widely, as from 3.5 per ent to 4 per cent fat.

We have been collecting from many actories reports of patrons' fat tests or a number of years and from a tudy of those already received we ave found: First, no case where all he patrons at a factory had the same at test on any given month. Second, n a few cases, about 5 per cent of all, where the highest and the lowest atrons' fat test for the month dif- ered by .2 per cent fat or less. Third. n about 20 per cent of all cases the highest and lowest patrons' fat test or a single month differ by less than .5 per cent fat. Fourth, in the great majority of cases the highest and low- st patrons' fat tests differ by .5 per ent to 1.5 per cent. Fifth, in about 7 per cent of all cases the difference between the highest and lowest test s from 1.5 to 2.15 per cent.

We will now compare several dif- erent methods of figuring payments nd see which is best suited to the ive groups of factories listed above.

In order to have a standard with which to compare payments by the pooling system and other methods we will figure the true cheesemaking value of several patrons' milk based on the average yield of cheese con- taining 37 per cent moisture from milk of different fat content, as given by Van Slyke and Publow in "Science nd Practice of Cheesemaking," page 207, based on many factory reports ollected in New York state by the Geneva Experiment Station:

TABLE I. YIELD OF CHEESE FROM ILK OF DIFFERENT FAT CONTENT.

% fat n milk	Lbs. cheese per 100 lbs. milk	Lbs. cheese per lb. of fat
3.00	8.30	2.77
3.25	8.88	2.75
3.50	9.45	2.70
3.75	10.05	2.67
4.00	10.60	2.65
4.25	11.17	2.63
4.50	11.74	2.61
4.75	12.31	2.59
5.00	12.90	2.58

Using the cheese yields given above ve may calculate the payments based n yield and compare these with the ayments for the same milk by the ooling system at four factories where he range of the fat tests is .2 per ent, .5 per cent, 1.5 per cent and 2.0 per cent fat, as shown in the table No. 2, given below.

These figures indicate that the pool- ing system payments would be seri- ously in error at about 95 per cent of all factories, since only about 5 per cent of the factories are like factory No. 2 in the table and the rest are like factories Nos. 3. 4 and 5. It should also be noted that the range of tests at a given factory varies at dif- ferent times of the year and no fac- tory can be certain whether at any time it is like Nos. 2, 3 or 5 without testing the patron's milk for fat each month. These facts should be brought closely to the attention of makers and patrons at those factories, mainly for- eign cheese factories where the pool- ing system is yet being used.

Inquiries are frequently received as to the accuracy of the ordinary system of paying for milk by the Babcock test at factories where the milk tests differ widely, as in the case of fac- tories Nos. 4 and 5 in the table. It is asserted on good grounds that, for example, 6 per cent milk does not give twice the yield of cheese obtained from 3 per cent milk, but according to the usual system of figuring payments from the fat test, 6 per cent is paid for at twice the price per 100 pounds paid for 3 per cent milk.

In table 3 it will be shown that there is a slight difference between the payments figured by the usual method from the fat test and the pay- ments figured by the yield of cheese as shown in the tables above. At fac- tories where the highest and lowest patrons' milk tests for the month differ by .2 per cent or .5 per cent, or below 1.5 per cent the error in pay- ment figured as usual from the fat test is quite small and negligible in most cases. There are, however, about 7 per cent of all cases occuring at about 15 per cent of all factories where the highest and lowest patrons' milk tests differ by 1.5 to 2.15 per cent.

In these cases the difference be- tween the payments figured from the "yield" and those figured as usual from the fat test is large enough to be seriously considered and avoided if possible. Such cases are shown in the table No. 3.

From these figures it is seen that the payments figured as usual by the fat test are very close to the correct cheesemaking value of milk based on yield in all cases where, as at factories No. 2 and 3, the patrons' tests do not differ widely. But when the highest and lowest tests vary as widely as 2 per cent, as at factory No. 5, the error in payment amounts to 3 cents or more on the dollar, which is an amount large enough to be seriously considered and saved, if it can be done so, without too much trouble. This matter is of interest to about 15 per cent of all factories and a method of figuring payments from the fat test, so as to avoid this error, will be presented in table No. 4.

The price per 100 pounds given in the last line is the price to be paid for 100 pounds of such milk only as had the same test as the "average test" given in the fifth line of the table. That is, at factory No. 1 the price paid for all milk testing 3.1 per cent fat is 1.2995 per 100 pounds and similarly the "average price" is paid at each factory for milk of the "aver- age test." For milk testing higher than the "average test" the price may be increased 1, 2, 3, 3½ or 4 cents per .1 per cent fat above the "average test" and for those whose milk tests less than the "average test" the price per 100 pounds will be similarly re- duced. The question is, should the price be raised 1, 2, 3½ or 4 cents per .1 per cent fat in order to make all patrons' payments agree as nearly as possible with the payments figured in table No. 2, according to the "yield" based on the table of yields given in table No. 1. The payments figured by

TABLE 2. PAYMENTS BASED ON YIELD COMPARED WITH POOLING SYSTEM PAYMENTS.

	Factory No. 2	No. 3	No. 4	No. 5
A Highest patron's fat test	3.2%	3.5%	4.5%	5.0%
B Lowest patron's fat test	3.0%	3.0%	3.0%	3.0%
Yield from 100 lbs. A milk (in lbs.)	8.76	9.45	11.74	12.90
Yield from 100 lbs. B milk (in lbs.)	8.30	8.30	8.30	8.30
Total yield (lbs.)	17.06	17.75	20.04	21.20
Net amount due patrons at 15c	$2.559	$2.6625	$3.006	$3.18
A's payment at 15c per lb. yield	$1.314	$1.4175	$1.761	$1.935
B's payment at 15c per lb. yield	1.245	1.245	1.245	1.245
Payment by pooling system	$1.279	$1.331	$1.503	$1.59
Error in pooling system payment—				
Per 100 lbs. of milk (cents)	3.4	8.6	25.8	35.5
Per dollar paid to patrons (cents)	3.	6.5	17.2	22.3

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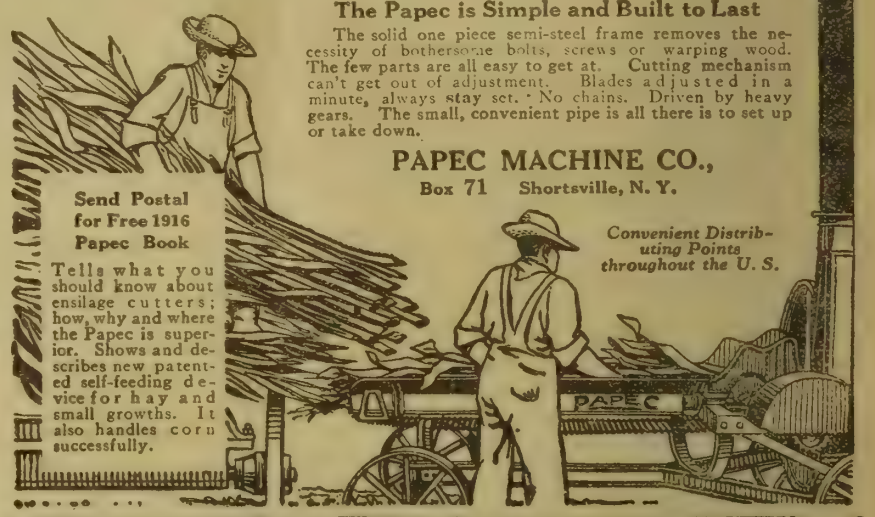

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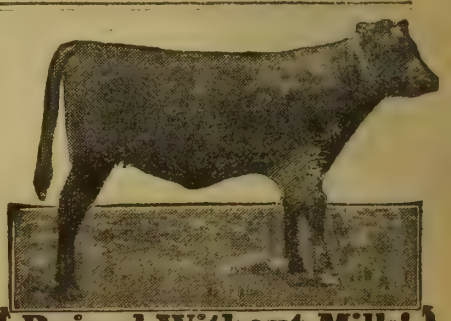

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these different prices are shown in the table No. 5 for comparison.

Comparing the "yield" payments at the top of table No. 5 with the others below it can be seen that at factory No. 2 the payments are all reasonably close, whether we allow 1, 2, 3 or 4 cents per .1 per cent fat, which signifies that there is no need of using this method of figuring at factories like No. 2, where the highest and lowest patrons' fat test are so close together as .2 per cent.

At factory No. 3 the payments figured at 3 and 3½ cents per .1 per cent fat above the average are quite close to the "yield" payments. At factories Nos. 4 and 5, where there is some real need of using this method of figuring in order to get correct payments, the payments at 3½ cents per .1 per cent fat above the average are much nearer the "yield" payments than any others.

It may, therefore, be concluded that when this method of figuring payments is employed in the cheese factory the work is done as follows:

1. Figure from the fat tests and weights of milk, the total weight of fat delivered. Divide this weight of fat by the total weight of milk to get the average fat content of all the milk.

2. Divide the total money to be distributed by the total weight of milk which gives the "average price" which is to be paid to those patrons, whose milk tests the same as the "average test" obtained in (1).

3. To determine the price per 100 pounds milk for each patron whose test is higher than the "average test" substract the "average test" from his test and for each .1% fat left, add 3½ cents to the "average price" obtained in (2). Similarly deduct for patrons whose milk tests less than the average. for example, if the "average test" is 3.67% and a patron's test is 4.10%, the difference is .43% fat, and 4.3 times 3½ cents or 15.05 cents should be added to the "average price" to get the price to be paid this patron.

4. Finally mutiply each patron's weight of milk delivered by his price per 100 pounds figured as above, to get the amount of money due him.

As long as a factory's highest and lowest milk tests in one month do not differ by more than 1.5 per cent the usual fat test method should be used. If the tests differ by 1.5 to 2.25 per cent the method of figuring shown in tables Nos. 4 and 5 may be used, if desired, although this requires somewhat more work with the pencil than the usual fat test method.

TABLE 3. PAYMENTS BY YIELD, COMPARED WITH THE USUAL FAT TEST PAYMENTS.

Factory	No. 2	No. 3	No. 4	No. 5
A Highest patron's fat test	3.2%	3.5%	4.5%	5.0%
B Lowest patron's fat test	3.0%	3.0%	3.0%	3.0%
Yield from 100 lbs. A milk (in lbs.)	8.76	9.45	11.74	12.90
Yield from 100 lbs. B milk (in lbs.)	8.30	8.30	8.30	8.30
Total yield	17.06	17.75	20.04	21.20
Net amount due patrons at 15c	$2.559	$2.6625	$3.006	$3.18
A's payment at 15c per lb. yield	$1.314	$1.4175	$1.761	$1.935
B's payment at 15c per lb. yield	1.245	1.245	1.245	1.245
Total weight of fat in milk. (lbs.)	6.2	6.5	7.5	8.0
Price per lb. of fat (cents)	41.27	40.96	40.08	39.75
A's payment by usual fat method	$1.321	$1.434	$1.8036	$1.9875
B's payment by usual fat method	1.238	1.229	1.2024	1.1925
Difference in payments—				
Per 100 lbs. milk (cents)	.7	1.6	4.2	5.25
Per dollar paid to patrons	.6	1.3	2.6	3.5

TABLE 4. THE AVERAGE PRICE PAID FOR MILK OF AVERAGE TEST.

Factory	No. 2	No. 3	No. 4	No. 5
A Highest patron's fat test	3.2%	3.5%	4.5%	5.0%
B Lowest patron's fat test	3.0%	3.0%	3.0%	3.0%
Weight of fat received (lbs.)	6.2	6.5	7.5	8.0
Weight of milk received (lbs.)	200	200	200	200
Average fat test of milk received.	3.1%	3.25%	3.75%	4.0%
Total money due patrons	$2.599	$2.6625	$3.006	$3.18
Average price per 100 lbs. milk	$1.2995	$1.3312	$1.503	$1.59

TABLE 5. PAYMENTS TO OTHER PATRONS, ALLOWING 1 TO 4 CENTS PER TENTH PER CENT FAT, ABOVE AVERAGE.

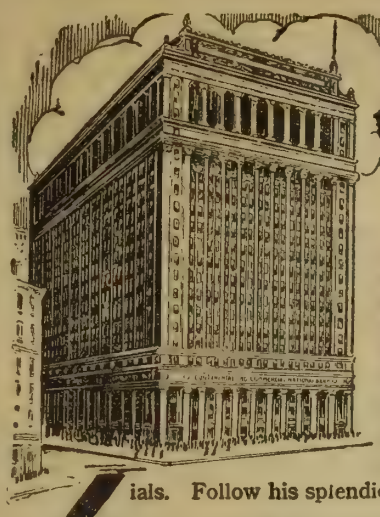
From Table 2— Factory	No. 2	No. 3	No. 4	No. 5
A's payment at 15c per lb. yield	$1.314	$1.4175	$1.761	$1.935
B's payment at 15c per lb. yield	1.245	1.245	1.245	1.245
A's payment adding 4c per .1% fat above the average	$1.3395	$1.4312	$1.803	$1.99
B's payment deducting 4c per .1% fat below average	$1.2595	$1.2312	$1.203	$1.19
A's payment adding 3½c per .1% fat above the average	$1.3345	$1.4187	$1.7655	$1.94
B's payment deducting 3½c per .1% fat below the average	$1.2645	$1.2437	$1.2405	$1.25
A's payment adding 3c per .1% fat above the average	$1.3295	$1.4062	$1.728	$1.89
B's payment deducting 3c per .1% fat below the average	$1.2695	$1.2562	$1.278	$1.29
A's payment adding 2c per .1% fat above the average	$1.3195	$1.3812	$1.653	$1.79
B's payment deducting 2c per .1% fat below the average	$1.2795	$1.2812	$1.353	$1.39
A's payment adding 1c per .1% fat above the average	$1.3095	$1.3562	$1.578	$1.69
B's payment deducting 1c per .1% fat below the average	$1.2895	$1.3062	$1.428	$1.49

RIVER FALLS AND ROBERTS REPORT.

P. B. Van Horne, official tester of the River Falls and Roberts Cow-Testing Association, sends us this week the December report, which is given herewith. An especially noteworthy record is that of the registered Holstein, Salma, belonging to D. E. Flower. This cow gave 2,387 pounds of milk of 3.2 per cent test and 76.4 pounds of butter fat. The report for December follows:

Owner, name and breed	Age	When fresh (1915)	Lbs. milk	Per cent fat	Lbs. B. fat
H. R. Taylor					
Janice, R. S. H.	4	11-8	1380	4.7	64.9
Alton Brothers					
Lady, H.	2	11-6	992	4.2	41.7
Jonesy, H.	5	11-17	1287	4.1	52.8
Pet, H.	7	1-14	791	5.1	40.3
Ella, H.	7	9-12	946	5.6	54.0
Nell, H.	5	10-15	1349	4.2	56.7
Susan, H.	2	9-12	930	5.1	47.4
Jessie, R. H.	4	11-8	1256	3.4	42.7
Connie, H.	4	11-17	1116	3.8	43.8
J. L. Chapman					
Martha, H.	4	10-15	1876	3.7	69.4
Rose, S. H.	3	10-3	1349	3.4	45.9
Netta, H.	3	9-20	1287	3.8	48.9
Roan, S. H.	3	5-10	915	4.6	42.1
Cherry, S. H.	6	9-21	1116	3.8	42.4
Clover, H.	3	9-19	1581	3.8	60.1
W. A. Chapman					
Bessie, H.	4	9-1	930	4.4	40.9
Johanna, H.	4	9-29	1395	3.7	51.6
Nancy, H.	4	10-13	1550	3.5	54.3
Alden Holmes					
Star, H.	5	11-3	1178	3.4	40.1
G. L. Battin					
Roan, S. H.	7	11-25	1349	5.8	78.2
Bell, S. H.	10	11-14	1054	4.0	42.2
H. A. Rundell					
Rose, G.	8	11-30	992	5.0	49.6
Lillie, J.	5	10-16	884	5.2	46.0
D. Imrie & Son					
Rosetta, R. H.	6	11-29	930	4.3	40.0
Prospect De Kol III, R. H.	4	11-12	1364	3.6	49.2
B. V. Belle, H.	9	11-29	915	4.6	42.1
F. T. Wilford					
Maude, G.	6	10-19	915	4.6	42.1
Nell, G.	6	11-23	1008	4.9	49.4
Nancy, G.	5	11-16	930	5.1	47.4
Spot, G.	6	11-15	992	4.3	42.7
Maggie, G.	7	10-25	930	4.3	40.0
Belle, G.	3	11-26	775	5.8	46.0
Robt. H. Graham					
Bird, G.	3	11-30	1070	4.1	43.9
O. R. Schwalen					
Pansy, R. G.	2	10-24	837	4.8	40.2
D. E. Flower					
Jewel, R. H.	4	12-5	1705	4.4	75.0
Lady, R. H.	4	9-28	1690	2.8	47.3
Salma, R. H.	4	10-30	2387	3.2	76.4
Star, R. H.	4	10-19	2155	2.9	62.5
Maude, H.	3	10-27	1907	3.4	64.8
Whitey, H.	4	11-25	1566	3.3	51.7
Belle, R. H.	2	10-21	1591	4.1	65.2
Aaggie, R. H.	2	11-5	1550	3.2	49.6
W. R. Godden					
Beauty, S. H.	5	10-25	884	4.5	40.0
F. M. Bliss					
Francis, H.	5	12-7	961	4.6	46.1
Daisy, H.	5	11-14	1209	3.4	41.1
Oscar Weiss					
Nellie, S. H.	5	11-12	946	4.4	41.6
Theo. Nopp					
White Face, Hereford	5	12-1	1008	4.0	40.3

P. B. Van Horne, Tester.



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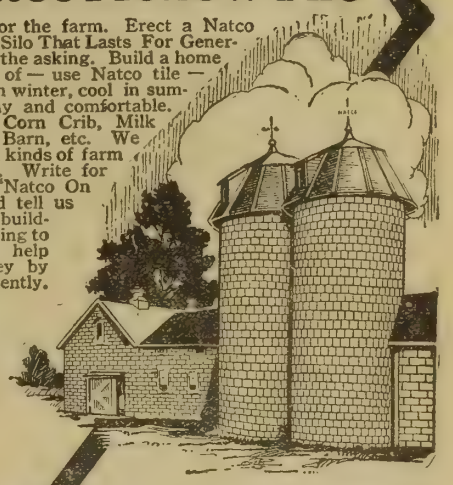

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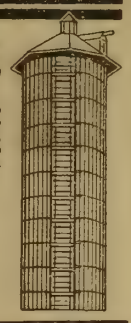

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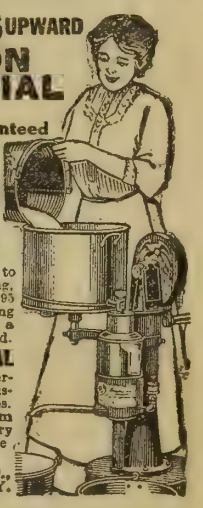

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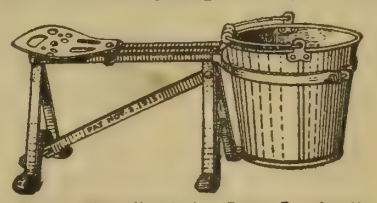

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Grind from 15 to 50 bushels per hour.
Ear or shelled corn. Small grain in proportion.
Best line of mills sold, including the famous Iowa for $12.80.
We also manufacture Bovee Steam Feed and Dairy Boilers. Cat. free.

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Get our big new 1916 Combination Offers on *Progressive Incubators* and *Brooders.* Wonderful bargains—built from best materials with latest improvements. Only machine with *hundreds of dead air cells* to protect eggs against sudden changes.

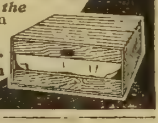
TAKES GUESSWORK OUT OF HATCHING

Many users report a chick from every hatchable egg. Easy to run. Built of genuine California Redwood; Copper Hot Water Heater; Double-disc Regulator; Double Doors; Safety Lamp; Tester, etc.

$7.85 LOWEST PRICE YET FOR BIG 155 EGG INCUBATOR

No extras. Incubator and Brooder both $9.85. Freight paid east of Rockies. Money back with 8% interest if machine doesn't make good. Order from this ad or get Special 1916 Combination Offer and Free Poultry Book showing why *the Progressives* beat them all for results.

Progressive Incubator Co.
Box 128 Racine, Wisconsin



Ironclad TRADE MARK **WINS In 2 Biggest HATCHING CONTESTS Ever Held**

Mrs. C. F. Merrick, Lockney, Tex., with her 140 egg Ironclad Incubator wins in the Mo. Valley Farmer and Nebr. Farm Journal Big Hatching Contest. She placed 148 eggs in the incubator and hatched 148 strong chicks. Think of that. You can now get these famous winners, made of Calif. Redwood.

140 Egg Incubator Chick Brooder } BOTH FOR $10

If ordered together. 30 days trial, 10-year Guarantee. Order direct from this advertisement—money back if not satisfactory. Incubator is covered with galvanized iron, triple walls, copper tank, nursery egg tester. Set up ready to run. The Brooder is roomy and well made. Send for free catalogue. **Freight Paid East of Rockies**

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Box 113, Racine, Wis. (3)

Chicks That Live

Stop wasting eggs—stop losing chicks—with cheap incubators. A Queen costs but little more, and the **extra chicks** it will hatch, and that will live and grow, soon pay for it.

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Alfred Cramer, Morrison, Mo., says: "I have operated about ten other incubators and the Queen is superior to any of them." S. L. Todd, Green Forest, Ark., says: I have tried six other machines, high and low priced, and the Queen is the best incubator I ever saw." Book Free.

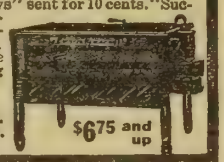
QUEEN INCUBATOR CO., 153 Bryan Ave., Lincoln, Neb.

LET ME INSURE YOUR SUCCESS WITH POULTRY

My world-famous high-quality incubators and brooders and my 20 Free Poultry Lessons make success easy and sure for you! Lessons given *free* to every purchaser of a

"SUCCESSFUL" **Incubator or Brooder**

Backed by 21 years of big successes and strongest guaranty ever written. Write me a postal for book and prices. "Proper Care and Feeding of Chicks, Ducks and Turkeys" sent for 10 cents. "Successful" Grain Sprouters furnish green food—make hens lay in winter. Ask about my high-grade poultry—all leading varieties.



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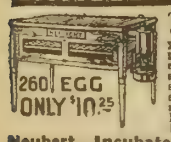
DES MOINES INCUBATOR CO.
380 Second St., Des Moines, Ia. **$6.75 and up**

GET MY INCUBATOR OFFER

In business 17 years I have produced a wizard hatching machine, wonderful for its mechanical precision. Big production makes low prices. Simple and reliable, gets big hatches. Write today for my 1916 SPECIAL OFFER in OETROIT Incubators and Brooders. Send Now.

HOMER L. SMITH, Pres. [2]
Detroit Incubator Co., 467 Campbell Ave. Detroit, Mich.

140 EGG Neubert Incubator $7.50



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"The Profits In Poultry Keeping"

Big FREE 1916 Poultry Guide. Describes Cyphers Popular-priced Incubators, 3 styles—8 sizes, 20 years leadership. *Write today.*

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SHOEMAKER'S POULTRY BOOK AND ALMANAC FOR 1916

Has 200 pages; with many colored plates of fowls true to life; tells about chickens, incubators, poultry houses, etc. Price 15c. Money back if not satisfied. C. O. Shoemaker, Box 893 Freeport, Ill.

More on Poultry Problems.

Continuing a Series of Letters From Prominent Poultry Breeders and Farmers of Wisconsin Giving Their Practical Experiences.

Make Hens Work for Their Food.

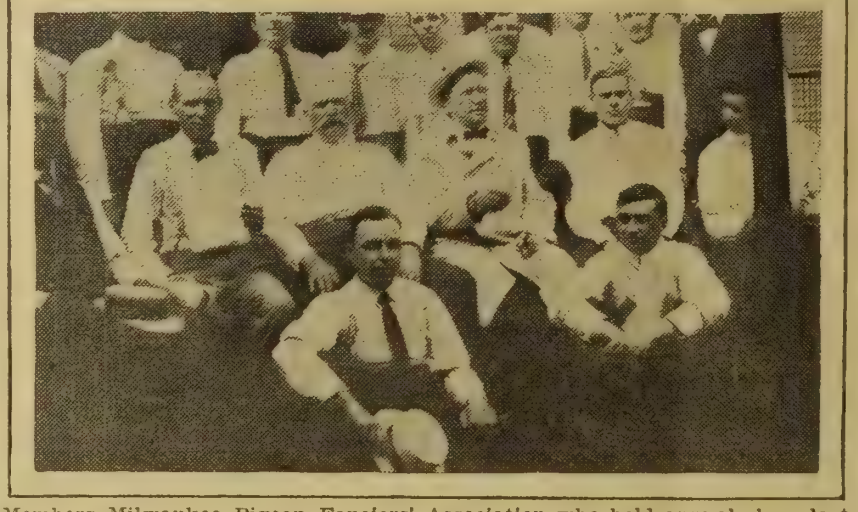
To the Editor:—I prepare all my hens and pullets for the winter laying. I give all my layers the first day some stale wheat bread soaked in hot milk or water, then mix enough bran to make it crumbly, then add one coffee cupful of molasses. Mix well, and let them eat as much as they want. This mixture is for three to four loaves of wheat bread. The second day, in the morning, give them scalded wheat, or barley, or corn. Let it stand in the hot water until it is cool enough to feed, then give one handful of feed for each chicken. For instance, if you have twenty chickens in the pen give them twenty handfuls of the scalded food in their trough. In the afternoon give half that amount of good, dry, whole grain for each hen. That same evening you soak in cold water the amount of feed you need for the next day. Let it stand until the next morning, then drain and feed. This third day should be oats and add a little salt, for it is an appetizer. In the afternoon give the same feed. Have plenty of good, sharp grit and oyster shell before them in their hoppers, for this feed will loosen them up and all half-round and smooth stones will leave them and they will fill up on the good, sharp grit and oyster shell. From now on give grain in deep litter every morning and make them work for their food. Every day between eleven and two let them eat a dry mash composed of one-half bran, one-quarter corn, one-quarter middlings, with one pound of beef scrap to eight pounds of the above mixture, let them eat for three hours, then take away or close up. In the evening give a little warm corn. Always warm their grain. It will help to keep them warm. Also give them warm water. If you have a lot of cabbage give them some every day. I also feed sprouted oats and barley, which is very good to keep them toned up. Try to pet your chickens as much as possible, for that helps to make them lay.

The open front is the thing for small-combed varieties where the winters are not too severe. Extreme open front is responsible for many frosted combs and wattles. Chickens do not need much warmth, but may be greatly injured by exposure to extreme cold. If you always keep your hens comfortable you will get the eggs. Here is the correct front for this climate and all the different breeds I have experimented with; Barred Plymouth Rocks, White Plymouth Rocks, Rhode Island Reds, and Single Comb White Leghorns, which is one of the best fine-combed varieties. I put in half of my windows with muslin front, which will keep out the moisture trouble, caused by condensing on the roof at night and dripping on the floor in the day, which is a great cause of disease. That there is a limit to this experiment no one will deny, but it has not yet been reached, and every step so far has been a benefit to the poultry and greater profit for the industry. Birds that have been kept in open front houses can stand a much lower temperature than those accustomed to warmer quarters. Combs and wattles are more liable to be frosted in the early morning than at any other time, and in extremely cold weather it may be worth while to darken the house and keep the fowls quiet until the sun is up.

I keep my yards and poultry houses free from lice and mites by the following method: Every fall and spring clean houses and whitewash. Spray with a good lice liquid and also fumigate your coop if possible, for it is a good prevention. Take some sulphur cake or powdered sulphur, put in a pan and set this pan in a dish of water, for the fumes and the water form an acid effect which is very strong. Remove fowls from coop while smoking. Keep coop closed five to six hours, then open windows and doors for a good ventilation. I always take out my roosts and scrub them with a good lice solution and soak the dropping boards. If the chickens are full of lice and you want to get rid of them quickly make a lice salve yourself by putting one pound of lard into a kettle and heating until thin, then add one tablespoonful of kerosene and one teaspoonful of lice liquid. Mix well, then let it cool until you can hold your finger in it. Grease your fowl on the head, under the wings and down the middle of the back, to prevent the lice and mites from traveling around the fowl, and grease the vent, for this is headquarters, or the reunion place, for lice and mites.

As to roup, I've had my troubles years ago and started to make my own roup cure. I made a study of this dreaded disease and found that prevention is the best. A chicken's head is all glands that lead all over, and it is always a gland that it caught cold in that will cause the swelling and form pus or a hard canker that can be worked out through the nostrils or into the roof of the mouth or the corners of the eyes by soaking the head in a warm solution of roup tonic. Always keep your water fountains clean by pouring scalding water into them. Keep your yards dug up and put lime on the ground, which will help to sweeten it up again. Also prevent crowding, which is very bad for your flock. Some poultrymen say the ax is the best remedy for roup. In severe cases it is, but not in mild cases while we have such good roup cures on the market now.

Concerning the sale of stale eggs; all the stores out here have the electric candling machine and candle all eggs brought in by the farmers. The storekeepers say that is one of the best investments they have, for it cured the farmers of bringing in bad eggs. The farmers ought to candle the eggs themselves by taking a candler, or take the eggs and hold their hands over them so as to half shadow them against a lamp light, and they can pick out all eggs that have started to hatch. A lot of farmers find hidden nests full of eggs and pack them in the crate, then take them to the store and let the storekeeper tell them the eggs are rotten and he doesn't want them. They could avoid this by candling the eggs before trying to sell



Members Milwaukee Pigeon Fanciers' Association who held annual show last month. Southeastern Wisconsin is one of the greatest pigeon sections of the country.

ONE OF THE THIELE BARRED ROCKS. A PRIZE WINNER.

PRIZE-WINNING EXHIBIT AT WISCONSIN FAIR.

Birds taken to Milwaukee by F. H. Thiele. Mr. F. H. Thiele at the left, his son, Robert, at right. Little Francis C. Thiele is seen petting her first-prize pullet. A family all interested in better poultry.

them. The good, clean, uniform eggs always bring a penny or two more than the market price. Also be sure not to send any eggs that have stains on them to hotel men, for they can't serve them soft-boiled with the shell. Keep these and the cripples yourself.

Fred H. Thiele.

Milwaukee Co., Wis.

From a Buff Wyandotte Breeder.

To the Editor:—I can talk chickens a good deal better than I can write about them, but will give my experience during the last ten years as a breeder of Buff Wyandottes. With me the chickens are a side issue—something to fool with when I get through work, and, as it does not cost any more to raise good ones, and they look better than scrubs, I try to keep mine up to the standard and I think I have succeeded.

To my way of thinking three things are necessary for egg production during the winter months, namely: good stock, proper feeding and comfortable houses.

In regard to stock I find that early hatched pullets or year-old hens that have got through the molting period in good season make the best winter layers.

I feed all grain in litter about one foot deep. The litter consists of oak leaves and straw. Grain consists of wheat, oats, barley and cracked corn, brought in the house the night before so that the chill will be off it when fed in the morning. At night, and sometimes at noon, feed a mash consisting of boiled oats mixed with bran-feed (corn and oats) ground, and middlings, moistened just enough to make it crumbly. I feed sprouted oats also and find it one of the best kinds of green feed. At night give them a good feed of whole corn that has been warmed. Keep plenty of warm water before them, also grit and oyster shell and dry bran in hoppers. Hang cabbages up about two feet from the floor so that they will have to jump for them. When I can get fresh green bone I feed about one ounce to each hen about twice a week, sometimes in the mash and again just throw it in the litter.

We have very good success with our style of house. It is eight by twelve, six feet high in front, five feet in rear, divided into two compartments, one used for roosting and the other for laying. It has good, large windows facing the south, and a scratching shed at each end eight feet wide by sixteen feet long, partly enclosed with windows and partly open, with burlap over the openings. Scratching material is always dry. We do not close the door of the roosting house except on stormy or very cold weather, and it is always dry.

I have not been bothered with mites since I started keeping poultry. Have kept the house and roosts clean and have used kerosene on the roosts. Have had trouble with lice up to last spring when I saw an advertisement of an ointment that should be used on the chickens in the spring and again in the fall. I got a tube of it and used it on my stock and there is no more dusting for me. I used it last spring and have looked a number of times for lice and did not find them until a week ago, when I got busy again and greased all of them.

Have had only one case of roup and used a well-known roup cure. As the case was not a very bad one, I was soon out of trouble on that line. I keep the yards clean and spade them up several times during the summer and always plant something in part of them, and I always keep the houses clean and dry.

We have been pretty lucky in regard to the sale of decayed eggs in this locality and have not heard of any action along this line. The only time people are bothered is when they get cold storage eggs at the store.

Frank J. Blood.

Portage Co., Wis.

Clean Up Poultry House.

To the Editor:—Clean up your poultry house. Get an old broom and clean off the walls, get the cobwebs down, particularly between the rafters, where there are usually many of them. Clean up the floors, remove the curtains and the roosts and give it a new coat of whitewash. The poultry house should be whitewashed twice a year, spring and fall.

I have an open-front house and the birds do better in the winter, for I have had the experience of a closed house with the frost on the ceiling. I have put in a ventilator from the bottom and a muslin front and a curtain in front of the roosts, and the air is more pure and clean.

I have my poultry on a city lot fenced in, raise a little corn to give them plenty of shade during the hot summer months, and the runways are always plowed up and turned over about six inches deep, which keeps off the germs and parasites. Look over both outside and inside and see that there are no cracks. Cover them up so that there is no draft on the birds at night.

For the feeding I put in about six inches of litter, throw in the feed and let them go after it. I feed cracked corn, wheat and oats, mostly, and dry mash in a hopper all the time. Give them fresh water daily.

When you get stock and eggs get the best, and you will not make a mistake by doing so. Last year I bought some Langshan eggs, paid $10 for twenty eggs, got eighteen chicks and they all did fine. Sent a cockerel to the big Coliseum Show at Chicago and took first and champion ribbons. A. R. C. Black Minorca cockerel also took first, winning over breeders that have bred birds for thirty years. That's going some. Now keep your poultry house clean and watch the results.

O. C. Steingraeber.

Jefferson Co., Wis

FEEDING POULTRY FOR BREEDING PURPOSES.

Observations made in connection with the work of the Maine station, as well as a study of the literature which exists upon the subject, have led to the opinion that in order to get the best results in respect to the fertility and hatching quality of eggs it is not desirable to feed birds which are to be used as breeders the heavy laying ration which is used to force egg production during the winter months in pullets. The feeding of such rich food has a tendency, it is believed, to reduce or impair the fertility and hatching quality of the eggs. Therefore, a plan of feeding birds kept to be used as breeders has been devised with the idea of getting over this difficulty so far as possible. This method of feeding is used for old hens, cockerels and cock birds which are kept from one season to another for breeding. The aim is to keep these birds on as light a ration as is consistent with the maintenance of good condition until just before the beginning of the breeding season when they are to be used and then to put them on a more stimulating and richer ration. The scratch food given to this breeding stock is the same as that given to the pullets, namely, corn for the first morning feed and a mixture of wheat and oats for the second feed of the day, both scattered in the litter. If, however, there is any tendency for the yearling hens kept as breeders to get unduly fat during the winter, corn is not fed as a litter grain. The hens, under such circumstances, are simply given the mixture of wheat and oats at both feedings.

The dry mash used for these birds kept as breeders has the following composition: Bran, 400 pounds; corn meal, fifty pounds; daisy flour or other low-grade flour, fifty pounds; meat scrap, 100 pounds.

Birds kept over from one season to another are managed in the following way: The birds completing their pullet year which are to be kept as breeders are continued on the usual pullet ration until after they have finished their molt in the early fall, usually in September or early October with the birds here. Immediately after the molt is over and the hens are well feathered out they are put on the dry mash ration given above. They are fed in the way described until the beginning of their second breeding season. The breeding pens are usually mated up about the first of February. During the breeding season all birds, both hens and pullets, are fed the following mash: Wheat bran, 200 pounds; corn meal, 100 pounds; daisy flour, 100 pounds; gluten feed, 100 pounds.

It will be noted that this contains no meat scrap or other animal food. The experience of the Maine station indicates that by reducing animal food to a minimum or dropping it altogether it is possible to improve markedly the hatching qualities of the eggs. Besides the dry mash the breeders are fed wheat, corn and oats in the same way as the laying pullets. Further, they are given an abundance of green food, always including green sprouted oats.

RENTERS HAVE POOR POULTRY QUARTERS.

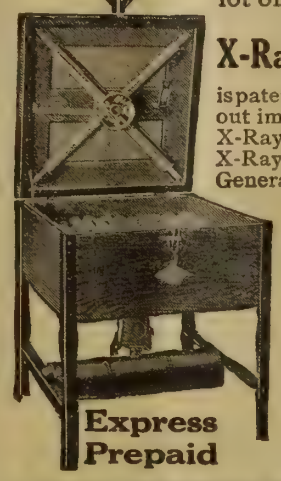
To the Editor:—Last spring I wrote you my experience with common fowls. This year, 1916, is our third year on a rented farm and in this part of the country there are no accommodations for poultry keeping at all. I suppose other renters find the same trouble, but it makes it hard for the woman of the house. By the time the little chicks begin to hatch there are so many other things to do.

I have sold enough of my culls and

One Gallon Oil—One Filling

THE X-RAY INCUBATOR CO. DES MOINES IOWA U.S.A.

X-Ray Does the Work



IF you are using any incubator with a lamp on the end or side you are paying big oil bills. If you are using any incubator whose tank has to be filled more than once to the hatch you are doing a lot of extra work and taking a big chance on the eggs becoming chilled. If you are using an X-Ray Incubator you're saving four to five gallons of oil and—what may be more important—you're saving a lot of work and worry—most important of all, you're getting the *biggest hatches*.

X-Ray Central Heating Plant

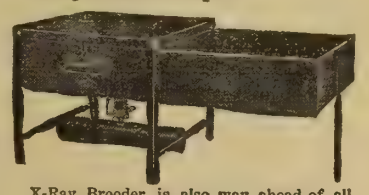
is patented but its huge success has brought out imitations. Don't be deceived. The X-Ray know-how cannot be imitated. The X-Ray Duplex Heating Plant and the X-Ray Generator are exclusive X-Ray features which account for X-Ray supremacy. You ought to have an X-Ray. It's built on the right principles throughout. Insures biggest hatches, sturdiest chicks and least trouble.

Express Prepaid

Ask for X-Ray 1916 Book

It tells all about X-Ray Fifteen Big Special Features. Learn all about X-Ray egg tray, perfectly level, no sag, makes turning the eggs the pleasure of a minute; X-Ray automatic trip, saves fuel, keeps the temperature in the egg chamber exactly right, automatically regulates the heat. Works itself—cuts down flame if heat exceeds the need—lets on more flame if temperature drops.

Learn all about the X-Ray hinged glass top and all the other X-Ray Special Features.



X-Ray Brooder is also way ahead of all others. Lamp beneath, same as in X-Ray Incubator, saves the chicks—that means profit.

We Pay Express Get your X-Ray this year by *Express Prepaid*. Don't wait on slow freight—every day saved is money made. We *prepay express* on X-Ray Incubators and Brooders to practically all points. Send for free X-Ray Book No. 43

X-RAY INCUBATOR COMPANY, Des Moines, Iowa

$7.25 New Mankato

Quick Delivery

Get the catalog of this big northwest incubator company. Let us show you how twenty years of success has enabled us to build better incubators than you ever heard of. *Thousands in use.*

Mankato Incubators

are made of genuine California redwood. Triple walls, asbestos lined. Heavy copper heating system. Safety lamp. Strong egg tray. High nursery. Tested thermometer.

Send Your Name on a post card and we will send you our big book Free. Our prices on incubators and brooders will amaze you.

Write Today!

Mankato Incubator Company
Box 708, Mankato, Minn.

A HEN'S NEST IS ROUND

NATURE teaches the hen to make her nest without corners. The Radio-Round Incubator is round like the hen's nest—no corners to get cold. No far-away points to heat. This and two other big features,

RADIO-ROUND

Heater and Moisture System work together to supply mild, moist, even heat like the hen's heat.

Powerful Triple Heater is right in center, with lamp beneath. Moisture System is built-in. ONE GALLON OIL, one filling to hatch. Only three minutes care daily. Freight prepaid. Write for Book No. 38

RADIO-ROUND INCUBATOR CO.
Drawer 9 Wayne, Nebr.

"LAWN PARK" COOP

Saves Your Chicks

The Wire Park, which pulls out like a drawer, gives hen and chicks fresh grass, air and sunshine during the day; closes at night and in storms. This coop meets every demand; portable, with removable floor for easy cleaning; roomy, light, durable, sanitary.

IT TELESCOPES!

PROOF Against Hawks, Rats Weasels, etc

Made of galvanized metal; repels vermin. Size, open, 18 in. x 24 in. x 48 in. Pays for itself in chicks and labor saved. Write today for free circulars, special prepaid offer and how to turn work into pleasure and profit.

CYCLONE MFG. CO., DEPT. 21, URBANA, IND.

old hens to more than pay my summer feed bill, and the eggs have kept up the table, so that sales from stock and grain could be applied to other things. I kept account of the fried chickens until they numbered up in twenty, then I lost count. It is surprising how many young chickens a small family will eat and they are a healthful meat. My little boy was delicate and ate very little until after fried chicken time came, then he ate all he wanted and began to mend. Now he is as fat as a butter ball. I do not believe there is any meat as healthy for children as chicken, either fried, boiled or baked. We seldom give the poultry department credit for the saving in the meat bill.

Poultry keeping is a painstaking labor no matter what one feeds and when one has not the means to carry on the work properly it is surprising what one can do with poultry with old, rattle-trap roosting houses, no mating lots, no coops nor old scraps to make them of. These are some of the conditions under which I have made a success with poultry. I feed whole corn, dry bran, Irish potatoes and beets driven to the wall by a nail, cabbage fed in a hanging basket made of a scrap of poultry wire. The potato, beet and cabbage I feed raw when snow is on or bad, windy days when the weather is severe. I also give them sweet or sour milk. I keep grit, oyster shell and charcoal before them all the time, and I have this winter discovered that a pan of cracked nuts, either walnuts, butter nuts or hickory nuts, whatever one has on hand, will take the place of insects they find in summer.

We really belong in the Hoosier state. I have bought a place of sixty acres and we hope to go home this coming fall. I expect to sell all my dear old biddies, together with what I raise this summer, and invest the money in new stock. I have had good success with the common barnyard variety. Now, will someone help me decide what breed to get? I have thought of the White Leghorn, but they have two faults. The hawks see a white chicken at a greater distance than any other color. Then, too, the buttons, as the merchants call them, appear on the leg so young that if for any reason you cannot market them at the right time you do not get any price for young roosters. Yet I like them for eggs. I have had a few Brown Leghorns in my mixed flock and they seem to be easier to take disease than any of the other chickens. Will someone else give their experience along this line? I am not afraid to start with any breed, but I would like to start right with the right breed with my limited means, as what I make from my chickens will have to help build their new home, and beginning wrong will put me back a great deal, so will someone help me to decide what breed to choose and just how to begin?

I will be eight miles from a fairly good market about thirty-nine miles from the capital. The interurban runs every hour from the town of about 10,000. Although I will be a Hoosier, I will still be one of your big family of readers, so you see a new start means a great deal to me.

Poultry Lover.

POULTRY MONEY ENOUGH FOR FOOD AND CLOTHES.

To the Editor:—In my estimation, poultry raising is an occupation suited to both old and young. It has done much for me. It has, to a great extent, been the means of supporting my home in that it has supplied the table with meat and eggs, besides buying the groceries and much of the clothing for a family of six. Last year I raised 150 chicks and did not use an incubator. I had the best luck with the chicks, as I lost but a few, and these were killed by the mother hen. I seldom lose a chick after it is hatched.

The pullets from last year's hatch I kept and many of those that were hatched in the months of February and March have been laying since the middle of September. The cockerels that were hatched in these months were sold when weighing two pounds,

RHODE ISLAND REDS bred by Mrs. F. H. Burke, Brodhead, Wis., whose advertisment appears on this page.

for which I received 23 cents per pound. Those hatched later in the season were kept to supply the table.

I raise the Barred Rocks and I think they are the best breed that I can get for an all-purpose farm fowl. They have proved to be good layers and grow to a size that makes them a desirable table fowl as well as for selling on the market.

My henhouse is not an expensive one, being built of rough lumber. The front faces the east in order to let in all the sunshine possible. My brood coops are made portable so that they can be removed from platforms beneath and frequently cleaned. I think I owe much of my success in raising poultry to keeping everything in connection with the poultry house and brood coops dry and sanitary. My poultry have free range, which I think is another advantage in chicken raising. When selecting eggs for hatching I select those obtained from the best layers of my flock and make the nests of the sitters warm and comfortable, the latter being especially important when setting hens early in the season. I gather the eggs from the nests soon after they are laid in order to prevent them from chilling when the weather is cold. I never put more than fifteen eggs under each hen early in the season and I never have any trouble in securing a good hatch. The chicks are kept growing from the very start by good feeding and housing.

I never feed young chicks for a day and night after hatching, and their first feed is scant—just a few dry bread crumbs—increasing the amount after the first few days. I give them plenty of clean water from the beginning. When the chicks are two weeks old I begin feeding chopped corn and wheat three or four times daily and push them on as fast as possible to maturity.

I consider the main reason of my "good luck" in chicken raising is owing to the fact that I was raised on a farm and love to work among chickens. I would advise every woman or girl going into the chicken business to get the best breed possible to begin with. My beginning with the Barred Rocks was with only one setting of eggs, which cost me $1.50, and at the present time my flock numbers 100 pullets and hens, besides eight cockerels. This spring my intention is to purchase an incubator, my idea being to set several hens at the same time and divide the chicks among the hens and allow them to do the brooding, as I think this would be less trouble than operating a brooder.

Mrs. Rosie Lowery.

Johnson Co., Illinois.

Recently more than seventy teachers of rural schools in Dane county and about 100 teachers in Wood county asked to have their names placed on the regular mailing list to receive bulletins from the agricultural experiment station. These bulletins will be used in teaching agriculture as carried on under Wisconsin conditions.

A report from the Wisconsin Department of Agriculture shows about 50 per cent of seed corn for 1916 in sight Seed corn will be high in price in the spring and the man who has good matured seed of Wisconsin varieties will be well off indeed.

Wisconsin Wins In Big Hatching Contests Every Year

Why Pay More

For only $10 you can get these two prize winning machines, delivered, freight paid east of the Rockies. You take no risk—money back if not satisfied. You can order direct from this ad. Ask the publisher about us.

Both Machines Freight Paid For Only $10

We also furnish 180 Egg Incubator and 180 Chick Brooder both for only..$12

Wisconsin Incubators have long proved their wonderful hatching qualities. Competing with every make known, they won in the five big annual National Hatching Contests. Think of it. Five consecutive victories. That certainly proves you can't make a mistake. Shipped on **30 Days' FREE Trial**

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Wisconsins have hot water heat, double walls, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Made of finest, select, clear CALIFORNIA REDWOOD, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1916 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

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Live Well On Chicken Profits

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"Tycos" Cup

402,000 in use. Get the whole story told by the Championship Winners in my big free book, **"Hatching Facts."** With book comes full description of incubator and brooder—my 10-year money-back guaranty—low prices—full particulars—**and my $1300.00 Gold Offers.** Learn how I paid one user $156, another $50, many from $45 down. Write today for Free Book. Jim Rohan, Pres.

Freight Prepaid. 1, 2 or 3 Months' Home Test

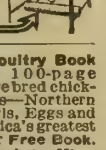
Belle City Incubator Co.
Box 106 Racine, Wis.

Tells why chicks die

E. J. Reefer, poultry expert, 9481 Farmer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure it." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

GET BIG HATCHES

Beginners hatch like experts with the wonderful center-heated Rayo Incubator—hatch on one gallon of oil and one filling of tank. Book sent FREE.



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HOUNDS Coon, Skunk, Fox, Wolf, Deer and Rabbit hounds, pedigreed and eligible to register. Sold on ten days trial, with money-back guarantee. Otis Slater & Son, Oconee, Ill. Successors to R. F. Johnson, Assumption, Illinois.

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Medical Battery for Light.

I have a small shocking machine. Could I arrange it so as to run an electric light?

Answer.—It would not be practical to run an electric light with your machine.

Lining Worn.

I have a 1915 Model T Ford car. When starting in low it grabs with a jerk, killing the engine at times. I have tightened the slow speed band, and given the set screws in the clutch fingers one turn each, but without improving it. Can you suggest a remedy?

Answer.—The lining of the low-speed band is worn. Remove the old lining and put in a new one.

Firing Order.

I would like to have you explain the firing order of six and eight cylinder motors. Is there an explosion every one-third or every one-sixth of a revolution in a six-cylinder motor? Is the explosion every one-fourth or one-eighth of a revolution in an eight-cylinder motor?

Answer.—The firing order depends upon the design of the crankshaft, not all motors having the same firing order. The firing order of any motor is easily found by turning the motor slowly and noting the order in which the intake valves open, the order of valve opening being the same as the firing order. The firing order is usually stamped on the crank case of the motor. Six cylinder motors have an explosion every one-third revolution, eight-cylinder motors every one-fourth revolution.

A Motor Sled.

I am intending to make a motor sled. At what speed should a four or six-foot propellor be run to move sled weighing 400 pounds at a moderate rate of speed? What horse power would be required? What wood is best for the propeller?

Answer.—Make the propeller out of maple. It is best to use boards one-fourth of an inch thick glued together so that the grain does not match. This prevents splitting. Make the hub strong and heavy and the tips of the blades very light. The speed of the tips of the blades should not exceed a mile a minute. For a five-foot propeller this speed requires about 350 revolutions per minute for the propeller shaft. Five horse power would be required. A sled of this kind would not be a success excepting on ice or on a level road.

Fan for Vacuum Cleaner.

What is the difference between a suction fan and a blower fan? Could I make a vacuum cleaner from a fan without putting a cover around the fan by fastening fan blades to the side of a solid wheel and mounting the wheel near a board having a three-inch hole in it; running three-inch spouting up the side of the house to the various rooms? How fast should the fan run and how much power would it take? Would it sweep flies off the screen door?

Answer.—You would not have any success unless you enclose the fan. Fans for blowing and suction are made the same, the difference being in the housing. The suction pipe is connected at the center of the fan housing, the blower pipe at the rim. You might cut an opening in a small box, the fan fitting the opening, and the suction spout running from the box. For a three-inch pipe we would suggest a fan about twenty inches in diameter running at a speed of 1,000 R. P. M. The fan must be well made and well balanced. About three horse power might be required. It would probably be better for you to purchase a fan from your hardware dealer.

The use of a vacuum cleaner to remove flies from screen doors is a novel idea and might work out well, especially after dark, when the flies are not easily disturbed. The vacuum cleaner is coming into general use and it may help solve the fly problem.

Registering a Car.

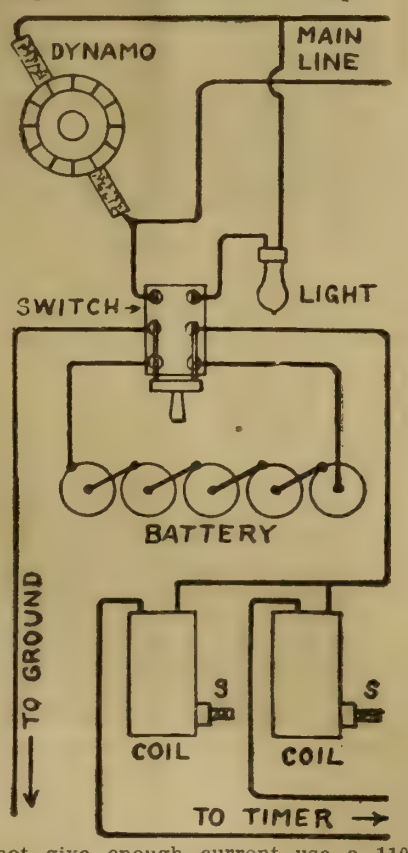
What are the registration laws of Minnesota, and what is the usual fee? When an Iowa man moves to Minnesota, taking his car along, is it necessary to notify the secretary of state of Iowa?

Answer.—When a man having an automobile moves from one state to another he does not have to notify the secretary of state of the state from which he moves. He should, however, write at once to the secretary of state of the state into which he has moved for information as to the license laws of that state and he should proceed to comply with those laws as soon as possible. The fee usually depends upon the S. A. E. horse power rating of the motor.

Ignition From Generator.

I have a 110 volt, five-ampere generator that I use for lighting. I would like to know how it can be connected to my gas engine to furnish ignition current. Can it be connected to the same vibrators, or is the current too strong?

Answer.—The current is too strong to connect direct, but it may be connected as shown in the figure, using a lamp for resistance. If a sixteen-candle-power 110-volt carbon lamp does not give enough current use a 110-volt lamp of greater candle power. When the switch is in the position shown the engine may be started on battery. Closing the switch in the upper position cuts out the battery and closes the circuit from the generator to the engine.



Some Power Saw Questions.

I have some questions to ask about my twenty-six-inch wood saw. I have a five-horse-power gas engine the speed of which is 425 R. P. M. The engine has a friction clutch pulley twelve inches in diameter. The pulley on the saw shaft is six inches in diameter, six inches wide. I also have a 200-pound balance wheel which is thirty-four inches in diameter. I wish to mount this wheel under the saw shaft, driving the balance wheel shaft pulley by a short belt from a pulley on the saw shaft. What size pulleys shall I use? Will a canvas belt three and one-half inches wide do the work? What is the speed of a twenty-six-inch saw when running as above stated? If a twenty-eight-inch pulley were used on the engine and a twelve-inch pulley on the saw shaft, would the engine's power on the saw be increased or decreased? The saw maker does not advise a speed of over 1,000 R. P. M. for a twenty-six-inch saw.

Answer.—With your twelve-inch to six-inch pulleys, your saw makes about 800 R. P. M. The saw would make a little over 1,000 R. P. M. with the twenty-eight to twelve combination. The actual power remains the same, but the higher the speed the less the pulling power of the saw at the rim. In the first case use an eight-inch pulley on the balance wheel shaft, and a six-inch pulley on the saw shaft. In the second case use a ten-inch pulley on the balance wheel shaft and a six-inch pulley on the saw shaft. The wheel and shaft must be well balanced to prevent vibration. The three and one-half-inch belt is rather light. A five-inch belt would be better.

Timing a Motorcycle Engine.

I would like to know how to time a twin-cylinder Indian motorcycle engine, Model 1913, equipped with Bosch magneto.

Answer.—Time the rear cylinder only, the front cylinder will be correct if the rear cylinder is correct. Set the exhaust valve so that it closes on top dead center or slightly afterward. The intake valve should open at the instant the exhaust valve closes. Having set the valves, turn the engine until the piston in the rear cylinder is at the top center of the compression stroke. Then turn the motor backward until the piston has moved down one-fourth of an inch. Set the timing lever at maximum advance. Turn the armature so that the points of the circuit breaker are just about to open and tighten the magneto coupling in this position. If after connecting the magneto with the spark plugs only one cylinder fires give the armature one-half a turn without moving the other parts.

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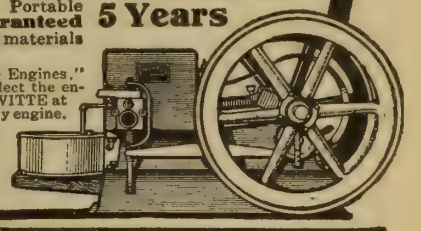
Fine Book Free My book, "How to Judge Engines," will show you how to select the engine most suitable to your needs, and how easy it is to run a WITTE at any kind of work. Get my engine facts before you decide on any engine.



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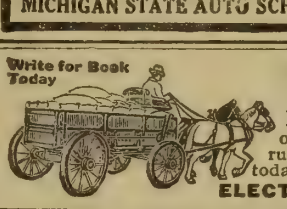

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It tells you how to get better compression and more power out of your engine—automobile, stationary and tractor. How McQuay-Norris Piston Rings save fuel and oil, and stop carbon trouble.

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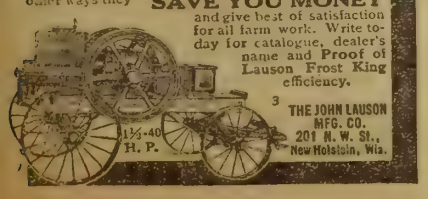
No Cranking—start easily with a slow turn of fly-wheel. Sumter Gear Driven Magneto does away with batteries, their expense and trouble. In other ways they **SAVE YOU MONEY** and give best of satisfaction for all farm work. Write today for catalogue, dealer's name and Proof of Lauson Frost King efficiency.



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Auto tire repair field a hundred times bigger and better than old bicycle days. Johnson, Tex. writes, "I made as high as $18 profit in one day." Investigate today. Ask for FREE catalog.

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FARMING IN VILAS COUNTY.

One of the Last of the Wisconsin Counties to Receive Attention, Vilas Is Coming Rapidly to the Front—County Agent System Is Bringing Excellent Results.

GREAT things will some day be heard, in an agricultural and dairying way, from Vilas county, Wisconsin. There were days when men looked upon this section as beautifully wooded and dotted with lakes and thought what an ideal hunting preserve it would make. But the agricultural and dairy lands of Wisconsin became scarcer and higher in price and the farmers marched northward step by step as the lumbermen finished their work. Those who have used good common horse sense in farming, and who have been willing to work hard for a few years and put up with some privations and lack of conveniences, are just at the point when they are coming into success. Like other Upper Wisconsin counties, Vilas has been tried and proved O. K. for farming. Its grass and grain crops are large, though the acreage is yet small. But the opportunity has been proved and it is now only a question of getting good, honest hard-working settlers to stick by the job through thick and thin until they have a fine farm cleared, the land in grasses or crops, farm improvements and money in the bank. It isn't a picnic to make good in Vilas county. But it is just as sure as death and taxes to those who will go at the work with the right spirit and determination. The views shown on this page indicate something of the progress which has been made "up north." County Agricultural Representative Oscar Gunderson has been on the job, helping the settlers to make good. Wisconsin people who not many years ago did not think seriously of Vilas county as a farming proposition must now admit that she is on the map; and the county representative system has had a big part in putting her there.

Mr. F. I. Carpenter, of Chicago, who is the owner of considerable land in Vilas county, Wisconsin, has made a special study of soils and crop conditions in that section. He is considering the matter of starting a model dairy farm in Vilas county. In a recent letter he recalls some of the incidents of his numerous inspection trips across the county and his conferences with farmers. Mr. Carpenter says the time has now come when Vilas county must look to agricultural development as the solution of its future greatness. This same opinion was recently expressed by Mr. C. I. Cook, of Menominee, Mich., who was for years an Iowa farmer. Mr. Cook is now managing several farms near Menominee in connection with his canning and wholesale grocery business. Like Mr. Carpenter, he is quite familiar with the land situation in Vilas county.

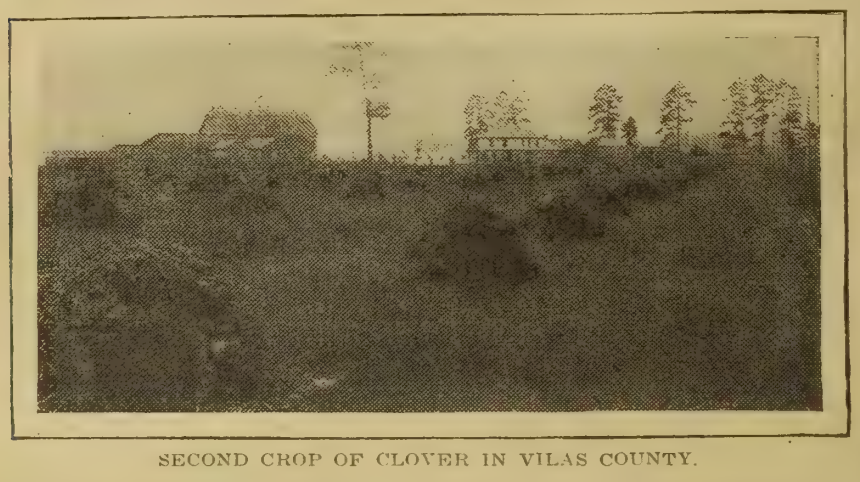
Both of these gentlemen write that they expect Vilas county to be a dairy and cattle-raising section. They look for continued increases in clover and hay throughout the county as the land is cleared up, and they agree that the silo is bound to be an important farm adjunct. Root crops, clover and alfalfa, however, will be the mainstay of Vilas county, and these will be the big aids to profitable dairying.

Mr. Carpenter writes that in Herefordshire, England, ten tons of root crops per acre are raised for cattle feed, and he says such a record is not unreasonable to expect in Vilas county, Wisconsin. He also believes that one of the best crops for feeding purposes is sugar beets. He says the beets are worth $10 a ton for feeding, and this is $4 a ton more than they are worth for sugar. A rotation of root crops, clover and some good silage crop is suggested by Mr. Carpenter, and he says when this rotation is put into effect one may expect as good profits in Vilas county as on fertile lands anywhere. One thing which will increase the profits in Vilas county is the fact that the original investment is small. Mr. Carpenter expressed the opinion that alfalfa will soon be quite as prominent as clover throughout Vilas county, and, in fact, in the sections of Upper Wisconsin which are commonly spoken of as the "clover belt."

In the matter of dairy farming under Vilas county conditions, writes Mr. Carpenter, the smaller or moderate units often have a better chance of profit-making than larger enterprises. We have had many notable examples of large and expensive herds which have suffered from the costs of inbreeding and tuberculosis and which have, for some reason or other, seemed to be the worst victims of foot-and-mouth disease and other cattle troubles. Many of these instances lead to the belief that close confinement under feed-saving methods often results in waste of health. Fresh air, sunshine and cleanliness are great and effective preventives.

Blooded bulls are necessary to the

(Concluded on page 34.)



SECOND CROP OF CLOVER IN VILAS COUNTY.

BOHEMIAN FARMERS NEAR TABOR, WISCONSIN.
Foreigners often settle in groups because of their inability to at first cope with the English language.

EAGLE RIVER, VILAS COUNTY, WISCONSIN, CREAMERY.

CORPORATION FARM NEAR PHELPS, WISCONSIN.
Where pure-bred Holsteins are kept and bred and where good sires are loaned out to the pioneer settlers to help improve their herds.

VILAS COUNTY HAS FINE OAT YIELDS.

FERDINAND DOLANSKY HOME, VILAS COUNTY, WISCONSIN.
Bahemian farmer who came to Upper Wisconsin with little money and plenty of elbow grease and has made good.

THE HOME

LETTERS intended for publication should be accompanied by the name and address of the writer not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., The Wisconsin Farmer, Madison, Wisconsin.

THE CHILDREN'S PRAYER.

The suggestion that our readers send us the prayers they have taught their children has met with a generous response and we have received quite a number of very pretty ones, indeed, from among which we think the friend who appealed to us will be able to make a selection.

One reader of our columns, B. F. Chamberlin, says:

I know of no better prayer for little children than the old one our mothers taught us. It is so simple and short that most children can grasp its meaning.

The first recollection I have of my mother is when, after preparing me for bed, she read a chapter from the Bible and then had me kneel down and, with her hand on my head, taught me to say:

Now I lay me down to sleep,
I pray the Lord my soul to keep.
If I should die before I wake,
I pray the Lord my soul to take.

That is one of the sweetest memories of my life. I am now quite an old man and it is now and has always been very fresh in my mind.

Some have objected to this little praper on the grounds that the little child should know nothing of death and should be taught nothing of death. But what could be sweeter than the memories that it brings to Mr. Chamberlin? Surely the repeating of those four lines at his mother's knee meant much to him and the reference to death only inspired a faith in his Maker and a feeling of security in His love, rather than a dread of the Grim Reaper.

Mrs. M. H. McComb sends us both morning and evening prayers and also two forms of Thanks for the child. Any one of them, we think, would appeal to the child through both rhythm and thought. Mrs. McComb says she has taught all three of her little daughters the following:

EVENING PRAYER.

Now I lay me down to rest,
Angels guard my little nest.
Like the wee bird in the tree,
Loving Father, care for me,
Glad and well may I awake,
This I ask for Jesus' sake.

MORNING PRAYER OR SONG.

Father, we thank Thee for the night
And for the pleasant morning light,
For health and food and loving care
And all that makes the day so fair.
Help us to do the things we should,
To be to others kind and good
In all we think or do or say,
To love Thee better every day.

CHILD'S THANKS.

Father, we thank Thee for our food,
'Tis by Thy hand we all are fed.
As each new day our wants return,
Give us, O Lord, our daily bread.

ANOTHER FORM OF THANKS.

Lord, we thank Thee for this food,
Bless it to our every good.
True love for all may each one feel
As we eat this {morning / noonday / evening} meal.

Mrs. McComb says that her little girls also enjoy repeating the Lord's Prayer and the Twenty-third Psalm. The writer remembers that as a very little child the Twenty-third Psalm had more appeal for her than any prayer or any other quotation.

Still another friend, Mrs. C. C. Taylor, says:

Seeing your request for prayers for children in The Home, I want to suggest that as a mother I taught my children very simply to divide their prayers into four parts, which can be done thus. First, confession—just name some wrong that may have been done and ask forgiveness; thanksgiving—something for themselves to remember either for home, parents or friends; intercession—always to pray for some companion or sick one; lastly, supplication—in their own words to ask for something both for their soul, as to overcome some habit, and for temporal wants. Or they repeat the Lord's Prayer, we down on our knees with them.

The following, which we quote from John Martin's Book, seems to us very nearly ideal for the little child. It is sweet and simple and full of loving thought and confident faith:

Dear God, another day is past,
Another night has come at last.
Your watchful, tender love will keep
Me safely guarded while I sleep.
The quiet night is soft and kind.
The world below, the sky above
Hold only restful, healing love.
I have not thoughts nor things to fear,
When God and so much love are near,
The dreams that come are sure to be
God's nighttime messages to me.
I'll sleep and rest the whole night long
So I may grow both big and strong.
God bless and keep my dear ones; then
Bless everybody else. Amen.

A HOBBY THE HOUSEWIFE'S SAFETY VALVE.

There are none to dispute the fact that housework is "powerfully constant," but, according to Miss Nellie E. Maxwell, of the department of farmers' institutes of the University of Wisconsin, there is no need of becoming a slave to it.

Do not imagine yourself under life sentence to the broom and dish cloth, for often the most exacting and perfect housekeeper is the poorest homemaker, and homemaking is, or should be, every woman's business. All work and no play will have its dulling effect on Jill just as it does on Jack and happy is the housemother who can leave things undone to run and play for a few hours, bringing her needed rest and change.

There are many women like the farmer's wife in a late story who had wanted for years to see the sun rise from a hill back of her home, but there was always breakfast to get at that time.

The pleasant thing about having a hobby or fad is that it need not be expensive and we don't all like the same things nor want to do the same kind of things. There are any number of hobbies to fit any taste and many a woman has saved her mind as well as good looks by having a hobby.

The person who is well informed on some one certain thing is always interesting and we are always glad to meet him if he doesn't ride the hobby too long or too often. Someone has said that "an educated person is one who knows something about everything and everything about something."

What more charming hobby could there be than a rose garden or a wild flower garden like that of a dear old friend who loved the wild flowers and transplanted every kind she could find in the woods in a small corner of her garden. Every spring she had the delight of watching day by day the delicate early blossoms which she had loved in the woods.

Bird study is a perfectly fascinating hobby and a good one in which to include and interest the children. They love nature and will learn to listen for, and return, the bird calls. One woman gained a new lease on life by keeping bees and studying the habits of the entertaining little workers. Another hunts the woods and meadows for mushrooms and is an authority on the edible varieties. Nowadays nobody is a really good companion who is not informed on the common plants, birds and flowers, their names and habits.

A diffident person may, by being full of her subject, become a charming conversationalist, when she can forget herself in the thing she loves.

Even the collecting of old teapots and cream pitchers may keep one young and interesting, as was proven by a charming old lady who had several cabinets full of pots of which she knew the history and which she loved like children.

The study of moths, butterflies and beetles afford interest to those whose tastes are so inclined. The making of rose beads, the study of basketry bead work, crochet patterns and kindred handiwork may afford keen delight to the work-weary wife.

Having a hobby need not make one narrow and selfish. It should, on the contrary, have a broadening effect and even the male members of the family enjoy the riding of a hobby.

TO KEEP SAUSAGE.

To the Editor:—Here is a suggestion that has proven helpful to me and I would like to pass it on to others.

Instead of frying sausage and packing for summer use I learned of an easier way. Make your fresh sausage (which has been ground and seasoned with salt, pepper and sage) into small cakes, as for frying, and place in layers in a new stone jar. Set this in a moderately hot oven and bake about thirty minutes, or until the top sausage seems well cooked. If the lard does not rise sufficiently to cover add enough fresh, hot lard so the top layer will be one-half inch below the surface.

After well cooled tie a flour sack and paper over the top and keep in a cool place for summer use.

Never use an old or cracked jar, for fear of poisons forming. One-gallon jars are best. Mrs. H. A. M.

SCOTCH LIVER PUDDING.

To the Editor:—I am sending you a recipe for making Scotch liver pudding, which I think is very nice.

First, boil beef or hog liver until tender. Then take three cups of liver, one cup of onion, one cup of corn meal, one cup of lard. Cut onion fine, mix all together, season with salt and pepper. Put it in a sack (a small salt sack will do) and cook in a kettle of water until done. Then take it out, let it get cold and peel out of the cloth.

Anna Hastie.

NEVER FAILED WITH SOAP.

To the Editor:—In answer to Mrs. H. L. in regard to making good hard soap out of hog skins, cracklings, etc., so there will be no settlings at the bottom of the kettle I will send you my recipe.

For the scraps, skins, cracklings, etc., of one hog take one can of lye and dissolve it in enough water to about cover the scraps. Boil from one to three hours, stirring occasionally. Then pour in enough water to cover any bones or pieces that the lye has not eaten up and set kettle in a cool place so the grease will rise to the top and harden. Then carefully take the grease all off with a spoon, leaving the settlings undisturbed.

Now weigh your grease and for every five and a half pounds of grease take one can of lye. Empty the contents of the can of lye into a stone jar or iron vessel, with two and a half pints of cold water. Stir until lye dissolves, set aside until temperature by your thermometer is not over 80 degrees. Melt the five and a half pounds of grease until it dissolves. When melted set aside until temperature is 120 degrees. Now slowly pour dissolved lye into the grease, stir until lye and grease are thoroughly combined and drops from stirrer like honey. Stir slowly, but not too long or you may separate the lye. From five to fifteen minutes is enough, according to grease and weather.

Pour into mold (a wooden box will do), cover with blanket or carpet, set in a warm place for a day or two, empty out and cut as desired.

If you have no thermometer you ought to be able to tell by putting your hand into the grease, as it should be considerably warmer than the temperature of the body and the lye not quite so warm. I have never used a thermometer and never had a failure.

Mrs. J. M. G.

SOAP RECIPE FROM A NEW FRIEND.

To the Editor:—I am just a brand new subscriber, but I saw Mrs. H. L.'s letter asking for a good recipe for soap making. Now I have one that has never failed and if the rules are followed closely it will be exactly what Mrs. H. L. and the others want.

Take sixteen pounds of meat scraps, three cans of lye, three gallons of cold water. Dissolve one can of lye in each gallon of water. Put the meat scraps in and put all into a large iron kettle on the stove. Let boil steadily for two

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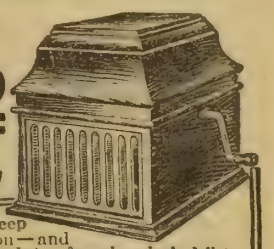

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hours, stirring so not to boil over. Take off and let stand until the next day. Cut out the top and throw away the bottom. Dissolve one more can of lye in one gallon of water and add to the top you cut out and let boil one hour after striking the boiling point. Pour into convenient vessels for cutting out into cakes.

I hope this will be of benefit to someone. I am just a newcomer to your paper, but hope to be of help anyway as we all need help once in a while. Mrs. C. E. P.

LIKES TO READ LETTERS FROM OTHERS.

To the Editor:—I have never written a letter to your department, but I always turn to your page as soon as I receive the paper.

I am a farmer's wife and have received many good suggestions from the letters of different people. We have no living children, but I like to read the letters from different mothers who have fresh-air babies and I enjoy seeing their pictures.

I see that some of the ladies are having grief with their soap. I made my soap this fall from grease which I rendered from hog's hide. To about one gallon and a half of grease I added two quarts of water and one can of lye. I stirred this mixture thoroughly, then placed it over a medium fire and allowed it to boil till it threaded from the spoon with which I stirred it every few minutes.

It can be poured into a square mold, if desired, or left in the cooking vessel till hard, when it will turn out readily.

I hope this will aid some of the soap makers. An Interested Reader.

CANDY AND PICKLES NOT GOOD FOR CHILDREN.

To the Editor:—I have been reading the letters in the Home Department concerning the care of babies.

I have a real healthy baby girl aged one year and six months. She has never had a sick spell in her life except a slight cold. I will send you her picture. Hazel June is her name.

I believe in having plenty of fresh air in the sleeping room and I also believe one should be careful in what they feed their babies. I do not believe in letting small children have candies or pickles or anything that is hard to digest.

I am interested very much in the letters concerning the care of babies and hope to hear from some more mothers who have healthy babies.

Mrs. D. Sedrel.

HELPFUL HINTS.

Cut clean newspapers into pieces of convenient size—about seven by ten inches—and hang on a hook handy to the kitchen sink. Use them to wipe grease from dishes and pans before washing. The greasy papers are easily dropped into the stove and burned and the dish water is kept much cleaner and free from grease.

If a cake will not come out of a tin easily place the tin on a cloth wrung out of hot water for a few minutes and it will come out readily without sticking. If the tin is greased with lard instead of butter and sprinkled with flour before putting the cake in there will be little chance of sticking.

To make a loaf cake bake evenly on top spread the batter a little higher on the sides than in the center of the pan. When done the cake will be even and smooth instead of being higher in the center, as is the case when the batter is spread evenly when put into the oven.

An emergency bag is a very convenient addition to the medicine closet; it should be made of two strips of heavy linen or denim, about six or seven inches deep, the back piece to be made about eighteen inches long and the front twenty-seven inches; the two strips should be bound together at the ends and across the bottom, then stitched to form several pockets (eight or nine), a flap should be buttoned over the top and each pocket labeled with indelible ink. One pocket should contain rolls of bandages, another bits of old, soft linen, another lint from worn-out napkins; other pockets should be made to hold bottles of arnica, witch hazel, carbolic acid, Jamaica ginger, absorbent cotton, a box of healing salve, a piece of castile soap and one-half dozen fingers cut from old, large kid gloves.

Layer cake requires a hotter oven than loaf cake.

A tiny funnel hung up by the ring and painted to match the kitchen woodwork is a convenient twine holder. The ball of twine just fits in the bowl and the end of string hangs down through the spout. The edge of the spout may be filed sharp and used as a twine cutter.

The measuring cup should hold one-half pint.

To make a shirtwaist box get a strong store box four feet long, three feet wide and three feet high. Pad with cotton wadding, on the inside, line with muslin or whatever material is desired and cover outside with either denim or matting. Use upholstery tacks along the edges. Put casters on and fasten the lid on with nice, strong hinges after the upholstering has been done.

Eggs thoroughly cooled are much more easily beaten.

Cleanse your combs and brushes often in very hot water and a little ammonia. Plunge into cold water immediately, shake well and dry in the sun. Keep ivory or polished wooden handles out of the mixture. Do not use this on air-cushioned brushes, as the ammonia rots the rubber.

RECIPES.

Apple Loaf.—Reserve enough bread dough to make a small loaf. Work thoroughly into it one tablespoonful of butter, one-third cup of sugar, one-fourth teaspoonful of cinnamon and two well-beaten eggs. Add flour to make a soft dough, knead lightly and let rise. Divide into three equal parts and roll each part to fit the pan. Lay one piece in a buttered pan, spread over it an inch layer of sour apples chopped fine. Pour over the apples a tablespoonful of melted butter, cover with the second piece of dough, and continue as before. Brush the top with milk, and let rise until very light. Steam for one hour, then place in a hot oven to brown lightly. Serve in slices with sugar and cream.

Apple and Cabbage Salad.—Shave cabbage fine and soak for one hour in celery water, made by adding one teaspoonful of celery salt to each quart of water. Drain and dry on a soft cloth. Add an equal amount of apple cut in small pieces. Mix with boiled dressing.

Cheese Puffs.—Four tablespoonfuls flour, two tablespoonfuls butter, two tablespoonfuls grated cheese, one cup water, two eggs, one-fourth teaspoonful salt, a little cayenne pepper. Put water and butter over the fire. Mix all dry ingredients thoroughly and turn these all at once into the boiling liquid. Stir quickly and cook, stirring all the time, until a smooth, stiff paste is formed and slips from the saucepan while stirring. When cold, add the unbeaten eggs one at a time and mix very smooth and velvety. Drop on a greased pan a little distance apart, using a generous teaspoonful for each puff. Bake in a moderate oven until they are light and puff up.

Virginia Waffles.—Boil half a cup of Indian meal in a cup and a half of boiling water thirty minutes. Add a cup and a half of milk, two teaspoons each of sugar and melted butter, two cups of flour, two heaping teaspoons of

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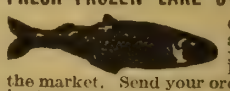

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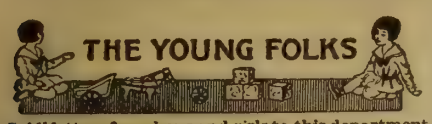
baking powder and two well-beaten eggs. Fry in a well-greased waffle iron. Serve with maple sirup.

Cream Puffs.—One cup boiling water, one-fourth cup butter, three eggs, one cup sifted flour. While water is still boiling stir in one cup sifted flour. When cool add the three unbeaten eggs. Drop in buttered tins three to four inches apart and bake from twenty to thirty minutes in moderate oven. When done, open and fill with whipped cream flavored with vanilla.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

SNIPPY GETS A GOOD HOME.

Dear Young Folks:—One evening when my sister and I were coming home from school we stopped at a house to get a drink and the lady who lived there had five little puppies and she gave us one.

We were a mile and a half from home and we carried him in our book sack. Mamma came to meet us and we showed her our puppy. She told us we had to take it back, but the next morning we acted like we forgot it—but we didn't.

That afternoon when we got home we took some sacks and made him a bed outside, for mamma would not let us put him in the house. When papa came home from work that evening we got our puppy and showed it to him. He said it was a fine dog and we were pleased. We fed him some sour milk and put him to bed.

The next day was the day we named our puppy and mamma helped us find a name. We thought once we would name him Rover, but finally called him Snippy. He learned his name in a week and when we called him he would come running to us.

When we moved Snippy came along. He seemed proud of his new home. We left our cats up at the other place. Snippy grew every day and his hair became curly. One day mamma went up to the place that we moved from and she brought back one of the kittens, the one we called Snowball. She is white and that is why we called her Snowball.

We were glad to have mamma bring Snowball, but Snowball was lonesome and had no other cats to be with so she took up with Snippy. At night Snowball would sleep with Snippy. One morning I found Snippy and Snowball on the porch fighting. I watched them a minute and then I made them quit. In a little while I saw Snowball loving Snippy and when Snippy would bite her she would slap him. We never got the other cats so Snippy and Snowball stayed friends.

Snippy has black eyes, yellow ears, white feet and yellow legs. He looks like he has leggings on. His hair is long and curly and his nose is long. He is a pretty puppy.

Snowball has three brown feet, a gray tail, a gray nose and ears and the rest is white. She looks as though she would melt if you were to touch her, her fur is so fluffy, and she keeps very clean and white.

Snippy will jump up and he looks so cute. We have another old dog and when he snaps and growls Snippy will run away and whine, for he is afraid of the other dog. He meets us when we come home from school and jumps and plays, for he is glad to see us. —Lucile.

A TRIP TO CALIFORNIA.

Dear Young Folks:—I have been reading your letters so long, but this is the first time I have ever written.

When I was five years old I went to California with my grandmother and grandfather. I had a fine trip. We went the northern route and saw some beautiful sights. They took me to Long Beach and I picked up little shells. When we were going through the Needles we saw about fifty Indians. They were selling beads and other things they had made. I bought one string of beads and still have them. We saw prairie dogs and coyotes and many other things.

—Mildred.

A FAITHFUL DOG.

Dear Young Folks:—One day my little cousin, Nellie, was playing in the garden when she saw a big yellow butterfly and she tried to catch it. It flew from bush to bush, she always following it. The butterfly flew into the woods and Nellie followed it.

There were many beautiful flowers in the woods and Nellie forgot about the butterfly and began picking flowers. She picked as many as she could carry and then wanted to go home. But she did not know which way to go. Everywhere were large trees and beautiful flowers. Nellie walked until she was tired, so she sat down under a tree and soon fell asleep.

Bellow, Nellie's dog, followed her and soon found her. He ran home and scratched at the door. Nellie's mother opened the door and let him in. He pulled at her dress and would not let it go. She thought there must be something the matter with Nellie, so she went with him and they soon reached the place where Nellie was sleeping. Her mother woke her and Nellie was very glad and told her mother about the butterfly. They went home and told Nellie's father about it. They thought Bellow was a very good dog. —Erna.

LITTLE TIMBER SQUIRRELS.

Dear Young Folks:—I am nine years old. I live on a farm and am going to tell you about our squirrels. There are a great many trees where I live and the squirrels think they are in the woods. They get in our corncrib every day, too, and when we are not looking they steal corn. There is an ear of corn in almost every tree.

We never shoot the squirrels. We put up a box for them and put corn in it. They will come and eat out of the box and when they get all they want they stand up on their hind legs and chatter as though they were thanking us for it. —Mamie.

HAS SIX HEALTHY, HAPPY BABIES.

To the Editor:—As I have a very healthy family I will send my baby's picture. Harold Duane, aged six months, has light hair and blue eyes and weighs twenty-five pounds.

He has had plenty of fresh air and sunshine and has never been fed anything but mother's milk and a drink of water every day.

I hope to hear from some more mothers who have fresh-air babies. I am the mother of six children, all well and happy. Mrs. John Manely.

HAROLD DUANE MANELY.

International Sunday School Lesson

Lesson for January 23, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE SPIRIT OF LIFE.

LESSON TEXT—Romans 8:12-30.

GOLDEN TEXT—As many as are led by the spirit of God, these are the sons of God.—Rom. 8:14.

The connection of this lesson with the others of the series is in the fact that this chapter is a panegyric regarding the spirit-filled life, the coming of which we have so recently studied. Read prayerfully in this connection Gal. 5:22, 26. We somehow feel that we ought to study this entire chapter rather than that portion assigned. The key to the whole is found in verse thirty-seven, "We are more than conquerors." If conquerors, how be more than conquerors? Very simple. Some victories leave the victor so exhausted that he cannot possess nor enjoy his victory; not so the spirit-filled Christian, for he is "more than conqueror."

Previously in this epistle the spirit is mentioned but once (5:5); in this chapter he is mentioned nineteen times. Over what is the spirit-filled man conqueror?

I. Over the Condemnation of Sin, v. 1. The spirit-filled Christian lives in another realm than that of the flesh (v. 9). The spirit removes us from the realm to that of the spirit, quickening us (i. e., making us alive who were dead in sins) to condemn sin in the flesh and enabling us to "walk not after the flesh, but after the spirit."

II. Conquerors Over the Power and Dominion of Sin, vv. 2-4. While we still have the body, yet it is our privilege, through the spirit's power at work within us, to put to death its deeds every day and each minute (Gal. 5:16, 22, 23). To live otherwise is to displease God (v. 8). Those who surrender their lives to the control of the indwelling spirit are "sons of God and, therefore, "free from the law of sin and death (v. 2), for the same spirit that "raised from the dead" (v. 11) not alone makes us sons but gives us the same power.

III. Conquerors Over Fear, v. 15. The righteousness of the law is fulfilled in us "who walk not after the flesh but after the spirit" (v. 4) and having received the "spirit of adoption" (i. e., being placed as sons) we cringe not before God in terror, nor call him a tyrant, or even ruler, but exclaim "Abba, my father." As "sons" we are spiritually minded and have "life and peace" (v. 6, Gal. 4:6).

IV. Conquerors Over Suffering, v. 18. We are joint heirs with Jesus "if so be we suffer with him." Our position and heirship in Christ involves our participation in his sufferings (Gal. 6:17, II Tim. 2:11, 12, Acts 14:22). What we often call afflictions are only discomforts and frequently the results of our own foolish carelessness. But as contrasted with his glory there is no comparison. Only eternity will enable us to comprehend what it means to be made perfect through suffering (Phil. 3:10, II Tim. 2:12, Heb. 5:8). If we are heirs of all God has and all that God is we are likewise an heir just as Christ is, and

to the extent that Christ is an heir and hence to his sufferings (we suffer with him) though we are even there more than conquerors, for like him we, too, shall rise triumphant "over all things."

V. Conquerors Over Vanity, v. 20. This glory is contrasted with the creation now subject to vanity, but which is in degradation by comparison. The creature (v. 21) (i. e. creation) was made subject not willingly, but by reason of him who subjected it in hope that the creation should yet be delivered from the bondage to the principles of death and decay into the glorious liberty, or the liberty of the glory, of the children of God.

VI. Conquerors Over Infirmities, v. 26. The believer's all-sufficiency and perfect security in the Lord Jesus. We may not have all we want, yet we have all we need (Phil. 4:19). This sufficiency is the privilege we possess in praying "according to the will of God"—we know not how to pray as we ought, but the spirit maketh intercession for us (v. 26); so also Christ, "who is at the right hand of God," intercedes for us (v. 34). The spirit knows the mind of God the father, teaches us how to pray and at times places a yearning in our hearts too deep for our own comprehension.

Even God must search the heart to know the mind of the spirit (v. 27) and in this God does "exceeding abundantly above all that we ask or think" (Eph. 3:20).

VII. Conquerors Over All Things, v. 28. The crowning privilege the spirit-filled life has is in knowing that all things work together for good and hence we are free from all possible anxiety of heart under any and all circumstances. Whatever comes to me is a part of his "all things" and, therefore, I should be grateful because the outcome will be good. We are not fore-ordained to salvation irrespective of what we may be or do, but we are fore-ordained as believers "to be conformed to the image of his Son" (v. 29). Thus those who become candidates are those elected.

HEPSEY BURKE.

(Continued from page 16.)

chuckled. Keeping her eyes on the horses as they trotted along at a smart pace over a road none too smooth for comfortable riding, she remarked casually:

"I suppose the Bishop told you what we wanted in the shape of a parson, didn't he?"

"Well, he hinted a few things."

"Yes; we're awful modest, like most country parishes that don't pay their rector more than enough to get his collars laundered. We want a man who can preach like the Archbishop of Canterbury, and call on everybody twice a week and know just when anyone is sick without bein' told a word about it. He's got to be an awful good mixer, to draw the young people like a porous plaster, and fill the pews. He must have lots of sociables and fairs and things to take the place of religion; and he must dress well and live like a gentleman on the salary of a book agent. But if he brings city ways along with him and makes us feel like hayseeds he won't be popular."

"That's a rather large contract!" Maxwell replied with a smile.

"Yes, but think what we're goin' to pay you, six hundred dollars a year, and you'll have to raise most of it yourself, just for the fun of it."

At this point the Junior Warden interrupted:

"Now, Hepsey, what's the use of upsettin' the young man at the start. He's——'

"Never mind, Jonathan. I'm tellin' the truth, anyway. You see," she continued, "most people think piety's at a low ebb unless we're gettin' up some kind of a holy show all the time, to bring the people together that wouldn't meet anywhere else if they saw each other first. Then when they've bought a chance on a pieced bed-quilt, or paid for chicken pie at a church supper, they go home feelin' real religious, believin' that if there's any obligation between them and heaven, it isn't on their side, anyway. Do you think you're goin' to fill the bill, Mr. Maxwell?"

"Well, I don't know," said Maxwell. "Of course, I might find myself possessed of talent for inventing new and original entertainments each week, but I'm afraid that you're a bit pessimistic, Mrs. Burke, aren't you?"

"No, I'm not. There's a mighty fine side to life in a country parish sometimes, where the right sort of a man is in charge. The people take him as one of their family, you know, and borrow eggs of his wife as easy as of their next door neighbor. But the young reverends expect too much of a country parish and break their hearts sometimes because they can't make us tough old critters all over while you wait. Poor things! I'm sorry for the average country parson, and a lot sorrier for his wife."

"Well, don't you worry about me; I'm well and strong and equal to anything, I imagine. I don't believe in taking life too seriously; it's bad for the nerves and digestion. It will be an entirely new experience for me, and I'm sure I shall find the people interesting."

"Yes, but what if they aren't your kind? I suppose you might find hippopotamuses interestin' for a while, but that's no reason you should like to live with 'em. Anyway, don't mind what people say. They ain't got nothin' to think, so they make up by talkin' about it, especially when it happens to be a new parson. We've been havin' odds and ends of parsons from the remnant counter now for six months or more; and that's enough to kill any parish. I believe that if the angel Gabriel should preach for us half the congregation would object to the cut of his wings, and the other half to the fit of his halo. We call for all virtues of heaven and expect to get 'em for seven-forty-nine."

"Well—I shall have to look to you and the Wardens to help me out," he said. "You must help me run things, until I know the ropes."

"Oh! Bascom will run things for you if you let him do the runnin'," she replied, cracking her whip. "You'll need to get popular first with him and his—then you'll have it easy."

Maxwell pondered these local words of wisdom and recalled the Bishop's warning that Bascom, the Senior Warden, had not made life easy for his predecessors, and his superior's exhortation to firmness and tact, to the end that he, Maxwell, should hold his own, while taking his Senior Warden along with him. The Senior Warden was evidently a power in the land.

They had driven about a mile and a half when the wagon turned off the road, and drew up by a house standing some distance back from it. Getting down, Mrs. Burke exclaimed:

"Welcome to Thunder Cliff, Mr. Maxwell. Thunder Cliff's the name of the place, you know. All the summer visitors in Durford have names for their houses, so I thought I'd call my place Thunder Cliff, just to be in style."

Jonathan Jackson, who had kept a discreet silence during Hepsey's pointers concerning his colleague, the Senior Warden, interjected:

"There ain't no cliff, Hepsey, and you know it. I always tell her, Mr. Maxwell, 'taint appropriate a bit."

"Jonathan, you ain't no Englishman, and there's no use pretendin' that you are. Some day when I have a couple of hours to myself I'll explain the whole matter to you. There isn't any cliff, and the house wants paintin' and looks like thunder. Isn't that reason enough to go on with? Now, Mr. Maxwell, you come in and make yourself perfectly at home."

(To be continued.)

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ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Address all orders to The Wisconsin Farmer, Madison, Wis.

7560 Ladies' Shirt Waist.—Cut in sizes 34 to 44 inches bust measure. This pretty waist has a square collar and three tucks at each side of the front. Long or short sleeves may be used. The girdle may be used or omitted. Collar, cuffs and girdle are of contrasting material.

7542 Ladies' Skirt.—Cut in sizes 22 to 30 inches waist measure. Serge, broadcloth or gabardine can be used to make this skirt. The skirt is cut in two gores and is perfectly plain. There is a small belt at the waistline in the back.

7280 Ladies' Shirt Waist.—Cut in sizes 34 to 48 inches bust measure. This waist has tucks running the full length of the center of both front and back. The fronts are also tucked at the shoulders and the outer side of the sleeve is also tucked, the upper end extending to the neck in raglan fashion.

7294 Girls' Dress.—Cut in sizes 6, 8, 10 and 12 years. In this pretty frock the closing runs diagonally from the center front of the neck down to the right side at the waistline, continuing straight down the skirt. The skirt has three gores and is plain at the belt.

7241 Children's Dress.—Cut in sizes 4, 6, 8 and 10 years. This pretty frock is made with a yoke which trims the back of the blouse at the top while the lower portion is gathered in both front and back. The neck is a little open with flat collar, which may be omitted.

7534 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. This simple frock is suitable for home or street wear. The closing is at the front and the three-gore skirt may have high or regulation waistline. Such materials as serge, cheviot and gabardine are liked for these dresses.

7284 Boys' Suit.—Cut in sizes 2, 4 and 6 years. In this suit the plain jacket has a straight vest in front and this may be cut off at the waistline. The neck is high and the sleeves long, finished with collar and cuffs. The trousers have a straight edge at the knee.

6833 Ladies' Apron.—Cut in one size. Linen, gingham, calico or percale can be used to make this practical apron. The apron has a bib in the front only and fastens with string ties in the back at the waistline.

7581 Girls' Middy Dress.—Cut in sizes 6, 8, 10, 12 and 14 years. White linen is used to make the blouse of this dress and dark blue serge is used for the skirt. The blouse is separate and the plaited skirt is attached to an underwaist. The sleeves may be long or short.

7565 Ladies' Apron—Cut in one size. Any of the pretty flowered wash materials can be used for this apron. The apron can be worn with or without a dress and slips on over the head. The short sleeves end just above the elbow.

Price of any of these patterns 10 cents each.

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THE AMERICAN WOMAN—favorite story and household paper, also a monthly and also a long-established and widely-known publication for the American woman.

THE LINCOLN PICTURE is a wonderful drawing by a genius. It is a perfect likeness of the Emancipator made with a single continuous line exquisitely done. It is decidedly a work of art and worthy of a place in any home. Below the picture itself is a fac-simile of the immortal Gettysburg speech as it was written. The drawing and fac-simile have been made with one single continuous line from center to circumference. Every home, every schoolroom, every club room, every place or point where people meet or gather, should have at least one of these wonderful drawings on its walls.

Picture mailed postpaid.

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Send communications and orders to

The Housewife

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WITH OUR ADVERTISERS.

1914 Seed Corn for Sale.

THE Dakota Improved Seed Corn Co., 27 Main St., Mitchell, S. D., has a limited supply of 1914 seed corn at special prices. See their advertisement on page 18 of this issue. Please mention this paper when you write.—Adv.

Northern-Grown Alfalfa Seed.

EVERY year there is more interest in alfalfa, clover and other grasses, which have proved so profitable on grain-belt farms. It is very important to get good seed and many experts agree that northern-grown seed is profitable. The Farmers' Seed & Nursery Company, 104 Third Avenue, Faribault, Minn., advertises fine northern-grown seed on page 17 of this issue. Write them for catalog and prices. Please mention this paper when you write.—Adv.

The "Hickory" Line.

THE Kelley-How-Thomson Company, Duluth, Minn., will be glad to send their free book on collars and harness to any reader of this paper who will write and ask for it, mentioning The Wisconsin Farmer in their letter. These people are makers of the famous Hickory brand, and most of our readers know the value of Hickory horse collars. There is probably a Hickory dealer in your neighborhood and you will see in his store a sign such as will be found in the Hickory advertisement on page 19. This dealer will be glad to show you the Hickory brand products. —Adv.

Upholstering for Automobiles.

A DEPANDABLE and serviceable upholstering for automobiles is Fabrikoid, made by the Du Pont Fabrikoid Company, Wilmington, Del. More than half of the 1916 model of automobiles are finished in Du Pont Fabrikoid. Fabrikoid is a standardized product which has met the severe tests of automobile use. Any reader of this paper may secure a sample by writing to the Du Pont Fabrikoid Company, Wilmington, Delaware, and asking for the same. Also ask for booklet No. 278, which tells more about Fabrikoid and its uses. See advertisement on page 15. Please mention this paper when you write.—Adv.

A Special Nursery Stock Offer.

KELLOGG'S NURSERY, Janesville, Wis., are making a special offer to introduce their well-known nursery stock. In this issue on page 18 they offer six apple trees for fifty cents, which is certainly an unusual offer on these hardy Wisconsin trees and one we believe our readers will appreciate. This nursery has been in Wisconsin for sixty-two years and are well known for their hardy trees and small-fruit plants. They have published a pamphlet containing a great deal of valuable information on the care of orchards and small fruits. In writing for it be sure to mention Wisconsin Farmer and address Kellogg's Nursery, Box 224, Janesville, Wis.—Adv.

Five Good Implements Discussed.

FIVE important products of the John Deere Company, Moline, Ill., are discussed this week in their advertisement on page 9. They are the John Deere corn planter, Van Brunt drill and seeder, John Deere spreader, John Deere disk harrow and the Dain system side rake. Each of these implements and the topic which each one naturally suggests are discussed in an educational way in booklets which are furnished free to any of our readers who will write to John Deere, Moline, Ill., and request them. There is a special booklet on "More and Better Corn," and another on "Bigger Crops from Better Seeds." In addition, there is the special John Deere spreader booklet and the free booklets describing the Van Brunt drills and seeders and the Dane system of air-curing hay. As before stated, any or all of these books may be secured without expense by writing and asking for them. We request that our readers who write mention this paper in their letter.—Adv.

Stubbs & Hyzer's Duroc Gilt Sale.

THE first Wisconsin sale of Duroc bred gilts of 1916 will be held January 31st by Stubbs & Hyzer, West Salem, Wis. This sale is one which our readers should not fail to attend. The outlook for breeders of pure-bred swine has never before been so good. The prospects for high pork prices for the coming year are very bright. There has also been a heavy slaughter of breeding stock this year, owing to the short corn crop. For these reasons there will be an unprecedented demand for breeding stock next fall and the breeders who are in a position to supply the demand will reap the benefits. The offering of Stubbs & Hyzer is largely of Knight the Col. breeding. This boar has probably sired more noted show boars than any other sire of the breed. There are also a number of gilts sired by Lee's Defender, grand champion at the 1914 Wisconsin State Fair. These sows and gilts are bred for spring litters to the boar, Lincoln Model, which won second at the 1915 Wisconsin State Fair and was declared by competent judges to be the equal of the senior champion boar. He is an excellent individual of Ohio Chief breeding. The sale will be held in the city of West Salem, so no driving will be necessary, which is a factor to consider in extremely cold weather. The sale pavilion is thoroughly comfortable, regardless of weather conditions. Catalogs, giving description and breeding of animals, is now ready and will be sent on application. Plan to attend this sale on Monday, January 31st, and be in a position to supply the demand for breeding stock next fall. See page 35. —Adv.

HEALTH COMFORT

Do away with the dangerous, unsightly, unsanitary outhouse. Enjoy the city comfort and convenience of a warm, odorless, sanitary indoor toilet. Protect your health. The

WOLVERINE Sanitary Closet

is a comfortable, permanent scientific substitute for the disease-breeding, water-polluting, foul outdoor privy. No water, sewer or plumbing. Endorsed by health officials. A cent a day operates it. Send for literature today.

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One of "Old Trusty's" Records.

WHEN an incubator will average 90 per cent hatches through twelve years of constant service it is what might be called "going some." That is the record reported by Bessie Warren, of Tyron, Neb., with an "Old Trusty" incubator, in the advertisement on page 28. The interesting 136-page "Old Trusty" book, telling of twenty years' experience in the building of incubators for 650,000 users, will be mailed you free if you will write today to H. M. Johnson Co., Clay Center, Neb., and mention their advertisement in this paper.—Adv.

Atwater's Duroc Sale.

L. F. ATWATER, Bangor, Wis., holds his annual sale of Duroc bred sows and gilts Tuesday, February 1st. The offering this year is in keeping with the usual high quality of Mr. Atwater's animals. They are of excellent breed type and well grown. They are of the same type that has won so consistenly in the big fairs the past several years and won the silver cup for this herd. Mr. Atwater is a discriminating judge of Durocs and by careful selection and mating of good animals of proven blood lines he has established and maintained a herd far above the average. The offering in this sale is practically of grand champion breeding. Of the forty-five spring gilts, two-thirds are either sired by or are out of daughters of Lee's Defender. He won grand champion honors at the 1914 Wisconsin State Fair. The balance of these gilts are sired by Corrector, Duchy Col. and Select Advancer and bred to Lee's Defender. The daughters and granddaughters of Lee's Defender are bred to Prince Illustrator, grand champion at the 1915 Wisconsin State Fair, and to Model King by High Model by Golden Model 2d. These blood lines will be recognized as second to none in the breed and by the many honors they have won in the show ring are proven to produce the most desirable type. The sale will be held in a comfortably heated, lighted, ventilated sale pavilion, which is comfortable under all weather conditions. Catalogs are now ready, giving pictures, descriptions and pedigrees. Plan to attend this sale in person, if possible, but if impossible make your selection from the catalog and send a mail bid to either the auctioneer, Col. T. E. Stickelman, Clarinda, Iowa, or H. S. Hoard, representative of The Wisconsin Farmer. See page 35.—Adv.

Farm surveys in the Lake Geneva district of Walworth county were started last fall by the United States Department of Agriculture and the Wisconsin College of Agriculture. This area is one of the best equipped farming sections in the state, as nearly every farm has a silo or two and is engaged in some form of animal husbandry under the most up-to-date methods.

Two prominent Wisconsin sheepmen, Arthur Broughton, Albany, and W. F. Renk, Sun Prairie, were recently re-elected members of the board of directors of the American Shropshire Registry Association and the American Hampshire Sheep Association, respectively.

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The Sunshine Safety Lamp Co., 827 Factory Bldg., Kansas City, Mo., has a new portable gasoline lamp which gives the most powerful home light in the world—a blessing to every home not equipped with gas or electricity. 300 Candle Power at one cent per night. This remarkable lamp has no wick and no chimney, is absolutely safe and gives such universal satisfaction they are sending it on Free Trial. They want one person in each locality to whom they can refer new customers. Take advantage of their free trial offer. Agents wanted. Write them today.—Adv.

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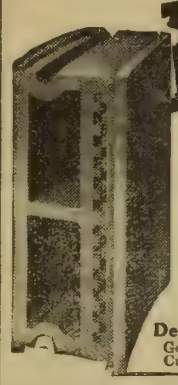

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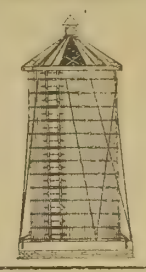

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ATTENDANTS — (caretakers of patients) at State Hospitals for Insane and Feeble Minded. Men and women. No written examinations. Positions open only to residents of Wisconsin. Address Wisconsin Civil Service Commission, Madison, Wisconsin, for application blanks and detailed information.

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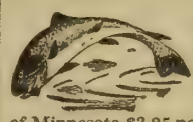

PIKE and PICKEREL packed in boxes can be had at the following prices: Herring, $3.50 per 100 lbs. Pickerel, $6.00 per 100 lbs. Pike, $9.00 per 100 lbs. Herring shipped in sacks inside of Minnesota $3.25 per 100 lbs. Price list sent on application. SEVERTSON BROS. FISH CO., 114 19th Ave. W., DULUTH, MINNESOTA.

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FOR SALE, excellent 200 acre dairy farm, Mukwonago, Wis., 86 miles north of Chicago on "Soo R.R.," and 25 miles west of Milwaukee, Wis., on electric line. Both roads run along side of farm. River borders south side, ½mi. to 2 dairy factories, new house and buildings, sold owing to death of Admr. Mukwonago Chief, Mukwonago, Wis.

POOR MAN'S CHANCE—$5 down, $5 monthly buys 40 acres productive land, near town some timber. Price $200. Write for list and literature. Address Box 425-H, Carthage, Missouri.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

STRAWBERRY plants, $1.65 per 1000. Truthful and valuable illustrated catalog free, worth $1.00. Mayer's Plant Nursery, Merrill, Mich.

FARMER AGENTS: Write for 1916 agency for Diddie-Blitzen Rods—best Lightning Rod Sold. L. F. Diddie Co., Marshfield, Wis.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Tempe Court, Minnea polis, Minnesota.

WANTED—to hear direct from owner of farm or unimproved land for sale. Address O. K. Hawley, Baldwin, Wisconsin.

VETERINARY

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Foot-and-Mouth Disease.

What animals are subject to foot-and-mouth disease?

Cattle and hogs are most susceptible to foot-and-mouth infection. Next in order of liability are sheep and goats, buffalo, American bison, camel, deer, chamois, llama, giraffe and antelope. Horses, dogs, cats and poultry have been victims of the disease. Man is also a rare victim.

Forage Poisoning.

What are the symptoms of forage poisoning?

The symptoms of forage poisoning vary greatly with the severity of the attack. In fatal attacks the first indication is a weak, staggering gait, total or partial inability to swallow solids or liquids, and impairment of the eyesight, twitching of the muscles and slight cramps may also be observed. As a rule the temperature is not elevated. These symptoms are soon followed by paralysis of the entire body, inability to stand and delirium, to be followed by a deep coma, which renders the animal quiet until he expires.

Eczema.

I have a calf about three weeks old which is all covered with scabs which break out every few days and fester. Can you tell me the reason? Do you think the barn is too warm?

The condition you describe indicates eczema. The treatment is often very difficult. You should examine the scabs carefully to detect the presence of lice, and if any be found your first course must be to destroy them. The sores may be treated by an application of white or blue ointment mixed with an equal part of fresh lard, and may be applied every second day, care being taken to prevent the calf from licking it off.

Paralysis.

I have a ten-year-old mare that had a stroke of paralysis in August. She seems well and hearty now but is easily excited and holds her head to one side and her neck is slightly crooked. Is there any danger of a second stroke, and how long would it be before you would expect the second stroke?

If this condition is the result of a mechanical injury to the spinal cord, from a broken bone or spinal hemorrage, the attack generally comes on gradually, although it may come on suddenly. When it is caused by agents in the blood the attacks may recur. It is impossible to foretell whether or not a second attack will occur or at what time to expect it if it should occur.

Thrush.

What is a sure cure for thrush for horse or mule?

There is no "sure cure" for thrush. Since the most common cause is uncleanliness and filth the first essential in the prevention or treatment of the condition is to render the stable or stall clean. The diseased and ragged portion of horn are to be pared away and the foot poulticed for a day or two with boiled turnips, to which may be added a few drops of carbolic acid. The cleft of the frog is then to be cleaned and well filled with dry calomel and the foot dressed with oakum and a rolled bandage. If the discharge is profuse the dressing should be changed daily, otherwise it may be left on two or three days.

Barking Trees.

My horses are barking my trees and eating the bark. They are cedar, elm and oak trees. They like the cedars best. These horses also are eating my barns, which are built of white pine and are new and painted. They are fed corn and oats and mixed clover and timothy hay and are turned out to grass or cornstalks and straw pile now when not working during the day. They get all the salt they want and are looking well.

As your horses are in good condition and your feeding does not seem at fault it must be something in the wood that they like, probably the tar present in the cedar and pine. It is hard to determine the exact cause. If they persist in this it would be advisable to protect the trees by wrapping with some suitable substance. If they gnaw the mangers you might try stripping the edges with iron stripping.

Absence of Heat Period.

I wish you would advise me what to do for a two-year-old heifer that will not come in heat. She is a good heifer, a Short-horn, well bred, very big and healthy.

This condition is usually a symptom of another local or general condition. An examination should be made to determine whether the heifer is normal or otherwise. A deformity, a plethoric condition or one of general debility are frequent causes of this trouble. You are advised to give two drams of aloes in conjunction with a tonic of iron, strychnine and arsenic.

Warts.

I wish you would advise me through your columns what to do for a heifer that has warts. They are very numerous around her bag and are getting large, seem to be uniting. They are also found all over her body. She will freshen in April. Have tried castor oil, but have had no success.

The warts can be removed with the scissors or can be twisted off with the fingers or ligatured by means of a rubber band or a horse hair. Their roots should then be cauterized with tincture of iron or lunar caustic. Acids should not be used in removing warts from the region of the eyes or mouth. You should give the heifer arsenic in the form of Fowler's solution, a tablespoonful and a half twice daily.

Animal Vices.

I have a good Scotch Collie dog that minds every word I say, but he always bites and pulls the cow's tail. He is about a year old and I have never been cruel to him in any way. When I scold him he is quiet, but when I start him after the cow again he does the same thing. I hate his doing it for it ruins the cow. Do you know of anything that will make him stop it?

The condition you describe is not a disease, but is a vice or bad habit, the result of lack of proper training. The dog no doubt thinks he is doing the very thing you want him to do. There is no set rule for overcoming such vices except careful, patient training until you have taught him what and how you desire him to act. It will require considerable effort, for you must first undo his present practice and then teach him all over again.

Lumpy Jaw.

I wish to ask a little information in regard to a Holstein heifer, seventeen months old. She has a swollen tongue and there seems to be much swelling under the jaw and she slobbers a little. She has been sick about two months. I called two veterinarians here to see her and they don't seem to understand the case. One thought she has slivers under the tongue, but there is nothing of the kind to be seen. They advised me to put mustard plaster on the swelling. I have done so and it hasn't broken yet. Her hide is terribly stiff. I would like to know if there is anything that could be done for her and if it is contagious.

The condition you describe is most probably actinomycosis or lumpy jaw. In case the bony structures of the jaw or head are not yet affected it may be possible to cure your heifer. Iodide of potassium should be administered in doses of one and one-half to two drams a day, dissolved in water and administered as a drench. The dose should vary with the effects produced. In the course of a week or ten days you should notice the skin becoming scurfy, weeping from the eyes, catarrh of the nose and loss of appetite. When these symptoms appear the medicine should be left off for a few days and afterwards repeated in the same dose. The milk should not be used during the treatment. The cure usually requires about three to six weeks. In case the above described symptoms do not appear it is evidence the animal is not susceptible to the curative effects of the drug and the treatment should then be abandoned. The animal can then be sold subject to inspection. The disease is not directly transmitted from one animal to another, but it is better practice to keep it from the other animals on the premises, especially after the tumor is discharging pus.

Montana, at the Panama-Pacific Exposition, won more prizes than any other state or country in the world, receiving 513 medals.

Montana Leads the World in Quality and Quantity Per Acre of Her Farm Products

In open competition with every state and nation in the world exhibiting at the Panama-Pacific Exposition at San Francisco, Montana won the grand prize for cereals; 9 medals of honor on wheat, oats, barley, flax, grains and general agricultural products; 73 gold medals, 236 silver medals, 195 bronze medals and 100 honorable mentions.

There are millions of acres of land just as fertile as the land which grew the prize-winning crops to be had cheaply. Much of this land is on and directly tributary to the lines of the

Chicago, Milwaukee & St. Paul Ry.

Send for literature. Maps and full and accurate data on Montana can be secured from

GEO. B. HAYNES, General Passenger Agent, CHICAGO — H. F. HUNTER, Gen'l Agent, 613 Railway Exchange

FARMING IN VILAS COUNTY.

(Continued from page 28.)

maintenance of good grade herds. Every farmer of every community should have a pedigree bull. The large farms can afford to breed such animals for distribution around the countryside. The amateur farmers with full-blood herds could perform a public benefaction if (as has been done by some) they were to give their surplus stock of bull calves (salable when young for only trifling sums) to selected farmers in their county who would agree to keep them for a reasonable term.

It is therefore good news whenever such a farmer comes into a community, and everyone should welcome the establishment in Vilas county by Mr. Bacchus, of Chicago, of a herd of pure-bred Guernseys. Mr. Bacchus is located on Lake Contest and Big St. Germain, and it is said he intends starting next year with 100 head of Guernseys.

The farmer needs the banker. The banker can vitally aid in the progress of dairy farming in this section. The title to cattle approved by experts and bought by money advanced by the bank can be retained by the bank until the cattle are paid for. In this way many a poor farmer can start a dairy herd. Local bankers must awake to the need and to this occasion.

Success will come as soon as the right men begin to take hold. Some capital or bank backing is needed, but the great thing is to have the start (both in dairy farming and in running creameries) made by the men who understand the conditions and who know how. Past failures have been due to the men who didn't know how.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Pure Water CHEAPENS FEEDING

—helps fatten your stock —keeps them healthy and increases flow of milk from your cows. With the Milwaukee Air PowerWaterSystem you can have an unfailing supply of pure, fresh water "direct from the well" anywhere about the house or barn, without the use of a storage tank. Write for illustrated catalog and price list today.

MILWAUKEE AIR POWER PUMP CO., 805 Third Street, Milwaukee, Wis.

Farmers or Farmers' Sons

Great Money Making Opportunity

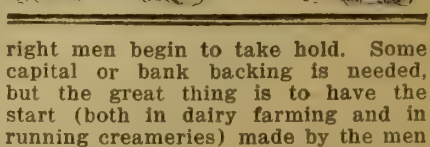
Sell Lange's Extracts, Spices, Toilet Articles, Teas, Coffees, Remedies and Veterinary Specialties, direct from wagon to home. Long-established, well-known big line, fine profits. Steady work in a business all your own. You furnish horse or team, we supply rig on easy terms. Previous experience unnecessary—we train you in salesmanship. Make big money. Our contract beats all others. Exclusive territory near your home. Write us quick.

E. A. LANGE, CO., Dept. 3, DePere, Wis.

FORD JOKE BOOK

All the latest and best funny jokes, and stories on the FORD automobile. Hundreds of them and all good ones. Also JITNEY jokes, Moving Picture, and Stage jokes. Laugh till you shake. A neat colored covered book by mail for only TEN CENTS.

PIKE PUB. CO. BOX 324 SO. NORWALK, CONN.



Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

J. C. Hendricks' Poland China Sale.

ON Wednesday, February 9, 1916, J. C. Hendricks, Hazel Green, Wis., will hold a sale of big-type Poland China sows and gilts at Hazel Green, Wis. The writer has just visited the herd and inspected the offering. This is one of the best lot of animals the writer has ever seen, both from the standpoint of type and size combined with quality. The offering consists of thirty-five spring gilts and five yearling and proven sows. The spring gilts at the present time range from 325 to 400 pounds and by sale date several of them will weigh 425 or over. The five older sows, although having had fall litters will weigh from 600 to 700 pounds. Although of exceptionally large size, and carrying seven to eight inch bone, they are not coarse nor rough. On the contrary they have short-wide heads, long, wide backs, deep sides and thick hams. They are not the refined, dainty type, but represent the best possible combination to be obtained. They have been produced by the careful mating of well-selected animals of proven blood lines. The aged sows are daughters of such boars as Gritters' famous A Wonder, Peter Mouw's Big Bone, Big Bug, which weighed 1,000 pounds at thirty months old, Wisconsin Giant, which won first at the Interstate Fair and Big leader by Giant Leader. The spring gilts are daughters of Repeater High Wonder, Black Jumbo, H.'s Jumbo and Smooth Wonder. Repeater is an exceptionally fine boar weighing 850 pounds at two years old. He is a son of Orange Big Bone and out of the sow, Orange Lady by Longfellow 7th. High Wonder is a son of Caverley's $600 boar, Long Wonder 2d. Black Wonder is a 1,000-pound boar by Heavy Bone, Smooth Wonder is by Wonderful by A Wonder. On December 30th Mr. Hendricks weighed every gilt and sow going into the sale and the following are some of the weights at that time: Five gilts from Big Daisy and sired by Smooth Wonder averaged 340 pounds. Four from Merry Miller sired by Repeater averaged 320 pounds; five from Wisconsin Giant sired by High Wonder averaged 330 pounds. Mr. Hendricks is issuing a very interesting catalog which gives the weight of each sow and gilt for December 30, 1915. These gilts are bred for spring litters to Repeater, High Wonder, Smooth Price, Northside Wonder and Oakland's Equal Jr. Smooth Price at twelve months of age weighed 550 pounds. He is an excellent individual of exceptional size, with a smooth, deep Body and ten inch bone. Northside Wonder is by Rood's Wonder by Fesenmeyer's noted A Wonder, and out of Orange Gem by J. O. James' noted boar, Big Orange. Oakland's Equal Jr. is by Irwin's $1,000 boar, Oakland Equal. Such lines of breeding will be recognized by our readers as the ones which have made the big-type Polands the leaders in the field. The sale will be held on the farm in a well-heated, lighted and seated sale pavilion. Railroad service has recently been inaugurated which makes it very convenient to reach Hazel Green from all points in Wisconsin, Illinois, Iowa and Minnesota. Arrangements have been made to meet those that come direct from the sale of Wm. Smiley & Son the day previous. Instructions for reaching Hazel Green conveniently from all points are given in the catalog. Send for a catalog and look it over carefully, plan to attend the sale if possible. However, if impossible to attend, make your selections from the catalog and send a mail bid and dscription of the type of animal you want either to Colonel Cottingham or to H. S. Hoard, representative of The Wisconsin Farmer. Mr. Hendricks states that all animals bought on mail bids may be returned if not satisfactory. See page 37.—Adv.

Edgewood Farms, Inc.

AT THE Edgewood and Lake Mills Holstein sales last May the Edgewood Farms purchased the largest number of the highest class females, including the highest priced females at both sales. These cows and heifers were bred to very high-class bulls. Most of the females of milking age had creditable A. R. O. records and those that have freshened since have been tested and have made as high as eighteen pounds in two-year-old form. Edgewood Farms products consist of Kieckhefers certified milk which bears an enviable reputation in the cities of Milwaukee and Chicago, also Edgewood Holsteins which come from an absolutely clean herd, regularly tested by the United States government. Note the advertisement on page 38 in which Edgewood Farms are offering some Holstein bulls for sale. Write for their pedigrees and prices.—Adv.

New York Holstein Sale.

HOLSTEIN breeders wanting the very tops will be interested in the big New York breeders' sale at Syracuse, N. Y., February 9th and 10th. Among the attractions are Korndyke Pontiac Pet and five of his daughters. This pull was sired by Pontiac Korndyke, the sire of eleven thirty-pound cows, and his dam, Pontiac Pet, has a record of 37.68 pounds of butter in seven days, which was the world's record at the time of making. There are numerous other bulls in this offering that are from high producing ancestry, and included are daughters of King Korndyke Sadie Vale, King Hengerveld Segis, Tidy Abbekerk Prince, with seven thirty-pound daughters to his credit in six months, Spring Farm King Pontiac 6th, the futurity sire and others. Catalog for this sale can be secured by addressing Holstein Sales Co., Managers, Elgin, Ill., as per the advertisement on page 36. Kindly mention The Wisconsin Farmer when writing.—Adv.

Smiley's Poland China Sale.

SMILEY'S annual sale of Poland China bred gilts will be held Tuesday, February 8th, at Albany, Wis. This herd of swine needs no introduction to the readers of The Wisconsin Farmer, for it is well known to our readers, both through the advertising which has been carried in our columns and through the many prizes they have won at the Wisconsin State Fair. The sale this year consists of forty-five head of spring gilts and four head of yearling and mature sows. The gilts are daughters of the splendid herd boars which have been in service for the past year, such as Major Hadley, Monarch, Wisconsin Jumbo 2d, Keefer's King and Orange Price. Major Hadley is well known to Poland China breeders. He has been a consistent prize winner himself and his offspring have won creditable honors wherever shown. At the 1915 Wisconsin State Fair his get won both the blue ribbons on get of sire and produce of sow. Monarch is a grandson of Major Hadley and was second-prize senior yearling at the 1915 Wisconsin State Fair. He is an excellent individual with heavy bone and a strong, arched back. Wisconsin Jumbo 2d is a son of the $1,500 boar, Longfellow Jr., and out of Miss Mouw, an 800-pound daughter of Big Jumbo. He is a strong, vigorous fellow with eleven-inch bone. Keefer's King is a well-bred boar, a grandson of Gritters' famous boar, A Wonder. His litter brother sold for $440 in public sale. He has a good back, wide and even, with very heavy hams. Orange Price is a line-bred son of Miller's Chief Price and his dam is by Miller's Big Orange, making his a richly bred animal. He is a big fellow, a very long and smooth-bodied, heavy-boned animal and a good sire. Oakland's Giant is a son of the $1,000 boar, Oakland's Equal. The dams of these gilts are mostly mature animals weighing 700 to 800 pounds. They are the sows that have produced the show animals for the Smiley prize-winning herd and many of them are prize winners themselves. The gilts and sows have been bred for March and April litters to the above boars and to Major Miller and Big Hadley, Mouw's Wonder 3d, Big Bone Jumbo. Major Miller won first at the 1915 Wisconsin State Fair. He also headed the herd that won second and the herd that won first as get of sire by Major Hadley. Big Hadley is by Big Top, a prize-winning boar, and out of a daughter of Jumbo Hadley, grand champion boar at the 1915 Wisconsin State Fair. Mouw's Wonder 3d is a grandson of Smooth Wonder. Big Bone is by Big Jumbo and out of Wonder Girl, a granddaughter of both Big Bone and Long Wonder 2d. From the above breeding it will be seen that the best of proven lines of blood are represented in these animals. An instructive and interesting catalog is now ready, giving pictures, description and pedigrees. Send for it at once and look it over. When writing kindly mention The Wisconsin Farmer. See page 37.—Adv.

Dunham's Percherons.

WHEREVER the draft horse exists the name of Dunham is a household word. For fifty years the Dunham Percherons have stood in the front row. The late M. W. Dunham pioneered the draft horse field and brought to the country the best representatives of the great French draft horse. He established a reputation for broad gauge business methods, honest dealing and high-class horses that is being fully maintained by the present management, which is under the active direction of W. S. Dunham. At this time, as always there is to be found in the stable at Wayne, a lot of outstanding horses, the rugged, quality kind, good ages, solid colors, that will be sold worth the money and on very satisfactory terms. It hardly seems necessary for any commendation of Dunham's horses or Dunham's business methods at our hands. Both are firmly established in the favor of the buying public and both can be depended upon to fully meet any demand that may be made upon them. A handsomely illustrated catalog will be sent to any address upon application to Dunhams, Wayne, Ill. Kindly mention this paper when you write. The advertisement appears on page 39.—Adv.

Harvey Little's Short-horns.

SOME choicely bred yearling Short-horn bulls of heavy milking strains are advertised for sale on page 38 by Harvey Little, Evansville, Wis. This herd has been established over forty years and a fine lot of cattle have been developed. Milk records have been kept for a great many years and cows producing from 10,000 to 11,000 pounds of milk per year are usual. Many of the heifers with first calf have produced 8,000 pounds of milk. The majority of the females in the herd at the present time are daughters of Demonstrator 3d and Roan Clay. Demonstrator 3d was an excepitonally fine animal individually and in breeding. He was sired by Young Fellows 121660 and out of Mason Duchess 15th by Morning Star. Roan Clay was sired by Demonstrator 3d and out of Janesville Rose 12th by Gifford Clay. Although the milking ability of the cows has always been kept firmly in mind, good size, constitution and type have not been negelcted and the young bulls advertised for sale show the result of this careful breeding. When writing kindly mention The Wisconsin Farmer. —Adv.

STUBBS & HYZER'S SALE

BRED DUROC GILTS AND SOWS

WEST SALEM, WISCONSIN

MONDAY, JAN. 31, '16

50 BRED GILTS AND SOWS sired by **King the Cols.**, the sire of more prize winners than any other sire of the breed; **King the Cols. 2d,** a son of King the Cols.; **Lee's Defender,** grand champion at the 1914 Wisconsin State Fair. These are bred for March and April farrow to **Lincoln's Model,** that won second at the 1915 Wisconsin State Fair. He is a richly bred Ohio Chief strain boar. Sale held in the city. No driving. Send for catalog. I. E. Stickelman, auctioneer. H. S. Hoard will represent The Wisconsin Farmer.

STUBBS & HYZER -:- **WEST SALEM, WIS.**

L. F. ATWATER'S GREAT DUROC

BRED SOW SALE

BANGOR, WIS., FEBRUARY 1, 1916

47 HEAD OF CHAMPIONSHIP CALIBER AND BREEDING

30 GILTS OUT OF BLUE RIBBON SOWS

These are sired by the great Lee's Defender, and their dams are the sows I won my ribbons on at the state fairs this last summer.

10 GILTS OUT OF LEE'S DEFENDER SOWS

Their sire is Select Advancer, he by Chief Select, a full brother to Cherry Chief. Here is breeding unexcelled anywhere.

5 GILTS BY CORRECTOR

He by Sensation Wonder and out of a Golden Model 2nd dam. These five are bred to Lee's Defender; they are sure grand champion stuff, as Lee's Defender and Corrector were twice awarded the purple ribbons.

2 GREAT FALL SOWS

Sired by Lee's Defender; their dam a full sister to the sow that won three grand championships at the big fairs in 1915. These two sows themselves were first and second and trophy winners at two of the big shows in 1915.

Remember, two-thirds of this offering bred to farrow in March. I. E. Stickelman, Auctioneer. H. S. Hoard, Wisconsin Farmer field man. Send for my Catalog today.

L. F. ATWATER **BANGOR, WISCONSIN**

Madson's Big Poland China Sale.

FORTY big, cholera-immune Poland China bred sows and gilts will be sold at public auction on Friday, February 11th, by M. Madson & Sons, Madison, Wis. The Madson herd of Poland Chinas is one of the best in the state. Their high quality and type is shown by the fact that they have been among the heaviest winners at the Wisconsin State Fair for the past five years. By careful breeding they have developed a big, growthy type of hog that carries more than usual amount of quality. Although of big size, they carry long, wide backs, deep sides, deep, thick hams, with ample bone to carry their weight and keep them well up on their toes. They are also firm believers in vaccination against cholera, having used it successfully for several years. The entire herd is immune again cholera, which is a factor of much importance to buyers. The offering this year consists of thirty spring gilts and ten fall, yearling and proven sows. The spring gilts are daughters of Correct I Am, a big-type boar of excellent quality and type. He won junior championship honors at the 1914 Illinois and Minnesota State Fairs. His sire was Correct I Know, grand champion at the 1915 South Dakota State Fair, and his dam, Mammoth Maid 2d, was the dam of the prize-winning herd in 1914-1915 Minnesota State Fairs. The fall gilts are daughters of Royal Model and Badger Perfection, that sired the grand champion sow in 1913. These sows and gilts are bred for March and April litters to Triumph, an outstanding son of Hidestretcher, grand champion at the 1915 Wisconsin and Illinois State Fairs. The dams of the sows offered for sale are mostly mature sows of excellent type, with deep, wide bodies, thick, well-let-down hams and heavy bone, many of them being prize winners themselves. The gilts are big and growthy, many of them at sale time will weigh close to 400 pounds. The sale will be held in Dr. J. P. West's veterinary barn, 753 East Washington Avenue, Madison, Wis., five blocks from the Chicago & Northwestern station and east-side Chicago, Milwaukee & St. Paul station. The barns are comfortably heated, lighted and ventilated. As the sale will be held in the city, it will not be necessary to drive out in the cold and snow in case of bad weather. Everything will be comfortable regardless of weather conditions. Friday evening after the sale the Wisconsin Poland China breeders will hold their annual business meeting at the College of Agriculture. The ten-day farmers' course will also be in session. Every Poland China breeder or prospectve breeder in Wisconsin and adjoining territory should plan to be in Madison at this sale and attend the meeting in the evening. Catalogs of the sale, containing pedigrees and descriptions, will be sent on application. When writing kindly mention The Wisconsin Farmer. See page 37.—Adv.

Bernd's Short-horns and Poland Chinas.

ONE of the best herds of Short-horn cattle and Poland Chinas in upper Wisconsin is that of W. J. Bernd, New Richmond, Wis. He is a careful, discriminating judge of live stock and has developed excellent herds. That his herds rank with the first in the state is shown by the consistent way in which they have won at the leading fairs in this territory. By careful mating of good animals and persistently following up with good feeding he has developed herds above the average in quality and type. At the Beaver Dam Fair which is conceded to be the greatest county fair in the United States, Mr. Bernd's Poland Chinas won every first but one and first and second on all sows a year and under in again with six herds showing. The majority of the young animals in the herd which are offered for sale were sired by King Jumbo, that won first as a yearling. He is a son of the great boar, King Jumbo that weighs 1,106 pounds and is the heaviest boar in Iowa. His dam is

JOHN MANN
NEOSHA, WISCONSIN

BREEDER of registered and high-grade Holsteins. Heifers, springers and cows for sale.

A. G. HARTER
RUBICON, WISCONSIN
BREEDER OF REGISTERED
HOLSTEIN CATTLE

Bred for high production ability, good type and along popular blood lines.

John Gutschenritter & Sons
Neosha, Wisconsin

BREEDERS of registered and high-grade Holsteins that are well marked and of good breeding. A large herd to select from. A few females for sale at the present time.

WRITE US YOUR WANTS

YOUNG HOLSTEIN BULL

SIRED by Canary Frisby Fobes Homestead, a son of the 35 pound bull, Canary Paul Fobes Homestead, and the 22.81 pound cow, Sadie Frisby Homestead, a daughter of Homestead Jr. De Kol. Send for extended pedigree and price.

Henry Hosterman Hartford, Wisconsin

PLEASANT VIEW STOCK FARM
Bulls From 2 Weeks to 9 Months

SIRED by the 22.81 pound bull, Canary Frisby Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead. The dams are high producing cows. One of them averaged 74 pounds of milk per day for 30 days. These bulls are ⅞ white, are well grown and have straight rumps. Address
Geo. C. Eifert **Hartford, Wis.**

BADGER STOCK FARMS

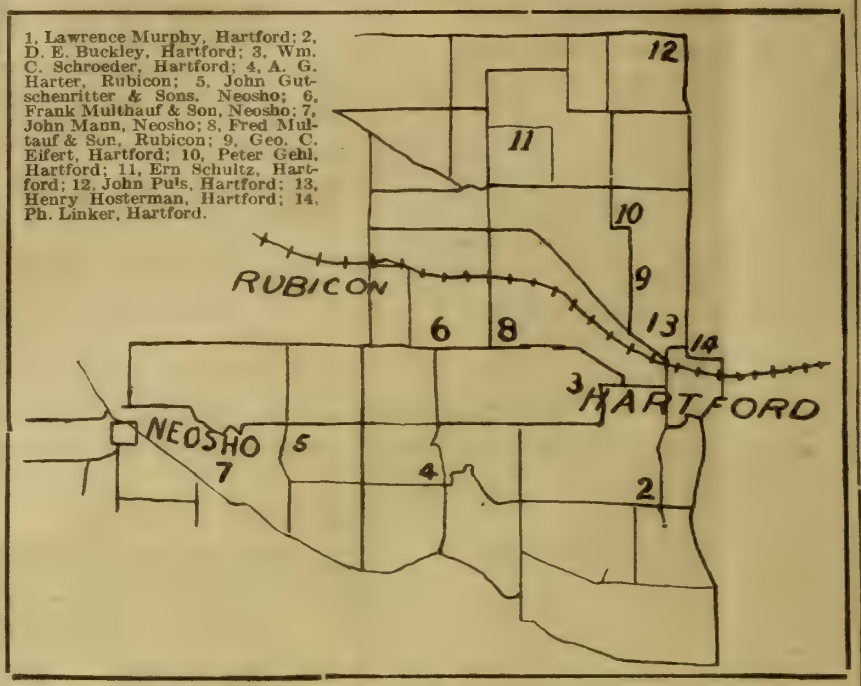
OFFER choice selections from the world's famous Colantha Changeling Lad, whose dam has 30.73 as a junior 4 year old, and his 4 nearest dams average over 30 pounds. Over 60 head to select from. Lawrence F. Murphy, Hartford, Wis.

HOLSTEIN COWS

OF Johanna, Korndyke and Pontiac and butter records. Cows and heifers Korndyke Veeman, whose dam has a sire's dam 41.06 lbs. and his three near and for 30 days 148.09 lbs. butter. Write come and see us.
WISCONSIN STAR STOCK FARMS

HEIFERS AND BULLS

breeding backed by large A. R. O. milk are bred to King Artis Pontiac and King record of 33.13 lbs. butter in 7 days, est dams average for 7 days 37.13 lbs. for particulars and price or better yet
E. M. SCHULTZ. HARTFORD, WIS.



Johanna Colantha Sarcastic Lad

BLOOD LINES THAT PRODUCE LARGE MILK
and butter records make up the entire pedigree of the
28.23-LB. YEARLING BULL

I am offering for sale. His sire has 14 A. R. O. daughters, 5 of which as two year olds average 1,641 pounds of milk and 658 pounds of butter in a year. His dam has a 28.23-lb. record and has two sisters with records over 30 pounds each. Other bulls from A. R. O. dams from $90.00 up.
A few Berkshire fall boars for sale.
JOHN PULS - - - **HARTFORD, WISCONSIN**

Yearling Holstein Heifers

AND bulls fit for service sired by Rag Apple Pontiac Polkadot, a son of the $6,800 bull, King Segis Pontiac Polkadot. Address
Ph. Linker **Hartford, Wis.**

REGISTERED
Holstein Bull Calves

Sired by the 30.62-pound bull,
CLEVELAND JOHANNA SIR PIEBE
Address
Wm. C. Schroeder **Hartford Wisconsin**

HOLSTEINS FOR SALE

I HAVE a number of choice Holstein bulls that are ready for service. Also bull and heifer calves, also some choice yearling heifers of the same breeding. These cattle are right in color, size and milking qualities.
D. E. Buckley **Hartford, Wis.**

P. L. GEHL'S FARM

TWO fine bulls, born September 12th and September 15, 1915. Sire is a son of King Segis Pontiac Polkadot, one of the greatest sires living. Their dams are Molly Carema Melchior 2d 260244 and Novelty Belle Ormsby 229160. These bulls are large, thrifty youngsters. Straight and long bodied, handsomely marked. Write for prices.
P. L. Gehl **Hartford, Wis.**

REGISTERED AND HIGH-GRADE
HOLSTEINS

WE have a herd of over 50 head (30 registered, 20 well-marked high grades). We can furnish males and females of all ages. Write us your wants. Address
Frank Multhauf & Son **Neosha, Wis.**

REGISTERED AND HIGH-GRADE HOLSTEINS

OF choice breeding, well marked, good type and high production ability. When in need of Holsteins write us. Address
Fred Multhauf & Son **Rubicon, Wis.**

Homestead Farm Guernseys

TEN bulls, grandsons of Governor of the Chien; from 1 to 15 months; mostly from A.R.O. cows with records up to 566 lbs. fat. Prices reasonable.
W. G. Jamison & Sons, Appleton, Wisconsin

Queen of All by Giant King, is heavy in Peter Mouw breeding, tracing to Chief Price, Long King and Long Hadley. Mr. Bernd is offering sixty yearling and spring gilts for sale and has a number of excellent young boars. The fall yearling gilts are mostly bred for March and April farrow. Some of the spring gilts are already bred, but others will be sold open or bred for April and May farrow. The sows are bred to Big Wonder, first-prize under six months boar at the 1915 Minnesota State Fair with twenty-eight in the ring. He is sired by Smooth Wonder bred by Peter Mouw and out of Big Mollie bred by Peter Mouw. He is backed by Peter Mouw breeding for several generations. These gilts are, therefore, valuable not only for themselves, but also on account of the litters which they carry. In Short-horn cattle Mr. Bernd is offering twenty-five registered cows and heifers ranging from six months old up to mature cows, and ten fine yearling bulls. These are of Scotch and Bates breeding of heavy milk producing strains. Mr. Bernd raises the large type of Short-horns, showing one cow at the fairs that weighed 2,040 pounds. The sire of the bulls and heifers offered for sale were sired by Highland Sultan, that won third at the International. He is a son of the $1,000 bull, Orange Sultan by Whitehall Sultan. Quite a number of these bulls and heifers are out of daughters of Rosebud Champion, that won second at the International in 1908 and weighed 2,400 pounds. Some are out of Bates bred cows that are going at the rate of 8,000 to 9,000 pounds of milk a year with ordinary herd care and pasture feeding. Mr. Bernd can supply a fine lot of breeding stock in either Polands or Short-horns and we recommend our readers to get in correspondence with him whenever in need of breeding stock. See this page.—Adv.

E. W. Hendricks' Poland China Sale.

THE third sale in the southern Wisconsin Poland China sale circuit is that of E. W. Hendricks, Hazel Green, Wis., to be held Thursday, February 10, 1916. The offering in this sale consists of twenty-seven spring gilts, nine fall yearling gilts and three proven sows. These are exceptionally good individuals of size, combined with quality. The spring gilts are daugthers of Peerless Wonder, Black Jumbo and Great Leader. Peerless Wonder is a son of Fesenmeyer's noted boar, A Wonder, whose reputation as a breeding sire is known to all big-type breeders. His dam is Queen Giantess 4th of the noted Giantess family. Black Jumbo is one of the largest and best sires in the corn belt. He is a Mammoth fellow weighing 1,100 pounds in show condition and only three years old. Although exceptionally large, he is not coarse and full of deep wrinkles. He carries full eleven-inch bone, has a strong back and is well up on his toes. He was sired by Heavy Bone by Big Bug by Big Bone. His dam is Big Molly by Chief Nelson by Peter Mouw's noted boar, Chief Price. Great Leader is by Tecumseh Leader the noted boar of E. A. Fraser that weighed 1,055 pounds at twenty-nine months of age. His dam is Miss Nelson Prospect 2d by Jumbo Big Prospect, John B. Lawson's noted sire. Five of the fall gilts are daughters of Oakland's Equal, for which J. B. Irwin paid $1,000. Five fall gilts and four tried sows are by Big Jumbo whose breeding is given above. Three proven sows are by Giant Big Bug by J. C. Big Bug by Big Bone. Two of these sows are out of daughters of Fesenmeyer's noted boar, A Wonder. These gilts are bred for spring litters to Big Oakland, a son of $1,000 Oakland Equal and out of an A Wonder dam. Some are bred to Long Joe by Big Special and out of a daughter of Fesenmeyer's noted boar, Big Joe. Some are bred to R.'s Wonder by Rood's A Wonder and out of a daughter of the $1,500 boar, Longfellow Jr. It will be seen that these gilts and sows are not only well bred themselves, but they carry litters that are very valuable. Mr. Hendricks is a discriminating judge of good Poland Chinas. By careful selection and mating of good individuals of proven blood lines, he has developed a herd far above the average, and our readers will be well repaid by attending this sale. Catalogs giving description, breeding, etc., has been issued and will be sent on request. Send for a catalog and look it over carefully. See page 37.—Adv.

Frank Morley's Short-horns.

ONE of the young bulls advertised for sale on page 38 by Frank Morley, Baraboo, Wis., is out of the cow, Sapphire Jewel 139388. This young bull is ten months old, is well grown, of good type and white in color. His dam is a cow of large size, smooth, of pleasing conformation and a good milker and a good feeder, a typical farmer's cow of the "double-deck kind." She was sired by Ardlethen Sapphire 308301 and out of Lioness 58255 by Young Abbotsburn 3d 226360, one of the noted bulls of his time. This young bull is fit to head a pure-bred herd of merit. For further information write to the above address.—Adv.

Butler Tank Heaters Easily Regulated.

BUTLER'S welded tank heaters keep water at just the right temperature for live stock throughout the coldest winter weather. They are easy to regulate and will keep fire with any kind of fuel from fifteen to twenty-four hours. The ashes can be removed without disturbing the fire. For descriptive pamphlet write to Butler Mfg. Co., 927, Sixth Ave., S. E., Minneapolis, Minn., and kindly mention their advertisement on page 12.—Adv.

FUTURITY classes for senior and junior calves at Iowa State Fair, American Royal, Kansas City, and International Live Stock Exposition, Chicago, are announced for 1916. These classes are endowed with liberal prize money. Entry blanks will be furnished to all who entered last year without application in time for entries to be made, but will be pleased to hear from new intending exhibitors. Address American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill. See page 38.—Adv.

THE CREME-DE-LA-CREME . . . **HOLSTEIN BREEDING**
Sale pavilion, Syracuse, N. Y., Feb. 9 and 10
New York State Breeders' Sale

AMONG the chief attractions are: Korndyke Pontiac Pet and 5 of his daughters. His sire: Pontiac Korndyke, sire of eleven 30-lb. cows. His dam: Pontiac Pet 37.68 lb. butter in seven days. The World's Record at time of making. Many other bulls of splendid breeding. Daughters of King Korndyke Sadie Vale. His daughters, age considered, exceed in production the daughters of any other sire. Daughters of King Hengerveld Segis, he by King Hengerveld from a 30-lb. daughter of King Segis. Daughters of Tidy Abbekerk Prince, seven 30-lb. daughters in seven months. A whole bunch of heifers sired by a son of the 38-lb. cow, Pontiac Lady Korndyke, two of whose sons brought $37,500 in the Dollar Sale. Daughters of Spring Farm King Pontiac 6th, the futurity sire. And others that will surely please you and prove money-makers. Write at once for catalog, mentioning The Wisconsin Farmer.

E. M. Stanton, Sec'y. Fayetteville, N. Y.
Holstein Sales Co., Sale Mgrs. Elgin, Illinois.

TOO LATE TO CLASSIFY.

BIG-TYPE POLAND CHINAS

SPRING GILTS. Some now bred for March and April litters. Others will be bred for April and May litters or will be sold open as desired. There are daughters of **King Jumbo** by Long Jumbo, that weigh 1106 pounds. **Fall Yearling Gilts,** bred for spring litters to **Big Wonder,** first prize under six months boar at 1915 Minnesota State Fair. **Some Fine Yearlings and Spring Boars** that will do you a lot of good. **SHORT-HORNS. 10 Fine Yearling Bulls,**—roans, red and whites, sired by **Highland Sultan,** a grandson of Whitehall Sultan. **25 Cows and Heifers** from six months old and up. These are of Scotch and Bates breeding. Most of them are of heavy milk producing strains. If you want Short-horns of big size you can get them here. My Short-horns won all first prizes but one at the 1915 Beaver Dam Fair against heavy competition.
W. J. BERND - - - **NEW RICHMOND, WISCONSIN**

SALE DATES.

All Breeds of Draft Horses.
Jan. 25-26-27-28, Breeders' Sale, Bloomington, Ill., C. W. Hurt, Mgr.

Poland China Swine.
Feb. 8, Wm. Smiley & Son, Albany, Wis.
Feb. 9, J. C. Hendricks, Hazel Green, Wis.
Feb. 10, E. W. Hendricks, Hazel Green, Wis.
Feb. 11, M. Madson & Sons, Madison, Wis.

Hampshire Swine.
Mar. 8, R. L. Currie, Viola, Wis.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY
Study at home. Thore, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. **The National Auctioneering School of America,** Dept. 103 Lincoln, Nebr., U. S. A.

HAMPSHIRE SWINE.

LAIRD'S HAMPSHIRE SWINE
CAN furnish boars and gilts not related, of all ages from sucking pigs to yearlings; 1915 spring and fall pigs sired by Laird's Rexall and Brooks' Choice, junior champion at the 1913 International. Let me supply your wants. Farmers' prices and show quality. A. M. Laird, Prairie du Chien, Wis.

SOUTHERN WISCONSIN
POLAND CHINA SALE CIRCUIT
FEBRUARY 8TH TO 11TH, INCLUSIVE

TUESDAY, FEB. 8, WM. SMILEY & SON, ALBANY; WEDNESDAY, FEB. 9, J. C. HENDRICKS, HAZEL GREEN; THURSDAY, FEB. 10, E. W. HENDRICKS, HAZEL GREEN; FRIDAY, FEB. 11, M. MADSON, MADISON.

SEE ADVERTISEMENTS BELOW OF THESE SALES

Smiley's Annual Big-Type Poland China Bred Sow Sale

Albany, Wis., Tuesday, February 8, 1916

The Type of Gilts in the Sale

45 SPRING GILTS; six fall yearling and mature sows. These are sired by Major Hadley, our noted sire of prize winners; Wisconsin Jumbo 2d, a son of the $1,500 boar, Longfellow Jr.; Monarch, weighed 800 pounds and won second at 1915 Wisconsin State Fair; Keefer's King, a grandson of old A Wonder; Orange Price by Miller's Big Orange. These are bred to Major Hadley, Wisconsin Jumbo 2d, Monarch, also Major Miller, first-prize yearling at 1915 Wisconsin State Fair; Big Hadley (by Big Top), Mouw's Wonder and Big Bone Jumbo. These are of good size and quality. The type that have won us so many blue ribbons at the state fair. Send for catalog containing eight illustrations, descriptions and pedigrees. Train service has been arranged to get to J. C. Hendricks' sale the day following at Hazel Green.

J. C. Hendricks' Big Sale

HAZEL GREEN, WIS., WEDNESDAY, FEB. 9, 1916

BIG type, big bone, big litters, big quality. Forty head of great sows and gilts that for size, length, bone, quality and feeding propensity will please the most fastidious buyers. Five tried sows, all having raised fall litters, sired by A Wonder, Wisconsin Giant, Big Bone, Big Bug and Big Leader. Thirty-five spring gilts, mostly March farrow, sired by Repeater, High Wonder, Black Jumbo, Smooth Wonder, Giant Defender and H.'s Jumbo, and are bred to Repeater, the greatest two-year-old boar living, weighing 810 pounds after service; High Wonder by Long Wonder 2d, the $600 boar. He sired first and second-prize under six months gilt in futurity class and second on produce of sow at Milwaukee this last fall. Others will be bred to Smooth Price, the largest and heaviest boned boar in the state. Weighed 550 pounds at twelve months and has a ten-inch bone, and North Side Wonder, a big, rugged, extra heavy-boned boar by Rude's Wonder by A Wonder, dam Orange Gem by Big Orange. He is a 1,000-pound boar at maturity. These gilts were all weighed on December 30th. They range in weight from 300 to 390 pounds in growing condition. They must be seen to be appreciated. Big Daisy has five dandy gilts, March 5th farrow; average weight on December 30th, 345 pounds; sired by Smooth Wonder. Wis. Giantess has five gilts, farrowed March 12th; average weight December 30th, 335 pounds; sired by High Wonder. Mary Miller has four gilts, average 325 pounds, and others are just as good. These are only a few samples. Send for catalog, which gives weight of each sow and gilt. It is instructive. Auctioneer, Col. Ira Cottingham. H. S. Hoard will represent The Wisconsin Farmer. Send your bids to him and I will guarantee entire satisfaction.

J. C. HENDRICKS HAZEL GREEN, WISCONSIN

Black Jumbo 221231

The Greatest 1,100 Pound Boar in America

Sale February 10, 1916

40 HEAD of sows and gilts, mostly bred to or sired by Black Jumbo. Nine corking good fall yearlings that are good enough to enter the best herds in the corn belt; four tried sows, twenty-seven spring gilts weighing up to 400 pounds and better. The offering is sired by Black Jumbo, King Jumbo, Oakland's Equal, Peerless Wonder, Giant Big Bug and Great Leader, bred to Black Jumbo, Big Oakland, Long Joe and R.'s Wonder for March and April farrow. Size, bone and quality combined. Ira Cottingham, Auct. Write for catalog. Address

E. W. Hendricks, Hazel Green, Wis.

Madson's Big Poland China Sale

Friday, February 11, 1916, Madison, Wis.

(Wisconsin Poland China Breeders' Annual Meeting Held Friday Evening)

30 Spring Gilts, 10 Yearling and Mature Sows

Cholera Immune Cholera Immune

Sale Held in Dr. West's Veterinary Barns

NO DRIVING in country necessary; 753 East Washington avenue. Building well heated and lighted. The spring gilts are sired by the big-type boar, **Corrector I Am, junior champion boar** at the Minnesota and Illinois State Fairs in 1914. He is by Correct I Know, grand champion South Dakota State Fair. The fall sows are by **Royal Model and Badger Perfection.** These gilts are bred to the big-type boar, **Triumph,** by **Hidestretcher,** grand champion at the 1914 Minnesota State Fair. These sows are big, well developed, combining quality with size. They will produce the profitable type of hogs and the type that will win in the show ring next fall. Send for catalog. Plan to attend this sale and the Wisconsin Poland China breeders' meeting in the evening.

HOLSTEIN-FRIESIAN CATTLE.

Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir KorndykePontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

Purebred Registered
HOLSTEIN CATTLE

A Holstein owner's assets. When a man buys a pure-bred Holstein-Friesian animal he acquires more than flesh and blood as property. Something more than size, weight and individuality, breeding, and the highest standard of productiveness. He shares the beneficial influence of the Holstein-Friesian Association, its financial soundness, its mighty prestige, its progressive exploitations, its animal prize offerings of $22,000, and its effective $25,000 yearly publicity, all of which combine to make a wonderful asset. It is this truthful exploitation of the foremost dairy cattle, together with their genuine merit, which has since 1908 raised the average auction price of Holstein cattle by $105 per head. Investigate the big "Black-and-Whites."

Send for **FREE** *Illustrated Descriptive Booklets*
The Holstein-Friesian Association of America
F. Houghton, Sec'y, Box 143, Brattleboro, Vt.

PONDEROSA HOLSTEINS

A 23-POUND Holstein bull ready for immediate service. A splendid individual, mostly white, right in every way. Sired by Daisy Hengerveld Piebe Champion. Dam, a granddaughter of Homestead Jr. De Kol. Can also spare a few A. R. O. cows and heifers. Send for prices and extended pedigrees. Address
W. P. Kissinger **Waupaca, Wisconsin**

SONS OF THE 32-LB. HOLSTEIN BULL
COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 20 months old. Out of heavy producing dams.
Baltz Hoesly - New Glarus, Wisconsin

HOLSTEIN BULL FOR SALE

INKA DE KOL AKKRUMMER 163119

BORN December 28, 1914. Sire, Daisy Johanna 5th, the 1st prize two-year-old bull at the 1915 Wisconsin State Fair. Dam, a 27-pound daughter of the show sire, Johanna Pontiac De Kol.
Rust Brothers, West Allis, Wisconsin

HOLSTEIN BULLS

OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address
WM. MILLER, JR., MENOMONIE, WIS.

32-Lbs. Butter

7 DAYS was made by the dam of **SIR NETHERLAND LONGFIELD.** Well marked, well grown bull calves from one to six months old, sired by the above bull, for sale. Write me your wants in registered Holsteins.
J. C. Klassy, Jr. **Monroe, Wisconsin**

10 REG. HOLSTEIN

COWS and heifers with A. R. O. records up to 20 pounds for sale. All due soon, some now springing bred to a son of King of the Pontiacs and of Sir Ormsby Hengerveld De Kol. Grandsons of King of the Pontiacs from A. R. O. dams ready for service. Priced for quick sale. Address
W. G. Marshall **Whitewater, Wis.**

WHITE STAR STOCK FARM A. E. SMITH

2 Registered Holstein Bulls

READY for service, from A. R. O. dams. Big-type Poland China spring boars and weanling pigs of both sexes. Address
A. E. SMITH **WAUPACA, WISCONSIN**

Registered HOLSTEIN

HEIFERS and bulls for sale. Sired by Byronia Pontiac Julip 111179. Prices reasonable.
G. L. Finkle **Appleton, Wisconsin**

15 REGISTERED HOLSTEIN BULLS

OLDEST seven months. Sired by King Walker Segis 3d, priced for quick sale. Can spare a few females. Address
Marinette County Asylum, Peshtigo, Wis.

Holstein Cows, Heifers, Bulls

PURE-BRED and high-grade Holstein cows, heifers and bulls of the large, heavy producing type. Write your wants to
Fairview Stock Farm **Evansville, Wis.**

FINE Holstein calves, both sexes, 15-16ths pure, from heavy milkers, $20 each. Registered bull $85. Edgewood Farm, Route 3, Whitewater, Wis.

2 Yearling Ormsby-Bred Holstein Bulls

AND two bull calves, all from high producing dams. Good individuals and at reasonable prices. Mention The Wisconsin Farmer. Address
Robt. Lachmund **Sauk City, Wisconsin**

HEIFERS

WE offer for immediate sale four carloads of first-class, high-grade **Holstein and Guernsey** open and bred heifers. Also 150 head mature cows and registered cows, heifers and bulls. Herd of 500 to select from. This is some of the best dairy stock in Southern Wisconsin. Come at once or write for particulars.
Edgewater Stock Farm **Fort Atkinson, Wis.**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt - Oxford, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls **Wisconsin**

Holstein Bulls

FROM A. R. O. dams with records up to 21 lbs. They are ready for service, are well grown, ¾ to 9-10ths white in color, sired by
SIR CANARY ALACARTRA
a son of the $1,000 bull, Canary Paul, and out of Nellie Alacartra Rue, that made 23 pounds butter in 7 days and 874 pounds in a year. Send for pedigrees and price. Address
A. L. Rowe **Waupaca, Wis.**

REGISTERED HOLSTEIN HEIFERS and COWS

Some with A. R. O. records. Choicely, bred and of straight, large conformation.
REGISTERED PERCHERON STALLIONS
Sucking colts—2 year old—5 year, old. Write for pedigrees and price.

Beautiful full marked sable and white Collie pups, males from natural workers, 10 weeks old. Price $5. Pedigree furnished. Address
Paddock Bros. - Augusta, Wisconsin

5 REG. HOLSTEIN COWS 5

4 YEARLING heifers and 3 yearling bulls of serviceable age from A. R. O. cows. Yearling animals sired by a grandson of the noted bull
KING OF THE PONTIACS
that has 164 A. R. O. daughters. Chester White boars and gilts for sale.
Kirkpatrick Bros. **Reedsburg, Wisconsin**

Registered Holstein Heifer

AND bull calves, three to ten months old. Some sired by King Clover De Kol Burke and sons by Oak Homestead Fobes, whose three nearest dams average over 30 pounds of butter in seven days. A few high-grade cows and heifers also for sale. Address
John North **Kilbourn, Wisconsin**

HIGH GRADE

NICELY marked Holstein and Guernsey heifer and bull calves about four weeks old, twenty dollars each; all express paid and safe arrival and satisfaction guaranteed. Order direct. Prompt shipment. Meadow Glen Yards, Whitewater, Wis.

Registered Holstein

COWS, yearling heifers and bulls, ready for service. Yearlings sired by the 31.11 pound bull, Briar Abberkerk De Kol 76694; well marked and good type. C. E. Ward, Palmyra, Wisconsin.

REG. HOLSTEIN HEIFERS

YOUNG COWS AND BULLS of serviceable age and bull calves. Prices reasonable.
JOHN BLASKA - SUN PRAIRIE, WIS.

HOLSTEIN BULLS

BULL calves from two weeks to one year old; all from A. R. O. cows. Sired by the 25-lb. bull, North Star Netherland Sir Beets. Priced from $25 to $65. Address
Trieloff Brothers **Ft. Atkinson, Wis.**

SONS OF THE 35.43-POUND BULL
Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69—24.65—22.35—20.46—16.96. Here are bulls that will improve the pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

GRANDSON OF THE $25,000 HOLSTEIN BULL
Johanna McKinley Segis

WELL MARKED; seven-eighths white; well grown. Send for pedigree. Address
J. C. Wilton **Eagle, Wisconsin**

SHORT-HORN CATTLE.

American Short-horn Breeders' Ass'n

FUTURITY classes for senior and junior calves announced for Iowa State Fair, American Royal, Kansas City, and International Live Stock Exposition, Chicago, for 1916. Those not familiar urged to send for particulars. 13 Dexter Park Avenue, Chicago, Illinois.

REGISTERED SHORT-HORN BULLS

READY FOR IMMEDIATE SERVICE. White, red and roan color. Sired by **McK.'s Masterpiece,** out of big, heavy producing cows of choice breeding. Also a few bull calves from two to ten months of age. Mention Wisconsin Farmer.
FRANK MORLEY - BARABOO, WIS.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

GREEN VIEW STOCK FARM

Offers the richly bred Short-horn bull,
ROYAL SULTAN 390142
A 2,300-pound grandson of Whitehall Sultan. We also will sell several of his yearling sons ready for service. Write for description and prices.
John Bear & Son **Spring Green, Wis.**

MILKING SHORT-HORNS

7 ROAN and 1 white yearling bulls; well grown. A few registered Short-horn heifers from high producing dams. Sired by Milkman, a richly bred bull of the milking strain.
BIG-TYPE POLAND CHINAS
Spring boars and gilts ready for fall breeding.
Geo. Smith & Sons **Burnett, Wisconsin**

BATES MILKING SHORT-HORN

HEIFERS 8 to 20 months old and bulls of serviceable age and younger. Big-type Poland China spring boars and fall gilts for sale.
A. T. Grundy **Oshkosh, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

CHOICE Short-horn bulls 1 to 14 months. Poland China swine of all ages. Write A. Menke, Route 1, Markesan, Wisconsin.

JERSEY CATTLE.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

HOLSTEIN-FRIESIAN CATTLE.

EDGEWOOD HOLSTEINS

HOLSTEIN bulls that combine breeding with individuality. These bulls are from A. R. O. cows and sired by good record bulls. Prices and pedigrees upon application. We also have some choice heifers from high-grade, heavy milking cows. Address
Edgewood Farms Inc., Pewaukee, Wisconsin

Registered Holstein Cows

IN order to make room in my stables, I offer three registered mature cows, price $225 to $250. Three ¾ registered cows 3 to 6 years old, $125 each. Several large, straight heifers $225. Two yearling bulls ready for service $75 to $100. These are richly bred. Send for extended pedigree.
W. H. Carey **Argyle, Wisconsin**

22.27-POUND HOLSTEIN BULLS

BORN March 18, 1915. Mostly white. Dam's A. R. O. record at 26 months old, 22.67 pounds of butter in seven days; grandam 26.93 pounds. Every dam in pedigree tested, all with records over 21 pounds. Write for pedigree, price and description. Mention Wisconsin Farmer. Address
Truttschel Bros., Sheboygan Falls, Wisconsin

REGISTERED HOLSTEIN HEIFERS

ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026, a richly-bred Ormsby bull. Address
Jacobson Bros. **Menomonie, Wisconsin**

At Reasonable Prices

REGISTERED HOLSTEIN bulls from 1 to 11 months old. Sired by King Pontiac Pioneer, that is backed by the world's champion cow.
Thos. A. Thompson **Argyle, Wisconsin**

HIGH-GRADE Holstein calves, either sex, 3 to 4 weeks old. $17 each, crated. BURR OAK FARM, Whitewater, Wisconsin.

HARMONY STOCK FARM *Short-horns*

TEN very good Scotch bulls for sale. All sired by Strathallen King 296426, that is one of the best grandsons of Whitehall Sultan. Address
J. E. KENNEDY **JANESVILLE, WIS.**

ROAN AND RED SHORT-HORN BULLS AND COWS FOR SALE

BULLS of serviceable age, sired by Oakland Lad and out of Profitable Oxford Bloom and and Young Mary cows. Will also sell a few yearling heifers and cows with calves at foot. Can supply a carload. Address
Kiser Bros. **Oregon, Wisconsin**

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
Geo. Wenham & Sons, **Ft. Atkinson, Wis.**

The Great World's Fair Herds

50 REGISTERED Short-horn bulls and heifers. 100 big-boned Poland China boars and sows. Call at Prairie Lawn Stock Farm or write.
C. J. Schoenfeld & Son, Fox Lake, Wisconsin

CAN SPARE A FEW SHORT-HORN

COWS and heifers; also two bulls, all reds, pure bred. J. D. Beetham, Lancaster, Wisconsin.

GUERNSEY CATTLE.

REG. GUERNSEY BULL

by the richly bred bull
EGLANTINE OF SPARTA
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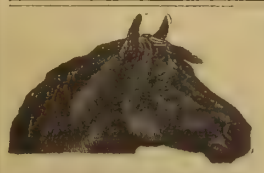

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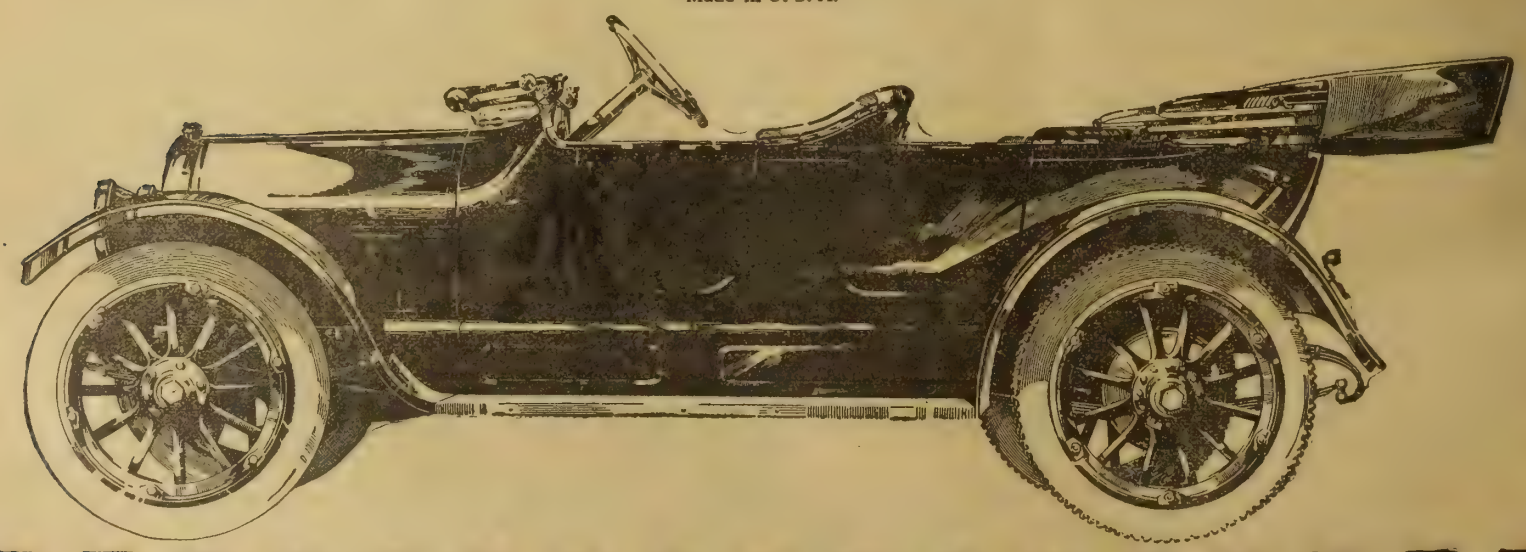

THE WISCONSIN FARMER

VOL. XLV. NO. 4. THURSDAY, JANUARY 27, 1916. WHOLE NO. 1774

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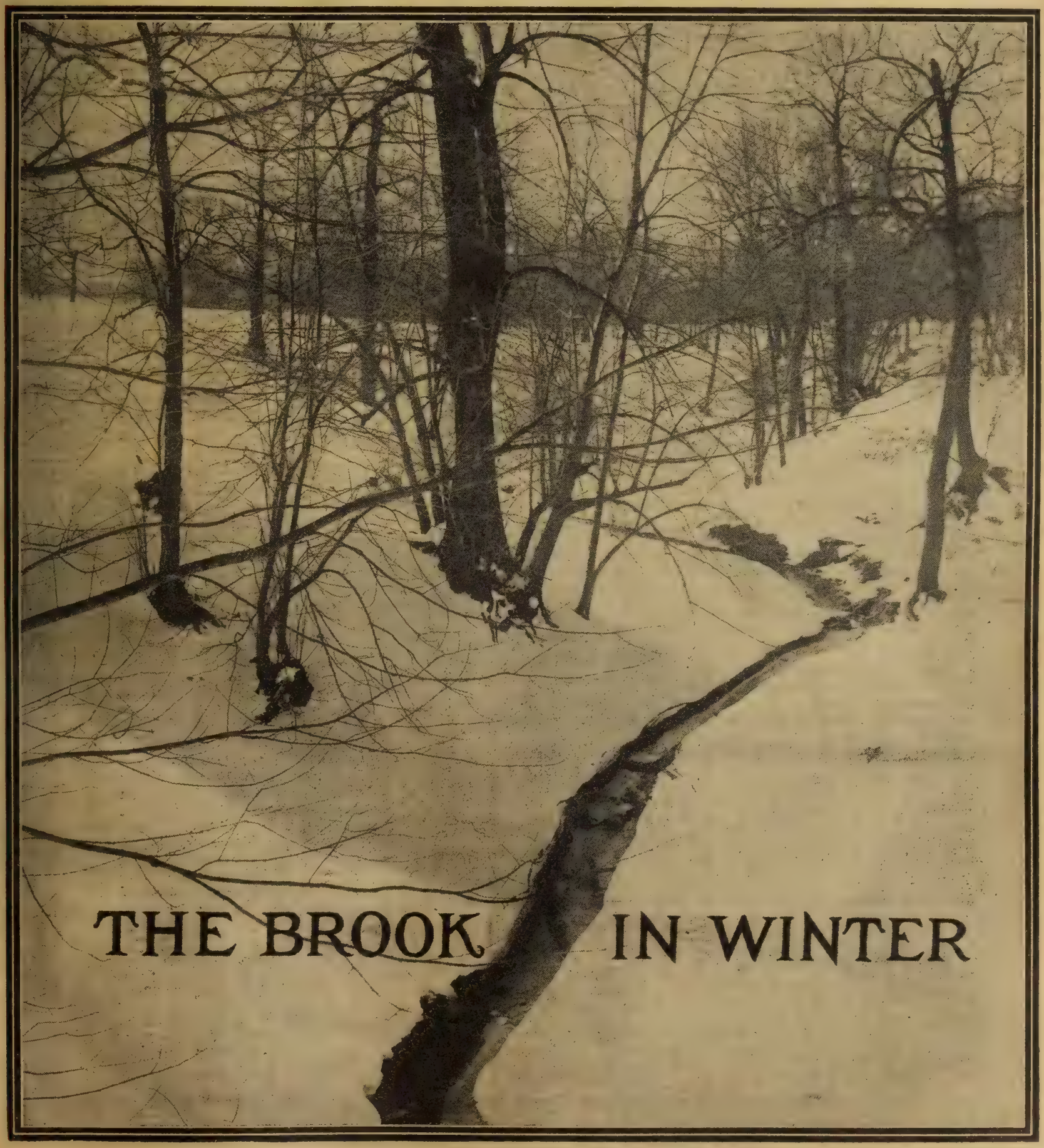

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HUDSON SUPER SIX

The Wisconsin Farmer

THURSDAY, JANUARY 27, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

AN ARGUMENT AGAINST CONSOLIDATION.

I AM greatly interested in a point which several of my readers make when they write to me discussing the practicability of the consolidated school. They call my attention to the fact that in many instances the school bus calls at such an early hour the children are obliged to leave before daylight, while they do not get back until night-time. The effect is not hard to imagine. Here is the way one of my correspondents pictures it:

A child going to consolidated school has no time, morning or evening, for the little chores that farmers' children ought to do and by the time they have finished school they will have acquired the dress-and-go habit to such an extent that chores and chore clothes will have no charm for them.

Printing this in one of my farm papers has brought a chorus of commendation from the opponents of the consolidated school plan, one of whom writes me:

Please put that in capitals, for it is the very soul of the question. A boy or girl who does not learn to work with his hands or head prior to sixteen years of age is not likely ever to become able to earn a living on a farm.

This, I believe, is an argument against the consolidated school fully as strong as the increase in taxes, concerning which many of my readers write me. Nor is the complaint an exceptional or isolated one, for at least a half dozen have called the matter to my attention within the last week or so. Here, for instance, is an extract from one letter:

When it comes to gathering the little children in the hack at six o'clock in the morning, cold, wintry weather, and hauling them from eight to twelve miles, I don't think they enjoy it very much. The hack passed my place last winter a good many mornings before daylight. Now, would you like to start a little fellow out that is only five or six years old, in the cold, to ride that distance? I don't think you would. When we have our rural schools the parent hitches old Dobbin up and takes the little ones to school in place of depending on some careless boy to drive the hack.

And here is the way another reader puts it:

There are lots of little folks that have to get into these school wagons as early as seven o'clock in the morning and these same little tots don't get home again until six o'clock at night. That isn't so bad in the early autumn and again in the spring after the weather warms up and the roads are good, but take it in the winter when the days are short and you have to rout little folks out of bed long before daylight and start them out in the wagon before sunrise. In a few years their health will be ruined and then what good will their education do them?

Certainly, my friends, this is a serious objection to a plan which undoubtedly has many merits. What does it value, indeed, if we educate our children as well as town children are educated, but ruin their health in so doing? What does it value if we educate them thus, but make them helpless, unable and unwilling to do farm-home chores, imbuing them with the "dress-and-go" habit, as one of my correspondents so aptly puts it?

The consolidated school has come to stay; I do not doubt that for a minute. But, on the other hand, we must not overlook or forget the facts that 64 per cent of all the children who go to school in the United States never go to any other than the one-room rural school, that the great majority of them never finish the eighth grade, and that 80 per cent of the schools in thirty-two of our states are one-room country schools. The problem we must confront is how to make conditions better in these schools which serve so large a percentage of our little folks.

Whatever we may think of the consolidated school, we must not give it all our attention and forget or ignore the one-room country school, with its great mission to educate the bulk of the children of America. You, in your community, may be willing to wake your children up in the wee small hours and send them far away for the entire day, for the added benefit that comes with the consolidated school. But, remember for every child thus enabled to get what you are pleased to call "superior advantages" there are hundreds who must depend on the old-fashioned, one-room school. The problem is to make those better and more efficient, for while the 2,000 consolidated schools in the United States cater to thousands of children, the one-room country school is still far in the majority and its needs are great. I cannot do better than to leave this thought with you, borrowed by me from one of the speakers at a recent country life conference in one of our great grain-belt states:

Do you remember the first day that your little child went to the rural school? That day stands out in your memory if you are a parent as one of the great days of your life. That morning he went from the home with its carpets, pictures, flowers and home comforts, down the flower-bordered path, through the gate and perhaps up the near-by hill to a dingy, unpainted, low-ceilinged, barely furnished room called a public schoolhouse. There your child went to spend years before entering the modern high school or the splendidly equipped college or university. The city and town pride themselves on their splendid buildings, but because of the selfishness or indifference of so many of our country people the rural schoolhouse is actually a disgrace to the community. We have in mind a school district we visited in Vermilion county, Illinois, populated by prosperous farmers, where the school building was the same old log house that had served in that capacity for seventy-five years, with just a few narrow, dingy windows, a low ceiling and most uncomfortable surroundings. Is it any wonder the children do not want to go to school? The wonder to me is that any of them want to go to such buildings.

Shall we join hands to better conditions, before it is too late, no matter how we may differ on the consolidated school, early rising, chore-doing and all manner of other things?

THE FUN OF THE OLD DAYS.

ONE of the subjects discussed at greatest length and with most interest at the farmers' week exercises of one of our grain-belt agricultural colleges recently was that of farm amusements. Most of the speakers declared that the fun crop is short, no matter what bumper crops of wheat and oats and corn we are raising nowadays. Many went so far as to say this was one of the main reasons why our young folks are being lured away to the towns and cities in such large number. The problem was conceded to be a big and vital one.

Personally, I think this problem is being best and most widely solved by the neighborhood farm club movement and the community clubhouse plan. I am delighted at the reports which come to me every week, telling of farmers' club rooms being established, in small towns, by banks and merchants and frequently, right in the country, far from any town, by the farmers themselves, desirous of a meeting place where harmless fun may be had by all.

I realize, however, that not every community can have these advantages, even in these prosperous times. But why cannot every community have the desired fun and recreation by means of neighborhood clubs and frolics and a return to the good old days of husking bees, apple parings and so on? These things are possible wherever there are two or more families within reach of one another, and what a royal good time can be had when congenial people get together, put all thoughts of work aside and let joy reign supreme for the time being.

This very subject was on my mind the other night when I picked up a country newspaper and read the editor's recollections of an old-fashioned apple paring. He had just read some new-fangled recipe for drying apples by machinery and was moved to wrath and to reminiscences. He harked back to the days of his youth, when the apples had been gathered into shiny heaps of red and green and gold among the leaves between the rows of orchard trees and were covered with blankets to keep them from the frost. He recalled how the word passed around the countryside—no need of telephone or R. F. D. when a good time was in store, it "grapevined" around in some mysterious way—"There's going to be an apple paring down to Joe Black's Tuesday night," and the young folks—and the old, too—gathered together and worked hard for a while and then played just as hard. It made me homesick for the good old days to read his description:

The apples were brought in from the orchard in sacks and bushel baskets and dumped in piles on the kitchen floor, and the work sort of divided itself naturally. Some pared, some quartered and cored and others strung the pieces on strings. The boys who had the best jackknives generally did the most of the peeling, tossing the pared apples into big tin pans. The girls were given darning needles threaded with strong linen a yard or so long and on this they strung the quartered apples and, when the string was full, tied the ends together.

The apples on strings were hung to dry from slats suspended from the kitchen ceiling. When a pie was wanted any day through the winter the housewife simply stood on a chair and took down a festoon of dried apples and there she had the material right at hand. Sliced pumpkins used to hang there with the apples, and a few of the largest and choicest ears of corn for seed next spring.

But it was not all work and no play; that would never have done. Young and old joined just as heartily in the merrymaking as they had in the work. Doesn't it make the old days compare pretty favorably with these piping times of prosperity nowadays, so far as the real enjoyment in life is concerned, to read something like this:

The best fun, and the climax of it all, came along about eleven o'clock, after the last string of apples had been hung, and the parlor floor was cleared for action, the center table with the family Bible, the plush album and the enlarged picture of grandfather in the shell frame being removed to the hall to keep it from being upset.

After the doughnuts and sweet cider had been passed around the games began—"postoffice," "clap in and clap out," "drop the handkerchief," "button, button, who's got the button," and then, along about midnight, the girls got their wraps, the boys assembled outside in front of the door, and as the girls came forth a young man stepped up to each and offered his arm. This we called "pairing off," and sometimes there was a good deal of rivalry in it, and some hard feelings.

Oh, those long walks down the road, with the girl of your choice at your side, her cheeks as rosy as the red muffler around her neck which her own dainty fingers had knit. The stars twinkled brightly in the cold sky, and your heart beat almost as loudly as the thumping of your own feet and hers upon the ground. At the door of her own home you lingered for a last shy good-night, with one of her mittened hands in yours and the other on the door knob, and just before she turned the knob you— But the moon setting in the west casts a deep shadow there, too deep for us to penetrate.

Haven't we lost a little something really worth while in life if we think we have gotten too big or too rich or too old or too dignified for such fun-making as this? Don't make the mistake, my friends, of getting too far away from the simple life and the harmless, even childish pleasures. We may not all ride in automobiles, we may not all have pianos which play themselves, we may not all know the heroes and the heroines of the moving picture world, but can't we all, if only we will, enjoy such pleasures as those which made time turn backward for the country editor whose words I have quoted you here?

R. F. D. TROUBLES INCREASE.

I DO NOT want to be accused of saying "I told you so" in an offensive manner, but I cannot refrain from reprinting a newspaper dispatch from a county-seat town here in the grain belt telling of R. F. D. troubles during the recent heavy snowfall and cold snap. I am going to omit all names so as not to embarrass any of the people mentioned or unduly advertise the troubles of any community. Here is the dispatch:

Patrons of rural routes out of —— got no mail for five days because the three rural route carriers "struck" when the blizzard, with its snow and twenty below temperature, hit this section last Wednesday. The carriers said they could not and would not make the trips over their long routes in such weather. Overtures made by Postmaster —— had no effect on the carriers' decision.

Not until Monday was the postmaster able to reach a solution of the difficulty. Then he hired three teams and drivers to make trips over the routes every other day.

The mail has hitherto been delivered in automobiles. Changes made by the postoffice department last fall lengthened the routes appreciably and made the task of delivering mail in such temperatures as prevailed last week a formidable one.

You will recall that I have discussed this matter of the new policy of the postoffice department in regard to rural routes often of late. I predicted that the plan of combining routes until one carrier was expected to cover fifty miles a day, the year around, was doomed to failure, inasmuch as our roads are in no condition on stormy winter days for such a feat. I have ample proof of what I have been arguing in this newspaper dispatch printed herewith. Other and more convincing proof will be forthcoming when the spring comes and our roads are a morass through which neither automobile nor team can flounder for fifty miles, day after day.

Far better that our R. F. D. system had been left as it was, that new routes had been established of the standard length and that everything possible had been done to improve the service as it existed. The postoffice department has accomplished nothing but to make carriers and patrons dissatisfied and to make inefficient a service which was rapidly approaching perfection and which was proving a splendid factor in improving country life conditions generally.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

The Wisconsin Farmer as a Cream Producer.

IF THE loss in dollars and cents to the farmers of Wisconsin who are delivering thin cream to their creameries could be accurately determined we believe there would be such an awakening that not a can of cream under 30 per cent of fat could be located at a single creamery in the state. Whenever a farmer sends a can of cream which is low in percentage to his creamery he is giving away a certain quantity of skim milk that is valuable to him for feeding purposes; he is increasing the cost of operating the factory; increasing the loss of fat in the buttermilk and lowering the standard of butter to be manufactured, the quality of which is the factor that governs the price.

Thin cream is, no doubt, costing our farmer dairymen hundreds of thousands of dollars annually. There are no statistics available on which to make an accurate estimate or even an accurate guess, but we believe that were the actual loss known it would astonish and probably startle our dairymen, and the result would undoubtedly be a campaign that would lead to the delivery of nothing but cream testing in the neighborhood of 30 per cent or better.

Statistics gathered recently by Mr. C. E. Lee, dairy specialist of the state food and dairy commission, caused him to estimate that the patrons of the co-operative creamery at Tomah are losing $10,000 annually by the delivery of thin cream. That is an average loss of about $25 a year to every patron of that great creamery. That $25 might just as well have been retained by the farmer by keeping the milk he let go to the creamery in his cream. The skim milk he lost, Mr. Lee figured, was worth that much to the farmer for feeding purposes. If a single community is losing $10,000 a year the loss, if the state were taken as a whole, certainly would be an eye-opener to the man who continued to deliver thin cream.

Mr. Lee, who recently addressed the Tomah dairymen, told them that last year they gave away 566,000 pounds of skim milk by taking cream to the Tomah creamery that averaged 23.3 per cent for the year. Had this cream averaged 30 per cent (and every farmer can produce cream of that kind) the farmers would not only have kept this 566,000 pounds of skim milk on the farms but they would have saved the cost of hauling; would have cut down the loss of fat in the buttermilk; would have cut down the cost of operating the factory, which is co-operative; would have lessened the cost of disposing of the buttermilk and would have increased the quality of the butter. Mr. Lee also pointed out that it would take 100 average cows and the services of ten men to milk them 365 days in a year to produce this 566,000 pounds of skim milk which ought to have remained on the farms but which went to the creamery in thin cream.

Corn is now retailing for 90 cents a bushel at Tomah, and, as the value of 100 pounds of skim milk is estimated for feeding purposes to be half as much as a bushel of corn it is seen that the value of this skim milk which was lost to the farmer was about $2,500. During the first fifteen days of August the Tomah creamery received 34,575 pounds of skim milk, which at that time was worth 30 cents a hundred. That is, the 27,921 pounds of butter fat could have been delivered in 84,619 pounds of cream instead of 119,194 pounds, and all can realize that had such been done the cost of handling would have been reduced.

We are citing the experience at Tomah to point out the loss to the farmer who delivers thin cream. The same condition is to be found at every creamery in Wisconsin and at every creamery in every other state. No farmer can afford to waste his skim milk in this manner. It is useful to him for feeding purposes. Even if not of use to him he should consider the increased cost of hauling, of operation of the factory, etc. Every farmer should skim cream that will test between 30 and 40 per cent, and a great loss, such as cited at Tomah, will turn to increased profits from the dairy.

Co-operation Between Business Men and Farmers.

THE community idea or rather the plan to bring the farmer and the business man into closer co-operation is gaining rapidly in favor throughout the state, and certainly is to be encouraged. In those communities where you find the farmer and the merchant touching elbows and breaking bread together you find the spirit that is building up those communities for co-operative effort always winning. Where the farmers pull one way and the business men the other little progress, as a rule, is found, for the success of every merchant is dependent largely upon the success of the farmers in his territory, and when the merchant does something to further the farmer's progress he is indirectly aiding himself.

The spirit is being fostered in many sections of the state this winter and other cities and villages are rapidly falling into line. Granton, in Wood county, has seen the advantage of this community intercourse and the business men there have rented a hall at an expense of $400 a year so as to afford the farmers who come there to trade some of the joys of city life and let them know that they are welcome. A picture show has been started in the hall by the merchants and the plan is to put on a show every Tuesday and Friday nights at which a small fee, merely covering operating expenses, will be charged, and on Saturday afternoon, when most of the farmers and their families come to Granton, give a free moving picture matinee to all. Vesper is another thriving little village in that part of the state which has joined in the community idea, and the merchants there have provided a free rest room for the farmers, their wives and their children. Here they may sit in comfort, meet their friends, etc. Business men at Vesper say that a test of the rest room project has proven it to be a paying investment, as the farmers like to trade in a city which is looking after their interest, which appreciates their trade and is willing to go a little out of the beaten path to accommodate them. Janesville in Rock county has a commercial club which is also fostering this spirit and the club only recently moved its quarters from the top floor of an office building to a ground floor room in the business district so that the club rooms would be more accessible to all. This arrangement makes it easy for the farmers and their families to drop in and get acquainted, meet there to compare notes, meet their friends, etc. The room is spacious, provided with big, easy chairs and the club is pleased to have the farmers make that their headquarters while in the city. Then the rooms are large enough for holding grain shows and like expositions.

The Wisconsin Farmer would like to see this idea spread into every city and village in the state, for experience has proven the investment by the business men worth while. Nothing wins like co-operation, especially between the business men and those they must depend upon—the farmers.

President Brett, of Elkhorn Fair, Retires.

FOR many years the Elkhorn fair, held under the auspices of the Walworth County Agricultural Society, has been held up as a model county exposition. The Elkhorn fair, we venture to say, is as well known in Wisconsin as the state fair. It is also known in other states, and its visitors and exhibitors come from other states. In 1914 it had a larger attendance than any fair in the state except the state fair with the Dodge County Fair at Beaver Dam a close second. Last fall, despite the fact that the state officials called off the cloven-hoof live stock show, the fair entertained enormous crowds, all of which has often occasioned the remark in the writer's presence, "Why is the Elkhorn fair so successful?"

The Elkhorn fair was first held in 1854, and during the past two generations has not asked for money, as a great many county fairs are compelled to do. Free water and light during fair week has been the concession asked of Elkhorn, and it is not to be wondered at that so many fair officials look to Elkhorn as a model. Some are succeeding; some failing.

Mr. James E. Brett, who has just retired from official connection with the fair after sixteen years as treasurer, one as vice president and one year as president, points out in a farewell speech to the society some of the reasons for the success of the fair, and we believe he puts advertising above everything else. Certainly the Elkhorn fair has been well advertised, not only in the press but in many other ways, and Mr. Brett, in answering criticisms as to why so much is spent for advertising, replied that the years which showed the heaviest advertising expense also showed the biggest gate receipts. The tendency was for the visitors to come back, and the Elkhorn fair makes its visitors boosters. For years it has conducted the fair on clean, moral lines; the glad hand has always been out to the visitor and the newspaper man; the fair has given what it advertised and the result is that the advertising by visitors is now a wonderful asset. No matter how fine exhibits may be no fair can succeed without crowds, and advertising brings them.

Mr. Brett tells of the scores of fair officials who have come to Elkhorn to learn how Elkhorn made its fair succeed. The trouble with many fair promoters is that they wish to start at the top of the ladder, while Elkhorn began at the bottom. The fair there started fifty-nine years ago with six acres of land, no buildings and the society owing for the land. It has taken almost sixty years to get where the fair is today, and Mr. Brett, who saw the first fair in 1854 with boyish glee, has been closely connected with its struggles during these six decades. Good exhibits good management and a real show will make any fair, and Mr. Brett believes advertising will get the crowds. The Elkhorn fair loses in Mr. Brett a splendid official, but declining health made it impossible for him to continue at the wheel. Already the trumpets for the 1916 fair are sounding and the Elkhorn officials promise bigger things than ever.

Wisconsin Live Stock Men to Meet.

FIFTEEN state live stock associations, representing most of the prominent breeds, will hold meetings in Madison the week of February 7th to 12th. It is probable that the largest gathering of breeders ever held in the state will occur at that time. It affords a wonderful opportunity for live stock men to get acquainted and to listen to splendid addresses by men of knowledge and experience. Stock men will find it to their advantage to be in Madison the entire week. If, however, they are unable to take this much time, Thursday and Friday, February 10th and 11th, are the main days and should not be missed. Separate meetings will be held by each one of the fifteen state associations. On Thursday, February 10th, there will be a general live stock meeting in the auditorium of the College of Agriculture. Mr. John M. Evvard, of the Iowa State College of Agriculture, will speak on economic pork production. Mr. Evvard has some splendid accomplishments to his credit and lately has added new laurels with his self-feeding experiments. Mr. James E. Poole, of the Union Stockyards, at Chicago, will speak at 1:30 p. m., the same day on "Wisconsin Live Stock at the Yards." In the evening there will be an address by Dean David S. White, of the Veterinary College, Ohio State University.

The associations which will have their annual meeting at Madison either Thursday or Friday of the week above referred to, and the officers of each association are as follows:

1. Wisconsin Aberdeen Angus Breeders' Association—President, Park Gelbach, Lancaster; secretary, Wm. A. Connell, Menomonee Falls.
2. Wisconsin Short-horn Breeders' Association—President, E. E. Jones, Rockland; secretary, John L. Tormey, Madison.
3. Wisconsin Red Polled Cattle Club—President, J. B. Ahlers, West Bend; secretary, L. C. Underwood, Avoca.
4. Western Guernsey Breeders' Association—President, F. E. Fox, Waukesha; secretary, Charles L. Hill, Rosendale.
5. Wisconsin Holstein-Friesian Breeders' Association—President, W. J. Gillette, Rosendale; secretary, Chris Schroeder, Racine.
6. Wisconsin Horse Breeders' Association—President, W. K. Caldwell, Morrisonville; secretary, J. G. Fuller, Madison.
7. Wisconsin Sheep Breeders' Association—President, Arthur Broughton, Albany; secretary, Gavin McKerrow, Pewaukee.
8. Wisconsin Berkshire Breeders' Association—President, H. C. Taylor, Orfordville; secretary, J. H. Kitchin, Eldorado.
9. Wisconsin Duroc Jersey Breeders' Association—President, M. H. O'Keefe, Waunakee; secretary, John D. Gant, Delavan.
10. Wisconsin Poland China Breeders' Association—President, M. Madson, Madison; secretary, E. E. Jones, Rockland.
11. Wisconsin Chester White Breeders' Association—President, James Fisher, Eastman; secretary, A. H. Kuhlman, Madison.
12. Wisconsin Ayrshire Breeders' Association—President, A. J. McNab, Black River Falls; secretary, Frank T. Stare, Ladysmith.
13. Wisconsin Hereford Breeders' Association—President, G. A. Porter, 3111 West Madison, Chicago; secretary, C. W. Thompson, Lake Geneva.
14. Wisconsin Jersey Breeders' Association—President, Ed Bruin, Fairwater; secretary, E. E. Wyatt, Tomah.
15. Wisconsin Live Stock Breeders' Association—President, Stephen Baird, Waukesha; secretary, A. W. Hopkins, Madison.

With so many good things promised by the speakers and the drawing together of the members of fifteen different breeders' associations it doesn't seem possible that any farmer or breeder who can possibly attend will remain at home.

Institutes For Wisconsin Farm Boys.

STUDY and thought are necessary to be successful in farming these days, and The Wisconsin Farmer is pleased to see the interest being taken this winter by the boys in the short courses which are being held for their benefit in different parts of the state. These boys are preparing themselves for the future, and the lad who wants to get ahead cannot afford to spend his spare time whittling pine sticks or reading blood-and-thunder novels. He must make the best of his opportunities, and the short course for the farm boy is an opportunity to build for the future. Much good is being accomplished by these short courses and every farm boy who lives within riding distance of one should attend. As a striking example of the value of these short courses the writer had the pleasure last summer to visit with a young man

in Douglas county whose interest in a short course conducted at Poplar by Mr. J. M. Walz, county agricultural representative, led to the erection of a silo and an improvement in the barn on his farm. This farm boy rode eight miles through the snow and over bad roads when the temperature was as much as twenty-five degrees below zero to attend the course. Certainly there can be no excuse for a boy living within easy access of such a short course to stay away. These courses consist of two winter terms of several weeks with the intervening time spent in some home project work under direct supervision of the instructor who is usually the county agricultural agent.

Farm mechanics, soils, horticulture, breeds of live stock, studies in grain and weed seeds, and farm business practice are among the subjects taught. As far as announced, courses are being held this year as follows:

Polk county, Frederic, November 29-January 21st, in charge of J. S. Klinka; Douglas county, Lake Nebagamon, dates not given, in charge of J. M. Walz; Eau Claire county, Eau Claire, January 31st-March 24th, G. R. Ingalls; Taylor county, Medford, January 24th-March 31st, R. A. Kolb; Price county, two weeks course at Ogema, beginning January 10th, in charge of Griffith Richards.

Panama-Pacific Exhibit Brought Home.

THE live stock pavilion at the college of agriculture at Madison will be filled with Wisconsin products during farmers' week in February and should be the Mecca for thousands of our farmers. The Badger exhibit at the Panama-Pacific Exposition, 120 feet long, will stretch along the south side, opposite the entrance, and serve as the background for the grain, dairy products, dairy machinery, etc., which will be shown there. Mrs. Addie F. Howie, who was in charge of the Wisconsin exhibit at San Francisco, brings back the news that this exhibit attracted more attention than any other and it is being set up in the live stock pavilion now so that residents who did not get to see it there can see it here. In front of this exhibit will be the grain exhibited at the annual grain show of the experiment association, the displays representing twenty-five years of dairy progress, etc. The pavilion will be filled and will be interesting to everyone. Mrs. Howie, on her return, announced that the Wisconsin exhibit at the Panama-Pacific Exposition won twenty-eight gold medals, forty-one silver medals and twenty-seven bronze medals and that the showing of Oderbrucker barley, the product of sixteen years of careful breeding, won against the showing of every country where barley is grown.

Federal Legislation Needed to Improve Farm Conditions.

ASSISTANT SECRETARY OF AGRICULTURE CARL VROOMAN has been a popular speaker at various agricultural conventions in the grain belt during the winter. Mr. Vrooman farms a large body of land and he is, therefore, familiar with all the complicated problems which farmers have to deal with.

In a recent address he called attention to the fact that most men farm primarily for profit, not to demonstrate principles of agronomy. They produce crops in order to support themselves and their families; they do not live and rear families in order to produce crops. What they want is not only large production but profitable production. For years maximum yield per acre has been held up as the goal towards which we must strive; agronomy has been preached as the beginning and end of agricultural science; the salvation of the American farmer has been hitched, as close as words could hitch it, to bumper crops.

Figures were presented by Mr. Vrooman showing that there have been a number of years in which a large crop meant a small income, in which the farmer not only received less per bushel for his corn and wheat than in unfavorable years, but less for the total crop. In 1912, for example, the country produced 677,758,000 more bushels of corn than in 1913; the farmers got $171,638,000 less for their corn in 1912 than they did in 1913. In 1906 a wheat crop 101,174,000 bushels larger than that of 1907 brought $64,104,000 less. In 1906 the corn crop, too, was unusually large, more than 150,000,000 bushels larger than in 1909; but it brought the farmers $500,000,000 less.

Farming is a business as much as running a steel plant, a saw mill or a bank, and Mr. Vrooman pointed out that a successful business man expects to make interest on his investment, wages for his time and a profit besides.

Unfortunately few farmers attain this ambition. Too many American farmers today are merely giving themselves hired men's jobs. Their labor incomes, the incomes that are left after interest on the capital has been deducted, frequently are no more than fair wages and sometimes less.

Mr. Vrooman alluded to the fact that in neither a day, nor a year, nor a decade can we hope to persuade all or even a majority of American farmers to farm efficiently enough to run the slightest risk of swamping the market. In the meantime, progressives among the farming class will reap rich rewards.

Another reason is that while a considerable number of intelligent, wide-awake farmers are steadily increasing their yields, as well as their profits, by scientific agriculture and business methods, probably a large number of our farmers are reversing the process by careless and short-sighted farm methods, which diminish the productivity of the soil and reduce yields.

Improved Types of Animals a Necessity.

IT IS OF GREAT importance to every farmer who in any way uses live stock in his system of farming to have improved types of animals. Such animals better meet some of the wants of man than the common stock of the country. Whether a single animal or family or breed is improved so far as the farmer is concerned, depends on what the requirements are. The first question in selecting stock is: What are they wanted for?

In these days of close competition and high-priced animal foods, farmers must have animals that possess the highest possible development for one special purpose, that is, the highest possible development that can be attained without weakening their vital functions. In some cases animals are kept for more than one purpose. Such animals cannot be highly developed in both directions, but may be symmetrically developed in two or more natural functions. It is a serious mistake to multiply the difficulties of breeding by attempting to breed animals that excel in more than one line of production.

The special dairy farmer need not be troubled by the fact that other farmers, in selecting cattle for breeding, look almost exclusively to indications of special adaptability for beef production, while a much greater number wisely say they find their wants best met by the cattle which have had their natural capabilities for both beef and milk giving cultivated to equal degrees. The great mass of dairy farmers will do well to select and breed for the highest possible development of the milk-giving functions without impairing health and vigor.

In selecting animals individual merit is of first importance. If this inherited excellence is present the value of the animal as a breeder is greatly increased. Pedigree is valuable because it is the safest guide in determining the qualities of the ancestors. Pedigree is not always proof of individual merit, but a first-class animal is a living witness of a good pedigree.

Environment, heredity and conditions of life cause a wide variation in the type of farm animals. The possibilities of animal development depend upon what it has inherited from its ancestors. The extent to which this development may go will be determined by the conditions that surround it. The breeding and developing of improved types of live stock need not necessarily be a matter of chance, as many seem to think, but a matter of accurate and well-defined knowledge. Years ago a few far-seeing men saw the need of animals that would convert their food into animal products in paying quantities. They began the selection of animals of the desired quality. In the course of time they developed meat-producing animals with strong backs and well-sprung ribs, well-developed in the quarters, well let down in the flanks, with a soft, mellow hide, straight top and bottom lines, and a tendency to locate as much as possible of their flesh on parts that command the most money in the markets. This line of breeding has been pursued until the animals possessed the true meat-making form. They are able to reproduce this form with certainty, because they have acquired the fixed habit of economically converting their food into the higher-priced cuts of meat. In the same way breeders of dairy cattle, horses and poultry have been able to develop better types and breeds, each breed or variety developed for some special or particular purpose, and with the inherited tendency of doing their best work in their particular line.

Why should the average farmer be interested in keeping high-class stock? Because he grows crops on his farm which he desires to convert into money. He may sell his crops or feed them to animals on his farm. If he sells his crops he expects the highest price, and in this kind of a deal he is characterized as a sharp business man. But, in case he desires to feed out his crops on his farm, he frequently exercises anything but sound judgment and selects animals for the purpose of converting his crops into money which are not capable of returning a fair profit for his crops. Instead of well-improved animals that have been bred and perfected by years of experience for the purpose of making some particular product most economically and profitably, he selects animals regardless of age, type or capacity. It is astonishing that so many persist in feeding crops to unimproved stock that cannot manufacture sufficient products from the food consumed to pay for their keep.

Compulsory Exercise For the Brood Sow.

IT WOULD be difficult to point out a lazier creature in the animal kingdom than a brood sow, and those who proclaim the doctrine of letting Nature take her course will face all kinds of dire disaster in swine breeding operations if they let the sows have their own way. We do not hesitate to say that the most skillful kind of feeding involving an ideal balanced ration will not result in a favorable outcome at farrowing time unless some sort of compulsory exercise is forced upon the breeding herd.

We appreciate the fact that a subject like this becomes hackneyed and it is difficult to convince the average man that much importance should be attached to exercise during the winter months. When sows have their own sweet way about the matter they spend four or five hours nestling in their nice warm beds for every hour that they rustle, whereas during the greater portion of the winter there is no reason why the animals in the breeding herd should not be kept on their feet during the greater portion of the day.

One way to enforce part of this discipline is to scatter grain about the yard instead of feeding it in a trough. This is not enough, however, and those who are most successful in raising large, strong litters have almost universally adopted the plan of turning their sows away from the yards during the greater portion of every fine winter day. If there is no straw available and they do not have access to a manure pile, the sows of necessity keep themselves on the go continuously. It is ideal if they can spend this time in a big pasture, because in that case they will keep roving over it instead of standing at the gate and squealing, which will be the case if they are simply turned into a bare yard.

It will pay to take the time to scatter a little shelled corn here and there over the pasture. This will prove an incentive for the sows to be continuously on the hunt for food.

Another good plan is to feed from a crib or granary located at a considerable distance from the herd's sleeping quarters. If a little corn is thrown out once a day from this crib the sows will not only make the trip for that one meal, but they will, in all probability, cover the distance three or four times, and these journeyings backward and forward force them into a life of activity that will contribute more than any other one factor to a strong, healthy litter. Even the old, heavy sows that are inclined to be too fat will cover two or three miles a day at least, if some such system as we have referred to in feeding is followed.

There may be times, to be sure, when stormy weather will prevent carrying out this program rigidly. Hogs are not very well protected against cold and the matter of exposure should not be overdone during severe weather. However, the daily labor program may be carried out four out of every five weeks during the winter and it should be kept up until each individual sow is placed by herself two or three days in advance of her farrowing period.

Neighbors Join in Purchase of Lime.

IN THE following communication an Illinois subscriber outlines a few preliminary steps that are taken by himself and his neighbors preparatory to the establishment of meadows. He writes:

We usually begin working and planning for the coming hay crop in the dead of winter. We can give the time to this better now than we can later in the season, when other work presses. Our first work is to get what lime we are planning to use and have it slacking for spring using. As we have to haul it some eight or nine miles, we can draw a heavier load on sleds than on wagons, which saves some time and horse flesh.

The lime we use is shipped in in bulk. A number of the farmers of the neighborhood usually put together and take a carload, so economizing a little. When the car gets in, we start the teams for the station and empty it before we have any charges to pay. The lime is put out in a big heap and permitted to stay there till spring, and by the time we want to use it is in good shape for sowing. It is the custom on my farm to use the lime with some crop, say oats, and so get the benefit of it, not only this present season, but next year in the hay we cut as well.

Another thing we have been doing for years in the direction of better meadows is to get the best possible seed. There is some difference of opinion here among some of us. There are those who think it more economical to buy timothy seed that has been hulled in the process of cleaning and recleaning. These farmers say they believe this seed is just as sure to come as that which has not been thus robbed of its outer coating; and I must say that I do not know how true this is, for I never have used any of it; but it is not nature's way of seeding, and the more closely we follow her, it seems to me, the better we will be off; so I have always bought the very best seed I could find, and consider that I am economizing by so doing.

And when I invest in this seed, I have an understanding that it shall stand the test of analysis at the state experiment station. I send away a sample of the timothy and also of the clover seed I propose to sow, and if it does not prove to be pure, I reserve the right of taking it back to the dealer. I had the fortune one year to get some alfalfa seed that was heavily loaded with foul seed. The man I got it of told me when I bought it that he would stand back of it. When the state report came I took it to the dealer. He was surprised enough, saying that he had supposed he could rely on the house of which he purchased it. But he stood by his word and gave me my money back, and I went elsewhere for my seed. It is not a pleasant experience, but it is better than to sow foul seed. In order to be sure that we will have time to secure an analysis of our seed, we buy it early. It may be done any time now.

On general principles it is sound policy to know something of the germination ability of seed before sowing it and more and more farmers are relying on the germination test that they are able to obtain through their experiment stations.

Where land is strongly acid, which condition is usually indicated by the fact that meadows are not thrifty, there is unquestionably some advantage to be obtained from applying lime, and the suggestion here given in regard to neighbors combining so that lime can be purchased in carload lots is one that will apply to many communities. This holds true especially in localities where a number of farmers are preparing to sow alfalfa, because this is a crop that makes but a half-hearted growth on acid soils.

Encouraging The Pure Breds.

Testimg in the Stanley Country Increases Interest in Better Stock and Also in Prover Feeding Rations.

[Editor's Note.—The following is from the pen of Richard F. Adams, official tester for the Stanley Co-operative Cow-Testing Association.]

Much has been said in favor of cow testing so far as it concerns the improvement of milk production, but it is just as valuable in getting farmers into pure-bred dairying as it is in inducing them to dispose of their boarders and feed more liberally and properly those that do pay for themselves.

OLE KROGAN FARMHOUSE, DAIRY BARN AND SILO, STANLEY, WIS.

No better illustration of the value of association testing is available than that at Stanley, Chippewa county, where Ole Krogan, of Stanley, has launched into the pure-bred business. Three years ago Mr. Krogan joined a cow-testing association. Finding that he had too many head of stock to feed he thinned out the poorest and fed the rest better than previously. He kept thinning out the poorest producers in his herd and feeding still better, with better results in milk production, with the result that he soon had a herd which was giving a good account of itself. Up to that time he had only grades, and the improvement he had made in his herd caused him to take an interest in pure-bred stock and shortly afterwards he bought two pure-bred Guernsey heifers which both had heifer calves. The result was that he had the start for a nice pure-bred Guernsey herd, and all due to adopting the businesslike system of dairying.

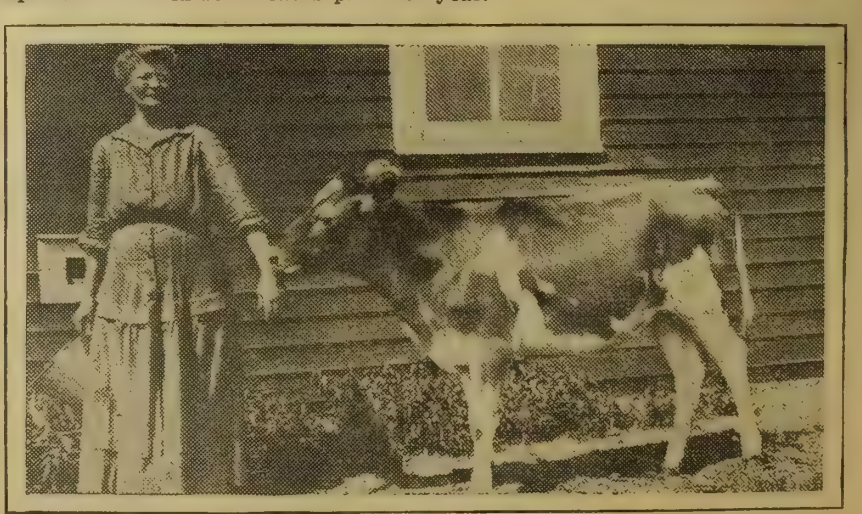
Mr. Krogan's pure-bred cows were tested in the Stanley Co-operative Cow-Testing Association the past year and found to be good producers, and Mr. Krogan is well satisfied with his start for better dairy individuals. A pure-bred Guernsey sire heads his herd and consequently a new grade herd is also started.

This is only one result of the work of the Stanley Association which is doing much toward building up the dairy herds in that community. The experience of Mr. Krogan and others in that association, shows what joining a cow-testing association will do for a dairyman. It pushes guesswork aside and puts the dairyman on a business basis. He keeps the cows which respond well to a balanced ration and soon parts company with Mrs. Boarder and Mrs. Poorproducer. And what is more, he has his mind made up to start working into pure breds as fast as possible and get something that may be depended upon to produce as well or better than their ancestors. So Mrs. Scrub must soon be sold to the man who slides along the old "good enough way" and stays in the same old rut. We want men in the dairy business in Wisconsin who believe in improvement, so when an attempt is made to help them they are ready to take advantage of the opportunity.

REGISTERED GUERNSEY, DEW DROP'S LAD, OWNED BY OLE KROGAN.

Personally, I believe an inspector should visit many dairy farms in the state. This visit should be made to suggest better methods for the production of cleaner and healthier stock and milk that would not be a menace to the public health. I believe milk should be bought by grade and a premium price put on the cleanest milk. This leaving it to cheesemakers and buttermakers to send home milk or cream that is really too dirty to be made into cheese or butter is really imposing upon them the duty of the government. Many cheesemakers and buttermakers are tempted to take dirty milk so as not to offend their patrons, hence a grade of butter or cheese is made that is not up to the grade that could have been made if the best milk or cream had been brought to the factory. Is this right? Who suffers? In this case it is the man who does his best and not the one who does his worst. It has been my experience that in some cases patrons in some of the associations I have had were very anxious to clean up when I came and the real beauty of it was they tried to stay clean, for they did not always know the day I would come. This habit grew until it staid by them. Today, clean, well-fed, well-housed and well-bred herds give these people the satisfaction that they are doing their best, and thus contentment follows. A very small proportion of the dairymen of this state have clean, sweet-smelling barns and produce clean milk, so if we wish to compete with foreign high-quality products we would be wise to have a law which in effect would give all dairymen notice to clean up and keep clean or pull out of the business. In this way the clean man will get what is his due. The way to do this is to have a government inspector for each county, whose duty it would be to visit each dairy barn two or more times each year.

REGISTERED GUERNSEY, IMPA'S WHIPLETT III, OWNED BY OLE KROGAN.



PURE-BRED GUERNSEY CALF, HJERT ROSE BOUQUET OF RIVERVIEW, OWNED BY OLE KROGAN.

Ask the King Board of Experts

For the Plan of Ventilation Your Barn Needs

YOU want the skilled service that goes with a King System of ventilation. Like a heating plant, no ventilating system is better than its plan. And to know how to design the *right* plan takes years of experience.

Take advantage of experience back of the King Board of Experts. Write us and let us outline this personal service that goes with a

KING

System of Ventilation

Planned Individually for the Building It Goes Into

You can install King System in any barn, new or old. The King Aerators, which set on the roof, are the first part of the King System; you can have them with or without a complete system. If you are not ready for the complete system right now, at least put King Aerators on your barn and in the meantime ventilate the hay mow or upper part of the barn and add beauty to the building.

Send for These Books

One is our catalog, which is free. The other is Prof. King's Book on Ventilation (sold heretofore for 75c) mailed for 10c to cover postage and packing.

KING VENTILATING COMPANY
1144 Cedar Street
Owatonna, Minn.

King Aerators

on any roof add beauty and refinement to the building

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co.
65 Elm St., Quincy, Ill.

Pull Out Every Stump This Year

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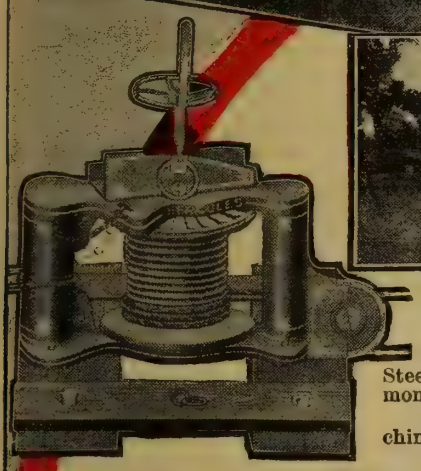


Make this your banner profit year! Farm *all* your land. Pull out the stumps—plant on virgin soil and reap the reward of *increased land value and big crops that you won't get if you let the stumps stand!*

Get my new free book at once, explaining all the facts and figures about the Hercules All-Steel Triple Power Stump Puller—the machine that so many thousands of farmers are making big money with throughout the country.

Let me tell you how you can easily make $100.00 profit for every $1.00 invested in the Hercules machine, not only the first year, but for years and years to come.

HERCULES

All-Steel Triple Power Stump Puller

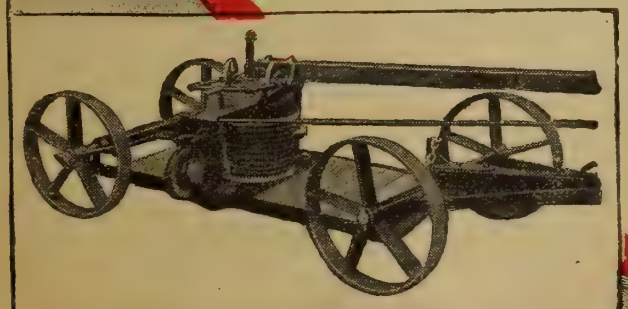
With a Hercules, you turn your loafer stump land into *money* land and harvest *money crops*. The work is easy, quick, safe and *sure*. The Hercules pulls out the *roots and all*—no grubbing or plowing into snags.

Pulls An Acre of Stumps A Day

Let me send you my free book that shows what *other* progressive farmers have done and are doing. Read where they pull the biggest stump in five minutes, clearing an acre of stumps a day. See the actual photographic illustrations of scenes from many states. Read about Hercules.

Construction

The Hercules is the *one* all steel, triple power stump puller made. It will pull any stump, green tree or hedge without straining or breaking. It is 60% lighter, and 400% stronger than any "semi-steel" or cast iron puller made. Don't be fooled on names that sound like *genuine* steel. Get a Hercules and be *sure*. It's the only puller with double safety ratchets—has self-anchoring and stump-anchoring features and is built low to the ground.



My 3-Year Guarantee

If any casting of your Hercules All-Steel, Triple Power Stump Puller breaks, any time within three years, Whether the Fault is Yours or the Machine's, I will absolutely replace any such part free of all cost to you. There are no conditions to this guarantee whatever. Any casting will be replaced promptly, whether the machine breaks by accident or through any flaw in workmanship or material.

My New Low Prices Beat All

To the first buyer in each locality I am making a special price offer this year that is bound to gain the attention and get hundreds and hundreds of orders from farmers everywhere. I want you to get in on this bargain at once. The limited number of these machines won't last long at the price I am making. If you write me at once on the coupon below or on a postal I will reserve one of these machines until I hear from you whether or not you are going to buy. Understand, your request for my book is not an order. I simply want to get the book to you at once, so you can read the remarkable facts about the Hercules All-Steel, Triple power Stump Puller and how it does such splendid work, making big profits for owners everywhere. Also **Hand-Power Stump Puller Pulls 120 000 lbs. Low Price. The ideal machine for the man who has no horses. Ask us about it.**

Mail Coupon

or a postal right now before you forget, or take down the name and address and write as soon as you get a minute's time. Address me personally.

B. A. FULLER, President

HERCULES MFG. CO.

659-24th St., Centerville, Iowa

Mr. B. A. FULLER, President, Hercules Manufacturing Co.
659 24th St., Centerville, Iowa

Dear Sir: Please send me free book about the Hercules Triple Power All-Steel Stump Puller. Also your low price to first purchasers.

Name.....

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State.....

Route No.....

HERCULES PORTABLE ONE-MAN PULLER FOR USE WITHOUT TEAM

THE only portable one-man puller on the market. One man can develop a pull of 120,000 pounds on the stump. When stumps are out a 14-year old boy can move puller. No heavy lugging or dragging

The Hercules Portable excels all other hand machines, because it is so light, strong and easy to handle. It develops more power with 6-ft. lever than any other machine with 10-ft. lever. The ideal machine for the man who has no horses. Write for particulars.

Pullman $740

The Great Big Car For the Farm

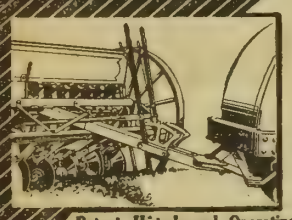
PULLMAN Cars are making money for the farmer in all sections of the country. Their durability and economy in maintenance increase your power of attending to your business in less time and at less cost. The *Pullman* is a great big car for a small cost. You receive a stupendous value for your money. The lines of the car are distinctive and attractive. There is exceptional spaciousness in the tonneau and driving seat—plenty of leg-room, hence ample comfort. The mechanical construction is good—few parts, therefore less trouble.

Pullman Cars ride smoothly and easily. Decrease your cost—increase your profits.

Pullman Motor Car Co.
DEPT. 5 York, Pa.

Cover the Seed For Big Crops

Here's the *big profit* maker for the man who grows grain of any kind. It's the drill that *opens* the furrow and *drops the seed at the* BOTTOM. No seed wasted—none lost to birds or wind. It's all *covered* in the bottom of a *packed seed bed.* Makes a top notcher of *every* crop.



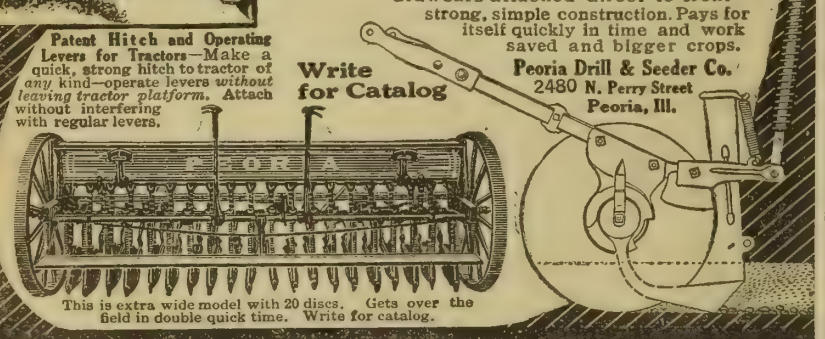
The Peoria Disc Shoe Drill

Disc cuts the trash and hard ground; force feed—sows all kinds of grain including flax. Cannot injure seed. Drop frame with disc drawbars attached direct to front—strong, simple construction. Pays for itself quickly in time and work saved and bigger crops.

Patent Hitch and Operating Levers for Tractors—Make a quick, strong hitch to tractor of *any* kind—operate levers *without leaving tractor platform.* Attach without interfering with regular levers.

Write for Catalog

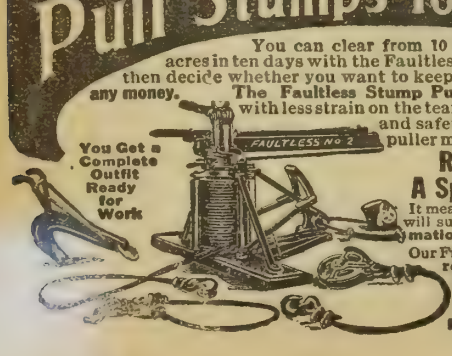
Peoria Drill & Seeder Co.
2480 N. Perry Street
Peoria, Ill.



This is extra wide model with 20 discs. Gets over the field in double quick time. Write for catalog.

Pull Stumps 10 Days-FREE

You can clear from 10 to 50 acres in ten days with the Faultless Stump Puller, and then decide whether you want to keep it or not—**before you pay us any money.** The **Faultless Stump Puller** develops greater power, with less strain on the team and the machine, and is easier and safer to handle than any other stump puller made. Backed by the strongest guarantee.



You Get a Complete Outfit Ready for Work

Right Now We Are Making A Special Low Price Offer

It means a slash in stump puller prices that will surprise you. **Write for full information at once and save money.**

Our Free Book gives much valuable and reliable information on clearing stump land, with numerous illustrations. Write for it today.

Faultless Stump Puller Co.
Dept. W Cresco, Iowa

CURRENT EVENTS

PRESIDENT WILSON is planning on making a tour of the grain belt, speaking in defense of national preparedness. His itinerary has not been completed, but it is expected that he will deliver addresses in Des Moines, Sioux City, Chicago, Cincinnati, Cleveland and Toledo. The president has become convinced that there is strong opposition to his preparedness plan in the middle West and is hopeful that his speaking tour may overcome part of this. He has changed his winter's social plans and proposes to devote almost all his time to this question of enlarging the army and the navy. He is firmly convinced that the program prepared by Secretary Garrison, of the war department (which calls for an enlargement of the regular army and the militia and the formation of a continental army of 300,000 men to serve three months each year), and by Secretary Daniels, of the navy department (which calls for the addition of more dreadnaughts to the navy than have ever been built in one year before), is the best which can be offered at this time. In championing this he aligns himself squarely opposite to Wm. J. Bryan and other pacificists. The prospects are for a political fight of the first magnitude, inasmuch as the democratic party is now split as badly as the republican party was four years ago, when Taft and Roosevelt confronted each other.

MONTENEGRO is the first of the European countries which has been fighting continuously since August 1, 1914, to sue for peace. Beset on the north, east and west by Austro-Hungarian armies, with all lines of retreat cut off except into Albania, where hostile tribesmen were to be faced, Montenegro asked Austria-Hungary for peace and her request was granted. Unconditional laying down of arms by Montenegro was made the basis of the opening of peace negotiations and these terms were accepted by the badly beaten people of the little kingdom. It had been conceded for days that the situation of Montenegro was a critical one. Although the army of the little kingdom fought valiantly against the Austro-Hungarians, it was unequal, because of inferior forces, lack of guns, and, it has been stated, a shortage in commissariat supplies, to the task of holding back the armies that had, in conjunction with their allies, succeeded in crushing Serbia. Already the Montenegrin capital and many of its important towns had fallen into the hands of the Austro-Hungarians, and the invaders were well on their way to Montenegro's chief seaport—Antivari. Montenegro is one of the smallest of the Balkan states, having an area of only 3,600 square miles, with a population of 250,000, almost entirely of Servian descent. The Montenegrin army consists of from 30,000 to 50,000 men and did valiant service in the Balkan wars. In fact, since it won its independence from Turkey over 400 years ago Montenegro has never bowed the knee to any foreign power until it was crushed by the Teutonic allies.

INTERVENTION in Mexico as a result of the troubled conditions there and the assassination of eighteen Americans a fortnight ago is persistently demanded by a number of leaders in congress. President Wilson and Secretary Lansing are determined, however, to give General Carranza ample time in which to bring the bandits, who assassinated the Americans, to trial and are persistently opposing the intervention attempts. General Carranza has already executed one of the chief bandits allied with Villa, his body having been exhibited at El Paso last week in order to prove that Carranza is doing what he can to better conditions and to bring the guilty to justice. Americans who have large investments in Mexico are the most persistent in demanding that the United States send troops across the line. Thus far the majority leaders in congress have succeeded in preventing action on any of the resolutions calling for intervention or investigation. Up to the first of this week no vote had been taken on any of the propositions, even the proposal of Senator Gore for the creation of a neutral zone in northern Mexico to be policed jointly by American and Mexican troops, and that of Senator Lewis to authorize President Wilson to use the armed forces of the nation in co-operation with Carranza troops, going over. Republican senators, however, expect to keep the issue before the senate and eventually may make an effort to get the question of intervention up for a vote.

FIVE members of the Ford peace party have been chosen as a permanent peace board to sit in Europe indefinitely, with the purpose of using all efforts to settle the war. The five are Wm. J. Bryan, Henry Ford, Jane Addams, Rev. Charles Aked and Mrs. Joseph Fels. Dr. Aked was pastor of the Baptist church which John D. Rockefeller attended for several years. Miss Addams is a noted sociological worker, head of the Hull House, of Chicago. Mrs. Fels is a noted philanthropist. The board is to be composed of an equal number of members from the various neutral countries and will remain in The Hague or Stockholm, with the financial backing of Mr. Ford. Each member will receive a salary, and the entire expenses of the board probably will amount to $50,000 yearly. Dr. Aked announced that he would offer his resignation from his San Francisco church. The other members of the Ford peace party have sailed for home, having spent several days at The Hague, where they were allowed to proceed, by the courtesy of Germany, traversing some German territory in the nighttime. Whether anything really definite and tangible has been accomplished by the trip is a debatable question. Public sentiment has been aroused and Mr. Ford claims to be satisfied. The expenses so far have been well on toward a half million dollars, but Mr. Ford is a many-time millionaire and doubtless feels he can easily afford so large a sum if any good whatever is accomplished.

GEN. VICTORIANA HUERTA, the Mexican dictator whose refusal to salute the Stars and Stripes at Tampico brought about American seizure of Vera Cruz and the attendant battle in which twenty American sailors and marines lost their lives, died last week at El Paso, Texas. Huerta left Mexico some months ago, flying to this country for refuge. Shortly thereafter he was arrested on the ground that he was attempting to promote another revolution while a guest in this country and just a few days before his death a grand jury indicted him on this charge. General Huerta seized the presidential chair in Mexico after the assassination of President Madero and his vice president, being generally held responsible for that foul deed. He ruled things with a high hand, but his trouble with the United States ultimately caused his downfall, as he could obtain no credit as long as this government refused to recognize him. His body has been placed in a vault, in the hopes that at some distant day peace may be restored in Mexico and the authorities will permit his body to be interred there, a request which General Carranza, now president, absolutely refuses.

MEXICO is infested with at least 100,000 cases of typhus fever, according to reports which have reached El Paso. American physicians armored in silk and rubber, are preparing to go into the afflicted country to combat the epidemic with the methods used lately with success, in Serbia. In the meantime, El Paso authorities are taking every precaution to keep the disease out of that city and Texas generally. Out of a population of 20,000 one Mexican town is said to have lost 1,980 by typhoid in December. The situation is extremely serious and adds to the troubles which are besetting Mexico on every hand these days.

Announcement of Louisiana's Land Opening

This announcement is appearing all over this country at the same time. We are determined to sell the lands described herein just as quickly as possible. If you want to own one of these farms then by all means send us the coupon below, together with your first remittance, today without fail. If you will not take our word as a guarantee, and you desire to know more about these lands before reserving a farm, then send the coupon for our literature below.

These Lands Described

These lands lie 690 miles south of Kansas City, on the Kansas City Southern Railroad, about sixty-five to seventy miles north of the Gulf of Mexico, in what is known as the Ozone Belt of Louisiana's Western Highlands. They lie from 130 to 185 feet above sea level, and are naturally well drained and free from any connection with alluvial meadows, drain swamps or land of similar kind. Too much cannot be said of the natural formation of this country.

Soil

The soil is a dark colored, sandy loam, underlaid by a rich clay subsoil. This soil is known as a very quick soil, as the sun warms it quickly, allowing seed to germinate rapidly. It is a natural soil, built by natural methods, and not deposited by overflows, etc.

Transportation

Beauregard and Vernon Parishes (Counties), in which Long-Belt Farms are located, enjoy unequaled transportation. The Kansas City Southern Railroad, Lake Charles & Northern Railroad, Louisiana & Pacific Railroad, Gulf, Colorado & Santa Fe Railroad, and several chartered railroads of lumber companies are available through both of these parishes. The Kansas City Southern Railroad gives an entrance into Port Arthur, where sea transportation can be had to all points of the world.

Schools

The school system of this locality is one of the most attractive points in its favor, being equal to any similar system in the North.

Roads

The roads in these two parishes are exceptionally well built, and a large amount of money, in the near future, is to be expended for additional highways.

Crops

It is our purpose to recommend general farming and live stock raising throughout this section. Louisiana's corn crop for the year just past is estimated at 48,000,000 bushels. This is a jump from 19,000,000 bushels in 1913, and shows how rapidly is Louisiana changing from a one-crop state to a diversified farming section. Here you may grow corn, oats, hay, the clovers, velvet beans, cow peas and other legumes, and with less competition than in almost any section of the North. We recommend Sudan grass growing, especially, for this section. Besides the staple crops, you can devote a few acres to trucking and can have about your home for additional profit such products as oranges, kumquats, figs, grapes, pecans, melons, ground fruit, etc. The staple crop of Louisiana, of course, is cotton, and most of our Northern farmers will want to have a crop of this great "mortgage lifter."

Live Stock, Poultry, Etc.

This section of Louisiana is well adapted to all kinds of live stock raising, cattle, sheep, hogs, and by the introduction of fancy stock for breeding purposes the native stock, which is cheap, can be turned into money very fast. There is a great demand for poultry and poultry products right in this very section, and especially in the large Southern market. This demand is now supplied by the North.

This Company—Our Plans

This Company is a sister corporation of The Long-Bell Lumber Company of this city, which holds first rank among America's largest lumber producers. You may investigate this Company through your bank, Dun's or Bradstreet's, or in any way you so desire. The fact that its name is connected with this project should be sufficient for you to investigate carefully the opportunity it offers.

We want the men and women who buy our lands to know that everything we say we will do we actually will do. We want no man to buy an acre of land who does not believe he is capable of developing his farm as a good farm should be developed. We want men and women who understand how good is the climate and soil and who know how to make the climate and soil return to them the income that is worthy of their effort. Dreamers and idlers will find nothing congenial among the men and women who are coming to the Long-Bell Farms with funds to build their homes and plant their crops, and who know what success is. We have 200,000 acres of land to sell, beside that now being offered for sale, and we want to make the first 100,000 acres we sell quickly dispose of the remaining portion of our holdings. With this end in view we have decided to sell our land upon the following lines:

The Plan

In a table given above you will see exactly what land we have to sell and the prices at which we are selling it. There is no difference between the highest priced land we offer and the lowest priced, except a price difference.

Raw, uncleared, unimproved land throughout the South is frequently sold by similar organizations to our own at $25.00 per acre. We believe the natural advantages and the benefits derived from transportation, etc., in Beauregard and Vernon Parishes tend to make our land have a value in excess of $25.00 per acre.

Read carefully the table below, and as you read remember this: **If you do not take advantage of reserving a farm now at these prices you have no one to blame but yourself.**

All you have to do is to determine the number of acres that you want to reserve. Then remit us 50c per acre, together with the reservation coupon below. As these coupons come into our office they will be allotted land at the prices then prevailing. For instance, if you get your reservation to us the first one you will receive land upon a basis of $12.00 per acre. When time limit has expired we will select you a farm at $14.00 per acre, and allotments will be made in this manner. The 50c per acre reservation applies for any size farm of 40 to 80 acres each.

As soon as we have allotted this land to you we will send you a purchase contract and a receipt for the money you have remitted to us, and we will tell you exactly the price at which your land was bought. If this price is not agreeable to you we will return to you every cent you have paid. There are no "ifs" or "ands" about this statement. The question of price is made for the purpose of quickly disposing of our land and placing settlers upon it, in order that we may settle up this community as fast as possible.

After you receive our purchase contract you will be given ninety days in which to investigate your land, without any further payments. When you have seen your land if it is not entirely to your satisfaction you may select a tract entirely to your own liking, or failing to do this, we will refund every cent you have paid us. This is the way we intend to do business.

We do not want you to buy an acre of this land, nor to reserve a tract, unless you can see your way clear not only to keep up your payments to this Company, but to make the kind of improvements that are necessary in any new farming section.

Our Free Book

No matter whether you send us a reservation or not, be sure and send us the coupon below for our free book entitled "Where Soil and Climate Are Never Idle." In this book you will find every phase of the Long-Bell Farms entirely covered. We will show you by the eye of the camera the very country you will view when you go down to investigate your land. We will give you facts and figures with respect to this section of Louisiana. We will tell you of the work done by the manager of the Long-Bell Demonstration Farm, which comprises 612 acres. You will see pictures of oranges, oats, corn, cotton, vegetables, figs and grapes grown on the very same farm.

We will tell you of a country where, upon a few acres, you can earn an easier and a larger living than you are now doing. We will tell you and show you a section of Louisiana that from the standpoint of education, health, comfort and transportation you can enjoy life to your fullest. We will show you how land values are increasing all over Louisiana, and in this section particularly, and we believe that we can convince you with this literature that here is the place for the man who wants to succeed and to locate.

We do not intend to lure you by fancy pictures of any kind, but we are going to talk to you in a man to man fashion about one of the choicest spots that is as yet left untouched by the plow of man. By all means send for our great literature today. Just clip the coupon now and place it in an envelope and send to us.

TABLE OF PRICES AND TERMS

50c per acre is the Reservation Price, no matter what land is allotted you.

Price Per Acre	Time Limit	Reservation	Down Payment Made After Inspection	Time	Int.
$12.00	Jan. 30 to Feb. 5, 1916	50c per acre	$5.00 per acre	3 to 5 yr.	6%
14.00	Feb. 6 to Feb. 15, "	50c per acre	6.00 per acre	3 to 5 yr.	6%
16.00	Feb. 16 to Apr. 1, "	50c per acre	6.00 per acre	3 to 5 yr.	6%
18.00	Apr. 2 to June 20, "	50c per acre	6.00 per acre	3 to 5 yr.	6%
20.00	June 21 to Sep. 15, "	50c per acre	6.00 per acre	3 to 5 yr.	6%
22.00	Sep. 16 to Nov. 1, "	50c per acre	6.00 per acre	3 to 5 yr.	6%
25.00	Nov. 2 to Dec. 31, "	50c per acre	6.00 per acre	3 to 5 yr.	6%

80 acres is largest farm we will sell to each man at $12.00 per acre.

You select your own land if our selection does not suit you. You are allowed 90 days in which to make an examination in person or through agent. No sale complete until land is examined and accepted by you or for you in writing. If land allotted you is not satisfactory, all reservation money will be returned to you.

How To Send Reservation

Select, for instance, 80 acres. Send us $40.00 as reservation. You will be allotted the land for sale at the prices which prevail when your reservation is received. If not satisfactory to you, we will return the $40 to you on demand. That is all you have to do. First come will be first served. The $12.00 land is the same quality as the $25.00 land. You can select your own farm, if you so desire, after you make your reservation.

Our Guarantee

Send us your reservation and remittance of 50c per acre for each acre you want to reserve, and we will allot you land at the price at which same is being sold at the time your reservation arrives. The only rule we follow is "First come, first served." As mail comes into our office it will be stamped with the day, the hour and the minute, and it will be opened in this manner.

The first reservations receive the lowest price land, the $12.00 land is the same quality as the $25.00 land, and those that follow, follow in this order. We will notify you immediately after allotment the price at which you bought. If this is not satisfactory to you, we will return every cent you have paid.

Long-Bell Farm Land Corporation

By R. A. LONG, Chairman the Board of Directors

Long-Bell Farm Land Corporation

Suite 407 R. A. Long Building, Kansas City, Missouri

RESERVATION COUPON

LONG-BELL FARM LAND CORPORATION,
Suite 407 R. A. Long Building,
Kansas City Missouri.

Gentlemen:

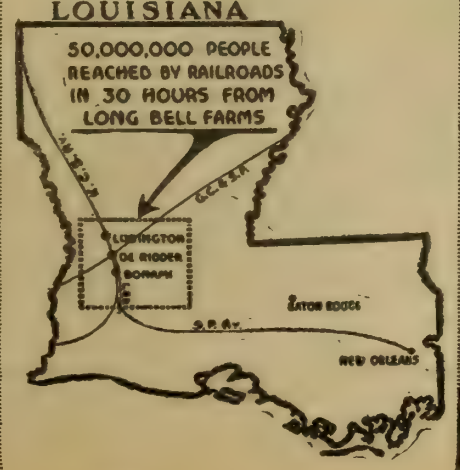
Please reserve me.....acres in your Long-Bell Farms Colony. I enclose $.....as my reservation remittance. If the land you allot me is not satisfactory to me in price, or for any other reason, you agree to return the amount of money I enclose herewith upon demand by me.

Name .....

Address .....

State .....

Note—If you have not the money in the house, write us a letter or telegraph at our expense and tell us definitely when this money will reach us, and we will make a reservation and hold to your order for ten days.



FREE BOOK COUPON

LONG-BELL FARM LAND CORPORATION,
Suite 407 R. A. Long Building,
Kansas City, Missouri.

Gentlemen:

Please send me your great book, entitled, "Where Soil and Climate Are Never Idle." I bind myself in no way to buy one of your farms, but I agree to read your book.

Name .....

Address .....

State .....

Note—If you want to know the commercial value of the company standing responsible for this announcement you may refer to any bank, express company or the commercial agencies such as Dun or Bradstreet.

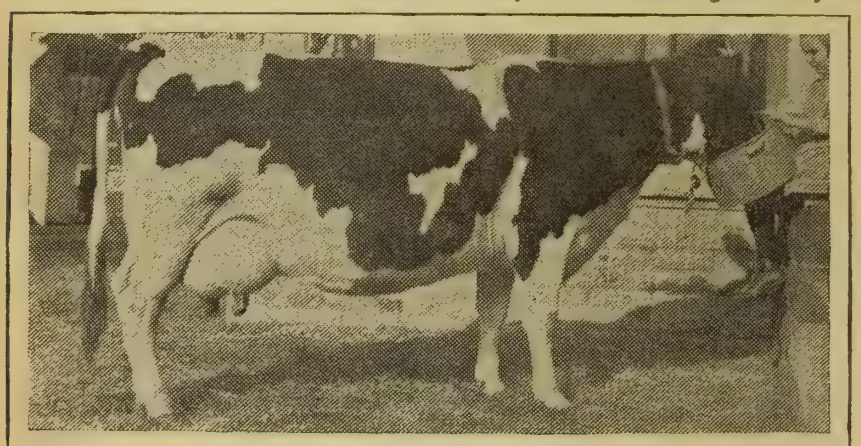
The Farm World Through the Camera

HEADED FOR A STOCK FARM.
Chester Gundlach, Grant county, won boys' stock judging of Guernsev Club.

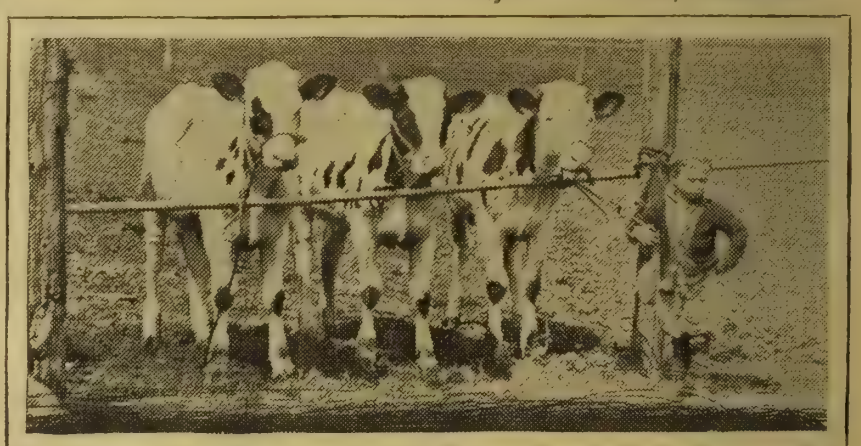
RESULTS FROM A GOOD HATCH OF CHICKS.
Mrs. James A. Vliet, Potomac, Ill., says this picture represents a small per cent of the results of her 1915 hatch. It is certainly a fine-looking and profitable flock.

ALL GOOD, BUT WHICH IS BEST?
This is a line-up of aged cows placed by the boys' judging teams at the Jefferson county meeting. A fine test of what the boys know about a good dairy animal.

A BEAUTIFUL BARRED ROCK.
A champion Wisconsin female owned by F. E. Tindall, Waterford.



THE DAIRY QUEEN AND THE FAIRY QUEEN.
One reason why Wisconsin farm girls take pride in the old home place.



THEY B'LONG TO ME AND FATHER.
Another answer to the question, "Why do boys like the farm?"

C. A. HOWARD, HAMMOND, MINN.
His steer, "Roan," exhibited Farmers' Week at Minnesota "Ag." meetings.

A SEXTET OF SPECIALISTS.
Boy experts in cattle judging, Jefferson County Guernsey Breeders' Association, 1915.

A YOUTHFUL JUDGE OF JERSEYS.
Lauren Klovdahl, winner boys' judging, Wausau-Portage Jersey Breeders.

The Breeds Are Prospering.

Wisconsin Live Stock Associations Report Good Year—Plans For Big Things Will Be Made at Madison, Feb. 9, 10 and 11.

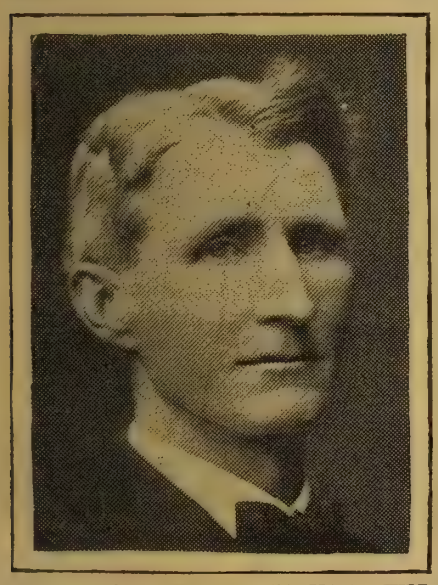
The Breeds Are Prospering.

THE past year has been one of continued progress for the live stock interests of Wisconsin. Many new records have been established by the dairy herds of the state and conditions have been rather favorable for the beef breeds, swine, horses and sheep. Prices have been conservative, yet, upon the whole, such that breeders with good stuff have made a fair margin of profit and at the present time the demand is improving. Swine breeders are looking forward to a prosperous twelve months ahead and despite the embargo because of the foot-and-mouth disease all the principal breeds show an increase for the year. The price of pork on foot has had a chilling effect on breeders, many of whom, however, believe this winter an ideal time for loading up with sows of the right kind. The horse market is especially good and the beef breeds have enjoyed a splendid year, though corn has been short. Recently the Wisconsin Live Stock Breeders' Association asked the officers of each state association to give expression to conditions as they affect their respective breeds, with the prospects for the future, and The Wisconsin Farmer is pleased to publish herewith the replies which have been received at this writing.

20 Per Cent Gain for Durocs.

To the Editor:—Every indication that counts in affecting an approximate prophecy for the year's business ahead of us points in the direction of an unusually prosperous twelve months. With the embargo of the "foot and mouth" on during the past year, we made a gain of 20 per cent over the previous year, and with this cleared up in Illinois, as it has been in other states, we will certainly come out at the end of 1916 with the banner year of our association tacked up in our "hall of fame." More inquiries from the South for information on the breed and where to buy have come to our office during the past forty-five days than has come to us in six months previously at any one time.

Sales in December have broken away from the "jinx" that seemed to have



M. H. O'KEEFE, WAUNAKEE, WIS.
President Duroc Jersey Breeders' Association.

clinched itself to the public auction system the past few months and our breeders are expecting and have a right to expect excellent prices. The price of pork on foot has had a chilling effect on growers, but there never was a better time than in this winter of 1915-16 to get loaded up with sows of the right kind. The price cannot help getting right with the enormous consumption that must eventually and naturally follow the close of the foreign struggle and the grower who is prepared when that time comes will reap the golden harvest of his forethought and preparedness.

Robert J. Evans,
Secy., American Duroc Jersey Assn.

Success to Ayrshires.

To the Editor:—The Wisconsin Ayrshire Breeders' Association was organized to promote the interests of the Ayrshire breed in Wisconsin and the middle West. While its membership is scattered throughout the state, which renders difficult the securing of representative attendance at meetings, yet the association has made commendable progress in growth of membership, which has more than doubled during the past year.

Each year sees an increase in the number of members who are placing their cows on test for advanced registry.

Wisconsin has helped to make history for the breed. At least one world's record has been made in Wisconsin. Many other creditable records have been made. A Wisconsin Ayrshire cow has twice been adjudged the superior of all other breeds, at that court of last resort, the National Dairy Show.

The members of this association have long been prominent in the show ring. It has the honor of having the "Champion Show Herd of America."

The Ayrshire Advanced Registry was started long after that of the other breeds. It has no seven-day or thirty-day tests. It recognizes nothing but a 365-day test. It has made an unparalleled advance in its Advanced Registry work, ranging from the two-year-old record of 17,974 pounds of milk and 738.23 pounds of butter fat, to the mature record of 23,022 pounds milk and 917.60 pounds butter fat. It has demonstrated the staying qualities of the breed. In five consecutive years an Ayrshire cow has produced 84,991 pounds milk and 3,362.35 pounds butter fat, or an average of

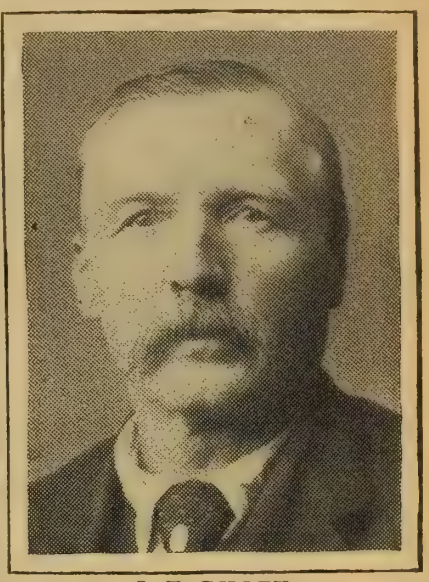
A. H. KUHLMAN, MADISON, WIS.
Secretary Wisconsin Chester White Breeders' Association.

16,991 pounds milk and 672.47 pounds butter fat for the five years. It has proven the usefulness of the Ayrshire cow. A record of 20,349 pounds milk and 774.73 pounds butter fat at twelve years of age and 18,382.6 pounds of milk and 716.36 pounds butter fat in her fourteenth year and then selling at public auction in her fifteenth year for $4,000.00 is a record unequaled by a cow of any breed.

In appearance the Ayrshire cow has no equal. She has proven her superiority as an economical producer in many contests. She is pre-eminently adapted to Wisconsin climatic conditions.

There are about 200 Ayrshire breeders in Wisconsin and this number is steadily increasing, while the established herds are also increasing in size as well as improving in quality.

Considering these facts, the future



J. F. DILLEY.
Secretary Poland China Breeders' Association.

prospects for the Ayrshire breed in Wisconsin are most gratifying.

A. J. McNab,
Pres., Wis. Ayrshire Breeders' Assn.

Good Holstein Year.

To the Editor:—The past year has been one of continued progress for the Holstein cow in Wisconsin. Although the demand for breeding stock has not been as active in recent years, due to

(Continued on page 13.)

PULL STUMPS The Quick, Easy Practical Way

Stump fields cost you money. You can't afford such waste—such loss. Get rid of the stumps—make every acre return big profits. Clear your land the Kirstin way—the quick, easy, practical way. Use the method endorsed by Government and State Officials—and by thousands upon thousands of farmers and land owners—the way that is easiest, most practical and costs you the least, both in first cost and for labor. The Kirstin One-Man way is the *proven* way. From Maine to California and from Canada to the Gulf, there are thousands of Kirstins at work and every one of them will repay their cost many times over. A Kirstin will make good in *your* stump fields.

Kirstin

One-Man Stump Puller

Easily Handled and Operated By One Man.

The improved Double Leverage Kirstin has *every* quality needed in a stump puller—gigantic *power*—variable *speeds*—enormous *strength*. Yet, with all its great power and strength, the Kirstin is the lightest stump puller made, so that one man can carry, handle and operate it with ease.

No Horses Required

In clearing land the Kirstin way, one man alone pulls stumps—your team driven by a boy can be kept busy dragging them away. Just think of the enormous difference in cost between the Kirstin One-Man way and the horse-power method—where it takes a team and a man or two to operate the puller alone.

The improved double leverage Kirstin, the new short lever model, stands the extreme tests of the very hardest stump pulling. The Kirstin's wonderful compound leverage principle develops enormous power—one man alone can easily pull all kinds of stumps—big, little, tough or green—also trees and hedges. In addition to its practically unlimited power, the Kirstin

Changes Speed While Pulling a Stump

No other stump puller at any price contains a similar device. With other machines you keep pulling at the same rate of speed even after the stump has broken loose and the hard pull is over. This is a big waste of time that the Kirstin Multiple Speed-Changing feature entirely overcomes. The Quick-Detachable connections also mean a big saving of time. Furthermore, with the Kirstin you can

Clear Over An Acre From One Anchor

No time lost in having to re-set machine for every stump—no unwinding cables from a heavy drum—no driving a team round and round—no wasted time or effort at all. Just a steady, easy, back-and-forth movement of the Kirstin lever brings stumps out quick and easy. Small trees, hedges, brush, etc., can be pulled *in bunches*. The Kirstin gives you unlimited power. It also has surplus strength in every part—and the *right speed* at the right time. Can be used anywhere—hills, swamps—rough ground or thick timber where no other puller could be used.

If you have any stumps on your farm you need a Kirstin. Why the Kirstin? Because the Kirstin is the simplest, most practical, most efficient land clearing device ever invented. Lowest first cost—lowest in cost of operation. It weighs much less than any other, is a great deal stronger, and is covered by

The KIRSTIN Iron-Clad Guarantee

You cannot afford to start to clear your land before you get the Kirstin Catalogue. This will be sent you FREE. It contains invaluable land-clearing information and full details about Kirstin One-Man Stump Pullers, our Liberal Ten-Day Try-Out Offer, the Kirstin Service Bureau, Time Payment Plans, etc. We'll also send you ABSOLUTE PROOF that the Kirstin is and does all we claim. Try a Kirstin on your land—prove its value to yourself.

Mail The Coupon

or send a postal, but be sure to write at once for your copy of free book.

Agents Wanted

FREE Book Coupon

A. J. KIRSTIN CO.,
5527 Ludington St.,
Escanaba, Mich.

Please send me your free book on Stump pulling.

Name .....

Town .....

R. F. D. or P. O. Box..... State.....

A. J. KIRSTIN CO., 5527 Ludington St. Escanaba, Mich.
350 E. Morrison St. Portland, Oregon
4205 Dennis St. Sault Ste. Marie, Ont.

In and Around Wisconsin

Fair Associations Hold Annual Meetings and Elect Officers For New Year--Manitowoc Holstein Breeders Meet.

Dousman, in Waukesha county, is planning a mid-winter fair to be held in February and committees have been appointed in cattle, horses, grain and produce, poultry, finance and general.

Trapping of fur-bearing animals has been especially good this winter and hundreds of farmers have picked up some extra money at this sport. J. P. Heffner recently made a $2,100 shipment from Muscoda which brings his total amount of shipments from that vicinity up to $18,000 for the season.

The N. Simon Cheese Company, of Appleton, has amended its articles of incorporation, increasing the capital stock from $15,000 to $50,000. N. Simon, Sr., is president and N. Simon, Jr., is secretary. Mr. Simon, it will be recalled, won much fame in 1910 by building a 4,000-pound cheese and by building the following year for the world's fair a cheese weighing 12,000 pounds.

The annual meeting of the Polk County Fair Association was recently held at St. Croix Falls and the ball started rolling for the 1916 fair. The treasurer's report showed that the indebtedness had been cut down considerably during the past two years, but that the society still owes $2,280. Directors for the coming year were chosen as follows: Pat Murphy, Milltown; Henry Peterson, Eureka; E. J. Day, Eureka; Luke Standard, Taylors Falls; J. A. Mack, St. Croix Falls; H. F. Taylor, St. Croix Falls; James Amundson, Eureka.

More evidence of the value of cow-testing associations has been gathered in Taylor county by R. A. Kolb, county agricultural representative. Recently the representative had calls from parties in Minnesota seeking two carloads of grade cows that have been in a cow-testing association. Mr. Kolb advises that there are a few carloads for sale in the county, but that last fall when an effort was made to organize an association enough farmers could not be gotten together for the purpose. As a result the men with grades for sale cannot furnish the records required by the Minnesota buyers.

The Central Wisconsin Fair Association, which is in charge of the annual Central Wisconsin Fair at Marshfield, held its annual meeting recently and J. C. Kieffer, of Auburndale, was chosen president; A. P. Bean, of Vesper, vice president; R. R. Williams, of Marshfield, secretary, and F. A. Noll of Marshfield, treasurer. The report of Secretary Williams on the 1915 fair showed that the association has a balance of $418.67 in the bank. State, county and city aid amounted to $3,123 and the total cash receipts amounted to $11,248. The indebtedness of the association was also reduced $600 and $2,493 was paid out in premiums.

The Manitowoc County Holstein-Friesian Breeders' Association held its annual winter meeting recently in the theater at Manitowoc. The meeting was held in connection with the community institute and was well attended, more than 100 breeders being present despite the fact that the mercury hung at 17 degrees below zero. Charles Hampke, secretary, reports to The Wisconsin Farmer that it was one of the most successful meetings the association has ever held. Mr. Hampke explained the essay contest which is now being conducted among the school children on the Holstein cow. Pres. Adolph Otto, of Vanders, opened the meeting and Treas. John Lorfield, of Cleveland, reported financial conditions satisfactory. R. J. Schaefer gave a very interesting address on "Raising a Calf From Birth to Maturity." Mr. Hampke reports that the association now has more than 100 members, all willing to boost, so it is seen that interest in the black and white cow is rapidly growing in that county. The association decided to hold a summer meeting in the form of a picnic next June. President Otto Secretary Hampke and Treasurer Lorfield were re-elected to those positions. P. J. Marlborough was chosen vice president and Theodore Pritzel and R. Rabenhorst directors.

The Wood County Cow-Testing Association at its recent annual meeting at Vesper elected E. E. Butters president; W. W. Clark, secretary, and A. P. Bean, treasurer for the coming year.

W. E. Stanfield, of Hillsdale, Mich., who was one of the judges at this year's state poultry show at Madison, has been chosen to judge again next year. George Wells, of Oshkosh, has been selected as the other judge in place of James A. Tucker, of Concord, Mich. The attendance this year was not as good as in the past, but the association will receive about $200 state aid. The following officers were elected by the state association for the coming year: President, M. C. Gerard, Stoughton; 1st vice president, W. H. Ashcraft, Janesville; 2d vice president, Dodgeville; secretary, James G. Halpin, Madison; treasurer, J. R. Love, Waukesha; directors, William Bell, Arlington; Frank A. Cooper, Merrimack; Mrs. L. A. Ross, Bellville; Thos. Clayton, Dodgeville; T. O. Evans, Dousman. January 2d-6th was chosen as the dates for the next show.

Sauk county has inaugurated a road-dragging contest for the farm boys, patterned after the contest which was conducted in Rock county last year. The board of supervisors has named a committee consisting of William Schenck, John Mears and Thomas Pearson to further the contest and it is expected some well-dragged roads will be found in that county the coming season as a result of the contest. The contest will be a town instead of a county affair and each town chairman will be in charge of the contest in his town. The season will end on November 1st when the prizes for the best kept stretch of road will be awarded. The plan is to assign each boy about a mile of road. The town chairman will see that he is furnished with the necessary drag. The road will first be graded and then the boy will be held responsible. The work will be paid for at the usual rates and in addition there will be the prize for the best maintained stretch of road.

September 19th-22d were chosen as the dates for the 1916 Sauk County Fair at the recent annual meeting of the county agricultural society at Baraboo. George C. Astle was elected president of the society; John Martiny, vice president; R. A. Pelton, secretary and L. E. Stone, treasurer, while Wilbur Cahoon was chosen marshall of the fair; A. Mattke, superintendent of gates; G. A. Briggs, privileges, and Henry Netcher, forage. The net profits from the 1915 fair amounted to $1,273, while in former years they ran from $400 to $500. The state aid this year totals $2,500, the maximum any fair can receive. The fair paid out $3,927 in premiums and the total receipts were $13,275. Secretary Pelton in his address to the society said that the fair was fortunate in picking a week of good weather and that the conditions which make a good fair are good weather, good grounds, good exhibits, large crowds each day, successful handling of the crowds and good judges.

Protests from orchard owners in Sauk county are pouring in upon Gov E. L. Philipp at Madison and J. G. Sanders, state entomologist, has urged that the protection of deer as far south as Sauk county is a mistake and that the legislature should at least provide a reasonable open season. Mr. Sanders has collected several bundles of small trees showing how completely the wild deer are damaging the orchards by eating the bark of young trees.

James E. Brett, president of the Walworth County Agricultural Society, which has charge of the Elkhorn fair, which is rated as one of the biggest and best county fairs in the county, retired at the recent annual meeting and these officers were elected for the coming year: President, C. F. Aldrich; vice president, L. A. Kimball; secretary, Samuel Mitchell; treasurer, Harry Cameron; superintendent privileges, W. E. Magill; chief police, Eugene Cornell; marshal, H. E. Wylie. Mr. Brett retired after sixteen years as an official of the fair, sixteen years as treasurer, one year as vice president and one year as president. The meeting also laid plans for the 1916 fair which it is proposed to make the best ever held.

HOME OF MAX BARTEL, WAUPACA COUNTY.
Mr. Bartel is a subscriber to The Wisconsin Farmer and enjoys this paper's weekly visits.

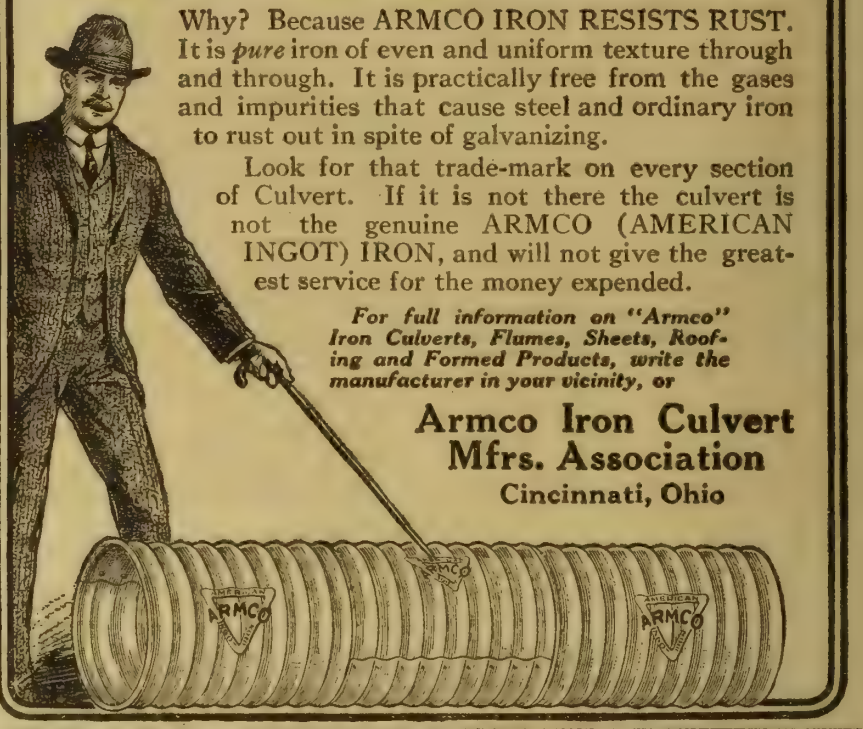
The executive committee chosen for the coming year is composed of these men: Bloomfield, E. O. Kull; Genoa Junction, John Vosburg; East Troy village, O. L. Shearer; East Troy town, Chas. Malaney; Whitewater City, A. M. Hanson; Sharon town, H. Mereness; La Grange, L. H. Phelps; La Fayette, Harry Ellsworth; Whitewater town, J. V. Collins; Lake Geneva city, A. E. Peacock; Spring Prairie, Glen Whitmore; Delavan town, E. F. Fidler; Richmond, W. S. Teetshorn; Delavan city, John Shanahan; Troy, F. F. Minett; Sugar Creek, E. J. Stearns; Walworth town, G. Q. Dunlop; Linn, L. R. Buell; Darien, E. C. Woodford; Elkhorn, G. D. Harrington; Lyons, F. A. Webster; Geneva, Leo. Dunlap; Sharon village, Chas. Shager; Walworth village, E. O. Burdick; Racine county, W. A. Fulton; Kenosha county, D. J. Vincent.

Practically all of the acreage for 1916 for sugar beets in Kenosha and Racine counties has now been contracted for and it is expected about 5,000 acres will be grown this year. The Racine & Kenosha County Beet Growers' Association met recently at Corliss, and, as the growers were satisfied with the price of $6 per ton, there was no movement for higher prices. Officers were elected for the coming year as follows: President, G. Piper, of Berryville; secretary-treasruer, J. Herzog, of Somers.

That Means True Economy!

THAT triangle trade-mark never appears on steel or common iron culverts; you will never find it on "good enough" flume or culvert sections. It is the recognized stamp of quality. It means honesty of manufacture and the assurance of long-run economy and service that will continue long after you have forgotten the price of

"ARMCO" AMERICAN INGOT IRON CULVERTS



Why? Because ARMCO IRON RESISTS RUST. It is *pure* iron of even and uniform texture through and through. It is practically free from the gases and impurities that cause steel and ordinary iron to rust out in spite of galvanizing.

Look for that trade-mark on every section of Culvert. If it is not there the culvert is not the genuine ARMCO (AMERICAN INGOT) IRON, and will not give the greatest service for the money expended.

For full information on "Armco" Iron Culverts, Flumes, Sheets, Roofing and Formed Products, write the manufacturer in your vicinity, or

Armco Iron Culvert Mfrs. Association
Cincinnati, Ohio

Ditching and Terracing Made Easy with the common sense Martin Farm Ditcher & Road Grader

Ten days trial. Money-back guarantee. cleans out laterals—grades roads

All Steel—Simple—Practical

Price only one-fourth of big machines. Does same work. Soon pays for itself. Ask your dealer or write for full information and introductory proposition.
Owensboro Ditcher & Grader Co. Inc. Box 881, Owensboro, Ky.

Concrete Mixer $11.50 Up.

Build your own foundations, floors, silos, tanks with a SHELDON BATCH MIXER at $11.50 up. Most practical low-priced mixer yet invented. Mixes 2½ cu. ft. in 1 min. Keeps six men busy. Catalog free. Write.
Sheldon Mfg. Co., Box 2293, Nebraska, Neb.

SALESMEN wanted to canvass the farming and threshing trade, soliciting order for Lubricating Oils, Greases and Paints. Previous experience unnecessary. Excellent opportunity for right party. Address The Victor Oil Company, Cleveland, Ohio.

THE BREEDS ARE PROSPERING.

(Continued from page 11.)

quarantine regulations and the general depression of the live stock breeding business because of the foot-and-mouth epidemic, sales of pure-bred Holsteins were, nevertheless, made into every county in the state during the year 1915. Prices have also been conservative, yet, upon the whole, such that breeders made a fair margin of profit.

At the present time the demand is

WM. F. RENKE, MADISON, WIS.
Ex-Secretary Wisconsin Sheep Breeders' Association.

improving. Breeders generally report increased inquiry for their surplus stock, but an inclination of buyers to still demand animals at low prices, except in cases where some particular line of breeding is desired. A few months hence will undoubtedly improve this condition also, and again find prices on a normal basis and plenty of buyers willing to pay them.

New centers of Holstein interest have continued to spring up in the state. There are not fifty-one local Holstein associations. A year ago there were forty-three. The impetus that these have given the Holstein trade in the past may be taken as a criterion of what that trade will be in the future.

Further progress has also been made by the Holstein by way of establishing new production records for the state. One of the most notable are those of the two four-year-old cows that completed records of more than 1,000 pounds of butter for a year's production. These are the first four-year-old cows in Wisconsin of any breed to make such records. W. J. Gillett, of Rosendale, is president of the Holstein-Friesian Association of Wisconsin, and Chris. Schroeder, of Racine, is secretary.

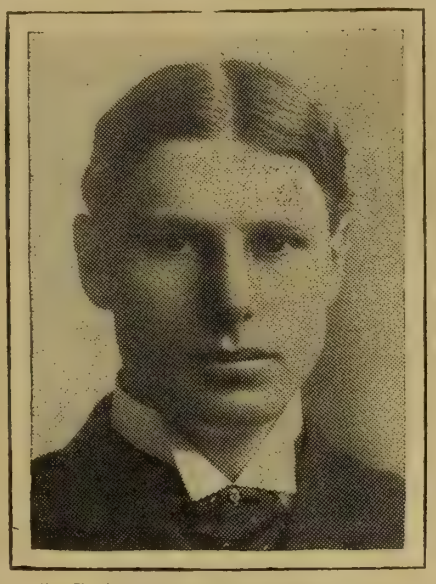
Chesters in the Front.

The Chester White hog has lately taken the lead in many states. At the great Iowa State Fair last fall they outnumbered any breed by far. So let us get together and not have it said that we breeders of Wisconsin are lacking in any way to uphold this breed and we can place them where they belong, in the front rank, if we organize as we should and do a little work. And without organizing and only working singly but little can be accomplished. I have been now almost thirty years breeding the Chester Whites and when I look back over these years till the present time I can't help but feel that the Chester White hog has steadily grown in favor with the farmer of Wisconsin. They have experienced no boom, but just a steady, natural growth. They have proven their superior breeding qualities and natural ability to put on growth and flesh on pasture where many breeds fail. The climate of Wisconsin is adapted for our breed of hogs. And I am urging you and as many as possible to come to the meeting. For years at our state fair a breeder of some other breed has judged the Chester White hogs. What we must have is a Chester breeder who has studied the type of our hogs and the true type or standard should win.

We will have no set program, but will appoint you all on the program. I wish to announce to the Chester White breeders of Wisconsin that our association will meet at Madison February 11th and must here urge all our brother breeders who can possibly attend to do so. John Fisher,
Pres. Chester White Breeders' Assn.

Fine Year for Polands.

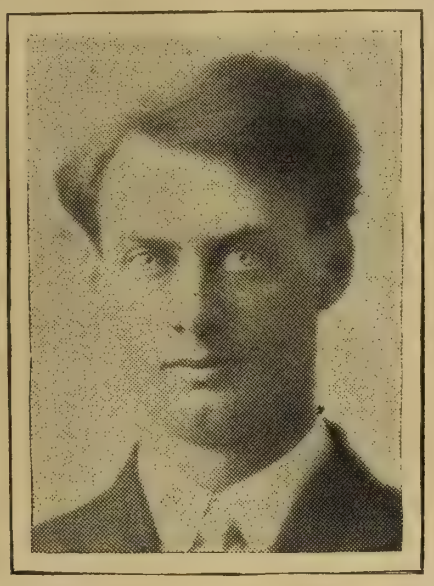
To the Editor:—Notice is hereby given that the annual meeting of the Wisconsin Poland China Breeders' Association will be held at Madison, Wis.,



J. G. FULLER, MADISON, WIS.
Secretary Wisconsin Horse Breeders' Association.

on February 11th at 7:30 p. m. This will be during the week of the Farmers' Course at Madison, also right after M. Madson & Sons' sale. This places the meeting at a time when we should have a good attendance and a good attendance is the life of any organization.

W. M. McFadden, president of the National Swine Growers' Association, also secretary of the American Poland China Record Association, is planning to be with us and talk on Futurities, and the great advancement that the breed is making in Wisconsin. The record association has taken up the pig club matter, which is a mighty big thing. The record association, in taking hold of the futurity, has, in my humble estimation, taken the most important step of its existence. To my mind no breed is offering such inducement to the young breeder as the Poland Chinas are in this great futurity show. You have eight chances at the money in each sow and boar



PARK GELBACH, LANCASTER, WIS.
President Wisconsin Aberdeen Angus Breeders' Association.

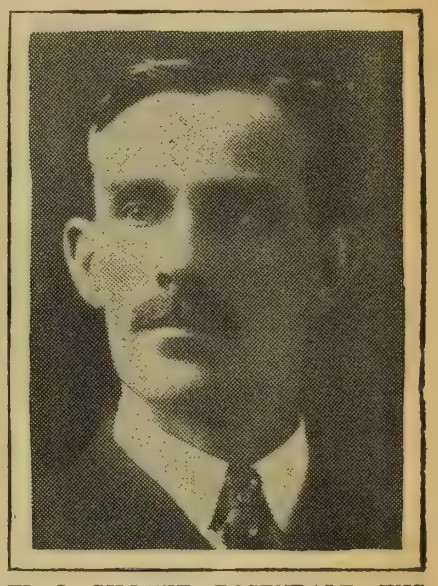
class and litters; also let every breeder support the futurity to the extent of his herd nomination and make the greatest showing the breed has ever made at the Wisconsin State Fair in 1916. The importance and value of the show ring as the standard establishing influence of the swine business can scarcely be overestimated and now with the very great majority of the Poland China winning animals so uniform and excellent. Each show year will see an improvement in the exhibits.

J. D. Diley, Secy.,
Wis. Poland China Breeders' Assn.

Bright Prospects for Sheep Men.

The coming meeting on February 10th, will be the tenth annual gathering of the Wisconsin Sheep Breeders' Association. The association has promoted a closer co-operation and a fuller understanding between Wisconsin sheep breeders.

Our sheep breeders, while they are greatly outnumbered by those pro-



W. J. GILLETT, ROSENDALE, WIS.
President Wisconsin Holstein-Friesian Breeders' Association.

moting other branches of Wisconsin live stock, have established an enviable reputation in the breeding world. At every national exposition and middle western state fairs they have been represented and in most cases have led all other states or provinces.

The part that this association has played in this development cannot be overestimated. The association has also been a consistent backer of the

(Concluded on page 21.)

Here's a car that sells by comparison:

VELIE FEATURES
115-inch wheel base—standard tread
Velie Continental motor 40 h. p.
Multiple dry disc clutch
Hotchkiss type of drive
Spiral gears in rear axle
48-inch underslung rear springs
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Two-unit Remy electric system
Velie mirror finish 20 operations deep
Fine leather deep tufted upholstery
Double-bulb headlights—rigid supports
15-gallon gasoline tank with gauge at rear
Simple rocking gear shift lever
Quick-adjustable side curtains
Cowl light shows if tail light is going
EQUIPMENT
One-man top, speedometer, dash light, portable light, coat rail, foot rail, electric horn under hood, 32x4 in. tires front and rear (non-skids on rear), 5 single-piece demountable rims and tool equipment, tool kit, etc.

Model 22 $1065

See the Car—See Also
Model 15—5 Passenger—$1400
Model 15—6 Passenger—$1450

Write for Catalog—Visit the Factory

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Velie Six

My Low Prices And High Quality Cause Big Sensation

Below are samples. Read them over. Compare them and remember everything I sell is first-class and I guarantee it. More customers is what I want. My prices get them, my quality holds them. Listen! Small profit, small selling expense for cash, no bad accounts for you to help pay for, no commissions to agents, very little advertising expense and because I am an actual grower, not a jobber, and sell direct from nursery to you is why I can make such low prices and save you 30 to 50 per cent. Read on.

100 Windbreak Evergreens Prepaid. $1.50

The finest quality evergreens I ever grew. Hardy and tough little trees, root pruned and ready to set in your nursery row. Guaranteed to reach you alive and in growing condition. A bargain that will please and satisfy—the kind that make Ferris customers for life.

APPLE TREES
4 to 6 Ft. Finest Quality

The biggest bargain ever offered. Really worth 30c each. Not a mark or blemish on them. Every tree in perfect growing condition. 25 varieties to select from, and here they are: Duchess, Early Ripe, Yellow Transparent, Whitney, Wolf River, Okabena, Peerless, Iowa Blush, Wealthy, Winesap, Patten's Greening, Price's Sweet, Peter, Northwestern Greening, Salome, Talman Sweet, Arkansas Black, Baldwin, Pewaukee, Jonathan, Grimes Golden, Roman Stem, Stayman's Winesap, Gano and Ben Davis, and in any quantity you may want from ten trees up. Every tree true to name and guaranteed to reach you in good condition.

10c

STRAWBERRIES—300 FOR $1.00

I have thousands and thousands of first-class plants, popular variety. Cheap at $1 per 100. At my special price they are a bargain that you should accept quick. Now. Today.

98c DON'T MISS THIS BARGAIN By Parcel Post, Prepaid

for following collection: 50 of our new Jones strawberries, 12 Cumberland raspberries, 2 Concord grapevines, two years old; 2 Niagara grapevines, two years old; all for 98c; if ordered at once 1 Crimson Rambler rose bush, two years old, free. Send your order for any or all of these bargains, direct from this ad. You are absolutely safe and will be treated square because all ads in this paper guaranteed by publisher. WRITE FOR FREE CATALOG full of bargains. Printed in colors. Different from most catalogs. Contains suggestions for planting and growing. Address

EARL FERRIS NURSERY CO.,
265 Bridge St. Hampton, Iowa

DON'T PASS UP BUMPER CROP OATS

Out-yields all other varieties. Extra heavy, large white grain, weighs 45 lbs. to measured bushel.

GENUINE MARQUIS WHEAT

Yielded 40 bus. per acre. Buy our pure strain, extra plump bright seed. Samples and new Illustrated SEED BOOK Free.

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104 1st Ave. FARIBAULT, MINN.

Get a "FULL STAND"

No lost seed, if you hitch a Kramer Rotary Harrow behind your plow. Discs, levels and pulverizes all in one operation. Great improvement over the old method. Light draft. **No extra horses. Easily attached to any plow. Makes a moist, finely pulverized seed bed. Seed germinates quickly. Gives a quick, even stand.** Thousands already in use. Users all enthusiastic. Write now for big free illustrated folder and special offer. **Find out about our agency proposition.**

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GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

FOR SALE—Choice recleaned and identified Wisconsin grown Red Clover, Timothy, Alsike, direct to you, good bona fide test. Prices on application. Pfeiffer Grain & Seed Co., Durand, Wis

Fruit and Garden

CRANBERRY GROWERS MEETING.

To the Editor:—The twenty-ninth annual meeting of the Wisconsin State Cranberry Growers' Association was held in Grand Rapids, Tuesday, January 11, 1916, in Daly's Opera House. Pres. Andrew Searls called the meeting to order at 10 a. m. with about thirty-five growers in attendance from the various districts. Mr. Albert D. Hedler, of Minneapolis, Minn., who is secretary of the Cranberry Lake & Development Company, at Phillips, Wisconsin, where a large bog is being constructed along scientific methods, and Mrs. Lydia M. Huyck, of Minong, Wisconsin, who is manager of the Lewis Cranberry Company, represented the northern part of the state; Mr. H. R. Laing and Andrew Bessig the eastern; Meesrs. H. J. and H. H. Gebhart, of Black River Falls, the western, while the majority came from the Mather and Cranmoor districts, which are at present the largest producing sections. The reports of the treasurer and secretary showed the financial condition to be the best it ever was, there being funds on hand which will enable the carrying out of several experiments along the line of sand pumping and pumping from a battery for a water supply, also experiments in spraying, which is now generally admitted to be necessary for the production of high quality fruit.

The old officers were re-elected, also Dr. C. L. Shear, of Washington, D. C., of the bureau of plant industry, was unanimously elected an honorary member as a recognition of the splendid work done in the interests of the cranberry growers. Mr. O. G. Malde, superintendent of the cranberry station, was also made an honorary member.

Mr. Searls' address was as interesting and helpful as it always is and dwelt upon the necessity of better frost warnings, telling of the thousands of barrels that might have been saved by a man on the ground to watch and warn growers. Mr. Malde, at Cranmoor, was wonderfully efficient, but the other districts needed a man also. Mr. A. U. Chaney, manager of the National Fruit Exchange, sent a paper on the necessity of spraying for keeping quality and cited cases in the East where it had been effective.

Mr. Andrew Bessig, trouble man for the exchange, told of his work adjusting claims. Mr. O. G. Malde gave the report of the station. Mr. C. R. Treat told of some wonderful results from the use of rock phosphate, harvesting over 600 boxes from one acre. Mr. C. M. Seeker spoke of the state fair exhibit and its possibilities. Mr. Albert Hedler and Miss Huyck told of the progress in the northern part of the state, which promises great things. Mr. S. U. Whittlesy spoke on mills and graders and outlined a new grader which all seemed to think a great improvement on present graders. Mr. F. L. Brandt, representing the Otto J. Koch Advertising Company, of Milwaukee, spoke interestingly on the possibilities of advertising to increase sales. Mr. F. J. Wood, president of the Wood County National Bank and also a stockholder in several bogs, spoke from the bankers' standpoint and told of the value of the industry to the section in which it is located.

The executive committee was authorized to use the funds for the best interests of the association.

In the evening Mr. Malde gave to a very appreciative audience a free exhibit of the many interesting views he has collected of the industry in the different parts of the state.

J. A. Fitch, Sec.

WHAT SHALL WE PLANT?

To the Editor:—Everyone on the farm and every gardener should answer the question now and send their orders to some reliable nursery or seedsman and get them booked. It is not necessay to send the money until you notify them the ground is ready. If you delay until planting time their assortment may be broken or they may be sold out.

Every farmer should have an orchard sufficient to furnish all the fruit his family needs. Twenty-five or fifty trees are enough if properly taken care of. Every fruit tree needs a little annual pruning. While young they need protection from mice and rabbits, when old they need manure every season. As soon as they get to bearing they need spraying three times at least if you expect good fruit.

Now about your location. There are very few places where you cannot grow at least a dozen kinds of apples, three kinds of plums and two kinds of cherries. The best location for the orchard is the high timber ridge, clay soil and northern slope. On such a location, with a love for the business, any man may grow fruit to sell if he selects the right kinds and gives the necessary care. The ordinary farmer can't make money growing fruit for market, still if he has the right kind of boys and girls he should give them an acre and let them grow strawberries for pocket money.

Now about varieties. For low ground and rich, black soil, plant Duchess, Tetofsky, McMahon, Longfield, Wealthy, Plumb's Cider, Patten's Greening, Windsor, Scott's Winter, McIntosh and N. W. Greening, and for top grafting a few Hiberian and Virginia crabs; for crabapples, Hyslop and Whitney; for plums, De Soto, Forest Garden and some of the new varieties lately brought out by Professor Hanson. The most profitable pear you can plant is one that never leaves out, if away from lake influence.

For the best one kind strawberry use the Dunlap, if two kinds are wanted add the Warfield, but this is pistillate and must be beside a perfect flowering kind. Of everbearers, the best three well tried in the last ten years are Progressive, Superb and Americus. If these are set in the spring and the fruit stems kept off till July they will then bear till they freeze.

Any questions asked through The Wisconsin Farmer will receive my prompt attention. Geo. J. Kellogg.

OATS

OATS, WHEAT, SPELTS, BARLEY

A quartette of giants! Great money makers! Bred to health, stooling qualities, stiff, strong straw, big yields—all registered pedigree varieties endorsed by Agricultural Stations.

SALZER'S NORTHERN GROWN SEED CORN

High grade, high testing Wisconsin and Minnesota grown Seed Corn. The kinds that will surely ripen in 1916. We have lots and lots of it. Pedigree strains.

ALFALFA, SWEET CLOVER, SUDAN AND BILLION $ GRASS

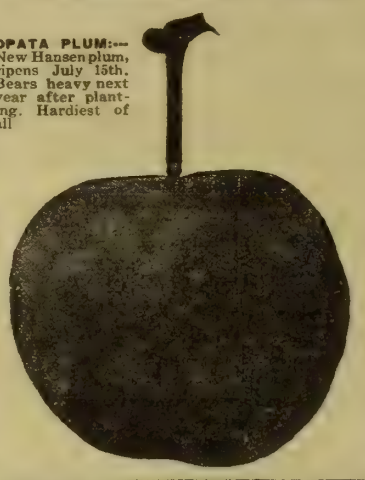
A quartette invincible. The first two made possible to grow and flourish on every farm in the United States, owing to Salzer's hardy ironclad strains—the last two growing 60 tons hay richer than Timothy in 10 weeks time on 10 acres! 50,000 bushels Seed Potatoes! 35 Packages Earliest Vegetables, $1.00, postpaid.

SALZER'S SEED CATALOG (184 Pages)

For 48 years it has stood for quality in Farm and Vegetable Seeds. It's free for the asking. A postal will bring it to you. Send for it. Brimful of good things!

JOHN A. SALZER SEED Co. BOX 123 LACROSSE, WIS.

DEPENDABLE SEED CORN FOR WISCONSIN



OPATA PLUM:—New Hansen plum, ripens July 15th. Bears heavy next year after planting. Hardiest of all

WE have been in the seed and nursery business in the Northwest for fifty years and you can depend on strictly first-class seed and trees from us. We have already received orders from Wisconsin this year for a good many thousand bushels of our seed corn, shipment has been made to numerous customers and they are satisfied. We can furnish you with such varieties as WISCONSIN NO. 12 or GOLDEN GLOW, MINNESOTA NO. 13, NORTH DAKOTA WHITE DENT and other varieties suitable to your state. Can furnish you 1914 or 1915 crop whichever you prefer. The 160-page, 1916 catalog giving all information is ready. It's free.

Gurney Seed and Nursery Company

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Strawberry Plants

$1.50 per 1000, etc. Best Michigan Stock. 100 varieties including Everbearers, also Grapes, Raspberries and other small fruits. Send today for FREE Catalog.

ALLEGAN NURSERY, BOX 23 ALLEGAN, MICH.

Olds' Silver King Corn (Wisconsin No. 7)

The Corn That Made Wisconsin Famous.

Awarded Sweepstakes, "Best Corn from Northern Zone," International Show. Averaged 73% ahead of all other corn in Wisconsin for 3 years. Olds' Fancy Ear Corn best obtainable.

Olds' 1916 Catalog

tells about this and other varieties corn, field and garden seeds. Write today. **Field Seed Collection Free.**

L. L. Olds Seed Co.
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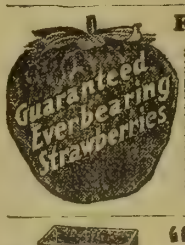
FREE 1916 PLANTING GUIDE AND PURE SEED BOOK

This 116-page four color book describes all new 1916 varieties vegetable and grain crops. Hundreds of illustrations, beautiful grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. All about alfalfa, clover, vetch, modern varieties field corn. A dictionary of gardening, encyclopedia of field crops! A flower lover's delight! A berry grower's book! An orchardist's manual! Most wonderful gardening guide-catalog ever published. A postal brings it to your home. Don't miss this book!

GALLOWAY BROS. & CO.
31 Galloway Sta, Waterloo, Iowa



Free for Testing

A pair of mated EVERBEARING STRAWBERRY PLANTS FREE if you will report as to your success with them. Will bear loads of fine, red, berries from June to November. We have counted 480 berries, blossoms and buds on a single plant. A postal will bring the plants, also enough seed of the new CEREAL FETERITA to plant a rod square of ground. Also a pkt. of perennial ORIENTAL POPPY seed. Send 10 cts for mailing expense or not, as you please. Write today and get acquainted with

THE GARDNER NURSERY COMPANY
Box 730, Osage, Iowa.

"More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate, A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR.
BOX Y STERLING, ILL.

Sweet Clover seed, special scarified, hulled and unhulled. Circular and prices on request. **John A. Sheehan, R. 4, Falmouth, Ky.**

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Farmers' Institute Follow-Up Work.

To the Editor:—With the advent of this season's farmers' institutes a more or less new feature has been added to the work to secure results as immediate as possible and to furnish ground work for summer institutes and farm demonstration meetings. The institute worker takes his pad after each session of the institute when the farmers are gathered in groups discussing phases of advanced agriculture and gets the names of farmers who want assistance in any way and then records the names of the farmers in his report with the kind of assistance which each farmer desires.

In this way thus far this season one cow-testing association has been signed up for and is now in working order with a tester and two others are in course of organization. The indications are now that as the direct result of this season's institutes at least a half dozen new cow-testing associations will be organized.

Thirty-six farmers at one meeting signed up for work in connection with the department of farm management of the college of agriculture. At another institute six farmers signified desire for help in instituting properly septic tanks in connection with their farm homes. These will be built under the supervision of the department of engineering of the college of agriculture. Many farmers are asking for help with spraying for late blight on potatoes. At two institutes fifty acres of alfalfa have been signed up to be put in properly with lime and inoculation. As the result of another institute milk sheets were called for and in all probability one farmer and his sons will begin weighing the milk of each cow. At this same institute a move was set on foot to secure a pure-bred sire for that community. This community will also organize a community potato growers' association and begin to grow better potatoes of a single variety for the market. Three concrete silos were signed up for at another institute.

The names of the farmers desiring help will be indexed upon cards at the office of farmers' institutes in Madison and then just as much service as the office can give will be given to help the farmers realize their desires.

As rapidly as results are secured through the efforts of these farmers community meetings and institutes will be held upon the farms to show and demonstrate the value of what has been done and to get other farmers to use the improved methods.

It is thus seen how a farmer signifying his desire to do something as the result of a farmers' institute in a community may be made to work out a great improvement to the benefit of every farmer in the community. By this way of doing things it is hoped to keep the farmers' institute up to its past standard of efficiency and if possible to make it even a greater agency for the agricultural advancement of Wisconsin.

Farmers at the remaining institutes ought to connect up with the office of farmers' institutes in this way and secure all of the assistance which the office is able to give. It is the desire of the office to help farmers at any and all times with propositions in which they are interested. In this way the most expert and scientific help may be brought to the farm.

E. L. Luther.

Appreciates Mr. Ingalls' Work.

To the Editor:—In all this talk of county representatives it is not right to let the work of the Eau Claire county representative, G. R. Ingalls, pass unnoticed. He is a man who gives himself personally to his work. He is never too busy to go to any f mer when he can be of any assistance. He is raising the grade of dairy cattle in the county by his co-operation with the farmers in the purchase and disposal of registered sires. In two instances, of which I know personally, he has financially aided beginners to get cows. He is a help to the teachers by giving entertainments with a lantern and pictures, and on one cold, snowy evening drove his car thirty miles to give such an entertainment out in the brush to not disappoint the teacher and people gathered there.

He is striving against great difficulties in that the people were not ready to accept his help, but he has surely made friends all over the county. The boys of the short course, which he conducts every year at Eau Claire, are his devoted admirers and friends.

Every teacher in the county feels he is a source of great help, when, in trying to raise the standards of the people of her districts, she runs up against a stone wall.

He has a charming family and a very comfortable home, "Inglenook," just two miles from Eau Claire. He has established there "the home of pure-bred Guernseys," so he practices what he preaches.

A Resident of Eau Claire County.

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield, but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.

1915 SEED CORN

Brings better results than old corn. Our seed is from the new crop. We have both rack dried and dried in the field. Test 90% to 98%. Satisfaction guaranteed. You can test the seed before you pay us. Don't take chances on old corn Write for catalog.

VERMILLION SEED CO. Box A Vermillion S. Dakota

Save With 3 Ways Cultivator Daisy Shields

Save the young corn solutely prevent on the hills. Save tra cultivator and of an extra man — enable you to plow corn one-fourth faster. Daisy Revolving Shields make corn plowing easy—no stops to uncover corn. They enable you to plow the smallest corn rapidly, do not drag trash; can't get out of adjustment.

Daisy Shields abclods from falling the cost of an exteam and the labor

Send US Your Dealer's Name

We'll arrange to send a pair of Daisy Shields for your inspection. Write today for folder and full information about these MODERN shields. Address

MUNSON MFG. CO. 118 E. COURT WINTERSET • IOWA

ALSIKE AND TIMOTHY $5.00 Per Bu.

INVESTIGATE—Best and Cheapest Seeding Known. Alsike Clover and Timothy mixed. Fully 1-3 alsike, a big bargain. Greatest hay and pasture combination grown. Write for Free Sample and 100 page catalog and circulars describing this wonderful grass mixture. Beats anything you can sow and ridiculously cheap. We handle only best tested recleaned seed guaranteed. Write before advance.

A. A. BERRY SEED CO., Box 534, Clarinda, Iowa

SEED CORN Disco Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

Buy quick! Save money—be sure of getting good seed. We fortunately carried over a few thousand bushels of choice seed from 1914 season, now offered at bargain prices. Write now for price list. Order early and get good seed.

Dakota Improved Seed Co. 27 Main St., Mitchell, S. D.

STRAWBERRY Catalog Free

The Best of the hardy varieties, bargain prices. Kellogg's Hardy Northern grown fruit plants are well grown and productive. None better. Also

THE EVERBEARING STRAWBERRIES

fruits from early summer till Nov. Send today for price list and pamphlet of instructions—62 years experience.

KELLOGG'S NURSERY, Box 224, Janesville, Wis.

PLANT NEW CORN

EARLY varieties grown from northern seed for No Iowa, Ill., Neb., So. Dak. So. Minn., Wis. Matured on stalk, sound, dry, high test, all grows, outyields old corn. Catalog and samples free.

J. B. Armstrong & Son Shenandoah, Iowa

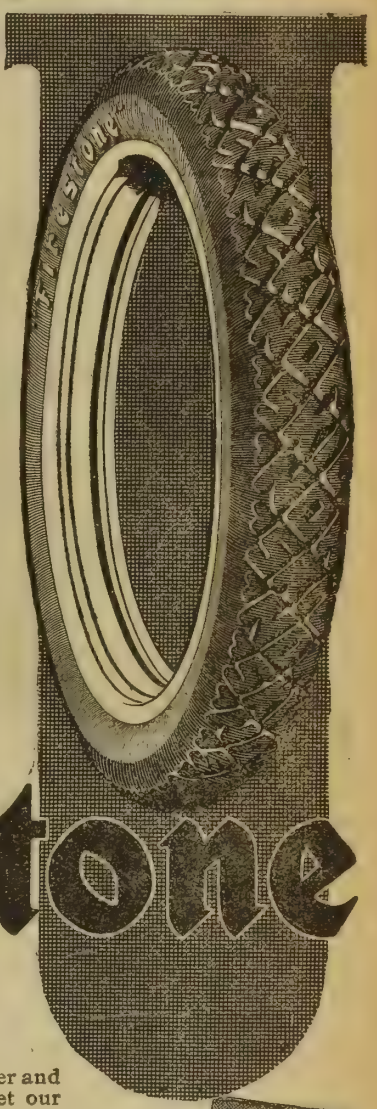
The Red Side Wall and Black Tread

This handsome design and color combination, the trade-mark "red and black," now distinguishes Firestone Tires and gives distinction to any car.

You have become used to Firestone sturdiness and toughness, which means "Most Miles per Dollar."

You have learned to expect that Firestone resiliency will give you easiest, most reliable riding.

Now you have the greatest possible style and fine appearance which can be built into a tire.



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Firestone Tire and Rubber Company
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Akron, Ohio Branches and Dealers Everywhere

THE HAPPY FARMER TRACTOR CO.

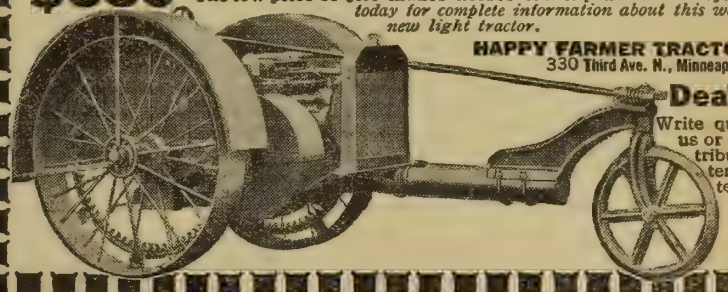
No Farmer Can Now Afford to Be Without His Tractor

Biggest tractor value ever offered. All steel construction in practically every part. Weighs several hundred pounds less than other tractors of equal power. 88 per cent of weight on drive wheels. Simple—two-thirds usual parts. You can haul anything a horse will draw, on fields or roads, and run all farm machinery with

ONLY $550

Happy Farmer Tractor

The low price of $550 makes horses too expensive to keep. *Write today for complete information about this wonderful new light tractor.*



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Dealers!

Write quick, to us or the distributor, for terms and territory.

New 1916 Plow Offer—The High-Grade Monmouth Extra Hard Steel Walking Plow

$8.10! A *big* reduction in price, due to our great increase in production—and our method of selling *Direct from Factory to Farmer*. A better Walking Plow has never been made! Look at the high-class construction! Share and moldboard the *Very Best Soft Center Steel, Finely Tempered and Polished*. Heavy steel frog, to insure ample strength and lasting durability. Heavily braced at every point of strain, to *guarantee* steady, *true* running. Beam made of High Carbon Steel. Toughest Oak Handles, nicely finished grips. The plow with "just the right hang." *And* sold direct for $8.10—with a

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Write today. Get full details of this NEW plow offer!

30 Days' Free Trial

Sold Direct From Factory

We SAVE You Money

We Make Gang and Sulky Plows Also. Get Our New, Low 1916 Prices

Send for New 1916 Catalog of Plows, Harrows, Cultivators, Grain Drills, etc. Find out how much money you can save buying from factory.

The Plow Man, with Monmouth Plow Factory, 617 South Main St., Monmouth, Ill.

Jerseys the Pride of Longview.

R. A. Long, Lumber King, Gratifies a Lifelong Ambition, Builds a Million-Dollar Farm, Stocks It With the Best Jerseys and Gets Back to the Simple Life.

WHEN R. A. Long, farm-born and country-bred, turned sixty, he decided to play a little, for the first time in his busy life. Being of a thrifty nature, he proposed to make his playing pay. Accordingly, he gratified a life-long ambition, set about to construct and equip a million-dollar farm, employed

R. A. LONG, OWNER OF AMERICA'S FINEST FARM.

a farm manager with instructions to develop this farm into a successful enterprise. Thus Longview Farm, the finest in America, came into existence.

It was no idle dream that obsessed Mr. Long all the years he was building his fortune out of yellow-pine trees, cutting a half billion feet of lumber a year down in Louisiana, Texas and Arkansas. He had been born and brought up on a farm; he had tasted many of the hardships of farm life in the early days; there had been times when the cup was bitter, but he drained it to the last dreg. Being one of eleven children on a 300-acre farm in Kentucky fifty or sixty years ago when there were no unnecessary frills or frolics, his was not an ideal life of ease. Still, throughout all the years, when fortune led him to the mountain-peak and offered him his choice of every good and desirable thing the world had to offer, R. A. Long kept thinking of the time when the ideal farm of his dreams would be his in reality. Like that other great Kentuckian whom he resembles, both physically and mentally, R. A. Long came to realize more and more each year, that "no other human occupation opens so wide a field for the profitable and agreeable combination of labor with cultivated thought as agriculture." Thus realizing the truth of what Abraham Lincoln said, Mr. Long set about to make his dreams come true.

"My life has been spent in hard work," he said, half apologetically, to those who asked why he turned from city pavements to country lanes. "I have never educated myself to play. Now I realize that I must not work too hard the remainder of my life. I must rest more and have more recreation. I was reared on a farm in Kentucky. I was always fond of live stock, of horses, cattle and hogs. When I decided to give more time to play I said to myself, 'There is something I like, why not play at that?' So I set about it on Longview Farm. It is good soil, it is the right distance from town, I can stand in the center of my farm and see practically all of the nearly 1,600 acres. It is a delightful view. My great aim shall be to make the place beautiful and attractive to the eye, but that will not be all; we shall make it pay."

Having started with nothing, found two business ventures uncongenial and unprofitable, and then amassing a fortune, beyond most men's dreams of avarice, Mr. Long did not propose to throw his money to the winds which sweep over Longview. He was going to play a bit, but he was too good a business man not to see to it that his farm investment paid good returns. It recalls the incident which his friends relate, with great glee. At a meeting of lumbermen, he was introduced as "the man who paid $10,000 for a horse." After the laughter had subsided, Mr. Long arose and turned the laugh on the man who had sought good-naturedly to ridicule his "extravagance," by saying, "I did pay $10,000 for a horse, but already this year that horse has earned me $4,000, which is forty per cent upon my original investment, and he will return me that much profit annually for the next ten or fifteen years. Have any of you made a better investment this year?" Longview is a rich man's farm, but the day is already in sight when it will prove itself a profitable money producer.

THE FARM HOME AT LONGVIEW, WHERE R. A. LONG GRATIFIES HIS DESIRE TO GET BACK TO THE COUNTRY.

Longview has many points of distinction and superiority, not the least being this: While it is the finest farm in the country (in point of general beauty, modernness, up-to-dateness of equipment, and convenience and comforts for men and stock alike) no other great "show-place" farm was originally designed on the large scale of Longview. When Mr. Long made up his mind to have a farm for himself, which should embody his ideas and ideals, he visited the large stock farms of Kentucky, Illinois, Wisconsin and other states. He found that none of them had been originally planned on the extensive scale to which they afterward grew, and consequently there was a lack of harmony and symmetry and, to a certain extent, a waste of energy. Longview was in Mr. Long's eyes, in perspective just as it appears today, before ever a shovelful of dirt was turned, before ever a rod of fence was built, before ever an animal was brought to the place. It is the only stock farm in America of its size, that was planned, laid out and built at the start to carry on the maximum of business to which it is intended to attain.

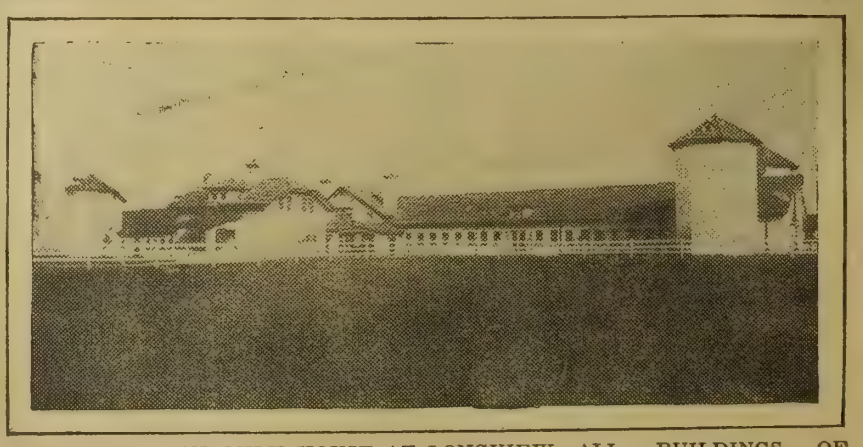
INTERIOR OF DAIRY BARN AT LONGVIEW, A VISTA OF IMMACULATE WHITE.

To accomplish the ends he had in mind, Mr. Long bought fifteen separate farms, merging them into the one farm of Longview, comprising 1,583 acres, eighteen miles out from the magnificent fourteen-story R. A. Long office building, the first steel-frame structure of consequence in Kansas City and one of the best appointed buildings in the United States. Longview is reached by one of the splendid rock roads for which Jackson county is becoming noted all over the country. It is not the secluded home of a millionaire who hides himself from public gaze. Quite the opposite; the latch string is always out at Longview, the public always welcome. Mr. Long may stand in the south loggia of his wonderful farm home and declare, with Alexander Selkirk, "I am monarch of all I survey; my right there is none to dispute," for an unobstructed view of all the splendidly-lying 1,583 acres is to be had from the hill upon which the home is built. Extending practically as far as the eye can reach is a vista of gently rolling hills and slopes, of alternating fields and forest glades, of splendidly modern buildings, all of white stucco, their red tile roofs blending with the various shades of green in the summer time, until Longview is a genuine Corot among farm landscapes. No more magnificent countryside view is to be had in all America than from the front porch at Longview, out over the acres where as good-blooded stock as can be found anywhere in the world passes its peaceful existence, past the church and school where the gospel of uplift and culture is preached and taught to old and young alike among the 150 employes of the farm, from dairy barns to show-horse barn, from work-horse barn to hog barns, with garage, sunken garden, greenhouse, pumping station, 20-acre lake, half-mile driving track, fifteen tenant houses and all the miscellaneous structures and attractions arranged most efficiently and effectively to form the harmonious whole.

Figures have a way of appalling the average mind at times, but no comprehensive idea of Longview and the scale upon which R. A. Long is carrying his farming operations can be had without the use of a few, at least.

Of the 1,583 acres, included in Longview, 940 were under cultivation last season, the chief field crops being alfalfa, corn, cane hay, clover, millet, oats, soy beans, timothy and wheat. Not one ounce was sold, every particle being fed or consumed upon the farm where it was grown. With Mr. Long's far-reaching plans as yet incomplete, there are today 50 saddle horses, 48 harness horses, 33 mules, 12 Percheron horses, 175 Jersey cattle, 75 beef cattle and 350 hogs at Long-

COW AND SHELTER BARN FOR JERSEY HERD AT LONGVIEW, R. A. LONG'S FARM



DAIRY BARN AND MILK HOUSE AT LONGVIEW—ALL BUILDINGS OF STUCCO AND TERRA COTTA.

view. Large as these figures may seem to the average 160-acre farmer, they do not represent the limit of Mr. Long's plans, for when Longview is concluded and stands forth as its creator saw it in his mind's eye before ever a stroke was done upon it, the number of Percherons will be increased to 50, the hogs to 750 and the Jerseys to 250.

Necessarily, with such large quantities of stock of splendid blood, there must be quarters not only in keeping with the wealth of Mr. Long and his reputation for doing everything right, but also with the needs of so immense a farm institution. A brief resume is all that can be given in the limits of such an article as this:

The dairy barn group consists of a dairy barn, 36x313 feet in size, with a capacity of 104 cows; a shelter shed, of the same size, with a capacity of 125 head; a calf barn, with a capacity of 75 head; a milk house, to which the milk goes through a covered passage, under the most sanitary conditions possible; a hospital and bull-pens. The whole inside of the dairy barn and the shelter barn is plastered smooth and painted. All the passageways, along which the blooded cows walk, are of concrete. All the corners and angles are rounded, the more easily to be kept clean and sanitary. The stalls in which the cows stand are floored with cork block, as soft and yielding to the feet as the finest Brussels carpet. A perfect system of ventilation throws a constant supply of fresh air into the dairy barn and removes the foul air. Feed carriers down the center carry the feed to the individual cows in their stalls. In one corner of the barn are the washrooms of the attendants, with lockers and shower baths adjacent. Each attendant is required to bathe and don a fresh white duck suit before milking begins. The milk is produced under the supervision of the Medical Milk Commission of the Jackson County Medical Society and each bottle bears its seal. To produce certified milk, which means milk as it comes from the cow with nothing added to or taken from it, requires a process, namely: All attendants bear medical inspection, the cattle are tested annually for tuberculosis, the cattle are groomed and washed before each milking, the milkers using plain white duck suits while milking and between the milking of each cow hands are washed, and so on. The milk, within a few moments, is strained and cooled below 50 degrees Fahrenheit and must so remain until delivered to the consumer. This insures absolutely pure milk with a bacteria count that is so low it is entirely harmless to the most delicate organism. This milk is largely purchased upon doctors' prescriptions for infants and invalids. Mr. Long furnishes Longview certified milk to the Mercy Hospital, of Kansas City, which hospital is for crippled and deformed children and absolutely free.

The draft-horse group of buildings consists of a barn, 36 by 240 feet in size, with a capacity of 65 head, wagon shed, implement house, blacksmith shop and boarding house for teamsters, forming a quadrangle in the center of which is a beautiful sunken garden.

The show-horse barn is the largest barn in the West, 100 by 225 feet in size, with a capacity of 36 horses, in addition to an enclosed, tan-bark arena, 70 by 175 feet in size, carriage room, harness rooms and sleeping rooms for the attendants. In one of the wings are thirty box stalls and six tie stalls for horses of high pedigree. In the other wing is a large living room for the attendants, with ten private rooms for their use, all fitted with baths. Between the two wings, in front, is a large waiting room or reception room, feed rooms and harness rooms. Around the side of the exhibition arena is a raised platform from which the fortunate guests may watch the animals as they are put through their paces.

Three hog houses, a greenhouse, a garage, a pumping station, a gateman's lodge, a stable at the driving track, a general manager's residence, an assistant manager's residence, a group of cottages and boarding houses for the dairymen, fifteen tenant houses in a large group and last, but by no means least, a combination church and school, for the exclusive use of Mr. Long's farm employes and their families—all of these buildings, like the larger and more imposing barns, of snowy white stucco, with red tile roofs—is it to be wondered at that superlatives lose their significance when Longview is first seen? Nor must mention be omitted of the seven miles of private rock road on the place, costing $50,000, and the twenty miles of snow-white board fence, each rail twelve feet long, two inches by six, so mitered and joined into the eight-foot posts that there is not a nail or a peg in all the twenty miles of hog-tight fence, which cost $25,000. Not a thing has been overlooked at Longview which might add to its beauty, comfort or convenience. The dream was of a lifetime, when it came true absolutely nothing was lacking.

The crowning glory is the farm house, a beautiful structure of white stucco, with red tile roof, commanding a hill from which an unobstructed view of the entire farm is to be had. The house is furnished in the best of taste and is a "home" in every sense of the word. Mr. Long has three great pleasures in life: His work, his church and his home. Longview gives him every opportunity to be with his family amid beautiful and congenial surroundings.

All this wonderful vista, all these magnificent structures would be but poor realization of Mr. Long's lifetime dreams if they were not devoted and dedicated to the improvement of farming and country life conditions generally. Houses and barns have risen under the hands of workingmen; it has remained for Mr. Long to put the soul into them. Dairy barns would be but poor fruition of a lifetime of effort if they did not contain the best stock procurable, if they were not devoted to making that stock still better. So it is at Longview.

No better blood is to be found anywhere in America than in the stock barns there, witness the fact that within the last two years first prizes have been won on horses, Jersey cattle and hogs at the most important fairs and horse shows. Perhaps the most noted prize was the grand champion five-gaited stallion, won at the Panama-Pacific Exposition in 1915, by My Major Dare. Innumerable prizes and trophies were won by Mr. Long's gifted daughter, Miss Loula Long, easily the most daring and accomplished horsewoman of America. Miss Long was the sensation of the 1915 New York horse show. She has shown at the most important shows in the United States and Canada, taking prizes at the London show, with her noted horse, The King, several years ago. Her most notable animals, to be found in the big show-horse barn at Longview, when not being exhibited against the pick of the world, are My Major Dare, Kentucky's Best, Imperious King, Fascination, Exposition, Catherine Grigsby, Aviation, Hesitation and Revelation. While Miss Long is thus partial to the show horse, and her father loves a fine horse devotedly, his hobby is really the splendid Jersey herd he owns, the head of which is the magnificent bull, Queen's Raleigh, and his herd of pure bred Duroc Jersey hogs. Mr. Long has won much in the live stock world; he aims still higher and is eager to do what he can to make the United States take still more commanding position in the live stock world.

Any description of Longview which did not include a pen picture of the owner would be lacking indeed. R. A. Long is sixty-five years young, an indefatigable worker who has earned every dollar of the many millions he possesses. He modestly asserts that his success is due to no unusual, uncopyable methods. "Success is wholly a matter of price," he declares, adding: "Some men will not pay it, because it means toil and self-sacrifice. A few will pay it. They labor diligently day and night and practice economy. The members of no profession, of no calling, are outside the unchangeable law that demands hard, unremitting labor as the cost of advancement."

Starting out in life a poor farm boy, he ventured into the big, waiting world with only $700 capital. Today The Long-Bell Lumber Company, of which he is president, and its allied companies have investments aggregating $31,000,000, consisting of some 350,000 acres of virgin yellow-pine timber in

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Kinsman Beauty (and Calf) No. 139476
Owned by Dr. Roberts
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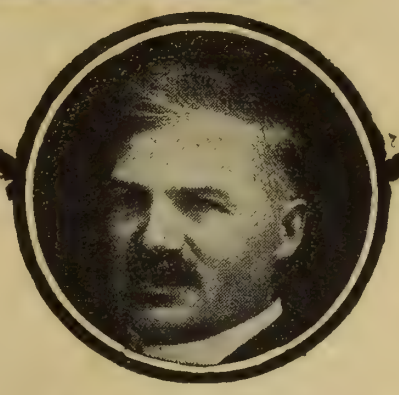

Dr. David Roberts' ANTI-ABORTION Drives Out Cow Abortion

The owners of over 5000 herds of cattle in the U. S. say that Dr. David Roberts' Anti-Abortion Treatment does wipe out contagious abortion. These people speak from experience. They *know*—they do not *guess*. They are to be believed rather than people who merely give it as their opinion that contagious abortion cannot be successfully treated. Let us give you one example—one of the 5000—which gives indisputable proof.

A Minnesota Example

Less than two years ago Dr. Roberts went to Minnesota and bought a herd of pure-bred Holsteins known to be afflicted with contagious abortion. It was a desperate case. Many treatments had been tried without success. But Dr. Roberts did not hesitate. He began his treatment on the infected animals and all traces of the infection were wiped out. The cows and heifers dropped healthy calves, carried full time—a good strong calf for every cow. Three of the cows made butter records of 14 lbs., 19 lbs. and 22 lbs. of butter per week. One has a milk record of 2000 lbs., another of 2200 lbs. per month.

Dr. Roberts has no more fear of contagious abortion in cows than if the disease did not exist, if cows are free from tuberculosis. He is absolutely master of the situation. You can apply the Roberts Treatment yourself. You can do what Dr. Roberts does if you will do what he tells you to do.

Dr. Roberts' Anti-Abortion Treatment is shipped, with instructions, direct from the laboratories at Waukesha. Address

DR. DAVID ROBERTS VETERINARY CO.
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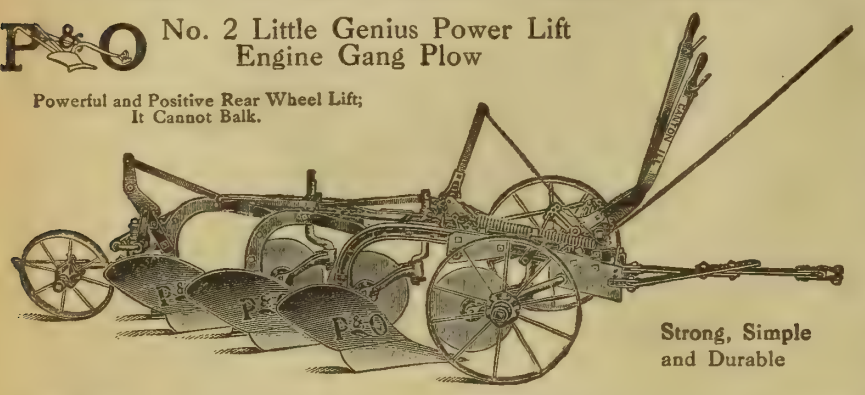
The most successful small sized engine gang plow made; complete and perfect. We want to send you a copy of the many testimonials we have received from all over the country; the strongest endorsements ever given an engine gang plow. The record of the P&O Little Genius is an unbroken series of successes and it is today the most popular engine plow of this type on the market.

P&O No. 2 Little Genius Power Lift Engine Gang Plow

Powerful and Positive Rear Wheel Lift; It Cannot Balk.



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P&O Engine Gang Plows are made with Molds or Discs, in various styles, from 2 to 12 furrow sizes. Write for Catalog, "Traction Engine Plowing."

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The West Bend ANTI-TIP Oscillator

has, besides the anti-tip features, many other features, individual to this sleigh only. It is very flexible—pulls out of ruts much easier—takes the pulling and backing strain off runners and distributes it uniformly through center of sleigh which makes sleigh run easier and back freely like a wagon. It dodges trees and obstructions far easier. It is stronger and more durable owing to weight distribution. Requires no bolsters, which brings box 6 inches closer to ground, yet gives higher clearance below beam. Simplicity gives it durability far beyond any other sleigh. It has been tried out and found to be perfect in every respect.

Ask your dealer to show you a West Bend ANTI-TIP or write us for full details.

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Louisiana, Texas and Arkansas; ten modern manufacturing plants, the annual output of which is from 25,000 to 30,000 carloads of lumber; eighty-six retail lumber yards, in Kansas, Oklahoma and Texas, a railway system of 138 miles and a string of general merchandise stores operated at the various mills; to say nothing of the two demonstration farms on the cut-over lands of Louisiana, one of 20 acres, the other of 612, where experiments are constantly being made to prove the soil efficiency of the sections and to assist the settlers brought into these new lands by the Long-Bell Farm Land Corporation, of whose executive board Mr. Long is chairman.

Having seen his pence multiply and re-multiply far beyond the most boyish dreams, Mr. Long has rendered good account of his stewardship, giving liberally of his plenty to those less fortunate and to improve conditions both in the country and in the city. The list of his benefactions is extremely long. The most notable items are these: $400,000 toward the erection of a large, non-sectarian hospital in Kansas City, under the auspices and control of the National Benevolent Association of the Christian Church, this gift ultimately to be increased to $1,000,000; $250,000 (at various times) to the Independence Boulevard Christian Church of Kansas City; $100,000 to colleges and universities throughout the country; $50,000 to maintain a national paper for the Christian Church. In addition, he is a liberal contributor to practically every worthy cause and for the last two years has maintained a tent city at Longview where 200 poor women and children are cared for each year, being given deep, revivifying breaths of God's fresh air. Whenever and wherever his hands have found anything to do to alleviate pain, relieve suffering and distress and scatter seeds of kindness they have done it, quietly, unostentatiously. In view of which there is none to question his right to lavish money as he chooses at Longview, finding in the farm (from which he climbed to the eminence of fame and fortune) the rest and recreation he craves, the fulfillment of what Lincoln had in mind when he said, "Every blade of grass is a study, and to produce two where there was but one, is both a profit and pleasure," such a profit to this self-made man of millions as no dollar sign could possibly measure, such a pleasure as no other occupation could possibly furnish.

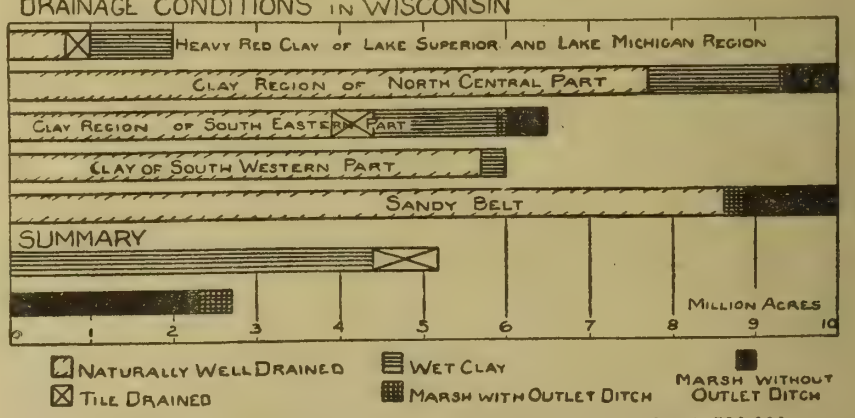
Talk Over Value of Drainage.

Wisconsin Farmers and Engineers Give Attention to a Subject Which Is of the Utmost Importance.

DRAINAGE is one of the big problems before the farmers of Wisconsin today. There are in this state something more than 7,000,000 acres of land in need of better drainage about 2,500,000 acres of which are marsh and the remaining 3,500,000 acres of wet clays, much of which is already under the plow, but which can be improved and made to produce more by better drainage.

It is encouraging to note the interest which the farmers are taking in this subject by their attendance at the meeting of the Wisconsin State Drainage Association at Grand Rapids, Wood county, last week. This was the second meeting of this association.

The local attendance was especially good, Grand Rapids being in a portion of the state which is reclaiming vast areas of farming lands. The farmers who have met crop failures because of improper drainage are beginning to realize the value of tile and drainage and that a wet soil properly tiled and drained can be made to produce increased yields. Owners of marsh lands are also seeing the value of reclaiming them and the experiences of scores of farmers who had established proper drainage which were related at the convention indicated that the increase in the value of the land more than offset the original cost.



Excessive water in soils is detrimental for these reasons:

1. Lands are too soft to cultivate.
2. Cultivation is delayed in the spring.
3. Wet soils are always sold.
4. Air is kept out of the ground and decomposition of vegetable matter is checked.
5. Standing water prevents root development.

Once the owner of wet land realizes these conditions he begins to consider drainage and the address of E. R. Jones, of Madison, secretary of the association, on "Why Tile Sometimes Fail," was very interesting to the farmer interested in this question. Mr. Jones cited the experiences of many farmers who had tiled their wet lands, discussed the advantages of the open ditch and in addition to estimating costs of tiling pointed out the necessity of doing the work properly.

Mr. Jones explained that wrong ideas prevail as to the cost of tile. Benefits more than offset costs. It has been estimated that were the two and a half million acres of marsh lands reclaimed and the three and a half million acres of wet clays, some now under the plow, drained that the profit above cost in increased value of the lands would be at least $114,000,000. The total cost of draining the more than seven million acres is estimated at $66,000,000, which would increase the values to $190,000,000, leaving a profit of $114,000,000 on an expenditure of $66,000,000. Of course, this work cannot be done in a day or a year, but were it possible to do it the above figures would represent the profit. Wisconsin, it was also pointed out, has been slow to realize the benefits of drainage as compared with other states. Illinois has reclaimed all except 900,000 acres of its 4,500,000 acres of swamp; Iowa has reclaimed about half its swamp lands and Ohio and Indiana have done equally as good work as Illinois. In Wisconsin's fifty drainage districts about 580,000 acres of swamp lands have been or are being reclaimed at a cost of about $3,000,000.

A four-inch tile laid three feet deep in a soil where the digging is reasonably easy costs 75 cents a rod for tile and labor, Mr. Jones explained. An eight-inch tile laid four feet deep costs about $2 a rod. If the laterals are four rods apart forty rods are required to the acre and the cost of the laterals is $30 an acre. An eight-inch tile with a fall of a tenth of a foot in a hundred will usually serve as an outlet for the entire under drainage from forty acres and the cost of this outlet, distributed over the entire area, may amount to $3 or $4 an acre. This added to the cost of the laterals, under ordinary conditions, makes the cost of tile in clay soils less than $35 an acre. To this may have to be added the inconvenience of boarding the laborers,

(Concluded on page 24.)

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Horn Operated by Magneto.

I have a horn on my Ford car operated by five dry cells. Could I arrange it to be operated by the Ford magneto?

Answer.—If your horn is of the vibrator type, probably yes; if it is of the revolving armature type, no. If your horn is of the vibrator type ground one terminal. Run the other terminal to the horn switch button and from the opposite switch button terminal to the magneto terminal.

Using Water With Kerosene.

My two-horse-power engine has a No. 9 Maxwell carburetor and uses kerosene for fuel. I would like to know how and where to put on a pipe so as to have hot water mixed with the kerosene. What size pipe shall I use?

Answer.—If your carburetor is intended for using water it will have a connection for a water pipe. If it is not designed to use water we doubt that you could arrange it to do satisfactorily. If you wish to experiment you might run a one-fourth inch copper pipe from your water tank to the exhaust pipe, make several turns with it around the exhaust pipe and then run the pipe to the intake manifold just above the carburetor. Make the connection at the water tank by drilling and tapping a one-eighth inch pipe tap hole in the tank; screw in a pet cock having a one-fourth inch copper pipe union at the outer end. To make the connection at the intake drill a one-fourth inch hole at the proper place, insert the pipe, bend it upward in the intake and mash the end nearly flat, so that the water will come out as a spray. Then solder the pipe to the intake, making a strong, air-tight joint. Regulate the amount of water by the pet cock.

Building a Tractor.

I would like your idea on building a tractor out of an eight-horse-power gasoline engine that is already team portable. Would this engine have traction enough to pull a plow? What would be its actual traction or pulling power? How could I transmit the power from the crank shaft when the clutch pulley takes up all the room on one side, and on the other side the shaft extends only one and one-half inches past the flywheel? Must the power be taken from the crank shaft, or could it be taken from the engine flywheel? If this engine would be too light for plowing, I would be satisfied by its being able to pull itself. I intend to use binder bullwheels for the rear, using the wheels already on for the front. How large a wheel could I use in front so as not to be geared too high for chain drive? Would I have to have a clutch? I would like to have your idea and the ideas of others on my plan.

Answer.—Your tractor would have plenty of power to pull itself and under favorable conditions would pull a twelve-inch plow. It might even pull a fourteen-inch plow. The drawbar horse power would not be much over four. The drawbar pull would be about 750 pounds at two miles per hour if your tractor weighs 1,500 pounds, about the correct weight for eight horse power. If geared to four miles per hour your drawbar pull would be only 375 pounds.

A good arrangement for the drive would be as follows: Mount a fifteen-tooth sprocket for roller chain on the crankshaft. One and one-half inches will hold it all right if the key is well fit. Use chain having a roller three-fourths of an inch long and three-fourths of an inch in diameter. Mount a jack shaft near the engine and drive this shaft from the engine, using a large sprocket equipped with a friction clutch on the jack shaft. On this shaft should be mounted a sliding gear driven by a strong key. Back of the jack shaft should be mounted the differential shaft, the differential being mounted at the middle of the shaft and small drive sprockets or pinions at the ends. On the differential case should be mounted two gears, one large and one somewhat smaller. The large gear should mesh with the sliding pinion on the jack shaft when in forward gear. Under and somewhat back of the jack shaft should be placed the reverse shaft. This shaft has one gear on it. This gear meshes with the smaller gear on the differential case. It must also mesh with the sliding gear when the sliding gear is shifted from forward to reverse position. There should be a neutral space between when the sliding gear is entirely out of mesh.

You should have a clutch, as stated above. We would not advise you to connect to the flywheel.

Ice in Water Jacket.

I have let the water freeze in the lower part of my water jacket area of my auto engine, and now I cannot crank the engine. Will the freezing ruin my engine? That is, will the ice crack the cylinders? How can I thaw this ice out? Where can I obtain literature on the care of storage batteries? Does the U. S. Department of Agriculture issue any bulletins on this subject?

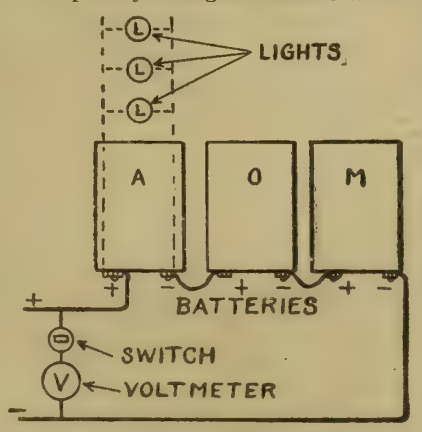
Answer.—If your engine has a water pump the water has frozen in it. This is what prevents you from cranking the engine. It may or may not be that your cylinders are cracked. Usually the inside of the cylinder does not crack, only the water jacket, which may be soldered or welded by the acetylene process. To solder a cracked water jacket file a V-shaped groove along the crack. Keep this groove free from grease or dirt and coat it with a solution of copper sulphate. This leaves a thin copper plate on the iron. Then solder up the crack, using ordinary soldering fluid. The copper plate makes the solder stick to the iron easily. To melt the ice pour boiling water into water pump.

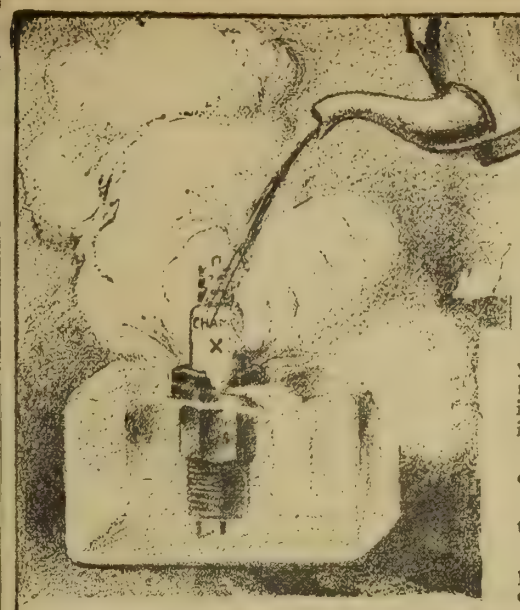
We have not seen any bulletin on storage batteries issued by the government. Any storage battery company will furnish you instructions. If you have access to a city library you can find considerable storage battery information in the I. C. S. reference books.

Charging Storage Batteries.

I have a 30-volt light plant. The generator is three-fourths kilowatt, 50-volt, direct current. How can I put on an ammeter to tell when the battery is fully charged? What is the voltage and amperage of the battery when fully charged? How could I connect an Overland and a Metz automobile battery to charge them with this outfit? Can I charge them all at the same time, or will I have to charge only one at a time?

Answer.—To tell when your battery is completely charged connect a voltmeter in the circuit as shown in the figure. Some voltmeters register only when a button is pressed. If you have one of that kind the switch is not required. When fully charged your battery will furnish 2.4 to 2.7 volts per cell, depending upon charging conditions. It should never be discharged below 1.7 volts per cell. Take the voltage reading while current is flowing from the battery. Voltage readings are not reliable when the battery is idle. To charge your other batteries you can connect them in series with your lighting battery unless the combined voltage exceeds 45 volts, your generator furnishing 50 volts. In case the combined voltage is too high you can charge the two automobile batteries by replacing battery A by a bank of lamps connected in parallel, as shown by the dotted lines. Use eight fifty-volt, fifty-watt lights in the bank. The safe discharge rate for a battery is about one-tenth of its ampere-hour rating.





This Illustrates What Happens When You Start A Cold Motor

When you "light the gas" under your cold spark plugs the effect is much the same as if you poured boiling water on a spark plug half buried in a cake of ice.

Unless the materials are exactly conditioned—

Unless the parts are accurately tooled and fitted—

Unless the contact points are properly cushioned where the strains come—something is bound to break.

If you would have absolutely reliable service, under all the varying strains of temperature, speed and load, see that your motor is equipped with

Champion

"TOLEDO MADE FOR THE WHOLE WORLD'S TRADE"

Dependable Spark Plugs

Every detail of their construction makes for endurance and dependability.

But to make them dependable we go to extremes of engineering and of processing which you would never dream of.

These extremes are practical only because such cost is distributed over such an enormous production.

Year after year our output has been greater than that of all other makes of spark plugs combined.

This season our output is *doubled* compared with last.

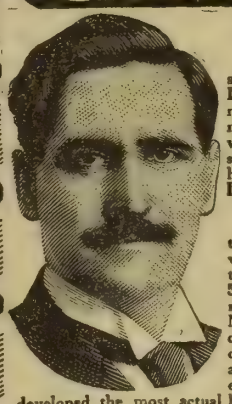
The spark plug which we designed to serve your motor we know, by actual comparative tests will serve that particular kind of motor with greater efficiency than any other kind of plug you can buy.

Your dealer knows which one it is and will gladly supply you.

Be sure the name "Champion" is on the porcelain—not merely on the box.

Champion Spark Plug Co., 503 Avondale Ave., Toledo, O.

GALLOWAY'S 1916 ENGINE CHALLENGE! READ IT!



EVERY ENGINE BUYER NOW PROTECTED!

Not one of the advertisers or manufacturers of light weight, high speeded, small bore and short stroke engines dare accept this challenge. I mean it particularly for advertisers of over-rated engines so that they may be compared with my 1916 Masterpiece Big Six engine. Let any manufacturer of an engine rated at 6 h. p. or more which is lighter in weight than the Galloway Masterpiece Big Six, of smaller bore and shorter stroke and speeded up to a greater number of revolutions per minute, send his engine to the mechanical department of any state college in the union; I will send a Galloway Masterpiece Big Six to test on the block beside it for:

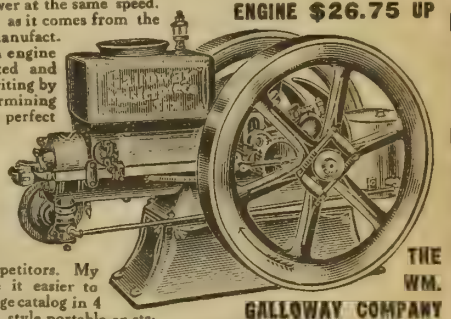
READ THESE CONDITIONS:

1. A 24 hour sustained brake test. 2. A 30 day (24h ours each) continued heavy load test, each engine pulling the same load. 3. A test for vibration, each engine mounted on the same kind of base. 4. A cooling test to determine which engine requires the least attention to keep cool. 5. Actual brake horse power of each engine when speeded up to the same number of revolutions per minute, whether fast or slow; speeding up the Masterpiece Big Six to any other engine's speed, or speeding down any competing engine to the same speed as the Galloway. When the test is over the mechanical department of the college to publish their comparisons, and determine: 1. Which engine pulled its load with the least vibration, easiest and steadiest. 2. Which engine cooled the best. 3. Which engine developed the most actual brake horse power at the same speed. 4. Actual horse power of each engine just as it comes from the crate, no expert or representative of any manufacturer to be in the testing room. 5. Which engine had the greatest surplus power over the rated and advertised capacity. 6. A comparison in writing by said mechanical engineers of all engines determining which one is the simplest in design, most perfect in operation, and which in their opinion is the best for long, hard, continuous, heavy day in and day out. engine service.

GET MY 1916 PRICES

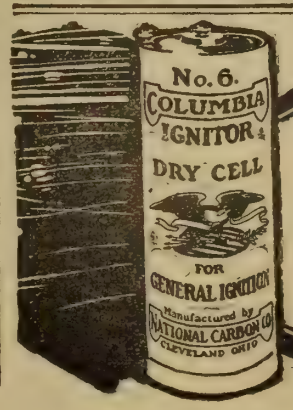
DON'T GET FOOLED and let the one dollar less asked for engines similar to the Galloway get so close to your eye that it hides the difference in quality between the Galloway Masterpiece Big Six and its competitors. My new low 1916 prices and selling plans make it easier to own an engine than ever. My new big 250 page catalog in 4 colors describes these selling plans and every style portable or stationary from 1¾ to 16 h. p. It is free. Engines shipped from Waterloo, Kansas City, Council Bluffs, St. Paul and Spokane.

ENGINE $26.75 UP



THE WM. GALLOWAY COMPANY

35 Galloway Station Waterloo, Iowa



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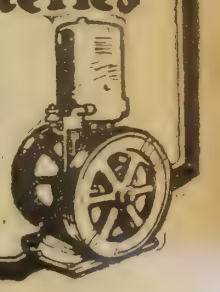
For steady, all-day running, use COLUMBIAS. For instant response, use COLUMBIAS. For bells, blasting, barn lanterns, wagon lights, telephones, signals and autos, use COLUMBIAS—the rugged, full-powered battery. It's borne the makers' name for 27 years and is sold in every part of the world.



NATIONAL CARBON COMPANY
Cleveland, Ohio

Fahnestock spring-clip binding posts, no extra charge. They prevent short circuits.

Do You use dangerous, ill-smelling, dim oil lamps and lanterns?

OR

Do You just throw the switch and have all the clear, clean, bright, steady ELECTRIC LIGHT wherever and whenever you want it, in every building on the farm?

The Wisconsin

Farm Electric Lighting Plant

JUST FOUR SIMPLE PARTS: engine, generator, switchboard, battery. Easy to install and operate. Switch is absolutely automatic. Plant is high grade in every respect; guaranteed to supply clear, constant light at a reasonable cost. Use engine a few hours each week to charge batteries, and rest of time on other farm work.

Send for Free Book

THE LAUSON-LAWTON CO.
315 BROADWAY
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This Steel Forge
Will Save Its Cost In 30 Days on Your Farm

Make blacksmith bills smaller by doing repair work at home. Our Forges are used by farmers in every State and foreign Countries. Blower is 11½ inches diameter. Hearth is 30½ inches high. Total height of Forge 43 inches.

Positively Guaranteed to be as large, durable, do as much work as any $10 forge made and to be as represented or money refunded.

Special Winter Offers

Until March 31, 1916 we offer our two styles of Farm Forges at **$3.75** and **$4.00** each. 1 pair of tongs and 1 Anvil and Vise combined $1.75 extra. Prompt shipments. This offer may not appear again. Write today. Send stamp for Catalog No. 22 and testimonials.

C. A. S. FORGE WORKS, Saranac, Mich.

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STEEL FENCE POSTS
Last a Lifetime — Drive Like a Stake

Are Your Fence Posts Guaranteed?

If not, why not? Inform yourself about "Chicago" guarantee. Real. Address Desk J, Guarantee Dept.

CHICAGO STEEL POST COMPANY
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Like Springs of Steel

Gives But Doesn't Go Down

The wavy strand wires in **Square Deal** Fence are specially drawn in our own wire mills. They never lose their elasticity. They give under sudden strain, but don't stretch out of shape. They are like springs of steel—full of life, but never brittle. They keep—

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tight and trim the year 'round. The Square Deal Lock double grips the one-piece stay wires to the strand wires—prevent slipping, bagging, sagging and buckling.

FREE to Landowners Only—Ropp's New Calculator—a 160-page book (worth 50c) answers almost every problem arising on the farm. This valuable book and our latest catalog FREE.

Keystone Steel & Wire Co., 638 Industrial, Peoria, Ill.

WRITE FOR BROWN FENCE BARGAIN BOOK AND SAMPLE

Over 25,000,000 rods Brown Fence already sold to 400,000 farmers. Factory Prices. Freight Prepaid. 150 styles, 13c per rod up. Gates and Steel Posts, too! Write postal.

THE BROWN FENCE & WIRE CO.
Dept. 35 • • • Cleveland, Ohio

ADVERTISERS follow up your newspaper advertising with country signs. Let me explain what I make and erect at $45. Will keep your name in front of the **farmer** for years. THOMPSON, the country SIGN MAN, 557 Herman St., Milwaukee, Wisconsin.

Model Creamery at Elk Mound.

Old Structure, Destroyed by Fire, Replaced by a Plant Modern in Every Respect and a Credit to Wisconsin.

ELK MOUND, Dunn county, in the erection of its new creamery, which was dedicated recently, has set an example for scores of other communities, for this new creamery ranks with the best in the state and is modern in every particular.

Wisconsin is in need of more creameries like the new Elk Mound creamery, for here the buttermaker will be able to produce the highest product under most ideal surroundings. Next in importance to securing good milk and cream from the farmers is the necessity of a good, sanitary place in which to make this raw product into the finished product. Such a place has been provided at Elk Mound.

The new creamery building is the result of a fire last spring which destroyed the old building and in planning the present structure every effort was made to erect a plant as modern as money could make it. Particular attention is called to the light in the plant, as indicated by the many large windows. Sunshine is one of the best disinfectants and the buttermaking room is flooded with abundant light. The equipment is all modern, the entire plant a model of sanitation and cleanliness and those communities which are considering erecting new creamery buildings can well afford to send representatives to visit the Elk Mound creamery.

The old building was destroyed by fire on May 27th and shortly after a meeting of the stockholders of the Elk Mound Creamery Company was held, at which it was unanimously agreed that the corporation should dissolve, but should continue in active control until a new company should be organized.

A committee was appointed to formulate a constitution and by-laws for the new organization which came into existence as the Elk Mound Co-operative Creamery Association, with a capitalization of $10,000, divided into 400 shares at $25 per share. Up to the present time 210 stockholders have bought 336 shares, bringing into the treasury $8,400. One of the rules of the new organization is that no individual shall own more than four shares of stock, and that each shareholder shall have only one vote, regardless of the number of shares owned by him.

Outside dimensions are 38x76 feet. At the east end is a covered drive ten feet wide, with arched openings. In the east end of the building proper is the intake room, 26x20x9 feet and the office, 20x10x9 feet. Descending a few steps from the intake room, the main floor is reached where the churning is done. This is 36x34x14 feet. From this room the cold storage opens, 10x16x8 feet, and the remaining floor space, 26x16 feet, is occupied by the boiler room, fuel room and bath. An attic extends over this entire space and a storage room 36x20x8 feet is under the office and intake.

In the work room are two 600-gallon cream ripening vats equipped with agitators of 1,000 pounds' capacity, a gearless combined churn and butterworker. A 600-gallon buttermilk tank is in the attic. Buttermilk, the only by-product, is sold by yearly contract to individuals. Pasteurization has not yet been practiced, but preparation has been made to carry it on whenever necessary.

A seven and one-half horse power electric motor operates the plant, at a minimum of expense and the maximum of convenience.

Hot and cold water is supplied to all parts of the building and in addition to a fine bathroom there is a shower bath with hot and cold water connections for the employes. Including plans, specifications, structure and equipment the total expense was in the neighborhood of $13,000.

The new building is situated on the old site. It is of fireproof construction and designed for practical utility, both now and for the years to come, unpretentious architecturally. The exterior is of sand mold and veneer brick, their color of soft dark red affording a pleasing contrast to the black mortar in which they are laid.

Back of this veneer is a lining of common red brick, which is backed by five-inch hollow tile with three air spaces. The interior wall finish is of two coats of cement plaster, with three coats of white dairy enamel. The steel window sash, inner and outer doors and ceilings are all of the same glistening whiteness and all pipes and radiators are coated with aluminum bronze.

The officers of the association are: President, E. C. Jacobs; secretary, M. T. Jenson; treasurer, William Siedenberg. Allan Dickson and J. W. Meyer, together with the officers, constitute the board of directors.

Chicago is the market for the greater part of the product, although an occasional shipment is made to New York and Philadelphia. One and one-fourth tons are taken each month by the local dealers and the patrons on the several routes. This amount is made into pound prints, all the rest being packed in sixty-pound tubs.

During the first three months that the creamery has been in operation under the new management there was received 350,796 pounds of cream, which yielded 97,616 pounds of butter fat. This was converted into 113,544 pounds of butter, which sold for $29,049.32. Cash paid to 267 patrons, including butter sold to them, $26,209.54.

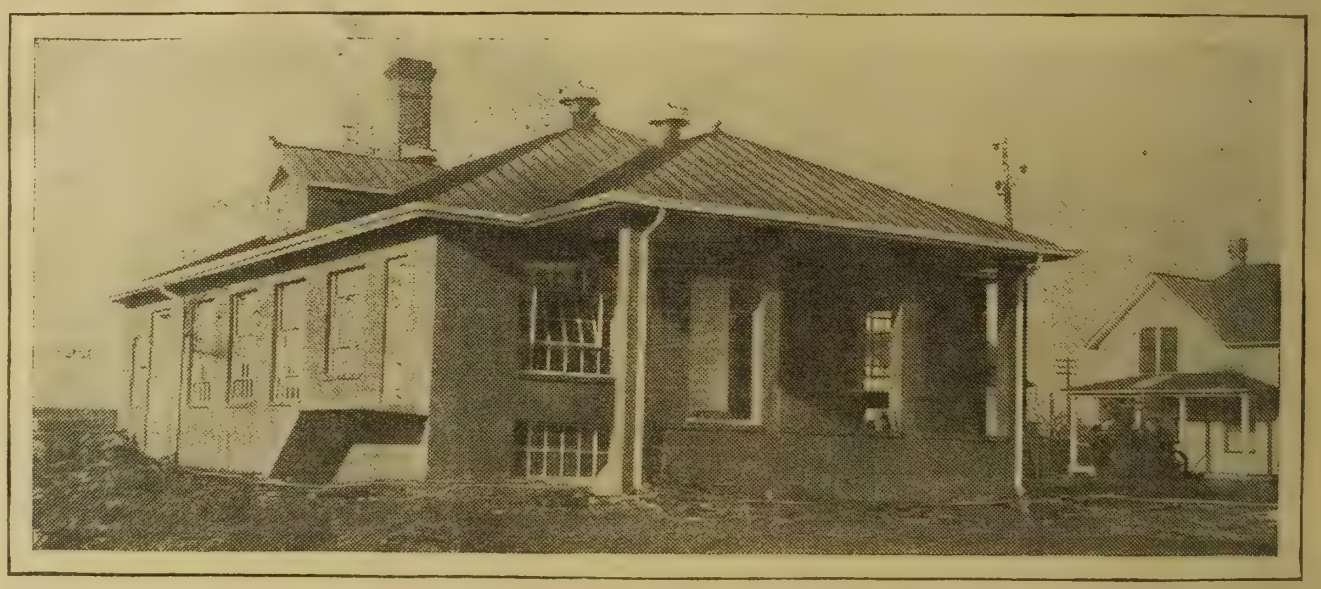
A phenomenal growth in the business of the creamery has taken place in the comparatively short period of three years. For instance, the number of patrons three years ago was 135, while at present there are 267.

Three years ago the number of tubs of butter per week was forty in winter and 115 in summer. The present output is 100 tubs per week in winter and 200 in summer.

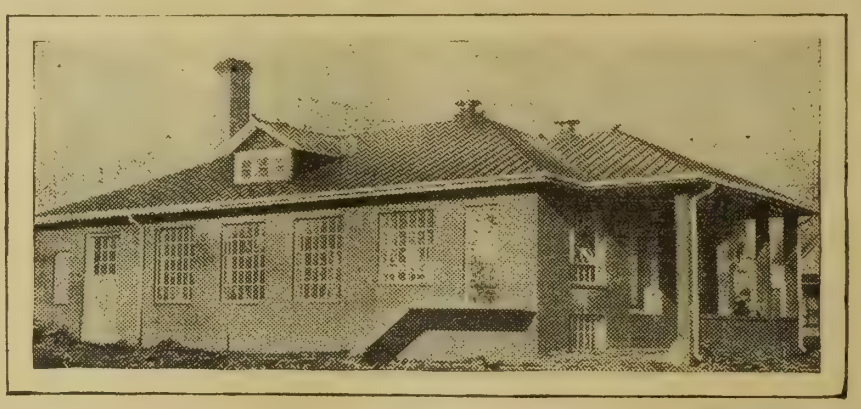
The farm separator system has been in operation for many years and five wagons collect and deliver the cream three times weekly during the summer months and three take care of the business in winter, when the volume is smaller and conditions for keeping the cream a longer period are more favorable. Cream is gathered from a radius of seven miles.

The organization of the Elk Mound Creamery Company dates back more than a score of years. Henry Ausman, Sr., was the first president and W. A. Mau secretary and treasurer. Mr. Mau was also the first buttermaker.

The Elk Mound creamery was first started in the spring of 1895 and on August 10th of that year the first delivery of whole milk, 641 pounds, was made. This produced twenty-four pounds of butter which was sold for 12 cents a pound. At the end of the first six years the delivery of milk had increased until it run as high as 15,600 pounds daily. In one year, when the change was made from the delivery of whole milk to the Moody system of farm separation, 134 separators were purchased by patrons of the creamery. Theodore J. Hass is the present buttermaker.

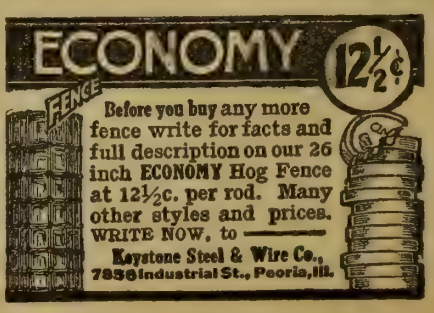


NEW CREAMERY AT ELK MOUND, DUNN COUNTY, WHICH WAS BUILT AND EQUIPPED AT A COST OF ABOUT $13,000. WISCONSIN NEEDS MORE CREAMERY BUILDINGS LIKE THIS BUILDING.



SIDE VIEW OF ELK MOUND CREAMERY SHOWING ARRANGEMENT OF WINDOWS WHICH PROVIDE ADEQUATE LIGHT AND VENTILATION.

ECONOMY 12½¢



Before you buy any more fence write for facts and full description on our 26 inch ECONOMY Hog Fence at 12½c. per rod. Many other styles and prices. WRITE NOW, to

Keystone Steel & Wire Co.,
7856 Industrial St., Peoria, Ill.

THE BREEDS ARE PROSPERING.

(Continued from page 13.)

state fair sheep show. Through its action a prize fund amounting to about $500 for Wisconsin-bred sheep at the last state fair was raised. In thus encouraging breeders to show at their own fairs a stimulus is given for further endeavor along similar lines.

There should be more sheep on Wisconsin farms. One of the greatest hindrances to the small-farm flock is the dog problem. Better legislation is needed.

The coming meeting of the Sheep Breeders' Association should be full of interest to all Wisconsin shepherds. Mr. R. J. Stone, from Illinois, a breeder of thirty years' experience, is expected to address the meeting. Remember the date and place.

Arthur Broughton, of Albany, is president of the sheep breeders.

Horse Situation Good.

The Wisconsin Horse Breeders' Association, which was organized February 15, 1906, is doing a great work for the horse-breeding industry and the year 1915 proved one of the best in the history of the organization. The demand for good, sound stock is very active and the horse breeders of the state anticipate a very prosperous coming twelve months.

The association during the year inaugurated the sale which was held in the live stock pavilion at the college of agriculture last fall and was so successful that this sale will be made an annual event. To this sale the members consign animals and it should become in a short time one of the big events in this part of the country. It is also being planned now to hold a horse show at Madison in March.

The Wisconsin Horse Breeders' Association solicits for membership and co-operation all interested in the betterment of the industry in the state and all breeders are urged to attend the annual meeting, which will be held February 10th at Madison. J. G. Fuller is secretary.

Praise for the Angus.

Wm. A. Connell, secretary of the Wisconsin Aberdeen Angus Breeders' Association, contends that from the standpoint of the beef-raising industry of Wisconsin that Aberdeen Angus cattle are best suited for this purpose. It is the breed, he believes, most economically adapted to Wisconsin. Park Gelbach, of Lancaster, is president of the association, which will also hold its annual meeting in Madison on February 10th.

The past year has been entirely satisfactory to this breed and more men are becoming interested each year in the Angus breed. The average Wisconsin farm is small and pasture is scarce. This breed is well suited to feed-lot conditions and does well on such, as they are of a quiet, gentle disposition and easily kept. Cattle of this breed mature young and make excellent baby beef, their weight being from 900 to 1,300 pounds at this period. They eat grain while on milk, so are ready for the market at from one year to eighteen months of age. This method of raising cattle shows a very small cost of production.

With the Guernsey Breeders.

The Western Guernsey Breeders' Association was organized February 14, 1900, during the meeting of the Wisconsin State Dairymen's Association at Watertown, Wisconsin. The association started with twenty-five charter members, all of whom were Wisconsin breeders except Prof. T. L. Haecker, University of Minnesota.

This association has held an annual meeting every February since that time and at least one summer meeting at the farm home of some breeder. The association has done much to encourage breeding of Guernseys by the offer of prizes at state fairs and national dairy shows, the conducting of essay contests and in aiding in the organization of local and county associations.

At several of the summer meetings scoring contests have been carried on and have always had for all their meetings the very best speakers to be obtained.

The association has now 150 annual members, fifty-five life members and fourteen honorary members from ten states.

The influence of this association has had much to do with the upbuilding of Guernsey breed interests in the middle West.

EXPERIMENT ASSOCIATION AND ALFALFA ORDER.

Wisconsin grain growers and those who raise alfalfa will find their interest in farmers' week at Madison centered in the programs Friday and Saturday, February 12th and 13th. On these days occur the meetings of the Wisconsin Agricultural Experiment Association and the Wisconsin Alfalfa Order. The annual grain show will be held in the live stock pavilion at the college of agriculture. The Wisconsin exhibit at the Panama-Pacific Exposition will be reproduced.

Sec. R. A. Moore, of the experiment association, and L. F. Graber, of the alfalfa order, have announced programs as follows:

The program for these two days, which has just been announced by R. A. Moore, secretary of the experiment association, and L. F. Graber, secretary of the alfalfa order, follows:

FRIDAY, FEBRUARY 11TH, 8 A. M.

Annual address of president—Henry Michels, Malone.

Secretary's report—Testing Seed Corn and Treatment of Seed Grains—R. A. Moore, Madison.

The Seed Corn Situation from the Practical Farmer's Standpoint—W. H. Hanchett, Sparta.

Young People's Agricultural Clubs and Why the Association Should Lend a Helping Hand—T. L. Bewick, Madison, State Leader Boys and Girls' Club Work.

Growing and Preparing Grains for Exhibition—H. T. Draheim, Gotham, winner of largest number of first prizes at last year's grain show.

Our State and County Fairs—Hon. C. P. Norgord, Madison, Commissioner of Agriculture.

Address—Science and the Soil—Prof. H. G. Bell, Chicago, Agronomist Middle West Social Imp. Committee.

Certification of Seed Potatoes—Prof. J. G. Milward, Madison, secretary Wisconsin Potato Growers' Assn.

The Drying of Potatoes—Dr. H. E. Horton, Washington, D. C., American Steel & Wire Co., Chicago.

ALFALFA ORDER, 1:30 P. M.

President's address—Jas. B. Cheesman, Racine.

Secretary's report—L. F. Graber, Madison.

Alfalfa From the Railroad Man's Viewpoint—A. C. Johnson, Traffic Mgr., C. & N. W. Ry. Co., Chicago.

Alfalfa on Every Farm—P. G. Holden, Director Agr. Extension, I. H. C., Chicago.

Motion pictures on alfalfa growing in Wisconsin.

AUDITORIUM, AGRICULTURAL HALL FRIDAY, 7:30 P. M.

Joint session of the experiment association farmers' course with short and long course literary societies.

Music—Agricultural Orchestra.

Address of welcome—Dean H. L. Russell.

Address—Adda F. Howie.

Music—Agricultural Orchestra.

Recognition exercises.

Music—Agricultural Orchestra.

AUDITORIUM, AGRICULTURAL HALL SATURDAY, FEBRUARY 12TH, 8:30 P. M.

Business meeting of the experiment association.

Reports of committees and election of officers.

Sudan Grass in Wisconsin—Prof. Geo. B. Mortimer, Madison.

Report on Association's Co-operative Experimental Work—J. J Garland, Assistant to Secretary, Madison.

Soil Management for Seed Corn Production—Noyes Raessler, Beloit.

Agricultural Opportunities in Wisconsin—Ben Faast, Eau Claire.

Uniting Country and City Efforts—Hon. Burt Williams, Madison.

Secretary Moore wishes it known that any farmer can exhibit at the grain show and that it is not required that he be a member of the experiment association to compete. The only requirement from nonmembers is a 25-cent entry fee for each sample exhibited.

As the grain show must be put up and judged before the farmers' course begins all grains must be in Madison by Thursday morning, February 3d. The prize list is especially attractive this year and may be secured from the secretary.

The officers of the alfalfa order are:

President—Jas. B. Cheesman, Racine, Wis.

Vice president—Ex-Gov. W. D. Hoard, Ft. Atkinson, Wis.

Secretary—L. F. Graber, Madison, Wis.

The officers of the experiment association are:

President—Henry Michels, Malone.

Vice president—J. R. Thorpe, Tavera.

Secretary—Ransom A. Moore, Madison.

Asst. to the Secy.—J. J. Garland, Madison.

Treasurer—Henry E. Krueger, Beaver Dam.

Clerk and Stenographer—Clara Brabant.

Executive Committee—Geo. W. Davies, North Freedom; J. R. Thorpe, Tavera; A. L. Stone, Madison; Frank Bell, Columbus; Jesse Van Natta, Dodgeville; Officers of Association, Ex-Officio.

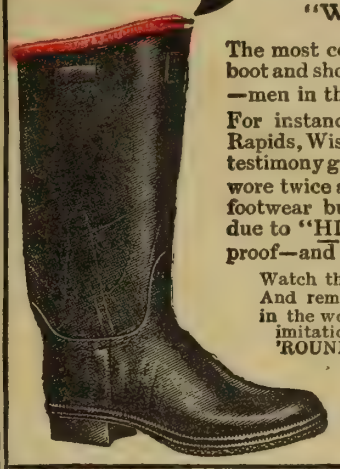
We want you to read these letters!

If you wear rubber boots you'll be interested. They give some remarkable opinions on

Goodrich "HIPRESS"

THE ORIGINAL Brown and White Rubber Footwear

"With the Red-Line 'round the top"



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They are worth Money

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

FROM A DANE COUNTY BREEDER.

To the Editor:—I have done a good real to improve poultry in Wisconsin and other states. I am breeding the utility Barred Rocks, large birds and good layers. We keep about 400 birds. Sold 9,000 eggs for hatching this year, also will sell about fifty cockerels this winter for breeding. We have 100 Rouen ducks, some Pearl guineas and Poland China hogs.

As regards feeding for eggs in winter, first you must have early-hatched pullets from strong, vigorous stock, well fed through the summer. When it comes cold make them work. Take some bundles of wheat, scatter them on the floor and some scratch feed in the morning. At noon fill self-feeders with ground oats, corn and bran. At night feed Yellow Dent corn. It makes a good egg. You must have a farm house and good yard, water, grit, oyster shell, slaked lime, wood ashes, second crop clover or alfalfa once a week, boiled potatoes, boiled oats, lard scraps pounded fine on a plank floor. When it is warm enough open the door and let the sun shine on them. There are lots of things that can be done.

Do I believe in open-air poultry house? No, I like a warm house, facing the south, some windows and large doors to open to let the sunshine in. I like a scratching shed, open front and a curtain to let down.

How to keep your poultry houses free from lice and mites: For mites I have my roosts hung on hinges, tied up with ropes at the other end. I raise them up and whitewash with hot, thin lime and sprinkle dry lime on the floor. For lice I have a box with hard coal ashes for the hens to dust in. When hatched with hens the lice go onto the little chickens. I have a recipe that will kill the lice on little chicks when two days old and not hurt them. (Meaning painless death for the lice.)

I have had a few cases of roup. The ax is the only cure I can find. I clean out the poultry houses and scatter lime around, scald out the drinking dishes and put permanganate of potash in the drinking water twice a week for a while.

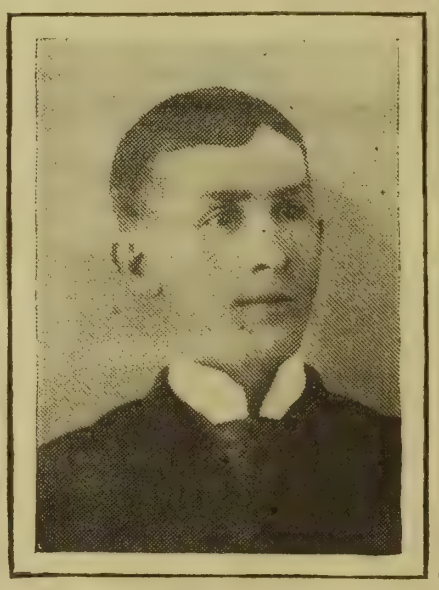
After the breeding season is over I pen my roosters up, then I sell eggs that will keep for winter packing for 2 to 5 cents a dozen more than the stores pay. Wm. Davenport.

Dane Co., Wisconsin.

APPROVES OPEN AIR HOUSING.

To the Editor:—We breed Barred Rocks and waterfowl. At the last Wisconsin fair we exhibited ten waterfowl, four Toulouse geese and six Pekin ducks and won eight ribbons out of the ten entries, three firsts, two seconds, one third and two fourths. We regret very much that we haven't some photographs of our stock to send The Wisconsin Farmer.

In feeding for winter eggs we find we get the best results from feeding a small feed of oats and wheat in litter, so that the chicks will get sufficient exercise early in the morning when they first leave the perch. We



FRED KRINKEY, ROCK COUNTY.
A successful Buff Orpington breeder.

scatter their morning feed in the litter the night before after the birds have gone to roost so that it will be there when the birds get up. About eight o'clock, or as soon as the birds have cleaned up the oats and wheat feed, a warm mash consisting of bran, corn meal, beef scrap and alfalfa meal, a little oil meal in the mash once a week is good. Feed plenty of greens. Sprouted oats is an excellent green food for laying hens. Feed the green oats at noon. Feed a good feed of whole grain in the evening, consisting of wheat, oats, barley and a little corn. Feed corn sparingly to laying hens or the hens will get fat and lazy. Serious results will come to the overfattened birds; no eggs and a loss of feed.

We do most strongly approve of the open air system of housing. It is natural that the birds should live out in the open air. So have an open front in the poultry house with a curtain in front which can be dropped on cold and stormy weather and raised on bright days so as to let in all the sunlight and fresh air you can. The housing of poultry is one of the biggest stumbling blocks in the poultry business.

To rid the birds from lice keep the house clean. Spray with a strong solution of daytholeum and water, paint the roosts with a wash made of kerosene and carbolic acid. Wood ashes placed in a box is good for the birds to dust in.

We have not been troubled with roup and we believe the principal cause to come from bad housing, by this we mean (1) by not keeping the houses clean (2) by not keeping the houses well aired (3) by keeping too many birds in the same house. Disinfect the poultry house and yard thoroughly with a good strong solution of daytholeum and water. If this is done twice a year, once in the spring and again in the fall, the houses kept clean, well aired and not overcrowded, we believe that there will not be any trouble with roup.

Waterford, Wis. Hardie Bros.

SELECTING HENS FOR SETTING.

To the Editor:—We always select two-year-old hens to be used as sitters. Hens of this age make better mothers than pullets. Pullets, as a rule, are more nervous than the older hens. The hen will sit more quietly upon her eggs during the period of incubation; therefore the hatching will be more uniform and also a more successful hatch will be the result.

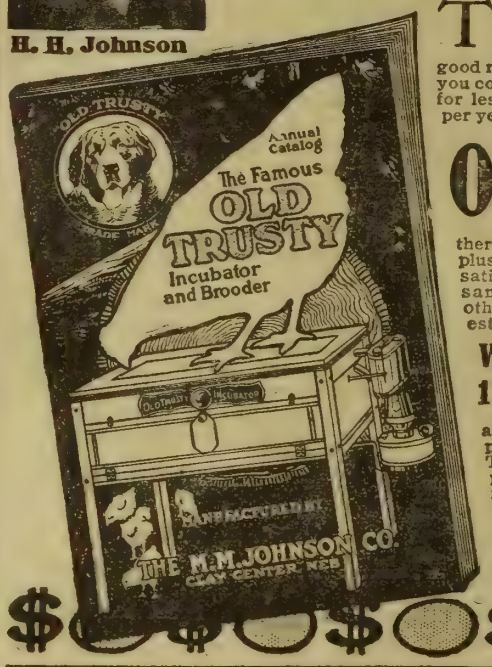
Pullets that have been producing eggs through the winter will, of course, become broody during the hatching season, but we confine these in slatted coops kept for this purpose, and by feeding and watering them well for a few days their desire for setting will vanish and in a short time they will be laying again.

We prefer hatching out the greater part of our chicks during the months of February and March. The pullets from these hatches are kept, which make our winter layers. The roosters are sold when weighing two pounds, and for these we secure the top prices.

We prefer sound, hard-shelled eggs of uniform size for hatching, and those from the older hens give the best results. We prefer setting as many as eight or ten hens at the same time so that the chicks will all be of the same age, and there will be no trampling of the younger ones as would be the case if the broods came off at different times. Then, too, the

H. H. Johnson

"Averaged 90% Hatches Through Twelve Years



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Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines. Ironclads are not covered with cheap tin or other thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad specifications. Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery—hot water tank, copper tanks and boiler, self regulator, Tycos Thermometer, glass in door and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this advertisement.

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140 Chick Brooder

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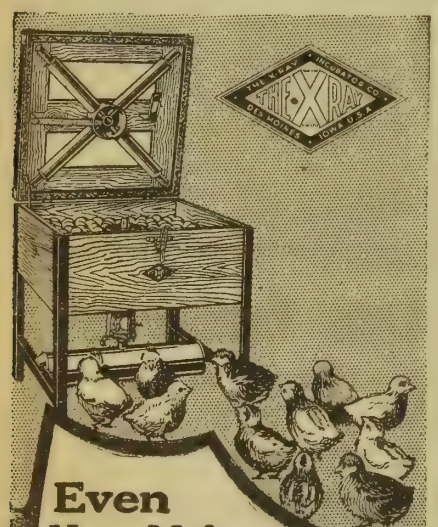

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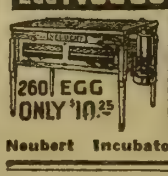

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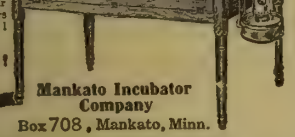

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Both Machines $10 Freight Paid Only

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Tells why chicks die

E. J. Reefer, poultry expert, 9481 Farmer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure it." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

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feeding is more easily done when all the youngsters come off at once.

We make warm, soft nests for the hens that are to hatch our early chicks. We feed them well during the period of incubation so that they will be in good condition when bringing off their brood. When the hatch is over we remove the hens and chicks to individual brood coops made to set a few inches above the surrounding surface to insure perfect dryiness, and there is nothing so harmful as dampness to the early broods. The coops are made wind and waterproof by lining them inside with tarred paper. Trenches are dug around the coops and the dirt is banked outside so that all water during a rainy spell will run away from them. The coops are also movable so that the floor underneath can be frequently cleaned.

Chicks like to scratch among leaves and we bring a supply from the woods and place them upon the floor. Thus they get all the exercise needed when so confined.

The chicks are fed in coops made of slats, which prevents the hens getting a greater part of the food. The hens, also the chicks, are examined carefully for lice. If any signs are seen we grease the hens under the wings and breast with lard and put a wee bit upon the chicks' heads. We never allow the hens and chicks outside during rainy weather, but remove them to a slatted shed built at one side of the hen house.

We feed the young chicks sparingly at first—increasing their rations as their digestive organs gain strength to properly digest the amount given. We feed chopped corn and wheat after the chicks are two weeks old. Their diet at first is dried bread crumbs. Plenty of water is before them at all times, also pulverized charcoal and sand, to keep their digestive organs in good working condition. The hens are fed liberally upon whole corn or wheat while mothering their broods. S. E. M.

IMPORTANT PLACE OF INCUBATOR AS WELL AS HEN HATCHING.

To the Editor:—I have had abundant experience with different makes of incubators. I like the machine method. It is all right. It is scientific and very trustworthy; so, also, is the old plan of natural incubation. Both methods of hatching have features worthy of our attention and adoption, but it depends on what is wanted and when and how to bring about the desired end.

I am not rejecting either method; neither do I expect to discard either. I find a fixed and worthy place for both. My plan is to employ both methods, but to hatch chickens for certain purposes at certain seasons of the year. For instance, I find the use of the incubator through the months of January and February, with the accompanying brooders, indispensable for hatching and brooding chicks for broilers—the males, chiefly, and stock from which to make my layers of eggs the following winter.

It is a well-known fact that it is not before in March, and generally during April, that there are any broody hens worth mentioning. This precludes the possibility of hatching and growing chickens for broilers, or from which to get extra early pullets for dependable winter layers. Late-hatched chickens cannot be expected, as a rule, to lay eggs the first winter, hence the desire for quite early ones.

Taking up now a peculiar plan of hatching chickens, as it were, by wholesale, which I accidentally discovered some years ago, I will describe the method. It will pay anyone to give it a fair trial. Remember, it does not do away with incubators or brooders, but for all medium to late hatches of chickens it is the finest arrangement imaginable and there is but little extra expense to get ready for operations. Extra room is all that is needed.

The way I made my discovery is like this. I had that spring some ten dozen hens of good, but somewhat mixed stock. They had the run of three connected houses, each 12x15 feet square, all provided with good box nests and roosts. It so happened that most of the hens made one of the rooms their roosting place. Consequently, when the weather warmed up and egg laying began in earnest the most of the eggs were deposited in the nests in the room where most of the flock roosted. This was perfectly natural and I made no effort to change it for the time being. Each evening I gathered the eggs—nearly 100—so as to keep them perfectly fresh for sale, use or some of the choicest for setting purposes.

After laying had gone on rapidly for some time I noticed one evening that quite a number showed signs of being broody. A new idea struck me, namely, that there was soon going to be a chance to set a dozen or more of them at one time. Then it occurred to me, also, that it would be possible to not only set a big lot of the hens at one time, but they could then be shut up so no laying hens could bother them through the period of incubation.

Well, to make a long story short, one evening when gathering the eggs I counted fifteen broody hens on the nests. Having plenty of fresh, fertile eggs on hand, just after dark I proceeded to set them. I gave each one fourteen eggs. The hens that had gone on the roosts I put out and the following morning I placed in the apartment a vessel of water and a liberal supply of mixed corn and wheat was put in a broad, shallow box for them to eat.

During the three weeks they sat they came off and went on their nests at will and during all that time (I looked in twice and three times a day) I only had to enter once to do any regulating. That time I found two of the hens had gone on the same nest. When they desired to do so they would leave the nests and after eating, drinking and stretching their wings a little, went back in good order. Not every time did each hen get on the nest she left, but any nest showing no occupant seemed satisfactory. So this changing resulted in no apparent ill, except the case I have named, and that did no harm. There were more than 200 eggs being set on in the very best way, and I have at no time found one of the mechanical devices giving as little care or trouble, even if the hatching was satisfactory.

It was only a little more than two weeks until in the adjoining house or room I set twelve more. I arranged them the same as I did those in the first room, namely, shut out all laying hens and provided them with water and feed. They hatched 140 chicks and I placed them with mothers like I did the first lot.

It is noticed that when I had the two rooms occupied with setting hens there was the third one left for hens still laying to enter, and there was still a good roosting place. This is the reason, if anyone wants to imitate what I have done, that he should construct three-room houses, or put high wire partitions in any extra large house already possessed.

I could have repeated the operation and hatched a similar number of chickens, but I wanted no more until late summer time, so I stopped proceedings. Since that time I have had little trouble with sitting hens through the regular hatching season. With sufficient brooders for mothering the young chicks I could have dispensed with the hens, but I find if the hens have the care of good-sized flocks of the young they range out on the premises some distance and get both natural food by hunting and exercise as well, which is very beneficial to them.

In conclusion, I will say to those having good numbers of hens and wanting to supplement the use of the incubator and brooder by hatching many chickens in the natural way, they will find the plan I have described exceedingly satisfactory. There may be seasons when more or less failure will result—I have had some bad hatches—but generally there is the best of satisfaction and constant care and worry is largely eliminated.

W. A. G.

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241 EGG Strain S.C.Buff Orpingtons. 200 cockerels, hens and pullets for sale. Catalog free. Address W. L. Bardsley, Neola, Iowa.

TALK OVER VALUE OF DRAINAGE.

(Continued from page 18.)

hauling the tile and filling the trenches, but Mr. Jones considers these estimates sufficiently high to cover a portion of these inconveniences. Many areas require tile only every eight rods and in deep peat the digging is easy and five-inch tile can be laid four and one-half feet deep at a cost little more than that of laying four-inch tile three feet deep in a clay soil. In many areas, he explained, less tile than this is required for satisfactory drainage.

Mr. Jones referred briefly to farmers who had found it pays to tile. William Kamman, of Manitowoc county, tile drained the wet swales on his 160-acre farm at a cost of less than $500 and now estimates the selling value has been increased at least $2,000. Gilbert Richmond, of Lodi, has made a cornfield by draining where previously he lost every crop and George Carpenter, of Sauk county, contends that tiling is far more satisfactory than open ditches and he has tried both.

Much interest was manifest in the address by F. M. White, of Madison, on "The Adaptability of Tractors to Marsh Land." The tractor is coming into such universal use on the farm now that the owners of swamp lands were anxious to learn the uses of the tractor, which Mr. White outlined:

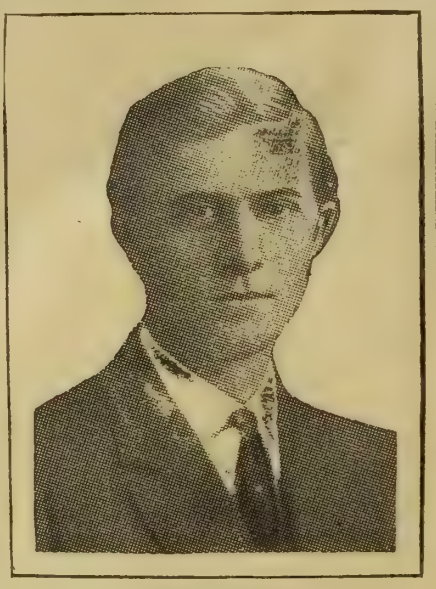
1. Pulling a ditching machine.
2. Pulling small willows, old logs, and stumps and removing them from the field.
3. Pulling a grub breaker and an ordinary plow.
4. Pulling a heavy roller to settle peaty soils.
5. Pulling heavy disks to pulverize the ground after breaking.
6. Pumping water during flood water periods.
7. For hauling tile.

Reclaiming land in this day of machinery is easy compared to ten years ago. The gas engine is a source of power which can be applied to all kinds of work and it seems to be especially adapted as an aid in land reclamations.

Tile ditching, Mr. White explained, is the feasible method of removing underground water and the disinclination of good labor to do this kind of work makes it necessary to adapt mechanical power in ditching. Horse ditching machines require from six to eight horses. A tractor can furnish this amount of power easily and ought to go on the soil where horses would be impracticable. Quite a discussion arose as to how to keep a tractor from miring in the soft soil and Mr. White explained the per square inch pressure of the various types. With either the caterpillar or wheel tractor type, he said, the pressure per square inch was less than that exerted by a horse. Mr. White also went into details as to the value of the tractor for pulling disks, plows, etc., and said that it could be hitched to the pumps at flood time and used in this connection when it otherwise would be standing idle.

Mr. H. W. Ullsperger, attached to the soils division of Wisconsin Agricultural Experiment Association, located at Sturgeon Bay, gave an interesting address on the fertility of marsh soils. We shall have more to say concerning this address in a subsequent issue.

F. W. Lucas, of Madison, discussed drainage specifications; B. M. Vaughn,



E. R. JONES.

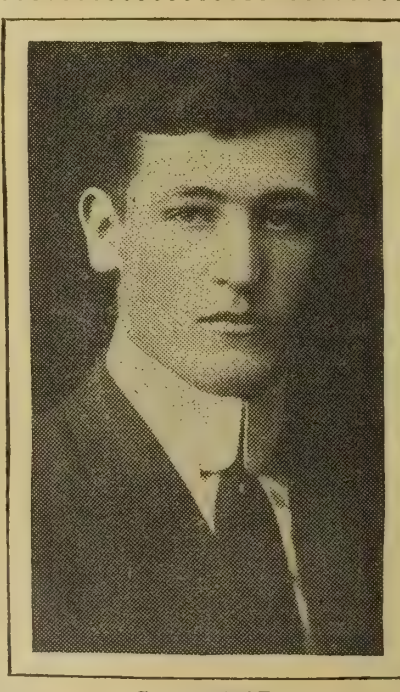
College of agriculture expert on drainage.

of Grand Rapids, reviewed the legislation proposed in 1915, and E. I. Philleo, of Grand Rapids, spoke of peculiar drainage methods in Wood county.

The use of tools, machinery and methods in tile drainage was discussed by J. H. Harness, of Waterloo, Wisconsin, who reviewed this work in some detail. How complete drainage and the use of large tile reduce floods was the subject assigned A. L. Webster, of Wheaton, Illinois, and A. J. Bracken, of Chicago, spoke on dredging from the contractor's standpoint. W. B. Coddington, of Plover, gave an interesting talk on the qualifications of a drainage commissioner and Nye Jordan, of Manson, explained how to keep drainage records. The convention was opened with an address by E. P. Arpen, of Grand Rapids, to which H. H. Sherwood, president, responded.

W. B. Coddington, of Plover, was chosen president for the coming year; B. M. Vaughn, of Grand Rapids, vice president; E. R. Jones, of Madison, secretary, and A. C. Willard, of Necedah, treasurer.

Madison was chosen as the place for the holding of the next annual meeting and Racine was selected for the summer meeting.



C. P. WEST.

New county agricultural representative for Sawyer county, Wisconsin.

STATE HOLSTEIN MEETING.

The Wisconsin Holstein Breeders' Association will hold its next annual meeting at Watertown, Wisconsin, March 2d. On the preceding evening the Holstein breeders and business men of Watertown will give a free banquet to the Holstein breeders. An interesting program is being arranged and a large and enthusiastic meeting is expected.

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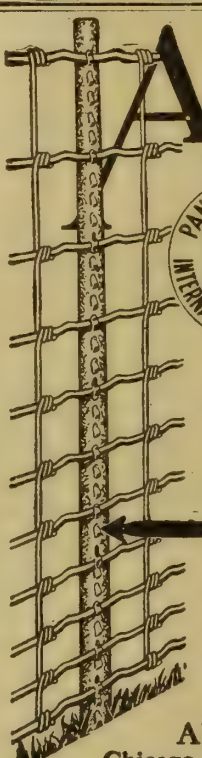

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2-Cylinder Engine

This Engine alone weighs only 320 lbs. It is one of the famous light-weight Cushmans, for all farm work.

A 3-in-One Outfit

1 Used as a Portable Saw Outfit. Only one horse is required to handle it.

2 Saw may be detached, making it a portable outfit for all kinds of work.

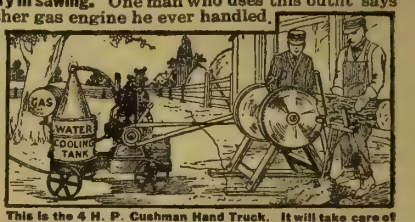
3 Engine is easily removed from the truck, and used for all general purposes.

Here is the successful Light Weight Saw Rig you have been looking for. Weighs only 1285 lbs. One horse easily takes it anywhere. Saw frame of the tilting type. Blades 28 inches. Fitted for pole saw work, when ordered. Where desired, tongue neck yoke and doubletrees will be furnished instead of shafts.

The sensitive Cushman Throttle Governor responds instantly when saw strikes the log, making it stand up and deliver steady, uniform speed, so necessary in sawing. One man who uses this outfit says the Cushman pulls more like a steam engine than any other gas engine he ever handled.

Light Weight Cushman Engines

Are the most useful engines for farm work. Run very quietly and steadily, on account of Throttle Governor and perfect balance. No violent explosions and fast and slow speeds. Very light in weight and easy to move around from job to job. 4 H. P. weighs only 190 lbs.; 8 H. P. only 320 lbs.; 15 H. P. only 780 lbs.; 20 H. P. only 1200 lbs. Cushman Engines are not cheap, but they are cheap in the long run. Engine book free.



This is the 4 H. P. Cushman Hand Truck. It will take care of the sawing needs of most farmers, besides doing all other jobs. Same engine used on binder. Weighs only 190 lbs.

Cushman Motor Works, 855 N. 21st St., Lincoln, Nebr.

UPPER WISCONSIN

AN ASHLAND COUNTY FARM.

The visiting stranger to Ashland county could hardly expect to see in that upper county a finer farm than that at Sanborn, known as "Troutmere Farm" and operated and owned by Theodore Werder. As an editor of The Wisconsin Farmer was touring Ashland county several weeks ago with C. B. Post, county agricultural representative, he observed as the machine was dropping out of the hills into the valley ahead a set of farm buildings which would do justice to

PART OF GUERNSEY HERD OF THEO. WERDER, SANBORN, ASHLAND COUNTY, WISCONSIN.

any of the counties in the southern tier. That was Troutmere Farm, one of the best equipped farms in Ashland county, and located where only a few years ago the lumberjacks were taking out the virgin timber.

Mr. Werder is interested primarily in the breeding of Guernsey cattle and Duroc Jersey swine and his farm has supplied many of the Guernseys which have enabled the settlers in that community to get started properly

THEO. WERDER'S STOCK AT ASHLAND FAIR FROM TROUTMERE FARM.

in the dairy industry. Mr. Werder has been using a pure-bred sire for several years and also has some pure-bred females in his herd of forty head. Dairying is still in its infancy in Ashland county, as the loggers have been gone only a few years and the marks of their visit are still visible in Mr. Werder's neighborhood where the old pine stumps dot the fields that have been cleared, but not stumped, and in other places they are hidden only by the second growth that is waiting for the settler's ax and the match.

The barn shown on this page was recently completed and represents a cost of about $9,000. It is modern in every way and the equal of barns in other dairy sections of the state. It is 36x150 feet, has stanchions for forty cows and at the end there stands two hollow brick silos to afford succulent feed for his cows in the winter. The floors are all of cement, the feed bins equipped with feed chutes, litter carriers, etc. Mr. Werder built for the future and has provided his herd with a cow home which is the equal of any in comfort, ventilation, etc.

On the farm at the time the writer was there Mr. Werder had 150 pure-bred Durocs which are housed in hog houses made of concrete. Like the barn, the house, the outbuildings, etc., they are lighted with electricity. Mr. Werder has had splendid success in swine breeding in this upper county, but felt he was entering the winter with a herd too large and at that time contemplated turning some of them into pork. Buttermilk is fed his hogs, he having a plentiful supply always.

In Troutmere Farm there are 260 acres, 160 of which is under the plow. The other 100 acres is being cleared gradually and when the writer was there Mr. Werder was working with a big stump that was giving him considerable trouble, but which he finally landed with the use of dynamite. It took several charges to blast this stump out, as the central roots were hard to reach, but Mr. Werder said that he had experienced little difficulty with his stumping operations. Occasionally he encounters a tough stump, but by using the pullers, dynamite and his tractor when necessary the stump always yields.

The tractor is used very generally on the farm and is invaluable in stump operations. Mr. Werder also uses it for plowing, etc.

Mr. Werder operates a private creamery in connection with his farm and the product of all his cows is made into butter on the premises. This creamery also takes care of the milk produced on adjoining farms and during the summer Mr. Werder churns twice daily. During the fall he was churning about 500 pounds of butter daily. In connection with the creamery he conducts his own refrigeration system and also his own electric plant which generates the light for the house, barns, etc. He uses a milking machine and finds it very satisfactory and a great labor saver. His milk room off the barn is a model for cleanliness and with running water therein it is easy to keep it clean. His separator he operates with a gas engine and every convenience known to the farmer in the older sections of the state are to be found at Troutmere Farm.

FINE NEW BARN ON THE THEO. WERDER FARM, ASHLAND COUNTY, WISCONSIN.

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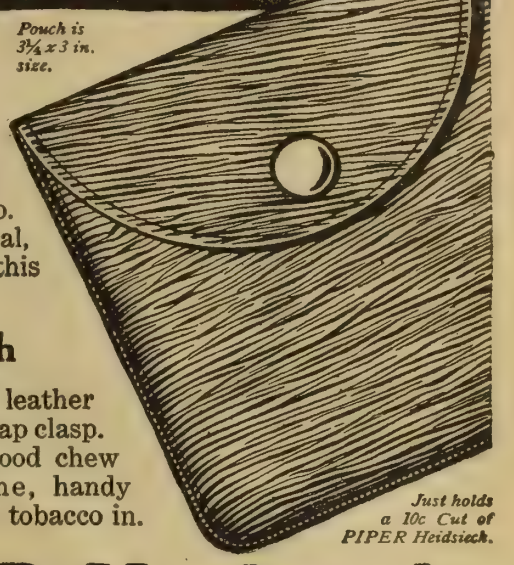

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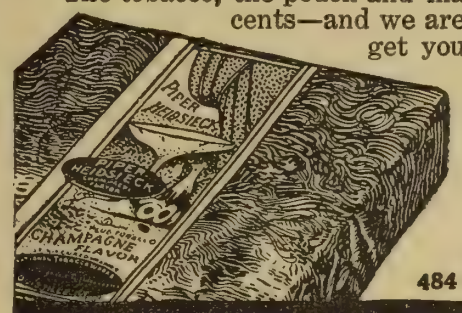

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DAIRY

FACTS LEARNED FROM TESTING.

Farmers who have tested their cows say many times that the ones they considered the best were in many cases inferior to others in the herd. A striking illustration of the fact that the test and scales is the only method of knowing the best cows is shown in these figures taken from the herd books of 300 members of the River Falls and Roberts Testing Association. In one herd a cow produced 9,247 pounds of milk, testing 2.7 per cent, making for the year 251 pounds of fat. In another herd an animal gave 8,930 pounds of milk testing 5.1 per cent, with 461 pounds of fat. Here is a case of a cow producing 317 pounds less milk, but yielding 210 pounds more fat. As the average price of fat last year was 31 cents, this leaves a difference of $65.00 in favor of the cow producing the smaller total yield of milk. The cost of feed for the 251-pound cow was $40.00; that of the other $50.00, leaving a net difference of $55.10. In practically all herds fat tests range from 3 to 4 or 5 per cent, the difference of which can only be determined by testing. The length of time required to make a high-yielding herd depends much on the cows from which the heifers are selected. By testing, the farmer has the actual figures relating to the merits of his cows and he is in a position to make a more intelligent selection.

It is interesting to note the differences in cows in the following table:

Average of the twenty-six best cows (one from each herd):

Pounds of milk	6,361
Pounds of fat	332
Cost of feed	$37.90
Profit	$63.65
Average age	6.1 years
Months milking	10½ months
Cost of 1 pound of fat	11c
Returns for $1 expended	$2.72

Average of twenty-six poorest cows (one from each herd):

Pounds of milk	4,868
Pounds of fat	185
Cost of feed	$34.19
Profit	$23.56
Months milking	9.1 months
Average age of cow	4.1 years
Cost of 1 pound of fat	19c
Returns for $1 expended	$1.55

The figures, which cover the year ending February 1, 1915, show that it costs more money to feed a good cow than a poor one, yet by spending $3.71 more for feed, the best cows produced $40.09 more profit. The length of period that an animal is milked has much to do with her profit. The best cows had an average lactation of ten and one-half months, as compared with nine months for the poorest. A dairy cow requires some rest between freshening periods, but a three-month period means feeding too long without receiving any return. It is a common practice with many dairymen to give a six weeks' rest and these figures are in accord with that fact. The results also confirm the somewhat-established fact that an animal is at her best when about six or seven years old.

There has been a great deal of discussion the last few years regarding the time of year for the cow to freshen. It was impossible to secure complete data on this point, due to the fact that in most of the herds the majority of the cows freshened either in the fall or spring. In one herd, however, a basis for studying this problem was possible, since ten cows freshened during the fall and ten in the spring months.

	Av. of fall cows (10)	Spring cows (10)
Lbs. fat	388	322
Cost of feed	$43.00	$41.50
Profit	$76.45	$57.60

After freshening, a cow gives a good flow of milk. If this occurs in the fall and good feeding follows, she will maintain her milk secretion until spring. When turned to pasture the milk yield may increase, making it possible to maintain a long lactation period, with good results. Fall and winter prices for butter fat are always higher than at other times of the year. Farmers have more time to care for the calves at this time than during the rush work of spring. As evidence that farmers are appreciating this point is seen in the increasing number of dairymen practicing fall freshening.

Below are some rations that produced good returns:

(1) Silage, 30 pounds.
Fodder,
Alfalfa, 7.5 pounds.
Mixture oats, bran, oil meal, 10 pounds.

(2) Silage, 25 pounds.
Clover, 7 pounds.
Mixture oats, bran, oil meal, 8½ pounds.

(3) Silage, 40 pounds.
Fodder, 3½ pounds.
Mixed hay, 6.6 pounds.
Oats, bran, corn, 7 pounds.

One of the greatest problems in dairying is the feeding. A successful dairyman must produce a large amount of milk at the least possible cost. The question of knowing when the cow is fed to her inherited capacity is many times a perplexing one. Some are overfed, others underfed. It is only by studying and noting the results that one is able to come to a satisfactory conclusion. A practical rule that has been found successful is to feed one pound of grain daily to every three or four pounds of milk produced, giving all the roughage she will consume without waste. It is very necessary that the ration be succulent and palatable, since investigators have proven that palatability improves digestion and increases the amount of food a cow may consume. Variety in the ration is of the utmost importance to dairy cows and if this factor is not considered the results will likely be poorer than the animal's possibilities.

SANITATION IN DAIRY PRODUCTS.

"Sanitation First" is the slogan of George J. Weigle, of the dairy and food commission of the state of Wisconsin. Wisconsin is the leading state in the quantity of dairy products produced, and it is the commissioner's aim to co-operate with other interests in making it first in quality as well.

The dairy and food commission, under authority of chapter 597 of the laws of 1915, have adopted a set of comprehensive rules and regulations for the manufacture of dairy products. These regulations go into effect January 1, 1916. Many of these rules appear very simple and unnecessary to anyone who is interested in the present conditions of Wisconsin factories. But it is just such simple laws which either through negligence of the operator or lack of proper facilities are most often disregarded, according to men of experience in the business. For instance, the new rule that factory floors, fixtures, utensils and other apparatus shall be cleaned at the close of each operation, seems at first sight to be an unnecessary regulation. One would expect the operator to do these things from common sense or decency, but it has been the experience of the dairy and food commission to find that just such rules are the most often disregarded.

The cheese and buttermakers are heartily in favor of the policy of the dairy and food commissioner, and at the recent meetings at Eau Claire, Fond du Lac, and Green Bay they showed their willingness to co-operate with him. Perhaps the chief reason for this new interest is the fact that heretofore the blame rested entirely on the operator. Now, however, the blame will be settled upon the owners, and they must provide the operator with the proper facilities to maintain the factory and product in a sanitary condition.

The owners of the factory at Mt. Horeb have already caught the spirit of cleanliness and have requested one of the members of the commission to inspect their plant in order to ascertain whether they should build a new factory or remodel the old one. The commission found that a new factory would be advisable. Now the owners have recently sent a man to Madison to confer with the commissioner on plans for a new building. This spirit is not only manifested at this particular place, but also is spreading by leaps and bounds throughout the entire state.

Sections 1410b-1 and 1400-2 of chapter 597 require not only the licensing of butter and cheesemakers but also of operators of butter and cheese factories. This is another very great step towards the goal of the commissioner. Since these licenses are subject to revocation by the dairy and food commissioner upon reasonable written notice that the licensee has violated any of the rules and regulations of the state relating to milk or cream or milk or cream products, the operators are forced to set a high standard to protect themselves.

Some of the requirements that a man must fulfill in order to obtain a butter or cheesemakers' license are that he shall have had twenty-four months' experience for a buttermaker, and twelve months for a cheesemaker, also, he must have a creditable record in operating and keeping in sanitary

Only $2 DOWN and One Year To Pay

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Just invented and patents granted. Has all the latest features and conveniences. Big improvement over any other stool. Made of strong, durable metal, aluminum painted. Fully guaranteed. Swinging pail holder, adjustable for any size pail. Pail swings out of way if cow kicks or moves. Sliding seat gives milker four inches backward or forward movement. Collapsible—can be hung on peg when not in use. PRICE $1.50 each. Send for circular. AGENTS, this stool sells wherever demonstrated. Write for special price.

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Tells you all there is to know about present-day silage feeding—how to build silos. Gives reliable and unbiased facts (we do not sell silos) on every silo built—home made—stave, hoop and octagonal silos—pit, brick, tile, cement, concrete silos—all modifications. Also covers every crop used for silage—41 of them. Here's an entirely new book—264 pages—better than former copies used as text books in colleges. Copyrighted November, 1914. Ten page index. We send it for 10c coin or stamps. Send for this new copy today.

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Different from picture, which illustrates our large capacity machines. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address:

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condition any factory or factories in which he may have been employed. These requirements bar beginners from filling the buttermakers' place at once, and thus increase the standard and efficiency of the butter and cheesemaker.

Although these new rules and regulations which are to take effect in January, are inadequate to meet the entire situation in the factories of today, it is a step in the right direction. With a good start the rest will follow easily. The rules of the commissioner are considered reasonable and easy to obey, and if he receives the proper co-operation he expects that his ambition will be realized, and the cleanliness of Wisconsin's greatest industry will then be an assured fact.

COW-TESTING PROGRAM.

Wisconsin dairymen who are interested in the subject of cow testing will be able to get a great many pointers if they attend the conference on this subject to be held in Madison February 7th-12th. The first open session of the conference will be held at 9 o'clock Tuesday, February 8th, and the program of topics and addresses will be as follows:

TUESDAY, FEBRUARY 8TH.
A. M.

9:00 Market Prices for Dairy Products During Twenty-five Years of Dairy Development—E. H. Farrington.
10:00 Undeveloped Opportunities for Dairy Farming in Wisconsin—E. J. Delwiche.
11:00 The Soil and Its Relation to Dairy Farming—A. R. Whitson.

P. M.

1:30 The Place of Grain and Forage Plants in Dairying—R. A. Moore.
2:30 Dairy Cattle Judging and Lecture—A. C. Oostrhuis.
3:30 General Aim of Our Cow-Testing Association Work—N. A. Negley.
4:00 Co-operative Enterprises of Cow-Testing Associations; Association Feed Ring—Ralph Splettstoeszer, Welcome Association.
Co-operative Buying of Feed—Louis Bober, Hillsboro, Association.
8:00 Our Friends, the Dumb Animals (Illustrated Lecture)—Dr. A. S. Alexander.

WEDNESDAY, FEBRUARY 9TH.
A. M.

8:00 New Methods of Controlling Diseases in Animals—F. B. Hadley. Value of Veterinary Service in Association Work—Alfred Parrot, Menomonie.
9:00 Economics of the Dairy Industry—L. C. Taylor.
10:00 Milk and Animal Nutrition—E. B. Hart.
11:00 Care and Management of the Dairy Calf—G. C. Humphrey.

P. M.

1:30 Testing Milk, Cream and Skim Milk, Laboratory Work—E. H. Farrington.
3:00 Record Keeping—C. L. Burlingham, United States Department of Agriculture.
4:00 Analysis and Application of Records—J. A. James.
5:00 Association Management—H. C. Searles.
Printing Reports—Frank Lynn, Eastern Pierce county.
6:30 Babcock Jubilee Banquet.

THURSDAY, FEBRUARY 10TH.
A. M.

8:00 Computation of Rations—G. C. Humphrey.
Discussion led by A. L. Odeen, Northport and Royalton Assn; Geo. L. Moss, Waupaca and Butternut Assns., and Richard Adams, Stanley Assn.
10:00 Cow-Testing Association Work in Dunn County—Theo. Sexauer.
11:00 Common Diseases of Cattle—F. B. Hadley.

P. M.

1:30 Judging Dairy Cattle—A. C. Oosterhuis.
3:30 Production and Care of Milk and Cream—A. C. Baer.
4.30 Care of Cream Separator, Dairy Utensils and Milking Machine—G. H. Benkendorf.
7:30 Address—Math. Michels, President Wisconsin Dairymen's Assn.
Guernsey Island (Illustrated Lecture)—Chas. L. Hill.
Moving Pictures, "From Cow to Consumer."

FRIDAY, FEBRUARY 11TH.
A. M.

8:00 Feeding Dairy Cows—C. C. Humphrey.
9:00 Dailry Cattle Management—A. C. Oosterhuis.
10:00 Value of Pure-Bred Sire—R. E. Baker.
Bull Associations—O. E. Winkjer, United States Department of Agriculture.

P. M.

1:30 Moving Pictures—Alfalfa.
2:30 Stable and Silo Construction—F. M. White.
3:30 Official Dairy Testing—R. T. Harris.
5:00 Proper Testing and Care of Outfit—J. H. Toolajian, Fox River Valley Assn.
7:40 Live Stock Lecture and Lantern Slides—Animal Husbandry Department.
Moving Pictures—"Homemade Silo," "Cow-Testing Associations."

SATURDAY, FEBRUARY 12TH.
A. M.

8:00 Marketing Dairy Products.
9:00 Question Box, Answers and Discussions.
10:00 Reports from Secretaries of Associations, Suggestions, Criticisms, etc.
11:00 Address—C. P. Norgord, Commissioner of Agriculture.

It is expected that Judge W. B. Quarton, Algona, Iowa, and other prominent breeders will attend and address the convention.

NEW RICHMOND TESTING.

Ivor Jones, official tester for the New Richmond Cow-Testing Association which has been in operation during the past ten months, reports that the farmers are much pleased with the business way of dairying and that they can get more profitable results on dry feeding than on pasture. Mr. Jones, in connection with the list of forty pounders for the last month which has just been made public, says that a second silo is going to be more profitable than so much pasture and that intelligent feeding, careful selection of stock and weeding out of unprofitable cows is going to do wonders for the dairy farmers of that vicinity.

The report shows twenty-eight cows in the forty-pound list and three two year olds in the thirty-five-pound list. His report for the last thirty-day period follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Wm. Albert					
Reinetta, P. B. H.	4	Nov.	1302	3.8	49.5
Schnell Bros.					
Marietta, G. H...	7	Nov.	1002	4.0	40.1
Albert Buettner					
Sistu, G. H.	5	Nov.	1050	3.9	41.0
Henry Bernd					
Red Mouse, G.S.H.	5	Oct.	1143	3.6	41.1
W. E. Bennett					
Big Tit, G. H.....	8	Nov.	1155	3.8	43.9
Liza, G. H.....	4	Nov.	1143	3.5	40.0
Jane, G. H.	4	Nov.	1080	4.4	47.5
Arnquist &Sons					
Nett, G. S.H.....	4	Nov.	915	4.6	42.1
Henry Wieland					
Nettie, G. H.	6	Nov.	1188	3.7	44.0
Bessie, G. H.....	8	Nov.	1119	3.6	40.3
N. R. Hemenway					
Bess, G. S.H.....	5	Jul.	747	6.0	44.8
Big Black, N.	4	Nov.	1011	4.1	41.5
Chas. Sette					
Elcota, P. B. H...	5	Sep.	1011	4.0	40.4
A. C. Kruschke					
Nigger, G. H.	6	Oct.	1185	3.7	43.8
Dumont Fox,					
P. B. H.	4	Oct.	1362	3.4	43.6
Johanna, G. H. ..	8	Oct.	1710	3.8	65.0
Bell, G. H.	6	Oct.	1428	3.5	50.0
Fred Wieland					
Beauty, G. H.....	5	Nov.	1164	3.6	41.9
Whitefoot, G. H.	8	Nov.	1140	3.7	42.2
Bess, G. H.	8	Nov.	1410	4.0	56.4
Daisy, G. H.	4	Nov.	1140	4.5	51.3
Dairy Maid, G. H.	5	Nov.	1395	3.2	44.6
Chas. Albert					
Duchess, G. H....	5	Oct.	1026	4.0	41.0
F. W. Wieland					
Nancy, G. H.		Nov.	1149	3.4	40.2
Molly, G. H.....		Oct.	1314	3.2	42.0
Dixie, G. H.		Oct.	1185	3.4	40.3
Geo. H. Kruschke					
Pearl 2d, P. B. H.	5	Oct.	1290	4.4	56.8
Nancy, G. H.	6	Nov.	1470	4.0	67.6
Two-year-old heifers producing 35 pounds or more butter fat during 30-day test.					
Wm. Albert					
Pauline, G. H. ...	2	Nov.	894	4.5	4.2
Geo. H. Kruschke					
Star, G. H.	2	Nov.	948	3.7	35.1
Bernd & Poston					
De Kol, G. H.	2	Nov.	1026	3.4	35.0

STANLEY CO-OPERATIVE TESTING ASSOCIATION REPORT.

The following table gives the names and records of the cows in the Stanley Co-operative Cow-Testing Association which have produced more than forty pounds of butter fat during the period of thirty days ending January 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
L. I Roe Co.					
Uneeda, R. H.	5	11-9-15	1146	4.5	51.6
Leon Podvin					
Kate, N.	6	11-5-15	858	4.9	42.0
Nina, N.	5	12-9-15	981	6.3	61.8
Geo. Weissenberg					
Tolita, R. H...	5	11-27-15	1320	3.2	42.2
Thorla, R. H...	2	11-19-15	1203	3.4	40.9
Queen, R. H...	5	11-24-15	1377	3.1	42.7
Frank Smalley					
Rosetta, R.H.	4	9-17-15	1452	3.7	53.7
Geo. Mason					
Jersy, G. J.....	8	11-15-15	909	4.9	44.5
P. A. Lien					
Vinnie, N.	9	12-10-15	906	4.9	44.4
Andrew Peterson					
Daisy, G. G. ..	8	12-11-15	1008	5.2	52.4
Geo. C. Leslie					
Linquist, G. H.	8	10-16-15	1173	3.6	42.2
Ed C. Johnsnn					
Loretta, G. J..	5	10-8-15	804	5.2	41.8
David Kienholz					
Snowflake, G.G.	7	12-15-15	1035	4.5	46.6
Imogene, N....	5	12-22-15	909	4.5	40.9
Comet, G. S. ..	4	12-15-15	907	4.4	40.0
G. W. Schmidt					
Carmel, G. G...	7	11-14-15	735	5.7	41.9
Ole Elton					
Snowflake, N.	8	11-12-15	711	5.7	40.5
Fred W. Fischer					
Bessie, R. H...	9	1-5-16	1332	4.3	57.3
Frank Schmidt					
Kleckner, G. H.	5	12-25-15	1212	4.7	57.4
Mollie, G. H. ..	5	12-25-15	1065	3.8	40.5
Ed Karlen					
Lady, R. H....	4	1-4-16	1086	4.3	46.7

The milk in the pail the cow kicks over is lost forever

AND the butter-fat that goes into the can through the skim-milk spout of a cheap, inferior or worn-out cream separator is just as surely lost as the milk in the pail the cow kicked over.

If you are trying to get along without a cream separator; or with an inferior or worn-out machine, you are losing butter-fat right along and butter-fat is money.

Get Your DE LAVAL Now — Right Away

every day you use it it will be paying for itself out of its own saving.

If you haven't the spare cash right now that need not hinder your immediate purchase.

We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at time of purchase and the balance in several installments, so that a De Laval really pays for itself while you are using it and getting the benefit from it.

Let the De Laval start saving cream for you right now while butter and cream prices are highest. See the nearest De Laval agent at once, or if you do not know him, write us direct for any desired information.

THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

OPEN UP FARMERS' PLANT

The Farmers' Co-operative Packing Plant at Wausau was recently thrown open for business. There were two carloads of hogs and considerable other stock offered on the first day. There are about fifty men employed at the plant and stock will be received as needed from anyone regardless of whether he is a stockholder in the co-operative enterprise or not. The Wausau plant is one of the best in the state and offers a good opportunity to test the co-operative packing plan.

PROFITS OF PACKING PLANT.

A year ago it was reported that the Farmers' Co-operative Packing Company, of La Crosse, was near bankruptcy. A report just issued shows the company made $1,800 in December. This is the first farmers' co-operative packing plant organized in the United States.

FOR BABY BEEF CONTEST.

Arrangements are being made for a baby beef contest in connection with the Janesville, Rock county, fair. Mr. R. Baker, of Madison, as secretary of the Wisconsin Live Stock Breeders' Association, appeared recently before the board and outlined the plans for the baby beef contest.

Ask your neighbor to subscribe for The Wisconsin Farmer.

THE HOME

LETTERS intended for publication should be accompanied by the name and address of the writer not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., The Wisconsin Farmer, Madison, Wisconsin.

AIDS TO GOOD HEALTH.

"An apple a day keeps the doctor away." And the doctors tell us that plenty of water will accomplish the same end, and water is cheaper and easier to get than apples. Because of its very cheapness we underestimate the value of water to keep our bodies in proper shape. Most of us look carefully to the cleansing of our outer bodies and then neglect to see that our inner bodies are given the same treatment. Physicians say that every individual should drink six to eight glasses of water each day, one upon rising, two or three between breakfast and dinner, two or three between dinner and supper and one upon retiring. That sounds easy enough and yet it is a fact that very few of us drink as much as this. The rule is always to drink before and after meals and not with them. Drink often of good, pure water, not a sup but a glassful.

And even cheaper and easier to get is fresh air. Day and night it should circulate through your homes, through the living rooms and the sleeping rooms, bringing with it health and vigor. Moreover, contrary to a very generally accepted notion that night air is not good for one, it is the very purest air we breathe. Actual tests have proved again and again that the bacteria count in the night air is much lower than that in the air during daylight when the activities of the world are at full height and the maximum of dirt and dust is active. Yet, in spite of this demonstrated scientific fact, thousands and thousands of people shut up their sleeping rooms during the winter for fear of letting in the "cold, damp night air." In the summer, of course, windows are opened to let in the cooling breezes, but during the winter months the purifying fresh air is diligently shut out, and thousands sleep in closed-window rooms and breathe over and over the vitiated air, rendered disease-breeding by the waste of their own bodies.

A VALUABLE KITCHEN ARTICLE.

No kitchen utensil will be found more useful than a good pair of steel scissors. They will save many cut fingers and much time. A medium-sized pair with good cutting point will answer every purpose.

There are many processes in the preparation of food that are often difficult to perform with a knife and yet they can be done easily and quickly with a pair of good, sharp scissors. Take, for instance, the disjointing of a fowl, there is nothing like a pair of sharp scissors for severing the joints. It is done quickly, neatly and easily and without splintering any bones in the process.

They are ideal for cutting celery, parsley, cabbage, carrots, etc., for soups and salads.

In the spring they will cut the young, tender stalks of rhubarb into cubes without removing the skins. It gives a pretty color to the sauce and the flavor is much finer when the skins are left on.

It is much easier to cut marshmallows with scissors than with a knife. The same is true of citron, lemon and orange peel.

They are most useful in the preparation of grape fruit, as the tough parts can be clipped out so easily. Large bunches of grapes and raisins can be readily divided into the right portions with scissors and are not torn or bruised as when a knife is used.

They are handy to cut shelf paper, covers for jelly glasses and butter jars, to cut up molasses candy, or to cut fruit off vines.

These are only a few of the services which the scissors will perform daily for the housewife. But they must receive the very best of care if they are to do their work well. They must be carefully cleaned and washed—and scoured occasionally, and thoroughly dried after each time they are used. When hung up let them be open. They should never be allowed to get rusty.

ESSENTIALS OF GOOD TASTE IN CLOTHES.

Individuality, simplicity and quality of material are elements that must be considered by the girl or woman who aspires to be well dressed in the judgment of Miss Florence Hunt, assistant in domestic art in the Kansas State Agricultural College.

According to Miss Hunt, too much stress cannot be placed on the importance of developing good taste. Good taste includes knowledge of color, line, form, material and suitability to the occasions upon which the dress is worn. Dresses for school, business, home or street wear or for dress affairs should, of course, be distinctive.

Then the costume must be suited to the individual according to line and form. A tall person cannot wear the same style as the short person. The same principles apply also to materials used.

The study of color harmony is essential also in the designing of appropriate costumes. There are materials which will not combine well and colors that should not be used together.

Another problem is the study of the design principles—the relation of rhythm, balance and harmony to dress. In Miss Hunt's department the greatest effort is made to impress upon girls studying costume designing the value of simplicity, good quality and less decoration. Women in general are beginning to give more thought to this phase of the costume question, and it is a step in the right direction. Simplicity and good quality, to a great extent, solve the dress question both as to economy and attractiveness of the finished product.

BREAD-MAKING POINTERS.

Bread is one of the simplest of our cooked foods, but making it involves some very complicated processes which will give better results if they are thoroughly understood by the housekeeper, according to Miss Addie D. Root, of the Missouri College of Agriculture. The first essentials are perfectly clean vessels and good strong yeast. No particular kind of yeast is better than any other, but whatever kind is used should be tested to see that it is not too old to give good results. It contains little plants which grow and give off gas, thus causing the bread to rise. In old yeast most of these plants are dead, so it is best to see whether it is live enough to form bubbles or foam in a few minutes after yeast has been added to sugar and lukewarm water.

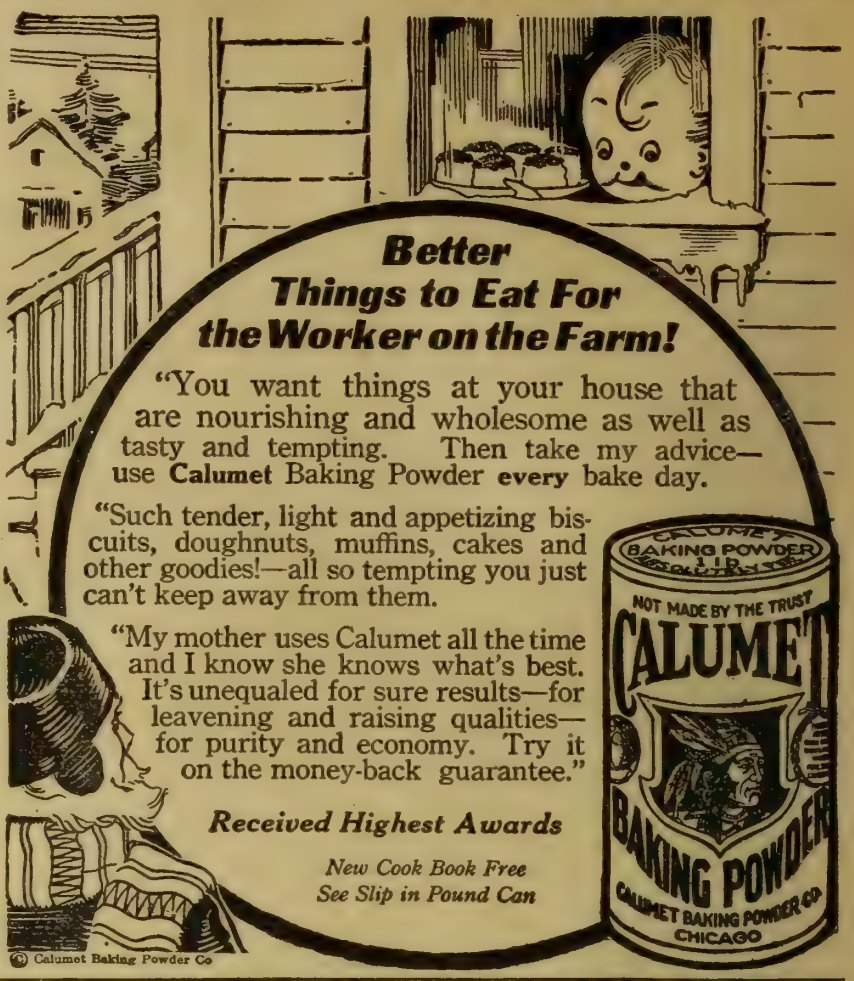
In mixing the dough if the flour is added gradually and thoroughly beaten into the liquid it will carry in enough air to make the yeast plants grow, for air is almost as necessary to them as it is to animals. If the dough is made too stiff, harsh, dry, crumbly bread will result, so as little flour as possible should be used, but enough must be used so that the dough will not be sticky.

In kneading use a quick, even stroke and be sure that the yeast plants reach every part of the bread in order that it may have a good, even texture. Never knead bread over thirty minutes, as too long kneading will destroy the elasticity of the dough. After fifteen or twenty minutes the surface will usually be smooth and velvety and gas bubbles will begin to appear, indicating that kneading has been continued long enough.

Set the bread to rise in a clean bowl covered tightly. If the temperature

A CITY WOMAN MAKING GOOD ON THE FARM.

She says she cooks for four men, yet finds time to raise poultry despite the fact that she never was on a farm until last summer. As you see, she is happy.



is kept between 80 and 95 degrees F. it will not be necessary to oil or moisten the surface to keep a crust from forming. It the dough is kept too warm while rising it will become soft and runny, too much gas will be formed, bacteria will grow, and the bread is likely to be dark, coarse and sour. Chilling will not stop the growth of yeast and formation of gas, but is likely to cause an undesirable crust to form over the dough. When the dough has risen in a warm, even temperature to about twice its first bulk and been properly worked, there should be little danger of souring.

The oven should be just hot enough to stop the dough from rising in the pans, after it is put in to bake, but should not be too hot at first. If a thermometer is used, start the bread in an oven at 360 degrees F. and increase the heat gradually for fifteen minutes, but lower it again after about thirty minutes. The bread should begin to turn brown in patches during the first fifteen minutes and should have an even brown surface at the end of half an hour.

If the dough has not risen to twice its original bulk it may be started in a cooler oven and allowed to continue to raise during the first ten minutes of baking.

BUCKWHEAT CAKES.

To the Editor:—I am sending you a good recipe for buckwheat cakes or griddle cakes that I have used for years.

Soak a yeast cake in lukewarm water, then stir in flour as you would start for bread in the morning. Then at night put one-half buckwheat flour and one-half wheat flour. I use milk, or if I do not have milk I use cold water. Make a thick batter. In the morning stir in half a teaspoonful of soda in a little water to sweeten the batter. Use milk to thin the batter.

Bake on a hot griddle; do not start baking until the griddle is hot enough to smoke. Turn the cakes as soon as there are holes in the top.

I save about a cupful of the batter for the next time, so that I do not need any more yeast. Set at night for each morning and each time save out a cupful or more of the batter to start the next lot.

These cakes are fine, never heavy or hard. I put them in a covered turene until ready to eat. Mrs. Sam Hall.

SHORT PRAYERS FOR LITTLE FOLKS.

To the Editor:—Not long ago someone asked for children's prayers and I will enclose some for you to use if you wish.

BLESSING.

We thank Thee, Lord, for daily bread,
And all the blessings on us shed;
We pray Thee fill us with thy love,
And guide us to our home above.
—Ps. 38-8.

EVENING PRAYERS.

Jesus, take this heart of mine,
Make it pure and wholly Thine;
Thou hast bled and died for me;
I will henceforth live for Thee.
—Matt. 19-14.

Fill Thou my heart with grace,
That I may clearer see;
The endless store of love
With which Thou blessest me.
—John 3-11.

Keep my heart, dear Lord, from sin,
Grant no evil dwell therein;
But as lilies fair and white,
Pure thoughts blossom in Thy sight.
—Matt. 5-8.

I want to live not only for myself,
To do some kindly deed, something for Thee;
To give some proof of gratitude, dear Lord,
For all the wondrous love Thou gavest me.
—Rom. 15-3.

Now I lay me down to sleep,
I pray Thee, Lord, my soul to keep;
Thy love be round me through the night,
And wake me with the morning light.
—Ps. 127-2.

MORNING PRAYER.

Now I wake and see the light,
'Tis God has kept me through the night;
And so I lift my voice and pray,
That he will keep me through the day.
—Josh. 1-5.

These are taken from a printed list of prayers which I have and I hope they will benefit someone.

Mrs. L. A. Inglett.

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Get the BEST and SAVE 10 cts per pound.
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IF YOU LOVE GOOD COFFEE SEND FOR PRICE LIST
JEVNE COFFEE CO. (Est 1881) Coffee Specialists
Dept. 16, 2855-57 W. Madison St., CHICAGO.

RECIPES.

Devil's Food Cake.—One-half cup butter, one and one-half cups sugar, yolks of four eggs, two squares chocolate dissolved in four tablespoonfuls boiling water, one-half cup cream or milk, one and three-fourths cup flour, whites of four eggs, two teaspoonfuls baking powder, one teaspoonful vanilla. Cream, butter and sugar, beat the eggs light, sift flour and baking powder together, then put all together in the order given. Put together with boiled icing.

Ham Croquettes.—One cup finely chopped cooked ham, one cup bread crumbs, two cups hot mashed potato, one large tablespoonful butter, two eggs, speck of cayenne pepper. Beat the ham, cayenne, butter and eggs into the potato. Let it cool slightly and shape like croquettes. Roll in bread crumbs, dip in beaten egg and again in crumbs, put in frying basket and plunge into boiling fat. Cook two minutes. Drain and serve.

Stuffed Baked Apples.—Wash and core the number of apples desired. Place in baking dish. Fill the centers with orange marmalade, jelly or a mixture of chopped nuts and raisins. Cover the bottom of the dish with hot water. Cook in oven until the apples are tender. Serve hot or cold with cream.

Orange and Date Salad.—Peel six oranges and a grape fruit, remove inner skin from the pulp and break into small bits. Wash, stone and cut into strips a pound of dates and mix with the fruit. Add one-half cup chopped nut meats and a dressing made of the yolks of two eggs, beaten light, one-half cup sugar, one cup orange juice and one tablespoonful of lemon juice. Ordinary boiled salad dressing may be used if prefrred.

Raisin Loaf Cake.—Cream, one-half cup of butter with one and a half cups of sugar. Add one cup of seeded raisins (cut in halves) and mix thoroughly. Then add two beaten eggs. Mix and sift two cups of flour with three teaspoonfuls of baking powder and add to the first mixture alternately with one cup of sweet milk. Flavor with one teaspoonful of lemon extract and bake in a loaf about one hour.

Dainty Dessert.—One quart milk, five rounding tablespoonfuls cocoa, four tablespoonfuls sugar, four tablespoonfuls cornstarch, one small teaspoonful salt, one cup macaroon crumbs, two egg whites. Heat milk, mix dry ingredients together, moisten with a little water and turn slowly into hot milk, stirring constantly. Cook until thick and smooth. Stir in macaroon crumbs and then fold in lightly the egg whites, which have been beaten stiff. Serve cold with whipped cream.

LYLE ELLSWORTH DAVIS, AGE FOUR MONTHS, WEIGHT FIFTEEN POUNDS.

FOR THE HOUSEWIFE.

A pinch of salt improves any cake.

Mix your pancake batter with an egg beater and you will have no lumps in the batter.

A trap baited with sunflower seeds is one of the most efficacious means of catching rats.

When baking fish never forget to line the pan with waxed paper; then there will be no disagreeably sticky dish to wash afterward.

When ironing waists for the boy or aprons for the girl put a clean handkerchief into the pocket of each before you hang it up, and they will never start to school without this essential article.

One teaspoonful of sweet cream in icing prevents crumbling when cut.

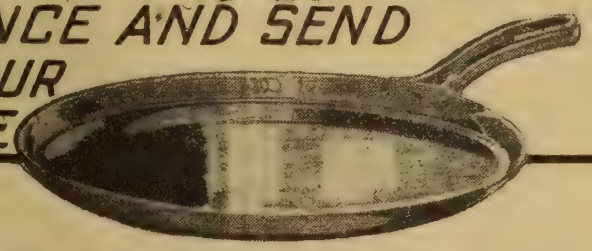
Wipe the range with brown paper after cooking and it can be kept bright with little trouble.

A snap clothespin has untold possibilities if kept near the kitchen stove. It may be used to lift hot kettle lids, pull saucepans from the fire, and will assist, without burning fingers, in turning pies or cakes in the oven.

An old tooth-brush will be found serviceable for spreading blacking on shoes. The long handle prevents the hands from getting soiled and it is durable and convenient. The shoes should be polished with a soft brush afterwards.

Karo Premium Griddle

$2.25 SOLID ALUMINUM GRIDDLE FOR 85 CENTS IN CASH AND LABELS FROM 50 CENTS WORTH OF KARO—GET YOUR KARO LABELS AT ONCE AND SEND FOR YOUR GRIDDLE



EVERYBODY these days knows aluminum ware—the highest priced and the most satisfactory kitchen ware used in this country.

Here is your chance to get a 10½ inch Solid Aluminum Griddle for less than the wholesale price.

This Aluminum Griddle needs *no greasing*. It heats uniformly all over; it doesn't smoke up the house; it doesn't chip; it doesn't rust and it looks so much better and cleaner than any of the old kind of griddles.

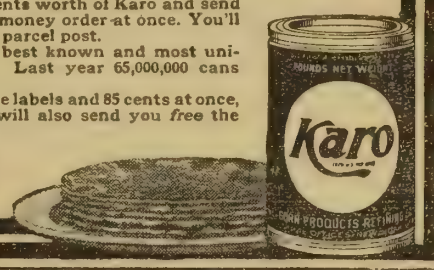
It bakes Griddle Cakes that are really just as crisp as you want them to be. With Karo on them, they are the finest eating in the world—and so *digestible* because baked without grease that many people who haven't dared to eat griddle cakes for years, are enjoying Karo and Griddle Cakes now.

At great expense we are seeking to place a Karo Aluminum Griddle in the homes of all Karo users, so that Karo—the famous spread for griddle cakes and waffles—may be served on the most deliciously baked cakes that can be made.

Go to your grocer today and get 50 cents worth of Karo and send us the labels and 85 cents in stamps or money order at once. You'll get your Aluminum Griddle by prepaid parcel post.

You know Karo, no doubt. It is the best known and most universally liked syrup in this country. Last year 65,000,000 cans were sold.

Get your Karo today—and send us the labels and 85 cents at once, so as to be sure of getting yours. We will also send you *free* the famous Corn Producs Cook Book.



CORN PRODUCTS REFINING CO.
P. O. Box 161 New York Dept. 104

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

FAIRER THAN A FAIRY.

Many, many years ago a beautiful princess was born to a king and queen far across the sea. The king, who was at war with several other rulers, had to be away from home all of the time and sent for his wife to join him. So they left their little daughter in a castle, which had been built by a mighty magician, and in the care of a wise old nurse, who loved the little princess as well as she loved her own children.

Everyone loved the princess and if you had seen her you would not have wondered at it. She was the most beautiful person that ever lived, the people said. Even as a tiny baby no name seemed to fit her but Fairer-Than-a-Fairy. So let us call her Fairer in the rest of our story.

For several years Fairer lived happily with her nurse in the castle, studying and improving her mind. Her beauty became so famous, in spite of her not going anywhere, that all the fairies were jealous and decided to destroy little Fairer.

Their queen was indeed lovely to look upon and she was so tiny that she was called Dwarfina. But she was mean and spiteful of disposition and plotting some way to hurt Fairer. At length Dwarfina came to the castle dressed like a serving maid and her ways were so charming, as only those of a fairy could be, that she soon became Fairer's favorite.

As long as she remained in the castle which the magician had built Dwrafina had no power. One day, however, Dwarfina, who was clever at dancing, in amusing Fairer and the other maidens, danced far out of the castle yard. Suddenly the deceitful little fairy queen pretended to faint and Fairer was so distressed that she rushed to her assistance. With a wave of her wand as Fairer stepped off the castle yard, where the fairy queen had no power, Dwarfina carried the beautiful maiden away to fairy regions deep in the earth.

Here Fairer learned that she had been captured by the maid whom she had loved best and she thought her heart would break. The fairies locked her in dungeons far away by herself and gave her many hard tasks to do.

She wept and wept until she fell asleep with her first task undone. Presently she was awakened by a bright light shining through her prison. There in the light stood a tall and princely young man.

"Who are you, young stranger?" asked Fairer. "Are you a god?" for she had never seen such a young man before.

"I'm not a god," answered the young man, "but I love you more than anything and I have come to help you. My name is Pyrrho and my mother is the fairy who has shut you in prison here."

Every night after that Pyrrho came and performed the tasks which the wicked fairies laid out for Fairer. Once it was to change a great basket of acorns into pearls; another time it was to clear thousands of cobwebs out of the long galleries of the dungeons. And after each task the fairies were much surprised and would give Fairer something harder to do.

They sent her to Sugar-Loaf Moun-

tain to get a goblet of the water that gave eternal life. When she got there she could not climb. So Pyrrho appeared in the form of an eagle, and, taking one of her slippers, brought it back from the top of the mountain full of the water of eternal life.

By this time Fairer truly lov the fairy prince as much as she had admired him from the first. His mother, Dwarfina, did not know that he was in love with her prisoner, but she was beginning to tire of having the work she set out for Fairer all so perfectly done. It gave her no excuse for doing away with the lovely princess.

As a final task and one that she was sure would end Fairer's life, Dwarfina sent her into the Forest of Marvels to capture the deer with silver hoofs. The princess started out with a little basket of food on her arm and soon was lost to sight in the forest, which seemed to close in all around her. In a short time she saw the deer with silver hoofs drinking from a stream near her, and, setting down her basket she started after the pretty animal. They ran on and on and then the deer disappeared and left Fairer all alone.

In despair fairer lay down and cried herself to sleep. A chorus of nightingales awakened her in the morning Some way she seemed to have more strength than she had before and so she spent the whole day chasing after the deer again.

At the end of three days Pyrrho appeared to Fairer in a dream and said to her:

"My dear Fairer, the cruel Dwarfina, my mother, knows that I have been helping you and so she has placed me in a dungeon for all but one hour in the day. Take this wand and wherever the silver-hoofed deer goes, follow. You will come to a bramble thicket at the entrance of which is a fire. Go past the fire and burn the skins of the animals which you shall find hanging there."

Then Pyrrho disappeared, leaving behind a wand with Fairer.

Now Fairer chased the deer with new hope in her heart. At the end of the fifth day it led her into a bramble

THE VERY BEST OF FRIENDS.

thicket at the entrance of which a fire was burning. Fairer ran on by until she came to a cozy little place in which was hanging the skin of a silver-hoofed deer. This she took on her wand, and, carrying it to the fire, burned it.

Looking around then she saw that she was in a little outdoor room which had many dainty little beds in it and was carpeted with Persian rugs. While she was wondering at this she heard the happy laughter of maidens. A lovely woman and several maidens entered the room.

"Dear maiden," said the lovely woman, "you are my deliverer. I am really queen of the fairies. I was changed into a deer, to live in that state for 300 years unless some maiden like you could capture me in the forest which is owned by the wicked Dwarfina. She has ruled in my place ever since I was enchanted. All these girls have tried and at the end of ten days' hunting they have been changed into animals. If you had failed you would have been a white rabbit."

Then they all left the Forest of Marvels and traveled back to Dwarfina and her bad fairies, who believed that Fairer had perished.

"Your power is at an end," said the real queen to Dwarfina. "You have done so many wicked and spiteful things, wholly unworthy of a fairy, that you may return to the islands where you were born. Only leave with me your son Pyrrho."

As Dwarfina was leaving Pyrrho came into the hall to bid her good-by. After she was gone he turned to Fairer, and the queen, seeing that they were in love with each other, sent them back to the kingdom of Fairer's father. Here they lived for many years in true happiness and the good fairy queen often visited them.

International Sunday School Lesson

Lesson for January 30, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE LAME MAN LEAPING.

LESSON TEXT—Act 3.
GOLDEN TEXT—Peter said, "Silver and gold have I none; but what I have that give I thee. In the name of Jesus Christ of Nazareth, walk."—Acts 3:6 R. V.

The coming of power (Chapter 2) is soon tested outside of the circle of believers. It is put to a public test, is tried as to its efficacy physically—i. e., has the Holy Spirit power physically as well as over the spirits of men?

I. **The Appeal to Peter and John, vv. 1-10.** Following Pentecost the disciples seem to have continued their accustomed mode of life. (1) The apostles and worship (v. 1). As yet,

A PREMO CAMERA
Is a Necessity--Not a Luxury

This camera is made by the Eastman Kodak Co., is of the box type, with universal focus lens, the simplest instrument for picture-making that can be devised. It will produce excellent results in the hands of anyone; no experience necessary. Film pack used, daylight loading. Pictures 1 1-4 x 3 1-4. Booklet of instructions included with each camera.

HAVE YOU ALWAYS REGARDED A CAMERA AS MERELY A "PLAY-THING?"

What do you raise?

Fruits? Livestock? Grain? Flowers?

It doesn't matter--whatever it is, you raise it to sell, don't you? Now, how much better than "telling" distant prospective customers what you have, is ***showing*** them! You can't bring them to your farm, but pictures will get practically the same result. One picture tells more than pages of words.

What better way of keeping a record of growth, than by pictures?

A Picture of old Dobbin with Baby on his back, will be priceless twenty years from now.

HERE'S HOW YOU CAN GET A CAMERA--

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Remit by P. O. Money Order or Registered Letter. Address

The HOUSEWIFE, 30 Irving Place, New York City

and indeed for many years to come, there was no particular separation of Jews and Christians.

Praying men like these two leaders, Peter and John, continued to fulfill their temple duties. The ninth hour was the prayer hour, the hour of sacrifice (Ex. 29:39, I Kings 18:36).

All true approach to God must be on the grounds of sacrifice (John 14:6, Heb. 9:22) and we must remember that this hour was the one at which Jesus died for us, our sacrifice (Heb. 10:19, 29).

Emphasize the need and importance of worship and prayer.

(2) The afflicted one (v. 2). This man had been there often and made his usual appeal; his expectation was limited to material aid (v. 5); he may or he may not have been familiar with Christ and His teachings, but something unusual was about to happen because the two to whom he appealed really knew God and on them now rested this new power in the world.

(3) The apostle's response (vv. 4-7.) Peter took a good look at the man (v. 4). Peter was changed by a look (Matt. 16:7). What he saw was the man's fundamental spiritual need. (a) Demanding the man's undivided attention, Peter gave the man what he had not—not what the man wanted or expected.

Peter's words, "Look on us," and Paul's "Be ye followers of me" (I Cor. 4:16) are in no wise egotistical, but in each case the fearless appeal of a man wholly God's, men conscious of the endowment of power, trying to seize the wavering wills of men that they might point them to Christ. (b) Peter aroused the man's expectancy.

It is usually men lacking in silver and gold who give to the world its greatest blessings and highest good (I Cor. 4:11).

Every effective Christian worker must base his appeal upon the facts of a personal experience (I Pet. 4:10 11). (d) Peter bade the man to do the very thing he (humanly) could not do, but the thing which, "in the name of Jesus Christ" he would be able to do.

(4) The result. (1) Upon the man. There is no doubt as to the completeness of the cure (v. 8). He had "strength;" was "lifted up" from his former position of weakness; he "leaped" (literally, ecstatic joy); he "walked," continuous activity; and he "worshiped," thanksgiving and renewing of strength. (2) Upon the people. (a) "All the people saw." They may not have heard or comprehended the words of Peter, but they did witness the transformation. (b) "They took knowledge" (v. 10), they began to observe, even as the world always does, the one who professes his faith in Christ. (c) They were filled with "wonder and amazement" (v. 10), they could not understand. No more can the world today (See I Cor. 1:18, 23) really comprehend the Christian. There was no guesswork, however, about this miracle, and, of the people who witnessed it and were so filled with wonder and amazement, many were converted (Ch. 4:4).

The miracle served to get for the gospel a good hearing and it accomplished its purpose (Rom 1:16).

II Peter's Appeal to the People, vv. 11-26. Notice it was the man who attracted the crowd, not Peter or John, for he eagerly held the disciples while the crowd gathered (John 5:10, 11). This may suggest the weakness of the man's faith in that he depended upon Peter and John rather than upon Jesus. (1) Peter seized this opportunity (v. 12) and began his salutation by taking advantage of their curiosity.

Peter eagerly turned their thoughts from himself unto Jesus. He wished to divert attention from himself and used the miracle for the double purpose of glorifying Jesus Christ and to convict these men of their sin.

Verses 13, 14, 15 contain the charges, whereof Peter and John were "witnesses." They were not to look upon "us" as though they had done anything, nor was it some new God of whom they witnessed (v. 13). The act of the crucifixion, he grants, may have been consummated in ignorance (v. 17), but since God had raised Jesus from the dead, and this doctrine of the resurrection was new, therefore they ought to repent even though their acts were in accord with prophecy.

Peter appeals to Jewish pride. Is such an appeal legitimate?

WITH OUR ADVERTISERS.

A Good Agency Proposition.

A KRAMER rotary harrow, hitched behind your plow, insures a moist, finely pulverized seed bed, which in turn means quick germination preventing lost seed. You can do your disking, leveling and pulverizing all in one operation and they are of such light draft that they do not require extra pulling power. A big illustrated folder and special agency proposition will be sent you if you will write to Kramer Rotary Harrow Co., 215 Main St., Morton, Ill., and mention their advertisement on page 14.—Adv.

Some Good 1914 Seed Corn.

THE Dakota Improved Seed Co., of Mitchell, S. D., handlers of "Disco" guaranteed seeds, are advertising on page 15 a limited amount of fine 1914 seed corn at special prices. By ordering promptly they claim that you can save money and be sure of getting some of the few thousand bushels of A. No. 1 seed which they carried over from last year and which is guaranteed to produce excellent results, because of its extra high vitality. Please mention this paper and address Dakota Improved Seed Co., 27 Main St., Mitchell, S. D. —Adv.

Mankato Incubators Delivered Quickly.

MANKATO incubators are quickly delivered after an order is received, all vexatious delays being eliminated. For twenty years they have been building incubators that have given satisfaction wherever used and there are thousands in use. The New Mankato incubator sells for $7.25 and has all kinds of incubator refinements and the best of construction. A postal card addressed to Mankato Incubator Co., Box 708 Mankato, Minn., will bring their big free incubator book and catalog to you. In writing them kindly mention their advertisement on page 23.—Adv.

Over Sixty Years in the Nursery Business.

EVERBEARING strawberries, which fruit from early summer till November, are one of the specialties offered by Kellogg's Nurseries in their advertisement on page 15. This concern has been in the business over sixty years and Kellogg's Hardy Northern grown fruit has a well-deserved reputation for big productivity and strength. A free price list and book of instructions will be sent on application to Kellogg's Nursery, Box 224, Janesville, Wis. In writing please mention this paper.—Adv.

Extra Good Wheat and Oats.

THE Farmer Seed & Nursery Co., of Faribault, Minn., is featuring its Bumper Crop oats and Genuine Marquis wheat in its advertisement on page 14. The former is said to produce exceptionally heavy, white grains, which will weigh forty-five pounds to the measured bushel, while the latter has yielded forty bushels to the acre. Their seed comes from pure strains and is full of strength and vigor. Samples and illustrated seed book will be sent free to anyone addressing Farmer Seed & Nursery Co., 104 Third Ave., Farlbault, Minn., and mentioning this paper. —Adv.

A Liberal Nursery Offer.

THE Gardner Nursery Co., of Osage are making a liberal and interesting proposition in their advertisement on page 14. They offer to send a pair of mated everbearing strawberry plants to anyone who will agree to report their success with them, enough of the new Cereal Feterita to plant a rod square, and a package of perennial Oriental poppy seed free on request. They say that if you feel like doing so you can send 10 cents for the mailing expense, but yon don't have to. They just want to get acquainted with you. You can take advantage of this very fair offer by writing today to the Gardner Nursery Co., Box 730, Osage, Iowa. Mention of their advertisement in this paper would be appreciated.—Adv.

Making the Horse a Luxury.

WHEN you can get a tractor for $550 that will haul anything a horse can on fields or roads, and will also run all your farm machinery, you can hardly afford to use a horse. That is what is claimed for the "Happy Farmer" tractor, which is advertised on page 15. It is said to be unusually light in construction but exceptionally durable, because of a practically all steel construction. It is simple in design and so arranged that 88 per cent of the weight is on the drive wheels. Further information about this new, light tractor, together with agents' terms and territory, will be sent on inquiry addressed to Happy Farmer Tractor Co., 330 Third Ave., Minneapolis, Minn. When writing please mention this paper.—Adv.

Salzer's Seed Catalog.

FOR nearly half a century John A. Salzer's Seed Co., of La Crosse, Wis., has stood for quality in farm and garden seeds. During these years their annual seed catalog has been a standard in thousands of homes. It contains 184 pages of seed wisdom and a postal card request will bring it to you at once. In their advertisement on page 14 some of their high quality seeds are enumerated, including their oats, which are of a registered, pedigreed variety, warmly endorsed by agricultural stations, their high-grade and high-testing Minnesota and Wisconsin grown seed corn, their alfalfa, sweet clover and other hardy, big producing grasses. They are offering thirty-five packages of earliest vegetable seeds for $1.00. For further information address John A. Salzer's Seed Co., Box 123, La Crosse, Wis., and kindly refer to this paper.—Adv.

A Splendid Grass Mixture.

A SEED mixture of fully one-third alsike clover and the balance timothy clover for $5 a bushel is one of the special bargains offered by the A. A. Berry Seed Co., of Clarinda, Iowa, in their advertisement on page 15. This is said to be one of the greatest hay and pasture combinations grown. A free sample, together with their 100-page catalog, describing this wonderful grass mixture and others of their tested, recleaned and guaranteed seeds, will be sent on request to A. A. Berry Seed Co., Box 534, Clarinda, Iowa. Mention of this paper in writing will be appreciated.—Adv.

Firestone Tires Have New Color Design.

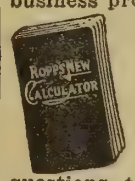
FROM now on you can easily distinguish Firestone tires by their color combination of red and black. They will have red side walls and black treads, and they lend a distinctive appearance to any car. If you will send the name of your dealer and the make of your tires to the makers they will forward you free one of their cementless tube patches, which is likely to come in handy some day. Ask also for a copy of their interesting new booklet, "Mileage Talks," No. 17. Address Firestone Tire & Rubber Co., Akron, Ohio, and please mention their advertisement on page 15.—Adv.

A Practical Ditcher and Grader.

MARTIN farm ditchers and road graders are useful in many ways. They are, of course, designed primarily for cutting ditches and grading country roads, and they do this work easily, in a common sense manner. They are handy to use in terracing and in cleaning out laterals. They are built entirely of steel and are so simple and practical that they do the work of much larger machines, costing four times as much money. You can learn about them and also about their special introductory proposition by writing Owensboro Ditcher & Grader Co., Box 861, Owensboro, Ky., and mentioning their advertisement on page 12.—Adv.

Two Books for Every Farmer.

ROPP'S New Calculator is a competent and accurate authority in the matter of short cuts to the solution of business problems of every description.



It covers every problem liable to come up on the farm, in the home, buying or selling, interest or discount, total of sales in dollars, exact amounts to be paid in wages, or amounts due for products. There are hundreds of answers aside from the common questions to be decided daily. The "Square Deal" fence book describes in detail how Square Deal fencing is made —why it is different from all others, and the fence you should put up. Both of these valuable books are sent by the Keystone Steel & Wire Co., 638 Industrial St., Peoria, Ill., to all who send name and address and who did not receive a copy of these books last year. In writing please mention this paper. See page 20.—Adv.

SUGAR FACTORY TO OPEN.

There is again talk of opening up the plant of the Rock County Sugar Company this year. This plant was closed down by Captain James Davidson, the owner and manager, when the present tariff law went into effect. Captain Davidson claimed that it was impossible to make the plant pay under the new tariff. The factory was closed down before the European war, which put quite a different aspect on the sugar business. The predicted slump in the price of sugar to follow the new tariff law did not come. On the contrary sugar raised in price after war was declared in Europe. Captain Davidson thinks it will pay to operate the Janesville plant and an effort is being made to interest farmers in raising more beets this year.

HONORS AT GRAIN SHOW.

There were 150 exhibitors at the recent grain show held in connection with the farmers' institute in Manitowoc county. A. H. Bauer, residing on Route 2, Manitowoc, won the silver loving cup offered to the exhibitor securing the largest number of points in the competition.

Farmers from near Stoughton, Dane county, met recently in Madison and discussed the advisability of supporting a condensary. Such a plant as is proposed for Stoughton would employ about twenty-five men.

The funeral of George Cannon, 89 years old, who, in 1863 and 1865 won the plowing championship of all England, took place recently. He was employed at Simplemarsh Farm, Addlestone, for more than fifty years, and continued working at Chertsey till he was past 77.

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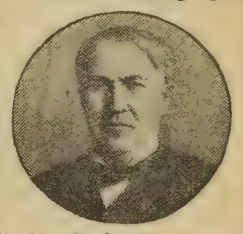

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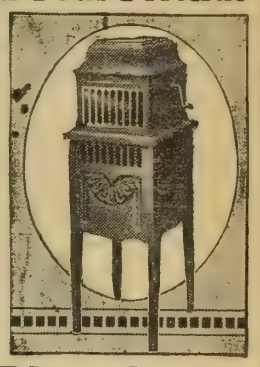
If you wish to keep Mr. Edison's superb new instrument, send us only $1.00 after the free trial. Pay the balance on the easiest kind of monthly payments.

Think of it—a $1.00 payment and a few dollars a month to get this brand new style outfit—the Diamond Stylus reproducer, the musical quality—the same Diamond Amberol Records—all the musical results of the highest price outfits—yes, the greatest value for $1.00 down, balance on easiest monthly terms. Convince yourself—a free trial first! No money down, no C.O.D.. not one cent to pay us unless you choose to keep the instrument.

Entertain Your Friends

Hear all the latest up-to-date song hits of the big cities. Laugh until the tears stream down your face from laughing at the funniest of minstrel shows. Entertain your family and friends with everything from Grand Opera to Comic Vaudeville—then if you choose, send it back.



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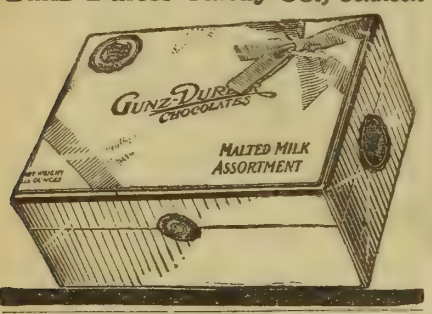

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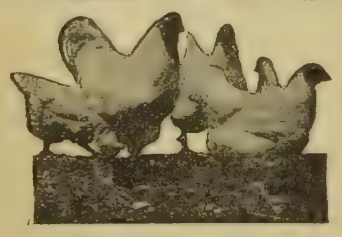
GALLOWAY BROS. & CO.,
32 Galloway Sta. Waterloo, Iowa

Making Hens Lay GOLDEN EGGS



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HEPSEY BURKE—A Sister to David Harum

By F. N. Wescott, the Brother of the Author of "David Harum."

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SYNOPSIS.

Hepsey Burke with the Junior Warder met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor."

CHAPTER II.

Gossip.

THAT afternoon Maxwell occupied himself in unpacking his trunk and arranging his room. As the finishing touch, he drew out of a leather case an exquisite miniature of a beautiful girl, which he placed on the mantelpiece, and at which he gazed for a long time with a wistful light in his fine gray eyes. Then he threw himself on the lounge, and, pulling a letter from his inner pocket, read:

"Don't worry about expenses, dear. Six hundred is quite enough for two; we shall be passing rich! You must remember that, although I am a 'college girl,' I am not a helpless, extravagant creature, and I know how to economize. I am sure we shall be able to make both ends meet. With a small house, rent free, a bit of ground for a vegetable garden, and plenty of fresh air, we can accomplish almost anything, and be supremely happy together. And then, when you win advancement, as, of course, you will very soon, we shall appreciate the comforts all the more from the fact that we were obliged to live the simple life for a while.

"You can't possibly imagine how I miss you, sweetheart. Do write as soon as possible and tell me all about Durford. If I could just have one glimpse of you in your new quarters—but that would only be a wretched aggravation; so I keep saying to myself 'Some day, some day,' and try to be patient. God bless you and good-by."

Donald folded the letter carefully, kissed it, and tucked it away in his pocket. Clasping his hands behind his head he gazed at the ceiling.

"I wonder if I'd better tell Mrs. Burke about Betty. I don't care to pass myself off as a free man in a parish like this. And yet, after all, it's none of their business at present. I think I'd better wait and find out if there's any possibility of making her happy here."

There was a knock at the door.

"Talk of angels," murmured Maxwell, and hurriedly returned the miniature to its case before opening the door to Mrs. Burke, who came to offer assistance.

"Don't bother to fuss for me," she said as he hastened to remove some books and clothes from a chair, so that she might sit down. "I only came up for a moment to see if there was anything I could do. Think you can make yourself pretty comfortable here? I call this room 'the prophet's chamber,' you know, because it's where I always put the visitin' parsons."

"They're lucky," he replied. "This room is just delightful with that jolly old fireplace, its big dormer windows and the view over the river and the hills beyond. I shall be very comfortable."

"Well, I hope so. You know I don't think any livin' room is complete without a fireplace. Next to an old friend, a bright wood fire's the best thing I know to keep one from getting lonesome."

"Yes—that and a good cigar."

"Well, I haven't smoked in some time now," Mrs. Burke replied, smiling, "so I can't say. What a lot of things you've got!"

"Yes, more than I thought I had."

"I do love to see a man tryin' to put things to rights. He never knows where anything belongs. What an awful lot of books you've got! I suppose you're just chuck full of learnin', clean up to your back teeth, but we won't any of us know the difference. Most city parsons preach about things that are ten miles over the heads of us country people. You can't imagine how little thinkin' most of us do up here. We're more troubled with potato bugs than we are with doubts, and you'll have to learn a lot about us before you really get down to business, I guess."

"Yes, I expect to learn more from you than you will from me. That's one of the reasons why I wanted to come so far out in the country."

"Hm! I hope you won't be disappointed."

Mrs. Burke adjusted her glasses and gazed interestedly about the room at some pictures and decorations which Maxwell had placed in position, and inquired:

"Who is the plaster lady and gentleman standin' on the mantelpiece?"

"The Venus de Milo and the Hermes of Praxitetes."

"Well, you know, I just can't help preferrin' ladies and gentlemen with arms and legs, myself. I suppose it's real cultivated to learn to like parts of people done in marble. Maybe when I go down to the city next fall to buy my trousseau I'll buy a few plasters myself to make the house look more cheerful-like."

Maxwell caught at the word "trousseau," and as Mrs. Burke had spoken quite seriously he asked:

"Are you going to be married, Mrs. Burke?"

"No such thing! But when a handsome young widow like me lives alone, frisky and sixty-ish, with six lonesome, awkward widowers in the same school district, you can never tell what might happen any minute; 'In time of peace prepare for war,' as the paper says."

Maxwell laughed reassuringly.

"I don't see why you laugh," Mrs. Burke responded, chuckling to herself. "'Taint polite to look surprised when a woman says she's a-goin' to get married. Every woman under ninety-eight has expectations. While there's life there's hope that some man will make a fool of himself. But unless I miss my guess, you don't catch me surrenderin' my independence. As long as I have enough to eat and am well I'm contented."

"You certainly look the picture of health, Mrs. Burke."

"Oh, yes! as well as could be expected, when I'm just recoverin' from a visit from Mary Sam."

"What sort of a visitor is that?" asked Maxwell, laughing.

"Mary Sam is my sister-in-law. She spends a month with me every year on her own initation. She is what you'd call a hardy annual. She is the most stingy and narrow-minded woman I ever saw. The bark on the trees hangs in double box-plaits as compared with Mary Sam. But I got the best of her last year. While I was cleanin' the attic I came across the red pasteboard sign with 'Scarlet Fever' painted on it, that the Board of Health put on the house when Nickey had the fever three years ago. The very next day I was watchin' the 'bus comin' up Main Street, when I saw Mary Sam's solferino bonnet bobbin' up and down inside. Before she got to the house I sneaked out and pinned up the sign, right by the front door. She got onto the piazza, bag and baggage, and brown paper bundles, before she caught sight of it. Then I wish you could have seen her face. I wouldn't have believed so much could be done with so few features."

"She didn't linger long?" laughed the parson, who continued arranging his books while his visitor chatted.

"Linger? Well, not exactly. She turned tail and run lickety-spindle back to the 'bus as if she had caught sight of a subscription paper for foreign missions. I heard Jim Anderson, who drives the 'bus, snicker as he helped her in again, but he didn't give me away. Jim and I are good friends. But when she got home she wrote to Sally Ramsdale to ask how Nickey was, and Sally, not bein' onto the game, wrote back that there was nothin' the matter with Nickey that she knew of. Then Mary Sam wrote me the impudentest letter I ever got, and she came right back and stayed two months instead of one, just to be mean. But that sign's done good service since. I've scared off agents and tramps by the score. I always hang it in the parlor window when I'm away from home."

"But suppose your house caught fire while you were away?"

"Well, I've thought of that, but there's worse things than fire if your insurance is all right."

Mrs. Burke relapsed into silence for a while, until Maxwell opened a box of embroidered stoles, which he spread out on the bed for her inspection.

"My! but aren't those beautiful! I never saw the like before. Where did you get 'em?"

"They were made by the 'Sisters of St. Paul' in Boston."

Hepsey gazed at the stoles a long time in silence, handling them daintily, then remarked:

"I used to embroider some myself. Would you like to see some of it?"

"Certainly, I should be delighted to see it," Donald responded; and Mrs. Burke went in search of her work.

Presently she returned and showed Maxwell a sample of her skill—doubtless intended for a cushion cover. To be sure it was a bit angular and impressionistic. Like Browning's poems and Turner's pictures, it left interesting room for speculation. To begin with, there was a dear little pink dog in the foreground, having convulsions on purple grass. In the middle-distance was a lay-figure in orange, picking scarlet apples from what appeared to be a revolving clothes-horse blossoming profusely at the ends of each beam. A little blue brook gurgled merrily up the hill and disappeared down the other side only to reappear again as a blue streak in an otherwise crushed-strawberry sky. A pumpkin sun was disappearing behind emerald hills, shooting up equidistant yellow rays, like the spokes of a cartwheel. Underneath this striking composition was embroidered the dubious sentiment "There is no place like home."

Maxwell examined carefully the square of crossstitch wool embroidery, biting his lip; while Hepsey watched him narrowly, chuckling quietly to herself. Then she laughed heartily and asked:

"Confess now, don't you think it's beautiful?"

Donald smiled broadly as he replied:

"It's really quite wonderful. Did you do it yourself?"

"To be sure I did, when I was a little girl and we used to work in wool from samplers, and learn to do alphabets. I'm glad you appreciate it. If you would like to have me embroider anything for the church don't hesitate to ask me." She busied herself examining the stoles again, and asked:

"How much did these things cost, if you don't mind my askin'?"

"I don't know. They were given to me by a friend of mine, when I graduated from the Seminary."

"Hm! a friend of yours, eh? She must think an awful lot of you."

Hepsey gave Donald a sharp glance.

"I didn't say it was a lady."

"No, but your eyes and cheeks did. Well, it's none of my business and there's no reason that I know of why the devil should have all the bright colors and embroideries and things. Are you High Church?"

Maxwell hesitated a moment and replied:

"What do you mean by 'High Church?'"

"The last rector we had was awful high." Hepsey smiled with reminiscent amusement.

"How so?"

"We suspected he didn't wear no pants durin' service."

"How very extraordinary! Is that a symptom of ritualism?"

"Well, you see he wore a cassock under his surplice, and none of our parsons had ever done that before. The Senior Warden got real stirred up about it and told Mr. Whittimore that our rectors always wore pants durin' service. Mr. Whittimore pulled up his cassock and showed the Warden that he had his pants on. The Warden told him it was an awful relief to his mind, as he considered goin' without pants

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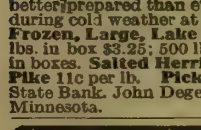

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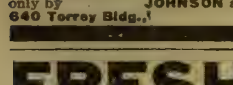

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durin' service the enterin' wedge for Popish tricks; and if things went on like that, nobody knew where we would land. Then some of the women got talkin', and said that the rector practiced celibacy, and that someone should warn him that the parish wouldn't stand for any more innovations, and he'd better look out. So one day Virginia Bascom, the Senior Warden's daughter, told him what was being said about him. The parson just laughed at Ginty, and said that celibacy was his misfortune, not his fault; and that he hoped to overcome it in time. That puzzled her some and she came to me and asked what celibacy was. When I told her it was staying unmarried, like St. Paul—my, but wasn't she mad, though! You ought to have seen her face. She was so mortified that she wouldn't speak to me for a week. I must go and make my biscuits for supper. If I can help you any just call out.

(To be continued.)

VETERINARY MATTERS.

AILING ANIMALS.

Fistula.

Is there any cure for fistula and poll evil before they break and run? If not before, what is the best cure after they break? Kindly give me the best information you can obtain. If the cure is not permanent, can it be driven back by blistering, and for how long?

If taken when purely an acute inflammation it may be overcome by a counter irritant. If pus has formed in swelling it is not advisable to apply blistering agents, as it will only tend to cause pus to burrow deeper into the tissues. The pus cavity should be opened at the lowest point at the earliest moment and free drainage given. If the cavity has opened naturally it is best to have a competent veterinarian handle the case and use radical means, as it usually resolves itself into this sooner or later. The use of bacterins have proven a great help in the treatment of fistula. Fistulas are not all alike and, therefore, it usually calls for a competent man to make an examination before intelligent treatment can be carried out.

Chronic Bloating (Tympanites).

I have a black Polled Angus two-year-old bull that first got bloated last fall on a small patch of alfalfa. I had a veterinarian here and he tapped him and has sent out different medicines a couple of times since then. He gets bloated every day so that I have to tap him two and three times a day. He seems to be all right otherwise. He eats and drinks the same as he ever did.

While you give only a limited number of symptoms, it seems probable your bull is subject to chronic bloating following an acute attack of bloating. This is found quite often among cattle. Give the animal a moderate dose of purgative medicine, one pound of sulphate of magnesia, one-half ounce powdered barbadoes aloes and one ounce of powdered ginger. Put this in two quarts of lukewarm water and give as drench. After operation of the purgative try the following tonic: Powdered gentian, three ounces, powdered bicarbonate of potash, three ounces, powdered ginger, three ounces, powdered capsicum, one ounce. Mix and divide into twelve powders. Give one in water as drench three times a day before feeding. Give plenty of exercise and clean, wholesome food. Instead of using the trocar so often try the use of two ounces of aromatic spirits ammonia in a quart of water, repeated in a half hour if necessary. Also move animal around to help relieve bloat. If followed out closely the above directions and remedies may prove of some benefit.

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At a meeting of the Hennepin County Jersey Cattle Breeders at Minneapolis, Minn., an organization was perfected for the bettering of the Jersey cattle business in Hennepin county. The Hennepin County Jersey Cattle Club was formed with a membership of twenty-five. C. R. Brackett was elected president; J. W. Love, vice president; G. A. Chaffee, secretary and treasurer. The Jersey breeders of Hennepin county expect great results from this organization.

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Live Stock Items and Commercial Notes

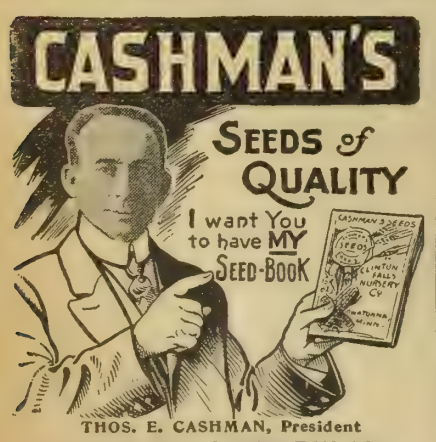
Gathered by Representatives of The Wisconsin Farmer

Gordon's Holsteins.

ONE of the most progressive breeders of dairy cattle in southern Wisconsin is J. Roy Gordon, Mineral Point, Wis. He has been actively engaged in breeding pure-bred Holsteins for many years and has developed an excellent herd of high-producing animals of good straight type and of proven blood lines. Mr. Gordon is a graduate of the college of agriculture, being a member of the class of 1900. He tells with a great deal of pleasure of his personal association with Dr. Babcock, inventor of the famous Babcock test; Dean Henry, author of "Feeds and Feeding"; Professor King, inventor of the King System of Ventilation, and others who were the pioneers in scientific methods of agriculture. The writer recently spent a most pleasant day at this farm and while there looked over the herd of Holsteins which consists of some sixty head. There are several which have advance registry records of merit. There are two bulls in service, viz.: Pontiac Cornucopia Coronis and Ostego Korndyke Hengerveld De Kol. Pontiac Cornucopia Coronis has fifteen A. R. O. daughters with creditable records, one being a twenty-five-pound three year old. His sire is Pontiac Cornucopia, that has twenty-three A. R. O. daughters, eight with records over twenty pounds. His dam Pontiac Coronis is a 27.60, 5 per cent daughter of Hengerveld De Kol, that has 116 A. R. O. daughters, eight over thirty pounds, seventy-two with records over twenty pounds. His sire's sire is Aaggie Cornucopia Johanna Lad, that has 101 A. R. O. daughters, fifty-three with records from twenty to thirty-two pounds. Ostego Korndyke Hengerveld De Kol is a grandson of Pontiac Korndyke that has 100 A. R. O. daughters, eight with records from thirty to thirty-eight pounds butter in seven days. Among the females in the herd are ten yearling heifers, which are worthy of special mention. They are both well bred and of good, straight conformation, showing also great capacity and constitution. They are especially noticeable because of the extraordinary udder development and long, smooth teats. These were sired by Queen of the Pines Aaggie, whose dam is a 26.03-pound daughter of Dutchland Sir Pontiac Rag Apple. At the present time Mr. Gordon has a number of choice bulls for sale out of A. R. O. cows and sired by Pontiac Cornucopia Coronis. They are from one-half to seven-eighths white and of good type. For pedigrees and description write to the above address. See page 39.—Adv.

E. W. Hendricks' Poland China Sale.

IT will be a big-type sale of quality which E. W. Hendricks, Hazel Green, Wis., will hold on Thursday, February 10th, and one which our readers cannot afford to miss. The writer recently had the privilege of looking over the offering and was impressed with the type of the individuals and the breeding. He saw here one of the largest boars of the breed—Black Jumbo, that in show shape weighs 1,100 pounds. He is not only of exceptionally large size, but he is a good individual with eleven inch bone, great width and depth and a strong back. Five fall yearlings and four mature sows and twenty-seven spring gilts offered in the sale were sired by him. There are four fall yearlings by the $1,000 boar, Oakland's Equal, three proven sows by Giant Big Bug by J. C. Big Bug by Big Bone, two of these are out of daughters of Fesenmeyer's noted boar, A Wonder. There are also a number of spring gilts by Great Leader, a son of E. A. Fraser's 1,055-pound boar, Tecumseh Leader. Some by Peerless Wonder by A Wonder. The gilts are well developed, with heavy bone, wide, smooth, strong backs, short, wide heads, deep sides and thick, well let down hams. They are bred for spring litters to Big Oakland, Long Joe and R.'s Wonder. Big Oakland is a son of Irwin's $1,000 boar, Oakland's Equal and out of an A Wonder dam. Long Joe is by Big Special and out of a daughter of Fesenmeyer's boar, Big Joe. R's Wonder is by Rood's A Wonder, a son of A Wonder and out of a daughter of Peter Mouw's $1,500 boar, Longfellow Jr. These gilts are, therefore, not only well bred themselves, but carry litters that are by excellent individuals of known breeding. Catalogs giving breeding and description are now ready for distribution. Send for one at once and look it over carefully. Make your selections and if impossible to attend the sale in person send a mail bid to the auctioneer or to H. S. Hoard, representative of The Wisconsin Farmer. See advertisement on page 37.—Adv.



THOS. E. CASHMAN, President
CLINTON FALLS NURSERY CO.,
OWATONNA, MINN.
Please send your free catalog to
Name _____
Town _____
R. F. D. _____ State _____

Madson's Poland China Sale.

FRIDAY, February 11th, is the date of the Wisconsin Poland China Breeders' Annual meeting and Madson's bred sow sale, both to be held at Madison, Wis. These are two events that every Wisconsin Farmer reader interested in Poland China swine should attend. The coming year promises to be the greatest in history for breeders of pure breds. There are several factors combining to make breeding very profitable. Firstly, the farmers and breeders have shipped all of their inferior and mediocre breeding animals for pork. This will create a heavy demand next fall, in addition there has been such a rush of light hogs, (from sixty to 150 pounds) on to the market that pork will be high next fall. High pork prices always stimulate a heavy demand for breeding stock. The offering in this sale is of high merit. They are excellent individuals, combining good type, large size with the desirable good quality. They are also well bred along proven blood lines, being sired by boars that have won high honors in the show ring under critical judges and against heavy competition. In addition every animal is cholera immune, having been given the double treatment. This is a factor of immense importance to every breeder whether he thinks he is in danger or not. I said that the animals are good individuals, and I leave it to you to decide. Many of the spring gilts now weigh 275 pounds and will touch 400 pounds by sale date. They have good, wide, strong backs, deep, heavy hams; deep barrels and well up on feet. The majority of the spring gilts were sired by Correct I Am, junior champion boar at the 1914 Minnesota and Illinois State Fairs against heavy competition. His sire was Correct I Know, grand champion at the South Dakota State Fair. The fall gilts were sired by Royal Model and Badger Perfection, that sired the 1913 grand champion sow. These sows are bred for March and April farrow to Triumph, an exceptionally good big-type boar declared by Lovejoy and McFadden to be an outstanding animal. He was sired by Hidestretcher, grand champion at the 1914 Wisconsin State Fair. The sale will be held at Dr. J. P. West's Veterinary Barn, 735 East Washington Avenue, five blocks from the C. & N. W. and east side C., M. & St. P. railway stations. It will, therefore, not be necessary to drive over drifted roads through cold heavy winds in case it storms. The sale will be held in a well heated, lighted and seated building where it will be perfectly comfortable regardless of the weather. Catalogs giving descriptions and breeding are now ready and will be mailed on application. Send for a catalog and look it over carefully. Plan to attend the sale if possible, but if impossible make your selections from the catalog and send a mail bid to either the auctioneer, Ira Cottingham, or H. S. Hoard, care of The Wisconsin Farmer, Madison, Wis. See page 37.—Adv.

A Very Popular Horse.

IF some candidates for office were able to attain the popularity of a certain race horse, which made a pacing record of 1:55, they would have no trouble in securing the offices for which they are running. This horse is so popular that over 2,000,000 people wrote and asked his owner for a picture of him and these pictures are now hanging in homes and offices all over the world. He is not only popular among the mass of people on account of his ability to win races and break world's records time after time, but he is also popular with his caretakers on account of his remarkably gentle and loving disposition. This horse seems to possess almost human intelligence and is remarkable in many ways. He has broken world's records fourteen times and while it may be that some day some horse may pace faster than he, it is conceded that for any horse to break as many records as this one has would be practically impossible. It is needless to mention the name of this horse, as it is known to every man, woman and child in the land. See advertisement of International Stock Food Co., Minneapolis, Minn., on page 24 this paper. Please mention this paper when you write them.—Adv.

Atwater's Duroc Sale.

THE annual Duroc bred sow sale of L. F. Atwater, Bangor, Wis., will be held on Tuesday, February 1st. This annual sale is an event looked forward to by Duroc breeders throughout this territory as one of the big events of the breed. The winnings of this herd at the Wisconsin and Minnesota State Fairs has placed it as one of the best herds in this territory. For several years he has won both grand, first and second prizes at the Wisconsin State Fair. The offering of sows and gilts in this sale is practically of grand champion blood. The majority of them are daughters or are out of daughters of Lee's Defender, grand champion at the 1914 Wisconsin State Fair. These are bred to Prince Illustrator, grand champion at the 1915 Wisconsin State Fair. He is by Model King of High Model by Golden Model 2d. A part of the other gilts are sired by Corrector, first-prize junior yearling at the 1914 Wisconsin State Fair, some by Lucky Col. and by Select Advancer. These are bred to Lee's Defender, a combination which should produce some excellent results. The gilts in addition to being of proven breeding are of superior type and well developed. They have been produced by careful mating of typey, well-developed animals of known and proven worth; in addition they have been well fed and cared for, not being allowed to be stunted at any time. Catalogs giving pedigrees and description are now ready for distribution. Write for one at once and look over the breeding. Attend this sale if possible, or send a mail bid to H. S. Hoard, representative of The Wisconsin Farmer. See advertisement on page 36.—Adv.

Paid for Incubator With First Hatch.

A GOOD incubator will pay for itself the first hatch if the hatch is made early so that the chickens can go on the market while prices are good. Last season the Logan Valley Poultry Farm, of Wayne, Neb., set a Radio-Round Incubator the second week of February with eggs which were gathered the last week in January and the first week in February. The hatch was good, considering the fact that in extremely cold weather many eggs are chilled before they can be gathered. When twenty-four hours old chicks were transferred to a Radio Brooder. On May 20th, when eleven weeks old, they were sold on the market as broilers. After paying for the incubator, the setting of eggs, feed and bedding for the chicks and oil for incubator and brooder, the owner of the incubator had $4.95 left from the proceeds of the hatch, besides five chicks on hand that he had not sold. The profits would have been considerably more had he not had bad luck and lost eleven chicks. Full details of the costs and profits of this hatch may be had by writing to the Radio-Round Incubator Co., Drawer 9, Wayne, Neb., and asking for Book No. 38. Please mention this paper when writing.—Adv.

Avoid Sled and Sleigh Tips.

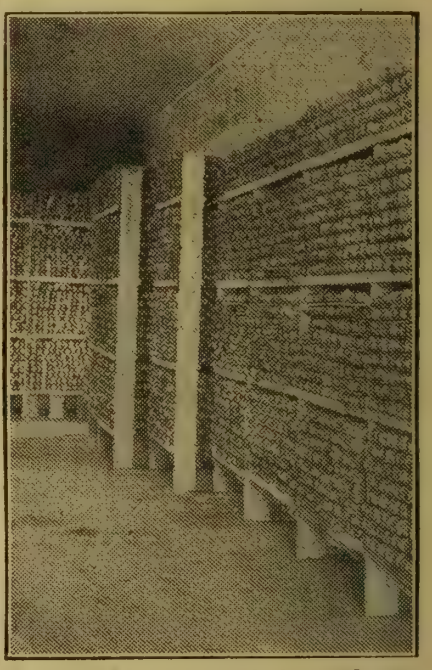
WEST BEND anti-tip sleigh runners are a sure guarantee against tipping over. The runners turn on pivots just below the beam, keeping the load directly over the runners, no matter how the team is turned. They also pull out of ruts much easier than the old-fashioned runners, take backing strain off the runners and distribute it evenly, making backing much easier, dodge obstructions easily and are very durable. They have been thoroughly tested and proven and are made by the old reliable Schmidt & Stork Wagon Co. In writing them for information about their anti-tip runners, inquire also about their "Light Running" West Bend wagons. Address Schmidt & Stork Wagon Co., Dept. 123, West Bend, Wis., and kindly mention their advertisement on page 18.—Adv.

"Hatching Facts" a Valuable Handbook.

THE booklet entitled "Hatching Facts," which the Belle City Incubator Co., of Racine, Wis., is offering to send free to anyone answering its advertisement on page 23, gives the story of many championship winners, told in their own words about their victories in hatching contests with Belle City incubators. It contains 100 photographs of these winning hatches, together with all sorts of valuable and interesting information about incubator and brooder construction. It is said of the Belle City machine that "it incubates in all states," there being over 400,000 in use. A postal card addressed to Jim Rohan, Pres. Belle City Incubator Co., Box 106, Racine, Wis., will bring you this handbook of practical hatching information, together with his personal ten-year guarantee propositiin. In writing please mention this paper.—Adv.

Stubbs & Hyzer's Duroc Sale.

EVERY reader of The Wisconsin Farmer who breeds pure-bred or grade Duroc swine or has "a leaning" that way, is advised to attend the sale of bred Duroc sows to be held by Stubbs & Hyzer, West Salem, Wis., Monday, January 31st. The demand for breeding stock next fall will undoubtedly be the largest ever experienced in this territory. Practically every farmer and many breders have shipped all of their hogs onto the market because of the poor corn crop. This meais that they will have to buy breeding stock later in the year. In addition to this the price of pork promises to be very high, which always stimulates a big demand for breeding animals. For these reasons every breeder of Duroc swine should be in a position to supply this heavy demand, which is sure to come. The animals offered for sale are of the best both in breeding and as individuals. In fact, they represent blood lines that have proven of exceptional quality. The offering consists of eighteen tried sows and thirty-two spring gilts, ten of these were sired by King the Colonel. This boar is the premier sire of the Colonel family. He has more 1,000-pound sons than any other boar of any breed. His daughters are also of exceptional merit, which is shown by the prices they were sold for. In 1915 thirty-five daughters of King the Colonel in nineteen different sales sold at an average of $140.60. There are eight sows sired by a son of the King the Colonel; two by Lee's Defender, grand champion at the 1915 Wisconsin State Fair; fifteen of Golden Model breeding and six of Defender breeding. The sale will he held on the farm, which is only three blocks from both the C., M. and St. P. and C. & N. W. Ry. stations. Everyone will be comfortable, regardless of weather conditions, as it will not be necessary to drive over drifted roads. If impossible to attend the sale in person, send a mail bid to the auctioneer, I. E. Stickelman, or to H. S. Hoard, of The Wisconsin Farmer. See page 35.—Adv.



A CORNER in one of the seed corn drying rooms of the Vermilion Seed Co., Vermilion, S. D. This firm has several thousand bushels of early picked and carefully dried seed which is testing high in germination. Note their advertisement on page 15.

Wisconsin Incubator and Brooder for $10.

WISCONSIN incubators and brooders offered on page 23, are shipped, freight prepaid, for only $10 for both machines. They are constructed of California Redwood and are guaranteed for ten years. They come to you complete, ready to run and are sold on thirty days' free trial. The 180-egg incubator and brooder of the same make sell for $12, and both machines are sold on a guarantee of money back if not satisfactory. They have proven their ability to produce results both in practical use and in national hatching contests. If you will send a postal card

NEXT WEEK'S SALE PROGRAM

Monday, January 31, { Duroc Jerseys, Stubbs & Hyzer, West Salem, Wis.

Tuesday, February 1, { Duroc Jerseys, L. F. Atwater, Bangor, Wis.

to the Wisconsin Incubator Co., Box 102, Racine, Wis., and mention their advertisement on page 23, you will receive their new 1916 catalog by return mail.—Adv.

Shekleton's Draft Horses.

FRANK P. SHEKLETON & SONS, well-known importers and breeders of Percheron, Belgian and Clydesdale stallions and mares, under recent date write as follows: "We are enjoying a very brisk stallion and mare trade and are looking forward to the best year we have had since engaged in the horse business. We have had inquiries from seven states and feel fortunate in having such a large collection of high-class drafters for our customers. Horse buyers who visit our barns say that we have the best bunch of young stallions that they have seen this year. Within the last few weeks buyers have been here nearly every day. We have sold to Mr. Likley, Strawberry Point, Iowa, a well-bred four-year-old Percheron mare. Mr. Likley is founding a herd of registered Percherons and buys nothing but the best. John Meyers, Graceville, Minn., was looking for a low-down, blocky Percheron stallion and found what he wanted in the thick, massive Prosper. Mr. Meyers has taken a great step forward in the upbuilding of the Percheron horse in his county and deserves the hearty support of the farmers in his community. S. Allen, Rudd,

LINCOLN MODEL 133864, first prize Sioux City Interstate Fair, first prize Nebraska State Fair, second prize Wisconsin State Fair, first prize and champion over all breeds at six leading county fairs. The sows and gilts in Stubbs & Hyzer's Duroc sale are bred to this boar. See advertisement on this page.

Iowa, purchased four black imported Percheron mares weighing nearly a ton each, all in foal, and while Mr. Allen paid a long price for these mares we know that with his enterprise and push he is sure to make a go of the business. Warrior, a low-down, dapple-gray, three-year-old Percheron stallion, goes to Theo Rake, Algona, Ia., and we want to say that Warrior is a grandly bred horse, a showy fellow, and cannot help but do his community a lot of good. Boudonnis, a rising five-year-old, dapple-gray Percheron, goes to Bert Powell, Genoa, Wis. Mr. Powell was looking for a draft stallion and a show stallion and we believe he has the combination in this horse. Owen Bunn, Fredericksburg, Iowa, purchased the imported Belgian stallion that we have considered one of the best we ever owned. This stallion is a tried sire and cost Mr. Bunn a lot of money. We still have a large collection of horses on hand and can suit the most critical judge. We have stallions that weigh up to 2,400 pounds and two year olds that will weigh a ton." Anyone interested in a good stallion or mare should see the advertisement on page 36 and write this firm, kindly mentioning this paper.—Adv.

Smiley's Oxford Sheep.

OXFORD ewes and ram lambs are advertised for sale on page 38 by William Smiley & Son, Albany, Wis. They have an excellent flock, the individuals from which have given excellent satisfaction wherever sold. They are now offering sixty ewes, ranging in age from ewe lambs to matured animals and fifteen ram lambs. There are ten yearling ewes, fifteen ewe lambs, seven two year olds, four three year olds and twenty-three matured animals all with full mouth. The older ewes are the ones that have produced their fine show animals. These sheep are in their everyday clothes, just in good, thrifty condition. Thirty-three of them are due in March and the balance in April. They are bred to Cowley President 2d, a Horlick lamb by Cowley's Hunch. He is a splendid individual, big, wide and even, of good Oxford type and well wooled. The ewe and ram lambs were sired by Smileys Jumbo, a ram of high individual merit, weighing 290 pounds in ordinary breeding condition and fitted for show would weigh 350 pounds. With the present outlook for wool the entire flock would produce about $2.50 worth per head. The outlook for sheep breeding is very promising, owing to the high price of wool and mutton. There is very little likelihood of any decrease in price, because of the great demand for wool and mutton and the destroying of all supply from the European market. For this reason we advise our readers to take up the breeding of sheep and we could suggest no better investment than buying a few of the animals offered by this firm.—Adv.

An Authority on Silage and Silos.

MODERN SILAGE METHODS" is a 264-page book that has been adopted as an authority on all silage and silo matters by many schools. A new edition, much better than all previous ones, containing a ten-page index, has been gotten out and will be sent for 10 cents in coin or stamps to anyone replying to the Silver Mfg. Co.'s advertisement on page 26. It tells all about silage feeding and silo construction. This company is widely and favorably known as the manufacturers of Silver's "Ohio" silo fillers. They will be glad to send you free on request their catalog and booklet "Silo Filler Logic." In writing them address Silver Mfg. Co., 312 Broadway, Salem, Ohio, and please refer to their advertisement in this paper.—Adv.

J. C. Hendricks' Big-Type Poland China Sale.

THE second sale in the Southern Wisconsin Poland China Sale Circuit is that of J. C. Hendricks, Hazel Green, Wis., Wednesday, February 9th. Mr. Hendricks' herd is well known to Poland China breeders throughout Wisconsin, Illinios, Minnesota and Iowa, because of the many good animals which have come from this herd. The noted boar, Hidestretcher, which won grand championship at the 1914 Wisconsin State Fair and others of equal note were bred on this farm. He has developed an exceptionally good "type" of big-type animals, not only breeding animals of great size, but with this combining good width, deep barrels and deep, thick hams. The offering of gilts and sows for his sale are very creditable. They have not been stinted on feed of the right sort and by steady growing from birth have developed into animals far above the average. On December 30th when issuing his catalogs for the sale, Mr. Hendricks weighed every animal going into the sale and has entered the weight of every sow and gilt in the catalog. Many of the gilts weighed close to 400 pounds at that time, while the average was close to 350 pounds. By date of sale the average will probably be close to 375 pounds. These animals represent the most popular of proven blood lines, being daughters and granddaughters of Fesenmeyer's famous boar, A Wonder; Peter Mouw's boar, Big Bone; the 1,000-pound boar, Big Bug; Wisconsin Giant; High Wonder, a 850-pound two-year-old and the 1,000-pound boar, Black Jumbo. These are out of large sows of good type, many of which weighed from 600 to 800 pounds. They are bred for spring litters to Mr. Hendricks' excellent boars, Repeater, Smooth Price, North Star Wonder and Oakland's Equal Jr. Catalogs containing pictures, pedigrees and description are now ready and will be sent on application. Send for one and look it over carefully. Plan to attend the sale in person. However, if impossible to attend the sale send a mail bid and a description of the type of animal you want to H. S. Hoard, representative of The Wisconsin Farmer. Mr. Hendricks states that all animals purchased on mail bids may be returned and the money will be refunded if not satisfactory. See page 37.—Adv.

Smiley's Annual Sow Sale.

WILLIAM SMILEY & SON, Albany, Wis., will hold their annual sale of bred sows and gilts on Tuesday, February 8, 1916. These sales are always looked forward to by Poland China breededs throughout this territory for the reputation of Smiley's Poland Chinas is of the best. Their winnings at the Wisconsin State Fair and leading county fairs throughout the state and the high quality of the animals, which they have sold both privately and in the sale ring have established this herd in the minds of

PONTIAC CORNUCOPIA CORONIS 51148, sire of the yearling Holstein bulls advertised for sale on page 39 by J. Roy Gordon, Mineral Point, Wis.

Poland China breeders everywhere. The offering which goes into their sale this year is of the same high quality that has won for them this enviable reputation. These animals are largely of their own breeding, many of them show animals themselves and practically all of them sired by their noted show boars and out of their show sows. They represent the very best in the line of breeding, being of blood lines that have proven to produce animals of the best type. The majority of the gilts in this sale are daughters of such boars as Major Hadley, Monarch, Wisconsin Jumbo 2d, Keefer's King and Orange Price. Major Hadley will be remembered as the senior boar of the Smiley herd. He is a big boar of excellent type and his offspring have been heavy winners in the show ring. He won first himself at the Wisconsin State Fair. Monarch won second as a senior yearling at the 1915 Wisconsin State Fair, weighing 800 pounds. Wisconsin Jumbo 2d is an excellent individual, sired by Peter Mouw's noted boar, Longfellow Jr., and out of the sow, Miss Mouw, an 800-pound daughter of Big Jumbo. Keefer's King is a son of Pfander's noted boar, King of Wonders. Orange Price is a son of Miller's Chief Price and out of a daughter of Miller's Big Orange. It will be seen that these

BE WITH US

MONDAY, JANUARY 31

Sale starts at 2 o'clock. Will be held three blocks from C., M. & St. P. and C. & N. W. Railway stations. No driving and no delay necessary and perfectly comfortable, regardless of the weather.

SOME OF THE GILTS IN THE SALE

50 Head Bred Duroc Sows, 18 Tried Sows, 32 Spring Gilts **50**

Ten by King the Colonel, the sire of more 1,000-pound boars and top-price gilts than any other boar of the breed. **Eight by a son of King the Colonel. Two by Lee's Defender,** grand champion at the 1914 Wisconsin State Fair. **Fifteen of Golden Model breeding. Seven of Defender breeding.**

How Do These Proven Blood Lines Look to You?

In addition to being well bred and good individuals these sows are safe in pig to our great herd boars, **Lincoln's Model,** first and champion at six leading fairs; S. and H. Colonel, out of a daughter of King the Colonel; **Logan Col.,** a son of King the Colonel; **Salem's Model,** of Golden Model breeding.

Attend this sale and be prepared to supply the great demand for breeding stock next fall. Trains leaving Watertown, Portage, Madison, Wis., Monday forenoon arrive here in ample time for sale. Be with us.

STUBBS & HYZER, West Salem, Wis.

gilts represent the best blood lines of the breed. Catalogs are now ready, which contains pictures, description and pedigrees. We urge our readers to attend this sale and the other sales of the Southern Wisconsin Poland China Sale Circuit. Send for catalog at once and look it over carefully. If impossible to attend the sale in person send a mail bid to the auctioneer, Ira Cottingham or H. S. Hoard. See page 37. —Adv.

A Story of Unbroken Successes.

THE history of "P. & O." Little Genius engine gang plows is a story of unbroken successes. Wherever they have been used they have called forth words of highest praise for their strength, ease in handling and durability. They are made with molds or disks of various styles for from two to twelve farrows. One of the most popular is their "No. 2. Little Genius" with a powerful and

BIG-TYPE Poland China gilts going into the sale of Wm. Smiley & Son, Albany, Wis., February 8th. See advertisement on page 37.

positive rear wheel lift, shown in their advertisement on page 18. It has a hitch adapted to all tractors and one man operates both engine and plow. The power lift operates all three wheels, giving a high, level lift. You can get further information about them from your dealer or by writing Parlin & Orendorff Co., Canton, Ill., and mentioning this paper.—Adv.

National Incubators Guaranteed Twelve Years.

NATIONAL incubators are made with hot water heat, double walls with dead air spaces, asbestos lining and metal covers. They are self regulating and it is claimed they will not warp or shrink. They get big hatches in the coldest weather and are shipped set up with a book of operating instructions. In their advertisement on page 23, the National Incubator Co. is offering to

TOO LATE TO CLASSIFY.

RED POLLED BULLS

OF serviceable age and younger; and yearling heifers and younger; from heavy-producing cows of A. R. breeding.

H. A. MARTIN - . GOTHAM, WIS.

send its 165-egg incubators and brooders for $10 on forty days' trial with money back proposition and twelve years' guarantee. They prepay the freight east of the Rockies. For further facts address National Incubator Co., Box 62, Racine, Wis., and kindly refer to this paper.—Adv.

Bargains From Earl Ferris Nursery Company.

THE Earl Ferris Nursery, of Hampton, Iowa, has established a big reputation for their evergreens, and when they say that the trees they are offering in their advertisement on page 14 are the best they have ever grown it means something. They are offering to send 100 of these windbreak evergreens for $1.50, prepaid. Other bargains which they mention are apple trees for 10 cents each, with twenty-five standard varieties to pick from, 300 popular variety strawberry plants for $1.00 and a combination offer for 98 cents, sent prepaid by parcel post. Their free catalog is printed in colors and not only gives prices and descriptions, but contains valuable advice and suggestions for the planting and growing of fruits, vegetables and shrubbery. To get a copy address Earl Ferris Nursery Co., 265 Bridge St., Hampton, Iowa, and please mention this paper.—Adv.

Seed Catalog With 700 Pictures.

A BIG seed catalog, containing over 700 illustrations of vegetables and flowers, will be sent free to all of our readers replying to R. H. Shumway's advertisement on page 14. He will also send one to any of your neighbors whose names you will send him. With every order of seeds he sends a lot of new sorts free. If after testing his seeds they are not found O. K. you can return them and get your money back. Address R. H. Shumway, Rockford, Ill., and kindly mention this paper in writing.—Adv.

SALE DATES.

Poland China Swine.

Feb. 8, Wm. Smiley & Son, Albany, Wis.
Feb. 9, J. C. Hendricks, Hazel Green, Wis.
Feb. 10, E. W. Hendricks, Hazel Green, Wis.
Feb. 11, M. Madson & Sons, Madison, Wis.

Hampshire Swine.

Mar. 8, R. L. Currie, Viola, Wis.

L. F. ATWATER'S GREAT DUROC

BRED SOW SALE

BANCOR, WIS., FEBRUARY 1, 1916

47 HEAD OF CHAMPIONSHIP CALIBER AND BREEDING

30 GILTS OUT OF BLUE RIBBON SOWS

These are sired by the great Lee's Defender, and their dams are the sows I won my ribbons on at the state fairs this last summer.

10 GILTS OUT OF LEE'S DEFENDER SOWS

Their sire is Select Advancer, he by Chief Select, a full brother to Cherry Chief. Here is breeding unexcelled anywhere.

5 GILTS BY CORRECTOR

He by Sensation Wonder and out of a Golden Model 2nd dam. These five are bred to Lee's Defender; they are sure grand champion stuff, as Lee's Defender and Corrector were twice awarded the purple ribbons.

2 GREAT FALL SOWS

Sired by Lee's Defender; their dam a full sister to the sow that won three grand championships at the big fairs in 1915. These two sows themselves were first and second and trophy winners at two of the big shows in 1915.

Remember, two-thirds of this offering bred to farrow in March. I. E. Stickelman, Auctioneer. H. S. Hoard, Wisconsin Farmer field man. Send for my Catalog today.

L. F. ATWATER **BANCOR, WISCONSIN**

POLAND CHINA SWINE.

BIG-TYPE POLAND CHINAS

SPRING GILTS. Some now bred for March and April litters. Others will be bred for April and May litters or will be sold open as desired. There are daughters of **King Jumbo**, by Long Jumbo, that weigh 1106 pounds. **Fall Yearling Gilts,** bred for spring litters to **Big Wonder,** first prize under six months boar at 1915 Minnesota State Fair. **Some Fine Yearlings and Spring Boars** that will do you a lot of good. **SHORT-HORNS. 10 Fine Yearling Bulls,**—roans, red and whites, sired by **Highland Sultan,** a grandson of Whitehall Sultan. **25 Cows and Heifers** from six months old and up. These are of Scotch and Bates breeding. Most of them are of heavy milk producing strains. If you want Short-horns of big size you can get them here. My Short-horns won all first prizes but one at the 1915 Beaver Dam Fair against heavy competition.

W. J. BERND - - - **NEW RICHMOND, WISCONSIN**

Silver Cup Big-Type Poland Chinas!

The greatest prize-winning herd in the state. We proved this by winning 61 ribbons at Wisconsin State Fair. This included 3 champions and 1 grand champion. At the Northern Wisconsin State Fair, we made a clean sweep, getting 1st and 2d on all the herds. We have for sale boars and sows of all ages. This stuff has the size, bone and quality out of big prolific sows that weigh up to 800 pounds, litters averaged 10. Can furnish you sows and boar not related. Pedigrees furnished. Write your wants.

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SEMI-BIG-TYPE POLAND CHINA SPRING GILTS

FOR SALE. Bred for March and April farrow. Sired by Wisconsin Jumbo 220255, 1st prize boar at Wisconsin State Fair, 1914, and from some of the best sows sold in L. P. Martiny's sale in 1915. Gilts are bred to a big-type boar sired by Larson's Big Orange 199563 by Big Orange 145509, bred by Peter Mouw. Dam, B. B. Surprise 481322 by Black Big Bone 179671. Price of gilts $25 to $35. Registered, crated and f.o.b. on G. B. & Western or on Soo Line railroads. Also some registered and high-grade Jersey females, all ages, Two in Reg. of Merit. Also field peas. Address all orders to

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Poland China Bred Gilts

AND yearlings from litters that average ten. Sired by Black Bone 212501, with 11 inch bone, sired by the $1,100 Black Big Bone, 1st at Minn. Fair; Square Deal by the 1,000-lb. Lakewood Ideal, and Black Model by Black Orange. These gilts are the large, smooth kind with length and heavy bone. Are bred to Black Model and Big Ben, a choice yearling of 9 inch bone. Priced to move them soon. Rose Comb Rhode Island Red cockerels. Address

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BIG-TYPE POLAND CHINA

BRED gilts to farrow March and April. Sired by Stand Pat Jr. and Blue Valley Expansion. Bred to Wonder Joe, son of Fesenmeyer's A Wonder, and dam, Joe's King Giantess. Will weigh 300 pounds. None better. Price $30 to $40. Address H. F. Strickler, Mt. Carroll, Illinois.

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AND GILTS at very reasonable prices if taken in the next 30 days. Gilts of quality, type and size. **W. H. Esterly, Whitewater, Wisconsin.**

Poland China Sow Sale Feb. 8

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MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address

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BIG-TYPE, big litter kind. Send for descriptive price list. 30 young brood sows. A few good boars. **F. H. Burt & Sons. Brodhead, Wis.**

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BRED GILTS, noted everywhere for their size, quality and popular blood lines, such as Rose Hill Guard 171721, Educator 67139 and Select Chief 173601, at farmers' prices. See them or write M. J. DOWD, Route I, LANSING, MINN.

BIG-TYPE Poland China bred gilts sired by L.'s Big Orange and Iola Chief. Prices $20 and up. Bred to L.'s Big Orange and Fairview Jumbo by Wisconsin Jumbo. J. Le Roy Larson, Iola, Wis.

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Duroc Spring Gilts

OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

CRITIC TOP NOTCHER

half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address

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30 BIG, growthy, bred spring and fall gilts, mostly sired by Valley G., one of the largest, heaviest boned and best breeding boars of the breed. Bred to Valley G.'s Col. Defender and Crimson Again. Write me if you want the best Guernsey bulls from one to fourteen months old. Glenwood May Rose and Rilma breeding. Some from A. R. O. dams. Address

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WELL-GROWN QUALITY WELL-BRED

DESCRIBES the Duroc spring boars I am offering. Proven blood lines and developed on butter milk has done it. Golden Model Lad, Lee's Defender and Corrector sired these pigs.

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ROSEDALE, WIS.

CHAS. A. PETERSON, Prop.

DUROC SPRING BOARS weighing 275 pounds. Bred spring gilts of choice breeding, sired by Burn Brae Distinction and Hazelhurst Col. Bred for March and April farrow to Burn Brae Golden Model. Mention Wisconsin Farmer when writing.

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MARCH and April farrow. Sired by Defender's Golden Model and Wonder Boy, both sons of grand champion sires. Priced for quick sale.

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FARROWED in April. Sired by Professor II, and out of sows of Chief J. E. D., Ohio Chief and Grant's Col. breeding. Price $20 and up.

W. T. Green **Orfordville, Wisconsin**

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Send 20c in stamps for large Horse Hanger which shows our Main Farm and sales stables. Correspondence a pleasure. **We have a horse for every purse.**

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IMPORTED and American-bred **PERCHERON** stallions and mares. First-class 2, 3 and 4-year-old stallions and mares with size, bone and quality at very attractive prices. A few big, sound, aged stallions very cheap. Every animal strictly guaranteed. Terms to suit. Call or write.

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SOUTHERN WISCONSIN POLAND CHINA SALE CIRCUIT

FEBRUARY 8TH TO 11TH, INCLUSIVE

TUESDAY, FEB. 8, WM. SMILEY & SON, ALBANY; WEDNESDAY, FEB. 9, J. C. HENDRICKS, HAZEL GREEN; THURSDAY, FEB. 10, E. W. HENDRICKS, HAZEL GREEN; FRIDAY. FEB. 11, M. MADSON, MADISON.

SEE ADVERTISEMENTS BELOW OF THESE SALES

Smiley's Annual Big-Type Poland China Bred Sow Sale

Albany, Wis., Tuesday, February 8, 1916

The Type of Gilts in the Sale

45 SPRING GILTS; six fall yearling and mature sows. These are sired by Major Hadley, our noted sire of prize winners; Wisconsin Jumbo 2d, a son of the $1,500 boar, Longfellow Jr.; Monarch, weighed 800 pounds and won second at 1915 Wisconsin State Fair; Keefer's King, a grandson of old A Wonder; Orange Price by Miller's Big Orange. These are bred to Major Hadley, Wisconsin Jumbo 2d, Monarch, also Major Miller, first-prize yearling at 1915 Wisconsin State Fair; Big Hadley (by Big Top), Mouw's Wonder and Big Bone Jumbo. These are of good size and quality. The type that have won us so many blue ribbons at the state fair. Send for catalog containing eight illustrations, descriptions and pedigrees. Train service has been arranged to get to J. C. Hendricks' sale the day following at Hazel Green.

Black Jumbo 221231

The Greatest 1,100 Pound Boar in America

Sale February 10, 1916

40 HEAD of sows and gilts, mostly bred to or sired by Black Jumbo. Nine corking good fall yearlings that are good enough to enter the best herds in the corn belt; four tried sows, twenty-seven spring gilts weighing up to 400 pounds and better. The offering is sired by Black Jumbo, King Jumbo, Oakland's Equal, Peerless Wonder, Giant Big Bug and Great Leader; bred to Black Jumbo, Big Oakland, Long Joe and R.'s Wonder for March and April farrow. Size, bone and quality combined. Col. Ira Cottingham, auctioneer. Write for catalog. Address

E. W. Hendricks, Hazel Green, Wis.

J. C. Hendricks' Big Sale

HAZEL GREEN, WIS., WEDNESDAY, FEB. 9, 1916

BIG type, big bone, big litters, big quality. Forty head of great sows and gilts that for size, length, bone, quality and feeding propensity will please the most fastidious buyers. Five tried sows, all having raised fall litters, sired by A Wonder, Wisconsin Giant, Big Bone, Big Bug and Big Leader. Thirty-five spring gilts, mostly March farrow, sired by Repeater, High Wonder, Black Jumbo, Smooth Wonder, Giant Defender and H.'s Jumbo, and are bred to Repeater, the greatest two-year-old boar living, weighing 810 pounds after service; High Wonder by Long Wonder 2d, the $600 boar. He sired first and second-prize under six months gilt in futurity class and second on produce of sow at Milwaukee this last fall. Others will be bred to Smooth Price, the largest and heaviest boned boar in the state. Weighed 550 pounds at twelve months and has a ten-inch bone, and North Side Wonder, a big, rugged, extra heavy-boned boar by Rude's Wonder by A Wonder, dam Orange Gem by Big Orange. He is a 1,000-pound boar at maturity. These gilts were all weighed on December 30th. They range in weight from 300 to 390 pounds in growing condition. They must be seen to be appreciated. Big Daisy has five dandy gilts, March 5th farrow; average weight on December 30th, 345 pounds; sired by Smooth Wonder. Wis. Giantess has five gilts, farrowed March 12th; average weight December 30th, 335 pounds; sired by High Wonder. Mary Miller has four gilts, average 325 pounds, and others are just as good. These are only a few samples. Send for catalog, which gives weight of each sow and gilt. It is instructive. Auctioneer, Col. Ira Cottingham. H. S. Hoard will represent The Wisconsin Farmer. Send your bids to him and I will guarantee entire satisfaction.

J. C. HENDRICKS HAZEL GREEN, WISCONSIN

Madson's Big Poland China Sale

Friday, February 11, 1916, Madison, Wis.

(Wisconsin Poland China Breeders' Annual Meeting Held Friday Evening)

30 Spring Gilts, 10 Yearling and Mature Sows

Cholera Immune Cholera Immune

Sale Held in Dr. West's Veterinary Barns

NO DRIVING in country necessary; 753 East Washington avenue. Building well heated and lighted. The spring gilts are sired by the big-type boar, **Corrector I Am, junior champion boar** at the Minnesota and Illinois State Fairs in 1914. He is by Correct I Know, grand champion South Dakota State Fair. The fall sows are by **Royal Model and Badger Perfection.** These gilts are bred to the big-type boar, **Triumph,** by **Hidestretcher,** grand champion at the 1914 Minnesota State Fair. These sows are big, well developed, combining quality with size. They will produce the profitable type of hogs and the type that will win in the show ring next fall. Send for catalog. Plan to attend this sale and the Wisconsin Poland China breeders' meeting in the evening.

5 Holstein Heifers

PURE-BREDS but not registered. Now springing—due to freshen soon. Well grown, well marked and from high producing ancestors.
G. A. Schultz - - Adell, Wisconsin

HOLSTEIN BULL

A SON of Brandis Violet 6th. Has a 7-day record of 24.22 lbs. butter; 21,500 lbs. milk, 970 lbs. butter in one year. A sister of Pearl Longfield DeKol, 28,050 lbs. milk, 1,215 lbs. butter in one year. The sire of this calf is Pontiac Spring Valley DeKol, a grandson of Hengerveld DeKol. This calf is 13 months old, a fine individual, straight as a line, weight about 900 lbs., ready for service and has just been tuberculin tested. Address
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The home of registered Holstein catte
Stock for sale at all times.

R. B. MELVIN, Prop., Glenbeulah, Wis.

His First Bull Calf Out of 16

BORN NOVEMBER 18, 1915. An extra nice, straight calf, more black than white. Sire, King Segis Alcartra Beauty 136938, a son of the $50,000 bull. Price, $125. Address
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Stock for sale at all times.

Registered Holstein Heifer

AND **bull calves** sired by **Pabst Canary Pontiac Champion 142885,** a grandson of King of the Pontiacs, that has 165 A. R. O. daughters. Write for pedigrees, description and prices.
Wm. Fenner - Sheboygan Falls, Wis.

VICTOR JEWEL JOHANNA BOY 100810

BORN January 9, 1912, well marked, good type. A young bull backed on both sides by good lines of breeding. His sire's daughters are making good records. His sire's sire has a long list of good record daughters and is 50% the same blood as the 32-lb. cow, Johanna Colantha 2d. His dam represents the blood lines of Pontiac, Korndyke and Hengerveld De Kol. Send for his extended pedigree. A few choice heifers seven to eight months old for sale. Address
O. C. Baum Random Lake, Wis.

2 High-Grade Springers

31-32 PURE, well marked, heavy producers. **Registered Holstein Bull Calf,** five months old.
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Stock for sale at all times.

8 Registered Holstein Cows

3 TO 7 years old—2 just fresh, others now springing, good size and type; good producers.
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Stock for sale at all times.

Registered Holstein Bull

SEVEN months old, well-marked, one-half white, well grown. Priced right.
Ernst Markwardt, - Sheboygan, Wis.

Bates Stock Farm

75 HEAD Registered Holsteins to select from —herd headed by Walker Prilly Ormsby Wayne, whose dam and sire's dam average over 30 pounds of butter in seven days.
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2 Well-Marked Bulls

1-2-⅛ white; 9-10 months old. Straight rumps, sired by **Piebe Champion 2d 91362,** a richly bred bull backed by high seven day and yearly records. These bulls are right and are priced for quick sale.
Henry W. Breher Sheboygan Falls, Wis.

6 Registered Holstein Cows

22.09-POUND BULL, three bulls from untested dams for sale; sired by King Piebe Champion 120553. Write for prices, description and breeding.
FRED DANKWERT, Sheboygan Falls, Wis.

RIGTJE Flossy Grace 199880, born Jan. 7th, 1913; sire, Sir Rigtje of Pinehurst. Lakeview Melchior Flossie Grace, born December 26, '14, sire, Scott Melchior De Kel 4th. Also bull calf born November 21, 1915, sired by Lakeview Model Podtiac Aggie for sald. Address W. F. Liebenstein, Cascade, Wisconsin.

There are 40,000 Dairy Cows in

SHEBOYGAN COUNTY, WISCONSIN

The greater part of which are Holsteins. No matter how many you want or of what type, it will pay you to come to Sheboygan county. Thirty-six of the best pure-bred breeders are offering cattle for sale at the present time, and a great many high-grade springers and heifers are available.

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Registered Holstein

BULL and heifer calves for sale. Bulls $40 and up; heifers $85 and up. Sired by Sir Ormsby Pontiac Mercedes.
B. C. Hicken - - Adell, Wisconsin

JAMES MULVEY
CASCADE WIS.

Breeder of Registered Holstein Cattle

Stock for sale at all times.

D. E. VANDERHOFF
WALDO WIS.

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Stock for sale at all times.

3 REG. HOLSTEIN COWS

ONE registered heifer due in the spring; one bull calf, well grown, for sale. Address
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22.34 Holstein Bull For Sale

17-POUND BULL; both sired by Pinehurst Champion 83168, whose two nearest dams average 20,205 pounds of milk, 772.15 pounds of butter in a year. Good pedigrees all through with records up to 27 pounds of butter in 7 days.
EMIL TITEL - PLYMOUTH, WIS.

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

GUERNSEY BULL CALF FOR SALE

BORN MAY 27, 1915. Sire, Imza's Eagle (29615) and out of Imported Polly of Alderney (37494) which has yearly record of 6596.00 lbs. of milk containing 410.87 lbs. of butter. Calf is light fawn and white, nicely marked and an excellent individual. Write for price, photo and description.
PINEHURST DAIRY, SHEBOYGAN FALLS, WIS.

C. J. NEHRLING
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Breeder of Registered Holstein Cattle

Stock for sale at all times.

HEIFER and BULL CALVES

FOR SALE sired by the 28-pound bull, King Johanna Abberkerk 149412, whose dam made 28.71 pounds of butter in seven days; 677.45 pounds butter in a year; 109 pounds of milk in one day. When in need of registered Holsteins write us.
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Stock for sale at all times.

26.30 POUND HOLSTEIN BULL

THREE YEARS OLD. Dam's A. R. O. record, 26.30 pounds of butter in seven days. Another bull born May 27, 1915; dam's A. R. O. record, 24.48. These bulls are straight individuals and nicely marked. Price $150 each. Write for pedigrees and description. Address
Truttschel Bros. Sheboygan Falls, Wis.

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REGISTERED HOLSTEINS FOR SALE

AGED cows—serviceable bulls and bull calves. Prices reasonable.
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FOR SALE Cows with records from 23 to 29 pounds butter in 7 days. Also a few yearling granddaughters of the $50,000 bull. Herd headed by King Veeman Pontiac Alcartra, whose eight nearest dams average 30.52 pounds. Address
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REGISTERED bull calves. High grade heifer calves and yearlings from high producing dams. Prices $15 to $50. Write us your wants.
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Breeder of Registered Holstein Cattle

Stock for sale at all times.

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OF Serviceable age, sired by King Segis Pontiac Beauty, that combines the blood of King Segis Pontiac and Johanna McKinley Segis.
Henry Walsh, Sheboygan Falls, Wis.

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Charlton, Iowa.

RED POLLED CATTLE.

FOUR REGISTERED RED POLLED BULLS

TEN to fifteen months old, sired by McGovern out of producing Cows of choice breeding.
M. J. Rowlands & Son, Cambria, Wisconsin

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SIXTY OXFORD EWES

OF all ages from lambs to mature animals. Will sell in lots to suit buyer. These are well bred, heavy shearers and good individuals. The high prices for mutton and wool will make sheep breeding very profitable. Come to our Poland China sale Tuesday, February 8th, and look them over.
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SHEEP.

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SHROPSHIRES

Champion Flock of America

SIRES in service: Tanner's Royal; Minton 1037; Minton 51; Breeder's Friend. Ram and ewe lambs for sale that for breeding, style and true Shropshire character cannot be excelled.
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Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir KorndykePontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

PONDEROSA HOLSTEINS

A 23-POUND Holstein bull ready for immediate service. A splendid individual, mostly white, right in every way. Sired by Daisy Hengerveld Piebe Champion. Dam, a granddaughter of Homestead Jr. De Kol. Can also spare a few A. R. O. cows and heifers. Send for prices and extended pedigrees. Address

W. P. Kissinger **Waupaca, Wisconsin**

SONS OF THE 32-LB. HOLSTEIN BULL
COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 20 months old. Out of heavy producing dams.

Baltz Hoesly - New Glarus, Wisconsin

HOLSTEIN BULL FOR SALE

INKA DE KOL AKKRUMMER 163119

BORN December 28, 1914. Sire, Daisy Johanna B 5th, the 1st prize two-year-old bull at the 1915 Wisconsin State Fair. Dam, a 27-pound daughter of the show sire, Johanna Pontiac De Kol.

Rust Brothers **West Allis, Wisconsin**

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OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address

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2 Registered Holstein Bulls

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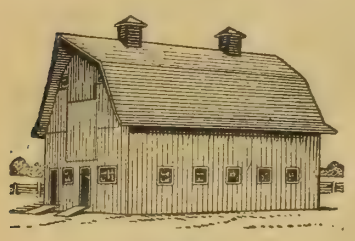

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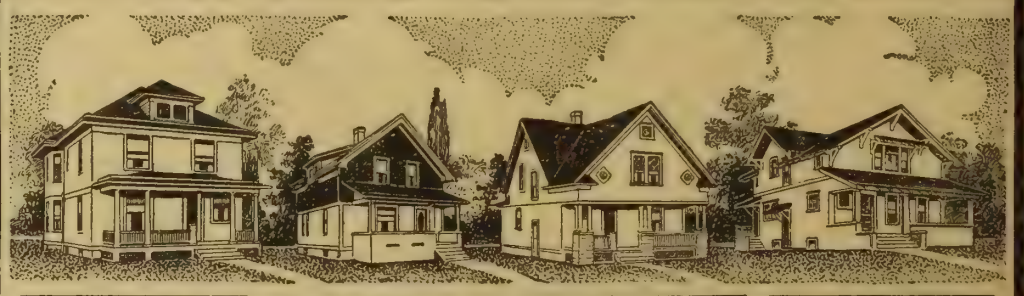

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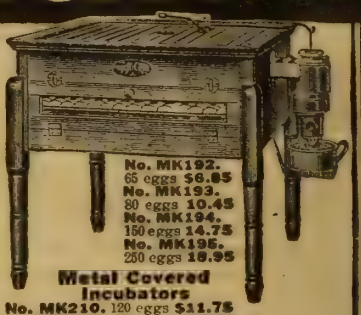

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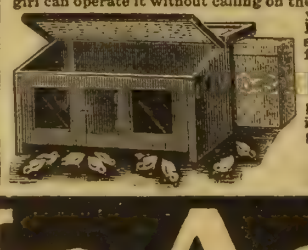
Early hatches mean big profits. Now is the time to send for your Majestic Incubator. Never before have you had such an offer as this. No one but Hartman ever sold high class guaranteed Incubators and Brooders on such liberal terms.

Just pick out a Majestic Incubator or Brooder of the size you need and we will ship it right out to you without one cent of advance payment. The Majestic is a Hot Water Incubator so simple that any woman or girl can operate it without calling on the men folks and so constructed as to give perfect service for many years. Each one is the best that a great up-to-date perfectly equipped Incubator Factory can produce—thousands are in use—giving perfect satisfaction. Look at these prices. Order any size you want direct from this advertisement. Send no money in advance.



Metal Covered Incubators
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Raising chicks is even more important than hatching them. Every Majestic will raise more sturdy chicks with less trouble than any other Brooder in the world. When you order your incubator don't forget to order a Majestic Brooder at the same time.

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No. MK198. 200 chick size..... .....**$10.95**

FREE INCUBATOR BOOK Fully describes these machines and the certainty of Majestic results. Mail coupon now.

No Money In Advance

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Hercules Never-Leak, Flint-Surfaced Roofing Is Absolutely Guaranteed "All-Kinds-of-Weather-Proof"—Greatest Money-Saving Roofing Offer Ever Made.

Order all the roofing you need direct from this advertisement. You run no risk because you are not required to send a cent with your order, make a deposit with anyone or even promise to buy.

Why have a leaky roof on any building when you can buy **absolutely guaranteed** roofing at such low prices and on such unheard of liberal terms?

No matter where you live, you will find that Hercules Roofing will remain unchanged and unharmed under all climatic conditions.

Made from highest quality long fibre wool felt, thoroughly saturated with pure asphalt. Both sides are thickly coated with very fine sharp particles of crystal which are firmly imbedded under enormous pressure.

Each roll is complete—32 in. wide, contains 108 sq. ft. (enough to cover 100 sq. ft.) Nails and cement included. No skill required to lay.

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Free Samples Your name and address on the coupon below or on a postal card will bring them by return mail.

We realize that farm dwellers everywhere prefer to pay their obligations at crop and stock selling times. It is more convenient for them to do so. We have devised our credit terms accordingly—to suit your convenience. And it is the most liberal credit ever offered by any concern.

Pay In 3, 6, 9 and 12 Months

Not only will we send you anything you want for farm or home—engine, separator, paint, roofing, incubator, brooder, furniture, rugs, carpets, stoves, ranges, dishes, silverware, etc., **without a cent of advance payment,** but you have 30 days' free use of the goods before you even decide to keep them. If you decide **not** to keep them, return them at our freight expense both ways. If you keep what you order, **you can take 3 whole months** before making even the first small payment—balance **in 3, 6 and 9 months** thereafter, giving you **a full year** to pay **without a cent of interest.** No other concern in the world has such confidence in the quality of its merchandise as to send out goods on such wide open terms as these. With $12,000,000 capital and resources, 1,500,000 satisfied customers and an organization that has grown for over 60 years to its present gigantic proportions Hartman's can well afford to accommodate the farm dwellers of this country.

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Made of the best and purest ingredients. Guaranteed against peeling, blistering, chalking or rubbing off, and to cover more surface, make a better finish, and last longer than any other paint. Mixed by machinery—pigments and oil ground together until every particle is thoroughly impregnated with and absorbed by the others. This insures greater spreading qualities and more uniform color.

Don't confuse this paint with cheap paints you see advertised, and don't let a painter tell you that any paint mixed by hand is better, or even as good as our Rex-Kote Ready-Mixed House Paint. It is not. It can't be.

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No. MK159. Ready Mixed House Paint as low per gallon as **$1.27**
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FREE Paint Book and Color Card

Send for this magnificent catalog containing complete color card showing all colors of Rex-Kote guaranteed Paints, etc. It will save you money. Mail the coupon or postal today and receive this book by return mail.

Not One Cent for 3 Months

Mail Coupon for Free Catalog

Remember, you run absolutely no risk in ordering direct from this page. You simply write a letter stating what you want. You send no money, you make no deposit of any kind. Goods will be shipped promptly. If what you order is not up to your highest expectations, you may return the shipment any time within 30 days at our freight expense both ways. However if you feel that you want to know more about these sensational bargains and our wonderful Farm Credit Plan before ordering—**Mail Coupon for Free Catalog.** Just place an **X** in square ☐ in coupon opposite catalog or catalogs wanted, sign and mail to us. The catalogs you request will be mailed to you at once, absolutely free—no obligation to you. **Mail Coupon Today.**

HARTMAN COMPANY,

4055-57 **La Salle St., Chicago, Ill.**

HARTMAN COMPANY, 4055-57 **La Salle St., Chicago, Ill.**

Place an **X** in square ☐ opposite catalog or catalogs wanted, sign name to the coupon and mail.
Incubator Book ☐ Separator Book ☐ Roofing Book ☐ Engine Book ☐ Paint Varnish Book ☐
In ordering goods direct from this page, write your order in a letter giving names and numbers of articles wanted.

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P. O. Box.....
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Town.....State..... 262

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Here is the engine offer that eclipses all others. Think of it—not one cent to pay for three months.

Don't send us a cent of your money until, from your own experience on your own work, you are absolutely sure it is the engine you want. If it isn't, send it back at our expense. If it is, you may use it for three whole months before you make even the first small payment and then pay the balance in 3, 6 and 9 months thereafter without interest.

The Great Majestic Gasoline, Kerosene, Naphtha and Gas Engines

are such amazing triumphs of engine construction that we will gladly send any size to suit your needs so that you, by testing it on your own place, may prove our claims at our risk.

The Majestic is the "happy medium"—neither too heavy or too light. Has fewer number of parts—a marvel of simplicity. Perfectly balanced—no excessive friction—most powerful for its H. P. rating, the most economical to operate.

Big improvements in all vital parts—and the most wonderful automatic mixer ever put on a gasoline engine.

Horizontal, 4-cycle type, open jacket, hopper cooled. No over-heating of parts or sticking of valves. Very little water needed for cooling.

Sizes 2, 3, 5, 7, 9 and 14 H. P. Stationary, Hand Portable and Horse Portable Styles.

FREE Engine Book

Tells why the majestic is the biggest engine value in America today and explains the famous Hartman selling plan.

A FULL YEAR TO PAY

The Wisconsin Farmer

THURSDAY, FEBRUARY 3, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE PRESIDENT'S VISIT.

BY THE time these words of mine are read the president will well-nigh have completed his swing around the circle in the grain belt. His intention to visit us may possibly not have been arrived at suddenly, but it was announced with little public preparation. He has been rather thorough in his evident desire to reach every section of the grain belt, his tour including stops and speeches in Milwaukee, Chicago, Des Moines, Topeka, Kansas City, St. Louis and innumerable smaller towns en route, where farmers will no doubt compose a goodly part of his audiences.

It is quite noteworthy, to me at least, that in his very first appeal to the people on any big, notable and national issue, the president has chosen to come to the grain belt first; to the cities which, despite their large factories and stores, are rural rather than urban in sentiment and composition. Milwaukee, Chicago, Kansas City and the other cities visited number their inhabitants by the hundreds of thousands; they are cities, in every sense of the word. But they are cities made up of folks from the farm and small town, in which the finger of the analyst can feel the throb of country life, as it is utterly impossible to feel it in New York, Philadelphia and the other big cities of the East. The president is wise enough to propose to stop at innumerable small towns, where he will get in close touch with the farmers and the actual rural population, but he is not out of touch with that population when he visits the large cities of the grain belt, recruited from the ranks of the farm and the small towns of less than 5,000 inhabitants. In coming thus among us he makes public testimony to the fact that public sentiment is best manifest here, amid people whose tastes and tendencies are rural, rather than urban. The president could have reached more people, numerically speaking, within a few hundred miles of Washington. He could not have reached so many typical Americans, whose opinions so really reflect and crystallize national ideas and ideals, other than by coming here to the grain belt. It is a compliment which we acknowledge with modesty, admitting it to be well deserved.

I have no doubt but that the president will devote most of his time and energies to defending national preparedness and to sounding public views on this subject. As host to our chief executive it would be discourteous for us to deny him the first word or an uninterrupted opportunity to have his say. Because we are silent when he urges us to turn our cornfields into munition factories and beat our pruning hooks into swords is not to say we agree with him; because we greet him with an enthusiasm which approaches the demonstrative is not to say we are ready for the new policy of empire which he would thrust upon us. There is a certain patriotic homage due the high office he occupies, an acknowledged appreciation of the many high qualities of head and heart which he brings to this office. So, as hosts, we welcome, applaud and entertain our guest, not promising, however, that as soon as the obligations of hospitality are at an end we shall not speak out in meeting and make our real sentiments manifest in most positive and unmistakable terms.

My own views on the issue which the president comes among us to champion are already well known. With our nation's chief executive honoring us with his presence this week I shall not have the effrontery to advance views which cannot but be antagonistic to those of our distinguished guest. Later on, as we counsel together, I shall speak, frequently and freely. Now, with the president swinging around the circle in the fertile garden spot of the world, our duty is to honor the man for doing what he conscientiously believes to be right. He has the courage of his convictions and is certain to express those convictions in language which all can understand, forcible and elegant. One and all, we should unite in welcoming him to the grain belt, to which he comes in the full knowledge that it is this section which he must win if the idea he champions is to be adopted by the nation.

TARIFF COMMISSION SUCCESS.

I AM delighted to see by the newspaper dispatches this week that President Wilson has committed himself in favor of a non-partisan tariff commission, which shall investigate and recommend with an eye single to the needs of the country as a whole and its best development. With the president thus squarely aligned in favor of the plan, I can see no reason why it should not be pushed through congress this winter, without undue delay.

I am greatly interested in this proposed non-partisan tariff commission for several reasons. First, because we must all admit we have been bungling our tariff revisions, upward and downward, for a good many years, considering the welfare of sections, instead of the country as a whole, and allowing certain interests to become all too firmly entrenched behind barriers of special privileges, when so important a matter should be settled for the greatest good of the greatest number. Second, because the bill which is to be introduced in congress gives agriculture representation upon the commission, its authors acknowledging it to be the most important industry in our country, demanding representation above all others. Third, because the plan is being pushed through to success by a personal friend, a man of unwavering determination, to whom every farmer owes a vote of thanks for being the man to put the Smith-Lever bill through congress, bringing our agricultural colleges home to us on the farms, making our educational system practical and of direct value to every member of the farm household.

I am delighted to see that success is about to crown the efforts of this man, who has devoted the major part of his time for the last half year to urging such a non-partisan tariff commission upon everyone within sound of his voice. Those of my readers who attended the sessions of the Farmers' National Congress at Omaha last fall heard Mr. H. H. Gross explain his plan in detail. It is this same plan which the president is now said to indorse and which, with the strong backing Mr. Gross has secured for it from all lines of industry, bids fair to be adopted by congress and to give the country long-needed relief from tariff tinkering, which, as I said before, is all too often tariff bungling.

I have devoted several columns of this department to indorsing this non-partisan tariff commission plan, and Mr. Gross was kind enough, a few weeks ago, to write and say I had rendered him invaluable assistance and that as a result of my articles he had received innumerable letters of commendation and support from farmers all over the country. I am glad, indeed, if I have been of any service and I shall look forward to seeing the efforts of Mr. Gross and his associates crowned with the success which they richly deserve. Mr. Gross has addressed innumerable gatherings during the last six months, always insisting (sometimes in the face of strenuous opposition) that agriculture shall have representation upon the commission, being too large and important an industry to ignore or overlook. In this he is absolutely right and I hasten to congratulate him upon his determined stand. Many men have argued with him, but in the end they have been convinced that he was right and so a great victory has been won.

Our nation confronts a period of even greater prosperity than it is now enjoying. To reap the full benefits of this larger prosperity, however, we must solve our problems in a big, national way, putting general welfare above individual good, making the nation the unit of our interests and endeavors. We will have taken a long step toward clearing the political atmosphere and putting government on a higher plane if we succeed, as now seems almost certain, in removing the tariff from politics and placing it in the hands of a non-partisan commission, the very first member of which shall represent the great farming interests of our country.

A MODEL FARM LEASE.

A SUBSCRIBER sends me a copy of a five-year farm lease recently signed by friends of his, a model of its kind and so interesting it opens up a most profitable subject for discussion in this page of mine. Before I give you the terms of this particular lease I want to tell of two other incidents which have recently come under my observation.

I have the honor to number among my friends a young banker who inherited 480 acres of grain-belt land, which he has tiled, fertilized and otherwise reclaimed until he has increased the gross rental from $2 to $10 and (in particularly favorable years) even to $12 an acre. He does not work this land himself, but leases it, his holdings comprising about 1,300 acres altogether. Under the terms of his leases the owner receives one-half of the corn, two-fifths of the small grain and $5 an acre for the hay and pasture land. My friend is a firm believer in commercial fertilizers, which he furnishes to his tenants in carload lots, they being required to haul it from the near-by town and spread it over the fields, but not being called upon to bear any of the expense. By reason of the tiling and the continued use of fertilizers the landlord has been able to increase his gross profits from 4 per cent to 14 per cent a year. But the tenants fared still better, for while he was doing this they increased their net earnings 24 per cent in one case and 47 per cent in another case. My banker friend advises me that practically all his tenants (there have been perhaps twenty or thirty in the last ten years) remain on his farm about three years, on the average, and then get places of their own, using as their original cash payment the money they have made and saved while tenant farmers. Here is splendid proof that the door of opportunity is open to both landowner and tenant when they work together harmoniously, realizing that their interests are mutual.

I had the pleasure, last summer, to hear a most practical talk given before a national conference of farm workers by a southern woman, Mrs. G. H. Mathis, of Alabama. Here, in briefest outline, is her story:

She bought 1,000 acres of farm land and decided to try out her tenant-farming plans. She tore up all the existing leases and made out new ones. Her first lease, and every one since, called for so many acres in corn, so many in hay, so many in potatoes; one acre in sorghum, from which to make at least one barrel of molasses for the tenant's own use; at least two acres of garden truck and other "surplus money" crops; one brood sow, that will yield $100 worth of meat; one cow and calf, that will yield $50 worth of butter, milk and meat; one brood mare, that will raise a colt worth $100; in addition to all which the lease provided for keeping roads and fences in repair and for removing all filth promptly, "so as to protect the health of my own family and the water supply of other people," all this work to be done under the direction of Mrs. Mathis, "without dissension or fuss"—the exact words.

The underlying idea is not hard to find. First, Mrs. Mathis wanted to see that her tenants raise enough to feed themselves, their families and their live stock. Then she wanted to insure a diversity of crops that would bring in ready money all the year around and get the shiftless ones away from cotton and nothing but cotton. By this method she has succeeded in bettering the lot of her tenants until now many own their places or are buying them on the installment plan, while she has materially reduced the 45 per cent which formerly had absolutely nothing, neither hog, horse nor cow, moving every twelve months. Another case, you see, of partnership between landowner and tenant and not making the transaction a mere matter of dollars and cents alone.

Now, I want to tell you of the model lease which my subscriber friend sends to me. It covers five years and provides for the owner furnishing the land and one-half of all the stock and machinery necessary to work it; the tenant furnishing all the labor and the other half of the stock and machinery. Permanent improvements are to be made from time to time, on the agreement of both owner and tenant, provision being made for borrowing money for this purpose, when both agree to it, the taxes, insurance and mortgage interest to be included in the expenses which are to be deducted before there is any division of profit. The crops and produce are to be sold and divided evenly, and at the end of the lease period of five years whatever sum the land may be worth in excess of $135 an acre, agreed upon as the present value, shall be divided evenly between owner and tenant. If they cannot agree on the valuation when the lease expires a third party, to be agreed upon, is to appraise it. Should the owner not accept this appraisement and agree to pay the tenant one-half of the increase in the land value, the farm is to be sold, the tenant having the first option on it at the price the appraisers shall put upon it.

It seems to me this is an admirable, even ideal arrangement, worthy of being copied by others (owners and tenants alike) who conscientiously want to improve one another's condition and put tenant farming on a higher plane. If any of my readers know of similar cases they will do me a great favor by letting me hear of them. Here is a matter we can well afford to spend a few hours discussing between ourselves, now that the time of the year is here when farm leases are to be made out or renewed and the subject becomes one of major importance.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

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Record-Breaking Issue of The Wisconsin Farmer.

THIS is the largest Wisconsin Farmer ever published. With forty-eight pages this number is eight pages larger than any previous issue of this paper. Files in our office show that this is the largest issue of a Wiconsin farm paper, from the standpoint of number of pages, in the years 1913, 1914, 1915 and 1916, and we believe it is the largest regular issue of a Wisconsin farm paper ever published.

This issue carries approximately ninety columns of advertising, which breaks all records for big issues in the years named. This paper is not only a splendid fulfillment of the hopes and aspirations of the publisher to lead as a Wisconsin farm paper, but it is prophetic of what may be expected in a much larger way in the future. The success of The Wisconsin Farmer is due entirely to the editorial efficiency of the paper. The foundation of any farm paper is what it has to give its patrons in the way of practical and interesting information concerning farm affairs in the field which it covers. The Wisconsin Farmer is edited and published for Wisconsin farmers, and its success as noted herein, is sufficient evidence of the approval of our readers.

One of the most gratifying phases of the farm paper situation in this state, to us, is the predominance which The Wisconsin Farmer maintains as an advertising medium for our prosperous stockmen. In the issue of January 20th The Wisconsin Farmer published seventeen and one-fourth columns of live stock advertising as compared to nine and one-half columns published by our nearest Wisconsin farm paper competitor. In this same issue The Wisconsin Farmer published a total of sixty-five columns of advertising, which was a gain of ten columns over last year. Our chief competitor published less total advertising in the issue of January 20th, and gained only one and one-fourth columns over the previous year. In the issue of January 27th The Wisconsin Farmer published seventeen and one-half columns of live stock advertising, and our next competitor only nine columns. This gave The Wisconsin Farmer a little more than two full pages the best of it, and indicates conclusively that the stockmen of this state regard the columns of The Wisconsin Farmer as their best market place. On total advertising in the issue of January 27th, The Wisconsin Farmer gained nineteen and one-half columns over last year, and the nearest competing paper gained fifteen and three-fourths columns.

The Wisconsin Farmer is attuned to the onward step of progress in the agricultural activities of this great state and feels closely the pulse of the farmers and stockmen on all practical topics and public issues. The Wisconsin Farmer has no political cliques to serve, is not affiliated with any "close corporation" organizations, and owes its one chief obligation to the farmers and live stock men who so liberally support it. The Wisconsin Farmer guarantees 80,000 circulation, which is a larger guaranteed circulation than is offered by any other Wisconsin farm paper. As a matter of fact The Wisconsin Farmer's actual circulation is largely in excess of its guaranteed amount, running well over 90,000 each week, over 75 per cent of which is concentrated in Wisconsin.

As we have started the year 1916 by making new records, we hope to continue it. More columns of good reading matter every week, more illustrations, more letters from Wisconsin people, greater interest in Wisconsin farm affairs, and more careful attention to the farm field of this state have made it possible to have this record-breaking issue of The Wisconsin Farmer. As the same policy is to be pursued and as we are prepared to redouble our efforts in these matters, we can see the brightest kind of a future for The Wisconsin Farmer.

For the hundreds of expressions of good will and encouragement received by the publisher through the mails, we take this opportunity to express our hearty thanks. Wisconsin farm and live stock opportunities are just opening up for development. This state can produce double the amount of almost any farm commodity we could name, if farming is properly carried on, with a minimum of waste and with proper equipment. To inspire the farmers in raising better products, to interest them in greater quantity of products, to aid them in living more comfortably and more happily, and to help work out their problems of sales and distribution, are some of the aims which the publisher and editors of this paper have in mind for the future. We ask the farmers of the state to continue to help us in this great work.

Wisconsin Man's New Ideas on Tuberculin Test.

COMMISSIONER OF AGRICULTURE C. P. NORGORD discussed the tuberculin test at the Waukesha County Guernsey Breeders' meeting and gave some new ideas which bid fair to assume national prominence.

Under the plan proposed by Commissioner Norgord tuberculin-tested cattle will not only be given a rating above those not tested, but this rating will be interstate and will be maintained and backed by veterinary departments of all states. The plan already has been indorsed by a number of states.

The plan presented by the commissioner practically is assured of general adoption, and already it has the indorsement of the executive committee of the Wisconsin Live Stock Breeders' Association, and will be formally indorsed by this organization at its annual meeting on February 10th. It also has been approved by several county breeders' associations.

The project has been worked out by the Wisconsin commissioner, the veterinary division of his department, of which Dr. O. H. Eliason is head, and the Live Stock Sanitary Board of the same department.

A campaign of education will be conducted in furtherance of the plan, and co-operating with the Wisconsin Department of Agriculture in this will be the College of Agriculture of University of Wisconsin, the United States Department of Agriculture, and the Wisconsin Live Stock Breeders' Association and all county breeders' organizations of Wisconsin.

The proposal of the commissioner means, in a word, that the tuberculin test will be so made use of, that, instead of its use being a stigma, added commercial importance will give the test the standing it deserves and make desirable its use.

Under the new order of things the herds coming under the test and found free from tuberculosis will be certified as Class A herds, and will be so listed in all states. Therefore, it will be an inducement for the breeder to voluntarily acquire this certification as soon as possible.

Death of James Zuill McLay.

JAMES ZUILL McLAY, prominent breeder and importer of Clydesdale horses and Short-horn cattle, died January 25th, at his home near Janesville, Rock county, aged fifty-three years. He had been ill of pneumonia, but was believed to be on the road to recovery when a sudden change for the worse came. Half an hour before his death Mr. McLay was pronounced much better, and his demise under such circumstances was a sudden shock.

With his brother, David McLay, James Z. McLay helped to collect what many good judges have called one of the finest groups of blooded Clydesdale horses in this country. The McLays have had and still maintain an exceptionally high standing among horsemen of this country and Canada. On their farms, aggregating about 900 acres in Rock county, they had thousands of dollars invested in blooded mares and stallions and Short-horn cattle. In 1904, at the World's Fair at St. Louis, the McLay farm swept the field with its exhibit of Clydesdales. At other state fairs during the past number of years the McLay horses have without fail always taken first honors.

Dr. A. S. Alexander, of the Wisconsin College of Agriculture, has written the following beautiful and richly merited appreciation of the late Mr. McLay:

James Zuill McLay exemplified the highest type of Christian country gentleman. At "Arngibbon," among his broad acres on Rock Prairie, near Janesville, he lived a retiring, peaceful, pastoral life, happy with his gudewife and large family, setting his children an ideal example and demonstrating the best methods of farming and stock breeding. He was modest, unassuming, courteous and conservative. He possessed the caution, reserve, thrift, keenness and integrity of his fine Scottish ancestry, like them was a stanch Presbyterian and he lived up to his creed and training. To the public he was best known and will longest be remembered as a successful breeder and judge of Clydesdale horses, but he also maintained a herd of pedigreed Short-horns. He was a constructive breeder keeping ever and clearly in mind an ideal of type and character which to him spelled perfection. It was based upon that of Cedric, Colonel Holloway's noted Prince of Wales horse, and its chief features were quality, style and action, oblique pasterns, silky "feather" and "cleftiness" of bone. Such refinement often is attained at a sacrifice of size and weight, yet many of the McLay bred Clydesdales, notably the females, have combined quality and size and everywhere ... animals of the stud have won a full shar... ...nors.

The "laird of Arngibbon" has ... from us in the prime of life, before h... ...pleted his work, before he could be spar... ...ered to his flock, but the Divine Will ... ...t and we must bow to it, keep "Jim" in affe... ...e memory and rest assured that he has de...rve... ...d received the "well done good and ... ..." of the Master.

A conspicuous ... which the late Mr. McLay took inter... ... the organization of the county Y. M. C. A. ... gives the rural boys the same privileges ... who belong to the Y. M. C. A. in town. Th... ...ork has been carried on in Rock county to the extent that inquiries concerning it have come from all over the country.

Mr. McLay was born in Rock county May 1, 1863, being the son of John and Jane Zuill McLay, who settled in Rock county in 1843. In 1888, on the third day of October he was united in marriage to Jean McFarland, the daughter of James McFarland. He is survived by the widow, three daughters, Mary McLay, who resides at home; Margaret McLay, a student at Beloit college; and Catherine McLay, who attends Monmouth College at Monmouth, Ill.; two sons, John McLay, of Milton College, and James Gordon McLay, at home. He is also survived by a sister, Mrs. Archie Reid, of this city, and two brothers, David McClay, of Johnstown, and William McLay, of this city.

The Wisconsin Farmer extends sympathy to the bereaved family. Mr. McLay's death is a loss to the state and nation.

Poultry Raising a Growing Industry.

IT IS DIFFICULT to comprehend the enormous total represented in the value of the poultry produced in the United States. It runs into the hundreds of millions, exceeding by far the enumeration given in the census reports. In 1911 the secretary of agriculture placed the total income from poultry and poultry products at $750,000,000. In our census reports no account is taken of the poultry raised and consumed in villages and towns, while the eggs and poultry consumed on the farm are also left out of the reckoning. The income from poultry alone is greater than that from the gold, silver, iron and coal mines in a given year, and until the last year or two the value of poultry products exceeded the value of the wheat crop.

No excuse, therefore, need be offered by The Wisconsin Farmer when it makes a special recognition of the great poultry industry by devoting a large part of this issue to poultry topics. From the year 1900 to 1910 the number of poultry in the United States increased 20 per cent, and there are those who are predicting that the next federal census will show an income from poultry products of the farms of the United States approximating $1,000,000,000.

Those who have been asked to contribute to this issue of The Wisconsin Farmer were warned in advance that readers of this paper were interested in poultry merely as a secondary farm industry. Exclusive poultry farms are so few in number that their needs are not to be considered at a time like this. There has been strict compliance with our suggestion and, therefore, the articles that appear in this issue will appeal strongly to those of our readers who are aware that their methods of poultry raising might be improved upon and who, therefore, turn the pages of The Wisconsin Farmer as open-minded truth seekers.

Poultry raising may be regarded as one branch of the farm that brings in a continuous revenue. It meets the little emergencies of life and, indeed, it supplies many of the comforts and most of the luxuries of living in thousands and tens of thousands of families.

While there are those who claim that there is little profit in the raising of poultry if the science of mathematics is coldly applied to the proposition, yet we contend that in no other industry is there so large a margin of profit returned from material that would otherwise go to waste as is the case with those who engage in poultry raising as a side issue to general stock and grain farming. On our high-priced land we must more and more realize on materials that have been going to waste in the past, and if we do this most efficiently we will be forced to recognize the numerous advantages of the poultry industry in attaining this end.

If profits are to increase these can come only as the result of more intelligent management. The day has passed when any breeder can afford to lose hundreds of little chicks simply as the result of irrational methods of feeding. Those who undertake to operate incubators should have it forced upon their attention that these artificial hens are highly efficient when properly managed. They have long since passed the experimental stage and, unquestionably, the introduction of incubators has been the one important factor responsible for the great increase in the number of poultry on the farms of the United States during the last decade and a half.

Those who have contributed to this issue of The Wisconsin Farmer are not in any sense theorists, but practical poultry people who bring to their subject not only comprehensive theoretical knowledge, but abundant practical experience. The reader may rely implicitly upon the instruction embodied in the various contributions, and we make the suggeston that this issue of The Wis-

consin Farmer be preserved so that some of the articles contained in it may be read and reread during the season when we are in the midst of active poultry raising operations.

Wisconsin Potato Men to Profit.

WISCONSIN growers are in a fair way to realize considerable profit on potato stock now on hand, even though the stock is much less in quantity than a year ago. On January 1, 1915, Wisconsin growers had 20,356,000 bushels of potatoes on hand. In addition to this there were 3,770,000 bushels in the hands of dealers. At that time, however, the price was around 30 cents. This was the prevailing price on December 1, 1914, and it fluctuated very little, being only 31 cents on March 1, 1915.

At the present time Wisconsin growers have nearly 12,000,000 bushels of potatoes on hand and dealers have 3,370,000 bushels. The price on December 1, 1915, was 45 cents, and it has advanced since then and there is every prospect of an advance before March 1st.

Unusually small stocks of potatoes were held on January 1st in the important potato-producing states, according to reports of correspondents of the Bureau of Crop Estimates. This is the reverse of conditions a year ago. Then, stocks were unusually large and southern potato growers who compete in the spring months with stocks carried over in the northern states were warned to expect the low prices which prevailed last spring.

Supplies on hand January 1, 1916, for market, are estimated to be about 38 per cent smaller than a year ago, 15 per cent smaller than two years ago, 30 per cent smaller than three years ago, but 16 per cent larger than four years ago.

If, for the purpose of comparison, the estimates of percentages of marketable stocks of potatoes on January 1st be applied to the estimates of total production, it shows, in the states included (which produced 66 per cent of the 1915 crop and 78 per cent of the 1914 crop of the United States), a total of 105,345,000 bushels January 1, 1916, compared with 169,554,000 a year ago, 123,292,000 two years ago, 149,845,000 three years ago and 90,778,000 four years ago. These figures indicate that southern growers need not fear a burdensome competition with northern stocks of potatoes this spring. The United States seldom imports or exports relatively a large quantity of potatoes. Therefore, the European war has no material direct influence upon the potato market of the United States.

Toting Water No Longer Necessary

THAT the farm housewife in her ordinary duties carries more than a ton of water a week, on a farm where there is no water system, is not generally known, but it is a fact. It is possible to relieve the women in farm homes from this drudgery with machinery which can be installed at a reasonable expense. "Toting" water requires a good deal of strength and time. It is easily possible for systems to be installed which will permit water supply for kitchen and other rooms of the home by simply turning on a faucet. Mr. F. M. White, secretary of the American Society of Agricultural Engineers, and a member of the Wisconsin College of Agriculture staff, has discussed the water-carrying problem in a Wisconsin Bankers' Farm Bulletin for February. The source of water supply on a farm is usually made convenient for the men, near the barn. A great many farmers object to pumping water for their stock and so have a gas engine or a windmill. Mr. White calls attention to the fact that it is usually possible to make this same engine or windmill furnish power for pumping every drop of water needed in the home. He says that installation of the motor system for the home is not so expensive as one may think. There are three methods of distribution: First, the elevated tank system; second, the air and water pressure system; third, the fresh water direct from the well. Before any of these are installed the source of supply should be considered, and in doing this Mr. White says that we may figure the following quantities of water needed daily: Twenty-five gallons per person, ten gallons per horse, ten gallons per cow, two gallons per hog, two gallons per sheep. Mr. White recommends wood as a good material for the tank, as wood will not sweat nor rust, causes little trouble to erect, is easier to keep from freezing and will last fifteen to twenty years. Where the tank is to be of large capacity he prefers steel or concrete. In Upper Wisconsin tanks will give trouble unless well protected. The tank must be at least six feet above point of delivery for every 100 feet of three-fourths-inch pipe through which water flows. The tank must be supported by heavy timbers. A good location for a gravity tank is in the hay-mow. A tank made of steel six feet in diameter and eight feet deep will hold 1,688 gallons, and will cost not to exceed $100 to install.

In the air and water, or hydro-pneumatic system, air and water are stored in an air-tight tank. The advantage is that this tank may be placed in the basement of the house or in the ground near the well. An outfit large enough for a family of six, for six horses, twenty head of cattle and ten hogs can be installed for $200. A small tank for house use only would cost about $100. The fresh water, or pneumatic system, delivers water direct from the well to the faucet, using compressed air as the power. This is a late development in water supply systems, according to Mr. White, and the special pump and air compressor and air tank complete cost about $300. The advantages of this system are as follows:

(1) One air storage tank will supply both hard and soft water by providing the extra cylinder or pump.
(2) Fresh water at all times.

Its disadvantages are:

(1) Storage of air difficult.
(2) Sand in water causes leaky valves.
(3) Not suitable to raise water over 125 feet.

Wisconsin farmers who have not seen this valuable bulletin, which gives more complete details, should ask for one at their bank, mentioning the fact that they read about the bulletin in The Wisconsin Farmer.

Farmers' Week at Madison.

THIS is the last opportunity which The Wisconsin Farmer will have to call attention to the numerous meetings of importance to be held in Madison February 7th-12th. Attention has been called to these matters in previous issues and several of the programs published. The grain show, under the auspices of the Wisconsin experiment station, the conferences on grain farming, horticulture, drainage, live stock raising and dairying, and the cow-testing conference, are among the matters of interest to come up during this Farmers' Week. Then there are the meetings of all the live stock associations, and of the Wisconsin Alfalfa Order, and the sessions of the home department, and of the country life conference. The spirit of the week is embodied in a twenty-fifth anniversary celebration of the discovery of the Babcock Test, and Dr. Babcock will be awarded appropriate honors. Those who miss Farmers' Week this year are likely to be sorry.

High Wisconsin Grain Yields.

FIGURES recently compiled on the production of grain per acre for the years 1913, 1914 and 1915, continue to show the predominance of Wisconsin and to emphasize the value of seed bought in Wisconsin, because of the heavy yielding strains. The average yield per acre in Wisconsin for 1913, 1914 and 1915 was 34.7 bushels. This is a higher average than any other state which grows any considerable amount of corn, with the single exception of Indiana, where the average was 35.9 bushels to the acre. Such great corn-growing states as Illinois and Iowa had 30.7 bushels per acre and 34 bushels per acre respectively.

The average yield of oats per acre in Wisconsin for the three years mentioned was 36.7 bushels. This is a higher average yield per acre than any other state in the Union. The next closest is Minnesota with 36 bushels per acre, then Iowa with 35.7 bushels and Michigan fourth with 35.2 bushels per acre.

Wisconsin leads all the wheat states in the yield of bushels per acre for the three years named. The average yield was 20.4 in Wisconsin, Iowa second with 19.7 bushels and Michigan third with 18.8 bushels.

Illinois had a slight lead over Wisconsin in the yield of barley per acre. The average yield for three years in Illinois was 29.8 bushels. Wisconsin comes second with 29.3 bushels, Iowa third with 27.3 bushels.

Minnesota led in the yield on rye. For the three years Minnesota averaged 19.1 bushels of rye per acre. Iowa was second with 18.6 bushels and Wisconsin third with 17.5 bushels per acre.

When it comes to big yields of good sound grain, suitable for good seed, it is hard to beat Wisconsin.

Durability of Concrete Posts Makes Strong Appeal.

IN A BULLETIN published recently by the United States Department of Agriculture dealing with the problem of fencing the concrete post receives attention. The author of this bulletin, H. N. Humphrey, states that the greatest care must be taken in the selection of materials used in the construction of this post. Gravel or crushed rock should be used which does not exceed one-half inch or run under one-fourth inch in diameter. The sand used should be clean and sharp. To secure the best results a very rich mixture must be made and should run one part cement, two parts sand and three parts gravel. It does not pay to stint the quantity of cement used, for a very slight reduction in cost caused by the use of less cement will make a very big difference in the quality of the post.

It is important that the mixing of the materials be done very thoroughly. The reinforcement should be placed near the surface of the post, but not nearer than three-fourths of an inch. There should be enough reinforcing wires so that when a force is applied to the post from any direction at least one wire will be in tension. It has been found that when smooth cold-drawn wire is used for reinforcement purposes the bond between the wire and the concrete is not strong enough; when a strain is placed on the post such a wire will slip in the concrete. This may be overcome by cleaning the wire with a strong caustic solution and washing with water, or the same result may be gotten by slightly rusting the wires with a diluted solution of sal ammoniac. Homemade wooden forms may be used in the construction of the posts, but better results can be obtained by the use of steel forms.

Rapid Gains on Swine Made at Low Cost.

SINCE the practice of using the self-feeder in feeding swine has resulted in making not only rapid gains but also inexpensive gains on hogs the question comes up if pursuing this line of investigational work will not sooner or later demonstrate that the hog knows more than his master. Of course, the knowledge referred to includes only a wiser selection of foods when a variety is available than can possibly be made even by the most skillful feeder. If, in the search for truth, we find our own intelligence belittled, it must be accepted simply as one of the penalties of progress. Scientists have been pounding away on feeding questions for generation after generation and it looks now as if all this time the hog was waiting to show that his knowledge is more comprehensive than that of the chemist and his wisdom surpassed that of the most skillful scientific feeder.

Additional proof has come to light that is favorable to the use of the self-feeder in swine feeding operations. This time it is from the Minnesota station. Ten hogs were fed by the self-feeder plan from July 10th to November 15th of last year, a period of 128 days. Each hog was kept in a pen by himself, the object being to accumulate data on the individual animal. Each animal has access to shelled corn, to tankage and to shorts, these products being separate in self-feeders. Five of the pigs were farrowed in March, and at the close of the feeding period, November 15th, they weighed an average of 287.1 pounds. They made an average gain of 1.8 pounds each, and 392.4 pounds of food were required to make 100 pounds gain. These pigs consumed a ration composed of 88.26 per cent of shelled corn, 9.02 per cent of tankage and 2.72 per cent of shorts. At the close of the feeding period the March pigs were 237 days old.

The May pigs were 191 days old when the experiment closed, at which time they averaged 248.4 pounds each. It required, in this case, practically the same amount of grain to make a hundred pounds of gain, namely, 392.54. The younger pigs consumed slightly more tankage, because their daily ration for the feeding period was made up of 86.99 per cent of shelled corn, 10.83 per cent of tankage and 2.19 per cent of shorts.

Swine breeders generally will concede that these are exceedingly satisfactory gains and, furthermore, they will concede that they were made at a very low cost. There is to be considered in addition to the amount of food consumed, the matter of labor, and on this point there is certainly a large saving compared with the old-fashioned system of feeding by hand, particularly in those cases where considerable slop is used.

Producing a Superior Article Pays.

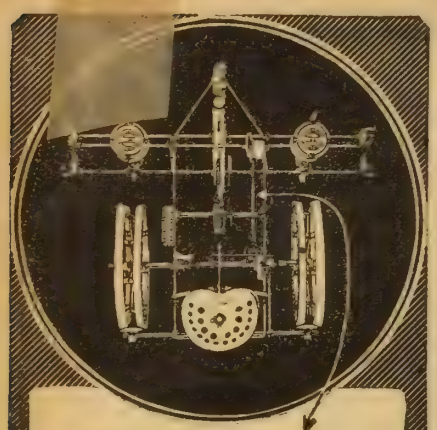
FOR a number of years there has been in existence in Wisconsin, of which many of our readers are aware, what is known as the Wisconsin Experiment Station Association. The members of this association are producing superior grains, such as corn, wheat, oats and barley. They have made a reputation for their grains and as a result are selling them all over the United States for seed purposes, and in foreign countries as well.

Similarly cattle breeding associations have been formed in Wisconsin, Michigan and other states. Farmers in certain communities are all breeding cattle of one breed, such as Holsteins, Guernseys or Short-horns. By reason of this co-operation they have been able to use better bulls than they could have done had they acted independent of each other. Furthermore, producing so many animals of one breed, buyers have been attracted in large numbers to these communities, which in turn has solved the marketing problem.

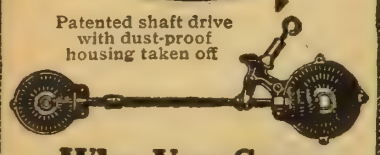
When the Missouri Valley Canners' Association recently met in Kansas City, the fact was brought out that the canning industry has developed wonderfully during the past decade, and that this development has been brought about largely because of putting out superior products. The canned vegetables and fruits of today are so much superior to the products of ten or fifteen years ago that there is no comparison between them, and the result has been an enormous increase in consumption. The output of canned tomatoes, for example, has increased over 100 per cent in the last ten years, and it is destined to grow even more in the next decade, because the canners are organized.

Local associations meet frequently to talk over things of interest to their members, while larger associations hold annual meetings where matters pertaining to marketing are discussed and where means of popularizing their products are studied. Had it not been for this close study of their business and the improvement of their product, it is not likely that consumption of canned goods would have been increased.

We mention these facts to get our readers to thinking about new methods and to get them to study their business more closely. Superior cattle, horses, hogs and sheep, as well as superior grains, forage crops, and all other products of the farm, will always find a ready demand on the market, and the better the article the more it will be sought and at a larger profit to the producer.



Patented shaft drive with dust-proof housing taken off



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HERE you see a top view of the Janesville corn planter. Note the freedom from needless parts. The construction is simple—easy to handle—easy to take care of.

In using the shaft drive we reduce the number of operating parts generally needed on a corn planter. We discard the clutch—we free you from chains, sprockets, springs and possibilities for gumming up, breakages and needless repair bills. We assure you of having your planter in running shape all of the time. You are not held up waiting to replace broken parts.

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Here is another feature that you will like on this planter. It has a sight feed. You can see every hill as it drops. You can change the feed without stopping the team—drop two, three or four kernels to the hill as the soil will stand. Here's the best construction for handling silage corn.

You can provide for any quantity of seed corn per acre. Commercial fertilizer attachment, as well as cow pea attachment also, can be furnished.

80 rods of wire, a reel, a disc marker, a full set of edge drop as well as flat drop plates for checking or drilling, furnished with each machine. Made in following models: checking and drilling, drilling only and lister planter.

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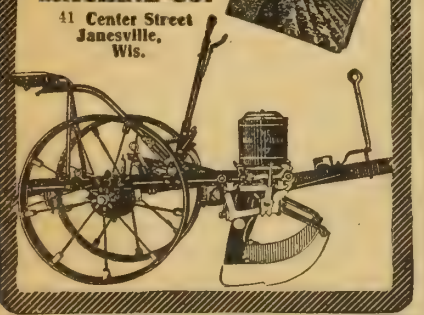


The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

The Farmers' Institute at Weirgor.

To the Editor:—Fifteen months ago Weirgor was not on the map. It was lying dormant in cut-over lands or forests. In January, 1916, there are in this vicinity 142 families settled and commencing new homes.

Weirgor now has one of the finest district school buildings that one can imagine. There are a couple of stores, a post office, a fine eating place and a good, log community room. An investigation of the soil of that region shows that it is mostly of hard wood origin and good. Splendid streams of the finest kind filled with speckled trout abound. The settlers of the region are of high class and full of hope and determination.

Though the farmers' institute was held at a most unfortunate time, as the farmers were for the most part engaged in logging and other teaming the schoolhouse was filled with a most attentive audience. One farmer drove in seven miles and brought ten people. Mr. and Mrs. John Nelson, of Yarnell, walked ten and one-half miles to get to the institute. This was a great effort, for snow filled the roads. The little community at Meteor turned out and showed that it was made up of progressive people. A committee of three, consisting of John Foss, H. C. Busse and Bert Zettle, was appointed to see that this community has another institute. H. C. Busse, Bert Zettle and Dave Senesac, of Meteor, signified desire to know more about securing a pure-bred bull for that community. Howard Busse asked for milk sheets. H. C. Busse brought along with him his fine family of five sons, and John Foss his fine family of three sons. F. Messerschmidt, of Weigor, showed a sample of splendid Green Mountain potatoes. Much interest was shown in better potato growing, and some time this spring a community potato growers' association will be organized. One of the institute workers said that this was one of the best institutes in which he had worked.

A. C. Thompson, Henry Wilson and F. M. Doyle, of Ladysmith, were present to help make the institute a success. These men are interested in the land about Weirgor and are active in helping the settlers make good. These men, acting as the local committee, were responsible for the general arrangements and advertising which made the institute such a success. With fine soil, fine settlers and a good bunch of boosters back of them the Weirgor community will surely prove to be one of the best farming sections in the state.

E. L. Luther,
Supt. Wis. Farmers' Institutes.

Dynamite a Time and Labor Saver on the Farm.

To the Editor:—The farmers are just beginning to see the importance of using explosives on their farms for such work as blasting stumps, ditches, tree holes, subsoil and hardpan.

Two men can take a case of dynamite, some caps and fuse and very quickly remove a good number of stumps, and they are almost always broken up so that they can be handled with ease for hauling or burning, as the case may be. Then there is no dirt left on them to be removed. Some time ago I blasted some cypress stumps for Mr. J. T. Avret, of Kitson, Ga., some of them as large as seven or eight feet across, but they came out nicely and they were broken up very good. Mr. Avret was much pleased.

Dynamite will dig a ditch where no other method can be used, in such places as swamps and ponds. It does better work in wet ground than in dry.

Anywhere a man can work to punch holes and load them a ditch can be blasted. The blasts lifts the dirt out and scatters it far on each side of the ditch, thereby leaving no big banks of dirt on the sides of the ditch to hold the water back or be washing into the ditch and the jar from the explosion loosens up the earth so that the water can drain into the ditch. A ditch dug with spades have hard sides so that the water cannot drain in and then there is lots of dirt on the sides of the ditch unless it is hauled away, costing time and money. I blasted some ditches that were about four feet deep and five to seven feet wide at top. Blasted ditches have sloping sides, therefore there is no caving. Ditches can be blasted as large as six feet deep and twenty feet wide if the proper method is used.

Trees should never be set in any but a blasted hole, as the blast cracks up the soil so that the roots can grow fast and the moisture can rise. Spade dug holes have hard sides that the young roots cannot penetrate or the moisture cannot rise. Fruit trees set in blasted holes come into bearing one to three years earlier than those set in spade dug holes and the cost per tree for blasting is very light.

If you have clay subsoil and want bumper crops use one-half stick of 40 per cent dynamite about three feet deep and fifteen feet apart and if the work is done at the proper time you will get them. The dynamite cracks up the soil so that the rains can soak in and not run off, as is usually the case, and then moisture can rise and the roots go down deep getting the plant food. As early as possible in the fall this work should be done and when the soil is dry or it will only blow a hole in the ground, doing no good.

L. N. Hodges.

On Poultry Shows.

To the Editor:—I have been reading the articles in your paper on poultry shows and wish to say a few words.

My experience in visiting shows cover the past thirty years and what I consider their greatest weakness still prevails at many places. That is the want of properly grouping the different breeds of fowls and the proper labeling of same.

I have seen shows of beautiful birds so mixed up an owner couldn't find his exhibit.

I don't believe an association can run a show and pay out without looking to the general public for admissions and to get them they must look at their show from the public's viewpoint.

Too many men who have charge of exhibits think because they know all about chickens everybody does, but that is not the case. There is no pleasure in viewing a thing you know nothing about. I have viewed some noted and valuable paintings that, had not the finer points and the name of the artist been given me, I would have passed by, thinking them a daub and would have never known the difference.

Many an order for day-old chicks, a setting of eggs or a trio of good fowls could be written if someone would try to interest the visitors.

Many a person who has visited shows with interest and perhaps to see if their neighbor's birds won a prize come out disgusted because they couldn't even find them and no one seemed to be able to direct them.

About a year ago I visited a show, going quite a distance, to get some stock and eggs. I never saw a better lot of birds, but hardly a coop had a ticket on it to tell whose it was. But there was lots of outside advertising matter in their place, which was all wrong.

I found some birds that pleased me very much, but no one seemed to know who owned them. I was told the secretary had it all down in his book and that he could tell me. I found the secretary had gone to lunch and taken the book with him. It was the third day of the show, the premiums had been awarded and still only a few of the ribbons placed. (I didn't place my order).

Too many exhibitors huddle together and talk "chicken" and forget their exhibit, when if they were on the job with a word of interest, a glad hand and a pleasant smile many an order could be booked from people who just needed a word to have them make a start.

If the exhibitors want to gain knowledge at these shows have a time before the doors open each day and "get together and chew it over," but when your doors are open to the public give your attention to the public. See that your exhibit is in order and your pencil's got a point on it.

All breeds of fowls should be grouped. All cages should be labeled with the same form of card, showing breed, kind of bird, age, what prize it competes for, name and address of owner and if he has stock or eggs for sale and high up over each group should be a sign that could be read from the entrance bearing the name of the breed located there.

If your show is run just to get together don't look to the public for patronage. Go down in your pockets and pay the bills. But that is not why most shows are run. Why do you suppose such shows as the auto show is put on each year at such a vast expense? Just to look over each other's product? Not much! To get orders from the public. That is the only way to get the money out of any business, the chicken business included.

A Farmer.

Kenosha Co., Wisconsin.

How I Grew a Bumper Crop of Rye.

To the Editor:—A tobacco crop was raised on the ground in 1913. Therefore, it was kept well cultivated all summer.

After the tobacco was harvested the ground was plowed about five inches deep and the rye was sown October 1st in the usual way, about five pecks to the acre.

The following spring in order to use the rye as a nurse crop for alfalfa it was necessary to disk the ground regardless of the possible injury to the rye. This was done the 14th of April. Then the alfalfa was sown and harrowed in. The disking and the harrowing made the rye look rather sick for a time, but, as I cared more for the alfalfa than the rye crop, it was immaterial to me.

After a time, however, I noticed that the act of sowing the alfalfa had served as a splendid cultivation for the rye, as it caused it to stool out. The rye grew six feet in height, but lodged a short time before harvesting so that it was impossible to get all of it.

It stood in the shock about a week, after which it was threshed and accurately weighed, an act which showed it yielded 132 bushels and twelve pounds from three acres of ground or an average of forty-four bushels and four pounds per acre.

The alfalfa was rather thin the first season, but this year I had a good crop of alfalfa as well as quite a crop of self-sown rye. It was cut three times, yielding about a ton per acre each time.

No fertilizer was used except the manure, which was put on the ground for the tobacco crop.

A sample of this crop of rye was the one which won the silver medal at the Panama Exposition.

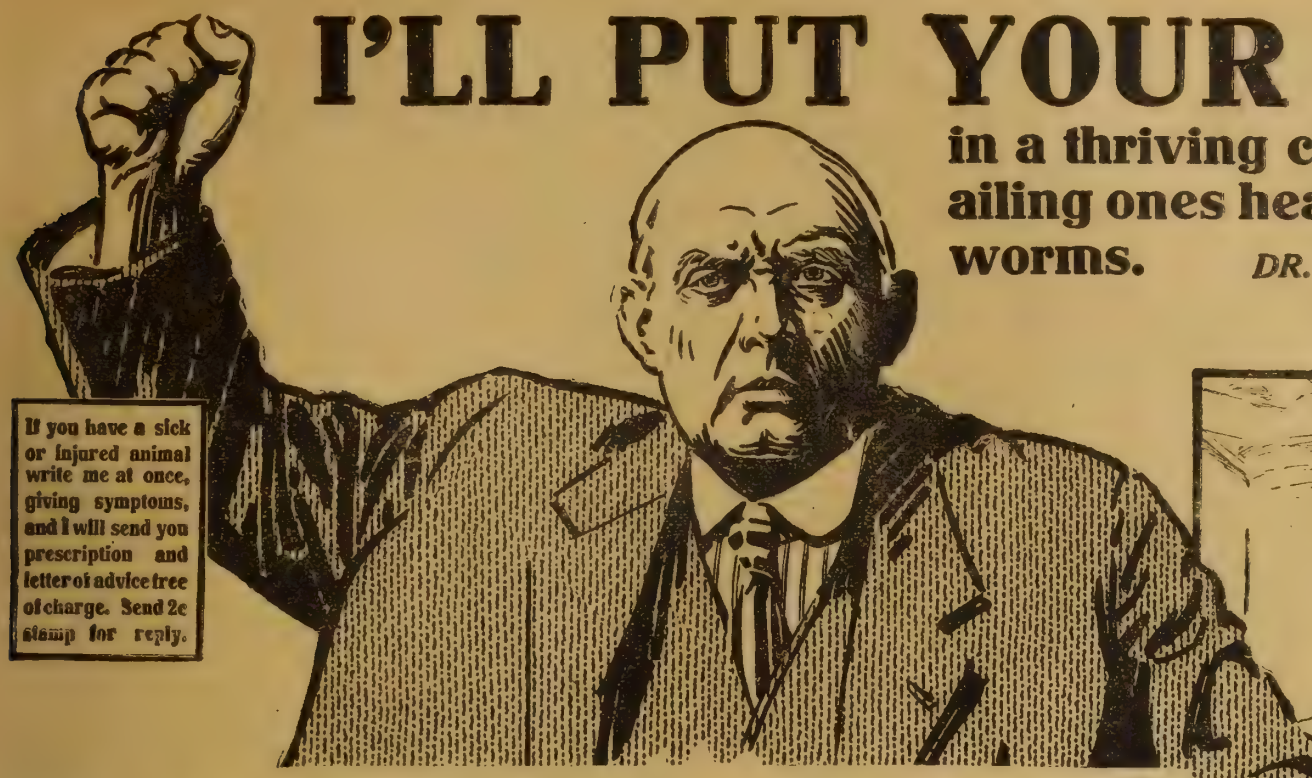
Lloyd F. Hubbard.

The principal grain crops of Canada during 1915 showed the most abundant yield in the history of the Dominion, according to an announcement of the census and statistics office. The increased yield of wheat and oats, it was said, was due to expansion of the acreage by a special effort as a result of the European war, as well as an exceptionally favorable season. The total value of field crops in 1915 amounted to approximately $800,000,000, comprising grain, $568,161,000,900; potatoes and sugar beets, $36,739,500. and fodder crops, $192,768,100. Total yield of wheat for 1915 was 376,303,600 bushels, compared with 161,280,000 in 1914. The quality of the crops, it was said, was superior to 1914, and also superior to the average of the last five years.

I'LL PUT YOUR STOCK

in a thriving condition, make the ailing ones healthy and expel the worms.

DR. GILBERT HESS
Doctor of Veterinary Science
Doctor of Medicine



If you have a sick or injured animal write me at once, giving symptoms, and I will send you prescription and letter of advice free of charge. Send 2c stamp for reply.

Why Pay the Peddler Twice My Price?

I urge every farmer to see to it right now that his work horses are put in condition for the hard work of spring and summer, so that when the sun shines your horses will be rid of their old coats, full of stamina and ready for business.

And don't overlook the spring pig crop—the mortgage lifters. Start them off free from disease—free from worms.

Be sure, also, that your milk cows are thoroughly conditioned for the long, heavy milking season, and that those with calf are vigorous and fit.

Remember, your stock have been cooped up for the last few months and have been on dry feed. As corn or oats, hay and fodder do not contain the laxatives and tonics so abundantly supplied in grass, your stock are pretty apt to be out of fix. Some of your animals are liable to be constipated, rough in hair, their legs may have become stocked, or they have dropsical swellings, but the most common disease of all, especially among hogs, is worms—worms.

DR. HESS STOCK TONIC

25-lb. Pail, $1.60. 100-lb. Sack, $5.00

Highly Concentrated, as the Small Dose Quantity Proves

Now, as a worm expeller, I will go the limit in guaranteeing my Stock Tonic. To clean out your hogs, put in the swill one tablespoonful of my Tonic to every two hogs twice a day and you'll make short work of the worms. Dr. Hess Stock Tonic is

A Sure Worm Expeller
A SPLENDID TONIC

This preparation of mine is 24 years old, farmers everywhere have tested it. I feed it to my own stock, for I know that it contains the necessary ingredients for enriching the blood, improving the digestion and assimilation, keeping the entire animal system clean and well regulated.

Now here is my guarantee to you—a guarantee that my dealer in your town will back up in letter and spirit; it must surely convince you of the undoubted faith I have in this preparation—read it very carefully:

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms, that I have authorized my dealer in your town to supply you with enough for your stock, and if it does not do as I claim, return the empty packages and my dealer will refund your money.

And here are my prices—just half what the peddler charges: 25-lb. pail, $1.60; 100-lb. sack, $5.00. Smaller packages as low as 50c (except in Canada and the far West and the South). Sold only by dependable dealers who are known for square dealing.

I have a book about Dr. Hess Stock Tonic that you may have for the asking.

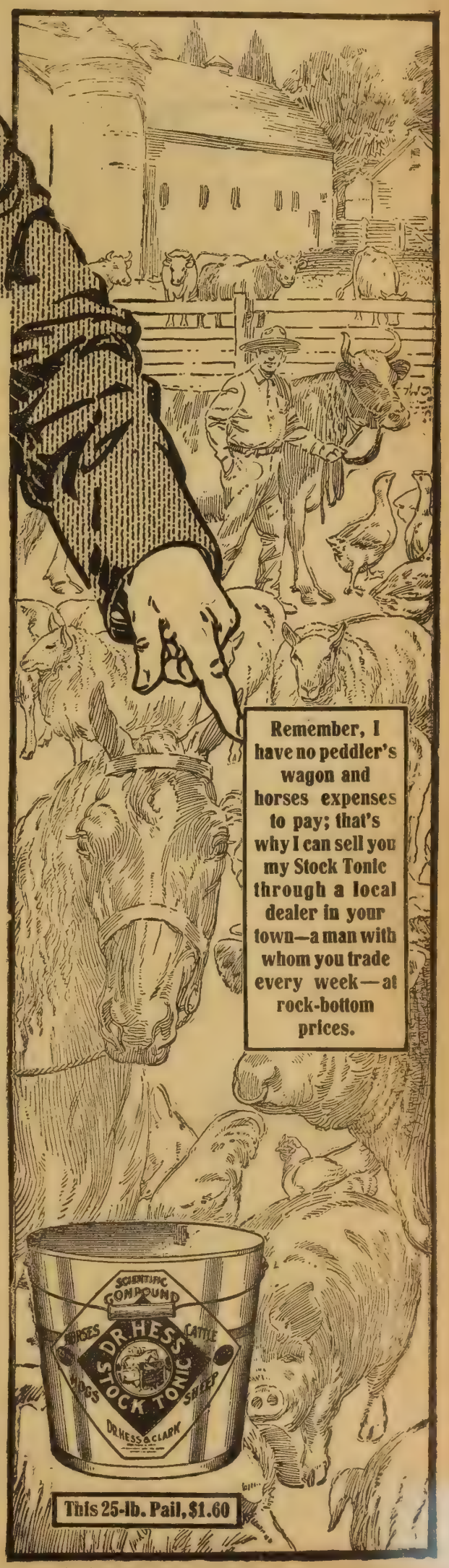
DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

This is just the time you should be giving your poultry this splendid tonic. It will put them in fine condition, make your hens lay, ensure fertile hatching eggs and strong, vigorous chicks. Very economical—a penny's worth is enough for 30 fowl per day. Sold only by reliable dealers—1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail, $2.50 (except in Canada and the far West). Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or, if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy, sifting-top cans. 1 lb. 25c; 3 lbs. 60c (except in Canada and the far West). I guarantee it.



Remember, I have no peddler's wagon and horses expenses to pay; that's why I can sell you my Stock Tonic through a local dealer in your town—a man with whom you trade every week—at rock-bottom prices.

This 25-lb. Pail, $1.60

Special Sale during January and February

Buggies and Engines

We are making special inducements to early buyers during January and February that will enable you to make a bigger saving in the purchase of an American Beauty Buggy or an Economy Engine than you can make at any other time of the year.

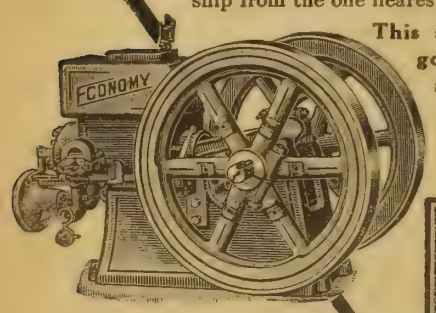
Don't buy a buggy or engine until you have seen this special proposition, as it means a big saving to you.

If you are interested in a Gasoline Engine, write for our special January and February Engine Proposition No. 74W80.

If you are interested in Buggies, write for our special January and February offer on American Beauty Buggies No. 74W80.

Shipped From a City Near You.

We carry six styles of American Beauty Buggies and a full line of Engines, Trucks, Saw Rigs, Grinders and Pumping Outfits in fifteen different cities and we ship from the one nearest you.



This special proposition good during January and February only. Write for it today.

Sears, Roebuck and Co. Chicago, Ill.

Come to Detroit
The Automobile Center
And

LEARN THE AUTOMOBILE BUSINESS

Big opportunities everywhere for Detroit trained automobile men. Interesting, pleasant and money making business. Ambitious men needed to start garage and repair shops everywhere. Learn how. Chauffers, garage and repair men, testers, etc., have more than they can do. *Plenty of room for you.*

EARN $75 TO $300 A MONTH

Students have experience of building new cars from start to finish—factory training in block testing, etc.—all the leading types of starting, lighting and ignition systems in operation. New 6-cyl. Losier Touring Car and 8-cyl. King Car used for road instruction. Just purchased—new 8-cylinder Motor for block test dept. solely for students instruction. Just added 1916 Delco System as used in Buick, Hudson and Packard 12.

DETROIT IS THE PLACE TO LEARN

44 Automobile Factories. They all know and endorse our school. Students can go through them, including Detroit Electric Service Department, without extra charge. Remember, ours is the Old Reliable School, in the heart of the Automobile Industry. Start course anytime. Write for full particulars, guarantee and copy of "Auto School News" and new pictorial catalog—just out—ALL FREE. Or better still, jump on a train and come to Detroit, as hundreds have done.
Learn the automobile business in Detroit and learn it right.

MICHIGAN STATE AUTO SCHOOL, 1402 Auto Bldg., 11-19 Selden Ave., DETROIT, MICH.

Investigate The Zimmerman Mighty Monarch Steel Stump Puller Before You Buy

Don't overlook the biggest value your money can buy. The new improved Zimmerman Mighty Monarch Steel Stump Puller is a tried and tested machine—not an experiment. Best stump puller on earth—in construction, improvements and operation—we'll prove that. New improved model Zimmerman Mighty Monarch pulls ANY stump—cannot be broken in legitimate service. Absolutely safe—child can operate it. Cheaper to use than dynamite and good for lifetime service.

PULLS 200 TO 600 STUMPS PER DAY

Works faster and easier than any other stump puller—has every modern improvement. Built of steel—same quality as we furnish to the U. S. Government. Write for new catalog. It's free. Don't buy any stump puller until you know all about the Zimmerman Mighty Monarch. We'll prove every claim we make.

ZIMMERMAN STEEL CO., Dept. WS ***Bettendorf, Iowa***

ROLLER FEED MILLS

GRIND A WAGON LOAD OF FEED FOR 10 CENTS.

THIS is the **Famous Howell Roller Mill** you have heard so much talk about. The new improved mill for the scientific grinding of grain. Old style Burr and Stone Mills are out of date. Thousands of them are being annually replaced by the Famous Howell Roller Mills. Grinds twice as fast as the best burr mill made. Does not heat the feed. Grinds Graham and Rye flour as well as feed. Has big capacity. Requires little power. No burrs or stones to wear out. Guaranteed to last a life time. Made in 13 sizes suitable for any size engine. Save one-half your time, gasolene and money by using a Howell Roller Mill. Write for catalog D.

R. R. HOWELL & CO., Migrs., Minneapolis, Minn.

CURRENT EVENTS

PRESIDENT WILSON left Washington last Thursday on his swing around the circle of the middle West. He went first to New York City, where he delivered the first of a series of addresses urging greater national preparedness for war. After that he headed west, stops being planned at Pittsburgh, Cleveland, Milwaukee, Chicago, Des Moines, Topeka, Kansas City and St. Louis. Addresses were planned for each of these cities, practically all of them expressing the president's views on this same subject: Preparedness for war by means of a vastly increased army and navy. The president is staking much upon his present trip, not the least being the possibilities of his own renomination and re-election. He holds to a middle course on preparedness, commending the plans of the secretary of war for a larger standing army and for a new continental army of 300,000 young men, to serve three months each year for three years and then hold themselves in readiness to be called to the colors at any time in the future. He is not in favor of universal military service, however, and thus finds himself opposed to both Roosevelt, who favors universal service, and Bryan, who opposes any extension of our defenses whatever. The president devoted the greater part of last week preparing his addresses, which bid fair to be notable in our national history. It is practically the first time a president has come to the people, in their homes, urging any great idea of an absolutely non-partisan character and represents a new idea in our governmental relations. President Wilson plans another and similar trip later on, which shall take him through the South, as far west as Denver.

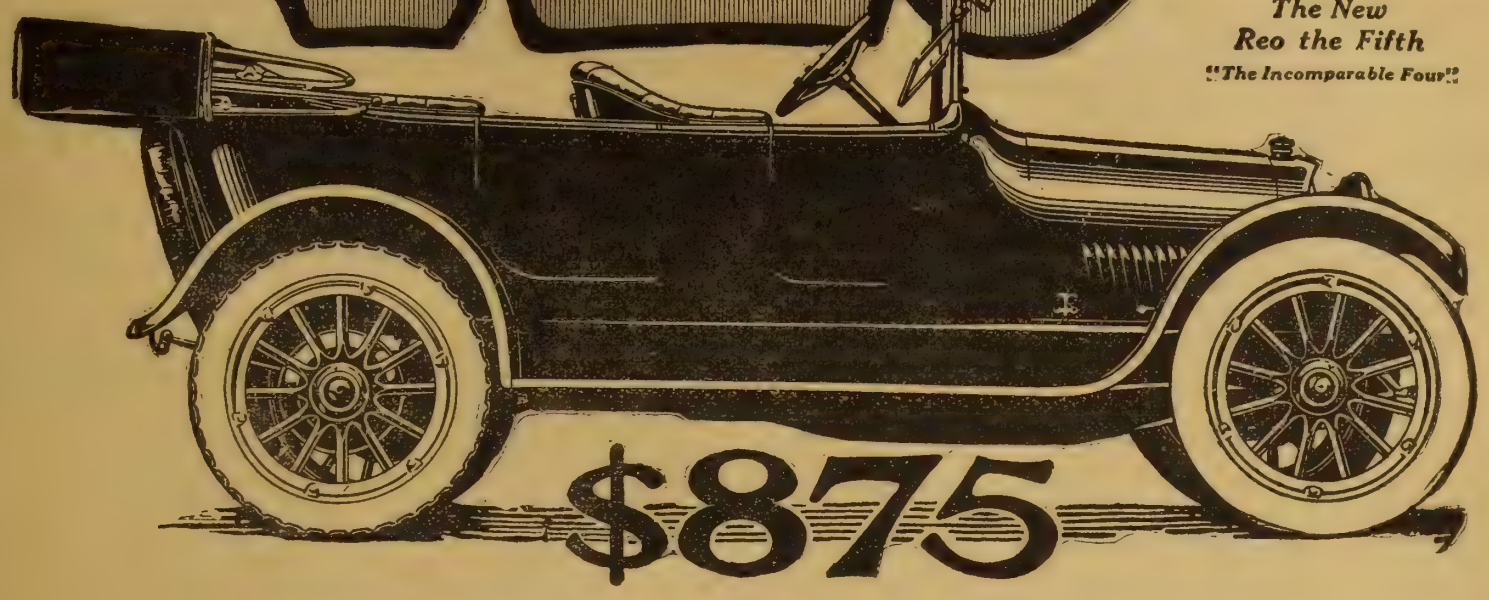
BY UNANIMOUS vote the United States Supreme Court has declared the federal income tax to be constitutional. As a result, leaders in congress predict that it is only a question of time until a definite movement is put on foot to levy more heavily on the revenues from great private fortunes for some of the millions the government must raise to carry out the army and navy increases. It is not likely that smaller incomes will be levied more heavily upon at first, but the larger ones are almost sure to suffer. "The supreme court's decision has absolutely unfettered the income tax as a source of revenue," said Representative Hull, of Tennessee, author of the law. "All doubt is removed and congress is left much freer to act. I believe congress will take advantage of the opportunity to amend the law materially. Without any unusual or unjust charges it can be made to yield $185,000,000 to $195,000,000 a year, as against $85,000,000 or $90,000,000 at present." Proposals are pending in congress to tax incomes of more than $1,000,000 a year as high as 50 per cent.

"FEAR God and take your own part," was the theme of a stirring address delivered by Theodore Roosevelt last week. He took occasion to denounce the proposed continental army plan (by which 300,000 men are to be enlisted, to serve three months each year for three years and then hold themselves ready for future service if needed) and to oppose a large regular army, but advocated universal military service, starting in the public schools at the age of sixteen, with four or six months actual service in the field, with the colors, between the ages of eighteen and twenty-one. He pleaded for a larger navy and opposed Senator Cummins' views on exclusive governmental ownership and operation of munition factories, saying: "We should at once begin governmental encouragement and control of our munition plants. To make war on them is to make war on the United States; and those doing so should be treated accordingly and all who encourage them should be treated accordingly. The existing plants should be encouraged in every legitimate way, and provisions made to encourage this continuance after the war. But it is most unfortunate that they are situated so near the seacoast. The establishment of munition plants further inland should be in every way encouraged and promoted. Pittsburgh is as far east as any plant should by rights be placed." Colonel Roosevelt declared he was in favor of the deportation of disloyal immigrants to their native lands. He praised Germany, in particular, for its military efficiency and its national cohesion. The speech was the most notable public utterance of the former president for some months and shows him opposed to President Wilson's preparedness plan, but favoring even a greater degree of national readiness for war than the president himself favors.

LITTLE has been given to the public concerning any of the campaigns of the European war in the last week. The report that Montenegro had accepted the peace terms granted it by Austria was emphatically denied and at last reports Montenegro was still allied against the Germans and Austrians, but practically all of its territory was in the possession of the enemy, the king and queen having fled, first to Italy and then to France, and the remnant of the army having crossed over into Albania, where it must fight hostile tribes. The Germans and their allies are now in possession of practically all of Belgium, Serbia and Montenegro and the most valuable part of France, while not a foot of German territory, except the colonial possessions, is occupied by the enemy. At the same time, the allies continue to claim that with the coming of spring they will be able to reverse the tables, and, with re-enforcements and plenty of munition, will be able to push the invaders back and gain the upper hand for the first time in the war. The British are said to have been defeated by the Turks in Asia, but no details are forthcoming. The result of the anxiously awaited debate in the British parliament on the blockade question is that the British government adheres to its existing policy. A resolution that the entire over-oceanic traffic with Germany should be prevented by a blockade, was talked out and the subject dropped, thus leaving the position exactly as before the debate, except that parliament seemed more converted to the government policy.

ENDORSEMENT of Secretary Garrison's efforts toward enlargement of the nation's military forces was voted by the National Security League in session at Washington last week, practically every state being represented. The plan of the present secretary of war was approved by two of his predecessors, Elihu Root and Henry L. Stimson, both of whom had held the war portfolio under republican presidents. George W. Wickersham, attorney-general in President Taft's cabinet, went even further than some of his league associates and advocated universal military service and immediate repeal of the law under which the national guard would be called into service in advance of volunteers. The only vote against the military preparedness program was cast by a delegate who said he represented the governor of Indiana. Aside from his protest the resolutions were adopted unanimously. Universal military service was likewise advocated before the league by Senator Chamberlain, of Oregon, chairman of the senate military affairs committee. Recognizing that the people were not ready for such a step, however, the senator said Secretary Garrison's continental army plan might be utilized to provide the force which the country must have to guarantee its security as a world power, protect the Panama canal and be ready to repel possible aggression from either Europe or Japan. Senator Chamberlain said among other things: "There is not a country in Europe that feels kindly toward us today and we know it."

REO



This Is Reo Year

EVERYTHING POINTS to that—everything indicates not only that the coming year will be the greatest Reo has ever known, but that the Reo policy and product will exert a greater influence on the automobile industry than ever before.

ALREADY YOU'VE NOTICED the tendency to emulate Reo in many features of design and construction—the "Sheerline" body of the New Reo Six is the acknowledged fashion plate, while Reo cantilever springs, Reo control and countless other mechanical features are being imitated as nearly as may be.

BUT AS THE YEAR PASSES you'll see more evidence of Reo influence on the trade generally.

FOR EXAMPLE, there's a greater divergence of engineering ideas this year than ever before. There's more types of motors and of cars—and no one dominant type.

OUT OF THAT CONFUSION—that babel of tongues arguing about and disputing over countless new and radical ideas—will come the decision that most or all of them are only engineering fallacies.

REO HAS BEEN CRITICISED for what some term our ultra-conservatism.

WE DON'T MIND—that has been the chief factor in the splendid Reo success. We don't change easily or often so we make less mistakes than others.

WE DON'T EXPLOIT our friends—so we keep them. We hold as sacred the confidence of Reo buyers—and as a result, this industry knows nothing that quite equals the loyalty of the Reo clientele.

AND SO WE SAY that this year of radicalism; this year of wild experimenting; this year of confusion will prove to be the Reo Year—because it will vindicate as no other year ever has, the Reo policy.

IF YOU ARE of an inventive or an adventurous turn, this is a great year to gratify your propensity for experimenting.

BUT IF YOU ARE one of those more serious minded persons who want value for your every dollar; who buy an automobile for service, not for the stunts it will perform:—

AND ABOVE ALL if you'd be certain when you draw your check that you are getting the best there is to be had in Simon pure automobile value and the lowest in maintenance cost—then come along with us—for this is Reo Year.

Reo Motor Car Company, Lansing, Michigan

117-(c)

Twenty-fifth Dairy Anniversary.

Farmers' Week This Year Will Be So Arranged as to Emphasize the State's Wonderful Progress in Dairy Industry.

EACH year in connection with farmers' week at the college of agriculture at Madison emphasis is laid upon some particular line of farming. This year dairying will feature the course during the second week in February, this being the twenty-fifth anniversary of the discovery of the Babcock test which has had so much to do with dairy development. It is also the twenty-fifth anniversary of the Wisconsin dairy school and the quarter centennial of the organization of the state dairy and food commission.

During this quarter of a century Wisconsin has advanced from the rank of seventh to first in dairying in the United States. It is appropriate that farmers of this state should, at this time, mark the advances which have been accomplished during the last twenty-five years.

Many of our present dairymen remember distinctly the situation twenty-five years ago—the difficulty they were having in building up their herds; the fight which the creameries and the cheese factories were having against the milk adulterators; the filled cheese fraud and the oleomargarine mixers. So it was when Dr. S. M. Babcock, of the Wisconsin College, gave his butter fat test to the world and the food and dairy commission was created that the means alone can decide. In the hope that it may benefit some who are striving to improve their stock and enable creameries to avoid the evils of the present system the test is given to the public.

The Wisconsin Farmer files of that time contain columns of matter relative to the test and it was estimated that this discovery, which was not patented and which Dr. Babcock gave to the public, was worth $100,000 to him. Time has certainly proved it worth many times $100,000, and had Dr. Babcock patented his test he certainly would have been rated a millionaire today.

The first machine was manufactured by Cornish, Curtiss & Greene, of Ft. Atkinson, and later by F. B. Fargo & Company, at Lake Mills, and by A. J. Decker, at Fond du Lac. It was first shown at the Wisconsin State Fair in the fall of 1890. Four models were exhibited—one by each of the above four firms and the original model perfected by Dr. Babcock, which is still in existence today and stands in the dairy school building at Madison.

Then began the campaign throughout the farm and dairy press for the use of the test, and The Wisconsin Farmer is pleased to note at this time the support it gave them in encouraging universal use of the test. Our files show hundreds of articles and editorials explaining the Babcock

DR. STEPHEN M. BABCOCK AND FORMER DEAN W. A. HENRY. TAKEN IN FLORIDA.

for improving these conditions were provided.

The Wisconsin Dairymen's Association, which was in existence at that time, the Wisconsin Buttermakers' Association, the Wisconsin Cheesemakers' Association and the various live stock breeders' associations have contributed much during this quarter of a century to Wisconsin's dairy success and these, with all other organizations which were working to the same end, will share in the celebration of "Twenty-five Years of Dairying" during farmers' week.

The Babcock test has stood through time and is essentially in every respect the same it was when Dr. Babcock gave it to the world a quarter of a century ago. Even the markings on the test tubes remain unchanged and so well did he build that nothing of greater value to dairying has been developed to this day. The test uncovered that one thing which the dairymen did not know and undoubtedly has done more toward the improvement of dairy herds than anything else. Prior to the discovery of this test there were two tests on the market—one known as Short's method, which was also developed at the Wisconsin College and the other the Patrick method, which came from Iowa.

That Dr. Babcock, who completed his work in 1890, built better than he knew at that time is indicated by this paragraph taken from his story of the discovery which appeared in The Wisconsin Farmer in the issue of August 15, 1890, the day that Dr. Babcock announced his discovery of a means to accurately determine the amount of fat in milk, to the world:

Whether this test will find a place . . . those already introduced time test and in fighting the conditions which have been largely overcome through the test and which has enabled Wisconsin to become the leading dairy center of the nation. On March 7, 1891, The Wisconsin Farmer contained this editorial:

The prudent dairyman will have a Babcock tester and a pair of scales he can depend upon so that by weighing and testing the cows' milk he can tell how much he is getting from each.

About the time the Babcock test was given to the public the dairy school was founded by Dr. Babcock and Dean W. A. Henry. This was the first school in America to attempt to give a definite course in the instruction in the science and art of dairy manufacture. Its first home was an old residence, and certainly the hundreds of buttermakers and cheesemakers who have taken the course there have been instrumental to a large degree in putting quality into our dairy products.

The food and dairy commission was created April 16, 1889, with H. C. Thom, H. K. Loomis and Prof. F. G. Short, who developed the Short method of testing, as commissioners.

All was not easy sailing for the commission, the maintenance of which during the last quarter of a century has done much towards improving dairy conditions. That this fight was a hard one is indicated by the following editorial defending the commission in The Wisconsin Farmer, issue of February 14, 1891:

It is a fight for life with them (meaning the oleo mixers; adulterators and filled cheese makers) but in an unjust cause. It will be a shame and a disgrace to the state if they gain a victory.

Wisconsin, it is thus evident, has not attained its enviable reputation as a dairy state, without a struggle. The press at that time was filled with advice on herd improvement, just as it is today, despite the wonderful advancement. Strenuous efforts were being made to get farmers into dairying and the following points for encouragement by H. C. Adams, which were published in The Wisconsin Farmer, May 2, 1891, are more or less true and applicable today:

Points for encouragement for the small dairyman.

1. In the fact that he can do his own work.
2. In the fact that the best dairy breeds are constantly increasing the maximum limit of butter production.
3. Because buyers are becoming more critical and better able to pay for what they want.
4. Because new machinery and new methods are diminishing the cost of each pound of feed and increasing the butter production of each acre of land.
5. Because his income is certain and his investment sure.

During the twenty-five years which has lapsed since the Babcock test was given to the public it must be borne in mind that Wisconsin has advanced steadily in dairying.

The most reliable statistics available as to that time shows that Wisconsin had only 792,600 milk cows in 1890, while in 1916 the total was more than 1,600,000. This is a gain of almost a million in twenty years. It was then estimated Wisconsin produced 60,000,000 pounds of cheese annually while conservative estimates are that the cheese produced in 1915 was 200,000,000 pounds or about 55 per cent of cheese made in America.

The government census of 1890 shows that 303,700,000 gallons of milk were produced on the farms and 458,320,000 gallons in 1909, the latest figures available. The 1909 statistics census showed 1,474,500 cows.

Many things have aided in making Wisconsin the leading dairy state. The King system of ventilation, which was the discovery of a Wisconsin man, has had to do with making our cow homes more comfortable and sanitary; the nearness to markets, Wisconsin having 20,000,000 persons within a night's ride, ideal climate, fine pastures, etc., all lending a helping hand.

Camels are fit to work at five years of age, but their strength begins to decline at twenty-five, although they usually live to be forty.

A TRACTOR ON EVERY FARM

Keep fewer horses. Let the Eagle Tractor do your plowing easier, quicker, cheaper—and you'll need less hired help. Then when you require Belt Power the **Eagle Gas Tractor** will be right on the job. It is the famous Eagle two-cylinder engine built for tractor service.

In the **Eagle Tractor** you get superior engine qualities—3-bearing crank shaft---cylinders cast in pairs---valve-in head action which gives more power and cleaner combustion for both tractor and belt work. You get **compactness** which specially fits it for small farm work.

Why buy for tractor work alone? Why buy a portable engine? You can get **both** in the **Eagle Gas Tractor**. Why do without a tractor, when you can get one built to fit Wisconsin farm conditions at a reasonable price—and save money by using it?

Every **Eagle Tractor** has four wheels with two drivers, also radiator, pump and fan, sliding gear shift and four block clutch applied at rim of pulley. High tension magneto with impulse starter does away with batteries.
Write for full description and prices.

Eagle Mfg. Co. 622 Winnebago St. Appleton, Wis.

Use It For Everything

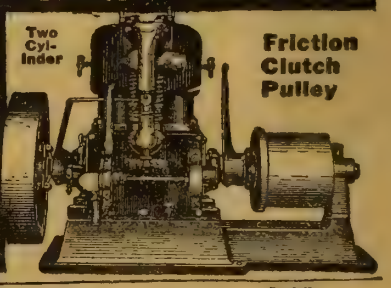
4 H.P.—190 lbs.

The 4 H. P. Cushman Handy Truck Outfit is the most useful outfit ever built for farm work. The engine weighs only 190 lbs., and the entire outfit only 375 lbs. A child can pull it around from job to job.
Besides doing all the farm and household power jobs, this 4 H. P. Cushman may be lifted from truck and hung on rear of binder during harvest to save horses and save the crop.

Light Weight
Cushman Engines

Built for farmers who need an engine to do many jobs in many places instead of one job in one place. Throttle Governed, with Schebler Carburetor. Run very quietly and steadily—not with violent explosions and fast and slow speeds like old-style heavy-weights. Engine Book free.
CUSHMAN MOTOR WORKS
855 N. 21st Street Lincoln, Nebraska

8 H.P.—320 lbs.



HOME MADE Concrete Mixer PLANS FREE

Send me your name and I'll send you, absolutely free, blue-print plans and complete instructions for building a practical, thoroughly-proven home-made concrete mixer. Hundreds have used my plans successfully. So can you.
S. M. CO., Box 3393, Nehawka, Neb.

Stop Egg and Feather Eating.

Some Things That Will Prevent It--By J. G. Halpin and J. B. Hayes, of Wisconsin College of Agriculture.

THE profits will be small if you keep hens that eat their eggs. This vice often exists for a long time in a flock before it is discovered. By the time it is found, it is probable that many of the hens have formed the habit. Whoever gathers the eggs should watch for the slightest indication of eggs having been broken in the nest.

If an egg has been eaten, the litter in the nest will be moist and will need replacing at once with clean, dry straw or shavings. The yolk of the broken egg will often be smeared on the feathers about the head of the guilty hen. This hen must be re-removed from the flock before others learn the habit. It is well to confine, for a day or two, a suspected hen so as to make sure that the egg was not accidentally broken and eaten.

Egg eating usually starts from an egg accidentally being broken in the nest, or from hens laying soft-shelled eggs. In some cases where hens are not well supplied with shell-forming material, the habit may be started from feeding egg shells that have not been crushed before feeding. Many flocks, too, will break and eat eggs that they see other hens lay on the floor, but will not interfere with eggs laid in the nests. At other times, hens learn to eat eggs because they are too closely confined, or because they are fed a ration lacking in egg-forming material. In such a case, the hen is especially greedy for the contents of the egg. Sometimes the lack of shell material is the cause. The hens often break the eggs, eat the shells, leaving the rest of the egg. In such a case the feeding of oyster shell and green bone will help to correct the trouble.

Whenever the trouble is noticed in the flock it is advisable to change the ration, give more range, or do whatever seems to be needed to correct conditions. If the trouble is not general, but confined to one or two hens, watch for them and use them on the table unless they are valuable for breeding purposes. If they are valuable for breeding cut the tip end of their beaks, removing thin slices until you note that blood will follow if more is removed. This makes the beak so blunt that the hen cannot readily break the egg, and also makes the beak tender. Occasionally a hen has the habit so fixed that even this treatment will not help. At the experiment station success has not resulted from the feeding of eggs containing pepper or other irritants, such as are frequently recommended.

To prevent egg eating, feed a well-balanced ration and give access to oyster shells. Keep all nests well littered so that eggs are not likely to be broken. Induce the hens to take plenty of exercise by feeding all grain in a deep litter of straw, whenever the flock is confined to the house. Provide darkened nests, so that the hens are not likely to see that an egg has been broken, and so that hens will not be likely to frequent the nest except when ready to lay. Gather the eggs frequently. If the eggs are allowed to accumulate in the nests the danger from breakage is greatly increased.

Feather eating is one of the worst habits of chickens and is often attended with loss. Fowls acquire this habit in three ways: First, from having nothing to do; second, from being fed a poorly-balanced ration; and third, from eating feathers smeared with blood plucked from table poultry.

This habit is most often seen in flocks that are closely confined. In some cases the hen that is attacked does not resist and the outer ends of the feathers are removed. At other times the entire feather is pulled out, especially if the hen that is attacked tries to get away. Both hens' pulling usually results in the removal of the feather.

Most feather eaters at first pull the feathers from the rump or the neck. If "pin" feathers are removed or the muscles at the base of the feather become torn, bleeding follows and the other hens in the flock, becoming cannibals, kill the hen unless she is removed. This trouble not infrequently develops among brooder chicks, causing severe losses.

Some hens seem to develop feather picking even when kept under good conditions, and unless valuable for breeding purposes, should be killed. If the hen is valuable, temporary relief may be had by trimming the beak so that the mouth parts cannot be shut close enough to grip a feather. At the experiment station three years ago a hen that had already learned the habit was kept from doing damage by trimming her beak once a month during the winter.

Where the trouble seems to be general in the flock, relief can sometimes be had by hanging pieces of tough, lean meat in the pen and letting the hens pick at it. This gives them something to do, which is essential. At other times the worst offenders can be removed. These are usually the ones that have been damaged the least. All grain feed should be fed in a deep, dry litter and as much range as possible given. If the flock still persists in feather eating it is avisable to dispose of the entire flock. Where the flock persists in picking at only a small area, barbadoes aloes can be smeared on the feathers with good results.

It has been noticed that many times birds on exhibition in the show room develop this vice, but it is usually temporarily relieved by heavy feeding on bologna sausage. The trouble usually stops as soon as the birds are released. Since all vices are likely to be the result of idleness, it is important to keep the flock busy.

During the winter hens frequently attack the male's comb, picking at it gently at first until the blood starts, when other hens join in and the comb is soon ruined. This often happens if the comb has been frosted. Sometimes the trouble will spread, the hens attacking other hens in the flock, sometimes killing them. This is usually the result of idleness and can only be treated by removing the injured bird. Do everything possible to keep the flock busy and contented. The suspending of strips of lean meat or vegetables far enough above the floor to force the fowls to jump for it, or the feeding of grain in a deep litter, are recommended as remedies.

The Wisconsin Guide Sign Association has taken up the work of marketing the roads in La Crosse county, under the guide-board law. This association established headquarters in Milwaukee at the Wisconsin Hotel and Bart J. Ruddle is in charge. The plan is to carry the campaign into all the counties of the state.

Uncle Sam made $2,500,000 last year from the sale of wood from the government forests.

When Detroit, the city

that produces more than three-fourths of the cars manufactured in the United States, shows by official figures for the entire year of 1915 MORE Studebakers in use on Detroit streets than any other car selling at more than $500

—what surer judgment can *you* follow in buying a car?

Think for a minute—think what that Studebaker Leadership in Detroit means to YOU. If a friend of yours has a car, you'd take his advice on buying a car in a minute—figure in your own mind that he ought to KNOW. Here's a whole city that KNOWS cars—and knows them better than any other city on the face of the earth. For Detroit's BIG industry is making cars. And so many people in Detroit are either directly engaged in the industry or else come into daily touch with others who are, that knowledge of cars is far more general and EXACT than in any other community.

And so when Detroit makes Studebaker its own Preference in cars—no man can overlook that judgment, whether he's running a farm in Illinois, a ranch in Colorado or a fruit orchard in California. For it means that in the judgment of the city that knows cars BEST, Studebaker gives the top VALUE of the market.

See the Car that Detroit PREFERS. See this new FORTY Horse Power, SEVEN passenger, SERIES 17 Studebaker at $845—the GREAT 4-cylinder Value of the year.

SERIES 17 FOUR
40 horse power
7 passenger
$845

Four Cylinder Models	
Touring Car, 7-passenger	$ 845
Roadster, 3-passenger	825
Landau-Roadster, 3-pass.	1145
Six Cylinder Models	
Touring Car, 7-passenger	$1050
Roadster, 3-passenger	1025
Landau-Roadster 3-pass.	1350
Coupe, 4-passenger	1600
Sedan, 7-passenger	1675
Limousine, 7-passenger	2500
Half-Ton Commercial Cars	
Panel Delivery Car	$875
Express Body	850
Station and Baggage Wagon	875
One-Ton Commercial Trucks	
Open Express, complete	$1200
Stake Body, complete	1250
Bus, 16-pass., full equipment	1400

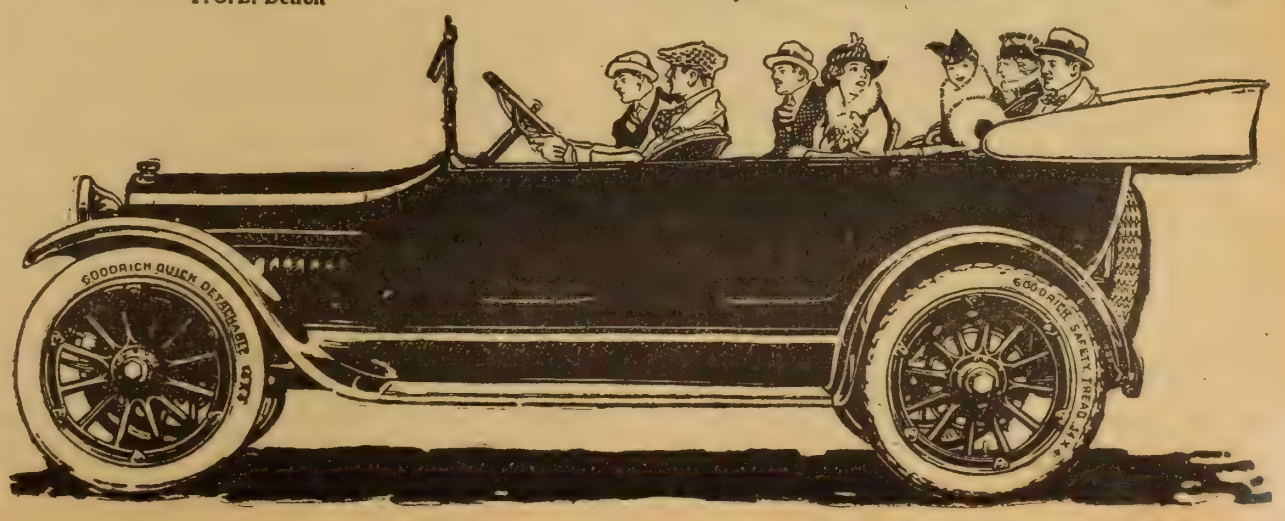
F. O. B. Detroit

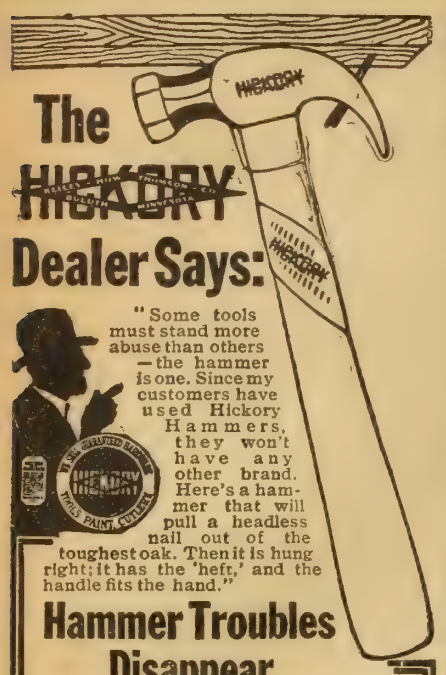
STUDEBAKER

South Bend, Ind. Detroit, Mich. Walkerville, Ont.

Address all correspondence to Detroit, Dept. F. 13

More than 214,000 Studebaker Cars now in use





The HICKORY Dealer Says:

"Some tools must stand more abuse than others—the hammer is one. Since my customers have used Hickory Hammers, they won't have any other brand. Here's a hammer that will pull a headless nail out of the toughest oak. Then it is hung right; it has the 'heft,' and the handle fits the hand."

Hammer Troubles Disappear

the minute you get a Hickory. Made of drop forged steel, tempered individually and toughened. Like all Hickory tools it is guaranteed to give satisfaction or you get a new tool.

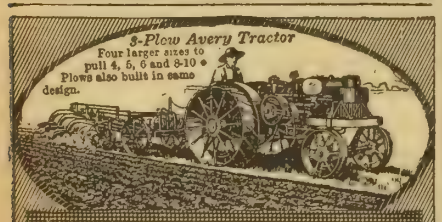
Look for the Hickory Store Sign in Your Town

It is the sign of *guaranteed* tools, cutlery, hardware, paints, varnishes, stoves, horse collars and harness, etc.

Send for free books on any line of Hickory Guaranteed Goods.

Address

Kelley-How-Thomson Company
Duluth, Minn.



Six Reasons for Avery Tractor Success

THERE are more acres plowed by Avery Tractors and Plows than by any other make. These are some of the reasons why so many men are buying Avery Outfits:

First—Special sliding frame which makes possible the elimination of the intermediate gear, shaft and boxings. An Avery Tractor has the least gears, the least shafting and the least bearings of any two-speed, double-drive tractors built — which means more power and longer life.
Second—Two rear drive wheels and two speeds—a big advantage over single-drive and one-speed tractors.
Third—Slow-speed, heavy-duty opposed motors—not high-speed, light automobile motors.
Fourth—Crankshafts are one-half the diameter of the cylinder or more. There has never been a broken Avery crankshaft.
Fifth—Motors have renewable inner cylinder walls. These parts, which are subject to the most wear, can be replaced without buying entire new cylinders.
Sixth—No pumps and fans.

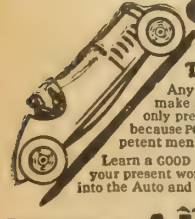
Complete Outfit—Tractor, Plow and Thresher—Built and Backed by One Company
A company with a large factory and many branch houses, which insure prompt and permanent service. Avery Plows in all sizes from 3 to 10 bottom. "Yellow-Fellow" Separators in sizes to fit each size tractor.

Prices—3-plow Tractor, $760 cash; 4-plow, $1120 cash; 5-plow, $1680; 6-plow, $2145; 8-10-plow, $2475. Special small size tractor, $295.

Write for new 1916 Avery Catalog

Avery Company, 1314 Iowa St., Peoria, Ill.
Ask for address of nearest Branch House or Jobber

AVERY
One Man Outfits 6 Sizes Fit Any Size Farm



GOOD MEN WANTED

To learn the Auto business.

Any capable, ambitious young man can make a success for himself, and if you will only prepare yourself YOU WILL GET WORK, because POSITIONS ARE OPEN, WAITING for competent men to do Auto and Electric work.

Learn a GOOD BUSINESS. Are you dissatisfied with your present work? Thousands of new men will go into the Auto and Electric Starter business within the coming year. YOU CAN, TOO. Do you want to?

The Auto business offers opportunities and promotion to high pay.

American AUTO College

You learn here by practical work in our large shops. We furnish TOOLS.

$900 to $3000 Per Year Salary or Business Profits

Big Electric Starter and Tractor course Free now with regular Auto course. FREE Catalog Now.

American Auto College, 309 Auto Bldg., Omaha, Neb.

Ripening a 1915 Corn Crop.

Practical Experience of Noyes Raessler, a Rock County, Wisconsin, Grower of Golden Glow Wisconsin No. 12 Corn.

AS MY 1915 crop of Golden Glow was handled no different from that of any other season I will briefly outline our system. This involves nothing which cannot be carried on by the average farmer to a very good advantage. We must bear in mind that corn as we know it today is a comparatively new crop, very highly developed by plant breeders for production of grain. It is said that a good stalk of corn will produce an ear equal to its own weight. If exposed to unfavorable conditions the ear is the first to suffer.

How often have we noticed that crib corn, although apparently of good germination, failed to produce a satisfactory yield of corn, while the stalk appeared to be of fair size. The exposure to dampness and freezing weakened the vitality of that seed and the ear, being the most highly developed, was the first to suffer.

What happens to the dairy cow when we turn her out on a cold winter day? The milk flow is reduced very materially. Her milking properties were abnormally developed and are the first to suffer under favorable conditions even though we may give her plenty of feed.

If we expect to improve our corn we must follow a definite means of controlling each seed ear. True, there is a certain amount of new seed corn in Wisconsin even this year, but the supply is very limited and cannot be expected to reach very far over the great area to be planted next spring. Only about 25,000 bushels has been reported and it will require something like 300,000 bushels of seed to supply the entire state.

I attribute my succees in ripening the past year's crop to three things: Good seed and thorough cultivation. This sounds simple enough, but in reality it means a man's job while it lasts.

Seven years ago I started breeding Golden Glow (Wisconsin No. 12) for high yield, early maturity and uniformity. This variety appealed to me because it seemed to mature over a very large territory and grew into popularity so rapidly—from Mississippi to northern Wisconsin it has found a permanent home with many farmers. My first step in the right direction was to start an ear-to-row breeding plot and after seven years I am more convinced than ever that this is the only sure means of breeding up seed corn.

Only the very best ears are selected for the ear plot. An equal number of hills are planted from each ear and in the fall it is a simple matter to compare yielding powers of those ears, also their trueness to type and the time of ripening. Those ears having the best breeding qualities are selected for the next year's ear plot after visiting a number of fairs in competition with other ears of the same variety.

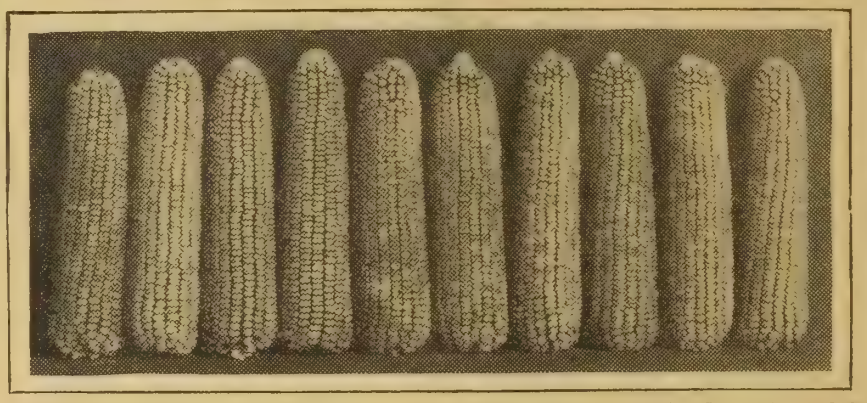
For the past four years the banner rows in our breeding plot were planted from prize winners only and each ear is planted in our fields unless it came from a parent which produced 100 bushels of shelled corn or more per acre in the breeding plot.

In our system of rotation we use clover every fourth year. After the first cutting of hay is taken off we begin to spread manure over the meadow, aiming to feed the second crop, only to plow it under when in full blossom. The field is then harrowed well and sown to winter rye, which acts as a cover crop during the fall and winter. In the early fall and winter another dressing of stable manure is applied to the rye and in the early spring the rye is plowed under for green manure. Immediately after the plowing the disk harrow is used to work up the sod as finely as possible. Again in a week or ten days the same thing is repeated. This may be termed a weed-killing process, as it destroys millions of tiny weeds before they have become troublesome. The first week in May the fine-tooth harrow completes the work of preparation.

Planting is begun May 10th, dropping three kernels to the hill in rows three feet six inches apart each way. A roller follows the planter firming the soil over each hill so that even if the planter happened to go a little too shallow in some places those hills will not be delayed in coming up.

We aim to harrow again twice before the corn is through the ground to keep the weeds in check.

As a rule from ten to fifteen days after planting the first cultivation is begun. No riding cultivator is allowed in our cornfields under any consideration. We start with an eight-shovel, two-horse walking sulky which straddles the row. One row to each cultivator has in our experience proven by far the best way to produce the bushels. Starting at a depth of three inches the cultivators are run more shallow each time through until about the first of July, when the sulky is replaced by a twelve-tooth one-horse cultivator. The latter is run at intervals of a week or ten days until the tassels appear. By this time the corn has been cultivated from eight to twelve times. To some this may look like a waste of labor, but we have kept the soil aerated, conserved the moisture and kept down the weeds thoroughly, even now the field is not laid by. The hoes are used freely from July until the last of August, cutting out all weeds which have escaped the cultivators and any suckers found robbing the soil of plant food which belongs to ear-bearing stalks are cut off close to the ground as soon as they are discovered.



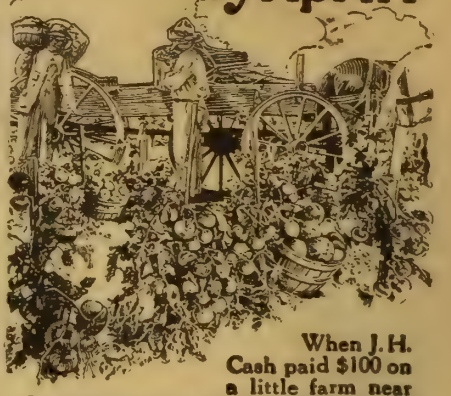
PRIZE-WINNING GOLDEN GLOW. ALL FROM ONE ROW IN THE EAR PLOT OF NOYES RAESSLER, ROCK COUNTY, WISCONSIN.

As our entire corn crop is pure bred and grown for seed we do our harvesting somewhat different from the ordinary way. In September as soon as the ears are fully matured we begin husking, one row at a time for each man. The ears are weighed, sorted and hung in the dry house by a good fire the same day they are picked. The binder cuts off the stover and when enough bundles accumulate the shocks are set up and tied firmly near the top. Our dry houses are provided with plenty of windows and ventilators so that a current of air is constantly passing through the buildings carrying off the moisture as fast as it leaves the corn. The secret of securing the very strongest seed, according to our best authorities, is first allowing the corn to mature; second, picking before frost, and, third, getting rid of the moisture as quickly as possible.

After filling our dry houses for four years we have never experienced any trouble in securing from 98 to 100 per cent germination whether the weather in the fall of the year is damp or dry.

At the end of six weeks' drying the seed corn is ready for testing and shipping. Most all of our seed corn is sold on the ear in crates holding one bushel each. The business farmer of today is willing to pay a fair price for seed in which he can see what he is getting, but he will hesitate at buying shelled corn which has lost its identity, as it does when removed from the ear.

A crop harvest by April 1st



When J. H. Cash paid $100 on a little farm near Camden, Ark. he had just $40 left—yet in three years he cleared his debts and bought 80 acres more. Its easy to understand why farmers along the

Cotton Belt Route in Arkansas & Texas

make headway so fast when you consider the soil and the season down there. When farmers up north are "drawing on the bank" for living expenses, Mr. Cash, and thousands of others in Arkansas and East Texas are cashing in on crops. Mr. Cash sells garden truck by April 1st; by the 15th he's marketing new potatoes, by May its strawberries and there's some crop to sell every month until Christmas. He's made five crops bringing $537 per acre in one season.

And the crops are not all truck or fruit. Corn, peanuts, clover, alfalfa, etc. yield big. Mr. Kapp, near Cash's place, makes 62 bu. of corn on his land. Mr. I. Z. Zimbrough of New Edinburg, Ark. makes 100 bu. of peanuts per acre, selling at $1 per bu. Rudy Stutter, of Stuttgart, Ark. says "I plant oats the last of September and in 15 years I've never lost a crop. Last year I threshed out 75 bu. per acre. Jacob Yoder, on the place adjoining mine made 90 bu. per acre." Near Texarkana, Tex. J. M. Champion shows how a farmer can make $1700 and $1800 a year net on twenty acres by taking advantage of the many crops per season which the long growing season allows.

Go where you will in Arkansas and East Texas you'll find farm opportunities even bigger than you've read about.

Two free books!

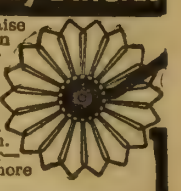
A farmer wrote them; and he knows what you want to know about a section new to you. They tell about the character and cost of lands, climate, crops raised, etc., and about schools, churches, towns, social conditions. Brimful of photograph pictures taken on the ground. Send me your name and address on a postal card today and get these free books now.

COTTON BELT ROUTE

E. W. LaBeaume, G. P. A.
1808 Railway Exchange Bldg., St. Louis, Mo.

STOP Covering Corn! Use Daisy Shields

Save time and labor and raise more corn and better corn with these famous revolving shields on your cultivator. Don't waste time and effort uncovering corn—Daisy Shields absolutely prevent clods from falling on the young corn. Enable you to plow faster—plow smaller corn—kill more weeds.



Fit Any Cultivator

Daisy Shields have shanks to fit any make of cultivator and can be adjusted to meet any conditions. They revolve like a wheel—cannot gather up trash and will not get out of adjustment. The fine dirt passes right through them and covers up weeds and grass—clods are thrown AWAY from the corn.

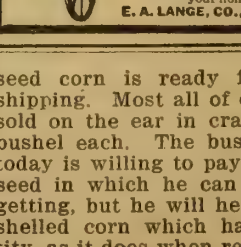
Old Way — New Way

Investigate these shields—best ever put on a cultivator. Write for folder and send your dealer's name. We'll send a pair for your inspection.

MUNSON MFG. CO.
118 E. COURT
WINTERSET
IOWA

Farmers or Farmers' Sons

Great Money Making Opportunity



Sell Lange's Extracts, Spices, Toilet Articles, Teas, Coffees, Remedies and Veterinary Specialties, direct from wagon to home. Long-established, well-known big line, fine profits. Steady work in a business all your own. You furnish horse or team, we supply rig on easy terms. Previous experience unnecessary—we train you in salesmanship. Make big money. Our contract beats all others. Exclusive territory near your home. Write us quick.

E. A. LANGE, CO., Dept. 3. DePere, Wis.

INSTITUTE AT POLAR.

At the Farmers' Institute at Polar, Langlade county, held January 13th and 14th, E. C. Jacobs acted as conductor. He was assisted by D. E. Bingham, of Sturgeon Bay, and County Representative F. G. Swoboda. Severe weather interfered materially with the attendance, but those who turned out were keenly interested.

Valuable information was brought out on clover silage. By request Assemblyman Ed Nordman discussed this topic. Mr. Nordman this year partly filled one of his silos with clover. The other was filled with corn. Some corn was also put on top of the clover in the second silo. At the beginning of the season Mr. Nordman started feeding the corn from the second silo. Because of favorable location near a lake, Mr. Nordman was one of the few farmers in the county to escape the destruction of the late August frosts so that his corn got fairly near to maturity before being finally nipped. Mr. Nordman noticed no change whatever in the milk flow from his cows in going from the corn to the clover. He is enthusiastic over the possibilities of clover and plans next year to grow very little corn on his farm, he figures he can grow as many tons of clover silage per acre in two cuttings as he can of corn. He also figures that the clover will not be so hard on his land as the corn and also that by growing clover he will do away with a lot of the washing which he experiences on corn land. Mr. Nordman favors a little timothy with the clover rather than having pure clover. The timothy being richer in carbohydrates helps materially in adding to the keeping qualities of the silage.

Other Langlade county farmers who this year tried clover for silage are very well satisfied with it.

Other topics discussed were the "Growing of Alfalfa," "Orchard and Small Fruits," "Barn Plans" and "Potato Growing."

WESTERN GUERNSEY MEETING.

The seventeenth annual meeting of the Western Guernsey Breeders' Association will be held at the Park Hotel, Madison, Wisconsin, February 10, 1916. Banquet will be served at the hotel at 12:30, plates $1. Business sessions will commence at 1:30 and beside the annual reports a business address will be made by W. E. Skinner, general manager of the National Dairy Show, on "Western Guernseys at the National This Year;" by Mr. W. L. Dexter, Kenosha, Wisconsin, on "The Guernsey Cow for Milk and Cream Trade," and by Mr. Will Forbes, Waterloo, Iowa, on "What the Show Ring Can Do to Develop the Guernsey Breed." As this date occurs during Farmers' Week at the University of Wisconsin and the jubilee banquet given to Dr. Babcock in honor of the twenty-fifth anniversary of the invention of the Babcock test, occurs on the evening of February 9th, we expect an unusually large number of breeders will be in attendance. All persons interested in the Guernsey breed are invited to attend and any wishing to attend the banquet will please notify the secretary in advance, Charles L. Hill, Rosendale, Wisconsin.

WISCONSIN HOLSTEIN MEETING.

The 1916 regular annual convention of Holstein-Friesian Breeders' Association of Wisconsin will be held at Watertown, Wis., on Wednesday and Thursday, March 1st-2d.

A banquet will be held on Wednesday evening at 7.30 o'clock and the regular program on the day following commencing at 10 o'clock a. m.

The local breeders and business men have pledged themselves to do all in their power to make the convention a success and will furnish the banquet on Wednesday evening free to the breeders who come to participate in it.

Arrangements for the program on March 2d are under way and this will be announced at a later time.

C. J. Schwider,
Secretary.

POTATOES BIG CASH CROP.

To the Editor:—Attention has been called to me for my activities in connection with the Lincoln county exhibit at the annual exhibition of the Wisconsin Potato Growers' Association, held at Marinette, Wisconsin, in November.

It is only in recent years that potatoes have been a big crop with us, but it is destined to be our big cash crop from now on. The acreage is increasing each year, and, what is better still, the quality of our potatoes is improving right along.

Five years ago many farmers, acting on the advice of Prof. J. G. Milward, turned their attention to standardizing the potato crop in their community. The results have been very gratifying. At the potato show held at Rhinelander in 1913, Lincoln county exhibited eleven varieties of potatoes. Every farmer exhibiting sent the variety that suited him the best. In getting together the exhibit for the Marinette show this year we could find but one kind of potatoes (Green Mountain) in sufficient quantity from which to make a selection. This means uniformity of variety at least. Now all that remains for our farmers to do is to sort closer and we shall be able to ship in car lots as fine potatoes as go into the market from any section.

As a seed-potato proposition our new soil produces stock that is clean, bright and practically free from disease. Co-operating with the Potato Growers' Association of Wisconsin and the University of Wisconsin, many of our fields have been certified by them, which enables us to offer to less fortunate sections seed that is true to type and with little or no disease.

From a county known a few years ago only as a lumber-producing section we are rapidly developing into one of the leading agricultural counties of the state.

Conditions and opportunities exist here today that make it an ideal place for a man to locate. Our land is productive and it is still cheap when compared with older farming communities. It is well watered, has good railroad facilities, good public roads, is close to the great markets and creameries and cheese factories are increasing each year. The agricultural development has just begun and if our exhibit at the Marinette Potato Show and our display of products at the state fair at Milwaukee attracted your attention where will we stand a few years hence?

Hall L. Brooks.
Lincoln Co., Wisconsin.

John Deere Implements

Van Brunt Drills and Seeders
With Adjustable Gate Force Feed

VAN Brunt Drills plant any small seed, alfalfa to bearded oats, peas or beans.

Amount sown per acre easily regulated merely by shifting feed gauge levers.

All the ground sown, because the Van Brunt adjustable gate force feed compels seed to leave hopper in even, continuous streams—no bunching or choking up—and an equal amount goes into each furrow.

An even stand of grain is secured, because pressure springs compel all the discs to cut furrows of equal depth, and the forward closed delivery places seed at bottom of these furrows.

Van Brunt Drills never clog up. Scrapers keep discs absolutely clean. The high grade discs have bearings that are guaranteed to last lifetime of drill.

Smooth running—each wheel drives half the feeds, equally distributing the work. A direct, double gear drive from the continuous axle.

Grass seeder attachment can be furnished which will drill or sow broadcast as desired.

Van Brunt Broadcast Seeders are just as positive in their operation as Van Brunt Drills.

Write us for free booklets describing Van Brunt Single or Double Disc Drills, or Broadcast Seeders.

John Deere Corn Planter
The Accurate "Natural Drop" Planter

ACCURATE—because it has the "Natural-Selection" drop—an improvement over all other methods.

Kernels do not have to be tipped on edge to enter the cells. Surface of hopper bottom and openings to seed cells are oblique, or sloping. The kernels naturally move toward and fill the cells.

A full—variable drop planter. Plants two, three or four kernels as desired—all you do to change number in the hill is to move foot lever.

Drilling distances varied, and change from hilling to drilling or back to hilling made just as easily.

All corn plates for this planter have 16 cells. Therefore, the same drilling distances are obtained with one plate as can be secured on other planters that require 8, 12 and 16 cell plates.

The gears are always in mesh and can be shifted at any time (even when in operation) to change drop or drilling distances.

Investigate the John Deere tip-over hoppers, quick detachable furrow openers, underhung reel and disc marker without rope.

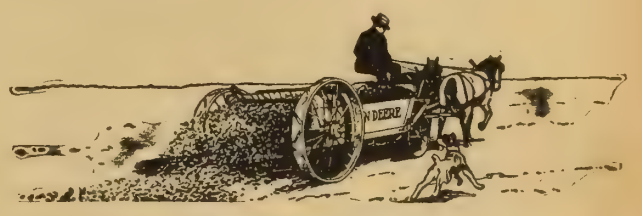
Write for free booklet, "More and Better Corn."

John Deere Disc Harrow
The Flexible Spring Pressure Disc

MODEL B—the only disc that cuts at even depth its entire width. It has a patented spring pressure lever. With this lever, pressure can be regulated at inner ends of gangs to cut out dead furrows or disc ridges without burying the harrow.

The Model "B" does not crowd toward the bottom on hillsides or in overlapping. The gangs are independent of each other and can be given the proper angle to work right under such conditions.

Write for free booklet, "Bigger Crops from Better Seed Beds."



John Deere Spreader
The Spreader with the Beater on the Axle

ONLY hip high to the top. Wheels out of way when loading. Mounting the beater on the axle is patented. Write for Spreader booklet.

Three exclusive John Deere Spreader features:

[1] Beater on the axle—nothing else like it. [1]

[2] Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching. [2]

[3] Ball Bearing Eccentric Apron Drive—requires no attention. Performs wonders in the working of the spreader. [3]

Dain System Side Rake
The Left Hand Rake

THE tool that is revolutionizing hay making. Left hand instead of right—follows the mower closely, places hay upon clean stubble and puts it in medium size windrows with bulk of leaves inside and majority of stems outside.

This means uniform curing and leaves don't dry up and fall off. They cure in the shade.

Hay is air-cured, not sun-scorched, retains its color, nutrition, feeding value and sells for more money.

Write for free booklet describing the Dain System of Air Curing Hay.

John Deere Dealers Everywhere

Better Farm Implements and How to Use Them

BOOK FREE—168 page reference book—tells all about a complete line of farm implements and how to adjust and use many of them. A practical encyclopedia of farm implements. Worth dollars. Describes and illustrates: Plows for Light Tractors; Steel and Chilled Walking and Riding Plows; Disc Plows; Cultivators; Spring Tooth and Spike Tooth Harrows; Lister Plows and Cultivators; Disc Harrows; Alfalfa and Beet Tools; Farm and Mountain Wagons; Teaming Gears; Manure Spreaders; Inside Cup and Portable Grain Elevators; Corn Shellers; Hay Loaders, Stackers, Sweep Rakes, Mowers, Self-Dump Sulky and Side Delivery Rakes; Hay Presses; Kaffir Headers; Grain Drills and Seeders; Grain Binders; Corn Binders; Gasoline Engines. This book sent free to every one who states what special implements he is interested in and asks for Package No. X-64.

John Deere, Moline, Illinois

In and Around Wisconsin

The Ellsworth Creamery in Pierce county has installed a pasteurizing machine. This company is also now using a starter for ripening the cream.

At a recent meeting of the Dodge County Fair Association, J. E. Malone, of Beaver Dam, was elected president; Martin Lueck, of Juneau, vice president; C. W. Harvey, of Beaver Dam, secretary, and H. B. Drake, of Beaver Dam, marshal. The division superintendents of live stock for the coming year will be Wm. Berigan, Beaver Dam, horses; J. Ferguson, Waupon, cattle; Geo. Madden, Fox Lake, swine; R. B. Davison, Waupon, sheep.

The Marathon County Agricultural Society held its annual meeting at Wausau last Thursday, the election of officers resulting as follows: President, G. A. Mills; secretary, John D. Christie; treasurer, A. H. Zimmerman; superintendent of speed, G. A. Mills. The secretary of the society is to receive a salary of $500 per year and the superintendent of speed $100, the same as last year. The dates for this year's fair, as decided at the meeting, are September 5th, 6th, 7th and 8th.

A recent report of the Farmers' Creamery at Black River Falls showed the average monthly price paid for butter fat for the year 1915, 30 cents. The cost of gathering 100 pounds of butter fat averaged $1.92, and the cost of gathering 100 pounds of cream, 48 cents. Each of these items are a trifle higher than last year. The creamery received 852,459 pounds of cream as compared to 914,158 for 1914. The total number of pounds of butter fat received in 1915 was 214,925, as compared to 223,505 for 1914. The total pounds of butter manufactured was 266,283, being approximately 10,000 pounds less than in 1914. The cost of manufacturing a pound of butter, including the cost from the farm to the car was $.0327 for 1915 and $.0323 in 1914. Rufus A. Jones is secretary and James E. Dimmick treasurer.

The annual meeting of the Excelsior Creamery Company at Baraboo was held recently and T. B. Towle, secretary and manager, furnished the following interesting statistics covering the past year:

Average number patrons, 416.
Total pounds cream received, 1,992,-530.
Average per cent of butter fat in cream, 24.4.
Total pounds of butter fat in cream, 485,310.
Pounds of butter fat used in making ice cream, 3,983.
Pounds butter fat made into butter, 482,326.
Pounds butter shipped, 504,009.
Pounds butter sold to patrons, 38,545.
Pounds butter sold in town, 73,488.
Total butter made, 616,002.
Pounds overrun, 133,676.
Average price received for butter per 100 pounds, $27.90.
Average price paid for butter fat, 31.25.
Received for buttermilk, $1,171.46.
Cash value of overrun, $37,296.60.
Total cost of manufacturing butter, $11,422.52.
Cost of making 100 pounds, of butter $1.85.
Cost of gathering cream above 1 cent per pound, $4,062.79.
Overrun returned to patrons, $15,-617.69.
Total cost of hauling cream, $9,033.30.
Average cost of hauling 100 pounds butter fat, $1.86.
Cash received for ice cream, $3,682.42.
Paid for butter fat, $151,973.10.
Total butter sold, $161,756.62.
Cash on hand, $4,721.164.

The report of the business done the past year shows a very substantial increase over that of previous years. The average patronage has increased 63, or nearly 18 per cent over last year, which was also an increase of 18 per cent over the year before. The amount of butter made shows an increase of 136,000 pounds or 28 per cent more than last year. The profits from the ice cream department are about double the year before. All of this goes to show that the co-operative plan is practical and can be made a success when all of those interested work in harmony and in the true co-operative spirit.

At the farm of H. C. Rogers near Oshkosh an oil lamp used in drying chickens set fire to a large hennery, suffocating 150 birds valued at from $5 to $50 apiece. Many of these birds had taken prizes in various poultry shows. The loss was complete.

Sam S. Johns, of Montfort, Grant county, Wisconsin, topped the Chicago market a little over a week ago with a car of lambs which brought $10.75 per hundred. This is the highest price for lambs sent out of the Montfort stockyards for a number of years.

The state of Wisconsin received over $7,000,000 from the federal government for improvement of highways under the Shackelford good roads bill which passed the lower house of congress by a vote of 281 to 81. The bill appropriates $25,000,000 for federal co-operation in road building.

Judge A. J. Phillip, of West Salem, one of the leading horticulturists in the state and a frequent contributor to magazines and farm journals, celebrated his eighty-second birthday by driving a thirty-seven-year-old horse to the neighboring village of Bangor where he visited Mrs. G. W. McKenzie, who is ninety-eight years of age. Judge Phillip well remembers the last United States war with Mexico, and is hale and hearty. Last winter he deliverd an address at the Minnesota State Agricultural College on apple raising, a form of agriculture in which he is considered an expert.

The Muscoda State Bank recently held an exhibit of twenty-one separate collections of home-grown corn. Prof. R. A. Moore, of the Wisconsin College of Agriculture, had a hard time judging the exhibits but finally awarded the Muscoda State Bank cup to John Sale. Considering the poor season last year the corn was exceptionally good. In order of excellence of product and exhibit the following seven exhibitors are worthy of mention: John Sale, No. 1; Orta Cornwall, No. 2; John Miller, No. 3; Emery Miller, No. 4; Oliver Sheppard, No. 5; C. B. Haskell, No. 6, and Joe Malter, No. 7. Every exhibit at the state bank received commendatory congratulations from Professor Moore for their product, the quality of all being a surprise to him.

According to A. W. Kalbus, statistician of the state department of agriculture, there were 55,992 silos in Wisconsin on January 1, 1916, against 47,165 on January 1, 1915, an increase of 19 per cent. The contents of the silos, figuring the average size 14x28, was 4,647,336 tons. Using the average value of $3 per ton the total value of the contents was $13,942,008. Sheboygan county takes first place in the number of silos with 2,772, against 2,625 in 1915. Manitowoc county is a close second with 2,712, against 2,643 in 1915, and Waukesha county comes third, with 2,662, and 2,530 in 1915. The following table shows counties leading in the number of silos:

	Jan. 1, '16	Jan. 1, '15
Sheboygan	2,722	2,625
Manitowoc	2,712	2,643
Waukesha	2,622	2,630
Walworth	1,996	1,783
Fond du Lac	1,877	1,645
Dane	1,812	1,561
Winnebago	1,233	1,138

North central and northern counties are showing gains in silo building. Barron has 765, against 613 a year ago; Marathon 626, against 347 a year ago, and Marinette 380, against 281 one year ago. Last year Manitowoc led the counties of the state.

Mr. Allen B. West, of Rock county, is conducting a strenuous campaign in the interest of better seed corn. At a recent farmers' meeting at which this matter was taken up samples of corn grown in the vicinity of Janesville were examined. The corn was tested. It was divided into ten lots and the following is the report on each lot of ten ears:

Lot A contained only two ears in which all six kernels showed strong; two had five strong and one weak, and one had five strong and one dead. The other five kernels varied, but none were good enough for planting.

Lot B contained three ears of strong germination, two with one dead and the other five too poor for planting.

C had three strong and three with five strong and one dead.

D had one strong with nine unfit for planting.

E had four strong with one with one dead.

F had six that showed no life and had one that gave five strong kernels and one weak.

G had three strong and one with five strong, one weak and two with five strong, one weak and two with five strong and two dead.

H had three strong, one with five strong and one dead.

I had six strong.

J had six strong also, with two that had five strong and one dead, and one with five strong and one weak.

K had eight kernels testing strong, the best lot of all.

New Credit Plan on Farm Merchandise.

ON page 2 the Hartman Company, of Chicago, are offering a number of special bargains on a new farm credit plan. You can order anything mentioned there or in any of their catalogs, and the goods will be shipped without a cent of cash payment. If after thirty days' use you do not find them satisfactory you can return them at their expense without its costing you anything, as they pay the freight both ways. If you do keep them you have three months' time after receiving them before making the first payment, with the balance paid in three, six or nine months longer, making a whole year's time for payment, without any interest. You can order direct from their advertisement with perfect security or else you can secure further information and price list by filling out the coupon attached to the advertisement, asking for whatever catalogs you desire and mail it to Hartman Co., 4055-57 La Salle St., Chicago, Ill., mentioning this paper, and they will be mailed you free at once.—Adv.

A Shaft-Drive Corn Planter.

THE reason that Janesville corn planters are so simple in construction, easy to handle and easy to keep in proper repair, is because their shaft drive saves a large number of parts usually found necessary. All that is needed to keep it in light running order is to grease the shaft drive once a season and it will always be in smooth working order. Any defective parts will be replaced at once at the makers' expense. Another feature of these machines is their sight feed. All these matters are fully explained and much additional information regarding Janesville plows, harrows and cultivators given in their book which will be sent you free if you will address Janesville Machine Co., 41 Center St., Janesville, Wis., and mention their advertisement on page 6.—Adv.

An Offer to Tomato Growers.

TOMATO growers will find much of value and interest in the 1916 catalog issued by the Jung Seed Co., who specialize on this delicious fruit and have many splendid varieties to offer in their new book. To every reader of this paper sending two cents in postage for their catalog this company will send free some seeds of the Jack Rose variety, which are said to be the earliest of all tomatoes. Patrons ordering from the Jung catalog are always happily surprised at receiving extra packages of seeds free, a policy which has done much to win this company its many friends. In writing them address Jung Seed Co., Dept. 4, Randolph, Wis., and kindly refer to their advertisement on page 24.—Adv.

A Million Evergreens Backed by Guarantee.

EARL FERRIS, head of the well-known Earl Ferris Nursery, Hampton, Iowa, has been called "Iowa's Evergreen Specialist" because he has been raising evergreens and selling them to Iowa farmers in great quantities for so many years and his trees have made a record to be proud of. They make the finest kind of a windbreak or lawn decoration. He has a million on hand this year which are backed by his reliable guarantee. You will find some interesting offers in his advertisement on page 24 after reading which you can secure more information by writing Earl Ferris Nursery, 265 Bridge St., Hampton, Iowa, and referring to this paper.—Adv.

Another Use For the Tractor.

Value of the Tractor as it May Be Used in Reclaiming Marsh Lands of Wisconsin--By F. M. White, of Madison.

IN CONSIDERING the farm tractor for reclamation work we ought to know the uses to which a tractor may be put in reclaiming marsh lands. These uses are:

1. Pulling a ditching machine.
2. Pulling small willows, old logs, and stumps and removing them from the field.
3. Pulling a grub breaker and ordinary plow.
4. Pulling a heavy roller to settle peaty soils.
5. Pulling heavy disks to pulverize the ground after breaking.
6. Pumping water during flood water periods.
7. For hauling tile.

The 3,000,000 acres of marsh land in Wisconsin are one-twelfth its total land area. The reclaiming of this land will add materially to the value of our agriculture. This low land from the drainage standpoint is similar in many respects to the Kankakee marshes and to the great flat area of central Illinois. These areas are among the most valuable farming land in this county. I can remember the big floating dredges which opened up a water way through Illinois, making available thousands of acres of the most fertile land in the world. Miles and miles of ditches from thirty to fifty feet wide had to be dug through this country before one could be reasonably sure that a summer rain would not wash out an entire crop. Now the land on either side of these ditches is as valuable as land two or three miles from them. Two hundred and fifty dollars is a good price for land, but in Illinois what might have been marsh land is now selling for this price.

Here in Wisconsin much of the land is very fertile. It is close to good markets and there is no reason why its value will not be increased many times when the land is thoroughly drained.

Reclaiming land in this day of machinery is easy compared with that of ten years ago. The gas engine is a source of power which can be applied to all kinds of work and it seems to be especially adapted as an aid in land reclamation. The farm tractor is the most recent development of a mechanical power suitable for farm work and it ought under the conditions first mentioned be a very practical method of decreasing the cost of reclaiming land.

Removing the water is only the first consideration in preparing a marsh soil for cultivated crops. Many tracts of low land present difficult problems even after the water table is lowered two and a half to three feet. Muck and peat soils are very apt to be springy even if there is no danger of miring down. Wet clay soils are soft and afford very insecure footing for horses. When the surface is dry it is difficult even for a man to walk over it on account of the springy nature of the surface. When dry a peaty soil might be compared with a straw pile. Most of us have had experience tramping around on straw. It's hard work. A horse walking on marsh of this character causes the soil to tremble so that it can be felt two rods away. Working a horse under such a condition is almost cruelty to animals. Some have tried to attach marsh shoes to the horse, which does, perhaps, give him a few more square inches of bearing surface. Even with this additional foot area the horse is at a decided disadvantage. It is true the horse may become partially accustomed to using marsh shoes and when there is danger of miring he will not become excited and struggle to free himself. However, it is dangerous at best to attempt to accustom a horse to work where there is danger of miring down. The struggle and strain that a horse is likely to make may result in his serious injury. Most anyone would welcome a mechanical power that will save horses from this danger.

Tile ditching is the feasible method of removing the underground water. The disinclination of good labor to ditch on marsh lands, or, in fact, to do ditching of any kind, makes it necessary to adapt mechanical power in ditching. A tractor is specially adapted to furnishing power for pulling most any type of ditching machine. The horse ditching machines require some six to eight horses. A tractor will furnish this amount of power easily. It can be kept going throughout the working day. It will require less man power to operate the entire outfit and it ought to go on the soil where horses would be impractical.

A tractor can travel on land when it is impossible to get on it with horses and at times even with men. A tractor weighs all the way from 3,000 to 30,000 pounds. The average weight of a draft horse is about 1,600 pounds and the average weight of a man is 180 pounds. A sixty-horse-power tractor weighing 24,000 pounds and equipped with what is known as a caterpillar wheel six feet four inches long and twenty-four inches wide has a pressure of about 5 to 6.4 pounds to the square inch. The same machine equipped with a thirty-inch track would have a pressure of 4.4 pounds per square inch. A wheel machine of about the same horse power with a sixty-nine inch wheel has a pressure of about seven pounds. A caterpillar machine weighing 6,000 pounds has 1,152 square inches of traction surface. This weight machine has a pressure on the ground of 4.3 pounds to the square inch. The horse has a pressure of about ten to twelve pounds and a man has a pressure of about six pounds. The wheel tractor of about twenty-five B. H. P. weighing about 7,500 pounds and having a weight of 5,600 pounds on the rear wheels has a pressure of about 4.8 pounds per square inch. This figure is based on a fifty-six inch wheel having a twenty-inch face and equipped with an eight-inch extension rim. Without this extension the pressure is 6.4 pounds. The actual pressure of these machines is less than that exerted by the horse. The pressure as given is not the governing factor in keeping a machine on top of the ground. When the machine is pulling a heavy load the pressure exerted is materially increased. The proper lug equipment has much to do with the "toe hold" which the tractor has on the soil.

The question of the tractor being able to travel on soft ground is not necessarily the deciding factor in the use of a mechanical power. The decision should be based upon what can actually be accomplished. Pulling small willows and clearing marsh land is a considerable part of the work in preparing marsh soil for cultivation. The root system of this type of soil is very shallow, and, therefore, little trouble need be experienced in pulling the small trees and shrubs found on many marsh soils. The tractor affords a power which is steady and on which severe strain will not have a serious effect. The strain of steady, long pulls on horses is serious.

A good many tracts of land are tamarack marshes and on them we find many old logs buried in the mud and many stumps which are easily pulled. Removing these is just the job for a tractor.

The use of a tractor as a power for plowing is almost ideal. A grub plow is designed especially for plowing in tough land full of roots and covered with small shrubs. The plow is thirty inches wide, but set to turn a furrow slice of twenty-four inches leaving the rest of the share to cut under the previous furrow and cut off any remaining roots. A heavy grub breaker, depending on the size of the tractor, is sufficiently strong to cut off small willows one-half inch to three-fourths inch in diameter and turn them under. A tractor will handle one, two or three of these twenty-four inch grub breakers, depending on the size of tractor, and turn the soil over in better shape than can be done with horses. It will be practically impossible to get enough horses together to do the same amount of work. Deep tilling disk plows may be used to advantage in some peaty soils. They require lots of power and in places where the condition of the ground is suitable very satisfactorily mix the top peat with the clay subsoil. Tractor plowing in marsh land has one advantage over many of our upland soils, there are no stones and no hills.

After turning the soil a good practice would be to roll the ground by attaching to the tractor a heavy concrete roller. This settles the soil rapidly and is a decided advantage in further pulverization and preparation of the soil for the seed bed. A good roller can be a homemade affair built of concrete. Concrete will stand the wear and can be made any desired weight and is very cheap. After rolling comes the pulverization of the ground by means of heavy disk harrows especially designed for tractor work. The disks are about one-third heavier than ordinary horse disk harrows. They are built tandem and can be weighted as desired for work to be done. These engine disks may be set to run straight when it makes a good subsurface packer. A disk should not only cut the ground up thoroughly but should pulverize any willows which had been turned under by the grub breaker. Under a heavy load it will require about a twenty-horse-power tractor. These machines are built in eight and ten-feet widths.

In most of our Wisconsin drainage districts it is necessary to provide some means of rapidly removing the water during flood periods. As the tractor will not be in use performing other operations mentioned throughout the year it can be kept busy by attaching it to the pump which will be necessary to take care of the water during heavy rains. This is a cheap source of power and will eliminate the expense of an extra engine.

"I've Fed SAL-VET 5 Years"

TRADE MARK REG. U.S. PAT. OFF.

"During the five years I have been feeding SAL-VET I have not lost a single hog. Just across the fence my neighbor lost dozens from cholera. SAL-VET also keeps my horses, goats and cattle in perfect condition." William J. Damrell, Shelbina, Mo.

Right now is the time to test SAL-VET. Your animals are on dry feed. They are not getting sufficient exercise. The tendency to constipation and indigestion is greatly increased. Under these conditions the deadly stomach and intestinal worms thrive best—get in their destructive work. Let your stock have free access to SAL-VET—my great worm destroyer and live stock conditioner. It will destroy these blood-sucking, disease-breeding pests. I'll prove it before you pay—let you test it 60 days on your own stock so that you can see the good results it produces.

SAL-VET Destroys Worms—Aids Digestion—Makes Greater Gains

SAL-VET is the medicated salt which contains no Antimony. It is the greatest worm destroyer ever prepared for farm animals. Just give your stock access to it; they'll **rid themselves of worms.** It requires no dosing—no drenching—no bother at all.

Send No Money-Just the Coupon

Just fill out the coupon—tell how many heads of stock you have; I will supply you enough to last all your stock 60 days; you pay the freight charges when it arrives and feed it according to directions. If SAL-VET does not do what I claim and you make a specific report in 60 days, I'll cancel the charge; you won't owe me a penny.

SIDNEY R. FEIL, President
The Feil Mfg. Co., Chemists
Dept. 137, Cleveland, Ohio

PRICES

Ea. 40 lb. pkg.	$ 2.25
Ea. 100 lb. pkg.	5.00
Ea. 200 lb. pkg.	9.00
Ea. 300 lb. pkg.	13.00
500 lbs.	21.12

Extra discounts in larger quantities.
Dealers in the far West and South are obliged to charge a little more, on account of the extra freight charges.
No orders filled for less than 40 lbs. on this 60 days trial offer. Shipments for 60 days trial are based on 1 lb. of SAL-VET for each sheep or hog and 4 lbs. for each horse or head of cattle.

Sal-Vet is giving splendid satisfaction. Have not had a sick sheep or lamb on the farm since we began to feed SAL-VET last spring. — Oak Lawn Farm, S. F. Speerstra & Sons, Props., Whitehall, Wis.

I have found SAL-VET all you claim. My neighbor who lives within a stone's throw of my place lost several hogs from cholera, while mine are as healthy and vigorous as can be. —Andrew Ireland, De Forest, Wis.

My colts were full of worms. Some one recommended that I feed them maple ash and tobacco, which I did, but it did not interfere with the worms at all. But when I started to feed SAL-VET, they passed worms in great quantities. My colts now look 100% better and so do the older horses.—Lud Jacob Zenk, Elkhart Lake, Wis.

(244) **THE FEIL MFG. CO.**
Dept. 137-2-3-16 Cleveland, Ohio

Supply me enough SAL-VET to last my stock sixty days. I agree to pay the freight, feed it as directed, and will then pay for it if it does what you claim. If it fails and I so report specifically in 60 days, you are to cancel the charge and I will owe you nothing.

I have .....hogs.....sheep.....horses.....cattle

Name .....

P. O .....

Ship. Sta.....State.....

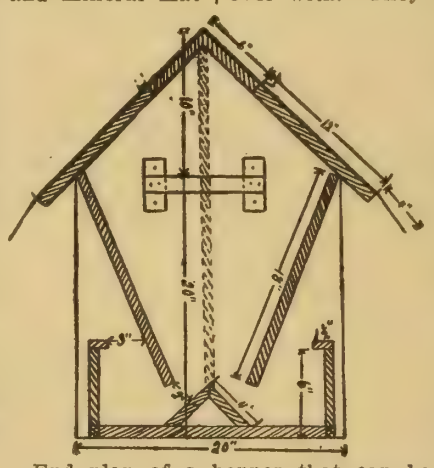
Handle Poultry For Market.

Too Many Persons Allow Their Hens to Care For Themselves and Then Expect Profits, States J. K. Morrison.

WE CAN write the balanced ration for a laying hen on a little piece of paper the size of a postage stamp and yet how many farmers of this country can tell you right off the reel a properly balanced ration to feed his hens to get eggs out of season? These are some underlying principles with which he should acquaint himself so that there will be no trouble to figure out his own ration in accordance with the home-grown feed that he happens to have.

The organs of the hen that convert protein, carbohydrates and mineral matter into albumen, yolk and shell.

All feeds that we use have protein, fats, carbohydrates and mineral matter, generally put down as ash. Some feed has more protein than others. It is possible for any farmer in the western country to raise practically all of the feed necessary to carry the flock throughout the winter and not buy any of the so-called protein feeds. There is little money in poultry keeping on boughten feeds. The pens are factories to convert feed into flesh or eggs and permit cheaper transportation on the grain and to afford a higher selling price for the grains than carrying it to market. Then again it is just carrying out the repeatedly advocated principle that all feeds should be fed on the farm in order to keep the fertility on the soil.



End plan of a hopper that can be used out of doors. By cutting figure in two you have an end plan for indoor hopper.

An old dilapidated hen that you have kept until she is dead with old age cannot convert this feed into the finished product at a profit. She should be culled out and not eat the profits of the younger hens. A Leghorn can be kept longer than the heavier breeds, as they do not take on fat so rapidly as do the heavy breeds. As a rule, two seasons is long enough to keep the American breeds. Many make the mistake of disposing of them along before Christmas and glut the market when the pig killing time is at hand and when everybody is selling off hens and chickens for Christmas money. The hens bring the best price after the spring laying season is about over with. They should then be gotten out of the way to make way for the growing stock. Eggs during the hot months from farms bring mighty poor prices and an old hen will not pay for her upkeep until fall when so many of them are carried to market. We think that the factory should be a well-matured pullet that is bred from a male bird that comes from a high laying hen. High laying is inherited from the female and transmitted by the male. The secret of breeding up the flock is the male. The factory should be hatched early and be well matured before the cold weather sets in. She will certainly not be profitable if you carry her through the first laying season and get no eggs from her. Winter laying is certainly an inherited characteristic and it makes no difference how well balanced the ration you give a hen that has not inherited this winter laying characteristic you will not make the factory turn out the eggs unless she is the laying kind. She just must be bred that way and you certainly should get some eggs this season from some breeder who is breeding for egg production and that you know has the flock that has the laying qualities.

Many breeders now throughout the country are working to breed high layers. This fact that high laying is inherited has been so popularized that many are breeding for eggs as well as for fine feathers. Get you a setting of eggs this season and even if you rear one male bird you should feel well repaid for the price you pay for the eggs.

But remember not to be too exacting about the hatch. So many complaints are registered throughout the breeding season by buyers that it is quite a trial to breeders answering the complaints. Many times it is the fault of the purchaser and he turns around and blames the person for his failure who sold the eggs. Be straight when you buy eggs and unless you have a real complaint let the matter slide.

Carbohydrates are merely the starchy part of the feed. The bird transforms the starchy part of the ration into fat, heat and energy. She also uses part of this material to manufacture the yolk of the egg which has much more carbohydrate material than protein. The protein is transformed into lean meat and muscle and when the hen is in laying condition she uses protein to make the albumen. The iron, sulphur, phosphorus and calcium which is found in plants and the mineral matter which the hens use go to make bone, egg shells and feathers. We speak in the terms of hens, for we are more especially treating of the laying hen. All of these same elements combined in different proportions are necessary for the growing chicks.

Wheat, oats, corn and kafir are the principal grains that are used in the feeding of poultry. Peas, soy beans, cottonseed meal, milk and meat scraps are the chief source of protein. The poultrymen have done much experimental work to ascertain the proper proportion to combine the protein and the carbohydrates so as to meet the demand of the growing stock and the laying hens.

The ratio that is generally accepted for the laying hen is 1:4.5. That is, a feed ration should contain one part of protein to every 4.5 parts of carbohydrates that it has. In looking at the tables which are available giving the amount of each element that the different feedstuffs contain you will find that the grains all have fat. This fat or oil is valued at two and one-fourth times as much as the carbohydrates. That is, it will go two and one-half times as far in the making of heat, energy, etc.

The growing chick needs a ratio of about 1:4. The fattening ratio is 1:7. It takes feed rich in carbohydrates to make fat. For that reason too much corn and wheat without giving some feed rich in protein will aid the hen in getting fat, but she cannot make eggs, for she is lacking in the proper material to combine with it to make eggs. The nutritive ratio of corn is about 1:8.3. This is a little too wide or contains most too much starchy material, but by combining with milk which has protein you have an excellent fattening ration.

The majority of poultrymen recommend beef scrap as the chief source of protein, but if soy beans and peas are combined with corn meal and bran, after they have been ground, in proper proportions they will make a good source of protein; then use sour milk to moisten the mash and give them plenty of it to drink you will have a very excellent ration.

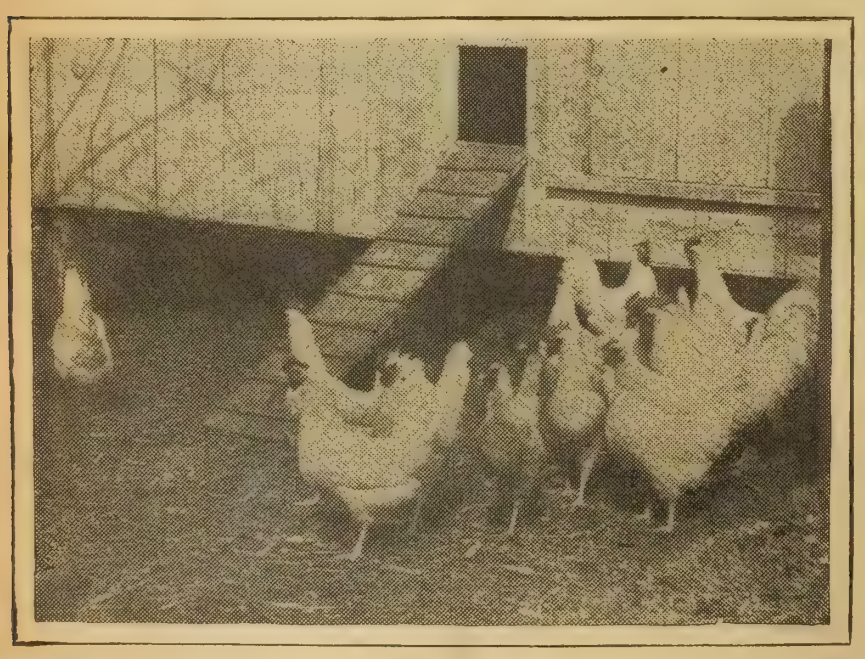
The following is the old Maine ration which is used in many sections: Wheat bran, two parts by weight; corn meal, one part; middlings, one part; gluten meal, one part; linseed meal, one part; beef scrap, one part. In lieu of the gluten meal and linseed meal you can use ground peas or soy beans and if you have plenty of milk omit the beef scrap and you will get good results. For the growing stock by using the same thing and keeping milk before them all the time you will keep them growing, for they will supplement with bugs and worms and get plenty of protein. A very simple ration is corn meal, eighteen pounds; cottonseed meal, fifteen pounds, or use about thirteen pounds of beef scrap; wheat bran thirteen pounds and four ounces of salt, or you can use soy beans or pea meal in lieu of the cottonseed meal.

Give the grain in litter about one quart to every twenty hens. They eat about twice as much grain as they do of the mash feed. The quantity of grain depends on how much grain they can pick up on the place and we have made allowance for the fact that they will pick up some.

We are too accustomed on farms to carry the frame to town and either glut the market with a low grade of stuff or it must be sent to the packing plant to be fattened. We can do this at home and sell a uniform grade of market chickens. The greatest cost is to bring the chickens to a pound or so. After you get them up to a pound they are frames with plenty of muscle that they have grown in their search for food. They will very quickly put on another pound of gain if put in a crate and fed with milk and meal.

Then when you have your birds ready for market have them uniformly crated, that is, keep all of one size together and not carry such miscellaneous stuff as we see going to the average market. A standardized product is what the public wants and farmers should learn the art of grading everything they sell without forcing it to the commission man to be graded and placed in salable shape.

Breed right, feed right and sell right and you will find that poultry will be a valuable side line on the farm.



These hens averaged over a hundred eggs each in six months time. They ate a mash composed of eleven pounds beef scrap that analyzed 70 per cent protein mixed with sixty-seven pounds corn meal. Corn and oats was the scratch ration. The main thing is to give the ration balanced. Such great variety is not necessary.

THE SURVIVAL OF THE FITTEST.

To the Editor:—Did you ever have, among your little chicks, one that was away behind the others in feathering out, that went around nearly all summer with its body bare in spots of down or feathers and its skin sunburned? Did you notice that its bill seemed longer than it should and that its head was flattened or sloped back from the bill and looked all wrong some way? Have you wondered what was the matter with the chick and why it was so different from the others when it had the same care in every particular?

Such a chick lacks vitality and it is usually an inherited weakness. It is not worth the trouble of raising and if finally it feathers and is allowed to remain in the flock it will be a positive damage, especially it if is allowed to bequeath its qualities to future generations.

Birds of low vitality and weak constitution kept in a flock are a constant menace to the other fowls, as they are predisposed to disease, which is liable to spread among them all.

At one time, in the beginning of my work in poultry, I used to select for hatching those eggs that were of good shape and size, without any regard to the hens that laid them.

I found that I got a good many undesirable chicks in this way and that as a whole the flock seemed to be growing weaker from year to year. Then I began selecting my breeding stock carefully and improvement was noticeable the first year.

Next I decided to help nature still more in her good work of letting only the fittest survive and whenever I see a weak fowl that fowl is eliminated from the flock. Of the chicks only the strong ones are kept. The weak ones are marked when they show weakness and so can be sold later if they survive. It is necessary to mark them in some way, as weak chicks may apparently overcome their weakness and later it will be impossible to tell them from the others.

If the hens were allowed to hatch and rear their chicks themselves only the strong ones would live and this is the way of nature, but we have improved on nature so much that we must go still farther and help her more.

If a hen is allowed to do as she thinks best she will leave the nest with those chicks that have been

Old Trusty Incubators

Brought Success and Profits To 650,000 Poultry Raisers

H. H. Johnson

READER, if *profits* can interest you I want you to get in touch with us. I want to tell you how and why Old Trusty has brought success and profits to so many thousands of people, and to outline to you the *Johnson Plan* of raising chickens, ducks, turkeys or geese on a *money-making* scale. I want to give you the same plans and ideas that started our customers from coast to coast doubling up their poultry incomes.

Maybe you have never given chickens much thought. Do you know that chickens can return more *actual cash* for the little attention you give them than pork, beef or mutton? On some farms Old Trusty has made the poultry *pay all the bills and more.* A mainstay income so to speak. Profits in other lines are saved—or put into the bank or into improvements or luxuries that were not possible before. Let me tell you of homes where this has worked out. But, whether you go into poultry raising for all there's in it, or just let it bring a few extra dollars now and then, it will pay you to get the Johnson plan.

Write Today for This New 136-Page Book—Full of the Ideas That Started Others Making Poultry Incomes FREE

There will be no obligation whatever. The book is free. I just want you to know what we have done in starting others, and what we can do for you too if you want to make more money than you are making now.

There's no experiment about it—no lessons to learn—no big investment made—you do not drop any of your present work—and it's not even necessary to have had previous experience, for *Old Trusty brings all the experience that's needed.* Anyone can operate it—even the most inexperienced have made big hatches with it right from the start. When you think of the fact that this incubator is used by *hundreds of thousands* more people than those who use any other, you must admit that it has made a *big success.* It leaves no doubt as to the *best* incubator. One thing about Old Trusty is that profits are *sure* if you do your part.

It can turn out record-making hatches for you at any time of the year. In coldest January or February as easy as in warm May or June.

M. M. Johnson

An Engineer and a Poultry Raiser. Inventor of Old Trusty and Founder of the Largest Incubator Business in the World.

Make Winter Hatches for Big Profits

It's the cold weather hatches that give you the big profits in chickens to sell in July and August or laying pullets in the fall and winter months when egg prices are highest. You need Old Trusty for this work. Here and there you may find an incubator that can make cold weather hatches, but remember, you are asked a high price for it. Old Trusty gives you top-notch construction at the bottom price because it's built in the largest exclusive incubator and brooder factory in the world. We make its parts in lots of tens of thousands. We have the most modern labor and cost saving equipment. We have no "big guns" drawing fat salaries and adding to our overhead cost. Therefore we are in a position to give you the biggest value for the least money. That's Old Trusty.

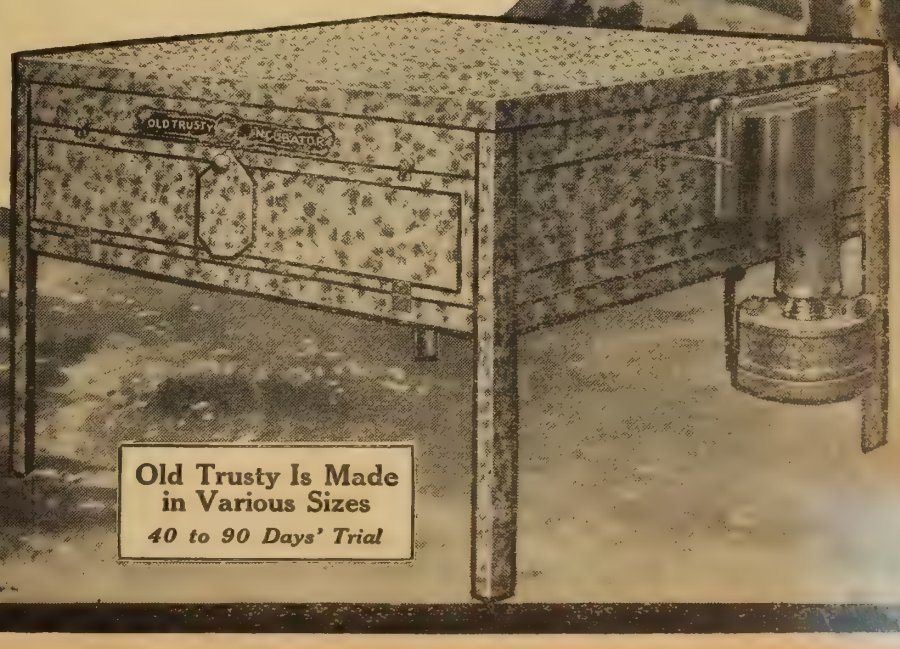
Practically speaking, there's no wear out to Old Trusty. One customer, Mr. S. W. Warren, at Tryon, Neb., bought an Old Trusty of us twelve years ago. A few weeks ago he wrote that it's still giving good service. That gives Old Trusty a pretty low cost per year, don't you think? And figuring that Old Trusty generally pays back its cost with the first hatch, what could be a better investment? But I am not going to urge you to buy an Old Trusty. What I want you to do is to send for our book and then arrange your plans accordingly. In this book we give you the facts on the raising of poultry as we found from actual experience. You'll find no fancy advertising language in it and nothing drawn from the imagination. It's just a home-made book gotten up by ourselves here in our own printing shop in Clay Center, but it's crammed full of sane *money-making* ideas from cover to cover.

Send for it today then you're in line for another income. Write your name on a postal or send a letter, as you prefer. But mail it today. Yours truly,

H. H. JOHNSON

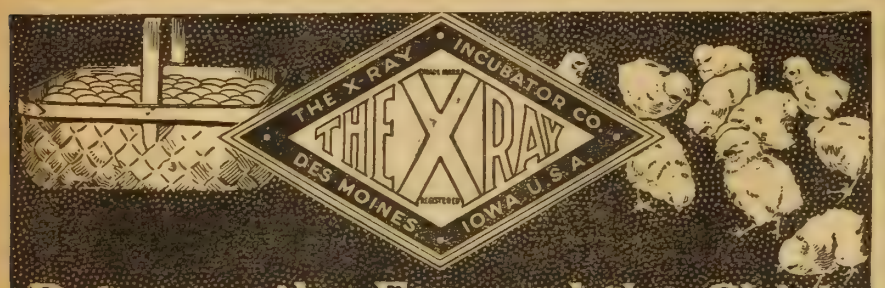
The M. M. Johnson Co., Clay Center, Neb.

Less than $10 still buys OLD TRUSTY Shipped freight paid to anywhere east of the Rockies — a trifle more to points farther west. Quick shipment from factory at Clay Center or warehouses at St. Joseph, Mo., or Seattle, Wash.



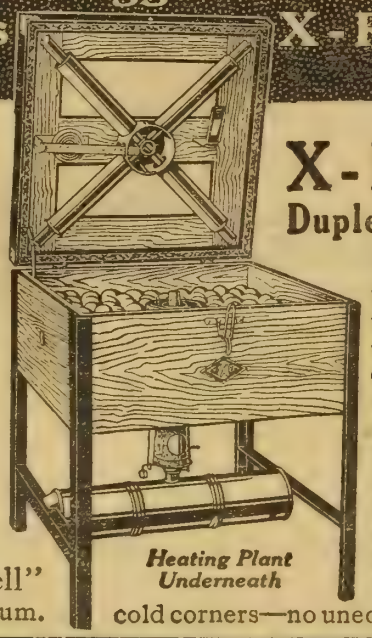
Old Trusty Is Made in Various Sizes

40 to 90 Days' Trial



Between the Egg and the Chick Stands X-Ray

X-RAY
Vapor Generator
converts the dry heat from lamp underneath into a mild, moist heat of the exact temperature and humidity for the perfect hatch. Reduces the number of "dead-in-the-shell" chicks to a minimum.


Heating Plant Underneath

X-RAY
Duplex Heater
distributes the gentle, moist heat with positive certainty and absolute equality to every point in the hatching chamber upon a perfectly level tray. No cold corners—no unequal heating.

Only One Filling of Oil to the Hatch

THINK what it means to be relieved of the disagreeable task of filling your incubator lamp every day. With the X-Ray you fill the big tank *just once*—at the beginning of the hatch. It saves oil—a gallon runs the hatch—saves work, saves worry. The

X-Ray Incubator

is the *original* incubator with heating plant in the center, underneath, where it should be. And *every year* it leads in important improvements. It is today the perfect incubator of the centrally-heated type. No other incubator is so *scientifically* built to produce perfect hatches. Reports from the many thousands of X-Ray users in all parts of the United States *positively prove this*. Join them—use an X-Ray *yourself*. Get big hatches that pay.

Send for Our Fine Free Book No. 43

Your name and address brings it. Get all the facts, illustrations and full descriptions of the X-Ray's *fifteen special features*. The book shows how the X-Ray duplex heater insures even heat and for the first time in incubator history makes practicable a *level egg tray*—how the mildly moist heat, the hatching heat of a mother hen is produced—and with it you see how the central heating principle is *correctly* applied.

Brooder has central heating plant too

Low Prices—Express Prepaid

With book, come low X-Ray prices and our new liberal offer to ship incubator *by express at our expense* to practically all points. No additional charge. We start your machine to you the very day your order is received. Wherever there is local delivery the express brings your X-Ray right to your door. It may mean an *extra hatch* to get your incubator just as soon as the express can bring it. And that means *extra profits for you.*

Free Book Tells All
Write TODAY—Ask for No. 43

X-Ray Incubator Co., Des Moines, Iowa

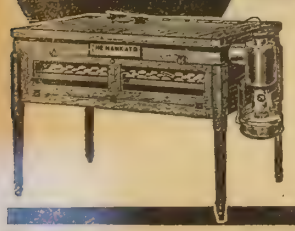
$7.25

New Mankato Incubator

WE are ready with the biggest incubator factory in the Northwest and manufacturing facilities to make you the most startling price offer of our twenty years' success. Remember, everything we offer is backed by a binding guaranty. Prices are lower than you ever heard of. Quick shipments. Buy direct.

Give Us Your Name

for our free book. Mankato Incubators are made of genuine California redwood, three thicknesses of wall all around with heavy asbestos lining. Heavy pure copper water heating system. Perfect automatic regulator. Correct ventilation system. Safety lamp. High nursery. Strong, well-made egg tray. Tested thermometer. Egg tester and everything you need. *Don't miss this wonderful offer.* Thousands of successful users back the Mankato. Just send name—today.



Mankato Incubator Company Box 708, Mankato, Minn.

When Writing to Advertisers Please Mention the Wisconsin Farmer

strong enough to make their way into the world. We help the weak ones out of the shell and impose them upon their kindred.

When a hen ranges with her brood naturally the weak ones are not able to keep up and so drop out of the race for life and the world is well rid of them. We put them up in yards and feed and pamper them and by our knowledge and care raise the weak as well as the strong.

This system continued from year to year gradually lowers the standard of vigor in the flock and results disastrously for ourselves and the fowls.

It takes a hen of strong constitution to live the strenuous life required of her these days and it does not pay to keep the weak ones, for they cannot do the work necessary to make them profitable.

It has been estimated and proven by experiments that a good hen will lay five and one-half times her own weight in eggs during the year. This tremendous production is a great strain on the health and strength of the hen and only vigorous ones can stand it.

Because of this if we keep the productiveness of our flock up to where it should be we must breed for constitutional vigor and must weed out the weak individuals whenever we find them at every stage of their growth.

Among the full-grown fowls a little attention will show you the physically weak ones. They are inactive, remain longest on the roosts in the morning and go first to roost at night, frequently being on the roost during the day. They are likely to squat instead of stand and are not found hustling for a stray grasshopper, while they sing and crow to express their joy of life. A strong hen will sing and cackle loudly and often and a strong cock will crow often.

The strength or weakness of a fowl is shown plainly in the build of the body. A strong bird will have a thick, deep, compact body, with a large fluff as compared with a weak bird of the same breed. The weaker fowls are more slender and delicately built in every line. This difference in build extends to every part of the body and a fowl of low vitality will be thin and long in every part, from its bill to its toes.

A medium or large, bright, red comb and wattles is a good sign of health and strength as is also a bright, clear, round eye, which should be prominent.

A weak fowl is apt to allow its tail to droop, while a strong fowl has a well-developed tail and carries it proudly erect. Bright-colored plumage is another good indication. A weak fowl is apt to have a faded look and the plumage will be more scanty. Lack of appetite where no disease is present is a sign of weakness.

These points of difference between strong and weak fowls hold good with chickens of all ages.

The baby chick that will later give a good account of itself will have bright prominent eyes and a plump little body. Its down will be long and thick. It will be active and sturdy and hard to catch and it will grow its feathers quicker than its weak brother or sister.

Some of the causes of low vitality and lack of physical vigor among the poultry are in-breeding, the use of pullets for breeding purposes (the pullet being herself immature and undeveloped cannot produce strong offspring), forcing for large egg yields and then for breeding purposes when weakened by the strain of heavy production, overcrowding, lack of exercise, carelessness in keeping the eggs for hatching, improper hatching and failure to select strong, vigorous fowls for breeders.

To get rid of resultant evils and secure healthy, long-lived, profit-making fowls we have to guard against these mistakes and must also ruthlessly weed out the weak individuals all along the line, from the chick that should be allowed to die in the shell to the hen that spends too much time on the roost and should be sent to market to make room for a more active fowl. Mrs. A. J. Wilder.

Mansfield, Missouri.

NEW BLOOD IN TURKEYS ESSENTIAL.

To the Editor:—My first possession was a turkey, and from that day to this I have been partial to this fowl. A trio was brought home, the first that I had ever seen, and one of the hens was for my sister, and the other was to be mine. One of them was a shiny black with keen eyes and an alert, businesslike bearing. The other was a trifle larger but of a dull, brownish black with some white feathers in the plumage. This bird, by common consent, was mine, and the other must go to the sister "because she was little," and right here could be preached a whole sermon on the subject of forever favoring one child in a family for some real or fancied reason.

Later the shiny one got sick, was choked, I think, and the sister asked if she might have "half of yours, if she dies," to which was given a very ungracious reply, I am sorry to say. For years after I was heartily ashamed of my selfishness, and only until there were kiddies of my own to keep on good terms did I really understand that in reality I was only getting even with the whole business.

At that time turkeys were not so very hard to raise, barring the ones lost by storms, low, wet places or varmints. Range was not restricted, and the turkey was more nearly in his natural environment than later. As remembered today, people were very careful to "change gobblers" each year, and while there might have been a better way, the fact remains that new blood in turkeys is the very basis of success.

A few people there are who will gravely point to the fact that in their natural state turkeys were inbred. Good and well. However, as with the Indians, all that were not capable of being warriors were either put to death or relegated to the background, and only the best and strongest were ever permitted to reproduce themselves. On no account ever attempt to inbreed or even "linebreed" your turkeys if you expect to have even the semblance of success.

A quarter of a century ago it was possible, with some success, to raise turkeys with a chicken hen, and that is largely what is the trouble with the turkey business today. This fowl cannot stand domesticity, and unless one has wide range for them better devote your time to chickens or ducks.

The best plan we have ever tried is to lay barrels on their sides in fence corners and out-of-the-way places. Cover them well with brush and branches that have leaves on them. By a little care at nesting time the hens can be rounded near the nests, and when once they lay in a nest, if one of their own eggs be left, they are pretty certain to fight for that particular spot until their brood is hatched. Indeed, only that the eggs are in danger of being destroyed by marauding dogs and crows, it would be better to not molest them in any way. Note the care the old turkey takes in the matter of covering her eggs each time. We have had hens to hide their nests out and lay during freezing weather, and hatch out a fine brood of lusty, gamey little beauties. One such brought twenty poults from twenty-one eggs.

When it nears hatching time let the hen severely alone. She does not need you—would, in fact, consider you an intruder. The only time our hatching turkeys are ever looked after is if the weather be fine, to notice that the hen does not leave the nest before the hatch is complete. She has the wild instinct, and in their natural state all wild birds hatch out within a few hours and the flock will have gone. Poor old turk! She cannot understand that years and years of coddling has put her on the domesticated list, and so she may possibly leave some pipped eggs in the nest.

The question now naturally arises: "What to do with the poults, now that they are hatched?" If the weather be warm and dry, "throw them away," meaning to let the hen mother slip away at will and feed the little creatures their natural food, in the shape of seeds, bugs, etc. Do not be concerned lest she "drags them through the grass and wears them out." She will do nothing of the sort. It often takes half a day for her to get across the small intervening lots to the fields. In a heavy rain or dew she will be found quietly hovering her babies with more sagacity than many human mothers.

But, says some one, if the weather be cold and wet when the poults hatch? Then all there is for it is to remove the poults to a pen made from

twelve-inch boards, permitting the mother turk to come and go at will. She will be always found on the job, all right. The best feed we have ever found is cottage cheese and onion tops. Not how much feed they can be stuffed with, but how little of the proper kind they can live on until they are large enough to turn on the range, which is about two weeks, or when they can no longer be restrained in the twelve-inch pen, and the sooner they get away from artificial conditions the better.

Suppose it will not do to close any turkey talk without saying something about blackhead. No need to ignore this dreadful disease, which has depleted flocks of turkeys from fifty or sixty to a few individuals, and besides not one farm in ten raises turkeys that formerly did in the eastern and middle states. Western people yet have a better outlook, and we hope the turkey will not be wholly a thing of the past, as many discerning people fear.

One breeder insists that he has cured a case of genuine blackhead by mixing equal parts of calomel and rhubarb and giving a teaspoonful in a pint of sweet milk, withholding all other feed and drink for several days. It is worth trying, but here is a suggestion that I would like to hammer hard. Be sure you mark the fowl, so that if it gets well it can be distinguished and sold on the market. Only the stock that has health, vigor and stamina should ever be used for breeding purposes. Mate about four hens to one tom, being careful that either the males or else the females are at least two years old. Subscriber.

LATE BROODING NOT ADVISABLE.

To the Editor:—In answer to the inquiry of Mrs. Glenn Healy regarding losing her chicks in the brooder late in the season, the writer has never been successful in the matter of either hatching or brooding artificially in hot weather. Early in the season the brooder will do far better than hens. Later there are wholesale losses, and the sooner we get at the bottom of it all the sooner will dissatisfaction with artificial hatching and brooding, without which the great poultry industry would be cut in half, cease.

This inquirer also asks if it is necessary to disinfect the hatcher after each hatch. It most certainly is. Cleaning and airing are all right, so far as they go, but they are not enough. Many operators say that they have splendid success the first time, and heart-breaking failure the subsequent times. It is not necessary to go into the depths of it all; far better to accept the matter as it is and get busy to remedy the evil.

After washing the incubator wash again with a 2 per cent solution of creolin added to the water. Leave the machine open until the odor evaporates, and the wooden hen is dry, leaving the lamp burning to hasten matters.

Our inquirer says that the chicks seemed bright and healthy when being placed in the brooder, and then about a dozen would be dead the following morning, and the next day would see the same losses. The writer has had exactly the same discouraging experience. The perverse little creatures would crowd, and from no apparent cause. That it was late, hot weather brooding to blame is very evident, because chicks of the same kind that were placed with a hen did fine.

We have tried this matter out from every point of view, and would certainly be glad if some of our people can give us light on the matter.

M. Stearns.

DUCK CULTURE DECREASING ON GENERAL FARM.

While the number of duck farms is increasing duck raising on the average farm as a side line is decreasing. According to bulletin 697 of the department of agriculture the decrease of duck culture by farmers is fully 40 per cent, as compared with the animal census of 1,900. Less than 8 per cent of the farms now raise ducks.

Taken as a whole, haphazard duck raising cannot come out whole as compared with chickens. The demand for duck eggs is more limited and aside from the city markets one cannot depend on a good market for ducks as for chickens. A few ducks might be kept for home use with good results, but from a commercial standpoint it would be advisable to study markets and conditions before going into the business to any great extent.

However, intensive duck culture carried on a large scale is more successful than chicken raising on an intensive scale. The Pekin, which is acknowledged the duck for all purposes, is raised almost wholly by commercial growers on a large scale. On the general farm much of the failure to realize a fairly decent profit on ducks is due to wrong methods of feed and management.

If fed rightly and grown quickly a duck will easily weigh five pounds at ten weeks of age. At least this is exactly what 100 ducklings did for us a few years since. If they had been marketed at that time with the price something like 12 cents, they would have brought a fair margin of profit. As it was they were permitted to run until near the holidays, at which time they did not weigh as much as early in the summer, sold for 6 cents per pounds or exactly what is estimated to grow a pound of duck.

On that lot of ducks we just broke even on the feed, but lost out badly on another count. The hens required to hatch and rear that many ducklings would have raised fully 100 chickens that people were pleading for at from $2 to $5 each. Even at market price the chickens would have won out over the ducks. So if you raise ducks for market bear in mind the fact that the sooner from shell to the block the better.

For best results on a general farm it is better to have a separate run for the breeding ducks. While they will thrive without water to swim in, the fact remains that they do better if furnished with running water. For this reason anyone having a pasture with a stream of water is particularly fitted to care for ducks. Failing to have a run of this kind better build a yard for them. The writer saw one of this kind just lately which contains a low shed which was bedded with straw and the inmates were happy and contented. If we mistake not there will be a flock of beautiful snowy white

"In 25 world's greatest matches Belle City won with perfect hatches"

Learn how *World's Championship Prize Winners* make their big hatching increases and big cash profits. You can do the same as easily as they do. They tell you how in my big Free Book, "*Hatching Facts*" *—their own experience in their own words—with 100 actual photographs of prize-winning hatches.* Users of my Belle City win championships *every year* in competition with users of all makes—many never used an incubator before.

But better than the 25 World's Championships is the big hatching successes and profit-paying success of hundreds of thousands of users of my Belle City in all parts of the country. 402,000 in use. In my big Free Book, "Hatching Facts," I publish, *for your information*, many letters from users in every community telling their experience—the most profitable record of poultry success you can have. Write for book. Besides the valuable pointers which winners give you, the book contains full description—all facts—proofs—particulars about

Belle City Incubators and Brooders

"An outfit made for hatching that there's no such thing as matching"

See what the 25 Times World's Champion Belle City Hatching Outfit is like

The book shows that my Belle City has everything worth having in and on an incubator—copper tank—double disc self-regulator, safety lamp, double walls and double door and dead air space all over, with roomy nursery and strong egg tray. "Tycos" thermometer, egg tester, sun hinge burner, funnel—everything you need, including valuable instruction book on operating, hatching and care of chicks. Book tells you all about my World Famous double walled top heat Belle City Brooder, guaranteed to raise largest percentage of chicks every time—a fitting companion to my World's Champion Belle City Incubator.

This is the kind of hatching outfit that has made all these wonderful Belle City records, *the very same kind of hatching outfit that I will send you* if you decide to own a Belle City and join the profit makers. But first of all see my Free Book. It costs you nothing but a postal. Write me today for book, "Hatching Facts." Jim Rohan, Pres.

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Get My $1300.00 Gold Offers

With the Free Book comes my $1300.00 Gold Offers for the season now beginning. *Conditions so easy anyone may receive biggest pay.*

Learn how I paid one Belle City user $156.25—another $50.00—two others each $45.00—many others from $33.00 down.

Get the book. With it comes my ten-year personal money-back guaranty—my low price—*same as last year*—freight prepaid—1, 2, 3 months' home test—everything

Learn how thousands have made big hatches and cash profits with my 25 times World's Champion Belle City Incubator—how my World Famous Belle City Brooder saves the chicks and raises the highest percentage—how you can make the most money out of chickens this year whether you go into it on a large or small scale.

"Simply beats the dickens How it hatches out the chickens"

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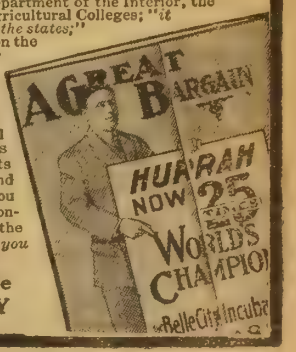
Greatest book of practical hatching information ever published

Great, big colored pictures give you an exact idea of this wonderful hatching outfit—402,000 in use—the kind used by all the Belle City World's Championship Winners; the kind used by the U. S. Government, Department of the Interior, the kind used by Agricultural Colleges; "*it incubates in all the states;*" the kind that won the gold-lined silver "Tycos" cup; the kind that will give you hatches that you will be proud of; the kind that will win big success and cash profits for you; the kind that will put you into the Championship Class from the start; will *make you cackle with joy.*



Write Me TODAY

ducklings this season and whether it pays out will all depend.

All the large commercial farms hatch with incubators. Ducks are much easier raised artificially than chickens. We have been very successful in hatching under chicken hens. The very first egg laid should not be placed for incubation. After the first few duck eggs hatch remarkably well. We have had many 100 per cent hatches, beating hens' eggs by a large margin.

If an incubator is used care should be used in following the directions. As it requires ducks much longer to escape the shell after they are pipped than chickens more moisture is required. Pekins rarely sit and at best are very indifferent mothers. Then, too, if they sit at all, it is too late to be successful. Late-hatched ducklings are of small account.

The period of hatching duck eggs is twenty-eight days, with the exception of the Muscovy, which is about thirty-five days. Give no food for at least thirty-six hours, in the meantime keeping the little fellows warm and dry.

The well-proved theory that chickens should be fed dry food does not apply to ducklings. A close observer can learn more wholesome lessons in poultry culture than all the theory expounded in 100 years. Just watch a flock of ducks when eating dry grain. They eat a short time and then watch them hie away to water for a drink with which to soften the mass. There is no way of getting around the matter. Ducks are a waterfowl and it is their nature.

They should be fed five times daily on equal parts, by measure, of rolled oats and bread crumbs, to which is added 3 per cent sharp sand.

About the third day this feed is changed to equal parts bread, rolled oats, bran and corn meal. After the seventh day three parts bran, one part each low-grade wheat flour and of corn meal, 10 per cent green feed and 5 per cent beef scrap with about 3 per cent sand or grit mixed in the ration. This mash should be mixed to a crumbly mass with water or milk. As time passes the bran should be decreased and the corn meal increased until it gradually merges into a fattening ration.

This applies to the ducklings to be sold as green ducks on an early market. For future breeders give free range and variety of feed permitting them to grow muscle and bone, the very thing we do not wish when growing for market.

HIS BIG PULLETS MAKE NEIGHBORS ENVIOUS.

To the Editor:—I hear many remarks about my big pullets and hens. Some of my neighbors seem envious and want to know why my fowls are so much larger and healthier than theirs. The secret of big hens and pullets is in the fact that I have a hardy, healthy, big breed to begin with. I never practice inbreeding, but buy new roosters every year from a neighbor who raises pure-bred stock and who follows the same plan that I do, that is, in purchasing new roosters with which to head her flock every year.

In the fall all undesirable pullets are sold and only those which come up to the requirements are kept in the spring. The eggs from the older hens are the ones used for hatching our big pullets. Of course, the care of the pullets has much to do with the size as well as the stock.

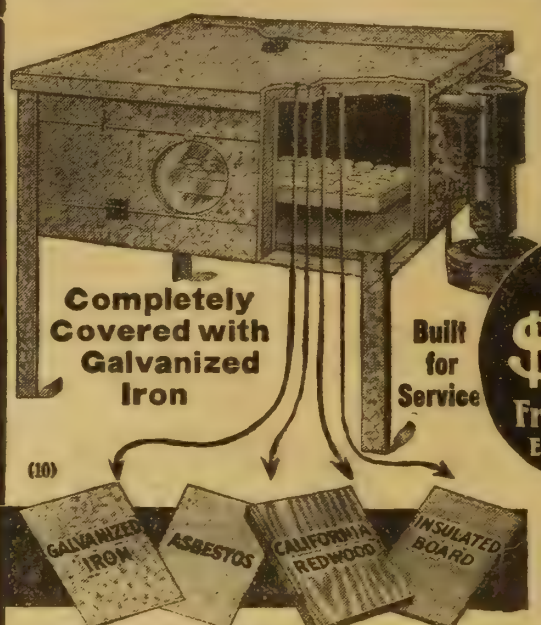
My pullets have free range where they can obtain lots of bugs, worms, etc., which is a natural diet for fowls. Besides, I think free-range fowls are much healthier than flocks kept in confinement and mature much more rapidly.

I feed my pullets after three weeks of age corn, wheat and any other grain raised on the farm and give them all the surplus milk in any form. I keep them growing from the very beginning without any setbacks. I provide them with comfortable quarters in winter and I have some that are big, bigger, biggest. S. E. M.

Ironclad TRADE MARK

Wins in the Two BIGGEST HATCHING Contests Ever Held

Why take chances with untried machines when for only $10 we guarantee to deliver safely, all freight charges paid (East of the Rockies) BOTH of these big prize winning machines fully equipped, set up ready for use? Why not own an Ironclad—the Incubator that has for two years in succession won in the GREATEST HATCHING CONTESTS EVER HELD? In the last contests conducted by the Missouri Valley Farmer and Nebraska Farm Journal, 2,000 Machines were entered, including practically every make, style and price. With 140 Egg Ironclad—the same machine we offer with Brooder, freight paid. for only $10, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in last contest.



We Give 30 Days Trial —Ten Years Guarantee

You have nothing to risk. We will send machines—let you use them 30 days—urge you to compare them in quality of material, hatching ability, workmanship and price—and if you don't find them satisfactory, send them back—we'll pay the freight charges and return your money. You are absolutely safe. We have to do as we advertise. If we didn't the publishers of this paper would not carry our advertising.

Both for $10 Freight Paid East of Rockies

140 EGG INCUBATOR CHICK BROODER

When an incubator is constructed of material of this kind it gives you the strongest and most durable incubator that can be made—a machine that will not warp or shrink, or open up at the seams, as every joint is lapped over with our galvanized iron covering—giving you a machine that will last a life time. Don't class this big, all-metal-covered dependable hatcher with cheaply constructed machines. Ironclads are not covered with tin or other thin metal and painted, like some do to cover up poor quality of material. Ironclads are shipped in their natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad Specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boilers, self regulator, Tycos Thermometer, glass in door, complete book of directions, and many other special features fully explained in free catalog. Write for it today or order direct from this advertisement and save time.

This Book Sent FREE

It tells how Ironclads are made and why they win in the Big Hatching Contests.

IRONCLAD INCUBATOR CO., Box 113 Racine, Wis.

NATIONAL Gets Big Hatches

Peter Kilpatrick, Nazereth, Pa., writes "Have made better hatches than anyone here." Strongest, most durable Incubator made. Hot water heat—double wall—dead air space—asbestos lining—self regulator—metal cover. Will not warp or shrink. Money cannot buy a better Incubator.

Freight Paid East of Rockies

Why pay more? A bigger, better, simpler machine at no increase in price. A proven cold weather hatcher. Built on U. S. Gov't. specifications. Write today sure for Free Catalog, or order direct from this ad and save time. You take no risk. Satisfaction guaranteed or money refunded. Comes set up ready to run, with egg tester and book of instructions. Don't delay. Get the facts at once.

NATIONAL INCUBATOR CO.
Box 62 Racine, Wis.

"LAWN PARK" COOP
Saves Your Chicks

The Wire Park, which pulls out like a drawer, gives hen and chicks fresh grass, air and sunshine during the day; closes at night and in storms. This coop meets every demand; portable, with removable floor for easy cleaning; roomy, light, durable, sanitary.

PROOF Against Hawks, Rats Weasels, etc

Made of galvanized metal; repels vermin. Size, open, 18 in. x 24 in. x 48 in. Pays for itself in chicks and labor saved. Write today for free circulars, special prepaid offer and how to turn work into pleasure and profit.
CYCLONE MFG. CO., DEPT. 21; URBANA, IND.

AILMENTS OF YOUNG CHICKS

M. E. Dickson, Nebraska Experiment Station, Gives Practial Advice Relative to Handling Chicks.

M. E. DICKSON.

Every year the same loss occurs, and every year we have the same questions to cope with:

1. Why is it my chickens die in the shell?
2. How can I get better fertility?
3. What causes white diarrhea?
4. Chickens mope around, wings droop and the chickens die in a day or two.
5. Chicks' heads are bare, and in some cases a few individuals fail to grow any feathers except on wings—commonly found in Barred Rocks and Rhode Island Reds.
6. Chicks stand and gape, with drooped wings.
7. Chicks do not grow properly, are poor, won't eat.
8. Chicks show signs of roup.

The continual dying of chicks at different stages of incubation indicates a loss in vitality, weak germs, or improper incubation.

Weak germs are caused by such practices as breeding from immature stock, pullets with narrow chests, long crow heads, hooked beaks, and weak legs, or stock weakened by disease; overcrowding in winter quarters; damp and poorly ventilated houses; lack of exercise, and too heavy forcing for winter egg production.

Select pullets properly matured, showing good comb development, and allow four and one-half square feet of floor space for each individual. Induce birds to take exercise by feeding cracked grain morning and night in a litter. When weather permits, allow birds to run at large.

Loss in vitality is not common in farm flocks. Flocks badly in-and-in bred show a striking loss in strength of germ, followed by low fertility and finally by decreased egg production.

Improper Incubation.—If eggs are artificially hatched, many times the operator is at a loss to know wherein the trouble lies. It would be advisable under such conditions to set a hen and compare results.

No greater loss is experienced in rearing chicks from any other source than from what is commonly called "white diarrhea." This disease or trouble makes its appearance generally the first ten days. Chicks so affected show an enlarged abdomen and are pasted up behind, indicating a looseness of the bowels. Contrary to the common idea that this disease cannot be prevented, it is in most cases brought about by improper handling, such as chilling, the feeding of moldy feeds, crowding, and the use of damp litter. Avoid overfeeding of grains. This practice sometimes results in some of the grain remaining on the ground and later on becoming moldy. Where wet mashes are fed care should be taken not to make this mixture too sloppy. In case there remains any feed, always remove same from chicks, especially if the mash is mixed with milk. Sour mash should never be fed to chicks. It is a good plan to occasionally examine the litter to make sure it is not damp, where chickens are artificially brooded. Where naturally brooded do not allow the hen to drag the chicks through wet grass. Confine the hen until the ground is sufficiently dry. Chicks are very often chilled in removing from incubator to brooder. See to it that the temperature in the brooder is at least that of the incubator from which the chicks were taken. Furnish an excess of heat rather than not enough. The chicks, if too warm, will find a comfortable place. Prevent crowding by packing the corners of the brooder with litter until round. Supply abundance of litter, especially at night. This breaks floor drafts and furnishes a good insulation from the cold floor beneath. Chicks crowding under the hover at night indicate being cold. Turn up the lamp until they are comfortably spread out away from the hover five or six inches. This furnishes a reserve heat for declining temperature at night.

In early spring it is poor policy to give a hen too many chickens. By so doing the chicks are liable to be chilled, especially if they get wet. Provide a board floor in the bottom of each brood coop to protect the hen and chicks from the damp ground.

White diarrhea is of two kinds—such as the above-mentioned and also

of a pure bacillary type which is hereditary. A very few farms in this section of the country are infected with the bacillary type of this disease, and where such conditions are found it is advisable that the total flock be sold and that new stock be purchased. The soil contains the bacillus, and it is therefore dangerous to introduce new stock into the same pen. Locate the poultry house in another section of the farm.

It is a good plan to feed sour milk to the chicks as soon as possible after hatching. Some men even go so far as to deprive the chicks of water for the first two or three weeks, inducing them thereby to drink more sour milk. Sour milk is a direct regulator of the alimentary tract and undoubtedly eliminates a great deal of common diarrhea troubles. If you experience this trouble on your farm do not be frightened and think that you have a serious disease in your flock. It is more than likely in your method of caring for chicks.

Chicks moping around with wings drooped generally indicate a lack of management in brooding and is most commonly found in those artificially brooded. A hover too cold at night results in the chicks crowding. This means less sleep, and while some chicks are badly crowded and are in a sweaty condition others are badly chilled. The weakest suffer, gradually becoming weaker and weaker from night to night until they finally die. Visit the brooder at the last feeding time and see that the temperature is sufficiently high. At night make sure that the chicks have a reserve heat and that they are well spread out.

The above description may also apply to chicks being fed on grains too large for them to digest properly. Such chicks are crouched up, and were described by one man as "standing around with their hands in their pockets." A ration made up mostly of hard wheat fed to chicks is undesirable and very hard for the chicks to digest. The chicks should be hungry in the morning, and when properly brooded are able to stand considerable cold and heavy feeding.

Bareheaded chicks may be due to one or two causes—either to parasites, such as head lice, commonly found on naturally brooded chicks, or, as is sometimes the case, it seems to be natural that they grow no feathers until very late in the season. This is commonly found in Barred Rocks and Rhode Island Reds. Some individuals fail to grow any feathers except a few on the wings. This cannot be helped by feeding, and such chicks generally thrive as well as those more properly feathered. For head lice, grease the head of each chick once each week for the first four weeks with common petroleum or vaseline. Provide animal protein in the ration, either in the form of meat scrap or by feeding milk to your chicks. This will cause the more rapid growth of feathers.

Gaping chicks usually indicate a disorder in the alimentary tract. It may indicate, where chicks are brooded on low ground, the presence of gapeworms in the windpipe. These may be seen by holding the bird so that the sun will shine directly into the trachea, and may be treated most effectively by removing the chicks from the low ground. Individual cases may be treated by the use of a feather with a little turpentine on it to remove the worms from the windpipe. Occasionally roup breaks out in broods of chicks. This is only found in artificially brooded chicks, as a rule, and under conditions where dampness prevails or where the floor is not properly littered and the chicks are cold. Cement floors have been known to produce cases of roup. Provide plenty of litter, and change same sufficiently often to keep dry, and there will be no trouble from roup. It does not pay to treat the affected individuals. Rather kill and burn them up.

Poor chicks lacking in appetite generally indicate a poor ration. Use at least three grains, and feed in a cracked form; also provide a ground mixture of same, as a mash. Do not feed on bare ground. Such places become poisoned by droppings and make very undesirable feeding places. Alternate grain feeds and mash feeds, for best results in rapid growth. In feeding wet mash provide sufficient trough space for all chicks to eat at a time. Give grain feed first in the morning and last at night. Feed as large a variety as possible, and at all times allow birds access to free range and plenty of shade. Both ground feed and whole grain seem to be necessary for best growth. Ground feed mixed with milk gives more returns than the same fed dry. Dry mash fed in large rain-proof hoppers brings down labor expense. Hopper feeding is indispensable on the farm for feeding chicks eight weeks old and over. Before this, hand feeding is best. The cornfield offers an excellent place for the rearing of young stock throughout the summer. Fields from which small grains have been cut make excellent places to rear chickens cheaply.

The following is a satisfactory ration for feeding chicks:

FIRST WEEK.

After chicks have been in the brooder about thirty-six hours, it is then time to give them their first feed.

Feed in Litter.—One pound bread crumbs, one pound rolled oats, one pound corn (fine), one pound wheat (cracked).

Allow access to following mixture: Two pounds corn meal, two pounds bran, two pounds rolled oats, one pound meat scrap (sifted), one pound wheat midlings.

Every chick should have a little grit and bone with its first feed; feed in shallow trays, together with grain, five times a day until all learn to eat. Provide fresh sour milk continuously. If necessary, place an older chick in the brood to teach them to eat and drink.

SECOND WEEK.

Feed in Litter.—One pound rolled oats, one pound corn (fine), one pound wheat (cracked).

Allow access to following mixture: Two pounds corn meal, two pounds bran, one pound rolled oats, one pound meat scrap (sifted), one pound wheat middlings.

Feed sparingly on grain mixture. Aim to feed only what chicks will clean up immediately. Observe keenness of appetite. Examine litter; if grain is found, skip one or two feedings. Feed green feed, such as chopped onions, sprouted oats, etc., twice per day.

A sliced mangel, to pick at throughout the day, keeps chicks happy. Provide, when possible, a fresh piece of sod. Chicks crave certain salts found in good fresh dirt.

SECOND TO FOURTH WEEK.

Feed in Litter.—One pound corn (fine), one pound wheat (cracked).

Allow access to following mixture: Two pounds corn meal, two pounds bran, two pounds wheat middlings, two pounds meat scrap.

Substitute two grain feedings with two feedings of moist mash, alternating with grain. Moisten the above dry mash with sour milk until crumbly. Feed sparingly at first. Do not feed more than will be cleaned up readily.

FOURTH TO SIXTH WEEK.

Give three feedings of grain and two of moist mash.

SIXTH TO EIGHTH WEEK.

Give three feedings of grain and one of moist mash.

EIGHTH WEEK TO MATURITY ON RANGE

Grain and dry mash in hopper.

Provide, from start, fine grit, meat scrap, bone, dry mash, and sour milk.

Allow abundance of grass range, and shade in season.

Avoid damp litter, unwholesome feeds, lice and mites.

Avoid feeding too coarse feed when changing grain rations.

The Lay of the Chickenier.

The Pioneer has passed away,
The Buccaneer has lost his prey,
The Cavalier now pitches hay,
The Musketeer has seen his day,
The Grenadier has said his say,
The Financier is held at bay,
The Gondolier is not so gay,
The Chickenier is here to stay,
Hail to the hen and to her lay!

The Doctor said to the dry goods clerk,
"It's back to the farm for you,
Your lungs are black with the city's smoke,
And your nerves are quite worn through."
The poor chap traded his earthly goods,
His dress suit and fancy vests
For a patch of land and six plain hens
All set on their egg-lined nests.

With this humble start the chap took heart
As he worked in open air,
Ere he was known as a Chickenier
His health was in good repair.
For some weary years he toiled all day
And part of the night, I grant,
The reward for his sacrifice and grind
Was a flourishing Egg Plant.

Now when prices of fresh eggs go sky high
This Chickenier laughs in glee,
Shipping the ovals ("Fragile"—"Keep Dry")
Each day from his hennery.
His supply keeps up through all seasons,
Receipts continue to grow,
To his old-time, worn-out friends he says:
"Haven't I reason to crow?"

"My Orpingtons purchased my dwelling,
Wyandottes, my motor car,
My Cochins Buff provided the stuff
For travels in lands afar,
My Spring Campines are my silver mines,
(Nearly sterling—New York dressed)
I'm rated by Dun, I've health and fun
And a richly feathered nest.

"Cock-a-doodle-dee!
You've nothing on me,
I never shall starve or beg,
The theme for my pen
Is the Noble Hen
That lays me the Golden Egg."
—C. B. Orwig.

THE DE PERE SHOW.

There were about 500 birds entered in the De Pere show, including all classes and breeds. Practically every bird entered was a show bird of high quality. The encouraging feature of the show was the exceptional interest of the farmers. Farmers from all over the state, and some from Michigan, exhibited. The chief awards at the show have been furnished to The Wisconsin Farmer by Chas. H. Behrendt, Jr., recording and show secretary, of Green Bay, Wisconsin, and they are as follows:

Champion pen won by Mrs. H. C. Rogers, of Oshkosh, Wis., on White Rocks.

Champion cock bird won by Mrs. H. C. Rogers on White Rock cock.

Champion hen won by A. J. Shannon,

(Continued on page 22.)

There's a Reason for These PHENOMENAL HATCHES

"Have brought off two 100% hatches in my Progressive." W. H. Thomas, Oak Flat, Ark.

"Progressive Incubator hatches average close to 100%." O. P. Parrish, Rutledge, Mo.

"Every single egg hatched that had a chick in it." Roy Green, Chattanooga, Tenn.

"Four fine hatches averaged from 90% to 100%." C. A. Walker, Charleston, Ill.

PROGRESSIVE INCUBATORS bring off Blue Ribbon Hatches like these because they are built from the best materials with latest improvements. Most consistent hatchers on the market. Biggest bargains.

$7.85 LOWEST PRICE YET FOR BIG 155 EGG INCUBATOR

GENUINE CALIFORNIA REDWOOD. Hundreds of dead air cells to protect eggs against sudden changes. Perfect Copper Hot Water Heating System, Double-disc Temperature Regulator, Heavy Safety Lamp, Double Doors, Strong Egg Tray, Reliable Egg Tester, Accurate Thermometer.

Write for new 1916 Combination Offer and Free Poultry Book with records of big hatches.

Incubator alone $7.85--with Brooder $9.85. Frt. paid E. of Rockies. Shipped complete all ready to use--no extras. Money back with 8 per cent interest if not found as represented. ORDER TODAY.

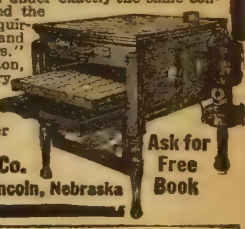
PROGRESSIVE INCUBATOR CO. Box 128 Racine, Wis.

The Queen Gets The Chicks

We receive many letters similar to this:

"Last season I installed a Queen as an experiment. It hatched 18 per cent better than eastern made machines and 11 per cent better than any other machine made in the west. All machines were run under exactly the same conditions. I recommend the Queen to everybody inquiring which is the best, and especially to beginners." —John Bowen, Littleton, Colo., Colorado Poultry Fanciers Association.

The Queen is built to run without trouble and to outhatch other machines. Book free.



Queen Incubator Co. 153 Bryan Ave., Lincoln, Nebraska

Ask for Free Book

Make Farm Poultry-Raising Profitable $60 DELIVERED

THIS is the finest, cheapest, most efficient hatcher I have been able to produce after thirty years. Thousands have proven it perfect in heat, moisture and ventilation. Round like a nest, just the right size, 66 eggs, for economy, convenience and results. Fitted with famous Sheer Automatic Fixtures, and guaranteed to hatch every hatchable egg. The 1916

"Peerless - 66"

delivered, for $60.00, is the only practical, all-metal, fire-proof, everlasting hatcher ever produced. Hot water or hot air heat, at the same price. It's the REAL FARM INCUBATOR. Send for big book, FREE--or better yet, send your order today at this special price. No freight to pay. Pacific Coast price, $7.00.

H. M. SHEER COMPANY, 194 Hampshire St., Quincy, Illinois

GLOBE GRAIN & MILLING CO., Pacific Coast Distributors, Los Angeles, Cal.

BIG HATCHES! On One Gallon of Oil-One Filling of Tank!

RAYO Incubators produce higher average hatches because center heat insures even temperature. Hinged glass top puts eggs, thermometer and all in plain sight, saving labor. Oil tank needs but one filling for entire hatch. Flame regulator saves 3 to 6 gals. oil every hatch. Hatching chart and money making book on request. Write for them and new catalog.

Rayo Inc. Co., U. D. Sta. 3369 OMAHA, NEB.

140 EGG Neubert Incubator $7.50

The famous Pioneer Hatcher of Quality made by experts of 22 years' experience. None better at any price. No cheap pasteboard or metal affair. Double wooden walls, dead air space, redwood, hot water copper tank, self regulator, safety lamp, high nursery. Most simple and durable; set up ready to use. Money back guarantee. Brooders $2.25 up. Factory prices saves half. Big catalog free. Write to-day.

Neubert Incubator Factory, Box 12 Mankato, Minn.

DETROIT CUTS THE COST

Here is the low priced famous Detroit Incubator—a wizard egg hatching machine, simple and reliable. Big hatches a sure thing. Large production makes my price low. Send Post Card now for my free book and startling price offer.

HOMER L. SMITH, Pres.

(1) Detroit Incubator Co., 442 Campbell Ave. Detroit, Mich.

SHOEMAKER'S BOOK on POULTRY

and Almanac for 1916 has 200 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about Incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.

C. C. SHOEMAKER, Box 897 Freeport, Ills.

FOY'S BIG BOOK FREE

POULTRY AND SQUABS FOR PROFIT. An encyclopedia of poultry information. Written by a man who knows. Leading varieties of poultry and pigeons in natural colors. Low prices on fowls and eggs.

Frank Foy Poultry Farm, Box 82 Clinton, Iowa

Close to Nature

The principles in the Radio-Round are those used by the setting hen. It has no corners to get cold. Radio built-in Moisture System and Triple Center Heater duplicate the mild, moist heat of the hen's body.

Round Like a Hen's Nest

Hatches on one gallon oil, one filling of tank. Labor-saving egg tray. Hinged cover with double glass panels. Only three minutes care daily. Beautiful imitation Sycamore wood finish on steel plate. Handsome enough for the parlor. Strong and durable, but light. We pay the freight.

Write for free Book No. 89

RADIO-ROUND INCUBATOR CO., Drawer 9 Wayne, Neb.

Mild Moist Heat

A Few Good Poultry Types

THE Columbian Rock Pullet shown in the double-column illustration on this page has traveled over 9,000 miles this year, having been exhibited at both the Panama-Pacific Exposition and the Madison Square Garden show in New York City. She was first pullet and champion female at the San Francisco show and first pullet at the Madison Square Garden show. Her full sister won first pullet and champion female at the Chicago show January 13-19, 1916. These birds are owned by James H. Taylor, Woodstock, Illinois, and are an excellent example of careful breeding to a good type. Other types shown on this page are also good and will be found interesting to look upon.

Farmers generally throughout the grain-belt states are beginning to realize the value of good breeding in poultry. More and more of our readers are taking an interest in the shows each year. They have become convinced that it is just as important to have good poultry breeding, if one wishes to make the most out of the poultry business, as it is to have good blood in horses, cattle, hogs and sheep. It is just as possible to have poultry "boarders" as it is to have dairy cow or hog "boarders."

A MUCH-TRAVELED CHAMPION BIRD.
This Columbian Rock Pullet is the property of James H. Taylor, of Woodstock, Illinois.

Better than 200 eggs a year, Single Comb White Orpington hen, owned by Rev. D. W. Davis, Stanley, Wis.

First Buff Plymouth Rock hen, Chicago Show, 1916. Owned by H. H. Rich, Des Moines, Iowa.

First cockerel White Leghorn, 1915 Wisconsin State Poultry Show. Owned by J. H. Durfee, Madison.

Single Comb White Orpington, a good type of this variety owned by Rev. D. W. Davis, Stahley, Wis.

First cockerel Columbian Plymouth Rock at Chicago Show. Owned by E. D. Broadt, Hellam, Pa.

Single Comb Brown Leghorn, winner at 1916 Chicago Show. This bird owned by E. A. Crotser, Fulton, Mich.

[illegible] type of White Leghorn cock[illegible] and owned by J. H. Durfee, [illegible]son, Wis.

Single Comb Rhode Island Red hen. A good type. Owned by M. C. Davis, Woodstock, Ill., who won several Chicago awards.

First Buff Wyandotte pullet, Chicago Show, 1916. Owned by John H. Saylor, Maryville, Mo.

THE DE PERE SHOW.

(Continued from page 21.)

of Appleton, Wis., on White Wyandotte.

Champion cockerel won by James A. Daley, of Mohawk, Mich., on Black Orpington.

Champion pullet won by Edw. J. R. Meyer, of Oshkosh, Wis., on Single Comb Anconas.

Cup was awarded to each of the above.

James Phinnester, Jr., De Pere, Wisconsin, won the large cup offered by C. Danen on largest number of varieties exhibited.

The show was a success in every way and enjoyed by all.

THE STANLEY SHOW.

To the Editor:—The Stanley Poultry Show was held in Stanley, Wis., January 4, 5 and 6, 1916. It was a financial success and was well attended by people from far and near. There were nearly 200 birds at the show. The Orpingtons were in the lead, followed by the Rhode Island Reds, White Wyandottes, Barred and White Rocks.

L. T. Abercrombie, of Waupaca, Wis., had the highest scoring bird at the show, a White Rock pullet scoring 94¾, and D. W. Davis, of Stanley, Wis., had the next highest scoring bird, a S. C. White Orpington hen, scoring 94½.

The following were winners of sweepstakes:

Solid Colored American Class.—L. T. Abercrombie, Waupaca, Wis., 1st, White Rocks; R. C. Buzzell, Stanley, Wis., 2d, White Wyandottes; L. T. Abercombie 3d, White Rocks; W. A. Abbott, Stanley, Wis., 4th, White Wyandottes.

Partly Colored American Class (except Rhode Island Reds)—L. T. Abercrombie 1st, Barred Rocks; Dr. F. W. Starr 2d, Barred Rocks.

Single and Rose Comb Rhode Island Reds—Ralph Keinholz, Stanley, 1st, Rose Comb Reds; W. G. Royar 2d, Rose Comb Reds.

White Leghorns—S. F. Taylor 1st.

Silver Spangled Hamburgs—Miles Welles, Waupaca, 1st.

English Class—D. W. Davis, Stanley, 1st and 3d White Orpingtons; Mrs. R. C. Rhodecker, Holcomb, Wis., 2d, Buff Orpingtons; Dr. E. F. Burns, Stanley, Wis., 4th, Single Comb White Orpingtons.

GRAND SWEEPSTAKES.

American Class.—W. G. Royer, Owen, Wis., 1st, Single Comb Rhode Island Reds; L. T. Abercrombie 2d, White Rocks; R. C. Buzzell, Stanley, Wis., 3d, White Wyandottes; W. A. Abbott 4th, White Wyandottes.

English Class.—D. W. Davis, Stanley, Wis., 1st and 3d, Single Comb White Orpingtons; Mrs. R. C. Rhodecker, Holcombs, Wis., 2d, Single Comb Buff Orpingtons; Dr. E. F. Burns, Stanley, Wis., 4th.

Mediterannean—S. F. Taylor 1st; Miles Wells, Waupaca, 1st on Silver Spangled Hamburgs.

D. W. Davis, Secy.,
Stanley, Wis.

THE STEVENS POINT SHOW.

The Stevens Point show this year was free to the public and was run in connection with the institute. The judge was J. A. Greenwald. According to advices to The Wisconsin Farmer, he gave good satisfaction. There were nearly twice as many entries as last year and splendid interest on the part of farmers in better poultry. The weather was stormy and the day of the show was the coldest day of the year. Mr. F. J. Blood, secretary and treasurer of the Stevens Point Poultry Association, is much encouraged by the results of the show and believes that they will have a much better showing next year. The various breeds entered and the number of each were as follows:

Anconas, 2; Silver Campines, 10; Red Shuffler Games, 4; Houdans, 2; Black Langshans, 6; Single Comb Brown Leghorns, 9; Single Comb White Leghorns, 10; Single Comb Buff Leghorns, 6; Rose Comb Buff Leghorns, 5; Rose Comb Black Minorcas, 26; Single Comb Black Minorcas, 10; Single Comb Buff Orpingtons, 16; Single Comb White Orpingtons, 14; Single Comb Black Orpingtons, 2; Barred Rocks, 40; White Rocks, 3; Rose Comb Rhode Island Reds, 8; Single Comb Rhode Island Reds, 28; Redcaps, 14; Silver Laced Wyandottes, 11; Buff Wyandottes, 18; Partridge Wyandottes, 3; Columbian Wyandottes, 13.

SPROUTED OATS USED.

To the Editor:—We are Bantam breeders and have about 450 Bantams and do not feed for egg production during the winter months, as it does not pay in Bantam eggs.

We believe in the open air system of housing and we keep our birds from lice and mites by using disinfectants twice a week.

We feed our Bantams sprouted oats, cabbage and other green feed.

also use ground bone, grit and oyster shell. There is nothing better than sprouted oats in the winter, as poultry always want something green.

White Cochin hen, first prize winner last year at Manitowoc, Wis.

We make our runs so that our stock has a little work. We take hay seed, cut straw and oats screenings, mix them good and then throw them in the runs so they have something to scratch in. We always throw our feed in the so-called bedding and the chickens will have to scratch for their feed.

Our chickens always look healthy and are not bothered with any sickness. It is very seldom that we have a case of roup.

We are sending you a postal that

First prize cockerel at Sheboygan Poultry Show last year. Owned by Dachs Bros.

Tells why chicks die

Write today for the poultry expert's valuable free book, "White Diarrhoea and How to Cure It." This book contains scientific facts on White Diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. The valuable book is free. Send your name and address for it now. E. J. REEFER, 1482 Reefer Building, Kansas City, Mo.

50 Best Paying Varieties Hardy Northern raised Chickens, Ducks, Geese and Turkeys. Pure-bred heaviest laying strains. Fowls, Eggs, Incubators, all at low prices. Large new Poultry Book and Breeders' Complete Guide Free. W. A. WEBER, Box 905, Mankato, Minn.

60 BREEDS Valuable Poultry Book Free—New 100-page 22nd Annual Edition. Fine pure bred chickens, ducks, geese and turkeys—Northern raised, hardy, beautiful. Fowls, Eggs and Incubators, low prices. America's greatest poultry farm. Write today for Free Book. R. F. NEUBERT CO., Box 806 Mankato, Minn.

MONEY IN POULTRY AND SQUABS Start small. Grow BIG. Get winter eggs. Keep healthy fowls. Save your chicks. Our Big Book Tells How. Shows fowls in natural colors, how to feed for eggs, select best layers, plans for houses. FREE. Crescent Poultry Farms, Box 29, Des Moines, Iowa

POULTRY.

STRONG, healthy baby chicks or eggs for hatching W. Wyandottes. Our White Wyandottes are utility birds and are not like some so-called utility stock that consists of birds culled from flocks raised for exhibition purposes only. If you want stock that will lay well you must breed them for that purpose. Come and see these birds, or write for catalog giving list of matings, records and prices. Pine Lake Poultry Farm, Chas. H. Benjamin, Mgr., Dept. 12, Hartland, Wis.

Breeding Stock From a Specialty Breeder
WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

S. C. R. I. REDS FOR SALE
BRED from prize winners. Ready for delivery. 50 pullets that will lay within a month. None disqualified. Good breeders $2.50 up. Cockerels $2 up. Exhibition birds at reasonable prices. Won 9 ribbons on 15 birds at the Wisconsin State Fair, 1915. Winnebago Poultry Yards, R.23, Omro, Wis.

ROSE COMB REDS
LARGE, dark ruby red, farm range birds. Score from 90 to 93½. Several blue ribbon winners. I produce the big kind. A card will bring price list. Mrs. F. H. Burt Brodhead, Wisconsin

PURE-BRED WHITE and Barred Rocks. 19 years breeder of highest quality. Big, nice cks., pullets and hens at reasonale prices. Mrs. J. F. Bloom, R. 1, Stillwater, Minn.

58 BREEDS Fine, pure-bred chickens, ducks, turkeys, geese. Hardy, northern raised. Fowls and eggs at low prices 22 years at it. America's pioneer poultry farm. Large catalog free. F. A. NEUBERT, Box 607, Mankato, Minn.

FAHA'S SILVER WYANDOTTES. "The Aristocrats." Cocks, hens, cockerels, pullets. Pens. Write your wants. Catalog free. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

58 BREEDS FINE pure-bred chickens, ducks, geese, turkeys, guineas at low prices. America's finest poultry farm. 3000 prizes. Large catalog 4c. A. A. Ziemer, Box 15, Austin, Minn.

BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys and guineas. Bare Poultry Co. Box 825, Hampton, Iowa

241 EGG Strain S. C. Buff Orpingtons. 200 cockerels, hens and pullets for sale. Catalog free. Address W. L. Bardsley, Neola, Iowa.

DOGS.

HOUNDS Coon, Skunk, Fox, Wolf, Deer and Rabbit hounds, pedigreed and eligible to register. Sold on ten days trial, with money-back guarantee. Otis Slater & Son, Oconee, Ill. Successors to R. F. Johnson, Assumption, Illinois.

FOR SALE Tow Shepherd dogs which are trained to drive cattle. Address Fred Buetow, Cologne, Minnesota.

Wisconsin Wins In Big Hatching Contests Every Year

Why Pay More
For only $10 you can get these two prize winning machines, delivered, freight paid east of the Rockies. You take no risk—money back if not satisfied. You can order direct from this ad. Ask the publisher about us.

Both Machines Freight Paid For Only $10

We also furnish 180 Egg Incubator and 180 Chick Brooder both for only..$12

Wisconsin Incubators have long proved their wonderful hatching qualities. Competing with every make known, they won in the five big annual National Hatching Contests. Think of it. Five consecutive victories. That certainly proves you can't make a mistake. Shipped on 30 Days' FREE Trial

MONEY BACK IF NOT SATISFIED

10-YEAR GUARANTEE

Wisconsins have hot water heat, double walls, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Made of finest, select, clear CALIFORNIA REDWOOD, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1916 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

WISCONSIN INCUBATOR COMPANY, Box 102 Racine, Wis.

WHITE WYANDOTTE cockerels on the Ardmore Poultry Farm, Oconomowoc, Wis. This farm which markets about 60,000 ducks annually, also breed pure-bred White Wyandottes and market about 2,000 annually.

was taken at Sheboygan Poultry Show last year. The White Cochin took first there, also at Plymouth. We have as yet no picture of our Bantams. We took first on Buff Cochin hen, third on buff cockerel, black cockerel third, Red Pyle hen second, fifth Silver Laced Wyandotte cockerel, fifth on Silver Laced pullet. We took seven first at Watertown County Fair and one second, showing fifteen Bantams, first Buff Cochin cockerel, first pullet, first hen, second cock, first white cock, first white hen, first black cock, first black hen. These were all Cochins shown at Watertown.

Dachs Bros.' Bantam Yards.
Milwaukee Co., Wis.

MILWAUKEE SHOW.

The poultry show in the Auditorium in Milwaukee was such a success that it will occur next year, an agreement having been signed whereby the Auditorium will be used, beginning January 18, 1917.

Some of the first prize winners in the show follow:

W. W. Henderson, Barred Plymouth Rocks, cocks.
W. W. Henderson, Barred Plymouth Rocks, hens.
Mrs. O. V. Daniels, Barred Plymouth Rocks, cockerels.
W. W. Henderson, Barred Plymouth Rocks, pullets.
J. F. Riemer, White Plymouth Rocks, cocks.
J. F. Riemer, White Plymouth Rocks, hens.
Frank W. Kramer, Buff Plymouth Rocks, cocks.
Frank W. Kramer, Buff Plymouth Rocks, hens.
H. G. Rohde, Buff Wyandotte cocks.
J. F. Chapman, Silver Wyandotte cocks.
Frank E. Hering, White Wyandotte cocks and hens.
Charles D. Love, all Golden Wyandotte classes.
John Blanchard, American Dominique cocks and hens.
Single Comb White Leghorns, Pabst Stock Farm.
Mrs. John Wolf, Rose Comb White Leghorn cocks and hens.
W. D. Kimball, Single Comb Buff Orpington cocks and hens.
F. M. Gench, Speckled Sussex cocks and hens.
U. J. W. Page, Calumet, hens, cockerels and pullets.
Royal Poultry Farm, colored Muscovy ducks, all classes.
Royal Poultry Farm, Toulouse, cocks, hens and pullets.
Mrs. Theodore Hewes, White Crested Black Polish and White Polish, all classes.

ANGUS MEETING.

The Wisconsin Aberdeen Angus Breeders' Association will hold its annual meeting February 9th at the college of agriculture, Madison, Wisconsin.

Wm. A. Connell, Sec.

BLACK WYANDOTTE.

This cock bird won first at recent Chicago Show. The property of Theodore J. Ritter, La Crosse, Wis.

Conkey says—Don't worry—White Diarrhea is the springtime terror but you can save your chicks with Conkey's White Diarrhea Remedy, 25c & 50c at your dealers or postpaid. Conkey Co., Cleveland, O.—Adv.

Make Good Your Big Opportunities with Poultry

High market prices for poultry and eggs—big grain crops producing cheap poultry foods—plentiful money and busy factories everywhere—all make big opportunities for poultry raisers. Now is the time to start with

Cyphers-Built Incubators

Low in cost—sure in results—three styles—eight sizes. Also complete line of Hovers, Brooders. Write today and start hatches early.

Big Catalog FREE—Write Today

168 pages showing 100 different articles for poultry men. Also ask for book "Poultry Foods and Feeding."

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Factory and Home Offices
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Buffalo, N. Y.

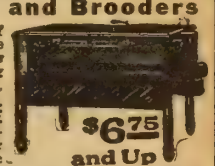
Three Styles Eight Sizes
$12 to $40

My Best Offer in 21 Years

Write Today for this offer which gives you the oldest and best known incubator at a rock bottom price. Get my guaranty which insures you a *sure success* and *big profits* this year with

"Successful"
Incubators and Brooders

Backed by 21 years of successes—and the strongest guaranty ever written. Twenty big points for success. Write today for catalog.



$6.75 and Up

Poultry Lessons FREE to every buyer of a "Successful" Incubator or Brooder. A complete course—well worth $25—insures success—tells how to save on feed—get top-notch prices, etc.

Feed Sprouted Grain—Get More Eggs—with *"Successful" Grain Sprouters*—built in all-steel sections—fireproof. Changes 1 bushel oats into 3 bushels fresh, green egg-making feed. Makes hens lay in winter. Send for free descriptive circular and low prices.

Write for Catalog of "Successful" Incubators and Brooders. Enclose 10c if you also want "Proper Care and Feeding of Chicks, Ducks and Turkeys." Incubator catalog is FREE—Write today.

J. S. GILCREST, *President*
DES MOINES INCUBATOR CO. 3802d St., Des Moines, Ia.

WE PAY $80 A MONTH SALARY
AND furnish rig and all expenses to introduce our guaranteed poultry and stock powders. Bigler Company, X 660, Springfield, Illinois

Farmers Like the Windbreaks.

Great Protection For Home Buildings and the Live Stock---How a Few Grain Belt Farmers Feel About It.

NOTHING adds more to the beauty of a farm home place than a fine windbreak. But the ornamental value of a windbreak is by no means its greatest importance. The real purpose of a windbreak is to protect farm buildings and live stock. The value of a windbreak for such protection has been recognized by farmers in the prairie states ever since this country was settled. There was a time when good evergreens could not be bought at a reasonable price. Those that were for sale were not properly grown. It is entirely a mistaken idea that one may go out into the pine woods of Minnesota or Wisconsin and pull up little pine trees and replant them and get a good windbreak. It can't be done, because the evergreens won't grow. A windbreak with a considerable number of scrawny and ragged trees in it is poor protection. Unless one can get evergreens which are reasonably uniform in size, which have been properly transplanted, preferably three times, and three times root pruned, there is not much chance of getting the best kind of windbreak.

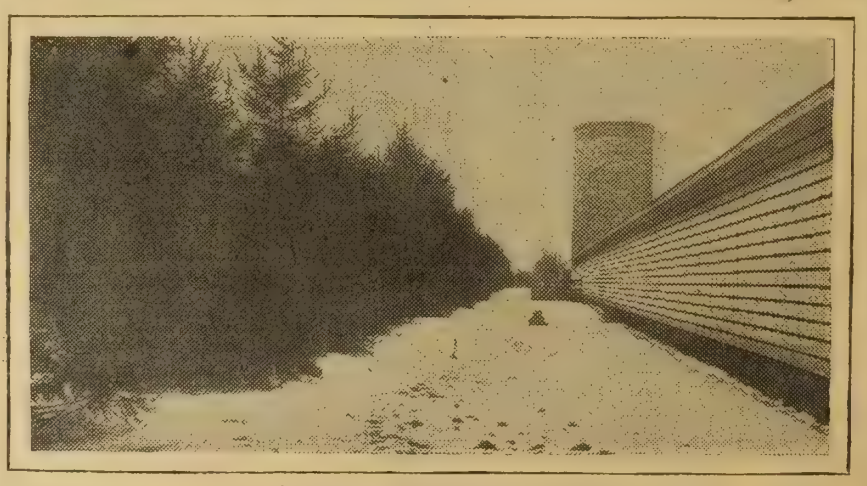
The writer recently visited several farms in Franklin county, Ia. This is one of the counties where $200 to $250 per acre farm land is no myth, and as it happens it is a county which leads in number and quality of windbreaks. On the old Mott place we saw a double row of Norway Spruce which was planted eight feet apart each way thirty-six years ago this spring. This windbreak protects a large orchard and also a good set of farm buildings and is good for a great many more years. The William Fink farm lies north of the Mott place and has over 1,000 evergreens on three sides of the set of buildings. The windbreaks are Norway Spruce and White Pine. A new Scotch Pine windbreak is growing on the northwest side. The evergreen windbreaks are taking the place of the old willows, which are dying out and which never did afford the protection which is given by the evergreens. One of the pictures shown herewith and marked as illustration No. 1 shows the new Scotch Pine windbreak supplanting the old willows, which are soon to be taken out. Mr. Fink, who appears in this picture, unlike a good many farmers, has planted his evergreens far enough away from the old willow hedge so that they will do well. His evergreens were planted six years ago last spring. It will be noted that Mr. Fink has chopped down one row of willows and he advises us that he intends to cut away the others before spring and to put in another row of evergreens, which in all probability will be Norway Spruce or American Arborvitae. The importance of planting evergreens far enough away from an old grove so they may have a chance for their life cannot be overestimated. Attention may also be called to the fact that this Scotch Pine grove has been well cultivated

NO. 1—GOOD GROWTH OF SCOTCH PINE.

This grove has a fine start. The owner selected good transplanted and root-pruned stock, put the trees some distance back from his willow hedge and fenced off the grove to keep the stock out. He also has paid attention to cultivation.

NO. 2—DOUBLE ROW NORWAY SPRUCE.

Eugene Mallory, a successful Iowa stockman, is proud of this windbreak which protects a fine set of buildings and stock which often tops the Chicago market.



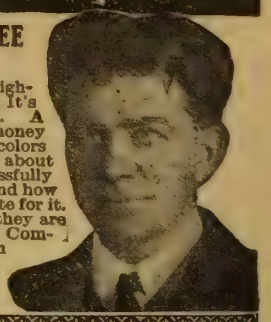
NO. 3—VIEW ON MALLORY PLACE.

Showing the windbreak on the side nearest the buildings. This corncrib and brick silo contain valuable winter stores.

I Challenge The World To Beat My Quality And Meet My Low Prices On Nursery Stock

Big, New Catalog in Colors—FREE Full of Wonderful Bargains

My great new 1916 catalog of Ferris high-grade nursery stock is ready for mailing. It's free and I want you to have a copy. A book you need if you want to save money on trees—handsomely illustrated in colors and containing complete information about Ferris trees. Tells how to plant and successfully grow evergreens and other nursery stock and how I save you 30 to 50% when you buy. Write for it. Read the bargains in this ad carefully—they are special bargains for readers of my ads. Compare my prices on the best trees grown with others and order now, direct from the ad. Read my big guarantee—it covers every tree I sell and makes you absolutely safe.



100 Root-Pruned Evergreens $1.50

Hardy 2-year-old, root-pruned evergreens--biggest bargain ever offered for anybody who wants to start a windbreak at the least possible cost. Tough, strong little trees that have plenty of roots. Each tree perfect. Order today.

- Guarantee -

Everything I sell is strong and hardy, first-class, true to name, guaranteed to reach you alive and in growing condition If not, replaced or adjustment as per terms in catalog. No argument. EARL FERRIS.

100 Transplanted and Root-Pruned Evergreens $4.50

Sure-to-grow trees with big, strong, vigorous root systems. Scientifically grown for transplanting. Ready to set into your windbreak row. Every tree full of vitality. Selected and packed under my personal supervision. If you want trees for a windbreak take advantage of this offer. NOW!

300 Strawberries $1.00

Thousands of fine, hardy, quick-growing plants. Standard, big-producing varieties. Regular price $1.00 per 100

Apple Trees 10c

I'm saving my customers 20c to 40c a tree. These are the biggest value ever offered by anybody worth 80c to 40c; 4 to 6 ft. high. 25 varieties to choose from. Order 10 trees now and save money. All perfect.

Bargain No. 2

Agents are selling St. Regis everbearing red raspberries for $5 per dozen and would ask for a collection of this kind $7 or more. Now we will give these 48 choice raspberry and blackberry plants, 12 Stone's Hardy Blackberries, 12 Cumberland Black Raspberries, 12 Louden Best Red Raspberries, 12 St. Regis Everbearing Red Raspberries If ordered at once the entire collection by parcels post, prepaid at this special price $1.86 POST PAID

Bargain No. 3

This bargain is made up of the hardiest and best flowering shrubs we grow. They are all good strong plants that will give absolute satisfaction and are all one year field grown plants, which makes them suitable for sending by parcel post. This is a collection an agent would sell for $3.50. 1 Hydrangea, 1 Common Snowball, 1 Japan Snowball, 1 Yucca Filamentosa, 1 Dorthea Perkins Rose, 1 Crimson Rambler Rose, 1 White Perkins Rose, 1 Purple Lilac. $1.68 POST PAID

EARL FERRIS NURSERY CO., 265 Bridge St., Hampton, Iowa

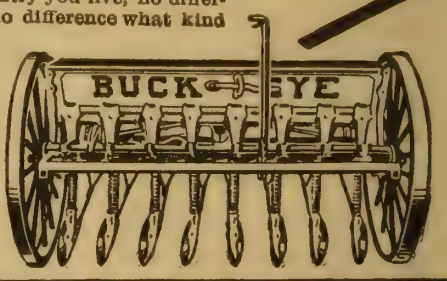
BUCKEYE GRAIN DRILLS

Ask your local dealer to show you the Buckeye "Get-at-able" Disc Bearing; no rivets to cut; only three bolts to take out; no repair bills; bearings replaced free if they ever wear out. Compare the Buckeye Drill with any other Drill and you will then understand why it is sold under such a broad and liberal warranty.

No difference in what state or country you live; no difference what your seeding conditions; no difference what kind of seed you want to sow, you can get a Buckeye Drill that will do your work right. Buckeye Drills have many exclusive features that are worth your attention.

Send for the Buckeye Drill Catalogue.

THE AMERICAN SEEDING MACHINE CO INCORPORATED SPRINGFIELD, OHIO U.S.A



Free Seed of Earliest Tomato

JACK ROSE, earliest of all smooth, red tomatoes. Get free package of this seed by sending us 2c stamp to pay postage on beautifully illustrated 1916 catalog. For best results and highest quality plant Jung's Tested Farm, Garden and Flower Seeds.

New Sorts Free with Every Order

A pleasant surprise. Write today for Bargain Catalog.

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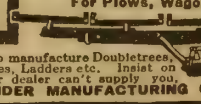
HEIDER EVENERS

2, 3, 4, 5 and 6-Horse Eveners For Plows, Wagons, Etc.



Also manufacture Doubletrees, Singletrees, Neckyokes, Ladders etc. Insist on Heider goods; If your dealer can't supply you, write us.

HEIDER MANUFACTURING CO., Carroll, Iowa

and is fenced so that stock cannot run through it. This is important to those who would grow a good windbreak. Another windbreak which is shown in illustration No. 2 was photographed on the Eugene Mallory stock farm, south and west of Hampton. This is certainly a beautiful double row of Norway Spruce. Mr. Mallory has over 1,000 evergreens similar to these on four sides of his large feed pens. He feeds ten or twelve carloads of stock every winter back of these windbreaks and effects an actual saving of feed which would pay the cost of the evergreens in a single year. Mr. Mallory has so frequently topped the Chicago market that he is pretty generally known among the stockmen of the state. He has improved several farms in Iowa and some in Minnesota and on every one he works out a practical plan of evergreen windbreaks. He has made the statement that every evergreen grove which he has ever put out at an expense of $100 has added $2,000 to the value of the farm when he came to sell it. Our readers will be interested in another view taken at the Mallory place and marked illustration No. 3. This shows the long corn shed and the new brick silo. Back of the corn shed is the Mallory feeding shed and feed lot. The feeding shed is one of the best buildings of its kind in the state. Mr. Norman Ingliss is a banker living at Hampton and he owns a farm northwest of that city. The farm was visited by the writer. The set of buildings are not yet in, with the exception of two sheds. Mr. Ingliss has started his improvements by setting out an evergreen windbreak shown in illustration No. 4. He expects to get this windbreak well established before building the house or barns. He looks upon a windbreak as an important part of farm equipment; so important that he can afford to wait a few years for it to grow strong and sturdy and become a protection for the buildings and the people and stock housed therein.

NO. 4—THINKS OF WINDBREAK FIRST.

Banker who owns this valuable farm land worth $200 per acre or better will erect fine farm buildings when his windbreak is in shape to give them proper protection. He figures that the windbreak is as important as any other farm improvements and adds greatly to the value of the land.

During the day in Franklin county several fine farms were visited and all were supplied with good windbreaks. Mr. Henry Witte, six miles northeast of Hampton, has a Scotch Pine windbreak well protected by a fence. Mr. Witte is one of the most prosperous farmers of northern Iowa. He bought land ten years ago for $85 per acre and was recently offered $265 per acre for it. He did not accept the offer. On the contrary he has so much faith in good Iowa land that he bought an additional unimproved forty for $193 per acre. Mr. Witte thinks a great deal of his Scotch Pine windbreak and expects to extend it alongside of his set of buildings. He is a feeder and very successful. On the Charles Dean farm, also several miles north of Hampton, we found the old farmhouse had been shoved back and a fine new modern dwelling is in the course of construction. The new dwelling is well protected from the north and west by evergreens. Mr. Dean is another successful northern Iowa farmer. He has been using a steam plow for a number of years and he says that is the reason his horses are so fat. Mr. Dean owns property on both sides of the road and has a windbreak on each side. When the Iowa blizzards come along they have no terrors for him.

"COLD-PACK" CANNING.

The five different methods of canning foodstuffs most commonly used may be classified as follows:

(1) The open kettle, or hot-pack method; (2) the intermittent, or fractional-sterilization method; (3) the cold-water method; (4) the cold-pack single period method; and (5) the vacuum-seal method.

The most popular method and the one recommended by specialists in charge of club work in the department is known as the "cold-pack." This simply means that the products are packed cold in their fresh and natural state in the glass jars or containers. To the fruits hot sirup is applied; to the vegetables and greens hot water and a little salt for seasoning is added. Then the sterilization is done in the jars or containers, after they are partially or entirely sealed, making it practically impossible for bacteria or spores to enter after the product has once been carefully sterilized or cooked. In following this method vegetables should first be blanched in boiling water or live steam, then quickly dipped into cold water, the skins removed and the products cut into suitable sized pieces. The products are then packed in containers and sterilized. Leaflets N. R. 23, 24, 28, 33, 34 and 37 of the department contain instructions and recipes.

By this "cold-pack" or cold-fill method of canning many food products can be successfully sterilized in a single period with but one handling of the product in and out of the processing vessel. The recipes referred to apply equally well to homemade outfits as to the several types of commercial sterilizers. Practically every type of fruit jar manufactured can be successfully handled in connection with this method.

FERTILIZER IN THE ORCHARD.

To the Editor:—Being a great friend of apples as a boy I decided to raise a big orchard when I obtained a farm of my own. It was in 1878 that I attained to that ambition. I then planted a lot of 100 trees consisting of the following varieties: Duchess, Tetofsky, Pewaukee, Fameuse, Plumb's Cider and Haas. I planted these in new broken land, but the summer being very wet I decided to cover them and consequently didn't lose a tree. But frequently if they are covered in a wet season they will root upward and if this covering is removed in any way they will die later on. To prevent this I now cover them with more ground than I intend to leave. If they need to be watered water them thoroughly and mulch them. By doing this they will pull through a very dry season.

In 1885 I lost all of the Pewaukees, the Fameuse and all but two of the Plumb's Cider. Not knowing where to receive information and being anxious to raise winter apples I planted every kind I heard of. I once went to Baraboo and saw a well-known fruit grower. From him I got many Russians. These I planted, but afterwards removed and threw away.

Top grafting was my next experience. Having a few Hibernal I sent for some Pewaukee scions. I grafted but one scion of the Pewaukee on the tree. The other scions were of other hearty winter varieties. The following winter was cold and in the spring I noticed that the Pewaukee scion was so nearly killed that it did not bud out until June. From this I concluded that only because the tree and other scions were sound and healthy the Pewaukee was saved. This continued to be the story of that variety even after it grew to be an old branch.

If I were planting a new orchard I should only plant Hibernal and top graft the first spring after planting both early and late varieties on the same tree. I should also try to put on some shy bearers. This would prevent overloading the tree, which is one of our greatest troubles. Another advantage of putting early and late varieties on the same tree is the fact that after the early apples are picked off it eases the tree and the late apples will grow much faster and generally much larger.

Another problem that confronts the fruit grower is the keeping up of fer-

Trustworthy Clover Seed

There are four things you want when you buy clover seed:—

1. High purity and freedom from foul, dangerous weed seeds.
2. Seed, nearly every one of which will grow.
3. Plumpness and good color, indicating health and vigor.
4. Hardy seed, adapted to severe climatic conditions.

Pure seed helps to keep your land clean and increases its value. When almost every seed grows, it costs less per acre than seed of low germination. Plump seed grows quickly, producing stronger, more prolific plants, thus giving a heavier hay or pasture crop. Hardy seed survives where other seed winter kills and fails. To be sure of satisfactory crops sow

NORTHRUP, KING & Co.'s SEEDS

Your assurance that these seeds are dependable is founded on the well-earned reputation enjoyed by Northrup, King & Co., for knowing the seed business and conducting it honestly. They will never permit the Sterling, Northland or Viking trade mark to be placed on any seed which does not come up to their required standard.

Sold by 15000 Dealers

In nearly every community in the Northwest there is a dealer who sells our seeds, making it easy for every planter to buy. If your merchant does not handle our complete line, he will take your order for any variety of our seed you want. Such orders will be filled without delay. If no dealer in your vicinity handles our seeds, send your order to us and it will receive prompt attention.

32nd Annual Catalogue

This is the best book we have ever issued. Whether you buy our seeds from the dealer or not, this complete, well-illustrated Seed Catalogue will help you select the seeds you need. It fully describes our clovers as well as all our other seeds for the garden, farm and lawn. A copy will be mailed you free, upon request. Write for it now.

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HENNEPIN AVE. AT FIRST ST.
MINNEAPOLIS, MINN.

DEPENDABLE SEED CORN FOR WISCONSIN

WE have been in the seed and nursery business in the Northwest for fifty years and you can depend on strictly first-class seed and trees from us. We have already received orders from Wisconsin this year for a good many thousand bushels of our seed corn, shipment has been made to numerous customers and they are satisfied. We can furnish you with such varieties as WISCONSIN NO. 12 or GOLDEN GLOW, MINNESOTA NO. 13, NORTH DAKOTA WHITE DENT and other varieties suitable to your state. Can furnish you 1914 or 1915 crop whichever you prefer. The 160-page, 1916 catalog givi all information is ready. It's free.

Gurney Seed and Nursery Company

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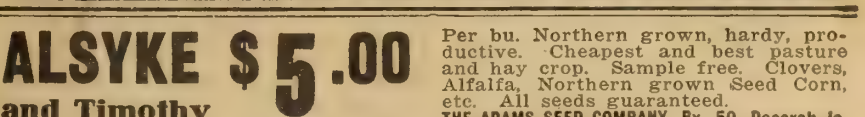
20 Pkts. Northern Grown Seeds 10¢

Olds' 96-Page Catalog tells the truth about the best varieties Potatoes, Field and Garden Seeds. Easiest catalog to order from. MAILED FREE

LETTUCE, - Good all the year.
CABBAGE, - - Best early variety.
CARROT, The general favorite.
BEET, - - - Olds' best early.
ONION, - - Red Wethersfield.
PARSNIP, Smoothest and best.
WATERMELON, Leading melon.
PARSLEY, - Fine for seasoning.
MUSKMELON, - - Rocky Ford.
CUCUMBER, Olds' White Spine.
PUMPKIN, Best for pies.
RADISH, Early & tender.
TOMATO, Olds' best early.
SPINACH, - - Olds' Long Season.
TURNIP, - Favorite table variety.
COSMOS, Olds' largest flowering.
DIANTHUS, - Best double pinks.
MIGNONETTE, - Finest strain.
POPPY, - Splendid double mixed.
ZINNIAS, - Olds' Superb Mixed.

L. L. OLDS SEED COMPANY, 13 Olds Bldg., Madison, Wis.



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THE ADAMS SEED COMPANY, Bx. 50, Decorah, Ia.

SWEET CLOVER
BIGGEST MONEY-MAKER KNOWN—INVESTIGATE
The greatest forage plant that grows. Superior to all as a fertilizer. Equal to Alfalfa for hay. Excels for pasture. Builds up worn-out soil quickly and produces immense crops, worth from $50 to $125 per acre. Easy to start, grows everywhere, on all soils. Don't delay writing for our Big 100-page free catalog and circular giving full particulars. We can save you money on best tested, guaranteed, scarified seed. Sample Free. Write today.
A. A. BERRY SEED CO., BOX 934 CLARINDA, IOWA

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SEED CORN QUESTION NOW

EVERY DAY'S DELAY is costly. The Seed Corn shortage in Minnesota alone amounts to 300,000 bushels. The best seed and best prices can be had **right now.**

Why take chances on inferior seed, when you can get guaranteed Seed Corn at reasonable prices, backed by specialists with 27 years experience.

Why risk your entire crop in buying from Mushroom Seed Men whose sole aim is to profit by this year's shortage? We protect you and fill your order on a money-back guarantee if not satisfactory.

Send at once for our new **Illustrated Seed Book** and special information regarding the **Seed Corn** situation.

We grow **Seeds** and **Nursery Stock** on our own farms and comply with all Pure Seed Laws. Samples and Seed Book free on request.

FARMER SEED & NURSERY CO.
104 First Avenue,
FARIBAULT, MINN.

Eureka Potato Planter

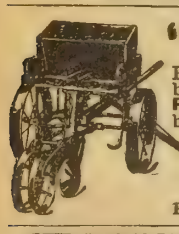
For Large or Small Growers, 1 or 2 rows

Opens furrow, drops seed any distance or depth required, puts on fertilizer (if wanted), covers up, marks next row. Accurate, automatic and dependable. Operated by one man. Furrow is opened directly under axle and seed is dropped in plain sight of operator. Made of steel and malleable iron, assuring long life and few repairs. In stock near you.

It does not injure seed

Send for Catalog

EUREKA MOWER CO.
Box 634, Utica, N.Y.



"More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate, A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR.
BOX Y STERLING, ILL.

SEED CORN $3.00 PER BU.

Corn Crop Short. Order Early. Our Supply Limited. High germination guaranteed. Varieties true to name. Our 1915 Seed Crop positively not touched by frost. Reid's Yellow Dent, Iowa Mammoth Yellow, Early Iowa Dent, Pride of the North, Iowa Gold Mine, Minnesota No. 13, Silver King, Boone County White, Mammoth White Dent, Bloody Butcher and Early Flint. State number of bushels wanted. Orders filled in rotation. This price holds good in ten-bushel lots, bags free. Make up your order now, direct from this ad. 1916 Seed Book and Planting Guide Free.

GALLOWAY BROS. & COMPANY
33 Galloway Station Waterloo, Iowa

tility. Starvation is the cause of many of our old trees dying. They are allowed to stand in June grass, which is extremely bad. The average farmer is more stingy when fertilizing his orchard than in fertilizing any other crop. Many believe it isn't needed. I have seen farmers who took such great pains in planting, but after that they might root, hog, or die.

Of late years I've made good use of the hogs in the orchard. By seeding it down with clover they were given a good feed, but unless they are at least six years old the hogs must not be in the orchard. If some young trees should happen to be in old orchards in which the hogs are allowed to roam about they should be well protected.

Fred Muehlenkamp.
Monroe Co., Wisconsin.

INSPECTION OF FOREIGN NURSERY STOCK.

An egg mass of the very dangerous gypsy moth, discovered in a shipment of European plants to a Milwaukee greenhouse, is reported by J. G. Sanders, state entomologist, of the Wisconsin Department of Agriculture. Every shipment into Wisconsin of plants and nursery stock from foreign countries is being inspected by the state entomologist.

The gypsy moth is an exceedingly destructive pest where it has become established in portions of New England. In spite of an expensive campaign directed against it by federal and state authorities, it continues to spread in New England.

The discovery of the egg mass on the shipment to Milwaukee, through careful inspection, probably has saved Wisconsin from another destructive pest of forest, shade and ornamental trees.

Up to a period before the holidays the infected district in New England was under federal quarantine against shipment of Christmas trees and greens. For some unaccountable reason, the quarantine was lifted shortly before the holidays, and there were shipments of Christmas trees to Wisconsin and other states, where a plentiful supply was available.

"Why Christmas trees should be shipped to Wisconsin and other western states in which these trees grow is a problem to me," said Mr. Sanders today. "If the federal quarantine is not re-established against shipments of this kind from New England, Wisconsin probably will establish a quarantine against such shipments, and I think other western states will follow this example. This matter was discussed at the recent annual convention of the American Association of Official Horticultural Inspectors, which was held at Columbus, O., during the holiday week."

RURAL CONTESTS IN WASHBURN COUNTY.

J. A. Lonsdorf, superintendent of schools of Washburn county, strikes the keynote of agricultural work in the country schools in his announcement of the boys' and girls' club contests for 1916 when he says that for the future of the boys and girls it is more important than any other activity of which he is familiar. No doubt these contests throughout the state are bringing splendid results and much good work has been accomplished in Washburn county, which it will be remembered, won first prize at the state fair in 1915.

The acre corn contest will be continued in connection with the school work, and the winner will be given a free trip to the farm course at Madison. Mr. Lonsdorf's plans for 1916 include a farm record contest; home project contest; soy bean, alfalfa, ear corn, potato; home work; manual training; domestic science; general school exhibit at county fair and plain and fancy work sewing contests. The farm record contests consist of poultry record, expenses for each month and value of eggs and profit and loss for each month. Daily record of eggs laid included; records for feed expense and value of pig, dairy cow or dairy herd, or any other farm domestic animal raised for profit. Records of the expenditure and receipts of a farm, say, the parent's farm; record of work and fertilizer put on field and the yield showing profit; make comparison with other fields and crops; milk sheets; feed records, showing profit or loss for dairy cow or cows. Keep daily records. Use Manila cardboard and rule it carefully.

In the home project contests the contestant will take care of, feed and have charge of pig or calf or sheep or colt. This animal should have been presented to the contestant by parent. Contestant will bring the animal to county fair; parent and teacher will certify. Best pig, 1st, $2; 2d, $1; 3d, 50c and 4th, 25c prizes. The same prizes are offered for the best heifer, sheep or colt. Any school club can receive the same prizes as are offered to the individuals. Clubs may take care of, feed, have charge of same kinds of domestic animals and bring same to county fair.

In the ear corn, soy bean and like contests the prizes will be for the best exhibits at the county fair, the first prize in each class being $2 with $1 for second, 50c for third and four 25-cent prizes. In the contest activities similar prizes will be awarded.

Mr. Lonsdorf also outlines the plan for organized school children's clubs. He has suggested the following constitution for these clubs, and as they can be started in any county we are giving the outline for the guidance of teachers or others who would like to take up such work.

Each school shall have an organization known as the —— School Children's Club.

The officers of such club shall be a president, vice president, secretary, treasurer and the teacher as adviser.

All acts by local clubs must be approved by the adviser.

The membership qualifications shall be: Pupil of school attending regularly and good in deportment. Adviser may disqualify any member for misbehavior or other good reasons.

Young people of district may become honorary members.

Membership shall be free unless assessments are voted.

The Washburn county school children's club shall be composed of all the local club members.

Each local club shall elect one delegate to the annual meeting of the county club.

These delegates shall meet at the direction of the county superintendent presently at the time of the county graduation.

These delegates shall proceed to elect the same kind of officers as are needed for the local club.

At the county meeting other important matters may be voted on.

The secretary of the county club shall report to the state secretary of boys' and girls' clubs if there is one. He shall also report to the state organizer of clubs.

All acts of the county clubs shall be subject to the approval of the teachers in institute assembled.

The activities of the local clubs shall consist among others of the following:

Agricultural contest work in soy beans, alfalfa, corn, potatoes.

Home projects like raising of pig, calf, flock of hens, etc.

The department of agriculture's annual estimate of farm cattle in the country January 1st shows 21,988,000 milk cows, an increase of 3.4 per cent over 1915; 39,453,000 other cattle, an increase of 6.4 per cent; 49,162,000 sheep, decrease of 1.6 per cent, and 68,047,000 swine, an increase of 5.3 per cent.

WASHINGTON'S CAPITAL GETS NEEDED OUTLET.

Olympia, the capital of the state of Washington, has now, for the first time in its history, adequate railroad connection with the rest of the state, with other Pacific coast states and the East.

This has been effected through a branch which now connects Olympia with the main line of the Union Pacific system from Portland to Seattle. Train schedules on the new line provide connection with several of the through trains, both northbound and southbound, including the famous Shasta limited.

A fine station has been provided in Olympia, conveniently located near the business district and thoroughly up-to-date in equipment. Olympia will now have a better opportunity to develop as a city—not merely as a capital.

The new train service has been in effect since January 1st.—Adv.

1916
FREE SEED DISTRIBUTION

Let Us Give You This Great Collection of Seeds

You can have all of them—each variety a new one—without a cent of cost if you have a garden or a farm to plant them on, if you want to improve your crops and if you will do a little to get more money from the farm.

There Are 22 Varieties

A new Beet, a new Cabbage, an Improved Carrot, a "queen" of Celery, an early Sweet Corn, Pop Corn, a "dandy" Cucumber, a superior Lettuce, a "peach" of a Muskmelon, a magnificent Watermelon, a beautiful Pepper, an Imp. Parsnip, a perfect pie Pumpkin, a "sparkler" Radish, a great Squash, a superb Tomato, a new Turnip, five pkts. of Flower Seeds, and, to follow, a wonderful new Oats and 2 new Potatoes.

22 Novelties to Keep and Plant

This Offer is for You

if a reader of this paper and you meet the requirements as above. We will send it on receipt of name and address. You had better not miss this, then your garden will be the envy of the neighborhood next summer. Only one to a family. Write your name and address perfectly plain.

O. K. SEED STORE, Desk 55, Indianapolis, Ind.

GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

6 Apple Trees Four to Six Feet Tall 50c

2 early; 2 Winter; 2 Crabapple. Hardy tested varieties—Kellogg's Hardy Northern Grown trees are **backed by 62 years in the nursery business.** Send today for this bargain collection, also our 1916 Price List of trees, shrubs and small fruit plants. It is **FREE**

KELLOGG'S NURSERY, Box 224, Janesville, Wis.

Free for Testing

A pair of mated EVERBEARING STRAWBERRY PLANTS FREE if you will report as to your success with them. Will bear loads of big, red, berries from June to November. We have counted 480 berries, blossoms and buds on a single plant. A postal will bring the plants, also enough seed of the new CEREAL FETERITA to plant a rod square of ground. Also a pkt. of perennial ORIENTAL POPPY seed. Send 10 cts for mailing expense or not, as you please. Write today and get acquainted with

THE GARDNER NURSERY COMPANY
Box 730 • Osage, Iowa

SEED CORN Disco Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

Buy quick! Save money—be sure of getting good seed. We fortunately carried over a few thousand bushels of choice seed from 1914 season, now offered at bargain prices. Write now for price list. Order early and get good seed.

Dakota Improved Seed Co. 27 Main St., Mitchell, S. D.

Dowagiac Drills & Seeders

ARE THE ***LEADERS***

BIG MONEY IN FRUIT

Replant your orchard. Plant your roadside. Hardy fruit trees, vines and shrubs at low

WHOLESALE PRICES NOW

Direct to you from our nurseries. Big 4-c color, new, different, original fruit book and planting guide FREE.

GALLOWAY BROS. & CO.
Dept. 36 Waterloo, Iowa

EVERBEARING STRAWBERRIES

HARDIEST PLANTS & TREES
AT RIGHT PRICES
CATALOG FREE.

Strand's Nursery, Box 126 Taylors Falls, Minn.

PLANT NEW CORN

EARLY varieties grown from northern seed for No. Iowa, Ill., Neb., So. Dak., So. Minn., Wis. Matured on stalk, sound, dry, high test, all grows, outyields old corn. Catalog and samples free.

J. B. Armstrong & Son Shenandoah, Iowa

"STRAWBERRY PLANTS THAT GROW"

"PROGRESSIVE" Best Fall-Bearer; and Standard June sorts. Also Raspberry, Blackberry, Currant and Grape Plants. Catalog **free.**

C. E. WHITTEN, Box 17, Bridgeman, Mich.

OLD SEED CORN—Finely selected home grown Minnesota No. 13, raised and cured for seed 1914. Best seed corn obtainable. Also five varieties 1915 corn, thoroughly tested. Write for prices. Christinelund Farm, Dassel, Minnesota.

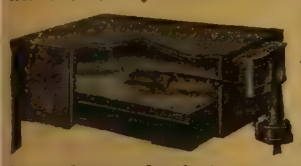
FOR SALE—Choice recleaned and identified seeds. Wisconsin grown Red Clover, Timothy, Alsike, direct to you, good bona fide test. Prices on application. Pfeiffer Grain & Seed Co., Durand, Wis

BULBS 50 High-Grade Flowering Bulbs Oxalis, Gladioli. Other Kinds. **25c**
Asparagus Fern. **All Post Paid**
PINE TREE NURSERY, Pemaquid, Maine

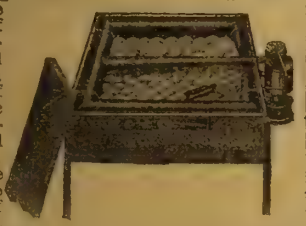
STRAWBERRY plants, $1.65 per 1000. Truthful and valuable illustrated catalog free, worth $1.00. Mayer's Plant Nursery, Merrill, Mich.

136-Page 1916 Poultry Book Ready for the Mails.

HERE'S to The Wisconsin Farmer readers who are interested in poultry facts—and that should include one or two members of every rural family. The chicken flocks of the farms must supply the poultry demands of our country. There are not enough strictly poultry farms to supply even one of our largest cities without the help of the eggs and poultry shipped from the farm homes. This book is unlike a lot of other poultry books—it is free—and it is also well illustrated. There are pictures of farm poultry flocks from almost every corner of our country.



In fact, over 200 illustrations in all and they are accompanied with mighty interesting and instructive reading. See to it that you get your copy right away. Write for it now while you have the time and mention in your letter that you want the book told about in The Wisconsin Farmer. Write to the M. M. Johnson Co., Clay Center, Neb. This company make the Old Trusty incubators and brooders and for this reason we are showing some illustrations of their incubator. The first illustration shows the interior of the Old Trusty incubator, also triple construction of the non-conducting walls, top and bottom. The first wall is made of seven-eighths-inch California redwood, the second of asbestos insulation and over all is a covering of metal. There is not a particle of wood exposed, even the legs are made of heavy metal.



The Old Trusty was the first incubator east of the Rocky Mountains in which California redwood was used. It is thought to be the best wood for this use because it is light, soft and non-odorous. It does not warp. This lumber is seven-eighths inch thick and is covered with a sheet of asbestos insulation. The lamp is placed at the end and with the metal covering and asbestos insulation there is practically no chance of fire. The second illustration shows the top removed—the method of heat distribution to every part of the machine—the roomy, convenient arrangement and the location of thermometer and regulator. You want the facts direct from the Old Trusty factory, so write them today for their free poultry book and state that you want to know more about the Old Trusty. They are in a position to give you a lot of information on poultry, incubators and brooders, whether you buy a machine or not, which includes the book mentioned above. The third illustration shows teh 1916 machine as it looks at work. It is neat and have every appearance of being substantial in every detail. Its construction combines every fundamental principle that the M. M. Johnson Co. have learned in their years of incubator construction. The easiest way to find out about the Old Trusty is to ask a neighbor who has one or write to the M. M. Johnson Co., Clay Center, Neb., for their Poultry Book and special testimonial sheets. The fourth illustration will especially interest you if you are going to purchase an incubator this year. It shows how the Old Trusty is packed for shipment. The crate is in every way all that is necessary to entirely protect the machine from all the usual abuse of shipping and adds very materially to your advantage when you receive the machine. It is also light, which means a saving in freight or express. And, by the way, we must not neglect to say that, in spite of the very low prices on Old Trusty Incubators that the M. M. Johnson Co. pay all freight charges to any point and in cases where the users insist on rush shipment that they also pay the express charges to several states surrounding Nebraska. A large stock of machines is carried at St. Joseph, Mo., so that prompt delivery is assured to purchasers. Drop the M. M. Johnson Co., Clay Center, Neb., a post card or letter right now and they will mail you your copy by return mail, free. Just mention this paper when you write. See advertisement on page 17.—Adv.

Wagon Parts of All Kinds.

IF you need wagon parts of any kind it will pay you to answer the advertisement of the Electric Wheel Co. on page 35. They will send you a free booklet describing all kinds of parts for wagons, together with their prices. They make every kind of wheel—steel of wood, high or low, wide or narrow tires. Address Electric Wheel Co., 65 Elm St., Quincy, Ill., and please mention this paper.—Adv.

PRICE COUNTY SHORT COURSE.

The one week short course for boys and girls conducted January 10-14, 1916, by the Price county, Wisconsin, agricultural representative, was a most successful one. The total attendance was twenty-one students composed of nineteen boys and two girls. Although the weather was the coldest that has been experienced this winter, the mercury going down as low as 34 degrees below zero, there were twenty of the students whose attendance was perfect. The other student who was not there every day became sick, so was unable to attend school. This perfect record of attendance is significant because it is an indication of the interest these boys and girls took in this agricultural work and also shows that they are anxious to get more education. When the class was asked if they would like another week's work the vote was unanimous in favor of a second week of work. It is impossible to give more work because the county representative gives agricultural instruction in the Price County Training School. This is very important because the graduates of this school must teach agriculture in the rural schools, so it is very necessary that they get this instruction.

An effort will be made to get these students to actually put into practice on their own farm some of the good farm practices which they have learned about. It is barely possible that a cow-testing club will be organized among the students. They will be required to weigh and record the milk from each cow. Milk samples from each cow will be taken once a month. These will be brought to Omega and the class do the testing. Farmers in the vicinity of Omega who want to keep records on their cows may also have milk samples tested at the same time.

A similar course will be given to any town in Price county if there is a demand for it. Anyone interested write to Griffith Richards, Phillips. The following is the list of names of students who attended: Axel Ahlen, Arvid Ahlen, Arnold Bjorklund, Lawrence Carlson, Clarence Carlson, Albin Clarin, Lizzie Erdman, Elster Hallberg, Howard H. Johnson, Elmer Johnson, Albin Koehler, Emma A. Luedke, Otto H. Luedke, Joe E. Lindberg, Theo Meyer, Alvin Murray, Walter Nelson, Leonard Risberg, Bert Swanson, Gotfred Weberg, Elmer Westlin.

Protect Your Chickens with Lawn Park Coops.

LAWN PARK chicken coops protect chickens from hawks, rats and other animals and at the same time give them all the advantages of the open air. The wire frame pulls out like a drawer for the day time and can be shoved back at night or during storms, so as to afford perfect protection. It is made of galvanized metal, which repels vermin, and is easily cleaned and kept sanitary. You can learn all about Lawn Park coops by writing to Cyclone Mfg. Co., Dept. 21, Urbana, Ill., and mentioning their advertisement on page 20.—Adv.

FARMERS' SCHOOL AT ASHLAND.

To the Editor:—The third annual farmers' school will be held at the branch experiment station at Ashland Junction, Wisconsin, during the first part of March, beginning March 6th. The school will continue for one or two weeks. Persons desiring to attend this school should register at once and state whether they want to attend for a week or for two weeks. Names will be entered in the order they are received. In the past it has been necessary to turn down some of the last applicants for lack of room. The course this year will be given largely to discussions of problems of dairying, live stock farming in general and crop production. It is also proposed to have a two days' session for homemakers.

Persons desiring further information may address the undersigned.

E. J. Delwiche.

PRINCE ALBERT

the national joy smoke

puffs its kindly way right into your good will because it is so friendly and cool and fragrant. You may smoke it as long and as hard as you like and it will not bite or parch or tire your taste! The patented process by which Prince Albert is made *fixes that!*

You smokers should realize that the Prince Albert patented process is owned exclusively by us; that no other tobacco can be like Prince Albert. And you'll find out how different P. A. is from any other tobacco you ever smoked just as soon as you try it *and know for yourself* that what we tell you is *proven by your own test!*

Buy some today and smoke it in your old jimmy pipe or roll it into the best makin's cigarette you ever put in your mouth. *It will absolutely delight you!*

Buy Prince Albert everywhere tobacco is sold. Toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors—and—in that fine crystal-glass humidor with sponge-moistener top that keeps the tobacco in such splendid condition—always!

On the reverse side of this tidy red tin you will read: "Process Patented July 30th, 1907," which has made *three* men smoke pipes where *one* smoked before!

R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C.

AGAIN! DOWN GO SEPARATOR PRICES!

Four 1916 Sizes! Four New Low 1916 Prices!

~~42~~50
~~51~~00
~~63~~50

I mean every word! Prices have gone down AGAIN! In spite of the increased cost of materials, on account of the large volume of separators going through my factories, I am able again to cut and slash cream separator prices as never before. My old 1915 prices are not in force today! My new lower than ever 1916 prices and easy selling plans (cash or time) are now in force!

A New Separator has been added to the great Galloway line of Bath-in-Oil Sanitary Cream Separators. It is identical with other sizes in quality and design and sells for less money than I ever sold a cream separator! Don't be mislead on cream separators thrown together and sold for a price. Buy direct from a real factory, get a better machine and save from $25 to $50 on the highest quality separator. 10,000 separators now coming through my factory—with new prices—special terms of no money down, 1 year to pay. I expect to sell them all between now and grass.

GALLOWAY SANITARY CREAM SEPARATOR

Big 1916 Book Is Now Ready

And I will mail it to you if you'll ask for it. 250 pages in size, printed in four colors and tells the truth about the cream separator business. If you buy a cream separator within the next twelve months you need this great book. I want you to know how I build these wonderful separators in my own great chain of factories, how they are designed, and how and why I can price a separator of highest quality at such new low prices. Read this book before you buy a cream separator of any make at any price. I'll be glad to pay the postage. Write for it today.

Look at These Features

Heavy, high carbon steel gear shafts and bowl spindle; extra long bearings; strong, sanitary bowl, discs not fastened together; oil bath lubrication; big, roomy, seamless, pressed steel supply tank; both gear shafts and both spindle bearings supported by one solid casting; heavy, sanitary tinware; low bowl speed reduces wear on bearings and gears.

No raw edges in the bowl to break up the globules of butter fat. *Separators shipped from Waterloo, Kansas City, St. Paul, Council Bluffs and Spokane—whichever is nearest you.*

WM. GALLOWAY COMPANY 33 GALLOWAY STATION WATERLOO, IOWA

NEW 1916 EASY SELLING PLANS!

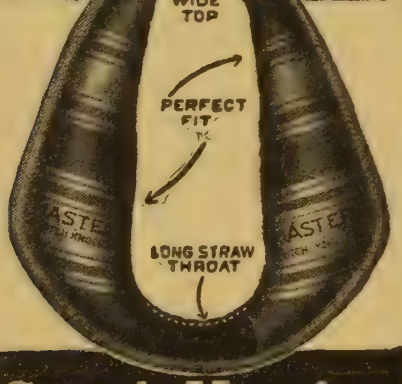
Collars That Cure—Prevent Sore Necks

Extreme care in the shaping, the building, and in the selection of materials used has produced in the Scotch Knocker a horse collar that entirely overcomes galled necks and sore shoulders.

The Scotch Knocker Collar works with your horse, assists him. It responds to every play of the muscles, snugs into every neck hollow, and lays back soft as velvet, yet staunch and firm against the pull of the powerful shoulders. Built so strong and durable that one Scotch Knocker will outlast *two* ordinary collars.

These collars come in different styles. Some are cloth faced but all are built of real *7-oz. bark-tanned leather*. They are stuffed with hand-flailed, long rye straw. Faced with soft, elastic sweat and rain proof hulls. Point of greatest strain triple reinforced. Write for free book.

Minnesota Harness Factory, Inc.
106 2nd St. W. Winona, Minn.



Scotch Knocker Collars

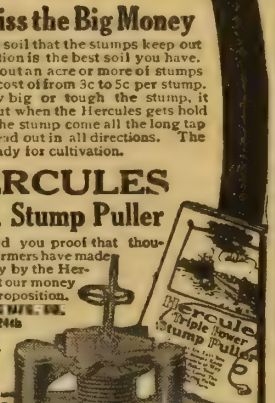
Don't Miss the Big Money

THE virgin soil that the stumps keep out of cultivation is the best soil you have. You can pull out an acre or more of stumps in a day at a cost of from 3c to 5c per stump. No matter how big or tough the stump, it walks right out when the Hercules gets hold of it. With the stump come all the long tap roots that spread out in all directions. The land is left ready for cultivation.

HERCULES
Triple Power Stump Puller

Let us send you proof that thousands of farmers have made big money by the Hercules. Get our money saving proposition.

HERCULES MFG. CO. 159 24th Street, Centerville, Iowa



Ask About Hand-Power Pullers Low Price 120,000 Pounds Pull

Steel Wheels

will make your old farm wagon as good as new. Save money because they never need repairs. Write for our big free book telling all about them and how they pay. **Empire Mfg. Co., Box 787 Quincy, Ill.**

BOOK FREE

When writing to advertisers please mention The Wisconsin Farmer.

Waukesha Guernsey Meeting.

Governor Philipp Enjoys the Day With Waukesha Society—Guernsey Men Look Back on Successful Year—Future Bright.

THE tenth annual meeting of the Waukesha County Guernsey Breeders' Association was held Wednesday, January 26th, at the beautiful Resthaven Hotel at Waukesha and was the largest attended winter meeting which has ever been held by this active and progressive organization. The meeting was full of enthusiasm and interest and 251 persons sat down at the banquet tables at noon to a sumptuous meal served in the big dining room at Resthaven. Many came after noon for the speaking program and at least 300 attended, which is a big increase over last year and considerably greater than any previous winter meeting.

The Waukesha county Guernsey organization is one of the pioneer community associations in the state and the writer doubts if a more aggressive organization is to be found anywhere. Waukesha county has learned much of its fame through the work of its Guernsey and Holstein associations and it was not surprising when one speaker who has recently returned from a long southern trip remarked that everywhere he went he heard Wisconsin mentioned as the leading dairy state and that invariably Waukesha county was connected with any mention of Wisconsin. The annual meetings of this association are becoming more popular every year and each year sees an increased membership. The association now has 127 active members, compard with 116 a year ago, despite the fact that many members, as Secretary Gavin McKerrow reported, had made their fortunes out of Guernseys and had retired. The combined increase in membership during the past two years has been the greatest of any two years in the history of the organization.

The secretary reported at the business session, which was held in the forenoon, that 227 persons attended the annual meeting last year and that 550 attended the last summer meeting at the Park Farm of John H. Williams. The association had just closed a very prosperous year, he reported, although the inquiries for stock had not been so large as during the previous year, due largely to the foot-and-mouth scare. However, during the last few months there has been a good increase and there has been several carloads shipped out of the county during that time. Prospects for this year are very bright with the foot-and-mouth matter clearing up and the question of holding a spring sale was discussed, but no definite action was taken, this being left to the directors. The secretary also reported that sixteen members of the association had cows in the yearly official tests during the last year which he believes to be the greatest number of men making such tests in any county breeders' organizations of any breed in the coun try. Two cows owned by members of the association have completed tests of 846 and 803 pounds of butter fat, respectively, during the year. This is the record butter-fat production for Waukesha county and it is believed this record will be lowered this year.

During the year the association undertook several new lines of activity, including the essay contest in which prizes worth $600 were given to the children of the county. Proposals to employ a county Guernsey agent whose duties would be to boost the Guernsey breed exclusively just as the county representative boosts the entire county were set afoot and this matter was discussed at the meeting, final action being deferred until the summer meeting in June. It was reported that $440 had been raised by private subscription to apply on the salary of such an agent and if he be employed it will be another innovation and certainly one of great benefit to the breeders.

Earl Roberts, of Oconomowoc, president, presided at all of the sessions. R. B. Benjamin, representing the Waukesha Live Stock Breeders' Association, the corporation formed to erect the sale pavilion at Waukesha, reported on the status of that project. The corporation has taken over the site owned by the Guernsey association in addition to two other lots in order to have sufficient room to erect a pavilion suitable for the needs of the breeders for years to come. Mr. Benjamin reported that $6,300 had been raised through subscriptions, but that the first cost estimate was too low and that the total cost of the pavilion, together with the site which cost $1,500, will be about $8,500. As a result it will be necessary to secure about $4,000 more in order to build as planned and avoid the necessity of mortgaging the property.

John H. Williams, treasurer, reported that the total receipts of the association for the year were $31,468.23 and that the association has a cash balance in the bank of $1,100.40, of which $310 belongs to individual subscribers for advertising purposes. This leaves a balance of $790.40 to the credit of the county association. Several communications were read by Secretary McKerrow, one from W. H. Caldwell, of the Guernsey Cattle Club, complimenting the association on its splendid work. The association also gave its approval to the proposed calf-growing contest in the county, which was also outlined at the recent Holstein meeting and which was given its support.

Roy Burton, of Eagle, H. N. Longley, of Dousman, and F. E. Fox, Waukesha, were elected directors for a term of three years at a directors' meeting after the general meeting the board elected Gavin McKerrow, of Pewaukee, president; George Lawson, of Oconomowoc, vice-president, and F. E. Fox, of Waukesha, secretary and treasurer, the board having decided to combine the latter offices.

Fifteen new members were also accepted as follows: Clinton Kinney, Norman Nelson, Harry H. Kohler, W. K. Wilson, Fred Barr, C. O. Porter, H. M. Stone, John H. Morris, Arvin P. Morris, L. K. Wilson, Elton C. Healy, A. C. Eschweiler, L. W. Seeburn, Delvin H. Utter and the Milwaukee County Agricultural School.

The banquet was held at 12:30, at which President Roberts acted as toastmaster.

Gov. E. L. Philipp, who is a Guernsey breeder and whose farm lies in Washington county, was the principal speaker and took as his subject the dairy farmer's interest in good government

Governor Philipp, after a brief review of agricultural conditions plunged into politics and defended the dairy and food commission, which has been under fire from his opponents, and the actions of the sanitary board in the foot-and-mouth fight last year. The governor said he wanted to be held personally accountable for the actions of the dairy commission and the live stock sanitary authorities and that he was determined to stamp out the foot-and-mouth disease and play no favorites if he never got another vote. The embargo against Illinois he said was still in effect and would remain in effect until that state was completely cleaned up.

Albert Fuller, of North Lake, president of the Milwaukee Milk Shippers' Association, explained plans on foot to incorporate and establish a milk depot for the farmers in Milwaukee. He said the Milwaukee dealers were dictating the milk prices; that the farmers could not get a fair price for their product and that it is up to the farmers to establish their own depots and be independent of the dealers. He asked the co-operation of all the farmers and invited them to attend a meeting which will be held shortly at North Lake.

C. P. Norgord, commissioner of agriculture, closed the speaking program with a review of the work of his department and the work it has outlined for the coming year.

Mr. Norgord explained a new plan which is now on foot relative to stamping out tuberculosis in cattle. His department proposes to co-operate with other states and the United States department of agriculture in giving cattle which have been tested a higher rating than those not tested. Herds tested and found free from tuberculosis will be listed as Class A herds and will be so listed by the veterinary departments in the state co-operating.

Harold Dvorak, of Milwaukee, gave an interesting reading and music was furnished during the afternoon by Mrs. Evangeline Olson and Miss Vinette, of Waukesha, and the Davies brothers, of Wales. Roy Burton, of Eagle, invited the association to meet at his farm in June, but final action was left to the directors.

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Look Out For Warbles in Cattle.

European Maggot Which Attacks Backs of Cattle Discovered in Northern States.

SPECIALISTS of the United States Department of Agriculture are urging cattle owners, in the North as well as in the South, to take steps to rid their attle of ox warbles or "wolves," the importance of which to the cattle industry has been generally underestimated. Ox warbles are the whitish rubs or maggots which develop from he eggs deposited by certain flies nown as warble flies or heel flies and which injure the hides, reduce milk low and retard the growth of the anials. The maggots are commonly ound just below the skin on the backs f cattle in the spring. Their presnce is revealed by local swellings bout the size of pigeons' eggs, each vith a small central hole or perforaion through which the maggot reathes. From this hole the maggot, vhen mature, emerges to enter the round and change to the adult or fly tage. When full grown the grub is bout three-fourths of an inch in ength.

In the past trouble from the warbles as largely been confined to cattle in he South, but recently the bureau of ntomology has discovered that a secnd species, heretofore not found in his country, but known to be even a nore serious pest in Europe than is our native warble, has become well eslablished in certain districts in the northern part of the United States. While it is probable that this soalled European ox warble will not be of as great importance in the southern part of the United States as the species already established, there is every reason to believe that unless checked it will become generally distributed throughout the northern half of the country. This European species is now generally distributed throughout New York and the New England states and a few specimens have been obtained from western Pennsylvania, western Maryland, southern Michigan, eastern Iowa and Missouri and western Washington. Attention is also directed to the fact that this species is now generally distributed throughout southern Canada. The department, therefore, is calling attention at this time to the danger of spreading this species promiscuously about the country and is urging cattle owners to take the simple means necessary to prevent its spread.

Until recently warbles were not regarded as serious even in the South, because it was thought that the loss they occasioned came principally from the damage they did to hides. Even this loss in the aggregate, however, is important, as hides show warble holes three to six months in the year and dealers pay from 50 cents to $1.50 less for hides that show even moderate warble infestation. In many cases the scars left after the holes have healed cause buyers to cut prices considerably.

The loss from the warble, however, is by no means limited to the holes the maggots cut in the hides. Extensive investigations in Germany and Denmark indicate that the losses through reduction in milk supply in dairy cattle, the retardation of growth in young stock and the loss of flesh in all classes of animals are twofold greater than the damage done to the hides. In some of these tests the early extraction of the grubs from the backs of infested cattle resulted in an increase of nearly 25 per cent in the milk production. Animals from which the grubs had been extracted showed a gain of more than 5 per cent in weight over similar animals in which the pests were allowed to develop normally.

Thus far the veterinarians and entomologists of the department have determined no better way of controlling these pests than through the systematic extraction and destruction of the grubs from the backs of infested animals.

When the larvae are nearly ready to leave their host they may be easily squeezed out by pressing the swelling with the fingers, but if not so far developed it is often very difficult to get them out by squeezing. In such cases a slender pair of forceps may be used for pulling them out. If the swelling and its opening are still very small the best way of extracting the grub is to make an incision with a knife, after which the grub can be squeezed out by applying strong pressure. Kill the grub when removed.

It is important that warbles be removed as early in their development as possible. This relieves the infested animals from the irritation and prevents the enlargement of the exit holes. While this practice is not applicable to ranch conditions, it is easily put into effect on small farms and in dairies. In the southern states the herds should be gone over early in December and about twice later at monthly intervals. In the northern states the extraction should be begun six weeks to two months later. If no grubs are allowed to drop to the ground and reach maturity the number appearing in cattle in subsequent years will be materially reduced and if extraction is followed up for several years almost complete eradication will result. Of course, it is important where possible to get concerted action among the stockmen in the destruction of these pests.

In extensive experiments along this line in Germany it was determined that the cost of removing all of the warbles from the backs of cattle during one season was about 3 cents per head. In this case men were employed especially to do the work. It is possible for practically every farmer and dairyman in this country to accomplish this work without material expense or loss of time.

It is suggested that in those communities where cow-testing associations have been formed the men charged with this work could in many cases devote part of their time to educating the stock raisers as to the losses caused by ox warbles and to aiding the members of the association in destroying the pests.

Investigations conducted by the department indicate that eradication also may be accomplished by the use of the arsenical dips, which are extensively employed at the present time for destroying cattle ticks. These investigations are being extended and experimental work is in progress which it is hoped may establish effective and practical methods of destroying warbles. The arsenical dip appears to act not upon the well-developed grub beneath the skin but upon the eggs or the newly hatched larvae, probably the latter. It is not unlikely that the destructive action of arsenical dips upon warbles is more or less dependent upon the fact that arsenic is stored up in small quantities in and upon the skin of cattle which are repeatedly dipped in arsenical dips.

The discovery of the European ox warble in certain sections of the North makes this pest significant to northern cattle raisers and to those who import pure-bred or other cattle from these sections. During the winter and spring months considerable numbers of pure-bred live stock are purchased in the northeastern states and are shipped to various parts of the country. It is urged that all animals thus transported be examined by the purchasers and all grubs destroyed during the spring and summer. Animals purchased at any season of the year may harbor these pests. In the winter and spring they will be found beneath the skin on the back, while at other times of the year the grubs are elsewhere in the body of the host and it will be necessary to watch for the appearance of these grubs during the following season. In those states in which registration of all imported animals is required it would be comparatively easy for the authorities to follow up such importations and see that any warbles are destroyed.

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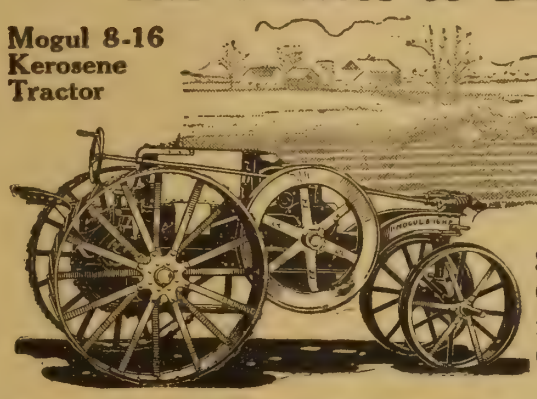

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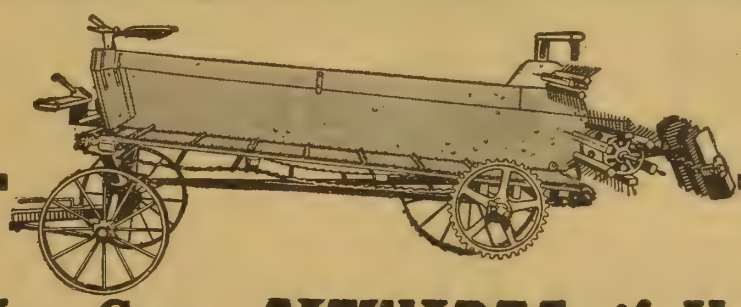

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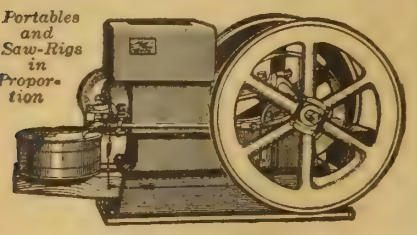

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OUR LEGAL DEPARTMENT

THIS department is edited by a practicing lawyer who has had years of experience at the bar. He will give accurate and reliable answers to all legal questions when they are of sufficient importance to be of practical interest to any considerable number of our readers. Subscribers who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delaying printed answers, those to whom it is important to receive an immediate reply by mail should remit $1.00, addressed as above.

LAW QUESTIONS.

Dog Fight—Killing Dog.

A Subscriber, Mindoro, Wis.—A was driving along a public highway and his dog was following the rig. In passing B's farm, B's dog ran out into the road and attacked A's dog and A shot B's dog. Had he a right to do so, and can B recover damages from A by law?

Answer.—If it was necessary to shoot B's dog in order to prevent it from killing A's dog or doing it great injury A had a right to shoot it and B cannot recover damages, but if it was not necessary B can recover damages.

Personal Injury—Liability.

A Subscriber, Cato, Wis.—I loaned my sawing outfit to a neighbor I thought the outfit was in good condition at the time. While my neighbor was operating it a box broke the saw and it became loose and cut a man in the face so that he will be disfigured for life. The injured man was employed by said neighbor's son at the time. He has sued me for $1,500. Can he recover damages from me?

Answer.—He cannot. You are not liable. If anyone is liable it is the neighbor or his son.

Collection of Note.

A Subscriber, Lena, Wis.—Three years ago A owed a store keeper some money, and gave him a note for the amount, payable at a certain time. When the note was due, A had the money ready to pay it, but he did not hear from the store keeper about it, but a short time ago the store keeper found the note which had been mislaid ever since it was due. Can the note be collected from A by law, under such circumstances?

Answer.—The note can be collected from A by suit in court, judgment and execution, provided A owns enough property exempt from execution. The fact that the note was not presented for payment when due does not relieve A from liability.

Widow's Share of Estate—Will.

A Subscriber, Burlington, Wis.—A widower having children of age, married a widow who also had children of age. There are no children of the present marriage. All the property the man owns was accumulated by him and his first wife and children. His present wife had no property when she married him. (1) If the man should die without making a will, how much of his estate would his widow be entitled to by the law of Wisconsin? (2) How much property can the man will to his wife, without danger of having the will set aside by his children?

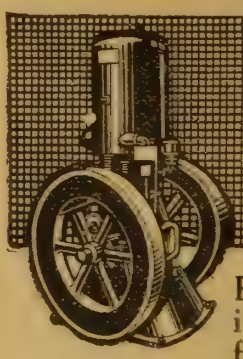
Answer.—(1) The widow would be entitled to dower in his real estate, which means one-third of it for her life time. She would also get from his personal property what is called the widow's allowance, consisting of household and kitchen furniture and other personal effects, and provisions, and besides such allowance, a child's part of the balance of the personal property—share and share alike with the husband's children. (2) The man has a lawful right to will all of his property to his wife, and such a will could not be set aside if the man was of sound mind when he made it, and was not induced by fraud or force to make it.

Husband and Wife—Descent of Property.

A Subscriber, Faribault, Minn.—A and B are husband and wife. Each one was married before, and has children by the former marriage, but has none by the present marriage. When they intermarried, A had some land with debts against it. After their marriage they paid off said debts, and bought more land, and now have forty-five acres. (1) If A dies first without making a will, what portion of his property real and personal will B get by law? (2) Will B's children get any of A's estate? (3) Could B will her share of A's estate to her children? (4) Could B sell the land if A dies without making a will? (5) In case B dies first without making a will, what portion of her property will go to her children? (6) If buildings are placed on A's land by B's children can they take them away, or get pay for them when B dies?

Answer.—(1) B will get the homestead for her lifetime and (2) the homestead will be equally divided among A's children. B will get a widow's allowance out of A's personal property and one-third of the balance of it. (2) They will not. (3) After receiving her share of A's estate B can will the same to her children. (4) She could not. (5) Two-thirds. (6) This depends upon facts and circumstances which you have omitted to state in your letter and, therefore, the question cannot be answered here.

Ask your neighbor to subscribe for the Wisconsin Farmer.



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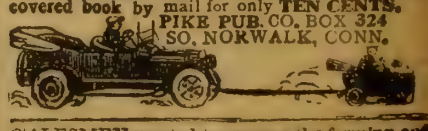


SALESMEN wanted to canvass the farming and threshing trade, soliciting order for Lubricating Oils, Greases and Paints. Previous experience unnecessary. Excellent opportunity for right party. Address The Victor Oil Company, Cleveland, Ohio.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department.

QUESTIONS AND ANSWERS.

Motor Used as a Generator.

Can a 110-volt motor be used to furnish current for 110-volt lamps? If so, what horse power motor would be required to furnish current for eight sixteen-candle-power lamps?

Answer.—Nearly all D. C. motors may be run as generators. It is usually advisable to change the position of the brushes so as to prevent sparking and place a rheostat in the field circuit to control the voltage. A one-third horse power generator would supply eight sixteen-candle-power tungsten lights.

Wet Cells for Lighting.

I am thinking of trying wet cells for lighting purposes. How many would be required to properly light three twenty-watt lamps? How long would the batteries last if used three hours each night?

Answer.—It is not practical to use wet cells for lighting on account of the cost. The number of cells required would depend upon the voltage of the lamps. The best cell for this purpose is the Edison-Lalande cell. Three of these cells are required to produce two volts. The larger the cell the more amperes it will furnish. In any case it would cost too much to maintain the battery to make it practical for house lighting.

Horse Power of Engine.

I would like to know how to figure the compression pounds relating to the horse power of my gas engine, which has an eight-inch bore and sixteen-inch stroke.

Answer.—The compression of your engine is probably forty to sixty pounds per square inch of piston area. After the explosion the average pressure acting on the piston is about seventy pounds per square inch. To find the horse power of a stationary gas engine multiply the average pressure by the length of stroke in feet by the area of the piston head in square inches by the number of explosions per minute and divide by 33,000. The area of your piston head is fifty and one-fourth square inches. At 350 revolutions per minute your engine should develop twenty to twenty-five horse power.

A Homemade Tractor.

I have a homemade tractor of the three-wheel type. The drive wheel is twenty inches wide and forty-eight inches in diameter. I am using a thirty-horse-power "Beaver" motor. A sixteen-tooth pinion on the crank shaft drives a 120-tooth gear on the jack shaft. A fourteen-tooth pinion on the jackshaft drives a 102-tooth gear bolted to the drive wheel. What drawbar pull can I expect and how many fourteen-inch plows can I pull on high?

Answer.—If your engine runs at 800 revolutions per minute you are geared to about two miles per hour, the correct speed for plowing. At that speed your drawbar pull would be about 2,000 pounds under favorable conditions. You should have more drive wheel area. With your present drive wheel you could not expect to pull more than two fourteen-inch plows. You might pull three with a wider and larger drive wheel. To pull two plows your tractor should weigh about 3,200 pounds.

Carburetor Floods at Low Speed.

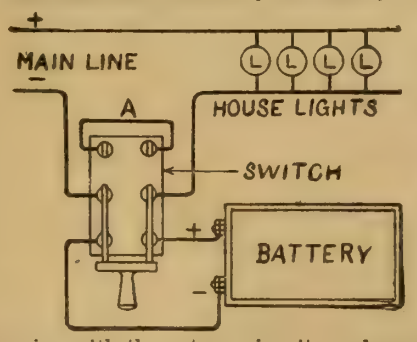
I have a 1913 forty-horse-power car which seems to be in good condition in every way. The compression is fine, and even on all the cylinders. The spark is good. The trouble seems to be with the carburetor, but I have tried five different sizes and makes of carburetors without results. The motor starts easily, but every time the motor slows down the carburetor fills with gas, and when the throttle is opened the motor either misfires or stops entirely. The motor runs fine at speeds above twenty miles per hour, but when it stops there will be one to six ounces of gasoline run out of the carburetor—it makes no difference what kind of a carburetor it is or how the float is set. I would appreciate any suggestion.

Answer.—We would say that you are using a carburetor entirely too small for your engine. The smaller the carburetor the greater the suction tending to draw the gasoline out of the needle valve. What you need to do is to lessen this suction. Before obtaining a larger carburetor put a very weak spring on your auxiliary air valve. It may be that this will lessen the suction enough so that your present carburetor will work at low speeds.

Charging Battery.

I would like to ask some questions regarding the care of my electric lighting plant. I have a thirty-two-volt system. I have been charging about once a week, beginning at noon and charging until bedtime, using current for light for that night from the generator, the excess current going to the storage battery. Would it be better to charge every second or third evening from dusk until bedtime? By this method the lights would be run by the battery not over two-thirds of the time. The battery would always be nearly fully charged. Could I also charge the six-volt battery that I use on my car from the forty-five-volt ten-ampere generator?

Answer.—We believe that you will find it more economical and better for your battery to charge twice a week, or three times if necessary, running the lights direct from the generator as much as possible. To charge your small battery use the house lights for resistance and connect your battery in



series with the return circuit as shown in the figure. You will notice that two poles of the double throw switch are short circuited by the wire A, so that when the switch is in the upper position the lighting circuit is closed without charging the battery, but when in the lower position the current flows through the battery.

Coil Trouble.

I have a Model T 1914 Ford car. It ran fine until I took it to a garage. The next day it would not run. The magneto delivers plenty of current to the coil box, but that is as far as the spark can be traced. How can the coils be tested? If they are dead how can they be repaired? What causes them to go dead? If they cannot be fixed would it be best to buy an Atwater-Kent system? If the latter were used could I run my lights from the magneto? How would the lights be wired?

Answer.—The chances are that the coils are all right. Some curious and ignorant person has probably been meddling with the contact screws that adjust the vibrator points on top of each coil. Having these readjusted will probably end the trouble. There is also a chance that something is wrong with the switch or the timer. In case your coils are bad, which is very doubtful, it would be a matter of personal choice as to installing an Atwater-Kent system. With that system you could use your magneto for lights. The wiring is very simple. Run a wire from the magneto to the light switch on the dash, from the switch to one of the lamps, from one lamp to the other, from the second lamp run a ground wire to the frame or motor. Use six-volt twelve-candle-power tungsten lights. If you have trouble with the lights burning out use eight-volt lights.

Charging Capacity of Motor.

I have a Knapp dynamo motor whose safe maximum load is six volts four amperes. It generates eight volts at 3,000 R. P. M. Will it charge a six-volt sixty-ampere storage battery?

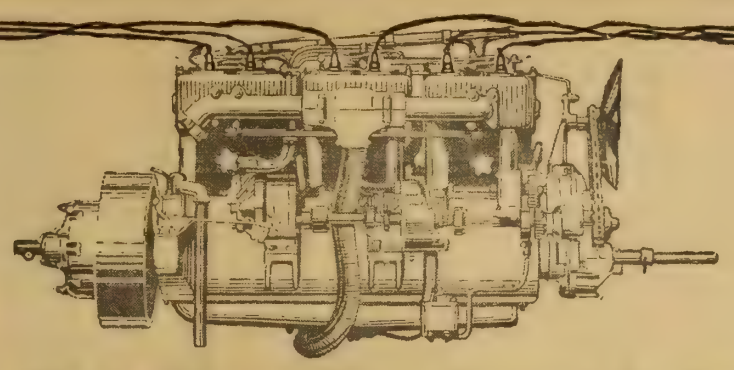
Answer.—In order to give the battery a complete charge the generator would have to generate at least eight volts. The generator is rather small for the battery. It would probably give the battery a complete charge in about twenty hours, running at 3,000 R. P. M. The machine would not last well under such an overload.

Galvanizing.

How can I galvanize a small piece of iron?

Answer.—Clean the iron so that it is free from rust, scale or grease. This is usually done by pickling in dilute muriatic acid or polishing with emery cloth. Then dip the iron in molten zinc.

Ask your neighbor to subscribe for The Wisconsin Farmer.



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They *get* them too, as witness the following who have adopted A C Spark Plugs as standard equipment.

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Chase Truck	Glide	Marmon	Packard	Stearns-Knight
Chevrolet	G. M. C.	Maxwell	Paterson	Stutz
Apperson	Cole	Haynes	Peerless	United Truck
Brockway Truck	Daniels	Hudson	McFarlan	Velie
Buick	Davis	Hupmobile	Pierce-Arrow	Westcott
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Special A C Plugs are also furnished for Fords, Overlands and Studebakers. Put in a set of A C Spark Plugs and notice the difference in your car's efficiency.

Champion Ignition Company, Flint, Michigan

AC Spark Plugs

Guaranteed Gas-Tight

WITTE ENGINES

BEFORE you buy any kind of a gasoline or kerosene engine, write for my offer, under which I send an engine to earn its own cost while you pay for it. Stationary Engines at **less than $17.50 per horse-power**—2 H-P, $34.95; 3 H-P, $52.45; 4 H-P, $69.75; 6 H-P, $97.75; 8 H-P, $139.65; 12 H-P, $197.00; 16 H-P, $279.70; 22 H-P, $359.80. (*F. O. B. Factory*). Portable Engines and Saw-Rig outfits proportionally low. **Guaranteed high quality**—thoroughly proven during 29 years by many thousands in use at all kinds of work in every state. **Guaranteed 5 Years**

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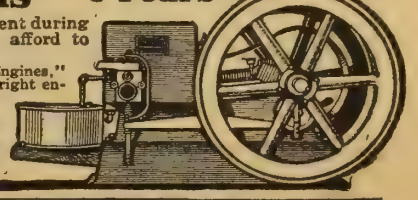

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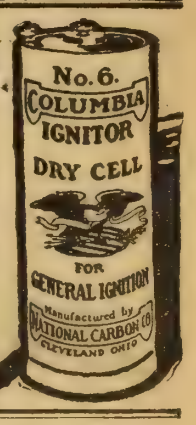
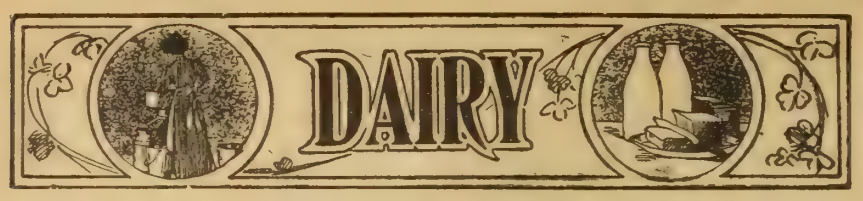




A NEW WORLD CHAMPION.

The Four-Year-Old Holstein Cow, Ormsby Jane Segis Aaggie, is Now Champion Over All Classes and Breeds.

THERE is a new queen of the dairy world. She is owned by Mr. Oliver Cabana, Jr., of Buffalo, N. Y., owner of the Pine Grove Farms, at Elma Center, N. Y., near Buffalo.

She is a pure-bred Holstein cow, almost entirely white in color, as shown by her photograph, which we reproduce in this issue. She is a senior four-year-old heifer and her name is Ormsby Jane Segis Aaggie 150934 and her brief history can well be taken as an object lesson and as an incentive to farmers and stockmen generally to persist in the development of their cattle.

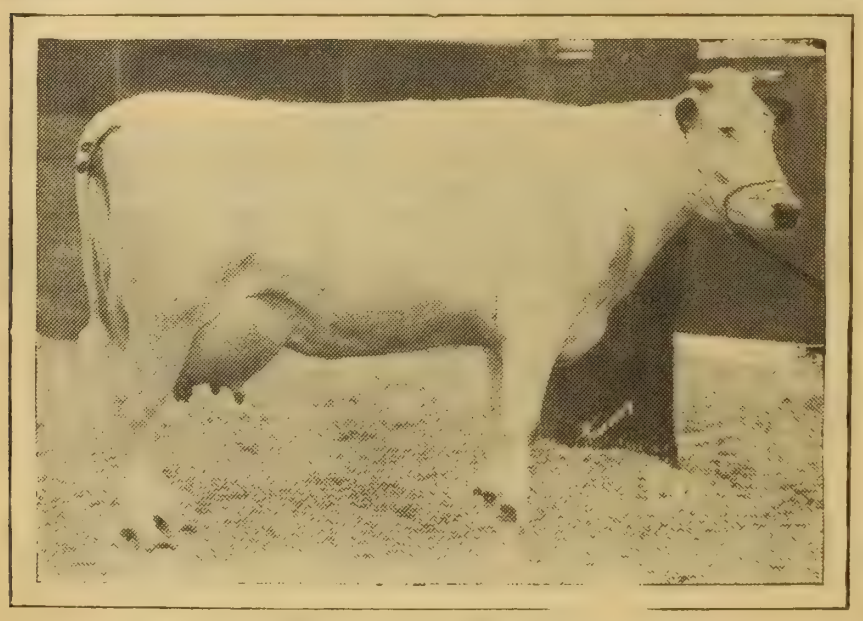
Mr. Cabana, her owner, has recently come into prominence by establishing the Pine Grove Farms and stocking them with the very best Holstein cattle obtainable at the various sales.

Last January he purchased sixteen animals at the Dollar Dispersion Sale, at Syracuse, N. Y., the cream of the entire herd, paying nearly $60,000.00 for the sixteen head, one of the number being the noted bull, Rag Apple Korndyke 8th, said to be the greatest Holstein bull in the world, for which Mr. Cabana paid $25,000.00, this being the highest price ever paid for a bull in public sale.

Ormsby Jane Segis Aaggie, the new world's champion, was purchased by Mr. Cabana over two years ago, when a young heifer, paying only $250.00 for her. She freshened for the first time at the age of two years and ten months; was put in official test and got a record of 17 and 24-100 pounds of butter and 437 pounds of milk in seven days.

She freshened again at the age of four years and seven days, producing a fine heifer calf by King Segis Pontiac Columbo, the junior herd sire at Pine Grove Farms. She was again tested and got a record of 22 and 94-100 pounds of butter and 535 pounds of milk in seven days.

Her next freshening was November 13, 1915, producing a fine heifer calf by Rag Apple Korndyke 8th. She was put in official test and the very first day started off at better than a thirty-pound gait for the week and continued increasing steadily until she scored the following wonderful production for a four-year-old heifer:



ORMSBY JANE SEGIS AAGGIE.

Here is her official producton:

	Butter pounds	Milk pounds
1 day	7.29	100.5
7 days	44.42	721.5
30 days	180	3,050

Not only has she beaten all records in her class as a senior four year old, but she has also beaten all world records for the full-aged class and the records were verified at different times in the test by Professor Royce, of the department of animal husbandry of New York State Agricultural College, and Prof. H. H. Wing, head of the department, who personally went to Pine Grove Farms to make a second verification test.

Individually, Ormsby Jane Segis Aaggie is the ideal dairy type. She is, therefore, champion of the world classes and breeds and unquestionably the most wonderful heifer that the world has ever known.

She is still in full official test and the above records were supervised by the New York State Agricultural College, the state official in charge being Mr. C. A. Bell, of Rochester, N. Y., and weighs about 1,500 pounds, is a fine, wedge-shaped animal, with a perfectly straight back line, and a heavy, deep body, showing great capacity. She has a perfect and highly developed, well-veined udder, one that could not possibly be improved upon. In color she is almost entirely white, having but four black spots on her body, with some black on each ear.

At Pine Grove Farms all cows are officially tested as they freshen. Thus every cow is given an opportunity of showing what she can do.

Here is a world-record cow that, as a two year old, was sold for the small sum of $250. She has since produced three calves—one bull and two heifers—all of which are owned at Pine Grove Farms and valued very highly, while she herself could not be purchased from her owner for $20,000.

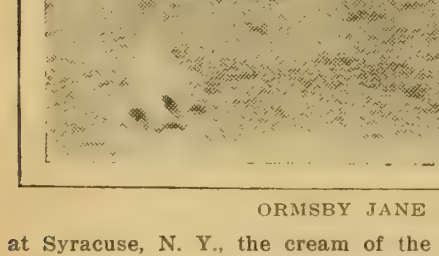
This is a good example of what persistency in the feeding, care and development of thoroughbred Holstein cattle will do. This cow and her three calves are today worth a snug little fortune.

Ormsby Jane Segis Aaggie will be continued in official test, going against all world records for a year. She will be bred to Rag Apple Korndyke 8th, the $25,000 bull and, it is said, a male calf would be worth at least $20,000.

COMMUNITY IDEAL IN DAIRYING.

Dairymen and breeders of dairy cattle have led in the plan and ideal of a community adopting one breed and specializing upon that breed. Each dairy breed has been founded and established upon that plan. Indeed, the ideal upon the islands of Jersey and Guernsey is so high that no cattle of any breed are permitted to be brought upon those islands except for immediate slaughter. With Holsteins, Ayrshires and Brown Swiss the ideals have ever been high. There has been but the one dairy breed in the locality where each has originated.

There are many advantages to the community and to individual members. Around the propositions of buying and selling hinge many of the advantages. Today many communities are starting in dairying or the residents of those communities have been netting a nice income off cows and have come to the conclusion that it would pay them to take up dairying as a business. It is plain that several men joining together may buy a carload of cows to much better advantage than each might buy a few individuals. Shipping charges and all items of expense will be less. The possibility of getting competent assistance in buying is very



The Healthy Herd

Hundreds of herds are kept in the prime of health and productiveness by the occasional use of KOW-KURE, the great cow medicine. KOW KURE has no equal in the cure of the common cow diseases of Abortion, Retained Afterbirth and Barrenness. It is also a positive cure for Bunches, Milk Fever, Scouring, Red Water and Lost Appetite.

But it is better to prevent than to cure. The periodical use of Kow-Kure in small doses will effectually prevent these diseases, and make the healthy herd pour a constant stream of profits into your pockets.

If you have a backward cow, buy a 50c package of KOW-KURE, and give according to directions. It will do wonders. 50c and $1.00 packages at all feed dealers and druggists.

Dairy Association Co.,
Lyndonville, Vt.

KOW-KURE

The smooth, rust-proof discs in the **Sanitary Milwaukee** cream separator are stamped out of one piece of pure aluminum. There is no soldering or any holes, pockets or perforations to catch and hold impurities. Every housewife knows that aluminum utensils are easier to wash because grease does not stick to them.

Not Numbered The Sanitary Milwaukee discs are interchangeable and do not have to be kept in numbered rotation. You do not have to take them off on a wire holder to keep them in any certain order. Each disc can be easily, quickly and ***thoroughly washed,*** not ***merely rinsed.*** Rinsing is not enough to keep any discs ***clean.***

Half as many Discs Besides you have only about half as many discs to keep clean. The tapered design of the discs which provides greater separating space, and proportional feed slides, which feed equal quantities of milk between each set of discs, enable the **Sanitary Milwaukee** to skim closer with less discs than any other.

SANITARY *Milwaukee* CREAM SEPARATOR

Enables you to market absolutely high-grade untainted cream, which will net you the highest prices, because you can keep every part of the **Sanitary Milwaukee** absolutely sweet and clean.

Your Separator Tested When you buy your **Sanitary Milwaukee,** you get a certificate, sworn to by a notary public, showing the exact results of the test of your particular outfit with whole milk at the factory. You ***know*** then what the separator you buy ***will do,*** not what we ***think*** it will do. We couldn't afford to furnish this sworn certificate if we weren't sure that every separator we send out will skim close.

Write now for our new catalog of the *Sanitary Milwaukee Cream Separator* and the name of dealer nearest you who can show you one.

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Use A Wood Tire Hollow Wall Silo

Cannot Sag, Blow Down or Rot.

Cures and preserves silage perfectly. Prevents freezing of silage. Easy to construct. A real farm building, permanent and rigid. No hoops to get loose. No guy wires. No staves to shrink or swell, but a smooth, double wall from base to roof, the inner wall being of *California Redwood.*

Guaranteed for 20 Years

"But Lasts a Lifetime"

The patented wood "tire" is built up of inch boards, and shipped in sections. The boards overlap in step formation at both ends. When nailed together, these sections form a ring of unusual strength. The silo frame forms its own scaffolding.

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AIR SPACE
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OUTER WALL

Send for our folder which shows how the Wood Tire Silo is built, and also what owners think of them. A postal brings it. Write today.

Agents Wanted in unassigned territory.

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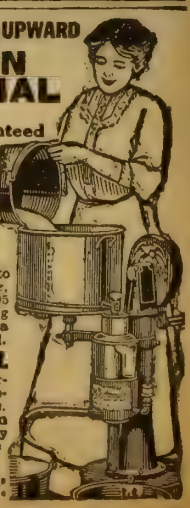
$15.95 UPWARD ON TRIAL Fully Guaranteed



American CREAM **SEPARATOR**

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95 Skims warm or cold milk making heavy or light cream. Bowl is a **sanitary marvel,** easily cleaned.

ABSOLUTELY ON APPROVAL

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. **Western orders filled from western points.** Whether dairy is large or small write for handsome free catalog. Address;

AMERICAN SEPARATOR CO.,
Box 3126 Bainbridge, N. Y.

much superior. The considerations shown by breeders who have stock for sale will be very much greater.

Every community expects to have surplus stock to sell. If that community has established one breed it has many advantages in selling. A reputation may easily be built up for that community as having stock of that breed for sale. Certain districts in the United States have worked this plan so successfully that they need not be mentioned here. Those communities have sold surplus stock to the point of exhaustion when there was a plentiful supply of equally as good stock for sale in surrounding localities that could have been secured at moderate prices. The surrounding localities had not specialized and had not made any community effort. The localities that had specialized reaped the harvest. Communities that are just starting in dairying certainly have opportunity to start right by adopting one of the popular breeds and then working and advertising as a community proposition The locality will acquire a reputation for having stock of that breed. The expense of selling will be reduced and, in all probability, higher prices will be secured.

The expense incurred in maintaining high-class sires is very much reduced where there is but one breed kept in the locality. Several small herds may use the same sire instead of each keeping one. The bulls need not be retired or slaughtered after having been used two or three years in one herd. They may be exchanged or sold to another breeder in the same locality. This is especially a good practice in the case of animals that prove to be outstandingly satisfactory as sires.

The community ideal and community effort is spreading. In all parts of the country there are breeders' clubs being organized. A splendid type of club that is adaptable to almost any locality is where the members agree to use pure-bred sires of one breed and further that such pure-bred females as they may buy shall be of that breed.

MARATHON COUNTY DAIRY MEETING.

That the cheese and butter makers of Marathon county are determined to do their share towards advancing the dairy industry was clearly shown when nearly fifty representatives met at the first regular meeting of the association held at the city hall at Wausau, Tuesday afternoon, January 18th.

In the absence of Mayor Ringle, Mr. Carl G. Krueger delivered the address of welcome which rang true to the usual spirit of welcome found in Wausau. W. R. Chellis, secretary of the Wausau Advancement Association also spoke a few words of welcome to the visitors. Vice president Joseph Bergs spoke in response.

The address of the afternoon was delivered by E. I. Aderhold, of the dairy commission, on the subject "New Rules and Regulations Governing Cheese and Butter Making in Wisconsin." After enumerating some of the lines along which the improvements could be made in advancing the butter and cheese business, Mr. Aderhold took up the new rules one by one and explained not only the meaning but also the reasons for and the purpose of each. At the close of the address the committee on constitution submitted its report and the constitution was adopted. A resolution was passed indorsing the new rules and regulations and pledging the loyal support of the members in putting them into effect in the county. Plans for the future which were discussed included the holding of a picnic during the summer. It is also planned to make a feature display of butter and cheese at the Marathon County Fair at Wausau. Steps will also be taken towards the standardization of Marathon county cheese and butter. Although one of the newer counties, Marathon already has nearly ninety cheese factories and a dozen creameries, whose output the past year approximated $2,000,000. With all her natural advantages and the help of the organization to further the interests of the industry she is bound to advance rapidly to the front as a great dairy county.

The officers are: M. B. Emmerich, president; Joseph Bergs, vice president; H. H. Humphrey, secretary-treasurer.

WHERE ARE THE GREAT COWS?

To the Editor:—The everyday farmer man sometimes gets the idea into his head that there is no use for him to think of ever having cows that give large quantities of milk or those whose milk is exceptionally good. Even the idea often creeps in that the reports which are published of heavy milkers are in great measure overdrawn and away beyond the mark of truth. "I never saw a cow that could do any such thing. I never saw a man who did. I believe it is grossly exaggerated. No one ever did what we hear it said they do."

So these good farmers leave it to the men of large means to get the cows with big records. And all the while it is a fact that many of the best cows in the country are on the farms of men like the rest of us and not alone in possession of wealthy men who are simply interested in dairying as a relief from other and more difficult work.

I myself know of a cow that will do better than 1,200 pounds of butter fat, if she has no accident, this year, and she is not a millionaire's cow, nor on any government or state farm. The name and address of the commonplace farmer who owns her can be given if necessary. Four other cows that are away back out of sight of the world I can tell my readers about that have averaged over 1,000 pounds of butter fat. One of these is now being tested in the hope that she may do even better than this.

There is hope in these facts for the everyday dairy farmer. No man ought to be discouraged or think that it is beyond his reach to possess cows of great capacity. For they are absolutely within reach of us all.

I know that may seem to be a big statement, but I believe it to be true. By working through a long period of time and using the same commonsense methods that the men have who now own great cows, the rest of us may arrive at last at the same results. It cannot be done in a little while, nor by a man of weak hopes and disposition to be discouraged easily. One must dig away at it and plod and get up from many discouragements, but the returns are sure.

Suppose one has a very good cow now. He may cross that cow with a bull of known excellent qualities and get a better calf than he had. Then year after year if he works in the same way, always aiming for better blood and better breeding, he will surely astonish himself and make the world's record for great cows better. For the hope of all who are now tugging toward the top this crumb of comfort is given: In the United States today there are some 3,200,000 cows that have very nearly a record of 8,000 pounds of milk a year. And most of these cows are on the farms of real farmers.

Subscriber.

CALVES ON SKIM MILK.

Which were the skim milk calves was the puzzle. Two lots of four calves each, one fed whole milk and the other skim milk and boiled flaxseed. The two lots looked equally sleek and thrifty. Mr. Peters, animal husbandman of the North Dakota Experiment Station, explained that the experiment was undertaken to determine how well dairy calves could be grown on skim milk.

The first three weeks both lots were fed whole milk. From then on lot No. 1 was fed eight pounds whole milk and eight pounds skim milk daily, while lot No. 2 was given sixteen pounds of skim milk and one pound of boiled flaxseed, which replaced the fat taken out in the cream. During the first three months lot No. 1 made somewhat larger gains and looked a little

Triple Wall Silos

Guaranteed not to collapse. No hoops to tighten. The permanent silo. Practically frost proof. Three walls. Regular silo staves, felt lining, Red Cypress siding. **Independent Fir Stave Silos shipped on approval.** Thousands of satisfied owners. Write for free catalog today.

Independent Silo Company,
2380 University Avenue
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Little Ford Milking Stool
Saves milk from spilling and keeps it clean

Every milker Needs It—Pays For Itself

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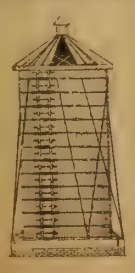

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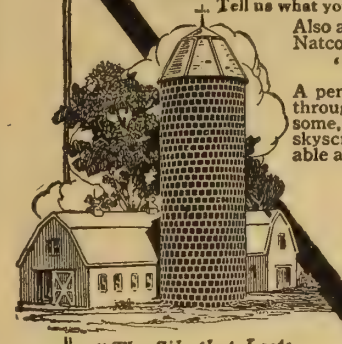

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more thrifty, but during the next three months lot No. 2 caught up. At six months several experienced dairy cattle breeders pronounced the calves in lot No. 2 equal to those in lot No. 1 in individual merit and dairy development. When the calves were five weeks old they were also fed clover hay and a grain ration made up of equal parts whole oats and bran. To this was added one-tenth by weight of linseed meal. It cost $19 less per head to feed the skim milk calves than those fed half whole milk to the age of six months.

REPORT OF DUNN COUNTY COW-TESTING ASSOCIATION.

Average production 807 cows 247.1 pounds per cow.

There were seventeen cows of the 807 cows that produced 400 pounds of butter fat.

There were twelve cows of the 807 cows that produced less than 100 pounds of butter fat.

There were five herds of the seventy herds that produced an average per cow per year of 355 pounds of butter fat.

The average cost of feed per cow per year in above herds was $44.66 per cow.

The net profit per cow per year in the above five herds was $69.60.

The owners of the above five herds do not intend to keep any cows that will produce less than 300 pounds of butter fat per year. These herds have been tested for years.

In the remaining sixty-five herds there are 596 cows that produced less than 300 pounds of butter fat per cow.

The five lowest herds of the seventy have an average per cow per year of 150 pounds of butter fat.

The average cost of feed per cow in the lowest five herds was $30.

The net profit per cow per year was $18 in the five lowest herds.

In seventy herds fifteen herds had an average production per cow per year of more than 300 pounds of butter fat.

The owners of these fifteen herds do not intend to keep any cows or heifers that will not produce more than 200 pounds per cow.

In the remaining fifty-five herds there were 182 cows or heifers that produced less than 200 pounds of butter fat per cow per year.

Twelve cows produced less than 100 pounds of fat per year.

Comparison of records of eight cows kept by two testers, one tester working independent at a different time each month than the other: Eight cows, record by tester No. 1, average 426.6 of fat per year. Eight cows, record by tester No. 2, average 423.8 of fat per year.

MORE PROFIT IN THICK CREAM.

Farmers will make more money by separating a reasonably thick cream than a thin cream, according to H. W. Gregory, assistant in dairy husbandry at the South Dakota State College.

He says, "Skimming high-test cream leaves more skim milk on the farm to be fed to the hogs, calves and chickens. Skim milk used in this way has a feeding value of about 30 or 35 cents a hundred, while if it remains in the cream the farmer will realize nothing from it at all.

"If a farmer is shipping cream there will also be a saving on express charges in favor of the thick cream. For example, if he had 130 pounds of cream testing 24 per cent butter fat he would have 31.2 pounds of butter fat. It would require two cans to hold the cream, one ten and one five-gallon can. Now if this cream has tested 39 per cent he would have eighty pounds of cream which could be shipped in a ten-gallon can. He would not only save the express on an extra can, but would have five gallons of skim milk left on the farm to feed.

"The buttermaker usually wants a cream testing around 35 or 40 per cent butter fat, depending somewhat on the season of the year. In the winter, if the cream is above 40 per cent it is rather difficult to get the cream all out of one can into another or into a vat and for that reason it is not advisable to skim over 38 per cent. Cream testing about 35 per cent in the winter and about 40 per cent in the summer is about right for buttermaking."

FEEDING THE DAIRY CALF.

In a sense, the care of the calf should begin before it is born. The cow which is soon to freshen should be kept in a clean, dry place, preferably a large, well-bedded box stall and should be seen by the person in charge several times each day in order that he may be there when the calf arrives or soon thereafter to see that all goes well. In most cases the calf will be able to get up and nurse within an hour after it is born, but occasionally it needs assistance. There is always a risk in allowing a cow to calve in the pasture or elsewhere without attention.

It is well to remove the calf from the cow by evening of the third day and it may be removed as soon as it has had one good nursing of the mother's milk. When the calf is weak it should be left with the cow at least a day or two. It should have the mother's milk for the first five to seven days unless the udder is diseased and the milk is bad. Her milk at this time has the proper physical effect on the calf, starting properly the action of the digestive tract. If it does well until ten days of age it will probably continue to do well, barring all accidents and poor care.

If taken from the cow early the calf usually learns to drink more quickly. At first it may be fed a small quantity of milk three times daily, though twice daily is usually sufficient. The amount of milk fed should vary from six to ten pounds (six to ten pints) daily, depending on the size and vigor of the calf and the quality (richness) of the milk. Very rich milk may be diluted with one-third as much warm water. After the calf is one week old this amount of milk may be raised to eight or twelve pounds daily; that is, two feeds of four to six pounds each. Calves which are being raised for dairy purposes need not receive more than twelve to sixteen pounds of milk per day even when changed to skim milk. If the calf is to be fattened for veal more milk should be fed.

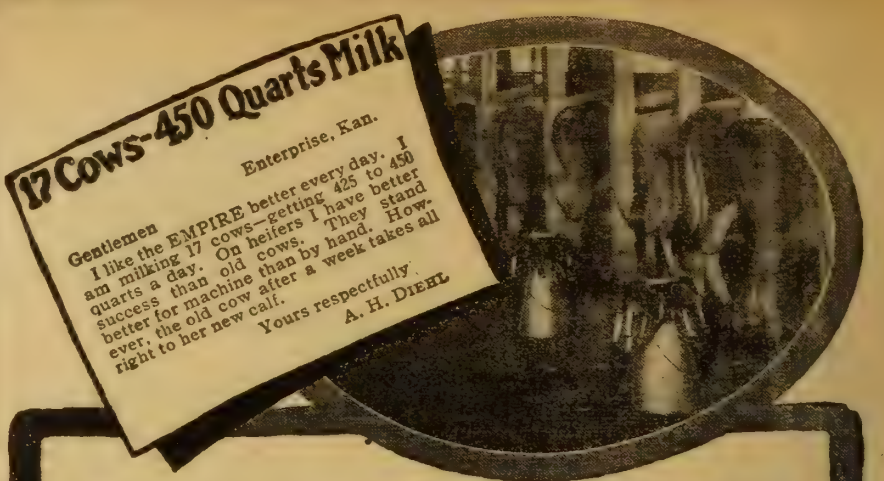
It is quite common practice for farmers who are not selling their milk to feed their calves too much skim milk. This overfeeding is the cause of much indigestion and scouring. Only warm, sweet, whole milk should be fed until the calf is two weeks of age. It is possible to begin changing to skim milk and adding other feeds at ten days of age if the calf is strong and vigorous. If the calf is not strong and vigorous the change should not be started until it is three weeks old. Better and more growthy calves will be secured if the whole milk is continued even longer than three weeks.

During the first few days and during any change in feed the condition of the calf should be watched carefully. When the change to skim milk is to be made it should be done at the rate of one-half to one pound (one-half to one pint) daily, the rapidity of the change depending on the age and vigor of the calf. The skim milk should be sweet and warmed to the same temperature as the whole milk (90 to 100 degrees Fahrenheit). The age at which the skim milk may be discontinued (the calf weaned) will depend on the condition of the calf, the supply of milk and the kind of feeds which are to take its place. It is possible to wean the calf at sixty days of age if the proper grains are substituted, but it is not desirable to make this change before the calf is four to six months of age if large, strong calves are desired. The longer the milk is continued the better will be the calf. If a number of calves are kept together they should be kept tied or in stanchions for fifteen minutes after feeding milk to prevent their sucking ears and udders. (It is claimed that sometimes bad quarters in udders of heifers at calving time are due to having been sucked when calves.)

If skim milk from a creamery is used it should be heated to 160 degrees Fahrenheit for fifteen to twenty minutes for the purpose of preventing the possibility of infection by tuberculosis or other disease germs which might be in the milk coming from other herds. The heating may also prevent scouring caused by filth germs in the milk. Sour milk, buttermilk or sour skim milk may be fed to calves six weeks to two months of age if the change is made gradually and the condition of the calf is watched closely. To teach the calf to drink give it the finger, place the hand down into the milk and gradually withdraw the finger. If it does not learn readily and is strong allow it to become very hungry and it will learn much more quickly. Care must be taken not to give it too much when hungry.

Pails in which the milk is fed should be washed after each feeding and would better be scalded or steamed. When possible they should be placed in the sun to dry, because the sun is a good germ killer. Troughs and vessels which cannot be cleaned readily are not suitable vessels in which to feed calves, because the filth germs growing in the milk and saliva left in them are very apt to cause sickness. Keep such vessels clean and dry when not in use.

Calf feeders are common on the market, but they have not given as good results as pail feeding, largely because of the difficulty of keeping them clean. Dirty vessels may make a calf sick for the same reason that a dirty bottle may make a baby sick.



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You can sell all the mother cow's milk or butter and make your calf pay you a big profit on its feed, by raising it on

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Blatchford's Calf Meal

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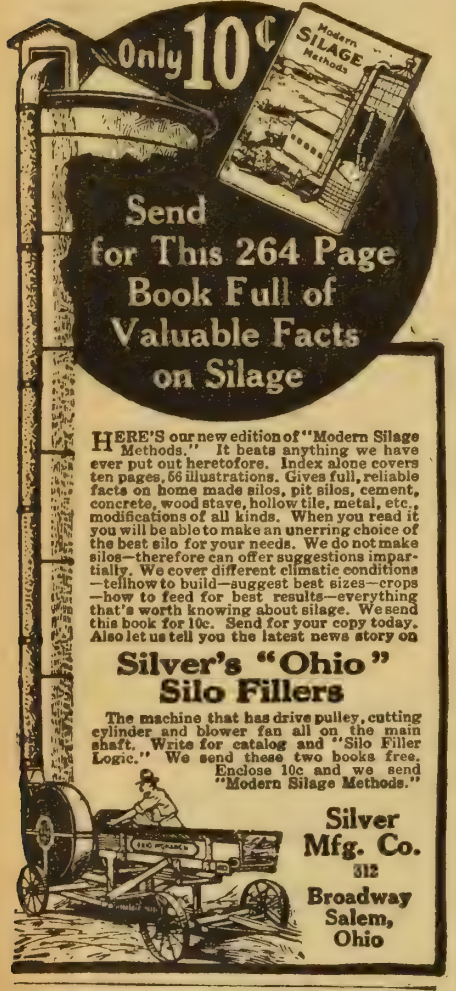
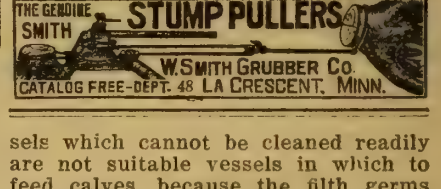
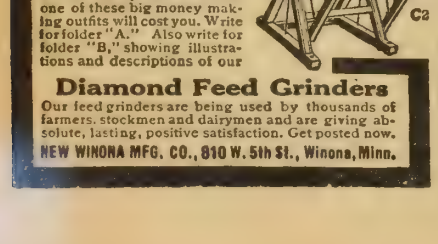






HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." After some thought he decided not to tell Mrs. Burke of her just yet.

CHAPTER III.
The Senior Warden.

"IT'S A fine morning, Mr. Maxwell," Mrs. Burke remarked at breakfast next day, "and I'm goin' to drive down to the village to do some shopping. Don't you want to go with me and pay your respects to the Senior Warden? You'll find him in his office. Then I'll meet you later, and bring you home—dead or alive!"

Maxwell laughed. "That sounds cheerful, but I should be glad to go."

"I guess you better and have it over with. He'll expect it. He's like royalty, he never calls first, and when he's at home he always has a flag on a pole in the front yard. If he's out of town for the day his man lowers the flag. I generally call when the flag's down. I wish everybody had a flag. It's mighty convenient."

The center of Durford's social, commercial and ecclesiastical life was the village green, a plot of ground on which the boys played ball, and in the middle of which was the liberty pole and the band stand. On one side of the green was a long block of stores, and on the opposite side a row of churches, side by side, five in number. There was the Meeting House, in plain gray; "The First Church of Durford," with a Greek portico in front; "The Central Church," with a boxlike tower and a slender steeple with a gilded rooster perched on top—an edifice which looked like a cross between a skating rink and a railroad station; and last of all, the Episcopal Church on the corner—a small, elongated structure, which might have been a carpenter shop but for the little cross which surmounted the front gable, and the pointed tops of the narrow windows, which were supposed to be "gothic" and to proclaim the structure to be the House of God.

Just around the corner was a little tumble-down house known as "The Rectory." The tall grass and the lowered shades indicated that it had been unoccupied for some time. Mrs. Burke called Maxwell's attention to it.

"I suppose you'll be living there some day—if you stay here long enough; though, of course, you can't keep house there alone. The place needs a lot of overhaulin'. Nickey says there's six feet of plaster off the parlor ceilin', and the cellar gets full of water when it rains, but I guess we can fix it up when the time comes. That's your cathedral, on the corner. You see, we have five churches, when we really need only one, and so we have to scrap for each other's converts to keep up the interest. We feed 'em on sandwiches, pickles and coffee every now and then to make 'em come to church. Yes, preachin' and pickles, sandwiches and salvation seem to run in the same class these days."

When they arrived in front of the block Mrs. Burke hitched her horse and left Maxwell to his own devices. He proceeded to hunt up the postoffice; and as the mail was not yet distributed, he had to wait some time, conscious of the fact that he was the center of interest to the crowd assembled in the room. Finally, when he gained access to the delivery window, he was greeted by a smile from the postmistress, a woman of uncertain age, who remarked as she handed him his letters:

"Good morning, Mr. Maxwell. Glad to meet you. I'm a Presbyterian myself, but I have always made it a point to be nice to everybody. You seem to have quite a good many correspondents, and I presume you'll be wantin' a lock box. It's so convenient. You must feel lonesome in a strange place. Drop in and see mother some day. She's got curvature of the spine, but no religious prejudices. She'll be right glad to see you, I'm sure, even though she's not 'Piscopal."

Maxwell thanked her and inquired the way to the Senior Warden's office, to which she directed him.

Three doors below the postoffice was a hallway and a flight of stairs leading up to Mr. Bascom's sanctum. As he ascended Maxwell bethought him of the Bishop's hint that this was the main stronghold for the exercise of his strategy. The Senior Warden, for some reason or other, had persistently quarreled with the clergy, or crossed them. What was the secret of his antagonism? Would he be predisposed in Maxwell's favor or prejudiced against him? He would soon discover—and he decided to let Bascom do most of the talking. Reaching the first landing, Donald knocked on a door, the upper panel of which was filled with glass painted white. On the glass in large black letters was the name, "Sylvester Bascom."

The Senior Warden sat behind a table covered with musty books and a litter of letters and papers. In his prime he had been a small man, and now, well past middle age, he looked as if he had shrunk until he was at least five sizes too small for his skin, which was sallow and loose. There was a suspicious look in his deep-set eyes, which made his hook nose all the more aggressive. He was bald, except for a few stray locks of gray hair which were brushed up from his ears over the top of his head, and evidently fastened down by some gluey cosmetic. He frowned severely as Maxwell entered, but extended a shriveled, bony hand and pointed to a chair. Then placing the tips of his fingers together in front of his chest he gazed at Donald as if he were the prisoner at the bar, and began without any preliminary welcome:

"So you are the young man who is to take charge of the church. It is always difficult for a city-bred man to adjust himself to the needs and manners of a country parish. Very difficult, Mr. Maxwell—very difficult."

Maxwell smiled as he replied:

"Yes, but that is a fault which time will remedy."

"Doubtless. Time has a way of remedying most things. But in the meantime—in the meantime, lack of tact, self-assertiveness, indiscretion on the part of a clergyman may do much harm—much harm!"

Mr. Maxwell colored slightly as he laughed and replied:

"I should imagine that you have had rather a 'mean time,' from the way you speak. Your impressions of the clergy seem to be painful."

"Well," the lawyer continued sententiously, "we have had all sorts and conditions of men, as the Prayer Book says; and the result has not always been satisfactory—not always satisfactory. But I was not consulted."

To this, Maxwell, who was somewhat nettled, replied:

"I suppose that in any case the responsibility for the success of a parish must be somewhat divided between the parson and the people. I am sure I may count on your assistance."

"Oh yes: oh yes; of course. I shall be very glad to advise you in any way I can. Prevention is better than cure. Don't hesitate to come to me for suggestions. You will doubtless be anxious to follow in the good old ways and avoid extremes. I am a firm believer in expediency. Though I was not consulted in the present appointment I may say that what we need is a man of moderate views who can adjust himself to circumstances. Tact, that is the great thing in life. I am a firm believer in tact. Our resources are limited, and a clergyman should be a self-denying man of God, contented with plain living and high thinking. No man can succeed in a country parish who seeks the loaves and fishes of the worldling. Durford is not a metropolis; we do not emulate city ways."

"No, I should imagine not," Maxwell answered.

The parson gathered that the Senior Warden felt slighted that he had not been asked by the Bishop to name his appointee, and that if he had bethought himself to sprinkle a little hay seed on his clothing his reception might have been more cordial.

At this point the door opened and a woman, hovering somewhere between twenty-five and forty, dressed in rather youthful and pronounced attire, entered, and seeing Donald exclaimed:

"Oh, papa, I did not know that you were busy with a client. Do excuse me."

Then, observing the clerical attire of the "client," she came forward, and extending her hand to Donald, exclaimed with a coy, insinuating smile:

"I am sure that you must be Mr. Maxwell. I am so glad to see you. I hope I am not interrupting professional confidences."

"Not in the least," Donald replied, as he placed a chair for her. "I am very glad to have the pleasure of meeting you, Miss Bascom."

"I heard last night that you had arrived, Mr. Maxwell, and I am sure that it is very good of you to come and see papa so soon. I hope to see you at our house before long. You know that we are in the habit of seeing a good deal of the rector, because—you will excuse my frankness—because there are so few people of culture and refinement in this town to make it pleasant for him."

"I am sure that you are very kind," Donald replied. Miss Bascom had adjusted her tortoise-sheel lorgnette, and was surveying Donald from head to foot.

"Is your wife with you?" she inquired, as one who would say: "Tell me no lies!"

"No, I am not married."

At once she was one radiant smile of welcome:

"Papa, we must do all we can to make Mr. Maxwell feel at home at Willow Bluff—so that he will not get lonesome and desert us," she added genially.

"You're very kind."

"You must come and dine with us very soon and see our place for yourself. You are staying with Mrs. Burke, I understand."

"Yes."

"How does she impress you?"

"I hardly know her well enough to form any definite opinion of her, though she has been kindness itself to me."

"Yes, she has a sharp tongue, but a kind heart; and she does a great deal of good in the village; but, poor soul! she has no sense of humor—none whatever. Then, of course, she is not in society, you know. You will find, Mr. Maxwell, that social lines are very carefully drawn in this town; there are so many grades, and one has to be careful, kou know."

"Is it so! How many people are there in the town?"

"Possibly eight or nine hundred."

"And how many of them are 'in society'?"

"Oh, I should imagine not more than twenty or thirty."

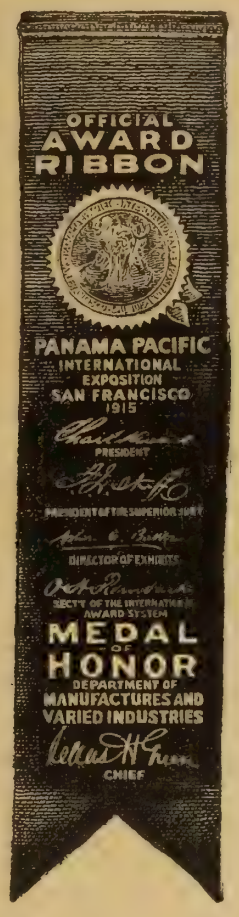
"They must be very select."

"Oh, we are; quite so."

"Don't you ever get tired of seeing the same twenty or thirty all the time? I'm afraid I am sufficiently vulgar to like a change, once in a while—somebody real common, you know."

Miss Bascom raised her lorgnette in pained surprise and gazed at Donald curiously; then she sighed and tapping her fingers with her glasses replied:

"But one has to consider the social responsibilities of one's position, you know. Many of the village people are



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The Farm Journal

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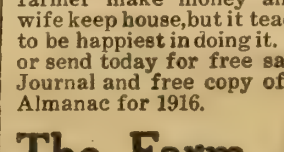

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well enough in their way, really quite amusing as individuals; but one cannot alter social distinctions."

"I see," replied Donald, non-committally.

Virginia was beginning to think that the new rector was rather dull in his perceptions, rather gauche, but deciding to take a charitable view, she held out her hand with a beaming smile as she said:

"Remember, you are to make Willow Bluff one of your homes. We shall always be charmed to see you."

When, after their respective shoppings were completed, Maxwell rejoined Mrs. Burke, and they had started on a brisk trot towards home, she remarked:

"So you have had a visit with the Senior Warden."

"Yes, and with Miss Bascom. She came into the office while I was there."

"Hm! Well! She's one of your flock!"

"Would you call Miss Bascom one of my lambs?" asked Donald mischievously.

"Oh, that depends on where you draw the line. Don't you think she's handsome?"

"I can hardly say. What do you think about it?"

"Oh, I don't know. When she's well dressed she has a sort of style about her, but isn't it merciful that we none of us know how we really look? If we did we wouldn't risk bein' alone with ourselves five minutes without a gun."

"Is that one for Miss Bascom?"

"No, I ought not to say a word against Virginia Bascom. She's a good sort accordin' to her lights; and then, too, she is a disconnection of mine by marriage—once removed."

"How do you calculate that relationship?"

"Oh, her mother's brother married my sister. She suspected that he was guilty of incompatibility—and she proved it and got a divorce. If that don't make a disconnection of Ginty Bascom, then I don't know what does. Virginia was born in Boston, though she was brought up here. It must be terrible to be born in Boston and have to live up to it, when you spend your whole life in a place like Durford. But Ginty does her very best, though occasionally she forgets."

"You can hardly blame her for that. Memory is tricky and Boston and Durford are about as unlike as two places well could be."

"Oh, no; I don't blame her. Once she formed a club for woman's suffrage. She set out to 'form my mind'—as if any mind wasn't pretty thoroughly formed at this time of day—and get me to protest against the tyranny of the male sex. I didn't see that the male sex was troublin' her much, but I signed a petition she got up to send to the governor or somebody, asking for the right to vote. There was an opposition society that didn't want the ballot and they got up another petition."

"And you signed that one, too, I expect," laughed Donald.

"Sure thing, I did. I'm not narrow-minded, and I like to be obliging. Then she tried what she called slummin', which, as near as I can see, means walkin' in where you ain't wanted, because people are poorer than you are, and leavin' little tracts that nobody reads, and currant jelly that nobody eats, and clothes that nobody can wear. But an Irishman shied a cabbage at her head while she was tryin' to convince him that the bathtub wasn't really a coal bin, and that his mental attitude was hindside before.

"Then she got to be a Theosophist, and used to sit in her room upstairs projecting her astral body out of the window into the back yard, and pulling it in again like a ball on a rubber string—just for practice, you know. But that attack didn't last long."

"She seems to be a very versatile young woman, but she doesn't stick to one thing very long."

"A rolling stone gathers no moss, you know," Mrs. Burke replied. "That's one of the advantages of bein' a rolling stone. It must be awful to get mossy, and there isn't any moss on Virginia Bascom, whatever faults she may have—not a moss."

For a moment Mrs. Burke was silent, and then she began:

"Once Virginia got to climbin' her family tree, to find out where her ancestors came from. She thought that possibly they might be noblemen. But I guess there wasn't very much doin' up the tree until she got down to New York, and paid a man to tell her. She brought back an illuminated coat of arms with a lion rampantin' on top, but she was the same old Virginia still. What do I care about my ancestors! It doesn't make no difference to me. I'm just myself anyway, no matter how you figure, and I'm a lot more worried about where I'm goin' to than where I came from. Virginia's got a book called, 'Who's Who,' that she's always studying. But the only thing that matters, it seems to me, is Who's What."

"I wonder she hasn't married," remarked Donald, innocently.

"Ah, that's the trouble. She's like a thousand others without no special occupation in life. She's wastin' a lot of bottled up interest and sympathy on foolish things. If she'd married and had seven babies they would have seen to it that she didn't make a fool of herself. However, it isn't her fault. She's volunteered to act as Deaconess to every unmarried parson we've had, and it's a miracle of wonders one of 'em didn't succumb, parsons are such—oh, do excuse me! I mean so injudicious on the subject of matrimony."

"But, Mrs. Burke, don't you think a clergyman ought to be a married man?"

"Well, to tell you the truth, t'aint me that's been doin' the thinkin' along those lines, for most of the parsons we've had. I've been more of a first aid to the injured, in the matrimonial troubles of our parish, and the Lord only knows when love-making has got as far as actual injury to the parties engaged—well thinkin' ain't much use. But there's Ginty, for example. She's been worryin' herself thin for the last five years doin' matrimonial equations for the clergy. She's a firm believer in the virtue of patience, and if the Lord only keeps on sendin' us unmarried rectors Ginty is goin' to have her day. It's just naturally bound to come. I ain't sure whether she's got a right to be still runnin' with the lambs or not, but that don't matter much—old maids will rush in where angels fear to tread."

Maxwell smiled. "Old maids and old bachelors are pretty much alike. I know a few of the latter that no woman on earth could make into regular human beings."

"Oh, yes; old bachelors aren't the nicest thing the Lord ever made. Most of 'em are mighty selfish critters, take 'em as they run; and a man that's never had a real great love in his life doesn't know what life is."

"That's quite true," Donald responded, with such warmth that Mrs. Burke glanced at him suspiciously, and changed her tune, as she continued:

"Seems to me a parson, or any other man, is very foolish to marry before he can support a wife comfortably, and lay by somethin' for a rainy day, though. The last rector had five babies and seventeen cents to feed 'em with. Yes, there were little olive branches on all four sides of the table and under the table, too. The Whittimores seemed to have their quiver full of 'em, as the psalmist says. Mrs. Whittimore used to say to me, 'The Lord will provide,'—just to keep her courage up, poor thing! Well, I suppose the Lord did provide, but I had to do a lot of hustlin', just the same. No sir, if a person marries, he better find a woman who has outgrown her short skirts. Young things dyin' to be martyrs with a good lookin' young parson, are a drug in the market. Better go slow." And Hepsey looked up at him significantly.

"Then you think it would be inadvisible to propose to Miss Virginia immediately, do you?" Donald asked, as if humbly seeking guidance.

"Well, there doesn't seem to be any immediate hurry about it. Now if you'll open the gate to Thunder Cliff I'll be much obliged to you. If I don't get my mind on something less romantic than Virginia we shall have to dine off airy fancies—and that won't suit Nickey, for one."

(To be continued.)

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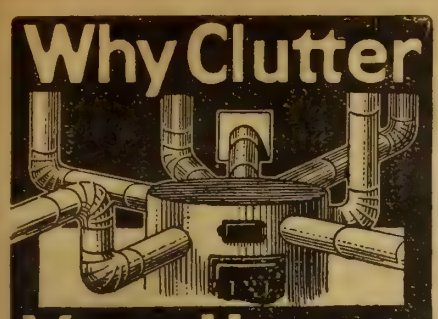

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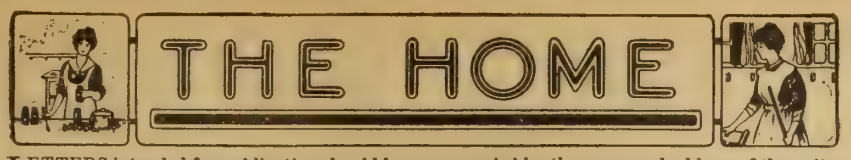

LETTERS intended for publication should be accompanied by the name and address of the writer not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., The Wisconsin Farmer, Madison, Wisconsin.

THE WOMEN WHO WANT TO VOTE.

There no longer remains much doubt as to the attitude the women themselves are taking on the equal suffrage question, despite the fact that the belief is entered by some persons that women generally do not want to vote. "Facts is facts," and this holds good in the stand taken by the women of the United States concerning the suffrage question. Many millions of women have gone on record as wanting to vote, and there is hardly a woman's organization of prominence which is not in favor of equal suffrage.

Here are a few of the country's women who want to vote:

International Council of Women, representing 7,000,000 women.
National Federation of Women's clubs, membership more than 1,600,000.
Every state federation of women's clubs in the states where women have the right to vote, and many in states where the right of suffrage is denied women.
National Women's Trade League, with a membership of twenty-two leagues in thirteen different states.
National Order of Maccabees, 50,000 women.
International Council of Nurses, representing nine countries, and including the United States.

And here are some of the organizations which say women are entitled to the ballot:

National Educational Association.
National Grange.
American Federation of Labor.
United Commercial Travelers, grand council.
National Association of Letter Carriers.
National Purity Conference.
National Miners' Federation.

In face of this support can men and women question the lack of interest on the part of the women themselves, or the lack of approval on the part of the men who are doing things?

WANTS TO KNOW DIFFERENCE IN CREEDS.

To the Editor:—I wonder if some of your readers will not answer some questions which no doubt will interest others as well as myself.

When attending church one is always urged to unite therewith, but never yet have I had any opportunity to learn the creed (if that is the correct word) of the different churches. Would be thankful to know what is expected of a person joining the Presbyterian, also the Methodist Episcopal church. What is the difference between them? Why is one a Christian and more likely to be saved after uniting with a church than when living an honest, conscientious life out of the church? Constant Reader.

NOW IT'S TWINS.

To the Editor:—So many mothers have sent their babies' pictures in that I thought I would take time to send ours. I have never seen any pictures of twins in the paper. Our babies are twin girls, May and Eva Rockwell. At the time this picture was taken they were one year old and weighed eighteen and twenty pounds. They are nineteen months old now. They only weighed three and five pounds when they were born. I brought them up on cow's milk and they have always been well.

I hope to hear from more mothers through the paper. I enjoy reading their letters very much.

Mrs. C. M. Rockwell.

HOW TO MAKE A GOOD BUTTONHOLE.

Buttonholes are a stumbling block to many an otherwise good sewer. A garment may be neatly made, fit well, and be a work of art in every other respect, but its beauty will be spoiled entirely if the buttonholes gap open or break through at the end, leaving a slit twice as great as the diameter of the button.

To make a good buttonhole, begin the slit about a quarter of an inch in from the edge. Cut on a thread through both or all thicknesses of the cloth, making the slit the length of the diameter of the button to be used. Use a thread a little heavier than the cloth in which the buttonhole is worked and of sufficient length to complete it. The needle should be as fine as will carry the thread.

In working a buttonhole, first put in two or more stitches across the lower end of the slit to keep it from stretching. Then take two or more stitches down the side, across the end and up the other side, a sixteenth of an inch from the edge, bringing the needle out at the starting point. This will strengthen the buttonhole. In overcasting the edges, sink the stitch a thread beyond this stranding. Four or five overcasting stitches on each side are sufficient to prevent raveling and to keep the strands in place. The last stitch in overcasting should bring the needle out at the end of the slit ready to begin working the buttonhole.

In taking the buttonhole stitch, the needle should be brought through towards the worker, deep enough to cover all stitches that have been made before and prevent pulling out. Before pulling through, make the buttonhole purl by taking the thread over the eye of the needle and carrying it around the point of the needle in the direction in which you are sewing. When the end is reached take seven or nine spreading stitches, making a fan, if a rounded end is desired. Continue down the other side. If a bar is used put the needle into the opposite purl at the end of the slit, draw the two sides together and make several long stitches the length of the width that the buttonhole is cut. Work the bar across the end, work-

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ing from left to right with the blanket stitch. Finish by taking a few tiny stitches on the wrong side.

DAISY YOKE.

So many of our friends have written us for further details in the crocheting of the daisy yoke illustrated some time ago in the Home Department that we are printing directions for this yoke herewith in a little different form and making as many explanations of stitches as possible. The yoke is made of No. 30 cotton.

Ist Row — *Chain eleven, two double trebles (thread over twice) in fourth chain from hook; chain four, three double trebles in fourth stitch from hook; chain three, slip stitch (put hook through work at stitch indicated in directions, draw thread through work and loop on needle at same time) in same hole; chain three, three double trebles, chain three, one slip stitch in same hole; chain three, three double trebles; chain three, one slip stitch in same hole; chain three, one double treble in same place and slip stitch in top of first double treble, thus forming one flower. Chain seven, slip stitch in first of eleven chain. Do not turn work.

2d Row—Chain nine, two double trebles in fourth chain from hook; chain four, two double trebles in fourth chain from hook, withdraw hook, pull through third chain from top of leaf; one double treble in same hole; chain three, one slip stitch in same hole; chain three, two double trebles in same hole; chain two, slip stitch in center of leaf of last row; chain six, two double trebles in fourth chain from hook; chain four, three double trebles in fourth chain from hook; chain three, one slip stitch in same hole; chain three, three double trebles; chain three, one slip stitch in same hole; chain three, three double trebles; chain three, one slip stitch in same hole; chain three, one double treble in same hole and slip stitch in beginning of flower; chain five, slip stitch into end of partly worked flower; one double treble; chain three, one single crochet into center hole of flower; chain three, three double treble; chain three, one single crochet in same hole; chain three, one double treble, slip stitch into top of flower. Repeat in the same manner from * until the desired width is reached, then decrease to form the other half of scallop.

TRY IT YOURSELF.

After corks have been used awhile they sometimes become so compressed that the contents of the bottle leaks out. This may be remedied by putting the corks in boiling water and leaving them until the water cools. They will then be as good as new and fit just as tightly.

The turkey or chicken need not be sewed up after the dressing has been put in. Insert toothpicks on either side and string back and forth over the picks. This is easily removed after the fowl is cooked.

Rusty flatirons should be rubbed over with beeswax and lard or beeswax and salt.

It should be a matter of common knowledge, since flour is always within convenient reach, that wheaten flour is the best extinguisher to throw over a fire caused by the spilling and igniting of kerosene.

When stoves are about to be put away for the summer, apply kerosene to them with a cloth; it will prevent rust.

Use sandpaper to remove spots of rust from your range.

Dark calicoes should be ironed on the wrong side with irons that are not too hot.

After using your meat grinder run a piece of dry bread through it. It will take out all the grease and make it easy to wash.

Sugar for cakes should always be sifted. Never melt the butter; creaming butter encloses air and makes the cakes light; cakes should always be beaten—not stirred.

MODIFIED MILK FORMULA FOR THE BABY.

To the Editor:—I have seen through the columns of your paper that you are wanting mothers to write to your Home Department. I am sending a picture of our eleven-months-old baby boy, weight twenty-eight pounds.

He has been an artificially fed baby since he was seven weeks old and is perfectly healthy and well. While I do not think artificial feeding is best, it is often the case that a baby must be fed from the bottle.

I advise cow's milk when it can be obtained, and will give the formula I have used with much success. In preparing cow's milk for children's use it should be strained through several thicknesses of cheesecloth into glass jars or milk bottles, which should be covered and cooled immediately. I have always used a half gallon fruit jar and filled it every morning with fresh milk and let it stand in ice water up to its neck for two and a half hours. Then I would take the top third and put two-thirds water with it, one ounce of limewater and one ounce of milk sugar. The milk sugar should be prepared by dissolving in warm or boiling water, and it should be filtered, after boiling, through two thicknesses of cheesecloth.

RAY M. STANLEY, AGE 11 MONTHS.

This amount will probably last baby for twenty-four hours, but I always made fresh milk every morning in cool weather and morning and evening in hot weather.

After the child is three or four months old the amount of cream to be added to the milk can be increased considerably. This will be done by adding one-quarter the bulk of cream to the milk. It is best to feed this formula until the child is ten or eleven months old.

Hoping this will be of benefit to some mother. Mrs. Selby Stanley.

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RECIPES.

Lamb Souffle.—Cook one tablespoonful of butter with one of flour. Add three-fourths of a cupful of rich milk or stock. When boiling add one cupful of finely minced chicken or mutton with one-half cupful of soft bread crumbs and three beaten yolks. Season with salt and pepper and a little Worcestershire sauce. Add a little minced pimento if there is any at hand.

Bread Omelet.—Break dry bread in pieces, pour over it hot water until real moist, season with salt, pepper and butter. Beat in one egg to each small slice of bread. Have pork fryings hot in skillet, pour the mixture in. Fold in the beaten whites and turn into a deep buttered dish. Bake in a slow oven for twenty minutes. Serve at once. When brown underneath cut as you would pie, turn and brown the other side. This is excellent.—Mrs. L. A. I.

Coffee Cake from Heidelberg.—One cup sugar, one-half cup butter and lard mixed, one egg, one cup milk, two and one-half cups flour, two teaspoonfuls baking powder, one-half cup currants. Pour into a large, flat bread pan and sprinkle with sugar and ground cinnamon. Bake twenty minutes. Serve hot with butter and coffee.

Brown Bread.—One-half cup of honey, one and one-half cups of sour milk or buttermilk, three cups of graham flour, one teaspoonful of soda. Nuts and raisins may be added if desired.

Apples and Rice.—Pare and core apples, place in a baking dish and fill the holes with chopped raisins and sugar. Fill the space between the apples with rice that has been boiled fifteen minutes. Cover and bake fifteen minutes. Remove cover and bake fifteen minutes longer. Serve hot with cream.

Jellied Apples.—Twelve apples, one lemon, one and one-half pounds sugar, one ounce gelatine. Pare and core apples. Cook in water enough to cover them, until they can be pierced with a straw. Remove them and add sugar to water. Boil five minutes. Then put apples in and cook until clear—about fifteen or twenty minutes. Take apples out and add sliced lemon and the gelatine, which has been dissolved in cold water. Let come to a boil and pour over apples. Set away to harden. Serve cold with cream.

Orange Cake.—One-fourth cup butter, one scant cup sugar, one-half cup milk, whites of two eggs, two and one-half cups pastry flour, two teaspoonfuls baking powder. Flavor with orange extract. Sift flour with baking powder three times and mix in the order given. Bake in two shallow pans about twenty minutes. When cool put together with orange filling.

Orange Filling.—One-half cup sugar, two small tablespoonfuls flour, a little grated orange rind, one-half cup orange juice (one orange), one-half teaspoonful lemon juice, one teaspoonful butter, one egg, beaten slightly. Mix in order given, beat up well and cook in a double boiler, stirring constantly until thick as thin mush. When cool it is ready for use.

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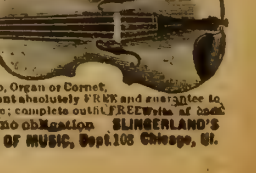

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FISH eaters beware! Order only strictly fresh weather-frozen fish, such as we ship. Direct from the waters to you. Herring in sacks $3.25 per 100 lbs., in boxes $3.50 per 100 lbs. Pike $9.25. Pickerel $6.25. Tulibees $6.25. Salted Lake Superior Herring (New Catch) per 100 lbs. in keg $3.25. Salted Lake Trout (New Catch) $7.50 per 100 lbs. in keg. Orders promptly attended to, and fresh fish guaranteed. Order from us now and be convinced. STAR FISH CO., Box 167, DULUTH, MINNESOTA. References: Am. Exchange Nat'l Bank. Discount given from above prices on 500 lb. lots.

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Fresh Frozen Lake Superior Herring

OR commonly known as Family White. Buy your fish direct from our Fisheries. The best in the market. Send your orders early. Fish shipped in strong wooden boxes. Fresh Frozen HERRING, per 100 lbs. $3.00. Fresh Frozen HERRING, per 50 lbs. $1.90. 500 lb. lots or more, $2.90 per 100 lbs. Reference, First State Bank Two Harbors, Minn.

JOHNSON, HENDRICKSON & CO.
Two Harbors Minnesota

We Guarantee Fresh Fish

AND SHIP SAME DAY ORDER IS RECEIVED. Prices per 100 lbs. as follows: Loose weather-frozen Herring in sacks $3.25, in boxes $3.50. Pickerel $6.25. Pike $9.25. Tulibees $6.25. Newly packed, salted, inspected Lake Superior Herring $3.25 in keg. Newly packed, salted, inspected Lake Trout $7.50 in keg. Order only from the old reliable firm. LAKE SUPERIOR FISH CO., 208 E. 1st St., DULUTH, MINN. Reference: Am. Ex. Nat'l Bank. Lower prices given on large orders.

Fresh Frozen Herring

PIKE and PICKEREL packed in boxes can be had at the following prices: Herring, $3.50 per 100 lbs. Pickerel, $6.00 per 100 lbs. Pike, $9.00 per 100 lbs. Herring shipped in sacks inside of Minnesota $3.25 per 100 lbs. Price list sent on application. SEVERTSON BROS. FISH CO., 114 19th Ave. W., DULUTH, MINNESOTA.

WITH complete equipment to catch and transport FRESH FROZEN FISH, we are better prepared than ever to fill orders promptly during cold weather at the following prices: **Fresh Frozen, Large, Lake Superior Herring** per 100 lbs. in box $3.25; 500 lbs. or more $3 per 100 lbs. in boxes. **Salted Herring** $3.25 per 100 lbs. Keg **Pike** 11c per lb. **Pickerel** 8c per lb. Ref. First State Bank. John Degerstedt & Co., Two Harbors, Minnesota.

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HERRING, 100 lbs. - - - - $3.25
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WHITEFISH, 50 lbs. - - - - $7.50

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FRESH FISH

CAUGHT in the waters of Green Bay are the best and finest flavored fish produced. Write for complete price list all kinds Fresh, Smoked, Salt and Spiced Fish. We offer only highest quality at lowest prices. Badger Fish Company, Dept. 4, Green Bay, Wisconsin.

ATTENTION, FISH BUYERS. Strictly Fresh Frozen Herring at $3.25 per 100 lbs. in sacks. $3.50 per 100 lbs. in boxes. Fresh Frozen Pike at $9.25 per 100 lbs. Pickerel at $6.25 per 100 lbs. Best Quality Salt Trout at $7.50. Salted Herring $3.25 per 100 lb. keg. Tulibees $6.25 per 100 lbs. We guarantee satisfaction. GREAT LAKES FISHING CO., 412 E. 5th St., Duluth, Minn.

WE GUARANTEE BEST QUALITY NEW Frozen Lake Superior Herring in sacks $3.25 per 100 lbs.; in boxes $3.50 per 100 lbs. Pike $9.00 per 100 lbs. Pickerel $6.00 per 100 lbs. Whitefish $10.00 per 100 lbs. AERIAL FISH CO., DULUTH, MINN.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

THE KING OF THE GOLDEN MOUNTAIN.

A certain merchant had two children whom he loved dearly. For several years he was wealthy and prosperous, and then one day he got word that some of his ships had been lost at sea. In these two ships he had put all of his property in the hope that he would make great gains. So when they were lost he was left without anything.

One day he met a little rough looking dwarf, who said to him:

"Tell me what makes you so sad."

So the merchant told him his troubles. When he was through the dwarf said to him:

"I will give you gold and great riches if, at the end of twelve years, you will promise to give me the first thing that runs to meet you on your return home today."

And the merchant, thinking, of course, that his dog or his cat would run out to greet him, promised.

Imagine his surprise and grief then, upon arriving at home, to have his little son run to meet him. However, the father did not worry about the bargain long, for he had not yet received anything from the dwarf. But one day when he went up into the garret he found a great pile of gold, which he took and started into trade again and was soon a rich man.

In spite of his wealth the father began to grow sad as the end of the twelve years drew near. At length his son asked what was the matter and the father told the boy of the bargain with the dwarf.

So they went into the forest and after a while the dwarf came. Then the son learned that he actually belonged to the little man. It was agreed that the boy was to be put into a boat and set adrift on the sea.

However, the boat went sailing on until it was washed onto the shore of a strange island. Here the boy got out and started to explore the place. He could find no living person or thing in the wood that covered the island. Finally he came to a beautiful castle that was enchanted. Going in, he went from room to room and the only thing he could find was a white serpent. This serpent was an enchanted princess and she told the boy: "I have been waiting here for you for twelve years. If you will deliver me from this enchantment you must stay in the castle two nights. On the first night twelve black men will come. They will stay until twelve o'clock and then depart. All that you must remember is not to speak a word while they are here. On the second night they will come again and you are to act in the same manner. Only on the second night they will cut off your head. But at midnight when they depart my enchantment will be done away with and I will get the water of life and restore you."

Everything happened as the princess had said and after she had been changed back into a beautiful lady the boy married her. Then he became King of the Golden Mountain. They lived happily for several years and had one little son. One day the king thought of his father who had been sorrowing for him so long.

The queen did not want him to go back to his old home, but when she saw he was determined to do so she gave him a wishing ring with this instruction: "Put this on your finger. It will bring you any wish, but do not use it to wish me or our son away from this place."

Dressed in shepherd's clothing the king started for his father's home. He told them about being a king and of his wife and child. But the father and mother laughed at this and said: "You a king and in those peasant clothes!"

That made the king so angry that he forgot what his wife had said and wished that she and his son were there. Instantly they appeared and proved what he had told his parents. But the queen was weeping, saying that some misfortune would surely happen.

The king was so disappointed with his father and mother for the way they had treated him that he started home with his wife and son. They came to the place where he had started off in the boat so many years before. As he was very tired, the king lay down to sleep for a while, and when he was asleep the queen took the wishing ring off his finger and in revenge wished herself and her son back at the castle.

When the king awoke he started out to follow her. On his way he passed a mountain where seven giants were quarreling over an inheritance of three things. They could not decide how to divide their possessions and so they called to the king.

Now the three things were a cloak that made the wearer invisible, a sword that would cut off the head of everyone in sight except the owner if he but shouted "Heads off," and boots that would transport the wearer immediately wherever he wished to go. The king put on the cloak and the boots, but the giants would not give

FOUR GENERATIONS.

Baby George Edward Haynes, age eight months; his mother, Mrs. C. H. Haynes, age twenty-four years; his grandmother, Mrs. E. D. Underwood, age sixty-two, and his great-grandmother, Mrs. A. O. Gransett, age seventy-nine.

MAYER Dry-Sox Shoes are the ideal wet weather shoes. They keep your feet dry and warm and protect you from rain, snow and slush, because they have a cork waterproof filling between inner and outer sole, pig's bladder between upper leather and lining and rubber welt which make Dry-Sox Shoes as near water-proof as possible.

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DRY-SOX SHOES HONORBILT

Give unusual wear on account of the way they are made, oak tanned soles, full vamps —strong, steel shank—solid counters.

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F. Mayer Boot & Shoe Co.
Milwaukee Wisconsin

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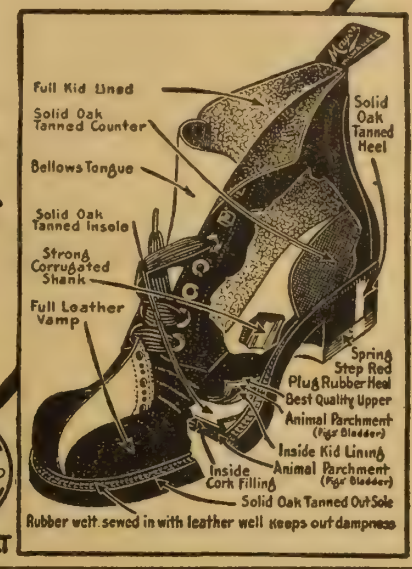

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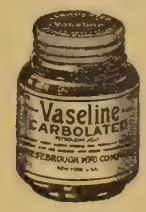

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RID-OF-RATS

Non-Poisonous. Guaranteed to destroy the rat and mouse pest from corncribs, bins, poultry houses, stables, etc. No results, no pay. Box 10c; Doz. boxes $1 east of Miss.; $1.20 west of Miss. If your dealer can't supply you order direct. *Write for catalog, it tells the story.*

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to Get a Beautiful Calendar

Free with one of the following big clubbing bargains

You Must Send Your Order by FEBRUARY 25TH

This is your last opportunity to get a beautiful *1916 Panel Art Calendar FREE* with one of the following big clubbing offers as this splendid bargain will expire February 25th.

Now is the time to secure your supply of reading matter for the coming year. We have carefully arranged the following combinations for your convenience and every offer is a big bargain. Each combination contains an entire year's reading for any family, and the prices are "rock bottom."

In addition you will receive a beautiful 1916 Popular Girl calendar if you send your order by February 25th.

The Popular Girl

calendar is a work of art, 9¼ inches wide and 32 inches long, beautifully colored. The picture was painted by the well known artist, Knowles Hare, Jr., and was posed for by a famous New York beauty.

Look them over: Everyone is a bargain. Use the coupon below and state the number of the offer you wish.

Special Offer No. 1

Kansas City Weekly Journal
Housewife
People's Popular Monthly
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All one full year only 65c

And a beautiful Popular Girl Calendar free if you send your order by February 25th.

Special Offer No. 2

McCall's Magazine
People's Popular Monthly
Home Life
Today's Magazine

All one full year only 85c

And a beautiful Popular Girl Calendar free if you send your order by February 25th.

Special Offer No. 3

People's Popular Monthly
Farm and Home
Woman's World
Household Magazine

All one full year only 55c

And a beautiful Popular Girl Calendar free if you send your order by February 25th.

Special Offer No. 4

American Woman
People's Popular Monthly
Woman's World
McCall's Magazine

All one full year only 75c

And a beautiful Popular Girl Calendar free if you send your order by February 25th.

REMEMBER you will receive the beautiful Popular Girl calendar Free if you send your order by February 25th. Be prompt and send your order *right now* as this announcement may not appear again.

People's Popular Monthly, Dept H
Des Moines, Iowa.

Gentlemen: Enclosed find $...

.....for which send me the magazines listed in special offer No....., all one full year. I am also to receive a beautiful 1916 Popular Girl Calendar free if I send this coupon by February 25th

Name .....

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Town .....State .....

him the sword until he promised not to say, "Heads off."

As soon as they gave him the sword the king wished that he was back in his own kingdom. Immediately he stood in front of the castle, which was all lighted up and from which sounds of music and merriment issued. The king asked what was happening and found that the queen was about to celebrate her second marriage.

Made invisible by his cloak, the king followed his wife wherever she went. In the dining room he ate the food off her plate, so that no matter how much she was served her plate was always empty. At last frightened and remorseful, she went to her room and moaned:

"Did not my deliverer come? Why does enchantment still follow me?"

"Your deliverer did indeed come," said the king bitterly, "and is here now. Does he deserve such treatment from you?"

Then he went down where the guests were and declared himself the king. The servants were going to throw him out and he shouted "Heads off," and the traitors fell before him. He was once again King of the Golden Mountain.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Address all orders to The Wisconsin Farmer, Madison, Wis.

7552 Ladies' Waist.—Cut in sizes 34 to 42 inches bust measure. This plain waist may be used for soft materials, such as silk, charmeuse and crepe de chine. Linen, madras or taffeta are also suitable. The collar may be buttoned high or rolled low.

7548 Ladies' Skirt.—Cut in sizes 22 to 32 inches waist measure. This skirt can be made up in serge, gabardine or broadcloth. It is cut in three gores and has a plaited section on the left side. High or regulation waistline may be used.

7582 Boys' Blouse.—Cut in sizes 8, 10, 12, 14 and 16 years. Percale, flannel, madras and similar materials are used for these blouses. This blouse has a center front closing and plain sleeves with small cuff ending. The collar is removable.

7549 Boys' Overcoat.—Cut in sizes 2, 4 and 6 years. Every boy needs an overcoat and here is an excellent pattern for making such a garment. The coat is very simple to make. The closing may be single or double breasted.

7538 Girls' Dress.—Cut in sizes 4, 6, 8, 10 and 12 years. Linen, gingham or serge can be used for this dress with the trimming bands of contrasting or plain material. The dress closes at the front and may have either long or short sleeves. The skirt has three gores.

7539 Ladies' Maternity Dress.—Cut in sizes 34 to 42 inches bust measure. Any of the pretty flowered woolen materials can be used to make this dress with the collar and cuffs of plain material. The dress has the Empire waistline with front closing. Long or short sleeves may be used.

7253 Girls' Middy Dress.—Cut in sizes 6, 8, 10 and 12 years. Brought up to date this dress has a separate skirt, with panel front and side plaits from this to the panel back. The blouse has only the usual short opening at the neck, slipping on over the head.

7535 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. Linen, serge or broadcloth can be used to make this plain and practical dress with the trimming of plain or contrasting material. Body and sleeve sections are in one and the skirt has four gores.

7258 Children's Rompers.—Cut in sizes 2, 4 and 6 years. In these simple rompers there is no division at the waistline in front, as half the body and half the leg sections are cut in one piece. The closing is in the center of the front. In the back the body section is seamless.

6725 Ladies' Apron and Cap.—Cut in sibes 36, 40 and 44 inches bust measure. Modified kimono lines are used in this apron which is quite loose and hangs in sacque fashion from shoulder to hem. There is a seam along the shoulder and down the outside of the sleeve.

Price of any of these patterns 10 cents each.

International Sunday School Lesson

Lesson for February 6, 1916

(By E. O. SELLERS, Acting Director of Sunday School Course.)

BOLDNESS OF PETER AND JOHN.

LESSON TEXT—Acts 4:1-31.

GOLDEN TEXT—Watch ye, stand fast in the faith, quit ye like men, be strong.—I Cor. 16:13.

The first seven chapters of the book of Acts have been designated as the Jerusalem period. Chapter 1 deals with the ascension of our Lord; chapter 2, the baptism of the Holy Spirit; chapters 3-7, the early conflicts in Jerusalem. In our lesson of last Sunday we had the story of Peter and John dealing with the lame man while on their way to the temple. Following this experience they were imprisoned, the first imprisonment mentioned for any of those who accepted the Gospel. As the disciples were dealing with the multitude the rulers of the temple came upon them and were much put out (v. 2) that the disciples should preach the resurrection of Jesus from the dead. The significance of this is better understood when we remember that the Jewish Sanhedrin was the great court of Jewish law composed of seventy-one leading men of the nation. Caiaphas, the noble high priest by Roman appointment, and Annas, the real high priest according to Jewish law, were both there. This body was largely made up of the Sadducees, the sect which did not believe in the resurrection from the dead.

I. The Imprisonment, vv. 1-4. Peter and John being brought before this tribunal were fulfilling literally the prediction of Jesus (Matt. 10:17). The attempt on the part of the rulers to prevent the preaching of the Gospel by this method really augmented its being heard throughout the nation. Peter had seen this body of men on the night when our Lord was condemned.

II. The Trial, vv. 5-22. (1) Peter's words vv. 5-12. Jewish wonder-workers were accustomed to perform marvels by the use of some name, so the council very naturally asked Peter and John "In what name" they had healed this man. The real object of their question was their attempt to entrap the disciples and find a basis of accusation and condemnation. But at that moment the Holy Spirit came again upon Peter and filled him (Matt. 10:19, 20; also Luke 12:11, 12; Acts 13:8, 9). The coming of the Holy Spirit is for every emergency of the Christian. Peter had been filled with that Spirit at Pentecost and was again filled a little later on (chapter 2:31). Thus we see that the coming of the Spirit is not once for all, though Pentecost was once for all, but that the filling is repeated as each new emergency may arise. (a) Peter acknowledged the authority of those who were dealing with him (v. 8), but (b) he gave Jesus credit (v. 10). It was Jesus who had died, he who had risen, and the risen Christ had effected this miracle. (c) Turning upon his accusers Peter charged them with the death of Jesus. He (v. 11) is the foundation of this miracle and their faith. Peter claimed that in Jesus alone (v. 12) could salvation be found, and implied (see last clause of this verse) that his accusers were lost men. Peter's deportment in all of this is wonderfully skilful, gentle and courteous, yet bold, fearless, frank and outspoken. We need to remember this when we recall how blunderingly Peter had conducted his conver-

lation before his enduement by the Holy Spirit. There was no compromising of the truth and no glossing over their guilt.

III. The Result Upon the Disciples, vv. 19-22. The book of Acts is plainly the record of the deft utterances of spiritual men. Peter had closed his appeal (v. 12) with the statement that the only way we could be saved must be through this means. The council were in a dilemma; they wanted to punish Peter and John, but could not, for the people were glorifying God for what had been done. Peter and John declared thus fearlessly that the teachings of the schools was not in accordance with that, for had not Jesus risen, and had not this miracle been performed? The Holy Ghost's boldness in these untutored men has always been a perplexity to the scholastics of the world. Their boldness was due to a sense of God's nearness and carried with it a like sense of their responsibility to him (see vv. 19, 20).

The only solution on the part of the people and of the priests was they took knowledge that "these men have been with Jesus." Tmhis is the solution of many mysteries of today.

Companionship with Jesus makes ordinary men extraordinary.

The Sanhedrin asked, "What shall we do with these men?"

A better question would have been, "What shall we do to be saved?"

IV. The Early Church, vv. 23-27. Six points about that church: (1) It was a praying church (vv. 24-30); (2) It was a Spirit-filled church (v. 31); (3) It was a united church (v. 32); (4) It was a witnessing church (v. 33); (5) It was a ministering church (vv. 34, 35); (6) It was a multiplying church, (vv. 36 and 37) for there were many converts added.

THE SHEBOYGAN SHOW.

The Sheboygan Poultry and Pet Stock Association had a good show this year with 600 birds and about 500 pigeons, according to George L. Spratt, secretary. About $450 in cash premiums was paid out. The birds, as a rule, were of good quality, indicating greater attention to the raising of pure breds in Sheboygan county. Among the big winners were George W. Schmitt and Robert Roberts, both of Sheboygan county. Schmitt is a breeder of S. C. White Leghorns and Roberts of S. C. Black Orpingtons. The Twin Lofts pigeon exhibit captured a majority of the prizes. Arthur Quade, of West Bend, entered thirty-six ducks and twenty-four geese and captured a large number of prizes. He also swept the field in the Bantam classes and carried home a number of special prizes and several cups. Mr. Robert H. Roberts, of Sheboygan, had seventy-nine birds entered.

40 NEW SUNSHINE POST CARDS.
Finest ever produced. In pretty colors. Real gems of worth. You want them. Don't buy old stale trash. Get these beauties that will delight your friends and be an inspiration to all. Special offer to introduce. One Set—20 Cards for **one dime**—2 Sets, all different—for **two dimes.** Order at once and name this paper and I will add free a big 25-cent Flower Collection with every set. Tell all your friends who use cards. I offer 40 Temperance Cards. (with Flo. Col.) at same price. I want agents everywhere. Published only by A. D. COOK, Seedsman, Hyde Park, N. Y.—Adv.

WITH OUR ADVERTISERS.

"Purity Brand" Seeds Give Satisfaction.

THE Adams Seed Co., Decorah, Iowa, has built up its big business in "Purity Brands" on the basis of absolute reliability and square dealing. In hundreds of farm homes "Purity Brand" means seed dependability. All their seeds are sold on their absolute guarantee of their purity and germination, subject to the buyer's test and inspection, with money cheerfully refunded if not found to be all and more than is claimed for them. Samples and prices will be sent free if you will write to The Adams Seed Co., Box 50, Decorah, Iowa, and mention their advertisement on page 25.—Adv.

Zyro Metal Silos Are Well Built.

THE makers of Zyro metal silos are offering a free book which tells all about the advantages of silos built of pure galvanized iron, which is said to be especially efficient in keeping the silage sweet. They are air tight, do not shrink or warp, are storm, lightning, vermin and rust proof and do not require hoops or anchor wires. They are ornamental, too, and their cost of upkeep is very small. They are made by the manufacturers of the famous Zyro corn cribs and grain bins and have the same careful construction that has made these other products so satisfactory. Write to The Canton Culvert & Silo Co., Box 214, Canton, Ohio, for their book and mention their advertisement on page 33, when writing.—Adv.

"Successful" Incubators Insure Success.

J. S. GILCREST, president of the Des Moines Incubator Co., is advertising on page 23 what he says is the best offer he has made in twenty-one years of successful experience as maker of "Successful" incubators and brooders. Every buyer of these incubators gets a free course of lessons in successful poultry raising that gives him the best possible preparation for making the largest profits out of the poultry business. He is also offering their "Successful" grain sprouters, which turn a bushel of oats into three bushels of fresh, egg-making feed that is a sure egg producer in winter. A free catalog will be sent upon request and, for ten cents additional, a copy of their valuable booklet, "Proper Care and Feeding of Chicks, Ducks and Turkeys," will also be mailed you. In replying to their advertisement on page 23 address Des Moines Incubator Co., 380 Second St., Des Moines, Iowa, and please refer to this paper.—Adv.

Ironclad Incubator Hatched 100 Per Cent.

IN one of the biggest hatching contests ever held an Ironclad incubator won with 148 chicks from 148 eggs. This is the same machine which is offered on page 20, together with the Ironclad brooder, for only $10. Both are substantially made, with the finest, most improved construction and best materials. They are sold on thirty days' free trial, with freight prepaid east of the Rockies. After reading the specifications as set out in their advertisement, write for their catalog, addressing Ironclad Incubator Co., Box 113, Racine, Wis., and kindly mention this paper.—Adv.

Radio-Round Incubators Built Nature's Way.

RADIO-ROUND incubators follow nature in providing a round egg chamber, exactly like a nest, and a mild, moist heat by means of a built-in moisture system and triple center heater. It has a hinged cover with glass panels and is said to operate on only three minutes' care a day, hatching from a single filling of oil. For further description and freight-prepaid proposition address Radio-Round Incubator Co., Drawer 9, Wayne, Neb. See page 21.—Adv.

Agents Wanted for New Improved Silo.

TABER lined silos are made of wood staves of choicest material, with a special paint for the outside and an acid-proof lining for the inside, to be put on after erection. The entire silo is well creosoted and is non-shrinkable, practically everlasting, rot proof, storm proof, worm proof and acid proof. It has an especially good door and door frame and is topped by a galvanized steel octagon roof which is perfectly adapted to the purpose. Agents are wanted to handle this latest development in silo construction. For further information address Taber Lumber Co., Keokuk, Iowa, and please mention their advertisement on page 34.—Adv.

Papec Ensilage Cutters Save Time and Money.

PAPEC pneumatic ensilage cutters not only cut the ensilage but elevate and distribute it with a great saving of power, time and money. They are built simply, with a few strong parts which are easily adjusted and do not get out of alignment. They are light running and durable. Full information is given regarding them and the new patented self-feeding device, which handles hay and other small growths and also corn, in their 1916 catalog, which will be sent you at once on receipt of postal card addressed to Papec Machine Co., Box 71, Shortsville, N. Y. When writing kindly mention their advertisement on page 33. —Adv.

AGAIN! ENGINE PRICES BUSTED

QUALITY MAINTAINED throughout because of perfected design and finest quality of materials bought in big quantities. I cannot afford to sacrifice quality. My engine business has grown to its gigantic proportions because quality has been maintained. I could build cheaper engines but I could not build them better. If they were not as good as I say, I could not afford to put them out on the free trial plan and easy terms! I build the quality in—you get the satisfaction out.

BUY FOR LESS MONEY NOW because increased output makes my 1916 low prices possible. If you're going to buy an engine within the next twelve months, then ask for my new big book. I have determined to build more engines and my special proposition will prove it.

SAVE $25 TO $300 by buying a Galloway 1916 Masterpiece. It is through saving my farmer friends and customers money and selling direct from my factories that I have built up this business running into the millions! I can save you money, too, on high grade engines. That's why I say

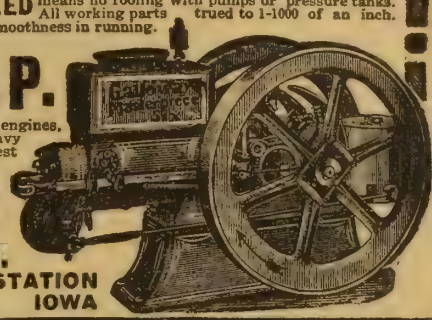
YOU SHOULD ANSWER THIS AD if you are going to buy an engine. Don't get fooled into thinking that you can get a better engine than the 1916 Masterpiece—into believing that you can buy an engine for less money that's anywhere near as good—into thinking that Galloway's claims are exaggerated and hollow! All you've got to do is ask for a free copy of

THE BIG NEW BOOK—JUST OUT which tells you why we save you money and give you a better engine—why light-weight, high-speeded engines are not to be compared with Masterpiece engines and why you are asked four profits for some engines no better. The truth of the engine business is all set down in black and white and I want you to get this book. If you expect to buy an engine I'll pay the postage and be glad to send the book.

LOOK! 1916 ENGINE IMPROVEMENTS

LARGE BORE—LONG STROKE and heavy weight means power that is horsepower. An engine that will "stand up" year in and year out—a lifetime of satisfaction! Users say so!
VALVES IN THE HEAD mean great power for gasoline consumed, economy, simplicity and modern design like the highest priced motor cars! Don't buy old style engines in 1916.
BUILT IN MAGNETO at small extra charge, means throwing batteries away. Starts easy, winter or summer. A fat, hot spark at a quarter turn of the fly-wheel! Why waste time with batteries?
HERCULES CYLINDER HEAD cannot blow off. Arching makes it strongest engine head ever designed. Water cooled head and valve stems. Big intake and exhaust valves.
MASTERPIECE IGNITER insures sparking and firing of charge in coldest weather. No spark plugs. Make and break ignition. Best, simplest, surest, safest. 75,000 users approve it.
ECONOMY CARBURETOR with special cold weather valve for easy starting. Also gets great power from small amount of gasoline. Our own invention. Exclusively used on Masterpiece engines.
NO OVERHEATING because of giant water pot and larger cooling surfaces. Water will not boil. Cylinders frost-proof.
PERFECTED OILING of all bearings. Elevated grease cups. Positive piston lubrication. Adjustable bearings.
IMPROVED FUEL FEED means no fooling with pumps or pressure tanks. All working parts trued to 1-1000 of an inch. Extra large flywheels mean smoothness in running. Big new book tells all.

1¾ to 16 H.P.

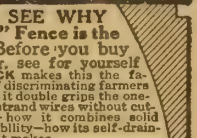


From pumping and light work engines, stationary and portable, to heavy duty moguls for the heaviest jobs. For farm, shop or factory. New big book shows every style and size we build. Engines shipped from Waterloo, Kansas City, Council Bluffs, St. Paul and Chicago.

WM. GALLOWAY CO.
35 GALLOWAY STATION
WATERLOO - IOWA

SIX NEW EASY 1916 SELLING PLANS

LOOK at the LOCK



and you WILL SEE WHY "SQUARE DEAL" Fence is the best fence to buy. Before you buy another rod of fencing, see for yourself why the **SQUARE DEAL LOCK** makes this the favorite field and stock fence of discriminating farmers everywhere. See how firmly it double grips the one-piece stay wires to the wavy strand wires without cutting, breaking or slipping—how it combines solid strength with remarkable flexibility—how its self-draining shape prevents rust—how it makes

Square Deal Fence

especially strong where others are weak. See the one piece stay wires that prevent sagging, bagging and buckling—save posts, time and trouble. See the wavy strand wires that give springiness, elasticity and life, keeping **SQUARE DEAL FENCE** tight and trim the year 'round. We want to send you our **FREE** catalog telling all about **SQUARE DEAL FENCE.** Land owners write for it **NOW—TODAY** and we also will send you **FREE** and postpaid (if you have not sent for one before) a regular 50c edition of **ROPP'S NEW LIGHTNING CALCULATOR**—160 pages of money, time and labor-saving ideas—the GREATEST book of its kind ever published. WRITE.

[26]

Keystone Steel & Wire Co.
625 Industrial St., Peoria Ill.

LITTLE WONDER LIGHTS

Lamps for the Parlor, Library and Dining Room
Lights for stores, schools, churches, tents, showmen, etc. Park and street lights, and Little Wonder Hand Lanterns. Little Wonder patented gasoline lights are **BRIGHTER THAN ELECTRICITY, CHEAPER THAN OIL.** Thousands in use everywhere. Wonderful-dependable-safe-steady-pure white-lights for every purpose. We want selling distributors where we are not represented. *Write for Little Wonder Catalogue and Prices.*

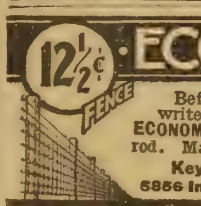
LITTLE WONDER MFG. CO., 144 S. 5th St., Terre Haute, Ind.

Caution

Today cheap fence means very light fence. **Before** you buy **get the** lowest factory to farm prices on high carbon, open hearth, **double strength,** coil spring steel fence, wire heavily galvanized before woven. **Our fences** have been **proven.** We don't deceive **but** guarantee. Special attention to full car-load orders. Send for free catalog.

The Tiger Fence Co., 416-D Broadway, Waukesha, Wis.

12½¢ ECONOMY FENCE



Before you buy any more fence, write for facts about our 26-inch ECONOMY HOG FENCE at 12½c. per rod. Many other styles and prices.

Keystone Steel & Wire Co., 6866 Industrial St. PEORIA, ILL.

CUT RATES, LUMBER, SHINGLES. Hurry! Prices advancing. "Tacoma" Dimension Lumber guaranteed full two inches thick. 20 per cent stronger. "Dakota" Clear shingles, guaranteed half-inch butts, everlasting. To insure lowest prices send list for estimate. We quote delivered; pay after inspection. Reference, any Tacoma bank. LOCAL LUMBER COMPANY, Tacoma, Wash.

Chicago STEEL FENCE POSTS

The New Way of Fence Building

The better way. Drive your posts, don't dig holes and plant them. Build your fence in one-fifth of the time and have it almost everlasting. Chicago Steel Posts don't break, don't wear out. Made of the *same material used in making the old black wire*—double the life of present-day wire. You can burn out your fence rows.

Lightning will not kill stock when crowded against the fence, because Steel Posts ground lightning. Chicago Steel Fence Posts are *guaranteed.* Write and let us tell you about this guarantee.

CHICAGO STEEL POST COMPANY, *Dept. J,* Continental and Commercial Bank Bldg., Chicago, Illinois

WRITE FOR BROWN FENCE BARGAIN BOOK AND SAMPLE

Over 25,000,000 rods Brown Fence already sold to 400,000 farmers. Factory Prices, Freight Prepaid. 150 styles, 13c per rod up. Gates and Steel Posts, too! Write postal.

THE BROWN FENCE & WIRE CO. Dept. 35 • • • Cleveland, Ohio

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

Smiley's Poland China Sale.

EVERY reader of The Wisconsin Farmer, who is interested in Poland China swine should plan to spend next week at the Southern Wisconsin Poland China sales. The first sale on this circuit is that of Wm. Smiley & Son, Albany, Wis., Tuesday, February 8th. The annual sale of bred sows of William Smiley & Son need no introduction to our readers, as they have been looked forward to as one of the Poland China events of the year. The offering of this year's sale is of the same high character as the animals in previous sales, and, as the animals that have won so consistently at all of the big fairs in Wisconsin. The animals are of good size with strong, heavy bone, long, smooth bodies, wide, deep barrels and deep, thick hams. They combine both large size and good quality. The offering consists of forty-five head of spring gilts and four head of yearling and mature sows. The gilts are daughters of the splendid herd boars, which have been in service for the past year, viz.: Major Hadley, Monarch, Wisconsin Jumbo 2d, Keefer's King and Orange Price. These boars are well known to Poland China breeders in this territory, both because of their records in the show ring or the winnings which their offspring have made. The offspring of Major Hadley won first as get of sire and produce of dam at the 1915 Wisconsin State Fair. Monarch is a grandson of Major Hadley and the second prize senior yearling at the same fair. Wisconsin Jumbo 2d is a son of Peter Mouw's noted $1,500 boar, Longfellow Jr. and out of Miss Mouw, an 800-pound daughter of Big Jumbo. He is a strong, vigorous fellow with eleven-inch bone. Keefer's King is a grandson of Fesenmeyer's noted boar, A Wonder. His litter brother sold for $440 in public sale and Keefer's King is consigned his equal and by many his superior in many ways. He has a good back, wide and even, with deep, thick hams and heavy bone. Orange Price is a line bred son of Miller's Chief Price and his dam is by Miller's Big Orange, combining the blood of two excellent sires. Oakland's Giant is the son of the $1,000 boar, Oakland's Equal. These gilts are out of sows of equally good breeding and of high individual merit. They are the sows that have produced the prize-winning animals for the Smiley herd. The gilts are sows which are going into the sale have been bred for March and April litters to the above boars and to Major Miller, Big Hadley, Mouw's Wonder 3d and Big Bone Jumbo. Major Miller won first at the 1915 Wisconsin State Fair and headed the herd that won first as get of sire. Big Hadley is by Big Top, a prize-winning boar and out of a daughter of Jumbo Hadley, that was grand champion at the 1915 Wisconsin State Fair. Mouw's Wonder 3d is a grandson of the noted boar, Smooth Wonder. Big Bone is by Big Jumbo and out of Wonder Girl, a granddaughter of both Big Bone and Long Wonder 2d. These sows and gilts are, therefore, not only exceptionally well bred themselves, but are carrying litters sired by boars of well-known and proven breeding. An instructive and interesting catalog is now ready giving pictures, description and pedigrees of the animals going into the sale. Send for a catalog at once and look it over. Plan to attend the sale in person if possible, but if impossible send a mail bid to the auctioneer, Col. Ira Cottingham, or to H. S. Hoard, representative of The Wisconsin Farmer. Everyone interested in Poland Chinas should attend this sale, for there is every reason to believe that the demand for Poland China breeding stock next fall will exceed anything that we have known heretofore. Pork prices promise to be exceptionally high and the country is practically stripped of breeding stock, for this reason it will pay our readers to buy bred sows and be in a position to supply the great demand, which is sure to come. See page 45.—Adv.

Holstein Dispersion of Hetts' Herd.

A WISCONSIN Holstein dispersion of exceptional importance is that announced by George Hetts & Son, Fort Atkinson, Wis., on page 44 of this issue. The offering includes Crescent Beauty Butter Maid 129539 and more than a score of her descendants. Records of interest concerning this Holstein cow will be found in the advertisement above referred to. The offering includes the entire herd and all animals over six months old are tuberculin tested, and a sixty-day guarantee will accompany each sale. There are twenty females with seven-day butter records from twenty to twenty-nine pounds, and a dozen with yearly records from 550 to 920 pounds of butter and 22,000 pounds of milk. More than forty offspring of these worthy matrons, for the most part sired by sons of Crescent Beauty Butter Maid, the twenty-nine-pound show cow, are offered in this sale. The catalog of this sale is ready for distribution and will give complete instructions regarding the animals offered and illustrations of the character of the herd, together with the breeding and records in detail. To secure a complimentary copy of this catalog letter must be addressed to Black and White Record Co., Monona and Main Sts., Madison, Wis. —Adv.

Hasse's Holsteins.

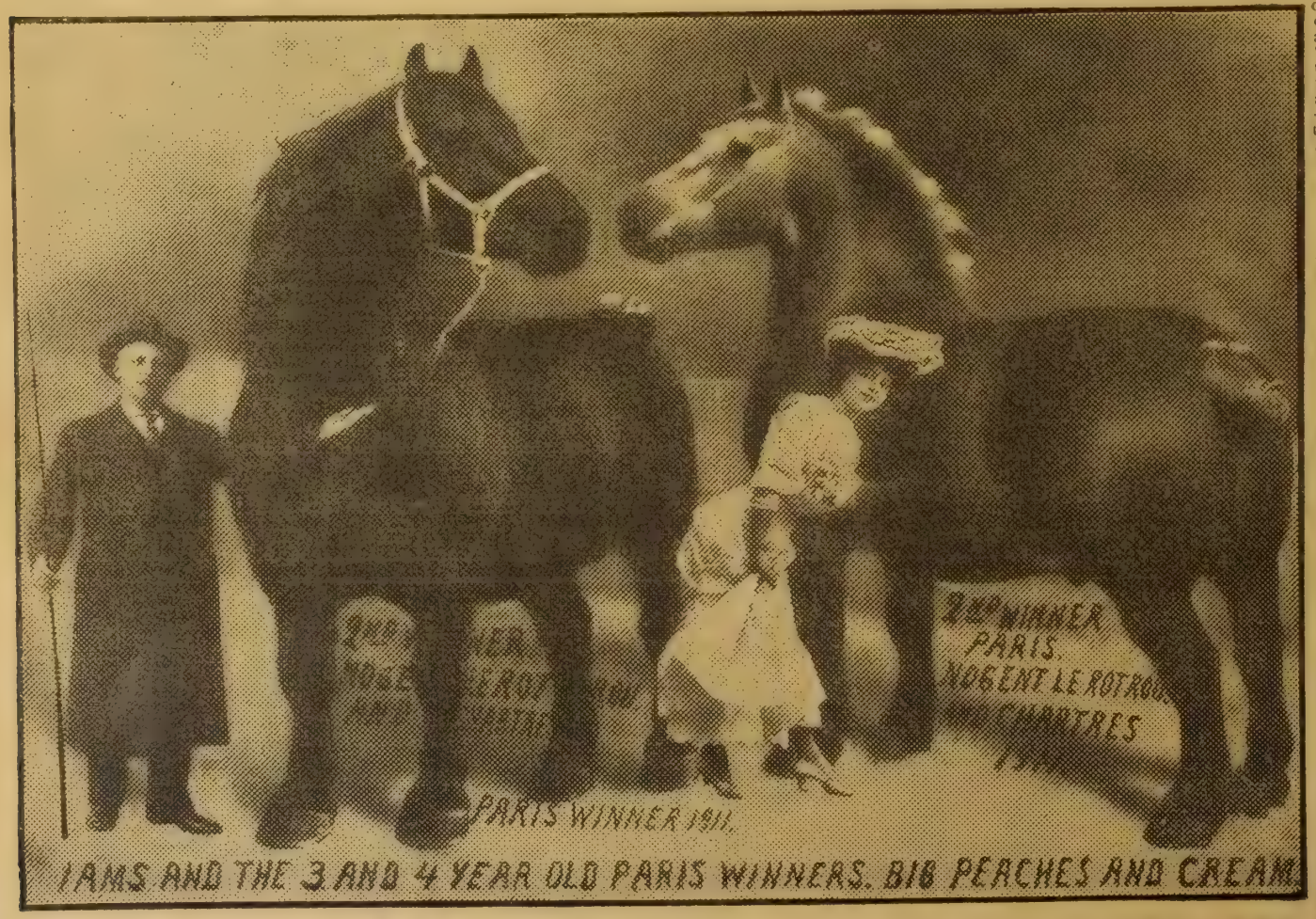
THE thirty-seven-pound Holstein bull, Sir Canary Belle De Kol, is the sire of the young bulls advertised for sale on page 47 by John Hasse, Monroe, Wis. This bull is one of the great bulls of southern Wisconsin, both as an individual and in breeding. His dam, Belle Mercedes, is a wonderful producer. She made 37.46 pounds of butter and 721.60 pounds of milk in seven days, an average of 5.5 pounds of butter and 103 pounds of milk per day. Her high record was 111 pounds of milk in a day. In thirty days she gave 146.32 pounds of butter and 2,809.20 pounds of milk. She has six A. R. O. sisters, one with a record of thirty-three pounds butter in seven days. His sire was Canary Paul 2d, a son of Canary Paul and out of a daughter of Chief Piebe Oak Duchess, that has twenty-one A. R. O. daughters, twelve with records from twenty to 31.10 pounds of butter in seven days. The cows in Mr. Hasse's herd are large, fine individuals of good, straight type and conformation. They show exceptionally good udder development and long, smooth teats. They are good producers and with ordinary herd care the two year olds give from forty to fifty pounds of milk per day and mature cows up to seventy pounds per day. Mr. Hasse recently sold five head to Gustave Pabst for his big farm at Oconomowoc, which is evidence that his cattle are of exceptionally good type. For further information in regard to the animals now offered for sale write to the above address.—Adv.

Madson's Big Poland China Sale.

CHOLERA-IMMUNE Poland China bred sows and gilts will be sold at public auction on Friday, February 11th, by M. Madson & Sons, Madison, Wis. Every breeder of Poland Chinas in this territory should plan to attend this sale, for they can take in the sale and the meeting of the Wisconsin Poland China Breeders' Association, which will be held in the evening of February 11th. The offering this year consists of thirty spring gilts and ten fall yearling and proven sows. They are exceptionally good individuals, combining large size with refined quality. The Madson herd of Poland Chinas is one of the most favorably known in this territory and have won many creditable prizes at the Wisconsin and Illinois State Fairs. The animals this year, though of larger size than their offering in former years, are of the same fine quality that has distinguished this herd. They carry long, wide backs, deep sides, thick hams and ample bone to carry their weight and keep them well up on their toes. This combination of size and quality has proven itself both by winnings in the show ring and the economical production of pork for the market. The animals are immuned to cholera a factor of much value in buying breeding stock. The spring gilts in the sale are daughters of Correct I Am, a big-type boar of large size and excellent quality. He was junior champion at the 1914 Illinois and Minnesota State Fairs. His sire was Correct I Know, grand champion at the 1915 South Dakota State Fair and his dam, Mammoth May 2d, was the dam of the prize-winning herd at the 1914 Minnesota State Fair. The fall gilts are daughters of Royal Model and Badger Perfection, the latter boar being the sire of the grand champion sow at the 1913 Wisconsin State Fair. These sows and gilts are bred for March and April litters to Triumph, an outstanding son of Hidestretcher, grand champion at the 1914 Wisconsin and Illinois State Fairs. The spring gilts are big, and growthy, many of them by date of sale will weigh close to 400 pounds. These gilts have been produced by the careful mating of big, well-developed sires and dams and by careful feeding since birth. Although they will weigh very heavy at the present time, they are not loaded with fat, but are in good, thifty breeding condition. The sale will be held in Dr. J. P. West's veterinary barn, 753 East Washington avenue, Madison, Wis., five blocks from the Chicago, Milwaukee and St. Paul station. It will not be necessary, therefore, to make a drive into the country, which is often very disagreeable in cases of bad weather. The barns are comfortably heated, lighted and ventilated and will be comfortable for all, regardless of weather conditions. Catalogs of the sale containing pedigrees and description will be sent on application. Send for one at once and look it over. If you cannot attend the sale in person send a mail bid to the auctioneer, Ira Cotting ham, or to H. S. Hoard, representative of The Wisconsin Farmer. See advertisement on page 45.—Adv.

Frank Iams' Offering.

FRANK IAMS, St. Paul, Neb., is not one to "lay down" because draft horses cannot be imported. He has suceeded in rounding up forty stallions and mares, including home-bred and imported animals, and he is offering these at bargain prices. He says: "Big Ikey" Horseman:—"Success knocks" at your door today. Be a "wise guy"—get into the "get rich quick wagon." Buy and breed all the full blood and grade Percheron and Belgian stallions and mares possible. The investment will make you 100 per cent. (Borrow the money if you have it not.) Big, imported and home-bred stallions and mares are scarce, getting higher and scarcer "daily." We are "8,000 stallions short" in 1916. No Percherons or Belgians will be imported in ten years. Europe must buy a "million horses" more of United States. "Ikey Farmer" "get busy" buy a stallion and pair of mares, today, and breed colts that sell at $500 at six months old—or $1,000 at two years old, then you wear "the diamonds." United States has a "big horse famine" "farmers and war" must have horses. Frank Iams is at "the bat" with forty new horses, his "show herd," Paris and Iowa and Nebraska State prize winners. They will "positively" be sold at "some price." "Ikey buyer" see Iams and his big "black boys," "real top notchers" and at "bargain prices." To make a "clean up" Iams is "cutting the melon" and giving "his customers" the "big half." Iams has the great "Paris winner," "Iliade" (82644) weight 2340 pounds, black, winner of second prize at Paris, Nogent Le Routrou and Chartres, the three largest horse shows of France. He is positively the best Percheron in the United States. He has other "gold medal" winners almost as good. The "champion" double "gold medal" winning Percheron two-year stallion, weight 2,100 pounds—"Dentist" (over all ages) at the Nebraska State Fair, 1914—also the best pair of "ton" three-year-old prize-winning mares at Iowa and Nebraska State Fairs. Also his 1915 "show herd" that are "the talk of all buyers." "Iams bell ringers." You will sure buy of Iams if you are looking for a "topper" and "know one" when you see him. "Mamma," Iams is a "hot advertiser," but he has "the horses as advertised." "It's up to you," Mr. Stallion Buyer, buy a "through ticket" to "Iams' horse town." Walk right in and say "hello," Iams will meet you with a $1,000 smile and treat you like "a prince" and there are "some doin's there daily. Iams' Paris "prize winners" make all buyers "sit up and take notice" at his "bargain counter" prices. Iams and the "pink lady saleslady" will not let any buyer with money or good notes get away. "Ikey" "come on along," buy imported horses today. Don't wait. They are "big snaps," that is why Iams and the "pink lady saleslady" are reducing prices on "show and business stallions." He made a "killing" buying those "top notchers" and to close out and make a clean up he has determined to sell and give buyers big snaps. "Ikey" "Horseman" Iams' six financial letters of recommendation from six of the best banks in Nebraska (shown in his catalog) tell you why you should buy Imported stallions of Iams. His thirty-four years of successful business, his "one-half million dollars behind his guarantee"—the fact that he is a "live wire" business man and expert horseman—in a "class by himself." He makes all competitors "stutter" and "get their hammers" out for Iams. When stallion buyers visit "Iams' horse emporium" they find "Iams" has the horses as represented and that Iams "makes good," and his "old customers" are his best page advertisers." "Ikey" "get busy," quick. Buy "show horses" of Iams and "wear diamonds." Iams is sure taking the "curl" out



TYPES found in the stables of Frank Iams, St. Paul, Neb., who has forty imported and home-bred stallions and mares weighing from 1,850 to 2,400 pounds. Iams claims he has 75 per cent of the "cream" stallions raised by American breeders.

of "high prices" on the best bunch of real "top notchers" ever offered for sale in the United States. Iams has more "show horses" and big "van horses" on hand than any importer in the United States and at same price and "some less" than for ordinary stallions. See advertisement on page 44.—Adv.

J. C. Hendricks' Big-Type Poland Sale.

THIS is the last call to the big-type Poland China sale of J. C. Hendricks, which will be held Wednesday, February 9th at Hazel Green, Wis. If you havn't sent for a catalog of the offering write or wire for one at once. However, if you don't get a catalog go to the sale anyway, for the offering is worthy of going a long ways to see. The breeding is of the best obtainable, being of blood lines that have proven right in the show ring and profitable in the pork barrel. As individuals they are outstanding, combining large size with good width and depth. They have been grown steadily from birth, so that they are of large size and very heavy for their age, although not crowded with fat. Many of the spring gilts weigh close to 425 pounds and the older sows from 600 to 700 pounds. The gilts carry seven to eight inch bone, but are not coarse and rough in any way. The aged sows are daughters of such noted boars as Fesenmeyer's A Wonder; Peter Mouw's Big Bone, the 1,000-pound boar, Big Bug; Wisconsin Giant, a heavy prize winner and Big Leader by Giant Leader. The gilts were sired by Smooth Wonder, Repeater, Black Jumbo, High Wonder and H.'s Jumbo. Repeater is an exceptionally fine boar, weighing 850 pounds at two years of age. He is a son of Big Bone and out of Orange Lady by Longfellow 7th, all of which are bred by Peter Mouw. High Wonder is a son of Caverly's 600-pound boar, Long Wonder 2d, Black Wonder is a 1,000-pound boar by Heavy Bone. Smooth Wonder is by Wonderful by A Wonder. On December 30th Mr. Hendricks weighed every animal going into the sale and the catalog shows the weight of each animal on that date. They will weigh considerably more by sale date, as they will gain very markedly in six weeks. As an indicator of the weight at that time a few of the litters are mentioned as follows: Five gilts from the litter of Big Daisy and sired by Smooth Wonder averaged 340 pounds; four from the litter of Merry Miller sired by Repeater average 320 pounds; five from the litter of Wisconsin Giantess sired by High Wonder averaged 330 pounds. The sale will be held on the farm in a well heated and lighted sale pavilion which will be perfectly comfortable regardless of weather conditions. Plan to attend the sale in person if possible for it will pay you to see these animals. However, if impossible to attend the sale send a description of the kind of animal you want and a mail bid to the auctioneer, Ira Cottingham, or H. S. Hoard, representative of The Wisconsin Farmer. Mr. Hendricks states that all animals sold on mail bids may be returned if not satisfactory. See page 45.—Adv.

Martin's Red Polled Cattle.

THE Martin herd of Red Polled cattle is well known to every breeder of Red Polled cattle through the high records made by the animals in this herd. This herd was established over thirty years ago by J. W. Martin, Gotham, Wis., and is still conducted by him and his son, H. A. Martin, secretary of the American Red Polled Association. Mr. J. W. Martin has been one of the leading importers into the United States, for twelve years going to Europe at least once a year. He was personally acquainted with such breeders as Squire Taylor-Coleman, noted manufacturer, and others whose herds won the championship of England honors. In 1890 Mr. Martin was elected by the Red Polled Association to go to Europe and select representative animals of the best type to exhibit at the Chicago World's Fair. He introduced the Babcock milk test into England and his purchases of animals were based on the amount of butter they produced. Such noted bulls as Corporal and such cows as Pear have made the Martin herd recognized as among the leaders of the breed. The majority of the high Advance Registry records made by Red Polled cows were made by animals or offspring of animals that came from this herd. The world's champion Red Polled record was recently made by Jean Du Luth Beauty 31725. She broke every world's record for the breed from seven days to 365 days. In a year she made 891.58 pounds of fat, which, figured at 80 per cent butter, equals 1,114.3 pounds of butter. She is a daughter of Proctor Knott, America's leading Red Polled sire of A. R. daughters. Mr. Martin has some choice young bulls for sale of serviceable age and younger of choice breeding and good type. For information in regard to these animals see advertisement on page 46.—Adv.

Dependable Seed Corn for Wisconsin Growers.

WHEN you buy seed corn the thing that you want most is dependability—seed that you know will germinate and grow. For half a century the Gurney Seed & Nursery Co., Yankton, S. D., has been furnishing seeds and nursery stock of all kinds that has won a name for its dependability. This year they have a splendid assortment of seed corn for Wisconsin growers. They have already received orders for thousands of bushels from Wisconsin farmers and the shipments already made have proven highly satisfactory. They have more of the same kind for you and can supply you from either the 1914 or 1915 crop. Their 160-page catalog, describing their various kinds of seeds and nursery stock, is now ready and will be mailed to you free if you will write to Gurney Seed Co., Box 112, Yankton, S. D., and mention their advertisement on page 25.—Adv.

E. W. Hendricks' Poland China Sale.

TWENTY-SEVEN spring gilts, nine fall yearling gilts and three proven sows, comprise the offer in the sale of E. W. Hendricks, Hazel Green, Wis., to be held Thursday, February 10, 1916. These are of strictly big-type breeding of the best strains obtainable. Not only are the animals well bred, but as individuals they can scarcely be faulted. They are of large size with big, heavy bone, yet are not the big, rangy kind that are lacking in quality. On the contrary these animals are well developed, being both wide and deep with thick, heavy hams aid smooth sides. Five of the fall gilts are daughters of the noted boar, Oakland's Equal, for which J. B. Erwin paid $1,000. Five fall gilts and four tried sows are by Big Jumbo, one of the largest and best boars in the corn belt. He is a mammoth fellow, weighing 1,100 pounds in show condition and is only three years of age, although exceptionally large with heavy, eleven-inch bone he is almost as smooth as a pig. He has a strong, arched back, is well up on feet and is very wide and deep. He was sired by Heavy Bone by Big Bug by Big Bone. Two of the sows are out of daughters of Fesenmeyer's boar, A Wonder. The spring gilts are daughters of Peerless Wonder, Black Jumbo and Great Leader. Peerless Wonder is a son of Fesenmeyer's noted boar, A Wonder, whose reputation as a breeding sire is known to all Poland China breeders. Great Leader is by Tecumseh Leader, the noted boar of E. A. Frazer, that weighed 1,055 pounds at twenty-nine months of age. His dam, Miss Nelson Prospect 2d, is a daughter of John B. Lawson's noted sire, Jumbo Big Prospect. It will be seen that the sows and gilts going into this sale are of well known and proven blood lines, representing the best in the breed. They are bred for spring litters to Big Oakland, Long Joe, and R.'s Wonder. Big Oakland is a son of the

BEAUTY PIETERTJE ORMSBY PAS-MA 157994, A. R. O. record 27.14 pounds butter in seven days at four years old. Owned by C. B. Reddelein, North Lake, Wis.

$1,000 boar, Oakland's Equal, and out of A Wonder dam. Long Joe is a son of Big Special and out of a daughter of Fesenmeyer's noted boar, Big Joe. R.'s Wonder is by Rood's A Wonder and out of a daughter of the $1,500 boar, Longfellow Jr. The litters which these gilts are carrying make them of added value. Mr. Hendricks is a careful, discriminating judge of Poland Chinas and his herd is considered by many prominent breeders to be one of the best in Wisconsin. Many of the spring gilts going into this sale will weigh better than 400 pounds and the matured sows will weigh from 600 to 700 pounds. Catalogs have been issued giving description and breeding of the animals going into this sale. Send for catalog at once and look it over carefully. Plan to attend this sale in person if possible, but if impossible send a mail bid to the auctioneer, Ira Cottingham or H. S. Hoard. See advertisement on page 45.—Adv.

Tochtermann's Holsteins.

WHEN in Green county recently the writer had the privilege of visiting the Holstein herd of Chris Tochtermann, Jr., Monroe, Wis. The herd consists of some forty head of registered animals of exceptional merit. Some twenty years ago Mr. Tochtermann purchased the choice heifer calf from one of the best herds of Holsteins in southern Wisconsin. His present herd all traces to this original foundation cow, with but two exceptions. He has purchased bulls form high-producing and long distance milking cows of good straight type following the Johanna line of breeding. By thus carefully selecting his breeding stock he has produced a herd of large, well-developed animals of good type and heavy

If you want good Holsteins attend

New York State Breeders' Sale

February 9th and 10th, at the

Sale Pavilion Syracuse, New York

NO BETTER cattle were ever offered in public sale than the grandly bred bull, KORNDYKE PONTIAC PET and FIVE of his daughters. You know he is by Pontiac Korndyke from the 37.68-pound cow, Pontiac Pet. A daughter of Tidy Abbekerk Prince (eight 30-pound daughters now), bred to King Pontiac Mayflower, the bull with a future. A son of King Korndyke Sadie Vale from a 25.8-pound four year old. A son of King of the Pontiacs ready for service. Daughters of Spring Farm King Pontiac 6th and eligible to the $1,000 futurity prize. A daughter of King Korndyke Sadie Vale from a 25-pound two-year-old daughter of Sir Korndyke Pontiac Artis, her dam a 25-pound two-year-old daughter of Sir Veeman Hengerveld.

Tuberculin Tested **Certificates Furnished**

For catalog write

Holstein Sales Company Elgin, Illinois

production ability. He has made a large number of creditable A. R. O. records both for seven days and the year, winning $125 prize money from the association two years ago. He believes very strongly in yearly records and contemplates getting the yearly record of every animal in the herd. At the present time he is offering a number of yearling bulls ready for service. These are from untested and A. R. O. cows of heavy production ability. They were sired by Piebe Longfield De Kol, a grandson of Homestead Jr. De Kol, that has sixty-nine A. R. O. daughters, five with records from thirty to 35.55 pounds of butter in seven days. For pedigrees, description, etc., of these animals write to the above address. When writing kindly mention The Wisconsin Farmer. See page 47.—Adv.

Kirkpatrick Brothers' Holsteins.

ATTENTION is called to the change in the advertisement of Kirkpatrick Brothers, Reedsburg, Wis. They are advertising a fine young bull of serviceable age, whose dam and sire's dam average 26.50 pounds of butter in seven days. His dam as a four year old made 24.94 pounds of butter and will be tested again. His sire's dam, Griselda Inka, made twenty-eight pounds. They are also offering a few yearling bulls from untested and A. R. O. cows, sired by King Pontiac Korndyke Champion, a grandson of King of the Pontiacs. His dam, Fancy De Kol Ormsby, made 22.08 pounds of butter in seven days and 560 pounds of butter in a year. She is a daughter of Sir Ormsby De Kol, that has six A. R. O. daughters with records up to 27.83 pounds of butter. His sire, King Pontiac Champion, has eighteen A. R. O. daughters and is out of a thirty-one-pound daughter of De Kol 2d Mutual Paul. The bulls offered for sale are well marked, of good, straight type and well grown. Eight cows are also being offered for sale at reasonable prices. For extended pedigree and further information in regard to these animals write to the above address. See advertisement on page 47.—Adv.

What Is Corona Wool Fat?

CORONA WOOL FAT is a wonderfully healing and scientific preparation, extracted from the skin and wool of healthy sheep, that will cure all flesh wounds and hoof sores on horses. It is cooling, penetrating and quick in action, but does not burn, blister or cause pain. It is said to grow a new hoof and to heal all flesh wounds without leaving a scar. On page 48 is an advertisement giving proof of these facts from men who have used it, together with a liberal trial offer that enables you to order a can for twenty days' use without payment of a cent. If it does what is claimed in the advertisement you then send 50 cents for it, but if not you do not owe a penny. A million farmers, stockmen and blacksmiths are said to be using Corona Wool Fat with highly satisfactory results. After reading the convincing advertisement you can secure a trial can by merely filling out the attched coupon and mailing it to C. G. Phillips, Manager, Corona Mfg. Co., 44 Corona Block, Kenton, Ohio, and mentioning this paper.—Adv.

The Story of 25 Championships.

IF you want to know the story of how Belle City incubators won twenty-five championships, as told by the people who operated them and fully illustrated, you can get it free by writing to the makers for their big book, "Hatching Facts," illustrated in colors. With the book comes their $1,300 gold offers for the season now beginning. All this is described in their advertisement on page 19. There are over 400,000 Belle City incubators and brooders in use and they have a long record of prize winning and daily satisfaction behind them. They are shipped quickly from Kansas City, Minneapolis or Racine. In writing for their booklet and other valuable information address Belle City Incubator Co., Box F 106, Racine, Wis., and please mention their advertisement in this paper.—Adv.

Four Requirements of Clover Seed.

WHEN buying clover seed you should look for four main points—first, that it is pure and free from the seeds of weeds; second, that it has high germination; third, that it is plump and of good color; fourth, that it is hardy and adapted to severe weather conditions. All of these elements are combined in Northrup, King

HOLSTEIN herd sire of Kirkpatrick Bros., Reedsburg, Wis. See advertisement on page 47.

Co.'s seeds, which are handled by 15,000 dealers. Their thirty-second annual catalog describes fully their "Sterling," "Northland" and "Viking" brands which bear their reliable guarantee for seed excellence. This catalog will be sent free to anyone replying to their advertisement on page 25 and addressing Northrup, King & Co., Hennepin and First Sts., Minneapolis, Minn.—Adv.

Parker's Durocs.

A FINE lot of Duroc spring gilts are advertised for sale on page 46 by E. H. Parker, Janesville, Wis. These gilts are choicely bred, being sired by Defender Golden Model and Wonder Boy. The first boar is a son of Lee's Defender, grand champion at the 1914 Wisconsin State Fair. Wonder Boy is a son of Marion's Wonder, grand champion at the 1914 Wisconsin State Fair. These gilts are cholera immune, are of large size with long, smooth, deep sides and deep, thick hams. They will prove a profitable investment.—Adv.

Derivan's Poland Chinas.

POLAND Chinas of the type that will do you the most good are advertised for sale on page 46 by James Derivan, Fox Lake, Wis. They are large and growthy, and yet not coarse and the hard feeding kind. They combine the

NEXT WEEK'S SALE PROGRAM

Tuesday, February 8	Poland Chinas, Wm. Smiley & Son, Albany, Wis.
Wednesday, February 9	Poland Chinas, J. C. Hendricks, Hazel Green, Wis.
Thursday, February 10	Poland Chinas, E. W. Hendricks, Hazel Green, Wis.
Friday, February 11	Poland Chinas, M. Madson & Sons, Madison, Wis.

WISCONSIN'S GREATEST HOLSTEIN DISPERSION

FT. ATKINSON, WIS., FEB. 15TH

FEATURES

CRESCENT BEAUTY BUTTER MAID 129569

AT THREE YEARS---

Butter, 7 Days - - -	29.04
Milk - - - - -	531.80

AT TWENTY-EIGHT MONTHS---

Butter, 359 Days - - -	671.61
Milk - - - - - -	14965.30

First prize four year old and grand champion at National Dairy Show (1913). First prize at Indiana and Illinois state fairs and Waterloo Dairy Cattle Congress. First prize National Dairy Show (1914), New York and Illinois state fairs and Waterloo Dairy Cattle Congress. The sale also includes more than a score of her descendants.

90 HEAD INCLUDING two score well-bred females in the milking herd. Twenty with 7-day butter records from 20 to 29 pounds; a dozen with year records from 550 to 920 pounds butter and 22,000 pounds milk. More than 40 offspring of these worthy matrons, for the most part sired by sons of Crescent Beauty Butter Maid (the 29-pound show cow). The offering includes the entire herd and with a single exception all are unblemished. Herd sires used include: Greenwood Johanna Lyons—a grandson of the well-known 34-pound cow, Betta Lyons Netherland. Crescent Beauty Butter Boy—a son of the above sire and Crescent Beauty Butter Maid (the great show cow). Crescent Beauty Segis Pontiac—by the noted sire King Segis Pontiac, also from Crescent Beauty Butter Maid. Most of the females are bred to this young bull who will be sold with the rest. All animals over 6 months of age are tuberculin tested and a 60-day guaranty will be given with each. The catalog gives apt illustrations of the character of the herd and the breeding and records in detail. It may be had only by addressing the sale managers: Black and White Record Co., Monona & Main Sts., Madison, Wisconsin. Auctioneers, Cols. R. E. Haeger, J. E. Mack, E. M. Hastings in the box.

Geo. Hetts & Son **Ft. Atkinson, Wis.**

big and medium types in a splendid manner, maintaining the superiority of both and the faults of neither. For pedigrees and further description of the animals now offered for sale, write to the above address.—Adv.

A Wisconsin Tractor For Wisconsin Farms.

THE Eagle tractor is a combination tractor and portable engine and will do all the work on a farm that either of these machines is supposed to do. It is admirably fitted to Wisconsin farming conditions and satisfactorily solves the tractor problem of the small or moderate sized farm. It has two cylinders with superior engine qualities and refinements and withal it is built compactly, making it especially adaptable to small farm work. Every Eagle tractor has four wheels and two drivers, while its valve-in-head action gives extra power and clean combustion for both tractor and belt work. A high tension magneto with impulse starter does away with batteries. For complete description and prices write to Eagle Mfg. Co., 622 Winnebago St., Appleton, Wis., and kindly mention their advertisement on page 10.—Adv.

New York's Big Holstein Sale.

THE big event of the winter months in Holstein circles will be the two days' sale at Syracuse by New York state breeders. It will be an offering of top Holsteins throughout, and the catalog tells a story that will interest every lover of good, high producing Holsteins. In the advertisement on page 43 will be found a list of some of the good things to be offered in this big sale, and it will be noted they represent the strongest producing strains of the breed. The Holstein Sales Co., Elgin, Ill., is managing this sale and will furnish any desired information. When you write kindly mention The Wisconsin Farmer.—Adv.

Northern Grown Nursery Stock.

THE Farmer Seed & Nursery Co., Faribault, Minn., is announcing the publication of their new seed and nursery book, containing full information regarding their northern grown trees, plants and shrubs, which are best suited to northern farms. This book will be sent free on application to Farmer Seed & Nursery Co., 104 First Ave., Faribault, Minn. In writing for it please mention their advertisement on page 26.—Adv.

HENRY LEFEBURE, Fairfax, Iowa, whose advertisement appears on this page writes: "With the buying season now on the prospective buyers of Belgian horses will find that we are just as well supplied with Belgian stallions and mares as ever before. We have not only the largest collection of Belgian horses in America, but we can say without fear of contradiction that we have a larger collection of imported Belgian stallions, all weighing a ton and up to 2,350, than can be found in any other barns in America. We are unusually well prepared to show you choice two and three-year-old American Belgians weighing from 1,700 to 2,300 pounds, sound, weighty and ready for service. We have on hand fifty imported Belgian mares and we are now offering two and three-year-old fillies for sale. We can show you teams in any color. The demand from the Dakotas for the big ton stallions is so great that the Iowa and neighboring states horsemen will have to hurry. Five of our December sales were in North Dakota. Our barns are full of good "buys." Come and spend a day with us."—Adv.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER **EARN $15 TO $100 PER DAY**

Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

HORSES.

PURE-BRED PERCHERONS

FOR sale— One stallion, black, small star, foaled May 11, 1912; one mare, iron gray, foaled June 18, 1913; one stallion, gray, foaled May 5, 1914; one stallion, gray, foaled May 15, 1914; one stud colt, black; foaled June 30, 1915; one stud colt, gray, foaled Aug. 3, 1915. Write for pedigree and prices. Address E. G. Krueger, Ixonia, Wis.

Reg. Percheron Stallions

5-YR-OLD Black **Imp. Kubain,** a cracking good individual. 2- and 3-year-old Blue Roan Stallions weigh 1500 and 1800 lbs.; sired by Imp. De Cine. Suckling colt by Imp. Kubain. 1 10-year-old Blue Roan Mare, weighs 1950. 1 10-year-old **Shire Stallion,** weighs 1850. **Angus cows, heifers and bulls;** serviceable age and younger. Can supply a carload.

McKevitt Bros. - - Bridgeport, Wis.

PERCHERONS

THE rugged kind with size and quality. We can suit you. A few imported horses and some extra good American bred colts. Barns in town. Come and see what we have to offer.

W. E. PRICHARD & SONS

OTTAWA ILLINOIS

HORSES.

FRANK IAMS'

"Peaches and Cream" Horses are "Town Talk"

Horsemen—1916 is the **"Get Rich Quick"** year for **Horse Breeders** and **Stallioners.** Get into the **"Money-Making Game"** of Breeding Draft Horses. **Europe "doffs"** her **"War Cap"** to **U. S. Horses. Europe** buys **500 Horses daily of U. S.** (at $125 to $200). Europe will buy **"a MILLION"** Horses of U. S. You make **more "Easy Money"** in **Breeding Horses** than any other business for **next ten years.**

His 34 years of success in *Importing, Breeding* and Selling *5,640 registered horses*—his "50 trips" across the ocean—make Iams *a safe man* to buy *stallions from.* His *"old customers"* are *"best Page advertisers,"* his *Breeding Guarantee* backed by *"1-2 Million Dollars."* *Iams' Imported* and *Home-bred horses* are *"classy, model big drafters"* of *large bone, fine form, quality, finish,* and *flash movers.* Several European

"Gold Medal and State Prize-Winners,"

"Iams' kind," and in the *"Pink of Condition."*

Bought at *"bargain prices"* and *must be sold. "Iams sells horses on honor."* A lady can buy as cheap as a man. *Iams is not in "stallion trust,"* and is *selling more pounds of "model draft horse"* for the *money* than any *competitor. Iams* is *cutting the middle* out of *high prices* on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected by Governments of France and U. S. and certificates "stamped" O. K. All "Inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse Iams sells

IMPORTED STALLIONS AT $1,000 AND $1,400

(few higher). **"Home-Breds" come cheapest.** Registered 1,800 to 2,100-lb. mares at $700 to $1,000. **Terms cash, or one year's time at 7 per cent; land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare;** gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads. with a **$500 guarantee** that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

WE now have in our barns more big-boned, rugged draft colts, from yearlings to 4 and 5 years, of the different breeds than ever before. We have two-year-olds that weigh over a ton—herd headers and show propositions.

Five farms over 1,000 acres devoted to the horse business. We do all our own buying and selling, grow all our own feed. Our economical way of handling stallions saves money for the purchaser. We guarantee all horses sold and can sell you a high-class stallion cheaper than any other firm in America.

We are located in North Central Iowa, 20 miles from the Minnesota line, on the C. M. & St. P. Ry., midway between Mason City and McGregor.

Send 20c in stamps for large Horse Hanger which shows our Main Farm and sales stables. Correspondence a pleasure. **We have a horse for every purse.**

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

Dunham's Percherons

For Fifty Years the Best

Send for Fine Photographic Catalogue

DUNHAM'S, Wayne, Dupage Co., Illinois

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

Homewood Stock Farm

IMPORTED and American-bred **PERCHERON** stallions and mares. First-class 2, 3 and 4-year-old stallions and mares with size, bone and quality at very attractive prices. A few big, sound, aged stallions very cheap. Every animal strictly guaranteed. Terms to suit. Call or write.

S. METZ & SONS, HOMEWOOD, ILLINOIS

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address

M. Bodenheimer & Co. Green Bay, Wis.

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

When writing to advertisers please mention The Wisconsin Farmer.

LAST CALL--REMEMBER THE DATES
AND BE SURE TO ATTEND
Southern Wisconsin Poland China Sale Circuit
FEBRUARY 8th to 11th Inclusive

Plan to spend four days at these sales and finish the week by attending The Wisconsin Poland China Breeders' Annual Meeting, Friday Evening, February 11, 1916

Smiley's Annual Big-Type Poland China Bred Sow Sale

Albany, Wis., Tuesday, Feb. 8, 1916

The Type of Gilts in the Sale

45 SPRING GILTS; six fall yearling and mature sows. These are sired by Major Hadley, our noted sire of prize winners; Wisconsin Jumbo 2d, a son of the $1,500 boar, Longfellow, Jr.; Monarch, weighed 800 pounds and won second at 1915 Wisconsin State Fair; Keefer's King, a grandson of old A Wonder; Orange Price by Miller's Big Orange. These are bred to Major Hadley, Wisconsin Jumbo 2d, Monarch, also Major Miller, first-prize yearling at 1915 Wisconsin State Fair; Big Hadley (by Big Top), Mouw's Wonder and Big Bone Jumbo. These are of good size and quality. The type that have won us so many blue ribbons at the state fair. Send for catalog containing eight illustrations, descriptions and pedigrees. Train service has been arranged to get to J. C. Hendricks' sale the day following at Hazel Green.

Wm. Smiley & Son **Albany, Wis.**

Black Jumbo 221231

The Greatest 1,100 Boar in America

Sale February 10, 1916

40 HEAD of sows and gilts, mostly bred to or sired by Black Jumbo. Nine corking good fall yearlings that are good enough to enter the best herds in the corn belt; four tried sows, twenty-seven spring gilts weighing up to 400 pounds and better. The offering is sired by Black Jumbo, King Jumbo, Oakland's Equal, Peerless Wonder, Giant Big Bug and Great Leader; bred to Black Jumbo, Big Oakland, Long Joe and R.'s Wonder for March and April farrow. Size, bone and quality combined. Col. Ira Cottingham, auctioneer. Write for catalog. Address

E. W. Hendricks, Hazel Green, Wis.

BE WITH US ON THIS DATE. IT WILL PAY YOU.

Come if Possible or Send a Mail Bid To

J. C. Hendricks' Big Sale

Hazel Green, Wis., Wed., Feb. 9th

THE above picture was taken on December 10th, and shows forty Poland China gilts farrowed in March and April. Thirty-five of these gilts will go in the sale.

BIG type, big bone, big litters, big quality. Forty head of great sows and gilts. Five tried sows, all having raised fall litters, sired by A Wonder, Wisconsin Giant, Big Bone, Big Bug and Big Leader. Thirty-five spring gilts, mostly March farrow, sired by Repeater, High Wonder, Black Jumbo, Smooth Wonder, Giant Defender and H.'s Jumbo, and are bred to Repeater, the greatest two-year-old boar living, weighing 810 pounds after service; High Wonder by Long Wonder 2d, the $600 boar. Others bred to Smooth Price, the largest and heaviest boned boar in the state. Weighed 550 pounds at twelve months and has a ten-inch bone, and North Side Wonder, a big, rugged, extra heavy-boned boar by Rude's Wonder by A Wonder. He is a 1,000-pound boar at maturity. These gilts were all weighed on December 30th. They range in weight from 300 to 390 pounds in growing condition. They must be seen to be appreciated. Auctioneer, Col. Ira Cottingham. H. S. Hoard will represent. The Wisconsin Farmer. Send your bids to him and I will guarantee entire satisfaction.

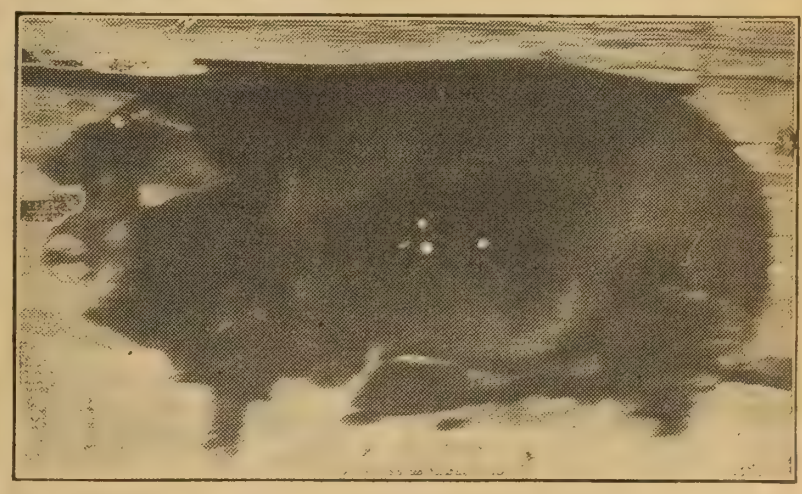
J. C. Hendricks **Hazel Green, Wisconsin**

MADSON'S

Big Poland China Sale

Madison, Wisconsin, Friday, February 11, 1916

Wisconsin Poland China Breeders Annual Meeting Held Friday Evening
30 Spring Gilts, 10 Yearling and Mature Sows, Cholera Immune. Sale Held in Dr. West's Veterinary Barns.



NO DRIVING in country necessary; 753 East Washington avenue. Building well heated and lighted. The spring gilts are sired by the big-type boar, **Corrector I Am, junior champion boar** at the Minnesota and Illinois State Fairs in 1914. He is by Correct I Know, grand champion South Dakota State Fair. The fall sows are by **Royal Model and Badger Perfection.** These gilts are bred to the big-type boar, **Triumph** by **Hide-stretcher,** grand champion at the 1914 Minnesota State Fair. These sows are big, well developed, combining quality with size. They will produce the profitable type of hogs and the type that will win in the show ring next fall. Send for catalog. Plan to attend this sale and the Wisconsin Poland China Breeders' meeting in the evening.

THE PALMER FARM HERD

COMBINES individuality, breeding and high production. Two service bulls, bull calves and yearling heifers priced to sell. Come or write.
W. E. Palmer **Elkhorn, Wisconsin**

PURE-BRED BULL CALVES

FOR SALE. Sired by a 30-pound bull, several out of A. R. O. dams. Also a few high-grade heifer calves from one to twelve months old.
S. J. Lauderdale **Elkhorn, Wisconsin**

REG. HOLSTEIN BULL CALVES

FROM 3 months to 18 months old, at prices from $40 to $70. Sired by son of Mutual Piebe De Kol from 840 lb. 3-year-old dam. Herd now headed by the 31.37 lb. bull, Finderne Hengerveld Jewel Pontiac. Address
E. A. Paddock **Elkhorn, Wis.**

HOLSTEINS

REGISTERED bull calves, great grandsons of Belle Korndyke; also high-grade heifers, two years old for sale.
E. J. Stearns **Elkhorn, Wisconsin**

HOLSTEIN BULL

FOR sale, 13 months old, well grown, well bred and a good individual. Sire, Pabst Burke De Kol King, a 33.56-pound bull, and out of an 18.18-pound two-year-old daughter of Beauty Walker Pietertje King. Address
A. G. Palmer & Sons **Lake Geneva, Wis.**

HOLSTEIN BULLS

SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address
H. J. Barker **Elkhorn, Wisconsin**

$150.00

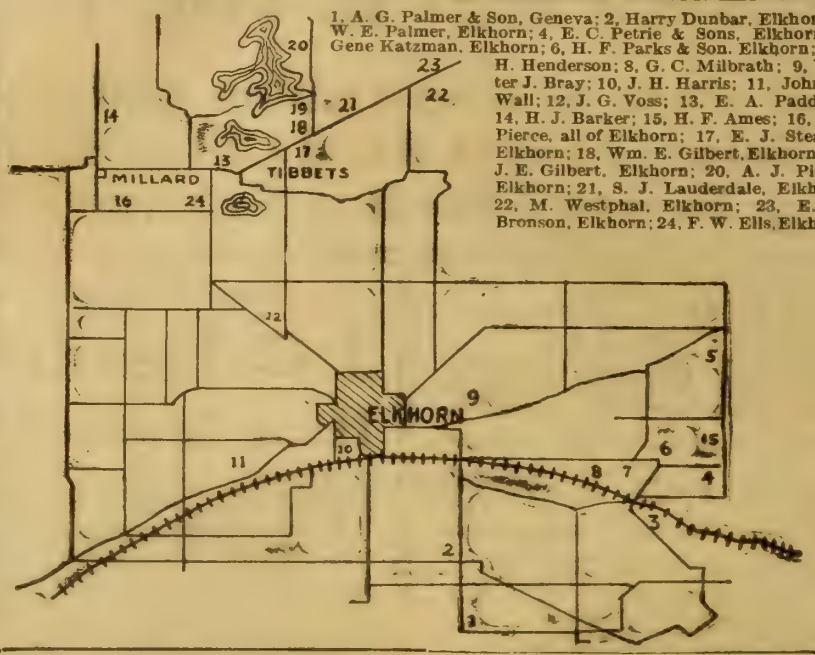
WILL buy a bull out of a dam whose record is 25.14 lb. butter in 7 days, and his sire is Beauty Walker Pietertje King 84482—whose 7 nearest dams average 28.724 lbs. butter. Some good A. R. O. cows and heifers for sale at $150 to $250 bred to our herd bulls. Address
Harry D. Dunbar **Elkhorn, Wisconsin**
Farm 2½ miles southeast of Elkhorn.

Holsteins For Sale

BULL from 26.41-pound dam, 9 months old; one from 19.60-pound dam, 7 months old. Also two yearlings from dams that will soon be tested. They are straight nice individuals, light color, all sired by Sir Pontiac Korndyke Count 82741, a 28.80-pound bull. Bull calf, one month old, from 22.31-pound dam sired by a 34-pound bull. Can spare a few young cows. For further information address
E. C. Petrie & Sons **Elkhorn, Wisconsin**

AN EXCEPTIONAL HERD SIRE

WESTSIDE LADOGA PRINCE 77130, practically perfect individual, proven sire, splendid breeder, 4 yrs. old, will be sold due to fact that he cannot be used longer in herd. Pedigree has no weak spots. His dam is a 27.38-lb. junior 3 year old, his nearest three dams average 27 lbs. and his nearest seven dams average 22 lbs. His paternal ancestors are likewise strong, the nearest three in particular have large number of A. R. O. daughters. Two Holstein bulls sired by Westside Ladoga Prince are also offered for sale. J.H.Harris, Holstein Dairy Farm, Elkhorn, Wis.



A. J. PIERCE
Elkhorn, Wis.

REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

J. G. VOSS
ELKHORN, WIS.

BREEDER of registered Holstein-Friesian cattle of outstanding individuality and high production ability. Write me when you are looking for Holsteins.

19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.
H. F. Parks & Son **Elkhorn, Wisconsin**

877 POUNDS BUTTER

IN a year. The record of the dam of the bull I am offering for sale. He is 9-10 white; born May 13, 1914; good individual; good server. Sired by King Bess of Rock, that won 1st prize at the National Dairy Show and New York State Fair. A well-bred bull and good individual. Price, $125.00. Send for pedigree and description. Address
Earl Pierce **Elkhorn, Wisconsin**

MEADOW SPRING FARM

is offering some fine registered

HOLSTEIN BULLS

SEVERAL sired by a 30.18-pound bull. One 15-16 pure, ⅛ white, a fine individual from high producing dams. Also a fine flock of R. C. R. I. Red. Cockerels $1 each. Visitors welcome.
M. Westphal **Route 6, Elkhorn, Wis.**

SONS OF THE 35.43-POUND BULL

Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69, 24.65, 22.35, 20.46, 16.96. Here are bulls that will improve pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

REGISTERED HOLSTEINS FOR SALE

EITHER sex. Sired by Champion Johanna Colantha, he being a son of the 35-lb. bull, Colantha Johanna Champion. Also some Chester White spring boars. Address
Gene Katzman **Elkhorn, Wisconsin**

F. W. Ells, Elkhorn

Breeder of registered cattle. Stock for sale at all times.

FOUR GRADE HOLSTEIN HEIFERS

TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn, Wisconsin.

Two Bulls For Sale

SIRED by Canary Homestead Frisby; also ten nicely marked, high-grade heifers coming 2 years old. Address
Walter J. Bray **Elkhorn, Wisconsin**

WELL MARKED

7-8 WHITE, yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address
G. C. Milbrath **Elkhorn, Wisconsin**

J. E. Gilbert
ELKHORN, WIS.

BREEDER of pure-bred Holstein-Friesian Cattle and Duroc Jersey Swine.

REGISTERED BULL

CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address
Wm. E. Gilbert **Elkhorn, Wisconsin**

POLAND CHINA SWINE.

BIG-TYPE POLAND CHINAS

SPRING GILTS. Some now bred for March and April litters. Others will be bred for April and May litters or will be sold open as desired. There are daughters of **King Jumbo** by Long Jumbo, that weigh 1106 pounds. **Fall Yearling Gilts,** bred for spring litters to **Big Wonder,** first prize under six months boar at 1915 Minnesota State Fair. **Some Fine Yearlings and Spring Boars** that will do you a lot of good. **SHORT-HORNS. 10 Fine Yearling Bulls,**—roans, red and whites, sired by **Highland Sultan,** a grandson of Whitehall Sultan. **25 Cows and Heifers** from six months old and up. These are of Scotch and Bates breeding. Most of them are of heavy milk producing strains. If you want Short-horns of big size you can get them here. My Short-horns won all first prizes but one at the 1915 Beaver Dam Fair against heavy competition.
W. J. BERND - - - **NEW RICHMOND, WISCONSIN**

Columbia County Asylum

will sell at

--PUBLIC AUCTION--

Tuesday, February 15, 1916

at 1:30 P. M.

36 REGISTERED Poland China matrons, 20 gilts and 16 proven dams. Also some others. For particulars write to
Supt. S. C. Cushman, Wyocena, Wis.

Poland China Bred Gilts

AND yearlings from litters that average ten. Sired by Black Bone 212501, with 11 inch bone, sired by the $1,100 Black Bone, 1st at Minn. Fair; Square Deal by the 1,000-lb. Lakewood Ideal, and Black Model by Black Orange. These gilts are the large, smooth kind with length and heavy bone. Are bred to Black Model and Big Ben, a choice yearling of 9 inch bone. Priced to move them soon. Rose Comb Rhode Island Red cockerels. Address
P. N. Collins, Box 55, River Falls, Wisconsin

BIG-TYPE POLAND CHINA

BRED gilts to farrow March and April. Sired by Stand Pat Jr. and Blue Valley Expansion. Bred to Wonder Joe, son of Fesenmeyer's A Wonder, and dam, Joe's King Giantess. Will weigh 300 pounds. None better. Price $30 to $40. Address H. F. Strickler, Mt. Carroll, Illinois.

Poland China Sow Sale Feb. 8

YOU will buy big-type Poland Chinas eventually. Why not our sow sale February 8th. Send for catalog. Address
WM. SMILEY **ALBANY, WISCONSIN**

Registered POLAND CHINAS

A FEW good spring boars ready for service. Bred gilts now. All priced for quick sale. Will ship on approval. Registered Holsteins. Address
Marinette County Asylum, **Peshtigo, Wis.**

BIG-TYPE Poland China bred gilts sired by L.'s Big Orange and Iola Chief. Prices $20 and up. Bred to L.'s Big Orange and Fairview Jumbo by Wisconsin Jumbo. J. Le Roy Larson, Iola, Wis.

Poland Chinas

BRED gilts for sale; also fall pigs at bargain prices. Address
James Derivan **Fox Lake, Wis.**

Big-Type Poland China Hogs

MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address
W. T. Hartley, **R. 3, La Crosse, Wisconsin**

HAMPSHIRE SWINE.

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

LAIRD'S Hampshire sows and spring gilts bred for spring litters to the Wisconsin junior champion boar. Special bargain prices during February. A. M. Laird, Prairie du Chien, Wisconsin.

SHEEP.

SIXTY OXFORD EWES

OF all ages from lambs to mature animals. Will sell in lots to suit buyer. These are well bred, heavy shearers and good individuals. The high prices for mutton and wool will make sheep breeding very profitable. Come to our Poland China sale Tuesday, February 8th, and look them over.
Wm. Smiley & Son **Albany, Wisconsin**

HICKORY DALE SHROPSHIRES

Champion Flock of America

SIRES in service: Tanner's Royal; Minton 1037; Minton 51; Breeder's Friend. Ram and ewe lambs for sale that for breeding, style and true Shropshire character cannot be excelled.
Arthur Broughton & Sons **Albany, Wis**

DISPERSION SALE

46 HEAD of Double Standard Polled Durham cattle, Tuesday, February 15, 1916. Send for catalog.
J. H. Wise & Doscher - **Platteville, Wis.**

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address
UNDERWOOD STOCK FARM
L. C. Underwood, Prop. **Avoca, Wisconsin**

RED POLLED BULLS

OF serviceable age and younger; and yearling heifers and younger; from heavy-producing cows of A. R. breeding.
H. A. MARTIN - - **GOTHAM, WIS.**

FOUR REGISTERED RED POLLED BULLS

TEN to fifteen months old, sired by McGovern out of producing Cows of choice breeding.
M. J. Rowlands & Son, Cambria, Wisconsin

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MULE-FOOT HOGS

I HAVE won more first premiums and championships than any herd in the U. S. Choice boars and fancy, large-type bred sows and gilts for sale. Zene G. Hadley, Box D, Wilmington, Ohio.

FREE catalog illustrating, describing, pricing big-type Mule-Foot hogs. Cholera immuned by double treatment. C. D. Thompson, Letts, Ind.

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BURT FARM DUROCS

BIG-TYPE, big litter kind. Send for descriptive price list. 30 young brood sows. A few good boars. **F. H. Burt & Sons, Brodhead, Wis.**

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Duroc Spring Gilts

OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

CRITIC TOP NOTCHER

half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address
B. W. LITTLE **JANESVILLE, WIS.**

Durocs and Guernseys

30 BIG, growthy, bred spring and fall gilts, mostly sired by Valley G., one of the largest, heaviest boned and best breeding boars of the breed, Bred to Valley G.'s Col. Defender and Crimson Again. Write me if you want the best Guernsey bulls from one to fourteen months old. Glenwood May Rose and Rilma breeding. Some from A. R. O. dams. Address
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ROSEDALE, WIS.

CHAS. A. PETERSON, Prop.

DUROC SPRING BOARS weighing 275 pounds. Bred spring gilts of choice breeding, sired by Burn Brae Distinction and Hazelhurst Col. Bred for March and April farrow to Burn Brae Golden Model. Mention Wisconsin Farmer when writing.

DUROC BOARS SHIPPED C. O. D.

OUR spring boars are good enough to ship C. O. D. They are big, typey, with heavy bone. They are sons of King the Col., Lincoln Model, Golden Choice and Crimson Model. Write for description. Price $20 to $30. Address
Stubbs & Hyzer **West Salem, Wisconsin**

Cholera Immune Duroc Gilts

MARCH and April farrow. Sired by Defender's Golden Model and Wonder Boy, both sons of grand champion sires. Priced for quick sale.
E. H. PARKER **JANESVILLE, WIS.**

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FARROWED in April. Sired by Professor II, and out of sows of Chief J.E.D., Ohio Chief and Grant's Col. breeding. Price $20 and up.
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BRED GILTS, noted everywhere for their size, quality and popular blood lines, such as Rose Hill Guard 171721, Educator 67139 and Select Chief 173601, at farmers' prices. See them or write M. J. DOWD, Route 1, LANSING, MINN.

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Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir KorndykePontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

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SONS OF THE 32-LB. HOLSTEIN BULL
COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 20 months old. Out of heavy producing dams.
Baltz Hoesly - New Glarus, Wisconsin

HOLSTEIN BULL FOR SALE

INKA DE KOL AKKRUMMER 163119

BORN December 28, 1914. Sire, Daisy Johanna 5th, the 1st prize two-year-old bull at the 1915 Wisconsin State Fair. Dam, a 27-pound daughter of the show sire, Johanna Pontiac De Kol.
Rust Brothers West Allis, Wisconsin

HOLSTEIN BULLS

OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address
WM. MILLER, JR., MENOMONIE, WIS.

REGISTERED HOLSTEIN HEIFERS and COWS

...with A. R. O. records. Choicely bred and right, large conformation.
...GISTERED PERCHERON STALLIONS
...ng colts—2 year old—5 year old. Write for ...rices and price.
...iful full marked sable and white Collie pups, ... from natural workers, 10 weeks old. Price ... Pedigree furnished. Address
...lock Bros. - Augusta, Wisconsin

32-Lbs. Butter

...DAYS was made by the dam of **SIR NETHERLAND LONGFIELD.** ... marked, well-grown bull calves from one to ... months old, sired by the above bull, for sale. ...e me your wants in registered Holsteins.
...C. Klassy, Jr. Monroe, Wisconsin

22.27-POUND HOLSTEIN BULLS

BORN March 18, 1915. Mostly white. Dam's A. R. O. record at 26 months old, 22.67 pounds of butter in seven days; grandam 26.93 pounds. Every dam in pedigree tested, all with records over 21 pounds. Write for pedigree, price and description. Mention Wisconsin Farmer. Address
Gruttschel Bros., Sheboygan Falls, Wisconsin

Registered Holstein Heifer

AND bull calves, three to ten months old. Some sired by King Clover De Kol Burke and sons of Oak Homestead Fobes, whose three nearest dams average over 30 pounds of butter in seven days. A few high-grade cows and heifers also for sale. Address
...hn North Kilbourn, Wisconsin

HOLSTEIN BULLS

SIRED by Pontiac Cornucopia Coronis, whose dam is a 27.06 pounds, 5% daughter of Hengerveld De Kol; $50 and up. Address
...l. Roy Gordon - Mineral Point, Wis.

Registered HOLSTEIN

...IFERS and bulls for sale. Sired by Byronia ...tiac Julip 111179. Prices reasonable.
... Winkle Appleton, Wisconsin

At Reasonable Prices

...STERED HOLSTEIN bulls from 1 to 11 ...ths old. Sired by King Pontiac Pioneer, ...packed by the world's champion cow.
...A. Thompson Argyle, Wisconsin

...GISTERED HOLSTEIN BULLS

...ST seven months. Sired by King Walker ...s 3d, priced for quick sale. Can spare a ...males. Address
...ette County Asylum, Peshtigo, Wis.

... Holstein calves, both sexes, 15-16ths pure, ... heavy milkers, $20 each. Registered bull ...dgewood Farm, Route 3, Whitewater, Wis.

500 Holsteins and Guernseys

WE are offering some of the best pure-bred and high-grade cows, heifers and bulls in southern Wisconsin. If you are interested at all, it would pay you to get our descriptions and prices. Don't forget our $18 calves. (When writing state class of stock you are interested in.)
Edgewater Stock Farm, Fort Atkinson, Wisconsin.

Hillside Stock Farm

OFFERS 26.50 lb. reg. Holstein bull, ⅛ white; grand individual, serviceable age. Dam 24.94 at 4 years, will be tested again. Sire's dam Griselda Inka 28 lb.; price $200.00. Also other yearling bulls, Pontiac breeding from A. R. O. cows from $80 to $100. Eight cows at reasonable prices. Farm 1½ miles south.
Kirkpatrick Bros., Sauk Co., Reidsburg, Wis.

Grandson of
King of the Pontiacs

READY for service. Sire Perfection King of the Pontiacs 89979, 4 A. R. O. daughters; dam Piebe Pride 2nd, 26.16 in 7 days at 11 yrs. 8 mos. of age; bull nicely marked, ½ white, fine individual; price $200.00 f. o. b. cars. Also 4 other serviceable bulls out of A. R. O. dams, $75.00 to $150.00. Send for pedigrees. Fairview Stock Farm, W. G. Marshall, Prop., Whitewater, Wis.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt - Oxford, Wisconsin

Holstein Bulls

FROM A. R. O. dams with records up to 21 lbs. They are ready for service, are well grown, ¼ to 9-10ths white in color, sired by
SIR CANARY ALACARTRA
a son of the $1,000 bull, Canary Paul, and out of Nellie Alacartra Rue, that made 23 pounds butter in 7 days and 874 pounds in a year. Send for pedigrees and price. Address
A. L. Rowe Waupaca, Wis.

REGISTERED HOLSTEIN HEIFERS

ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026, a richly-bred Ormsby bull. Address
Jacobson Bros. Menomonie, Wisconsin

Holstein Bulls

OF serviceable age and younger, sired by **Piebe Longfield De Kol** and out of untested and A. R. O. cows with records up to 24 pounds butter in seven days and 750 pounds in a year.
C. Tochtermann - - Monroe, Wis.

50 HOLSTEINS 50

ON Wednesday, February 2, 1916, I will sell at public auction on Fairview Stock Farm at Evansville, Wisconsin, 50 head of choice Holsteins, Springers 3 to 6 years old, bred to registered bulls, due to freshen within one month. This is an opportunity to secure some first-class dairy stock. Come and see them. Fairview Stock Farm, Robert Spencer, Prop., Evansville, Wis.

HIGH GRADE

NICELY marked Holstein and Guernsey heifer and bull calves about four weeks old, twenty dollars each; all express paid and safe arrival and satisfaction guaranteed. Order direct. Prompt shipment. Meadow Glen Yards, Whitewater, Wis.

2 Holstein Bull Calves

BORN November and December, 1915; ⅞ white, from good A. R. O. cows; $40 each. Also heifer calves $1.00 each. Send for photo and pedigree.
Trieloff Brothers Ft. Atkinson, Wis.

Registered Holstein

COWS, yearling heifers and bulls, ready for service. Yearlings sired by the 31.11 pound bull, Briar Abberkerk De Kol 76694; well marked and good type. C. E. Ward, Palmyra, Wisconsin.

REG. HOLSTEIN HEIFERS

YOUNG COWS AND BULLS of serviceable age and bull calves. Prices reasonable.
JOHN BLASKA - SUN PRAIRIE, WIS.

GRANDSON OF THE $25,000 HOLSTEIN BULL
Johanna McKinley Segis

WELL MARKED; seven-eighths white; well grown. Send for pedigree. Address
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HIGH-GRADE Holstein calves, either sex, 3 to 4 weeks old. $17 each, crated. BURR OAK FARM, Whitewater, Wisconsin.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

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REG. GUERNSEY BULL

by the richly bred bull
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
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REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address
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REGISTERED GUERNSEY BULLS

OF serviceable age. Sired by the richly-bred bull. Imp. Royal George of the Isle 30551, and out of imported cows of Gov. of the Chene breeding. Send for pictures, pedigrees and description. Prices reasonable. Address
Pinehurst Dairy Sheboygan Falls, Wis.

At the Present Time

I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.
Alfred I. Stubbs West Salem, Wis.

REGISTERED Guernsey Bulls

OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address
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Homestead Farm Guernseys

TEN bulls, grandsons of Governor of the Chien; from 1 to 15 months; mostly from A.R.O. cows with records up to 566 lbs. fat. Prices reasonable.
W. G. Jamison & Sons, Appleton, Wisconsin

9 GUERNSEY BULLS

SIRED by Lehigh's Golden Emperor (15761), a bull with a show record, and a grandson of Golden Noble 10508. Dams of all these bulls trace to Lily Ella's Jeweler, Glenwood Reputation 7687, Reputation of Portage, a bull valued at $5,000. Priced right. Clifford Capener, Baraboo, Wis.

Homestead Farm Guernseys

TEN bulls, grandsons of Governor of the Chien. from 1 to 15 months; mostly from A.R.O. cows with records up to 566 lbs. fat. Prices reasonable.
W. G. Jamison & Sons, Appleton, Wisconsin

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Registered Holstein Cows

IN order to make room in my stables, I offer three registered mature cows, price $225 to $250. Three ¾ registered cows 3 to 6 years old, $125 each. Several large, straight heifers $225. Two yearling bulls ready for service $75 to $100. These are richly bred. Send for extended pedigree.
W. H. Carey Argyle, Wisconsin

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HOLSTEINS

HOLSTEIN bulls that combine breeding with individuality. These bulls are from A. R. O. cows and sired by good record bulls. Prices and pedigrees upon application. We also have some choice heifers from high-grade, heavy milking cows. Address
Edgewood Farms Inc., Pewaukee, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse Monroe, Wisconsin

JERSEY CATTLE.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
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30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Chariton, Iowa.

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REGISTERED SHORT-HORN BULLS

READY FOR IMMEDIATE SERVICE. White, red and roan color. Sired by **McK.'s Masterpiece,** out of big, heavy producing cows of choice breeding. Also a few bull calves from two to ten months of age. Mention Wisconsin Farmer.
FRANK MORLEY - BARABOO, WIS.

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YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
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Offers the richly bred Short-horn bull,
ROYAL SULTAN 390142
A 2,300-pound grandson of Whitehall Sultan. We also will sell several of his yearling sons ready for service. Write for description and prices.
John Bear & Son Spring Green, Wis.

HARMONY STOCK FARM
Short-horns

TEN very good Scotch bulls for sale. All sired by Strathallen King 296426, that is one of the best grandsons of Whitehall Sultan. Address
J. E. KENNEDY JANESVILLE, WIS.

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
Geo. Wenham & Sons, Ft. Atkinson, Wis.

The Great World's Fair Herds

50 REGISTERED Short-horn bulls and heifers. 100 big-boned Poland China boars and sows. Call at Prairie Lawn Stock Farm or write.
C. J. Schoenfeld & Son, Fox Lake, Wisconsin

BATES MILKING SHORT-HORN

HEIFERS 8 to 20 months old and bulls of serviceable age and younger. Big-type Poland China spring boars and fall gilts for sale.
A. T. Grundy Oshkosh, Wis.

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

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COWS and heifers; also two bulls, all reds, pure bred. J. D. Beetham, Lancaster, Wisconsin

CHOICE Short-horn bulls 1 to 14 months. Poland China swine of all ages. Write A. Menke, Route 1, Markesan, Wisconsin.

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CHESTER WHITES

SPRING boars of the kind and type so much in demand by farmers and breeders. A few choice sows also for sale. Write for prices.
Adolph Nuttleman West Salem, Wis.

CHESTER WHITES

BARGAINS in pedigreed Chester Whites. Herd boars, bred sows and early fall pigs. Address
JOHN SIMON CAMPBELLSPORT, WIS.

CHESTER WHITE SPRING BOARS AND GILTS

SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address
W. F. Miller West Salem, Wis.

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WE OFFER

50 full blooded
YORKSHIRE PIGS
that can be registered and 12
POLAND CHINA PIGS
six weeks to eight weeks old at
$5.00 EACH
R. C. CONNOR CO., MARSHFIELD, WIS.

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I want to show you that you can keep your horse's hoofs in the finest condition—take out all foot soreness, cure all flesh wounds, etc. and do it quickly.

I want you to try this wonderful healing ointment at my risk—not yours. Try it on any case you have—apply part or all of it. At the end of 20 days if you are perfectly satisfied, send me only 50c for the big trial can. If you are not satisfied, tell me so and you won't owe me a penny.

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is extracted from the skin and wool of the sheep and is the only remedy that will penetrate the shell of a horse's hoof—take out the soreness and grow new hoof. ***Corona Wool Fat*** does not burn, blister or cause suffering. It is a cooling, healing, penetrating ointment, quick in action, ***heals without leaving a scar.*** Read these letters—we have thousands more like them:

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Gentlemen:—Corona Wool Fat is the best thing I have ever used for hard and contracted feet of horses. I have used about all kinds.

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P. D. Jamison,
Bridgewater, Maine.

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—I like Corona Wool Fat. I think it is fine to heal sores and cuts, and can truly recommend it to any one needing a good healing salve.

Yours truly,
Dewitt Conrad,
23 State St., Fort Plain, N. Y.

Send No Money—Simply Mail Coupon

If you have never sent for a trial can of Corona Wool Fat, fill out the coupon and mail it today. When you receive the ***Corona Wool Fat***—try it—watch results—then if satisfied, send me only 50c—if not satisfied, just write and tell me so and I'll charge you nothing. Write for the big trial can ***now.*** Remember, I send it ***postpaid.*** You risk nothing in testing it. ***Will keep your horses in working condition and put them in selling condition.*** I take all the risk—send today.

Corona Mfg. Co., C. G. Phillips, Manager **44 Corona Blk., Kenton, O.**

IT WILL CURE

Hard and Contracted Feet, Mud Fever, Split Hoofs, Corns, Grease Heel, Thrush, Quarter Crack, Cuts, Barb Wire Wounds, Sore Teats of Cows, Ulcer, etc.

Our Guarantee is on the Lid of Every Can.

I have sent out a million cans the past eight months, and now have more than that number of satisfied customers. You need it; I have it for you, and you can try it out on the "before you pay" plan. Now, all I ask is a fair, square trial on its merits. *C. G. Phillips.*

Proof!

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—I received the Corona Wool Fat all right and have tried it and it works just as you recommend and even better. My horse was sore in the front feet and she could hardly get out of the barn, and in two weeks time she improved so much that she was as limber as ever, and our blacksmith stated that he never saw anything as good as Corona Wool Fat.

Sincerely, T. J. Tishell,
North Rush, N. Y.

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—Having been in the dairy business all my life and as all dairymen will agree it is a hard matter to keep their horses going sound. I with the help of the shoeing smith were kept at our wits end until a friend of mine told me of Corona. It certainly does the work. Every horse is going sound and when it comes to sore teats on cows you have certainly solved the problem. In fact, my stable and barn boys all swear by Corona and the best part of it is, it is just as good for a man as for a horse or cow. Wishing you the success that is due you, I remain, Yours very truly,

Robt. T. Armil, Prop.
Oakwood Dairy Farms, Davenport, Ia.

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—I am very well pleased with Corona Wool Fat, and am enclosing you remittance for more of this wonderful product. It is great stuff. Yours truly,

Louis J. Dumont,
R. F. D. 1, Wolverine, Mich.

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—Corona Wool Fat is just the stuff for my bank mules feet as it keeps the bank water from cracking their feet and getting sore. Enclosed find remittance for $3 for which send me a ten pound pail. Yours truly,

W. F. Williams,
New Sharon, Iowa.

Corona Heals Barb Wire Cuts Smoothly

Grease Heel Before and After Using Corona Wool Fat

For Collar Galls and Sore Shoulders

(6)

20 Day's Free Trial COUPON

CORONA MFG. CO., 44 Corona Block, Kenton, O.

Gentlemen:—Please send me the trial can of your Corona Wool Fat. It is understood that I am to use this for 20 days in accordance with directions, and if I am satisfied with the results I will send you 50 cents to pay for it. If it does not do as you claim I will owe you nothing.

Mention ailment you intend to use it on.....

Name.....

Address.....

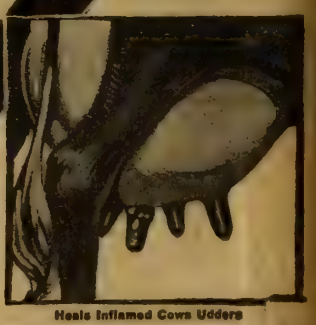
County.....

State.....

Galled Shoulder

Fill Out the Coupon NOW

A Bad Case of Scratches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1,000,000 Farmers, Stockmen and Blacksmiths are using *Corona Wool Fat.* Don't experiment—make sure of a quick cure by using *Corona Wool Fat.* There is no other remedy or healing ointment that will do the work as well.

C. G. PHILLIPS.

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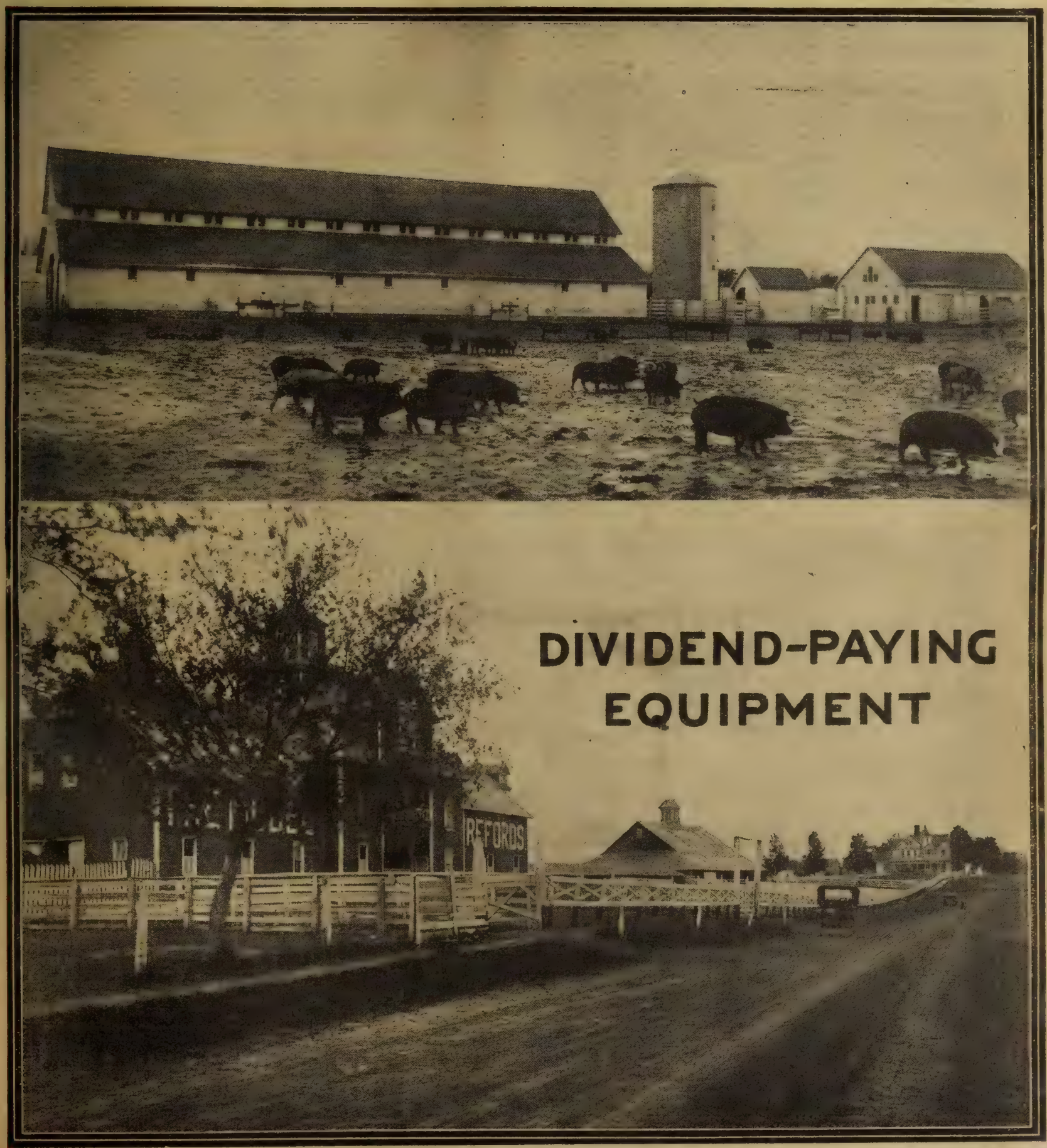
THE WISCONSIN FARMER

VOL. XLV. NO. 6. THURSDAY, FEBRUARY 10, 1916. WHOLE NO. 1776



PAIGE

The Standard of Value and Quality

For Your Own Protection a Paige

We want you and your family to FIND FOR YOURSELVES in this new Paige Fleetwood "Six-38" ($1050) your ideal of what a five-passenger motor car should be.

We want you to find for yourself the tremendous POWER, sturdiness and reliability of the motor. You will need this on steep hills, in sand, for all those road-conditions that bring out the real worth of a motor. We want you to find for yourself the flexibility of the motor (from 2½ to 60 miles an hour) and the remarkable ease of control.

We want you to see for yourself the beauty of line and design, the elegance and the luxury of the equipment and furnishing throughout.

We want you to find for yourself the REAL VALUE and QUALITY and SUPREMACY of Paige cars.

We want to make this vital point. A cheaper purchase price isn't necessarily a saving. Often it proves later to be a liability—a heavy and needless expense. Thousands of motor car owners—some say as high as 33⅓ per cent of all owners—have disposed of the cheaper cars with which they began, for cars of real value, quality and character.

Why? Because they have found that the cheaper cars haven't given them the comfort, the service, the saving in upkeep and, at the end of the year, the value as an investment.

Ask Paige owners why they bought Paiges and continue year after year to buy Paiges. They will tell you YOUR final choice will be a Paige; that it is expensive to experiment with anything below Paige Quality; that it will save you time, money and annoyance to buy a Paige FIRST and buy it NOW.

In their efforts to keep pace with Paige Cars—the Fleetwood and the seven-passenger "Six-46"—other manufacturers of Light Sixes are introducing radical features—new designs—new power plants—new engineering theories. These are all experiments.

Why should YOU risk an experiment?

Why should YOU consider anything but the national standards of six-cylinder value—the five-passenger Fleetwood "Six-38" at $1050 and the seven-passenger Fairfield "Six-46" at $1295?

Paige cars have won the overwhelming endorsement of the American people. They have been perfected to the current hour of motor car building. They are built and backed by one of the strongest companies in the industry.

Why buy anything but a proved, an established success? Why anything but a Paige?

Paige-Detroit Motor Car Company

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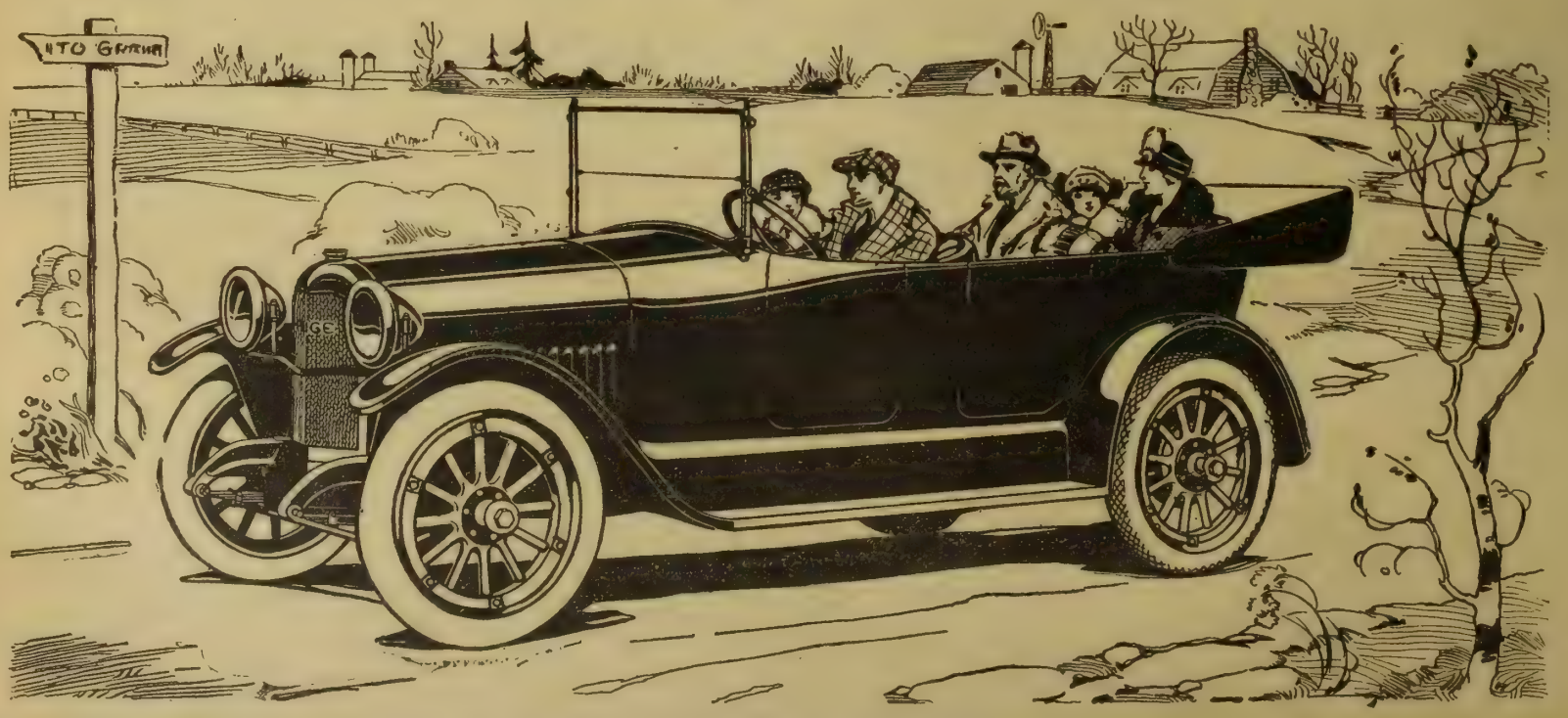


The Wisconsin Farmer

THURSDAY, FEBRUARY 10, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

IMPROVING OUR FARM HOMES

A GOOD point was raised by a Nebraska farmer, speaking at the Iowa Short Course, last week. He declared that while farmers are evidencing their prosperity and progressiveness by spending $2,500 every fifteen minutes, in Iowa alone, for new farm buildings, they are not always exercising good judgment in the selection of the site and the materials and the efficiency of arrangement. I believe we can well afford to consider this matter for a few minutes.

It is gratifying to our pride to know that no section of the country is making greater headway than ours in this all-important matter of beautifying our farm homes, adding the necessary comforts and conveniences, and erecting barns, silos, cribs and outbuildings which shall reflect the fertility and prosperity of our farms. Thus, in the ten years ending with 1910, when the last federal census was taken, I find that here in the grain belt the value of farm buildings had increased 100 per cent (being exactly double what it had been ten years before) while in New England the increase, in the same time, had been but 37 per cent, in the middle Atlantic states but 34 per cent and in the United States as a whole but 77 per cent. In other words, the farmers of Wisconsin, Iowa, Missouri and Kansas are spending three times as much for their farm buildings as are the farmers of Massachusetts, New York and Pennsylvania. While this is gratifying and while it is somewhat appalling, because of the magnitude of the figures, to learn that the value of the farm buildings in the grain belt today is almost $4,000,000,000, still this is a matter in which the largeness of the figures is not the only thing to be considered. Even more important is this: Are we spending our money wisely? Are we getting the best possible returns from this large expenditure?

No one is a firmer advocate of improving the farm home than I am. I do not believe the profits of our fields and herds could be used to better advantage than to modernize the old farmhouse (installing a water-under-pressure system so as to save the good wife steps and backaches, artificial lighting systems, sewage-disposal systems and so on) or to replace the old farmhouse with a new and up-to-date structure or to build large barns and outbuildings which shall be a credit to our farm and our standing in the community. But shall we not be systematic about it? What good is a fine new farm home, with water faucets ready to the hand, just as convenient as any city home has them, if our water supply is contaminated by near-by filth; if our house is built too close to the barnyard, with its filth; if our drainage is not properly looked after; if we do not consider waste steps and inefficient running back and forth, covering the same ground over and over in a futile, chicken-with-its-head-cut-off manner? It is not necessary that we go to a city architect and spend several hundred dollars for house-building plans and farmstead arrangements, but when we are spending so much money for farm buildings and farm beautification shall we not use our common sense and take advantage of the service which the agricultural college offers in practically every state and practically without charge? By this service we can arrange our farmsteads so as to conserve time, steps and money and equip our houses with those comforts and conveniences which will keep the good wife from getting old before her time. By all means, let us give to our farm homes everything that will make life easier and work more effective, but let us see to it that this work of remodeling and rearranging is done just as systematically and as scientifically as we go about breeding stock and growing grain. There is nothing about farming or farm life, my friends, that can be done in a slipshod, haphazard fashion, without the effects being visible and costly, in money, in health and in happiness.

I am delighted to see such widespread interest in this subject of farm-building improvement. Nothing appeals to me as more interesting or important. As I drive around the country I have seen scores of places where the old farm home of the early, pioneer days has been supplanted by a new, up-to-date home, set right in front or to one side of the old place, eloquent testimony to our prosperity and progressiveness. I have in mind one place where there are three houses: The very first, pioneer one; then one of the middle eighties; lastly the new, modern structure erected just last year. A picture of these three places would tell the whole story of grain-belt prosperity. I shall print it for you some day and perhaps tell how the owner reached the various stages reflected by the homes which he occupied. It will be a story well worth reading, I feel sure.

WHY NOT A FOOD PREPAREDNESS?

WE HEAR much nowadays about war preparedness; would it not be a good thing to hear a little more about peace preparedness? Instead of devoting our time and attention to those things which take human life, why not consider as well those things which nourish and sustain human life? In brief, why not have an agricultural preparedness, as well as a military one?

I was quite interested the other day in what one of our best corn growers of the grain belt told me. He said when a young boy, forty-three years ago, he worked on a farm and he will never forget how one day the farmer for whom he worked called to him and said: "Get into that crib and pick out the seed corn; tomorrow we start planting." No germination boxes, not even a rag-doll tester; it was trust to luck that a young boy would pick out the ears which would produce the most and best corn; if not, there would be another crop failure; nobody could tell until harvest time. "I often wonder," added the man who told me this, "if we have completely gotten rid of that kind of farmers. I hope so, but I'm not sure." I could only add that I did not believe any of my readers would be guilty of such a thing.

But can we sit down complacently and confidently assert there is no such farming going on round about us today? An Indiana friend writes me to say that in their five-acre corn contests, in 1914, there were twenty-one farmers who raised more than 100 bushels of corn to the acre. The average for the United States as a whole is but twenty-five bushels. What kind of farming is going on that this 100 bushels should be cut down seventy-five bushels in the national average? Farming in which there is not enough preparedness for the uncertainties of soil, climate and general conditions; that and nothing else, in my opinion.

One of the speakers at an agricultural gathering which I attended recently pointed to the fact that whereas just ten years ago we had exported 120,000,000 bushels of corn, in 1914 (1915 was such an exceptional year, because of the war, the figures did not prove much) our corn exports were reduced to 10,000,000 bushels. In other words, instead of producing so much corn that we had it to sell to the whole world, even with our vastly increased production, we are now growing just about enough corn for our own uses, with little left for other people. With the confidently anticipated increase in immigration at the end of the European war, we confront the day, not far distant, when we will have just enough corn for our own use, with not a single bushel for export.

But, you say, we have millions of acres of waste land that will be available for many, many years to come, which the new peoples from across the sea and the adventurous ones already here can cutivate, to add to our area under the plow and to our production. Yes, my friends, we have vast areas uncultivated today, but I have it on the authority of a government official that all our available land will be exhausted in the next twenty years, at the rate it was taken up and reclaimed last year. We must not sit back and depend on lands not now under the plow; we must be prepared for the time when all our land will be cultivated and increased production will be absolutely necessary if all are to be fed and clothed.

That is why, my friends, I declare there is a preparedness for peace—a food preparedness—that should be occupying your thoughts and mine, the thoughts of those who sit in authority and by the weight of their influence can launch campaigns that sweep the country with enthusiasm. We must see to it that we are prepared for the time when the production of today, large as it is, will not suffice; when we must all be better farmers, making our fields yield to the maximum, that there will not be hundreds of fifteen-bushel corn farmers bringing down the average of those who raise sixty, eighty and even 100 bushels to the acre. It is none too early for some Paul Revere to dash across the countryside rousing the people, not to arms, but to pitchforks and plowshares, so that we may be prepared for the time which now, in our prosperity, we ignore or choose not to see. The man who does this will go down in agricultural history as a prophet who awoke his people to action before it was too late.

THE LESSON OF LINCOLN'S LIFE.

SO LONG as our nation survives, the story of Abraham Lincoln's life will be an inspiration to every farm boy. It is a far cry from splitting rails and poring over books on the puncheon floor of a log cabin, in the dim light from the fireplace, to occupying the president's chair and piloting a nation through stress and storm to the harbor of peace and safety, but because one farm boy did this millions of others are cheered to do their best, no matter how humble may be the only outlet for their ambition. It is a good thing for us that Lincoln's life is not shrouded in any of the historical mysticism that envelops Washington's. It is hard to think of Washington as a flesh-and-blood man; we cannot think of Lincoln in any other way. His rugged, homely face was so human, neither time nor hero worship can make him aught but a man, made of common clay, one of the common people, from whom he sprang.

Once every year, as I prepare this page of mine, I confront the task of trying to bring Lincoln and his life before you in some new light, that you may see him as he was in the flesh: A farmer, loving and honoring farm work to the day of his death. Although his character was many-sided it is a difficult task to bring some new thought to you. Out of the stress and strife and storm that surround us nowadays, when three continents are at war, it seems to me that nothing Abraham Lincoln said showed the greatness of his character and its nobility more, that nothing he ever said so deserves to live in history and be enshrined in our hearts and memories as those epochal words, "Let us have peace." Whenever was there a time when we can so fervently breathe this prayer of the man of peace who was forced into war, who, on another time said: "Fondly do we hope, fervently do we pray, that this mighty scourge of war may speedily pass away." Is there one among us today, as Lincoln's birthday approaches, who cannot or will not echo these words of the martyred emancipator? This is the thought I would give to you on Lincoln's birthday; only a few simple words, to be true, but, oh, how many untold millions of lives hang upon them, what a cloudburst of human blood is held back by them. And, remember, my friends, the man who spoke them was just a common man, like you and me, a product of the soil, a farmer, of whom no truer picture was ever painted than that of the poet when he wrote:

The color of the ground was in him, the red earth,
The tang and odor of the primal things,
The rectitude and patience of the rocks.
The gladness of the wind that shakes the corn,
The courage of the bird that dares the sea,
The justice of the rain that loves all leaves,
The pity of the snow that hides the scars,
The loving kindness of the wayside well,
The tolerance and equity of light,
That gives as freely to the shrinking weed
As to the great oak flowing to the wind—
To the grave's low hill as to the Matterhorn
That shoulders out the sky.

And so he came—
From prairie cabin up to capital.
One fair ideal led our chieftain on.
Forever more he burned to do his deed
With the fine stroke and gesture of a king.
He built the rail pile as he built the state,
Pouring his splendid strength through every blow,
The conscience of him testing every stroke
To make his deed the measure of a man.

So came the captain with the mighty heart,
And when the step of earthquake shook the house,
Wresting the rafters from their ancient hold,
He held the ridgepole up and spiked again
The rafters of the Home. He held his place,
Held the long purpose like a growing tree,
Held on through blame and faltered not at praise.

And when he fell in whirlwind, he went down
As when a kingly cedar, green with boughs,
Goes down with a great shout upon the hills
And leaves a lonesome place against the sky.

That is the Lincoln I love to think of, not a man whose birthday kings remembered, nor a great commander led unwillingly to war, but a man of the road and the country school, a man of the cornfield and the country store, a man so great that when he fell he went down like a kingly cedar, leaving a lonesome place against the sky.

We mark the lowly place where he was born,
We try to dream the dreams that starred his nights
When the rude path that ran beside the corn
Grew to a fair broad way which found the heights;
We try to sense the lonely days he knew,
The silences that wrapped about his soul
When there came whispers tremulous and true
Which urged him up and onward to his goal.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Be Liberal on the Farm Home.

THERE should be more attention paid to the farm home. It is, of course, very easy to make a statement of this kind and very pleasing no doubt to those who have home building materials for sale. But the matter should be viewed rather from the standpoint of the value which may be derived from a good farm home property. This value is represented in several very important ways, including health, happiness, comfort, ease and pride. We fail to realize at times how closely these things are related. Those who have enjoyed a good, convenient farm home, modern structure in a proper setting of trees and shrubbery, are better able to understand.

A good farm home under present conditions may be built for $2,500 to $5,000 or $6,000. The cost will depend largely upon the finishing. It is nice to have an interior of solid oak, but it is not necessary. A home may be comfortable—yes, it may be beautiful without the most expensive finish. Plumbing bills may run into large sums, but good, substantial plumbing minus some of the nickel trimmings may be secured at quite reasonable cost.

The decision as to the walls of the house, whether they shall be frame, brick, hollow tile or other construction will have most to do with the ultimate cost. Square houses, as a rule, give the maximum of house space for cost, everything considered and when angles and odd-shaped roofs and frills are added they will appear in the total bill of cost.

Fireproof construction is desirable for farm homes, but it is relatively more expensive than wood. If one is to build a large house from absolutely fireproof materials the cost will run up. Frame construction will be the usual method. Those who are able to pay for heavier construction will be well pleased with the added expense. A plaster or stucco finish, put on over metal lath is desirable and beautiful. It is well for the prospective builder to consider these materials, their relative cost and efficiency.

There are a few things in connection with modern home building which should not be overlooked. A sleeping porch may be planned in connection with the original building operation and it will not be much additional cost. Good wide porches are desirable even where the lawns are well shaded. Give the house sufficient elevation to get the breeze and give the proper ventilation to the cellar. Put in a furnace of some kind. It is the modern way of getting even heat, and the furnace should be considered as a part of the house plan.

Don't forget that there are many uses for a good cemented basement. Here's a chance for the washroom and for a good vegetable cellar. Seed corn can be dried in the furnace room. A good furnace means an even temperature throughout the house. It means that more than one room may be used in comfort throughout the long winter days and evenings. Running water in the house ought to be a subject for discussion along with the house plans. This makes a bathroom possible and this is the era of the bathroom. The farmer who intends to build a home should take a little time to study over these things, figure out what conveniences he can afford, and build the home for the future comfort and happiness of the children and of himself and wife when they are old.

It is not possible to put into the home every good thing which will be suggested. Hark back in memory to the hot summers and to the cold winters, to the heavy rains and the big snows, and many notions will come up in the mind concerning the building of the home. Do not be niggardly in erecting the farm home. Every dollar spent in a good home is well spent, provided, of course, that materials and workmanship are properly bought and reasonable plans are adopted. Large barns represent prosperous farms. Good, substantial homes add just as much to the sale price of the farm as any other class of farm buildings. The expense put into the home place must not be looked upon as money sunk. It may be the means of keeping those boys and girls on the farm, or preserving the health of the family. We do not know of any farmer who has a good, substantial home, who will say that he made a poor investment. We know a good many farmers who have twice as much invested in their homes as the size of their farm would seem to warrant, but who are well satisfied and wouldn't stint a bit if they had the home to build over again.

Youthful Wisconsin Alfalfa Grower.

THE publisher of The Wisconsin Farmer has received a very beautifully written letter from Harold E. Parsons, of Portage county, Wisconsin. He is twelve years of age and in the seventh grade of the Plover, Wisconsin, graded school. His letter is of exceptional interest to us because it tells of his experience in raising alfalfa, and this same alfalfa took first prize at the boys' and girls' contest held in Stevens Point, Wisconsin, October 29, 1915. In order that other boys and girls in Wisconsin may know something of what this twelve-year-old boy has done, his letter is published herewith:

In the spring when papa plowed his garden he plowed a piece of ground that used to be a chicken park. He was going to plant it with potatoes, but when I got my alfalfa seed he said I could plant my seed where the chicken park used to be. After the ground was plowed I raked it over two or three times so as to break the lumps of sod. I planted my seed rows about eighteen inches apart. The piece of ground in which I planted my alfalfa was twelve feet long and ten feet wide. I planted my seed about the middle of May. My rules said to plant the seed between the first and the tenth of May, but it was too cold for the seed to sprout. I planted it about two inches deep. When my alfalfa was about three inches high I pulled all the weeds out, little and big. I weeded it once a week until it was about ten inches high, and then I weeded it once in two weeks. I had a hoe similar to a cultivator. It had three teeth and was just right to cultivate between the rows. I cultivated the alfalfa from two to four times a week. I cut my first crop the twelfth of august. When I cut my alfalfa I took it in the barn and spread it out on the floor to dry and let it lay there about a week. I had about forty pounds. When it was nice and dry I took the best of it and tied it up in a bundle about four inches in diameter. The longest of it was about two feet long. I cut my second crop in the middle of September. It was not in blossom so I didn't save it. It grew to be only about ten inches high. It was about fifteen pounds.

Attracting the Settlers to Wisconsin.

GREATER interest is being manifest this winter in the newer lands of Wisconsin, and the present year will probably see more settlers come into this state than ever before. Men able to buy higher priced lands in old-settled communities are buying and developing new lands in central and Upper Wisconsin as well as men who are coming to this state to make their stake, unable to purchase the higher-priced lands in other communities. They have seen the clover growing wild in the cut-over districts and are convinced as to the fertility of thousands of acres still to be put under the plow, and as they are urgng neighbors and friends to locate near them a greater influx of new citizens can be expected and more Wisconsin land will be made tillable.

So it is timely that such a bulletin as "A Personal Word with the Homeseeker" should be issued by the state department of agriculture for the bringing in of these settlers and then seeing that they are properly located is one of the big problems of the state. This pamphlet has just been issued by B. G. Packer, director of the immigration bureau, and it is one of the best bulletins that has been issued in some time, setting forth the great future of the undeveloped lands of the state. It is profusely illustrated and the various farming topics as well as everything the prospective settler wishes to know, such as climate, soil, transportation, etc., is set forth in a clear, concise style. Its purpose is well set forth in the following paragraph from Mr. Packer's introductory in which he points out that the settler's interest is the state's interest:

This pamphlet is issued with the homeseeker's interest kept in view first, last and all the time. The writer has no seductive stories in big profit in farming to tell you. Where crop returns are mentioned only averages are used, and these obtained from impartial sources, then reviewed and verified. The division of immigration has no financial interest in the sale of lands, but every assistance is offered that will lead you to discover the exact locality you would prefer. Write us in detail about your plans. In adding to the farm wealth of Wisconsin it is the purpose of all forces, public and private, to build from the bottom up, and not from the top down. Your welfare and the state's interest are one and the same thing.

The bulletin sets forth what is being done with the great undeveloped lands and what can be done. There are wonderful opportunities in central and upper Wisconsin, and the state department of agriculture is anxious that the settler get started right so that he will succeed. It would be folly to attract homeseekers to this state with a lure of great riches and wonderful returns and then have them fail; have them tell their friends and neighbors to avoid Wisconsin. As Mr. Packer correctly states, hard work, patience and some cash capital are required to fit new land for crops in any state, and Wisconsin is no exception. Most well-to-do Wisconsin farmers began with small means and without the credit, transportation and markets found today. But the soil was good, and because it was good, combined with their thrif and enthusiasm, they made good. Thousands o settlers are winning out today just as their fore fathers won out, and the opportunities are unlim ited for the man who buys right, starts right works right and lives right.

The bulletin has been issued with the view o interesting the prospect. It sets forth the grea advantages of the state and it should prove a grea assistance to the landowners who are bringing i new citizens to develop that land. The interes of that department is in getting the homeseeke settled right so that he can win out. It desires n failures. A successful settler means more devel oped lands, greater farm profits, a greater stat and greater prosperity.

The question of finances is one which usuall confronts most of the homeseekers. They ar seeking a newer country where the lands ar cheap because they can't afford the higher price lands in the well-developed communities. But, a Mr. Packer sets forth, the new settler's capital i certainly not to be measured wholly in dollars an cents. His earning power must be considered an the active man will find employment, if necessary in most sections of the state. The amount o money needed depends upon the extent and con dition of land purchased and how he goes at the job. More especially does it depend upon the man his wife and their habits of thrift. One thing i certain—the new settler should not put all his funds in land, for it is well to reserve some for buildings and provide for clearing. These build ings need not be costly, and no state offers better opportunities along this line, as lumber is cheap in the cut-over country, and if thought best log buildings can be put up at the cost of erecting them. Then there is the additional income that can be secured the first winter from the sale of bolts, fire wood, etc., and the profit in summer from the cash crops, such as potatoes, cabbage, etc., which are good producers in the new country.

Many Counties Can Profit by Waukesha's Example.

WAUKESHA COUNTY, which is undoubtedly the best-known county from a dairy standpoint in Wisconsin, is entitled to the fame it has won as a dairying community. There is no reason for any county to be jealous of the position Waukesha has attained, for this position has been earned by her breeders who are setting an example for those of every other county when it comes to enthusiasm and progressiveness. For real live dairy organizations the writer believes Waukesha county beats them all, but what Waukesha has done can be done in any other county. This county has no patents or copyrights on cooperation and enthusiasm. Her breeders have put her on the dairy map because they saw in co-operation the organization that the greatest good could be accomplished and every breeder was ready to put a shoulder to the wheel.

There is much that any breeder may learn in Waukesha county in addition to how to breed fine dairy stock. He can learn the value of organization and the fact that the Guernsey association, which has been highly organized for ten years, can report an increase of membership during the last two years that is the greatest in any two years, speaks volumes for the permanency of community organizations properly conducted. The Guernsey breeding industry is the most highly developed agricultural industry in the county because ten years ago a few breeders with an enthusiasm that was deep seated and unselfish brought the Guernsey lovers into an organization. Two years later the Holstein breeders united and are vieing with the Guernsey breeders for first honors and contributing their share to making Waukesha county the dairy capital of America.

Often the writer has been asked why these Waukesha county associations have succeeded so admirably. That question could have been answered by anyone who attended the two annual meetings this past month—the Holstein and the Guernsey meetings. From the moment these gatherings were called to order there was enthusiasm and lots of it, They were community gatherings in the strictest sense—gatherings to which mother and the children attended as well as father and son. At noon each association served a banquet which would delight the best business man's organization in Wisconsin. To this festive board they brought the best speakers obtainable—men from whom they could learn and profit, all of which was interspersed with the best of vocal and instrumental music.

The result is that these annual and also the summer meetings have become social as well as business occasions. They are something for the entire family to attend. The day is a grand holiday; an outing for mother and the daughters with no dinner to cook; no dishes to wash; nothing to do but enjoy themselves. We all know how the mother enjoys a change from her own cooking; how she likes to eat someone else's cooking. And with a banquet like that served at Waukesha nothing was left undone from the eating standpoint. The result is that everyone returns home at night refreshed from a day's outing; imbued with the enthusiasm of the meeting; richer in the good things explained by the speakers. While the mind has been refreshed with music and visiting and the inner-man satisfied the business has been trans-

acted and the interest in the association and its work increased.

The Wisconsin Farmer wishes every county in Wisconsin might boast of such organizations as are flourishing in Waukesha county. Many of our counties have such associations but they lack the vital thing—enthusiasm. They also need leaders, for without men who are willing to give freely of their time to carry on the work any organization will perish. Waukesha county has been fortunate in having leaders—it is also developing leaders so that the men now active can retire and watch the work go on under the direction of new leaders. Waukesha county has shown the state what these community organizations can do; it has shown the state how to interest the entire families; how to make the meetings appeal to all. The question is whether more counties will profit by Waukesha's success.

Sheboygan County, Wis., Makes a New Record.

SHEBOYGAN county is rapidly forging to the front in official testing and during the past two weeks a new production record for butter fat has been set for that county. Vickery Vale Beechwood, a Holstein in the herd of Emil Titel at Plymouth, has just completed a 365-day official test, during which time she produced 980.54 pounds of butter fat in 26,050.7 pounds of milk. Mr. Tittel has several other cows in official work which have not yet completed their year's records, but the record thus far completed indicates heavy productions.

This production of 980.54 pounds of fat is the highest official 365-day record ever reported from Sheboygan county and indicates the high quality of cows which are being bred now in that community. Only a short time before the record of Vickery Vale Beechwood was completed a cow in the herd of Harry Keach at Glenbeaulah, Pearl Longfield De Kol, produced 972.084 pounds of fat from 28,050.5 pounds of milk. This was also an official 365-day Holstein test, and several other of Mr. Keach's cows now under test will produce near this mark. These tests will be completed during the next few months. The Keach record is only a few pounds below the Titel record, and for a time there was a race between these two Sheboygan county dairy queens as to who would produce the most fat in the year.

There are approximately 40,000 Holstein cows in Sheboygan county, and the records of Mr. R. T. Harris, at Madison, supervisor of official tests, shows more interest in official work in that vicinity than ever before. There are some splendid Guernsey and Jersey herds in the county, but the Holsteins have the advantage in numbers. These two official records, only recently completed, emphasize the growing importance of the pure-bred, high-production dairy industry in that county.

Better Dairying in Dane County.

AN INCREASED interest in dairying in the tobacco-growing sections of Wisconsin is indicated by this inquiry from one of our valued readers, Mr. Bert Chappell, of Dane county:

"The farmers in the vicinity of Stoughton wish to form a dairymen's association for the purpose of awakening an interest in the production of better and cleaner milk, the raising of better stock and also for procuring a better market for milk. We wish to ask you to give us a few ideas how to get started. What would be a reasonable amount to pay a secretary?

Can you give us the address of any dairy company that would be likely to make use of our whole milk? There is no sentiment here for a co-operative creamery. We have had a rather favorable correspondence with the ———— company of Chicago, but they seem to be somewhat doubtful of this tobacco region, hence our desire to form an organization to keep up the dairy interest.

"While thanking you in advance for your reply, allow me to express my personal appreciation of The Wisconsin Farmer and more especially your editorials."

The farmers of the Stoughton vicinity are certainly on the right track, and an organization, as Mr. Chappell suggests, would no doubt be a powerful influence in increasing the dairy farmers' profits by encouraging the production of better milk and in finding a profitable market for this milk. The initiative for such an organization must come from the farmers in that vicinity. Our advice would be for a dozen or more farmers to get together; start an association, and if properly conducted and begun it will gather influence as time goes and outside assistance can be secured from the college of agriculture and the state food and dairy commission. Either will be glad to send good speakers and organizers to help the work along, but local farmers must take the initiative and certainly there are a sufficient number of public-spirited dairymen in that community to do this. We do not know of any secretary receiving a salary for such work as this and there is in almost every community and certainly in the Stoughton community some man who is willing to devote his time without compensation to the upbuilding of such an industry. Of course, the secretary should be reimbursed for any expenses such as postage, etc., which might be incurred. The first thing to do would be to canvass the farmers; learn how many are interested in such a plan and then call them together for organization and selection of officers. The college of the dairy and food commission would be willing to send a man to assist in perfecting the organization.

Stoughton should have a creamery. There is in that vicinity many dairy farms from which the milk and cream is being shipped to outside markets. If such an organization as outlined above were started it would attract outsiders, and if the farmers did not wish to start a creamery cooperatively someone from the outside would come in and take hold of such a proposition. A creamery in Stoughton, conducted properly, would be a big boon for that vicinity, for it would no doubt be followed by a cow-testing association with the result that the farmers would begin to sell off their boarders; would get a better price for their milk and would likewise produce a better product. It would also mean that the skim milk would stay on the farms.

The Chicago dairy company with which the farmers are now corresponding could dispose of their whole milk very easily, and to the advantage of the farmers if they decide to take this milk. It is true many of the big city milk companies are afraid of the tobacco farmers as they have, naturally, devoted their attention principally to tobacco raising, but, as more and more of them are taking up dairying each year, this prejudice should soon be forgotten. If the Stoughton farmers, after organizing, decide not to start a creamery they could probably find in Milwaukee a splendid market for cream, as one of the big dairy companies there is now paying 8 to 9 cents a pound above the Elgin market price for butter fat. This, it seems, would be better than shipping the whole milk, as it would leave the skim milk on the farm, and this is an important item with corn high in price and feed short. Skim milk is worth half as much per hundred pounds for feeding purposes as a bushel of corn, and in this vicinity there are many hogs, calves, etc., which can use this milk to advantage. In the second place the farmer can profit just as well by skimming and selling his cream, and he does not have the large expense of transportation that is present when shipping whole milk.

These matters could all be threshed out after the milk producers had organized and speakers had been brought in to explain the problems confronting the farmers. Such an organization would go a long way towards boosting the farmers' profits, if rightly conducted, not only in finding the proper market but by increasing the milk production through interesting the farmers in keeping better cows, and up-to-date dairying methods.

Implement Wear Due to Rust and Decay.

MACHINES make money for you when they are in use; they cost you money when they stand idle.

A machine makes the greatest possible profit for its owner when it is used continuously in profitable work till it is worn out. Then it is really worn out—it does not rot or rust out.

The average farm implement is only about half worn out by use alone. The rest of the wear is due to rust and decay.

Acres count in the life of a machine—not years.

These are some of the striking facts about machinery emphasized by a recent study conducted by the United States Department of Agriculture.

It was found that the cost per acre covered is the real measure of the value of the service given by an implement, and that, on the average, the more acres covered per year, the more profitable it proves to its owner. For example, it was found that for the territory surveyed, the mower that covers but fourteen acres per year cost its owner thirty-six cents per acre, while the mower that covers fifty-three acres annually cost but ten cents per acre cut.

Of the implements studied, the walking plow shows the longest life in days of service, 224 days out of a total life of twelve years, while the two-row corn planter shows the shortest life in days of service, nine days out of eleven years, or about nine-tenths of a day per year. The cost of the walking plow was less than ten cents per acre, mostly for repairs, while the cost of the two-row corn planter was eighty cents per acre, mostly "replacement cost" or the amount charged against the implement each year toward getting a new one when it is scrapped.

This investigation was made in an eastern state and the findings, therefore, only apply in a general way to corn-belt conditions. For example, it was found that the disk harrow was used only 4.2 days during the year, while the spike-toothed harrow was used 3.1 days. In the central west each of these implements would give three or four times this amount of service every year. Where the investigation was made, the life of the disk harrow was thirteen years and the spike-toothed harrow fourteen years, during which the former was in use fifty-four days and the latter forty-three days. It goes without saying that this class of implements and, indeed, all classes of implements are built strongly enough to give many times this service and the fact that they are worn out in so short a time must be very largely due to rust and decay. The grain binder, according to this report, is used an average of 3.4 days in the year and it lasts for 15.4 years, doing only fifty-three days' work until it is discarded. Binders can be found in the wheat belt that have cut all the way from 500 to 1,000 acres of small grain, thus showing that where they are really taken care of they will give ten times the service that was revealed as the result of this investigation.

Put the Lease in Writing.

WE ARE not in favor of verbal leases. Even the best of friends in a matter of this kind are much more apt to remain friends if each party signs a contract that defines somewhat in detail the condition under which land or other property is leased. This topic is suggested to our minds by a number of communications that have been received recently from men who are in a "stew" over the action of their landlord on the one hand or the tenant on the other.

In one case a verbal lease was made for one year, the tenant to pay share rental. Nothing was said about the pasturing of the stalks, and just as soon as the tenant turned his cattle into the stalk field he had trouble on his hands there and then. The landowner in this case was stubborn and threatened the tenant with all sorts of dire disaster if he turned his cattle into the stalk fields, and the matter was being wrangled over at the time advice was asked by the tenant.

Another instance gives a view of the matter on the share plan as applied to the live stock as well as to the crops. The relation of the two parties in this case was such that each expected to extend the term of the lease at the end of the year, but the renter purchased another farm and the problem of settlement came up involving a division of the live stock. The landlord maintained that there could be only one satisfactory method of appraising the live stock and that involved the holding of a public auction sale, but at the same time he refused to bear any portion of the expense involved in this sale, claiming that the action of the renter made the sale necessary and he, therefore, should bear the cost.

Other instances have been presented, involving the matter of repairing fences. One case in particular indicated that no fence on the farm was in condition to restrain live stock and the question came up as to who should pay for the new wire as well as the posts and also who should bear the labor cost of putting in the new fence. These matters were not touched on in the lease and they were, therefore, a source of annoyance sufficient to create an antagonistic feeling between renter and landlord.

It is no easy matter to draw up a lease that will cover all emergencies, but the important fact to be kept in mind is that under no circumstances should any individual undertake to handle land with nothing more nor less than a verbal arrangement with the landowner. Furthermore, specific reference should be made in every lease to the matter of keeping buildings and fences in repair, and the terms of the lease should make suitable disposition of the cornstalk ground, straw and materials of that kind. When both parties to the contract are prepared to exhibit good common sense under all circumstances the lease becomes a secondary matter entirely and we have known instances where neither landlord nor tenant would have occasion to read the lease for years after signing it. However, the cases where dissatisfaction is apt to arise are sufficiently numerous to justify specifying somewhat in detail the conditions under which the landlord and the tenant operate.

Burning Coal Economically.

THE service one secures from a furnace depends to a large extent upon the skill with which it is managed. Where soft coal is used one must be very careful to keep the air passages free from soot so that there will be enough draft to burn the coal as completely as possible. Crowding a fire results in loss of fuel because it tends to distil off gases in an unburned condition. Keep the furnace burning slowly and as evenly as possible. The following suggestions from the superintendent of the power plant of the Kansas agricultural college are timely and to the point:

It is also economical to charge the furnace frequently with comparatively small amounts of coal, as otherwise the fuel bed will become too thick and a large amount of coal will be driven off in the form of unconsumed gases. This condition probably has been experienced by nearly everyone who has fired a furnace. Gas accumulates and sometimes even causes small explosions.

Cover the fire with one and a half to two inches of fresh coal, or put a thin layer on one side and much more on the other, so that the air passing through the hot coals will mingle with the gases that are distilled from the green coal. This will make the gas hot enough to burn. The proper regulation of the damper has much to do with the economical way of burning coal.

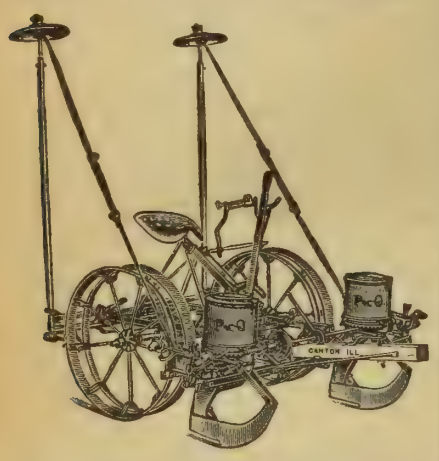
Under general conditions nut coal gives the best satisfaction in the furnace. Screening or fine coal packs too closely; lump coal usually forms a fire that is too open for best results.

Those who are contemplating putting furnace heat in their homes should give the selection of the kind of furnace very careful attention. It is also well to remember that the first cost is not an item of so much importance as is the service the furnace will render and the economy with which it can be operated. A saving of $10 a year in coal bills mounts up to a large sum in the course of ten or twenty years.

P&O

Variable Edge Drop Corn Planters

Furnished with 30 or 36 inch wheels, concave or open center, adjustable to all standard widths with wire to match, according to local requirements. Can be furnished with Flat Drop Attachment, Fertilizer Attachment, or Pea and Bean Attachment. Double disc markers. A perfect stand of corn is assured with a P&O Planter. "It's the Way We Build Them."



The variable drop can be changed instantly, without stopping the team, to plant 2, 3 or 4 kernels to the hill. The simplest variable drop found on any planter; easily operated from the seat; the driver operates it with his foot. Ample tongue adjustment for any sized team. Reel can be used on either side. Large hoppers, easily tilted to change plates or remove corn; plates can be changed without emptying hopper. Hoppers are the combination type; flat drop plates may be used. Can be instantly changed from variable hill drop to variable drop drill. Sight feed, without glass; unobstructed view.

Regular runners, stub runners or disc furrow openers can be furnished. Dropping mechanism perfect; congestion is impossible; valves carry one hill in reserve and hill cannot be doubled. Plunging motion of lower valve forces seed out without scattering. Cushion spring at end of the tongue keeps the proper tension on front frame in uneven ground. Every planter is actually tested with seed in the hoppers before leaving the factory. P & O Planters are the simplest and strongest made.

We also make Flat Drop Planters and Drills, Bean Planters and Kafir Corn Seed Plates.

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Light Draft Plows Are Backed By An Unqualified Guarantee

Is your soil gumbo or sandy, loam or muck? The right plow to turn it up is

THE G. D. JUNIOR

Fitted with any style of bottom. The lightest tractor-plow built. Double-braced where others are weak. 2 or 3 bottoms. Power-lift. Back-up-able. Turns short, clear of trash. Any hitch. The ideal plow for a light tractor. Write *today* for catalog—tell us how much you farm.

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FREE 1916 PLANTING GUIDE AND PURE SEED BOOK

This 116-page four color book describes all new 1916 varieties vegetable and grain crops. Hundreds of illustrations, beautiful grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. All about alfalfa, clover, vetch, modern varieties field corn. A dictionary of gardening; encyclopedia of field crops! A flower lover's delight! A berry grower's book! An orchardist's manual! Most wonderful gardening guide-catalog ever published. A postal brings it to your home. Don't miss this book!

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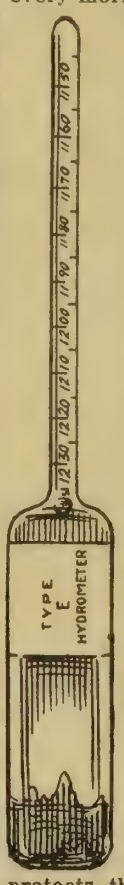
RURAL ELECTRIC LIGHTING.

An Inexpensive and Practical System of Illuminating the Home—By E. C. Sauve, Wisconsin Experiment Station.

ELECTRIC lighting on a farm is now a practical possibility. Judging from statements made by owners I know, electric lights for the farm home are no strain on their pocketbooks. Through personal interviews and lists of questions I have obtained from several owners of rural electric lighting plants information in regard to their manner of operating and expressions of opinion as to their practicability. One man, who has a thirty-two volt lead battery, says: "Our plant is a large one. We have about eighty-five lights, run a washing machine and do the ironing. A plant half the size would be sufficient for an ordinary farmer. We have had no trouble and have not spent a cent on it since the time of installation. The plant has been in use two years." Another, who has a thirty-two volt Edison plant, writes: "I think electric lighting on the farm is very practicable. I have about thirty-five lights and I believe it does not cost me to exceed 2 cents per day for charging. Plant has been in operation over one year." A third, owner of a thirty-two volt lead battery, says: "We cannot do without our plant. We run a washing machine, vacuum cleaner and flat iron and can do any work that is done with 110 volts. Plant has been in use twenty-two months." The superintendent of a county poor farm writes: "Our plant has been in use for four years and we have to renew the plates which will mean an expense of about $150. (This is expensive lighting). The battery is charged every day from morning until bed time and then we are in darkness every morning until I start the engine. We had the cells cleaned a year ago. We have had the generator commutator turned up twice in the four years of use." These statements are the common sentiments expressed by users.



The following parts are included in the make up of a lighting plant: Battery, dynamo, switchboard and accessories, engine and wiring. A battery consists of sixteen, nineteen or twenty-four cells, or storage units, the number depending on the arrangement of cells and the kind used. Each cell is made up of a container, electrolyte or solution and two or more plates. These figures apply to the thirty-two volt system which is commonly used on the farm.

Some batteries are made up of open cells and some of closed or sealed cells. The open cell with the glass container, used in stationary work only, has the advantage that the operator can note the condition of the cell at all times and should one or more cells become disabled they can be easily replaced. A glass cover protects the electrolyte from the impurities of the air. The closed or sealed cell is used largely for portable work, such as the automobile, the railroad train, electric trucks, etc. It is also used in rural lighting plants. A disadvantage of the closed cell is that the density of the solution cannot be so easily determined, it being necessary to pour the liquid into an open vessel before the hydrometer (see Fig. 2), which is the instrument used in measuring density, can be inserted. The plates of this cell are not accessible to view and when it is no longer serviceable it is often discarded. However, in the hands of experts the worn out closed cell can be rebuilt and put in as good condition as a new one. Each kind of cell has its advantages and disadvantages and must be selected to best suit the purpose.

Until recently lead batteries were used almost exclusively and many of the plants now in use are of this kind. A few points to be considered in caring for this type of plant are location of battery, the electrolyte or solution, charging, discharging, efficiency, depreciation and troubles.

The battery room should be dry and well ventilated and the temperature should be moderate, 40 to 70 degrees Fahrenheit. The rays of the sun should not be allowed to strike the cells. Excessive heat, over 90 degrees Fahrenheit, causes rapid evaporation of the electrolyte and injures the plates. Extreme cold is also to be avoided. All equipment of the battery room must be acid proof, that is, walls, ceilings, floors, etc., should be of brick or tile, the floor having a drain. Wooden floors, iron work, etc., may be rendered acid proof by a coat of asphaltum paint.

There is considerable variation in practice as to the strength of the electrolyte or solution used. Chemically pure sulphuric acid is poured into distilled or rain water until the density is approximately 1.2. A hydrometer is used in determining this density. Every plant owner should have one. Water should never be poured into the acid and care must be taken that the plates are completely covered, at all times, by the electrolyte.

If charging is not begun immediately after the electrolyte is placed in a new cell the plates are likely to become sulphated, that is, a whitish non-conductive scale is formed on the plates, which affects their life materially. The first charge should be at such a rate that the temperature of the cell will not reach $100 degrees Fahrenheit. This is not true of subsequent charges. Overcharging, as well as overdischarging, of the battery is to be avoided, for under these conditions the battery deteriorates rapidly. In the observation of the writer overdischarging is a more common error than overcharging. If we consider a standard voltage of thirty-two of the rural plant at a full charge will get about thirty-five volts maximum and at a complete discharge a reading of twenty-eight volts will be obtained. A dimming of lights will be noticeable beyond this point of discharge and the battery should be recharged as soon as possible. It is much better to avoid discharging to this critical point.

Often a battery is left unused for months at a time, resulting in deterioration. If a plant is to be idle for a considerable time it should be put out of commission in the following manner: Give the battery a full charge until the cells are gassing freely and the hydrometer reading ceases to rise. Remove the sulphuric acid solution by syphoning or by emptying after the plate couples have been removed one at a time. Avoid delays while plates are exposed to the air. Put plates back in jars. Replace the solution with water and leave the water in the jars for about twelve hours. After the water has been removed the plates may be allowed to remain unused indefinitely. When ready to use again fill the jars with new, or with the old acid, and charge as in the case of a new battery.

The efficiency of a lead storage battery is said to be about 90 per cent when new. That is, 90 per cent of the charge given is available for use. Experience shows that the battery depreciates with use more or less rapidly according to the care given it. One authority says that the depreciation of the lead battery is about 7 per cent per annum, meaning that at the end of about thirteen years the battery would have to be entirely renewed.

Chief among the troubles met with in the operation of the lead battery are sulphation and short-circuiting. The former results in buckling of the plates and disintegration of the active material of the positive plate, and is indicated, as before stated, by the presence of a whitish scale on the plate. Sulphation, if but slight, may be corrected by giving the cell or cells affected, a long charge at a low rate and only partially discharging. This process should be repeated until the sulphate is gradually eliminated. If sulphation is more pronounced it may be necessary to scrape the plates before applying the treatment outlined above.

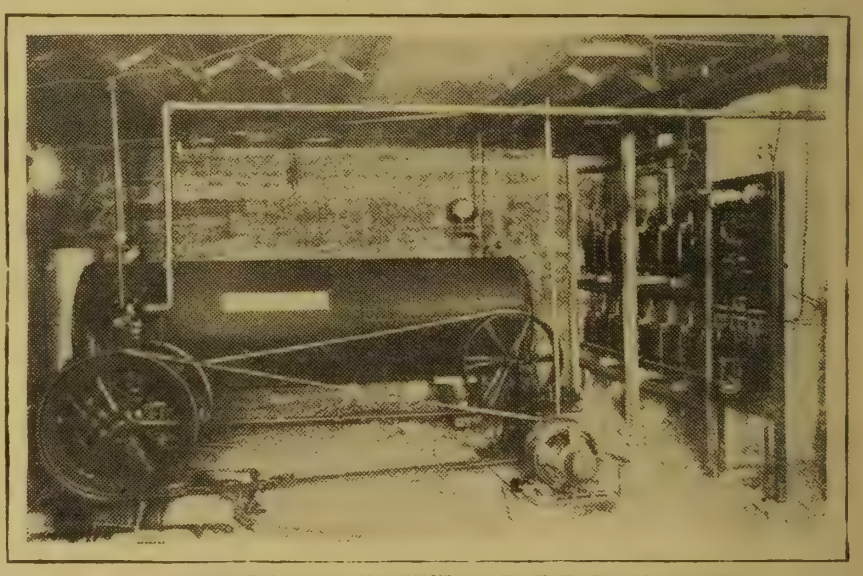
Buckling may be corrected by placing the warped plate between boards and subjecting it to pressure or by tapping it gently with a mallet. The pressure method is preferred, as less likely to injure the plate.

As the battery is used sediment will form in the bottom of the jar. This must not be allowed to accumulate so that it will touch the plates, for then short-circuiting and rapid deterioration will result.

The nickel iron battery, now coming into general use, has many points of superiority over the older types. After a number of years of experimenting this battery has been placed upon the market and seems to be in general favor with its users. It was constructed with the idea of eliminating all the defects of the lead battery. Tests which ordinarily would be destructive to other types were conducted and the results were favorable. The nickel iron battery is, however, not without its disadvantages. Due to the nature of the electrolyte used in this type of battery freezing takes place at a higher temperature than in the case of the lead battery solution. Low temperature weakens this plant materially, but it can be recuperated by application of heat. Experience has shown that there is considerable variation in voltage from full charge to complete discharge and the lights are affected to the extent of voltage variation. However, this may be avoided by charging and discharging daily to meet the demands of the day. The nickel iron battery is not injured by errors in charging or discharging as is the lead battery. The writer has examined an Edison storage battery which has been in use about seven years and which is still doing satisfactory work. The construction of the nickel iron battery renders its efficiency somewhat less than that of the lead battery. The first cost of this type of plant is greater than that of the lead battery equipment, but practically no expenditure for upkeep is required.

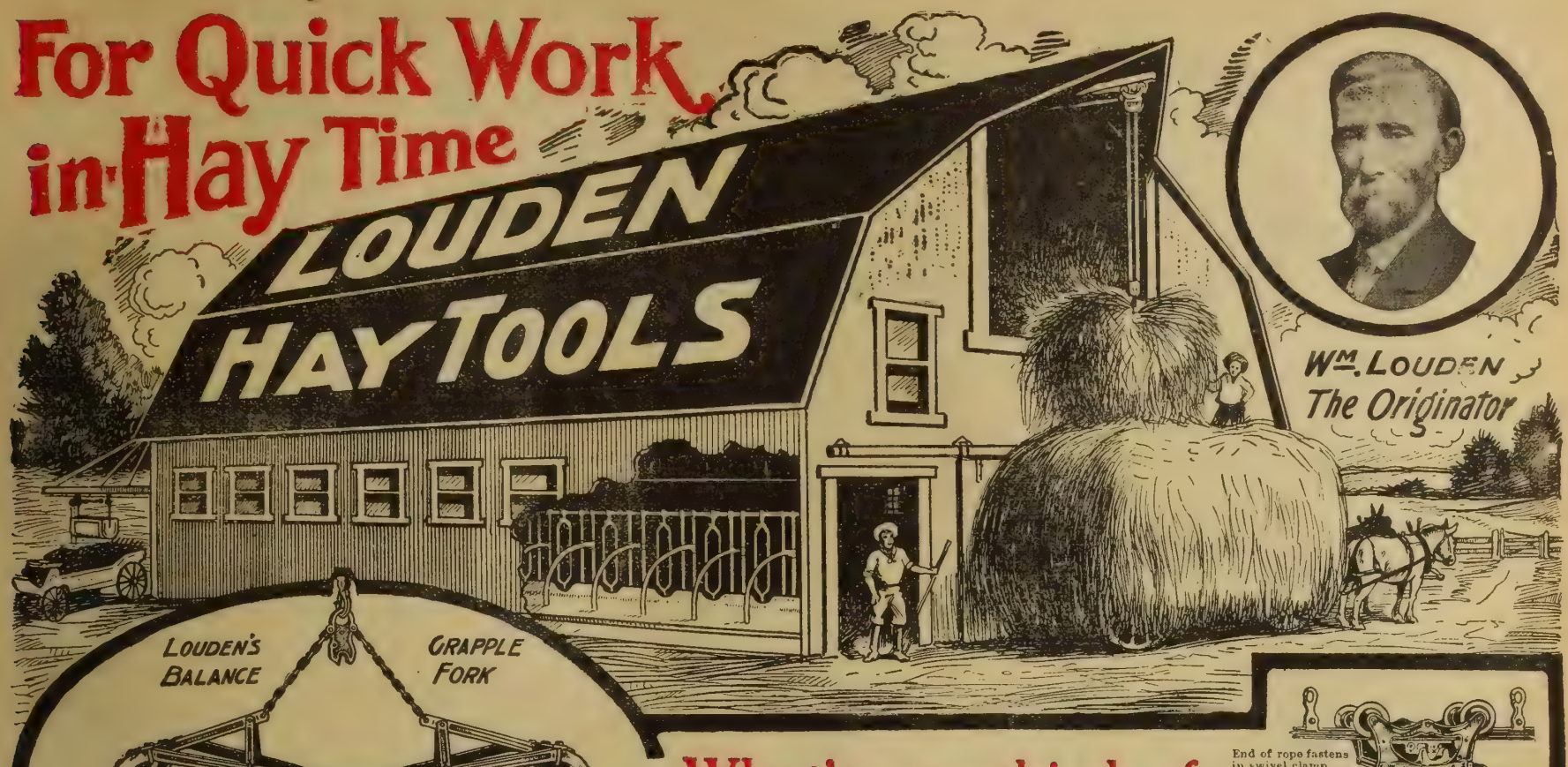
The dynamo, or generating unit, is that machine which produces the electricity. A knowldge of the following parts will be helpful. The armature is the part that rotates. The commuta-

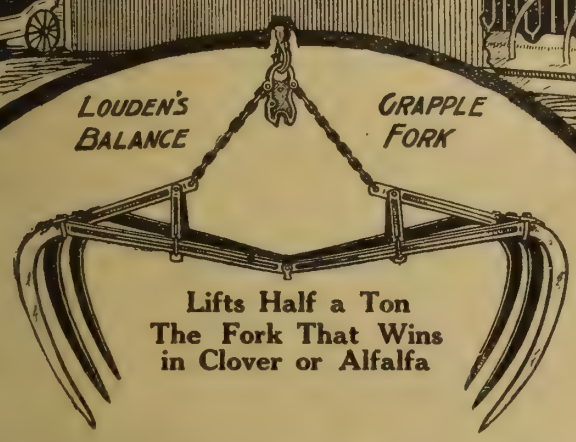
(Concluded on page 12.)



COSTS BUT A FEW CENTS A DAY FOR CHARGING.

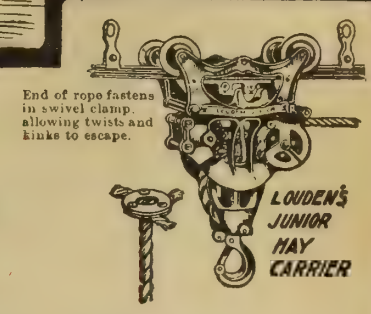
For Quick Work in Hay Time





Lifts Half a Ton
The Fork That Wins
in Clover or Alfalfa

What's one-third of your time in the hay field worth to you?



LOUDEN'S HAY TOOLS will save it. Will enable you to move bigger loads easier and faster than in any other way—avoid the danger of delay which often lets the rain catch your hay down, spoiling it for use or sale.

THE LOUDEN BALANCE GRAPPLE FORK

Set Louden's Balance Grapple Fork across a load and it will take the entire width of an eight-foot rack at a single lift. Half a ton at a time will not strain it. You can put away the biggest load in five minutes. Moves straw, alfalfa or clover as clean as timothy—grips it tight; no scattering or dribbling. WHAT OTHER HAY FORK WILL DO THIS? Built of the finest steel, especially made for us. Light, strong, perfectly balanced, never fails.

THE LOUDEN HAY SLING

Is the tool you want for heavy work in short forage. Its factory test is 3,000 pounds. Will handle anything in the way of roughage without waste. Nothing to beat it as a time and labor saver.

LOUDEN POWER HOIST

Works with all of Louden's Hay Tools. One man operates it from the load—takes the place of horse or team on the draft rope; saves you $5 a day, when used with a Louden Carrier Fork or Sling. It's simple, smooth running, powerful. Operates with steam, gasoline engine or electric motor. Will MAKE GOOD wherever hoisting power is needed.

THE LOUDEN JUNIOR HAY CARRIER

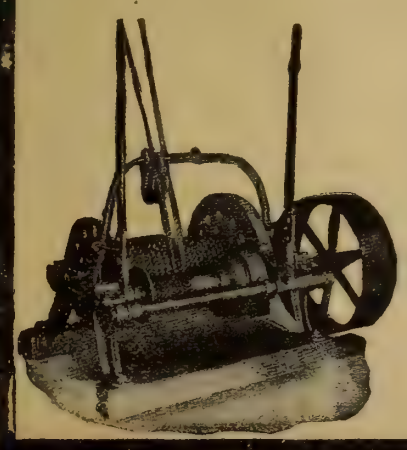
Is absolutely reliable in its operation at all times, because its mechanism is simple and perfect. No loss of time through tangled, twisted or kinking ropes; no letting back the load because of failure to register; no running to town for repairs.

THE LOUDEN HAY CARRIER is a swivel carrier, equally satisfactory in end or center hoist. It's automatic; always drops your hay where you want it; distributes it evenly; will fill your loft clear to the peak, dragging its load over high beams without a hitch. You can put tons more hay in the same space.

Nothing Can Ever Interfere with the Smooth, Easy Operation of Louden's Bird Proof, Double-Flexible Barn Door Hanger.

Sparrows are banished. Snow, ice, rain or trash can't make trouble. One piece of steel, pressed into tubular shape, completely encloses smooth, level track. Center-hung on roller-bearing Tandem Trolleys makes it easy for a child to move. Flexible construction prevents breakage by crowding stock. Carries the heaviest doors. Lasts as long as the barn—always on the job. The ideal hanger for barns, garages, factories or any place where easy sliding doors are wanted.

The Louden Hay Tools are dependable at all times. They cost little, save time, save labor, save the crop. They are money makers from the start, in the field and at the barn.



The Louden Line of Sanitary Barn Equipment Includes:

Litter Carriers	Feed Trucks	Garage Door Hangers	Cow Pens
Feed Carriers	Cow Stalls	Manger Divisions	Calf Pens
Milk Can Carriers	Water Troughs	Hay Barn Equipment	Bull Pens
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Books on all Louden Equipments free. See your dealer, or write us direct.

The Louden Machinery Co., 1701 Court St. Fairfield, Ia.

TO PROGRESSIVE DEALERS Dealers who want the big Hay Tools and Barn Equipment business will find it easy to sell The Louden Line. Farmers want them because they know them. There is a steady growing demand for this line. Nationally advertised for 20 years. Get your share of this profitable and growing business. Write for full particulars.

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Without cost to me, send books or information checked below:

( ) Hay Tools
( ) Barn Door Hanger
( ) Stalls and Stanchions
( ) Feed and Litter Carriers
( ) I will build a barn.....x.....feet.
( ) I will remodel barn

Signed .....

Town ..... State.....

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Break Stumps to Bits With Farm Powder

A *pulled* stump is hard to handle, and it takes up more room than it did before. *Blast* it out and you can carry it away like kindling wood. "Most stump pulling machines are too expensive and unwieldy," says U. S. Farmers' Bulletin No: 150. Use

Atlas Farm Powder
THE SAFEST EXPLOSIVE
The Original Farm Powder

and save money, time and labor. Punch a hole under the stump, load, fire, and the job is *done!* The shattered roots come out free of earth, the soil is loosened for yards around—ideal for crops.

Atlas Farm Powder is made especially for farm use. It is the cheapest farm hand for blasting stumps and boulders, digging ditches and many other kinds of work. Sold by dealers near you.

Send for "Better Farming" Book—FREE
"Better Farming" (illustrated) tells how you can grow bigger crops by blasting the subsoil, how you can bring orchards into bearing two years earlier, and how Atlas Farm Powder replaces expensive labor. Sent free for Coupon.

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ATLAS POWDER CO., Wilmington, Del.
Send me your 74-page book "Better Farming." I am interested in the use of explosives for the purpose before which I mark X. WF1

☐ Stump Blasting ☐ Tree Planting
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Great Value for Tractor Buyers—$550

Happy Farmer Tractor—powerful—but extremely light in weight—$550. Low price made possible by great simplicity of construction. This means increased efficiency and remarkable power.

Happy Farmer Tractor

Light in weight—durable—frame all steel—prevents racking. Holds all parts rigidly in place. ⅔ usual number of parts on tractors of equal strength. Enclosed gears run in oil. Strain borne by wooden clutch shoes, pins and rollers—quickly and economically replaced. Special steering control—runs clear across field without attention.

88% total weight falls on traction wheels, where it belongs. Takes less fuel. Pulls anything horses can draw. Write for full specifications.

Dealers: Quickest selling tractor ever offered you. 1916 supply limited—write today for terms and territory—distributor or us.

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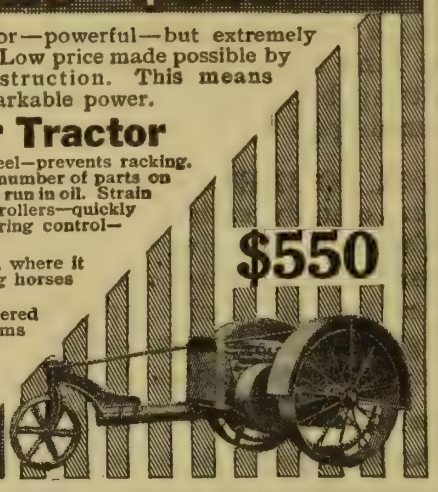


New 1916 Plow Offer—The High-Grade Monmouth Extra Hard Steel Walking Plow

30 Days' Free Trial
Sold Direct From Factory
We SAVE You Money

$8.10! A *big* reduction in price, due to our great increase in production—and our method of selling *Direct from Factory to Farmer.* A better Walking Plow has never been made! Look at the high-class construction! Share and moldboard the *Very Best Soft Center Steel, Finely Tempered and Polished.* Heavy steel frog, to insure ample strength and lasting durability. Heavily braced at every point of strain, to *guarantee* steady, *true* running. Beam made of High Carbon Steel. Toughest Oak Handles, nicely finished grips. The plow with "just the right hang." *And* sold direct for $8.10—with a

FIVE-YEAR GUARANTEE
Write today. Get full details of this NEW plow offer!

We Make Gang and Sulky Plows Also. Get Our New, Low 1916 Prices

Send for New 1916 Catalog of Plows, Harrows, Cultivators, Grain Drills, etc. Find out how *much* money you can *save* buying from factory.

The Plow Man, with Monmouth Plow Factory, 617 South Main St., Monmouth, Ill.

CORN AND OATS

WHEAT, TIMOTHY, CLOVER and other crops yield more where a perfect seed bed is prepared. The Western has no equal for this work. Pulverizes, packs and mulches at one operation. Saves time, seed, horsepower. Especially valuable for covering clover and grass seed, and rolling young grain and corn in spring. Will form hardest crust into moisture-holding granular mulch without hurting grain.

Western Pulverizer, Packer and Mulcher

Three Machines in 1

Made in 8 sizes, 1 and 3 sections. Sold direct, price $20 and up. We want every farmer to have our free catalog before buying a roller or packer. It will prove we can save you money and have far the best machine. Contains full description and price direct to you, letters from many farmers proving its advantages over other makes, and much other valuable information. Send for it today.

WESTERN LAND ROLLER CO., Hastings, Nebr. Box 454

CURRENT EVENTS

PRESIDENT WILSON spent practically all of the past week traveling through the grain belt, speaking on preparedness to immense crowds. Upon his return to Washington he expressed himself as more than satisfied with his trip, asserting his conviction that the people of the middle West are with him and that there is none of the lethargy which had been reported to him. The president delivered notable speeches at Milwaukee, Chicago, Des Moines, Topeka, Kansas City and St. Louis. At the very outset he announced that no crisis was imminent, that nothing had developed recently which should alarm the country, but that affairs were progressing so that the nation needs and should demand better preparedness against possible danger. In his speech at St. Louis he asserted that the United States should have "incomparably the greatest navy in the world." The president spoke to at least 100,000 people, it is estimated, at the larger stopping places, while 50,000 more heard him as they gathered around the rear platform of the car in which he traveled. In addition, hardly fewer than half a million others have been banked on the sidewalks to watch and cheer him. Altogether the president is so well satisfied he is planning another trip for the near future which shall take him through the South and West as far, possibly, as Denver. The tone of his speeches is well shown by this extract from his Kansas City address: "There may come a time—I pray God it may never come, but it may come in spite of everything we can do—when I shall have to ask: 'I have had my say; who stands back of it? Where is that force by which the right and majesty of the United States are to be vindicated and asserted?'" The president declared the need was immediate and that action should be begun within the present month. "I assure you there is not a day to be lost!" he exclaimed. "Not because there is any special crisis, but because I do not know twenty-four hours ahead what will happen.

A DEFINITE policy contemplating Philippine independence in four years has been approved by the United States Senate, Vice President Marshall casting the deciding vote. President Wilson has not made any public declaration on the subject, but it is understood he will not stand in the way of the movement, especially since the last democratic national platform declares squarely for it. The amendment adopted by congress provides as follows: "The president is hereby authorized and directed to withdraw and surrender all right of possession, supervision, jurisdiction, control or sovereignty now extending and exercised by the United States over the territory and people of the Philippines, and he shall on behalf of the United States fully recognize the independence of the said Philippines as a separate and self-governing nation and acknowledge the authority and control over the same of the government instituted by the people thereof. This transfer of possession, sovereignty and governmental control shall be completed and become absolute not less than two years nor more than four years from the date of the approval of this act." It is provided that if the president finds the condition of Philippine affairs to be such that independence is not practical, in four years, he may withhold granting it until congress shall have reconvened again, in order that further action may be taken.

A SUGGESTION that all the belligerent nations in the present great war subscribe to a declaration of principles governing attacks on merchant vessels and forbidding the arming of such vessels has been made by the United States, in an effort to establish in international law a general policy disposing of many of the vexatious problems arising from the development of submarine warfare. Identical notes have been sent out asking the various countries at war to say specifically whether they are willing to join in such an agreement. The declaration of principles would provide that non-combatants may expect protection under the rules of international law and principles of humanity when traveling on merchant ships; that warning must be given before a merchantman is attacked; that belligerent owned merchant ships must obey warnings to stop; that merchantmen shall not be fired on except in case or resistance or flight; that no merchantman shall be sunk except where it is impossible to supply a prize crew or until passengers and crew are placed in safety; that merchantmen shall not be permitted to mount arms. Germany and Austria already have agreed in effect to the proposals regarding attacks on commercial ships, and Great Britain and her allies always have been understood to be in accord with the American viewpoint on that subject.

TWENTY-FOUR persons were killed and twenty-seven injured in a Zeppelin airship raid on Paris last week, the first time the big dirigible balloons of the Germans have visited the French capital for some months. Notwithstanding the advance warning that the Zeppelins were coming and the fact that thirty French aeroplanes sought to drive the aerial visitor away, the Zeppelin was successful and dropped about three and one-half tons of bombs on the helpless city below. The airship flew at terrific speed between two and three miles up in the air and dropped the bombs at random, as a dense fog enveloped the city. In a populous part of the city a bomb struck a six-story apartment building occupied by the families of workingmen, cutting it in two on the line of the corner of the kitchens, from garret to cellar, burying ten victims under the debris of the central part of the structure. The street front was untouched, and on the other side of the gap the six kitchens of the building, one atop the other, were left open to the weather with the ranges and utensils in plain view and apparently undisturbed.

THE historic Canadian parliament building was destroyed last week by a fire which the Canadian officials believe was started by the explosion of a bomb or infernal machine. Several lives were lost, while the building, which was valued at $5,000,000, was almost entirely destroyed, without insurance. Canada's participation in the war is believed to have brought about the act which fired the building, with the attendant loss of life. The cornerstone of the historic structure was laid in 1867 by King Edward VII, then Prince of Wales. Canada has rallied to the support of the mother country in surprisingly enthusiastic fashion and has sent many thousands of soldiers over to the trenches and battlefields of Europe.

THE generally increased price of gasoline, Secretary Lane reported to the United States senate in response to a resolution, is caused by shortage of supply and an increase in consumption. He recommended that the situation be relieved by the use of heavier distillates in internal combustion engines. Secretary Lane's report asserts that "authorities agree that the automobile and other internal combustion engines are primarily responsible for the increased consumption of gasoline," and adds that a kerosene carburetor "would at once go a long way toward relieving the present shortage." The report says the increase in consumption of gasoline in the United States in 1915 was 25 per cent over 1914 and estimated that there will a corresponding increase in 1916. The production in 1915 increased 20 per cent over 1914. War exports are heavy.

Buttermakers' Convention.

Practical Hints of Benefit to Farmer-Dairymen Were Brought out at the Convention Held Last Week at Eau Claire.

THE growing importance of the buttermaking industry in Wisconsin was exemplified last week by the Wisconsin Buttermakers' Association holding at Eau Claire the largest and most successful convention in its history. The butter exhibit was the largest ever gotten together at a state meeting and the fact that this butter brought twenty-seven cents when put up for sale indicates that the quality, taken as a whole, was exceedingly good.

This was the fifteenth meeting of the association and something more than 400 buttermakers and others interested in this industry were present. The new license law was one of the big subjects before the convention.

The past year, from the creamery operator's standpoint, has not been so good as it might have been, but stocks are moving rapidly now, prices are good and the greatest optimism prevails for a very prosperous year.

Much interest was shown in the exhibit of butter. There were 185 tubs shown and the winning tubs, the judges declared, were as fine in quality as could be hoped for. H. H. Whiting, of the Ayrshire creamery at Johnson Creek, took off first honors with a score of 97. Mr. Whiting won first last year and the fact that he is able to win in such competition is a strong argument for study and thought by the buttermakers, as Mr. Whiting has for years scored his butter at the dairy school, attended state exhibitions and sought to learn the necessary essentials in successful buttermaking.

B. L. Bolstead, of Basco, took second place, his butter scoring the same as Mr. Whiting's exhibit on flavor, but there was just enough cut in body to deprive him of first honors. Mr. Bolstead had made the mistake of overworking his butter. Both of the winning tubs showed that the cream from which they were produced was of the highest quality and that such butter could only be procured with the assistance of the farmer, who must do his part by taking to the buttermaker clean, sweet cream, high in test in butter fat. The buttermaker working with thin cream is under a disadvantage and it pays the farmer at this season to deliver cream testing around 35 per cent fat as well as the buttermaker to demand high-testing cream. Cream testing up to 40 per cent is better in the summer months. Too many farmers are delivering thin cream, cream testing 20 per cent and under, and when so doing they are going to an unnecessary transportation expense and depriving the farm of much skim milk high in feeding value.

The entire exhibit of butter so far as texture goes was very fine, but the low-scoring tubs were so scored because of a poor flavor which might have been caused by a combination of causes. No doubt feeding conditions were the cause for some poor flavored exhibits, as the silage being fed this winter is not up to the usual standard and contains some weeds which the farmers could not get out of their corn because of the wet season. Mr. C. E. Lee, who, with William Schneider, of Johnson Creek, and O. A. Storvick, of Albert Lea, Minn., scored the butter, told the writer that much of this rank flavor came from the fact that the cream was not collected fast enough—that it was permitted to remain on the farms too long. Better care of the cream, he felt sure, would have meant a higher score for many tubs, and this drives home the relation of the farmer with the buttermaker if the farmer's creamery is to produce high-quality butter and in turn be able to pay top prices for the cream. The exhibit butter went to the Hunter-Walton Co., of Chicago, at twenty-seven cents.

The convention teemed with good things and everything of interest to the buttermaker, from his relations with the farmer to refrigeration and pasteurization, were discussed. One afternoon was devoted to a discussion of the new license law, which discussion was led by Mr. Lee and Commissioner Wiegle, of the dairy and food commission, and the interest shown by the delegates indicates a hearty co-operation with the commission in improving dairying conditions. "If we could have had such a meeting and such co-operative effort in Wisconsin ten years ago this state would be far ahead of its position today," said Mr. Lee after the meeting. Mr. Lee also pointed out why the farmer should be interested. It means more profit to him when his buttermaker turns out a product that tops the market, and this product can only be produced on the farm under sanitary conditions.

D. F. Wallace, of Alma Center, gave some very interesting pointers on getting the farmers to whitewash their barns. Mr. Wallace told of the experience he had at Alma Center which finally resulted in getting sixteen farmers to use whitewash, and finally most of them fell in line, although at first they thought it a useless expense.

Whitewash, in addition to making a barn light and clean looking, is a disinfectant and Mr. Wallace said many could be induced to whitewash for disinfecting purposes when not "just to spruce up." This work among the creamery patrons he considered a duty of the buttermaker and he advocates that every creamery buy a whitewashing machine, which costs about $15 to $20, and rent it to the farmers at the small cost of probably 50 cents per barn. The whitewashing done in his vicinity, he said, was done by a private contractor at a cost of from $2 to $9 per barn, depending on the size, and certainly no farmer can continue to have a dirty, dark barn when it can be done this cheaply. Lime is not only the best disinfectant, but the cheapest, and there is no danger from the cattle eating it.

H. H. Whiting, the prize buttermaker, gave some splendid pointers which should be of value to his co-workers, and Clarence A. Day, of Madison, advised how to care for the creamery churn. John J. Farrell, dairy and food commissioner of Minnesota, spoke at length on conditions in his state as well as Wisconsin and urged that buttermakers never ship any butter known to be of inferior grade. To do so scares the market. Proper management is vital, he said, and urged great care in selecting creamery managers. Sometimes it is better to make the buttermaker the manager, he explained.

E. J. Morrison, of Chetek, was chosen president to succeed Allan Carswell, of Clear Lake; Carl Jorgenson, of Rose Lawn, was elected vice-president; G. H. Benkendorf, of Madison, was re-elected secretary, and F. M. Werner, of Waterloo, re-elected treasurer. The treasurer's report showed the association in a flourishing condition, with a balance of more than $2,200 in the treasury. O. B. Cornish, of Fort Atkinson, was again chosen a member of the executive committee with these members: C. J. Dodge, of

(Concluded on page 13.)

MEDUSA PRODUCTS *Make Good* CONCRETE

WHAT are you planning to build this spring? Are you ready to make those long needed improvements—the new feeding floor, the new hen house, the cistern that needs repairing, the new milk cellar, the new steps for the house—or even a new silo? Now is the time to see them through to a *finish*.

That means that you will want to make them of concrete—and of the best concrete—because a good concrete job stays *good*. The things you build this spring with good concrete won't have to be rebuilt next year—or any other time.

Only remember this—be sure of your sand, of your gravel or stone, and, above all, of your *cement*.

Be sure to use one or more of the Medusa Cement products in your concrete. You can rely on them all for best results—Medusa Gray, Medusa White and Medusa Waterproofed Cement, both colors.

MAKE YOUR CONCRETE WATER-TIGHT

But you want something more than just permanence in all your concrete work. You want it *water-tight*—and the best and cheapest way to do this is to have 2 per cent. of Medusa Waterproofing mixed with your cement.

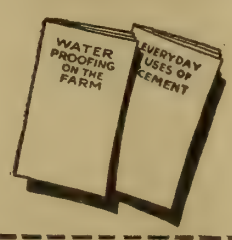
A comparatively lean mixture of cement, sand and gravel or stone is *abundantly strong* for most farm construction. The addition of Medusa Waterproofing will make such mixtures water-tight as well as strong—without affecting the strength, setting or hardening qualities of the concrete. Get our Waterproofing booklet—it will save you money.

Make your concrete beautiful with

MEDUSA WHITE PORTLAND CEMENT

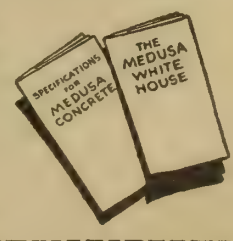
The first true white Portland Cement ever manufactured. A facing of Medusa White Portland Cement adds 100% to the appearance of buildings of all sorts. It is just as strong and just as desirable as any other high testing Portland. The only difference is that, instead of the ordinary unattractive greenish gray, it is naturally a pure, stainless white, and can be tinted to produce wonderful color effects.

Note—We also make and recommend Medusa Waterproofed Portland Cement (gray) and Medusa Waterproofed White Portland Cement — containing Medusa Waterproofing ground up with the cement at the factory in just the right proportions for perfect results. Ask your dealer.



WHICH OF THESE BOOKS DO YOU WANT?

They show you what others have done with the Medusa products. They are full of valuable suggestions for your spring building. Fill out the coupon now.



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Room G-1 Engineers Building,
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Please send me the books which I have checked :—

Waterproofing on the Farm ☐
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Specifications for Medusa Concrete ☐
The Medusa White House ☐

Types of Movable Hog Houses.

An Investment in These Structures Enables Breeders to House Swine at Small Cost.

AN EXCEEDINGLY interesting and instructive bulletin was published last year by the swine division of the Iowa Experiment Station. The problem of movable hog houses was taken up in detail and the text of the bulletin well illustrated by drawings and engravings. We have chosen four of these houses and these are shown in the accompanying illustrations. They have been tested out at the Iowa station and it has been ascertained that they are practical in every way and it goes without saying that they are inexpensive. Where there is no central building for the housing of swine the movable house system can be used to great advantage. It ties up a comparatively small amount of capital and the fact that these houses can be moved from place to place is a point of merit that is strongly in their favor irrespective of their low cost.

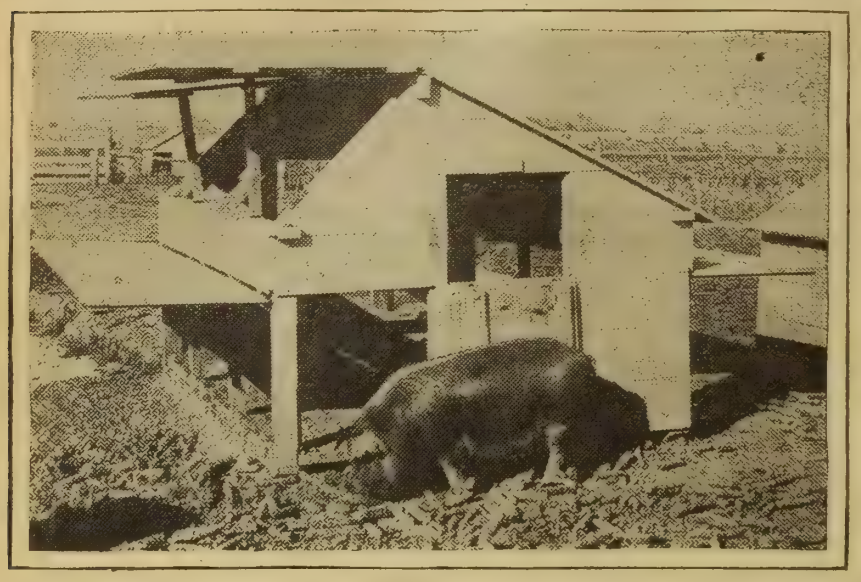


FIG. 1.

The house shown in Fig. 1 is built with doors in the roof so as to provide a maximum of direct sunlight. This house is six feet wide and eight feet long. It is placed on runners, 4x4, so that its location can be changed easily. The cost of the material in this house runs between $17 and $18, this price including a double coat of paint.

A somewhat different type of house is shown in Fig. 2. It is simple of construction and presents an attractive appearance. The perpendicular walls, as in the case of the house shown in Fig. 1, enable the floor space to be utilized to good advantage.

A somewhat similar type of house is shown in Fig. 3, but in this case there is roof lighting, over which folding doors are placed for purposes of warmth when they are needed. Special precaution must be taken in the erection of this house so that the glass in the roof is not broken. It will have to be protected by stiff wire, properly re-enforced, so that it cannot be pushed against the glass. This type of house is the same size at its base as the house shown in Fig. 1, being six feet wide and eight feet long. It is necessary to place a fender inside around the four walls so that young pigs cannot be crushed against the wall. A stout 2x4 will answer the purpose well, but gas piping is still better. If the pipe is embedded in the frame it cannot be displaced and it is not subject to being gnawed by ill-tempered old sows.

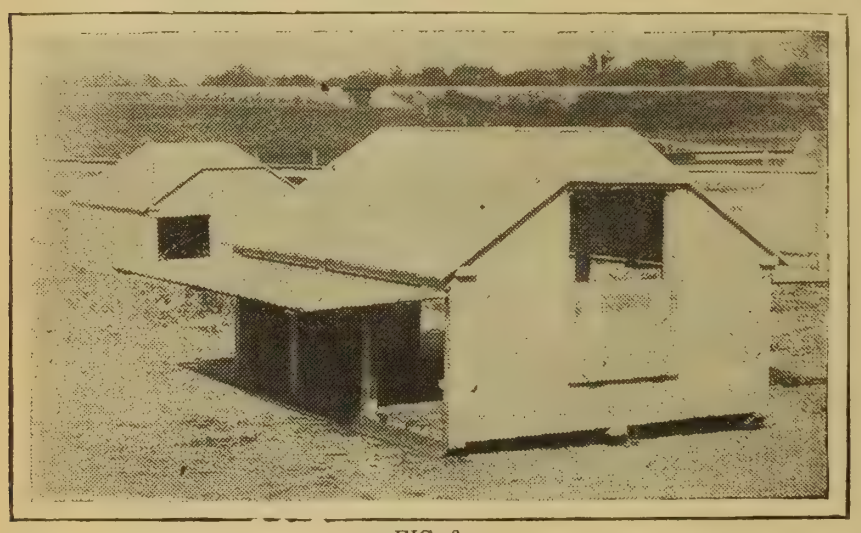


FIG. 2.

Then there is the "A" type of house shown in Fig. 4. This is proving to be quite satisfactory and it is strongly recommended by a large number of practical swine breeders. No interior fenders are needed in this house, as the slant of the roof affords ample protection to little pigs, although they are needed across the end. This house is usually built six feet wide by eight feet long, with the ridge a little over six feet from the floor. Attention is called to the fact that if it is made lower than six feet it will be necessary to use a swinging door hinged at the top because the lower house will not permit the sliding door to be raised high enough. A window should be placed in the end opposite where the door is located.

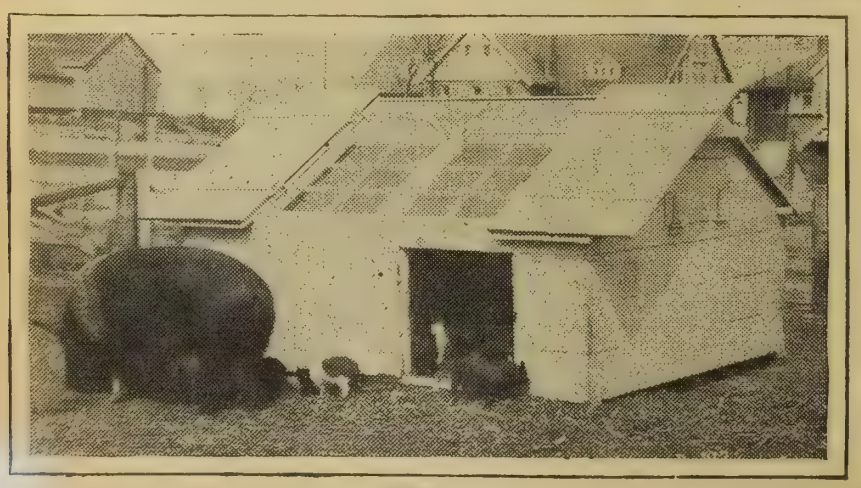


FIG. 3.

FIG. 4.

Nearly 150,000 volunteer crop reporters and special correspondents are now aiding the bureau of crop estimates of the United States Department of Agriculture in the preparation of its estimates of crops and live stock production of the country, according to the annual report of the bureau which has just been issued. In addition there are 151 paid employes in the service of the bureau. The total appropriation for the work for the fiscal year ending June 30, 1915, was $275,580. The bureau has enlarged its work during the fiscal year by assigning one of its employes to the work of investigating truck crops. The crops for which acreage estimates were undertaken by this specialist include watermelons, cantaloupes, cabbages, onions, early potatoes, tomatoes and strawberries. Other crops are to be added as the work progresses.

Dollars in Ditches for You

Every undrained farm in your county means possible profit for you. You can make $10 to $15 a day without more effort than ordinary farm work requires.

You can cut tile ditches at an average cost of 5c to 7c a rod, including liberal wages for yourself. Your neighbor will pay more than this, giving you a big profit. The

"A Perfect Trench at One Cut"

BUCKEYE Traction Ditcher

Works perfectly and economically in any soil, leaving the trench ready for the tile. The trench will be absolutely to grade with smooth, true, vertical sides and the finely pulverized excavated dirt deposited to one side convenient for backfilling. Hundreds of these machines are in actual operation today, all giving satisfaction. You, too, can make big money easily with the Buckeye.

Read What These Men Have Done in Their Own Counties

Macksburg, Iowa.
Am enclosing photo of machine at work digging 3-ft. deep at the rate of 16 rods per hour. We average about 100 rods a day, 3-ft. deep, for which we receive 25c per rod, at the expense of about $5.00 per day, or 5c per rod, which would leave us $20.00, which is pretty good interest on amount invested.
DAVIS & MACUMBER.

Riga, Mich.
I am sending you a record my ditcher made in 115 days. My total expenses—gas, repairs and labor were $436.35 with my time figured nothing. I dug 13,312 rods of ditch and the work came to $2,945.26 so that left me for my work $2,508.91 and my machine was just as good when I got it through as when I got it.
JOHN GOLL, Jr.

Write for Special FREE Book of Facts

It tells all about the Buckeye Traction Ditcher and contains letters from men who have made money with this machine. Describe your soil conditions and size ditches you wish to cut. We will gladly outline the machine and equipment best adapted and most profitable. Our Service Department will help you build up a steady paying, healthful contract tile drainage business. This advice and assistance free. Write us today.

The Buckeye Traction Ditcher Co., 172 Crystal Ave., Findlay, Ohio

DON'T FORGET

There's a big difference in cupolas; difference in price, in material and in construction. The Queen was the original. On the market over 15 years. Good from the start. Still ahead. Used by thousands. Made of steel reinforced with heavy braces. Bird proof, snow proof, leak proof. Write for catalog and prices or ask your lumber dealer. QUEEN CUPOLA CO., 315 PECK ST. CRESCO, IOWA.

QUEEN CUPOLAS

HOLSTEIN BREEDERS ELECT.

The Waukesha County Holstein Breeders' Association is now an incorporated organization. A board of nine directors has been elected as follows: For one year, Arthur J. Rust, West Allis; Stuart Reid, Oconomowoc; Chas. Cole, Dousman; David Roberts, Waukesha; Robert L. Baird, Waukesha; H. E. Reddelien, Oconomowoc; for three years: Dr. M. W. Downing, Waukesha; Chas. J. Will, Menomonee Falls; W. L. Baird, Waukesha.

The directors elected C. J. Will president; H. E. Reddelien, vice president; Chas. Cole, treasurer, and W. L. Baird, secretary. C. H. Jacob was elected auditor of the association for the ensuing year.

The matter of securing a county representative for Waukesha county was left in the hands of the directors.

The following resolution presented by S. A. Baird was unanimously endorsed: "Be it resolved, that the Waukesha County Holstein-Friesian Association go on record as favoring, and do petition the bureau of animal industry or like department of state live stock industry, to establish a record bureau of all the tuberculin tested herds of cattle in Wisconsin."

ON BARN VENTILATION.

To the Editor:—Our horse barn is something like 132 feet long and can take care of thirty head of horses and several cows comfortably, but we usually have had about twenty head of horses and two cows housed in it. When built seven or eight years since, we recognized that some sort of ventilation would be necessary and hence had foul air flues built based on our own idea of what would conduce to proper ventilation, these flues running up through the hay mow to wooden cupolas on the roof. This ventilation did not work satisfactorily and the barn was very foul smelling and there was much dampness and mold. Our attention was called to the King system and we recently had their system installed with three aerators on the roof and six foul air flues running up to them and with fresh air intakes, all put in in accordance with plans worked out by a ventilation specialist. Although we have had this system in but a few months now, the improvement is very marked. The foul air is being taken out and replaced with fresh air continually; there is a very noticeable doing away with the disagreeable odor, and there is none of the dampness and mold now such as was so pronounced previously. We have had no tests made to show just how often the air is being changed, but there is a large volume of foul air moving up the foul air flues and a like volume of fresh air coming in the fresh air intake to replace it. The fresh air intakes are so arranged that the quantity of air flowing through them may be cut down or completely cut off by means of an adjustable door operated from the inside of the barn. We presume in extremely cold weather these doors would need to be adjusted to meet the conditions in case it should throw too much cold air into the barn.

The one thing that strikes us about barn ventilation is this, that while ventilation is seemingly a simple proposition, if farmers or others than experts should attempt to install a system of their own to take care of this important phase of barn building, the chances are ninety-nine to one that they would not get their system right and it would not perform the work properly. With the King system planned as it was for us one is absolutely sure of perfect results or as nearly perfect as it may be possible to devise ventilation for tight barns where a varying number of cattle, horses, etc., may be housed from night to night. There are a number of cow barns within a radius of one or two miles of this city which have installed the King system this past summer and two of these barns are occupied with stock at the present time—the other not yet having been occupied.

A. H. Krouskop.

Richland Co., Wisconsin.

POLK COUNTY GUERNSEY BREEDERS HAVE WINTER MEETING.

To the Editor:—On January 15th, in the high school building at Amery, Wisconsin, was held one of the most enthusiastic meetings the Polk county association has ever held. In spite of the severe weather there was a good attendance. Beginning at 10:30 the general business and election of officers occupied the balance of the forenoon. The newly elected officers were: J. H. Stewart, president, Clear Lake; J. P. Tanner, vice president, Clear Lake; E. T. Stewart, secretary, Clear Lake; W. H. Scott, treasurer, Clear Lake; directors, S. B. Vassau, Amery; J. S. Klinka, Balsam Lake; J. P. Jensen, Amery; Andrew Eastlund, Dresser Junction, and O. T. Jensen, Milltown.

The addresses of the day were upon valuable topics and ably delivered by J. S. Klinka, of Balsam Lake, and R. P. Cuff, of Barron. Several musical numbers which were greatly appreciated were other features of the afternoon program. That Polk county is getting rightly started in Guernseys is a certainty. There are very many good sires in use, both from a breeding and individual standpoint, sires whose daughters are evidence of their breeding ability. In the past few years several Guernsey breeders have come to the county with their herds, which has extended the business very favorably. The association will undoubtedly offer for sale a carload or more of choice grades in the near future. Preparation was made for the summer meeting and on invitation of O. T. Jensen the club unanimously voted to meet at his farm at Milltown on June 15th.

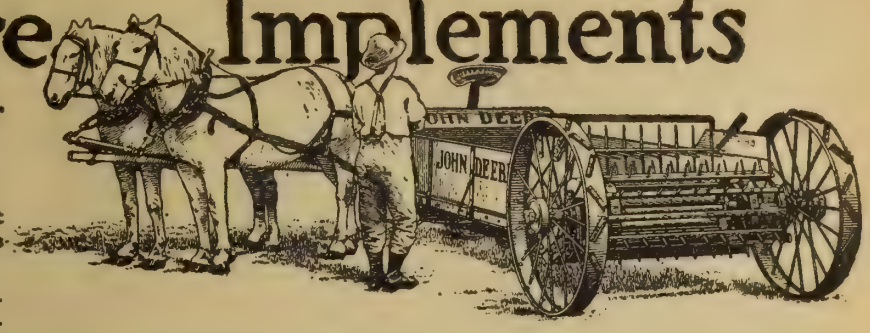
E. T. Stewart, Sec.

LIVE STOCK STUDENTS PLAN TRIP IN FEBRUARY.

A class of 125 students enrolled in the second year of the short course at the college of agriculture, University of Wisconsin, will take an observation trip to the Union Stockyards, Chicago, February 21st, returning by way of Waukesha, where tney will visit a number of the dairy farms in that well-known "butter-fat belt." The class will be led by George C. Humphrey, in charge of the department of animal husbandry.

The fact that duty should come before pleasure doesn't mean that it is to take the place of pleasure. You need recreation as much as you need food. Take it regularly, and in the open air.

John Deere Implements



John Deere Spreader
The Spreader with the Beater on the Axle

ONLY hip high to the top, but has big drive wheels. Wheels out of the way when loading.

Beater drive works on the principle of a horse power. No clutches, no chains, no trouble. Mounting the beater on the axle (a patented feature) does away with half the types of castings.

Three exclusive features of the John Deere Spreader: [1] Beater on the axle—simply revolutionary in spreader building. Nothing else like it. Doubles the value of the spreader by all practical tests. Makes the John Deere Spreader possible. [1]

[2] Revolving Rake—entirely new and original. Load moving back to beater revolves the rake. The teeth down in the load hold the manure while the beater pulverizes it. Draft actually less. Even spread—no bunching. [2

[3] Ball Bearing Eccentric—apron driven without friction. This ball bearing apron drive requires no attention, not even oiling, but it performs wonders in the working of the Spreader. [3]

Write for John Deere Spreader booklet. Tells all about farm manures and fertilizers, how to store manure, its value, and how to spread it most economically. Also contains illustration in colors.

John Deere Plows for Light Tractors
High and Level Lift

PRACTICAL—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all bottoms raise high and level. Another pull lets them down. Plows do not clog or gather trash on the turn.

Extra beam and bottom, readily attached, increases regular two bottom plow to three, or regular three bottom to four, as desired.

Equipped with Quick Detachable Shares—save 80% time changing shares. Write for free booklet.

John Deere Syracuse Plows
The Plows with Perfect Fitting Parts

SYRACUSE chilled shares fit perfectly—the extra shares go on easily. A smooth joint is formed between share and moldboard and share draws up snugly to its place. Two bolts in share instead of one. Rib on back of share strengthens share and standard.

Write for free literature on the 442 series, combination plows, for use in sandy or gravelly soils, and work well in turf or stubble. Also the 61 series of combination plows, for use in sandy-loam soils, fairly free from stones and grit, or in sticky soils where good cleaning qualities are desired.

Van Brunt Drills and Seeders
With Adjustable Gate Force Feed

VAN Brunt Drills plant any small seed, alfalfa to bearded oats, peas or beans.

Amount sown per acre easily regulated merely by shifting feed gauge levers.

All the ground sown, because the Van Brunt adjustable gate force feed compels seed to leave hopper in even, continuous streams—no bunching or choking up—and an equal amount goes into each furrow.

An even stand of grain is secured, because pressure springs compel all the discs to cut furrows of equal depth, and the forward closed delivery places seed at bottom of these furrows.

Van Brunt Drills never clog up. Scrapers keep discs absolutely clean. The high grade discs have bearings that are guaranteed to last lifetime of drill.

Smooth running—each wheel drives half the feeds, equally distributing the work. A direct, double gear drive from the continuous axle.

Grass seeder attachment can be furnished which will drill or sow broadcast as desired.

Van Brunt Broadcast Seeders are just as positive in their operation as Van Brunt Drills.

Write us for free booklets describing Van Brunt Single or Double Disc Drills, or Broadcast Seeders.

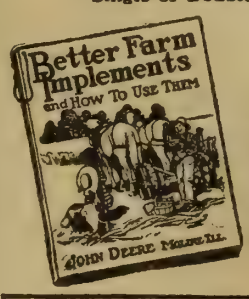
R. & V. Engines
Dependable Farm Power

"R & V" Triumph—always develops rated horse power—made in 1, 1½, 2½, 4, 6, 8, 10, 12, 16 and 20 H.P. sizes, stationary and portable.

Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings.

High grade throughout. Inspect the extra guard ring over piston pin to prevent possibility of scoring cylinder. Ask about the "R & V" oscillating magneto. Write for free booklet.

John Deere Dealers Everywhere



Better Farm Implements and How to Use Them

BOOK FREE—168 page reference book—tells all about a complete line of farm implements and how to adjust and use many of them. A practical encyclopedia of farm implements. Worth dollars. Describes and illustrates: Plows for Light Tractors; Steel and Chilled Walking and Riding Plows; Disc Plows; Cultivators; Spring Tooth and Spike Tooth Harrows; Lister Plows and Cultivators; Disc Harrows; Alfalfa and Beet Tools; Farm and Mountain Wagons; Teaming Gears; Manure Spreaders; Inside Cup and Portable Grain Elevators; Corn Shellers; Hay Loaders, Stackers, Sweep Rakes, Mowers, Self-Dump Sulky and Side Delivery Rakes; Hay Presses; Kaffir Headers; Grain Drills and Seeders; Grain Binders; Corn Binders; Gasoline Engines. This book sent free to every one who states what special implements he is interested in and asks for Package No. X-64.

John Deere, Moline, Illinois

ARRANGEMENTS FOR SWINE WEEK.

Officers of several of the state breed associations met recently at Madison and decided to have a swine week at Madison some time in 1917, probably in February. After discussing the feasibility of holding a series of conferences and demonstrations at this season of the year for the purpose of advancing the five different classes of live stock the breed representatives decided to leave the arrangements for a swine week to a committee which would represent the several breeds, the college of agriculture and this association. The committee appointed consists of E. H. Parker, to represent the Wisconsin Duroc Jersey Breeders' Association; H. C. Taylor, the Wisconsin Berkshire Breeders' Association; James Fisher, the Wisconsin Chester White Breeders' Association; Mace Madson, the Wisconsin Poland China Breeders' Association; G. C. Humphrey, the animal husbandry department of the college of agriculture, and myself the Wisconsin Live Stock Breeders' Association.

The suggestion that similar committees be later constituted for the advancement of the beef cattle, sheep, dairy cattle and horse interests met with unanimous approval and such representations will likely soon be chosen.

The swine week committee met immediately after the general session and agreed that the conference in 1917 should consist of a demonstration sale of high-class breeding animals and also an experimental demonstration which would be of value to every farmer in the state interested in economic pork production. It was thought that it would be best to have the various breeds of swine alternate in the holding of these annual association sales. And because of the fact that the movement was originated by Messrs. John D. Gant, E. H. Parker, L. F. Atwater and M. H. O'Keefe, of the Wisconsin Duroc Jersey Breeders' Association, it was decided that the Duroc breed should be given the opportunity of making the first sale. It was later suggested that it would be best to have the two breeds having the largest number of herds in the state contribute to the success of the first sale. This was done to encourage still greater interest upon the part of the farmers of the state in the event.

Later announcements will be made of the plans for the week. Among those who attended the conference were:

Arthur Broughton, president Wisconsin Sheep Breeders' Association and vice president Wisconsin Live Stock Breeders' Association, who acted as chairman; H. C. Taylor, president Wisconsin Berkshire Breeders' Association; M. H. O'Keefe, John D. Gant and E. H. Parker, Wisconsin Duroc Jersey Breeders' Association; L. C. Underwood, Wisconsin Red Polled Cattle Club; W. M. Connell, Wisconsin Aberdeen Angus Breeders' Association; M. Madson, Wisconsin Poland China Breeders' Association; Eben E. Jones, Wisconsin Shorthorn Breeders' Association; C. W. Thompson, Wisconsin Hereford Breeders' Association; W. K. Caldwell and James G. Fuller, of the Wisconsin Horse Breeders' Association; Jerry P. Riordan, Wisconsin Holstein Breeders' Association; A. J. McNab, Wisconsin Ayrshire Breeders' Association; George C. Humphrey and H. L. Russell, Wisconsin College of Agriculture; Raymond Baker and Andrew Hopkins, Wisconsin Live Stock Breeders' Association.

RURAL ELECTRIC LIGHTING.

(Continued from page 6.)

tor is a part of the armature and is made up of copper segments insulated from one another by strips of mica. This part is subject to the wear of the brushes. The brushes, usually made of carbon, convey the current from the commutator to the distributing point. The contact of the brushes will in time cause the commutator to become uneven. To remedy a slight unevenness of the surface wrap a piece of fine sand paper (not emery cloth) on a flat surface of a wooden block, about the width of the commutator, and apply with pressure on its surface while dynamo is in motion until it is bright and even. If this is not effective it will be necessary to send the armature to an electrical repair shop or a machine shop where the commutator can be cut to smoothness. When the dynamo is not in use keep it covered to prevent the settling of dust on the parts of the machine. Keep the armature bearings well oiled with high-grade dynamo oil.

I conducted a test on a plant operated by a two-horse-power kerosene engine last winter. The working load of the engine was about one horse power for one hour's time, which is the equivalent of eight sixteen-candle-power tungsten lights burning five hours. Using gasoline for fuel the cost would somewhat exceed this figure. Under the ordinary operating conditions the expense for fuel and lubricating oil, when the engine is worked to its capacity, will not exceed 4½ cents per horse power hour of run.

The installation of a lighting plant where storage battery is used should not be attempted by the inexperienced man. A plant not properly installed is likely to be a bill of expense to its owner.

Two factors enter largely into the success of rural lighting by electricity—the battery used and the care of the plant. The experience of the owners indicates that of these two factors the care given the plant is the more important, some securing excellent results and others having very little success with the same type of plant. This difference is explained by the care, or rather lack of care, which the plant receives.

A Great Tomato Bearer.

THE Mills Seed House, Rose Hill, N. Y., say that from 100 to 150 pounds of tomatoes have been grown on a single plant of their Giant Climbing variety, a sample package of which they offer to send on trial to anyone writing for their splendid 1916 seed book, offered free in their advertisement on page 19. The book fully describes their extra fine vegetable, fruit and flower seeds. Address Mills Seed House, Dept. 25, Rose Hill, N. Y., and please mention this paper.—Adv.

Velie Six

THIS is the Biltwel Model 22—the car that astonished the motoring public when we announced that it would be a regular, full-size, fully equipped Velie to sell for only $1065. Let us mail you a catalog showing Model 22, also Model 15, which has been reduced nearly $200 on both the five and six passenger types. You're not far from the Velie factory—pay us a visit—and, in the meantime, get that catalog.

VELIE FEATURES

115-inch wheel base—standard tread
Velie Continental motor 40 h. p.
Removable cylinder head for inspection
Helical gears in motor—no chains
Multiple dry disc clutch
Automatic ignition system
Hotchkiss type of drive
No noisy strut rods or torque arm
Spiral gears in rear axle
48-inch underslung rear springs
Velie-Stewart vacuum feed
All electric wiring in metal conduits
Push button starting device
Two-unit Remy electric system
Expanding tire iron—no straps
Velie mirror finish 20 operations deep
Fine leather deep tufted upholstery
Double-bulb headlights—rigid supports
Curved radiator blending with hood and body
Windshield ventilating top and bottom
15-gallon gasoline tank with gauge at rear
Simple rocking gear shift lever
Quick adjustable side curtains
Heavy steel-crowned fenders
Cowl light shows if tail light is going

EQUIPMENT

One-man top, speedometer, dash light, portable light, coat rail, foot rail, electric horn under hood, 32x4 in. tires front and rear (non-skids on rear) 5 single-piece demountable rims and full tool equipment, tool kit, etc.

$1065

Model 22

VELIE MOTOR VEHICLE CO., 118 Velie Place, Moline, Ill.

SEEDS

"Purity Brands" have always been the highest qualities obtainable each year. Hundreds of farmers will not experiment with any other. All seeds sold on absolute guarantee of **purity** and **germination**—being subject to your test and inspection and money refunded if not better than we represent. **Timothy, Clovers, Alfalfa, Mixed Timothy and Alsike, Blue Grass, Millets, Seed Corn, Seed Oats, Seed Flax, Seed Grains,** etc. Samples and prices free on request.

THE ADAMS SEED COMPANY BOX 50 DECORAH, IOWA

PRICES DOWN AGAIN!

GALLOWAY SANITARY CREAM SEPARATORS

are lower priced than ever and the quality has been maintained throughout. In spite of the increased cost of all materials, on account of the large volume going through my factories, I am able to again cut and slash cream separator prices. The 1915 prices are not in force any more. My new low 1916 prices and new easy selling plans, such as no money down—a year to pay, etc., have taken their place. 10,000 separators now coming through my factories—all to be sold on **special proposition between now and grass.**

~~42.50~~ ~~51.00~~ ~~63.50~~

In addition to the famous line of separators I have been building I have added a new size which I am selling for less money than ever before. It is identical in quality and design with the other sizes, and fully described in my

1916 BOOK—NOW READY!

250 PAGES—If you buy a separator in the next twelve months you should have this book. It tells how I build the Galloway Sanitary Bath-in-Oil Cream Separators from the ground up. Read this book before you buy a cream separator of any make at any price!

Don't be misled on cream separators thrown together and sold for a price. Buy direct from a real factory, get a better machine and save from $25 to $50 on a machine of the highest quality. Shipped from Waterloo, Kansas City, Council Bluffs, St. Paul or Chicago—the nearest point.

4 sizes skimming 875 to 950 lbs. per hr.

4 new low 1916 prices.

NOTE THIS BUILT IN QUALITY

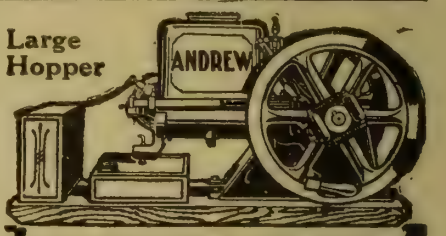
Heavy, high carbon steel gear shafts and bowl spindle; extra long bearings; strong, sanitary bowl, discs not fastened together; oil bath lubrication; big, roomy, seamless, pressed steel supply tank; both gear shafts and both spindle bearings supported by one solid casting; heavy sanitary tinware; low bowl speed reduces wear on bearings and gears. No raw, sharp edges in the bowl to break up the globules of butter fat. Drop us a postal today.

R-24

WILLIAM GALLOWAY COMPANY
33 Galloway Station Waterloo, Iowa

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield, but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.

Large Hopper



Light But Strong

One of the secrets of engine building is to know how to use weight. A part that is heavier than necessary adds just that much to the weight for the farmer to move about, without adding to the power delivered.

By making the cylinder of the ANDREW engine of the same close-grained iron used in the cylinders of six-cylinder automobiles, we get plenty of strength with about one-half the cylinder weight of many other 1½ H. P. engines.

Also about half the total weight of the engine is in the fly wheels—quite an advantage.

While light—165 lbs. complete—the

ANDREW

Gasoline Engine

works so smoothly that it stands without blocking.

Two other features that appeal strongly to most engine buyers are the large water hopper and the extreme simplicity of design.

The ANDREW engine, we believe, delivers as much power as any other small engine of its bore and stroke—and **more** power than most 1½ H. P. engines on the market. It will be to your interest to make a full investigation of the features of the ANDREW engine before you buy. Better write at once. *Dealers wanted.*

ANDREW MOTOR MFG. CO.,
Dept. 20 Milwaukee, Wis.

FARMER AGENTS: Write for 1916 agency for Diddie-Blitzen Rods—best lightning rod sold. L. F. Diddie Co., Marshfield, Wis.

BUTTERMAKERS' CONVENTION.

(Continued from page 9.)

Windsor, and H. E. Griffen, of Mt. Horeb.

Thursday afternoon was farmer's day and the meeting was held in connection with the short course at Eau Claire. Dean Farrington, of the dairy school, spoke on the opening night on the development of pasteurizing machinery, and J. M. Speed, of Milwaukee, discussed the technical sides of refrigeration. Fuel and power efficiency was discussed by O. A. Storvick, of Minnesota.

At the farmers' session J. D. Jarvis, of Chicago, spoke on the care of cream on the farm and emphasized the importance of properly caring for the cream after it had left the separator. Mr. Jarvis told of experiments which the De Laval Separator Co., which he represents, had made with tanks in which the water was cooled by well water and said that every farmer could have such a cooling tank at little expense and that the quality of cream would be greatly improved thereby.

1. Rinse in lukewarm water the separator bowl and utensils to remove all the milk, etc.
2. Then scrub with a brush with warm water to which has been added some kind of washing powder.
3. Then immerse in boiling water for a few moments.
4. Then invert bowls, buckets, etc., and let dry in pure air and the sunshine.

By all means don't use the milk room for a store house for old clothes, etc., and remember that thick cream always keeps better than thin cream.

Hon. S. A. Cook, of Neenah, gave a very interesting talk on dairy conditions, and E. C. Jacobs, of Elk Mound, dwelt upon the value of co-operation between creamery owner and farmer. C. P. Norgord, commissioner of agriculture, explained the workings of the new department and the plan to place the herds free from tuberculosis on a certified state list.

When the resolutions committee reported a discussion on pasteurization arose which was very spirited and ended in the association voting down a resolution in favor of compulsory pasteurization. Several speakers urged that under present conditions it would prove a hardship and a big financial loss to the butter men and the farmers, but all admitted that pasteurization is coming some day. Resolutions adopted approved the rules and regulations under the new license law; approved the dairy and food commission as now constituted; favored a requirement that whey butter be so labeled when made from whey cream and disapproved the attack on the dairy industry which is unwarranted and untrue.

The association voted in favor of changing the time of meeting to the fall instead of the winter and an invitation to meet in Sparta next year was received. Dates and place of meeting were left to the board of directors.

The winners in the butter exhibit, with their scores, follow:

District No. 1—John Mogenson, Beloit, 90; Louis Schawitzer, Nashotah, R. 22, 93.66; Martin von Liere, Troy Center, 92; C. W. Page, Elkhorn, 93.33; Axel L. Larson, Nashotah, 93; H. O. Zick, Tiffany, 91.16; Harry D. Nichols, Elkhorn, 94.83; John R. Meyer, Slades Corner, 94; Walter J. Clark, Lake Beulah, 92.83; Charles D. Kelly, East Troy, 95.16; F. V. Merryfield, Mukwonago, 93.83; Geo. Christoph, Avalon, 91.

District No. 2—Arthur W. Seager, Cedarburg, 94; H. Skerhutt, Cedarburg, 94.33; Hubert Bartel, New Holstein, 92.33; Arthur A. Olson, Waupun, 96; G. P. Sauer, Cedarburg, 94.50; J. S. Magrane, Fond du Lac, 91.66; Wm. Remel, Maribel, 92.50; Albert Hoefke, Waterloo, 93; Richard L. Sleyster, Endeavor, 90.16; Quirin Morsch, Fond du Lac, 94.33; Wm. Warnke, Kingston, 94.16.

District No. 3—H. P. Nielson, Deerfield, 93.33; A. C. Hilstad, Oregon, 92.83; G. M. Stewart, Mazomanie, 91.50; F. M. Werner, Waterloo, 93.40; Hod Doolan, Marshall, 92.66; W. H. Kubat, Marshall, 95.33; E. R. Smart, Marshall, 93; Carl P. Steder, Helenville, 92; Henry T. Kipp, Cambridge, 91.66; H. J. Herreman, Black Earth, 91.33; H. E. Griffin, Mt. Horeb, 94.66; Alex. Shey, Marshall, 91; Ed F. Bolstead, Stoughton, R. 2, 92.33; R. J. Brigham, Whitewater, R. 3, 92.83; Rudolph J. Else, Helenville, 92.83; John Tenjim, Windsor, 90.16; H. M. De Golier, Cambridge, 96.33; L. L. Bolstead, Basco, 96.66; Fred C. Kuts, Johnson Creek, 92.83; Herman Hartwig, Deerfield, 95.33; H. H. Whiting, Johnson Creek, 97.

District No. 4—C. R. Winner, Stitzer, 94.16; Albert Warnke, Pardeeville, 92.83; Van Barron, Sauk City, 90.33; Hugo R. Heiney, Livingston, 93; Henry Donner, Dayton, 93.66; W. E. Moyes, Ironton, 92.16; Frank Shepherd, Mt. Sterling, 93.33; John H. Miller, Baraboo, 93.66; W. J. Dehn, La Valle, 91.66; Ernest Soltwedel, Lime Ridge, 93.16; H. J. Edge, Patch Grove, 92.33; E. D. Schwartz, Lancaster, 93.50; H. J. Quale, Platteville, 92.33; L. M. Turner, Montford, 92.50; Olaf Larson, Fennimore, 95.50; Val Dressler, Louisburg, 90; Ole C. Hanson, Hazel Green, 90.16.

District No. 5—John Mortenson, Camp Douglas, 91; A. W. Zimmerman, Norwalk, 91.16; E. G. Rasmussen, Melvina, Box 41, 91.16; Oscar Thompson, Black River Falls, R. 6, 90.16; Wm. Sieger, Chaseburg, 92.83; Frank O'Hearn, Melrose, 91.66; Geo. W. Marvin, Black River Falls, 90.33; H. A. Johnson, Westby, R. 2, 91.16; Benedick Rahbek, West Salem, R. 2, 90.33; Julius Kretzschmar, New Lisbon, 93.50; J. D. Simpson, Viroqua, 92.16; E. E. Haliday, Mauston, 90; D. F. Wallace, Alma Center, 93.66; G. S. Caucutt, Taylor, 91; Thos. J. Berge, Northfield, 91; O. Felstad, Elroy, 91.

District No. 6—C. J. Jenson, Withee, 94.10; Geo. Jenson, Saxville, 90.66; F. S. Root, Rudolph, 91.83; Odin Christianson, Nelsonville, 93.50; Joseph Yager, Thorp, 92.83; Christ Christensen, Neillsville, 94; M. R. Cross, Humbird, 90.83; V. D. Lee, Neillsville, 91.16; Theo. Sommers, Thorp, R. 1, 90.66; F. F. Kresse, Plainfield, 90; O. J. Krogstad, Greenwood, 91.83; Clarence Fostvedt, Wild Rose, 91.33; Chas. M. Sanford, Amherst Jct., R. 2, 91.66; F. H. Joseph, Plainfield, 90.83; T. J. Warner, Rosholt, 91.33.

District No. 7—L. H. Winter, Eau Claire, 91.50; E. A. Feiler, Osseo, 91.16; S. J. Johnson, Ettrick, 90.83; Paul McCaulley, Elmwood, 94.66; Grant Winner, Osseo, 93.33; Carl Sorenson, Meridean, 92.50; Chas. M. O'Brien, Augusta, 93.50; W. E. Brierly, Downsville, 93.33; R. P. Colwell, River Falls, 94.50; H. J. Halverson, Eleva, 91.50; Walter Stolpe, Wheeler, 91.83; R. H. Banks, Spring Valley, R. 2, 90.83; T. J. Hass, Elk Mound, 91.50; A. J. Rivard, Merrill, R. 1, 94.60; L. C. Olson, Galesville, 90.83; N. E. Dale, Blair, 92; Leonard Place, Knapp, 90.16; L. J. Bjerking, Ellsworth, 91.16; Richard P. Butler, Mondovi, 91.33; T. J. Hanlon, Prescott, 91.16; P. E. Peterson, Hersey, 90.33; Jacob W. Ringger, Durand, R. 4, 91; H. K. Hanson, Caryville, 90.33; Chas. A. Cartwright, Stanton, 91.66; O. L. Holverson, Spring Valley, 92.33.

District No. 8—R. J. O'Keefe, De Pere, R. 1, 93.50; R. C. Cleaves, Iola, 92.33; H. N. Olson, Waupaca, 90.16; H. A. Wheeler, West De Pere, 93.66; Lauritz Olsen, West De Pere, 93.83; Theo. R. Peterson, Weyauwega, 91.16; Abe Speich, Berlin, R. 2, 94.33; Earl Lonteau, Green Bay, 93.83; L. A. Olson, Waupaca, 91; C. J. Chapin, Sheridan, 93; H. F. Recknagel, Seymour, 91.16; M. Engebretson, Scandinavia, 93.33; Henry Reif, Weyauwega, 90; Robt. S. Andreason, Northland, 91.66; M. Christopherson, New Franken, 91; C. F. Wolzien, Black Creek, 91.66.

District No. 9—Will Geisler, Bruce, 90.66; Ray Hayton, Stanley, 92.16; F. J. Mathews, Brill, 90.83; Hilbert Enerson, Comstock, 94; Henry S. Paul, S. Superior, 93.50; F. J. Roch, Chippewa Falls, 91.83; J. M. Hanson, Cameron, 92; Geo. Sampler, Clear Lake, 91.50; Peder Kristensen, Cushing, 94; A. N. Finstad, Albertville, 91; Henry Bonefield, New Auburn, 92.83; J. C. Christopherson, Cadott, 92.16; Louis M. Hanson, Iron River, 90.50; E. W. Scheel, Turtle Lake, 93.40; R. A. Butler, Amery, 94; Albert Erickson, Amery, R. 4, 93; Frank D. Packard, Deronda, 90.83; John W. Sullivan, Chippewa Falls, 91.66; Theo. Lennarts, Frederic, 92.33; Chas. J. Back, Luck, 91.66; Lewis Laurence, Ladysmith, 91.50; E. R. Eckwright, Bloomer, 91.50; John E. Mattson, St. Croix Falls, 93.83; J. P. Sorenson, Milltown, 91.33; Ole Esker, Dallas, 93.33.

District No. 10—C. F. Brennecke, Antigo, 91.83; Louis Peterson, Bonduel, 92.33; Carl Jorgenson, Rose Lawn, 96.16; Joel Gilbertson, Medford, 94.16; Hans Christianson, Rose Lawn, 95; W. F. Paulson, Phillips, 90.50; A. N. Anderson, Antigo, 90.83; M. G. Koepsell, Little Black, 93; R. G. Zabel, Wausau, 93.16; Frank Meisner, Wittenberg, 92.

STATE PRIZE WINNERS.

1st, H. H. Whiting, Johnson Creek; 2d, L. L. Bolstead, Basco; 3d, H. M. De Golier, Cambridge; 4th, Carl Jorgenson, Rose Lawn; 5th, Arthur A. Olsen, Waupun.

DISTRICT PRIZE WINNERS.

First District—1st, Chas. D. Kelley, East Troy; 2d, F. V. Merryfield, Mukwonago; 3d, Louis Schawitzer, Nashotah.

Second District—1st, Quirin Moersch, Fond du Lac; 2d, Albert Hoefke, Waterloo; 3d, Hubert Hartel, New Holstein.

Third District—1st, H. E. Griffin, Mt. Horeb; 2d, F. M. Werner, Waterloo; 3d, H. P. Nielson, Deerfield.

Fourth District—1st, Olaf Larson, Fennimore; 2d, John H. Miller, Baraboo; 3d, Frank Shepherd, Mt. Sterville.

Fifth District—1st, D. F. Wallace, Alma Center; 2d, C. D. Simpson, Viroqua; 3d, Frank O'Hearn, Melrose.

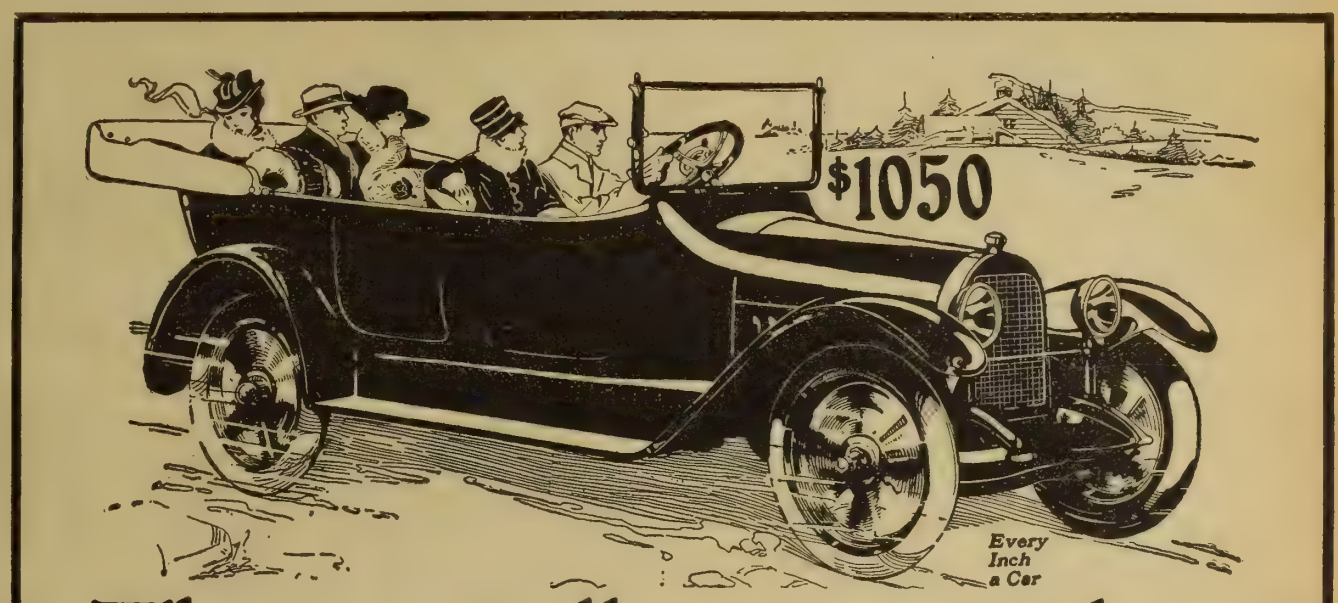
Sixth District—1st, C. J. Jenson, Withee; 2d, Christ Christensen, Neillsville; 3d, Joseph Yager, Thorp.

Seventh District—1st, R. J. Rivard, Merril, R. 1; 2d, R. P. Colwell, River Falls; 3d, Chas. M. O'Brien, Augusta.

Eighth District—1st, Abe Speich, Berlin, R. 2; 2d, L. A. Olson, Waupaca; 3d, C. F. Wolzien, Black Creek.

Ninth District—1st, Hilbert Enerson, Comstock; 2d, Henry S. Paul, South Superior; 3d, E. W. Scheel, Turtle Lake.

Tenth District—1st, Hans Christianson, Rose Lawn; 2d, M. G. Koepsell, Little Black; 3d, Frank Meisner, Wittenberg.



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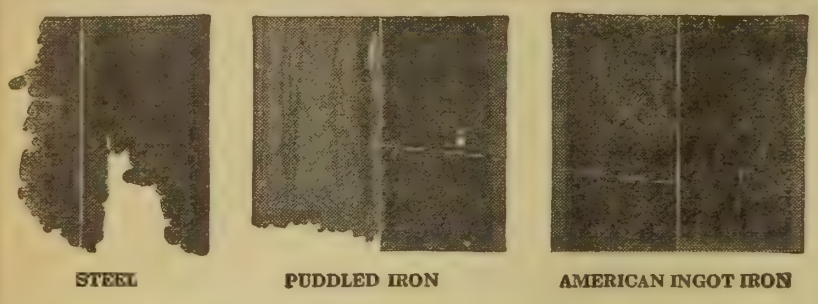

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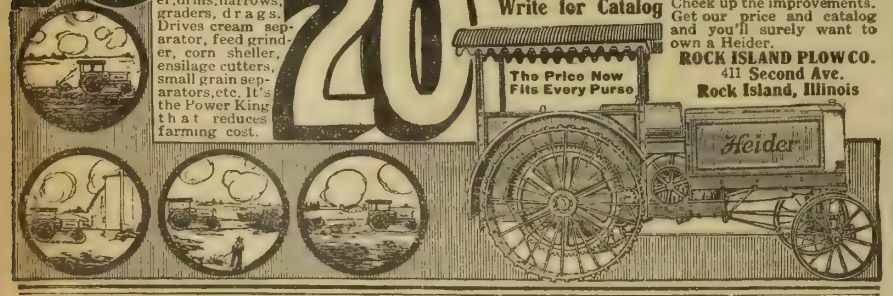

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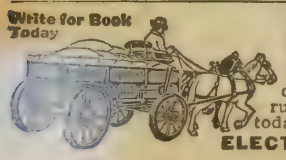

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In and Around Wisconsin

Creameries at Annual Meetings Report Prosperous Year With Good Prices to Farmers For Their Product.

The Wisconsin Bankers' Association will meet this year at Madison, June 22d, 23d and 24th.

The Jefferson County Order of the Experiment Association will hold its annual meeting and grain show at Lake Mills on February 26th.

Farmers, shippers and buyers of cattle are co-operating at Green Bay with the expectation of building a stockyards there this summer.

Stock sales to date for the proposed co-operative packing plant at New Richmond, St. Croix county, total $235,000, leaving a balance of only $15,000 to be secured.

The Clear Lake, Polk county, creamery hit a new production mark in 1915 by making 811,000 pounds of butter, compared with 697,175 pounds in 1914, an increase of 113,825 pounds.

F. S. Campbell, of Oneida county, one of the well-known potato growers of the state, recently shipped a carload of certified Irish Cobbler seed potatoes to California at $1.25 per bushel.

John Haerle, of Milwaukee, has purchased and taken possession of the Hartland creamery at Hartland, Washington county. The seller was C. B. Harbaugh, who retired to look after other business interests.

W. W. Clark, of the Wood County Agricultural School, and William Bassler, official tester for the county cow-testing association, are organizing a second association in the vicinity of Grand Rapids and have entered 300 of the required 500 cows to start an association.

February 12th will be seed corn testing day in Walworth county and it is suggested that on that date every one begin a test for the 1916 seed. The teachers of the county are cooperating and much good will undoubtedly be derived from this county-wide movement.

The following breeders were elected officers of the Fond du Lac County Guernsey Breeders' Association at the annual meeting recently at Ripon: President, Math Michels, of Peebles; vice president, W. A. Lawson, of Rosendale; secretary and treasurer, F. M. Ingalls, of Fond du Lac. The association has 250 members.

Another cow-testing association has been organized in Manitowoc county as the result of the farmers' institute recently at Mishicote. The officers of this new association which will begin work immediately are: George Barthels, of Mishicot, president; Albert Johannes, of Two Rivers, Secretary and treasurer; Oscar Samz, Albert Braun and Wm. Bertolaet, board of directors.

Albert Fuller, of North Lake, who is behind a project as president of the Milwaukee Milk Shippers' Association to establish a milk depot in Milwaukee, announces that he has secured almost 400 signers. They propose to incorporate a company for $10,000 and sell milk directly to the city consumers in Milwaukee. Mr. Fuller declares that this is the only way the farmers can secure justice from the dealers in Milwaukee and secure a fair price for this product.

The Marathon County Agricultural Society has chosen September 5th-8th as the dates for the next fair at Wausau. The association is planning many improvements this year, including new swine and horse barns, and it is hoped the county board will assist with an appropriation. At the recent annual meeting these officers were chosen: President, B. F. Wilson; secretary, J. D. Christie; treasurer, A. H. Zimmerman; superintendent of speed, G. A. Mills. Board of directors: Arden Paronto, of the village of Mosinee; W. F. Lemke, of the town of Berlin; J. H. Vogt, of the town of Brighton; F. J. Bandy, of the town of Flieth; Herman Ramthun, of the town of Wausau; J. D. Christie, of the town of Weston; B. F. Wilson, A. H. Zimmerman, L. H. Cook and S. M. Quaw, of Wausau.

Grant county lambs topped the Chicago market recently when a carload marketed by Sam S. Johns, of Montfort, brought $10.75 per hundred.

The Jefferson County Fair Association has elected the following officers for the year 1916: President, A. R. Hoard; vice president, William Higgins; secretary, R. B. Hellen; treasurer, William Henry.

Brown county creameries report a very prosperous January and during the last week of the month the West DePere creamery paid the highest price for butter fat, 39 cents. The Fox River Valley creamery paid 36½ cents and the South Lawrence company paid 34 cents.

Secretary Gavin McKerrow has given us some additional figures on the Waukesha County Guernsey Breeders' Association. The association has 127 paid members, an increase of thirty-nine in the last two years. There are sixteen new members proposed at this time. The association is in a most flourishing condition.

The Outagamie County Cheesemakers, Buttermakers and Dairymen's Association was organized recently at a meeting at Appleton at which these officers were chosen: A. F. Peterson, Grand Chute, president; William Menning, Greenville, vice president; N. Simon, Jr., Appleton, secretary; P. H. Grienert, Freedom, treasurer. The association started out with fifty members and about 300 farmers attended the organization meeting.

The increase in dairying in the St. Croix valley is indicated by the annual report of the Star Prairie Cheese Company, which has handled about 3,300 pounds of milk daily during the past year. The year previous the factory ran only every other day, as it was impossible to get sufficient milk to keep it going daily. The average price paid the patrons for fat during the year was 33.71 cents. The average price received for cheese was 13.73 cents.

The past year was the most successful in the history of the co-operative creamery at Knapp, Dunn county, which was organized eleven years ago. Patrons received 1½ per cent premium, amounting to $2,200 on butter fat for the year in addition to 8 per cent to the shareholders. At the recent annual meeting H. W. Jodell was chosen president; Frank Lierman, secretary, and William Casey, treasurer. George Hart, Fred Larson and Herman Hellendrung were elected directors.

August 29th, 30th and 31st have been chosen as the dates for the 1916 fair of the Manitowoc County Agricultural Society. The treasurer's report shows a balance of $1,400 in the treasury at the end of the year which is very gratifying. This is an increase of more than $400 over last year. The fair last year reported total receipts of $9,899 and was one of the best ever held. These officers were elected for 1916: President, John Kellner; first vice president, M. H. Dempsey; second vice president, Jay Hall; secretary, Fred Borcherdt, Jr.; treasurer, F. T. Zentner.

The Guernsey breeders of Polk county held their annual meeting and love feast at Amery on January 15th. It was one of the most enthusiastic meetings that the association has ever held. Several new members were received and John Klinka and R. L. Cuff, county agricultural representatives of Polk and Barron counties, respectively, spoke. These officers were elected for the coming year: President, J. H. Stewart; vice president, J. C. Tanner; secretary, E. T. Stewart; treasurer, W. H. Scott. Directors, S. B. Vassau, J. P. Jensen, John Klinka, Andrew Eastlund and O. T. Jensen.

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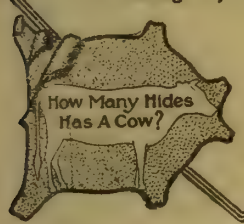

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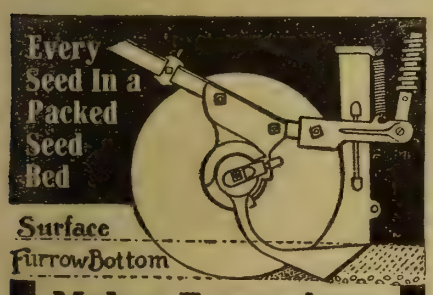

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COUNTRY LIFE CONFERENCE.

An interesting program has been arranged for Country Life Day at the college of agriculture in Madison during Farm and Home Week. The set day for this country life conference is Friday, February 11th. Meetings will be held in Agricultural Hall, Room 305. Ernest N. Warner, president Wisconsin Country Life Conference, will open the session with an address and the morning Round Table will be on "First steps in country development," and will be conducted by C. J. Galpin. The Round Table on "First steps in rural public health" will be conducted by W. D. Frost. Mrs. Adda F. Howie will speak in the evening on "Better Rural Living."

A PRACTICAL BARN PLAN.

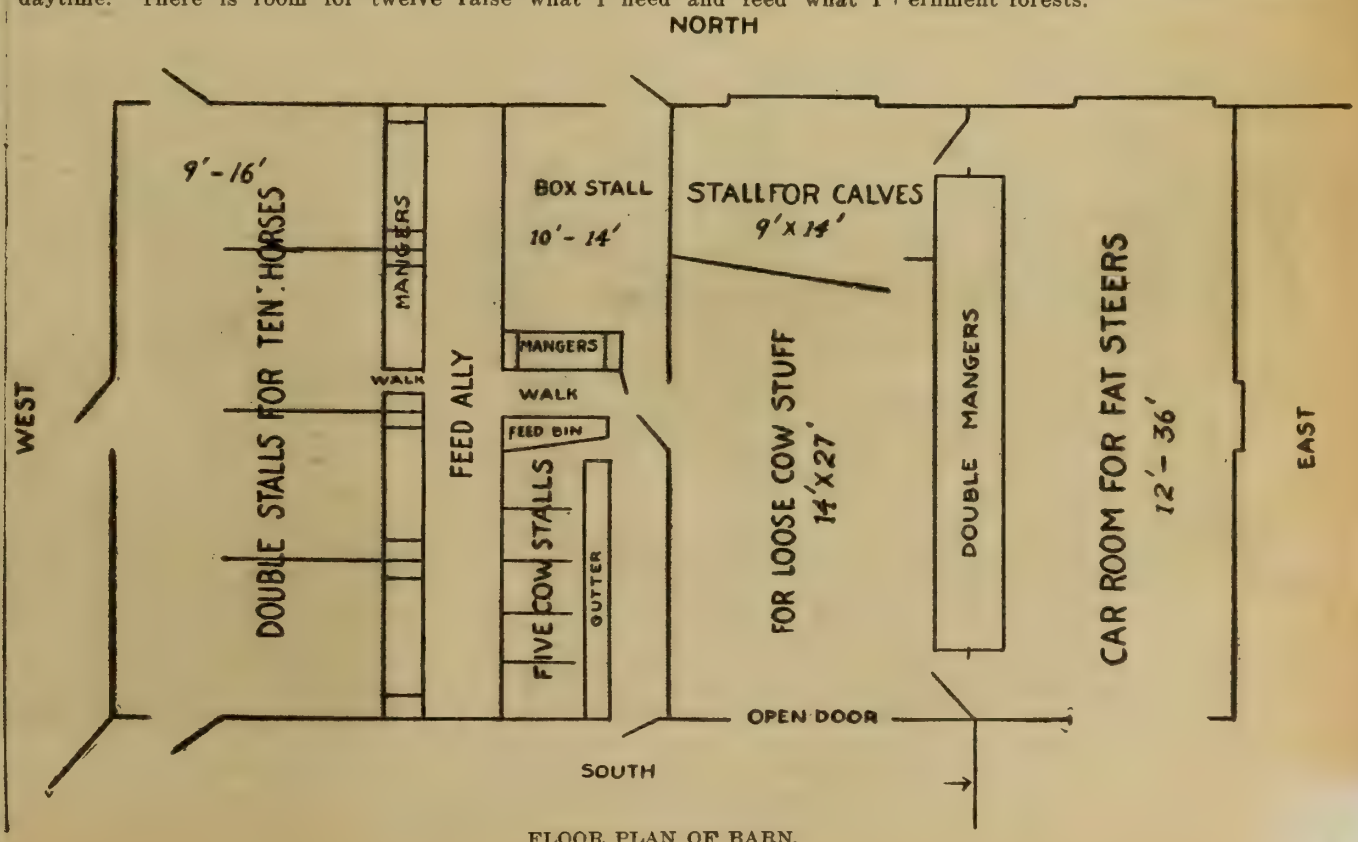
G. H. Plagmann Describes Structure That Has Proven to Be Well Adapted to 160-Acre Farm.

I am sending you under separate cover a floor plan of my all-purpose barn which might be of some interest to some of your readers. I am also sending a photograph of the barn.

Just a word about the barn plan. I think it is a good everyday barn for the 160-acre farmer, as he has room for eight work horses and in a pinch he can take care of ten by using the box stall. The box stall has several other useful ways in any barn. There is room for five milk cows, about as many as the average farmer has, a stall for six or eight calves such as

BARN DESCRIBED BY MR. PLAGMANN.

have to run with the cows during the summer and at weaning time feed in this stall, and for exercise they can be turned in with the fat cattle in the daytime. There is room for twelve to eighteen loose cattle, such as every farmer has, and last, but not least, room for a carload of fattening steers. Now I find that one can raise about feed enough for the above amount of cattle on a 160-acre farm (of course, this means a silo), although I have bought some corn the last few years on account of not raising a normal crop out here. But my theory is to raise what I need and feed what I raise and buy and sell a little to make it balance up.



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Good stabling a necessity, either in mixed farming or in specialty farming with live stock.

MINNESOTA DAIRY BARN.
Properties of the Woodlawn Dairy Farm, Owatonna, Minnesota, George M. Flinn, proprietor. Roomy and Well Ventilated Dairy Barn.

THE OLD HOME AND THE NEW.
A northern Iowa farmer has pushed back the old farmhouse and is building a modern one in its place.

PROSPERITY ON A MISSOURI ROAD.
These improvements are not new, but they have been kept up in good shape and will give long service.

WHERE THE FAMILY ENJOYS LIFE.
This modern farm home has every convenience and there is no incentive for the young folks to move.

SOLID COMFORT FOR ALL.
Good improvements at reasonable cost serve well the needs and comforts of man and beast.

UPPER WISCONSIN

OUT OF THE LOG BUILDINGS.

Fifteen years ago Alois and Joe Stengl, Bohemians by nationality, became Upper Wisconsin farmers when they invested their savings in cut-over lands in Langlade county, a few miles from the city of Antigo, and began making their fortunes from the soil. The Stengl brothers went into that country under the same conditions that thousands are going into Upper Wisconsin today and by following out the best farming methods they are realizing today the dream they had when they took up their residence there several years ago.

THE LOG FARM BUILDINGS AND HOUSE WHICH SERVED THE STENGL BROTHERS UNTIL THEY COULD BUILD MORE MODERN HOMES AND BARNS.

Alois Stengl, thirty, economical and energetic, did the best he had with the means at hand and from the day he began cutting out the second growth timber, removing the stumps and preparing the land, he had the desire to some day own a fine dairy herd, a fine barn for this herd, a modern residence and those conveniences that the farmer is entitled to and deserves. That was the dream, as he called it then, and when the big barn, the silo and the residence he now has under construction are completed this spring that dream will have come true.

NEW AND COMPLETED BARN AND SILO OF JOE STENGL, LANGLADE COUNTY, IN WHICH HEMLOCK TAKEN FROM THE WOODS NEARBY WAS USED FOR THE BEAMS AND THE RAFTERS.

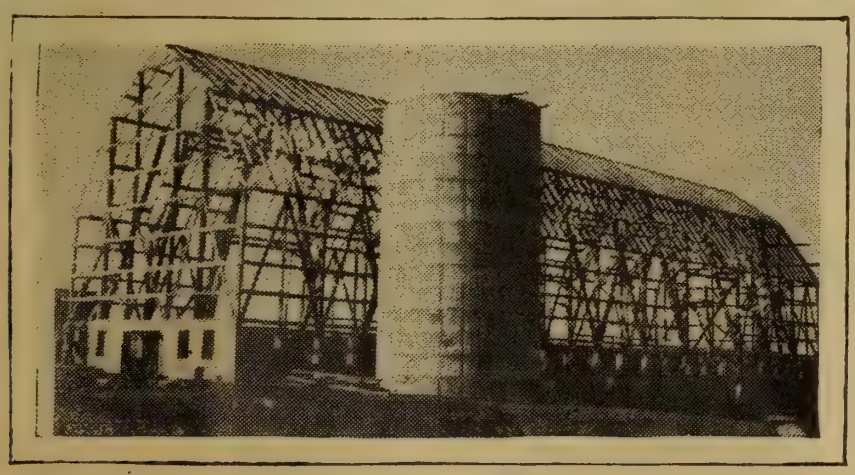
Stengl is building a barn which would do credit to most any community; his big concrete silo attached to this barn will provide the succulent feed and fine grade Holstein herd requires during the winter months and in his new home he will enjoy the comforts of the city man who has everything modern and up to date. These improvements are being made from the profits of fifteen years of farming in Langlade county; the sale of adjoining lands he had the vision to buy and clear years ago.

Recently when an editor of The Wisconsin Farmer was in Antigo, F. G. Swoboda, county agricultural representative, said he wished to show the writer what could and had been done in Upper Wisconsin where the right man was in control. So he drove the writer to the farm of Alois Stengl and then to the farm of Joe Stengl, his brother, only a few rods away and across the road.

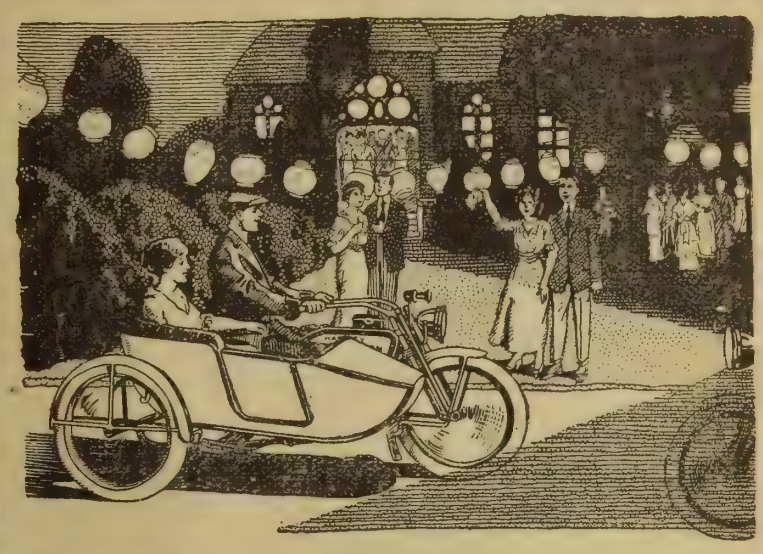
"You don't have to go to the old, established sections of Wisconsin to find fine dairy barns and homes," Mr. Swoboda remarked before we left Antigo, and one glance around after reaching the Stengl farms readily convinced the writer that he was correct.

Alois Stengl's new barn is thirty-six feet wide, 138 feet long and has accommodations for sixty-five head of cattle and six horses. It is modern in every respect and the picture shown herewith was taken just as the framing was being completed and shows for itself the substantiability of construction.

Particular attention has been paid to ventilation and light and this barn will be as nearly ideal as a cow home can be made. There are forty-eight



ALOIS STENGL, LANGLADE COUNTY, BUILDING A BARN FOR THE FUTURE, AS WELL AS FOR TODAY. NOTE THE SUBSTANTIAL CONSTRUCTION AND THE BIG, CONCRETE SILO.



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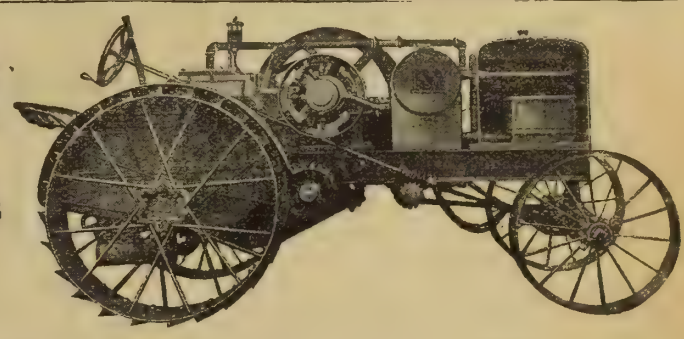

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windows in the basement, which are equal to the wall space, and through the center there is a big driveway which will permit a wagon to pass through. Mr. Stengl had many of his own ideas which he worked into this barn. For many years—the years he has been dreaming of such a barn—he has been sketching barn plans at night and getting ready for the time when he could afford to build. He worked out many of his own ideas and the barn was practically designed by him, with the assistance of Mr. Swoboda. Mr. Stengl was anxious that it be the last word in barn construction, as he expected it to stand for many years, and, like the progressive farmer, he studied barn construction, took all the suggestions he could take and then worked in his own ideas as they had developed from practical experience.

When the writer visited this farm Mr. Stengl was found up among the rafters sawing and nailing, as the barn was built under his personal direction, and he has helped handle every timber that has gone into it. The basement is of concrete and when

THE NEW MODERN FARM HOME OF ALOIS STENGL, PARTLY COMPLETED.

the construction is complete it will be equipped with the most modern stanchions, litter carriers, etc.

The silo, which stands at the side, was also built under Mr. Stengl's direction and by himself and farm labor. Fortunately, he had the gravel close at hand and this he dug a few feet from where the silo stands. This silo stands thirty-six feet high and is fourteen feet in diameter and is of concrete. Beside it sufficient space has been left for another silo of equal dimensions, as Mr. Stengl sees the day when he will need two instead of one in order to provide the necessary feed for his cattle.

The barn floors, etc., are all of concrete and Mr. Stengl plans a concrete yard, covered with dirt so that the stock will not mire in the muddy weather. The loft, as well as the entire building, is very large and will hold in the neighborhood of 150 tons of hay. He also has a manure pit which will catch and hold all the good qualities of this fertilizer.

Most farmers would either build the barn or the house first, but Mr. Stengl built both at the same time and the house was nearly completed when the writer was there. It has eight rooms and will be as modern as it is possible to make it.

These improvements Mr. Stengl is making after living in the little log house as shown in the illustration on page 17. The old barns are also of logs and native hewn timber and these old buildings are located just a few rods east of where the new ones are situated. They have served their purpose and during the time they have been in use Mr. Stengl has cleared most of his land and secured the means for the new buildings.

Holsteins and Chester White swine have been the favorites with Mr. Stengl. He has eighty acres in his farm, seventy of which is cleared, and with the use of a pure-bred sire he is grading up his herd so that today he has one of the nicest high-grade herds in the county. He has given much attention to potatoes, as most farmers have in that community, and has found this a very profitable crop. During the last year or two he has been growing certified seed. Mr. Stengl would not advise any farmer in his vicinity to go into swine raising exclusively, as he does not favor swine except to take care of the waste on the dairy farm and for this purpose he has found the Chester Whites money-makers for him.

Progressiveness runs in the Stengl family, as Joe Stengl, his brother, whose farm is only a short distance away, only recently completed a new barn which ranks in size and up-to-dateness with that of Alois Stengl. Joe Stengl has also built a new home and does not intend to be outdone by his brother.

The barn on the Joe Stengl farm is 40x135 feet and resembles very much, as shown by the accompanying picture, the barn of his brother. He is also a certified potato grower, has eighty acres, of which sixty-five is under the plow, and is building up a good herd with the use of his brother's pure-bred sire. Most of his cows at present are natives, but he is working gradually into the strictly dairy breeds.

Like his brother, Joe Stengl, with the help of neighbors and others, built his own barn and a better constructed one the writer has never seen. The rafters and beams are all of native hemlock, cut from the woods by the Stengl brothers themselves. By using this timber they were able to save large sums, as it was not necessary to buy the heavy, expensive timbers. This barn is also fully equipped with the most modern equipment and connected therewith is a concrete silo, 14x40 feet. This concrete work, as well as the brick partitions, etc., in the barn was done by Mr. Stengl. The lighting and ventilation has had special attention. The silo and the straw pile cut off the view in the picture of the many windows in the dairy part of the barn, but there is sufficient window space to let in plenty of sunshine—one of the great requisites of the modern barn.

What these two brothers have done should be an inspiration to the farmer who is struggling along in the old, old way. Neither of them were endowed with any great amount of cash capital, but they were energetic, progressive and thrifty and they have made this Langlade county cut-over land, with good cows and hogs, provide for them good, modern, comfortable homes and farm buildings just as comfortable for their stock.

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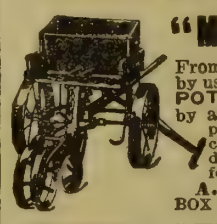

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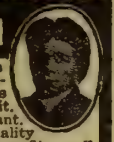

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HORTICULTURAL TOPICS

THIS department is conducted by an experienced horticulturist. All questions relating to horticulture will be answered if of sufficient general interest to warrant a reply in this department. Communications and inquiries upon horticultural topics should be addressed to this office.

AS TO HOTBEDS.

The time to begin hotbed work for early garden plants depends very much upon the latitude of the gardener. For south Wisconsin and north Iowa the first to tenth of March is plenty early enough. In all places it depends upon what you plan to use hotbeds for. If you plan to grow lettuce and radishes for market or for your own table you may, with advantage, start the crop weeks before you need to plant cabbage, tomato and other seeds to get the plants for the garden.

For growing vegetables which are to come to maturity in the bed the earlier you begin operations the better, provided you are ready to protect the beds against possible cold snaps. For this purpose you should choose an especially favorable location, one with a south front, and with good wind protection on the north. In this case even the first of February is none too early, but to do it then requires foresight to have soil in convenient shape and place. Then, if you have well-made, tight frames, well set and tight glass, and good mats for night covering you can have your vegetables up by March 1st.

In the growing of tomato and cabbage plants it is a rule for the gardeners to allow six weeks from the seeding to the garden transplanting. That means that if it is safe to transplant to the field May 15th, April 1st is the time to sow the seed.

But again circumstances alter cases, and if you have provided plenty of hotbed room so that you can transplant once in the beds to secure extra stocky plants, then you may sow these seeds in March or even February. This is the way to get very early tomatoes. Having plenty of room, when the plants have reached the four-leaf stage, transplant, giving each one two inches of room. They may stand there until they are four or five inches high. Then transplant into flats, where they are to remain until taken to the field the middle of May. But leave these flats under the glass so that you can protect them at night.

In all these operations you must use plenty of water, and after transplanting give shade for a couple of days. When the warm days of spring come remove the glass entirely during the daytime, replacing it at night. In this way your plants will become more stocky and healthy than if kept covered. And this is as true of lettuce and radishes as of the other plants. To grow good lettuce and radishes you must allow plenty of room. The temptation is to crowd them because your space is limited, but that always proves to be a fatal error. Let radishes have two inches of space and lettuce four if you would have proper development.

A very good way to start cuttings of the grape and currant is to use the bottom heat principle, as secured by the hotbed. But for this purpose you will need a thicker surface layer of soil than for the vegetable plants. Also, other soft-stemmed plants which need sand and heat to grow from the cutting, like geraniums, will respond very readily if given this opportunity. There are many gardeners even, not to mention amateurs, who do not fully appreciate the possibilities of the hotbed.

JEFFERSON COUNTY GRAIN SHOW.

The Jefferson County Order of the Agricultural Experiment Station will hold its annual grain show at the Water and Light Company Hall, Lake Mills, Wisconsin February 26th, at one o'clock. A good program is being prepared and there will be a fine exhibit of products and good prizes awarded. Prof. R. A. More and Prof. J. G. Halpin, of Madison, and Supt. A. J. Thorne, of Jefferson, will speak.

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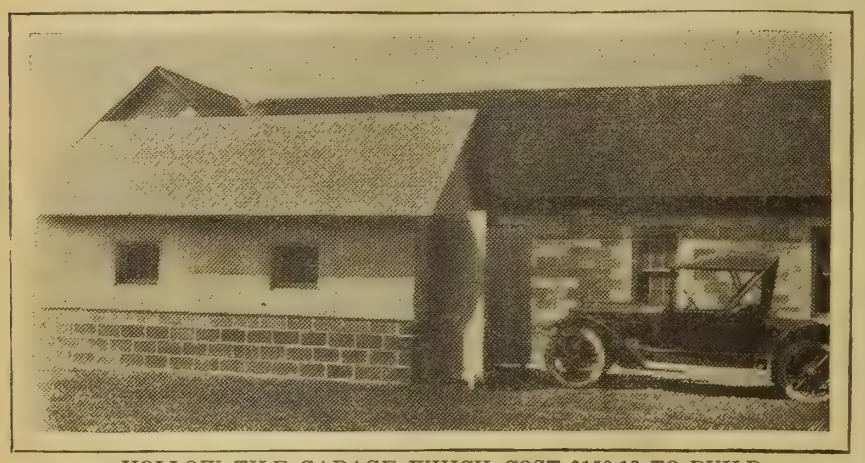
THOUSANDS of farmers and stockmen are taking long chances in housing their automobiles along with their cattle or other valuable property. A separate building—a fireproof garage—should be erected to receive the car after its day's work.

But safety from fire is not the only reason for building a garage. Owing to the value of this piece of machinery with its many intricate parts, a suitable and adequate protection should be provided—something more than a corner in the stable where there is often much dampness in the air to rust the metal parts or disintegrate the tires, and litter to be tracked into the car or be thrown against its sides in passing. These sides, by the way, are covered with a delicate coat of enamel which rough handling soon mars and disfigures. This last-mentioned advantage of a garage—that of protection—is particularly emphasized where the leaving of the car out in the open overnight or for several days, has become a habit.



HOLLOW TILE GARAGE WHICH COST $152.13 TO BUILD.

While the lack of time or money, or both, have been offered as excuses for not building a garage, it is more often a failure to realize the seriousness of exposing his property to fire or the unnecessary waste resulting from housing the car in poor quarters or none at all, that is the real reason for most farmers not having a garage. However, where insufficient time seems to be the obstacle, it might be well for the farmer to stop and consider if the building of a garage is not more important than some of the tasks that are now taking up most of his time. In most cases it will be found that this is true.

Disproving the belief that a large sum of money is required to provide a shelter for the car, the garage shown in the first of the accompanying illustrations is offered as a solution to the problem, its cost being $152.13.

This building is twelve feet wide, twenty feet long and eight feet high to the eaves. Hollow clay building tile, eight inches in thickness, were laid upon a conduit foundation, for the base wall. On top of these were laid six-inch hollow tile to the eaves, these last mentioned tile being covered with white stucco on the exterior surface. The roof is three feet high at the ridge, being constructed with a wooden frame which is covered with asphalt shingles. On the inside of the building the walls and ceiling are plastered. This, however, may be omitted and the cost of the building lowered. The floor is of cement. Two single-sash windows and a double end door complete the equipment of this remarkably attractive and well-built garage.

In order that anyone who is contemplating the erection of a garage may have the opportunity of figuring on a fireproof, permanent, low-cost-of-upkeep, dry and good looking building, the itemized figures showing the exact actual cost of this garage are shown in the accompanying table.

FIREPROOF GARAGE ON FARM IN CERRO GORDO COUNTY, IOWA.

For the benefit of the uninitiated in the realm of hollow-tile masonry, it might be said that the conduit "seconds" referred to in the above list of materials for both the foundation and the floor are very similar in size, shape and substance, to a hollow tile. In fact, these conduits are not usually obtainable by the average builder on the farm, and may very readily be replaced by first quality hollow tile at perhaps a slightly higher cost. It might be said in passing that conduits are not manufactured as a building material, but for use in protecting telephone and telegraph wires when laid underground. However, owing to the rigid inspection which this material has to pass before being accepted by the inspectors of the purchaser, some are rejected because of slight defects. These "seconds," being strong and impervious to moisture, are used wherever obtainable for foundation work in residences of not more than two stories.

It will be noted that hollow tile—or conduits, as it happens to be in this case—were laid for the floor with a topping of cement, perhaps one or two inches in thickness, spread over them. This form of construction makes a dry floor, due to the insulating air spaces in the tile—an advantage not to be underestimated when it is remembered that rubber tires have to rest on this floor many hours every day and sometimes for days at a time. Disintegration of the tires and rust of the machinery is thus obviated. The lack of this feature is a great objection in floors of solid masonry, which, it is claimed, draw dampness from the earth beneath. Whether or not this is true, there is no denying the fact that a solid floor is colder and, therefore, more liable to condense moisture upon its surface than one that is provided with insulating air cells through which neither moisture nor heat will readily travel.

A hollow-tile farm garage in Cerro Gordo county, Iowa, is also shown herewith, this building being different in size, design and finish than the one first shown. Hollow clay building tile 5x8x12 inches were employed in its construction, no stucco being used. The roof consists of a wooden frame with a fireproof composition roofing paper laid over it and cemented. The cost of this building was not obtained, but it is estimated at about $125 and surely not more than $150. Both of the garages here shown are built to accommodate one car.

MASONRY			
Walls:			
368 6x12x12 hollow tile, @ 6½c each			$23.92
160 8x8x16 hollow tile, @ 7½c each			12.00
20 6-duct, 3-foot conduit sections, @ 15c each			3.00
20 4-duct, 3-foot conduit sections, @ 10c each			2.00
3¼ bbls. cement, @ $1.50			4.90
1 bbl. lime			1.00
2 yards sand, @ 75c			1.50
2 bags of plaster, @ 30c			.60
500 lath, @ $2.50			1.25 $50.17
Floor:			
2½ bbls. cement, @ $1.50			$3.75
1¼ yards sand, @ 75c			.94
¾ yard gravel, @ 75c			.57
120 3-duct, 2-foot conduit seconds, @ 3c			3.60 $8.86
ROOF:			
22 pieces 2x4x10-foot lumber, 147 feet			
14 pieces 2x4x12-foot lumber, 112 feet			
20 pieces 1x4x10-foot lumber, 67 feet			
	326 feet, @ $15.00		$4.89
1x10-foot sheeting	210 feet		
1x 8-foot sheeting	130 feet		
8-foot shiplap	56 feet		
	396 feet, @ $25.00		9.90
10 pounds nails, @ 2¼c			.22
4 squares asphalt shingles, @ $3.85			15.40 $30.41
DOORS AND WINDOWS:			
Door (Double):			
3-inch flooring	48 feet		
2x6x16-foot pine	56 feet		
	104 feet, @ $25.00		$2.60
Door Frame:			
2x8 pine	43 feet, @ $24.00		1.07
Window Frame:			
2 2x8 frames, @ $1.00			2.00
2 sash, @ 50c			1.00 6.67
Total cost of material			$96.11
LABOR:			
Walls:			
59½ hours mason, @ 30c			$17.85
55½ hours helper, @ 17½c			9.72
Floor:			
7 hours mason, @ 30c			2.10
20 hours helper, @ 17½c			3.50
Roof:			
39 hours carpenter, @ 21c			$8.19
22 helper, @ 17½c			3.85
Doors:			
30 hours carpenter, @ 25c			8.50
11 hours painter, @ 21c			2.31 $56.02
Total cost of building			$152.13

Get a KING Plan of Ventilation for Your Barn

IT takes years of experience to know how to design the right plan of ventilation for a farm barn. No two barns are alike—no ventilation problems are alike. Each requires a special plan—worked out to meet the conditions. That's why you need a King Plan—prepared by the King Board of Experts—and backed by many years of experience in ventilating thousands of farm barns. This is the personal service that goes with every

KING System of Ventilation

Planned Individually for the Building it Goes Into

Before we point out the location of a single intake or flue, we go to the heart of your ventilation problem. Then we design a plan according to the conditions and construction of the building. This accounts for the certainty of satisfactory results with a King System.

The King Aerators, which set on the roof, are the first part of the King System; you can have them with or without a complete system. If you are not ready for the complete system right now, at least put King Aerators on your barn and in the meantime ventilate the hay mow or upper part of the barn and add beauty to the building.

Send for These Books

One is our catalog, which is free. The other is Prof. King's Book on Ventilation (sold heretofore for 75 cents) mailed for 10 cents to cover postage and packing.

King Ventilating Co.
1144 Cedar Street
Owatonna Minn.

WAIT! BEFORE YOU ORDER

Seed or Nursery Stock let me send you our wonderful, new, different and original four-color seed book—an eye opener—the Royal Purple Grand Champion line of pure tested field and vegetable and flower seeds, also fruit trees, vines, shrubs, etc., at new, surprisingly low prices.

REMEMBER Nothing is so good but what it can be better. Thousands who have bought from other firms for ten and twenty years tell us we give better seeds at lower prices. Investigate. Get our book. Try our seeds and nursery stock. You will say the same thing. All I ask you to do is just get our book, look it over, try our seeds—be your own judge.

Galloway Bros. & Co., Dept. 31 Waterloo, Iowa

WANTED

MARCH 1st, good man to help care for herd of thoroughbred Holsteins and assist in general farm work. Must be dry hand milker. Give experience and wages wanted in first letter. C. J. Taylor, R. 3. Whitewater, Wisconsin.

PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send for three free books; inventions wanted, etc. I market your invention without charge. Richard B. Owen, 37 Owen Bldg., Washington, D. C.

Besides being low in cost, these buildings are absolutely fireproof—a quality that is inherent in the material of which the walls are built. Hollow tile, in its manufacture, receives a baptism of fire in the kiln and emerges immune from the effects of future heat.

Hollow tile makes a building that is permanent—one in which the cost of upkeep is practically nothing. Your first cost is your last cost with a building of this type. These garages are neat in appearance. No, they are more than that, they are handsome, a distinct addition to the land upon which they stand. The one in which the white stucco finish was used, together with the brown glazed base wall and green asphalt shingle roof, presents a particularly attractive appearance. And the best part of it is that these colors are lasting. No paint is needed to restore faded tints, for the color of these materials does not fade.

How a Farm Success Was Made

H. G. Jamison, For Thirty-one Years a Farmer in Outagamie County, Tells Wisconsin Farmers a Few Experiences.

[Editor's Note.—At the request of the editor Mr. Jamison wrote the following for publication in this paper.]

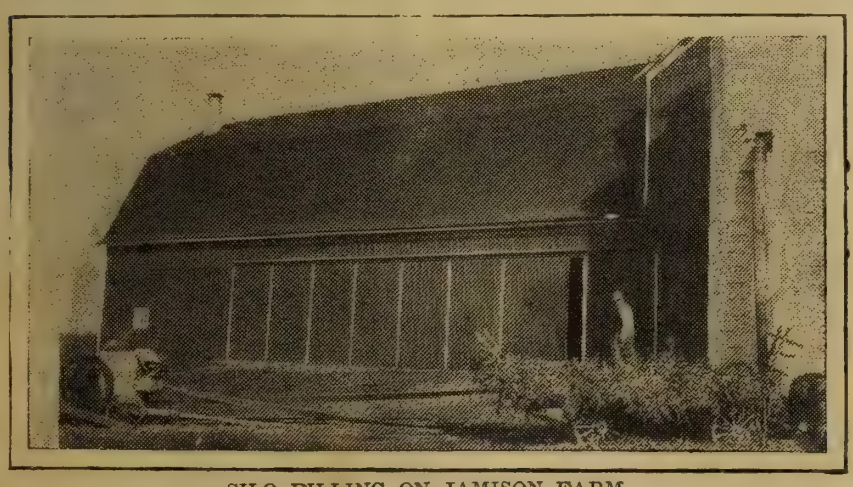
THIRTY-ONE years ago this coming spring I started in on an eighty-acre farm, in a small way, with a few head of common cattle. In fact, all we had was common, and, being somewhat of a novice at farming, made quite a few mistakes and for a number of years it was rather hard sledding. When attending one of the first farmers' institutes held in this locality I heard I. J. Clapp speak on the merits of the Guernsey cow, which caused me to decide then and there if I ever had the wherewith would own Guernseys some day. The first registered sire we had came from the I. J. Clapp estate. Later on I purchased a registered heifer from a Rosendale breeder. At present I have twenty-five pure-bred females and twenty-eight grades, all good producers, and some excellent ones in the lot. Have been doing A. R. work for two years. Among the better ones is an aged cow with an A. R. record of 13,058 pounds, 566 pounds butter fat. A two-year-old heifer at two years and four months produced 10,286 pounds milk and 529.76 pounds fat. The herd is headed by a son of Governor of the Chene. Each and every milking of all the cows is weighed and two-day samples taken and tested each month in order to know what each individual is doing.

As to our farming operations our farm has increased from an eighty to 280 acres, by purchase and acquisition. At present a little over 200 acres are tilled. There is considerable variety in character of the soil, some being heavy, stiff clay, some sandy, sandy loam, and a part rather gravelly. Something over 100 acres are sown to grain each year, mostly barley and oats, and some wheat and rye. The straw is a very important factor where considerable live stock is kept. Used as bedding it helps greatly in making large quantities of fertilizer. Being members of the agricultural experiment association led us to try the pedigreed grains, which we are much pleased with. The yield is better and prices received for seed are much better than are paid by the local buyers. Each year from forty to fifty acres of corn are planted, also considerable red clover and alfalfa each year. Practically all of the land sown to grain is seeded with red clover which usually furnishes a lot of pasture in the fall. Our milk is separated and the fresh milk fed to the calves until they are about a year old. This is an important factor in raising dairy stock.

Herewith is a likeness of most of our force. All have taken or are taking the short course at Madison, except the youngest, who is going to high school. He has charge of the poultry department. Has Rhode Island Reds, a good portion of the surplus stock being sold for breeders. The boys in the picture do not stand according to ages. They are Robert, Clarence, Harvey, Stanley and Howard. Harvey looks after the feeding of the herd and he does it very creditably.

"OUR BEST CROP," WRITES MR. JAMISON.

TEST COWS ON PASTURE.



SILO FILLING ON JAMISON FARM.

Did You Get Your Velie Catalog?

THE 1916 Velie catalog is a beautiful book and tells all about their Biltwell Models 22 and 15, both of which are splendid cars, which have been reduced in price. You can read about some of their features in the advertisement on page 12. Then you should write for a copy of their catalog, addressing Velie Motor Co., 118 Velie Place, Moline, Ill., and mentioning this paper. Then if you can do so, a trip to their factory, not far from you, would prove instructive and interesting.—Adv.

Good Seed Corn From 1915 Crop.

GOOD seed corn from the new 1915 crop, dried in the field or on the rack, can be had of the Vermillion Seed Co., Vermillion, S. D., at reasonable prices. It will test from 90 per cent to 98 per cent and they give you plenty of time to test it before paying for it. A catalog will be sent on request to Vermillion Seed Co., Box A, Vermillion, S. D., if you will mention their advertisement on page 19.—Adv.

Whether You Build or Remodel

JAMES Barn Plan Service will start you right and keep you going right. Whether you do the work yourself or hire a builder, this service, which is a great feature of the new book, "The JAMESWAY," will be a wonderful help and profit to you. Tells what the barn owner needs to know about location, drainage, lighting, ventilation, equipping, etc. It will *save* you money and *make* you money. Written by W. D. James and his expert associates—originators of sanitary barn equipment ideas.

JAMES Sanitary Barn Equipment

in a barn built the Jamesway means bigger results with less labor. Notwithstanding its reputation and superior quality, it is reasonably priced. Stalls as low as $4.25 each. An ideal stall to begin with is the one for $5.25, with the same quality and construction of the complete feature-equipped stalls. The only difference between JAMES stalls of different prices is in some of the special features which are added to the higher-priced stalls.

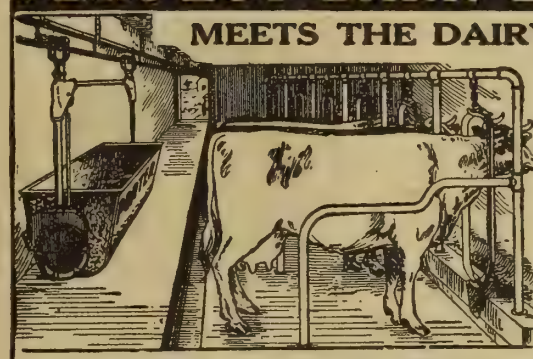
The JAMES line includes Stalls, Stanchions, Pens, Carriers, Ventilators, Trucks, Watering Buckets, etc. To get a free copy of "The JAMESWAY" just fill out the coupon aud mail it at once.

JAMES MFG. CO.
D.Y. 63 CANE ST. FT. ATKINSON, WIS.

JAMES MFG. CO., D. Y. 63 Cane St., FT. ATKINSON, WIS.
Please send me your book, "The JAMESWAY," showing how to build and equip a dairy barn.
I have.....cows. Expect to build.....or remodel.....about.....
Am interested in Stalls, Stanchions, Pens, etc. [ ]
Carriers [ ] Ventilators [ ]
Name.....
Post Office.....
R. F. D.....State.....

PORTER PERFECT BARN EQUIPMENT

MEETS THE DAIRYMAN'S DEMAND



for quality and makes possible sanitary conditions, and opens the way for the farmer or dairyman to acquire deserved profits with decreased labor.

The Porter steel stalls, cow stanchions, litter carriers, barn door hangers, hay carriers and other fixtures are acknowledged leaders everywhere.

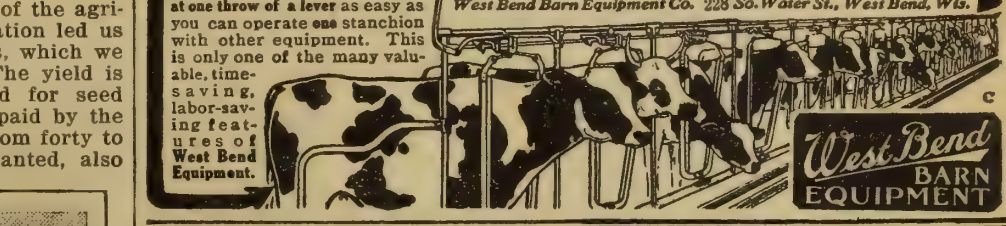
We offer expert advice relative to your remodeled or new barn without obligation in any sense. Write us about the requirements and ask for our *free catalog*, which fully describes the World's Standard Line.

J. E. PORTER COMPANY, 682 Fremont St., Ottawa, Illinois.

This Lever Controls Entire Row

With West Bend Automatic Swinging Stanchions you can lock up or release 2 to 50 cows at one throw of a lever as easy as you can operate one stanchion with other equipment. This is only one of the many valuable, time-saving, labor-saving features of West Bend Equipment.

The West Bend line includes Steel and Wood Stanchions (automatically and individually operated), Feed and Litter Carriers, Watering Bowls and complete systems. *Write today for free catalog showing entire line.*
West Bend Barn Equipment Co. 228 So. Water St., West Bend, Wis.



West Bend BARN EQUIPMENT

THE HINGE DOOR SILO

THE most convenient and best equipped silo made. Doors always in place. Strong steel frame. Perfect anchorage. Best material throughout. We also make the Lansing Silo, the Chicken Silo, and Tanks of all kinds.

WOODS BROS. SILO & MFG. CO.
Main Office: Dept. 19 Lincoln, Neb.
Factories: Lincoln, Neb.; Lansing, Mich.; and East St. Louis, Ill.

CHAMPION SILO

Now is time to buy. Prices lowest, quality highest, saving the greatest. Interlocking anchoring system, oil filled staves, modern improvements is why farmers who investigate all say that

Is the best. Write for colored picture 26x30 of CHAMPION Silo on Modern Farm.
WESTERN SILO CO.
115 ELEVENTH ST.
DES MOINES - IOWA

Kinsman Beauty (and Calf) No. 139476
Owned by Dr. Roberts
Year's Record:
580.82 lbs. Butter
12,724.50 lbs. Milk

It's Up to You When Your Cows Get "Off Feed"

It's mighty important that you do something for your cows when they are in this condition. But it's just as important to care for them when they are giving a good flow of milk. A cow should be fed to her full capacity if she is to be profitable. The strain of milk production is apt to overtax the digestive organs. The heavy milker needs a tonic to act on the secreting glands that produce the gastric juices that convert the food into milk. Dr. David Roberts' COW TONIC does that very thing. It contains such roots, barks, herbs, as nature would supply if the cow roamed the meadows and woods.

Dr. David Roberts' COW TONIC

is a great conditioner at all times, especially when cows are stabled or on dry feed. Cow Tonic is not a food, but a genuine tonic to act upon the digestive organs and enable cows to get full benefit of their food.

Breeding Tonic acts on organs of reproduction and gets animals in condition for sure breeding.

Cow Cleaner removes the afterbirth naturally. Heals and leaves breeding organs in normal condition.

Calf Cholera Remedy prevents scours and calf cholera. Keeps calves in continuous growth.

Calf Meal, Diolice, Badger Balm, Laxotonic and Stokvigor—valuable remedies, which should always be kept on hand.

Special Sample Offer
STOKVIGOR, 10c

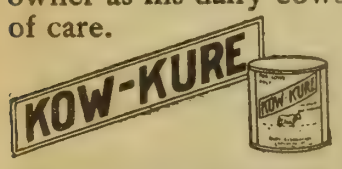
Enough to feed a cow two weeks. Aids digestion, tones the system, makes animals grow fast and develop better. Send 10c and we will send Special Sample Package to test on your own stock. Don't fail—don't wait. Enclose dime or stamps.

Get Dr. Roberts' Live Stock Prescriptions at your drug store—nearly 4000 dealers in U. S. If you do not already have the 184-page "Practical Home Veterinarian," treating all diseases of all live stock, send 25c and receive by mail, postpaid. Address

DR. DAVID ROBERTS VETERINARY CO.
950 Wisconsin Ave., Waukesha, Wis.

Why Do Dairy Cows Run Down?

No other farm animal is the cause of so much anxiety to the owner as his dairy cows; sickness gets in in spite of the best of care.



Why? Because the dairy cow is subjected to constant forcing to get the maximum in quantity and quality of the milk yield. This constant strain proves too much for many a good cow; some important function becomes impaired and for want of proper medical assistance she becomes a "backward" cow. In just such cases as these Kow-Kure has made its reputation for success when used to

Raise the Health Standard

of the herd. Kow-Kure is a medicine for cows only—not a stock food It has wonderful medicinal qualities that act on the organs of production and reproduction for the prevention or cure of many serious cow ailments. It is especially useful in cases of Abortion, Barrenness, Milk Fever, Scouring, Lost Appetite, Bunches, Retained Afterbirth, etc. Farmers who have used it keep Kow-Kure on hand constantly. Most feed dealers and druggists sell it

Sold in 50c and $1.00 Packages

Dairy Association Co.,
Lyndonville, Vt.

FREE BOOK
"The Home Cow Doctor"

A book that should be in every farmer's library is yours for the asking. It may be worth hundreds of dollars in a critical moment.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

GOOD COW-TESTING WORK.

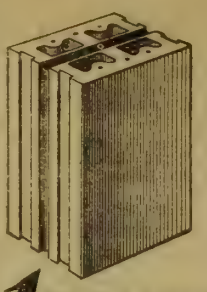
One of the best reports on cow-testing work which has come to the attention of The Wisconsin Farmer recently is that of the Winnebago County Cow-Testing Association for the month of December. During that month 16 per cent of all the cows in the association produced more than forty pounds of butter fat, there being a total of fifty-five that produced forty pounds or more. Mr. Archibald R. House, of Omro, official tester, sends in the report and says that it is the largest report which has been made for some time, especially for December. Mr. A. L. King is secretary of the association.

Mr. House's report follows:

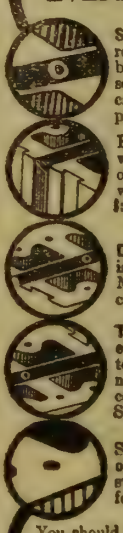
Owner, name and breed	Age	When fresh (1915)	Pounds milk	Per cent fat	Pounds B. fat
H. R. Meilahn					
Brindal, N.	5	10-18	840	4.8	40.3
Cuttie, P. B. D.	7	11-7	1023	4.4	45.0
H. P. Zellman					
Lady Jr. Queen, P. B. J.	3	10-7	626	6.6	41.3
Ray Ward					
Lilly, G. G.	4	10-16	989	4.8	47.5
Frank Barntt					
Brin, G. J.	7	11-18	939	4.4	41.3
A. C. Marshall					
Jessie, G. J.	13	11-30	849	5.3	45.0
C. H. Slayton					
May Rose, G. G.	10	12-4	1159	3.8	44.0
Finn Dell, G. G.	6	12-6	1113	6.3	70.1
F. A. Farrow					
Sukie, G. G.	9	9-20	682	5.9	40.2
Yakrose, G. G.	3	11-28	827	6.1	5.04
Caroline, G. G.	13	10-12	756	5.6	42.3
Redie, G. G.	9	11-27	924	4.8	44.4
Jessie, G. G.	6	10-28	775	5.7	44.2
Arthur Lloyd					
Dora, G. G.	2	11-9	828	5.2	43.1
John Thrall					
Newell, G. J.	9	10-18	905	4.6	41.6
Old Yellow, G. G.	8	11-20	1280	3.8	48.6
E. E. Mackie					
Fanny, G. G.	5	9-24	986	4.7	46.3
Mary, G. G.	7	10-22	992	5.2	51.6
Eva, G. G.	8	11-9	1240	4.3	53.3
Daisy, G. G.	8	10-24	986	5.0	49.3
Lulu, G. G.	11	10-15	837	5.6	46.9
Lady of Waukesha, G. G.	7	12-19	1001	4.8	48.0
Milton Mackie					
Glory, G. G.	7	12-8	1190	4.8	57.1
Silver, G. G.	6	12-16	1070	4.4	47.1
Beauty, G. G.	7	12-17	983	4.2	41.3
Nancy, G. D.	9	12-12	1181	3.6	42.5
Oren Miller					
No. 6, G. J.	3	11-10	735	6.2	45.6
No. 16, G. J.	7	11-10	791	6.0	47.5
No. 11, G. J.		11-25	828	5.4	44.7
Jennings Bros.					
No. 6, G. D.		10-30	1252	3.8	47.6
Jerry Shea					
No. 9, N.	5	11-20	1085	4.1	44.5
W. P. Bussey					
No. 22, G. J.	9	11-8	1123	3.8	42.7
No. 7, G. D.	7	11-19	1132	3.6	40.6
No. 8, G. D.	8	11-19	1286	3.5	45.0
M. L. De Voin					
Grany, G. H.	8	11-6	1184	3.4	40.3
Quick, G. H.	8	11-18	1615	3.4	54.9
Fenant Bros.					
No. 12, G. J.	6	12-5	868	5.4	46.9
No. 25, G. J.	5	11-5	1004	4.4	44.2
A. L. King					
No. 4, G. J.	8	10-31	1004	4.5	45.2
No. 2, G. H.	7	10-18	1023	4.0	40.9
No. 8, G. H.	9	12-1	1302	4.0	52.1
No. 6, G. H.	13	12-12	1116	3.6	40.0
W. A. Goodell					
No. 9, G. J.	5	12-10	865	5.6	48.6
No. 16, G. J.	9	11-12	930	6.8	63.2
H. K. Mosely					
Delmas Girl, P. B. G.	4	8-20	877	5.4	47.4
Daisy, G. G.	8	11-17	1199	4.5	54.0
Bertha, G. G.	6	10-20	1061	4.0	42.4
N. A. Rassmussen					
Bo Peep, G. G.	5	11-15	1014	4.2	42.6
G. E. Washburn					
Lynda, P. B. J.	5	8-29	800	5.0	40.0
Rose Linda, P.B.J.	5	10-1	749	6.2	46.4
Bessie, G. J.	4	9-21	696	6.4	44.5
Spots, G. J.	6	10-30	873	6.4	53.9
Black Wallis, G.J.	6	10-30	800	5.2	41.6
J. J. Ihig					
Daisy, G. G.	5	11-15	666	6.8	45.2

WAUPACA COUNTY TESTING RECORD.

Owner, name and breed	Age	When fresh (1915)	Pounds milk	Per cent fat	spuned B. fat
C. C. Boyce					
Rhoddie, G. H.	9	10-9	1404	3.2	44.9
Annie, G. H.	5	11-25	1621	3.4	55.1
Crumple, G. H.	8	11-12	1203	3.7	44.5
Genevieve, G. H.	4	8-9	1004	4.0	40.2
Fred T. Jorgensen					
Ciff, G. H.	9	11-17	1308	4.0	52.3
F. R. Constance					
Missy, G. J.	4	10-22	809	5.4	43.7
Phoeba, R. J.	7	1-8	558	7.6	42.4
Pinkerton Bros.					
Aggie, R. H.	10	10-15	1590	4.7	74.7
Queen, R. H.	2	12-11	980	5.0	49.0
E. F. Schroeder					
Bessie, G. G.	2	11-20	871	5.0	43.5
Love, N.	3	11-13	1026	4.8	49.2
Belle Guern, G.G.	4	11-6	831	6.4	53.2
E. O. Frihart					
Alice, G. H.	9	12-4	1116	3.6	40.2
Herman Becker					
Nigger, G. J.	9	10-6	883	5.6	49.4



5 BIG FEATURES of the EVERLASTING SILO BLOCK



Steel cotter keys tightly secure the steel reinforcing bands to the separate silo blocks. This is the only **correct** way to secure **proper tension.** No other silo can offer this essential feature. It is patented.

Each block has deep **side corrugations,** which lock or dovetail with corrugations of blocks adjoining, when laid in the wall. This insures all joints being **absolutely air-tight.**

Double protection against heat and cold is furnished by **double air chambers.** Most other silos have only a single air chamber.

Thick triple walls afford wonderful **extra strength.** The severest wear and tear that a silo is subject to can have no effect on the scientific block used in constructing the EVERLASTING SILO.

Several small **perforations** permit **thorough burning** of the block and in construction they partially fill with mortar, forming vertical anchorage.

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Saves milk from spilling and keeps it clean

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Just invented and patents granted. Has all the latest features and conveniences. Big improvement over any other stool. Made of strong, durable metal, aluminum painted. Fully guaranteed. Swinging pail holder, adjustable for any size pail. Pail swings out of way if cow kicks or moves. Sliding seat gives milker four inches backward or forward movement. Collapsible—can be hung on peg when not in use. **PRICE $1.50** each. Send for circular. AGENTS, this stool sells wherever demonstrated. Write for special price.

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FULLY GUARANTEED CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a **sanitary marvel;** easily cleaned.

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Cut your green fodder and pack your silo full—**at the right time.** Save the value that is lost by delay. The Papec is simple—few parts—all easy to get at. **Guaranteed** to cut and lift silage to top of **highest silo,** with **any** power, provided the cutting wheel does not fall below the moderate speed of 600 revolutions a minute.

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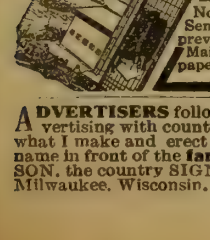

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Goldie, G. J.	3	10-2	794	6.2	49.2
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Aug. Guenther					
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Frieda, G. G.	6	11-30	1187	4.0	47.5
Corn, G. G.	5	12-28	1153	3.7	42.7
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Bessie, G. G.	8	11-15	852	4.8	40.9
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Bob Tail, G. G.	6	12-4	781	5.2	40.6
Linden, N.	8	11-17	967	5.4	52.2
Arthur Glock					
Golden Beauty, R. G.	7	10-10	973	4.4	42.8
French Beauty, R. G.	4	11-11	1088	4.3	46.8
Cherry, G. G.	3	12-27	1249	3.9	48.7
C. A. Stinchfield					
No. 18, G. G.	12	10-12	862	5.6	48.3
No. 20, G. H.	4	12-25	1172	3.8	44.5

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

BUTTER AND BUTTER FAT.

To the Editor:—Many a creameryman has found himself "stumped" when he has attempted to explain to a patron why more pounds of butter can be made from a certain quantity of cream delivered to the creamery than the pounds of butter fat that the producer is paid for. When the creameryman visits a "backsliding" or "backslidden" patron he is very often uncourteously told that he is not giving honest tests, as more butter has been made at the farmer's or dairyman's home than was paid for the butter fat at the creamery from an equal quantity of cream.

Every person interested in dairying should have a complete and clear understanding of the difference between butter and butter fat. It is the absence of this that accounts for many a misunderstanding between him and the creamery. The producer of the cream is right when he says he can make more butter from a given quantity of cream than the number of pounds of butter fat he would be paid for at the creamery from the same cream. He is mistaken, however, when he considers the creameryman has been dishonest with him, because it is inevitable that the butter should exceed the butter fat.

Butter fat as shown by the Babcock test is practically a pure oil. There may be, and probably is, a small quantity of water or acid in the fat column in the neck of the test bottle, but we will suppose it is a pure oil, as the impurities have no material influence on the final result of the Babcock test. The butter fat is a complex oil made up of nine different fats, each having its own particular melting point. When, however, they are physically united the alloyed fats have a common melting point.

When the butter fat is in milk or cream it is in the form of minute globules, it being emulsified throughout the mass. It is then in very close physical relationship with the other components of the milk product, and without adding a sufficient amount of acid to destroy all the solids in milk —not fat—it would be practically impossible to get free from the other milk components.

When cream is churned there still remains this close relationship between the butter fat and some of the other milk components. While the butter fat becomes more united and in a solid form during the churning process, it takes up or becomes more or less closely united physically with waste and curd or casein which were in the cream. Besides these substances there is incorporated in most butter enough salt to give it the desired flavor. Butter, then, is composed of butter fat, water, curd and salt. Hence, more butter can be made from a given quantity of butter fat than the amount of original butter fat. In creamery practice an attempt is made to get about one-fifth more butter than butter fat. For instance, if 100 pounds of butter fat were in a churning an effort would be made to get about 120 pounds of butter.

The buttermaker cannot apply methods whereby he is assured of a certain increase over the butter fat, but he can secure approximate results. This increase of butter over butter fat is known as overrun. This is the factor that makes it possible for the creameryman to pay the market price of butter for the butter fat. This is a matter that has caused much discussion in creamery circles and it is one that every person at all interested in dairying should understand.

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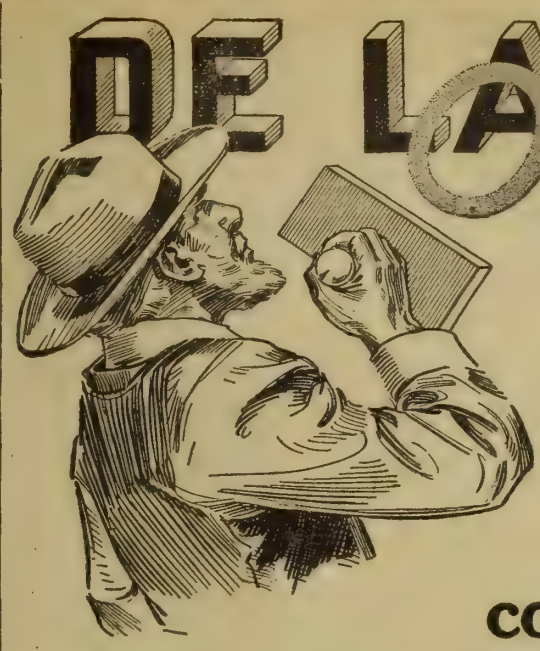

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O.K'd by nearly two million cow owners

MORE De Lavals are being sold than all other makes combined—nearly 2,000,000 are now in use. Year by year an ever increasing proportion of farm separator buyers reach the conclusion that the De Laval is the only cream separator they can afford to buy or use.

In fact, about the only excuse ever offered for buying any other separator nowadays is that its first cost is a little less than the De Lavals.

But they soon find out that the last cost of a cream separator is what really counts, and when they realize that the De Laval gives the most and best service for the money they buy a De Laval.

Over 40,000 users of inferior machines discarded them for De Lavals during the past year in the United States and Canada alone.

Better be right in the first place and start with a De Laval.

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SUCCESS PLANS AHEAD!

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GET THESE FREE BOOKS NOW

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North and South, East and West, you farmers and stockmen have proved the soundness of a Silo investment—but—you shouldn't overlook the true economy that lies in the best Silo Filler.

Now is the time—become thoroughly posted on Silo Filler values—know what we offer, what the other fellow offers. Cool headed, unbiased comparison tells the story.

Write for our Free Books—Free Catalogue of Silo Fillers—Free Book on Silage.
Write for Catalogues of other Fillers—con 'em over point by point and let your decision be governed by what you know rather than by the unsupported song of some salesmen.

WILDER-STRONG IMPLEMENT COMPANY, Monroe, Michigan, Box 31

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RAISE YOUR CALVES WITH BLATCHFORD'S CALF MEAL

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You get 100 gallons of rich milk feed from 100 pounds of Blatchford's Calf Meal, and it costs you only one-fourth as much. It will make your calf grow fast and well.

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are heated from central heating plant squarely underneath. No cold corners or sides, no "cooked" eggs. Note the big oil tank—requires only one filling—one gallon for the entire hatch.

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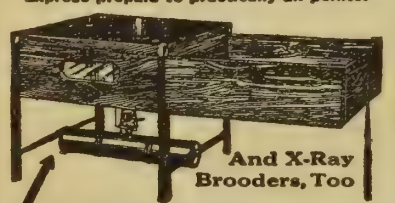

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Any Place—Any Time—Any Climate

These famous Metal covered machines make big money every year for poultry raisers. High quality material, superior construction, simplicity and ease of operation all combine to give the greatest hatching value.

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In this incubator you get the greatest hatching value at the lowest possible price. Will last a life time.

C. P. Shirey, writes: I hatched 220 chicks from 222 fertile eggs. I have not done this with any other machine and I have tried a number.

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Get our big new 1916 Combination Offers on *Progressive Incubators* and *Brooders*. Wonderful bargains—built from best materials with latest improvements. Only machine with *hundreds of dead air cells* to protect eggs against sudden changes.

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Many users report a chick from every hatchable egg. Easy to run. Built of genuine California Redwood; Copper Hot Water Heater; Double-disc Regulator; Double Doors; Safety Lamp; Tester, etc.

$7.85 LOWEST PRICE YET FOR BIG 155 EGG INCUBATOR

No extras. Incubator and Brooder both $9.85. Freight paid east of Rockies. Money back with 8% interest if machine doesn't make good. Order from this ad or get Special 1916 Combination Offer and Free Poultry Book showing why *the Progressives* beat them all for results.

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and Almanac for 1916 has 200 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about Incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.
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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

BETTER QUALITY POULTRY.

Interest in quality poultry is rapidly on the increase in Wisconsin, as evidenced by the exhibits at the sixty odd shows which were held in the state this winter. The majority of the shows, for some unknown and unaccountable reason, showed a falling off in the number of fowls shown, but what was lost in most instances in numbers was more than made up in quality, and this is encouraging, as quality is what counts in the end.

Poultry interest has always been strong in Wisconsin and we doubt if any state has more real, dyed-in-wool fanciers. The state is ideally located for poultry production, just as it is for dairying, being close to the big markets and within a night's ride of 20,000,000 of the nation's population. So it is to be expected that this industry will grow, whether the egg fancier is breeding for the show ring, the market or for egg production.

One of the outstanding features of the winter's shows was the increased interest by the farmers of the state. More farmers, we believe, had birds on display this year than ever before, for the farmer is learning that by introducing good blood into his flocks he can increase his profits, for good breeding always tells, whether for egg production or eating purposes. One drawback in the past has been that too many of our farmers have just kept poultry, while today they are beginning to see the value of establishing a good egg-laying strain and raise a breed that will produce for him when the prices are the best. Most of the show fanciers, it must be admitted, live in and adjoining the cities and towns and most of them are breeding for show purposes, but it is these fanciers that are supplying the good stock for the farmers and enabling them to increase their poultry profits. Thousands of farmers must also be classed as show bird fanciers and where they have shown this year they have succeeded in winning their share of the prize money. But the average farmer and his wife is interested in the hen for the eggs she will lay and the stress laid upon the good egg producers at this winter's shows will no doubt lead to more interest by the farmers themselves, not only in the shows, but also in the value of good breeding and laying stock.

Many of the shows in the state this winter switched from the score card to the comparison system of judging and this accounts in many instances for the decrease in the number of birds exhibited. We do not believe that a small show, one with only a few hundred birds, should try the comparison system of judging, but should stick to the score card. However, the larger shows, those with 700 or 800 birds or more, probably can do better under comparison judging, as these shows draw from a larger district and bring together more good birds than the smaller show can possibly expect. When the state show at Madison switched from score card to comparison the entries increased, as the exhibitors at this show, coming from a large area, preferred this system. However, in most cases the change occasions a decrease for a year or two, and in the case of the smaller shows it is usually found advisable to return to the scoring system or stick by it if a change has not been attempted.

Many of this winter's shows also dropped the specials for the largest displays, regardless of quality. Of course, this tended to reduce the number of entries, but at the same time increased the quality, as the exhibitors only brought their very best birds, not wishing to pay transportation and entry fees on those which could not win on quality when there was nothing offered for the largest displays. However, the prize for best displays was always contested for very keenly and this sweepstakes award proved very popular at all the shows, as it is splendid advertising for the fancier who has the best display. Consequently the fanciers work hard for this award. With the largest display award eliminated, it is not unexpected to see exhibitors bring in only a few birds when they formerly brought in a score or more, and we should not be surprised to see many of the shows which dropped this class this winter establish it again next winter in order to retain former records for number of entries.

Another innovation was carried out this year by several of the larger shows by offering big specials in certain classes if the birds in that class exceeded a certain number of entries. Instead of offering 60 per cent of the premium fee as an additional inducement if a class fills to a certain figure, offer 120 per cent, or double the extra award. This makes the breeders get out among themselves and boost to get the larger number of birds, as the winners will get a big bonus if these conditions are met. This was tried out very successfully at the Milwaukee and the Chicago shows. This means a little additional expense in premiums, but it is worth the extra cost.

The Northeastern Poultry Show, which was held recently at Green Bay, switched from the score card to the comparison this year and consequently reported a decreased number of entries. This was the seventh annual show of this association. Otto Platz, of Manawa, with his pen of S. C. White Orpingtons, won the silver cup for the best pen in the show.

The Green Bay show also offered $65 for the best displays, which brought out a good list of entries. This was won also by Otto Platz, of Manawa, but with his display of Black Orpingtons. The first prize was $30 and the second prize of $20 went to the S. C. Anconas of J. R. Meyer, of Oshkosh; third prize of $10 to the white-crested Black Polish display of A. Zehms, Jr.,

Ironclad TRADE MARK Wins in the Two BIGGEST HATCHING Contests Ever Held

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We also furnish 180 Egg Incubator and 180 Chick Brooder both for only $12

Wisconsin Incubators have long proved their wonderful hatching qualities. Competing with every make known, they won in the five big annual National Hatching Contests. Think of it. Five consecutive victories. That certainly proves you can't make a mistake. Shipped on 30 Days' FREE Trial

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10-YEAR GUARANTEE

Wisconsins have hot water heat, double walls, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Made of finest, select, clear CALIFORNIA REDWOOD, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1916 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

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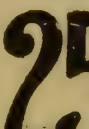
25 TIMES World's Champion Belle City Incubators and Brooders



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of Green Bay, and fourth prize of $5 to the S. C. Rhode Island Reds shown by W. H. Laabs, of Green Bay. The birds exhibited all showed good breeding and, although the number of entries dropped down, the quality standard of this show was maintained, the officers of which are: J. M. Franssens, president; Wm. J. McGinnis, first vice-president; M. J. Laluzerne, second vice-president; L. H. Hebel, secretary; Chas. O'Connor, treasurer; Louis Tennis, warden; Henry Herbeck, director; Otto Tonne, director; Herman Holz, director; E. Van Ermen, show secretary; Louis H. Hebel, show superintendent; W. J. McGinnis, kennel superintendent. Judges: D. E. Hale, poultry; Geo. F. Ziegler and Stanley Whittaker, kennel; J. M. Franssens, pigeons.

The Southern Wisconsin Poultry Show at Janesville turned out to be the best ever held by that association from a quality standpoint, although, like all the larger shows, showed fewer birds in the coops than last year. The Janesville association puts up large cash prizes in several of the important breeds and secures a large turn-out as a result. The first national show ever held in the state was that held at Milwaukee by Theodore Hewes, who also stages the Chicago show, and this show drew a large number of Wisconsin fanciers. Being held at the same time as the Janesville and Green Bay shows, it secured many birds which otherwise would have gone to one or the other of these shows. The competition was very keen at Milwaukee and the fact that the entries were not so large as expected can only be laid to that unaccountable reason which affected the majority of the winter exhibitions. Appleton has always had a splendid reputation and the annual show there last week, in connection with the state meeting of the American Poultry Association, was not an exception.

The Fond du Lac show brought together some very good stock and the Buff Orpington display by E. L. Bemis, of that city, swept the boards, taking the grand sweepstakes award for the best display in the show. These Buff Orpingtons also took sweepstakes on display in that class.

The Eau Claire County Poultry Association at Augusta cooped 431 birds, which was ten more than a year ago. The quality was of the highest and there were about thirty exhibitors from different points. Barred Rocks were the leading class, with seventy-nine entries, and F. B. Seville, of Augusta, had the highest scoring Barred Rock in this large class. The association's sweepstakes prize of $25 cash to the highest scoring pen was awarded to C. H. Rickey, of Augusta, on Brown Leghorns. E. E. Thwing is president, F. B. Seville is secretary and George Howard is treasurer.

The Marion Poultry Association staged a very successful show at Marion with 224 birds cooped. F. S. Ludow, secretary of the show, won two of the three specials, one of his S. C. White Leghorns being placed as the best shaped male in the show and one of his White Orpingtons as the whitest bird shown. Frank Rodgers had the best shaped female, a black Wyandotte.

The Western Progressive Poultry and Pet Stock Association always hold a fine show at Sparta and the 1916 show was up to previous standard. There were thirty-five exhibitors and the birds showed good breeding. F. H. Chamberlain, of Sparta, won the specials for the highest scoring cock and pullet, with all classes competing, with S. C. Rhode Island Reds. He also had the highest scoring male in the American class. F. J. Heilman, of Sparta, with a Partridge Rock, had the best scoring cockerel of all classes; J. E. Kircheis, of La Crosse, with a Hamburg, the highest scoring hen of all classes.

Some very high-class birds were shown at the Stevens Point show, at which S. F. Taylor, of Waupaca, with his Silver Comb White Leghorns, won the special for the best pen in the show. The awards were placed by J. G. Greenwald, of Cedarburg.

The Northwestern Wisconsin Poultry Show at Menomonie brought together the very best display of fowls ever seen in that city. The special for the best shaped bird went to a White Wyandotte cock exhibited by H. J. Penfield, of Hudson, and the best colored bird was a White Leghorn pullet shown by Oscar Hellum, of Menomonie. The White Leghorns were strongest in numbers, with forty-three birds, all bred in Dunn county. White Wyandottes and Rhode Island Reds were next in importance.

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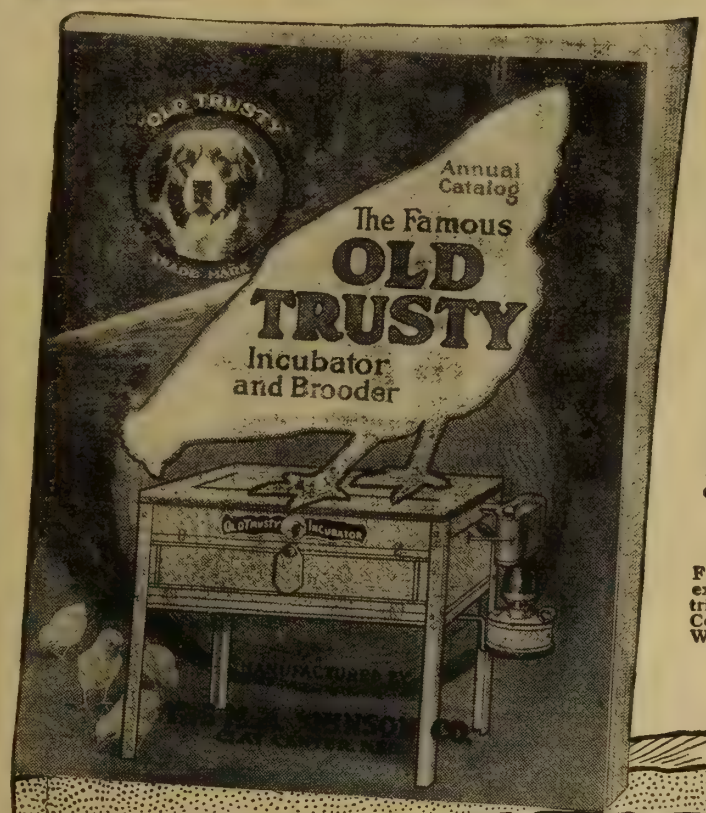

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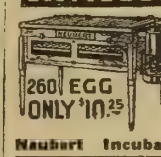

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DEPENDABLE EGGS FOR HATCHING.

To the Editor:—The hatching season will soon be here again, so let us get busy and make a good beginning. The success or failure will depend much upon the breeders selected. I never use pullets for breeders. Eggs from hens that show lots of vigor and vitality and that come through the fall molt in good condition are the desirable ones for hatching strong, healthy chicks. I have noticed that the active hen, the one that is always on the lookout for her feed, while cheerfully singing all the while, is the one that can be depended on to produce strong, fertile eggs. Of course, pullets' eggs will often hatch as well as hens' eggs, but my experience is that if they do the chicks are never as strong and do not mature as rapidly as chicks from the older hens' eggs.

The selection of the cockerel with which to head the flock is equally as important as the selection of the hens. The loud-crowing, active cockerel that is master of the situation is the one to breed from. I never use the same cockerel two years in succession.

I find that much the best results are obtained when the breeders have free range, but when this is impossible they should be given as much room as possible in which to exercise and keep them busy scratching for their food. If fowls are kept in confinement a variety of food must be fed in order to duplicate that which they can obtain when allowed free range. Wheat, oats soaked in water until soft, corn and other grains, an abundance of green food, milk and plenty of grit, with an unlimited amount of pure water will insure good hatchable eggs.

Of course, it is understood that their quarters must be kept sanitary and free from lice and mites. When the hatching is to be done with hens, large, warm, comfortable nests should be provided. These I make by placing one or two folded newspapers in the bottom of nest boxes, filling the same partly full of clean hay or straw. Dry leaves make good nesting when other material is not to be had. With good, strong, fertile eggs ready to put under the hen half the battle is won. Hens of gentle disposition, the ones that are not easily frightened, make the best sitters, and the hatching will be uniform.

Subscriber.

As a food the soy bean ranks high. In crude protein and fat it is equal to linseed or cottonseed meal, and twice as rich as wheat bran. As a concentrated food it is valuable for hogs and sheep. Its use for dairy cows should be moderate, as too large allowances of soy beans may produce soft butter. For hay and pasturage it is excellent, as a soiling crop rather unsatisfactory, as a soil renovator highly beneficial.—[Wisconsin Station.

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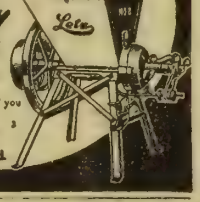

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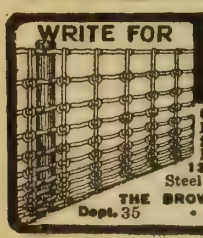

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QUESTIONS AND ANSWERS.

Horse Power of Auto Engine.

I have bought an auto truck and I want to know the horse power of the engine. The motor is four-cylinder, three and three-fourths inch bore, five-inch stroke.

Answer.—To find the horse power multiply the square of the diameter of the cylinder by the number of cylinders and divide by two and one-half. For your motor

$$\frac{3\frac{3}{4} \times 3\frac{3}{4} \times 4}{2\frac{1}{2}} = 22\frac{1}{2}$$

Therefore your motor is 22½ H. P.

Storing a Car.

I wish to put my Ford car away for the winter. What are the proper things to drain or remove? Would it be possible to run the garage light from the Ford magneto? If so, what size lights and how many?

Answer.—Drain the radiator and gasoline tank. Jack the car up so that the tires do not touch the floor. Let the air out of the tires.

You could light two eight-volt ten-candle-power tungsten lights from your Ford magneto. Connect the lights in series.

Making a Storage Battery.

Would it cost more to make a storage battery than to buy one? How is a twenty-volt battery made? How often would it have to be recharged to run a three-candle-power light?

Answer.—It would be more satisfactory and possibly cheaper for you to buy a storage battery. A twenty-volt battery has ten cells connected in series. A six-volt, forty-ampere battery would probably answer your purpose. This battery would run a three-candle-power light for about fifty hours without recharging.

Size of Wire.

For a thirty-volt system, what size wire would be suitable for lighting four sixteen-candle-power tungsten lights? Two of the lights are in my two barns, the further one 150 yards from the generator. Would number sixteen wire be too small?

Answer.—Fire insurance rules prohibit the use of wire smaller than No. 4 for lighting purposes. You could use No. 14, but your voltage would drop from thirty at the generator to twenty-five at the furthest light. This would not be a serious loss of power, however, about five watts. Using No. 10 wire the drop would be about two volts.

A Question of License.

I wish to run an auto livery. Do I need an extra license for this? How old does a driver have to be before he can obtain a license?

Answer.—We could not give a general law as to licenses owing to the difference between the various states. For all questions regarding the license of the car write to the secretary of state in which you reside. Some states have what is known as a "dealer's license" which enables dealers to obtain one special license to cover several cars.

Chauffeur's license and license to run a livery are usually local licenses. Apply to the city clerk.

Ignition From Telephone Generator.

Does a telephone generator generate a high or a low tension current? Could it be used for ignition on a Ford auto? Could it be used for a "uni-coil" system? Would it have to be direct connected or gear driven or could it be driven by a belt?

Answer.—Telephone generators usually generate a high voltage current of small amperage. It is not suitable current for ignition and the machines are not strong enough to run continuously. A belt-driven, low-tension generator could be used with a unicoil system, but a dry cell battery or a storage battery is usually used, as the amount of current consumed is quite small.

Boiler Horse Power.

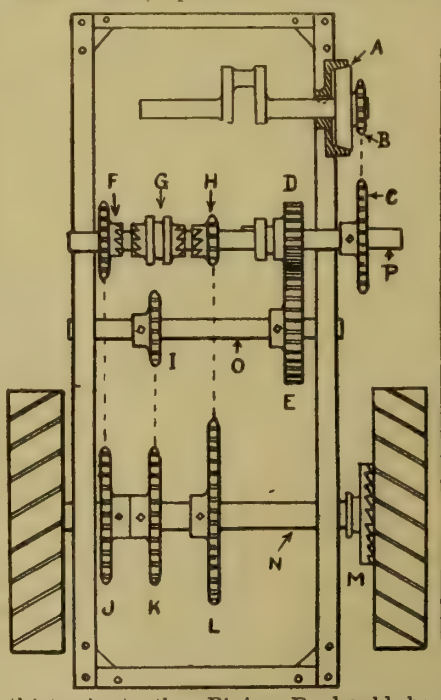
How is the horse power of a boiler calculated? How full of water should the boiler be when working?

Answer.—To find the horse power rating of a boiler divide the number of square feet of heating surface by twelve. When a boiler is working it is usually best to keep the gauge glass about two-thirds full or the water between the upper and middle gauge cocks. If the boiler "primes" badly carry a somewhat lower level. Under no circumstances should the water level become so low as to expose the crown sheet—the fire box roof. "Priming" is the carrying of water over with the steam in large quantities. It may be caused by too high a water level, bad feed water or poor boiler construction.

A Homemade Tractor.

I have a ten-horse-power gasoline engine that I wish to use for a small farm tractor. For the truck I have a manure spreader truck. The drive wheels are forty-four inches in diameter, six-inch face. They have ratchets in their hubs. To the drive axle is keyed a twenty-eight-inch sprocket wheel. The speed of the engine is 250 R. P. M. What speed will I need on the jack shaft and crank shaft to drive the tractor three miles per hour on low speed, and six miles per hour on high? For backing I have planned a second jack shaft driven by gears from the first jack shaft. Will one of the drive wheels have to be keyed to the axle in order to back the machine? I can do all the work myself except casting the gears, as I am a stationary engineer and machinist, and have a good blacksmith shop on my farm. I enclose sketch of my machine as planned.

Answer.—We publish in the figure your sketch somewhat revised. We have added the friction clutch, A, to control the drive sprocket, B. A friction clutch is necessary in order to start the tractor smoothly. Sprocket B should have twelve teeth; sprocket C should have forty-eight teeth. Sprocket F should have eighteen teeth; sprocket J should have twenty-eight teeth. Sprocket H should have twelve teeth; sprocket L should have



thirty-six teeth. Pinion D should be six inches in diameter; gear E should be twelve inches in diameter. Sprocket I should have fifteen teeth; sprocket K should have twenty-five.

The gears are shown in reverse position. To go forward slip D out of mesh with E, slip clutch, M, out of mesh with the wheel hub and the tooth clutch, G, into mesh with sprocket H. The machine is in high gear when G is engaged with F. F and H are loose on the shaft, being held in place by collars not shown on the drawing. D and G slide on the shaft, but are driven by a "feather" key in the shaft. B is keyed to the clutch. All the other gears and sprockets are keyed to the shafts.

M is a clutch to drive one of the drivers backward. On account of the ratchets in the hubs the machine could not be reversed without locking at least one wheel on the axle. If one wheel were keyed to the axle part of the differential effect of the ratchets would be lost. M must be disengaged when the tractor is running forward. At three miles per hour the drivers make twenty-three R. P. M. and the jackshaft sixty-nine R. P. M.

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." However, he decided not to tell Mrs. Burke of her just yet. The new pastor's first call was upon the Senior Warden, receiving a hearty welcome from Virginia Bascom, his daughter.

CHAPTER IV.

Milking.

BETTY, my love: I can imagine just about this time you have finished your dinner and are enjoying your after-dinner coffee in the library with your father, I would give all that I possess, though heaven knows that is mighty little, to be with you and get you to talk to me and let me tell you all that has happened since I left you. But instead of that I am alone in my room with your picture on the table while I write and it is the middle of the evening with us on the farm. I have a bright wood fire on the hearth, as it's a bit chilly tonight.

Today I have almost completed my first round of parish visits and the experience has been a revelation to me of the mixture of pathetic narrowness, hardship and self-denial of the people up here in the mountains. One minute I am all out of patience with their stupidity and the next I am touched to the heart by their patience with unendurable conditions, and their generosity and kindness to each other. I hope to be able to adjust my mental equilibrium to the situation before long and to learn to understand them better; I find that a country parson must be a man of many accomplishments, and that I have to learn my profession all over again. Yesterday I called on a poor, shriveled old woman who, I was told, was in trouble. When I asked her what I could do for her she brightened up and informed me that her apple trees were full of worms! So there was nothing for it but to take off my coat and vest, roll up my sleeves and burn out the worms I must have destroyed about a bushel, more or less. It took most of the afternoon, but she was pleased and appeared in church this morning for the first time in six years.

I have learned a lot about the rotation of crops, helped to dig a well and attended a barn dance. I have eaten pickles by the score at teas given in my honor, rather than offend the hostess; and have had horrible nights in consequence. Every morning Nickey and I take the milk down to the creamery before breakfast. I am so tanned that you would hardly recognize me; and I must confess with shame that I am never more happy than when I am able to put on my soiled working clothes and do manual labor on the farm. I suppose it is the contrast to my former life, and the fact that it takes my thoughts away from the longing for you.

The men up here seem to think I know mighty little. It's very humiliating! But since they discovered that I am neither "'ristocratic" nor "pious," they seem to be friendly enough. I often find myself wondering if much of the work in the seminary wasn't a sheer waste of time, when I am brought up against the practical, commonplace, everyday life of these people. My friend, Mrs. Burke, has a fund of common sense and worldly wisdom which is worth more than any PhD. or S.T.D. represents, to help a man to meet the hard facts of life successfully, and she has been very nice and considerate in making suggestions to me—always wrapped up in a humor all her own. I have found it practically impossible to get into touch with the farmers of the neighborhood without becoming more or less of a farmer myself, and learning by actual experience what the life is like. One man was so openly supercilious when he found out that I did not know how to milk that Mrs. Burke, who is nothing if not practical, offered to show me.

I have acquired a suit of overalls and a wide-brimmed straw hat, and so, attiring myself in the most orthodox fashion Mrs. Burke and I went to the shed yesterday where Louise, the Jersey cow, abides, and I took my first lesson in milking. Mrs. Burke carefully explained to me the modus operandi I was to pursue, and so, taking the pail between my knees, I seated myself on the three-legged stool by the side of Louise and timidly began operations. She seemed to know by some bovine instinct that I was a tenderfoot, and, although I followed Mrs. Burke's instructions to the letter, no milk put in its appearance. Mrs. Burke was highly amused at my perplexity. Finally she remarked:

"You've got to introduce yourself and get Louise's confidence before she'll give down. She thinks that you are too familiar on a short acquaintance. Now talk to her a bit and be friendly."

This was somewhat of a poser, as Louise and I really have not much in common, and I was at a loss where to begin. But something had to be done and so I made a venture and remarked:

"Louise, the wind is in the south, and if it doesn't change we shall certainly have rain within three days."

This did not seem to have the desired effect. In fact, she ignored my remark in the most contemptuous fashion. Then Mrs. Burke suggested:

"Get up and come around where she can see you. No lady wants to be talked to by a gentleman that's out of sight."

So I got up and went around by her head, fed her some clover, patted her on the neck, rubbed her nose and beg n a little mild, persuasive appeal:

"Louise, I am really a man of irreproachable character. I am a son of the Revolution; I held three scholarships in Harvard; and I graduated second in my class at the General Sem. Furthermore, I'm not at all accustomed to being snubbed by ladies. Can't you make up your mind to be obliging?"

Louise sniffed at me inquiringly, gazing at me with large-eyed curiosity. Then as if in token that she had come to a favorable conclusion, she ran out her tongue and licked my hand. When I resumed operations the milk poured into the pail and Mrs. Burke was just congratulating me on my complete success when, by some accident the stool slipped and I fell over backwards and the whole contents of the pail was poured on the ground. My! but wasn't I disgusted? I thought Mrs. Burke would never stop laughing at me, but she was good enough not to allude to the loss of the milk!

Some day when we are married and you come up here I will take you out and introduce you to Louise and she will fall in love with you on the spot.

My most difficult task is Senior Warden—and it looks as if he would not make friends, do what I will to "qualify" according to his own expressed notions of what a country parson should be. But I rather suspect that he likes to keep the scepter in his own hands, while the clergy do his bidding. But that won't do for me.

So you see the life up here is interesting from its very novelty, though I do get horribly lonesome sometimes. If I had not pledged myself to the Bishop to stay and work the parish together into something like an organization I am afraid I should be tempted to cut and run—back to you, sweetheart.

And there was a postscript:

I've not said half enough of how much Mrs. Burke's wisdom has taught and helped me. She is a shrewd observer of human motives and I expect she has had a struggle to keep the sweetness of her nature at the top. She is, naturally, a capable, dominating character, and often I watch how she forces herself to let persuasiveness take precedence of combativeness. Her acquired philosophy, as applied to herself and others, is summed up in a saying she let drop the other day, modified to suit her needs: "More flies are caught with molasses than with vinegar—but keep some vinegar by you!". Verb. Sap!

CHAPTER V.

The Miniature.

IT HAPPENED that the Reverend Maxwell committed a careless indiscretion. When he went to his room to prepare for supper he found that he had left the miniature of a certain young lady on the mantelpiece, having forgotten to return it to its hiding place the night before. He quickly placed it in its covering and locked it up in his desk, but not without many misgivings at the thought that Mrs. Burke had probably discovered it when she put his room in order.

He was quite right in his surmise, for just as she was about to leave the room she had caught sight of the picture, and, after examining it carefully, she had exclaimed to herself:

"Hm! Hm! So that's the young woman, is it? In a gilded frame set with real glass rubies and turquoises. I guessed those letters couldn't come from his mother. She wouldn't write to him every blessed day; she'd take a day off now and then, just to rest up a bit. Well, well, well! So this is what you're dreaming about; and a mighty good thing, too—only the sooner it's known the better. But I suppose I'll have to wait for his reverence to inform me officially, and then I'll have to look mighty surprised! She's got a good face, anyway, but he ought to wait awhile. Poor soul! she'd just die of loneliness up here. Well, I suppose it'll be my business to look after her and I reckon I'd best take time by the fetlock and get the rectory in order. It isn't fit for rats to live in now."

Mrs. Burke's discovery haunted her all day long and absorbed her thoughts when she went to bed. If Maxwell was really engaged to be married she did not see why he did not announce the fact and have it over with. She had to repeat her prayers three times before she could keep the girl in the gilt frame out of them, and she solved the problem by praying that she might not make a fool of herself.

The next morning she went over to Jonathan Jackson's house to see what her friend and neighbor, the Junior Warden, would say about the matter. He could be trusted to keep silent and assist her to carry out some provisional plans. She knew exactly what she wished and what she intended to do, but she imagined that she wanted the pleasure of hearing

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someone tell her that she was exactly right.

Jonathan Jackson was precisely the person to satisfy the demand, as his deceased wife had never allowed him to have any opinion for more than fifteen minutes at a time—if it was different from hers, and when she had made a pretense of consulting him he had learned by long experience to hesitate for a moment, look judicially wise and then repeat her suggestions as nearly as he could remember them. So Jonathan made a most excellent friend and neighbor when any crisis or emergency called for an expert opinion.

Mrs. Burke had been an intimate friend of Sarah Jackson, and just before Mrs. Jackson died she made Hepsey promise that after she was gone she would keep a friendly eye on Jonathan and see that he did not get into mischief, or let the house run down or "live just by eatin' odds and ends off the pantry shelf any old way." Mrs. Jackson entertained no illusions in regard to her husband and she trusted Hepsey implicitly. So, after Mrs. Jackson's mortal departure, Hepsey made periodic calls on Jonathan, which always gave him much pleasure until she became inquisitive about his methods of housekeeping; then he would grow reticent.

"Good morning, Jonathan," Hepsey called, as she presented herself at the woodshed door, where she caught Jonathan mending some of his underclothes laboriously.

"Well, I declare," she continued, "I'm blessed if you ain't sewin' white buttons on with black thread. Is anybody dead in the family or ain't you feelin' well as to your head this mornin'?"

His voice quavered with mingled embarrassment and resentment as he replied:

"What difference does it make, Hepsey? It don't make no difference, so long as nobody don't see it but me."

"And why in the name of conscience don't you get a thimble, Jonathan? The idea of your stickin' the needle in and then pressin' it against the chair to make it go through. If that ain't just like a helpless man, I wouldn't say.'

"Well, of course, sewin' ain't just a man's business, anyway, and when he has just got to do it——"

"Why don't you let Mary McGuire do it for you? You pay her enough, certainly, to keep you from becomin' a buttonless orphan."

Mary McGuire, be it said, was the woman who came in by the day and cooked for Jonathan and intermittently cleaned him out of house and home.

"She don't know much about such things," replied Jonathan confidentially. "I did let her do it for a while, but when my button holes got tore larger, instead of sewin' 'em up, she just put on a larger button, and I'd be buttonin' my pants with the covers of saucepans by now if I'd let her go on."

"It is curious what helpless critters men are, specially widowers. Now, Jonathan, why don't you lay aside your sewin' and invite me into your parlor? You aren't a bit polite."

"Well, come along then, Hepsey, but the parlor ain't just in apple-pie order, as you might say. Things are mussed up a bit." He looked at her suspiciously.

When they entered the parlor Mrs. Burke gazed about in a critical sort of way.

"Jonathan Jackson, if you don't get married again before long I don't know what'll become of you," she remarked, as she wrote her name with the end of her finger in the dust on the center table. "Why don't you open the parlor occasionally and let the air in? It smells that musty in here I feel as if I was attendin' your wife's funeral all over again."

"Well, of course, you know we never did use the parlor much, 'cept there was a funeral in the family or you called or things like that."

"Thank you, but even so, you might put things away occasionally and not leave them scattered over the place."

"What's the use? I never can find auything when it's where it belongs, but if it's left where I drop it I know right where it is when I want it."

"That's a man's argument. Sakes alive! The least you could do would be to shut your bureau drawers."

"What's the use shuttin' bureau drawers when you've got to open 'em again 'fore long?" Jonathan asked. "It just makes so much more trouble and there's trouble enough in this world, anyway."

"You wouldn't dare let things go like this when Sarah was livin'."

"No," Jonathan replied sadly, "but there's some advantages in bein' a widower. Of course, I don't mean no disrespect to Sarah, but opinions will differ about some things. She'd never let me go up the front stairs without takin' my boots off, so as not to soil the carpet, and when she died and the relatives tramped up and down reckless like I almost felt as if it was wicked. For a fact, I did."

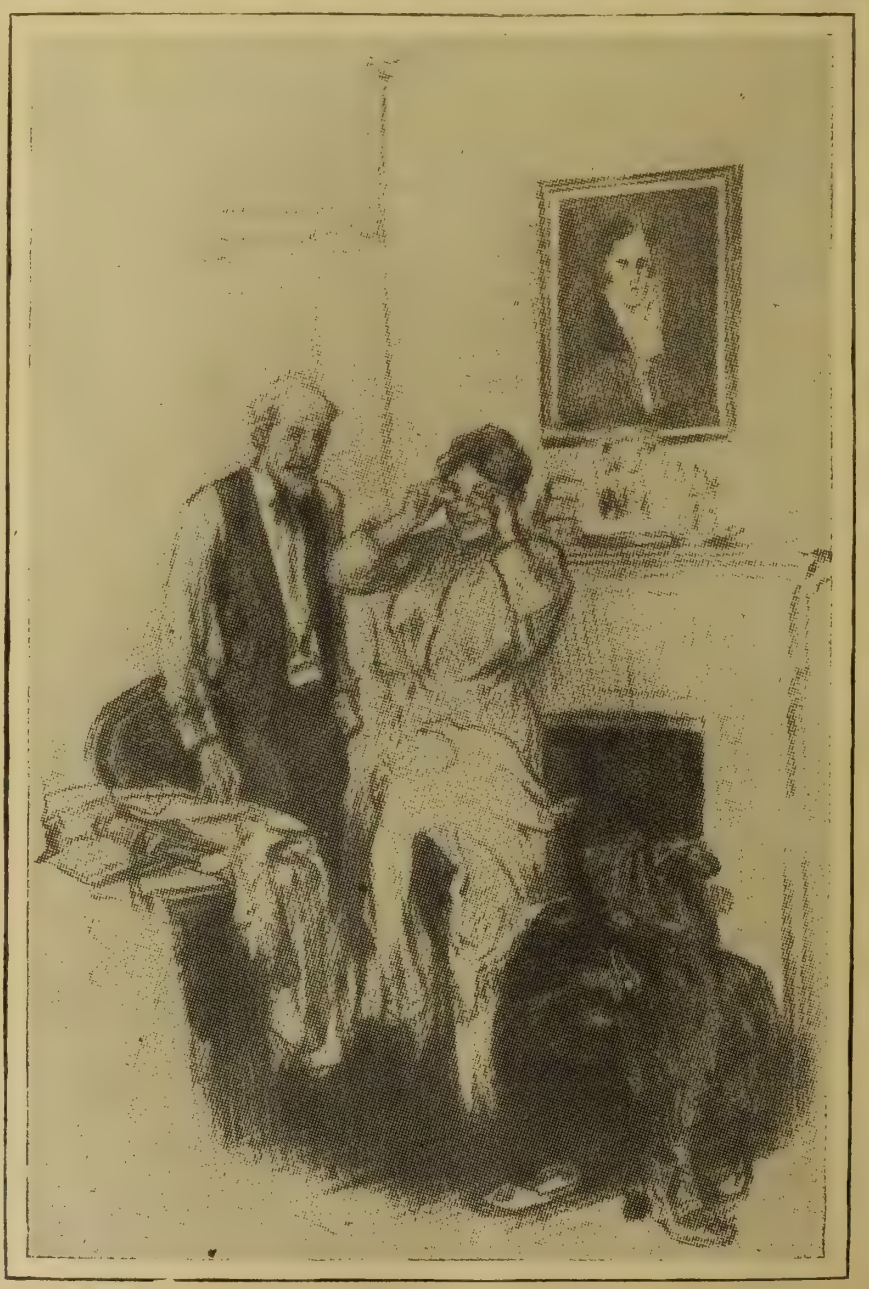
"Well, I always told Sarah she was a slave to dust; I believe that dust worried her a lot more than her conscience, poor soul. I should think that Mary McGuire would tidy up for you a little bit once in a while."

"Well, Mary does the best she knows how. But I like her goin' better than comin'. The fact is, a man of my age can't live alone always, Hepsey. It's a change to live this way, till——"

"Oh, heaven save the mark! I can't stay here talkin' all day, but I'll tidy up a bit before I go, if you don't mind, Jonathan. You go on with what you call your sewin'."

"Go ahead, Hepsey. You can do anything you like," he replied, beaming upon her.

(To be continued.)



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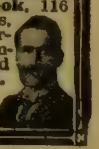

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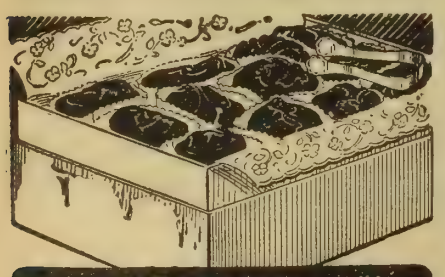

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

THE EMERGENCY SHELF.

Do you have an emergency shelf? Are you one of those efficient housekeepers who, at a moment's notice, can go to the larder and in a few minutes set before the unexpected guest a regular "company dinner?"

Most of us are not so fortunate. Of course, those who live in the country and have plenty of milk, cream, butter and eggs find it easy to prepare many delicious dishes in short order. Cream soups, custards, souffles and omelets are good hurry-up dishes. A salad dressing of sour cream can be quickly prepared for a dressing of cabbage or any vegetable at hand, or halves of pears and peaches with chopped nuts served with a boiled salad dressing make a most delicious salad.

Nevertheless, the emergency shelf is a good thing to have, especially in the small town or country home where the telephone may not bring the desired article on short order. The thoughtful housewife will stock her shelf with the foods, accessories and relishes that are especially adapted to her needs. It should contain a few cans of fish (salmon and tuna) which may be served plain or in combination with other foods, cans of vegetables like corn, peas and beans, cans of soup of various kinds, olives, pickles, a jar of salad dressing, a bottle of nutmeats, jellies, jams and preserves. Salt wafers kept in a tin box and two or three kinds of cookies stored in air-tight jars will keep for a long time.

With such a shelf one need never be caught unprepared—but don't forget to replace whatever you use at the very first opportunity. Also, the wise woman will have a list of easily prepared dishes to which she may turn in a hurry, for sometimes the best trained minds are flurried when unexpected company arrives.

NEED OF MOTHER TRAINING.

Many untrained individuals have wrong ideas concerning what constitutes proper care of children. They are liable to go to one of two extremes. Either they are overindulgent or they are too severe. The one disregards all rules of hygiene and refuses to conform to any regulations "because the baby does not want it." The undeveloped child is allowed to eat and sleep when it pleases, to follow its own caprice in all matters without regard to the effect upon its health or without consideration for the remainder of the family. The other extremist is overanxious concerning every detail of the child's life.

The overwatched child is not allowed to drink one drop more than the rules prescribe. A variation of a few minutes in its hours of sleeping is watched with concern. The baby is wrapped and toasted and kept so like a hothouse flower that it does not develop any power of resistance. One of these extremes is as bad as the other.

A great deal of judgment and common sense, with a foundation of knowledge, is necessary for the proper care of babies. It sometimes is a matter of surprise that young mothers do not make more mistakes, considering their lack of training and experience. In no other line of work do we throw such great responsibilities upon the untrained worker. It is strange that in our great system of public education no provision is made to train girls for their great work in life. There is no reason why the proper care of babies should not be a required study in school. It certainly would be of much more practical and economic benefit in later life than many of the subjects that now are required.

The present-day mothers who realize how handicapped they are by lack of knowledge of babies should insist that their daughters do not suffer from the same lack. Whatever the mothers of the country demand shall be taught in the schools will be placed in the curriculum.—[Dr. E. B. Lowry, in "Your Baby."

FOURTH PRIZE STATE FAIR BABY.

To the Editor:—I am sending you a picture of our baby girl, Esther May, twenty months old. She has never been sick and has a glorious appetite. She is fed four times a day, always at a given time, so is always ready for her meals. We feed her mostly on milk, cereals and eggs and fresh water to drink whenever she wants it.

Her clothing is the simplest kind, all made to hang from the shoulders.

For the benefit of other busy farm mothers I will tell how we kept her out of doors last summer and fall

ESTHER MAY SHANANDER, PRIZE WINNER AT IOWA STATE FAIR.

without interfering with my work. We used a clean, smooth dry goods box, four feet by four, and just high enough so that whenever she stood up she could rest her arms on it without falling out. Then we put a rug in the bottom and some playthings and placed the box in the shade—and she was safe and satisfied. She spent the greater part of the day there, except when she took her nap after dinner.

We took her to the state fair in Des Moines, where she won fourth prize in the rural baby class, with a total of ninety-five. Mrs. Wm. Shanander.

SOMETHING FOR YOU TO THINK ABOUT.

The bureau of education says that there are in the United States 20,000,000 school children. Over 12,000,000 (60 per cent) of these children are attending 250,000 rural schools. The country schoolhouse is the worst, the most unsanitary and inadequate type of building in the whole country, including not only buildings for human beings but also those used for our live stock.

Rural school children are less healthy and are handicapped by more physical defects than are the children of the cities, including even the children of the slums.

Healthful and attractive rural schools are absolutely essential to the physical, mental, social, economic and moral well-being of the children themselves, and to the life and welfare of the nation as a whole.

Country school children should have as sanitary and attractive schools and as intelligent and effective health care as school children in the cities.

The health care of rural school children should include at the least the following:

Schoolhouses sanitary and attractive, well ventilated, lighted, cleaned and equipped within and without.

Teachers better trained and better paid to do their logical and full share in carrying out a health program.

Health examinations, including dental inspection, once a year.

Follow-up health work by district and school nurses.

Health care in the school, including health instruction, warm school lunches, tooth brush drills and inculcation of all health habits.

Provision for removal of injurious defects by dental clinics, health clinics, etc.

Co-operation of all available individuals and organizations for the promotion of health and welfare of country school children.

Country children deserve as much health and happiness as city children.

Country children are entitled to as careful cultivation as live stock and crops.

A HOMEMADE FIRELESS COOKER.

A number of our subscribers have asked for information concerning the making of a homemade fireless cooker. A very satisfactory one can be made from two lard cans, a fifty-pound can and a twenty-five-pound can.

In the bottom of the larger can place two inches of paper pulp made by tearing newspapers into shreds and soaking them in water. The padding should be firmly stamped down and the smaller can placed upon this. Then fill the space between the two cans with the pulp, taking care to pack it tightly. The padding should extend to within one inch of the top of the smaller can, allowing only enough space to fit the lid. A half-gallon granite or aluminum kettle can be used for the cooking vessel.

The food is brought to a boil in the vessel, then it is covered and placed in the cooker as quickly as possible. The lid of the smaller can is placed in position. Several thicknesses of cloth then go in and the whole is coverad by the lid of the larger can.

HOW TO SEW ON A HOOK AND EYE.

Next to an unsightly buttonhole, the slovenly hook and eye does about as much damage to the looks of a garment as anything one can mention. It is really an art to sew on a hook and eye so that they will fulfill the mission for which they were invented and at the same time stay modestly out of sight.

The hook should be placed on the right side just far enough back from the edge to prevent it showing. Tack with small stitches to hold in place while the buttonhole stitch (purl on outside) is being put in to cover the loops. The hook end should be fastened firmly with tacking stitches.

The eye must be on the left side exactly opposite the corresponding hook. In order to be accurate about this, after the hooks are sewed on, place the edges of the garment in position and stick pins where the eyes are to be. Sew on eyes, also with buttonhole stitch.

The thread should match the material in color, thus making the fastenings less conspicuous.

This method holds them on so firmly that one is well repaid for the extra time required in the beginning.

When putting fastenings on plackets begin at the apex—on waists and corset covers begin at the top. Place them close enough to prevent gaping. No garment should ever be pinned.

FOR THE HOUSEWIFE.

In cooking fruit it takes nearly twice as much sugar to sweeten it if added before cooking. Cook first, then sweeten to taste.

The ravelled threads from old linen will be found best for darning tablecloths or napkins.

Put white washable skirts onto their stiff inside belts by means of a strip of snappers and there will be no belts crumpled and ruined in the washing.

Tea and coffee stains may be removed by pouring boiling water over them or by the use of oxalic acid. Chocolate and cocoa stains are washed with soap and tepid water to remove them.

Most cooked cereals are good with dates stirred into them and the whole served with cream. The dates should first be well washed, dried, stoned and chopped.

Flavor a rich cream sauce with some good meat sauce and poach some eggs in it. Serve on toast for breakfast or luncheon.

A tablespoonful of melted butter added to a quart of pancake batter makes greasing the griddle unnecessary; hence no smoke or odor.

To keep cheese moist and fresh, put in glass jar, screw top on tight and set away in a cool place.

If you haven't a funnel handy when

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AND SHIP SAME DAY ORDER IS RECEIVED. Prices per 100 lbs. as follows: Loose weather-frozen Herring in sacks $3.00, in boxes $3.25. Pickerel $6.25. Pike $9.25. Newly packed, salted, inspected Lake Superior Herring $3.25 in keg. Newly packed, salted, inspected Lake Trout $7.50 in keg. Order only from the old reliable firm, LAKE SUPERIOR FISH CO., 208 E. 1st St., DULUTH, MINN. Reference: Am. Ex. Nat'l Bank. Lower prices given on large orders.

FRESH FROZEN FISH

FRESH WEATHER-FROZEN "CLEARWATER" BRAND FISH per 100 lbs. HERRING $3.00 in sack, $3.25 in box. Pike $9.25. Pickerel $6.25. Newly packed Fancy Lake Superior HERRING $3.25 packed in keg. Fancy newly packed trout $7.50 in keg. WE GUARANTEE EVERY FISH, and MAKE QUICK SHIPMENTS. Consider this when ordering. 25c per 100 lbs. reduction in above prices from 500 lb. lots. DULUTH FISH COMPANY, Box 57, DULUTH, MINN. Ref. Northern National Bank.

FISH eaters beware! Order only strictly fresh weather-frozen fish, such as we ship. Direct from the waters to you. Herring in sacks $3.25 per 100 lbs., in boxes $3.50 per 100 lbs. Pike $9.25. Pickerel $6.25. Tulibees $6.25. Salted Lake Superior Herring (New Catch) per 100 lbs. in keg $3.25. Salted Lake Trout (New Catch) $7.50 per 100 lbs. in keg. Orders promptly attended to, and fresh fish guaranteed. Order from us now and be convinced. STAR FISH CO., Box 167, DULUTH, MINNESOTA. References: Am. Exchange Nat'l Bank. Discount given from above prices on 500 lb. lots.

Fresh Frozen Lake Superior Herring

OR commonly known as Family White. Buy your fish direct from our Fisheries. The best in the market. Send your orders early. Fish shipped in strong wooden boxes. Fresh Frozen HERRING, per 100 lbs. $3.00. Fresh Frozen HERRING, per 50 lbs. $1.90. 500 lb. lots or more, $2.90 per 100 lbs. Reference, First State Bank Two Harbors, Minn.

JOHNSON, HENDRICKSON & CO.
Two Harbors Minnesota

WITH complete equipment to catch and transport FRESH FROZEN FISH, we are better prepared than ever to fill orders promptly during cold weather at the following prices: **Fresh Frozen, Large, Lake Superior Herring** per 100 lbs. in box $3.25; 500 lbs. or more $3 per 100 lbs. in boxes. **Salted Herring** $3.25 per 100 lbs. Keg **Pike** 11c per lb. **Pickerel** 8c per lb. Ref. First State Bank. John Degerstedt & Co., Two Harbors, Minnesota.

"SATISFACTION BRAND"

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HERRING, 100 lbs. - - - - $ 2.65
PICKEREL, 100 lbs. - - - - $ 6.00
HERRING, 500 lb. lots - - - $12.50

Pure. Appetizing. Healthful. Packed in boxes. Sold only by JOHNSON and CARR, 640 Torrey Bldg., DULUTH, MINN.

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CAUGHT in the waters of Green Bay are the best and finest flavored fish produced. Write for complete price list all kinds Fresh, Smoked, Salt and Spiced Fish. We offer only highest quality at lowest prices. Badger Fish Company, Dept. 4, Green Bay, Wisconsin.

10 APPLE TREES 10

2 TO 4 feet $1. Two each Dudley, Lowland, Snow, Delicious and Golden Russet. Get our fine catalog. It's free. **Wisconsin Nurseries, Box 88, Union Grove, Wisconsin.**

WE GUARANTEE BEST QUALITY NEW Frozen Lake Superior Herring in sacks $3.25 per 100 lbs.; in boxes $3.50 per 100 lbs. Pike $9.00 per 100 lbs. Pickerel $6.00 per 100 lbs. Whitefish $10.00 per 100 lbs. AERIAL FISH CO., DULUTH, MINN.

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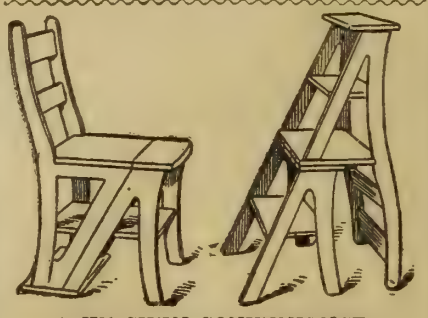
you fill salt and pepper boxes an envelope with the corner cut off will do.

It is poor economy to buy cheap blankets. An all-wool blanket not only outwears the cheaper one, but is much warmer.

If the children's hands are badly chapped wash them gently and carefully in warm water and castile soap, then rub with cold cream or white vaseline and pull on a pair of white kid mitts made from the tops of old gloves. Let them wear the mitts all night and replace them with colored ones for daytime if need be.

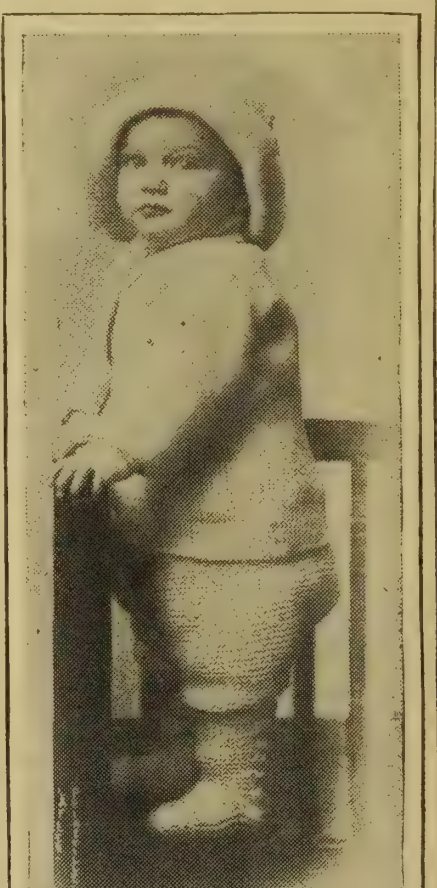


A KITCHEN CONVENIENCE.

A stepladder chair will be found most useful in the kitchen. One can be had at a cost of $1.50 and the expenditure is small in comparison with the comfort and convenience derived from its use.

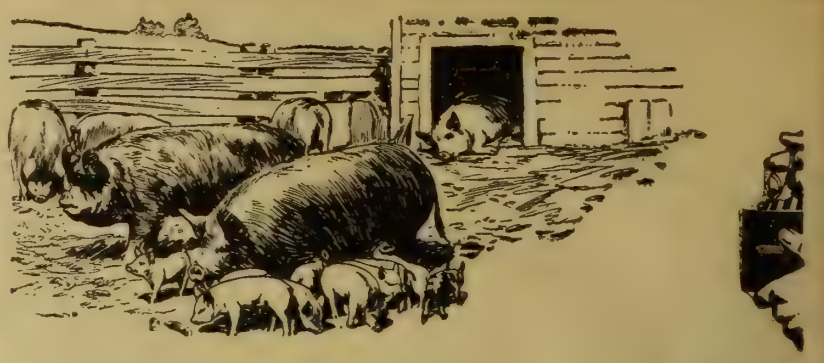
RECIPES.

Cabbage Rolls.—One cup of cold, cooked meat of any kind, chopped fine, one-third cup of cold, cooked rice, salt to taste, a sprinkling of pepper and one heaping tablespoonful of bacon drippings. Mix these together very thoroughly. Remove the leaves from a head of firm, white cabbage. Place in the center of each cabbage leaf one tablespoonful of the mixture. Roll up carefully and tie in place with a cord or fasten together with toothpicks. Pack closely in a steamer and steam



JOHN SMITH, SON OF DR. AND MRS. C. E. SMITH.

Little John is the first osteopathic baby to come to our columns. All his baby aches and pains have been massaged away by his doctor father and from appearances John has thrived on the treatment. He is thirteen months old and, according to his parents, a happy, healthy youngster—his solemnity, we suspect, being merely assumed for the occasion.



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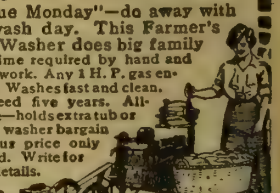


30 Days Free Trial

for half to three-quarters of an hour. Turn out on hot platter, remove the fastenings and serve immediately.

Honey Muffins.—One pint of flour, two teaspoonfuls of baking powder, one-half teaspoonful of salt, sifted four times; yolks of two eggs beaten lightly, one and one-fourth cupfuls of cream. Beat thoroughly, then fold in lightly the beaten whites of two eggs and two tablespoonfuls of extracted honey. Bake in muffin pans and serve while hot.

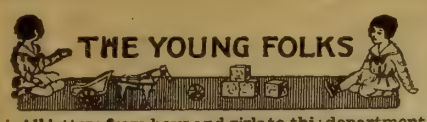
Stuffed Potatoes.—A nice way to vary baked potatoes is to cut a slice from the top of each and scrape out the inside. Mash, season with salt, pepper, chopped parsley and butter, and heat in a little hot milk. Add two well-beaten whites of eggs. Refill the skins, sprinkle with grated cheese and place in a hot oven for about six minutes.

Cranberry Frappe.—Wash and pick over a quart of cranberries. Put into a saucepan with two cups of boiling water and boil five minutes. Mash and boil ten minutes (without a cover); then add three cupfuls of sugar and boil five minutes. Strain, cool and freeze the same as ice.

Apple gems.—Chop four sour apples fine, add one beaten egg, two tablespoonfuls molasses, one and one-half cups Indian corn meal, one and one-half cups flour, one-half teaspoonful salt, two teaspoonfuls baking powder. Add sufficient milk to make thick drop batter; bake in hot, greased gem pans.

Potted Meat.—One-half-pound of veal shank, one-half pound beef shank, one-half pounds pork shank. Boil in plenty of water till tender. Grind in meat grinder. Let liquor cool, remove all fat, and add meat. Heat together. Season with salt and pepper. Pack in porcelain pan and when cool it will slice easily. This is nice with chicken in place of veal.—Mrs. H. H.

Sugar Cookies.—Two cupfuls sugar, two eggs, one cupful lard, one-half cupful sour milk, one teaspoonful soda, two teaspoonfuls baking powder, four cupfuls flour. Flavor with lemon and nutmeg. Mix very soft, roll in flour and sugar mixed together.—M. C.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

THE WIND.

I saw you toss the kites on high
And blow the birds about the sky;
And all around I heard you pass,
Like ladies' skirts across the grass—
O wind, a-blowing all day long,
O wind, that sings so loud a song!

I saw the different things you did,
But always you yourself you hid.
I felt you push, I heard you call,
I could not see yourself at all—
O wind, a-blowing all day long,
O wind, that sings so loud a song!

O you that are so strong and cold
O blower, are you young or old?
Are you a beast of field and tree
Or just a stronger child than me?
O wind, a-blowing all day long,
O wind, that sings so loud a song!
—Robert Louis Stevenson.

THE LEGEND OF ST. VALENTINE.

Every little girl and every little boy, we suppose, is thinking of valentines these days, and planning to send to some other little girl or boy the very prettiest one to be had. It is a pretty custom and I wonder how many of you know how it first came about?

It happened this way. A long time ago, in Rome, during the reign of Emperor Claudius II—you ancient history students know about him—there lived a good man named Valentine. This man Valentine was a Christian and he loved to tell the people, many of whom could not read or write, about God and His goodness. And the people loved Valentine and became Christians too because they believed what he told them.

But Claudius II was not a Christian and he hated Valentine and all others who were Christians, so he put many of them in prison. Valentine was not afraid of the emperor and went right on preaching and helping those who were in prison. This made Claudius

so angry that he put Valentine in a dungeon and put a guard over him. But did Valentine get discouraged and give up? Not a bit of it. He just talked to his guard and the first thing Claudius knew the guard had been converted too and had gone away to tell others of the wonderful news.

This made the emperor more angry than ever, and in retaliation he had Valentine beaten and beheaded. That shows how much Valentine loved the truth and God, for he gave up his life so that he might teach others. But the people he had converted loved him and believed what he had believed, so they called him Saint Valentine because he had always been so good, and they vowed they would always remember the day of his death—February 14th.

At this same time of the year there was a celebration in Rome in honor of heathen gods. They called this festival Lupercalia. The names of girls were put in a box and the young men each drew out a name, and it was the custom that the maiden whose name he drew was to be his sweetheart.

Now, this custom did not please the early Christians so they put the names of saints in the box instead of the maidens' names, and then all the young folks, both girls and boys, drew out a name and each was supposed to honor the saint whose name he drew.

The festival began about the middle of February and so the people chose Valentine as the patron saint of the festival. It was in this way that the day lost its former pagan form and became a religious festival.

Then, after a while, they stopped celebrating the day in a religious way but the young folks didn't forget it and sent their messages on February 14th just the same. They didn't have postmen then so they sent their messages or valentines by carrier pigeons.

Now when someone sends you a pretty valentine with flowers and hearts and doves and maybe a cunning Cupid on it you will remember how the custom started and will not forget the good Saint Valentine who loved others so much that he gave up his life teaching them the truth.

LIKES THE COLD COUNTRY BEST.

Dear Young Folks:—I have a friend, our neighbor's boy, who often tells us stories about himself. He is eleven years old. Maybe some children in the northern or cold countries think they do not like the cold weather and would rather be in warm countries. Here is what this boy says about it:

I was born in Russia and came to America when I was about one year old. I do not remember how I liked it in Russia and I cannot tell anything about crossing the ocean. All I remember is just being in Wisconsin near a little river and near a village. I went to school after I got big enough and was happy playing by the river.

During that time my father worked in mills and other places. When I was nine years old all our family moved to Lodi, California. On the way I saw many different places, and mountains and rivers and people. When we got to California I saw many different fruits growing, such as grapes and bananas and oranges, but I soon got tired of the fruit. I also saw how the grapes were put in the cars and how the fruit was gathered.

I went to school, but we played different games than we did in Wisconsin. It was very warm there and the people did not need furnaces or heaters. The houses are built different—only of single boards, with just a good roof to prevent the rain coming in, and it very seldom rains. When the winter came there was no snow and it never got cold enough to freeze the water, so could not use my sled or skates.

After a few months we decided to come back to Wisconsin. Many people came to us and told us to stay longer. The pastor of one of the churches said to me, "You better tell your father to stay here, because if you go back to Wisconsin your father will have to get you a warm coat and yet you will be cold." And I said, "If I go back to Wisconsin there will be snow and ice, and I will play with snow balls and slide on my sled and skate on the ice. That will be more fun than here."

The pastor smiled and said, "All people are not alike; some are thankful to God for warmth and others are thankful for ice and snow."

When we came back to Wisconsin it was almost spring, but I enjoyed it better here playing in the snow.

This boy now lives on a farm and goes to school with us and he says he never wants to live in the warm climates. —Alice.

FUZZY ANN AND TOODLES.

Dear Young Folks:—I have been reading your letters and thought I would write and tell about myself.

I had never been in the country until we moved out here two months ago, so you can about imagine how interesting everything is to me. We have twenty-seven cows and four calves that were born last week. The calves are the cutest little things I ever saw—all black and white. We also have four big horses and some chickens.

I have a Maltese cat named Fuzzy Ann and she is very playful. She plays with Toodles, our dog. One day while playing the dog accidentally bit her little gray ear, and that made her real mad, so she scratched his nose and made it bleed. It is well now, but he is more careful how he handles her. It is very sweet to see him pick her up by the neck and carry her around. I must tell you more about them if you are not getting tired.

One morning when we came out the ground was covered with snow. Fuzzy Ann was afraid of getting wet so Toodles took her by the neck and put her in the deepest snow and left her there. Then he stood looking at her and enjoying her discomfort I think, but he soon felt sorry for her and went and got her and took her to the barn. I thought that was so cute I wanted to tell you about it.
—Lillian.

The first thing to remember in tea making is not to boil it, for this takes out the flavor and aroma that constitute its nourishment. Always use freshly drawn water and let it boil until it bubbles furiously. Scald an earthenware vessel with boiling water and while it is still warm put in one full teaspoonful of tea for every two cups. Pour the bubbling water over it and set the vessel on the back of the stove. Let the tea steep for five minutes, then pour it into a heated teapot and serve.

SUGAR 2½c PER LB.

Here is the List of Groceries You Get

20 Lbs. Granulated Sugar	$ .50
1 lb. Coffee (unground)	.25
1 bottle Vanilla Extract, 2-oz.	.25
1 bottle Lemon Extract, 2-oz.	.25
1 can Baking Powder, 1-lb.	.25
1 package Baking Soda, 1 lb.	.10
1 package Whole Nutmeg	.05
6 cans Pork and Beans (large size)	.90
1 can Hominy	.15
1 package Breakfast Oats, 1½-lb. package	.15
1 package Pancake Flour, 1 lb.	.20
3 packages Spaghetti, 1-lb. packages	.45
2 packages Shredded Cocoanut, ½-lb. packages	.40
4 packages Caramel Pudding	.60
4 packages Strawberry Gelatine, (package makes 1 pint)	.40
2 packages Corn Starch, 1-lb. packages	.20
2 jars Peanut Butter	.40
2 jars Prepared Mustard	.30
1 package Black Pepper, (ground)	.10
3 packages Ever-Ready Tapioca 1-lb.	.45
5 cans Lustre Bright Scouring Powder	.50
3 packages Washing Powder	.30
1 package Gloss Starch, 1 lbs.	.10
1 box Medicinal Toilet Soap	.25
20 bars Floating Bath Soap	1.00
30 bars Family Laundry Soap	1.50
Total	$10.00

(426)

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With This
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We are making this bargain so big—so attractive—that no housewife can afford to miss this opportunity. We want to prove to you that our factory-to-home plan of dealing gives you nearly double the value that you can secure elsewhere without extra cost. Now is the time to lay in a supply of staple groceries.

This **big bargain list of groceries** may not appear again. Remember, this list of groceries, including 20 lbs. of sugar for 50c, and this comfortable Oak Rocker **all for only $10.00.** Send in your order today. You take no risk. Our money-back guarantee given below, makes you absolutely safe.

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This handsome Rocker has a solid Oak frame, finished in the popular Golden Oak finish. The spring seat measures 19x19 1-2 in. Heavy upholstered comfortable back is 27 in. wide and 25 1-2 in. high from seat. Beautifully upholstered and tufted in best grade of black imitation leather. Arms are 5 1-2 in. wide. Front posts broad and neatly shaped. Built strong and durable, this Rocker will be appreciated by every member of the family and give many years of satisfactory service in any home.

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These flags are in beautiful colors and are made of silk. A special feature is the wavy effect of the silk, as though the flags were blown by the breeze. Each flag is a true representation of the official flag of each nation and is printed with suitable national inscription in the mother tongue of the nation the flag represents.

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Chile	Puerto Rico
Christian	Red Cross
Colombia	Rumania
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International Sunday School Lesson

Lesson for February 13, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

HUMBLED AND EXALTED.

LESSON TEXT—Phil. 2:1-11.

GOLDEN TEXT—For ye know the grace of our Lord Jesus Christ, that though he was rich, yet for your sakes he became poor, that ye through his poverty might become rich.—II Cor. 8:9.

The key word of the first chapter of Philippians is "confidence" (See vv. 6, 14, 25). Paul has confidence in the church at Philippi on account of their spiritual condition (vv. 1, 2), which resulted in fellowship (vv. 3-8) and fruitfulness (vv. 9-13). This confidence inspires boldness and is a source of joy and blessing. Paul's creed is also set forth in Chapter 1:5-11. This confidence is in the face of the conflict and suffering which was before them (See 1:27-30).

I. Be of the Same Mind, vv. 1-4. The key word of this chapter is the word "comfort" (vv. 1, 19). The first section might be entitled "The Comfort of Love" (vv. 1-18) and the second section "The Comfort of Knowledge" (vv. 19-30). If there was to be opposition from without certainly the Christians ought to stand together. Paul is urging them to unity in order that it might comfort and console him. He had always rejoiced in this church (1:4), but he desires them to "fill full his joy by being of the same mind, having the same love, being of one accord, of one mind." Paul's comfort of love in the disciples he anticipated would be due to their state of mind, which depended upon (a) unity (vv. 1, 2); (b) humility (v. 3); (c) that they might "mind the things of others" (v. 4). Nothing would so comfort and console, or so gladden the heart of Paul as such unity. It was even so with the heart of our Lord (See John 17:21). The words "be of the same mind" do not refer merely to unity of opinion, but rather to a unity of purpose and affection, literally "being souled together."

II. Let This Mind * * * Which Was Also in Christ Jesus, vv. 5-8. The second comfort of love was due, not to a unity of mind, but to the standing which Paul and this church had in Christ, due to His (Christ's) standing in God. The words of this passage are among the most wonderful to be found anywhere in the Bible. They contain a statement of the most profound truth and mystery that we have regarding the person of our Lord Jesus Christ. No plummet has sounded their depth, nor rod scaled their height, nor tape measured their breadth. His eternal deity—and on the other hand his amazing self-humiliation—yet these facts and truths are brought before us to enforce the homeliest duties of everyday life. Equal to God (John 10:30) yet he gave up his divine glory and incarnated himself in the historical Jesus, was anointed of God, died on a Roman cross, buried in Joseph's tomb, yet rose again and is alive today as much as when He walked over Galilee's hills. The mind that was in Jesus was a purpose to choose the lowest depth of humiliation rather than a full equality with God, either choice of which he might have made; but he chose the former—creation's most sublime illustration of self-sacrifice—and this is the mind we should have. The word "robbery" implies a thing to be seized hold of. Instead of seizing hold of equality with God, Jesus let go and seized hold of the death on the cross, and thus made Himself of no reputation, literally emptied Himself. The context shows of what He emptied himself: (a) his divine form; (b) his divine glory. This latter is shown by his birth in a stable and his death upon a cross, thereby being under the curse of God (Gal. 3:13). But this was an act of obedience to God (v.8). The father bade him to do it. The sacrifice of Christ had its original source in the will of God—his love towards us (John 3:16, Rom. 5:8). There are three thoughts in this passage: (a) the incarnation; (b) the passion; (c) the exaltation. Keep this in mind and remember Paul's circumstances in prison when he wrote this letter.

III. God Also Hath Exalted Him, vv. 9-11. The result of this comfort of love, due to a state of mind on the part of the disciples and their having the mind of Christ; was first the exaltation of Christ (v 9), and the giving unto him of "the" name, not "a" name, that is above all other names; and secondly, worship on the part of all of God's creation, every knee bowed in submission; and third, confession (v. 11). Jesus, who humbled himself to the lowest place, God has exalted to the highest place. Humiliation of self is the path to exaltation by God.

The worship mentioned here is not merely that we worship through him, though that is true (John 14:6).

The phrase "every knee shall bow" is a clear expression of the oneness of Jehovah and Jesus.

Notice that those that bow are in heaven, in earth and in Hades (Rev. 5:3).

Even lost men and angels who will not bow now will have to do so some day, though it will then have no saving power in it for them.

OUR FASHION DEPARTMENT.

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THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Address all orders to The Wisconsin Farmer, Madison, Wis.

7052 Ladies' Waist.—Cut in sizes 34 to 44 inches bust measure. This waist is the last word in style and simplicity. The closing is in the front, the neck high with turnover collar. There are gathers along the shoulder seam in front, but the back is plain. The full length sleeve is gathered into a fancy cuff.

7553 Ladies' Skirt.—Cut in sizes 22 to 32 inches waist measure. Striped serge or broadcloth can be used for this skirt. It can be made with or without the applied yoke. High or regulation waistline may be used.

7536 Ladies' Waist.—Cut in sizes 34 to 42 inches bust measure. Any of the pretty flowered materials can be used for this waist. The neck is finished with a frill of lace and there is a seamless yoke. The long sleeves are finished with a narrow band.

7563 Girls' Dress.—Cut in sizes 4, 6, 8, 10 and 12 years. Any of the pretty striped materials can be used to make this dress with the trimming of plain material. The dress closes at the front and may be made with long or three-quarter length sleeve. The skirt has four gores.

7543 Children's Dress.—Cut in sizes 2, 4 and 6 years. Any of the pretty checked wash or woolen materials can be used to make this dress. The dress closes at the front underneath a box plait. Long or short sleeves may be used.

7583 Ladies' Negligee.—Cut in sizes 34 to 46 inches bust measure. Crepe de Chine or challie can be used for this negligee. It can be made as a long negligee or as a short dressing sacque. Long or short sleeves may be used. The skirt which is cut in two pieces may be plaited or gathered.

7568 Children's Rompers.—Cut in sizes 2, 4 and 6 years. Linen, gingham or percale can be used for these rompers with the trimming of braid. The

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WAIT! Don't buy a gasoline engine of any make or kind or price until you FIRST get my **New Low 1916 Prices**, terms and easy buying plans. Remember! I was the first engine manufacturer building high quality engines in my own great chain of factories, and selling them direct to the farms and shops of America with only one small profit added to actual cost of material and skilled labor. As my factory volume has increased

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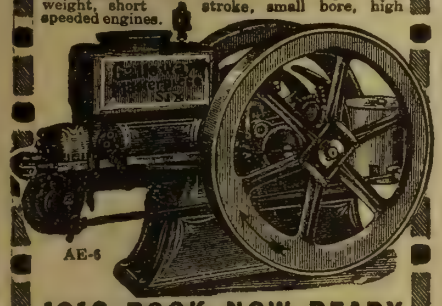

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FOR SALE, excellent 200 acre dairy farm, Mukwonago, Wis., 86 miles north of Chicago on "Soo R. R.," and 25 miles west of Milwaukee, Wis., on electric line. Both roads run along side of farm. River borders south side, ½m. to 2 dairy factories; new house and buildings, sold owing to death of Admr. Mukwonago Chief, Mukwonago, Wis.

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THE CHEAP LANDS of upper Wisconsin have big crops, good schools the best of roads, through lines of railroad and the nearest big markets. Write us for detailed facts. Wisconsin Advancement Association, 1590 First National Bank Building, Milwaukee, Wisconsin.

MONEY-MAKING FARMS throughout 15 eastern states; 1 to 1000 acres, $15 per acre up; several with livestock, tools and crops included, to settle estates. Big illustrated catalog free. E. A. Strout Farm Agency, Dept. 3015, 47 W. 34th Street, New York.

POOR MAN'S CHANCE—$5 down, $5 monthly buys 40 acres good land; near town, some timber; price $200. Other bargains. Box 425-H, Carthage, Mo.

SOUTHERN FARMS. Mississippi, Arkansas, Tenn. Cheap land for corn, stock, gen. farming. Martin & Cole, 118 Madison Ave., Memphis, Tenn.

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FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

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rompers close at the front and may be made with either the long or short sleeves.

7128 Ladies' Dress.—Cut in sizes 34 to 44 inches bust measure. The waist of this dress is closed high in the neck, with fancy standing collar. The fronts are gathered along the shoulder and joined to a forward extension of the back. The skirt is cut in four gores.

7546 Girls' Dress.—Cut in sizes 2 to 10 years. This pretty little dress is very simple and easy to make. It closes at the back and can be made with or without the trimming bands. The plaited or gathered skirt may be used.

7572 Misses' Dress. Cut in sizes 14 to 20 years. Plain and plaid materials are combined in making this stylish little dress. The dress closes at the front and may be made with either long or short sleeves. The skirt is cut in two gores.

Price of any of these patterns 10 cents each.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Scab.

What is good for scab on cows?

It is hard to advise treatment without knowing the cause of scab in this particular case. The use of the lime and sulphur dip has proven most effective. Pamphlets can probably be had on this subject by writing to the department of agriculture at Washington.

Dislocation of Patella.

I have a horse coming four years old in May that when he raises his leg up high the stifle cap will slip to the outside. It will go back again of itself if he is on level ground. He had this for a year. Can anything be done for him? Can the cap be taken out without injury to the horse?

This trouble is of such long standing that it is doubtful if any good can be done with treatment. Do not enter in for a moment the proposition of removing the patella, as it would be the ruination of the horse.

Injured Teat.

I have a red heifer coming four years old that will be fresh the 26th of next month. After she had her first calf the end of one of her teats was cut off by barbed wire. The teat gives milk, but spatters all over the pail. Could the teat be punctured and healed over without any ill effect?

The trouble could possibly be overcome with the right kind of treatment, but we would advise you to let an experienced veterinarian do the work, as poor work on it might only tend to make it worse.

Rheumatism in Sheep.

I have a number of sheep and about three weeks ago five of them got lame in the legs. They cannot stand up and I don't know what could be the matter. Have tried different remedies, but they don't seem to help. At night the sheep are kept in the barn and have plenty to eat. They are in good shape, eat and drink the same as usual. It seems to be mostly in the lower joint.

It is very probable that your sheep are affected with rheumatism. At the onset of the disease put the animals in comfortable quarters and give the following: Sodium salicylate, one-half teaspoonful, and sodium bicarbonate, one-half teaspoonful, dissolved in water. Give this amount every four hours. If joints are swollen and painful apply a bandage soaked in saturated solution of epsom salts or soda, and cover with waterproof bandage. If they get better and the joints stay swollen apply tincture of iodine locally once daily.

A LAMP WITHOUT A WICK

The Sunshine Safety Lamp Co., 827 Factory Bldg., Kansas City, Mo., has a new portable gasoline lamp which gives the most powerful home light in the world—a blessing to every home not equipped with gas or electricity. 300 Candle Power at one cent per night. This remarkable lamp has no wick and no chimney, is absolutely safe and gives such universal satisfaction they are sending it on Free Trial. They want one person in each locality to whom they can refer new customers. Take advantage of their free trial offer. Agents wanted. Write them today.—Adv.

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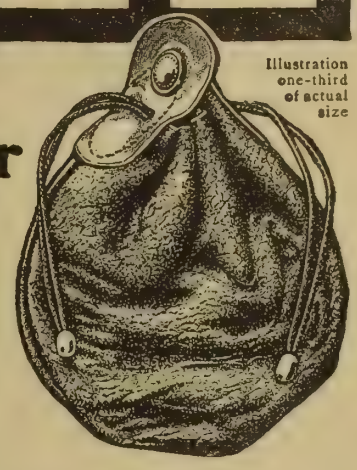

Illustration one-third of actual size

Every smoker appreciates a leather tobacco pouch. This handy, serviceable, Tuxedo Draw-Pouch is made of fine, soft, flexible tan leather, with a draw-string and snap that close pouch tight and keep the tobacco from spilling.

Send us 10c and your tobacco dealer's name, and we will mail you prepaid, anywhere in U. S., a 10c tin of TUXEDO and this handsome Leather Draw-Pouch. We gladly make this offer to get you to try TUXEDO.

Tuxedo

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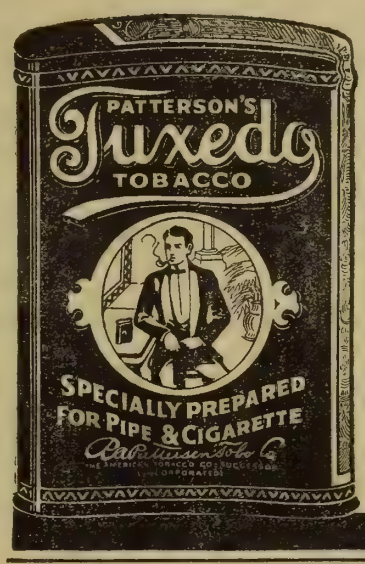

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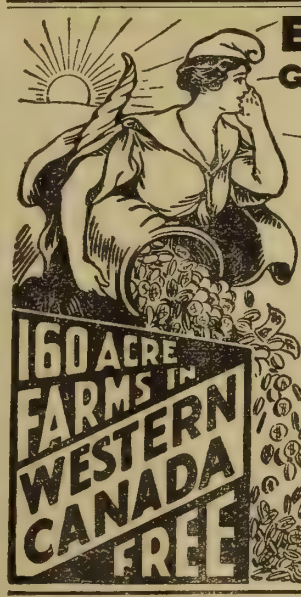

Bumper Grain Crops
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Prizes Awarded to Western Canada for Wheat, Oats, Barley, Alfalfa and Grasses

The winnings of Western Canada at the Soil Products Exposition at Denver were easily made. The list comprised Wheat, Oats, Barley and Grasses, the most important being the prizes for Wheat and Oats and sweep stake on Alfalfa.

No less important than the splendid quality of Western Canada's wheat and other grains, is the excellence of the cattle fed and fattened on the grasses of that country. A recent shipment of cattle to Chicago topped the market in that city for quality and price.

Western Canada produced in 1915 one-third as much wheat as all of the United States, or over 300,000,000 bushels.

Canada in proportion to population has a greater exportable surplus of wheat this year than any country in the world, and at present prices you can figure out the revenue for the producer. In Western Canada you will find good markets, splendid schools, exceptional social conditions, perfect climate, and other great attractions. **There is no war tax on land and no conscription.**

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NEWS OF THE SALE RING

Stubbs & Hyzer's Duroc Sale.

The sale of Duroc bred sows and gilts held by Stubbs & Hyzer, West Salem, Wis., Monday, January 31st, was highly satisfactory. In spite of the sale being held on Monday, which makes it difficult for many to attend, there was a large crowd present. A big dinner was served to everyone present, and this entire space could be filled with the menu and the favorable comments made by the guests. It was a banquet in every sense of the word, both in quantity and in quality, and the ladies in charge can be highly complimented. A ten-piece orchestra composed of the young businessmen and young ladies of the city furnished music which was enjoyed and complimented by the diners, and a vote of thanks is hereby tendered. The offering was very good as a whole, the older animals being especially good. They were all well bred and the majority well developed and of good type. There were a few buyers from Minnesota and Iowa, and quite a number from southeastern Wisconsin, while western Wisconsin was heavily represented. It was a notable feature that the richly bred sows and gilts bred to a richly bred boar were eagerly sought. A detailed list of the sale is given below:

1. E. Falconer, Early, Ia. $72.00
2. F. Sprain, West Salem, Wis. ... 38.00
3. J. L. Fisher, Janesville, Wis.. 34.00
4. E. Falconer 60.00
5. Fred Sprain, West Salem, Wis. 80.00
6. A. Fletcher, Bangor, Wis. 36.00
7. G. P. Larson, Mindora, Wis... 31.00
8. J. L. Fisher 30.00
9. Aug. Koehler, Hixton, Wis.... 36.00
10. W. S. Guy, Beloit, Wis. 31.00
11. A. E. Knight, Whitehall, Wis. 40.00
12. E. Falconer 55.00
13. J. L. Fisher 36.00
14. E. H. Parher, Janesville, Wis. 55.00
15. Michel McEldowney, West Salem, Wis. 35.00
16. John Kronberg, Sparta, Wis... 36.00
17. Gant Farm, Delavan, Wis..... 34.00
17. J. L. Fisher 26.00
19. F. Rossa, Arcadia, Wis. 32.00
20. Michel Stehr, Viroqua, Wis... 45.00
21. F. Sprain 41.00
22. J. L. Fisher 26.00
23. M. McEldowney, West Salem, Wis. 25.00
24. Damerow, Oxfordville, Wis... 27.00
25. P. J. Larson 25.00
26. J. L. Fisher 29.00
27. Mr. Geo. Koehler 72.00
28. B. L. Rundell Roberts..... 50.00
29. P. J. Larson 60.00
30. E. Falconer 46.00
32. H. Rowe, Manston 22.50
33. P. J. Larson 24.00
34. P. J. Larson 24.00
35. F. S. Vanderhyde, West Concord, Minn. 27.00
36. P. J. Larson 36.00
37. E. Falconer 34.00
38. John Fisher 30.00
39. F. Sprain 45.00
40. K. O. Gander, Holmen, Wis... 38.00
41. E. Falconer 51.00
42. Ed Young, West Salem, Wis.. 26.00
43. S. L. Simonson, West Salem.. 25.00
44. M. McEldowney 29.00
45. M. McEldowney 27.00
51. F. Ross, Arcadia, Wis. 21.00

SUMMARY.

45 head ...$1,702.50; average....$37.85

Atwater's Duroc Sale.

The annual sale of bred Duroc sows held by L. F. Atwater, Bangor, Wis., was a succession of his former successive sales. The bidding was brisk and in the early part of the sale prices were very high. The first ten animals in the ring averaged $108. The top price animal was a fall yearling sow named Defender Lady 457536. She is an outstanding sow of exceptional size, wide and deep with good, thick hams, a good head and ear and well up on feet. Her litter sister was the next highest priced animal, selling for $152.50. The whole offering was one of merit, there not being a poor animal in the lot. The spring gilts were well developed, many weighing 400 pounds and better. There were a great many buyers from southwestern Wisconsin present who bought liberally. There were also a goodly number of animals purchased by Minnesota buyers. A fine dinner was served at noon by Mrs. Atwater and friends, which was thoroughly enjoyed and they may well feel proud. Col. I. E. Stickelman, Clarinda, Iowa, did the selling in a clean-cut businesslike manner and Wisconsin breeders will do well to secure his services. John L. Jones, Leon, Wis., an auctioneer of local fame, assisted in the ring. Following is a list of sales:

1. Filney Farm, St. James, Minn. $237.50
2. Wm. Thomas, Ridgway, Wis. 152.50
3. R. W. Culbertson, Rochester, Minn. 120.00
4. W. C. Jenkins, Bangor, Wis. 30.00
5. B. L. Rundell, Roberts, Wis... 34.00
6. R. W. Culbertson 101.00
7. M. J. Bowler, Sparta, Wis... 36.00
9. A. G. Vonder Ohe, West Salem, Wis. 33.00
10. Dennis Shea, Melvina, Wis... 50.00
11. J. Aldrich, West Salem, Wis. 32.00
12. Bernard Meyer, Watertown, Wis. 51.00
13. Gant Farm, Delavan, Wis.... 60.00
14. A. E. Kirst, Tomah, Wis..... 71.00
15. McBurg Bros., Viroqua, Wis. 48.00
17. J. Aldrich, West Salem..... 31.00
18. A. Jones, Lion, Wis..... 25.00
19. Willie Thomas, Ridgeway, Wis. 45.00
20. Geo. Koehler, Hixton, Wis... 35.00
21. J. Napp, Fennimore, Wis..... 44.00
22. C. N. Guy, Sparta, Wis..... 45.00
23. Eben Roberts, Columbus, Wis. 38.50
24. John Napp 60.00
26. Aug. Koehler, Hixton, Wis.. 53.00
27. Will Thomas 30.00
28. A. Runde, Cuba City, Wis... 53.00
29. John Kabus, West Salem, Wis 33.00
30. Geo. Kronberg, Sparta, Wis.. 31.00
31. Fred Sprain, West Salem.... 45.00
32. Elmer Knapp, Fennimore, Wis 117.50
33. J. L. Teddle, Hastings, Minn. 40.00
34. A. G. Vander Ohe 31.00
35. Cedar Lake Farm, Mikana, Wis. 101.00
36. John Swenson, Willmar, Minn. 100.00
37. Aloysius Runde, Cuba City, Wis. 66.00
38. E. Napp, Fennimore, Wis.... 57.00
39. Cedar Lake Farm 75.00
40. Elmer Napp 67.50
41. Stubbs & Hyzer, West Salem 35.00
42. B. L. Rundell 31.00
43. Frank Ross, Arcadia, Wils... 32.00
44. R. W. Culbertson 35.00
45. Frank Ross 30.00
46. A. G. Vonder Ohe 26.00
47. Arthur Nuttleman, Holmen, Wis. 45.00
48. Theo. Ruetter, Sparta, Wis.. 60.00
49. Glen J. James, Mortfort, Wis. 51.00
50. Lewis Anderson, London, Minn. 40.00
51. S. T. Kittlesby, Calmor, Iowa 47.50
52. S. T. Kittlesby 57.50

SUMMARY.

49 head ....$2,769.50; average....$56.52

Laird's Hampshire Sale.

In spite of the bad weather and roads which prevailed Friday, January 21st, the sale of Hampshire swine held by A. M. Laird, Prairie du Chien, Wis., was very satisfactory. In addition to the animals sold in the ring Mr. Laird, also made a number of every good private sales. An interesting feature of the sale was a demonstration of a Hampshire carcass. Hampshire swine are noted for the fine quality of meat which they produce. The fat and lean layers are laid in alternately and is particularly free from gristles. Mr. Laird had the dressed carcass of an eight months old barrow and gave a short talk on the superiority of the Hampshire. He called attention to the long, heavy loin, the evenly marked side bacon, the compact heavy hams and shoulders and the good head. Chas. O'Neill, Bridgeport, Wis., cried the sale.

The Bloomington Horse Sale.

The eighteenth annual sale of draft horses of the different breeds at Bloomington, Ill., January 25th, 26th, 27th and 28th, under the management of C. W. Hurt and Dan Augstin, drew many buyers and practically 250 head of horses were sold for approximately $94,000. Bidding on the better sorts was good all through the sale, there being an especially keen demand for good mares and fillies. The top for stallions was $1,300. Another stallion sold for $1,250 and one for $1,150. In each case they went to Illinois buyers. The market for mares was extra good and there were numerous sales above the $500 mark. Every section of the country from Pennsylvania and New York in the east to Montana on the west, and from Minnesota to Tennessee was represented at the ringside and many carlot buyers were in attendance. The outcome of the sale demonstrated the healthy condition of the draft horse market and should be a source of gratification to horsemen generally. Chas. W. Hurst managed the sale in his usual efficient manner and the auctioneers were Cols. Carey M. Jones, Fred Reppert, Orval Jones, Lloyd Seeley, J. J. Rolofson and assistants.

HALF INTEREST IN CARNOT SOLD.

Record-Breaking Price for Half Interest in Great Percheron.

Important news comes to The Wisconsin Farmer from White Hall, Ill., to the effect that Mr. W. S. Corsa has sold a half interest in the great Percheron stallion, Carnot, to Robert Leeds, of Richmond, Ind., for the sum of $20,000. Coming at a time when here and there can be found men who are weak-kneed over the future prospects of draft horse breeding, this event is history-making in more than one respect.

Carnot is not only the greatest show and breeding horse in the United States, but he is possibly without a peer today even in his native land. Mr. Leeds has courage, to be sure, in making the investment of this huge sum, but, barring accidents, there is no question but what the future will demonstrate that the venture embodied a splendid display of foresight and forethought.

A PREMO CAMERA

Is a Necessity--Not a Luxury

This camera is made by the Eastman Kodak Co., is of the box type, with universal focus lens, the simplest instrument for picture-making that can be devised. It will produce excellent results in the hands of anyone; no experience necessary. Film pack used, daylight loading. Pictures 2 1-4 x 3 1-4. Booklet of instructions included with each camera.

HAVE YOU ALWAYS REGARDED A CAMERA AS MERELY A "PLAY-THING?"

What do you raise?

Fruits? Livestock? Grain? Flowers?

It doesn't matter--whatever it is, you raise it to sell, don't you? Now, how much better than "telling" distant prospective customers what you have, is ***showing*** them! You can't bring them to your farm, but pictures will get practically the same result. One picture tells more than pages of words.

What better way of keeping a record of growth, than by pictures?

A Picture of old Dobbin with Baby on his back, will be priceless twenty years from now.

HERE'S HOW YOU CAN GET A CAMERA--

Given with The Housewife for one year at $1.80. Cameras sent postpaid, delivery guaranteed.

Remit by P. O. Money Order or Registered Letter. Address

The HOUSEWIFE, 30 Irving Place, New York City

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

Lybrand's Percheron Dispersion.

THE Percheron stud of the late R. C. Lybrand, Richland Center, Wis., was one of the best in the Northwest. Mr. Lybrand was a discriminating judge of good Percherons and selected his breeding stock with great care. The older mares in the stud are an indication of his good judgment and the younger animals are evidence that his selections were excellent transmitting animals. Owing to the death of Mr. Lybrand this stud will be sold at public sale Monday, February 21st. See advertisement on page 37. The stud consists of thirty-eight head including the mature stallion, Imp. Tripoli 27449 (46168), fifteen mature mares, seven stallion colts and twelve mare colts born in 1014-1915, one three-year-old stallion and three three-year-old mare colts. It is an offering that our readers should not fail to see, as this sale will present an opportunity to get some extraordinary values. The animals have never been pampered, and appear in rough coats of hair, as this has been a breeding establishment where only the young animals have been sold in carload lots. For this reason they have not kept them in show ring shape. However, they are the equal of many noted prize winners, for they have the backs, limbs, heads and rumps of the most desirable type. They are all sound as "a hound's tooth" and will stand veterinary examination. In breeding they represent the best blood lines of the breed. The stallion, Imp. Tripoli 27449 (46168) is by Othello 22623 (42829). He is a fine type of animal himself and his colts show up in fine shape. There are eleven stallion and mare colts sired by him that are as uniform in color, size and type as is often seen. The three-year-old stallion is out of the mare, L'Amia 45407 by Imported Sultan 24723 (43644). The mare, Letta Highland, and three of her colts are in the sale. She is by King of Highland by King of Perch, and is of equally good breeding on the dam's side. A black mare, Mora by Valseur 42833 (56387), is a fine type of a mare and should be looked over. Space does not permit going into detail with all the animals, but full breeding and description is given in the catalogs which are now ready for mailing. We urge both breeders and farmers to attend this sale, for there are horses here that will fill the wants of both. Col. Carey Jones, Chicago, will conduct the sale. Send for catalog to J. W. Martin, Mgr., Gotham, Wis.—Adv.

Currie's Hampshire Swine Sale.

HAMPSHIRE swine will be sold at public auction, Wednesday, February 23, 1916, by R. L. Currie, Viola, Wis. This herd is one of the largest and best known herds of Hompshires in the Northwest. Many of the best breeders in Wisconsin, Illinois, Iowa and Minnesota have selected their breeding stock from this herd. Although not forced or kept in show shape they have true breed type, the majority are well belted and the fact that they are the most desirable type obtainable is shown by the purchases made by such breeders as DeKalb and Yates. The offering is one of exceptional merit, consisting of twenty big, private foundation sows, forty extra good spring gilts and the balance fall sows of various ages. The yearling and older sows are daughters of such great boars as Aristocrat Jr. 26789, a grandson of Bon Bon Beauty grand champion at the Illinois State Fair; King Midas by Viola Chief; Orchard Hill Duke Jr. by Orchard Hill Duke, a boar bred the same as Messenger Boy 6179, that was fifteen tmes grand champion. The spring gilts and older sows are bred for March, April and May farrow to DeKalb's Gen. McArthur. He is one of the best bred sires living. He is a son of Erlanger, the noted show boar, and his dam was Jennie Aylor, conceded to be one of the great foundation sows of the breed. She was sired by Longfellow, that sold for $1,000. A litter sired by this boar will prove very profitable. The balance of the gilts are bred to Currie's Champion 28387 and Currie's King 28383. The sows in this herd have been very prolific, and have saved nearly all of their pigs. The pigs are strong, healthy and vigorous. Plan to attend this sale in person if possible. However if impossible send a mail bid to the auctioneer, Chas. W. O'Neill, Bridgeport, Wis., or H. S. Hoard, representative of The Wisconsin Farmer. See page 37. —Adv.

Get the John Deere Farm Implement Book.

ONE of the greatest factors in lessening farm work and increasing farm profits has been the increasing use of good farm machinery and in this development the John Deere Company, of Moline, has been one of the pioneers and leaders. "Better Farm Implements and How to Use Them" is the title of the 168-page reference book which they are sending to every inquirer who writes them, stating what farm implements he is specially interested in and asking for Package No. X-64. This book is a veritable encyclopedia of information about the proper use, care and handling of farm implements and is typical of the thoroughness and dependability which characterizes everything that comes from the John Deere factory. In writing for your copy address John Deere, Moline, Ill., ask for package X-64 and kindly mention their advertisement on page 11, illustrating and describing some of their most useful farm implements.—Adv.

Lefebures' Royal Belgian Horses.

HENRY LEFEBURE & SONS, the American pioneer importers of Belgian stallions and mares have just issued their twenty-eigth annual catalog which is very interesting to anyone breeding draft horses whether they be pure bred or grades. The catalog contains some sixty illustrations of stallions and mares to be seen at the Lefebure farm and of the four different farms owned by the Lefebures. The catalog is an artistic one and gives much useful information. Mr. Henry Lefebure, the senior member of this firm is a native of Belgium and is very familiar with conditions in that country and it is his opinion that in years to come only an occasional stallion will be sold for exportation. Mr. Lefebure has the largest collection of Belgian mares in the country and is growing upon his farms Belgian stallions and fillies that compare favorably with those produced in the native land of the Belgian horse. A few Percherons are also offered for sale by the Lefebures. Any of our readers in the market for a high-class Belgian or Percheron stallion should visit the Lefebure farms before purchasing. This firm won premier champion exhibitor and premier champion breeder at the Panama-Pacific International Exposition, 1915, which is sufficient evidence that the Lefebures handle the best to be found in Belgians. See page 38 and write for catalog, mentioning this paper.—Adv.

Underwood Red Polled Cattle.

THE Underwood Stock Farm, Gotham, Wis., owned by L. C. Underwood, has been the home of Red Polled cattle for over twenty years. By careful selection and mating of good individuals of proven breeding there has been produced a herd of excellent animals. They have been following the blood lines of the noted bull, Corporal, very strongly crossing with other blood lines of equal merit. Mr. Underwood is offering his junior herd bull, Jerome 27287, for sale. He was sired by Jap 22585 by Corporal's Guard, which was by Corporal and out of an Hesperus-bred dam. Several young bulls are also offered for sale. These are by Champoin by Dewey by Cremo, one of the greatest show bulls of the breed. His dam, Celia, is of Corporal breeding. Several fine yearling heifers are also offered for sale. These are daughters of King Richard 14533 by King Henry. His dam, Rose, was by Corporal. It will be seen that the breeding of these animals is of the best known to the breed. As individuals they can scarcely be faulted, as they are well grown and of good straight breey type. Mr. Underwood has sold many animals to readers of The Wisconsin Farmer, who have invariably been well pleased. For further information in regard to the animals now offered for sale write to the above address. See page 38.—Adv.

Plums for Wisconsin Farmers.

PROFFESSOR HANSON, of the Brookings, S. D., agricultural college and experimental farms, has developed a hardy plum which not only has the quality of hardiness, but it is one of the largest grown. The flavor, too, is second to none. There are several of these, all closely allied, yet somewhat different. To the farmer, or nursery man in Wisconsin, Minnesota or the Dakotas, these plums appeal most strongly on account of their unusual hardiness. They cannot be recommended too strongly. This plum is handled by the Gurney Seed and Nursery Co., Yankton, S. D., which company is prepared to fill orders very promptly. They will furnish you dependable stock, true to name. They also have a large quantity of well-matured and dried seed corn concerning which they will be pleased to furnish you further information. Write them for their catalog of seed and nursery stock—they issue a very complete catalog. In writing please say that you saw their notice in The Wisconsin Farmer. See page 19.—Adv.

Three Machines in One.

EVERY farmer knows the importance of a well-pulverized seed bed. The Western Land Roller Co., is advertising on page 8 a machine that pulverizes, packs and mulches all at one operation. It is said to save time, seed and horse power in covering grass and clover seed and in rolling corn and young grain in the spring. It is made in eight sizes and sold for $20 and up. You can find out all about it by writing for their free catalog and mentioning this paper. Address Western Land Roller Co., Box 454, Hastings, Neb.—Adv.

Hart Bros.' Stallions.

THE firm of Hart Bros., Osceola, Iowa, are offering a great string of imported and home-bred Percheron and Belgian stallion and mares for sale, and they will be pleased to have intending purchasers come and see them. They also offer a choice lot of fillies for sale. They will be pleased to tell you just what they have on hand if you will only write them. When corresponding with them kindly mention The Homestead. See page 38.—Adv.

Pritchard & Sons' Horses.

THE announcement in another column of W. E. Prichard & Sons, Ottawa, Ill., will be of interest to any reader of The Wisconsin Farmer who is in the market for a good Percheron stallion or a span of producing mares. For over a third of a century the senior member of this firm has been recognized as one of the best constructive horse breeders in the country, and the junior members of the firm have spent their entire life in the producing of good horses along the lines that have brought success and reputation to the Ottawa establishment. While this firm has made importations each year for several years until the breaking out of the war, they have achieved signal success in their breeding operations, producing a class of horses that are in every way the equal of the imported animals, and that have behind them the guarantee of a thoroughly reliable firm. Some of the best young stallions that are to be seen anywhere can be found in the pastures of the Prichard farms, the rugged, quality kind, with size, bone, action and conformation, and coming from the best of producing ancestry. In the barns at Ottawa are a few imported horses and a strong lot of young home-bred stallions that will give a good account of themselves under proper care and treatment. In addition to their Percherons, Messrs, Prichard & Sons have a few extra good Belgian stallions, acclimated and in first-class condition. These gentlemen carry on their business at the minimum of expense, and are in a position to quote customers some very attractive prices. Buyers will find both the firm and its horses reliable in every way. Write them today, mentioning that you saw their advertisement in The Wisconsin Farmer. See page 38. —Adv.

Increasing Farm Valuations.

TWO retired farmers were recently discussing the improvements in everything that enters into farming since their active days, but nothing struck them more forcibly than the general use of wire fencing, which is replacing the old wooden fences everywhere. One remarked, "If we had had wire fences we would neither of us be as physically worn out as we are today," to which the other replied, "Yes, and if my farm had been enclosed with a wire fence it would have made me $1,000 more." It is undoubtedly true that wire fencing is a better investment than money in the bank, but care should be used in selecting the right kind of fence. The Peerless Fence Co. will send a free catalog on receipt of postal card request from any of our readers, describing their wire fences that eliminate any danger of your making a mistake. Peerless fences have many special features, such as the one-piece cross bar that prevents animals crowding the fence down from the top or pushing through at the bottom, while the patent non-slip knot holds the wires always in place. In addition to describing their different styles of field, poultry and lawn fences the new Peerless catalog contains full information about their many kinds of gates, all of which are heavily electro galvanized, requiring no paint to prevent rusting. Peerless gates and fences are easy to buy, easy to put up, have a fine appearance and give long service. In writing for their catalog address Peerless Wire Fence Co., 206 Michigan St., Adrian, Mich., and kindly mention this paper.—Adv.

Apex Fences and Steel Posts Give Satisfaction.

APEX fencing has some special features which are said to make it an exceptionally good-looking fence, easily put up and having long-wearing qualities. Its swinging joints lets the line wires fit the ground easily, no matter whether it is smooth or rough, level or hilly. Its stay are doubly strong and distribute the shock evenly, so that the fence keeps its shape. Apex steel drive posts are strong, though light in weight, and cost less than wood posts. They will last indefinitely and save digging, tamping, and a large part of the work of hauling and handling. They can be driven in any soil without injury. For interesting free books on Apex fences and steel posts write to the Janesville Barb Wire Co., 433 S. Frankling St., Janesville, Wis., and kindly mention their advertisement on page 26. —Adv.

"The KisselKar Every Inch a Car."

THE KisselKar is a carefully manufactured car, not an assembled one, with its own distinctive design, motor and equipment. It is often described as "every inch a car" because of the care which has been put into every detail to make it serviceable and convenient. It has power to spare, plenty of room and an appearance that will compare favorably with any car on the market. The KisselKar "High Efficiency Thirty-Two" at $1,050 is a car that will give complete satisfaction to any buyer and enable him to enjoy all the comforts and luxuries of motor perfection. If you will write to the Kissel Motor Car Co., 312 Kissel Ave., Hartford, Wis., and mention their advertisement on page 13, they will be pleased to send you your nearest KisselKar dealer's name and other interesting and valuable information.—Adv.

Coldren's Holstein Dispersion.

THIRTY-SEVEN registered and thirty high-grade Holsteins will be sold at public auction Thursday, February 17th, by C. J. Coldren, Brodhead, Wis. The high grades are well marked, of good, straight type and heavy producers. Many of them are practically pure bred, but of course not eligible to registry. The pure breds are a very good lot of cattle. He purchased his foundation stock from Fred Trumpy, whose herd was estabished over forty years ago and who was conceded to have one of the best herds in southern Wisconsin. The majority of the animals in the herd were sired by four bulls, viz., a son of Sir Johanna Fayne, a son of Homestead Jr. De Kol, a brother of the great world's record cow, Tilly Alacantra, and a bull of Sadie Vale Concordia breeding. Many of them trace very close to Hengerveld De Kol, which has 116 A. R. daughters, eight with records above thirty pounds. Nutula Fobes Sir Celacatra is the sire of several in the sale. He is a brother to Tilly Alacantra, which gave 30,000 pounds of milk in a year and made thirty-one pounds of butter in seven days. He also has a 34.89-pound sister and several A. R. O. daughters. Homestead Longfield De Kol, the sire of several head, is a son of Homestead Jr. De Kol, which has sixty-nine A. R. O. daughters, five with records from 30 to 35.55 pounds of butter in seven days. There are also several grandsons and daughters of Pontiac Amphion, a son of Hengerveld De Kol. All parties will be met at the train and taken to the farm. This sale will present an opportunity for our readers to get some exceptionally well-bred foundation stock. Plan to attend the sale or send a mail bid to the auctioneer, Col. Edgar Eells, or H. S. Hoard, who will represent The Wisconsin Farmer. See page 36.—Adv.

Columbia Asylum Poland China Sale.

THE Columbia County Asylum, Wyocena, Wis., will hold a sale of thirty-six bred sows on Tuesday, February 15th. The offering consists of twenty gilts and sixteen proven sows. These are daughters of Columbia Wonder and Columbia Pete and Columbia Orange. Columbia Pete is a son of Wisconsin Orange by Big Orange, the famous boar bred by Peter Mouw and owned by J. O. James. The dam of Wisconsin Orange is a daughter of John Blain's noted boar, Pawnee Lad. Columbia Wonder by New Wonder by the famous boar, A Wonder, and out of a daughter of Big Bone, and A Wonder Price dam. Columbia Orange is by a son of Long Orange by Otto Big Orange. It will be seen that the breeding is of well-known and proven blood lines. The gilts are well grown, in good, healthy, breeding condition. It will pay to attend the sale. For further information in regard to these animals write to S. C. Cushman, superintendent Columbia County Asylum, Wyocena, Wis. See page 36.—Adv.

Laird's Hampshire Swine.

HAMPSHIRE swine of the highest breed type are the kind that comprise the herd of A. M. Laird, Prairie du Chien, Wisconsin, whose advertisement appears on page 37. He is a careful. discriminating judge of Hampshires and his herd shows the result of careful selection and good care. His herd boar, Kornfalfa King, won junior champion honors at the 1915 Wisconsin State Fair. The majority of the animals in the herd trace to Jimmy and Orchard Hill Duke, two noted boars that weighed over 1,000 pounds. The gilts offered for sale are daughters of Laird's Rexall, an outstanding boar which Mr. Laird recently sold for $250.00. He is a richly bred animal and his offspring show wonderful development. These gilts are bred to the junior champion boar, Kornfalfa King. For further information in regard to the animals offered for sale write to the above address. When writing kindly mention this paper.—Adv.

"Armco" Culverts Resist Rust.

EVERY farmer putting in a culvert is looking for one that will withstand rust. "Armco" culverts, made of American ingot iron, are said to be wonderful rust resisters, as is shown by the illustrations in their advertisement on page 14, of three kinds of culvert material after they had been exposed to the elements for three years. "Armco" quality is due to uniform purity and scientific manufacturing. You can secure full information about "Armco" iron culverts, flumes, sheeting, roofing, etc., by writing to Armco Iron Culvert Mfgs. Association, Cincinnati, and mentioning this paper.—Adv.

Don't Have Sagging Gates.

CAN'T-SAG" gates are just what their name implies—farm gates that cannot sag, because they are made of boards, double bolted (not nailed) between eight steel uprights. They

Holstein Dispersion, Thursday, Feb. 17, '16, Brodhead, Wis.

C. J. Coldren's Herd of 37 Registered and 25 High Grade Holsteins

The grades are well marked—of good, straight type and of good productionability. The Registered Cattle are well bred and from high producing strains. The majority are daughters of the following bulls—one a son of **Sir Johanna Fayne**—a son of **Homestead Jr. DeKol**—a brother of the **30,000 pound milk cow, Tilly Alacartra,** and a bull of Sadie Vale Concordia breeding. Come to the sale or send a mail bid to **Col. Edgar Ells or H. S. Hoard,** representating Wisconsin Farmer.

cost less than wooden gates and will wear five times as long. If you prefer you can get the gate steels and make the gate with your own lumber. Full information will be furnished if you will write Alvin V. Rowe, President Rowe Manufacturing Co., 1713 Adams St., Galesburg, Ill.—Adv.

Don't Let Cows Get "Off Their Feed."

WHEN your cows get "off their feed," as the saying is, it's time for you to act quickly, but they really shouldn't be allowed to get in that shape. If they do get sick there is a remedy in Dr. David Roberts' complete line of stock remedies that will help you out, but a pound of his famous Cow Tonic is worth many doses of medicine after things have started bad. It contains nature's ingredients from roots, bark and herbs, which a cow needs and which she would get if in the open and it will put your cows in the very best condition and keep them there, enabling their digestive and eliminating organs to work efficiently all the time. In his advertisement on page 22 Dr. Roberts describes some of his other excellent cow remedies and offers to send enough of his "Stokvigor" for ten cents to feed a cow for two weeks. His 184-page book, "Practical Home Veterinarian," treating of all live stock and poultry ailments and their proper treatment, will be sent for 25 cents additional. In writing him address Dr. David Roberts Veterinary Co., 950 Wisconsin Ave., Waukesha, Wis., and mention of this paper will be appreciated.—Adv.

More Farmers are Using Motorcycles.

FOR an always ready, rapid means of getting about, a Harley-Davidson motorcycle is a source of never-ending convenience on the farm. With a side-car attachment, which can be put on or taken off in a few moments, it becomes a family conveyance that will take you to town or to the neighbors in short order and at very little expense. It is a constant source of delight and recreation to take a spin in one of these reliable machines and if you get one you will find a hundred uses for it which you cannot now realize. For fourteen years the makers have specialized in making motorcycles that are dependable and durable and they have produced a machine which is not only a luxury, but fast becoming recognized as a farm necessity. Most dealers sell Harley-Davidson machines on terms that will be satisfactory to you. If you don't know a Harley-Davidson dealer, write for their interesting catalog to Harley-Davidson Motor Co., 1155 A Street, Milwaukee, Wis., and kindly mention their advertisement on page 17.—Adv.

Many Uses for Atlas Farm Powder.

A STUMP that has been blasted out can be easily hauled away and used for kindling wood. Many farmers are finding this a highly satisfactory way of clearing their land. Atlas farm powder is said to have been the original farm powder for this and similar farm purposes. There are many other uses to which Atlas powder can be put on the farm to great advantage, such as boulder blasting, loosening the subsoil, tree planting, ditch digging, etc. The Atlas Powder Co., has an interesting and instructive booklet on all these matters, which is offered free in its advertisement on page 8. If you will check off the particular use you would be interested in on the attached coupon and mail it to the Atlas Powder Co., Wilmington, Delaware, they will be pleased to send you a copy of this seventy-four-page booklet, "Better Farming," without expense to you. In so doing kindly mention this paper.—Adv.

No Guesswork in Hatching.

PROGRESSIVE incubators are built with hundreds of dead air cells to protect the eggs from sudden changes of temperature. They make hatching a matter of certainties, not guesswork. Many users report chickens from every hatchable egg. They are finely built of California redwood, with all the best features of a good incubator. Their big 155-egg incubator sells for $7.85 with money back at 8 per cent if it doesn't make good. A progressive brooder goes with it for only $2.00 extra, freight prepaid east of the Rockies. For further details, including their 1916 combination offers, send for catalog and free poultry book to Progressive Incubator Co., Box 128, Racine, Wis. Mention of their advertisement on page 24 will be appreciated.—Adv.

Wisconsin Incubators are Thoroughly Reliable.

WISCONSIN incubators are shipped on thirty days' free trial, with freight prepaid east of the Rocky mountains, and your money back if not perfectly satisfied. They also have a ten-year guarantee. Their 139-egg incubators and brooders, which have proven their worth in many a contest, sell for $10.00. They are made of the finest select California redwood, with hot water heat, double walls, double glass doors, copper tanks and boilers and are self regulating. They are

MY NEW FREE BOOK WILL SETTLE THE SPREADER QUESTION FOR YOU NOW!

If you are undecided about buying a spreader—if you do not know what machine to buy—if you doubt whether a spreader will pay—then read this great new book! It tells you in dollars and cents just what a spreader will do for you on your farm. It tells why I began building spreaders and how we have steadily improved them; it tells about my many patents which fully protect the special Galloway Spreader features. I want you to have this book—that's why I'll send it to you for a post card request.

SPECIAL 90 DAY PROPOSITION I have a special proposition for you from now until seeding time which should sell 25,000 machines in the next few weeks. I want you to take a Galloway spreader right onto your farm and test it out. I want you to see how it will lighten the work of getting the manure on the fields. You know that nothing will pay you bigger profits than getting the winter's accumulation of manure out onto the land. A hundred loads or so will pay for the Galloway spreader because of the extra profit you would not otherwise get. Let me send you this new proposition and new 250 page book that tells the whole story.

New all steel Beater and V-Rake. Steel Tongue.

LOW 1916 PRICES AND LIBERAL SELLING PLANS. Galloway was first to lower high spreader prices. I have kept spreader prices down and led in spreader improvements. Buying material in great quantities, manufacturing in my own chain of factories by the thousands, and selling direct at one profit to the customer, has been the reason for the great growth of this business! That's why they say "Galloway divides the melon with his customers." Spreader prices now lower than ever, and you can buy on one of six selling plans, including no money down, a year to pay and five other buying plans.

1916 SPREADER FEATURES Light draft, two horses handle it; low down, double chain drive, cut under front wheels, channel steel frame, trussed like a steel bridge, steel tongue, endless apron, force feed, top of box only 42 inches high, with our improved Model V-rake and all steel beater which makes a finer and wider spreading machine than ever. Shipped from Waterloo, Kansas City, St. Paul, Council Bluffs and Chicago. My new 1916 easy selling plans, cash or time, are fully described in my book, which is mailed for the asking. Write today.

WM. GALLOWAY CO.
BOX 39 WATERLOO, IOWA

complete as shipped and can be operated at a minimum of expense and bother. Their 1916 catalog contains much information that poultry raisers should have, and tells of the many Wisconsin incubator merits and triumphs. When writing for it address Wisconsin Incubator Co., Box 102, Racine, Wis., and kindly refer to their advertisement on page 24.—Adv.

P. & O. Corn Planters Easily Operated.

A PERFECT stand of corn is the aim of every good corn grower and one way of helping accomplish this aim is to use a P. & O. variable edge drop corn planter. It can be instantly adjusted, without stopping the team, to plant two, three or four kernels to the hill. It is simple in construction with nothing to break or get out of order. The driver operates it from his seat with his foot. It has a sight feed without glass, giving an unobstructed view. It can be furnished with a flat drop attachment, fertilizer attachment or pea and bean attachment. Every one is thoroughly tested before it is sent out. You can ask your dealer about it or write Parlin & Orendorff, Canton, Ill., mentioning their advertisement on page 6.—Adv.

"More Wagon For the Money."

IN buying a wagon the lighter the draft the better it is, if durability has not been sacrificed. West Bend wagons are said to have an unusually light draft and at the same time to have such strong construction as to stand up under the hardest wear. When the quality of West Bend wagons is considered the price is said to be much lower than you would expect to pay. Their motto is "More wagon for the money" and by following this policy they have increased their sales every year. A catalog showing a full line of West Bend farm wagons will be sent free on request to Schmidt & Stork Wagon Co., 123 Mill St., West Bend, Wis., if you will mention their advertisement on page 18 when writing.—Adv.

Why Waste Butter Fat on Calves?

WITH butter fat worth $600 a ton you can't afford to feed it to the calves, especially when you can substitute Blatchford's calf meal so easily and get equally good results. You can get 100 pounds of rich milk value from 100 pounds of Blachford's calf meal and it will cost only one-fourth as much. The calves like it, thrive on it and make you much bigger profits than if they were using up the mother's milk and butter fat. The booklet, "How to Raise Calves Cheaply and Successfully Without Milk," will be sent free to anyone replying to their advertisement on page 23 and addressing Blatchford Calf Meal Factory, 63 Madison St., Waukegan, Ill. In writing mention of this paper will be appreciated.—Adv.

Buckeye Drills Save Repair Bills.

THE disk bearings on Buckeye grain drills are very easy to get at. There are no rivets to cut; all you have to do is to take out three bolts. This saves repair bills and if the bearings ever wear out they will be replaced free by the makers. Many other exclusive features which make the Buckeye one of the best drills on the market, are given in the Buckeye drill catalog, which you can secure by writing for it to The American Seeding Co., Springfield, Ohio, and mentioning this paper.—Adv.

Compound Incubators Offer Big Values.

THE Warsaw Incubator Co., are advertising some special values on their Compound incubators in their advertisement on page 24. They are made in various sizes and are said to be constructed of high quality material

COLUMBIA COUNTY ASYLUM

Will sell at Public Auction 1:30 P.M. Tuesday, FEBRUARY 15, 1916

36 REGISTERED Poland China matrons, 20 gilts and 16 proven dams. Also some others. For particulars write to **Supt. S. C. Cushman, Wyocena, Wis.**

that will last a lifetime. Farmers who are considering buying an incubator are invited to send for their 1916 catalog giving rock-bottom prices, before buying. In writing address Warsaw Incubator Co., Box 233, Warsaw, Ill., and mention their advertisement in this paper.—Adv.

Rayo Incubators Conveniently Arranged.

RAYO incubators have a flame regulator that is said to save from three to six gallons of oil every hatch. A single one-gallon filling of the oil tank is enough for any hatch. Its central heating system provides an even temperature throughout the egg chamber and its hinged glass top puts eggs and thermometer all in plain sight. They will be pleased to send their hatching chart and instructive booklet, as well as their catalog, to anyone writing Rayo Incubator Co., U. D. Station, 3369, Omaha, Neb. In writing kindly mention their advertisement on page 25.—Adv.

Help the Backward Cow Along.

A FIFTY-CENT package of Kow-Kure is said to do wonders for a backward cow and small doses given regularly will go a long ways towards preventing the common cow diseases. It is used in hundreds of herds with beneficial results and will do as well for your animals as for the thousands of head it has already helped greatly. It can be had in fifty-cent and $1.00 sizes at all feed stores or druggists, or by writing to Dairy Association Co., Lyndonville, Vt., and mentioning the advertisement on page 22.—Adv.

Krueger's Percherons.

ATTENTION is called to the advertisement of E. G. Krueger, Ixonia, Wis., on page 38. He is offering six registered Percherons that will appeal to our readers. They are of extra good breeding and as individuals can scarcely be faulted. Send for pedigrees and description of these animals to the above address—Adv.

ONE of the greatest problems in helping along the cause of the farmer has been to distribute the information obtained by the colleges and experiment stations in such a form that it could be used by the farmers and that it could be a help to them. The facts must be presented in a simple and brief form, as the farmer is a very busy man and does not have time to look up the meaning of big words, or to read page upon page of printed matter to get a few words of real information. Some of the larger companies interested in greater prosperity for the farmer have from time to time undertaken to help in this matter. For six years the International Harvester Company, with headquarters at Chicago, has issued what it calls an Almanac, brim full of information boiled down into a few words, so that the farmer might use it as a handbook of farm knowledge. These almanacs sent out by the Harvester Company have been different each year, so that the farmer receiving them might keep them all with profit, each one making a separate volume in the set. The almanac has come into greater demand every year, so that more than 2,000,000 were required in 1916 to meet the requests of the farmers. The new Harvester Almanac comes up to the standard set by previous issues, or even surpasses them. It is bound in a cover printed in colors by the new offset process and contains forty-eight pages of closely-condensed information with many illustrations. Among the many subjects discussed are proper methods of feeding silage, plans for farm home building, fuel for kerosene engines, weights and measures, suggestions on how to handle stable manure, information on the use of lime to sweeten the land, directions for proper tillage, figures on dairying, prevention and cures for hog cholera, etc. The almanac is distributed free, and it is the purpose of the Harvester Company to mail one to every farmer who is interested. Realizing the increasing demand, an extra quantity was printed this year, and until the supply is exhausted a copy will be mailed upon request. Please mention this paper when you write for the almanac.—Adv.

50 VARIETIES Chickens, Bronze White Holland, Bourbon Red Turkeys, Toulouse, Embden, African China Geese, Pekin, Rouen, Indian Runner, Muscovy Ducks, Guineas, Incubators and Brooders. Catalog 2c. **THEO. FRANZ, Box 104, Mankato, Minn.**

THOSE LARGE BERKSHIRES

YOU must wear the smile of satisfaction, or there will be no sale. Write your wants today. Address W. A. Freehoff, R. 9, Waukesha, Wisconsin.

FREE to a Few Men. Suit made to measure in latest style and chance to make money in spare time. For samples and offer write Knickerbocker Tailoring Co., Dept. 374, Chicago, Illinois.

IN A letter received a few days ago from Mrs. F. H. Burt, Brodhead, Wis., she says: "Since writing my annual price list on cockerels and cocks, I have had a great many inquiries due primarily to my advertisement in The Wisconsin Farmer. At our recent poultry show at Albany held by the Southern Wisconsin Poultry Association, I entered ten birds and won six ribbons. Among these prizes were two specials. I have sold four cockerels to James Landon, of Appleton, Wis. I also shipped a very fine cockerel to Mrs. Mark Tatro, of Bruce, Wis. The remainder of birds are doing exceptionally fine and I believe there should be quick sales for them.—Adv.

THE Pullman Motor Car Co., York, Pa., offers a big, comfortable, easy-riding automobile for $740.00. This car is attractive in design and is a comfortable car in which to ride on account of the ample room in the tonneau. Exceptional claims for durability and economy are made for this car. Catalog and illustrations may be secured by writing the address given herein. Please mention The Wisconsin Farmer when you write.—Adv.

W. A. FREEHOFF, Waukesha, Wis., has an advertisement on this page of this issue that will interest breeders of large Berkshire swine. Write him your wants, mentioning The Wisconsin Farmer.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

Hampshire Swine.

Feb. 23, R. L. Currie, Viola, Wis.

CURRIE'S HAMPSHIRE SWINE SALE

WEDNESDAY, FEBRUARY 23, 1916, VIOLA, WISCONSIN

100 Head Reg. Hampshire Swine of All Ages--Well Bred--Well Grown--Good Type--Well Belted--Prolific

THIS offering is the result of many years of careful breeding and good care. That I raise good ones is shown by the fact that I have shipped to many of the best breeders in Iowa, Illinois and Wisconsin. My present herd is of the type that wins in the show ring. This is an opportunity for every farmer who is interested in good Hampshires to get the best of breeding stock at his own price. Auctioneer, Col. Chas. W. O'Neill, Bridgeport, Wis. Send mail bids to the auctioneer or H. S. Hoard, Rep. The Wisconsin Farmer.

R. L. CURRIE - - - - **VIOLA, WISCONSIN**

GUERNSEY CATTLE.

REG. GUERNSEY BULL

by the richly bred bull

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address

W. H. & B. L. Hanchett Sparta, Wisconsin

BIRCHWOOD GUERNSEYS

REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address

M. L. Welles Rosendale, Wis.

REGISTERED GUERNSEY BULLS

OF serviceable age. Sired by the richly-bred bull. Imp. Royal George of the Isle 30551, and out of imported cows of Gov. of the Chene breeding. Send for pictures, pedigrees and description. Prices reasonable. Address

Pinehurst Dairy Sheboygan Falls, Wis.

At the Present Time

I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.

Alfred I. Stubbs West Salem, Wis.

REGISTERED Guernsey Bulls

OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address

Ray Lewis West Salem, Wis

Homestead Farm Guernseys

TEN bulls, grandsons of Governor of the Chien; from 1 to 15 months; mostly from A.R.O. cows with records up to 566 lbs. fat. Prices reasonable.

W. G. Jamison & Sons, Appleton, Wisconsin

9 GUERNSEY BULLS

SIRED by Lehigh's Golden Emperor (15761), a bull with a show record, and a grandson of Golden Noble 10508. Dams of all these bulls trace to Lily Ella's Jeweler, Glenwood Reputation 7687, Reputation of Portage, a bull valued at $5,000. Priced right. Clifford Capener, Baraboo, Wis.

SHEEP.

SIXTY OXFORD EWES

OF all ages from lambs to mature animals. Will sell in lots to suit buyer. These are well bred, heavy shearers and good individuals. The high prices for mutton and wool will make sheep breeding very profitable. Come to our Poland China sale Tuesday, February 8th, and look them over.

Wm. Smiley & Son Albany, Wisconsin

YORKSHIRE SWINE.

WE OFFER

50 full blooded

YORKSHIRE PIGS

that can be registered and 12

POLAND CHINA PIGS

six weeks to eight weeks old at

$5.00 EACH

R. C. CONNOR CO., MARSHFIELD, WIS.

McKevitt's Percherons.

SEVERAL Percheron stallions of various ages are advertised for sale on page 38 by McKevitt Brothers, Bridgeport, Wisconsin. One of these is the imported stallion, Kubain. He has well-formed hips and big bone and is black in color. They also offer a sucking colt sired by him and a ten-year-old blue roan mare bred to him. They also offer two stallions, two and three years old, of blue roan color, weighing 1,500 and 1,800 pounds, respectively. These were sired by Imp. De Cine, a 2,200-pound stallion. They are also offering a Shire stallion weighing 1,850 pounds, a quick breeder and an extra good mover. All of these horses are sound and will stand a veterinarian's examination. McKevitt Brothers are also breeders of Aberdeen Angus cattle and have one of the largest and best herds in Wisconsin. Their herd has been a heavy winner wherever shown. They are offering Angus cows, heifers and bulls of serviceable age and younger and can furnish a car load if desired. For further information in regard to these animals write to the above address. When writing kindly mention this paper.—Adv.

CHESTER WHITE SWINE.

CHESTER WHITES

SPRING boars of the kind and type so much in demand by farmers and breeders. A few choice sows also for sale. Write for prices.

Adolph Nuttleman West Salem, Wis.

CHESTER WHITES

BARGAINS in pedigreed Chester Whites. Herd boars, bred sows and early fall pigs. Address

JOHN SIMON CAMPBELLSPORT, WIS.

CHESTER WHITE SPRING BOARS AND GILTS

SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address

W. F. Miller West Salem, Wis.

DUROC JERSEY SWINE.

BURN BRAE FARM

ROSENDALE, WIS.

CHAS. A. PETERSON, Prop.

DUROC BRED SPRING GILTS of choice breeding, sired by Burn Brae Distinction and Hazelhurst Col. Bred for March and April farrow to Burn Brae Golden Model. Mention The Wisconsin Farmer when writing.

Duroc Spring Gilts

OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

CRITIC TOP NOTCHER

half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address

B. W. LITTLE JANESVILLE, WIS.

Durocs and Guernseys

30 BIG, growthy, bred spring and fall gilts, mostly sired by Valley G., one of the largest, heaviest boned and best breeding boars of the breed. Bred to Valley G.'s Col. Defender and Crimson Again. Write me if you want the best Guernsey bulls from one to fourteen months old. Glenwood May Rose and Rilma breeding. Some from A. R. O. dams. Address

Allie S. Knudson Brodhead, Wisconsin

DUROC BOARS SHIPPED C. O. D.

OUR spring boars are good enough to ship C. O. D. They are big, typey, with heavy bone. They are sons of King the Col., Lincoln Model, Golden Choice and Crimson Model. Write for description. Price $20 to $30. Address

Stubbs & Hyzer West Salem, Wisconsin

Cholera Immune Duroc Gilts

MARCH and April farrow. Sired by Defender's Golden Model and Wonder Boy, both sons of grand champion sires. Priced for quick sale.

E. H. PARKER JANESVILLE, WIS.

DUROC BOARS AND GILTS

FARROWED in April. Sired by Professor II, and out of sows of Chief J.E.D., Ohio Chief and Grant's Col. breeding. Price $20 and up.

W. T. Green Orfordville, Wisconsin

MOUNT VERNON DUROC JERSEY

BRED GILTS, noted everywhere for their size, quality and popular blood lines, such as Rose Hill Guard 171721, Educator 67139 and Select Chief 173601, at farmers' prices. See them or write M. J. DOWD, Route 1, LANSING, MINN.

BURT FARM DUROCS

BIG-TYPE, big litter kind. Send for descriptive price list. 30 young brood sows. A few good boars.

F. H. Burt & Sons, Brodhead, Wis.

Fine Fence Book for You.

OUR readers will notice with interest that the advertisements of the Brown Fence & Wire Co., Cleveland, Ohio, are again running in these columns. This is the fifteenth year they have advertised with us and they must have obtained a good patronage from our readers to keep it up so long. A letter from Mr. Brown states that their new eighty-page catalog is just off the press and that it is larger and more beautiful than ever. It is a regular encyclopedia of farm fencing and gates of every kind and also describes their new triple angle steel posts. It will be sent at once on postal card request addressed to Mr. James Brown, President Brown Fence & Wire Co., Dept. 35, Cleveland, Ohio. Whether or not you are already one of their 400,000 customers it will pay you to have this new book. In writing kindly refer to this paper. See advertisement on page 26. —Adv.

LYBRAND PERCHERON DISPERSION SALE

Richland Center, Wisconsin, Monday, Feb. 21, 1916

THE noted Percheron stud of the late R. C. Lybrand, Richland Center, Wis., will be sold at public auction. This stud, which consists of thirty-eight head, is one of the best in the Northwest. It is composed of sound, well-developed mares of good breed type and characteristics and their offspring. One mature stallion, seven stallion colts foaled 1914-15, one 1913 stallion, fifteen mature mares, twelve mare colts 1914-15, four 1913 mares. The mature stallion, Imp. Tripoli 27449, by Othello 22623, is the sire of the 1915 crop of colts, all of which are black in color and good individuals. He is an exceptional breeder. Every animal will stand veterinary inspection. This is an opportunity for you to get "seed stock" that is the result of years of breeding. Catalogs, giving breeding and description, are ready. Send for one at once.

J. W. MARTIN, Mgr. Gotham, Wis.

POLAND CHINA SWINE.

Silver Cup Big-Type Poland Chinas!

The greatest prize-winning herd in the state. We proved this by winning 61 ribbons at Wisconsin State Fair. This included 3 champions and 1 grand champion. At the Northern Wisconsin State Fair, we made a clean sweep, getting 1st and 2d on all the herds. We have for sale boars and sows of all ages. This stuff has the size, bone and quality out of big prolific sows that weigh up to 800 pounds, litters averaged 10. Can furnish you sows and boar not related. Pedigrees furnished. Write your wants.

J. D. McDONALD, NORTH BEND, WISCONSIN

BIG-TYPE POLAND CHINAS

SPRING GILTS. Some now bred for March and April litters. Others will be bred for April and May litters or will be sold open as desired. There are daughters of **King Jumbo** by Long Jumbo, that weigh 1106 pounds. **Fall Yearling Gilts,** bred for spring litters to **Big Wonder,** first prize under six months boar at 1915 Minnesota State Fair. **Some Fine Yearlings and Spring Boars** that will do you a lot of good. **SHORT-HORNS. 10 Fine Yearling Bulls,**—roans, red and whites, sired by **Highland Sultan,** a grandson of Whitehall Sultan. **25 Cows and Heifers** from six months old and up. These are of Scotch and Bates breeding. Most of them are of heavy milk producing strains. If you want Short-horns of big size you can get them here. My Short-horns won all first prizes but one at the 1915 Beaver Dam Fair against heavy competition.

W. J. BERND - - - NEW RICHMOND, WISCONSIN

Poland Chinas

BRED gilts for sale; also fall pigs at bargain prices. Address

James Derivan Fox Lake, Wis.

Big-Type Poland China Hogs

MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address

W. T. Hartley, R. 3, La Crosse, Wisconsin

HAMPSHIRE SWINE.

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.

R. L. CURRIE VIOLA, WISCONSIN

LAIRD'S Hampshire sows and spring gilts bred for spring litters to the Wisconsin junior champion boar. Special bargain prices during February. A. M. Laird, Prairie du Chien, Wisconsin.

MULE-FOOTED SWINE.

MULE-FOOT HOGS

I HAVE won more first premiums and championships than any herd in the U. S. Choice boars and fancy, large-type bred sows and gilts for sale. Zene G. Hadley, Box D, Wilmington, Ohio.

FREE catalog illustrating, describing, pricing big-type Mule-Foot hogs. Cholera immuned by double treatment. C. D. Thompson. Letts, Ind.

Poland China Bred Gilts

AND yearlings from litters that average ten. Sired by Black Bone 212501, with 11 inch bone, sired by the $1,100 Black Big Bone, 1st at Minn. Fair; Square Deal by the 1,000-lb. Lakewood Ideal, and Black Model by Black Orange. These gilts are the large, smooth kind with length and heavy bone. Are bred to Black Model and Big Ben, a choice yearling of 9 inch bone. Priced to move them soon. Rose Comb Rhode Island Red cockerels. Address

P. N. Collins, Box 55, River Falls, Wisconsin

Registered POLAND CHINAS

A FEW good spring boars ready for service. Bred gilts now. All priced for quick sale. Will ship on approval. Registered Holsteins. Address

Marinette County Asylum, Peshtigo, Wis.

Poland China Sow Sale Feb. 8

YOU will buy big-type Poland Chinas eventually. Why not our sow sale February 8th. Send for catalog. Address

WM. SMILEY ALBANY, WISCONSIN

BIG-TYPE POLAND CHINA

BRED gilts to farrow March and April. Sired by Stand Pat Jr. and Blue Valley Expansion. Bred to Wonder Joe, son of Fesenmeyer's A Wonder, and dam, Joe's King Giantess. Will weigh 300 pounds. None better. Price $30 to $40. Address H. F. Strickler, Mt. Carroll, Illinois.

BIG-TYPE Poland China bred gilts sired by L.'s Big Orange and Iola Chief. Prices $20 and up. Bred to L.'s Big Orange and Fairview Jumbo by Wisconsin Jumbo. J. Le Roy Larson, Iola, Wis.

HORSES.

FRANK IAMS'

"Peaches and Cream" Horses are "Town Talk"

Horsemen—1916 is the **"Get Rich Quick"** year for **Horse Breeders and Stallioners.** Get into the **"Money-Making Game"** of Breeding Draft Horses. **Europe "doffs"** her **"War Cap"** to **U. S. Horses. Europe** buys **500 Horses daily of U. S.** (at $125 to $200). Europe will buy **"a MILLION"** Horses of U. S. You make **more "Easy Money" in Breeding Horses** than any other business **for next ten years.**

His 34 years of success in *Importing, Breeding* and Selling *5,640 registered horses*—his "50 trips" across the ocean —make Iams *a safe man* to buy *stallions from.* His *"old customers"* are *"best Page advertisers,"* his *Breeding Guarantee* backed by *"1-2 Million Dollars."* *Iams' Imported* and *Home-bred horses* are *"classy, model big drafters"* of *large bone, fine form, quality, finish,* and *flash movers.* Several European

"Gold Medal and State Prize-Winners,"

"Iams' kind," and in the *"Pink of Condition."*

Bought at *"bargain prices"* and *must be sold. "Iams sells horses on honor."* A lady can buy as cheap as a man. *Iams is not in "stallion trust,"* and is *selling more pounds of "model draft horse"* for the *money* than any *competitor. Iams* is *cutting the middle* out of *high prices* on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected by Governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse Iams sells

IMPORTED STALLIONS AT $1,000 AND $1,400

(few higher). **"Home-Breds" come cheapest.** Registered 1,800 to 2,100-lb. mares at $700 to $1,000. **Terms cash, or one year's time at 7 per cent; land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare;** gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads. with a **$500 guarantee** that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

Closing Out Sale of

Percherons

HAVING sold my farm, I will sell my entire stud of registered Percherons at public auction at Omro, Wis., March 1, 1916. Parties interested will please write for catalog.

Address

John H. Haigh, *owner*

R. R. 27, Pickett, Wis,

Or Y.H. Denhart, Neenah, Wis, Auct.

Dunham's Percherons

For Fifty Years the Best

Send for Fine Photographic Catalogue

DUNHAM'S, Wayne, Dupage Co., Illinois

Homewood Stock Farm

IMPORTED and American-bred **PERCHERON** stallions and mares. First-class 2, 3 and 4-year-old stallions and mares with size, bone and quality at very attractive prices. A few big, sound, aged stallions very cheap. Every animal strictly guaranteed. Terms to suit. Call or write.

S. METZ & SONS, HOMEWOOD, ILLINOIS

PURE-BRED PERCHERONS

FOR sale— One stallion, black, small star, foaled May 11, 1912; one mare, iron gray, foaled June 18, 1913; one stallion, gray, foaled May 5, 1914; one stallion, gray, foaled May 15, 1914; one stud colt, black; foaled June 30, 1915; one stud colt, gray, foaled Aug. 3, 1915. Write for pedigree and prices. Address E. G. Krueger, Ixonia, Wis.

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address

M. Bodenheimer & Co. Green Bay, Wis.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

PERCHERONS

THE rugged kind with size and quality. We can suit you. A few imported horses and some extra good American bred colts. Barns in town. Come and see what we have to offer.

W. E. PRICHARD & SONS

OTTAWA ILLINOIS

HORSES.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

WE now have in our barns more big-boned, rugged draft colts, from yearlings to 4 and 5 years, of the different breeds than ever before. We have two-year-olds that weigh over a ton—herd headers and show propositions.

Five farms over 1,000 acres devoted to the horse business. We do all our own buying and selling, grow all our own feed. Our economical way of handling stallions saves money for the purchaser. We guarantee all horses sold and can sell you a high-class stallion cheaper than any other firm in America.

We are located in North Central Iowa, 20 miles from the Minnesota line, on the C. M. & St. P. Ry., midway between Mason City and McGregor.

Send 20c in stamps for large Horse Hanger which shows our Main Farm and sales stables. Correspondence a pleasure. **We have a horse for every purse.**

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

Reg. Percheron Stallions

5-YR-OLD Black **Imp. Kubain,** a cracking good individual. 2- and 3-year-old Blue Roan Stallions weigh 1500 and 1800 lbs.; sired by Imp. De Cine. Suckling colt by Imp. Kubain. 1 10-year-old Blue Roan Mare, weighs 1950. 1 10-year-old **Shire Stallion,** weighs 1850. **Angus cows, heifers and bulls;** serviceable age and younger. Can supply a carload.

McKevitt Bros. - - Bridgeport, Wis.

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

SHORT-HORN CATTLE.

REGISTERED SHORT-HORN BULLS

READY FOR IMMEDIATE SERVICE. White, red and roan color. Sired by **McK.'s Masterpiece,** out of big, heavy producing cows of choice breeding. Also a few bull calves from two to ten months of age. Mention Wisconsin Farmer.

FRANK MORLEY - BARABOO, WIS.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address

Harvey H. Little Evansville, Wis.

GREEN VIEW STOCK FARM

Offers the richly bred Short-horn bull,

ROYAL SULTAN 390142

A 2,300-pound grandson of Whitehall Sultan. We also will sell several of his yearling sons ready for service. Write for description and prices.

John Bear & Son Spring Green, Wis.

HARMONY STOCK FARM *Short-horns*

TEN very good Scotch bulls for sale. All sired by Strathallen King 296426, that is one of the best grandsons of Whitehall Sultan. Address

J. E. KENNEDY JANESVILLE, WIS.

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 195886, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address

Geo. Wenham & Sons, Ft. Atkinson, Wis.

The Great World's Fair Herds

50 REGISTERED Short-horn bulls and heifers. 100 big-boned Poland China boars and sows. Call at Prairie Lawn Stock Farm or write.

C. J. Schoenfeld & Son, Fox Lake, Wisconsin

BATES MILKING SHORT-HORN

HEIFERS 8 to 20 months old and bulls of serviceable age and younger. Big-type Poland China spring boars and fall gilts for sale.

A. T. Grundy Oshkosh, Wis.

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

CHOICE Short-horn bulls 1 to 14 months. Poland China swine of all ages. Write A. Menke Route 1, Markesan, Wisconsin.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY

Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. **The National Auctioneering School of America,** Dept. 103 Lincoln, Nebr., U. S. A.

JERSEY CATTLE.

She's The Money Cow

She makes use of every ounce of feed. Her milk is the richest of all the breeds in butter fat and solids. She is rugged and vigorous — will thrive in any climate. She milks steadily. She is beautiful and gentle. She's the mortgage lifter. She's the cow for the everyday farmer, yet she's the rich man's *pride,* too. And she's the cow for the family.

Our free book, "About Jersey Cattle," proves these things. Send for it now—a postal will do —it's interesting and instructive.

The American Jersey Cattle Club

338 West 23rd Street • New York City

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address

Rollie Vandervort Tomah, Wis.

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address

UNDERWOOD STOCK FARM

L. C. Underwood, Prop. Avoca, Wisconsin

RED POLLED BULLS

OF serviceable age and younger; and yearling heifers and younger; from heavy-producing cows of A. R. breeding.

H. A. MARTIN - - GOTHAM, WIS.

FOUR REGISTERED RED POLLED BULLS

TEN to fifteen months old, sired by McGovern out of producing Cows of choice breeding.

M. J. Rowlands & Son, Cambria, Wisconsin

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Chariton, Iowa.

HOLSTEIN-FRIESIAN CATTLE.

2 Holstein Bull Calves

BORN November and December, 1915; ¾ white, from good A. R. O. cows; $40 each. Also heifer calves $100 each. Send for photo and pedigree.

Trieloff Brothers Ft. Atkinson, Wis.

Registered Holstein

COWS, yearling heifers and bulls, ready for service. Yearlings sired by the 31.11 pound bull, Briar Abberkerk De Kol 76694; well marked and good type. C. E. Ward, Palmyra, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

High Grade Holsteins

A few heifers and cows usually for sale. Address **ALBERT VOGT, Oconomowoc, Wisconsin.**

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HOLSTEINS

REGISTERED and high grade Holsteins for sale at all times. Address
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25-LB. HOLSTEIN BULL

BORN December 2, 1914. Well marked, well grown, straight and right. Sire, King Segis Butter Boy. Dam, Blue Bell De Kol. A. R. O. record 23.50 pounds. Can spare a few heifers.
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20.748 POUND two-year-old bull. Straight back and rump. Will make a large bull when full grown. Price $150. One bull 10 months old. Well grown and very large for his age. Price $75. Four bull calves from 2 to 3 months old $30 to $40. 15 to 20 tons of good clover hay in stack $8 per ton.
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OFFER choice selections from the world's famous, Colantha Changeling Lad, whose dam has a 30.73 record as a junior four year old, four of whose dams average over 30 pounds. Over sixty head to select from. Address
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(Waukesha, County)

Here are 50 herds of Registered and High-Grade animals in which you will find a large selection of the type of animals for which you are looking.

Everything from grade heifer calves to 30-pound bulls are advertised here.

ONE good high-grade cow, more white than black. Will freshen January 22, 1916. Easy milker. Address Mrs. S. Spoerke & Sons, Oconomowoc, Wisconsin.

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FOR sale, three and five years old, weigh about 1,200 lbs. each. Address August Borchardt, breeder of Holstein cattle, Oconomowoc, Wis.

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ONE heifer calf six weeks of age, sired by B. P. Prince; one heifer calf twelve weeks old and one bull calf out of Ormsby Duchess Marie, 21.32 pounds butter in seven days and sired by Beauty Pietertje Prince. All are nicely marked. Price $500.00. Address
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ALDESLEY HOMESTEAD JOHANNA LAD
from 60-pound dams.

One 1,600-pound
Dappled Gray Horse
9 years old. Guarantee him true and sound.
W. A. Reid & Son, R. 2, Oconomowoc, Wis

LA BELLE VIEW FARM. Ormsby breeding, the blood that has made the black and whites famous. Herd sire, Hillvale Champion. This bull carries 50% of the blood of Sir Ormsby Hengerveld De Kol. Buy a young Ormsby bull from A. R. O. dam and walk with the four hundred. You will never go wrong if you keep Ormsby company, for it is this family that holds the world butter record for seven days and one year. Inquire of Earl E. Rosenkrans, Oconomowoc, Wis.

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A SON of Paul Ormsby is sire of Ormsby Jane Segis Aaggie, world's champion seven day butter cow (44.42 lbs. butter.) A son of Sir Ormsby Hengerveld De Kol is sire of Duchess Skylark Ormsby, world's champion yearly cow (1506 lbs. butter.) Both these bulls were used in our herd. One of the best sons of each is used now. Such a combination of Ormsby breeding has never been effected in any herd in the world. A bull for every need, and our prices give you more bull for your money than any other breeder in the state. Investigate. Address
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in herd. Address Mrs. Maria E. Gunderson & Sons, Oconomowoc, Wis.

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TWO years of age. Sired by Beauty Pietertje Prince Ormsby. Well marked, straight and right. Price $225. Address
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OLANTHA DE KOL PIETERTJE

IRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol auline, A. R. O. record 39.64 pounds butter. Can pply bulls of serviceable age, or from 1 month 20 months old. Out of heavy producing dams.
altz Hoesly - New Glarus, Wisconsin

OLSTEIN BULL FOR SALE

NKA DE KOL AKKRUMMER 163119
ORN December 28, 1914. Sire, Daisy Johanna 5th, the 1st prize two-year-old bull at the 1915 isconsin State Fair. Dam, a 27-pound daughter the show sire, Johanna Pontiac De Kol.
ast Brothers West Allis, Wisconsin

OLSTEIN BULLS

F SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son Homestead Jr. De Kol, out of a daughter of e Kol Burke, that has 70 A. R. O. daughters, ven with records above 30 pounds. These young ulls are out of A. R. O. cows. Write for extended digrees. Mention Wisconsin Farmer and address
M. MILLER, JR., MENOMONIE, WIS.

Holstein Bulls

F serviceable age and younger, sired by **Piebe Longfield De Kol** and out of untested and A. O. cows with records up to 24 pounds butter in ven days and 750 pounds in a year.
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ICELY marked Holstein and Guernsey heifer and bull calves about four weeks old, twenty ollars each; all express paid and safe arrival and tisfaction guaranteed. Order direct. Prompt ipment. Meadow Glen Yards, Whitewater, Wis.

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IR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write e your wants in Registered Holsteins
ohn Hasse Monroe, Wisconsin

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Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77984,** a son of the 31.71-lb. bull Sir KorndykePontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

32-Lbs. Butter

7 DAYS was made by the dam of **SIR NETHERLAND LONGFIELD.** Well marked, well grown bull calves from one to six months old, sired by the above bull, for sale. Write me your wants in registered Holsteins.
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22.27-POUND HOLSTEIN BULLS

BORN March 18, 1915. Mostly white. Dam's A. R. O. record at 26 months old, 22.67 pounds of butter in seven days; grandam 26.93 pounds. Every dam in pedigree tested, all with records over 21 pounds. Write for pedigree, price and description. Mention Wisconsin Farmer. Address
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YOUNG COWS AND BULLS of serviceable age and bull calves. Prices reasonable.
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GRANDSON OF THE $25,000 HOLSTEIN BULL
Johanna McKinley Segis

WELL MARKED; seven-eighths white; well grown. Send for pedigree. Address
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REGISTERED HOLSTEIN bulls from 1 to 11 months old. Sired by King Pontiac Pioneer, that is backed by the world's champion cow.
Thos. A. Thompson Argyle, Wisconsin

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OLDEST seven months. Sired by King Walker Segis 3d, priced for quick sale. Can spare a few females. Address
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FINE Holstein calves, both sexes, 15-16ths pure. from heavy milkers, $20 each. Registered bull $85. Edgewood Farm, Route 3, Whitewater, Wis.

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Some with A. R. O. records. Choicely bred and of straight, large conformation.

REGISTERED PERCHERON STALLIONS

Sucking colts—2 year old—5 year old. Write for pedigrees and price.

Beautiful full marked sable and white Collie pups, males from natural workers, 10 weeks old. Price $5. Pedigree furnished. Address
Paddock Bros. - Augusta, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
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Sheboygan Falls Wisconsin

500 Holsteins and Guernseys

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OFFERS 26.50 lb. reg. Holstein bull, 7/8 white; grand individual, serviceable age. Dam 24.94 at 4 years, will be tested again. Sire's dam Griselda Inka 28 lb.; price $200.00. Also other yearling bulls, Pontiac breeding from A. R. O. cows from $80 to $100. Eight cows at reasonable prices. Farm 1½ miles south.
Kirkpatrick Bros., Sauk Co., Reidsburg, Wis.

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SIRED by Pontiac Cornucopia Coronis, whose dam is a 27.06 pounds, 5% daughter of Hengerveld De Kol; $50 and up. Address
J. Roy Gordon - Mineral Point, Wis.

Grandson of
King of the Pontiacs

READY for service. Sire Perfection King of the Pontiacs 89979, 4 A. R. O. daughters; dam Piebe Pride 2nd, 26.16 in 7 days at 11 yrs. 8 mos. of age; bull nicely marked, ½ white, fine individual; price $200.00 f. o. b. cars. Also 4 other serviceable bulls out of A. R. O. dams, $75.00 to $150.00. Send for pedigrees. Fairview Stock Farm, W. G. Marshall, Prop., Whitewater, Wis.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
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Holstein Bulls

FROM A. R. O. dams with records up to 21 lbs. They are ready for service, are well grown, ¾ to 9-10ths white in color, sired by

SIR CANARY ALACARTRA

a son of the $1,000 bull, Canary Paul, and out of Nellie Alacartra Rue, that made 23 pounds butter in 7 days and 874 pounds in a year. Send for pedigrees and price. Address
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ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026, a richly-bred Ormsby bull. Address
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50 HOLSTEINS 50

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Registered Holstein Heifer

AND bull calves, three to ten months old. Some sired by King Clover De Kol Burke and sons by Oak Homestead Fobes, whose three nearest dams average over 30 pounds of butter in seven days. A few high-grade cows and heifers also for sale. Address
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To introduce my Stock Tonic to just a thousand more readers of this paper **I am going to give away** one thousand **beautiful Wool Horse Blankets—Absolutely Free**—I'll send them at once—**to the first thousand readers of this paper** who send in the coupon below. With this blanket I will also agree to send a big trial feeding of

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the greatest of all live stock conditioners. What is more, I will send this Stock Tonic with the distinct understanding that it is to be **used for two months at my risk**—that if at the end of the two months feeding the Stock Tonic has not been entirely satisfactory **—no charge is to be made.**

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at my risk, that my Stock Tonic will positively **rid your stock of worms, fatten them up** and **keep them in pink of condition.** I will prove to you that with my tonic you will actually get **more milk from your cows,** that you will **fatten your hogs, steers, sheep and poultry for market in one-third less time**—that you will **save grain, prevent disease** and **make more money** from each animal you own. I will prove these things to you and I'll do it all at my own risk. And as a **special inducement,** to the first one thousand persons who send for this free trial feeding—**I will give one of the magnificent $5.00 Horse Blankets** shown above.

Send No Money! Just Mail The Coupon

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It is composed only of the finest ground roots, herbs, etc.—each one carefully selected and absolutely pure—**Gentian, Elm Bark, Foenugreek, Charcoal, Anise Seed, Soda, Salt, Elecampane African Ginger, Wheat Middlings, Quassia** and **Blood Root**—the finest tonics, appetizers, digestive aids, worm dispellers and blood purifiers known to medical science. **Ask any veterinary about these ingredients.** Each one has a special purpose. A compound of these herbs, roots, etc., is absolutely sure to **help the digestion** of any animal—**keeps the blood clear,** the **system free from worms and disease** and forces the animal to **put on fat** rapidly. I have proved it so often I have no doubt about it. That is why I can make you this almost unheard of offer—to ship you a quantity of this tonic with the distinct understanding that **you don't pay a cent unless you are satisfied.**

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I have such absolute faith in Wilbur's Stock Tonic that I take all the risk in this trial feeding. **I know what it has done for others.** I have made and sold this tonic for over thirty-two years. Over a million of the best stock raisers in America are feeding it every day to their live stock—many of them have for over thirty years—I have thousands upon thousands of the finest kind of letters from all parts of the country telling me of the wonderful results from feeding this Stock Tonic. And now all I want is to show you **that what it will do for others it will do for you.**

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It never costs you a cent. It is yours—forever—to keep and use every day—**whether you ever pay for the trial feeding of Tonic or not.** It is a big, warm, soft, wool blanket—84x90 inches—never sold for less than $5.00 to $6.00 anywhere. It's a blanket you'll be proud to own—and remember—IT'S FREE.

APPLICATION FOR FREE BLANKET

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Please send me at once one of your **beautiful $5.00 Wool Horse Blankets.** Also send me 100 pounds of Wilbur's Stock Tonic. I agree to feed the tonic for two months, and if it does what you claim, I will pay you for it at the rate of only $2.00 per month until I have paid $14.00. If it fails and I so report in sixty days, **you are to cancel the charge and I will owe you nothing.** You are also to ship me—Free—enough **Wilbur's Poultry Tonic**—your guaranteed egg producer—to offset all freight charges on the shipment. **It is understood that the $5.00 Horse Blanket and this pail of Poultry Tonic are to be mine—Absolutely Free—whether I pay for the Stock Tonic or not.**

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NOTE. This liberal offer only open to responsible farmers and stock raisers over 21 years of age.

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President

Wilbur Stock Food Co.
940 Huron Street
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THE WISCONS FARMER

VOL. XLV. NO. 7. THURSDAY, FEBRUARY 17, 1916. WHOLE NO. 1777

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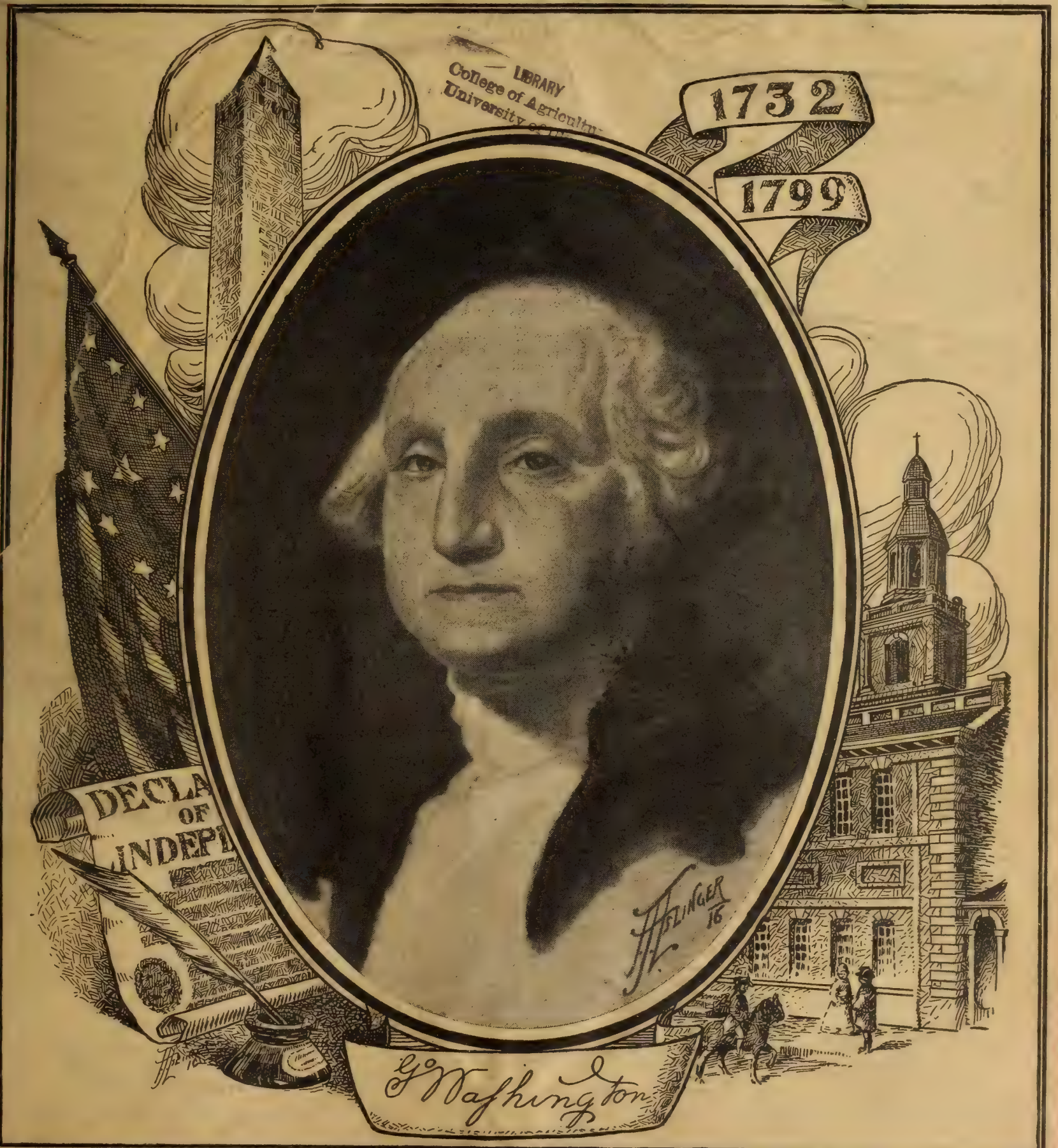

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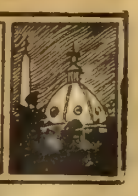

...ations with Berlin and ... Germany is satisfied ...greement which has pre... ...ndly relations with the ...tes without the humiliation ... the pres...

...paganda he is antagonizing his former chief supporter, Wm. J. Bryan. The main effort of the democrats thus far seems to have been to hit upon a candidate for vice president to supplant Tom Marshall, of Indiana, who is none too popular or strong as a running mate. The republicans and progressives are still up in the air, with Theodore Roosevelt holding the balance of power, but refusing to say just exactly what he will or will not do. Justice Hughes, of the United States Supreme Court, is still looked upon as a possible candidate, although he has repeatedly stated that he does not aspire to the honor and has ordered his name removed from the ballot wherever it has appeared. Senator Borah, of Idaho, also flatly declines to make the race, while Senator Weeks, of Massachusetts, is slowly but surely eliminating himself. Aside from Roosevelt, the men most frequently and prominently mentioned for the republican nomination are Senator Cummins, of Iowa; Senator McCall, of Massachusetts; and Senator Burton, of Ohio. All are favorite sons and will enter the convention with the support of their home states, far from enough votes to nominate, however. It is only a few months now until the nominating conventions are to be held, with more uncertainty as to the nominees and their chances of winning than usually prevails in the pre-convention campaign.

THE first steps in the campaign for national preparedness were taken by congress last week, party lines being obliterated and Champ Clark, speaker of the house, and James M. Mann, republican leader, working together. Two navy measures were passed without dissenting vote. One was to provide for adding 300 midshipmen to the entering class at the naval academy next July, in order to have more men in command of our ships, the other was to equip navy yards for construction of battleships now provided for. Immediate improvement of the navy by designing new battleships along the lines of the best now in use, doubling the membership of both Annapolis and West Point, creation of many additional regiments for the army and short term enlistments to produce a reserve, were among suggestions made by Champ Clark. He said he expected to discuss the subject of preparedness generally soon. Mr. Mann reiterated his previous pleas for a larger army and navy and aided in maneuvering the bills to passage. "This is not the time for crimination and recrimination," said he. "It is not the time to find fault with that which has been. It is the time for all to join hands for that which may come."

THE United States and Germany are reported to have reached a complete agreement on the settlement of the controversy over the sinking of the Lusitania and the sacrifice of 115 American lives last May. While concessions have been made by both sides, Germany is understood to have made the greater ones, practically meeting all of the demands of President Wilson. While refusing to admit that the sinking of the liner constituted an "illegal act" it is willing to make money reparation and to guarantee to take care of the lives of noncombatants on the high seas hereafter. Danger of trouble between the two nations, over this act, is now far removed. President Wilson believes he has won an agreement from Germany which eliminates forever the submarine menace to traveling Americans and that he has procured all the concessions that could be expected without adopting a threatening attitude which might lead to a breach of

OBJE... ...paredness p... ...y call for greatly en... ...s and navy, was made to the military committee of the lower house of congress last week by representatives of the National Farmers' Union and other national bodies having large and representative membership. Opposition to war preparations was voiced by John B. Lennon, treasurer of the American Federation of Labor; James H. Maurer, president of the Pennsylvania Federation of Labor; Mrs. Florence Kelley, Frank Dornblazer, a director of the National Farmers' Union, and Sara Bard Field of the California Women Voters' Association. Mr. Dornblazer said 2,000,000 farmers were behind a resolution he presented, demanding economy in the expenditure of funds, opposing an increase for an army or navy, approving a reasonable expenditure for coast guards and submarines, and objecting to a large standing army or compulsory military service. Miss Field attributed the opposition to preparedness, reported to exist in the middle West, to the advent of western women in politics. They realized the need of money for constructive things, she said, more than for war.

GERMANY continues to lose its colonies, being now well-nigh stripped of all its oversea possessions. Last week 900 Germans and 14,000 colonial troops from the German protectorate of Kamerun in western Africa crossed over into Spanish territory and were interned for the remainder of the war. While Germany has been wonderfully successful in its fighting in continental Europe it has been unable to hold its far-flung colonial possessions, the Japanese beginning the work by wresting the Chinese foothold away after a siege which promised to be exceedingly bloody, but which was ended by the surrender of the Germans. The campaign against Kamerun began in the spring of 1915. Kamerun has an area of 191,130 square miles and has a population of 2,540,000, including about 2,000 whites. The only other posesssion of the Germans in Africa, not conquered by the allies is the protectorate of German East Africa, which has an area of 384,000 square miles and a population of 5,500,000. The allies will hold all these conquered German colonies to use as counters, in the exchange of territory and advantages won, when the final peace accounting comes.

LINDLEY M. GARRISON, secretary of war in President Wilson's cabinet, resigned last week because of differences of opinion with the president over the preparedness plans, particularly as they apply to the absolute necessity of the proposed continental army of 300,000 men to serve three months each year for three years and then hold themselves liable to the call to the colors. The resignation has been accepted by the president, making the second break in the cabinet, Wm. J. Bryan having resigned the state portfolio because of differences of opinion on the Germany and war situations. Secretary Garrison was convinced that a new continental army should be organized, to supplant the national guard for defense, but President Wilson, while favoring the plan, has been informed that it will be impossible to force the matter through congress and has not insisted upon it. It is known that one of Secretary Garrison's principal reasons for his conviction that only a federal continental army ...stead of a reorganized national g... could be the main military depend... of the nation was his belief that s... day the United States may be ca... upon to defend the Monroe doctr... and in that event he foresaw the t... tional guard might not be available for use outside of the United States before a declaration of war. Upon the ...ntention on the one hand that the ...ntinental army or ultimately univer... service was the nation's only re...ance, and the position, on the other, that no one plan could be enforced upon congress, President Wilson and his secretary of war parted official ...any.

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This is the collar that is ... farmers because of its extraordinary ...ties. No sweat pads are needed. S... ...er Collars *prevent* galled necks ... ...ulders—even *cure* them. These ... ...e shaped to fit every bone, every ... ...and to keep their shape. Only ... ...ounce, bark-tanned leather use... ...ng. Only hand-flailed, long ... ... stuffing. Only soft, elastic, s... ...n-proof buckwheat hulls for ... Point of greatest strain triple ...

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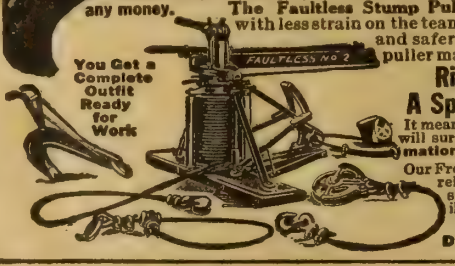

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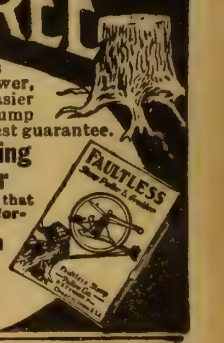

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The Wisconsin Farmer

THURSDAY, FEBRUARY 17, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

GEORGE WASHINGTON, FARMER.

IT IS interesting and stimulating to reflect that in our two greatest national crises, we have turned to the farm for a leader. Abraham Lincoln was born on a farm. He followed the life of the average farm boy until the law called him. George Washington was born on a farm (they called it a plantation in his days and location), he was brought up in the country and until manhood he had never seen a town of 5,000 people. There have been times when our nation seemed deaf and blind to the needs and the claims of the farm; in national stress it sees and hears with prophetic clearness.

With Washington's birthday occurring next Tuesday, it may not be amiss for us to consider the father of our country from the standpoint of the farmer. In recent years we have been enshrouding him too much in an historical mantle, making him a personage rather than a personality. I am indebted to a most interesting book, entitled "George Washington—Farmer," for restoring the real Washington to my mind, at least. I hope that when I have set forth a few facts here you, too, will be enabled to see our first president as he really was.

To begin with, no man thought more of farming and the farmer than Washington. Thus we find him writing to a friend, shortly after the war of independence:

> The more I am acquainted with agricultural affairs the better I am pleased with them; insomuch that I can nowhere find so great satisfaction as in those innocent and useful pursuits. In indulging these feelings I am led to reflect how much more delightful to an undebauched mind is the task of making improvements on the earth than all the vain glory which can be acquired from ravaging it, by the most uninterrupted career of conquests.

Do not these words take on a new and stronger meaning, now that we are asked to abandon the pursuits of peace and assume a warlike attitude? Can we not well afford to listen to Washington, the great soldier, the great commander, who, having whipped a never-before-beaten foe, turns from the victories of the battlefield to glorify the far greater achievements of improving the earth, making it to yield more abundantly? Let us think over his words before we quit the fields which we have trod with such credit to ourselves and comfort to the entire world.

On another occasion, Washington added this tribute to farming:

> I think with you that the life of a husbandman is the most delectable. It is honorable, it is amusing, and, with judicious management, it is profitable. To see plants rise from the earth and flourish by the superior skill and bounty of the laborer fills a contemplative mind with ideas which are more easy to be conceived than expressed.

Nor were these idle tributes, for Washington never found any greater pleasure in life, honored though he was, than to return to his fields and follow the farming life he loved so well. As a farmer he was progressive far beyond his time. Thus we find him carrying on experiments which seem childish to us today, in the zenith of our agricultural supremacy, but which showed an eagerness to learn in those days, when there were no farm papers, no agricultural colleges, no county agents, practically no outside aids to farming such as we have in such abundant measure today. Thus, in the fall of 1764, we find Washington sowing "a few oats to see if they would stand the winter." The author of the book which records this, aptly adds: "Any country boy of today could tell him that ordinary oats sown under such conditions in the latitude of Mount Vernon would winter-kill too badly to be of much use, but Washington could not know it till he had tried." The point was, he tried to make conditions better; sometimes he failed, but nevertheless he tried, repeatedly. Thus, we find him shifting from the culture of tobacco, which is exceedingly exhausting to the soil, to wheat, oats and corn; practicing rotation of his crops, using barnyard manure as fertilizer, experimenting with alfalfa and doing everything possible to improve farming conditions in the very beginnings of our national life, a century and a half before we topped the pinnacle of agricultural fame by producing crops of the annual value of ten billion dollars.

Nor was Washington a grain farmer only; the breeding and raising of horses, sheep and mules interested him intensely. During the revolutionary war he bought twenty-seven worn-out army mares for breeding purposes, and soon after he became president he bought thirteen fine animals for the same use, paying as high as $125 for the best, which was four times the prevailing price. In 1785 he had on his various farms a total of 130 horses, with other live stock in proportion. He was, by his own account, the first American to attempt the raising of mules, a jack and two jennets being presented him by the king of Spain. Later on in life he took increased interest in dairy cattle and hogs and rounded out a well-filled and honorable career by practicing almost every branch of farming as it was then known.

Thus, we see that the nation, which today leads the world in agricultural achievements, forecasted that supremacy by turning, in its first national stress, to a product of the farm and the field; a man who found no honor greater than that of making his acres yield more than his neighbors, who found it far more to be desired to improve his land than to ravage it with military conquests. Let us not depart from the principles of Washington, now that we have builded upon them such a superstructure of prosperity as the world has never seen before.

This, my friends, is the message I would leave with you on Washington's birthday: He who had beaten a great world power, who had won independence for a new nation, found in farming far greater comfort and far greater victories than were ever won by mortal man on any battlefield. Let us remember Washington's words and example, to the end that those who would lure us from the fields of peace to the blood-red fields of militarism may receive no answer to their frenzied cries.

THE PRICE OF GASOLINE.

THE price charged for gasoline is an important matter to farmers, in view of the fact that there are fully 1,000,000 gas and oil engines in use on the farms of America and an equal number of automobiles owned and operated by farmers.

I am not going to attempt to figure out exactly how much gasoline the farmers of America use in the course of a year, for that would be difficult and well-nigh impossible. I think we can get a fairly good estimate, however, without much trouble. There are now over 2,000,000 motor vehicles in use in the United States. In the ten states of the grain belt fully one-half of all the automobiles are farm-owned; this proportion does not prevail elsewhere, but we are fairly safe in assuming that one-third of all the motor cars in the United States are owned by farmers. This makes a total of 700,000 farm-owned cars, in round numbers. Statistics show that the average car uses about 500 gallons of gasoline a year, at which ratio the farmers of the United States buy 350,000,000 gallons of gasoline in the course of a year for their cars, to say nothing of the quantity necessary for their gasoline engines. Every time, therefore, that the price of gasoline is advanced 1 cent the farmers of America find their pocketbooks affected to the extent of thousands of dollars. When we stop to reflect that the price has been practically doubled in the last few months (filling stations, in town, sold gasoline for 10 and 12 cents last summer, whereas today it is 21 and 22 cents) the matter becomes one of serious importance.

In view of this state of affairs, I am glad, indeed, to see that one of our grain-belt congressmen, Mr. Dowell, of Iowa, has introduced a resolution providing for an inquiry into the exceptional flights the price of gasoline has been taking recently. Mr. Dowell's resolution (a copy of which I have just received from him) calls for a sweeping investigation by congress to see if the present prices are justified, or if they have been brought about by collusion between the companies and if prices are being fixed and manipulated so that the 2,000,000-strong army of automobile drivers is being forced to pay an exorbitant price, so that a few men may be unduly enriched. I hope congress will act upon Mr. Dowell's suggestion and never drop the matter until it discovers, once and for all, whether the farmers are being mulcted or are only paying such a price for gasoline as returns a fair and reasonable profit to the refiners and retailers.

I have seen a number of explanations offered for the rise in the price of gasoline, but I must admit none of them seem very tenable to me. One was that gasoline was being shipped extensively from the California oil fields, by way of the Panama canal, and the slides there, which stopped traffic for several weeks, held up a number of oil steamers and thereby reduced the supply. Another was that the severe storm at Galveston last summer cut down shipments from that port and those who know the oil situation know that Galveston and Port Arthur are two of the most important shipping points in the country. A third explanation was that one of the big fields in Oklahoma is yielding less abundantly than before. To my mind, no one of these explanations (nor all of them combined, for that matter) would warrant such a big rise in price, for the damage done by the Galveston storm has been repaired, the shipment through the Panama canal is but a small part of the aggregate oil movement, and Oklahoma never produced so much oil in its history as it did last year, fully 50 per cent of the high-grade oils of the world coming from that state. These explanations do not explain, in my opinion; they are interesting, but not convincing.

I sincerely hope the proposed investigation will go into all these matters thoroughly. I look for the price of gasoline to decline in the spring, but never again to reach the low price of last summer, when it was obtainable at 8 and 9 cents in sixty-gallon lots. But if a few men are holding up several million men, a third of the victims being farmers, the sooner we know it and put a stop to it the better.

SUCCESS OF CO-OPERATION.

I AM a firm believer in co-operation among farmers. Ends can be attained by organized effort which are absolutely impossible by individual and spasmodic effort. Therefore, whenever I see notable examples of co-operative success I propose to tell you about them. That I will have ready hearers I do not doubt, for nowhere has the co-operative movement made greater headway than here in the grain belt. Wisconsin has the honor to lead all the states in the number and strength of its co-operative activities, furnishing an example which other states might well afford to follow.

The latest report of co-operative success comes from the heart of the wheat belt in Kansas, where farmers who have organized a stock and grain company have not only realized 10 per cent on their investment, but the profits have been sufficiently large to enable them to declare a dividend of 1 cent a bushel on all the grain handled in the last year. The fact that since June, 1915, the company has handled more than 105,000 bushels of corn and wheat and twenty-four carloads of stock shows the extensiveness of the operations. The greater part of this 105,000 bushels of grain handled was sold by farmers who were not stockholders of the company. Many of them came for long distances, even passing other elevators on the way. Here is splendid refutation of the charge sometimes made that farmers cannot and will not hold together in an organization such as this.

The farmers' organization thus so signally successful was formed eight years ago to buck one of the old-line elevator concerns, and it was only a few years until the old-line company was glad to sell out and leave the farmers in complete control. Originally the concern was capitalized at $10,000, but last June the capital stock was doubled, the membership being increased to ninety. In 1914 the company had 243 grain customers and last year twenty-four more were added.

To me, there is something really inspiring about such a story, proving the farmer's capacity for extensive business effort. I have attended conventions of farmers and farm students and heard the argument repeatedly made that farmers would not hold to their agreements. I have always denied these assertions, but my opponents have demanded facts, rather than opinions. I am now well armed for them, for the facts which I have set forth here are indisputable. I have seen it estimated that fully 5,000,000 Americans are now directly or indirectly associated with various co-operative enterprises. I imagine if the exact figures were available a large percentage of this immense total would be found to be farmers and small-town people. It is here that co-operation is making greatest headway, with the prospects good for a greater number of converts within the next two or three years than ever before in our history.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

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Reviewing a Year's Progress.

IN THIS issue The Wisconsin Farmer presents for its readers some of the good things which those who attended Farm and Home week at Madison were privileged to hear. It is not possible to review in a single issue all of the important matters which were brought up at this series of meetings and conventions arranged for by the Wisconsin College of Agriculture.

The attendance Farm and Home week proves conclusively that Wisconsin farmers and stockmen are deeply interested in their work. There is greater interest today in better grain farming and a higher grade of producing live stock than ever before. There is a great deal more interest in the farm home and in farm power than Wisconsin has ever known. The auditorium at the state college was filled for almost every address of the week. Wisconsin farmers look forward to a great year in 1916, and they are giving careful study to the best methods for making this year a more profitable one. The editors of The Wisconsin Farmer met many of their good friends at the Madison meetings, and we take this opportunity to thank all those who have assisted us by sending their papers and photographs. Almost every Wisconsin man with whom we had an opportunity to talk is a subscriber to The Wisconsin Farmer and is pleased with the rapid progress which this paper is making. For the many kind remarks along this line we are also very pleased and grateful.

As the oldest and largest Wisconsin farm paper, we feel a pardonable pride in referring to the fact that this paper in early days led the fight for such institutions as the Wisconsin College of Agriculture, the Wisconsin State Fair, and even away back, before the war, urged support for the first county agricultural fairs.

Starting Alfalfa on Sod Land.

ONE of our readers, Mr. J. Carter, of Freeport, Ill., who has purchased a farm in Green county, Wisconsin, inquires in the following letter about getting started with alfalfa on sod land:

I have bought a farm of 100 acres near Monroe. I want to get some alfalfa started as soon as possible. This field where I want to start it is now in pasture. Would it be advisable to break this field up and put barley on the breaking so that I might sow alfalfa this fall?

The best results on this pasture land can no doubt be obtained by turning it to corn this year or some other cultivated crop; followed by barley next year with which the alfalfa could be sown next spring. Of course, this would not give a crop of alfalfa either this year or next year, but the corn would be profitable this year; the barley would provide a good cash crop next year, and the alfalfa the following year would be well established and should yield at least three good cuttings.

It would be a mistake to try to sow alfalfa this year, as the blue grass in two or three years would crowd it out, regardless of how good the stand. So it will be best to plow it up this spring and cultivate it through this summer with corn or some other cultivated crop. This will give the sod plenty of time to rot and decompose and will insure the owner that the blue grass will not bother him in after years as it would if turned and sown to alfalfa immediately. By fall this ground should be in excellent condition and next spring barley and alfalfa could be sown together. The barley would be cut off during the summer, giving the alfalfa full sway and at the same time the barley would yield sufficiently to make the land pay while the alfalfa was getting its start. The following year, under this system, should find the alfalfa thriving nicely and a good stand would have been obtained.

The objection to this method may be that it takes two years before getting a cutting of alfalfa. Barley could be sown this spring, as Mr. Carter suggests, but there would not be the cultivation to decompose the old sod and the blue grass would creep in later on and tend to choke out the alfalfa. So we believe Mr. Carter and others with sod land wishing to start alfalfa can get the best results with alfalfa by cultivating the first season and sowing alfalfa the second season with a nurse crop which nurse crop nets a cash profit and at the same time affords protection to the tender alfalfa plants.

Much of the soil of Green county, like that in most counties, is acid and this acidity must be corrected if alfalfa is to do its best. Mr. Carter does not state whether his soil is acid or not acid but we would advise that he make the simple litmus paper test which will determine this point, and if it is acid arrange to correct this acidity before sowing the alfalfa. This is very easily and cheaply done and is worth far more than the expense.

The Wisconsin Farmer is pleased to receive these inquiries from its readers and welcomes Mr. Carter to Wisconsin. Alfalfa is a very important crop in Wisconsin and especially in a county like Green, where dairying is general. Every farmer should have an alfalfa plot and we are pleased to learn that Mr. Carter intends to devote some of his hundred acres to this crop.

The Relative Importance of Freight Rates.

IN A RECENT editorial we stated the need for active and intelligent co-operation on the part of the farmers of the grain belt in helping their public officials secure a fair and just regulation of railroad rates. The objection has been raised since then that the average farmer is not competent to understand or deal intelligently with so complicated and technical a subject.

On behalf of our many thousands of farmer readers we resent any such insinuation, for we believe that there is no question of public policy which the voters of this country cannot deal with fairly and efficiently or whose fundamentals they cannot grasp when properly presented. Otherwise our whole American system of government, with its belief in the intelligence and honesty of the average man, is a confessed failure.

The tariff question is a most technical one, but through its agitation every four years the farmer voters have come to understand its broad principles and to act as is consistent with their best interests.

How much more important that they should familiarize themselves with the fundamentals involved in railroad rate regulation! The total import tariff duties of the United States are only about 300 millions annually; the total railroad revenues reach the stupendous sum of 3,000 millions every year. The average tariff tax per capita, at the taking of the last census was $16.50; the average railroad tax per capita was $138.80. How much more it concerns the public's pocketbook, then, to see that the question of railroad rates is adequately and fairly handled than that tariff duties are properly adjusted! And yet we have campaigns of public education regularly fought over the tariff question, while the great mass of the people remain in densest ignorance of railroad rate matters.

A striking example of the relative importance of the rate question to every person was afforded by the testimony of Mr. Hugh L. Cooper in a hearing before the Interstate Commerce Commission involving a reduction in freight rates between Keokuk, Iowa, and Atlantic coast points. Mr. Cooper was the chief engineer in the construction of the great Keokuk dam, built at a cost of $25,000,000. He has had charge of the construction of more water power plants than any other three men who ever lived, and as such should be an authority on the relative importance of cheap power and low freight rates in manufacturing costs. He testified that the cost of power entering into the manufacture of such a representative commodity as flour was 1 2-3 cents per 100 pounds. In other words, a difference of only 2 cents per 100 pounds in freight rates was worth more to the manufacturing interests of Keokuk than the construction of the largest dam in the world at her very doors. Whether or not this dam was to mean anything to the people of Keokuk depended on their securing freight rates on an equality with Quincy, just across the river. Otherwise manufacturers could better afford to locate at Quincy, even if Keokuk were to offer them power absolutely free.

This is typical of the importance of rate regulation to the people everywhere, for freight transportation enters into the cost of almost every article of daily use and affects the pocketbook of every perosn far more than do tariff schedules. When the farmers of the grain belt grasp this fact, as they are fast coming to do, they will exercise the power which they possess for fair rate regulation. Then, and only then, will this great vital question be settled and settled right.

Wisconsin Man Says Live Stock Future Seems Bright.

W. K. CALDWELL, president of the Wisconsin Horse Breeders' Association, takes an optimistic view of live stock prospects in Wisconsin and in the nation. In a letter to The Wisconsin Farmer he discusses phases of the situation which will be of interest to every farmer of this state, and of special interest to our breeders. We quote from Mr. Caldwell's letter which reads in part as follows:

I firmly believe the brighest future awaits us in the history of the live stock industry of our country. The present prosperity of this vast country of ours, the principal object of which for the past decade has been the production of meat-producing animals, has been and now is severely handicapped in different ways. The prevalence of the foot-and-mouth disease all through the southern portion, has crippled not only the breeding but the feeding interests as well, the results are, the markets have been crowded with immature and unfinished stock, from nearly all the meat-producing sections. The vast northern section is having a somewhat similar experience, through the loss of the corn crop, and a lack of confidence of the people as to the future markets. In my opinion this is a plain case, of an alarming scarcity, and of higher prices of all meat-producing animals in the near future.

The prospects of the horse business is, I believe, as good and even better than that of any of the branches of the live stock interests. The coming of the automobile and the tractor as a detriment to the horse breeding business, I believe, has been greatly overestimated in the minds of the public. While the market for horses for the past year has been anything but encouraging, I believe the demand from foreign countries has come to the rescue, and is going to serve a twofold purpose, inasmuch as they are now taking vast numbers of the common class of horses, such as our markets do not demand, and when the disturbances in the foreign countries have subsided, those countries will then demand the best we are able to produce.

Therefore I honestly believe that the near future awaits us for much better prices, and an unlimited demand. I also think that these conditions are stealing in upon us, so to speak, unawares.

Milk as a Food For Growing Animals.

MILK is of great nutritive value as a feed for the growing animals on the farm and this point Prof. E. B. Hart dwelt upon in his address last week at the Farm and Home course at Madison, Wis. Professor Hart is one of the most fluent speakers connected with the college of agriculture and his address was a treat to those fortunate enough to hear him. His subject was "Milk and Animal Nutrition," and having conducted numerous experiments, he spoke with much ease and authority.

Prof. Hart's explanation of the suitability of the mineral content of milk for the growing animal emphasized the use of the skim milk on the dairy farm for feeding and the necessity of the farmer selling only high-testing cream with the desire of keeping as much skim milk on the farm as possible, and a hundred pounds of skim milk has half the value of a bushel of corn as feed and the farmer who skims thin cream is wasting a lot of valuable nutrition the growing animals require, in addition to hauling more bulk to his creamery than necessary. Professor Hart pointed out that there are in milk distinct growth-promoting substances which are in such liberal concentration as to make this article of food especially adaptable to growing stock and that the farmer cannot afford to waste it. He also pointed out the dangers from selling too closely the milk supply of the farm into the various industrial outlets, such as cheese manufacture and city milk, emphasizing this from the point of view that the young growing animals need proper care and nutrition if Wisconsin is to have strong animal breeding centers.

Drainage Lessons For Wisconsin Farmers.

UNDER direction of E. R. Jones, drainage expert, demonstrations were given at Madison Farmers' week. The first demonstration showed the use of the grade lath in obtaining a true grade line for tile drains. The second consisted of blackboard demonstrations of the methods of laying out drainage systems on different kinds of wet lands. A gasoline power trenching machine dug a trench in frozen ground on the University Farm as a special feature supplementing the exhibition. From Mr. Jones' remarks on the demonstration field and in the class room, we gained valuable drainage facts of interest to every farmer in Wisconsin.

Every farmer should know something about testing the grade lines of his drains. The grade lath method, explained fully in Bulletin 229, is very simple. After the grade laths are set in a line exactly five feet above the grade line and parallel to it by sighting over a stick five feet long, both farmer and tiler can tell whether or not the trench is dug to grade. This is particularly desirable during a dry season when no water occurs in the trench to act as a guide. Whenever there is a doubt as to the amount of fall in the line of grade laths after they are set, a careful test should be made with a level. Get a surveyor to use an accurate level wherever it appears that the fall is small.

Every farmer should have some notion as to how the drainage system on his land should be laid out. Many of our best drainage systems are laid out by a farmer himself, but in almost every case after a system is laid out, it is well to have an engineer test the doubtful places in the system.

Eight to ten typical areas were sketched upon the blackboard and drainage systems were laid out on these areas before the eyes of the farmers witnessing the demonstration. Many of these drainage systems were put in as sketched. Where parts of them have proved less successful than they should, the reason was explained.

On areas having a tight clay subsoil, tile usually

have to be four rods apart and not over three feet deep. On peat soils, tile should be four feet deep or more. It is better to have four or five lines of small tile discharged into a main which has a single outlet than to give each small line of tile an independent outlet. On springy areas if a line of tile can be laid between the spring and the hill from which the water comes, it will intercept the seepage and less tile will be needed than if the seepage is not cut off. On a low flat marsh with a creek running through it it is best to dig an open ditch toward the higher marsh until a ditch four feet deep can be secured. Then let the tile discharge into the end of this ditch. Such a device is known as a makeshift outlet.

The tiling machine is a new feature of demonstrational work at the college. Mr. Jones believes that the tiling machine is a big help in solving the drainage problem in Wisconsin. Tile can be laid more quickly with a machine and frequently time enough is saved to save a crop and thus pay for the tile.

Hand labor will often be required in the wetter, softer and stonier areas. For this reason it is desirable to train practical tilers in the use of a surveyor's level. A tiler who understands the use of the level and can set accurate grade sticks should command wages 25 per cent higher than a man who knows nothing about the use of such an instrument and is apt to do careless work.

Cover Page of This Issue Drawn by a Wisconsin Farmer.

GENERALLY speaking, we always have a little heart-pang when a good, successful farmer branches out into other lines and makes a conspicuous success. But we know that this great country which is first of all an agricultural country, must annually recruit thousands of men and women from the farm, for business for political life and for the furtherance of the arts, crafts and sciences. While our doctrine is that in most cases it pays to stay on the farm, we know that our country needs and must have a great many of these people, of strong body and clear mind, for other walks in life. The cover page of this issue was drawn by a farmer, and those who will take another look at it will see that Frank J. Eslinger, of Winnebago county, Wisconsin, can work very cleverly with other tools than pitchforks, hoes, plows, etc. Mr. Eslinger has the real artistic sense, and there are many students at the art schools who would be glad to claim authorship to this cover page. Mr. Eslinger has been studying drawing and penmanship for several years and has had forty-two separate exhibits of his work at the Winnebago, Wisconsin, county fair the past two years. He has won thirty-five prizes and his home friends regard him as considerable of an artist.

The Wisconsin Farmer takes pleasure in calling attention to the good work of a farmer-artist and we congratulate him on his effort. It is our hope that he may make as much of a success with his farm tools as he has accomplished with pen and brush. Mr. Eslinger writes us that the successes he has had have encouraged him and we shall not be surprised to learn of greater achievements in the future.

Wisconsin Honors Dr. Babcock.

THE present governor of Wisconsin, Emanuel L. Philipp, remembers the time when a farmer boy in Sauk county, that all farmers made butter and took it to the village store where it was deposited in a common barrel. In this barrel there was butter of various colors, of varying degrees of saltiness. There was good butter and bad butter and butter that was even worse. On a hot day this butter would melt and run together. Butter thus gathered could be shipped only in cold weather because there were no refrigerator cars. The first refrigerator car was brought to Wisconsin in 1873 and prior to that time there was no opportunity to dispose of dairy or other perishable farm products save in such weather as was favorable for their preservation.

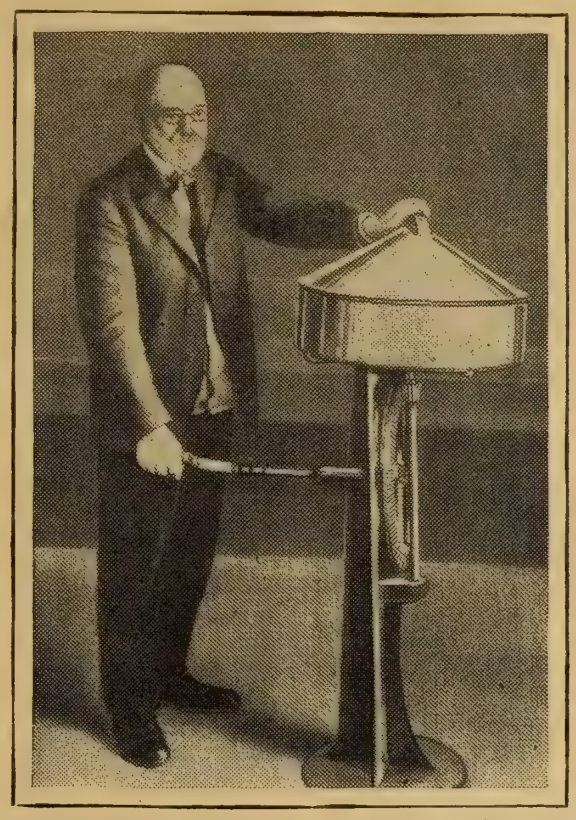
Dairy progress in Wisconsin has been marked since the invention of the Babcock test in 1890. Three great steps in dairying were discussed at the Babcock testimonial banquet in Madison last week, viz., the organization of creameries, the application of centrifugal force in the separator, and the discovery of the Babcock test. While these events stand out most prominently in the dairy world, events as they have influenced dairying in Wisconsin were particularly enumerated as follows:

1841—First co-operative factory in the state.
1846—Swiss cheesemakers arrive in the state.
1872—Wisconsin Dairymen's Association organized.
1873—First refrigerator car service for dairy products.
1885—Invention of the rennet test.
1889—State Dairy and Food Commission established.
1890—Invention of the Babcock test.
1893—Wisconsin Cheesemakers' Association organized.
1895—Cold curing of cheese first advocated.
1898—Invention of the Wisconsin curd test.
1898—Filled cheese law passed.
1900—Southern Wisconsin cheesemakers organized.
1901—Wisconsin Buttermakers' Association organized.
1907—Hart casein test invented.
1907—Wisconsin butter moisture test invented.
1910—Sediment test introduced throughout the country.
1910—Pasteurized milk cheese perfected.
1916—Cheesemakers' license law put into practice.

The old-timers remind us that Wisconsin was originally a wheat state and that such an unwelcome visitor as the chinch bug, destroyer of the wheat crops, forced the farmers to turn their attention to other lines.

Prior to the discovery of the Babcock test there was no practical way to measure the butter fat in milk. Buyers had no way of telling, save by long and laborious methods, whether milk had been partly skimmed or not. The farmer who provided poor milk got as much for it as the farmer who provided milk rich in butter fat. This system was worse than it would be to sell calico without a yardstick or coal without weights. One may guess with a reasonable degree or accuracy on measuring a yard of cloth, or a ton of coal. But it has never been easy to guess the quality of milk by the sight test. Dr. Babcock's invention put an absolute and infallible rule on butter fat measurement, and for the first time it gave an easy as well as accurate system of measurement.

Dr. Babcock's service to the state and to the world of dairying, cannot be overestimated. The striking feature of this service is that it was done without thought of personal glory or promise of financial reward. Dr. Babcock is spending the autumn of his life in research work at the Wisconsin College of Agriculture. He is still youthful and happy in this work. He was in his prime when Dean Henry was in charge of the College of Agriculture and Governor Hoard was just opening the eyes of Wisconsin farmers on the possibilities of dairying. It was one of the ambitions of Dean Henry when he was in charge of the state college staff, that Dr. Babcock should succeed in perfecting a butter fat test and give it free of charge to the world. Dr. Babcock's invention, had it been retained as a personal asset, would have netted him hundreds of thousands of dollars. One big commercial firm has figured that Dr. Babcock would have been several times a millionaire, had he received only a small royalty on every tester which has been made and sold. The tester would have been no less a marvel had it been commercialized by its inventor. But the inventor might long since have been lost sight of. The personal sacrifices of time, of pleasures, of money, enter largely into the spirit which prompted the recent anniversary celebration at Madison, and the tremendous ovation given to Dr. Babcock.



DR. STEPHEN MOULTON BABCOCK AND THE ORIGINAL BABCOCK TESTER.

Making Wisconsin Fruit Profitable.

THE test for anything progressive in agriculture is whether it pays. This may sound a bit sordid, but it is true. As a general rule, the test which is applied to anything new on the farm, any "new fangled idea," is whether it pays in dollars and cents. There are a few things in farm life to which, we realize, there may be applied a loftier test, as for instance the improvements in the farm home which do not show up so directly in cash returns, but which do, in most instances, give a greater return in comfort and happiness, than can be gotten out of cash in the bank.

The test of "whether it pays" must eventually be applied to all lines of activity suggested by the state departments for farmers, and especially to those very important operations suggested for the farmers by the departments of the experiment station. There are a good many farmers who look with some degree of allowance upon what "the professors" have to suggest. But we dropped the word "professor" in Wisconsin a long while ago. We refer to the use of the word as it has in times past been applied to experiment station men. These men are merely students of farm problems. They work under a little more favorable circumstances usually than the farmer, for the reason that they have a salary which is certain and which the farmers by the way help to pay.

R. H. Roberts, of the horticultural department of the college of agriculture, has given The Wisconsin Farmer some interesting facts concerning the work of this section of the Wisconsin station. He says that one of the most pleasing results of this work is that the fruit from experimental orchards in the state has brought good prices this year. And this has certainly been a poor year for fruit—unless the fruit was especially good. It is a rather interesting situation when farmers report that "apples went to waste because they were not worth picking," and at the same time come into the middle of winter and can't get apples for less than $2 a bushel. At least this is the price to the consumer from the retail stores. But the apples we buy now are apples which, at picking time, were suitable for storage; apple without scab or worms. Such apples never fail to bring a fair return on the investment.

The results obtained at the state orchards this summer were co-operative and were due largely to proper spraying methods. In these orchards the owners urged state experts to adopt the most modern spraying methods and the demonstrations were witnessed by many farmers and fruit men. Apples from these orchards sold at $1.00 to $1.25 per bushel. Mr. Robert tells us that if all the time and material is charged against the clean fruit which is normally scabby and diseased on the unsprayed checks without considering the benefit to the tree of having its foliage clean and healthy, the cost ranges from nine to eighteen cents per bushel.

Under average conditions these were results that could be obtained on every farm orchard. The small scab and sooty mold spots on apples from unsprayed or poorly sprayed orchards so detract from the appearance and keeping qualities of the fruit that it has little value. Many farmers who are acquainted with these troubles do not realize the true low value of their fruit and complain annually of having no market for their apples. But the co-operators of this season can all testify to the efficiency of careful spraying at the right time as a means of having fruit that is demanded on the market.

So the horticultural work is demonstrating its value under the dollars and cents test. Mr. Roberts will be glad to communicate with any farmer in Wisconsin who is interested in the better and more profitable way of raising fruits.

Increase in Price of Milk and Cream

COMPARISON of prices which the Wisconsin dairy farmers are receiving today for their cream and milk, as compared with the prices they received twenty-five years ago were made by Prof. E. H. Farrington of the dairy school at the Farm and Home course in Madison. As the cost of feed has increased, so has the selling price of the cow's product, until today the farmer is getting an average of from 30 to 35 cents for butter fat, when a quarter of a century ago he was receiving only 22½ cents. In those days when the Babcock test was just being inaugurated and was a new thing with dairymen and factory operators, milk was bought at the rate of ninety cents per one hundred pounds for four per cent milk which Mr. Farrington explained was at the rate of 22½ cents for butter fat. Some creameries in the state have paid as high as 39 cents this winter, but of course the summer price brings the average down. Just what the average for the state is is not definitely known, but the farmer by remembering that in April, 1890, his fat was only worth 22¼ cents, can easily ascertain the increase by comparing with the prices he gets today.

Mr. Farrington's address was along the lines of the improvement in dairying conditions over a period of twenty-five years, and in this prices were given consideration. It was especially interesting that the observance of the twenty-fifth anniversary should also mark the realization of the highest prices that have ever been received in Wisconsin for cheese. Cheese that is now in demand at 18 cents a pound was bringing only 12 cents twenty-five years ago, and it is predicted that the prices will go over 19 cents within a few weeks, as the stocks are moving fast and the demand very brisk. During the first week in February the price of cheese on the Plymouth and Sheboygan boards averaged 18¾ cents and several lots sold at 19 cents, so it is noted that as this industry in Wisconsin has grown to be a $30,000,000 industry, the price of the product to the consumer has gradually increased. The war has had much to do with this high price of cheese, as it has kept much of the Canadian product out of the American market and at the same time has caused large exportations from Wisconsin to the warring nations. These high prices of course benefit the farmer, and the increase in the value of the milk and cream, as outlined by Mr. Farrington is, of course, regulated by the selling price of the manufactured product—cheese and butter.

Mr. Farrington also gave some interesting figures on butter production and pointed out that the richer the cream the greater the overrun. Therefore, it is to the advantage of the creamery operator to have his patrons deliver him high-testing cream as it will make more butter per hundred pounds of fat. Cream testing 40 per cent has an overrun 1 per cent greater than cream testing only 20 per cent.

Grain Growers' Splendid Meeting.

Wisconsin Experiment Association Holds Its Annual Gathering at Madison With an Attendance of More Than 500.

THE seed corn situation; smut in oats and the values of fertilizers in increasing Wisconsin's grain crops received much attention at the annual meeting of the Wisconsin experiment association at Madison last week. More than 500 members, most of whom were grain growers, attended the business session on Saturday, and three times that number were present at the addresses and moving picture demonstrations on Friday.

Henry Michels, of Malone, was re-elected president and Prof. R. A. Moore, of Madison, was again honored with election as secretary. J. R. Thorpe was elected vice president and H. E. Krueger, of Beaver Dam, was chosen treasurer for another term.

The meetings were full of enthusiasm. The corn and grain show held in the live stock pavilion during the week proved to be the best ever held and the joy of the exhibitors was reflected at the business sessions of the association. Secretary Moore reported that the membership has grown steadily and that at the end of the year the association had a paid up membership of 1,446. New county orders are being formed all the time, Waushara county being the fiftieth in the state to organize, and Secretary Moore urged that all state members feel that they stand sponsors to the county associations and help them in every way possible.

The seed corn situation received much consideration, not only in the report of the secretary but also by several speakers. W. H. Hanchett, of Sparta, discussed this matter from the practical farmer's standpoint and said that 75 per cent of the farmers in Wisconsin were facing two questions:

First, where to get good seed corn for next season's planting.

Second, what variety will be the safest to buy.

Mr. Hanchett said that there is considerable indifference manifest at this time, which he said is a mistake. He warned the farmers to exercise extreme care that seed corn is of a strain that will mature in Wisconsin. In his own case Mr. Hanchett said that he will tie to two varieties: Golden Glow for crib corn; Silver King for silage.

Mr. Hanchett added that there was some sentiment with him for these varieties, but long experience had proven them absolutely reliable. Golden Glow on his farm in the average season is ready to shock by September 1st, and gives the maximum of good, sound corn for the crib. Silver King, under the same conditions, is ready for the silo by September 15th, and he believes will produce several tons per acre more good silage than any other variety he has tried.

The efforts of many to make great money out of seed corn he criticised and urged careful selection by the farmers. In the matter of seed he said the Wisconsin farmers were more fortunate than those of most states, as the state association grasped the situation last fall and saved much good seed from members who were fortunate to mature enough good corn for seed. Mr. Hanchett also believes the shortage will have one good effect—it will stimulate the planting of pedigree seeds as the scrub varieties mostly failed, and most of the seed is of the pedigree varieties. This will start many farmers into pure-bred corn who otherwise would have stuck by the scrub varieties. Noyes Raessler, of Beloit, spoke of the value of soil management for seed corn production; Prof. George B. Mortimer discussed Sudan grass in Wisconsin and Ben Faast, of Eau Claire, told of the splendid opportunities in Upper Wisconsin, emphasizing the need of better co-operation between the commercial interests and the farmers. Prof. H. G. Bell, of Chicago, discussed "Science and Soil," illustrating by lantern slides the value of fertilizers, etc.; and H. T. Draheim, of Richland county, a big winner in the state grain show, told of growing and preparing grains for exhibition.

Secretary Moore, in his report, took up the activities of the association during the last year and reviewed the increased interest in pedigree seeds. The local demand and the demand from sister states for pedigree seeds of all kinds has been better than ever, although the war has cut down the foreign demand. Secretary Moore also revived the success of the Wisconsin grains and corn at the Panama-Pacific Exposition and afterwards Mrs. Adda F. Howie, of Elm Grove, who was in attendance at the exhibit, was extended a vote of appreciation and made an honorary member of the association.

Speaking on the activities in pedigree grains and the seed corn situation, Secretary Moore said:

For the first time this year there seems to be a desire on the part of some of the membership to boost prices beyond all reason on seed corn simply on account of the unfortunate conditions which obtained last year. The member should realize that mostly all of the buyers of seed corn are farmers like himself and there should be no attempt to take advantage of the situation by charging double and treble the price that seed corn usually sold at.

Many calls for seed have already come to the office and lists of our growers sent to such parties. In many instances these same parties have written me to the effect that some of our growers would not even set a price on their seed and others wanted prohibitive prices which made it necessary to purchase elsewhere. It should be remembered that at the present time there are over 25,000 bushels of seed corn to be sold in the hands of our growers and more is being listed each day. We are not in the seed business for a season merely, but for a lifetime perhaps.

It seems reasonable this year that the grower should have a higher price for seed corn than in previous years, as it required more labor to secure and fire-dry it. While the association makes no attempt to fix prices of products grown by the members, yet I feel that a good fair price to growers and buyers alike for good select ear corn would be $5 per bushel and $4 per bushel if shelled. This is to be sound, high-testing, pure-bred corn. Where a member is required to select sample ears for judging or for breeding plot an extra price can always be charged.

More criticism than ever before has come to the secretary to the effect that much smut developed in the oat crop this year that was sown with seed oats that had been purchased from our members. This leads me to believe that our members are not as careful as they should be in the treatment of seed for the prevention of smut. The association will demand for 1916 that all seed oats and barley sown should be treated. The treatment is so simple and effective that there is no valid excuse for not treating the seed sown upon the farm.

We desire to have all seed oats sacked loosely and submerged for five minutes in a solution made by pouring one pint of formaldehyde into thirty-six gallons of water. For barley, submerge two hours. The time saved by having a large quantity of solution made up for the treatment will more than offset the extra cost for formaldehyde. After treating the grains they should be emptied on the barn floor and covered for two hours with canvas or blankets so as to make the treatment entirely effective.

Swine Breeders Discuss Big Sale.

Poland China, Duroc Jersey, Berkshire and Chester White Associations Hold Annual Meetings at Madison.

SWINE week, to be held probably during Farm and Home Week, 1917, was a topic of great interest at all the swine breeders' association meetings. The proposal is to hold a big combination state sale, probably in the live stock pavilion, and if these plans are carried out it will doubtless bring together more Wisconsin swine men than have ever met together before.

The Wisconsin Poland China Breeders' Association approved the proposed sale and duplicated the special premiums it offered for the state fair at Milwaukee, the Northern Wisconsin Fair at Chippewa Falls, the Interstate fair at La Crosse and the Sauk County Fair at Baraboo last year. The association by duplicating these specials expects to keep up the interest of Poland China breeders in exhibiting their herds and it is probable some other fairs will be granted special money.

The association also decided to aid the state pig contest which is being fostered by the boys and girls' club department of the college of agriculture and offer additional prizes to the winners to those already offered by the state fair. This pig show will be in connection with the 1916 state fair and where the winner is a Poland China the association will offer speci l prizes. The details were left to the secretary to work out. It was also decided to continue the Poland China futurity at the state fair, as it was the consensus of opinion that this has done much to increase interest in the breed in Wisconsin.

Robert Smiley, of Albany, was chosen president to succeed M. Madson, of Madison. Burley Dobson, of Lancaster, was elected vice president and J. F. Diley, of Rush Lake, was again chosen secretary. L. P. Martiny, of Chippewa Falls, and Albert Madson, of Madison, were chosen members of the executive committee.

J. L. Tormey, of Madison, addressed the meeting on market conditions. He endeavored to explain the cause for low hog prices and said that many farmers were complaining because they shipped their hogs in poor condition when they could only command a poor price. Some Wisconsin counties, he said, were stripped of market hogs and this situation prevailed in many other localities. Hog receipt records at the markets were broken in December. Prices averaged $7.10 last year, which struck about the ten-year average. This was $1.20 lower than the 1914 average and $1.25 lower than the 1913 average. The market was best in October and poorest in December.

About twenty-five breeders were present at the annual gathering of the Wisconsin Duroc Jersey Breeders' Association, which approved the plans for swine week and appointed a committee composed of E. H. Parker, of Janesville; J. D. Gant, of Delavan, and F. R. Constance, of Waupaca, to perfect the arrangements for a sale next winter. The members were divided over whether it would be best to hold the sale during farmers' week or the week following so the committee was empowered to take the proper action.

M. F. O'Keefe, of Waunakee, was re-elected president; F. R. Constance, of Waupaca, was chosen vice president, and Mr. Gant was honored again with election as secretary. John L. Fisher, of Janesville, and J. C. Bolger, of Waterloo, were elected members of the executive committee.

The matter of holding a Duroc Jersey futurity at the state fair this year was discussed and universally approved. Several breeders nominated their herds and it is believed it will be possible to secure the necessary twenty nominations in order to secure the $400 which will then be available. There will be twenty-four prizes and no better means of boosting the breed could be secured, members believed, at the same cost. A committee to arrange the futurity was named consisting of Mr. Fisher, Charles Burt, of Brodhead, and L. F. Atwater, of Bangor.

Secretary Gant reported on the failure of the association to hold its consignment sale at Madison last winter because of the foot-and-mouth disease and afterwards a resolution expressing thanks to The Wisconsin Farmer for donating the advertising was unanimously adopted. The association, expecting to hold the sale, did some preliminary advertising, expecting to pay for same out of the proceeds of the sale. When the sale was called off The Wisconsin Farmer cancelled its bill, as the association was without funds to meet such a bill. This the members appreciated very much, especially as it was the only farm paper to grant this concession.

James Fisher, of Eastman, was re-elected president at the annual meeting of the Chester White Association. This meeting was attended by about fifteen enthusiastic breeders and William F. Belda, of De Forest, was elected vice president; A. H. Kuhlman, of Madison, secretary-treasurer, and Leon J. Delahant, of Green Bay; Herman Liemer, of Watertown, and Alfred Kirst, of Tomah, members of the executive committee. There are about eighty members of the national record association in Wisconsin and an effort will be made to get all of these into the state association. Interest in Chester Whites has come very fast during the last five years and new herds are being established every year in Wisconsin. The association decided to encourage the pig contests among the boys and girls by offering specials to the winners at the state fair if they happen to be Chester Whites and also arranged for specials for the regular state fair exhibitors. Mr. Eastman spoke briefly on why he likes the Chesters and said that in his belief it is the coming breed, as the Chester brood sow is a large producer and the pigs have the size and quality. He believes a farmer can start with a forty-pound Chester pig and make more money than with any other breed. The secret of the hog game, he said, is to do away with the sows that farrow two or three or four pigs and when the farmers learn this they will turn to the Chesters which are large producers and good milkers so that they can care for large litters.

Several important matters were discussed by the Berkshire breeders at their annual meeting. H. C. Taylor, of Orfordville, was again chosen president; George Kelley, of Mineral Point, was elected vice president, and W. A. Freehoff, of Waukesha, secretary-treasurer. Burton Peck, of Spring Green; W. D. Becker, of Fort Atkinson; A. P. Cortte, of Lomira, and George Clark, of Janesville, were elected to the executive committee.

The association discussed a statewide Berkshire pig-feeding association to increase interest in the breed and also an advertising campaign for the same purpose. J. H. Kitchen, of Eldorado, the retiring secretary, suggested some kind of an advertising campaign to help the young breeders and the secretary was instructed to work out a good plan. An effort will also be made to send a car of Berkshires to the national show in Omaha next October in order to show the world the kind of Berkshires this state is producing.

The Farmers' Co-operative Creamery at Clear Lake, Polk county, another of the large creameries of the state, did a business last year that amounted to $233,029 and gained 113,000 pounds in butter manufactured over 1915. This creamery recently moved into a new building that cost $16,870 and is said to be one of the finest in the state. Interesting items from the annual report are:

Milk received	254,357 lbs.
Cream received	2,594,178 lbs.
Average test of milk	3.766%
Average test of cream	25.4 %
Butter fat in milk	9,580 lbs.
Butter fat in cream	659,970 lbs.
Total butter fat	669,550 lbs.
Butter shipped (net)	772,427 lbs.
Butter sold patrons (net)	26,158 lbs.
Butter sold to stores (net)	12,525 lbs.
Total butter made (net).	811,110 lbs.
Net gain over 1914	113,935 lbs.
Av. overrun for year	21.1%
Av. net price obtained for butter	27.82 cts.
Av. net price paid for butter fat	30.8 cts.
Av. cost of making one pound butter	1.58 cts.
Rec'd for butter shipped	$214,336.75
Rec'd for butter sold patrons	7,560.65
Rec'd for butter sold in Clear Lake	3,798.25
Cash on hand December 31, 1914	3,478.42
Paid patrons for butter fat	206,866.25

The Ellsworth creamery, at Ellsworth, Pierce county, which has had under consideration the establishment of a co-operative laundry in connection therewith, has dropped the project after an investigation by E. W. Campbell. Mr. Campbell, who visited the laundry at River Falls, said that the cost would be at least $5,500 and that the laundry would have to have 500 regular patrons to prove profitable. The contract for buttermilk for the coming year was let at an average price of 33 5-8 cents.

F. F. Showers, one of Wisconsin's best farmers, says that he can keep a cow to the acre and make a profit of $72 per head. He doesn't pretend that he can do better than others.

Twenty Thousand in Club Work.

Agricultural Clubs in Wisconsin Given Added Impetus by Special Awards to Be Given at the State Fair.

CONSIDERABLE impetus to the boys and girls' agricultural club work in Wisconsin should result this year from the co-operation of the state fair, which will give $3,500 in premiums at the fair this fall in order to make this work statewide in importance. The fair board has just announced the preliminary plans for the state contests, etc., which will be held during fair week, September 11th-15th, in connection with the young people's agricultural exhibits.

The boys and girls' department was added to the state fair last year and proved so successful that this department has been greatly enlarged for this year and includes all the agricultural activities in which the boys and girls of the state are engaged.

Something like 20,000 boys and girls are interested in agricultural work in Wisconsin. Some are growing corn in the various county and community contests; others are growing grains; some are raising dairy calves, beef calves and swine; hundreds of girls are interested in tomato clubs, garden clubs, horticulture and other lines of agriculture. This work has been growing rapidly during the last few years and the encouragement which the state fair gives by putting up such a sum should cause many more thousands of farm boys and girls to become interested in this work.

The regular premiums announced amount to $1,500 and special premiums total $1,000. In addition a surprise premium of $1,000 is to be announced later and this department will be a great educational feature. This boys and girls' club work is a very important undertaking and the net result of the state fair department will be to make it statewide in character, for there will be prizes for the champion corn growers, champions of all classes, etc.

Heretofore, the interest in these boys and girls' corn, calf and similar contests has been entirely local. Now they will be just as interesting locally and in addition the boys and girls will get together from all the counties at the state fair in Milwaukee and fight for the honors. This gives state recognition to a work that is highly effective and because of this recognition many boys and girls will become interested who would not take part in the purely local affairs.

There are seven divisions of interest to the farm boys and girls. They are the school and club exhibit, field and garden exhibits, calf club exhibits, pig club exhibit, poultry exhibit, stock-judging contest and horticultural contests.

The school and club exhibit will be open to organized clubs and premiums are offered for club displays of corn, potatoes, calf, pig, poultry, garden, canning, sewing and baking.

The field and garden division is open to any boy or girl in the state and premiums are offered for the best ten-ear sample of corn, the best pecks of early and late potatoes, the best pecks of oats and barley, the best-cured bundles of alfalfa and for garden stuff. The cash prizes in this division total $152.

Considerable interest in calf raising should develop through the offering of $177.50 in cash in addition to specials to be announced later. This exhibit is for boys who have selected, fed and kept an accurate record of a calf-feeding experiment and as many of these experiments are now being started this should prove a very profitable department. Dairy and beef breeds are included.

First prizes of $10, second of $7, third of $5, fourth of $3 and fifth of $1.50 for Holstein, Guernsey and Jersey pure-bred or grade heifers and also for pure-bred dairy bull calf, all under eight months, are offered. For beef bull calf the first prize is $15, second $10, third $7, fourth $5, fifth $3 and sixth $1.50. In addition there will be a first prize of $15 for the champion dairy heifer under eight months of any breed and the champion pure-bred dairy bull calf of any breed.

In the pig division there are offered prizes ranging from $5 for first down to $1 for fifth for the best boar and also best sow in Polands, Durocs, Chester Whites, Berkshires and Tamworths and premiums ranking from $10 down for the grades and cross breds of the large type. There will also be championships with $10 offered for each of these—grand champion boar, any breed; grand champion sow, any breed; grand champion grade or cross bred.

Eighty dollars has been offered in the poultry division for the boys and girls and $273 has been put up for the stock judging which is open to teams of three each. There will also be sewing and baking contests for the girls.

In addition to the apple exhibit there will be apple judging and identification contest for the exhibitors. A total of $101.50 is offered in this division.

Four state championships will also be awarded for which special premiums will be given. They are:

1. Champion Boy.—This premium will be won by the boy showing the highest score and average.
2. Champion Girl.—This premium will be won by the girl showing the highest score and average.
3. County Champion.—This premium will be awarded to the county the clubs of which make the highest score and average.
4. Club Champion.—This premium will be awarded to the club making the highest score and average.

The boys and girls' exhibits will be held in the amphitheater arcade which will be greatly enlarged this year and will be large enough to properly care for the exhibits. The state fair officials are also arranging with the Milwaukee Y. M. C. A. to take charge of an emcampment so that the boys and girls who attend the fair can camp on the fair grounds at moderate cost.

The fair authorities are co-operating with the boys and girls' club department of the college of agriculture and the state department of public instruction and bulletins giving the details can be secured from any of these organizations. The directors and others in charge are:

Board of Directors.—Chairman, Thomas L. Bewick, Madison, state leader boys' and girls' agricultural clubs, United State Department of Agriculture; H. N. Goddard, Madison, state department of public instruction; J. M. Gahagan, Milton, superintendent of city schools; W. W. Clark, Grand Rapids, Wood County School of Agriculture; J. M. Coyner, Mondovi, agricultural department Mondovi Hight School.

Advisory Committee.—C. P. Norgord, Madison, commissioner of agriculture of Wisconsin; K. L. Hatch, University of Wisconsin, assistant director of agricultural extension; R. A. Moore, University of Wisconsin, secretary Wisconsin Pure Seed Association; A. W. Hopkins, Madison, secretary Wisconsin Live Stock Breeders' Association; F. W. Cranefield, Madison, secretary Wisconsin Horticultural Society; J. G. Halpin, University of Wisconsin, secretary Wisconsin Poultry Association; J. G. Milward, University of Wisconsin, secretary Wisconsin Potato Growers' Association; Miss Elizabeth Kelly, University of Wisconsin, superintendent of extension courses for women; Milton C. Potter, Wilwaukee, superintendent of public schools.

Contest Directors.—G. C. Humphrey, University of Wisconsin, in charge of calf club contest; Raymond Baker, Madison, in charge of pig club contest; J. G. Moore, University of Wisconsin, in charge of horticultural contest; J. G. Fuller and J. A. James, University of Wisconsin, in charge of stock judging contests; Miss Elizabeth Amery, University of Wisconsin, in charge of girls' baking clubs; Miss Emma Conley, state department of public instruction, in charge of girls' canning contest; Miss Helen Dodge, Madison High School, in charge of girls' sewing contest; J. A. James, University of Wisconsin, in charge of corn judging contest.

H. N. Goddard, supervisor of awards and premiums.

THE MOTOR SLEIGH AT LAST.

Mr. Frank J. Mathews, a resident of Brill, Barron county, Wisconsin, has recently patented an invention for propelling sleighs. This invention has for its object the provision of a runner attachment adapted for automobiles, so that an automobile may be converted into a sleigh without requiring any special reconstruction of the vehicle aside from the removal of the wheels and the installation of the runners in their places. This invention embodies runner members which are secured to the body of the vehicle, the front runners being connected to the steering spindles, while the rear runners are attached to the rear construction of the vehicle body for the purpose of regulating the contact of the propelling members which replace the rear driving wheels. For several years various efforts have been made to construct an attachment which would easily convert an automobile into a motor sleigh. This device seems to be as simple and efficient as anything which has come to our attention. A set of adjustable rods radiate from the spoke. These rods are fitted with an end piece set on a spring so that when the rod or spoke strikes the earth or snow it is easily adjustable without jarring the occupants of the vehicle. By the attachment which Mr. Mathews has worked out he claims his motor sleigh has all the comforts and convenience of an automobile with the addition that it operates on runners and can be used when there is a heavy snowfall.

CORN AND DAIRY SCHOOL.

The Corn and Dairy School held at Lancaster, Grant county, on January 18th to 21st was a success with an average attendance of 150. The business men were back of the movement and the farmers turned out in good style. Lancaster is a very progressive city, and is the center of one of the wealthiest farming sections of the state of Wisconsin. The farmers were particularly interested in alfalfa and their land is becoming so high priced that it is capable of producing a large amount of feed per acre.

James B. Cheeseman, of Racine, president of the Wisconsin Alfalfa Order, bought the ninth Babcock tester which was manufactured in the United States. This incident came to light in connection with the celebration of the twenty-fifth anniversary of the Babcock test at Madison last week. At that time Mr. Cheeseman was manager of the Deerfoot Farm, Southborough, Mass., and the tester was bought in July, 1890. The factory informed him that it was the ninth one manufactured.

As soon as congress has voted a site in Arlington cemetery a $50,000 memorial to the nuns who served as nurses on the battlefields of the war for the Union will be erected. Mrs. Ellen Ryan Jolly, president of the women's auxiliary of the Ancient Order, of Hibernians, is in charge of the fund. Congressman Ambrose Kennedy is introducing a bill for the setting aside of a site in the national cemetery, and it is expected to be passed.

Banks O. K. heating investment

The improvement of property by putting in radiator heating is looked upon with special favor by bankers and building-loan companies. They recognize the security of the investment, as radiator heating will last a hundred years, and brings big annual savings to the owners. Real estate is immediately put into "preferred class" for rental or sale by installing

The Banker knows that money spent for radiator heating is wisely invested

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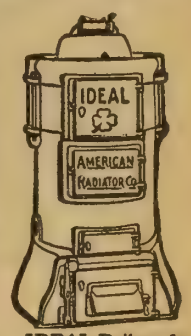

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The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Stick to Potatoes.

To the Editor:—When we potato growers are confronted by the ups and downs which we have undergone this season we are rather inclined to look for some crop to grow which is less susceptible to the drawbacks the growing of the tuber inherit.

The agricultural authorities, however, advise us to stick to the game. My experience for the past five years seems to bear this out. Had it not been for the severe freeze last September I would have made a killing with this season's crop. As it is, I will have a very nice profit from the crop. A liberal credit is due to the five applications of Bordeaux spraying, which resulted in my controlling the late blight, which was so disastrous to many fields.

For the past five years I have been breeding the Green Mountain and from a field yield of 110 bushels in 1910 I have managed to increase each successive yield up to the 325-bushel mark and I do not think I have hit the high mark by considerable.

I have managed by careful seed selection to eliminate all mixtures and

A FIELD OF RUSK COUNTY POTATOES.

now have a pure seed of this variety which is true to type and has all the requirements of first-class seed stock.

I am practicing the five-year period of rotation. After potatoes I sow corn, after corn oats or barley, seeding to clover. After oats I take off three crops of hay and seed to clover, two crops the first year after seeding and one crop the second year, plowing under the second crop when in bloom, and the following spring plant to potatoes and so on around the cycle.

I sort my seed, aiming to have a uniform, smooth, four-ounce tuber. This is treated by submerging in a solution of formalin and is then hand cut into three pieces, care being exercised to have two good, strong buds to each seed piece.

I use a horse planter and plant twenty bushels to the acre. I space thirty-three inches between rows and twelve inches between hills. As soon as the vines are up far enough so the row can be followed I go in with a wheel disk cultivator on which the disks are set so as to cover up the vines, and as soon as the vines show through the ridges I go over the field crossways with a light harrow and drag them thoroughly. The advantage I find in this is it controls the weeds that develop in the rows and gives a clearer cultivation. I give the field five cultivations, the last two with one-horse hand cultivators. The last cultivation wallows down the vines considerably. I practice level cultivation, not hilling.

The cost last season was $54.60 per acre, which includes seed, all materials and labor and $20 per acre for use of the ground. I am planting approximately 15,000 hills to the acre and when I can grow three pounds to the hill I will have to build more storage or cut down the acreage. I recently sold an order for 3,000 bushels of certified seed from the West Coast Potato Association, of Stockton, California. C. P. Coon.

Rusk Co., Wisconsin.

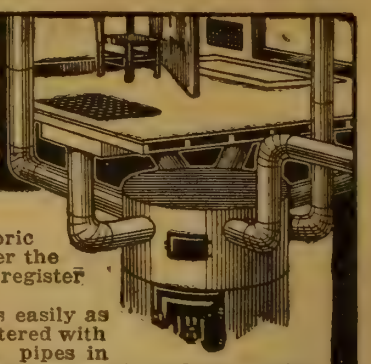
The Farmers' Institute at Plainfield.

To the Editor:—Plainfield is located in the western part of Waushara county in the light, sandy loam soils of Wisconsin. This region is the subject of much sympathy from people living on the heavier soils of Wisconsin and of other states. Many times this region is also the subject of much disparagement by the uninformed. It is too bad that the people of Wisconsin could not have seen Plainfield when it entertained the farmers' institute. A council of business men with the bank as a center looked after the financial end of the work and of the general preparations for the institute. Over $200 was raised. Special printed matter was sent out in 450 letters of special invitations to farmers about the town. The country folks were invited to lunch both days and an extensive premium list was made to promote a community fair of dairy cattle and products. A goodly amount was placed on articles of the culinary art. What was the result? Over thirty head of pure-bred dairy cattle were shown and some of this stock was of very high-producing strains. Over sixty articles were entered for the premiums of the culinary department. One hundred and fifty-six entries of farm crops were made. All in all, this exhibit would do credit to the most favored portions of this earth. The clover seed was so good that the judge from the farmers' institute force said that he would probably secure his clover seed from that shown by the farmers here. The exhibit of corn was good. The grain and potato and vegetable exhibits were excellent. Every session of the institute was crowded by a most wide-awake assemblage of farmers. The women's institute was also crowded. Four thousand cups of coffee, 2,000 buns, 100 pounds of meat and 1,700 doughnuts were consumed at the two midday lunches. A long list of farmers signed up for assistance with various farm projects, not the least of which was barn ventilation. This region has long been cropped extensively to potatoes, but from now on attention will be turned more and more to dairying, better stock, the growing of clover and alfalfa, seed corn and better potatoes. The people of Plainfield have every reason to be proud of the farmers' institute of 1916 and they have little reason to feel any dissatisfaction with the country. All that is necessary is to diversify a cropping system based upon dairy farming and no part of Wisconsin will prove superior in profitable returns and as a place in which to live.

The institutes of Wautoma, Almond and Hancock were also very successful from the standpoint of attendance and the signing of farmers for follow-up work. The Wautoma farmers will soon gather to organize a breeders' association. These places are all out to do various community enterprises which will tend to a more profitable agriculture and development. All the lighter soils of Wisconsin need is a system of farming which will tend to restore organic matter to the soil and a system of dairy farm feeding which will keep up a high state of fertility and these soils will prove to be the most responsive soils in the world. The people of the vicinity of the towns named have the possibilities of the region well in mind and are going forward to realize upon them.

E. L. Luther.

Heating Pipes Are Needless



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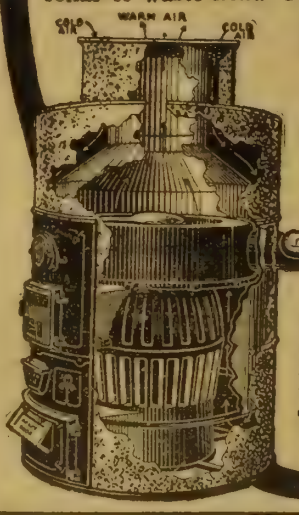

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Trapping Laws.

To the Editor:—I saw an article in your paper recently concerning fur-bearing animals and the different laws of the state. As the laws now are they open the 15th of November and close the 15th of March on muskrats and mink. Now, as I am an old trapper, I am going to give you my ideas on this subject. Not that they may amount to a great deal, but here goes:

If I could have anything to say about the laws I would say to prohibit all fall trapping on muskrats and give us spring trapping from the time it opens up in the spring until the first of May. Then we could get some fur that was good. Muskrats are never prime until spring. I suppose some people would put up a great howl and say that spring is the breeding time, but I would like to ask of these people if they think those from which we take the pelts in the fall do any breeding?

Emory Knowlton.

Jefferson Co., Wisconsin.

Bumper Potato Crop.

To the Editor:—This is to tell you how I raised a bumper crop of potatoes in 1915. I planted them on the 15th to 20th day of May on land that was well matured the year before. Some had winter wheat and some had corn on the year before. It was plowed in the spring, disked and harrowed well, making a good seed bed. The potatoes were planted three feet apart in the row by eighteen inches the other way. Just before they came up they were dragged with a light drag crop, then cultivated until they were large enough to hill. Then I run through them with a shovel plow and followed a little with a hoe. Bugs were kept off with Paris green and arsenate of lead mixed. This is very important and must be done in time. Seed was selected at digging time and stored in cold cellar.

For some time I have raised four kinds: Triumph, Burbank, Russet and Rural New Yorker. The Burbank and Russet are favorites for family trade. We have raised Burbanks for fifteen years and Russets for twelve years, and they are not run out. These kinds, having many eyes, must not be cut too small. That is one reason why some cannot get a good crop of them. These four kinds cannot get mixed.

I sort them very carefully at digging time, leaving the scabby and rough stock home for feeding, which insures me 10 cents to 15 cents more on the bushel. City people have no place for the waste and it might as well be fed up on the farm.

By all means rotate crops and do not plant more than you can take care of.

Chas. Parsons.

Langlade Co., Wisconsin.

$1.00 PER WEEK Enough said. Write the Wisconsin School of Telegraphy, Dept. A, Oshkosh, Wisconsin.

More on Barn Ventilation.

To the Editor:—I built a barn in 1913 32x84 feet with basement, stalls for thirty-one cows and four box stalls. I have a separate room equipped with stanchions. I have the King system of ventilation and have four pipes eight inches by fourteen inches running from about eight inches above the basement floor and running up the walls and along the roof to the cupola. On a cold morning, zero weather, I have seen fully an inch of frost on the inside of the cupola. This, of course, comes from the floor of the basement. The people who put in my system sent a man from the factory to install cupola and pipes and finished up everything in good shape. The intakes for fresh air may be easily put in by carpenters or masons while building. I think the system of ventilation I have is very good and the cupolas are attractive as to finish and design.

Jay F. Morse.

Grant Co., Wisconsin.

Look to the Land and Seed.

Important in Alfalfa Growing---Pointers From Address by A. C. Johnson, Traffic Manager C. & N. W. R. R.

FEW, if any, farms are physically adapted in their entirety to the successful production of alfalfa, and yet practically every farm has sufficient acreage, if selected, to produce a required amount. The tendency is, when poor selection is made and failure is a direct result, to retire from further effort; where favorable results are secured by accidental selection to greatly increase the acreage physically unsuited for the purpose—all of which makes prominent the importance of selection of land and seed, with due regard to all other essentials, as one acre will suffice for a test, while 100 acres might be a problem.

Successful production of alfalfa requires one fast rule: More official work to increase the average standard of production and quality, keeping step with progress and business demands, preventing possible discouragement caused by misdirected effort and removing the production of alfalfa from the experimental stage in the shortest possible time. Such procedure requires engineering ability in the selection of land, knowledge of soils and especially of seeds and other requirements usually possessed by the average farmer. When the essentials are known and understood, we think, one of the most important matters is the question of climate and its relation to effect on seed.

Mild climate seeds will germinate in a more severe climate, but do not stand the necessary after tests. Climatization of seeds is a pronounced necessity. The permanency of an alfalfa crop is a large element of its value. The severe test of permanency, other conditions being favorable, lies in the winter-resisting power of the plant, made possible by acclimation of seed. Theorists inform us there is no complete remedy against winter-killing on account of there being no seed yet sufficiently climatized to wholly resist it. We agree with such theory, but the seed that has been longest produced under certain conditions will produce the highest per cent of good results under similar conditions. If seed can be secured in a locality where it is to be seeded and it has been successfully produced in such locality for a period of time it is, the most desirable seed to use.

South Dakota ten years ago produced only a few acres of alfalfa, and yet in certain sections of the state it has been successfully produced continuously in the same fields for twenty-five years, insuring profit and longevity of crop. During the season of 1915 there was 199,918 acres engaged in alfalfa production. This same acreage should have produced twice as many tons as were produced. However, this is a wide range in individual production and a state average. For instance, the state of Illinois is the largest corn-producing state, and, while there are individual productions in Illinois of over 100 bushels per acre, the average for the entire state was thirty-six bushels per acre. In South Dakota we know of non-irrigated land, one field in particular, with alfalfa twelve years of age that produced a little over eight tons per acre in the four cuttings in 1915, which was an unusually favorable season for alfalfa feed, but not for seed.—South Dakota produced 31,000 bushels of alfalfa seed in 1915 and it is the largest alfalfa seed shipping state in the Union. We know the acreage has more than trebled in five years and will be doubled in 1916. This condition, so far as possibilities are concerned, is representative of South Dakota, North Dakota, Minnesota, Wyoming, Iowa, Illinois, Michigan, Nebraska and Wisconsin.

In the sale of seed there is wide opportunity for fraud. This, added to much ignorance on the part of some dealers in seed, leads almost direct to failure for the planter. A purchaser in northern Wisconsin knows he does not want a seed produced in Kansas or Louisiana, and yet he does not have the means of knowing, except on statement of dealer, who, in turn, possibly does not know. The Turkestan alfalfa comes from a wide range of country and various climatic conditions and represents as wide a variation as Kansas and Minnesota seeds; so that variety alone does not determine what is equally or more important, the climatic and hardy variety of any kind of seed. The protection is to secure seed from a similar locality, or, better, produce your own seed. Alfalfa successfully produced lays the foundation for all other successful farm efforts. A location or district thus established directly concerns and insures due consideration by a transportation company.

Land that is idle for any reason is practically worthless. If profitably employed it is brought into the production class. If it can be made more productive by a crop that in turn supplies direct, and through agencies, fertility that again adds to volume, it will in an accumulative effect produce an excess and such excess in volume produces transportation. A common carrier is dependent entirely on volume of traffic, and volume is one of the most important and prominent factors in rate construction. Thus the prosperity of the farmer adds to the prosperity of the transportation company.

FINE BREEDERS' MEETING.

The Waupaca and Portage Holstein Breeders' Association held an interesting meeting recently at Manawa, Wisconsin, in the Gem Theater building, January 29th. The theater was donated for the meeting by Mr. Kanoke. Pres. John Erickson, of Waupaca, called the meeting to order and Secretary Pinkerton, also of Waupaca, read the report of the last gathering. The following officers were elected for the ensuing year: President, A. L. Lowe, Waupaca; vice president, W. Kissinger, Weyauwega, reelected; secretary and treasurer, Arthur W. Ritchie, Royalton; member at large, Felix Paronto, Manawa. Plans for future advertising were discussed and other important business transacted. The report of the secretary showed a large increase in membership during the past year. Sim Shambeau, of Ogdensburg, was elected toastmaster for the banquet, which was held in the Ceylon Hotel. It was a fine feast. During the dinner hour music was furnished by an orchestra, which was hired for the occasion by the business men of Manawa. This was highly appreciated by the members of the association.

The afternoon session was called at 2 p. m. and a few other matters of business discussed, after which a fine address was delivered by Mr. Riordan, of the "Mayville Farms."

Plans for the next annual meeting were made; also arrangements for the annual picnic to be held at A. L. Rowe's farm near Waupaca, some time during the summer.

Much interest and enthusiasm was made manifest and a feeling of good will toward fellow breeders was prevalent during the entire meeting.

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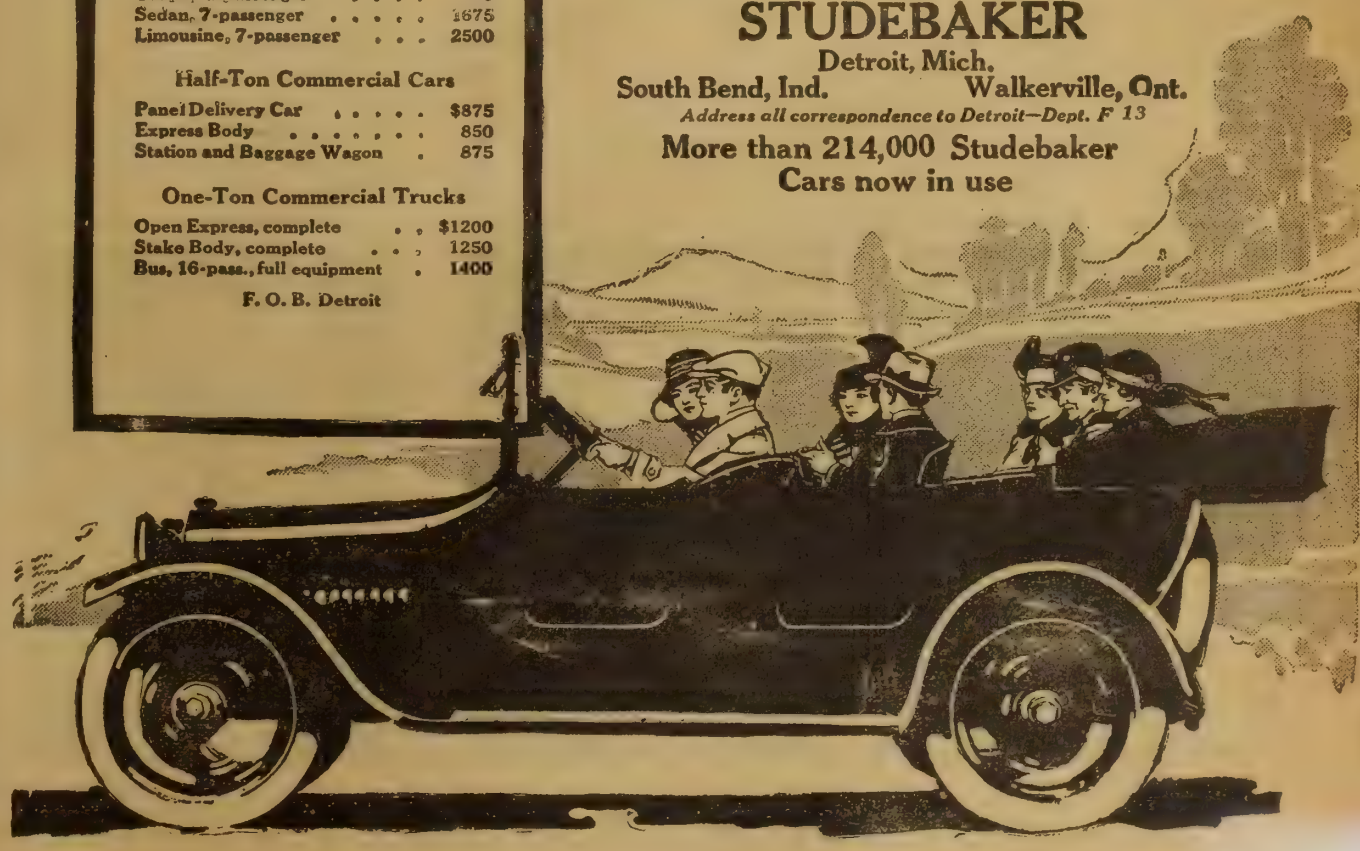


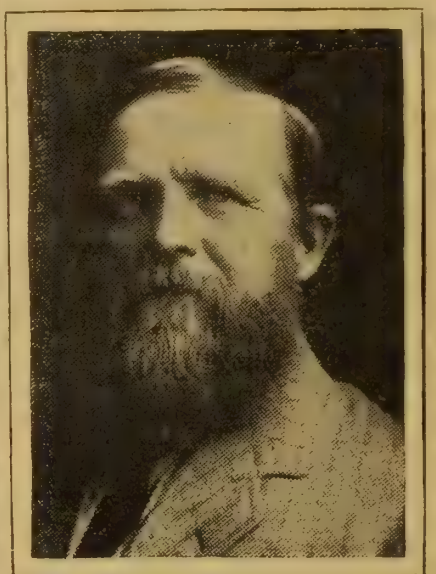
FARMERS REVIEW PROGRESS.

Farm and Home Week at College of Agriculture Brings Together Various Agricultural Forces to Discuss Best Methods of Farming.

GENERAL VIEW OF EXHIBIT HELD IN LIVE STOCK PAVILION UNIVERSITY FARM, MADISON, FARM AND HOME WEEK.

MORE than 1,000 Wisconsin farmers and stockmen attended the Farm and Home Week meetings held last week at the college of agriculture in Madison. Breeders' meetings representing the Wisconsin Live Stock Breeders' Association, the dairy and beef breeds of cattle, the hog breeds and the horsemen's association, brought a large number of representative men of the state to the capital. There was also a good showing of dairy breeders from outside the state at the annual meeting of the Western Guernsey Breeders' Association which was held in Madison, Thursday, February 10th. Members of the Wisconsin Agricultural Experiment Association and the Wisconsin Alfalfa Order helped swell the crowds and the Country Life Association and other meetings brought a goodly number all interested in the betterment of the farm and home.

Dairying was given the place of prominence in the week's program, and rightly so because of the splendid record which Wisconsin is making in this industry. Twenty-five years ago, as previously related in The Wisconsin Farmer, Dr. Stephen Moulton Babcock, a member of the faculty of the Wisconsin College of Agriculture, discovered and gave to the world the Babcock test. Briefly, this test has put the dairy business on a "certainty" instead of a "guesswork" basis. The remarkable feature about this wonderful discovery is that in a quarter of a century no scientist, not even the learned doctor himself who was the inventor, has been able to make any alteration of note to improve it. Nothing could more clearly demonstrate the painstaking care with which this great invention was originally worked out. Dr. Babcock was accorded a complimentary banquet. Three hundred representative farmers and students of agriculture, scientists and state leaders in other lines, gathered to honor him. President Van Hise, of the university, presided. Governor Phillip, Dean Russell and others spoke. Letters and telegrams were received from twenty-six states felicitating Dr. Babcock on his life work. There were also testimonial expressions from foreign countries. A parchment forwarded to Dean Russell, of the college of agriculture, by the staff of the dairy division, United States Department of Agriculture, read as follows:



S. J. UHRENHOLDT, SAWYER COUNTY.
Chosen for special recognition by the Wisconsin College of Agriculture.

MRS. ADDA F. HOWIE, ELM GROVE.
Chosen for special recognition by the Wisconsin College of Agriculture.

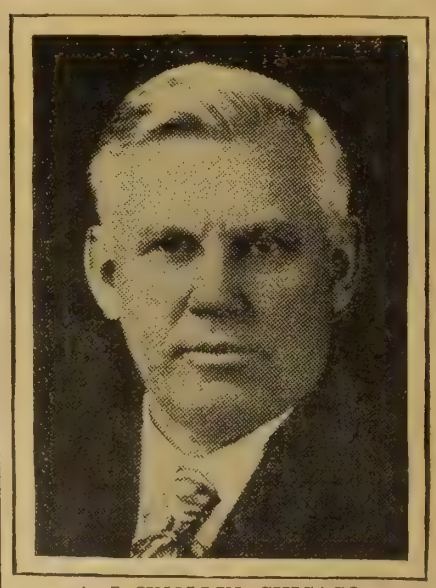
To Dr. Stephen Moulton Babcock:—We, who have been assembled by our government to promote the industry to whose advancement you have contributed so much, take this inadequate means of conveying to you our congratulations and good wishes on this anniversary. Anything that we could say pertinent to this occasion has been said many times. Your work has made an enduring monument for itself in the invention which bears your name. We know, however, that incalculable as is its value, this invention is not your greatest contribution to agriculture or to science. The far-reaching effect of your work will come from the example you have set, the inspiration your life has been, to hundreds of students and investigators in this country. Your life has been devoted to the quest of the absolute. You have avoided the publicity of the administration office and the lecture platform. Propaganda and exploitation have had no place in your career. Through all these years, which have spanned the period of evolution of agricultural science, you have not swerved from your search for truth for truth's sake. You have set an example of devotion to an ideal. You have shown that, though working quietly and unostentatiously, a man may achieve success and renown. Your life cannot fail to have a profound influence on those who come in contact with you and this influence is going out through your students, your associates and your readers in ever widening circles. Many of us carry in grateful memory your kindly interest in our struggling efforts. To all of us it is a source of gratification and encouragement to know that you are now able, in a congenial atmosphere and surrounded by friends and well-wishers, to devote yourself to your favorite problems. We cannot offer a better wish on this occasion than the hope that you have a full realization of the honor and esteem in which you are held by us all. The Staff of the Dairy Division, Washington, D. C., February 9, 1916.

This official government document fairly expressed the sentiment of those who met to honor Dr. Babcock. Dr. Babcock responded with an interesting story of his life experiences.

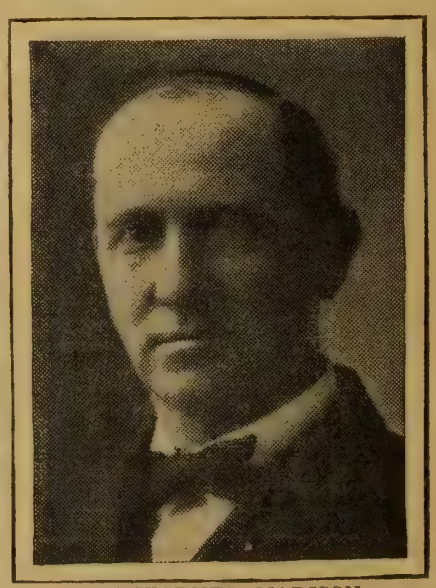
Farm power is of such importance that it was given a very conspicuous place on the Farm and Home Week program. The light tractor demonstration was watched with keen interest. Some weeks ago it was announced that a limited number of entries would be received for the gasoline engine school conducted under the auspices of F. M. White, and with the assistance of his agricultural engineering staff. Entries were limited owing to the lack of space in the engineering division. Several times as many farmers would have entered this

(Continued on page 14.)

GEO. J. WEIGLE, MADISON.
Wisconsin State Dairy and Food Commissioner.



A. J. KNOLLIN, CHICAGO.
President American Shropshire Breeders' Association.



E. M. WARNER, MADISON.
President Wisconsin Country Life Conference.

D. S. WHITE, OHIO STATION.
Spoke to Wisconsin farmers on livestock preparedness.

Meetings of the Beef Men.

Topics of Interest Discussed and Officers Elected For the Ensuing Year---Attendance Is Good.

THE Wisconsin Short-horn Breeders' Association met at the auditorium Agricultural Hall, Madison, last week. The meeting occurred on the same evening that the complimentary banquet was tendered Dr. Stephen M. Babcock, and this detracted somewhat from the attendance. However, there was a good representative company. The association re-elected the old officers who are as follows: President, E. E. Jones, of Rockland; vice president, George Carpenter, of Baraboo; secretary and treasurer, John L. Tormey, of Madison; directors, Ralph Reynolds, of Lodi, and O. H. Martin, of Bagley.

Mr. Frank Harding, secretary of the American Short-horn Breeders' Association, a resident of Waukesha, was to have been present and addressed the meeting, but he was busy at home superintending the shipment of some of his cattle to Argentina, South America. He wrote advising the members of the state society that it has been decided to issue a new magazine to be known as "The Short-horn in America." Frank D. Thompson has been selected editor. The American Short-horn Breeders' Association will give $50,000 in 1916 as a special appropriation for state fair and national beef cattle expositions and Wisconsin

EBEN E. JONES.
President Wisconsin Short-horn Breeders.

will receive a part of this money. The premiums arranged to be offered at the Wisconsin State Fair in 1916 will total $2,250, which is as much as is offered in any state. Iowa and Minnesota offer no more except that Iowa has a special futurity class which carries a purse of $1,000.

Arrangements were made at the Wisconsin meeting for the appropriation of $125 to the Wisconsin State Fair premium fund for Short-horn classes, $150 for the Interstate Fair, at La Crosse, and $150 for the Sauk County Fair, at Baraboo. These sums will be added to by the fair management in each case mentioned until the total will be raised to $500 for each exhibition.

There was some discussion of judges for the next Wisconsin State Fair and the association suggested three names to the state fair management and hopes that one of these men will be selected to judge the Short-horns next fall. C. F. Curtiss, of Iowa, was first choice; W. C. Rosenberg, of Ohio, second, and J. A. Kilgour, of Illinois, third.

The Wisconsin Live Stock Breeders' Association is endeavoring to interest young people in baby beef contests in several counties. The winners of prizes in county contests will have a competitive exhibit probably at Madison next year and the Wisconsin Short-horn breeders offer a silver trophy to the winner, provided, of course, that the champion calf is a Short-horn.

There is considerable talk of a sale at Madison next year to be conducted on the order of that announced for Des Moines, Iowa, this month. The plan is to hold a show and follow this with a sale. It is likely such a show and sale will be held at dates close to those selected by Anoka Farms and Herr Brothers & Reynolds for their annual sales. A committee including A. R. Maurer, of Fox Lake; William F. McCormick, of Lancaster, and E. R. Williams, of Bangor, will investigate the proposed sale plan and report. The association named Wallace Reynolds and E. R. Williams a committee of two to confer with State Veterinarian Eliason on the matter of state certification of tuberculin-tested herds.

Hereford breeders to the number of about thirty attended the first annual meeting of the Wisconsin Hereford Breeders' Association, which was held at Madison last week. This is a new organization, formed last summer, and the interest already being taken by the lovers of the white faces indicates a strong association within a short time. There are several very fine Hereford herds in the state and the members of this association report an increasing interest in the breed.

It is planned to ask fairs in the beef-producing communities to offer substantial specials for Hereford exhibits as well as the regular prizes in order to get out large and representative exhibits. Secretary Thompson read communications from several fair officials offering to co-operate, the association to contribute a portion of the special money. No definite action was taken on this matter, it being left to a committee. It was generally agreed that the 1916 fairs should have larger Hereford exhibits and everything possible will be done as a state association to increase interest of the breeders in showing.

The old officers were honored with re-election. Irving Jewell, of Mineral Point, is president; H. A. Eberhardt, of Manitowoc, vice president, and C. W. Thompson, of Lake Geneva, secretary and treasurer. The executive committee consists of A. C. Bartlett, Lake Geneva; M. Moore, Sturgeon Bay; Henry Schacht, New Richmond; Hugh Robinson, Evansville; L. M. Scott, Bagley; G. A. Foster, Fairchild, and R. D. Hubbell, Walworth. A committee consisting of Mr. Eberhardt, Mr. Thompson and Mr. Robinson was named to further the fair proposition.

The Wisconsin Aberdeen Angus Breeders' Association held a very interesting annual meeting at Madison last week at which Parker R. Gelbach, of Lancaster, and W. A. Connell of Menomonee Falls, were re-elected president and secretary-treasurer respectively. H. J. Pettigrew, of Oconto, was chosen vice president, and these officers will also constitute the executive committee. A new constitution and by-laws was adopted and the members present predicted an increased interest in the Angus breed in Wisconsin during the coming year. The Angus breeders regard their breed as one of the best suited to Wisconsin beef-producing conditions. Cattle of this breed mature young and make excellent baby beef, their weight being from 900 to 1,300 pounds at this period. They eat grain while on milk, so are usually ready for the market at from one year to eighteen months. Much interest was manifest in the meeting and several new members were received. The plan of the department of agriculture for a certified list of Wisconsin herds known to be free of tuberculosis, which was outlined at this meeting as well as at all other meetings of the breeders at Madison last week, was discussed pro and con, some members approving and some disapproving of the plan. The breeders were enthusiastic over live stock prospects.

The matter of holding a big sale of Red Polled cattle was discussed very fully at the annual meeting of the Wisconsin Red Polled Cattle Club at Madison last week. The state club now has about forty active members who represent some of the best herds in this section of the country and many felt that the time had arrived for the Red Polled breeders to conduct a sale. Others reported that there was always a demand for their breeding stock at good prices and that it seemed useless to hold a sale. No definite action was taken, however, the matter being left to the discretion of the officers.

The tuberculin certified list plan of the Wisconsin Department of Agriculture was endorsed by the club and H. A. Martin, of Gotham, was chosen a delegate to represent the club at the meeting at which rules were to be adopted for testing herds, which are to be certified as free from tuberculosis. J. B. Aheers, of West Bend, was again chosen president; L. C. Underwood, of Avoca, was re-elected secretary-treasurer, and B. R. Curran, of Taylor, was chosen vice president. The breeders reported an increased interest in this beef type in Wisconsin and a good demand for breeding stock.

An outward indication of inner quality
RED SIDE WALL AND BLACK TREAD
THE TRADE MARK OF
Firestone
NON SKID
TIRES

Wisconsin's Annual Grain Show.

Pure-Bred Grains From Many Counties Compete at Annual Show of Wisconsin Agricultural Experiment Association, Held in Madison Last Week.

GRAIN EXHIBIT SHOWING THE CORN AND GRAINS ON THE TABLES AND THE 1915 WINNING GRAINS, SHOWN AT THE PANAMA-PACIFIC EXPOSITION, AGAINST THE WALL.

THE best and the largest corn and small grain show ever held in Wisconsin," was the verdict of the visitors at Madison last week when the Wisconsin Experiment Association held its annual exposition in the college of agriculture live stock pavilion. There were more than 500 samples of corn, seed and sheaf grains exhibited by about 150 exhibitors, coming from many counties of the state. The seed grains were especially fine, and with the strongest of competition the winners at this show have reason to feel proud of their success.

Considering the poor 1915 season for corn crop, the showing of ear corn was remarkably fine, and visitors were heard frequently to say that they did not think such quality corn was produced in 1915 in Wisconsin or any other state last year. The judges pronounced the corn exceptionally good, taken as a whole, and the winning exhibits would have done justice to a show which followed a most favorable season for corn growing. Everyone expected good showings of alfalfa and the seed grains, as Wisconsin outdid herself last year in the production of small grains and grasses so it was the exceptional showing of corn that aroused the most interest. The corn exhibit proved one thing—that Wisconsin can be depended upon in a bad year. The ears were well filled and the depth of the kernels at the tips was especially good. This was particularly true of the white dent corn which won the sweepstake trophy offered by The Wisconsin Farmer.

The exhibit was held in the live stock pavilion in connection with the Wisconsin products show which featured Farm and Home week. In addition to being the greatest corn and grain show ever held by the experiment association the winning exhibits of last year were displayed, giving the growers a chance for comparison of the 1915 and the 1914 crops. Last year's exhibits were shown in connection with the Wisconsin exhibit at the Panama-Pacific Exposition at San Francisco, which exhibit was returned here from the West especially for this occasion. With the 1915 winning corn, grains and grasses as a background to the 1916 showings it made a farm products display of considerable movement.

Prize-winning bundle of alfalfa, exhibited by John F. Hesprich, of Lomira. This bundle was four and one-half feet high and the crop would yield from six to seven tons an acre.

The experiment association, to encourage new exhibitors and those who have not been first prize winners at previous shows, separate and first prize winners, placing them in an honorary class. In other words, the winners of firsts in previous shows competed among themselves in the honorary class. This tended to encourage the less experienced growers. It made the competition among the honorary exhibitors all the more keen, and at the same time made it possible for the less experienced growers to win some of the money. The first prize winners this year will go into the honorary classes next year.

La Crosse county exhibitors swept the boards in many of the classes and won more ribbons than any other county. This was especially encouraging to growers in the western half of the state who have been beaten so frequently by those from the eastern half, and when the La Crosse county exhibitors took four of the six sweepstakes they were greatly pleased. The fact that a La Crosse county man took sweepstakes on pedigree barley over H. E. Krueger, of Beaver Dam, who for many years has been hailed the "world's champion barley grower," caused much joy in their ranks—not so much for defeating Mr. Krueger, but because they realized that in defeating him they had produced a barley which was especially high in quality.

The Wisconsin Farmer's beautiful silver trophy, offered for the best fifty ears of White Dent corn, went to a La Crosse county grower, S. P. Markle, on Silver King. Mr. Markle also took one other sweepstake prize in addition to many firsts. The sweepstake winners, in full, follow:

SWEEPSTAKES CLASS.

Best 10 Ears Silver King Corn of Entire Show—1st S. P. Markle, La Crosse.

Best 10 Ears Yellow Dent Corn of Entire Show—1st Noyes Raessler, Beloit.

Best Peck Wisconsin Pedigree Barley—1st Wm. Moos, Onalaska.

Best Peck Wisconsin Pedigree No. 1 Oats—1st H. W. Whitehead, Rockland.

(Concluded on page 13.)

ROCK COUNTY BOYS LOOKING OVER THE CORN AND GRAIN EXHIBITED AT MADISON

WISCONSIN'S ANNUAL GRAIN SHOW.

(Continued from page 12.)

Best Peck Wisconsin Pedigree No. 5 Oats—1st H. T. Draheim, Gotham.

Best 50 Ears Silver King Corn—1st S. P. Markle, La Crosse.

The showing of alfalfa in bundles was pronounced by Mr. L. F. Graber, secretary of the state order, as the best ever held. The winning bundle shown by John F. Hesprich, of Lomira, measured 4½ feet long and was estimated to run about six to seven tons to the acre. P. A. Paulson, of Hudson, who won the first world's championship on alfalfa for Wisconsin at the 1913 national corn show, took second, and Lewis M. Hanson third.

The exhibits of seed grains were especially fine, and the barley shown, except for color, was the best in years. All grains were very plump and the weight per bushel very high, the sweepstake barley grown by William Moos, of Onalaska, weighing 52½ pounds. The off color in barley was due to the wet weather during harvest time. Some wonderful samples of wheat, oats, rye, etc., were shown and the list of awards, as announced by the association, follow:

10 Ears Silver King (Wisconsin No. 7) Corn—1st Hieron Block, Burlington; 2d J. A. Brunker, Ridgeway; 3d W. J. Steinhoff, Platteville; 4th Otto Wolf, La Crosse; 5th Jos. T. Hans, Jefferson.

10 Ears Early Yellow Dent (Wisconsin No. 8) Corn—1st Alf. Austin, Janesville; 2d H. E. Krueger, Beaver Dam; 3d Chas. Hull, Tigerton.

10 Ears Golden Glow (Wisconsin No. 12) Corn—1st Hieron Block, Burlington; 2d S. S. Foster, New Richmond; 3d Jippa Wielinga, Midway; 4th J. E. Brunker, Ridgeway; 5th Arthur Popp, Jefferson.

10 Ears Clark's Yellow Dent (Wisconsin No. 1) Corn—1st Frank Cairns, Mazomanie; 2d J. W. Jung, Randolph; 3d Jos. T. Nans, Jefferson; 4th H. E. Krueger, Beaver Dam.

10 Ears North Star Yellow Dent (Wisconsin No. 11) Corn—1st Noyes Raessler, Beloint; 2d H. E. Krueger, Beaver Dam.

10 Ears Murdock (Wisconsin No. 12) Corn—1st H. C. Brueckner, Jefferson; 2d Justus Brueckner, Jefferson; 3d Chas. Austin, Milton; 4th Fred Stubley, Black Earth; 5th Arthur Popp, Jefferson.

10 Ears 8 Rowed Red, Yellow or Smut Nose Flint—1st H. T. Draheim, Gotham; 2d Lauren Hastin, Eagle; 3d Arthur Popp, Jefferson; 4th H. E. Krueger, Beaver Dam; 5th J. W. Jung, Randolph.

10 Ears 8 Rowed White Flint—1st Chas. T. Leonard, Jefferson; 2d Anton Bohl, Beaver Dam; 3d H. E. Krueger, Beaver Dam; 4th Arthur Popp, Jefferson; 5th H. T. Draheim. Gotham.

10 Ears Pop Corn—1st J. F. Staples, Onalaska; 2d C. H. Howitt, Randolph; 3d Jos. T. Hans, Jefferson; 4th H. T. Draheim, Gotham; 5th Arthur Popp, Jefferson.

Single Ear Dent Corn—1st H. T. Draheim, Gotham; 2d Jippa Wislina, Midway; 3d Otto Wolf, La Crosse; 4th T. S. Ward, Ft. Atkinson; 5th J. A. Brunker.

50 Ears Silver King Corn (Wisconsin No. 7)—1st S. P. Markle, La Crosse; 2d Anton Bohl, Beaver Dam; 3d Otto Wolf, La Crosse; 4th Heiron Brock, Burlington; 5th Noyes Raessler, Beloit.

50 Ears any Wisconsin Standard Yellow Dent Corn—1st Jippa Wielinga, Midway; 2d H. C. Brueckner, Jefferson; 3d John Van Loon, La Crosse; 4th Hieron Block, Burlington; 5th Noyes Raessler, Beloit.

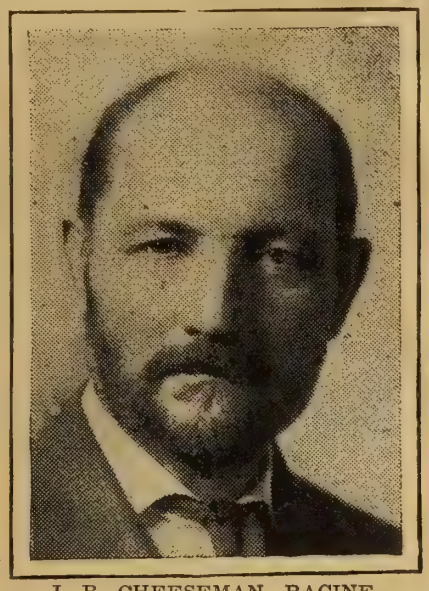
Peck Wisconsin Pedigree or Oderbrucker Barley—1st Wm. Moos, Onalaska; 2d Otto Wolf, La Crosse; 3d Jos. T. Hans, Jefferson; 4th John Schwartz, Antigo; 5th Alfred Klein, Lomira.

Peck Two-row Barley—1st Anton Bohl, Beaver Dam; 2d H. E. Krueger, Beaver Dam; 3d H. T. Draheim, Gotham.

Peck Wisconsin Pedigree No. 1 Oats—1st H. W. Whitehead, Rockland; 2d Lewis M. Hanson, Eleva; 3d P. J. Marmes, Antigo; 4th Adolph H. Thompson; 5th Roy E. Leemon, Waupun.

Peck Pedigree No. 5 Oats, or Swedish Select Oats (Wisconsin No. 4)—1st Wm. Moos, Onalaska; 2d H. W. Whitehead, Rockland; 3d H. E. Krueger, Beaver Dam; 4th Erick Mickelson, Pembine; 5th J. L. Krause, Beaver Dam.

Peck Sixty Day or Kherson Oats—1st H. E. Krueger, Beaver Dam; 2d H. T. Draheim, Gotham; 3d Alfred Klein, Lomira; 4th G. R. Welch & Son, Antigo; 5th Clarence Rhodes, Kansasville.



J. B. CHEESEMAN, RACINE.
President Wisconsin Alfalfa Order.

Peck Any Other Variety of Oats—1st H. E. Krueger, Beaver Dam; 2d De Witt Damp, Dane; 3d L. Leslie, Antigo; 4th Wm. Neuberger, Reeseville; 5th Ed Peters, La Crosse.

Peck Winter Wheat—1st Noyes Raessler, Beloit; 2d J. J. Ihrig, Oshkosh; 3d G. W. Kuhlman, Lowell; 4th A. A. Goetsch, Juneau; 5th Carl J. Piek, Chilton.

Peck Spring Wheat—1st Josh Schelb, Stratford; 2d Art Blumenstein, Woodruff; 3d Arthur Popp, Jefferson; 4th Martin Haevers, Luxembourg; 5th Herb Chelstrom, Turtle Lake.

Peck Wisconsin Pedigree Winter Rye—1st Ed Whitemore; 2d John Schwartz, Antigo; 3d Morgan Grandy, Wausaukee; 4th J. G. Kading, Reeseville; 5th H. R. Zimmermann, Wausau.

Peck Medium Red Clover Seed—1st J. L. Krause, Beaver Dam; 2d Hieron Block, Burlington; 3d A. F. Jacobs, Coloma; 4th Robert J. Plenty Rice Lake; 5th Stanley Sebion, Westby.

Peck Mammoth Red Clover Seed—1st Graham, Fennimore; 2d J. W. Jung, Randolph; 3d J. L. Krause, Beaver Dam; 4th H. E. Krueger, Beaver Dam; 5th Peter Kneeland, Windsor.

Peck Alsike Clover Seed—1st Schmidt Bros., Foxboro; 2d H. E. Krueger, Beaver Dam; 3d J. L. Krause, Beaver Dam; 4th Lauren Hastin, Eagle.

Peck Timothy Seed—1st A. N. Kelly, Mineral Point; 2d Lewis M. Hanson, Eleva; 3d H. E. Krueger, Beaver Dam; 4th Emil Breger, Madison; 5th J. W. Jung, Randolph.

Peck Alfalfa—1st H. E. Krueger, Beaver Dam.

Peck Silver Hull Buckwheat—1st H. E. Krueger, Beaver Dam; 2d Arthur Popp, Jefferson; 3d Cook Bros., Burlington; 4th Anton Bohl, Beaver Dam.

Peck Japanese Buckwheat—1st J. L. Krause, Beaver Dam; 2d H. T. Draheim, Gotham; 3d Anton Bohl, Beaver Dam; 4th H. E. Krueger, Beaver Dam.

Peck Black Soy Beans—1st A. F. Jacobs, Coloma; 2d J. A. Hass, Ellison Bay; 3d Max Schlies, Peshtigo; 4th Elmer Kopp, Eau Claire.

Peck Green Soy Beans—1st H. E. Krueger, Beaver Dam.

Peck Yellow Soy Beans—1st H. E. Krueger, Beaver Dam; 2d Arthur Popp, Jefferson.

Peck Yellow Field Peas—1st H. E. Krueger, Beaver Dam; 2d Arthur Popp, Jefferson.

Peck Green Field Peas—1st Martin Haever, Luxembourg; 2d H. E. Krueger, Beaver Dam; 3d Arthur Popp, Jefferson.

Peck Smooth Peas—1st H. E. Krueger, Beaver Dam.

Peck Wrinkled Peas—1st H. E. Krueger, Beaver Dam; 2d Arthur Popp, Jefferson; 3d J. W. Jung, Randolph.

Peck Navy Beans—1st H. E. Krueger, Beaver Dam.

Peck Kidney Beans—1st Arthur Popp, Jefferson.

Sheaf Pedigree or Oderbrucker Barley—1st H. T. Braheim, Gotham; 2d Ed Peters, La Crosse; 3d Otto Wolf, La Crosse; 4th Wm. Moos, Onalaska; 5th Adolph H. Thompson, Black River Falls.

Sheaf Two Row Barley—1st H. T. Draheim, Gotham; 2d Arthur Popp, Jefferson; 3d Robert W. Ward, Fort Atkinson; 4th H. E. Krueger, Beaver Dam.

Sheaf Pedigreed or Swedish Select Oats—1st Brown Bros., Rhinelander; 2d C. H. Howitt, Randolph; 3d Ed Peters, La Crosse; 4th Otto Wolf, La Crosse; 5th Walter J. Steinhoff, Platteville.

Sheaf Winter Wheat—1st Noyes Raessler, Beloit; 2d Arthur Popp, Jefferson; 3d Stanley Sebion, Westby; 4th Wm. Moos, Onalaska; 5th H. T. Draheim, Gotham.

Sheaf Spring Wheat—1st Ed Peters, La Crosse; 2d Arthur Popp, Jefferson; 3d J. L. Krause, Beaver Dam; 4th H. T. Draheim, Gotham.

Sheaf Pedigree Rye—1st Ed Peters, La Crosse; 2d Adolph H. Thompson, Black River Falls; 3d Noyes Raessler, Beloit; 4th Arthur Popp, Jefferson; 5th John Schwartz, Antigo.

Bundle of Alfalfa—1st John F. Hesprich, Lomira; 2d P. A. Paulsoon, Hudson; 3d Walter J. Steinhoff, Platteville; 4th Lewis M. Hanson, Eleva; 5th Stanley Sebion, Westby.

Bundle of Red Clover—1st Walter J. Steinhoff, Platteville; 2d H. T. Draheim, Gotham; 3d A. H. Thompson, Black River Falls; 4th Stanley Sebion, Westby; 5th Wm. Clemmens. Kansasville.

Bundle of Alsike Clover—1st H. T. Draheim, Gotham; 2d Arthur Popp, Jefferson; 3d H. E. Krueger, Beaver Dam; 4th Walter J. Steinhoff, Platteville.

Bundle of Timothy—1st Herman Schoeneck, Enterprise; 2d Schwartz Bros., Waukesha; 3d H. E. Krueger, Beaver Dam; 4th C. H. Howitt, Randolph; 5th Arthur Popp, Jefferson.

Bundle of Sudan Grass—1st H. E. Krueger, Beaver Dam; 2d John Van Loon, La Crosse; 3d Martin Young, La Crosse; 4th Fred P. Grebe, Fox Lake.

Bundle of Blue Grass—1st H. T. Draheim, Gotham; 2d Robert T. Ward, Fort Atkinson; 3d Theo. S. Ward, Fort Atkinson; 4th A. N. Kelley, Mineral Point.

Bundle of Soy Beans—1st Ellis Wynn Roberts, Wild Rose; 2d H. E. Krueger, Beaver Dam; 3d Robert W. Ward, Fort Atkinson; 4th Theo. S. Ward, Fort Atkinson.

Wisconsin No. 25 Corn—1st F. E. Tucke, Crivitz; 2d C. A. Correll, Crivitz.

HONORARY CLASSES.

10 Ears Silver King (Wisconsin No. 7) Corn—1st S. P. Markle, La Crosse; 2d Noyes Raessler, Beloit.

10 Ears Wisconsin No. 8 Eearly Dent Corn—1st Noyes Raessler, Beloit.

10 Ears Wisconsin No. 12 Golden Glow Corn—1st Noyes Raessler, Beloit; 2d John Van Loon La Crosse; 3d C. H. Howitt, Randolph.

10 Ears Any Variety 8 Rowed Flint Corn—1st Geo. H. Leonard, Jefferson; 2d Wm. R. Leonard, Jefferson.

Peck Pedigree Barley—1st H. E. Krueger, Beaver Dam; 2d C. H. Howitt, Randolph.

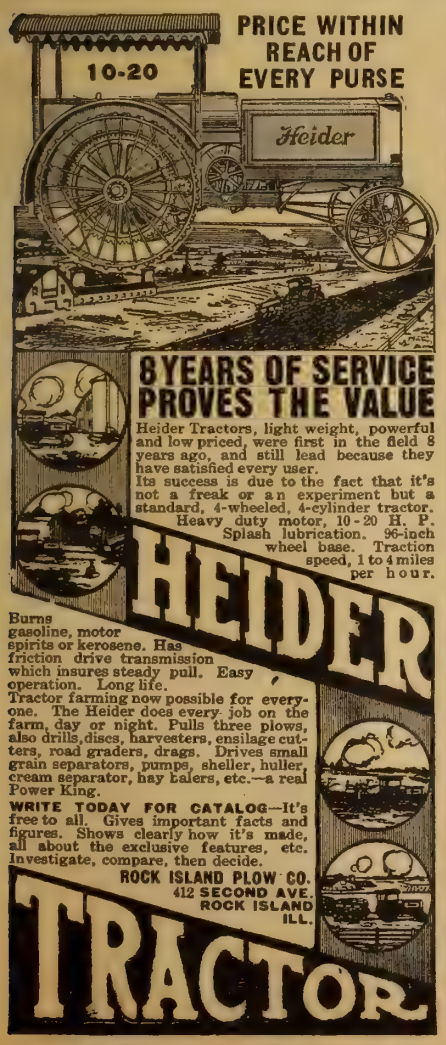
Peck Pedigreed No. 1 Oats—1st H. T. Draheim, Gotham; 2d C. H. Howitt, Randolph; 3d H. E. Krueger, Beaver Dam; 4th Fred P. Grebe, Fox Lake; 5th Alfred Klein, Lomira.

Peck Pedigreed No. 5 Oats or Swedish Select Oats—1st H. T. Draheim, Gotham; 2d J. G. Johnson, Blair.

Peck Winter Wheat—1st H. E. Krueger, Beaver Dam.

Peck Spring Wheat—1st H. E. Krueger, Beaver Dam.

Peck Pedigreed Rye—1st Noyes Raessler, Beloit; 2d H. E. Krueger, Beaver Dam.



It took 301½ days

of the hardest kind of service to wear out this pair of

Goodrich "HIPRESS"

—The Rubber Boots and Shoes

"With the Red-Line 'round the top"

We've been giving you actual instances of the remarkable superiority of the MOLDED RED-LINE Rubber Footwear. Here's another that came to us recently. Willard Crane, of Martel, Warren county, Ohio, started in February with a pair of "HIPRESS" and wore them steadily 301½ days before they would give in. The roughest usage imaginable—concreting, railroad work, tile ditching, etc. Said he had been buying three pairs of boots a year for ten years until he tried "HIPRESS." He is so enthusiastic that he went before a notary and made the above statement under oath, sending us a copy. *That's* the service "HIPRESS" is giving—it is so far ahead of the ordinary boot and shoe that there is no comparison.

"HIPRESS" is made of the same tough rubber that goes into Goodrich Auto Tires—MOLDED INTO ONE SOLID PIECE! Weakness of the hand-made boot thus not possible—they'll outwear anything on the market. Remember—Goodrich is the only concern making these wonderful boots and shoes—you can tell the genuine by the RED-LINE 'ROUND THE TOP.

Come in all styles—short boots, hip boots, pacs, arctics, etc.

The B. F. Goodrich Company
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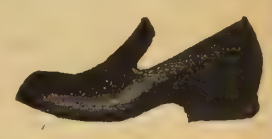
Makers of the Celebrated Goodrich Automobile Tires—*"Best in the Long Run"*

When you buy Rubber Overshoes insist on the genuine Goodrich-made

"STRAIGHT-LINE"

for best fit—longest wear



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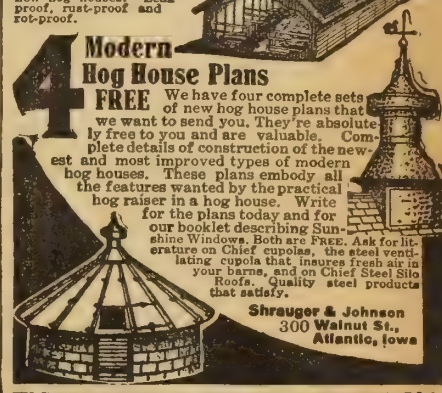
4 Modern Hog House Plans FREE

We have four complete sets of new hog house plans that we want to send you. They're absolutely free to you and are valuable. Complete details of construction of the newest and most improved types of modern hog houses. These plans embody all the features wanted by the practical hog raiser in a hog house. Write for the plans today and for our booklet describing Sunshine Windows. Both are FREE. Ask for literature on Chief cupolas, the steel ventilating cupola that insures fresh air in your barns, and on Chief Steel Silo Roofs. Quality steel products that satisfy.



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Makes and burns its own gas. Gives 300 candle power of strong steady light. Can't blow out or jar out. Made of heavily nickeled brass, Mica Globe. Guaranteed for five years. Ask your dealer—if not on sale in your town yet, write for catalog of 20 different kinds Gas Lanterns, Table Lamps, etc. Dealers or agents wanted in every locality.

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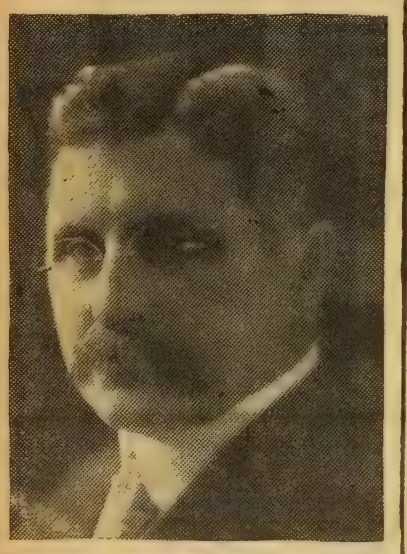
FARMERS REVIEW PROGRESS.

(Continued from page 10.)

division if they had gotten a chance. The present price of gasoline seems to have caused no dimunition in interest in gas engines. There was also an exhibit of farm electrical equipment and it aroused great interest, especially from the home lighting standpoint. Several companies donated the use of light tractors for the gas engine show and these made regular trips through the snow demonstrating their efficiency. The light tractor bids fair to become very popular on Wisconsin farms. Wisconsin farmers have made a careful study of cultivation methods, and, as most of them own their own farms, they are willing to make sufficient investment in power machinery to make their work bring bigger profits.

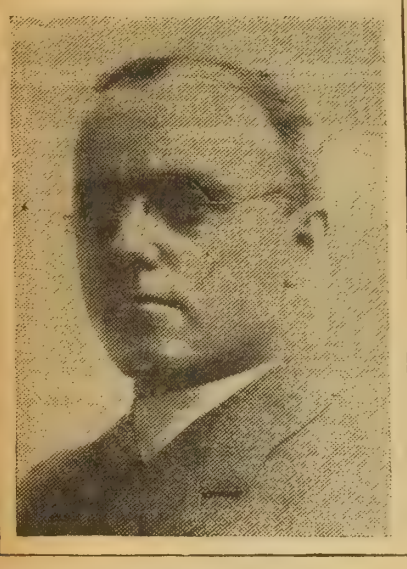
The spirit of the Babcock twenty-fifth anniversary was carried out in other departments. By special arrangement most of the Wisconsin ex-



W. D. FROST, MADISON.
Conducted Round Tables at the Wisconsin Country Life Conference.

hibit at the recent Panama-Pacific Exposition in San Francisco was reproduced in the university stock pavilion for the benefit of Farm and Home Week visitors. Here was seen the farm kitchen and sitting room of twenty-five years ago and the same rooms furnished in a modern way as they may be furnished today. There was a model farmstead which attracted a great deal of attention and choice exhibits of Wisconsin products of the field and dairy.

As usual, the college of agriculture named this year candidates for recognition because of conspicuous service in agricultural work in Wisconsin. Mr. S. J. Uhrenholdt, one of those named, a farmer of Sawyer county, has been conspicuous because of his success in the Upper Wisconsin country. He came to Wisconsin when sixteen years of age and settled in the



H. G. BELL, CHICAGO.
Representative of the National Fertilizer Association.

white pine country. He has made a study of forestry and carefully preserved his timber so that it has paid him better than 10 per cent on his investment. Mr. Uhrenholdt never received any instruction on forestry, but has worked out his ideas in the big school of "experience." Mrs. Adda F. Howie, of Elm Grove, Waukesha county, also received special recognition. Mrs. Howie was in charge of the Wisconsin grain and dairy show at the Panama-Pacific Exposition and she remained in charge during Farm and Home Week while the show was put on in the stock pavilion on University Farm. As a special evidence of Mrs Howie's high standing in the farm world and her ability as director of agricultural exhibits a beautiful amethyst brooch was presented to her with a letter of commendation for her work at the Panama-Pacific Exposition. Mrs. Howie is one of the leading cattle raisers in the state, having the largest herd of Jersey cattle in Wisconsin. Aside from her active connection with her farm at Elm Grove, Mrs. Howie has been on the farmers' institute force for eight years and was the only woman to have received an appointment as a member of the state board of agriculture.

The program of addresses was up to the high standard set in previous years. The meetings were crammed into one week this year instead of two as formerly. One of the important features was the conference of representatives of cow-testing associations. Wisconsin now has forty-five of these associations and more being added every month. The Wisconsin Farmer has urged the importance of such associations and we are very glad to see the work progress. Noel E. Negley, of Madison, told the visiting farmers how twenty-one years ago in Denmark, the home of co-operative enterprises, the first cow-testing association was organized. In 1905 the first association was started in the United States. There are now 250 associations in this country and almost one-fifth of them are in Wisconsin. The large number of cows in Wisconsin has given greater impetus here toward such organizations. Mr. Negley told of the excellent work which is being done by the Wisconsin Dairymen's Association, organized in 1872 by Ex-Governor W. D. Hoard. This association, with an appropriation of only $4,500 annually, is able to keep forty-seven men in the field to interest 1,500 men in testing and to save for them at least $50,000 annually. Mr. Negley urges more cow-testing associations in 1916.

The annual session of the Country Life Conference under the direction of C. J. Galpin brought out many points of interest. Club work is on the increase in Wisconsin. Reports from various clubs showed that the following specific things had been accomplished in Wisconsin by clubs in the past few years:

Introduced experiments in lime, rock phosphate and alfalfa.
Promoted cow-testing organization.
Started movement to erect town hall.
Bought pianos and victrolas for school and community use.

(Continued on page 25.)

THE NORTHWESTERN MUTUAL LIFE INSURANCE CO. MILWAUKEE, WIS.

GEO. C. MARKHAM, President

To the Public

The 58th Annual Report of the President to the trustees and other policyholders of the Company shows the following transactions for the year 1915

Death Claims Paid		$13,845,763.96
Endowments Paid		4,500,097.36
Dividends of Surplus Paid		13,271,991.90
Surrender Values Paid		10,598,673.85
Annuities		242,488.58
TOTAL PAYMENTS TO POLICYHOLDERS	$42,459,015.65	
Addition to Assets	15,383,683.17	
Grand Total for Benefit of Policyholders	$57,842,698.82	
New Insurance Paid For		127,401,120.00

Total Insurance in Force, $1,420,012,571

FINANCIAL CONDITION JANUARY 1, 1916

ASSETS		LIABILITIES	
Loans on Mortgages	$181,861,021.75	Legal Reserves	$312,136,886.00
Bonds (Market Value)	84,656,310.00	Installments	4,875,455.19
Loans on Policies	55,085,173.44	Claims, Taxes, Dividends Due, etc.	4,976,344.28
Real Estate	4,972,068.06	Annual Dividends of Surplus, payable 1916	11,946,750.00
Cash	4,380,382.87	For Deferred Dividends,	1,452,301.00
Miscellaneous	12,676,153.93	Contingency Reserve,	8,243,373.58
Total	$343,631,110.05	Total	$343,631,110.05

Despite the generally depressed and unsettled condition of business during the earlier months of 1915, the above report shows that the NORTHWESTERN made, during the year, that steady, consistent and healthy growth which has become characteristic of it. The uncertainty attaching to other lines of business and other means of protection, has emphasized the necessity for adequate life insurance and the flexibility of the Policies of the NORTHWESTERN in meeting the demands of family, business or estate, the convenience with which they can be adapted to changing conditions and the conservatism and care exercised in the investment of funds and selections of risks, have made the NORTHWESTERN popular with careful buyers of insurance. The above figures are worthy of careful study, especially those showing payments to policyholders.

Geo. C. Markham
President.

Resolutions of Breeders.

State Live Stock Association Meeting Passes Set of Resolutions---Arthur Broughton the New President.

THE Wisconsin Live Stock Breeders' Association at its annual meeting held in Madison last week elected Arthur Broughton, of Albany, Green county, president, to succeed S. A. Baird, of Waukesha county. Mr. Broughton was most signally honored at Madison, having been the first sheep breeder to be chosen head of the state breeders' association, and having also been re-elected, by a unanimous vote, to succeed himself as president of the Wisconsin Sheep Breeders' Association. Earl Roberts, of Oconomowoc, was chosen vice president of the live stock association, and Andrew W. Hopkins, of Madison, was unanimously re-elected secretary. Mr. R. Baker will remain at the Madison office as assistant to the secretary and L. P. Martiny, of Chippewa Falls, will act as treasurer of the society for the ensuing year. Members of the executive committee chosen are J. C. Robinson, of Evansville, and W. L. Houser, of Mondovi. This association has done a splendid work in Wisconsin in unifying the work of the various breed organizations and spreading the gospel of "more and better live stock."

There has been considerable discussion in Wisconsin of late on the question of taxing pure-bred sires. It is an open question with strong adherents to each side of the argument. It was apparent at the meeting last week that the members of the organization are not in entire accord on the subject. At the suggestion of the resolutions committee it was decided to name a committee to investigate the topic and report the merits and demerits of the case.

Live stock marketing conditions are to be investigated by the association as evidenced by the following resolution which was passed:

Whereas, Competition has long been recognized as the essential principle of trade, prices being governed by supply and demand, and

Whereas, The central live stock markets give opportunity for large numbers of rival packers, shippers, butchers and feeders to compete in the purchase of live stock, and furnishes the producer with the only guide to current live stock prices that he has, and

Whereas, A system of country buying whereby it is said they are enabled to purchase with very little or no competition, causing a serious depression of prices on the open market by decreasing demand, and establishing prices which do not indicate the real supply and demand, be it

Resolved, That this association recommend the appointment of a committee by the executive committee to secure all possible information on live stock marketing matters.

A resolution was passed demanding cleaning and disinfecting stock cars, the expense thereof to be borne by the railroads. The breeders also endorsed the five-day market as the best method to secure more even distribution of shipments throughout the week. Other resolutions were passed as follows:

Resolved, That it is exceedingly unfortunate and regrettable that the last Wisconsin senate failed to provide an appropriation sufficient to partially reimburse Wisconsin exhibitors at the last National Dairy Show for expenses incurred because of the necessity of holding their cattle in quarantine for foot-and-mouth disease and that this association take the proper steps to place this before the next legislature.

Resolved, That there should be more effective and rational quarantine regulations, which would establish quarantine zones around infected premises at a safe distance as determined by scientific authorities, rather than establishing quarantine lines to conform to township, county or state lines. And, that after such quarantine is established, we favor strict co-operation with state and federal authorities in their enforcement. Be it further

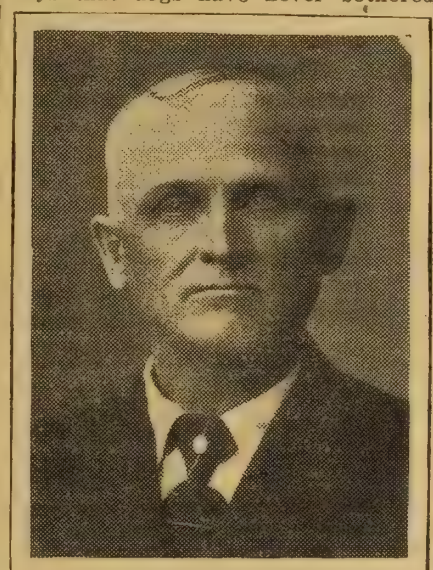
Resolved, That in case of infection of pure-bred herds with foot-and-mouth disease that slaughter or quarantine be decided upon the merits of the individual case, and be it further

Resolved, That we pledge our hearty support to the United States Department of Agriculture in any plans made for the efficient handling of a future outbreak.

Resolved, That we express the thanks of the association to the state live stock sanitary board for its efficient handling of the foot-and-mouth disease situation in Wisconsin.

Resolved, That this association favors and will support state and federal legislation which will allow of the appraisal of pure-bred live stock slaughtered on account of the foot-and-mouth disease to more nearly represent the reasonable breeding value of the animals slaughtered. And the said appraisal to be made by men familiar with the value of pure-bred live stock. Resolved, That this association co-operate with the United States Department of Agriculture and the Wisconsin Live Stock Sanitary Board in the maintenance of an official public record for all herds which can be certified as tuberculosis-free herds.

The Wisconsin Sheep Breeders' Association held its annual meeting and listened to an address by A. J. Knollin, of Chicago, an officer in the American Shropshire Breeders' Association and a sheep breeder of many years experience. Mr. Knollin hopes to see the time when the wool tariff will be taken out of politics and put on a business basis. He favors a protective tariff on wool, but says the worst thing that can happen to the sheep men is to have the subject constantly up for discussion and changed by every congress. He says President Taft's idea of a tariff commission was right and he approves President Wilson's stand on the same subject. Sheep raising at present is profitable notwithstanding the free wool law, and Mr. Knollin expressed the belief that it will continue to be profitable for several years. There has been a shortage of sheep offered for market and Mr. Knollin believes, government statistics to the contrary notwithstanding, that there is an actual shortage in flocks of the country. Several practical suggestions were offered. One breeder said that in fifty years he had had no trouble with dogs. He has kept a shepherd dog and has allowed his sheep to run in pasture with dairy cattle and colts. Another breeder says that dogs have never bothered



ARTHUR BROUGHTON, ALBANY.
Chosen president Wisconsin Live Stock Breeders' Association.

him and he attributes this to the fact that he keeps a goat or two always with his flock.

The association elected the following officers: President, Arthur Broughton, of Albany; vice president, Seth L. Crall, of Evansville; secretary, W. F. Renk, of Sun Prairie; treasurer, George Phillipi, of Welcome. The new directors are William T. Miles, of Oregon; W. C. Bradley, of Hudson; George McKerrow, of Pewaukee; Frank L. Kleinheinz, of Madison, and R. E. Richards, of Lodi. After some discussion the association recommended that the officials of the Wisconsin State Fair select two judges for the 1916 fair, for the mutton breeds, from among the following: John Miller, of Toronto, Canada; Noel Gibson, of Illinois; James Duncan, of New York; William A. Dryden, of Brooklyn, Canada; James Hammond, of Ames, Iowa; John E. Webb, Southport, Indiana; Willia S. Dixon, of Connecticut; C. E. Lockwood, of Michigan. Prof. E. L. Shaw, of Washington, seemed to be first choice of the breeders for one of the judges, provided his services can be secured.

The Wisconsin Horse Breeders' Association at its annual meeting held in Madison last week unanimously re-elected its former officers, who are as follows: President, W. K. Caldwell, of Morrisonville; vice president, James Boyd, of Milwaukee; secretary and treasurer, J. G. Fuller, of Madison.

This association has lost two of its members since the last meeting two years ago by death. Appropriate resolutions concerning the lives of James Z. McLay, of Janesville, importer and breeder of Clydesdales, and R. C. Lybrand, of Richland Center, breeder of Percherons, will be spread upon the permanent records of the society.

Dr. A. S. Alexander, veterinarian at the University of Wisconsin College of Agriculture, and Professor Edmunds, of the Illinois station, addressed the meeting. Dr. Alexander said that the war had helped the horse breeders in that it had taken 600,000 horses and mules, of the grade stock, away from this country and had depleted our supply and at the same time left us in possession of the best.

Mr. James Van Etta, of Lima Center, was chosen on the board of directors to succeed the late James Z. McLay.

A horse show is proposed hereafter at the close of annual short course. Such a show was formerly held. It is also proposed to have an annual sale of draft horses in November. While the horse men have met some discouragements in the past two years, they are optimistic regarding the future of the horse business in Wisconsin and the nation.

The Pleasant Hill Creamery Company, Wood county, had the biggest year in its history in 1915. The annual report shows a butter production of 117,416 pounds from 98,609 pounds of butter fat. F. A. Fox was chosen president and Peter Hansen secretary for the coming year.

Avery Tractors for Any Sized Farm.

ONE reason why there are more acres plowed by Avery tractors and plows than by any other make is because they are made in six sizes, one of which is adapted to any farm in the country, no matter whether it is large or small. Avery tractors are operated by one man and they work with economy of time, labor and expense. In their advertisement on page 18, the Avery Co., gives six good reasons why so many farmers are buying Avery outfits, including tractor, plow and thresher, all built and backed by this old, reliable concern. In writing for the 1916 Avery catalog, which gives full information about the big Avery line, address Avery Co., 1315 Iowa St., Peoria, Ill., and please mention this paper.—Adv.

Pay Nothing In Advance

First Small Payment In Three Months

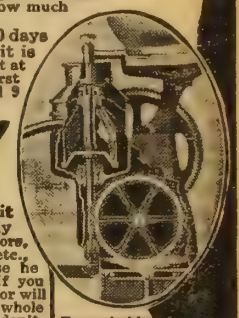
This is the most sensational bargain offer ever made on a Cream Separator of absolutely guaranteed high quality. The **House of Hartman** with its 60 years business record and $10,000,000 resources is behind this remarkable Separator, which is offered direct-to-you on the famous **Hartman Special Farm Credit Plan**—the most liberal credit terms ever devised.

PAY NOTHING IN ADVANCE. Not a penny down, no deposit, no "red tape" of any kind, no security, no interest. Just let **Hartman** ship you a **Majestic** Cream Separator for free trial, so that you can prove for yourself what it will do. Test it with warm and cold milk. See how easily it runs—how simple and satisfactory—how it skims right down to the last drop—how much quicker it does the work.

Just use the **"Majestic"** as your own for 30 days and, if you are not perfectly satisfied that it is the best Separator bargain ever heard of, return it at our expense. If you decide to keep it, make your first small payment in 3 months, and balance in 3, 6 and 9 months thereafter, giving you

A YEAR TO PAY Without Interest

This is the famous **Hartman Farm Credit Plan** on which you can buy not only Cream Separators, but also Engines, Incubators, Paint, Roofing, Furniture, Carpets, Rugs, etc., etc. **Hartman** trusts Farm Folks because he believes in them. Your credit is good. If you prefer, you may pay all cash, but the Separator will be no cheaper in price. It costs you nothing extra if you take a whole year to pay. If you are thinking of buying a Cream Separator, don't do it until you let **Hartman** ship you for free trial the wonderful



Remarkable Inside Oiling Device—No Outside Oil Cups—All Gears Encased.

Majestic Cream Separator

375, 500, 750 and 1,000 Pounds Capacity

A masterpiece of mechanical skill—a Separator so ingenious in design, so perfect in construction, so simple and easy to operate—that it will measure up in all 'round efficiency with Cream Separators that sell for practically twice the **Hartman** low direct-to-you bargain price. The **"Majestic"** has all the very latest improvements, including a remarkable inside oiling device that keeps the gearing perfectly lubricated and prevents any trace of oil coming in contact with the cream. The **Majestic** Separable Disc Bowl is the simplest, most accessible and easiest to clean of any Separator Bowl made.

Wonderful Offer

Send for This Free Book

We want you to learn all about the wonderful Majestic and compare our low price with prices of cheaply constructed, inferior makes. The Majestic on our year-to-pay easy credit terms costs less than others ask all cash for. Get the proof. It's in this book. Write your name and address in coupon and mail today. Ask for Cream Separator Catalog No. S-262

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Send me free copy of your Cream Separator Catalog No. S 262 explaining liberal no-money-in-advance, year-to-pay-without-interest credit terms. This does not obligate me in any way.

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Market the Milk

Raise your calves and get the bigger money to which you are entitled. But do not feed the calf whole milk, with butter fat worth $800 a ton.

You can sell all the mother cow's milk or butter and make your calf pay you a big profit on its feed, by raising it on

RAISE YOUR CALVES WITH BLATCHFORD'S CALF MEAL

Blatchford's Calf Meal

The Recognized Milk Equal

You get 100 gallons of rich milk feed from 100 pounds of Blatchford's Calf Meal, and it costs you only one-fourth as much. It will make your calf grow fast and well.

Blatchford's Calf Meal is composed of the elements the young calf needs in the most trying period of its life; is thoroughly steam cooked—prevents bowel troubles and other ills due to improper milk substitutes.

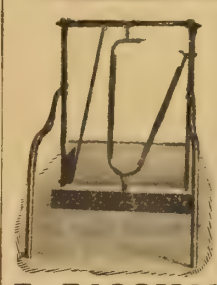
Blatchford's Pig Meal insures quick, sturdy growth of young pigs at weaning time, without setback or falling off.

Write us for our Free Book on "How to Raise Calves Cheaply and Successfully Without Milk."

Blatchford Calf Meal Factory
Madison St., Waukegan, Ill.

L. C. Beard, Hagerstown, Md., writes: "I can say Blatchford's Calf Meal will pay anyone 100 Pct. that has calves to raise."

SIMPLEX IMPROVED STEEL STALLS



Stanchions and Litter Carriers. No advance in price on this famous equipment. If you are going to build or refurnish your barn, send for our new catalog which tells all about our famous springless lock stanchion and three-bolt alignment.

F. RASSMANN MFG. CO.
31 Lake St. BEAVER DAM, WIS.

Dairy Rations Containing Silage.

To Get the Most Profitable Returns from the Use of Silage it Should Be Fed in Connection With Other Feeds.

ARGUMENTS are no longer needed to convince the farmer that silage is a good feed for cattle, regardless of whether they are kept for milk or beef. A few years ago beef producers, while they conceded that silage might be all right for the dairy and beef breeding cow, it had no special value for the fattening steer. But these men have now learned from experience that silage is as valuable for the steer as for the cow. The fact that by converting the corn crop into silage we save all its food value—40 per cent of which is represented in the stalks and leaves—is such an important item that no one can afford to overlook it. The question of how to feed silage to the best advantage, however, is not so well understood as the fact that it is an economical feed, even when not fed strictly according to the scientific principles underlying the use of all feeding stuffs.

Since this article is especially intended to discuss the feeding of silage to dairy cows, rations for other stock will not be mentioned, although it is just as important for the beef producer to use silage judiciously as it is for the dairyman or the farmer who feeds it to his milk cows, from which he is anxious to obtain a steady cash income the year round. There is a tendency among a good many farmers to use silage as a substitute for hay. This is all right in a way, but it should be used with other feeds in such a manner as to produce a balanced ration. The milk of a cow is rich in protein; it forms a perfectly balanced ration for the young calf, as everyone knows. Nature intended that it should and a young calf, like any other young animal, requires a large amount of protein and mineral matter so that it may build up its body rapidly and in a normal manner.

By bearing this fact in mind—that milk is rich in protein—it is not difficult to understand why a dairy cow must have feed rich in that same constituent. This becomes clearer still when we realize that protein in milk can be produced only from protein. The cow, therefore, to make protein for her milk must take protein either from the food she consumes or rob her own body of that constituent. She can continue robbing her body for only a comparatively short time and keep up a good milk flow; hence it follows that if she is to produce profitably she must be given a ration containing the necessary constituents needed for that purpose. Just as we must supply the mason with brick and mortar instead of with lumber and nails if we want him to build a brick house, so must we also supply the cow with the proper amounts of protein and carbohydrates if we want her to produce a large flow of milk.

The question then arises, What does the cow need in the way of these nutrients—protein and carbohydrates—in order to produce a certain amount of milk: Is that known? Certainly it is. It has been worked out very definitely by keeping records of the amounts of these nutrients fed to cows together with the amount of milk produced therefrom, and that is why it is now possible to compound rations for milk cows from all sorts of feeding stuffs and obtain economical returns therefrom, provided the cows are of the right kind. So well have these things been worked out that any farmer can learn to provide a balanced ration for his cows and feed each cow according to her capacity or her ability of converting food into milk.

There is only one difficulty in the way of the average farmer making up his own dairy cow rations and that is his lack of knowledge of the chemical composition of feeding stuffs. This, in fact, is our excuse for writing this article and appending a number of balanced rations thereto, which may at least serve as excellent guides.

It has been learned that a 1,000-pound cow, in order to maintain her body at an even weight when not producing milk, requires seven-tenths of a pound of digestible protein and seven and two-tenths pounds of digestible carbohydrates and fat. Whatever additional feed she consumes can be utilized for the production of milk or the increase of body weight. A first-class dairy cow, however, will not lay on body fat while she produces milk, but will convert all food consumed above the amount needed for body maintenance, into milk.

Just as it is known how much protein and carbohydrates a cow needs for body maintenance so it is also known how much she needs in order to produce a given quantity of milk of a certain richness. Thus a 1,000-pound cow, producing thirty-two pounds of four per cent milk—three gallons—a day requires 2.35 pounds of digestible protein and 15.03 pounds of digestible carbohydrates. The following rations all contain approximately those amounts of nutrients, and are therefore suitable for use:

RATION 1.

Feeding stuff	Protein Lbs.	C. H.* Lbs.
65 lbs. silage	.58	3.42
3.5 lbs. cottonseed meal	1.32	1.51
6.5 lbs. corn	.43	4.69
	2.33	14.62

RATION 2.

40 lbs. silage	.36	5.12
8 lbs. alfalfa	.89	3.21
1.5 lbs. cottonseed meal	.56	.65
8.5 lbs. corn	.57	6.13
	2.38	15.11

RATION 3.

30 lbs. silage	.27	3.84
10 lbs. alfalfa	1.11	4.05
1 lb. cottonseed meal	.38	.43
9 lbs. corn	.60	6.49
	2.36	14.81

RATION 4.

20 lbs. silage	.18	2.56
14 lbs. alfalfa	1.55	5.67
10 lbs. corn	.67	7.21
	2.40	15.44

RATION 5.

40 lbs. silage	.36	5.12
8 lbs. clover	.57	3.35
2.5 lbs. cottonseed meal	.94	1.07
7.5 lbs. corn	.50	5.41
	2.37	14.95

RATION 6.

30 lbs. silage	.27	3.48
10 lbs. clover	.71	4.19
2 lbs. cottonseed meal	.75	.86
8 lbs. corn	.54	5.77
	2.27	14.66

RATION 7.

20 lbs. silage	.18	2.56
14 lbs. clover	.99	5.87
2 lbs. cottonseed meal	.75	.86
8 lbs. corn	.54	5.77
	2.46	15.06

RATION 8.

40 lbs. silage	.36	5.12
8 lbs. timothy	.22	3.62
3.5 lbs. cottonseed meal	1.32	1.51
6.5 lbs. corn	.43	4.69
	2.33	14.94

RATION 9.

30 lbs. silage	.27	3.84
10 lbs. timothy	.28	4.53
3.5 lbs. cottonseed meal	1.32	1.51
6.5 lbs. corn	.43	4.69
	2.30	14.57

RATION 10.

20 lbs. silage	.18	2.56
14 lbs. timothy	.39	6.34
4 lbs. cottonseed meal	1.50	1.72
6 lbs. corn	.40	4.32
	2.47	14.94

RATION 11.

40 lbs. silage	.36	5.12
8 lbs. millet	.40	3.96
3 lbs. cottonseed meal	1.12	1.29
7 lbs. corn	.47	5.05
	2.35	15.42

RATION 12.

30 lbs. silage	.27	3.84
10 lbs. millet	.50	4.95
3 lbs. cottonseed meal	1.12	1.29
7 lbs. corn	.47	5.05
	2.36	15.13

*Carbohydrates.

The above rations all contain silage, but in varying amounts. Note that Ration 1 contains no roughage other than silage. In order to get such a ration in balance, a large amount of high-protein feed—cottonseed meal being mentioned—is required. Silage being deficient in protein it must be supplemented with something rich in that constituent. Suppose we have an abundance of alfalfa on hand, then we might use a combination as shown in Ration 3 and effect a saving in the cottonseed meal needed. In Ration 4 we show a combination for which no purchased feed is needed. This makes a very good ration for cows that do not produce large quantities of milk, but for a cow producing sixty-four instead of thirty-two pounds of milk a day it would not be suitable, for such a cow would need more concentrates as she could not eat enough alfalfa to secure the amount of protein needed for the production of such a large quantity of milk. Now contrast Ration 4 with Ration 10, in which timothy is substituted for alfalfa. Note that in this case four pounds of cottonseed meal are required as compared with none of that constituent in Ration 4. This shows clearly the superiority of alfalfa over timothy as a feed for dairy cows. Also study Rations 8, 9, 11, 12, none of which has alfalfa in its make-up; hence all require relatively large quantities of a protein feed.

"Velvet" For Dairymen

West Chester, Pa.

February 3rd, 1916.

Mr. Dairyman:

We have a wonderful new invention and I want to tell you about it myself. It is a source of new profit for dairymen without added expense which I call "velvet," for it is *all profit.*

Thirty-five years, longest in America, the Sharples plant has been devoted exclusively to the Cream Separator.

Its inventors produced the first cream over-flow bowl with its superior quality of smooth even cream, the first directly driven steam Separator, saving power, fuel and wear, the first and only tubular bowl with its doubled skimming force and efficiency and extreme simplicity, the bottom feed, the hanging tubular bowl, all making for convenience, durability, economy of maintenance and operation.

Now we have made another great invention, greatest of all as a profit producer, though so simple that it seems we should have had it long ago.

Thousands of carefully made observations by competent investigators, government officials and scientific men have proven beyond question that 95% of all the hand driven cream separators in America are turned below regulation speed, below the speed marked on the handle, a great part of the time and *every* hand separator is under-speeded *some* of the time.

No matter which separator, whose make, or what it is capable of doing when turned at full speed, it will lose cream and a lot of it, when the speed is allowed to drop even for a moment, and with the cream goes the profit.

THE NEW
SHARPLES
SUCTION FEED

Separator will stop this loss, aggregating millions of dollars annually to America's dairymen—stop it at once and forever.

No matter if you turn this Separator at widely varying speeds, fast or slow, it skims equally clean—no cream will be lost. The bowl *drinks its milk supply as it needs it,* always in exact proportion to the separating force within the bowl. At slower speeds it drinks less, at faster speeds more, but always just the right amount for *clean* skimming.

A thousand of these machines are in regular daily use; we demonstrated them to a finish before announcing them; it is the Sharples way—*absolute perfection before sale.*

The Sharples Suction Feed Separator has several very important advantages in addition to its certainty of clean skimming at any speed. The varying of speed does not change the thickness of cream; fast turning increases the capacity much above normal, just as you whip up a horse, when in a hurry. The supply can is but knee high and the machine throughout is simpler and better than ever.

We sell our Separators now, as always, subject to free trial by the buyer; but a stronger guarantee than any trial is the unbroken record of the growth of this business from the small beginning of 35 years ago to its immense proportions of to-day. It could not grow so except by the unbroken rule of complete satisfaction to customers.

Lack of space prevents explaining more fully; but send today for new book, "Velvet for Dairymen," that tells all about this money-saving invention.

Sincerely yours,

P. M. Sharples

President.

The Sharples Separator Co.

Also Makers of Mechanical Milkers and Gasoline Engines

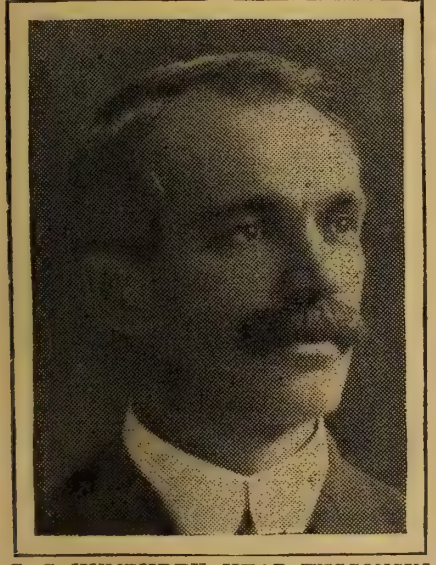
West Chester - - - Pennsylvania

Chicago San Francisco Toronto Portland

PROMINENT FARMERS' WEEK

E. J. DELWICHE, WISCONSIN EXPERIMENT STATION.

B. G. PACKER, OF STATE IMMIGRATION BUREAU.



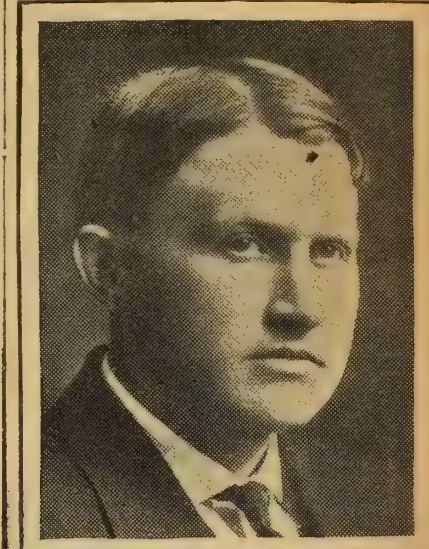
G. C. HUMPHREY, HEAD WISCONSIN ANIMAL HUSBANDRY DEPT.

WISCONSIN FARMER CORN TROPHY.

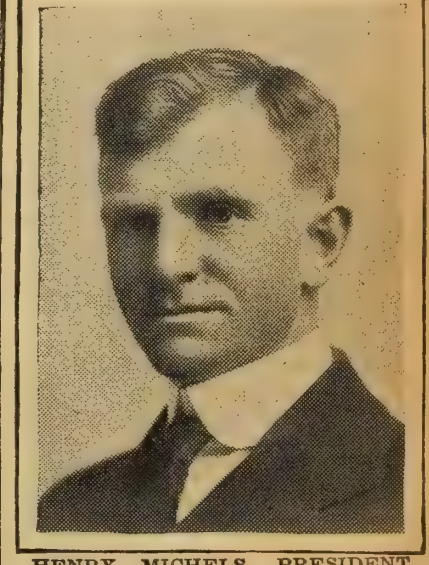
The above silver loving cup was offered by The Wisconsin Farmer this year to the member of the Wisconsin Agricultural Experiment Association who took first honors for the best fifty ears of White Dent corn. Mr. S. P. Markle, of La Crosse county, with Silver King variety corn won sweepstakes on white corn, and his exhibit was generally spoken of as one of the best ever shown in the state. Mr. Markle also won honors at the recent National Corn Show in St. Paul with his exhibits of white corn. He is well known throughout Wisconsin because of his exceptionally good work in corn breeding. Mr. Markle has won many honors at the La Crosse County Agricultural Experiment Association annual exhibit. He is one of the company of Wisconsin men who have worked hard to produce good grains, and his labors have been generously rewarded with success.

The Wisconsin Farmer is advised that there are approximately 1,000 bushels of good seed corn in La Crosse county. While this is below normal it is somewhat better than was at first supposed. The price of seed corn is running from $4 per bushel up. An effort is being made to keep all seed corn for sale by experiment association members at the $5 per bushel mark, but when growers have exceptionally good seed corn for sale the bidding for it is so active that the price is bound to be higher. The farmer who has good seed corn to sell is indeed fortunate.

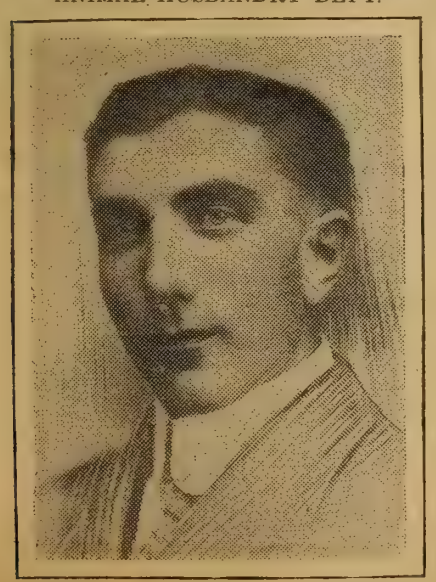
C. J. GALPIN, LEADER COUNTRY LIFE CONFERENCE.



JOHN EVVARD, IOWA STATION, EXPERT ON HOG RATIONS.

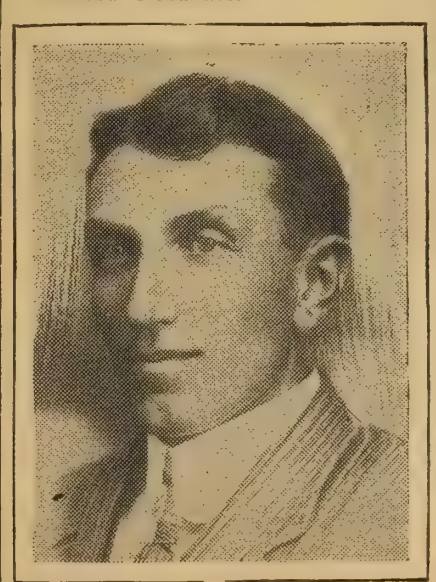


HENRY MICHELS, PRESIDENT WISCONSIN EXPERIMENT ASSN.

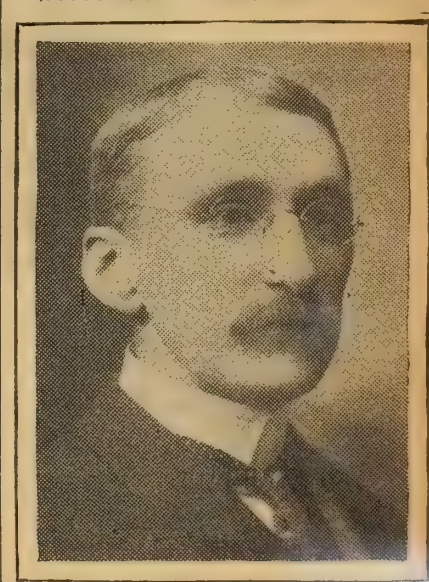


LEWIS M. SWARTZ, CORNFALFA FARMS, WAUKESHA COUNTY, WIS.

JAYSON S. SWARTZ, CORNFALFA FARMS, WAUKESHA COUNTY, WIS.



PETER C. SWARTZ, CORNFALFA FARMS, WAUKESHA COUNTY, WIS.



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Learn All the Facts About the Avery Outfits

Sliding frame; two-speed gears; double drive; slow-speed special tractor motor, extra large crankshaft, renewable inner cylinder walls; no pumps or fan. Another big advantage in getting an Avery Outfit is that the entire outfit is built by one company—the plow as well as the tractor. You can also get a "Yellow Fellow—Grain Saver" Separator in sizes to fit each size tractor. Built in sizes to make Tractor Farming successful on any size farm—large, medium or small. Also best power for threshing and road building. 3-plow tractor, $760, cash; 4-plow, $1120, cash; 5-plow, $1680; 6-plow, $2145; 8-10-plow, $2475. We also build a special smaller size tractor for $295. All built and backed by a company having a large factory and many branch houses which insure prompt and permanent service. **Write now for new 1916 Avery Catalog.**

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It will mix 2½ cu. ft. at a batch, has self-tilting dump, runs by hand or 1 h. p. engine. Will keep from 2 to 6 men busy. Does finest work, equal to any $200 machine—and costs you almost nothing in comparison. Just drop me your name on a post-card today. Full instructions and blue print plans will come at once. FREE.

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Box 887, Quincy, Ill.

Please mention this paper when writing

As Viewed at the Stockyards.

An Address by James E. Poole, of Union Stockyards, Chicago, Before Wis. Live Stock Breeders' Association.

WISCONSIN'S contribution to the beef, veal and pork supply of the country is by no means inconsiderable. In volume it ranks behind such states as Iowa, Illinois or Missouri, but it enjoys the distinction of marketing in large quantities the costliest raw materials the packers buy, veal. The Wisconsin hog enjoys an enviable reputation at the market. It figures well on the dressing sheets and but a small percentage of the crop fails to pass the post-mortem test. The Wisconsin hog is a healthy animal and less susceptible to tuberculosis than his Iowa prototype. Although not noted for its beef cattle, Wisconsin contributes a large quantity of grass product, the fall run from the blue grass region of the southwestern part of the state having recognized market standard. That this state markets only a handful of native sheep is to be deplored. That it might be the home of an important wool and mutton industry is indicated by the occasional arrival of a prime load of native lambs at Chicago that top the market. In a live stock sense Wisconsin is a region of but partly developed and almost unlimited possibilities. With a beneficent climate, fertile soil and advantageous location as to markets, enjoying the unquestioned benefit of short hauls, light shrinks and low freight rates, it is a safe prediction that within the next decade its production of cattle, hogs and sheep will be materially augmented.

Logical by-products of the dairy herd are beef and pork. But for the butcher cattle that come annually to the stockyards from Wisconsin's dairy yards the beef of the common people would cost considerable more money. Wisconsin is essentially a farm home state where the agriculturist does not carry "all his eggs in one basket." The farm that produces milk, butter, eggs, cheese, veal, pork and a little beef is a much safer proposition than that which specializes. Wisconsin is a region of comfortable farmsteads, capacious schoolhouses, busy and prosperous towns and contented people with an appreciation of comfortable living. Its system of mixed husbandry furnishes employment to the entire family the year around.

Some years ago an Iowa man came to Chicago with a load of Hereford yearlings. It was just before the Christmas holidays when such cattle always find a good market. They weighed right around 1,000 pounds and realized $9.90 per hundredweight. Asked what profit he figures on the transaction, he replied: "Why, that's all profit. I never had a cent of that money before and I never missed what those cattle ate. They just grew up on the farm, ate what it produced and about the only trouble they gave me was salting 'em." While his figuring was fallacious it was in a measure correct. That load of yearlings was really a farm by-product, the result of a system of diversified farming, and in that respect Wisconsin has a decided advantage over the corn belt when its live stock goes to market. The stuff being home raised the speculative element in the transaction is eliminated.

The beef cattle Wisconsin sends to Chicago are not of the blue-ribbon variety. In market parlance these are known as "knotheads." Thousands come annually from the north country in the yearling stage weighing around 500 pounds and selling as low as 4 cents per pound, which means about $15 per head net to the grower. Sent to the shambles in the veal stage they would have netted nearly as much and the risk and expense incidental to wintering would have been avoided. Maturing such cattle is obviously unprofitable.

From the eastern and southern sections of the state a continuous procession of calves and such cows as the trade knows as canners and cutters troop to the stockyards. But all Wisconsin cattle are not trash. Such counties as Grant, Crawford and Richland contribute stockers and feeders that have an excellent reputation among finishers in Ohio, Indiana, Pennsylvania and other eastern territory. Better sires might be used, and the fact that Wisconsin grows such cattle suggests possibilities of expansion of the industry. Good stockers from Crawford and Grant counties have commanded $7 to $7.25 per hundredweight at Chicago, while the "knothead" class has had to take $4 to $4.25. Growing stock cattle is now a remunerative business and along this line of production Wisconsin, by reason of its proximity to market and eastern feed lots, has unquestioned opportunity.

Feeders in Indiana, Ohio, Pennsylvania and southern Michigan have been forced to travel long distances to secure young cattle at great expense in the matter of shrinkage. Ontario is now depended on to replenish Pennsylvania feed lots and that state is sending a large sum annually to eastern Canada for raw material. Wisconsin could increase its production of yearling stock cattle enormously without taxing the capacity of the market. Despite the contention of theorist to the contrary, it is not, and probably will not be, the logical function of high-priced corn-belt land to grow stock cattle which can be more economically produced on cheaper areas, capable of growing roughage. Carrying a cow for the calf it raises is a maintenance ration proposition and offers one of the most lucrative and safest spheres of beef production. Wisconsin has millions of acres adapted by nature for that business.

At the market Wisconsin's grass cattle are well thought of. Most of them come from a rolling area in the southwestern part of the state, mainly Grant, Crawford and Iowa counties, and in stockyard parlance are known as "Mineral Point cattle." They are strictly grassers and many sell at $8 to $8.50 per hundredweight.

Growers in that section of the state have in recent years experienced the same difficulty as beef makers everywhere in securing store cattle at a price that insures a reasonable margin and the grazing section of the state is under the necessity of buying inferior western stock cattle at St. Paul, owing to deficiency in local production.

Slaughter records demonstrate the healthfulness of the Wisconsin hog. The swine industry of the state is to a large extent a side line, the by-product of the dairy industry. Most of the crop goes to Chicago and Milwaukee, where the Wisconsin hog enjoys an enviable reputation. Both as regards cholera and tuberculosis the Wisconsin hog outfigures corn-belt product in the post-mortem test.

Wisconsin boasts of one of the most efficient experts in the United States, but his efforts to put the wool and mutton industry on its feet have not produced results. I refer to Frank Kleinheinz, of the state experiment station. There are other practical Wisconsin sheep raisers engaged in constant demonstration that the business is profitable, but somehow or other Wisconsin refuses to avail itself of this opportunity. Between dogs, parasites, bad markets and other adverse influences, what the trade knows as the native sheep in contradistinction to western product is becoming less numerous annually and the 1916 lamb crop east of the Missouri river will be the smallest in a quarter of a century. Sheep need shepherding and this essential care the average farmer is not disposed to give.

Wisconsin could, and ought to, produce as much wool and mutton as Idaho, but that accomplishment will never be possible on a small farm flock basis. Cattle and hogs are able to take care of themselves to a large extent and are farm by-products, but if ever the sheep is to gain substantial foothold in Wisconsin or its neighboring states it will be as a district special industry. Such men as Arthur Broughton have made discussion of that topic unnecessary. Wisconsin has the climate, the soil and the feed capacity to market $25,000,000 worth of wool and mutton annually.

A fine farm from $400 and 3 cows

Beginning with $400 and three good cows Thos. Bently has developed a fine farm near Paragould, Ark. worth several thousand dollars now. Wherever you go along the

Cotton Belt Route in Arkansas & Texas

you'll find hundreds of farmers, now well to do, who started just a few years ago with only a little cash.

As H.V. Tull, near Jonesboro, Ark. says "One can start farming here on less capital than anywhere else I have ever been. We paid $25 per acre for this land and made a good crop the first year."

S. M. Jackson, of Piggott, Ark. had the same experience. "We came here a few years ago from Tennessee and bought this place for $700 and have been making money all the time. There is more money here and a better market. Our garden and orchard crops bring us money every month of the year; and our field crops and pastures support our live stock." Down near Jacksonville, Tex., B. E. Barber bought 40 acres of land a few years ago for $365. The first year his crops brought a revenue of over $2000—and in four years time he put $12,000 in the bank from the sale of products raised on his farm, mostly by his own labor.

If you could talk with the farmers from Iowa, Michigan, Illinois, Kansas—from every part of America—who have gone into Arkansas and East Texas with little capital and made good money from the start, you'd realize what your opportunity is there.

Two free books!

A farmer wrote them; and he knows what you want to know about a section new to you. They tell about the character and cost of lands, climate, crops raised, etc., and about schools, churches, towns, social conditions. Brimful of photograph pictures taken on the ground. Send me your name and address on a postal card today and get these free books now.

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Light draft, two horses handle it; low down, double chain drive, cut under front wheels, channel steel frame, trussed like a steel bridge, steel tongue, endless apron, force feed; top of box only 42 inches high, with our improved Model V-rake and all steel beater, which makes a finer and wider spreading machine than ever. Shipped from Waterloo, Kansas City, St. Paul, Council Bluffs and Chicago. My new, 1916 easy selling plans, cash or time, are fully described in my book which is mailed for the asking. Write today.

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This 116-page four color book describes all new 1916 varieties vegetable and grain crops. Hundreds of illustrations, beautiful grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. All about alfalfa, clover, vetch, modern varieties field corn. A dictionary of gardening; encyclopedia of field crops! A flower lover's delight! A berry grower's book! An orchardist's manual! Most wonderful gardening guide-catalog ever published. A postal brings it to your home. Don't miss this book!

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Western Guernsey Breeders Meet.

More Than a Hundred Breeders Present at Annual Convention---H. W. Griswold Chosen President.

MORE than a hundred Guernsey breeders from Wisconsin, Illinois, Iowa and Minnesota attended the annual meeting of the Western Guernsey Breeders' Association at Madison last week. The meeting was held during Farm and Home Week and was one of the most interesting winter meetings ever held. Business has been good the past few months; the inquiries for stock are coming in rapidly and the breeders at the meeting in their addresses reflected optimism for a prosperous year.

A banquet was served at noon, followed by the business meeting at which officers were elected and other important matters discussed. Pres. Frank E. Fox, of Waukesha, presided and the report of the secretary showed the association is in a flourishing condition. The secretary reported that there are now 160 annual members, fifty-six life members and fourteen honorary members, and as twenty-one new members were received at the Madison meeting the total membership is now 251, which is a satisfactory increase over last year. The secretary also reported that there is in the treasury a balance of $439.12.

H. W. Griswold, of West Salem, Wis., a former president, was chosen president and Mr. C. L. Hill, of Rosendale, Wisconsin, was re-elected to the position of secretary and treasurer. O. W. Lehmann, of Woodland, Ill.; George P. Grout, of Duluth; Minn., and Charles Wilkins, of Plattville, Wis., were elected vice presidents. Gavin McKerrow, of Pewaukee, and George C. Humphry, of Madison, were chosen members of the executive committee.

Twenty-one new members were elected as follows:

O. K. Spires, Burlington, N. D.; A. E. Rundell, Plattville, Wis.; J. S. Govin, Menomonie; F. K. Babson, Chicago; George Higginson, Jr., Winetka, Ill.; George W. Brown, Waukesha; Conrad Kuhtz, Waukesha; George Westercomp, New Albany; Dr. F. F. Bowman, Madison; N. I. Anderson, Cambridge; G. R. Jones, Wales; George Nicholson, Brooklyn; C. H. Dayton, Oshkosh; Spencer Otis, Barrington, Ill.; D. L. Larey, Dousman; Dale Rundell, Plattville; F. D. Couriss, Lake Geneva; W. D. Hall, Big Stone City, S. D.; Enoch Perry, Milwaukee; George Goetz, Chicago, Ill., and Homer Rundell, Plattville, Wis.

The secretary reported that he had several inquiries on hand for stock and that he had been asked to supply for an outside shipper a half dozen cars of good grade Guernseys. He also has calls for calves and for yearling heifers and calves at about $150. The inquiries have been coming much faster of late, which indicates a good selling season.

W. E. Skinner, general manager of the National Dairy Show, was one of the principal speakers and he went into detail in explaining the removal of the 1916 show to Springfield, Mass. He said that the show committee had never been approached with a better offer by a better bunch of boosters and that he had every reason to expect the 1916 show to be a record breaker and that it would renew that interest in dairying in New England which is now a crying need. He said that Springfield has ample hotel accommodations to take care of the crowds and that a fund of $500,000 was being raised to take care of the show and insure its success. Thirty-nine men have already pledged themselves for $10,000 each, he said, which tends to show the interest and enthusiasm shown by the Springfield business men. He urged every Wisconsin breeder to exhibit, and said that he wished the western breeders to show the eastern breeders who were boasting that they would "clean up" this year; that the East has nothing on the West in dairy stock. He also spoke of the work of the National Dairy Council and its plans for an advertising campaign to increase the consumption of milk and dairy products. The association passed a resolution approving the work of the council.

Dr. T. W. Brophy, of Chicago, proposed that the association express itself in favor of a rule that every animal shown at the national dairy show be required to have passed an examination under the direction of state or federal authorities and that every exhibitor be required to file this bill of health with his entry. This brought on considerable discussion and the general opinion was that it was a wise move. The members who had had herds at the last dairy show, where they were quarantined because of the foot-and-mouth disease, were strongly in favor of health certificates for show stock, and some said they would never show again until such requirements were insisted upon. Dr. Brophy said in his opinion nothing will do more to clean up the herds and keep them clean than the requirement that owners secure bills of health for stock before showing. The incentive among the pure-bred breeders will be to keep their herds clean, and this would have the effect on the farmer of impressing upon him the importance of healthy herds.

Finally Dr. Brophy moved that the association favor the requirement of health certificates from all animals shown at all state and district fairs, as well as the national dairy show. The motion carried after some discussion as to whether county fairs should be included.

Dr. L. A. Wright, a Guernsey breeder in Columbia county and a member of the Wisconsin Live Stock Sanitary Board, explained the plan of the state department of agriculture for a certified list of herds free from tuberculosis. M. L. Welles, of Rosendale, was chosen as delegate to represent the association at the state conference to adopt rules and regulations.

W. S. Dexter, of Kenosha, spoke on the value of Guernsey milk and told of his success in building up a fine herd in thirty years by the use of pure-bred Guernsey sires. To his mind one of the greatest boosts ever given the dairy industry of Wisconsin was when the first Guernsey cow was imported. He started with a herd of red, native cows, and says that he has always been able to find a market for his milk and cream in Chicago; a market for his young stock and that 75 per cent of his young sires have gone into low-testing herds. The future of the Guernsey breeding industry, he predicts, is very bright.

L. P. Martiny, of Chippewa Falls, and H. W. Griswold, of West Salem, spoke on the effect of the show ring on the Guernsey industry.

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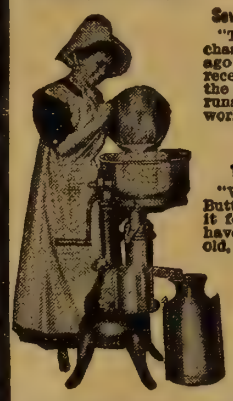

Seven Years Old—Runs Like New

"The Butterfly Separator we purchased of you about seven years ago is still doing fine work. I recently took it apart and cleaned the gears with coal oil. Now it runs like a new machine and works as well as ever."
H. S. Stonebraker,
Kokomo, Indiana.

Twelve-Year Old Girl Runs It

"We would not do without our Butterfly Separator or exchange it for all the other machines we have seen. Our little girl, 12 years old, runs it like a clock."
Mrs. P. E. Rude,
Ashland, Wis.

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"We made $78.61 worth of butter before we had the machine and in the same length of time, we made with the Butterfly Separator $140.00 worth of butter from the same number of cows."
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Point Aux Pius, Mich.

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"We don't see how we got along without the New Butterfly as long as we did. It runs lighter, is easier washed and kept clean than the higher priced machines in this neighborhood."
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New Butterfly Cream Separators are the only ones having the patented one-piece aluminum skimming device, very easy to clean. Light-running vertical shafts; frictionless pivot, ball-bearings bathed in oil, low down, self-draining milk tank; closed drip-proof and dust-proof bottom. Simplest and most sanitary machine on the market.

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Why not get one of these big labor-saving, money-making machines while you have the opportunity to do so on this liberal self-earning plan? Let us send you our big new illustrated Catalog Folder showing all the machines we make and quoting lowest factory prices and easy payment terms. We will also mail you a book of letters from owners telling how the New Butterfly is helping them make as high as $100 a year extra profit from their cows. Sending coupon does not obligate you in any way. Write today.

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Biggest Chance Anyone Ever Had to Make Extra Money with a Hatching Outfit

Learn how I paid one Belle City user $156.25, another $50.00, two others each $45.00 and many others from $33.00 down. Learn how thousands have made big hatches and cash profits with my 25 Times World's Champion Belle City Incubator—how my World Famous Belle City Brooder saves the chicks and raises the highest percentage—how you can make the most money out of poultry this year whether you go into it on a large or a small scale. Write to me today. Address Jim Rohan, Pres.

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We also furnish 180 Egg Incubator and 180 Chick Brooder both for only... $12

Wisconsins have hot water heat, double walls, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Made of finest, select, clear **CALIFORNIA REDWOOD**, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1916 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

WISCONSIN INCUBATOR COMPANY, Box 102 Racine, Wis.

There's a Reason for These PHENOMENAL HATCHES

"Have brought off two 100% hatches in my Progressive." W. H. Thomas, Oak Flat, Ark.

"Progressive Incubator hatches average close to 100%." O. P. Parrish, Rutledge, Mo.

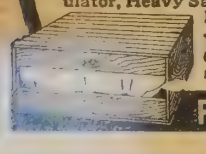
"Every single egg hatched that had a chick in it." Roy Green, Chattanooga, Tenn.

"Four fine hatches averaged from 90% to 100%." C. A. Walker, Charleston, Ill.

PROGRESSIVE INCUBATORS bring off Blue Ribbon Hatches like these because they are built from the best materials with latest improvements. Most consistent hatchers on the market. Biggest bargains.

$7.85 LOWEST PRICE YET FOR BIG 155 EGG INCUBATOR

GENUINE CALIFORNIA REDWOOD. Hundreds of dead air cells to protect eggs against sudden changes. Perfect Copper Hot Water Heating System, Double-disc Temperature Regulator, Heavy Safety Lamp, Double Doors, Strong Egg Tray, Reliable Egg Tester, Accurate Thermometer.



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Incubator alone $7.85—with Brooder $9.85. Frt. paid E. of Rockies. Shipped complete all ready to use—no extras. Money back with 8 per cent interest if not found as represented. ORDER TODAY.

PROGRESSIVE INCUBATOR CO. Box 128 Racine, Wis.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

COMMON POULTRY DISEASES.

In his address Farmers' Week, B. A. Beach, of the Wisconsin Station, discussed some of the common forms of poultry diseases. Fowl tuberculosis, he said, has existed in European countries for many years, but the disease was not sufficiently recognized in this country until 1900. All birds are susceptible, though the disease makes its worst ravages among domesticated birds such as chickens. Poultrymen and farmers sustain far greater loss from this than from any other disease, according to Mr. Beach. The presence of tuberculosis in the average flock means its ultimate annihilation. The disease is caused by a germ. These germs, in the process of growth within the body, interfere with the functions of some of the internal organs. Flocks become infected by the introduction of infected birds, also by the association with other flocks where there are diseased birds. The purchase of infected birds in butcher shops and the feeding of the trimmings and offal may also be the means of transmission. The first noticeable symptom is heavy loss in weight, notwithstanding the appetite may remain good. The condition is spoken of by poultrymen as "going light." Lameness is a frequent symptom. The comb and wattles become pale. In the advanced stage of the disease the birds become lifeless and sit around all day and move very little unless compelled to do so. A laboratory examination of a suspected bird is the only sure method of diagnosis. The germs usually attack the digestive cavity and nodules light in color and ranging in size from the size of a pinhead to a quarter are seen. The usual size is about that of a garden pea. The liver is usually affected and is quite apt to be enlarged. The spleen and intestines are affected and the lungs rarely show lesions. Mr. Beach states that two investigators at the North Dakota station diagnose the disease by injecting tuberculin into the wattle.

Discussing the prevention and control, Mr. Beach urges great care in purchasing birds. Inquire from whence they came and the conditions under which they were raised. Strive to prevent association as much as possible with neighboring flocks and never feed the offal of birds purchased for table use. All birds in flocks known to be infected should be slaughtered. Market only those which show no lesions. Infected birds together with the litter from the poultry house should be burned and the houses thoroughly sprayed with a five-per-cent solution of some good coal tar disinfectant. All runs should be plowed where possible and cropped. No birds should be kept on the premises for a year.

Mr. Beach says it is still a disputed question whether roup and chickenpox are the same disease. Most investigators, however, agree with Mr. Beach's idea that they are separate diseases. The diseases are widespread and outbreaks occur in certain communities every year, though they are usually several years apart. The mortality is not high and in most cases if the birds are properly cared for their usefulness is unimpaired. The cause is believed to be a germ. The disease is spread by introduction of birds from infected flocks and at times from attendants passing from one flock to another. The symptoms include at first a general disturbance, loss of appetite, and a desire to sit on the roost undisturbed. The next symptom is usually, in roup, watering of the eye, followed shortly by swelling of the eyelids and pus around the eyeball; also pus patches in the mouth known as canker, a nasal discharge, and in chicken pox the appearance of pox scabs on the comb and wattles. Recovery usually occurs in ten days to three weeks. Outbreaks have occurred where the mortality ran from 80 to 90 per cent. When roup or chicken pox makes its appearance in a flock the affected birds should be isolated at once. All the remaining birds, Mr. Beach advises, should have their heads dipped in a solution of permanganate of potash made by diluting a saturated solution one to four with

My Best Offer in 21 Years

Write Today for this offer which gives you the oldest and best known incubator at a rock bottom price. Get my guaranty which insures you a *successful* and *big profits* this year with

"Successful" Incubators and Brooders

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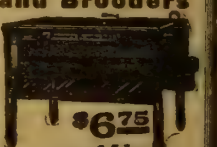

Poultry Lessons FREE to every buyer of a "Successful" Incubator or Brooder. A complete course—well worth $25—insures success—tells how to save on feed—get top-notch prices, etc.

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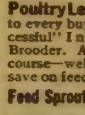

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Chicks That Live

Stop wasting eggs—stop losing chicks—with cheap incubators. A Queen costs but little more, and the **extra chicks** it will hatch, and that will live and grow, soon pay for it.

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Alfred Cramer, Morrison, Mo., says: "I have operated about ten other incubators and the Queen is superior to any of them." S. L. Todd, Green Forest, Ark., says: I have tried six other machines, high and low priced, and the Queen is the best incubator I ever saw." Book Free.

QUEEN INCUBATOR CO., 153 Bryan Ave., Lincoln, Neb.

"LAWN PARK" COOP

Saves Your Chicks

The Wire Park, which pulls out like a drawer, gives hen and chicks fresh grass, air and sunshine during the day; closes at night and in storms. This coop meets every demand; portable, with removable floor for easy cleaning; roomy, light, durable, sanitary.

PROOF Against Hawks, Rats Weasels, etc

Made of galvanized metal; repels vermin. Size, open, 18 in. x 24 in. x 48 in. Pays for itself in chicks and labor saved. Write today for free circulars, special prepaid offer and how to turn work into pleasure and profit.

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"The Profits In Poultry Keeping"

Big FREE 1916 Poultry Guide. Describes Cyphers Popular-priced Incubators, 3 styles—8 sizes, 20 years leadership. *Write today.*

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In business 17 years I have produced a wizard hatching machine, wonderful for its mechanical precision. Big production makes low prices. Simple and reliable, gets big hatches. Write today for my 1916 SPECIAL OFFER in DETROIT Incubators and Brooders. Send Now.

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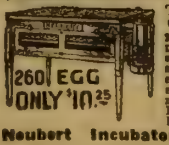
140 EGG Neubert Incubator $7.50



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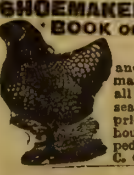
SHOEMAKER'S BOOK on POULTRY



and Almanac for 1916 has 200 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about Incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.

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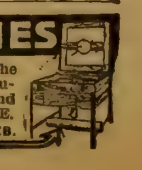

Beginners hatch like experts with the wonderful center-heated Rayo Incubator—hatch on one gallon of oil and one filling of tank. Book sent FREE.

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water. The head should be held under only a few seconds. Boric acid powder should be put into the eyes of affected birds, the pus patches and pox scabs scraped off, and the areas painted with tincture of iodine.

FROM A SUCCESSFUL POULTRY BREEDER.

To the Editor:—I noticed in your issue of the 20th of January that someone wanted information as to which breed of chickens they should start out with. Having had about twenty years' experience in chicken raising and having tried several breeds in that time I would like to be of any help I can to other people who have had less experience.

If possible, get a start with an all-around chicken. By this I mean a good table fowl as well as a good layer. After trying out a good many breeds I have concluded the Orpingtons are the best, with Rhode Island Reds a close second if not as good. Either the White, Black or Buff Orpingtons will give anyone complete satisfaction if they are given half a chance. Take the color that suits you best in this breed. All do equally well.

First of all, do not get a single chicken until you have a good, clean, sanitary chicken house to put them in. Also do not overcrowd. This is one of the fatal mistakes of a beginner. Every fall sell or kill all roosters and get new cockerels, thus introducing new blood into your flock every year.

This will insure you healthy birds and make a better laying bunch, on an average, than if you try to inbreed.

Kill all sick birds the minute you discover their condition. Have the house warm and properly ventilated. Clean at least once a week. Give grit, such as oystershell and charcoal, in winter. Feed cabbages and beets, also in cold weather try giving them alfalfa steamed with hot water, at least twice a week.

Now a word about your little chickens. In order to be a successful chicken man of course you must not lose the young chicks. I think the feed has a good deal to do with chickens dying when they are little. The reason why some people lose so many young chicks is because they start in to feed heavy grain of all kinds before the chicks' digestive organs are able to take care of it. Because of this one mistake many chicken raisers lose from 40 to 60 per cent of their little chickens before they are four weeks old. I have raised hundreds of little chickens without the loss of a single chick, except by accident. I feed no grain at all until they are from six weeks to two months old. Do not give the chicks any feed until they are at least twenty-four hours out of the shell. Forty-eight hours is still better. The yolk of the egg is already in the chick when it is hatched and it should be given time to digest the food provided by nature before any other food is taken in. If the chicks are fed before they are two days old it does more harm than good. For the first feed I give hard-boiled eggs and boiled potatoes. Be sure to boil the eggs hard and break them up. Feed the little potatoes which otherwise you would throw away, but if you have no little potatoes feed the big ones. It is cheap feed at that, and good too. If this plan of feeding is followed the chicks will have no bowel trouble and you will have the healthiest and fastest growing bunch of chicks you ever raised. The chicks should be kept on the ration of hard-boiled eggs and boiled potatoes for at least six weeks, then grain may be fed.

It is not a good plan to crowd the young chicks at night. If you have 100 chicks you should give them to at least five hens. More than twenty chicks to a hen is crowding. Give each hen a box of her own. After the chicks are about two months old the hens may be taken away. Each bunch of chicks will roost in the same box where they have been kept with the hen. Do not have any bottom in the boxes, for the simple reason that it invites lice and mites, as the box will surely get dirty and it will be impossible to keep them out. Move the box at least once a week onto clean ground. It is only necessary to move it a few feet each time. Up to four weeks old, I put a little straw in the boxes in order to keep the chicks off the ground. By moving the boxes once a week and sprinkling kerosene on the ground where they are moved from you will not be troubled with lice.

You must get your own experience. You cannot get it out of books. One man will tell you to do so and so, another will say that is no good, and each one claims to have made a success. The only way that I can see to be successful in the poultry business is to:

Keep the houses clean.
Do not crowd.
Do not inbreed.

But above all things, be kind to your poultry. Make every chicken a pet, if possible. A pat on the head and a caress or two as you go through the flock have a wonderful effect. I have seen men go through their flocks with water and feed and kick the chickens right and left. These people can never make a success with poultry. Walk carefully when you go through the flock. Never scare your chickens if you can keep from it, as it will surely keep down the egg record. They will repay any kindness shown them tenfold. An Old Subscriber.

SURVEY IN MARINETTE COUNTY.

To the Editor:—Completion of a farm survey of Marinette county shows the annual value of farm crops is over $7,500,000, having doubled since the year 1910.

The acreage improved land has been greatly extended, and the yield per acre has been brought up surprisingly through diversified and dairy farming. Over 300 new families from Illinois, Iowa and other middle western states have located on Marinette county lands each year for five years.

The county now has 400 silos, over 100 having been built during the past year. Twelve will be built by new settlers during 1916, and over 150 will be built in older settled localities of the county. Many farms which have had one silo for years are building a second one.

Since 1913 the number of cheese factories and creameries has been increased from seven to seventeen, and the output of all in existence in 1913 has been greatly increased. Seventeen new rural schools were built during the year 1915.

From present indications it is believed over 500 new families will take up homes on Marinette county lands during 1916. Of these from fifty to 100 families will be from southern Wisconsin. Howard I. Wood.

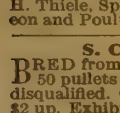
It saves time in packing school lunches to do them always in the same place, with the lunch napkin, parafine paper, sharp knife and paper napkins all close at hand.

Tells why chicks die

Write today for the poultry expert's valuable free book, "White Diarrhoea and How to Cure It." This book contains scientific facts on White Diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every batch. The valuable book is free. Send your name and address for it now. E. J. REEFER, 4482 Reefer Building, Kansas City, Mo.

POULTRY.

STRONG, healthy baby chicks or eggs for hatching, W. Wyandottes. Our White Wyandottes are utility birds and are not like some so-called utility stock that consists of birds culled from flocks raised for exhibition purposes only. If you want stock that will lay well you must breed them for that purpose. Come and see these birds, or write for catalog giving list of matings, records and prices. Pine Lake Poultry Farm, Chas. H. Benjamin, Mgr., Dept. 12, Hartland, Wis.



50 VARIETIES Chickens, Bronze White Holland, Bourbon Red Turkeys, Toulouse, Embden, African China Geese, Pekin, Rouen, Indian Runner, Muscovy Ducks, Guineas, Incubators and Brooders. Catalog 2c. THEO. FRANZ, Box 104, Mankato, Minn.

Breeding Stock From a Specialty Breeder

WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

S. C. R. I. REDS FOR SALE

BRED from prize winners. Ready for delivery. 50 pullets that will lay within a month. None disqualified. Good breeders $2.50 up. Cockerels $2 up. Exhibition birds at reasonable prices. Won 9 ribbons on 15 birds at the Wisconsin State Fair, 1915. Winnebago Poultry Yards, R.23,Omro,Wis.

ROSE COMB REDS

LARGE, dark ruby red, farm range birds. Score from 90 to 93¼. Several blue ribbon winners. I produce the big kind. A card will bring price list. Mrs. F. H. Burt Brodhead, Wisconsin

MONEY IN POULTRY AND SQUABS Start small. Grow BIG. Get winter eggs. Keep healthy fowls. Save your chicks. Our Big Book Tells How. Shows fowls in natural colors, how to feed for eggs, select best layers, plans for houses. FREE.

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58 BREEDS FINE pure-bred chickens, ducks, geese, turkeys, guineas, at low prices. America's finest poultry farm, 8000 prizes. Large catalog 4c. A. A. Ziemer, Box 15, Austin Minn.

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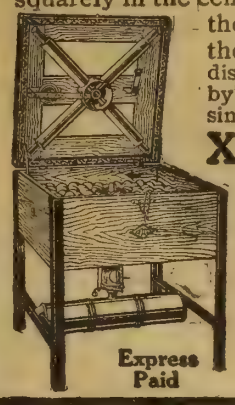
THE secret of X-Ray Record Hatches lies in the X-Ray Duplex Central Heating Plant. The lamp squarely in the center, beneath, sends the heat *up* where it strikes the X-Ray Vapor Generator. Here it takes up the proper amount of moisture and is evenly distributed to every corner of the hatching chamber by the X-Ray Duplex Heater. A perfectly simple, simply perfect heating plant. The



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have fifteen of these Big Special Features. *Get free book* and read all about the X-Ray. See what users say about it. You ought to know all about these *fifteen special features.* Sold direct from factory. No agents, no middlemen's profits. *Express paid* to practically all points. Shipment made same day order is received and no delays on account of slow freight. Send postal today for X-Ray book of Incubator and Brooder Facts No. 43.

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Ironclad TRADE MARK **Wins in the Two BIGGEST HATCHING Contests Ever Held**

Why take chances with untried machines when for only $10 we guarantee to deliver safely, all freight charges paid (East of Rockies), BOTH of these big prize winning machines fully equipped, set up ready for use? Why not own an IRONCLAD—the incubator that has for two years in succession won the greatest hatching contest ever held? In the last contest conducted by Missouri Valley Farmer and Nebraska Farm Journal, 2,000 Machines were entered including practically every make, style and price. With 140-egg Ironclad—the same machine we offer with Brooder freight paid, for only $10, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in the last contest.

140 EGG Ironclads are not covered with cheap tin or other thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the Natural color—you can see exactly what you are getting. Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering, galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boiler, self regulator, Tycos Thermometer, glass in door, set up complete ready for use and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this advertisement.

10-Year Guarantee

Both for $10 Freight Paid East of Rockies

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140 Chick Brooder

IRONCLAD INCUBATOR COMPANY, Box 113 **RACINE, WIS.**

INCUBATOR AND BROODER IN ONE MACHINE

Plenty of room for 100 chicks in hatcher and brooder. 2 machines complete in one, warmed by one lamp. Big success everywhere

2-IN-1 HATCHER SAVES 1-2 YOUR FUEL
No wood; made of sanitary rustless metal, asbestos and airspace insulation. Automatic regulation heat and moisture. Handy, simple. Children run it. Order from this ad. or write for booklet NOW—FREE.
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60 BREEDS Valuable Poultry Book Free—New 100-page 22nd Annual Edition. Fine pure bred chickens, ducks, geese and turkeys—Northern raised, hardy, beautiful. Fowls, Eggs and Incubators, low prices. America's greatest poultry farm. Write today for Free Book.
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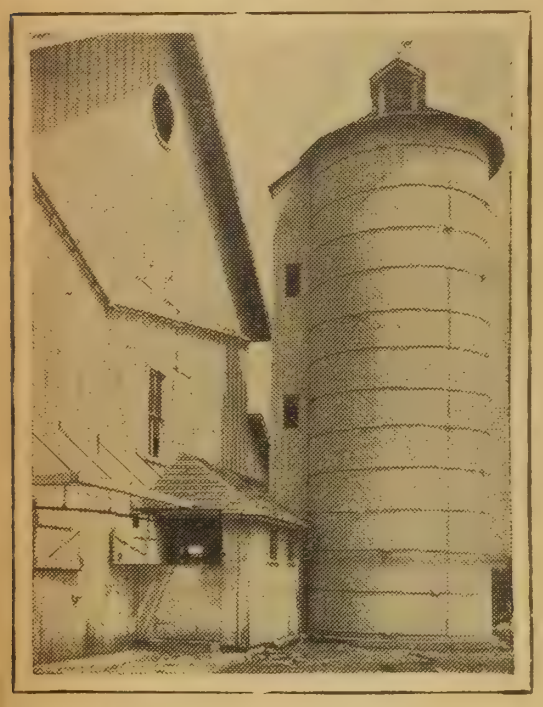
FOY'S BIG BOOK FREE
POULTRY AND SQUABS FOR PROFIT. An encyclopedia of poultry information. Written by a man who knows. Leading varieties of poultry and pigeons in natural colors. Low prices on fowls and eggs.
Frank Foy Poultry Farm, Box 82 Clinton, Iowa

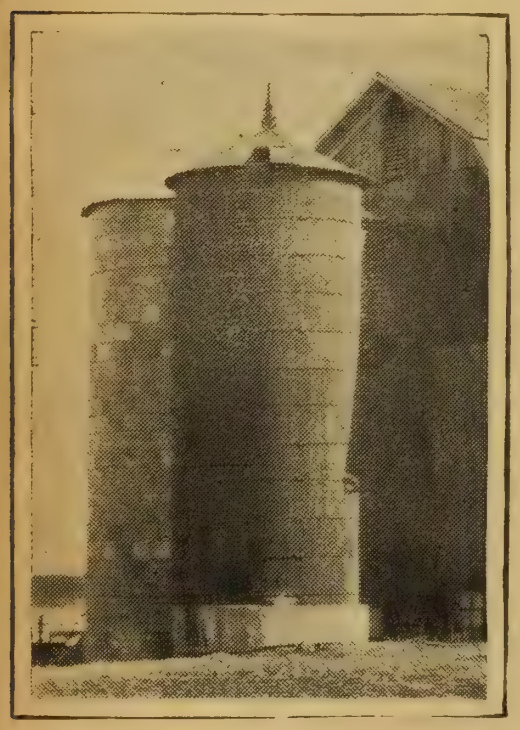
A Few Good Types of Silos.



A GOOD TYPE OF WOOD SILO.
Silage keeps well in all kinds of weather in a wood silo.

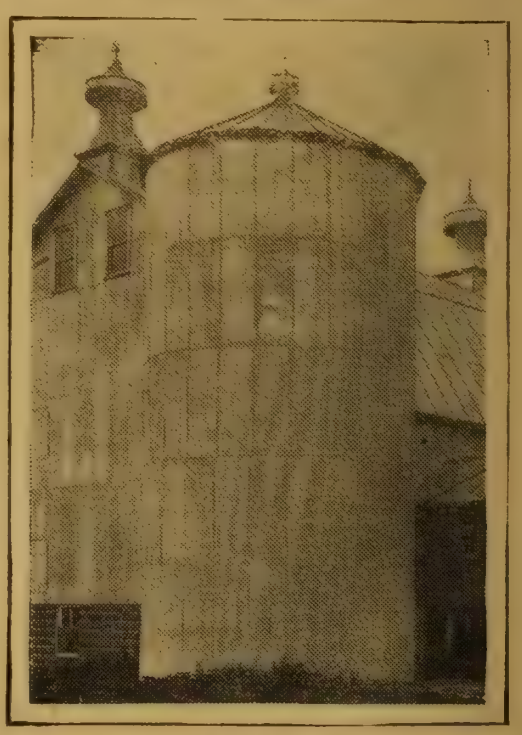
TWIN CLAY BLOCK SILOS.
A permanent character of silo which has been found practical.

SILOS ON BEST FARMS.
As a rule farmers who have good silos also have other good equipment.



TWO KINDS OF SILOS.
Two well-built silos, one of wood and the other of a clay block type.

THE HOOP SILO.
A Serviceable and practical silo of the wood construction type.



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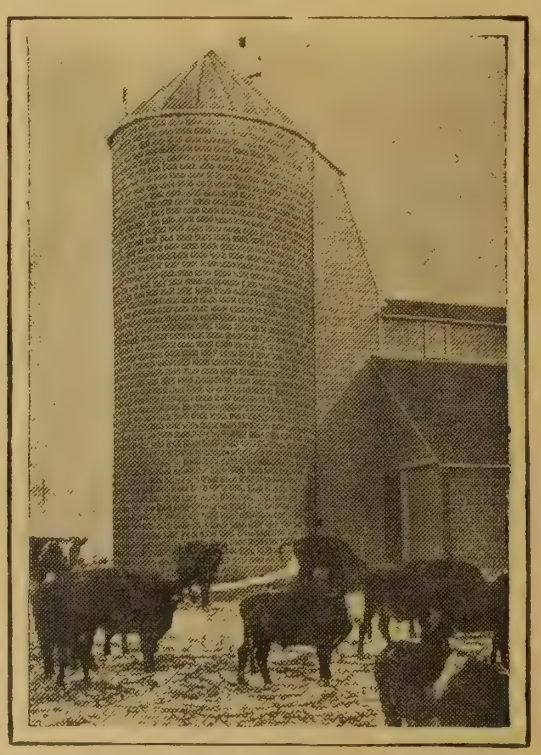
Practical use of cement is made in silo construction.

SURVEYING A GOOD JOB.
This farmer has just completed a good silo and is more than pleased with it.



LARGE BLOCK SILO.
This silo is equipped with extension top, making it bigger than it looks.

THE CONCRETE SILO.
A very substantial type of silo which is coming into general popularity.

BENEFITS OF COW TESTING.

President of Wisconsin Dairymen's Association Reviews Work of Wisconsin's First Cow-Testing Association.

BEFORE the assembled farmers and short course at Madison last week, Math Michels, president of the Wisconsin Dairymen's Association, told interesting cow-testing facts which should be known by every farmer-dairyman of this state. He said that the average farmer has been altogether too slow in applying modern methods to his business. Ten years ago the Wisconsin Dairymen's Association agreed to help dairymen by placing field men to supervise cow-testing work. Mr. Michels, of Fond du Lac county, was one of the very first to take advantage of the offer. He enlisted the aid of R. C. Searls, who is now chief cow-testing supervisor.

From the beginning of this first testing association many new and interesting things have been constantly developing. For instance, there was the one farmer who thought he knew exactly which were his best and which his poorest cows, but who could scarcely believe his own eyes when scales and tester proved to him that he had been sadly mistaken. He found that the cow which had been his pride tested far below his expectations and dried up early. The one which had been considered for the stockyards kept up her relatively small flow of milk for the entire season and two pounds of her milk were worth as much as three pounds from the barn pet.

At another time in the first year's work Mr. Searls was disappointed because one of the largest members had told him he was going to drop the work. By visiting this farmer it was found that he seemed unwilling to disclose the real reason for his decision. However, a little questioning finally drew from him the admission that none of his cows were paying for their board and that he did not want this to become common knowledge in the neighborhood. Mr. Searls tried to persuade him to finish the year's work but of no avail. This cow keeper told him that there was no use because the figures already at hand showed him that none of his cows were going to pay for their board. Next Mr. Searls tried to compare his business with that of a hotel owner who had twenty boarders, some of which were not going to pay their bills. Now he said, "Don't you think that the sooner he finds his bad paying men and gets rid of them the better it will be for his business?" The answer was, "Yes, but I will not sell any of my cows."

Other men of this first cow-testing association only a few weeks ago sold another car load lot of grade cows and heifers at fancy prices. This car was shipped into the state of Kansas.

Another member of this first cow-testing association, while his average production was good, had one cow that did exceptionally well, yielding over 500 pounds of fat for one year. This made his herd famous throughout this section, and any stock he may have to spare, even to grade bull calves, brings him a fancy price.

As much depends upon the feeder as does upon the feeds that are fed. Some may feed expensive rations with no better results than others obtain from much less expensive rations. In other words, the feeder and caretaker may mean as much as one-half the feed fed. Of course, first of all importance is a good foundation upon which to build your herd. This foundation laid, together with continued good judgment in selecting herd sires, it is comparatively easy to raise a well paying herd.

The results obtained from this work of testing cows, go much farther, have much more meaning and point out the way for more profitable and better dairying than is realized at the end of a few years' testing. It leads to higher and better ideals as is plainly shown today throughout Fond du Lac county, where the first cow testing was started. It leads to culling out cow boarders; it leads to the introduction of pure-bred sires; it leads to better care and more economical or better feeding. In fact, it gives the dairy farmer a solid, substantial foundation upon which to build his business. The result has been not alone the increased profits from the herds. Among the indirect results may be mentioned the impetus given to silo building, the general improvement of dairy barns, the introduction of new equipment, making not only for the comfort and convenience of the dairyman and his help, but also adding to the comfort and health of all his stock.

The lessons learned from this association work are of more value and felt even more today than ever before, continually leading the way to better producing herds; teaching the dairymen to become better judges in selecting, breeding and caring for dairy stock. It has been a leading factor in arousing interest in dairy experiments conducted by agricultural colleges and dairy literature in general. In fact, it has led directly in a number of cases to semi-official testing with records as high as 600 to 700 pounds of butter fat.

In just the same proportion as the dairy knowledge has been increasing has there been an increase in production of butter fat, in uniformity of herds, trueness to breed and better care of the cattle and the milk and cream produced. Besides the direct money received for the butter fat (which in a number of instances is running better than $100 per cow), there is an increase in the sale and price of live stock from year to year. As soon as a community gets a cow-testing association under way just so soon will it attract buyers of dairy stock from various parts of the country. A community with a cow testing association has the further advantage of co-operating in disposing of its cream and milk and by co-operative buying of feed. The dairy farmer will soon learn what feed he wants for best results and learn what and how to grow and put up such feeds as are wanted.

Mr. Michels spoke a few words regarding the methods employed in tabulating out the monthly results. The one-day test while there may be slight variations in individual cows, as a herd proves to run very close to the actual yield of butter fat produced for a month. He remembers when one month a creamery patron came with a statement showing that his average test at the creamery had been 4.1 per cent and that of all of his cows 3.9 per cent. Figuring on the total butter fat in each case he found a difference of only 2 per cent; on another patron whose test at the creamery had been 4.0 per cent and his cows all tested 4.0 and better showed by summing up the totals that at the creamery he received 264 pounds of fat and those made by the tester figured up 268 pounds fat. This was near enough for all practical purposes

To be pastor of a church, to successfully manage a farm or a creamery or take charge of a cow-testing association are by no means easy tasks. Each has its troubles and its tribulations. The tester who keeps himself informed, works with zeal and is practical in applying his knowledge, has a chance to do as much good as men in any other vocation. In his work the tester is called upon to advise in many things besides just merely the weighing and testing of milk. He is looked upon for advice as to the care of stock, feeds and feeding, health of stock, growing and caring for crops and in the building and rearranging of barns. No matter how much knowledge may be stored up in a man engaged in this work he will soon find the chance to exercise to his full capacity.

Mr. Michels believes that every cow-testing community should and will sooner or later join the State Farm Management Contest.

INTERESTING BEEF AND MILK RECORDS.

At the world's three leading beef cattle shows held in 1915, where all breeds, grades and cross-breds competed, viz., Smithfield, London, Palermo, Buenos Aires and Portland, Oregon, the grand championships were won by Short-horn steers. At the Western Live Stock Show held at Denver, Colorado, in 1916, the grand champion carload of fat steers were two-year-old Short-horns. A most interesting fact in connection with the above record of beef winnings is the Short-horn dairy record as revealed by the British Dairy Short-horn Society which placed twenty-eight Short-horn cows on the honor roll as a result of the 1915 tests. The yields ranging from 10,006 pounds of milk produced in 256 days to 13,000 pounds produced in 365 days.

These remarkable records are the more impressive because they represent the dual sources of productiveness, a combination long recognized as reaching a high value in the Short-horn.

AN AYRSHIRE COW WINS.

The Rock County Cow-Testing Association, recently organized, now can boast of eight cows which have made records of forty pounds of butter fat within a single month. An Ayrshire cow, owned by W. D. Austin, has the highest butter fat record, having given 918 pounds of milk for the month, with a 6 per cent test and fifty-five pounds of butter fat. The December report of this association shows the following leaders:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
H. H. Little Lady Mayflower No. 22, S. H.	8	11-6-15	1239	3.7	45.8
Janesville Pose No. 55, S. H.	6	11-23-15	1225	4.0	49.0
Lily Clay 4th, S. H.	7	10-5-15	987	4.8	47.3
W. D. Austin Corina Pender 2d, Ayrshire	5	11-22-15	918	6.0	55.0
E. P. Coon Blossom, G. H.	6	10-18-15	955	4.2	40.1
Lauer Bros. Bessie, G. H..	4	11-5-15	1230	3.4	41.8
Ralph Marquart Davy, G. S.H.	13	10-4-15	1071	4.6	49.2
J. B. Palmer Madge, G. D..	7	12-2-15	1314	3.4	44.6

Joseph Z. Feinberg, Official Tester.
H. M. Burdick, Secretary.

It costs less to buy a

DE LAVAL

than to buy experience

EACH year some 40,000 farmers, who have bought at one time or another "cheap" cream separators, discard their inferior, cream wasting machines and replace them with clean skimming De Lavals.

These men bought the "cheap" machines because they thought they were "good enough" or "just as good" and that by purchasing such machines they could save a little money. They actually would have been better off in most cases had they bought no separator; for they lost most of the money they spent for the "cheap" machines, besides all the cream these machines have failed to get out of the milk.

No one ever saved money using a "cheap" cream wasting separator or an old or half worn-out machine. No one ever got back the money spent for such a machine by continuing to use it. Those who bought "cheap" machines and got out of the difficulty best are the ones who quickly discovered their mistake, discarded the inferior machines and put in real cream separators—De Lavals.

There are nearly 2,000,000 farmers who have bought De Lavals, and every one of these had just as many opportunities to buy "cheap" separators as any one else. They did not do it and are now money ahead. They have avoided paying the high cost of experience, and their De Lavals have paid for themselves many times over. It always pays to buy a separator of proved, known superiority.

The nearest De Laval agent will be glad to let you see and try a De Laval on your own farm, without obligating you in any way. It is better to take advantage of this opportunity than to pay dearly for your own cream separator experience. If you don't know the local De Laval agent, simply address the nearest main office as given below.

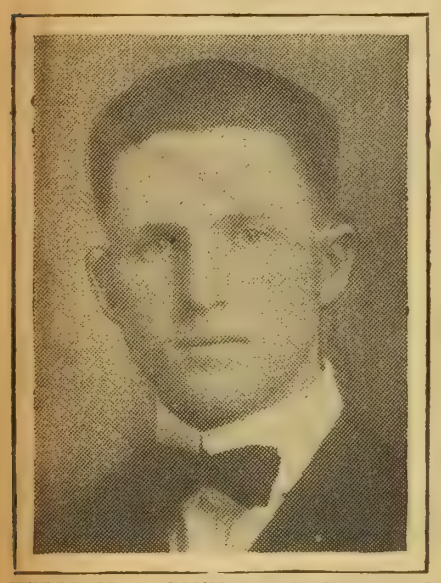
The De Laval Separator Co.

165 Broadway, New York | 29 E. Madison St., Chicago

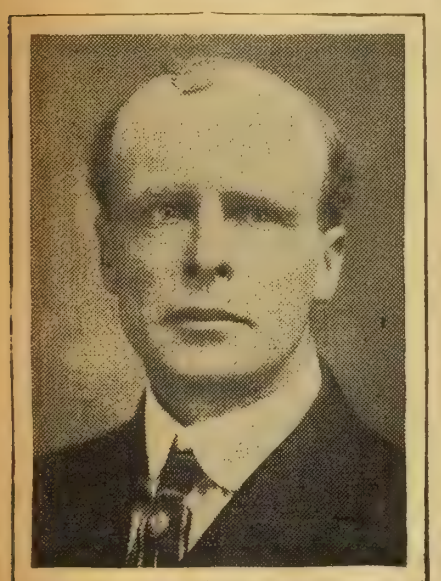
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

INTEREST IN BETTER LIVE STOCK

L. C. UNDERWOOD, SECRETARY WISCONSIN RED POLLED CLUB.



WILLIAM A. CONNELL, SECRETARY WISCONSIN ANGUS BREEDERS.



A. J. M'NAB, RETIRING PRES. WISCONSIN AYRSHIRE BREEDERS.

JOHN L. TORMEY, SECRETARY WISCONSIN SHORT-HORN BREEDERS.

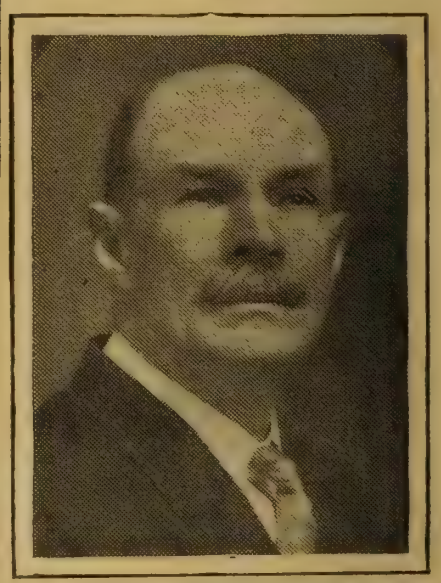
WISCONSIN FARMER FUTURITY CUP

For the past two years The Wisconsin Farmer has offered a silver loving cup as a trophy for the winner of the Poland China Futurity at the Wisconsin State Fair. The illustration shown herewith presents a picture of the cup which was won at the 1915 Wisconsin State Fair by J. D. McDonald, Poland China breeder, of North Bend, Wisconsin. The Wisconsin Farmer in offering this cup each year is trying to do its part in encouraging better live stock. Mr. M. Madson, of Dane county, won the cup the first year. A similar cup will be offered for the 1916

(Concluded on page 27.)

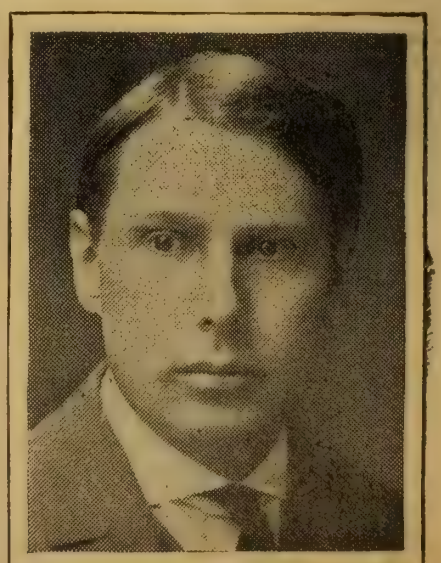
JOHN D. M'DONALD, WINNER WISCONSIN FARMER FUTURITY CUP.

F. E. FOX, RETIRING PRES. WESTERN GUERNSEY BREEDERS.



S. A. BAIRD, RETIRING PRES. WISCONSIN LIVE STOCK BREEDERS

W. K. CALDWELL, PRESIDENT WISCONSIN HORSE BREEDERS.



J. G. FULLER, SECRETARY WISCONSIN HORSE BREEDERS.

J. B. AHLERS, PRESIDENT WISCONSIN RED POLLED CATTLE CLUB.

FARMERS REVIEW PROGRESS.

(Continued from page 14.)

Bought pure seed for members.
Bought folding chairs for the schoolhouse.
Raised $250 by socials and parties.
Arranged for weekly moving picture show.
Gave farmers' picnic and field days.
Organized a men's chorus.
Gave club and township agricultural fair.
Arranged for lecture course.
Put on local talent plays and concerts.
Co-operative buying.
Arranged for farmers' institute.
Helped the county to get agricultural representative.
Helped to exterminate grasshoppers.
Arranged for better farming automobile tours.
Got out a club cook book.
Arranged plowing contest.
Arranged tractor demonstration.
Organized poultry club for young people.
Organized girls' sewing classes.
Arranged for exchange table and bulletin board.
Organized county country life conference.
Secured appropriation from school district for community work.
Increased use of state and national publications.
Organized central electric lighting plant for small village.
Assisted movement for new town hall.
Arranged for union graduation exercises of rural schools.

W. D. Frost, of Madison, and Ernest W. Warner assisted in directing the conference and round table discussions. Mr. Warner has been president of the conference for two years. He is an attorney and became interested in this work through the rural school at Mendota Beach, Dane county, where many modern ideas of rural education have been worked out.

It would not be possible to tell of all the interesting sessions of the home department under the general direction of Miss A. L. Marlatt, of the home economics department of the university. There were sewing and cooking demonstrations and discussions of home furnishings and equipment. The proper arrangement of kitchen furniture to save labor, modern power machines to do the washing, the use of electricity in the farm home and kitchen and other topics just as interesting were brought up.

Miss Elizabeth Kelley, well known throughout the state because of her extension work, dwelt upon the importance of better living and the relationship between the home and the farm. The old idea that the home on the farm is the last thing to consider and that the home environment of the wife and children is a matter that can wait, Miss Kelley said, is all wrong. The quicker the farmer realizes this fact the sooner he will understand why children want to leave the farm. Contented mothers and children, made possible by good homes, she said, should mean more to the farmer than his live stock and his crops. Miss Kelley deplored the situation where the farmer and his wife have labored hard for years to accumulate a competency to the neglect of their children. Although it is well to be thrifty and frugal and always put away something for the rainy day, she believes it a better policy to see that the children get the proper attention. Spend some of the savings for better homes, better equipment and for those things which make home a real home. In these days when bathrooms, electric lights, furnaces, etc., can be secured by the farmer at reasonable cost Miss Kelley believes that to secure these conveniences should be the ambition of every farmer as well as to secure better barns and better farm equipment.

The most interesting and largest meeting ever held by the Wisconsin Alfalfa Order was the annual meeting held last week at Madison. Many important business matters were considered and the old officers were reelected for another year, they being James B. Cheeseman, of Racine, president; Ex-Gov. W. D. Hoard, of Fort Atkinson, vice president, and L. F. Graber, of Madison, secretary and treasurer. Several splendid addresses on alfalfa were also given and the alfalfa motion pictures, showing the preparation of the seed bed, soiling, harrowing, seeding and harvesting proved very popular as well as instructive.

One of the interesting papers of the convention was the annual report of Mr. Graber, who outlined the experiences of members of the order last year with seed distributed by the order. Mr. Graber compiled this report from the answers from about 500 alfalfa growers. In three years the order has grown so that it now has 1,350 members and Mr. Graber pointed out that the order stands for the encouragement of alfalfa growing in Wisconsin, but it would rather not have anyone attempt to grow alfalfa if he is not prepared to give it a square deal. The greatest drawbacks to the extension of alfalfa growing in Wisconsin today are the failures of those who take a "chance" of getting a catch of alfalfa by seeding it any old way without regard to the requirements of the crop. As a result it was interesting to hear what 487 farmers who started alfalfa last year reported to Mr. Graber:

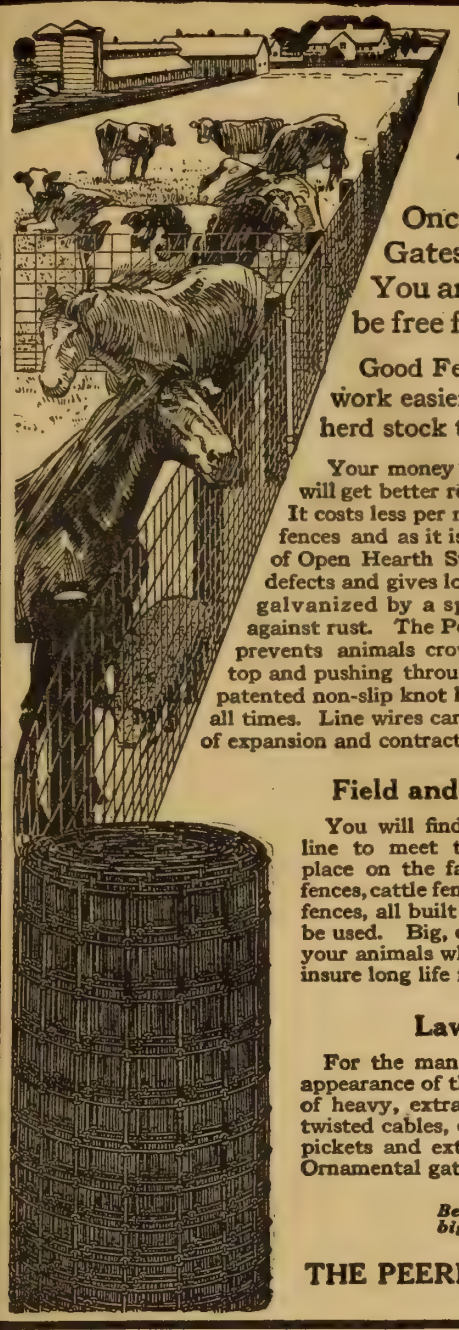
To date 487 reports have been received. The following shows the percentages of successes and failures throughout the state on this comprehensive test.

ALFALFA SEED DISTRIBUTED SPRING OF 1914.

Per cent of growers having good success	59
Per cent of growers having fair success	22
Total	81
Per cent of growers securing poor stands	7
Per cent of growers reporting failures	12
Total	19

Why 12 per cent failures and 7 per

(Concluded on page 45.)



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Around Your Farm And Quit Worrying

Once your fields are all enclosed with Peerless Fencing and Gates, your fence troubles are over for a long time to come. You are sure to find your animals where you want them and will be free from injuries caused by trying to get through a poor fence.

Good Fences and handy Gates increase the value of your farm, make the work easier and your assistants more contented. The hired man hates to herd stock that has broken out and mend old inefficient fences.

Your money will go farther and you will get better results with Peerless fence. It costs less per rod than other high grade fences and as it is made of the best grade of Open Hearth Steel Wire it is free from defects and gives long service. It is heavily galvanized by a special process insuring against rust. The Peerless one-piece crossbar prevents animals crowding it down from the top and pushing through at the bottom. The patented non-slip knot holds the wire in place at all times. Line wires carefully coiled to take care of expansion and contraction.

Field and Poultry Fences

You will find a style in the Peerless line to meet the requirements of any place on the farm. Hog fences, sheep fences, cattle fences, paddock and poultry fences, all built for the place they are to be used. Big, closely spaced wires keep your animals where you want them and insure long life for the fence.

Lawn Fences

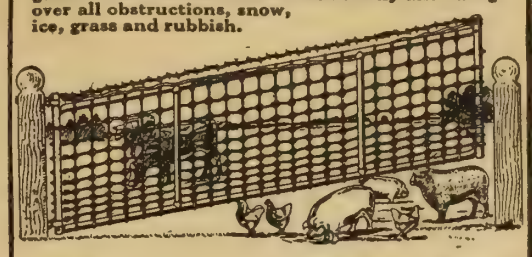
For the man who takes pride in the appearance of the front yard. All made of heavy, extra galvanized wire, extra twisted cables, extra deep crimps in the pickets and extra care in construction. Ornamental gates to match the fence.

Peerless Gates

Very few farmers can afford board gates in this age of high price of timber. Peerless steel gates are not only cheaper but they look better and are easier to handle. Heavy tubing frames, filled with special galvanized wire, insures long life. Every part of every Peerless gate is heavily galvanized to prevent rust.

The Peerless Self-Raising Gate

IS one of the best selling styles in our entire line. It is no longer necessary to lug around the old-fashioned sagging, dragging, heavy gates. The Peerless lifts automatically and swings over all obstructions, snow, ice, grass and rubbish.



In addition to being self-raising, it is extra heavy in both frame and filling. Big massive frames of 1⅝" tubing and close woven all No. 9 wire, close mesh filling, insures long life.

Every part heavily electro-galvanized—no paint to wash or wear off in a year or two.

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CLIMATE unsurpassed and soil adapted to raising grain, hay, corn and unlimited variety of farm and garden products. Great opportunities for dairymen, cattlemen and stock raisers. Large or small farms to suit purchasers. Prices of improved or unimproved lands cheap. All well watered. Fu description upon request to Lawrence J. Anderson. 1021 S. Fulton St., Salisbury, N. C.

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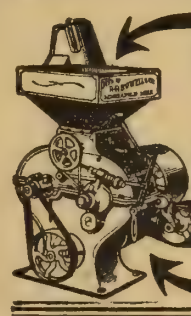

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TO an efficient Northern farmer with $1,000 we will pay $50 per month salary to operate and take care of a demonstration farm in the rich farming belt of southwest Mississippi, on a plan for him to own same when we have sold out our large holdings which will probably take a year or two. Write us for full information regarding this plan. Southland Investment Company, 533 Lathrop Bldg., Kansas City, Mo.

SOUTHERN FARMS, Mississippi, Arkansas, Tenn. Cheap land for corn, stock. gen. farming. Martin & Cole, 118 Madison Ave., Memphis, Tenn.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

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Daisy Cultivator Shields Insure Bigger Crops

Absolutely the best shields ever put on a cultivator. Pay for themselves half a dozen times in one season in saving time, labor and money. Mean more corn and better corn; more profits with less labor. Used on thousands of farms. Daisy Revolving Shields absolutely prevent clods falling on young corn. Enable you to plow corn one-fourth faster and do better work. **Fine dirt passes through the shields, covering weeds and grass—clods are thrown away from the corn.** Shields revolve like a wheel on the surface of the ground—don't pick up trash and cannot get out of adjustment. Write for folder describing Daisy Shields. Send your dealer's name and we will send a pair for your inspection. Don't put off investigating this modern shield—write today.

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Strong, hardy plants that sell regularly at 100 for $1.00.

JAPANESE ROSE BUSHES
Five for 10cts.

The Wonder of the World

Rose Bushes with roses on them in 8 weeks from the time the seed was planted. It may not seem possible but we **Guarantee** it to be so. They will **BLOOM EVERY TEN WEEKS** Winter or Summer, and when 3 years old will have 5 or 6 hundred roses on each bush. **Will grow** in the house in the winter as well as in the ground in summer. **Roses All The Year Around.** Package of seed with our guarantee by mail, **only Ten Cents.**

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Seed Low Prices. Big Yields, with sure profit if you plant our choice matured dried selected seed. Varieties suited for every section. Absolutely guaranteed in every way. Tested germination 95%. We know it is right, but it must satisfy you. Test it thoroughly and if not pleased return it at our expense. We have been developing improved seed corn for past 20 years. Our valuable Profit-sharing exclusive Field and Grass Seed Guide with samples you need **Free.** AMERICAN MUTUAL SEED COMPANY, Dept. 782, 43rd and Robey St., Chicago, Ill.

SEEDS 20 Packages High Grade Flower Seeds --- 5 Bulbs **10c**
PINE TREE NURSERY - PEMAQUID, MAINE

Fruit and Garden

COST OF SPRAYS.

Orchardists in attendance at the Farm and Home course at Madison who heard R. H. Roberts, of the experiment station, on "Orchard Spraying" were given a splendid insight into the cost of such spraying as well as its value.

Mr. Roberts said that experiments have proved that the cost of spraying is about 1 cent for each year of the age of the tree. For example, it would cost 10 cents to spray a tree ten years old; 15 cents for one fifteen years old, etc. Of course, these prices might vary, but this was estimated to be about the average cost per tree per year. The larger the yield the lower the cost per bushel, and other experiments he said showed that in 1915 it cost on the experimental plots about 4 to 7 cents per bushel of fruit produced for spraying.

As the farmers and orchardists who sprayed received much more for their product than the orchardist who did not spray the cost of the operation was entirely justified. Sprayed trees on the orchards under investigation produced apples that brought from $1 to $1.50 per bushel while those unsprayed produced fruit that sold for 50 to 75 cents.

Mr. Wilson dwelt at length on the insects and diseases confronting the orchard owner and pointed out which sprays were needed to overcome these difficulties. He also explained the mixing of sprays and said that there were no Wisconsin apples on the local markets at this season because of lack of spraying, the stock not possessing of keeping qualities that are needed to carry the fruit through until the spring.

The following he suggested as a proper apple spraying program which could be followed at reasonable expense and to the benefit of the orchardists in Wisconsin:

APPLES.

1. Dormant Sprays.
   Scale.—Use commercial lime sulphur, one gallon to ten gallons of water before growth starts.
   Aphis.—Use nicotine sulphate (Black Leaf 40) one pint to 100 gallons of water when buds first show green. Add three pounds soap to each 100 gallons.
   Note.—When both scale and aphis are present, delay the scale spray and add the nicotine to the lime sulphur without soap.
2. Growing Season Sprays.
   A. "Pink" Spray for Scab and Curculio. Use 4-4-50 Bordeaux or lime sulphur, five quarts to fifty gallons in combination with arsenate of lead, three pounds (paste) to fifty gallons or one and one-half pounds (powder) to fifty gallons when the flowers first separate in the clusters.
   B. "Calyx" or First Moth Spray for Scab and Codling Moth.—Use lime sulphur and arsenate as in A when petals fall, and before calyx cups close, three to seven days.
   C. Second Moth Spray.—Lime sulphur and arsenate applied from ten days to two weeks later than B.
   D. Summer Spray.—Use Bordeaux, 4-4-50 and arsenate about July 20th to 25th, about a week after second brood codling moth eggs appear.
   Note.—Avoid using Bordeaux during wet, rainy weather as this condition favors Bordeaux injury to fruit and foliage. Do not use lime-sulphur during dry summer weather when temperatures are high. Also do not mix Bordeaux and Black Leaf.

CHERRIES.

1. Farm Orchard.
   Spray cherries when spraying apples.
2. Commercial Orchard.
   Bordeaux is used on cherries when spraying for Shot Hole fungus.
   Usual practice is as follows:
   1. Bordeaux and arsenate just before blossoms open.
   2. Same as above when calyx (shuck) falls.
   3. Two to three weeks later.
   4. As soon as possible after fruit is picked.

PLUMS.

Spray when spraying apples, also three to four weeks before fruit ripens.

GRAFTING WAX FOR TOPWORKING.

A friend wants to know how to make a good grafting wax which is just right for outdoor work in either warm or cold weather.

Here is a receipt in general use and always recommended: Rosin, four parts; beeswax, two parts; tallow, one part. You may make a large quantity or a small quantity, just as you wish, but be exact, weigh out the materials.

First, put the rosin in the dish and let it melt, then add the beeswax and tallow. While the melting proceeds stir thoroughly that all may be well mixed. If you have a good, hot fire it will be well done fifteen minutes after adding the last ingredients.

Have a pan ready with some cold water and turn into it enough of the mixture to make a good handful. Grease your hands while it is cooling and in a minute (you must not leave it to get too hard) take out of water and pull—just as though it were taffy. It will turn to a beautiful yellow, but don't eat it if it does look good. Make it into sticks four inches long and one inch thick.

Proceed with the rest in the same way, cooling each time as much as you can pull handily until it is all "sticked."

Of course, the sticks should be put away in some cool place. This wax when used will not crack by cold; neither will it melt and run when the sun shines warm.

If you use it in very cold weather you will have to manage to keep the sticks warm so that it will spread. No better way than to keep it in a pan of moderately warm water.

And, on the other hand, if you use it on a very warm day do the other thing—keep it in cool water.

THE POMONA CURRANT.

Now and then we find some new thing which makes good and fully justifiies its introduction and from observation and experience we conclude that the Pomona currant belongs in the select list of fit survivors. Tested alongside a half dozen leading varieties we give it the blue ribbon.

What the public demands in a currant is not only size and quality but vigor of bush also. The Fay and the old Cherry currant are both first class in many respects, but when it comes to making vigorous, strong bushes they fail. And really what is the use of size and quality in a variety if you never can get a bush big enough to bear a crop? Right here the Pomona comes in strong, for it is as vigorous as the old red Dutch or the Victoria.

The Pomona is a red variety and when grown with half a chance it gives long, full clusters with individual berries as large as the largest. We have often been impressed with the big fruit of the Cherry, but the Pomona equals it.

One advantage of the Pomona is the rapidity with which it may be propagated. A good, strong root planted in rich soil will at once throw up many sprouts, and, as every gardener knows, if you can only get sprouts you can multiply a variety indefinitely. It may be called an early sort from the fact that it ripens its wood and drops its

DEPENDABLE SEED CORN FOR WISCONSIN

OPATA PLUM:—New Hansen plum, ripens July 15th. Bears heavy next year after planting. Hardiest of all

WE have been in the seed and nursery business in the Northwest for fifty years and you can depend on strictly first-class seed and trees from us. We have already received orders from Wisconsin this year for a good many thousand bushels of our seed corn, shipment has been made to numerous customers and they are satisfied. We can furnish you with such varieties as WISCONSIN NO. 12 or GOLDEN GLOW, MINNESOTA NO. 13, NORTH DAKOTA WHITE DENT and other varieties suitable to your state. Can furnish you 1914 or 1915 crop whichever you prefer. The 160-page, 1916 catalog giving all information is ready. It's free.

Gurney Seed and Nursery Company

Box 112 Yankton, S. Dakota

SEED CORN

Testing 95%. A limited amount of genuine 1915 **Godard's Silver King** grown here (fifteen miles from Minn. line) and picked before the frost, now drying in our new brick seed house. Also Choice Silver King grown by others. Have drying also the following varieties of fancy seed ears: **Minnesota, No. 13; Wimple's Yellow Dent; N. W. Dent.** We also have several lots of fancy 1914 seed corn. If preferred, **we can furnish our Minnesota patrons with choice seed grown in the latitude of Northfield, Minn.** We give you all the time you need after receiving the seed to test it and satisfy yourself of its high quality, and will promptly refund your money if dissatisfied. Write today for our "Guaranteed Seed-Corn" prices and descriptions.

THE ADAMS SEED COMPANY **BOX 50, DECORAH, IOWA**

POUNDER'S CORN KING HARROW

is self-clearing, self-adjusting—does 2 to 3 times the work, and outwears any 2 ordinary Harrows. 25 years satisfaction; 100,000 of these harrows in use. **Pounder's Iron-Clad GUARANTEE** is your safeguard. If your dealer don't sell *Pounder Harrows*, we ship one direct, lowest price, freight prepaid. Write for Catalogue.

G. H. Pounder, 7 E St. Ft. Atkinson, Wis.

Harrow Perfection At Last, Ask Any User.

"More Potatoes"

From ground planted secured by use of The **KEYSTONE POTATO PLANTER** than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for **CATALOG**, price, etc.

A. J. PLATT, MFR.
BOX Y STERLING, ILL.

Free for Testing

A pair of mated EVERBEARING STRAWBERRY PLANTS FREE if you will report us to your success with them. Will bear loads of big, red berries from June to November. We have counted 480 berries, blossoms and buds on a single plant. A postal will bring the plants, also enough seed of the new CEREAL FETERITA to plant a rod square of ground. Also a pkt. of perennial ORIENTAL POPPY seed. Send 10 cts for mailing expense or not, as you please. Write today and get acquainted with

THE GARDNER NURSERY COMPANY
Box 730 . Osage, Iowa.

CONDON'S NEW LIGHTNING RADISH

Finest Early Radish in Existence. **Ready to eat in 14 days.** To introduce Our Northern Grown "Sure Crop" Live Seeds we will mail you **Big Package "Condon's New Lightning Radish"** and our Mammoth Illustrated 1916 Garden and Farm Guide. Send name and address on postal today sure. **FREE**

Condon Bros., Seedsmen, Rock River Valley Seed Farm, Box 588, Rockford, Ill.

SEED CORN Disco Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

Buy quick! Save money—be sure of getting good seed. We fortunately carried over a few thousand bushels of choice seed from 1914 season, now offered at bargain prices. Write now for price list. Order early and get good seed.

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EARLY varieties grown from northern seed for No. Iowa, Ill., Neb., So. Dak., So. Minn., Wis. Matured on stalk, sound, dry, high test, all grows, outyields old corn. Catalog and samples free.

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ADAPTED to Central and Northern Wisconsin. Grown 50 miles northwest from St. Paul. Germination guaranteed. Hardy alfalfa, clover and grass seeds. John Henderson, Rt. 1, Cokato, Minnesota.

BULBS 50 High Grade Flowering Bulbs. Gloxinia, Begonia, Oxalis, Gladiolus, other kinds. Also Asparagus fern all postpaid for **25c**

PINE TREE NURSERY PEMAQUID, MAINE

Here's the Secret of Good Plowing

Note the long, sweeping lines on this Janesville plow bottom. Note how the long point runs back and out almost to the extreme to get an easy slicing cut under the furrow. And how the moldboard turns over in a long, flowing curve which curls the furrow as neatly as if molded with a trowel. The shape of the plow is long and narrow. It follows the lines of least resistance from the share point to the heel of the moldboard. It does not raise the furrow, nor kink the soil. Instead, the furrow flows in a long, auger twist that lightens the pull on the team. The moldboard buries all the trash and scours clean as a plate all around the field.

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This is the plow that won the championship at the big plowing matches year after year. It turned over the neatest looking fields—buried all the trash and stubble—left the depth and width of the furrows uniform—broke up the ground thoroughly. The excellent work that Janesville plows did in these fields shows the kind of work they can do in yours.

Make One Plow Do All Your Plowing

This Janesville S. & S. bottom will turn any soil you farm—sod, corn land, sticky loam or heavy clay. It takes the place of a sod breaker—it's just what you need as you rotate your crops year after year—you can make one bottom do all your plowing in any field with least work for yourself and the team.

This bottom also works perfectly on tractor plows. Leaves the furrow uniform whether going one mile an hour or four. We can supply Janesville S. & S. bottoms in gangs of 2 and 3 plows for tractor plowing. Two or three bottoms in gang plows—also in single bottom walking and riding plows

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Read how you can take hard work out of plowing for yourself and team. Also ask about Janesville Harrows, Disc Cultivators and Corn Planters.

We have been building farm machinery for 57 years. Write today.

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Free Seed of Earliest Tomato

JACK ROSE, earliest of all smooth, red tomatoes. Get free package of this seed by sending us 2c stamp to pay postage on beautifully illustrated 1916 catalog. For best results and highest quality plant Jung's Tested Farm, Garden and Flower Seeds.

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A pleasant surprise. Write today for Bargain Catalog.

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The greatest forage plant that grows. Superior to all as a fertilizer. Equal to Alfalfa for hay. Excels for pasture. Builds up worn-out soil quickly and produces immense crops, worth from $50 to $125 per acre. Easy to start, grows everywhere, on all soils. Don't delay writing for our Big 100-page free catalog and circular giving full particulars. We can save you money on best tested, guaranteed, scarified seed. Sample Free. Write today.

A. A. BERRY SEED CO., BOX 934 CLARINDA, IOWA

leaves much earlier than red Dutch

We would certainly drop all the old sorts and plant chiefly of the Pomona. We do not claim to have tested all the newly introduced varieties and it may be, as claimed, that some of them are vastly superior. But we shall prefer to wait before believing it, and, posing as a man from Missouri, ask "to be shown."

THE COTTONTAIL NUISANCE.

Nuisance is the word which best describes the rabbit. In summer he is a pleasant and lively feature of the landscape, and in winter he is an occasionally welcome addition to the bill of fare, but, as a rule, he is a nuisance the year around. He breeds so abundantly that all the efforts of his many enemies can scarcely keep his numbers within bounds.

The danger from the cottontails comes from the fact that they are vegetable eaters, depending upon succulent foods like clover, alfalfa, apples, cabbage, etc. Then when snow comes and these favorites are hidden, as a substitute menu apple bark is acceptable. Big trees are in no danger, for he can only use the small twigs and branches. The bark for him must be tender, and the strength of his mouth will never permit him to gnaw trees over two inches in diameter.

Where it is desired to protect young orchards, a fence of chicken wire thirty inches high will do it, provided the bottom of the wire is set four inches in the earth so that the game cannot dig under it. Where only a few trees are to be protected cylinders of common window screen placed about trees will do it. The cylinder should be so fastened that the rabbits cannot push it up. There are a dozen other methods of protection, like wood veneer, cornstalks, newspapers, etc.

One common way of handling bunny is to set the boy and the shotgun after him. Then there are various ways of trapping and poisoning. The figure 4 trap baited with corn is a very sure way of taking one at a time. But this works best if the trap is placed near a pile of fresh apple brush. The limbs bring the rabbits together to gnaw fresh bark and to get the shelter of the pile, and the chances to get a fresh ear of corn to nibble makes a temptation they cannot resist.

A very successful trap used in Oklahoma is made as follows: Get a 6x12-inch sewer tile tee and set the long end downward so deep that the six-inch opening at the side is below the surface. Then take a length or two of six-inch tile and attach them horizontally with the side opening. Cover the joints with paper or soil to keep out all light. Provide a heavy but easily removable cover for the top of the long tile. Let the end which opens on the surface be protected with brush or stones so as to make the entrance look natural and inviting to bunny. He will at once adopt it as a wise provision of nature for his safety and make it his den and refuge in time of danger. Your dog will know when the game is at home, and while he is smelling at the door and stands ready to nab bunny as he tries to escape, you have only to lift the cover off the standing tile, reach in your hand and pull Mr. Rabbit out. Even if you do not care to catch the game alive, but only wish to kill them as fast as possible, make these traps and place poison inside them where it will be out of reach of birds and domestic animals.

In some states the laws forbid the use of poison, but if you are free to use it, poisoned oats will kill many of them. Mix an ounce of powdered strychnine, an ounce of baking soda, three tablespoonfuls of flour and a small amount of sugar. Put in enough cold water to make a creamy paste, and apply this paste to twelve quarts of good, clean oats. Drop this along the trails or where you know they are often found. You should use this with care, remembering that it will be fatal to birds or stock if they get it.

In a snowy winter, such as this is proving to be, it will save much damage to give prompt attention to the rabbit nuisance.

WISCONSIN FARMER FUTURITY CUP.

(Continued from page 24.)

futurity. Mr. McDonald has animals of good type, large and of a good quality. He has exhibited at the Minnesota State Fair, the Northwestern Wisconsin State Fair at Chippewa Falls, Interstate Fair at La Crosse, and at a number of the county fairs in Wisconsin. In 1914 he won over one-fourth of the prize money in the Poland China classes at the Wisconsin State Fair, and in 1916 he won $566 out of a total of $1,586 offered in the same class. Mr. McDonald has a herd of about 200.

Protection Value of Evergreen Windbreak.

THE evergreen windbreak must not be considered merely as a farm ornament. While it is the most ornamental thing which can be added to a good farm property, and has the advantage of remaining ornamental the year around, its greatest value is its protection. Stockmen who have been without a good evergreen windbreak and then gotten one, are surprised at the difference it makes in stock in bad winter weather. We have known many instances where stockmen have put in evergreens to protect from the north and west and have been so pleased that later they have put in another, simply to protect from the few days of chill south winds which we get sometimes in the winter. The south wind doesn't come often, but it carries a damp chill which is very depressing to stock. The food which is fed to stock in winter gives animal heat which helps the stock to winter through. A good feeding shed, of course, helps and a well-grown windbreak will make such a change in the comfort and growth of stock in the worst winter weather that the stock and the owner will be surprised. We have known several farmers who have sold their properties for a considerable advance just because they had a good windbreak. One banker in Iowa builds windbreaks first on his farm land and puts in his building equipment afterwards. He states that he always adds $2,000 to the selling price of every quarter section, where the buildings are properly protected by a good windbreak. Earl Ferris, 265 Bridge St., Hampton, Iowa, is an evergreen specialist with something like 2,000,000 evergreen trees on hand in his own nursery. He has superintended the transplanting and root-pruning of these evergreens and supplies only trees with good roots and stocky trunks. These trees will grow, and they will grow uniformly and make a nice, even row of everygreens. Write him for low prices which he is making now. Please mention this paper in your letter. See page 26.—Adv.

Three Reliable Brands Of Seeds

Dependable Quality And Reasonable Price Are Assured By The High Reputation Of The Firm Name

NORTHRUP, KING & CO.

JIM SAW THE DIFFERENCE

WHEN Jim Hubbard was planning his spring work a few weeks ago, he came to the conclusion that some of his past methods had been wrong. His crops last season were only fair; some of them, in fact, were mighty poor. His nearest neighbor, Fred Baker, had cut extra heavy crops of grain. Fred's hay crop, too, from the lower meadow, was far ahead of Jim's, which lay right next to it. The soil on both farms was equally fertile and Jim considered himself just as good a farmer as Fred. It was no wonder that Jim was puzzled.

A few days later, Fred, on the way to town in his big "Six," stopped at the Hubbard home. The conversation naturally turned to crops.

"Why is it that your crops are so much better than mine?" asked Jim. "Well, I don't know," replied Fred, "unless it's because I'm more particular about the seed I sow than you are. You seem to think that the purchase of seed is a useless expense and use 'most anything you happen to have. I believe good seed is the secret of my success and always buy the best I can get. I have been using Northrup, King's seeds for over twenty years, and father used them before me. Year in and year out, you can absolutely depend upon the quality of all their brands. I'm on my way now to Thompson's store to order my supply.

"They phoned me yesterday that their box of packet seeds was in and some field seeds, too. If they don't have in stock any seeds I select from the catalogue, they will order them for me. By the way, Jim, have you got their seed catalogue? It's a dandy. You ought to send for it. I'd lend you mine, but we can't spare it. Mother and the children are using it now to plan the garden."

"All right, Fred, I'll take your advice and write today. I'm going to plant seeds of those brands you mentioned, too. Seeing is believing, and I know the fine crops they gave you. Thanks for the suggestion."

32nd Annual Seed Catalogue Sent On Request.

NORTHRUP, KING & CO., Seedsmen

Hennepin Ave. at First St. MINNEAPOLIS, MINN.

SEEDS

"Purity Brands" have always been the highest qualities obtainable each year. Hundreds of farmers will not experiment with any other. All seeds sold on absolute guarantee of **purity** and **germination**—being subject to your test and inspection and money refunded if not better than we represent. **Timothy, Clovers, Alfalfa, Mixed Timothy and Alsike, Blue Grass, Millets, Seed Corn, Seed Oats, Seed Flax, Seed Grains,** etc. Samples and prices free on request.

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6 Apple Trees Four to Six Feet Tall 50c

2 early; 2 Winter; 2 Crabapple. Hardy tested varieties—Kellogg's Hardy Northern Grown trees are **backed by 62 years in the nursery business.** Send today for this bargain collection, also our 1916 Price List of trees, shrubs and small fruit plants. It is **FREE**

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SEED CORN $3.00 PER BU.

Corn Crop Short. Order Early. Our Supply Limited. High germination guaranteed. Varieties true to name. Our 1915 Seed Crop positively not touched by frost. Reid's Yellow Dent, Iowa Mammoth Yellow, Early Iowa Dent, Pride of the North, Iowa Gold Mine, Minnesota No. 13, Silver King, Boone County White, Mammoth White Dent, Bloody Butcher and Early Flint. State number of bushels wanted. Orders filled in rotation. This price holds good in ten-bushel lots, bags free. Make up your order now, direct from this ad. 1916 Seed Book and Planting Guide Free.

GALLOWAY BROS. & COMPANY
33 Galloway Station Waterloo, Iowa

10 APPLE TREES 10

2 TO 4 feet $1. Two each Dudley, Lowland, Snow, Delicious and Golden Russet. Get our fine catalog. It's free. **Wisconsin Nurseries, Box 88, Union Grove, Wisconsin.**

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"PROGRESSIVE" Best Fall-Bearer; and Standard June sorts. Also Raspberry, Blackberry, Currant and Grape Plants. Catalog **free.** **C. E. WHITTEN, Box 17, Bridgeman, Mich.**

OLD SEED CORN—Finely selected home grown Minnesota No. 13, raised and cured for seed 1914. Best seed corn obtainable. Also five varieties 1915 corn, thoroughly tested. Write for prices. Christinelund Farm, Dassel, Minnesota.

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159 24th St.
Centerville, Iowa

From Iowa

SOLVING THE HEATING PROBLEM.

To the Editor:—There was a discussion in our neighborhood as to which article of household equipment contributes the most to the comfort of the modern home and all its inmates and the man who argued that it is nothing more nor less than the little radiator in the corner won the debate and took the neighborhood prize for the best talk on a commonplace article.

There are twenty men and twenty women in our club and nearly every single one of them championed a different article, ranging from the parlor piano to the little dollar machine the women use to grind apples and mincemeat. But only one of the bunch thought of the radiator, and he was given the merry laugh at first. They made it unanimous, though, when he got through and the vote was taken on which was the most convincing talk.

I'm not saying that a radiator is the handiest thing a man can have in his house. I'm just telling you what this other man said and if you had been there and heard it it's a cinch that you would have voted just like the rest of us thirty-nine people did. And really, it's wonderful, when you come to think of it, what a lot of domestic comfort there is in these radiators and what goes with them.

He told about the time when he was a boy and it seemed as though the whole burden of living was bound up in the job of eternally cutting wood and building fires and keeping them going. That made a hit with me and I guess most of the rest of the bunch were up against the wood fire stunt when they were small, the way they appreciated what he said. We had a stove in the kitchen, another in the dining room, another in the parlor, a big fireplace in the downstairs bedroom and three bedroom stoves upstairs. We didn't keep them all going all the time, but they were all going some of the time and some of them all the time. In cold weather it was a case of fix the fire, fix the fire, fix the fire, until I used to secretly curse the man who discovered fire. And every stove had to be continually tended, not only to keep the fire going but to keep it clean. And when it was warm and we didn't need fires we had to cut wood for the next winter and pile it up in the big woodshed. And then every spring we had to take down all the stoves and store them away in the barn and every fall we had to get them out again and clean them up and black them and set them up in their places. Altogether, looking back on it now, a stove looms up as veriest bane of my early existence and that of my father and mother and brothers as well.

Now look how the thing is done. Down in our basement there is a boiler not much bigger than our old round, sheet iron parlor stove. In the morning I shake it down a bit and put in a few shovels of coal and in the evening the same. Once or twice a year a boy carries out the ashes and that is all there is to it from one year's end to another. The little regulator on the boiler automatically opens the door when the heat goes below a certain point and it closes it again when it begins to get too warm. From the time we start the fire in the fall until we let it go out in the spring the whole of the house is maintained at the even temperature we desire, say 75 degrees, no matter how cold or how warm the day may be outdoors. We pay a very moderate coal bill. The boiler downstairs and the little radiator in the corner do the rest.

The modern heating companies have simply brought steam and water heating to perfection, for all kinds of homes, no matter how small. The radiators take up so little room as to be no consequence. The new designs are an ornament to a room, rather than otherwise. They do not generate constant dirt like a stove and they do not spout dust like the registers of a hot-air furnace. They can be painted or gilded every year to match the furniture or wall paper and they are always doing business with the least possible attention. My wife never worries lest the fire go out and the children take cold. The house is always the same, no matter what time of the day or night, and my boys are not being brought up to dread the very name of fire. When you come to think about it it isn't so much of a wonder that the man who picked the radiator as the greatest home comfort won the prize unanimously.

Subscriber.

Wireless is the latest fad for two New England girls. In their own laboratory on Cape Ann they spend every evening over their wireless plant and learn all the news which the public will read of in the morning newspapers. Miss Margaret L. Campbell and Miss Gertrude E. Tarr, both popular young women of Rockport, are the owners of the wireless plant. Last May they became interested in this work and decided to attend school in Boston, where they finished the course. Then they built the laboratory on the property of Miss Campbell's father. Each evening at 10:15 they get news from all the world and receive some messages from Arlington. Many of the messages they overhear are in cipher.

Department of Agriculture chemists are examining samples of new foods from animal bone and blood invented since war began by a German scientist at Cologne. Bozivan is the name given to the blood food. The German ministry of trade and industry is investigating the scientist's claims that he has developed nourishing foods. Samples of the foods were sent to the United States by an American consul in Germany.

Ask your neighbor to subscribe for The Wisconsin Farmer.

48 tons by hand

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When you screw A C Spark Plugs into the engine of your car you are doing what fifty-four leading motor car manufacturers have done. Because of their many superior features A C Plugs have been adopted as standard equipment by the following famous makes:

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Chandler	Jackson	Pierce-Arrow
Chase Truck	Kissel Kar	Pilot
Chevrolet	Knox	Reo
Cole	Lambert	Saxon
Daniels	Lexington-Howard	Sayers-Scovill
Davis	Marmon	Simplex
Detroiter	Maxwell	Singer
Dodge Brothers	McFarlan	Stearns-Knight
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	National	Westcott
		Wilcox Trux

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Guaranteed Gas-Tight

There are a few makers, however, who do not use our plugs, such as Ford, Overland and Studebaker, but there is an A C Plug suitable for each. These plugs make your motor more efficient and give you a better running car.

Champion Ignition Co., Flint, Mich.

This plug is designed especially for Ford cars

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LET me send you an engine to earn its own cost while you pay for it. **Easy to start; no cranking;** easy to understand and manage; and easy to pay for on any suitable, reasonable terms of payment, during a year. I have helped many thousands to own engines in this way, during my 29 years of engine building.

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SEE THESE LOW PRICES: 2 H-P, $34.95; 3 H-P, $52.45; 4 H-P, $69.75; 6 H-P, $97.75; 8 H-P, $139.65; 12 H-P, $197.00; 16 H-P, $279.70; 22 H-P, $359.80. (*F. O. B. Factory*) Portable Engines and Saw-Rig outfits proportionally low. **Guaranteed high quality**—as durable as superior design, best materials and workmanship can make.

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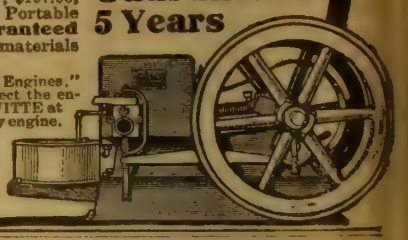

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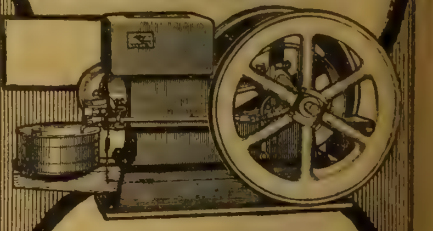
Prove Their Quality

Write us, giving dealer's name and we will tell you how to get a high-grade **Meco** Engine for trial, and send you our Engine Catalog to select the kind of engine you want.



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2 H-P, $35.10; 3 H-P, $52 65; 4 H-P, $70.20; 6 H-P, $100; 8 H-P, $140.40; 12 H-P, $210.90. Built for hard, heavy work, compact, easy to run; few parts, and save their cost in fuel first year.

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Don't pay more than our prices for any high-grade engine until you have tried the **Meco.** Write for Catalog today.

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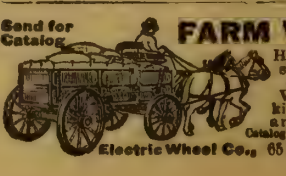
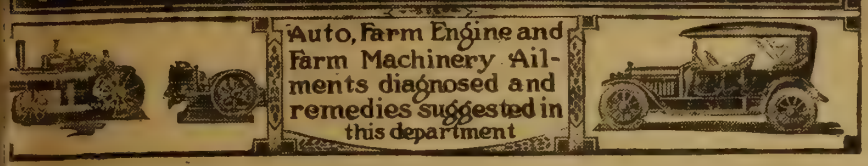
Send for Catalog **FARM WAGONS**



High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 65 Elm St., Quincy, Ills.

FARM MECHANICS



QUESTIONS AND ANSWERS.

Wiring a Tail Light.

I would like to put an electric tail light on a 1915 Ford car. If possible I would like to operate it by the same switch as the headlights. Please tell me how to wire it.

Answer.—Connect the tail light wire to the switch terminal to which the headlight wire is connected. Run the tail light wire from this terminal to the tail light. From the other tail light terminal run a ground wire to the frame. Use a sixteen-volt, two-candle-power light.

A Peculiar Circumstance.

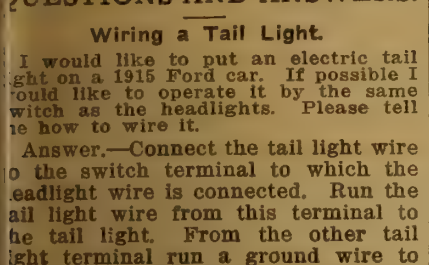
Please tell me what causes my Reo 1914 car to misfire at a certain place in road? The road is level and smooth. The engine will be running fine until it gets to that place, when it will make a noise like it was firing twice instead of once and then misfire. Is there some material in the ground that causes it to do so?

Answer.—We have heard of cars that ran better in the morning than at night, but we never before have heard of a car that objected to traveling over a nice, smooth, level road! Some cars actually run better in the daytime than after dark, as the air is damper and heavier after dark and the carburetor may be so adjusted that the lighter air gives better results. If the level road is on very low or very high ground this may be an explanation of your trouble, the air being heavier on low ground. It may also be that some part of your carburetor has a tendency to stick and that on a level road there is not enough vibration to keep it from sticking.

Electric Light Switches.

Please give me a diagram of a three-point switch with a four-point switch between them. How many lights can be governed by these switches? We have a 110-volt system. What size fuze plugs should we use?

Answer.—The figure is a diagram of



this combination. A, B and C are the points of one of the three-way switches. D, E, F are the points of the other three-way switch. G, H, I, are the points of four-way switch. At one end the switch lever, S, connects A with either B or C. At the other end the switch lever, I, connects E with either D or F. In the four-way switch the bars XX connect G and I, also H and J, when in the position shown. When turned a quarter way around they connect G with H and I with J.

Any number of lights may be connected as shown and controlled by any one of the three switches regardless of the position of the other two switches. For instance, with these three switches located respectively down stairs, up stairs and in the basement the hall light could be turned on or off at any one of the three switches. Or these three switches could be wired to control all the lights of any branch line from any three desired points in the house. Of course, the lights could not be controlled independently of each other by the switches.

The fuse plug that should be used depends upon the amperage, not the voltage. Fuse plugs from six to ten amperes capacity are usually used on house lighting systems. A ten-ampere fuse is usually considered safe for No. 14 wire.

Engine Too Small for Tractor.

I enclose a drawing of a plan I am going to use in making a small tractor. I have a two-horse-power gas engine that I wish to use on a small tractor so that it will pull itself. We have to take it quite a distance to pump water. It would be handier to have it pull itself. How large a load would it pull? Would it be best to use a belt drive? How could it be steered? What kind of front wheels and axle would you advise me to use? Would it pull a walking plow? Would it pull a cultivator? How fast would it go if the engine makes 850 R. P. M.

Answer.—Your machine would not much more than pull itself unless you use ball-bearing wheels, so as to do away with as much friction as possible. At any rate, it would be too small for plowing. We would suggest that you use motorcycle wheels, two behind and one in front. Steer with the front wheel, using handle bars like a motorcycle. Also use a motorcycle chain drive and coaster brake. Gear it to about two miles per hour. Space will not permit us to publish a sketch.

A Magneto for Ignition.

We have a seven-horse-power engine that we have been running on dry cells. We are thinking of putting on a magneto. I presume we will have to start on the dry batteries. Can we use the same spark coil for both? Will there be any danger of the electricity running down into the batteries if we use the same coil? Is there any danger of short circuiting the magneto if we use too much oil? Is a friction drive better than a belt drive? Which will give the better results, battery or magneto?

Answer.—You can use the same coil. Use a double throw switch, so that when the switch is in one position the batteries are connected to the coil; in the other position the magneto is connected to the coil. Start on battery and as soon as the engine gains speed switch to magneto. With the switch arranged as above there will be no possibility of the magneto current affecting the battery. Do not use more oil than necessary on the magneto bearings, as too much oil might cause a short circuit. Friction and belt drives are equally satisfactory if properly constructed. Use the drive that is easiest to install on your engine. As a rule, a magneto gives better satisfaction than a battery and costs very little to keep up.

Electricity and Horse Power.

How many horse power is required to run a dynamo, relative to its output? How much electricity is consumed in heating a gallon of water to the boiling point?

Answer.—Watts equals volts times amperes. One horse power equals 746 watts. A 110-volt generator delivering seven amperes is delivering a little more than one horse power. Small generators are only 70 per cent efficient as a rule. Therefore, a generator delivering one horse power would require about one and one-half horse power to run it. It requires about two and one-half watt hours to raise the temperature of one gallon of water 1 degree Fahrenheit.

A Dry Cell Battery.

I would like to know how to make a dry cell battery to test about forty amperes.

Answer.—Obtain a zinc cup four inches in diameter and eight inches high. Line the cup with paper about one-sixteenth of an inch thick. The paper should be wet. Obtain a stick of battery carbon about one inch in diameter and eight inches long. Pack the paper-lined zinc cup with manganese-dioxide moistened with a weak solution of salammoniac, placing the carbon stick at the center, allowing the end of the carbon to come within one inch of the bottom of the cup. The manganese should come within one inch of the top of the cup. Fold the paper lining over the top; put in a layer of clean sand and fill the space at the top of the cup with coal tar. Keep the cell in a pasteboard box.

Evidently you wish more current than the ordinary No. 6 cell furnishes. You can obtain forty amperes on test by connecting two ordinary dry cells in the multiple, that is, zinc to zinc. This heavy current will flow only for an instant, however. A No. 6 dry cell will not furnish much over one-half ampere for any great length of time.

Too Much Gasoline.

I am writing to you to find out the the trouble with my gasoline engine. It is a one and one-half horse power "Hummer." It will run four or five revolutions and then stop. The gasoline will then run out of the air damper. Where is the "Hummer" engine made?

Answer.—Evidently you are giving the engine too much gasoline. In order for an engine to run the amount of gasoline must be regulated correctly for the amount of air used. Too much gasoline is as bad as too little. Do not unscrew the needle valve so far. We do not know where the above engine is made.

Galvanizing.

How can I galvanize a small piece of iron?

Answer.—Clean the iron so that it is free from rust, scale or grease. This is usually done by pickling in dilute muriatic acid or polishing with emery cloth. Then dip the iron in molten zinc.

What Our Big Production Means to You

Year after year for many years, we have made more spark plugs than all the others *combined.*

Year after year we have greatly enlarged our output.

This year we will double last year's production.

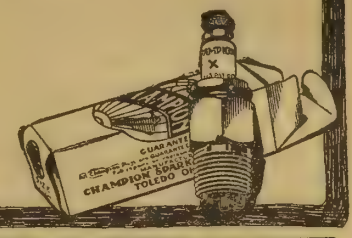
Year after year we have made Champions more and more dependable.

As our production has grown we have been able to adopt extreme and still more extreme measures to insure dependability—

Because—as our production increases we can distribute the expense of these extremes of engineering, of testing and of processing over a vastly larger number of spark plugs.

That's why Champions are so much more dependable.

Your dealer will supply you with the Champion designed to serve your car more dependably than any other. Look *on the porcelain* [not merely on the box] for the name *Champion.*



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504 Auburndale Ave. Toledo, Ohio

More Power
Less Carbon

LEAK-PROOF
PISTON RINGS

The only perfect and durable gas-tight and oil-tight Piston Rings.

Get them from your supply dealer. If he hasn't them—write us. We'll see that you are supplied. Send for FREE book—"To Have and to Hold Power."

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Big Money For You

You can easily make from $10.00 to $15.00 per day sawing wood for yourself and others this winter with a "Diamond" Wood Sawing Outfit. The frame shown in this illustration is built adjustable to any width wagon—can be put on or taken off quickly. Has capacity of 30 to 40 cords per day with 5 H. P. engine. Write for folder "A," giving prices and complete information about Diamond Saw Frames. Also write for folder "B" which describes the famous

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There's 25 to 35 percent advantage to you in owning one of these mills. Let us tell you more about it. Write today. Both folders mailed free. C-3

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To ring the help to dinner—to call someone to the phone—for every kind of signal, use COLUMBIAS. They're the cells that ring the bells *unfailingly*—and run engines, autos, phones, tractors; make lanterns blaze; set off blasts! The world over, "Columbia" is the other name for RELIABILITY.

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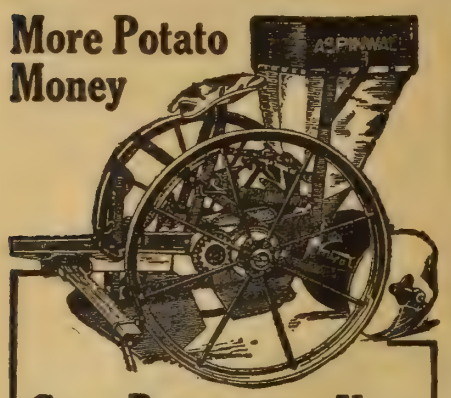
Fahnestock spring-clip binding posts, no extra charge. Make connecting cells an easy job.

More Potato Money



Grow Potatoes this Year

PUT in a big acreage. Make more out of potatoes than out of grain—200 bushels to the acre is not uncommon. An Aspinwall one-man planter plants 5 to 8 acres a day. Plants at uniform depth and spacing—uniform planting means biggest yield. Machine opens furrow, drops seed—any size—any distance—covers, marks next row, and if desired, sows fertilizer all in one operation.

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Manufactured by the *World's Oldest and Largest Potato Machinery Makers.* 60,000 Aspinwall Planters in use. Take no chances on unproven machines. Learn all about the

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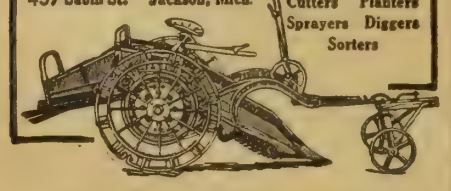

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Hickory "99" is the finest finish for walls and ceilings that you ever saw. A large variety of beautiful shades and tints—whatever you wish. Dull toned and *washable.* Costs less than wall paper—easier to apply—and it *lasts*—keeps bright and new for years. Suitable in any home.

Comes ready to use—anybody can apply it—no mixing. Easy to brush and doesn't show brush marks.

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is sold by all Hickory hardware dealers. Use it over any surface—board, plaster, burlap, wall paper or woodwork. No peeling, no flaking. We guarantee every can of Hickory "99." Satisfaction, new goods or money back.

And for the finest, most lasting varnish you ever had, *Use Hickory Floor Finish.* Will not mar or turn white under hardest usage. Hot or cold water positively cannot affect it. Absolutely guaranteed.

FREE Set of handsome poster stamps showing rooms finished with Hickory "99" actual colors. Suggestions for your home. Write today and we will send entire set free.

Kelley-How-Thomson Company
Duluth, Minnesota

In And Around Wisconsin.

Creameries Report Satisfactory Year Which Indicates That 1915 Was Favorable For Dairymen—Other Items of Interest to Farmers.

William Hawkins, one of the pioneer creamery men of Wisconsin, died recently at his home at Roberts.

Farmers in the vicinity of Albion, Dane county, recently met and organized a co-operative association for the establishment of a cheese factory.

The dairy and food commission has warned all dealers that "spot" or "bad" eggs are treated as adulterated foods and the sale of such is punishable by a fine of from $15 to $100 or imprisonment. The law affects farmers as well as dealers.

The Baraboo Valley Farmers' Club at its annual meeting recently elected J. O. Lucht president for the coming year; Lawrence Siebecker, vice president; Mrs. John Brown, secretary and treasurer, and Mrs. John Rumph and S. S. Parsons members of the program committee.

The ball has been started rolling in Winnebago county for the employment of a county agricultural representative and at the recent institute at Oshkosh committees were named to confer with the county board in the hope of inducing that body to make the necessary county appropriation.

Green county cheesemakers are teaching Montana farmers the value of cheese factories and during the past few months several have removed from there to various points in Montana. Jacob Marty, of Brodhead, is planning to start three or four brick and Swiss cheese factories there this spring.

Reports by the tanners show that Wisconsin farmers and trappers had a very successful catch of raccoons this winter, the open season for which closed on February 1st. Prices have been good this season and farmers who spent their spare moments trapping were well repaid. The season for trapping skunks also closed on February 1st in Washington and Ozaukee counties. In other counties there is no closed season on skunks.

The dates for the 1916 Fond du Lac County Fair have been set for September 19th-22d, immediately following the state fair at Milwaukee. This plan of staging this fair immediately after the state fair has proven advantageous, as it catches much stock released at Milwaukee the week previous. The county board recently set aside $2,500 for improvements at the grounds and committees are now working on plans for several new barns and buildings.

Kewaunee, the fourth smallest county in the state, claims it has more registered farm names than any other county. Already more than 350 names have been recorded.

The Fox River Valley Holstein Breeders' Association at its recent annual meeting re-elected R. J. Shaefer, of Appleton, as president, and E. Mueler, of Appleton, secretary and treasurer.

C. E. Blodgett, of Marshfield, and P. E. Kampine, of Neillsville, have begun the erection of a modern concrete cheese factory on the Osseo road, Wood county. Mr. Kampine will be in charge of the factory.

The Oconomowoc Poultry and Pet Stock Association has chosen December 6th-10th as the dates for the next show and W. E. Stanfield, of Hillsdale, Mich., will place the awards. C. O. Hudson was elected president; Heyliger DeWindt, first vice president; W. A. Nack, second vice president; F. S. Clausen, treasurer, and George Johnson, secretary.

A woman's building and a new cattle barn will be completed in time for the next Sheboygan County Fair at Plymouth on September 6th-9th. These improvements were planned at the annual meeting recently at which P. K. Wheeler was elected president; Peter Reiss, secretary.

The Barron creamery, which is thought to be the largest co-operative creamery in the world, broke all records in 1915, showing a gain of 17 per cent over the previous year. The butter production for the past year was 1,299,429 pounds, for which the farmers were paid $334,061.32. As the creamery operates only six days a week in the summer and but four days a week in the winter, the average amount paid farmers runs better than $1,200 for each working day and averages over $1,000 a day for each of the 300 working days of the year. The creamery has over 800 patrons and the cream is gathered right from the house doors by twelve cream carriers on eighteen routes. Two of the carriers use automobile trucks with success, which speaks volumes for the good roads of this section and the clay soil which makes possible such good roads. There was gathered the last year 3,986,370 pounds of cream, which made 1,095,550.4 pounds of butter fat, for which was paid an average of a little over 30½ cents per pound. Last month 38 cents was paid.

The Central Wisconsin Cheesemakers, Buttermakers and Dairymen's Association is scheduled to meet at Stratford on February 19th and a large attendance is expected.

The sixteenth annual convention of the Southern Wisconsin Cheesemakers and Dairymen's Association will be held at Monroe, Green county, February 23d and 24th, and preparations have been made to make this the biggest meeting ever held by the association.

It is not unlikely that Wisconsin will be well represented at the first National Swine Show which will be held in Omaha early in October. Already one of the breed associations of this state is planning on sending a combination exhibit and the matter will be presented at the meetings of swine men to be held at the college of agriculture the present week.

Two Wisconsin fairs—those held at Milwaukee and La Crosse—are to be benefited by the special appropriation made by the American Shorthorn Breeders' Association in the aid of American breeders of this class of cattle. Notice of this action has been received by John L. Tormey, of the college of agriculture, who is the secretary of the Wisconsin Short-horn Breeders' Association.

VISITING FARMERS FROM NORTH DAKOTA.

Again this year North Dakota farmers, bankers, county agents and business men, representing a section of North Dakota, came to Wisconsin to get pointers. The group shown herewith was photographed while the party was in Madison. The company represented Benson county, North Dakota. There were several representatives of the Great Northern Railroad in the party. H. J. Boyts, county agricultural agent of Benson county, accompanied the visitors. These men came to Wisconsin to study dairying and to investigate the pure-bred grain situation as it has been developed in this state. They took a great interest in the road school which was held in the capitol building the evening they were in the city.

The West Salem Co-operative Creamery, La Crosse county, had a very successful year and finished the year with a balance of $12,971.92. This is one of the largest creameries in Wisconsin and the following statistics from the report sent us by Mr. J. H. Moran, treasurer and manager, will be of interest to all:

Number of shareholders	388
Number of shares outstanding	6,804
Average number of patrons	383
Pounds of cream received	2,935,339
Pounds of butter fat received	730,986
Pounds of butter made	899,229
Average overrun	.23
Average test of cream	.249
Average cost of gathering 100 lbs. cream	$ .41
Average cost of gathering 100 lbs. butter fat	1.66
Total cost of manufacturing 100 lbs. butter, farm to car, permanent improvements not included	2.93
Monthly average price paid per 100 lbs. butter fat	32.67
Pounds of butter made in 25 years	17,053,925
Paid patrons in 25 years	3,503,944.90
Paid cream haulers in 25 years	183,016.90

Diseases of Our Cattle.

By Dr. David Roberts, of Waukesha, Former Wisconsin Veterinarian, Before Wisconsin Ayrshire Breeders.

OF ALL the live stock diseases known to American cattle there is no one disease that has attracted a wider attention than the foot-and-mouth disease which we have experienced in America during the past year. Those who were unfortunate enough to have their herds come in contact with this disease had reasons enough to be alarmed, and even those whose herds were in the same vicinity had reasons to be alarmed, but unfortunately for the live stock industry this alarm has spread to nearly every part of our country. For this reason our live stock industry has been virtually at a standstill, but owing to the fact that the foot-and-mouth disease has been practically eliminated from the United States, I feel that the live stock breeders have no particular reason to be afraid of any further serious outbreak, and I believe we will settle down into the healthy, normal condition.

The next serious thing along the line of cattle diseases is bovine tuberculosis. But it lies within the power of every live stock owner in America to detect and eradicate tuberculosis from his herd. While the tuberculin test is not infallible, it is the very best method known to detect tuberculosis and it is only in rare cases that it fails. And when it does fail to detect this disease you can rest assured that such an animal is in the last stages of the disease and any ordinary experienced person can determine without doubt that such an animal should not be allowed to remain in the herd whether she reacts to the tuberculin test or not.

When the tuberculin test was first introduced it was looked upon with a great deal of suspicion, and even to this day there are people who look upon it with suspicion, but the experienced live stock owner has implicit faith that he can protect the health of his herd by the use of this test.

The next serious disease that cattle are heir to is contagious abortion, and it is alarming the large per cent of cows and heifers that abort annually. The loss brought about by this disease alone runs into millions of dollars, to say nothing about the loss of milk and usefulness of the cows afflicted.

Some twenty-five years ago I realized that the United States was experiencing a heavy loss on account of abortion and for this reason gave this disease special attention and mapped out a plan of treatment which has been applied during the last quarter of a century to over 5,000 herds of cattle in the United States alone.

This treatment is not infallible, but it is the very best method known to eradicate and control contagious abortion in cattle. It was at first looked upon with suspicion, just as was the tuberculin test and even now there are people who have not had experience with it that might question its reliability, but the mere fact of having been in use all these years and that 5,000 live stock breeders have tried and tested out this method of eradicating contagious abortion and have found it successful (otherwise they would not come back for this same treatment when their herds become reinfected) goes to show that such a treatment has stood the test.

Many times when live stock owners inquire what to do for abortion they are advised by inexperienced people that there is no cure for the disease, or they may recommend various treatments, most of which are found too expensive or too bothersome to be practical and again they may advise allowing the disease to take its course, as cows will become immune in from one to three years. But the heavy losses that the owners experience by losing three crops of calves and by the noticeable shortage in the flow of milk makes the latter plan of getting rid of abortion even more costly.

If abortion is allowed to run its course in a herd (and this requires from one to three years) you will understand that these animals are still diseased. However, they may carry their calves full time. Still, if you introduce a healthy, pregnant cow into such a herd she will become infected and is liable to abort once, twice or three times, and then she, in turn, becomes immune, but is always in a condition to spread the disease.

On the other hand, if the disease of abortion is checked in a herd and the herd is free from the germs you can introduce a healthy, pregnant cow and she will not contract contagious abortion. This is the difference between a herd that has recovered and an immune herd. In other words, no treatment should be considered successful unless it can be applied, even after a portion of the herd has aborted, and check the disease immediately to such an extent that there will be practically no further abortions and the cows that have already aborted conceive again at the proper time and deliver strong, healthy calves at full time.

Barrenness is another serious affliction to a herd and many a valuable animal has gone to the butcher's block without being given an opportunity to breed.

It is perfectly natural for a cow or heifer when in a healthy condition to conceive when bred and if they are bred once, twice or three times and fail to conceive you will know that there is something seriously wrong.

Every barren cow and heifer should be made to breed if possible and a large per cent of them can be made to breed by giving them a tonic to stimulate the genital organs and by washing out these organs with a mild, non-irritating, antiseptic solution. – The mouth of the womb should be dilated, but this should never be attempted excepting when a cow or heifer is in heat and a womb sound and dilator is the most practical method.

In stubborn cases the ovaries of the animal should be examined to ascertain if they are diseased. They are sometimes affected by cysts and these cysts must be ruptured before the animal can be made to breed.

The best advertisement in the world is to keep your herd free from tuberculosis and contagious abortion. This can be done, because it has been done.

When a farmer offers an animal for sale he should guarantee it to be free from tuberculosis, so far as he knows or the tuberculin test can determine, and should also guarantee the animal to be a breeder, whether it be a male or female. But it is not fair to the seller for the buyer to take an animal home and turn it into an untested herd or a herd afflicted with contagious abortion, for the reason that if it contracts tuberculosis the ovaries, being glands, are just as apt to be affected by this disease as any other gland in the body. This will render a cow or heifer barren as well as tubercular.

If a healthy cow or heifer be bred to a sire that has been bred to barren cows there is always some danger of carrying the disease of barrenness to the newly purchased cow. It is for this reason that the seller cannot guarantee his animals further than the day of sale unless precautions are taken by the purchaser to protect the health of the new animal.

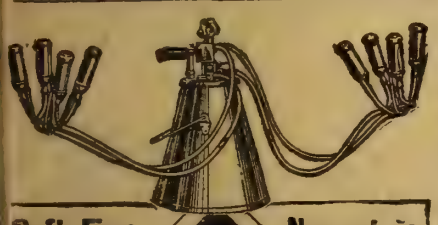
When you stop and think that by putting an attractive advertisement in the column of a good, reliable agricultural paper that this paper is the means of introducing you personally to, say 50,000 or more, live stock owners who may be in the market for good cows and heifers, as well as a pure-bred sire to head their herds, you are saving a lot of time and money.

If you were to write a personal letter to 50,000 live stock owners the postage alone would be $1,000 and when you realize that you can put a fair-sized letter in a two to four-inch advertisement and it does not cost you but a few dollars you are accomplishing more than you would by sending a personal letter to these farmers, because the agricultural papers stand back of all you claim and for this reason you cannot afford to misrepresent animals offered for sale.

If you can insert a nice cut of an animal that you are offering for sale it will give the buyer a splendid idea as to whether this animal will suit him or not. Give the name and registry number of the animal, the date of birth, milk and butter records, if any, and the name and number of the sire and dam and their records. This will give the purchaser the information he needs to determine what family of pure-bred stock they are from. If you tuberculin test your herd annually say so in the advertisement. The price need not be given in the advertisement, as this and other information may be taken up by correspondence after you receive the inquiry.

It is almost impossible for us to appreciate the real value and service that the live stock journals are rendering us by sending a copy of our letter to every one of the 50,000 up-to-date, businesslike farmers, including all of those who are in the market for good cattle.

Ask your neighbor to subscribe for The Wisconsin Farmer.



Soft, Firm Touch

Nearest to Nature's Way

Dairy Economy

THE Empire Milker is easy to install, and begins making you money right from the start. One double or two-cow unit takes care of 20 to 30 cows per hour. One man can handle two double units.

EMPIRE

Mechanical Milker

Nearest to Nature, because the Empire Teat Cups massage the teats with a wonderfully soft, firm touch. Sore or inflamed teats or udders impossible. Let us send full description. Ask about Empire Cream Separators, Empire Gasoline Engines and Empire Star Feed Mills.

Ask for Catalog No. 56M

Empire Cream Separator Co., Bloomfield, N.J.

Chicago, Ill.; Denver, Colo.; Portland, Ore.; San Francisco, Cal.; Montreal, Toronto, Winnipeg, Canada

Would You Hire Two Men To Do One Man's Work?

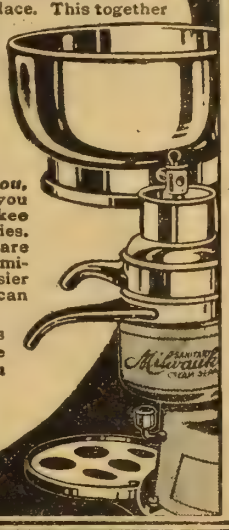
OF course not! Then why buy or put up with a cream separator that uses any more discs than are used in the Sanitary Milwaukee? With practically half the number of discs used in other separators, the Sanitary Milwaukee actually skims closer, quicker and easier. The discs are tapered, allowing greater separating capacity where separation takes place. This together with the fact that the feed glides allow an equal amount of milk to flow between each set of discs — something accomplished in no other separator — explains why the skimming bowl of the

SANITARY Milwaukee CREAM SEPARATOR

Does its work more thoroly, with *less trouble, less work for you.* You have only about half as many discs to clean every time you use the separator. Moreover, the discs of the Sanitary Milwaukee have no holes, pockets or perforations to catch and hold impurities. They are as smooth as glass. Still another reason why they are easy to keep clean, is that they are stamped out of pure aluminum. Every woman knows that aluminum utensils are easier to wash because grease does not stick to aluminum. It can never rust or corrode and thus taint the cream.

Sanitary Milwaukee will give you *all* the cream with less work, yet cost you no more. Write now for complete illustrated catalog and name of dealer nearest you who can show you the *Sanitary Milwaukee.*

MILWAUKEE SEPARATOR MFG. CO.
245 Madison Street
Milwaukee, Wis.



Proof Against Wisconsin Weather

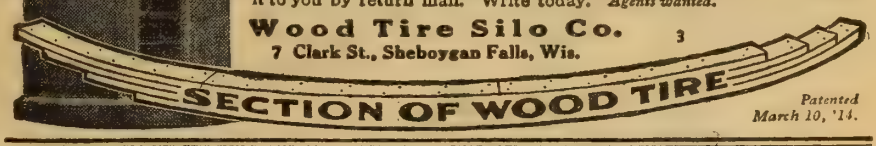
The Wood Tire Hollow Wall Silo prevents freezing, even when the mercury ranges from 20 to 30 degrees below zero, except sometimes a very little. It is built on a new (patented) principle which gives you a *real building*, so rigid and strong that it will resist storms and be as permanent as your house or barn. Moreover, it is easy to erect as it forms its own scaffolding. No guy wires needed—no hoops to keep adjusted—no staves to shrink or swell, but a continuous, smooth, double wall with a 3¾ inch air space from base to roof, the inner wall being of *California Redwood*

GUARANTEED FOR 20 YEARS

"But Lasts a Lifetime"

Hundreds of Wood Tire Silos are in use in Wisconsin and neighboring states, perhaps one near where you can examine it and talk with the owner. Not a single one has ever blown down or even racked out of plumb. All give perfect service. If you are planning to buy a silo, send at once for our folder which shows how they are built. A postal brings it to you by return mail. Write today. *Agents wanted.*

Wood Tire Silo Co.
7 Clark St., Sheboygan Falls, Wis.



Patented March 10, '14.

Provable Papec Points

Every reason for the "Papec" is proved by thousands of machines in use—giving satisfaction in every state—almost everywhere. Thousands are operated by only four H. P. gas engines—with little or no repair cost and saving their owners time and money. The simple, durable "Papec" construction has never been excelled. The semi-steel frame; heavy gear driving mechanism; six fans instead of the usual four; the low speed—only 600 R. P. M.—are a few of the "Papec" features that reduce power cost, mean durability and bring thorough satisfaction. Learn the many other reasons why the "Papec" SERVES when others FAIL. Send postal for our new 1916 Catalog, describing the new patented self-feeding device that handles all growths—green or dry.

Convenient Distributing Points throughout the U. S.

PAPEC MACHINE CO.,
Box 71 Shortsville, N. Y.

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co.
65 Elm St., Quincy, Ill.

America's Finest Municipal Building

is the New York City Hall. It is built to last and is a monument to the good judgment of its builders. Fireproofed throughout with over 36,000 tons (1462 carloads) of Natco Tile. Imposing, massive, strong, symmetrical. Make your farm buildings just as efficient—

Build with Natco Hollow Tile

Natco buildings serve well, look well and last forever. Put your silage where it's safe—in a splendid **NATCO IMPERISHABLE SILO.** The hollow vitrified clay tile are impervious to air and moisture and their dead air spaces resist frost. The reinforcing bands laid in the mortar hold the silo in a grasp of steel. Build your home with Natco Hollow Tile, too—make it attractive, comfortable, fireproof and windproof. The first cost of Natco buildings is little if any greater than frame buildings and that first cost is the **last cost.** We have plans for all kinds of farm buildings, free. Tell us what you are thinking of building—we have some splendid ideas for you.

Whether it be a skyscraper, silo or barn, if built of Natco Hollow Tile it will last for generations

Natco Silo Wall: Note perforated shell providing firm anchorage for mortar joints.

Send for our new book "Natco on the Farm." Fully illustrated from photographs and construction details of all types of farm buildings.

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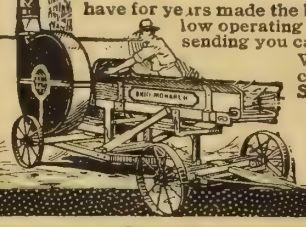
It's far superior to anything we have ever put out before. Tells everything you want to know about silos and silage. Home made silos—hoop and octagonal silos, pit silos, brick, concrete, tile, cement, metal—all modifications of all known types. We do not make silos, therefore, can recommend without favor. When you read this book you can make an unerring choice of the best type of silo suited for your particular needs. Your climate—your conditions—your stock—your land—your crops—are all fully discussed and best suggestions offered for increasing your profits. Copyrighted November, 1914. Contains 30 page Feeders' Guide and complete 10 page Index, 56 illustrations. Be sure to get this new copy. It's far ahead of former editions which were used as text books in agricultural colleges. We send it for 10 cents, stamps or coin. Send for this revised edition—read it and profit from the knowledge you will get from it.

Silver's "Ohio" Silo Fillers



have for years made the best records for big capacity, fast work and low operating cost. Let us tell you about our new model by sending you catalog and our free booklet, "Silo Filler Logic."

Write today for these two books. Enclose 10 cents and receive the new edition of **"Modern Silage Methods"** with them.

The Silver Mfg. Co.
312 Broadway
Salem, O.

Minneapolis Panel Silos — Built of Steel and Wood

Cannot collapse when empty, rest uniformly on foundation, no tightening of hoops. Mechanically, scientifically, structurally correct.

New 1916 drain joint means longer life because seams and joints are always dry.

CATALOGUE AND INFORMATION SENT ON REQUEST.

Puffer-Hubbard Mfg. Co., 3205 26th St. East, Minneapolis, Minn.

Dairy Breeders Hold Meetings.

Dr. David Roberts, of Waukesha, Named President of Ayrshire Association---Reports From Other Breed Meetings.

A PROGRAM of several important addresses was carried out by the Wisconsin Ayrshire Breeders' Association at its annual meeting held in Madison last week. The new officers of the association are as follows: President, Dr. David Roberts, Waukesha; vice president, A. G. Austin, Janesville; secretary-treasurer, Frank T. Stare, of Ladysmith; executive committee, the officers and A. J. McNab, Black River Falls, Adam Seitz, Waukesha, and J. Van Etta, Lima Center. Under the able leadership of President McNab and Secretary Stare the association has grown in the past year from twenty-one to sixty-one members and is now in the most flourishing condition in its history.

Fred Tschudy, of Monroe, told his experiences with breeding Ayrshires. His father had selected the breed, and in an experience of fifty years Mr. Tschudy says he feels that his father used excellent judgment. Sam Jones, of Juneau; Prof. George C. Humphrey, Adam Seitz, of Waukesha; Dr. David Roberts and A. G. Austin discussed matters of interest to Ayrshire breeders. Mr. Seitz discussed best methods to adopt in the show ring where he has been eminently successful. The Ayrshire breeders elected Dr. David Roberts, a delegate to the conference where certification of tuberculin-tested cattle was discussed.

FRANK T. STARE, LADYSMITH.
Re-elected secretary of the Wisconsin Ayrshire Breeders.

The Wisconsin Brown Swiss Cattle Breeders' Association was organized at Madison last week. Fifteen representative breeders were present and the meeting was an enthusiastic one. B. H. Hibbard, of Madison, presided. Sec. Andrew W. Hopkins, of the Wisconsin Live Stock Breeders' Association, addressed the meeting on the purposes and objects of community and state organization. Mr. Hopkins offered the services of the state association in any possible way to assist the Brown Swiss breeders in their work. The officers of the new association are as follows: President, Ira Inman, Beloit; vice president, J. P. Allyn, Delavan; secretary-treasurer, H. C. Taylor, of Orfordville; executive committee includes elective officers and H. W. Ayers, of Honey Creek.

The Wisconsin Jersey Breeders' Association, at its annual meeting in Madison last week elected officers as follows: President, F. F. Showers, of Delavan; vice president, W. H. Clark, of Rice Lake; secretary, E. E. Wyatt, of Tomah. The Jersey breeders had a good, live meeting and considerable discussion of the best methods to advance the interest of this breed of dairy cattle.

The annual meeting of the Wisconsin Holstein Breeders will be held at Watertown March 1st and 2d. An informal meeting was held in the auditorium of Agricultural Hall, Madison, last week, for the purpose of discussing the proposed official certification of cattle which has been tuberculin tested. The Holstein breeders chose Otto Toepfer, and S. A. Baird, a committee of two to meet with the state veterinarian to discuss the subject. Mr. C. J. Shroeder, secretary of the society, was chosen alternate.

HANDLING MILK IN SPRING.

Begin to safeguard the milk before you get it. Use a good, clean cloth and a brush on the cows before every milking. There will be some loose hairs flying at this season of the year. The milk pail is not a good place for them.

See to it that the clothes of the milker are clean. Not always do we pay as much attention to this as we should. We say, "I'll just slip on any old thing. It is good enough to milk in." That makes it easier to have the milk go from the stable with a smell that nature never put there.

Strain the milk as soon as it has been drawn. Cold milk never strains as well as warm.

It is easy to rinse the strainer in cold water, but that cannot make a clean strainer of it. Especially should the cloth strainer be thoroughly scalded and rinsed and then dried in a place where pure air can circulate all about it.

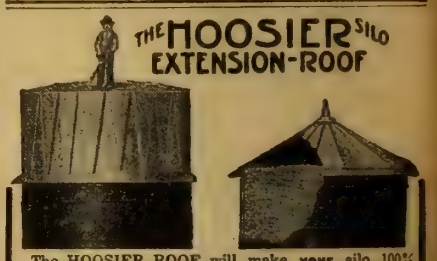
It is a good plan to use a cloth strainer spread over the regular wire sieve strainer. But remember that no strainer ever made can remove impure matter from milk. It must be kept out.

The can into which the milk is strained never should be permitted to stand in the stable while the milking is being done. A small milk room adjoining the stable, with a door between, and that door kept shut, makes it difficult for odors to get into the milk from the stable, but if we have no such room the can may be kept out of doors in the open air, the strainer on top and precaution taken to keep cats and dogs out and to prevent dust from sifting into the strainer.

Every can and pan that touches milk ought to be as clean as water can make it. That water ought to be both hot and cold, too. By this I mean that first the cans and pails ought to be rinsed with cold water very thoroughly. This water should be thrown out and then hot—really scalding hot—water used for washing. The cloth used ought to be perfectly sweet and clean. Some never use soap in washing such things, but do make use of soda. These people think the use of soap never leaves the can or pan or pail free from particles that never should be in milk vessels. Then after the hot water has been used cold water should follow to rinse out and cool the metal. Then the sunshine will do the rest.

As it comes from the cow there is

THE HOOSIER SILO EXTENSION-ROOF



The HOOSIER ROOF will make your silo 100% efficient. No lost space by your ensilage settling. It is the kind of silo roof you have been looking for. Write nearest office for catalogue and learn why HOOSIER customers say that the "HOOSIER ROOF ought to be on every silo."

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802 New York Street, Goshen, Ind.
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HORSE OWNERS

IF you have colts to break or if you have a kicker, shyer, runaway or otherwise unmanageable horse that you are unable to properly break with any other bridle or breaking appliances, **Koepke's Controller Bridle** will do the work in the shortest time with the least possible danger. A perfect breaking and driving bridle. Satisfaction guaranteed or money cheerfully refunded. Write for circulars and prices.

FRANK L. KOEPKE, Whitehall, Wis.

STOP! Look ahead—don't look backward after you build and wish that you had selected an All-Metal Silo—then it's too late.

Outlive their guarantee

ZYRO METAL SILOS

TRADE MARK

All we ask is that you investigate before you spend your money. The ZYRO is 25 years ahead—made of Pure-Galvanized-Iron—airtight—insures big saving in silage waste—no shrinking, cracking or collapsing—no tightening anchor-wires or hoops—safeguarded against storms, lightning and vermin—made of NO-CO-RO METAL—rust-proof—costs less to erect, guaranteed to last longer—ornament to any farm.

Free Book Get our Free ZYRO Book—full of facts. Write today—no obligation. Ask us about ZYRO Corn Cribs and Grain Bins. **The Canton Culvert & Silo Co., Box 314, Canton, Ohio.**

TRIPLE WALL SILOS

No hoops to tighten. Practically frost proof. **Three walls.** Regular silo staves, felt lining, and Red Cypress siding. **Guaranteed not to collapse. Fir stave silos**—Best quality one piece fir stave silos any length up to 40 feet shipped on approval.

Free catalog tells all.

Write for it today.

INDEPENDENT SILO COMPANY,
2330 University Ave.,
ST. PAUL, MINN.

15 95 UPWARD ON TRIAL Fully Guaranteed

***American* CREAM SEPARATOR**

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95 skims warm or cold milk making heavy or light cream. Bowl is a sanitary marvel, easily cleaned.

ABSOLUTELY ON APPROVAL

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. **Western orders filled from western points.** Whether dairy is large or small write for handsome free catalog. **Address;**

AMERICAN SEPARATOR CO.,
Box 3126 Bainbridge, N. Y.

Lap Joints—— Better Walls

Stronger—more durable—less mortar exposed to feed on inside—every joint solid as rock. Silage settles better—and keeps better in

LANSING Vitrified Tile Silo

Write us and learn about this superior tile block. Walls reinforced with twisted steel—continuous doorway—easy climbing ladder—all features superior—yet cost is no more than others. First cost—only cost. Write for catalog 333

J. M. PRESTON CO., Lansing, Mich.

Get our offer on Climax Silage Cutters and Bidwell Threshers

TABER LINED SILO

Non-Shrinkable—Practically Everlasting, Rot-Proof, Worm-Proof, Storm-Proof, Acid-Proof.

The latest improved Silo. A wood stave Silo; choice of lumber. Entire Silo creosoted. Special paint for outside. Acid-Proof Lining for coating inside after erection. The finest door and door frame on the market. Special Galvanized Steel Octagon Roof—best manufactured.

Write Dept. D. for Catalogue

Manufactured by

TABER LUMBER CO., KEOKUK, IA.
ESTABLISHED 1856
AGENTS WANTED IMMEDIATELY.

When writing to advertisers please mention **The Wisconsin Farmer.**

more or less animal heat in milk. If permitted to remain, this will prevent the milk from keeping as it should. For this reason air ought to be gotten all through the milk as soon as possible after milking. The aerators to be had nowadays are fine, but if we have none we may simply stir the milk well or even pour it from one can into another. The makers of agricultural implements now make a sort of dipper with a long handle for stirring milk and cream that is fine. These do not cost much and are worth a great deal.

Shut the milk away from all smells, not by closing the receptacle tight but by having the room so sweet and clean that there will be none to find its way into the milk.

STATE JUDGING CONTEST SUCCESSFUL.

Seventeen teams of three boys each competed in the statewide stock-judging contest which was held last week at Madison in connection with Farm and Home Week. This was undoubtedly the largest and most important stock-judging contest ever held in Wisconsin and the honors were closely contested.

First honors in team judging went to the three boys representing the Milton (Rock county) high school,

E. R. JONES, MADISON.
Gave demonstrations in drainage and tiling Farm and Home Week.

with a score of 1,402.8 points out of a possible 1,800 points. The Athens team took second with a total of 1,335 points.

Individual honors in judging, which competition was open to all the boys in the teams, went to Howard Holiday, of the Milton school. He was a member of the winning team and his score was 495.5 points out of a possible 600 points.

The summary of the winners follows:

TEAM PLACINGS.

Milton High School, 1st team; Athens, 2d team; Milltown High School, 3d team; Racine County School of Agriculture, 4th team.

INDIVIDUAL JUDGING.

Howard Holiday, Milton High School, 350; William Hoge, Athens High School, 343; Carl Kloth, Pewaukee High School, 332.5; Chas. Turner, Milltown High School, 325.5; Walter Harrison, Darlington High School, 332.5.

Those in charge of the contest were very much pleased and said that many of the boys exercised the judgment of experienced judges in placing and their reasons therefor. T. L. Bewick, who directed the work, said this first state contest would prove of great value and predicted greater interest in judging than ever before, as the entire state was interested in the contest.

The teams were selected in competitions conducted by the high schools having agricultural courses and the county schools of agriculture. These schools were organized into districts, each district containing from three to six schools. Each district held a preliminary stock-judging contest and the winning team in each district was entitled to compete in the state meeting. There were nineteen districts and seventeen teams competed at Madison.

Those entered in the contests by teams and according to the schools they represent follow:

Waldo High—Charles Drewry, Victor Klein and Harry Hill.

Wood County Normal—George Bartels, Orvin Hofschild and Earl Olsob.

West Salem High—Charles Stiven, Roy Cullmen and Rueben Carsel.

Racine County School of Agriculture—Walter Ledger, Stanley Overson and Donald Webster.

Viroqua High—Guy H. Smith, Walter Bean and Raymond Ernest.

Milltown High—Leonard Murphy; Clarence Johnson and Charles Turner.

Marathon County School of Agriculture—Harry Johnson, Almon Peffer and Howard Merwin.

Dunn County School of Agriculture—Ed S. Arkey, Willard Engs and Walter Hubin.

Omro High—Alvin Allen, Wilbur M. Andrew and Charles Foote.

Darlington High—R. D. Smith, Walter Harrison and Kenneth Schreiter.

Sun Prairie High—Frank Wilwarth, Richard Ryan and Slayton Bull.

Mukwonago High—George Carroll, Archie E. Taus and Merl Swan.

Greenwood High—Norman Colly, Fred Behrens and Ernest Nelson.

Milton High—Howard Holiday, Robert Gray and Benjamin Kraus.

Bloomer High—Oscar Weiner, Herman Steab and Jukius Brunstadt.

Athens High—Leo Bloizynski, Alfred Kruetzer and William Hoge.

Pewaukee High—Homer Pearson, Carl Kloth and Roger Taylor.

Dunn county farm names which have been registered recently include the following:

Elm Grove Stock Farm, Anton Amundson, Elk Mound.

Bonnie View Dairy Farm, Robert T. Marshall, Stanton.

Spring Dale Farm, Val Wellstein, Lucas.

Forest City Farm, Riley Drake, Spring Brook.

Rippling Brook Dairy Farm, John F. James, Stanton.

Branching Brook Stock Farm, H. W. Jodell, Stanton.

Sunnyside Home Farm, James Murray, Dunn.

Pleasant View Farm, Martin Simonson, Menomonie.

Old Hickory Stock Farm, R. J. Leischer, Stanton.

Golden Valley Farm, John Erickson, Menomonie.

Silver Creek Farm, George Johnson, Menomonie.

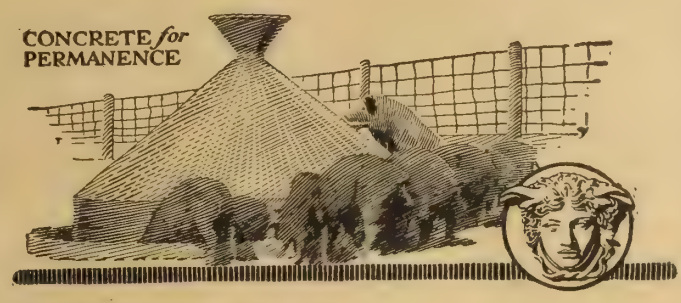
Brookside Dairy Farm, Chris Ulrich, Elk Mound.

Oak Grove Dairy Farm, Louis Brown, Red Cedar.

Morning Star Dairy Farm, Swen Anderson, Sheridan.

Lone Willow Farm, Tim Manore, Dunn.

Ask your neighbor to subscribe for **The Wisconsin Farmer.**



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You can make your hog troughs, silos, feeding floors, concrete stalls, barn and hen house floors, etc., absolutely waterproof by adding

MEDUSA WATERPROOFING

to a comparatively lean mixture of cement, sand and gravel. It saves cement—cuts down the cost of your concrete work—makes it look better and last longer because *it keeps the water out.*

Medusa Waterproofing should be used everywhere in farm concrete work. Only 4 to 8 pounds required for every barrel of Portland Cement. Easy to mix—lasts as long as the concrete. For perfect results

USE READY-WATERPROOFED CEMENT

Your dealer can furnish you the old reliable Medusa Gray Cement and a special Medusa White (for white finish), both waterproofed at the factory by grinding Medusa Waterproofing with the cement in the exact proportions necessary for a perfect water-tight mixture. Ask for dealer's name.

Write today for the following booklets: "Farm Waterproofing," "Pure White Concrete," "Concrete Specifications," "Uses of Cement." *All free.*

The SANDUSKY PORTLAND CEMENT CO.
Room G-2 Engineers Building Cleveland, Ohio

NITRATE FERTILIZER 1-2c PER POUND

NITROGEN 40c per acre. Best for inoculating farm seeds. Instructive circular No. 2 free. Write Dept. 20, **Standard Nitrogen Co., Glen Ridge, N. J.** Soil tested for acidity 25c.

Little Ford Milking Stool

Saves milk from spilling and keeps it clean

Every milker Needs It—Pays For Itself

Just invented and patents granted. Has all the latest features and conveniences. Big improvement over any other stool. Made of strong, durable metal, aluminum painted. Fully guaranteed. Swinging pail holder, adjustable for any size pail. Pail swings out of way if cow kicks or moves. Sliding seat gives milker four inches backward or forward movement. Collapsible—can be hung on peg when not in use. **PRICE $1.50** each. Send for circular. AGENTS, this stool sells wherever demonstrated. Write for special price.

J. A. PAUL, 903 Washington St., Waterloo, Iowa

GALVANIZED HOLLOW WALL CYPRESS LINED SILO **$63.00 AND UP**

Most practical silo, non-freezing, non-molding. Steel protects from wind, rain, heat, cold, fire, vermin; wood lining, hollow walls and tarred felt insure perfect ensilage to outer edge. Strong, durable. Galvanized ladder and air-tight, hinged doors. Built in sections, add more as stock increases.

"Silo Facts in a Nut Shell"

sent FREE to any address. Tells faults and advantages of ALL KINDS of silos in text book on silos and stock-raising. Shows how to save price of silo first year. Send for it TODAY. It's FREE.

KRETCHMER MFG. COMPANY
319 Eleventh Ave. Council Bluffs, Ia.

The Beaver Storm-Proof Silo

STANDS like an oak. Our eight cross rod anchor system and double angle iron inner hoops, top and bottom, together with self-adjusting hoops, make our silo non-collapsible when not in use.

For the past ten years thousands of satisfied farmers have been using the Beaver Silo. Now why aren't **you?** Write for circular "F."

BEAVER SILO & BOX MFG. CO. Inc.,
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SILOS Exclusive rights for sale or lease—patented, tongued and grooved concrete staves. No infringements. State fully territory desired, ability to handle. DIAMOND CONCRETE STAVE SILO CO., 703 Live Stock Exchange Building, Kansas City, Missousi.

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CREAMERY REPORTS REFLECT DAIRY POSSIBILITIES.

The future of Upper Wisconsin, it has been repeated, lies in its dairying possibilities. Rich in clover lands, possessed with a soil that is as fertile as any under the sun when cleared and stumped, it offers splendid opportunities for the growing of those feeds which the cow particularly needs and, as the development must come largely through the operation of small farms, dairying appears the surest and the quickest way.

No better indication of these possibilities is available than the reports of the Upper Wisconsin creameries for the year of 1915. Every one of them reflects the increase in dairying which means an increased farming area; more farmers and more tillable land. It requires cows to make creameries and what has been the experience of the butter factories the last year has been the history of the cheese factories. Every report we have seen has shown an increased business and we have yet to hear of one which did not do as well as a year ago.

We have in mind at this writing two Upper Wisconsin creameries—the big co-operative factories at Barron, in Barron county, and Clear Lake, in Polk county. The Barron creamery is doubtless the largest co-operative creamery in the world and last year this one creamery manufactured more butter than was made in the entire upper half of Wisconsin thirty years ago. Of course, every creamery in Upper Wisconsin is not of the size of these two, but the records of these two alone during 1915 are in themselves testimonials to the progress being made in Upper Wisconsin along dairying lines and at the same time they afford that insight into the future possibilities which is drawing hundreds of settlers from older communities.

The Barron creamery produced 1,299,429 pounds of butter, an increase over the previous year of about 17 per cent. For the butter fat used in making this butter the farmers in that vicinity received $334,061.22, which is more than $1,000 a day for each working day in the year. The average price paid for fat was a little over 30½ cents. The Barron creamery is not alone in its field. Within a few miles there are other creameries and cheese factories and considerable whole milk and cream is shipped from that station. Only a few years ago this county was cut-over land and on this cut-over land has grown this large co-operative concern which, as much as anything else, has contributed largely to the prosperity of the community by providing the market through the manufactured product for the product of the hundreds of cows in its cream-gathering radius.

The co-operative creamery at Clear Lake, only a few miles west of the Barron creamery, recently occupied a new building costing $16,000, which is said to be one of the finest in the state. This creamery last year showed a gain of 113,995 pounds of butter manufactured over 1914, the total butter made being 811,110 pounds, for which the farmers were paid $206,866.25. This creamery paid an average of 30.8 cents per pound for its fat and manufactured its butter at a cost of 1.58 cents. It received an average net price for its butter of 27.82 with an average overrun of 21.1 per cent. What has been the experience at Barron has been the experience at Clear Lake and the fact that these two big creameries, closely situated in addition to being surrounded by scores of smaller factories, continue to grow at so rapid a rate certainly bespeaks the dairying possibilities of the great area to the north which is now being opened up and put to use.

MARINETTE COUNTY GRAIN SHOW.

Two points stand out importantly in connection with the first annual grain exhibit by the Marinette County Order of the experiment station:

1. Prof. E. J. Delwiche, of the state agricultural college, said Marinette county is destined to become the producer of pure-bred seed grains for the entire upper part of the state.

2. The majority of the prizes were won by farmers of the newly settled parts of Marinette county, indicating the efficiency of the new settlers in such localities.

Professor Delwiche's statement created a deep impression, because it came from a man who has made farming conditions in Upper Wisconsin practically his life's study. His chief work is carried on at the state experiment farm at Ashland. Due to the county's location on the shores of Green Bay, its altitude and soil conditions Professor Delwiche said it was certain Marinette county would be a pure-bred grain seed producing county.

The exhibit took place at the Marinette county agricultural school on Saturday, January 8th.

It was decided to make the grain exhibit an annual event, to be held each year with the annual meeting of the experiment order. The following officers of the experiment order were re-elected: President, Fred Sweningson; vice president, John Tiedjens; secretary, D. S. Bullock, the latter being of Marinette.

Of the total number of awards new settlers, or farmers in the newly settled localities, won these awards: Eric Michelson, Pembine, first; R. F. Goodman, silver cup (Mr. Michelson took first on Triumphs at the state potato show on Swedish select oats; J. D. Roche, Pembine, second on Swedish select oats; Joachim Carstens, Crivitz, third on Wisconsin early black first, Farmers' Savings & Trust Company silver cup on Wisconsin No. 12 corn; Osborn Siverston, Loomis, second on Wisconsin No. 12 corn; F. E. Luke, Crivitz, first, Lauerman Bros., silver cup on Wisconsin No. 25 corn; C. A. Correll, Crivitz, second in same class; James Tossell, Crivitz, third in same class.

The complete awards follow:

SWEDISH SELECT OATS.

First prize—Eric Mickelson, Pembine, R. F. Goodman, silver cup.
Second prize—J. D. Roche, Pembine, $3 in merchandise, given by J. L. Hersey.
Third prize—Joachim Carstens, Crivitz, $1.

WISCONSIN PEDIGREE BARLEY.

First prize—Max Schlies, Peshtigo, Stephenson National Bank, silver cup.
Second prize—Adolph Feifarek, Peshtigo, two tins Moore's fly spray and sprayer, given by R. A. McDonald.
Third prize—Fred Sweningson, Peshtigo, $1.

WISCONSIN PEDIGREE RYE.

First prize—Morgan Grandy, Wausaukee, First National Bank, silver cup.
Second prize—Max Schlies, Peshtigo, $2 in merchandise, given by W. L. Schulz.
Third prize—Adolph Feifarek, Peshtigo, $1.

WISCONSIN EARLY BLACK SOY BEANS.

First prize—Albert Dettman, Marinette, Farmers' and Merchants' Bank, silver cup.
Second prize—Max Schlies, Peshtigo, $3 street blanket, given by J. B. Eggner.
Third prize—Jachim Carstens, Crivitz, $1.

WISCONSIN NO. 12 CORN.

First prize—Hans Silvertson, Loomis, Farmers' Savings and Trust Company silver cup.
Second prize—Osborn Silvertson, Loomis, $3 fountain pen, given by Krueger's Drug Store.
Third prize—Max Schlies, Peshtigo, $1.

WISCONSIN NO. 8 CORN.

First prize—Fred Cisar, Skidmore Land Company, silver cup.
Second prize—Marvin Loucks, Peshtigo, $3 in merchandise, given by F. W. Woolworth Company.

WISCONSIN CORN NO. 25 CORN.

First prize—F. E. Luke, Crivitz, Lauerman Brothers, silver cup.
Second prize—C. A. Correl, Crivitz, five gallons French San Jose Scale and Oyster Shell Bark Louse Exterminator, given by Watson Brothers.
Third prize—James Tossell, Crivitz, $1.

ASHLAND JUNCTION FARMERS' COURSE.

The third annual Farmers' School will be held at Ashland Junction, Ashland county, Wisconsin, covering a period of two weeks from March 7th to 11th and March 13th to 17th. All farmers attending the school are requested to bring a half peck of grain which was raised in 1915. This will be judged during the course. Those who attend the school will be expected to bring their own lunches, as there are no facilities at the station to accommodate people at meals. George C. Humphrey, of the animal husbandry department, Madison, H. M. Jones, weed expert, and E. J. Delwiche, superintendent in charge of the station, will conduct the school the first week and give most of the lectures and instruction. Frank Kleinheinz, the University shepherd, J. G. Moore, of the Wisconsin College of Agriculture, horticultural department; E. R. Jones, drainage expert, Miss Elizabeth B. Kelley, of the University Home Economics department, and J. G. Halpin, secretary of the Wisconsin Poultry Association, will have charge of most of the work the second week. Farmers who desire to attend this course should write to Prof. E. J. Delwiche, and state in their letter whether they will want to attend the course the first week or the second week.

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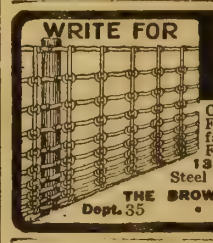

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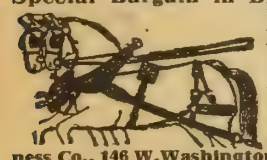

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." However, he decided not to tell Mrs. Burke of her just yet. The new pastor's first call was upon the Senior Warden, receiving a hearty welcome from Virginia Bascom, his daughter. Hepsey surmised that Maxwell was engaged and made a neighborly call upon Jonathan Jackson, the Junior Warder, to see what he thought about the matter.

CHAPTER V—Continued.

Mrs. Burke opened the blinds and windows, shook up the pillows on the lounge, straightened the furniture, dusted off the chairs and opened the door to the porch. She made a flying trip to the garden and returned with a big bunch of flowers which she placed in a large glass vase on the mantel. Then she hung Jonathan's dressing gown over the back of a chair and put his slippers suggestively near at hand. In a few moments she had transformed the whole appearance of the room, giving it a look of homelike coziness which had long been foreig to it.

"There now, Jonathan! That's better, isn't it?"

"It certainly is, Hepsey; it certainly is. I wonder why a man can't do that kind of thing like a woman can? He knows somethin's wrong, but he can't tell what it is."

Hepsey had almost forgotten her errand, but now that her work was done it came back to her with sudden force; so, puckering up her lips and scowling severely at the carpet, she began:

"The fact is, Jonathan, I didn't come over here to dust the parlor or to jolly you. I've come to have a confidential talk with you about a matter of great importance."

"What is it, Hepsey?"

"Matrimony."

Jonathan started eagerly and colored with self-conscious embarrassment; and after clearing his throat, nervously inquired:

"Did you think of contemplatin' matrimony again, Hepsey?—though this ain't leap year."

"I, contemplate matrimony? Oh, land of Gideon, no. It's about someone else. Don't get scared. I'm no kidnapper!"

"Well, who is it, then?" Jonathan inquired, with a touch of disappointment.

"My adopted son."

"You don't say! I've heard rumors about Maxwell and Virginia Bascom, but I didn't take no stock in 'em, knowin' Virginia."

"Virginia hasn't nothin' to do with it."

"Well, who has then, for land's sake!"

"I don't know the girl's name, but I saw her picture on his mantelpiece yesterday mornin', and I've had my suspicions for some time."

"Well, I suppose his marryin' ain't none of our business anyway, be it?"

"Yes, it is our business; if he's goin' to get married, the rectory's got to be fixed over a whole lot 'fore it's fit to live in. You know the Senior Warden won't lift his finger, and you've got to help me do it."

Jonathan sighed profoundly, knowing from past experience that Hepsey's word carried more weight than all the vestry.

"I suppose I have, if you say so, Hepsey."

"Yes sir, you've got to help me do it. No decent girl is goin' into that house as it is with my consent. It's the worst old rat-trap I ever saw. I've got the key and I'm goin' through it this afternoon and then I'm going' to plan what ought to be done."

"But it seems to me you're venturin' some. You don't know they're goin' to be married."

"No, but all the symptoms point that way and we've got to be prepared for it."

"But the people round town seem to think that Virginia has a first mortgage on the rector already."

"No doubt she thinks she has, but it ain't true. He's made a blunder, though, not announcin' his engagement, and I'm goin' to tell him so the first chance I get. I don't see why he should air his private affairs all over the town, but if he don't announce his engagement before long Virginia Bascom'll make an awful row when he does."

"Yes, and to the best of my knowledge and belief this'll be her fifth row."

"Well, you meet me at the rectory at two o'clock sharp."

"But we ought to consult the vestry first," the Junior Warden cautioned her.

"What for, I'd like to know?"

"'Cause they are the trustees of the property."

"Then why don't they 'tend to the property? The vestry are a lot of—"

"Sh! Hepsey, be careful. I'll be there, I'll be there!"

Mrs. Burke rose and started for the door, but Jonathan called out to her:

"Hepsey, can't you stay to dinner? I'd like awful well to have you. It would seem so nice and homelike to see you sittin' opposite me at the table."

"Am I to consider this a proposal of marriage, Jonathan?"

"Well, I hadn't thought of it in that light, but if you would I'd be mighty thankful."

But Hepsey was beating her retreat.

Jonathan stood for a minute or two in the middle of the room and looked very sober. Slowly he took off his coat and put on his dressing gown. Then he sat down and cautiously put his feet in another chair. Next he lighted a cigar—gazing about the room as if his late wife might appear at any moment as an avenging diety and drag him into the kitchen where he belonged. But nothing happened, and he began to feel a realization of his independence. He sat and thought for a long time and a mighty hunger of the heart overwhelmed him. Before he knew it a tear or two had fallen on the immaculate carpet; and then, suddenly recollecting himself, he stood up, saying to himself—such is the consistency of man:

"Sarah was a good soul accordin' to her lights, but she's dead and I must confess I'm powerful reconciled. Hepsey Burke's different. I wonder if—"

But he put the thought away from him with a "get thee behind me" abruptness and, putting on his coat, went out to water the stock.

CHAPTER VI.

The Missionary Tea.

"HM!" MRS. BURKE remarked to Maxwell abruptly one day during supper. "We haven't had a missionary tea since you came, and I think it's high time we did."

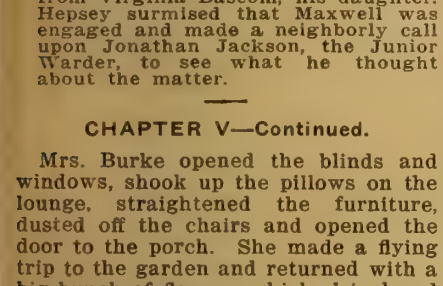
"What sort of a missionary tea do you mean?" the parson inquired.

"Well," Mrs. Burke responded, "our missionary teas combine different attractions. We get together and look over each other's clothes; that the first thing; then someone reads a paper reportin' how things is goin' in Zanzibar, or whats doin' in Timbuctoo. Then we look over the old clothes sent in for missionaries, mend 'em up, and get 'em ready to send off. Then we have tea and cake. I've had my misgivin' for some time that perhaps we cared more for the tea and cake than we did for the heathen; but of course I put such a wicked thought aside. If you value your reputation for piety, don't you ever speak of a missionary tea here except in a whisper."

"But I suppose the tea helps to get people together and be more sociable?"

"Certainly. The next best to religion is a cup of strong tea and a frosted cake, to make us country people friends. Both combined can't be beat. But you ought to see the things that have been sent in this last week for the missionary box. There's a smoking jacket, two pairs of golf trousers, several pairs of mismated gloves, a wonderful lot of undarned stockings, bonnets and underclothing to burn, two jackets and a bathin' suit. I wonder what people think missionaries are doin' most of the time!"

On the day appointed for the missionary tea the ladies were to assem-



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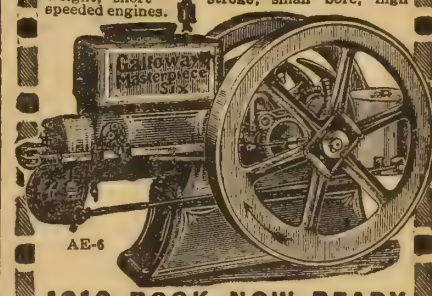

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ble at Thunder Cliff at four o'clock; and when Maxwell came home, before the advent of the first guest, he seemed somewhat depressed; and Mrs. Burke inquired:

"Been makin' calls on your parishioners?"

"Yes, I have made a few visits."

"Now you must look more cheerful, or somebody'll suspect that you don't always find parish calls the joy of your life."

"It's so difficult to find subjects of conversation that they are interested in. I simply couldn't draw out Mrs. Snodgrass, for instance."

"Well, when you've lived in the country as long as I have, you'll find that the one unfailin' subject of interest is symptoms—mostly dispepsy and liver complaint. If you had known enough to have started right with Elmira Snodgrass, she would have thawed out at once. Elmira is always lookin' for trouble as the sparks fly upwards, or thereabouts. She'd crawl through a barbed wire fence if she couldn't get at it any other way. She always chews a pill on principle, and then she calls it a dispensation of Providence, and wonders why she was ever born to be tormented."

"In that case," laughed Maxwell, "I'd better get some medical books and read up on symptoms. By the by, is there any particular program for this missionary meeting, Mrs. Burke?"

"Yes, Virginia Bascom's goin' to read a paper called 'The Christian Mother as a Missionary in Her Own Household.' To be sure, Ginty's no Christian mother, or any other kind of a mother; but she's as full of enthusiasm as a shad is of bones. She'd bring up any child while you wait, and not charge a cent. There goes the bell, so please excuse me."

The guests were received by Mrs. Burke. Miss Bascom entered the parlor with a portentous bundle of manuscript under her arm, and greeted Donald with a radiant smile. Pulling a pansy from a bunch in her dress, she adjusted it in his buttonhole with the happy shyness of a young kitten chasing its tail. After the others had assembled they formed a circle to inspect the clothing which had been sent in. There was a general buzz of conversation.

As they were busily going through the garments, Virginia remarked, "Are all these things to go to the missionaries at Tien Tsin?" and she adjusted her lorgnette to inspect the heap.

"Yes," Mrs. Burke responded wearily, "and I hope they'll get what comfort they can out of 'em."

"You don't seem to be very appreciative, Mrs. Burke," Virginia reproved.

"Well, I suppose I ought to be satisfied," Hepsey replied. "But it does seem as if most people give to the Lord what they can't use for themselves any longer—as they would to a poor relation that's worthy, but not to be coddled by too much charity."

"I think these things are quite nice enough for the missionaries," Virginia retorted. "They are thankful for anything."

"Yes, I know," Mrs. Burke replied calmly. "Missionaries and their families have no business to have any feelings that can't be satisfied with second-hand clothes, and no end of good advice on how to spend 5 cents freely but not extravagantly."

"But don't you believe in sending them useful things?" Virginia asked loftily.

"So I do; but I'd hate that word 'useful' if I was a missionary's wife."

"Might I inquire," asked Miss Bascom meekly, "what you would send?"

"Certainly! I'd send a 25-cent scent bag, made of silk and filled with patchouli-powder," said Hepsey squarely.

"Well," Virginia added devoutly, "sachet bags may be well enough in their place; but they won't feed missionaries, or clothe them, or save souls, you know, Mrs. Burke."

"Did anybody say they would?" Mrs. Burke inquired. "I shouldn't particularly care to see missionaries clothed in sachet bags myself; the smell might drive the heathen to desperation. But do we always limit our spending money to necessary clothes and food? The truth is, we all of us spend anything we like as long as it goes on our backs, er down our throats; but the moment it comes to supportin missionaries we think 'em worldly and graspin' if they show any ambition beyond second-hand clothes."

"Do you live up to your preachin', Mrs. Burke?" a little sallow-faced woman inquired from a dark corner of the room.

"Oh no; it hits me just as hard as anybody else, as Martin Luther said. But I've got a proposition to make. If you'll take these things you brought back with you and wear 'em for a week just as they are and play you're the missionaries I'll take back all I've said."

As, however, there was no response to this challenge, the box was packed and the cover nailed down.

(It is perhaps no proper part of this story to add that its opening on the other side of the world was attended by the welcome and surprising fragrance of patchouli, emanating from a little silk sachet secreted among the more workaday gifts.)

The ladies then adjourned to the front piazza, where the supper was served.

When the dishes had been cleared away the guests adjusted their chairs and assumed attitudes of expectant attention while Virginia stood up and shyly unrolled her manuscript, with a placid, self-conscious smile on her countenance. She apologized for her youth and inexperience, with a moving glance towards her pastor, and then got down to business. She began with the original and striking remark that it was the chief glory and function of woman to be a homemaker. She continued with something to the effect that the woman who forms the character of her children in the sancity of the home-life rules the destinies of the world. Then she made a fetching allusion to the "Mother of the Gracchi," and said something about jewels. Nobody knew who the "Gracchi" were, but they supposed that they must be some relatives of Virginia's who lived in Boston.

She asserted that the modern methods of bringing up children were all wrong. She drew a striking picture of the ideal home in which children always stood modestly and reverently by their parents' chairs, consumed with anxiety to be of some service to their elders. They were always to be immaculately neat in their attire and gentle in their ways. The use of slang was quite beneath them.

These ideal children were always to spend their evenings at home in the perusal of instructive books and the pursuit of useful knowledge. Then, when half past seven arrived they were to rise spontaneously and promptly and bid their parents an affectionate good night and retire to their rooms, where, having said their prayers and recited the golden text, they were to get into bed.

Portions of Virginia's essay were quite moving. Speaking of the rewards which good mothers reap in the virtues and graces of their dutiful offspring she said:

"What mother does not feel a thrill of exquisite rapture as she fondly gazes into the depths of her baby's eyes and sees there the budding promise of glorious womanhood. What mother does not watch the development of her little son with wondering pride, as she notes his manly, simple ways, his gentle reverence, his tender, modest behavior. What mother——"

Here Virginia came to an abrupt stop, for there was a terrible racket somewhere overhead on the piazza roof; a rope was suddenly dropped over the edge of the eaves and almost immediately a pair of very immodestly bare legs were lowered into view, followed by the rest of Nickey Burke's person, attired in his nightshirt. It was the work of a moment for the nimble boy to slide down the rope onto the ground. But, as he landed on his feet, finding himself in the august presence of the missionary circle, he remarked "Gee Whitaker bee's wax!" and abruptly took to his heels and sped around the house as if he had been shot out of a gun.

(To be continued.)

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

HEADACHES.

One of our readers writes as follows:

I enjoy reading the Home Department and I find many useful helps for the household. I would like to ask if anyone can tell me what to do for headaches. I have been subject to dreadful headaches for years and I would be very thankful if anyone could tell me something that would relieve me.

At the outset we want to say: Don't use patent headache cures. They may give temporary relief, but most of the drugs of which they are composed have a depressing effect on the circulation and may weaken the heart, in which case you have a worse trouble than headache on your hands.

Headache is a symptom, not a disease, and as a rule the real cause of the pain lies in other organs than the brain. The safest plan is to consult a physician and by proper medical treatment remove the cause. If all other organs of the body are in first-class shape there will not likely be much trouble with the head.

Headaches are most frequently caused by disorders of the digestive tract, as indigestion and constipation; second, abnormal condition of the eyes, ears, nose or throat; third, diseases of the pelvic organs; fourth, nervousness and fatigue.

On this subject of headaches one authority, Dr. Alice Farnham Leader, has this to say:

Headaches from digestive causes are usually frontal, although sometimes there may also be pain in the back of the neck. Moving the head aggravates the symptoms. The pain occurs because certain toxic substances have not been eliminated from the system. Naturally, the prevention of the toxaemia is to avoid such articles of diet as are known to disagree, and also to secure free elimination by the kidneys, the bowels and the skin. Drink plenty of water, and eat freely of fruit and vegetables; the liver should be relieved by a cathartic now and again.

The immediate treatment of an attack is to move the bowels by castor oil, salts or a Seidlitz powder; an enema is a very good adjunct to the cathartic. Plenty of very hot water should be ingested. Often a hot water bag placed over the stomach will relieve the pain.

Headaches from eye strain are located in the forehead around the eyes, and in the eyes, and often in the back of the neck. Using the eyes makes the pain worse, while a period of rest frequently gives temporary relief. Properly fitted glasses will be necessary to effect a cure.

Headaches from disease of the nose, ears, or throat will be associated with catarrh or other symptoms pointing to the organ affected and permanent relief can be obtained only by treatment of the cause by a reliable physician.

The headache of pelvic origin is usually located on the top of the head, and sometimes is felt only in a spot about the size of a silver dollar; for this the doctor must again be consulted, that the cause may be removed.

A nervous headache is usually felt in the forehead, the back of the neck, or the top of the head. There is often marked mental depression, as well as a feeling of heaviness especially on wakening in the morning. Such a headache is a warning of exhaustion of the nerves from overwork or worry, and if this danger signal is disregarded the result may be a nervous breakdown.

In all cases it is best to seek the advice of a competent physician. Much harm can be done to the general system by the ill-advised use of drugs, and the first step toward ridding one's self of headache is to get the system in perfect condition, indeed, when the general health is as it should be there will be no more headache to doctor.

FOUR-LEAF CLOVER EDGE.

Chain five, double crochet twice in fourth stitch back; chain four, double crochet twice in fourth stitch back (which will be center of clover); chain three, slip stitch in same stitch (center); chain three, double crochet twice in same stitch (center); chain three, slip stitch in same stitch (center); chain three, double crochet twice in same stitch (center); chain three, slip stitch in same stitch (center); chain three, slip stitch in top of first leaf. This makes the first clover.

*Chain eleven, double crochet twice in fourth stitch back; chain four, double crochet twice in fourth stitch back (which will be center); join with slip stitch in center of third leaf of clover just made; chain three, slip stitch in same stitch (center); chain three, double crochet twice in same stitch (center); chain three, slip stitch in same stitch (center); chain three, double crochet twice in same stitch (center); chain three, slip stitch in same stitch (center); chain three, slip stitch in top of first leaf. Repeat from *.

WANTS TO HEAR FROM OTHERS.

To the Editor:—As I have a very healthy baby I will send you a picture of her and myself. Her name is Doris

MRS. ALMA SCHAFFER AND HER THREE-MONTHS-OLD DAUGHTER, DORIS MARIE.

Marie. She is three months old and has light hair and blue eyes.

She has always had plenty of fresh air and sunshine. I hope to hear from some more mothers who have fresh air babies. Mrs. Alma Schaffer.

PERSONAL FAITH IN CHRIST THE ESSENTIAL THING.

To the Editor:—While not an authority on the subject, perhaps I can give "A Constant Reader" some light on the subject of the creeds of the different churches.

Were we to sum up the beliefs of the orthodox churches (Methodist, Baptist, Presbyterian, etc.) I think we would find it in the Apostles' Creed, which we all know.

The one fundamental fact on which they all stand is that we have salvation alone through faith in Christ as the Son of God. They may differ somewhat about the mode of baptism, about church government, etc., but they are all serving the same Christ. So, to my mind, it doesn't make so much difference to what church one belongs, the chief thing is to have a real, personal faith in Christ as a living Savior. Nor is it absolutely necessary to salvation to belong to any church. But when one becomes a Christian he naturally wants to be associated with people of like mind. The church is an inspiration to better living and, if a Christian, why not join it and go to work for other people? The church has made mistakes and sometimes isn't all that it should be, but it is God ordained, so let's stand by it.

Merely uniting with the church, however, doesn't make one a Christian. The Bible declaration is, "Believe on the Lord Jesus Christ and thou shalt be saved."

I do not know much about the distinctive teachings of the Presbyterian church. The Methodist church teaches the doctrines of a universal gospel, of free will (that is, through Jesus Christ God has provided salvation for all men so that whosoever will may be saved from sin); that whosoever is a Christian may know that fact in his own heart and spirit; that a Christian may be cleansed by grace from all sin and love God with all his heart and his neighbor as himself.

A Minnesota Reader.

ANOTHER PAIR OF TWINS.

To the Editor:—As I have seen so many baby pictures in your paper and only one pair of twins I thought I would send the picture of our twin girls, Alma and Velma Luckow.

At the time this picture was taken they were four months old and weighed fifteen pounds. They are now twenty-two months old. They weigh-

ALMA AND VELMA LUCKOW.

ed four and five and a quarter pounds when they were born.

They were brought up on mother's milk.

I hope to hear from more mothers, as I enjoy reading their letters.

Mrs. F. C. Luckow.

CREED IS INTERPRETATION OF BIBLE'S TEACHINGS.

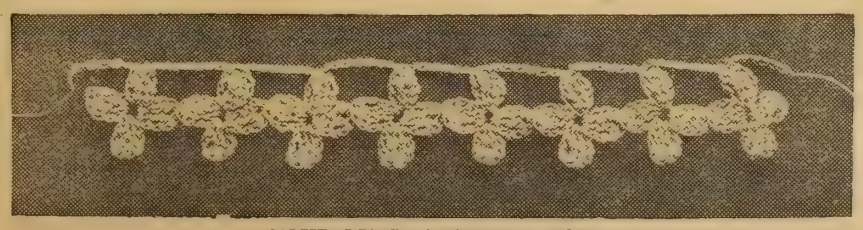
To the Editor:—Replying to "Constant Reader" in the February 3d issue will say that a church's creed is its belief, doctrine and teachings. The reason churches differ in creed is because of the different interpretations put upon the things the Bible teaches. I will name only one, baptism.

Some churches believe in infant baptism, while others hold that baptism follows believing and is a voluntary act on the part of the believer. Still others insist that baptism to be strictly in accordance with the Bible must be by immersion, while others hold that sprinkling or pouring fulfills the Bible's teachings.

The church member that feels that he or she is above the members of another church because their creed is not the same is in my opinion, a poor Christian. A Christian's guide should be his Bible; the interpretation that he puts upon it his creed.

He can be a good Christian without uniting with a church, but he does not fulfill the Bible's teachings unless he does his very best for the Lord's work which cannot be done unless he is one of a body of Christian workers for in union there is strength.

A Reader.



FOUR-LEAF CLOVER EDGE.

CORRECT HEIGHT FOR KITCHEN TABLE.

Backaches and worry; then tears! That is the order of things in kitchens where the tables are too low. Sometimes the children are blamed, but it isn't their fault. It's the table. It is a few inches lower than it should be and the muscles of the back are strained.

"There is a correct height for every table in every kitchen," says Miss Rebecca Bartholomew, assistant in domestic science in the Kansas State Agricultural College. Experiments have been conducted in her department which prove that the correct height for a table when a woman is four feet seven inches tall is twenty-seven inches. If the housewife is five feet five inches tall the kitchen table should be thirty and one-half inches high. In other words, for every five inches difference in a woman's height there must be a corresponding change of two and one-half inches in the height of the table.

NEEDS ASSISTANCE IN CAKE BAKING.

To the Editor:—I am having so much trouble with my cakes and I have been wondering if some of the readers of the Home Department could not help me. The cakes rise fine in the oven and seem to be baked through, but as soon as they are taken out they drop and are coarse grained. Can anyone tell me where the trouble lies? I have used different kinds of baking powder, but it is always the same. Would be thankful to anyone who tells me what is the matter, as I love fine grained cakes. Do you think the sugar could be the cause of it? A Reader.

THE COOKING OF BEEF.

The various cuts of beef differ in tenderness, flavor and cost according to the part of the animal from which they are taken. The nutritive value of all cuts is practically the same.

The parts which have least exercise and least connective tissue (all rib and loin cuts) are the juciest and most tender. The shoulder portions, the rump, round, chuck are the next, while the neck and leg portion are the toughest and least desirable in flavor, though their nutritive value is as great as the other.

Much money is wasted by the improper cooking of the high-priced cuts. Since rib portions (prime roasts) cost more simply because they have more highly flavored juices and are more tender they should be so cooked as to retain as much of their juice as possible. As cooking for tenderness is not necessary the only other requirement is the development of the proper color.

Heat a pan or roaster and place the meat in it, turning until all cut surfaces are well seared. Do not use a covered roaster. The searing makes a coat or crust on the outside which prevents the escape of the juices. The meat is literally "cooked in its own juices." If the roast is placed properly the melted fat will run down the sides and baste the meat sufficiently. The degree of cooking depends upon personal taste. No water need be used. When water is used or a cover placed on the pan the resulting steam will break the seal and allow the juices to exude. Thus the special

value of the high-priced cut is lost. Salt should not be added at first, as it tends to draw out the juices. Persons who enjoy the delicate flavor of meat prefer to season it on serving.

The above method of cooking gives a very juicy roast. On carving the juice will "follow the knife." When water is used or a covered roaster a dry meat results—as practically all of the juice is thus extracted.—[May C. McDonald.

FOR THE HOUSEWIFE.

When plaster of paris is used to fill cracks in the plaster mix it with vinegar instead of water. It will not harden so quickly, whereas if water is used the paste will harden before you can successfully use it.

If paint brushes have dried stiff with paint in them let them simmer a few minutes in vinegar which has been brought to the boiling point. Remove and wash thoroughly in strong soap suds.

DOROTHA GENEVIEVE ROWE.

I am the only little child of Mr. and Mrs. Willis Rowe. I get lots of fresh air and a drink of water several times a day. I am five months old and weigh sixteen and one-half pounds.

Perspiration stains can be removed by a solution of oxalic acid and water in a proportion of one drop of oxalic acid to twenty drops of water.

If a bay leaf is added to tomato soup it will give it a delightful flavor.

Seeded raisins cut in half and added to a nut salad will make it taste much better.

FUDGE SANDWICHES.

The natural desire for sweets may be satisfied in a very good way by giving fudge sandwiches to children from six to sixty, says Miss Bab Bell, of the Missouri College of Agriculture. Beat fudge until creamy, and while still soft spread between thin slices of buttered bread. If not cooked too hard it may be kept in a bowl covered with a moist cloth for use as filling later.

RECIPES.

Doughnuts.—Two eggs, large cup of sugar, seven tablespoonfuls melted lard, one pint of sour milk, one teaspoonful of soda, salt, nutmeg and flour enough to make a soft dough.—M. P.

Cookies.—One cup of sour cream, one-half cup of butter, one teaspoonful of soda, salt, nutmeg and flour enough to make dough just so it can be handled.—F. C.

Creamed Small Onions.—Four cupfuls of peeled onions, one cupful of milk, two tablespoonfuls of butter, two tablespoonfuls of flour, two teaspoonfuls of salt, pepper to taste. Cook the onions in boiling water forty minutes; drain (saving the water for soup.) Cover with the milk; add the salt and pepper, and bring to a boil; add the butter and flour, which have been rubbed together until smooth, and boil for three minutes. Always have the butter soft before adding the flour.

Baked Hashed Potatoes.—Eight cupfuls of boiled and chopped potatoes, one cupful of grated onion, one cupful of milk, one tablespoonful of salt, a dash of pepper, one tablespoonful of drippings. The potatoes should be washed and boiled with the skins on, then pared and chopped fine while hot. Put the drippings and onion into a baking pan, and heat through; add the potatoes, the salt and pepper; mix well, smooth the top, and pour the milk over all. Put in a hot oven for thirty minutes or until a nice light brown. Sprinkle with parsley.

Ginger Sandwiches.—Mix one-fourth cupful of finely chopped preserved Canton ginger and one-third cupful of chopped pecan nut meats. Add two tablespoonfuls of finely cut candied orange peel, one tablespoonful of ginger sirup, one teaspoonful of vinegar and a few grains of salt. Spread between thin unsweetened crackers. These are quickly made and are nice served with tea.

Creamed Pork.—Cut three slices of fat salt pork in small cubes, try out and drain. Put two tablespoonfuls of pork fat into a saucepan, add three tablespoonfuls of flour and stir until well blended. Then pour on gradually, while stirring constantly, one cupful of milk. Bring to the boiling point and season with one-half teaspoonful of salt and a few grains of pepper. Add one and one-half cupfuls of cold roast pork, cut in small cubes, and when thoroughly heated add pork scraps.

Ham and Vegetable Soup.—One cup canned corn, one large onion, one cup canned tomatoes, one ham bone, one large potato, salt. Boil the ham bone until any meat on it is tender. Remove the bone and cook the vegetables in the meat stock. Add the cooked ham, season and serve.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

GEORGE WASHINGTON.

As you all know, George Washington lived on a big farm in Virginia. The farm overlooked the Potomac river and Mr. Washington had his own dock where the big ships sailed up to be loaded with tobacco from the plantation.

Those ships had a great fascination for the boy George and he vowed that public school like you little folks—he learned his lessons from his mother when he became a man he would go to sea and be a sailor and he listened with all his ears to the tales the seamen told him.

George Washington didn't go to a and Mrs. Washington was very strict and stern so that George had to learn his lessons thoroughly. One of the biggest lessons she taught him was obedience, which probably was one reason he was such a good soldier. Also, it helped her in later years, for George's father died when he was eleven years old and his mother guided him to manhood alone.

George was contented on the farm for four years after his father's death and then, when he was fifteen, he decided he wanted to go to sea. He sought and secured his mother's consent and got all ready for the life of a sailor. But he was doomed to disappointment. An uncle in England got wind of the plan and sent to Mrs. Washington a letter in which he begged her not to let him go if she cared anything for his future. Life on the sea was not in those days what it is now and he feared that the boy would be mistreated. Mrs. Washington hated to disappoint the boy, but she knew his uncle must know what he was talking about, so she showed George the letter and told him he must give up the plan.

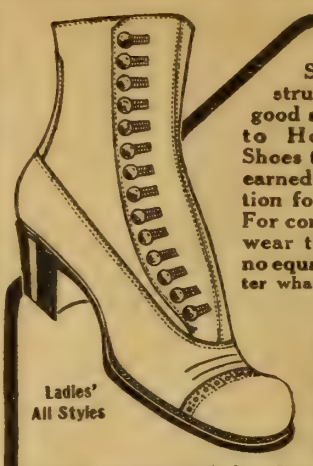
MARLETA ANNA RAKOW.
Daughter of Mrs. F. Rakow.

Now young George had a bad temper and it flared up at this interference with his dearest dream. But fast on the heels of his anger came love for his mother and he swallowed the hurt and said, "I shall stay, mother, if you wish it." And his mother softly answered, "I thank you, son; God grant you may never regret the choice."

George Washington never did regret his choice. I think he must have been very, very glad when the stirring days of his service to his country came that he had obeyed his mother, for had he gone to sea he perhaps would never have been able to fill the place that made him the "father of his country."

MY PETS.

Dear Young Folks:—I love to read your stories and I thought I would tell you a story of my pets. One day this spring I went into the wash house and there I saw the mother cat had made her nest with five kittens. When the



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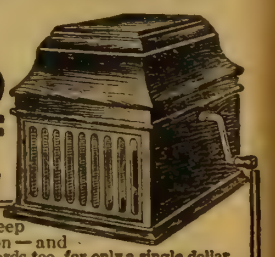

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kittens were one week old one was killed.

One sunny morning I put my chickens and duck in a basket out in the sun. In a short time I heard them crying. I went out and saw the cat with one chicken in her mouth. I thought she was going to eat them, but she did not. The chicken cuddled down beside her and stayed there for quite a while. When it went out doors the cat would go out and carry it back into the nest. The chicken slept there for a long time and then one day it got its head caught in the door and was killed. —Mildred.

ANOTHER STORY ABOUT GEORGE WASHINGTON.

Dear Young Folks:—I am a reader of the Young Folks page and I am going to send you a story about George Washington. His home was near a great river. His father was rich and there were so many storehouses on the place that it almost made a town of itself.

Mr. Washington was very fond of horses and after he died, when George was still a boy, Mrs. Washington had to take care of them. Her favorite horse was a sorrel. One day George's playmates were there and they were playing around the horses and George said, "If you will put the bridle on the horse and catch him I will ride him." So they caught the horse and George got on him to ride. The horse kicked and jumped and at last he gave a great plunge and fell to the ground, dead.

Early one morning Mrs. Washington asked George if he had seen anything of her favorite horse. "Yes, madam, I killed him. I tried to ride him and he gave a jump and fell to the ground, dead." She looked sadly at him and said, "I am sorry that my favorite is dead, but I am glad that my son always speaks the truth."
—William.

WHAT EVERY WISE CHILD SHOULD DO.

If I want to be happy
And quick on my toes,
I must bite my food slowly
And breathe through my nose.

I must press back my shoulders,
And hold up my head,
And not close my window
When going to bed.

I must soap my bath-flannel,
And scrub all I know;
I must then take a towel
And rub till I glow.

I must never be idle,
And loll in my chair;
Or shout like a demon,
And act like a bear.

I must play and not fidget,
Read books and not flop;
Begin all with a purpose,
And know when to stop.

I must know what is noble,
And do what is kind;
I must strengthen my body
And tidy my mind.

Yes, if I would be healthy,
And free from all cares,
I must do all I've told you,
And mean all my prayers.
—Anon.

International Sunday School Lesson

Lesson for February 20, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

CHRISTIAN BROTHERHOOD.

LESSON TEXT—Acts 4:32-5:16.

GOLDEN TEXT—Love one another from the heart fervently.—I Pet. 1:22 R. V.

The Sanhedrin had tried threatening upon the disciples and this is generally pretty weak business. But their threat meant danger and the disciples were not unduly puffed up over their deliverance. With all their believing friends they prayed, and in response the Holy Spirit came upon them in still further measure (4:23-31).

I. The Spirit-Filled Believers, 4:32-37. The two sections of this lesson are really one and are designed to bring out sharply the contrast between the Holy Spirit-filled church and an evil spirit-filled man. The communism of the early church was (a) Christian communion (See 2:44); and it was (b) for a special occasion; (c) it was benevolent—each had according to his "needs" (4:34, 35); (d) it was voluntary (5:4), and (e) it recognized the right to private property (See 5:4, 9). He, the Holy Spirit, does bring that unity, that altruism, those active social relations and services of which Pentecostal communism is the type. Unity and love are seen in genuine Christianity in all ages, but the forms of their expression may differ. The power of the Holy Spirit was manifested, not merely in love and unity which it produced, in the brotherhood thus evidenced, but also in the testimony given for the Lord Jesus Christ, "with great power gave the apostles witness to the resurrection of the Lord Jesus." There is much witness to the resurrection of the Lord Jesus Christ in our day, but not always "with great power." When we are filled with the Holy Spirit it is of Jesus, and especially of His resurrection, that we will bear witness. Another result of being filled with the Holy Spirit was that grace was upon all. "Grace" means favor. We are not told whether it was God's favor or man's favor that was upon them. It seems to imply both (See Luke 2:52). No man looked upon his own interests, but "every man on the things of others." Distribution was made according as each had need, not according to his ability, not according to his notable service. The pre-eminent illustration of Christian love in the brotherhood at Jerusalem was Barnabas. If we had more of such today we would have less of union labor troubles and missionary deficits. We do well to consider carefully the six distinguishing features of the early church: (1) A praying church (4:24-30), (2) a Spirit-filled church (31), (3) a united church (32), (4) a witnessing church (33). (5) a ministering church (34), 35), (6) a multiplying church (36, 37).

II. The Devil-Possessed Unbeliever, 5, 1-16. Barnabas had received great praise for what he had done at the impulse of the Holy Spirit in his life. It is an exceedingly fair picture, but the scene of the early church had been from foes without, now it faces the greater peril of foes within. And when this great question, regarding the deity and personality of the Holy Spirit, is first brought to light, God, through his church, dealt with it in a stern manner. The devil is always presenting his imitations of everything good and holy. Ananias and Sapphira were not willing to make a like sacrifice. They, too, "sold a possession," but they secreted a part of the price and brought the rest with the intent to deceive the church. The Holy Spirit quickly informed the church of this hypocrisy and, Spirit-guided, they were not deceived. For Ananias to lie in the atmosphere of love and consecration engendered by the Holy Spirit made his crime the more unpardonable. The same words are used in describing his actions as those used in describing the actions of Barnabas up to a certain point. But what a difference we see subsequently. In the case of Barnabas his act was a deed of self-forgetting love; in the case of Ananias it was one of calculating hypocrisy. We thus see that the early church was not as perfect as some would have us imagine it to be.

The second section of this paragraph (vv. 12-16) is a record of what the results of this vindication of the Holy Spirit were. First the Spirit came upon the apostles and literally overflowed upon all those about them.

In the second place those who were thinking of joining the church for mercenary motives were held back from so doing (v. 13).

If the Holy Spirit were present in such power today there would be fewer hypocrites who would dare to join themselves to it.

The deception of Ananias was deliberate (v. 4); he had talked it over with his wife (vv. 2, 9), and he was a grave danger to this early church. It threatened to choke the very fountain of love and unity which had sprung up in the midst of the selfish world.

The stern judgment that came upon Ananias and Sapphira was richly merited and indeed was gracious, for it sifted and saved the church.

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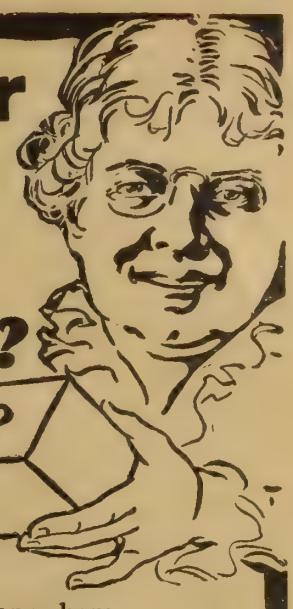

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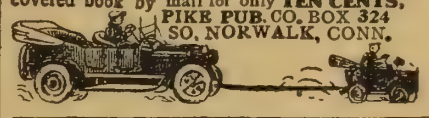

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7250 Ladies' Waist.—Cut in sizes 34 to 48 inches bust measure. This simple, tailored waist has plain front and back. The neck may be finished with standing or flat collar and the sleeve may be long or short, with roll cuffs. Box plait or coat closing may be used.

7555 Girls' Dress.—Cut in sizes 6, 8, 10, 12 and 14 years. This dress consists of a separate blouse and skirt. The skirt is of plaid material and the blouse is of plain material. The skirt is cut in three gores.

7540 Girls' Apron.—Cut in sizes 2, 4, 6, 8, 10 and 12 years. Linen, gingham or calico can be used to make this serviceable apron. It closes at the back and can be made with either the plain or bishop sleeves. The collar and bands around the sleeves are finished with edging.

7547 Ladies' Waist.—Cut in sizes 34 to 44 inches bust measure. This waist may be made of either one or two materials. The closing is at the back and the sleeves may be long or short. The sleeve is finished with a pretty fancy cuff.

7571 Ladies' Skirt.—Cut in sizes 22 to 32 inches waist measure. Whipcord, velveteen, gabardine and broadcloth are liked for plain skirts like this one. The skirt is cut in five gores and has two small plaits at each side of the front. High or regulation waistline may be used.

7277 Children's Dress.—Cut in sizes 2, 4, 6 and 8 years. This simple frock has a plain blouse with wide sailor collar at the neck and long or short sleeves. The skirt is made with three gores and is slightly circular in cut. There is a wide belt where blouse and skirt are joined.

7559 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. Serge, gabardine or broadcloth can be used to make this dress with the trimming and shield of contrasting material. The pattern provides for a shield. The skirt is cut in two gores and is joined to a yoke.

6865 Ladies' Apron.—Cut in sizes 34 to 44 inches bust measure. This is one of the favorite bungalow aprons, made with a small waist with sleeves and body cut in one, closing in the back and joined to a skirt which completely covers that of the dress.

7260 Children's Dress.—Cut in sizes 2, 4, 6, 8 and 10 years. This practical dress is suitable for either school or playtime. It has a simple sacque dress, closing at the side of the front and worn over bloomers which are mounted on a band and gathered at the knee.

7556 Ladies' Dress.—Cut in sizes 34 to 44 inches bust measure. This dress has a plain waist with side front closing and a separate shield and collar. The skirt is cut in two gores and is joined to a yoke. Long or short sleeves may be used.

Price of any of these patterns 10 cents each.

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THE Taber Lined silo is well known in the corn belt and has many claims worthy of the consideration of every farmer. The manufacturers claim that they are the only company turning out an absolutely clear long leaf pine silo. All lumber is thoroughly creosoted and boiled in creosote oil. This makes it non-shrinkable and acid proof. Owing to its being air tight there will be no frozen silage. We suggest our readers write the Taber Lumber Company, Dept. D, Keokuk, Iowa, for a copy of their new catalog which is just published.—Adv.

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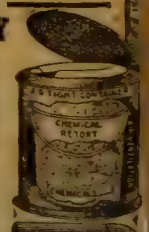

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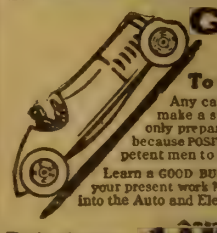

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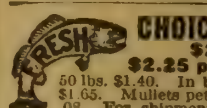

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PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Age of Mule.

Do you tell the age of a mule by his teeth the same as a horse?

The dentition for the mule is supposed to take place at the same ages as for the horse, hence the same indications as to age would apply to each.

Warts.

I have a colt, two years old, that has several blood warts. Have tried everything, but nothing seems to help it. Have used carbolic acid. I would like to have your advice.

A nice method of treating warts is that of cutting them off clean and then cauterizing the wound. You may also get good results by applying the following paste to each wart. White arsenic and gum arabic, each one dram, and water to make six drams.

Cancer.

I have a mare with sore lips. It first started with a very small sore on the upper lip and kept eating until it got over both upper and lower lips. She is healthy and always calling for her feed, but she is falling off slightly in flesh. I work her when I need her. Her mate has a small touch of the same thing. It eats the lips quite deep. The mare has had it for three weeks. At times it seems dead and then again it is raw, with blood oozing out of the mouth. I keep no other horses in the barn for fear they will get the same thing. Slobbers run out of her mouth, as it seems she cannot work the lips to take in saliva. I have to shell her corn, as she cannot work her lips to get the ear right. What can I do for her and what is your advice?

It is very likely that the trouble with your horse's lips is of cancerous nature. This is not a very easy disease to overcome once it has a good start. The most rational and most effective treatment of this is the total cutting away of the affected parts just as soon as the trouble starts. But when a great amount of tissue becomes involved this becomes an impossibility. The best thing for you to do is to have a first-class veterinarian give these animals a thorough examination and advise you in accordance with the findings.

Wart Near the Eye.

I have a three-year-old horse that has a wart an inch and a half long above his eyelid. It is about an inch in diameter and has been there for four or five months. I have put castor oil on it, but it doesn't seem to help any. Can you tell me what to do for it?

In treating warts near the eye one must be careful not to injure the eye. In the case you mention try tying a strong cord tightly around the base of the wart, thus cutting off the blood supply and causing the wart to come off. The quickest and best method is to let a veterinarian remove it by means of the scalpel or scissors.

Windgalls.

I have a big mule with road puffs. What would be the best and safest remedy? I have tried several patent remedies without results.

The mule must have complete rest during treatment and for some time after. A sharp blister with biniodide of mercury will promote absorption of the excess secretion, should subdue the inflammation, strengthen the walls of the sac and finally cause the windall to disappear. In case the blistering does not bring about the desired after results after a few applications may be necessary to resort to line firing or other surgical operation.

BEST INSECTICIDE.

With many fruit growers, especially the professional fruit men (the term used advisedly and means the men who do nothing else but fruit growing) spraying has become a regular part of the summer program. Experience has gone so far at this time that the lessons learned by actual work have such value. Thirty years since it was thought that Paris green was the only suitable poison to mix with the fungicide, Bordeaux mixture. Doubtless Paris green would still be used if we could not do better. But there are found to be points of advantage in the use of arsenate of lead. For one thing, it remains in suspension in the spray mixture far better than the green, does not require that constant agitation necessary for the former.

For another thing, the arsenate is sticky in its nature and when once lodged on the little apple, where it is put to foil the worm in its efforts to enter, it stays there for an indefinite time. It will not deteriorate in the sun, and rain is not likely to wash it off. But it stays put, until Mr. Worm appears and gobbles it. It combines as well with the newer fungicide, lime-sulphur, as it does with the Bordeaux.

For some years lead arsenate was always bought in the paste form and when used required to be thinned with a small portion of water and well mixed before adding to the contents of the spray tank. Now it is offered by the druggist in the form of a dry powder. In this form it is easier to use and is just as strong and effective as the paste. About the same quantity is needed to add to the fungicide.

The way to use the powder is to mix first with a little water and then add the thinned dose to the contents of the barrel. The improvements made all tend to make the necessary work of spraying a little easier and that encourages the effort.

KANSAS MAN WINS PRIZE.

F. E. Slason, of Plainville, Kan., was awarded the first prize of $500 by the Hyatt Roller Bearing Company in the contest to determine the greatest mileage attained by automobiles on their original equipments of Hyatt bearings. Slason's car, a 1909 model, had traveled 261,000 miles—equal to more than ten times around the world—up to last October when the contest closed, and since then thousands of miles more have been added to this record.

The second prize was awarded to James Lewis, of Shelton, Conn., whose 1909 Mitchell had traveled 218,734 miles when the contest closed.

Seven different makes of cars are represented among the sixteen prize winners, the total distance traveled being 2,512,435 miles—equal to more than 100 times around the world. The average mileage of all sixteen prize winners was 156,814, or more than six times around the world. All of the cars are being operated by their owners today.

The Hyatt bearings in all the cars never gave the slightest trouble. All the mileages were investigated and substantiated and were submitted to the judges with the evidence. The judges were: Alfred Reeves, general manager of the Automobile Chamber of Commerce; Coker F. Clarkson, general manager of the Society of Automobile Engineers, and Julian Chase, editor of "Horseless Age."

The other prize winners follow; J. W. Norman, Paint Rock, Texas, 1909 Mitchell, 183,837 miles; Sam Deck, Darlington, Ind., 1910 Mitchell, 175,875 miles; J. D. Albright, Bowie, Texas, 1911 Ford, 172,683 miles; Earl G. Druding, Ellsworth, Wis., 1909 Ford, 171,418 miles; S. T. & E. R. R., Stockton, Cal., 1909 Mitchell, 160,100 miles; Jacob Stark, Chicago, Ill., 1906 Logan, 148,150 miles; J. J. Moore, Philadelphia, Pa., 1911 Ford, 147,751 miles; John Fraser, Jr., Milwaukee, Wis., 1908 Buick, 139,523 miles; George P. Mason, Des Moines, Iowa, 1910 Maytag, 135,000. Dr. P. M. Bertolet, Reading, Pa., 1910 Mitchell, 127,681 miles; James W. Hines, Minneapolis, Minn., 1910 Hudson, 120,256 Linus Krene, Buffalo, N. Y., 1910 Mitchell, 120,000 miles; J. N. Burnett, Dallas, Texas, 1909 Flanders, 116,557 miles; F. I. Wiltse, Oneonta, N. Y., 1908 Ford, 113,061 miles.

ST. LOUIS A WORLD FUR MARKET.

The million dollar fur sale which began in St. Louis, Missouri, January 13th last, emphasizes emphatically the change of the fur market from London to American cities. Great fur traders, who have much to do with controlling the world's trade met at this sale conducted at the Funsten Fur Exchange. Large fur houses of Europe were present, practically all of them, as well as the fur buyers of Canada and the United States. The bidding was spirited.

The scene on the exchange floor was not unlike a legislative chamber. Each of the 300 expert buyers sat behind his own desk facing the elevated courtlike bench of the auctioneer. Pages and messenger boys scurried about. The selling was rapid—and exciting. A bid of a dollar might actually be a bid of a thousand if the lot chanced to be one in which there were a thousand pelts. In the same way a 10-cent raise might easily mean a cool hundred dollars. Yet the buyers, seasoned veterans, took all the excitement calmly enough, though the sale of a single pair of silver fox skins for $2,350 did bring a ripple of applause. For such skins to bring $1,820 and $1,900 was a mere nothing. The furs of fifteen different countries were represented, at all kinds of prices—from 6 cents upward. The prices for the fur of common blue and black house cats went up as high as 46 cents each, and the demand was lively. On the whole, the prices commanded were high, in some cases showing an advance of 30 per cent over last year. Domestic skins from American trappers were much in evidence.

Among the buyers present were experts representing Goetz Freres, Paris; J. Arionwitch & Co., Moscow; The Eitingon Schild Co., another Russian concern; G. Gaudig & Blum, Theo. Thorer, Inc., Otto Erler and H. Jaeckel Sons, all German fur companies; H. M. Koenigswerther, of Leipsic; The T. Eaton Co., of Winnipeg, and many others.

This great sale, which will be the first of many, represents a distinct triumph for Funsten Bros. & Co.

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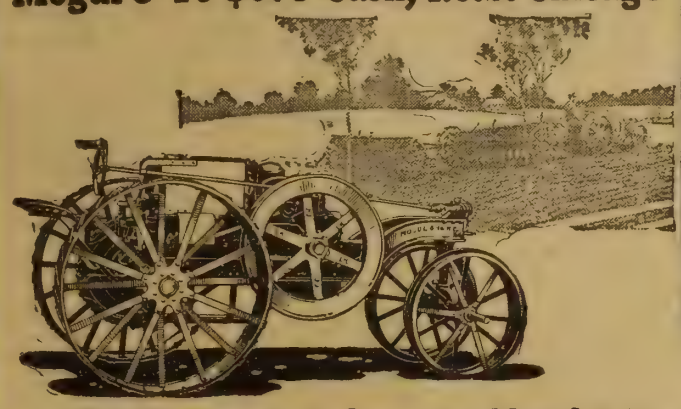

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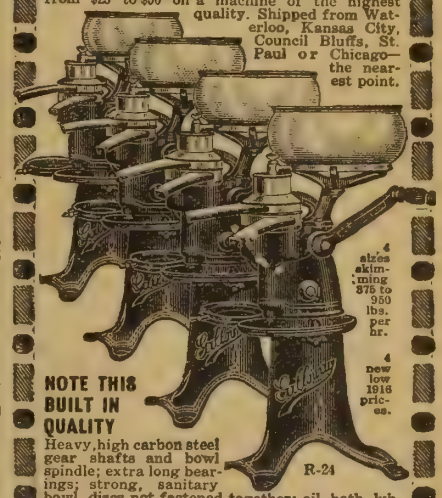

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NEWS OF THE SALE RING

J. C. Hendricks' Poland Sale.

One of the big surprises in the live stock world was the sale of J. C. Hendricks, Hazel Green, Wis. Owing to the corn crop failure and other unfavorable conditions that have prevailed to hurt the swine game, and basing their opinions on the average obtained at Duroc and Poland sales held earlier in the season, it was universally predicted that we would not see any very high averages on the entire sale circuit. Moreover Mr. Hendricks has not done any showing in the past few years and did not have the advantage of pull which grand championships and show records give a sale. However, the average obtained was $75.30 on the sows, which represented the price that the majority of the animals brought. There were no extravagant prices paid and no low prices, the top sow selling at $135. This was a two-year-old sow, weighing close to 600 pounds. The top priced spring gilt was $125, weighing close to 440 pounds, a remarkable growth for an eleven-month-old gilt in good breeding condition. These two top priced animals went to North Bend, Wis., to J. D. McDonald and W. W. Quackenburk, Melrose, Wis., respectively. The bidding was snappy from the start and practically every animal started at $50 and above. Practically all of the leading big-type breeders in Wisconsin and northern Illinois were present and there was hot competition between them. The offering was very uniform in type, development and quality, which is a credit to Mr. Hendricks' ability as a breeder. The breeders present, although anxious to buy these animals as low as possible, made statements of praise and commendation during the sale that stimulated the bidding and gave the newer buyers greater confidence in their own judgment. Sows were sold to buyers in all sections from Wisconsin, as well as Illinois and Iowa. The following is a detailed list of the sale:

1.	J. D. McDonald, North Bend, Wis.	$135.00
2.	Ben Feldermon, Bellview, Ill.	90.00
3.	Fred Suter, Fountain City, Wis.	70.00
4.	Heck Bros., Burlington, Wis.	82.50
5.	Geo. Lesh, Lyons, Wis.	75.00
6.	L. E. Pease, Millville, Wis.	70.00
7.	W. L. Proctor, Barlington, Wis.	80.00
8.	Ed Hendricks, Hazel Green, Wis.	80.00
9.	Columbia County Asylum, Wyocena, Wis.	55.00
10.	Ben Feldermon	70.00
11.	W. W. Quackenburk, Melrose, Wis.	125.00
12.	L. E. Pease	77.50
13.	Geo. Martin, Darlington, Wis.	70.00
14.	J. D. McDonald	80.00
16.	P. T. Rambow, Decorah, Ia.	62.50
17.	A. Bergum, De Forest, Wis.	60.00
18.	Jas. Daws, Galena, Ill.	57.50
19.	E. W. Hendricks, Hazel Green, Wis.	100.00
20.	L. P. Martiny, Chippewa Falls, Wis.	65.00
21.	Dobson & Eastman, Lancaster, Wis.	72.50
22.	W. H. Brunker, Ridegway, Wis.	77.50
23.	W. L. Proctor	67.50
24.	Lathrop & Sons, Wauzeka, Wis.	67.50
25.	Frank Moorhouse, Lancaster, Wis.	80.00
26.	Jno. Adickes, Platteville, Wis.	77.50
27.	Heck Bros.	72.50
28.	Heck Bros.	57.50
29.	W. H. Brunker	80.00
30.	Griswold Bros., Livingston, Wis.	65.00
31.	E. W. Hendricks	75.00
32.	W. W. Quackenburk	77.50
33.	Ben Feldermon	57.50
34.	C. H. Whitmore, Evansville, Wis.	70.00
35.	W. L. Proctor	42.50
36.	Columbia County Asylum	52.50
37.	Frank Renalde, Lancaster, Wis.	57.50
38.	L. P. Martiny	42.50
39.	L. P. Martiny	52.50
40.	Frank Renalde	55.00
41.	Henry Drafahl, Janesville, Wis.	52.00
42.	J. D. McDonald	105.00

Smiley's Poland China Sale.

The first sale on the Southern Wisconsin Poland China Sale Circuit was that of Wm. Smiley & Son, Albany, Wis. There was a goodly sized crowd present and for a time bidding was snappy. However, the crowd realized that there would be a chance to buy about 200 Poland China sows within the next four days and,though bidding was brisk, they did not start high. Owing to unfavorable conditions last spring these gilts did not get a promising start and because of this they were hardly up to the usual Smiley standard. The bulk of the offering was of late spring farrow, as many of their early pigs were affected by the unseasonably wet weather last March and April. A large part of the offering stayed in the home county, which is evidence of the esteem with which the neighbors regard Mr. Smiley and the quality of his swine. There were no exceptionally high prices paid and no very low prices, the price being very uniform. There were a number in the sale bred by other breeders which, though of good quality did not carry as good a finish and, therefore, did not bring what they were worth. Col. Ira Cottingham conducted the sale and impressed the buyers by his clean, sincere, honorable methods. Wisconsin breeders and buyers are fortunate to hold or attend a sale cried by such an auctioneer and we hope he will be with us often in the future. Below is a detailed list of the sale:

1.	C. A. McCornuck, Mechanicsville, Ia.	$42.50
2.	E. B. Eastwood, South Wayne, Wis.	42.50
3.	A. W. Cole, Lodi, Wis.	50.00
4.	J. D. McDermott, Albany, Wis.	40.00
5.	J. D. McDermott	47.50
6.	Fred Buckner, Spring Green, Wis.	37.50
7.	J. D. McDermott	37.50
8.	W. J. Yager, Lena, Ill.	32.50
9.	Grant Walrath, Edgerton, Wis.	35.00
10.	Frank Schultz, Brodhead, Wis.	37.50
11.	J. McDermott	40.00
12.	Columbia County Asylum, Wyocena, Wis.	32.50
13.	F. P. Jeffery, Monroe, Wis.	32.50
15.	J. McDermott	42.50
17.	Wm. Towne, Albany, Wis.	85.00
19.	E. B. Eastwood	32.50
21.	C. E. Young, Brodhead, Wis.	35.00
22.	J. McDermott	35.00
23.	Otto Baars Lodi, Wis.	23.00
24.	J. McDermott	32.50
25.	Otto Baars	30.00
26.	D. Finnane, Evansville, Wis.	30.00
27.	Otto Baars	27.50
28.	D. Finnane	30.00
29.	Grant Walrath	32.50
30.	W. J. Yager	32.50
31.	J. P. Goldsmith, Evansville, Wis.	42.50
32.	W. H. Yager	35.00
33.	D. Finnane	35.00
34.	Grant Walrath	37.50
35.	W. J. Yager	35.00
36.	C. H. Whitemore, Evansville, Wis.	32.50
37.	Otto Baars	30.00
38.	Henry Drafahl, Janesville, Wis.	30.00
39.	Otto Baars	30.00
39.	Otto Baars	30.00
40.	Otto Baars	30.00
41.	Otto Baars	30.00
42.	D. Finnane	30.00
44.	J. McDermott	32.50
45.	W. G. Vance, Lima Center, Wis.	32.50
48.	Lee Gillett, Albany Wis.	35.00
49.	D. Finnane	35.00
46.	C. H. Whitemore	55.00
47.	Caverly, Toulon, Ill.	52.50
50.	Lee Gillett	37.50
51.	C. S. Maltby, Janesville, Wis.	42.50
52.	C. S. Maltby	45.00
55.	E. B. Eastwood	45.00

E. W. Hendricks' Poland Sale.

The third sale on the Southern Wisconsin Poland China Sale Circuit was that of E. W. Hendricks, Hazel Green, Wis., Thursday, February 10th. It demonstrated that there is always a demand for the best in live stock. Although there had already been close to 100 Poland China sows sold in two days, the demand seemed to be as great as ever and bidding was brisk right up to the last animal. The offering was good from every standpoint, viz: breeding, development and type. Although not carrying quite the size and finish as a whole as those sold the day before, yet they were above the average seen in most public sales. The top priced gilts were a fall yearling and a spring gilt that sold for $137.50 each. The boar, Black Jumbo, was the object of much interest, as he is one of the few 1,100-pound boars in the breed. Although only three years old he has attained this remarkable size, yet is smooth with eleven-inch bone and active on his feet. His daughters and sows bred to him were bid on very liberally. All sections of Wisconsin were represented on the sale seats, which is another indication of the interest that has so rapidly developed in Wisconsin. Northern Illinois, Iowa and Indiana buyers also purchased several head. This good seed stock should prove of much value to the buyer, if properly taken care of. The crowd was royally entertained with a dinner served by Mrs. Hendricks and her obliging friends and it was thoroughly enjoyed and appreciated by everyone present. A detailed list of the sale is given below:

1.	A. E. Hensley, Cappa, Ind.	$115.00
2.	J. D. McDonald, North Bend, Wis.	137.50
3.	L. E. Pease, Millville, Wis.	70.00
4.	Mr. Sutter, Fountain City, Wis.	85.00
6.	Geo. Madden, Fox Lake, Wis.	72.50
7.	John Crook, Dodgeville, Wis.	70.00
8.	Tony Rosenmeyer, Cuba City, Wis.	72.50
9.	E. Caverly, Toulon, Ill.	102.50
11.	John Belcher, Ramora, Mo.	90.00
12.	J. C. Hendricks, Hazel Green, Wis.	137.50
14.	Chas. Greenwald, East Dubuque, Ill.	85.00
15.	James Denvan, Fox Lake, Wis.	80.00
16.	W. H. Maxwell, Dixon, Ill.	62.50
17.	F. J. Sweeny, North Buena Vista, Ill.	65.00
18.	Geo. Van Matre, Orangeville, Ill.	77.50
19.	B. J. Stevenson, Raymond, Ia.	65.00
20.	Geo. Martin, Darlington, Wis.	80.00
21.	J. C. Hendricks	65.00
22.	Columbia County Asylum, Wyocena, Wis.	62.50
23.	John Clayton, Belmont, Wis.	52.50
24.	Edgar Martin, Winchester, Ind.	70.00
25.	W. H. Maxwell, Winchester, Ind.	57.50
26.	W. J. Yager, Lena, Ill.	67.50
27.	C. S. Maltby, Janesville, Wis.	50.00
29.	B. L. Shunkweiler, Raub, Ind.	47.50
30.	J. Crook	47.50
31.	F. J. Showers, Orangeville, Ill.	47.50
32.	Jos. Huntington, Darlington, Wis.	47.50
33.	H. O. Adams, Fredericksburg, Iowa	47.50
34.	Geo. Madden, Fax Lake, Wis.	50.00
35.	T. A. Carkill, Nortonville, Kan.	45.00
36.	F. E. Purdy, Orfordville Wis.	47.50
37.	W. J. Yager	50.00
38.	H. O. Adams	45.00
39.	S. H. Whitmore, Evansville, Wis.	52.50
40.	James Trewartha, Hazel Green, Wis.	50.00
41.	W. J. Yager	57.50

Madson's Poland China Sale.

Mace Madson & Sons, Madison, Wis., sold thirty-eight bred sows at public sale at an average of $41.30. Although not a high average, many breeders in the state would consider themselves very fortunate indeed to be able to obtain this average on their sales this year. However, the prices were not in keeping with the quality of the offering, but being the last sale in the circuit the breeders were pretty well supplied, especially as these will be kept largely on boughten feed that costs "real" money at the present time. There was an extraordinarily large crowd of breeders and farmers. The offering was in good flesh, but not overfat. They combined good size with quality, but were not as large as many of the big-type herds. Among the heavy bidders were J. I. Ethredge, Madison, Wis., who bought for the Oconto Farms, Oconto Falls, Wis.; Frank Spencer, Appleton, Wis.; Senator Bichler, Random Lake, Wis., and several others. A detailed report is given below:

1.	J. P. Martiny, Chippewa Falls, Wis.	$57.50
2.	Paul Renner, Appleton, Wis.	47.50
3.	W. B. Noyes, Beaver Dam, Wis.	40.00
4.	M. Palmer, Neillsville, Wis.	50.00
5.	Senator Bichler, Random Lake, Wis.	50.00
7.	B. McNulty, Cobb, Wis.	50.00
8.	B. Hefty, Riley, Wis.	50.00
9.	L. M. Stusse, Riley, Wis.	47.50
10.	Frank Spencer, Jr., Appleton, Wis.	55.00
11.	R. L. Perryl, Spencer, Wis.	45.00
12.	C. Nelson, Edgerton, Wis.	35.00
13.	John Slater, Madison, Wis.	37.50
14.	J. I. Etheridge, Madison, Wis.	37.50
15.	John Slater	37.50
16.	J. I. Etheridge	47.50
17.	C. B. Rutherford, Lake Mills, Wis.	32.75
18.	Mr. McNulty	37.50
19.	A. Getzgo, Madison, Wis.	30.00
20.	Senator Bichler	35.00
21.	J. D. Little, Janesville, Wis.	35.00
22.	S. Good, Madison, Wis.	40.00
23.	W. H. Carey, Argyle, Wis.	47.50
24.	J. I. Etheridge	50.00
26.	E. Padden, Mortonville, Wis.	32.50
27.	F. E. Hayner, Sun Prairie, Wis.	32.50
28.	F. E. Hayner	32.50
30.	Elmer Renner, Appleton, Wis.	32.50
31.	Elmer Renner	40.00
32.	Zack Kinney, Three Oaks, Mich.	52.50
33.	A. Getzgo	35.00
34.	J. Thompson	35.00
35.	J. L. Davidson, Madison, Wis.	32.50
37.	R. E. Lawrence, Madison, Wis.	32.50
38.	J. L. Davidson	32.50
39.	Sidney Good, Madison, Wis.	40.00
40.	F. Spencer, Appleton, Wis.	42.50
41.	Elmer Renner	17.50
42.	B. Hefty	20.00
45.	Frank White, Woodstock, Ill.	30.00

OZAUKEE COUNTY BREEDERS.

The Ozaukee County Holstein-Friesian Breeders' Association will hold its annual meeting at Cedarburg, Wisconsin, February 24th. This association has over fifty members and expects to increase its membership materially at the coming meeting. Many farmers have purchased pure breds the past year. C. F. Dineen is secretary of the association.

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Gathered by Representatives of The Wisconsin Farmer

Shekletons' Stallions.

UNDER date of February 7th, Frank P. Shekleton & Sons, Lawler, Iowa, write as follows: "Last week was a very stormy week here, but in spite of that stallion buyers came in on nearly every train, and we made quite a number of satisfactory sales, which shows that buyers find what they want and at the right prices when they come to our barns. Among our sales for the past week are the following: G. F. Overholt, Manley, Iowa, is a breeder of Percherons and was looking for a stallion to head his herd of pure-bred mares. Mr. Overholt is a discriminating buyer and would buy nothing but the best, having been in the market for a stallion for a year and, finding nothing that would suit him, he visited our barns and after looking over our two-year-old stud colts he selected the large, massive black Percheron colt, Dalton. Mr. Overholt said he was the best Percheron colt he has seen in years and he has every reason to be proud of his purchase, as this colt is a grandson of Besique, and with the breeding and conformation that he possesses should make a great sire. V. Moline selected the 2,200-pound Percheron stallion, Lester. Mr. Moline lives in the northern part of South Dakota and wanted a horse with great scale and conformation to put on his ranch. Lester is a tried sire and should make good in his western home. W. C. Danner, New Hampton, Iowa, selected the rising five-year-old gray Percheron, King George. This horse now weighs a trifle over 2,100 pounds and has very heavy bone. Mr. Danner has a good herd of grade Percheron mares and wanted a heavy-boned stallion for his own use. To L. A. Schaefer, Parker, S. D., we sold the imported black Percheron stallion, Pickard. Mr. Schaefer is a breeder of Percheron horses and has a bunch of young pure-bred mares to breed this spring. John Schaler, St. Paul, Minn., selected the imported bay Belgian stallion, Mas A. Mons. This horse weighed a trifle over 2,300 pounds when Mr. Schaler bought him and cost him a lot of money, but Mr. Schaler has a lot of grade Belgian mares and will make this horse noted as a great sire. To Frank Kodako, Cloverdale, N. D., goes the thick-set roan Belgian stallion, Romeo. Mr. Kodako has a small herd of mares and selected this colt on account of his thick, heavy-set build. We have a very choice bunch of imported and American-bred stallions of the ton and over type, and will be able to suit anyone, whether they want the very best or a good stallion to put on the stand. Parties desirous of buying stallions this spring will save money by writing to us and getting our prices and descriptions before they buy." When writing mention this paper. See the advertisement on page 45.—Adv.

Currie's Hampshire Swine Sale.

THE Hampshire swine sale of R. L. Currie, Viola, Wis., to be held Wednesday, February 23d, is one which our Hampshire readers should not fail to attend. This is one of the oldest established herds in the state of Wisconsin and one of the best. Mr. Currie has bred and owned many of the highest priced Hampshires ever sold in the state and Illinois and Iowa buyers have purchased from him very heavily. The offering in this sale consists of 100 head. This includes his worthy mature matrons as well as their promising yearlings and younger offspring. There are twenty of these big foundation sows, forty extra good spring gilts and the balance fall yearlings and 1915 fall pigs. The yearling and older sows are daughters of such boars as Aristocrat Jr., a grandson of the Illinois grand champion boar, Bon Ton, King Midas by Viola Chief, Orchard Hill Duke Jr., an outstanding boar sired by Orchard Hill Duke. The sows are bred for spring litters to De Kalb's General McArthur, one of the best bred sires living, being a son of Erlanger and out of Jennie Aylor. The sows not bred to De Kalb's General McArthur are bred to Currie's Champion and Currie's King. Plan to attend this sale or send a mail bid to the auctioneer, Chas. W. O'Neill, Bridgeport, Wis., or H. S. Hoard, representative of The Wisconsin Farmer. See page 44.—Adv.

Haigh's Percheron Dispersion.

THE entire Percheron stud of John H. Haigh, Pickett, Wis., will be sold at public auction March 1, 1916. The sale will be held at Omro, Wis. An interesting catalog showing breeding and giving description has been issued and will be sent on request. Mr. Haigh has been one of the leading Percheron breeders in central Wisconsin and has bred and owned many very valuable horses. He recently sold his farm and is, therefore, dispersing his herd. Write for catalog and look it over. When writing kindly mention The Wisconsin Farmer. See page 45. —Adv.

Valuable Free Book.

EVERY farmer who owns an engine or expects to buy one ought to know about engines—how to judge them, how to apply simple tests, how to figure exactly what an engine is worth. This interesting and valuable information is given in the free illustrated book, which will be sent without any obligations to any reader. Simply send name today to E. H. Witte, 2716 Oakland, Ave., Kansas City, Mo., and mention their advertisement on page 28.—Adv.

Valuable Farm Building Books.

THE Gordon-Van Tine Lumber Company of Davenport is offering in their advertisement on page 48 to send every reader of this paper, free, two books containing 300 modern house plans, showing photographs, color schemes, floor plans and all architectural details. It is said that it cost $10,000 to prepare each of these books and it is certain that they will prove of great value and interest to every reader who is considering building a new home. They are also offering free a big barn book, showing the most approved plans and methods of barn construction. In their advertisement are shown pictures of some of these various plans, together with other construction materials of interest to every farmer. The Gordon-Van Tine Company is one of the oldest lumber concerns in Iowa. For over half a century they have given satisfactory service to thousands of customers and boast a list of over 100,000 satisfied patrons. Their building materials, ready-cut houses, barns, adjustable wall silos, etc., are all sold on a strong "satisfaction or money back" guarantee. All that it is necessary to do in order to get the valuable plan books, catalogs, roofing samples, etc., mentioned in their advertisement, is to fill out the attached coupon and mail it to Gordon-Van Tine Co., 5935 Case St., Davenport, Iowa, mentioning this paper and what things you are especially interested in.—Adv.

The Short-horn in America.

AN announcement of special interest to all Short-horn adherents appears on page 44. The American Short-horn Breeders' Association has planned to render a broad service to the Short-horn interests at large. "The Short-horn in America," which will be published as a quarterly, beginning April 1st, is an important part in this plan. The publication will be under the direct charge of Frank D. Tomson, for many years connected with the agricultural press. It is not intended that "The Short-horn in America" will be an advertising medium except that it will carry a breeders' directory as explained in the announcement. Hundreds of inquiries for Short-horns are received each year at the association office and it is desired that this breeders' directory will be sufficiently representative that it may be supplied to all such inquiries and furnish the information needed. This publication will become a reliable record of Short-horn progress. It will contain expressions from representative Short-horn authorities. It will, in fact, become the exponent of Short-horn affairs throughout the land. The association invites the co-operation of every breeder and prospective breeder of Short-horns. The plan has far-reaching possibilities.—Adv.

McDonald's Poland Chinas.

ONE of the greatest Poland China herds in Wisconsin is that of J. D. McDonald, North Bend, Wis. They are not only well bred, carrying the blood of the most noted animals of the breed, but by the records made at the leading fairs in the Northwest they have proven themselves to be animals of great individual merit. Mr. McDonald has a herd of close to 200 animals and his show herd has won heavily at the Northern Wisconsin State Fair, Minnesota State Fair and Wisconsin State Fair. His matured sows are big and prolific, weighing as high as 800 pounds. His boars are big with heavy bone and of smooth quality. His spring pigs are well grown, of good type and willl develop into good individuals. He is now offering bred sows and gilts that with proper care will prove very profitable.—Adv.

155-Egg Progressive Incubators for $7.85.

SOME of the many phenomenal hatches that have been obtained by using Progressive incubators are shown in the form of testimonial statements from users on the Progressive incubator advertisement on page 20. Records like these are not an accident—they are the result of years of careful planning and the working out of details by the makers and then by employing high quality workmanship and materials in their construction. The price is as low as the quality is high, their big 155-egg incubator selling for only $7.85. The many special features of the Progressive are shown in their advertisement. You can get more information regarding them and receive their new 1916 combination offer without obligation on your part by writing to Progressive Incubator Co., Box 128, Racine, Wis., and mentioning this paper.—Adv.

Karo Adds to the Joy of Living.

HOUSEWIVES of the United States have awakened to the fact that Karo corn sirup, introduced some years ago, is not a passing fad, but a staple food product that has come to stay and to grow in popularity. In thousands of farm homes all over the country it has become as staple as granulated sugar. The Corn Products Refining Company announce that during the past year 65,000,000 pails of this food have been sold, and the demand is increasing steadily. To realize the full satisfaction of the breakfast hour, when the wind is blowing crisp and keen across miles of open snow fields and the mercury is trying to sneak through the bottom of the thermometer, one needs to have a plate of steaming hot griddle cakes, just off the fire, with a pitcher of Karo sirup handy. As a special inducement to housekeepers the makers of Karo sirup are offering a fine aluminum griddle at less than half its usutl price when the order is accompanied by 50 cents' worth of Karo labels. It makes better cakes than "the kind mother used to make" on the old-fashioned iron griddle that stood under the kitchen sink and smoked and burned and it's lots easier kept clean. If you havn't tasted griddle cakes made on a Karo aluminum griddle and smothered in Karo sirup give thanks that you have something yet to live for.—Adv.

Knudson's Durocs and Guernseys.

DAUGHTERS of Valley G. are advertised for sale on page 47 by Allic S. Knudson, Brodhead, Wis. Valley G. is one of the best Duroc boars in the Northwest. He is great by virtue of his breeding, by virtue of his good individual merit and by virtue of his offspring. He is a litter brother of the noted boar, Illustrator, that was grand champion at the Illinois State Fair and sold for $2,000. As an individual he is one of the best to be found. Although he weighs over 1,000 pounds and has eleven-inch bone, he is not coarse and full of wrinkles. He has a short, wide head, a long, smooth, strong back, deep sides and thick, well-let-down hams, He transmits to his sons and daughters his great size and his refined quality and they develop rapidly into high-class animals. The gilts which are advertised for sale are bred to Colonel Defender and Crimson Again. Mr. Knudson is also a breeder of registered Guernsey cattle and is offering some excellent young bulls of May Rose, Glenwood and Rilma breeding. A number of these are from advanced registry dams of choice breeding. For pedigrees and further information write to the above address.—Adv.

50,000 Butterfly Separators in Use.

WHEN a cream separator has been used on more than 50,000 farms and found so satisfactory that its users are enthusiastic over it there is no room for doubt that it is designed along right lines, carefully built and efficient in use. This is the case with the New Butterfly, shown in the Albaugh-Dover Co.'s advertisement on page 19. One of the most attractive things about their offer on this machine is that you can get one on thirty days' trial and, if not satisfied with it, can return it at the maker's expense, which includes freight charges both ways. If you want to keep it you can pay for it at the rate of only $2 a month, without interest and without any extras, letting it earn its own way in extra profits. You can read and see its many special features set out in the advertisement and can then get a free catalog and details of their special offer by filling out the attached coupon and mailing it to Albaugh-Dover Co., 2158 Marshall Blvd., Chicago, Ill. Please mention this paper when doing so.—Adv.

Harmony Stock Farm Short-horns.

TEN very good Scotch Short-horn bulls are advertised for sale on page 47 by J. E. Kennedy, Janesville, Wis. These were sired by Strathallen King 296426, one of the best grandsons of the noted bull, Whitehall Sultan. His sire sold for $5,000 and his dam sold twice for $950. For pedigrees and further information in regard to these animals write to the above address.—Adv.

Easy Terms on Edison Phonographs.

YOU can get one of the new Edison phonographs, with your choice of records, on trial and if not satisfied can return them, or if you desire to keep this wonderful home entertainer you can pay for it at the rate of only $1 down and the balance at the rate of a few cents a day. If you have not seen the new Edison book you can get one without any obligation on your part by addressing F. K. Babson, 4482 Edison Block, Chicago, Ill., and mentioning the advertisement on page 38. —Adv.

Lybrand's Percheron Dispersion.

THE Lybrand Percheron Stud, Richland Center, Wis., will be dispersed at public sale, Monday, February 21st. This is one of the largest and best lot of Percherons in southern Wisconsin. The mares are a lot of big, level, drafty producers that are regular breeders. For many years this stud has been the mecca for big breeders to replenish their stock of young breeding stock. The character of the stallions and mares used has attracted buyers from all parts of the middle West. Owing to the recent death of Mr. Lybrand the herd will now be discontinued and the entire herd of sound, drafty mares, as well as the promising young mares and stallions will be sold out. The black stallion, Tripoli 27449 (46168), an imported horse of tried and proven worth wiill be sold as well as seven of his sons, four yearlings and three weanlings. The female offering consists of fifteen tried and proven mares, three two year olds and eight weanlings. Tripoli sired the younger females and they have all inherited his rich black color. Catalogs giving pedigrees and description have been issued and are ready for distribution. Send for one at once to Mrs. R. C. Lybrand, Richland Center or J. W. Martin, Gotham, Wis. —Adv.

Short-horn Calf Futurity.

THE American Short-horn Breeders' Association has made a total appropriation of $7,000 for the calf futurity classes for 1916 at the Iowa State Fair, Des Moines; Ohio State Fair, Columbus; American Royal, Kansas City, and The International, Chicago; a liberal appropriation and one that should meet with a general response by Short-horn breeders. Entries for senior calves close March 1st; junior entries close June 1st, with no privilege to substitute after entry is made. The limiting of this privilege is directly in favor of the small breeder. If the privilege to substitute were extended to a later date the advantage would clearly rest with the larger breeders and exhibitors who are apt to have a greater range of selection. Entries should be sent to the association office, 13 Dexter Park avenue, Chicago, Ill. The general appropriation for shows and fairs for the year, made by the Short-horn Association, show a large increase and are widely distributed. Detailed information will be available at an early date. It is a broad plan that the association has worked out, and a popular one with the many interested fair associations and exhibitors.—Adv.

Lefebure's Belgians.

HENRY LEFEBURE & SONS, Fairfax, Iowa, write as follows: "On Tuesday, February 1st, Dave Risk, the live stock artist of Chicago, visited the Lefebure Stock Farms at Fairfax, Iowa, and upon seeing the twenty largest Belgian stallions, photographed twelve in a group and then weighed them, finding the average weight of the twelve to be 2,174 pounds. The photograph of this group of twelve will be seen in the agricultural journals in the very near future and we believe this the best and heaviest group of Belgian stallions in America. The twenty weigh twenty tons, are from two to six years old, sound and right in every way. Five of these were the first-prize group of the Iowa State Fair, Minnesota State Fair and the Panama-Pacific Exposition this year. We are enjoying a nice trade, one of the recent sales being a pair of fillies to Arthur Smith, of Sycamore, Ill., and a two-year-old stallion to a club of farmers at Cartwright, N. D." See page 45 and when writing for prices or information kindly mention this paper.—Adv.

Taking the Labor Out of Plowing.

THE secret of plowing lies in the shape of the plow, which enables it either to follow along the lines of least resistance or else requires extra pulling power because it is not properly designed. Janesville plows are the result of the most careful study and experience in making a twist moldboard that cuts neatly, lays over a clean furrow, and requires a minimum of pulling power. Their booklet, offered free in their advertisement on page 27 tells how to reduce the labor of plowing greatly, while doing a thorough job. You can get it by writing to Janesville Machine Co., 41 Center St., Janesville, Wis., and mentioning their advertisement in this paper. At the same time it will pay you to inquire regarding their other kinds of high-grade farm implements and machinery.—Adv.

Burn Brae Farm Durocs.

THE Burn Brae Farm, Rosendale, Wis., owned by Chas. A. Peterson, is advertising Duroc spring gilts. These gilts were sired by Burn Brae Distinction and Hazelhurst Colonel. Burn Brae Distinction is a son of the noted boar,

NEXT WEEK'S SALE PROGRAM

Monday, February 21 — Percherons, J. W. Martin, Mgr., Richland Center, Wis.

Wednesday, February 23 — Hampshires, R. L. Currie, Viola, Wis.

CURRIE'S HAMPSHIRE SWINE SALE

WEDNESDAY, FEBRUARY 23, 1916, VIOLA, WISCONSIN

100 Head Reg. Hampshire Swine of All Ages--Well Bred--Well Grown--Good Type--Well Belted--Prolific

THIS offering is the result of many years of careful breeding and good care. That I raise good ones is shown by the fact that I have shipped to many of the best breeders in Iowa, Illinois and Wisconsin My present herd is of the type that wins in the show ring. This is an opportunity for every farmer who is interested in good Hampshires to get the best of breeding stock at his own price. Auctioneer Col. Chas. W. O'Neill, Bridgeport, Wis. Send mail bids to the auctioneer or H. S. Hoard, representing The Wisconsin Farmer.

R. L. CURRIE - - - - - **VIOLA, WISCONSIN**

Distinction and out of the sow, Crowd Anna Wonder by Brigadier, the noted boar of Ed Baxter. Hazelhurst Colonel is by H. C. Nodolf's noted boar, Col. E. and out of Pilot Girl 2d, a sow bred by E. D. McReynolds. The gilts offered for sale are bred for March and April litters to Burn Brae Golden Model, a son of Golden Model Chief. These sows are well grown, of good type, large size and smooth quality.—Adv.

Birchwood's Guernseys.

THE Birchwood Guernsey Farm, Rosendale, Wis., owned by M. L. Welles, is advertising some exceptionally good registered Guernsey heifers and yearling bulls for sale on page 47. These were sired by the noted bull, Dairymaid's King 12898. This bull is backed by some of the highest producing blood in the Guernsey breed, both his sire and his dam come from long lines of high producing ancestry. His full sister, Dairymaid of Pinehurst, made 910 pounds of fat in a year, which is equivalent to 1,137 pounds 80 per cent butter. As an individual, Dairymaid's King, cannot be faulted, being a bull of great size with good width and depth, a long, straight rump with a soft, yellow skin. The heifers and bulls advertised for sale are out of A. R. cows of choice breeding. Any of our readers who are in the market for a yearling bull, ready for immediate service, can do no better than to look over these animals. They are well grown, of good dairy type and there is every reason to believe that they will transmit the desirable qualities which they have inherited. For pedigrees and description of each individual write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

Rust Bros.' Holsteins.

A TWENTY-EIGHT-POUND bull is advertised for sale on this page by Arthur Rust, West Allis, Wis. This bull was born May 14, 1914, so is ready for immediate service. His dam, Aaltje Salo Princess 3d Pontiac, as a four year old made 27.99 pounds of butter in seven days. In a year she gave 16,646.10 pounds of milk and made 754.26 pounds of butter. She is a daughter of Johanna Pontiac De Kol, that has twenty-two A. R. O. daughters. Among these are four with records from 27.54 to 29.74 pounds of butter in seven days and six others with records above twenty pounds. His sire was Johanna Rue 3d's Lad, that has forty-eight A. R. O. daughters, four with records from thirty to 36.86 pounds of butter in seven days and twenty-eight others above twenty pounds. The sire of the bull advertised for sale is Cornucopia Netherland Mechthilde, that won third prize as a yearling at the 1913 Wisconsin State Fair. From this limited description of the breeding it will be seen that high producing blood flows in the veins of this bull. For an extended pedigree and description write to the above address.—Adv.

Derivan's Poland Chinas.

ATTENTION is called to the change of advertisement of James Derivan, Fox Lake, Wis., on this page. Mr. Derivan's Polands are well and favorably known to many of the readers of The Wisconsin Farmer. He reports very favorable results obtained from his advertising this year in spite of the corn crop failure. In fact, he is practically sold out of spring and yearling boars and sows and is now advertising 1915 September pigs of both sexes. The writer met Mr. Derivan on the Poland China sale circuit where he bought a number of outstanding bred sows. At the sale of B. W. Young, Prosper, Minn., he bought a gilt sired by Rood's Big Joe by Big Joe by Smooth Wonder and out of a daughter of long King's Best. At the E. W. Hendricks' sale at Hazel Green, Wis., he bought three excellent sows of approved breeding and high individual merit. If you want some good fall gilts or boars write him at once.—Adv.

Little's Milking Short-horns.

THE Short-horn herd of Harvey H. Little, Evansville, Wis., is distinguished both for the heavy milking qualities as well as the great size and good type of the individuals. Although the milking ability of the cows has been kept uppermost in selecting breeding stock it has not been obtained by any decrease in physical perfection. The yearling bulls now offered for sale are out of heavy producing cows, giving as high as 1,100 pounds of milk per year. They were sired by Bonnie Scotchman, a grandson of the noted bull, Whitehall Sultan. These young bulls are well developed and of good, straight type. See page 47.—Adv.

Good Money in Little Ford Milking Stools.

THE Little Ford milking stool, shown in the advertisement on page 33. pays for itself in a short time with the milk which it saves from spilling. It also helps keep the milk clean. These stools are made of durable metal and are fully guaranteed. Agents are wanted everywhere to sell this stool for $1.50 and they are said to be big sellers wherever shown and introduced. Write for attractive agents' proposition and circular to J. A. Paul, 903 Washington St., Waterloo, Iowa, and kindly mention this paper.—Adv.

Collin's Poland Chinas.

BIG-TYPE Poland China bred gilts are advertised for sale on page 47 by P. N. Collins, River Falls, Wis. Mr. Collins issues a private sale catalog, which is very interesting. It shows the breeding of the animals being offered for sale and convinces one that these gilts carry the blood of the best known animals of the breed. His Poland Chinas are especially prolific, averaging ten to the litter. The bred gilts offered for sale were sired by Black Bone, Square Deal and Black Model. Black Bone is a boar of great size with eleven-inch bone and is a son of the $1,100 boar, Black Big Bone, first-prize boar at the Minnesota State Fair. Square Deal is a son of a 1,000-pound boar, Lakewood Ideal, and Black Model is a son of Peter Mouw's noted boar, Black Orange. These gilts are bred for spring litters to Black Model and Big Ben, a choice yearling boar of exceptional size. These gilts are well developed and the smooth, stretchy kind that develop into large matured sows. For further information in regard to these animals write to the above address.—Adv.

Green's Durocs.

DUROC boars and gilts of April farrow are advertised for sale on page 47 by W. T. Green, Orfordville, Wis. These were sired by Professor 2d, a son of the noted show boar, Professor, and are out of sows of Chief J. E. D., Ohio Chief and Grant's Colonel breeding. Mr. Green has an excellent herd of Durocs, which he has developed by careful selection of his breeding sires and dams. He has always purchased good individuals of proven lines of breeding, regardless of what they cost, realizing that the cost of seed stock is of little consequence in proportion to the quality of the animals produced. For pedigrees and further information in regard to the animals offered for sale write to the above address.—Adv.

Bate's Dairy Short-horns.

GEORGE WENHAM & SONS, Ft. Atkinson, Wis., are offering some extra good Bates dairy Short-horn cows for sale on page 47. These were sired by the noted bull, Clayton Buttercup 19588. He was a son of Imp. Duke Buttercup, whose daughters are noted for their heavy milking ability. Eight of his daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these cows are bred to Oxford I 2d and are due to freshen soon. Mr. Wenham is also offering five choice yearling bulls, sired by Oxford Duke I. For further information in regard to these animals write to the above address.—Adv.

Marinette County Asylum.

POLAND CHINA swine and Holstein cattle are advertised for sale by the Marinette County Asylum, Peshtigo, Wis. They are offering bred gilts bred for spring farrow and can still supply a few good boars ready for spring service. In Holsteins they are offering some choicely bred young bulls sired by King Walker Segis 3d and will also price a few females. For extended pedigree and further information in regard to these animals write to the above address. See page 46.—Adv.

Frank Morley's Short-horns.

SHORT-HORN bulls, ready for immediate service, are advertised for sale on page 47 by Frank Morley, Baraboo, Wis. These were sired by McK's Masterpiece and out of big, heavy-producing cows of choice breeding. Mr. Morley is also offering a few bull calves from two to ten months of age. The yearlings are of white, red and roan color, are well grown and of good, straight type. For pedigrees and description write to the above address.—Adv.

Ward's Holsteins.

REGISTERED Holstein cows, yearling heifers and yearling bulls, ready for service, are advertised for sale on page 46 by C. E. Ward, Palmyra, Wis. The yearling heifers and bulls are sired by the 31.11-pound bull, Briar Abberkerk De Kol 76694. He is an exceptionally good individual, being very long-bodied, wide and deep and of good, straight conformation. For pedigrees and further information write to the above address.—Adv.

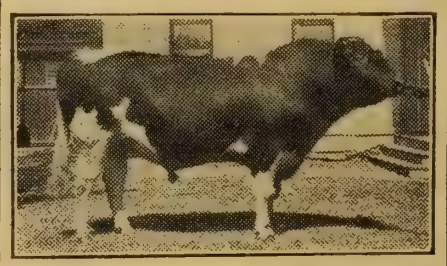
THE BUILDINGS AND HOLSTEIN HERD OF BALTZ HOESLY, NEW GLARUS, WIS., WHOSE ADVERTISEMENT APPEARS ON PAGE 46.

Grundy's Short-horns.

THE Short-horn herd of A. T. Grundy, Oshkosh, Wis., is made up of high-producing animals of Bates breeding. This herd has been established for a great many years and is one of the best Bates herds in the Northwest. Heifers eight to twenty months of age and bulls of serviceable age and younger are now being advertised for sale on page 47. Mr. Grundy is also a breeder of big-type Poland China swine and is offering some extra good spring boars and fall gilts. For further information in regard to the animals now being offered for sale write to the above address.—Adv.

A Home Built Concrete Mixer.

THE Sheldon Mfg. Co., is offering to send blue print plans for a practical and satisfactory concrete mixer which you can make at home. It is highly endorsed by engineers and many users, is simple and costs but little. All you need to do to get these plans free is to write for them to the Sheldon Mfg. Co., Box 4493, Nehawka, Neb., and mention their advertisement on page 18.—Adv.



ONONIS SADIE CORNUCOPIA, a noted Holstein bull owned by Rust Bros., West Allis, Wis. See advertisemetn on this page.

Trieloff's Holsteins.

TRIELOFF BROTHERS, Ft. Atkinson, Wis., are offering two nice bull calves for sale on page 46. They are seven-eighths white and from good A. R. O. cows with creditable records. They are also pricing heifer calves very reasonably. For further information in regard to breeding write to the above address.—Adv.

Coleman Lanterns Save Work.

COLEMAN gas lanterns require filling only once a week and cleaning only once a year, saving lots of work and time. They give a steady, clear light of 300 candle power and can't blow up, explode or leak, but may be used with perfect safety in barns and other outbuildings, as well as around the home. For further details see the advertisement of this serviceable lantern on page 13 or write the Coleman Lamp Co. at any of the branch offices named there, mentioning this paper.—Adv.

Cream Separators From $15.95 Up.

THE American Separator Co., has cream separators that are guaranteed to do your work satisfactorily at prices of from $15.95 up. The bowl is easily kept clean, the mechanism simple and along the most approved scientific lines and they are sold on your approval after a careful test. For a handsome free catalog, showing you American separators adapted to any size dairy, address American Separator Co., Box 3126, Bainbridge, N. Y., and kindly refer to their advertisement on page 33.—Adv.

Dunham's Percheron Catalog.

DUNHAM'S, Wayne, Ill., call the attention of the buyer in their advertisement on page 45 that they have a finely illustrated catalog of their Percherons they will be glad to send to all who are interested enough to write for the same. For fifty years Oaklawn has been headquarters for all that is best in Percherons, and this season they are as well equipped as ever to care for the wants of their customers. Send today for the catalog and mention this paper when you write.—Adv.

Meco Engines Guaranteed Five Years.

MECO engines are guaranteed for five years and you can get one on trial if you will send the makers the name of your dealer. They are made for gasoline, kerosene or gas fuel and are said to give splendid satisfaction. Some of their prices are shown in the Meco advertisement on page 28. For further information write for their engine catalog to Manufacturers' Engine Co., 1761 Crystal Ave., Kansas City, Mo., and kindly mention this paper.—Adv.

Agents Wanted for Beacon Burners.

THE makers of Beacon burners, which fit any lamp and are said to greatly increase lighting power and to decrease the cost of running it, desire a local patron in every town to whom they can refer new customers. To such a person they have a special offer to make, according to their advertisement on page 39. They also want good local agents everywhere. In writing them regarding it address Home Supply Co., 89 Home Bldg., Kansas City, Mo., and kindly mention this paper.—Adv.

SALE DATES.

Hereford Cattle.

May 18. Birch & Thompson, Lake Geneva, Wis.

TOO LATE TO CLASSIFY.

THE SHORT-HORN IN AMERICA

ISSUED quarterly, will be sent free to any patron of the American Short-horn Herd Book who sends the name and address of one prospective Short-horn breeder. A uniform space of one-half inch will be allowed to each Short-horn advertiser. In sending copy, please send $10 to cover advertising for one year. Address Dept. B, American Short-hornBreeders' Association, Chicago, Illinois.

Rust Brothers' Stock Farms

offer a richly bred young Holstein bull,

CORNUCOPIA NETHERLAND PONTIAC

HIS dam as a four year old made **27.99 pounds butter in seven days, 756 pounds butter in a year.** Send for pedigree and price to

ARTHUR RUST, - West Allis, Wisconsin

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address

JOHN NORTH, - Kilbourn, Wisconsin.

RHODE ISLAND RED COCKERELS

BIG boned, S. C. and R. C. from my strain of heavy, winter-laying, money-making Reds. Will make you new, vigorous spring breeding stock. $1.50 up. Immediate delivery via C. M. & St. P. Ry. and C. & N. W. Ry. to any point in U. S. R. E. Daly Poultry Farm, Necedah, Wis.

Guernsey Bulls

FROM well bred stock. One two years old, "Lord Yeksa Boy" and a few calves. Priced right. Clifford Capener, Baraboo, Wis., R. No. 2.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address

JAMES DERIVAN, - Fox Lake, Wisconsin.

WANTED to buy all leading varieties pure-bred poultry, especially Golden Wyandottes, Houdans, Hamburgs, C.I. Games, P. Rocks, Orps. and Spanish. Elmer Skink, 511 S. 10th St., Lyons, Ia.

HORSES.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

WE now have in our barns more big-boned, rugged draft colts, from yearlings to 4 and 5 years, of the different breeds than ever before. We have two-year-olds that weigh over a ton—herd headers and show propositions.

Five farms over 1,000 acres devoted to the horse business. We do all our own buying and selling, grow all our own feed. Our economical way of handling stallions saves money for the purchaser. We guarantee all horses sold and can sell you a high-class stallion cheaper than any other firm in America.

We are located in North Central Iowa, 20 miles from the Minnesota line, on the C. M. & St. P. Ry., midway between Mason City and McGregor.

Send 20c in stamps for large Horse Hanger which shows our Main Farm and sales stables. Correspondence a pleasure. **We have a horse for every purse.**

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

FARMERS REVIEW PROGRESS.

(Continued from page 25.)

cent poor stands? Forty-four per cent of these failures were due, according to reports of these farmers, to a need of lime and inoculation.

Members of the Alfalfa Order, I have received many reports on alfalfa growing in Wisconsin during by secretaryship of this organization and it is the same thing every year—the two greatest factors causing failures of alfalfa growing in Wisconsin are a lack of lime and inoculation.

Other causes for failures in order of their importance are as follows:

1. Poorly drained flat land.
2. Nurse crop too thick.
3. Early spring freezing and thawing.
4. Land of poor fertility.
5. Weeds and poor preparation of seed bed.
6. Crowded out by blue grass.
7. Drouth after nurse crop.
8. Miscellaneous causes.
9. Lack of snow covering.
10. Loose seed bed due to late spring plowing.
11. Late fall pasturing.

President Cheeseman in his address reviewed the alfalfa conditions of the last year and pointed out its increasing favor as an economic feed.

COUNTRY LIFE OFFICERS.

At the fifth annual Country Life Conference held in Madison last week the following officers were elected: President, Ernest N. Warner, of Madison; secretary, Charles J. Galpin, of Madison; advisory council:

Rev. R. O. Brandt, McFarland; W. H. Bridgeman, Stanley; Charles Brigham, Blue Mounds; J. C. Brockert, Platteville; G. F. Comings, Eau Claire; Miss Mary Connor, Windsor; H. M. Culbertson, Medina; G. W. Davies, North Freedom; John Donald, Mt. Horeb; Mrs. David Haddow, River Falls; Rev. Joseph Heyde, Middleton; A. W. Hopkins, Madison; F. H. Lindsay, Milwaukee; Rev. C. D. Mayhew, Baraboo; H. A. Moehlenpah, Clinton; Miss Ellen B. McDonald, Oconto; Edgar Packard, Berlin; J. J. Phoenix, Delavan; Miss Lutie Stearns, Madison; Rev. W. F. Tomlinson, Platteville; William Toole, Baraboo; Wes. Tubbs, Madison.

COW TESTERS ORGANIZE.

The first meeting of testers for the various cow-testing associations in Wisconsin was held at Madison last week in connection with Farm and Home week and resulted in the organization of a state association which will meet annually.

Louis Bober, of Lone Rock, formerly official tester at Hillsboro but now with the association at Lone Rock, was chosen president. Richard F. Adams, of the Stanley Co-operative Cow-Testing Association, was named vice president and A. H. Parrot, of Menomonie, was made secretary-treasurer.

There are now forty-five cow-testing associations in the state, and this number, it is believed, will be increased to sixty this spring. About 25,000 cows are now under test, and some 1,500 farmers have substituted the scales and the test for the guess method of dairying. About two-thirds of the official testers in the state attended the Madison meeting.

A special program was given throughout the week under the direction of H. C. Searles, superintendent of the testing associations, and N. G. Negley, of Madison, his assistant, and it was the consensus of opinion that much good was accomplished and that the testers will return to their work with new enthusiasm and new ideals for better dairying. This they will carry to the farmers allied with the associations, and it is planned to hold an annual conference each year.

Abnormal purchases of wool by Americans in Australia and New Zealand has caused much comment in trade circles in London, and the view has been expressed that the reimposition of the embargo on export raw material from the colonies of Great Britain to the United States is necessary. There is a general impression that America is buying wool in order to manufacture for the German market goods which, immediately peace is declared, will be shipped across in the German ships interned in United States harbors. In this way, it is believed, the American trader hopes to get ahead of the British manufacturer.

Reg. Percheron Stallions

5-YR-OLD Black **Imp. Kubain,** a cracking good individual. 2- and 3-year-old Blue Roan Stallions weigh 1500 and 1800 lbs.; sired by Imp. De Cine. Suckling colt by Imp. Kubain. 1 10-year-old Blue Roan Mare, weighs 1950. 1 10-year-old **Shire Stallion,** weighs 1850. **Angus cows, heifers and bulls;** serviceable age and younger. Can supply a carload.

McKevitt Bros. - - Bridgeport, Wis.

PURE-BRED PERCHERONS

FOR sale— One stallion, black, small star, foaled May 11, 1912; one mare, iron gray, foaled June 18, 1913; one stallion, gray, foaled May 5, 1914; one stallion, gray, foaled May 15, 1914; one stud colt, black; foaled June 30, 1915; one stud colt, gray, foaled Aug. 3, 1915. Write for pedigree and prices. Address E. G. Krueger, Ixonia, Wis.

PERCHERONS

Our Entire Stud of Twenty (20) Pure Bred MARES, FILLIES and STUD COLTS

MUST be disposed of before April 1st. We will make some very attractive offers on any number of these Percherons. Write for particulars and prices. (We are also offering 500 head of first class Holstein and Guernsey cattle, including pure bred service bulls.) **EDGEWATER STOCK FARM, - - Fort Atkinson, Wis.**

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

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Get This Book Before You Buy An Ensilage Cutter

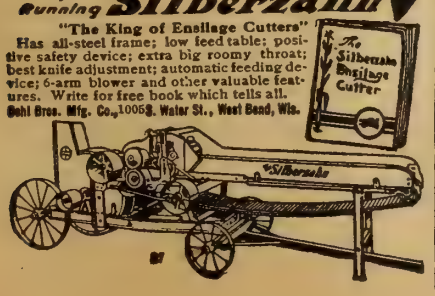
Invest in a stamp to get this free book on ensilage and ensilage cutting. It gives you valuable ensilage facts—tells you all about the Silberzahn—the ensilage cutter that has been recognized as standard for more than a quarter of a century.

Light Running **Silberzahn**

"The King of Ensilage Cutters"

Has all-steel frame; low feed table; positive safety device; extra big roomy throat; best knife adjustment; automatic feeding device; 6-arm blower and other valuable features. Write for free book which tells all.

Gehl Bros. Mfg. Co., 1005 S. Water St., West Bend, Wis.



HORSES.

FRANK IAMS'

"Peaches and Cream" Horses are "Town Talk"

Horsemen—1916 is the **"Get Rich Quick"** year for **Horse Breeders** and **Stallioners.** Get into the **"Money-Making Game"** of Breeding Draft Horses. **Europe "doffs"** her **"War Cap"** to **U. S. Horses. Europe** buys **500 Horses daily of U. S.** (at $125 to $200). Europe will buy **"a MILLION"** Horses of U. S. You make **more "Easy Money"** in **Breeding Horses** than any other business for **next ten years.**

His 34 years of success in *Importing, Breeding* and Selling *5,640 registered horses*—his "50 trips" across the ocean —make Iams *a safe man* to buy *stallions from.* His *"old customers"* are *"best Page advertisers,"* his *Breeding Guarantee* backed by *"1-2 Million Dollars."* *Iams' Imported* and *Home-bred horses* are *"classy, model big drafters"* of *large bone, fine form, quality, finish,* and *flash movers.* Several European

"Gold Medal and State Prize-Winners,"

"Iams' kind," and in the *"Pink of Condition."*

Bought at *"bargain prices"* and *must be sold.* *"Iams sells horses on honor."* A lady can buy as cheap as a man. *Iams is not in "stallion trust,"* and is *selling more pounds of "model draft horse"* for the *money* than any *competitor. Iams* is *cutting the middle* out of *high prices* on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

3 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected by Governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse **Iams sells**

IMPORTED STALLIONS AT $1,000 AND $1,400

(few higher). **"Home-Breds" come cheapest.** Registered 1,800 to 2,100-lb. mares at $700 to $1,000. **Terms cash, or one year's time at 7 per cent; land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare;** gives 60 per cent breeding guarantees. Can place $1,500 insurance. Iams backs up his ads. with a **$500 guarantee** that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

Closing Out Sale of Percherons

HAVING sold my farm, I will sell my entire stud of registered Percherons at public auction at Omro, Wis., March 1, 1916. Parties interested will please write for catalog.

Address

John H. Haigh, *owner*

R. R. 27, Pickett, Wis,

Or Y. H. Denhart, Neenah, Wis., Auct.

Dunham's Percherons

For Fifty Years the Best

Send for Fine Photographic Catalogue

DUNHAM'S, Wayne, Dupage Co., Illinois

PERCHERONS

THE rugged kind with size and quality. We can suit you. A few imported horses and some extra good American bred colts. Barns in town. Co me and see what we have to offer.

W. E. PRICHARD & SONS

OTTAWA ILLINOIS

12 PERCHERONS 12

FROM two to six years old. Six stallions and six mares. Good size with good breeding and mostly black. One seal brown and a good one. All farm raised and in good condition.

E. M. REEVES,

Waverly, - - Iowa

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address

M. Bodenheimer & Co. Green Bay, Wis.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

Homewood Stock Farm

IMPORTED and American-bred **PERCHERON** stallions and mares. First-class 2, 3 and 4-year-old stallions and mares with size, bone and quality at very attractive prices. A few big, sound, aged stallions very cheap. Every animal strictly guaranteed. Terms to suit. Call or write.

S. METZ & SONS, HOMEWOOD, ILLINOIS

HOLSTEIN-FRIESIAN CATTLE.

JOHN MANN
NEOSHA, WISCONSIN

BREEDER of registered and high-grade Holsteins. Heifers, springers and cows for sale.

A. G. HARTER
RUBICON, WISCONSIN
BREEDER OF REGISTERED
HOLSTEIN CATTLE

Bred for high production ability, good type and along popular blood lines.

John Gutschenritter & Sons
Neosha, Wisconsin

BREEDERS of registered Holsteins that are well marked and of good breeding. A large herd to select from. Two bull calves for sale at the present time that are from high producing dams. Good individuals and at reasonable prices.

YOUNG HOLSTEIN BULL

SIRED by Canary Frisby Fobes Homestead, a son of the 35 pound bull, Canary Paul Fobes Homestead, and the 22.81 pound cow, Sadie Frisby Homestead, a daughter of Homestead Jr. De Kol. Send for extended pedigree and price.

Henry Hosterman Hartford, Wisconsin

PLEASANT VIEW STOCK FARM
Bulls From 2 Weeks to 9 Months

SIRED by the 22.81 pound bull, Canary Frisby Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead. The dams are high producing cows. One of them averaged 74 pounds of milk per day for 30 days. These bulls are ¾ white, are well grown and have straight rumps. Address

Geo. C. Eifert Hartford, Wis.

BADGER STOCK FARMS

OFFER choice selections from the world's famous Colantha Changeling Lad, whose dam has 30.73 as a junior 4 year old, and his 4 nearest dams average over 30 pounds. Over 60 head to select from. Lawrence F. Murphy, Hartford, Wis.

HOLSTEIN COWS

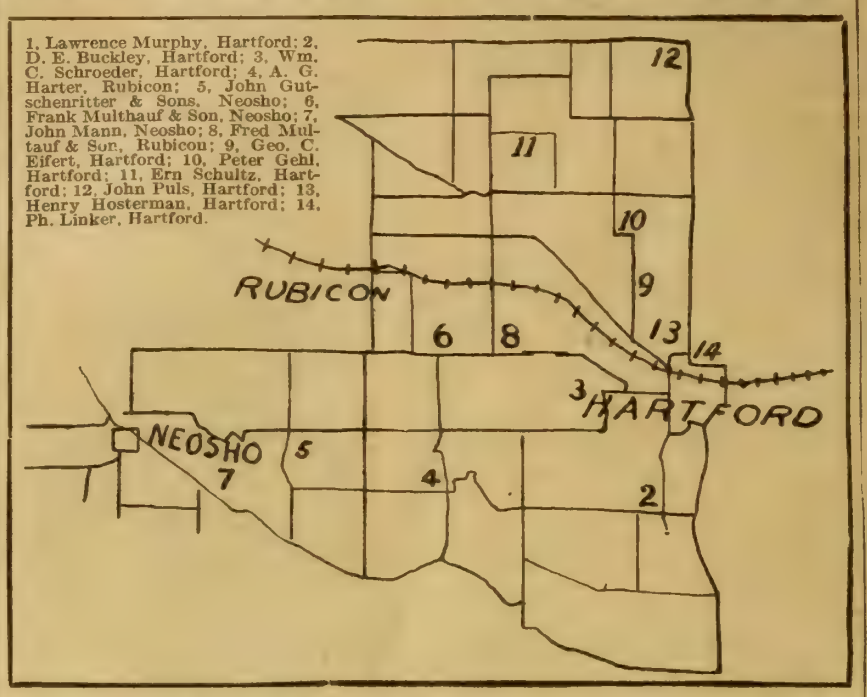
OF Johanna, Korndyke and Pontiac and butter records. Cows and heifers Korndyke Veeman, whose dam has a sire's dam 41.06 lbs. and his three near and for 30 days 148.09 lbs. butter. Write come and see us.

WISCONSIN STAR STOCK FARMS

HEIFERS AND BULLS

breeding backed by large A. R. O. milk are bred to King Artis Pontiac and King record of 33.13 lbs. butter in 7 days, est dams average for 7 days 37.13 lbs. for particulars and price or better yet

E. M. SCHULTZ, HARTFORD, WIS.



Johanna Colantha Sarcastic Lad

BLOOD LINES THAT PRODUCE LARGE MILK
and butter records make up the entire pedigree of the

28.23-LB. YEARLING BULL

I am offering for sale. His sire has 14 A. R. O. daughters, 5 of which as two year olds average 1,641 pounds of milk and 658 pounds of butter in a year. His dam has a 28.23-lb. record and has two sisters with records over 30 pounds each. Other bulls from A. R. O. dams from $90.00 up.

A few Berkshire fall boars for sale.

JOHN PULS - - - HARTFORD, WISCONSIN

Yearling Holstein Heifers

AND bulls fit for service sired by Rag Apple Pontiac Polkadot, a son of the $6,800 bull, King Segis Pontiac Polkadot. Address

Ph. Linker Hartford, Wis.

FOR SALE

THREE registered Holstein bull calves sired by the world's champion, Cleveland Johanna Sir Piebe 132446, whose dam is Molly Johanna Korndyke 184885, the only two year old that made 30.62 pounds butter in seven days. Prices reasonable. Write, or better come and see them. Two miles southwest of Hartford.

Wm. C. Schroeder, R. 5, Hartford, Wisconsin

HOLSTEINS FOR SALE

I HAVE a number of choice Holstein bulls that are ready for service. Also bull and heifer calves, also some choice yearling heifers of the same breeding. These cattle are right in color, size and milking qualities.

D. E. Buckley Hartford, Wis.

P. L. GEHL'S FARM

TWO fine bulls, born September 12th and September 15, 1915. Sire is a son of King Segis Pontiac Polkadot, one of the greatest sires living. Their dams are Molly Carema Melchior 2d 260244 and Novelty Belle Ormsby 229169. These bulls are large, thrifty youngsters. Straight and long bodied, handsomely marked. Write for prices.

P. L. Gehl Hartford, Wis.

REGISTERED AND HIGH-GRADE
HOLSTEINS

WE have a herd of over 50 head (30 registered, 20 well-marked high grades). We can furnish males and females of all ages. Write us your wants. Address

Frank Multhauf & Son Neosha, Wis.

REGISTERED AND HIGH-GRADE HOLSTEINS

OF choice breeding, well marked, good type and high production ability. When in need of Holsteins write us. Address

Fred Multhauf & Son Rubicon, Wis.

Purebred Registered
HOLSTEIN CATTLE

The Holstein-Friesian bull possesses a strong constitution, superior we believe to that of any other dairy breed. Hence his value for grading up ordinary herds. A Cornell bulletin describes results secured in grading up its herd of twenty cows. The cow, Freddie, three-quarters Holstein, in forty-five weeks produced 11,693¼ pounds of milk, containing 413 pounds of butterfat, or 3.53 pounds. Ruby, three-quarters Holstein, produced in forty-eight weeks, 13,574 pounds of milk, containing 430 pounds of butterfat, or 3.17 per cent. This shows what a purebred Holstein bull will do. Investigate the big "Black-and-Whites."

Send for **FREE** *Illustrated Descriptive Booklet.*

The Holstein-Friesian Association of America
F. Houghton, Sec'y, Box 143, Brattleboro, Vt

SONS OF THE 32-LB. HOLSTEIN BULL
COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 20 months old. Out of heavy producing dams.

Baltz Hoesly - New Glarus, Wisconsin

HOLSTEIN BULL FOR SALE
INKA DE KOL AKKRUMMER 163119

BORN December 28, 1914. Sire, Daisy Johanna 5th, the 1st prize two-year-old bull at the 1915 Wisconsin State Fair. Dam, a 27-pound daughter of the show sire, Johanna Pontiac De Kol.

Rust Brothers West Allis, Wisconsin

Registered HOLSTEIN

HEIFERS and bulls for sale. Sired by Byronia Pontiac Julip 111179. Prices reasonable.

G. L. Finkle Appleton, Wisconsin

10 CHOICE Holstein heifers and 2 bulls 15-16ths pure, $20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wisconsin.

Lewis' Guernseys.

SOME choicely bred Guernsey bulls are advertised for sale on page 47 by Ray Lewis, West Salem, Wis. He has two sired by King Belle 4th, a son of the noted bull, King Belle, that won grand championship at the National Dairy Show. He is also advertising a two-year-old son of Imp. Robert's Boy whose daughters are proving to be wonderful producers. He also has three younger bulls sired by the noted bull, King of the Roses, a son of May Rose King. These bulls are out of well-bred cows of heavy production ability and as individuals cannot be faulted. For pedigrees and further information in regard to these animals, write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir Korndyke Pontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

Registered Holstein Cows

IN order to make room in my stables, I offer three registered mature cows, price $225 to $250. Three ¾ registered cows 3 to 6 years old, $125 each. Several large, straight heifers $225. Two yearling bulls ready for service $75 to $100. These are richly bred. Send for extended pedigree.

W. H. Carey Argyle, Wisconsin

32-Lbs. Butter

7 DAYS was made by the dam of **SIR NETHERLAND LONGFIELD.** Well marked, well grown bull calves from one to six months old, sired by the above bull, for sale. Write me your wants in registered Holsteins.

J. C. Klassy, Jr. Monroe, Wisconsin

22.27-POUND HOLSTEIN BULLS

BORN March 18, 1915. Mostly white. Dam's A. R. O. record at 26 months old, 22.67 pounds of butter in seven days; grandam 26.93 pounds. Every dam in pedigree tested, all with records over 21 pounds. Write for pedigree, price and description. Mention Wisconsin Farmer. Address

Truttschel Bros., Sheboygan Falls, Wisconsin

HOLSTEIN BULLS

OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address

WM. MILLER, JR., MENOMONIE, WIS.

Holstein Bulls

OF serviceable age and younger, sired by **Piebe Longfield De Kol** and out of untested and A. R. O. cows with records up to 24 pounds butter in seven days and 750 pounds in a year.

C. Tochtermann - - Monroe, Wis.

15 REGISTERED HOLSTEIN BULLS

OLDEST seven months. Sired by King Walker Segis 3d, priced for quick sale. Can spare a few females. Address

Marinette County Asylum, Peshtigo, Wis.

REGISTERED HOLSTEIN HEIFERS and COWS

Some with A. R. O. records. Choicely bred and of straight, large conformation.

REGISTERED PERCHERON STALLIONS
Sucking colts—2 year old—5 year old. Write for pedigrees and price.

Beautiful full marked sable and white Collie pups, males from natural workers, 10 weeks old. Price $5. Pedigree furnished. Address

Paddock Bros. - Augusta, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

ADAM LORENZ
Sheboygan Falls Wisconsin

Hillside Stock Farm

OFFERS 26.50 lb. reg. Holstein bull, ¾ white; grand individual, serviceable age. Dam 24.94 at 4 years, will be tested again. Sire's dam Griselda Inka 28 lb.; price $200.00. Also other yearling bulls, Pontiac breeding from A. R. O. cows from $80 to $100. Eight cows at reasonable prices. Farm 1½ miles south.

Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

HIGH GRADE

NICELY marked Holstein and Guernsey heifer and bull calves about four weeks old, twenty dollars each; all express paid and safe arrival and satisfaction guaranteed. Order direct. Prompt shipment. Meadow Glen Yards, Whitewater, Wis.

REG. HOLSTEIN HEIFERS

YOUNG COWS AND BULLS of serviceable age and bull calves. Prices reasonable.

JOHN BLASKA - SUN PRAIRIE, WIS.

GRANDSON OF THE $25,000 HOLSTEIN BULL
Johanna McKinley Segis

WELL MARKED; seven-eighths white; well grown. Send for pedigree. Address

J. C. Wilton Eagle, Wisconsin

At Reasonable Prices

REGISTERED HOLSTEIN bulls from 1 to 11 months old. Sired by King Pontiac Pioneer, that is backed by the world's champion cow.

Thos. A. Thompson Argyle, Wisconsin

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt - Oxford, Wisconsin

Holstein Bulls

FROM A. R. O. dams with records up to 21 lbs. They are ready for service, are well grown, ¼ to 9-10ths white in color, sired by

SIR CANARY ALACARTRA

a son of the $1,000 bull, Canary Paul, and out of Nellie Alacartra Rue, that made 23 pounds butter in 7 days and 874 pounds in a year. Send for pedigrees and price. Address

A. L. Rowe Waupaca, Wis.

REGISTERED HOLSTEIN HEIFERS

ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026, a richly-bred Ormsby bull. Address

Jacobson Bros. Menomonie, Wisconsin

Registered Holstein Heifer

AND bull calves, three to ten months old. Some sired by King Clover De Kol Burke and sons by Oak Homestead Fobes, whose three nearest dams average over 30 pounds of butter in seven days. A few high-grade cows and heifers also for sale. Address

John North Kilbourn, Wisconsin

2 Holstein Bull Calves

BORN November and December, 1915; ⅞ white, from good A. R. O. cows; $40 each. Also heifer calves $100 each. Send for photo and pedigree.

Trieloff Brothers Ft. Atkinson, Wis.

Registered Holstein

COWS, yearling heifers and bulls, ready for service. Yearlings sired by the 31.11 pound bull, Briar Abberkerk De Kol 76694; well marked and good type. C. E. Ward, Palmyra, Wisconsin.

HOLSTEIN BULLS

SIRED by Pontiac Cornucopia Coronis, whose dam is a 27.06 pounds, 5% daughter of Hengerveld De Kol; $50 and up. Address

J. Roy Gordon - Mineral Point, Wis.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins

John Hasse Monroe, Wisconsin

WANTED

MARCH 1st, good man to help care for herd of thoroughbred Holsteins and assist in general farm work. Must be dry hand milker. Give experience and wages wanted in first letter. C. J. Taylor, R. 3, Whitewater, Wisconsin.

GUERNSEY CATTLE.

REG. GUERNSEY BULL

by the richly bred bull

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address

W. H. & B. L. Hanchett Sparta, Wisconsin

BIRCHWOOD GUERNSEYS

REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address

M. L. Welles Rosendale, Wis.

REGISTERED GUERNSEY BULLS

OF serviceable age. Sired by the richly-bred bull. Imp. Royal George of the Isle 30551, and out of imported cows of Gov. of the Chene breeding. Send for pictures, pedigrees and description. Prices reasonable. Address

Pinehurst Dairy Sheboygan Falls, Wis.

At the Present Time

I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.

Alfred I. Stubbs West Salem, Wis.

REGISTERED Guernsey Bulls

OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address

Ray Lewis West Salem, Wis

Homestead Farm Guernseys

TEN bulls, grandsons of Governor of the Chien; from 1 to 15 months; mostly from A.R.O. cows with records up to 566 lbs. fat. Prices reasonable.

W. G. Jamison & Sons, Appleton, Wisconsin

9 GUERNSEY BULLS

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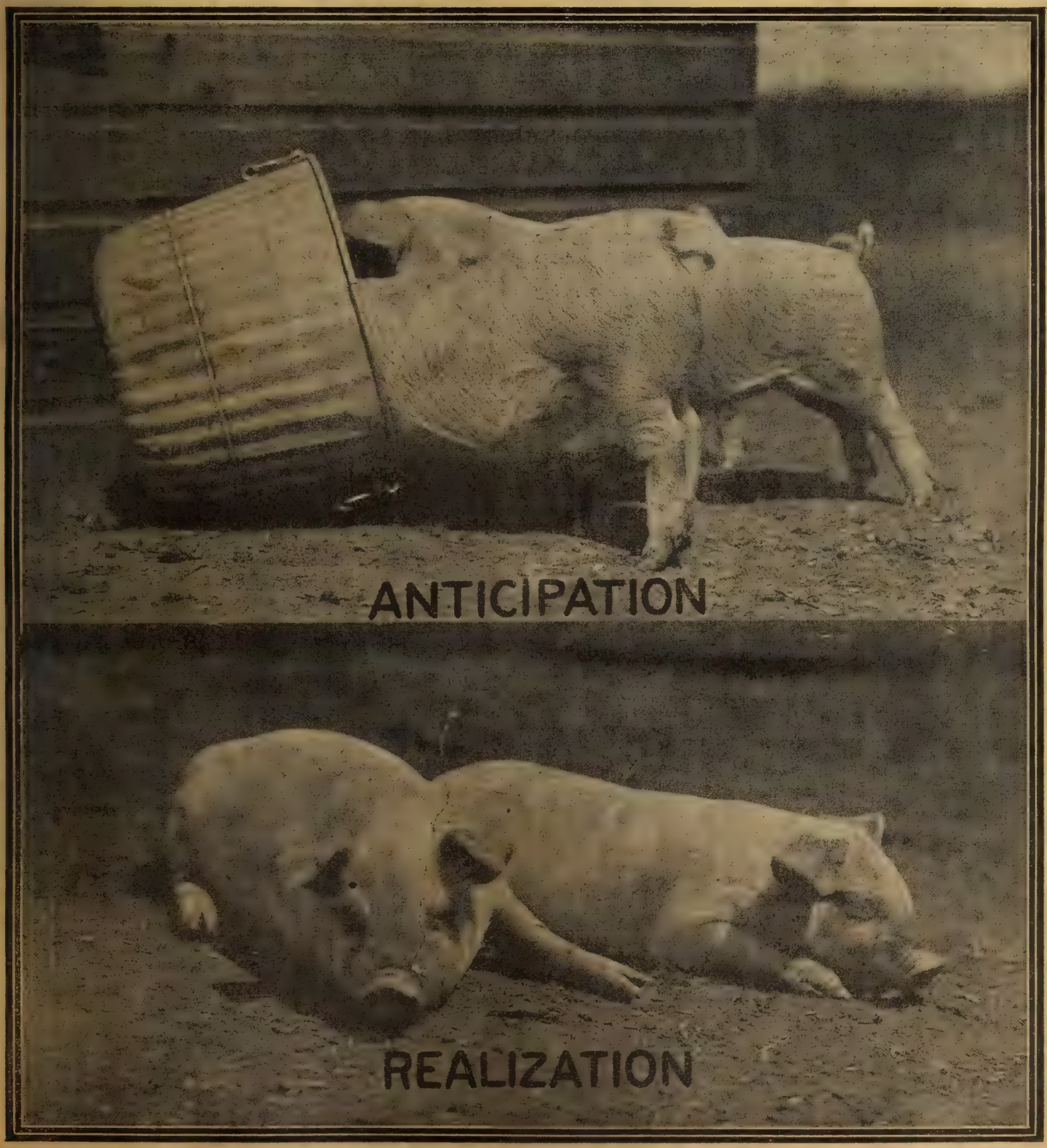

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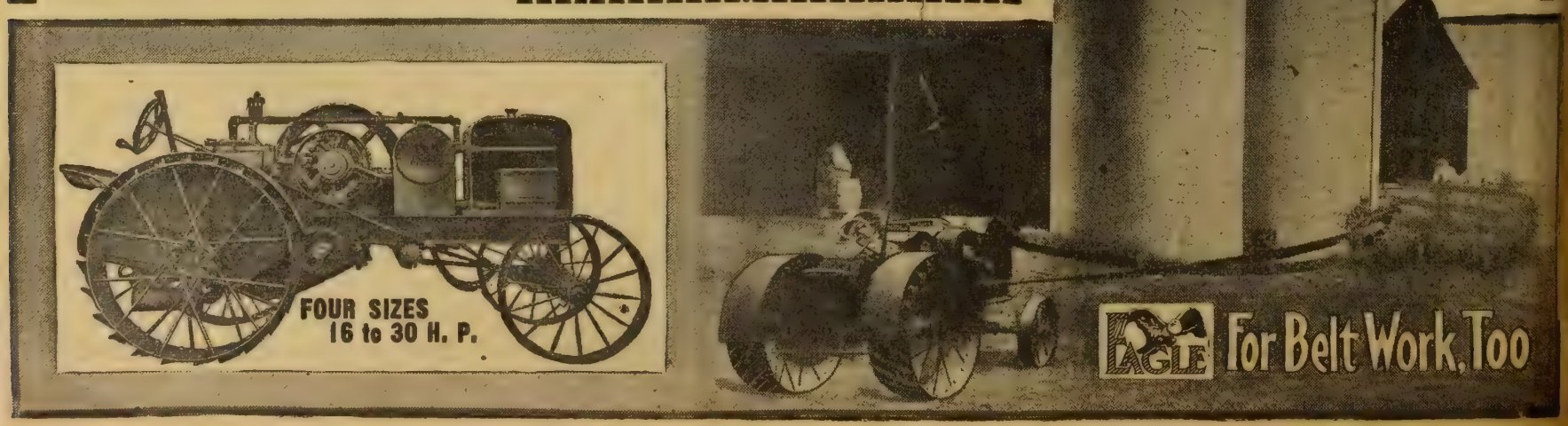


The Wisconsin Farmer

THURSDAY, FEBRUARY 24, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE PRESIDENTIAL CAMPAIGN.

TO THOSE of us who have been busy in office and field, the fact that another presidential campaign is right upon us comes as a distinct surprise. Yet the grain belt will begin to speak its mind on this all-important matter within another month. I, for one, can hardly realize that the campaign is so imminent.

I consider it eminently appropriate that the grain belt should be the first section of the country to speak out for men and measures. Why should it not? Is it not here that the bulk of the reforms which have swept our nation in the last decade have been launched? Is it not here that the men have been produced, in all parties, who have overthrown the corruption which once existed unrebuked in high places, giving back to the people the reins of government of which they had all too long been despoiled? Is it not here that we find the most calm, unprejudiced reflection on the big issues of the day, those issues upon which our future peace, prosperity and happiness depend in large measure? This being the case I, for one, believe it to be eminently fitting that we should be the first to speak our mind on presidential policies and candidates.

Minnesota has the honor to be the first state of the forty-eight to hold a presidential primary. The date is March 14th, only three weeks distant. North Dakota follows a week later. Then, in rapid succession, come South Dakota (on April 4th), Nebraska (on April 18th) and most of the other states of the grain belt. Surely, here is an inspiration to the rest of the nation, for nowhere has the movement to allow the people to vote directly for presidential candidates and for the delegates to national conventions gained such headway as here in the middle West. No matter who may win out at the various primaries it is a matter of congratulation that we of the grain belt have led in this movement to make the vote of the people, rather than the voice of the bosses, supreme in naming our national standard bearers and deciding on the issues upon which the campaign shall be fought.

With the first presidential primaries only three weeks distant and the others a matter of but a few more weeks, I want to urge upon all my readers that they give this matter their most careful and conscientious thought. The campaign is upon us before we know it; let us lose no more time, but get down to calm reflection, to the end that the best men may be nominated and that policies may be decided by the people themselves, even in the most obscure and distant precincts and townships. Let us begin at once to take counsel one with the other, talking over candidates and issues as we go about our daily work, as we meet our friends and neighbors in town or on the road, at church or at our community clubs. Let us put aside the war and the weather as our favorite topics of conversation and get into the presidential campaign before the primaries come upon us.

I am not advocating the candidacy of any one man or set of men. I am not here championing any particular principle or policy. I do urge, however, that none of us be too quick to forget. There are certain things which must be thought over carefully in connection with the coming campaign, particularly by farmers. Notable in the list are these: Preparedness, the proposed non-partisan tariff commission, the tariff as a whole (not forgetting our experiences four years ago, when Canadian reciprocity was such a big and vital issue), agricultural educational extension, conservation, railroad regulation, and so on. No matter to what party we belong, we should have decided views on all these subjects, for all have a direct bearing upon our agricultural welfare. Having such decided views, we should see to it that, so far as lies in our power, the men are named for the presidential race who most honestly and sincerely represent our views. The president is a man of great power, he occupies a position of immense trust and responsibility; yet the beginnings of his greatness and power are laid in the township and the precinct primaries, where you and I—common people, whom the president never knows—express our rights as sovereign citizens. How can we expect our president to do his full duty if you and I—who make him president—do not do our full duty, by voting at the polls, by deciding issues among ourselves and by exerting our franchise right to the utmost?

I want to urge upon you all, without regard to geographical location or political affiliation, that you get into the presidential campaign at once, without delay, so that when the time comes for you to raise your voice you can do so without hesitation, to the end that the man may be elected who will most truly represent the farmers of America and most surely put into execution those policies which will make our farming more certain and profitable, our peace more stable and our national honor more incorruptible.

MOTOR MECHANICS.

I SPENT a very pleasant hour recently attending one of the numerous automobile shows which have come to be popular annual events here in the grain belt. Two things particularly impressed me. First, the great number and variety of the cars made. Second, the wonderful popularity of automobiles with farmers and their familiarity with motor operations. It seems to come as naturally to a farmer nowadays to talk of carburetors and gears, transmission and differential, as to speak of varieties of corn and oats and the superiority of various breeds of live stock.

I have seen it estimated that the farmers of the ten states of the grain belt are spending $250,000 a day for new motor cars. From what I saw at the recent automobile show I believe these figures to be conservative. One of the popular makes of cars held daily lectures and demonstrations, conducted by a member of the faculty of the agricultural engineering department of the state college. Nine-tenths of the men who attended these lectures were young farmers. The eagerness with which they drank in every word convinced me there is nothing under the sun in which the farm boy of today takes a greater interest than mechanics, and motor mechanics, in particular.

I can readily understand now, better than ever, the exceeding popularity of the department in this paper entitled, "Farm Mechanics." I was the first farm paper publisher in the country to add such a department regularly to my papers. The great number of letters coming in daily, asking questions for the expert in charge of that department to answer, convinced me of its value. I had only to see the eagerness with which these young farm boys attended the motor demonstrations and lectures at the automobile show to realize how ready they are for just such information as we have been giving them for the last two or three years.

BUYING WAR HORSES HAS STOPPED.

CAN WE foresee the end of the European war because the buying of horses and mules here in the middle West, for war service across the seas, is practically at an end? Here is an interesting topic which we can well afford to discuss for a few minutes.

There is no question but that the European war has enabled farmers to dispose of a lot of surplus horseflesh at exceptionally good prices. Our "scrub" stock has been sold around $100 and $125, prices which were never dreamed of before the war made the large demand for "cannon fodder." The average life of the horse or mule bought here in the grain belt and shipped to the front in Europe, is said to be only ten days or two weeks. This has made the demand for horses and mules by the British, French and Italian armies something undreamed of by the farmers and unheard of in any former war. I have seen it stated that 60,000 horses and 120,000 mules have been bought and shipped through the Kansas City market since the war broke out, for the armies of Great Britain and its allies, to say nothing of the large numbers bought and shipped through other markets in the grain belt. That this immense war demand has not robbed the farm of its necessary and desirable animals is shown by the fact that the Department of Agriculture has recently reported more horses on the farms of America January 1, 1916, than there were a year ago, the average value being higher. Not only have we sold our surplus and "scrub" stock at wonderfully good prices, but we have more animals today and they are worth more to us. Here is an exceptionally pleasing condition of affairs.

But what I started to point out was that the fighting nations of Europe are beginning to withdraw their buyers and this has led many to believe that the end of the war is in sight, for supplies must still be transported and, so far as any of us here can see, the war, if it is to continue, must be prosecuted in the future as in the past. True, we may expect more and more trench fighting and fewer dashing charges, but supplies must be carried to the men in the trenches and if the war is to continue there will be need of horses and mules just as in the months gone by. Yet what is the situation? Let me quote a little from a grain-belt newspaper:

> Does the British government believe the end of the war is in sight?
>
> In November there were in the United States about forty officers of the British army remount service, all engaged in the purchase and shipment of horses and mules for the allied armies. Since then many have gone back to England, and it was learned yesterday that the remaining officers in the United States have been recalled.
>
> There are ten British officers in the remount commission at Lathrop, Mo., and these expect to embark for England within a fortnight. All the members of the remount service in the United States will have left by March 15th, a member of the commission at Lathrop said yesterday.
>
> No purchases of horses in the Kansas City market have been made by the British since November 15th, and according to the remount officers none has been bought in this country since then.

When we consider that one horse-buying firm had 500 buyers in the field a short time ago, scouring the grain belt for animals for the war, and that practically all of these buyers have now been called in, it looks very much to me as though there might be war developments within the next few weeks which will surprise the world. I certainly hope that my optimism is not ungrounded and that before long we will begin to see the first rays of hope—hope that the warring nations of Europe are at last beginning to recover their lost senses and that awful, devastating, un-Christian war may be driven from our midst, not to dare to show its hideous features again for many, many years to come, if ever.

BOYCOTTING THE R. F. D.

REPORTS continue to come to me showing that farmers are victorious over the post-office department and that rural mail routes are being re-established on the old basis, so as to give better results. By this time the postal authorities at Washington must be convinced of two things: First, that the order combining routes and expecting carriers to cover fifty miles every day (rain or shine, snow or storm) was impractical and demoralized the service; second, that the farmers of the grain belt, once they become thoroughly aroused, exercise an enormous influence. I imagine there are few grain-belt congressmen who have not sent protests in to the postoffice department, on behalf of their rural constituents, since the change went into effect a few months ago.

One of the reports which has just come to me shows how the farmers of a community where the R. F. D. service had been altered and impaired went about to restore the old order in a rather novel manner. They simply boycotted the service until the carrier, thoroughly alarmed over the situation, reported the matter to Washington and an order came back, post-haste, to give the farmers what they wanted, which, in this case, was simply the old service with which they had been very well satisfied. Here is the way a subscriber tells the story, writing to me from Muscatine, Iowa:

> Farmers along the Conesville rural route boycotted Uncle Sam's rural carrier and won their fight. Last fall when the postoffice department put in its general revision of routes the Conesville and Nichols routes were merged. Conesville patrons declared they were victimized and they would refuse to accept an inferior service. So they declared a boycott of the rural route. For weeks the rural carrier traveled his route without receiving a single article of mail and most of the farmers traveled all the way to the postoffice to claim their papers and letters. This week the old separate routes were restored.

Good for the farmers of the Conesville route, I say. Ordinarily I am not in favor of the boycott principle, but there are times, such as this, when it is most effective. With a presidential campaign almost upon us and all parties anxious to secure rural support, it ought not to be a hard matter to get the postoffice department to back water and restore the R. F. D. service to the efficiency which it had reached before some misguided official, in the interests of bogus economy, interfered.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

A Bouquet From Upper Michigan.

THE publisher has received this week a letter from one of our valued subscribers at Palatka, Michigan, which is just a few miles across the line from the Upper Wisconsin border. Our readers will pardon us for calling attention first to the kind words in this letter which comes to us from Arthur Burgquist. Part of the letter reads as follows:

I am a member of a family which subscribes for The Wisconsin Farmer, and certainly do welcome its weekly appearance, as it contains much interesting farming facts and shows that the farmers in Wisconsin are progressing.

I cannot say too much in praise of your paper and I am sure that most farmers will agree with me in saying that it is one of the best farm papers published.

Of course, these kind words caught the eye of the editor. Who does not appreciate such words as these? Any man who puts in his best licks on any proposition likes to feel that his work is meeting with approval. The editor of The Wisconsin Farmer and his staff of associates all feel a keen interest in every issue of The Wisconsin Farmer.

But there is another important bit of information in Mr. Burgquist's letter. Farmers, and especially the younger folks, are interested in forming a club in Iron county, Michigan. The writer advises us he has talked the matter over with neighbors and with some of the high school boys in town, and they are all agreed that "co-operation leads to better farming and dairying." So they are going to have a club where a study of these things will be made. Meetings will be held in the country schoolhouses, and some important farm topic will be taken up at each meeting.

We certainly agree with Mr. Burgquist that such a club would be a great benefit. It may help some in the way of improvement to bring in people from the outside to polish us up a bit, but the surest movement for improvement either of self or farming methods, is that which begins at home. When farmers are determined that they will make a study of their conditions and better themselves, then nothing can stop their progress. Of course, they can get a great deal of advice and help from outside speakers and from the farm press, but the biggest thing in it all is for each individual farmer and the members of his family to have a determination to live and work better. If there are a few good fellows like this subscriber at Palatka, Michigan, who will go into this club work and agricultural and live stock study in earnest, we predict that wonderful good to all the community will be the result. Iron county is on the southern border of the Michigan upper peninsula, and the conditions are very similar to that in Upper Wisconsin. We bespeak for the new club at Palatka great success. The information asked for in Mr. Burgquist's letter will be cheerfully furnished. If there are any other readers of The Wisconsin Farmer who are anxious to secure information concerning organization of clubs, we will be glad to furnish the same and put them in touch with people who will afford a great deal of help.

Work of Wisconsin Horse Breeders' Association.

DURING the past year the Horse Breeders' Association has continued its campaign for better horse breeding. Members of the association have given a large number of addresses over the state during the year on the subject of draft horse production. One of its members accompanied the Live Stock Breeders' special train over the northern part of the state and discussed the subject before many new audiences.

Special attention has been given to the importance of more careful selection of breeding stock with a view toward getting producers to breed from animals that will produce large, high-class stock of quality. The matter of giving the draft foal plenty of the right sort of feed and the proper care is even being brought before the farmers. Draft foals should make 1,000 lbs., usually a little more than half their mature weight at one year. To do this, foals must not only be properly bred, but they must be well fed and cared for.

The association by means of its futurity prizes at the state fair has been able the last three years to give special reward for the production of high-class draft yearlings. Never before the establishment of these classes has there been such a splendid display of Wisconsin bred draft yearlings. The futurity for draft yearlings has not only done much for the breeder and fitter but for the fair as well.

During the past year the association was co-partner to a new activity of the public auction sale of draft horses. The undertaking was successful, and plans are under way for an annual Wisconsin Horse Breeders' Association sale. This is a much needed line of effort and the success of the initial venture was very important. The breeders must do their part in breeding and fitting the animals, and the success of the sale is assured.

Advertising Live Stock.

ADVERTISING was a chief topic of interest at the recent breeders' meetings held in Madison. It was generally recognized that stockmen can derive great benefit from advertising in farm papers, and the only discussion revolved around the question as to how to best go about it. Advertising has been responsible for putting several Wisconsin counties and a number of individual breeders to the front. Advertising is a legitimate expense to the live stock business; it is just as important and necessary as proper feed for stock. A man may have the finest herd in the world and make very little profit from it if he fails to advertise. No breed, no matter how good it is, can assume its proper place and gain its deserved popularity without advertising of some sort.

There are various methods of advertising. A Wisconsin farmer with a number of pure breds for sale might erect a sign board in every township in the state. This would be advertising and no doubt it would bring him business. But it would be an expense far beyond the possibilities of reasonable returns. To reach a limited area a breeder may advertise in his local paper, and this also pays, though it is not possible to build up a statewide business through the medium of one local paper. The Wisconsin Farmer strongly urges the use of local newspapers when the breeder desires to reach only the farmers in his immediate neighborhood. But this is appealing to a limited market, and the best prices are never secured in a limited market. A breeder might advertise in every weekly in the state, and we believe he would get a good many replies and accomplish a good many sales, but the expense would be enormous. There would be a great deal of duplication of circulation—that is, the same man would see the same advertisement in several papers.

The most practical and least expensive method of advertising live stock, to be disposed of either at public sale or by private sale, is through the medium of the farm press. The Wisconsin Farmer guarantees to carry live stock advertisements every week to 80,000 farmers, all of whom are residents of Wisconsin or the counties adjoining Wisconsin in our nearest neighboring states. There is no other method of reaching 80,000 farmers in this favored territory so cheaply. There is waste circulation in every other class of media, for the reason that only a small percentage of the readers are interested in stock. Wisconsin Farmer readers are practically all interested in live stock, hence there is a minimum of waste circulation. Almost the entire circulation of The Wisconsin Farmer is within a few hours' ride of your stock farm, hence the readers of this paper are much more likely to buy than the readers of a paper which has all its circulation in far-distant states. The farmer or stockman who has large interests can afford to branch out by advertising in territory further away. This is especially true of a state like Wisconsin, where the character of the breeding stock is so high that it is in demand for foundation of herds any place.

It would cost $800 cash, to say nothing of the labor and printing expense, to send a postal to as many farmers as are reached in Wisconsin territory by The Wisconsin Farmer. But an advertisement can be inserted in our live stock columns for only a few dollars a week, depending upon the size, and those who are now using these columns are getting excellent returns. To send a 2-cent letter to 80,000 farmers would cost $1,600 for the postage alone. A two-inch advertisement can be run in The Wisconsin Farmer for an entire year for about one-tenth that sum. The Wisconsin Farmer's experienced field men will be glad to aid any farmer or breeder who is interested in selling his stock through advertising. Mr. H. S. Hoard, of Madison, represents The Wisconsin Farmer in eastern Wisconsin, and Mr. T. P. Shreve, also of Madison, represents us in western Wisconsin and eastern Minnesota. These men are experienced in getting up copy for live stock advertisements. They will handle your bids at public sales, provided you are unable to attend. Their services are free, and a letter addressed to either of them, care Wisconsin Farmer office, Madison, Wisconsin, will receive courteous and prompt attention.

Wisconsin Banker-Farmer Excursion.

FOR several seasons the Wisconsin College of Agriculture has been entertaining delegations of farmers from North Dakota and giving these farmers some of the latest information on dairying.

It occurred recently to George D. Bartlett of Milwaukee, secretary of the Wisconsin Bankers' Association, that the college would doubtless be willing to entertain delegations of Wisconsin farmers. Of course the college authorities were more than willing and so it has been arranged. There will be a banker-farmer excursion to Madison March 28-29th, under the auspices of the Wisconsin Bankers' Association. Any farmer in the state who is interested in the details can get complete information by calling at his local bank. Just say that you read about a banker-farmer excursion in The Wisconsin Farmer and that you would like to hear more about it.

Through the co-operation of the Wisconsin Bankers' Association and the College of Agriculture authorities, a fine program has been arranged for March 28th-29th. S. M. Smith, of Janesville, Wis., president of the state association, will preside at the first meeting to be held at 10 o'clock, March 28th. Dean H. L. Russell and R. A. Moore will speak. Farmers who desire to ask questions about pure-bred grains will have an opportunity. Here will be a good chance to bring up the subject of seed corn this year. J. R. Wheeler, of Columbus, vice-president of the bankers' association, will be chairman of the afternoon meeting. Live stock raising and alfalfa will be discussed respectively by George C. Humphrey, in charge of the state animal husbandry department and L. F. Graber, secretary of the Wisconsin Alfalfa order. There will be another opportunity to ask questions on these important topics and at 4:00 o'clock demonstrations in feeding will occur at the University barns. C. R. Thomson, of Viola, chairman of the evening session, is also chairman of one of the sub-committees of the state association. Dean D. H. Otis will talk on "Farm Management" at the evening session. There will be moving pictures to illustrate grain growing and farm fencing. George D. Bartlett, secretary of the state association, will be chairman of the Wednesday morning session, where such topics as poultry, dairy cattle, hog cholera, mutton sheep, beef production and horse breeding will be discussed. Dr. A. S. Alexander will deliver a lecture on "Better Horse Breeding," at the college auditorium at 11:00 a. m. H. J. Maxwell, of Princeton, another well-known banker, will preside at the afternoon meeting. J. G. Fuller, of the state animal husbandry department, will discuss "Swine Management," and J. C. Halpin, secretary of the Wisconsin Poultry Association, will talk about "The Care of Farm Poultry." The session will adjourn about 4:00 o'clock on the second day, March 29th, permitting all who desire to catch the afternoon trains in each direction out of Madison.

This effort on the part of the bankers should find a ready response from farmers who will surely be benefited if they attend the meetings.

Falling in Line With New License Law.

THOSE who expected the buttermakers and the cheesemakers to fight the provisions of the new license law in Wisconsin seem destined to disappointment. Wisconsin manufacturers of butter and cheese have proved themselves willing to co-operate to any end that will increase the quality and the standard of these products and the new license laws, with the proper enforcement, undoubtedly will accomplish the desired end.

The anticipated opposition to the new laws has failed to materialize to any extent. Of course there may be a few butter factories and a few cheese factories that would prefer not to come within the scope of the law, but these factories, in many cases, are those making a product that is not up to the Wisconsin standard. Fortunately there are a very few who have held back which indicates the willingness of the butter and cheesemakers to co-operate with the state in putting Wisconsin's great dairy industry upon a higher and a more stable basis. This co-operation was manifest to an especially encouraging degree at the recent convention of buttermakers at Eau Claire and at the cheesemakers convention some weeks ago in Milwaukee. An afternoon at each convention was devoted to the new license regulations and the interest displayed by the delegates indicated a willingness to do freely and with a co-operative spirit whatever the state requires in the manufacture of butter and cheese products. In the words of Mr. C. E. Lee of the dairy and food commission, "the dairy industry of Wisconsin would be far greater today than it is if such a meeting as that held at Eau Claire had been held in Wisconsin ten years ago." In other words, Mr. Lee believes the dairy industry would be just ten years more advanced had such been true.

It now remains for the farmers to do their part, which is a most important part. The new license regulations require that every cheesemaker and every buttermaker be experienced in his business before he can secure a license. They also require

sanitary factories and cleanliness and compel the factory owner to provide these things for the factory operator. That was one of the drawbacks under the old system of no licenses. The operator might be cleanly, but the owner of the factory, anxious to make as much as possible, might refuse to keep the factory in the proper condition for the manufacture of these products. The factory operators and owners have signified a willingness to be more cleanly and sanitary than ever before and both associations have gone on record approving the new laws. But to produce the highest quality product clean, sweet, wholesome milk and cream must be provided and that is the duty of the farmer to the dairy industry. Without this clean raw product, no buttermaker, however careful, can make the best butter and no cheesemaker can produce high-quality cheese. Clean, well-lighted, well-ventilated barns are necessary to clean milk production. Milk houses, free from contaminating odors, with cooling tanks for the proper care of the cream and milk until its delivery, are a great aid. Rapid collection of milk and cream: Proper care of the separator, cans and utensils, etc., all enter into the production of this product if it is to go to the factory in condition to make the quality product that Wisconsin demands and for which the market price is the highest. The factory operators can do much by talking with their patrons and in pointing out the increased value of good, clean milk and cream. But the operator, to make his advice hold good, must be clean himself, for otherwise he cannot expect anyone to follow his advice.

No Wisconsin Round-up Institute.

MR. E. L. LUTHER, superintendent of Wisconsin farmers' institutes, advises The Wisconsin Farmer that there will be no round-up this year. The round-up institute has been an annual feature of institute work. All institute workers have been gathered at the close of the season for an interchange of ideas. The last round-up was held at Kenosha, under the supervision of C. P. Norgord, now secretary of agriculture. Mr. Luther says the round-up costs $700 to $800, and he can arrange for about twenty smaller institutes for this sum. In this way a much greater number of farmers will be served by the institute staff.

The institute bulletin will be continued, but it will be made up of special articles by institute workers instead of round-up addresses as heretofore. Practically all important topics will be covered in this manner.

An important "follow-up" system has been introduced by Mr. Luther. Record is made of the inquiries at institute meetings. The director and workers at the meetings furnish all the information they have at hand and then forward the inquiry with the name and address to the superintendent. Mr. Luther has these inquiries indexed by card, and continues to supply information on the subjects inquired about. In this manner the service given the farmers of Wisconsin is made to cover a wider range than the two or three days in actual institute work. When there is found to be considerable interest in any given subject a special effort will be made to gather additional information and forward it to all who have inquired concerning this subject. Barn ventilation and sewage disposal are two topics concerning which many questions have been asked this year at Wisconsin institutes. Mr. Luther will forward information to all those who have inquired concerning these topics, and at some future date will send out a return postal card to ascertain whether the inquirer has made any of the improvements. Barn equipment and silos are also important in the minds of Wisconsin farmers, judging from the inquiries received on those subjects. Mr. Luther has accomplished a great deal in broadening the scope of institute work this year and has still further plans to improve this important branch of service.

Acreage of Peas in Wisconsin.

THERE was a reduction in the acreage of peas in the United States, as a whole, of about 25,000 acres. In 1913 there were fifty-five canneries in Wisconsin and in 1915 sixty-six reported. The leading states for the canning of peas are New York, Michigan, Wisconsin and Indiana. All showed a falling-off in acreage last year. Of these states, the falling off in Michigan was 23 per cent; in New York 15.7 per cent; in Indiana, 25.6 per cent, and in Wisconsin, 17.1 per cent. Wisconsin, in 1914, had almost as much acreage in peas as New York, Indiana and Michigan combined, and nearly two-fifths of the entire acreage of the country.

On page 16 in this paper will be found an article discussing the subject of drainage as it affects the growing of peas. Peas will be found to be a profitable crop where there is an even distribution of moisture and where there is not too much moisture. Hence the importance of looking into the matter of drainage on the ground on which peas are to be raised.

Starting With a Clean Slate.

ALL bills accumulated by the 1915 Wisconsin State Fair have been paid and the department of agriculture starts its work for the 1916 fair with a clean slate. The emergency appropriation for the payment of bills which could not be cared for from the state fair receipts, was not available until February 1, 1916, owing to an opinion by the attorney-general on construction of the emergency appropriation law. A good many premiums were not paid until this month. Most of the advertising accounts were also held up. But these bills have now all been paid in full and a new effort is to be made to make the 1916 state fair pay its way. In this effort Commissioner C. P. Norgord invites the co-operation and best wishes of all Wisconsin people.

The Cleaning and Grading of Seed Grain.

FROM time to time interesting bulletins dealing with farm problems are distributed by the national department of agriculture. It is the aim of the department to distribute these bulletins at a time when the topics discussed are of chief interest to farmers. In a recent one, for example, the question of grading seed grain is recommended and the reasons for same given somewhat in detail.

If we are to take the advice of this bulletin, small-grain seed should be carefully screened and graded before sowing. This work is ordinarily done with the fanning mill, the lighter kernels and the trash being blown out by a current of air, while the small, shriveled kernels and most of the weed seeds are removed by screens. The proportion of the seed that is removed in cleaning varies largely with the quality of the seed grain. If the grain is plump, heavy and fairly free from weed seeds the removal of about one-tenth of the entire quantity is usually sufficient, particularly with wheat and barley. In the cleaning of fairly good oats and of the poorer qualities of wheat and barley, about one-fourth of the seed should be removed. With very poor oats it is sometimes profitable to remove by cleaning as much as one-half the seed. The screenings are nearly as good for feed as the cleaned grain.

Cleaning and grading removes the small, light or shriveled kernels which will not germinate at all, or if they germinate, will produce weak plants. The removal of these kernels and the sowing of only good, plump seed helps to insure a uniform stand of vigorous plants and increase the yield. Screening also greatly reduces the quantity of weed seed which is sown, thus helping to prevent the spread of weeds and favoring the growth of the grain crop. Except with very poor seed it is usually not profitable to run it through the fanning mill more than once. However, light, trashy seed may need to be fanned twice to obtain seed that is good enough to sow.

All small grain is likely to "heat" when kept in the bin, and as heating may prevent germination, seed grain should be always carefully tested. Dig down a little way into the grain in the bin, take out a handful and put 100 grains in the seed tester or between two sheets of damp blotting paper. Keeping the grains damp and warm for a few days will tell the tale.

Unless 85 or 90 per cent of the seed tested sprouts you should increase the amount of seed sown or get better seed.

Effect of Unbalanced Rations.

WHILE it is important that rations for fattening hogs should contain a certain amount of protein to insure the most economical returns, it is equally important that they should not be overbalanced on the protein side. An all-corn ration, for example, contains too much carbonaceous matter, while an all-shorts ration contains too much protein.

At the Ohio experiment station hogs were fattened on a ration containing nine parts, by weight, of ground corn, and one part of tankage, and of that feed they consumed 430 pounds per 100 pounds gain. Another ration composed of nine parts, by weight, of ground oats and one part of tankage, they consumed 571 pounds per 100 pounds gain. Manifestly the latter ration was much more expensive, and one of the reasons for this was its high content of expensive protein. It contained one pound of digestible protein to 3.6 pounds of digestible carbohydrates, while the other contained one of protein to 5.6 of carbohydrates. An economical ration for fattening hogs weighing over 125 pounds should not contain more than one of protein to about 6.5 of carbohydrates, the latter being obtained by feeding one pound of high-grade tankage per peck of corn. With corn and oats each worth a cent a pound the hogs made a net profit of $2.28, when sold at $6.50 per hundred pounds, on the corn and tankage ration, whereas they showed a net loss of 6 cents, under the same conditions, on the oat and tankage ration.

Of course, the cost of the feed should always be taken into consideration in determining what sort of ration to feed. With corn at 70 cents and oats at 35 cents a bushel the results would naturally have been different in this test, but even then the corn and tankage ration would have produced a profit of 86 cents per head against a loss of 6 cents per head for the oats and tankage ration. Oats, while an excellent grain for growing shoats, and to a limited extent also for brood sows, is not well adapted for fattening purposes because of its high content of hulls. As a general proposition oats are a more valuable feed for horses and cattle than for hogs.

Fattening hogs do not need as much protein as brood sows. For brood sows the Missouri experiment station recommends the following combination of feeds: Corn, fifty parts, by weight; shorts, twenty-five parts; alfalfa hay, fifteen parts; and oil meal, ten parts. In our opinion this ration contains more protein than is necessary. In other words, a less expensive ration would give equally good results, provided the necessary feeds were available on the farm for that purpose. The linseed meal might be dispensed with altogether, and the corn and shorts fed in limited amounts, so as to force the sows to eat more alfalfa.

Eighth in Corn for Canning.

WISCONSIN ranked eighth in 1915 in the acreage devoted to corn for canning purposes. Illinois had 34,415 acres in sweet corn for canning and Iowa 28,936 acres. The states of New York, Maryland and Ohio had each approximately about 20,000 acres. Indiana had 16,000 and Maine about 14,000 acres. The total acreage in Wisconsin devoted to corn for canning was 7,047, an increase of 6.2 per cent over 1914. This is, in each case, the acreage actually reported by factories. Other acreage of private individuals, who sold their products to the factories, brings the total up to 7,532 acres in Wisconsin. There were twenty-one corn canning factories reported to the government bureau of crop estimate in 1914 and 1915.

Beautifying the Farm Home.

IF ONE wants to see beautiful homes the place to go is to a suburb of some city, yet the opportunities for beautifying the home are much greater in the country than in the city. First, because there is more ground available for that purpose in the country, and second because it can be done at much smaller expense. The fact of the matter is that it is not the cost of buying shrubbery or trees or flowers or grass seed for the lawn that keeps farmers from making their homes the most beautiful in the world; it is not the labor cost that stands in the way; nor is it a lack of appreciation on the part of the farmer and his wife of natural beauty. What then is the reason for this general lack of beauty in the country, such as can so easily and cheaply be provided with a few of the hundreds of varieties of shrubs and plants on the market? We believe it is thoughtlessness, very largely. Farmers have not thought much about the matter; they have seen comparatively few farm homes properly beautified in this way that might serve as object lessons and as sources of inspiration.

This is not as it should be. The farm home, regardless of its size or cost, should be an object of beauty, a place that the children may learn to love from all possible points of view, and one of which the farm wife may be especially proud. There are men to whom natural beauty may not appeal very strongly, but women who do not dearly love flowers and shrubs are indeed rare. If for no other reason, buy some appropriate flowers and shrubs or trees for the yard this year just to please your wife. It will make her happier. She will be refreshed and comforted every time her eyes rest upon her home surroundings, and through the influence of this delicate beauty she will become a more loving wife and a more devoted mother. We believe that it could be almost impossible to spend too much money or too much labor upon the surroundings of the home.

Talk the matter over with your wife and see if she does not agree with us that by the expenditure of a few dollars and a little labor the home can be wonderfully improved and actually be made a place so beautiful that people will come for miles and miles to see it. It is time that farmers get busy along these lines.

Will some of our readers who have beautified their homes please tell us how they did it, what they planted, what the cost was, and what the result has been in making the whole family happier and better for the effort put forth?

Cornstalk Ground for Drilled Oats.

THIS subject is brought up by a farmer, Mr. W. J. Telfer, who desires to know the best plan of preparing cornstalk ground for oats when it is the intention to drill in the crop. Mr. Telfer wishes to know if the stalks will interfere with drilling and, if so, how should one proceed to handle them so as to insure the best results?

As a rule, very little work is done in a constalk field where a drill is used in sowing small grain. However, it will usually pay to put some labor on the seed bed. Where the stalks are heavy they should be smashed down with a railroad iron or some such effective weapon. This task can be performed on a frosty morning much better than it can after the period of heavy frost has passed. It will then pay to give the surface at least one good disking, and there are those who strongly indorse the practice of double disking corn ground even where the grain is to be drilled in. This affords an opportunity to cross-disk so that the stalks that are not cut to pieces in one direction will be broken up when the disk is run in the opposite direction. In this way conditions are made favorable for the operation of the drills and there ought to be very little trouble from the roughage on the surface. Of course, the disk drill still further cuts the cornstalks, leaving them as a beneficial mulch on the surface where they rot down and add vegetable matter to the soil.

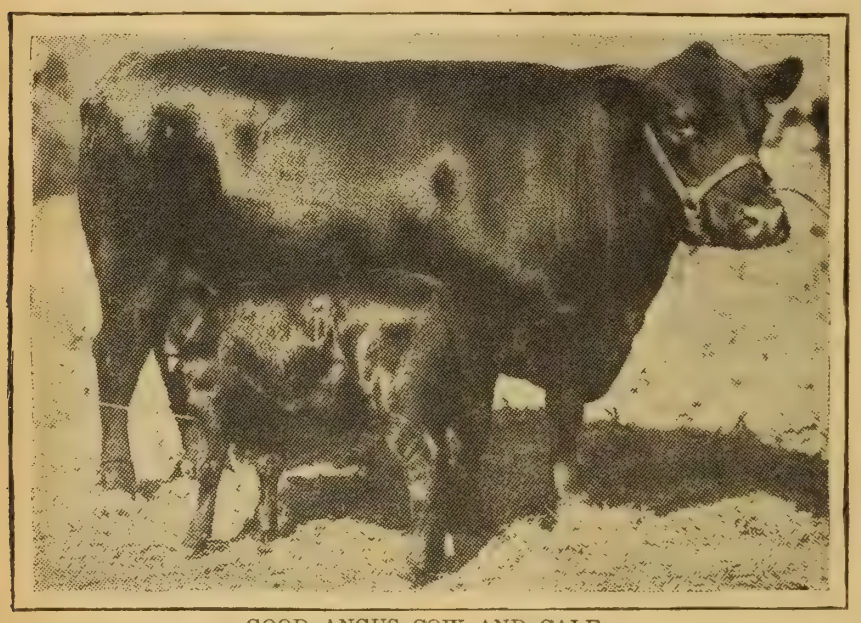
Better Beef Type Demanded.

Difference Between the $4 Beef and $10 Beef---Pointers to Wisconsin Feeders---By Parker Gelbach, Pres. Wis. Angus Assn.

HERE is a little incident which occurred in Grant county not long ago. A farmer was complaining about the price which his cattle had brought him; only $4 per hundredweight, in Chicago, when a friend spoke up: "I was just reading about a man getting $10 per hundredweight for his cattle," the friend said. "Why don't you raise that kind?" "Why?" is the question so many find hard to answer. But we are coming to a time when we must answer this question and answer it right or move to a country where land is cheaper. With all kinds of feed soaring to unprecedented prices here in Grant county this question appeals to us even more strongly.

The first thought which comes to our mind in answer to this question, "Why?" is what is the difference between these cattle which brought such a difference in price. Here it is. The $10 kind carries the meat on the parts from which the butcher obtains his choicest cuts. The $4 kind is just about the opposite. How can we solve this problem of putting the meat where it belongs? Simply by which makes a poor type of beef, will ultimately go begging. No one will be able to afford to feed him. It reminds me of the experience of a friend of mine. He bought some steers and among them was a Jersey. He didn't want the Jersey, but the seller wouldn't deal unless all were taken. So he took the bunch and put them into the feed lot and when fat sold them to the stock buyer. But the buyer wouldn't take the Jersey, as it looked too thin. He then put some cows to fatten and put this steer in with them. When they were fat he sold them but the buyer wouldn't take the steer. One day my friend received a call from a neighbor, and they agreed to butcher the steer. To their surprise the steer was the fattest they had ever had but the beef was not where the butcher wanted it.

In order to get a top price we must not only have a steer of good beef type but also a finished product, one which will reach market in prime condition. If one is in doubt as to what type is best he can get some valuable pointers from any good butcher. It is the butcher who finally gets these cattle and who really sets the gauge



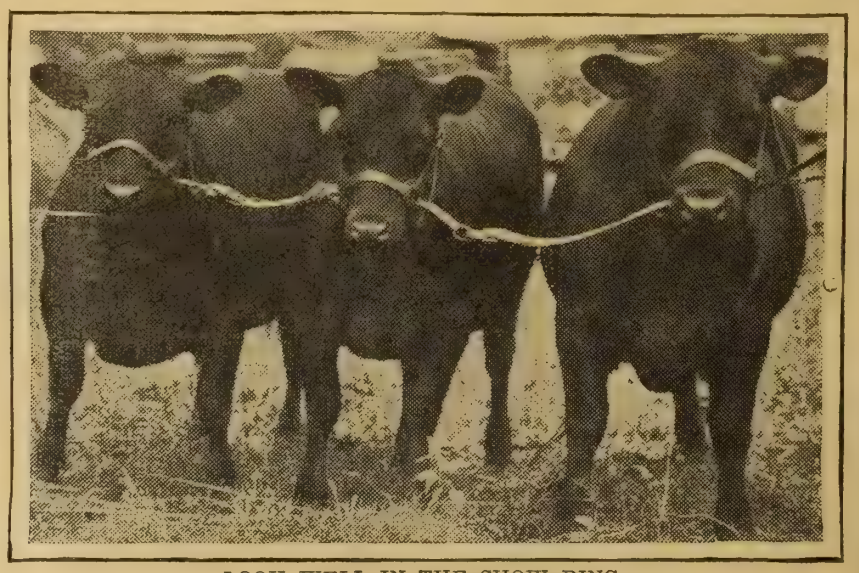
GOOD ANGUS COW AND CALF.

breeding towards that standard. That is what men have been doing for generations and what we are still continuing to do. The low price of beef cattle as compared to feeding cattle has driven many feeders out of the business, and now it seems we must raise the standard of our feeding cattle or shut up part of the feed lots.

As land prices go up and feed prices follow we will see the gap widen. The poor type of feeder, leaving the gap between the best and the poorest to be filled with other grades. And if he is the one who ultimately decides, we must produce what he wants. Neighbors of ours, a father and two sons, for several years bought yearling steers, fattened them and sold them as two year olds at a fair profit. But with the increasing scarcity of yearlings and the advance in price they found their profits diminishing. So they bought a number of grade Short-horn cows of the beef type, and crossed them with a pure-bred Angus bull. They have attained a marked degree of success and have a splendid breeding herd.

One must get cows of as near a beef type as possible, and still not neglect the milking qualities to such an extent that the cow will not be able to raise a healthy, vigorous calf. Some people are of the opinion that an Angus dam does not give enough milk for a calf, but I have not yet seen such an Angus cow. Of course, some Angus breeders have nurse cows, but so far as I know, only when in the show ring, at which time the entire show herd is crowded to the limit and then the calf is very nearly a year old, and its true mother is being dried up to give the next calf a chance.

For a number of years when we were just starting in the Angus business we bought up common calves, putting two calves to a cow, but as the buying public became more critical, and in order that we might sell our bull calves as young as possible, we now have each cow raise only her own calf, except that we usually milk one cow and put her calf on another, of course picking out one of the heavier milkers to raise the two calves sufficiently well to attain our purpose.



LOOK WELL IN THE SHOW RING.

For ordinary purposes I think almost any Angus cow will raise two calves.

What the future has in store for the beef cattle breeder is, of course, hard to forecast, but everything seems to point to a long period of prosperity for the producer. This will sure come in greater measure as soon as the business has undergone the changes essential to modern beef making.

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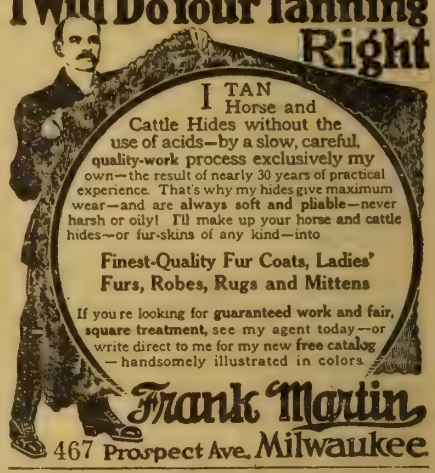

I TAN Horse and Cattle Hides without the use of acids—by a slow, careful, quality-work process exclusively my own—the result of nearly 30 years of practical experience. That's why my hides give maximum wear—and are always soft and pliable—never harsh or oily! I'll make up your horse and cattle hides—or fur-skins of any kind—into

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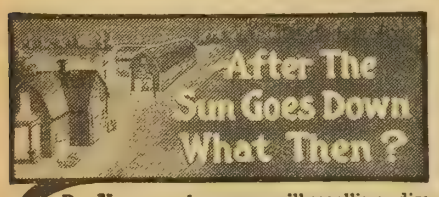

Do You use dangerous, ill-smelling, dim oil lamps and lanterns?

OR

Do You just throw the switch and have all the clear, clean, bright, steady ELECTRIC LIGHT wherever and whenever you want it, in every building on the farm?

The Wisconsin

Farm Electric Lighting Plant

JUST FOUR SIMPLE PARTS: engine, generator, switchboard, battery. Easy to install and operate. Switch is absolutely automatic. Plant is high grade in every respect; guaranteed to supply clear, constant light at a reasonable cost. Use engine a few hours each week to charge batteries, and rest of time on other farm work.

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European Motorists are getting 10,000 to 15,000 miles from a set of tires by "half-soling" them with Steel-Studded Treads—you can do the same—Durable Treads are guaranteed 5000 miles without puncture

We deliver free without a cent deposit, prepay express and allow you to judge. Applied in your own garage in thirty minutes.

Special discount to motorists in new territory on first shipment direct from factory. Write for sample-state tire size.

The Colorado Tire & Leather Co.
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They are worth Money

WEATHER frozen "Clearwater" brand Herring, $3.00 per 100 lb. sack. $3.25 in box. Pike $9.25. Pickerel $6.25. Newly packed Fancy Salted Lake Superior Herring $3.25 packed in keg. Fancy Salted newly packed Trout $7.50 in keg. Quick shipments. 25c per 100 lb. reduction on 500 lb. lots. Duluth Fish Co., Box 57, Duluth, Minn. Ref.-Nor. Nat'l Bank.

$1.00 PER WEEK Enough said. Write the Wisconsin School of Telegraphy, Dept. A, Oshkosh, Wisconsin.

I Will Tell You How

to Make Poultry Healthy

Make Hens Lay Make Chicks Grow

Now that mating time has arrived, it's up to you to see that your poultry get a tonic and internal antiseptics to make them vigorous and free of disease. *Therefore, feed Pan-a-ce-a.*

In that condition your hens will lay better, you will get more healthy, fertile eggs and the chicks will stand a better show of reaching maturity. *Therefore, feed Pan-a-ce-a.*

And, before the hatches come, I want to warn against gapes, leg weakness and indigestion, for these ailments are responsible for half the baby-chick losses. *Therefore, feed Pan-a-ce-a*—it will save you these losses.

My lifetime experience as a veterinarian, a doctor of medicine and poultry raiser has taught me the needs of poultry under all conditions; that is why I urge you to try my scientific and long-tried prescription,

Dr. Hess Poultry PAN-A-CE-A

It's a Tonic—Not a Stimulant

Here are a few of the valuable ingredients in Pan-a-ce-a to meet the requirements of your poultry which I have just stated:

Nux Vomica, a nerve tonic; *Carbonate of Lime*, a shell former; *Hyposulphite of Soda*, an internal antiseptic; *Quassia*, an appetizer; *Iron*, to enrich the blood, and other valuable ingredients, all well known and recommended by the highest medical and veterinary authorities.

Perhaps the strongest argument in favor of Pan-a-ce-a is the fact that it has been on the market for 22 years and is growing in favor each year. Read the guarantee in the right-hand panel—that is your protection.

There is a Dr. Hess dealer in your town, a man whom you know, a man who stands back of my guarantee and will return your money if Pan-a-ce-a fails to make good. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail, $2.50 (except in Canada and the far West).

DR. HESS & CLARK, Ashland, Ohio

My Guarantee

So sure am I that Dr. Hess Poultry Pan-a-ce-a will help make your poultry healthy, help make your hens lay and your chicks grow that I have told my dealer in your town to supply you on condition that if Pan-a-ce-a does not do as I claim, return the empty package and get your money back.

Dr. Hess Stock Tonic

25-lb. pail, $1.60; 100-lb. sack, $5.00

Why pay the peddler twice my price?

Your stock need this tonic now to harden and condition them after the confined heavy feeding of winter. There's nothing better to put horses in trim for hard spring and summer work. Milch cows need it just now to prepare them for the heavy milking season ahead. Dr. Hess Stock Tonic makes all stock healthy, keeps them toned up and expels worms. Sold under money-back guarantee. 25-lb. pail, $1.60; 100-lb. sack, $5.00; smaller packages as low as 50c (except in Canada and the far West and the South). Send 2c for my *new* free Stock Tonic book.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and sprinkle it in the nests, or, if your fowl are provided with a dust bath, sprinkle Instant Louse Killer in the dust bath every other week—the hens will do the rest. Also destroys bugs on cucumber, squash and melon vines, slugs on rose bushes, etc. Comes in handy, sifting-top cans. 1 lb. 25c; 3 lbs. 60c (except in Canada and the far West). I guarantee it.

Gilbert Hess M.D., D.V.S.

FREE

If you have a sick or injured animal, write Dr. Hess, tell symptoms, enclose 2c stamp for reply, and he will send you a prescription and letter of advice free of charge.

Pullman $740

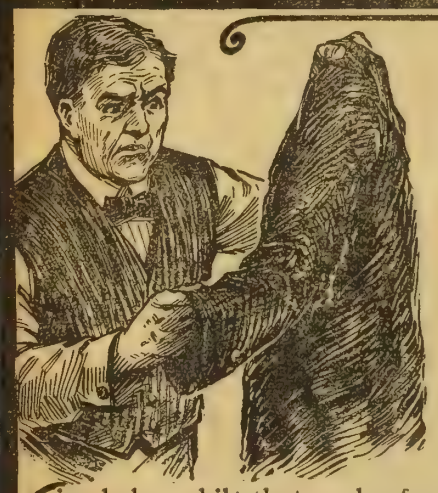
The Great Big Car For The Farm

COMFORT is the keynote upon which the body was designed---plenty of knee room in the driver's compartment, ample leg space in the tonneau and wide seats. Real leather upholstery over real curled hair creates an easy chair of the road. Perfect balance and smooth, easy-running qualities are insured by the famous cantilever springs of the English Lanchester type. The rakish lines, the simplicity in construction, the continuous satisfactory performance, all give to a Pullman owner a marvelous value for the money. There is no other car on the market today that wears as well.

SPECIFICATIONS: 114-inch wheel base; 32-H. P. four-cylinder motor; Batavia non-skid tires on all four wheels; cantilever rear springs; Independent electric starting and lighting systems; separate high-tension magneto; honeycomb radiator; full floating rear axle.

Write Dept. 5

Pullman Motor Car Co. York, Pa.



Pure Wool Costs Money

in a Coat or a Blanket

IT'S very much easier to buy goods which contain a little cotton or shoddy, and they look just as well at first.

The difference shows up in the wear. The cheap garment soon wears shiny, then threadbare, then shows gaping holes, while that made of pure wool is practically as good as new.

It's just the same with Pure Iron for Road Culverts or other uses in which it is exposed to the elements. After cheaper material has rusted to failure, "Armco" (American Ingot) Iron will still be strong and sound—good for long years of service.

"ARMCO" IRON CORRUGATED CULVERTS

are made from the purest, most even, and most durable iron on the market. Look for the Triangle Brand. **It is** your guarantee of service value.

For full information on "Armco" Iron Culverts, Flumes, Sheets, Roofing and Formed Products write

ARMCO IRON CULVERT MFRS. ASSOCIATION

CINCINNATI, OHIO

In and Around Wisconsin

Breeders' Associations Plan Their Annual Meetings —Little Items of Interest Culled For the Farmers.

Carl B. Reddelien, of North Lake, Waukesha county, recently sold his entire herd of sixty-six pure-bred Holsteins to the Carnation Stock Farms at Oconomowoc.

The annual meeting of the Barron County Holstein Breeders' Association will be held Saturday, February 26th, at the court house at Barron and all breeders are invited to attend. The association is rapidly gaining in membership.

The Central Wisconsin Fair Circuit, which at present embraces the fairs at Marshfield, Merrill, Wausau, Stevens Point, Chippewa Falls, Augusta and La Crosse, will probably be enlarged to include Mondovi this year. Final action is to be taken at a meeting of the directors soon.

The annual meeting of the Sheboygan County Holstein Breeders' Association will be held at Plymouth on Saturday, March 11th, and all dairymen, as well as Holstein breeders, are invited to attend. Commissioner Norgord, of the department of agriculture, will be the principal speaker.

Barron county farms which have been registered recently include the following:

Berg Valla Farm, Gust Peterson.
Balsam Grove Farm, John Larson.
Chinquak Park, William Halvorson.
Hill View Dairy Farm, A. L. Gumbert.
North View City Farm, A. F. Gumm.
Prairie Lake Farm, F. C. Durkee.
Star Ranch, C. E. Hinkle.

The Clark County Agricultural Society at the recent annual meeting decided to eliminate the outside race horses at this year's fair at Neillsville and have only home and farm horse races. A. A. Huckstead was elected president; J. W. Hommel, vice president; John P. Kintzele, treasurer, and Myron E. Wilding, secretary.

Door County Fair officials have opened their fair to the residents of Kewaunee county, which does not hold a fair, and this year Kewaunee county farmers can compete at the fair at Sturgeon Bay with Door county residents. The dates are September 19th-22d. One day will be set aside as Kewaunee day.

Farmers in the vicinity of Vesper, Wood county, met recently and organized a farmers' club, to be known as the Farmers' Advancement Club, with nineteen members. John TenPas was elected president; J. Overset, vice president; J. Hubrectse, secretary; Ben TenPas, treasurer, and G. Greenaway, manager.

The annual report of the Emerald creamery, St. Croix county, shows the following facts:

Number of patrons	169
Cream received, pounds	966,293
Average test	24.364%
Butter fat from cream, pounds	235,427
Butter made, pounds	289,565
Overrun, 54,138 pounds, or	22.9956%
Average price paid for butter fat	31 35-46c
Average price paid per pound	3041138

The New Richmond Cheese and Dairy Factory at New Richmond paid its cheese patrons in 1915 an average of 33.81 cents per pound for butter fat and received an average price of 13.87 cents for its cheese. The total cheese production was 155,082 pounds. Butter patrons were paid an average of 29.09 cents for their butter fat and the factory received an average of 27.6 cents for its butter. Total pounds of butter made was 40,427. At the recent annual meeting the proposition to establish a co-operative laundry was discussed, but no definite action was taken.

The advantage of growing certified seed potatoes has been illustrated this winter in Barron county where the 4,200 bushels of certified seed have been disposed of at double the market price. A carload has just been contracted for at $1.25 a bushel. This carload goes to North Yakima, Wash. Other growers have disposed of their seed at from $1.10 to $1.25 per bushel and it is estimated that the entire certified seed crop sold at an average of $1.15. As the average market price at Barron during the winter was about 50 cents for potatoes the value of growing certified seed is visible.

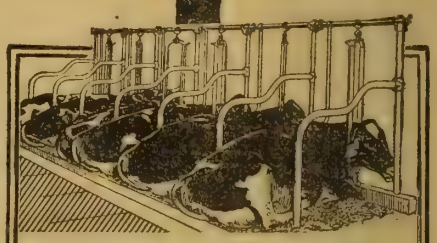
Sauk county farmers are endeavoring to organize a cow-testing association in the vicinity of Baraboo and already seven farmers with seventy-nine cows have signed up. About 400 cows are required to make it a paying and successful proposition. H. E. Taylor, of the Baraboo schools, is behind the movement, assisted by organizers from the state dairymen's association.

Improvements in the poultry building and the agricultural building have been ordered by the Walworth County Agricultural Society and will be completed before the 1916 fair at Elkhorn, the dates of which are September 19th-22d. This action was taken at a recent meeting of the society which also discussed a corn-growing contest for boys in order to increase interest in corn growing. Charles L. Turner was named superintendent of the cattle and sheep divisions; Charles O'Keefe superintendent of horses; Henry Dunbar of swine and Percy Cowles of poultry.

Wood County Cow-Testing Association No. 2 was organized recently at a meeting at Grand Rapids with William Burhopp as president; Porter H rney as secretary, and Ed Caan as treasurer. This is the second association for that county and was organized by W. W. Clark, of the county agricultural school. The membership includes thirty-two farmers with 420 cows. William Bassler is tester. It is proposed to form a third county association this spring for the Pittsville district.

Wisconsin has four tomato canning factories using the product of about 300 acres of tomatoes annually.

$4.75 For This JAMES Stall



INCREASE your barn profits—save labor and time—by putting in the great line of JAMES Sanitary Equipment. Prices are within reach of all.

Stalls for $4.75 each—same as the $10 stalls except on the latter some special features are added—include same steel piping used in all JAMES stalls; square horizontal pipe to hold dust-proof fittings securely; Triple Curve Stall Partition; stall post anchors for easy installation; JAMES stanchion with cow-proof lock of door-knob type, lock open clip, everlasting hinge, Double Chain Hanger with flat links, wood lining; baked-on enamel finish. Shipped assembled, knocked down for easy handling and erection.

JAMES line includes celebrated Stalls; Stanchions, Pens, Carriers, Ventilators, Watering Buckets, etc., designed and built by originators of sanitary barn equipment ideas.

Tell us how many cows you own and when you expect to build a new barn or remodel the old one, and receive free book, "The James Way," showing how to build and equip a dairy barn. Write today.

James Manufacturing Co.

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PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send for 3 free books: inventions wanted, etc. I help you market your invention without charge. Address Richard B. Owen, 37 Owen Bldg., Washington, D.C.

Raising Blue Ribbon Grains.

Pure Breeding as Important as in Live Stock---By Herman T. Draheim, of Gotham, Wis., Who Has Many Blue Ribbons.

THERE are many different ways of growing proper grains for exhibition, but from my own experience I found it necessary to first study the soil and sow the seed that is best adapted for your soil and climate. Now, there is just as much difference in pure-bred seed grain and common varieties of seed grain as there is in pure-bred stock and the common variety of stock. I don't think any exhibitor would try to improve his stock with a scrub sire or try to improve his seed with common variety of seed grain; and I would advise every exhibitor to grow nothing but pure-bred seed grain.

H. T. DRAHEIM, Gotham, Wis.

Then how to prepare the soil. Now, you all know what rotation farming means. It is clover, corn, oats and barley, three crops in all. I do all my plowing in the fall for small grain. In the spring give a light disking, harrow several times, clean your grain and treat for smut, then sow it with a drill, then go over the ground with a planker or roller, as this will crush all the bumps and leaves a fine dust mulch. You will be surprised to see how even the grain will come up and also how even it will grow until harvest time. I cut when ripe, not too ripe, as grain will crinkle and shell out. When shocking always make a long shock. A dozen bundles is plenty. Some prefer a round shock, but I have found in wet weather the long shock dries out better and will not get moldy or color your grain as quickly as the round shock.

Stacking is very important. Also see that grain is fit, as it will heat and also color your grain. After proper care has been taken with your grains you will be surprised to see how bright the grain is. Now, I am sure every exhibitor feels proud of his blue ribbons and they mean as much to him as A. R. O. records do to a stock breeder. I think every farmer should exhibit grain at the county fair and at the annual grain show at Madison. It gives the exhibitors a chance to study the true types of corn; also the prize-winning grain and sheaves. Now, if you win blue ribbons it is a good boost for your community. Then when these samples win at national grain shows it is a bigger boost for your state and shows we appreciate the work done by the agronomy department for developing these pure-bred seed grains which are carrying off the highest honors wherever exhibited.

Now, about growing corn for exhibition, it is rather a hard proposition and is something that cannot be accomplished in a few years. I think there isn't any variety of seed neglected so much as corn. A great many farmers get in a hurry about planting time and neglect to do the work properly. About half of the corn will come up, then they will replant with almost any kind of corn, whether it is Flint or what, they are not very particular and expect good corn. Such corn will get mixed and not mature even. Some will be ripe, others dented, while some may have a small nubben. Now start right. Don't think just because you grow white corn it is the true type of Silver King (No. 7). I am sure you would not think just because you owned a cow that had black and white spots that she was a pure-bred Holstein and a typical type of a dairy cow. First get the true type and plant the variety that is best adapted for your climate. Plant on manured clover sod, plow and give a double disking, good harrowing and plank before planting. This will leave the ground smooth and even. Have every ear tested. Then plant, wait a few days, then drag again, as this will break the crust that forms after rains. Dragging will help while the corn is small. First time cultivate rather deep. Then after shallow cultivation. When your corn is ripe select from the stalk only the very best ears. Then take a ten-ear sample and enter at your county fair or grain show. Don't expect a blue ribbon the first thing or be disappointed if you don't get one, for there's glory in defeat also. From the first exhibit you will get interested. The following year plant a few ears in a special seed plot or ear-to-the-row method. Any way to grow prize-winning corn, and you will wonder that there is more to learn every year. I hope you readers will not think me a book farmer, but this is the method I used on growing the grain that won the most blue ribbons at the annual grain show last year.

WHY A "LEVEL" ADJUSTMENT CHANGES.

To the Editor:—I noticed in a recent issue of your paper mention made of leveling with a cheap farm level. The party stated that when he left same standing for a while, on returning found the bubble had run off to one end of the tube. That is, the level on being set would not stay in a perfect condition or the same as set. This, you will find, is due to the fact that in winter time the ground thaws under the feet of the tripod at irregular intervals. For instance, as the sun comes out from under a cloud the tripod will settle enough to run the bubble off. Then again, when the sun stays under the clouds you will experience no trouble with the bubble running off.

It may be that with the cheaper grades of levels, as the one under consideration, will be moved enough by this effect of thawing under the tripod to make a difference in the levels.

I have never experienced any trouble with a difference in the levels unless under extreme conditions where I was obliged to leave the level standing in one position for a long time, or where the thawing was extreme in itself. T. Harold Knight.

John Deere Plows for Light Tractors
High and Level Lift

PRACTICAL—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all bottoms raise high and level. Another pull lets them down. Plows do not clog or gather trash on the turn.

Extra beam and bottom, readily attached, increases regular two bottom plow to three, or regular three bottom to four, as desired.

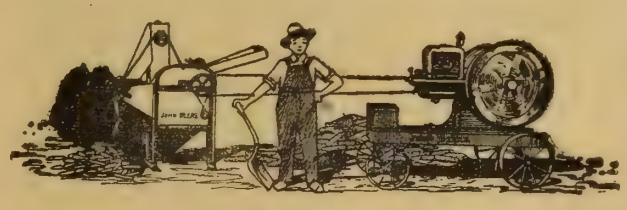
Equipped with Quick Detachable Shares—save 80% time changing shares. Write for free booklet.

John Deere Disc Harrow
The Flexible Spring Pressure Disc

MODEL B—the only disc that cuts at even depth its entire width. It has a patented spring pressure lever. With this lever, pressure can be regulated at inner ends of gangs to cut out dead furrows or disc ridges without burying the harrow.

The Model "B" does not crowd toward the bottom on hillsides or in overlapping. The gangs are independent of each other and can be given the proper angle to work right under such conditions.

Write for free booklet, "Bigger Crops from Better Seed Beds."



R. & V. Engines
Dependable Farm Power

"R & V" Triumph—always develops rated horse power—made in 1, 1½, 2½, 4, 6, 8, 10, 12, 16 and 20 H. P. sizes, stationary and portable.

Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings.

High grade throughout. Inspect the extra guard ring over piston pin to prevent possibility of scoring cylinder. Ask about the "R & V" oscillating magneto. Write for free booklet.

John Deere Grain Binder
With All Steel Quick Turn Tongue Truck

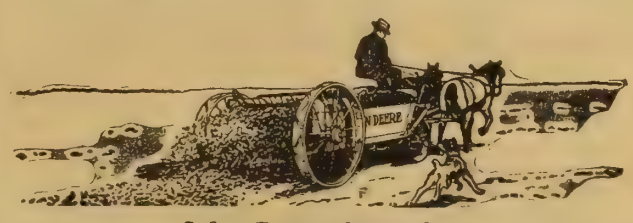
THE Better Binder—The first binder to be equipped with a practical all-steel quick-turn tongue truck. The advantages are:

1st—Truck turns machine faster than team turns. This saves time in turning, square corners are made, and full swaths taken at the turns.

2nd—Stub tongue is all steel, hot riveted—no breaking, splitting or rotting. All steel eveners.

The binder that is noted for its light draft, sure cutting, elevating and tying.

Write for free booklet, "The Better Binder."



John Deere Spreader
The Spreader with the Beater on the Axle

ONLY hip high to the top. Wheels out of way when loading. Mounting the beater on the axle is patented. Write for Spreader booklet.

Three exclusive John Deere Spreader features:

[1] Beater on the axle—nothing else like it. [1]

[2] Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching. [2]

[3] Ball Bearing Eccentric Apron Drive—requires no attention. Performs wonders in the working of the spreader. [3]

Dain System Side Rake
The Left Hand Rake

THE tool that is revolutionizing hay making. Left hand instead of right—follows the mower closely, places hay upon clean stubble and puts it in medium size windrows with bulk of leaves inside and majority of stems outside.

This means uniform curing and leaves don't dry up and fall off. They cure in the shade.

Hay is air-cured, not sun-scorched, retains its color, nutrition, feeding value and sells for more money.

Write for free booklet describing the Dain System of Air Curing Hay.

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Better Farm Implements and How to Use Them

BOOK FREE—168 page reference book—tells all about a complete line of farm implements and how to adjust and use many of them. A practical encyclopedia of farm implements. Worth dollars. Describes and illustrates: Plows for Light Tractors; Steel and Chilled Walking and Riding Plows; Disc Plows; Cultivators; Spring Tooth and Spike Tooth Harrows; Lister Plows and Cultivators; Disc Harrows; Alfalfa and Beet Tools; Farm and Mountain Wagons; Teaming Gears; Manure Spreaders; Inside Cup and Portable Grain Elevators; Corn Shellers; Hay Loaders, Stackers, Sweep Rakes, Mowers, Self-Dump Sulky and Side Delivery Rakes; Hay Presses; Kaffir Headers; Grain Drills and Seeders; Grain Binders; Corn Binders; Gasoline Engines. This book sent free to every one who states what special implements he is interested in and asks for Package No. X-64.

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THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

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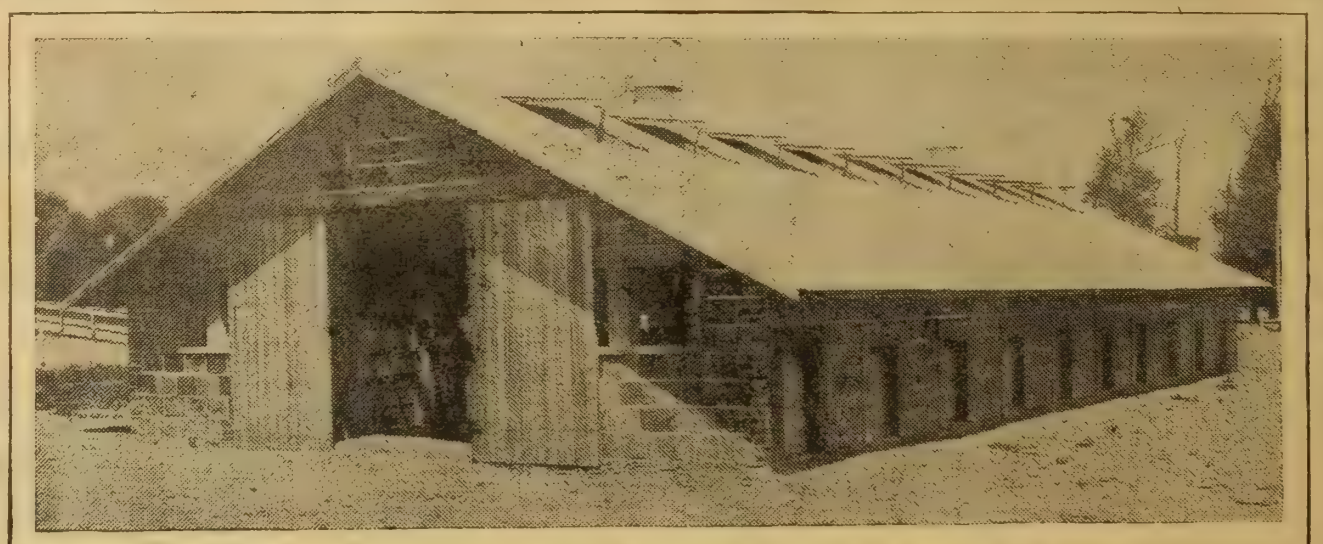
CAFETERIA PLAN FOR HOGS.

Mr. John Evvard Has Aroused Considerable Interest Among Wisconsin Hog Men by His Free-Choice System of Feeding---Results of His Experiments Interesting.

ONE of the most interesting addresses at Madison Farm and Home Week was by Mr. John Evvard, of the Iowa station, on the free-choice plan of swine feeding. Mr. Evvard takes the position that an enormous amount of labor may be saved in the feeding of swine, and, further, that there may be a material cutting down in the cost of pork production if the methods which he outlines are adopted by swine breeders. The dropping of slop alone from the bill of fare means the removal of one of the most laborious items of choring in farm operations. In a series of experiments outlined and supervised by Professors Pew and Evvard, of the Iowa station, it has been demonstrated over and over again that the most rapid and cheapest gains can be made when hogs have free access to grain as well as to concentrates, these being fed in dry form from self-feeders.



SUN-LIT HOG HOUSE DESIGNED AND PERFECTED BY IOWA EXPERIMENT STATION—WARM, DRY, WELL-VENTILATED, SANITARY AND SUNNY.

The writer visited the Iowa station some weeks ago and found 400 pigs on feed and the outcome of an extensive series of experiments will, we predict, establish and fix forever certain principles of feeding swine that have heretofore been unheeded. It has been found, among other things, that blue grass is not an economical feed unless accompanied by a liberal grain ration. Pigs weighing an average of forty-one pounds on June 18th were turned into a good blue grass pasture and fed one pound of corn daily and about one-tenth of a pound of tankage for each 100 pounds of live weight. Four months later these pigs weighed seventy-two pounds. It required 407 pounds of corn and tankage for 100 pounds of gain made. On the other hand, pigs of the same initial weight, namely, forty-one pounds, fed exactly the same length of time as the first lot, having free access to corn and tankage in separate feeders, weighed 204 pounds each. In other words, they were 132 pounds heavier than the lot fed the small-grain ration, and, furthermore, they made their gains at a lower cost, as it required but 369 pounds of corn and tankage to make 100 pounds of increase in weight. Remember that each lot had a continuous full ration of blue grass. Where hogs were fed three pounds of corn per 100 pounds of live weight during the grazing period they weighed 141 pounds, whereas hogs full fed twice daily on corn and tankage weighed 185 pounds. Even full feeding twice daily failed to produce the fine results accomplished by the self-feeder, as the hogs were nineteen pounds lighter than the self-fed group. Comparing, now, the cost of grain in the case of the lot fed one pound of grain to each 100 pounds of live weight with that of the self-fed lot, we find that in the former instance it was $7.41 per 100 pounds and in the latter $5.04. Corn is computed at 70 cents a bushel and tankage at $2.50 per 100 pounds, but even at these prices the more corn you can feed to hogs on blue grass the greater will be the gains and the less the cost and the larger the profits per pig. Mr. Evvard says that he has convincing proof that if you want to use blue grass as a pasture and feed corn and tankage so as to make 200-pound pigs in the least time with the least labor and at the lowest cost look to the self-feeder for the inspiration and the means.

It is one thing to allow hogs to balance their own ration when they have access to grass and plenty of exercise, but it might seem to be quite a different thing if they are dry-lot fed. This is a matter that has also been well threshed out by Mr. Evvard. Seven groups of hogs were placed on different rations at the weight of forty-two pounds. At the end of a 100-day feeding period it was found that the hogs having access to shelled corn, wheat middlings and tankage weighed 155 pounds. In the making of 100 pounds of gain they consumed 300 pounds of shelled corn, fifty-three pounds of wheat middlings and fifty-five pounds of tankage, or a total consumption of 408 pounds. This made the cost of the gain, at prevailing prices, $5.90 per 100 pounds. Hogs given the same ration, but fed three times a day instead of having continuous access to the grain, made 100 pounds of gain at a cost of $6.07. When they were fed twice a day it cost $6.35. In the latter case, however, the hogs only weighed 137 pounds at the end of the 100-day feeding period, whereas the free-choice lot weighed 155 pounds. Four other lots were fed in accordance with well-known feeding standards, but in every instance they fell far behind the free-choice lot in the daily gains made and the increase in weight was made at a greater cost than were the gains in the case of the free-choice lot. The result of this dry-lot experiment indicates that the ration the pigs select themselves will produce larger gains and cheaper gains than will result from the feeding of foods selected by men be they ever so skilfully standardized.

SELF-FED GILTS DEVELOP INTO PROFITABLE BREEDING STOCK.

In the case of hogs having access to alfalfa pasture, the supplying of grain by the self-feeder system gave most satisfactory results. Hogs weighing forty-one pounds when turned into alfalfa made an average gain of .62 pound when fed one pound of corn to each 100 pounds of live weight. When similar hogs were fed three pounds of corn to 100 pounds of live weight they made an average daily gain of .95 pound, while hogs having access to the self-feeder made an average daily gain of 1.19 pounds. At the end of a feeding period lasting 120 days the hogs fed the so-called 1 per cent ration weighed 116 pounds, those fed the 3 per cent ration or three pounds of grain for each 100 pounds of weight, weighed 155 pounds, while the lot fed corn with a self-feeder weighed 185 pounds. The cost of the grain in making 100 pounds of gain was the smallest where the least corn was fed, namely, $4.15 per 100 pounds, and the largest in the case of the self-feeder, which was $4.79 per 100 pounds. The fact must not be lost sight of, however, that the hogs having access to the self-feeder were sixty-nine pounds heavier than those fed lightly on corn, and, therefore, they were just that much nearer the marketing period. It follows, naturally, that it costs more to make a pound of gain on a heavy hog than on a light one, so that by the time hogs weighing 116 pounds are brought up to the weight of the self-fed lot, namely, 185 pounds, their gains will even run higher than the self-fed lot. All things considered, therefore, the most profit per pig running on alfalfa in a given time is secured, under ordinary conditions, with a full feed grain ration. The gains are more rapid, and, in the case of spring pigs, they are ready for market early when prices, on the average, are higher. Then there is the saving of labor that is effected by early marketing and the advantage of getting rid of the hogs before they need expensive shelter.

It will be noticed that in every instance the hog gives the best results from the food consumed when he is allowed to make his own choice. The hand of man is apparently not required in the mixing, as the needs and requirements of the animal seem to be most economically met when free choice is allowed. The young pig requires considerable protein and early in life the high-priced concentrates are used freely. Later on, as weight increases, there is a rapid falling off in the amount of protein consumed and an increase in the amount of fat-forming foods required. This means that, considering the whole feeding period,

(Concluded on page 25.)

HOGS IN GROUP TO LEFT, PASTURED ON BLUE GRASS AND SELF-FED ON CORN AND TANKAGE, AT SIX AND A HALF MONTHS WEIGHED 204 POUNDS, WHILE THE GROUP TO RIGHT, PASTURED ON BLUE GRASS AND 1 PER CENT CORN RATION, WEIGHED SEVENTY-TWO POUNDS AT SAME AGE.

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Wonderful Stump Puller-Special Price

Just What You Have Been Looking For

Why pull stumps by hand power? Let the horses do the work. Save yourself back-breaking labor, time and money with this wonderful stump puller.

Biggest value ever offered in a stump machine—more service per dollar of cost than you ll get from any other. Meets all your requirements—just what you want for ordinary stumps. Strong, safe, sure and fast in operation. Practical and serviceabl

Your opportunity to get a **horse-power** stump puller at a real bargain price. This machine takes the place of the old-style, slow-action, man-killing hand pullers. Made to pull stumps any place, any time with one horse. Can be used as a hand machine if desired and works as easy and as fast as any hand power stump puller. Has every good feature—gets results that mean money to you. Investigate now. Get proof of its qualities and satisfy yourself that it's the cheapest, safest, easiest and best way to get those stumps out.

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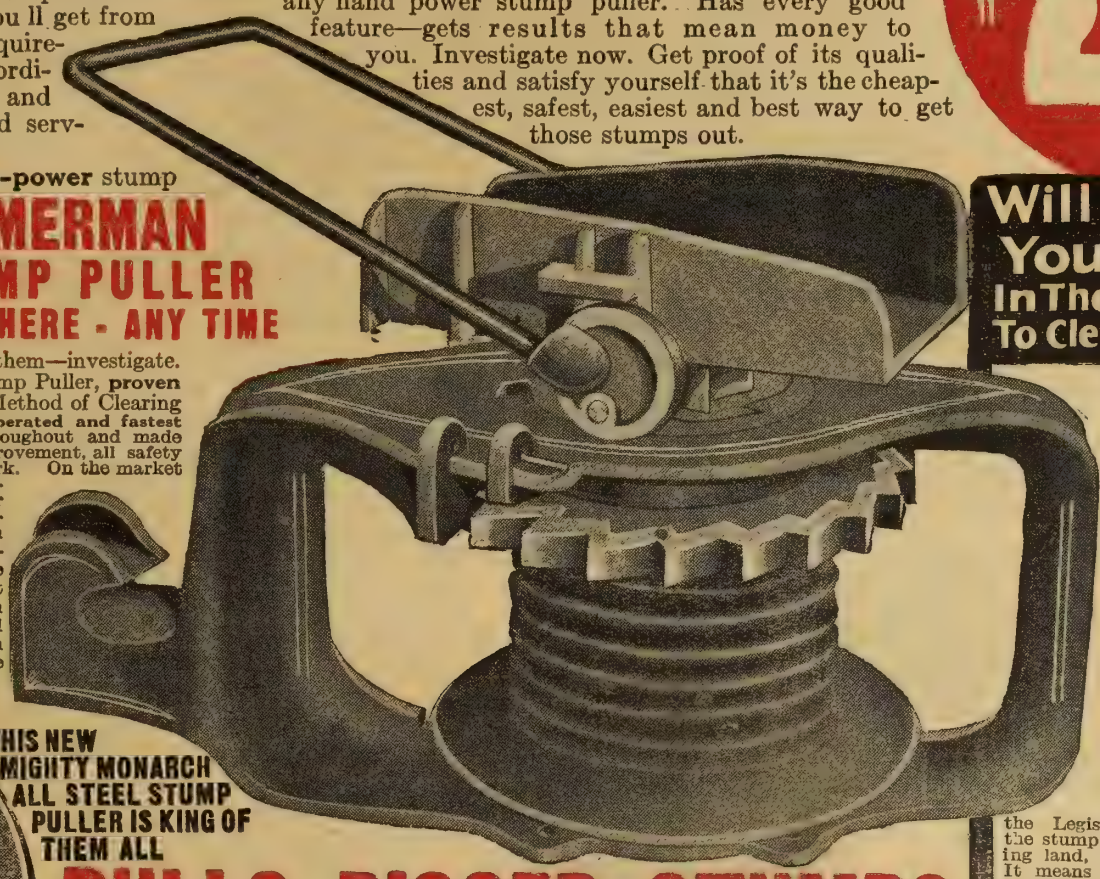
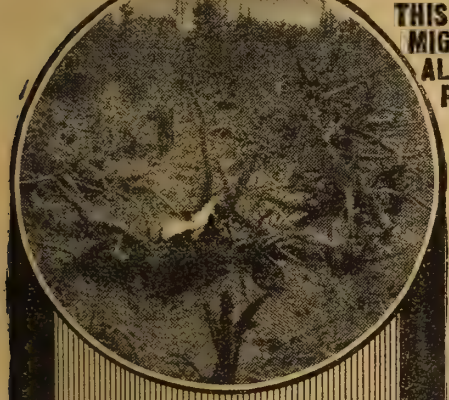
THIS NEW ZIMMERMAN ALL STEEL STUMP PULLER FOR ALL WORK - ANYWHERE - ANY TIME

If you have large stumps, many of them—investigate. The famous Mighty Monarch Steel Stump Puller, **proven and recognized** as the World's Best Method of Clearing stump land. **Strongest, safest, easiest operated and fastest stump puller on earth.** Made of steel throughout and made absolutely right. Has every modern improvement, all safety devices and is made in all sizes for any work. On the market 20 years—40,000 satisfied users. Unbreakable in service and dependable for lifetime satisfaction. So simple in operation and so safe that a child can handle it. Pulls stumps roots and all—200 to 600 of them per day. Note the large bearings, long anchor hook and deep ratchet teeth. This Mighty Monarch can be thrown out of gear with a full load on the cable and is the only machine made with a friction brake on the drum operated by the same lever used to throw it in and out of gear.





THIS NEW MIGHTY MONARCH ALL STEEL STUMP PULLER IS KING OF THEM ALL

PULLS BIGGER STUMPS CHEAPER, FASTER, EASIER—WE PROVE IT

The New Zimmerman Mighty Monarch Steel Stump Puller pulls all the stumps—big or little—from any soil. Pulls them faster than any other stump puller can. Pulls them easier and at less expense. Cheaper to use than dynamite and safer than any other method. Clears land at one operation—gets roots out and saves grubbing. This World famous stump puller will pull stumps with triple power over an area of more than two acres with 200 feet of cable at one setting. Holds the World's record for speed, power and economy.

We'll prove these statements—every one of them—at the first Mighty Monarch demonstration in your community. Don't fail to see it—you'll learn things about clearing with modern methods that you never dreamed of.

GET CATALOG AND BOOK ON LAND CLEARNG---THE REAL FACTS

Fill out coupon below and mail to us today. Get our big Catalog and Land Clearing Book—worth money to you. Tells all about Mighty Monarch Stump Pullers—all sizes and prices. Shows how they are made and why they're "Best On Earth." Fully illustrated with pictures of clearing scenes all over the country and showing the Mighty Monarch at work. Describes full line of high grade clearing accessories and complete modern equipment. This book is free to you—write for it.

SPECIAL: GOOD TERRITORY OPEN FOR DEALERS

Big chance for active dealers. We want representatives in all open territory to supply our customers with Mighty Monarch Stump Pullers. Thousands of land owners want them now and the demand is increasing as state campaigns for more cleared land progress. Write for our big, new advertising and sales plan and complete plan of dealer co-operation to show stump land owners the big value of Mighty Monarch Clearing Methods. Public competitive demonstrations to be held by all our dealers. Let us tell you about it.

ZIMMERMAN STEEL COMPANY

DEPT. W 8 BETTENDORF, IOWA

Will You Help Your State In Their Campaign To Clear Stump Land?

The success of the big campaign now on in this state to get the land cleared and under the plow depends on the stump land owners. That means you.

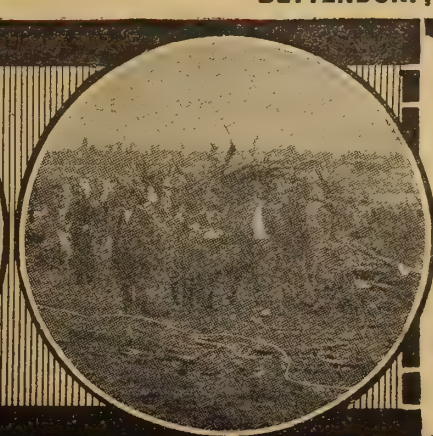
Are you interested in the prosperity of your state? In its crop returns, land values and future place among producing states? Do you want to see better times, more money in circulation and more settlers about you?

The State Agricultural Schools, Agricultural Experts and practical farmers are all boosting for land clearing right now. Bankers, influential business men and members of the Legislature are urging the land owner to clear his land, and some official action from the Legislature is expected. Clearing the stump land means more producing land, more crops, more money. It means permanent prosperity for the state at large and every individual community.

Help this good cause along. Clear your land now. Get the stumps out and grow crops and make money from the land. One crop from new land will pay for the cost of clearing with a Mighty Monarch Stump Puller—every year after that is net profit.

AOT NOW

Get the Mighty Monarch Book and learn how to clear land cheaply, safely and easily.



Zimmerman Steel Company,
Dept. W S Bettendorf, Iowa.
Gentlemen:

Please send me by return mail your Catalog of Zimmerman Mighty Monarch Steel Stump Pullers and Land Clearing Book. I am interested in clearing and want full information about your line of stump pullers and accessories.

I have.....acres of land of which.....acres is stump land. Soil is..... Stumps average about .....in diameter and about.....to the acre. They are.....stumps. My land is .....miles from town.

My dealer's name is.....

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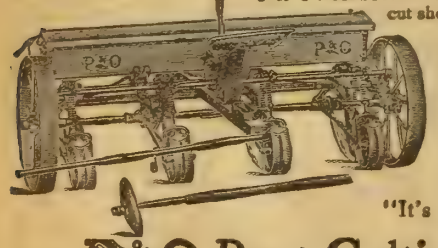
P&O Sugar Beet Implements

P&O Beet Seeders

P&O Four Row Beet Seeder



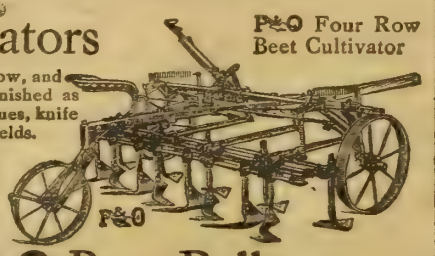
P & O Beet Seeders are up to date in every respect. The accompanying cut shows the regular equipment. The feed mechanism can be adjusted to plant any quantity desired. All cups are adjusted at once. Large seed capacity. Press wheels have open center, concave tires.

Can be furnished for planting in rows 16, 18 and 20 inches, or 18, 20 and 22 inches apart, as ordered. Openers and press wheels can be raised or lowered together, or independently. Can be equipped with an efficient Fertilizer Attachment; also an Irrigating Attachment.

"It's the Way We Build Them."

P&O Beet Cultivators

P&O Four Row Beet Cultivator

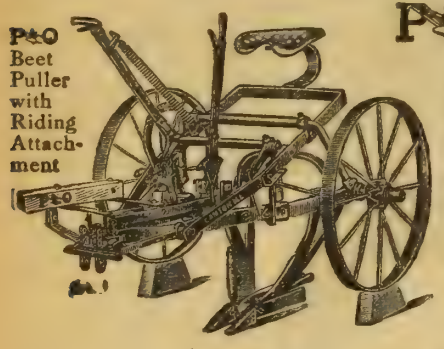


P & O Beet Cultivators are made in two and four row, and can be equipped to meet varying conditions. Furnished as shown, or with irrigating shovels, duck feet, deer tongues, knife weeders, disc weeders, spiders, crust breakers and shields.

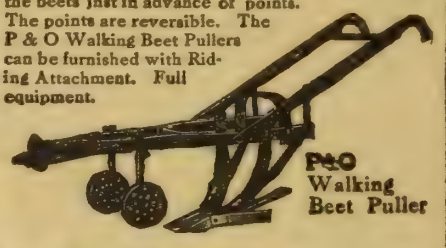
Fine depth and leveling adjustment. Adjustable for rows 16, 18 and 20 inches apart, or 18, 20 and 22 inches apart, as ordered. Noted everywhere for simplicity of construction, great strength, and ease of operation, the hall marks of P & O excellence.

P&O Beet Pullers

P&O Beet Puller with Riding Attachment



Walking or Riding. The P & O Riding Beet Puller is the only one on which the operator sees the beets just in advance of points. The points are reversible. The P & O Walking Beet Pullers can be furnished with Riding Attachment. Full equipment.



P&O Walking Beet Puller

We make a full line of implements for the Beet Grower.

Our pamphlet, "Sugar Beet Implements," describes them. Write for it.

P&O Light Draft Plows Are Backed By An Unqualified Guarantee

Ask Your Dealer or Write to Nearest P & O Agency

Parlin & Orendorff Co.

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Easy for Your Horses

THE LIGHT RUNNING WEST BEND WAGON

In buying a wagon, there are three points you must look for—good materials, good workmanship, *right price*. Equally important, you want a *light running* wagon—one that will run so easily that horses do not waste energy pulling it. You get all these fine points—good materials, good workmanship, right price when you buy The Light Running West Bend Wagon

25% Lighter Draft Guaranteed

The West Bend is the lightest running farm wagon on the market. It is known for its exceptional qualities. Improved S. & S. skeins with large, smooth bearing surfaces insure complete lubrication and easy running. Easy on horses. Enables you to haul maximum load. *Ask Your Dealer* to show you the Light Running West Bend Wagon. Write us for catalog showing full line of wagons for every farm purpose. Mailed *free*—write today.

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We SAVE You Money

$8.10! A *big* reduction in price, due to our great increase in production—and our method of selling *Direct from Factory to Farmer*. A better Walking Plow has never been made! Look at the high-class construction! Share and moldboard the *Very Best Soft Center Steel, Finely Tempered and Polished*. Heavy steel frog, to insure ample strength and lasting durability. Heavily braced at every point of strain, to *guarantee* steady, *true* running. Beam made of High Carbon Steel. Toughest Oak Handles, nicely finished grips. The plow with "just the right hang." *And* sold direct for $8.10—with a

FIVE-YEAR GUARANTEE

Write today. Get full details of this NEW plow offer!

We Make Gang and Sulky Plows Also. Get Our New, Low 1916 Prices

Send for New 1916 Catalog of Plows, Harrows, Cultivators, Grain Drills, etc. Find out how *much* money you can *save* buying from factory.

The Plow Man, with Monmouth Plow Factory, 617 South Main St., Monmouth, Ill.

2016 Model

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and *freight prepaid* on the new 1916 "RANGER" bicycle. Write at once for our *big catalog* and *special offer*. Improved Models, prices reduced. Extraordinary *new offers*. *You cannot afford to buy* without getting our *latest propositions*. WRITE TODAY.

Boys, be a "Rider Agent" and make big money taking orders for bicycles and supplies. Get our *liberal terms* on a sample to introduce the new "RANGER." TIRES, equipment, sundries and everything in the bicycle line half usual prices. A few second-hand bicycles $3 to $8 to clear.

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CURRENT EVENTS

THE republican national campaign will be waged as a fight for adequate military preparedness and tariff reform, opposition to granting early independence to the Philippines and insistence of a vigorous stand for American rights, both in Mexico and in relation to the European war. Such were the keynotes sounded at the republican state convention in New York last week, plainly intended for adoption on a national scale when the proper time comes. These keynotes were first sounded by Elihu Root, chairman of the convention, who was temporary chairman of the republican national convention four years ago, which nominated Taft for the presidency for a second term. The big fight of the convention was over the instruction of the delegates to the national nominating convention. Notwithstanding every effort on the part of Governor Whitman and his supporters, the delegates were left uninstructed, so that should the name of Justice Hughes be presented the New York delegates will be free to support him, instead of Governor Whitman or any other candidate. After a fight which lasted four hours the committee on delegates finally agreed on United States Senator James Wadsworth, Jr., Charles S. Whitman, Frederick C. Tanner and Elon B. Brown, republican leader in the state senate. As Wadsworth, Tanner and Brown are reputed anti-Whitman men the committee's decision was accepted as a defeat for Governor Whitman.

REPORTS have been rife the past few days that Germany had offered to make a separate peace with Belgium, agreeing to withdraw all troops and restore Belgium to its king and government, the only provision being that Belgium should absolutely prohibit the allied troops from marching across its territory to attack Germany after the German troops were withdrawn. In short, Germany would have Belgium maintain the strict neutrality which it violated when it invaded that country immediately after the outbreak of the war. Whether or not Belgium is considering the matter seriously (whether, in fact, Germany has made such an offer) is not now definitely known. The ministers of the allies are known, however, to have informed the Belgian government that hostilities against the Teutons and their allies will not be permitted to end without Belgium having re-established its political and economical independence. They added that the Belgian government would also be called upon to take part in the peace negotiations.

GERMANY has issued formal notice to the world that after March 1st all armed belligerent merchantmen will be considered and treated as warships. This means that any vessel of England, France or any other enemy nation which carries freight or passengers or both, but which has a mounted gun for protection, will be attacked and disabled or sunk, the same as though it were a regular war vessel the purpose of which was to engage in battle at the first sight of the enemy. While making this formal announcement, Germany reiterates that it will abide by its promise to President Wilson and that unarmed passenger ships will not be sunk without warning and without ample time being given to allow the passengers to get to safety. Carrying a cannon or guns is to be the test of whether a shipping vessel is to be attacked and sunk, according to the new rule, which goes into effect next week. While Germany is assuming this new attitude, announcing an early resumption of its submarine activities, the United States virtually helps it in its new course by announcing the possibility of action on our part which will bar armed merchantmen from American ports except as they may put in, like war vessels, to remain a stipulated time for coal, provisions or repairs, after which they must leave or be interned for the remainder of the war. There is talk of congress going still further and warning Americans that they must not take passage on liners that are armed or lose their right to the protection of the Stars and Stripes if they insist upon doing so. If the administration refuses to warn Americans to keep off armed liners there will be a demand in the senate for the immediate passage of the Gore bills prohibiting Americans from taking passage on vessels of belligerent nationality. There already is close to a majority of the senate in favor of such legislation and it is not improbable that the situation produced by the administration and the German government will serve to increase the support of the Gore measures.

NOW that the plan of former Secretary Garrison for the creation of a continental army is doomed to defeat, proposals have been made by the National Guard Association for the federalization of the state troops. Under the proposed plan an enlistment contract would be required of the national guardsman by which he would bind himself to serve the federal government "within or without the continental limits of the United States" for a period of two years, or until discharged, should the guard be called out at any time during his three-year enlistment period. At least forty-eight drills a year and participation in annual field maneuvers would be required. The maximum number of troops provided for is 500 for each congressional district, or a total peace strength of approximately 200,000, an increase of 70,000 over the present strength of the national guard. They would form a separate branch of the regular army in time of war when called into the federal service. The act would take effect July 1, 1916. Heretofore the national guard has been solely and exclusively a state body of troops, with no federal authority or supervision. There is a growing conviction that to get the best results the national government must be the supreme power, instead of forty-eight separate state governments. One of the reforms that seems likely to be adopted, as a result of the preparedness talk, is this proposed change in the organization, supervision and duties of the national guards of the various states.

JOHN T. TROWBRIDGE, poet and author of stories for boys, whose name was a household word a third of a century ago, died last week at his home in Massachusetts, in his ninetieth year. It was sixty-three years ago that Mr. Trowbridge gave to the youth of an earlier generation "Father Brighthopes," the first of a long series of books that included "Neighbor Jackwood," "The Pocket Rifle," "Cudjo's Cave," and ended with "A Pair of Madcaps" in 1909. Mr. Trowbridge was one of the last survivors of the group of authors who made Boston a famous literary center in the first three decades of the last half of the nineteenth century. Perhaps the best known of Mr. Trowbridge's verse is the humorous poem, "Darius Green and His Flying Machine," written in 1870. When, forty years later, he first saw an aeroplane in action, he remarked: "I never dreamed when I wrote that poem that such a thing as a flying machine was even a possibility in my lifetime."

HORSE OWNERS

IF you have colts to break or if you have a kicker, shyer, runaway or otherwise unmanageable horse that you are unable to properly break with any other bridle or breaking appliances, **Koepke's Controller Bridle** will do the work in the shortest time with the least possible danger. A perfect breaking and driving bridle. Satisfaction guaranteed or money cheerfully refunded. Write for circulars and prices.

FRANK L. KOEPKE, Whitehall, Wis.

Wisconsin Baby Beef Contest.

Boys Under Twenty Years of Age May Compete for Prizes Offered by Wisconsin Live Stock Breeders' Association.

UNDER the auspices of the Wisconsin Live Stock Breeders' Association, an effort is being made to interest Wisconsin boys in beef cattle. A contest for boys under twenty years of age has just been announced. Prizes will be awarded to boys who show the best baby beef, regardless of breed. The contest will be conducted in conjunction with the county fairs; all winners at these fairs to compete in a state show to be held at Madison, November 22 and 23, 1916. Prizes will be awarded at Madison, ranging from $50 for first prize down to $4 for fifteenth prize. Four fairs—the Grant County Fair at Lancaster, the Iowa County Fair at Mineral Point, the Richland County Fair at Richland Center, and the Rock County Fair at Janesville—have complied with the rules of the contest and the Lodi Union Fair at Lodi and the Sauk County Fair at Baraboo are expected to come in shortly. It is also believed the Walworth County Fair at Elkhorn and the Interstate Fair at La Crosse will cooperate. The state association has chosen these eight fairs to stage the local contests and if successful this year it will be enlarged and include other fairs in the beef belt next year.

The local fairs will each offer $150 in prizes to the boys within their counties for the best baby beeves shown at their fairs. This will be in addition to the state prizes which will be awarded at the round-up at Madison.

The three winners at each local fair will be required, by the rules of the contest, to exhibit at Madison, but any other fair exhibitor, though beaten at his county fair, may also exhibit at Madison. The state round-up is open to any boy in the state who will condition his beef as set forth in the rules and each exhibitor at the Madison round-up, whether a prize winner or not, will have his transportation charges paid by the state live stock breeders' association.

There will be no entry fee or other expense at the Madison round-up, although the county fair association may make its own regulations.

The contest opens March 1st and entries close April 15th. Steer or heifer calves, any breed, pure bred, grade or cross bred, dropped on or after September 1, 1915, are eligible for entry. Other rules of the contest are:

Each entry must be exhibited at the county fair where entered. Boys must comply with the regular rules of the fair board covering live stock exhibits.

Every boy must feed, groom, break and show his own calf.

No restrictions will be placed upon the kind or amount of feeds fed or the methods of feeding. Each boy will be required to keep a brief feeding record.

Whenever scales are available it will be well to keep a weekly record of weights. The weekly gains of the calf will be a good index to its condition and may suggest that changes of feeding or management are necessary.

The record of feeding will not be considered in the final placing of calves. They will be judged by a competent beef cattle man, from a market standpoint entirely.

The first three prize winners at each county fair contest will be required to exhibit, but all county fair contestants are eligible.

Any boy not winning a cash award will have his transportation expenses paid. Stall room, hay and bedding will be furnished free of charge, but each exhibitor must furnish his own feed.

One judge and two referees will be secured to place the calves. One of these men will be an experienced butcher and meat judge and will have charge of the carcass demonstration after the judging on foot is finished. Commission men, packers' representatives and stock buyers will be present to bid upon the calves which are for sale.

Prize money will be apportioned at the Madison show as follows: First, $50; second, $40; third, $30; fourth, $25; fifth, $20; sixth, $15; seventh, $12.50; eighth, $10; ninth, $7.50; tenth, $5. The eleventh, twelfth, thirteenth, fourteenth and fifteenth prizes will be $4 each.

Each boy must feed, groom, break and show his own entry. A certificate to this effect will be required of parent or guardian.

Each calf must be exhibited at the county fair where entry is made. The first three prize winners at each county fair must exhibit at Madison.

Contestants must comply with all the rules of the fair association covering live stock entries.

No restrictions will be placed upon the kind and amount of feeds or the methods of feeding. The record of feeding must be filed with the Wisconsin Live Stock Breeders' Association.

Contestants are limited to two entries and more than one boy in a family may exhibit.

Interested breeders who have no boys eligible to enter the contest may loan a calf to a neighbor boy. But the boy must make the entry and feed, care for and exhibit the calf.

Calf owners are not obliged to sell their calves, but may dispose of them in any way they may see fit to do.

Misrepresentation in regard to any part of this contest will disqualify the contestant.

Complete information may be secured free by writing the Wisconsin Live Stock Breeders' Association at Madison.

BOYS' AND GIRLS' WEEK AT ST. PAUL.

An unusually attractive program has been arranged for Boys' and Girls' Week at University Farm, St. Paul, Minn., April 3d to 7th. This is the sixth yearly meeting of young farmers at the Minnesota Agricultural College and each year's program has been better than the one that preceded it. Last year 403 attended, and a larger attendance is expected this year.

The mornings of Boys' and Girls' Week will be given over to class study and practice. In the afternoons there will be excursions to places of interest in the Twin Cities—to the state capitol, the new prison at Stillwater, the Russell-Miller Milling Company's mills, the Walker Art Gallery, the Minneapolis Public Library, Minnehaha Falls, the Soldiers' Home and the South St. Paul Stockyards.

County school superintendents report that students who have attended Boys' and Girls' Week take a deeper interest in better farming. They are the ones most eager to enter corn-growing contests and most interested in industrial improvement. Students return home at the end of the week, they say, with a vision of better things and attempt to improve conditions with brighter hopes.

The week is recommended by men at the agricultural school as a fitting close to the agricultural high schools' short courses. Other schools which have opened for the spring term are offering to give credit for time spent at Boys' and Girls' Week.

LAW QUESTIONS.

Farmer Liable for Injuries.

A Subscriber, Toledo, Ill.—I am a farmer and I operate a threshing machine, also a shredder and an ensilage cutter. If I hire a man to work with said machinery and he gets injured while so working, will I be liable to him for damages under the laws of Illinois?

Answer.—You will.

Marriage of Cousins.

A Subscriber, Butterfield, Minn.—I am a young man. My grandmother married three times. My grandfather was her first husband. (1) Am I a cousin to a daughter of a daughter of my grandmother's third marriage? (2) Am I too close of kin to marry a daughter of a daughter of my grandmother's third marriage in the state of Minnesota? (3) Could I lawfully marry her in any other state?

Answer.—(1) The daughter of a daughter of your grandmother by her third marriage is a first cousin of the half blood to you. (2) You are too close of kin to the daughter of the daughter of your grandmother to marry her in Minnesota. (3) You can lawfully marry her in Idaho, New Mexico or California.

Failure to Pay Rent.

A Subscriber, Mankato, Minn.—A rented his farm to B for five years, and holds ten notes of B for the payment of the rent; $300 of each year's rent is to be paid on October 1st of each year, and $600 is to be paid on February 1st of each year. B paid only $100 on the first note and there is not much prospect of his paying the balance of said note. (1) If he makes no further payment, when can A compel B to surrender possession of the farm? (2) If B pays the balance of the first note, and then fails to pay the second note, when can A compel him to quit possession?

Answer.—(1) A can bring a suit against B at once to recover possession of the farm and obtain judgment restoring the possession to A. But at any time before such judgment is rendered B may pay to A the rent due and interest thereon and all the costs of the suit and an attorney fee of $5, and if he does so he may keep possession of the farm, otherwise he will be put off. (2) The same proceedings could be taken if B should pay off the first note and then fail to pay the second note.

Limitation in Oregon.

A Subscriber, Sparta, Wis.—When will a mortgage on real estate in the state of Oregon become outlawed if the interest on the same is kept paid up?

Answer.—In ten years after the last payment of interest. The payment of interest or any part of the principal prevents the debt from becoming outlawed, and the ten-year limitation is counted from the last payment.

Bill of Sale—Deed.

A Subscriber, Waupaca, Wis.—(1) Is a bill of sale between two parties legal in court if such bill is not witnessed or acknowledged before a notary public? (2) Is a bill of sale made on Sunday, but dated a day back, legal? (3) Where a wife's name is Mary D., and her husband's name is Frank D., is a deed made to the wife reading Mrs. Frank D. legal, or must it read to Mrs. Mary D.?

Answer.—(1) Such a bill of sale is legal between the parties and good as evidence in court. (2) It is not. (3) Such a deed is legal and conveys the property to Mary D.

Seduction of Girl.

A Subscriber, Free Soil, Michigan.—About one year ago a man in Iowa seduced his young sister-in-law, and she has a child by him. He promised her if she would not tell her sister about it, he would pay her a large sum of money. He has not complied with his promise. What can be lawfully done about it?

Answer.—The girl can sue him for damages and obtain judgment against him. Also, she can have him prosecuted for the crime of seduction, the penalty for which is imprisonment in the penitentiary not more than five years or in jail not more than one year and a fine not more than $1,000.

Smut in oats causes greater losses in the fields of the United States every year than any other preventable cereal diseased. Hence it must be worth while to study the causes and prevention of smut.

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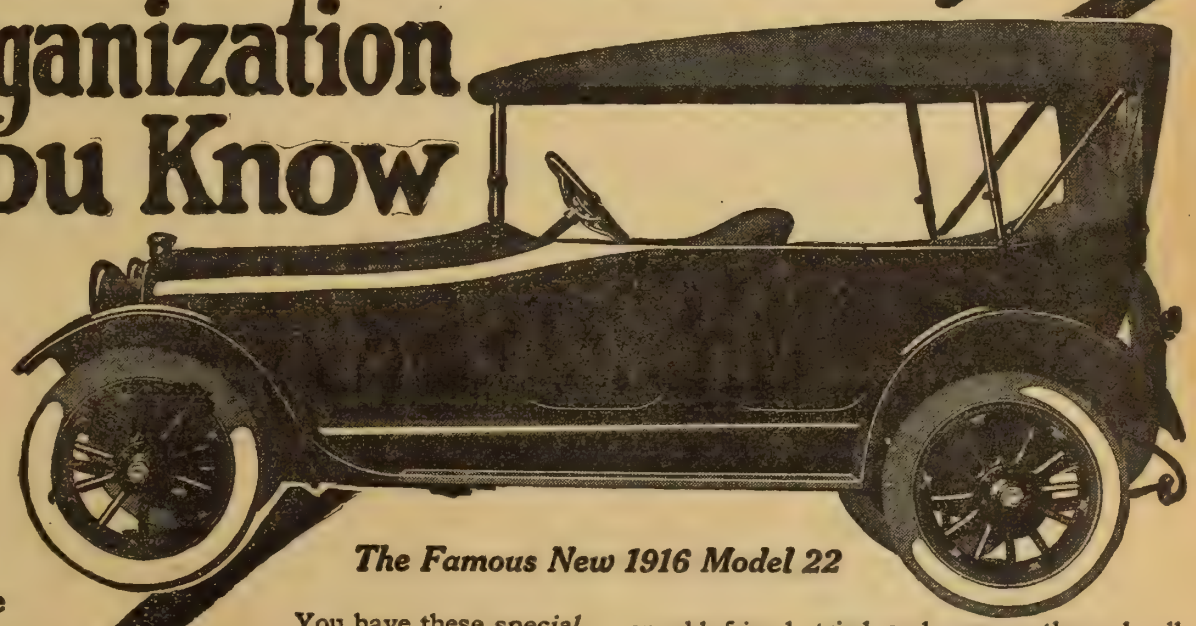

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The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

FAVORS THE CONSOLIDATED SCHOOL.

To the Editor:—I read the article you printed in your issue of January 27th against consolidation of schools. Now, I always have considered your paper given to fair dealing and beg to present the other side, as a great many of your readers are for consolidation.

The subject of consolidation is one in which we are greatly interested, as we live outside the village school district and have five children ranging in age from six to fifteen. We were educated first in the country schools, then in the graded school of our village, and, as we live but a short distance either from the village one way or the rural school the other, we have kept in touch with both. We have looked into the methods of the grade schools as conducted in the village school, with its score of teachers, and the country school, with its one teacher, and have decided in favor of the larger school for our family. This at a cost of about $100 more for tuition and hitch barn charges. By consolidating the school the poorest country child can have equal advantages with those of means. I have given this much of personal experience to show I am not speaking at random.

I wish to say here that we have as good rural schools and teachers as anywhere in the state. It is not the fault of the teachers that they cannot give the little lads and lasses the advantages of their cousins, for one teacher cannot hear all the recitations of eight grades in the six hours allotted. In talking with many acquaintances among the rural teachers I find that they all have to use makeshifts to get through and they combine in saying that they haven't time to do the work expected of them now. On top of this their superiors in the educational system ask them to undertake outside work, such as mothers' meetings, sociables, etc. In comparison I do not need to show the advantages to be gained in the larger, centralized schools, do I? Here one teacher would have not over two grades to attend to and can give much more undivided attention, with extra teachers for those who cared to take manual training, sewing or cooking.

I notice that the general opposition is that it is wrong to call the little chap from bed at an early hour in order to catch the school bus. I cannot conceive why any thinking mother will allow her child of five or six to go to school for as long as it has all of God's out-of-doors to play and develop in. Give it a chance to lay a foundation for its health before it starts to school. The child of seven or eight will soon outstrip those who started younger. When these little children are in school the well-cared-for child will still be taking its afternoon nap. As to getting up early, that never hurt a child if it was sent to bed at a proper time instead of sitting up until its parents retired, as is so common.

If your friends object to their children going the route in the bus what is to hinder them hitching up "old Dobbin" and taking them to a consolidated school as well as any other? There is one out of ten of the parents who bother to hitch up "old Dobbin" and the poor kiddies who wade two or three miles through mud or snow would be very glad of a ride in the bus.

As to its unfitting them for life, making them unwilling to do chores and get the dress-and-go habit, there is nothing in it. That lies entirely with the parents and the home life. It is the selfishness entirely that is opposing the consolidated school, the fear that Tommie or Susie won't do quite so much for their board and other necessities. It is this same selfishness that drives them from home, not the advantages we give them. If the parents will deal as fairly with the children as with their neighbors or hired help there will be no trouble about their helping at home.

A parent of this class is not fighting the centralization of schools, but it is the ignorant, the lover of petty offices, the well to do who are afraid it might raise their taxes a trifle. In short, those whose self-love exceeds their love for our young folk. This is the same class who give the child a calf or acre of corn, then when the same has matured pocket the profits and lessen their interest in the farm. It is these parents, not the schooling, that drive the children from the farm.

What if 80 per cent of those schools are country schools and 64 per cent of the school children never attend any but country schools? Does that make it right? The country children are the strength, the hope, the flower of our nation and should have the best there is. Abolish the one-room school, centralize the schools and when our children enter the high school or go out into the world they will not be handicapped as now. At present, to my positive knowledge, the country school graduate is so far behind the village eighth grade graduate that they never cover the gulf and, work as they may, the others carry off the honors at graduation, not from superior intellect but from more opportunities to develop that intellect.

This is a day for big changes. Do not putter along, trying to make over the educational structures of our fathers, but with one wide sweep level them and erect one that will give our boys and girls a chance to show their supremacy over the children of the banker and day laborer, merchant and shop worker of our cities.

I will sign myself first "A Farmer's Daughter" and last, but by no means least, "A Farmer's Wife."

Rock Co., Wis. Mrs. C. E. S.

Discussing Consolidated Schools.

IN THIS department will be found a letter from a Rock county woman who takes a decided stand on the question of consolidated schools. She favors the consolidated school, and objects to some opinions which have been published in The Wisconsin Farmer. This woman has given the subject of consolidated schools as compared to the one-room, one-teacher, rural school, considerable thought and The Wisconsin Farmer is deeply indebted to her for her opinions. Other readers of The Wisconsin Farmer have opinions on this important subject and we would be more than pleased to hear from them. Address Wisconsin Farmer, Madison, Wis.

BARN VENTILATION SYSTEM.

To the Editor:—I have the King system of ventilation in my barn. It is all right and will do the work if properly put in. The theory is to take in the fresh air near the ceiling and force the impure air out near the floor, in this manner: Pipes are put in for intake of fresh air, opening near the sill on the outside with the opening screened. Same pipe has door near the ceiling on the inside, size and number to be regulated by the size of the room to be ventilated. Ventilating pipes are brought down from the cupola to within one foot four inches of the floor (screened). All pipes are air tight. I think it is best to have a flooring in the cupola; that is, do not try to ventilate the loft of barn direct from the cupola. Make the stable as near air tight as possible, with storm windows and double walls with air space between. All the hay chutes should be made to close tight. If you want the system to work keep them closed. Also keep the doors closed, as no system without artificial heat will work with a lot of openings. The theory is that the warm air rises to the ceiling and the impure or damp air is at or near the floor. With the cold air coming in from the top the draft in the foul air duct makes the circulation complete and the air in the stable will always smell fresh. I do not consider the King system complete without specially made pipes adapted for ventilation work.

Pembina, N. D. W. B. Hancock.
Mgr. Hazel Bay Farm, Pembina, N. D.

CLUB REPORT FROM ROCK COUNTY.

To the Editor:—I am sending you a clipping from the Beloit Daily News, telling of a farmers' club meeting held in this vicinity (six miles west of Beloit) last Wednesday evening, thinking you might be interested in what this community is doing to make farm life more attractive. Our club was started last November with thirteen members. We meet once a month at the homes. It seems to be filling a need felt by all, as old and young are joining and all are taking a deep interest, both in the programs and the social side.

We hold a farmers' institute at the schoolhouse this week, Tuesday and Wednesday, the ladies going Wednesday and taking lunch and serving hot coffee at noon. There will be three outside speakers and some neighborhood talent.

If you care to publish the clipping and would like a report of meetings to follow I would be glad to send them to you. Mrs. D. Van Camp.

Beloit, Wisconsin.

[Editor's Note.—The clipping above referred to by Mrs. Van Camp calls attention to a regular meeting of the Rural Advancement Club held at the home of Benjamin Hanson, six miles northwest of Beloit. About eighty were present. Mr. Harry Mosely, the president, announced the topic of the debate, "Should boys stay on the farm?" It proved to be a very live subject, with interesting and forcible expressions on both sides. Mr. Markham, of the Y. M. C. A. at Janesville, was present and gave an interesting talk on how to increase corn yield by seed-corn testing and getting rid of corn pests. Ten new members were added to the club, making a total of fifty-eight.]

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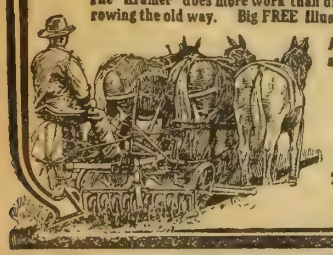

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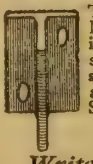

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No other ventilators work as well with the King System as King Aerators; therefore, if you are not ready for the complete system, be sure to get King Aerators and be started right.

In using King Aerators alone you ventilate the haymow or upper part of the barn as well as add beauty to the building.

King Aerator

Send for These 2 Books

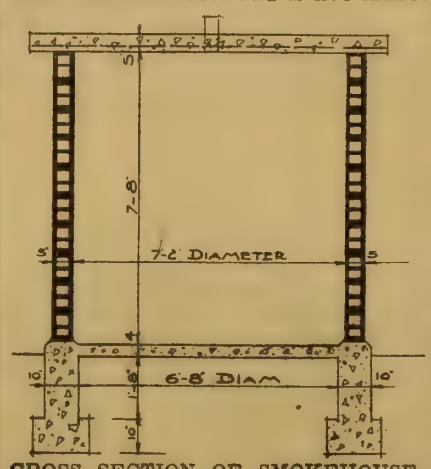
Write for our catalog and, if you wish, enclose 10 cents for Prof. King's book, the recognized authority on ventilation.

King Ventilating Company
1144 Cedar Street
Owatonna, Minn.

THE KING AERATORS on the Roof are the first part of the King Ventilating System

ROUND-TILE SMOKEHOUSE.

A smokehouse like this one is eight feet in diameter and eight feet in height. It is built out of hollow clay building tile and rests on a concrete floor and footing. The roof is of re-enforced slab concrete and is five inches



CROSS SECTION OF SMOKEHOUSE.

thick. A fireproof house of this description has been put up when the materials that went into it cost but $28, and the simple method of construction required only the unskilled farm labor to complete it.

The concrete footing is ten inches thick and is two and one-half feet under ground. Make this concrete of the following proportions: One sack of Portland cement, three cubic feet of clean, coarse, sharp sand and five parts of coarse gravel mixed with water to make a real damp or sloppy mixture. In pouring it into the forms be careful not to jar loose any of the dirt of the trench walls. The floor should be at least four inches thick and could be made of the same material as was the foundation and footings. Drain the floor to the front and trowel the surface down smooth. For the tile walls hollow clay silo blocks were used and were laid in a lime and cement mortar. The concrete roof slab is re-enforced with a heavy wire mesh and has a small opening in the center for ventilation. This roof slab can be built in its place or on any level platform or floor would be much

TILE SMOKEHOUSE.

easier. It can be lifted into place as soon as it is thoroughly hardened. Make the door frame out of common two by six-inch planks and drive twenty penny spikes through the sides of the frame into soft mortar so as to make a solid joint between the tile walls and the door frame. These materials are required:

5½	barrels cement	$ 8.00
2	yards clean sand	2.00
3	yards coarse gravel	3.00
230	hollow clay tile 5x8x12	10.00
60	sq. ft. heavy wire mesh re-enforcing	2.00
1	door frame 2 ft. 6 in. by 7 ft.	1.00
1	door 2 ft. 6 in. by 7 ft.	2.00
Total cost of materials		$28.00

CLOSING FARMERS' INSTITUTES.

The schedule of Wisconsin Farmers' Institutes from the last of February until March 10th follows:

Dodge county—Le Roy, February 29th and March 1st; Neosho, March 2d and 3d.

Fond du Lac county—Mt. Calvary, February 29th and March 1st; Van Dyne, March 2d and 3d.

Ozaukee county—Horn's Corners, March 7th and 8th; Knellsville, March 9th and 10th.

Racine county—Yorkville, March 7th and 8th; North Cape, March 9th and 10th.

Sheboygan county—Rhine Center, February 29th and March 1st; Adell, March 2d and 3d; Oostburg, March 2d and 3d; Howard's Grove, March 7th and 8th.

Manitowoc county—Cato, February 29th and March 1st.

Milwaukee county—South Milwaukee, February 9th and 10th.

Kenosha county—Kenosha, March 9th and 10th.

Waukesha county—Mukwonago, March 9th and 10th.

Waupaca county—Waupaca, February 29th and March 1st.

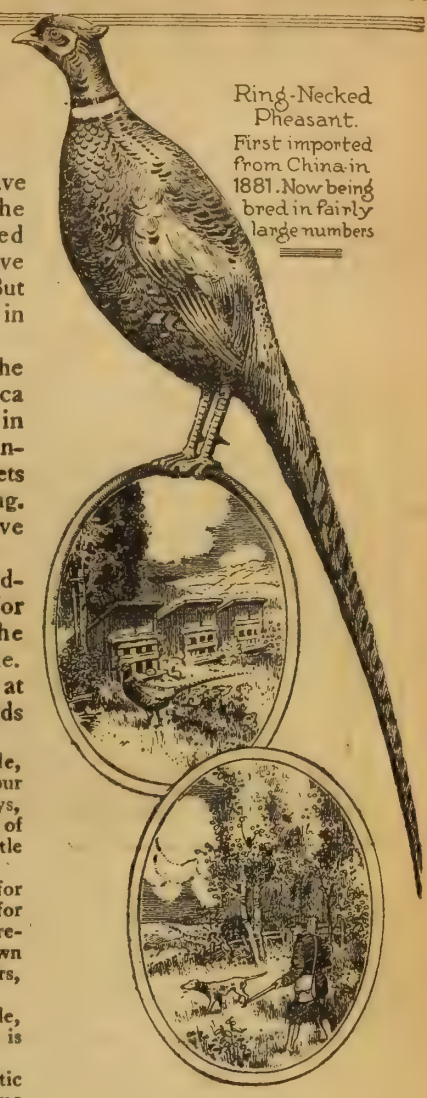
Winnebago county—Ring, March 2d and 3d.

Wisconsin farmer boys ought to take an interest in the baby beef contest which has been inaugurated by the Wisconsin Live Stock Breeders' Association. Particulars concerning this contest may be secured by addressing R. Baker, assistant secretary, care college of agriculture, Madison, Wisconsin.

It isn't too late to get that farmers' club started before summer time. Sample constitutions and by-laws and programs which have been used by clubs already in a flourishing condition may be secured by writing direct to C. J. Galpin, Madison, Wisconsin, care college of agriculture.

Five hundred bushels of potatoes to the acre is the accomplishment of a Nova Scotia farmer.

Breed Game Birds on Your Farm



Ring-Necked Pheasant. First imported from China in 1881. Now being bred in fairly large numbers

FOR many years, we in America have spent much time bemoaning the disappearance of our feathered game. It is indeed a fact that we have little game to eat and little to shoot. But we can have an abundance of game in the fields and on the market.

The farmers of this country have the land and the enterprise to make America the greatest game producing country in the world. They can supply the ever increasing demand of American markets and American sportsmen by game farming.

To you, game farming should prove of interest for three reasons:

It is profitable from a marketing standpoint. The demand for eggs and for breeding stock is much greater than the supply, and will be for years to come. Pheasant eggs, for instance, sell today at from $20 to $25 a hundred. Live birds bring from $5 to $7 a pair.

It will, at small expense in time and trouble, supply you with an abundance of food for your own consumption. Pheasants, wild turkeys, quail, grouse, and other birds forage much of their own food, and require comparatively little attention.

It will provide more shooting for you and for everyone, for it is a fact that game raised for sporting purposes can not be confined in any restricted area. At the same time, those who own large acreage, or who pool their land with others, get profit from those who pay for sport.

Game farming can be done on a small scale, and as a side issue to regular farm work, or it is a profitable occupation in itself.

Women on the farm who are raising domestic poultry, will find it worth while to breed game birds as well.

When conducted on a large scale, a game farm produces sufficient income to be a paying business in itself.

But this subject is too big to be properly treated in this space. Every progressive farmer is sure to be interested in it. Write for the book, "Game Farming for Profit and Pleasure," which will be sent to you without cost. It tells of the subject in a most interesting and informative manner. Fill out the coupon below and a copy will be mailed you at once.

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Very truly yours,

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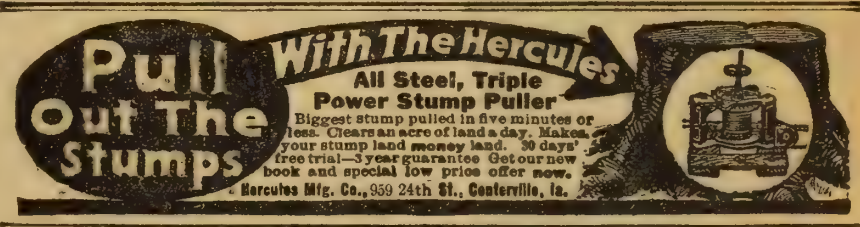

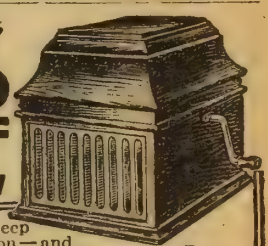

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DRAINAGE INCREASES YIELDS.

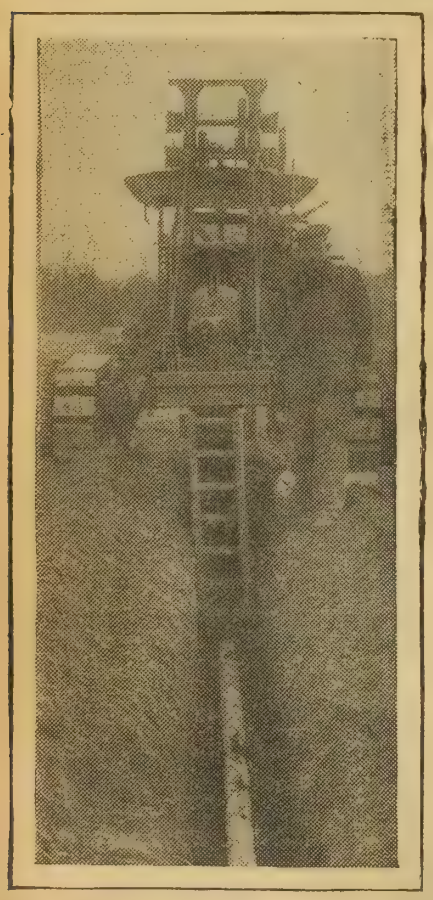
Experiences of Pea Raisers in Ozaukee County, Wisconsin, Have Proved the Value of the Ditching Machine in Farm Operations.

OZAUKEE COUNTY, WISCONsin, farmers, because several of their number have discovered the value of proper land drainage, have taken an added interest in tiling and a great amount of work was done in that county last fall and more is planned this spring.

SCENE IN FLAT FIELD WHERE MACHINE IS BUSY DITCHING AND TILE IS LAID READY TO BE SET.

This interest by the farmers has been increased by the drainage work undertaken by the Cedarburg Canning Company on its own farms at Cedarburg, where about 260 acres are to be underlaid with tile with the knowledge that this soil will not only produce better but larger crops in the future. This canning factory cans a very high-grade line of peas, and the success with peas by some of its patrons on properly drained soil led the owners of this factory to immediately lay out an extensive system of tile drainage.

For several seasons Theodore Wittenberg, one of the owners, noticed that some farmers brought him a better quality of peas than others. One of his patrons in particular always "topped" the market and his crop was



DITCHER AT WORK IN OZAUKEE COUNTY.

put to one side and used in canning a special brand which sold at a little higher price than the average product. Mr. Wittenberg wondered how this farmer happened to raise peas of such exceptional quality. He knew the soil about Cedarburg was all practically the same. He knew that the original seed stock was about the same. He knew that the cultivation methods were similar throughout the district. One day he took the trouble to call upon the farmer and asked him for the secret of the "quality" peas. He found that the secret was "better drained land," and the "better peas" were the result of proper distribution of water, underdrainage and ideal soil conditions made possible by tiling. Peas can stand almost anything except a soil that is too wet. They can stand frost and drouth much better, but wet lands mean poor crops.

MACHINE DID SUCCESSFUL WORK ON STONY GROUND.

The success of this patron pleased Mr. Wittenberg so greatly that he immediately began a study of drainage conditions. He found that he had certain spots on his farm that were yielding only about a tenth as much as they should yield, principally because of poor drainage, which left the ground wet and cold, delayed cultivation and cut down the yields. This led to his introducing better drainage methods on the company lands with the primary purpose of increasing their own yields and the secondary purpose of proving to the patrons of the cannery how much more they could grow on properly drained land and how much it would be to their financial advantage to tile.

Mr. Wittenberg immediately began his drainage system with the result that the canning company now owns and operates a complete power ditching outfit, which digs perfectly the trench for the tile. When he completes draining the company farms this spring Mr. Wittenberg plans to drain land on contract for the farmers in that vicinity, as tiling can be done much cheaper by machinery than by the old hand method. Mr. Wittenberg told an editor of The Wisconsin Farmer who visited him recently at Cedarburg that he believed he could secure contracts now for enough tiling to keep him and his power outfit busy for the next six months. The writer found him an enthusiastic booster for drainage and the success of his patrons and neighbors makes him all the more certain it is the wise and profitable thing to do, as the most expensive lands on the farm are those just dry enough to plow and too wet to produce.

Mr. Wittenberg began his drainage operations last fall, and before winter set in had laid about 20,000 feet of tile, ranging in size from three to eight inches. All of this he did with his power outfit and he plans to lay another 20,000 feet this spring, which will about complete the drainage of 260 acres of the 650 acres operated by the canning company. Most of this will be four, five and six-inch tile, and Mr. Wittenberg says that he does not expect to lay any more three-inch tile. Although it may be satisfactory he prefers to be safe and lay an inch larger tile. On the fourth day that he operated the ditching machine he laid 1,600 feet of tile in one day and he believes that with a better knowledge of operation he can lay 2,500 feet daily.

As this tiling was only done last fall there are no statistics as to yields, but in the Cedarburg neighborhood there are several farmers who have tiled by the hand method who have had good results. Fred Rintleman tiled one of the wet spots on his farm where he has never had a crop, and the result was a good corn yield last year. Considering that last year was very wet and poor for the corn growers this is considered a remarkable testimonial in favor of proper tiling and drainage.

Henry Kuep, of Cedarburg, a patron of the cannery, tiled twenty acres last fall and is expecting splendid results from this land the coming season. Mr. Kuep in conversation with an editor of The Wisconsin Farmer, said that he considered tiling worth far more than the expense, and that the increased value alone offset the cost of tiling. Mr. Kuep figures that it cost him between $7 and $8 an acre to tile drain his land by hand, and Mr. Wittenberg believes that he can save the farmers money by doing it with power. Mr. Kuep used a four-inch tile for the laterals, and as he had a splendid flow of water through his tile last fall he has every reason to believe that this twenty acres will be in splendid condition this season and will return bigger yields because of drainage.

Fred Kohlwey, of Cedarburg, drained five acres last year, and is planning some additional work this season. One plot which he drained gave him a good corn yield last year, despite the wet season, Mr. Kohlwey had had crops before on this plot, but they were never sure, and the corn would have certainly failed last year. Often the crops were drowned out and the labor of plowing, cultivating, seeding and planting proved nothing but an expense. He used four-inch tile mostly and some three inch. The exact cost he did not keep, but he feels certain the added value will more than offset the original cost.

Mr. Wittenberg, when he began studying drainage for his lands, secured an illustration of the follies of poor tiling. If a farm is worth draining it is worth draining properly, and the criticism on tile drainage comes mostly from those who have improperly installed systems. Mr. Wittenberg discovered that one section had been drained before and tiling laid about four feet deep. This had been poorly laid and had filled with sand and dirt and was useless.

These are only a few of the draining operations in the Cedarburg vicinity and indicate the interest which success in drainage work has aroused. In another year or two there will be many acres of poor land in this section of the state reclaimed by proper drainage.

MUCH LABOR COSTS SAVED BY THIS METHOD OF DITCHING.

Making Room For More Crops.

Stump Puller Found to Be an Economical Way--- By All Means Get to Work and Clear More Land.

THERE is one thing that the American people, with all their collective invention genius, adaptability and resource, cannot do. That is create more land on which to grow crops.

Now we have reached a point in developing this country where practically all the fertile land that has been fully prepared and made ready for cultivation by nature is producing crops. There is very little good land

HOW GOOD STUMP PULLER HANDLES GIANT STUMP.

ready for immediate cultivation open for settlement today. It's already under the plow and producing year by year the foodstuffs which feed the 95,000,000 people who call the country "home." It produces abundantly, too—a gigantic crop total amply sufficient for overmaintenance.

This is just the reason why the United States government and a large number of private corporations and individuals are spending billions of dollars in great reclamation schemes today. It is the reason, too, for the fact that hundreds of thousands of people not ordinarily interested in land are now buying. Valuable as land is today it must inevitably become much more valuable in the future and most thinking people realize that fact.

Of the huge land areas which could be made productive and which are potentially as valuable as the land which now grows crops only a part requires irrigation or drainage to become pro-

PILING UP STUMPS FOR BURNING.

ducing land. There are yet in this country enormous areas of the very finest land, well watered, well drained and well located, but which remains nonproducing simply because it is stump land. There's nothing else the matter with it and its preparation for crop growing is a simple and comparatively easy process, too. Yet the hundreds of thousands of land seekers overlook it to buy the higher-priced reclamation lands.

This country has today about 100,000,000 acres of cut-over land where the stumps still stand and no crops are grown and probably half as much more on which the stumps are so plentiful as to materially hinder crop cultivation and production. Generally speaking it is good land, too—fertile land with tremendous possibilities for crops. More than 75 per cent of it could be farmed successfully and with good profit for the owner.

This state alone—Wisconsin—has hundreds of thousands of acres of cut-over land that could be cultivated and made to yield big crops of every sort of farm produce. Much of it is as naturally fertile and as well located as the highest-priced land in the state. Where it is being cleared enormous crops are grown and the value of the land doubles and frequently triples within a few years' time. It can be bought—lots of it—for $20 and $30 an acre in the raw state and is worth, cleared, an average of $100 an acre.

There is no logical explanation for the fact that these fertile acres in Wisconsin and other states lie fallow while land seekers buy reclamation land. It is simply another case of overlooked opportunity.

The old theory that land clearing must necessarily be an extremely hard, slow and expensive process has been exploded. Modern methods have robbed that job of its terrors just as is the case with hundreds of other jobs. Clearing land by the modern process is neither especially hard nor particularly expensive and the land seeker who passes up the fertile cut-over land because he feels unequal to the solving of the clearing problem is making a serious mistake.

The cost of clearing land nowadays is nowhere near equivalent to the increase that the clearing makes in the value of the lands. That's true regardless of how the work is done. There are very few things that can be done with land that add more to its value than clearing does.

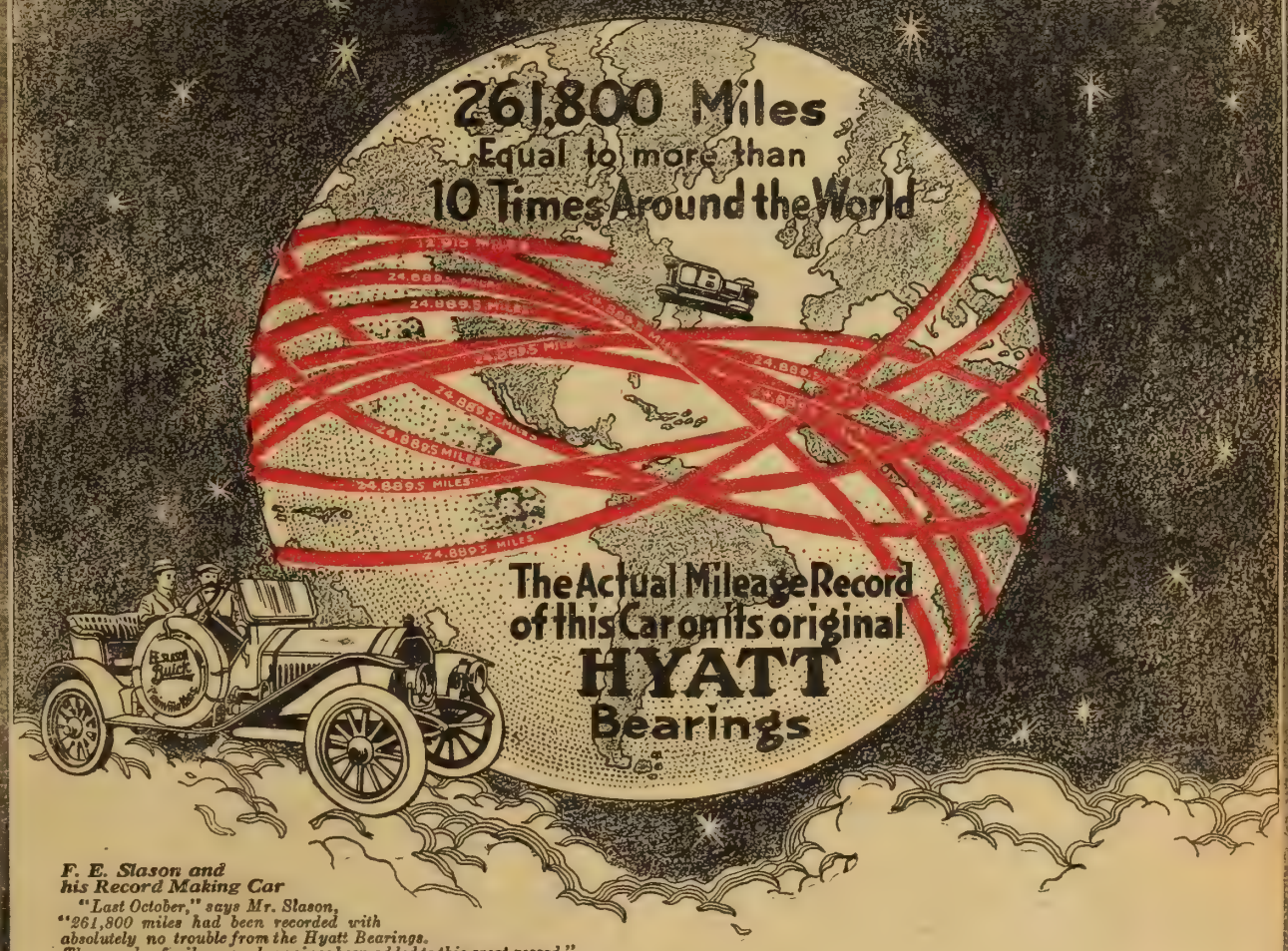
There are several distinct ways of

(Concluded on page 34.)

Marvelous Mileage Attained On

HYATT

ROLLER BEARINGS



F. E. Slason and his Record Making Car
"Last October," says Mr. Slason, "261,800 miles had been recorded with absolutely no trouble from the Hyatt Bearings. Thousands of miles more have since been added to this great record."

SUCH severe and constant service proves the worth of Hyatt Bearings. Engineering data has been reinforced by records of every day service obtained through our recent investigation.

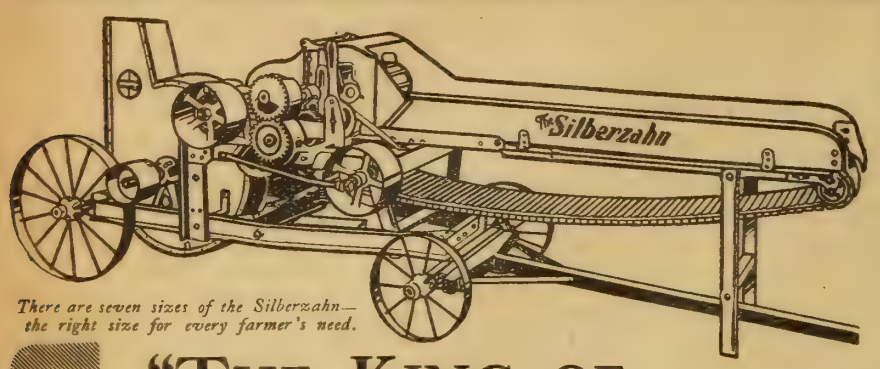
From everywhere came indisputable evidence of the marvelous performance of Hyatt Quiet Bearings.

On no single record, however, rests the reputation of Hyatt Bearings. The faithful service of **millions** in daily use offers a mighty testimonial to their value.

Their remarkable merit is evidenced by the following records which have been carefully investigated and verified.

Representative Mileage Records of Cars on their original Hyatt Bearings

NAME	CAR	MILEAGE	NAME	CAR	MILEAGE
F. E. Slason, Plainville, Kansas	1909-Buick	261,800	J. J. Moore, Philadelphia, Pa.	1911-Ford	147,571
James Lewis, Shelton, Conn.	1909-Mitchell	218,734	John Fraser, Jr., Milwaukee, Wis.	1908-Buick	139,523
J. W. Norman, Paint Rock, Texas	1909-Mitchell	183,837	Geo. R. Mason, Des Moines, Iowa	1910-Maytag	135,000
Sam Deck, Darlington, Ind.	1910-Mitchell	175,875	J. M. Bertolet, M. D., Reading, Pa.	1910-Mitchell	127,681
J. D. Albright, Bowie, Texas	1911-Ford	172,683	James W. Hines, Minneapolis, Minn.	1910-Hudson	120,256
Earl G. Druding, Ellsworth, Wis.	1909-Ford	171,418	Linus Kiene, Buffalo, N. Y.	1910-Mitchell	120,000
S. T. & E. R. R., Stockton, Calif.	1909-Mitchell	160,100	L. N. Burnett, Dallas, Texas	1909-Flanders	116,557
Jacob Stark, Chicago, Ill.	1906-Logan	148,150	F. I. Wiltse, Oneonta, N. Y.	1908-Ford	113,061



There are seven sizes of the Silberzahn—the right size for every farmer's need.

"THE KING OF ENSILAGE CUTTERS"

The Silberzahn Cutters of past years have been wonderful machines—famed for their simplicity, safety, easy-running, durability and great capacity; but the new 1916 Silberzahns with all-steel frame, automatic feeding device and other valuable improvements are simply *marvelous.* In ease of operation, clean cutting, freedom from accidents and trouble, great capacity, the

Light Running Silberzahn

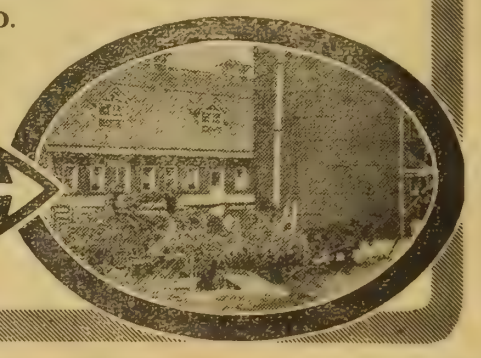
stands in a class by itself. Here are a few of the many valuable features that should make the "Light Running Silberzahn" your choice:

All-steel frame insures strength, compactness, long life, low upkeep cost. *Low Feed Table,* combined with extra big roomy throat and automatic feeding device saves expense of man at machine. *Positive Safety Device* prevents accidents to machine or operator. *Malleable Knife Heads,* accurate knife adjustment and special arrangement of cutting head insures clean cutting at enormous capacity. *Shear cut* insures better quality of ensilage. *6-arm Blower* that simply can not clog and is easily regulated to height of silo. *Independent Control* of blower and cutting mechanism *saves power* and prevents clogging of feed rolls or choking of blower. *High-grade Bearings* placed just right insure smooth, light running at all times.

WRITE TODAY FOR THE SILBERZAHN BOOK

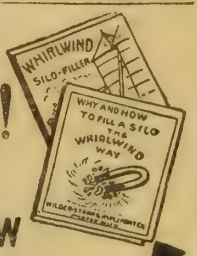
which gives full details and explains *how* and *why* the Silberzahn is *better.* This book if *free*—write today for your copy.

GEHL BROS. MFG. CO.
1006 So. Water St.
WEST BEND, WISCONSIN



Ensilage cutting scene at Tilden Farms, Delavan, Wis. This is an actual photograph of a No. 24 Silberzahn taking fodder as fast as *four* men can throw it in. The Silberzahn simply can't be clogged—never known to "blow up."

SUCCESS PLANS AHEAD!



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GET THESE FREE BOOKS NOW

THESE LONG evenings afford the best possible opportunity for that careful thought which is ever the root of top-notch success.

Just as you plan ahead the spring crops, you should right now plan how to handle 'em most profitably—your machinery buys should not be made on the snap judgment necessitated by summer rush; that's costly.

North and South, East and West, you farmers and stockmen have proved the soundness of a Silo investment—but—you shouldn't overlook the true economy that lies in the best Silo Filler.

Now is the time—become thoroughly posted on Silo Filler values—know what we offer, what the other fellow offers. Cool headed, unbiased comparison tells the story.

Write for our Free Books—Free Catalogue of Silo Fillers—Free Book on Silage.
Write for Catalogues of other Fillers—con 'em over point by point and let your decision be governed by what you know rather than by the unsupported song of some salesmen.

WILDER-STRONG IMPLEMENT COMPANY, Monroe, Michigan, Box 31

Silo Fillers Feed Cutters Land Rollers and Pulverizers Cattle Stanchions

Only device made that will operate 2 to 50 swinging stanchions and cowstops with one movement of the lever. Stanchions also operate singly—line up cows with gutter and embody all other latest features. All West Bend Equipment guaranteed. Write for catalog—shows full line of stanchions, also litter and feed carriers with rod or rigid track.

WEST BEND BARN EQUIPMENT CO.
229 South Water Street West Bend, Wis.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

MANY IN FORTY-POUND LIST.

Thirty-one cows made the forty-pound list in the New Richmond Co-operative Cow-Testing Association for the thirty days ending February 4th, according to the report of Ivor Jones, official tester. Four two year olds made the thirty-five-pound list. This is a gain of three forty-pound cows and one thirty-five-pound heifer over December. The report follows:

Owner, name and breed	Age	When fresh	Pound milk	Per cent of fat	Pounds B. fat
Wm. H. Albert					
Maxine, P. B.H...	5	Nov.	1206	3.4	41.0
B. H. Fuiten					
Dolly, G. H.....	4	Oct.	1335	3.1	41.4
Fillpail, G. H....	8	Oct.	1176	3.4	40.0
Albert Buettner					
Laura, G. H.....	5	Dec.	864	5.0	43.2
Henry Bernd					
Red Mouse, G.S.H.	5	Sep.	1164	4.0	46.7
Bell's Queen, G.H.	7	Dec.	1038	3.9	40.5
W. E. Bennett					
Blue Girl, G. H..	4	Dec.	1371	3.4	46.6
Minnie, G. H.....	4	Dec.	1170	4.1	48.0
Liza, G. H.....	4	Nov.	1110	3.8	42.2
Jane, G. H.....	4	Nov.	1122	3.7	41.5
Arnquist & Sons					
May Nora, G. S.H.	4	Dec.	1149	4.1	47.1
Dixie, G. S. H....	5	Dec.	987	4.3	42.4
Bob Tail, G. H...	5	Dec.	1131	4.7	53.2
Henry Wieland					
Nettie, G. H.....	5	Dec.	1248	3.7	46.2
Bessie, G. H.....	6	Nov.	1122	3.6	40.2
A. C. Kruschke					
Johanna, G. H....	8	Oct.	1677	3.5	58.7
Bell, G. H.	6	Oct.	1461	3.2	46.8
Bess, G. H.	4	Dec.	1326	3.0	40.0
Fred Wieland					
Jose, G. H.....	4	Nov.	1234	3.3	40.9
Bess, G. H.....	7	Nov.	1461	3.3	48.2
Daisy, G. H.....	5	Nov.	1161	3.5	40.6
Dairy Maid, G.H.	6	Nov.	1350	3.7	50.0
Charles Albert					
Fannie, G. H.....	5	Oct.	1029	4.0	41.2
Ella Jayne, G. H.	5	Dec.	981	4.2	41.2
F. W. Wieland					
Topsy, G. H.....	6	Nov.	1068	3.8	40.6
Geo. H. Kruschke					
Pearl-de-Mar					
P. B. H.....	5	Nov.	1230	3.7	45.6
Nancy, G. H.....	6	Dec.	1185	3.5	41.5
Bernd & Poston					
Rose, G. H.....	4	Dec.	1110	3.8	42.2
Lillian, G. H.....10		Dec.	939	4.8	45.1
Dorothy, G. H....	3	Dec.	1029	3.9	40.1
O. C. Kruger					
Fannie, G. H.....	6	Oct.	1041	4.2	43.7
Two-year-old heifers producing 35 pounds or more of butter fat during 30-day test.					
Wm. H. Albert					
Pauline, G. H....2		Nov.	1056	3.3	35.0
Johanna, G. H....	2	Dec.	1002	3.5	35.1
Geo. H. Kruschke					
Star, G. H.....	2	Nov.	900	4.0	36.0
Bernd & Poston					
De Kol, G. H.....	2	Nov.	975	3.8	37.1

VALUE OF TESTING.

The value of cow testing in Barron county is being illustrated by the work of the association there as indicated by the report of W. J. Markoff, official tester and secretary. In connection with the report of the forty pounders for the month ending January 15th Mr. Markoff says:

It is hard for anyone to believe that they are keeping poor cows after being in the dairy business for a number of years, raising and selecting what one thinks are good cows, and then find a few boarders in the herd; but through it all you notice that you have been placing practically the same value on a cow producing 125 pounds of butter fat in a year as on one that produces 300 pounds or more.

Cow testing and systematic weighing of milk is one of the best lessons in farming. It will show how much each individual cow has produced in butter fat and cash. Four cows in one herd that has been carefully graded up made the following record:

Maude produced 350.5 pounds fat valued at $102.81 in eleven months.

Rose produced 281.7 pounds of fat valued at $82.74 in nine months.

Pet produced 295.7 ponunds fat, valued at $84.74 in eight and one-half months.

Jane produced 125.7 pounds of fat valued ot $41.21 in nine months.

All of the above cows freshened about the same time and all received the same care and feed. But what a contrast in the figures. The farmer found he had three cows in his herd of sixteen that figured only up to 125 pounds of butter fat and he did not wait long before he sold them. The average for his herd was 240.5 pounds of butter fat per cow, which I consider fairly good for merely grade Holstein cows.

In dairying performance at the pail is the all-important criterion of value. Fine features and beautiful coloring of the coat may attract the attention of the casual observer, but the cow's record is the important question.

The January report follows:

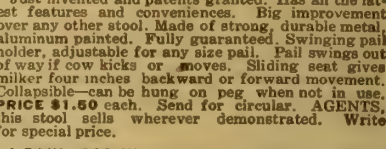
Owner, name and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
L. M. Krippner				
Lad's Lorlette, J...	8	816	5.4	44.1
J. Rauchenstein				
Nell, G. J.	4	1221	4.0	48.8

The best way to tie the cow ever devised. Hundreds of thousands sold every year. Government adopted. Will last a lifetime. Cow rests in perfect comfort. Can turn her head to lick her flanks. Does not bruise her shoulders when she rises. Louden stanchions can be used in any stall. Ask your dealer or write us.

"Everything for the Barn"
The Louden Machinery Co.
1702 Court St. (*Established 1867*) Fairfield, Iowa

Little Ford Milking Stool

Saves milk from spilling and keeps it clean



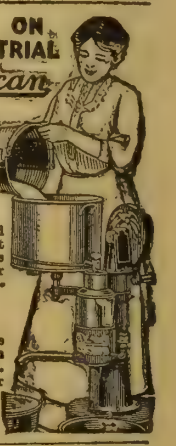
Every milker Needs It—Pays For Itself

Just invented and patents granted. Has all the latest features and conveniences. Big improvement over any other stool. Made of strong, durable metal, aluminum painted. Fully guaranteed. Swinging pail holder, adjustable for any size pail. Pail swings out of way if cow kicks or moves. Sliding seat gives milker four inches backward or forward movement. Collapsible—can be hung on peg when not in use. **PRICE $1.50** each. Send for circular. AGENTS, this stool sells wherever demonstrated. Write for special price.

J.A.PAUL, 903 Washington St., Waterloo, Iowa

$15.95 Upward ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR

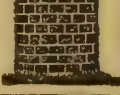


A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a **sanitary marvel;** easily cleaned.

ABSOLUTELY ON APPROVAL
Different from picture, which illustrates our large capacity machines. **Western orders filled from western points.** Whether dairy is large or small write for handsome free catalog. **Address:**

AMERICAN SEPARATOR CO.,
Box 4126 Bainbridge, N. Y.

B-V-T-Silo



"The Gibraltar of Silos" will withstand the storms and destroying influences of ages. Built of vitrified Brazil fire clay tile, impervious to air and moisture. Reinforced with steel. The strongest and most permanent silo in the world. Absolutely air-tight and 100% efficient. Never needs painting, repairing or rebuilding. Write today for illustrated Silo Book E

Brazil Hollow Brick & Tile Co., Brazil, Ind.

DON'T FORGET

There's a big difference in cupolas; difference in price, in material and in construction. The Queen was the original. On the market over 15 years. Good from the start. Still ahead. Used by thousands. Made of steel reinforced with heavy braces. Bird proof, snow proof, leak proof. Write for catalog and prices or ask your lumber dealer. QUEEN CUPOLA CO., 516 PECK ST. OSWEGO, IOWA.

QUEEN CUPOLAS

Brindle, G. J.	6	1083	4.3	46.6
Wm. Halverson				
Spot, G. G.	3	784	5.1	40.1
Bloomer, G. G.	3	1119	3.8	42.5
Dickson Bros.				
Dora, G.	3	994	5.0	49.7
Coleman-Bartlett				
Annie, G. G.	4	873	4.8	41.9
Pet, G. G.	4	918	4.5	41.3
H. W. Melgard				
Rose, G. G.	5	1129	3.7	41.8
J. R. Brown				
Heart, G. G.	10	1232	3.4	41.9
W. A. Coe				
Daisy, J.	8	860	4.9	42.1
C. C. & G. C. Post				
Helen Pictertye	4	1168	4.4	51.4
Neth'lnd Will's, H.	5	1277	3.5	44.7
Barron Co. P. Farm				
Nell, G. H.	5	1168	4.0	46.7
Geo. J. Gleiter				
Maude, G. H.	4	1388	3.7	51.3
W. R. Cuthbert				
Johanna, G. H.	6	1293	3.3	42.6
Wm. Beckwith				
Jet, G. H.	10	1224	3.8	46.5
Oscar Bergeson				
Belle, N.	6	1076	4.0	43.0
B. J. Bergeson				
Bessie, N.	5	880	4.6	40.0

PROGRAM STATE HOLSTEIN MEETING.

Arrangements for the annual banquet and meeting of the Holstein-Friesian Breeders' Association of Wisconsin to be held at Watertown, Wisconsin on March 1st-2d are now complete, and all interested in the breeding of Holstein cattle in the state of Wisconsin are urged to attend.

The banquet will take place at 7:30 on Wednesday evening, March 1st. It is tendered the Holstein breeders of Wisconsin free of charge by the business men in Watertown and the Holstein breeders in that vicinity. A program of after-dinner talks and toasts will be held in connection with the banquet.

The regular business and literary program and meeting will be held on the following day, Thursday, March 2d. The meeting will open at ten o'clock with an address of welcome by Mayor Charles Kading, of Watertown. W. C. Schroeder, West Bend, Wis., will respond to the welcome. J. P. Riordan, Mayville, Wis., acting president of the association, will next render the president's annual address. C. P. Norgord, state commissioner of agriculture, will follow with an address on "The State and the Farmer." This completes the morning program.

The business session will be held from one o'clock to two o'clock immediately following the noon intermission; after which two important addresses will be given. W. S. Moscrip, the prominent Holstein breeder and judge of Lake Elmo, Minnesota, will speak on "The Improvement of Holstein Type," and Dr. H. B. Favill, vice president of the American Holstein-Friesian Breeders' Association, who operate a large Holstein breeding establishment at Lake Mills, Wis., will present "Our Obligation to the Grade Cow."

JANUARY SCORING EXHIBITION BUTTER.

To the Editor:—There were 105 entries of butter in the January scoring exhibition held at the dairy department, University of Wisconsin, January 12th.

Nearly every buttermaker placed his score on the tub of butter before sending it to us; these scores show that such work is helping the buttermakers to know when they are making "extras" or "firsts," as they have the commercial judges' scores to compare with their own.

The method blanks sent with the butter by eighty-two of the buttermakers show that twenty-seven of the eighty-two are pasteurizing the cream for buttermaking. This is undoubtedly a larger percentage than would be found if all the creameries of the state were asked about their daily practice on this point, but when the creamery patrons realize that pasteurization at the creamery is necessary to stop the spread of tuberculosis among their cows they will insist on every creamery and cheese factory in the state using a pasteurizer.

At our last scoring, eighteen out of seventy creameries reporting on this point were pasteurizing the cream for buttermaking, and as this, when correctly done, destroys the disease germs in the buttermilk of the creamery the patrons of such creameries are going to reap the benefit of the practice and remove one cause of disease among the cows in the community.

The butter was judged this time by Mr. O. A. Storvick, Prof. C. E. Lee and Prof. G. H. Benkendorf.

E. H. Farrington.

THE HIRED MAN AND THE MILKING MACHINE.

To the Editor:—The hired man likes the milking machine. It shortens his hours and relieves him of having the cow's tail switching in his face for perhaps hours each day. The milking machine increases a man's efficiency. It enables him to do in one and one-half to two hours what formerly required four. Sunday on a dairy that has a milking machine is quite different. The milking job becomes merely a chore. It leaves nearly the whole day for Sabbath observance.

Hired men can run a milking machine if they are of the right type. Recently the writer visited a farm where twenty-five cows are kept. The proprietor had been suddenly taken ill. The one hired man was manipulating the machine. Carefully he attached the teat cups. Carefully he turned on the power. Carefully he watched the flow of milk cease as the udder was milked dry. Carefully he tested each cow for a little additional milk after the tubes had been removed. The hired man confessed that it was the first time he had attempted to run the machine. He surely was handling it successfully. It is true that he may be of a superior type and ability to some hired men. He is the only type that should be hired on a farm where cows are kept. Hired men of the future will operate milking machines and will do so satisfactorily.

H. E. McCartney.

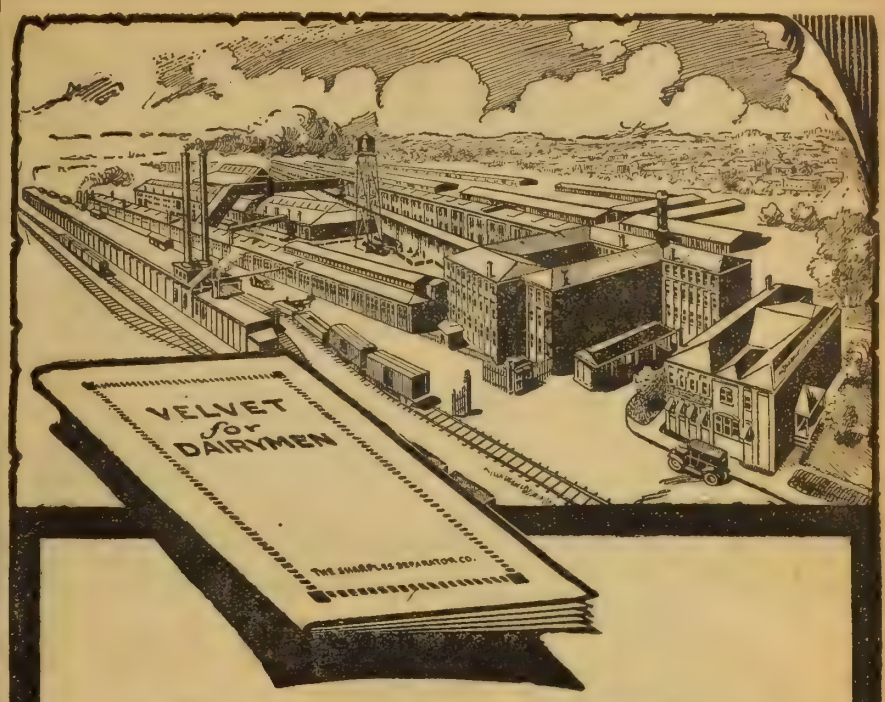
COW TESTING IN LANGLADE COUNTY.

The Langlade County Cow-Testing Association began its third year of work on Monday, February 14th. Mr. George Thull, of Marinette, is official tester.

At a meeting of the association held on Saturday, February 12th, the following officers were elected: President, Peter Krier; vice president, Chas. Schotte; secretary F. C. Swoboda; treasurer, H. C. Head. Directors: Gus Schroeder and Otto Klessig.

The association voted to charge $3 per ton for silage and $1.50 a month for pasture, and regular market prices for grains and concentrates. About three-fifths of the cows signed up for the coming year belong to members who have been in for either one or two years.

The Green County Agricultural Society met recently at the office of the secretary, M. C. White, and set the date of the Green county fair for 1916 the week ending September 9th.



More Dairy Dollars

We have found a way to bring you more dollars without increased expense. We call this new profit "velvet," because it comes so easily. Our new book, "Velvet for Dairymen" tells all about it.

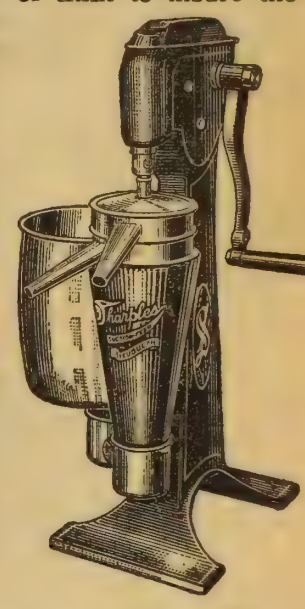
Your separator is losing cream, no matter what the make. A famous experiment station says, "*The use of the gravity can, a low speed of the separator, and an excessive rate of inflow cause heavy loss in butter fat.*" They have proven that 95% of all farm separators are turned below regulation speed. When the speed slackens, a lot of the cream escapes with the skim milk—and with the cream goes the profit.

The annual loss from imperfect separation is $47 on the average farm and upon many farms it is $100 and more. That's the tax you pay because you can't turn your separator at just the right speed all the time. But with

THE NEW SHARPLES SUCTION FEED

Separator you get all the cream at any speed.

A wonderfully simple invention enables the bowl to *drink in just the right quantity of milk* to insure the closest possible skimming. You may turn slow and make the work easy or you may turn fast and get through quicker. You simply won't lose cream with the "Suction Feed."



You get smooth cream of an even grade whatever the speed of the separator. Uniform cream makes fancy butter that brings top prices.

The supply can is only knee-high. There's no hard lifting to empty heavy milk cans.

The new machine has all the features that have made the Sharples Tubular famous and many other new vital and exclusive features found in no other separator.

Send now for our new book, "Velvet for Dairymen," and learn how to secure this new dairy profit. Address Dept 44

The Sharples Separator Co.

Also Mechanical Milkers and Gasoline Engines

West Chester - - - Pennsylvania

Chicago San Francisco Toronto Portland

ALSYKE and Timothy $5.00

Per bu. Northern grown, hardy, productive. Cheapest and best pasture and hay crop. Sample free. Clovers, Alfalfa, Northern grown Seed Corn, etc. All seeds guaranteed.
THE ADAMS SEED COMPANY, Bx. 50, Decorah, Ia.

Market the Milk

Raise your calves and get the bigger money to which you are entitled. But do not feed the calf whole milk, with butter fat worth $600 a ton.

You can sell all the mother cow's milk or butter and make your calf pay you a big profit on its feed, by raising it on

RAISE YOUR CALVES WITH BLATCHFORD'S CALF MEAL

Blatchford's Calf Meal
The Recognized Milk Equal

You get 100 gallons of rich milk feed from 100 pounds of Blatchford's Calf Meal, and it costs you only one-fourth as much. It will make your calf grow fast and well.

Blatchford's Calf Meal is composed of the elements the young calf needs in the most trying period of its life; is thoroughly steam cooked—prevents bowel troubles and other ills due to improper milk substitutes.

Blatchford's Pig Meal insures quick, sturdy growth of young pigs at weaning time, without setback or falling off.

Write us for our Free Book on "How to Raise Calves Cheaply and Successfully Without Milk."

Blatchford Calf Meal Factory
63 Madison St., Waukegan, Ill.

L. C. Beard, Hagerstown, Md., writes: "I can say Blatchford's Calf Meal will pay anyone 100 Pct. that has calves to raise."

New Edition
Modern Silage Methods

Only 10c

ENTIRELY a new book—new chapters—tells facts about every type of silo—home made, stave, brick, cement, tile, metal, pit, etc. Tells best for your needs—impartial suggestions for making most profits. 264 pages—10 page index—Copyrighted Nov. 1914, covers 41 silage crops. Send for new book; it beats all previous editions. Write today. Mailed for 10c. Mention this paper. Silver Mfg. Co., Salem, O.

CUT RATES, lumber, shingles. Hurry! Prices advancing. "Tacoma" Dimension Lumber, guaranteed full two inches thick, 20 per cent stronger. "Dakota" Clear Shingles, guaranteed half-inch butts, everlasting. To insure lowest prices send list for estimate. We quote delivered: pay after inspection. Reference, any Tacoma bank. Local Lumber Company, Tacoma, Wash.

FARMER AGENTS: Write for 1916 agency for Diddie-Blitzen Rods—best lightning rod sold. L. F. Diddie Co., Marshfield, Wis.

STOP! READ! FOR GALLOWAY'S

My New 250-Page 1916 Bargain Book

Just off the press. A postal or the coupon in corner gets it. Will save you from $100 to $500 in 1916, depending upon what you buy.

The book is new, different and original. It tells how and why I actually divide the melon with my customers—how this year the melon will be bigger and juicier than ever. Tells how this business was started with nothing only a few years ago and now runs into millions.

It explains my system. Tells about my policy which eliminates lost profit between producer and consumer. Printed in four colors. A work of art, an eye opener, an educator. A money saver—a money maker—for everyone who gets it—and should be in the home of everyone who reads this paper.

Like Having a $1,000,000 Stock of Merchandise in Your Own Home to Select From

Besides our own manufactured products which are sold exclusively by us, we have at the request of our many customers, added a large line of General Merchandise needed in every home. Things that we have never offered before, such as Automobile Tires and Accessories, successful up-to-the-minute Electric Lighting Plants, new line of Incubators and Brooders, Dishes, Silverware, latest patterns of Carpets and rugs, swell line of Furniture, Baby Carriages, Phonographs, Paints, Fencing, Hardware, Roofing, Harness, Buggies, Sewing Machines, Ladies', Men's and Children's Wearing Apparel, Galloway Bros. & Company's famous Royal Purple Grand Champion line of Pure Tested Seeds, etc.

Every article in this book carefully and exactly illustrated and honestly described. Sold at rock bottom prices that will make new Galloway customers.

6 Selling Plans-Cash Or Easy Terms To Please Every Fancy-To Suit Every Purse

Look them over carefully. Select the one you like best. It's a new feature with us and will continue for only 90 days. It's to make new customers new friends to boost sales to create more living walking advertisements for the Galloway goods.

It's the chance of a lifetime to get acquainted with the Galloway Fair and Square Policy. It's a chance to save money on our direct from factory-to-farm plan and get what you need on the same easy or easier terms than you can get at home and I guarantee satisfaction or money back with freight paid both ways. Every article, every purchase backed by our $25,000 Bank Bond.

We want another 100,000 customers this spring. Your name on our customer's list will be welcome. Once on, the high quality, low prices and absolute satisfaction will keep you there.

When I first started in the manufacturing business, I made a harrow cart, then a manure spreader, next a gasoline engine, then a cream separator followed by a line of different farm tools. The latest addition to the Galloway family is the famous Efficiency Farmobile, which is the wonder of all tractors and now, after spending 5 years working, developing and negotiating, I am at last in position to offer the great buying public of this country the most remarkable line of low priced automobiles yet produced. Low price has been my watchword. The secret of low prices with me is not poor quality proven by the fact that this business has grown to millions in a few years through satisfied customers.

Listen! The secret is simply the policy I adopted in the beginning to make and sell goods at actual cost of labor, actual cost of material, plus one very small profit. Add to that big demand—enormous output, manufacturing with automatic machinery, standardizing all parts to go into my products which means cost of production down to a minimum, with my direct from factory-to-farm plan of selling which brings selling cost down to lowest possible point thereby puts my customers on a wholesale basis and you have the story in a nutshell.

Plan No. 1 Cash with order. Right down to bed rock prices. Money back if not satisfied for any reason.

Plan No. 2 Bank Deposit. Satisfy yourself before you let go of your money.

Plan No. 3 Half cash, half note. Transaction backed by our $25,000.00 Guarantee Bond.

Plan No. 4 All note settlement for those who want it. Pay out of your next crop.

Plan No. 5 Installment plan. One-tenth down and one-tenth each month, letting goods earn their cost.

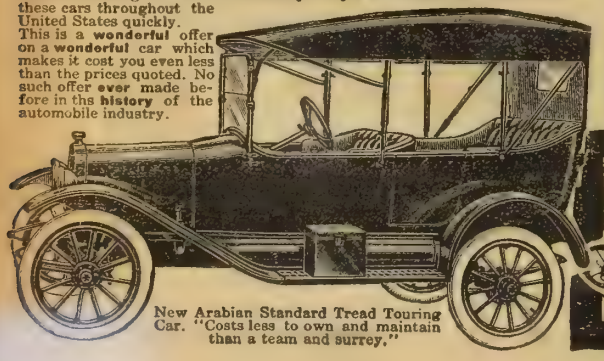
Plan No. 6 No money down. Try actually 30 days with money in your pocket and a year to pay.

Look! New 1916 Galloway Automobile

See the Prices! Read Specifications

A business or pleasure car for everyone. Price need no longer interfere with your enjoying pleasant rides. A light car, pleasing to the eye. Properly designed, carefully built. Easy riding. Has 4 cylinder motor, clutch internal cone type. Transmission silent sliding gears. Two speeds forward and reverse. Axles front I beam. Famous Baily skidless differential in rear axle. Drive, propeller shaft enclosed through universal joint to rear axle. Springs—full elliptic. Carburetor—Mayer. Standard automatic type lubrication. Splash system. Sight gauge on dash. Speed 35 to 40 miles per hour. Made standard tread. F. O. B. over transfer point nearest you. Waterloo—Kansas City—St. Paul—Chicago—Council Bluffs—or Jackson, Michigan. The quality is there. Service and satisfaction are assured.

WANTED! Ten men or more in every county to get our **special advertising distribution offer** which we are making for the next **thirty days** in order to introduce these cars throughout the United States quickly. This is a **wonderful** offer on a **wonderful** car which makes it cost you even less than the prices quoted. No such offer **ever** made before in ths **history** of the automobile industry.



New Arabian Standard Tread Touring Car. "Costs less to own and maintain than a team and surrey."

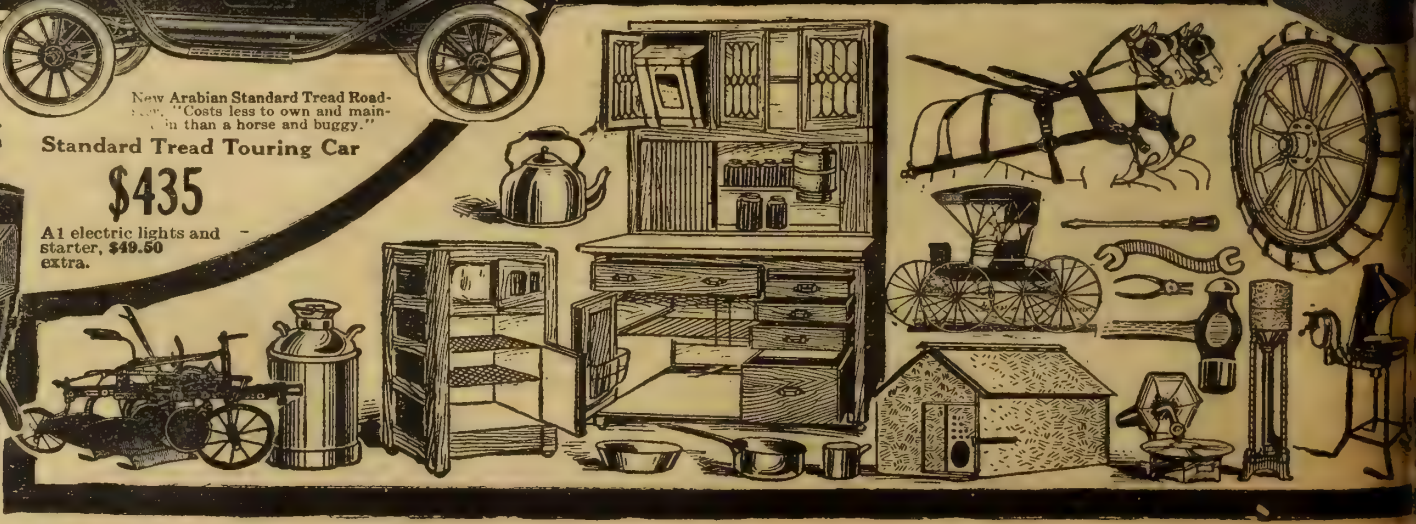
Standard Tread Roadster $385
A1 electric lights and starter $40.50 extra.

New Arabian Standard Tread Roadster. "Costs less to own and maintain than a horse and buggy."

Standard Tread Touring Car

$435

A1 electric lights and starter, $49.50 extra.



THEN WRITE
WONDERFUL BARGAINS

Travel 20,000 miles, look over every factory in the U. S. and all foreign countries. Look through every catalog published. Call on any one who sells the same articles. You won't find, you can't buy, from anyone, anywhere, on better terms, the exclusive patented, up-to-date articles at the bargain prices we make.
The four bargains below are representative of our entire line. Don't take my word for it. Satisfy yourself. Investigate. Compare. Test any or all of these four products of the Galloway factories with any other you ever saw or heard of. If they are not as claimed, exactly as represented, made of honest material, serviceable and satisfactory after 30 to 90 days' test on your own farm, return them and get your money back, including freight both ways. That's fair to you. It's satisfactory with me because my policy in dealing with farmers of the U. S. is satisfied customers at any cost.

10,000 CREAM SEPARATORS
NOW BEING COMPLETED IN THE GREAT GALLOWAY FACTORIES

These 10,000 to be sold between now and grass. They are so good, so satisfactory, such high quality, that one in a neighborhood sells more. To get more of them in new territory, to build up summer sales, I am making unusual 90-day proposition in addition to low prices already quoted. The separator I sell is equal to any separator made. My customers say they are better. The thing to do is find out for yourself. All I ask is, before you buy a separator of any kind, of any make, at any price, that you get my catalog. Read over the Separator section, then order one on 90 days' trial, which means using it 180 times before you need decide to keep it or not. If you keep it, do so on one of my six selling plans. A guarantee for 10 years against defective material and workmanship goes with each one and every sale backed by a $25,000 Bond. You have everything to gain, nothing to lose, because it's all up to you. You are the judge—the jury. The separator itself, the way it's made, are the evidence. It has big seamless pressed steel supply tank, high crank shaft, short crank, oil splash lubrication, high carbon steel gear shaft. The base is strong, well balanced, giving machine solid firm footing. Large worm-wheel. Sanitary drip pan, hinged cream pail shelf, strong sanitary bowl, high carbon steel bowl spindle, low speed crank, only 50 R.P.M. These special features alone worth price of separator.

SPECIAL PROPOSITION on 10,000 New Galloway No. 8 Manure Spreaders
FROM NOW UNTIL SEEDING TIME AND IT IS NOT FAR AWAY.

This special offer is made with the idea of getting ten or more in every township in the next few weeks, because one Galloway No. 8 always sells from one to a dozen more, and we can afford to make this special proposition to get as many as possible scattered into every locality as quickly as possible. Buy on terms! We sell the Galloway spreader on six different selling plans, including cash, half cash and half note, all note settlement, installment plan (no interest). If you haven't the money handy buy on the last plan and let the spreader pay for itself. Some new features: Wider spreading—finer spreading than ever; all steel, non warping, non-cracking, double pulverizing beater; lighter draft, low down, double chain drive, cut under front wheels, big capacity, channel steel frame, trussed like a steel bridge, steel tongue endless apron, force feed, folding seat, manure guards over drive chains.
"Galloway, how can you do it"? That's the question that is often asked when people come to Waterloo. Go into our sample room and look over our new V-rake steel beater, tongue and frame Galloway No. 8 Manure Spreader, which we sell lower than ever! It is a money-maker—a cash producer. The manure spreader section of my big 250 page book tells you by actual photographs in colors all about this spreader. It illustrates to you how on one of my farms last year I made an experiment with and without manure which made a difference to me on one field of $17.00 per acre. Figure it out for yourself on forty acres!

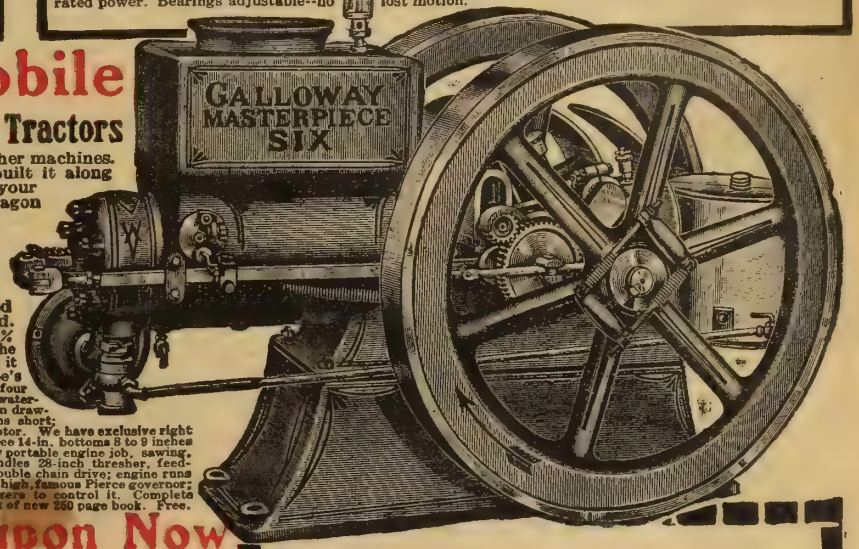
10,000 GALLOWAY ENGINES IN 90 DAYS
MY NEW SPECIAL PROPOSITION
Is ready for you today.

I want you to get it because this offer, in connection with my new lower than ever 1916 prices on Galloway Masterpiece engines from 1 3-4 h. p. to 16 h. p. will **save you money.** You can't buy a better engine than the Galloway Masterpiece. Tens of thousands of Galloway Masterpiece engine users have said so themselves! I build this engine right here in Waterloo in **my own factories** and build it **so good** that when it goes out into the hands of a customer, one Masterpiece engine sells from **one** to a **dozen** more. **Galloway Engines** sweep whole communities like **wildfire.** That's why I say

WAIT! DON'T DO A THING Until you have seen this wonderful 1916, 250-page book that tells all about Galloway engines and I explain my special advertising distribution offer! If you answered all the engine advertisements ever published you would not find an offer fairer, squarer or more in your favor. You owe it to your pocket-book and the satisfaction that you demand in the operation of the engine you buy to answer this advertisement and learn the particulars of this new 90-day offer to distribute 10,000 more Galloway Masterpiece engines from 1 3-4 h. p. to 16 h. p.! I know these 10,000 engines will speak for themselves and multiply my sales this year!
Our 1916 model is a mechanical master piece—a master stroke in engine design—built by master engine builders. Materials superior in quality —skilled workmanship — standardized -- develops away above rated power. Bearings adjustable--no lost motion.

Galloway's Efficiency Farmobile
The Wonder of All Farm Tractors

We call it the Farmobile because it is unlike other machines. We have eliminated unnecessary friction and built it along automobile lines. How far would you go in your automobile if it had an axle like your farm wagon or your mower?
The Galloway Efficiency Farmobile is built with anti-friction bearings, twenty-one sets of Hyatt Roller and Ball bearings in this Farmobile, which eliminates friction and reserves the power in the engine for the draw-bar and the pulley where it is really needed. By dynamometer test it only takes 15% of the motor's power to drive the tractor empty. On many tractors it takes from 50% to 75% of the engine's power to drive the tractor empty. Has four cylinders; valve in head, modern motor; water-cooled; working parts protected; 12 h. p. on draw-bar and 20 h. p. on pulley guaranteed; turns short; weighs 5200 lbs.; transmission a unit with motor. We have exclusive right on this patented transmission. Will pull three 14-in. bottoms 8 to 9 inches deep in clover or timothy sod; will do any portable engine job, sawing, silo-filling, corn shelling, shredding, handles 28-inch thresher, feed-grinder, pumping for irrigation, etc. Double chain drive; engine runs in tight oil-bath case; rear wheels 58 in. high, famous Pierce governor; engine never races. Only two levers to control it. Complete description in Farmobile department of new 250 page book. Free.



Mail Coupon Now

Get the Galloway 250-page catalog, look through the book carefully---Note the prices---Read the descriptions, and study the pictures; then send that trial order to get acquainted with Galloway Merchandise, and the Galloway method of saving you from $100 to $500 per year. Do it now, today.

WM. GALLOWAY, President
THE WM. GALLOWAY CO.
37 Galloway Station
WATERLOO, IOWA.

Wm. Galloway, Pres.
THE WM. GALLOWAY CO,
37 Galloway Station, Waterloo, Iowa

Kindly send me, free, postage paid, your new 250-page catalog and your special literature and 90-day proposition on Cream Separators, Gasoline Engines, Manure Spreaders, Automobiles, Farm Tractors (Farmobiles.) Also, farm implements, household goods, auto accessories, furniture, pure seeds, etc. Use the following spaces to write in what article or articles interest you most.

.....

.....

NAME.....

TOWN.....

STATE.....R. F. D.....

A Powerful Light Tractor for Only

$550

Just see what we have to offer you for $550. Impossible? Not at all. The reason is merely this: All unnecessary parts have been eliminated from this new, remarkable tractor.

Happy Farmer Tractor

Frame all steel—light in weight—durable. Two-thirds the number of parts usually found on tractors of equal strength. Strain borne by wooden clutch shoes, pins and rollers—quickly and economically replaced. 88% weight on traction wheels—where it should be. Pulls anything that horses can draw. Greatest value in light tractors ever offered. Write us for full specifications.

DEALERS: The tractor you have been looking for. 1916 output extremely limited. Write immediately for terms and territory.

Happy Farmer Tractor Co.
330 Third Ave. North
Minneapolis, Minn.

It's All in the Spread

Two farmers using the same kind and amount of manure will produce varying crops. One spreads right and the other doesn't. Right spreading means prompt and even spreading, neither too thick nor too thin and without waste in either barn or field.

Manure has a fertilizing value of $8.00 to $10.00 profit per animal. The only way you can get this full value is by the use of a proper spreader. Such a machine is the reliable, guaranteed

NEW IDEA Registered U.S.Pat.Off.

the gearless spreader. Operates by strong chain. Conveyor gathers all the manure and does not race going up hill. Double cylinders insure thorough pulverization without clogging. The New Idea can be loaded full 35 inches high. Only 43 inches at highest point. Wheels track.

Spreads 7 ft. Wide Across 3 Corn Rows Spreads and Pulverizes a Load in 3 Minutes

The patented revolving distributor causes this remarkable spread. It goes beyond the wagon tracks so it is never necessary to drive over the spread manure. Variable spread from 3 to 18 loads per acre. Guaranteed against defective material and workmanship.

"Helping Mother Nature"
Write for Your Copy
FREE

A book of information on manure. Tells how to spread it to get best results. Worth money but we give it free. Ask the New Idea dealer or write us direct.

New Idea Spreader Co.
"Spreader Specialists"
227 First St. Coldwater, Ohio

BIG MONEY IN FRUIT

Replant your orchard. Plant your roadside. Hardy fruit trees, vines and shrubs at low WHOLESALE PRICES NOW
Direct to you from our nurseries. Big 4-color, new, different, original fruit book and planting guide FREE.
GALLOWAY BROS. & CO.
Dept. 36 Waterloo, Iowa

Please mention this paper when writing

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

To Recharge Dry Batteries.

I would like to know how to recharge small dry batteries.

Answer.—There is no satisfactory way to recharge dry cells. You can extend their life somewhat after they have become exhausted by punching a hole through the tar down into the black powder beneath and pouring in a little salt water.

Speed of Saw.

I have a four-horse-power engine and would like to know how fast to run a saw, thirty inches diameter. The saw has a pulley six inches in diameter, six-inch face. It has a ninety-five-pound flywheel.

Answer.—A thirty-inch saw should make about 1,000 revolutions per minute. About six horse power would be required. Your engine is suitable for a saw about twenty-two inches in diameter.

A Cycle Car.

Would a motorcycle engine, three-inch bore and three-inch stroke be practical for a small cycle car weighing about 200 pounds? I would use chain drive, two speeds ahead and one reverse. Would bicycle wheels be strong enough?

Answer.—Your engine would have power enough for a very light cycle car, using bicycle wheels. You should keep the weight less than 100 pounds if possible.

Lubricating Trouble.

I have a two-horse-power gasoline engine equipped with a double sight feed lubricator. The lubricator is located near the side of the cylinder, being supported by a pipe nipple and elbow. There is a pipe running from the lubricator to the crank case. In cold weather I have considerable trouble keeping the oil flowing through this pipe, as the oil thickens and stops flowing. Could differential grease be used successfully in the engine crank case by putting in a little every day or two?

Answer.—We would not advise the use of transmission grease in an engine crank case. There are some heavy motorcycle oils on the market that might be used as you suggest. It might be better for you to use a lighter oil in your lubricator during the winter months; or install a larger oil pipe between your lubricator and crank case.

Motorcycle Trouble.

I have a 1907 Indian motorcycle. It is ignited by three standard dry cells. The motor runs fine for a few miles and then begins to misfire. The spark is good at the start, but becomes very weak. I have a new piston, new cylinder, new carburetor and new batteries. Do you think the trouble is in the coils?

Answer.—The trouble is not in the coils, as coil trouble would prevent your engine from starting. It may be that when your engine is running dirty oil works into the timer case, causing short circuits that interfere with the ignition. It may also be that the contact points are too close together, drawing too much current from the batteries and rapidly exhausting them. As a rule, the contact points should be about one-thirty-second of an inch apart when entirely open.

Some Sawing Questions.

At what speed should a twenty-two-inch saw be driven by a three-horse-power gas engine? What size of pulley should be used on the engine, there being a five-inch pulley on the saw mandrel, if the engine makes 450 revolutions per minute? Which is the better, a sixty or a ninety-five-pound balance wheel? What size of canvas or rubber belt should be used? Should the engine stand well ahead of the frame, or close to the mandrel?

Answer.—A twenty-two-inch saw should make 1,200 to 1,400 revolutions per minute. Use a fourteen-inch pulley on the engine or a fifteen-inch pulley if you can obtain one. We believe the ninety-five-pound balance wheel would give the better results. However, that can be determined only by experiment. Use a four and one-half inch rubber belt. If your pulleys are wide enough use a five-inch belt. The engine should not set too close to the mandrel, as a very short belt does not drive as well as a long belt. A crossed belt drives better than a straight belt, but does not last as long.

Bosch Magneto for Lighting.

I own a Pope twin-cylinder motorcycle which is equipped with a Z. E. V. type Bosch magneto. Is there any way in which I could use this magneto for lighting, either direct or through storage batteries?

Answer.—There is not any practical way.

Batteries for Coils.

Will it injure a three-battery coil to connect six batteries to it, or a four-battery coil to connect it with eight batteries?

Answer.—There is danger of burning out the coils, ruining the condenser and burning the vibrator points. The coil might stand this excess for some time, but it is not advisable to risk it.

Speed of Auto Motors.

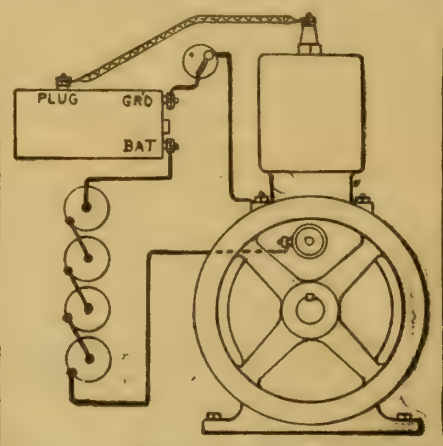
Why is it that the latest Chalmers has more revolutions per minute than other motors? I have read that the Chalmers engine can make 3,400 revolutions per minute and that many other motors can make only 2,600.

Answer.—The present tendency in automobile design is toward motors of very high speed in order to obtain as much power as possible from a given weight of engine, and also to give the car a more even motion. High speed motors have comparatively small, but perfectly balanced crankshafts, extremely light pistons and connecting rods and large valves.

Wiring Gas Engines.

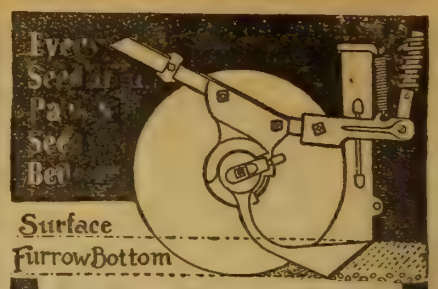
I would like to ask how to connect batteries and coils to gas engines. Should carbon or the zinc battery terminal be connected to the coil? Should the "ground" terminal on the coil be connected to the engine timer or grounded on the engine? In a make-and-break system, should the carbon or zinc battery terminal be connected to the coil?

Answer.—In either case it does not matter whether the coil is connected to the zinc terminal or the carbon terminal of the battery. It does not matter which direction the current flows. The figure shows the usual method of wiring a jump spark engine. Four or



five dry cells are connected carbon to zinc as shown. From one of the two remaining battery terminals run a wire to the battery terminal of the coil. From the ground terminal of the coil run a wire to the switch and from the switch to the engine. Or the switch may be placed in the line between the battery and the coil, thus avoiding the possibility of the battery running down due to a short circuit in the coil. Be sure that the ground wire makes good contact with the engine frame. From the other battery terminal run a wire to the engine timer. The coil terminal marked "ground" should not be connected to the timer, as the secondary as well as the primary current flows to this terminal, and the secondary current is injurious to the timer.

A make-and-break system is wired the same as a jump spark system, except that there is no spark plug wire. With a make-and-break coil it does not make any difference which coil terminal is connected to the battery.



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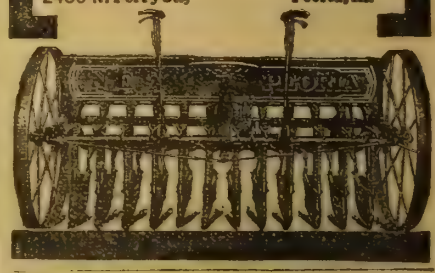

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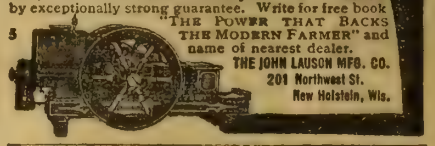

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UPPER WISCONSIN

UNDEVELOPED DAIRY OPPORTUNITIES.

[Editor's Note.—The following was prepared by E. J. Delwiche, director of the Ashland Junction, Wisconsin, Experiment Station.]

It is a trite statement to say that Wisconsin is a great dairy state, and yet the resources of the state from the standpoint of dairy farming have been scarcely more than half developed. The upper half of the state has from 9,000,000 to 10,000,000 acres of good farming land available for dairy farming. The estimate allows for waste land to be reserved for forest purposes and leaves out farm land not very well adapted for dairying or other agricultural pursuits. Upper Wisconsin possesses opportunities for dairying, demonstrated by the good dairy farms which are found in the upper section of the state. Wish to recall that some of the best records made by individual animals are located north of the line dividing the state into the northern and southern half.

In this discussion it is proposed to discuss the dairy opportunities largely from the standpoint of the possibilities of growing crops to feed to dairy animals. It should be remembered that after all the growing of crops to be utilized for feeding purposes is the foundation for successful dairying. In 1906 the experiment station established branch and substations in the northern region with a view to demonstrating the possibilities of crop production, soil management and farming in general. This work has been extended in recent years and today there are three branch experiment stations in the northern half of the state. At these stations problems affecting dairying and allied industries are studied. The improvement of crops for the north by breeding and selection is carried on. New varieties have been introduced and old ones improved by up-to-date breeding methods.

Clover grows bountifully throughout Upper Wisconsin and because of the fact that snow usually covers the ground during the winter months very little winter killing occurs. Medium red clover is the standard crop, although alsike and mammoth are also extensively grown. Medium red has given excellent results on nearly all classes of soil where tried. At the Ashland branch station and on the demonstration station at Superior yields of clover have ranged from two tons to over five tons in two cuttings. On sandy loam soil at the Spooner branch the yields have not averaged quite as high, yet yields of upwards of four tons in two cuttings have been secured. By sowing clover either alone or with oats and cutting the oats for hay if the season is dry good stands are assured. We have sown clover on corn land in May and cut over a ton of hay the same season as sown. Two cuttings are cut the following season. The sod is then plowed up and the land planted to corn. On Colby loam soil at the Marshfield station and on Kennan loam at the Rusk county demonstration farm medium red clover has given about the same results as on the red clays of the Lake Superior area. Alsike clover also gives good yields. It is particularly well adapted to rather wet land.

Alfalfa has been tried at the different stations in the northern section and also in co-operation with several hundred farmers. While the crop is not grown as readily as clover, it can be successfully raised providing the right care in soil preparation is given. On heavy clay soils at Superior and Ashland yields ranging from two to four tons in three cuttings have been secured. On the well-drained clay lands inoculation only is necessary. On the heavy soils of central Wisconsin and on the sandy soils of the northeastern section lime should be provided. At the Spooner station we have grown good alfalfa without liming. The indications are that liming will be required for best results. The feeding value of northern Wisconsin alfalfa is high. A Lincoln county farmer has found through experiments that increased production from his dairy herd resulted from changing his ration from bran and alfalfa to alfalfa alone; in other words, when fed in equal amounts, alfalfa gave better results than bran.

The soy bean is a crop of recent introduction in northern Wisconsin. Nevertheless, tests carried on at the different stations since 906 indicate that it is a splendid crop to substitute for clover to be cut for hay or to be grown for seed. It is particularly well suited to the sandy sections of northern and central Wisconsin. When the soil is well inoculated it is a certain crop and on sandy soil acid in character it has proven far superior to clover. Yields of cured hay have ranged from one to three tons per acre. It is, of course, an annual legume and hay is made from it the same year as planted. Soy bean hay is about equal in feeding value to alfalfa. Soy bean growing centers have been established in the neighborhood of Ellis Junction, in Marinette county; Stevens Point, in Portage county; Spooner, in Washburn county, and Tomahawk, in Lincoln county. Yields of seed range from twelve to twenty-eight bushels per acre. From what has been said it should be clear that legume crops for hay and pasturage can be grown abundantly in Upper Wisconsin.

Turning to nonleguminous roughage for cattle we find that this, too, can be grown in abundance. Corn for silage can be grown everywhere in the north and the yields, where proper care in growing the crops has been given, have been very satisfactory. On the substation near Superior we have grown eighteen tons of silage corn per acre and about as heavy yields at Iron River on the light type of soil. Equally as good yields have been obtained at the other stations. At the Spooner station we have grown seventy bushels of shelled corn per acre and about as much at Marshfield and Ellis Junction.

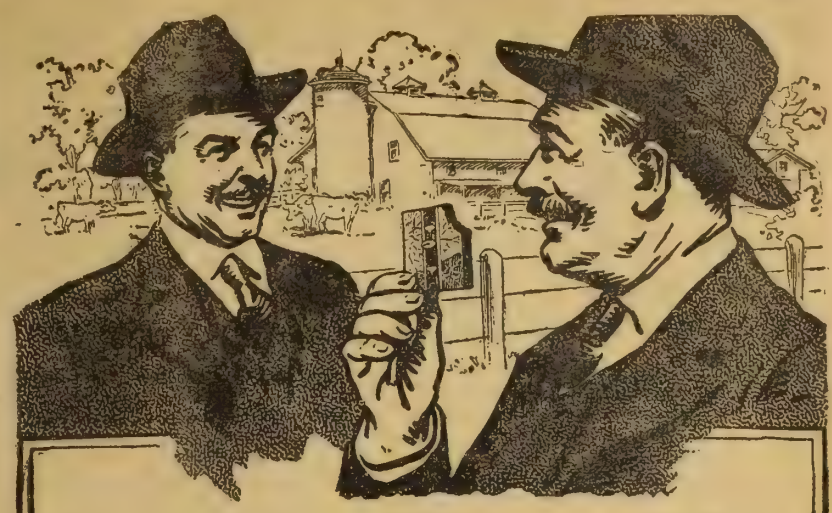
We have also found that peas and oats, when grown in double rows and cultivated, gave very good yields per acre. At the Superior station last year we grew nearly ten tons of peas and oats per acre. This combination makes good ensilage and when it is considered that the cost of production is much less than corn it can be seen that it is destined to be a good combination for making ensilage.

Root crops grow very readily in northern Wisconsin. They are particularly well adapted to the heavy clays and loams of the North. Rutabagas have given yields of over twenty-five tons per acre. These roots have given a little the best results of any of the root crop types we have tried. They are a very fine crop to supplement the clover, silage corn and other roughage, as feed for dairy animals. No northern Wisconsin farmer should neglect the growing of roots if he is to make the most of his opportunities.

The question as to whether it is possible to grow grain to supply at least a part of the concentrates for feeding dairy cattle is one that can be answered in the affirmative for most sections of the North. The clay belt adjoining Lake Superior is exceedingly well adapted to the production of small grains and peas. Barley, oats, wheat, rye and peas have given yields on our station farms much above the average. In 1915 on the demonstration station at Superior oats yielded eighty bushels per acre, barley forty-five bushels, spring wheat thirty-five bushels, and peas twenty-five bushels. At Ashland yields were fully as high. In central Wisconsin on the loam soils at Conrath and Marshfield barley and oats gave very good yields, nearly, but not quite, as high as was recorded for the red clay belt. The sandy and sandy loam types are not quite so well adapted to growing grains. On Plainfield sandy loam at Spooner, in 1915, our oats averaged over fifty bushels per acre for the best varieties. For the light types of soil our experimental work indicates that soy beans are exceedingly well adapted to be grown for concentrates for dairy cattle. On those types of soil it is possible to mature corn for the crib. Ear corn, when ground with soy beans, makes a fine concentrated feed for dairy cattle.

Pasturage grows on most soils of the North, and, owing to the fact that rainfall is a little more abundant during the summer months than is true in the regions farther south, pasturage holds out through the summer better than it does in more southerly localities. This is true on all except very light soils. Good pasturage is usually available from the middle of May to the first of June and lasts until November. The quality of the pasturage is usually good, since the legume plants are abundant and June grass is found everywhere. We do not wish to leave the impression that conditions as described are true for the entire acreage of undeveloped land in the North, but it holds for the greater part of it. With the facilities for growing legume crops of high feeding value, corn silage and roots, small grains, peas and soy beans for concentrates, and plenty of wild land available to develop into pastures, the conditions are favorable for dairying in the North.

This conclusion is not derived merely from the data procured during the ten years' work done at the different branch and demonstration stations, but to quite an extent from the results obtained by dairymen throughout the area described. Good dairy farms are found in practically all northern counties. Some of the finest and most productive herds in Wisconsin are located north of the forty-fifth parallel. Conditions are favorable for the production of high-class butter and cheese and it is a noteworthy fact that in recent years the cheese factory and the creamery have followed closely on the heels of the settler. The northern Wisconsin farmer has shown a disposition to co-operate with his neighbor. This is clearly indicated by the testing associations, live stock breeders' associations, bull clubs, potato warehouses and many other organizations requiring the right spirit of co-operation on the part of the farmer. Considering the fact that by far the greater number of settlers were men of very limited means and often of even more limited training as farmers, it is remarkable that such advance has been made. The future development of the dairy industry in northern Wisconsin will be greatly helped by an influx of settlers knowing something of farming. Cheap money on easy terms is also needed to help the settler clear the land and stock the farm with good stock. The northern half of the state, in common with all new regions, is lacking in available capital. Associations to remedy this condition have been established in certain counties, as in Marinette and Eau Claire, for instance. A system of rural credits, whether carried on under government, state or private direction, or combinations of these, is greatly needed to help towards a more rapid development of northern Wisconsin's latent agricultural resources.



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Fruits and Garden

New Uses For the Potato.

Unless We Can Profit by Germany's Efficiency in Handling Crop, Big Crops in This Country Will Be Unprofitable.

A DISCOURAGING feature of potato growing is the occasional big crop which produces such an enormous quantity of potatoes, a big per cent of which go to waste or are sold at small profit. Dr. H. E. Horton discussed this phase of the potato industry at Madison, Farm and Home week. Facts presented in his address show that we have not as yet begun to realize the possibilities of the potato crop either from the standpoint of production or the uses to which the tubers may be put. The Germans have solved these problems better than any people in the world. Statistics given by Dr. Horton, show that the Germans waste only 10 per cent of the potato crop. The latest authentic figures on production in Germany show that about 1,500,000,000 bushels are grown annually on 8,151,000 acres. The acreage in this country in 1912 was 3,711,000 and the production 420,000,000 bushels in round figures. Thus in the matter of production we get about one quarter as many potatoes off the same acreage as the Germans get. But this is not our biggest potato problem now, as such crops as are raised in Germany would simply swamp our American markets. The following statement shows what distribution Germany makes of her tremendous crop:

440,000,000 bu. used on table.
91,833,333 bu. made into alcohol.
51,426,666 bu. made into starch.
191,013,333 bu. used for seed.
646,506,666 bu. used for feeding cattle.
157,953,333 bu. lost. (Only 10 per cent of total production.)

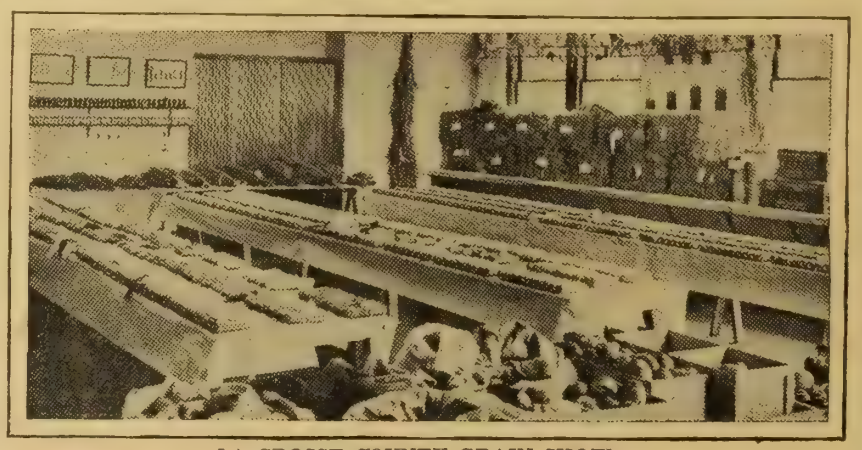
The potato furnishes 25 per cent of the food for the German Empire. In the families of German working people potatoes constitute 50 per cent of the food consumed. While the drying of potatoes into "potato flakes" is almost an unknown art in the United States, in Germany it is a profitable business. In Germany potato flour is in general use and other European countries also use it. Cook books are published showing how potato flour may be used. In 1913 we imported over 16,000,000 pounds of potato flour and starch for the use of people who come here from Europe. The war has cut off this supply, according to Dr. Horton, but the demand is still here, and there is no reason why Americans should not utilize potatoes for these purposes. Unsalable potatoes and culls might be thus turned into a good profit. Potato flakes, Dr. Horton says, may be turned almost instantaneously into mashed potatoes, the American national dish. Such flakes put up in cartons could be readily sold at all stores. Potato flakes would become indispensable in the army and navy. Potato flakes could also be made a very valuable food for farm animals. Horses, according to Dr. Horton, eat these flakes readily. Colic is less common and the feed agrees with horses. The same good effect of potato flakes might be found were they fed to swine. Potatoes lack protein and this substance must be supplied by one of the other ingredients of the ration. This is true of other starch foodstuffs.

Dr. Horton says that we must consider the matter of manufacturing potato flakes, starch, alcohol, etc., to get the best market for all grades of potatoes. In this manufacture of starch and alcohol there is a considerable pulp remaining which has a feeding value which should not be overlooked. When we get to the point where the potato is studied and its every product used as in Germany, our big potato crops will not give us such a scare as they do today.

LA CROSSE COUNTY GRAIN SHOW.

The annual Farmers' Course and Homemakers' Conference was held at La Crosse County School of Agriculture and Domestic Science, February 3d, 4th and 5th. There were over 800 people present during the three days. At the close of the session was held the first La Crosse County Country Life Conference, under the direction of Prof. C. J. Galpin, of Madison. The La Crosse county order of the agricultural experiment association held its annual corn and grain show at the same time and there was an exhibit of graded school sewing. A horse show added to the interest of the sessions. The homemakers' program was in charge of Mrs. Elizabeth Kelley, of Madison.

As usual, the La Crosse county exhibitors upheld their reputation as producers of prize-winning corn and small grain. It is doubtful whether any better display of farm products has been gathered in Wisconsin this year. Adverse season conditions seem to have made very little difference to the producers of prize-winning grains in La Crosse county. Alfalfa played a prominent part in the show and a special exhibit of legumes attracted attention. S. P. Markle, of La Crosse, swept the boards with his corn, which also won honors at the National Corn Show in St. Paul and the Wisconsin Grain Show at Madison. The sewing



LA CROSSE COUNTY GRAIN SHOW.
Part of the corn, small grain and other farm products exhibited.

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PINE TREE NURSERY - PEMAQUID, MAINE

exhibit was a great credit to the school and teachers of La Crosse county. Immediately following the La Crosse show the winning exhibits were forwarded to Madison.

In the corn classes S. P. Markle won first on Wisconsin No. 7; sweepstakes on ten ears any Dent variety; sweepstakes single ear, any Dent variety; first on best fifty ears of White Dent; largest ear of corn entered; sweepstakes best fifty ears Dent corn. John Van Loon won first on best ten ears Golden Glow; first on best single ear White Dent; first on best single ear Yellow Dent; first on best ten ears sweet corn. Gust Olson won first on best ten ears any other yellow variety. Otto Wolf won first on Wisconsin No. 6. Jippa Wielinga won special prize for first fifty ears of corn, any Yellow Dent variety. J. E. Hauser won first best ten ears Flint corn and first best ten ears sweet corn, early variety. J. Staples won first on ten ears pop corn.

Wm. Moos showed best peck Wisconsin pedigreed oats and Ed Peters best peck oats any other variety. Mr. Peters also won first on best peck Wisconsin pedigreed barley and Otto Wolf first on best peck barley any other variety. Otto Wolf also won first on barley in sheaf. Harry Pralle had best peck of rye any other than pedigreed variety. In the small grain classes Ed Peters won first on best rye in sheaf; first on best peck spring wheat; first on best wheat in sheaf. Harry Pralle won first on best peck winter wheat. The best bundle of alfalfa was shown by John Van Loon and the best peck of potatoes, any variety, both early and late, by Ed Peters. Peters also had the best display of farm products. The greatest amount of cash, as prizes on pure-bred corn, was won by S. P. Markle. Sweepstakes on small grains were, oats, Wm. Moos; barley, Wm. Moos, and rye, Harry Pralle.

YELLOW LEAF ON CHERRIES.

To the Editor:—I grow some fruit and take a great interest in the year book of the Wisconsin Horticultural Society, and also the society paper. We can grow very fine fruit of all kinds in this county, including apples, pears, plums and cherries. But it is hard to keep the insects away, especially with the cherries. The yellow leaf is killing them and already hundreds of trees are dead. There has been a good deal of spraying done, but our greatest trouble seems to be to find cut just the right time to spray, so that it will do any good. So far I have not made a great deal from my fruit. I started to plant an orchard twelve years ago. I planted a number of trees which had to be pulled out again and some died. If I had known twelve years ago what I know now I should have had a fine orchard by this time. Apples do fine here, especially the Dudley, Wealthy, Northwestern Greening, Duchess, Scott's Winter, Snow, McManus and the Wolf River.

Door Co., Wis. C. Saabye.

INSTITUTE A GRAND SUCCESS.

To the Editor:—Our institute was a grand success in every way. We had a fine attendance both days and at one time there were 325 ladies present by actual count in the women's institute.

There were thirty-one head of registered cattle on exhibit, 156 entries of corn, potatoes and grain and clover seed, fifty-six entries in the women's department or cooking school exhibits. We served about 800 people with a free lunch and provided free barn room for 182 horses.

Unusual interest was manifested by the farmers and we believe great good will come from this institute.

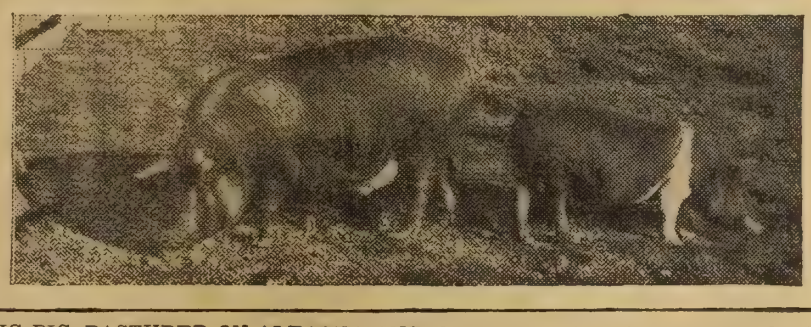
Wm. Drenk.

Waushara Co., Wisconsin.

CAFETERIA PLAN FOR HOGS.

(Continued from page 10.)

the hog does not consume the high-priced concentrates in such excessive quantities as to make his gains expensive, but, on the other hand, even with tankage at $50 a ton, the consumption of this food in quantities regulated wholly by the appetite of the hog means cheaper gains than can be made from corn alone or from corn and tankage mixed together in any fixed quantity. The conclusion is reached that the hog's ration varies slightly from day to day. Beginning at weaning time and ending when he is fit for market, there is a gradual, and it may be said daily, widening of the ration, and the series of experiments now being conducted by the Iowa station have already demonstrated that the hog, when left to his own resources, knows what is best for him, and fortunate it is that his natural appetite, when gratified, leads to the making of cheaper gains than can be put on by any other plan of feeding.



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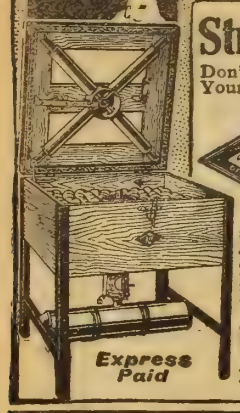

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upwards of four and a quarter million bushels being exported in less than six weeks,

and this was but the overflow of shipments to Montreal, through which point shipments were much larger than to New York.

Yields as high as 60 bushels of wheat per acre are reported from all parts of the country; while yields of 45 bushels per acre are common.

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POULTRY.

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BRED from prize winners. Ready for delivery. 50 pullets that will lay within a month. None disqualified. Good breeders $2.50 up. Cockerels $2 up. Exhibition birds at reasonable prices. Won 9 ribbons on 15 birds at the Wisconsin State Fair, 1915. Winnebago Poultry Yards, R.23, Omro, Wis.

WE PAY $80 A MONTH SALARY
AND furnish rig and all expenses to introduce our guaranteed poultry and stock powders. Bigler Company, X 660, Springfield, Illinois

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P.W. Condon, West Chester, O.

58 BREEDS Fine, pure-bred chickens, ducks, turkeys, geese. Hardy, northern raised. Fowls and eggs at low prices 22 years at it. America's pioneer poultry farm. Large catalog free. F. A. NEUBERT, Box 607, Mankato, Minn.

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PURE-BRED Single Comb Buff Leghorn yearling hens, the laying strain, at $10 per dozen. Charles Schmit, Route 22, Hortonville, Wisconsin.

241 EGG Strain S.C.Buff Orpingtons. 200 cockerels, hens and pullets for sale. Catalog free. Address W. L. Bardsley, Neola, Iowa.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

LICE AND MITES.

One of our subscribers, Mrs M. L. Brend, of Calumet county, who is interested in giving her little chicks a start in life free from lice, writes The Wisconsin Farmer as follows:

I have been reading your paper with much interest and especially the poultry department, as I am anxious to succeed with my chickens. Last year I had considerable trouble with lice and mites and last many of my little chicks as a result. Can you advise me what is the best method to use in ridding them of these parasites this spring?

The experience of Mrs Brend with lice and mites has been the experience of hundreds of other poultry fanciers and farm women. These two parasites cause the death of many thousands of newly hatched chickens in Wisconsin every year and it is advisable at this time to rid the flock of them and give the little chicks a start in this world free from either. The farm woman should be on the alert now for these parasites as lice on baby chicks may sometimes be prevented by dusting the hens several times while the chicks are hatching, but even when these precautions are taken some of the eggs on the hen's body may hatch and thus the chicks become infested. Lice are not usually as harmful as mites, but many broods of chicks are often badly injured and some are killed by these pests. Not infrequently hens desert their nests and the eggs are spoiled because of the ravages of lice.

When the chicks are hatched and lice are noticed they may be eradicated by greasing the chicks on the top of the head, an old remedy known to most poultry raisers; by dusting the sitting hens at least three times during the hatching period; by using blue ointment or grease on all other hens and by providing a good dust wallow. Use insect powder for the dust, which method kills the lice by suffocating them, or knocks them off the body of the hen where they soon die. The liberal use of this powder at least three times is usually effective, while one dusting is not sufficient. Care should be taken that no powder gets into the eyes of the hen and be sure to fill her feathers with the powder. This done to the setting hen, the others should be treated and a louse paint fumigation of the henhouse and nests will help to rid the premises of them so the little chicks will not be infested.

The common chicken mite is the most common of all external parasites of poultry. Setting hens are frequently killed by mites while laying hens usually cease laying and become poor in flesh. They prove very deadly to the little chicks and they attack the chicks as soon as they are hatched and suck up so much of their blood that the chicks die. Most poultry fanciers realize the destructive habits of mites and are on the constant lookout for them. Once they have gotten a start in the henhouse or coops they are hard to eliminate and spraying or fumigating the house are the best methods. Unless the house can be tightly closed fumigation will not result successfully. Whitewash, crude oil, coal tar disinfectants, crude carbolic acid and various other mixtures are effective sprays. Also be careful to remove all litter in which they can hide and the poultry raiser who wishes to have the best results must combat these two common parasites. Hen-hatched chicks are more likely to be troubled with lice than incubator-hatched and artificially brooded chicks, but in every case precautions should be taken, as prevention is far better than cure.

LIKES OUR POULTRY COLUMNS.

To the Editor:—I wish to congratulate The Wisconsin Farmer for the excellent work they are doing for poultry. Many valuable lessons for us all have appeared in their columns which should be put into practice.

People say to me, "We have taken care of poultry since childhood and these things are good enough to read about, but they don't pay for the bother."

If you have not already, try some of these suggestions and see if it doesn't pay to have a year-around income from your chickens.

We are now on the last half of another cold winter, fraught with many disturbances because of the prevailing epidemic and the frailties of mankind to combat with atmospheric conditions; a winter long to be remembered by many of us to whom it has brought a full cup of sickness and death. But what of the poultry? Have they also been assailed by the la grippe and pneumonia? This has been a season to test the feasibility of the open-front poultry house and many a disbeliever in the fresh-air system must have been converted to the desirability of such a house as a means of rugged health for his birds.

If only we could contrive a head covering for the male to protect his comb and wattles and a drinking fountain that he could drink from and not drip water to freeze on his wattles

Appreciation of the Poultry Columns of The Wisconsin Farmer.

I WISH to congratulate The Wisconsin Farmer on the excellent work it is doing for poultry. Many valuable lessons for us all, which should be put into practice, have appeared in its columns.
Mrs. A. J. Schloerb,
Winnebago Poultry Yards, Omro, Wis.

Mrs. Schloerb is well known to Wisconsin farmer-poultry-raisers. She is acknowledged to be one of the best-posted poultry fanciers in the state and has taken a very active interest in her home community in organizing young people for raising better poultry.

Compound Incubators Get Bigger Hatches

Any Place—Any Time—Any Climate

These famous Metal covered machines make big money every year for poultry raisers. High quality material, superior construction, simplicity and ease of operation all combine to give the greatest hatching value.

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In this incubator you get the greatest hatching value at the lowest possible price. Will last a life time.

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Don't buy an incubator anywhere at any price until you get our new 1916 catalog and rock bottom prices. You owe it to yourself to know all about this wonderful incubator. Write today—sure.

WARSAW INCUBATOR CO.
Box 233, Warsaw, Ill.

these cold days when the temperature drops to 20 degrees below zero.

We have solved the question of freezing fountains—a small patent lamp, perfectly safe, that consumes but a mite of oil, does away with all dishes of frozen drinking water, but only with the utmost care do combs and wattles escape freezing in this cold climate.

There is no question but that the birds housed with open fronts and perfectly dry quarters are able to endure the cold and thrive to the best of advantage. All houses are not constructed just right for the open front to preserve the comb of the males from being frosted.

The question of proper ventilation for different styles of poultry houses should be carefully studied and I believe more attention should be given this subject in these agricultural institutes where "poultry for profit" is discussed, especially in these severe cold climates I believe ventilation should be better understood by poultry raisers.

I remember attending a poultry institute last winter in February when the topic of ventilation was brought up. At this institute there were over 100 birds on exhibition which had been brought in from the near-by farms. A part of the male birds shown here did not have frozen combs or wattles.

We tried to get these farmers to tell us about the construction of their houses or their plan of housing birds with these perfect combs, but we were unable to draw out this very valuable knowledge we all so much wished to know. We learned that some of these birds did not go out doors in the winter, having the run of large barns and stables. Others were allowed to go out of their feeding and roosting quarters when they pleased. All the farmers complained of no egg yield in the winter.

There's a science of housing and a science of feeding that has to come to the people who keep poultry and this intimate knowledge must be gained before the hen can possibly do her best.

The virus of good care, feeding and housing of cows has entered the very soul of the successful dairyman and he is getting results so far ahead of the old-time plan that the man who now holds to the ancient regime is scoffed at. Just this same revolution in poultry will bring about the greater profits and the hen will be able to do her share of the mortgage lifting.

Our poultry houses at the Winnebago yards were not all built for the best arrangement of the open front plan. We have always left windows open day and night, used curtains at night in cold weather to divert the drafts and cloth cover for windows in daytimes if weather is too severe.

One should have no trouble with colds whatever with the right number of birds in a dry, pure-air pen.

Sometimes a crowded condition will undo all other precautions. You should resolve never to overfill a pen. Better use the ax at once and have a few perfect specimens than to weaken the constitution of many.

We have been dissatisfied with several plans of ventilation which were suggested to us and which we tried out.

We are now following, so far as practicable, the ventilation system used in some of the houses of the experiment station at the state university at Madison, Wisconsin, and like it so much better than any other that we shall probably make no further changes. This system is not much unlike that used in the fool-proof poultry houses used at Mountain Grove, Missouri, experiment station.

This fool-proof house is one of the best and simplest style of a commonsense, inexpensive protection for poultry. In order to make it more comfortable up here in this frigid climate a little more lining back of the roosts and a cloth curtain over the lattice windows in front would improve it.

Judging from the questions some people ask, I am led to believe that there is a great lack of observation among those who raise poultry simply as a side issue, satisfied with just hens of any sort.

Careful attention to the condition of individual birds would prevent the inroad of any disease or of vermin that sap the life from an otherwise healthy flock of chickens.

You know the old adage about "An ounce of prevention, etc." Very often these serious troubles that come to poultry could be prevented by curbing the very beginnings of it, at which time, perhaps, it was scarcely noticeable.

Speaking of being observing reminds me of a story I read once.

"I think that children are not so observing as they used to be," said a member of the school board to a teacher whose class he was visiting.

"I hadn't noticed it," replied the teacher.

"Well, I'll prove it to you," answered the committeeman.

Turning to the class he said: "Someone give me a number."

'Forty-two," said a little girl eagerly.

He wrote "twenty-four" on the board. Nothing was said.

"Well, someone else give me a number."

"Eighty-three," said another child.

He wrote "thirty-eight" on the board and smiled knowingly at the teacher. When nothing was said he called for a third number and fairly gasped at the indignation manifested by a small, red-faced urchin, who said: "Eighty-eight, and see if you can change that." Mrs. A. J. Schloerb.

Omro, Wisconsin.

MENTHOL IN VASELINE FOR ROUP.

To the Editor:—I note so many poultry raisers have no sure cure for roup. I will give you one which has proved very successful. Mix enough menthol in vaseline to make it fairly strong and penetrating, then grease the head of the fowl, also give about five drops of common coal oil once a day. Keep your drinking vessels supplied with enough coal oil to cover the water and good night roup.

Remove all sick chickens and keep in a separate place. We wrap our roosts with burlap and keep it saturated with crude oil and when the chickens go to roost the lice crawl down on their legs and come in contact with the oil, which is sure death to mites and lice. This oil will also cure scaly legs with one or two applications. The surest way to get a good hatch is to paint the nests with crude oil a day or two before setting a hen and after hatching keep the hen and chicks in a box treated in like manner. I do not believe you could find a louse on any of our poultry. We have used this method for three years. A. C. Ladely.

Department of Agriculture chemists are examining samples of new foods from animal bone and blood invented since war began by a German scientist at Cologne. Bozivan is the name given to the blood food. The German ministry of trade and industry is investigating the scientist's claims that he has developed nourishing foods. Samples of the foods were sent to the United States by an American consul in Germany.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Stumps Out—Quick and Easy

Here at last is the land clearing device you have been looking for—the Kirstin One-Man Stump Puller—a simple, powerful, practical Puller that one can handle and operate with ease. No big, expensive, cumbersome outfit—no horses to drive—no extra work of any kind. With the Kirstin, one man *alone* clears land quickly, easily, economically. Costs little to begin with—nothing for upkeep—and costs far less to operate than any other hand or horse power puller on the market. In the

Kirstin One-Man Stump Puller

you get every quality needed for land clearing—*strength, power, speed.* The Kirstin is the only stump puller with variable speeds. This gives you a big advantage—saves much time. To start the tough stumps, you have enormous *power*: then when the stump breaks loose, a turn of a wrench gives *greaterspeed.* Any and all kinds of stumps—big, little, green, dry, tough—also trees and hedges—are pulled quick and easy. The Kirstin holds the record for lowest cost of operation. Prove our claims by

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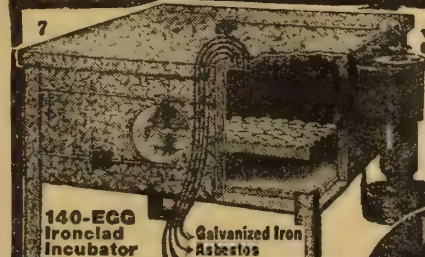

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." However, he decided not to tell Mrs. Burke of her just yet. The new pastor's first call was upon the Senior Warden, receiving a hearty welcome from Virginia Bascom, his daughter. Hepsey surmised that Maxwell was engaged and made a neighborly call upon Jonathan Jackson, the Junior Warder, to see what he thought about the matter.

CHAPTER VI—Continued.

Several segments of the circle giggled violently. The essayist, though very red, made a brave effort to ignore the highly indecorous interruption and so continued with trembling tones:

"What more beautiful and touching thing is there than the innocent, unsullied modesty of childhood? One might almost say——"

But she never said it, for here again she was forced to pause while another pair of immodest legs appeared over the eaves, much fatter and shorter than the preceding pair. These belonged to Nickey's boon companion, the gentle Oliver Wendell Jones. The rest of O. W. J. followed in due time; and, quite ignorant of what awaited him, he began his wriggling descent. Most unfortunately for him the hem of his nightshirt caught on a large nail in the eaves of the roof; and after a frantic, fruitless and fearful effort to disconnect himself, he hung suspended in the breeze for one awful moment, like a painted cherub on a Christmas tree, while his mother, recognizing her offspring, rose to go to his assistance.

Then there was a frantic yell, a terrible ripping sound and Oliver Wendell was seen to drop to the ground clad in the sleeves and the front breadth of his shirt, while the entire back of it, from the collar down, waved triumphantly aloft from the eaves. Oliver Wendell Jones picked himself up, unhurt, but much frightened and very angry, presenting much the aspect of a punctured tire. Then suddenly discovering the proximity of the missionary circle and missing the rear elevation of his shirt about the same time, in the horror and mortification of the moment, he lost his head entirely. Notwithstanding the protests of his pursuing mother, without waiting for his clothes, he fled "anywhere, anywhere out of the world," bawling with wrath and chagrin.

The entire circumference of the missionary circle now burst into roars of laughter. His mother quickly overtook and captured Oliver, tying her apron around his neck as a concession to the popular prejudice against "the altogether." The gravity of the missionary circle was so thoroughly demoralized that it was impossible to restore order; and Miss Bascom, in the excess of her mortification, stuffed the rest of her manuscript, its eloquent peroration undelivered, into her bag.

When the last guest had departed Mrs. Burke proceeded to hunt up Nickey, who was dressed and sitting on the corncrib whittling a stick. His mother began:

"Nicholas Burke, what in the name of conscience does all this idiotic performance mean; I'd like to know?"

Nickey closed his knife. Gazing serenely down at his mother, he replied:

"How'd I know the blamed missionary push was goin' to meet on the front porch, I'd like to know? Me and Oliver Wendell was just playin' the house was on fire. We'd gone to bed in the front room and then I told Ollie the fire was breakin' out all around us and the sparks was flyin', and the stairs was burned away, and there was no way of 'scapin' but to slide down the rope over the roof. I ain't to blame for his night shirt bein' caught on a nail and bein' ripped off him. Maybe the ladies was awful shocked, but they laughed fit to split their sides just the same. Mr. Maxwell laughed louder than 'em all."

Hepsey retired hastily, lest her face should relax its well-assumed severity.

Maxwell, in the meantime, felt it a part of his duty to console and soothe the ruffled feelings of his zealous and fluent parishioner and to Virginia's pride his offer to escort to Willow Bluff was ample reparation for the untoward interruption of her oratory. She delivered into his hands, with sensitive upward glance, the receptacle containing her manuscript and set a brisk pace, at which she insured the passing of the other guests along the road, making visible her triumph over circumstance and at the same time obviating untimely intrusion of a tete-a-tete conversation.

"You must have given a great deal of time and study to your subject," remarked Maxwell politely.

"It is very near to my heart," responded Virginia, in welling tones. "Home life is, to me, almost a religion. Do you not feel, with me, that it is the most valuable of human qualities, Mr. Maxwell?"

"I do, indeed, and one of the most difficult to reduce to a science,"—she glanced up at him apprehensively, whereupon, lest he seemed to have erred in fact, he added,—"as you made us realize in your paper."

"It is so nice to have your appreciation," she gurgled. "Often I feel it almost futile to try to influence our cold parish audiences; their attitude is so stolid, so unimaginative. As you must have realized, in the pulpit, they are so hard to lead into untrodden paths. Let us take the way home by the lane," she added coyly, leading off the road down a sheltered by-way.

The lane was rough, and the lady, tightly and slightly shod stumbled neatly and grasped her escort's arm for support—and retained it for comfort.

"What horizons your sermons have spread before us—and, yet,"—she hesitated—"I often wonder, as my eyes wander over the congregation, how many besides myself, really hear your message, really see what you see."

Her hand trembled on his arm and Maxwell was a little at a loss, though anxious not to seem unresponsive to Virginia's enthusiasm for spiritual vision.

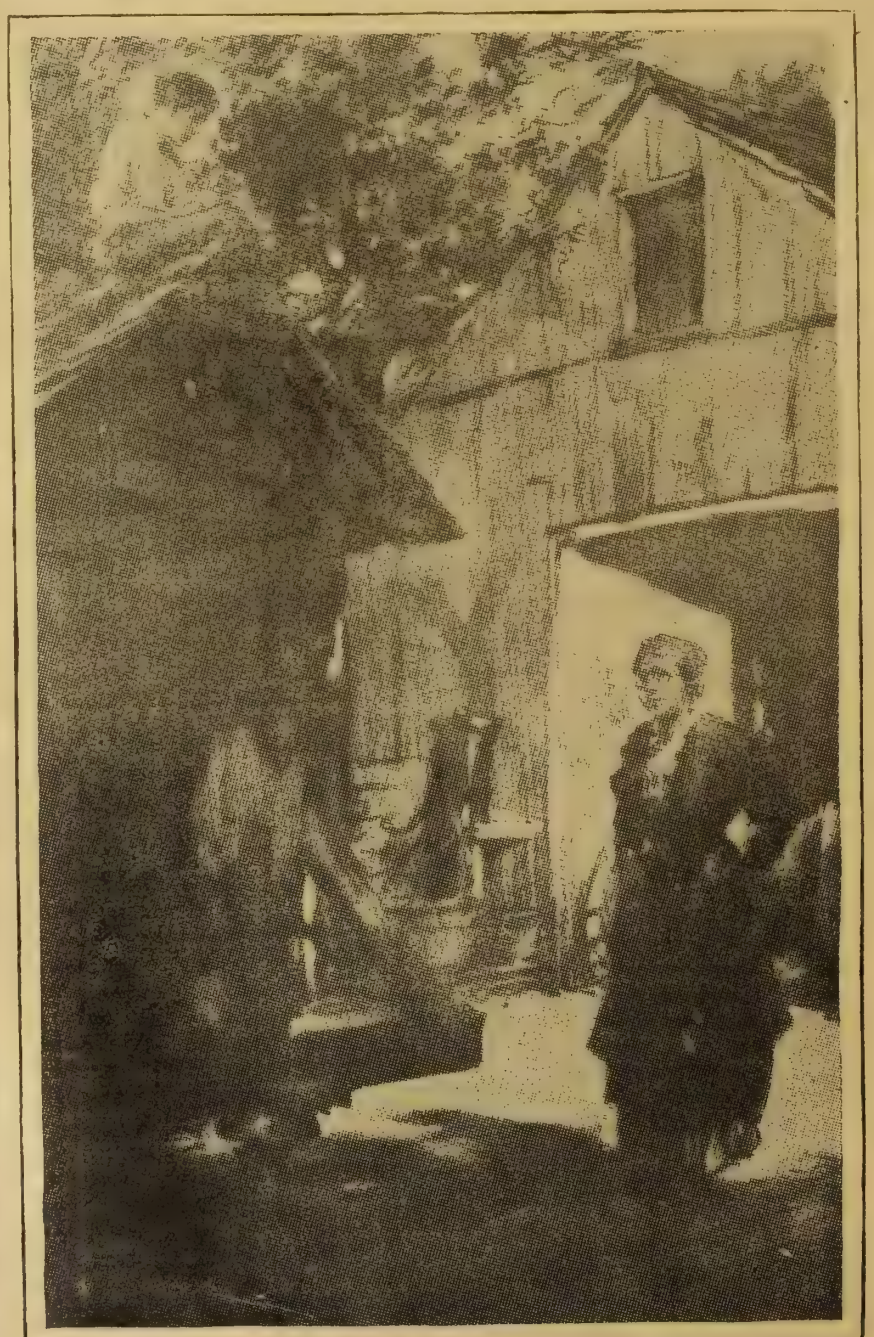
"I feel that my first attention has to be given to the simpler problems here in Durford," he replied. "But I am glad if I haven't been dull in the process."

"Dull? No indeed—how can you say that! To my life—you will understand?" (she glanced up with tremulous flutter of eyelids) "—you have brought so much helpfulness and—and warmth." She sighed eloquently.

Maxwell was no egotist and was always prone to see only an impersonal significance in parish compliments. A more self-conscious subject for confidences would have replied less openly.

"I am glad—very glad. But you must not think that the help has been one-sided. You have seconded my efforts so energetically—indeed I don't know what I could have accomplished without such whole-hearted help as you and Mrs. Burke and others have given."

To the optimistic Virginia the division of the loaves and fishes of his personal gratitude was scarcely heeded. She cherished her own portion and soon magnified it to a basketful—and soon, again, to a monopoly of the entire supply. As he gave her his hand at the door of Willow Bluff she was in fit state to invest that common act of friendliness with symbolic significance of a rosy future.



"NICHOLAS BURKE, WHAT IN THE NAME OF CONSCIENCE DOES ALL THIS IDIOTIC PERFORMANCE MEAN, I'D LIKE TO KNOW?"

CHAPTER VII.

Hepsey Goes A-Fishing.

MRS. BURKE seemed incapable of sitting still, with folded hands, for any length of time; and when the stress of her attention to household work, and her devotion to neighborly good deeds relaxed, she turned to knitting wash rags as a sportsman turns to his gun or a toper to his cups. She seemed to find more stimulus for thought and more helpful diversion in the production of one wash rag than most persons find in a trip abroad.

One day, not very long after the eventful missionary tea, she was sitting in her garden and knitting more

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rapidly than usual as she said to Maxwell:

"What's been the matter with you these last few weeks? You've been lookin' altogether too sober and you don't eat nothin' to speak of. It must be either liver, or conscience, or heart."

Secretly she strongly suspected a cardiac affection of the romantic variety. She intended to investigate.

Donald laughed as he replied:

"Perhaps it's all three together, but I'm all right. There's nothing the matter with me. Every man has his blue days, you know."

"Yes, but the last month you've had too many and there must be some reason for it. There's nothin' so refreshin' as gettin' away from your best friends once in a while. I guess you need a change—pinin' for the city, maybe. Sakes alive! I don't see how folks can live that way—all crowded up together, like a lot of prisons."

"You don't care to visit in the city, then?"

"Not on your life!"

"But a change is good for everyone. Don't you ever get away from Durford for a few weeks?"

"Not very often. What with decidin' where to go and fussin' to get ready and shuttin' up the house, it's more trouble than its worth. Then there's so many things to 'tend to when you get home."

"But don't you ever visit relatives?"

"Not on your life, unless I'm subpoenaed by the coroner, though, of course, we do get together to celebrate a family funeral or a wedding now and then. Visitin' is no joke, I tell you. No sir, I'm old enough to know when I'm well off, and home's the best place for me. I want my own table and my own bed when it comes night." She paused and then remarked meditatively:

"I went down to visit in New York once."

"Didn't you enjoy your visit?" Maxwell inquired. "New York's my home city."

"Can't say I did, awful much. You see, I was visitin' Sally Ramsdale—Sally Greenway that was. They were livin' in an apartment, ninth floor up. In the first place, I didn't like goin' up stairs in the elevator. I was so scared I felt as if the end had come, and I was bein' jerked to my reward in an iron bird cage with a small kid dressed in brass buttons. When I got into the hall it was about two feet wide and darker than Pharoah's conscience. It had a string of cells along the side and one opened into a chimney and the rest into nothin' in particular. The middle cell was a dinin' room where we ate when we could find the way to our mouths. Near as I can recollect you got into the parlor through the pantry, back of the servant's room, by jumpin' over five trunks. You ought to have seen my room. It looked just like a parlor when you first went in. There was somethin' lookin' like a cross between an upright piano and a writin' desk. Sally gave it a twist and it tumbled out into a folding bed. The first night I laid awake with my eyes on the foot of that bed expectin' it to rise and stand me on my head, but it didn't. You took the book of poems off the center table, gave it a flop and it was a washstand. Everything seemed to shut up into something else it hadn't ought to. It was a 'now you see it and now you don't see it' kind of a room; and I seemed to be foldin' and unfoldin' most of the time. Then the ceilin' was so low that you could hardly get the cover off the soap dish. I felt all the while as if I should smother. My! but I was glad to get home and get a breath of real air."

"Yes," Maxwell replied, "people live more natural and healthful lives in the country. The advantages of the city aren't an unmixed blessing."

"That's true enough. That's no way to live. Just think of havin' no yard but a window box and a fire escape! I'd smother!

"We folks out here in the country ain't enjoyin' a lot of the refinements of city life; anyhow we get along, and the funny part about it is—it ain't hard to do, either. In the first place, we ain't so particular, which helps a lot, and besides, as Jonathan used to say—there's compensations. I had one look at Fifth Avenue and I'm not sayin' it wasn't all I had heard it was, but if I had to look at it three hundred and sixty-five days a year I wouldn't trade it for this.

"Why, some days it rains up here, but I can sit at my window and look down the valley to where the creek runs through and 'way up into the timber and the sight of all those green things, livin' and noddin' in the rain is a long ways from being disheartenin', and when the sun shines I can sit out here in my garden with my flowers and watch the boys playin' down in the meadow, Bascom's Holsteins grazin' over there on the hill, and the air full of the perfume of growin' things—they ain't got anything like that in New York."

For a time Mrs. Burke relapsed into silence, while Maxwell smoked his briar pipe as he lay on the grass near by. She realized that the parson had cleverly side-tracked her original subject of conversation and as she glanced down at him she shook her head with droll deprecation of his guile.

When she first accused him of the blues it was true that Maxwell's look had expressed glum depression. Now, he was smiling, and, balked of her prey, Mrs. Burke knitted briskly, contemplating other means drawing him from his covert. Her strategy had been too subtle. She would try a frontal attack.

"Ever think of gettin' married, Mr. Maxwell?" she inquired abruptly.

For an instant Maxwell colored, but he blew two or three rings of smoke in the air and then replied carelessly, as he plucked at the grass by his side:

"Oh, yes; every fellow of my age has fancied himself in love some time or other, I suppose."

"Yes, it's like measles, or whoopin' cough; every man has to have it some time, but you haven't answered my question."

"Well, suppose I was in love; a man must be conceited to imagine that he could make up to a girl for the sacrifice of bringing her to live in a place like Durford. That sounds horribly rude to Durford, but you won't misunderstand me."

"No; I know exactly how you feel, but the average girl is just dyin' to make a great sacrifice for some good-lookin' young fellow, all the same."

"Ah yes; the average girl, but——"

Maxwell's voice trailed off into silence, while he affected to gaze stonily into the blue deeps of the sky overhead.

Hepsey had thought herself a pretty clever fisherman in her day; evidently, she decided, this particular fish was not going to be easy to land.

"Don't you think a clergyman is better off married?" she asked, presently.

Donald knocked the ashes out of his pipe and put it in his pocket, clasped his hands across his knees and smiled thoughtfully for a moment. There was a light in his eyes which was good to see, and a light trembling of his lips before he ventured to speak. Then he sighed heavily.

"Yes, I do, on many accounts. But I think that any parson in a place like this ought to know and face all the difficulties of the situation before he comes to a definite decision and marries. Isn't that your own view? You've had experience of married parsons here. What do you think?"

"Well, you see the matter is just like this: Every parish wants an unmarried parson; the vestry 'cause he's cheap, every unmarried woman 'cause he may be a possible suitor; and it's easier to run him than it is a married man. He may be decent, well-bred and educated. And he comes to a parcel of ignoramuses who think they know ten times as much as he does. If he can't earn enough to marry on and has the good sense to keep out of matrimony the people talk about his bein' a selfish old bachelor who neglects his duty to society. He can't afford to run a tumble-down rectory like curs. If in the face of all this he marries he has to scrimp and stint until it is a question of buyin' one egg or two, and lettin' his wife worry and work until she's fit for a lunatic asylum. No business corporation, not even a milk-peddlin' trust, would treat its men so or expect good work from 'em. Then the average layman seldom thinks how he can help the parson. His one idea is to be a kicker as long as he can think of anything to kick about. The only man in this parish who never kicks is paralyzed in both legs. Yes sir, the parson of the country parish is the parish goat, as the sayin' is."

Mrs. Burke ceased her tirade and after awhile Maxwell remarked quietly:

"Mrs. Burke, I'm afraid you are a pessimist."

"I'm no such thing," she retorted hotly. "A pessimist's a man that sees nothin' but bad and says there's no help for it and won't raise a hand; he's a proper sour-belly. An optimist's a man that sees nothin' but good and says everything's all right; let's have a good time. Poor fool! The practical man—anyway, the practical woman—sees both the bad and the good and says we can make things a whole lot better if we try; let's take off our coats and hustle to beat the cars, and see what happens. The real pessimists are your Bascoms and that kind, and I guess I pity him more than blame him. He seems as lonesome as a toothpick in a cider barrel."

"But I thought that Bascom was a wealthy man. He ought to be able to help out and raise money enough so that the town could keep a parson and his wife comfortably."

"Sure thing! But the church isn't supported by tight-fisted wealthy people. It's the hard-workin' middle class who are willin' to turn in and spend their last cent for the church. And don't you get me started on Bascom if you value your life. Maybe I'll swear a blue streak before I get through. Not but what I suppose that even Bascom has his good points—like a porcupine. But a little emery paper on Bascom's good points wouldn't hurt 'em very much. They're awful rusty."

"Oh well! Money isn't all there is in life," soothed Maxwell, smiling.

"No, not quite, but it's a mighty good thing to have in the house. You'd think so if you had to wear the same hat three summers. I've got to that time in my life where I can get along very well without most of the necessities, but I must have a few luxuries to keep me goin'."

"Then you think that a clergyman ought not to marry and bring his wife to a place like Durford?"

"I didn't say anything of the sort. If you was to get married I'd see you through, if it broke my neck or Bascom's."

"Do you know, you seem to me a bit illogical?" remarked Maxwell mildly.

"Don't talk to me about logic! The strongest argument is often the biggest lie. There are times in your life when you have to take your fate in both hands and shut your eyes, and jump in the dark. Maybe you'll land on your feet and maybe you—won't. But you have got to jump just the same. That's matrimony—common sense, idiocy, or whatever you choose to call it. I never could tell which. It's the only thing to do; and any man with a backbone and a fist won't hesitate very long. If you marry I'll see you through, though, of course, you won't stay here long, anyhow."

"You're awfully kind, Mrs. Burke," Maxwell replied, "and I sha'n't forget your promise—when the time comes for me to take the momentous step. But I think it would be the wisest thing for me to keep my heart free for a while, or at any rate, not to get married."

Mrs. Burke looked down at her rector and smiled broadly at his clever evasion of the bait she had dangled before him so persistently.

"Well, do as you like, but that reminds me that when next you go to town you'll need to get a new glass for that miniature of your sister. You must have dozed off with it in your hands last night and dropped it. I found it this morning on the floor alongside of your chair with the glass broken."

She rose triumphantly, as she knitted the last stitch of the wash rag. "Excuse me—I must go and peel the potatoes for dinner."

"I'd offer to contribute to the menu, by catching some fish for you, but I don't think it's a very good day for fishing, is it, Mrs. Burke?" asked Maxwell innocently

(To be continued.)

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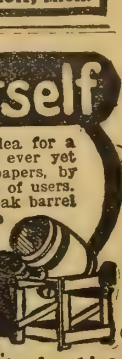

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

WOMEN SHOULD MAKE WILL.

It is considered the proper and usual thing for a man to make a will, but not often does a woman even think of such a thing. It is just as important for the mother to provide for the children she may have to leave as for the father to do so.

For instance, if you have property or money in your own name, a will makes your wishes in regard to it binding and every penny, without delay or cost, will go to those you intend shall have it.

If you are a widow failure to make a will involves not only a loss of time in getting the estate settled up as well as unnecessary expenditure of money which may be needed for the children you want to provide for, but it means also that you will have nothing to say about who shall look after your children.

If you have minor children and have not indicated in a will who shall be their guardian the court will appoint one and it might not be the person you think would do the best by them. Moreover, the guardian appointed by the court may charge commissions, counsel fees and premiums, all of which will come out of the children's share of the estate, be it large or small, and many a time commissions and fees eat up all of a small legacy and the little ones are left in want.

That is putting the matter in a different light isn't it? It doesn't make much difference who looks after your property so far as the property goes, but when the conduct of such affairs so vitally affects the welfare of your little ones it is quite a different matter.

If you should leave real estate and no will it could not be sold without the appointment of an administrator and an order of the court, and that would mean a long and expensive proceeding. If there are minor children their share cannot be sold until they are of age, no matter how badly they may need it. All this costs money and yet all these requirements must be complied with in order that good title may be given to the real estate. In no case can a clear title to the property be given for at least two years after your death.

The failure to make a will means a lot of worry and expense and trouble for the children, which is the very thing you want to save them from and every woman who has the welfare of her children at heart should see to it that all these things are provided for in a will so that that which she wishes to leave to her children is not eaten up in court fees and that the proper person is selected to look after them until they are of age.

PROGRESS OF BABY WEEK CAMPAIGN.

There are 1,727 communities considering some preparation for Baby Week, according to the inquiries received by the children's bureau of the United States Department of Labor. This number does not include those of whose interest in the campaign word has come to the bureau directly.

The letters about Baby Week are still coming in from every state in the Union and from every type of community, such as a Colorado settlement forty miles from a railroad, a club of women on one of the government reclamation projects, a Montana coal mining town with a large foreign population, a southern mill village and a club of farm women in a middle western state.

Texas has its own Baby Week slogan—Baby Health is Texas Wealth—and Mississippi has started a competition to secure a slogan for that state. North Dakota reports plans for a statewide essay contest in the public schools. In a few state campaigns the state federation of women's clubs, the state university extension department, the state health officials and those who are especially interested in education are all co-operating in the Baby Week campaign.

In its suggestions for Baby Week observance the children's bureau lays special emphasis on the opportunity it affords for extending permanent work for infant welfare, such as infant welfare stations, visiting nursing, special nursing and instruction for prospective mothers, city inspection of milk, special work for the prevention of blindness and little mothers' classes and home nursing instruction for school girls in the upper grades.

GIVES SOME GOOD ADVICE.

To the Editor:—I have long been an interested reader of this department, but have never written before. When I saw the inquiry from "Constant Reader" I felt I should write now.

She wanted to know why one who is a good, moral person is not a Christian. Let me tell her to read the New Testament as a child would read, believing, and she will soon see the necessity of belonging to the church Christ established. Read Mark 16:16. To be Christians we must be like Christ and he was baptized.

There are many scriptures to prove the necessity as well as the pleasure of being a Christian, but one-half Christian is no better than a sinner. Read the Bible and then do just what it says, regardless of creeds. The Bible is the true creed. Then find the church that endeavors to live up to the whole gospel and you will find peace to your soul, both here and hereafter.

I think the prayers for children that you have been printing are very good. "Train a child in the way he should go and when he is old he will not depart from it." I have three bright little children, the oldest not quite five, and none of them have had any sickness to speak of. I believe in giving children fresh air and sunlight. How they do enjoy the sunlight when they have been kept in a few days!. I believe coddling makes sickly babies. Take them out and make "hardy plants" of them.

One thing I want to speak of, I don't think parents should tease their children and tell them things that are not so, even if it is only in fun, for the child does not see the difference between "only joking" and lying, and so we might unconsciously teach them to tell untruths.

I should like to hear from mothers who are able to train their children as they should be. I find it a hard problem. Mrs. M. A. Whisler.

LETTERS FROM OTHERS HAVE HELPED HER.

To the Editor:—I have been noticing pictures of fresh-air babies in the Home Department, so I am sending you a picture of our baby. His name is Donald Lee, age six months, weight forty-eight and one-half pounds. He is a happy, healthy boy and I think his fresh air rides have made a part of his happiness. He is our only child.

I have been a reader of your paper for a long time, but never have written before. Your articles have sure been a help to me. I took the advice

SIX-MONTHS-OLD DONALD LEE QUIVEY.

of what some of the mothers had to say in your paper before I was a mother and since, too, and I have never been sorry that I did.

Mrs. L. J. Quivey.

Lorena, Guy, Gladys and W. M. Bridges, children of Mr. and Mrs. Geo. C. Bridges. The oldest girl is eight, the next younger girl and the boy are twins, age four, and the baby is five months. Mrs. Bridges says they are all healthy and happy and she is justly proud of her family.

CHRIST ESTABLISHED BUT ONE CHURCH.

To the Editor:—In the Home Department of the February 3d issue "Constant Reader" asks a question or two, to which I wish to make answer in part, concerning denominational creeds and how they may affect one in the Christian life.

I want to say, first, that the various creeds, of which there are hundreds, do not cut any figure whatever under the New Testament covenant in the salvation of the soul.

"Constant Reader" asks: "Why is one a Christian and more likely to be saved after uniting with a church than when living an honest, conscientious life out of the church?"

Notice how this question is worded, viz., "a church" would signify more than one, while "the church" would signify a particular one, or only one. Christ established but one church, one Lord, one faith.

Let me say to "Constant Reader" you cannot be a Christian out of the church and the only way to get into that church is through Christ, the Door. Jesus told Nicodemus that he must be born again, born of the spirit. "Marvel not," he says, "ye must be born again," which birth puts one into the church. Jesus said, "I am at the door, if any man enters in by me he shall be saved, and he that climbeth up any other way the same is a thief and a robber." That "any other way" would be joining a church with man and man-made creeds as the door. The Bible does not authorize anything of the kind.

As a rule, one creed has just as good a foundation to build on as another, but just think, Constant Reader, what a conglomerated mess it would be to undertake to blend them all and try to live a conscientious Christian life thereby. Subscriber.

THE BIBLE IS THE CHRISTIAN'S CREED.

To the Editor:—I have been a subscriber of your paper for years and have read the Home Department with much help and interest.

I would like to say to "Constant Reader" who wants to know the difference in creeds, why have any creed but God's Word or the Bible? I am a member of the Christian church, and,

while we do not claim to be the only Christians, we claim to be Christians only and our creed is the Bible. I find no mention of the necessity of a creed more than the Bible. It should be our guide and it teaches us that we should repent and be buried in baptism, also not to neglect the "assembling of ourselves together "(in His house, as I understand it.)

We are required to do these things because Christ commands us to do these things and we must obey God and keep his commandments. I think we all should read and study the Word of God and follow its exact teachings, for it says in Revelations, the last chapter and almost the last verse:

For I testify unto every man that heareth the words of the prophecy of this book, if any man shall add unto these things God shall add unto him the plagues that are written in this book.
And if any man shall take away from the words of the book of this prophecy, God shall take away his part out of the book of life and out of the holy city and from the things which are written in this book.

A Christian Only.

EATS AND SLEEPS REGULARLY.

To the Editor:—As I have seen so many mothers sending pictures of their babies I thought I would send mine. This picture was taken when she was thirteen months old. Her name is Nellie Elizabeth and she is

NELLIE ELIZABETH JEPPESEN.

now two years and nine months old. She has never been sick except having a slight cold in her nose, which only lasted a few days.

At birth she weighed seven and a half pounds, at three months twelve and a half pounds, at five months seventeen pounds and at nine months twenty-one pounds.

The first year and a half she had a bath twice a day and now she has one each week. I nursed her until she was about a year old. I am very careful with her food. She sleeps and eats regularly. I never take her out in damp or stormy weather.

Mrs. J. Jeppesen.

WANTS MORE INFORMATION ABOUT SAUSAGE.

To the Editor:—I saw Mrs. H. A. M.'s suggestion for packing sausage and I wish she would tell us how she makes her sausage.

As I believe one good turn deserves another I will send a recipe for making green tomato mince meat. It may be a help to someone when canning season comes again. I think it is fine.

Chop fine one peck of green tomatoes, drain off the juice, measure, put in as much water as there was juice and add five pounds of brown sugar and three pounds of raisins. Boil slowly until the tomatoes are done. Add two tablespoonfuls each of allspice, cloves, cinnamon and salt and one cupful of vinegar. Cook until thick enough for pies. Then add fifteen sour apples chopped fine. Cook until the apples are done, then can.

Do not use the juice off the tomatoes. Mrs. L. M. G.

INTERESTED IN SAUSAGE.

To the Editor:—I am a reader of the Home Department and I have seen a suggestion for keeping sausage in jars. I wish the lady who sent in that letter would tell us if she fries the sausage before she puts it in the jar and if there would be any danger of poison if the jar should be cracked.

A Reader.

[Editor's Note.—We suggest that Mrs. H. A. M. or anyone else who has had good success keeping sausage in this way write a letter to the Home Department explaining the process in detail for the benefit of those who have not tried it heretofore.]

ENJOYS THE MOTHERS' LETTERS.

To the Editor:—I have been much interested in reading the mothers' letters. I am sending a picture of my boy, Harry Lee, taken at the age of ten months, when his weight was thirty pounds. He has always been healthy and had plenty of fresh air

HARRY LEE SLATTEN AT TEN MONTHS OF AGE.

and exercise, and now, at the age of three years, he weighs forty-five pounds and is strong and healthy—and mischievous, too. I send the picture because he has always been considered unusually large and strong for his age.

Let us have more photographs and "baby talk." Mrs. O. L. Slatten.

BREAD "STARTERS."

To the Editor:—Will some of the readers of the Home page send in recipes for "starters" for bread and give instructions for using? I have seen these recipes before, but I have mislaid them and I would like to know what other housewives use.

A Reader.

HOUSEHOLD SUGGESTIONS.

Up-to-date cooks add the baking powder to cake and batter mixtures after everything else has been added. The older method of sifting it in with the flour is easier, but the new method insures the full strength of the baking powder, for it begins to work as soon as it is moist.

When you have a little beefsteak left over chop it fine, mix it with cooked rice, season with butter, salt and pepper and a little onion. This makes a delicious filling for stuffed peppers. Cut off the small end of the pepper, clean out the seeds and fill. Bake until the peppers are soft.

White cotton crepe affords an excellent material for tea towels. After being washed to take out the stiffness it is absorbent, non-linty, and is sufficiently rough to give a high polish to glassware. Also, it is much more easily laundered than ordinary glass toweling.

A common 10-cent currycomb will be found convenient in cleaning the brush of a carpet sweeper of threads, hairs, etc.

When croquettes or other fried food is removed from the fat it should be thoroughly drained on paper. A roll of paper toweling is a conveniences for this purpose.

Try taking a nap in the afternoon if you are going to be out late in the evening.

Sweet oil rubbed on shoes when they are dry will soften the leather and will also remove a reddish or musty color from black shoes.

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RECIPES.

Pork Cake.—One pound of fat salt pork, one pint of boiling water, two cups of sugar, one cup of molasses, one teaspoonful of soda, one teaspoonful of cloves, two teaspoonfuls of cinnamon, one pound of currants, one pound of raisins, one-fourth pound of citron, flour. Wash and dry the currants. Wash, seed and chop the raisins. Shred the citron. Have the pork entirely free from lean and rind and chop very fine or put through the food chopper, using the finest cutter. Pour the boiling water over the chopped pork, add the sugar, mix the soda with the molasses and add the molasses. Mix the spices with part of the flour and stir into the mixture. Add the fruit and then the rest of the flour. No definite amount of flour is given, but the batter should be as thick as one can stir. It is well to try a sample cake, as one seldom uses enough flour the first time. Bake in a moderate oven from three to four hours, or steam three hours and bake one hour.

Corn Bread.—Three cupfuls corn meal, three-fourths cupful flour, one-fourth cupful sugar (light brown), three-fourths cupful sour cream, two cupfuls sour milk, one teaspoonful soda dissolved in a little milk, a little salt.—Mrs. H. H.

Cabbage With Cream Sauce.—One medium-sized cabbage, one cupful of cream sauce, one tablespoonful of dried celery top, one teaspoonful of salt. Cut the cabbage into quarters, cover with cold water for thirty minutes, drain, cover with boiling water, boil for forty-five minutes in an uncovered boiler, and drain again. Lay in a shallow dish, cut side up, dust with salt, cover with one tablespoonful of dried celery. The sauce may be flavored with nutmeg or onion.

Fruit Juice Pie.—One and one-half cups sweetened fruit juice, two and one-half level tablespoonfuls cornstarch, two eggs (whites for meringue), one teaspoonful butter, one-fourth cupful sugar, a pinch of salt. Heat the sweetened fruit juice, canned or fresh, grape, cherry or anything with a tart flavor. Then mix together the sugar, salt, cornstarch and beaten yolk. Add a little cold water. Stir this slowly into the boiling juice and cook seven minutes. Pour into baked crust, cover with merinque and brown.

Ginger Cookies.—One cupful of sugar, one heaping cupful of lard, one cupful of dark sirup, two eggs, three level teaspoonfuls of soda in three large spoonfuls of water, two tablespoonfuls of ginger. Mix very, very stiff and bake fast.—M. C.

Prune Cream.—Remove stones from stewed prunes and cut fruit in small pieces—there should be two-thirds of

a cupful. Soak one tablespoonful of gelatine in one-fourth cupful of cold water, and dissolve in one-fourth cupful of scalded milk; then add one-half cupful of sugar. Strain into a pan, set in larger pan containing ice water, and stir constantly until mixture begins to thicken, then add whites of two eggs, beaten until stiff, one-half pint heavy cream diluted with one-third cupful milk, beaten until stiff, and prunes. Turn into a mold, first dipped in cold water, and chill.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

LIVES ON AN UP-TO-DATE FARM.

Dear Young Folks:—May I join your circle? I have read the stories on the Young Folks' page and enjoy them very much.

I live on a farm near the Buffalo river. We have sixteen horses, twenty-two head of cattle and about 280 chickens. We keep the chickens in a concrete building. We also have a concrete silo, so that the cattle get silage all the year around. We have electric light in our house, furnished by water power.

Two of my sisters and I go to a consolidated school. My sisters are in the fourth year high school and I am in the eighth grade. I take domestic science and agriculture besides my other subjects. —From A Friend.

A GOOD RECORD AT SCHOOL.

Dear Young Folks:—This is my first letter and I hope you will enjoy reading it. I am a little girl seven years old. I live close to school and I have gone five months without missing a day. My teacher's name is Miss Lelah and I love her and my little schoolmates. Sister tells me to learn so I can go to high school like she does. Sister says she loves high school.

I am always so glad when sister comes home Friday evenings. We have such nice times reading and spelling. I don't get to see her very often now, for it has been too bad for grandpa to run his car.

I haven't any pets to tell you about, but I have four dolls. Their names are Rosey, Sadie, Dinah and Leon.

I will write a longer letter the next time. If grandma sees my letter on the Young Folks' page she won't be able to read any more without laughing. —Reitha.

FIDO HAS A SLEIGH RIDE, TOO.

Dear Young Folks:—I have been reading your letters these last few months and I am so interested in them. This is the first time I have ever written.

We live two miles from town and four rods from the schoolhouse. On the farm we have nineteen head of cattle and six head of horses besides eighteen hogs. I do a little work before and after school. I get wood in the house and milk two cows and then I have some fun with my dog, Fido.

I hitched Fido up to my sled and went sleighing. He is a good little puller and took me everywhere. After he pulled me a while I stopped him and put him on the sled and gave him a sleigh ride. He sat there just as nice and quiet as a child.

When I go to school poor Fido is so lonesome he will come to the schoolhouse door and sit there and wait for me to start home.

I like to go to school. I am in the fourth grade.

I have a rabbit trap that my brother fixed for me. I caught quite a few rabbits. In the morning the first thing I do is to take Fido and go out and look at my trap and if there is a rabbit in the trap I set the trap on my sled and haul it to the barn. Then I shut the doors and open the trap and let Fido catch the rabbit. I tell you that is some fun for my little Fido. He is a hunting dog and his color is brown and his ears are long. —Edward.

A BOY WORTH WHILE.

Dear Young Folks:—I enjoy reading the letters and stories in the Young Folks' page very much. I am thirteen years old and am in the seventh grade. My school is half a mile from home.

I live on a large farm ten miles from a little town. I live with my grandparents. I have no brothers nor sisters.

My grandpa owns five head of fine horses, three cows and calves and a large number of yearlings.

We have an organ and I can play a few pieces. I have a little bantam hen and rooster and also a pet cat. I can do some needlework and I can milk the cows and sweep and do most any kind of work, also cook.

I like to ride horseback and do often. —Jimmie.

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7606 Ladies' Waist.—Cut in sizes 36 to 44 inches bust measure. This pretty waist is very full in both front and back the fronts opening over a soft little vest. There is a high, flare collar at the back of the open neck and the sleeves are quite full from the shoulder to the wrist.

6464 Boys' Blouse.—Cut in sizes 4, 6, 8, 10 and 12 years. Percale, madras, flannel, serge and similar materials can be used to make this blouse. The blouse may be made with or without the back yoke facing and with permanent or removable collar.

7588 Ladies' Corset Cover.—Cut in sizes 34 to 42 inches bust measure. This dainty garment may be made of plain material or of embroidered flouncing as shown. It is made without shoulder seams and a single length of embroidery is used, crossing over in front and back in surplice style.

7620 Children's Rompers.—Cut in sizes 2, 4, 6 and 8 years. These rompers are to be worn without skirts under them. They have either a front or a back opening as preferred, but in either case there is an opening across the waistline in the back. The neck is high, with flat collar and the sleeves are long with band cuff.

7604 Girls' Dress.—Cut in sizes 4, 6, 8, 10 and 12 years. Blouse and skirt are joined to this dress. It has a side front closing, with either a high neck and standing collar, or round neck and flat collar. The sleeves are plain and either long or short with fancy cuff finish. The skirt has four gores.

7625 Ladies' Apron.—Cut in sizes small, medium and large. This natty apron is for use when engaged in light work only. It is often sufficient except on cleaning days. It has a bib in front with cross straps in the back and the skirt is in two parts, sloped up at the lower edges of the side seams.

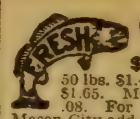
7624 Ladies' Skirt.—Cut in sizes 22 to 34 inches waist measure. This skirt has three gores, with closing in the center of the front. It fits neatly at the top and widens at the lower edge to 2⅜ yards in the medium size. At the top there is a fancy belt, with long side tabs, but this may be omitted.

7621 Misses' Dress.—Cut in sizes 14, 16, 18 and 20 years. Girlish and simple this dress has a plain blouse with center front closing. The neck is open with wide collar and the sleeves are either long or short. The skirt has a yoke of moderate depth and below this the three-gored lower portion is full and gathered.

7607 Ladies' Skirt.—Cut in sizes 22 to 34 inches waist measure. This design offers a novelty in a four-gore model. There is a seam down the center of both front and back and down the lower part of each side, but the upper part of each side is filled in with a sharply pointed gore.

7593 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. Plain and practical this dress has a side front closing, with a high, flare collar at the sides and back of the plain, high neck. The long sleeves are fitted and finished without a cuff unless shortened. The skirt has a deep yoke below which are three gores.

Price of any of these patterns 10 cents each.



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International Sunday School Lesson

Lesson for February 27, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE SEVEN HELPERS.

LESSON TEXT—Acts 6.

GOLDEN TEXT—Bear ye one another's burdens and so fulfill the law of Christ.—Gal, 6:2.

It would be a source of great blessing if every teacher and scholar would read through the book of Acts several times during the year. Such reading will give vision, inspiration and a more comprehensive idea of the continuation of what Jesus "began" and which record is not yet fully written. The time of this lesson is about A. D. 35, though Ramsey places it at 32, 33; and the place, the city of Jerusalem.

I. The Occasion, vv. 1-2. For a time the preaching of the Gospel of Jesus continued in Jerusalem, but soon the pressure of circumstances thrust it forth as prophesied (1:8). There were two groups of men in the early church: Those who had been born in Judea who spoke Hebrew (Aramaic), and those born in foreign cities and who spoke the Greek language. Trouble arose over the distribution of funds among certain of the dependent widows—the text suggests "secret displeasure." There was imperfection, selfishness, suspicion and jealousy in that early church.

II. The Method, vv. 3, 4. It does not appear that God gave the church a cut and dried program according to which it must act. Certainly the church had no precedent to follow, and step by step God was developing it. This lesson gives us a suggestion of those steps : (1) As the occasion demanded, (2) The Apostles refused to diminish their praying and preaching, literally it was not pleasing to God for the Apostles to "serve tables." such work must be done, certainly, but it was not to be done by these God-appointed and selected leaders, their duty was clearly stated. The minister's business is praying and ministering the word. These things should fully engage his attention, and in them he is "to continue steadfastly." The minister cannot manifestly "know more about books than the school-teacher; more about politics than the politician; more about medicine than the doctor; more about psychology than the college professor." No, that is out of the question, though he should be intelligent in these lines. But he should be preeminent in prayer and in the minis-

try of the word, and, furthermore, he should preach that word pre-eminently. (3) The church, not the apostles, must needs select these new officials. (4) The qualffications of these men, who were thus to care for these temporal affairs, were (a) "men of good report," not those bearing doubtful reputations, nor chosen because they were rich or shrewd in business. (b) "full of the spirit." It demands the Spirit-filled man to look after financial affairs as certainly as it does to teach or preach the word. (c) "full of wisdom." Men of common sense, a quality often sadly lacking among spiritually-minded men. Men meeting such qualifications will be men of "the spirit of power, of love and of a sound mind" (literally sound sense). (II Tim. 1:7).

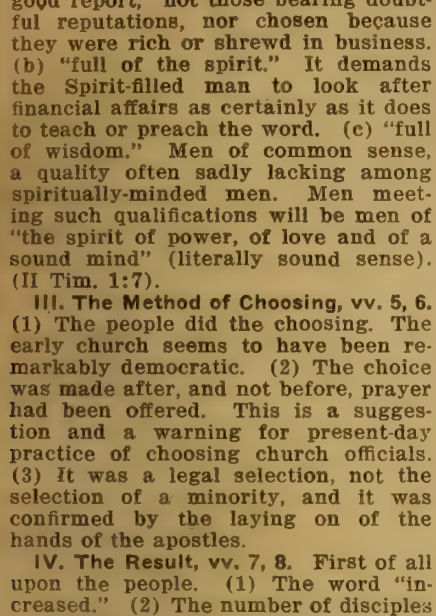
III. The Method of Choosing, vv. 5, 6. (1) The people did the choosing. The early church seems to have been remarkably democratic. (2) The choice was made after, and not before, prayer had been offered. This is a suggestion and a warning for present-day practice of choosing church officials. (3) It was a legal selection, not the selection of a minority, and it was confirmed by the laying on of the hands of the apostles.

IV. The Result, vv. 7, 8. First of all upon the people. (1) The word "increased." (2) The number of disciples "multiplied greatly," and (3) Some of the priests of the Jews were "obedient to the faith." Secondly, the result in the lives of the thus chosen and Spirit-anointed men gave evidence of the good hand of God. They were "full of grace" (Eph. 4:9, Acts 15:15); they were "full of power" (1:8). The first two of them soon became great and mighty preachers as well. Indeed as far as we can read they even outstripped the apostles themselves in real achievement for God. Stephen, of course, stands out pre-eminently. His character is suggested in verse eight. He was (a) "full of faith," (b) "full of the Holy Spirit," (c) "full of grace" (R. V.), (d) "full of power." How sad it is that so frequently our churches fail to make a wise and spirit-led choice of its leaders, and are content with few, or perhaps none, being added to its membership.

No man is fit to be an officer in the church of Christ unless he is filled with the Holy Spirit, (Acts 1:8, Luke 24:49).

Such a man will always stir up opposition of the powers of evil, even as did Stephen.

Those who opposed Stephen were moral and religious men (v. 9). Frequently the opposition a Spirit-filled man encounters is not from the immoral, the worldly, or the utterly ungodly; but those who stand out against him, and reason against him (v. 10), and often seek to kill him, are moral and religious men.



Health First

If a cow is well—if her organs of production are doing their duty—she will yield well. Time was when the cow that became sluggish and seemed to be going backward was promptly sold to the butcher.

Thousands of cow owners have found that in most cases proper treatment will save them the difference between the price of a beef cow and a vigorous milch cow.

Most dairy cow ailments are simple if the source of the trouble is reached. If the organs of production or reproduction are not doing their duty, try Kow-Kure—the medicine for run-down cows. It has worked wonders in many herds, and is especially recommended for the prevention and cure of Abortion, Barrenness, Milk Fever, Scouring, Lost Appetite, Bunches, Retained Afterbirth, etc.

Keep Kow-Kure on hand constantly. Sold in 50c. and $1.00 packages by feed dealers and druggists.

Write us for copy of our free book, "The Home Cow Doctor."

Dairy Association Co.
Lyndonville, Vt.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Retention of Afterbirth.

I have a cow that lost her calf seven months before time and she did not clean. It is nearly four months since she lost her calf. What can I do for her?

It often happens that when cows abort early the afterbirth is retained. This should be removed at that time if possible. If left, it putrifies and usually comes away later piecemeal. You should not have let this cow go so long without treatment. If there is a discharge from her the vagina and uterus should be irrigated daily for a few days with a ½ per cent lysol solution or 1-3000 permanganas solution. It may be that you will need the services of a veterinarian to carry on this work and also to prescribe a suitable tonic.

Infected Stifle.

I had a three-year-old mare which I had shod in front, but three weeks ago when I had her hitched up to a load she slipped with one of her hind feet toward the inside and fell down, hurting her stifle. At first she did not dare to rest on her foot nor hardly put any weight on it in walking. It is a little better now. Her stifle seems to be in place, but it pains her. Could it be that her stifle is broken? If so, is there a remedy?

It is possible your animal has suffered a severe strain of tendons and ligaments in the region of the stifle. You should have had a competent veterinarian attend this animal when it was first injured. Give the animal complete rest for a few days and in the meantime bathe affected parts several times with alterations of hot and cold water. Later massage the parts with the hand, at same time applying chloroform or turpentine liniment, and give the animal some gentle exercise.

Excessive Perspiration in Cow.

I wish you would tell me what makes my cow sweat. She is a large cow of heavy milking power and is kept in a well-ventilated barn, with a ration of corn silage, bran and clover hay.

This condition of a cow sweating noticeably is of very uncommon occurrence. It would be very hard to say just what is the cause of this trouble without a thorough examination of the animal. It is possible that the other eliminative organs are overtaxed from some cause, and, therefore, cause the sweat glands to work excessively. Would advise that you give this cow plenty of exercise daily and also give about one ounce of potassium nitrate dissolved in her drinking water. If she does not improve in a week you should have a competent veterinarian make a thorough examination of the cow and her feed, etc., and he may be able to find the cause of the trouble.

Intestinal Worms.

I would like to have a good remedy for a four-year-old bay mare that seems to be wormy. Was in good shape and smooth last spring. In August, while driving her she passed a big bunch of worms about six inches long. Now her hair looks rough and her actions are slower. I tried smoking tobacco but haven't seen her pass any worms.

Your mare is probably infested with intestinal worms. For treatment give twice daily for three or four days a drench composed of oil of turpentine or creolin, one ounce, and linseed oil, two or three ounces, to be followed on the fourth day by a physic of Barbadoes aloes, one ounce in water used as drench. This last dose should not be repeated and should be followed in six or eight hours by one-half to one quart of raw linseed oil. After above treatment the use of tonics should be instituted. Try the following. Powdered nux vomica, two ounces; powdered ginger, two ounces; powdered gentian, two ounces; powdered Fenugreek, two ounces. Mix and divide into sixteen powders, one to be given with each feed. In drenching a horse a large metal syringe is best. Place fluid far back and toward roof of mouth.

Injury to Ligaments, Tendons or Their Sheaths.

I have a big Percheron stallion coming two years old that got hurt in his gamble joint. It seems to be on the inside and on the cords and it is swollen quite badly. He is not lame. I painted it with tincture of iodine, but it seemed to make it swell more. What can I put on it to reduce the swelling?

In regard to this stallion would say that the case by now is past the acute stage and is of a chronic nature. The treatment should be directed toward hastening the absorption of inflammatory exudate. Try the use of blue ointment and green soap, equal parts, with double the amount of vaseline. Massage parts well with this every day. These thickenings are sometimes very troublesome to remove and sometimes even impossible to remove.

Dental Fistula.

I have a six-year-old mule that got hurt about two years ago on a nail or something in the stable. The wound was in the jaw. When I first noticed it there was a small hole there and a little blood. I did not pay much attention to it, because I thought it would not amount to much, but after a year I had a veterinarian look at it. He split the place open and there was a hole in the jaw bone and he rasped around in the bone and washed it out and gave me some oil to put in it. But it did not do any good. The jaw bone at that place is a little thicker than on the other side and the hide is tight to the bone around the small hole. There is thick matter that comes out all the time and sticks to the hair and at times it smells some. It has been over two years since it was hurt. Please tell me what to do for it.

From your description we would be lead to believe that your mule is troubled with a dental fistula instead of some trouble caused by a nail. The trouble has probably come from some diseased condition of one or more of the teeth. Would advise you to have the teeth examined thoroughly and have the cause removed. This is your only possible show to get results.

Urinary Trouble.

I have a thirteen-year-old bay horse which has trouble with his water. He seems to try to pass water at times and can't. Sometimes only a little, then at other times quite a good deal. He seems to be in good spirits, works well, but does not gain in flesh as he should. He had an attack of the same last winter but seemed much better during the summer. What can be done for him?

There are so many causes of urinary disorders that it would be next to impossible to state just what the trouble is in the case you mention without a thorough examination of the animal. This can best be done by a competent veterinarian. It is possible that more than one examination may be necessary.

?

Ask Yourself—

What have I lost through Abortion

—in calves?
—in milk?
—in injury to cows and heifers?

Is it not time for me to clean up my herd, when I can give the treatment myself at small cost?

Cow Abortion Driven Out

Here's the evidence of men in the livestock business. It covers nearly twenty years. You can do what they did if you do as I tell you to do.—*Roberts.*

What is lost on one good calf would pay for the treatment of an average herd.

1898 "My herd of twenty-two cows was afflicted with Infectious Abortion in 1898. After losing a number of calves I began treating them with DR. ROBERTS' ANTI-ABORTION TREATMENT. I feel that they were permanently cured, for I have not lost any calves since that time, five years ago."—(J. A. Griswold, Duplainville, Wis.) "My herd of cows, eleven in number, was troubled with Infectious Abortion. I tried various remedies, without any relief; then I began treating my herd with ROBERTS' ANTI-ABORTION. I had ten live, strong, healthy calves come that year and have not lost a calf since that time—over three years ago."—(Sworn statement of Herman Shirley, deceased, Waukesha, Wis.)

1902 "My herd of twenty-two cows being afflicted with Abortion in 1902, I decided to try DR. ROBERTS' ANTI-ABORTION TREATMENT, which I did with results satisfactory, and I believe if used according to directions is a sure cure every time."—(I. Vandeburg, Kingston, Ill.)

1913-14-15 "In 1913 I applied your ANTI-ABORTION TREATMENT to my herd of forty-two head, and hereby wish to state that I cured my herd entirely and that I haven't had a single case of abortion since that time."—(Jos. F. Jira, Cary Sta., Ill.) "Several years ago we had Contagious Abortion in our herd and with your treatment completely eradicated it."—(Connecticut. Name on request.) "I am well pleased with your TREATMENT FOR ABORTION. I have nine fine calves and one cow left to calve yet. Two of the calves are from cows that aborted last year. I finished your treatment July 15, 1915, two months ago, and have seen no signs of disease since then."—(Iowa. Name on request.)

If your herd is afflicted with Contagious Abortion, and is free from tuberculosis, you can, with the Dr. Roberts treatment, clean up your herd and wipe out abortion. All Abortion Treatments are shipped direct from our laboratories at Waukesha.

Write us today for free Abortion book, "Questions and Answers"

DR. DAVID ROBERTS VETERINARY COMPANY
950 Wisconsin Avenue
Waukesha, Wis.

A LAMP WITHOUT A WICK

The Sunshine Safety Lamp Co., 827 Factory Bldg., Kansas City, Mo., has a new portable gasoline lamp which gives the most powerful home light in the world—a blessing to every home not equipped with gas or electricity. 300 Candle Power at one cent per night. This remarkable lamp has no wick and no chimney, is absolutely safe and gives such universal satisfaction they are sending it on Free Trial. They want one person in each locality to whom they can refer new customers. Take advantage of their free trial offer. Agents wanted. Write them today.—Adv.

MAKING ROOM FOR MORE CROPS.

(Continued from page 17.)

clearing stump land—all more or less successful and popular. It is possible to grub stumps out and to burn them out—those are the old-fashioned, slow and laborious methods which many people think of first when considering clearing. The stumps can be blown out—usually with dynamite, too—or pulled out by a tractor or with a good stump puller. A well-made stump puller is said to combine in operation the good features of all the other methods, without exhibiting any features urged as disadvantages against some other methods.

It is possible to entirely clear land with a good, modern stump puller—to put it into shape for cultivation immediately the stumps and roots are removed or burned. It is a practical means of getting all the stumps and big roots out at one operation.

With a good stump puller—one of the modern steel machines—all the stumps can be pulled out. These pullers are enormously strong and by an arrangement of pulleys will double, triple and even quadruple the power of the direct pull. Generally speaking, no stump is big enough and tough enough to resist them.

The expense of clearing with a modern, perfected stump puller is not a fixed item, but the fact has been established on the experience of thousands that it is a very cheap method of clearing. Pulling stumps with a puller gets them out of the ground at minimum expense. The actual cost of clearing in any section depends, of course, on local conditions and is never the same in two localities. The number of stumps per acr , kind of stumps, kind of soil and condition the soil is in and various minor considerations all have to do with clearing cost.

This much is true—given good, fertile soil, the cost of clearing it cannot be anywhere near half the added value the clearing gives it. Here in Wisconsin and the neighboring states there are great areas of land which can be actually increased in value from $50 to $75 an acre with a stump puller.

The stump puller method of clearing is a safe one. The perfected modern machines for pulling stumps are so safeguarded as to be practically accident proof and are no more dangerous to use than a farm wagon. They are under control all the time.

It may seem strange to the reader that the writer urges the consideration of a good stump puller for clearing as a matter of economy. It has been proven many times that the modern stump puller will actually get stumps out at the very lowest possible expense.

The largest stump pullers now on the market require for successful operation under the hardest condition only four men and three horses and the average outfit only three men and two horses. Aside from the labor of the men and teams the only expense for operating the stump puller is the small item of a little axle grease on the machine.

The speed at which a good, dependable stump puller can be operated depends on the size and kind of stumps and the condition of the ground. In this and adjoining states the average day's work seems to vary from 100 to 300 stumps. Frequently 400 to 500 are pulled in a day and seldom, if ever, as few as fifty. Now, if you stump land owners have any idea as to the number of stumps to the acre on your land you can compute roughly the time required to do your clearing.

One advantage a good stump puller possesses is worthy of special mention here. It practically puts the lands in condition for cultivation at once. It gets out the big roots near the surface that interfere with the plow and saves a lot of extra work that way. That's one of the reasons why pulling stumps is less expensive—it leaves less work to be done after the stumps are out. Any farmer who has attempted to plow in a field where a lot of big roots lie just under the ground will appreciate the advantage of a clearing method that gets stumps out, root and all.

The accompanying illustrations show clearing scenes and will serve to give those unused to such work an idea of its nature. All these views show clearing done by means of stump pullers.

THE STUMP PULLER "FIRST-AID" TO THE SETTLER.

The first two views shown herewith show how big roots are pulled out with the stumps. One was taken near Weirgor, Wisconsin, and the other on a farm owned by Drs. Enger and Homrick near Ladysmith, Wisconsin.

Now, the big thing and the important thing, of course, is the clearing itself, rather than the methods. It is important to the country at large, the state and every individual community that the stump land be cleared and put to crop producing.

The sooner this land is cleared of stumps and given a chance to grow crops the better. There is no danger of overproduction in this country and there will not be. We need this land for crops today and we will need it more and more every succeeding year.

The states which have large areas of cut-over land cannot hope to take their proper economic position in the Union until this stump land is cleared and producing crops. Therefore, it is incumbent upon us here in Wisconsin to "boost" for land clearing, regardless of the methods used, if we are interested in the future of our state and feel some pride in seeing her take the place among the great food-producing states that should be hers by reason of natural advantages.

We have spoken here particularly of land clearing as applied to raw land. What we have said applies equally well to the land that is partly cleared and is being cropped with insufficient cultivation because dotted with standing stumps which interfere with the proper operation of farm machinery those stumps are a losing proposition to the farmer—hinder production every season. They should be gotten rid of by the best available means, be what it may.

Clear your land, neighbor. Get rid of the stumps. Dig them out, burn them out, blow them out or pull them out—any way you prefer—but get rid of them. It's the first step in developing your own farm, your community, your state and your nation.

Fifty counties are now organized under the Wisconsin Agricultural Experiment Station and the other counties should fall in line until there is not a single one missing from the list.

Although the dairy business is increasing throughout the country, there is at present no sign of overproduction. The consumption of dairy products is increasing very rapidly and people are learning to make much greater use of these products than in former years.

A PREMO CAMERA

Is a Necessity--Not a Luxury

This camera is made by the Eastman Kodak Co., is of the box type, with universal focus lens, the simplest instrument for picture-making that can be devised. It will produce excellent results in the hands of anyone; no experience necessary. Film pack used, daylight loading. Pictures 2 1-4 x 3 1-4. Booklet of instructions included with each camera.

HAVE YOU ALWAYS REGARDED A CAMERA AS MERELY A "PLAY-THING?"

What do you raise?

Fruits? Livestock? Grain? Flowers?

It doesn't matter--whatever it is, you raise it to sell, don't you? Now, how much better than "telling" distant prospective customers what you have, is ***showing*** them! You can't bring them to your farm, but pictures will get practically the same result. One picture tells more than pages of words.

What better way of keeping a record of growth, than by pictures?

A Picture of old Dobbin with Baby on his back, will be priceless twenty years from now.

HERE'S HOW YOU CAN GET A CAMERA--

Given with The Housewife for one year at $1.80. Cameras sent postpaid, delivery guaranteed.

Remit by P. O. Money Order or Registered Letter. Address

The HOUSEWIFE, 30 Irving Place, New York City

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

Plymouth Holstein Sale.

THE third annual sale of high-grade and registered Holstein cattle held by Plymouth breeders, will be the largest ever held. The sale this year extends over three days, viz.: on Wednesday, March 8th, F. W. Traxler sells ten head of registered heifers, one registered six months old bull and thirty-four high grades; Thursday, March 9th, the Plymouth Canning Co., sell thirty-eight high grades; Friday, March 10th, George Buelke sells sixteen choice high-grade Holsteins, the registered bull, Electa De Kol Burke and a number of registered heifer calves. The offering of F. W. Traxler is especially attractive. The registered heifers are choice individuals backed by heavy producing ancestry. They are well grown, of good type and well bred. The high grades are for all useful purposes, the equal of pure breds. They are well marked, have big udders and are of good type. They were selected from some of the best herds in the country and are not culls in any sense of the word. The canning companies' consignment is also one of merit and the majority of the animals cannot be told from pure breds either in markings, type or production ability. Mr. George Buelke is dispersing his entire herd of high grades, as he now has a full herd of registered cattle. Here will be an opportunity to get the best grades in his herd. On Wednesday, March 9th, the Plymouth Brewing Company will sell four span of heavy horses and one span of mules. The horses are match teams five and six years old and gray and black in color. Terms of the sale are six to eight months' time on approved notes at 6 per cent. See page 39.—Adv.

A Two-Year-Old Percheron Bargain.

WHEN a farmer has only one or two registered mares that he maintains for breeding purposes and farm work, a prospective buyer can generally find their colts well grown and cared for and the dealers are glad to buy such colts. Archie H. Cook, Baraboo, Wis., has one registered mare that has proven valuable to him as a breeding matron and her two-year-old stallion colt is now being offered for sale. He is a seal brown, a very rich color, a colt with exceptional quality, and bone that horsemen like. He has good lines, a fine crest and is one that should make a valuable sire at maturity. He is just turned two and will weigh right at 1,700 pounds. His sire, imported Gibus, is a grandson of old Brilliant and his dam is by a son of Theudis he by Brilliant. His second, third and fourth dams are all Brilliant bred mares. This colt will suit any dealer, for he can go into any sale barn without any special fitting. Some farmer that wants a horse for the coming season can well afford to get in touch with the owner of this good colt. We would suggest that you write for the price at once, for he is a bargain and will be picked up soon. Don't forget to mention The Wisconsin Farmer, when writing. See page 38.—Adv.

155-Egg Incubator Only $7.85.

NO poultry raiser can afford to be without the advantages of an incubator when they can get a Progressive with 155-egg capacity for only $7.85. They are splendidly built of the best materials and have all the latest improvements. The eggs are protected against sudden changes by hundreds of dead air cells and 100 per cent hatches are said to be no unusual thing for them. The Progressive incubator and brooder sell for $9.85 and freight is prepaid east of the Rockies. If you are not satisfied with them your money will be returned with 8 per cent interest. In their advertisement on page 27 the makers are offering to send you free their big poultry book, together with their special new combination offer. All that you need to do is to drop them a line, addressing Progressive Incubator Co., Box 128, Racine, Wis., and mention their advertisement in this paper.—Adv.

A Cheap Farm Hand.

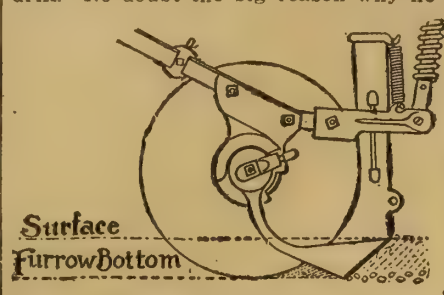
ATLAS farm powder is made especially for farm use in blasting out stumps, shattering boulders, breaking up hard pan, digging ditches, post holes, etc. For that reason "safety first" has been considered in its manufacture, so that the makers claim that it is the safest explosive known. It can be used without any danger by any ordinarily intelligent man and will prove one of the cheapest and most effective helps to better farming that any farmer can secure. It is called "the cheapest farm hand." In their advertisement on page 25 the Atlas Powder Co. offers to send free to anyone filling out the attached coupon their valuable seventy-four-page booklet, "Better Farming." In writing for it address Atlas Powder Co., Wilmington, Del., and kindly mention The Wisconsin Farmer.—Adv.

"Famous Collection" Seed Offer.

IN the Great Northern Seed Co.,'s advertisement on page 25, is described their special dollar offer, comprising one of their famous collections which will be mailed to you postpaid on receipt of order. For 10 cents' additional postage they will mail you their new instructive Garden Guide, containing good advice for every gardener and planter. In writing address Great Northern Seed Co., 307 Rose St., Rockford, Ill.—Adv.

Grain Drill Increased This Crop.

ONE day season before last a farmer named Rummens, living near Pomeroy, Wash., had his team run away with his grain drill while he was working along the railroad right of way. The team tore across the tracks, hopelessly smashing the drill. As it was impossible for him to get the necessary repair parts without sending to Portland he discarded the broken drill and got himself a New Peoria Disk Shoe Drill from a Pomeroy dealer and took it out and started in to work again where he had left off with the other drill. No doubt the big reason why he



chose the Peoria was because of the famous disk shoe, here illustrated: This is a combination disk and shoe that has all the merits of the single disk for cutting the trash and hard ground and opening the furrow plus the power of the shoe for forming the furrow and depositing the grain. The forward end of shoe being pivoted to disk bearing, works independently of the disk. The disk opens the furrow, Then, the shoe follows directly behind and deposits the seed on a packed seed bottom. This insures for the seed the three essential requirements to make small grain grow: Heat, air and moisture. The shoe always travels the same depth as the disk. No loose dirt can fall into the furrow until after the seed is deposited. No seed can ever come in contact with disk. The merits of this unique device were certainly appreciated by Mr. Rummens, for, in a letter, he says: "I was perfectly astonished at the results. When the grain was grown, the point where I had begun with the Peoria could be easily marked with the eye. The grain sowed by the Peoria was about four inches higher and at least 15 to 20 per cent thicker. The Peoria did perfect work and to say that I was highly pleased with the results is stating it mildly." Those wishing further details in regard to this remarkable drill can obtain same by writing to the Peoria Drill and Seeder Co., Peoria, Ill., who will be glad to send catalog to all who wish one.—Adv.

A SON of the thirty-one-pound bull, King Pontiac Champion, heads the herd of Wm. Fenner, Sheboygan Falls, Wis. See advertisement on page 39.

Edgewater Percherons.

THE Edgewater Stock Farms, Ft. Atkinson, Wis., are advertising twenty pure-bred Percherons for sale on page 38. The offering consists of mares, fillies and stud colts of various ages. The foundation stock were selected from some of the best Percheron breeding establishments in Wisconsin and the present offering is one of much credit. The mares are big, broody, drafty workers that will prove a profitable investment for farmers and breeders. The younger animals are a promising lot that were sired by Mattice, a stallion weighing over 2,050 pounds. The mares weigh from 1,600 to 1,800 pounds and are of dapple gray and black color. For breeding and further information in regard to these animals write to the above address.—Adv.

"Game Farming for Pleasure and Profit."

IT IS seldom that pleasure and profit can be combined on the farm to such a degree as that afforded in the breeding of game birds. It is profitable because the demand for eggs and breeding stock is far greater than the supply, with consequent high prices. For example pheasant eggs sell for from $20 to $25 a hundred and live birds bring from $5 to $7 a pair. They can be raised with very little trouble and expense, as can wild turkeys, quail, grouse and other birds. Game farming can be done as a side issue and the profits from it are just that much clear gain for the farmer or his wife. At the same time he is supplying game for the market he can have all that he needs for his own table. The Hercules Powder Co. is performing a public service in calling attention to the opportunities along this line in their very interesting advertisement on page 15, and in offering to send their interesting and instructive booklet, "Game Farming for Pleasure and Profit," to anyone filling out and mailing the attached coupon. We advise all our readers to send for a copy of this book. In doing so address Hercules Powder Co., Game Breeding Dept., Room 195, Wilmington, Del., and kindly mention The Wisconsin Farmer.—Adv.

A Logical Clean-Cut Proposition.

ON page 2 is an advertisement worth the attention of every reader of this paper. It graphically portrays the tremendous advantages of tractor farming, showing how one man and an Eagle tractor can do the work of three men and nine horses in plowing. It also illustrates the adaptation of the Eagle tractor to belt work. In the body of this convincing advertisement are given seven logical and powerful reasons why every farmer should buy a tractor on general principles and seven strong claims of the Eagle tractor in particular. A tractor will do the work that a horse will and many things that a horse cannot do and it will do them quicker and cheaper. Eagle tractors are built with special reference to the needs of the medium-sized farms and farming conditions in Wisconsin. They are powerful, economical and reliable and are giving splendid satisfaction to users everywhere. If you want to know more about tractor farming in general and Eagle tractors in particular fill out the coupon attached to their advertisement and mail it to Eagle Mfg. Co., 671 Winnebago St., Appleton, Wis., mentioning The Wisconsin Farmer, and you will receive free an interesting book from their.—Adv.

PART of the Holstein herd of Frank Holt & Son, Pleasant Prairie, Wis.

Pullman Automobile for $740 a Beauty.

ON page 8 are set out the specifications of the Pullman automobile for $740, that has attracted so much favorable attention and proven its worth as a farmer's car. The Pullman is built for comfort, as well as wear, and its ample lines are appreciated by anyone who has ever been compelled to ride in cars where they were cramped for room. It rides smoothly and easily and is like an easy chair. A glance at the picture shown in the advertisement will convince anyone of its beauty of design, while a ride in one will leave no doubt that the makers have succeeded in their ambition of building an ideal machine for town and country use. If you have not known these facts it will pay you to send for their beautiful catalog, addressing Pullman Motor Car Co., York, Pa.—Adv.

Get This Incubator Book.

YOU can depend implicitly on the value which Wisconsin incubators will give you, because they are shipped on thirty days' trial, with freight prepaid east of the Rocky mountains, and if not perfectly satisfactory you can get your money back. They are also guaranteed for ten years by a firm whose guarantee is absolutely good. Their 130-egg incubators and brooders, which have proven their worth as result getters in many a contest, sell for $10 for the two. They are made of finest select California redwood, with hot water heater, double walls, double glass doors, copper tanks and boilers and they are self-regulating. They are complete as shipped and operate at a minimum of cost and bother. Their 1916 catalog is a book that poultry raisers will find valuable and interesting. It tells of many "Wisconsin" merits and triumphs. When writing for your copy address Wisconsin Incubator Co., Box 102, Racine, Wis., and kindly mention their advertisement on page 27.—Adv.

James Sanitary Stalls Only $4.75.

SANITARY barn equipment lessens farm work and increases farm profits. It will pay for itself many times over both in saving labor and in helping keep your cows healthy. On page 8 the James Mfg. Co. is advertising sanitary stalls for as low as $4.75, which are the same as the higher priced stalls, excepting that the latter have some extra features. The James line of barn equipment has long been a standard and has proven its value, practicability and durability wherever used. If you are thinking of building a new barn or of remodeling the old one it will pay you to write them, telling how many cows you keep, and they will send you their valuable booklet entitled, "The James Way," showing how to build and equip an up-to-date dairy barn. In writing them address James Mfg. Co., DU63 Cane St., Ft. Atkinson, Wis., and please mention The Wisconsin Farmer.—Adv.

"Velvet for Dairymen."

THE Sharples Separator Co. is authority for the startling statement that the loss from imperfect cream separation on the average farm is $47 every year and on many farms it is more than $100. One of the causes of this loss is said to be inability to turn the separator at just the right speed all the time. The new suction feed on Sharples separators enables the bowl to take in just the right quantity of milk to insure the closest skimming, no matter how fast or how slow you turn. You get cream of smooth, even quantity no matter at what speed, which means extra profit for dairymen. You can learn all about this new patent device by replying to their advertisement on page 19, and asking for their free book, "Velvet for Dairymen." In writing address The Sharples Separator Co., Dept. 44, West Chester, Pa. Mention of this paper will be appreciated.—Adv.

Cream Separators From $15.95 Up.

THE American Separator Co., has cream separators that are guaranteed to do your work satisfactorily at prices of from $15.95 up. The bowl is easily kept clean, the mechanism simple and along the most approved scientific lines and they are sold on your approval after a careful test. For a handsome free catalog, showing you American separators adapted to any size dairy, address American Separator Co., Box 4126, Bainbridge, N. Y., and kindly refer to their advertisement on page 18.—Adv.

Percheron and Belgian Stallions for Sale.

THE advertisement of Champlin Brothers, Clinton, Iowa, offering imported and home-bred Percheron and Belgian stallions for sale will be found on page 38 of this issue. These animals have size, bone, quality and action and range in age from yearlings to six year olds. They will be sold at reasonable prices on terms to suit the purchaser. Every horse will be guaranteed.—Adv.

Justice's Percherons and Belgians.

SOME imported Percheron and Belgian stallions are for sale by J. R. Justice, Union Hotel, Galesburg, Ill., who has also some good, rugged Belgian mares. The horses are all in good shape, with quality, size and conformation and will be priced worth the money. Mr. Justice has an announcement on page 38.—Adv.

Easy Terms on Edison Phonographs.

YOU can get one of the new Edison phonographs, with your choice of records, on trial and if not satisfied

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

can return them, or if you desire to keep this wonderful home entertainer you can pay for it at the rate of only $1 down and the balance at the rate of a few cents a day. If you have not seen the new Edison book you can get one without any obligation on your part by addressing F. K. Babson, 4482 Edison Block, Chicago, Ill., and mentioning the advertisement on page 15. —Adv.

Stump Land Means Money Wasted.

STUMP land means, to a large extent, unproductive land and unproductive land means smaller profits than you should be getting. No good business man will allow part of his capital to die idle when it might just as well be paying him good profits and every farmer with stump land should get it cleared and set it to work for him with a crop this spring. One of the easiest, quickest and cheapest ways to do this is to blast out the stumps with Du Pont Red Cross farm powder, as thousands of farmer users have learned to their advantage. There are many things which this farm explosive can be used for that will save time, work and money for every farmer. There is a constantly growing use of powder on the farm and the up-to-date man will want to know all about its advantages. By writing for the Hand Book of Explosives No. 35F, mentioned in the Du Pont advertisement on page 14, our readers will receive free complete and reliable information on this subject. Address E. I. Du Pont De Nemours & Co., Wilmington, Del., and kindly mention this paper.—Adv.

Liberal Service a Velie Feature.

ONE of the greatest considerations in buying an automobile these days is the kind of service which goes with it after you have paid for the machine. The Velie Motor Vehicle Co., Moline, Ill., do not believe that their interest in a customer ends when the sale is made. They are fortunately located in the heart of the grain belt where they can furnish factory service to their large circle of customers among our readers. In dealing with them you are dealing with old friends who have been tried and found worthy and on whose liberal treatment you can rely. In their advertisement on page 13 is shown a picture of their famous new model 22 with detachable winter top and a summer top for $1,240. If you will write for their fine catalog you will find it interesting and instructive. Address Velie Motor Vehicle Co., 118 Velie Place, Moline, Ill. Mention of their advertisement in this paper will be appreciated.—Adv.

NEWS OF THE SALE RING

Hetts' Holstein Sale.

One of the greatest, if not the greatest, Holstein sales in the middle West was staged at Fort Atkinson, Wis., Tuesday, February 15th, in the dispersion sale of the herd of George Hetts & Son. This highly successful sale demonstrated the high reputation which this excellent herd had established. It also demonstrated that the farmers still hold great confidence in the breeding of pure-bred Holsteins. As one breeder expressed it, "If reasonable care is used you can't help but win," and that this belief is stronger than ever is plainly demonstarted at this sale, five animals selling consecutively in twenty minutes' time for $14,000. The top-price female, Crescent Beauty Butter Maid, sold for $3,200 to R. E. Haeger, Algonquin, Ill. The top-price male sold for $2,600 to Henry Anthes, Jefferson, Wis. Mrs. K. H. Miller, owner of The Barrington Farms, Barrington, Ill., was present and judiciously selected a number, purchasing fourteen of the best. C. De Voise, Jacksonville, Fla., who recently closed out 150 head of high-grade Holsteins, purchased a goodly number. There were a great many buyers from out of the state present, who bought a few and will spend the balance of the week visiting various parts of the state, picking up enough more to make out a carload each. Wisconsin buyers from every part of the state were present and took home the major part of the offering, demonstrating that Wisconsin is still a heavy buyer of pure-bred dairy cattle. A detailed list of the sale is given below:

MALES.

Crescent Beauty Butter, Jan. 24, 1912; W. H. Wilson, Ft. Atkinson, Wis.	$825
Crescent Beauty Segis Pontiac, May 3, 1914; H. Anthes, Jefferson, Wis.	2,600
No. 3½, bull calf, Oct. 21, 1915; R. E. Haeger, Algonquin, Ill.	400
No. 4¾, bull calf, Jan. 1, 1915; R. Royce	330
No. 15½, bull calf, Aug. 12, 1915; J. C. DeVoise	120
No. 18¾, bull calf, one year old; Jens Thorstad, Derfield, Wis.	75
No. 21¾, bull calf, Dec. 15, 1915; Edgewater Stock Farm	95
No. 28½, bull calf, May 3, 1915; O. H. Hanson, Cambridge Wis.	135
No. 31½, bull calf, Dec. 17, 1915; Edgewater Stock Farm	55
No. 34½, bull calf, Dec. 13, 1915; C. W. Hodge, Milton Jct., Wis.	50
No. 35½, bull calf, Dec. 13, 1915; R. E. Haeger	130
No. 39½, bull calf, Nov. 7, 1915; H. Yandry, Ft. Atkinson, Wis.	60
No. 40, Sept. 2, 1914; Fred C. Westphal, Bonduel, Wis.	110
No. 49, bull calf, October 15, 1915; Edgewater Stock Farm	60
No. 50, bull, Dec. 15, 1915; Edgewater Stock Farm	55

FEMALES.

Star Belle De Kol, Sept. 20, 1902; Otto Toepfer, Madison, Wis.	165
No. 1½, heifer, Dec. 25, 1915; C. De Voise, Jacksonville, Fla.	295
Beryle Queen, April 6, 1904; Otto Toepfer	165
Lucy De Kol Wayne, Oct. 2, 1903; R. E. Haeger	500
Crescent Beauty Canary, Dec. 13, 1907; H. S. Royce, Seattle, Wash.	450
No. 4½, Jan. 13, 1914; H. S. Royce	345
Madrigal Johanna Aaggie, Jan. 18, 1907; Edgewater Stock Farm, Ft. Atkinson, Wis.	540
No. 5½, heifer, Sept. 1, 1914; Barrington Farms, Barrington, Ill.	275
Agatha Netherland De Kol Pietertje, Dec. 2, 1904; Edgewater Stock Farm	300
No. 6½, heifer calf, Nov. 29, 1914; Harold Ward, Avalon, Wis.	200
No. 41, Nov. 29, 1914; M. H. Meagher, Chippewa Falls, Wis.	250
Grace of Portage De Kol, Nov. 14, 1904; Edgewater Stock Farm	2,250
Sadie Vale Madrigal, Feb. 4, 1906; Mrs. K. H. Miller, Barrington Farms	425
No. 45, heifer, two years old; Barrington Farms	300
No. 8¾, heifer calf, Jan. 30, 1916; Barrington Farms	185
Crescent Beauty Butter, Sept. 13, 1909; R. E. Haeger	3,200
Canary Duplicate Butter Girl, Nov. 28, 1908; Roy Hetts, Ft. Atkinson, Wis.	800
Canary Dpulicate Pride, Jan. 3, 1910; F. E. Daniels, Ft. Atkinson, Wis.	1,325
Crescent Beauty Canary, Geo. Linsley & Son, Manawa, Wis.	190
Crescent Beauty Butter Girl, Oct. 31, 1908; W. H. Wilson, Ft. Atkinson, Wis.	410
Crescent Beauty Butter Girl 2d, yearling heifer; W. H. Wilson, Ft. Atkinson, Wis.	305
Heilo Abbekerk Hengerveld, Oct. 8, 1909; Barrington Farms	320
Salma Pontiac Johanna, May 1, 1910; K. Olaus Finseth, Kenyon, Minn.	470
Ollie Johanna Hengerveld, Nov. 20, 1910; Barrington Farms	500
No. 17¾, heifer calf, Dec. 10, 1915; J. C. De Voise	200
No. 17½, heifer calf, Dec. 7, 1914; M. H. Meager	225
Star Belle De Kol Pontiac, Oct. 15, 1910; Barrington Farms	510
No. 18½, heifer calf; Barrington Farms	230
Grace of Portage Hengerveld, Oct. 20, 1910; Wm. Kittleson, Mt. Horeb, Wis.	275
No. 19½, heifer calf, Dec. 13, 1915; Wm. Kittleson	125
Grace of Portage De Kol Lyons, Feb. 11, 1911; R. E. Haeger	1,225
No. 20½, heifer calf, Jan. 16, 1915; R. E. Haeger	250
Sadie Vale Netherland Johanna, Feb. 7, 1911; Barrington Farms	580
No. 21½, heifer calf, H. S. Royce	385
Elzevere Crescent Beauty Canary, Dec. 1, 1911; T. E. Getzelman, Hampshire, Ill.	280
No. 23½, heifer Calf; T. E. Getzelman	185
Canary Duplicate Butter Girl 3d, Oct. 27, 1912; Barrington Farms	580
No. 24½, heifer calf, April 26, 1915; H. S. Royce	315
Salma Pontiac Lyons, Nov. 6, 1912; Emil McComb, Ft. Atkinson, Wis.	275
Queen Heilo Lyons, Jan. 3, 1912; Barrington Farms	825
Heilo Oak Burke 2d, Jan. 21, 1913; Barrington Farms	800
Star Belle Lyons, Dec. 11, 1912; R. E. Haeger	180
Star Belle Lyons Netherland, Oct. 7, 1911; Henty Anthes, Jefferson, Wis.	760
Agatha Lyons, Jan. 18, 1913; S. S. Sleep, North Lake, Wis.	330
Agatha Butter Maid, Dec. 27, 1913; H. S. Royce	400
No. 32½, heifer calf, Dec. 12, 1915; C. De Voise	190
Grace of Portage Hengerveld 2d, Nov. 4, 1913; Barrington Farms	275
Lucy Wayne Butter Maid, Oct. 28, 1913; R. E. Haeger	530
Beryl Queen Butter Maid, Nov. 4, 1913; Roy Hetts	380
Salma Pontiac Butter Maid, March 20, 1914; M. H. Meagher	290
Heilo Abbekerk Butter Maid, Apr. 20, 1914; Barrington Farms	285
Madrigal Johanna Aaggie 2d, Feb. 22, 1913; E. Benson, Milwaukee, Wis.	290
No. 48, R. Hetts	340
No. 41	250

SUMMARY.

15 males ... $5,100; average	$340.00
54 females..$25,930; average	$480.18
69 animals..$31,030; average	$449.77

THE MARKETS.

Union Stockyards, Chicago, Ill., February 19th.—Last week's severe raid on cattle values had the expected effect of curtailing the marketward movement this week, and prices have been pushed upward almost as fast as they declined the week previous. While a supply at six western points the first five days of the week aggregating 32,000 less than like period last week was the chief influence in the improvement of the trade, the reopening of the stocker outlet at this market, closed November 1, 1914, on account of foot-and-mouth disease, has been a price-boosting factor of some importance. The stocker outlet so far has been narrow owing to the delinquincy of eastern states in lifting the embargo, Ohio and Indiana, as well as some other states which ordinarily receive liberal supplies of stockers and feeders from this market at this time of the year as yet refusing to accept Chicago shipments, but the outlet is expected to broaden gradually with the relaxation of existing state embargos which will give the lighter-fleshed cattle a competitive market right along.

Advances in the steer trade during the week are mostly 25@40c and some sales show a 50c gain. The bulge restores prices on the general run of offerings to within 10@25c of the year's high point. It will be well, however, for the country to display caution, as it is easy to get a few too many cattle. Lent begins March 8th and buyers usually use that effectively as a bear argument. This is always a period of liquidation, but the fact must not be overlooked that liquidation has been on a free scale for three months past and that in many sections where feed lots are normally full at this time cattle are now scarce. March and April ought to develop a good set of markets.

Barring five head of prime steers fed experimently at the Illinois University and selling at $10.25, the top this week has been $9.65, but choice heavy beeves have been scarce and comparatively few have passed the $9 mark. Much of the steer run sold at $7.50@8.75, with a much smaller proportion under the $7 line than last week. The advance has been rather more pronounced on steers selling from $7.25@8.75 than in the top or lower registers of the market. Feeder competition has developed below the $7.25 line and the bulk of the stockers going to the country sold from $6.50@7.00 with choice toppy yearlings at $7.25 and a few common off-colored thin stockers down to $5.50 @6.00. A good demand, especially for stocker grades to throw on grass in the spring is expected to develop.

Desirable killing classes of cows and heifers have recovered their decline of last week, 25@40c advances being general and some good tidy heifers being quoted 50c higher. Common kinds have not shared fully in the advance, but barring Holstein stuff which is getting strong price discrimination, most of the cows selling below $5.25 are 10@15c higher. Bulls are 15@25c higher for the week, barring big weight beef bulls and choice calves are about steady, while plain, light veals show about a 25c decline. Most of the butcher cows are selling at $5.50@6.50 with choice koshery corn fed cows up to $7 and above and common long-haired kinds at $5@5.25, some Illinois Holsteins of butchery class going down to $4.75 and below. Most of the good to choice fat heifers are selling at $6.65@7.40 and choice corn-fed yearlings are worth $8 and better. Heifers now selling at $5.50@6.00 are on the stocker order and a trashy off-colored kind goes down around $5. Bologna bulls are on a $5.75@6.15 basis for the bulk, and good to choice handy weight butchers sell at $6.25@7.00, but $6.25 is hard to pass for a 1,700-pound or heavier fat bull no matter how ripe. It is largely a $10.50@11.00 market for good to choice veal calves, with a plain light kind around $10, underweights from $7.00@7.50. Most of the heavy calves are going at $6.50@7.50, choice 300-pound weights up to $8.50 and common rough heavies down to $5 and under. Quotations follow:

NATIVE BEEF STEERS.

Ch. to pr. 1,500-1,600 lbs.	$9.00@10.00
Gd. to ch., 1,300-1,450 lbs.	8.50@ 9.00
Med. to gd., 1,250-1,350 lbs.	7.50@ 8.35
Plain short-fed	6.25@ 7.25
Poor to plain steers	5.50@ 6.25
Choice to prime yearlings	9.00@10.00
Good to choice yearlings	8.25@ 9.00
Medium to good yearlings	7.25@ 8.00
Plain to fair yearlings	6.25@ 7.00
Common yearlings	5.25@ 6.00

STOCKERS AND FEEDERS.

Good to choice	$6.85@7.40
Fair to good	6.35@6.85
Common to fair	5.85@6.35
Inferior, off-colored stockers	5.25@5.75

HEIFERS.

Extra fancy yearlings	$8.25@8.00
Good to choice yearlings	6.75@8.00
Good to choice heifers	6.50@7.25
Fair to good heifers	6.00@6.50
Common to plain heifers	4.75@5.75

COWS.

Choice to prime	$6.75@7.50
Good to choice	6.00@6.50
Plain to good	5.25@6.00
Fair to good cutters	4.50@5.15
Fair to good canners	3.90@4.25
Common canners	3.00@3.75

BULLS.

Good to prime butcher	$6.50@7.00
Plain to medium butcher	6.15@6.35
Good to choice heavy	6.10@6.50
Good to choice bolognas	5.85@6.25
Plain to medium light	5.00@5.75

CALVES.

Prime vealers	$10.75@11.25
Good to choice vealers	10.25@10.50
Poor to fair vealers	7.50@ 9.50
Good to choice heavy	6.50@ 8.50
Poor to fair heavy	4.50@ 6.25

While closing 5@10c lower than a week ago, the hog market showed the best levels of the season during the week, an $8.50 top being recorded on the high spot Thursday and the bulk selling on that session at $8.15@8.40. A 5@10c decline Friday carried the general average price down to $8.23, which is $1.75 per cwt. higher than the corresponding day last year. Bulk sold Friday at $8.05@8.35 with few hogs, other than common underweight stuff and rough, heavy packers, below the 8c line. Pige of good class were on a $6.75@7.25 basis. The coming week will doubtless attract a generous run of March 1st contract and renters' hogs, but much of the liquidation that under ordinary circumstances will occur at this juncture has already been effected and confident prediction of $9 top hogs in March is made. Given proper encouragement, however, the tail end of a big winter crop, such as that of this winter, usually results in a more liberal supply of good fat hogs at the windup than most traders figure on, and the rapid advance in the market the last forty days in the face of unusually heavy receipts, has doubtless persuaded some farmers and feeders to hold back even under the high price of corn, and feed hogs to a heavier weight than originally intended, the lure of the $9 hog during the early spring being a magnet of strong drawing power. The range in prices has widened out somewhat this week, owing to the presence of more light stuff in the run, but it is still comparatively narrow. Receipts for the first five days of the week at eleven leading markets totaled 714,000, as compared with 779,000 same period last week and 565,000 a year ago. Since January 1st, these eleven points have received 6,211,000, against 4,982,000 same period of 1915.

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SUITS $3.75, pants $1.00; made to measure. For even a better offer than this write and ask for free samples and styles. Address Knickerbocker Tailoring Co., Dept. 301, Chicago, Ill.

FOR SALE 6,000 two-year-old Ginseng plants cheap on account of lack of room for spring planting. Address John Treiber, 2310 Ohio Avenue, Madison, Wisconsin.

FOR SALE OR EXCHANGE—Improved 160 acre southern Idaho farm. Irrigation not needed. F. G. Kraege, Kilbourn, Wisconsin.

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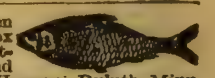

FOR SALE CHEAP—High-class registered German Coach stallion. Good breeder and a show horse. A. S. Aikins, Viroqua, Wisconsin.

FOR SALE—Prize-winning, full blooded Buff Orpington cockerels. Address Mrs. H. Hardwick, Route 1, Edgerton, Wisconsin.

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SIXTY OXFORD EWES

OF all ages from lambs to mature animals. Will sell in lots to suit buyer. These are well bred, heavy shearers and good individuals. The high prices for mutton and wool will make sheep breeding very profitable. Come to our Poland China sale Tuesday, February 8th, and look them over.

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BARGAINS in pedigreed Chester Whites. Herd boars, bred sows and early fall pigs. Address

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50 full blooded

YORKSHIRE PIGS

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POLAND CHINA PIGS

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CHAS. A. PETERSON, Prop.

DUROC BRED SPRING GILTS of choice breeding, sired by Burn Brae Distinction and Hazelhurst Col. Bred for March and April farrow to Burn Brae Golden Model. Mention The Wisconsin Farmer when writing.

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BRED GILTS, noted everywhere for their size, quality and popular blood lines, such as Rose Hill Guard 171721, Educator 67139 and Select Chief 173601, at farmers' prices. See them or write M. J. DOWD, Route 1, LANSING, MINN.

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30 GALLOWAY BULLS FOR SALE

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SPRING GILTS. Some now bred for March and April litters. Others will be bred for April and May litters or will be sold open as desired. There are daughters of **King Jumbo** by Long Jumbo, that weigh 1106 pounds. **Fall Yearling Gilts,** bred for spring litters to **Big Wonder,** first prize under six months boar at 1915 Minnesota State Fair. **Some Fine Yearlings and Spring Boars** that will do you a lot of good. **SHORT-HORNS. 10 Fine Yearling Bulls,**—roans, red and whites, sired by **Highland Sultan,** a grandson of Whitehall Sultan. **25 Cows and Heifers** from six months old and up. These are of Scotch and Bates breeding. Most of them are of heavy milk producing strains. If you want Short-horns of big size you can get them here. My Short-horns won all first prizes but one at the 1915 Beaver Dam Fair against heavy competition.

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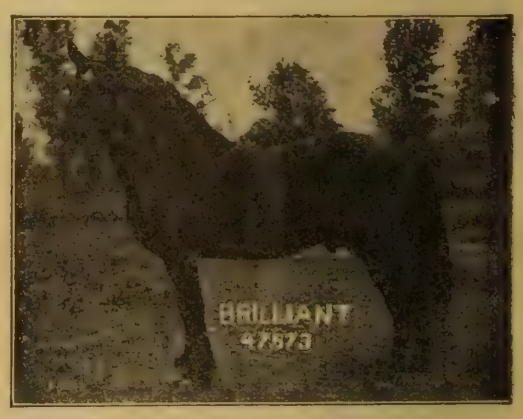

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PURE-BREDS but not registered. Now springing—due to freshen soon. Well grown, well marked and from high producing ancestors.
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75 HEAD Registered Holsteins to select from —herd headed by Walker Prilly Ormsby Wayne, whose dam and sire's dam average over 30 pounds of butter in seven days.
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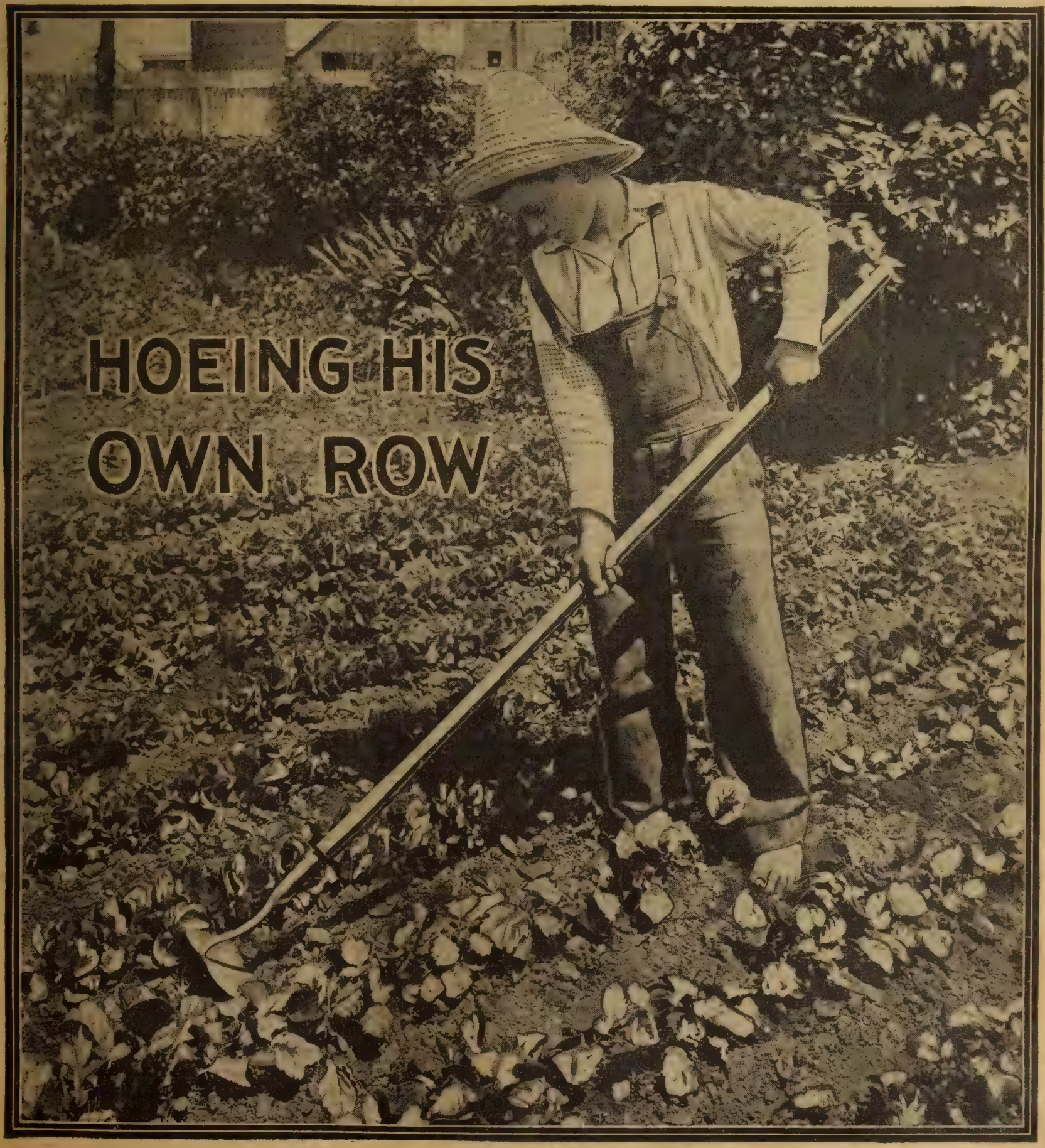

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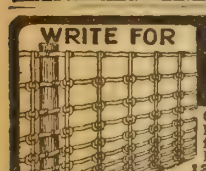

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CURRENT EVENTS

ENGLAND is not ready even to consider the possibilities of peace, according to Premier Asquith, who delivered a ringing speech on the subject in parliament. The only terms the fighting premier offered to the enemy countries were contained in this utterance: "We shall never sheath the sword, which we have not lightly drawn, until Belgium—and, I will add, Serbia—recover in full measure all and more than they have sacrificed; until the rights of the small nations of Europe are based upon an unassailable foundation, and until the military domination of Prussia is wholly and finally destroyed." The announcement of the premier was brought about by a peace talk made by one of the members of the house of commons, a talk which the other members showed they had but little sympathy for. While this discussion was going on in the British parliament the French and the Germans were renewing activities, the Germans beginning a terrific drive with 240,000 men, against the French stronghold of Verdun. This is the most formidable move since the Champagne campaign last September and is for the purpose of trying out the two lines, to see which is the stronger. There is plenty of evidence that the hard fighting will be resumed very soon now, for but little has been accomplished by either side during the winter months.

NATIONAL preparedness legislation took a long step forward in congress last week when the house military committee reached a practical agreement on the outline of the army bill it will unanimously present for passage. Complete federalization of the national guard will be substituted for the proposed continental army. A total peace strength of 575,000 men in the standing army and the guard combined will be provided for, with reserve systems to more than double the force in war. The expense for the whole establishment this year is roughly estimated at $174,000,000 exclusive of Panama canal defenses. To complete the committee's compromise with President Wilson on the continental army, the bill will authorize the increase of the regular army to a total peace strength of 147,000 by adding ten regiments of infantry, four regiments of field artillery, fifty-two companies of coast artillery, fifteen companies of engineers and four aero squadrons. It will provide also for doubling the cadet corps at West Point and creation of thirty cadet companies to be attached to regular regiments to be trained for entry into an officers' reserve corps. Congress is making more rapid headway on this matter than had been anticipated, party lines being well-nigh obliterated in the discussions so far.

THE war has cost Great Britain over $10,000,000,000 to date and last week the house of commons passed an additional credit bill for $2,000,000,000. This is expected to carry the war to the end of May. In Premier Asquith's speech to the house it developed that the war is costing England $25,000,000 a day, a figure which the premier declared to be very reasonable. The chancellor of the exchequer praised England's unimpaired credit, saying: "It is an absolute marvel that after eighteen months of war we are still an open gold country. Our paper can be exchanged for gold at the bank. Every sovereign in paper money has gold back of it. It would never have been believed two years ago that British credit could stand the extraordinary test to which it has been subjected. Notwithstanding the gigantic expenditures we have maintained our credit. We have great resources, but must husband them with prudence. I have no doubt that a year hence I shall be able to show that our credit is still unimpaired." With the end not yet in sight England alone, among the half dozen great powers involved, has already spent a fabulous sum, which, as Premier Asquith rightly says, is "not only beyond precedent but actually beyond the imagination of any financier of this or any other country."

THE proposal to amend the income tax law so as to include smaller incomes is certain to be abandoned in favor of an increased rate on those already taxed. Sentiment against lowering the exemption limit ($3,000 for the unmarried and $4,000 for the married) in order to provide additional revenue for the preparedness program has crystallized in congress within the last few days. Leaders now declare that virtually the entire preparedness revenue burden will be met with income taxes. One of the democratic leaders who will be active in framing the administration bill said he would suggest doubling the present 1 per cent rate on incomes below $20,000 and possibly make the tax on incomes above that amount as high as 8 per cent. He also might suggest lowering the minimum income subject to the 1 per cent rates to $15,000, he said. Married men, he said, according to the plan, would be given the advantage of an additional $1,000 exemption as in the present law.

AN INTERESTING interview with King Peter, of Serbia, was printed in the daily newspapers recently. King Peter is literally a man without a country, for he escaped from fire and disease-stricken Serbia only by disguising himself and riding in an ox wagon and is now forced to take refuge on Greek soil. Notwithstanding the fact that the enemy has almost complete possession of his land and his people are either killed or scattered far and wide, the king remains hopeful of the day when Serbia will again be for the Serbs and the Serbian cause will triumph. He expressed this hope in these earnest words: "I believe in the liberty of Serbia as I believe in God. It was the dream of my youth. It was for that I fought throughout my manhood. It has become the faith of the twilight of my life. I only live to see Serbia free. I pray God to let me live until the day of the redemption of my people. That day I am ready to die if the Lord wills. I have struggled a great deal in my life and am tired, bruised and broken from it." Serbia has suffered even more in the war than Belgium, for it was decimated by disease epidemics and then fearfully harrowed by the Teutonic armies, but despite all this King Peter continues hopeful of the dawn of a better day.

SEN. ROBERT M. LaFOLLETTE, of Wisconsin, has announced his candidacy for the republican nomination for president. The announcement came at a conference of the progressive element of his party, the primary vote of Wisconsin and North Dakota being pledged to him. If these pledges are fulfilled Senator LaFollette will go into the Chicago nominating convention with at least thirty-six votes, a strength to be seriously reckoned with in the final analysis. The list of "favorite sons" in the grain belt is now quite formidable, including Senator LaFollette, of Wisconsin; Senator Cummins, of Iowa, and Senator Sherman, of Illinois, in the republican ranks. There is no avowed candidate against President Wilson in the democratic party, so that the main contest here in the middle West will be in the republican ranks.

ANOTHER SHORT-HORIN HERD BOOK.

Vol. 86 of the American Short-horn herd book is now ready for distribution. It contains 20,000 pedigrees, of wihch 9,000 are bulls numbered from 412,001 to 421,000, and 11,000 cows numbered from 182,001 to 193,000. This volume sells to non-members for $2, charges prepaid, and those interested should write American Shorthorn Breeders' Association, 3 Dexter Park Ave., Chicago.

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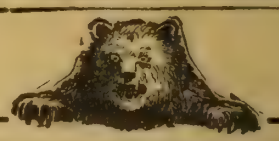

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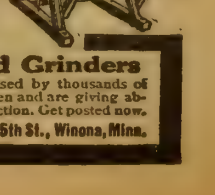

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The Wisconsin Farmer

THURSDAY, MARCH 2, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

PRESIDENTIAL PRIMARY DATES.

I AM in receipt of a number of letters from farmer friends asking me what the situation is in regard to presidential primaries in their states. Perhaps the best way to answer them will be a general article setting forth conditions throughout the grain belt generally.

I am delighted to be able to state that in seven out of the ten grain-belt states direct presidential primaries will be held this spring, giving farmers the right to vote directly for the men whom they want to head the national tickets. Altogether, presidential primaries will be held in nineteen states. It will thus be seen that the movement to give the people, rather than the bosses, the deciding voice and vote has gained greater headway here in the middle West than in any other section of the country, for over two-thirds of the states enjoy the privilege here, while in the United States as a whole the proportion is only two-fifths.

For the convenience of my readers I print herewith a table showing the dates when presidential primaries will be held in the grain-belt states, together with the number of delegates to which each state is entitled. I will arrange the states in the order of their primaries:

State	Date of primary	No. of delegates
Minnesota	March 14	24
North Dakota	March 21	10
Wisconsin	April 4	26
Iowa	April 10	26
Illinois	April 11	58
Nebraska	April 18	16
South Dakota	May 23	10
		170

It will thus be seen that with 170 delegates to both the republican and the democratic national conventions, elected by their direct votes, the farmers of the grain belt will have a bigger part to play in naming party leaders and deciding party policies than they have ever enjoyed before. I rejoice that this is so. It marks a new day in our political life.

The candidates duly placed in nomination in these seven states of the grain belt are rather numerous and include a number of "favorite sons." From reports which have reached me from all of the states I am able to say that President Wilson seems to have a clear field in his party, while the republicans have a large field from which to choose, the most prominent candidates in that party whose names are sure to go on the ballots in these seven states being Theodore Roosevelt, Albert B. Cummins, Robert M. LaFollette, Laurence I. Sherman, Henry G. Estabrook and William G. Webster. With the exception of Mr. Estabrook, who is a New York lawyer, and Mr. Webster, who is a Chicago lawyer, all of these men are doubtless known to my readers. Three "favorite sons" are included in the list (LaFollette, of Wisconsin; Cummins, of Iowa, and Sherman, of Illinois), so that the grain-belt vote may confidently be expected to be quite scattering.

There is only one thing that mars the view as we survey the situation in the grain belt, and that is that while Illinois is listed as a "suffrage" state the supreme court has ruled that Illinois women are not entitled to vote for national delegates. I sincerely hope that this situation will have been corrected long before the next national campaign. Iowa, in all probability, will have adopted equal suffrage before the 1920 campaign, so that the women of the Hawkeye state may content themselves this year with the thought that this is the last presidential campaign in which their voice, vote and influence will not be directly heard and felt.

It is not my intention to enter upon a discussion of the merits and qualifications of the various candidates at this time. I am simply setting forth facts which may help you in measuring up to the full stature of citizenship. No man should fail to exercise the prerogative of suffrage because there is work to be done in the field, the feed lot or the office on primary day. I earnestly hope that every one of the farmers of Wisconsin, Iowa, Minnesota, North Dakota, South Dakota, Nebraska and Illinois will go to the polls on the days their primaries are held and exercise the right which progressive legislatures have granted to them. It is a boon which all who enjoy should exercise without fail. Only by getting down to the very foundations of our political life can we hope to bring nearer to hand the ideal government, which depends, in the last analysis, fairly and squarely upon the vote of the individual, the farmer fully as much as the city man.

SAFETY AT THE WHEEL.

I AM in receipt of a letter from a subscriber urging me to support a proposed law making it a misdemeanor for an intoxicated person to attempt to drive an automobile. I replied that I proposed such a law, in these columns, some months ago, and that I shall be only too glad to do what I can to see that such a measure is placed upon the statute books not merely of one state but of all our states.

The same mail which brought me this letter brought another telling of how justice had been meted out to a speeding automobilist who struck and seriously injured a young farmer. Now, ordinarily, the guilty driver would have been sued for damages and, if the victim had a good lawyer and the case was clear, he might have been compelled to pay a few hundred or a few thousand dollars damages. But this money, nine cases out of ten, would not come out of his pocket, for most city drivers carry liability insurance protecting them against such contingencies. Therefore, the damage suit and the verdict would not be much of a lesson or a deterrent to future speeding. But in the case just reported to me the speeding driver was arrested, was charged with attempted manslaughter, was convicted of assault with intent to commit great bodily injury and was sentenced to the state reformatory. I do not know the driver; he may have a family dependent upon him; I know none of the outside circumstances. I do believe, however, that a few such instances, with the law invoked summarily and severely, will tend to make all automobilists more careful and to think twice before they drink intoxicating liquors (as this driver had done) and then go out upon the public highway with their minds so befogged they cannot, in an emergency, tell the brake from the clutch or reverse from high speed forward.

Automobile driving is really less hazardous and dangerous to life, limb and property than might be thought. I have seen it figured out, and apparently quite logically, that there are fewer accidents, per mile traveled, by automobile communication than by any other method of getting about. When we consider that there are something like 2,000,000 or 2,500,000 motor cars in the country and each one travels about 5,000 miles a year, it is easy to see what an immense mileage is covered by horseless carriages in a year. Looked at in this way the number of accidents is small. But, small as it is, it is still too large.

Motor accidents are sometimes unavoidable, but when they are caused by drink or reckless speeding the driver should be summarily haled before a court of justice and dealt with promptly and without leniency. I hope my friend will be successful in getting his proposed law put upon the statute books of his state. Whatever views we may have on "personal liberty" as applied to prohibition, the fact remains that whisky and gasoline do not mix well. With from 25,000 to 200,000 automobiles in each of the ten states of the grain belt, dashing back and forth along country roads and city pavements at breakneck speed, it is high time we all resolved to see that more caution and common sense were put into our motor driving.

FREE SEED GRAFT AND THE R.F.D.

LETTERS setting forth the deplorable condition in regard to the R. F. D. service continue to pour in upon me. Some twenty or more came in one mail today. Two of the writers had gone to the trouble to figure out how far they are obliged to travel, now that the department has "reorganized" the service, in the interests of bogus economy, compelling the carriers to attempt to cover fifty miles every day, rain or shine, snow or storm. Both the writers state that under the old plan the mail was brought to their front door; today one has to travel 383 miles a year, the other 480 miles a year to obtain his mail. One writer tells of three neighbors who are obliged to go from one-half to three-quarters of a mile each to get their mail, while the carrier doubles back on his tracks a mile in order to serve only two patrons, leaving the three to obtain their mail as best they can. All this is manifestly unfair and unnecessary. All the farmers who complain ask is that the routes be put back on the old basis; they were perfectly satisfied before the order came out from Washington doubling routes and vexing practically everybody, patrons and carriers alike.

One of the best and most practical suggestions I have seen comes to me from Mr. W. P. Adams, proprietor of Elk View Farm, near Edgewood, Iowa, who says that the combining of routes in his neighborhood makes it necessary for some farmer patrons to travel a mile for their mail and deprives others of the R. F. D. service altogether. Mr. Adams then continues:

> I think every farmer ought to have his mail brought to the door. Why should some farmers have their mail left at their door and others have to go a mile or more when they don't pay any more for the service than the man a mile away?
>
> One inspector that was here last spring said a farmer ought to be satisfied to get his mail within a mile. We might just as well have it left at the postoffice—we would get it just as often.
>
> I received a package of garden seeds the other day, from our congressman, G. M. Haugen. When I got it the thought came to me—if congress would cut out this seed graft and use the thousands of dollars spent for seeds to improve the R. F. D. service the farmer would appreciate it a thousand times more than getting a few seeds, which he is able to buy himself, and I would rather pay some for the service, if Uncle Sam isn't able, than to go a half-mile for my mail.
>
> The farmer that does not get his mail every day gets behind reading his papers and some will not be read. Yours for better R. F. D. service,
>
> W. P. ADAMS.

Mr. Adams does well, indeed, to bring up this matter of the government seed graft in this connection. If the officials at Washington were in earnest in their attempts at reform they would start somewhere else than with the R. F. D. service. They could not make a better beginning than with the perquisites enjoyed by our congressmen, from free seeds to excessive traveling expenses. There is no reason whatever why congressmen should be allowed to burden the mails with cumbersome packages of free seeds which the farmer neither asks for, wants nor is able (in many cases) to make germinate and grow. The farmers of America are not suppliants for charity, especially in the form of mislabeled seeds. If congress and the postoffice department really need and want to save money let them cut out the seed graft, limit the free use of the mails by those officials who now abuse their franking privileges flagrantly and otherwise curtail useless and unjustified expenses. But continue to give the farmer the right to receive his daily mail the same as the city man, to the end that our high percentage of literacy and our widespread average prosperity and progressiveness may be maintained in our rural sections, unimpaired.

SWOLLEN WAR FORTUNES.

I WANT to leave just one little thought with you this week, in regard to the great hue and cry about "preparedness." One of the many gun companies located on our eastern seaboard reports its gross earnings for the past year to be $20,309,085. This was twenty times its capital stock, which is $1,000,000. Now the thought I have in mind is this: Here is simply one of the many munition companies making as much in one year as 7,158 farmers in Wisconsin made in the same time, for government figures show the average annual farm revenue in Wisconsin to be $2,836. And how much greater was the investment demanded of these 7,158 farmers than of the one munition manufacturer. It is conservative to estimate that each and every one of those Wisconsin farmers has $15,000 invested in his farm, a total for the entire 7,158 of $85,896,000, eighty-five times the capital stock of the one munition factory.

Is it any wonder that we find a sentiment in favor of war, and of "preparedness" on a vast and expensive scale, in that part of our country where the arms and munition factories are located and where a few men are becoming immensely rich through the slaughter of millions of their brothers? Should we not eliminate from all consideration the immense effect which war is having upon the already swollen fortunes of these munition magnates and allow the calm, unprejudiced reflection of the producer here in the middle West to decide the issue, rather than the cupidity of those who have already fattened far too much on war's demands for things that maim and kill?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks. promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Seasonable Information For Wisconsin Farmer Folks.

MANY instructive articles will be found in this week's issue of The Wisconsin Farmer relating to the orchard and garden. Seeding time is near at hand and the fruitfulness of the season depends largely upon the wisdom we display in the selection of crops as well as upon the skill we exercise in getting the soil prepared. No theorist will be found in the list of contributors to this week's issue of The Wisconsin Farmer because each and every writer has become known because of his success in practical, everyday affairs.

Mr. W. H. Hanchett, of Monroe county, the same Hanchett who has had such a prominent part in developing the Fruit Growers' Co-operative Society at Sparta, sounds a warning against Wisconsin people shipping away much of their good seed corn this year. His statement in this regard will be found on this page, and it should be gone over carefully by every reader.

It is possible not only to add to the beauty and comfort of the farm home by improving the home grounds, but also to add to the value of the farm place. There is no better way of giving the prospective customer a good impression of the farm home place than to have a good, wide, sweeping lawn, with a proper setting of plants and shrubs. Mr. E. H. Niles, of Oconomowoc, Wisconsin, in an excellent article on page 6, tells how this can be economically done on the Wisconsin farm.

An article has been provided in this issue which will be of special interest to the women. Miss E. M. Goelzer, of Oakwood, tells how every farm woman can have shrubbery and perennial flowers at small expense. Miss Goelzer has had practical experience along this line and her interesting advice will be appreciated by all our farm women. Her article will be found on page 9.

One of our best posted horticulturists in Wisconsin is Mr. C. L. Richardson, of Eau Claire. Mr. Richardson knows from practical experience the value of various varieties, and his suggestions on "How to get the most out of the farm fruit patch," on page 10, will be found of great interest to every Wisconsin Farmer reader.

A number of special articles along horticultural lines appear this week under the Fruits and Garden department heading, and these are all on practical subjects of interest to Wisconsin farmers.

A new grass, with which some experiments have been made in Wisconsin, is known as Sudan grass. Mr. George B. Mortimer, of the Wisconsin station, is perhaps better equipped to write on this subject than any man in the state, and for this reason we direct special attention to his very interesting article on page 16 of this issue.

There is a good deal of powder used in blasting in Wisconsin for the elimination of stumps and also for sub-soiling and drainage ditches. The question arises on the Wisconsin farm occasionally how to ignite a series of blasts at one time, using dry cells and a coil instead of a fuse. In response to an inquiry on this subject our Farm Mechanics editor answers this question on page 19.

Paul Johnson, of Stoughton, Dane county, is a farmer-poultryman who has had wide experience and great success. The Wisconsin Farmer has published a number of letters from farmer poultry-raisers. Many of these letters have contained fine suggestions. Mr. Johnson writes us a good, long letter which certainly covers the poultry field, so far as the farm is concerned, and which discusses rations and diseases in a very practical way. No one who raises poultry should fail to read Mr. Johnson's letter this week in the poultry department.

Most of our readers know about the great success which Mr. S. P. Markle, of La Crosse county, has had in raising pure-bred seed corn. Mr. Markle won The Wisconsin Farmer cup at Madison at the recent grain show for the best fifty ears of White Dent corn grown in Wisconsin. On page 13 of this issue will be found a picture of these fifty ears, and they are well worth considerable study.

These special features of this week's issue are provided in addition to the regular departments, which are complete as usual, and which make this one of the best issues of The Wisconsin Farmer.

Keep Wisconsin's Best Seed Corn at Home.

MR. W. H. HANCHETT, a practical and progressive farmer of Monroe county, Wisconsin, has been making a little study of the seed-corn situation, and gave some of his ideas recently at Madison. He says that the farmers of Wisconsin have two important problems to face this season, namely, where is good seed corn to be gotten, and what is the safest variety for 1916. Mr. Hanchett has considered these problems so carefully and answers them so well from his own experience that we quote his own words:

The progressive farmer will have very little difficulty in deciding what variety or varieties he wishes to secure, for that is a matter that he has carefully worked out in past years and he will be guided in the matter by the lamp of his own experience. The corn that he wants is the corn that will give him the maximum yield, and that is reasonably sure to mature in his latitude and particularly on his individual farm. It will not matter to him who originated the variety, whether the catalog man or the agricultural college professor, as performance in the field is the point on which he bases his decision. Neither is he in need of advice in the matter, for he well knows that his own carefully worked out knowledge of the adaptability of varieties to his particular environment is the safest guide in the matter and the chances are that he is among the 25 per cent who have been able to secure their own supply of seed corn and possibly a supply to furnish the unfortunate ones in his own neighborhood.

In my own case there are two varieties that I shall tie to, i. e., the Golden Glow and Silver King. The Golden Glow for crib corn and the Silver King for silage. In my choice of these two varieties there is no admixture of sentiment. They were tried on our farms with the same caution that we try out new introductions and have won out hands down over every other variety that has ever been raised in our community for the purposes for which I plant them. The Golden Glow on my farm on the average season is ready to shock by September 1st and gives us the maximum yield of good sound crib corn. The Silver King on the average season is mature enough for the silo by September 15th and will produce several tons per acre more good silage than any other variety we have ever tried.

In the matter of where to get seed corn the Wisconsin farmer is indeed the most fortunate of all farmers on the northern edge of the corn belt—thanks to the Wisconsin Experimental Association and its co-operative work in grasping the situation early last autumn and saving a large amount of seed by the members fortunate enough to have crops of corn mature enough to produce good seed. Had it not been for the good team work done in this line last fall by this association it would take Wisconsin at least two years to get back on the map as a corn state. As it is, Wisconsin farmers should be prompt to take advantage of the situation and secure their seed at once and not wait till the Wisconsin supply has been exhausted, for acclimated seed is of just as much importance as variety, and if the Wisconsin supply is allowed to go to other states and Wisconsin farmers through neglect are forced to plant southern grown seed the loss in next year's corn crop is likely to be considerable.

Now, just a few words about seed corn in general and I am through. In the corn exhibits which came under my observation during two years of work with the farm institutes, it became very apparent to me that the average farmer has very little idea as to proper type in the selection of seed corn and that there is very great need of education along this line among farmers. Even Silver King with its well-established type had lost its identity entirely after a few years' selection of his own seed by the average farmer. In summarizing the seed corn situation I have this to say, that many farmers will be forced to plant pure-bred seed corn next year that would not otherwise have done so, for the very simple reason that the scrub farmer and his scrub corn lost out last season on the corn crop and the progressive, practical farmer will supply the seed that he plants, for the simple reason that the pure-bred won the race to maturity in a trying season. The practical farmer either has seed corn of his own raising of known germination quality or else has his order placed with reliable parties who have what he wants and is not taking a long chance by waiting till planting time before he orders.

Good Work by Dunn County School.

WHAT an agricultural school may mean to a county was illustrated this winter in Dunn county by the Dunn County School of Agriculture at Menomonie. Some criticism of these county schools, of which there are seven, has been heard in Wisconsin, but they are gradually proving their value to the counties, from an agricultural standpoint, and the extension meetings held in Dunn county in January and February under the direction of Mr. Theodore Sexauer, superintendent, will, without question, result to the advantage of every resident of that county.

Two extension tours were held and approximately 5,000 farmers and interested business men were reached on those two tours. The first tour late in January took in the southern half of the county and reached about 2,700 persons and the second tour, the third week in February, took in the northern half of the county and reached by actual count 2,007 persons. Twelve meetings were held during the February tour, four at Colfax, and one each at Boyceville, Downing, Connorsville, Ridgeland, Sand Creek, Grant town hall, Rusk and Cedar Falls. Mr. C. E. Lee, of the dairy and food commission at Madison, assisted the school faculty on the February tour and told The Wisconsin Farmer that it was one of the greatest weeks of extension work he had ever participated in in the sixteen years he has been working for improved dairying conditions.

The entire faculty of the county school assisted in the meetings and sang and entertained the visitors as well as addressed them. Miss Hermine Knapp, of the domestic science department, talked on farm home conveniences, hair dressing, home making, etc.; Mr. H. F. Good, of the farm mechanics department, on silo construction; Mr. A. H. Pickford, of the animal husbandry department, on the raising of calves and young stock, as well as feeding and feeds; Mr. Lee on the responsibility of the farmer to the creamery operator in the production of good butter, and Mr. Sexauer, when time permitted, on canning clubs and general farm topics.

These meetings carried the work of the county school directly to the farmers. They gave the farmers the chance to get in touch with the simple things that will aid them; that will tend to increase their prosperity and improve conditions in general. That so many farmers took advantage of this opportunity indicates a willingness and a desire to receive tips on the newer things in agriculture, and the Dunn county school has certainly done a lasting service to the county by this extension work, which is an important part of the work of every county school, as only a small percentage of those to be benefited can attend school.

More Money For Dairy Farmer.

HIGH prices for cheese during the past two months have raised the prices for whole milk, all of which is a benefit to farmers of Wisconsin, especially if they are patrons of cheese factories or city milk dealers which are paying on a cheese basis. Cheese prices are around the high-water mark and with a heavy demand from abroad because of the war many dealers are making the prediction that cheese will go higher. Cheese has already reached 18½ cents on the Plymouth board; some has sold as high as 19 cents, and in consequence the factories are paying higher prices now for milk than is the rule.

The result has been that many of the large condenseries in the state have been forced to boost their milk prices to keep their trade, as the farmers in the neighborhood of cheese factories began to deliver to them and quit the condenseries. City milk prices to the farmers in many communities have gone up, and in Fond du Lac, for instance, where one dealer contracted for his milk, agreeing to pay on either a butter or cheese basis, depending on which was higher, paid $1.79 during January for 4 per cent milk. During January the cheese market ruled the higher, and this Fond du Lac dealer paid the following prices, which we are giving here that our readers, selling whole milk, may make their own comparisons:

3.0 per cent milk	$1.31	4.1 per cent milk	$1.79
3.1 per cent milk	1.36	4.2 per cent milk	1.84
3.2 per cent milk	1.40	4.3 per cent milk	1.88
3.3 per cent milk	1.44	4.4 per cent milk	1.93
3.4 per cent milk	1.49	4.5 per cent milk	1.97
3.5 per cent milk	1.53	4.6 per cent milk	2.01
3.6 per cent milk	1.58	4.7 per cent milk	2.06
3.7 per cent milk	1.62	4.8 per cent milk	3.10
3.8 per cent milk	1.66	4.9 per cent milk	2.15
3.9 per cent milk	1.71	5.0 per cent milk	2.19
4.0 per cent milk	1.75		

As Wisconsin produces about 200,000,000 pounds, or more than half the nation's cheese, it can readily be figured how the farmers are to be benefited by the ruling high prices for cheese which are raising the value of the farmer's milk. If the prices remain up, as many cheese dealers expect, it means that this spring the dairy farmers will get more for their product. When the cheese factories pay more it forces the city dealers and condenseries to raise their wholesale prices to meet competition and also gives the butter market an upward tendency. It will mean more money for new and better equipped barns; more silos; more automobiles; more equipment on the farms and better contented and more prosperous farmers.

A Strong Believer in Alfalfa.

JAMES B. CHEESMAN, of Racine county, is president of the Wisconsin Alfalfa Order and a student of live stock and feeding problems. He says the unusual economic conditions caused by the war in Europe have created an inviting and fascinating situation for every stockman. He believes that Europe's needs will continue to be greater as the years roll by and that the demands on the United States will increase heavily. He calls attention to the awful destruction of meat and dairy animals and to the corresponding decreased production of meat and milk. It is Mr. Cheesman's idea that there must soon be an enormous demand from Europe for a supply of field tools which have been destroyed. Farm tractors will be needed to hasten the work so long delayed by war's destruction.

The latest reports gathered do not indicate a very large increase in live stock in this country, and Mr. Cheesman says it remains to be seen whether he can do very much in the export business after the close of the war. If we cannot all find enough pure breds then we can do the next best thing and use good grades. First of all, we

must learn to feed well before we can mold and fashion animals to conform to the best type and style. The effect of judicious feeding, according to Mr. Cheesman, will go a long way toward producing desirable animals for breeding. And further, by an early use of well-selected, leafy alfalfa, the animal's stomach may be appreciably enlarged and its digestive capacity increased.

Mr. Cheesman regards alfalfa as the most profitable farm plant. He says a more liberal use of alfalfa will aid the Wisconsin farmer in preparing himself for better husbandry.

Celebrating the Community Spirit.

RICHLAND CENTER, Richland county, held a booster celebration on February 17th, 18th and 19th, which was one of the best examples of co-operation between business men and country folk that has come to the attention of The Wisconsin Farmer. The business men styled it "Get Together Week" and it was correctly so-called, for it seemed that every man, woman and child in the county visited Richland Center during those three days, and hundreds came from adjoining counties. They traveled by train, by auto, in bobsleds, cutters, wagons and even afoot, and it was in every sense a get-acquainted week for the merchants and the farmers.

After bringing the farmers and their families to town the merchants proceeded to entertain them. Merely getting them to town was not enough. They wished them to enjoy themselves, have a good time, and, if they had any money to spend, well and good. If not, it was just the same, because it was "Get Together Week," and the merchants realized the value of getting acquainted; of making the country folk feel at home so that they would have a warm spot in their hearts for Richland Center and then return later in the spring when they had some trading to do. The merchants wished the farmers to know that Richland Center wanted their trade, wanted them to come to town and was willing to co-operate with them to any extent which would increase the farmer's prosperity and make life more interesting, for the prosperity of the country merchant depends entirely upon the prosperity of the farmers.

Hundreds of dollars were given away in cash prizes and premiums for most everything—from the largest load of farmers that came to town to the largest number of automobiles from any one township. One of the editors of The Wisconsin Farmer was in the city on the first day, and the streets and stores were taxed to take care of the crowd, despite the fact that the roads were thawing and not in the best condition. The two succeeding days were much better and crowds were larger.

A grain show was held, for which $75 in cash was given away as prizes; general demonstrations of farm machinery, engines, automobiles, etc., were held; a baby show and a horse show were features of one afternooon. On the second evening a lecture on soil culture was given free by W. E. Taylor, of Moline, Ill. Among the entertainment features were dancing, style show and entertainment, roller skating exhibitions, etc., all in addition to the regular picture shows, etc. There was also held a dairy exhibit of Richland county butter and cheese for which $45 was given away as prizes. These were only a few of the hundred and one features of the week, and the prizes ranging from $50 down, which were given from the largest loads of visitors; those coming from great distances, etc., did much to swell the crowds.

Richland Center has found that this co-operation between merchants and country folk is a paying proposition. If it pays in Richland Center it will pay in any other town.

Handling Corn Land in Wisconsin.

THE United States Department of Agriculture has made surveys in twenty-one representative corn-growing regions for the purpose of studying farm practice in the cultivation of corn. In the central western division, or corn-belt territory, tillage methods were studied in a representative county in each of eight states. The land is level or gently rolling.

Heavy teams are employed for breaking and preparing the land; gang plows, two-horse check-row planters, and two-horse, six-shovel cultivators are generally used. Corn is usually planted level and in checks.

Using the data obtained as a basis for calculating the average farm practice in this division, it is found that 21.1 per cent of the farmers plow in the fall to an average depth of 6.1 inches, while 78.9 per cent plow in the spring to an average depth of 5.9 inches. The average depth of plowing for all divisions is 6.8 inches in the fall and 6 inches in the spring. The cultivations after plowing and before planting in this division average 2.9; the average after planting is 4.8. Corresponding averages for all areas studied are 2.3 and 4.6. The average normal yield per acre is forty-five bushels, as compared with 36.3 for all the regions studied.

One section of the report deals with a survey of Waushara county, Wisconsin. It was found that about half the corn land in this county is broken in the fall and half in the spring with two-horse and three-horse plows. Before planting, the land is harrowed twice, first with a disk and then with a spike-tooth harrow. About half the planting is done in checks 3½ feet apart each way, with two stalks to the hill, and about half is planted in drills 3½ feet apart with one stalk every ten or twelve inches in the drill. Most of the check planting is done with a two-horse, two-row planter, but some farmers plant by hand. After planting the field is gone over once with a spike-tooth harrow, and again with a weeder. Most of the cultivating is done with a two-horse, six-shovel cultivator. The two-horse, eight-shovel; the two-horse, ten-shovel, spring-tooth; and the five-shovel, one-horse cultivators are used by a few farmers. Corn land is plowed on the average to a depth of 5½ inches. After plowing and before planting, the average number of workings is 1.8, and after planting 5.4 workings are given. The average normal yield per acre is estimated at 30.4 bushels.

Clean Up the Hog Yards.

PRACTICALLY all hog diseases are due to germs. If all pathogenic—disease-producing germs, could be kept out of hog houses and hog yards we would have but very little disease to contend with among our hogs. Cholera, pneumonia, tuberculosis, swine plagues, and many other hog ailments are brought about through the action of germs and they cannot come into existence without the presence of the germs producing them. In other words, it is not possible, as many people think, for a person or one of the lower animals contracting a severe cold, to have the cold "run into" tuberculosis. If the germs of tuberculosis are not present there is absolutely no danger for a cold, no matter how severe, or any other disease for that matter, to end in tuberculosis, pneumonia or cholera. This is just as impossible as it is for iron to turn to stone.

We mention these things simply to impress upon those of our readers who may not fully understand the nature of germ diseases, just what sanitation means and what it may do toward preventing disease. Manifestly, if we can keep the germs of cholera or all other swine diseases away from our hogs we need not dread those diseases. It is true that keeping them away is not always an easy matter, because they may be carried to our farms in a great many ways; yet if we keep our hog lots clean, use disinfectants frequently, permit no standing water in the hog lots to become putrid, but keep everything well drained and as dry as possible, there is comparatively little danger of disease.

Clean out the lots as soon as weather conditions will permit, and don't allow manure to accumulate till farrowing time, when you will be too busy with other duties to clean up. Keep them clean right along. Use lime on the floors in the hog house. See to it that the troughs are kept clean and that the immediate surroundings are kept dry and sprinkled with lime or other disinfectant from time to time. If there are any low places in your lots that should be drained have this done as soon as possible, because low places, especially during wet seasons, are a menace to the health of the hogs.

Test Every Ear of Seed Corn.

IT IS not only important that seed corn be tested in Wisconsin this year but it is doubly important that every ear intended for planting be tested. The unfavorable season of 1915 not only caused a scarcity of good seed corn but many ears ripened that look all right, feel all right and appear to be good seed but which lack germination qualities. The Wisconsin corn grower cannot afford to take any chances this year even on the ear that looks good. It is impossible to tell with the eye whether a kernel will germinate. To be safe every ear which is to be planted should be tested.

As illustrating the need of testing we might refer to an incident at Madison, Farm and Home Week. A farmer who had several samples which looked like winners, was showing his seed. He was conscientious and believed his corn first class, but after a test of several ears which he made at the college it was found that the germination was less than 2 per cent. This farmer was greatly surprised and went home determined to make an ear test of all his seed. Unless others follow his example and test there will be considerable disappointment when the corn fails to show up at the proper time.

The Wisconsin Farmer is informed more testing is being done in Wisconsin this year than ever before. This is proof that the need is imperative, but there are always some who believe they can pick good seed with the eye. The aim should be to get 100 per cent corn. Eighty per cent is not good enough; neither is 90 per cent. Planting 80 per cent corn means the planter loses the equivalent of one row out of five.

Two tests must be given each ear—the eye test and the germination test. With the eye test the best candidates for the germination test are picked. The general maturity and vitality can usually be told by close inspection. But that is not enough, and to be certain make a germination test. Ears well filled out, kernels plump and sound, not chaffy, and firmly attached to a firm, well-colored cob are signs of quality in corn. Cobs which are damp and soft mean low vitality, and ears with kernels loose on the cob and weak in color should be rejected immediately without further testing. After the best ears have been chosen by the eye the germination test may be begun.

Don't give your seed a bulk test. That is, don't shell off the ears, mix all the corn together, and then pick out a few hundred kernels for the test. Test each ear separately before shelling. Take six kernels from each ear—two from near the top, two from near the butt, and two from near the center, and from different rows on the ear—so that the sample will represent the ear as completely as possible. Unless the six kernels all germinate and show vigorous sprouts, discard the ear from which they were taken. Aim to get 100 per cent seed corn. The better the seed, of course, the more perfect the stand, and the better the stand, other things being equal, the higher the yield will be. Even by exercising the greatest care in seed testing the loss due to imperfections in the stand will still be heavy enough, but that is no argument against planting the very best seed obtainable.

Now in regard to the amount of work, one man can easily test one bushel of seed corn in two hours or five bushels in ten hours; hence, in a day's time he can test enough corn to plant thirty acres, so the job is really a comparatively small one and especially so when it is done during the slack part of the season when perhaps nothing else could be done anyway.

If you haven't a tester buy one; if you don't feel like buying, make one. The testers on the market are very convenient and worth the money they cost. When people have the right kind of tools with which to do a job they can do better work than when they improvise something that may answer the purpose. This is why we think it is a good plan for the farmer to get one of the standard and reliable makes of seed testers.

Two Prominent Wisconsin Men Dead.

TWO prominent Wisconsin men, each one of whom had a special part in developing Wisconsin, have recently died. They are A. L. Hatch, of Sturgeon Bay, and Dr. Harry B. Favill, of Chicago, formerly a resident of Wisconsin. Mr. Hatch has been called the father of the cherry business in Door county. He had been intimately connected with the development of horticulture both in the Kickapoo Valley district and in the Door county peninsula. Dr. Harry B. Favill could not be called the father of the dairy business in Jefferson county, but his father and uncles, residents of that county, and two or three old settlers had a great part in developing the interest in Holstein cattle in the "greatest Holstein county in America." Sketches of both of these prominent men, and their pictures will be found in other columns of this issue.

The Rotting of Straw.

SOIL experts are diligent in season and out of season preaching the necessity and importance of conserving as much humus-making material as possible on every farm. Experiments conducted at the various stations indicate that many types of soil have an abundant supply of mineral constituents for crops if conditions could only be made favorable for their liberation. To this end great importance is attached to the matter of conserving the farm-yard manure, while even the cornstalks and all the straw produced on the farm should find its way back to the soil, according to those who have studied the matter.

In this connection we beg leave to refer to a communication received from a subscriber, Mr. S. P. Thomas, relating to the straw problem. Mr. Thomas writes:

> I would like to hear from you in regard to the best plan of rotting down a straw stack. The particular stack in question is close to the barn and I therefore cannot carry out the suggestion that some have made of adding lime to the straw in order to bring about its decomposition. I want to utilize this material on the soil but confess that it is difficult for me to decide what is the best method of getting this straw back onto the land. Possibly you or some of your readers can help me out on this point.

In former times the notion was quite strongly adhered to that straw must be rotted before applying it to the soil. We have known many instances where the daily custom prevailed of throwing a certain part of the stack into the yard, so that it could be tramped down by the cattle and hogs, later to be hauled to the fields in the form of manure. Indeed, there is much to recommend this method in the case of those who have live stock enough to utilize all the straw in this way, but we recognize the fact that there are thousands of instances in the corn belt where this plant cannot be followed. In such cases, it is entirely practicable to haul the straw directly to the field, scattering it thinly over the surface. Manufacturers have even recognized the need for providing some practical means of scattering dry straw and, as a result, machines are now on the market that efficiently perform this task. Those who do not have live stock enough to convert their straw into manure should remember the fact that the straw is worth saving. While it contains a relatively small proportion of fertility, yet its humus value is sufficient to justify the labor of transferring the straw from the yards to the field.

PLANNING FARM HOME GROUNDS.

Money Properly Expended on Farm Home Grounds Is Well Spent—By E. H. Niles, Oconomowoc, Wis.

THE American farmer, especially the Wisconsin farmer, if you please, is beginning to come into his own. He is receiving a larger proportion of the wealth his labor produces and with this increased prosperity he is letting up from the strain of subduing a continent long enough to consider the attractiveness of his surroundings. The natural result of this is the present wave of interest in the landscape work because no other form of decoration can be applied so naturally and so effectively to the farm home. He has plenty of out doors which is the main feature. He can get many of the materials near by and he has the training to give the proper care. The only part that worries him is how to proceed and to aid in this is the object of the following suggestions.

The general principles of landscape gardening apply to the country home as well as to any other. These general principles have been repeated so often they will not be dwelt upon here, but will be briefly outlined as follows: Open up and accentuate all the attractive views and screen unsightly ones; soften the harsh lines of the house and lessen the change from the natural to the artificial by planting at the angles; set off the house to the best advantage by making framework, that is, group the planting to the sides and the rear, leaving the lawn open, save for a few trees. The background should be as high or higher than the house with the sides decreasing in height to the front. Plant naturally, that is, avoid straight lines or geometrical figures, unless artificial conditions necessitate, or make excuse for them. Arrange the planting to bring out the special beauties of each season, from the crocus and snowdrops of early spring to the profusion of May with its lilacs and apple blossoms; from the gorgeous peonies and poppies to the soft purple and orange shades of late summer; from the rich coloring of foliage and fruits of the fall to the cheerful contrast of red, yellow and white bark with the snow-covered evergreens of winter. But in striving to obtain this do not forget that the most important of all is foliage.

One of the chief difficulties for the farmer is the time required for the care of the planting after it is in. For his city brother it is a rest to get out of the office or store in the evening and pull weeds among the flowers. But such rest does not appeal to the farmer who has worked in the field all day. He also seldom has watering facilities, but this is more than offset by his knowledge of the benefits of cultivation which the city man seldom has.

ALWAYS LEAVE THE LAWN OPEN, PLANTING THE SHRUBS AND PERENNIALS ALONG THE BORDER AND AGAINST THE HOUSE.

A VERY NEATLY ARRANGED FRUIT ORCHARD.

It is, therefore, necessary to cut down the labor item as much as possible. This can be done by reducing the lawn to definite limits, by keeping the planting in groups, leaving the lawn open and by selecting for the most part varieties that are fairly permanent and easily cared for.

By reducing the lawn to definite limits it is not meant that it should have a stone wall around it or a fence of any kind, but it is meant to do away with the usual strip of waste land that is neither lawn nor field. It is usually too full of ruts, weeds and mowing machines to be used for either. First, lay out as much lawn as you will be able to get along with conveniently; then lay out such drives and walks as are absolutely necessary and edge these up so that every user will know where he belongs and after this is done proceed to devote everything that is left to farming purposes. Almost all farm crops are attractive in themselves and a well-kept field may form an important part of the landscape. It is the waste patches that are unattractive and unprofitable and they form an unending source of weed seed and trouble. By having the drives well defined it will aid in preventing this, as the adjoining ground is not so likely to be cut up by ruts.

SCREENING AN UNSIGHTLY VIEW. NOTE THE STATELY LARKSPUR IN THE FOREGROUND.

In laying out the drive remember that it is meant for service, and, therefore make it as convenient as possible without cutting into the lawn more than is necessary, especially the front lawn. A curve is usually considered more graceful than a straight line, but remember that there is a difference between a curved drive and a crooked one. It is often more natural to drive in on a slight curve than a straight line, but if the straight drive seems the more natural make it so.

We are now ready for the grading. The house and barnyard should be well drained and there should be no catch holes on the grounds unless they are under drained. A gently rolling contour is to be desired and if you have secured these conditions in your building site it is well, as it is difficult to grade as gracefully as nature does and such work is expensive. In grading and excavating for the basement and drives save the top soil for the surface. After the general grade is done put in a heavy coat of manure and plow it under, or, better yet, if you care to take the time raise a crop of clover and turn it under with the manure.

We are now ready for the planting. Remember the first of the "general principles" as outlined above was to accentuate the best views and screen the unsightly ones. Naturally these should be considered from the points from which you will be the most likely to see them. Therefore, stand at the most important windows, doors and porches and lay out your view lines. If there is no window at your best viewpoint make one. Paintings are only imitations. Why hang them on your walls when you can cut a window and have a real picture? No house is properly planned unless the windows

A CORNER OF EVERGREENS, WELL LOCATED. A PLEASURE TO THE EYE THROUGHOUT THE YEAR.

OPEN LAWN BORDERED BY SHRUBS, AN IDEAL SETTING FOR THE FARM HOME.

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The 7-Passenger Fashion Plate of '16

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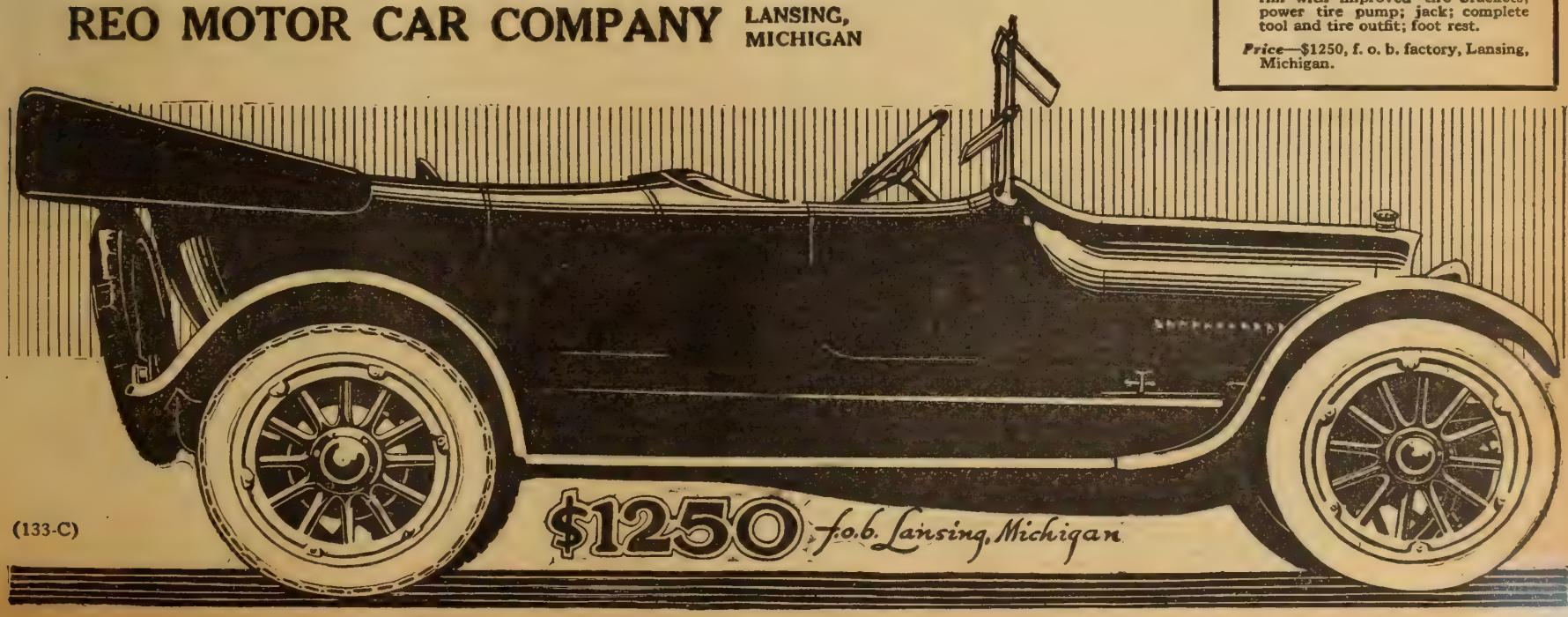

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are located with reference to the views as far as practicable.

After the views are established arrange the groups of trees and shrubs between them. This will frame in the views and lead the eye in that direction. In other words, accentuate them. Unsightly views can often be shut out by these same groups. If the object to be screened is low use a group of shrubs, and a good view can often be obtainable over them. If it is high, for instance, a gravel pit in a distant hill, use high trees and possibly a good vista may be had beneath the branches.

The plan should now be considered from the road and other likely viewpoints, with reference to keeping the views open as much as possible from these points and to frame the house and grounds.

The planting directly around the house is governed by its style. Some require delicate lines, as are found in the eulalias and bridalwreaths; others strong formal lines as are found in the evergreens. Some require tall, pyramid forms and others low, drooping ones. For instance, a group of Lombardy poplars or red cedars by a low spreading house will make it appear all the lower, while with a tall house of long lines it will sometimes add the same architectural touch that a church steeple does to an otherwise plain building. However, this is something which must be decided with each house individually, as no set rules can be laid down. For instance some houses of the formal straight lines need graceful planting to offset this, while in other cases it is well to follow the formal idea throughout by using evergreens and other plants of the stiff formal outline. The heaviest planting should usually be at the corners and the blank spaces in the wall, because such features are not restful to the eye.

E. H. NILES, OCONOMOWOC, WIS.

The next problem is to decide on the choice of plants. It is necessary to consider many things in selecting the proper plant for each location. It is necessary to consider its height when mature, its breadth, its form, whether drooping or upright, formal or natural, its adaptability to the amount of light and moisture and to the character of the soil, the character of the foliage, the kind of fruit and many more points which come up when one gets into the work.

To do all this it is necessary to have plans, as no mind can carry all these details of arrangements for the entire place. It is better and more economical in the end to have experienced help. But to one who wants the satisfaction of planning his own home these results are not impossible and we will attempt to outline the actual steps necessary to accomplish them. Three suggestions will be given. First, do not plant too much. It is a common fault to plant trees and shrubs much too close. You often hear the remark that the trees were planted with the idea of cutting out every other one when they became crowded, but I do not recall one instance where they were taken out until they had caused irreparable damage. A perfect tree is a rarity on our streets, largely for this reason. The same fault is just as often found in planting shrubs, although it is not so serious, as shrubs can be more easily transplanted when they get to crowding, although even this is seldom done. From thirty to forty feet is none too wide for trees and four to six feet for the larger shrubs, as lilacs, honeysuckles, etc. Second, do not be too impatient and skip all the slow-growing varieties, as often, in fact, as a rule, they are the most permanent. Contrast, for instance, the soft maple, box elder and the poplar with the sugar maple, elm and oak or the Balsam fir with the white spruce. Neither is size a gauge for value. A Japanese yew (taxus cuspidata brevifolia) two feet high is more valuable than a black spruce ten feet high. Third, do not think that just because a tree grows wild in the woods it is not as good as some variety imported from Europe. With few exceptions the native variety does better with us than the European variety of the same species. For instance, the American white elm does better than any European elm I have ever seen. The same is true of the American white birch and the American linden and others. The Norway maple seems to be an exception, although in some respects it is not as good as either the native sugar maple or acer rubra, sometimes called the swamp maple. In the evergreen family no country has produced a finer evergreen than the native hemlock spruce and the white pine is one of the finest pines. The Canadian yew of our northern woods does not seem to be as good as the Jananese yew, although neither of them has been tried enough. The Wisconsin woods and meadows also contain hundreds of varieties of ornamental shrubs and flowers, but it is too large a subject to even touch upon at this time.

While it is well to use many of these native varieties it is not wise nor economical to collect them, as the plants will not be as good and will not grow as well as nursery-grown stock.

Of course, there are hundreds of desirable varieties not native of Wisconsin, but stress is here laid upon the native varieties because they have been neglected?

These are the three most common errors, and by avoiding them it will save labor also, because a surplus of trees and shrubs, fast growing, short-lived ones, or plants which die because they are not adapted to the climate, all add to the work.

Just a word in closing on the use of evergreens. They have been put into bad repute, to some extent, because they were wrongly used. The larger growing ones should seldom be used in the front yard, as they obstruct the view, and their beauty is disfigured if they are trimmed from the bottom. If in the background or at the sides where no view is obstructed a group is very appropriate, especially if it can be placed to the north or west of the house. The dwarf varieties can be used in the front or near the house the same as shrubs, and should be used more. The best of these dwarf and semi-dwarf varieties for Wisconsin are pinus mugho, pinus cember, juniperus prostrata, juniperus pfitxeriana, juniuerus scotti, taxus cuspidata, taxus canadensis, thuya wareana, thuya globosa, thuya pyramidalis and thuya elwangeri.

It is hardly necessary to go into the manner of planting and the care of the plants, as the average farmer understands that, but it might be well to add that such work, if properly laid out, is not especially expensive to install or care for, and will increase in value as the years go by, and at the same time be a source of education, of health and of general satisfaction to the farmer and his family.

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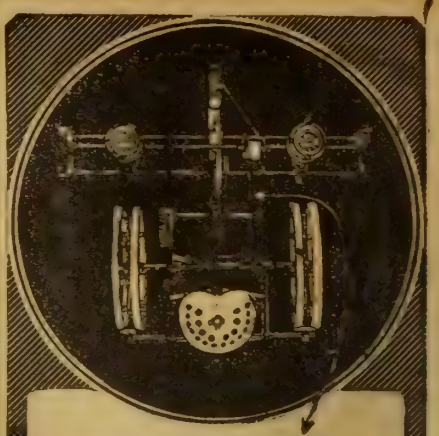

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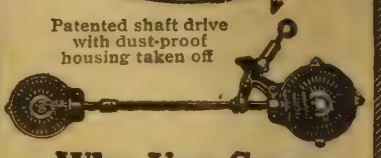

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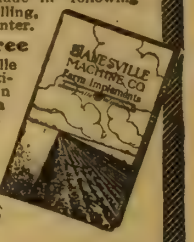

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Flowers Suitable for Farm Home.

Every Woman, at Small Expense, Can Have Shrubs and the Perennial Flowers—By Miss E. M. Goelzer, Oakwood, Wis.

THE planting of shrubs and flowers is a matter to be considered by everyone who wishes to complete the picturesqueness of the country home. For shrubs and flowers form an important factor in the adornment of the home surroundings.

There is such a multitude of hardy shrubs and flowers that no one ought to be at a loss in selecting a few that are attractive in appearance and useful as cut flowers. The hardy shrubs when once planted and given reasonable care will grow almost indefinitely. Plant them in convenient places. If not in front of the house then plant them in places where they may screen unsightly spots and grow just as easily as the burdocks and other weeds.

Of the hardy schubs the common lilac, an old-fashioned shrub, deserves a place in every garden. The beautiful purple flowers, with their tender fragrance, are beloved by everyone. They will grow almost anywhere, but good soil and a sunny location will produce better flowers. Trimming out the withered flowers will greatly improve the appearance of the shrub during the remainder of summer.

Another favorite shrub is the snowball. It is very hardy and its lovely white balls of bloom are a beauty to behold.

Of the Spireas the most beautiful one is the Spirea Van Houttei. It is a beautiful ornament for the lawn at any season and when in flower it is a complete fountain of white bloom.

The rose designated as the "Queen of Flowers," should be foremost of all the shrubs. No garden should be without them. It is the most appreciated flower and well deserves its rank.

The hybrid perpetuals are the most desirable. They are classed as entirely hardy, but some protection during the winter is quite beneficial, as the constant freezing and thawing injures the bushes.

The hybrid tea roses are among the most beautiful of all. They produce an abundance of flowers from early summer until freezing weather. For continuous flowering it is necessary to have healthy and vigorous plants, and so we must constantly battle against the ravages of insect pests and diseases. Spraying once a week with a Bordeaux arsenate of lead mixture will keep them free from almost all insect pests as well as fungous diseases, but sometimes it is necessary to use either a tobacco or whale oil soap solution for the aphis.

The hybrid tea roses are not hardy and even with good protection will not withstand our winters. It is best to take them up and plant in boxes and place in a cool cellar and giving just enough water to prevent the soil from getting too dry.

Of the hardy climbing vines the large-flowering clematis is the most attractive. When in bloom no other plant equals it in beauty. They are very hardy, but it is best to take the vines down and cover with a liberal mulching of strawy manure.

Of all the plants that are planted for ornamental purposes there are none that have attained such popularity as the hardy perennials. Their popularity is not at all surprising when we note the many changes that take place throughout the growing season in a hardy border, as almost every day brings something new to interest and delight. When once established they give us great rewards for slight labors, but do not, however, imagine that hardy perennials need no attention. They need good cultivation in spring and some must be protected in winter.

The early-flowering ones grow very rapidly and one of the first to bloom is the bleeding-heart. Its long racemes of graceful, pink, heart-shaped flowers are very attractive, its only objection being that soon after the flowers have faded the foliage will ripen and leave a dormant spot.

We next will have the columbines. They come in various colors and are very pretty as cut flowers. They succeed in any soil and location and plants often come up from self-sown seeds and are easily transplanted.

The ever popular peony is considered the "Queen of Spring Flowers." They are of rather slow growth when first planted, but when well established will increase in size each year. They are unequaled for their brilliant colors and abundance of bloom. They require a deep, rich soil and thrive in a partly shaded as well as in a sunny location and are very hardy, but a good mulching of manure will retard the early growth in spring and thus prevent them from being injured by late frosts.

The delphiniums or hardy larkspurs with their long, showy spikes of flowers, ranging through all the colors of blue from beautiful sky blue to purple, are much admired. They are of easy culture and may be raised from seed and many of the plants will blossom the first season. After the first crop of flowers have faded cut off the flower stalks to within a few inches above the ground and new shoots will come up and produce a second crop of flowers. A good plan is to stake the plants when about three feet high, as the stalks are very tender and easily broken by the wind.

The hardy gaillardia is one of our showiest perennial plants. It blooms the entire summer and its large, gorgeous-colored flowers are a bright, golden yellow and reddish brown, going into all imaginable tints and shades. They are easily grown from seed and do well in any good soil, but want a sunny location.

The perennial phlox is one of our prettiest summer flowering plants. They have such a wide range of colors and when once planted do not need attention for several years. They succeed in any good soil, but a mulch of manure every season is of benefit to the plants. If the flower spikes are cut off as soon as faded a second crop of flowers may be had until late in the fall if plants are given sufficient moisture.

There are many more hardy perennial plants that are equally beautiful and attractive, but coming on to midsummer we want the annual flowers for beautiful colors and profusion of bloom. There are so many beautiful kinds that no garden should be without them. As cut flowers for decorative purposes they are the most desirable.

The seed of the annuals must be sown each year and of many of them it is best to start the seed early indoors in shallow boxes or in a cold frame. I do not prefer a hotbed, as the plants grow too frail and tender and will not grow well when transplanted.

Many people do not have available space for flower beds, so a good way is to plant them in the vegetable garden, which usually consists of rich soil and is suitably located. Do not plant in beds, but put in rows as the vegetables, so they may be cultivated and kept free from weeds.

I will mention a few of the annuals that are easy to grow, have a wide range of colors and continue in bloom until taken by the frost.

One of the earliest flowering annuals which for beautiful fragrant flowers is excelled by none is the ten-weeks stock. The colors range from the deepest reds and purples to the most delicate pink and lavender and white, and as cut flowers they are very lasting.

For brilliant colors we will have the giant-flowering snapdragon or antimhinums. They grow well in any soil, but need a sunny location and a warm temperature, as in cool weather the flowers are not abundant.

Another very pretty flower is the sweet sultan or centaurea. It is seldom grown in the ordinary garden. Its artistic shaped flowers are borne on

(Concluded on page 12.)

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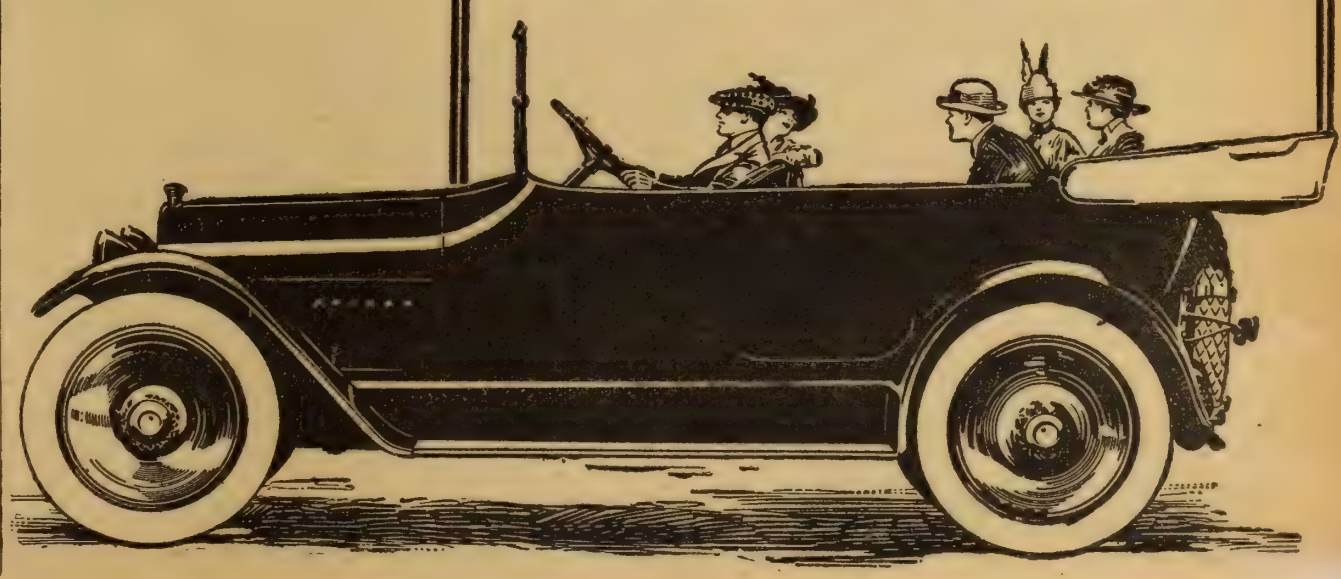


THE FARMER'S FRUIT GARDEN

How to Get the Best Out of the Fruit Patch—By C. L. Richardson, an Experienced Grower, of Eau Claire, Wis.

RESULT OF PROPER SPRAYING AND PRUNING.

THE farm garden is a project which almost everyone has idealized to suit his particular tastes and circumstances. But as it is at best only an attractive side line, dwelling as near as may be in peace and amity with the drove of swine, the herd of cattle, the corn, the grain and the hay, so this garden must be a very practical affair after all; simple, productive, inexpensive, easy to care for, and, above all, dependable and scattering its fruits over a long stretch of time.

This combined orchard and garden should be of considerable extent—from one-fourth to three-fourths of an acre we will say. Its length will be much more than its breadth to secure easy cultivation, with clear turning space at the ends and free clearance at the sides. The soil should be fertile and in good tilth. Its location is usually dictated by convenience and location of buildings. Nevertheless, if any choice be possible a northeast is preferable to a southwest slope, or in lieu of that secure as much protection as possible from fences, windbreaks, buildings, etc., from the icy blasts of the northwest in winter and the intensely hot southwest simoon of August. The importance of this winter and summer protection is not sufficiently realized by those whose farms happen to lie in exposed situations.

The trees should be arranged in rows the long way of the plot, preferably north and south. In the absence of local conditions to the contrary the plums, being hardier, are placed west of the apples. The currant and gooseberry bushes may be planted between the trees in the row, while the strawberries and raspberries may be planted in rows between the rows of trees.

Depending upon the soil and its adaptability to apples, as well as the distance north and west in the state, from a dozen to thirty apple trees will be required. Throughout the southern and central section the list would be somewhat as follows: One each of Yellow Transparent and Wolf River, two each of Duchess, McMahon, Hibernal, McIntosh, Patten's Greening and Fameuse, four each of Wealthy, Dudley and Northwestern Greening. To these I might add Scott's Winter, Anisim, Talman Sweet for baking and the Gideon for its superb sauce. Along the southern Michigan lake shore a dozen of the poorest of these might be replaced by the King, Baldwin, etc.

Do not crowd the trees. Twenty by twenty-four feet is close enough for apples and eighteen or twenty feet for the plums. This gives room to plant two gooseberry bushes, three currants or a grapevine or two between trees.

There are a number of good currants on the market, perhaps the Perfection and Fay's Prolific are as good as any. Keep them clear of the trees as they require a high degree of fertilization. Until the trees become too large to permit, cultivate in early spring and summer, mulch or manure heavily about the bush, remove about one-fourth of the old wood each year and when you cannot cultivate longer mulch with sawdust or the chip dirt from the wood piles. For the currant worm dissolve half a teaspoonful of white hellebore or three times that amount of London purple in a sprinkling can and apply once or twice.

HANDY FOR THE HOUSEWIFE.

A GENEROUS YIELD.

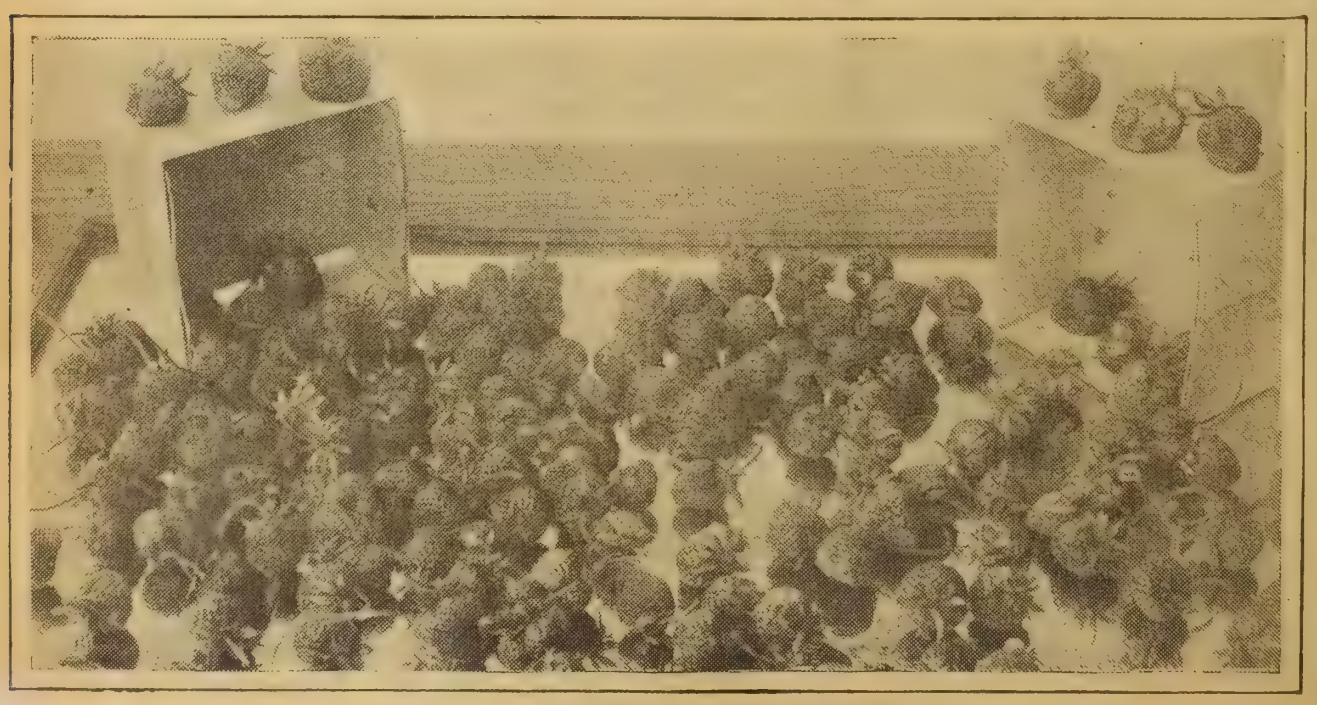
The plum succeeds over a greater diversity of soils than the apple. it fills in a gap and the fruit is excellent raw, preserved or canned. Ten to fifteen trees may profitably be planted, including three or four Surprise and one or two each of such standards as De Soto, Wyant, Wolf, Forest Garden. Terry, Quaker and others. For best results they should be trimmed back each year to balance and to remove excess bloom, should be mulched to retard spring blossoming, retain moisture and increase the size, should be cultivated if possible for the same reason and should be sprayed with Bordeaux mixture and arsenate of lead for fungous diseases and curculio. They all have too much of a tendency to go back to the condition of their uncivilized parents. To this list I would add two trees each of several of the Hansen Hybrids, including the Sapa, Opata, Hanska, Kaga and possibly one or two more. They fruit extraordinarily young, fill in vacancies in the fruiting season and are pleasing and attractive as far as I have seen.

There is a strip in eastern Wisconsin where the farmer will find it profitable to plant cherry trees, but so far they have not proved a fruiting success beyond narrow limits.

About 200 raspberry canes is the next consideration. Almost every year sees new introductions, but my choice would still be the old, time-tried Marlboro, Cuthbert and Loudon. The purple Columbian is good also. They should be planted in the early spring in rows six to eight feet apart and three to four feet apart in the row. As fast as possible develop a solid hedge row with paths separating it from the next. It will be necessary to lay them down and cover with earth for two or three years until well established, after which they may be left exposed over winter, and after some winter killing they will become acclimated and fruit pretty regularly. The size may be improved by cultivating out the paths and removing the old wood each August. I am aware this is unorthodox treatment, but it is one way to secure fruit on the farm. How many farmers will continue to grow a cane that must be laid in the grave each fall in the haste of plowing to be exhumed again in the rush of spring seeding?

The strawberry bed is of first importance. Five hundred plants is not too many for the average farm. There will be room for two or three rows between the apple trees if set four feet apart. Set twenty inches to two feet apart in the row and as early in the spring as convenient. Let the extra earlies, the extra lates and the freaks alone. One hundred Progressive (everbearing) will be a wise investment—they will produce the first berries in the spring and if the season is reasonably wet a fair second crop in August and September. The Dunlap will succeed anywhere in Wisconsin, is perfect flowered, hence can be planted alone, and is very hardy and productive. If several varieties are desired add the Warfield or Haverland for mid-season, and the Sample, New York, Uncle Jim, Glen Mary or one of the other large, late varieties.

Cultivate once in two weeks or oftener until August and not so often after that. Hoe them four or five times during the spring and summer, swinging the runners about longitudinally to form a row one to two feet wide. Keep the blossoms cut off until



NOT LONG TO WAIT FOR THIS MONEY-MAKING CROP

July to throw all the vitality into the runners. Keep the alley free from plants and in a fine state of cultivation. Before the snow covers the rows out of sight they should be mulched with straw, marsh hay or strawy stable litter one to two inches in thickness. This prevents thawing and freezing, retards the weeds next spring, conserves moisture and keeps the fruit from lying in the dirt. This bed will furnish fruit for two years at least, but each spring a new bed should be set out from the new plants which have never borne fruit, as old fruiting plants are not satisfactory. After the bed has fruited the alley can be plowed lightly, dragged down and made ready for the rooting of new runners from the old row alongside. Sometimes it is possible to carry a patch over four years. By moving the bed about in the orchard and beside it the orchard and garden may be kept together for a long period of time if desired. To avoid continual replanting on the same ground rotate with potatoes, garden vegetables and even oats and clover. Clover hullings make excellent mulch for trees, but contain too much grass seed for use on the strawberries.

Before the ground freezes it is well to examine the trees and if any are loose in the ground tamp the soil firmly about and remove any grass which touches the trunk, as it makes a tempting home for the mice, which I find more destructive than the rabbit. Wrap a piece of tarred paper or building paper about the trunk of the tree reaching from the ground to or even above the lower limbs, and tie with a bit of tarred twine. This is a protection from mice, rabbits and sunscald. A large bundle of cornstalks makes a higher protection and seems to be more efficient, especially on loam or sandy soils.

Black raspberries require the same general treatment as the reds except that they prefer richer land, more moisture and more mulch than the other. We have found the Cumberland, Gregg and Older satisfactory.

Very difficult to raise and not advocated for the average farmer is the blackberry. Where it succeeds at all it prefers heavy, black soil, very fertile and very wet. The Ancient Briton and Snyder are reliable as any. All over central and northern Wisconsin the wild blackberry grows profusely, and almost any farmer as he clears up the woodlot may get a few vines started in the new clearings, and for the next five or six years while the stumps are rotting down he may have a very fair supply of blackberries. Coming before the apples and after the other small fruits they fill the vacancy quite satisfactorily.

Let us summarize and see what the owner may look forward to in time to come under favorable conditions. In August and September of the first year the everbearing strawberries will produce a few berries if the year is fairly wet. The next year the strawberries and raspberries come into fruit and three of Hansen's Hybrids. The Americana plums will bear at three years and the first apples at four. So that at the fifth year the strawberries will commence from the 5th to the 20th of June and continue for three weeks at least. By the time they are gone the raspberries come on and carry the family along a fortnight or more. By that time the Sapa and Opata plums will be ripe and blackberries coming on. Before they are gone the native plums and the remaining hybrids get into the fray and before the last of these are eaten the Charlamoff Duchess and Yellow Transparent are here. Once the apples arrive the list given above will take care of the average farm family until the last Northwestern Greening is gone—but not forgotten—in May of the ensuing year. Of course, the family have eaten canned and preserved fruit all fall and winter. From May to June the poor average farmer will be obliged to eat pieplant and asparagus, starve and possess his soul in what patience he may until the strawberries arrive once more.

Perhaps this looks like a seriously large contract, but it is all possible, all practical and can be done on any farm in Wisconsin where the first outlay can be made, the small amount of time afforded that the fruit requires, and where conditions permit apple trees to grow. In the far North and where the soil is unfavorable the farmer may still try the Duchess, Patten's Greening, Virginia crab and Hibernal—some of these will grow on almost every farm if well cared for. So this is the opportunity for the family that will try.

GROWTH OF WISCONSIN LAND VALUES.

The growth of land values in Wisconsin districted by counties is traced in a report based on land sales compiled by the state tax commission. Land has increased in value $33.75 an acre in 1905 to $55.25 in 1915. It shows the value per acre from 1905 to 1915 by counties as follows:

	1905	1910	1915
Adams	$ 13.00	$ 16.00	$ 22.50
Ashland	9.25	14.25	19.75
Barron	23.00	32.50	46.00
Bayfield	11.25	13.00	15.50
Brown	63.00	77.75	92.50
Buffalo	27.00	29.50	43.75
Burnett	10.50	11.50	17.25
Calumet	80.75	98.50	134.50
Chippewa	23.00	28.00	39.75
Clark	26.00	30.75	43.25
Columbia	52.00	61.75	76.75
Crawford	20.75	26.50	41.75
Dane	72.75	88.25	122.75
Dodge	88.50	110.75	129.75
Door	32.50	43.25	57.00
Douglas	16.25	32.25	47.25
Dunn	25.00	31.50	51.25
Eau Claire	26.25	33.75	45.00
Florence	8.25	12.25	14.25
Fond du Lac	84.75	87.25	112.50
Forest	8.50	10.75	18.75
Grant	44.25	48.25	73.25
Green	73.00	91.75	112.50
Green Lake	54.25	71.50	94.75
Iowa	46.75	59.25	82.25
Iron	7.75	13.75	29.00
Jackson	17.75	23.00	27.75
Jefferson	88.75	93.00	121.00
Juneau	23.25	31.50	30.50
Kenosha	76.25	93.00	113.00
Kewaunee	49.75	69.50	82.50
La Crosse	37.50	37.00	46.25
Lafayette	70.75	83.25	105.25
Langlade	10.50	23.00	28.25
Lincoln	13.50	20.50	24.00
Manitowoc	72.50	97.75	109.00
Marathon	22.75	29.75	40.50
Marinette	12.25	18.50	21.75
Marquette	24.00	28.75	36.00
Milwaukee	235.00	355.00	425.00
Monroe	27.50	33.00	45.00
Oconto	17.75	23.75	27.50
Oneida	7.25	12.00	10.00
Outagamie	67.75	80.00	87.75
Ozaukee	98.25	117.00	137.50
Pepin	24.75	34.25	49.50
Pierce	34.50	43.00	59.00
Polk	22.50	26.75	40.00
Portage	23.00	32.75	43.50
Price	8.25	14.25	19.00
Racine	72.75	108.00	122.50
Richland	32.00	47.50	71.75
Rock	71.00	93.00	120.50
Rusk	10.75	15.00	20.50
St. Croix	36.75	43.25	61.50
Sauk	48.50	65.00	77.50
Sawyer	6.25	10.25	15.50
Shawano	30.00	38.50	43.50
Sheboygan	82.50	102.00	122.00
Taylor	12.50	17.75	23.50
Trempealeau	26.00	37.75	51.75
Vernon	31.75	40.50	58.50
Vilas	14.00	19.75	11.00
Walworth	85.50	115.25	134.00
Washburn	9.75	13.00	18.25
Washington	83.00	96.00	108.00
Waukesha	91.50	105.75	126.00
Waupaca	36.00	48.50	58.25
Waushara	27.75	35.25	50.75
Winnebago	74.00	81.00	93.00
Wood	29.25	35.75	39.75
State	$33.75	$49.25	$55.25

In 1915 the estimated average value per acre in fifteen counties is less than $25; in twenty-three counties between $25 and $50; in eight counties between $50 and $75; in eight counties between $75 and $100 and in seventeen counties over $100.

PRACTICAL STUDY OF THE PIG RATION.

On October 23, 1915, two pigs which averaged 10 pounds each, were purchased and sold to the boys of the seventh and eighth grades of the Gays Mills public schools on equal share at $1 each. These pigs were just ordinary pigs of no particular breed, and although they were bought at the local stockyards, yet they were not fat, but rather in the best of running condition. For a time their daily ration consisted of buttermilk and table scraps; later a mixture of ground feed was added; and still later corn was included. A mixture of charcoal, wood ashes and salt was kept before them all the time.

The pigs were sold on January 27th, having been fed ninety-six days. It was found that they had made an average daily gain of better than one and a half pounds each, the total weight of the two being 510 pounds. They were bought at $6.50 per hundred pounds and sold at $6.75 per hundred pounds. Hence the profit to pupils on each dollar invested amounted to 98 cents.

However, mention must not be neglected of the fact that through the kindness of a neighbor a small field of corn was given to the boys for the husking of it, otherwise the financial side of the story would not look so well in print. However, the chief object of the experiment was not so much for any financial gain which it might bring, but rather for the purpose of arousing a great interest in agricultural work by giving the pupils an opportunity to deal with the real problem instead of the abstract.

No carnivorous bird or quadruped in England will eat the flesh of a cat. The rule applies even to the carrion crow, which will devour dead dogs greedily.

In and Around Wisconsin

The importance of the dairy industry in Richland county is indicated by the recent shipment from Richland Center of fifteen carloads of cheese, worth $70,000, to the London, England, market and the contracting of five additional carloads which will be shipped shortly.

Farmers in central Wisconsin, especially in Clark, Wood and Marathon counties, are fostering a movement to organize a cheese producers' federation along the lines of the Sheyboygan County Cheese Producers' Association. A meeting is to be held soon to discuss plans for organization.

M. B. Rosenberry, of Wausau, who was recently appointed a member of the state supreme court, has been active in agricultural affairs for many years in Marathon county and is president of the Farmers' Co-operative Packing Company, of Wausau, whose plant began operations about two months ago.

The Stevens Point Fair Association recently completed plans for the 1916 Portage county fair which it is proposed to make the best ever held. Several improvements are planned and a new system of cooping will be installed for the poultry exhibitors. I. S. Hull was chosen president; E. H. Rothman, vice president; J. M. Pfiffner, secretary; C. S. Orthman, treasurer.

Reports recently issued by the new Farmers' Co-operative Packing Company at Wausau show that in the first two months of operation the plant handled about 500,000 pounds of live stock of which 35 carloads were purchased outside the city of Wausau. For this stock a total of $43,110.02 was paid of which the railroads for freight received only $697.23. The plant during that period sold and delivered 104,108 pounds of meat; 9,560 pounds of sausage and 17,510 pounds of lard.

The Inter-Township Fair Association has chosen September 19th-21st as the dates for the 1916 fair at Oconto. At the 1915 fair $1,115 was paid out in premiums and the indebtedness on buildings was reduced, leaving a small balance in the treasury. W. C. Riner, Eldred Klauser, T. F. Reynolds, John H. Berger, W. A. Flatley, Theodore Eastman and J. D. Amgus were chosen directors. Mr. Klauser was also elected president; Mr. Berger and Mr. Riner, vice presidents; Mr. Reynolds, treasurer and A. J. Peterson, secretary.

The Watertown Inter-County Fair Association at its recent annual meeting elected the following officers:

President—Emil Tanck, Watertown.
Vice President—H. J. Grell, Johnson Creek.
Secretary—Charles W. Harte, Watertown.
Treasurer—Charles E. Frey, Watertown.
Superintendent of Speed—Charles Mulberger, Watertown.
Directors—W. A. Beurhaus, Watertown; Emil Klentz, Reeseville; H. W. Kronitz, Watertown.
Soliciting Committee—C. A. Kading, Max G. Kusel and John C. Gruel, all of Watertown.
Publicity Committee—J. P. Holland, Otto Krueger and John M. Moore, all of Watertown.

FLOWERS SUITABLE FOR FARM HOME.

(Continued from page 9.)

long, stiff stems and are well adapted for cut flowers. The colors are mostly white, lavender, purple and yellow.

Another good annual is the larkspur. They have been vastly improved in recent years in size and color of the blossoms. They are continuous bloomers, even after the frost has taken all the other flowers the larkspurs are still bright. The larkspurs do best if the seed is sown where the plants are to bloom, as they do not transplant successfully. The seeds take a long time to germinate and if sown in the open ground without special care very little will come up. A good way is to open little furrows in well-pulverized soil, water thoroughly and then sow in the seeds and cover with fine soil. Then cover the rows with folded newspapers held in place with weights or stakes. If the weather is not at all too hot and dry there will be sufficient moisture for the plants to come up. Remove the papers when the plants begin to appear.

With the advent of cooler weather we will be looking for the beautiful aster. There is no flower that has such a diversity of colors and species as the aster. The aster is of easy culture, but I have found no flower so subject to insect pests and plant diseases as the aster. Among the insects that I have encountered are the root lice or aphis, the flea beetle, the black aster beetle and the tarnished plant bug, and among the diseases stem rot and yellows.

The pansy should be included in every flower garden, for no flower is more interesting to grow, as each opening bud is watched with interest for different colors and markings. Pansies are not difficult to grow. They demand a rich, loamy soil, somewhat sandy, and an abundance of moisture. For strong, vigorous plants and large flowers the seed should be sown early and when the plants have about four leaves transplant into beds that have been prepared in the fall by digging in well-rotted manure and in spring again dug over to make the soil thoroughly loose and fine. Partly shaded during the hottest part of the day would be an advantage and during very dry weather the bed should be thoroughly watered, preferably in the evening, and in the morning the soil should be stirred up and made fine to prevent the forming of a crust, but care should be taken to prevent injury to the roots. If the plants are to be continuous bloomers all withered flowers and seed pods must be removed.

Another addition to our list of beautiful flowers are the sweet peas. A more beautiful sight than a well-grown ro of sweet peas in full bloom cannot be imagined. Their culture differs somewhat from the other flowers, for sweet peas must be planted as early in spring as the ground can be worked. Good soil thoroughly mixed with well-rotted manure and wood ashes dug to a depth of one foot give splendid results. Sow the seeds in a trench about six inches deep and cover with an inch of fine soil. After the plants are up gradually fill the trench to the level of the surrounding ground. It is necessary that the surface of the soil be kept mellow all the time. They should be staked up with brush or wire netting and in dry weather watered thoroughly and frequently. The flowers should be cut as soon as open, for the forming of seed pods will stop the plants from continuous blooming.

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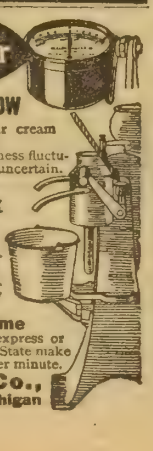

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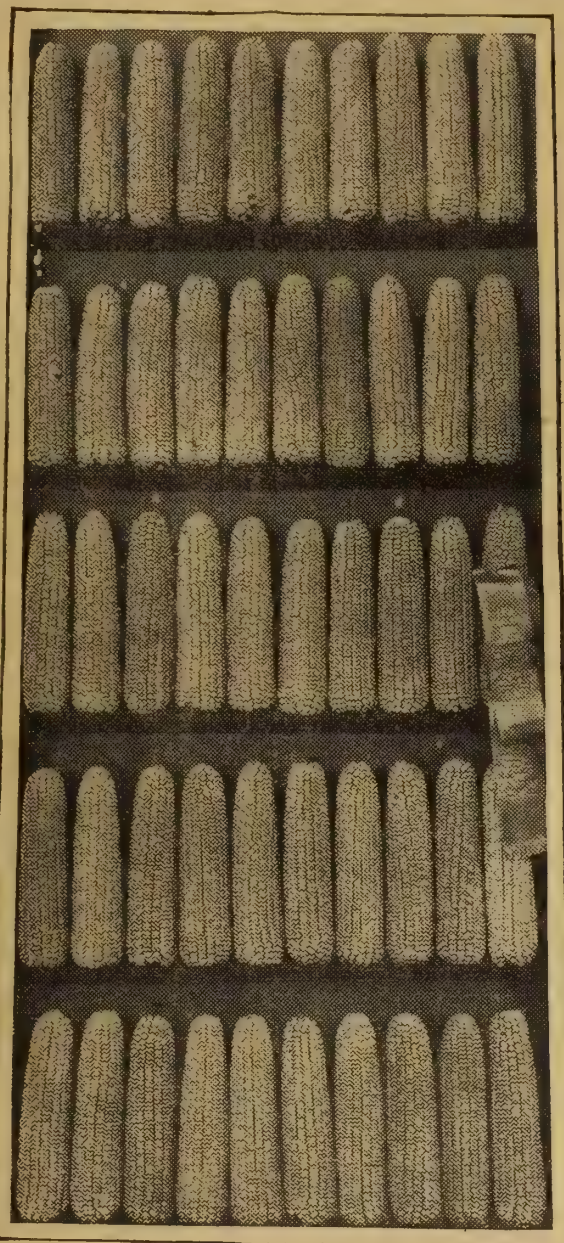
Champion Yellow Dent Corn.

THE WISCONSIN FARMER reported in its issue of February 17th that S. P. Markle, of La Crosse county, a member of the Wisconsin Agricultural Experiment Association, had won The Wisconsin Farmer cup at the annual grain show held in Madison. This cup was offered for the best fifty ears of Wisconsin-grown White Dent corn, and Mr. Markle, we believe, richly merited the coveted prize. The illustration given herewith shows Mr. Markle's exhibit, and every good corn grower will admit that these fifty ears are a very fine illustration of what the Wisconsin grower can do by using pure-bred seed corn. Mr. Markle has won numerous premiums at the La Crosse county grain show, the Interstate Fair, at La Crosse, and at other Wisconsin contests. He won a number of prizes at the recent National Corn Show, held in St. Paul. There are a great many farmers in Wisconsin who can make just as great a success of corn as Mr. Markle does if they only take the pains and care with their seed and crop that he does. Success in corn growing is not attained by accident nor in a season. Mr. Markle has been perfecting his seed for years. He has been showing constantly, sometimes getting beaten when he least expected it, but always going back into another season with a determination to do better than he did the year before.



Conditions are favorable in La Crosse county for good corn, but they are not more favorable than in many other counties of the state. There is some very rich soil in the section in which Mr. Markle resides, and in ordinary years there is sufficient moisture. Last year there was too much, but careful farming even overcame the abundance of rain and made it possible for Mr. Markle to raise this prize-winning corn. It will be remembered that only a few years ago most farmers made no effort to raise corn in Wisconsin. Northern Illinois was considered the extreme northern boundary of the corn belt. This boundary, in a quarter of a century has been moved northward 300 to 400 miles and on an average season where frost does not come too early, considerable corn is matured in Upper Wisconsin. Upper Wisconsin raises good corn for silage in almost any season. In central Wisconsin corn, now that the Wisconsin varieties have been perfected, is a staple crop, and the acreage has been increasing every year.

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OZAUKEE COUNTY HOLSTEIN MEETING.

The annual meeting of the Ozaukee County Holstein-Friesian Breeders' Association, which was held in the theater at Cedarsburg, Wisconsin, on Thursday, February 24th, proved to be one of the largest-attended and most enthusiastic gatherings ever held by the association. About seventy-five breeders were in attendance and much pleasure was displayed over the great strides Ozaukee county has made in Holstein breeding the past year.

The association now has about sixty active members, including ten new members accepted at the meeting last week. Considering that this association is still in its infancy this is a splendid showing. More than half the members are owners of pure-bred females and all are using pure-bred sires, this being one of the requirements of membership. The number of pure-bred herds in the county is rapidly increasing and many pure-bred heifers and cows have been introduced into grade herds during the past year, while owners of a few pure-bred females are constantly adding them to their herds. The dairymen are concentrating on the dairy breeds and as the majority of the cows in Ozaukee county are Holsteins this breed is being more firmly established. These farmers are learning that the quick and sure way to build up a fine pure-bred herd is to introduce some blooded females as well as use exclusively pure-bred sires.

One of the important actions taken at the meeting was the adoption of a resolution favoring the organization of a cow-testing association. N. E. Negley, representing the Wisconsin Dairymen's Association, outlined the plan of operation of community associations and explained in detail the purposes and objects. There are now forty-seven of these associations in actual operation in the state and the number is expected to be increased to sixty when those now being reorganized for another year and new associations in progress of organization begin operations. Mr. Negley told of the popular plan under which each farmer who is a member pays $1.25 per cow per year for the test, in addition to a small membership fee of 50 cents in the association for himself.

The subject was discussed very fully and it was evident that sentiment favored such an association and that the members wished to weed out the unprofitable rows in their herds. State Senator Biechler, of the Ozaukee-Sheboygan district, who owns a Holstein herd on his farm at Belgium, Wis., added a few words to what Mr. Negley said. Senator Biechler is an ardent booster for keeping record of the cow's production, and strongly supported the plan. The increased value of the herd which would be caused by the advertising alone was more than the cost of the test, he said, to say nothing of the numerous other advantages. Among these advantages, he said, is the increased value of a herd whose record is known, especially if a good herd, and the knowledge the farmer gets as to which is his best cows and which are his "boarders." Others entered into the discussion, all speaking of the advantage of the test.

Finally a contract was circulated and 270 cows were signed up for an association by sixteen farmers. This is an average of seventeen cows per herd and it was a splendid start for an association. To be successful an association must have about 500 cows, so an Ozaukee county association appears certain, as the officers believe it will be possible to sign up 330 more cows, the number required.

The matter of holding a stock show in connection with the summer meeting in June was discussed.

The election resulted in the selection of the present officers for another year. These officers were: President, George Kohlwey; vice president, P. L. Pierron; treasurer, Walter Ahlers; secretary, C. F. Dineen.

The milk shipping situation was also discussed and the breeders hope to be able to secure better prices the coming year, especially if the shippers' association succeeds in establishing their own distributing depot in Milwaukee in competition with the Milwaukee dealers who now dominate the market. Most of the breeders in the southern half of the county ship to the Milwaukee market and those in the northern half deliver to the cheese factories. The shippers are now getting about $1.70 per 100 pounds for their milk, which is considerably below cheese factory prices, which prices are good owing to the good cheese market. The shippers also hope to force the Milwaukee dealers to grade and pay according to the fat content.

C. J. Will, of Menomonee Falls, president of the Waukesha County Holstein-Friesian Association, spoke on community effort and gave the breeders first-hand information on the building up of the Waukesha association.

The summer meeting will be held the first week in June, the exact date to be selected by the officers.

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Fruits and Garden

ORCHARD MULCHING.

Many men are interested in the relative merits of orchard culture and straw mulching. All kinds of opinions are expressed and some are certain that culture is cheaper and preferable to the mulch, while others hold a directly contrary opinion. We understand that the same object is kept in view whichever method of treatment is adopted, that is, the aim is to keep down grass and weeds and conserve moisture.

There is much to be said upon both sides of the proposition. It is certain that where straw is obtainable at reasonable prices weeds and grass may be kept down by its liberal application at much less cost than by the cultural method. Also, it can be maintained that moisture will be retained in the soil at a cheaper rate by the straw mulch than by the dust mulch which demands constant stirring. Granted that the good old days when straw could be had for the hauling are gone forever, yet in very many cases a cheap grade of straw, wet tops and wet bottoms of stacks can be very cheaply bought. In any farming community with which the writer is familiar straw stacks, as compared to orchards, are as ten to one.

If a man has an orchard to mulch the first expense need not frighten him. About five tons of straw to the acre, or say to 100 trees, will cover the ground sufficiently deep to stop all vegetation. And a mulch like this will last for four years. If in less time, however, you find that weeds are appearing, it will be wise to patch the mulching.

The time to mulch is in the winter and chiefly for the reason that labor is cheaper at this season than at any other time. The kind of straw is immaterial—wheat, rye, barley or oats. Only, to save later work and worry, let it be clean straw. Avoid buying straw of a man who has notoriously foul fields. It is not absolutely necessary to have straw. Spoiled hay, that lot of clover or slough grass ruined by the untimely rains is just as good.

Mulching is especially desirable in the case of young orchard trees. In their case it is essential to keep down weeds and maintain moisture. Now figure the cost of mulching done in winter and the cost of culture through the long, hot summer. At that time you will be paying your hired man about $30 per month and your horses will be busy in the cornfield or the harvest field. And mulching will do the business at about half the expense of the other method.

But never think that you can slight the mulching or do a poor job and get good results. You can't do it, gentlemen. Better trust to culture than to do a botch job of mulching. You must spread on the straw evenly and thick and tramp it down. We have seen both methods tried in the same orchard and at the end of two years there was very little difference in the thrift of the trees. Some men object to putting straw in the orchard because it facilitates mouse nests and mice gnaw the trees. But don't hesitate for that. Mice will get into the orchard—straw or no straw. If you have small trees protect them by some of the many devices—wrapping or painting or mounding.

Straw will also prevent the washing of soil on side hills and for this purpose it is very valuable. In case of large orchards and in sections where fruit growing is the chief business straw in large quantities will not be available. In that case you will have to rely upon culture and cover crops. But the matter of cover crops is a large subject in itself.

A WOMAN GARDENER AND LIMAS.

One of our subscribers writes to us as follows:

Can a woman who is not afraid of work make a success of growing Lima beans? What other garden crop is likely to be easier grown and more profitable? My husband works in the shops, and, as we have a half-acre garden, I try to make my own spending money. Last year I tried melons, but they were a failure.

A woman who is strong and willing to work might make a success with Limas, and then, again, she might not. Much depends upon the season. You speak of a failure with melons last year. Your experience was like that of many other would-be melon growers. They failed not because they did not do their part well, but because the season was abnormal. Last summer lacked heat and just the few degrees we were minus ruined the melons, the corn crop and also the Lima beans, for they, also, need warm weather.

We cannot tell you of any garden crop which is easily grown. In some years of careful observation we have seen nothing easy in gardening. It is an occupation which requires a careful and continuous labor to make it successful, but it is adapted to persons of light physical mold, because great muscular strength is not absolutely needed.

But because Limas were almost a failure in 1915 it does not follow that they will fail the coming season. The chances are decidedly that we will have a normal season, with sufficient heat to ripen corn, melons and beans. If you can get beans started early upon suitable soil and give them such culture as to push their development you are likely to secure a crop.

You should have a soil which has been manured in the recent past, but no fresh fertilizers this year. Have it plowed very deeply and thoroughly pulverized. Plant the beans in rows six feet apart and running north and south. Use only standard running sorts, for the dwarf or bush varieties, which may be adapted to small gardens, do not yield enough when you are growing for commercial purposes.

Set every bean in the soft, mellow earth with the eye down. Do not plant over one inch deep—less than that if the soil is damp. It is important to observe these rules. If the seed is good plant six inches apart. If not sure that all will grow plant a little thicker and thin out later. When you buy ordinary seed it is best to reject the small ones before you plant.

You understand, of course, that you will need poles or trellises. If you use poles they should stand, after setting, about eight feet above the surface, because the Lima is a tall grower. A very good trellis, and about as cheap as any in the long run, is chicken fencing. Let it be eight feet wide and nail it to posts set about a rod apart.

When the vines begin to run it is always necessary to give them a little hand help. They are like children and need to be started in the way in which they should go.

You must keep down all weeds if you would have good, full pods, and the soil must be kept loose.

When you begin to pick do not be in a hurry, but let the pods fill out. There is a distinct loss in picking the half-grown beans, for though they sell well and taste good they will both sell and taste better if full grown.

There is good money in Limas when you have a crop. It is best to shell them at home and then, according to whether the market is well or ill supplied, you can sell them at from 20 to 30 cents per quart.

CABBAGE PATCH GENERALLY NEGLECTED:

To the Editor:—It requires intelligent and constant work to raise a good field or even a small patch of cabbage. As a usual thing the cabbage is neglected and the attention they should have is given to some other part of the garden or field. When a large field of cabbage is to be raised the seed is generally sown in hotbeds, but when only a small patch is raised they may be sown in a small box. Take well-rotted manure and fill a box one-third full, then put three inches of rich dirt on top of this, then sow seed the last of February for early plants. The box can be kept in a warm room if there is no

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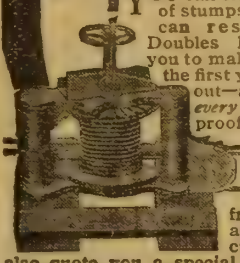

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cellar on the farm. It should be watered as often as the dirt becomes dry so the seed will germinate in a few days.

Ground for cabbage need not be over rich, though this does not mean that good cabbage can be raised on poor soil. When preparing the ground where the plants are to be set it should be thoroughly pulverized. This can be done best with a disk, but if you have no disk it should be cross plowed and harrowed thoroughly. If well-rotted stable manure is used as a fertilizer this may be applied after the first plowing or before the disk is used, as the cross plowing or disk will thoroughly work it into the soil. The plants should not be set on a dry or hot day. Select, if possible, a day when a light rain is falling.

I find it a good plan to pull the plants a day or two before they are to be set and put them in a cool place, covering them with a well-moistened cloth. They will be made stronger by so doing and will not wilt as quickly as if taken from the bed direct to the field.

Cabbage plants should be set thirty inches apart each way. This is for the full-leaf varieties. The Danish ballhead and other small cabbage may be set eighteen inches apart.

After the setting has been completed cultivation should begin at once and be continued, if possible, each day that the soil is in condition to be worked. The ground should never be allowed to crust and stirring the ground often will prevent evaporation. A double-shovel cultivator is the best for general use after the plants begin to form heart and it may be used even after the outside leaves begin to touch between the rows, as the loss by breaking off will not injure the plant or interfere with its development. In the last plowing throw a good furrow against the row.

E. F. L.

A STUDY OF BEES.

To the Editor:—We, as humans, waste considerable time in gaining knowledge, which often lies idle or even is forgotten, but the little bee commences at its work almost immediately without any time lost in absorbing the knowledge necessary for the performance of its duties, for it is instinct which guides them in their work.

Under normal conditions there are three kinds of bees present in a hive, namely, a queen, drones and worker bees.

There is only one queen bee in a hive, she being largest of them all and can be distinguished from the others by her elongated body, also by the deportment of the other bees to her, for well do they seem to realize that she being the mother of all the bees is absolutely essential to the welfare of the colony. She is capable of laying from 3,000 to 5,000 eggs in a day in the height of the season and during this part of the season an average worker bee's life is only a few weeks, while the life period of a queen may be several years, but as she grows older her power of reproduction decreases, and it is for this reason that we beekeepers aim to have our colonies headed by a young queen.

Strange as it may seem the queen lays only two kinds of eggs, and yet they can be made to produce three different kinds of bees.

It must be remembered that the queen is the only fully developed female, while the workers are only partially developed females. The egg destined to become a queen is the same as the one destined to become a worker, but as soon as the egg that is to become a queen hatches it is fed lavishly of a highly-concentrated food known as "royal jelly," also her cell is enlarged so as to give room for her full development, while that egg destined to become a worker is not fed on such a high concentrated food, neither is its cell enlarged. It takes from fifteen to sixteen days for her full development.

The worker bees are the smallest and the most numerous. They perform all the work, such as feeding the young, building the comb, producing the chyle which is used as food for the larvae, gathering nectar and edulcorating it into honey, etc.; they require twenty-one days to reach their full growth.

Drone bees are the only male bees in the hive; they appear clumsy and their sole purpose is in fertilization of the queen. They are not possessed of a sting or proboscis. One can find them in the fall when the honey flow has ceased and they are not longer needed, hovering around the entrance, for they are driven out by the other bees; here they finally succumb. They require twenty-four days for full maturity.

The bee passes through three different stages before becoming a perfect insect. First the egg larvae and then the nymph stage. All eggs hatch on the fourth day of incubation, but the period of growth varies.

In observing a strong colony in the height of the honey flow, opening up a super where they are pulling away with might and main in drawing out the combs, literally tens of thousands of these busy toilers fairly quivering with the excitement of work. At the first glance one may wonder how they produce this wax; let us examine one of these workers closely and we will notice the wax plates visible on the ventral side of the abdomen of the bee; there are eight of these wax-pockets, and into these the liquid wax exudes, through pores which perforate the wax plates, and it hardens to form the scales as it comes in contact with the air. How they remove these wax scales is hard to observe, for bees are exceedingly lively and constantly shifting their positions, so it will be hard indeed to follow them in their movements. No single bee ever finishes one piece of work herself or ever works steady on a job, for they all seem to help along more or less. They are capable of building five different kinds of cells, namely, worker, drone, queen, storage and attachment cells. All are hexagonally shaped except the queen cells.

The worker cells are the smallest and the most plentiful, measuring approximately five cells to the inch.

The drone cells measure four to the inch.

The queen cells are not grouped together and are peanutlike in shape when completed. Furthermore, these cells are usually torn down soon after the queen emerges and rarely, if ever, are used for any other purpose.

The attachment cells are those cells at the edge of the combs attached to the frame and are irregular in size.

Honey cells may be either composed of drone or worked cells, but it should be our aim to have as little drone comb built as possible. These honey cells may be much prolongated, while when used for brood rearing they must remain as near as possible to a certain depth.

The bees gather and store three substances known as honey, pollen and propolis.

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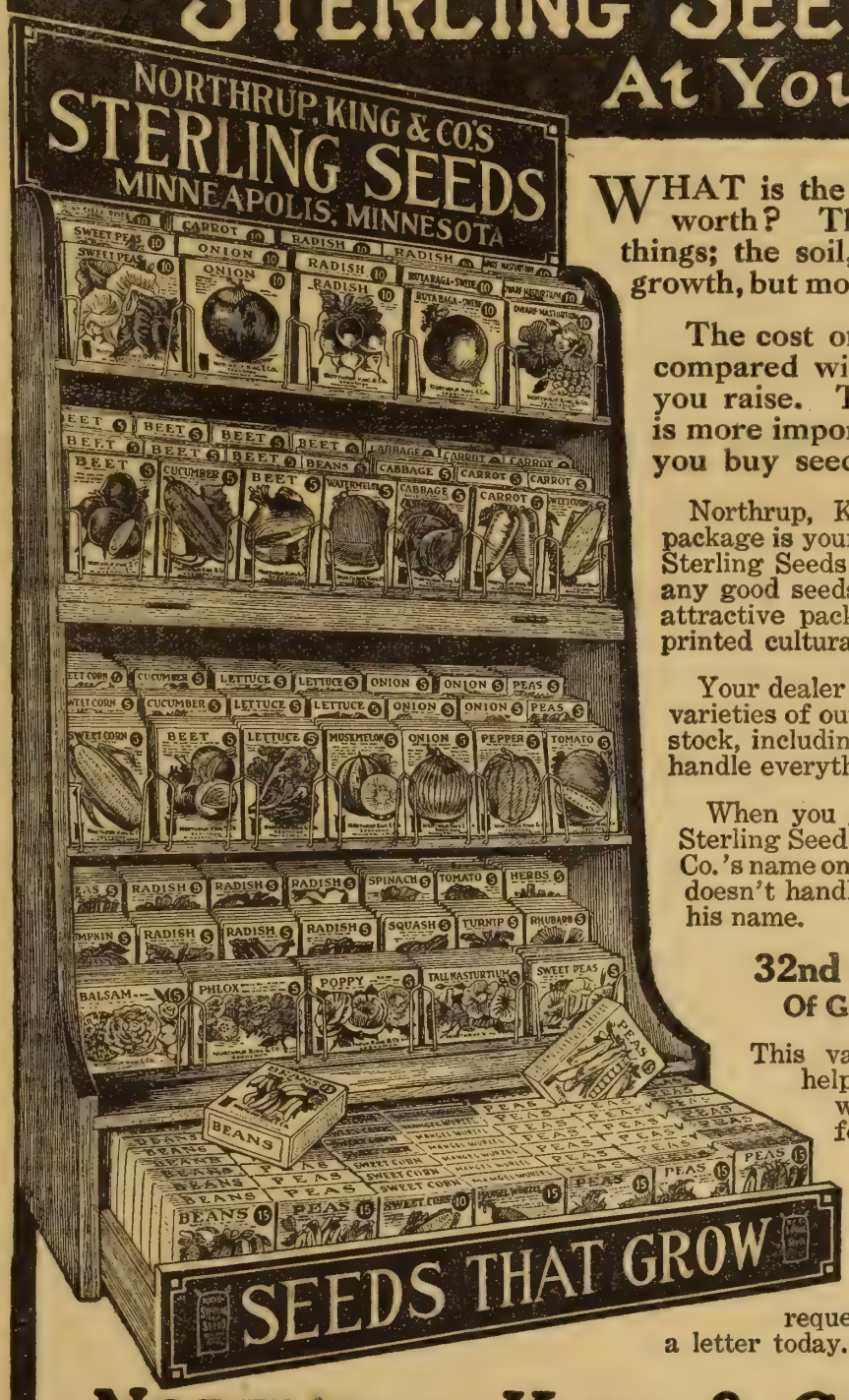

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Sudan Grass New Forage Crop.

Profitable For Hay and May Be Raised For Seed Product in Wisconsin---By George B. Mortimer, Wis. Station.

THERE is perhaps no crop that has so completely occupied the attention of the farmers of southwestern United States for the past few years as has Sudan grass. It has spread from Texas as a center where it was first introduced in the spring of 1909, until now we find the northern states growing the plant, as yet, largely in the way of experimentation.

Sudan grass was brought to the United States in 1909 from Africa by Prof. C. V. Piper, of the United States Department of Agriculture. This plant, like Johnson grass of the south, is a sorghum, and in searching for sorghums without the troublesome underground stems that Johnson grass has Mr. Piper found this plant growing in Egypt under the name of Garawa. Only a small sample of seed was secured, the larger part of which was planted in Texas in the spring of 1909. On account of the excellent showing made against drouth and other unfavorable conditions all of the seed was carefully preserved and planted again the next year. Again the plant gave such a wonderful account of itself that some of the seed was disseminated among the farmers with the result that Sudan grass now occupies a firmly established place in the farming of southwestern United States.

Like all sorghums and plants of similar nature, Sudan grass requires a warm season and soil for its best development, but from trials conducted in the northern tier of states it has been found that it will do very well even in the shorter growing seasons of this section. As to moisture requirements, this plant is quite drouth resistant, due perhaps to the extensive system of fiberous roots with which it is supplied.

The claim is made that this grass will grow on most every type of soil from heavy clays to sandy soils, provided the latter is reasonably fertile.

Like the grain crops, Sudan grass does better upon fall-plowed land.

The preparation of the seed bed should be the same as that for corn. The young plants do not grow so rapidly at first and are liable to be crowded by the weeds early in the season, unless special effort is made to destroy them as far as possible before planting. Consequently fall plowing, together with early and frequent harrowing up to planting time are recommended.

For a state as far north as Wisconsin Sudan grass should never be seeded until danger from spring frosts has passed. About corn planting time or even a week or two later seems to be the best time for planting. This grass may be seeded in close drills, cultivated rows or broadcasted. When sown in cultivated rows the usual rate of seeding for hay purposes is from eight to ten pounds of seed per acre. Under humid conditions the best method of seeding for hay purposes is either drilling by means of an ordinary grain drill or broadcasting. Well-cleaned seed feeds freely from the grain drill is distributed evenly and an even stand is secured. Either of the above methods requires from fifteen to twenty pounds of seed per acre.

When Sudan grass is grown for hay it should be cut in full head and before any of the seeds are formed. It is at this stage that the hay is most palatable and nutritious. Cutting for hay after the seeds have set makes hay of lower feeding value.

From central United States southward it is possible to get two cuttings each season for hay, and in some instances as many as four cuttings have been made. The easiest way to harvest the crop is with the mower. It cures very readily and can be cut in the morning and raked up the next day if the weather has been bright and sunshiny. The best quality of hay is made by placing it in small cocks and allowing to cure in that way. The leaves are retained well and if handled properly the hay will be bright, leafy and sweet.

There are few grasses that are injured so little by standing beyond the proper stage of maturity as Sudan grass. This is due largely to the fact that the numerous stools mature successively later than the main stem and hence always furnish immature stalks, even though the older ones are ripened.

The yields vary, depending largely upon the number of cuttings made. Under irrigated conditions as high as eight tons of cured hay have been reported. In Wisconsin where not more than two cuttings may be had the yield will not on an average run higher than five tons, with perhaps an average of about four.

The good seeding habits of this grass is one of its very best features. The seed is produced in abundance and is retained well so that loss from shattering is not very great. When the seed is practically mature it may be cut with a grain binder and left to cure in shocks. It may be threshed with an ordinary grain separator. The highest yields of seed are produced in the semi-arid West where dry, warm weather prevails. The yields reported range from 300 pounds to 1,400 pounds per acre. Good seed will weigh forty pounds per bushel.

Up to the present time the seed has been rather expensive, ranging from 50 cents to $1.50 per pound. This is due to the fact that nearly all of the seed being used is grown in Texas.

As a pasture grass Sudan is lacking in several of the essentials of a good pasture. Being an annual plant a turf is not formed and considerable injury from tramping would result. Undoubtedly live stock pasturing upon it would pull out many of the plants.

During the past season Sudan grass has been under trial as a forage crop for Wisconsin conditions. The test conducted by the experiment association were based upon various rates of seeding for forage and for seed. Owing to the unusual weather conditions prevailing the past season the plant did not get a fair test. A prolonged, cold spring followed by a rather cool summer with early fall frosts was not conducive to very good results.

The tests conducted for seed yields were entirely destroyed by the early fall frosts. Of the members of the association reporting upon their experiences with this grass, two have reported small yields of mature seed, so that I feel it is safe to say under ordinary seasonal conditions a seed crop may be expected in Wisconsin.

Even under the unfavorable conditions of the past season the crop made a good showing for forage purposes. The seeding was not made until June 23d, so that the yields reported were from only one cutting. Broadcasting at the rate of ten pounds gave a yield of three and three-fourths tons of cured hay per acre. This was the highest yield of the various rates of seeding, that from the thirty-five-pound rate yielding two and one-half tons. From the tests conducted it would appear that the best rates are between ten and twenty pounds of good viable seed per acre.

It would appear from the records that this plant has made since its introduction into this country that it should find a place under certain conditions and for various purposes in Wisconsin farming. Undoubtedly it cannot become a crop of our primary rotations, taking the place of clover, alfalfa and corn.

Then, too, there is the seed production phase for Wisconsin farmers to consider. It is quite possible that the South will have to look to the north-central states for the production of pure seed on account of the freedom with which Sudan and Johnson grasses mix in that section of the country.

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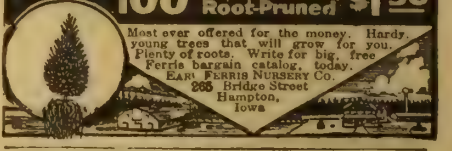

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$20,000,000.00 Steel Works now in operation at Duluth. Employs many highly paid workmen. They are good eaters and need food. Wanted at once, 500 Farmers to supply them. L. B. Arnold, Land Agent, C. R. I. & P. Ry. Co., 151 Wolvin Bldg., Duluth, Minn.

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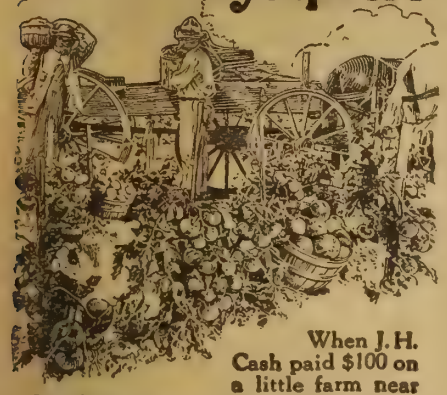
A crop harvest by April 1st



When J. H. Cash paid $100 on a little farm near Camden, Ark. he had just $40 left—yet in three years he cleared his debts and bought 80 acres more. Its easy to understand why farmers along the

Cotton Belt Route in Arkansas & Texas

make headway so fast when you consider the soil and the season down there. When farmers up north are "drawing on the bank" for living expenses, Mr. Cash, and thousands of others in Arkansas and East Texas are cashing in on crops. Mr. Cash sells garden truck by April 1st; by the 15th he's marketing new potatoes, by May its strawberries and there's some crop to sell every month until Christmas. He's made five crops bringing $537 per acre in one season.

And the crops are not all truck or fruit. Corn, peanuts, clover, alfalfa, etc. yield big. Mr. Kapp, near Cash's place, makes 62 bu. of corn on his land. Mr. I. Z. Zimbrough of New Edinburg, Ark. makes 100 bu. of peanuts per acre, selling at $1 per bu. Rudy Stutter, of Stuttgart, Ark. says "I plant oats the last of September and in 15 years I've never lost a crop. Last year I threshed out 75 bu. per acre. Jacob Yoder, on the place adjoining mine made 90 bu. per acre." Near Texarkana, Tex. J. M. Champion shows how a farmer can make $1700 and $1800 a year net on twenty acres by taking advantage of the many crops per season which the long growing season allows.

Go where you will in Arkansas and East Texas you'll find farm opportunities even bigger than you've read about.

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A farmer wrote them; and he knows what you want to know about a section new to you. They tell about the character and cost of lands, climate, crops raised, etc., and about schools, churches, towns, social conditions. Brimful of photograph pictures taken on the ground. Send me your name and address on a postal card today and get these free books now.

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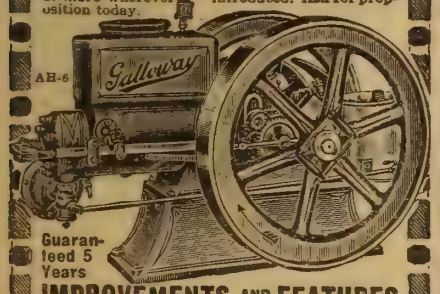

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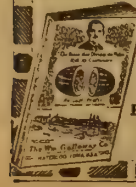

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Engine Manufacturing Specialists

Please mention this paper when writing mention The Wisconsin Farmer.

FOR MAKING SPRAY MIXTURES.

The Connecticut Horticultural Station gives the following directions for making spray mixtures:

Commercial Lime-Sulphur.—Any of the commercial lime-sulphur mixtures on the market testing 33 degrees B. may be used for spraying fruit trees. For winter treatment these are usually diluted with one part of mixture to nine parts of water. For summer treatment the dilution is usually one and one-fourth to one and one-half gallons to fifty gallons water.

Self-Boiled Lime-Sulphur.—This is a homemade mixture as follows: Eight pounds of fresh lime are started slaking in a barrel with a little water (warm water preferably in cool weather), and when the mass has begun to heat, eight pounds of sulphur flour are quickly sifted in and thoroughly stirred with the slaking lime. This, at the consistency of a rather thick paste, is allowed to heat for fifteen minutes from the time the sulphur is added, when it is cooled down with additional water. The mixture is stirred and strained into the spray barrel, to remove the coarser sediment and diluted to the fifty gallons.

Usually three barrel lots can be made at a time in an ordinary barrel by using three times amount indicated above. This amount furnishes more heat and makes a little better mixture than when made up in single barrel lots. A third of the amount is then used with a barrel of water.

Bordeaux Mixture.—Four pounds of copper sulphate, are dissolved in hot water or by suspending the crystals in a coarse bag in a half barrel of water. Four pounds of fresh lime are slaked in a small amount of water, and then strained into the spray barrel about half filled with water. To this is then added the half barrel of dilute copper sulphate.

When several barrels are needed, stock solutions can be made up as follows: The copper sulphate is dissolved in a barrel at the rate of one pound to one gallon of water, and the lime, after slaking, is diluted so that it also contains one pound per gallon of water. Then, when needed, four gallons of the lime water, after stirring thoroughly, are strained into the spray barrel, this half filled with water, and four gallons of the copper solution, further diluted to make about half a barrel are poured into this.

Lead Arsenate.—This poison is manufactured in both paste and powder form. The paste form is generally preferred for orchard work, but it dries and becomes lumpy if kept from one year until the next. It also corrodes metal containers. The paste contains 50 per cent water and should be used in the proportions of three pounds in fifty gallons of water. It is best to first mix thoroughly with a small amount of water before putting into the spray tank.

Dry or powdered lead arsenate will keep indefinitely in a dry place: In spraying, use just half as much as of the paste form, or one and one-half pounds in fifty gallons of water. The dry lead arsenate may be thrown into the spray tank after it has been filled with liquid, and it will be readily moistened and distributed.

Both paste and powdered lead arsenate may be used in connection with lime sulphur. Bordeaux mixture or nicotine solution and larger quantities of arsenate may be used if desired.

Nicotine Solutions.—Several of these are now sold containing 40 per cent or more of nicotine, usually in the form of sulphate. For most kinds of aphids one-half pint to a barrel of water is sufficient, but the amount may be much increased or doubled without danger of causing injury. Nicotine solutions may be safely used in combination with lead arsenate, Bordeaux mixture, or lime sulphur; with any one or with all of them.

Miscible Oils.—Several brands are now on the market, and for dormant spraying each should be dilutel at the rate of one part in fifteen parts water. The contents of each original package should be thoroughly mixed or shaken before attempting to dilute any portion of it. As a rule, it is unnecessary and inadvisable to mix miscible oils with other spray materials. Such oils are chiefly used on dormant trees.

Cautions.—Before beginning to spray, know what you are spraying for. If you have troubles which you cannot identify, send specimens to the station and get information and advice.

Never spray any fruit tree while in bloom. It kills your best friends, the honey bees, which pollinate the flowers.

TUBEROUS BEGONIAS.

Here is a flower whose merits are not fully recognized. Comparatively few people grow it and yet in beauty and attractiveness it is unexcelled. Because it has some special requirements in treatment it has received from hasty cultivators the reputation of being difficult to grow. And yet the special treatment which it needs is simple and easily understood and flower lovers everywhere should learn to grow it. Perhaps the word "everywhere" should not be used, because it doubtless thrives best in cool climates.

Any person who is familiar with the common house begonias can understand the form of the flower in the tuberous varieties, but that familiarity gives no conception of the size of the flower. It is often three inches across and the variety in colors is complete. You can get all the hues of the rainbow. They are very free bloomers. All leading florists carry the tubers in stock and the price is not excessive, considering what you get.

Buy the tubers early and start them in pots or shallow boxes in hotbeds, preferably in March or April. Let the soil you use be a mixture of sand, leaf mold and loam. You should aim to get stocky plants, so do not let them get too hot, which will make them leggy. Give plenty of fresh air as soon as days get warm so that glass is not required. This will harden the plants, which is necessary before planting out.

Do not plant out in your flower border before mid-May, after frost danger is past. The soil cannot be too rich. Give plenty of room, for the plant has a low-spreading nature. Eight inches apart is not too much space. If you have some spot with partial shade they will do well there. If the soil becomes very dry water them at night or early in the morning. Sometimes a fungous rot attacks the leaves and in that case sift over them flour of sulphur.

It is easy to keep the bulbs if you dig before freezing, dry well in the shade and pack in dry sand. They will keep well in a room or cellar where the temperature is from 40 to 50 degrees.

What boot-wearers—like yourself—are saying about the famous molded

Goodrich "HIPRESS"
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We've told you of the wonderful new "HIPRESS" process and how it makes possible SO MUCH MORE WEAR AND COMFORT.

NOW we're going to give you specific instances of their superiority—not what WE THINK they will do, but WHAT THEY ARE DOING.

Bob Gray, up in New River Station, N. B., Canada, wrote us recently about a pair of "HIPRESS."

Said they were worth their weight in gold—never played him a dirty trick—no sore, tired feet—always dry. Said that 3500 miles would be a conservative estimate of the walking he had done in the boots, much of it over rough ground, and still he couldn't wear them out! Now, this is the sort of things "HIPRESS" is doing everywhere—it has set a NEW STANDARD OF BOOT AND SHOE WEAR!

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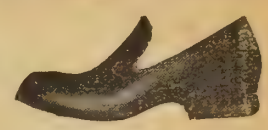

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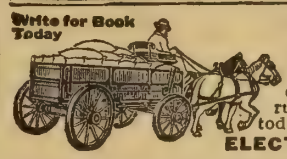

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NITROGEN 40c per acre. Best for inoculating farm seeds. Instructive circular No. 2 free. Write Dept. 20. **Standard Nitrogen Co., Glen Ridge, N. J.** Soil tested for acidity 25c.

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"PROGRESSIVE" Best Fall-Bearer; and Standard June sorts. Also Raspberry, Blackberry, Currant and Grape Plants. Catalog **free.**
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The Chinese Woolflower

introduced by us last year has proved a great success everywhere and a most wonderful floral novelty. It is a Celosia of new form and easy growth Plants throw out scores of branches bearing balls of crimson wool nearly a foot thick. Also many laterals with smaller heads, and fresh green foliage. Flowers form in June but none fade before frost, continuing to expand and glow with its wonderful crimson-scarlet color, very showy and succeeds anywhere.

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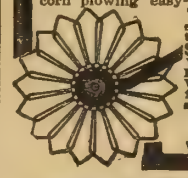

They enable you to plow the smallest corn rapidly, do not drag trash; can't get out of adjustment.

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We'll arrange to send a pair of Daisy Shields for your inspection. Write today for folder and full information about these MODERN shields. Address

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Special apple tree bargains. Your choice of 25 varieties. No order for less than 10 trees. Trees 4 to 6 feet tall. Actually worth 30c to 50c. 300 hardy, big-yielding strawberry plants, $1. My big catalog free.

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3 TO 4 feet $1. Two each Dudley, Lowland, Snow, Delicious and Golden Russet. Get our fine catalog. It's free. **Wisconsin Nurseries, Box 88, Union Grove, Wisconsin.**

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SOLD direct to planters at wholesale prices. Write for catalog. It's free. Address Fairmont Nurseries, Drawer 8, Fairmont, Minnesota.

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Barn Construction and Equipment.

ANY farmer who is considering rebuilding or remodeling his barn will find the book offered on page 18 by the James Mfg. Co., entitled "The Jamesway," profitable and interesting reading. It tells all about the best farm construction and sanitary equipment and will be sent anyone writing the James Mfg. Co., CA63, Cane St., Ft. Atkinson, Wis., and mentioning this paper.—Adv.

Cow-Testing Reports.

FENNIMORE COW-TESTING ASSOCIATION.

The following table gives the names and records of the cows in the association which have produced more than forty pounds of butter fat during the period of thirty days ending January 30, 1916:

Owner and breed	Age	When fresh	Pounds milk	Per cent fat	Pound B. fat
Theo. Wehrle					
Reg. Jer.....	6	8-25-15	681	6.3	42.9
Gr. Jer.	7	9-20-15	675	6.0	40.5
Gr. Jer.	7	11-25-15	915	5.2	47.5
Perry J. Braudt					
Gr. Jer.	8	10-31-15	924	6.0	55.4
Reg. Jer.....	8	12-4-15	909	6.4	58.1
Reg. Jer.....	5	12-17-15	963	6.0	57.7
J. F. Morse					
Reg. Hol....	5	10-25-15	1209	3.5	42.3
Reg. Hol....	8	10-16-15	1146	4.0	45.8
Reg. Hol....	2	11-16-15	1155	3.6	41.5
Reg. Hol....	3	11-15-15	1440	4.0	57.6
Rector & Marks					
Gr. Hol.....	5	11-21-15	1140	3.8	43.3
Gr. Hol.....	5	12-25-15	978	4.1	40.1
Gr. Hol.....	6	11-23-15	1185	3.6	42.7
Geo. A. Stivarius					
Gr. Guern...	4	10-27-15	828	5.6	46.4
Gr. Guern...	4	10-4-15	942	4.3	40.5
Gr. Guern...	7	12-16-15	1065	3.9	41.5
Gr. Guern...12		10-10-15	960	4.6	41.4
Gr. Guern...	3	12-17-15	939	4.4	41.3
Emil Schwer					
Gr. Guern...	7	1-17-16	1020	4.2	42.8
Rollo Smith					
Gr. Jer.	5	11-25-15	846	5.0	42.3
Ira Murphy					
Gr. Jer.	4	1-1-16	912	5.4	49.2
Gr. Jer.	6	12-15-15	750	5.6	42.0
Gr. Jer.	6	12-15-15	924	4.8	44.3
Gr. Jer.	2	1-3-16	1005	4.4	44.2
Andrew Browning					
Gr. Jer.	8	12-27-15	984	4.6	45.2
J. C. Hill					
Gr. Guern...	4	11-15-15	750	7.8	58.5
Arthur Zenz					
Gr. Jer.	7	11-20-15	1008	6.8	68.5
Gr. Jer.	6	1-15-15	933	5.5	51.3
Gr. Jer.	6	10-15-15	870	4.8	41.7
Gr. Jer.	6	11-16-15	1032	5.2	53.6
Gr. Jer.	3	9-20-15	843	5.2	43.8
Rector & Marks					
Gr. Hol.	5	1-17-16	1170	4.7	54.9
Gr. Hol.	7	1-20-16	1458	4.9	71.4
Gr. Hol.	5	1-22-16	1191	3.7	44.0
Gr. Hol.	6	1-23-16	1464	3.1	45.4

M. H. DUEL, Tester.

WINNEBAGO COUNTY ASSOCIATION.

The following is a very good report from the Winnebago County Cow-Testing Association, of which Archibald House is official tester:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
H. B. Meilahn					
Cuttie, P. D...	7	11-7-15	1079	4.6	49.6
Whiteleg, G.H.	6	12-27-15	1197	3.6	43.1
Ray Ward					
Lily, G. G.....	4	10-16-15	992	4.6	45.6
Frank Barnett					
Brin, G. J.....	7	11-8-15	933	4.3	40.1
Maid, G. J....	7	12-20-15	862	5.6	48.3
Stub, G. J.....	6	1-1-16	1057	4.0	42.3
A. C. Marshall					
Fairview, N...	3	10-27-15	735	6.2	45.6
Minnie, N.....12		10-26 15	939	4.8	45.0
Jessie, N.....13		11-30-15	694	6.5	45.1
Molly, N.....	3	1-1-16	1079	5.4	58.3
N. A. Rassmussen					
Bopeep, G. G.	5	11-15-14	1138	4.1	46.7
Beauty, G. G.	7	12-9-15	1017	4.2	42.7
J. J. Ihrig					
Delight, P.B.J.	4	12-8-15	868	5.6	48.6
Promis, P.B.J.	5	10-13-15	837	4.8	40.2
Iowa, P. B. J.17		12-21-15	837	7.5	62.8
Daisy, G. G..			837	4.9	41.0
G. E. Washburn					
Rose Lynda, P. B. J.	5	10-1-15	756	6.1	46.1
Bessey, G. J...	4	9-21-15	692	6.2	42.9
Guernsey, G.G.	8	12-26-15	1342	5.4	72.5
Spots, G. J...	6	10-30-15	837	5.0	41.9
Rose Snd, P. B. J.....	5	12-25-15	983	4.6	45.2
Lynda, P.B.J..	5	8-29-15	747	6.0	44.8
Susie, P. B. J.	5	12-26-15	1101	4.6	50.6
Black Wallis. G. J.	6	11-30-15	871	5.6	48.8
C. H. Slayton					
Fin Dell, G.G.	6	12-6-15	1094	5.5	60.2
T. A. Farrow					
Sukie, G. G...	9	9-20-15	657	6.1	40.1
Edith, G. G...	5	1-6-15	676	6.0	40.6
Yakros, G. G.	5	11-28-15	831	5.2	43.2
Caroline, G.G.	13	10-12-15	682	5.9	40.2
No. 18, G. G...	9	1-1-16	880	4.6	40.5
No. 19, G. G...	9	11-27-15	939	4.8	45.1
J. T. Thrall					
No. 8, G. G...	8	1-14-16	1203	4.8	57.7
E. E. Mackie					
Bell, N. 12		12-29-15	1085	3.9	42.2
Spot, G. G.....	6	1-4-16	1159	4.3	49.9
Marry, G. G...	7	10-22-15	927	4.8	44.5
Eva, N.	8	11-9-15	1215	4.0	48.6
Daisy, G. G...	8	10-24-15	918	5.2	47.7
Dolly, N. 10		12-22-15	1004	4.2	42.2
Lulu, G. G...11		10-15-15	738	5.5	40.6
Molly, G. G...	2	11-15-15	691	5.8	40.1
Fanny, G. G...	5	9-24-15	1060	4.6	48.8
Lady, G. G...	7	12-19-15	1178	3.7	43.6
Sarah, G. G...	6	12-20-15	939	5.0	47.0
Milton Mackie					
Glory, G. G...	7	12-8-15	1122	4.8	53.9
Silver, G. G...	6	12-16-15	1277	4.3	54.9
Beauty, G. G..	7	12-17-15	1088	4.8	52.2
Princess, G. J.10		8-20-15	770	5.2	40.0
Florence, G. J.10		10-20-15	961	4.2	40.4
Rosabel, G. D.10		12-17-15	1302	4.3	56.0
Nancy, G. D..	9	11-12-15	1147	3.8	43.6
Oren Miller					
No. 16, G. J...	7	11-10-15	694	6.0	41.6
J. S. Shea					
No. 2, N.....	8	1-10-16	1166	4.6	53.6
No. 9, N.....	5	11-20-15	1057	4.2	44.4
W. P. Bussey					
No. 8, G. D....	8	11-8-15	1116	3.8	42.4
No. 22, G. J...	9	11-8-15	1119	3.6	40.3
M. L. De Vain					
Grany, G. H...	8	11-6-15	1162	3.7	43.0
Daisy, P. B. H.	7	12-31-15	1470	4.0	58.8
Mabel, P. B.H.	3	1-21-16	899	4.8	43.8
Quick, G. H...	8	11-18-15	1434	3.7	53.1
Kate, G. H. ..	3	1-21-16	1302	3.4	44.3
Tenant Bros.					
Bertie Fisher, P. B. J.....10		12-11-15	1148	3.6	41.3
Ruth, P. B. J.	5	9-10-15	740	5.4	40.0
Carrie, G. J...	5	3-18-15	598	6.8	40.7
Hattie, G. J...	6	12-5-15	1125	5.4	60.8
Kate, G. J....	5	11-5-15	1061	4.2	44.6
Anna, G. J....	3	1-3-16	763	5.4	41.2
Susan, P. B. J.	6	10-25-15	755	5.6	42.3
A. L. King					
No. 4, G. J....	8	10-31-15	1065	4.2	44.7
No. 6, G. J....13		12-10-15	1117	3.6	40.2
No. 8, G. H...	9	12-8-15	1200	4.0	48.0
Edward Race					
No. 11, G. H...	4	12-24-15	1381	3.6	49.7
W. A. Goodell					
No. 9, G. J....	5	12-10-15	793	5.6	44.4
H. R. Mosely					
Daisy, G. G...	8	11-7-15	1144	4.7	53.8
Bertha, G. G..	6	9-25-15	954	4.4	42.0

A. R. House, Official Tester.

MANY FORTY-POUND COWS.

The following January report of the Geneva Co-operative Cow-Testing Association shows a number of forty-pound cows and some very good higher records:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Harry Dunbar					
Queen, H.	6	9-29-15	2530	3.7	93.2
Chas. Turner					
Susie, H.....	8	12-14-15	2430	3.5	85.1
A. G. Palmer & Sons					
Beauty, H....	8	11-26-15	2257	3.4	76.7
W .E. Palmer					
Lady, H.....	5	11-29-15	1965	3.7	72.7
Mrs. Moss & Sons					
Vevie, H.....10		12-27-15	1556	4.4	68.5
Harry Dunbar					
Hengerveld, H.	4	12-5-15	2235	3.0	67.1
M. E. Petrie					
Netherland, H.	4	10-24-15	1848	3.5	64.7
W. E. Palmer					
Queen, H.....	3	11-22-15	1752	3.6	63.1
A. G. Palmer & Sons					
Chase, H.....	5	12-17-15	1851	3.4	62.9
Harry Dunbar					
Elgin, H.....	3	12-2-15	1854	3.4	63.0
W. E. Palmer					
Nettie, H.....	4	11-21-15	1652	3.6	59.5
Chas. L. Turner					
Jessie, H.....	3	12-22-15	1634	3.6	58.8
A. G. Palmer & Sons					
Daisy, H.....	5	12-3-15	1674	3.5	58.6
Houwtje, H...	7	12-3-15	1646	3.5	57.6
Harry Ames					
Johanna, H...	8	12-20-15	1665	3.4	56.6
A. G. Palmer & Sons					
Johnson, H...	8	21-30-15	1696	3.3	56.0
Mrs. Wm. Moss & Sons					
Lorina, H.....3		12-27-15	1550	3.6	55.8
Harry Ames					
Nig, G. H.....	9	12-27-15	1094	5.0	54.7
Ora Taylor					
Slattery, G. J.	7	11-26-15	1066	5.1	54.4
M. C. Flack & Son					
Umballa, J....	4	12-20-15	1060	5.0	53.0
Norton & Randall					
Malinda, G. H.	6	1-7-16	1364	3.8	51.8
J. W. Finnell					
Nellie, G. H...	3	12-25-15	1147	4.5	51.6
Rockwell Bros.					
Violet, G. H...	6	12-8-15	1426	3.6	51.3
F. H. Lean					
Blossom, G.G.10		11-9-15	1268	4.0	50.7
W. E. Palmer					
Fall Breeze,H.	3	11-27-15	1476	3.4	50.2
P. G. Harrington					
B. & W. Stearns, G. G.	6	9-27-15	775	6.4	49.6
Norton & Randall					
Bob, G. H.....	4	11-27-15	983	5.0	49.2
James Henderson					
Guernsey, G.G.	7	12-26-15	1113	4.4	49.0
Alfred Holt					
Belle, G. G....	5	12-6-15	1063	4.6	48.9
Chas. Turner					
Marian, H.....	3	1-5-16	1278	3.8	48.6

(Concluded on page 26.)

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1-gal. cans, ...**$1.36**
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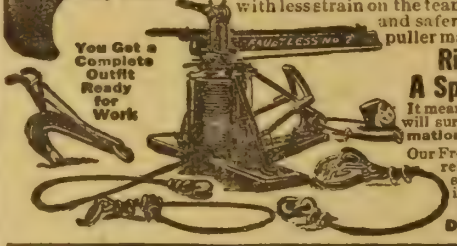

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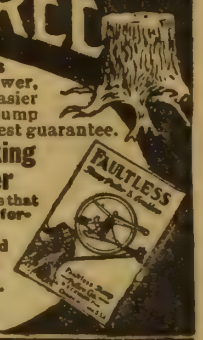

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department.

QUESTIONS AND ANSWERS.

Storage Battery Leaks.

Would like to know what would stop a storage battery from leaking. I have a battery that seems to lose too much water. Could there be too much acid in it?

Answer.—If your storage battery actually leaks it is due to a cracked cell and the only sure way of fixing it would be to obtain a new cell. It may be that you are overcharging your battery, which causes the electrolyte to be given off as a spray at the vent hole in the top of the cell.

Alcohol for Engine.

I would like to know how denatured alcohol would work in a Ford engine. How will it work in comparison with gasoline and what would be the effect on the engine? Would a different carburetor be required?

Answer.—It would require a new carburetor unless you can surround your present carburetor with a hot air or hot water jacket. The heat is necessary to vaporize the alcohol. Alcohol has no bad effect on an engine if properly carbureted. The same power is obtainable from the same quantity of fuel, but about 10 per cent more power is obtainable from the same engine by using alcohol, as more alcohol can be used.

Engine Lacks Power.

I would like to ask a question about my Majestic engine. It is fourteen horse power. It will run all right empty, but as soon as I put the belt on it will slow down and stop. It has a relief valve and a damper. It will not run with the damper open. The engine has a Webster magneto, and seems to have a good spark. What is wrong?

Answer.—It looks as if your engine is not getting enough gasoline. Be sure that the gasoline pipes are not stopped up. If you have a carburetor change the float valve so as to carry a higher gasoline level in the float chamber. Poor compression or faulty timing would also cause the trouble. The exhaust valve should close and the intake valve open soon after the piston passes dead center at the end of the compression stroke. In the retarded position the spark should occur just after the dead center at the end of the compression stroke.

Igniting Blasts.

How can I arrange to ignite a series of blasts at one time, using dry cells and a coil instead of a fuse? I am using black powder.

Answer.—Figure 1 shows the arrangement of the wiring, using a coil. The high-tension wires must be well insulated. The wires at P P P enter the powder. The spark gap at these points should be about one-thirty-second of an inch. Figure 2 shows the method of wiring without a coil. The powder is at W W W. The ends of the branch wires are connected by a loop of very fine iron wire, about No. 32 gauge. When the current is turned on these fine wires become white hot and ignite the powder. The longer the main line the greater the number of dry cells required or the larger the diameter of the wire. With the high-tension system, No. 14 copper wire heavily insulated, may be used for any reasonable length. With the low-tension system ordinary double cotton-covered wire may be used, but the rubber-covered wire is more durable. Use No. 14 wire for the low-tension system if the distance does not exceed 100 feet, or No. 10 wire for a distance between 200 and 300 feet.

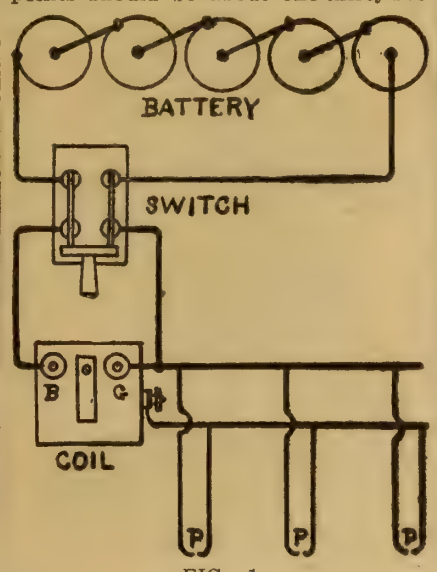

FIG. 1.

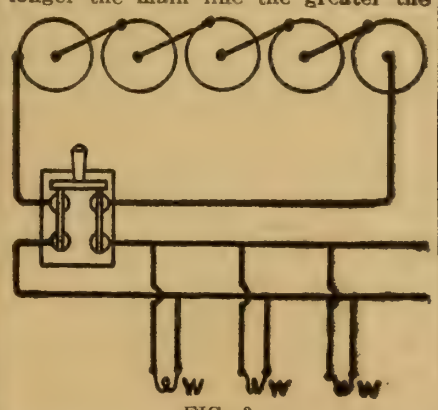

FIG. 2.

Some Tractor Questions.

What is the horse power of a four-cylinder motor having a four and three-fourths-inch bore, six and three-fourths inch stroke, running at 800 R. P. M.? If this motor were used in a tractor weighing 5,200 pounds, what would be the draw bar pull at two miles per hour? What is the rated horse power of a two-cylinder motor having a six and one-half inch bore, seven-inch stroke, running at 570 R. P. M.? If this motor were used in a tractor weighing 7,200 pounds, what would be the draw bar pull at one and three-fourths miles per hour?

Answer.—Manufacturers have no fixed rule for rating their engines and tractors. The following estimates are only approximate: The first engine should develop thirty-two horse power. The drawbar pull would be between 3,000 and 3,500 pounds. The second engine should develop twenty-four horse power. The drawbar pull should be close to 3,000 pounds.

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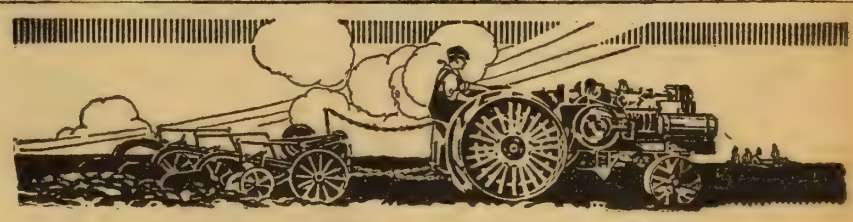

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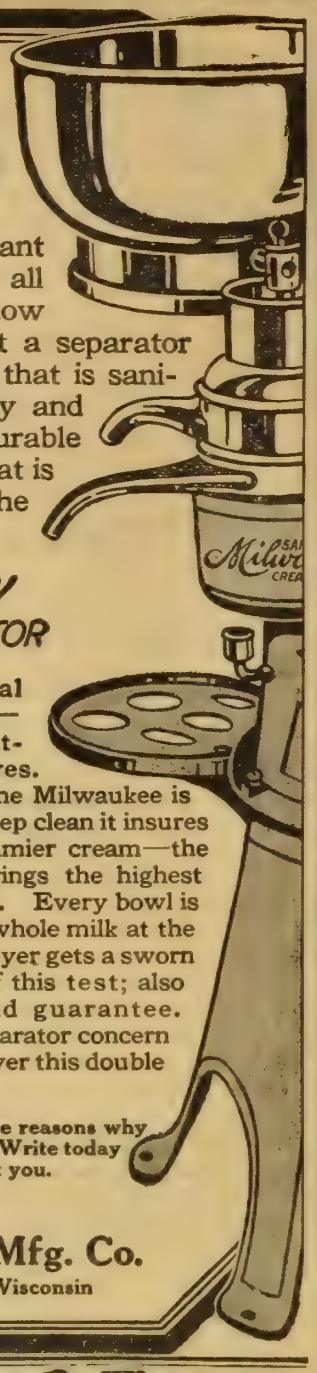

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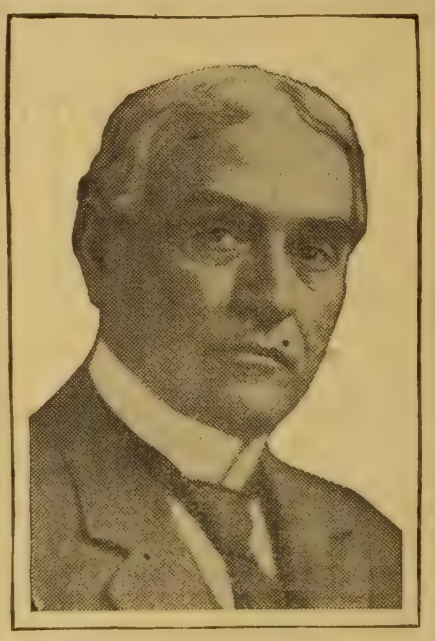
DEATH OF DR. HENRY B. FAVILL.

Dr. Henry Baird Favill died recently in Chicago at the age of fifty-five years. He was familiarly known throughout Wisconsin as Dr. Harry Favill. He was a member of a Jefferson county family, very prominent in the early days of dairy development in this state. While Dr. Favill practiced in the city of Madison for ten years, and had, more recently, become a physician of nation-wide reputation, he was more generally known in Wisconsin as a lover of Holstein cattle. His interest in this prominent dairy breed centered chiefly in Wisconsin, but he was known by Holstein breeders all over the world. In 1913 he was elected president of the National Dairy Council and vice president of the national organization of Holstein breeders in 1916.

Dr. Harry Favill attended the Wisconsin Holstein-Friesian breeders' meeting at Neenah in March, 1915, and was a prominent figure at that meeting. He was very much interested in the subject of county and community organizations and has directed his dairy enthusiasm toward the organization of "locals." At the Neenah meeting both Dr. Harry Favill and Dr. John Favill, of Appleton, were prominent in all the proceedings. Dr.



DR. HENRY B. FAVILL.
Chicago physician who was prominent in Wisconsin Dairy Circles.

John Favill is a minister-dairyman. The grandfather of the two Favills was a dairyman back in Herkimer county, New York, in the early days. The Favills describe that country as one where there are more hills than grass. There were six boys and five girls in Grandfather Favill's family, and every one of them learned dairying. Five of the brothers left New York state and settled in Wisconsin, four of them in Jefferson county near the city of Lake Mills. Both Dr. Harry Favill and Dr. John Favill have taken considerable pride in recent years in looking back upon the part which the Favill family took in dairy development in Jefferson county.

Dr. Harry Favill had been invited to attend the meeting of the Wisconsin Holstein-Friesian Breeders' Association, which is in session at Watertown this week. He would have been able to meet there many of the present-day breeders of Jefferson and Dodge counties. A good many of these men were boys when Dr. Harry and John were boys. Dr. Harry Favill owned a farm near Lake Mills, Jefferson county. This was devoted almost entirely to the dairy business and the care of his Holstein herd.

Dr. Favill was born August 14, 1860, at Madison, Wisconsin. His mother was Louise Baird, the daughter of a Green Bay attorney and Elizabeth Monroe Fisher, a grandchild of a prominent Ottawa chieftain. Dr. Favill was proud of his Indian blood. Once, when friends asked whether he could qualify as a member of the Mayflower society he replied, "No, my people were on the reception committee."

Besides being a leader in his profession, Dr. Favill was accorded many political honors in Chicago. He was president of the Municipal Voters' League from 1907 to 1910. He was, for a time, president of the Chicago City Club and was a member of the Public Efficiency Bureau. He devoted special attention to the study of living conditions in Chicago. Several days before his death Dr. Favill was in Springfield, Mass., where he had gone to deliver an address before the New England Dairy Association, and to go over some of the plans for a national dairy show.

LAW QUESTIONS.

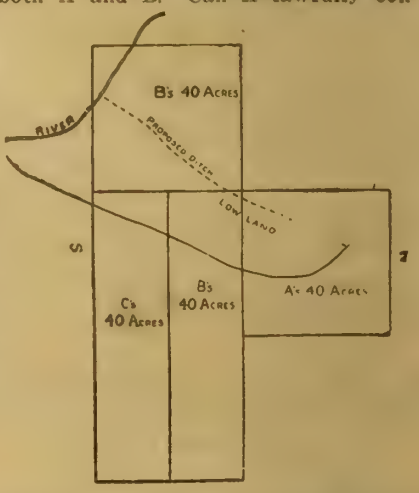
Mortgage—Wife Must Sign.

A Wisconsin Subscriber.—A husband and wife have a farm, the title of the farm is in the husband's name, the wife's name not being mentioned in the deed. (1) Has the husband a right to borrow money at a bank without his wife's knowledge or consent? (2) Can the husband lawfully mortgage the farm without the wife signing the mortgage?

Answer.—(1) He has. (2) He cannot. The wife must sign and acknowledge such mortgage in order to render it valid.

Draining Over Another's Land.

Mr. F. R. Jacobitz, Campbellsport, Wis.—The accompanying diagram represents the relative locations of the lands of A, B and C showing location of the low lands, river and course of proposed ditch, marked by dotted line. Such a ditch would benefit the lands of both A and B. Can A lawfully con-



struct such a ditch to the river, over B's land, without his consent, and if so, who will have to pay for constructing the same?

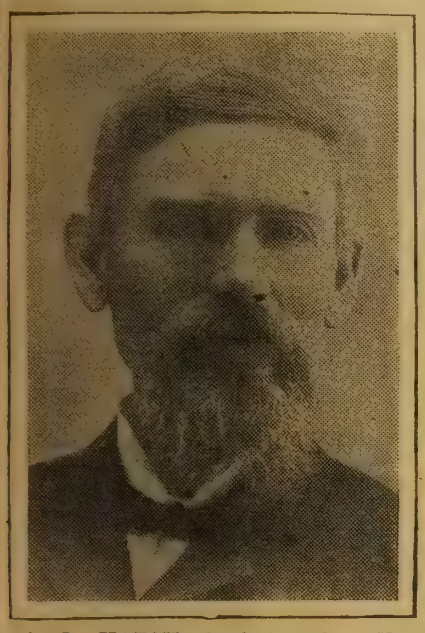
Answer.—A cannot lawfully construct such a ditch over B's land without B's consent.

MEN WHO ORGANIZED WISCONSIN COW-TESTING ASSOCIATION AT MADISON LAST MONTH.

DEATH OF A. L. HATCH, WISCONSIN HORTICULTURIST.

Death has called another prominent Wisconsin man—Mr. A. L. Hatch, of Door county, who was recognized some years ago by the college of agriculture for his distinguished services to horticulture in this state. Mr. Hatch died recently at Pittsburgh, Pa., and his death came as a great shock to his thousands of friends in this state.

Mr. Hatch has been referred to as the "discoverer of Door county"—that little county on the peninsula which protrudes into Lake Michigan and which in recent years has won the distinction of being the greatest cherry producing county in America. This



A. L. HATCH, STURGEON BAY.
Known as the father of the cherry industry in Door county, Wisconsin.

county, surrounded on three sides by water, has a climate ideal for fruit production, and when Mr. Hatch established his orchards in the neighborhood of Sturgeon Bay years ago he displayed great foresight. He went to Door county with the advantage of years of experience in the Kickapoo valley, another of Wisconsin's great fruit sections, and started an orchard which was the beginning of orcharding on a commercial scale on the peninsula.

Mr. Hatch made fruit growing his life work, and into it he put energy, enthusiasm and hard work. What was worth doing with him was worthy of doing well. He cultivated and sprayed properly. He studied fruit growing. No better tribute to his life and his services to horticulture in Wisconsin has come under the notice of The Wisconsin Farmer than the following brief article from the pen of Mr. Frederic Cranefield, secretary of the Wisconsin State Horticultural Society, which appeared some years ago in Wisconsin Horticulture, the official organ of that association:

Mr. Hatch lives at Sturgeon Bay. The whole country up there is his—by right of discovery—and a very substantial portion of it by right of ownership, "recognized in the sheep-bound volumes of the law." It is not yet quite twenty years since Mr. Hatch, in company with Professor Goff, discovered Door county, and today it is the leading fruit producing county in the state. (Make a heavy mark for foresight.) Just before that he owned a farm and an orchard in Richland county. All of this orchard, except one row, was in sod as was the fashion then and now in Richland county. This row, cherries, bore exceedingly well even in off years. The Hatch cherry orchard at Sturgeon Bay has always been cultivated. Make another mark for judgment and observation.

He was a tree peddler once, about thirty-five or forty years ago, out in the Kickapoo country. The trees he sold are alive yet and bearing the kinds of fruit he said they would bear. Make another mark for honesty.

If you should follow closely the life of this man you would have your slate covered with marks. Briefly, it is this: He has made the best possible use of all of the faculties with which nature endowed him to the end that he ranks today one of the leading horticulturists of the United States. Electing the business of fruit growing for a life work, he put into it hard work, hard study and integrity. Such things seem to pay in the end. Is there any young fellow within sound of the scratch of my pen who is cussing his "luck"? A. L. Hatch never met anything that weaker men call "good luck." If old man Bad Luck came his way he kicked him into the street.

We suspect that he was the son of poor, but honest, parents. We hope so. He is somewhere between forty-five and seventy years of age, it's immaterial; horticulturists never grow old.

In 1872 he joined the State Horticultural Society and has been one of its most helpful members ever since. From his "Observations of a Novice" at the 1874 convention at Madison, we will quote the following and then quit:

"There is no nobler employment of the human heart than home-making. Of all home attractions none are purer or more cheering in their tendencies than those offered by horticulture."

A MINNESOTA WINTER.

To the Editor:—In spite of the muskrats we have had a fine winter. They were reported last fall, in November, with houses very high. One report was seven feet high and fourteen feet long, with great thickness. Well, we have had here at Minneapolis thirty-five to forty inches of snow since December 15th. The thermometer two days in December reached zero, in January eighteen days below zero and the coldest being 30 degrees below. In February ten days below and the other ten days has been trying to clean out the snow and spoil two months of good sleighing. Ten years ago I spent a much more disagreeable winter in Los Angeles, California, than we have had here this year. While the cold has been steady and severe at times, we have had very few storms with high winds. Further north and west they report the worst of snow blockades and the thermometer away down to 58 degrees below zero; shortage of fuel and much suffering also reported.

George J. Kellogg.

INVITATION TO SHEEP RAISERS.

To the Editor:—The Wisconsin Sheep Breeders' Association extends a cordial invitation to all farmers and breeders of the state interested in the growing and breeding of sheep to join our association, as we would like to swell our membership to 1,000 if possible, as you know in union there is strength. The association has secured the passage of a dog law at the last legislature, so this will be an incentive for some farmers to start small flocks of sheep, who have hitherto been afraid of doing so on account of dogs. We also intend to publish a pamphlet containing the names and addresses of all paid-up members, together with the breeds of sheep each member handles, and also setting forth the reason why Wisconsin is so well adapted to sheep husbandry.

There is hardly a farm in Wisconsin but what could carry a small flock of good sheep at a profit, with wool now at 35 cents and fat lambs selling at $11.50 per hundred. What is more profitable?

The world is short of good mutton sheep and it will take a long time to overcome this shortage, as the temptation to market ewe lambs is very great when the present prices prevail, and the western ranges are being cut up into farming lands and no increase can be had from the west.

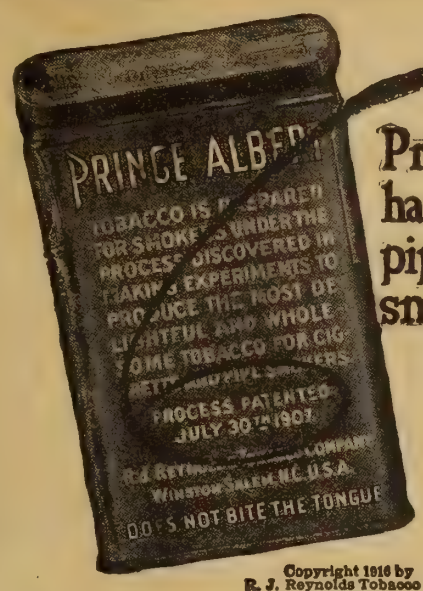
It only costs 50 cents per year to belong to this live organization and if any one is in doubt about Wisconsin producing good sheep, he should come to the Wisconsin State Fair next fall and see the exhibit of sheep that are bred and owned in Wisconsin.

W. F. Renk,
Sec. Wis. Sheep Breeders' Assn.

[Editor's Note.—The Wisconsin Sheep Breeders' Association is worthy the support of all Wisconsin sheep men and we would advise our readers to get in touch with Mr. Renk, the new secretary.]

The Best in Twenty-one Years.

FOR twenty-one years J. S. Gilcrest, president of the Des Moines Incubator Co., has been making offers on "Successful incubators and brooders that have won the approval of thousands of customers, but on page 24 he announces that he is making one this year that beats all others he ever made. With Successful incubators and brooders goes a free course in poultry raising that insures the success of any buyer. His advertisement also describes "Successful" grain sprouters that insure green feed the year around and makes the hens lay in winter. It changes a bushel of oats into three bushels of green, fresh feed. For free catalog write to J. S. Gilcrest, Pres., Des Moines Incubator So., 380 Second St., Des Moines, Iowa. If you wish his valuable book "The Proper Care and Feeding of Chicks, Ducks and Turkeys" enclose 10 cents extra. When writing reference to this paper will be appreciated.—Adv.



Prince Albert tobacco has made three men smoke pipes where one smoked before!

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Your supply of Prince Albert awaits your cheery nod at the nearest store that sells tobacco. Toppy red bags, 5c; tidy red tins, 10c; pound and half-pound tin humidors and that fine crystal-glass pound humidor with sponge-moistener top that keeps the tobacco in such excellent condition.

PUT fire to that friendly old jimmy pipe of yours or to a makin's cigarette that's all chock-full of Prince Albert—if you want to know *why* the national joy smoke has revolutionized pipe and cigarette rolling pleasure; *why* Prince Albert has trebled the number of pipe smokers in six years!

Test out P. A. to the last ditch! Puff your way into that enticing flavor, fragrance and long-burning coolness. Your confidence will never be abused. The patented process fixes that—and *cuts out* bite and parch!

PRINCE ALBERT

the national joy smoke

will *set free* any pipe-shy tongue! It will give *any* man *all* the pipe happiness and makin's happiness he ever yearned for!

Prince Albert has won its way on merit; won-over men of all tastes—it's so universal in its popularity; so good, so kindly, so satisfying. *It will win you quick as a flash!*

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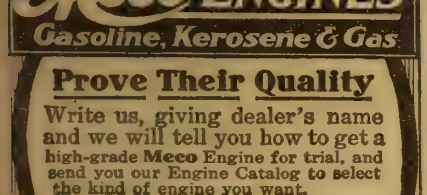

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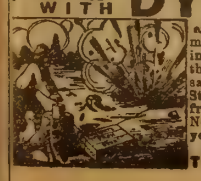

and accomplish more work in removing stumps, rocks, also planting trees, digging ditches, etc., than twenty men. It's effective, safe and easily used; guaranteed Standard Brand; shipped DIRECT from Mill in this state, lowest prices. No salesmen. Established over 30 years. Write for full particulars.
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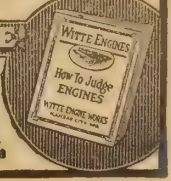

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DAIRY

DAIRY MEETING AT SPARTA, WISCONSIN.

Western Wisconsin farmers and dairymen held a love feast at Sparta, Wednesday, February 16th, which will be remembered as one of the most interesting and enthusiastic gatherings ever held in that part of the state. The meeting was held under the auspices of the Sparta Advancement Association and more than 250 farmers and dairymen were present.

The gathering brought together the members of the three breeders' organizations in that vicinity—the Western Wisconsin Holstein-Friesian Breeders' Association, the Monroe County Guernsey Breeders' Association and the Monroe County Jersey Breeders' Association. Each of these associations held its annual business meetings on that day and the members of each attended jointly the general exercises arranged with the assistance of the Sparta association. This association includes business men and farmers interested in the advancement of dairying and general farming conditions.

The meetings were held in the city building and dinner was served at noon free of cost by the Sparta Advancement Association. This kind of co-operation between the business men and farmers is certain to win in the end and those who aided in the entertainment of the visitors are entitled to much praise and commendation for their work. Following the afternoon program a vote of thanks was extended by the farmers and dairymen to the advancement association for its part in making the meeting successful.

The forenoon meeting opened with an address on "Improvement in Live Stock in Wisconsin," by George McKerrow, of Pewaukee, who told of the benefits from co-operation in Waukesha county. This address was followed by music and addresses by John B. Irwin, of Minnesota, who spoke on "The Dairy Cow for Profit." Mr. Irwin is the owner of the world's champion cow, Duchess Skylark Ormsby, and his experience with profitable cows enabled him to speak first hand regarding this subject. He spoke on feeds and feeding in relation to the profits and cited his champion cow as an example of the dairy cow for profit. The well-fed cows, he said, are as a rule the heaviest and best producers, but proper feeding is just as essential as heavy feeding. He discussed the balanced ration and every dairyman who heard him went home feeling that he had improved his time.

Following dinner each association held its annual business meeting and at 3 o'clock J. L. Tormey, of Madison, spoke on "Co-operation Among Breeders." Four reasons may be assigned, he said, for the great advancement of the dairy industry in Wisconsin: First, the Babcock test; second, the separator; third, the educational work of the farm papers; fourth, co-operation and association work.

Mr. Tormey pointed out that 108 of the 111 community breeders' associations in Wisconsin are dairy organizations and that the dairymen have taken the lead in co-operative work. He cited the success that the Waukesha associations have enjoyed as illustrations of successful and profitable co-operation.

Ford J. Allen, general dairy agent for the North-Western Railroad, spoke briefly upon the desire of the railroads to co-operate in every way possible in building up the dairy industry and said that great progress had been made in western Wisconsin in the last few years.

Charles W. Humble, official tester for the Sparta Co-operative Cow-Testing Association, reported on the activities of the association which closes its first year March 7th. During the year twenty-three farmers have been testing their cows and in January there were fifty-six cows in the association which gave more than forty pounds of fat.

The Western Wisconsin Holstein Friesian Association, which comprises the counties of Monroe, La Crosse, Trempealeau, Vernon and Jackson, elected Charles Vander Schaaf, of Sparta, president; E. L. Little, of Onalaska, secretary, and L. M. Compton, of Tomah, treasurer.

The Monroe County Guernsey Breeders' Association elected Gotham Liddle, of Sparta, president; W. H. Hanchett, of Sparta, secretary, and John Blackburn, of Sparta, treasurer. The Monroe County Jersey Breeders' Association reported a fine year with an increased interest in Jerseys and elected officers for the coming year.

RIGHT START TO SECURE HIGH-TESTING CREAM.

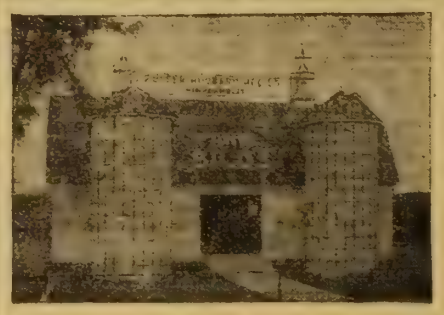
The River Falls Co-operative Creamery, Pierce county, at its annual meeting recently adopted a resolution that should be of great value to that creamery in producing better butter and also of value to the farmers in increasing their profits.

This resolution provides that on and after April 1st all cream received at that creamery which tests less than 25 per cent fat will bring 2 cents less per pound than the general price paid during the month for cream.

In other words, this means that the farmer who skims thin cream with less than 25 per cent fat will receive just 2 cents less per pound for his fat than the farmer who skims and delivers cream testing 26 or more per cent. Several other creameries, we are informed, have taken action with the view of compelling their patrons to skim only high-testing cream.

This is certainly a move in the right direction. There will no doubt be numerous complaints from many patrons of the River Falls creamery. Many will call it an unjust action and it remains to be seen whether the resolution is enforced to the letter. It is a move to compel the farmer to keep his skim milk on the farm instead of carting thousands of pounds of this valuable food to the creamery every year

A FINE WISCONSIN SHOW HERD.
Owned by Joe Gordon & Sons, Mineral Point, Wisconsin.



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Little Ford Milking Stool

Saves milk from spilling and keeps it clean

Every milker Needs It—Pays For Itself

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Barn cleaning is fun for the boy when a Louden Litter Carrier is used. It is no longer slow, laborious, disagreeable and wasteful.

Louden Carriers are strong, light-running, safe, trouble-proof. The hoisting gear is the least complicated and most powerful—has no dangerous hit-or-miss ratchets or brakes.

The Emancipator Carrier
On a Louden Track
Carries a Ton Safely

A 10 or 12-year-old boy can operate it Every pound of pull on the chain lifts 40 pounds in the box. Has roller bearing trolleys; runs smoothly around curves and over switches.

Louden Litter Carriers are built in four styles, suitable for any type or size of barn and at a wide range of prices. We can fit up your barn at small cost with a system that will pay for itself in a few months

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Feed and Litter Carriers. Barn and Garage Door Hangers. Stalls and Stanchions. Steel Pens. Hay Tools. Horse Barn Fittings Cupolas and Ventilators. "Everything for the Barn"

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New way to get a New National—the supremely finest and best cream separator ever designed—the only machine with the marvelous vortex-spoon. No excuse to buy a poor or cheap machine.

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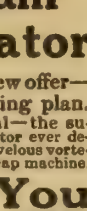

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Our ship-lap block lets you brace tile against tile—joints set solid—permanent—less mortar exposed to feed inside—a better looking wall outside

LANSING Vitrified Tile Silo

defies age—fire—storms—winter frost and summer heat. First cost is only cost. Reinforced with twisted steel—continuous doorway—easily climbed ladder. Write for catalog and low price offer on our superior "ship-lap" block.

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Also get offer on Climax Silage Cutters and Bidwell Threshers

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Special Galvanized Steel Octagon Roof—best manufactured.

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Cannot Sag, Blow Down or Rot.

Cures and preserves silage perfectly. Prevents freezing of silage. Easy to construct. A real farm building, permanent and rigid. No hoops to get loose. No guy wires. No staves to shrink or swell, but a smooth, double wall from base to roof, the inner wall being of *California Redwood.*

Guaranteed for 20 Years

"But Lasts a Lifetime"

The patented wood "tire" is built up of inch boards, and shipped in sections. The boards overlap in step formation at both ends. When nailed together, these sections form a ring of unusual strength. The silo frame forms its own scaffolding.

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Silver's "Ohio" Silo Fillers

Write for catalog and booklet "Silo Filler Logic" which we send free. Enclose 10c and we send "Modern Silage Methods" with them.

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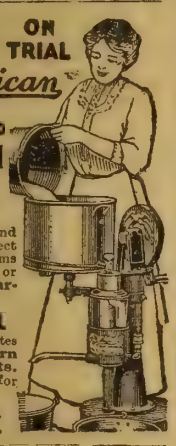

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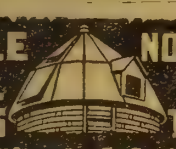

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in his cream cans. It is a move to save the farmer a large loss in fat that occurs in buttermilk when cream is thin. It is a move to compel the farmer to feed this skim milk which is now worth about 40 cents a hundred, for if he keeps it on the farm he is pretty likely to feed it to his calves, his pigs or his chickens. It is a move to save the farmer considerable transportation expense in hauling thin cream, to save the creamery the cost of handling so much bulk and also enable the creamery to produce a better product at less expense. Recently it was shown that the farmers, by delivering thin cream to the Tomah creamery lost $10,000 last year. At every creamery there is this loss, the amount depending upon the average cream test which governs the amount of skim milk the farmer throws away by hauling to town.

The quality of cream has everything to do with the prices which the farmers receive for their fat. Some Wisconsin creameries last year paid an average of 36 cents for the year, but most creameries paid 30 cents. Some received from 2 to 4 cents more for their butter than others, all due to the fact that good, clean wholesome cream, high in test, was delivered to the buttermaker. It is not difficult to skim cream testing above 25 per cent, the minimum set by the River Falls creamery. Every dairy farmer can do this and should do it and no doubt more creameries in the future will be making such regulations. Cream testing between 30 and 40 per cent should be the ideal of every farmer and it should be properly cooled and kept so that it can go to the creamery in the best condition. Good, pure, sweet cream, high in test, is necessary if butter commanding the highest prices is to be made and it is the duty of the farmer to the buttermaker to deliver such cream. Then he can expect the prices that top the market and if he doesn't receive them he has a kick coming against the buttermaker.

FOX RIVER VALLEY HOLSTEIN BREEDERS.

To the Editor:—The Fox River Valley Holstein Breeders' Association held its annual meeting at Neenah, Wisconsin, January 27, 1916, and owing to the bad weather there were only twenty-five members present.

The following officers were reelected: President, R. J. Schlafer, Appleton, Wisconsin; secretary and treasurer, Edward O. Mueller, Appleton, Wisconsin.

The following executive committee was chosen: Archie Calder, Allerville, Wisconsin; Fred Zeigler, Appleton, Wisconsin; Charles Carpenter, Hortonville, Wisconsin.

We have the honor of being placed on the Outagamie County Community Institute for a Holstein meeting which is to be held February 28 to March 1, 1916, at Appleton, Wisconsin.

It was voted that the members of the Fox River Valley Holstein Association who have also been appointed to serve on the agricultural committee of the community institute to be held at Appleton, act with the president of the association in arranging for that part of the program.

The president and secretary were instructed to endeavor to arrange for a banquet on the date of the Holstein meeting. It was voted that the president and secretary draw up a resolution to be sent to the officers of the Wisconsin Holstein Breeders' Association, who are to instruct their secretary to mail to every national member in the state of Wisconsin a proxy which shall be returned to the delegate elected to attend the annual meeting of the Holstein-Friesian Association of America. This is for the purpose of getting the Wisconsin Holstein breeders better organized and holding their own proxies. Heretofore the most of the Wisconsin proxies were held by eastern breeders.

It was voted to hold a picnic this coming summer.

Edward O. Mueller.
Outagamie Co., Wisconsin.

WAUSAU COUNTY REPORT.

The Wisconsin Farmer is in receipt of a letter from Otto J. Kilian, of Wausau. He reports that the yearly receipts at the Taegesville cheese factory amounted to 1,078,795 pounds of milk, out of which 104,748 pounds of cheese were made. This is an increase of 156,176 pounds of milk received and 16,758 pounds of cheese made. The farmers received $12,886.18 for the milk delivered.

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—that's the title of our new free book on hollow tile for farm buildings. Send for it. Before you figure on another building, read it carefully; study its illustrations and plans. Natco buildings cost a little more than frame buildings, but the first cost is the last cost—no painting or repairs. They cost less than other forms of permanent construction, and are easier to erect. You'll be convinced that for permanency, safety, health, convenience and attractiveness, you should

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44x36 ft. Fireproof, dustproof, everlasting. An ornament to any farm.

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They cannot decay, burn, warp, crack or crumble. Their glazed surfaces are impervious to air and moisture; their dead air spaces resist frost. We have some very practical plans of buildings ready for you—free—and our experience as the largest fireproofers of buildings in North America is yours for the asking. Write today. And be sure to ask for the book, "Natco On The Farm."

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Well ventilated, clean, warm—makes fowl happy, contented profit builders.

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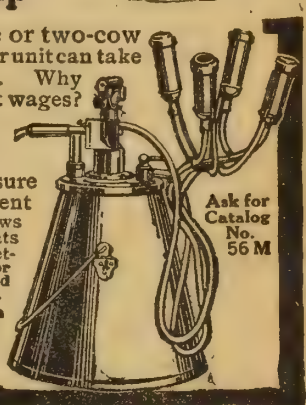
The Empire is operated by natural air pressure which produces a gentle massaging movement that cows really like. Empire teat cups fit all teats. Cows give down freely—usually increase the milk flow. Sore teats and udders are unknown to users of the Empire. You get better milk prices because the bacteria count is greatly reduced. No dirt or germs come in contact with milk. You can keep more cows, less hired help and make more money by owning the Empire Mechanical Milker.



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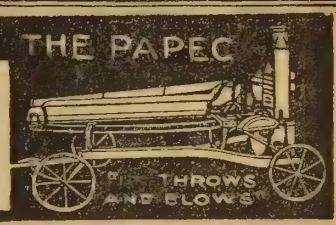

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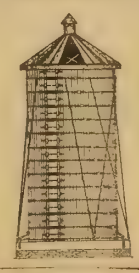

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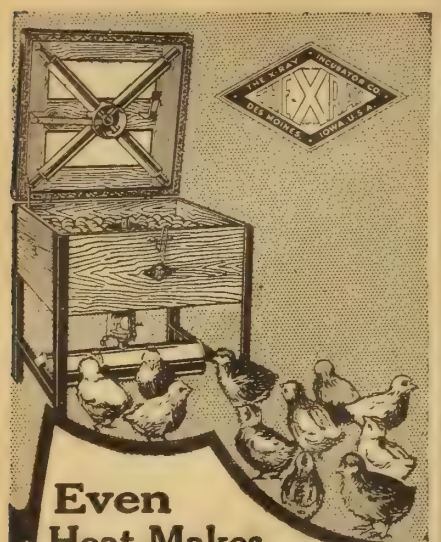

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MILD, moist, even heat sent to every corner of the hatching chamber by the X-Ray Duplex Central Heating Plant heats every egg exactly the same. Never too much heat, never too little—X-Ray Automatic Trip attends to that.

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Fill the big tank just once—that's enough for the entire hatch. No fussing to fill a tank every day. No danger of hatch becoming chilled.

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Poultry Lessons FREE to every buyer of a "Successful" Incubator or Brooder. A complete course—well worth $25—insures success—tells how to save on feed—get top-notch prices, etc.

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Feed Sprouted Grain—Get More Eggs—with "*Successful*" *Grain Sprouters*—built in all-steel sections—fireproof. Changes 1 bushel oats into 3 bushels fresh, green egg-making feed. Makes hens lay in winter. Send for free descriptive circular and low prices.

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J. S. GILCREST, *President*

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Biggest Offer Yet!

BIG 155-Egg Incubator. Made of genuine California Redwood. Natural Finish. Double Doors. Deep Nursery. Thermometer. Tester. Self-regulating. Has hundreds of air cells to protect eggs from outside changes. Hot water heat. Cold-rolled, one-piece corrugated copper heater. Won't leak. Biggest bargain ever offered on a guaranteed incubator and brooder! Order from this ad or write for new 1916 catalog.

155 Chick

Progressive Incubator Co., Box 128, Racine, Wis.

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AMERICAN POULTRY JOURNAL

Tells everything about the fascinating and profitable poultry industry. Issued monthly; 10 cents. We want you to know how good it is and will send it 6 months for 25c. Order now.

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POULTRY AND SQUABS FOR PROFIT. An encyclopedia of poultry information. Written by a man who knows. Leading varieties of poultry and pigeons in natural colors. Low prices on fowls and eggs.

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

POULTRY HINTS FOR THE FARMER.

To the Editor:—I wish to give a word for Mr. Halpin for his able service in poultry. Mr. Halpin is an authority on poultry and we are very fortunate in securing such a prominent poultry man for the old "Badger state."

To begin with, if you have a flock of poultry and they are scrubs just stop and consider the profits you are deriving from them. The recent census gives the average per hen of seventy eggs per year, while the egg contests at Storrs and Mountain Grove have produced a great number that have passed the 200-egg mark and then some. Wouldn't it be a grand thing if you could double your egg yield in one year's time and produce these eggs when the market was the best?

Well, the average farmer could very nearly do this and at a very small expense at that.

If you are carrying scrubby stock don't breed from such! Here we have poultrymen advertising fancy poultry, thoroughbred utility stock and eggs. Here we have a poultry farm at the

A PRIZE PULLET.

First prize White Plymouth Rock pullet at 1916 Chicago Show. Bred and owned by Charles H. Conway, Terre Haute, Ind.

university which breeds all important varieties of the choicest farm and egg-laying strains. Wouldn't it be best to purchase some eggs or stock from some of these breeders and raise something that will be your foundation stock for another year? An outlay of a few dollars is all that is required and you are not spending that, you are simply investing it.

How much does it take to make the same changes with your cattle and hogs? Still the poultry business is paying more for the amount that is invested than any other live stock on the farm.

Let us assume that you have thoroughbred stock and are prepared for raising some good offspring. The main thing is keeping the breeders healthy so a large per cent fertility is derived. Keep at least six inches of straw in your poultry houses and feed your grain in this. If you want an output of eggs try this simple method: Morning feed oats in litter, being careful that you don't give too much. The idea is to keep them hungry through the day and the evening ration is supposed to fill them. Supposing you feed a six-quart pail of oats in the morning; at noon give table scraps, greens (cabbage or forkful of clover chaff) and about three quarts of wheat. For evening feed corn on cob (broken in half) and let them exercise by picking it off. Use judgment and feed enough corn so as to fill them, but just what they pick up clean. It is far better to have them looking for more than to overfeed. Two handfuls a day is sufficient for any bird and in feeding gauge your amount by this.

Now don't forget the hoppers for the dry feeds. A good many poultry-

Wisconsin Wins In Big Hatching Contests Every Year

Why Pay More

For only $10 you can get these two prize winning machines, delivered, freight paid east of the Rockies. You take no risk—money back if not satisfied. You can order direct from this ad. Ask the publisher about us.

Both Machines Freight Paid For Only $10

We also furnish 180 Egg Incubator and 180 Chick Brooder both for only..$12

Wisconsin Incubators have long proved their wonderful hatching qualities. Competing with every make known, they won in the five big annual National Hatching Contests. Think of it. Five consecutive victories. That certainly proves you can't make a mistake. Shipped on 30 Days' FREE Trial

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Wisconsins have hot water heat, double walls, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Made of finest, select, clear CALIFORNIA REDWOOD, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1916 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

WISCONSIN INCUBATOR COMPANY, Box 102 Racine, Wis.

men feed a moist mash at noon, but I think that it is far better to let the birds mix their own mash. Some birds desire this, others more of the other, and, therefore, they balance their own rations.

In making the hoppers have at least four compartments or sections to it.

A PRIZE COCKEREL.

Second-prize winner White Plymouth Rock cockerel class, at Chicago Show, 1916. Owned by Charles H. Conway, Terre Haute, Ind.

Keep bran, middlings, grit and oyster shells (one-half of each) and charcoal (regulates digestive organs). The four named are very important and you cannot expect to produce results without them. Then look at the economy derived from feeding ground feeds. Bran and middlings cost from $1.15 to $1.40 per 100 pounds, while oats, wheat, etc., cost considerably more. Yes, by the hopper system you introduce a cheaper food that is very nutritious. Meat must also be furnished, especially when confined. This can be fed also in hoppers if beef scraps (commercial) are fed. Or untrimmed bones can be hung up and the birds will pick them clean. The birds also get considerable exercise from the latter method.

This formula is as simple as anyone can make it and you certainly get good results. We read of methods that call for everything, such as mixing of mashes and feeding at noon, sprouting oats, etc. Now, very few farmers have time for such and it takes skill in feeding same. The oat sprouting is one of the greatest achievements in poultry work, but cabbages, lawn clippings, etc., serve the purpose of summer conditions and the work is hardly noticeable.

The writer has seen coops (good number at that) without a straw in it. The corn lays plentifully on the floor and the birds jump down in the morning, fill up and then hop back on the perch, or mope around in the corners. Do you wonder they don't lay eggs? They simply can't under such conditions. There is no exercise and the birds are lazy fat. The one ration of corn does not go far in making an egg. A hen is simply a machine for producing eggs. You cannot feed fatty foods and expect to get albuminous back. It takes wheat, oats, etc., to make the albumen (white of egg); corn and barley for the yolk. Then don't forget oyster shells for the shell and grit for grinding the food. How simple it is, but how many follow it?

The writer is going to deal with a topic that is one of the greatest draw-

"The Profits In Poultry Keeping"

Big FREE 1916 Poultry Guide. Describes Cyphers Popular-priced Incubators, 3 styles—8 sizes, 20 years leadership. *Write today.*

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MONEY IN POULTRY AND SQUABS Start small. Grow BIG. Get winter eggs. Keep healthy fowls. Save your chicks. Our Big Book Tells How. Shows fowls in natural colors, how to feed for eggs, select best layers, plans for houses. FREE.

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RHODE ISLAND RED COCKERELS

BIG-BONED S. C. and R. C. from my strain of heavy, winter-laying, money-making Reds. Will make you new, vigorous spring breeding stock, $1.50 up. Immediate delivery via C. M. & St. P. Ry. and C. & N. W. Ry. to any point in U. S. R. E. Daly Poultry Farm, Necedah, Wis.

50 VARIETIES Chickens, Bronze White Holland, Bourbon Red Turkeys, Toulouse, Embden, African China Geese, Pekin, Rouen, Indian Runner, Muscovy Ducks, Guineas, Incubators and Brooders. Catalog 2c.

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WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

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BRED from prize winners. Ready for delivery. 50 pullets that will lay within a month. None disqualified. Good breeders $2.50 up. Cockerels $2 up. Exhibition birds at reasonable prices. Won 9 ribbons on 15 birds at the Wisconsin State Fair, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

WE PAY $80 A MONTH SALARY AND furnish rig and all expenses to introduce our guaranteed poultry and stock powders. Bigler Company, X 660, Springfield, Illinois

58 BREEDS FINE pure-bred chickens, ducks, geese, turkeys, guineas, at low prices. America's finest poultry farm, 8000 prizes. Large catalog 4c. A. A. Ziemer, Box 15, Austin, Minn.

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P. W. Condon, West Chester, O.

58 BREEDS Fine, pure-bred chickens, ducks, turkeys, geese. Hardy, northern raised. Fowls and eggs at low prices 22 years at it. America's pioneer poultry farm. Large catalog free. F. A. NEUBERT, Box 607, Mankato, Minn.

FAHA'S SILVER WYANDOTTES. "The Aristocrats." Cocks, hens, cockerels, pullets. Pens. Write your wants. Catalog free. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

WANTED to buy all leading varieties pure-bred poultry, especially Golden Wyandottes, Houdans, Hamburgs, C. I. Games, P. Rocks, Orps. and Spanish. Elmer Skink, 511 S. 10th St., Lyons, Ia.

PURE-BRED WHITE and BARRED ROCKS. Eggs $1.25 per setting prepaid; $5.00 per 100. Chicks $15.00 per 100. Address Mrs. J. F. Bloom, Route 1, Stillwater, Minnesota.

PURE-BRED Single Comb Buff Leghorn yearling hens, the laying strain, at $10 per dozen. Charles Schmit, Route 22, Hortonville, Wisconsin.

FOR SALE—Prize-winning, full blooded Buff Orpington cockerels. Address Mrs. H. Hardwick, Route 1, Edgerton, Wisconsin.

backs in poultry, namely, lice and mites. It is surprising to hear how people get these confused. You will hear them say, "That house is full of chicken lice!" It is not; it is full of mites! Lice are entirely different from mites and they, therefore, must be treated differently. A louse stays on the fowl and lives from the skin, gnawing the surface and producing scales and sometimes sores. The skin becomes scabby in severe cases and a glance at the bird will show whether lice are present. The best remedies and the ones best known are powders. They all require time and cost considerable. The writer uses licene, an anointment which is very effective. One application the size of a pea is sufficient for six months' time. It must be put directly below the vent or anus, as all lice sap at the vent and in crawling through the anointment they perish.

For mites, the most dreaded of all, is required a different treatment. These pests are hidden in cracks, under perches and nest boxes, etc. At night they attack the fowls and sap the blood. When full (blood) they appear red; otherwise they are a grayish color. These are the fellows that crawl on your hands and clothes while in the poultry house.

Make your raid on them about the first of May, as then they are not as numerous as later on when warm weather arrives. Get some kerosene, tar (roofing tar is good) and some crude carbolic acid. Mix the three in the following proportions: Kerosene, 60 per cent; tar, 30 per the sulphur touches the coals the fumes arise and the attendant must make his escape. When you think everything is destroyed within open the doors and windows and air the coop. Then proceed with your mixture and paint as stated. By using sulphur the attendant is relieved of being pestered while performing the work. We all know how it feels to be full of mites.

In closing I wish to state that there are other very important items that I have not dealt upon (1) kind of houses, (2) breeds of poultry, (3) raising chicks, etc. They are important, but it depends upon the man behind.

The three referred to and written about I consider very important, especially to the farmer: First, good foundation stock (breed you desire); second, feeding variety egg-producing foods; third, keeping down the lice and mites.

One is just as important as the other. Good stock with poor care and houses makes a very slight improvement. Good food with lousy and mite-infested birds and houses makes a poor showing. If you will practice cent; crude carbolic acid, 10 per cent. Mix thoroughly so the tar is entirely dissolved. Take an ordinary paint brush and proceed, painting nests, perches, etc., any place where you think mites are present. It is one of the cheapest solutions obtainable and the tar and carbolic acid makes a very strong coating of black that penetrates the wood. Do this at least twice during the warm weather and you will not be bothered with the pests. The interior of the house should be whitewashed in the spring making the coop light and sanitary.

For places already alive with mites try the following: Close up all openings so that the coop is perfectly tight. Take two or three pounds of sulphur and throw over a pan of red coals, having a large pan with water in under the small one. The moment what is given you will be surprised at the results obtained and they are so simple. Paul Johnson.

Dane Co., Wisconsin.

LIKES LARGE INCUBATOR.

To the Editor:—I am very much interested in poultry and raise large numbers of chicks each year. At first I tried setting hens, and I could not get a big enough bunch of little chicks at once, so my husband decided to buy an incubator, a 240-egg machine, at $25. I have had it and run it for two seasons. Now a friend of mine has bought a 400-egg machine that she likes and claims it hatches equally as well as a smaller machine, so I am getting the same idea, to get a 400-egg incubator of that kind and sell mine.

Some claim that a small incubator is the safest. Not for me. I want it large, as I aim to raise between 800 and 900 young Plymouth Rocks this spring. I raised a large number last year and kept an account of what they cost me and what they brought me and I find that there is money in poultry, especially in winter when we can bring plenty of fresh eggs to the market at 35 and 40 cents per dozen, to which I suppose all poultry raisers will agree with me. M. H. E.

Having passed the 50,000 mark in silos and the 80,000 mark in automobiles, Wisconsin is looming up as a state where the farmers not only make big profits but are willing to invest these profits in equipment which will add to returns and give greater pleasure and comfort. There is now a silo to about every third farm in this state and the automobile ratio is nearly as high.

CONKEY'S ROUP REMEDY cures your hens. A good preventive too. 50c postpaid. Conkey Co., Cleveland, O.—Adv.

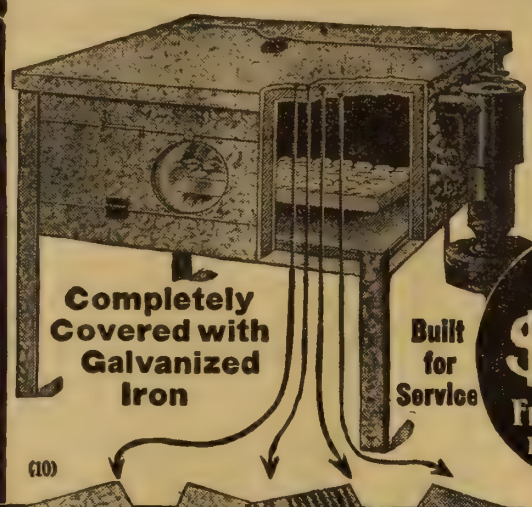
Tells why chicks die

E. J. Reefer, poultry expert, 4483 Farmer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure it." The book contains scientific facts on white diarrhoea and shows how to prepare a simple home solution that cures this disease over night and actually raises 98 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

Ironclad TRADE MARK

Wins in the Two BIGGEST HATCHING Contests Ever Held

Why take chances with untried machines when for only $10 we guarantee to deliver safely, all freight charges paid (East of the Rockies) BOTH of these big prize winning machines fully equipped, set up ready for use? Why not own an Ironclad—the Incubator that has for two years in succession won in the GREATEST HATCHING CONTESTS EVER HELD? In the last contests conducted by the Missouri Valley Farmer and Nebraska Farm Journal, 2,000 Machines were entered, including practically every make, style and price. With 140 Egg Ironclad—the same machine we offer with Brooder, freight paid. for only $10, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in last contest.



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We Give 30 Days Trial —Ten Years Guarantee

You have nothing to risk. We will send machines—let you use them 30 days—urge you to compare them in quality of material, hatching ability, workmanship and price—and if you don't find them satisfactory, send them back—we'll pay the freight charges and return your money. You are absolutely safe. We have to do as we advertise. If we didn't the publishers of this paper would not carry our advertising.

140 EGG INCUBATOR CHICK BROODER

When an incubator is constructed of material of this kind it gives you the strongest and most durable incubator that can be made—a machine that will not warp or shrink, or open up at the seams, as every joint is lapped over with our galvanized iron covering—giving you a machine that will last a life time. Don't class this big, all-metal-covered dependable hatcher with cheaply constructed machines. Ironclads are not covered with tin or other thin metal and painted, like some do to cover up poor quality of material. Ironclads are shipped in their natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad Specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boilers, self regulator, Tycos Thermometer, glass in door, complete book of directions, and many other special features fully explained in free catalog. Write for it today or order direct from this advertisement and save time.

This Book Sent FREE

It tells how Ironclads are made and why they win in the Big Hatching Contests.

IRONCLAD INCUBATOR CO., Box 113 Racine, Wis.

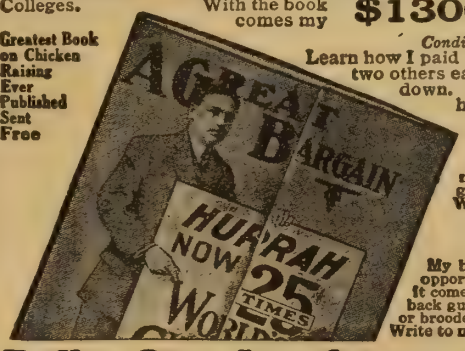
NOW 25 Times World's Champion Belle City Incubators and Brooders

Jim Rohan Pres.

Postal brings my great book, "Hatching Facts" to you. Championship winners tell *in their own words* how to make most profits. 100 photographs of winning hatches

"In twenty-five world's greatest matches Belle City won with perfect hatches"

SEND for my new big *free book*, *"Hatching Facts,"* today. The whole wonderful story told by the winners themselves. Book gives all facts—proofs—particulars—shows 100 actual photographs of prize-winning hatches—gives full description and illustrations of incubator and brooder *in actual colors*. *"An outfit made for hatching—that there's no such thing as matching."* 402,000 in use—the kind used by U. S. Government and leading Agricultural Colleges. With the book comes my $1300.00 Gold Offers



Greatest Book on Chicken Raising Ever Published Sent Free

Conditions easy to receive biggest pay

Learn how I paid one Belle City user $156.25, another $50, two others each $45.00 and many others from $33.00 down. Learn how thousands have made big hatches and cash profits with my 25 Times World's Champion Belle City Incubator—how my World's Famous Belle City Brooder *saves the chicks* and raises the highest percentage—how you can make the most money out of poultry this year whether you go into it on a large or a small scale—how my World's Champion

"Adds a money-making charm To the poorly paying farm"

My book "Hatching Facts" shows money-making opportunities for every man, woman, boy or girl. With it comes my *low prices*—my ten-year personal money-back guaranty. Before you buy any other incubator or brooder read this book *on Practical Poultry Raising*. Write to me today. Jim Rohan, Pres.

Let Me Put You in the Prize Winning Hatching Class

Get my low price; 1-, 2-, 3-Months' Home Test Plan. Freight Prepaid.

Same as last year

No one else can give you so much Hatching Value for so Little Money

We Ship Quick from Buffalo, Kansas City, Minneapolis or Racine

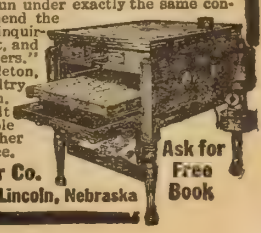
Belle City Incubator Company, Box M106 Racine, Wisconsin

The Queen Gets The Chicks

We receive many letters similar to this:

"Last season I installed a Queen as an experiment. It hatched 18 per cent better than eastern made machines and 11 per cent better than any other machine made in the west. All machines were run under exactly the same conditions. I recommend the Queen to everybody inquiring which is the best, and especially to beginners." —John Bowen, Littleton, Colo., Colorado Poultry Fanciers Association.

The Queen is built to run without trouble and to outhatch other machines. Book free.



Queen Incubator Co. 153 Bryan Ave., Lincoln, Nebraska

Ask for Free Book

UPPER WISCONSIN

A SOLUTION FOR THE CUT-OVER LAND PROBLEM.

To the Editor:—I have been intending to write to your paper for some time along lines that seem to me are of vital importance to the development of this state and other states possessing a large amount of cut-over timber land.

It is a well-known fact that any man who takes hold of a tract of forty or eighty acres of cut-over land and endeavors to put it into a state of productivity has a very large job on his hands, especially when he has limited capital. Every year there are a great many men who fail at the difficult undertaking. Only foreigners who are used to being deprived of every comfort and convenience seem to be able to make a partial success on the cut-over timber land tracts. And yet the state of Wisconsin has thousands and thousands of acres of this land, which, when once cleared, will be trebled in value and become very productive. Under the circumstances would it not be wise for the state to undertake to clear up land for settlers at, say, $20 per acre, and assess the property for twenty years? Let us assume that a settler had purchased eighty acres of land at $25 per acre, none of which was improved; that he could apply to the state to have twenty acres of this land cleared up at $20 per acre, or $400, the state to assess the property for twenty years at $20 per annum, with interest; that the state would establish a board of experts to look after the work and experienced land clearers would submit bids to this board for clearing certain tracts of land. These contractors should have not only experience in this line of work, but all the necessary equipment, tools, machinery and trained men to make a quick and good job of clearing. The state could authorize bond issues to carry on this work, and, as the credit of the state is very high, money could be borrowed at around 4 per cent on long-term bonds. By this method many thousands of acres of cut-over land could be brought into cultivation. In many counties the assessed value of lands would be doubled and the tax returns to the state multiplied.

At present, some farmers hesitate to come into Upper Wisconsin from adjoining states and tackle a cut-over land proposition, but by the state offering to clear up lands as above described thousands of new settlers would instantly take up the land. I have been all over the northern cut-over land belt and can say that the above method seems the most effective method for getting settlers who can stay and make a success of the venture on these vast tracts of cut-over land.

Cut-over land in this northern country is worth from $10 to $30 per acre, but farms of eighty acres with house and barn, and twenty or thirty acres cleared, are worth from $75 to $100 per acre. Would the state lose anything by clearing such land up and making the community more prosperous?

If $5,000,000 were spent each year by the state in clearing up stump land for actual settlers, at the average cost of $20 per acre, there would be 250,000 acres cleared up each year, which would result in thousands of new settlers, millions of dollars' worth of improvements and a big increase in the productiveness of the communities so improved. Five million dollars spent in this manner for ten years would virtually eliminate the cut-over land from this state and increase the population and productivity many-fold.

The plan that I have outlined is the method used for all civic improvements, such as sewers, waterworks, paving, sidewalks, bridges and roads in cities or counties. It merely means doing the work on a large scale and in a scientific manner and spreading the payments over a long term of years.

Prentice, Wis. W. H. Hull.

Saves a Team
Attachments For Any Binder

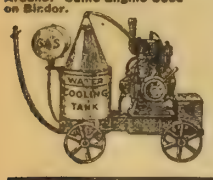
4 H. P. Cushman on a Binder. Same Engine Does All Other Farm Work.

Cushman Binder Engines

For All Farm Work

This is the one successful binder engine. Thousands are in use every harvest. **Fits any binder.** Engine drives sickle and all machinery. Since horses have only to pull machine, two horses will easily handle 8-ft. binder in heavy grain. In a wet harvest Cushman Engine **saves the crop,** as it keeps sickle going when bull wheel slips—it never clogs. **After harvest Cushman engine does all other work.** Very light weight and easy to move around, yet runs more steadily than most heavy engines, because of **Throttle Governor and perfect balance.** **4 H. P.** weighs **only 190 lbs.;** when stripped for binder only 167 lbs. 8 H. P. only 320 lbs. Forced water cooling system prevents overheating. Equipped with Friction Clutch Pulley.

Iver A. Madson, Wheatland, N. D., writes: "I have six engines and the **Cushman is the best.** It does not jump like a heavy engine. On the binder it is a great saver of horse flesh. It will do all you claim and more too."



4 H. P. Truck—Easy to Move Around. Same Engine Used on Binder.

E. W. Gasser, Sidney, Ill., says: "With a Cushman I cut 10 acres more a day with less horses. A binder will last 3 or 4 years longer with this engine." Ask for free Engine Book.

Cushman Motor Works
855 North 21st Street
LINCOLN, NEBRASKA

FARMERS

HANDY WAGON

Low steel wheels, wide tires, make loading and handling easier. We furnish Steel Wheels to fit any axle, to carry any load. Plain or grooved tire. Catalogue sent free.

EMPIRE MFG CO., Box 387 Quincy, Ill.

COW-TESTING REPORTS.

(Continued from page 18.)

Alfred Holt						
Rose, G. G.	3	11-14-15	834	5.8	48.4	
J. W. Finnell						
Bess, G. H.	3	10-15-1.	1026	4.7	48.2	
A. G. Palmer & Sons						
Fall, H.	5	12-12-15	1848	2.6	48.0	
James Henderson						
Gem, H.	7	1-3-16	1325	3.6	47.7	
Ora Taylor						
Dark Pansy, J.	3	12-20-15	812	5.8	47.1	
Harry Farrar						
Julia, G. G.	5	11-15-15	939	5.0	47.0	
Wm. Schultz, St.						
Rosie, G. D.	12	11-1-15	985	4.3	46.7	
M. Petrie						
Tina, H.	5	8-17-15	1460	3.2	46.3	
F. H. Lean						
Rose, G. G.	6	11-16-15	1252	3.7	46.3	
Rockwell Bros.						
Ideal Girl, G.H.	7	11-17-15	1442	3.2	46.1	
Alfred Holt						
Dott, J.	3	8-20-15	570	8.0	45.6	
Mrs. Wm. Moss & Sons						
R. Ball, G. H.	7	9-23-15	1176	4.2	45.2	
James Henderson						
Mildred, H.	3	1-3-15	1358	3.3	44.8	
Norton & Randall						
Gusta, G. H.	6	1-1-16	1119	4.0	44.8	
H. E. Brooks						
Dott, G. J.	4	1-27-15	809	5.4	43.7	
Rockwell Bros.						
Mildred, G. H.	6	12-15-15	1277	3.4	43.4	
A. G. Palmer & Sons						
Sunshine, H.	4	1-11-15	1352	3.2	43.3	
Rockwell Bros.						
Jewell, H.	8	10-8-15	1353	3.2	43.3	
James Henderson						
Edith, H.	6	1-11-16	963	4.5	43.3	
W. E. Palmer						
Corona, H.	3	10-22-15	1376	3.1	42.7	
James Henderson						
Ben, G. H.	12	11-15-15	1066	4.0	42.6	
Norton & Randall						
Dandy G. J.	5	12-29-15	1184	3.6	42.6	
Ishmal Baker						
Rouse, G. J.	6	11-5-15	989	4.3	42.5	
Harry Farrar						
Brindle, G. G.	9	11-6-15	1063	4.0	42.5	
James Henderson						
Mechthilde, H.	6	1-8-16	1245	3.4	42.3	
Rockwell Bros.						
Ruth, G. H.	7	11-10-15	1209	3.5	42.3	
Pearl, G. H.	6	10-17-15	1110	3.8	42.2	
Wm. Rouse						
Yvonne, G. H.	6	10-29-15	1240	3.4	42.2	
Alfred Holt						
Murne, G. J.	3	1-20-15	676	6.2	41.9	
Ora Taylor						
11 Per Cent, J.	3	1-1-16	645	6.5	41.9	
Chas. Fish						
Bluie, C. H.	6	11-23-15	1045	4.0	41.8	
Ora Taylor						
Line Back, G.J.	7	11-6-15	887	4.7	41.7	
Emil Papenfus						
Ruby, G. H.	3	10-5-15	1113	3.7	41.2	
Silas Fish						
Rose G. D.	6	12-13-15	1212	3.4	41.2	
A. G. Palmer & Sons						
*Nora, G. H.	8	9-26-15	1082	3.8	41.1	
Emil Papenfus						
No. 2, G. D.	8	1-2-16	1051	3.9	41.0	
F. H. Lean						
Beauty, G. H.	4	11-8-15	1023	4.0	40.9	
Mrs. Wm. Moss & Sons						
Lucy, G. H.	8	12-6-15	1169	3.5	40.9	
Rockwell Bros.						
Skylark, G. H.	5	11-18-15	1361	3.0	40.8	
Norton & Randall						
Jane, G. H.	4	1-6-16	995	4.1	40.8	
Harry Farrar						
Dolly, G. G.	5	11-14-15	781	5.2	40.6	
Will Schulz, Jr.						
Queen, G. D.	7	12-3-15	1094	3.7	40.5	
Ora Taylor						
Costigan, J.	3	10-20-15	654	6.2	40.5	
Emil Papenfus						
No. 3, G. H.	6	1-2-16	1156	3.5	40.5	
Harry Ames						
Spot, G. H.	5	11-5-15	918	4.4	40.4	
Rockwell Bros.						
Laura G. H.	6	11-16-15	1187	3.4	40.4	
Emil Papenfus						
No. 18, G. G.	6	10-1-15	840	4.8	40.3	
Will Schulz, Jr.						
Belle, G. D.	6	1-1-16	1060	3.8	40.3	
A. G. Palmer & Sons						
Mary 2d, G.H.	4	11-13-15	1184	3.4	40.3	
Will Schulz, Jr.						
Sparks, G. D.	7	12-4-15	1004	4.0	40.2	
Norton & Randall						
White Face, G. H.	4	11-17-15	1054	3.8	40.1	

Two-year-old cows that produced more than thirty pounds of butter fat during the period of thirty days, ending January 31, 1916.

Harry Dunbar						
Walker, H.	2	10-27-15	1882	3.3	62.1	
Adeline, H.	2	12-8-15	1550	3.8	58.9	
Lady, H.	2	12-4-15	1835	3.2	58.7	
A. G. Palmer & Sons						
W. Gem, H.	2	12-14-15	1429	3.2	45.7	
Netherland, H.	2	12-17-15	1256	3.4	42.7	
Walker, H.	2	12-15-15	1572	2.7	42.5	
Harry Dunbar						
Alma, H.	2	12-2-15	1073	3.8	40.8	
A. G. Palmer & Sons						
Queen M., H.	2	12-15-15	1119	3.4	38.0	
Harry Dunbar						
O. L. Burke, H.	2	10-27-15	1263	3.0	37.8	
Harry Farrar						
Grandma, G.G.	2	11-16-15	791	4.6	36.4	
J. W. Finnell						
Callie, G. H.	2	10-23-15	980	3.5	34.3	
Grey Nick, G. H.	2	12-22-15	1073	3.2	34.3	
Mrs. Wm. Moss & Sons						
Edith, G. H.	2	11-5-15	1054	3.2	33.7	
Norton & Randall						
Mildred, G. H.	2	12-14-15	868	4.0	32.7	
Harry Farrar						
Little Julia, G. G.	2	1-1-16	778	4.0	31.1	
Emil Papenfus						
No. 5, G. H.	2	10-15-15	707	4.4	31.1	
James Henderson						
Beauty, H.	2	12-18-15	899	3.4	30.6	
Rockwell Bros.						
Lady Jewell, H.	2	1-3-16	890	3.4	30.3	

Wisconsin demonstrates that the best way to solve the rural credit problem is to show rural prosperity.

The Quaker Says:—

"Put Thy Faith in Lewis'"

He knows that the lye with the reputation is the lye that discriminating housewives should select, for general cleaning about the house, for water softening, for making soap.

About making soap—do you realize that home-made soap is easy to make and an extraordinary economy? Would you like to save money? Soap made at home with

Lewis' Lye

The Standard for More Than Half a Century

costs less than half as much as the cheapest commercial soaps and it gives perfect cleansing results.

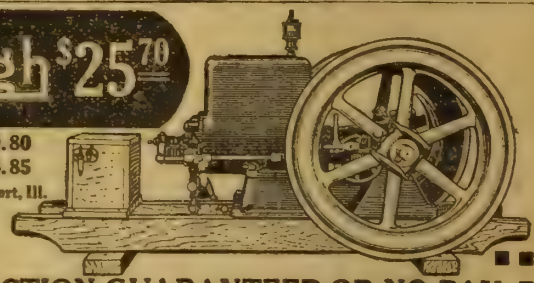
Lewis' Lye entirely saponifies the grease in home-made soap. It *always* does it because it is *always* the same. Every can of Lewis' Lye is of the same superior quality as every other can—always and anywhere.

Ask your mother. The chances are she used it when she was a girl and does yet.

Send for Booklet *"The Truth About a Lie."*

PENNSYLVANIA SALT MANUFACTURING COMPANY
Manufacturing Chemists Dept. 6 PHILADELPHIA

1½ HP The Rawleigh $25.70



2½ H. P. $38.90; 3½ H. P. $49.80
4½ H. P. $69.90; 7 H. P. $96.85
9 H. P. $139.65, Complete, f. o. b. Freeport, Ill.
Cash or 60-Day Bank Deposit
60 DAYS FREE TRIAL
ABSOLUTE SATISFACTION GUARANTEED OR NO PAY

W. T. RAWLEIGH
President Rawleigh Manufacturing Co.

Use gasoline, kerosene, distillate or gas. 4-cycle—make and break ignition—Contact points can be cleaned while running—Cylinder and frame cast separately—Positive speed changer—Perfect design—Built complete in our own factory—Material, machining and finish far superior to engines selling much higher.

Buy your engine direct from a manufacturer of known responsibility. Take advantage of these rock-bottom Factory-to-Farm prices. Hopper-cooled semi-steel cylinder. Semi-steel pistons, ground to fit. Malleable connecting rod. Drop-forged crank, ground to mirror finish. **You cannot buy a better engine at ANY price.**

EVERY Rawleigh engine tested on brake to pull 15% more than its rated horse power continuously.

TERMS: Cash; 60 day bank deposit; **a year to pay, if you wish.**

RAWLEIGH MANUFACTURING COMPANY, 104 Taylor Ave., Freeport, Ill.

WRITE AT ONCE FOR BIG NEW CATALOG

LE PAGE'S GLUE 10c
THE HANDY MAN ABOUT THE HOUSE

12 Ever Bearing Strawberries Free

and 200 other choice varieties postpaid $1.25, 100 Dunlap and 50 each of two choice varieties with our book of instructions how to plant and grow them.
J. L. TODD & CO. R3 Box C Des Moines, Ia

YOUNG MAN—Would you accept a tailormade suit just for showing it to your friends? Then write **Banner Tailoring Co., Dept. 277, Chicago,** get beautiful samples, styles and a wonderful offer.

FARMER AGENTS write for 1916 agency for Diddie-Blitzen Rods. Best Lightning Rod sold. L. F. Diddie Co., Marshfield, Wis.

HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." However, he decided not to tell Mrs. Burke of her just yet. The new pastor's first call was upon the Senior Warden, receiving a hearty welcome from Virginia Bascom, his daughter. Hepsey surmised that Maxwell was engaged and made a neighborly call upon Jonathan Jackson, the Junior Warden, to see what he thought about the matter. The ladies of the parish gave a missionary tea, at which Virginia read a paper feeling that she was thereby gaining the much desired attention of her pastor.

CHAPTER VIII.

An Icebox for Cherubim.

AS WE have seen, when Maxwell began his work in Durford, he was full of the enthusiasm of youth and inexperience. He was, however, heartily supported and encouraged in his efforts by all but Sylvester Bascom. Without being actively and openly hostile the Senior Warden, under the guise of superior wisdom and a judicial regard for expediency managed to thwart many of his projects. After each interview with Bascom Maxwell felt that every bit of life and heart had been pumped out of him, and that he was very young and very foolish to attempt to make any change in "the good old ways" of the parish, which for so many years had stunted its growth and had acquired the immobility of the laws of the Medes and Persians.

But there was one parishioner who ever was ready to suggest new ventures to "elevate" the people and to play the part of intimate friend and adviser to her good-looking rector, and that was Virginia Bascom. For some unknown reason "the people" did not seem to be acutely anxious thus to be elevated and most of them seemed to regard Virginia as a harmless idiot with good intentions, but with positive genius for meddling in other people's affairs. Being the only daughter of the Senior Warden and the leading lady from a social standpoint, she considered that she had a roving commission to set people right at a moment's notice, and there were comparatively few people in Durford on whom she had not experimented in one way or another. She organized a Browning Club to keep the factory girls out of the streets evenings, a mothers' meeting, an ethical culture society and a craftsman's club, and, as she was made president of each, her time was quite well filled.

And now in her fertile brain dawned a brilliant idea, which she proceeded to propound to the rector. Maxwell was non-committal, for he felt the matter was one for feminine judgment. Then she decided to consult Mrs. Burke—because, while Hepsey was "not in society," she was recognized as the dominant personality among the women of the village, and no parish enterprise amounted to much unless she approved of it, and was gracious enough to assist. As Virginia told Maxwell, "Mrs. Burke has a talent of persuasiveness," and so was "useful in any emergency." If Mrs. Burke's sympathies could be enlisted on behalf of the new scheme it would be bound to succeed.

As a matter of fact, Mrs. Burke had heard rumors of this new project of Virginia's. It always went against the grain with Hepsey to say: "Don't do it." She was a firm believer in the teaching of experience: "Experience does it," was her translation of the classic adage.

And so one morning found Virginia sitting opposite Mrs. Burke in the kitchen at Thunder Cliff, knitting her brows and poking the toe of her foot with the end of her parasol in an absent-minded way. This was symptomatic.

"Anything on your mind, Virginia? What's up now?" Mrs. Burke began.

For a moment Virginia hesitated and then replied:

"I am thinking of establishing a day-nursery to care for the babies of working women, Mrs. Burke."

Mrs. Burke, with hands on her hips, gazed intently at her visitor, pushed up her under lip, scowled, and then observed thoughtfully:

"I wonder someone hasn't thought of that before. Who's to take care of the babies?"

"Mary Quinn and I, with the assistance of others, of course."

"Are you sure that you know which is the business end of a nursing bottle? Could you put a safety pin where it would do the most good? Could you wash a baby without drownin' it?"

"Of course, I have not had much experience," Virginia replied in a dignified and lofty way, "but Mary Quinn has, and she could teach me."

"You're thinkin', I suppose, that a day-nursery would fill a long-felt want, or somethin' like that. Who's goin' to pay the bills?"

"Oh, there ought to be enough progressive, philanthropic people in Durford to subscribe the necessary funds, you know. It is to be an auxiliary to the parish work."

"Hm! What does Mr. Maxwell say?"

"Well, he said that he supposed that babies were good things in their way, but he hadn't seen many in the village and he didn't quite realize what help a day-nursery would be to the working women."

"That doesn't sound mighty enthusiastic. Maybe we might get the money, but who's to subscribe the babies?"

"Why, the working women, of course."

"They can't subscribe 'em if they haven't got 'em. There are mighty few kids in this town, and if you really want my candid opinion, I don't think Durford needs a day-nursery any more than it needs an icebox for cherubim. But then, of course, that doesn't matter much. When you goin' to begin?"

"Next Monday. We have rented the store where Elkin's grocery used to be and we are going to fit it up with cribs and all the most up-to-date conveniences for a sanitary day-nursery."

"Hm! Well, I'll do all I can to help you, of course. I suppose you'll find babies pushin' all over the sidewalk Monday mornin', comin' early to avoid the rush. Better get down as early as possible, Virginia."

Virginia departed.

After the furnishing of the incipient nursery had been completed and each little crib had a new unbreakable doll whose cheeks were decorated with unsuckable paint, Virginia and Mary Quinn—invaluable in undertaking the spadework of all Virginia's parish exploits—gave an afternoon tea to which all the subscribers and their friends were invited. But when everything was in readiness for patronage what few working women there were in Durford possessed of the right kind of babies seemed strangely reluctant to trust their youthful offspring to the tender mercies of Virginia Bascom and Mary Quinn.

Consequently, the philanthropic movement, started under such favorable patronage, soon reached a critical stage in its career and Mrs. Burke was called in to contribute some practical suggestions. She responded to the summons with all due promptness and when she arrived at the nursery she smilingly remarked:

"Hm! But where are the babies? I thought they would be swarming all over the place like tadpoles in a pool."

"Well, you see," Virginia, her voice quivering with disappointment, "Mary Quinn and I have been sitting here four mortal days and not a single infant has appeared on the scene. I must say that the working women of Durford seem strangely unappreciative of our efforts to help them."

"Well," Mrs. Burke responded, "I suppose day-nurseries without babies are as incomplete as an incubator without eggs. But, after all, it hardly seems worth while to go out and snatch nursing infants from their mother's breasts just to fill a long-felt want, does it? Besides, you might get yourself into trouble."

"I didn't ask you to come and make fun of me," Virginia replied touchily. "I wanted you to make some suggestions to help us out. If we don't get any babies we might just as well close our doors at once. I should be awfully mortified to have the whole thing a failure after all we have done, and all the advertising we have had."

Mrs. Burke sat down and assumed a very judicial expression.

"Well, Ginty, dear, I'm awful sorry for you. I don't doubt you done the best you could. It'd be unreasonable to expect you to collect babies like mushrooms in a single night. All true reformers are bound to strike snags and to suffer because they ain't appreciated in their own day and generation. It's only after we are gone and others take our places that the things we do are appreciated. You'll have to resign yourself to fate, Virginia, and wait for what the newspapers call 'the vindicatin' verdict of prosperity.' Think of all the people that tried to do things and didn't do 'em. Now there's the Christian martyrs——"

For some reason Virginia seemed to have a vague suspicion that Hepsey was still making fun of her, and, being considerably nettled, she interjected tartly:

"I'm not working for the verdict of posterity, and I don't care a flip for the Christian martyrs. I'm trying to conduct a day-nursery, here and now; we have the beds and the equipment and some money, and——"

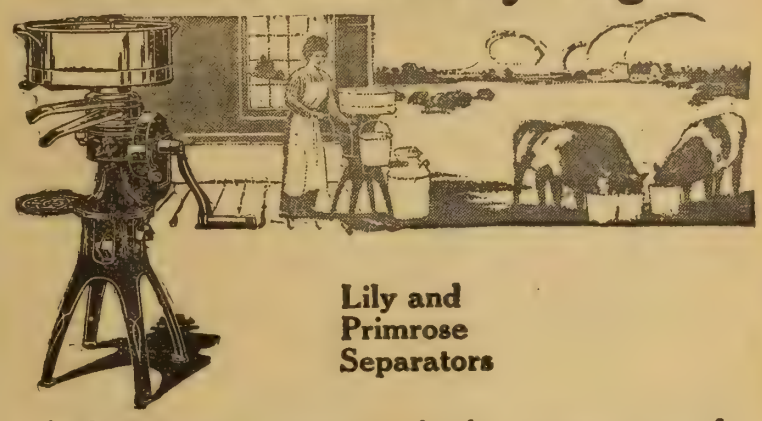
"But you haven't got the babies, Virginia!"

"Precisely, Mrs. Burke. It's simply a question of babies, now or never. Babies we must have or close our doors. I must confess that I am greatly pained at the lack of interest of the community in our humble efforts to serve them."

For some time Hepsey sat in silence; then she smiled as if a bright idea occurred to her.

"Why not borrow a few babies from the mothers in town, Virginia? You see, you might offer to pay a small rental by the hour or take out a lease which could be renewed when it expired. What is lacking is public confidence in your enterprise. If you and

Go Slow and Buy Right



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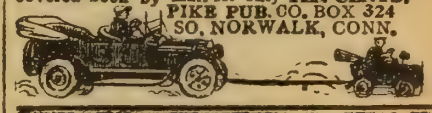

Miss Quinn could be seen in the nursery windows handlin' a baby on each arm and singin' lullabies to 'em for a few days it'd attract attention, inspire faith in the timid and public confidence would be restored. The tide of babies 'd turn your way after a while and the nursery would prove a howlin' success."

Virginia considered the suggestion and, after deep thought, remarked:

"What do you think we ought to pay for the loan of a baby per hour, Mrs. Burke?"

"Well, of course, I haven't had much experience rentin' babies, as I have been busy payin' taxes and insurance on my own for some years; then you see rents have gone up like everything lately. But I should think that ten cents an afternoon ought to be sufficient. I think I might be able to hunt up a baby or two. Mrs. Warren might lend her baby and perhaps Mrs. Fletcher might add her twins. I'll call on them at once, if you say so."

Virginia looked relieved and in a voice of gratitude responded:

"You are really very, very kind."

"Well, cheer up, Virginia, cheer up. Every cloud has its silver linin'; and I guess we can find some babies somewhere even if we have to advertise in the papers. Now I must be goin', and I'll stop on the way and make a bid for the Fletcher twins. Good-by."

When Nicholas Burke learned from his mother of the quest of the necessary babies, he started out of his own motion and was the first to arrive on the scene with the spoils of victory in the shape of the eighteen-months infant of Mrs. Thomas McCarthy, for which he had been obliged to pay twenty-five cents in advance, the infant protesting vigorously with all the power of a well-developed pair of lungs. As Nickey delivered the goods he remarked casually:

"Say, Miss Virginia, you just take the darn thing quick. He's been howlin' to beat the band."

"Why, Nickey," exclaimed Virginia, and gingerly possessing herself of James McCarthy, "however did you get him?"

"His ma wouldn't let me have him at first, and it took an awful lot of jollyin' to bring her round. Of course, I didn't mean to tell no lies, but I said you was awful fond of kids. I said that if you only had Jimmy it would give the nursery a send-off, 'cause she was so well known and Mr. McCarthy was such a prominent citizen. When she saw me cough up a quarter and play with it right under her nose I could see she was givin in; and she says to me, 'Nickey, you can take him just this once. I'd like to help the good cause along and Miss Bascom, she means well.' Ma's gettin' after the Fletcher twins for you."

James McCarthy was welcomed with open arms, was washed and dressed in the most approved antiseptic manner; his gums were swabbed with boric acid and he was fed from a sterilized bottle of pasteurized milk and tucked up in a crib with carbolized sheets and placed close to the window where he could bask in actinic rays and inhale ozone to his heart's content. Thus the passer-by could see at a glance that the good work had begun to bear fruit.

Mrs. Burke managed to get hold of the Fletcher twins, and as they both howled lustily in unison, all the time, they added much to the natural domesticity of the scene and seemed to invite further patronage, like barkers at a sideshow. Mrs. Warren was also persuaded.

Although the village was thoroughly canvassed, Miss Bascom was obliged to content herself with the McCarthy baby and the Fletcher twins, and the Warren baby, until, one morning, a colored woman appeared with a bundle in her arms. As she was the first voluntary contributor of live stock she was warmly welcomed, and a great fuss made over the tiny black infant which gradually emerged from the folds of an old shawl "like a cuckoo out of its cocoon," as Mary Quinn remarked. This, of course, was very nice and encouraging, but most unfortunate, when night came the mother did not appear to claim her progeny, nor did she ever turn up again. Of course, it was a mere oversight on her part, but Virginia was much disturbed, for, to her very great embarrassment, she found herself the undisputed possessor of a coal black baby. She was horrified beyond measure, and sent at once for Mrs. Burke.

"What shall I do, what shall I do, Mrs. Burke? she cried. Mrs. Burke gazed musingly at the writhing black blot on the white and rose blanket and suggested:

"Pity you couldn't adopt it, Virginia. You always loved children."

"Adopt it!" Virginia screamed hysterically. "What in the world can you be thinking of?"

"Well, I can't think of anything else, unless I can persuade Andy Johnson, the colored man on the farm, to adopt it. He wouldn't mind its complexion as much as you seem to."

Virginia brightened considerably at this suggestion, exclaiming excitedly:

"Oh, Mrs. Burke, do you really think you could?"

"Well, I don't know. Perhaps so. At any rate, if we offer to help pay the extra expense, Mrs. Johnston might bring the baby up as her own. Then they can name it Virginia Bascom Johnston, you see."

Virginia bit her lip, but she managed to control her temper as she exclaimed quite cheerfully:

"Mrs. Burke, you are so very kind. You are always helping somebody out of a scrape."

"Don't overpraise me, Virginia. My head's easily turned. The teachin's of experience are hard—but I guess they're best in the end. Well, send the poor little imp of darkness round to me tonight, and I'll see that it has good care."

As a matter of fact, Hepsey had qualms of conscience as to whether she should not, at the outset, have discouraged the whole baby project; experience threatened to give its lesson by pretty hard knocks, on this occasion.

For, though the immediate problem was thus easily solved, others presented themselves to vex the philanthropic Virginia.

When on the tenth day the rental for the Warren baby and the Fletcher twins fell due and the lease of James McCarthy expired without privilege of renewal, the finances of the nursery were at a very low ebb. It certainly did not help matters much when, towards night, Mary Quinn called Virginia's attention to the fact that there were unmistakable signs of a bad rash on the faces of the twins, and very suspicious spots on the cheeks of the Warren baby. Even the antiseptic James McCarthy blushed like a boiled lobster and went hopelessly back on his sterilized character. Of course, the only thing to be done was to send at once for the doctor and for the mothers of the respective infants. When the doctor arrived he pronounced the trouble to be measles, and when the mothers made their appearance, Virginia learned something of the unsuspected resources of the English language served hot from the tongues of three frightened and irate women. Finally the floor was cleared and the place closed up for disinfection.

Just before she left Virginia dropped into a chair and wept quite oblivious of the well-meant consolations of Mary Quinn sometime co-partner in "The Durford Day-Nursery for the Children of Working Women."

"We've done the very best we could, Miss Bascom; and it certainly isn't our fault that the venture turned out badly. Poor babies!"

At this the sobbing was roused to one last protest:

"Many Quinn, if ever you say another word to me about babies I'll have you arrested. I just hate babies and—and everything! Why, there comes Mr. Maxwell! Say, Mary, you just run and get me a wet towel to wipe my face with, while I hunt for my combs and do up my back hair. And then if you wouldn't mind vanishing for a while—I'm sure you understand—for if ever I needed spiritual consolation and the help of the church it is now, this minute."

(To be continued.)

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No Flowers So Fair as Roses: No Finer Roses than The Housewife's

Our 1916 offer is Better and Bigger than any previous group---Splendid and unusual types chosen in well balanced assortment comprising Eight Hardy Beauties in all.

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THE HOME

LETTERS intended for publication should be accompanied by the name and address of the writer not necessarily for publication, but as a matter of good faith. All communications intended for his department should be addressed to Editor Home Dept., The Wisconsin Farmer, Madison, Wisconsin.

MELY ADVICE FOR THE FLOWER LOVER.

It is none too early to begin planng the garden if you want your ossoms to come early. Such flows as the aster, chrysanthemum, ckscomb, cosmos, marigold, petua, scarlet sage, verbena, Scotch pink, yssum, sweet william and four clock do especially well if started in tbeds or cold frames and, according specialists of the United States Dertment of Agriculture, those who ssess these should lose no time in wing them in such flowers as will desired later for beds.

Of course, some of these, such as yssum, aster, marigold, cockscomb d pink, need not of necessity be arted in hotbeds, as they do quite ell if sown later in the season in e open ground and then transplant- to their permanent locations. Pans, snapdragons, zinnias, mignonette d single dahlias also may be sown this way. However, the seed of ese flowers should not be sown un- the ground is in condition for makg a good seed bed and until there is longer any likelihood of a heavy ost. If you are not sure that the il in the garden is in proper condion to be worked, take up a mass of in the hand and press it into a ball. the ball readily falls apart the round is dry enough to be worked. pade up the ground well, break it up oroughly with hoe and rake and be re that all stones and lumps are moved. Do not ask a flower seed to ow in lumpy, pebbly soil. Have the rface very fine and soft. In plantg each kind of seed follow carefully e directions as to depth of planting. There are a number of flowers the eds of which should be sown in the pen ground or beds where the plants re to remain, as they either die or ow half-heartedly if transplanted. mong these are the California poppy, candytuft, corn flower, forget-me-t, phlox drummondii, sunflower and eet pea.

Sweet peas are probably the most opular of this list. They should be the ground as soon as it is dry ough to work.

The soil should be spaded up and ell prepared and then a trench ould be dug four inches deep; in e bottom of this the peas should be lanted about two inches apart. hen the peas are to be grown over hicken wire or brush truck in the round it is customary to sow them two parallel rows, six or eight ches apart. In this way on the ame amount of trellis double the umber of plants can be grown with atisfactory results. Sweet peas hrive best in a cool, moist climate. ecause of this it is especially deirable to sow very early in the pring.

Poppies may be sown directly on he surface of ground that was preared last fall. If the bed was not repared at that time it should be paded up as soon as the ground is ry enough, and the poppy seed sown venly over surface. The seed should e slightly covered by drawing the ack of the rake over the bed. Care hould be taken to distribute the eed evenly and not in bunches, for f there is much disturbance of the oots at the time of thinning, the plants will not do so well as when eft undisturbed. The Shirley poppy, very showy and attractive variety, nay be obtained in many colors. The ndividual blossoms, however, are very short lived, and as compared with many other plants its blooming season is short. The plants are so ttractive when in bloom, however, hat they are well worth planting. A succession of sowings will prolong he blooming season.

The California peppy should also be own early, but does not require as arly sowing as the other poppies. t is handsome and will bloom during longer period than the Shirley oppy.

Balsams or lady's slippers and castor beans are also best sown where they are to grow, but they should not be put in the ground until it is warm enough to grow beans and tomatoes well—that is, about the time corn is coming up or oak leaves are half grown.

The first sunshiny day that comes, let the mending or the darning or the ironing go over to the morrow and get out of doors with the rake and the hoe and a stout boy or man to manage the spade and the lifting, and start your gardening so that the blossoms you love best will be coming on at the earliest possible moment.

WOMEN FARMERS ORGANIZE.

The Iowa Women Farmers' Association, composed of women who own and manage their own farms, was recently organized. They had been invited to the agricultural college at Ames to meet and listen to a talk by Miss Pearle Mitchell, of Columbia, Mo., president of a similar organization in that state. They heard Miss Mitchell and were so favorably impressed with what she said that they decided to form an association of their own.

The membership of this organization is to be limited to women who own and operate their own farms, and the farms must consist of at least twenty acres.

This is a step in the right direction, and we wish that farm women everywhere whether they are the actual owners of the farm they live on or not would organize into clubs and associations for the purpose of mutual assistance in the problems that daily confront them.

The viewpoint of farm women is changing. Time was when you could hear many a farm woman say she could not take part in anything outside her home because "there was so much work to do." Labor saving devices and better working methods are changing all this, and the drudgery of the farm is almost a thing of the past. And there is no better way of finding out these helpful things than through the efforts of such an organization. Many of these clubs have been organized through the central West and they have not only brought the community together in a social way but through study of home problems have been a great aid to home makers.

Someone has said, "Society today demands service of each individual. Somewhat of oneself one must contribute to the social machinery or be a clog in the wheel." The rural club answers this need.

MOISTURE NECESSARY FOR HOUSE FERN.

Greenhouse men say that special care should be given to the house fern just at this time of year.

To keep the humidity of the room high is the first consideration. The temperature is not of so much importance, but a dry room is a killing room for ferns. The air can be kept moist by placing shallow pans of water around in places where evaporation will take place rapidly. Also keep the fern well watered, but not soaking wet.

The plant mealy bug, a fern insect pest, can be gotten rid of by turning the plant upside down and spraying it with a fairly strong stream of water. The aphis can be killed by washing with nicotine solution. If any insect eggs have dropped down into the soil of the crock it would be well to remove the top inch or two of the dirt and replace it with new soil.

If the ferns were not repotted in the fall it would be well to do it this spring. Leaf mold and rich soil, half and half, make an ideal growing mixture.

DOMESTIC SCIENCE MAKES WARM LUNCH POSSIBLE.

The question of whether or not domestic science should be taught in the rural schools is one that has recently come in for a good deal of discussion. One of the best arguments in favor of the teaching of this branch is contained in a recent communication from Mr. A. R. Arveson, county superintendent of Langlade county, Wisconsin. The schools in this county have only been in operation something like ten or twelve years, but the progress they have made is indeed creditable, and the important place domestic science has taken in the course is of interest to school patrons everywhere.

Work in domestic science is carried on in nearly all of the graded schools in this county and in about 25 per cent of the one-room schools. One hour a week is usually devoted to this work, which is mostly patching, darning and plain sewing. A little fancy work of the most practical value is

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also taken up by the older girls. The teachers report a great deal of interest on the part of pupils not only in this work but a greater interest in their other work. In some cases, Mr. Arveson says, a marked increase in percentage of attendance. Parents, also, are interested in the work and have been free to express their appreciation.

In connection with this work, the plan of serving warm lunches to the children who carry their dinners is being tried out by several teachers with splendid success. Not only is it a success from a health standpoint, but it presents an opportunity for teaching lessons in domestic science, such as lessons in cooking, serving, cleanliness, table manners, etc.

One grade school has served cocoa, pea soup, bean soup, beef soup, etc. The domestic science class under the direction of the teacher does the serving. Children bring their own dishes. Reports show that the pupils do better work in the afternoon and show a better spirit toward their work. The boys are making a cooking table for the domestic science class.

Another graded school serves a warm dish once a week to the pupils of each room. The work is done by the domestic science class under the direction of the teacher. The school board approves of the plan and it has the hearty indorsement of the people, and especially of those who live a long ways from school. The teacher in charge of this work loses no opportunity for teaching a practical lesson whenever opportunity offers.

Still another school enjoys warm lunches every day which is appreciated by all of the patrons of the school.

Of course, the plan of serving warm lunches requires some effort, but the results obtained in this county are conclusive evidence that it is well worth while and those who are doing it are to be commended for their interest and effort.

HOW DO YOU CAN YOUR STRAWBERRIES?

To the Editor:—I have thought a good many times of writing to the Home Department, as I have received lots of good from it. Would like to have someone give me directions for canning strawberries. Mine are always so strong we do not care for them. I have heard people say they should be as mild as when fresh. Can someone help me out?

Mrs. H. A.

TOO MANY DENOMINATIONS.

To the Editor:—I found in your paper a letter from a reader about uniting with the church, which greatly interested me.

I am a member of the Methodist Episcopal Church. The rules of this church are taken from the Bible. Read it and you will know what is expected. But of what good are rules if they are never lived up to? I would never want to have it on my conscience that I thought only members of a church would be more likely to be saved than those who are not members.

In the gospels which tell of the life and work of Jesus we find nothing about uniting with a church, but only to observe all things which He commanded. We might ask how many church members do that? I know God will be less pleased with a chur member who never does what promises than with a person w promises nothing and lives a goo life.

I firmly believe in an Almighty Go in the Bible as God's Word, in Jesu Christ, and that every human bein is a sinner. I also know that th sooner we acknowledge it to Jesu the sooner will our conscience be peace. But from that hour we mu watch and pray and God's Word mu be used daily for the soul's welfar as food is used for the body.

It seems to me that the greate trouble in Christianity today is tha there are too many denominatio and that the power of God's Word ha been crowded out. We also seem have forgotten that God gave every one a conscience and mind o his own and we rely too much o what others say and think instead o going direct to God's Word and Jesu Christ.

A Believer.

IRONS STAIN THE CLOTHES.

To the Editor:—Can anyone t me what to do with my flatirons They are nickel plated and when begin to iron the clothes they wi leave them all yellow. They do n burn the clothes, but stain. I hav tried all kinds of things to clean the but to no avail. Will be thankful fo any advice.

N. N.

KNOWS WHAT TO DO FOR HEADACHE.

To the Editor:—I can't resist writ ing to you in answer to the lady wh wants relief from headaches. I know just how to sympathize with her, fo I have had the same trouble for years

MRS. E. JETT SENDS US A PICTURE OF HER FAMILY.

But I am not writing to tell her how much I suffered from them but, rather, how I found relief.

I was like everybody else, I would try anything anybody told me about. My whole idea was to get rid of the headaches. It never occurred to me that there must be a reason for them. I am a farmer's wife and have the usual household duties to perform besides three little folks to take care of, so that I could not always (or thought I couldn't) rest when I needed it. The result was that I was run down and didn't give myself a chance to build up again.

Then a friend induced me to try osteopathy. I was skeptical at first but I promised her I would try it. So one day when I went to town one of those headaches came on and I thought that was a good chance to try it. And I did. I came out of that doctor's office just about as skeptical as I went in but, would you believe it, I was hardly a half mile out of town when I suddenly realized that my headache was gone.

Of course that wasn't the last of my headaches. But the next one found me right there where I had got relief from the first one. I learned right there that it was a general upbuilding of my system that I needed and not a "headache tablet" to kill the pain. I began to feel better every way and it isn't very often now that I have to give up to a headache. I have learned, too, that I gain a good deal by resting when I feel the need of it instead of finishing some household duty that I know perfectly well will be there just any time I get ready to do it. Why, sometimes I stop right in the middle of ironing or sweeping or whatever I am doing, put the kid-

dies in the buggy and we all take a ride. The youngsters think it is a lark, and I know my work is lots easier to do when I get back. Just try it once, and for goodness' sake don't spoil it all by worrying if someone catches you with the dusting not done. Mrs. J. D.

THINKS SCORE CARD WOULD HELP.

To the Editor:—The letters and baby pictures printed in your paper are most interesting and helpful to us young mothers. If an official score card used in the baby judging contests were printed it would be a help to mothers also. We could then judge our own babies.

We have an eight-months-old boy, John Anson Rose, Jr. John is the fifth John Rose in a direct line of descent. He weighs seventeen pounds. He is a fresh air baby and has never had any food but mother's milk. I feed him every two hours during the day and twice in the night. He takes his naps regularly during the day. We do not play with him a great deal. He is a good baby all the time.

I hope some of the more experienced mothers will write and tell us their methods. Mrs. V. J. Rose.

TOO MUCH SUGAR.

To the Editor:—In answer to the reader who wants assistance in her cake making will say that I think the reason her cakes fall and are coarse is because there is too much sugar. If your recipe calls for one cup of sugar make it a very scant cup.

Here is a small, white cake recipe which is fine. One scant cupful of sugar, one level tablespoonful of butter whipped to a cream, one-half cupful of sweet milk (or part water), one heaping cupful of flour with a heaping teaspoonful of baking powder sifted with it, one teaspoonful of lemon extract. At the last fold in the whites of two eggs beaten stiff.

Mrs. W. J. S.

APPLE AND CRANBERRY JELLY.

An excellent combination for homemade jelly, according to the home economics experts of the United States Department of Agriculture, is cranberries with apples. Equal quantities of cranberries and apples cut into small pieces should be just covered with water and boiled until the fruit is soft. Strain the juice through cheesecloth. Add to the pulp the same amount of water as at first, boil the pulp a second time, strain as before, and combine the two lots of juice. Add three-fourths as much sugar by measure to the juice and boil again. The jelly is done when a few drops taken up with a mixing spoon will flake on the spoon as it cools instead of dropping from it. Pour the jelly into glasses which have just been sterilized in boiling water and thoroughly drained. Cool the glasses in the ordinary way.

RECIPES.

Bread Pudding.—Three eggs (beaten), one cup sugar, two cups grated white bread, one and one-half teaspoonfuls baking powder, one cup dates, one cup chopped walnuts, one-half teaspoonful vanilla. Bake twenty-five minutes in moderate oven in bread tin. When cold turn out and serve (sliced) with whipped cream.

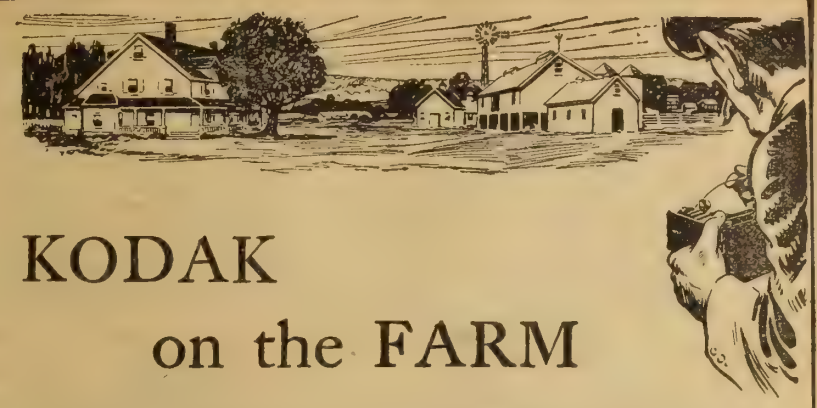
Corn Meal With Raisins.—One cup corn meal, two cups milk, one cup seeded raisins, one egg, two teaspoonfuls baking powder, two tablespoonfuls butter, one teaspoonful salt. Mix corn meal and milk together, and the well-beaten egg and melted butter. Add salt, baking powder and raisins (which have been washed, dried and put through food chopper). Mix all together. Brush pie tins with drippings, pour in mixture one inch thick, bake in moderate oven twenty to twenty-five minutes, or put into iron gem pans and bake twelve to fifteen minutes. Serve warm.

Spareribs.—Trim off the rough edges of two sets of ribs, break the bone across the middle, rub inside with salt, sprinkle with black pepper and dredge with flour. Fill with sauerkraut which has been parboiled twenty minutes. Save the water in which the kraut was cooked, sew ribs tightly, place on rack in roaster, then pour the kraut liquor around it. Cook slowly. Turn once, when tender brown thoroughly. Serve with mashed potatoes.

Prune Puff.—One cup cooked prunes unsweetened, one teaspoonful lemon juice, one cup flour, five level tablespoonfuls sugar, two level teaspoonfuls baking powder, one-fourth level teaspoonful salt, one egg, one-third cup milk, two tablespoonfuls melted butter. Mix the prunes, lemon juice and sugar thoroughly. Place in the bottom of a well-buttered pudding mold. Mix the flour, baking powder and salt. Add the egg and milk mixed together. Pour the batter on top of the prunes. Bake in a moderate oven for twenty minutes. Remove from the pan, cut in squares and serve warm with whipped cream. Of course the prunes must be seeded.

Corn Meal Griddle Cakes.—One cup yellow corn meal, one cup boiling milk, one egg, one teaspoonful baking powder, one-half teaspoonful salt, one tablespoonful melted butter, one tablespoonful molasses. Put the corn meal into a bowl, pour the milk over, add the salt, butter, molasses, baking powder and well-beaten egg. Mix well. Bake on hot griddle.

Eula V. McWilliams is the daughter of Mr. and Mrs. John McWilliams. She is four months old and weighs nineteen pounds.



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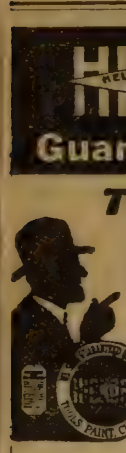

Mr. Atkinson, of Superior, Wis., intended sending $10 away for paint for this house. Martin Erickson, the Hickory dealer, furnished Hickory paint and oil at regular price, total cost $8.75. Also saved Mr. Atkinson freight of about 75c. This house was painted 6 years ago and is in perfect shape today.

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THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

RAISED A FINE COLT.

Dear Young Folks:—I am ten years old and live with my parents and four brothers and one sister on a 200-acre farm. Two years ago my father gave me a calf and I traded with my uncle for a colt. I fed it with milk and you can't imagine what a fine colt it is now. I put the saddle on her whenever I get a chance to go horseback. I call her Rosie.

I milk five cows in the evening but not always in the morning because you know boys like to sleep.

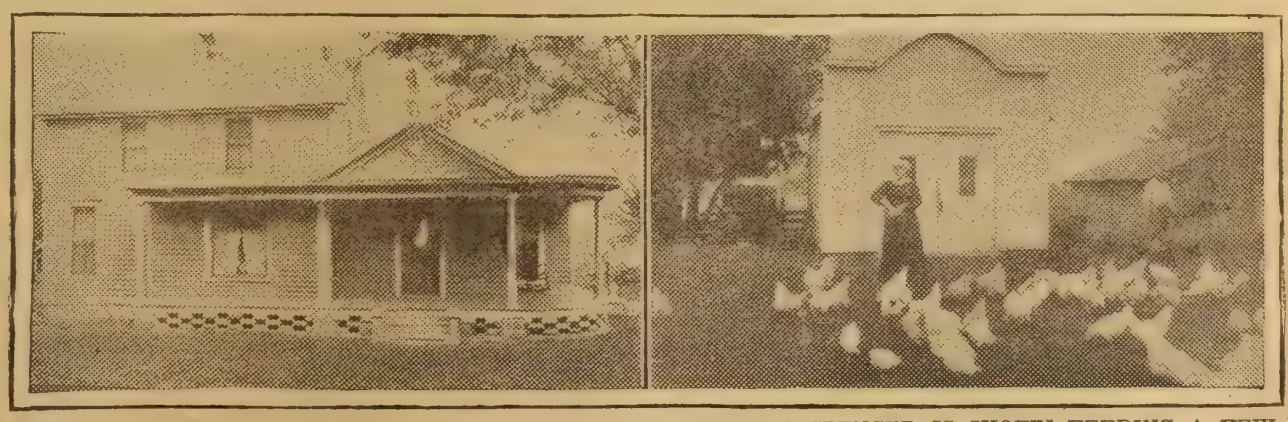
I also have a goat. She followed me to school one day. The boys had lots of fun with her. I have a quarter of a mile to go to school.

Last year I raised thirteen guinea hens, but they all died. My uncle has given me three fine looking ducks so I am going to raise ducks next summer. Henry.

GOES TO CONSOLIDATED SCHOOL.

Dear Young Folks:—As I have been interested in the Young Folks page I thought I would write to you.

I live in a large white house near the river. It is a mile and a half from the schoolhouse. I go to a consolidated school. It has been consol-



FARM HOME OF MR. AND MRS. J. H. SPENCER. AT THE RIGHT MRS. SPENCER IS SHOWN FEEDING A FEW OF HER FLOCK OF WHITE WYANDOTTES.

idated for two years. The old schoolhouse would not hold all of the pupils, so three country schoolhouses were brought in. There are seven buses.

We have on our farm forty head of cattle, eight horses, about thirty pigs, three ducks, some chickens and six cats. One of the horses is named Maude. We have had her ever since I can remember. She is a trotting horse. Maude is ten years old. Papa used to drive her up town in the morning and take us to school. When we used to tell papa we were going to be late it seemed as if she would go faster. One morning papa timed her when we were going to school and she went in seven minutes. I do not believe papa would take $1,000 for her now. —Rose.

CITY GIRLS LIKE THE COUNTRY.

Dear Little Friends:—I am a little girl ten years old and my sister is eight. We also have a little brother four years old. We were born in Chicago but now live on a farm of forty acres, and we like it very much.

We have a school right across the way. I am in the sixth grade and my sister is in the fourth. We have thirty pupils altogether and we like our teacher very much.

We are just starting to farm. It is just a year ago the fourth of January that we moved to the farm. I think we will get used to the country, for it is very nice here. We are only two and a half miles from town. We have four cows and a baby calf, one horse and five pigs. Maybe you think that isn't a very big start, but in a year's time what can you expect?

Our papa and mamma are very good to us and we have lots of fun. Perhaps I shall write to the Young Folks again some time. —Lillian.

TAKES TRIP TO FAIR.

Dear Young Folks:—I have been reading your stories for a long time and I think it is my turn to write. My father and mother took me to California this fall. We were gone from home seven weeks. We stayed with an aunt and uncle near Los Angeles. We went to San Diego. The fair was nice. We went to an ostrich farm and I had my picture taken driving an ostrich. On our way home we stopped at the Grand Canon.

—Vira.

Don't Wear a Truss

BROOKS' APPLIANCE, the modern scientific invention, the wonderful new discovery that relieves rupture will be sent on trial. No obnoxious springs or pads. Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. **Sent on trial to prove it.** Protected by U. S. patents. Catalogue and measure blanks mailed free. Send name and address today.

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THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Address all orders to The Wisconsin Farmer, Madison, Wis.

7623 Ladies' Waist.—Cut in sizes 34 to 44 inches bust measure. All the new materials are soft and such a waist as this is ideal for them. It is quite full in both front and back, with plain center front, and with side front closing. The high neck has a high collar with turnover edge. The sleeves are long and are full from the shoulder. They are finished with an ornamental cuff.

7587 Boys' Blouse.—Cut in sizes 4, 6, 8, 10, 12, 14 and 16 years. Very mannish in style, this blouse is long enough to tuck into the trousers and may have the lower edge left plain and straight or gathered on a tape or an elastic. The front closing may be in coat style or with a band and the neck may have a permanent soft collar or a band.

7601 Ladies' Waist.—Cut in sizes 34 to 44 inches bust measure. The new full effect is shown in this waist. The material is gathered in both front and back along the shoulder seams, and the front closing is in surplice style with shaped shawl collar. The sleeves fit the arm and end at the wrist.

6409 Children's Dress.—Cut in sizes 2, 4, 6 and 8 years. Linen, serge or pique can be used to make this dress with the trimming of plain or striped material. The dress closes at the right side of the front. The sleeves may be long or short.

7631 Boys' Trousers.—Cut in sizes 4, 6, 8, 10 and 12 years. These plain trousers are the kind that small boys wear on all occasions. They have the straight edge at the knee and are fitted by short darts on the hips, running from the edge to the pockets. The fronts are closed with a fly in the larger sizes and with a seam in the small.

6460 Children's Sacque Apron.—Cut in sizes 2, 4, 6, 8, 10 and 12 years. This apron is high in the neck, where there is a small, flat collar and has long sleeves, ending in a band at the wrist. The front is plain and the closing is placed in the center of the back.

7633 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. The blouse of this attractive dress closes far over at the side of the front. The open neck shows a small shield and has a handsome square collar tapering to narrow bands in front. The skirt is a one-piece gathered model, joined to the waist beneath a wide, shirred girdle of contrasting material.

7609 Girls' Dress.—Cut in sizes 4, 6, 8, 10 and 12 years. This pretty frock is slipped on over the head, the neck being cut down in front to make the opening large enough. The front is in panel form and the sides and back are plain, held in by a loose belt. A flat collar finishes the neck and turnback cuffs edge the short sleeves.

7617 Girl's Dress.—Cut in sizes 2, 4, 6 and 8 years. This little frock is made with an overjacket which ends at the belt with plain or scalloped edge. At the neck is a turnover collar and a turnback cuff finishes the sleeves, when short, although a plain band is used for the full length. The skirt is quite long and is pleated all around with plain panel in front.

7608 Ladies' Morning Set.—Cut in sizes 34 to 42 inches bust measure. This set offers a novelty in the morning dress. It has a Middy blouse made on the usual lines, but in one piece, without shoulder seams. The skirt has four gores with a width of 2⅝ yards at the lower edge in the medium size. The cap is gathered with revers band in front.

Price of any of these patterns is 10 cents each.

International Sunday School Lesson

Lesson for March 5, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE DEATH OF STEPHEN.

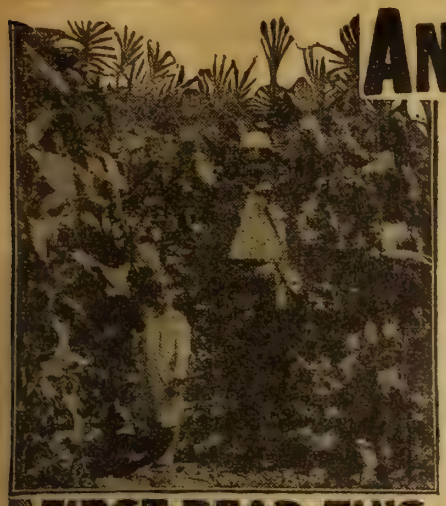
LESSON TEXT—Acts 7:1-8:3.

GOLDEN TEXT—Be thou faithful unto death and I will give thee the crown of life.—Rev. 2:10.

This lesson closely follows that of last Sunday. There are some battles of life that are not fought with fists or weapons. The boy who holds his temper is more manly than the one who goes into a fight simply to win. Paul tells us how and what to fight (Eph. 6:11, 12). We must show the scholars clearly the two great battles Stephen fought and the victory he won as described in today's lesson. The charges made against Stephen were made by "false witnesses." This does not mean men who invented false words, but men who took isolated statements, distorted them and by innuendo used them for their own ends. Stephen was charged with three things: (a) Blasphemy against God (6:11-13), (b) That he had said Jesus would return and destroy the temple (6:14), (c) That he claimed that Jesus would destroy or abrogate the law (6:14). This great passage of Scripture is so profound and so closely connected that we hesitate in trying to separate it into divisions or sections. We much prefer to note the logical argument and presentation Stephen, the Spirit-anointed deacon, made to the Sanhedrin.

I. Stephen's Defense. Stephen was a Grecianized Jew, whose name means "a crown." He answered the charges of these foreign accusers, made before the Sanhedrin, seriatim. His point of contact was to respectfully remind the council that he was an orthodox Jewish believer and worshiper (v. 2). He called the council "Men, brethren and fathers." They were common believers and all were standing before the God-appointed leaders of Israel. Stephen in his reply showed that he reverenced God and God's prophet Moses, thereby answering the first charge (v. 11), and while he reverenced the temple he showed that it was not essential to worship (7:47:49). This last was in answer to their second charge (6-14). In answer to their third charge Stephen then turned upon his enemies and by direct and indirect charges he convicted them of certain facts. Indirectly, by skillful fepetition of Jewish history, and a review of the prophets, he discloses the vacillation and sinfulness of God's chosen people (23, 29). Directly he accuses these leaders of having been subservient to certain customs as being superior to the law they professed to obey. Stephen's accusers were, as we have seen, from without Jerusalem (6:9, 10), and his first battle was concerning the truth about Jesus. His second great battle, and one of his ultimate victory, was with these avowed enemies of Jesus (6:11-8:3).

II. Stephen's Death. The real contest of this occasion was Satan vs. the Holy Spirit. Stephen put to rout these men from the foreign synagogue, hence the Jewish authorities determined to take hold of the problem themselves and put a stop to this Christian teaching. Stephen's sudden application of the Scripture to his judges caused intense anger. He preached the word of God in the demonstration of the Holy Spirit, and such preaching always either produces conviction of sin, or else arouses anger at the preacher. These men could not deny the truth of his accusation; they, therefore, turned upon him in anger. Being "full of the Holy Spirit" is an abiding condition and inevitably involves a conflict with Satan. It led



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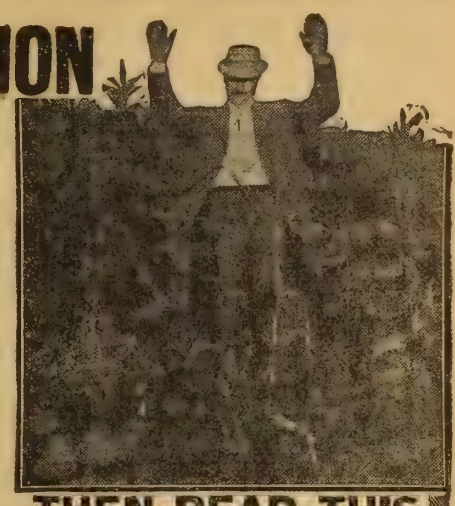

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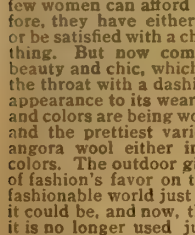
Get in on this **special distribution advertising offer** from **now** until seeding time. At the end of twelve months, if the Galloway Spreader **has not paid for itself,** if you have hauled out a **hundred loads** of manure or more, and it has not proven everything I say for it, I agree to take it back, pay freight both ways and **return your money,** no matter on which plan you buy. Could I make this offer if I was not sure of my ground? Every sale backed by a **$25,000 bank bond**—an **additional guarantee** to you!

FIRST READ THIS

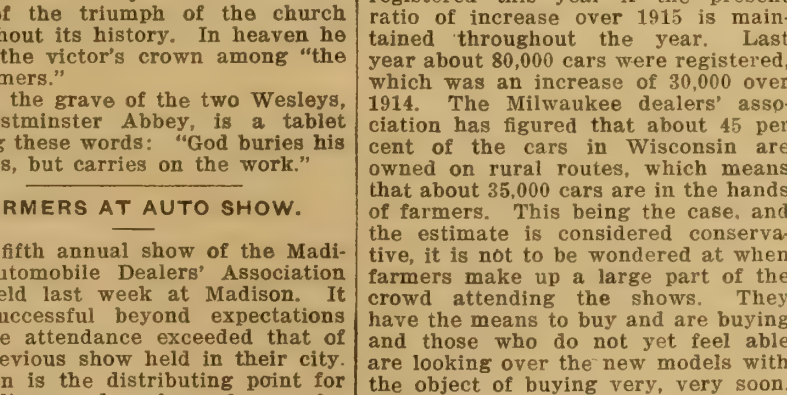
MANURED! I wish you could have seen this field year before last and the poor crop on it! Here is an actual photograph of a corn crop grown in the fall of 1915 after an experiment by using an application of manure. The other photograph shows part of the identical field taken the same day, but that part of the field was **not manured.** The increased crop of corn from this field amounted to over $17 per acre where manured! Figure it out on 20 or 40 acres or **on your own field**

NEW 1916 BOOK FREE



Get this big, new catalog A postal gets it. 250 pages. Printed in four colors. It tells how to handle manure with the least labor—how Galloway made spreaders famous—how a run-out, unproductive farm was turned into a "gold mine" crop producer—how to build a manure pit to preserve fertility—how to increase your corn crop from $10 to $15 per acre—how a Galloway spreader will pay for itself in one year by increasing crop profits and leave money to put in the bank in the fall—how we save you $25 to $45 on a spreader—how Galloway, right from the farm, a few years ago started and built up a $2,000,000 industry by selling direct from factory to farm—how with a 20-lb. steel and malleable feed mechanism we accomplish the same results as others do with 400 pounds of brittle gray iron—how a Galloway spreader handles easier with two horses than other spreaders with three and often four.

New steel beater and wide spreading V-rake pulverizes and tears manure to shreds. Worth $15.00 on any spreader; costs you nothing extra on Galloway. Over 50,000 in use. Invincible, Irresistible patented roller feed. This great exclusive feature on the Galloway Spreader is what makes it superior to all others. It's a secret of our light draft, because the perfect mechanical principle used here is **exactly** the same principle as moving a house on rollers. This feature alone is worth $25 on any spreader. Exclusive on the Galloway, but costs you nothing extra. Don't buy a spreader of any make or kind until you have tried a genuine Galloway at our risk without obligating yourself before trying.



Patented automatic stop, uniform clean-out **push-board,** Worth $10 on any spreader. Exclusive but costs you nothing extra on the Galloway. Spreaders shipped from Waterloo, Kansas City, Council Bluffs, St. Paul and Chicago.

New overlasting, pressed steel unbreakable tongue, worth $5 more on any spreader. No extra charge on the Galloway.

8-18

30 DAYS FIELD TRIAL AND RETURNABLE TO US WITHIN ONE YEAR IF NOT PERFECTLY SATISFIED

Remember we manufacture this spreader in **our own factories** and sell it **direct** to you from **factory to farm.** This spreader should **not** be compared or confused with other low-priced spreaders that **do not have** the special exclusive patented features and genuine merit (backed up by tens of thousands of **Galloway** spreader users) that is found in the **Galloway. Beware** of cheap, absolutely worthless imitations of the **genuine Galloway. Beware** of imitations at any price. Get a **genuine Galloway** and you will be **safe.**

THEN READ THIS

NOT MANURED! This picture was made on the same day as the opposite photograph. It is in the same field but not manured. It had been cropped to death! This field was in exactly the same condition as the other field, planted the same day, cultivated the same way, grown from the same seed, by the same man, but was **not manured.** A Galloway manure spreader will positively pay for itself in one year if you have a hundred loads or more to haul—and leave you money besides! Read our special 1916 proposition in this ad. and the complete story of this experiment in the new 1916 big catalog.

OTHER 1916 FEATURES—IMPROVEMENTS

In addition to our exclusive patented roller feed, automatic stop, uniform clean-out, push-board, the everlasting beater and V-Rake, we have many other valuable features, including pressed steel tongue; double chain direct drive from rear wheels; endless apron with force feed; frame work of channel steel, trussed like a steel bridge; cut under front wheels, short turning; extra light draft; two horses will do with this spreader what it takes three or four to do with other spreaders; seat folds forward out of the way when loading; 60 to 70 bushels capacity but so constructed that manure can be piled 18 to 20 inches above the top of the box and the spreader will successfully handle it.

WM. GALLOWAY, PRESIDENT, THE WM. GALLOWAY CO.

Manure Spreader Manufacturing Specialists.

39 GALLOWAY STATION, WATERLOO, IOWA

This Season's Novelty!

Stylish Angora Style Wool Scarf

You Want One? Read This!

Send us 75 cents only, and get The Housewife for One Year (regular 50 cents) and this Dollar Scarf.

A $1.50 VALUE FOR JUST HALF!

AT LAST fashion has been kind to the women of small means. She has given the scarf, the novelty of the season, to those who cannot afford furs. Comparatively few women can afford really good furs, therefore, they have either had to go without them or be satisfied with a cheap imitation of the real thing. But now comes the scarf, a thing of beauty and chic, which can be wound around the throat with a dashing air lending a smart appearance to its wearer. Scarfs of all kinds and colors are being worn but the most popular and the prettiest variety is the one made of angora wool either in pure white or dainty colors. The outdoor girl first brought the light of fashion's favor on the scarf and showed the fashionable world just how pretty and practical it could be, and now, that cold weather is here it is no longer used just as a pretty piece of decoration, but as a serviceable piece of milady's wardrobe. These scarfs are very warm and easily cleaned, with these two characteristics they are destined to remain immensely popular. The scarf we offer is made of fine wool, angora style and measures 56 inches long by 7 inches wide, it may be obtained in different colors. Each scarf has striped ends of harmonizing colors and is finished with a self fringe. Kindly state color desired when ordering.

Remember, all you need to do to get this Scarf, is to subscribe for The Housewife for a year and remit 75 cents only for both Housewife and Scarf. The regular rate of The Housewife is 50 cents—the usual cost of the Scarf is $1.00.

WE OFFER BOTH FOR 75 CENTS!

Remit by P. O. Money Order or Registered Letter to

THE HOUSEWIFE, 30 IRVING PLACE, NEW YORK

Stephen to look up and not about him, and in his house of testing he saw a wonderful vision of heaven—"The glory of God and of Jesus standing." Let us accept the testimony of this dying man as a literal fact. This sight strengthened him for his suffering and for his witnessing. Death had no more terror for Stephen and he was faithful and steadfast to the end.

III. Stephen's Burial. These men overreached themselves, for persecution simply scattered those who gave the Christian testimony a wider and a more effective hearing (11:19-21). This force of circumstances thrust the early church forth from Jerusalem. Now, after a period of perhaps five or seven years, we see the beginning of the literal fulfillment of the Pentecostal program (Acts. 1:8). During this storm of persecution the apostles remained at their posts in Jerusalem.

Saul's rage knew no bounds, and not content with disputations in the synagogues, he persecuted the church, sparing neither sex nor age (8:1-3).

Stephen's success was in his personal life and his unswerving testimony.

Stephen's victory has been a first fruit of the triumph of the church throughout its history. In heaven he wears the victor's crown among "the overcomers."

Over the grave of the two Wesleys, in Westminster Abbey, is a tablet bearing these words: "God buries his workers, but carries on the work."

FARMERS AT AUTO SHOW.

The fifth annual show of the Madison Automobile Dealers' Association was held last week at Madison. It was successful beyond expectations and the attendance exceeded that of any previous show held in their city. Madison is the distributing point for many lines and makes of cars for southern Wisconsin and the dealers reported satisfactory business and prospects for the biggest business this year that they have ever enjoyed.

The outstanding feature of the show was the great interest shown by the farmers and country folk in the displays. The show lasted only two days, but on each day a large percentage of the visitors were farmers who were interested in the new models and wished to look them all over before they placed their orders this spring. Thousands of Wisconsin farmers who have never owned a car are going to buy this spring. Cheese prices are high, which has increased the size of the monthly milk and cream checks. There is every indication for a fine crop season ahead. The live stock and dairy cattle markets are improving and with a good year to their credit the farmers are in a position to become interested in automobiles. This fact was evident at the Madison show where they inspected the higher as well as medium-priced cars and looked around as the man with the means to buy the car he likes best looks around. The Madison show is largely a southern Wisconsin show and the attendance from the country was very pleasing to the dealers. The show was not like the large shows in Milwaukee and Chicago. Every dealer and agent held his display in his own show rooms and the visitors were transported by auto bus, free of charge, from show room to show room. It is a splendid way to conduct a show in a small city and one which other cities of the state can easily imitate, as nothing stimulates interest more than the yearly displays.

Wisconsin is now registering automobiles at a faster pace than ever before and the secretary of state predicts that at least 120,000 cars will be registered this year if the present ratio of increase over 1915 is maintained throughout the year. Last year about 80,000 cars were registered, which was an increase of 30,000 over 1914. The Milwaukee dealers' association has figured that about 45 per cent of the cars in Wisconsin are owned on rural routes, which means that about 35,000 cars are in the hands of farmers. This being the case, and the estimate is considered conservative, it is not to be wondered at when farmers make up a large part of the crowd attending the shows. They have the means to buy and are buying and those who do not yet feel able are looking over the new models with the object of buying very, very soon. The farmer has learned that the automobile annihilates time between his farm and town and once he has one he wonders how he ever got along without it.

VEGETABLE OYSTERS—ASPARAGUS BEETS.

Two delicious vegetables, little known—easily grown. Oysters either stewed or fried taste exactly like the real—and much healthier. Must be eaten to be appreciated. Asparagus beets are finest greens ever seen; ready in 60 days and continue all the season. Don't miss these splendid vegetables. Large Packet of each for one dime, or 3 of each (and a 25c Present) also Catalog and Premium List for 25c. Name this paper. Address, A. D. COOK, Seedsman, Hyde Park, N. Y.—Adv.

ARE YOU LOOKING FOR A

NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

O. O. WHITED CO.
Radisson Wisconsin

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

Western North Carolina Farms

CLIMATE unsurpassed and soil adapted to raising grain, hay, corn and unlimited variety of farm and garden products. Great opportunities for dairymen, cattlemen and stock raisers. Large or small farms to suit purchasers. Prices of improved or unimproved lands cheap. All well watered. Fu description upon request to Lawrence J. Anderson. 1021 S. Fulton St., Salisbury, N. C.

LANDOLOGY FREE A magazine giving the FACTS in regard to the land situation. 3 months' trial subscription free. If for a home or investment you are thinking of buying good farm land, simply write me a letter marking it "*Personal*" and say "*Mail Landology and all particulars free.*"
Address: **LLOYD M. SKINNER, Gen. Mgr.**
Skidmore Land Co., 23 Hall Ave., Marinette, Wis.

FOR SALE:—FORTY ACRE FARM, NEW house, cow, two pigs, twelve chickens, $1,000, one-fourth cash. SANBORN COMPANY, Eagle River, Vilas County, Wisconsin.

LET ME HELP you buy, sell or exchange farm or business property anywhere. Booklet free. G. L. WILLITS, 33 Palace Building, Minneapolis, Minnesota.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

WANTED—FARMS—Have 3,357 buyers; describe your unsold property. Give price, acreage, location. 769 Farmers' Exchange, Denver, Colo

WILL exchange $18 L. & H. valve trombone in fine condition for 2 geese and gander or 3 ducks and drake or $9 cash. E.E. Merton, Kilbourn, Wis.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

FOR SALE—Improved and raw lands. Write for list. Dvorak Land Co., Wyndmere, N. D.

When writing to advertisers please mention The Wisconsin Farmer.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Blindness.

I have a five-year-old colt that by all appearances is going blind. One eye is blind now I think or there is a scum over it. Can you give me any advice on what to do for him?

You do not say what you think might be a possible cause of the trouble with your horse's eyes. These troubles are usually brought on by some constitutional disturbance or some local irritation which leads to serious trouble. You should have a competent veterinarian give this animal a thorough examination to determine the cause of the trouble.

Sore Teats.

Please give me some advice on what to do with some of my cows. They are in good condition and are about six or seven years old but each has a sore teat. It is badly swollen but is not hard. It is difficult to milk and only gives a very fine stream. Have put lard on but it doesn't do any good.

It is very possible your cows have frozen their teats during the cold weather. Gentleness when milking is advisable and the use of carbolized vaseline after milking. The teat that comes in contact with the cold ground or floor is often the one that is affected.

Split Tooth.

I have a six-year-old mare that has a first double tooth on the upper jaw split. There is a bunch on the outside of the jaw. Would it be best to pull this tooth or would it be better to bore through the jaw and drive it out? Would it injure the mare?

Whenever a tooth is causing the animal considerable inconvenience it is advisable to have it removed. A split tooth is often troublesome. It is best to remove a tooth by simple extraction with the forceps, but sometimes this cannot be done. The best means to remove this tooth will surely be used by an experienced operator and you should leave it to him if you know him to be a man in whom you can place confidence.

KRESO DIP No. 1

STANDARDIZED.
EASY AND SAFE TO USE
INEXPENSIVE

KILLS LICE
ON ALL LIVE STOCK
DISINFECTS.
CLEANSES.
PURIFIES.

It has so many uses that it is a necessity on every farm.

USED IN THE TREATMENT OF MANGE, SCAB, RINGWORM, SCRATCHES, ETC.

Destroys Disease Germs
DRIVES AWAY FLIES

For Sale by All Druggists
Write for Free Booklets

PARKE, DAVIS & CO.
DEPARTMENT OF ANIMAL INDUSTRY
DETROIT, - - MICHIGAN

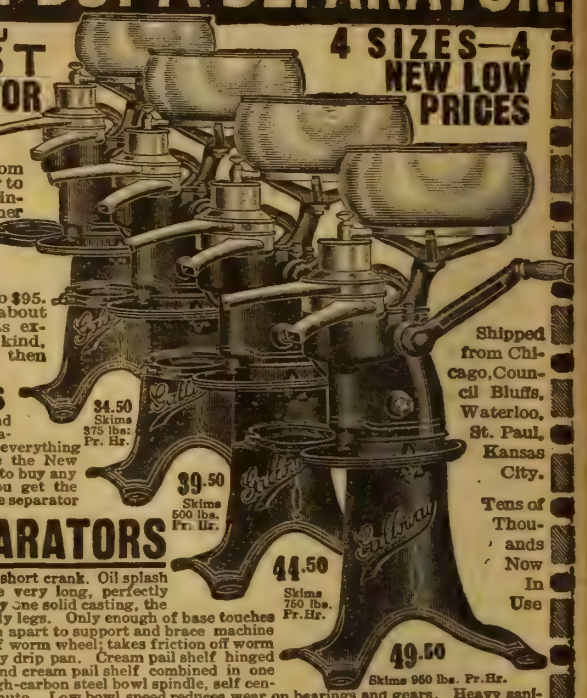
STOP! DON'T BUY A SEPARATOR!

UNTIL YOU FIRST READ THIS NEW BOOK OF SEPARATOR FACTS! From now until grass I am going to make a new special proposition on 10,000 of our new Galloway Sanitary Cream Separators. One sold in a neighborhood sells another; in many cases from six to a dozen—in some cases as high as twenty-five. In order to get more of these new wonderful Sanitary Cream Separators introduced over as much territory as possible to build up summer and fall sales, I am making this unusual proposition in addition to the already low prices quoted.

4 SIZES—4 NEW LOW PRICES

PRICES LOWER---SAVE $25.00 TO $50.00 NOW

The separator I sell I claim is equal, if not better, than separators that sell from $75 to $95. My customers say it is positively away ahead of them. They make statements about it that are so strong and positive that if I would make them you would think I was exaggerating, but all I want you to do before you buy a cream separator of any make, kind, or at any price, is to first get my catalog, read over the separator department in it; then try one for ninety days, which is 180 times, before you have to decide to keep it.



Shipped from Chicago, Council Bluffs, Waterloo, St. Paul, Kansas City.

Tens of Thousands Now In Use

90 DAYS' TRIAL---5 NEW SELLING PLANS

I sell my separators on your choice of five open, fair and square plans and guarantee them for ten years against defective workmanship and material and back up every sale with a $25,000 bank bond. You have everything to win and nothing to lose. It's only fair to yourself to investigate the New Galloway Sanitary Bath-in-Oil Cream Separator before you decide to buy any other kind. I will leave it entirely to you to be the judge after you get the catalog, read over the plans, select the one you want and then try the separator

GALLOWAY SANITARY SEPARATORS

Big, roomy, seamless, pressed steel supply tank. High crank shaft, short crank. Oil splash lubrication. High carbon steel gear shafts. Gear shaft bearings are very long, perfectly fitted. Both gear shafts, and both bowl spindle bearings supported by one solid casting, the gear case. The base, a strong, substantial pedestal, no spindly, wobbly legs. Only enough of base touches the floor to give the machine a good firm footing. Feet just far enough apart to support and brace machine perfectly from every direction. Helical drive gear offsets side thrust of worm wheel; takes friction off worm wheel shaft bearings. Large worm wheel. Open sanitary base; sanitary drip pan. Cream pail shelf hinged so it can be raised and lowered, not pushed back and forth. Bowl, vise and cream pail shelf combined in one piece. Strong, sanitary bowl, discs, not fastened together. Heavy, high-carbon steel bowl spindle, self centering neck bearing. Low speed of crank, only 50 revolutions per minute. Low bowl speed reduces wear on bearings and gears. Heavy sanitary tinware. Sit right down and drop me a postal today and I will send you my big 4-color 250 page book free.

WM. GALLOWAY President

THE WILLIAM GALLOWAY CO., 33 GALLOWAY STA., WATERLOO, IOWA

The Cream Separator Manufacturing Specialists.

PILLING CATTLE INSTRUMENTS

A necessity for every farmer. Practical, reliable, easy to use. No veterinary experience required. Used and endorsed by leading live stock raisers and milk producers. Manufactured by the largest firm of its kind in the world—backed by 100 years' experience.

CASE NO. 3

This oak case contains the following "Easy to Use" Pilling instruments:

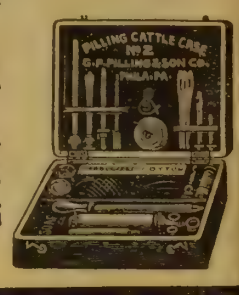
Injection Syringe	$2.50	Teat Opener	.75
Bloat Trocar	1.50	Garget Outfit	4.00
Animal Soap	.25	Fever Thermometer	2.00
Milk Fever Outfit	3.00	Sinus, or general syringe	1.25
Two Bandages	.50	One oak-polished case	1.00
Three Lead Probes	.75		
Two Milk Tubes	1.00		
Teat Dilator	1.00		
Teat Slitter	1.50		

$21 VALUE, complete with "Easy to Use" directions for $15 Prepaid

CASE NO. 2

Containing $3.00 milk fever outfit and 8 other "Easy to Use" cattle instruments needed by every dairyman, complete in polished oak case.

$15 VALUE, complete with "Easy to Use" directions for $10 Prepaid



Get Our Free Booklet on "Easy to Use" Cattle Instruments

G. P. PILLING & SON CO., 2318 ARCH STREET PHILADELPHIA, PA.

Sniffles in Pigs.

I have some pigs about four months old that have some kind of a nose disease. They start to sneeze at first, then their noses shorten up and enlarge and twist to one side. They also lose in flesh. Is there any cure for this disease? I use dip, but it does not seem to stop the trouble.

Your pigs are troubled with what is commonly called sniffles. This trouble is found in pigs quite frequently. The best treatment is just to play a game of hope. However, it is always advisable to clean up the premises thoroughly and separate the affected pigs from the well ones.

Frozen Teats.

I have a cow that came in five days ago and has two bad teats, the back ones. Just on the end of the teats there is a white spot with a black circle around it. She has much pain when I milk her. Please tell me the cause and what to use for it. She is in good health and about six or seven years old. She dropped her calf at night and as I was not present I thought maybe they had become frozen as it freezes in my barn when 25 or 30 below zero.

This trouble is quite common in cows at this time of the year. Just be patient with the animal and handle her teats as easily as possible while milking. A little carbolized vaseline applied to the affected parts after milking will help keep the parts soft. The teats will probably be all right after the dead frozen tissue has been cast off.

Lame Driving Mare.

I have a sorrel driving mare, six years old, that has gone lame on one hind foot. The trouble is in the hip. I have had a doctor examine her and he said she sprained the muscles or ligaments in her hip. She has been lame for about six months. She has been running in pasture, but does not get any better. I have blistered her but it did not relieve her. What treatment would you suggest?

Since you have had a veterinarian to examine your mare and advise treatment and still got no results it would be folly for one who has not seen her to diagnose and prescribe treatment. The trouble is of a chronic nature by now and would undoubtedly prove very resistant to treatment. It might pay you to have some other veterinarian make a thorough examination of the animal.

Vaccination.

How long after vaccination can a hog be shipped into another herd and not give cholera?

It is presumed you are making inquiry regarding the simultaneous method of vaccination. In most instances it is safe to place a simultaneously treated hog with other hogs that have not been vaccinated after fifteen days following such treatment. It is better to wait twenty-one or even thirty days before placing it among non-immune hogs. When the hog has had the single treatment, or serum alone, it may be placed immediately with the herd that has not received treatment.

Wound.

Please tell me what is the matter with my hog. He has a sore on his side that is about an inch and a half across and perfectly round. It extends out from his body about half an inch and the smaller part is next to his body. It is running blood and looks some like a carbuncle. I have never seen anything like it on a hog before. He is fat enough to eat and in good shape every other way and I would like to know if he is fit to eat, and what to do for him.

This is probably only a wound of some kind. However, it may be a small new growth or tumor which sometimes occurs on the skin of swine. In either case the probabilities are that it is purely a local condition and that the meat is as fit as any other hog. Cleansing it with a strong solution of some good antiseptic will be found beneficial.

Abortion in Mares.

Can you give me any reason why mares lose their colts? Last season I bred four mares and got two colts. One mare lost her colt at about six months. The other we did not see, but was almost sure she was with foal. This season I have bred five and they have all lost their colts. Four of the mares carried them six months and the other about four. If you can give me any light on this I will be very glad. I have been raising horses for twenty-five years and never had anything like this happen before. Tell me if it would be advisable to breed these mares again or not.

Your mares are troubled with abortion, either infectious or non-infectious. It is hard to say just what is causing the trouble. It may come from some irritant being eaten which causes an inflammatory condition of the urinary or genital organs. It may come, also, from overwork or lack of exercise. It seems more probable, however, that your mares are troubled with abortion of infectious nature. This may have gotten into your herd by breeding your mares to a stallion which has had intercourse with an affected mare. It would be best for you to have a competent veterinarian look into this trouble thoroughly and find out if possible the real source of the trouble and he could possibly advise you how to overcome the difficulty.

Raised Without Milk!

Her name is "Daisy" and her owner, W. A. Riddle, of Chapin, Iowa, raised her on Blatchford's Calf Meal, which costs less than half as much as milk.

Blatchford's Calf Meal

A useful preventive of scouring. Calves raised "The Blatchford's Way" are heavier, bigger-boned and healthier. Known as the complete milk substitute since the year 1875. Sold by your dealer or direct from the manufacturer.

Blatchford's Pig Meal insures rapid, sturdy growth of young pigs at weaning time. Prevents setback.

See Actual Figures—based on results—that show you how to increase your calf profits. Write today.

Blatchford Calf Meal Factory, Dept. 63 Waukegan, Illinois

Cash paid to the implement dealer permits him to pay cash to the manufacturer. The manufacturer may then buy on cash basis and the system thus established should save the farmer money in the end.

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

The Atwater Duroc Herd.

THE writer recently spent a very pleasant day at the beautiful country home of L. F. Atwater, near Bangor, Wis., where he had the pleasure of inspecting one of the best Duroc herds in the country. The breeding of Durocs is first and foremost on this farm. The farming operation is in charge of Mr. Atwater's son while L. F. devotes his time to the hogs and his show yard winning and public sales of the past, demonstrates the fact that he is some "hog man." The feature of the Durocs and the hog that has helped to put this breeder on the map, is Lee's Defender. The writer is familiar with most of the Duroc herds in the West and when one hears the breeders of Iowa and South Dakota talking about Lee's Defender, as a sire, it must be conceded that he has something more than a local reputation. We were not disappointed in this hog when we saw him. He has been used heavily and does not look like he did when he won his several championships, yet he has that masculinity and individuality so pronounced that one has only to look at him to be convinced that he is a successful sire. He is siring the big kind with the arched backs that breeders are so anxious to get. They have good bone, short pasterns and feet suitable to carry their weight. Mr. Atwater will have a herd out this fall, sired by Lee's Defender, that will cause some competitor worry. Prince Illustrator, the boar that was shown and used so successfully in this herd and has been sold to the Tilney Farms, St. James, Minn. When Mr. Atwater priced this boar to Mr. Crowley, who is manager of the above farms, he priced him at what he was worth to him as a sire and did not expect to sell him, but as Mr. Crowley was after the best, a few dollars did not stop him, consequently $700 was paid for Prince Illustration and a spring gilt. We have never seen this boar, but the fact that he won championship honors at Milwaukee and his get on the Atwater farm will convince anyone that he is a boar of merit. His sire, Illustrator 2d, is, in our estimation one of the best, if not the best sire in the state of Nebraska, and the Tilney Farms are to be congratulated on the purchase of this boar. We advocate "family breeding" that is, get a good brood sow and keep her and the daughters as part of your herd. At some future date we will take for example the best sow in the Atwater herd and show what she has done for her owner. Four spring boars are being offered for sale at this time. Two of them are good enough for pure-bred herds. One is by Regulator he by Reed's Top Col., out of a Lee's Defender dam, the other one by Lee's Defender, out of a daughter of the noted Golden Model 2d. Here are two good buys for someone. Write for prices and please mention The Wisconsin Farmer.—Adv.

Incubators by Express.

YOU can now have an incubator delivered to you by express instead of waiting for days and weeks while the machine is coming by freight. Should you decide that you would like to set an incubator in a few days, don't give up the idea for fear it would require a couple of weeks to get the machine. Drop a card to the X-Ray Incubator Company, Dept. 42, Des Moines, Iowa, and receive free a copy of the handsome X-Ray book. This book aside from being a catalog, contains a world of useful new ideas pertaining to poultry raising. You'll find it a handy book to have around the house. Get a copy of this valuable book and if you're in a hurry you can have your incubator in a ccuple of days after you send your order. The X-Ray Company is the first to offer their customers this unusual service, and this quick delivery is made at their own expense. There is no extra charge. The quick delivery is not the only attractive feature about the X-Ray machine. It has become wonderfully popular during the last few years owing to its many convenient features. The incubator makes a hatch on a single gallon of oil and one filling of the lamp. There are no trays of eggs to lift—no lamps to fill. Read the X-Ray advertisement which appears in this issue and by all means send for a copy of the X-Ray Book No. 42. Mention The Homestead when writing and you will get an immediate reply. See advertisement on page 24.—Adv.

Cushman Engines Save Horses and Binder.

CUSHMAN engines will not only do all regular farm work, but during harvesting time they can be easily attached to any binder and will drive the sickle and all the machinery, so that one team of horses can furnish all the pulling power necessary for an eight-foot binder in heavy grain. In a wet harvest, like the last one, a large percentage of the crop otherwise lost can be saved, because the Cushman engine keeps the sickle going even when the bull wheel slips. The Cushman engines have a throttle governor and perfect balance, and a water cooling system prevents overheating. The four-horse-power machine weighs 190 pounds and only 167 pounds when stripped for binder. Farmers say that a binder will last several years longer with a Cushman engine attachment. You can get a free book telling all about Cushman engines by mentioning the advertisement on page 26 and addressing Cushman Motor Works, 855 North 21st St., Lincoln, Neb.—Adv.

Morley Co. Offer Good Percherons.

WITH this issue of The Wisconsin Farmer, R. A. Morley Co., Baraboo, Wis., start their advertisement offering for sale some very choice Percheron stallions and a few Short-horn bulls. The best colt they are offering is a June yearling—June 1, 1914. He is a dark gray, wide and well ribbed with an excellent back. He has a good, flat bone and with care will make a great stallion at maturity. His sire, imported Josias, has been a consistent show yard winner and is a proven sire. This young stallion is well worth all the money asked for him and it will pay stallion buyers to get in touch with the owners. The stallion at the head of the Morley stud is Nicholas K. and there are several good prospects among the colts sired by this stallion. Nicholas K is a half brother to the stallion, Eugene, that was used and sold in the dispersion sale of that good breeder, James G. Boyd for $1,400. This stallion is one of those big, rugged fellows, what we call the "Dutchman's kind." He is now seven years old and inasmuch as the present owners have so many young things by him, they will consider a trade for another stallion. They will be glad to show you colts by this horse to prove that he is a proven sire. It will be to your interest to communicate with the Morley Co., relative to the Percherons they are offering. They are in thrifty condition and the prices are attractive. Don't forget that they are also offering some young bulls from heavy milking dams. Write at once and please mention The Wisconsin Farmer. See page 37.—Adv.

The Corn Planter With a Shaft Drive.

JANESVILLE corn planters are said to be the only ones with a shaft drive, which explains their great simplicity of construction and ease in handling. It greatly reduces the number of parts and eliminates much of the danger of breakage. Another feature is the sight feed, by means of which you can see the hill as the seed drops and can change the feed to two, three or four kernels without stopping the team. It also has a commercial fertilizer and a cowpea attachment if desired. You would find the book offered in their advertisement on page 8, very interesting. It tells all about this improved corn planter, as well as the rest of the old Janesville line of farm implements, which have been giving satisfaction for nearly sixty years now. In writing address Janesville Machine Co., 41 Center St., Janesville, Wis. Mention of this paper will be appreciated. —Adv.

Manley's Ayrshires and Hampshires.

SOME Ayrshire bulls are advertised on page 38 by E. N. Manley & Son, Lyons, Neb. These bulls are from the best families, having high producing ancestry, are mostly white in color, large for their age, with plenty of bone and substance. One is a two-year-old grandson of the grand champion at the Panama-Pacific Exposition. Manley & Son also breed Hampshire hogs, and are offering some hogs sired by the World's Fair prize-winning boar, Gen. Tipton Again, that was grand champion, as well as the get of Farmer's King, reserve senior champion and Messenger Boy Jr., first-prize junior yearling. The Manley Hampshires won $1,270 in premium money at the San Francisco Show, the largest sum ever won by a Hampshire exhibitor and the hogs they are offering are all closely related to their show animals. Write them your wants, mentioning The Wisconsin Farmer.—Adv.

Taber Non-Shrinkable Silo.

THIS non-shrinkable silo is the result of a special gum preparation, which is simply heated and applied with a brush, the same as ordinary paint, making a silo lining which renders the silo acid and moisture proof. This special composition is used in all Taber lined silos and the Taber Lumber Co. consider it the leading feature of their product, as this simple lining process retains all the juices within the silage and prevents moisture and carbonic acid gas from penetrating the walls, which has caused many silos to swell and shrink, thus leaving the hoops loose so the silo may blow down. The Taber lining overcomes this trouble and is practically everlasting. Their advertisement appears in this issue on page 22. We suggest you write the Taber Lumber Co., Dept. D, Keokuk, Iowa, for their 1916 catalog and terms to agents.—Adv.

Seed Quality the First Consideration.

NO matter how good the season is or how great care you put on your garden, it will not be a success unless the seeds you plant are dependable. Northrup, King & Co.'s seeds have won the reputation of being absolutely dependable. They put quality first and if you follow the instructions on every package they will certainly produce well for you. Their thirty-second annual catalog, containing 168 pages of seed wisdom, will give you reliable information on how to plan your garden and farm crops. It will be mailed free if you will write today to Northrup, King & Co., Seedsmen, Hennepin Ave., at First St., Minneapolis, Minn., and mention their advertisement on page 15.—Adv.

Lincoln Model-Stubbs & Hyzer.

WHEN Lincoln Model won first as a senior yearling at the Sioux City Interstate Fair he was an outstanding show boar, but at that time the owner did not have many pigs sired by him. Before this boar was sold to Stubbs & Hyzer, Mr. Burton bred several sows to him and we will say that the best sows today in the Burton herd are by Lincoln Model. Mr. Burton has often expressed the desire to get this boar back and we know that a good price has been offered for him, but what was Mr. Burton's loss was the present owners' gain. Lincoln Model has many good points. He has an ideal head and ear, and we don't know of a three-year-old boar that is as smooth. He has an excellent, strong back, shows no tendency to go down on the pastern and taken in all, we consider him a very desirable boar. The owners have several fine fall litters by him and a number of good sows are bred to him for spring farrow. These gentlemen are also using a young boar that is choicely bred. He is sired by Missouri Model Top, a boar that has been a grand champion three times and his dam is a daughter of Golden Model 31st, a boar that is rated high as a sire. These breeders have recently purchaser a sow bred to Educator. This boar is the best son of the immortal Ohio Chief now in service today and if Stubbs & Hyzer have good success with the litter, they should have something great to offer the breeders of Wisconsin next spring. There has been many inquiries for bred Durocs and in view of this fact, the above mentioned breeders are offering fifteen spring gilts for sale. They are bred for April and May farrow and many of them to Lincoln Model. They are being priced for quick sale. Get your order in early and in writing for prices please mention The Wisconsin Farmer. See page 39.—Adv.

A Boon to Potato Growers.

IF you are interested in potato raising you should also be interested in the Aspinwall potato planter—the machine that will plant from five to eight acres of potatoes in one day and, what's more important, will plant them right. It opens the furrow, drops any sized seed, covers it up in the best shape, marks the next row, and, if you wish, sows in fertilizer—all at one operation. A corn, pea and bean attachment can be furnished with it, if desired. It is made by the oldest and largest makers of potato machinery in the world. Sixty thousand are in use and giving satisfaction everywhere. For free booklet address Aspinwall Mfg. Co., 457 Sabin St., Jackson, Mich., and kindly refer to their advertisement on page 16.—Adv.

Saving Engine Power.

YOU can save waste power in your engine, no matter whether in your automobile or tractor, by equipping it with Leak-Proof piston rings—the rings insure perfect compression, that never lose their fit or bearing, that will not score the cylinders and last as long as the engine. They keep the oil out of the cylinders, preventing carbon accumulations and dirty spark plugs. They are made in all sizes and easily installed. If your dealer doesn't keep them you should send his name to McQuay-Norris Mfg. Co., and also ask for their free booklet "To Have and To Hold Power' that tells all about compression and what it means to you. Address them 2820 Locust St., St. Louis, Mo., and kindly mention their advertisement on page 19.—Adv.

Triple Wall Silos Are Guaranteed.

THE triple wall silos, with felt lining, made by the Independent Silo Co., and advertised on page 23, are guaranteed not to collapse. They are shipped on approval and will be found air tight and practically frost proof. They have no hoops to tighten and are a permanent addition to your farm building equipment that will stand up under any tests. If you are considering putting up a silo you should write today for free catalog to Independent Silo Co., 2330 University Ave., St. Paul, Minn., and mention this paper.—Adv.

A Perfect Harrow.

THERE are 100,000 Pounder's Corn King harrows in use and without exception they are giving satisfaction. They are self-clearing and self-adjusting and are said to outwear two ordinary harrows. They are absolutely guaranteed and any user will tell you that they are an ideal farm implement. For further information address G. H. Pounder, 7 E. St., Ft. Atkinson, Wis. Mention of the advertisement on page 14 will be appreciated.—Adv.

From a Satisfied Customer.

ON page 25 is a letter from one user of Queen incubators, telling of his remarkable success with them and recommending them to others. This is only a sample of many such letters which the makers receive. They say that the Queen is built to run without trouble and to get the highest possible percentage of hatches. If you will write to the Queen Incubator Co., 153 Bryan Ave., Lincoln, Neb., and ask for their free book they will be glad to send it to you. Please mention this paper when writing.—Adv.

Fewacres Farm Jerseys.

ONE of Wisconsin's most unique farms is that of Fredrick D. Underwood, Wauwatosa, Wis. Mr. Underwood is now president of the Erie railroad, but when a boy lived in Wauwatosa. A few years ago he purchased about 100 acres of land at the outskirts of Wauwatosa and has established one of the finest farms in the state. His Jersey herd now numbers about sixty animals which will be increased to 100 in the near future. The herd is headed by the richly bred bull, Brookhill Financial Count, a grandson of the great bull, Golden Fern's Lad. His dam is a granddaughter of the $10,000 bull, Imp. Flying Fox. She is a daughter of the cow, Financial Countess, that made 795 pounds of fat in a year, equivalent to 983 pounds of 80 per cent butter. This bull, therefore, combines the blood of the three great bulls, Financial Count, Imp. Flying Fox and Golden Fern's Lad. Register of merit work is continually being done and the cows are making some exceptionally creditable records. Among those now on test are Irene's Cherry, that as a two year old has given forty-seven pounds of milk per testing 5.73 per cent fat. She has made 272 pounds of fat in four months and is still giving forty pounds of milk per day. This is a wonderful two-year-old record. Fern's Ducky Dimple gave fifty-seven pounds of milk per day in official test. Fern's Bonnie Lucile has given fifty-two pounds of milk per day and is now making sixty pounds of fat per month. L. K.'s Blossom B. is making from fifty-five to sixty pounds of fat per month and is increasing. Among the cows that have already finished their records are Distinction Oxford Belle that made 687 pounds of butter as a four year old. Fern's Gypsy Queen made 567 pounds butter as a junior four year old, Fen's Iceland Queen made 510 pounds butter, Golden Fern's Jane made 573 pounds butter. Considering the fact that this herd has been established but two years it is an exceptionally creditable showing Many of the cows in the herd will weigh from 1,000 to 1,100 pounds. Care has been taken to select cows of good type with well-developed udders and teats and from proven lines of breeding. The majority of the females are of Loretta D., Nobles of Oakland, Golden Fern and Jacoba Irene lines of breeding. A young bull of Raleigh breeding has recently been added to the herd. Every precaution for the health of the cattle has been taken. The barns are models of sanitation and are kept scrupulously clean. At the present time they are offering some fine young bulls for sale from heavy producing cows. These bulls are of good, straight conformation—good type and well grown. For charted pedigrees, pictures and further information in regard to these animals write to the above address. See page 37.—Adv.

Hoag's Guernseys.

A VERY choice yearling bull is advertised for sale on page 37 by W. E. Hoag, Oakfield, Wis. He was sired by Golden Hero of Bierntown by Imp. Golden Hero of Etnary by Imp. Golden Hero. Imp. Golden Hero of Etnary sired the noted bull, Holden 4th. Golden Hero of Bierntown is out of Imp. Goodwill of the Grain, a daughter of Governor of the Chene. The dam of the bull offered for sale is a daughter of Imp. Dandy of La Hogue by Galaxy's Sequel. From this short description of the breeding it will be seen that the young bull comes from the best of blood lines from both his sire and dam. He is well built, well grown and a show bull.—Adv.

Roller Mills That Last a Lifetime.

IF you buy a Howell roller feed mill you get a machine that is guaranteed for a lifetime. It has no burrs or stones to wear out and is said to grind a wagon load of feed for ten cents. It does not heat the feed and will grind graham and rye flour as well as feed. It is a fast worker and requires little power. Howell roller feed mills are made in thirteen sizes and among them is a size just suited to your needs. In replying to their advertisement on page 18, write for Catalog D. and address R. R. Howell & Co., Minneapolis, Minn. Mention of The Wisconsin Farmer will be appreciated.—Adv.

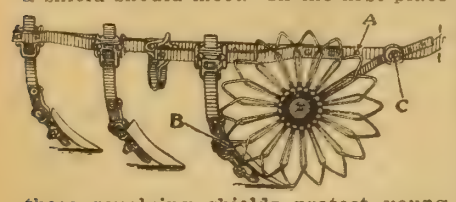
A New Fence Book.

A GREAT many of our readers have already sent for the fine new catalog issued by the Brown Fence & Wire Co., of Cleveland, Ohio. This concern has been in business for thirty-three years and in that time has built up an enormous business among over 400,000 farmers. If you are in need of fence or gates for any purpose, you will do well to send a post card to this company for their 1916 catalog, which is just off the press. It contains eighty pages, shows over 150 different styles of fences and gates, quotes prices direct

from factory to you, freight prepaid. Simply address the Brown Fence & Wire Co., Dept. 35, Cleveland, Ohio. Mention this paper and catalog will come to you by return mail. See page 2.—Adv.

A Unique Cultivator Shield.

AMONG the interesting, modern devices used in cultivating corn, the Daisy revolving cultivator shield is prominent. Ordinarily we think of a cultivator shield as simply a thin sheet of metal, and oblong in shape. It trails along between the corn row and the shovels to fend off the dirt from covering the young corn. Daisy shields are made on an entirely different principle. They are circular in shape and travel over the ground by revolving just as a wheel does. These shields are made entirely of heavy wire (see illustratioon) arranged in loops. The whole shield revolves on a short axle from which it is attached to the cultivator beam. This shield was designed by a practical farmer, familiar through years of experience with all the requirements that a shield should meet. In the first place



these revolving shields protect young corn better in the plowing. Clods are thrown away from the corn row and cannot fall on the hills. The Daisy Shields protect the corn equally well at any speed the cultivator can travel, something the old-style shield cannot do. The makers assert that these shields enable the user to plow corn "first time over" just as fast as is possible with well-grown corn. The open spaces in Daisy shields allow fine dirt to pass right through them. This is an advantage as this dirt covers and chokes small weeds about the hills. The value of Daisy shields has been established in actual service on hundreds of farms. They fit any standard make of cultivator, have nothing about them to wear out and should give many years' service. Farmers who buy new plows should insist on their being equipped with Daisy shields. The Munson Mfg. Co. is a responsible firm with a reputation for fair dealing. They will be glad to furnish full information about Daisy shields to anyone who will address them at Winterset, Iowa. See page 17.—Adv.

Get These Hog House Plans.

THERE is a closer connection between hog profits and hog house construction than many farmers realize. Hog health is, to a large extent, dependent on sanitary surroundings and proper sanitation requires plenty of sunshine. Any farmer who is interested in learning about the most improved methods of hog house construction should take advantage of the offer of Shrauger & Johnson, Atlantic, Iowa, makers of "Chief Sunshine" windows, in their advertisement on page 18, and get the four sets of hog house plans which they offer to send free on request. They give in detail the designs which will be best adapted to your purpose. At the same time you should ask for their steel products catalog, telling all about their "Chief" side wall windows, steel cupolas, etc. Address Shrauger & Johnson, 300 Walnut St., Atlantic, Iowa, and kindly mention this paper.—Adv.

A Permanent Rigid Wood Silo.

GUARANTEED for twenty years, but lasts a lifetime" is the claim made for Wood Tire silos, which are said to cure and preserve silage perfectly. They have a double wall, the inner one being constructed of California redwood. A hollow space between protects the silage from freezing. They are shipped in sections and are easy to construct, without any hoops to get loose and no guy wires. A postal card to the makers will bring full information, together with what others who have used them think of them. Agents are wanted in any unassigned territory. When writing address Wood Tire Silo Co., 7 Clark St., Sheboygan Falls, Wis., and kindly refer to their advertisement on page 23.—Adv.

Harness and Collars That Wear.

SCOTCH KNOCKER harness is made of the same material that is used for artillery harness in the European war, because of its strength and durability. It does not crack and is not affected by sweat or rain. Scotch Knocker harness is made by the reliable Minnesota Harness Factory which has solved the collar problem for hundreds of our readers with its Scotch Knocker collars, that fit the horse's neck perfectly, do not gall or chafe, and wear to beat the band. You can get a book giving prices and full information about these splendid Scotch Knocker products by writing Minnesota Harness Factory, Inc., 106 Second St., Winona, Minn., and mentioning their advertisement on page 8.—Adv.

Two Fine Books.

IF you want unprejudiced information about present-day silage feeding and silo construction by people who do not sell silos you cannot get it better than by sending 10 cents in postage or coin for the 264-page book "Modern Silage Methods" offered by the Silver Mfg. Co. in their advertisement on page 23. It tells all there is to know on these subjects and is a handbook of silage wisdom. At the same time if you will ask for it, they will send you free a booklet entitled "Silo Filler Logic" telling about Silver's "Ohio" silo fillers that are used with perfect satisfaction on many grain-belt farms. Address The Silver Mfg. Co., 312 Broadway, Salem, Ohio., and kindly mention this paper.—Adv.

Watson & Will's Holsteins.

THE Holstein herd of Watson & Will, Menomonie Falls, Wis., consists of over sixty head or registered animals. The herd was founded some twenty-five years ago and by careful selection of the right type of animals they have developed a large herd of heavy-producing individuals. A greater part of the foundation stock was of Johanna breeding which has long been noted as a high-producing strain. In recent years the Duchess Ormsby strain has been largely followed. One bull recently used was Homestead Masterpiece Ormsby, which has six A. R. O. daughters with creditable records. He was sired by a son of Pietertje Hengerveld Paul De Kol and traces twice more to this same bull. He also traces twice to Duchess Ormsby 3d, the highest record daughter of Duchess Ormsby. Another bull recently used was Sir Ormsby Hengerveld De Kol 3d, a half brother to the former world's record cow, Pietertje Maid Ormsby. He traces twice to Gem Pietertje Hengerveld Paul De Kol and to Duchess Ormsby. Sir Ormsby Hengerveld De Kol 3d has sixteen A. R. O. daughters, six of which average close to twenty-three pounds of butter in seven days. One of these, Bonair Beechwood Ormsby, recently made 26.76 pounds butter, Bonair Belle Ormsby made 23.85 pounds butter, Akkrummer Jessie 2d made 22.20. The bull now at the head of the herd is Maplecrest De Kol Friend, a very richly bred bull. His sire, Friend Hengerveld De Kol Butter Boy, has twenty A. R. O. daughters, three above thirty pounds butter in seven days and over 12,000 pounds of butter in a year. Banistine Belle De Kol gave 27,404 pounds of milk and 1,322 pounds butter in a year. The dam of this bull is a twenty-one-pound daughter of Pontiac Aaggie Korndyke, that has thirty-five A. R. O. daughters, two above thirty pounds. Maplecrest De Kol Friend is a very richly-bred bull and great things are expected of his daughters. At the present time they are offering several of his sons for sale out of Duchess Ormsby and Johanna bred cows. These are well grown and several are ready for immediate service. For further information write to the above address. See page 37.—Adv.

Quality Paint Costs Less.

THE makers of Hickory paint offer to prove to you that it costs less for each job than cheaper paints by furnishing you a quotation for your next painting job. In their advertisement on page 31, they cite the case of Mr. Atkinson, of Superior, Wis., who saved money by buying Hickory paint from his local dealer instead of sending away for some cheaper kind. Hickory paint is guaranteed and contains no acids or other impurities, but holds its oil for years, protecting the woodwork perfectly. If you will write to Kelley-How-Thomson Co., Duluth, Minn., mentioning this paper, they will send you their free color cards and Paint Talk book.—Adv.

McGill's Holsteins.

REGISTERED Holstein bulls of serviceable age are advertised for sale on page 37 by W. D. McGill, Menomonee Falls, Wis. These were sired by Sir Johanna Aaltje Korndyke 103734, a richly bred Johanna bull. He is a son of Dr. Johanna Korndyke, a grandson of Korndyke Wayne Paul De Kol and Johanna Colantha Sarcastic Lad. His dam is a granddaughter of Sir Johanna De Kol, the sire of the forty-pound cow, Johanna De Kol Van Beers. The dams of the bulls offered for sale are A. R. O. and untested cows of Duchess Ormsby and other equally good breeding. For extended pedigrees, pictures and prices of these young bulls write to the above address.—Adv.

"Easy to Use" Cattle Instruments.

LIVE stock raisers will find great interest in the advertisement of Pilling's cattle instruments on page 34. They are made by the largest firm of its kind in the world and are backed by a century of experience in the treatment of cattle for all kinds of diseases. No veterinary experience is required for their successful use and they are endorsed and used by leading live stock men and dairymen everywhere. Their book "Easy-to-Use Cattle Instruments" will be sent you free on request to G. P. Pilling & Son Co., 2318 Arch St., Philadelphia, Pa., if you will mention this paper when writing.—Adv.

A Splendid Buggy for Only $39.25.

NO more interesting buggy book has ever been printed than the one which H. C. Phelps, president of the Ohio Carriage Mfg. Co., is offering to send free in his advertisement on page 14. It describes all their immense line of split hickory buggies and gives prices. Many of our readers will be surprised that the prices on these light running, easy-riding and long-lasting vehicles runs as low as $39.25. For further information write for the big booklet to H. C. Phelps, Pres., The Ohio Mfg. Co., Station 187, Columbus, Ohio, and kindly mention this paper.—Adv.

Why Be Without a Separator?

THERE is not much excuse for being without a cream separator when you can get one like the New Butterfly machine that is shipped on thirty days' trial and guaranteed a lifetime for only $2 down and a year's time to pay the balance. At that rate you can pay for your machine out of your extra profit and have a good balance left to your credit besides. The New Butterfly machines are made in various sizes and have many special features which make them highly satisfactory in operation. After reading the advertisement on page 22 you can write for further information to Albaugh-Dover Co., 2158 Marshall Blvd., Chicago, Ill., and it will be sent you free if you will mention this paper.—Adv.

Anderson's Holsteins.

TEN registered Holstein cows and heifers are advertised for sale on page 37 by A. M. Anderson, Whitewater, Wis. They are good type, well-marked animals in good, healthy, thrifty condition. The cows are heavy producers and have A. R. O. records from sixteen to 21.89 pounds of butter in seven days. Two of the heifers are daughters of the thirty-five-pound bull, Sir Pontiac Chief and six of the cows are bred to him. He is a very richly bred bull, being a son of the great cow, Pontiac De Nijlander, that has never been beaten for production at three, four and five years old for either milk or butter in either seven or thirty-day test. As a three year old she made 30.11 pounds butter and 587 pounds milk in seven days and 123.8 pounds butter and 2,522.20 pounds milk in thirty days. As a four year old she made 32.73 pounds butter and 613.30 pounds milk in seven days and 135.31 pounds butter, 2,632 pounds milk in thirty days. As a five year old she made 35.43 pounds butter 750.20 pounds milk in seven days and 144.60 pounds butter, 3,090.60 pounds milk in thirty days. It will be seen that she averaged over 100 pounds of milk per day for thirty days. She is a daughter of Pontiac Apollo, that has thirty-five A. R. O. daughters, twelve from twenty to thirty-five pounds butter in seven days. She is a granddaughter of the great bull, Hengerveld De Kol, that has 116 A. R. O. daughters, thirty-one with records from twenty-five to thirty-three pounds butter. Sir Pontiac Chief was sired by Ypsiland Sir Korndyke De Kol by Sir Korndyke Manor De Kol, that has forty-four A. R. O. daughters, three with records above thirty pounds. The cows bred to Sir Pontiac Chief are, therefore, carrying very well bred and valuable calves, and our readers should look these over when buying cattle. For extended pedigree and further information write to the above address.—Adv.

Absolutely Reliable Seed Corn.

EVERY farmer konws that this is a year when he has to be especially careful in selecting his seed corn. There is a great scarcity of really good seed and next year's crop depends on getting seed that will show a high percentage of germination. The seed sold by the Iowa Corn Growers' Seed Co., Essex, Iowa, is grown under the best possible conditions. It will grow, mature and yield in northern Iowa, South Dakota, Illinois, Nebraska, southern Minnesota and Wisconsin. It is carefully selected and is pure bred, hand picked, butted and tipped and tests 94 per cent or better. Every bushel sold has their guarantee and is subject to your approval. If not satisfactory it can be returned any time within twelve days and your money will be cheerfully refunded. If you want more information write today for free seed corn booklet and samples, addressing Iowa Corn Growers' Seed Co., Essex, Page county, Iowa, as noted in their advertisement on page 16.—Adv.

Holt's Holsteins.

FRANK HOLT & SON, Pleasant Prairie, Wis., are devoting their 400-acre farm to raising live stock. Their farm is located eight miles from Kenosha and three miles from Pleasant Prairie. Holstein cattle have been bred for twenty-five years and a very creditable herd has meen developed. Among the cows are a twenty-three-pound ten year old which tested 4.10 per cent fat. Another made 20.39 pounds butter as a junior two year old testing 4.12 per cent fat. A junior four year old made 22.17 pounds butter. She is a granddaughter of King of the Pontiacs. At the present time they are offering yearling bulls and younger from the above cows, as well as from untested cows. These are being offered at very reasonable prices. For extended pedigrees, pictures, etc., write to the above address. See page 37.—Adv.

Have You a Kalamazoo Catalog?

IN the new Kalamazoo stove and range catalog you will find 500 beautiful styles of stoves and ranges fully described, illustrated and priced at figures that will surprise you if you have not already investigated them. Kalamazoo stoves and ranges are sold on thirty days' trial, 360 days' approval test and for cash or easy payments. They are fully guaranteed. In writing ask for catalog No. 432 and address Kalamazoo Stove Co., Kalmazoo, Mich. Please mention their advertisement on page 31 when writing.—Adv.

Does Your Wagon Need Repairing?

YOU will find any kind of wagon wheel described and the price given in the Electric Wheel Co.'s catalog, mentioned in their advertisement on page 17. High or low wheel, steel or wood, wide or narrow tires are given, together with a price list of all other wagon parts. Their book is illustrated in colors and will be mailed you free on request to Electric Wheel Co., 65 Elm Street, Quincy, Ill. When writing mention of this paper will be appreciated.—Adv.

"K" Hand Power Stump Puller.

THE "K" stump pullers are operated entirely by hand and require no digging and no horses. They are made of Krupp forged steel and are fully guaranteed. They will pull large a surprising amount of land in a single day at low expense. For special free book on land clearing, together with prices, etc., address W. J. Fitzpatrick, Box B, 182 Fifth St., San Francisco, Cal., and kindly mention the advertisement on page 18.—Adv.

Make Barn Cleaning a Snap.

CLEANING out the barn! Every farmer knows the work and time that means when done in the old-fashioned way. But with a Louden litter carrier it's altogether different. A boy with a Louden Emancipator carrier on a Louden track can clean out a barn in almost no time and do it thoroughly with hardly any effort at all. One of these pieces of Louden barn equipment will carry a ton safely and it can be operated by a small boy. They are built in four styles, suitable for any sized barn and at a wide range of prices. You should drop a postal card for further free information about this and other kinds of Louden barn equipment mentioned in their advertisement on page 22. Address The Louden Machinery Co., 1703 Court St., Fairfield, Iowa, and kindly mention this paper.—Adv.

A Tube Bag for Every Automobilist.

IF you own an automobile you will be interested in the offer of the makers of Firestone tires—the kind with the red side walls and the black tread on page 11. They are offering to send you free, for the name of your dealer and the kind of tires you are using, a fine, rubberized tube bag. When writing you should also ask for their free book, "Care and Repair of Tires No. 17," which will tell you facts that every motorist should know about the saving of tires and how to increase your tire mileage. Addres Firestone Tire & Rubber Co., Akron, Ohio, and be sure to mention this paper when accepting this liberal proposition.—Adv.

Learn About the "Apex" Way.

TWO books of special value to any farmer going to buy fencing are offerd free in the advertisment of the Janesville Barb Wire Co., on page 2. They are entitled "The Apex Way" and "Apex Steel Drive Posts." They tell you about a fence that fits any land—level or hilly and that keeps its shape and good appearance. "Apex" steel posts save the work of digging post holes and last forever. It will pay you to write to Janesville Barb Wire Co., 533 Franklin St., Janesville, Wis., for these books. When doing so reference to this paper will be appreciated.—Adv.

Save the Price of an Auto.

CHICAGO steel fence posts protect your cattle because they will ground lightning. They also save money because they will last a lifetime without repair and save the work of digging holes. They are made from the same material as was used in old black wire, which means they will never wear out. The makers offer to tell you how they will save you the price of an automobile if you will address Chicago Steel Post Co., Dept. J, Continental and Commercial Bank Bldg., Chicago, Ill. See the advertisement on page 2. When writing please mention this paper.—Adv.

Better and Cheaper Than Milk.

ON page 34 is shown the picture of a calf raised by W. A. Riddle, Chapin, Iowa, on Blatchford's calf meal, at half the expense that milk would have cost. Calves raised in this way are said to be heavier, healthier and bigger-boned than those raised on milk. Blatchford's calf meal has been known as a complete milk substitute since 1875. If you want more proof of its economy and value, shown by actual figures, write today to Blatchford's Calf Meal Factory, Dept. 63, Waukegan, Ill. and please mention The Wisconsin Farmer.—Adv.

The Hercules Book is a Good One.

THE Hercules book on stump pulling is filled with interesting pictures showing how others have settled the land-clearing problem economically and efficiently. It shows how you can make waste stump land prove the most productive part of your farm. If you will address the Hercules Mfg. Co., 159 Twenty-fourth St., Centerviille, Iowa, and mention their advertisement on 14, they will send this book to you free and make you a special money-saving proposition that will interest you.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

YORKSHIRE SWINE.

WE OFFER
50 full blooded
YORKSHIRE PIGS
that can be registered and 12
POLAND CHINA PIGS
six weeks to eight weeks old at
$5.00 EACH
R. C. CONNOR CO., MARSHFIELD, WIS.

ALSYKE $5.00 and Timothy

Per bu. Northern grown, hardy, productive. Cheapest and best pasture and hay crop. Sample free. Clovers, Alfalfa, Northern grown Seed Corn, etc. All seeds guaranteed.
THE ADAMS SEED COMPANY, Bx. 50, Decorah, Ia.

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland,** his dam, a granddaughter of **Golden Fern's Lad,** gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

NEWS OF THE SALE RING

Lybrand's Percheron Sale.

Probably the largest crowd that ever attended a Percheron horse sale in the state of Wisconsin was on hand at the dispersion sale of the Percheron stud owned by the late R. C. Lybrand, Richland Center, which took place February 21st. In the death of Mr. Lybrand the state lost a man who, through his untiring efforts, has done untold good for the Percheron industry in Wisconsin and the large crowd in attendance demonstrated the fact that his efforts were appreciated by his fellow breeders and farmers. The offering could have been in better condition, especially the younger things, and no doubt they would have brought more money, however they were in fine condition for the buyer. The top of the stallion offering was $600, that amount being paid for Antoine, an eleven-year-old stallion that stood at the head of the stud. He was purchased by John M. Faber and should do a great amount of good for his new owner. The top of the mare offering was $410 paid by C. R. Thompson, Richland Center for the six-year-old mare, Mora. She is typical of the breed and a proven brood mare and was indeed a good buy at that figure. Professor Fuller, representing the University Farm, made what we consider the best buy in the sale, when he secured an outstanding two-year-old gray mare, number 25 in the catalog, for $400. This mare has a great future and with proper care she would make a creditable showing in the three-year-old class at any state fair this fall. S. F. Guttenstein, Milwaukee, Wis., secured several of the bargains. We follow with a complete report. Col. Carey M. Jones sold the offering in his usual satisfactory manner.

Antoine, June 1, 1904; Jno. M. Faber, Twin Bluffs, Wis. $600
Corondo, March 26, 1914; S. F. Guttenstein, Milwaukee, Wis. 145
Martel, April 9, 1914; Frank Roelke, Dane, Wis. 140
Navajo, March 2, 1914; Enock Jewell, Bloom City, Wis. 155
General, April 16, 1915; S. F. Guttenstein 150
Master, April 12, 1915; S. F. Guttenstein 180
Galmard, May 25, 1914; S. F. Guttenstein 150
Rupart, April 8, 1915; S. F. Guttenstein 190
Rosette P., April 21, 1905; S. E. Meyer, Eleva, Wis. 320
Mora, April 22, 1909; C. R. Thompson, Richland Center, Wis. 410
Cremona, June 5, 1914; R. A. Strader, Osseo, Wis. 320
Ripon Is Bayarda, June 2, 1901; Frank Rider, Lone Rock, Wis. 320
Merea, May 3, 1903; S. A. Shephard, Seymour, Wis. 340
Elodia, May 3, 1911; H. Martin, Gotham, Wis. 275
Ventura, June 15, 1907; Chas. Keene, Richland Center, Wis. 225
Zona, April 9, 1910; Hurd Farm Co., Monticello, Wis. 325
Marchoness, June 2, 1902, and Ivyl, May 23, 1902; Ray Rishel, Phillips, Wis. 305
Avis, June 11, 1903; P. T. Englesby, Eleva, Wis. 300
Driana, April 8, 1911; Brecken Brothers, Lone Rock, Wis. 260
Geneva, June 2, 1913; Fred Rider, Lone Rock, Wis. 280
L'Amie, May 3, 1905; C. R. Thompson, Richland Center, Wis. 250
Sylvina, March 23, 1913; University Farm, Madison, Wis. 400
Gerbeem, March 13, 1914; R. C. Tullis, Brooklyn, Wis. 170
Sirene, April 6, 1913; W. C. Gauschow, Bonduel, Wis. 305
Myrella, May 21, 1913; Frank Luneuschloss, Richland Center, Wis. 350
Junie, April 23, 1914; Jno. Weindenfelt, Twin Bluffs, Wis. 125
Manola, May 15, 1914; W. A. Johnson, Mazomanie, Wis. 175
Lois, April 26, 1914; W. A. Johnson 175
Birda, March 22, 1915; S. F. Guttenstein 300
Alma, April 9, 1915; County Farm, Richland Center, Wis. 150
Naoma, April 13, 1915; County Farm 200
Vanara, April 16, 1915; Enoch Jewell 155
Flora, April 17, 1915; S. F. Guttenstein 190
Lodia, May 2, 1915; Richland County Farm 145
Cremo, May 27, 1915; Richland County Farm 160

ALFALFA SEED $16 per bushel. Order direct from this advertisement, as we have plots of fifty different strains of alfalfa under test which enables us to send you seed adapted to your locality. Swartz Brothers, Cornfalfa Farms, Waukesha, Wisconsin, winners of the World's Gold Medal Alfalfa Sheaf at the Panama-Pacific Exposition. Also the largest alfalfa hay growers in Wisconsin.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

TOO LATE TO CLASSIFY.

10 Registered Holstein Cows and Heifers

IN GOOD, healthy, thrifty condition. The cows have A. R. O. records from 16.96 to 21.89 lbs. butter in 7 days. Two of the heifers are daughters of the **35.43 lb. bull, Sir Pontiac Chief 100732,** whose dam, Pontiac DeNijlander, made three consecutive records of 30.11—32.73—35.43 lbs. butter and gave 750 lbs. of milk in 7 days. Six of the cows for sale are bred to this bull. This is an opportunity to get some exceptionally high-producing cows. A. M. Anderson, Whitewater, Wis.

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls **Wisconsin**

26.30-POUND HOLSTEIN BULL

THREE YEARS OLD. Dam's A. R. O. record, 26.30 pounds of butter in seven days. Another bull born May 27, 1915; dam's A. R. O. record, 24.48. These bulls are straight individuals and nicely marked. Price $150 each. Write for pedigrees and description. Address
Truttschel Bros., Sheboygan Falls, Wisconsin

Sons of Serviceable Age of
SIR JOHANNA AALTJE KORNDYKE

IN which is combined the Holstein blood of Sir Johanna DeKol, Sarcastic Lad and Belle Korndyke. Bulls from A. R. O. and untested cows for sale at reasonable prices. Address
W. D. McGILL, - Menomonie Falls, Wis.

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address
Watson & Will **Menomonie Falls, Wis.**

22.19-POUND YEARLING HOLSTEIN BULL

AND others from A. R. O. cows, ready for immediate service. Well grown, nicely marked, good individuals. Prices $50 at 4 months up to $125. Frank Holt, Pleasant Prairie, Wisconsin.

Percheron Stallions

YOUNG stallions and fillies, priced reasonable. Short-horn Bulls, sired by Golden Light; dams big milkers with size. Address
R. A. MORLEY CO., - Baraboo, Wis.

WANTED To hear from owner of good farm or unimproved land for sale. H. L. Downing, 157 Palace Bldg., Minneapolis, Minn.

STOP! LISTEN! 40 acre farm $385. Other farms. McGrath, Mountain View, Missouri.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

Margia, June 7, 1915; S. A. Shepard 270
37 head ..... $8,910; average $240.80

Currie's Hampshire Sale.

Mr. R. L. Currie, the veteran breeder of Hampshire swine of Viola, Wis., held his closing-out sale February 23d. One hundred head were cataloged which included his old sows as well as many pigs that were too young to bring their real value. The offering was not in high condition, in fact hardly fat enough to look well in a sale ring at the same time the buyers got the benefit and can feel satisfied that they will get good results from the bred sows. Mr. Currie has purchased from the best breeders in the county and he sold some great brood sows. A. M. Laird, a prominent breeder from Prairie du Chien made several good buys. H. A. Bush, Fond du Lac, Wis., purchased some of the best ones to add to his good herd. J. A. Watson, Farmington, Minn., was a help to the sale and to himself as he selected some of the best gilts. Col. Chas. W. O'Neill, Bridgeport, Wis., sold the offering and worked hard for the success of the sale. Many of the gilts were sold in bunches at an average of around $20 and we list the individuals selling for $30 or over. We might say, however, that Mr. Currie still has some good sows with spring litters that he is pricing well worth the money, for quick sale. Here is an opportunity for some man to get into the Hampshire game with a small amount of capital.

1. H. A. Bush, Fond du Lac, Wis. $52.00
2. H. A. Bush 40.00
3. A. M. Laird, Prairie du Chien, Wis. 40.00
4. A. M. Laird 41.50
5. A. M. Laird 44.50
6. A. M. Laird 53.00
7. A. M. Laird 37.50
8. A. C. Damon, Viola, Wis. 40.00
9. S. A. Simmins, Viola, Wis. 37.50
10. S. A. Simmons 42.50
1. E. F. Groves, Viola, Wis. 35.00
12. E. F. Grorves 37.00
13. E. F. Groves 35.00
14. E. F. Groves 36.00
15. S. A. Simmons 30.00
16. Guy Morrison, Viola, Wis. 38.00
17. Geo. Blakeley, Viola, Wis. 40.00
18. Geo. Blakeley 55.00
19. J. A. Watson, Farmington, Minn. 35.00
20. J. A. Watson 35.00
21. Wm. Risen, Viola, Wis. 39.00
22. Wm. Risen 38.00
23. J. L. Erwin, Bloomington, Wis. 31.00
24. S. F. Beighley, Viola, Wis. 54.00
25. W. H. Carpenter, Viola, Wis. 36.00

Ask your neighbor to subscribe for **The Wisconsin Farmer.**

SHORT-HORN CATTLE.

The Short-Horn In America

ISSUED quarterly, will be sent free to any patron of the American Short-horn Herd Book who sends the name and address of one prospective Short-horn breeder. A uniform space of one-half inch will be allowed to each Short-horn advertiser. In sending copy, please send $10 to cover advertising for one year. Address Dept. B, American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill.

Oak Lawn Farm
Short-horns

OF quality. Four very good Scotch bulls, coming one year old. Sired by Strathallan King 295426, one of the best grandsons of Whitehall Sultan. Also a few good cows and heifers in calf for sale at reasonable prices. Address
J. E. KENNEDY **JANESVILLE, WIS.**

REGISTERED SHORT-HORN BULLS

READY FOR IMMEDIATE SERVICE. White, red and roan color. Sired by **McK.'s Masterpiece,** out of big, heavy producing cows of choice breeding. Also a few bull calves from two to ten months of age. Mention Wisconsin Farmer.
FRANK MORLEY - BARABOO, WIS.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

GREEN VIEW STOCK FARM

Offers the richly bred Short-horn bull,
ROYAL SULTAN 390142
A 2,300-pound grandson of Whitehall Sultan. We also will sell several of his yearling sons ready for service. Write for description and prices.
John Bear & Son **Spring Green, Wis.**

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
Geo. Wenham & Sons, **Ft. Atkinson, Wis.**

The Great World's Fair Herds

50 REGISTERED Short-horn bulls and heifers. 100 big-boned Poland China boars and sows. Call at Prairie Lawn Stock Farm or write.
C. J. Schoenfeld & Son, Fox Lake, Wisconsin

BATES MILKING SHORT-HORN

HEIFERS 8 to 20 months old and bulls of serviceable age and younger. Big-type Poland China spring boars and fall gilts for sale.
A. T. Grundy & Sons, R. 6, Bx. 43, Oshkosh, Wis.

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

AYRSHIRE CATTLE.

TWO AYRSHIRE BULLS FOR SALE!

ONE is a 2-year-old grandson of the Grand Champion at the Panama-Pacific International Exposition. The other is 6 mos. old and by Garland's Success. Both good individuals and priced to sell. Also Hampshire pigs for sale.
E. N. Manley & Sons, **Lyons, Neb.**

HAMPSHIRE SWINE.

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

GUERNSEY CATTLE.

REG. GUERNSEY BULL

by the richly bred bull
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

BIRCHWOOD GUERNSEYS

REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address
M. L. Welles **Rosendale, Wis.**

REGISTERED GUERNSEY BULLS

OF serviceable age. Sired by the richly-bred bull. Imp. Royal George of the Isle 30551, and out of imported cows of Gov. of the Chene breeding. Send for pictures, pedigrees and description. Prices reasonable. Address
Pinehurst Dairy **Sheboygan Falls, Wis.**

At the Present Time

I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.
Alfred I. Stubbs **West Salem, Wis.**

REGISTERED Guernsey Bulls

OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address
Ray Lewis **West Salem, Wis**

Registered Guernsey Bulls

THREE ready for service. One 4 years old. Also registered and grade females. King of the May and Yeksa breeding.
BASSE BROS, Route 5, West Allis, Wisconsin

Guernsey Bulls

FROM well bred stock. One two years old, "Lord Yeksa Boy" and a few calves. Priced right. Clifford Capener, Baraboo, Wis., R. No. 2.

JIM CEDARWOOD 34252, yrlg. Guernsey bull, combining Golden Hero, Gov. of the Chene, Masher's Sequel blood, straight rump, well-grown, light faun, ¼ white. D. E. HOAG, Oakfield, Wis.

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address
UNDERWOOD STOCK FARM
L. C. Underwood, Prop. **Avoca, Wisconsin**

RED POLLED BULLS

OF serviceable age and younger; and yearling heifers and younger; from heavy-producing cows of A. R. breeding.
H. A. MARTIN - - GOTHAM, WIS.

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Chariton, Iowa.

CHESTER WHITE SWINE.

CHESTER WHITES

SPRING boars of the kind and type so much in demand by farmers and breeders. A few choice sows also for sale. Write for prices.
Adolph Nuttleman **West Salem, Wis.**

CHESTER WHITES

BARGAINS in pedigreed Chester Whites. Herd boars, bred sows and early fall pigs. Address
JOHN SIMON **CAMPBELLSPORT, WIS.**

CHESTER WHITE SPRING BOARS AND GILTS

SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address
W. F. Miller **West Salem, Wis.**

HOLSTEIN-FRIESIAN CATTLE.

THE PALMER FARM HERD

COMBINES individuality, breeding and high production. Two service bulls, bull calves and yearling heifers priced to sell. Come or write.

W. E. Palmer **Elkhorn, Wisconsin**

PURE-BRED BULL CALVES

FOR SALE. Sired by a 30-pound bull, several out of A. R. O. dams. Also a few high-grade heifer calves from one to twelve months old.

S. J. Lauderdale **Elkhorn, Wisconsin**

REG. HOLSTEIN BULL CALVES

FROM 3 months to 18 months old, at prices from $40 to $70. Sired by son of Mutual Piebe De Kol from 840 lb. 3-year-old dam. Herd now headed by the 31.37 lb. bull, Finderne Hengerveld Jewel Pontiac. Address

E. A. Paddock **Elkhorn, Wis.**

HOLSTEINS

REGISTERED bull calves, great grandsons of Belle Korndyke; also high-grade heifers, two years old for sale.

E. J. Stearns **Elkhorn, Wisconsin**

HOLSTEIN BULL

FOR sale, 13 months old, well grown, well bred and a good individual. Sire, Pabst Burke De Kol King, a 33.56-pound bull, and out of an 18.18-pound two-year-old daughter of Beauty Walker Pietertje King. Address

A. G. Palmer & Sons **Lake Geneva, Wis.**

HOLSTEIN BULLS

SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address

H. J. Barker **Elkhorn, Wisconsin**

Auction Sale

IN order to quickly reduce our herd to our limited barn room we will sell fourteen head of A. R. O. Holstein cows and heifers at public auction, Wednesday, March 8, 1916, at 2 P. M. Send for sale list. Address

Harry D. Dunbar **Elkhorn, Wisconsin**

Farm 2½ miles southeast of Elkhorn.

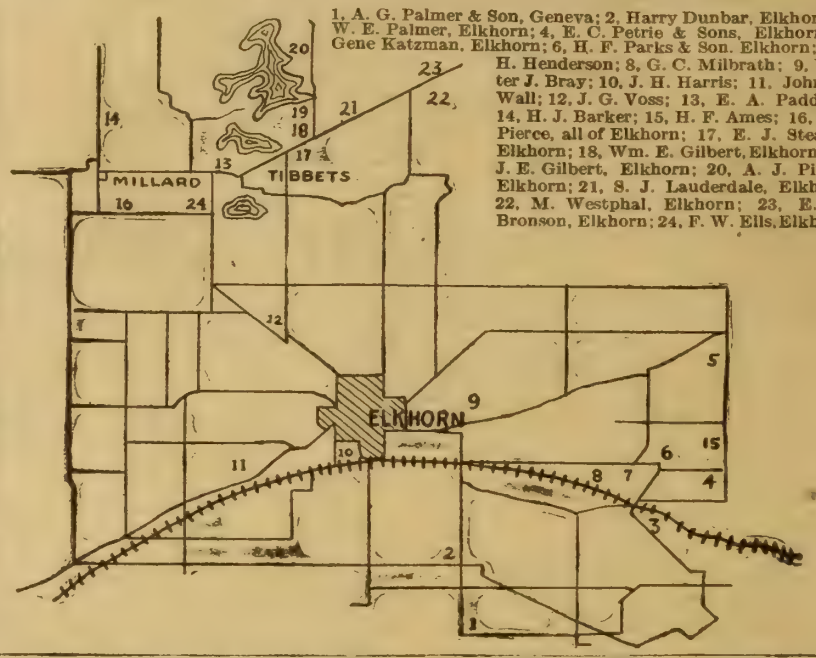
Holsteins For Sale

BULL from 26.41-pound dam, 9 months old; one from 19.60-pound dam, 7 months old. Also two yearlings from dams that will soon be tested. They are straight nice individuals, light color, all sired by Sir Pontiac Korndyke Count 82741, a 28.80-pound bull. Bull calf, one month old, from 22.31-pound dam sired by a 34-pound bull. Can spare a few young cows. For further information address

E. C. Petrie & Sons **Elkhorn, Wisconsin**

AN EXCEPTIONAL HERD SIRE

WESTSIDE LADOGA PRINCE 77130, practically perfect individual, proven sire, splendid breeder, 4 yrs. old, will be sold due to fact that he cannot be used longer in herd. Pedigree has no weak spots. His dam is a 27.38-lb. junior 3 year old, his nearest three dams average 27 lbs. and his nearest seven dams average 22 lbs. His paternal ancestors are likewise strong, the nearest three in particular have large number of A. R. O. daughters. Two Holstein bulls sired by Westside Ladoga Prince are also offered for sale. J.H.Harris, Holstein Dairy Farm, Elkhorn, Wis.



A. J. PIERCE
Elkhorn, Wis.

REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

2 HOLSTEIN-FRIESIAN BULLS

BOTH from Advanced Registry dams. One just past two years old. Kind, sure and O. K. in all respects. More white than dark. Gets nice calves. Price $100. One about thirteen months. Dam's record over 17 pounds as a two year old. Nice individual, more dark than light. Big enough for heavy service. Price $100. For extended pedigree and complete description write me. Address

John G. Voss **Elkhorn, Wisconsin**

19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.

H. F. Parks & Son **Elkhorn, Wisconsin**

877 POUNDS BUTTER

IN a year. The record of the dam of the bull I am offering for sale. He is 9-10 white; born May 13, 1914; good individual; good server. Sired by King Bess of Rock, that won 1st prize at the National Dairy Show and New York State Fair. A well-bred bull and good individual. Price, $125.00. Send for pedigree and description. Address

Earl Pierce **Elkhorn, Wisconsin**

MEADOW SPRING FARM

is offering some fine registered

HOLSTEIN BULLS

SEVERAL sired by a 30.18-pound bull. One 15-16 pure, ¼ white, a fine individual from high producing dams. Also a fine flock of R. C. R. I. Red. Cockerels $1 each. Visitors welcome.

M. Westphal **Route 6, Elkhorn, Wis.**

SONS OF THE 35.43-POUND BULL

Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69, 24.65, 22.35, 20.46, 16.96. Here are bulls that will improve pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

HOLSTEINS FOR SALE

COWS and heifers bred to the 27.82-pound proven sire, Knight Errant 39566. Also bull calves from one to five months old sired by Champion Johanna Colantha 70478. Address

Gene Katzman **Elkhorn, Wisconsin**

F. W. Ells, Elkhorn

Breeder of registered cattle. Stock for sale at all times.

FOUR GRADE HOLSTEIN HEIFERS

TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn, Wisconsin.

FOR SALE

My herd bull

CANARY HOMESTEAD FRISBY 107723

For price and pedigree address

Walter J. Bray **Elkhorn, Wisconsin**

WELL MARKED

7-8 WHITE, yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address

G. C. Milbrath **Elkhorn, Wisconsin**

J. E. Gilbert

ELKHORN, WIS.

BREEDER of pure-bred Holstein-Friesian Cattle and Duroc Jersey Swine.

REGISTERED BULL

CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address

Wm. E. Gilbert **Elkhorn, Wisconsin**

Purebred Registered

HOLSTEIN CATTLE

To the farmer of judgment, seeking more profit and satisfaction in milk production, a comparison of the actual records of the pure-bred Holstein-Friesian breed with others, is an object lesson in economical investment. The ten largest records of the "Black-and-White" cows average 1,007 pounds butterfat and 25,897 pounds of milk. The nearest competitive breed produced 947 pounds butterfat and 18,120 pounds of milk. One good pure-bred Registered Holstein will produce as much as two ordinary cows, saving proportionately on feed, housing and care. Investigate the big "Black-and-White."

Send for **FREE** *Illustrated Descriptive Booklet.*

The Holstein-Friesian Association of America
F. Houghton, Sec'y, Box 113, Brattleboro, Vt

Upland Farms, Walworth, Wis.

E. E. Ayer, Prop. **J. H. Travis, Manager**

OFFERS a number of very choice yearling Holstein bulls ready for service. They are well marked—of good straight conformation and well grown. These young bulls are choicely bred, being sons of the 27-lb. bull, **Sir Pontiac Artis Duke 77994,** a son of the 31.71-lb. bull Sir Korndyke Pontiac Artis that has 45 A. R. O. daughters. His two nearest dams average 29.42. His three nearest sires have 158 A. R. O. daughters, eleven with records over thirty lbs. Send for pictures, pedigrees and descriptions.

Rust Brothers' Stock Farms

offer a richly bred young Holstein bull,

CORNUCOPIA NETHERLAND PONTIAC

HIS dam as a four year old made **27.99 pounds butter in seven days, 756 pounds butter in a year.** Send for pedigree and price to

ARTHUR RUST, - West Allis, Wisconsin

Registered Holstein Heifers

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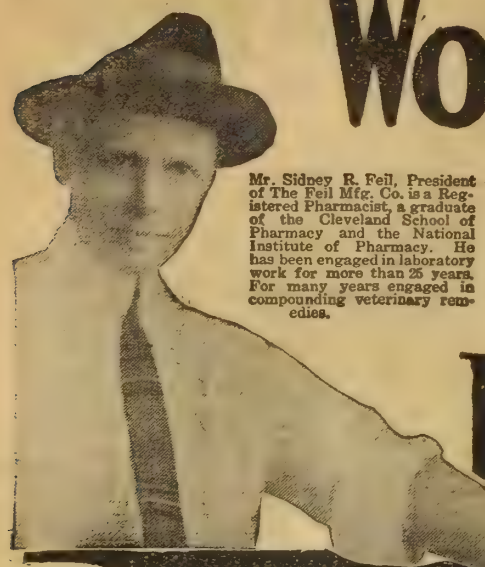

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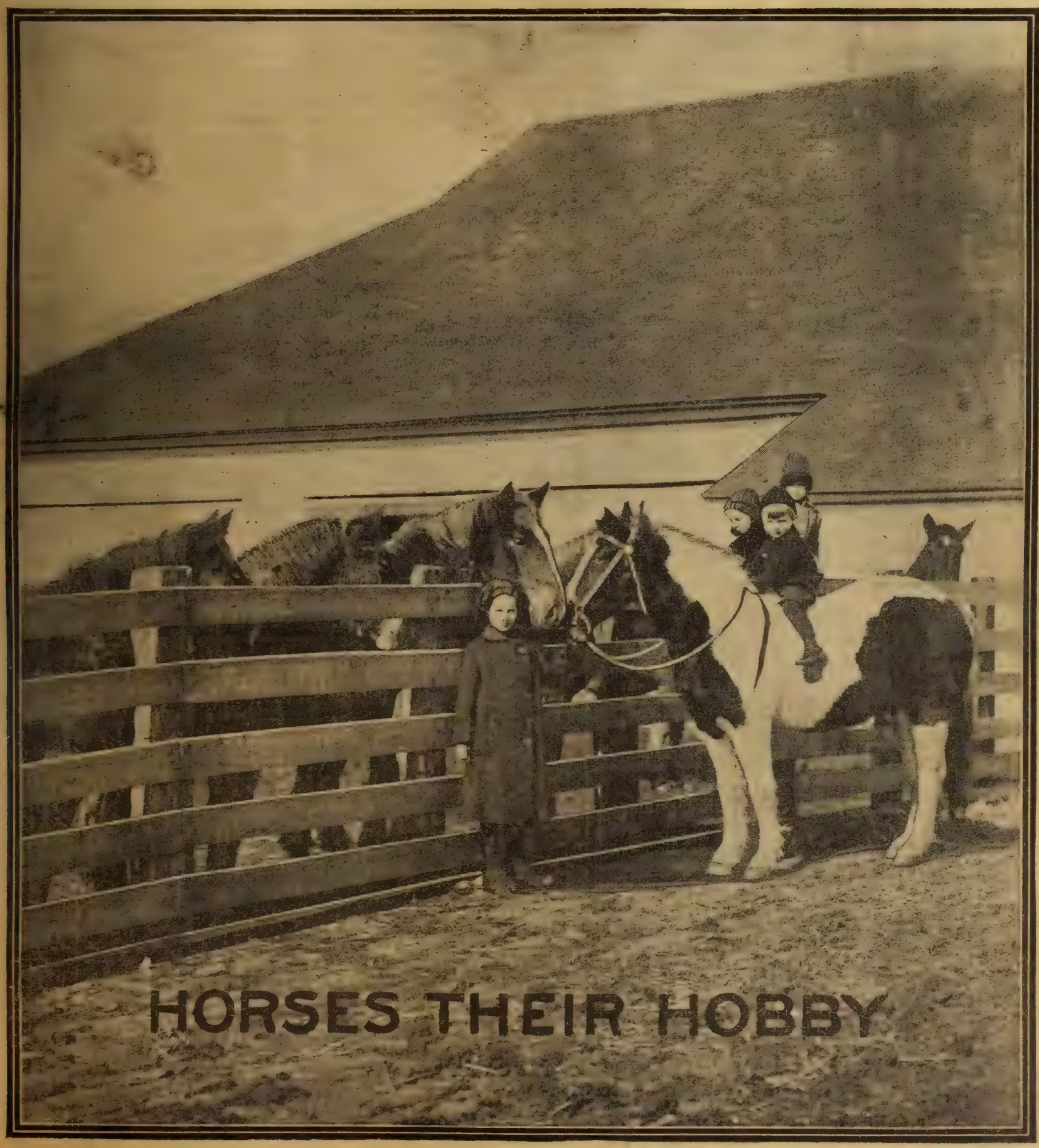

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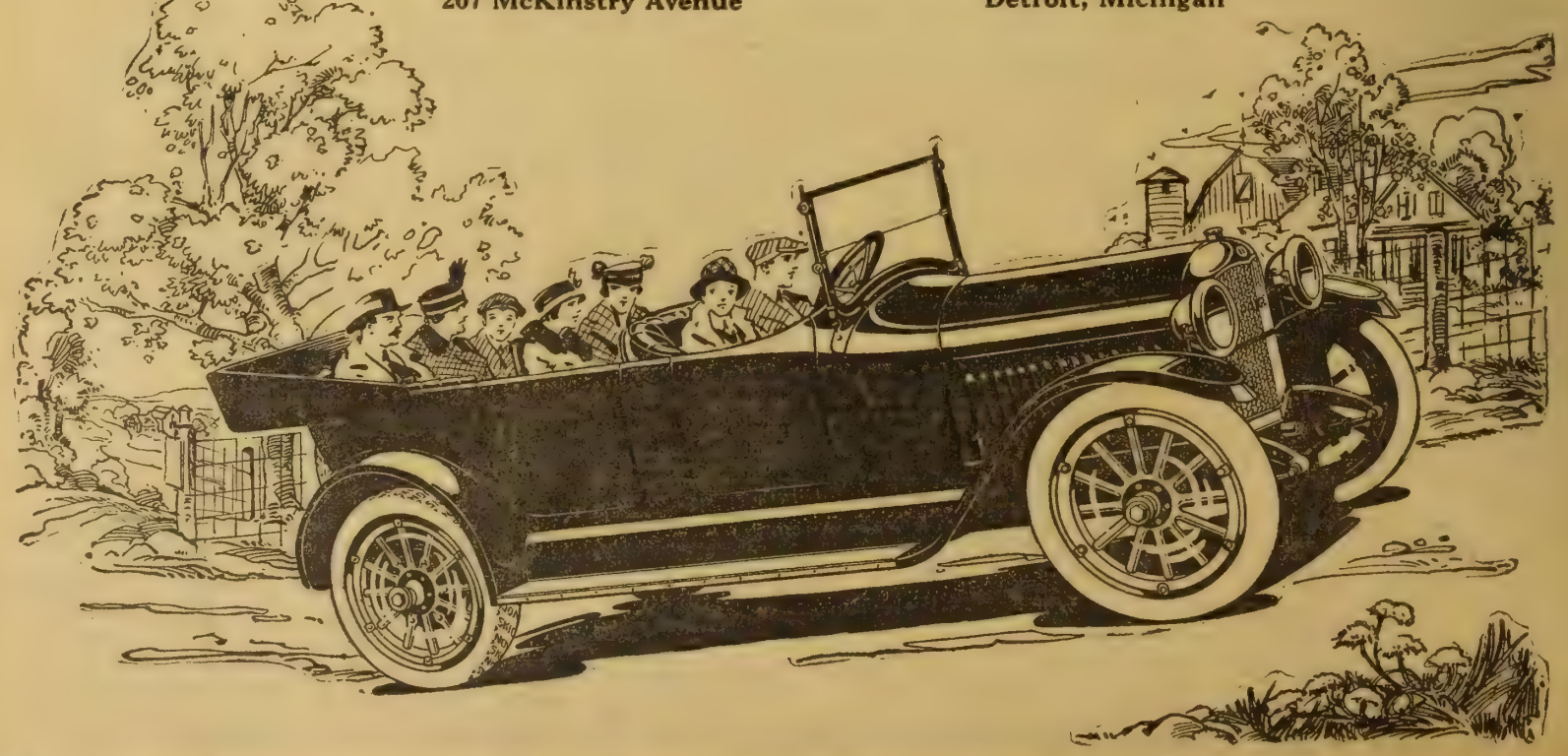


The Wisconsin Farmer

THURSDAY, MARCH 9, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

WAR AND FARM MACHINERY.

NOTHING that I have read in connection with the war has interested me more than a statement made by an American correspondent with the Russian army tending to show that the real reason why the Russian peasants are so eager to fight the Germans is because the Germans have been sending agricultural machinery into Russia. At first thought it would appear as though there could not possibly be any connection between farm machinery and war, yet let me give the words of the war correspondent as I find them in one of our current magazines. He is quoting a high Russian officer, who declares there is great patriotism among the Russian soldiers today, saying:

> The Russian peasants are very patriotic; they hate the Germans. You see, most of the agricultural machinery comes from Germany and this machinery does the work of many men, driving the peasants into the factories at Petrograd and Moscow and Riga and Odessa. Then the Germans flood Russia with cheap goods which undersell Russian products; that causes our factories to shut down and throws thousands out of work. Wherever in Russia they have no feeling against the Germans, we tell them these things.

What an unspeakably useless, unnecessary tragedy is here expressed; hundreds of thousands of men pitted against each other in bloody, deadly conflict for no other reason than that a progressive people have invented and are manufacturing machinery to make wheat fields and oat fields more productive and profitable! Is there any patriotism in a war waged over such an issue? Is there any principle worth making the great sacrifice of life for here, in the fetish antagonism of a blind people to something which will advance living standards, increase human efficiency and liberate a peasant race now held in almost slavish abjection by men willing to keep them in bondage through prejudice against machine labor? If Germany is to be warred against for no other reason than because it sends reapers and binders into Russia, can we hope to keep the United States free from war's entanglements when our agricultural machinery goes around the world in such great quantities?

When I read the words set forth above I closed the magazine, my mind reverting to a description I had read of the scene when Cyrus Hall McCormick tried out his first reaper, against the scoffs and jeers and jibes of those who feared that machinery would displace human labor and that the death knell of the farm hand would be sounded by the new invention. It was back in 1832 when McCormick, after many years of experimenting, was ready to give his machine a public tryout. Let me picture the scene as I find it described in the book I read several years ago and which I have looked up, because the war correspondent's words recalled the instance to my mind:

> Fully 100 people were present; several political leaders of local fame, farmers, professors, laborers and a group of negroes who frolicked and shouted in uncomprehending joy.
>
> At the start it appeared as though this new contraption of a machine, which was unlike anything else that human eyes had ever seen, was to prove a grotesque failure. The field was hilly and the reaper jolted and slewed so violently that John Ruff, the owner of the field, made a loud protest.
>
> "Here, this won't do," he shouted. "Stop your horses. You are rattling the heads off my wheat."
>
> This was a hard blow to the young farmer-inventor. Several laborers, who were openly hostile to the machine as their rival in the labor market, began to jeer with great satisfaction. "It's a humbug," said one. "Give me the old cradle, boys," said another. These men were hardened and bent and calloused with the drudgery of harvesting. They worked twelve and fourteen hours a day for less than a nickel an hour. But they were as resentful toward a reaper as the drivers of stage coaches were to railroads, or as the hackmen of today are toward automobiles.

Such were the disadvantages against which Cyrus McCormick tried out his first reaper, a machine which has revolutionized farming, enriched the American farmer and sent American products around the world. Is not history repeating itself when the peasants of Russia, seeing no further than their noses, obsessed with a blind prejudice against farm machinery, put every obstacle (even to their own life-blood) in the way of the advance of farm machinery? The poor drudges of the Virginia wheat fields of eighty years ago did not go to war to stop McCormick and his reaper, but they did everything else in their power to perpetuate an obsolete farming system (in which brawn played the chief part, brains being secondary) the doom of which was sounded the day McCormick successfully cut six acres of oats in an afternoon, the first time in all history that such a feat had been accomplished.

I am not taking sides in the present war; I am holding myself to strict neutrality, as the president advised us all early in the struggle. But I want to say that any war which has no greater principle at stake than prejudice against farm machinery is so useless, inexcusable, barbaric and un-Christianlike as to stand condemned in the eyes of every man. If wars must be fought (and, I hope and pray, never again) let there be some greater principle at stake than slavish, abject, blind prejudice against that which breaks the shackles of agricultural bondage and makes a people more progressive, more prosperous, more contented, better and bigger in every way.

THE GASOLINE SITUATION.

THE price of gasoline continues to occupy public attention. Selling now, at most filling stations in town, at 22 to 25 cents a gallon, it is freely predicted the price will touch 30 and perhaps 40 cents before the rise ends.

I am glad to see that there is no apparent intention of letting the matter drop in congress. The author of the resolution calling for an investigation of the "gasoline trust" (Hon. C. C. Dowell) writes me that he proposes to push the matter and not let it die a quiet death, as so many such things do in congress. In the meantime, another member of congress has introduced a bill which, while it has little or no chance of ever becoming a law, shows how public sentiment is being aroused. This bill proposes that the manufacturer of gasoline shall pay a tax of $1 per gallon on all his product sold at a price above 15 cents per gallon. The proposed tax would fall on the original seller of the gasoline and would mean that no manufacturer could ask more than 15 cents for the fluid when sold to the dealer. "I believe fifty to seventy-five men in this house have told me they would vote for such a bill," says the author. They probably will never have the opportunity to do so, but the report is interesting, as it shows what support may be counted on for Congressman Dowell's resolution to investigate gasoline prices and see if there is an illegal combine in restraint of trade, under the Sherman anti-trust law.

In the meantime it becomes quite apparent to me that the greatest hope of permanent relief lies in the discovery of some substitute for gasoline or cheaper distillate. Already there are rumors of several. It may be that we will have the war to thank for such a substitute, just as we undoubtedly have it to blame for the present high prices. It is reported that the Germans have discovered a practical fuel for motor cars in alcohol, or rather a distillation with a spirituous base. If the Germans can do this the Americans can, too, as the discoveries of dye and other products, since the war cut off the foreign imports, have shown. Another report is that the Germans have turned to the big soda beds and secured a gas which today is driving many of the motor cars of the empire. These may be mere idle rumors, but they give us a ray of hope. Should gasoline reach a prohibitive price, we may safely rely on some inventive genius, either in Germany or the United States, announcing a discovery or invention which will give us relief. Necessity is the mother of most inventions, and the limit of human ingenuity in this respect has not been reached.

I do not make any claim to being a motor expert, and cannot vouch for the practicability of the following, but it interests me nevertheless, and I will pass it on to you. It is what a well-known gasoline-engine manufacturer says of the situation and the way in which it may be met, in the emergency:

> If they keep on hiking the price of gasoline, pretty soon some substitute is going to step in and leave the oil men with the bag to hold. But you do not have to wait for a substitute. If you drive a motor car or run a stationary engine and the price of gasoline is beginning to pinch you, just mix 20 to 50 per cent kerosene with the gasoline. I've done it and it works just about as well, so I don't see why others can't do it, too. If it doesn't seem to work well, let a little water in the air intake of the carburetor. If you get too much it will stop; not enough will cause pounding. However, it's a fact that even at much higher prices than today gasoline and kerosene would still be the cheapest engine power.

I had heard that one of our largest engine-manufacturing concerns was working along the lines indicated in the paragraph I have just quoted, so I wrote to them. It seems that the report was wrong, however, in so far as the experiments apply to automobile engines, for they reply that they have converted all of their product of stationary and marine engines into designs which will enable them to use lower and cheaper grades of distillates. In my opinion, this is just the beginning, and if the gasoline situation becomes too serious the motor manufacturers will likewise endeavor to use cheaper distillates and eventually to secure a gasoline substitute which will be within the reach of all of our purses.

ADVICE TO A FARM BOY.

I AM in receipt of a letter from a young farm boy which interests me as much as any letter I ever received. I am going to answer it just as I would speak to my own son. Here is the letter:

> We have been taking your good paper ever since I can remember anything, and we are very much interested in your good, sound advice to young men. I have been reading so many of your articles I thought perhaps, even though you are a busy man, you might help me to decide a difficult problem.
>
> I am the only child of a fond and indulgent father and mother, and, while I have been reared on a farm, I have been surrounded with every convenience and luxury known to modern life. I will be nineteen next August, and since I was seven years old I have been continually in school. I will graduate from an accredited high school next June and my father has given me the choice of three things: A four-year course in mechanical engineering at the state college, a two-year course in a good school of technology, a course in agriculture at the state college and the management of his 260-acre farm when the course is completed. Now I am not particularly interested in farming. My whole ambition all my life has been along mechanical lines, and the way I look at it now I would be a misfit at anything else. I am not especially fond of hard work, but I think I could work hard if the occasion demanded it.

If that boy were mine, and the conditions were such as he represents them to be, I would not hesitate a minute, but would tell him to set about without delay to perfect himself in the work which appeals most to him and to which he seems best adapted. In this case, it is undoubtedly not farming, but mechanics. I would qualify my advice in this particular case by recommending that the boy take the four-year course in mechanical engineering at the state college, rather than the two-year course at the school of technology. Why? First, because he will be associated with his kind, boys from the farm, and not thrown among perfect strangers. Second, because he will find out at the state college that farming offers as many good opportunities to the mechanically inclined today as any other profession, and he will have a ready opportunity to change from the mechanical to the agricultural course, without losing too many credits, if time opens his eyes to the advantages of farming over purely mechanical pursuits.

I hope that nothing I shall ever write will lure any boy or girl away from the farm. The success of farming operations depends upon son succeeding father, daughter succeeding mother, resulting in a race of farmers with generations of inbred pride in the work. Farming that is the result of city men hearing and answering the call of the land, until they can get on their feet again, either financially or physically, to be abandoned at the first city opportunity, will never make this country rich or strong or great. Farming is a profession to hand down from father to son, in my opinion the greatest and most honorable profession there is.

But we must no more enchain boys and girls to the farm, against their will, than we would confine them behind stone walls and iron bars in order to make them think as we do. There is a rebellion of the mind as powerful as any revolt of the body. Unless we put our whole heart and soul into our work we will not succeed. We may get along for a time, but neither our peace nor our prosperity will be lasting. In this case, the boy frankly admits that he is not particularly interested in farming, that his ambition is all along mechanical lines. Let him follow his natural bent, so guided and directed by his father and mother that he shall not make any serious mistake, with every opportunity given him to develop, to show his powers and abilities, to do the work in which he puts his whole heart and soul.

I am neither a prophet nor the son of a prophet, but I believe in this particular case, long before the four-year course in mechanical engineering at the state college is at an end, this boy (being bright, well-schooled and ambitious) will see that the farm offers as many opportunities for his mechanical ability as the city. I believe this boy will be saved to the farm yet, but if this is brought about it must be on his own volition, not by any arbitrary act or advice of either his parents or me. I shall watch his career with interest. He has the right stuff in him; of that I feel sure from the manly, honest tone of his letter to me.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Use of Fertilizer in Wisconsin.

MR. HENRY G. BELL, agronomist of the soil improvement committee of the National Fertilizer Association, recently visited Wisconsin and had a good deal to say concerning Wisconsin's opportunity to improve crop yields. If Wisconsin will properly care for its soil the state has a wonderful agricultural future. Mr. Bell calls attention to the fact that in 1910 Wisconsin produced 182,000,000 bushels of money crops, consisting chiefly of wheat, corn, oats, barley, rye and potatoes. He also shows us that with these millions of bushels and millions of tons of produce going out of the state year by year, there is going an ever-increasing quantity of the constituents of plant food—namely, nitrogen, phosphoric acid and potash. This continual draft is upsetting the balance of the plant food which is circulating among the tiny particles of soil, and although nature is doing her part by letting loose more and more of that great store of potential food, which the chemist has revealed as existing in the soil, still there is an ever-increasing shortage in the available supply of those materials which make for largest crops of best quality.

But the question arises, how shall a man know what to do to make his farm productive? Mr. Bell says that some agricultural writers try to enshroud this query in mystery. But he assures us fertilizers have been manufactured since 1842, and that Germany used 8,000,000 tons in 1910. Some of our eastern states with worn-out soil are producing more potatoes to the acre than western states where the soil is rich. Eastern states are even giving better potato yields than some sections of Wisconsin where potatoes are a virgin soil crop. If we would examine the reports of yields per acre on grains and truck farms in Europe, where the land has been farmed for a thousand years, we would certainly be surprised. In Maine, in the year 1910, according to Mr. Bell, 80,000 tons of fertilizer were used. It must have been a paying proposition or the orders would not have been increased to 140,000 in 1915. We are amazed at times that the German empire, cut off from the world food supply, is able to defy the other nations of the earth. Mr. Bell shows how this is due to right handling of the soil, right management of plant food, the wise use of stock manures and the judicious use of available plant food or fertilizers.

Asked directly for suggestions for the betterment of Wisconsin farmers, Mr. Bell said:

1. "Clear the decks"—is the command when battleships prepare for action. Everybody knows that this command means to get everything in order for most effective work. The spirit of this order is my first suggestion. Drain your soil, rotate your crops so that a legume may be grown upon the land as often as desired. Keep up the stock of humus in the soil. Apply lime sufficiently often and in sufficient quantities to keep your soil sweet. Give your soils proper tillage to insure good circulation of air in the soil.

2. Manage your plant food so as to keep up the desirable supply and balance of available plant food constituents. You wouldn't think of turning your high record Holsteins out on oat stubble pasture alone, and expect them to keep up their record. You weigh up the carbohydrate and protein-carrying feeds in just the right proportions every day, and you get the greatest profits from your cows. Your crops are just as responsible as your cows. Balance up their nitrogen, phosphoric acid and potash, and your money crops will show the profit. But you ask how shall we do this? My answer constitutes my other suggesstion.

3. Balancing plant food. There are three sources of plant food—nitrogen from legumes; nitrogen, phosphoric acid and potash, from farm manure, and the same plant food constituents from fertilizers. The general crops of the farm have their disinctive food requirements, as follows:

Nitrogen—Hay, much; grain, fair supply, roots, fair supply.

Phosphoric Acid—Hay, small amount; grain, much; roots, fair supply.

Potash—Hay, fair supply; grain, fair supply; roots, much.

The farmer can balance his plant food from the three sources named above. It is hard to say definitely just how much nitrogen is fixed per acre per annum, by the common legumes grown upon our farms, because actual experimentation has not so far revealed this amount. Indications are that under favorable soil conditions this amount varies from twenty-five to seventy-five pounds per acre per annum. Average farm manure returns about ten to fifteen pounds nitrogen, five to nine pounds phosphoric acid and nine to fourteen pounds potash per ton. With these facts in hand, then, can you not estimate how much plant food you have returned to your soil in this year's rotation and manuring?

When it comes to fertilizers, you have definite guaranteed analyses to go by. You have the per cent of nitrogen, phosphoric acid and potash. Now, as to just what to use on your soil, for your different crops, neither I nor any other man can tell you. I can tell you what others have done with profit—both experiment stations and actual farmers. To state this as concisely as possible you will find on page fourteen of the booklet on Science and the Soil, the amounts and range of analyses which have been used with profit on various types of soils with common farm crops.

Our suggestion then is for you to choose your fertilizer of an analysis to make up for the weakness of your soils and to meet the special requirements of your crops. Fertilize part of the crop and compare it at harvest time with the unfertilized. Compare the yields and the quality of crop from both parts.

This question of crop feeding is one of great importance to farmers who are producing selected seed. An increase of 10 per cent to 20 per cent in the amount of your corn that will grade "seed corn" pays handsomely with seed corn at $4 to $5 per bushel.

Wisconsin has done great things—she can and will do immensely greater things. You can double your yields of corn and wheat and oats in many sections and greatly improve the general quality of your cereals and potatoes by proper food balancing.

Wisconsin to Produce More Beef.

FROM the interest already shown by Wisconsin farm boys in the baby beef contest, which will be conducted this year by the Wisconsin Live Stock Breeders' Association, it is apparent that it will be up to every expectation. Its purpose is to develop among the farm boys knowledge, experience and interest in the production of baby beef and the entries are already being filed according to the plans which were set forth in detail in The Wisconsin Farmer February 24th. Eight county or district fairs are co-operating in the contest which opened March 1st, and no entries will be accepted after April 15th. The contest is open to any boy of twenty years or under in the state who will take a steer or heifer calf of any breed, pure bred, grade or cross bred, that was dropped on or after September 1, 1915. The prizes will be awarded according to gain.

Mr. J. C. Robinson, of Evansville, an experienced beef cattle man, has consented to act as field man for the association and will work during the summer with the boys entered in the contest. He will act as an adviser and any question the boys wish answered relative to feeding or any other problem will be answered by him free of charge. He will also travel in the counties where county fairs have taken hold of the contest and aid the boys in every way possible to secure the greatest gain with their beeves. No restrictions on feeding have been placed by the rules. The idea is to produce the best beef at the lowest cost, and the boys may feed as they choose and receive advice from anyone they wish. The result will be that not only the boys but fathers also will get much information on feeding and finishing a beef animal.

The Janesville, Richland Center, Lancaster, Mineral Point, Lodi and Baraboo fairs have joined with the association, and the Elkhorn and La Crosse fairs are expected to join. The boys in these counties will show their stock at these fairs and the three winners are required to show at the state round-up at Madison, November 22d-23d, when prizes ranging from $50 down will be awarded. Boys beaten at the county fair are also eligible to compete at Madison as well as any boy in any county in the state, whether or not the county fair has co-operated. The animals will be sold at Madison for beef and all transportation expenses will be guaranteed. Full details may be secured by writing Ray Raker, assistant secretary, Madison, Wis.

Surely Wisconsin should produce more beef with its ideal climate, fine pastures, close markets and the abundance of corn, corn silage, small grains, clovers, grasses and alfalfa that are produced here. This contest is expected to increase beef interest and show the profit in beef production in Wisconsin. Baby beef is a well-bred, highly finished steer or heifer, twelve to fifteen months old, in prime market condition, weighing about 1,000 pounds, and the association has started this baby beef contest for the reason that considerable skill in feeding is required.

Baby beef production has become popular for several reasons. Baby beeves make quicker and more satisfactory gains; they yield smaller cuts, now demanded by consumers; less capital is required to get into the cattle business where baby beef is produced and money can be turned quickly; more breeding stock can be carried on the farm producing baby beef; it makes beef making a farm process where the animals are bred, grown and fattened on the farm, eliminating the uncertainty of cattle feeding as usually practiced.

The making of baby beef may be looked upon as a very special line. In order to make the highest gains and the greatest net profits it requires not only a knowledge of the breeding and selection of calves, but the skill of a good cattle feeder. However, it is growing to be an extensive branch of the cattle business, and authorities, both stockmen and packers, predict that profitable beef production is rapidly narrowing down to baby beef.

In the production of baby beef type is of the greatest importance, young animals having a tendency to grow rather than to fatten. To consume large amounts of feed and make good use of it, a calf must be compact, low down and blocky; and must have a deep, thick body and well sprung ribs. These points indicate feeding capacity and early maturity. Quality is another essential in a good baby beef; it is indicated by a "breedy," medium sized head, fine bone and soft, pliable skin. There is but one source of this proper baby beef type, and that is the blood of a pure-bred, blocky, early maturing beef bull. Such sires are easily found in Wisconsin.

One other important necessity is high feeding. Failure will surely result if a calf is not pushed. The market pays the highest prices for well-finished baby beeves, but it will not tolerate a poorly finished one. The calf must be kept gaining continuously and should never be allowed to lose its calf fat. Calf fat is the cheapest fat, the easiest to gain, and hardest to replace.

Another Boost For the Silo and Alfalfa.

IT HAS been repeated often that a silo will pay for itself in two or three seasons, but this statement promises to be more than substantiated in the farm management report which is to be announced in Wisconsin some time in April. This report will show that a silo will pay for itself in a single year, this conclusion having been drawn from the examination of the reports of some 650 farmers who were entered in the 1915 farm management contest under the direction of the college of agriculture. These farmers kept an accurate account of all receipts and expenses during the year; figured the operating capital, labor income, etc., and the forthcoming report of the results of the year's contest will show these principal items:

1. That the operating capital on the farm is a big factor—even more so than the fixed capital.
2. That the number and quality of cows has a strong bearing on the income from the farm as a whole.
3. That enough is lost each year on farms without silos to pay for a good silo once a year.
4. That alfalfa is one of the best forage crops in Wisconsin. In nearly every county the labor income was several hundred dollars greater per farm with five acres or more of alfalfa than the farm with five acres or less of alfalfa.

From these conclusions drawn from a compilation of the reports from these 650 farms it appears that every farmer who hasn't a silo should begin immediately reading the advertisements and catalogs with the idea of having one ready to receive the 1916 crop. What farmer can afford to be without one if the waste due to lack of a silo is great enough, if prevented, to pay for a new silo every year? Under this basis of figuring the silo would pay for itself the first year, and after that the saving of this waste would increase the annual profits to the value of the silo or more. Alfalfa is now grown in every county in the state, and reports this spring indicate that it is continuing to grow in favor as a feed and that the acreage will be greatly enlarged this year.

First County Swine Breeders' Association in Wisconsin.

THE Grant County Poland China Breeders' Association, which was organized at a meeting recently at Lancaster is the first association of its kind in Wisconsin. The honor, therefore, of forming the first community organization of swine breeders in the state goes to the Grant county Poland China breeders.

Chris Kartman, of Cassville, was elected president; F. M. Morehouse, of Lancaster, vice president; Burley Dobson, of Lancaster, secretary; and Rolla Rich, of Lancaster, treasurer. The board of directors is composed of J. C. Hendricks, of Hazel Green; C. S. Flesh, of Mount Hope, and W. F. Ackerman, of Glen Haven.

The organization of this association is the cue for swine breeders in other counties of the state to band themselves together for the benefit of their breed in general and themselves in particular. Wisconsin now has about 115 community breeders' organizations, all except four of which are dairy organizations. As we noted above this is the first county swine breeders' association, and its organization should be followed by the lovers of other breeds in Grant county and by breeders in every other county in Wisconsin.

The new association starts out with twenty charter members and immediately launched several propositions which will undoubtedly rebound to its credit. The annual dues were placed at $1 a year, and what the dairy organizations in other communities have done for the dairymen in those communities the Grant County Poland China Breeders' Association expects to do for the Poland China breeders of Grant county.

The association immediately set plants going for three association swine sales a year. It was decided to hold two annual bred-sow sales in the spring and one annual boar sale in the fall, probably in August or September. These sales will be held, in all probability, at Lancaster.

It was also decided to get behind a pig-feeding contest in co-operation with the Grant County Fair, and $300 will be given away in prizes to the boys who take a pen of three grade barrows and during an allotted time make the best gain at the least expense. As the state fair, in its boys and girls' department, has offered large premiums at the 1916 fair for similar contests, it is believed

this contest will develop considerable interest among the boys, and, of course, it will be of inestimable value to them.

Grant county has the reputation of shipping more hogs than any other county in the country. The breeders are alive and active and The Wisconsin Farmer expects much good to come from this organization, and trusts it will lead other county swine men to get together in an association of this nature.

Wisconsin Seed the Best.

MR. G. B. MORTIMER, of the Wisconsin station, has written an interesting article for the Wisconsin Bankers' Farm Bulletin under the heading, "How to Secure Seed Grain." He advocates the use of the Wisconsin improved varieties, believing they are the best yielders. He says they excel because they have been bred for Wisconsin conditions. Mr. Mortimer takes the position that the best grains for seed purposes are those which are home grown, preferably on the farmer's own ground, providing proper attention has been given to selection. Such seeds have developed a liking for soil conditions, and, according to Mr. Mortimer's idea, will generally do better than those imported from long distances. It becomes necessary, however, to purchase other seed quite frequently, and Mr. Mortimer urges the Wisconsin farmer to insist upon Wisconsin-grown seed. Further, he advises getting it as near at home as possible. He suggests a telephone conversation around the neighborhood asking for the seed needed. One advantage of buying seed locally is that personal inspection is possible.

In order to keep seed grain as free as possible from mixture Mr. Mortimer recommends the following precautions:

1. Cleaning of the drill or seeder before sowing a different variety.
2. Cleaning of all grain sacks before filling by turning inside out and thoroughly shaking.
3. Cleaning of fanning-mill.
4. Discarding first few bushels of seed that come from the separator.
5. Feeding horses ground oats during seeding time.
6. Storing seed so as to be rat and mouse proof.
7. Thoroughly cleaning the grain binder before starting to cut a new variety.

In discussing the question of varieties of small grains and corn in Wisconsin, Mr. Mortimer says:

Turkey Red wheat is the leading hard winter wheat of the world. Pedigree No. 2 of this variety has been selected and bred for wheat growers of Wisconsin. It is a hardy, high yielding wheat of good quality. Those interested in spring wheat will do well to secure Marquis, one of the more recently introduced varieties. In yield and earliness it is superior to other spring wheats. It has excellent bread-making qualities.

Wisconsin Pedigree Oderbrucker barley speaks for itself. It is known the world over. It has never yet suffered defeat at any of the great grain shows when placed in competition with other varieties. Being stiff strawed it does not really lodge in the field. Its uniformity in maturing produces plump grain of the very best quality. Be sure to get the Improved Oderbrucker for the highest yielding barley.

There are improved varieties of oats to meet all oat growing conditions in the state. At present Wisconsin Wonder-Pedigree No. 1 holds the record for high yields, especially upon the heavier soils. Swedish Select, Pedigree No. 5, is another one of the best yielders and also does well on the heavy and medium soils. Sixty Day, Pedigree No. 6, is desirable for sandier soils on account of its earliness.

Wisconsin is one of the three leading rye producing states. The improved pedigreed varieties of winter rye outyield the common varieties by five to ten bushels an acre. Call for Wisconsin pedigree winter rye.

There is an improved variety of corn for every portion of the state. Silver King, Wisconsin No. 7, bred primarily for the southern half of the state is the great favorite, with the leading corn growers of that section. Golden Glow, Wisconsin No. 12, bred for central Wisconsin is the best dent corn to be had for this portion of the state. Earliness and high yielding qualities have created a large acreage for this variety. Early Yellow Dent, Wisconsin No. 8, is excellent for both central and north central Wisconsin. For the extreme northern portions, improved Smut Nosed Flint will give good results.

Too Much Scale in Draft Horses.

A WRITER in the London Live Stock Journal calls attention to the fact that there is a tendency on the part of a few present-day judges to place a big, overgrown drafter in front of a smaller but more correct type, although the latter may have the weightiest set of limbs, thereby giving rise to the question whether the craze for size can be pursued with safety. In this case the Shire horse is under consideration but presumably what this writer has to say applies alike to all draft breeds. Mere size or weight is not always indicative of true character as applied to Shires, especially if it is obtained at the expense of feet and legs.

This writer goes on to say that it is more difficult to find a horse standing seventeen and a half hands as proportionate as one two or three inches lower, and when it comes to actual labor the tall animal, he points out, is the first to show signs of wear. It is true that a good big horse is better than a good little one within reasonable limits. Nevertheless among Shire horses it is certain that the biggest stallions have not proved themselves the most successful sires. Continuing, this writer says:

At some shows specimens have found favor which were decidedly leggy, with such length of body as to make them look shallow at the flank and short in the rib, which is not quite the type to propagate, as they cannot stand the strain when backing a load like those of the strong-loined and muscular type. Therefore, it may be asked whether the back and loin should not be taken more into consideration when judging as well as the "feet, joints and feather," notwithstanding that it is said "the top can change, the bottoms never." If the top changes, or appears to change, it is through being loaded up with fat, which hides a lot of defects, and that of a slack loin in particular. A short-ribbed and shallow colt grows into a horse with the same defects, but they are less obvious in a fat than in a lean animal.

By paying more attention to the top it is not suggested that the bottoms should be neglected or that palpable defects in feet, joints or limbs should be passed over. As regards the feet of Shire horses they get better each year, this being to a great extent due to the fact that the feet of colts are not neglected till the animals are worked, as they used to be.

There is little danger of size being overemphasized by American breeders for the simple reason that the feeding of draft horses, particularly draft colts, has not yet become an art on this continent. Somewhere along the line we are tempted to economize in the use of grain, with the result that many well-bred animals from imported foundation stock fall short in the matter of scale. It will be generations before American breeders will need to be warned not to get their drafters too big.

Wisconsin Potato Institutes.

EXPERIENCE has shown that the Wisconsin counties which are showing the greatest strides in potato growing are those which have concentrated on a few select market varieties. Such counties as Oneida, Waupaca, Langlade and others, which several years ago began this work of standardizing the crop, have set an example for other communities, and to push work further a series of special institutes has been planned for this month.

Adams, Marquette, Waushara and Portage counties have been chosen for this work, and ten institutes will be conducted in these four counties by Mr. J. W. Hicks, of Prentice, president of the Wisconsin Potato Growers' Association, as follows:

Arkdale, Adams county, March 21st.
Grandmarsh, Adams county, March 22d.
Endeavor, Marquette county, March 23d.
Westfield, Marquette county, March 24th.
Coloma, Waushara county, March 27th.
Bancroft, Portage county, March 28th.
Wild Rose, Waushara county, March 29th.
Plover, Portage county, March 30th.
Amherst, Portage county, March 31st.

These four counties are all good potato-producing counties, but it is believed that by selecting and growing a few select market varieties, such as Early Ohios, Green Mountains, Rural New Yorkers and Triumphs, which are especially suited to these communities, that better prices will prevail through securing a better market and that larger yields will be secured. Mr. Hicks, who as a potato grower himself, is thoroughly competent, and the potato farmers who can attend any of these meetings will find it worth while and to their advantage. These institutes will be devoted entirely to potatoes, and Mr. Hicks will point out the value of standardization as well as cultural methods for improving the yield, etc. Some splendid potatoes have been grown in all these counties in the past, but not enough attention has been given to the varieties most suited to local conditions, and then too many varieties have been grown. This all has a bearing upon the market and the price the farmer receives, as Mr. Hicks will explain.

Those Brood Sows.

THE annual loss of pigs throughout the country is appalling when an actual census is taken and all losses are counted, not including therein losses due to cholera. Practically 50 per cent of the pigs born die before they are a week old. Three-fourths of this loss can unquestionably be traced to improper feeding of the pregnant sows and one-fourth to unfavorable weather conditions. Most sows are fed too much fattening food and not enough bone and muscle-producing nutrients. This is a matter that has been discussed a thousand times and the only excuse for referring to it again is that so many farmers continue to disregard the feeding problem, and as a result their pig crops are small.

Take a sow that is fed nothing but corn, kafir or milo, and she is almost certain to farrow weak, fine-boned pigs of low vitality. This is especially true of yearling sows. A gilt is not full grown at the time she is bred. Thus while she is carrying her litter she must not only supply food for growth of the developing fetus, but also for her own body, which makes the tax on her system greater than on that of a mature sow. Now corn and similar feeds, while splendid for fattening purposes, are not suited for producing growth. A ration capable of inducing normal growth must contain a certain amount of protein and mineral matter, and there is no use denying it or of making light of it. Bone and muscle cannot be manufactured from starch and sugar by the hog or any other animal for that matter, and corn contains an exceedingly large percentage of starch.

Once more, therefore, we urge our readers to feed their brood sows intelligently—that is, supply them with enough protein to perform the functions nature demands. Make liberal use of good alfalfa hay if you have it and limit the corn ration to one and a quarter pounds a day per hundred pounds of hog fed. If the sow weighs 230 pounds give her a little less than three pounds of corn a day and all the alfalfa hay she will eat. On such a ration—a cheap one too—a young sow will not only develop her own body, but she will also farrow a strong, vigorous litter of pigs. In absence of alfalfa hay supplement the corn with tankage, oil meal, middlings or something of that sort. Proper proportions are as follows: Ten pounds corn and one pound high-grade tankage; half corn and half shorts; forty pounds corn, thirty pounds middlings, thirty pounds ground oats; fifty pounds corn, forty pounds wheat, ten pounds oil meal; sixty pounds corn and ten pounds oil meal.

Give the sows enough of any one of these rations to keep them in strong breeding condition and you will save a lot more pigs than if you fill them up on corn.

An Early-Maturing Nurse Crop Desirable.

NATURE abhors barrenness. If the land does not produce economic crops it at once runs riot with weeds. Indeed, from the standpoint of crop production weed vegetation is better than no vegetation, but more and more we are coming to believe in the plan of utilizing every field throughout the entire growing season.

This end is attained in the case of cereal crops by using these as a nurse crop along with legumes and grasses. True it is that clover seed is high in price, involving a considerable cost in seeding down. It is also true that frequent failures result from efforts to get a stand of clover and grass. In the latter case this may frequently be traced to rankness of growth in the nurse crop as well as to its late maturity. For this reason those who are meeting with the greatest degree of success in getting a stand of clover and grass are more and more resorting to the use of early-maturing varieties of grain.

Those who have winter wheat to use as a nurse crop are especially fortunate. It matures early and the soil is not dried out to a harmful degree by the time it is ready to harvest. Certain varieties of early oats may be used to great advantage and nearly all varieties of barley are early maturing. A gain of ten days or two weeks in shortening the season may make the difference between success and failure of the new seeding.

There is also some advantage in seeding the nurse crop lightly. By this we mean that better results are usually obtained from eight or nine pecks of seed grain per acre than the customary three bushels, viewing the matter from the standpoint of the success of grass and clover. Then there is the matter of early sowing which should not be lost sight of. True it is that we do not have much control over this factor because the average man is eager to get on the land just as soon as it is dry enough to till. However, let it be remembered that a few days' gain at the beginning of the season will show up plainly at harvest time and our chief aim should be to get the crop in so that it will be ready to harvest at the earliest possible date.

Rape Pasture Valuable.

NOTHING has been more thoroughly established in connection with economical production of pork than the fact that pastures are an invaluable aid for this purpose. It is impossible to produce pork profitably by exclusive dry lot feeding. During the greater part of the life of the hog he should take care of himself, and this he can do to best advantage in a productive pasture. Nothing is more valuable for this purpose than alfalfa, sweet clover and the common clovers.

Comparatively few farmers are provided with legume pastures for their hogs, and it takes time to establish a good alfalfa pasture, especially on farms where this crop has never been grown before. Rape is a splendid substitute for alfalfa; in fact, in localities where the rainfall is plentiful it is considered by many to be next in value to alfalfa for pasture purposes.

To use rape economically it should be seeded in small patches at intervals of two or three weeks. Then when the first field has been pastured off the second will be ready to turn into, and finally the third. After that the first field can be used again and so on through the season.

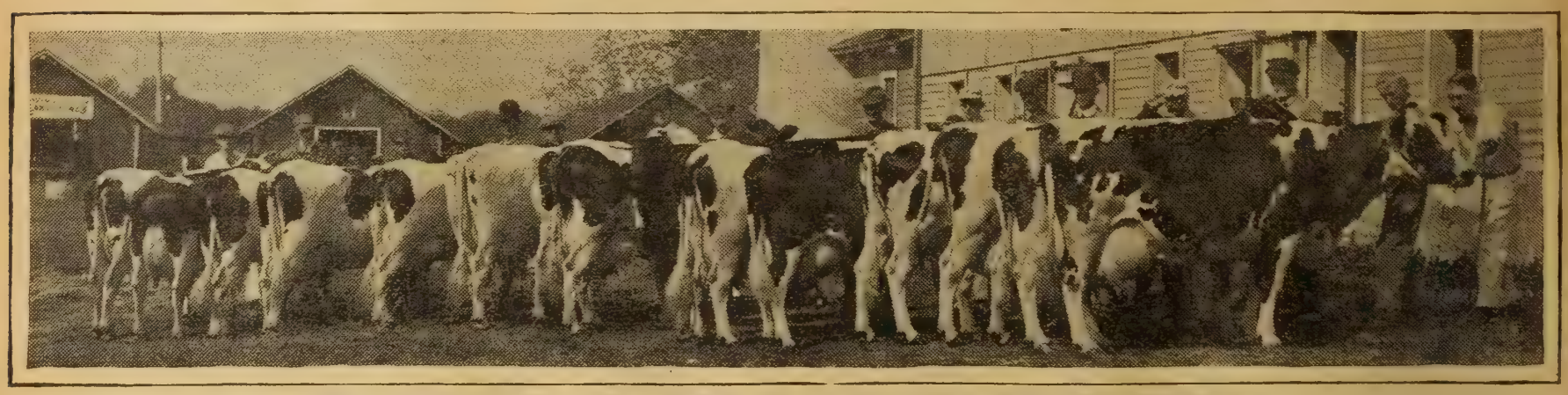
When rape is seeded alone, five pounds of seed should be sown per acre either broadcast or in rows—less being required for the latter method. In the drier sections the row method is preferred to broadcast seeding, because it makes it possible to cultivate the field and thus conserve moisture. Hogs should not be turned into a rape field till the crop stands about ten inches high.

For best results hogs should always be fed some grain while on pasture, even if alfalfa is available. While weanling pigs can make a living on rape or alfalfa pasture without grain, gains made on pasture alone are more expensive than when the green succulent feed is supplemented with corn or a grain mixture. Growing pigs should be given about two and a half to three pounds of grain per 100 pounds live weight per day when on pastures, and if the pasture is rape, alfalfa or clover, corn alone with perhaps a small amount of oats will give excellent results, high priced concentrates being not needed, as these forage crops will supply needed protein for the pigs. When blue grass and timothy pastures are employed, some concentrate should be fed with the corn, otherwise the pigs will not obtain enough protein to make profitable gains.

A good hog pasture not only materially reduces the cost of pork production, but it also keeps the pigs in a more healthful and vigorous condition, thus reducing the chances of loss from disease.

State Holstein-Friesian Meeting.

Wisconsin Breeders of the Black and White Dairy Cattle Exchange Experiences at State Convention Held Last Week in the City of Watertown.



FINE SHOWING IN THE AGED HOLSTEIN COW CLASS AT WISCONSIN STATE FAIR IN 1915.

HOLSTEIN enthusiasm in Wisconsin never ran higher than it did last week at the annual convention of the Wisconsin Holstein-Friesian Breeders' Association, which was held at Watertown, Jefferson county. The attendance was not so large as at Neenah last year, but what was lost in numbers was more than made up in interest and enthusiasm and if those breeders present continue during the coming year the enthusiasm for the association with which they were imbued at the Watertown meeting the year 1916 should prove a record breaker for the organization.

There were about 150 breeders present and all parts of the state were represented. The convention opened on Wednesday evening with a banquet at which 100 breeders were present and continued through Thursday, the afternoon session of that day bringing out the largest and the most enthusiastic attendance.

Several important matters were inaugurated at the business session which should prove of immense value to the great Holstein interests of the state. Important among these was the step taken to employ a field man who shall be paid a salary and who shall also act as secretary. This man will devote his entire time to the work of the association and in the interests of the Holstein breeders and if the plan is carried into effect, as it is probable it will be, the state association will have a sort of promotion publicity agent. It was the consensus of opinion that such a hired field man and secretary could be of invaluable service to the breeders and the association and a committee consisting of J. P. Riordan, of Mayville; Herbert Schroeder, of West Bend, and F. B. Fries, of Richland Center, was named to work out a plan for employing such a man and to secure the necessary funds for his salary and expenses. This committee is to report some time in May when a special meeting of the association will be called to receive the report and perfect plans for employing such a field worker.

Another important action was that looking forward toward the proper representation of Wisconsin Holstein interests at the meeting of the national association at Detroit in June. There are 1,200 members of the national association living in Wisconsin, and, as this is the second Holstein state in the Union, it was thought time that Wisconsin was receiving more recognition from the national association. The plan is to send a delegation to the national meeting with as many proxies as it can obtain and a committee composed of S. A. Baird, of Waukesha; Sidney Jones, of Watertown, and James Torrey, of Kenosha, was named to perfect the arrangements and secure the proxies. It is hoped to secure at least 1,000 proxies for the use of this committee and with the large delegation of Wisconsin breeders which will attend personally the association would be in a position to demand recognition. As there will be some expense in securing these proxies it was decided to ask the members to contribute to a fund for this purpose, the funds in the treasury of the association not being sufficient. During the meeting a subscription paper was circulated and about $75 was donated. Those who wish to contribute and did not have the opportunity at Watertown can mail their subscriptions to either of the three members of the proxy committee.

A WELL-MARKED HOLSTEIN YOUNGSTER OF PROMISE.

The convention also passed resolutions touching on the oleomargarine fight now in congress and supporting the National Dairy Union in its fight; another relative to guaranteeing the correctness of registration papers, production records, etc. Another resolution expressed the bereavement of the members of the association over the death of Dr. Henry Favill, a fellow member and breeder, who had planned to attend the convention and deliver an address.

The annual election resulted in the selection of R. J. Schaeffer, of Appleton, as president after J. P. Riordan, who has been acting president because of the illness of Pres. W. J. Gillette, of Rosendale, had declined to serve because of press of private business. Fred Pabst, of the Pabst stock farms at Oconomowoc, was chosen vice president; Chris Schroeder, of Racine, secretary, and F. J. Bristol, of Oakfield, treasurer. Mr. Riordan was elected a member of the directory board as well as S. E. Jones, of Watertown. The nominating committee consisted of L. E. Wiese, S. E. Jones and W. L. Baird.

The resolutions, which were presented by a committee consisting of H. F. Schroeder, F. H. Everson and R. J. Schaeffer were adopted as they were presented. The resolution relative to the oleomargarine fight follows:

Whereas there is a systematic effort being made by the oleomargarine interests to repeal the federal law governing the manufacture and sale of oleomargarine and to pass a law that will permit oleomargarine to be colored in semblance of yellow butter and which would permit oleomargarine to sell and be served to the consumer as butter;

Be it Resolved, that we, the members of the Wisconsin Holstein-Friesian Breeders' Association in convention March 2d, at Watertown, urge that the congressmen of Wisconsin use all honorable means to defeat any bill that may be introduced in congress favoring the manufacture and sale of oleo-

WELL-BRED HOLSTEIN HEIFER OF GOOD CONFORMATION.

THE PAIL-FILLING TYPE OF HOLSTEIN COW.

margarine and to the detriment of butter;

Be it Further Resolved that we support the National Dairy Union in its efforts to secure a square deal for butter.

Relative to the employment of a field man the following resolution was adopted:

Whereas, owing to the present dormant condition of our association we believe new life and vigor can be brought about by placing in the field some good, salaried man whose duty shall be to make this association a live issue, therefore;

Be it Resolved, that the president appoint a committee of three to devise plans to raise necessary funds and develop plans for this representative to work under; said committee to report to the secretary some time in May and a special meeting to consider this matter be called.

The appointment of the proxy committee, mentioned above, followed the adoption of the following resolutions:

Whereas, we feel a necessity of combined effort on the part of members of the national association in furthering the interests of Wisconsin breeders, therefore;

Be it Resolved, that the president appoint a committee of three to take immediate action on securing as many proxies as possible, these proxies to be presented by a delegation of this organization;

Further Be it Resolved, that in order to finance this resolution a subscription list be passed at this meeting to raise funds.

The presentation and adoption of these three resolutions followed a stirring appeal by Mr. Riordan, acting president, in the president's annual address. Mr. Riordan, filled with enthusiasm for the association, pleaded for more unity and interest; a greater association; better recognition of the Wisconsin breeders in national work, etc. During his address William Everson, the veteran breeder at Lake Mills, occupied the chair.

Mr. Riordan pointed out that there is a great work for the association and that he does not believe it is accomplishing as much as it should. He talked plainly and with the view of arousing new interest and enthusiasm. With 2,000 breeders of pure-bred Holsteins in Wisconsin and an investment of probably $40,000,000 in stock he said this state, second to New York in numbers but to his mind first in quality and in the character of its breeders, should lead the world. Then he told of his experience at the Chicago convention where there were six Wisconsin votes and where 500 Wisconsin proxies were in the hands of eastern delegates, to use as they choose, either for or against Wisconsin. He urged that a concerted effort be made to keep these proxies in the hands of Wisconsin delegates and predicted that a delegation with a thousand proxies that goes to Detroit will be in a position to hold up at the annual meeting the greatness of Wisconsin in the Holstein world.

Mr. Riordan said that in his belief the employment of a salaried field man and secretary was absolutely necessary if the association is to grow and the breed interests be advanced in keeping with Wisconsin's position. There are two important things in breeding—First, produce the cows and second, after doing this get into position to realize the reward that is due. Wisconsin is already producing the cows and Mr. Riordan said that now is the time to begin to reap the reward, and that a field man, hired for that purpose, can do much to promote the breed and the interests of the breeders. Just how the money is to be raised to finance this project he said would have to be worked out by the committee, but it is probable it will be raised by subscription among the breeders. "Such a man will be on the job day and night looking after our interests," he said. "To my mind the mission of this association is to be on the guard continually to protect our interests, and this man would be the guiding hand. He will see that Wisconsin never has her nose rubbed in the ground; he will guard us against obnoxious legislation, etc. There is a great work for us and if we don't do it we are blinding ourselves to our advantages."

Mr. Riordan also started quite a discussion on the action of the national registry associations in refusing to guarantee certificates of registration, A. R. O. records, etc., since the Iowa Supreme Court record held the American Percheron Society liable for damages because of fraud registrations. A buyer who found he had been defrauded sued the seller who was insolvent and then in turn sued the registration society and got damages from the society. Since then Mr. Riordan said the registration societies have been printing a little box on the face of the certificates, etc., that "it is the belief that the statements, etc., are true." "To my mind this is merely telling the breeder that he has no assurance his papers are absolutely correct," he said. "For one I am against it and I'm willing to go down into my own pocket and help pay any losses to the association and the registry if they will stand back of every certificate." This statement was greeted by prolonged applause which expressed the sentiment of the Wisconsin breeders and afterwards the following resolution was adopted without a dissenting vote:

Whereas, our national directors have seen fit to deface our registration papers with printed notices which really amount to making them null and void except as to the veracity and honesty of the breeder, therefore;

Be it Resolved, that this association resents this action and would favor the national association backng up their registration papers, and:

Be it Further Resolved that a committee of one be appointed to get in touch with other state organizations and learn their view on this matter.

F. H. Everson, of Lake Mills, was named the committee of one to confer with other state associations.

D. D. Aitkins, of Flint, Mich., president of the National Holstein-Friesian Association, was one of the interesting speakers of the convention and spoke on Holstein conditions in general. He closed with a special invitation to the Wisconsin breeders to attend the national gathering in Detroit and assured them fine entertainment and a splendid convention.

Mr. Aitkins defended the action of the national board relative to the registration certificate matter, and said that no association today assumes this liability. He explained how the "little reading box" described by Mr. Riordan happened to be inserted, but he did not change the view of the convention that the association should back up every certificate. He said the Holstein industry owes a great obligation to Wisconsin which has turned out many splendid breeders, including many notable individuals, and took occasion to praise the life and work of Dr. H. D. Favill, whose place on the program at the convention he filled.

No one has anything on the Holstein breeder, he said, and it is his belief the character of the breeder is going to have a greater bearing in the future than in the past. To his mind there is no limit to the production of a Holstein and he fears to even prophesy what will be the record a year hence for fear that he will place the limit too low. He pleaded for greater encouragement to the young breeder. "Start the boys right by giving them the benefit of our experience" was

(Concluded on page 35.)

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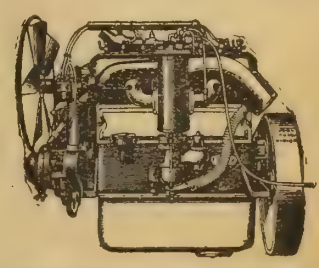

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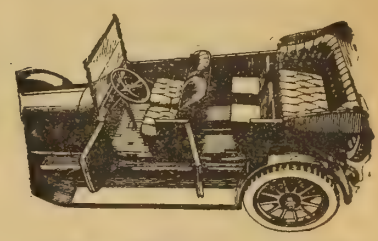

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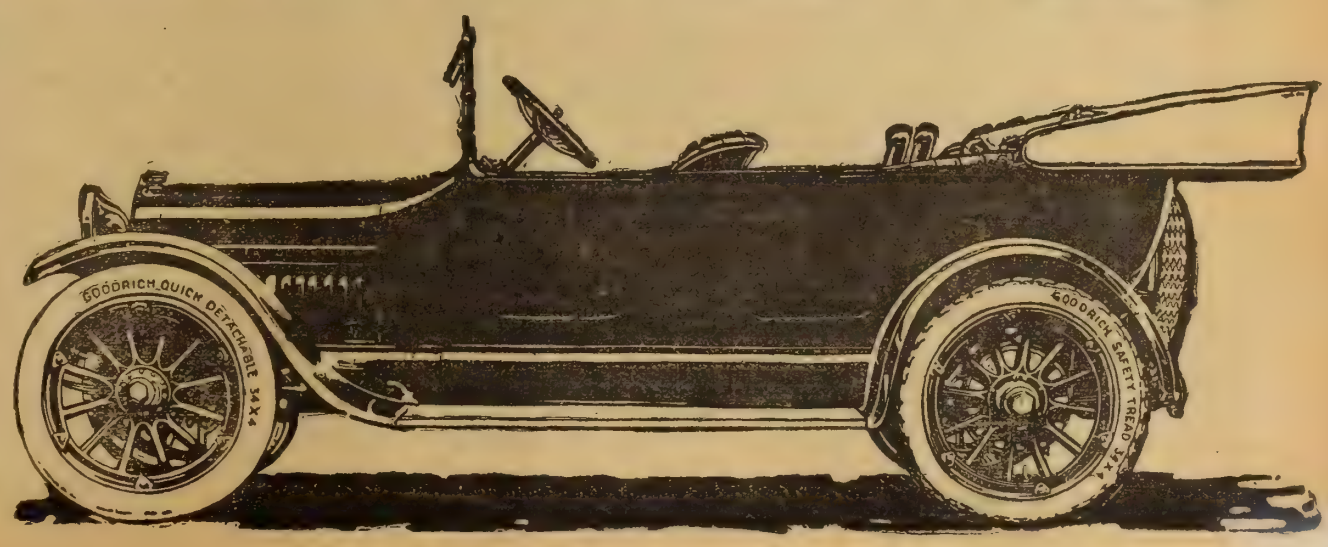

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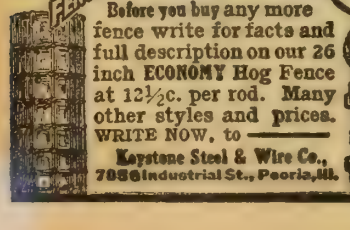

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CURRENT EVENTS

PRESIDENT WILSON and congress have been at loggerheads the past week over foreign affairs. The president is firmly insistent on the rights of America to travel unrestricted and unquestioned on the high seas, notwithstanding Germany's warning that after March first she would attack and sink armed merchantmen, with the fact quite evident, but not explicitly stated, that even the presence of American citizens on such vessels would not save them from destruction. Sentiment in congress until the close of last week was undoubtedly in favor of a middle ground, American citizens to be warned of the danger of ocean travel and advised to keep off the armed merchantmen of nations now engaged in war. President Wilson argued that by not backing him up congress was causing Germany to believe that the president does not represent public sentiment, thus greatly weakening the force of his protests in the Lusitania case and every other one in which international law or the rights of humanity have been ignored or violated on the ocean. The matter bade fair to drag along for weeks, but the president precipitated a crisis by demanding that congress take positive action on the resolution introduced by Senator Gore, of Oklahoma, warning Americans off of armed ships. He declared that the passage of such a resolution was antagonistic to American principles and rights, the defeat of such a resolution would be support of him and evidence to Germany that he does indeed represent public sentiment. After much wrangling and arguing, positive action was postponed in the house but the senate went on record in support of the president, after one of the most striking nonpartisan debates in its history, the vote being 3 to 1 in favor of the president's policy.

THE fiercest and most deadly fighting of the year and a half of the European war was in progress last week, when a third of a million Germans stormed the French fortress of Verdun. The battle lasted longer than did the battle of the Marne, over a year ago, likewise fought out on French soil, which was of a week's duration. Verdun is the strongest fortress in France and has been strengthened for the past few months in anticipation of just such an attack as the Germans waged against it, led by the kaiser himself and his son, the crown prince. While the press dispatches are conflicting, the Germans do not seem to have been completely successful. They captured some of the outlying forts and posts, at a terrific cost in men, but the main fortress and town were still in possession of the French at last reports. The Germans are said to have taken no heed of human life, sacrificing men by the scores of thousands in the herculean attempt to win a victory. One report says the Teutons were mowed down in solid formation, so that the dead bodies remained erect, there being no place for them to fall. However the battle may develop, the loss of life is already the heaviest of any struggle in the war.

OCEAN travel continues to be extremely perilous, notwithstanding Germany's pledge to the United States that "liners will not be sunk without warning by our submarines and without safety of the lives of noncombatants, provided that the liners do not try to escape or offer resistance." Mines continue to imperil the safety of ships and the lives of travelers. One day recently no less than four British ships were sunk by mines, with a heavy loss of life. The principal ship to meet this disaster was the liner, Maloja, with 200 on board, which struck a mine near the shores of Dover and sunk within twenty minutes, with the loss of over 100 lives. A vessel which went to the rescue struck another mine and went to the bottom in short order. In this case, as in most maritime disasters, a large percentage of those who were killed were women and children, the terrific explosion of the mine literally blowing many children to pieces. In view of all the tragedies of the ocean, those who travel across the seas are either foolhardy or impelled to make the journey by the most urgent of necessities.

PRESIDENT WILSON outlined his views on the war and America's part therein, both directly and indirectly, in a speech delivered before the Gridiron Club (an organization of newspaper men) a few nights ago. He told his hearers that America ought to keep out of the European war "at the sacrifice of everything except this single thing upon which her character and her history are founded, her sense of humanity and justice." Among other things the president said: "I would be just as much ashamed to be rash as I would to be a coward. Valor is self-respecting. Valor is circumspect. Valor strikes only when it is right to strike. Valor withholds itself from all small implications and entanglements and waits for the great opportunity when the sword will flash as if it carried the light of heaven upon its blade."

LORD KITCHENER, minister of war, urged the utmost economy upon all loyal Britons in a speech delivered last week inaugurating a national savings campaign. He said: "We want just as many men as we can get as soldiers. We are bound to take all the men that can possibly be spared from industry, agriculture and commerce. We cannot produce all our ordinary peace time requirements. Either the population must go short on many things or the army must go short of munitions and other indispensable things. Are civilians prepared to let their brothers in the trenches endure hardships while they are not ready to make small sacrifices of harder work, increased effort and increased economy?" England is rapidly waking up to the fact that the war will be won by the home folks co-operating with the soldiers in the trenches, and not by the latter alone and unaided. Lloyd George has the munition factories working efficiently now, but this does not suffice; England must prepare for the day when production in all lines will be cut down and thus the national economy campaign just launched.

GERMANY, in a formal note presented by Count von Bernstorff to Secretary Lansing, reiterates assurances regarding the future conduct of submarine warfare given in the Lusitania case. The note declares those assurances have not been modified by the memorandum setting forth its intention to treat armed merchantmen of the entente allies as auxiliary cruisers, and attempts to justify the issuance of the memorandum by presenting evidence and assertions designed to prove that the British government has instructed merchantmen to use their armament for purposes of attack in violation of assurances given to the United States. Later, it was said at the state department, while the United States stood unalterably for the right of merchant ships to carry guns for defense, it was not now and never had been contending that Americans could travel with immunity on ships having orders to act offensively.

HENRY JAMES, one of America's best-known novelists, died last week in England, where he had made his residence for many years past. About a year ago Mr. James took the oath of allegiance to the British crown in order to show his sympathy and support of the government in the war, he having left his native land and taken up his residence in England, where his work was better appreciated, years ago. Mr. James was a master of literary style. His best-known novels are "The Portrait of a Lady," "What Maisie Knew," "The Bostonians" and "The Awkward Age." He was born in New York almost seventy-three years ago.

Testing Wisconsin Seed Corn.

Every Ear Which Is Selected For Planting in This State This Year Should Be Tested to Determine Germinating Qualities.

EVERY ear of seed corn that is planted in Wisconsin this spring should be tested. The season of 1915 was unfavorable for seed corn production and the farmer who takes a chance by planting seed from those ears that look all right may have occasion to regret later in the summer that he did not test every ear to determine its germinating qualities. An ear may look good and still not be good. So the only sure way is to conduct a germination test. If this has not already been done this is a good month to do so, before the spring work starts in earnest. Considerable 1914 corn will be used this year in Wisconsin for seed, and it is just as important that this be tested as the 1915 corn as it may have lost considerable of its vitality during the past year.

Three of the most important factors in securing a good yield of corn are selection, the curing and the testing of the seed. Most of the seed at this time has been selected and cured so this article deals only with the important factor of testing, as every kernel that goes into the ground must produce if the farmer is to get the maximum yield for his labors.

This is an old question with many of our readers but hundreds of them will be testing for the first time this year, and consequently it is new to them. It is not difficult to make the test, and if you don't have a tester or do not care to buy one make one by using a shallow box and sawdust. There are many testers on the market which are cheap and satisfactory, and many devices have been recommended, all of which have their advantages. In a circular just issued by the agricultural extension service of the Wisconsin College of Agriculture the question of testing has been taken up at length and copies of this may be secured free on application. This circular was prepared by R. A. Moore and J. J. Garland, of the experiment association, and is very timely and interesting. It also contains some very valuable information on selection and curing as well as testing, and every farmer should secure a copy.

Only the most nearly perfect seed ears, having kernels of uniform width and other desirable characteristics should be saved for seed. These ears should be selected from the storeroom and laid out on the floor or on tables to be convenient for the test. It is a good plan to number each ear, which can be done by fixing a number to the butt by the use of a nail. In this way there is no danger of getting the ears mixed during the test.

Before describing the methods best to use Mr. Moore and Mr. Garland point out in their circular that these results may be expected from testing:

Increases yield.

Enables growers to discard weak germinating and dead ears. (Each dead ear planted means a loss of at least $3 or $4.)

No matter how well corn has been cured, a general test by taking one or two kernels from a hundred or even more ears in different parts of the room will prove good insurance. (Corn can be tested in February or March before spring work begins.)

If general duplicated tests are not practically perfect, ear tests will save loss and disappointment. (Strong, vigorous germinating kernels will not rot so quickly after planting if weather conditions are unfavorable.)

The common square box tester, often called the sawdust box tester, has been found to be one of the best at the experiment station. A box thirty inches wide, five feet long and four inches deep can be made by any farmer of soft ¾ or one-inch pine boards, and will test 240 ears at one time or from 2½ to 3 bushels of seed. It may be smaller if preferred. A couple of coats of paint will prevent warping and make it a permanent box, although this is not necessary. This box should then be filled with sawdust to the depth of two inches and packed smoothly with a trowel or brick. On a piece of unbleached muslin mark off 2½-inch squares with an indelible pencil which, when marked, dampened and laid over the sawdust, all is ready for placing the kernels in these squares. By marking the cloth ten squares wide and numbering only the outside rows the number of any inside row can be easily determined.

Take six ears from ear number No. 1 and put them in square No. 1; six from ear No. 2 for square No. 2, etc., until all squares are filled. Take out two kernels near the butt, two near the center and two near the tip, and in "prying out" take care not to "pry out" between the kernels but between the rows, as "prying out" between kernels may injure the germ. Place all kernels in their place germ side up with the tips all pointing the same way. When the squares are filled place a tightly woven moistened cloth over the kernels. Spread a cloth larger than the box over this muslin cover and fill the box with sawdust, which has been moistened. Then the test is ready.

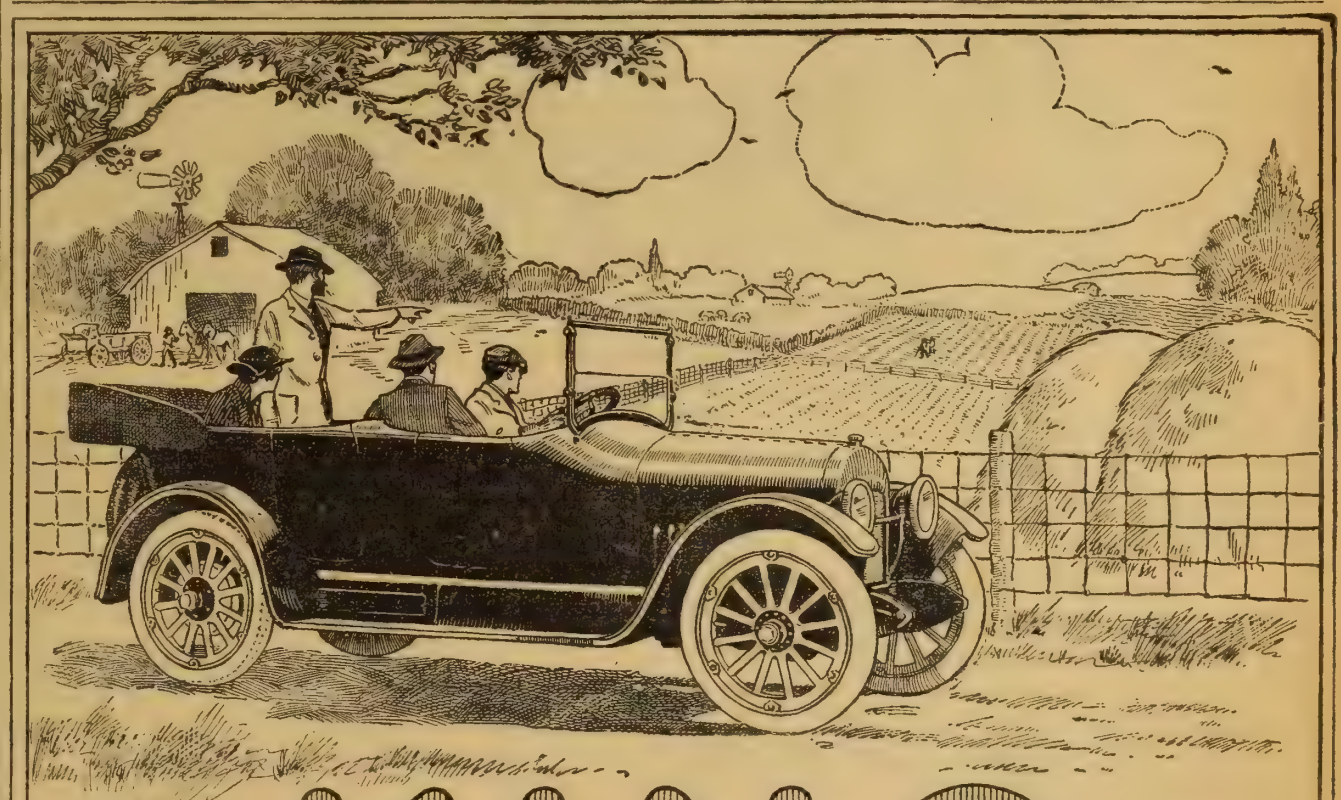
This box should be kept in a room with a temperature of from fifty-five to seventy-five degrees, and if tilted a little, by placing a brick under one end with the tips tilting downward the roots will grow in one direction and the stems the other. In from five to six days the top cloths and sawdust may be removed, taking care not to move the sprouted kernels and the tester will then learn which ears have germinated. Only those ears which have six vigorous sprouted kernels in the germination box should be saved. All others should be discarded, and by comparing the number of the square to the number on the ear it is easily determined which ears are not good.

The rag doll tester has also come into very general use. If properly handled it gives splendid results. This may be made by taking a piece of muslin or sheeting, ten inches wide by five feet long, which should be ruled off in twenty squares, 2¼ inches square. The numbering of the squares and ears is the same as in the sawdust box test. When all these squares are filled it can be rolled up, beginning at either end and soaked in a bucket of lukewarm water from six to twelve hours. Then pour off the water and let the roll drain by placing it on a piece of wood placed in the bucket for this purpose. Cover the pail and keep it in a heated living room for five or six days, when it may be unrolled and the results of the test ascertained. The one disadvantage to this test is that the rolls are likely to become dry if not carefully examined each day and moistened. The same examination as advised in the sawdust box test should then be made, and any ear, the six kernels of which do not produce strong, vigorous sprouts, should be rejected from the seed corn.

Another device, more suitable for determining the average germination of a large amount of seed, is the plate test. Here two plates are used. Not more than fifty kernels are spread upon a moistened flannel laid on the plate; then covered and a moistened flannel and an inverted plate. In six days this will show the germinating qualities. If three kernels in a plate fail to sprout then it is better to test each individual ear by the individual ear method. This individual method is the only sure way that the weak and dead seed ears can be discovered.

Some farmers have other methods of their own. Of course, any method of determining the germinating power is of value so long as the farmer knows that every ear he selects for planting is going to produce the results desired.

This should be the year when farmers of this state will discard unprofitable fruit trees—trees which have been carrying disease and furnishing fruit which was poor when ripe and absolutely unfit for storage for winter markets.



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Those who would willingly pay more than is asked for the King find the necessity gone when confronted with this car's remarkable performance and luxury.

"Challenger" Model E embodies improvements and refinements in eight cylinder construction which could be offered only by a Company that has had its "Eights" in operation all over America and in thirty foreign lands for over a year, there being *more* King eight cylinder cars in owners' hands than *any* other make save one. Aluminum pistons of special King design, the latest advance in automobile engineering, are a feature of this car. They increase engine power and resist carbon.

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In congested city traffic the King Eight will creep along in "high," and, when an opening comes dart away with locomotive speed at the movement of a finger. Sudden hills are taken with a hum instead of a throb and with scarcely ever a change of gears. Simplicity and ease of operation make it the ideal car for women who drive, and its extreme economy in fuel, oil and tires is only another proof of high engine efficiency.

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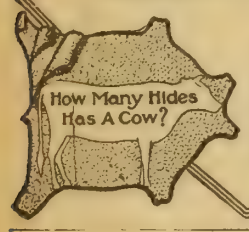

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In And Around Wisconsin.

F. E. Mohr, of Marathon, has purchased and taken possession of the Commonwealth Creamery at Reedsburg, Sauk county.

The creamery at Almena, Barron county, which has been under the management of Charles Kaemmer for sixteen years, has been sold to Richard Becker and Richard Bender.

E. R. Jones, secretary of the state drainage association, has been made chairman of the drainage committee of the American Society of Agricultural Engineers. E. M. Chandler, of Burbank, Wisconsin, has been detailed to special drainage work.

The annual report of the co-operative creamery at Downsville, Dunn county, shows that last year 750,000 pounds of butter were made and that $224,290 was paid out to the farmers in that vicinity for butter fat. T. B. Denning was chosen president for the coming year and C. N. Whinnery secretary and manager.

Beginning with this spring all growers of pure-bred seed grains who wish to sell their seeds under the auspices of the Wisconsin Agricultural Experiment Association must treat their grains for smut every three years. Those who wish to have their names in the association's pure-bred seed list next year must treat their grains for smut this spring.

The January report of the co-operative creamery at Milltown, Polk county, shows that the average cream test was 23.74 per cent and the milk test 3.8 per cent. During the month 26,381 pounds of butter were made from 21,680 pounds of fat, with an overrun of 21.22 per cent.

C. G. Wilcox, of De Pere, a former member of the state fair board, has resigned as president of the Brown County Fair because of the press of other business. Elmer Hall, of Green Bay, was chosen to succeed him.

Judge Martin L. Lueck, of Beaver Dam, formerly vice president of the Dodge County Fair Association, has been chosen president again to succeed James E. Malone, who died recently. A. W. Wilcox, of Horicon, was elected vice president.

The Stevens Point Poultry Association has decided to install a new system of collapsible cooping and the officers have been instructed to cooperate with the Portage County Fair in the purchase. The 1917 show will be held January 10th-12th. The association is now incorporated and will hereafter receive state aid. Officers chosen for this year are: President, Dr. W. W. Gregory; vice president, J. J. Normington; secretary-treasurer, F. J. Blood; superintendent, M. C. Burkle. Directors, R. K. McDonald, A. E. Bourn, Geo. Bos, E. P. Trautmann, Geo. Worden, M. E. Bruce and F. D Reynolds

The committee named to revise the premium list for the Central Wisconsin Fair, at Marshfield, has completed its work. The changes increase the premiums between $200 and $300. In the cattle department the increase is about 20 per cent over last year. Extra premiums on Holsteins, Guernseys and Jerseys have been substituted for Victorias. Merinos, Cheviots, Rambouillets and Delaines have been dropped from the sheep lists as not adaptable to local conditions. The prizes in the grain departments were increased 50 cents.

William Kalinouski, of Baldwin, sends us the 1915 report of the co-operative creamery at Baldwin, St. Croix county, which shows that during the year $263,733 was paid to the farmers for 871,488 pounds of fat. Butter made was 1,049,323 pounds, with an average overrun of 20.39 per cent. The average cream tests was 24.48 per cent for the year.

The Barron County Guernsey Breeders' Association, at their annual meeting held recently at Barron, elected William Bartlett, of Barron, president for the coming year; William Halvorson, of Rice Lake, first vice president; Arthur E. Coe, of Barron, secretary, and Archie Nelson, of Barron, treasurer. The association decided to hold a separate summer picnic and meeting in June at the farm of President Bartlett, and Frank D. Otis, C. O. Heldstab and Mr. Nelson were appointed a committee on arrangements.

The Wisconsin Experiment Station Farm has sold a flock of pure-bred Shropshire ewes, bred at the farm, to the Oklahoma College of Agriculture. These will be used as foundation stock.

The 1916 price of binder twine manufactured at the state prison plant at Waupun has been fixed at 8¼ cents per pound in car lots, which is the same as Minnesota, a cent lower than Kansas and ¾ of a cent lower than Michigan. The price list follows:

Sisal	500 ft. to the lb.	8¾c per lb.
Standard	500 ft. to the lb.	8¾c per lb.
Climax	600 ft. to the lb.	11½c per lb.
Premium	650 ft. to the lb.	12½c per lb.

These prices are f. o. b. cars Waupun or Chester, Wisconsin.

Terms—If paid before November 1st the following deductions will be allowed:

2,000 and less than 10,000 lbs.	⅛c a lb.
10,000 and less than 20,000 lbs.	¼c a lb.
20,000 or carloads	½c a lb.

Alvin Hall and brother, of Clinton, Illinois, who recently purchased 160 acres in section 23, range 7, town of Knowlton, have built a good substantial fence, using oak posts, woven wire, with barbed wire on top around one forty and expect to put 500 Angora goats on this forty in April to clear the land. As this method of clearing is an innovation in this part of the country the experiment will be watched with considerable interest. Mr. Hall will purchase the goats in Omaha.

The Wisconsin Farmer is in receipt of a letter from Frederic Cranefield, secretary of the Wisconsin State Horticultural Society. The society this year is offering a copy of its annual report for 1915 free to any resident of Wisconsin. The report is valuable for reference, containing lists of fruit, ornamental trees and shrubbery suitable for planting in Wisconsin, also formulas for spraying mixtures and eighteen valuable papers and discussions on different horticultural topics. Those who wish a copy of this valuable book should apply by postal or by letter to Frederic Cranefield, secretary, Madison, Wisconsin.

SHOWING INTEREST IN TRACTORS, FARM AND HOME WEEK AT MADISON, WISCONSIN.

EVERY COUNTY SHOULD ORGANIZE.

Only twenty Wisconsin counties have thus far stayed out of the pure-bred seed grain organization.

Service of the Implement Dealer.

What Is Expected of the Dealer and Why He Should Have Reasonable Compensation---By Hugh M. Craig.

WHEN I used to live down on the farm and go to town for some piece of farm equipment our vision of the implement dealer was confined to a man who had omething to sell that we wanted and e was going to get all it was worth, nd it was necessary for the head of he house to go along and do the dick- ring.

The sale usually wound up by the ealer making a satisfactory price, lenty of time in the terms, and al- ays used the slogan, "Satisfaction uaranteed."

Those two last words have helped reak many a dealer's back and bend, not actually break, more than one anufacturer's. These two words ave caused more unnecessary ex- ense in the implement business than ny other couplet that could be oined. The usual warranty behind ny standard brand of farm imple- ent, for instance, reads in substance ke this, "The articles are separately arranted only against breakage aused by manifest defects of material r workmanship and no claim shall be ade or allowed after a reasonable est of any of the implements pur- hased on account of not performing he work for which the implement as manufactured."

The "Satisfaction Guaranteed" was ust about all of the service we as armers saw and whatever else the arm equipment dealer was doing in he way of service for us as a class as totally unknown. Our main idea as to get the machine home and put t to work and if it didn't satisfy us e laid it aside, making a trivial ex- use and many times were unjust nough to buy elsewhere.

However, in late years tremendous trides have been made in the retail nd of the business. The cost of do- ng business has been preached from ne end of the country to the other nd every single item of income and utgo has been carefully tabulated by he better class of dealers. These ifferent expense items and their auses have been given careful atten- ion and today the careful and effi- ient dealer knows beforehand what n average amount of business will ave to bear in the way of service ex- ense.

These services rendered the trade re costly and are paid by the buyer t the end. No one disputes the sound usiness principle of giving value re- eived by the merchant, but there is limit to all things and especially so hen a no-limit service means an limination of the one who attempts o supply it.

What are some of the visible and in- isible services rendered by the ealer to his community and custom- rs? First, of course, there is the alue of his investment as a going usiness to the town, the fact that he elps pay taxes and in many ways elps keep up the town which in it- elf is no easy task. One of the ways o measure the value of the small own to the country home is to think hat would happen to farm values if ll small towns were abolished.

He boosts every conceivable thing hich has the ultimate benefit of agri- ulture and his customer as its object.

The reputable dealer orders twelve nonths ahead of time the implement e is to sell, besides carrying large tocks of implements over from one eason to the other. He has estab- ished credit relations with nearly all he manufacturing concerns in the ountry and can get in the quickest ossible time any article for the farm ou may want. He displays at his lace of business all models of ma- hines salable in his community so he farmer may see with his own eyes ust what he is buying and when the eal is closed the farmer takes out he article ready to go into the field nd perform its work.

The next big service the dealer ren- ers to his customer is entirely finan- ial in nature. The implement dealer, s a class, has constituted one of the heapest agencies for farmer loans ver known in this country. Each ealer has been a loan agency all to imself and if the amount of money oaned by dealers to farmers was to be lumped together into one sum it would annually run into millions of dollars upon which the farmer has not paid 1 cent of interest. Taken from a purely philanthropic standpoint, this system is perhaps a success, but from a business standpoint it is an abso- lute failure.

It is not at all uncommon for a re- tailer to carry as high as $15,000 to $20,000 in open accounts on his books from spring until late fall and winter. This is a service chargeable against his business at the rate of 6 to 7 per cent, equalling $900 to $1,000 annually. Yet competition is so keen in the re- tail implement field the dealer has at- tempted to absorb this service along with practically all the fluctuations in the market prices of his goods from year to year. Could there be any higher service possible than first-class banking privileges furnished free of charge?

In too many communities and in too many cases the dealer has a long, ex- pensive wait for his cash. When you stop to consider that he is the market- ing channel of nearly $200,000,000 worth of farm equipment annually it doesn't take a very long wait for free time to run into a considerable amount of money. Contrast this state of affairs with the dealer's customer, the farmer, who sells all his goods for cash and the only time he has to wait for it is while he is waiting for the market price to adjust itself to suit. Even so, the farmer can always find a cash value for his produce, while the dealer is unable to borrow a penny on an open account, and some time the same is true on good farmers' notes.

This is the service little known out- side the business has for its in- ception a necessity in the early days of development in this country, and has lingered in the business because of competition and precedent. How- ever, the time has come when neces- sity is forcing less and less of this kind of dealer-banking, as the farmers are fast becoming more prosperous than the dealers and the farmers' own terms of sale are being more general- ly followed by those dealers who mean to stay in the business. These terms appear on the bottom of any public sale bill:

All sums under $10, cash.
Sums over that amount must be set- tled by good bankable note drawing 6 per cent.
No goods to be taken away until set- tled for with clerk of sale.

This is right and proper. It is good business and the retail dealer would do well to copy this good business practice from his farmer customers and use for his sales slogan "Farmers' Terms Go Here." When this practice becomes universal one of the most ex- pensive elements of the business will be eliminated and the farmer will be the first to get the benefit.

The services the farmer actually sees and makes use of each time he buys an article of any size are such as having the article set up in run- ning order, and, in some instances, having it delivered to his farm. Also the use of experts from the dealer or manufacturer to start the machine, as well as the use of all the facilities thereafter to keep it up to its highest efficiency.

The implement dealer also gives away much free labor. There are con- stant demands made for repair work on old machinery, adjustments on new machines and not a small amount of expense can be charged to work done on new machines which are in the hands of the farmer and for which there has been no definite settlement agreed upon between the dealer and the farmer. This general work is charged for in many cases, while in others the materials only are charged and paid for.

Keeping stocks of repairs is another big service rendered by the dealer and he will also make the hardest kind of efforts to get repairs for any machine whether new, old or obsolete.

The implement dealer invariably has out in the hands of his customers at least one pair of pump tongs, a set of fence stretchers, special tools for pump work, windmill rope, etc., all loaned with good grace by the dealer, and are of real importance and saving

Wisconsin Farm Tractors

It is just as important to know the pedigree and quali- ties of a tractor as of a horse. Who builds it? What experience has the firm had in *practical* tractor work? What records have the firm's products made? Are they built right? Do they stand the "Drive" of hard work?

Then what are the pedigree and qualities of Eagle Tractors?

The Eagle Tractor is not an assembled machine, but is manufactured in our own factory. This Tractor is the outgrowth of practical work with years of tractor and gas engine building experience by men who are famil- iar with Wisconsin farms and farm conditions.

The motor, a vital part of any tractor, is the famous **Eagle Two-cylinder Valve-in-the-Head Motor,** known in all Wisconsin as the engine that "runs like a steam engine." It is the motor that made such a wonderful record in Eagle Portable Engines. That, in itself, is a guarantee that Eagle Tractors have smooth and abun- dant power for both

All-around Belt And Tractor Work

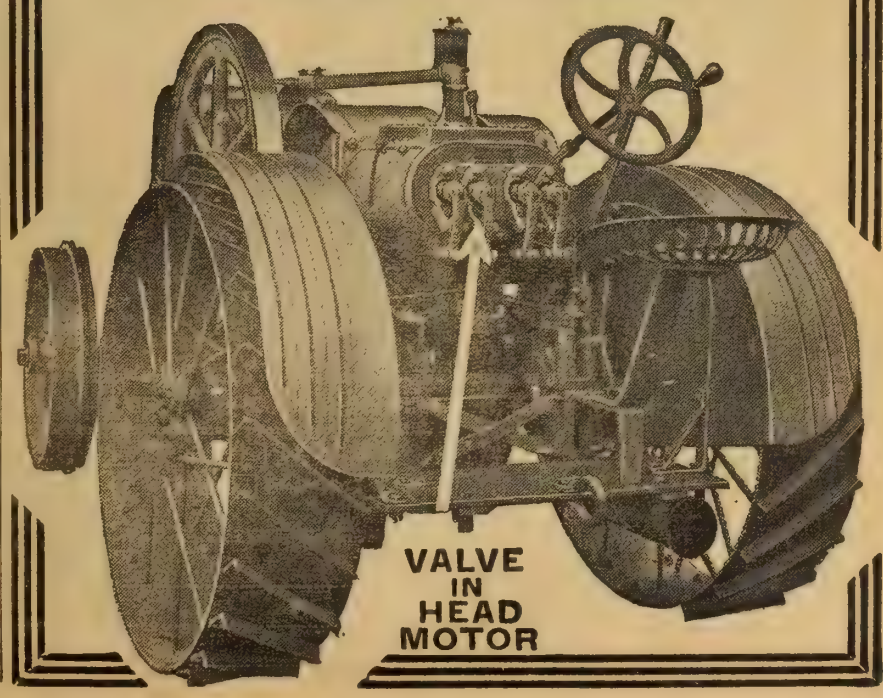
The Eagle Tractor is built to do heavy and light work, quickly and economically, yet it sells at a price within reach of every farmer.

It is safe--it is simple--every part is easily accessible. In a word, it is built to be operated and taken care of by the average busy farmer. An Eagle Tractor is chuck full of life and develops an abundant flow of smooth power, yet it is as easily controlled as a well- broken horse.

It is light weight, yet strong and correctly balanced. Eagle means built right, built to meet a need success- fully, not built to meet a price, yet the price is rea- sonable. The Eagle reputation and Eagle experi- ence in farm power are behind every Eagle Tractor.

Investigate the **Eagle Gas Tractor** *before you buy. It costs nothing to learn all about it. Write us today. We shall gladly send you complete information.*

Eagle Manufacturing Company
672 Winnebago St., APPLETON, WISCONSIN



The Zig Zag Tag Means Tested and Guaranteed Portland Cement

Say to your dealer:

"Give me the bag
With the ZIG ZAG TAG!"

Then you'll get a bag of the best quality

Portland Cement

bearing a tag like this

and the name

Marquette Portland Cement

If your dealer does not carry Marquette cement, write us your dealer's name and address and we will advise you nearest point where it can be secured.

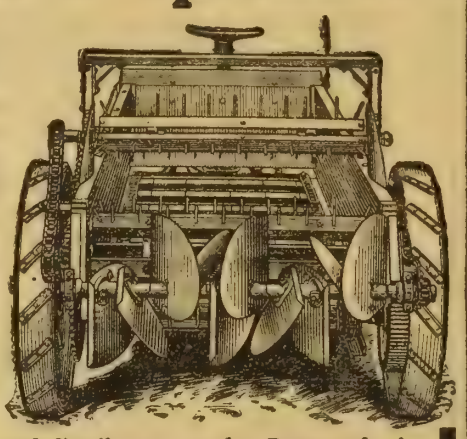
Made by Marquette Cement Manufacturing Co.
CHICAGO, ILLINOIS LA SALLE, ILLINOIS

Can I Afford a Spreader?

Will It Pay on My Farm?

Government reports show the average loss of manurial value on farms is over $100 annually. This is caused by leaching and firing in piles and by uneven field spreading by fork or otherwise.

Stop this waste. Get *all* the fertility value from your manure. You can do this with the



NEW IDEA Registered U.S. Pat. Off.

the spreader that pulverizes finely and distributes evenly. It pays for itself in a year. The reliable, guaranteed **NEW IDEA** is good all the way through. Instead of gears it is drawn by quiet chains which last for years. Chain conveyor brings every mite of manure to where double cylinders insure thorough pulverization. Our patented steel revolving distributor spreads it 7 ft., across three corn rows. The spread goes beyond the wagon tracks so you do not have to drive over spread manure.

This machine is only 43 inches at highest point and can be easily loaded. Owing to the absence of gears and the fact that the wheels track it is of light draft and two horses can easily pull it. Built like a wagon box, strongly braced at all points. Unconditionally guaranteed for one year and indefinitely guaranteed against breakage from defective material or workmanship.

Write for Valuable Book FREE

Let us give you a copy of "Helping Mother Nature." The best book on manuring ever written. Not a catalog but a book of real value. You get it for nothing. *Ask the New Idea Dealer* or write us for a copy. Absolutely FREE.

NEW IDEA SPREADER CO.
"Spreader Specialists"
225 First Street Coldwater, Ohio

to the customer on account of being more or less special in nature and usable only now and then.

All this service is furnished freely and with the best of intentions by the dealer, and there is a good reason for it. By far the large majority of farm equipment dealers have been farmers themselves at one time in their lives or actually own and operate farms of their own at the present time. This makes them particularly sympathetic to the needs of their customers and a real friendliness exists between them which is peculiar to but few other businesses.

Thus we find a business carrying a service in many instances all out of proportion to the amount of sales involved. Whether this condition is found in the implement business or in any other business it takes a high order of business training and judgment to make an ultimate success of the venture. New dealers come into the ranks from farming and these men find a highly developed business conducted on narrow margins and competition so keen that only the very best dealers survive.

Anyone can see with the business so highly developed on the basis of service to the customer there must be some expense incurred and the question naturally arises, "Who pays for it?" and also "Isn't it possible to reduce it and give the consumer the benefit?" This question answers itself as we will see shortly. The profit asked on any article is based not alone on its actual value, the mode of selling, as well as many other factors involved but also on how many times the capital can be turned each year. Suppose the capital is turned once in two years, once in one year or a number of times during a year, a marked difference is noted in the margin of profit asked in each case.

If the farmers are going to ask of the dealer every conceivable kind of service and not pay for this service as they get it this excess expense must go into the price of the goods. If the farmer must have all this service and the dealer wants to still give it he has but one way to still get a narrow margin of profit and remain in business, and that is by turning his capital more frequently every year. The faster capital is revolved annually the more service burden it will carry even when the margin of profit is less. Also the difference between what is really necessary service and what is not service, but simply unnecessary expense becomes very marked and is easily distinguishable. In other words, we must hurry up the cash from the time the original investment is made in the material and labor and is returned from the farmer to the dealer and thence to the manufacturer.

For instance, the coal dealer has a car of coal or lime shipped him on short-time terms. Upon its arrival he phones many of his farmer customers the car is in and if they will shovel the coal into their wagons direct from the car they will save so much per ton. He can make this proposition because the farmer gets the coal with the minimum amount of service and saves the dealer the expense of handling the coal. The transaction is a simple one, so much coal from the mine to the dealer in a car, and from the car to the farmer for his stove.

However, the mechanical equipment of a farm is so varied, manufactured at so many different sources, each machine carries individual problems unrelated to any other machine, and added to all this is the rapid progress of improvements demanded by the American farmer to place the machines and equipment he uses at the very top of practical efficiency, both as to mechanical perfection and quick service. This precludes any thought of any other means of distribution except through the medium of the retail dealer; and looking at this question entirely from the viewpoint of the farmer, I feel if we are to retain a semblance of the present service and still get our farm equipment at a lower price we should do our part to speed up the turning of the investment made in this equipment.

We say "money talks." If so, why not use more of it when we buy implements? We say our note is as good as the cash. If so, why don't we keep our agreements more promptly? We boast an account against us is as good as the wheat. If so, why do we let our cash lay in the bank awaiting the semiannual interest dividend of 1½ to 2 per cent when the same money if used as cash when buying farm equipment would bring three times as much?

The actual hardship in the business is the failure of the customer, through negligence and carelessness, to make good his promises to pay either when the account is merely on the books or in a note. The dealer counts on discounting his bills at certain periods of the year because so and so owes him and will make payment in time for him (the dealer) to pay his bills due the manufacturer. But, unfortunately, the customer is holding his produce for a satisfactory market quotation or some other reason which forces the dealer to borrow. The customer could save more than the bank rate of interest if he were to finance his purchases through the bank rather than through the dealer and besides get the saving in the first price of his purchases.

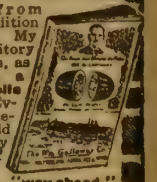
These services, as well as the complexity of detail surrounding the buying, selling and using of farm equipment need a dealer to handle them. This business has always needed the dealer and it always will. Some one farmer may be able to buy some one implement now and then and not need any element of service whatever, but sooner or later this same person will find the dealer is his only salvation and help and his value to him will more than overcome temporary advantages secured through other channels. Just as some one in town now and then makes it a practice to go direct to the farm for a few eggs, vegetables, etc., but these same people would be the last to want to see the local merchants discontinue to serve the community.

The farm equipment dealer is beset with problems of all kinds and is successfully solving them as fast as he can get to them and to him belongs the credit of giving more service in proportion to his investment in the business than any one other class of merchants doing business with the farming public today.

PRICES CHOPPED

10000 NEW 1916 GALLOWAY SANITARY CREAM SEPARATORS

Special Proposition from Now till Grass—in addition to my new low prices. My way of opening new territory and making further sales, as one separator sold in a neighborhood always sells from one to twenty-five more. Every customer boosts—their statements coming from my lips would be called "exaggeration." Every Galloway Separator is equal to if not better than other separators selling for $75 to $95.---users say "way ahead." I only ask one thing—before you buy a separator of any make, kind or at any price, get my big book—pick out the separator you want, try it 90 days—180 times—at my expense. If you decide to keep it (you don't have to) I'll give you the choice of 5 open, fair and square selling plans and guarantee my separator for 10 years against defective workmanship and materiall A $25,000 bank bond backs every sale!



NOTE THIS BUILT-IN QUALITY

Heavy, high carbon steel gear shafts and bowl spindle; extra long bearings; strong, sanitary bowl, discs not fastened together; oil bath lubrication; big, roomy, seamless, pressed steel supply tank; both gear shafts and both spindle bearings supported by one solid casting; heavy sanitary tinware; low bowl speed reduces wear on bearings and gears. No raw, sharp edges in the bowl to cut up the globules of butter fat.

Handsomely printed, beautifully illustrated in four colors. Tells all about my new 1916 Sanitary Cream Separators, how I build them; gives my 4 new low prices on 4 good sizes, also my 6 easy selling plans, cash or terms, etc. I'll also send my special proposition on 10,000 Galloway Sanitary Cream Separators. Drop me a postal today. Separators shipped from Waterloo, Kansas City, Council Bluffs, St. Paul or Chicago.

Wm. Galloway, Pres., The Wm. Galloway Co.
33 Galloway Station Waterloo, Iowa
Cream Separator Manufacturing Specialists

Girl Wins In Pork Contest.

Edith Penno, of Grafton, North Dakota, Makes a Splendid Record With Litter of Twelve Yorkshires Which She Fed.

A PORK production contest open to boys and girls ten to eighteen years of age who would raise a litter of pigs was conducted in North Dakota in 1915 for the third time. The awards were made on the basis of the largest gains in the shortest time and at the least cost. Four hundred and fifteen dollars in cash and three pigs were offered as prizes.

Edith Penno, of Grafton, won the contest by securing a return of 54¼ cents per day above the feed cost. Her litter of twelve Yorkshires weighed 2,593 pounds at 193 days old and used up $50.92 worth of feed. She fed largely barley, screenings, skim milk and pasture. The prices charged for the feeds were: Barley, 52 cents; corn, 54 cents; oats, 32 cents; shorts, $20; screenings, $10; skim milk, 25 cents per 100 pounds; pasture, .3 cent per hog per day and corn hogged down $8 per acre. The hogs were valued at 6 cents a pound.

Kenneth Wood, of Arvilla, won second place with a litter of twelve Berkshires that at 209 days old weighed 2,655 pounds. The feed cost was $65.11, leaving a daily return of 45 cents per day above feed cost.

Emile Clairmont, of Walhalla, secured the greatest weight of litter. His twelve pigs weighed 3,080 pounds at 201 days old. His feed cost was large, amounting to $115.80, leaving a return of 34¼ cents a day above the feed cost. This gave him sixth place in the contest.

The average weight of the 232 hogs in the twenty-four prize-winning litters was 197 1-3 pounds at the average age of 208 days. These results were secured both with and without corn. The average weight secured in 1914 was 210 pounds at 218 days old. The average return per day per litter above feed cost in the 1914 contest was 39 cents against 30 cents this year. The higher cost of feeds and the smaller use of corn apparently accounts for this difference.

The purpose of Thomas P. Cooper, director of the North Dakota Experiment Station, in starting and conducting these contests has been to develop a greater interest in pork production. The contestants in trying for the prizes would make demonstrations in economical pork production in all parts of the state. The contestants are from year to year paying more attention to economical production through the use of feeds that might not otherwise be of value, or of but small value, as screenings, and through combining these feeds with those that are more expensive. A great deal of attention has also been given to the best manner of feeding, as grinding and soaking the feed.

The boys and girls have demonstrated in this contest that pigs farrowed early in April and fed on pasture supplemented with grains and skim milk can be made to reach a weight of 200 pounds in seven months and at a profit. The pigs have returned about twice the market price of the feeds used. The boys and girls through these contests have demonstrated the possibilities in pork production as well as how to secure them.

STOCKMEN MEET AT MARSHFIELD.

At a meeting of the Central Wisconsin Live Stock Breeders' Association, held at Marshfield recently, it was decided to hold the third semiannual sale about May 10th. Final arrangements were also made for financing the new sale and show pavilion erected on the fair grounds at Marshfield. This is nearing completion. It will be the largest and best equipped barn in the state and many say the best in the United States. The barn is 150 feet in diameter and will contain 178 patent stalls with concrete mangers, floor and gutter. There will be steel box stalls, enough to accommodate about seventy head of cattle. An office and sleeping rooms for attendants of cattle are also provided. The seating capacity of this barn is over 1,000. The cost when completed, which will be by April 25th, will be $6,500. E. E. Butters, Marshfield; W. W. Clark, Grand Rapids; C. H. Imig, Junction City, were appointed to make arrangements for the sale, which they plan to make a two and perhaps a three-day affair, depending on the amount of stock that is consigned. The two sales held last spring were said to be the equal of any sales held in the state. It is expected to make the coming sale even more of a success by selecting a bunch of stock that is strictly high class in every way. We expect to handle the sale in a way that will be a credit to the state at large, as well as the community and the Central Wisconsin Live Stock Breeders' Association that stands back of it.

GUERNSEY MEN ORGANIZE.

The first annual meeting of the Langlade County Guernsey Breeders' Association was held at the court house at Antigo on Saturday, February 26th. The business meeting was followed by a short program. Officers for the ensuing year were elected as follows: President, Gus Schroeder, Bolling; vice president, Chas. Lade, Polar; secretary-treasurer, Peter Krier, Antigo. Executive committee, with above officers: Anton Follstad, Elcho; Fred Swenson, Antigo. During the past year the number of Guernsey sires in the county has practically doubled. Several farmers have purchased pure-bred females. The thirteen members in the association own eleven pure-bred sires, twenty-three pure-bred females and 155 grade females. Over 100 Guernsey cows are enrolled in the cow-testing association for the coming year. An effort will be made to double the present membership.

STEVENS POINT FAIR ASSOCIATION.

The Stevens Point Fair Association has elected the following officers: President, I. S. Hull; vice president, E. H. Rothman; secretary, Meehan Pfiffner; treasurer, C. S. Orthman. The 1916 fair will be held September 12th, 13th, 14th and 15th.

John Deere Grain Binder

With All Steel Quick Turn Tongue Truck

THE Better Binder—The first binder to be equipped with a practical all-steel quick-turn tongue truck. The advantages are:

1st—Truck turns machine faster than team turns. This saves time in turning, square corners are made, and full swaths taken at the turns.

2nd—Stub tongue is all steel, hot riveted—no breaking, splitting or rotting. All steel eveners.

The binder that is noted for its light draft, sure cutting, elevating and tying.

Write for free booklet, "The Better Binder."

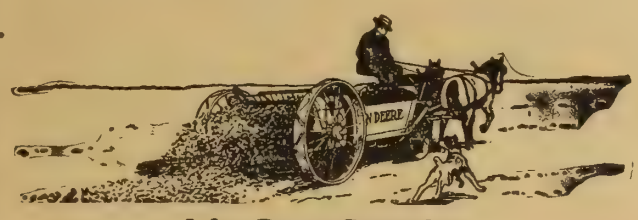
John Deere Disc Harrow

The Flexible Spring Pressure Disc

MODEL B—the only disc that cuts at even depth its entire width. It has a patented spring pressure lever. With this lever, pressure can be regulated at inner ends of gangs to cut out dead furrows or disc ridges without burying the harrow.

The Model "B" does not crowd toward the bottom on hillsides or in overlapping. The gangs are independent of each other and can be given the proper angle to work right under such conditions.

Write for free booklet, "Bigger Crops from Better Seed Beds."



John Deere Spreader

The Spreader with the Beater on the Axle

ONLY hip high to the top. Wheels out of way when loading. Mounting the beater on the axle is patented. Write for Spreader booklet.

Three exclusive John Deere Spreader features:

[1] Beater on the axle—nothing else like it. [1]

[2] Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching. [2]

[3] Ball Bearing Eccentric Apron Drive—requires no attention. Performs wonders in the working of the spreader. [3]

John Deere Plows for Light Tractors

High and Level Lift

PRACTICAL—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all bottoms raise high and level. Another pull lets them down. Plows do not clog or gather trash on the turn.

Extra beam and bottom, readily attached, increases regular two bottom plow to three, or regular three bottom to four, as desired.

Equipped with Quick Detachable Shares—save 80% time changing shares. Write for free booklet.

Dain System Side Rake

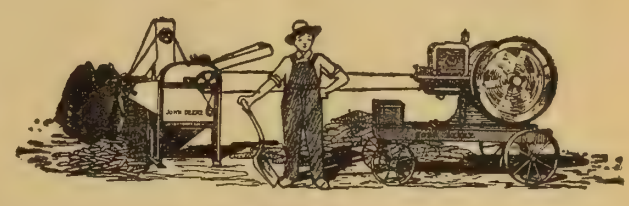
The Left Hand Rake

THE tool that is revolutionizing hay making. Left hand instead of right—follows the mower closely, places hay upon clean stubble and puts it in medium size windrows with bulk of leaves inside and majority of stems outside.

This means uniform curing and leaves don't dry up and fall off. They cure in the shade.

Hay is air-cured, not sun-scorched, retains its color, nutrition, feeding value and sells for more money.

Write for free booklet describing the Dain System of Air Curing Hay.



R. & V. Engines

Dependable Farm Power

"R & V" Triumph—always develops rated horse power—made in 1, 1½, 2½, 4, 6, 8, 10, 12, 16 and 20 H.P. sizes, stationary and portable.

Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings.

High grade throughout. Inspect the extra guard ring over piston pin to prevent possibility of scoring cylinder. Ask about the "R & V" oscillating magneto. Write for free booklet.

John Deere Dealers Everywhere

Better Farm Implements and How to Use Them

BOOK FREE—168 page reference book—tells all about a complete line of farm implements and how to adjust and use many of them. A practical encyclopedia of farm implements. Worth dollars. Describes and illustrates: Plows for Light Tractors; Steel and Chilled Walking and Riding Plows; Disc Plows; Cultivators; Spring Tooth and Spike Tooth Harrows; Lister Plows and Cultivators; Disc Harrows; Alfalfa and Beet Tools; Farm and Mountain Wagons; Teaming Gears; Manure Spreaders; Inside Cup and Portable Grain Elevators; Corn Shellers; Hay Loaders, Stackers, Sweep Rakes, Mowers, Self-Dump Sulky and Side Delivery Rakes; Hay Presses; Kaffir Headers; Grain Drills and Seeders; Grain Binders; Corn Binders; Gasoline Engines. This book sent free to every one who states what special implements he is interested in and asks for Package No. X-64.

JOHN DEERE MOLINE, ILL. THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

John Deere, Moline, Illinois

Alfalfa

ALFALFA, SWEET CLOVER, SUDAN AND BILLION $ GRASS

A quartette invincible. The first two made possible to grow and flourish on every farm in the United States, owing to Salzer's hardy ironclad strains—the last two growing 60 tons hay richer than Timothy in 10 weeks time on 10 acres!

OATS, WHEAT, SPELTS, BARLEY

A quartette of giants! Great money makers! Bred to health, stooling qualities, stiff, strong straw, big yields—all registered pedigree varieties endorsed by Agricultural Stations.

SALZER'S NORTHERN GROWN SEED CORN

High grade, high testing Wisconsin and Minnesota grown Seed Corn. The kinds that will surely ripen in 1916. We have lots and lots of it. Write us.

SALZER'S SEED CATALOG

For 48 years it has stood for quality in Farm and Vegetable Seeds. It's free for the asking. A postal will bring it to you. Send for it. Largest Seed Potato Grower in America! 35 Packages Earliest Vegetables, $1.00, postpaid.

JOHN A. SALZER SEED Co. BOX 123 LACROSSE, WIS.

SEED CORN

Testing 95%. A limited amount of genuine 1915 Godard's Silver King, grown here (fifteen miles from Minn. line) and picked before the frost, now drying in our new brick seed house. Also Choice Silver King grown by others. Have drying also the following varieties of fancy seed ears: **Minnesota, No. 13; Wimple's Yellow Dent; N. W. Dent.** We also have several lots of fancy 1914 seed corn. If preferred, **we can furnish our Minnesota patrons with choice seed grown in the latitude of Northfield, Minn.** We give you all the time you need after receiving the seed to test it and satisfy yourself of its high quality, and will promptly refund your money if dissatisfied. Write today for our "Guaranteed Seed-Corn" prices and descriptions.

THE ADAMS SEED COMPANY **BOX 50, DECORAH, IOWA**

1915 SEED CORN

Brings better results than old corn. Our seed is from the new crop. We have both rack dried and dried in the field. Test 90% to 98%. Satisfaction guaranteed. You can test the seed before you pay us. Don't take chances on old corn Write for catalog.

VERMILLION SEED CO.
Box A
Vermillion S. Dakota

CASHMAN'S

THOS. E. CASHMAN, President
CLINTON FALLS NURSERY CO.,
OWATONNA, MINN.

Please send your free catalog to

Name_____

Town_____

R.F.D._____ State_____

GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

Olds Alfalfa Seed

4 to 5 Tons per Acre —3 Crops per Year

Fancy North Dakota Alfalfa. From land never irrigated.
Fancy Montana Alfalfa. Brightest Montana Seed.
Fancy Idaho Alfalfa. Pure Northwestern grown seed.
Fancy Nevada Alfalfa.

99 per cent pure, brightest and nicest ever seen.
Grimm Alfalfa. Genuine Grimm seed. 99.2% pure.

Large stocks, all free from noxious weeds and high in germination. Ask for samples with tests and prices. Also free booklet, "ALFALFA CULTURE IN THE NORTH."

Olds' 96-Page Catalog

should be in the hands of every farmer. The best seeds, all kinds at moderate prices.

L. L. OLDS SEED COMPANY
14 Olds Bldg.
Madison, Wisconsin

STRAWBERRY Catalog Free

The Best of the hardy varieties, bargain prices. Kellogg's Hardy Northern grown fruit plants are well grown and productive. None better. Also

THE EVERBEARING STRAWBERRIES

fruits from early summer till Nov. Send today for price list and pamphlet of instructions—**62 years experience.**

KELLOGG'S NURSERY, Box 224, Janesville, Wis.

SEED CORN Disc Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

Buy quick! Save money—be sure of getting good seed. We fortunately carried over a few thousand bushels of choice seed from 1914 season, now offered at bargain prices. Write now for price list. Order early and get good seed.

Dakota Improved Seed Co. 27 Main St., Mitchell, S. D.

GIGANTIC TOMATO

SEEDS FREE

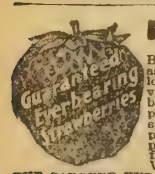
Here is the king of all **Tomatoes**, largest and most productive, fruit often weighing 2 to 3 lbs., each, and 100 to 150 lbs. have been grown on **one plant.** Handsome red color, very smooth, few seeds, solid all through, ripens early. A few plants will produce more Tomatoes than a family can use.

Our Special Offer

We want every person who uses seeds to see our 1916 **Seed Book** and try this **Giant Climbing Tomato.** We will send a sample packet in a **10c** coupon envelope for trial, with **Seed Book Free.** This Book describes the best Vegetables, Fruits and Flowers. Send your address today.

MILLS SEED HOUSE, Dept. 25, Rose Hill, New York

FREE FOR TESTING.



A pair of mated EVERBEARING STRAWBERRY PLANTS FREE if you will report as to your success with them. Will bear loads of big, red berries from June to November. We have counted 480 berries, blossoms and buds on a single plant. A postal will bring the plants, also enough seed of the new CEREAL FETERITA to plant a rod square of ground. Also a pkt. of perennial ORIENTAL POPPY seed. Send 10c for mailing expense or not, as you please. Write today and get acquainted with

THE GARDNER NURSERY COMPANY, Box 730, OSAGE, IOWA

NOTE: We will send one dozen genuine Progressive Everbearing Strawberry Plants, enough for one bed, for 60 cents, postpaid.

HARDY TREES & PLANTS

We Grow Them, Sell Direct, and Guarantee Satisfaction. CATALOG FREE.

STRAND'S NURSERY, Box 26 Taylors Falls, Minn.

Strawberry PLANTS **FREE** To introduce our *Pedigreed Everbearing* strawberries we will send 25 fine plants free. PEDIGREED NURSERY CO., SULLIVAN, MO.

12 Ever Bearing Strawberries Free

and 200 other choice varieties postpaid $1.25, 100 Dunlap and 50 each of two choice varieties with our book of instructions how to plant and grow them.

J. L. TODD & CO. R3 Box O Des Moines, Ia

Fruit and Garden

EVERGREENS FOR SHELTER BELTS.

Every stock farmer needs the protection of evergreen belts about his cattle yards, and it is good economy to provide them. When the January winds are blowing cattle exposed to their blasts suffer severely, and it is a costly suffering. The more exposure, the more feed required to maintain animal heat. Men who have had opportunity for observation know that the temperature inside a heavy belt of conifers is several degrees higher during cold snaps than it is on the outside. It is possible to calculate, with considerable accuracy, the extra amount of feed needed for every five degrees of cold, so it is within bounds to say that shelter is equivalent to feed.

It is a pitiable sight, with the mercury below zero and a northwest wind blowing, to see stock, with humped backs, shivering in unprotected yards. And it is a debatable question whether the cattle or their owner is most to be pitied. For as fast as they are losing flesh he is losing cash. Fifty per cent of this loss is unnecessary, for a wise outlay of a little capital and labor at the outset will stop it. Compared to the losses which come through neglect to provide shelter, the cost of the shelter is very small.

If your stockyards occupy a space six by six rods, plant four rows of evergreens along the north and west sides. More would be better, but even four rows of stocky, well-grown trees will tangle the breezes very successfully. One hundred trees will do it, and if you buy twice transplanted stock about two feet tall you will have trees which transplant with little risk, and after the first season will make an annual growth of eighteen inches on the average. You should plant them seven or eight feet apart, with rows the same distance, and break joints. At the end of eight years your trees will average ten feet in height, and the side branches will have filled up the spaces. At that time it will be a good windbreak, and getting appreciably better each year.

The whole cost, compared to the value received, will be only a trifle. The first cost of the trees ought not to exceed $10, and the planting and care for the first year the same amount. Cultivation for two years more $5 per year. Then mulch heavily with straw and they will need no more attention. The cost of your shelter belt when it becomes useful will only be $40. But make a liberal allowance and say it costs an even $50. That will allow something for the rental value of the land it covers.

Consider what it does for you if you have from twenty to fifty head of cattle or more. In the first place the snowdrifts are held back from the yard, so that you have the full use of it. Then, every animal that ranges your yards will require $2 worth less of feed for the winter. And the extra comfort you enjoy in your work about the yard and barn might perhaps be stated in precise terms of dollars and cents. Your shelter belt will be worth to you, for each and every year, the full amount of its cost.

It is important to consider well as to the variety of tree you use for this work. The Scotch pine will grow very rapidly and will reach the protective stage quickly, but it will not make as close and as lasting shelter as the spruce. So, in the long run, the white spruce or the red cedar will be more satisfactory than any of the pine family.

GROWING ASPARAGUS.

To the Editor:—I will tell you how we grow asparagus. I do not agree with the majority of growers when it comes to growing this crop on a large scale. As a general rule they will tell you to plant four to six feet by eighteen inches to two feet. This is all right, but I do not like to have single rows. By planting two rows in a bed you will save half the work cultivating the furrows and the weeder will do better work on a wide bed. Weeding is one of the big items when it comes to growing this crop on a commercial scale. We can take care of ten acres all through the cutting season with one man and a horse and keep the beds perfectly clean without any hand work till up to the middle of August, when we have to get down on our knees and pull the weeds by hand.

Now, almost all the directions will tell you to disk or plow the beds after the last cutting. We would not think of doing this, since you will spoil all of three or four days' cutting which will amount to $15 or $25 per acre. Also, they will tell you to start cutting the first or second season after planting. This is like putting a two-year-old horse into harness. By the time he is old enough to do hard work he will be crippled. We begin cutting the fourth or fifth year. If the fourth year cut only until the middle of June.

As to soil, most growers claim that light, sandy soil is the best. We tried this on a four-acre patch nine years ago and 60 per cent of the plants are dead, while on black, sandy loam, in a bed over fifty-five years old, the yield was good up to eight years ago. The main thing is dry, well-drained land.

We grow white only, as our market is 15 to 25 per cent better on the white than on the green. We have the Argenteuil, Ragend Ciant and Brunswick varieties. So far the Argenteuil seems to be the best. You will hear a great deal of praise for the Columbian White, but I would advise to go slow on this, because it is neither white nor green, but a dirty, smutty color.

I will add how I got badly fooled. Six or eight years ago I went down to southwest Texas—planning this for different farmers—from Houston to Brownsville. I was under the impression they would be able to compete with California, but now since they send me samples I was surprised to see the poor, small stalks—nothing larger than a pipe stem. Such stuff could not be sold in our market. When it comes to growing fine, large grass Oregon will beat all. My relatives live near Portland. I have been out to see them several times and the first thing that struck me was the large grass, but they can't grow this for market, as the price is too small—2¾ cents per pound. Grain and hay would pay us better at that price. The last twenty years we have figured on 16 cents to 20 cents per pound, which gives from $400 to $500 per acre. When it comes to dollars and cents I'll stay at home. Old Wisconsin is good enough for me.

When it comes to book farming this has done more damage to us than benefit. Our last experiment was a $1,000 irrigating plant, which never paid the expense for lubricating oil.

Another thing: If you will read Professor Haximer's book on how to grow asparagus you will see he tells you to be sure to plant it deep enough, as the plants will raise a quarter of an inch every year. According to his idea, when we plowed out the fifty-five-year-old bed the plants should have been ten to twelve inches above the ground. C. A. Schulpius.

Milwaukee Co., Wisconsin.

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SOLD direct to planters at wholesale prices. Write for catalog. It's free. Address Fairmont Nurseries, Drawer 8, Fairmont, Minnesota.

Results of Testing the Cows.

How the System Has Worked Out in Langlade County the Past Year---By F. G. Swoboda, County Agricultural Agent.

CHAS. SCHOTTE, on Route 5, has the distinction of owning the champion butter cow in the Langlade Cow-Testing Association for 1915. Mr. Schotte's cow, a grade Jersey seven years old, produced during the year 8,424 pounds of milk and 466.3 pounds of butter fat. Her gross returns for butter fat were $131.40, cost of feed $38.68 and profit $92.34. Mr. Schotte is one of the most enthusiastic members of the association. He unhesitatingly credits this cow's splendid production to the better care and feed given her because he belonged to the association. He is making his dairy herd a study and dairying a real business. He admits, like many other members, that in the past his cows have not done as well as they might have because of lack of proper attention. He has been using a pure-bred Jersey sire for a number of years, but that, he says, was only a start toward dairy success.

Henry Ings gave Mr. Schotte a mighty close rub for first honors, his grade Jersey producing 453.2 pounds of fat from 7,150 pounds of milk. Her feed bill was $36.88 and net profit $88.48 with returns for $1 worth of feed $3.39.

	High herds	Low herds	Difference favor High herds
Average milk production	6220 lbs.	4817 lbs.	1403 lbs.
Average fat production	287.3 lbs.	206.6 lbs.	80.7 lbs.
Average cost of feed	$34.12	$28.57	$ 5.55
Average net profits	$46.44	$28.57	$17.87

Mr. Ings' herd is a splendid illustration of what good care will do toward bringing up production. In 1914 his herd average was 294 pounds of butter fat at a feed cost of $35.90. The next year his herd production went to 325 pounds of butter fat, an increase of thirty-one pounds, while the feed expense only went up 17 cents to $36.07. Mr. Ings credits this to the fact that during the past year he was able to give his herd all the attention they required.

Third high cow was a fourteen-year-old Jersey owned by Harry Guenthner. She produced 8,556 pounds of milk, 429.7 pounds of butter fat and a net profit of $59.44 at a feed cost of $47.11. Out of the ten highest cows eight are Jerseys and two are Holsteins. Jersey men have a right to feel proud of the showing of their breed for aside from the large proportion in the ten high cows list, Jerseys ranked well all through.

Honors for high-producing herd go to Harry Guenthner on his Jerseys, with an average butter fat production of 381 pounds, with an average milk yield of 7,656 pounds. The average feed cost for the herd was $44.75 and the average net profit $61.92. This herd is clearly an exemplification of the value of good breeding combined with good feeding. While this herd had the highest feed bill, it also produced the highest net profit. In contrast the herd with the lowest feed bill had the lowest average production of butter fat.

TEN HIGH COWS.

Owner and breed	No.	Age	Mos. in milk	Per cent fat	Lbs. milk	Lbs. fat	Gross Ret.	Cost of feed	Profit	Net for $1 feed
Chas. Scotte, Gr. Jer.	8	7	10½	5.59	8424	466.3	$131.4	$38.68	$92.34	$3.38
H. Ings, Gr. Jer.	6	6	11	6.33	7150	453.2	125.36	36.88	88.48	3.39
H. Guenthner, Gr. Jer.	1	14	11	5.02	8556	429.7	106.55	47.11	59.44	2.26
H. Guenthner, Gr. Jer.	5	5	11	5.23	8143	426.1	123.22	47.11	76.11	2.61
C. Vorass, Gr. Hol.	7	6	10½	4.74	8181	388.6	105.91	31.98	73.93	3.31
J. Guenthner, Gr. Jer.	1	8	11½	4.93	7530	375.1	107.30	43.10	65.20	2.51
Wm. Rusch, Gr. Hols.	4	6	10½	4.83	7535	364.1	110.36	31.78	78.58	3.47
E. Quinlan, Reg. Jer.	8	4	11½	5.6	6494	364.2	101.50	45.07	56.43	2.25
E. Quinlan, Gr. Jer.	6	6	8½	4.46	7952	355.0	97.41	44.56	52.86	2.18
Chas. Lade, Gr. Jer.	2		10	5.48	6435	353.2	99.52	30.11	69.41	3.90

Between the fifteen high herds and the fifteen low herds are afforded some interesting comparisons. They become more strikingly apparent when presented in tabular form:

It is worth while to note that while the difference in feed cost between the high herds and the low herds was only $5.55 higher for the high-producing herds, the latter showed an average profit of $17.87 above the low herds.

As often stated, the dairy cow is the Wisconsin farmer's most dependable source of income. The cow-testing movement is the surest avenue toward the expense of testing. For years he has been using a pure-bred dairy sire. He boasts of two silos on his farm and each year stores away an abundance of clover hay of good quality, also other choice roughage. His animal feed bill for concentrates is always of good proportions. Deducting $1.05 per cow, the cost of membership, this man made a clear gain of $8.58 per cow on his twenty-cow herd. Four pounds of butter fat at market price pays the expense of testing for a cow for a year. The average increase of the ten herds was 27.2, leaving a gain of 23.2 pounds above the expense of testing.

Fifty-four cows were sold before the year closed because their records showed them to be either boarders or very low producers. About a half dozen others showed up as losers when the year's records were summarized and others together with many low profit producers still left at the end of the year have received their sentence to the butcher.

Aside from the drawing of the line between the profitable cows and the boarders or near boarders, the greater interest the cow-testing association is fostering in better dairy methods is the big thing to be credited to it in Langlade county. The enthusiasm for testing which cannot be stimulated from the road is spreading over the line fence. The publication of the monthly forty-pound list and at the end of the year the full report of the year's work are raising the standard of the dairy cow in the county.

A survey of the farmers in the association shows that all but five of the members either owned or used pure-bred sires. All but four farmers had silos and two of these four bought silage from the local pea canning factory. Twenty-one out of thirty-five farmers in the association fed a balanced ration.

placing it on a business basis where it should be. The fact that the second year's work sent sixty out of 500 cows, or about 12 per cent, to the butcher and this clearly out of herds which are considerably above the average reveals that at least 1,000 cows are being kept in the county that are money losers. In all probability, the number is nearer 2,000 for the majority of the herds in the association were either grades or grades and pure breds, while there are still many herds in the county the offspring of low-grade and scrub sires.

STATISTICS FOR BEST FOURTEEN HERDS IN 1915.

Rank	No. cows	Ave. milk	Ave. fat	Ave. cost feed	Ave. Profit
1. Jer.	7	7656	381.0	$44.74	$61.92
2. Jer.	5	6352	325.8	36.07	54.25
3. Hols.	8	6952	291.1	31.51	50.39
4. Hols.	8	6816	290.2	29.61	58.09
5. Jer.	10	5529	286.9	42.57	38.29
6. Jer.	16	5112	273.7	34.98	39.43
7. Mixed	6	5645	272.4	36.46	40.60
8. Hols.	5	6536	271.7	33.19	39.45
9. Guer.	20	5571	268.4	31.16	46.19
10. Mixed	12	6338	268.6	26.46	46.73
11. Hols.	12	6196	266.6	29.40	44.52
12. Guer.	12	5614	264.7	35.01	38.62
13. Hols.	6	6021	263.0	29.84	42.04
14. Hols.	10	6607	262.9	30.65	44.02
Ave.		6378	279.2	33.66	41.46

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MR. A. M. ROSE
Judge of the Circuit Court of Illinois
"Tuxedo tobacco is pleasantly mild, yet has a fragrance that is most satisfying. I enjoy Tuxedo more than any tobacco I've ever smoked."

A. M. Rose,

Tuxedo has plenty of imitators—but there *can't* be another tobacco like Tuxedo, because no other can be made by the secret "Tuxedo Process."

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Convenient, glassine-wrapped moisture-proof pouch . . . 5c

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In Tin Humidors, 40c and 80c
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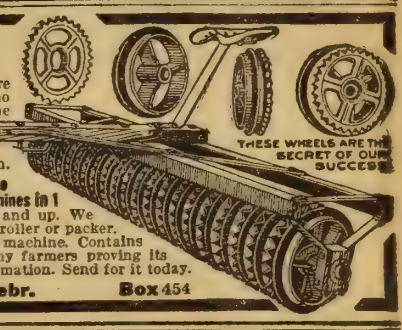

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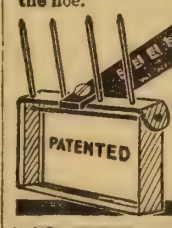

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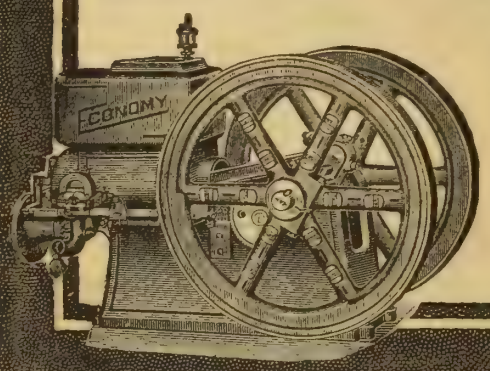

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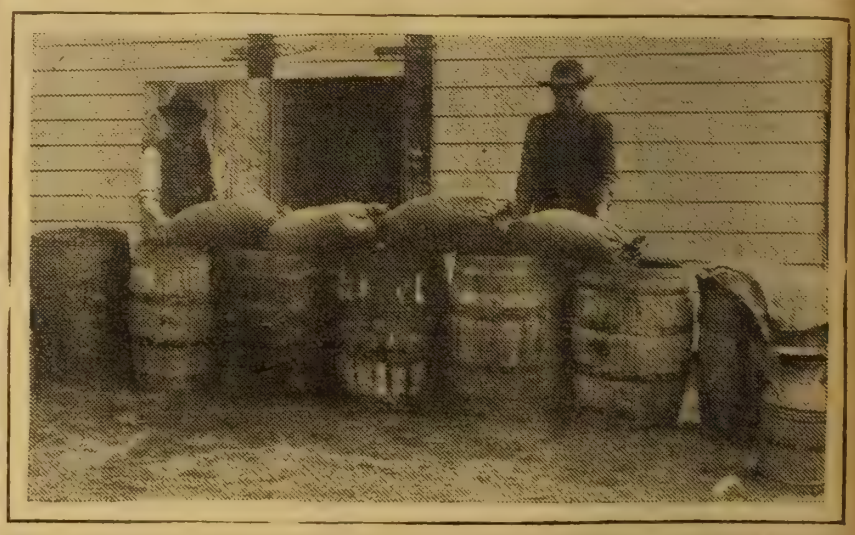
Fight Grain Smuts and Blights.

Methods of Control Suggested by R. E. Vaughn and A. G. Johnson, of the Wisconsin College of Agriculture.

GRAIN smuts and blights were unusually severe in 1915 owing largely to the cool, wet season. The seed, then, that will be sowed the coming spring will have an abundance of smut spores or "germs" under the hulls, in the furrows and even inside the kernels. This statement applies particularly to oats smut and barley smut, but certain other wide-spread diseases, such as the leaf stripe disease of barley, come in the same class.

If such seed is sown without first killing the spores loss from smut is sure to occur. Such losses in Wisconsin in the past caused a reduction of one-third or one-half of the crop and unless prevented will be heavy this year.



SEED GRAIN IN THE SACKS READY TO BE DIPPED IN A FORMALIN SOLUTION TO KILL SMUT.

The formalin seed treatment is the best and most effective for general use on the farm. It has the decided advantage over the hot-water treatment in being easily applied. The cost is also extremely low, 14 to 15 cents a pound (pint), if purchased in quantities of five gallons or more. Farmers may buy together and reduce the cost.

The formalin treatment is not a "cure all" and can never take the place of strong seed and good preparation of the soil. Treated seed will also rot in cold ground the same as untreated seed. In other words, seed treatment is a thing to be added to good seed and culture. If the variety and soil are satisfactory you cannot afford to neglect formalin seed treatment. The diseases controlled are: Stinking smut of wheat, covered smut and loose smut of oats and covered smut of barley. Furthermore, when the seed is treated with the two-hour soaking as in process No. 1 the loose smut and leaf stripe disease of barley are also practically eliminated. Unfortunately, the loose smut of wheat, blotch disease or blight of barley and leaf and stem rusts of various grains cannot be controlled by the formalin treatment. Rusts cannot be killed by any kind of seed treatment.

The solution used is made up as follows: One pint formalin (formaldehyde 40 per cent); temperature about 60 degrees Fahrenheit in thirty to thirty-five gallons of water. The processes may be more or less varied, but these given have been found by experiments to be best suited to Wisconsin conditions. Barrels or tanks are not injured by the formalin and may be used for holding the solution when soaking or dipping the seed. The solution may be used several times, but preferably not more than four or five times.

Always run the seed through a good fanning mill before any treatment is given. This will remove many of the blighted kernels, the spore balls, much of the free loose smut spores and dirt.

2. Avoid freezing the wet grain; to

(Concluded on page 33.)

SHOWING THE EFFECT OF SMUT IN OATS.

How Boys Grew Prize Corn.

Minnesota Contestants Give Wisconsin Farmer Readers Result of Their Experiences in Growing Corn.

IT IS time to give serious consideration to corn here in Wisconsin. Seed is to be chosen and tested and The Wisconsin Farmer believes that many of its readers will profit by experiences of some of the boys who took part in the Minnesota state corn contest last year and were prize winners. Several of these boys have written us and sent their pictures. The letters which are given below are written by the boys themselves and relate their practical experiences in corn growing in 1915.

Used Prize Corn as Seed.

To the Editor:—Herewith find a photograph of myself and a little account of my experience in raising my acre of corn.

In raising corn I think the seed is of first importance. The seed I used was taken from ten ears I won first on at a grain show held in Warren, Minnesota, a year ago, and other select ears, equally as good, to make up enough seed to plant my acre. The ground was an extra good piece of ground I had corn on the year before,

LE ROY PETERSON.
Eleven years of age and a corn grower.

so I did not use any more fertilizer on it, but on account of cornstalks on it I double-disked it before I plowed it and it was plowed good six inches deep. Then it was disked again three times and dragged twice with a smoothing harrow. I planted my corn on the 22d day of May and dragged it twice before it came up. After it got large enough to cultivate it was gone through twice with shovels on the cultivator and twice with surface cultivator. We had some very heavy rains, but I always waited to cultivate until the ground was dry enough to work good. I hand-hoed around the hills and pulled all the weeds out. It was in bloom and tassel the first week in August. The corn ripened fairly good for this season.

I like my contest work and hope other boys and girls like myself will take up such work.

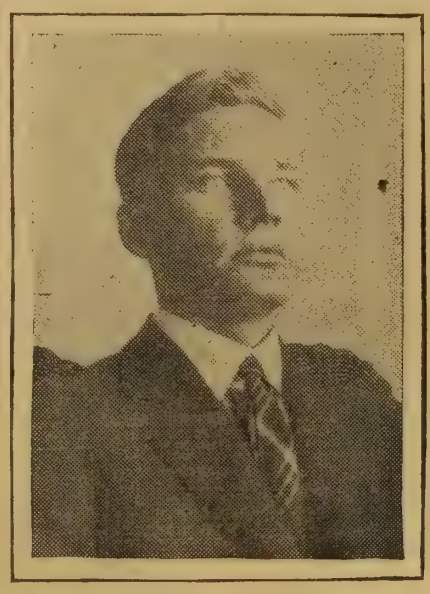
Warren, Minn. Leroy Peterson.

How I Grew My Acre of Corn.

To the Editor:—Last winter Mr. L. A. Henke got some of us boys interested in the acre yield contest.

I had a piece of land which was a little larger than the required acre. This land had been used for a barn site for about fifteen years, and for small grains for a few years. The last three years it had been used for potatoes. The land slopes slightly towards a lake, and this gives it good drainage but not enough to cause erosion. It is also protected on three sides by a grove of trees.

The corn I planted I bought from one of my neighbors who has been



ANTON HUSETH.
Raised nearly ninety bushels of corn to the acre.

growing "Rustler White Dent" for eight years with good results. The germination test of my corn was 99 per cent.

I planted the corn on the 18th of May. As soon as the corn appeared above the ground I began to cultivate it. This I did every week for seven weeks. I also hoed around each hill six times. When the corn was two feet in height I thinned each hill down to two stalks per hill. By August 1st the corn was nearly nine feet in height, and each stalk bore two good-sized ears.

As soon as the corn was mature Mr. Henke came and picked the corn on every row and weighed it. The yield was 89.6 bushels of good corn. About one-half of this corn can be used for seed. The cost of growing my acre is 22c per bushel.

I am entirely satisfied with my acre yield, but hope to do better this year.

Anthon Huseth.

Elbow Lake, Minn.

How I Raised My Acre of Corn.

To the Editor:—I chose a well-drained piece of land that raised a good crop of potatoes in 1914. It is a heavy clay loam, clay subsoil. It was

FLOYD C. BEMIS.
Overcame bad corn season and got state fair trip.

given twelve loads of barnyard manure, using a spreader. Was plowed seven inches deep in the spring, disked and harrowed several times to kill weeds as well as get the soil in fine shape. Corn was planted May 22d, marking one way three feet and four inches and planting with a hand planter twenty-eight inches in the row. It was harrowed twice after planting. When corn was four inches high it was thinned to three plants in the hill, leaving a perfect stand. It was then cultivated, afterward hoeing in the row, in all five cultivations and two hoeings. When laid by, corn was six feet high.

About the seed: I used Rustler White Dent, ear tested, so that I was sure it would all grow strong. There was not a weed to be seen and the soil was in very good shape, but owing to the very severe climatic conditions all through the growing season the corn did not act as well-bred corn ought to act. It grew too much to stalk and did not start to form ears until too late for them to mature. On the fourth of October, when frost came, it was just starting to dent, so in going through the moisture test there was a large shrinkage. In a normal season, with the stand I had and the number of ears, I am sure that I would have had a much larger yield of mature corn. The seed I used has been grown here for a number of years and has always got ripe before. I am going to try it again next year and by using the experience I have gained this year, and with better climatic conditions, I shall hope for a larger yield. It has been very interesting work for me and I look forward to a very pleasant as well as profitable trip to the Minnesota State Fair in 1916 as a reward for my labor.

Floyd C. Bemis.

Long Prairie, Minn.

Buying and selling seed grain is a business that calls for the highest degree of honesty and intelligence. For in spite of all the laws which may be enacted to protect the purchaser the seed business will always be one in which the character of the seller is one of the most important factors.

Anyone can grow ordinary grain, but only those of us who are careful should attempt to grow seed grain.

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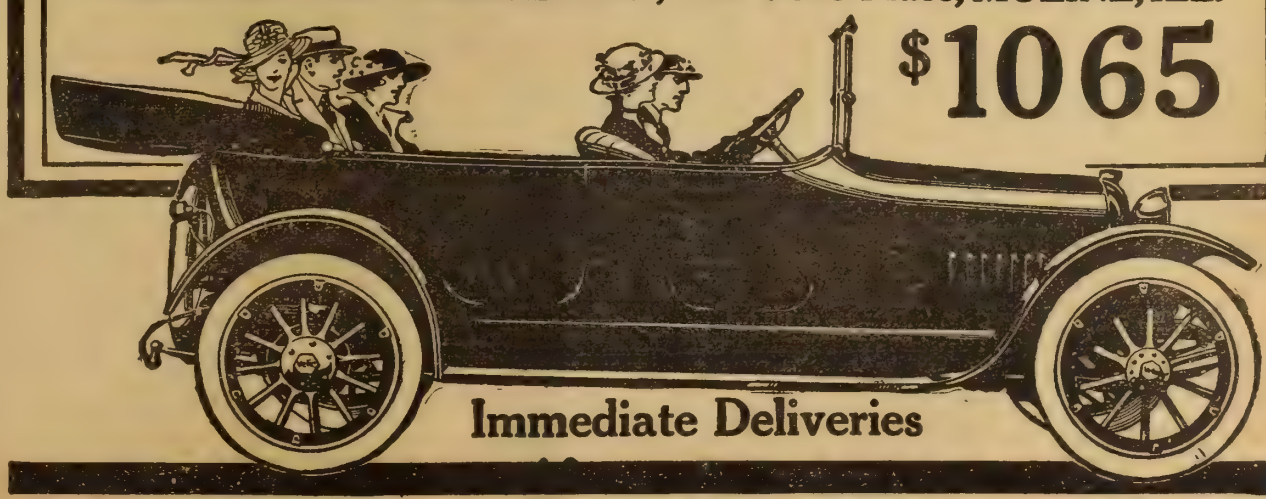

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No Cold Corners **No Chilled Eggs**

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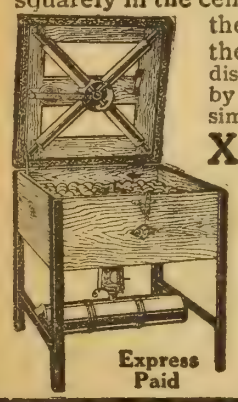

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Wisconsin Wins In Big Hatching Contests Every Year

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We also furnish 180 Egg Incubator and 180 Chick Brooder both for only..$12

Wisconsins have hot water heat, double walls, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Made of finest, select, clear CALIFORNIA REDWOOD, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1916 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

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STRONG, healthy baby chicks or eggs for hatching, W. Wyandottes. Our White Wyandottes are utility birds and are not like some so-called utility stock that consists of birds culled from flocks raised for exhibition purposes only. If you want stock that will lay well you must breed them for that purpose. Come and see these birds, or write for catalog giving list of matings, records and prices. Pine Lake Poultry Farm, Chas. H. Benjamin, Mgr., Dept. 12, Hartland, Wis.

BIG FOUR POULTRY JOURNAL—the Practical Poultry Paper for Practical Poultry Raisers; only paper devoted exclusively to the poultry interests of Ill., Ind., Mich. and Wis. It's **your** paper; you should read it. Bright, Snappy, Live. **Special Offer:** 6 mo. trial Sub. 15c. Send stamps. Big Four Poultry Journal, Desk 28, Chicago.

50 VARIETIES Chickens, Bronze White Holland, Bourbon Red Turkeys, Toulouse, Embden, African China Geese, Pekin, Rouen, Indian Runner, Muscovy Ducks, Guineas, Incubators and Brooders. Catalog 2c. **THEO. FRANZ, Box 104, Mankato, Minn.**

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WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

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POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

AX ONLY CURE FOR FOWL CHOLERA.

There is no satisfactory treatment for fowl cholera, says Dr. C. C. Lipp, veterinarian at the South Dakota State College. He says much good may be done by destroying the sick fowls just as soon as the first symptoms become evident. Their carcasses should be burned and the poultry houses and yards thoroughly disinfected, using compound cresol, seven tablespoonfuls per gallon of water. Care should be taken so that the solution reaches every crack and corner of the house, dropping boards and scratch sheds, otherwise the disease will continue unabated. After thorough disinfection the entire inside of the house must be whitewashed.

A weak solution of permanganate of potash kept constantly before the fowls may assist in controlling the disease. This solution is made by adding one teaspoonful of the crystals of permanganate of potash to one quart of water, stirring occasionally so as to get all the drug in solution. A small quantity of this solution is to be added to the drinking water, enough to tint it the color of red ink. Compound sulphocarbolates given in a mash feed or drinking water at the rate of one-half grain per fowl per day, also assists in the control of the disease.

Efficient prevention and control depend almost entirely on prompt and thorough disinfection, cremation of dead fowls and the use of intestinal antiseptics in the drinking water, as outlined in the foregoing. Do not depend on the cure.

Cause of fowl cholera. This disease is caused by a specific germ that enters the fowls with food and drink. Fr m three to five days are usually required before the first symptoms make their appearance. Sick fowls scatter the germs in immense numbers in their droppings, which easily contaminate feed and water supply and in this way spread very rapidly.

Symptoms:—The first symptoms are loss of appetite and increased thirst. The sick fowls do not follow the other members of the flock, but stand about with ruffled feathers and drooping tail. A profuse diarrhea soon develops. The discharges are white at first and later become greenish and streaked with blood. The head is dull in appearance and the comb and wattles become purple in color and sometimes even black. The disease practically always results in death. Sometimes fowls die in a few hours without showing any symptoms. Fowl cholera often spreads very rapidly through the flock and may reduce it 50 per cent or more in a comparatively short time.

POULTRY MONEY ENOUGH FOR FOOD AND CLOTHES.

To the Editor:—In my estimation, poultry raising is an occupation suited to both old and young. It has done much for me. It has, to a great extent, been the means of supporting my home in that it has supplied the table with meat and eggs, besides buying the groceries and much of the clothing for a family of six. Last year I raised 150 chicks and did not use an incubator. I had the best luck with the chicks, as I lost but a few, and these were killed by the mother hen. I seldom lose a chick after it is hatched.

The pullets from last year's hatch I kept and many of those that were hatched in the months of February and March have been laying since the middle of September. The cockerels that were hatched in these months were sold when weighing two pounds, for which I received 23 cents per pound. Those hatched later in the season were kept to supply the table.

I raise the Barred Rocks and I think they are the best breed that I can get for an all-purpose farm fowl. They have proved to be good layers and grow to a size that makes them a desirable table fowl as well as for selling on the market.

My henhouse is not an expensive one, being built of rough lumber. The front faces the east in order to let in all the sunshine possible. My brood coops are made portable so that they can be removed from platforms beneath and frequently cleaned. I think I owe much of my success in raising poultry to keeping everything in connection with the poultry house and brood coops dry and sanitary. My poultry have free range, which I think is another advantage in chicken raising. When selecting eggs for hatching I select those obtained from the best layers of my flock and make the nests of the sitters warm and comfortable, the latter being especially important when setting hens early in the season. I gather the eggs from the nests soon after they are laid in order to prevent them from chilling when the weather is cold. I never put more than fifteen eggs under each hen early in the season and I never have any trouble in securing a good hatch. The chicks are kept growing from the very start by good feeding and housing.

I never feed young chicks for a day and night after hatching, and their first feed is scant—just a few dry bread crumbs—increasing the amount after the first few days. I give them plenty of clean water from the beginning. When the chicks are two weeks old I begin feeding chopped corn and wheat three or four times daily and push them on as fast as possible to maturity.

I consider the main reason of my "good luck" in chicken raising is owing to the fact that I was raised on a farm and love to work among chickens. I would advise every woman or girl going into the chicken business to get the best breed possible to begin with. My beginning with the Barred Rocks was with only one setting of eggs, which cost me $1.50, and at the present time my flock numbers 100 pullets and hens, besides eight cockerels. This spring my intention is to purchase an incubator, my idea being to set several hens at the same time and divide the chicks among the hens and allow them to do the brooding, as I think this would be less trouble than operating a brooder.

Mrs. Rosie Lowery.
Johnson Co., Illinois.

DISTINGUISHING THE SEX OF GEESE.

To the Editor:—Both the Embden and Toulouse geese can easily be raised without water to swim in. All they need is plenty of water to drink. The Toulouse weighs the heaviest and yields the most feathers. I do not know what breed she refers to when she mentions the gray dry-land geese unless it be the Toulouse, as the only other breed of gray geese I know of is the Gray African, which is not very common.

Experienced geese raisers can distinguish the sex of geese by the looks of the head and by their call. In my opinion, the only way an amateur can distinguish the difference is by observing the abdomen of the goose. After a gosling is almost grown you will notice the abdomen is elongated and hangs down between the legs. In stooping down and looking at it from the front, if you notice that the abdomen has a crease in it, seeming to divide it in two folds, you may be certain that it is a gander. The abdomen of the goose is not creased, but hangs in one distinct fold. In this way a person ought to have no trouble in

Tells why chicks die

E. J. Reefer, poultry expert, 4483 Farmer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure it." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

telling one from the other—that is, if I have succeeded in giving a clear explanation.

After two years of age a goose is better for breeding, as the eggs do not hatch so well at one year.

Morton, Ill. Mrs. E. A. Moore.

WANTS A HOMEMADE BROODER.

To the Editor:—Would like some of your readers' opinions on homemade chick brooders, as I would like very much to make one this spring. I would, in fact, rather buy one of the best, but do not feel able this spring and I think I would rather have a homemade one than some of the cheap ones. I have a good incubator lamp and planned on buying a thermometer. My plan so far was to take a box of a couple of thicknesses, with paper in between, and a glass, hinged top, with holes at the top for ventilation. Then I intended to put a piece of stovepipe up through the middle for the lamp chimney to extend through. I do not know whether I have the right idea or not. Of course. I intended to have a large exercising room and I was thinking of hanging over the door leading to the exercising room a cloth to keep out the draft. What do you think of my plan? What are some of your readers' plans for homemade brooders? I hope to see this discussed in your paper soon. W. S.

CORN IN THE RATION.

To the Editor:—I feed my hens twice a day with a mixture of corn, oats and wheat in a deep litter. I feed larger quantities of corn as the weather grows colder. My birds have green food three times a week and a dry mash, composed of three parts bran, one part middlings, one part cornmeal, and one-fourth part beef-scrap, is left before them at all times.

I believe in the open-air system of housing, in places where the winters aren't too cold, but in extremely cold climates I would prefer the King system of ventilation in a closed house.

I keep my houses and yards free from lice and mites by whitewashing every spring and using some disinfectant once every two weeks.

I have never had any trouble with roup. I keep my birds from catching cold, which is the first stage of roup.

J. Pierce Martiny.

Sauk Co., Wis.

A HOMEMADE BROODER.

To the Editor:—I would like to get a plan for a successful homemade brooder, which would hold about 100 chicks, and to use oil lamp or lantern. If any of your readers can give such a plan please ask them to answer through the poultry columns of the paper.

F. C. Bratley.

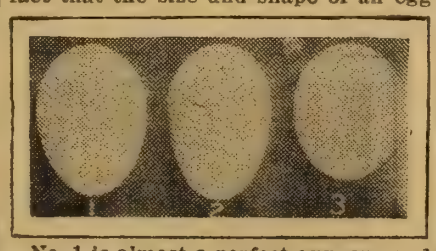
Adams Co., Wis.

KNOW THE HEN BY HER EGG.

To the Editor:—Much has been said about high records made by hens in the egg-laying contests as well as records made by hens in the yards of poultry breeders. The number of eggs produced is not all that should be considered, for an egg to be of value should be of good size and shape, and be covered with a sound, smooth shell.

It is indeed very fortunate for the poultry industry that hens' eggs are all so near the same size. The eggs of the different breeds in a recent contest varied in weight from 2.03 ounces to 2.29 ounces, while the hens themselves averaged in weight from 3.12 pounds to 6.36 pounds, and, strange as it may seem, the hens whose eggs averaged 2.03 ounces averaged 5.75 pounds, while the ones whose eggs averaged 2.29 ounces averaged only 3.40 pounds each. In fact, we find that the size of the hen has little or no influence on the size of an egg. A four-pound hen will lay an egg the same size as an eight-pound hen.

After studying the poultry business from every angle, one recognizes the fact that the size and shape of an egg



No. 1 is almost a perfect egg, one and one-half times as long as it is thick and weighs two and one-sixth ounces.
No. 2 is too long for the width.
No. 3 is too short and round.
High producers usually lay eggs shaped like No. 1.

is the one thing all breeders can work for, for it is the only thing in common with all breeds and varieties.

In poultry shows the breeders of the various breeds and varieties cannot enter a free-for-all competition on size, shape, color, comb, earlobes, shanks, or any other characteristic, for they are not the same with different breeds, but the size and shape of all eggs should be the same. Therefore, this is one of the most important points to be considered in breeding.

An ideal egg should be an oblong oval, slightly tapering from one end to the other and should weigh 2 1-6 ounces, or 26 ounces to the dozen. Egg markets require them to weigh at least 24 ounces to the dozen. Eggs of this size and shape are the correct size to fill the standard egg case filler, and if incubated will give better results than where various sizes and shapes are incubated together. The old idea that round eggs hatch pullets and the long eggs hatch cockerels is incorrect, for a hen lays uniformly shaped eggs regularly which hatch approximately an equal number of cockerels and pullets.

Nothing can be told from the size and shape of an egg whether it is fertile or infertile, or whether it would hatch a cockerel or a pullet, but the shape of an egg is a characteristic which is transmitted to the offspring. Therefore, use as breeders only the hens which produce eggs of correct size and shape.

C. T. Patterson.

Before anyone may pose as a breeder of live stock he must be a successful feeder. He must learn to feed well before he can model and fashion animals that will conform to the type and style which is embodied in the best models.

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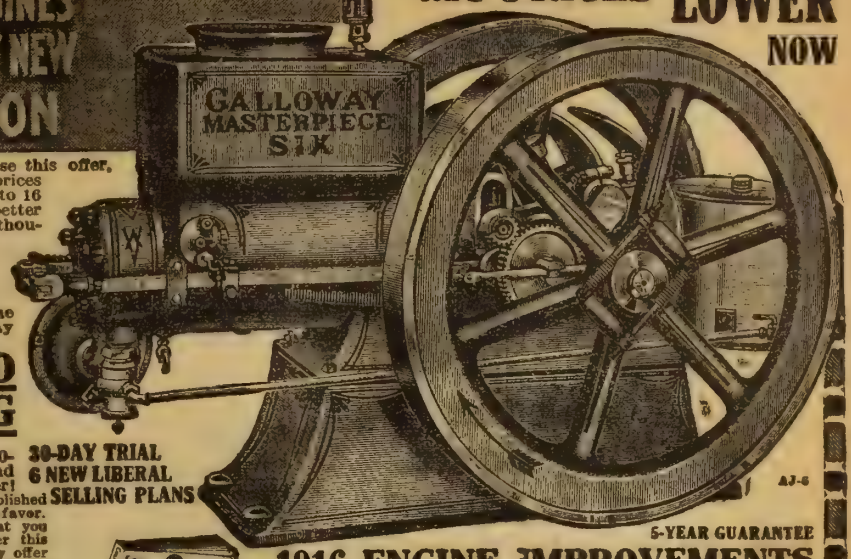

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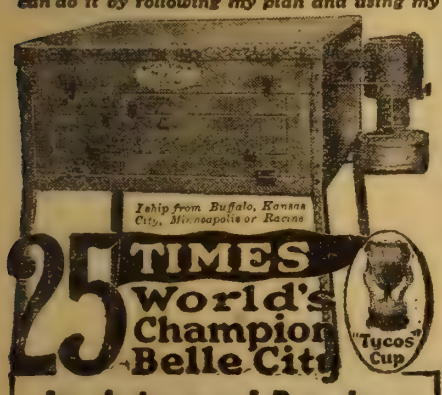

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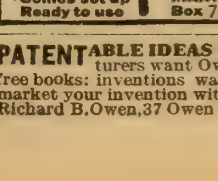

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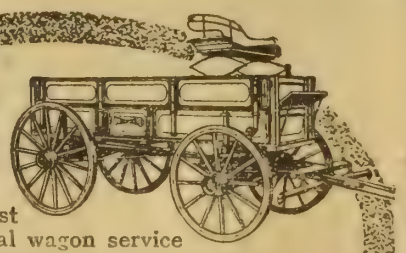

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UPPER WISCONSIN

IN ONEIDA COUNTY.

Oneida county, Wisconsin, which won single honors at the state and national potato shows last fall, is more than a potato-raising county, as one might surmise from the success of its potato growers at the various shows. Oneida county is making just as much progress in grains as in potatoes; some of the best herds and flocks in Upper Wisconsin are being built up within its borders and this county, only a few years ago covered with lakes and virgin timber, is developing rapidly in general farming.

The Oneida county exhibits at the state potato show at Marinette swept the boards as the best in Wisconsin and later at Grand Rapids, Mich., won first in national competition, so the county immediately sprung into the limelight as a potato county. But a glance at the winners at the state grain shows discloses many Oneida county farmers taking prizes on their grains and in a few years Oneida county live stock will no doubt be in the blue ribbon division. Farming is rapidly replacing lumbering as the chief industry of the county and this article is intended to show the advancement along farming lines.

Less than 5 per cent of the county is in farms, but the high yields of grain and potatoes attest the fertility of the soil and the fine herds and flocks indicate a growing live stock industry. There are now about 800 farms in the county and the area of tillable land is being increased steadily by the clearing operations in progress throughout the county.

An editor of The Wisconsin Farmer had the pleasure some time ago to spend a day with Mr. W. D. Juday, county agricultural representative, and Secretary Barstow, of the Rhinelander Advancement Association. Oneida county was the first county in the United States to employ a county agent and his efforts for better agriculture are certainly bearing fruit. Many of the farmers and settlers are confronted with conditions which they have not encountered before and it means much to them to be able to step to the telephone and confer with a county employe whose services are free and who is experienced in all matters pertaining to farming and live stock raising in that particular community. This co-operation between representative and farmer in Oneida county has undoubtedly done much toward advancing conditions there and this county can already boast of some accomplishments, which, in comparison, would make some of the older communities feel ashamed.

One of these accomplishments is the almost complete elimination of the scrub dairy sire. This shows that the county is building for the future. Our older communities have been putting up with scrub sires for decades when they should have been eliminated long ago and the percentage of pure-bred sires per farm probably is higher in most of the new upper counties than in some of the older parts of the state. The same holds true with horses, and for the two scrub stallions in the county there are two pure-bred stallions and pure-bred boars and rams are being introduced as rapidly as these two classes of live stock farming develop.

PIGS AND CALVES ON THE WILLIS JEWELL FARM, ONEIDA COUNTY.

Dairying will doubtless be the great industry of this county, as it has in other counties. The cow and the potato today are the principal standbys, but the farmers are being urged not to go so strong on potatoes in the future and pay more attention to other lines of farming. Mr. Juday is advising that four acres of potatoes is enough on a forty-acre farm and is likewise working for standardization of varieties and pure seed. The experience of farmers last summer with oats, wheat and other grains proves these crops are very successful and the farmers are, therefore, urged not to "put all the eggs in one basket," as is the case when half of the farm is in potatoes. In those cases a potato failure means a year lost, while with diversified farming there is never a failure.

The outlook for dairying is unusually bright. There are already many fine herds in the county and pure-bred and high-grade stock is being shipped in constantly. During the last year

WAIST DEEP IN BARLEY ON FARM OF ALBERT RADKE, ONEIDA CO.

twelve new silos were built and Oneida county can be depended upon to produce enough corn to fill every silo. With silos full, an ideal soil for hay and clovers and cheap land the farmer has splendid dairying conditions. As the writer rode through the country he saw clover growing wild at the roadside which was thick enough to trip a person afoot. Where the second growth has been taken off the cut-over land the cows can pasture and many farmers have built up fine pastures among the stumps by brushing and raking the surface and sowing a pasture mixture.

Potato growing has led in general farm operations and probably 90 per cent of the county's potato crop last year was Green Mountains with Triumphs and Rural New Yorkers closely tied for second honors. The soil seems ideal for the Green Mountains, but, as mentioned before, an effort is being made to cut down the potato acreage and at the same time increase the profits per acre by improving the stock. Hill selection has be-

SHEEP BRUSHING DOWN THE CUT-OVER LAND ON THE WHITE FARM, ONEIDA COUNTY.

come a common practice and about fifteen farmers in the county last year grew certified seed.

Mr. Juday is recommending a crop rotation which should greatly improve the farmer's profits. He advocates an initial rotation of oats seeded with clover. The second year cut the first crop of clover for hay and plow under the second crop. Then follow this the third year with corn and potatoes, each of which he would give half the acreage allotted to oats and clover. By rotating the plots of corn and potatoes these two crops are thrown into a six-year rotation. With fertilizer every third year this assures the potatoes an absolutely disease-free soil every year.

The soil is mostly a sandy loam with considerable swamp land, which will no doubt be drained in future years. Medium red clover always gives two cuttings and sometimes three, while two crops of alsike are often secured. Alfalfa runs about five tons to the acre and with abundant feed and creameries to take the milk dairying is bound to boom.

Although a new county there are some farms there which would be a credit to older communities. Frank McLaughlin, three miles out of Rhinelander, has one of the substantial farm homes in the county and this spring will erect a new barn to accommodate his herd of high-grade Holsteins. He has been using a pure-bred bull for years and the result shows up in his cows, there not being a cow in the herd that gives less than forty pounds of milk a day with ordinary feed. Some of his cows are giving seventy pounds a day.

George Burhart, also of Rhinelander, is another progressive farmer and does all his plowing, disking, etc., with a tractor. He has a good grade Holstein herd headed by a pure-bred sire and last year had splendid success with sixteen and a half acres of alfalfa on soil that had been limed. He also had twenty acres of pure-bred Green Mountains.

Swine breeding has not developed so rapidly as the cattle industry, but there are several good herds in the county, among them being the pure-bred Duroc Jerseys owned by Joe Kurtz, of Monico. Mr. Kurtz has about seventy head in addition to a grade Guernsey herd which he is improving with the services of a pure-bred sire.

F. S. Campbell, of Three Lakes, who has won quite a reputation with his potatoes, is one who is succeeding with diversified farming and in 1914 he sold all of his seed potatoes for 80 cents to $3 per bushel. He had eight acres in Green Mountains, Cobblers, Rurals and Triumphs and one acre yielded him 442 bushels. Mr. Campbell is what many of his friends call a crank on soil fertility. In his case it appears wise to be a crank on the subject, as his increased yields as the result of fertility prove his judgment to be good and sound. Mr. Campbell also has a good grade Guernsey herd.

Sid Florsheim has a pure-bred Guernsey herd at Minocqua which is supplying some good stock to neighboring farms and Henry Blumenstein, at Woodruff, is making a specialty of seed potatoes in addition to handling a herd of Guernseys, four of which are pure bred. Herman Schoeneck, of Enterprise, has won many laurels with his pure-bred grains and this year at the Panama-Pacific Exposition was awarded a bronze medal on his barley. He is also building up a Guernsey herd, headed by a pure-bred sire, and only recently bought three heifers that are closely related to the great cow, May Rilma. Two other well-known farms are those of Brown Bros., of Rhinelander, and F. Robbins, also of Rhinelander. Brown Bros. Tamrack Farm is the home of the noted Holstein cow, Oneida Bess. Some unusual yields were secured on this farm last fall, oats averaging sixty-four and one-half bushels to the acre for thirty-two acres. This farm started as a log camp and is gradually being enlarged each year. On the Robbins farm just north of Tamrack Farms is eighty-nine head of stock pasturing on the cut-over lands. Here Mr. Robbins has thirteen head of pure-bred Herefords and his experience with beef cattle is being watched with much interest. His foreman is Mr. James Mitchell, a constant reader of The Wisconsin Farmer.

JOE KURTZ AND HIS PURE-BRED DUROC JERSEYS ON HIS FARM AT MONICO.

There is also considerable interest in the possibility of sheep raising in the county. The flocks are few, but as sheep are good brushers of the land, more may be expected. Charles Ryan is the shepherd of the White flock at McNaughton, where 300 head are brushing down the land. All of these sheep were out every day last winter with three or four exceptions, which indicates the climate is not too severe.

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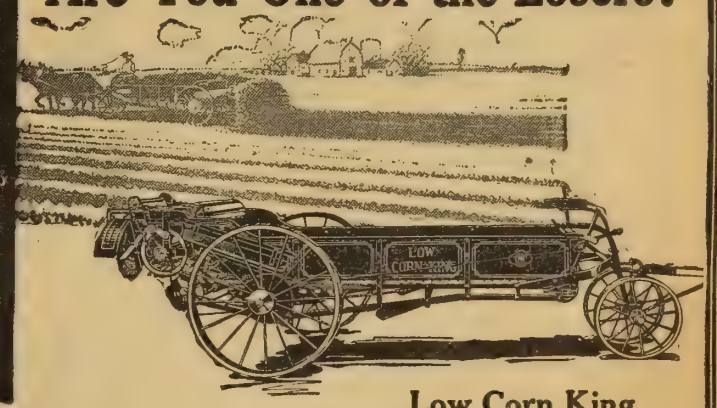

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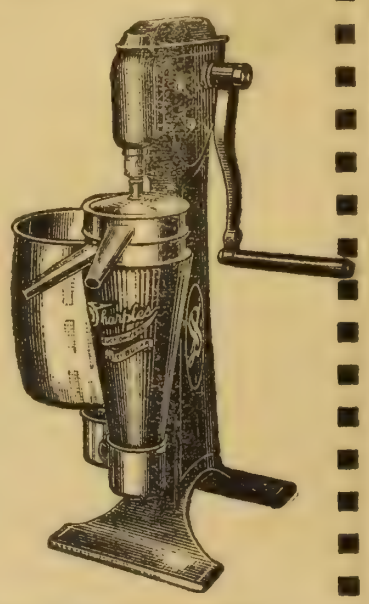

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DAIRY

THE HANDLING OF CREAM.

[Editor's Note.—The following extracts are taken from the paper read by J. D. Jarvis, before the Wisconsin Buttermakers' Association meeting at Eau Claire, February 3d.]

A person is interested in an article or subject only to the extent that the article or subject will benefit him. The care of cream on the farm will interest you only to the extent of the price you will receive for the butter fat in your cream. The price you receive for your cream as a rule is determined by the price your creamery receives for its butter. The price the creamery receives for its butter depends upon uniform quality butter. It stands to reason that extra quality butter cannot be made from poor quality cream. Your cream buyer knows this to be true and you and he also know that extra quality butter cannot be made out of second or third-grade (quality) cream. So beware of the cream buyer that tells you he would just as soon have old, sour, rotten cream as good, clean, sweet-flavored cream.

Today competition in many localities is keen among the cream buyers and they force one another to accept anything that looks like cream. When the cream buyer pays your neighbor just as much per pound for butter fat for a can of old, sour, rotten, abused cream as he does you for a can of good, clean-flavored, properly kept sweet cream he is paying the neighbor for something he is not getting and if there is such a thing as under or overreading the Babcock butter-fat test the chances are that it will be the can of sour cream that will cause the trouble.

According to the dairy division of the United States Department of Agriculture, there is manufactured annually over 627,000,000 pounds of creamery butter and 995,000,000 pounds of farm butter, or a total of over 1,500,000,000 pounds of butter. From reliable information only 15 per cent of this butter grades as extras or best quality butter, while the remaining 85 per cent grades from firsts to packing stock, the poorest quality butter. There is an average range in the market price between extras, firsts and seconds of 4 cents per pound and between seconds and packing stock of 8 cents per pound.

It is prudence to assume that the butter fat in the packing stock butter was as pure, clean and wholesome as the butter fat in the extra quality butter when it was drawn from the cow at the time of milking and this difference in quality and price is due to neglect or lack of intelligence in taking proper care of the butter fat from time of milking until the butter is consumed. Taking the lowest range, 4 cents per pound, on 1,500,000,000 of butter the loss due to neglect or ignorance would be $60,000,000.

This large sum of money, if saved, would benefit the farmer, creamery operator and the consuming public because more daily cash money placed into the trade channels will help business in general. For this reason everybody should be interested in better quality cream and better quality butter. The quality of cream depends to a great extent upon the care cream receives on the farm. There are three chief factors to be considered in taking care of cream on the farm, namely, cleanliness, rich cream and cold temperature.

The care of cream begins the moment milk is drawn from the udder of the cow and since milk is one of the most delicate and nourishing human foods it is of utmost importance that it should be produced under proper sanitation and cleanliness. The cows should be kept clean and healthy; they should receive wholesome feed and kind, gentle treatment. The milkers and all who handle the milk or cream should appreciate cleanliness and thoroughly clean the stable and all dairy utensils (pails, strainers, cans, separator bowl and tinware) every time they are used.

A good housewife does not leave the supper dishes stand overnight and use them again for breakfast without first washing them. And still, the small amount of food particles left on the supper dishes is far less repulsive and objectionable than the dirty, filthy, often bloody, pus matter that collects as slime in the separator bowl.

The tinware and the separator bowl should be washed as follows: First, they should be rinsed in lukewarm water to remove all milk particles; then they should be thoroughly scrubbed with a brush in warm water to which a good washing powder has been added; next they should be immersed for a few minutes in boiling water. After this they should be inverted and allowed to dry. Tinware, when not in use, should be placed in pure air and sunlight, because these agencies will destroy undesirable germs.

Milk and cream absorb odors like a dry sponge absorbs water. Mainly for this reason do not feed the cows strong-flavored feeds like silage, cabbage, turnips, etc., just before or at milking time. Do not keep cream in musty cellars or near strong-smelling vegetables or in the cooking odors of the kitchen. If you have a milk house do not let the men or boys use it to store their felt boots, overalls, old harness or any other strong-smelling material.

Rich cream will keep better than thin cream, just as thin cream will keep sweet longer than milk. It is also for economic reasons to the cream patron and to the creamery that they should agree upon a cream testing between 30 and 45 per cent butter fat. Rich or heavy testing cream is more profitable to the creamery patron than thin cream because:

1. He has his butter fat in smaller bulk, needs fewer cream cans and a smaller cooling tank.
2. His heavy cream will not sour as quickly as thin cream and it requires less ice or cold water to quickly cool.
3. He takes better care of a smaller amount of cream and thereby produces a better quality of cream.
4. He has less bulk to haul or ship to creamery and thereby saves transportation charges on the same.
5. He retains a larger amount of wholesome skim milk for feed.
6. He receives a better grade and hence a better price for his butter fat.

Rich or heavy-testing cream is more profitable to the creamery because:

1. It reduces the amount of cream to handle, reduces the amount of buttermilk, hence less pounds of butter fat loss and requires less labor in operating creamery.
2. It enables the operator to increase the capacity of creamery.
3. Where cream is pasteurized it prevents the abnormal loss of butter fat in buttermilk.
4. It gives a larger overrun, thus reducing cost of manufacture.
5. It improves the quality of butter by receiving a better quality cream and by permitting the use of a more clean high-flavored starter.

In order to accomplish the best results it is advisable to have the patrons skim a cream testing from 40 to 45 per cent during the summer months and from 30 to 35 per cent during the winter months.

From experimental data temperature control is the big factor in assisting or preventing the growth of germ life (bacteria, yeast, mold, etc). Two samples of milk were kept at 50 and 70 degrees respectively, and after a period of twenty-four hours there were five bacteria for every one at the beginning in the milk at 50 degrees, while there were 750 bacteria for every one at the beginning in the milk at 70 degrees. Thus a difference of 20 degrees in twenty-four hours multiplied the number of bacteria in the 70 degree milk by 150 over the number of bacteria in the 50 degree milk.

In most states the temperature of well water is below 60 degrees and from the above-mentioned experiment bacterial development was very slow below 60 degrees temperature. The thought suggested itself that if we could keep the cream at the temperature of well water nine-tenths of our poor quality cream troubles would be over. Some farmers do keep their cream in cans hung in wells or cisterns, but there is a chance for dirt,

dust and foreign materials falling into it, as well as the cream absorbing the stale, dank odor of the air which is in the bottom of the well.

The thermos bottle and fireless cooker have demonstrated that keeping cold water cold or hot water hot is merely a matter of insulation. We, therefore, conceived the idea that in a tank which is perfectly insulated on top, bottom and sides and connected up the water pumped for stock purposes would flow through it the water would always be at practically the same temperature of well water and a can of cream kept in it would be cold enough to keep it in good condition for several days.

All the available data relating to the heat-resisting properties of wood, various metals, felt, charcoal, sawdust, cork, paper, vacuum and various patented materials were considered and the manufacturers of thermos bottles and fireless cookers were consulted. A large number of sample tanks were made and carefully experimented with. A ten-gallon can of cream kept in one of these tanks, temperature of water at 54 degrees, and in a room averaging 100 degrees in daytime and 85 degrees at night had a temperature of 59½ degrees at the end of the week, a rise of 5½ degrees in that period of time.

In order to prevent the mixing of warm cream with cold cream (cream of older separation) a small two-gallon can is used for the warm cream and then lowered into the tank through the small square opening in the back. The can is held down by a convenient latch which engages the square ends of the handle. A cream stirrer can be left in the small can so the cream may be stirred at frequent intervals until thoroughly cooled. The lid to the compartment for the small can is ventilated, thus allowing the animal odors and vapors to escape. Just before the next separation the cream in the small can is emptied into the delivery or shipping can in the large compartment. It is then washed and ready for the next separation. The tank is intended to be set outdoors. where the air is fresh and pure, a place between the well and the stock tank, so all the water pumped daily for stock purposes flows through it. The insulation is so perfect that it is not necessary to have the tank under a roof. Even when it stands in the direct rays of the sun in the hottest summer or in the sharp, cold winds of the coldest winter the water in it will be within a few degrees of the temperature of the well water if the water required for six horses or cows flows through it.

During the spring of 1914 we had fifty of these tanks constructed and we loaned them to patrons of creameries in North and South Dakota, Kansas and Oklahoma. They were put out under the supervision of our dairy and creamery advisory experts and the results were very gratifying. Many farmers who before they used these tanks were delivering the poorest cream immediately began furnishing the best cream. Buttermakers were surprised and could hardly believe their own eyes. In one case cream was kept perfectly sweet for over a period of one week during very hot weather. Those tanks also gave good service where used during the winter, because if they were able to keep out heat they were likewise able to keep out cold.

The experiment had the desired result. It attracted attention of creamerymen and cream producers all over the country and the American Association of Creamery Butter Manufacturers and the dairy schools took up this movement of better quality cream by recommending the use of tanks similar to those used by us. It is now possible for those who desire to purchase similar cream tanks to obtain them by writing either the dairy supply houses, the secretary of the American Association of Creamery Butter Manufacturers, Chicago, Illinois, or your local creamery.

In summarizing, the following factors will enable the farmer to produce a better quality of cream on the farm:

1. Clean, healthy cows, fed wholesome feed and kept in clean, well-lighted and well-ventilated stables.
2. Clean, healthy milkers who appreciate cleanliness.
3 Clean utensils, pails, strainers, cans, seperator bowl and tinware thoroughly cleaned and sterilized every time they are used.
4. Skim a cream testing between 30 and 45 per cent butter fat.
5. Cool cream quickly to temperature of well water and control the temperature of all by use of a well insulated cream tank similar to the aforesaid.
6. By using cleanliness, rich cream and a properly insulated cream tank, a better quality of cream can be produced on the farms of the United States and the annual $60,000,000 loss will be considerably reduced.

DEVELOPMENT OF THE DAIRY COW.

[Editor's Note.—The following extracts were taken from one of the recent addresses of the late Dr. Henry B. Favill, of Chicago. The address was given before a meeting of Wisconsin Holstein breeders. Dr. Favill was one of the best posted Holstein-Friesian breeders in the country, and was a member of the national association.]

The development of a dairy cow is our object. The ends to be secured are three, constitution, size and specific function. Constitution is an indefinite word of which we vaguely conceive several desirable attributes. Most important of these are capacity to assimilate food, ability to transform such food into milk, to procreate, and to resist disease. It is conceivable that we may have either of these three without the others. Our problem is to combine them.

It will be seen at once that the question of size is more or less closely related to the capacity for assimilation of food. Also that milk and reproduction are the essence of specific function. The interesting question is, are there conflicts in the various methods which we may pursue to these ends? Aside from hereditary endowment it seems to me clear that the determining fact as to the capacity of a calf to assimilate food is its daily habit and experience. If we are looking for the highest degree of transforming power of food to milk, it is fair to assume that consistent pushing of the assimilating power within the limits of health maintained is necessary to establish the best results. Although there is room for the best judgment as to what is consistent with health all experience in the rearing of animals as well as human beings, goes to show that growth and assimilative power are dependent upon judicious crowding of food in the early period of life. Let us not be led astray by the popular dictum founded upon sound observation that it is well to keep calves hungry. Whatever truth there is in that observation is but a practical method and not a principle. It is simply a way of satisfying ourselves that the calf is not overfed and does not at all mean that the purpose for which we are working would not have been better secured if the hungry calf had been fed more.

With other domestic animals whose rearing is attempted under different physical conditions there is no suggestion that it is desirable to keep them hungry. In draft colts, for example, whose value is related to size, all experience goes to show that early feeding is indispensable. Less trouble occurs with them, however, because of the freedom of their lives as compared with the hot-house methods employed with dairy calves.

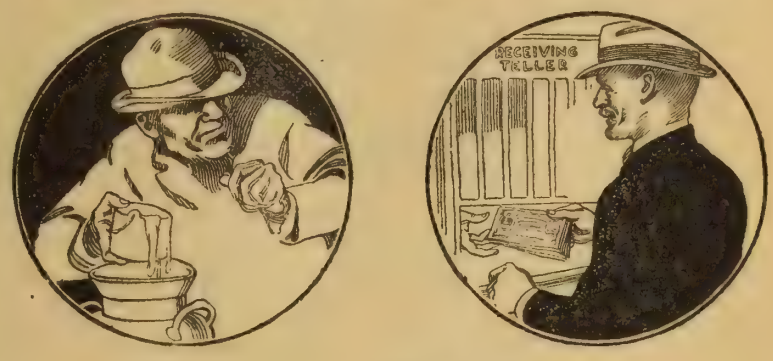
This question, however, presents itself and is prominent in the minds of many breeders: Does the heavy feeding and development of dairy calves have a tendency to transform them from the dairy type to the beef type? You are perfectly familiar with the discussion of that subject and with the difference of opinion that exists. I believe that where full feeding of dairy stock has had bad results, if at all, it is in incorrect feeding rather than excessive feeding. Let me here call attention to the fact that growth of a calf is a matter of skeleton and not a matter of flesh. All people agree that the dairy cow, and particularly the Holstein-Friesian cow, should be brought to its full size. All breeders know that it is only to be brought to its full size by forcing it during its first two years. The simple question is, need anyone fear to do it lest he impair the milk function?

I am strongly of the opinion that the heaviest feeding consistent with health of proper skeleton forming foods cannot interfere with the dairy type.

So far as science throws any light upon it at all it distinctly favors that view of the matter. My conclusion, therefore, is that in our effort to create a strong transforming machine for turning food into milk we not only must begin this early but we need not fear that in the process we shall destroy the milk type by creating another type. If there is no such fear, then the factor of size is at the same time secure, and if, moreover, it is true that assimilative power, skeleton and milk function are all dependent upon essentially the same kind of food, viz., high protein food, the problem seems to take a definite form.

Right here let me call your attention to something which is not always realized. Bones are not primarily lime or phosphate. They are primarily tissue, more like gristle, a high protein substance, and must have abundance of proteid material to form them. Lime and other salts are put into them ultimately for the purpose of stiffening, but growth of the skeleton is a proteid growth. There remains, however, a further phase to constitution, of the utmost importance—resistance to disease. Let us depart from the narrow question of cows to the general question of relationship of animals to disease. Most of the diseases in question are infectious diseases. In general, they must be regarded as a struggle in the body of an animal to prevent the undue development of lower forms of life, usually low plant life, under the general terms of "germs." Every sickness represents, not what the germ is doing to the animal, but the struggle which the animal is making against the germ. If it succeeds, it survives; if it does not succeed, it perishes. But sickness is a manifestation of warfare and not a mere passive surrender. Never, for example, is probably a conservative process and not destructive. It is nature's method of meeting the germ attack by what we regard as resistance. In the body of every animal

WHICH WILL YOU BUY



A "Cream Thief" or a "Savings Bank" Cream Separator?

WITH a great many machines or implements used on the farm it doesn't make much difference which of several makes you buy. One may give you a little better or longer service than another, but it's mostly a matter of individual preference and often it makes little difference which one you choose.

Not so with buying a cream separator, however.

There is a big difference in cream separators.

The most wasteful machine on the farm is a cheap, inferior or half worn-out cream separator.

The most profitable machine on the farm is a DE LAVAL Cream Separator

A cream separator is used twice a day, 730 times a year, and if it wastes a little cream every time you use it it's a "cream thief," and an expensive machine even if you got it as a gift.

But if it skims clean to the one or two hundredths of one per cent, as thousands and thousands of tests with a Babcock Tester show the De Laval does, then it's a cream saver, and the most profitable machine or implement on the farm—a real "savings bank" for its fortunate owner.

But cleaner skimming isn't the only advantage the De Laval user enjoys.

There are many others, such as longer life, easier turning, easier washing, less cost for repairs, and the better quality of De Laval cream, which, together with its cleaner skimming, make the De Laval the best as well as the most economical cream separator.

If you need a De Laval right now there is no reason why you should let its first cost stand in the way, because it may be purchased on such liberal terms that it will actually pay for itself out of its own savings.

A De Laval catalog to be had for the asking tells more fully why the De Laval is a "savings bank" cream separator, or the local De Laval agent will be glad to explain the many points of De Laval superiority. If you don't know the nearest local agent, simply write the nearest De Laval main office as below.

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Dr. David Roberts' COW CLEANER AND ANTISEPTO

Cow Cleaner stimulates the circulation in the blood vessels of the genital organs, causing the afterbirth to ripen and come away of its own weight, leaving the organs in a healthy condition. Cleanse the genital organs with Antisepto—it is cooling, soothing and healing, all of which are essential to health. Keep your cows in a healthy breeding condition. Give them the help they need at this trying time.

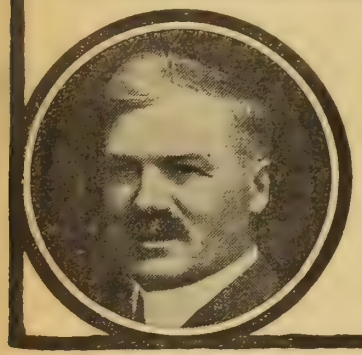
Cow Tonic Aids digestion, increases appetite, tones and keeps animals in condition.

Breeding Tonic Acts on the genital organs and puts in condition for breeding.

Calf Cholera Remedy Prevents scours and calf cholera. Avoids stunting. Keeps calves growing.

Ask at your drug store also for Dr. Roberts' Calf Meal, Diolice, Badger Balm, Laxotonic and Stokvigor.

There is a Roberts' medicine for every common animal ailment. Over 500,000 copies of the great book (184 pages), "Practical Home Veterinarian," are already in the hands of live stock owners. If you do not have a copy, send 25 cents and copy will be sent postpaid, together with 8-ounce sample of Stokvigor.



Go to your druggist. Buy Dr. Roberts' animal medicines and tonics. Over 3500 drug stores carry them. Take no other. If your druggist hasn't Roberts' goods, write us direct. Give us his name. We will see you are promptly supplied. Look for and insist on getting the package that bears Dr. Roberts' picture.

Special Sample Offer—Stokvigor, 10c

This trial package of Stokvigor will cure for one cow or horse two weeks. Get it and see for yourself what a nice stock tonic or stock food you can make. Enclose dime or stamps.

Dr. David Roberts Veterinary Co.
950 Wisconsin Avenue Waukesha, Wis.

struggling with infectious disease there are forming antagonistic chemical substances whose purpose is protection. All serums which we use in practice are the products of such protective reaction.

In the modern theory and method of treating human tuberculosis, fresh air, food and rest are cardinal principles.

Do not get the idea that fresh air is valuable because it does not contain tuberculosis germs. It may or may not contain germs, but its value undoubtedly is in its tonic effect upon the entire cellular mass of which the animal is made up. So also as to food. There is no antagonism between milk and eggs and tuberculosis germs. The benefit herein lies in the fortification of the tissues in the minutest particle for carrying on its own protective resistance. So, also, as to rest. Probably rest in tuberculosis is of value because it permits the assimilative power of the organism to be concentrated on the upbuilding of the cells and does not dissipate their powers in unnecessary activities.

In fact, it is now manifest that in combating tuberculosis in human beings which is already established there is a value in prescribing activity which shall result in a re-active fever representing the natural defense of the body, following which activity, perfect rest permits the utilization of the protective products, in killing out the tuberculosis germ.

Today in Chicago the movement is on foot to put all children who are, as we say, sub-normal, into open-air schools. The result of these efforts is astonishing. Not only do these children thrive, gain in weight and grow, but they become mentally normal, when almost invariably they have hitherto been mentally backward. They accomplish in the school curriculum from 30 to 100 per cent more in the year than they did under the former conditions, and in every way the experiment shows that the element which we call vitality, for want of a better name, was lacking and that that vitality can, in the majority of instances, be supplied by food and fresh air, and, I think it is true that neither will accomplish this result without the other.

Can there be any doubt as to the importance of the bearing of this experience upon our dairy problem? Admitting as we must, the menace to our industry, of tuberculosis, to say nothing of other infectious diseases; halting along unsatisfactorily as we do with the tuberculin test and its weeding out method, can we close our eyes to the fact that safety in this situation lies in the development of a vital resistance, and that particularly in the earliest months of life?

Resistance to infectious disease, aside from tuberculosis, is by no means, so far as we know, related to size, vitality or constitution. There are many infectious disease among human beings, which apparently attack the very strong as dangerously and perhaps more dangerously than the apparently weak.

There is no question that there is less infectious material outside the barn than within it. When we stop to consider, therefore, the highly stimulated resistance on the one hand and the less exposure to infection that there is in the open air on the other, can we avoid the conclusion that our animals, and particularly our young animals, are safer in the open air than they are in the barn?

There is no doubt that calves can be kept looking better in the stable than in the open during certain seasons of the year. There is no doubt that the attack of flies upon young stock hampers its development. There is no doubt that exposure to cold roughens their general condition and appearance. It takes more food to keep them in condition in open air than in stable life.

It has been suggested that continued breeding from tuberculous cattle, avoiding infection of the calves, would produce a race of animals immune from tuberculosis. The theory, though attractive, is not thus far substantiated, and I have no opinion to express as to its possibility.

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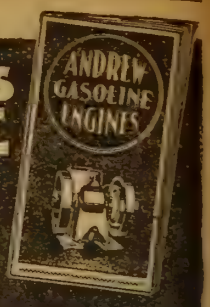

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BIG ENGINE VALUE

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Send us $5.00. If the engine does not suit you send it back and we will refund your money.

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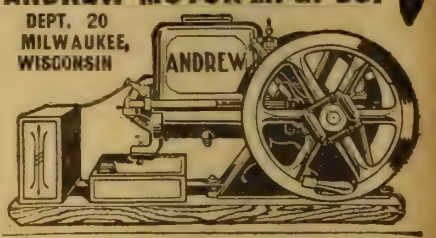

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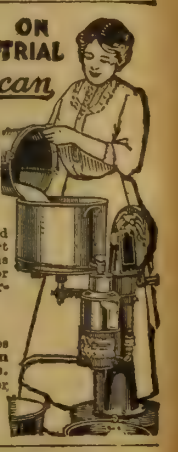

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Strong, hardy plants that sell regularly at 100 for $1.00.

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PAPEC PNEUMATIC Ensilage Cutter

cuts and elevates green silage to the top of the highest silo with **little power.** In every state, almost everywhere, there are many "Papecs" successfully operated by gas engines of only 4 to 8 H. P. Because the Papec runs at the low speed of only 600 R. P. M. it takes less power; because it has **six** fans instead of the usual **four,** it has a stronger blast on **less power.** The low speed makes the entire machine more durable. It is simple—of few parts—all easy to get at. Cutting parts are easy to adjust—and **stay** set. Has no chains. Strong heavy gears form the driving mechanism. Frame is one-piece, of semi-steel—no bolts or screws to loosen. **The Papec is built to last.** It is the machine for **you** and the 1916 catalog tells just why.

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With West Bend Automatic Swinging Stanchions you can lock up or release 2 to 50 cows **at one throw of a lever** as easy as you can operate **one** stanchion with other equipment. This is only one of the many valuable, time-saving, labor-saving features of **West Bend Equipment.**

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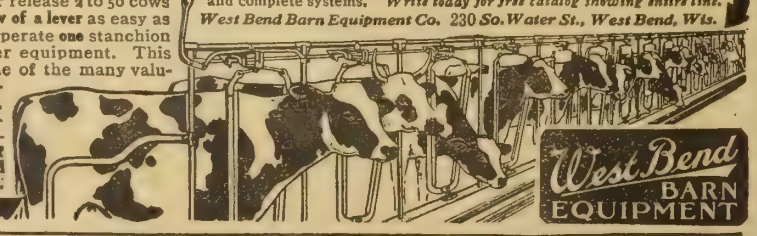

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Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Vulcanizing Auto Tires.

Please tell me how to vulcanize auto tires.

Answer.—A vulcanizer, some benzine or gasoline, some semi-cured sheet rubber and some vulcanizing cement are required. There are many vulcanizers on the market, the more elaborate ones being steam heated and the simpler ones heated by gasoline. The car owner is more likely to have the latter. To vulcanize a hole in a tube proceed as follows:

Clean the tube thoroughly around the hole with gasoline or benzine. Cut a piece of sheet rubber, semi-cured, large enough to extend past the hole in the tube one-half inch in every direction. Coat the patch and tube with the rubber cement and allow to dry until it appears dull. The patch should then be placed in position on the tube and clamped in place between the plates of the vulcanizer. Put a little water in the gasoline bowl of the vulcanizer, then fill the bowl with gasoline and ignite. Just enough heat should be generated by the burning gasoline to cause the patch to weld to the tube. The small amount of water placed in the gasoline bowl tends to keep the temperature from becoming too high. Not enough heat results in an imperfect patch. Too much heat ruins the tire. Steam vulcanizers are accompanied by instructions as to how many pounds of steam pressure to use and how long a time is required. The higher the pressure the hotter the steam.

Storage Battery Questions.

I wish to make a storage battery, six volts, sixty amperes. Please explain how to make such a battery. What determines the voltage and amperage of a storage battery? What is the difference between the positive and negative poles, if lead is used for both plates? Why are the volts and amperes of various makes of storage batteries not proportional to each other? Why should one be six volts, forty amperes and another six volts, sixty amperes?

Answer.—Space will not permit us to give a detailed description of how a storage battery is made. There are many books on the subject. We advise you to consult your local book dealer. While it is possible to make a storage battery on the farm, it is not very practical to do so.

The number of cells determines the voltage of the battery, the rating being two volts per cell. The actual voltage when the battery is fully charged is about 30 per cent higher. Therefore, the voltage rating of the generator should be at least 30 per cent higher than the voltage rating of the battery.

The ampere-hour capacity of the battery is determined by the number of square inches of plate surface. The larger the plates and the more there are of them the higher the ampere-hour capacity. There is no relation or proportion between the voltage rating and the ampere rating. A six-volt, thirty-ampere battery might be compared with a water tank six feet high and holding thirty gallons of water; a six-volt, sixty-ampere battery to a water tank six feet high and holding sixty gallons of water. The pressure would be the same in both cases, but it would take twice as long to drain the latter if both are drained at the same rate.

Both negative and positive plates are made of lead, but the grids of the positive plates are filled with a paste made of red lead and sulphuric acid; the negative plates with a paste made of litharge and sulphuric acid.

Magneto for Auto Engine.

I have a four-cylinder Franklin car that runs on five dry cells. The dry cells soon give out, causing much trouble. Could I install a Savage magneto that is made for a single-cylinder engine? If not; please give reason. Does one of these magnetos give a steady current that is distributed to the spark plugs through the timer?

Answer.—We are not familiar with the Savage magneto. We doubt that you could use it successfully on a four-cylinder engine. If it is very well made, generating a low-tension current, it might be used with some success in the manner shown by the two-cylinder wiring diagram published in this issue. As a rule, stationary engine magnetos are not well enough constructed to be durable on an automobile.

If it is a high-tension magneto it could not be used, as a distributor is necessary to distribute the current to the spark plugs. The timer does not distribute the current to the plugs—it simply causes the current to flow at the proper time in the magneto windings and the distributor determines where it shall flow, that is, to which plug.

Motor and Battery.

Please tell me how to wind an armature for a small electric motor. Please tell we how to make a sal ammoniac wet battery

Answer.—Space will not permit us to describe the process of winding a small armature. If interested in this line of work you should obtain a book on the subject. Your nearest book dealer has a list of such books and you can obtain the information you want from the book. The sal ammoniac battery is made by suspending a sheet of zinc and a carbon rod in a glass jar filled with a solution of sal ammoniac and water. There should be all the sal ammoniac used that will readily dissolve, but no more. The carbon and zinc must not touch. A square jar is generally used. The carbon rod is placed in one corner and the zinc sheet, bent in cylindrical form, is placed in the middle.

Battery Trouble.

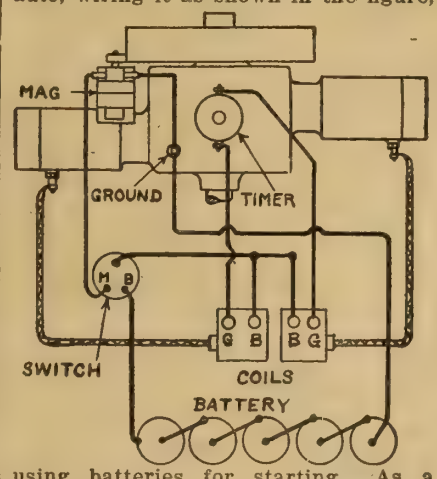
I connected the carbon post of a battery to the magneto sparker post, and the zinc post of the battery I grounded on the engine. The battery lasted only one day. The magneto does not work. Why did the batteries give out so soon?

Answer.—We are not sure just how you wired your engine. It may be that you wired it in such a way as to short circuit the battery, in which case the battery would be ruined in one day. There may be a short circuit in some part of the sparker that caused the trouble, or the switch may be defective. If you leave the switch closed and the sparker is in contact position, standing idle, the battery will be ruined in a short time. It does not matter whether the zinc terminal or the carbon terminal is grounded.

Low-Tension Magneto for Runabout.

I want to know whether or not a common belt-driven magneto such as is commonly used on stationary engines will make sufficient spark to ignite a two-cylinder runabout. How should it be wired?

Answer.—If the magneto is well made it should work all right on your auto, wiring it as shown in the figure,



using batteries for starting. As a rule stationary engine magnetos are not durable when used on an auto.

Lighting From Magneto.

I own a Model 59T Overland automobile, with Splitdorf magneto. Could I arrange to light the headlights direct from the magneto?

Answer.—The magneto is not suitable for lighting purposes.

Auto-Oiled Windmill
ALL WORKING PARTS INCLOSED
and flooded with oil from the supply in the gear case, which needs replenishing only once a year.

Put your old Aermotor wheel and vane on this self-oiled motor, and have an up-to-date outfit at small cost.

Don't waste your time climbing to oil an old mill. Replace it, on your old tower, with an Auto-Oiled Aermotor which will last you a lifetime and furnish you an abundance of water.

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Write for Folder-Hanger. It tells all about Auto-Oiled Aermotors and Easy-To-Build-Up Towers.

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Lowest Cost On Record
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Save Money On Land Clearing
Clear your land the easy, practical, economical way—the KIRSTIN One-Man way. The KIRSTIN costs little—holds record for low cost of operation—costs nothing for upkeep. One Man handles and operates with ease. The Powerful Improved

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with its Multiple-Speeds, Short Lever, Quick Detachable Connections, Auto Release, etc., is the most wonderful and efficient land clearing device you ever saw. Write today for big new catalogue, "Absolute Proof," and special limited time prices. You want your land cleared the best, quickest, cheapest way. A KIRSTIN will do it. Our free catalogue and booklet tell how. Don't wait—write now.

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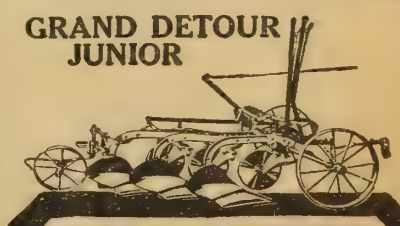

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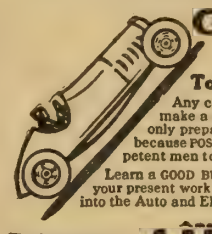

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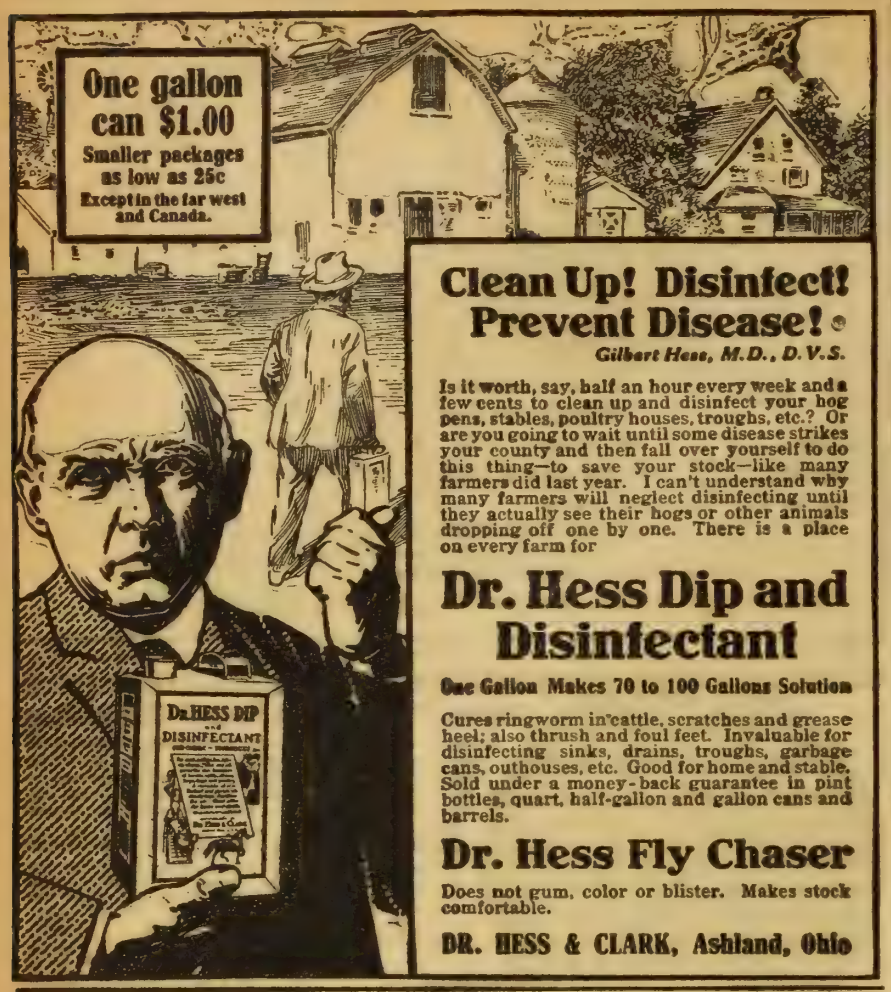

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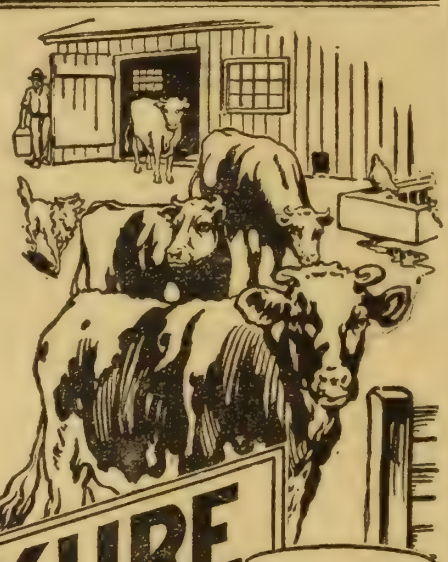

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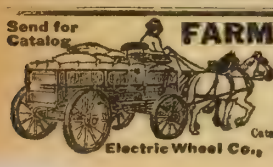

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PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Sniffles In Pigs.

Is canker a contagious disease in young pigs and what is the best means to combat it? I raised sixty shoats this year. They were farrowed during last April and ten of them have what I think is canker. The nose of the pig is either crooked or wrinkled up. They sneeze a great deal. The pigs that are affected do not grow very much. I have never tried any treatment for them.

Your pigs are affected with what is commonly called sniffles, but which is in reality necro-bacillosis of the mucous membranes. This disease is one of the discouraging kind when it comes to treatment. There could not be much advised in line of treatment that would be worth your while. Just play a waiting game.

Balking in Horse.

I have a four-year-old mare that I broke to work this last fall. She did very well, but would throw herself sometimes. Have fed well all winter and now she won't work at all. Won't pull a thing, just bucks and throws herself. Please tell me how to work her.

The trouble with your horse is probably just a bad habit or maybe she is troubled with some derangement which affects her nervous apparatus. You usually find that balky horses are of a nervous disposition. We could not advise intelligently without first knowing the cause of the trouble.

Lameness in Mare.

I have a coming two-year-old gray mare that has been lame in the right hind leg for a month. She is poor and gaunt. I can't find anything wrong with her foot or hip either one. When she gets down she has a hard time getting up. No treatment has been given, thinking it was her hoof broken off too close. She has been kept in the barn the last two weeks and doesn't seem to be getting any better. Can you give me any information about this?

From the very few symptoms you give it would be folly to attempt diagnosis and treatment. Lameness is sometimes hard to diagnose even after a careful examination. If the young mare is of much value it might pay you in dollars as well as in peace of mind to have a competent veterinarian make a careful examination.

Abortion.

Could you please give me some information about abortion in cows? I have a cow that dropped a dead calf the seventh month after pregnancy. What can be the cause of it? Is there any cure for it, and when should it be treated to prevent it? Is there any medicine that can stop it? How soon would you advise me to have the cow bred again?

If there hasn't been any abortion in your herd heretofore the above-mentioned case was probably brought about by some other means than contagion, probably from injury or eating some irritating substance which set up an inflammatory condition of the urinary or generative organs. In case you think an animal is going to abort you should send for a veterinarian immediately. If the cow you speak of having aborted has cleaned up all right she may take the bull at her next period.

Chronic Cough.

I have a horse that coughs as if he had the heaves, though I do not think he has. I had this horse in a pasture last summer and when I got him back he had this cough. Nearly all the horses in that pasture had the same cough at that time, although most of the others got over it in time, but this one groans and coughs more or less every day. When he works hard and sweats good the cough eases some. I will be very glad to have any information as to what to do for him.

A chronic cough may succeed the acute diseases of the respiratory tract, such as pneumonia, bronchitis, laryngitis, etc. It accompanies chronic roaring, chronic bronchitis, broken wind. As previously stated, cough is but a symptom and not a disease in itself. Chronic cough is occasionally associated with diseases other than those of the organs of respiration. It may be a symptom of chronic indigestion or worms. In such cases it is caused by a reflex nervous irritation. The proper treatment in all cases of chronic cough is to ascertain the nature of the disease of which it is a symptom and then cure the disease if possible and the cough will probably cease. All coughs are not treated alike. We would advise you to let some good veterinarian examine this animal and advise treatment, as first-hand advice in these cases is advisable always.

Abortion in Cattle.

I have a bunch of about thirty Holstein cows in which abortion started about six weeks ago. I would like your advice in regard to a cure, if there is any cure. Also would like to know about the nature of the disease. I have lost six calves up to date.

You did not say whether there had been any abortion in your herd previous to the above-mentioned time. Abortions are either infectious or non-infectious and should be treated according to kind. Non-infectious abortions may be caused from irritating foods, injury, etc. Infectious abortion is caused by the bacillus of abortion gaining entrance into the uterus of the cow. This is a disease which takes time and patience to handle. The animals not affected should be separated from those affected and all the infected stables, lots, etc., should be thoroughly disinfected. Any dead calves should be burned or scalded. Those cows which have aborted should have the vagina and uterus irrigated with warm, antiseptic solutions which can be done by means of a soft rubber tube, one end of which is placed deep into the uterine cavity and the other end elevated and a funnel placed therein and the antiseptic solution allowed to flow into the womb. As a solution use 1 to 2 per cent lysol solution. This treatment should be repeated at first one or two times daily, later every two or three days until the discharge has ceased for several days. After treatment it is still advisable to keep them from other cows and not breed for at least two months after abortion. The bull used should be treated by clipping the hair off the prepuse and irrigating the preputial cavity with warm, antiseptic solution. Careful attention to these rules and persistency may win. Would advise you, however, to have a competent veterinarian if there is one to be had near you and have him determine whether the trouble is of infectious or non-infectious nature.

Here are a few of the simple rules which one Wisconsin farmer follows in growing grain for seed and exhibition purposes: "Select pure seed that is adapted to the climatic conditions and purchase only from reliable growers; plow the land in the fall, which is to be sown to grain; disk the field lightly in the spring and harrow several times; clean the seed and treat it for smut; sow with a drill; roll the land after sowing so as to crush all limbs and to form a fine dust mulch; cut the grain when ripe, but do not allow it to get so ripe as to shell out; put up in long shocks of not over twelve bundles each; do not stack until the straw is perfectly dry and allow the grain to remain in the stack until it is well sweat out."

Wisconsin, according to the president of the agricultural experiment association, grows more pedigreed seed grains than all the other states combined. Our seeds have found their way into other states and other countries and the demand for them, as reported by the members of this organization, is constantly increasing.

HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." However, he decided not to tell Mrs. Burke of her just yet. The new pastor's first call was upon the Senior Warden, receiving a hearty welcome from Virginia Bascom, his daughter. Hepsey surmised that Maxwell was engaged and made a neighborly call upon Jonathan Jackson, the Junior Warden, to see what he thought about the matter. The ladies of the parish gave a missionary tea, at which Virginia read a paper feeling that she was thereby gaining the much desired attention of her pastor.

CHAPTER IX.

The Rectory.

A FEW WEEKS after Donald's conversational duel with Mrs. Burke he started on a six weeks' vacation, which he had certainly earned; and as he busied himself with his packing—Hepsey assisting—he announced:

"When I come back, Mrs. Burke, I probably shall not come alone."

He was strapping up his suitcase when he made this rather startling announcement and the effect seemed to send the blood to his head. Mrs. Burke did not seem to notice his confusion as she remarked calmly:

"Hm! That's a good thing. Your grandmother can have the room next to yours and we'll do all we can to make the old lady comfortable. I'm sure she'll be a great comfort to you, though she'll get a bit lonesome at times unless she's active on her feet."

Donald laughed, as he blushed more furiously and stuttered:

"No, I am not going to bring my grandmother here, and I strongly suspect that you know what I mean. I'm going to be married."

"So you are going to get married, are you?" Hepsey remarked with due amazement, as if the suspicion of the fact had never entered her head before. "Well, I am mighty glad of it. I only wish that I was goin' to be present to give you away. Yes, I'm mighty glad. She'll make a new man of you up here, so long as she isn't a new woman."

"No, not in the slang sense of the word, although I think you will find her very capable, and I hope with all my heart that you'll like her."

"I'm sure I shall. The question is whether she'll like me."

Hepsey Burke looked rather sober for a moment and Donald instantly asserted:

"She can't help liking you."

"We-ell now, I could mention quite a number of people who find it as easy as rolling off a log to dislike me. But that doesn't matter much. I have found it a pretty good plan not to expect a great deal of adoration and to be mighty grateful for the little you get. Be sure you let me know when to expect you and your grandmother back."

"Most certainly I shall," he laughed. "It will be in about six weeks, you know. Good-by, and thank you a thousand times for all your kindness to me."

There was considerable moisture in Hepsey's eyes as she stood and watched Maxwell drive down the road. Then wiping her eyes furtively with one corner of her apron she remarked to herself:

"Well, I suppose I am glad, mighty glad; but somehow it isn't the jolliest thing in the world to have one's friends get married. They are never the same again; and in ten times out of six the lady in the case is jealous of her husband's friends and tries to make trouble. It takes a lady saint to share her husband's interests with anybody and maybe she ain't to blame. Well, the next thing in order is to fix up the rectory in six weeks. The best way to repair that thing is with a match and some real good kerosene and a few shavings; however, we'll have to do the best we can. I think I'll set Jonathan Jackson to work this afternoon and go around and interview the vestry myself."

Jonathan proved resignedly obedient to Hepsey's demands, but the vestry blustered and scolded, because they had not been consulted in the matter, until Hepsey said she would be glad to receive any contributions they might offer; then they relapsed into innocuous desuetude and talked crops.

As soon as the repairs were well under way the whole town was wild with gossip about Maxwell and Miss Bascom. If he were going to occupy the rectory the necessary inference was that he was going to be married, as he surely would not contemplate keeping bachelor's hall by himself. At last Virginia had attained the height of her ambition and captured the rector. Consequently she was the center of interest in every social gathering, although, as the engagement had not been formally announced, no one felt at liberty to congratulate her. To any tentative and insinuating advances in this direction Virginia replied by non-committal smiles, capable of almost any interpretation; and the seeker after information was none the wiser.

Mrs. Roscoe-Jones, by virtue of her long intimacy with Hepsey and her assured social position in Durford's thirty gentry, felt that she was entitled to some definite information; and so, as they walked back from church one Wednesday afternoon, she remarked:

"I hear that the parish is going to repair the rectory and that you are taking a great interest in it. You must be on very intimate terms with Mr. Bascom and the vestry!"

"Well, not exactly. Bascom and I haven't held hands in the dark for some time; but I am going to do what I can to get the house in order for Mr. Maxwell."

"I wonder where the money is coming from to complete the work? It seems to me that the whole parish ought to be informed about the matter and share in the work; but I suppose Mr. Bascom's shouldering it all, since there's been no effort to raise money by having a fair."

"I really don't know much about it as yet, Sarah. Of course, Bascom's charitable work is mostly done in secret, so that nobody ever finds it out. He is a modest man and wouldn't like to be caught in the act of signing a check for anybody else. It might seem showy."

"Yes, I understand," Mrs. Roscoe-Jones retorted dryly; "but under the circumstances, that is——"

"Under what circumstances?" Mrs. Burke inquired quickly.

"Oh, considering that Mr. Bascom is Virginia's father and would want to make her comfortable, you know——"

"No, I don't know. I'm awful stupid about some things. You must have discovered that before."

"Now, Hepsey, what is the use of beating around the bush like this? You must know the common gossip of the town and you must be in Mr. Maxwell's confidence. What shall I say when people ask me if he is engaged to Virginia Bascom?"

"Tell 'em you don't know a blessed thing about it. What else can you tell 'em? You might tell 'em that you tried to pump me and the pump wouldn't work 'cause it needed packin'."

After this Mrs. Roscoe-Jones felt that there was nothing left for her to do but retire from the scene; so she crossed the road.

When Mrs. Burke began the actual work on the rectory she quickly realized what she had to cope with. The workmen of Durford had a pleasing habit of accepting all offers of work, and promising anything, and making a start so as to get the job; and then, having upset the whole premises, they promptly "lit out" for parts unknown in order to get another job, and no mortal knew when they would return. It always seemed promising and hopeful to see a laboring man arrive in his overalls with his dinner pail and tools at seven, but when two hours later he had vanished, not to return, it was a bit discouraging. Mrs. Burke was not in a very good humor when, arriving at the rectory, she met Tom Snyder, the plumber, at ten-thirty walking briskly away from his job. She planted herself squarely across the walk and began:

"Good morning, Thomas; where are you going, if I may ask?"

"I am going back for my tools, Mrs. Burke."

"Excuse me, Thomas, but you were never more mistaken in your life. You put the kitchen pipes out of business two weeks ago and you must have been goin' back for your tools ever since. I suppose you're chargin' me by the hour for goin' backwards."

Thomas looked sheepish and scratched his head with his dirty fingers.

"No, but I have to finish a little job I begun for Elias Warden on the hill. I'll be back again right away."

"None of that, Thomas. You're goin' back to the rectory with me now, and if the job isn't finished by six o'clock you'll never get your hands on it again."

The crestfallen Thomas reluctantly turned around and accompanied Hepsey back to the rectory and finished his work in half an hour.

After much trial and tribulation the rectory was duly repaired, replastered and papered. The grass had been cut, the bushes were trimmed and the house had been painted. Then Mrs. Burke obtained a hayrack and a team, and taking Nickey and Jonathan Jackson with her, made a tour of the parish asking for such furniture as individual parishioners were willing to give. Late in the afternoon she arrived at the rectory with a very large

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load and the next day Jonathan was made to set to work with his tools, and she started in with some paint and varnish, and the result seemed eminently satisfactory to her, even though her hands were stained, she had had no dinner and her hair was stuck to her head here and there in shiny spots. As they were leaving the house to return home for supper she scowled severely at Jonathan as she remarked:

"Jonathan, I do believe you've got more red paint on the top of your head than you left on the kitchen chairs. Do for mercy sake wash the end of your nose. I don't care to be seen comin' out of here with you lookin' like that," she added scathingly.

After that it was, as Mrs. Burke remarked, just fun to finish the rectory; and though so much had been given by the people of the parish, there were many new pieces of furniture delivered, for which no one could account. As neither Mr. Bascom nor Miss Bascom had sent anything, and as neither had appeared on the scene, excitement was at fever heat. Rumor had it that Virginia had gone to the city for a week or so to buy her trousseau. Presently the report circulated that Maxwell was going to bring his bride back with him when he returned from his vacation.

The day before the one set for Maxwell's arrival Mrs. Burke confessed the truth and suggested that the rectory be stocked with provisions, so that the bride and groom should have something to eat when they first got home. The idea seemed to please the parish and provisions began to arrive and were placed in the cellar or on the newly painted pantry shelves or in the neat cupboards. Mrs. Talbot sent a bushel of potatoes, Mrs. Peterson a pan of soda biscuit, Mrs. Andrews two loaves of bread, Mrs. Squires donated a pan of soda biscuit, Mrs. Johnson some frosted cake and Mrs. Marlow two bushels of apples. Mrs. Hurd sent a pan of soda biscuit, Mrs. Waldorf three dozen eggs and a sack of flour, Mrs. Freyburg sent a pan of soda biscuit, Mrs. Jones a boiled ham, Mrs. Orchardson two bushels of turnips and half a pan of soda biscuit.

Mrs. Burke received the provisions as they arrived and put them where they belonged. Just about supper time Mrs. Loomis came with a large bundle under her arm and remarked to Hepsey:

"I thought I'd bring something nobody else would think of—something out of the ordinary that perhaps Mr. and Mrs. Maxwell would relish."

"I'm sure that was real thoughtful of you, Mrs. Loomis," Hepsey replied. "What have you got?"

"Well," Mrs. Loomis responded, "I thought I'd bring 'em two pans of my nice fresh soda biscuit."

Mrs. Burke kept her face straight and responded cheerfully:

"That was awful nice of you, Mrs. Loomis."

"Oh, that's all right. And if you want any more just let me know."

Finally, when the door was closed on the last contributor, Mrs. Burke dropped into a chair and called:

"Jonathan Jackson, come here quick."

Jonathan responded promptly and anxiously inquired:

"Hepsey, be you ill?"

"No, I'm not sick; but we have ten pans of soda biscuit. They are in the pantry, down cellar, in the woodshed, on the parlor table. For mercy's sake take eight pans out to the chickens or stick 'em on the picket fence. I just loathe soda biscuit; and if any more come I shall throw 'em at the head of the woman that brings 'em."

CHAPTER X.

The Bride's Arrival.

NEXT morning, when Nickey brought up the mail, Mrs. Burke looked anxiously over her letters until she came to the one she was expecting. She read it in silence.

The gist of the matter was that Maxwell had been married to the nicest girl in the world and was looking forward to having Mrs. Burke meet her, and to have his wife know the woman who had been so supremely good to him in the parish. He closed by informing her that they were to return the next day at 5 p. m., and if it were not asking too much, he hoped that she would take them in for a few days until they could find quarters elsewhere. The letter was countersigned by a pretty little plea for friendship from "Mrs. Betty."

Mrs. Burke replaced the letter and murmured to herself, smiling:

"Poor little dear! Of course, they could come and stay as long as they pleased; but as the rectory is in order I think that I'll meet them at the depot and take them there direct. They'll be much happier alone by themselves from the start. I'll have supper ready for 'em, and cook the chickens while they're unpackin' their trunks."

As Mrs. Burke thought it best to maintain a discreet silence as to the time of their arrival there was no one but herself to meet them at the station when the train pulled in. As Maxwell presented his wife to Mrs. Burke Hepsey took the girl's two hands in hers and kissed her heartily, and then, looking at her keenly as the bride blushed under her searching gaze, she remarked:

"You're a dreadful disappointment, Mrs. Maxwell. I'm afraid it'll take me a long time to get over it."

"I am horribly sorry to disappoint you so, Mrs. Burke."

Maxwell laughed, while Mrs. Betty looked puzzled.

"Yes," Mrs. Burke continued, "you're a dreadful disappointment. Your picture isn't half as sweet as you are." Then turning to Maxwell, she said:

"Why didn't you tell me? Who taught you to pick out just the right sort of wife, I'd like to know?"

"She did!" Maxwell replied, pointing delightedly to the young woman, who was still smiling and blushing under Hepsey's inspection.

"But Mrs. Burke," Mrs. Betty interposed, "can't you give we a little credit for 'picking out' Donald, as you say?"

"Yes; Mr. Maxwell's pretty fine, though I wouldn't want to have you tell him so for anything. But I know, because Durford is calculated to test a man's mettle, if any place ever was. Now, Mrs. Betty, if that's what I'm to call you, if you'll get into the wagon we'll drive home and have some supper. You must be 'most famished by this time, if you stop thinkin' about Mr. Maxwell long enough to have an appetite. I suppose that we might have had a committee of the vestry down here to bid you welcome to Durford; and Nickey suggested the village band and some hot air balloons, and that the boys of the parish should pull the carriage up to the house after they'd presented you with a magnificent bouquet; but I thought you'd just like to slip in unnoticed and get acquainted with your parishioners one at a time. It'd be simply awful to have a whole bunch of 'em thrown at your head at once; and as for the whole vestry—well, never mind."

They got into the "democrat" and started out at a smart trot, but when they came to the road which turned toward Thunder Cliff, Mrs. Burke drove straight across the green.

"Why, where are you going, Mrs. Burke?" Maxwell exclaimed.

"Well, I thought that maybe Mrs. Betty would like to get a sight of the town before we went home."

When they came to the rectory and turned into the yard the wonderful transformation dawned on Maxwell.

"My gracious, what a change! It's perfectly marvelous," he exclaimed. "Why Mrs. Burke, I believe you've brought us here to live!"

"Right you are my friend. This is where you belong."

"Well, you certainly do beat the Dutch. Who is responsible for all this, I'd like to know? But, of course, it's you."

"Well, I had a hand in it, but so did

"OH, WELL, I ALWAYS BELIEVE THAT TWO YOUNG MARRIED PEOPLE SHOULD START OUT BY THEMSELVES, AND THEN IF THEY GET INTO A FAMILY ROW IT WON'T SCANDALIZE THE PARISH."

MONEY-SAVING CLUBS.

HERE is an opportunity for subscribers to The Wisconsin Farmer to buy all of their papers and magazines at one time at a big reduction in price. By ordering all your papers and magazines through The Wisconsin Farmer you are assured of prompt service and low prices. Pick out your club and send your order today. (We do not guarantee these prices longer than ten days beyond the date of issue in which these offers appear.)

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If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wis.

This Season's Novelty!

Stylish Angora Style Wool Scarf

You Want One? Read This!

Send us 75 cents only, and get The Housewife for One Year (regular 50 cents) and this Dollar Scarf.

A $1.50 VALUE FOR JUST HALF!

AT LAST fashion has been kind to the women of small means. She has given the scarf, the novelty of the season, to those who cannot afford furs. Comparatively few women can afford really good furs, therefore, they have either had to go without them or be satisfied with a cheap imitation of the real thing. But now comes the scarf, a thing of beauty and chic, which can be wound around the throat with a dashing air lending a smart appearance to its wearer. Scarfs of all kinds and colors are being worn but the most popular and the prettiest variety is the one made of angora wool either in pure white or dainty colors. The outdoor girl first brought the light of fashion's favor on the scarf and showed the fashionable world just how pretty and practical it could be, and now, that cold weather is here it is no longer used just as a pretty piece of decoration, but as a serviceable piece of milady's wardrobe. These scarfs are very warm and easily cleaned, with these two characteristics they are destined to remain immensely popular. The scarf we offer is made of fine wool, angora style and measures 56 inches long by 7 inches wide, it may be obtained in different colors. Each scarf has striped ends of harmonizing colors and is finished with a self fringe. Kindly state color desired when ordering.

Remember, all you need to do to get this Scarf, is to subscribe for The Housewife for a year and remit 75 cents only for both Housewife and Scarf. The regular rate of The Housewife is 50 cents—the usual cost of the Scarf is $1.00.

WE OFFER BOTH FOR 75 CENTS!

Remit by P. O. Money Order or Registered Letter to

THE HOUSEWIFE, 30 IRVING PLACE, NEW YORK

the whole parish. Now walk right in and make yourself at home."

Mrs. Burke enjoyed to the full Maxwell's surprise and delight, as he and Mrs. Betty explored the house like a couple of very enthusiastic children. When they got into the china closet and Mrs. Betty found a silver tea-ball she exclaimed rapturously:

"Look here, Donald! Did you ever see the like of this? Here is a regular tea-ball. We will have tea every afternoon at four and Mrs. Burke will be our guest. How perfectly delightful."

This remark seemed to please Hepsey mightily, as she exclaimed:

"Oh, my, no! Do you want to spoil my nervous system? We are not given much to tea-balls in Durford. We consider ourselves lucky if we get a plain old-fashioned pot. Now you get fixed up," she directed, "while I get supper ready, and I'll stay just this time, if you'll let me, and then if you can stand it perhaps you'll ask me again."

Soon they sat down to a little table covered with spotless linen and a pretty set of white china with gold bands. Maxwell did not say much; he was still too surprised and delighted.

The broiled chickens and the browned potato balls were placed before Maxwell, who faced Mrs. Betty—Hepsey sitting between them.

"Now this is what I call rich," Maxwell exclaimed as he carved. "I hadn't the slightest suspicion that we were to come here and find all these luxuries."

"However did the house get furnished?" chimed in Mrs. Betty.

"Oh well," Mrs. Burke replied, "I always believe that two young married people should start out by themselves, you know; and then if they get into a family row it won't scandalize the parish. The only new thing about the furnishings is paint and varnish. I drove around and held up the parish and made them stand and deliver the goods, and Jonathan Jackson and I touched it up a little; that's all."

"We ought to acknowledge each gift personally," Maxwell said. "You must tell us who's given what."

"Oh, no you won't. When I took these things away from their owners by force I acknowledged them in the politest way possible, so as to save you the trouble. You're not supposed to know where a thing came from."

"But there must have been a lot of money spent on the rectory to get it into shape," Maxwell asserted. "Where did it all come from?"

Mrs. Burke grinned with amusement.

"Why, can't you guess? Of course, it was that merry-hearted, generous old Senior Warden of yours. Who else could it be? If there is anything you need just let us know."

"But the house seems to be very completely furnished as it is."

"No, not yet. If you look around you'll see lots of things that aren't here."

Mrs. Betty quite raved over the salad, made of lettuce, oranges, walnuts and a mayonnaise dressing. Then there came ice cream and chocolate sauce, followed by black coffee.

"This is quite too much, Mrs. Burke. You must be a superb cook. I am horribly afraid you'll have spoiled Donald, so that my cooking will seem very tame to him," Mrs. Betty remarked.

"Well, never mind, Mrs. Betty. If worst comes to worst there are seven pans of soda biscuits secreted around the premises somewhere; so don't be discouraged. There are lots of things you can do with a soda biscuit, if you know how. Now we'll just clear the table, and wash the dishes, and put things away."

When about nine o'clock she arose to go, Maxwell took Hepsey's hands in his and said quietly:

"Mrs. Burke, I'm more indebted to you than I can possibly say, for all you have done for us. I wish I knew how to thank you properly, but I don't."

"Oh, never mind that," Mrs. Burke replied, a mist gathering in her eyes. "It's been lots of fun and if you're satisfied I'm more than pleased." Then, putting her arm around Mrs. Betty's waist, she continued:

"Remember that we're not payin' this nice little wife of yours to do parish work, and if people interfere with her you just tell 'em to go to Thunder Cliff. Good-by."

She was turning away when she stopped, an expression of horror on her face:

"My! think of that now! This was a bride's dinner-party and I put yellow flowers on the table, instead of white! What'd city folks say to that!"

(To be continued.)

GAMES FOR THE SCHOOL ROOM.

In two Illinois school districts they have discovered a way to keep their boys away from the poolrooms. The method adopted has been to introduce the pool table into the schoolhouse. Mr. Charles McKinley, head of the Pool and Billiard Association, of Chicago, presented each of the school districts with a pool table. These were placed in the game rooms. These school districts use their school building as a community and social center. They have considerable trouble in keeping their boys away from the poolhalls. The new plan gives the boys all the pleasure which may be derived from the game and at the same time removes it from undesirable association. The fathers and mothers of the school districts are well pleased with the change. Mrs. Charles H. Treadwell, principal of one of the schools, says that the tough poolroom problem will be solved when school districts are willing to establish desirable games under school supervision.

Alfalfa is a splendid servant. It promises to do much and it does more than it promises. It is also a forceful master. It teaches lessons of forethought, thrift, industry and loyalty. It will not dwell in an uncongenial environment, but insists upon a soil which is deep enough to accommodate its roots for at least three or four years, that does not have an excess of water, and which is free from acidity and has at least a small amount of inoculation.

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ROSES! Eight Beauties For 15c!

No Flowers So Fair as Roses: No Finer Roses than The Housewife's

Our 1916 offer is Better and Bigger than any previous group---Splendid and unusual types chosen in well balanced assortment comprising Eight Hardy Beauties in all.

Bigger, Better, Brighter Than Ever

Frau Karl Druschki—A pure paper-white, free-flowering, large-sized Hybrid Perpetual. It is a remarkably handsome plant with bright, heavy foliage and strong, upright growth. There is nothing in the line of perfectly hardy Roses that can compare with this one in form, color and general finish.

Robin Hood—This new Rose has a glorious rosy-scarlet color that is at once soft and bright and lasting; the bloom is full and of beautiful build. It is a grand grower, heavy caned and profuse in foliage; flowers very freely produced; we feel sure this will prove a delightful companion for Rhea Reid.

Rhea Reid—Considered by many experts to be the finest red Rose in existence; has no rival. Rhea Reid is an offspring of American Beauty, which fact alone would place it right in the front rank along with its hitherto unrivaled parent. Much darker and richer red than the American Beauty; fragrant and continuous.

Violet Blue (the Blue Rambler)—the most novel creation of the age. A perfectly hardy, rapid-growing Rambler, identical with Crimson Rambler, except the color of its flowers. The immense clusters of beautiful violet-blue flowers, reminding one at a distance of the Blue Clematis, is a sight never to be forgotten. It is entitled to a place in every garden. It will cover the porch or trellis where planted in a short time, and will succeed everywhere.

Climbing American Beauty—Climbing H. P. A seedling from American Beauty with Wichuraiana and Tea blood in its veins. The introducers say of it: "Same color, size and fragrance as American beauty, with the addition of the climbing habit. Good foliage, and better blooming qualities. One plant of this new Rose will produce twenty times as many flowers in June as the old American Beauty, besides blooming occasionally during the summer. Blooms three to four inches across; has proved perfectly hardly and stands heat and drought as well as any Rose in our collection." We feel sure this Rose has a great future.

White Dorothy. (New)—A pure white sort of well-known Dorothy Perkins, of same habit of growth and freedom of flowering; a splendid companion for the pink variety, as it flowers at the same time. A most valuable addition to this class. Awarded gold medal National Rose Society and Award of Merit, Temple Show, England.

Madame Caroline Testout—Clear bright satiny-pink: flowers very large and extremely showy; quite distinct. It is the Rose par excellence. It does well everywhere.

Marechal Niel Rose—The world-renowned Rose. A beautiful deep sulphur-yellow, very large and exceedingly fragrant. It is the finest yellow Rose in existence. It has a climbing habit.

OFFER ENDS POSITIVELY MAY TENTH

THE HOUSEWIFE

THE HOUSEWIFE is showing wonderful improvement and the evidences of this are just beginning—the very best fiction, illustrated by work of famous artists are to appear in coming issues.

Look at a few of the many names of those now contributing to The Housewife's pages:

AUTHORS.

Holworthy Hall—Author of Henry of Navarre, Ohio; the "Pepper" stories, etc.

Ellis Parker Butler—Who wrote "Pigs is Pigs;" the Great American Pie Company, etc.

Jane W. Guthrie—Who can tell a love story as few can, which explains her fame.

Lilian Dynevor Rice—Whose special cookery and household columns will be welcomed and—

No end of other features, Mother Knows Hows, Childrens' Pages, Real Poetry, Short Stories, and many big features to be announced from time to time.

ARTISTS.

F. Early Christy, whose cover designs are their own best description; John R. Neill, of whom it has been said, "He more than illustrates a story—he illuminates it;" P. J. Monohan, whose pictures are always full of action and real people; W. B. King, he of the deep understanding and deft touch; the list could be made as long as wanted, both as to artists and authors.

No expense nor time nor trouble is being spared to make

THE HOUSEWIFE

the finest popular priced magazine for women in America.

At any price The Housewife would not be a luxury —at 50 cents a year it is a necessity!

As an introductory offer—The eight famous roses described in detail above will be sent to any person who subscribes to The Housewife for one year at 50 cents a year, for but 15 cents additional. In other words for 65 cents, you get The Housewife for one year and the roses will be sent you postpaid. THIS OFFER APPLIES UPON ORDERS RECEIVED BEFORE MAY 10TH—IT WILL BE WITHDRAWN UPON THAT DATE AND ORDERS RECEIVED AFTER THAT DATE WILL NOT BE FILLED. Think of it!—Eight beautiful roses for 15 cents! Lose no time in sending in your order—take advantage of this sensational springtime offer at once. There is going to be a lively demand, so the sooner you get your request filed, the better.

THE HOUSEWIFE, 30 IRVING PLACE, NEW YORK.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

GOOD BOOKS.

What is a good book? A good book is one which will bear re-reading; a book that inspires one to higher ideals and better living; a book that has stood the test of time. A good book opens up a new field of knowledge and brings one in contact with great minds from which have come thoughts that take us out of ourselves and refresh us with new ideas and visions.

Books, someone has said, are like friends. They broaden our sympathies and our outlook on life, and in the selection of our reading, as in the cultivation of friends, we should be guided by our needs. For instance, do not read a book just because someone has said it was a good book if you are

BABY WACHTL.

not interested in the subject of which it treats. Do not laboriously wade through the works of a certain author just because you think you ought to like it. Sincerity is just as much a part of book friendships as human friendships. Read the best you can get, but let it be something that rests you and uplifts you and from which you get the most pleasure and the greatest degree of help.

Again, a book that makes an appeal one day may not fit the mood of another day. When tired do not undertake heavy reading, but turn to a light, restful novel. For profitable reading never sit down with your book and scan the pages in a nervous hurry; read quietly, restfully and thoughtfully. If you have only a few minutes to read, then read only a little and get the best there is in it. Another good idea in planning one's reading is this: For every new book read one of the old ones that has stood the test of time. Among the latter may be named "Old Curiosity Shop," "A Tale of Two Cities" and "Nicholas Nickelby," by Charles Dickens; "The Mill on the Floss," by George Eliot; "Ivanhoe," by Scott, and "Vanity Fair," by Thackeray. "Vanity Fair," by the way, has been pronounced by an overwhelming vote of present-day novelists and writers to be the greatest novel ever written. If more solid, thought-inducing books are wanted try "Heroes and Hero Worship" and "Sartor Resartus," by Thomas Carlyle; "Representative Men," by Emerson; essays by Ruskin, Addison's "Spectator" and Stevenson's "Kidnaped."

A WARNING.

This is the time of year for measles and the Philadelphia department of public health has issued a warning which might well be heeded everywhere. This is to the effect that parents must abandon the dangerous custom of exposing children to the disease for the purpose of "having it over with." It has been stated on good authority that this, as well as other contagious diseases, would die out of their own accord if proper precautions were taken at all points of infection.

The department points out that measles is by no means to be considered lightly, since statistics show that in 1915 in that city there were more deaths from measles than from typhoid fever, scarlet fever or whooping cough. And the disease is on the gain, the death toll last year being 184 as compared with seventy-seven in 1914 in Philadelphia alone.

The bulletin sets forth that voluntary exposure to the disease indicates gross ignorance and may unnecessarily predispose the child to serious complications, which may result in death. This disease, therefore, is termed a serious one and should not be treated with indifference on the part of parents or guardians. The bulletin continues:

The greatest mortality from measles occurs among children under five years old, and the cause of death usually is attributed to inflammation of the lungs, which is a frequent complication. Those who survive may be so injured physically as to predispose them to other infections. Running ears and even deafness may be the result of an attack of measles.

The early symptoms are those of an ordinary cold. The child coughs, sneezes, has a running nose, and the eyes are red and watery. These symptoms last three or four days and are followed by the appearance of a rash upon the forehead, neck and face. Children who present such symptoms should not be sent to school, nor allowed to be visited by other children. The family physician should be sent for immediately to determine the nature of the case.

If the disease is measles, it is necessary that all persons in the household who have not had it stay at home, because they may become infected and spread the disease before symptoms actually present themselves. Adults who have had the measles may attend their regular duties, excepting school-teachers and janitors, provided they do not come in direct contact with the patient and do not attend church, go to theaters or other public gatherings while the disease prevails in the household.

Other children of the family who have not had the measles, after proper cleansing and the disinfection of their clothing, may take up their residence in other premises occupied exclusively by adults. They then may be readmitted to school fourteen days after such removal, but must not visit their home until it has been disinfected by the health authorities.

The patient should be isolated in a room free from bright light and devoid of unnecessary tapestries and furniture. Bedclothes, towels, napkins and clothing used by the patient should be disinfected and then thoroughly washed. Milk dealers are cautioned not to take empty bottles from a house where measles exists unless they have been thoroughly cleansed in boiling water or disinfected in a solution of chlorinated lime, one-half pound of lime to a pail of water.

The measles epidemic is now in its period of incubation, and the extent of its prevalence in the spring will depend upon the readiness with which the public accepts the precautions mentioned.

UP-TO-DATE KITCHEN HELP.

Farmers' wives should not worry because of inability to obtain kitchen help. The time has come when a few dollars invested in modern kitchen and laundry equipment will solve the help problem.

The first and most important of all labor-saving devices is running water in the kitchen. Of course, everyone cannot afford an expensive water system with accompanying bath room connections, but there are inexpensive devices for piping water into the kitchen and providing for its disposal. The cost is so small and the benefits so great that it would be well to economize along some other line and provide for this convenience.

With water provided for the next step is improvement in laundry equipment. There are power washers on the market that are run by gasoline engine or by electricity and there are electric, gasoline and alcohol irons that save many steps, to say nothing of the heat of a stove when doing the ironing.

INTERESTED IN BABY PICTURES.

To the Editor:—I have been watching with interest the baby pictures in your paper, and, as I have three healthy babies, I am sending their pictures.

The first children were a pair of twins, Eunice and Eugene, weighing six and seven and a half pounds at birth. At the time the picture was taken they were a year old and weighed nineteen and twenty-one pounds. Now, at the age of twenty-one months they weigh twenty-four and twenty-six pounds. The boy has always been about two pounds the heavier.

The baby is five and a half months old now. She was four months old when the picture was taken and weighed nineteen pounds. Both boys were brought up on mother's milk, but the little girl was brought up on the bottle. I hope to hear from more mothers. Mrs. John C. Wachtl.

EUNICE AND EUGENE WACHTL, YEAR OLD TWINS.

MORE TWINS.

To the Editor:—We have seen different pictures of little baby girl twins, so I'll send you a picture of our little boys, Philip and David. They were born on Christmas day in the morning, 1913. They weighed each eight pounds and were brought up on mother's milk.

One of the pictures was taken just two weeks before they were a year

PHILIP AND DAVID AND LADY.

old. The other was taken last October when they were one year and ten months old.

They began to creep when nine months old, but did not walk until they were thirteen months old. I think they are as healthy and strong as any babies I ever saw. They are used to fresh air at night as well as in the daytime. We always have some windows open from the top, summer or winter, day or night, therefore, they never have even a cold.

They are exceedingly fond of water and drink nearly a glassful at every meal besides all the way from three to ten drinks between meals.

We have weighed them the 25th of every month as old as they are and found they always weighed alike with the exception of one or two ounces. They now weigh thirty-one and a half pounds.

They are not very fond of talking, for they say only a few words, such as baby, kitty, Lady (our dog's name), but they can make one understand anything they want.

Mrs. John P. Warren.

CREED TO BE FOUND IN NEW TESTAMENT.

To Constant Reader:—You say in attending different churches you are urged to join, but you have no opportunity of learning their creeds. If you will turn to Matt. 16:16 in your New Testament you will find the only divine creed that Christ said he would build His church on. If you believe that "Jesus is the Christ, the Son of the living God" and are ready to obey him, turn to Acts, second chapter, and see what Peter told the people to do who wanted to be saved.

Do the same things that people did in the days of the apostles to become Christians and you will be saved from your sins and be in the church that Christ established and need not worry over different men-made creeds.

A Reader.

WHEN TO JOIN CHURCH.

To the Editor:—I have read the letters of many and would like to hear from some of you who read this pa-

er. My husband, who is nearly twen--one, says he isn't going to join hurch until he is about forty, beause, he says, he then will be able to eep the church's rules, etc. He says e will know better what to do when e is older. We know other boys who elong to churches who swear and do any things that they should not. My usband is an industrious boy and is nxious for us to have a home of our wn. What I want to know is this: Do you think he is right about joining hurch at forty? —Mabel.

TOO MUCH BAKING POWDER.

To the Editor:—I noticed in a reent issue that "A Reader" is having rouble with her cakes falling and being coarse grained. The trouble is

WARREN THORNTON BROWN.

very likely too much baking powder. If she will use about one-third less I think she will find her cakes much nicer. The teaspoon should be just a little rounded.

Can anyone tell me why my bread dries out? It is fine grained and I have a bread box and I am sure it is not baked too long. I would be glad to have any suggestions. We get many useful hints from the paper.

C. E.

YOUNG HOUSEKEEPER HAS SUCCESS WITH CAKES.

To the Editor:—I read where someone was having trouble with her cakes. I have been married a little over seven months and, though I never baked a cake before I was married, I seldom have one fall now. I think the trouble is in the weight or measurement of the ingredients. It should be exact. Too much sugar will make a cake fall. I have had that experience. Use the same cup for sugar, milk and flour. Also, the more you beat the cake the better it will be. The batter should be real spongy when it has been beaten enough.

I have never written to the paper before, but I hope this little letter will do some one good. Mrs. B. R.

THE UNFINISHED PRAYER.

"Now I lay me—say it, darling."
"Lay me," lisped the tiny lips
Of my daughter, kneeling, bending,
O'er her folded finger tips.

"Down to sleep," "to s'eep," she murmured;
"I pray the Lord," I gently added—
"You can say it all, I know."

"Pay de Lord," the words came faintly,
Fainter still, "my soul to teep."
Then the tired head fairly nodded,
And my child was fast asleep.

But the dewy eyes half opened
When I clasped her to my breast,
And the dear voice gently whispered—
"Mamma, Dod knows all de yest."

Oh! the trusting, sweet confiding
Of the child-heart! Would that I
Thus might trust my Heavenly Father,
He who hears my feeblest cry!

—Selected.

POINTERS.

White cotton piece bags hung in the linen closet are a great convenience. Have them made with a string to draw from both sides. Mark in large letters in indelible ink what the bag contains, as "Dress Pieces," "Old Linen," "Cotton and Linen Sundries," "Old Silk," "Old Gloves," etc.

Small rugs should be cleaned out of doors each week. Place the rugs right side down and beat lightly with a rattan or wire beater. Sweep, turn and sweep the right side. Better yet, go after them with a vacuum cleaner.

Sunlight is a great purifier of air. Let it into every room in the house. Don't neglect the cellar. Keep it not only clean and sweet but give it fresh air and good ventilation.

Water boils when it bubbles, fat when it is still. Fat, however, is not ready for frying until a blue smoke rises from the surface. Be particular about this point.

French fried potatoes dipped in corn meal before frying are excellent.

Milk will keep sweet longer in a shallow pan than in a pitcher.

Soiled pans filled with hot water start cleaning themselves.

Beeswax and salt will make rusty flatirons clean.

Granulated sugar is best for cakes.

WEIGHTS AND MEASURES.

Two and one-half teaspoonfuls make one tablespoonful.
Four tablespoonfuls make one wineglassful.
Two wineglassfuls make one gill.
Two gills make one teacupful.
Two teacupfuls make one pint.
Four teaspoonfuls salt make one ounce.
One and one-half tablespoonfuls granulated sugar make one ounce.
Two tablespoonfuls flour make one ounce.
Two cups or one pint granulated sugar will weigh about one pound.
One scant quart wheat flour about one pound.
Ten ordinary sized eggs about one pound.
A piece of butter the size of an egg about one and one-half ounces.
Two cups of butter about one pound.

RECIPES.

Graham Bread.—Two and three-quarter cupfuls of graham flour, one teaspoonful of salt, one-quarter cupful of sugar, one teaspoonful of soda, one-third cupful of English walnut meats, cut up; one-half cupful of molasses, one cupful of milk, one egg, one tablespoonful of shortening. Mix dry ingredients, beat egg and add flour, add molasses, milk and shortening, stir thoroughly, put into tin and bake forty to forty-five minutes in slow oven. If sour milk is not at hand use sweet milk, one teaspoonful of baking powder and cut the amount of soda to one-half teaspoonful. Bacon fat is a good shortening.

Fig and Orange Jelly, With Cream.—One and one-fourth cupfuls figs, one and one-fourth cupfuls fig juice, three-fourths cupful sugar, one and one-half tablespoonful gelatine, juice of one lemon, one and one-half cups orange juice. Cook figs very slowly in water to cover, reserving the water in which they were cooked. Heat together the fig juice and sugar. Pour this over the gelatine, which has been soaked in cold water, add juice of lemon and orange juice. Then strain. When beginning to set, add figs, cut small, mold and serve with thick cream.

Raisin Puffs.—One tablespoonful sugar, one cupful flour, one-fourth cupful butter, one-half cupful milk, one egg, one-half cupful raisins, one teaspoonful baking powder. Steam one-half hour in buttered cups. Serve with a sauce made of two eggs, one pint milk, one-half cup sugar and one teaspoonful vanilla. Boil until it thickens. Remove from fire, add a pinch of salt and a teaspoonful of vanilla. Serve hot.

Lemon Custard.—Four eggs, one lemon, one cupful sugar, three tablespoonfuls cornstarch, butter size of an egg, one pint boiling milk. Beat the grated lemon, sugar, melted butter, yolks of eggs and cornstarch, mix well, then add the boiling milk. Let these ingredients cool and beat in lightly the beaten whites. Bake in rich pastry. This recipe makes two pies.

Brazilian Stew.—Two pounds of veal, cut in small pieces, one-half pound of salt pork, sliced thin, four quarts water, three tablespoonfuls vinegar; boil one hour; skim thoroughly. After skimming add one chopped onion and two chopped turnips. Season with salt and pepper. Then place all in a pan, put in oven and stew slowly two hours.

Breast of Mutton and Tomato.—Bone the meat, roll and tie it, place in a saucepan with the bones, brown all over a hot fire; dredge a tablespoonful of flour over meat and brown it. Put with the meat a quart of fresh or canned tomatoes, peeled and sliced. Season highly with salt and pepper. Cook slowly for an hour. Remove the bones and the string from the meat and serve with the sauce.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

HAS A TRICK DOG.

Dear Young Folks:—I have been reading your most interesting letters and I enjoy them very much. I am eleven years old and am in the eighth grade. I love to go to school and I think every child should.

I have many little pets. My pony's name is Dapple. All my friends wish they had one like him. He doesn't kick or bite. I also have a little white dog. His name is Moufflo. He can do many tricks. Sometimes he makes a wheelbarrow out of himself, and he can dance and jig. Sometimes I hold a biscuit in front of him and count one, two, three, then he will snap and catch the biscuit. One day he ran away from me. He didn't come back for many days and I thought he was lost. Then one day he came home, thin and hungry. I was so glad to see him again. On Sundays I wash his hair and tie it up with a blue ribbon and then he is so proud of himself he does not want to walk in the sand. He will jump up on a chair and looks so cute. He goes to meet me when I come home from school. I feel very proud of him. —Elsie.

GETS PRIZES AT SCHOOL.

Dear Young Folks:—I have been reading your letters and thought I would write one, too. I live in the country and walk half a mile to school. Our winter term closed the 18th of February with a program in the afternoon. I got two prizes, one

PHILIP AND DAVID, TWIN SONS OF MR. AND MRS. JAMES P. WARREN.

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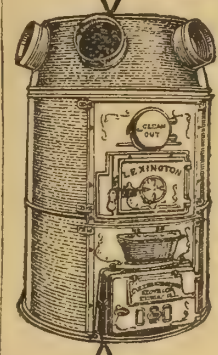

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GALLOWAY BROS & CO., Dept. 37 Waterloo, Iowa

for head marks and the other for being neither absent nor tardy. Now we have five weeks' vacation. During that time I expect to visit my grandma and several cousins that live near. I am also going to finish reading "Helen's Babies" and learn some new patterns of crochet. Then I will be ready to go back to school.

—Bernice.

HELPED TO GET A DEER.

Dear Young Folks:—I am a little boy eight years old. I will tell you a story about last hunting season.

One day my father went hunting. While he was gone the horse got sick and my mother said I would have to go call my father. So I went and I took my little gun with me. I followed my father's track and at last I heard a noise. I looked up and saw a big buck. I was so frightened that I could not make a noise.

I put my gun on a stump and shot at the deer. He started to run and he was bleeding so I followed the track. I went a long, long ways and then I heard a shot. I kept on going and pretty soon I met my father. He had got the deer that I had shot at and I was very glad.

I was so hungry and tired that my father had to carry me home.

—Johnnie.

NERO PUNISHES A ROGUE.

Dear Young Folks:—I read the Young Folks' letters and thought I would write about my dog. His name is Nero.

Nero is very useful. He is sometimes sent on errands and brings parcels from the shops very nicely. He goes alone to the market.

But Nero has an enemy, a fierce bull dog that lives on the road to the market. Nero is stronger than the bull dog, but the sly rascal keeps out of sight except when Nero has a basket in his mouth. Then he runs at him and Nero is too faithful to drop his burden, so he has to scamper.

One day the scamp worried Nero all the way home. He came in much excited. I set the basket on the table and took out the meat. Then Nero leaped up, seized the basket with his teeth and ran out of the house. Nero went straight to the house where the ugly dog lives. The dog saw the basket and thought he had a good chance to bite Nero, so out he rushed. What then? Why, Nero dropped the basket in a hurry and he gave that wicked dog such a whipping that he never forgot it.

—Bertha.

PET LIKES BREAD AND CAKE.

Dear Young Folks:—I enjoy reading your letters very much. I am a little girl nine years old and I live in the country about four miles from town. I have a mile and a half to go to school. I am in the fifth grade.

I have two sisters and one brother and we have a little pony named Pet. We drive her to school and when we eat our lunch at noon she eats what is left. She will eat bread, apples and cake and is always glad when it is time to go home. Sometimes we drive her to take our music lessons. We can have lots of fun with her in vacation.

—Florence.

ENJOYS THE YOUNG FOLKS' LETTERS.

Dear Young Folks:—I often read your letters and take a great interest in them, for you all write such interesting letters. I can hardly wait until the mail carrier brings the paper.

I am thirteen years old and am in the seventh grade. I have about two miles to go to school, but I like to go just the same, for we play games and have lots of fun.

We have a fifty-acre farm and keep nine cows, two horses and two colts and about eighty chickens, mostly Plymouth Rocks and a few Buff Orpingtons. The Buff Orpington roosters are very tame. When I feed the chickens, first the colts come to get a taste of oats and then one of the roosters comes to eat out of the pail or my hand. All three roosters are tame, but I like this one best.

The next time I write to the Young Folks I am going to send a picture of myself.

—Rose.

International Sunday School Lesson

Lesson for March 12, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

HEROES AND MARTYRS OF FAITH.

LESSON TEXT—Heb. 11:1; 12:3.

GOLDEN TEXT—Let us run with patience, the race that is set before us, looking unto Jesus, the author and perfector of our faith.—Heb. 12:1, 2.

There are two kinds of heroism for which medals are awarded in this country. Congress confers a "medal of honor" for distinguished services and extraordinary heroism in war. The Carnegie "hero fund in peace," bestows medals and pecuniary recognition for heroic deeds performed in preserving and rescuing human life, and the first medal thus issued was given to a boy for rescuing another boy from drowning.

I. Faith Defined, v. 1. This is perhaps the most quoted and succinct definition we have of faith. What follows is but the illustration and application of the fact. Faith is an "assurance" (R. V.). The ground of this assurance and conviction is the word of God. (See Rom. 10:17). The only sure ground for a dynamic and intelligent faith is God's word: Put to the acid test of experience it never fails.

II. Faith Declared, vv. 4, 5. Faith had been declared and manifested by many illustrations before the death of Stephen:

(a) Abel, at the risk of his brother's anger, obeyed the unseen God and earned his approval; his heroic, martyred spirit still speaks to men (v. 4).

(b) Enoch, the diligent seeker after God, in a world of lawlessness lived a life well-pleasing to him through a faith that made his presence real (vv. 5, 6).

(c) Noah (v. 7), a lonely man of faith (Gen. 6:5), chose the unseen God and preached righteousness rather than avoid the ridicule of his neighbors. Noah reckoning the invisible as tangible, continued to build his ark and became a blessing to the race.

(d) Abraham and Sarah (8-12). Not knowing whither they went, by faith these lonely pilgrims unerringly followed an invisible God to an unseen country; but a faith greater still led them to "dwell in the land" and not possess it (v. 10). Their faith redeemed them from the mere emigrant character. They "looked for a city, which had foundations, whose builder and maker is God."

(e) Moses (23-28) showed his faith by a right choice. He weighed values and had "respect unto the recompense of reward." His faith "endured, as seeing him who is invisible." Moses saw by faith the "reproach of Christ," that which Christ suffered for the redemption of the world, as being of "greater riches than the treasures of Egypt."

These, and others not mentioned, are summarized by their having accomplished ten different things (32-40). They performed great deeds of heroism (32-34); they endured great suffering and persecution (35-36). All of this suffering was to issue in a greater reward with the glory that was to come (Rom. 8:18, II Cor. 4:17, 18). All these men of faith "obtained a good report."

III. Faith Demanded, 12: 1, 2. The Holy Spirit has given us this long list of heroes as an exhortation to stir up those living to the performance of their duty. The roll call of triumphant heroes is not yet completed. All these mentioned are witnesses, not onlookers. These are they who have testified to God and to the truth of his word. In the light of this testimony and on the same ground of their testimony, we are to do several things:

1. To "lay aside every weight." No runner carries any weight beyond that which is needful. Some things are burdens that are not necessarily sins. Every such thing hinders our running and should be laid aside.

2. "The sin that doth so easily beset us." Literally, that wrap themselves about us as an ill-fitting garment, and which trip or impede the runner's progress. These sins (not sin) are those little devil habits and practices which must, for that reason, be laid aside.

3. "Run with patience the race set before us." There must be steadfastness and endurance. If church members were as faithful in following up as the average business house is we would have less of lapsed church members and fewer boys and girls who drift away from the Sunday school.

4. "Looking unto Jesus." This is the keynote to this entire epistle and to this category of heroes. He is our "file-leader" and the perfector of our faith. Once we get our eyes off him we will stumble and fall in the race. "For the joy (literally equal fellowship with God) set before him, he endured the cross" (Phil. 2:6-8). If we would win the race we must despise the sin which lies in the path of absolute loyalty to God.

The work of Jesus and the bestowing of the Holy Spirit who is always with us, is the source, the author of our faith.

There is far too much easy-going Christianity and too little self-surrender and almost no privation in our modern church life.

Such a passionless Christianity has produced an indifferent world.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Address all orders to The Wisconsin Farmer, Madison, Wis.

7594 Ladies' Waist.—Cut in sizes 34 to 44 inches bust measure. This smart bodice has two short tucks at each side of the front, a plain back and shoulder straps. The open neck is trimmed with large revers and there is a flare collar with wide points at the sides, which trims the back of the neck. The sleeve is plain, gathered into a band.

7596 Ladies' Dress.—Cut in sizes 34 to 44 inches bust measure. A great aid when altering is the design which permits the use of two materials. The one shown is of these and they are also the best and latest in style. The waist consists of a loose blouse, in jacket effect, with band trimmings simulating a vest. The skirt has a three-gore upper part and a deep contrasting flounce.

6459 Ladies' Brassiere.—Cut in sizes 34 to 42 inches bust beasure. The brassiere or bust supporter is indispensable with the low-cut corsets now worn. It serves both comfort and looks. This design is the regulation one, made with a short yoke in front, below which the material is fitted by darts. In the back the two sections cross over and are held by a single button at the shoulder.

7585 Children's Dress.—Cut in sizes 2, 4 and 6 years. This dress is in one piece from shoulder to hem, with center front closing and loose, full length sleeves. The high neck has a flat collar. With it is worn an underwaist, to which are attached bloomers gathered at the knee.

7599 Girls' Dress.—Cut in sizes 8, 10, 12 and 14 years. Smart to the last degree is this little frock. It consists of a plain blouse with small, flat collar and long sleeves gathered into a band cuff. To this is buttoned a side pleated skirt which has a plain panel in front. Over both these garments is worn the jacket which has a flaring, circular cut, plain on the shoulder, but rippling at the edge.

7603 Ladies' Dress.—Cut in sizes 34

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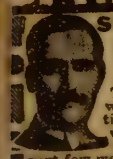

This extra offer is made with the idea of getting ten or more Galloway Spreaders in every township in the next few weeks. One Galloway No. 8 Spreader always sells from one to a dozen more in the same community. That's why I make this new special offer to distribute 10000 advertising spreaders quickly

LOOK! Our new 250 page catalog. Tells you all about the special patented features on the famous Galloway Manure Spreader; how to make a spreader pay for itself in six months' time; shows why 3 exclusive Galloway patented features make the Galloway Spreader worth $50 more than any other spreader, but cost nothing extra on the Galloway; also shows full line of other Galloway implements and merchandise.

NEW SELLING PLANS

Cash or time—one year to pay—installment plan—note settlement—half cash half note—bank deposit or cash, at prices so low you cannot afford to do without a manure spreader now. We sell direct at less than wholesale from factory to farm at the actual cost of material, actual cost of labor and only one small profit based on tremendous output.

All Steel Beater and V-Rake

Steel Tongue

LOOK! 3 GREAT INVENTIONS

They make the Galloway Spreader in a class by itself, are:

1. Invincible Roller Feed worth $25 on any other spreader. Exclusive on the Galloway, but costs you nothing extra. One of the secrets of our light draft.
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3. New Steel Everlasting Beater with V-Rake which gives wide spreading and tears the manure into shreds for uniform available plant-food. This exclusive feature alone worth $15. Costs nothing extra on the Galloway.

Many other special 1916 features: low down; double chain drive; cut-under front wheels; channel steel frame, trussed like a steel bridge; steel tongue; endless force feed apron; top of box only 42 in. high; front wheels under the box, and other special features make it easy for two average horses to handle.

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Get in on this special distribution advertising offer from now until seeding time.

At the end of twelve months, if the Galloway spreader has not paid for itself, if you have hauled out 100 loads of manure or more, and it has not proven everything I say for it, I agree to take it back, pay freight both ways and return your money, no matter on which plan you buy. Could I make this offer if I was not sure of my ground? Every sale backed by a $25,000 bank bond—an additional guarantee to you! Galloway spreaders have passed a field test in every state and almost every county.

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Manure Spreader Manufacturing Specialists

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You Can Get 5000 Miles More Service

out of them by "half-soling" them with Durable Steel Studded Treads. European Motorists have been doing this for the past three years and getting from 10,000 to 15,000 miles from one set of tires. In eight months over 30,000 American Motorists have followed their example and are saving $50 to $200 a year in tire expense

We Deliver Free Without a cent deposit prepay the express and allow you to be the judge. Durable Treads double the life of your tires and are sold under a signed guarantee for 5,000 miles without puncture

Special Discount offered to motorists in new territory on first shipment direct from factory.

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Gentlemen:—Please send me without obligation, full information, sample, guarantee, etc.

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Wigs, makeups, tricks, puzzles, jokes. Big catalog Free. Oaks Magic Co., Dept. 279, Oshkosh, Wis.

to 44 inches bust measure. Gracefully simple, this dress has a plain blouse with diagonal closing, the neck slightly open, with chemisette and wide, turnover collar as a finish. The sleeves may be in either of two styles, one closely fitted to the arm and the other loose and flowing, gathered at both shoulder and wrist. The skirt has three gores.

7622 Ladies' Combination.—Cut in sizes 36, 40 and 44 inches bust measure. This combination is slipped on over the head. It consists of a corset cover which has a surplice arrangement in both front and back and a short petticoat which has a tab in envelope style at the lower edge.

7597 Ladies' Apron.—Cut in one size. This bungalow apron is all but a dress. It is in one piece and is slipped on over the head. It may have a side front opening as well. The neck is low, the sleeves short, and it has a small patch pocket. Gathers hold it in at the waistline.

Price of any of these patterns is 10 cents each.

BANKER-FARMER MEETING.

The following program has been arranged for the banker-farmer meeting at Madison, Tuesday and Wednesday, March 28th and 29th:

TUESDAY FORENOON, MARCH 28,
Chairman, S. M. Smith, President Wisconcin Bankers' Association.

10:00 What the Farmer-Banker Movement Means to Wisconsin—H. L. Russel, Dean of the College of Agriculture.
The Value of Pure-Bred Seed on Wisconsin Farms—R. A. Moore, In charge of Agronomy Department.
Questions and discussion by farmers and bankers.

TUESDAY AFTERNOON.
Chairman, J. R. Wheeler, Vice President Wisconsin Bankers' Association.

1:30 The Value of Herd Records—J. R. Wheeler, Banker, Columbus, Wis.
The Management of the Dairy Herd—C. C. Humphrey, In charge of Animal Husbandry Dept.
Questions and discussion by farmers and bankers.
How to Succeed with Alfalfa—L. F. Graber, Sec. Alfalfa Order, Wis. Exp. Assn.
Questions and discussion by farmers and bankers.
4:00 Feeding the University Herd—Demonstration at Dairy Barn.

TUESDAY EVENING.
Chairman, C. R. Thomson, Chairman Sub-Com. Wisconsin Bankers' Ass'n.

7:30 Moving Pictures: Alfalfa Growing.
Some Benefits to be Obtained from Farm Records—D. H. Otis, Professor of Farm Management.
Moving Pictures: How Grains are Improved.
Moving Pictures: The Building of a Wire Fence.

WEDNESDAY FORENOON, MARCH 29,
Chairman, Geo. D. Bartlett, Secy. Wisconsin Bankers' Association.

8:00 Demonstrations at the University farm buildings in the order named:
1. Poultry Plant "How to Make Hens Lay."
2. Dairy Barn, "The Selection of Dairy Cattle."
3. Hog Barns, "Making Pork." "Preventing Hog Cholera."
4. Sheep Stables, "Money-Making Mutton."
5. Beef Cattle Barn, "Profitable Beef Production."
6. Live Stock Pavilion, "Horse Breeding."
11:00 Better Horse Breeding (Illustrated Lecture) Auditorium—Dr. A. S. Alexander.

WEDNESDAY AFTERNOON.
Chairman, H. J. Maxwell, Member W. B. A. Agricultural Committee.

1:30 Swine Management—J. C. Fuller, in charge of Swine Husbandry.
Questions and discussion by farmers and bankers.
2:30 The Care of Farm Poultry—J. C. Halpin, Professor of Poultry Husbandry.
Questions and discussion by farmers and bankers.
4:00 Adjournment of meeting.

FIGHT GRAIN SMUTS AND BLIGHTS.

(Continued from page 16.)

do so would lower or destroy germination.

3. When the seed has been treated and is yet damp and swelled the seeder or drill should be set to sow one-half bushel (barley or wheat) to three-fourths bushel (oats) more to an acre than the usual amount.

No. 1. Treatment best for barley.—One pint formalin to twenty gallons of water, temperature 60° F. Soak the seed in loosely filled burlap or gunny sacks for two hours. Drain on slats over the barrels or tanks to prevent wasting the solution. Dry by spreading on a clean floor or canvas, stir occasionally with rake or shovel. It will dry faster if the wind can blow over the wet grain. Sow as soon as the seed will run freely or dry thoroughly and store in clean bags or bins until it is planted. Barley requires a two-hour treatment to kill the leaf stripe and loose smut diseases.

No. 2. Treatment best for oats, wheat and rye.—One pint formalin to thirty-five gallons water. Dip the seed, in loosely filled burlap or gunny sacks, into the solution and soak for five minutes. Drain and pile the oats and wheat on a clean floor or canvas and cover with sacks of canvas for two hours. It is best to leave rye covered four to six hours. This covering is important, as it prevents too rapid evaporation of the formalin. It is difficult to dry oats after long treatment is applied. Dry and handle as in treatment 1.

No. 3. Treatment sometimes used for oats, wheat and rye, but never recommended when the other treatments can be used. One pint formalin to thirty-five gallons water. Sprinkle the solution on the seed, using about one gallon to the bushel, shoveling over at the same time to make sure of thorough and uniform wetting. Cover in a pile with clean bags or canvas and handle as in treatment 2. The effectiveness of this treatment depends upon the thoroughness of wetting. If any part of the seed is left dry the smut may live.

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Guaranteed 5000 MILES Ford Size
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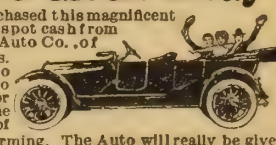
Write to the house most convenient to you

To introduce our goods we will send these three little labor-saving sanitary "Star" pans to any address in the United States for 25c., postpaid. They are made of heavy, rust-proof material and will fit any Mason jar.
SIMPLEX SUPPLY HOUSE, 48 Pontiac Bldg. Chicago, Ill.
Send for catalogue describing our Feather Brooders, Automatic Feeders and other poultry appliances.

1916 $695 Overland To Be Given Away

I have purchased this magnificent Overland for spot cash from the Clemens Auto Co. of Des Moines. I'm going to give it free to some one for promoting the interests of Successful Farming. The Auto will really be given free because it will be given in addition to liberal cash commision or other premiums that may be earned, such as Gold and Silver Watches, Tool Chests, Dinner Sets, Shot Guns, etc. Every one guaranteed proper reward. Write for details of my new plan for helping you get the Auto and other desirable things, and for my free Premium Catalog and Overland book. Write today—now.



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EVERYONE loves flowers and the one special favorite of all is the Rose. Naturally, it is the most popular of all. The beauty of the Rose is first manifested in its long, graceful, shapely and solid buds, delicate and firm texture and opening to present a depth of blossom showing a formation of shell-like beauty.

Read this Description of the Roses we Send

Thousand Beauties.—A very appropriate name to give this great novelty. We are free to predict that Thousand beauties will become the most sensational climbing rose yet introduced. A single cluster of flowers is a whole bouquet in itself. Blooming profusely from the beginning of June until the last of July, the flowers appear in large clusters, ten to fifteen in a cluster, are of splendid size and quite double. The colors run from delicate balsam or tender rose through the intermediate shades of bright rose and carmine, with white, yellow and various other delicate tints showing. There is no other rose in cultivation like it.

American Crimson Rambler.—The most magnificent Hardy Crimson Rose in existence. Splendid flowers, two and one-half inches across, perfectly double. Borne in grand clusters completely covering the whole bush. Color, pure, deep rich crimson, far brighter and more intense than the old "Crimson Rambler." The Rambler does not fade, bleach or wash out, but holds its bright dazzling color to the last, which adds greatly to its value. Has handsome foliage, does not mildew, and is a most abundant bloomer.

Lady Alice Stanley (Pink).—Whatever else one may plant in the way of Roses, however much the grower may be in love with other varieties, the garden should contain this Rose to be complete. It is a silvery-rose in color with a sweet fragrance, and the flowers come freely and constantly. The blossoms are large, full and globular.

Mrs. Aaron Ward (Yellow).—A creamy-yellow rose, strikingly pleasing, both in form and fragrance. The flowers are large and heavy, beautiful in every respect, and come freely upon the plant. The growth of the bush is inclined to assume a compact form and produces flowers in abundance. It blends well with the other yellow varieties. Yellow roses are often desired by many growers of this flower and this one is sure to become a great favorite.

Leslie Holland (Red).—A fragrant dark velvety crimson Rose that flowers constantly upon a strong, vigorous plant, whose foliage is remarkably resistant to mildew. The color is constant and durable, being one of the few dark red Roses that does not rapidly fade.

White Killarney.—A creamy-white Rose, very highly perfumed, with a texture of blossom that forms a wonderful substance. The flowers are large, full and heavy, and follow each other so rapidly that there is not a noticeable pause between the successions of blossoms. The bush is particularly strong and vigorous in its growth, with all large, handsome foliage, which sets off the exquisite flowers in a most charming manner.

Remember—You will receive the six rose bushes (1 year plants) just as described and The People's Popular Monthly for 2 full years for only 50c. ***No need to write a letter*** but just write your name and address on the coupon below and fold 50c (stamps, coin, check or M. O.) in a piece of paper. We will know exactly what you are to receive and your order will have our best attention.

COUPON FOR THE SIX BEAUTIFUL ROSES

People's Popular Monthly,
Des Moines, Iowa
DEPT. H.

Gentlemen—
Enclosed find 50c for which send me the 6 Beautiful Roses, and The People's Popular Monthly for 2 full years.

Name .....

Town .....State .....

Street or Rt. No.....

GOOD DAIRY RECORDS.

Some splendid records were made last year in the River Falls & Roberts Cow-Testing Association, which closed its year on February 1st and has been reorganized for another year's work, the year to begin soon. Mr. P. B. Van Horne, who conducted

DAISY, GRADE HOLSTEIN.

Owned by John L. Chapman, River Falls, Wis. At five years her record is 10,343 pounds of milk, 400.3 pounds of fat, milk testing 3.87.

the tests last year, will return for the coming year and The Wisconsin Farmer is indebted to him for a report of the year's work, together with the accompanying illustrations of

MAGGIE, GRADE HOLSTEIN.

Owned by John L. Chapman, River Falls, Wis. Record at six years, 12,086 pounds of milk, 457.3 pounds of fat, milk testing 3.78.

four of the eleven cows which produced more than 400 pounds of butter fat during the year, February 1, 1915, to February 1, 1916. Some splendid work has been done by this association and of the eleven cows producing more than 400 pounds of fat nine, or all except two, are grades. In this list are two Short-horns, five Holsteins and four Guernseys.

The best cow in the association of over 450 cows was a grade Guernsey, Buttercup, owned by Mr. John L. Chapman, of River Falls. She calved

BUTTERCUP, GRADE GUERNSEY.

Owned by John L. Chapman, River Falls, Wis., at nine years she made a record of 10,560 pounds of milk, 501.6 pounds of fat, average test 4.75.

January 14, 1915, making 10,560 pounds of milk and 501.6 pounds of butter fat. Mr. Chapman had three other cows making over 400 pounds of butter fat. He is also the proud possessor of the best four cows in the association. The four averaged 442.1 pounds of butter fat.

The following list is compiled for the cows giving over 400 pounds of butter fat:

Owner, name and breed	Lbs. B. fat
John L. Chapman, Buttercup, G. G.	501.6
Alton Bros., Pet, G. H.	475.2
Theo. Nopp, Cad, G. S. H.	461.4
John L. Chapman, Maggie, G. H.	457.3
O. R. Schwalen, Beauty, R. G.	457.2
H. A. Rundell, Bessie, G. G.	450.3
D. E. Flower, Trilby, R. H.	440.9
F. T. Wilford, Maude, G. G.	422.0
John L. Chapman, Susie, G. H.	409.3
Oscar Weiss, Nellie, G. S. H.	403.3
John L. Chapman, Daisy, G. H.	400.3

Mr. W. A. Chapman has an exceptional heifer who deserves special mention. She is a registered Holstein, Colantha, making 386.8 pounds of butter fat and freshened April 1, 1915. This record was made in ten months' milking and at the close of the January test she was under a good flow and by April 1, 1916, she will have passed the 425-pound mark. Mr. Walter Chapman had twenty-three

SUSIE GRADE HOLSTEIN.

Owned by John L. Chapman, River Falls, Wis. Age five years. Record, 10351 pounds of milk, 409.3 pounds of fat, test of milk, 3.95.

cows which averaged over 300 pounds of butter fat.

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.

Three Hundred Million Bushel Crop in 1915

Farmers pay for their land with one year's crop and prosperity was never so great.

Regarding Western Canada as a grain producer, a prominent business man says: "Canada's position today is sounder than ever. There is more wheat, more oats, more grain for feed, 20% more cattle than last year and more hogs. The war market in Europe needs our surplus. As for the wheat crop, it is marvelous and a monument of strength for business confidence to build upon, exceeding the most optimistic predictions."

Wheat averaged in 1915 over 25 bushels per acre
Oats averaged in 1915 over 45 bushels per acre
Barley averaged in 1915 over 40 bushels per acre

Prices are high, markets convenient, excellent land low in price either improved or otherwise, ranging from $12 to $30 per acre. Free homestead lands are plentiful and not far from railway lines and convenient to good schools and churches. The climate is healthful.

There is no war tax on land, nor is there any conscription. For complete information as to best locations for settlement, reduced railroad rates and descriptive illustrated pamphlet, address

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Canadian Government Agent.

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Air-Tight—Fireproof—Permanent

B. V. T. tile have triple air space. The narrow spaces form a tongue and groove mortar joint absolutely air-tight. No spoiled silage. No other silo has this construction. It is patented.

The B. V. T. Silo will stand for ages. You only buy it once. Then you are done—no further expense for painting or repairs. Send for free Silo Book E

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HOW To Own a Better Barn

How to build a barn so that milk production is made bigger in quantity and better in quality. How to build a dairy barn that *will* increase profits—lessen labor. The "how" is told in the James catalog—

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Tell us how many cows you have and when you intend to build or remodel and we will send you a Free copy of this book. Get the facts about James Barn Plan Service—whether you build the barn yourself or employ a builder. Write today.

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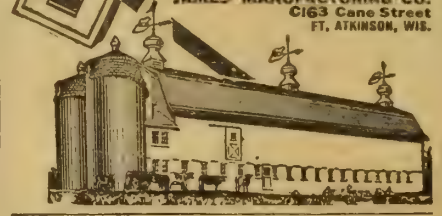

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FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

STOP! LISTEN! 120 acre improved farm $900, good terms, other farms. McGrath, Mountain View, Mo.

WISCONSIN IMPROVED FARMS near St. Paul and Minneapolis. Write for lists to COOLIDGE, Downing, Wisconsin.

ARE YOU LOOKING FOR A NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

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IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

SPECIAL FOR LENT. Order your supply of Frozen and Salted Fish at once at these low prices. We guarantee Best QUALITY. Fresh Frozen Herring at $3.25 per 100 lbs. Pike $9 per 100 lbs. Pickerel $5.75 per 100 lbs. Tulibee Whitefish $5.75 per 100 lbs. Mullets $4 per 100 lbs. This fish is all packed in new boxes. Newly Salted Herring $3.25 per 100-lb. keg. Net weight. LAKE SUPERIOR FISH CO., 208 E. 1st Street, Duluth, Minn. Reference, American Exchange Nat. Bank.

FISH Caught in the waters of Green Bay are the finest flavored Fish produced. Salt Lake Herring 100 lb. kegs $2.75. Fresh Frozen Round Herring per lb. 3c. Large Dressed Herring 4c. Dressed Bluefin White 4c. Pickerel 6c. Tulibee White 7c. 500 lb. lots ½c per lb. less. Write for complete price list all kinds Fresh, Salt, Smoked Spiced Fish.

BADGER FISH COMPANY,
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MINNESOTA, the land of corn and clover, offers a home for you. Buy now while lands are cheap, and are selling on long time and easy terms. Maps and literature sent free. Write to Fred D. Sherman, State Immigration Commissioner, Room 604, State Capitol, St. Paul, Minnesota.

FOR SALE Good 100-acre farm, 4 miles from Hersey, St. Croix county. Good soil, buildings. Price $6,800. Write owner, P. M. Lee, Route 2, Woodville, Wisconsin.

FOR SALE:—FORTY ACRE FARM, NEW house, cow, two pigs, twelve chickens, $1,000, one-fourth cash. SANBORN COMPANY, Eagle River, Vilas County, Wisconsin.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

ONE MAN for general farm work for 9 months. State wages wanted. Address Roy Dolphin, Monfort, Wisconsin.

Southern Farms: Mississippi, Arkansas, Tennessee. Send for booklet. Martin & Cole, Memphis, Tenn.

STATE HOLSTEIN-FRIESIAN MEETING.

(Continued from page 7.)

his plea, and when they get good animals encourage them and help them.

Advertising, Mr. Aitkins pointed out, is an important matter for the Holstein men to consider. Not only advertising to sell animals but also advertising the great food value of milk and dairy products to sell the Holstein milk. He told of the dairy council's plan for national advertising campaigns on the value of milk as food and dairy products as good and predicted that the consumption could be doubled in a few years and, of course, that means better prices for stock and better prices for milk.

C. P. Norgord, commissioner of agriculture, spoke at the forenoon session on the "State and the Farmer." As much interest was shown in his discussion of tuberculosis as in any other matter discussed at the convention. Mr. Norgord explained the state plan to prepare an accredited list of tuberculin-tested herds which has been worked out in more detail since it was presented during Farm and Home Week at Madison. He used charts showing how easily tuberculosis is spread, one showing that one public sale carried tuberculosis into twelve herds. Another showed its spread by the use of skim milk from a cheese factory. Tuberculosis was brought into two cheese factory districts by the purchase of new animals and was spread by the skim milk from the two factories. In a few years 30 per cent of the animals in these two districts had contracted the disease, while only 8 per cent of those in the adjoining districts had contracted it. Another chart showed how the disease had been spread by a watering trough in the barn, a cow at the head passing it to all cows along the trough.

The members entered into a lively discussion of the accredited list plan. Four states now bar Wisconsin cattle unless inspected by federal authorities. This is an important item to breeders and shippers and Mr. Norgord's plan is to place Wisconsin in a better light and make it possible for breeders to ship everywhere on state tests and compile a list from annual tests of tuberculin-tested cows. This will advertise the herds free from the disease, so far as the test can show, and would be of great value to the breeders. Afterwards the convention adopted this resolution:

Whereas, our attention has been called to the question of tuberculin tested herd lists;

Be it Resolved, that this association approve of this plan in general and awaits its development.

The plan as outlined by Mr. Norgord is not yet complete and is still open to revision and suggestion. As it now stands it contains the suggestions made at the conference of representatives of all the cattle breeders' associations following the meetings at Madison during Farm and Home Week. The tentative plan as outlined at Watertown follows:

The owner of any herd of cattle may make application to the Wisconsin Department of Agriculture to have his herd placed on file for preparation to enter the "Accredited Tested Herds" list. It is not required that these herds must have been tested prior to application.

(a) The tuberculin testing of these herds after application has been made shall be by veterinarians in the employ of the department of agriculture.

(b) The number of tests required to be made upon each herd will depend upon:
   1. If any re-actors are found.
   2. Number of re-actors found on first test.
   3. Previous history of herd with regard to tuberculosis.
   4. Whether some of the herd have been bought from untested herds or not.

Number of cattle to be tested by one man at one time.

While testing in this work, the veterinarian shall not test more than fifty head at one time.

Re-actors must be removed, and also other diseased cattle, under the direction of and in a manner satisfactory to the board.

If tuberculosis has existed or re-actors are found, the premises shall be disinfected under the direction of the board.

1st. Introduction of adult animals: No adult cattle shall be introduced into these herds unless such cattle are either from accredited tuberculin tested herds or have been tuberculin tested by a graduate veterinarian immediately before entry into the herd.

2d. Calves: Untested calves shall not be placed in these herds when bought from any herd except a herd which is also on the accredited tuberculin tested herds list, and any other calves bought must be segregated until such time as they can be tested.

3d. Nurse cows or other cows introduced temporarily into herds must be on same basis as the above.

Calves in these herds shall not be fed on milk skimmed in public skimming stations or on whey from cheese factories, unless such milk or whey has been sterilized by thorough pasteurization or heating, sufficient to kill tubercular germs.

The expense of making these tests must be met by the owner of the herd. This shall be as near the actual cost of the work as can be calculated by the live stock sanitary board. (Actual rates will be established and published later.)

Only breeders who wish to avail themselves of the privileges of the accredited tuberculin tested herds plan of the live stock sanitary board shall sign an agreement to abide by all the rules and regulations herein enumerated.

1. To co-operate.
2. To furnish all data available to tester.
3. Submit herd to test whenever it is thought necessary by the board.
4. To furnish sufficient attendants to keep cattle in good condition and to keep barn clean while testing.
5. To provide conveyance and suitable maintenance of deputy while making tests.
6. To allow examination of any or all animals in the herd at any time.
7. Not to introduce any cattle except as provided by the board.
8. To comply with orders as to disinfection of premises.
9. To pay to the live stock sanitary board, the amount determined by the live stock sanitary board.
10. To remove all reactors whenever found.

Dr. W. L. Williams, of Cornell University, New York, gave a very interesting and instructive talk on "Contagious Abortion," which was illustrated with lantern slides. Mayor Kading, of Watertown, delivered the address of welcome to which F. B. Fries, of Richland Center, responded on behalf of the association.

J. M. COYNER, OF MONDOVI.

Wisconsin man has recently been chosen county agricultural agent for Portage county. He will be located at Stevens Point.

The banquet on the opening evening was social in character and greatly enjoyed by all. Mr. Riordan, as acting president, presided as toastmaster and called on various breeders for remarks. Fred Pabst, of Oconomowoc, was introduced as "Col." Pabst, to which Mr. Pabst replied that he desired no such title, the only honor he wishing was that of producing a forty-pound cow. S. A. Baird, of Waukesha, spoke briefly on the taxation of cattle and told of the injustice often found where a cow in one town is assessed at $75 and one of like breeding and similar market value is assessed at $150. He hoped for some method in Wisconsin eventually of an equitable assessment of dairy stock.

Other addresses were made by William Everson, of Lake Mills; R. J. Schaefer, of Appleton; F. B. Fries, of Richland Center; S. E. Jones, of Watertown; manager Norton, of the Carnation Farms at Oconomowoc, and A. J. Glover, of Hoards Dairyman. Mr. Glover told of the wonderful result of unity and co-operation. Just forty-four years ago, he said, the pioneer of all dairy organizations—the Wisconsin Dairymen's Association—was organized in Watertown.

It was announced also that hereafter dues in the association will be $2 a year as before, but that no initiation fee of $2 will be charged. The $2 entrance fee now will cover the dues of the first year also. Heretofore, the first year cost has been $4.

WISCONSIN MEN PROMINENT.

Charles McCarthy, C. J. Galpin, J. L. Gillin, Edward M. Barrows, John R. Commans, Peter W. Dykema and Edward A. Fitzpatrick, of Madison, Wisconsin, have joined with about seventy leaders in the community-center movement in signing a call for a national conference on the use of school buildings as community and civic centers. The conference will be held in New York beginning April 19th and ending April 22d. Its president is Dr. Luther H. Gulick, president of the Camp Fire Girls of America. Among others signing the call are Prof. John Dewey, of Columbia University; Prof. James Ford, of Harvard; Raymond N. Phelan, of the University of Minnesota; Henry Bruere, city chamberlain of New York; Mrs. J. Borden Harriman; George E. Vincent, president of the University of Minnesota; William G. Willcox, president of the New York Board of Education. The executive chairman of the conference is Albert Shiels, director of the division of research of the New York Board of Education. The secretary of the conference is John Collier, 70 Fifth Avenue, New York.

In less than three years the membership of the Alfalfa Order of the Wisconsin Agricultural Experiment Association has grown from a very few to more than 1,300. Its enthusiastic members are working co-operatively to place alfalfa on the rural map of Wisconsin.

Failures in alfalfa growing in Wisconsin are often due to one or more of the following causes: Lack of sufficient lime in the soil, improper inoculation, low fertility, lack of drainage, late fall pasturing and too late sowing of the grain crop with which it is sown.

8 Fine, Hardy Rose Plants Free

To introduce our popular home magazine, THE PEOPLE'S HOME JOURNAL, into thousands of homes where it is not already taken, we offer for a limited period only, **absolutely free** for a year's subscription at 50 cents (the regular price), a Set of Eight Fine, Everblooming Tea and Hardy Roses, all choice varieties, as follows;

1 **THE BRIDE.** A mammoth, ever-blooming Cream-White Tea Rose, of exquisite form and texture. A strong, healthy grower, and a constant bloomer. One of the largest white roses known, the flowers being very double; can be cut with long stems.

1 **CHAMPION OF THE WORLD.** A hardy ever-blooming Rose, producing flowers in abundance of a rich, glossy pink color, and delightfully fragrant. A strong, vigorous grower.

1 **MRS. DUDLEY CROSS.** A pale, soft, rosy-yellow Rose, an exquisite color, with blooms of beautifully rounded form held on good stems. A splendid bedding variety.

1 **WELLESLEY.** The beautiful Pink Rose, the outside of the petals being bright and clear, with a silvery reverse. A very vigorous, healthy grower, free bloomer, and clothed with heavy dark green foliage.

1 **WHITE DOROTHY PERKINS.** A new climber, a pure white sport of the well-known Dorothy Perkins, with the same habit of growth and freedom of flowering. A splendid companion for the pink variety as it blooms at the same time.

1 **YELLOW MAMAN COCHET.** An unusually hardy, pure Tea Rose. A sturdy, clean grower, with stiff stems and luxuriant bloom. Flowers are large, perfectly double and shapely, of a rich sulphur-yellow color.

1 **QUEEN OF BEDDERS.** This is, without doubt, the best of the red Roses for bedding. It can be planted anywhere, being entirely hardy. The flowers are large, and of a fiery scarlet.

1 **RED DOROTHY PERKINS.** This is an improved Crimson Rambler. The flowers are large and double, thirty to forty on a stem, the color being an intense crimson-maroon, tipped with scarlet. A fine climber.

The eight rose plants described above are grown by one of the largest and most reputable rose growers in the United States. They are not cheap, common roses, but well-known standard varieties. We send strong, healthy, well-rooted, 1-year-old plants, warranted true to name and color. They are carefully protected in the packing, and are shipped, prepaid, from the greenhouses where they are grown, directly to our subscribers, thus receiving but one handling, and are guaranteed to reach their destination in good order.

THE PEOPLE'S HOME JOURNAL

has been published for over thirty years, and goes regularly every month into over nine hundred thousand homes, where it has reached the very hearts of its readers. Its widespread popularity is no accident—it is the natural outcome of a policy consistently adhered to from its very beginning over a third of a century ago. The publishers believe, and the success of the magazine has proven it, that the great majority of people read magazines for **both** pleasure and profit. In other words, while THE PEOPLE'S HOME JOURNAL maintains a number of excellent departments for the housewife, each conducted by an expert in her line, the publishers believe that for the greater part of her reading the busy housewife wants to get away from the practical side of life with its, ofttimes, perplexing problems that demand her care and attention for ten to twelve hours of the day, and wants recreation, entertainment, inspiration for mind and body—wants to read bright, cheerful, optimistic, wholesome, refreshing stories and articles dealing with the emotions of life. Such is THE PEOPLE'S HOME JOURNAL, edited for all members of the family—in fact, it is a member of the family in over 900,000 homes—conceded to be the most indispensable publication in the magazine field today, catering to the tastes and needs of every American household.

OUR SPECIAL OFFER— To any one who will send us 50 cents in payment for a subscription to THE PEOPLE'S HOME JOURNAL before May 31st, we will send the Magazine for one year, and in addition will send free the full Set of Eight Fine Rose Plants above described, both fully prepaid.

Our offer is remarkably liberal, and every one who is fond of flowers should take advantage of this unusual opportunity to secure a fine collection of choice rose plants absolutely without cost. Address all orders:

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Biggest stump pulled in five minutes or less. Clears an acre of land a day. Makes your stump land **money** land. 30 days' free trial—3 year guaranty. Get our new book and special low price offer **now.**

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GOVERNMENT tests show that by use of this wonderful mantle, you get four times as much light from a gallon of oil as in the ordinary way. The mantle is made from the rare earths thorium and cerium, best light giving substances known to science. By this process you can not only get more than twice the light from half the amount of the same kind of oil you now use, but it will be a pure white, brilliant, steady light, which scientists at leading Universities say is nearest in color to sunlight and better than electric. Lights whole room. No odor, smoke or noise. No pumping up; no pressure; no danger. Revolutionizing farm and small town home lighting. Saves the eyesight.

One in each locality is wanted to show this new way of getting better light. Be first and get the opportunity of getting **Yours Free**

Just ask for free book. Tells all about wonderful oil-saving process of getting white light better than electric. You will also be given full particulars about our liberal free offer. Agents wanted.

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CURRIE BROS. COMPANY

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NOW full of holes, repaired, made neat, strong and durable for **$1.00** to **$3.00** per tire, depending on condition. Send to **Deering's Vulcanizing & Welding Works, Augusta, Wisconsin.**

CUT RATES, lumber, shingles. Hurry! Prices advancing. "Tacoma" Dimension Lumber guaranteed full two inches thick, 20 per cent stronger. "Dakota" clear shingles, guaranteed half inch butts, everlasting. To insure lowest prices send list for estimate. We quote delivered; pay after inspection. Reference, any Tacoma Bank, Local Lumber Company, Tacoma, Washington.

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ADAPTED to central and northern Wisconsin. Early varieties with guaranteed germination. Hardiest alfalfa, clover and grass seeds. Seed oats and Marquis wheat. Write for price list. Address **John Henderson, R. 1, Cokato, Minnesota**

SEED OATS for sale. Wis. White Bonanza, short and stiff in straw, yields 80 bu. per acre, state tested. Albert Wollin, Johnson Creek, Wisconsin.

When writing to advertisers please mention The Wisconsin Farmer.

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

Attractive Prices on Percherons and Belgians.

WE recently called on Thos. McNamara, Bloomington, Wis., the veteran horseman of Grant county and found him with three choice Percheron stallions and one outstanding imported Belgian horse. Until recently Mr. McNamara has operated his farm and has maintained the following stallions for his own use on his registered mares and for the good of the community. He has recently moved to town and does not care to keep these horses for public use only and for that reason they are being offered for sale. The advertisement that appears in this issue gives the age of each and inasmuch as he has had these horses since they were three and four years old, it goes without saying that they are good ones or he would not have kept them in the stud. The attraction of the offering is a four-year-old black horse that he bred and raised. He has all the good points of a Percheron draft horse and is one of the best colts we have seen in Wisconsin. The seven-year-old gray horse is the "Dutchmans' type," heavy bone, short back and a compact draft horse. We saw some excellent colts sired by this horse. The eight-year-old gray is heavier, a ton horse in ordinary condition, sound in every respect and an excellent sire. The Belgian weighed 1,980 pounds the day we were there and is a stallion that can go into any locality and make good. Mr. McNamara guarantees these horses for soundness and he will give you a 50 or 60 per cent breeding guarantee with each stallion. Here is a grand opportunity for some one to get a stallion that has made good in the stud. They have paid for themselves in the stud and consequently the prices he asks will appeal to anyone wanting a stallion for the coming season and you can well afford to investigate these horses. In this issue can be seen a kodak picture of the black four-year-old Percheron. Write at once for detailed description and price, on one or all and please mention The Wisconsin Farmer. See page 39.—Adv.

McNutt's Holsteins.

REGISTERED and high-grade Holsteins are advertised for sale on page 38 by H. F. McNutt, Oxford, Wis. He has a large herd of close to a hundred head of registered animals and a hundred head of grades. At the present time he is offering heifer calves and yearling heifers and young cows bred to the forty-pound bull, Johanna King Segis. He is a son of the former world's record cow, Johanna De Kol Van Beers, that with her three sons have sold for a total of $62,000. Mr. McNutt is also offering high-grade springers and young cows that are well marked, of good, straight type and of high producing ability. These were sired by registered bulls and are bred to his prize-winning bull, Wisconsin Colanthus. He can supply a carload of registered or high-grade females if desired. He also has several fine yearling bulls and younger out of A. R. O. and untested dams. Whatever your wants may be in the way of Holsteins they can be supplied to good advantage in this herd.—Adv.

Get Information in Time.

DON'T wait until the rush season before you decide on the silo filler to buy, but study up on them now so that you will be well informed when the time comes to buy. Rosenthal Corn Husker Co., Milwaukee, Wis., advertises a silo filler on page 24 of this issue which is claimed to do very rapid efficient work. The company makes three sizes running from four to eighteen horse power. The distinctive features advertised are: A direct drive to main cutterhead shaft, two and three-eighths inches in diameter; a powerful six-blade fan on same shaft; and an emery wheel attached. It will pay to write for the company's catalog and also their Farmers' Account and Record Book both of which are free to our readers. Please mention The Wisconsin Farmer when you write.—Adv.

Hasse's Holsteins.

SONS of the thirty-seven-pound bull, Sir Canary Belle De Kol, are advertised ford sale on page 38 by John A. Hasse, Monroe, Wis. He is a son of the 37.46-pound cow, Belle Mercedes Lady. She has been five times an association prize winner, winning both first and second association prizes in 1913. At nine years old she gave 721 pounds of milk in seven days and made 146 pounds of butter in thirty days. She is a daughter of Sir Gem De Kol, that has two daughters with records of thirty-three to thirty-seven pounds respectively. Mr. Hasse also has a few females for sale. For further information in regard to these animals write to the above address.—Adv.

Bear's Short-horns.

GREEN VIEW STOCK FARM, owned by John Bear & Son, Spring Green, Wis., offer for sale the richly bred Short-horn bull, Royal Sultan 390142. He is a 2,300-pound grandson of the great bull, Whitehall Sultan. He is an excellent individual of great size, good, straight conformation and of good type. They are also offering several of his yearling sons, which are ready for immediate service. For pedigrees and further description write to the above address. See page 37.—Adv.

A Good Rock County Duroc Herd.

ONE of the real good Duroc Jersey herds in Wisconsin is owned by E. H. Parker, Janesville. His herd numbers about fifteen brood sows that will farrow this spring. These sows carry the blood of many of the greatest sires of the breed. One of the good ones is Opal Orion, and she is by the great Orion Chief, a boar that stands out preeminent as a sire of high-class sows. She now has a seven-pig spring litter by a son of Cherry King, so that is good enough for anyone. Two daughters of Illustrator do their part to keep up the popularity of this herd. Two are by Dominant Col., the Illinois grand champion of 1912 and a son of the renowned Sensation Col. They are litter sisters out of an Illustrator dam. Others bred by the Wisconsin champion, Lee's Defender. Daughters of Marion Wonder (C. W. Again-H. A.'s Queen) are as good as the best. Mr. Parker has been using a son of Royal King. This boar is by Orion Cherry King, by Cherry King by Cherry Chief. Royal King was sold to Johnson Bros., of Minnesota, last year for $2,650. At this time Mr. Parker has two fall boars that will be heard from later. One is by Orion Cherry King, out of a Watt's Model 1st dam, and the other is by The Chief's Col. by Cherry Chief, out of a Pal's Col. dam. Here are two choice boar prospects, and with the care their owner will give them, you can rest assured that there will be some hog show at Milwaukee this fall. Keep this good herd in mind. See page 39.—Adv.

Bernd's Poland Chinas.

BIG-TYPE Poland Chinas and Short-horn cattle are advertised for sale on page 39 by W. J. Bernd, New Richmond, Wis. He is offering spring gilts and fall yearling gilts bred for spring litters. Also a few fine yearlings and spring boars. The gilts are bred to King Jumbo, a son of the 1,106-pound boar, Long Jumbo. The fall yearlings are bred to Big Wonder, first-prize boar at the Minnesota State Fair. Write for further particulars.—Adv.

Upland Farms' Holsteins.

THE Upland Farms, Walworth, Wis., have a choice herd of seventy-five registered Holsteins. They are well marked, of choice breeding, and of high production ability as a whole. The herd is headed by the twenty-seven-pound bull, Sir Pontiac Artis Duke 77994. He is a son of the 31.71-pound bull, Sir Korndyke Pontiac Artis, that has forty-five A. R. O. daughters. His two nearest dams average 29.42 pounds of butter in seven days and his three nearest sires have 158 A. R. O. daughters, eleven with records over thirty pounds. At the present time they are offering some choicely bred yearling bulls, several from A. R. O. dams. They are well marked, of good, straight conformation and big, growthy animals. For extended pedigrees and further information write to the above address.—Adv.

Tochtermann's Holsteins.

SEVERAL choicely bred Holstein bulls of serviceable age and younger are advertised for sale on page 38 by C. Tochtermann, Monroe, Wis. There are three a little over a year old, which are strong enough for hard service at the present time. Nearly all of the bulls offered for sale are from A. R. O. cows with records up to twenty-four pounds of butter in seven days; 750 pounds of butter and over 17,000 pounds of milk in a year. The bulls are well grown, of good, straight type and from choicely bred cows. Their sire, Piebe Longfield De Kol, is a grandson of Homestead Jr. De Kol, that has sixty-nine A. R. O. daughters, five with records ranging from thirty to 35.55 pounds of butter in seven days. For extended pedigrees and further information in regard to the animals offered for sale write to the above address.—Adv.

Gordon's Holsteins.

SOME choice young Holstein bulls are offered for sale at very reasonable prices by J. Roy Gordon, Mineral Point, Wis. These were sired by Pontiac Cornucopia Coronis, whose dam is a 27.06-pound 5 per cent daughter of Hengerveld De Kol, which has 116 A. R. O. daughters, eight with records above thirty pounds. Some of these bulls are out of advanced registry dams with creditable records. They are well grown, well marked and of good type. For extended pedigrees and further information write to the above address. See page 38.—Adv.

Notseter's Short-horns.

YEARLING Short-horn heifers and bulls are advertised for sale on page 37 by John Notseter, Deerfield, Wis. He has a fine herd which he established many years ago. For several years he has purchased his breeding stock of McLay Brothers, who are known all over this continent as the leading breeders of Clydesdale horses and as Short-horn breeders. The young animals offered for sale were sired by a McLay-bred bull, King's Crest 396857.

A TYPICAL Beau Perfection Hereford owned by Birch & Thompson, Lake Geneva, Wis.

Most of them are also out of daughters of a McLay bull, Copestone. King's Crest was by Scarlet Crown, that was out of Duchess of Gloster J. and sired by Golden Crown. Copestone was by Gloster Archer. Several are out of daughters or granddaughters of Scotch Lad by Guardsman. The cows in the herd are of Arabella and Imp. Bertha breeding, which combined with the Duchess of Gloster blood has produced some very good, growthy yearlings. For further information in regard to these animals write to the above address.—Adv.

A Low-Priced Tractor.

FARMERS looking for a low-priced, light-weight, serviceable tractor should learn of the Happy Farmer tractor advertised on page 25 of this issue. By simplifying the construction of this machine, the makers are able to offer it for $550 and still furnish a tractor that is durable and efficient. Happy Farmer tractors are built so that 88 per cent of the weight is on the traction wheels, thus giving it the greatest pulling power possible. Other important features are an all steel frame, enclosed gears run in oil, and wooden clutch shoes, pins, rollers, etc., which are easily replaced when worn out. For full particulars regarding this exceptional offer write the Happy Farmer Tractor Co., 330 Third Ave. North, Minneapolis, Minn., and kindly refer to this paper.—Adv.

Fisher Buys Disturber 52d.

WE have just been advised that J. L. Fisher, Janesville, Wis., has purchased Disturber 52d. It will be remembered that this was the first-prize senior yearling boar at the Wisconsin State Fair, 1915. Mr. Fisher has changed his name, and from now on he will be known as Gold Bond. He is sired by the noted Disturber, out of a Tattle Tale sow by Educator by Ohio Chief. It would be difficult to write a better or more fashionable pedigree. More good hogs have come from this line of breeding than any other. This boar will be mated to a grand lot of sows, and we feel confident Mr. Fisher will be able to make a reputation for him as a sire. He didn't get the boar in time to breed any sows for early litters, but he has several bred for April and May.—Adv.

The Use of Cement.

THIS age is called a "concrete age" by many; true enough, the use of concrete has grown marvelously in the last few years. Farmers especially find many uses for concrete in building barns, silos, feeding floors, watertroughs, fence posts and other necessities and conveniences on the farm. Success in the use of concrete depends largely on the grade of cement used, therefore care must be exercised in buying cement. Marquette Portland Cement is tested and guaranteed by the Marquette Cement Manufacturing Co., Chicago, Ill., whose advertisement appears on page 12. Their product is known by the green zig zag tag on the bag. If your dealer does not carry Marquette cement, a postal sent to the company will bring information regarding the nearest point where it can be secured. If you write them please mention this paper.—Adv.

The Eagle Farm Tractor.

THE farm tractor is past the experimental stages; its practical service to the farmer has been demonstrated on thousands of grain-belt farms, where it is considered more economical than horses. Since many of our readers will be in the market for tractors soon, we would advise them to investigate the Eagle Farm tractor which is advertised on page 11. This tractor is claimed to be especially smooth-running, with abundant power for all-around belt and tractor work. It does both heavy and light work, quickly and economically. This is important since the greater the number of uses to which the tractor can be put, the greater the return on the investment. The Eagle tractor is not an assembled machine, since all parts are made by the Eagle Manufacturing Company in their own factory at Appleton, Wis. The knowledge and experience of men who are familiar with Wisconsin farms and farm conditions have entered into the construction of this tractor, therefore, Wisconsin Farmer readers should be especially interested in learning about it. Since an investigation costs nothing, we would suggest that you write today for complete information. Address Eagle Manufacturing Company, 672 Winnebago St., Appleton, Wis., and mention The Wisconsin Farmer when writing.—Adv.

An Auto-Oiled Windmill.

WHENEVER you climb up the tower to oil or repair an old, squeaking windmill, you are losing time. If you wish to save this time, and also the expense of repairs, you should investigate the Auto-Oiled Aermotor, advertised on page 25 of this issue by the Aermotor Co., 1125 S. Campbell Ave., Chicago, Ill. This self-oiled motor can be attached to the wheel and vane of your old windmill and the oil supply will need replenishing only once a year. The working parts of the motor are inclosed in a metal hood or helmet which keeps out the rain and dust. The company has aimed to produce a set of working parts which will give the greatest amount of power from the windmill with the least amount of attention and expense for repairs. If you want better service from your old windmill or want a new one, you should write to the Aermotor Co., for their Folder-Hanger which tells about the Auto-Oiled Aermotors and Easy-To-Build-Up towers. Kindly mention this paper when writing.—Adv.

The New Gilson Weeder.

A NEW garden tool, the Gilson Weeder, is on the market, which it is claimed does better work than the old-fashioned hoe and is much easier to handle. It will do more than a hoe in cutting weeds, loosening the soil and working close to the plants or shrubs without injuring them. The blade is double-edged, and is made in four widths running from three and one-half inches to eight inches. By reversing, the weeder may be used as a rake. If you have a garden, you should write to J. E. Gilson Co., Dept. 14, Port Washington, Wis., for folder and prices on this new tool. See page 15 for their advertisement and mention The Wisconsin Farmer when writing.—Adv.

Rowe's Holsteins.

SIR CANARY ALCARTRA is the sire of the young bull advertised for sale on page 38 by A. L. Rowe, Waupaca, Wis. These young bulls are well grown are three-fourths and nine-tenths white in color and several are from A. R. O. dams with records up to twenty-one pounds of butter in seven days. Sir Canary Alcartra was sired by the $1,000 bull, Canary Paul, and out of Nellie Alcartra Rue, that made 874 pounds of butter in a year. For charted pedigree and description of the animals offered for sale write to the above address.—Adv.

Jacobson Brothers' Holsteins.

JACOBSON BROTHERS, Menomonie, Wis., are offering registered Holstein heifers, one to twelve months old, for sale on page 38. They are also offering bull calves, one to six months old. These are out of good producing dams, many with A. R. O. records. They are all sired by Hillvale Robert La Follette, a richly bred Ormsby bull. For further information in regard to breeding write to the above address.—Adv.

Paddock Brothers' Holsteins.

PADDOCK BROS., Augusta, Wis., are offering registered Holstein heifers and cows for sale on page 38. They are choicely bred, of large, straight type and good producers. Many of them are granddaughters of Homestead Jr. De Kol and have A. R. O. records. They are also offering registered Percheron

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. R. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland**, his dam, a granddaughter of **Golden Fern's Lad**, gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.

FEWACRES FARM • • • **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

stallions and Collie pups. For pedigrees, prices and description write to the above address.—Adv.

Freehoff's Berkshires.

W. A. FREEHOFF, Waukesha, Wis., writes us that he has everal fine fall Berkshire boars for sale. One is an August boar sired by the first prize winner at the state fair last fall. He is a good growthy, meaty pig. Another is a September pig of Masterpiece breeding, a growthy showy animal. He has a few boars sired by a half brother to the grand champion at the recent world's fair. Mr. Freehoff guarantees these boars to please, or you need not keep them. Mention this paper when writing. See advertisement on page 39. —Adv.

North's Holsteins.

JOHN NORTH, Kilbourn, Wis., is offering registered Holstein heifers, cows and young bulls for sale on page

MAPLECREST DE KOL FRIEND, sire of the yearling Holstein bulls advertised for sale on page 38 by Watson & Will, Menomonee Falls, Wis.

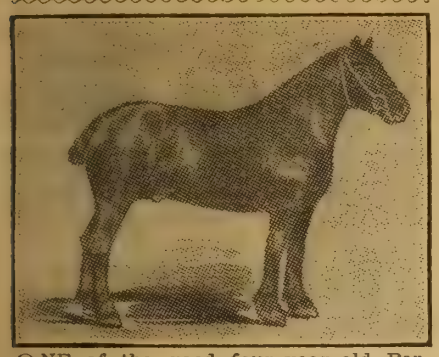
38. Some of these were sired by Jewel Aaggie Alcartra 143023, whose four nearest dams averaged over twenty-five pounds of butter in seven days. For extended pedigrees and further information in regard to these animals write to the above address.—Adv.

Little's Durocs.

DUROC spring gilts are advertised for sale on page 39 by B. W. Little, Janesville, Wis. They are of Defender, Ohio King and Wonder lines of breeding. They are bred for March and April farrow to Critic Top Notcher, half brother to the grand champion at the 1912 Nebraska State Fair. For further information in regard to the animals write to the above address.—Adv.

Vandervort's Jerseys.

REGISTERED Jersey bulls are advertised for sale on this page by Rollie Vandervort, Tomah, Wis. These were sired by Golden Fern Don, a richly bred bull of the Golden Fern family. These



ONE of the good four-year-old Percherons being offered by Thos. McNamara. See field note on page 36.

young bulls are out of well bred, high-producing dams of good type. They are well grown, of good, straight conformation and are offered at reasonable prices.—Adv.

Miller's Chester Whites.

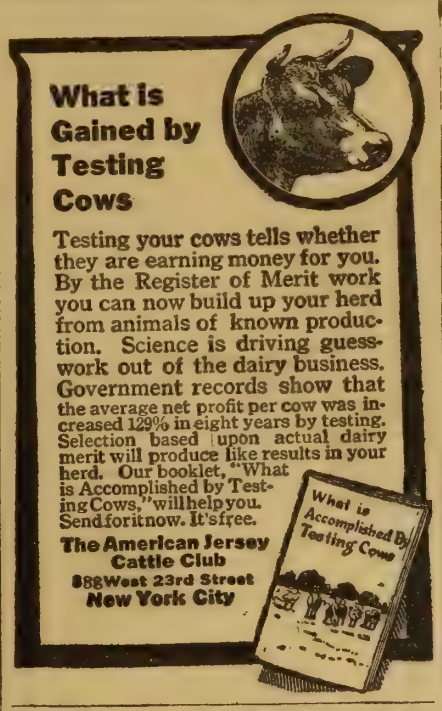
CHESTER WHITE spring boars and gilts are advertised for sale on this page by W. F. Miller, West Salem, Wis. These were sired by Combination C. and St. Elmo Chief, two fine individual boars of well-known lines of breeding. For further information in regard to the animals offered for sale write to the above address.—Adv.

Simon's Chester Whites.

ATTENTION is called to the advertisement of John Simon, Cambellsport, Wis., which appears on this page. He is one of Wisconsin's most successful breeders and at the present time is offering bred sows and early fall pigs at reasonable prices.—Adv.

Bargains in Guernsey Bulls.

THORN HILL FARM, Deerfield, Ill., advertises on this page they are overstocked with bulls of all ages, all from advanced register cows, and will price them from $40 up. This herd is



What is Gained by Testing Cows

Testing your cows tells whether they are earning money for you. By the Register of Merit work you can now build up your herd from animals of known production. Science is driving guesswork out of the dairy business. Government records show that the average net profit per cow was increased 129% in eight years by testing. Selection based upon actual dairy merit will produce like results in your herd. Our booklet, "What is Accomplished by Testing Cows," will help you. Send for it now. It's free.

The American Jersey Cattle Club
886 West 23rd Street
New York City

ELMDALE FARM . . . JERSEYS

REGISTERED yearling bulls ready for immediate service and younger, sired by Sage's Victor and Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price. Address
H. Holt & Son **Oconomowoc, Wis.**

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

TOO LATE TO CLASSIFY.

JACK FOR SALE

LARGE registered Jack, standing 15 3-4 hands high; color black with white points. Address Adam Luchsinger, R. 17, Evansville, Wisconsin.

RHODE ISLAND RED HATCHING EGGS FROM my heavy winter-laying, money-making strain. Our capacity has been tripled for 1916 season. Quick shipment via p. post, W. F. express or American express to any point in U. S., $2 per 15. R. E. Daly Poultry farm, Necedah, Wis.

FOR SALE Four Shepherd dogs which are trained to drive cattle. Addres Fred Buetow, Cologne, Minnesota.

regularly tested for tuberculosis and every animal is guaranteed. Write them for particulars, mentioning The Wisconsin Farmer.—Adv.

Blaska's Holsteins.

REGISTERED Holstein heifers, young cows and yearling bulls are advertised for sale on page 38 by John Blaska, Sun Prairie, Wis. These animals are choicely bred and are being offered at reasonable prices. For pedigrees and further description write to the above address.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

According to the experience of many alfalfa growers of the state, southern and southwestern-grown alfalfa seed is about as well adapted to Wisconsin conditions as is the northern-grown seed. It is cheaper than that grown in the far-famed seed-producing sections; it does not winter kill any easier and the stands are as good as those produced from the more expensive seed.

Every farm family should have a supply of early vegetables, and in order to secure them with the least expense a hotbed will be needed. The family on a farm has the greatest opportunity to live well, and something is wrong somewhere if they do not do so.

NEW BARN JUST COMPLETED BY JOHN NOTSETER, DEERFIELD, WIS., WHOSE SHORT-HORN ADVERTISEMENT APPEARS ON THIS PAGE.

SHORT-HORN CATTLE.

Oak Lawn Farm

Short-horns

OF quality. Four very good Scotch bulls, coming one year old. Sired by Strathallan King 295426, one of the best grandsons of Whitehall Sultan. Also a few good cows and heifers in calf for sale at reasonable prices. Address
J. E. KENNEDY **JANESVILLE, WIS.**

REGISTERED SHORT-HORN BULLS

READY FOR IMMEDIATE SERVICE. White, red and roan color. Sired by **McK.'s Masterpiece**, out of big, heavy producing cows of choice breeding. Also a few bull calves from two to ten months of age. Mention Wisconsin Farmer.
FRANK MORLEY - BARABOO, WIS.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

GREEN VIEW STOCK FARM

Offers the richly bred Short-horn bull,
ROYAL SULTAN 390142
A 2,300-pound grandson of Whitehall Sultan. We also will sell several of his yearling sons ready for service. Write for description and prices.
John Bear & Son **Spring Green, Wis.**

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
Geo. Wenham & Sons, **Ft. Atkinson, Wis.**

Registered Short-horn Heifers

AND yearling bulls. Sired by KING CREST 39857, a Duchess of Gloster bull, and out of Arabella and Imp. Bertha bred cows. Prices right.
John Notseter **Deerfield, Wisconsin**

The Great World's Fair Herds

50 REGISTERED Short-horn bulls and heifers. 100 big-boned Poland China boars and sows. Call at Prairie Lawn Stock Farm or write.
C. J. Schoenfeld & Son, Fox Lake, Wisconsin

BATES MILKING SHORT-HORN

HEIFERS 8 to 20 months old and bulls of serviceable age and younger. Big-type Poland China spring boars and fall gilts for sale.
A. T. Grundy & Sons, R. 6, Bx. 43, Oshkosh, Wis.

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

AYRSHIRE CATTLE.

TWO AYRSHIRE BULLS FOR SALE!

ONE is a 2-year-old grandson of the Grand Champion at the Panama-Pacific International Exposition. The other is 6 mos. old and by Garland's Success. Both good individuals and priced to sell. Also Hampshire pigs for sale.
E. N. Manley & Sons, **Lyons, Neb.**

HAMPSHIRE SWINE.

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

GUERNSEY CATTLE.

THORN HILL FARM GUERNSEYS

I HAVE for sale some very fine Guernsey bulls of all ages, from Advance Register cows and at very low prices, $50 up. I am overstocked and must sell at your price. Herd regularly tested for tuberculosis. Every animal guaranteed. Write for prices and description. Address
Thorn Hill Farm **Deerfield, Illinois**

REG. GUERNSEY BULL

by the richly bred bull
EGLANTINE OF SPARTA
A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

BIRCHWOOD GUERNSEYS

REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address
M. L. Welles **Rosendale, Wis.**

At the Present Time

I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.
Alfred I. Stubbs **West Salem, Wis.**

REGISTERED Guernsey Bulls

OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address
Ray Lewis **West Salem, Wis**

Registered Guernsey Bulls

THREE ready for service. One 4 years old. Also registered and grade females. King of the May and Yeksa breeding.
BASSE BROS, Route 5, West Allis, Wisconsin

Guernsey Bulls

FROM well bred stock. One two years old, "Lord Yeksa Boy" and a few calves. Priced right. Clifford Capener, Baraboo, Wis., R. No. 2.

JIM CEDARWOOD 34252, yrlg. Guernsey bull, combining Golden Hero, Gov. of the Chene, Masher's Sequel blood, straight rump, well-grown, light faun, ¼ white. D. E. HOAG, Oakfield, Wis.

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address
UNDERWOOD STOCK FARM
L. C. Underwood, Prop. **Avoca, Wisconsin**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Chariton, Iowa.

CHESTER WHITE SWINE.

CHESTER WHITES

SPRING boars of the kind and type so much in demand by farmers and breeders. A few choice sows also for sale. Write for prices.
Adolph Nuttleman **West Salem, Wis.**

CHESTER WHITES

BARGAINS in pedigreed Chester Whites. Herd boars, bred sows and early fall pigs. Address
JOHN SIMON **CAMPBELLSPORT, WIS.**

CHESTER WHITE SPRING BOARS AND GILTS

SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address
W. F. Miller **West Salem, Wis.**

MULE-FOOTED SWINE.

MULE-FOOT HOGS

I HAVE won more first premiums and championships than any herd in the U. S. Choice boars and fancy, large-type bred sows and gilts for sale. Zene G. Hadley, Box D, Wilmington, Ohio.

FREE catalog illustrating, describing, pricing big-type Mule-Foot hogs. Cholera immuned by double treatment. C. D. Thompson, Letts, Ind.

HOLSTEIN-FRIESIAN CATTLE.

High Grade Holsteins

A few heifers and cows usually for sale. Address **ALBERT VOGT, Oconomowoc, Wisconsin.**

HIGH GRADE HOLSTEIN CATTLE

for sale. Address **ALBERT DAVY, Oconomowoc, Wisconsin.**

FOR SALE High-grade Holstein calves. Can also spare a few heifers. Address Mrs. S. Spoerke & Sons, Oconomowoc, Wisconsin.

25-LB. HOLSTEIN BULL

BORN December 2, 1914. Well marked, well grown, straight and right. Sire, King Segis Butter Boy. Dam, Blue Bell De Kol. A. R. O. record 23.50 pounds. Can spare a few heifers.
John Douglas **Oconomowoc, Wis.**

YOUNG stock and springers for sale at all times. Address
W. E. BLISS, R. 26, OCONOMOWOC, WIS

BONNIE VIEw FARM

20.748 POUND two-year-old bull. Straight back and rump. Will make a large bull when full grown. Price $150. One bull 10 months old. Well grown and very large for his age. Price $75. Four bull calves from 2 to 3 months old $30 to $40. 15 to 20 tons of good clover hay in stack $8 per ton.
Campbell & Messerschmidt, Hartland, Wis.

Fairlawn Farm

OFFERS 25 pure-bred females of all ages; 2 serviceable show bulls, some younger; all from A. R. O. dams. A choice offering, but priced to sell. Can also furnish 100 or more high-grade cows due to freshen this fall.
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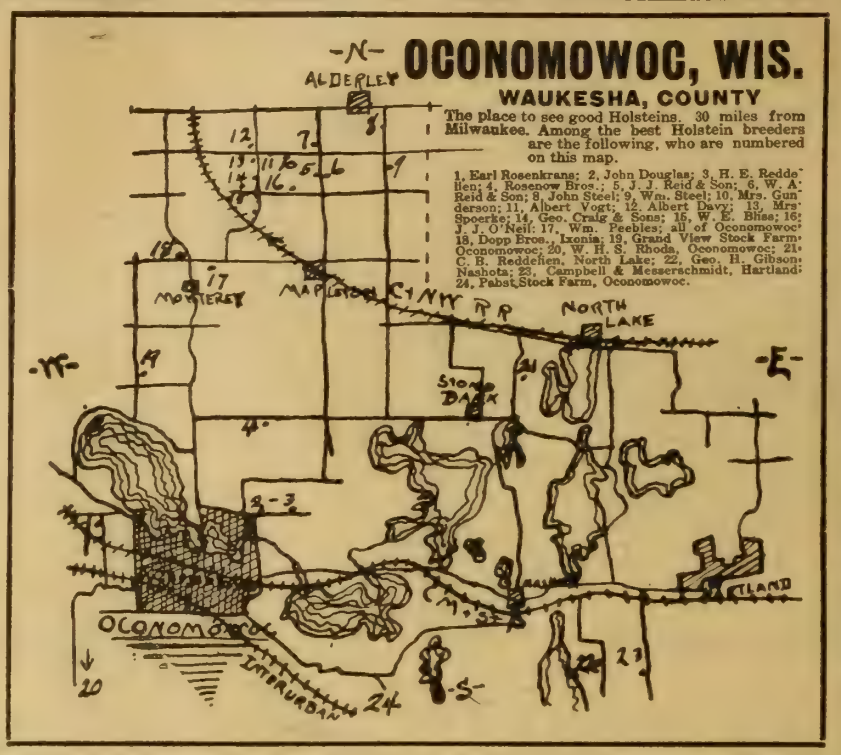

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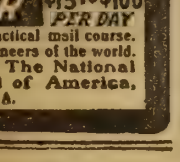

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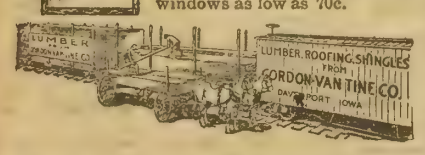

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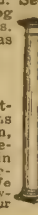

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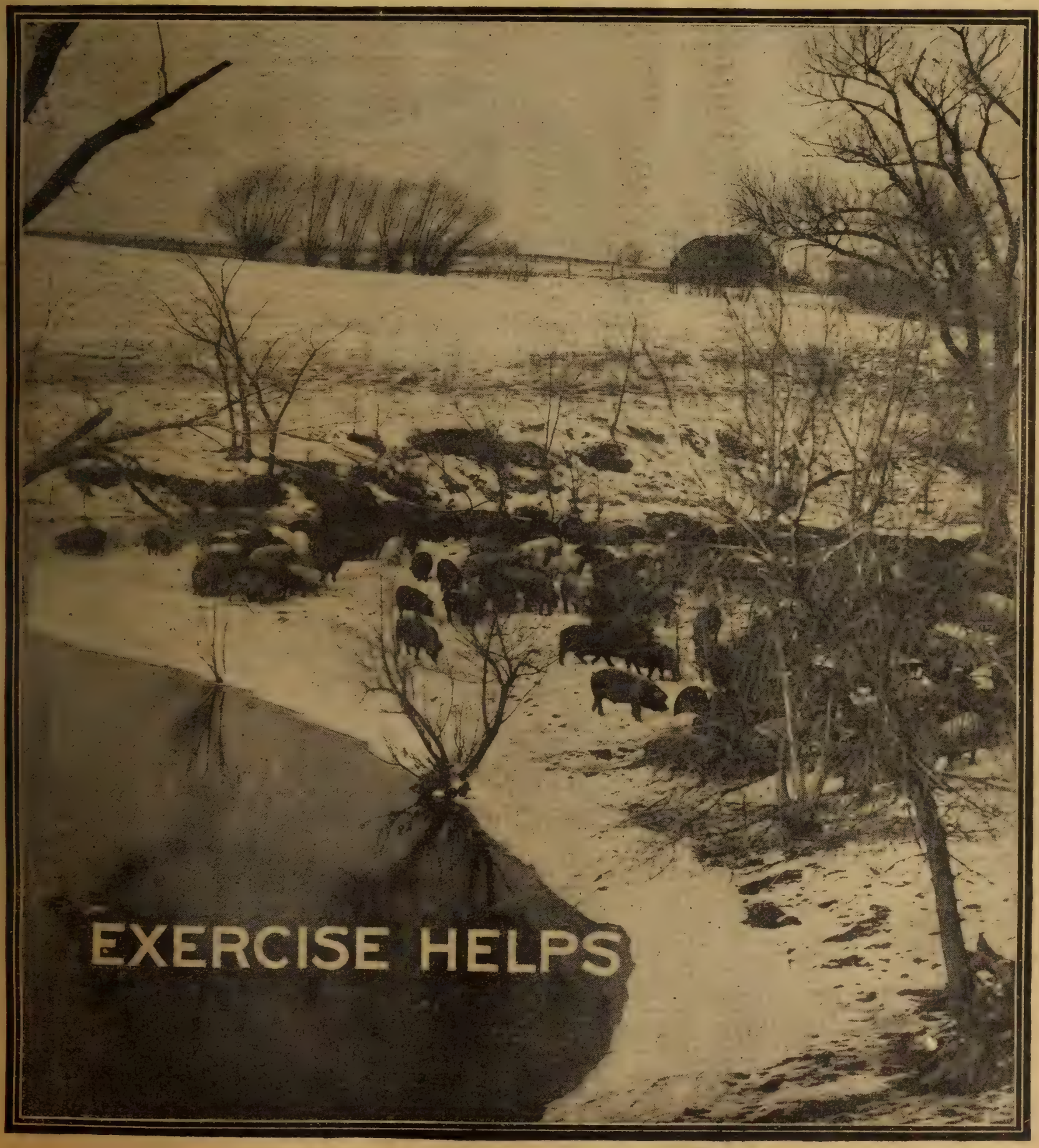
Reading Room of Agricultural Economics
Urbana, Ill.

VOL. XLV. NO. 11. THURSDAY, MARCH 16, 1916. WHOLE NO. 1781



CURRENT EVENTS

RENEWED trouble with Mexico was threatened last week when a large band of bandits, said to be commanded by Francisco Villa himself, crossed the boundary line and "shot up" the town of Columbus, New Mexico, killing fifteen Americans, civilians and soldiers alike. Villa is said to have issued orders to kill as many Americans as possible in order to force intervention, because the United States recognized the Carranza government instead of his. The bandits shot their victims down in cold blood and then fled across the border. They were followed, fifteen miles south of the line, into Mexican territory, by troops of United States cavalry commanded by Colonel Slocum, who took matters into his own hands and crossed the line without waiting for authority from Washington. When the word reached Washington the officials there stood firmly behind the doughty colonel, holding that this following of a "hot trail" did not constitute intervention, which President Wilson has strenuously opposed ever since coming into office. Formally there is no authority for the presence of the American troops in Mexico. In fact, the patrols along the border have from the beginning of the disorders there been under orders not to cross under any consideration. If the provocation had not been so great, the officers responsible for the action would face court martial. Suggestions that Colonel Slocum, in command at Columbus, might be court martialed, however, were scouted by some officials, while at the war department itself the subject was not discussed.

UP TO the beginning of the present week the Germans had been unsuccessful in their efforts to storm and to capture the French fortress and town of Verdun, although they had been successful in capturing outlying posts and in pushing the French lines back two or three miles in several places. The fighting was still in progress the first of the week, with tremendous losses on both sides. Most of the action consists of artillery duels, it being said that some parts of the battle line saw 100,000 shells exploded within twelve hours, making the greatest artillery fight in the history of the world. The Germans are sacrificing immense numbers of men, sending them across open plains in the face of front and cross fires which mow them down by the thousand. Some of the woods round about Verdun are said to have been shot into splinters, while the face of the country has been completely changed by the terrific duel, twenty-five feet of one hill having been completely blown off. There have been rumors during the past week of a naval engagement between the German and English fleets, but these are not confirmed. Winston Churchill gave England warning, in a speech in parliament, that the German fleet might be expected to come out any time, as it has undoubtedly been strengthened and will be called upon to attempt the almost impossible task of beating the allied fleet before the war comes to an end.

BY A VOTE of 276 to 142 the lower house of congress last week killed the resolution warning Americans to keep off of armed merchant vessels belonging to the warring nations, thus standing by the president in most decisive fashion. The senate having killed a similar resolution by the overwhelming vote of 68 to 14, the president felt sufficiently vindicated in his course and resumed his correspondence with Germany in regard to the Lusitania case and the right of Americans generally on the high seas. To the rallying cries of "Stand by the president" and "Is it Lansing and Wilson or von Bernstorff and the kaiser?" a big democratic majority and nearly half the republicans in the house rolled up overwhelming votes against every effort to tie the president's hands or embarrass him in the present diplomatic crisis. Released from the bonds of embarrassment forced upon him by the dissensions in congress, which have been represented in foreign capitals as indicating that he was making his demands on Germany in direct opposition to the elected representatives of the people, President Wilson is now prepared to go on with the submarine negotiations with the central powers. The next step probably will be an answer to Germany's last proposal to settle the Lusitania case, in which the United States will probably ask for such further assurances as it considers sufficiently broad and complete to guarantee that the new submarine campaign which began on March 1st and in which notice had been given that all ships carrying guns will be sunk without warning, will not endanger Americans traveling the seas on merchant vessels.

THE German commerce raider, Moewe, made famous by her exploits, has performed one of the most spectacular feats of the war by reaching Germany safely, getting through the strong cordon of blockading English battleships in the North sea. The Moewe arrived in port with four British officers, twenty-nine British marines and sailors, 166 men of crews of enemy steamers (among them 103 East Indians) as prisoners, and a vast sum of money in gold bars. The vessel captured fifteen enemy vessels, the greater part of which were sunk and a small part sent as prizes to neutral ports. Count von Dohna, the Moewe's commander, has been awarded the iron cross of the first class and the members of the crew have received the iron cross of the second class. Count von Dohna has been ordered to meet Emperor William at headquarters. The success of the Moewe in eluding capture and in getting through the blockading lines is one of the marvels of the war, the story of the raider being a picturesque chapter of a war which, for the most part, is so bloody and horrible as to have little of the picturesque in it.

NEWTON D. BAKER, formerly mayor of Cleveland, Ohio, has been appointed secretary of war to succeed Lindley M. Garrison, resigned. President Wilson sent the appointment to the senate last week. Mr. Baker is a young democrat of promise, being only forty-four years old. He began his public career by serving as private secretary to Postmaster-General Wilson in President Cleveland's cabinet. When "Tom" Johnson, the noted reform mayor of Cleveland, died, Mr. Baker succeeded to the office. President Wilson offered him the post of secretary of the interior three years ago, but the offer was declined. Announcing the appointment of Mr. Baker to be secretary of war, the president explained that he desired a good lawyer in this important position, because of the legal problems involved in the proposed reconstruction of the army system.

THE first of the national preparedness measures to reach either house of congress for consideration has been introduced in the senate by Senator Chamberlain, of Oregon, chairman of the military committee. It proposes an even more sweeping change in military policy than that outlined by President Wilson in his annual message, and was described by Mr. Chamberlain as the most comprehensive piece of military legislation ever offered in congress. All of the elementary administration army plans prepared by former Secretary Garrison are retained, although in altered form, and additional proposals for organization of industrial reserves in peace times go further than the administration had suggested. For the regular army the bill provides a peace strength within five years of 178,000 men of all arms, or approximately 165,000 fighting troops. The percentage of men in each company, battery or troop at peace strength would be increased in the interest of efficiency, and the full war strength would be 225,000. The army would consist of sixty-five infantry, twenty-five cavalry and twenty-five field artillery regiments in addition to the staff and other special corps and the coast artillery. Enlistment is fixed at seven years, four with the colors and three in reserve. At the end of one year of service efficient men may be discharged into the reserve on recommendation of their commanders and at the end of two years at their own request if approved. Reservists would receive a minimum pay of $24 a year and the president would have authority to mobilize the reserve in time of actual or threatened hostilities.

The Kewaunee Cheesemakers & Dairymen's Association will hold its next meeting at Kewaunee on March 28th. This announcement was made recently at the annual meeting of the Blahnik cheese factories which handled 45,280 pounds of fat during the year and paid the patrons an average price of .3274 cents per pound.

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SIXTY days' free trial, absolute satisfaction guaranteed or no pay, are the conditions under which the Rawleigh Manufacturing Co., 104 Taylor Ave., Freeport, Ill., are offering their engines direct from the factory. As further inducement, they make the following liberal terms: Cash, sixty-day bank deposit or one year in which to pay. Rawleigh engines are tested on the brake to pull 15 per cent more than their rated horse power. Therefore, they will always develop the power expected of them. They are simple and perfect in design, easy to set up and run. Gasoline, kerosene, distillate or gas may be used in them. The different horse power ratings and prices are given in the Rawleigh advertisement on page 27. If you expect to buy an engine, write for the new Rawleigh catalog and please say you saw the advertisement in The Wisconsin Farmer. —Adv.

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Spade-dug holes, like pots, confine and cramp the roots. Set your trees out in blasted holes. Stop the big percentage of early losses. Make them grow sturdy, hearty and fast. Cash in on your investment quicker by getting earlier yields.

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Drawn from actual photo.—Note marked difference in growth between tree planted in blasted hole and tree planted in spade-dug hole.

lightens labor and increases profits. It loosens the earth, makes better rootage and provides increased nourishment for young trees. It rejuvenates old trees and makes them bear.

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E. J. BARKER, Beech Bluff, Tenn., says: "I would not set trees without first subsoiling with explosives, even if it cost four times the amount."

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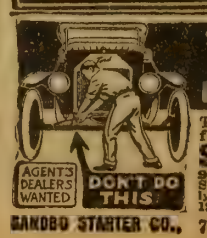

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The Wisconsin Farmer

THURSDAY, MARCH 16, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

MUSIC IN THE FARM HOME.

I AM quite interested in the plaint of a noted eastern musician and the answer made thereto by the editor of one of our well-known magazines. Here is what the musician said:

The young people here in America do not have their minds directed definitely enough in musical channels. I do not see groups of children standing about a piano in the twilight and singing to a mother's accompaniment. I do not see the boys of a neighborhood forming a small orchestra and playing really fine music as they do in France and Germany.

And here is the magazine editor's answer:

Mr. Stransky overstates his case somewhat. We know of a farmer's family of six children, each playing a different instrument, who, with father and mother, make a real little orchestra. And there are a good many such groups of the sort Mr. Stransky says he has not seen—youngsters about their mother at the piano. But there should be still more—many more. There cannot be too many. For, as the wise conductor says, music is something more than mere entertainment. It is "a serious and permanent joy in life....to keep the emotions stirred, the imagination young."

I am inclined to think that there is merit in the complaint and inspiration in the answer. It is a fact that we do not find families gathered about the piano or organ, singing the old favorites, today as we did when I was a lad. A letter from a very good friend (Mr. J. C. Loehr, living in Lone Tree, Iowa,) brought this very matter to my mind a day or two ago. This friend and I were boys in the same state, Ohio, with only a county or two between us, but it was not until long afterwards (a couple of years ago) that we came to know each other. Here is a portion of his last letter, right in line with what we are discussing here:

I remember in the fall of 1860 my father took me to Tiffin, Ohio, in a buggy. It was when Lincoln and Douglas and Breckinridge were running for president. I remember, also, about the breaking out of the war between the North and the South and the patriotic songs we used to sing in Tiffin. Here is the way some of them ran:

Stand up for Uncle Sam, boys,
With hearts so brave and true;
Stand up for Uncle Sam, boys,
For he has stood by you.

Then conquer we must,
For our cause it is just,
And this be our motto:
"In God is our trust."
And the star-spangled banner
In triumph shall wave
O'er the land of the free
And the home of the brave.

The army, the navy, forever,
Three cheers for the red, white and blue;
The army, the navy, forever,
Three cheers for the red, white and blue.

Ah, how well I remember these stirring songs and the others of the war days, the songs that kindled patriotic fervor and sent many a brave boy to the front, to fight and die for Old Glory. I took this friend's letter home with me, and my wife and I sat for an hour recalling the words of the old war songs, with glistening eyes and sometimes, I must confess, with trembling lips.

But now all is changed. Where once we gathered, in the twilight, with mother or an older sister softly fingering the keys, all joining as best we could (regardless of real vocal merit) in the words of some good old Gospel Hymn or war song or ballad on the "Juanita" or "Maid of Athens" style, now we go dashing madly about the countryside in an automobile, or we put a new record on the talking machine, or otherwise adopt the fad or amusement of the moment. Yet for every family which no longer has these twilight or nighttime song reunions there are literally hundreds which have had music brought into homes formerly bereft of this refining influence through the medium of the phonograph or the piano player. It is astounding the number of homes, in the country as well as in the city, where the talking machine, in some of its numerous forms, holds sway, to the delight of young and old. Sousa's swinging marches, the wondrous beauty of the sextet from "Lucia," the "Miserere" from "Il Trovatore," or the "Traumerei," the haunting melody of the Hawaiian instrumentalists or the lilting lyrics of the latest opera, all these are being enjoyed, day and night, in hundreds of thousands of farm homes, where music was hardly known at all before. As we become more and more deficient in vocal ability, due to the very lack of this gathering around the family organ or piano, we become more and more proficient in recognizing and carrying tunes, thanks to the "canned" music in most of our homes. And as we come to know music better we invariably come to love it more, and so, in the end, we are brought back to the simple, home music which we forsook because it seemed old-fashioned to some of the younger folks. Music in the farm home is one of my hobbies; it is a refining, uplifting influence second to none.

GET OUT THE RURAL VOTE.

THE problem of how to get out the rural vote may not have been completely solved at this week's primaries in Minnesota, but in my opinion the plan which was promulgated by the managers of one of the presidential candidates was so deserving as to warrant a little of our attention. The offer was made, in apparently the best of faith, of $200 in cash, to be expended for good roads, to the township which cast the largest percentage of the vote it cast in the 1914 election. You see, it is not for the largest vote cast, that would give the prize at once to some city township; it is for the largest percentage of the 1914 vote, which means that a rural township casting 100 votes two years ago and fifty votes this spring will win the $200 over a city township which cast 10,000 votes two years ago and 4,900 this spring. The "corrupt practices" act is avoided by offering the prize to the township for the entire vote, regardless of whether it goes to the candidate in whose interest the prize was offered or not. From whatever angle we view it the offer is so novel and inspiring as to be worthy of attention.

I hope the day will never come when the farmers of the middle West will have to be paid (either directly or indirectly) to vote. The right of franchise is one of our dearest possessions, and every good, loyal citizen—be he farmer or town man—exercises it every opportunity allowed him. But there are often temptations for the farmer to stay away from the polls, obstacles in his way so great that it seems hardly worth while, at times, to attempt to overcome them in order to exercise the right of franchise. Election day comes and the roads are well-nigh impassable, or there is work in the field to be done, or any one of a dozen other reasons, and the busy farmer excuses himself on the ground that one vote, more or less, would not change the general result, anyway. But what if we all made this excuse to ourselves and let the city vote determine the election? We would as effectively disfranchise the great body of farmers as though congress had completely and forever barred us from the privilege. In a way, this offering of $200 to the good roads fund is an indirect bribe to the farmer, yet it is made in such a good cause and such a good end is served that I find it worthy of commendation, rather than condemnation. If the farmer vote of Minnesota, or any other grain-belt state, expresses itself so emphatically that the men are nominated as our party leaders who most honestly have the farming welfare of the nation at heart, and incidentally the cause of good roads is advanced by farmers making their voices count loudly at the polls, so much good has been accomplished that we need hardly question the selfish motives which inspired the $200 gift.

I shall watch with interest the outcome of this novel experiment in politics and give you the results later. Many a good man has been defeated because the better element among the voters stayed away from the polls; anything which will bring out the vote and make the result representative is worthy of a fair and impartial trial, in my opinion.

STARTING A FARM CLUB.

I AM in receipt of a letter from a farmer living at Palatka, Michigan, which pleases me very much, not only because he asks my help, but because his letter testifies to a high state of prosperity and progress in his neighborhood. His letter follows:

I am contemplating organizing a club of farmers in my neighborhood, but do not know exactly how to proceed. I have talked the matter over with a neighbor of mine and we are both of the opinion that co-operation means better farming and dairying. We are, therefore, trying to organize such a club. Would you kindly advise me where I could get the necessary literature and instruction for starting such an organization? We expect to hold our meetings in the country schoolhouse and at each meeting have some interesting farm question discussed by all the farmers and thereby get the opinion of all, but at times we would have some prominent agricultural man come to our meeting and speak to us. Don't you think such a club would be a benefit to all concerned and at the same time increase our knowledge of farming and teach us to do it scientifically? I cannot say too much in praise of your paper and I am sure that most farmers will agree with me in saying that it is one of the best farm papers published.

In reply I set forth my views on farm clubs, as I have expressed them frequently here in this page of mine (most of you know by this time that I am heartily in favor of such organizations, believing them to be of the greatest value) and sent samples of constitutions and by-laws of several farmers' clubs in Wisconsin, which state has made more rapid progress, perhaps, in this splendid work than any other. I also sent sample programs of farmers' clubs all over the grain belt, enough to give my Michigan correspondent ideas for the whole year, I hope. A little work, changing the constitution and program to meet local conditions, should enable that community to organize a club that will be the most prominent factor in country life betterment the vicinity has ever known.

I believe firmly in both the things my Michigan correspondent inquires about: Farmers' clubs and co-operation. If the latter were not an unqualified success would we find over 1,500 farmers' co-operative companies in Wisconsin alone; 347 co-operative creameries, 290 cheese factories, 35 live stock shipping companies, 5 fruit exchanges, 40 grain elevators, 200 insurance organizations and 609 telephone companies, according to a count made a year and a half ago? If it were not an unqualified success would we find 50,000 Iowa farmers joining the 367 co-operative elevator, grain and lumber companies now in existence in the Hawkeye state, with property to the aggregate value of almost $4,000,000? If co-operation were not an unqualified success would we find as eminent an authority as W. M. Jardine, dean of agriculture in the Kansas State Agricultural College, publicly asserting that there is a waste of from 30 to 40 per cent of the crops on the farm under the present marketing system and that co-operation is the remedy? If any of you are dubious on this co-operative question let me suggest that you write to the Department of Agriculture, Washington, D. C., for a couple of bulletins, reprinted from the Yearbook of 1914: "Co-operative Marketing and Financing of Marketing Associations," by C. E. Bassett and Clarence W. Moomaw, and "The Organization of a Rural Community," by T. N. Carver. Both bulletins are full of practical advice on how to organize and to work together to cut down waste and get 100 per cent efficiency and production.

If my Michigan correspondent organizes his neighborhood club, as I sincerely hope he will, he cannot possibly do better than to consider this big and vital question of co-operation at an early meeting and have talks founded on the very bulletins I have mentioned here. There is a host of wonderfully good material in these state and federal bulletins on agricultural and kindred topics if we will take the trouble to look through them, as I hope many of my readers are in the habit of doing.

A COUNTRY STORE SUCCESS.

THE current issue of the Banker-Farmer contains an inspiring little article written by the proprietor of a general store in Cloud Chief, Oklahoma, now a bustling little town, but at the time the store was established a pokey little settlement ten miles from a railroad, consisting of a postoffice, a blacksmith shop and a small grocery store. By working with his farmer customers, to increase their crops and profits, and making their interests paramount, this man has built up a good trade and (far more important) has increased the prosperity of the whole community. I cannot refrain from quoting a little from the story as he tells it:

I maintain a rest room for the use of my customers, where they may take the children, or look over the latest papers and magazines. I made a hit with the farmers at the last harvest time by delivering all orders for goods amounting to $5 or over. I gain the interest and trade of the farmers by visiting them in their homes. I never lose sight of the fact that my interest is hitched up tight to the farmer, his family and his home. When the roads are good I spend as much time getting around the country as I do behind the counter. I drop into the different farms for a little chat most any time of the day. My best friends are my farmer customers. I enjoy visiting with them and they always seem glad to see me.

There is a lesson here which I wish thousands of our small-town merchants would learn. The farmer is not merely a customer, he is a partner in the development of every community, urban as well as rural. No town under 100,000 in population can grow and prosper unless the country immediately around about is prosperous.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Experiment Station for Waushara County.

THE business men of Hancock, Waushara county, are showing the proper spirit in offering, free of cost, to the state the choice of several near-by farms for the establishment of an experiment and demonstration farm by the college of agriculture. The county advancement association, realizing the great good to the community which will result from having such a farm in its midst, will donate a farm, rent free, as an experiment station and the college authorities have agreed to the proposition. The college men will choose the farm best suited for the purpose. The result is that in a few months an experiment station will be opened at Hancock.

The soil about Hancock is typical of about 4,000,000 acres of sandy soil in Wisconsin. The experiments carried on there will be under conditions existing in many parts of the state and the results will be applicable to the 4,000,000 acres of like soil. What to do with the sandy soils has long been a big problem in Wisconsin and the college authorities believe the selection of the sandy soil at Hancock offers a splendid opportunity to solve this problem. Experiments have been carried on for many years with sandy soils, as a result thousands of acres now produce which never produced before. It has been possible to discover crops best suited to these soils. Considerable work of this kind has been done at Sparta, in Monroe county, and some splendid results have been obtained there. However, the work at Sparta has been largely concluded and the station now located there will be moved to the new fields at Hancock. These farms at Hancock have been cropped for many years and the soil is pretty well run down so that the soils department of the experiment station will have splendid opportunity to demonstrate how these run-down and cropped sandy soils can be improved. It has been impossible to produce clover on them for some years and as dairying is a big factor in that community and clover essential to profitable dairying the improvement of this soil so that it will grow clover will be one of the first efforts at the station.

The expense to the Hancock business men must be considerable as they will have to take care of the rental, taxes, etc., on the farm picked by the college authorities. These business men realize the relation that should exist between merchant and farmer. The success of one is dependent upon the other. These men know that the soil about Hancock can be made to produce more. They know there are certain crops for such soils that are immensely profitable and that the location of an experimental farm there will teach the farmers of their vicinity what to do and how to do it. Part of the farm selected will be given over to experimental work in growing grasses, grains, etc., and the remainder devoted to demonstrational work in order to show what can be done by the proper methods. A committee of the board of regents, consisting of Mr. Ben Faast, of Eau Claire county. Mr. S. D. Jones, of Marathon county, and Mr. Theodore Hammond, of Milwaukee, was named to locate the station by selection of one of the farms offered by the Hancock Advancement Association.

Taxes For the University.

FROM one of our readers, Mr. Lewis Ostenson, of Waukesha county, comes the following inquiry relative to the tax paid for the support of the state university, of which the college of agriculture is a part:

> How much tax do we pay to the University of Wisconsin for every $1,000 that we are assessed?
>
> In other words, how much of the taxes that we have to pay goes to the fund that is levied for the maintenance or running of the state university for every $1,000 that we are assessed?
>
> It is the standing rate—so many mills, or such a fraction of a mill per dollar of assessment. This is in addition to the other appropriations that the legislature may make, and does make, from time to time for other purposes of the university, as new buildings, etc.

The state tax now for the support of the university is three-eighths of one mill or, for every $1,000 that the farmer is assessed, as Mr. Ostenson inquires, 37½ cents. That is, for every $1,000 of assessment the taxpayer pays 37½ cents towards the maintenance of the University of Wisconsin. On a $10,000 assessment it would be $3.75, etc.

This three-eighths of a mill or 37½ cents per $1,000 of assessment is levied as a direct tax for the maintenance or running of the university. This is the only direct tax made for the university, as the appropriations made by the legislature are paid from the general fund. The general belief during the tax fights which has been a part of the political campaigns during the last few years, has been that the university received money in some other manner from the taxpayers. This 37½ cents per $1,000 is the only direct tax, and the appropriations which are made by the legislature for new buildings at the university, etc., comes from the general fund which has never, with but one exception, been raised by direct state taxation. This fund is created by the income tax, corporation taxes, etc.

The Wisconsin Farmer is pleased to receive inquiries from its readers and glad to note interest in state officers. The taxation question is one of great interest to every farmer, as he pays a good share of the taxes, and he should be conversant with all the facts of our taxing system. Friends of the university in the last fight in the legislature pointed out that in most cases the university costs the taxpayers in many localities nothing, as they get back more for local education than they contribute in direct taxes to the university. In 1915 the state returned for local education $3,161,935, which was paid out of the fund made up from corporation taxes, etc., and not by direct tax. This money is returned in the nature of state aid to rural schools; county agricultural schools, etc.

The Wisconsin Farmer is glad to answer any questions of fact sent to us by our readers in good faith.

Read the Farm Mechanics Department.

IT IS time to get the car out—those of our farmers who have not been running it all winter. An increasing number of our readers are joining the "all the year 'round" company of automobile drivers, especially since the new "all weather" tops have appeared.

But those who have had the car jacked up in the barn will be itching these spring days for a spin, and it is best to give the car a good looking over to see that it is in trim. The Farm Mechanics department of this paper offers many helpful suggestions from week to week to automobile owners and drivers. Every question answered in this department is bona fide. The Wisconsin Farmer has an expert employed to answer these questions from farmer automobile drivers. The service to our readers is free and we shall be glad to have all take advantage of it. The Wisconsin Farmer receives more questions for this department each week than we can afford space to answer, so the most important ones are picked out and answered first. For this reason it is well for our readers to go through the department every week, as the very problem concerning which they would inquire doubtless has been answered in these columns very recently. It is not infrequent that we receive several questions of the same kind in the same week. In such instances we aim to publish one answer, thus serving all, and giving space for other problems.

Read the Farm Mechanics department regularly and you will find such helps in this section of The Wisconsin Farmer alone which will more than pay you for the subscription price of this paper. The Wisconsin Farmer is the only Wisconsin farm paper which runs such a department for the benefit of its readers.

Test Your Tobacco Seed.

JUST as much care should be taken this spring in testing by the tobacco growers as the corn and small grain growers, for what corn testing means to the corn growing sections tobacco seed testing means to the tobacco regions. If the tobacco growers of Wisconsin expect to obtain the full benefit of what points to an excellent market for the 1916 crop they should begin by buying the best seed obtainable and then test this seed to determine its germination qualities. Good seed should be secured regardless of cost, for "any old kind" will not do.

Tobacco growers will also find it to their profit to find out the class of tobacco in demand by buyers to supply the binders' trade and then try to procure it. The seed has much to do with the quality of the crop and quality is what is valuable. Therefore, it is highly important that only good seed be used and there is plenty of such seed to be obtained from those who make it a practice of propagating the improved varieties. If a desirable binder is produced in Wisconsin this year the farmers should recover much of their losses of the last two years as conditions were never better for securing remunerative prices for the coming crop. By the time the 1916 crop is harvested every bit of old leaf is likely to be out of the market and the manufacturers with smaller stocks on hand than ever before. The bad season last year cut the quality and the price and market conditions the year previous were upset because of the war. It has been anticipated that many farmers have contemplated going to grains, but the tobacco riders report a good many plans to increase their acreage, believing the forecast for good prices.

Some interesting conclusions on the failure of the crop in so many sections last year were recently set forth by Director Brooks of the Massachusetts Experiment Station. The wet season, he attributed as the reason for the failure of the New England crop, and similar conditions prevailed in Wisconsin. On old tobacco soil he found that the crops had failed because the roots were unable to reach available fertilizer because of the very rainy weather late in the season. The root growth had apparently been stunted in the early spring when it was cold. Some of the best crops were produced on land which had had little fertilizer, and for this year he recommends thorough cultivation and aeriation of the soil to make this residue of fertilizer quickly available. Many contended that the fertilizer had been washed away by the heavy rains because the crop failed, but Director Brooks believes it was so deep and the root growth so stunted that the plants did not receive any benefit from it.

Spreading Better Farming Advice in Grant County.

MR. JOHN D. KEENAN, in a letter addressed to the farmers of Grant county, signs himself "Professor of Agriculture, Fennimore High School." This thing of having "professors" of agriculture in a high school is coming to be very popular. A great many of these men are doing splendid work. It is difficult to get enough men who are properly equipped to fill positions of this kind. Under ordinary circumstances, we believe it is just as well to omit the word "professor." This is not said in a spirit of criticism. There is no reason at all why farmers should have any prejudice against "professors," and a great many farmers do not have such prejudice. At the same time there are hosts of farmers who have been successful and have done it without any considerable amount of "book learning." It is nothing more than natural that these farmers should hesitate when it comes to taking advice from a man who has learned a considerable part of his agriculture out of books. We have come to speak of men as professors who gain their title from the study of bound volumes. But Prof. John D. Keenan, of the Fennimore High School, is evidently on the right track. We judge this from the contents of his letter to Grant county farmers. He writes as follows:

> I am wondering if you realize what we mean when we speak of plant food. You all know that different grains fed to fattening stock have different effects. You know that corn is the best grain to fatten your steers and hogs with, but do you know that this fact is dependent upon the soil? Like cattle and hogs, grains and hay crops must have the proper food to get the proper results. They are as much a living thing as your stock. In grains and hay we look for the power to produce fat and energy. To get this fat and energy the soil must contain plant food that will produce a large amount of leaves and stalks in hay and a large kernel in the grain.
>
> These plant foods are in the soil, not in the form of fat, protein, sugar and starch that is required for good results in feeding, but as nitrogen, phosphorus, potassium and calcium. Each of these foods has a certain duty to perform, in the building up of the plant with which we fatten our stock.
>
> Due to these facts we should take pains to find out which of these foods is lacking in our soil. If our oats grow all to stalk and produce but small head, we feel sure, providing our share has been done in preparing the soil properly, that the soil is lacking in the food needed to build up the grain.
>
> Think of your soil in this way. Does that field produce what the other one does? Why? Why can't I get a catch of clover in this field? Why doesn't my corn fill out the tips? Why doesn't corn do well after clover? Why do oats go down on the field where I have just broken up clover sod? Why do oats grow best on the ridges?
>
> "There is a reason." Let us answer these questions for you. Come and see us or let us meet you in your country school some evening to discuss these questions.
>
> JOHN D. KEENAN,
> Prof. of Agriculture, Fennimore High School.

If Professor Keenan can arouse the farmers in the vicinity of Fennimore to a discussion of such important topics as he mentions in his letter, he will have accomplished a great deal.

Ice Cream Manufacturing in Wisconsin Creameries.

THE manufacture of ice cream as a sideline to the manufacture of butter has been freely discussed in Wisconsin during the recent months at meetings of farmers interested in co-operative factories. Creamery owners have also taken up this subject. This interest has prompted the issuance of a bulletin by the state experiment station, entitled "Ice Cream Making", which was prepared by Mr. A. C. Baer. Mr. Baer discusses the manufacture of ice cream in detail and the bulletin contains much valuable information to creamery owner and operator.

Profits from the manufacture of ice cream are twice as great as from butter, and this fact has caused many creameries and milk plants in recent years to equip for making ice cream. Ice cream can be made a profitable sideline of a creamery or milk

plant with the additional small equipment and as the demand increases, ice cream plants continue to spring up. It is not practicable nor advisable to ship ice cream a long distance.

In Wisconsin, where a 14 per cent fat standard is required for ice cream, a gallon of ice cream will contain approximately a pound of butter. This ice cream at wholesale would sell for seventy-five cents a gallon, while the cost, although it varies owing to equipment, etc, need never exceed forty cents a gallon. This leaves a good margin of profit, but despite this profit and the increasing demand Mr. Baer points out that the manufacture of this product is today where the butter and cheese industry was twenty years ago. Standardization of operations will do much towards boosting the industry. The product is not uniform from day to day, and the difference in its quality are not well understood. The result is that creamery and milk plant operators who understand the manufacture of ice cream and take it on as a sideline are likely to find it profitable provided the output is from fifty to 100 gallons a day.

Many Wisconsin creameries which have begun the manufacture of ice cream have met with success. Not one in twenty is so located as to handle the business profitably, though. Location is the chief factor as there must be a market for the product, and the average output should be at least twenty-five to fifty gallons daily during the season. If well located and not hampered too much by competition no creamery need fear the experiment.

The equipment necessary for making ice cream in a creamery where the power in already available is given by Mr. Baer as follows:

1 10-gallon upright freezer	$100
1 ice crusher	50
Packers and cans	200
Shafting and pulleys	15
1 hardening tank	20
1 mixing vat	10
1 extra wash sink	15
Small tools and conveniences	25
Total	$435

An ordinary ten gallon tub freezer, Mr. Baer says, will be sufficient at the start. This freezer will cost from $75 to $100 and can be replaced by a better machine as the business increases.

In the smaller cities, ice cream making can also be made a profitable side line of a small milk plant or pasteurizing plant. The largest flow of milk usually occurs during the summer months and milk plants contracting for the product from farms often have a surplus at this season which can be manufactured into butter or ice cream. A milk plant usually has pasteurizing facilities and refrigerating machinery which enables it to handle the cream properly for ice cream making.

Grain Pictures and Letters.

THE editors have arranged for this issue an illustrated page on seed corn testing. Our readers will refer to page 16 for this feature. Several of the pictures used in this feature have been borrowed from the agronomy department, Wisconsin College of Agriculture. They are used here because they provide the best illustrations which we are able to get hold of.

Special attention is also called to the Farm Forum department this week. This is headed with an article on growing show corn, by S. P. Markle, of La Crosse county. Names of other prominent Wisconsin grain growers will also be found in the Forum column this week. The Forum is a medium for exchange of views, and as such it is open to every farmer who writes his convictions or experiences in good faith. Within the past few months many excellent articles have appeared in the Farm Forum department. We are sure that others of our readers have good ideas which they might give us for this department, and their brother farmers of the state would profit thereby.

Department of Agriculture Indorses Plan of Drilling Oats.

CLIMATIC conditions that are favorable to the production of corn are not conducive to the best development of small grain, particularly oats. The central West produces an enormous quantity of oats every year for the simple reason that a tremendous area is seeded. Last year the ten grain-growing states of the central West produced approximately one billion bushels of oats, but the yield per acre was only 36.8 bushels. Comparatively speaking, this was a good yield, but it was not enough to afford the grower anything like a satisfactory profit in the case of high-priced land. If an increase of one bushel per acre could be made this in itself would amount to millions of dollars.

In this connection we beg leave to refer to a recommendation recently made by the United States Department of Agriculture in the weekly news letter published by that department. Referring to the method of sowing oats it is pointed out that drilling gives a more even stand than broadcast seeding, for all the seed is covered to about the same depth. In sowing broadcast, some of the seed may not be covered at all and some may be covered too deeply. Germination is better from drilled seed and the growth is more uniform throughout the season. In numerous tests at the experiment stations drilled oats have outyielded oats sown broadcast by several bushels to the acre. Better stands of grass and clover can also be obtained in drilled than in broadcast oats.

The best depth to sow oats varies with the soil and the season. In any case they should be covered with half an inch to an inch of moist soil. They should be sown deeper in sandy soils than in loams or clays. Deeper seeding is also necessary when the ground is dry than when it is moist. On the average the best depth is from one to one and one-half inches.

Oats should be sown as early in the spring as it is possible to make a good seed bed. The exact date, of course, varies with the season and with the locality. This does not mean that the preparation of the land should be neglected in order to sow early. Better yields will be produced from seed sown in a good seed bed than from that sown a few days earlier in ground too cold and wet for the seed to germinate.

Alfalfa Ruined by Cutting at the Wrong Time.

THOSE who are successful in growing alfalfa must become students of the habits of this important legume, and in the following communication one of our subscribers, Mr. J. N. Shirley, of Marion county, Ind., calls attention to some important points in connection with the cutting of alfalfa. He writes:

In agricultural papers and bulletins I often see instructions to "clip" weeds as often as they threaten alfalfa. These writers don't say why this should be done, but I suppose they mean to benefit the alfalfa and hope to kill the weeds. I am sure they are wrong, and the results are just reversed.

It will pay the farmer to study the nature of alfalfa. It will pay both in dollars and in pleasure. The alfalfa plant is regarded as a weakling at first, but this is not true. Of course it is tall and slender for a few weeks and looks out of proportion, but it is stretching itself that it may get air and sunshine among the weeds or so-called nurse crop. If we cut an alfalfa plant high it dies down to the ground and takes a fresh start from new buds at the base. If we clip weeds high we don't kill them because we clip over a bud on each weed branch at the stem of the weed and we make the weeds thicker by throwing the weed force into these buds "in waiting," and at the same time we retard the alfalfa plants by cutting their lungs out, and unless their new buds at the base of the plants are well started the weeds, foxtail, crab grass, etc., get the ascendancy and matters are made much worse. I have known many alfalfa fields ruined by this very process. I plead guilty myself but promise not to do it any more.

A few years ago a brother-in-law of mine in Park county, Ind., told me that he took special pains to break and prepare seven or eight acres of good, rich land for alfalfa. He said he had a fine stand at first, but I think he was mistaken. It must have been too thick, for he used about twenty pounds of seed per acre. He said he even clipped the weeds off of it three or four times the first year! He did not kill the weeds by cutting them high, but he did kill or retard the alfalfa plants by both cutting their heads off and their lungs out and by making the weeds thicker.

My father, in February, 1915, sowed twenty acres of alfalfa, with Jack Frost on corn ground, using nine or ten pounds of seed per acre, and he got a splendid stand. His tenant, wanting something to do, while it was too wet to plow corn, clipped the weeds off the alfalfa two or three times, with the usual and inevitable result.

Last summer I hired a man to cut close to the ground the first crop of April 5, 1915, seeding of alfalfa, about ten acres, sowed on dry, windy, weather-checked or cracked ground. The work was to be done when the buds for the next crop of alfalfa had well started. This man cut the upland part "when he had time," when it was too wet to get into his corn. He killed the alfalfa, or nearly so, but he killed the weeds, too, by close cutting, and I mean to reseed this three or four acres as soon as the snow leaves and Jack Frost gets the ground in condition. I, myself, two weeks later, cut the weeds and a little alfalfa from the other six or seven acres. I admit I had a heavy crop of weeds, from four to six feet high, and but little hay, this first cutting, but I got a good second crop of clean alfalfa and I could have cut a light third crop if I had had the time to do it.

Unquestionably those who succeed with alfalfa must give attention to the matters referred to by Mr. Shirley. A study of the new buds that make their appearance at the base of the plants must be made and must be made with care. If the crop is cut before these make their appearance the crop will be greatly weakened while, on the other hand, if cutting is unduly delayed we may actually harvest two crops instead of one. In former days heroic attempts were made to improve the growth of alfalfa by cutting back the weeds when, as a matter of fact, the soil was not in condition for the alfalfa crop. This is being overcome by the use of lime and by the inoculation of soils.

Better Success With Thin Nurse Crop.

IN THE following communication one of our subscribers gives the result of his observation in the thick and thin sowing of a nurse crop when it was used in connection with timothy and clover. He writes:

Two of my neighbors were preparing to seed down a couple of fields to meadow. The fields had nothing more than the public road running between them, and the soil on them was of practically the same fertility. Both fields had been in corn the previous year, so that all conditions may be considered as equal.

Both men pursued practically the same methods as to seed bed preparation, and both had good seed oats, but when it came to sowing the oats, Neighbor John sowed them at the rate of only about two and a half bushels to the acre, while just across the road Neighbor George was slapping on about four bushels of seed to the acre.

Calling across to where his neighbor was sowing his oats, Neighbor George inquired how many bushels of seed he was putting to the acre. Upon being told by Neighbor John how much seed he was sowing to the acre, Neighbor George laughed at him, saying:

"'Sow sparingly, reap sparingly.' I'm putting on four bushels to the acre. We'll see the difference in these two patches when harvest comes."

Neighbor John smiled good naturedly and merely remarked that there was such a thing as a fellow getting too much seed on old ground, especially if it was to serve as a nurse crop. Then he passed unconcernedly on about his oat sowing.

The writer helped handle those oats that fall, and truly (as Neighbor George had said) there was a big difference in the final results. On the thickly seeded field of oats they made about twenty-five bushels of grain to the acre. The man actually had sown the seed so thick the plants did not thrive well. As for his clover and timothy meadow—he had none. The thick-standing oats simply had smothered down the young, tender plants.

On the other hand, just across the road from the thickly seeded one, where the seeding of the oats was much lighter, the yield of grain was about thirty-five bushels to the acre. And not only were both quantity and quality of the grain higher on this thin-seeded land, but the thin stand of oat plants admitted the air and sunlight to the timothy and clover plants below, causing them to secure a strong, vigorous growth, which resulted in a fine "set" for a meadow.

There is a much greater difference in the yield in this instance than can ordinarily be expected between thick and thin seeding. Something depends upon the character of the soil, to be sure, but up to four bushels per acre, under ordinary conditions, the yield will always be higher from the thicker seeding. Usually three bushels per acre will give the most satisfactory results as the returns from the thicker seeding, although greater, may not be sufficient to justify putting on the extra seed, particularly if it is high in price.

Of course, from the standpoint of the timothy and clover, the thinner seeding is to be preferred, and ordinarily ten pecks of seed is sufficient when oats are used as a nurse crop.

An Example of Business Carelessness.

WE ARE all more or less prone to make mistakes. Strive as we may we blunder nevertheless. Some of these are costly from the standpoint of dollars and cents, while they are all more or less annoying. We are started on this train of thought by a communication from a business firm stating that they have a number of statements with remittances for furs, hides, pelts, etc., awaiting claimants. In some cases no postoffice is given, while in other instances the persons forwarding orders have failed to sign their name. As a result there are scattered here and there throughout the entire central West individual customers whose carelessness has involved them in a money loss. It goes without saying that no reputable firm wants goods for nothing. If it stays in business year after year as a result of following a square deal its one great desire is to treat each and every customer with fairness. In such cases, however, as those referred to the company is helpless.

It is a well-known fact that the government receives hundreds of thousands of dollars' worth of goods every year because of the same weakness in human nature, while the express companies and railroad companies have thrust upon them thousands of packages, the contents of which are of value to the original owner but of little value to anyone else. All this is a loss, as stated by one government official, that falls on careless people.

We are calling attention to the matter in the hope that such firms as the one referred to above may be able to once more make connections with some of its claimants. We hope that the mere suggestion here given may be sufficient to inspire action on the part of subscribers who have had unsatisfactory dealings with any firm or individual advertising in this paper. Doubtless in most cases there would be no occasion for holding a grudge if all the facts were known.

Running Water a Household Necessity.

IMPORTANT truths are often forced upon our attention by the simple plan of making comparisons. An instance of this kind is furnished by a statement made by the governor of an eastern state while addressing a farmer audience recently. Upon that occasion Governor Craig, of North Carolina, said:

If I were asked to name what in my opinion is the most desired utility of modern life, I would not name the railroad, nor the telephone, nor the electric light, nor the automobile, essential as they are, but I would name running water in the home. This conduces more to cleanliness and health and comfort than any other improvement that modern civilization has brought us. It can be had too, at a little cost. There is not a farmer of moderate means who cannot with economy have running water and sewers in his home, and this would contribute more to the health and comfort of his family than any other improvement.

The house fly and mosquito are deadly enemies of our people. They can be guarded against with slight expense. With running water and screens, any home, however humble, can be clean and comfortable and healthy, and the people who live in it will be cleaner, more comfortable and more healthy.

It is undoubtedly true that most of us fail to realize the great importance from the standpoint of comfort and health of an abundant supply of running water. A supply of running water will do more to eliminate drudgery from the work of the home than any one factor that could possibly be mentioned. The sink in the kitchen with drainage facilities is an absolute essential. Pressure may be obtained by elevating a supply tank or by air compression, and the money invested in either equipment will pay dividends in comfort, health and pleasure that cannot be matched by any other investment that could be named.

EXPERIMENTS WITH HEMP.

With War Prices Hemp Seems a Profitable Crop in Wisconsin, But It Demands a Considerable Amount of High-Priced Machinery to Handle the Crop.

HEMP growing, which has been largely confined to Kentucky, promises to become an important farm crop in Wisconsin, as it has been proven after seven years of experiments that this crop can be made to pay well in this state. Growers of hemp the past year in Wisconsin netted from $40 to $80 an acre and constantly increasing inquiries indicate an increased interest by the farmers.

The war has had much to do with added interest in hemp growing in this country, as many of the nations engaged are the largest producers and imports have been cut off. Hemp is cultivated commercially for fiber in large quantities in Russia, Italy, Austria-Hungary, France, Germany, Belgium, Turkey, China and Japan, all of which, excepting China, are involved in the war. Russia, before the war, produced more hemp for export than all other countries and as the cultivation of this crop has never reached very large proportions in the United States hemp growers see a splendid market ahead.

Hemp is easy to cultivate and requires no attention between seeding and harvesting. It follows a cultivated crop better than any other crop and does not follow well the grains, so that in a rotation it should follow either corn or clover with the grain following the hemp. In a deep soil it withstands drouth exceedingly well, is not affected by light early frosts, does well during a moist season and is a sure killer of thistles and other weeds which cannot survive the dense shade of the hemp.

WISCONSIN HEMP IN THE FIELD AND IN SHOCK.

Special machinery is one requirement for successful hemp fiber production and this fact must be borne in mind by the farmer who undertakes it. The crop cannot be grown profitably in small, isolated areas. Two hundred acres or more should be grown on one or adjoining farms to warrant the introduction of the necessary machinery for drilling, harvesting, breaking and baling and make it possible to ship in car lots. Three or four hundred acres is even better.

HEMP FIBER GOING TO MARKET AT WAUPUN, WIS.

HEMP GROWN FOR SEED.

This condition brought about the organization of hemp districts in Wisconsin and hemp is probably best handled as it is at Waupun, where the farmers have co-operated in buying the necessary machinery for handling. This solved the big problem of the farmers about Waupun and where a farmer doesn't have sufficient acreage to warrant introducing the machinery needed it is advisable to join with others near by.

Hemp fiber is now bringing from $11 to $12 per 100 pounds and the price of seed has gone soaring since the war began, good seed now being worth about $11 a bushel, as compared with a normal price of about $3 a bushel. At this price for fiber it would almost be profitable to break the hemp by hand.

The Wisconsin Hemp Growers' Association, which included all the commercial growers in the state, first took up the work of buying special machinery, etc., and recently the Waupun growers organized the Waupun Hemp Growers' Sales Co., which will finance the handling and marketing of the crop there.

There are at present three hemp-growing centers in the state. The district of which Waupun is the center extends as far north as Brandon and as far south as Beaver Dam. Burlington, in Walworth county, is the center of a small district and Union Center is the center of the third district.

These three centers do not by any means represent the entire hemp growing of the state, but they do represent the commercial hemp-growing districts. Hundreds of acres are devoted to hemp in all parts of the state as an eradicator of quack grass and Canadian thistles. Farmers have found this crop good for stamping out these farm enemies, but hemp is too valuable a crop for such purposes when it will net $40 to $80 in a district where machinery is accessible for handling. Of course, it is worth much, many farmers say, if it eradicates quack grass and thistles.

Wisconsin has good soil for hemp and the 1915 crop of the association at Waupun sold for $12,000, the farmers netting from $40 to $80 an acre. About 500 acres were devoted to hemp and it ran from 1,000 to 2,000 pounds of fiber to the acre, some acres yielding as high as 2,200 pounds.

Any good, deep soil which will produce a good corn crop can be depended upon for hemp and it works best in the usual four-year rotation with corn, grain and leguminous crops. Since 1909 experiments have been running in this state under the direction of C. P. Norgord, commissioner of agriculture. Two problems faced the growers—one a plan for growing and marketing the crop; the other the securing of the necessary machinery. This was finally worked out by the organization of the Waupun association where different machines have been tried out and where farmers interested in the crop can secure valuable information.

Hemp is uninjured by light frosts and can consequently be sown earlier than oats and harvested later than corn. It requires about 110 days for its growth and should have a rainfall of about ten inches during that period. For its best development it requires a rich, alluvial or loamy soil not subject to drouth, yet not of a swampy nature. It is not to be recommended for a light, sandy soil unless it follows a crop of clover or beans which have left a good quantity of nitrogenous fertilizer. Hemp will not do well in acid soils. The acid lands should be limed as they are for alfalfa. Government experiments in Indiana have developed good crops on peaty soils over marl.

Hemp may be introduced in any crop rotation, but it is best to have it follow clover, peas or beans or a cultivated crop. It may follow corn or grain, providing these crops are well fertilized. The best fertilizer is the barnyard manure and this should be applied to the previous crop, or, at the latest, in the fall before sowing the hemp.

Fall plowing is always best and seed should be sown at the rate of approximately a bushel per acre about the time of sowing oats or as nearly after the severe frosts as possible.

In harvesting most of the hemp is now cut with self-rake reapers made especially for this crop. They leave the hemp stalks in gavels. After lying in the gavel for two or three days the stalks are either spread for retting, set in shocks without binding or tied in bundles and set in shocks. In Kentucky the fiber is gray if dew-retted and light yellow if water-retted. In the North where there is no danger of hot weather to sunburn the stalks the hemp may be spread for retting immediately after cutting. If there is danger of dry, hot weather it is better cured in shocks. If it is to be stacked it must be tied into bundles before it is ready for shocking.

HEMP FIBER ON WAGON AFTER LEAVING BREAKING MACHINE.

HEMP BREAKING MACHINE IN ACTION AT WAUPUN, WIS.

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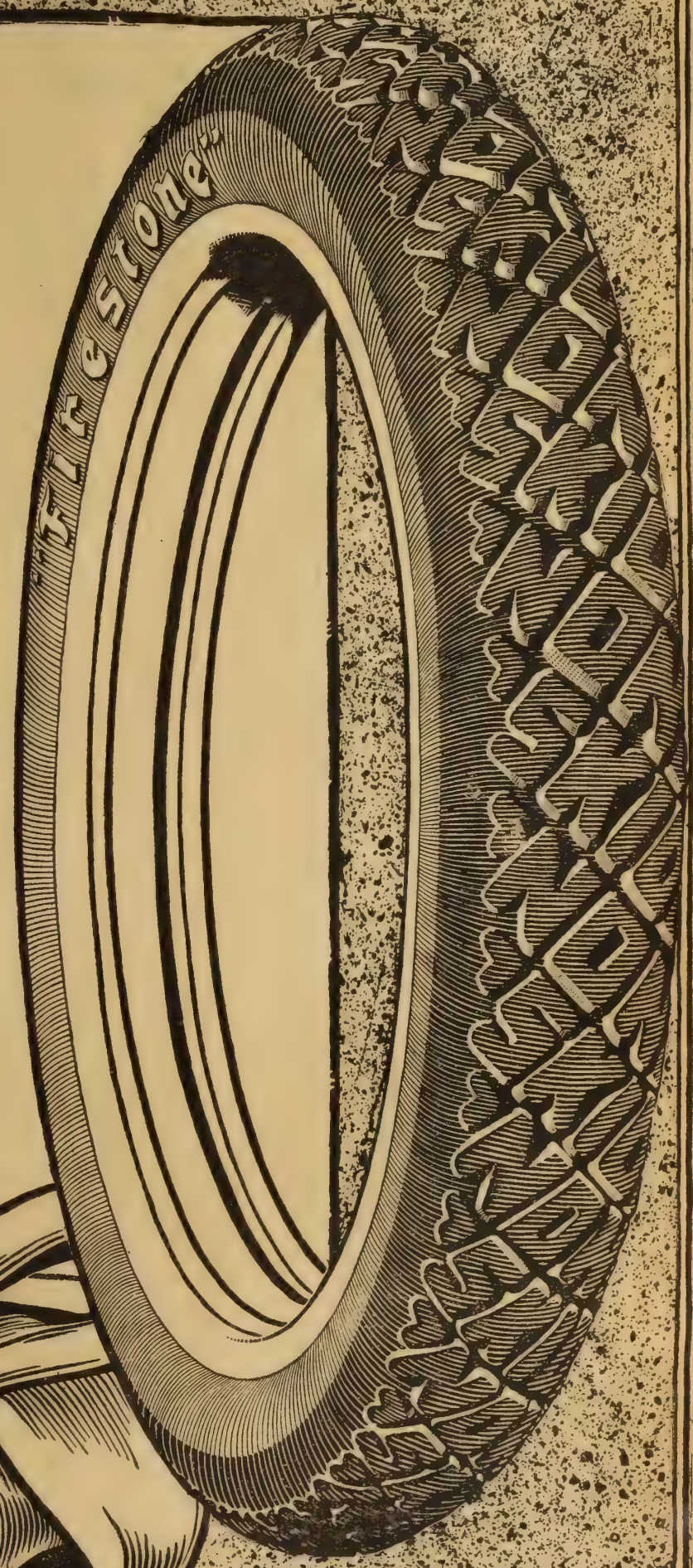

Why Disk Cultivating Brings a Better Crop

As you see in the illustration above, the disks leave the roots intact, down in the soil. The shovel cultivator cuts them off and lifts them toward the surface. Here, roots cannot get moisture—the plant is robbed of nourishment. The shovel turns the hard baked soil down to the roots and throws the moist, life giving soil up to the sun. The disk cultivator rarely goes deep enough to cut the roots. Should the disks touch the roots, they leave them deep down in the moist soil. The disk rolls over the soil. Its pressure is always downward. The disk blade keeps mulching the surface and killing the weeds, in any kind of soil, no matter what variety or in what quantity the weeds may be; when the field gets full of clods, the shovels knock them about and break the corn. The disks cut and crumble the clods to form a surface mulch and conserve the moisture below.

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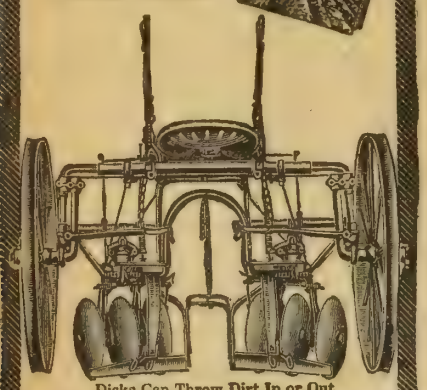

Disks Can Throw Dirt In or Out

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The every year money-maker for every farmer. Thrives anywhere in the corn belt, makes 6 to 10 tons good, sure, luscious feed per acre; relished by all stock. Thousands who bought and tried it last year now order 2 to 10 times as much. Big seed book free. Also other seeds of all kinds. GALLOWAY BROS. & CO. Dept. 38 Waterloo, Iowa

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Show Corn Methods.

To the Editor:—Raising show corn and raising hog corn are two very different things. How to raise show corn and get a fine lot of seed corn at the same time is a problem, too. It requires a lot of common sense. One must first take into consideration the nature of the soil. First, the soil must not be too rich or high in fertility, as that tends to interfere with the type of the corn; second, plant your corn as soon as the soil is fit, as the longer growing season you give it the more certain you are of not losing your type and besides you will have a much firmer ear. Third, never plant all the corn at the same time. Skip two rows out of ten and plant these two rows seven days later. This is one way to get better-filled tips. When corn is ripe put into shocks. But be sure it is ripe, as the longer you can let it stand the better. Leave it in the shocks two weeks before husking. Never pick show corn while the corn is standing. Also never dry show corn by heat. Dry as nature does and you will have a more natural ear. When husking time arrives husk the corn, separating the crib corn from the seed corn, also the show corn from the seed corn. Hang your seed corn up to dry. Lay your show corn in rows three deep to dry. Don't think of picking out your corn the day before the grain show. Better begin picking it out a month in advance and keep on working at it until the time for the show. I have won four first prizes on fifty-ear lots at Madison in five entries and I put in six weeks on the lot every year. Care must be taken in placing your ears so as to have your corn line up in length as well as in color. Then when you have accomplished this you are all ready for the show. Pack up by placing each ear in paper and packing in a suit case so as not to shell off any of the corn. After you have packed your fifty, ten and single ears start out for the show and see if you can't beat the other fellow. S. P. Markle.

La Crosse Co., Wisconsin.

Prize Two-Row Barley.

To the Editor:—My experience with two-row barley is very limited, as I grew it for the first time last year and only a small patch of it. I bought a peck of barley seed from a seed company in this state and sowed it on good, rich soil. It grew very rank and most of it was badly lodged at harvest time. I took about fifteen of the best sheaves and hung them in a shed as soon as they were cut to keep it from getting colored. After it was dry I threshed it by hand and with the use of a good fanning mill was able to clean up a good peck for the grain show. While I didn't expect to get first prize, I knew I had a pretty good peck of two-row barley. I expect to sow a number of acres of this barley next year and probably after next harvest I shall be better able to say what I think of this barley. Anton Bohl.

Dodge Co., Wisconsin.

Profits in Potatoes.

To the Editor:—The experiences I have had in growing potatoes are nearly along the lines of the older writers, but I have this to say: The ground should be prepared for potatoes in the course of rotation, taking two or three years for the best results. We of the new lands use it the first year as soon as the weeds and the wild brakes are subdued. We followed the second year with potatoes, after fall plowing and again plowing in the spring. This land was moist and spongy all summer and it is now plowed for clover and oats to be sowed this spring.

We bought forty acres three-fourths of a mile from town. We raised 3,000 bushels the first year from twenty-three acres. Last year we cleared the balance and put it into potatoes. Having frost in August hurt some, then the blight got some of the late planting, but we put into the warehouse 4,100 bushels of assorted seed stock of Triumph, Cobblers, Rose and Ohio. it doesn't take much figuring to see that the forty acres, all cleared, doesn't cost much money and is worth $3,000 as it stands today. The first cost was $17.50 per acre, with a clearing expense of about $35 per acre. We got about 30 cents and better for the first 3,000 bushels, and with 4,100 bushels on hand today, all seed stock, the land proposition looks good to parties that have the money to carry 't to the second year. O. G. White.

Mgr. L. Starks Co., Amberg, Wis.

Growing Premium Corn.

To the Editor:—I will tell you how we grow our corn, which will not differ much from the general rule. Our soil is mostly a black clay loam. We practice a three-year rotation, oats, clover and corn. We manure the clover sod with stable manure which we plow about seven inches deep as early in the spring as we can harrow it. We give the weeds a chance to start and when they have started nicely we disk it, using a disk harrow and then the smoothing harrow until planting time, which is from the 15th to the 20th of May. We use a check-row planter and try to plant about three inches deep with three kernels to the hill. If the weather will permit we harrow twice before the corn is up. As soon as the corn is two or three inches high we begin cultivating and cultivate rather deep while the corn is small and then shallow as often as we can until the corn is too large for a two-horse cultivator. Then we go through it with hoes and clean out the weeds that escaped the cultivator, which, as a rule, are not very many. After that we go through it with a one-horse cultivator with small teeth if necessary to stir the ground to keep up a mulch. We let it get thoroughly ripe in the fall before we cut it if the frost will hold off long enough, which it did not do in 1915. We husk as soon as we can after cutting so as to get our seed corn in before cold weather. Our seed is put in a dry kiln and a fire kept under it until it is thoroughly dry. H. C. Brueckner.

Jefferson Co., Wisconsin.

Dynamite a Time and Labor-Saver on the Farm.

To the Editor:—Farmers are just beginning to see the importance of using explosives on the farm for such work as blasting stumps, ditches, tree holes, subsoil and hardpan. Two men can take a case of dynamite, some caps and a fuse, and very quickly remove a good number of stumps, and they are almost always broken up so that they can be handled with ease for hauling or burning, as the case may be; and there is no dirt left on them. Some time ago I blasted out some stumps that were seven or eight feet across, but they came out nicely and were well broken up.

Dynamite will dig a ditch where no other method can be used, in such places as swamps and ponds. It does better work in wet ground than in dry. Anywhere a man can work to punch the holes and load them a ditch can be blasted. The blast lifts the dirt out and scatters it far on each side of the ditch, thereby leaving no big banks of dirt on the sides of the ditch to hold the water back or to be washing into the ditch, and the jar from the explosion loosens up the earth so that the water can drain into the ditch. A ditch dug with spades has hard sides so that the water cannot drain in, and then there is lots of dirt on the sides of the ditch—unless it is hauled away about four feet deep and from five to seven feet across at the top. Blasted ditches have sloping sides, therefore there is no caving. If the proper method is used, ditches as large as six feet deep and twenty feet wide can be blasted.

Trees should never be set in any but a blasted hole, as the blast cracks up the soil so that the roots can grow fast and the moisture can rise. Spade-dug holes have hard sides that the young roots and moisture cannot penetrate. Fruit trees set into blasted holes come into bearing from one to three years earlier than those set in spade-dug holes, and the cost per tree for blasting is very light.

If you have clay subsoil and want bumper crops, use one-half stick of 40 per cent dynamite about three feet deep and fifteen feet apart, and if the work is done at the proper time you will get them. The dynamite cracks up the soil so that the rain can soak in and not run off, as is usually the case, and then the moisture can rise and the roots can go down deep, getting the plant food. As early as possible in the fall this work should be done, and when the soil is dry, or it will only blow a hole in the ground, doing no good. L. M. Hodges.

From Buffalo County.

To the Editor:—I sat down at my desk today and looked over very carefully The Wisconsin Farmer of March 2d. One article especially appealed to me and that was the community celebration at Richland Center. Such a spirit ought to exist in every locality with merchants and country folks. My experience as a merchant for almost thirty years in the small village of Cochrane has shown me that the relation between the merchant and the farmer is not close enough. There should not be a line between the village people and the country folks. Frequent gatherings would bring better results, both for the farmer and for the merchant, and I think you cannot state too strongly in the columns of your paper that the farmer must not look upon his home merchant as a deadbeat, and that he needs his home merchant and a home market in order to prosper and keep advancing.

I do not know how large a circulation you have in my vicinity, but I think every farmer ought to have your paper, and if I can be of any assistance I will do it. Cochrane has two rural routes, and the mail to Naumandee, Wisconsin, goes through this office. Buffalo county is a very good county, and the Naumandee valley is one of the richest valleys in the state. Dairying is carried on very extensively.

I am of Swiss descent, and I remember that my father was one of the first to make cheese in Buffalo county. That was in 1855, when he came here. Buffalo county has the smallest incorporated city in the state, Buffalo City, with a population of 275, situated one mile from the Cochrane station, on the C., B. & Q. railroad.

Buffalo Co., Wis. G. M. Rohrer.

Favors Sanitary Barn Law.

To the Editor:—In your issue of February 24th, you have an editorial headed, "Falling in Line with the New License Law." In this editorial you say that cheesemakers and buttermakers are complying with this new law and its conditions. Now, in order to help them along in their effort for cleaner and more sanitary dairy conditions, I believe there should be a law passed and enforced to the effect that all cow barns must be kept clean and sanitary. There are some farmers and a large percentage of them too, who try their best to be clean and sanitary. But there are others who do not care whether the milk is clean or not, so long as it is accepted at the factory, and it is against such persons that I think there should be rigid law enforcement. I have visited a certain farmer who used a cloth for a strain, and this cloth was dirty and sour, and so long as such things are permitted the cheesemaker and buttermaker cannot make a clean and sanitary product. J. C. Paul.

Brown Co., Wis.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Work of Effective Dairy Tester.

Suggestions By Roy Harris, Official Supervisor Dairy Tests in the State of Wisconsin.

A CERTAIN hardware firm has adopted as its slogan the phrase, "The recollection of quality remains long after the price is forgotten." I commend it to you testers, and would-be testers, as worthy of your most thoughtful consideration. Whether you are in official or association work, but especially the latter, you are engaged in something in which the one to whom service is rendered enters with more or less doubt and hesitation. In forming an association the most frequent objection raised is on the score of its cost. Why should a farmer spend the money necessary to have his cows tested? Dollars are not so plentiful with him that he can afford to throw them away recklessly. He expects to get something in return and he ought not to be disappointed.

If he goes to a hardware store and buys a steel square he expects to get one that is "square"; one that will tell him where his work is out of plumb; that will enable him to find and remedy imperfections and one that can be depended upon as accurate. If he joins a testing association he will have the right to expect about the same qualities, will he not? Should he not expect to learn which of his cows are giving him a "square deal" and, if any are not, how the failure may be remedied? Is it asking too much, if he expected the tester to be on the lookout for his interests and giving his time and thought to improvement in production and economy? Certainly, he should be able to rely on the accuracy of the tests and the tester's accounts. If the measure is wrong its use leads to error and is worse than none at all.

If the pure-bred cattle breeder calls for an official test may he not expect that the work will be accurately done and properly reported? May he not also expect the tester to so conduct the test that the records will stand as the actual unquestioned production of his cows? He certainly may, else he had better keep his money and do his own testing. His own private records are as good—and lots cheaper—than loosely conducted advanced registry.

A tester's position is one of very considerable responsibility, and his qualifications are many. He must first of all be thoroughly familiar with the Babcock test. Next, he must have more of an acquaintance with cows than can be picked up in one visit to the stockyards. He really ought to know quite a bit about them. None of us know any too much. But feeds, rations, tried mixtures, profitable use, market prices, etc., there is no limit to what he may well know in this direction. He may also be something of a veterinarian to advantage. A working knowledge of first aid treatment is useful to whoever has anything to do with farm animals. He ought to be posted on current dairy news too; know what is going on in dairy organizations and at his agricultural college.

Whether he possesses all of the above qualities or not there is one that he can and must have. That is a clean mind and a clean body so he will be welcome in any family circle.

The opportunity for social influence and acquaintance found in either kind of testing, should appeal strongly to any young man with the spirit of leadership in him. Far beyond any money consideration is the lasting satisfaction of having led someone or influenced someone to do something better than they were doing it before.

Still, with all of these virtues, many of you will agree with me that a tester has to be something of a diplomat. Imagine for instance, the reception he is likely to receive when he drops down box and baggage on a place on wash day, or in the midst of house cleaning, or the day the Mrs. sprained her ankle "with the shredders comin' next week and me that much behind with my work, I don't know what to touch next!" Well, it takes quite a genius to get through a situation like that and leave them with a feeling that after all he is not such a nuisance, and "we're glad he came this week instead of next."

The real test of your work, young man, comes a long time after it is done. If a year, two years, or even longer after you have left they are still speaking of you as "that young fellow who helped us so much in improving our herd; who was so nice to have around and right on the job, too"; you will not have to wonder whether they regret the money paid for testing or not. The answer is in the record you have left behind you.

Now, addressing more particularly the official, or advanced registry, testers; all that I have said applies to you just as much as to those in charge of cow-testing associations. Besides, you have heavier responsibilities through the larger values attached to the records made and the fact that you are acting as a direct representative of the state in conducting the tests. We vouch for your work in the belief that we can depend upon you fully and that you will so conduct the tests that our own people and every one else will have full confidence that anything bearing the name "Wisconsin" can safely be accepted anywhere at its full face value. The rules are strict and fairly plain, and we hold you to the letter of them. You know that you must be right there while each test cow is being milked; that nothing is to be taken for granted or left to chance. You don't guess, you know that each cow actually produced in the time stated the amounts of milk and butter fat which you report to her credit. There are certain things which the owner has to do and others which he may not do and have his records accepted. You have not the authority to compel him to do anything but are expected nevertheless to see that he does them. You accomplish this by watchfulness, remindings, persuasion and arguments, if necessary. Usually the first two are enough but occasionally you must have recourse to the others.

Interest in Holsteins.

To encourage interest in the Holstein cow the Manitowoc County Holstein Breeders' Association conducted an essay contest among the boys and girls of the county this winter, the authors of the best essays to receive a prize. The contest closed recently

ED BERGNER, CLEVELAND, WIS.
Winner of gold medal in Manitowoc Holstein Essay Contest.

and the essays submitted were judged by M. H. Gardner, superintendent of the Holstein registry at Delavan, Wisconsin.

Honors for the best essay were awarded to Edward Bergner, of Cleveland, twelve years of age, who prepared the following essay on the Holstein cow:

The Holstein cattle are called the Dutch or the Holland cattle. This breed had its origin in Holland. It produces a larger quantity of milk than any other breed. The breed is of value also for beef, the frame is large and the color is black and white. The Holstein cow is the only cow that has held all the world's butter records. The cattle have increased rapidly and are now found nearly in all parts of the country. When the cow is not in milk it takes on flesh rapidly and soon becomes full in form. Most cows weigh 1,100 to 1,400 pounds. The Holstein cows give about forty to sixty pounds a day. Most of the cows have a record from fifteen to twenty-five pounds of butter a week. The males are very large and heavy, often above 2,500 pounds. Its head is long, rather narrow and he has a large mouth and nostrils. The back is usually level and the tail is long and thin. The calves are large and strong at birth and develop very fast. The calves show a strong resemblance to the Holstein cow. She has very few calves that are not black and white. With a few crosses they look like full bloods and make splendid cows.

As winner of first place Mr. Bergner will be given a gold medal. Other winners were:

Second—Johanna Pischel, camera.
Third—Norris Johnson, fountain pen.
Fourth—Esther Thompson, ladies' pocket knife.
Fifth—Mildred Wimmler, silver spoon.

Other contestants in the contest were Joe Lemberger, Malinda Basken, Esther Basken, Charles Basel, Ed Reiderer, Bernard Reiderer, Florence Bergner, Elsie Johannes and Isidor Lemberger. Ten subscriptions to The Wisconsin Farmer were donated by the publisher of this paper and these will be awarded the contestants who failed to finish in either of the four first places.

This was the first contest of its kind ever held in that part of Wisconsin and was very successful in every way. The contest was originated and handled by Charles H. Hampke, the secretary, and he is entitled to much credit for his work for the association which is rapidly growing and now has about 100 members. The association is in splendid financial condition and a judging as well as a milking contest is planned at the annual summer meeting in June at Manitowoc. This county is fast becoming a Holstein center and there are several splendid foundation herds in the county which are supplying high quality stock to the farmers.

When the calf is from ten days to two weeks old give it a small amount of choice mixed clover or alfalfa hay. A little later give it a very small amount of grain and increase the allowance gradually as the young animal develops. It is well to keep a calf a little hungry rather than to tax its digestive organs.—[Wisconsin Bulletin.

Warm the house —make a home!

Women like radiator heating—it puts June in every room

All mothers wish for homes that are evenly warmed all over to cheer and comfort husband and little folks; and to make the home a cozy, genial center for the gatherings of good friends.

All mothers now-a-days deserve to be freed forever from the back-breaking labor of "tending stoves," that heat only "in spots," and spout ash-dust and coal-gases. The only sure way to fill a house with mild, delightful warmth and make it a home is with an IDEAL-AMERICAN outfit.

AMERICAN RADIATORS & IDEAL BOILERS

They increase the value of your property by more than their cost. They are noiseless, absolutely safe (a child can run them), and can at any time be put in new or *old* houses without disturbing anything or tearing out walls or partitions.

They protect against fire risk **and run independently of the water works supply, as same water is used over and over again for years.**

They pay for themselves in savings

The IDEAL Boiler may be put in cellar, side-room or "lean-to" and will burn any local fuel—wood, oil, gas, lignite, hard or soft coal, (even cheap grades of pea coal, slack, run-of-mine, screenings, etc.) Bankers and real estate men will back our statement that it is a paying and permanent investment and not an expense.

A No. 020 IDEAL Boiler and 262 ft. of 38-in. AMERICAN Radiators, costing the owner $185 were used to heat this farm house, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions. The IDEAL outfit is the *only* feature of the house which is never worth *less* than you paid for it.

IDEAL-AMERICAN outfits heat the whole house, with one fire—no more care-taking than to run one stove for one room. The yearly fuel savings soon pay the first cost of the outfit.

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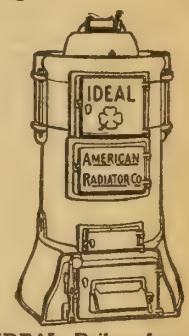

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Holstein Meeting at Plymouth.

Breed Flourishes in Sheboygan County, Wis., Which Has Become Nationally Famous as a Dairy Center.

THE spring meeting of the Sheboygan County Holstein-Friesian Breeders' Association, which was held last Saturday in the city hall at Plymouth, was one of the most enthusiastic and best attended meetings ever held by the association. More than sixty prominent Holstein breeders were present and several important plans were discussed and set going that should do much to advance the interests of the association and the breed during the coming year in that county.

GOOD TYPE SHEBOYGAN COUNTY HOLSTEIN.

Vickery Johanna 75517, milk, 438.4 pounds; butter, 23.10, at twelve years. She is the old foundation cow in the herd of H. R. Weiskoff, at Cleveland, and every animal in the herd traces back to her.

The Sheboygan association now has about ninety members in good standing and is one of the most active in the state in furthering the interests of the Holstein. Unlike most community breeders' associations the Sheboygan breeders meet frequently, at least four times a year, while most such organizations only meet twice a year. The annual meeting was held last January and the spring meeting was called primarily to discuss the question of holding another Holstein sale this spring.

Official testing and community advertising has done much during the past few months to call attention to the high standing of Sheboygan county as a Holstein breeding center. Only recently two cows in official yearly tests completed remarkable records, one in the herd of Emil Titel, at Plymouth, producing 980 pounds of butter fat and another in the herd of Harry Keach, at Glenbeulah, producing 972 pounds of fat. The Titel record is all the more remarkable, as seven weeks after completing her year's work she dropped a calf and these two A. R. O. records, backed by the enthusiasm of the breeders and the splendid results being made by other cows now in official work, have done much to call attention to this splendid Holstein county.

Another factor has been the splendid work of the Sheboygan County Cow-Testing Association, which led the state last year in the state cow-testing association work. Sheboygan county also had the best herd in the association work last year, the Keach herd winning this honor. Frank Ubbelohde, of Sheboygan Falls, secretary of the association, told an editor of The Wisconsin Farmer who had the pleasure to attend the meeting, that the association records so far this year were better than they were last year. He expects his association to finish first again in the state work, although the Keach herd is not now entered, Mr. Keach dropping out of local work to do A. R. O. testing.

Feed is plentiful in the county this year and the silage, while not up to the quality of past years, is better than the average and the hay and alfalfa crops last year were the finest in the history of the county. With these conditions the Sheboygan breeders have been enabled to keep their herds in fine condition and the demand for stock has been better this spring, many breeders informed the writer, than ever before. More persons are coming to Sheboygan county than ever before to select and buy their pure-bred Holstein stock.

REGISTERED HOLSTEIN COWS.

On the P. J. Liebenstein Farm, near Adell, Sheboygan county, Wisconsin.

These conditions, combined with the knowledge that they have the stock, convinced the association breeders that another sale should be held and May 9th was selected by the association as the date. Although the sale last year, which was the first, was not so good from the seller's standpoint as the breeders would have desired, there was not a vote against a sale this year. Many breeders agreed that they would have to pocket a little loss on the first sales, but that in the end they would get it all back by the increased prices their stock would bring in future sales when the buyers had been shown what Sheboygan county is producing. About forty-five animals have already been consigned to the sale in May. There were about eighty in the first sale last spring and it is hoped to do better than this this year. A sale committee consisting of Frank Ubbelohde, Charles Nehrling, Foster Smith and Carl Krumrey, which was named at the January meeting, was instructed to proceed with the arrangements and work out the details in order to make the sale successful in every respect. This sale will be held at Plymouth.

As the meeting was called primarily to consider a sale this matter occupied most of the attention of the breeders present. E. A. Harrington, of Madison, gave some pointers on how sales are conducted in New York and was followed with some sound advice by Frank Everson, of Lake Mills, who has directed the Lake Mills sales for many years.

Mr. Everson praised very highly the enthusiasm and interest of the Sheboygan breeders. Looking around the room he declared that the Lake Mills breeders could never get out half so large a crowd and he could see no reason why Sheboygan county couldn't have one of the best sales in the country. There is no better way, he pointed out, to get rid of the surplus stock than the sale ring, but emphasized the importance of placing good animals in the ring, for it is a poor place to sell those that are not good.

Mr. Harrington spoke of the sixty-day guarantee under which several Wisconsin sales will be conducted this year. This is a guarantee given by the consignor that his animal will not react to the tuberculin test with-

NEW CROP SEED CORN

Plant Early Yellow Rose

THE corn that made Shenandoah famous as a seed-producing center. The earliest big corn, biggest early corn. An all round kind. Records show Early Yellow Rose matures well in southeastern South Dakota, also Harrison, Worth, Greene, Story and Allamakee counties, Iowa, and southern Wisconsin, also northern Illinois. Iowa Agricultural College got ninety-four bushels per acre of Early Yellow Rose shelling out sixty pounds corn from seventy pounds ears. It's a good corn for north central Iowa sure. While it lasts, a few hundred bushels, fall picked, rack dried seed at $3 shelled and graded or $4 select ears crated. Offer for same territory early strain Reid's Dent, ear $3.75; shelled $2.75. Early strain Silver Mine, same price. Farther north use Pride of the North, ears $4, shelled $3, Longfellow's Yellow Dent ears $4, shelled $3.75. White Cap Red Butcher (large and early) ear $3.75, shelled $2.75; Smoky Red Northwestern Dent, ears $5, shelled $4. Wisconsin White Dent ears $4, shelled $3. Improved Silver King ears $4, shelled $3. Special reduction on lots five bushels or more. All hand picked and selected ears packed in bushel crates. Shelled seed all hand picked, tipped and butted, milled and graded ready to plant. 94 to 98 per cent germination. All sold under our regular warrantee or guarantee as per our free seed corn circular same as years past. Catalog and samples free. Now is the time to get cream of our big supply.

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GROUP OF GRADUATES OF THE SECOND WISCONSIN COLLEGE OF AGRICULTURE SHORT COURSE.

a sixty days after sale. In case she hould react he will have to refund he money; in case not the sale tands. He also warned against any y-bidding and said that if an asso- iation is to build up a successful ale that the buyer must be assured hat the animals will go for what hey are bid in at in the sale ring. This the association decided a wise ourse and the committee announced no by-bidding would be permitted. This rule was followed last year. Mr. Harrington also spoke relative to the percentage of bulls and heifers in the sale and said that in New York the percentage, as a rule, was one bull to ten females, as buyers will not come a long distance to buy bulls. Mr. Everson suggested that as many cows be put in as possible and suggested not less than twenty-five cows in the coming sale. These are problems which have to be worked out by the associations just going into the sale game and the breeders discussed them fully and with much interest. Finally it was left to the sales committee to work out these rules and regulations.

The association also decided to incorporate and the officers were instructed to proceed along these lines, as it was agreed that such is advisable since the association has gone into the business of holding sales.

Another important matter was the support given by the association to the erection of a combination show and sales barn on the county fair grounds at Plymouth. R. B. Melvin, of Glenbeulah, a director in the county agricultural association, outlined the proposal and in less than thirty minutes the breeders present had subscribed about $1,400 worth of stock. This indicates the progressive spirit of the Sheboygan county breeders and the subscribing for stock started off with a rush, the first subscribers taking blocks of ten shares worth $100.

Mr. Melvin said the plan is to erect a barn that will accommodate 200 head of cattle at the fair and so arrange it that the annual sales can be held there. The county fair is now cramped for room and the cattle barns are far inadequate and the association got behind the movement immediately. The barn will cost about $2,500 or $3,000, so it is seen that about half of the necessary funds were subscribed at this meeting.

The principal speaker of the day was Dr. O. H. Eliason, of Madison, state veterinarian, who spoke for C. P. Norgord, commissioner of agriculture, who was unable to be present.

Dr. Eliason outlined the plan of the department for an accredited list of tuberculin tested cattle which has been discussed in the columns of The Wisconsin Farmer previously. He outlined the plan as it was outlined by Mr. Norgord at the state Holstein breeders' meeting recently at Watertown and which was reported in our report of that convention.

The plan, Dr. Eliason said, is primarily to give those herds which are clean the advantages they are entitled to and in this way do much in cleaning up the state. These herds must be tested by a veterinarian from the state department; the breeder to pay the costs, and when the tests are completed these herds will be certified as tuberculin tested herds. Other states are co-operating and Dr. Eliason expects much of the difficulties now encountered in shipping to other states will be overcome by the new method.

The department is without funds to pay for the work, so it must be self-sustaining. Dr. Eliason said that he believed the testing could be done for about 75 cents per head with a minimum of $15 for the herd, although the plan and the cost has not been entirely perfected. He expects to have the plan completed and ready to go to work within the next ten days or two weeks.

The officers of the association are Dr. H. A. Arpke, of Sheboygan, president; T. H. Thackray, of Glenbeulah, secretary, and C. J. Nehrling, of Plymouth, treasurer.

ON EMIL TITEL FARM NEAR PLYMOUTH.

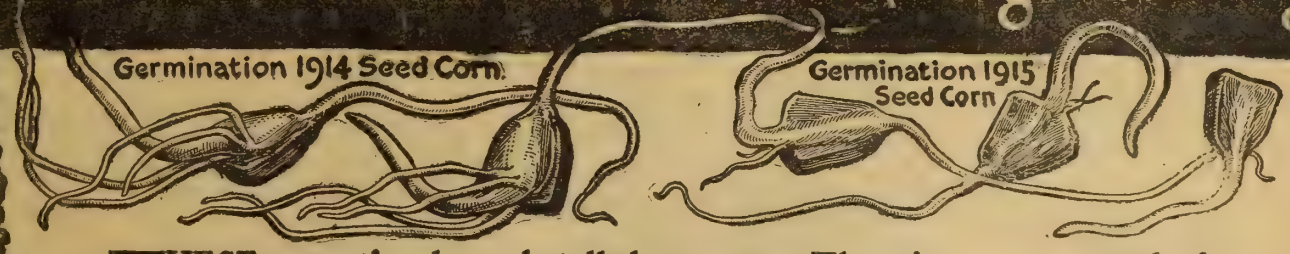
One of Titel's Holstein cows, Vickery Vale Beachwood, recently made a 365-day record of 26,050.7 pounds of milk and 980.54 pounds of fat.

The state automobile bureau of New York has devised a psychological number plate for motor cars that, it is believed, will make it easier to catch those meanest cads on earth, the people who do not stop when their car has injured a person. For a man to catch a number quickly it is necessary that the number be not only plain but so arranged as to be easily read. Plain numbers containing many figures, as, for example, 893526, are not easily read; but a little knowledge of psychology shows that when the number is divided by hyphens, as 89-35-26, the eye takes it in quicker and the mind fixes it more firmly. Therefore, New York is to have hyphenated motor car plates. Rather a pretty little application of scientific knowledge to everyday use, is it not?

"Simon C. Johnson, living on the east mail route, uses a scheme for mailing letters during the cold winter months that is simple and handy for the rural carriers," wrote a mail carrier in the Grand Junction (Iowa) Globe, then explains it: "He uses an ordinary clothes pin to fasten the letters together and when out of stamps puts the money for the postage in a paper and fastens this and the letters together with the clothes pin. The carrier can remove them without taking off his mittens and it also insures no letters being overlooked in the box." To make his argument stronger the carrier guaranteed to return the clothes pin.

Proved By All Vitality Tests

1914 Seed Corn Best For This Spring's Planting



THESE sprouting kernels tell the story. The picture was made from photographs of Minnesota grown seed corn. The two kernels at the right show the poor vitality of what little 1915 crop seed corn will germinate. Only 40% to 60% of this 1915 corn will grow and that is weak and sickly, having few, if any lateral or side roots.

Contrast with this the strong, vigorous roots, laterals and sprouts of the 1914 crop seed corn we are selling. Its germination is about 90%. This Minnesota grown 1914 crop seed corn is early maturing, sound and dry. It is practically the only seed corn which is safe to plant this spring in Minnesota, Northern Wisconsin and North Dakota. We recommend this, also, for South Dakota and Southern Wisconsin.

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You can buy this seed corn from your dealer. If he has not ordered from us, urge him to get it for you. Every bag we ship bears a tag on which appears our name, germination test and the county in which the seed was grown.

Our Catalogue Tells the Seed Corn Story

It gives the reasons for the failure of the 1915 seed corn crop and is interesting to every man who plants corn, or any other crop.

SENT FREE UPON REQUEST

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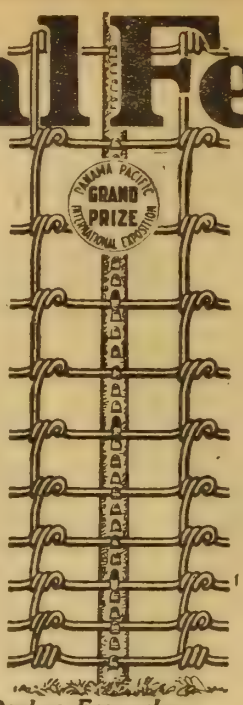

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Write for booklet on how to set posts and erect fence. Every farm owner should have it.

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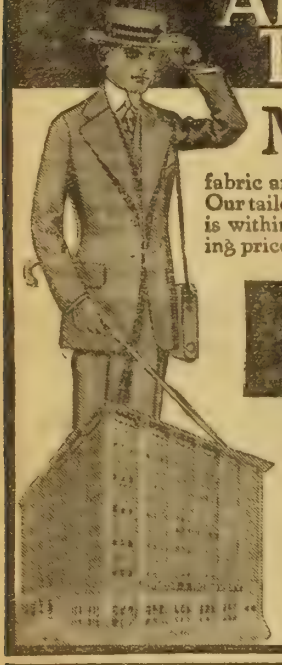

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If you are interested in bettering your position, meet us half way. It will be to our advantage to help you make a big success of this work, and we will do so. Address

AGENCY DIVISION **THE WISCONSIN FARMER, MADISON, WIS.**

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Cow-Testing Reports.

Waupaca Association.

The following is the report of the official tester, George L. Moss, of the Waupaca and Butternut Ridge Cow-Testing Association for the month ending February 18, 1916. There will be one more report of this association before the beginning of the new year. Mr. Moss reports that there are now several cows reaching the 400-pound mark. This association is now in its fourth year, with H. C. Frihart, president; E. Schroeder, vice president; William Kneip, secretary; Ira Farley, treasurer, and C. A. Stinchfield, director. The report is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
C. C. Boyce					
Roddie, G. H.	9	10-9-15	1326	3.3	43.8
Frixy, G. H..	5	11-25-15	1551	3.2	49.6
Crumple, G.H.	8	11-12-15	1074	3.8	40.8
Petram, G. H.	5	12-17-15	1809	2.6	47.0
Fred T. Jorgensen					
Rose, G. H...	10	9-3-15	999	4.0	40.0
Ciff, G. H.....	9	11-17-15	1257	3.4	42.7
Vangeline, G. H.	9	12-28-15	1446	3.4	49.2
Pinkerton Bros.					
Aggie, R. H...	10	10-15-15	1137	3.6	40.9
Queen, R. H..	2	12-11-15	1159	3.5	40.6
F. R. Constance					
Gold Mine,G.J.	2	12-25-15	786	5.7	44.8
Golden, G. J..	5	1-1-16	1002	4.3	43.1
E. F. Schroeder					
Lover II, N...	2	11-13-15	999	4.4	44.0
Scharlot, G. J.	3	1-7-16	1026	3.9	40.0
Belle Guern, G. G.	3	11-6-15	699	5.8	40.5
Tootsie II,G.G.	2	12-31-15	912	5.2	47.4
E. O. Frihart					
Daisy, G. H...	4	1-1-16	1362	3.8	51.8
Nigger, G. H..	9	12-24-15	1260	3.2	40.3
Herman Becker					
May, G. J....	7	1-8-16	1032	4.4	45.4
Nigger, G. J..	9	10-6-15	837	5.5	46.0
Bessie, G. J...	6	12-27-15	981	4.8	47.1
Grandma, G.J.	12	10-18-15	804	5.1	41.0
Greesy, G. J...	8	10-16-15	840	5.4	45.4
Goldy, G. J...	3	10-2-15	723	6.3	45.5
E. F. Hochschultz					
Honey, G. G...	7	12-24-15	1146	4.8	55.0
M. J. House					
Susie, G. H...	5	11-23-15	996	4.5	44.8
H. C. Frihart					
Cherry, G. J..	4	12-25-15	939	4.8	45.0
James Vincent					
Brown Bess, G. J.	3	10-21-15	720	5.6	40.3
John C. Backes					
Pauline, G. G.	11	1-27-16	993	4.1	40.7
Buttercup,G.G.	5	11-6-15	792	5.2	41.2
Bessie, G.G...	3	1-23-16	1020	4.8	49.0
Spot, G. G....	5	10-6-15	906	5.2	47.1
Rocksie, G. G.	5	1-16-16	1053	5.0	52.6
Carl Miller					
Florrie, G. H.	5	1-24-16	915	5.3	48.5
Theo. A. Bauer					
Esther, G. J..	5	11-14-15	843	5.1	43.0
Ira Farley					
Belle, G. H...	4	1-1-15	1398	4.0	55.9
Brownie, N..	10	10-9-15	1176	5.3	62.3
Laura, G. H..	2	1-3-16	1086	4.1	44.5
Bessie, G. H..	6	1-2-16	1365	4.3	58.7
Jewel, G. H...	5	11-18-15	1182	4.2	49.6
Annie, G. H...	5	10-18-15	828	5.0	41.4
Jessie, G. H...	6	11-23-15	1452	3.8	55.2
Daisy, G. H..	4	1-11-16	1302	3.7	48.2
Cora, G. H...	2	1-28-16	1116	3.7	41.3
Eva, G. H....	2	1-13-16	1383	3.9	53.6
Emma, G. H..	2	1-16-16	1554	3.5	54.0
Wm. Kneip					
Jessie, N.....	6	12-28-15	1002	4.0	40.1
Fred Dunbar					
Nig, N.	5	1-21-16	981	4.1	40.2
Wm. Rossy					
Dandy, G. G..	5	10-31-15	876	5.3	46.4
Aug. Guenther					
Freida, G. G..	6	11-30-15	1056	5.2	54.9
Cora, G. G....	5	12-28-15	1023	4.0	40.9
C. A. Peterson and G. R. Miller					
Mama's Queen of Norwood,R.G.	7	1-15-16	1069	7.2	77.0
Ruth, G. G...	4	9-14-15	739	5.5	40.6
Rose, N.	5	2-8-16	972	6.9	67.1
Arthur Glocke					
Golden Drop, R. G.	7	10-10-15	955	4.3	41.1
French Beauty, R. G.	4	11-11-15	1033	4.8	49.6
Fromes Fascination, R. G.	2	12-17-15	916	7.1	65.0
Cherry, G. G..	3	12-27-15	1208	4.0	48.3
C. A. Stinchfield					
No. 21, G. H...	4	12-25-15	1077	3.9	42.0

Geo. L. Moss, Tester.
Wm. Kneip, Secretary.

Dunn County Reports.

The following is a list of the cows in Dunn County Association No. 2 that have produced forty or more pounds of butter fat in thirty days, ending February 15th:

Owner and breed	Herd No.	Age	Lbs. milk	Per cent fat	Lbs. B. fat
F. C. Sutliff					
Native 10	5	951	4.7	44.7	
S. O. Emerson					
Gr. Durham .. 5	3	744	6.2	46.1	
W. E. Canfield					
Gr. Durham ..18	3	870	4.6	40.0	
D. C. Coolidge					
Gr. Holstein... 9		1014	4.5	45.6	
E. H. Radtke					
Gr. Holstein .. 1	7	1030	4.2	45.4	
Gr. Holstein .. 3	6	744	5.4	40.2	
G. M. Cowles					
Native 2	10	1116	3.9	43.5	
S. O. Larson					
Native 3	8	993	4.4	43.7	
Henry Weber					
Gr. Durham ..15	8	1089	4.5	49.0	
Ed Schultz					
Native 3	12	1140	3.9	44.5	
Fred Schultz, Jr.					
P. B. Holstein 1	4	1818	3.6	65.4	
P. B. Holstein.18	2	1143	3.6	41.1	
O. T. Gregerson					
Gr. Holstein .. 1	3	924	4.5	41.6	

Following is a list of forty-pound cows for January in Dunn County Cow-Testing Association No. 3, as reported by John Reckinger, tester:

Owner and breed	Lbs. milk	Test	Lbs. B. fat
C. F. Cole, G. G.....1035.4		5.40	55.91
C. F. Cole, G. G....	734.7	5.70	41.88
T. Christison, G. G...	942.4	4.00	43.35
T. Christison, G. G...	961.0	4.20	40.36
Joe Larson, G. G....	765.7	5.40	41.35
Albert Larson, G. G...1069.5		4.10	43.85
H. W. Jodell, G. G....	784.3	6.00	47.06
H. W. Jodell, G. G....	830.8	5.00	41.54
H. W. Jodell, G. G....	995.1	4.80	47.76
Thomas Hagerty, G.G.1072.6		4.10	43.98

Grade Guernsey Leads.

Mr. Joseph Feinberg, of Lima Center, official tester for the Rock County Cow-Testing Association, has forwarded this paper his report for January, 1916. This report shows Marguerite, a grade Guernsey owned by F. O. Uehling, has the highest milk and butter-fat record for the month. In January she gave a total of 1,559 pounds of milk and 77.9 pounds of butter fat. The milk was 5 per cent test. Other records over forty pounds for January were as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
R. Marquart					
Roxy Lee, S.H.	4	1-7-16	1017	4.2	41.7
Johnie, G. S.H.	6	1-2-16	1197	4.8	57.4
H. B. Paul					
Lady Pontle, G. H.	8	12-20-15	1259	3.4	42.8
J. B. Palmer					
Madge, G. D..	7	12-2-15	1232	3.3	40.6
A. Templeton					
Betty, G. H..	4	1-8-16	1116	4.2	46.8
J. Van Etta					
Mayflower, A.	7	12-5-15	1110	3.7	41.0
Ethelyne, A...	8	12-21-15	1500	3.9	58.5
Daisy, A.....	5	1-5-15	1153	4.0	46.1
H. H. Little					
Roan Maid, S. H.	4	11-23-15	1012	4.3	43.5
Lily Clay 4th, S. H.	7	10-5-15	1013	4.3	43.5
Janesville Rose, No. 55, S. H..	6	11-23-15	1232	3.6	44.3
Lady Mayflower No. 30, S. H.	4	11-20-15	1050	3.9	40.9
Lady Mayflower No. 22, S. H.	8	11-6-15	1250	3.7	46.2
W. D. Austin					
Brown Sue, G. A.	8	12-24-15	1171	4.5	52.6
Mary, G. A....	5	15-29-15	1232	3.3	40.6
Austin Bros.					
Kate, G. A...	7	8-30-15	798	5.5	43.8
M. G. Kellogg					
Ceres, G. ...	3	12-5-15	838	4.9	41.0
Brindle, G. ..	4	11-1-15	997	4.4	43.8
F. O. Uehling					
Marguerite, G. G.	7	12-29-15	1559	5.0	77.9
H. M. Burdick					
Bobby, G. J...	5	11-9-15	1014	4.2	42.5
Reddie, G.S.H.10		9-5-15	915	4.6	42.0

Joseph Z. Feinberg, Official Tester.
H. M. Burdick, Secretary.

Eau Claire County Report.

The Eau Claire County Cow-Testing Association No. 2 with headquarters at Augusta has just begun its third year's work with E. G. Sutton as official tester. The past year was very successful and the results will be published in The Wisconsin Farmer as soon as compiled by Mr. Sutton, who sends in the following report for the thirty-one days of the first month of the third year:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
B. M. Arries					
R. Holstein	5	12-15	1522	4.6	70.0
R. Holstein	5	12-15	1813	4.1	74.3
G. Holstein	4	12-15	1141	3.8	43.3
S. W. Halbert					
Native	3	11-15	1068	4.0	42.7
Native	4	11-15	991	4.6	45.6
F. Rodlaczyk					
G. Holstein	8	12-15	897	4.8	43.0
Otto Stelter					
Native	6	11-15	1237	4.8	59.3
Native	6	11-15	1283	4.8	61.6
D. B. Strader					
G. Jersey..	9	11-15	1131	4.9	55.4
G. Jersey ..	8	11-15	1027	5.2	53.4
G. Jersey ..	6	11-15	1079	5.1	55.0
G. Jersey ..	5	11-15	925	5.0	46.2
G. Jersey ...	6	11-15	849	5.0	42.4
Victory & Zeil					
Native	8	11-15	1206	4.6	55.5
G. Guernsey	4	10-15	856	5.8	49.6
G. Jersey ..	15	11-15	1029	6.1	62.8
A. P. Shong					
Native	6	1-16	970	4.3	41.7
Henry Kohnke					

(Concluded on page 19.)

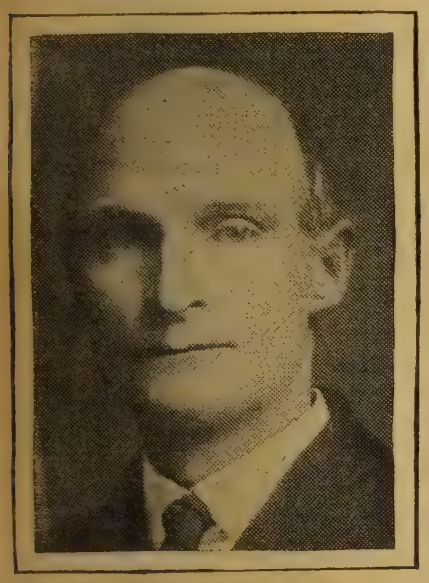
In and Around Wisconsin

Barron County Holstein Breeders Meet—Grant County Has Completed Plans For Pig Contest.

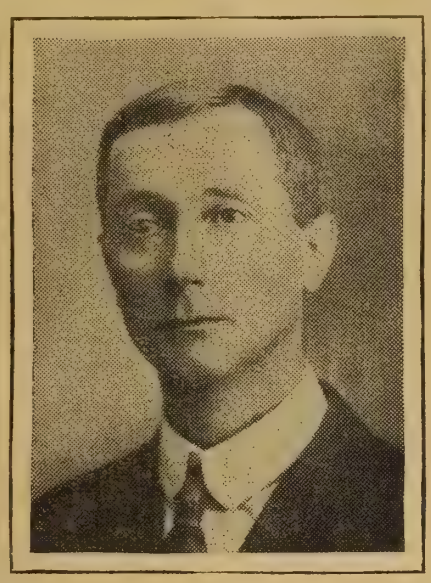
A Holstein in the herd of Barney Bosar, Brown county, recently gave birth to three calves, all of which are living.

Farmers in the vicinity of Mt. Calvary, Fond du Lac county, have begun the organization of a cow-testing association and at a recent meeting nineteen farmers with 232 cows signed up for an association. It is hoped to secure another 200 cows shortly and begin work about April 1st.

At the North Dakota Experiment Station where manure and alfalfa sod preceded corn the yield was 72.9 bushels per acre in 1915 and 56.9 bushels in 1914. While the yield of corn following corn in 1913 was fifty-two bushels per acre and in 1914 was 38.7 bushels per acre. This made an increase of 20.9 bushels in 1913 and 18.2 bushels in 1914, or an average increase of 19.5 bushels per acre due to alfalfa and manure preceding the corn crop.



IRA INMAN, BELOIT, WIS.,
Recently elected president Wisconsin Brown Swiss Association.



WILLIAM F. RENK, SUN PRAIRIE,
Secretary Wisconsin Sheep Breeders' Association.

The Marquette County Agricultural Society at its recent annual meeting at Monticello elected these officers: President, Henry Schwark; vice president, F. E. Crane; secretary, W. P. Fuller, Jr.; treasurer, Chas. O'Neil; director for three years, Emil Tonn; director for two years, Geo. Dewar; director for one year, Gus Petrich.

IRVING JEWELL, MINERAL POINT,
President Wisconsin Hereford Breeders' Association.

F. F. SHOWERS, DELAVAN, WIS.,
President Wisconsin Jersey. Breeders' Association.

The Jefferson county order of the experiment association at its recent meeting at Lake Mills elected Orris J. Emmert, of Johnson Creek, president; William Leonard, of Jefferson, vice president, and Arthur O. Popp, of Jefferson, secretary-treasurer. The grain show which was held in connection with the meeting was the largest ever held by the county order.

Action looking toward the receipt of higher testing cream was taken recently at a joint meeting of the Lawton creamery, the farmers' creamery at Esdaile, and the Ellsworth creamery at Ellsworth, Pierce county. This is an important move and one which should result to the benefit of the creameries as well as the patrons. It was shown that in churning 20 per cent cream there would be 2,400 pounds of buttermilk and in 30 per cent cream only 1,600 pounds of buttermilk. Even if the loss in churning were the same in both instances it is readily seen that it is more profitable to handle richer cream. At a meeting of the directors this resolution was adopted: "That we urge our patrons to skim a cream that will test from 25 to 30 per cent and to produce the same under the best sanitary conditions, keeping barns, cows, milk utensils, separators and everything coming in contact with milk or cream absolutely as clean as possible, so there will be nothing to cause bad flavors, as it is only the clean-flavored cream that will make the finest butter. Finer quality means higher prices."

The secretaries of Upper Wisconsin fairs, at their recent annual meeting at Grand Rapids, decided upon the dates for the 1916 fairs as follows: Marshfield, Aug. 22d-25th; Merrill, Aug. 29th-September 1st; Wausau, September 5th-8th; Stevens Point, September 12th-15th; Chippewa Falls, September 19th-22d; La Crosse, September 26th-29th. The officers elected were: President, A. G. Cox, Chippewa Falls; vice president, C. S. Van Auken, La Crosse; secretary-treasurer, W. A. Gethins, Stevens Point. Marshfield will open the season for the fair racing circuit and have announced $2,300 in prizes in these events.

The Klondike Holstein-Friesian Breeders' Association was organized recently at a meeting of farmers at Klondike, Oconto county, with G. J. Stodola, of Colman, as president; A. B. Decleue, of Klondike, secretary; August Holtger, of Klondike, treasurer, and Joe Guillanme and Henry Brumlick, members of the executive committee. The association was organized by J. W. Hicks, of Prentice, a Holstein breeder and also president of the state potato growers' association.

The annual meeting of the Barron County Holstein Breeders' Association, which was held recently at Barron, was well attended and the following officers were elected for the coming year: President, E. J. McKinney; vice president, Fred Hoxie; secretary, M. M. Matthys; treasurer, Frank Barfknecht; executive committee members, F. J. Frahenbuhl and Louis Voll. Vice presidents from the different towns were also chosen, they being: W. S. Carpenter, Barron; G. J. Gleiter, Maple Grove; Carl Anderson, Clinton; A. M. Chrislaw, Oak Grove, and John LeJeune, Bear Lake. Mr. Matthys, Dr. C. C. Post and Fred Hoxie were named members of an advertising committee whose duties shall be to advertise and boost the Holstein industry of Barron county. The association also voted to hold a summer picnic, the date and place to be selected by a special committee named by the president. J. L. Tormey, of Madison, addressed the convention on "Feeds and Feeding," pointing out that it always pays to feed well. Mr. Tormey advocated that instead of growing so much timothy Barron county farmers will find alfalfa and clover more profitable. R. V. Gunn, of Madison, explained the advantages of the farm management contest work which has been carried on in Barron county for three years and explained that the records show a silo to be worth a great deal to every farm. Out of 104 farms studied in that vicinity fifteen did not have silos. These had an average labor income of $355, while the eighty-nine farms with silos had an average income of $746.

A number of farmers met recently at Lancaster, Grant county, and organized "The Hurricane Products Company." The company is incorporated at $1,000, divided into forty shares of $25 each. No person is permitted to hold more than two shares. The company has contracted with Ben Springer, of Platteville, an expert cheesemaker, who will put in the necessary machinery to make

YOUR FEED YARD SHOULD BE DRY

Concrete feed floors do not soak up water—waste grain and manure—or become infected with disease germs when

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is used in the mixture. Medusa Waterproofing makes your concrete work *water tight*—and keeps down the cost of construction. Eight pounds of Medusa Waterproofing to every barrel of Portland cement does the job. It keeps your feed floors, water drains, silos, etc., from cracking. They should last forever.

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You know the qualities of Medusa Gray and Medusa White Portland Cement. They have been the standards for years in concrete construction for the farm. They give the mixture the hardening, setting and strength necessary for perfect concrete work. Medusa Waterproofing is a product of equal merit—a time and money saver that has given permanence to every concrete job on which it is used.

Ready-Waterproofed Cement

You can get Medusa Waterproofing already mixed in proper proportions with Medusa White or Gray Portland Cement. These products assure you of *watertight*, perfect construction.

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Write today for our free booklets, "How to Make Concrete Watertight," "Medusa Concrete Specifications," etc.

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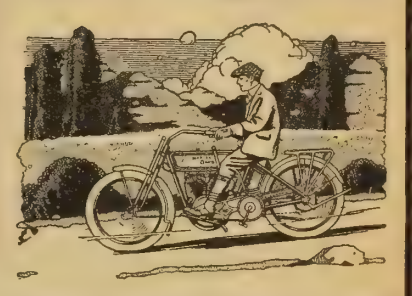

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YOU can get twice as much fun out of those all-too-short hours between supper and bedtime if you own a Harley-Davidson. Just think how much of your spare time is spent going and coming. When you own a

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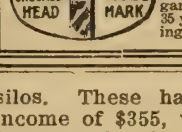
for 14 years the Master Motorcycle, you can cut "traveling time" out of your calculations, because you'll be "there and back," almost in the time it now takes to "hitch up" or wait for trains.

Learn to laugh at distances. Get a three-speed Harley-Davidson. Most Harley-Davidson dealers will arrange easy terms. Catalog on request.

HARLEY-DAVIDSON MOTOR CO.
1179 A Street Milwaukee, Wis.

It Will Pay You

to have Capewell horse nails used. If uncertain about the brand have the shoer show you the Trade-Mark on the nail head. Owners are entitled to the best nail—the one to be relied on in all emergencies—not the cheapest regardless of quality. Quality plus 35 years' experience in nail making goes with "The Capewell."



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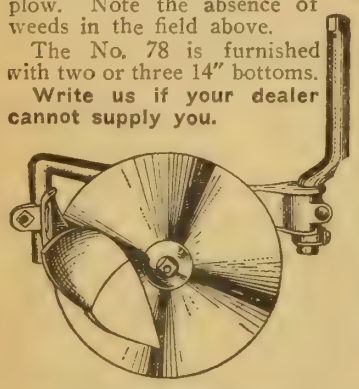
The Oliver No. 78 is a power-lift tractor plow, the bottoms raising and lowering at the pull of a trip rope. The farmer who uses this plow can do the same good work he does with his horse plows. The work is done with all the speed and comfort of the improved method of plowing with tractor and power-lift gang.

The combined rolling coulter and jointer, the most successful weed covering device yet invented, is regular equipment on this plow. Note the absence of weeds in the field above.

The No. 78 is furnished with two or three 14" bottoms.

Write us if your dealer cannot supply you.



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HEIDER TRACTOR
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Eight years of actual field work and the experiences of hundreds of users has proven the Heider 10-20 the one real all-purpose tractor.

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The Heider is not a freak, but a standard four-wheel, four-cylinder, light-weight, one man tractor to work on your farm every month in the year. Sturdy, compact, simple, easy to operate and economical.

WHAT IT CAN DO

The Heider can pull your plows, discs, harrows, seeders, binders, graders, hay loaders, wagons, etc. It will operate grain separators, shellers, hullers, hay balers, silo fillers or feed grinders. Does light work economically, such as operate cream separator, washer, pump water, saw wood, etc. Pulls three bottoms under normal or four under very favorable conditions.

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Other points are fully described in our big Heider catalog. Send for it at once and be convinced that the Heider is the biggest value for you. Don't buy your tractor until you have seen this catalog.

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STRAWBERRY PLANTS 250 best 3 varieties $1; $3.50 per 1,000. Cuthbert Red Raspberry, $1.25 per 100. Fresh, live plants. C. R. Tuttle, Baraboo, Wisconsin.

FARMERS HAVING BEES. A postal brings the booklet—How to Care for Bees—and prices on bee supplies. Address Gus Dittmer Company, Augusta, Wisconsin.

American cheese. The officers of the company are: Albert Keene, president; S. R. Kerr, secretary and treasurer; directors, Albert Keene, Clyde Richardson, Frank Zenz, L. A. Clark and S. R. Kerr.

The Milladore, Wood county, farmers' co-operative creamery had the biggest year in 1915 in its history. The butter output was the largest in five years, the creamery making 195,000 pounds from 165,000 pounds of fat. The creamery paid an average of .2860 for its fat and received an average of .2696 for its butter.

The annual meeting of the Rusk County Agricultural Society was held recently in Ladysmith. The officers elected are Phil. Koehler, of Weyerhauser; A. F. Hein, of Tony, and Nate Hand, of Ladysmith; directors. The directors elected Thomas Baker, president; Nate Hand, vice president; E. M. Worden, treasurer, and V. V. Miller secretary. The dates for the 1916 fair were left open.

Work has been begun on the Farmers' Co-operative Packing Plant at Madison. The plans and specifications for all the buildings are about ready, and contractors will probably be asked to bid soon. The work now being done is preparatory to building operations and consists of cleaning up the grounds, grading, etc. Sidetracks have been ordered built from the Milwaukee road to the packing plant.

The Grant County Fair Association has completed plans for the boys' pig contest which will be conducted this year in connection with the fair. Six cash prizes, totaling $80, will be awarded, $18 for first, $16 for second, $14 for third, $12 for fourth and $10 each for fifth and sixth. Dodson & Eastman will also give $10 to the winners, providing the winning pigs are sired by a pure-bred Poland China boar bred by them. The Grant County Poland China Breeders' Association will add another $10 provided the winning pigs are bred by a pure-bred Poland China. The rules governing the contest follow:

1. The contest will be open to boys of Grant county from the age of eight years to eighteen years.
2. The pigs to be shown shall be three grade barrows of any breed, but must be sired by a pure-bred sire and farrowed on or after March 1, 1916.
3. Barrows to show, must be fed and cared for by the boys making the entries.
4. All entries shall be made with the secretary of the fair upon blanks furnished by the fair association, which will be sent upon application to the secretary of the fair.
5. Pigs may or may not be bred by exhibitor, but if not bred by exhibitor same shall be purchased on or before July 1, 1916.
6. No restrictions have been placed upon the methods of feeding and every contestant is urged to secure all possible help and advice from experienced breeders, feeders, judges of swine and show men, in the selection and feeding of their hogs.
7. Judging shall be done by the judge who has judged the hogs in the general hog classes.
8. Each exhibitor will be allowed but one entry of three pigs each, but more than one boy from a family may enter in the contest. All entries must be made on or before July 1, 1916.
9. Each boy must feed, care for, and show his own entry. A certificate to this effect will be required of his parent or guardian.
10. Misrepresentation in regard to any part of contest will disqualify the contestant.
11. No entry fee in pig contest, except the regular admission to the grounds.

Potato Seed Certification.

Seed potato certification has worked out so admirably in Wisconsin during the past two seasons that the work is to be placed upon a self-sustaining basis this year. The college of agriculture which has been directing the inspection work has decided to increase the prices for inspection to make the work self-sustaining, not only because the previous rates have been too low but to enable the scope of the work to be broadened.

About 57,000 bushels of potatoes were inspected and certified last season for 103 growers in the state. The demand for this stock has been very great this winter and much of the seed has been sold at prices three times the market value of potatoes as a food product. There was a large increase in acreage and production over the previous year and the college authorities concluded that the experimental stage had been passed and that the growers would be willing to pay a little more for their inspections in order to make the work self-sustaining. This will also enable the college to make more inspections, enlarge the work and give many growers the attention to which they are entitled. This attention they have been previously denied because the charges did not cover the cost, and the appropriations for such work was limited. Under the new plan any potato farmer wishing to grow certified seed this year can feel sure of getting someone to make the inspections.

The new prices, effective this year, are $6 for two inspections of from one to four acres, $9 for two inspections of from five to eight acres and $1 additional for two inspections for each acre over nine acres. In other words, ten acres would cost $10, twelve acres $12, etc. It is expected that the acreage this year will be very large, as the increased prices which growers are getting for certified seed has caused many others to become interested.

Need Grain With Rape.

Can you afford to feed grain to your hogs this summer?

R. C. Ashby, in charge of swine at University Farm, St. Paul, says you cannot afford to grow them without grain. He gives the results of three tests of feeding corn to hogs on rape pasture to prove his claim.

Six fifty-pound pigs were put in each of three lots, about a quarter of an acre in size, on rape pasture. The pigs in the first lot were fed a half ration—2 per cent of corn; that is, two pounds of corn for every 100 pounds of live weight. Those in the second lot were fed three pounds of corn for every 100 pounds of pig; that is, 3 per cent. The pigs in the third lot were fed a full ration, 4 per cent, of corn. The pigs were on good rape pasture eleven weeks—from July 10th to September 26th. Their gains were counted as worth 7 cents a pound and corn was charged at 55 cents a bushel.

The returns paid for the rape pasture an acre were: Lot No. 1, $52.80; lot No. 2, $66.72; lot No. 3, $65.60. If the corn is figured at 75 cents a bushel the balance for the pasture on the three lots would be $43.16, $51.36 and $45.60, respectively.

Without the feeding of grain the pigs would have gained little, Mr. Ashby says. Rape may be expected to pay $50 an acre as pasture only with the proper feeding of grain.

Timothy for Seed.

To the Editor:—I sow my timothy and clover seed together and the second year after sowing the clover is mostly gone. I endeavor to cut this new seeding for seed, rather than taking the older seeding, for the heads are larger and more even and I think also have a greater vitality in the seed. I do not wait until the last and smaller heads are ripe, but cut as soon as the majority, and especially the first headed, are ripe. In this way I think I get the largest and best seed.

A. N. Kelly.

The Province of MANITOBA, CANADA
Calls for Farm Helpers

There is a very urgent call for farm workers this spring for the Province of Manitoba, Canada. Owing to the keen demand for all kinds of foodstuffs caused by the war, together with the enlistment of so many thousands of our young men, the farmers of Manitoba find themselves face to face with a serious labor shortage. In order to encourage farmers' sons and other farm workers from the United States to answer to this call the Railway Companies are offering reduced rates to all such passengers from all points on the International boundary line northward, going West in Canada. This will enable anyone who wishes to see Western Canada to do so at a very small cost, and will permit inspection at first hand of the thousands of acres of cheap land which are still available.

The scale of wages for experienced men will run from $25.00 to $45.00 per month according to experience, and it is estimated that from 3,000 to 3,500 such men are needed. In order to allay any apprehension on the question, it may be asserted that absolutely no military obligation of whatever sort is imposed upon anyone coming into or living in Canada.

If you are interested, write or apply personally to the

MANITOBA IMMIGRATION OFFICE
323 Jackson Street
ST. PAUL MINNESOTA

ARE YOU LOOKING FOR A NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

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ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

LANDOLOGY A magazine giving the FACTS in regard to the land situation. 3 months' trial subscription free. If for a home or investment you are thinking of buying good farm land, simply write me a letter marking it "*Personal*" and say "*Mail Landology and all particulars free.*"

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COLORADO. Fine soil and climate. Unusual opportunity. Official pamphlets free. Immigration Dept., 1513 Tremont Place, Denver, Colo.

FOR SALE BY OWNER on easy terms, a good section of land in Hettinger county, North Dakota. Address E. Willis, 53 E. 6th St., St. Paul, Minnesota.

POOR MAN'S CHANCE $5 DOWN, $5 monthly buys 40 acres productive land, near town, some timber. Price $200. Write for list. Box 425-H, Carthage, Missouri.

FOR SALE:—FORTY ACRE FARM, NEW house, cow, two pigs, twelve chickens, $1,000, one-fourth cash. SANBORN COMPANY, Eagle River, Vilas County, Wisconsin.

LET ME HELP you buy, sell or exchange farm or business property anywhere. Booklet free. G. L. WILLITS, 33 Palace Building, Minneapolis, Minnesota.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

WANTED TO RENT a farm on the shares. Address W. care of The Wisconsin Farmer, Madison, Wisconsin.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

WISCONSIN IMPROVED FARMS near St. Paul and Minneapolis. Write for lists to COOLIDGE, Downing, Wisconsin.

ONE MAN for general farm work for 9 months. State wages wanted. Address Roy Dolphin, Monfort, Wisconsin.

Southern Farms: Mississippi, Arkansas, Tennessee. Send for booklet. Martin & Cole, Memphis, Tenn.

ANYONE thinking of buying a farm or farm land, write H. Scheldt, Amberg, Wisconsin.

PEDIGREE OATS NOS. 1 AND 5
Also Pedigree Barley. Sacks free. Address
H. P. West Ripon Wisconsin

SEED CORN Silver King, Pride of the North, 1914 grown. Tested 94%. $4.50 per bushel. Edwin Foth, Norwalk, Wisconsin.

Percheron Fee Raised.

To the Editor:—At a recent meeting of the board of directors of the Percheron Society of America, the registration fee on imported horses was increased to $100 per head, taking effect July 1, 1916. The object sought is to discourage the importance of inferior horses, and it is believed this high fee will have the desired effect. Provision is further made to refund $85 of the $100 paid to importers, on horses that are good enough to win at fairs recognized by the Percheron Society of America. It is believed this action will effectually bar inferior horses, without interfering with the importation of really valuable animals. Members of the Percheron Society have already been advised of this action, and breeders generally appear to be heartily in accord with the new ruling.

Forty-one fairs and expositions in the United States were accorded recognition by the Percheron Society for 1916. Classification and list of fairs is attached hereto. Provision was also made to recognize, with a special classification, all Canadian fairs that obtain recognition from the Canadian Percheron Association. Strong exhibits of Percherons at the fall fairs will benefit the Percheron breed, and all breeders. Special attention is directed to the futurity stakes—for colts foaled in 1915—to be held at the Iowa, Illinois and Ohio state fairs and the International in 1916. Breeders should fit good yearlings for these shows, and help to demonstrate that America can produce Percherons second to none.

Memorial resolutions on the death of M. Charles Aveline, president of the Society Hippique Percheronne de France, were adopted and a copy was ordered sent to the family and to the Societe Hippique Percheronne.

Records in the office of the Percheron Society show an active trade, particularly as to sales made by breeders. Prices are gradually growing stronger on good Percherons, but demand is slack for poorer sorts. More men are seeking stallions of exceptional merit, fit to head pure-bred studs, than at any time in the last three years, and more confidence is expressed by purchasers generally.

More than $112,000,000 worth of horses, and $23,000,000 worth of mules have been exported from the United States in the sixteen months ending January 1, 1916. This is a greater total in cash received than we obtained for all horses and mules exported during the preceding sixteen years, and our shipments show no signs of lessening. Good draft geldings are in keen demand also, and are bringing from $275 to $325 on the Chicago market, despite pessimistic comments of country horse buyers, who generally seek to give, for selfish reasons, the impression that drafters are not wanted. Farmers who cannot secure satisfactory prices at home should club together and ship their draft geldings direct to the large markets. Country horse buyers are doing all they can to hammer down prices on drafters in the country, for their own profit, and are having fair success. The war horse demand keeps business going, and if a big drafter is passed by often enough, the farmer who owns him may take the price offered. For this reason, direct shipments should receive consideration.

The urgent need, more apparent than ever before, is for men to assemble small but select bands of mares, absolutely sound and right in every way, breed then to really high-class sires, and develop and show the colts. From such hand-picked studs, stallions can be developed fit to head any band of pure-bred mares. This is precisely what American breeders are most urgently in need of now, and the opportunity is a great one.

Wayne Dinsmore, Secretary.

Madison Horse Show.

Entries at the Madison Horse Show held at the University Stock Pavilion, March 10th, under the auspices of the Wisconsin Horse Breeders' Association, were chiefly from Madison and vicinity. The college of agriculture entered a number of pure-bred draft horses, including the Percheron stallion, Principal, that has been a consistent winner of show awards. A feature of the show was the parade of dairy cattle, led by the university herd sire, Windsor Ormsby Butter Boy, and a parade of beef cattle, including the animals of the university Hereford and Angus herds. R. P. Stericker, of Chicago, judge of the events, awarded prizes as follows:

Three-Gaited Saddle Horses—Diamond MacDonald, gelding owned by F. B. Luchsinger, first; Duke's Mixture, sorrel gelding, owned by W. K. Caldwell, second; chestnut gelding owned by Frank Hinrichs, third; and bay gelding owned by Thomas Lyons, fourth.

Five-Gaited Saddle Horses—Miss Cliff, mare, owned by F. B. Luchsinger, first; Cinnamon Roll, chestnut gelding, owned by W. K. Caldwell, second; Hazel, chestnut mare, owned by J. S. Evans, third; Magneto, chestnut mare, owned by W. K. Caldwell, fourth.

Combination Horses—F. B. Luchsinger, first; Frank Hinrichs, second; Thomas Lyons, third; Palace Livery, fourth.

Madison Heavy Deliveries—Kennedy Dairy Co., first; B. F. Orvis, second; American Express Co., third.

Draft Teams Under 3,000 pounds—Karl F. Steul, first; E. S. Reynolds, second; J. F. Salter, third.

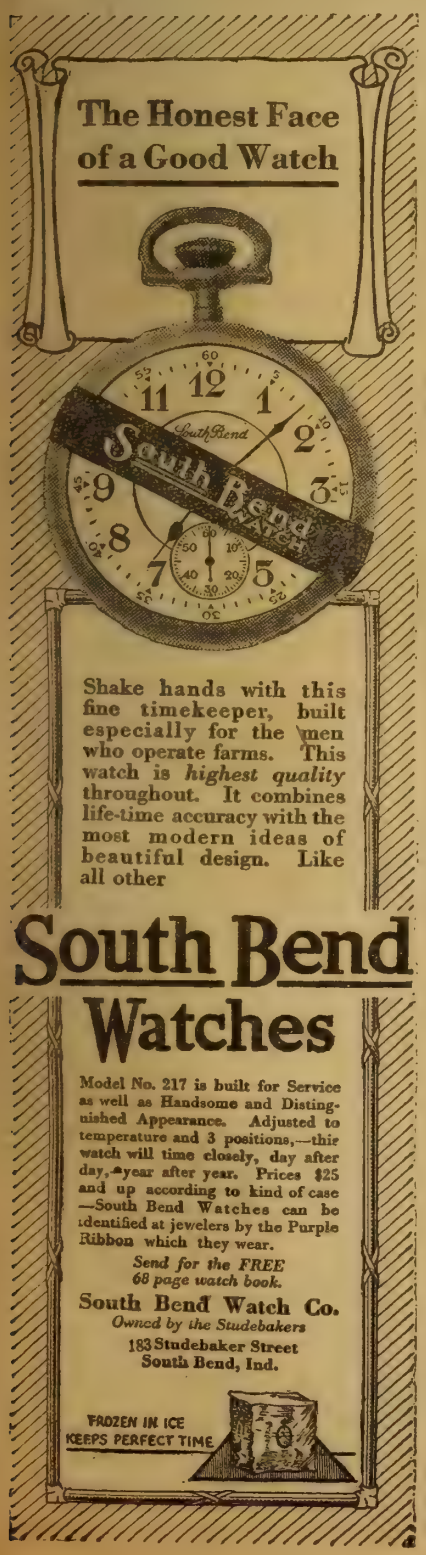
Draft Teams Over 3,000 Pounds—Conklin & Sons, first; J. R. Cullinane, second; Sinaiko Bros., third.

Pair of Roadsters in Harness—F. B. Luchsinger, first; Palace Livery, second; W. K. Caldwell, third; Palace Livery, fourth.

Single Roadster Horse in Harness—B. J. Kehoe, first; Dr. J. P. West, second; E. L. Gallagher & Son, third.

FRED PABST, OCONOMOWOC, WIS.
Recently elected vice president Wisconsin Holstein Breeders' Association.

R. J. SCHAEFER, APPLETON.
New president Wisconsin Holstein Breeders' Association.



Solve This Puzzle and Win a Prize

Here are seven sheep in a pen. By drawing three straight lines you can put each one in a pen by himself. If you can do this, we will send you as a prize, *a surprise package of beautiful season and greeting post cards,* lithographed in rich colors, and also a certificate of entry in our grand contest for an Overland Automobile. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

Overland Auto Given Away

Remember the Overland will absolutely be given away at the close of the grand contest. In case of a tie an Overland will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

THE AUTO MAN, Dept. 46 Des Moines, Ia.

NEW CROP, WESTERN GROWN, UPLAND ALFALFA TESTED FOR PURITY
At special bargain prices. Write for samples, price list, and illustrated circulars telling how to grow and use the crop.
SWEET CLOVER WHITE OR YELLOW
Of excellent purity and quality. Samples, circular of information and Red Ink Bargain Price List FREE.
IOWA SEED COMPANY
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BEING centrally located in the clover seed section of Wisconsin, we have a large quantity of alsike, red clover and timothy seed for sale and also a large stock of alsike and timothy mixed. Our seeds are guaranteed. Every bushel is inspected by the agricultural seed inspection department. Write for prices and samples. Pickart Bros., Malone, Wis.

UPPER WISCONSIN has the great markets of St. Paul and Minneapolis on the westward, Superior and Duluth on the north, and Milwaukee and Chicago on the south—through lines of railroad. Its cheap lands out produce—but let us send you official crop figures and state map. Wisconsin Advancement Association. 1590 First National Bank Building, Milwaukee, Wisconsin.

APPLE TREES 5c, WILLOWS 3 FT. 1c
Raspberries 1c, Currants, Gooseberries 5c. Everbearing Strawberries. All trees and shrubbery at a bargain. Catalog free. Mankato Nursery, Mankato, Minn.

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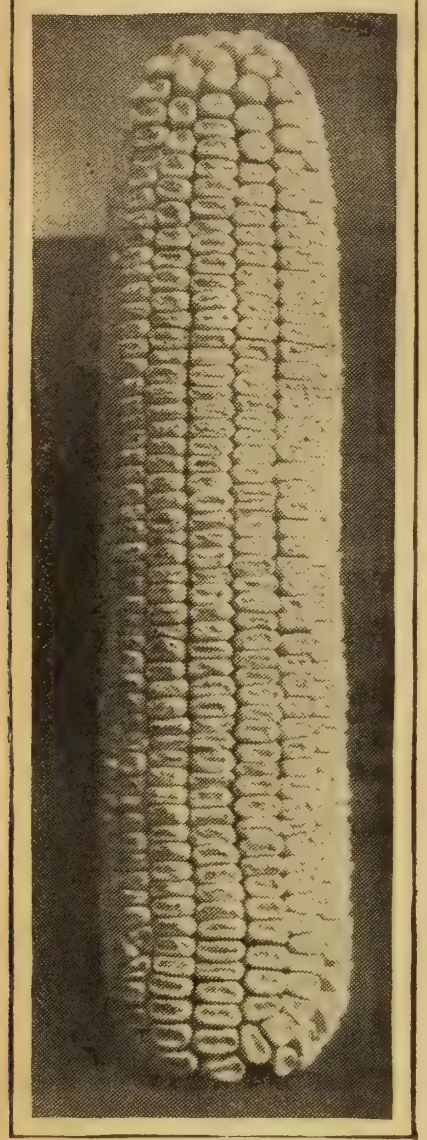
Testing Seed Corn Important.

Good Yield of Corn Depends Largely Upon the Selection, Curing and Testing of the Seed—Wisconsin Pays Careful Attention to These Essential Items.



SELECT THIS KIND.

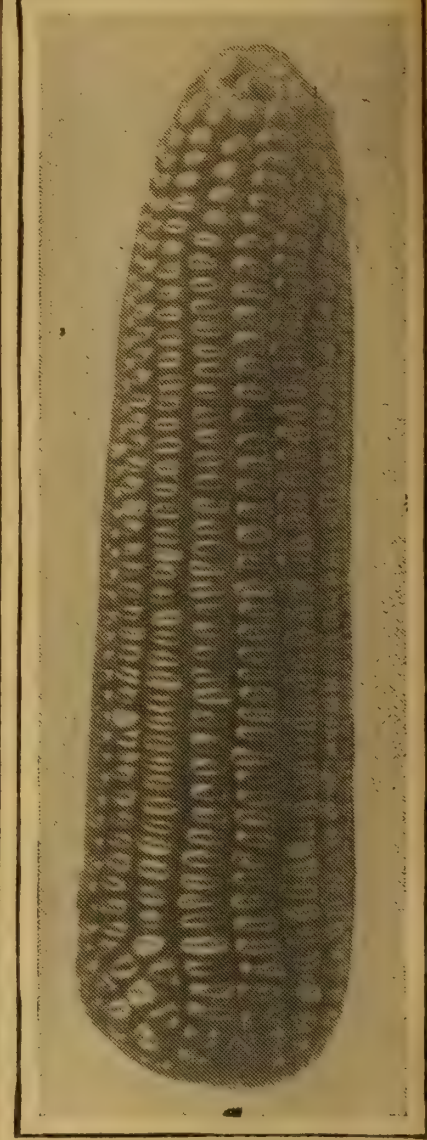
This ear of corn is nearly a perfect specimen, true to type which is regarded as the goal toward which the Wisconsin farmer should strive. The corn is a good size for this state, the rows are regular, the grains well dented, and the tip and butt well filled. If there are any ears of corn as good as this in your seed corn be sure to see that they are planted, provided, of course, the kernels meet the germination test. It is almost certain that this corn will test high.

ANY FARMER WOULD BE PROUD OF THIS CORN.

A well-selected ten-ear sample showing what the Wisconsin Farmer can do when he has good seed and takes proper care of his corn.

KNOW THE EARS WHICH WILL GROW.

Every square on the tester which does not show a vigorous root and stem for each kernel should be noted. The ears corresponding to that number should be thrown out of the seed.



DISCARD THIS KIND.

This ear should not be saved for seed corn. On the theory that like will produce like and that there is a tendency for the quality of grain to deteriorate, the planting of this ear will mean many ears even poorer than this one. The rows here are uneven, the shape irregular and the tip and butt not well filled. There are many poorer ears of corn raised in Wisconsin each year than this one, but one cannot expect to improve the quality of corn with an ear like this in the seed selection.

THE RAG DOLL TESTER IS SIMPLE AND INEXPENSIVE.

A single strip of cloth nine inches in width and sixty inches in length makes this simple tester. Each roll is numbered to correspond to every twenty ears tested.

REMOVING THE KERNEL.

Insert the knife blade between the rows so as to avoid injuring the germ.

UPPER WISCONSIN

Swine Raising.

Swine raising is becoming more general in Upper Wisconsin each year and the accompanying illustration shows a brood sow and her litter of eleven spring pigs which were exhibited at the last Langlade County Fair by J. G. Urness, of Antigo.

Mr. Urness likes the type which produce large litters and he has chosen the big-type Poland Chinas. This brood sow is three years old and has lived up to his ideal as a producer of large, strong litters and with such brood types he believes there is a splendid opportunity in Upper Wisconsin for the swine breeders. The future of this country lies in dairying largely, but as the two go hand in hand Mr. Urness sees great possibilities with hogs.

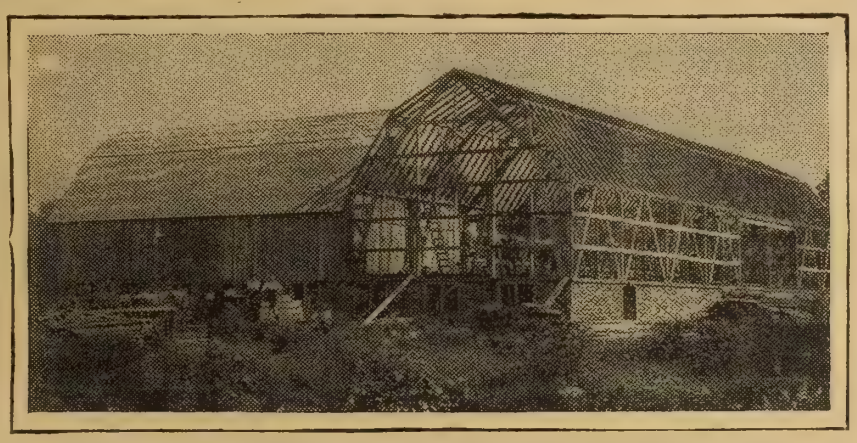
This brood sow had eight in her first litter, nine in her second litter and eleven in her third litter. That all of the last farrowing lived is shown by the picture which shows all eleven. This picture was taken on the fair grounds. This sow is also due to farrow again this March.

This sow won first place at the county fair last fall. She is a full-blooded Poland China, but through neglect in registering her ancestors she cannot be marked with a pedigree.

SWINE ON URNESS FARM IN LANGLADE COUNTY, WISCONSIN.

Barn Building.

In this department this week will be found a picture of a barn taken on the farm of Edward Falbe, near Holcombe, Wisconsin, Chippewa county. The picture was taken when the barn was only partly finished, but it is illustrative of the character of improvements which are being built in Chippewa county. This barn was built right in the woods. It has a full nine-foot stone basement and is thirty-six feet in width. Mr. Falbe writes us that he is now putting up two silos 16x30. This is certainly a fine illustration of the character of improvements which are being made by progressive farmers in Upper Wisconsin.



NEW BARN ON EDWARD FALBE FARM IN CHIPPEWA COUNTY.

Silo the Short Course Built.

The silo and barn addition shown in the accompanying illustration is one which J. M. Walz, county agricultural representative of Douglas county, refers to as "the silo the short course built."

This new concrete silo on the farm of Charles Bong, near Poplar, Douglas county, was built last summer as the result of his brother, Arvid Bong, attending a short course conducted in the county by Mr. Walz. Arvid rode horseback every morning to the short course, which was conducted at a point eight miles distant from his home during weather when the snow covered the ground and the thermometer was from 25 to 30 degrees below zero.

When the short course ended Arvid immediately began to study silo construction and the result was the building of the silo shown in this picture. The addition to the barn was another improvement due directly to the short course and this gives room for thirteen cows in addition to other stock on the farm. The picture was taken before the addition was painted and shows up at the right end of the barn in the rear of the new silo. This farm, where thirty-five acres are under the plow, is surrounded entirely by timber and shows what is being done in the cut-over districts of Douglas county.

UPPER WISCONSIN SILO.

Go Slow and Buy Right

Lily and Primrose Separators

THE cream separator is the center around which every successful dairying establishment revolves. A good separator will add considerably to your cash income. You can't afford to buy at random. If you are not personally acquainted with the best features of the best cream separators, let us help you.

An ordinary separator will save you money, but if you want to make the most from your cream buy a **Lily** or **Primrose.** These **International Harvester** separators work so efficiently and for so many years that even the two- or three-cow farmers use them with profit. Is yours a bigger herd? Then take the advice of thousands of the most prosperous dairymen and buy either a **Lily** or a **Primrose.**

Lily and **Primrose** separators skim very closely—leaving only a drop of cream in a gallon of milk. They are strong and simple, needing few adjustments—which any man or woman can make. The frame on each is open and sanitary. The supply can is large and low. Every bearing and quiet gear is well oiled always by a splash system. There are no better separators.

Buy a **Lily** or **Primrose** from the **I H C** dealer and be sure of satisfaction. Write us for catalogues and booklets on dairying.

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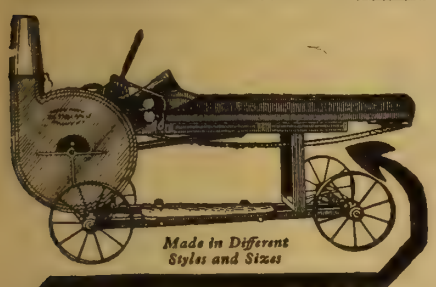

The Old Standby

Every farmer who has used an EAGLE Ensilage Cutter knows its **absolute reliability.** When your corn or other silage feed is ready for the silo, you want quick service with a safe, reliable, large capacity silo filler. Experience shows that the EAGLE is a **compact, safe, well built, clean-cutting machine of extra large cutting capacity and reliable service.**

EAGLE Ensilage Cutters

are simple, durable, light running machines. The deep-grooved and non-winding spike rolls give far greater feeding possibilities than any other cutter. **Reverse lever permits instant stopping and reversing.** They are machines with easy running, durable, positive-drive blowers that will not clog. *Get catalog at once showing other special features.* 26

EAGLE
Eagle Mfg. Co.
693 Winnebago St.
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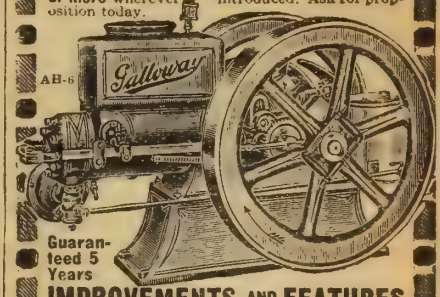
ABOUT BUYING AN ENGINE

Until you have seen this **new 1916 260-p. book** that tells all about **Galloway engines** and explains my **new extra special advertising distribution offer.** If you answered all the engine advertisements ever published you would not find an offer fairer, squarer or more in your favor. You owe it to your **pocket-book** and the **satisfaction** that you demand in the operation of the engine you buy to **answer this advertisement** and learn the particulars of this new 90-day offer to distribute 10,000 more Galloway Masterpiece Engines from 1 3-4 h. p. to 16 h. p.

The **great Galloway chain of factories** are running **day and night.** We are turning out more **Masterpiece engines** than ever and the reason is that we are building this engine **so good** from such a highly perfected design, of such good materials, and by such thoroughly skilled workmen, that every Galloway Masterpiece **sells one or more** wherever introduced. Ask for proposition today.



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IMPROVEMENTS AND FEATURES

include valves in the head; extra cooling surfaces, large water pot; frost-proof cylinder; adjustable bearings, economy carburetor; uses any fuel; large perfectly balanced fly wheels; built-in magneto; Hercules water-cooled cylinder head, cannot blow off; easy to start, no cranking; needs no batteries; independent of weather, hot or cold, wet or dry. **A mechanical masterpiece!** These features and many others make Masterpiece engines power kings in their field. **Ask today for this new book** printed in four colors. It will solve your power problems. A postal gets it. Engines shipped from Waterloo, Council Bluffs, Kansas City, St. Paul, Chicago. **Wm. Galloway, Pres.**

WILLIAM GALLOWAY CO.
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Engine Manufacturing Specialists

Please mention this paper when writing

HORTICULTURE

Top Grafting.

To the Editor:—We are nearing the time for spring work. The orchard should be pruned this month and any trees that are unprofitable should be either dug out or top grafted. If healthy and vigorous top graft it with some good winter apple. If the tree is very large cut back the main branches severely. This will cause water sprouts that may be grafted after two years. We don't recommend grafting limbs larger than a broom handle and a big tree would carry the grafts too far from the ground. The best success in top grafting is on young trees two or three years old set for that purpose. Every orchardist should set a few trees every year and there is nothing equal to Hibernal and Virginia crab for top grafting. Their limbs stand out at right angle with the trunk and do not break down or split when in heavy bearing. If you have a variety that will make a nice top the trees can be grafted as soon as set by whipping one cion on the main stem. This is less work in grafting, but does not do as well as grafting when the side branches get as big as your thumb. Now, how about your cions? Did you cut them before zero weather and bury them in a box with just leaves? Some kinds even when hardy get a little injury by zero and have not the vitality they should have.

You may find some nurseryman who has early cut cions, but they are mostly cut from young trees. I prefer cions from young trees just coming into bearing. Cions in perfect condition will do to graft till June 10th. It is better to top work the trees in the early part of April. I have successfully grafted in March and June. For wax there is nothing better than one part tallow, two parts beeswax, four parts rosin, slowly melted, run into water, well worked as you pull molasses candy. Laid away in balls or rolls on oiled paper it will keep for years. The best way to put it on is with a brush, having a little furnace with a little fire to keep the wax warm, not hot. After the graft is well waxed a thin strip of old cotton cloth wrapped around before the wax is cold is a good protection against the hot sun. I have used newspapers that do well, but cloth is better. If there is no way to keep the wax warm use it in the ball or rolls. If the weather is cool keep it in warm water; if hot keep it in cold water, but be sure to protect every crack and put a tip on top of the cion. Watch the growth. Don't let suckers steal the sap and don't let the grafts grow too rapidly. Pinch them if necessary. As to varieties to top graft you may use any old favorite that has died out or that you had back East. Get the cions sent you by mail. Northwestern Greening, Windsor, Golden Russet, McIntosh, Jonathan, Grimes Golden. We would also try Delicious, but it has not done well so far north as Minnesota.

Geo. J. Kellogg.

Flowers to Plant.

To the Editor:—There are so many kinds of flowering plants in the seed list that if one has only a limited space it is hard to decide which ones to grow. There are, however, some hardier varieties that will grow under the most adverse conditions of soil and position that it is possible for anyone who has any ground at all to have flowers. Some of these standbys are the nasturtiums, petunias, phlox drummondi, zinnias, verbenas, marigolds, Shirley and California poppies. The last two, if sown early, will grow in any place where there is a bit of soil and sunlight.

Poppies will hide the drying leaves of the spent tulip bed and with a few zinnias planted in later will furnish a gorgeous show of flowers from early spring until frost. If it is possible to have flowers growing in rich garden soil have some that are good for cutting, such as sweet peas, sweet William, corn flower and antirrhinum, commonly called snap dragon or lionmouth. There has been a great improvement in this half-hardy perennial and it is fast getting to be one of the popular flowers both for greenhouses and outdoor cultivation. One advantage to be derived from planting snap dragon is that it will bloom from spring until fall and later will bloom in the house if potted. Their long, graceful spikes of bloom make them desirable for a mixed bouquet or alone.

The little cut-and-come-again sunflower, the rudbekias, the oxheart daisy are easily grown and are fine for house decoration. These can be grown in any corner of the back yard or along the fence and will be a help to hide any unsightly places.

Dahlias and gladioluses are fine for fall cutting. Asters have not done well in the last two or three years, having suffered from a disease called the yellows. This trouble with asters seems to be spreading and as yet there is no remedy.

Often the only available place where flowers might be planted is shaded by trees or is a North or East exposure. Should you wish something bright and attractive from the street for such locations get the begonia semperflorens. This is a constant bloomer, grows readily from seed and cuttings taken any time will root. This plant also makes a good house plant for window box or stock may be kept over winter in a box placed in a basement window.

There is quite a list of more delicate flowering plants that are more or less adapted to shaded places, such as pansies, English daisies, bluebells, etc. A border of Canterbury bells and fox gloves for the background is one of the most beautiful flower combinations that can be made. If a tall border is required plant the single and double hollyhock of the lighter shades with the perennial larkspur. Such a border may be kept a permanent feature.

Another fine flower for cutting is the gailardia. Their rich shading of red, brown and yellow harmonize well with the furnishing of a room finished in those colors. They make a gorgeous bed, are perennial, but will bloom in July if sown early. The old plants bloom from May until frost.

Cannas, caladiums and castor beans are favorites with many. If the ground is ample a free use of these luxuriant foliage plants lends a tropical effect to the landscape. Coleous and cannas are sometimes grown in the same bed, but it is a mistake, as the two plants do not harmonize. Coleous should be planted alone and in a sunny place. A few salvia plants with cannas help to brighten the bed, but plant only a few so as not to crowd the leaf effect of the cannas.

There are but few plants that can be grown in the shade with success and of the bedding plants commonly used cannas or coleous are the least likely to do well in the shade.

Every child who has any yard whatever should be given opportunity to dig and plant. It is their natural inclination and birthright. Association with flowers and growing plants and the soil elevates the mind and will keep many a child out of mischief and away from the streets once their interest is aroused.

J. W. Roe.

Winnebago Co., Wisconsin.

STOP Covering Corn! Use Daisy Shields

Save time and labor and raise more corn and better corn with these famous revolving shields on your cultivator. Don't waste time and effort uncovering corn—Daisy Shields absolutely prevent clods from falling on the young corn. Enable you to plow faster—plow smaller corn—kill more weeds.

Fit Any Cultivator

Daisy Shields have shanks to fit any make of cultivator and can be adjusted to meet any conditions. They revolve like a wheel—cannot gather up trash and will not get out of adjustment. The fine dirt passes right through them and covers up weeds and grass—clods are thrown AWAY from the corn.

Old Way — New Way

Investigate these shields—best ever put on a cultivator. Write for folder and send your dealer's name. We'll send a pair for your inspection.

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Million Evergreens

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100 2-year-old, root-pruned hardy evergreens. Finest little trees grown. $1.50

100 Transplanted, root-pruned evergreens with large fibrous roots. $4.50

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GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

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JACK ROSE, earliest of all smooth, red tomatoes. Get free package of this seed by sending us 2c stamp to pay postage on beautifully illustrated 1916 catalog. For best results and highest quality plant Jung's Tested Farm, Garden and Flower Seeds.

New Sorts Free with Every Order
A pleasant surprise. Write today for Bargain Catalog.

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2 early; 2 Winter; 2 Crabapple. Hardy tested varieties—Kellogg's Hardy Northern Grown trees are backed by 62 years in the nursery business. Send today for this bargain collection, also our 1916 Price List of trees, shrubs and small fruit plants. It is FREE

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Seed Low Prices. Big Yields, with sure profit if you plant our choice matured dried selected seed. Varieties suited for every section. Absolutely guaranteed in every way. Tested germination 95%. We know it is right, but it must satisfy you. Test it thoroughly and if not pleased return it at our expense. We have been developing improved seed corn for past 20 years. Our valuable Profit-sharing exclusive Field and Grass Seed Guide with samples you need Free. AMERICAN MUTUAL SEED COMPANY, Dept. 782, 43rd and Robey St., Chicago, Ill.

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Ask your local dealer to show you the Buckeye "Get-at-able" Disc Bearing; no rivets to cut; only three bolts to take out; no repair bills; bearings replaced free if they ever wear out. Compare the Buckeye Drill with any other Drill and you will then understand why it is sold under such a broad and liberal warranty.

No difference in what state or country you live; no difference what your seeding conditions; no difference what kind of seed you want to sow, you can get a Buckeye Drill that will do your work right. Buckeye Drills have many exclusive features that are worth your attention.

Send for the Buckeye Drill Catalogue.

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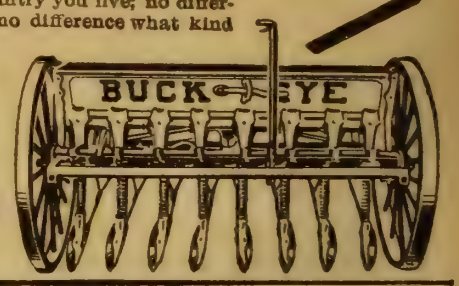
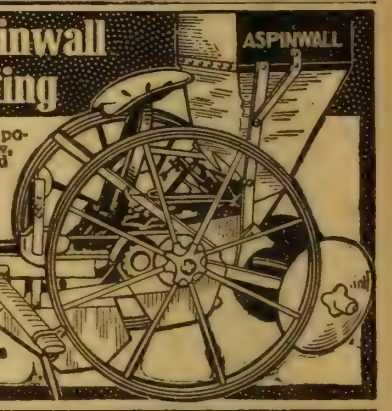


Just Drive—Let The Aspinwall Do All Your Potato Planting



ONE man and the Aspinwall plant 5 to 8 acres of potatoes a day—and plant them right. Machine opens furrow, drops seed—any size—any distance, covers, marks next row, and if desired, sows fertilizer all in one operation. Corn, Pea, and Bean planting attachment furnished when wanted.

Aspinwall Potato Planter

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Per bu. Northern grown, hardy, productive. Cheapest and best pasture and hay crop. Sample free. Clovers, Alfalfa, Northern grown Seed Corn, etc. All seeds guaranteed.

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Tested: Sold subject to your approval.

SAMPLES FREE ON REQUEST: Thoroughly matured, hand picked, butted and tipped; each ear critically examined as to vitality; carefully graded for edge drop planter; shows germination of 95 to 98 per cent. Every bushel sold subject to 12 days approval and if not satisfactory to be returned, our expense, and purchase price promptly refunded. Iowa Yellow Dent, Reid's Yellow Dent, Iowa Gold Mine, Early Champion White, Iowa Silver Mine, Silver King, Pride of North, Dakota Bloody Butcher and all best Flint Varieties. Special Seed Corn Booklet mailed free. Send for it before you order.

Address, IOWA CORN GROWERS' SEED CO.
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SEED CORN Disco Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

Buy quick! Save money—be sure of getting good seed. We fortunately carried over a few thousand bushels of choice seed from 1914 season, now offered at bargain prices. Write now for price list. Order early and get good seed.

Dakota Improved Seed Co. 27 Main St., Mitchell, S. D.

SEED CORN

CURRIE BROS. COMPANY
380 East Water Street MILWAUKEE, WIS.

SEND postal for free illustrated catalog of Farm, Vegetable and Flower Seeds.

Nitrates Added to the Soil 1-2c a Pound

NITROGERM 40c per acre. Best for inoculating farm seeds. Instructive circular No. 2, free. Our endorsement—sole distributors of Nitro-Cultures (Trade Mark registered U. S. Pat. Office.) Sold by State Agricultural Departments. Write Dept. 20, Standard Nitrogerm Co., Glen Ridge, N. J. Soil tested for acidity, 25c.

ALFALFA SEED $16 per bushel. Order direct from this advertisement, as we have plots of fifty different strains of alfalfa under test which enables us to send you seed adapted to your locality. Swartz Brothers, Cornfalfa Farms, Waukesha, Wisconsin, winners of the World's Gold Medal Alfalfa Sheaf at the Panama-Pacific Exposition. Also the largest alfalfa hay growers in Wisconsin.

12 Ever Bearing Strawberries Free

and 200 other choice varieties postpaid $1.25, 100 Dunlap and 50 each of two choice varieties with our book of instructions howto plant and grow them.

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"STRAWBERRY PLANTS THAT GROW"

"PROGRESSIVE" Best Fall-Bearer; and Standard June sorts. Also Raspberry, Blackberry, Currant and Grape Plants. Catalog free.

C. E. WHITTEN, Box 17, Bridgeman, Mich.

SEED OATS for sale. Wis. White Bonanza, short and stiff in straw, yields 80 bu. per acre, state tested. Albert Wollin, Johnson Creek, Wisconsin.

Cow-Testing Reports.

(Continued from page 12.)

G. Jersey..	8	11-15	877	4.8	42.1
G. Guernsey	6	1-16	1079	5.8	62.6
Ray E. Ketchum					
G. Jersey ..	6	12-15	922	4.8	44.2
R. A. Strader					
G Guernsey	4	1-16	992	4.3	42.6
G. Jersey ..	7	11-15	837	5.1	42.7
Elmer Chryster					
G. Guernsey	5	11-15	989	4.7	46.5
Native	7	1-16	899	4.6	41.3
McCauley & Son					
G. Jersey ..	8	11-15	894	4.6	41.1
Fred Gerike					
Native	9	1-16	840	4.9	41.2
Native	7	10-15	719.	5.9	42.4
Ed L. Horton					
G. Guernsey	9	11-15	1215	4.0	48.6

Stratford Association.

The following report for January, 1916, has been received at this office:

Owner, name and breed	Age	When fresh	Pounds milk	Test	Pounds B. fat
Frank Hetts					
Lady, R. H.	3	12-1-15	1483	4.6	68.2
Crouser Bros.					
No. 3, R. H.	6	12-19-15	1789.5	3.7	66.2
No. 6, G. H.	4	11-14-15	1503.8	3.9	58.7
Chas. Steineke					
Flory, G. G.	8	12-21-15	1020	4.5	46.0
Chrouser Bros.					
No. 10, G. H.	4	12-6-15	1305	3.5	45.6
Fred Griesbach					
No. 14, G. H.	9	12-25-15	1273	3.4	43.3
Frank Hetts					
Flory 2d, R.H.	8	10-29-15	1232.3	3.5	43.1
Fay Bros.					
Jessey, G. H.	3	12-12-15	1220	3.5	42.7
Jacob Spindler					
Nellie, N. ..	8	11-20-15	1056.5	3.9	41.2
Chrouser Bros.					
No. 1, R. H.	9	7-6-15	1030.3	4.0	41.2
No. 15, G. H.	4	12-24-15	1237	3.3	40.8
No. 22, G. H.	2	11-6-15	1305.1	3.0	40.5
No. 25, G. H.	2	10-23-15	1052	3.5	36.8
No. 26, G. H.	2	12-19-15	1187.8	3.1	36.9

President, Garrett Hughes.
Secretary, James L. Chrouser.
Francis Woodward, Tester.

Geneva Association.

Mr. Charles L. Turner, secretary and treasurer of the Geneva Cow-Testing Association, writes us under date of March 3d from Elkhorn, Wisconsin, giving the official January records. These records were published last week. This association was organized October 1, 1915, and at that time had about 500 cows under test. There are now over thirty members and over 600 cows. For December this association had ninety-five cows producing forty pounds of butter fat or better. The officials of the association are Ora Taylor, president; Harry Dunbar, vice president; Charles L. Turner, secretary and treasurer; Percy Harrington, Alfred Holt, Earl Palmer and James Henderson, directors, and Frank Drake, tester. We believe the Geneva report shows more forty-pound cows than any association report in the state. If there is any other association which can beat this record we shall be very glad to have them send us a report.

March Crop Report.

The summary of the March crop report for Wisconsin and for the United States, as compiled by the bureau of crop estimates of the department of agriculture and transmitted through the weather bureau, shows that on March 1st this state had on its farms 1,170,000 bushels of wheat, a large increase over last year; 4,900,000 of corn, a big decrease; 43,000,000 of oats, almost double last year's; and 6,520,000 of barley, a third more than on March 1, 1915.

Following is the report:

Wheat—State: Estimated stocks on farms March 1st this year, 1,170,000 bushels, compared with 878,000 a year ago and 1,319,000 two years ago. Price on March 1st to producers, $1.10 per bushel, compared with $1.32 a year ago and 83 cents two years ago.

Wheat—United States: Estimated stocks on farms March 1st this year, 242,000,000 bushels, compared with 152,903,000 a year ago and 151,795,000 two years ago. Price on March 1st to producers, $1.03 per bushel, compared with $1.34 a year ago and 83 cents two years ago.

Corn—State: Estimated stocks on farms March 1st this year, 4,900,000 bushels, compared with 18,863,000 a year ago and 24,725,000 two years ago. Price March 1st to producers, 77 cents per bushel, compared with 71 cents a year ago and 59 cents two years ago.

Corn—United States: Estimated stocks on farms March 1st this year, 1,140,000,000 bushels, compared with 910,894,000 a year ago and 866,352,000 two years ago. Price March 1st to producers, 68.2 cents per bushel, compared with 75.1 cents a year ago and 69.1 cents two years ago.

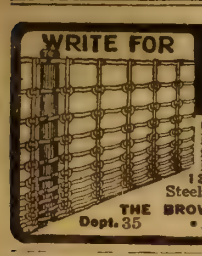
Corn—State: The percentage of the 1915 crop which was of merchantable quality is estimated at 13 per cent, compared with 82 per cent of the 1914 crop and 78 per cent of the 1913 crop.

Corn—United States: The percentage of the 1915 crop which was of merchantable quality is estimated at 71.3 per cent, compared with 84.5 per cent of the 1914 crop and 80.1 per cent of the 1913 crop.

Oats—State: Estimated stocks on farms March 1st this year, 43,000,000 bushels, compared with 22,356,000 a year ago and 37,367,000 two years ago. Price March 1st to producers, 45 cents per bushel, compared with 53 cents a year ago and 36 cents two years ago.

Oats—United States: Estimated stocks on farms March 1st this year, 597,000,000 bushels, compared with 379,369,000 a year ago and 419,481,000 two years ago. Price March 1st to producers, 42.7 cents per bushel, compared with 52.1 cents a year ago and 38.9 cents two years ago.

Barley—State: Estimated stocks on farms March 1st this year, 6,520,000 bushels, compared with 4,423,000 a year ago and 5,981,000 two years ago. Price March 1st to producers, 68 cents per bushel, compared with 73 cents a year ago and 53 cents two years ago.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Sheep Prospects.

Recently The Wisconsin Farmer gave some pointers to its readers from the address of A. J. Knollin, of Chicago, at Madison, Farm and Home week. Mr. Knollin is an officer of the American Shropshire Breeders' Association, and he has a very high standing among the sheep breeders of the country. The Wisconsin Live Stock Breeders' Association has furnished us with a copy of Mr. Knollin's address and we quote further from this address, concerning matters which will interest Wisconsin sheep men.

Any man who is familiar with the sheep industry of the United States for the past forty years can readily recall to memory more vivid pictures of the tearing down and building up of the industry than I can possibly portray in words. As a nation, we owe a deep debt of gratitude to the shepherds who, out of love for their flocks and faith in the industry, continued to hang on through periods of depression when the entire industry seemed utterly ruined, thereby saving seed stock with which again to build up an industry of inestimable value to the nation.

Do many of our citizens realize, I wonder, what a splendid animal the sheep is? In this country we have about 50,000,000 golden-hoofed sheep that are gathering weeds and flowers from our farm fields and from the rugged, rocky fastnesses of snow-capped mountains; gleaning the harvested fields of grain, corn, beets and every variety of cultivated crops; gathering shrubs and grasses from our uncultivated farm lands, from the foothills of the mountains, and from the plains; brambles and sage from the desert waste, converting this mass of otherwise largely waste vegetation into soft, beautiful fleeces more magical than that which Jason sought, and producing delicately flavored, nutritious meat, both of which are necessities for the comfort of human life.

In view of the facts as stated; that sheep largely gain their sustenance from vegetation that would otherwise go to waste; that they provide us with the most comfortable and durable clothing and the most healthful and nutritious animal food known, and the further facts that the gross value of these products of the sheep in our country, in their raw state, aggregates the enormous sum of $250,000,000 annually, do you not agree with me that sheep are wonderful and useful animals from an economic standpoint?

Moreover, the sheep industry, from the time the first bleat of the newborn lamb is heard, until the wool has gone through many different processes of preparation for its varied uses and the meat is prepared for the table, affords labor for hundreds of thousands of our people, distributing in wages many millions of dollars each year. Let us note how labor is represented in various phases of the sheep business.

First, there is the care of the sheep, their transportation to market, their care in the stockyards, the slaughter of the sheep, and the preparation and sale of the innumerable by-products, many of which have great medicinal value. In connection with the wool, there is shearing, the transportation by railroads, the passing of the wool through the hands of the graders, then through the scouring process. Then comes the carding, the spinning, the weaving—and still there are innumerable busy hands through which it must pass before it reaches milady's boudoir in the shape of a beautiful gown, or clothes President Wilson "immaculately" (as described in a Kansas City newspaper when he addressed a gathering of 15,000 citizens there recently). And even after the beautiful gown and the immaculate clothing are cast aside by milady and the president, it passes on through still other processes and into innumerable uses. Is not, therefore the sheep industry a real economic necessity? It must be, and I feel certain, will be so considered in the broad policy of preparedness that our nation is about to adopt.

Planting Trees.

Many other gains result from the proper planting of trees around the farm home. In protecting the farm buildings from the winter winds the fuel bill is appreciably reduced. The live stock receives much protection from the winds. If the trees are properly selected and cared for they will supply timber for fence posts and for general repairs about the farm as well as an abundance of fuel. The protection afforded by a good windbreak of trees makes it possible to grow many varieties of small fruits and of vegetables, that could not be raised on the open prairie. Many kinds of edible fruits are borne on ornamental plants—useful for hedges and windbreaks. Such fruits can be produced at a very low cost by planting them in the shrubbery clusters and windbreaks. The trees also protect the farm home from the dusty, drying winds of summer and reduce the rapid evaporation of moisture from the soil besides affording an abundance of shade. They serve as an attraction for birds, which not only bring happiness by their song, but also aid by catching many harmful insects. During the time the trees are growing they increase the value of the farm with little expense to the owner. Probably the greatest assets to a prairie farmer who has had enough foresight and interest to plant trees around his home, are the enjoyment he derives from them in later years and the appreciation of his work by those who follow him in life. —[Dakota Bulletin.

How to Bridge Graft.

To be effective, bridge grafting should be done in the spring before growth starts, though sometimes it can be done after growth starts if dormant cions for the purpose can be secured.

Prepare the wound in the tree by cutting away all dead tissue and thoroughly cleansing the injured parts. If possible, sterilize by washing with a solution of bichloride of mercury, copper sulphate, or some other antiseptic. The irregular edges of the bark above the girdled tract or wound should be cut back into an even edge, far enough from the wound to make certain that healthy cambium is under the bark.

For the grafting, select cions from wood of the previous season's growth, either branches which grew the preceding season or water sprouts that are only a year old. The cions should be a little longer than the space which is to be bridged, so they will arch slightly over the central part of the wound.

Bevel the cions at each end on the same side of the cion with a long sloping cut so that the wedge-shaped ends thus formed will be relatively thin and permit their being thrust well under the bark without danger of separating it unduly from the cambium at the points of insertion. The placing of the cions will be facilitated if the bark at the margins of the wound is slit for a short distance at the points where the ends are to be inserted.

A dispatch from Berlin, via London, said the Bundesrath had ordered all trimmings from hides converted into feed for live stock. Trimmings usually are used to make gelatine and glue.

Chick size grit and fine charcoal should be kept before the young chicks at all times.

Guard against sudden changes in the temperature. During cold weather locate the brooder indoors.

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The modern way of fence building. No holes to dig or posts to set if you use Chicago Steel Fence Posts. Driving 320 posts a day is an easy job for a man and a boy. Then you're ready to staple up the wire and fence your land in one-fifth the time. There is no breaking, no wearing out. Your
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Fencing wire is stretched tight between terminals, and held in alignment by Carbo Supports which are anchored 18 inches below ground; have knife-like edges to cut the ground, and cushion against earth. One man can drive 500 a day, soft ground or frost. No holes to dig.
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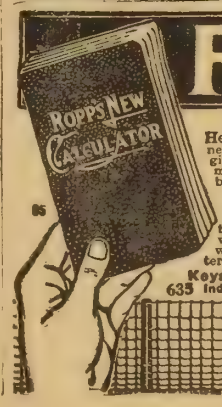

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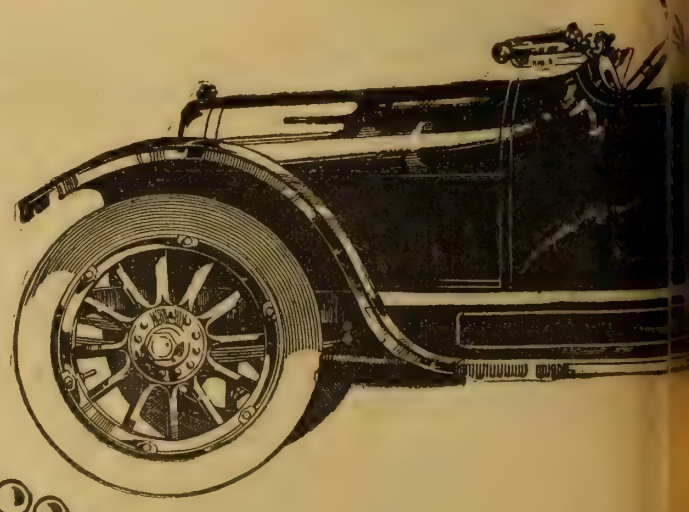

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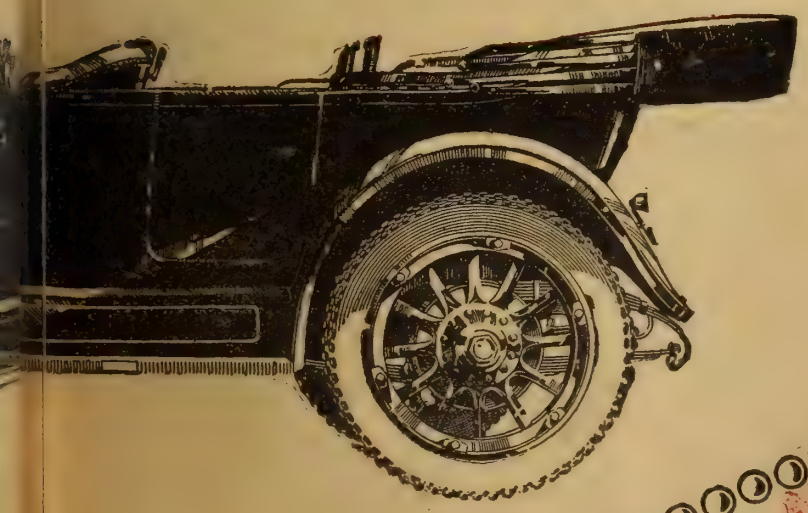
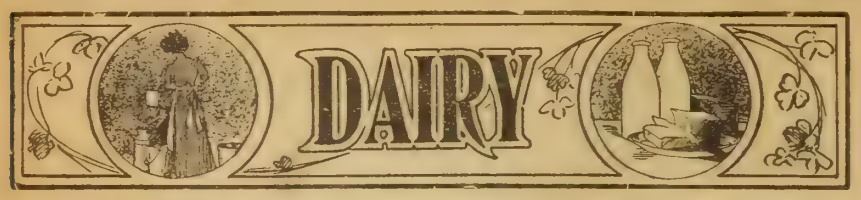




Milk and Cream Contests.

Milk and cream contests have been found to be a very valuable means of inducing dairymen to take greater pains in the production and handling of milk. In a United States Department of Agriculture bulletin the axiom is quoted that "Education accomplishes more than legislation." The law, it is said, can, of course, be applied to glaringly insanitary conditions, but after a certain degree of cleanliness has been reached subsequent improvement must be obtained in other ways.

The first milk and cream contest was held in 1906 during the National Dairy Show at Chicago. Since then there have been many others and the method of scoring the exhibits has gradually been improved. Under the present system out of a total possible score of 100 points thirty-five are allowed for the bacterial count, twenty-five for the flavor and odor of the milk, ten for the absence of visible dirt, ten for percentage of fat, ten for percentage of solids not fat, five for acidity and five for the appearance and condition of the bottle and cap.

To obtain a perfect score for the bacterial count the milk must contain less than 500 bacteria per cubic centimeter. A bacterial count above the local legal limit results in a score of 0. The deductions from the possible score of twenty-five for flavor and odor are made according to the conditions found. This is also true of the examination for visible dirt. For this the milk is allowed to remain for some time undisturbed and the bottom is then examined very closely for the slightest movable speck. Four per cent, or more, of fat in the milk results in a perfect score of 10; less than 2.7 per cent in 0. To obtain a perfect score for the solids not fat the percentage must be 8.7 or more, and less than 7.8 per cent is counted 0. In the case of cream there is no credit for solids not fat and the percentage of fat counts 20 points instead of 10. To obtain a perfect score for acidity the percentage must be 0.2 or less. More than 0.24 per cent is counted 0.

The same score card is now being used for market milk and for certified milk, but in most of the contests those who compete in the certified class are not allowed to enter samples in the market class.

The educational value of these contests is indicated by the fact that almost invariably dairymen who have had experience in such competitions obtain higher scores than those who have not. On the other hand, the contests are used also to point out to consumers the fact that clean milk is more difficult and expensive to produce than dirty milk.

Crawford County Report.

The Wisconsin Farmer is in receipt of the directors' annual report of the Farmers' Co-operative Creamery at Soldiers' Grove, Crawford county. This is the fifth annual report of the company. In 1915 the company received $34,018.71 for butter shipped; $3,764.43 for butter sold in the city, and $1,586.45 for butter sold to patrons. Other receipts, such as cash for cream, buttermilk, etc., made a total of $39,747.15. The company paid out for cream, $30,647.09. After deducting all expenses, interest on stock, and taxes, the company showed a balance for the year of $3,639.44. This creamery handled 442,782 pounds of cream, with a total of 121,158 pounds of butter fat, and produced 146,724 pounds of butter. The average overrun was 21.70. The average price paid, including overrun, was $ .2975. The cost of butter manufacture and delivery to depot was only $.022. The officers of this company are Norman Barlow, president; John Lee, vice-president; Albert Johnson, secretary; Ben Coher and Bert Ehorn, directors.

Know Your Breed.

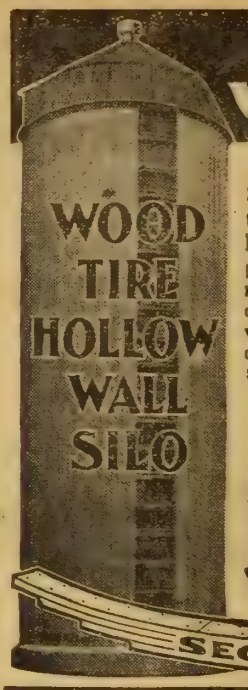
Each dairy breed has its stanch advocates and supporters. Each of those breeds has its distinct characteristics that distinguish it from other dairy breeds. Intermingled with the breed differences there is breed history. That breed history is both made and in the making. The man succeeds better if he knows the origin of his adopted breed and the locality that made it famous. The little island of Jersey off the coast of Europe is almost sacred in the minds of those who are foremost in the advancement of the interests of that breed in our own country. The story of the manner and method of caring for those little cows on their native island home is ever an example and source of information for practical breeders everywhere. He who knows the story of the Jerseys is a better dairyman and a better breeder. He is more enthusiastic and far more likely to consistently boost for that breed. Likewise the Guernsey breeder who is familiar with conditions in the native home of his breed is a better dairyman, a more successful breeder and a more substantial booster. The same is equally true with regard to the Holstein and the Ayrshire.

Present-day history is vital and alive. Since the Babcock tester came into use the real superiority of all dairy breeds has been shown conclusively and emphatically. The early records were large. The way those early records have been broken has been almost magical. Within a few years cows of three different breeds have held the world's championship record in butter-fat production. Each and every progressive breeder has learned those records and has made use of them persistently in advocating his chosen breed. The cost of production has come to be a living factor and much that has been interesting has been determined in respect to that and concerning each breed.

The record association of each breed has been working with determined energy to place before the public enthusiastic and truthful information concerning the merits of its dairy stock. The prospective breeder should not venture into the business until he has perused the literature sent out by the representatives of each breed. He will find that literature full of information and very interesting in its splendid illustrations and its discussion. The experienced breeder is ever gaining the latest information and new inspiration from that source and is loud in his praises.

It is well known that dairymen and dairy breeders are above fighting each other and are working and pulling together to advance the interests of all. Yet there is enough that is distinctive concerning each breed to make any man enthusiastic who sincerely admires one breed or who is engaged in business with stock of that breed as his capital.

At fairs and dairy shows and at sales men observe characteristics and type of their favorite breed. Fairs and shows are held primarily for educational purposes. The casual visitor may learn some new and vital fact. He may be enthused with what he sees and learns and will go home to reconstruct his farm operations or perhaps he will resolve to tie up his fortunes with one of the dairy breeds instead of the mongrels. The professional breeder usually observes more and sees more and learns more concerning his own breed than does any other visitor. Often the exhibitor, in being defeated, learns the demands set up for his breed and is more successful in future shows because of that defeat and the lesson he learned therefrom. At sales of dairy stock observing men learn much of the value of records, of type and of pedigree. It is very evident at present-day sales that animals that have not made satisfactory records or which lack in dairy and breed type and characteristics are the ones that go for the



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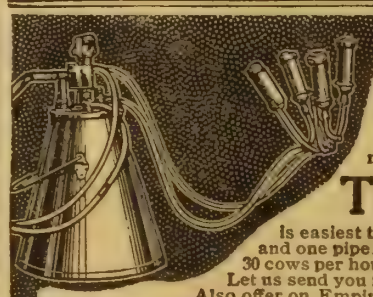

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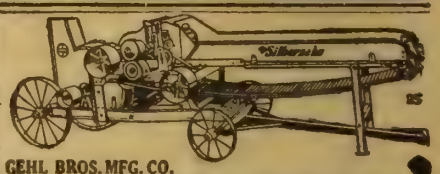

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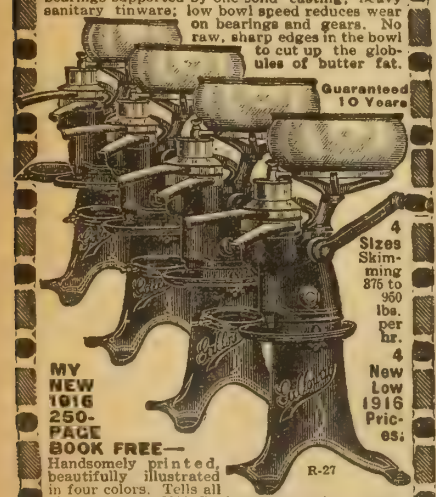

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Handsomely printed, beautifully illustrated in four colors. Tells all about my new 1916 Sanitary Cream Separators, how I build them; gives my 4 new low prices on 4 good sizes, also my 5 easy selling plans, cash or terms, etc. I'll also send my **special proposition on 10,000 Galloway Sanitary Cream Separators.** Drop me a postal today.

R-27

Separators shipped from Waterloo, Kansas City, Council Bluffs, St. Paul or Chicago.

Wm. Galloway, Pres., The Wm. Galloway Co.
33 Galloway Station Waterloo, Iowa
Cream Separator Manufacturing Specialists

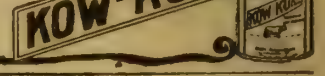
The Healthy Herd

Hundreds of herds are kept in the prime of health and productiveness by the occasional use of KOW-KURE, the great cow medicine. KOW KURE has no equal in the cure of the common cow diseases of Abortion, Retained Afterbirth and Barrenness. It is also a positive cure for Bunches, Milk Fever, Scouring, Red Water and Lost Appetite.

But it is better to prevent than to cure. The periodical use of Kow-Kure in small doses will effectually prevent these diseases, and make the healthy herd pour a constant stream of profits into your pockets.

If you have a backward cow, buy a 50c package of KOW-KURE, and give according to directions. It will do wonders. 50c and $1.00 packages at all feed dealers and druggists.

Dairy Association Co.,
Lyndonville, Vt.



$15.95 Upward ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a **sanitary marvel;** easily cleaned.

ABSOLUTELY ON APPROVAL

Different from picture, which illustrates our large capacity machines. **Western orders filled from western points.** Whether dairy is large or small write for handsome free catalog. **Address:**

AMERICAN SEPARATOR CO.
Box 4126 Bainbridge, N. Y.

Raised Without Milk!

Her name is "Daisy" and her owner, W. A. Riddle, of Chapin, Iowa, raised her on Blatchford's Calf Meal, which costs less than half as much as milk.

Blatchford's Calf Meal

A useful preventive of scouring. Calves raised "The Blatchford's Way" are heavier, bigger-boned and healthier. Known as the complete milk substitute since the year 1875. Sold by your dealer or direct from the manufacturer.

Blatchford's Pig Meal insures rapid, sturdy growth of young pigs at weaning time. Prevents setback.

See Actual Figures —based on results—that show you how to increase your calf profits. Write today.

Blatchford Calf Meal Factory, Dept. 63 Waukegan, Illinois

TABER LINED SILO

Non-Shrinkable—Practically Everlasting, Rot-Proof, Worm-Proof, Storm-Proof, Acid-Proof.

The latest improved Silo. A wood stave Silo; choice of lumber. Entire Silo creosoted. Special paint for outside. Acid-Proof Lining for coating inside after erection. The finest door and door frame on the market.

Special Galvanized Steel Octagon Roof —best manufactured.

Write Dept. D for Catalogue

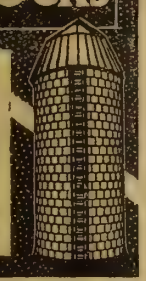
Manufactured by

TABER LUMBER CO., KEOKUK, IA.

ESTABLISHED 1855

AGENTS WANTED IMMEDIATELY.

Better Blocks



Made of better tile—lap-joined—stronger, more durable silo wall.

LANSING Vitrified Tile Silo

defies age, winds, winter frosts and hot summer heat. Reinforced twisted steel. First cost, only cost. Write for catalog.

J. M. PRESTON COMPANY

Dept. 333 Lansing, Mich.

Get our offer on Climax Silage Cutters and Bidwell Threshers

SIMPLEX IMPROVED STEEL STALLS

Stanchions and Litter Carriers. No advance in price on this famous equipment. If you are going to build or refurnish your barn, send for our new catalog which tells all about our famous springless lock stanchion and three-bolt alignment.

F. RASSMANN MFG. CO.

31 Lake St. BEAVER DAM, WIS.

The Beaver Storm-Proof Silo

STANDS like an oak. Our eight cross rod anchor system and double angle iron inner hoops, top and bottom, together with self-adjusting hoops, make our silo non-collapsible when not in use.

For the past ten years thousands of satisfied farmers have been using the Beaver Silo. Now why aren't **you?** Write for circular "F."

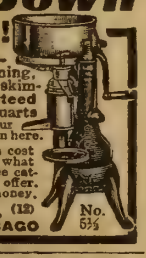
BEAVER SILO & BOX MFG. CO. Inc.,

BEAVER DAM, WISCONSIN

Only $2 Down

One Year to Pay!

$24 Buys the New Butterfly Jr. No. 2. Lightrunning, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 95 quarts per hour. Made also in four larger sizes up to 510 2 shown here.



30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog, folder and "direct-from-factory" offer. Buy from the manufacturer and save money.

ALBAUGH-DOVER CO. (12) 2158 Marshall Blvd. CHICAGO No. 6½

4 Empire STEEL Wheels 75c

that's the cost per year on basis of service. They last 20 to 25 years. Average cost $13. Save labor, time, horses, roads, money. Put a set on your wagon at our risk. Write for catalog and prices.

Empire Mfg. Co., Box 987 Quincy, Ill.

low price. At the sales, too, breeders learn much from each other.

In visiting farms of men who have been successful in handling the chosen breed men are able to gain information and inspiration that will be of use to him in his own farm and business operations. Each breed has its own separate and distinct meetings and banquets. Always the man who attends comes away with a more progressive and more aggressive spirit than he possessed previously.

Men who have had college training have indeed had superior advantage in learning the characteristics of dairy cattle and of their favorite breed in particular. Many of the most active young breeders of today are those young men who have spent some time, perhaps a full four years, in college specializing in the general subject of dairying and in gaining knowledge of all that is good and useful concerning the breed with which he has since linked his fortunes. The dairy breeder who is best informed is the one who succeeds best. The breeder of pure-bred stock who is most successful is the one who is most persistent in gaining a further knowledge and acquaintance with his breed and with other breeders and with men furthering its interests.

Importance of the Creamery

The Wisconsin Farmer at various times has had much to say concerning the relationship a good co-operative creamery has to the town in which it is located. The amount of business such a creamery does, the quality of butter as well as quantity it makes, and the price paid the farmers for their fat all have an important bearing on the propensity of the community. In many Wisconsin communities the creamery is the most important business enterprise in the community. Too often this is not realized, for it is the creamery that takes the farmer's raw product and pays him the money that he will spend with the merchant for food, clothes, new equipment, etc. Therefore, it is of just as much interest to the country merchant as the creamery operator and the farmer that the creameries produce the best kind of product, secure the best kind of prices and pay the highest prices possible to the farmers for their cream and milk.

Barron, in Barron county, the co-operative creamery is an enormous factor to that little city. We have often spoken of this creamery and the importance of this creamery to the community in which it is located is well indicated by the report of its business for the month of January which has just come to our attention. During that month the creamery made 59,618.7 pounds of butter, which is more butter than hundreds of creameries make in an entire year. And this was in midwinter and in a country that was stumps and second growth two decades ago.

But most important of all was the price the farmers received for their butter fat. During January it was 34 cents per pound net, an increase of a cent a pound over the prices paid in 1915. The report shows that during the month twelve farmers received checks for cream that were more than $100 each. One check was for $173.33, another for $154, another $146. Ninety four farmers were paid more than $50 and less than $100 during the month for cream, which makes a total of 106 farmers receiving more than $50 each in January.

Every month these cream checks are being handed out and as the season approaches June, the high month in dairying, they will increase. The relation of the Barron creamery to its community is the same as that of any other creamery to its community and everyone should always bear in mind that whatever helps the co-operative creamery helps everyone else.

Early sowing of wheat has been found the best at the Langdon, N. D., substation in 1915. Marquis wheat sown on corn ground April 19th went thirty-five and a half bushels per acre, sown May 9th the yield was twenty-four and four-fifths bushels. Marquis wheat sown on sod land April 15th went thirty bushels per acre, while wheat sown May 19th yielded eighteen and a half bushels.

"Yes, It's A Natco"

Wisconsin University

As you are riding through the country, take special notice of the silos along the way. Throughout the fertile Middle West country and in the East as well, in every prosperous farming section, where livestock farming or dairying is done, will be noted the vitrified tile silos. And in the majority of such cases a closer inspection will identify the silo as a

Delaware State College

Natco Imperishable Silo

"The silo that lasts for generations"

—so distinctive in appearance you'll know it at once. The handsome glazed tile, contrasting with the white markings of mortar, and our famous "Michigan" hip roof, make it easily recognizable from a distance. A close inspection shows our convenient door front, the convenient steps of galvanized iron pipe which, with the steel reinforcement, holds the silo in a grip of steel, the perfectly smooth walls, and last and most important, the sweet, juicy ensilage in all parts. Here's the silo that's windproof, decayproof, fireproof and frost-resisting. In daily use by the following State Experiment Stations:—

Wisconsin
Connecticut
Michigan
Illinois
Pennsylvania
Kentucky
Indiana
New York

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New Jersey Agricultural Experiment Station

Send for our new Silo Catalog—also our new book, "Natco On The Farm," describing the use of Natco Hollow Tile for all types of farm buildings. Both free. Write now.

Natco Silo Wall. Note perforated shell providing firm anchorage for mortar joints

National Fire Proofing Company

1123 Fulton Building

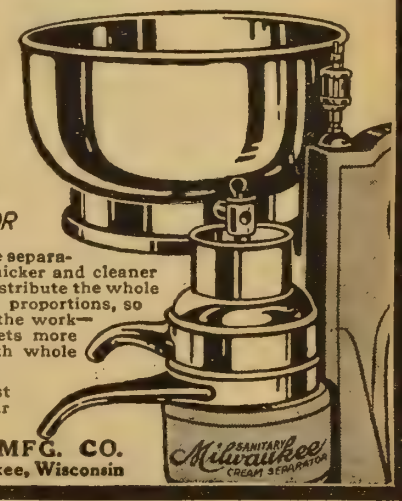
Pittsburgh, Pa.

23 Factories—Short hauls—Prompt shipments.

Why the "Milwaukee" Gets *all* the Cream

FEWER discs are used in the Sanitary Milwaukee, yet it skims closer, quicker and easier than any other separator. The discs are made of aluminum, which, unlike the tinned steel discs of other separators, will not rust, and can be drawn and tapered to the exact shape required for greatest skimming efficiency. Because of the tapered discs used in the

SANITARY Milwaukee CREAM SEPARATOR



the skimming space is widened where the separation actually takes place. This means quicker and cleaner skimming. Three removable feed slides distribute the whole milk into each skimming space in exact proportions, so that each disc must do its full share of the work—another reason why the Milwaukee gets more cream. Every Milwaukee is tested with whole milk before it leaves our factory.

Write for beautiful, new catalog, just off the press, and the name of your nearest Milwaukee dealer.

MILWAUKEE SEPARATOR MFG. CO.

245 Madison Street Milwaukee, Wisconsin

Minneapolis Panel Silos — Built of Steel and Wood

Cannot collapse when empty, rest uniformly on foundation, no tightening of hoops. Mechanically, scientifically, structurally correct.

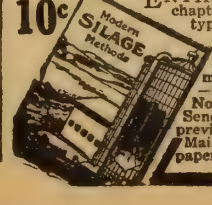
New 1916 drain joint means longer life because seams and joints are always dry.

CATALOGUE AND INFORMATION SENT ON REQUEST.

Puffer-Hubbard Mfg. Co., 3205 26th St. East, Minneapolis, Minn.

New Edition (264 Pages) of "Modern Silage Methods"

Only 10c



ENTIRELY a new book—new chapters—tells facts about every type of silo—home made, stave, brick, cement, tile, metal, pit, etc. Tells best for your needs —impartial suggestions for making most profits. 264 pages —10 page index—Copyrighted Nov. 1914, covers 41 silage crops. Send for new book; it beats all previous editions. Write today Mailed for 10c. Mention this paper. Silver Mfg. Co., Salem, O.

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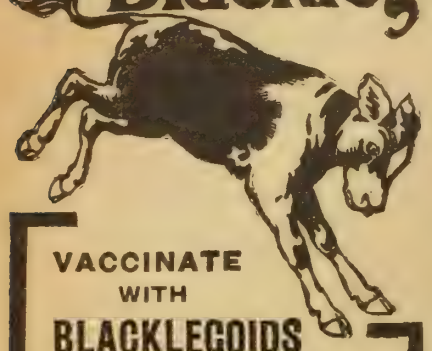
Sell Lange's Extracts, Spices, Toilet Articles, Teas, Coffees, Remedies and Veterinary Specialties, direct from wagon to home. Long-established, well-known big line, fine profits. Steady work in a business all your own. You furnish horse or team, we supply rig on easy terms. Previous experience unnecessary—we train you in salesmanship. Make big money. Our contract beats all others. Exclusive territory near your home. Write us quick.

E. A. LANGE, CO., Dept. 3, DePere, Wis.

No More Blackleg



VACCINATE WITH **BLACKLEGOIDS** and save the animals.

BLACKLEGOIDS are

EASIEST
SAFEST
SUREST.

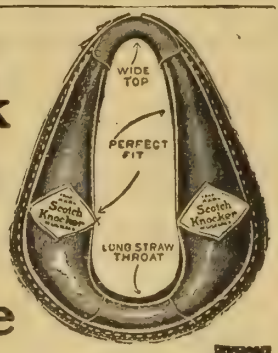
Used and endorsed everywhere that Blackleg is known.

Order through your veterinarian or druggist.

Write us for circulars describing Blackleg and telling how to prevent it.

PARKE, DAVIS & CO.
Department of Animal Industry,
DETROIT, - MICHIGAN.

More Work From Your Horse



YOU can't expect good work from your horse when his shoulders and neck are hurting under an ill fitting collar.

Scotch Knocker Horse Collars, by their perfect fit, *prevent*—even *cure*—Galled Necks, Sore Shoulders. They are built to conform to every bone, every muscle—to work *with* your horse and assist.

Made of *real* seven-ounce *bark*-tanned leather. Stuffed with hand-flailed, long rye straw. Faced with soft sweat-and-rain-proof buckwheat hulls. Triple reinforced at throat. Write for *free* book.

Minnesota Harness Factory, Inc.
106 2nd St. West, Winona, Minn.

Scotch Knocker Leather Collar

Modern Hog House Plans FREE CHIEF Sunshine Hog House Windows

Let us send you our new, modern hog house plans; complete plans and details of construction of the latest, best and most improved type of hog houses. Four complete plans absolutely free to you; every one practical and valuable. They embody the features you want in a modern hog house.

Chief Sunshine Windows are the big, valuable feature of the modern hog house. They are the roof windows that let in sunshine directly on the floor of your pens every day the sun shines. Made of heavy galvanized steel-glass protected by wire netting. Strong, durable windows that insure you more hog profits. Leak-proof, rust-proof and rot-proof. Easily installed in any hog house, new or old. Cost no more than wooden windows and are many times better. Write for booklet on Sunshine Windows and FOUR FREE PLANS today. Make your hog house modern and pocket more profits.

SHRAUGER & JOHNSON
800 Walnut St. Atlantic, Iowa

Kills Prairie Dogs and Gophers of all kinds. Endorsed by State Experimental Stations. 1400 tablets prepaid for $1.25. Warranted. Raticide Tablets, 25c Ask druggist or send direct.
Booklet Free. F. D. Chemical Co., Ft. Dodge, Ia.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Fleas.

Will you please tell me how to get rid of fleas on cats? I dipped them once and the cats all died.

To rid cats of fleas the best treatment is frequent grooming and bathing in a 2 per cent solution of creolin or lysol. This must be repeated at times. Do not use stronger than 2 per cent solution. The use of a very few drops of oil of anise or oil of pennyroyal on the hair is of benefit. Clean and disinfect the cats' sleeping quarters.

Worms in Colts.

I have six colts coming two and three years old which I think are wormy. Would like to know the amount of turpentine and linseed oil to use.

The amount of turpentine to be used is from one-half to one ounce in two to three ounces of linseed oil. This amount should be given twice daily for three or four days and then followed with a purge of aloes one ounce. Do not repeat the dose of aloes. You will get better results from the turpentine if you feed the animals very lightly for twenty-four to forty-eight hours before using it.

Lame Mule.

I have a mule that was required to pull a heavy load two months ago, and has been lame ever since. First it was lame in the right hind leg and now it is in the left leg. She carries her leg all the time. It seems to be in the stifle joint.

Your mule has probably been severely strained from hard pulling, but from the few symptoms you give it would hardly be advisable for one who has not seen the animal to prescribe. It may mean dollars to you in the long run if you have your local veterinarian give this animal a thorough examination and then advise treatment according to the findings.

Digestive Disturbance in Sheep.

I am losing some of my sheep. They get lame in front feet and lie down and die in from one to two days. My sheep are fine and fat. They have had the run of the meadows and I have been feeding silage. I have heard that silage kills them. Their gall is almost ready to burst.

The disturbance you speak of is probably due to digestive derangement which, in turn, is the result probably of too much concentrated foods. It has been found in a good many cases that by diminishing or withdrawing the grain ration and feeding on small quantities of clean, wholesome hay the sheep will show no further disturbance.

Cataract.

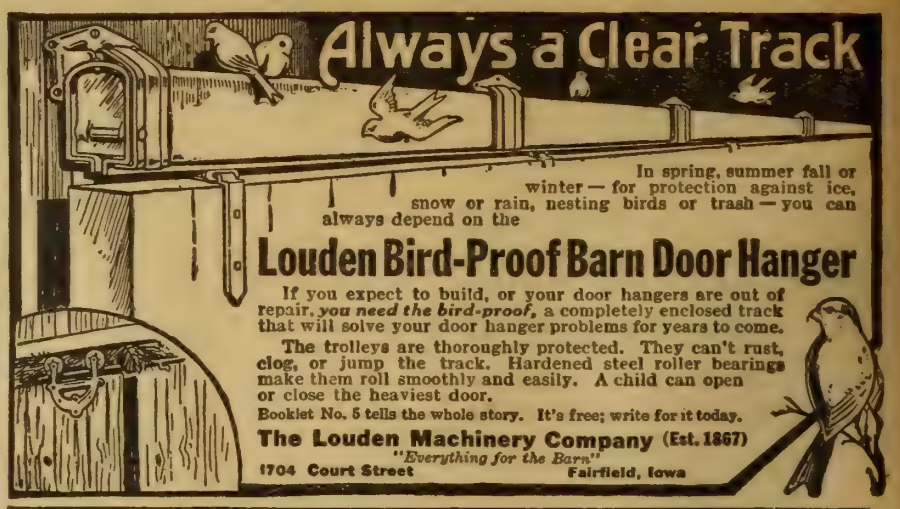
I have a fine black Percheron three-year-old mare that has something the matter with her eyes. About a year ago I noticed a little white speck in one corner of her eye. This winter the eye has become white almost all over the eyeball and she does not see any with that eye. The last few days the other one has been getting weak. The water runs out of both eyes. Will you please tell me what I can do for them, if anything? I have not done anything in the way of doctoring them.

This condition is frequently the result of recurrent ophthalmia or moon-blindness. It is quite doubtful if you will be able to successfully treat her yourself. A competent veterinarian may be able to save the eye that is not yet destroyed. However, it may be so far advanced as to not respond to treatment.

Ring Bone.

I have a six-year-old mare that has gone lame in the right front leg. There seems to be a bony enlargement just above the pastern joint. A doctor book I have describes it as ring bone. Can anything be done for it? I loaned the mare to a fellow last fall and she went lame as soon as she was returned.

As your description of the trouble is lacking in detail we will take your diagnosis. It is very probable that your horse is affected with ring bone, which is by now of chronic nature. The outcome of treatment for ring bone depends a great deal on cause, location, time of standing, etc. Most cases of ring bone have become chronic before treatment is begun. After a bony enlargement is noticeable they are more difficult to treat and get results. You may get results by blistering the affected parts with biniodid of mercury and cantharides ointment and then letting the animal rest for several weeks. If this does not prove effective the parts should be point fired by a competent veterinarian. In any event, do not expect the results to be wonderful.



In spring, summer fall or winter—for protection against ice, snow or rain, nesting birds or trash—you can always depend on the

Louden Bird-Proof Barn Door Hanger

If you expect to build, or your door hangers are out of repair, *you need the bird-proof,* a completely enclosed track that will solve your door hanger problems for years to come.

The trolleys are thoroughly protected. They can't rust, clog, or jump the track. Hardened steel roller bearings make them roll smoothly and easily. A child can open or close the heaviest door.

Booklet No. 5 tells the whole story. It's free; write for it today.

The Louden Machinery Company (Est. 1867)
"Everything for the Barn"
1704 Court Street Fairfield, Iowa

SEED CORN Testing 95%. A limited amount of genuine 1915 **Godard's Silver King** grown here (fifteen miles from Minn. line) and picked before the frost, now drying in our new brick seed house. Also Choice Silver King grown by others. Have drying also the following varieties of fancy seed ears: **Minnesota, No. 13; Wimple's Yellow Dent; N. W. Dent.** We also have several lots of fancy 1914 seed corn. If preferred, we can furnish our Minnesota patrons with choice seed grown in the latitude of Northfield, Minn. We give you all the time you need after receiving the seed to test it and satisfy yourself of its high quality, and will promptly refund your money if dissatisfied. Write today for our "Guaranteed Seed-Corn" prices and descriptions.

THE ADAMS SEED COMPANY BOX 50, DECORAH, IOWA

Ensley says—save money on Fence-Paint-Roofing

Before you put up that fence—or do that roofing or painting job, get Ensley's Free Catalogs—one on each subject. You absolutely can't afford to buy anywhere before you study these books—greatest ever issued on **Fence, Paint and Roofing.**

ENSLEY'S PRICE IS RIGHT

Quality, too. Enormous output makes attractive prices. Big stock. Prompt delivery. You get what you want when you want it. Catalogs give you complete information—many helpful suggestions. You always get a square deal from Ensley. Send a postal now—specify which catalog you want—**Fence, Paint or Roofing.**

Free Catalog

THE F. B. ENSLEY CO., 4030 ENSLEY BLDG., DETROIT, MICH.

Proud of Wisconsin.

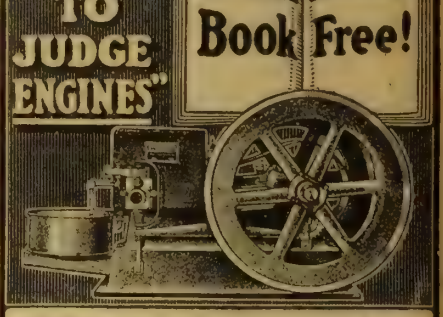
Principal S. M. Thomas, in a recent issue of the Wisconsin Journal of Education, sets forth in a concise and interesting style the advantages of the rural school system in Wisconsin. In a statement entitled "Wisconsin Leads, Doesn't This Make You Proud of Your State?" he writes:

I am proud of a state that
Is one of four states that grant state aid for improved physical conditions in country schools;
Is one of fifteen states giving state aid for consolidation and transportation;
Is one of six giving state aid to graded schools;

Is one of three where the state department may pass judgment on the fitness of the schoolhouse and enforce the penalty;
Is one of eight which grant state aid either on a basis of teaching efficiency or minimum salary;
Is one of three to place a premium on hiring country school-teachers with certain qualifications;
Is one of fewer than four states that require one year of professional training of those who enter upon the work of teaching country schools.

I am proud of a state
Whose law provides for a library in every country school with yearly additions;
That provides facilities for country school-teacher training in normal schools, county training schools and high school special courses;
That provides for supervision in each county in addition to that by the county superintendent;
That brings the school board members together in annual convention in each county;
That offers a high school education free to all boys and girls within its borders;
That has a minimum rural school year of eight months;
That, though she has all these things, is not satisfied with conditions as they are, but is constantly looking for the best in country school education.

"HOW TO JUDGE ENGINES" **A Valuable Book Free!**



EVERY man who has any idea of buying a Kerosene or Gasoline Engine should have this book.

Discusses different types of engines; how constructed; how operated; how cylinders and other parts should be made to give greatest efficiency.

It has taken 30 years of engine building experience for me to learn the facts in this book. Yours for the asking.

My 1916 Model Engines are the greatest value I have ever offered. All sizes pull from 30 to 50% over factory rating.

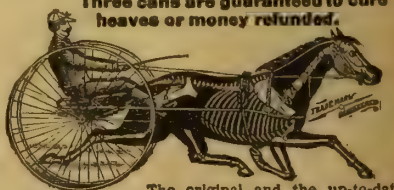
WITTE Engines—built by experts. **Free Trial—Easy Terms.**

ED. H. WITTE, WITTE ENGINE WORKS,
2711 Oakland Avenue, - Kansas City, Mo.
2711 Empire Bldg., - Pittsburgh, Pa.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

THE NEWTON REMEDY CO., Toledo, Ohio

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.

HOMESTEAD COMPANY
Engraving Dept. Des Moines, Iowa

When the Lamp Is Underneath

There are no cold corners. You save oil and get BIGGEST hatches

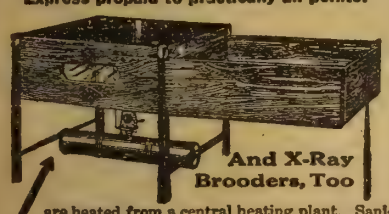
X-RAY Incubators

are heated from central heating plant squarely underneath. No cold corners or sides, no "cooked" eggs. Note the big oil tank—requires only one filling—one gallon for the entire hatch.

Get Our Factory-Direct Price and Big Free Book No. 43

Get all the facts about X-Ray construction and X-Ray hatching record. Learn all about X-Ray automatic trip that keeps the heat just right; the X-Ray generator that supplies the moisture of motner hen, producing healthier chicks; the X-Ray duplex heater that carries mild, even heat to every corner. Get X-Ray facts in big free book.

Express prepaid to practically all points.



And X-Ray Brooders, Too

are heated from a central heating plant. Sanitary, healthy, rat-proof. Gives chicks best start.

X-RAY INCUBATOR CO., Dept. 43, Des Moines, Ia.

EASY TAXES

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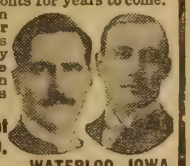

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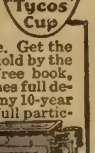

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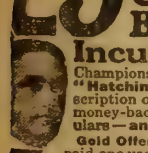

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Chick's Digestive System.

In his book entitled "Productive Poultry Husbandry," Harry R. Lewis gives considerable attention to the care and management of young chicks, among other things on this subject, he says:

Crowding the digestive system of young chicks is always a dangerous, undesirable and unprofitable practice. Dry, crushed, hard grain is the best and safest material. In artificial brooding this question of feeding must be considered, but it is of no practical importance in natural brooding, because the hen will see to the feeding. As soon as they have been put in the brooder coop, give the hen a good feed of whole corn and place water where she and the chicks can drink it, then throw a little rolled oats on the sand. This probably is the best feed for young chicks, because, owing to its light color, it attracts their attention and they can see to eat it. Bread crumbs soaked in milk make an excellent first feed for naturally hatched chicks, as do hard-boiled eggs, to which use infertile eggs can be put. The general practice, however, and it is a good one, is to start the chicks on fine cracked corn or wheat. For the first few days only a limited amount of the grain should be given, but after they have learned to eat they should be fed two or three times a day with good feed which they can clean up in a short time. Where skim milk is available, it is well to give the chicks all of it they wish to drink. Unless they have access to green grass in the runs, a little chopped lettuce or other green feed should be furnished. In the absence of any fine sand or gravel on the floor of the coop, chick grit should be supplied. After the first few weeks the ration can be gradually simplified and made less expensive. Cracked corn or wheat should serve as its basis, in addition to which the chicks should be given animal and green feed, also grit. The feeding of young stock naturally hatched is a much more simple proposition than the feeding of artificially hatched chicks in the brooder; for, in the first case, the hen sees to their welfare to a great extent.

A good ration for the first week for chicks brooded by the hen contains equal parts of cracked corn, crushed wheat and oatmeal.

Put the feed where the hen cannot reach it, she being given three times daily a grain ration of equal parts of corn and wheat. During the second and succeeding weeks gradually eliminate the oatmeal, and as the chicks grow larger substitute whole wheat for the crushed. After the first week begin to give them dry mash similar to that used in artificial brooding.

Of course, every breeder understands the importance of withholding feed from chickens when they are young, that is, during the first twenty-four to forty-eight hours. Under natural or normal conditions, when chicks are hatched in the old-fash ioned method, they are always brought out from a location where there is very little food. The chicks are at least a day old and possibly thirty-six hours old before they ever leave the nest and then after that they are trotted through the yards and orchard, where they have an opportunity to pick up grit, but their privilege of gorging themselves with food is very limited. It would not be putting the matter too strongly to say that millions of chickens are lost every year in the United States from gorging during the first few days of their lives.

Second Season Roosters.

An Illinois subscriber sends the following communication:

Should we keep roosters over the second season? I mean is it advisable to change each year? Some breeders advise me to purchase new stock while others say it is safe to keep the old. It is late; good cockerels are hard to find, and I am afraid that if I buy they will not improve my flock. Purchased some eggs last season, but the cockerels are not so good as my own, and I do not like to use them.

If your cocks are of good breeding, are strong, sturdy and good individuals then would you better use them another season than to take chances on running your flock down. If the males are enough superior to help fix a certain type it is a good plan to mate them again to their pullets, thus getting stock that carries three-fourths of the blood of the sire.

In no case is it advisable to carry this inbreeding another season. Procure males of the same general type, of the same strain we would say, but from a distant parentage, for the next year.

Briefly speaking, if we have the best of heads to our yards and keep them over, our flock will have the advantage of getting superior blood in the shortest possible time. If the males are crossed or not of pure lineage, then will our flock by keeping them again, be deteriorated in a like ratio.

We have carried this experiment a few times, sometimes from necessity and a few times from the desire to find the result. In every case the good points were intensified, with the exception of size. A flock begins to run down in size first of all. However, the birds that were not so large as the parents, when mated to just ordinary sized individuals, produced offspring fully as large as the first head of the flock.

One fine cockerel that was produced by mating his sire back to his own pullets showed up in a deformed comb. You see some of his undesirable relations that he would not have owned if they had ventured to pay him a visit, possessed a "fish tail" comb. Inbreeding, or linebreeding, brings out the best and also the worst. So if we follow this plan it is very necessary that we get the best we can procure and afford.

Successful Goose Culture.

It would be possible for any goose to be a "dry land goose" so far as it doing without water to swim in is concerned, though the fact remains that water is the natural environment of waterfowl and it is a great help in the matter of cleanliness and health.

The Toulouse goose is perhaps the most popular of the breeds, though almost any variety would do well. This breed was named from the city of Toulouse, France. The sexes are exactly alike in color, grayish above and on the breast, running to white underneath. They attain great weight under heavy fare of coarse food, while the standard weight is eighteen to twenty pounds for the goose and gander respectively.

The Embden goose is pure white in color and its standard weight is the same as that of the Toulouse. The progenitors were brought from Hanover fully 100 years ago and have been greatly improved in size. The flesh is thought to be rather better flavored than the Toulouse and it is largely bred to fill the market for green geese.

The most successful goose breeder the writer has ever known who resides in the grain belt where waste land is unknown had an acre of pasture land fenced off at the lower side of a running ditch. The lot was fenced with woven wire and boards. The geese were the Toulouse variety and six pairs were kept. This woman, who had raised geese in the southland, said that it was not absolutely necessary to mate them in pairs, but that she had better success, everything considered, than when kept in trios or pens.

About the first of March the fowls would begin to gather straw and other trash that had been washed to the banks to build their nests. When the eggs were deposited some of the building material was placed over them. About fifteen eggs would be the result of the first laying and when the goose began to get broody she was removed from the nest until the fever had passed and she would begin to lay again in a short time. The eggs were mostly hatched under chicken hens and the geese broken up the second time, and they would lay the third clutch of eggs, though not so many as the first time.

After twenty-four hours they were placed in pens where there was plenty of grass, which together with water, was all they were given until the next day. The goslings from start until finish, or until they were grown, were fed soaked bread and ground grains mixed with water. By far the most stress was placed on the grass and clean water at all times.

A large pan of water was kept within reach of them so they could wash in it, though they were never permitted to be in the rain until they grew feathers. In conclusion this woman said: "They are not hard to raise once you get them started. After they

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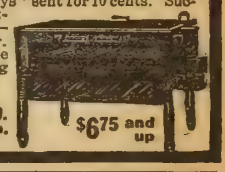

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get to be a week old they are almost certain to live unless they meet with an accident, which should not count. After the first few days they are permitted to have the run of the yards in the daytime and cooped up at night. They are not permitted to run in the dew and when it rains they are driven to their coops. A goose, I mean a young goose, is the silliest thing imaginable in the rain. They just run 'round and 'round, never attempt to get to shelter, and drown. After grown geese can live almost wholly on grass and water."

For the most part, to be profitable geese need some such place as this pasture arranged for their needs. However, many people do raise them with no other accommodations than that for chickens. Where there is low, marshy land that is not under cultivation geese can be raised almost for the labor entailed.

Poultry Raising For Women.

To the Editor:—Poultry raising is a profitable, as well as a pleasant occupation for women, especially for the housewife who is not overly strong and who desires to be out in the fresh air as much as possible. Besides, there is an income derived from this business to the woman whose home duties require her to remain at home that otherwise cannot be secured. Farm women have the advantage of the city woman so far as facilities are concerned, in as much as the fowls have free range of the farm where they may gather a variety of seeds, grains, bugs, worms, etc., thereby balancing their ration. On the farm there is sunshine and fresh air in abundance, shade can easily be provided, also fresh, pure water where the fowls can help themselves when they so desire. The hen and her brood thus given the "right of way" will return at evening with their crops bulging with the fruits of their foraging and will make rapid development. Those wishing to engage in poultry raising should not make the mistake of starting with too many breeds. The secret of success depends much upon beginning right and continuing right. Experience counts for much in successful poultry raising and one must grow into the business. If eggs is the object sought, the best results will be obtained by selecting a laying strain, as well as a laying breed. On the other hand, if one desires to raise poultry for the market they will make no mistake in choosing a breed suited for this purpose. The writer's experience is that there is more money in eggs than any other branch of the poultry business, owing to the fact that there is a daily income derived from this source. Then the laying breeds mature so rapidly that one can secure good prcies for the cockerels and all undesirable pullets. One important thing the writer has learned by experience, and that is that it never pays to keep the pullets that are undesirable for layers or breeders until winter. S. E. M.

Early Hatches.

To the Editor:—The hatching season will soon be upon us and we who live on the farm should not wait until the rush and bustle of spring to attend to the many things which should be done now if we wish to be successful in raising the early-hatched broods. On the farm, in early spring, there will be more work to be done than can be well done, and consequently the most vital points may be neglected which will insure the well being of the early hatches.

Now is the time to repair the old brood coops and feeding pens, or build new ones if needed. Good, clean, roomy brood coops and substantial feeding pens are necessary at any season of the year when raising chicks, and more especially the early hatches require warm, comfortable, water-proof brood coops. If one does the hatching with hens there will be need of several in which to keep the mother hen and little chicks. These coops can be made now and be ready when the hens come off with their broods. The brood coops for our early hatches are made separate from the floor of plank beneath, which is a little larger than the coop. The coop is placed upon the platform and can be removed when necessary and cleaned. There is no danger of the chicks being eaten by rats when roosting in floored coops. Besides, they are handy and convenient, as they can be removed and the floor aired on sunny days.

When warm weather arrives we remove the coops from the platform and allow the hen and chicks to roost upon the cool earth, which we think is better at this time, as the chicks are larger and do not require so much warmth. We remove the coops to a new, clean place every few days, as the accumulation of manure increases as the chicks grow older.

If the hens and chicks have free range with the older fowls, a feeding pen is a necessity, for the older ones will get the bigger part of the food if they are fed together. Besides, the little things will be trampled by the older fowls and the consequence will be the loss of many. Our feeding pens are made of wooden slats, one style being about four feet long and of the same width and two feet high. The slats are nailed to four corner posts on the sides and ends, being nailed a sufficient distance apart to admit the little chicks when feeding. Slats are nailed on top in the same manner. The other style is made roof shaped, with wooden slats nailed far enough apart on sides and end to admit the chicks as they increase in size. We keep the feeding pens under shade trees in hot weather, with plenty of water inside so that the chicks can get a cool drink at any time. All preparations which are made now will diminish the labor after the chicks are hatched.

Geese and Duck Raising.

To the Editor:—Will some of your readers please give me some hints in your columns regarding feeding of geese and ducks before and during the laying season? Could someone also advise me why so many of the goose eggs do not hatch? My neighbors seemed to have so much trouble along these lines last year. Any advice you can give me through these columns will be greatly appreciated.

Mrs. C. E. W.

Making Your Hens Pay.

To the Editor:—"Why, I guess so!" will be the answer with a great many to whom this question is put. "Seems as if we must be doing well with our hens. The eggs bring a good price and we get a good many of them."

But do you know about this? How many eggs do you really get? How much do your hens actually bring in in the course of the year? What does it cost you to feed and care for these hens a year?

Ask these questions and before you know it you have your friend "up a stump." For not one in ten farmers can come within gunshot of knowing anything about whether his hens as a matter of fact bring in a cent over and above the cost of keeping them. They only know that eggs bring a good price and they get lots of them.

Honestly, now, how long would you think a man running a store could keep his head above water if he did business in that slipshod sort of way? Not long, let me tell you that. He knows that he must know not only the value of the goods he sells but the cost of those goods and the expense of selling them.

It does not require a very great deal of ability to keep track of the time spent in feeding and otherwise caring for the hens. You can get at the value of the food given very easily by measuring everything out and setting down the worth of it. In a little book you can set down the worth of the eggs sold and at the end of the year, or at any other time, for that matter, you can get your balance and know instead of guessing.

There is a lot of satisfaction in knowing, instead of guessing about these matters. And I believe that if an account such as I have mentioned were to be kept with the hens it would make us open our eyes. We would see that we are not quite as smart at the poultry business as we supposed we were.

But if any man does keep such an account as I have mentioned and finds that his balance is on the wrong side do not let him be disgusted and discouraged and throw up the sponge. It is not "a bad job," necessarily, just because you have not found a little balance where you could use it.

The thing to do in such a case is to pick out your best hens, the hens that are doing business right along, and let the rest, the hens that creep onto the roosts in your houses every night and eat right out of your hand, but do not give you back anything worth while for the feed and care, go to the meat market. And do it just as soon as you can. It is by such a process of selection that men bring their flocks up to a paying basis.

Then, too, there is much in growing the feed needed for use in your houses. Here we fail badly many times. Lets come more nearly to supporting our own hens, fellow farmers.

Subscriber.

Jersey Men Meet.

Langlade County Jersey Breeders met at the court house at Antigo on Monday at the office of the county representative, elected officers and discussed matters of interest to the breed.

Blaine Stewart was re-elected president. Harry Lyons, vice president, W. A. Reiland of Aniwa, secretary; Chas. Schotte, treasurer; and Geo. Hunt, member of the executive committee.

Chas. Schotte extended an invitation to the association to hold its summer meeting at his farm. The invitation was accepted the matter of date being left to the executive committee. It will probably be about mid June. Several bills were voted paid. F. G. Swoboda was voted an honorary member of the association.

Jersey men are elated over the showing their breed made in the Langlade County Cow-Testing Association the past year. The fact that eight out of the ten highest cows in the association were Jerseys speaks volumes for this breed and its ability to come across under northern Wisconsin conditions. They made light of the oft-expressed notion that to produce well the Jersey must be babied. Good care and feed and a clean, comfortable stable as befits any dairy cow, that is expected to produce is all that the Jersey requires.

Some of the breeders lamented the fact that it is difficult to sell a good sire even from a dam with a good record for milk and butter fat production. "The trouble is," declared one of the breeders, "too many of our farmers are too easily satisfied when it comes to a sire. They want to buy a well-bred calf for less than veal prices. Failing to get one they continue to use a scrub." "I might as well ask $1,000 for a bull calf as to ask what I am asking. I believe I would sell just as many," said another.

It was pointed out that in some localities farmer after farmer is still using a scrubby scrub bull. To pay a dollar breeding fee is considered wasteful extravagance by many.

The Jersey men are working hard to enlarge their membership and increase the interest in their breed.

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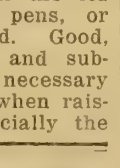

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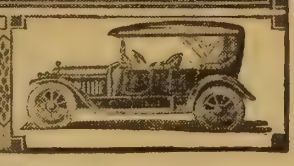

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Drive for Jump Spark Magneto.

I have a two-cylinder Maxwell runabout that runs on five dry cells. I wish to know if a common jump spark gasoline engine magneto can be used on it with a friction drive?

Answer.—If it is a low-tension magneto it may be used with a friction drive in place of the batteries. You would require the batteries for starting. If it is a high-tension magneto with a distributor it would have to be gear driven.

Making a Small Moto .

Is the wire on a telephone generator all right to use on a small motor? Could I use the magnets on the generator for the field? Could I use the armature to make the armature of the motor?

Answer.—You could use your armature complete if it has a commutator. If it has no commutator you could put one on and use the generator armature winding and core. Your permanent magnets would soon lose their magnetism. Make your field magnets by winding fine insulated copper wire on soft iron cores.

Power for Sawing.

Would like to know whether my two and one-half horse-power engine would pull my sawing outfit easier if belted to a jackshaft under the saw mandrel. If belted direct, I would use a sixteen-inch pulley on the engine. If belted to the jack shaft, I would use an eight-inch pulley on the engine and a two to one set of pulleys on the jack shaft, so that the speed of the saw would be the same in either case.

Answer.—If your engine has heavy flywheels it would be better to belt direct, as the jackshaft friction would be saved. Your engine may be too small for the work. It is large enough to run a twenty-two-inch saw if the saw is properly set and sharpened.

Some Electrical Questions.

What kind and what size wire should I use to make a rheostat for a forty-volt, twenty-ampere generator? If a small generator is run so as to deliver four amperes at ten volts, should a four-ampere fuse be used? If the speed is increased so that the generator gives five amperes at fifteen volts, would a four-ampere fuse burn out? When ordering a fuse is it necessary to state the voltage?

Answer.—If you wish to connect the rheostat directly across between the main wires use 500 feet of No. 8 B. & S. gauge iron wire. If you wish to use the rheostat in series with some load, as a storage battery, for instance, considerably less wire would be required. The amount would depend upon the resistance of the load, which is added to the resistance of the rheostat. Use a fuse as large as the maximum safe capacity of the generator. A four-ampere fuse will burn out if five amperes of current flows through it. It is not necessary to state the voltage when ordering a fuse. The heating effect depends upon the amperage, not the voltage.

Engine Lacks Power.

We have a four-horse-power Fuller & Johnson engine that lacks power. It explodes regularly and has good compression. It seems to leak between the mixing chamber and engine head, as air shoots out at each explosion. What is the trouble?

Answer.—The first thing to do is to stop the leak. Then if the engine still lacks power check up the timing. The exhaust valve should close about two inches past dead center, measured on the rim of an eighteen-inch flywheel. The spark should occur on top dead center when it is fully retarded.

Length of Rafters.

I am building a barn twenty-six feet wide with bungalow roof. How long should the top rafters be? What figures on the square should be used to cut them? How long should the bottom rafters be?

Answer.—We are not quite sure as to what kind of roof you have in mind. Since your barn is twenty-six feet wide you would require bottom raft : twenty-six feet long. We presume that if you make your roof eight feet and eight inches high you will have a satisfactory slope. However, you better lay this out; possibly you may want a steeper slope. For the above slope set the square at four and six, the four being for the vertical cut. You would require an eighteen-foot rafter, the distance measured at the center line of the rafter from the top to the bottom cut being fifteen and one-half feet.

Horse Power of Engine.

Please tell how to find the horse power of my kerosene engine. It has a six-inch bore, seven-inch stroke. It runs 450 revolutions per minute.

Answer.—The horse power formula for any engine is

$$H.P. = \frac{PLAN}{33000}$$

in which P=average pressure per square inch on piston head; L=length of stroke in feet; A=piston head area in square inches; N= the number of power strokes. To find the horse power multiply all the quantities above the line together and divide by 33000. The average pressure for a gasoline or kerosene engine is usually assumed at seventy pounds per square inch. The area of the piston head=.7854 times the square of the diameter. For a four-cycle engine under full load N=one-half the R. P. M.

For your engine

P=70 lbs. per square inch

$L = 7 \div 12 = 7/12$ ft.

$A = .7854 \times 6 \times 6 = 28.27$ square inches

$N = 450 \div 2 = 225$

$$H.P. = 70 \times 7/12 \times 28.27 \times \frac{225}{33000} = 7.8$$

The above is for a single-cylinder engine. If the engine has two cylinders multiply by two.

Gas Engine for Tractor.

I have a stationary gas engine that I am thinking of mounting on a truck to make a tractor of it. The engine has a nine-inch bore and a ten-inch stroke. The diameter of the flywheel is fifty-eight inches. The engine weighs 3,200 pounds. How many horse power will it develop? How many fourteen-inch plows will it pull?

Answer.—Your engine should develop eighteen horse power at 350 R. P. M. It would not be safe to run it much faster with so large a flywheel. It should pull two fourteen-inch bottoms under almost any condition and possibly three bottoms under favorable conditions.

Auto Does Not Start Easily.

We have a Model 81 Overland car. We have trouble in starting the motor by hand either in hot or in cold weather. When using the electric starter we have no trouble. The carburetor, manifold, compression and spark seem to be all right. The car is equipped with a six-volt, eighty-ampere storage battery. Could this battery be used for ignition when starting with better success?

Answer.—The magneto with which your car is equipped does not furnish a good spark when the motor is turned over slowly. In order to start the motor it is necessary to "spin" it, that is, turn it over rapidly several times without stopping. The battery could not be used with your present ignition system.

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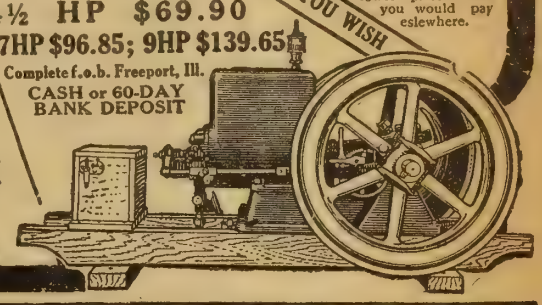

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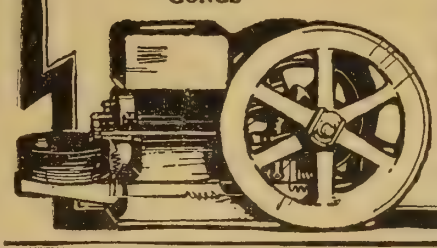

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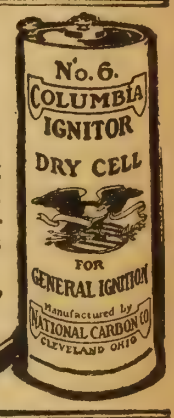

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Woman's World	.35	
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CLUB NO. 9.

Peoples Home Journal	$ .50	Our Price For All Three
St. Louis Twice-a-Week Republic	.50	
Wisconsin Farmer	1.00	**$1.20**
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CLUB NO. 10.

McCall's Magazine	$ .50	Our Price For All Three
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Kansas City Weekly Star	$ .25	Our Price For All Three
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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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SYNOPSIS.

Hepsey Burke with the Junior Warden met the new pastor, Donald Maxwell, at the depot, giving him a welcome to his new parish. During the ride out to Thunder Cliff, Hepsey's home, she gave Maxwell in her outspoken way a very clear idea of the requisites or, as she put it, what the "parish wanted in the shape of a pastor." Having arrived at Thunder Cliff, Maxwell settled himself in the room assigned to him and then while resting read a letter from "Betty." However, he decided not to tell Mrs. Burke of her just yet. The new pastor's first call was upon the Senior Warden, receiving a hearty welcome from Virginia Bascom, his daughter. Hepsey surmised that Maxwell was engaged and made a neighborly call upon Jonathan Jackson, the Junior Warden, to see what he thought about the matter. The ladies of the parish gave a missionary tea, at which Virginia read a paper feeling that she was thereby gaining the much desired attention of her pastor. Maxwell returned from a vacation with Mrs. Maxwell and Mrs. Burke piloted them to the rectory which had been repaired and furnished under her supervision.

CHAPTER XI.

Virginia's High Horse.

MRS. Betty soon succeeded in winning a place for herself in the hearts of her parishioners, and those who called to look over her "clothes," and see if she was going to "put on airs" as a city woman, called again because they really liked her. She returned the calls with equal interest and soon had her part of the parish organization well in hand.

Maxwell's choice was, in fact, heartily approved—except by Virginia Bascom and the Senior Warden. The former took the opportunity to leave cards on an afternoon when all Durford was busily welcoming Betty at a tea; and was "not at home" when Betty duly returned the call. Virginia was also careful not to "see" either Betty or her husband if, by any chance, they passed her when in town.

Of all of which maneuvers Betty and Donald remained apparently sublimely unconscious.

As a means of making some return for the good-hearted generosity and hospitality of the inhabitants, represented by the furniture at the rectory and many tea-parties under various roof-trees, Mrs. Maxwell persuaded her husband that they should give a parish party.

So invitations were issued broadcast and Mrs. Burke was asked to scan the lists, lest anyone be omitted. China sufficient for the occasion was supplemented by Hepsey Burke and Jonathan Jackson, and Nickey laid his invaluable services under contribution to fetch and carry—organizing a corps of helpers.

The whole adult village—at least the feminine portion of it—young and old, presented themselves at the party dressed in their best bibs and tuckers, amusing themselves outdoors at various improvised games, under the genial generalship of their host; and regaling themselves within at the tea-tables presided over by Mrs. Betty, whose pride it was to have prepared with her own hands—assisted by the indefatigable Hepsey—all the cakes and preserves and other confections provided for the occasion. The whole party was one whole-hearted, simply convivial gathering—with but a single note to mar it; and who knows whether the rector, and still less the rector's wife, would have noticed it, but for Hepsey Burke's subsequent "boiling over?"

When the games and feast were at full swing Virginia Bascom's loud-voiced automobile drove up, and the door bell pealed. The guests ceased chattering and the little maid, hired for the occasion, hurried from the tea cups to answer the haughty summons. Through the silence in the tea room, produced by the overpowering clatter of the bell, the voice of the little maid—quite too familiar for the proper formality of the occasion, in Virginia's opinion— was heard to pipe out cheerily:

"Come right in, Miss Virginia; the folks has eat most all the victuals—but I guess Mrs. Maxwell 'll find ye some."

"Please announce 'Miss Virginia Bascom,'" droned the lady, ignoring the untoward levity of the now cowering maid, and followed her to the door of the room full of guests, where she paused impressively.

"Mrs. Bascom," called the confused maid, through the solemn silence, as all eyes turned towards the door, "here's—this is—I mean Miss Virginia says Miss Virginia Maxwell——" After which confusing and somewhat embarrassing announcement the maid summarily fled to the kitchen and left Virginia to her own devices.

Betty at once came forward, and quite ignoring the error, smiled a pleasant welcome.

"Miss Bascom, it is very nice to know you at last. We have been so unlucky, have we not?"

Virginia advanced rustling and gave Betty a frigid finger tip, held shoulder high, and cast a collective stare at hostess and guests through her lorgnette, bowing to Maxwell and ignoring his proffered handshake.

There was an awkward pause. For once even Betty-the-self-possessed was at a loss for the necessary tactics.

A hearty voice soon filled the empty spaces: "Hello there, Ginty; I always did say those auto's was a poor imitation of a street car; when they get balky and leave you stickin' in the roadside and make you behind time you can't so much as get your fare back and walk. None but royalty, duchesses and the four hundred can afford to risk losing their cup o' tea in them things.

There was a general laugh at Hepsey's sally and conversation again resumed its busy buzzing and Virginia was obliged to realize that her entry had been something of a frost.

She spent some minutes drawing off her gloves, sipped twice at a cup of tea and nibbled once at a cake; spent several more minutes getting her hands back into her gloves, fixed a good-by smile on her face, murmured some unintelligible words to her hostess and departed, annoyed to realize that the engine of the awaiting car—kept running to emphasize her comet-like passage through so mixed an assembly—had become quite inaudible to the company.

"Such an insult!" stormed the lady, as she returned home in high dudgeon. "I might have been a nobody, the way they treated me. Dad shall hear of this; and I'll see that he puts them where they belong. The impudence! And after his t-treating me s-s-so!" she wept with chagrin and malice that betokened no good to the rector and his little wife.

Even so, it is doubtful if the host and hostess would have permitted themselves to notice the supercilious rudeness of the leader of Durford "Society," had Hepsey been able to curb her indignation.

As she and Betty and the little maid, assisted by Donald and Nickey and his helpers, were clearing up the fragments that remained of the entertainment, Hepsey broke forth:

"If I don't set that young woman down in her place where she belongs before I've done I've missed my guess: 'Please announce Miss Virginia Bascom,' indeed! If that isn't sauce, I'm the goose."

"Oh never mind, Mrs. Burke," soother Betty in a low voice; "she'll soon realize that we're doing things in good old country style, and haven't brought any city ways with us to Durford. I dare say she thought——"

"Thought nothin'!" replied the exasperated Hepsey. "I'll thought her, with her high looks and her proud stomach, as the psalmist says. I'd like—oh, wouldn't I just like to send up a nice little basket of these left-over victuals to Ginty, 'with Mrs. Maxwell's regards.'"

She laughed heartily, but Betty was determined not to let herself dwell on anything so trivial and soon, by way of changing the subject, she was put-

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THE HOUSEWIFE, 30 IRVING PLACE, NEW YORK.

ting Nickey up to the idea of forming a boy-scout corps, which, as she added, could present the village with a thoroughly versatile organization, both useful and ornamental.

"Gee," remarked Nickey, who quickly saw himself captaining a body of likely young blades, "that's be some lively corpse, believe me. When can we start in, Mrs. Maxwell?"

"You must ask Mr. Maxwell all about that, Nickey," she laughed.

"But not now," interposed his mother. "You come along with me this minute and let Mr. Maxwell have a bit of peace; I know how he just loves these teas. Good night, all!" she called as she departed with her son under her wing.

"Donald! Wasn't it all fun—and weren't they all splendid?" Betty glowed.

"More fun than a barrel of Bascoms—monkeys, I mean," he corrected himself, laughing at Betty's shocked expression.

CHAPTER XII.

House Cleaning and Bachelorhood.

APART from Mrs. Burke there was no one in the town who so completely surrendered to Mrs. Maxwell's charms as Jonathan Jackson, the Junior Warden. Betty had penetration enough to see, beneath the man's rough exterior, all that was fine and lovable, and she treated him with a jolly, friendly manner that warmed his heart.

One day she and Mrs. Burke went over to call on Jonathan and found him sitting in the woodshed on a tub turned bottom upwards, looking very forlorn and disconsolate.

"What's the matter, Jonathan? You look as if you had committed the unpardonable sin," Hepsey greeted him.

"No, it ain't me," Jonathan replied; "it's Mary McGuire that's the confounded sinner this time?"

"Well, what's Mary been up to now?"

"Mary McGuire's got one of her attacks of housecleanin' on, and I tell you it's a bad one. Drat the nuisance."

"Why, Jonathan! Don't swear like that."

"Well, I be hanged if I can stand this sort of thing much longer. Mary she's the deuce and all, when she once gets started housecleanin'."

"Oh, dear," Mrs. Betty sympathized. "It's a bother, isn't it? But it doesn't take so long and it will soon be over, won't it?"

"Well, I don't know as to that," replied Jonathan disconsolately. "Mary McGuire seems to think that the whole house must be turned wrong side out and every bit of furniture I've got deposited in the front yard. Now, Miss Betty, you just look over there once. There's yards and yards of clothesline covered with carpets and rugs and curtains I've been ordered to clean. It's somethin' beyond words. The whole place looks as if there was goin' to be an auction or a rummage sale, or as if we had moved out 'cause the house was afire. Then she falls to with tubs of boilin' hot soapsuds, until it fills your lungs and drips off the end of your nose and your fingers, and smells like goodness knows what."

"Jonathan!" Hepsey reproved.

"Are you exaggerating just the least bit?" echoed Betty.

"No, ma'am, I'm not. Words can't begin to tell the tale when Mary gets the fever on. I thought I noticed symptoms of housecleanin' last week. Mary was eyein' things round the house and givin' me less and less to eat, and lookin' at me with that cold-storage stare of hers that means death or housecleanin'."

"But, Mr. Jackson," Betty pleaded, "your house has to be cleaned sometimes, you know."

"Sure thing," Jonathan replied. "But there's altogether too much of this housecleanin' business goin' on to suit me. I don't see any dirt anywheres."

"That's because you are a man," Hepsey retorted. "Men never see dirt until they have to take a shovel to it."

Jonathan sighed hopelessly. "What's the use of bein' a widower," he continued, "if you can't even have your own way in your own house, I'd just like to know? I have to eat odds and ends of cold victuals out here in the woodshed, or anywhere Mary McGuire happens to drop 'em."

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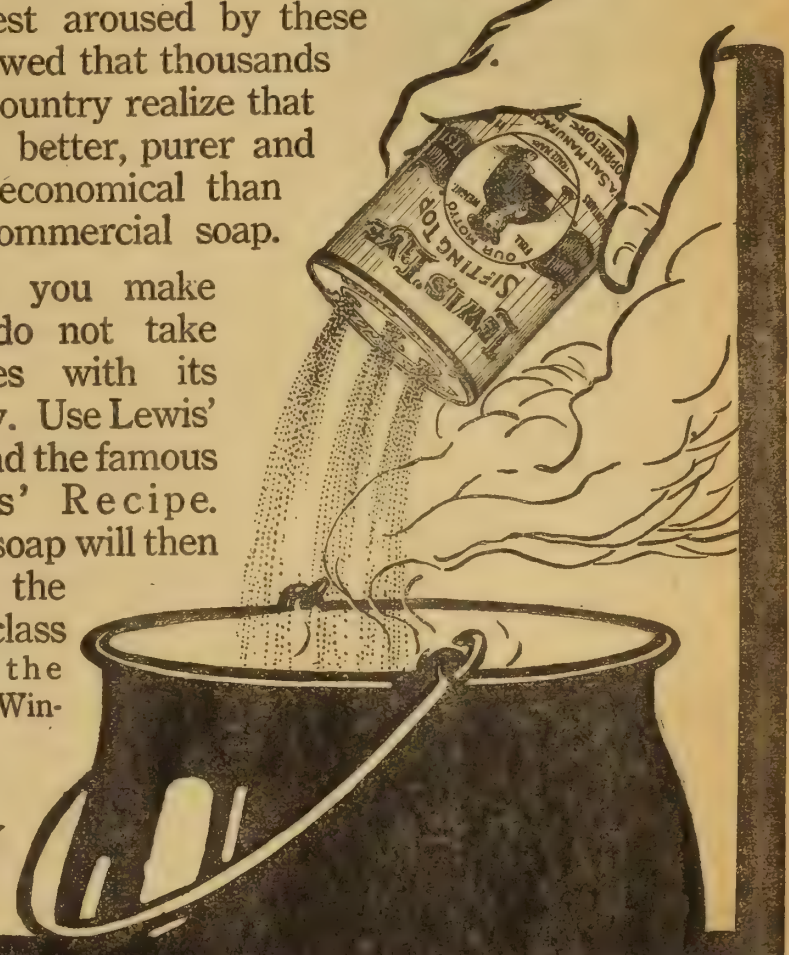
The nation-wide interest aroused by these home soap contests showed that thousands of women all over the country realize that the soap they make is better, purer and more economical than any commercial soap.

The Famous Prize-Winning Lewis Recipe for Making Soap Without Boiling

Empty a can of LEWIS' LYE into a jug containing 2½ pints of cold water. By stirring, it will dissolve immediately and get hot; let it stand until cold. In a basin melt 5½ pounds of any kind of fat or grease. ONLY IT MUST NOT CONTAIN ANY SALT. Let it stand until it is just warm, and then pour the liquid Lye into the melted fat, in a continuous stream. This should take but a few minutes' time until the consistency of syrup is obtained. Pour the mixture into a square wooden box, lined with a damp piece of muslin, to prevent sticking to the sides and bottom. Cover up with a blanket and set in the corner of the kitchen until the next day. You will then have a block of pure soap, weighing about ten pounds, at a cost of simply the can of LEWIS' LYE.

When you make soap do not take chances with its quality. Use Lewis' Lye and the famous Lewis' Recipe. Your soap will then be in the same class with the Prize Winners.



PENNSYLVANIA SALT MANUFACTURING COMPANY
Manufacturing Chemists
PHILADELPHIA

"That's tough luck, Mr. Jackson. You just come over to dinner with Donald and me and have a square meal."

"I'd like to awful well, Mrs. Maxwell, but I dasn't; if I didn't camp out and eat her cold victuals she'd laid out for me it'd spoil the pleasure of housecleanin' for her. 'Taint as though it was done with when she's finished, neither. After it's all over and things are set to rights they're all wrong. Some shades won't roll up. Some won't roll down; why, I've undressed in the dark before now, since one of 'em suddenly started rollin' up on me before I'd got into bed and scared the wits out of me. She'll be askin' me to let her give the furnace a sponge bath next. I believe she'd use tooth powder on the inside of a boiled egg if she only knew how. This housecleanin' racket is all dum nonsense, anyhow."

"Why, Jonathan! Don't swear like that," Betty exclaimed laughing; "Mr. Maxwell's coming."

"I said d-u-m, Mrs. Betty; I never say nothin' worse than that—'cept when I lose my temper," he added, safely, examining first the hone and then the edge of the scythe, as if intending to sharpen it.

Hepsey had gone into the house to inspect for herself the thoroughness of Mary McGuire's operations; Betty thought the opportunity favorable for certain counsels.

"The trouble with you is you shouldn't be living alone like this, Jonathan. You have all the disadvantages of a house and none of the pleasures of a home."

"Yes," he responded, yawning, "it's true enough; but I ain't a chicken no more, Mrs. Betty, and I've 'most forgot how to do a bit of courtin'. What with cleanin' up and puttin' on your Sunday clothes and goin' to the barber's and gettin' a good ready, it's a considerable effort for an old man like me."

"People don't want to see your clothes; they want to see you. If you feel obliged to you can send your Sunday clothes around some day and let her look at them once for all. Keeping young is largely a matter of looking after your digestion and getting plenty of sleep. It's all foolishness for you to talk about growing old. Why, you are in the prime of life."

"Hm! Yes. And why don't you tell me that I look real handsome, and that the girls are all crazy for me. You're an awful jollier, Mrs. Betty, though I'll admit that a little jollyin' does me a powerful lot of good now and then. I sometimes like to believe things I know to a certainty ain't true, if they make me feel good."

For a moment Betty kept silent, gazing into the kindly face, and then the instinct of match-making asserted itself too strongly to be resisted.

"There's no sense in your being a lonesome widower. Why don't you get married? I mean it."

For a moment Jonathan was too astounded at the audacity of the serious suggestion to reply; but when he recovered his breath he exclaimed:

"Well, I swan to man! What will you ask me to be doin' next?"

"Oh, I mean it, all right," persisted Mrs. Betty. "Here you've got a nice home for a wife and I tell you you need the happiness of a real home. You will live a whole lot longer if you have somebody to love and look after; and if you want to know what you will be asking me to do next, I will wager a box of candy it will be to come to your wedding."

"Make it cigars, Mrs. Betty; I'm not much on candy. Maybe you're up to tellin' me who'll have me. I haven't noticed any females makin' advances towards me in some time now. The only woman I see every day is Mary McGuire, and she'd make a pancake griddle have the blues if she looked at it."

Mrs. Betty grasped her elbow with one hand and putting the first finger of the other hand along the side of her little nose whispered:

"What's the matter with Mrs. Burke?"

Jonathan deliberately pulled a hair

SPREAD NOW!

SPECIAL PROPOSITION
10,000 GALLOWAY
NO. 8 SPREADERS

This **extra offer** is made with the idea of getting **ten** or **more Galloway Spreaders** in every **township** in the next few weeks. One Galloway No. 8 Spreader always sells from one to a dozen more in the same community. That's why I make this **new special offer** to distribute **10000 advertising spreaders quickly**

S-17

LOOK! Our new 250 page catalog. Tells you all about the **special patented** features on the famous Galloway Manure Spreader; how to make a spreader pay for itself in six months' time; shows why 3 **exclusive Galloway** patented features make the Galloway Spreader worth $50 more than any other spreader, but cost nothing extra on the Galloway; also shows **full line** of other **Galloway implements** and **merchandise.**

NEW SELLING PLANS

Cash or time—**one year** to pay—**installment plan—note settlement—half cash half note—bank deposit or cash,** at prices so low you cannot afford to do without a manure spreader now. We sell direct at **less** than wholesale from factory to farm at the **actual cost** of material, **actual cost** of labor and only one small profit based on tremendous output.

LOOK! 3 GREAT INVENTIONS

They make the Galloway Spreader in a class by itself, are:

1. **Invincible Roller Feed** worth $25 on any other spreader. **Exclusive** on the Galloway, but costs you nothing extra. One of the secrets of our light draft.
2. **Patented Automatic Stop, Uniform Clean-Out Push-Board** worth $10 on any spreader. Costs nothing extra on the Galloway.
3. **New Steel Everlasting Beater** with **V-Rake** which gives wide spreading and tears the manure into shreds for uniform available **plant-food.** This exclusive feature alone worth $15. Costs nothing extra on the Galloway.

Many other **special 1916 features:** low down; double chain drive; cut-under front wheels; channel steel frame, trussed like a steel bridge; steel tongue; endless force feed apron; top of box only 42 in. high; front wheels under the box, and other special features make it easy for two average horses to handle.

SPREADER PRICES LOWER

Get in on this **special distribution advertising offer** from now until **seeding time.**

At the end of twelve months, if the Galloway spreader has not **paid for itself,** if you have hauled out 100 loads of manure or more, and it has not proven everything I say for it, I agree to **take it back,** pay freight **both ways** and **return your money,** no matter on which plan you buy. Could I make this offer if I was not **sure** of my ground? Every sale backed by a **$25,000 bank bond**—an additional guarantee to you! Galloway spreaders have passed a field test in every state and almost every county.

Ask for this new 250-page book and special proposition today.

Spreaders shipped from Waterloo, Kansas City, Council Bluffs, St. Paul and Chicago.

Wm. Galloway Co., Box 39 Waterloo, Iowa
Manure Spreader Manufacturing Specialists

MAKE BIG CROPS!

Don't Miss the Big Money

THE virgin soil that the stumps keep out of cultivation is the best soil you have. You can pull out an acre or more of stumps in a day at a cost of from 3c to 5c per stump. No matter how big or tough the stump, it walks right out when the Hercules gets hold of it. With the stump come all the long tap roots that spread out in all directions. The land is left ready for cultivation.

HERCULES
Triple Power Stump Puller

Let us send you proof that thousands of farmers have made big money by the Hercules. Get our money saving proposition.

HERCULES MFG. CO.
159 24th Street, Centerville, Iowa

Ask About Hand-Power Pullers
Low Price
120,000 Pounds Pull

FORD JOKE BOOK

All the latest and best funny jokes, and stories on the FORD automobile. Hundreds of them and all good ones. Also JITNEY jokes, Moving Picture, and Stage jokes. Laugh till you shake. A neat colored covered book by mail for only **TEN CENTS.**

PIKE PUB. CO. BOX 324
SO. NORWALK, CONN.

from his small remaining crop and cut it with the scythe, as if he had not heard Betty's impertinent suggestion. But finally he replied:

"There's nothin' the matter with Mrs. Burke that I know of; but that's no reason why she should be wantin' to marry me."

"She thinks a great deal of you; I know she does."

"How do you know she does?"

"Well, I heard her say something very nice about you yesterday."

"Hm! Did you? What was it?"

"She said that you were the most—the most economical man she ever met."

"Sure she didn't say I was tighter than the bark on a tree? I guess I ain't buyin' no weddin' ring on the strength of that. Now, Mrs. Betty, you just try again. I guess you're fooling me!"

"Oh no, really I'm not. I never was more serious in my life. I mean just what I say. I know Mrs. Burke really thinks a very great deal of you and if you like her you ought to propose to her. Every moment a man remains single is an outrageous waste of time."

Jonathan grinned as he retorted:

"Well, no man would waste any time if all the girls were like you. They'd be comin' early to avoid the rush. Is Mrs. Burke employin' your services as a matrimonial agent? Maybe you won't mind tellin' me what you're to get if the deal pulls off. Is there a rake-off anywheres?"

Betty laughed, and Jonathan was silent for a while, squinting at the scythe-edge, first from one angle, then from another, and tentatively raising the hone as if to start sharpening.

"Well, Mrs. Betty," he said presently, "seeing I can't possibly marry you, I don't mind tellin' you that I think the next best thing would be to marry Hepsey Burke. She's been a mighty good friend and neighbor ever since my wife died; but she wouldn't look at the likes of me. 'Twouldn't be the least use of proposin' to her."

"How do you know it wouldn't? You are not afraid of proposing, are you?"

"No, of course not; but I can't run over and propose, as I would ask her to lend me some clothesline. That'd be too sudden; and courtin' takes a lot of time and trouble. I guess I 'most forgot how by this time; and then, to tell you the truth, I always was a bit shy. It took me near onto five years when I proposed to my first wife."

"Well, now that's easy enough; Mrs. Burke usually sits on the side porch after supper with her knitting. Why don't you drop over occasionally and approach the matter gradually? It wouldn't take long to work up to the point."

"But how shall I begin? I guess you'll have to give me lessons."

"Oh, make her think you are very lonely. Pity is akin to love, you know."

"But she knows well enough I'm mighty lonely at times. That won't do."

"Then make her think that you are a regular daredevil and are going to the bad. Maybe she'll marry you to save you."

"Me, goin' to the bad at my age, and the Junior Warden of the church, too. What are you thinkin' of?"

"It is never too late to mend, you know. You might try being a little frisky and see what happens."

"Oh, I know what would happen all right. She'd be over here in two jerks of a lamb's tail and read the riot act and scare me out of a year's growth. Hepsey's not a little thing to be playin' with."

"Well, you just make a start. Anything to make a start and the rest will come easy."

"My, how the neighbors'd talk!"

"Talk is cheap; and besides, in a quiet place like this it's a positive duty to afford your neighbors some diversion; you ought to be thankful. You'll become a public benefactor. Now will you go ahead?"

"Mrs. Betty, worry's bad for the nerves, and's apt to produce insomny and neurastheny. But I'll think it over—yes, I will—I'll think it over."

Whereupon he suddenly began to whet his scythe with such vim as positively startled Betty.

(To be continued.)

OUR LEGAL DEPARTMENT

THIS department is edited by a practicing lawyer who has had years of experience at the bar. He will give accurate and reliable answers to all legal questions when they are of sufficient importance to be of practical interest to any considerable number of our readers. Subscribers who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delaying printed answers, those to whom it is important to receive an immediate reply by mail should remit $1.00, addressed as above.

LAW QUESTIONS.

Adverse Possession Title.

A Subscriber, Chilton, Wis.—A man has been holding land in Wisconsin by adverse possession for more than twenty years. Can he sell the land and give a warranty deed which will be safe from future attacks without proceedings in the circuit court to perfect his title?

Answer.—He would have a right to sell and convey the land by a warranty deed and the title would be good, but it would not appear on the records in a perfect claim of title; therefore, it would be well for him to bring an action in the circuit court to quiet title by a decree of the court and have a certified copy of such decree recorded and that would show perfect title.

Good Cause for Divorce.

A Subscriber, Bancroft, Wis.—I am the wife of a husband who is jealous and selfish. I do all the housework and besides work for him in the fields and help do the chores about the farm and I am in all ways a good and honest wife. We have six children, the oldest eleven years old and the youngest four months old and I care for them. My husband abuses me and ill treats me and beats me and all the neighbors know of it. I have not a cent to pay a lawyer. What can I do?

Answer.—This is indeed a distressing case. We advise you to go to a good lawyer in the county seat of your county and tell him all about it and have him get a divorce for you. He will attend to it and compel your husband to pay the expenses.

Will—Proceeds of Farm.

A Subscriber, Brutus, Mich.—A and B were husband and wife living in Iowa and A owned a farm there, the title to which was in the wife's name. B made will providing that after her death the farm should be sold and certain sums paid to the children out of the proceeds and the balance to go to A. B died and the farm is not yet sold. During B's lifetime A farmed the land and received all he made from it. Who is entitled to the rent of the farm from the time of B's death until the farm is sold under the will?

Answer.—If there is no unnecessary delay in selling the farm, and it brings a price more than sufficient to pay the children the sums provided for them by the will, A would be entitled to the rents and proceeds of the farm until it is sold.

The importance of growing only pure-bred grains is emphasized in the following from the Jackson County Journal, which also points out the profits in pedigreed seeds: "Jackson county farmers will find it profitable to get into the pedigreed-seed business Several of our farmers are already making a good thing in raising pedigreed seed, but the opportunity to engage in it is unlimited. Some lost out on their corn last year the same as corn growers generally, but early frosts are not likely to come frequently. But other pedigreed seeds did well. There is not only the increased yield from such seed but the selling of grain for seed is more profitable than selling in the open market. A start can and should be made on every farm, and the seed for such a start can be obtained right here at home. Those farmers having pedigreed seed for sale can help the movement along by inserting an advertisement in the local papers as the planting season approaches. Better seed, like better live stock, means increased profits from the same amount of labor and effort expended. Wisconsin is fast becoming the great seed-raising state of the nation, and there is no county in the state better adapted to the business on account of soil and climatic conditions than our own.

Eggs shipped for some distance should be carefully packed and placed in a quiet place at least twenty-four hours before placing them under hens or in the incubator.

6 Beautiful Roses FREE
with
The People's Popular Monthly
2 Years for Only 50c
If you send your order by
MARCH 25TH

EVERYONE loves flowers and the one special favorite of all is the Rose. Naturally, it is the most popular of all. The beauty of the Rose is first manifested in its long, graceful, shapely and solid buds, delicate and firm texture and opening to present a depth of blossom showing a formation of shell-like beauty.

Read this Description of the Roses we Send

Thousand Beauties.—A very appropriate name to give this great novelty. We are free to predict that Thousand beauties will become the most sensational climbing rose yet introduced. A single cluster of flowers is a whole bouquet in itself. Blooming profusely from the beginning of June until the last of July, the flowers appear in large clusters, ten to fifteen in a cluster, are of splendid size and quite double. The colors run from delicate balsam or tender rose through the intermediate shades of bright rose and carmine, with white, yellow and various other delicate tints showing. There is no other rose in cultivation like it.

American Crimson Rambler.—The most magnificent Hardy Crimson Rose in existence. Splendid flowers, two and one-half inches across, perfectly double. Borne in grand clusters completely covering the whole bush. Color, pure, deep rich crimson, far brighter and more intense than the old "Crimson Rambler." The Rambler does not fade, bleach or wash out, but holds its bright dazzling color to the last, which adds greatly to its value. Has handsome foliage, does not mildew, and is a most abundant bloomer.

Lady Alice Stanley (Pink).—Whatever else one may plant in the way of Roses, however much the grower may be in love with other varieties, the garden should contain this Rose to be complete. It is a silvery-rose in color with a sweet fragrance, and the flowers come freely and constantly. The blossoms are large, full and globular.

Mrs. Aaron Ward (Yellow).—A creamy-yellow rose, strikingly pleasing, both in form and fragrance. The flowers are large and heavy, beautiful in every respect, and come freely upon the plant. The growth of the bush is inclined to assume a compact form and produces flowers in abundance. It blends well with the other yellow varieties. Yellow roses are often desired by many growers of this flower and this one is sure to become a great favorite.

Leslie Holland (Red).—A fragrant dark velvety crimson Rose that flowers constantly upon a strong, vigorous plant, whose foliage is remarkably resistant to mildew. The color is constant and durable, being one of the few dark red Roses that does not rapidly fade.

White Killarney.—A creamy-white Rose, very highly perfumed, with a texture of blossom that forms a wonderful substance. The flowers are large, full and heavy, and follow each other so rapidly that there is not a noticeable pause between the successions of blossoms. The bush is particularly strong and vigorous in its growth, with all large, handsome foliage, which sets off the exquisite flowers in a most charming manner.

Remember—You will receive the six rose bushes (1 year plants) just as described and The People's Popular Monthly for 2 full years for only 50c. ***No need to write a letter*** but just write your name and address on the coupon below and fold 50c (stamps, coin, check or M. O.) in a piece of paper. We will know exactly what you are to receive and your order will have our best attention.

COUPON FOR THE SIX BEAUTIFUL ROSES

People's Popular Monthly,
Des Moines, Iowa
DEPT. H.

Gentlemen—
Enclosed find 50c for which send me the 6 Beautiful Roses, and The People's Popular Monthly for 2 full years.

Name .....

Town .....State .....

Street or Rt. No.....

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

The Care of the Palm.

Most every housewife likes to number among her indoor plant possessions a beautiful palm, but not every one is successful in her efforts to grow them. As a general thing, failure is due to the soil more than to any other one thing. Most palms thrive best in a mixture of garden loam and sand, using just enough of the sand to make the mixture friable. Old and well-rotted manure from the cow yard is a valuable addition to the other ingredients of the soil, but under no circumstances should fresh or unrotted manure be used. If the old manure cannot be obtained, finely ground bone meal may be substituted in its place. A teacupful of this material to a half bushel of soil is about the right proportion.

Having your soil prepared and ready, see that the pots you are going to use have proper drainage. Put an inch or an inch and a half of broken pottery, brick or charcoal in the bottom of each pot, taking care that the drainage hole in the bottom of the pot is not obstructed. Then fill with the soil mixture.

A deep, rather than a broad, pot is desirable, as the roots of palms go down instead of spreading out.

Palms do not do well if their roots are overwet. Therefore, be sure that water is not allowed to accumulate in the jardinieres in which the pots are set. Water is bound to collect in the jardiniere unless it is looked after frequently and if it is allowed to stand until there is enough to come up about the pot the effect will be the same as if the plants were given no drainage.

The question of when to water palms is one that should be given attention. This should be done regularly and you may be sure that whenever the surface of the soil looks dry it is time to give the palm a drink. Use enough water to thoroughly moisten the soil clear to the bottom of the pot, or until a little water runs out the hole in the bottom of the pot.

Let the palms have plenty of light in order to keep the soil sweet and wholesome. A sour soil means a diseased plant.

Wash the foliage at least once a week, using a soft cloth or a camel's hair brush. A small quantity of sweet milk added to the wash water will give the foliage a glossy look that will add much to the attractiveness of the plant.

If the plant seems inclined to stand still and produce no more leaves, make an application of some good fertilizer and examine the condition of the soil at the same time to make sure that it has not been injured by undue retention of water.

Do not repot your plants until you are sure that the old pots are filled with roots. The plants should be interfered with as little as possible. An annual repotting is not necessary unless the plants are root bound.

In repotting slip the ball of earth out of the pot and set it in another one a size or two larger and fill in about it with fresh soil. On no account scrape the soil away from the roots. To do so often causes the death of the plant. Large pots and frequent repotting are not necessary if the soil is kept well supplied with nutriment by the use of fertilizers.

Better Baby Clothes.

Remember when you were a baby how the ruffles of tatting and lace about the neck and wrists of your dresses sawed and irritated you until you cried? Remember how you used to get tangled up in the lace ruffles around the bottom of your clothes when you tried to learn to walk or creep? Profit by your own experiences and clothe your baby simply and comfortably. Instead of spending your time on the worse than useless task of embroidering and ruffling baby's clothes spend it in resting and in taking much-needed outdoor exercise. So says Miss Ethel Ronzone, of the University of Missouri College of Agriculture.

This ruffling and decorating of baby clothes is passing. The needs of the child are being considered instead of placing the emphasis on appearance. The need for proper and adequate clothing for the child is of great importance. The new-born babe is not capable of regulating its body temperature. Since the temperature must be kept about 98 degrees Fahrenheit it is necessary to control it by the use of clothing. This does not mean that the child be wrapped in several layers of flannel all the year around. It is as necessary to provide for getting rid of excess heat in summer as it is to provide for conserving heat in winter.

CLEO EPHRAIM CASKEY.

Son of Mr. and Mrs. Arlie B. Caskey, is four months old and weighs seventeen and three-fourths pounds.

The fabric which is best for conserving heat is wool. This fabric is warm on account of the air spaces between the fibers. Cotton flannel for the same reason is warmer than plain cotton material. The disadvantage is that it loses its woolly character with repeated washing. When it comes to losing heat in summer we find that cotton fabrics smooth in character are better, since they are good conductors of heat. On a very warm day the fewer the clothes the better. By careful watching and occasionally feeling the child's hands and feet the mother can tell when some added clothing is needed.

The frequent and repeated laundering which baby clothes require makes it necessary that they be simply made and of material easily cared for. Absence of tucks, ruffles and embroidery makes the laundering problem simpler. The use of crepe for slips does away with the necessity for ironing. Mixtures of wool and cotton are less apt to shrink than all-wool garments Diapers made of cheesecloth with pads of old towels or soft knit material absorb more moisture and are more easily cleaned than the usual diaper.

The ease with which the child can be dressed should be considered. Slips and night gowns should open all the way down the back. Gertrude petticoats opening on the shoulder are convenient.

Wants Whitewash Remover.

To the Editor:—I am coming to the Home Department readers for a little advice. It will soon be time to clean house and I would like to have someone tell me how to remove whitewash from walls so that the paper will stick. I want to paper a room where the walls have been whitewashed and I find that the paper will not stick. Can someone help me? —M. A. G.

Baby Sleeps Out of Doors.

To the Editor:—I am a reader of the Home Department and have been for over two years. I love to read it and only wish it would come every day instead of once a week.

FREDERICK MAX MULLER.

I see other mothers have sent pictures of their babies so I will send one of our baby, Frederick Max Muller. At the time the picture was taken he was six months old and weighed twenty-three pounds. He has had mother's milk and has had crackers and oatmeal twice a day ever since he was two months old. He will be ten months old this month and he walks around chairs and creeps. From the time he was six weeks old until the first of November he slept out of doors. Now he sleeps in a very cool room and sleeps all night through.

I enjoy reading the letters in the Home Department and wish more of the readers would write. I like to crochet and hope there will be more patterns in our department.

Mrs. Michael Muller.

RICHARD MINER BLACKBURN.

Likes Mothers' Letters.

To the Editor:—I have been much interested in the mothers' letters in the Home Department. I am sending a picture of my little girl, Loretta Jane. This picture was taken at the age of one year and four months, when she weighed eighteen pounds. She has always been a fresh-air baby and has always been well except for a little cold or two. She is now three years and eight months old and weighs forty-five pounds. She is the only child we have and we surely think a lot of her.

LORETTA JANE.

Please let us have more baby pictures and mothers' letters.

Mrs. W. J. Beidler.

"World's Fair" Starter.

To the Editor:—I note in the last issue a request for bread starter. I presume the famous "World's Fair" starter is the one in mind and send it herewith. I have used it with great satisfaction for several years.

For making: Take one pint of lukewarm, soft water, a half pint granulated sugar and flour enough to make batter as thick as for pancakes. Beat well and keep moderately warm for from two to seven days. Be sure to use soft water and to never salt the starter. The night before baking set bread sponge the same as with any other yeast, using the starter. In the morning take out half a pint of the sponge into a glass jar, sprinkle over it half a cup of granulated sugar, cover loosely and keep in a cool place for next baking. Now salt your sponge, add a spoonful of lard and flour to knead. Work until smooth and velvety. Cover and keep warm. When real light push down and let rise again, then make out into loaves with as little handling as possible. When loaves have increased to twice original size put in oven with low fire for first fifteen minutes, then increase heat and bake until done, time depending on size of loaves. This yeast will last indefinitely if used once a week or oftener.

For keeping sausage for summer use I pack the raw meat in gallon jars and bake three hours (slowly), then cover with melted lard. The product is as good as when made way into August or as long as it can be kept from eaters. —Alice Elizabeth Wells.

Potato Yeast.

To the Editor:—I read the Home page every time the paper comes and enjoy it very much, as it always has such good instructions and helps the housewife so much.

I read in the last paper that someone wanted a bread starter. Here is one that I have used for a long time, "potato yeast." Two quarts boiling water, four or five large potatoes, one-fourth cup salt, three-fourths cup sugar, four and one-half cups flour, one or two yeast cakes dissolved in lukewarm water. Mix together the salt, sugar and flour. Boil the potatoes in the two quarts of water and when done pour the boiling water

over the dry ingredients, stirring meanwhile. Mash the potatoes at once and strain through a sieve to avoid lumps. Mix the potatoes with the other mixture and cool lukewarm before putting in the yeast. Let rise overnight.

A cupful of this may be put in a jar for next time. Put about half a cup of sugar on the top. If kept in a cool place it will keep a long time.

A good way to freshen your starter is by saving a little dough to add to the next baking or a little potato water.

Interested in Better Babies.

To the Editor:—I am much interested in better babies and am glad to see anything about babies in farm papers, so am sending a picture of our boy.

Richard Miner Blackburn is six and a half months old, weighs twenty-one and three-fourths pounds and is twenty-seven inches tall. He is a happy, healthy boy, is nursed regularly and never keeps anyone awake at night.

I enjoy reading other mothers' letters and hope this part of the Home Department may continue.

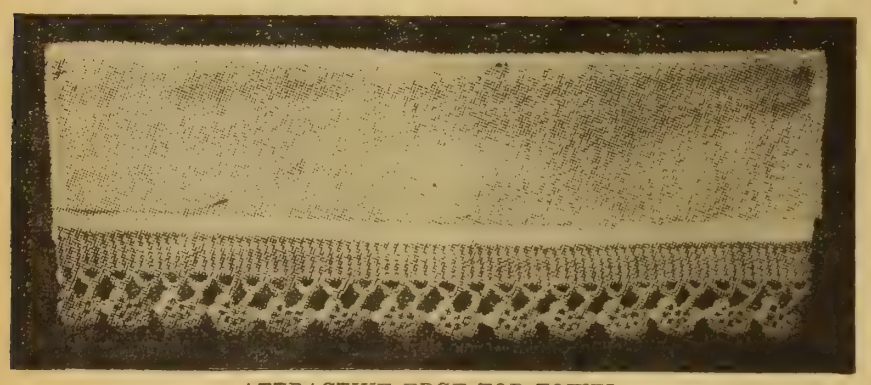
Mrs. Susie Blackburn.

Edge For Bath Towel.

Chain seven, turn, single crochet one in each stitch, chain one, turn, single crochet in each stitch, taking up back stitch to form rib. Make two and one-half ribs, or five times across. Chain five, catch back in first rib; chain one, turn, single crochet ten over five chain. Make two and one-half ribs. Chain five, catch back in first rib, single crochet five over five chain; chain nine, slip stitch in fifth stitch from hook, chain four, one treble in loop *, chain two, one treble in loop. Repeat from * four times.

AUGUST LENZ.

August is six months old and is the son of Mr. and Mrs. Ed Lenz. He weighs twenty-two pounds and his mothers says he is a "wild west" baby, because his home is in South Dakota.



ATTRACTIVE EDGE FOR TOWEL.

making six holes in loop. Slip stitch in first scallop, chain one, three trebles, one single crochet in each hole, making six small scallops. Five crochet over chain, five single crochet over chain. This completes one scallop. Repeat across towel. Fasten scallops together as shown in picture. Use No. 3 cotton.

Sends Three Recipes.

To the Editor:—I am sending you my way of putting up sausage, which is perfect if properly done. Also I am sending a recipe for starter for bread which never fails me, and an appetizing cabbage pickle.

We pack our seasoned sausage tightly in jars, large and small. Sometimes we pour warm lard over the top of the sausage, as it will keep better if the weather "turns soft" before we can fry it. We work the little cakes firm like a biscuit. Fry until the cakes press firm with a fork. The meat must be done or it will not keep. We reheat slowly and brown as we like them when wanted for the table.

The little cakes we pack in gallon stone jars, being sure the glazing is perfect. Then we pour the sausage grease on as far as it goes. Allow two inches of lard over the top of the sausage. I have tried less, but have found that the top cakes were sometimes moldy. This lard is not wasted, as we like the flavor very much in biscuit.

My mother always fried her sausage this way and I have myself for thirty years. I do not like the oven frying as it makes the meat dry. Keep in a cool place, but not in the cellar.

For a bread starter boil three medium-sized potatoes. Use the potato water and enough more water to make about three pints in all. Stir in two tablespoonfuls of sugar and a yeast cake that has been previously soaked. If it is kept warm for a few hours the potatoes will foam on top, but the next morning they will not show.

Take out one pint for starter. I keep mine in glass jars. In what remains stir flour to make batter. In a little while it will be all foamy. Sift one full sifter of flour into it, add salt and four tablespoonfuls of sugar. Work in flour until dough is right. It must not be sticky. If yeast and all is kept at the right heat it comes very quickly.

An appetizing pickle can be made with a nice firm head of cabbage and a few onions. Cut the cabbage in pieces, boil in clear water with salt to taste till cabbage can be pierced with a straw. Drain. Have very best cider vinegar. To a quart of vinegar add about four tablespoonfuls of sugar, pickle spices to flavor, or a few cloves, a little allspice, celery seed if liked. Bring the onions just to a boil in this. Then drop in the cabbage and take right up. Seal in glass jars.

—Lee.

Calla Lily Will Not Bloom.

To the Editor:—I enjoy reading the Home Department and am coming to you for some help. I am a friend of flowers and like to have geraniums in bloom in the house during the winter, but I do not have good luck with them. They look fine, but will not bloom very much. How can I have them in bloom? I also have a calla lily that is three years old, but it only bloomed the first year. During the summer I lay it under an evergreen tree and before freezing weather in the fall I get it inside and water it freely. Can some of the readers of the Home Department who have had experience with these plants tell me how to care for them so they will bloom?

—A Reader.

Queen Eleonore, of Bulgaria, has spent her entire fortune in relief work for the subjects of her husband and is now penniless.

There are over 2,500 women stockherders and raisers in the United States.

Mayer HONORBILT CUSHION SHOES

Cushion Shoes

Sensitive feet get quick relief. Wear Mayer Honorbilt Cushion Shoes. The quilted soles take up the shock when you walk.

No other cushion shoes equal them. Cool in summer, warm in winter. Easy on the feet from the first day and all the time. Made for both men and women in all styles to suit every taste.

WARNING. Always look for the Mayer name and trade mark on the sole. If your dealer cannot supply you, write to us.

We make Mayer Honorbilt Shoes in all styles for men, women, children; Dry-Sox wet weather shoes; Martha Washington Comfort Shoes.

F. Mayer Boot & Shoe Co.
Milwaukee

Recipes.

Peach Tea Cake.—One large tablespoonful equal parts butter and lard, one-half cup sugar, one-half cup sweet milk, one egg, two cups flour, one teaspoonful baking powder. Cream the butter, lard and sugar, add beaten egg, then milk, and baking powder sifted in flour. Beat well. Turn into shallow pan, cover with sliced peaches (fresh or canned). Sprinkle with granulated sugar and cinnamon. Bake thirty minutes. Apples can be substituted for peaches if desired.

Honey Fruit Cake.—One cup honey, one-half teaspoonful cinnamon, pinch cloves, one egg, two tablespoonfuls melted butter, one cupful seeded raisins, one cupful chopped nuts, one cupful sour milk, one-half teaspoonful soda, two cupfuls sifted flour. Beat well the honey, cinnamon, cloves, egg and melted butter, and then add raisins, nuts and sour milk with soda dissolved in it, and then two cups of sifted flour or more to make cake dough. Bake slowly in bread pan.

Corn Muffins.—One cupful corn meal, one-half cupful flour, half teaspoonful salt, two teaspoonfuls baking powder, one tablespoonful melted butter, one tablespoonful sugar, one cupful milk, one egg, one teaspoonful oil or butter. Sift the flour, corn meal, sugar, salt and baking powder into bowl; add the milk, butter and well-beaten egg; mix well. Brush muffin tins with the melted butter or oil and in each one put one tablespoonful of the mixture. Bake thirty-five to forty minutes in hot oven.

Potato Ribbons.—Wash and peel the potatoes, taking out all eyes and specks. Then peel around and around into thin ribbons. Place in a frying basket and cook in hot fat for five or six minutes. Sprinkle with salt and pepper and serve either hot or cold.

Orange Jelly.—One tablespoon granulated gelatine, one-fourth cup of sugar, one-fourth cup cold water, one cup orange juice, one-half cup boiling water. Prepare in usual way. Sections of orange may be placed in a mold and a little jelly poured in and allowed to harden so as to hold the sections in place, then the remainder of the jelly added.

Stuffed Green Peppers With Meat and Celery.—Take green peppers; cut off top and scoop out. Have ready cold meat—lamb, beef or lean corned beef—one small head of celery, the inside of the green pepper, pinch of pepper, salt and paprika. Chop fine; place inside green pepper; put small piece of pepper back on top; bake in slow oven until done. The pan should have enough water in it to keep it from burning.

Baked Trout or Pike.—Trout is delicious served in the following manner: Take two large fresh trout and place in a shallow baking dish. Sprinkle with salt, pepper and a little flour. Add a sprig or two of parsley, a small onion, a carrot sliced or finely minced, a bay leaf, three lumps of sugar, a tablespoon of butter, an egg and a cupful of white vinegar. Bake the fish forty-five minutes.

Modern Housekeeping.

She fills her fireless cooker
With seven kinds of grub;
Turns on the suds and puts her duds
Into the scrubless tub.
She starts the dustless sweeper
On gear keyed down to low;
Powders her nose and gaily goes
To see a picture show.

This Season's Novelty!

Stylish Angora Style Wool Scarf

You Want One? Read This!

Send us 75 cents only, and get The Housewife for One Year (regular 50 cents) and this Dollar Scarf.

A $1.50 VALUE FOR JUST HALF!

AT LAST fashion has been kind to the women of small means. She has given the scarf, the novelty of the season, to those who cannot afford furs. Comparatively few women can afford really good furs, therefore, they have either had to go without them or be satisfied with a cheap imitation of the real thing. But now comes the scarf, a thing of beauty and chic, which can be wound around the throat with a dashing air lending a smart appearance to its wearer. Scarfs of all kinds and colors are being worn but the most popular and the prettiest variety is the one made of angora wool either in pure white or dainty colors. The outdoor girl first brought the light of fashion's favor on the scarf and showed the fashionable world just how pretty and practical it could be, and now, that cold weather is here it is no longer used just as a pretty piece of decoration, but as a serviceable piece of milady's wardrobe. These scarfs are very warm and easily cleaned, with these two characteristics they are destined to remain immensely popular. The scarf we offer is made of fine wool, angora style and measures 56 inches long by 7 inches wide, it may be obtained in different colors. Each scarf has striped ends of harmonizing colors and is finished with a self fringe. Kindly state color desired when ordering.

Remember, all you need to do to get this Scarf, is to subscribe for The Housewife for a year and remit 75 cents only for both Housewife and Scarf. The regular rate of The Housewife is 50 cents—the usual cost of the Scarf is $1.00.

WE OFFER BOTH FOR 75 CENTS!

Remit by P. O. Money Order or Registered Letter to

THE HOUSEWIFE, 30 IRVING PLACE, NEW YORK

Delivered TO YOU FREE

1916 Model

A sample 1916 model **"Ranger"** bicycle, on approval and **30 DAYS TRIAL.**

Write at once for large illustrated catalog showing *complete line* of bicycles, tires and supplies, and particulars of *most marvelous offer* ever made on a bicycle. You will be astonished at our ***low prices*** and *remarkable terms.*

RIDER AGENTS Wanted—Boys, make money taking orders for Bicycles, ***Tires*** and Sundries from our big catalog.

Do business *direct* with the leading bicycle house in America. **Do not buy** until you ***know*** what we can do for you. WRITE TO US.

MEAD CYCLE CO., DEPT. K 184 CHICAGO

Household Hints.

Camphor put in drawers or trunks keeps away mice.

Cranberries are good for malaria.

Old bread or biscuit can be made fresh by moistening and placing in an oven until heated through.

Fat used for frying fish should be used for no other purpose.

A stew boiled is a stew spoiled.

Baked meat should be started in a hot oven.

Nothing much can be done outdoors this month, but a little later it will be greatly appreciated if a hole is now made in the pile of spring sewing and closets and bureau drawers are put in order.

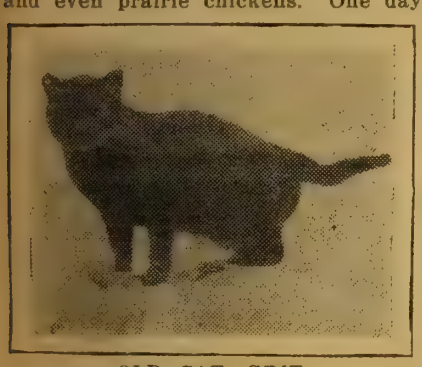
Always put the scrubbing brush to dry with the bristles down. This will save the brush.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Old Cat Grit.

Dear Young Folks:—I want to tell you about our family cat, Grit. We gave him his odd name when he was a tiny kitten. When he was found in the barn with a lot of other kittens Aunt Fannie tried to see which was the bravest by holding them up by the neck as the mother cat did. This little fellow did not cry at all and she said, "I am going to keep him and call him Grit." He has had good care and is now seventeen years old.

When Grit was younger he caught lots of rats, mice, rabbits, gophers and even prairie chickens. One day



OLD CAT GRIT.

when mamma was away he caught a prairie chicken and brought it home alive. Papa said that a whole chicken was too much for a cat and Grit could only have the head. So he skinned the prairie chicken and got a tame chicken to go with it. While papa was cutting it up Grit came up to the pan (he had been sitting by, pouting) and put in his paw and took out a piece of chicken. Then he walked off a little and looked at papa as much as to say, "You took my chicken and I'll take yours." —Sarah.

Kindness to the Rabbit.

Dear Young Folks:—As I have seen so many letters from other young folks I think I will write too.

I am ten years old. I go to school and am in the fifth grade. We live about three miles from school.

I have no special pets, but we have two dogs named Rover and Fido. It might be a lot of fun for a dog to chase a rabbit in a barn, but I think it is not much fun for the poor rabbit. I believe in being kind to all animals.

—Mamie.

Back to the Country.

Dear Young Folks:—I certainly enjoy reading the stories and letters on the Young Folks' page. I am twelve years old and am in the seventh grade. I like my teacher very much. She is very religious and teaches us a great deal about the Bible. I live in town and my school is not far away.

My father is sheriff of our county and we have lived in town for three years, but will move away in one more year. I will be very glad, because I like country life so much better than town life. I was born on the farm and want to get back to it.

My father owns two farms, each consisting of 300 acres. They are called the Blue Ribbon and Prairie View farms. One is two and a half miles from town and the other one is eight miles. We have two very fine horses, a cow, a wagon, a buggy and an Overland automobile, so we never have to walk. We have about sixty-five chickens and three pet cats, and I also have four dolls and a buggy. I love them all very much. I am taking music lessons now, but I can play most anything I want to by ear.

I have two brothers and two sisters. My oldest sister is married and has the dearest little girl baby. Her name is Juanita. She is eight months old. They live in the country and I visit them about every week.

I have a pair of ice skates and a pair of roller skates and have great times skating both in winter and summer. I can do most any kind of housework and my mamma is teaching me how to crochet and tat. —Vera.

Another Friend of Bunny.

Dear Young Folks:—I read a letter by Edward in the February 24th number. I want to tell him not to let his dog Fido kill the rabbits any more. I felt so sad over that part of his letter. I don't think he means to be cruel, but is just thoughtless, for he says he gives his dog a ride on his sled and no cruel boy would do that.

Just think, Edward, of the poor rabbit, after having all out-of-doors for a home, to get caught in a trap. Think how it tried to get out until it was all tired out and sick with fear. Then you drew it home on your sled and gave the poor, innocent creature such a cruel death. Just think if you were caught and cried all night and then a big tiger was left loose to kill you. Dear little bunny did not deserve such a death. My papa takes them out of the trap carefully and holds them up by the hind legs and strikes them just back of the ears. That kills them quickly and they don't suffer at all. Then we eat them.

I have some pretty stories about quail, rabbits and other animals, how they build nests and hide their babies. I would like to have you read some of these. They would teach you many things and would help you grow up into a kind, good man. —Nora.

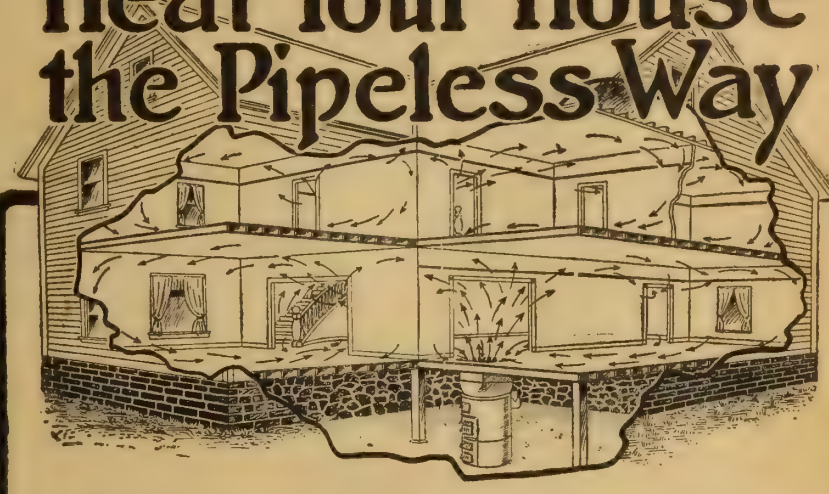
Country people have many advantages over the city dwellers, but sometimes overlook the commonest ones. One is the fact that the early rising on the farm necessitates going to bed early and the latest experiments prove that the early hours of the night give the most restful and health-giving sleep. It is claimed that the first quarter of a night's sleep possesses more rest than all the other hours of the night. "An hour's rest before midnight is worth two hours after" and "Early to bed and early to rise makes one healthy, wealthy and wise," are proverbs resulting from the experience of humanity in the matter of the comparative value of early and late rest.

Between 800 and 900 cars of strawberries will be shipped out of Ozark berry regions during the season soon to open, according to Ashleigh P. Boles, a railroad horticultural expert. Last year the crop was 580 cars. The earliest berries are expected to come from the fields about Van Buren, Ark., which will begin shipping about April 25th.

Select eggs for hatching uniform in size. Extremely small eggs or exceptionally large eggs should not be used.

GIANT PANSIES AND PETUNIAS.
Fashion's finest favorites. I send seed of 50 loveliest Prize Pansies—all entrancingly beautiful, and 40 Varieties Everblooming Petunias—an endless array of colors, shades and markings of wondrous beauty. Large packet of each (worth 30c) for **one dime** to introduce. 3 Pkts. of each, catalog and Premium List for 30 cents. If you order and name this paper I will add my Mammoth 25c Flower Collection free with every 10 cents worth ordered. Tell your friends of this. I want 100,000 new customers and friends. Address, A. D. COOK, Seedsman, Hyde Park, N. Y.—Adv.

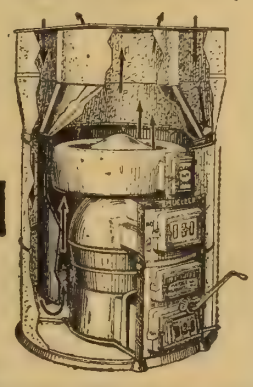
Heat Your House the Pipeless Way



ENJOY furnace heat without the trouble and expense of building pipes or flues into your walls. Keep every room at a comfortable temperature even in the coldest weather. Do away with the drudgery, dirtiness and wasted space of stoves. Lessen your family's likelihood of taking cold. The **Mueller System of Pipeless Heating** is thoroughly reliable and will put olid comfort into any home, old or new, large or small.

MUELLER PIPELESS FURNACE

Heats the whole house from one central register without flues or pipes. Easily installed in any cellar no matter how small; if your house has no cellar, just dig a pit for it.



The one thoroughly practical pipeless furnace. Gives you most heat from fuel. Burns coal, coke or wood. No heat wasted. Continuous circulation of fresh air ventilates your rooms. Doesn't heat up cellar and spoil produce. Thousands of delighted users. Built of cast iron. Easy to tend and clean.

Write today for Free Book describing the Mueller Pipeless and showing what it means to your home.

L. J. Mueller Furnace Co.
204 Reed St., Milwaukee, Wis.

Makers of heating systems of all kinds since 1857. Can supply you with regular hot air pipe furnaces, steam or hot water boilers and vapor heating systems. Give you honest advice on your heating requirements.

International Sunday School Lesson

Lesson for March 19, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

PHILIP AND THE ETHIOPIAN.

LESSON TEXT—Acts 8:26, 40.

GOLDEN TEXT—Understandest thou what thou readest?—Acts 8:30.

Beginning at verse four, chapter eight, we enter upon the second great division of the Book of the Acts. It marks the beginning of preaching outside of Jerusalem and also the employment of lay-preachers. The persecution of the Jerusalem church was chiefly led by Paul (v. 3) and resulted in a wider dissemination of the good news (v. 4). Philip, the deacon, went to Samaria where multitudes heard and saw (vv. 5, 8) and where a remarkable work of grace attended his dealing with Simon Magnus, who thought he could buy the gift of the Holy Spirit bestowed by the apostles (v. 9-24). The apostles returned to Jerusalem (v. 25) leaving Philip to continue his great revival in Samaria.

I. Divine Preparation, vv. 26, 27 a. The marvelous way God leads us; ways we do not comprehend, to accomplish his great designs is nowhere better illustrated than here. Philip's work would seem to demand his undivided and personal supervision, but he exhibits his superior wisdom by at once obeying this new command (Heb. 11.8). The Samaritan road joined the great Jerusalem highway to Egypt in the midst of uncultivated pasture land. Philip carried "sealed orders" and as he came to Gaza he met this man from the region south of Egypt, who was probably a Jewish proselyte, having adopted their religion, and was returning from worshiping at Jerusalem.

II. Diligent Study, v. 27-29. Philip overheard this high official as he was reading aloud from the prophecy by Isaiah, probably from the Greek translation. The Spirit directed Philip to join himself to this evidently honest inquirer, not because of his wealth and position but because he was a seeker after truth (John 7:17, Ps.

Don't skimp on price for
Good Seed Corn

It only takes 6 quarts to plant an acre. Poor seed as a gift would be the most expensive. Look for **Quality**, not Germination only. Go safe by buying from reputable growers with 27 years experience in breeding Seeds suited for Northwestern conditions.

Our supply is limited and going fast. Write us at once for samples and prices. **New Annual Seed Book Free.**

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Buy Your **COFFEE** WHOLESALE IN 10-LB LOTS
Get the BEST and SAVE 10 cts per pound.
WE PAY POST, EXPRESS or FREIGHT
IF YOU LOVE GOOD COFFEE SEND FOR PRICE LIST
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25:9). This statesman gives us a most simple and practical illustration (v. 28 R. V.) of how to study the Bible and to improve the time occupied in traveling. Both Luke, who wrote the Book of Acts, and Philip, the evangelist, seem to accept all of Isaiah without reservation. This method of reading study is the one that will surely secure for us revelations from God.

III. Direct Instruction, v. 30-35. We do not advocate indiscriminate assault upon every passing stranger in our desire to do personal work. Philip took each step as directed by the Holy Spirit. If we are attuned to the Spirit's "small voice" we will surely hear his "Go near" which will send us to those whom we may win for Christ. It is true that this passage from the prophet Isaiah is somewhat obscure, and, apart from Jesus of Nazareth, irreconcilable. "In his humiliation his judgment (justice) was taken away"—a fair trial not given; "his generation who shall declare," (Am. R. V.) i. e., his contemporaries who among them considered that he was cut off out of the land of the living (New Cent. Bible). Prof. G. A. Smith has declared that "none but prejudiced Jews have ever denied that this great prophecy, known as the fifty-third of Isaiah, was fulfilled in Jesus of Nazareth, and achieved all of its details in him alone." Philip's question was a pertinent one; good for this present time, and the eunuch's reply was much more frank than many professed Christians of today would be willing to admit. We have one who is ready to guide even as God met this ruler's need (John 14:26; 16:13; 1 Jno. 2:27). The importance of understanding is great (Matt. 13:19, 15:20, 24:15). The two portraits here presented of the Messiah are seemingly irreconcilable and are still a great puzzle to the Jews. Prince of Peace, despised and rejected; Suffering Savior, King eternal; there are many such seeming paradoxes.

IV. Declared Faith, v. 36-40. The eunuch had doubtless seen the rite of baptism in Jerusalem and at the first opportunity he desired to make public his new found faith. Baptism is confession and a symbol (Rom. 6:1-6) and immediately after the eunuch's declaration of faith (v. 37) Philip at once administered the rite, after which, his work being done, Philip is whisked away while the eunuch journeyed on "rejoicing."

These two men were total strangers, yet this wayside conversation gains one who must have heralded far the Gospel as he witnessed along his journey and in his home land.

Philip made Caesarea his home and twenty years later met Paul in that city (Acts 21:8).

Philip worked without the machinery of an "organized movement" and evidently without any emphasis upon the offering.

Do we look for the Spirit's personal leadings?

Are we ready for every opportunity?

Can we tell men the way of life, how to become a Christian?

How many Sunday school teachers can intelligently use the word of God in answering the inquiry, "What must I do to be saved?"

Meat in some form should be fed the hens in winter and early spring to take the place of grasshoppers, worms and bugs obtained in summer. Beef scraps offer a convenient form of animal food. Fresh ground bones make one of the best.

SPECIAL FOR LENT. Order your supply of Frozen and Salted Fish at once at these low prices. We guarantee Best QUALITY. Fresh Frozen Herring at $3.25 per 100 lbs. Pike $9 per 100 lbs. Pickerel $5.75 per 100 lbs. Tulibee Whitefish $5.75 per 100 lbs. Mullets $4 per 100 lbs. This fish is all packed in new boxes. Newly Salted Herring $3.25 per 100-lb. keg. Net weight. LAKE SUPERIOR FISH CO., 208 E. 1st Street, Duluth, Minn. Reference, American Exchange Nat. Bank.

FISH Caught in the waters of Green Bay are the finest flavored Fish produced. Salt Lake Herring 100 lb. kegs $2.75. Fresh Frozen Round Herring per lb. 3c. Large Dressed Herring 4c. Dressed Bluefin White 4c. Pickerel 6c. Tulibee White 7c. 500 lb. lots ¼c per lb. less. Write for complete price list all kinds Fresh, Salt, Smoked Spiced Fish.
BADGER FISH COMPANY,
Dept. 4 - - - Green Bay, Wisconsin.

YOUNG man, would you accept a tailormade suit just for showing it to your friends? Then write Banner Tailoring Co., Dept. 277, Chicago, and get beautiful samples, styles and a wonderful offer.

$1.00 PER WEEK Enough said. Write the Wisconsin School of Telegraphy, Dept. A, Oshkosh, Wisconsin.

Wigs, makeups, tricks, puzzles, jokes. Big catalog Free. Oaks Magic Co., Dept. 279, Oshkosh, Wis.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Address all orders to The Wisconsin Farmer, Madison, Wis.

7605 Ladies' Middy Blouse.—Cut in sizes 34 to 44 inches bust measure. Made in the simplest manner possible, this blouse slips on over the head, the neck opening being cut down a little to make it large enough. There is a medium size collar as a neck finish. The low shoulder joins the plain sleeve, which is loose and either full length or shorter.

7612 Children's Set.—Cut in sizes 1, 2 and 3 years. In this set we have first suit of rompers made with opening down the back and across the waist and also along the inseam of the legs. There is also a petticoat, with tab in envelope style from back to front between the legs, and there is a pair of small drawers which button along the inseam and are mounted on a band.

7628 Ladies' Dressing Sacque.—Cut in one size. This garment is made of a perfectly square piece of material, with a cross cut for an opening at the neck. The edges in turning back form revers and the slope of the sides is completed by turning up little pointed ends on each arm. A ribbon holds in the front and back and binds all edges.

7589 Boys' Russian Suit.—Cut in sizes 2, 4 and 6 years. This pretty suit has a diagonal front closing, with a deep opening at the neck. This is filled in by a shield with a standing collar and may be worn or not, as preferred. There is a wide collar at the neck, edging the blouse. Bloomers are provided for wear with this blouse.

7627 Children's Dress.—Cut in sizes 2, 4, 6 and 8 years. This little frock has a deep shoulder yoke in front and a plain back. The lower part of the front is plain and there is a band closing. The high neck is finished with a small turnover collar, and a cuff edges the sleeves whether long or short. They are also gathered a little at the shoulder. The skirt is made with a panel front and is side pleated all around.

7619 Ladies' Apron.—Cut in sizes 34 to 44 inches bust measure. This apron is for all practical purposes a dress. It is in bungalow style, made with waist and skirt, the sleeves of raglan type, the front and back of the waist plain with bias front closing. The open neck is trimmed with a turnover collar. The sleeves are short, edged with a trimming band. The four-gore skirt fits neatly at the top and has a side front closing.

7595 Ladies' Skirt.—Cut in sizes 22 to 32 inches waist measure. Made with two gores, this handsome walking skirt closes at the left side. There is a small piecing which fills in the upper part of the front gore, where the material is cut away for the pocket outline. The short belt across the back is a matter of choice.

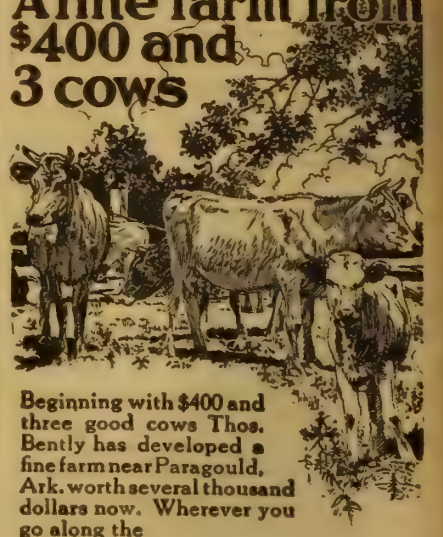
7592 Misses' Dress.—Cut in sizes 14, 16, 18 and 20 years. The feature of this dress is the closing which passes diagonally across the front of the blouse and down the side of the skirt. The high neck may have a high, turnover collar or a wide, flat one, and the sleeves may have a turnback cuff, if short, or a deep plain one, if long. The skirt has three gores and a flounce below the knee.

7602 Ladies' Skirt.—Cut in sizes 22 to 34 inches waist measure. Walking skirts are now made plain and the model shown is ideal for general use. It has four gores, that of the front arranged as a plain panel. The skirt fits neatly about the body and has either raised or normal waistline. The lower edge measures 2⅛ yards in medium size.

7591 Ladies' Dress.—Cut in sizes 34 to 42 inches bust measure. The plain waist closes at the side of the front, the open neck has a chemisette and standing collar and a wide revers trimming. The skirt is made with four gores and has a reversed box pleat in the back. It closes at the left side of the front.

Price of any of these patterns 10 cents each.

A fine farm from $400 and 3 cows



Beginning with $400 and three good cows Thos. Bently has developed a fine farm near Paragould, Ark. worth several thousand dollars now. Wherever you go along the

Cotton Belt Route in Arkansas & Texas

you'll find hundreds of farmers, now well to do, who started just a few years ago with only a little cash.

As H.V. Tull, near Jonesboro, Ark. says "One can start farming here on less capital than anywhere else I have ever been. We paid $25 per acre for this land and made a good crop the first year."

S. M. Jackson, of Piggott, Ark. had the same experience. "We came here a few years ago from Tennessee and bought this place for $700 and have been making money all the time. There is more money here and a better market. Our garden and orchard crops bring us money every month of the year; and our field crops and pastures support our live stock." Down near Jacksonville, Tex., B. E. Barber bought 40 acres of land a few years ago for $365. The first year his crops brought a revenue of over $2000—and in four years time he put $12,000 in the bank from the sale of products raised on his farm, mostly by his own labor.

If you could talk with the farmers from Iowa, Michigan, Illinois, Kansas—from every part of America—who have gone into Arkansas and East Texas with little capital and made good money from the start, you'd realize what your opportunity is there.

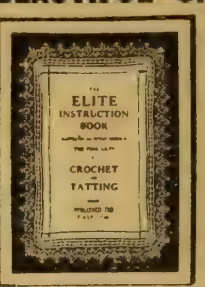
Two free books!

A farmer wrote them; and he knows what you want to know about a section new to you. They tell about the character and cost of lands, climate, crops raised, etc., and about schools, churches, towns, social conditions. Brimful of photograph pictures taken on the ground. Send me your name and address on a postal card today and get these free books now.

COTTON BELT ROUTE

E. W. LaBeaume, G. P. A.
1854 Railway Exchange Bldg., St. Louis, Mo.

BEAUTIFUL CROCHET BOOK



This Beautiful Crochet Book contains thirty-two pages of Crochet, Tatting, Smocking, for yokes, edgings, Luncheon Sets, Handkerchiefs, Babywear, Centerpieces, Scarfs, Bags, etc. Each and every article is fully illustrated and so simple are the instructions, that you can easily make any article shown therein. We will send this very useful book for only 12c, postpaid.

EMBROIDERY HOUSE, DEPT. P. F.
60 W. Washington St. - Chicago, Ill.

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co.
65 Elm St., Quincy, Ill.

The Cow at Calving Time.

To the Editor:—As in nearly everything else in life the natural way is the best way when a cow is calving. I have in mind several instances where pedigreed cattle and other almost priceless animals about to give birth were given almost constant vigilance of attendants for weeks ahead. In such cases the young are often born lifeless. The owners will complain and cannot understand why it is that an animal worth half a thousand dollars, having every attention, will fail to produce a live calf, while a lot of scrub cattle without any attention whatever seldom if ever have any trouble.

In this there is a natural cause. To ascertain what this natural cause is we must go to the animal in its natural way, where it has the liberty of a pasture field when the time for parturition draws near. She will watch her chance to evade the other cattle and seek a secluded place as much removed from all living things as she can get. It is very rare that an animal so situated will fail to give birth to a living calf. If not disturbed for four or five hours in a few hours she will easily and naturally eliminate the placenta as well.

As the usefulness of a cow during the period of lactation depends to a great extent on how she comes through the critical period of calving it stands in need to insist on as near as possible absolute quietness. About the best thing one can do at this time is not to do at all, that is, don't get the cow excited. Not long since I was asked to go to a neighbor's barn to see a fine calf just born. The attendant and his dog, a hired man, another neighbor and his dog and myself were all welcome to see this calf only a few hours old. On expostulating with the attendant he said: "Why, the cow is used to seeing strangers and dogs, too, as our dog is around the cows all the time." While she might have been used to having strangers and dogs around her every day, she was not used to having a calf every day and things she would not notice at ordinary times might at this time excite her to a perfect frenzy, thereby causing the retention of the placenta and possibly the derangement of nearly every function of her entire system. Excitement is bad for dairy cows at any time, but it is much more apt to have a harmful effect during and a few days following parturition.

A cow ought to be removed to a box stall away from other animals about one week before she is to calve. Get her accustomed to the new surroundings. Then keep dogs and all other annoyance out of her sight and hearing. I know of several instances where the placenta had to be removed by hand, which, I am perfectly sure, was made necessary because the cows were frightened by dogs following the attendants into the stalls about the time the calves were born.

As to the attendant's desire to help a cow by pulling and tugging at the unborn calf the fact of the matter is with an easy delivery she certainly needs no help and with a hard delivery it is yet more necessary to give more time for the parts to relax. When a cow cannot deliver the calf by her own exertion the calf cannot be pulled away by force without tearing and injuring the cow. Unless it is found to be absolutely necessary I would never do it.

At the first showing the attendant should make an examination to ascertain if the presentation is right. If found to be proper quietly leave the stall and keep out of sight and hearing of the cow for at least three hours. Then if the calf has been born give the cow a pail of water warmed to about 70 degrees and feed her about three quarts of either wheat bran or bran and ground oats. Try all four teats to see if they are open and leave the cow and calf again entirely alone for at least six hours. At the end of this time feed and water her and milk all four teats nearly dry. Do not milk her entirely dry until about the fourth milking, or, if the udder be hot and swollen, it is best not to milk her entirely dry until this has subsided. Give all the warm water she will drink three times a day and feed bran or wheat bran. Increase the feed gradually as she increases in milk, reaching the maximum amount in perhaps two weeks.

In the case of an improper presentation the thing to do is to employ the services of an experienced person just as soon as possible. Likewise, if the afterbirth has not been eliminated naturally inside of eight hours an experienced person should take it by hand. Subscriber.

WITH OUR ADVERTISERS.

The Taber Lined Silo.

IF YOU want a good wood stave silo, you should investigate the Taber Lined Silo advertised on page 23. Only choice lumber is used in its construction, the entire silo is creosoted, and a specially prepared paint is used on the outside. The inside is coated with an acid-proof lining which keeps the silage from injuring the wood. Taber Lined Silos are manufactured by the Taber Lumber Co., Keokuk, Iowa, who will be glad to send you their catalog if you write for it to their Dept D and mention The Wisconsin Farmer.—Adv.

Seed Corn at Attractive Prices.

J. B. ARMSTRONG & SON, Shenandoah, Iowa, are advertising seed corn on page 10 at some very attractive prices. If you do not have good seed corn on hand you should read this advertisement, because you may want some of this seed. The prices run from $2.75 to $5, depending on the variety and whether the seed is shelled or in the ear. Early Yellow Rose is an especially good northern variety because it is both early maturing and big. All the varieties have between 94 and 98 per cent germination. Get your seed corn now while there is a large supply to pick from. A catalog and free samples will be sent to anyone who will write the company named above and mention this paper.—Adv.

A Time-Saving Milking Machine.

"GAIN two hours a day," says one farmer regarding his Empire mechanical milker. Many others agree that the Empire cuts down the time spent in milking, so that they can keep more cows with greater profit or have more time for other work on the farm. The Empire milker is one of the easiest to install and operate, and it requires only one tank and pipe line. The advertisement on page 22 gives a small picture of the machine. If you are keeping cows for profit, you should send for details regarding this milking machine, also regarding Empire separators, gasoline engines and Star feed mills. Ask for catalog No. 56M of the Empire Cream Separator Company, Bloomfield, N. J., and please refer to The Wisconsin Farmer in your letter.—Adv.

A Satisfactory Barn Door Hanger.

WHEN the barn door track gets clogged with birds' nests or snow and ice, and the trolleys refuse to slide, it is certainly an endless source of annoyance. If you have had this trouble, you will be interested in the Louden bird-proof barn door hanger advertised on page 24. Not only birds, but snow, rain, ice and trash are kept from the Louden enclosed track, so that the trolleys run smoothly and easily at all times. They can't rust, clog or jump the track and very little effort is needed to open or close the heaviest door. Booklet No. 5 of the Louden Machinery Company, 1704 Court St., Fairfield, Ia., tells the whole story. Write for it today and kindly refer to this paper.—Adv.

Planting Potatoes by Machinery.

PLANTING potatoes by hand is a very slow and wearisome job and a machine that will save the time and labor required in this work is worthy of our attention. On page 18, is advertised the Aspinwall potato planter, which will plant five to eight acres a day and do the job as well as the hand method. One man can run it alone. The machine opens the furrow, drops seed of any size at any distance desired, covers, and marks the next row. Fertilizer may be sown in the same operation if desired. If you expect to put in a good many potatoes this year, you should have one of these planters. Write to the Aspinwall Manufacturing Co., 457 Sabine St., Jackson, Mich., for their free booklet on potato planters and learn of their proposition. Please mention The Wisconsin Farmer when you write.—Adv.

Profits in Chickens.

THE chickens that roam over the farm, picking a living from scattered grain and waste material which every farm affords, are one of the best sources of farm profits. They will get along without much labor, expense or feeding of high-priced feeds. However, if you decide to raise more chickens this year, you should have a good incubator. It takes too much time to bother with fussy hens that should be laying eggs, and besides they are not always broody at the right time. With an incubator the hatches can be arranged so that the chickens will be ready for sale when prices are highest. But be careful in selecting your incubator. The test of an incubator is in the percentage of vigorous chicks that it hatches. By this test the Ironclad incubator has proven its worth with a hatch of 148 chicks from 148 eggs in a recent hatching contest. These incubators are advertised on page 25 of this paper. By getting an Ironclad incubator now, you can raise a good lot of early summer frys or fall layers. They are sold by the Ironclad Incubator Co., Box 113, Racine, Wis., who will be glad to hear from you. If you write them kindly mention The Wisconsin Farmer.—Adv.

Ponies Given Away

I AM the Pony King of America. I have given away 364 Ponies to Children. Now, I am going to give away more Ponies—some of the finest Shetland Ponies I could pick. I want every family that reads this paper to stand an equal chance. If you are a Boy or Girl, send in your name. If you are the Father or Mother of a Boy or Girl, send in your child's name. I will enter the name in my Big Free-for-all Pony Club, and send you a copy of my Pony Picture and Story Book. Every child in the country should have one of these books.

Children—Write your name and address below, cut it out and mail it to me. You will surely get the Pony Book and maybe get a real Pony besides.

Parents—Don't miss this chance to get this Free Pony Book. Children love to read it. Besides, your child may get one of the Ponies.

Pony Picture and Story Book

Pony Book Free

Send Your Name

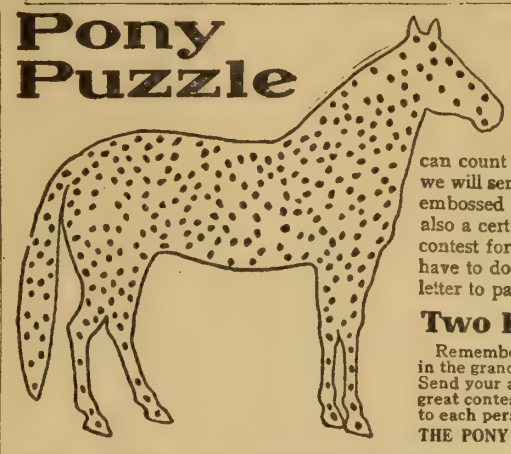
Address Your Letter or Postal to

The Pony King

268 E. 10th St., St. Paul, Minn.

The Pony King, 268 E. 10th St., St. Paul, Minn.
I want the Free Pony Picture Book and I would like to have one of your Free Ponies.
Name.....
Postoffice.....
State.....R. F. D.....

Pony Puzzle



Count the Dots and Win a Prize

Here is a Shetland pony covered with dots. By being careful any boy or girl can count the dots on this pony. If you can do this we will send you as a prize, a packet of five beautiful embossed postcards lithographed in rich colors, and also a certificate for 1500 Free Votes in our grand contest for two beautiful Shetland ponies. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

Two Beautiful Ponies Given

Remember the Ponies will absolutely be given away in the grand contest which we will tell you all about. Send your answer at once so you can be entered in this great contest. In case of a tie for a pony one will be sent to each person so tied. Full particulars by return mail.

THE PONY MAN Dept. 201 Des Moines, Iowa

Uses a Harley-Davidson.

THE farmer who owns a Harley-Davidson motorcycle can find more uses for it than he ever dreamed of before. A quick trip to town for machinery repairs, a visit to the neighbors to look at a calf or colt for sale, a ride to a public live stock sale and return by chore time, or a refreshing spin between supper and bedtime, these are some of the uses of a Harley-Davidson, the three-speed, master motorcycle. For many farmers the question isn't, Can I afford a Harley-Davidson? but, Can I afford to be without one? A catalog may be obtained by writing the Harley-Davidson Motor Co., 1179 A St., Milwaukee, Wis., and mentioning The Wisconsin Farmer. See page 13.—Adv.

Read This Free Offer to Tire Users.

THE Firestone Tire and Rubber Co., Akron, Ohio, will send a fine waterproof tube bag free to tire users who will send them their dealer's name and address and the make of tires they use. When you send, ask also for the free book, "Care and Repair of Tires" No. 17. The Firestone Tire and Rubber Co. are makers of Firestone Tires, which have the color combination of a red side wall and black tread, that stands for sturdiness and wearing quality; also, of Firestone Red Tubes, which have always given motorists full measure of mileage and security. Don't fail to take advantage of this unusual offer, and please mention The Wisconsin Farmer when you write. See page 7.—Adv.

Farm Help Wanted in Western Canada.

A FIELD of great opportunity for farm workers lies in the Province of Manitoba, Canada. It is estimated that from 3,000 to 3,500 men are needed at wages running from $25 to $45 per month, in order to supply the keen demand for foodstuffs caused by the European war. Farmers are wanted, and no military duties whatever will be forced upon persons going there. Railroad companies are offering reduced rates to passengers from all points on the International boundary line and northward who are going West in Canada. This offers an opportunity to see western Canada at a small cost, and will permit first hand inspection of the cheap lands which are still available in this region. Read the advertisement on page 14 and if interested, write to the Manitoba Immigration Office, 323 Jackson St., St. Paul, Minn. —Adv.

Water-Proof Concrete on the Farm.

THE Sandusky Portland Cement Company are advertising on page 13 Medusa water proofing, which is used to make concrete water tight. This material is put in a mixture at the rate of eight pounds of water proofing to every barrel of Portland cement. Waterproof concrete is especially desirable on the farm—in concrete silos, the walls should not allow the silage juices to penetrate; on concrete feeding floors, dampness is very undesirable and soaking in of manure or lodging of disease germs should be avoided; and in concrete barns and houses damp walls are a cause of much annoyance. Therefore, Medusa water proofing will likely have a wide use. When desired, it may be obtained already mixed in proper proportions with cement. Further information is contained in the booklet, "How to Make Concrete Water Tight," which may be had by writing the Sandusky Portland Cement Company, Room G-4, Engineers Building, Cleveland, Ohio, and mentioning The Wisconsin Farmer.—Adv.

Shekleton's Stallions.

F. P. SHEKLETON & SONS, Lawler, Iowa, write as follows: "Stallion business with us the past week has been fine and we are having a great many inquiries, and we expect the demand to run far into the spring months. Our stallions are all doing fine, on our different farms, and we are still able to supply the prospective buyer with a first-class stallion of the different draft breeds. During the last week we sold to Mr. George Wagner, of Monona, Iowa, the sorrel chestnut Percheron stallion, Pink Borodino. This stallion is one of the best of the breed, being sired by the champion Percheron stallion, Pink, and out of a champion mare. Pink Borodino at the time of sale weighed 2,340 pounds and was seven years old. Mr. Wagner paid $2,500 cash for him and felt that he secured a bargain. Clayton county is noted for its draft horses and Mr. Wagner means to keep up its reputation by buying this stallion. Mr. Wagner has given to Clayton county and the adjoining counties a rare opportunity to breed to one of the best sires of the breed, as this horse stood in Illinois at the head of a herd of eighty full-blooded mares and has already made his mark as a breeder. Farmers of Clayton county should appreciate Mr. Wagner's efforts in making their county noted for its heavy horses and should patronize this stallion freely. Joe Nystle, Jerico, Iowa, takes the good thick-set three-year-old bay Belgian stallion, Sir Oost. Mr. Nystle was looking for a stallion to put on the stand and selected this horse on account of his thick conformation and he should make good as a breeder. To John Hansen, Ostrander, Minn., goes the Percheron Lawler stallion. This is a very toppy, stylish horse weighing a trifle over a ton and is a typical Percheron. He is a tried sire and will make good on the stand. George Beenkin, of Germania, Iowa, visited our barns after an exhaustive search for a stallion. He is a discriminating buyer and would buy nothing but the best. He finally selected the two-year-old black Percheron stallion, Oise. This colt has the heavy, flat bone and wide, deep build of a 2,400-pound stallion, weighing at the time of sale a trifle over a ton. Mr. Beenkin will be proud of his purchase and this colt properly fed will make a great drafter. Buyers of stallions will do well to write to us for particulars or visit our barns and see for themselves before buying." See page 39.—Adv.

Live Stock Items and Commercial Notes

Gathered by Representatives of The Wisconsin Farmer

A Great Wisconsin Jersey Herd.

A HERD of Jerseys that is recognized as one of the very best in the state of Wisconsin, is owned by Fred Stubley, Black Earth. Mr. Stubley is a breeder in the strict sense of the word. Of the 100 head of females that goes to make up this great herd, all have been bred by him with the exception of perhaps twenty head that he imported. His cattle have size and capacity and more desirable than the little island type. A bull that has done a great deal of good in this herd is Golden Maid's Viscount. He is sired by the noted imported bull, Golden Maid's Prince, and traces through his dam to a bull that is known to all admirers of Jersey cattle—Golden Lad. Several young bulls, around a year old are being offered for sale, sired by this bull. Another bull doing service in this herd is Noble of Avaranch, a son of the world's famous sire, Noble of Oakland. This bull is siring some of the best things on the farm and a young bull by him would add prestige to most any herd. The dams of the young bulls now being offered are high testing cows, many of them having high advanced registry records. One of the good young bulls is out of a daughter of Blue Belle's Eminent, that is a half brother to Noble of Oakland. She has a record of 453 pounds butter as a three year old. A dam of another one is an imported cow that weighs over 1,100 pounds and made 474 pounds butter in eleven months. As above mentioned, this good herd contains 102 head, about twenty imported cows and more than twenty are in the register of merit. In buying from this herd you get individuals backed up by eighteen years of conscientious breeding on the part of Mr. Stubley. We are glad to recommend this herd to all Jersey admirers, for they will find in this herd animals suitable to all surroundings. Black Earth is located on the C., M. & St. P. railroad, twenty miles west of Madison. Shipping facilities are good in any direction.—Adv.

A Heating System for the Farm Home.

THE disagreeable side of farm life is gradually falling away. By sound judgment and wise spending, the farmer of today can afford his family most of the conveniences of the town home—and it pays in most cases. One of the worst hardships on the farm is to get up before dawn on a cold winter morning and build a fire in a smoke and ash spouting stove to take the icy chill from the house. A good heating system will remove this hardship and increase the efficiency and comfort of everyone in the house. Then it pays financially, too, if you get the right system. American radiators and Ideal boilers are said to pay for themselves in the yearly fuel savings, aside from a big labor-saving. In order to be informed on this important subject, you should write to the American Radiator Company for their free booklet, "Ideal Heating," as suggested in their advertisement on page 9. You will not be obligated in any way and will receive some valuable information. Address American Radiator Company, Dept. F-39, Chicago, Ill. Mention of The Wisconsin Farmer is always appreciated.—Adv.

An Advantage of the Overland Six.

MOTOR car experts say that a six-cylinder motor is superior to a four chiefly in that it gives greater range of speed on direct drive—requiring less gear shifting. But you must choose the right six, as not all have this advantage. The Overland six does. It will creep along in the overcrowded city streets or take long, steep hills on "high" with seldom a need to shift the gear. That is one reason why it satisfies the most discriminating buyers. The Overland six is priced at $1,145—some say underpriced because it ranks with motor cars of much higher prices. If you are interested in cars write for The Willys-Overland Company's catalog which describes both their sixes and fours. See advertisement on pages 20 and 21, and address the Willys-Overland Company, Dept. 471, Toledo, Ohio, and mention this paper.—Adv.

Caloric Pipeless Furnaces.

IF you wish to install a furnace in your home without putting in a lot of pipes and flues, you should get a Caloric pipeless furnace. To install, a hole is cut in the floor just above the furnace and the warm air circulates through the house. These furnaces are made with a special ribbed firepot of great radiating surface and allowing free circulation of air and complete utilization of coal. The picture in the advertisement on page 15 will give you an idea of the heating plan of Caloric furnaces. Full information may be obtained from any Caloric dealer or by writing direct to the Monitor Stove & Range Co., 255 Gest St., Cincinnati, Ohio. Please say you saw the advertisement in this paper.—Adv.

Kirkpatrick Brothers' Holsteins.

KIRKPATRICK BROTHERS, Reedsburg, Wis., are offering registered Holstein cattle at very reasonable prices on page 38. They have a fine herd of about forty animals and have been using excellent sires, one a grandson of King of the Pontiacs, that has 175 A. R. O. daughters, eleven of which have records ranging from thirty to forty-four pounds of butter in seven days. For pictures, pedigrees and further information in regard to these animals write to the above address.—Adv.

Red Polled Heifers and Bulls for Sale.

THE Red Polled cow is gaining in popularity as time goes on and well she should, for they are a very desirable breed of hornless cattle. Of the dual-purpose cattle, a Red Polled cow has the world's record which far exceeds many records that are made by dairy cattle. The Bennetts, of Black Earth, Wis., are pioneer breeders of the state. They have stayed by this breed for over twenty years. The senior member of the firm has retired and his son, E. L., has purchased the entire herd, and will continue to keep up the reputation established by his father. At this time he is offering yearling and two-year-old heifers for sale, some bred and others open. They are in excellent condition smooth, excellent lines and are from good ancestors. Many of the cows in this herd are granddaughters of the great sire Corporal, probably the greatest bull the breed ever produced. Others trace to the great show and breeding bull, Falsetto 1807. The Bennetts have never followed the show circuits but they have bred cows that have been winners for other breeders. Their cattle are of a uniform type, uniform in color—the deep red—and the fact that they have been in business twenty years goes to show that they have produced good stuff. The bull heading the herd is Buster 26260 by Jackson, a grandson of Falsetto. You will like the class of stock this bull is siring. The young bulls by him are outstanding. Get into communication with Mr. Bennett, he will sell you some heifers and a young bull that will make a grand foundation for a Red Poll herd. Write and mention this paper. See page 38.—Adv.

Frank Iams New Catalog.

WE are in receipt of Frank Iams' catalog for 1916 and it is replete with interesting things to all lovers of Percheron and Belgian horses. The Iams catalog always was one of the best that has been issued by the importers and breeders here in the West, and this year it is again in the front of the procession. It is beautifully illustrated from cover to cover with pictures of many of the stallions and mares that he is now offering for sale. It tells you all about how Frank Iams can and will sell you a stallion or a pair of mares for as little money as any man in the business. The main reason why Frank Iams has been able to do this is that he sells for cash or a good bankable note that your home banker will take without discount, and, therefore, his customers get the benefit of this cash method. If you are thinking of buying a Percheron or a Belgian stallion or mare you will be interested in seeing this catalog. Write Frank Iams, St. Paul, Neb., and kindly mention this paper. See page 39.—Adv.

Wenham's Short-horns.

BATES milking Short-horns are bred by George Wenham & Son, Fort Atkinson, Wis., and their herd is one of the best in the middle West. They have been very careful in the selection of herd sires and have developed a herd of cattle that are both good milk producers and test a high percentage of butter fat. At the present time they are offering some extra good daughters of Clay Buttercup, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. They are also offering some choice yearling bulls ready for immediate service, sired by Oxford Duke I, a son of Wild Eyes Duke. These two lines of breeding will be recognized as among the best in the breed. For pedigrees and further information in regard to these animals write to the above address. See page 38.—Adv.

The Mueller Pipeless Furnace.

THE Mueller pipeless furnace may be installed in your house without the trouble and expense of building pipes and flues into your walls, and it will keep the house warm even in the coldest weather. It can be used in houses that have no cellar by digging a pit for it. One register placed just above the furnace will heat the whole house. The Mueller Pipeless is a practical, fuel-saving furnace made by a company that has been making heating systems of all kinds since 1857. If you will write to the L. J. Mueller Furnace Co., 204 Reed St., Milwaukee, Wis., they will give you honest advice on your heating requirements. Their advertisement appears on page 33.—Adv.

Puls' Holsteins.

MANY fine seven-day and yearly records have been made by the Holstein cows in the herd of John Puls, Hartford, Wis. As he states it, "The yearly record is the only record that shows the true value of a cow," and for this reason he contemplates putting yearly records on every animal in his herd. He has a herd of close to 100 animals that are choicely bred and of good dairy type. Most of the herd of milking age are daughters of Aaggie Cornucopia Pauline 13th, a grandson of Aaggie Cornucopia Pauline, the world's champion four year old. This cow in seven days gave 659 pounds of milk and made 34.32 pounds of butter. The first two-year-old daughter of this bull to finish her yearly record gave 16,155 pounds of milk and made 710 pounds of butter. He now has five cows that have finished yearly records and eighteen more will finish soon. Among the other cows in the herd are Springdale DeKol 2d Vale, that made 28.23 pounds of butter in seven days and is now making a creditable yearly record. Springdale Roena Vale has just completed a yearling record with 16,000 pounds of milk with an average of 4.2 for the entire year. She made 24.50 pounds of butter in seven days. Mr. Puls is now advertising a two-year-old son of this cow for sale on page 38. He is sired by Johanna Sarcastic Lad, a grand individual weighing 2,510 pounds. He is a son of Sarcastic Lad, champion bull at the St. Louis Fair. The dam of Johanna Colantha Sarcastic Lad is Johanna Colantha, that made 26.50 pounds of butter in seven days and 796.7 pounds of butter in a year. This bull has a large number of A. R. O. daughters with large seven day and yearly records. For extended pedigree and further information in regard to the animals offered for sale write to the above address.—Adv.

Special Cream Separator Offer.

FARMERS and dairymen who are looking for a high-grade cream separator at a reasonable price should investigate the Melotte advertised on page 40. This separator is of Belgian make and has been a prize winner all over Europe and, since the high tariff of cream separators has been removed, is being introduced into America on very liberal terms. A thirty days' free trial is offered every prospective purchaser, and if the separator proves satisfactory it can be paid for in small monthly payments if the purchaser so desires. Before buying a cream separator send for the Melotte catalog and free book, "Profitable Dairying." Address The Melotte Separator Co., Dept. 4483, 19th St. and California Ave., Chicago, Ill., and mention this paper.—Adv.

FRANK RILMA 21901, Guernsey bull owned by Allie Knudson, Brodhead, Wisconsin.

Time Saving Grain Drills.

FARMERS know that time is worth money, especially in the spring during seeding time, and time saved is money made. That's why the Buckeye grain drill advertised on page 18 is a good investment—it saves time usually wasted in repairing. The disk bearings are easy to get at with no rivets to cut, and they wear so long that the company's guarantee to replace them is seldom needed. This drill has many other distinctive features that may be learned from the Buckeye drill catalog which will be sent on request. Address the American Seeding Company, Springfield, Ohio, and mention The Wisconsin farmer in your letter.—Adv.

Holt's Jerseys.

WHEN on a tour of the state a few weeks ago the writer had the pleasure of visiting the farm of Henry Holt & Son, Oconomowoc, Wis. They are breeding registered Jersey cattle and have an excellent herd of about forty head. It is evident that they have used great care in selecting their breeding stock for the animals are all of good type and the cows in milk show exceptionally good udder development. Several of them have recently freshened and they would make pictures worthy to be shown in any album of Jersey pictures. The bull at the head of the herd is Sage's Victor, a strongly bred St. Lambert bull of good type and from a heavy producing dam. His dam made twenty pounds of butter in seven days. The junior herd sire is Inez Rosaires Oxford, a son of G. F. Oxford's Pride and out of the cow, Inez Rosaires, that made 720 pounds of butter in a year. Register of merit work has been done in this herd and many creditable records made. Queen of Ellendale made 400 pounds of butter in a year and had an average test of 5.89 per cent fat. She is a daughter of Badger St. Helier by Marigold St. Helier, a St. Louis World champion. Broadway Belle, a full sister to the above cow, gave thirty-eight pounds of milk in a day. At the present time they are offering yearling bulls for sale out of these two cows and sired by Sage's Victor. For pedigrees and further information write to the above address. See page 38.—Adv.

Basse Brothers' Guernseys.

BASSE BROTHERS, West Allis, Wis., have a fine herd of Guernsey cattle, headed by Maple King, a big, typey, well-bred individual. His dam, Queen of Fairview, was owned by Fruit Bros., Waukesha, who state that she was a fine individual. She was sold when on test to parties in Minnesota, so never completed an A. R. record, but Fruit Brothers state that she could easily have made 500 pounds of fat. The sire of Maple King has two A. R. daughters that average 586 pounds of fat at two and a half years of age and there are several now on test which are making exceptionally good records. The sire of Maple King won first at the 1910 National Dairy Show, when fourteen months of age. Basse Brothers are now offering Maple King for sale and two of his yearling sons, as well as registered and high-grade females. For pedigrees and further information in regard to these animals write to the above address. See page 38.—Adv.

Duroc Spring Gilts.

BURN BRAE FARM, Rosendale, Wis., is offering Duroc spring gilts for sale on page 39. These were sired by Burn Brae Distinction and are bred for March and April farrow to Burn Brae Golden Model. Mr. Peterson is one of Wisconsin's progressive Duroc breeders and has nominated his herd for the Wisconsin Futurity to be held at the state fair next fall. Litters from any sow of this herd will be eligible for competition in this futurity by conforming to the requirements. This is a valuable factor to consider in the purchase of breeding stock, as this futurity promises to be a most important event in Wisconsin Duroc circles. The gilts offered for sale are of good type, well grown and are carrying litters by this excellent Golden Model boar and their litters with proper care should be excellent futurity prospects.—Adv.

Miller's Holsteins.

HOMESTEAD JUNIOR DE KOL 2D is the sire of the yearling bulls offered for sale on page 38 by William Miller, Jr., Menomonie, Wis. This bull is one of the most choicely bred animals raised or owned in Wisconsin. He is a son of Homestead Junior De Kol, that has sixty-nine A. R. O. daughters, five with records above thirty pounds of butter in seven days. His dam is a daughter of De Kol Burke, that has seventy A. R. O. daughters, seven with records above thirty pounds. This combination of breeding has produced many of the highest producing cows ever owned in the state. Mr. Miller is advertising yearling bulls for sale sired by Homestead Junior De Kol 2d and out of A. R. O. cows with creditable records. For pedigrees and further description of these animals write to the above address.—Adv.

Birchwood Guernseys.

THE Birchwood herd of Guernseys is one well worth while to visit. It consists of close to seventy registered animals of various ages. They are well bred and of high production ability. Advanced registry testing has been done for several years and a large number of very creditable records have been made. They are now offering registered Guernsey heifers and yearling bulls ready for service, sired by Dairymaid's King 12898. He is a full brother to the great cow, Dairymaid of Pinehurst, that made 910 pounds of fat in a year. The heifers and young bulls offered for sale are out of A. R. cows of choice breeding, which have made creditable records. Mr. Welles issues a sale list,

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

JOHN MANN
NEOSHA, WISCONSIN

BREEDER of registered and high-grade Holsteins. Heifers, springers and cows for sale.

A. G. HARTER
RUBICON, WISCONSIN
BREEDER OF REGISTERED
HOLSTEIN CATTLE

Bred for high production ability, good type and along popular blood lines.

John Gutschenritter & Sons
Neosha, Wisconsin

BREEDERS of registered Holsteins that are well marked and of good breeding. A large herd to select from. Two bull calves for sale at the present time that are from high producing dams. Good individuals and at reasonable prices.

4 HOLSTEIN BULLS

MOSTLY white, ranging in ages from 5 to 10 months; and 4 Holstein heifers, more white than black, ranging in age from 3 to 7 months. Sired by Canary Frisbie Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead, and the 22.81-pound cow, Sadie Frisbie Homestead, a daughter of Homestead Jr. De Kol. Address
HENRY HOSTERMAN
257 N. Main St. Hartford, Wisconsin

PLEASANT VIEW STOCK FARM
Bulls From 2 Weeks to 9 Months

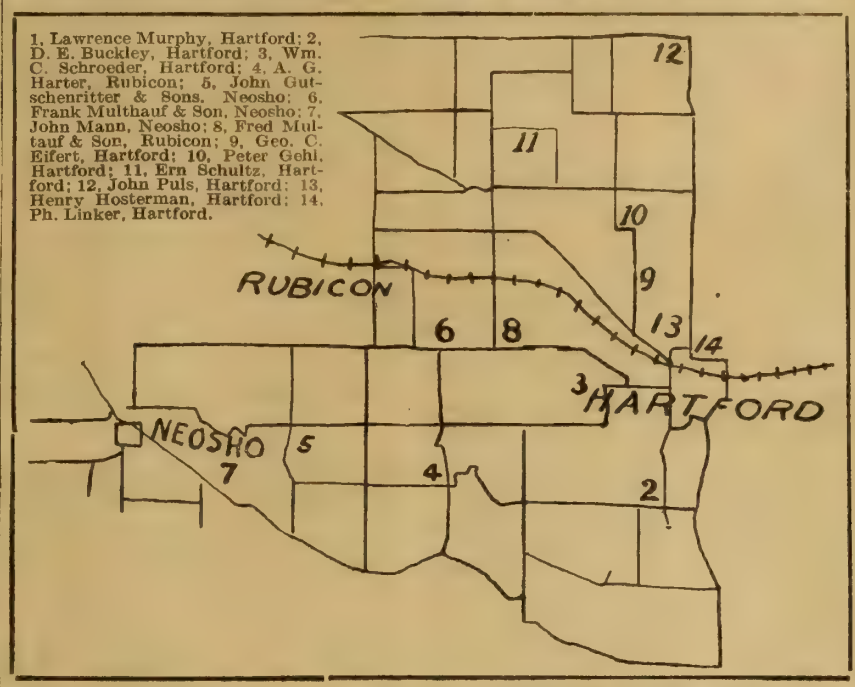
SIRED by the 22.81 pound bull, Canary Frisby Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead. The dams are high producing cows. One of them averaged 74 pounds of milk per day for 30 days. These bulls are ⅞ white, are well grown and have straight rumps. Address
Geo. C. Eifert Hartford, Wis.

A. R. O. BRED

WE have a few bulls left sired by King average over 29 lbs. butter in 7 days ter in 7 days, and 21,834 lbs. milk and daughters has just made over 20 lbs. in out of Johanna, Korndyke and Pontiac butter records. Write for particulars
Wisconsin Star Stock Farms,

HOLSTEIN BULLS

Artis Pontiac, whose dam and sire's dam and whose sire's dam made 31.7 lbs. butter in 7 days at 2 years of age. These bulls are bred dams backed by large milk and and price. Address
E. M. Schultz, Hartford, Wisconsin



Johanna Colantha Sarcastic Lad

PREPAREDNESS

BE prepared when the time comes that your milk will be bought by the test, use a son of Springdale Roena Vale, record 24.87 pounds in seven days, just finished a yearly record of some 16,700 pounds of milk with an average test of better than 4.2 per cent fat. I now offer for sale a two year old son of hers, large, well grown, very gentle and like his sire, Johanna Colantha Sarcastic Lad, is a very good individual. Address
JOHN PULS - - - HARTFORD, WISCONSIN

Yearling Holstein Heifers

AND bulls fit for service sired by Rag Apple Pontiac Polkadot, a son of the $6,800 bull, King Segis Pontiac Polkadot. Address
Ph. Linker Hartford, Wis.

FOR SALE

THREE registered Holstein bull calves sired by the world's champion, Cleveland Johanna Sir Plebe 132446, whose dam is Molly Johanna Korndyke 184885, the only two year old that made 30.62 pounds butter in seven days. Prices reasonable. Write, or better come and see them. Two miles southwest of Hartford.
Wm. C. Schroeder, R. 5, Hartford, Wisconsin

HOLSTEINS FOR SALE

I HAVE a number of choice Holstein bulls that are ready for service. Also bull and heifer calves, also some choice yearling heifers of the same breeding. These cattle are right in color, size and milking qualities.
D. E. Buckley Hartford, Wis.

P. L. GEHL'S FARM

TWO fine bulls, born September 12th and September 15, 1915. Sire is a son of King Segis Pontiac Polkadot, one of the greatest sires living. Their dams are Molly Carema Melchior 2d 260244 and Novelty Belle Ormsby 229169. These bulls are large, thrifty youngsters. Straight and long bodied, handsomely marked. Write for prices.
P. L. Gehl Hartford, Wis.

BADGER STOCK FARMS

OFFER choice selections from the world's famous Colantha Changeling Lad, whose dam has 30.73 as a junior 4 year old, and his 4 nearest dams average over 30 pounds. Over 60 head to select from. Lawrence F. Murphy, Hartford, Wis.

REGISTERED AND HIGH-GRADE HOLSTEINS

OF choice breeding, well marked, good type and high production ability. When in need of Holsteins write us. Address
Fred Multhauf & Son Rubicon, Wis.

which he will gladly send on request. For list and further information write to Mr. M. L. Welles, Rosendale, Wis. See advertisement on page 38.—Adv.

Little's Durocs.

THE writer recently visited the farm of B. W. Little, Janesville, Wis., and while there looked over his excellent herds of Duroc swine and Bates Shorthorn cattle. Mr. Little is one of the pioneer breeders of Rock county and has been instrumental in making Rock county one of the leading Duroc and Short-horn centers of the state. He recently owned a son of the noted boar, Defender, the only boar of the breed to twice win grand champion honors at the International. This boar was named Defiance, and he was in every way a worthy son of his noted sire. He is considered by many one of the best boars ever owned in Wisconsin and his offspring of which Mr. Little has a large number, are of the same type and quality. Another boar used in this herd was Ohio King, an excellent individual of choice breeding, whose offspring would make him noted had he been a poor individual himself, for they are the large, heavy bone, smooth type that are profitable for both the breeder and feeder. The boar in service at the present time is Critic Top Notcher, half brother to the grand champion at the 1912 Nebraska State Fair. He is, I think, the best boar for his age I have ever seen in Mr. Little's herd, and he promises to surpass these other noted boars as an individual. Mr. Little is offering spring gilts bred to Critic Top Notcher for March and April farrow. See page 39.—Adv.

Cook Brothers' Holsteins.

ONE of the many good Holstein bulls in Wisconsin is that at the head of the herd of Cook Bros., Burlington, Wis. He is both a good individual and well bred. His sire is a half brother to the $50,000 bull, King Segis Pontiac Alcartra. His dam's sire is a brother of King of the Pontiacs, which now has 175 A. R. O. daughters, eleven with records from thirty to forty-four pounds of butter in seven days. He has ninety-one with records of from twenty to twenty-nine pounds, making 102 with records over twenty pounds. Butter Boy Mink Pontiac is the bull owned by Cook Brothers. He is a grandson of King Segis Pontiac and Pontiac Almeda Korndyke that was by Pontiac Korndyke, that has 116 A. R. O. daughters, five with records from 33.76 to 38.03. He is a great grandson of King Segis De Kol 2d Butter Boy 3d and Pontiac Korndyke, a combination of great producing blood. Cook Brothers are advertising sons of the above bull that are out of A. R. O. dams. They have bulls ready for service and younger. For pictures and extended pedigrees write to the above address. See page 38.—Adv.

Serviceable Short-horn Bulls.

THERE appears on page 38 of this issue of The Wisconsin Farmer the advertisement of R. Connor Company, Marshfield, Wis., in which they are offering several choice young registered Short-horn bulls for sale. These animals are of serviceable age and are located on a farm at Auburndale. They are sired by Imp. Brilliant Bandsman and are a choice lot of animals, which they wish to dispose of this spring. They also have for sale one registered Holstein bull coming three years old. —Adv.

Build With Natco Hollow Tile.

IT is a noteworthy fact that a large number of the state agricultural experiment stations which are making careful experiments on the handling and storing of silage have adopted the Natco imperishable silo made of vitrified tile. Also, that farmers are using them and throughout the middle West and in live stock dairying regions of the East these handsome glazed tile silos mark the farms of prosperous, far-seeing farmers. Handsome as they are, their great value lies in their absolute resistance to wind, fire, frost and decay, and complete preservation of the ensilage so that it keeps sweet, juicy and nutritious in all parts of the silo. Natco hollow tile is also used for houses, barns and outbuildings. Read the advertisement on page 23 and if you expect to do any building, send to the National Fire Proofing Company, 1123 Fulton Building, Pittsburgh, Pa., for their silo catalog and information on the use of the Natco hollow tile for farm buildings. Kindly mention The Wisconsin Farmer when you write.—Adv.

A New Milwaukee Separator Catalog.

DAIRYMEN and farmers should get the beautiful new catalog of the Milwaukee Separator Co., and learn of the distinctive features of the Sanitary Milwaukee cream separators. Some of the features brought out are: Non-rust aluminum disks, which can be drawn and tapered to the exact shape required for greatest skimming efficiency; widened skimming space, giving quicker and cleaner skimming; and fewer disks than most separators, yet with greater skimming power. You can get this catalog by writing to the Milwaukee Separator Co., 245 Madison St., Milwaukee, Wis., and mentioning this paper. Their advertisement is on page 23.—Adv.

Truttschel Brothers' Holsteins.

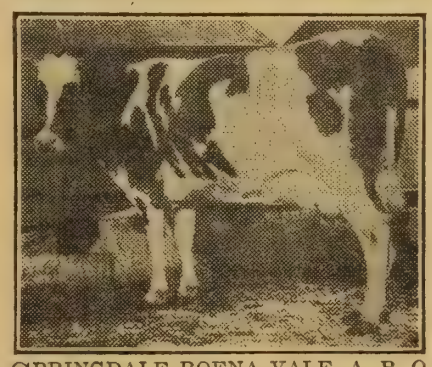
A 26.30-pound Holstein bull is advertised for sale on page 38 by Truttschel Brothers, Sheboygan Falls, Wis. He is three years of age, a good individual, well marked and choicely bred. They are also offering a yearling bull, born May 27, 1915, out of a cow, that made 24.48 pounds of butter in seven days are good, straight individuals and are being priced very reasonably. For pedigrees and further description write to the above address.—Adv.

A Valuable Free Book.

A VERY valuable book, "How to Judge Engines," has been published by the Witte Engine Works, which should be in the hands of every man expecting to buy a kerosene or gasoline engine. It discusses the construction and operation of different types of engines very thoroughly. The book is free to readers of this paper who will write for it to Ed H. Witte, Witte Engine Works, 2711 Oakland Ave., Kansas City, Mo., and mention the advertisement on page 24.—Adv.

The Oliver Power Lift Tractor Plow.

THE Oliver No. 78 power-lift tractor plow will plow as efficiently as the horse plow, yet with all the speed and comfort of the tractor and power-lift gang. The bottoms are raised or lowered at will by pulling a trip rope. A combined rolling coulter and jointer turns under all weeds so that the field is soon cleared of them. The plow is furnished with either two or three fourteen-inch bottoms. Ask your dealer to show you this plow or write to the Oliver Chilled Plow Works, South Bend, Ind, for information. Their advertisement appears on page 14 of this paper. —Adv.


SPRINGDALE ROENA VALE, A. R. O. record 24.87, dam of the bull advertised for sale on this page by John Puls, Hartford, Wis.

Eagle Ensilage Cutters.

IN order to give satisfaction, an ensilage cutter must be safe, simple, durable, clean cutting and light running, with blower that will not clog. large capacity and speed are also desirable. Any other kind of an ensilage cutter is a poor investment at any price. The Eagle Mfg. Co., claim to have an ensilage cutter that will meet these requirements. They are advertising on page 17 of this issue. If you expect to be in the market for one of these machines, you should send for their catalog. Address Eagle Mfg. Co., 693 Winnebago St., Appleton, Wis., and kindly mention The Wisconsin Farmer. —Adv.

Lorenz's Holsteins.

TEN registered Holstein heifers, one to four months of age, and two registered cows are advertised for sale on page 38 by Adam Lorenz, Sheboygan Falls, Wis. Mr. Lorenz is one of the leading breeders in Sheboygan county, which has long been noted as one of the greatest dairy counties and the home of many fine herds of Holsteins. The writer recently inspected this herd and saw the animals offered for sale. They are good individuals, well grown and are well bred. For pedigrees and further information write to the above address.—Adv.

TOO LATE TO CLASSIFY.

Burn Brae Farm
ROSENDALE, WIS.
CHAS. A. PETERSON, Prop.

DUROC SPRING GILTS bred for May and June litters to Burn Brae Golden Model. A few spring and fall boars for sale at reasonable prices. My herd is nominated for the Duroc Futurity.

Reg. Percheron Stallions

5-YR.-OLD Black **Imp. Kubain,** a cracking good individual. 2- and 3-year-old Blue Roan Stallions weigh 1500 and 1800 lbs.; sired by Imp De Cine. Suckling colt by Imp. Kubain. 1 10-year-old Blue Roan Mare: weighs 1950. 1 10-year-old **Shire Stallion,** weighs 1850. **Angus cows, heifers and bulls;** serviceable age and younger. Can supply a carload.
McKevitt Bros. - - Bridgeport, Wis.

Gabel's two in one pig forceps is sold on 30 days trial 20000 in use
Price of set: $3.00
Agents Wanted GABEL MFG CO Hawkeye, Iowa

Foot Comfort in Cushion Shoes.

THE full satisfaction from well-made, comfortable shoes is hard to estimate, and our readers will likely be interested in the advertisement on page 32 of the Mayer cushion shoes. A soft quilted felt shoe, inside cork filling, full kid lining, solid oak tanned outer sole and extra strong steel instep are some of the distinctive features of these shoes. They relieve sensitive feet and take up the shock in walking. If your dealer cannot supply you, write your wants to F. Mayer Boot & Shoe Co., Milwaukee, Wis., and mention this paper.—Adv.

A Silo of Steel and Wood.

PUFFER-HUBBARD MFG. CO., 3205 Twenty-sixth St. East, Minneapolis, Minn., are advertising on page 23 their Minneapolis Panel Silos, built of steel and wood. These silos are constructed so that they rest uniformly on their foundation and will not collapse when empty. They require no tightening of hoops and the seams and joints are made so that no rain or moisture can get in to start decay. A catalog and complete information on these steel and wood silos may be obtained by writing to the company named above and mentioning The Wisconsin Farmer.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

HOLSTEIN-FRIESIAN CATTLE.

BONNIE MEAD STOCK FARMS

Offer a few choice sons of King Pietertje Hengerveld Ormsby, a full brother to 35 pound cow, Pietertje Maid Ormsby, from A. R. O. and untested cows of Alacartra, Johanna and Ormsby breeding.

Hutchinson Bros. & Burbach **Randolph, Wisconsin**

Purebred Registered

HOLSTEIN CATTLE

Holsteins, the best dual purpose breed. The Michigan, Iowa and Nebraska State Experiment Stations report that in their competitive tests the Holsteins made a larger gain per steer at a less cost per pound of either roughage or grain than any of the other breeds. As voluminous and profitable milk producers and as valuable beef animals when their milking days are over, purebred Holsteins are firmly established as the world's leading dual purpose cows. Investigate the big "Black-and-Whites."

Send for FREE *Illustrated Descriptive Booklet.*

The Holstein-Friesian Association of America
F. Houghton, Sec'y, Box 143, Brattleboro, Vt

10 Registered Holstein Cows and Heifers

IN GOOD, healthy, thrifty condition. The cows have A. R. O. records from 16.96 to 21.89 lbs. butter in 7 days. Two of the heifers are daughters of the **35.43 lb. bull, Sir Pontiac Chief 100732,** whose dam, Pontiac DeNijlander, made three consecutive records of 30.11—32.73—35.43 lbs. butter and gave 750 lbs. of milk in 7 days. Six of the cows for sale are bred to this bull. This is an opportunity to get some exceptionally high-producing cows. A. M. Anderson, Whitewater, Wis.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt - Oxford, Wisconsin

Holstein Bulls

FROM A. R. O. dams with records up to 21 lbs. They are ready for service, are well grown, ¾ to 9-10ths white in color, sired by

SIR CANARY ALACARTRA

a son of the $1,000 bull, Canary Paul, and out of Nellie Alacartra Rue, that made 23 pounds butter in 7 days and 874 pounds in a year. Send for pedigrees and price. Address

A. L. Rowe **Waupaca, Wis.**

REGISTERED HOLSTEIN HEIFERS

ONE to twelve months old. Bull calves one to six months old. These are out of good producing dams, many with A. R. O. records. All sired by Hillvale Robert La Follette 88026, a richly-bred Ormsby bull. Address

Jacobson Bros. **Menomonie, Wisconsin**

Registered Holstein Cows

IN order to make room in my stables, I offer three registered mature cows, price $225 to $250. Three ¾ registered cows 3 to 6 years old, $125 each. Several large, straight heifers $225. Two yearling bulls ready for service $75 to $100. These are richly bred. Send for extended pedigree.

W. H. Carey **Argyle, Wisconsin**

400 HOLSTEINS

Pure-bred and high grade

Cows, Heifers and Service Bulls

THEY are first class individuals, well bred, tuberculin tested and right in every respect. Exceptionally low prices. (We have some choice GUERNSEYS.) Write for particulars. Address

EDGEWATER STOCK FARM, Fort Atkinson, Wis.

REGISTERED HOLSTEIN HEIFERS and COWS

Some with A. R. O. records. Choicely bred and of straight, large conformation.

REGISTERED PERCHERON STALLIONS

Sucking colts—2 year old—5 year old. Write for pedigrees and price.

Beautiful full marked sable and white Collie pups, males from natural workers, 10 weeks old. Price $5. Pedigree furnished. Address

Paddock Bros. - Augusta, Wisconsin

Sons of Serviceable Age of

SIR JOHANNA AALTJE KORNDYKE

IN which is combined the Holstein blood of Sir Johanna DeKol, Sarcastic Lad and Belle Korndyke. Bulls from A. R. O. and untested cows for sale at reasonable prices. Address

W. D. McGILL, - Menomonie Falls, Wis.

Hillside Stock Farm

OFFERS registered Holsteins. 8 cows $100 to $200. 4 heifers $100 to $150. 6 bulls $40 to $150. Write your wants. **KIRKPATRICK BROTHERS, Reedsburg, Sauk Co., Wis.**

22.19-POUND YEARLING HOLSTEIN BULL

AND others from A. R. O. cows, ready for immediate service. Well grown, nicely marked, good individuals. Prices $50 at 4 months up to $125. Frank Holt, Pleasant Prairie, Wisconsin.

REGISTERED HOLSTEINS

TEN registered Holstein bull calves, oldest 7 months, sired by King Walker Segis 3d, Sir Witra Clyde Segis and University Johanna Excelle. Can spare a few females. (Poland China hogs.)

Marinette County Asylum, Peshtigo, Wis.

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

ADAM LORENZ
Sheboygan Falls **Wisconsin**

26.30-POUND HOLSTEIN BULL

THREE YEARS OLD. Dam's A. R. O. record, 26.30 pounds of butter in seven days. Another bull born May 27, 1915; dam's A. R. O. record, 24.48. These bulls are straight individuals and nicely marked. Price $150 each. Write for pedigrees and description. Address

Truttschel Bros., Sheboygan Falls, Wisconsin

Rust Brothers' Stock Farms

offer a richly bred young Holstein bull,

CORNUCOPIA NETHERLAND PONTIAC

HIS dam as a four year old made **27.99 pounds butter in seven days, 756 pounds butter in a year.** Send for pedigree and price to

ARTHUR RUST, - West Allis, Wisconsin

HOLSTEIN BULLS

OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address

WM. MILLER, JR., MENOMONIE, WIS.

SONS OF THE 32-LB. HOLSTEIN BULL

COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 10 months old. Out of heavy producing dams.

Baltz Hoesly - New Glarus, Wisconsin

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address

Watson & Will **Menomonee Falls, Wis.**

2 HOLSTEIN BULLS

READY for service. Sired by our senior herd sire, Johanna Spofford Corona 71305, and out of A.R.O. dams. No. 1, record of 20 lbs. butter in seven days. No. 2, record of 17 pounds butter in seven days. Address

Cook Brothers **Burlington, Wisconsin**

Holstein Bulls

OF serviceable age and younger, sired by **Piebe Longfield De Kol** and out of untested and A. R. O. cows with records up to 24 pounds butter in seven days and 750 pounds in a year.

C. Tochtermann - - Monroe, Wis.

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address

JOHN NORTH, - Kilbourn, Wisconsin.

REGISTERED HOLSTEIN HEIFERS

SIRED by the richly bred bull, SIR ORMSBY PIEBE BURKE, brother to the 41-pound cow, Sadie Vale Concordia 4th. These are from A. R. O. cows of De Kol Burke, Ormsby and Korndyke breeding. W. F. Mielenz, 97 Wisconsin treet, Milwaukee, Wisconsin.

REG. HOLSTEIN HEIFERS

YOUNG COWS AND BULLS of serviceable age and bull calves. Prices reasonable.

JOHN BLASKA - SUN PRAIRIE, WIS.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins

John Hasse **Monroe, Wisconsin**

10 CHOICE Holstein heifers and 2 bulls 15-16ths pure, $20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wisconsin.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Chariton, Iowa.

When writing to advertisers please mention The Wisconsin Farmer.

SHORT-HORN CATTLE.

AMERICAN SHORT-HORN BREEDERS' ASSOCIATION

WE call attention to the Central Short-horn Breeders' Show and Sale of Short-horns, April 5th and 6th, Kansas City, Mo. E. M. Hall, Secretary, Carthage, Mo., will supply catalogs on request. If you send in your name to this office, along with the name of a prospective breeder or customer for Short-horns, the first number of THE SHORT-HORN IN AMERICA will be sent. It is free and it is for your benefit. Address 13 DEXTER PARK AVENUE, CHICAGO, ILLINOIS.

We have several choice young registered

Short-horn Bulls

of serviceable age on our farm at

AUBURNDALE

that we want to dispose of. These young bulls are sired by our imported

BRILLIANT BANDSMAN

and we have a few choice animals left that we want to dispose of this spring. We also have for sale one registered Holstein bull, coming three years old, from the Pontiac, Michigan, stock. Address

R. CONNOR CO., MARSHFIELD, WIS.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address

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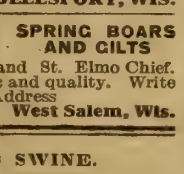

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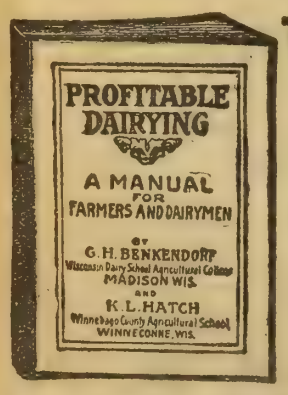

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CURRENT EVENTS

AFTER a week of preparation, United States troops, under command of General Pershing, with General Funston over all, crossed the border line into Mexico and began the hunt for Villa, the bandit, last week. At last reports the American command was penetrating further into the Mexican mountain regions, having encountered no serious obstacles, although there were repeated rumors that the Carranza forces might join hands with the Villa forces and make the expedition one of intervention rather than one of the administration of justice. About 20,000 regular soldiers have massed at the Mexican border, but their movements are being shrouded in secrecy, as the commanders wish to take Villa by surprise if possible. It was expected that three columns would march down into Mexico, converging slowly, so as to seize Villa somewhere between the three lines. Whether this is being done or not has not yet been made public. President Wilson and Secretary Lansing sent ample assurances to Mexico that there was no intention whatever of intervening in Mexican affairs and that the expedition was solely to capture Villa, dead or alive. At the same time, no man can forecast Mexican affairs a day in advance and the most serious trouble the two countries have ever known may result before the expedition returns.

THE status of Verdun, the French stronghold, remained unchanged the first of the week. Another strong German attack was delivered against the outposts the latter part of last week, but the assaulting forces were driven back, with heavy loss, according to French official advices. So far the Germans, whether from sheer exhaustion or for other reasons, have not attempted to follow up their successes west of the Meuse, even their bombardment slackening. Meanwhile the French reserves, which, in the opinion of some critics, are kept much too far in the rear out of the reach of the curtain of fire, came up and won back most of the lost ground, according to reports from the scene of the fighting. Terrific fighting is undoubtedly in progress, but no appreciable advantage has been won by either side as yet.

BOTH houses of congress took cognizance of the serious international situation last week by passing a bill authorizing the recruiting of the regular army to full strength, which means the addition of about 20,000 men, bringing the total fighting strength up to 120,000 men. Unofficial reports said prospective recruits were flocking to the colors all over the land. Department officials were elated. Of late army recruiting has lagged, the wave of prosperity, officials say, making it difficult to obtain men for the regulars. The war department is swamped with telegrams and personal callers offering volunteer services should the country need them. Several members of the national guard who called on Secretary Baker assured him the men of their states were ready and eager for a call. Individuals also wished to enroll. The Mexican trouble has resulted in a widespread wave of patriotism, such as was evident when war with Spain was declared and when President Wilson sent the bluejackets to Vera Cruz a couple of years ago.

THE Norwegian ship, Silius, en route from New York to Havre, France, with seven Americans aboard, was torpedoed without warning, being the first ship carrying Americans to suffer this fate since the new Austro-German submarine warfare on armed merchantmen went into effect the first of March. All the Americans were saved, but three of the crew were drowned. Secretary Lansing is securing the facts, in order to file a strenuous protest with the Teutonic powers, inasmuch as the safety of American lives was affected. That the Silius was unarmed was generally taken for granted, since it was a neutral ship of commerce. This fact, in itself, officials said, may make the case more serious than any that has confronted this government since the war began. No government ever has even hinted that noncombatants, either neutral or belligerents, have not the right to travel on the high seas aboard neutral vessels. Even if the submarine commander afforded the crew the measures of safety which Teutonic powers have assured the United States would be given in case of warranted attack on belligerent passenger ship, the United States, it can be authoritatively stated, will not be satisfied. If the attitude of the president and Secretary Lansing, as frequently expressed in formal notes to the Teutonic nations, has not changed, and officials grimly declared it has not changed "one iota," the United States must insist on disavowal, reparation and condign punishment for the offending submarine commander.

ONE OF THE best-known aviators of the country, W. C. Robinson, of Grinnell, was killed last week while attempting to establish a new altitude record. He had ascended in his flying machine between 13,000 and 16,000 feet when the rarified air weakened his heart, so that he lost control of his machine, falling in long spirals to the ground, where his gasoline tank exploded, burning Robinson to a crisp. Robinson was one of the most careful American fliers. He held the long distance record for an unbroken flight, traveling from Des Moines, Iowa, to Hammond, Indiana, a year ago. He had set out for Chicago, but lost his way in a storm and landed near Hammond, establishing a world record which has not yet been broken. Robinson's death simply emphasizes the dangers which still attend aerial navigation, whether the aviator be careful or foolhardy.

THAT congress is not giving the attention to the gasoline situation it should, and particularly to that phase of it which relates to the continued existence of Standard Oil control of the oil and gasoline business, was emphasized before the house committee on rules in a hearing on the resolution of Representative Dowell, of Des Moines, for a congressional investigation of the high prices of gasoline. Robert L. Welch, formerly of Iowa, now of Chicago, counsel for independent oil jobbers, appeared along with Mr. Dowell and urged the resolution. While the committee did not act, Mr. Dowell said he was hopeful of favorable action.

ORDERS aggregating 4,000,000 tons, valued at $240,000,000, have been placed in the steel market since January 1st, and the crest of the boom has not yet been reached, according to statements made by leaders in the industry. The orders placed in the last two months indicate profits to the mills of $80,000,000, half of which is expected to flow into the coffers of the United States Steel Corporation. Even this tremendous tide of prosperity, it is declared, will be surpassed before the close of the year. It is pointed out that prices have advanced $5 and $10 since New Year's day, and further advances are looked for in the near future, which will eclipse the record of 1899 and 1900.

FOUR of the largest munitions plants in the East are working on rush orders for steel shells and rifles for the United States government, according to statements made at Philadelphia by officials of these companies, who added that they are in a position to supply the further needs of this country without interfering with their foreign orders. The Remington Arms Company, it was stated, is making 2,000,000 rifles for the army, the Eddystone Ammunition Corporation 2,500,000 shells and the Baldwin Locomotive Company 1,000,000 steel forgings, while the Midvale Steel and Ordnance Company is also working on large orders for the United States in addition to its foreign contracts.

The Wisconsin Farmer

THURSDAY, MARCH 23, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

PUNISH THE MURDERERS.

IN THE early days, before law and order came to a community, it was the custom (and it was necessary) for the settlers to band together for mutual protection, administering law and justice with a rude hand and swift. Thus we had anti-horse thief associations, and he who robbed a settler knew full well the dangers he ran, but until a sufficient number had paid the penalty crime flourished for a time. Later on, organized courts came to deal with offenders, and the days of lynch law and rude justice, administered by an unorganized people, passed away.

I am minded of those old days and those old ways by the situation as we find it now on our southern border, where almost a score of our citizens were murdered by Mexican bandits a fortnight ago. Because there was much red tape to cut before the regular soldiery could be had in support, because the men who attacked them, burned their farm homes, carried their farm women into a slavery worse than death and pillaged, were even lower than the bad men of the states a half century ago, the citizens along our Mexican border have, for a long time, been wont either to band together to take the law into their own hands (as we did here in the new-settled states a half century ago) or to bow their heads before the inevitable, praying for the coming of a better day. Now that a foul deed—the massacre of almost a score of American citizens at Columbus, New Mexico, recently, by Villa bandits—has aroused the nation and precipitated a crisis, the regular army of Uncle Sam comes in, as the law and the courts came to us here in the northern states after those early days of lawlessness, with an inexorable determination to bring the guilty to justice, be the cost what it may, even in lives.

My voice has always been raised against war, and always will be, but this is not war, it is simply the administration of justice. When a murder is committed we set ourselves to apprehend and punish the murderer, taking no thought of what the trial will cost the county or the state, in dollars and cents. We send the sheriff and his deputies hot upon the trail, realizing that one or even more of the officials may be killed in the attempt to arrest the man whose life is in the forfeit. The murderer must be arrested, even though another life be lost in bringing this about. Law, order and justice demand that he be punished; the future security of society depends upon it. We cannot say: "Let him go," no matter what the cost in dollars or in human lives.

This is the situation between the United States and Mexico today. The United States is the outraged family, the sancity and security of which have been rudely shattered by the bullets of the assassins. A member of the great national family has been shot down; shall we fail to make every effort to arrest, try and punish the assassin, simply because much money must be spent, perhaps many lives sacrificed, in the administration of justice? Never will I raise my voice for war; but justice is another matter entirely.

I have always been against intervention in Mexican affairs. It is neither called for nor warranted. It is being urged, for the most part, by those who have large mining or land interests in the southern country and who want Uncle Sam, even at the cost of many lives, to make it easier and safer for them to make money. The man who invests his money in Mexico does so at his own risk; the man who leaves the sheltering folds of the stars and stripes and seeks another land, lured by the lust of lucre, is aware of the risk he is taking; no nation should ever be plunged into war because he sought to make money more quickly or more easily than it can be made at home, here in the United States. But it is an altogether different matter when Mexican bandits steal across the line and murder innocent ranchmen and townsfolk, for no other reason than racial hatred or blood passion. To follow after the murderers, arrest and try them is neither intervention nor war; it is justice, that and nothing else. That is why I am glad, beyond words, that the authorities have acted so decisively and that our troops are already well on their way, following up the bandit-murderer who must be captured and punished, at whatever cost. Anarchy must not be permitted, nor lawlessness, in any part of our land.

Some of our brave soldier boys are going to lose their lives in Mexico before this thing is over; perhaps many of them will. But they must go ahead, to the very end, doing their full duty, no more quitting it before the murderer is found and tried than we would want our sheriff or any of his deputies to quit the search for a murderer here in the peaceful grain belt because he feared he could not catch the miscreant easily. It is justice we demand; not war.

TRADE CONDITIONS TODAY.

ONE of the banks of the grain belt issues a monthly letter on trade conditions. The current issue strikes me as being splendid reading. If anything were needed to convince us that 1916 bids fair to be the banner year of general prosperity it is to be found here. I have no desire to inflict a mass of uninteresting data upon you, for I realize that figures are not as interesting to all people as they are to me. Yet I cannot refrain from passing on to you some of the inspiring facts I find in this bank's trade letter, based upon statistics gathered from various sources.

To begin with, what of the bank clearances today, as compared with a year ago? The first of the year I had occasion to use some facts in regard to the state banks of the grain belt, so I wrote to the various examiners and was immensely surprised at the reports I secured. I found that in the last year, in the ten states of the grain belt, the number of state banks had increased 273, while the deposits in this class of banks alone (saying nothing of all the national banks) had increased $237,758,262.80 in a year, almost a quarter of a billion dollars' increase in round numbers, due, in large part, so all the authorities agreed, to the bumper crops of last fall and the good prices prevailing for our farm products. Now, from this bank trade letter, I find that the bank exchanges at 162 principal cities, in January, were $7,000,000,000 more than they were a year ago, while the actual money in circulation the first of February was $35,000,000 more than the same time last year. The circulation per capita on February 1st was $38.67, a new high record, almost $2 in excess of the per capita circulation one year ago. Realizing, as all of us surely do, that bank deposits are the best financial and industrial barometer the country knows, here we have such indisputable evidence of present prosperity as to be most reassuring and convincing to us all.

But do not let us stop here. Bank deposits might testify to a spirit of miserliness as well as of enterprise. Let us see how our rapidly-increasing deposits are being utilized.

Building operations during January in 139 leading cities totaled $53,000,000, as against $44,000,000 in January, 1915, a gain of 20 per cent. Mill shipments of western pine in December were 93,000,000 feet, as against 76,000,000 feet the year before. The southern pine output in January was 409,000,000 feet, compared with 329,000,000 feet in January a year ago. The net earnings of 169 railroads in December were $102,000,000, compared with $59,000,000 the year before, an increase of 73 per cent. In the face of a large decrease in the cotton movement, southern roads are showing gains in gross earnings today, whereas a year ago they were recording losses, in spite of a heavy cotton movement, which would apparently indicate that general business conditions influence railroad earnings quite as much as crop movements. The net number of cars idle in the country on February 1st was 21,485, compared with 46,955 on January 1st of this year and 279,411 on February 1, 1915. In other words, a quarter of a million more freight cars are in operation today than there were a year ago, testifying to a tidal wave of shipping prosperity. Moreover, there were orders placed during January for 30,327 railroad cars, compared with orders for only 3,300 new cars a year ago. Certainly the railroads would not be thus adding to their equipment if they could not foresee a continued demand for such rolling stock, with which to move the bumper crops confidently anticipated for 1916, and the building materials so eagerly demanded all over the country, to say nothing of the war supplies being frantically rushed to the fighting armies abroad.

I hope these figures have not bored you; to me they are intensely interesting, for they tell a story which can be told in no other way; a story of American pluck, progress and prosperity the like of which was never before known. Realizing that every other industry is so prosperous, is straining every muscle to the limit to win every reward of the golden opportunity, shall we not resolve to make farming keep pace with the other great industries of the nation, to the end that 1916 shall be our greatest crop year, surpassing every other one of its brilliant predecessors?

ACRES OF DIAMONDS.

MANY of my readers have probably heard Dr. Russell H. Conwell deliver his famous lecture, "Acres of Diamonds," at some Chautauqua assembly, for he has delivered it over 5,000 times, and is a great favorite on the Chautauqua platform here in the grain belt. Dr. Conwell tells the origin of this famous lecture in the current issue of one of the large national magazines. To me the story is intensely interesting.

The idea was originally given to Dr. Conwell by an Arab guide, who retold an old story of a man who left his home and searched the world for diamonds, only to give up and drown himself in despair, while all the time the richest diamond field in the world—Golconda itself—was located on the place he had left to start his fruitless world-wide search. When the Arab guide had told this legend to Dr. Conwell the latter replied with a story of similar point, bringing the lesson nearer home to us here in this country.

It seems that a man who owned a farm in Pennsylvania decided to sell it and get a job collecting coal oil for his cousin up in Canada, where the first oil on the continent had just been discovered. He wrote to his cousin for employment and his cousin replied: "I cannot hire you, for you know nothing about oil." So the old farmer said: "I will know," and he set himself to study the whole subject. Then he sold his farm for $833 and went up to Canada. He had scarcely gone from the place when the new owner went out to arrange for watering the cattle in a brook back of the barn. He found that the old farmer, years before, had placed a plank edgewise across the surface of the brook to throw off a scum that collected on the surface and kept the cattle from drinking. He became curious and his investigations resulted in the discovery of a tremendously rich flow of oil. Dr. Conwell concludes the story thus:

For twenty-three years the man who went off up to Canada to make his fortune in the oil business had been damming back a flood of coal oil which geologists have since declared to be worth a thousand millions of dollars. The city of Titusville now stands on the territory which this man, who had learned all about oil, sold for $833.

Would that Dr. Conwell or someone like him, preaching a similar message, could come into every farm home in the grain belt to show us the acres of diamonds within our grasp, no matter how barren and unfruitful seem the soil and the life about us. Dr. Conwell adds a story which all of us might well take home to ourselves. He says:

Too many people are satisfied if they have done a thing "well enough." That is a fatal complacency. "Well enough" has cursed souls. "Well enough" has wrecked business enterprises. "Well enough" has destroyed nations. If perfection in a task can possibly be reached, nothing short of perfection is "well enough."

Governor Talbot, of Massachusetts, got his high office because General Swift made a happy application of the truth, in saying to the convention: "I nominate for governor of this state a man who, when he was a farmer's boy, hoed to the end of the row." That saying became a campaign slogan all up and down the state. "He hoed to the end of the row! He hoed to the end of the row!" When the people discovered that this was one of the characteristics of the man, they elected him by one of the greatest majorities ever given a governor in Massachusetts.

There is another story he tells of still another farm boy, who, by the force of an indomitable will, finally made good, against great obstacles. Here is the story:

I am thinking of a young Connecticut farm lad who was given up by his teachers as too weak-minded to learn. He left school when he was seven years old and toiled on his father's farm until he was twenty-one. Then something turned his mind toward the origin and development of the animal kingdom. He began to read works on zoology, and, in order to enlarge his capacity for understanding, went back to school and picked up where he left off fourteen years before. Somebody said to him: "You can get to the top if you will!"

He grasped the hope and nurtured it, until at last it completely possessed him. He entered college at twenty-eight and worked his way through with the assistance that we were able to furnish him. Today he is a respected professor of zoology in an Ohio college.

Is there not an inspiration here, for all of us, in these stories of men who made good, in the face of apparently insurmountable obstacles, men who made good even in the little circle where their lives were cast? It is not always necessary to go out into the busy, unheeding world to get ahead in life, to win fame and fortune; there are acres of diamonds all about us, in the country and in the city, if only we will rub the scales from our eyes and see, while there is yet time.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

[illegible] Ia. | 201 Washington Bldg. Madison, Wis.

[illegible] communications relating to subscription or advertising [illegible] addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.25; ten years in advance, $4.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

The Wisconsin Farmer Started This Farmer Right.

ALMOST every farmer in Wisconsin knows about Dodge county grains and seeds and the neighborhood around Beaver Dam. This neighborhood has become famous for the gold medals which its farmers have carried away at district, state and national grain shows. Among the farmers in the Beaver Dam neighborhood who have won many ribbons at grain shows is J. L. Krause, whose letter giving experiences in growing clover for seed appears in the Farm Forum department of The Wisconsin Farmer this week.

At the same time Mr. Krause sent The Wisconsin Farmer the brief and modest statement of his farming experiences he also addressed to the editor the following letter:

Beaver Dam, Wis., March 9, 1916. The Wisconsin Farmer, Madison, Wis. Dear Sirs:—I am today sending you particulars on my method of growing clover seed. . . . . I can trace my success directly to articles on clover in copies of The Wisconsin Farmer in 1911.

And the excellent seed secured that year and the premium won at Columbus, Wis., with the lecture of Prof. R. A. Moore, were directly responsible for my entrance into the short course and my continued success thereafter in that line.

We have been sowing from seventy-five to eighty acres of clover the past few years for fall pasture and future crops of clover, and it has paid us very well. Yours very truly,

(Signed) J. L. KRAUSE.

When a successful farmer like Mr. Krause gives The Wisconsin Farmer credit for the inspiration which has resulted in his success, we feel as though we were coming very close to fulfilling our mission as an agricultural publication. Of course we realize that Mr. Krause is responsible for his success. An agricultural paper might preach the right kind of doctrine for years, but unless this seed falls upon good ground it will never result in a farming success. It is a source of great gratification to The Wisconsin Farmer that Mr. Krause was able to get his first ideas on clover for seed in this paper. And we are very proud of the fact that Mr. Krause has seen fit to make the best of his opportunities. The Wisconsin Farmer feels that its mission is to teach better farming and better living and evidence of this character proving the success of our ambitions are gratifying in the extreme.

New Life For Wisconsin Holstein Association.

IF NO other one thing results from the recent convention of the Wisconsin Holstein-Friesian Breeders' Association at Watertown than the employment of a field man, as proposed at that time, the meeting will go down in history as one of the most beneficial ever held in Wisconsin by the lovers of the "black and white." The Wisconsin Farmer believes this a wise move on the part of the association, one which will be of immense value to the Holstein interests of the state, and we trust the plan as outlined and explained in detail in our report of the convention last week will be carried out.

The plan is to hire an experienced man to represent the association and also act as secretary. He will be paid a salary, devote all of his time to the association, and boost at all times for the promotion of the breed in Wisconsin. Just what the expense of such a man will be is not known, but many breeders believe that he can be employed for about $2,000 a year; that his traveling and office expenses might be another $1,000 and that $3,000 would cover the total expense. Certainly such a field man, capable and always on the job, would be worth the expenditure. Just how this money is to be raised is another question, as the association does not have the needed funds, and a committee was appointed to devise ways and means. This committee will report in May, and a special meeting will then be called to take further action.

There are about 2,000 breeders of pure-bred Holstein cattle in Wisconsin. Of these about 1,200 are members of the national association, but less than a tenth of the national members belong to the state association. Why? That was one of the big questions which the convention endeavored to solve, and it was agreed that a field man who could give all his time to the work ought to interest practically every breeder, especially those with pure breds, in the state association, and in a short time make it the foremost organization of its kind in the country. It is probable that the breeders will be asked to contribute to a fund for the support of a field man. If each of the pure-bred breeders would donate $2 such a man could be hired and put to work immediately. This is not a big task if every breeder will put his shoulder to the wheel and work to make the state association occupy a position second to none. This field man would be to the Holstein industry of the state what the county agricultural representative is to his county. Wisconsin produces as fine Holsteins as any state, and if the breeders do not secure the prices to which they are entitled they are at fault in not creating a demand, providing other conditions such as to market, etc., are right. A field man could do this by bringing before the world the superiority of Wisconsin Holsteins. Furthermore, he could increase the membership of the association and enlarge its scope of work and so direct its energies as to accomplish the most good.

Waukesha county Guernsey breeders are considering the field agent plan for the one county. If such a man would be of value to the breeders of one county he would be worth far more to breeders from the state at large. There is much that he could do, and if a field man is employed the Holstein interests of the state should gain much therefrom. Every breeder of the "black and white" in Wisconsin should belong to the state association. Instead of 200 breeders at a state convention there should be 2,000 or even more. The man with grades has just as much to gain through such an association as the man with pure breds—probably more. A field man could do much to get all of these breeders into the organization, and when the association includes a majority of the breeders in the state it will be a mighty force, not only in Wisconsin Holstein affairs but in national Holstein affairs.

Getting Ready For the State Fair.

THERE is every indication that the 1916 Wisconsin State Fair at Milwaukee will be of greater interest to farmers of the state than any previous state fair. Commissioner C. P. Norgord, Sec. O. E. Remey and the advisory board are all awake to the agricultural possibilities of the fair and are doing all within their power to make the coming fair the best agricultural show yet staged in Wisconsin.

At a recent meeting of the board in Milwaukee final approval was placed upon many projects of importance to the farmers. The premium list which will be ready for circulation within a few weeks, was approved. Provision was made for substantial increase in premiums on live stock, corn, grains, poultry, etc. With competition open to the world this year and more money offered in live stock classes than ever before, it is probable that the live stock show will be a record breaker for Wisconsin. Many new divisions have been added. One of particular importance is a cow-testing competition for which $500 in prizes has been offered. The best ten cows and the poorest ten cows in the ten cow-testing associations with the highest producing cows will be brought to the fair in this competition and will afford the dairymen a splendid opportunity to study production, feeding, etc. Each cow entered will be assured at least $30, which will doubtless bring out some strong competition. A baby beef class has also been added.

This will attract much interest because of the contest being conducted by the Wisconsin Live Stock Breeders' Associations, co-operating with eight county fairs in the beef producing sections. In the boys' and girls' department the premiums have been increased and a boys' stock judging contest with liberal prizes has been added.

The board has made it possible for the Wisconsin fair to have a good corn show, by ruling that any corn harvested since the preceding fair may be shown. This means that 1915 corn may be shown at the 1916 fair and that exhibits at the state winter grain show and other shows held during the winter may be shown at the fair. The premium list on corn has been increased $300, and with more money for grains and grasses the 1916 corn and grain show should prove a record breaker. Special attention will also be given the county exhibits and horticultural departments.

The board decided definitely to eliminate the "pike," and in its place there will be a western show free from objectionable features. About $14,000 will be spent for music and free attractions. The fair will open Monday but to accommodate thousands of visitors who always come on Sunday a sacred concert by the Tavia Concert Band, assisted by the singing societies of Milwaukee, will be given on Sunday afternoon. Exhibits will be released on Friday night, but on Saturday automobile races will be held, and on Wednesday and Thursday there will be night shows.

The Milwaukee Automobile Dealers' Association also arranged for another automobile show in machinery hall, which will be the first show of the season displaying the 1917 models. It has not been definitely decided whether the 10-cent admission charged last year will be continued or the show made free. The board decided to cut the issuance of passes and proposes to deny this honor to all except employes and those who donate some service to the fair. State officials and legislators will be cut off under this ruling.

Alfalfa Grows Sickly on Acid Soils.

THE process of determining whether a soil contains too much acid for a thrifty growth of alfalfa or not is comparatively simple and it is reasonably accurate. Purchase a few cents' worth of blue litmus paper from any druggist and you are then ready to proceed with the test. Place a small strip of this paper in a ball of moistened soil taken from the field that is to be tested. It is usually a good plan to dig down four or five inches and secure a representative sample. The soil should be moist enough so as to make the paper damp, but it need not be wet enough to make a mud ball. If the soil is acid it will turn the paper pink in a very short time. If there is only a trace of acid the paper may be slightly but not entirely changed in color, and such soils will invariably produce good alfalfa, if they are properly inoculated. We have repeatedly examined soil that showed a trace of acid and yet at the same time the field from which it was taken was producing a good crop of alfalfa. However, if the paper is turned completely pink one may rest assured that there is a soil that will not produce good, thrifty alfalfa.

And there is good reason why the crop does not thrive under those conditions. It involves the problem of germ life that is present on the roots of a thrifty alfalfa crop. Those germs do not thrive in the presence of acid and the alfalfa crop does not make a thrifty growth if these root organisms do not prevail. In such a case it is absolutely necessary to sweeten the soil by the free use of lime. Sometimes tile draining land will greatly improve it and it will sweeten of its own accord under a regular crop-growing system. However, where there is a desire to obtain a stand of alfalfa without delay it becomes necessary to resort to the use of lime. Ground limestone rock answers the purpose ideally. It may take a ton per acre or even as much as two tons to bring about a favorable condition of the soil. Of course, it will only be wasting time and seed and energy to undertake to establish alfalfa if the soil is not reasonably well drained by natural processes or by tiling.

Little Things That Count in Handling Brood Sows.

SWINE breeders pocket an enormous loss every year because they raise so small a percentage of the pigs that are farrowed early in the spring. This applies particularly to pigs farrowed in March. We have known many instances where sows did not save more than an average of two or three pigs per litter, and where this is the case it goes without saying that most of the profits are eliminated right in the beginning.

We realize that some of the trouble is due to the fact that satisfactory living quarters are not provided for the sows, with the result that the little pigs become chilled and, therefore, drop out one by one. Where only a few sows are kept it should not be a difficult matter to provide at least one farrowing pen that can be made comfortable even during periods of cold weather. This is where the individual hog house comes in well. A little building 6x8 feet can be constructed at a cost not to exceed $15. It can be placed in a small yard and the sow should have access to it two or three days before farrowing. Let her go in and out at will but do not try to force matters. By putting a little feed in the new house the sow can be coaxed into her quarters without arousing her resentment. If the sow is satisfied with her surroundings this in itself is half the battle because the way is then paved for the little attentions that are often needed when the pigs are young.

We recognize the fact that unless the individual hog house is well banked up during periods of cold weather the little pigs might become chilled even in such quarters. In that case the owner can well afford to give a little personal attention to the situation and in no way can so much be accomplished with a small amount of effort as by supplying a little artificial heat at farrowing time. Sometimes one or two lighted lanterns will supply enough heat to answer every purpose. The objection to this plan is that the lanterns will sometimes befoul the air, and our own preference is to use hot bricks. One can take half a dozen or even a dozen bricks, thoroughly heat them in the stove or furnace, put them in a metal vessel and place the vessel in the farrowing pen. It is amazing how this will moderate the temperature during a cold spell. It takes the chill off the air so that the young pigs are given a warm reception rather than a cold one as they start upon life's journey. In most cases it is sufficient to supply artificial heat for a few hours only because after that if the pen is dry and a reasonable amount of bedding supplied the little fellows will be able to shift for themselves.

There is one other matter to which attention should be given. We refer to the plan employed in feeding the sow. We believe in a light ration immediately preceding the farrowing period and

ht feeding for twenty-four or possibly forty-ght hours afterward. This is particularly im-rtant where one has to deal with a heavy milk-g strain of sows. If such are fed milk-making ods the little pigs are apt to be scoured, par-cularly in cold, damp weather. This causes more ss among young pigs than all other ailments mbined and it usually can be avoided by feeding ghtly at the critical time. It is important, also, exercise care in the use of slop when the pigs re young, particularly slop containing milk. This a fertile cause of bowel trouble in the little llows and it is much better to err on the other ide by feeding only dry grain than it is to risk hrowing the little pigs out of condition by using et foods.

Utilize the Manure to Advantage.

MANURE is the most valuable by-product on the farm, and yet a very large percentage of the annual accumulation is llowed to go to waste. To obtain the full value rom the manure it ought to be hauled to the field s produced. Unfortunately this is not always racticable, for one reason or another, but it is ossible to prevent large accumulations and allow-ng it to be wasted both through fermentation and eaching.

During the winter and early spring months the wheat field offers a splendid opportunity for sav-ing the manure by spreading it over the growing crop at the rate of six tons to the acre, by means of a manure spreader.

The soluble constituents which the manure con-tains immediately get to the roots of the plants and much of it becomes available as plant food in a very short time. There are few wheat fields that are not improved by a light dressing of stable or yard manure; and, in fact, there are few places where it will do more good than on the wheat field.

Such top dressings are also of great value to grass and clover fields intended for hay, while pas-tures are greatly improved thereby. By all means get the manure away from the yards where from 25 to 50 per cent of its fertility value will be lost in a very short time. Good barnyard manure is worth $2 per ton, and no one can afford to allow any of it to go to waste, even in a small way. A field that has been well covered with manure will show the effect thereof for several years after-wards.

Poor Economy Not to Paint Buildings.

THERE is probably nothing that sells better than paint or brings a fairer price. Not in cans or kits, however, but rubbed in and onto the surface of various things. The real es-tate man buys a poor, run-down farm. He has a man go over the place and straighten up a few fences. Boards are nailed up where most needed. A few of the most obviously necessary things are done, then it is paint, paint, paint. Eventually paint sells the farm at a profit. Paint sells more goods of the secondhand sort than any other one agency. The reason is simple enough. It covers defects and imperfections and lends attraction to the object it covers. It adds newness. Not only does it cover these imperfections but paint makes them last longer, and it is a curious fact that many people would rather pay an unreasonable price for an inferior article that is well painted than to buy the same article unpainted and paint it themselves.

Twenty-five years ago a farmer whose barn was painted was considered quite well off in most communities. Today the man who fails to paint his barn, house or other buildings is considered a poor manager. It is the custom now on most farms where public sales are held to repaint every implement offered. It is a good practice, for not only does the paint attract the attention of the prospective buyer and add to the value, but on a farm where everything is kept painted and in first-class condition this painting of such offerings is in keeping with the general scheme of the farm. It gives the place a prosperous appearance. It gives the air of well-kept-upness that nothing else will do.

More and more inside painting is being done each year. The scarcity of hardwood and its con-sequential rise in price has led to the substitution of cheaper softwood grades as inside finishing in many instances. This is usually painted or enam-eled. The same is true of many articles of furni-ture. For several years "packing box" furniture has been much in vogue, and as most of this is made at home and of the poorer grades of wood, paint is necessary for it. It is not a difficult task to paint either inside or outside work. Practically all colors and types of paints can be purchased ready mixed, and for second coat work and finish-ing they are superior, as a rule, to the home mixed. For the first or prime coat the home mixed paint is the best of the two because one can add the re-quired amount of oil. Woodwork that has stood the weather for long requires much more oil than new woodwork. This is especially true of build-ings that have stood the elements for several years unpainted. For such work, or for new work, the oil of the prime coat should be rubbed well into the wood to insure permanency. Second coat or inside priming that will be well protected will take less paint and need less attention in this respect.

Inside work can be painted at any time, and it is a mistaken idea that everything must be re-moved from a room in order to paint it. By spreading old pieces of carpet or newspapers over the floor even a ceiling may be painted without damaging anything in the room if one is careful. Outside work had best be done in May or June, for it is then that the dust and flies make the least trouble.

Location of Farm Buildings and Farm Work.

SEVERAL of our experiment stations have been making investigations for the purpose of ascertaining the amount of labor that can be saved on a farm annually by the proper loca-tion of farm buildings as compared with a location that is awkward. The North Dakota station calls attention to the fact that in the case of one farm studied in detail a distance of fifty-three miles was covered in a year in carrying water. Later a modern water system was installed, and by pip-ing it to the house and to the farm buildings the task of carrying water was entirely cut out.

It was found in one case that in carrying the wood for the home a distance of twenty-two miles was covered annually, whereas under a new ar-rangement this was reduced to eight and three-fourths miles. It was found by this station that on many farms a saving of more than 100 miles a year could be made in caring for the hogs. The replanning of one farm resulted in a total saving for the year of 217 miles. Not only was this distance covered in performing farm tasks under the old plan but in most cases the worker carried a load at the same time, so that a mere enumeration of the mileage does not con-vey a proper idea of the amount of labor per-formed.

We understand perfectly that where buildings are located it is not a simple matter to change them, because in many cases a very large expense will be involved. We are going in the right direc-tion, however, by studying these matters, and one of the first things on the average farm that should receive attention is the water supply. What can be more laborious than the task of pumping a large supply of water by hand each day and the carrying of the same in buckets not only into the home but also using it for live stock. Usually our cattle and horse water troughs are handily lo-cated, but in many cases an enormous amount of labor is involved daily in the feeding of the hogs. The mixing of slop alone is a big undertaking where many hogs are kept, and in this connection attention should be called to the fact that some of our experiment stations are getting notably good results in the raising of hogs without any slop. They are using the self-feeders so that the hogs balance their own ration, and when they are af-forded an ample supply of water the amount of care they require is reduced to a minimum.

Cost of Automobile Service.

FIGURES have just been published by the United States Department of Agriculture in regard to the cost of running automobiles. They are based upon nineteen months of contin-uous service on the Washington-Atlanta Highway, over which the office of public roads and rural engineering has supervision. Three low-priced cars were used in the test. The cost of operation —including gasoline, grease, oil, tire casings, other tire cost, storage charges, and miscellaneous ex-penses—for car No. 1 averaged 4.63 cents per mile; for car No. 2, 3.91 cents; and for car No. 3, 3.90 cents. The average cost for all was 4.13 cents per mile. These cars ran from twenty-eight to forty-three miles a day for thirty days a month over the nineteen-month period. An average for all the cars during the whole period shows that the cost of transportation was 21 cents per mile per month. Similar figures for the use of livery show a cost 62 cents per mile per month, which makes a very favorable showing for the automobile with-out taking the element of time-saving into con-sideration.

The average cost of the gasoline used in these tests was 18.1 cents per gallon; the average miles run per gallon was 17.6, the average miles run per pound of grease was 423, and the average miles run per quart of oil was 66.4. The various costs per mile run were distributed as follows: For gasoline, 1.4 cents; for grease, .04 cents; for oil, .23 cents; for tire casings, .65 cents; for other tire costs, .18 cents; for storage charges, .52 cents; and for miscellaneous expenses, 1.47 cents—total, 4.13 cents per mile. It will be seen that storage charges were much higher than they would be on the farm—over one-third the cost of the gasoline. Considering these facts in regard to economy of operation and in addition to the element of time saving one can readily understand why the auto-mobile continues to grow in popularity.

Seed Corn Proclamation.

WHEREAS, The department of agri-culture has called my attention to the serious shortage of good seed corn in Wisconsin due to the unfavorable ripening season last fall; I, therefore, deem it necessary to acquaint the public with the following facts:

Many germinating tests have shown that little of the seed corn has sufficient vitality to make it safe for planting without securing a germinating test of each ear. However, much of the seed saved, though low in germination, contains many ears of high vitality. These can be found and saved by a simple test of each ear.

Many of Wisconsin's improved home-grown and acclimated strains of corn that otherwise might be destroyed and lost to the state, can in this way be saved and profitably used. Greatly decreased stands and yields, with much waste of time, money and effort will surely follow if the seed on hand is planted without proper testing. The situation is so serious and the need for immediate action so imperative that I deem it advisable to publicly call attention to these conditions.

To this end, I hereby proclaim the week from March 27th to April 1st as seed corn week. I urge that during this period every farmer thoroughly test each ear of his seed corn and eliminate all ears not showing high germination. I also urge that business men of all classes encourage farmers in this work and that they render assistance in obtaining acclimated seed of high vitality. In witness whereof, I hereunto set my hand and cause the great seal of the state to be affixed this 10th day of March, 1916.

EMANUEL L. PHILIPP,
Governor.

By the governor:
JOHN S. DONALD,
Secretary of State.

One-fourth of the Land in Legumes

ACCORDING to a bulletin recently prepared by the United States Department of Agri-culture, the productivity of a farm is not being kept up on a permanent basis unless annu-ally at least one-fourth of that farm is made to grow legumes which are either plowed under as stable manure or green manure. A few of the rules relating to maintenance of fertility given in this bulletin are, first, do not, unless under excep-tional circumstances, grow corn in the same field more than two years in succession; second, keep one-fourth of the land in legumes in order to main-tain a proper supply of humus and nitrogen in the soil; third, feed as much grain as possible to live stock on the farm.

The results of experiments at the Illinois station are cited, these having been carried on since 1879. Where corn and oats were grown alternately the average yield of corn has been 38.1 bushels per acre. On the other hand, where a rotation of corn, oats and clover has been carried on the average yield of the corn during the same period was 57.2 bushels per acre.

A great many different kinds of ration may be practiced to meet varying conditions, according to this bulletin. "The most common one covers a four-year period and uses the following crops, corn, oats with clover seeding, clover, and wheat. In connection with this rotation it is suggested that if the clover fails an annual legume such as cow-peas or soy beans may be used to fill in. Where clover precedes wheat the first crop is used for hay and the second one cut for hay or seed." As a matter of fact, on rich land, following clover, wheat is not the most profitable crop, as it is liable to lodge, while, on the other hand, it is im-possible to get a soil too rich for corn. Practically speaking, where wheat is in the rotation best re-sults in the long run will be obtained from a five-year rotation. In that case there will be two crops of corn followed by a crop of oats, then winter wheat, this to be seeded down to clover.

Where it is the intention to build up a soil rapidly the shorter rotation may be resorted to. In that case winter wheat or fall rye may be sown in the cornstalks and clover sown at the same time or the following spring. In this case there will be a crop of wheat or rye the second year, and in all probability a good growth of clover in the fall. The third year one or two crops of clover may be cut and the last one plowed under in prep-aration of the land for corn the following year. Of course, the short rotation is costly in one re-spect, inasmuch as the land would have to be seeded down every third year and clover seed seems to have reached a permanently high value.

In the rotations mentioned above nothing has been said of the pasture, and this is, after all, one of our most important crops. Pasture is a great conserver, and where a top dressing can be used periodically land can be built up very quickly if left in grass, particularly if legume seed has been used freely in seeding it down.

Sixteen hundred tons of cherry pits, now a source of annoyance and expense to canneries, can be made to yield two valuable oils and also a meal for feeding cattle, according to specialists of the United States Department of Agriculture. In ad-dition 105,000 gallons of cherry juice now wasted in seeding cherries can be turned into desirable jelly and sirup, or even into alcohol. A saving of these valuable by-products from cherry canning may make possible the domestic manufacture of substitute for almond oil and bitter almond oil, now imported, and at the same time establish a new industry in the cherry packing districts of western states.

In and Around Wisconsin

Wood County Guernsey Breeders Elect Officers---Breeders Associations Making Plans For Their Summer Picnics.

Vilas county boosters are at work for a county fair and Sayner, the geographical center of the county, probably will be selected as the place for holding the fair.

The new $6,500 barn on the Oneida Indian reservation near DePere has been completed and congress has been asked for an appropriation of $10,000 with which to buy pure-bred cattle for the school farm.

S. M. Prout and Prentice C. Warmington, of Honey Creek, and Frank Squires, of Burlington, have been announced as the three winners in the county farm management contest conducted in that county during the past year. From these three the county winner will be chosen.

The Stevens Point Fair Association has completed plans for the 1916 fair and announced the standing committees on whom rest much of the responsibility for the success of the fair. R. K. McDonald, A. E. Bourn, G. L. Park, A. D. Barnes, M. E. Bruce and J. J. Normington were chosen to get up the premium list.

Paul Weisner, of Patch Grove, recently told at a meeting called to organize a cheese factory of his experiences in starting such a factory some years ago at Patch Grove. As a result of the factory he says that there are less than 200 of the original cows left in that territory; that land values have risen from $50 and $60 to $80 and $85 an acre and in his opinion nothing is better for a district than a factory to take care of the dairymen's product. He praised the milking machine highly and said that with the milking machine a man can milk twenty cows an hour and in this way the labor question which confronts the owners of large herds is solved.

The annual meeting of the Central Wisconsin Holstein Breeders' Association was held on March 15th at Vesper, Wood county, and was well attended. A full account of the meeting will appear in these columns in a later issue.

The Wisconsin Live Stock Breeders' Association has turned back to the Wisconsin Panama commission the sum of $4,239.46. This represents the unexpended balance of the fund of $5,000 set aside for Wisconsin stockmen for an exhibit at the Panama-Pacific Exposition, which, excepting horses, was called off on account of the foot-and-mouth embargo.

The Wild Rose Poultry Association has decided to add a junior department to its 1917 show and the boys and girls are urged to get busy immediately and raise some good stock for the next show. The association at its annual meeting recently elected A. M. Holman president; C. A. Smart, vice president, and C. G. Corning, secretary.

The annual meeting of the co-operative creamery association of Jackson county was held recently at Black River Falls and all the old officers, excepting the president, were re-elected. T. R. Kittelson was forced to retire from the presidency, as he is leaving the county. In his place Oscar Flugstad, of North Bend, was chosen. J. H. Harmer, of Albion, was chosen vice president, and L. A. Sly, of Sechlerville, secretary.

Indications are that Upper Wisconsin will be well represented at the banker-farmer conference which will be held in Madison March 28th-29th. Several counties have already selected delegates, although anyone is at liberty to attend. The Rusk County Bank, at Ladysmith, agreed to pay the expenses of a man chosen by the Ladysmith creamery and E. C. Steubs was chosen. Other banks are contemplating similar action.

Plans for the summer meeting and picnic of the Northern Dunn and St. Croix County Holstein Breeders' Association were discussed at the annual meeting recently at Glenwood City. It was decided to hold the picnic at Boyceville some time in June, the date to be announced later. It is the intention to make this picnic the big social event of the year for that community and Frank Meyers, E. H. Radke and S. B. Peck were appointed members of a committee to make the arrangements. A. H. Parrott, official tester of the county cow-testing association, will also assist this committee. The association also decided to offer a prize to the owner of the cow in the association territory which produces the most butter fat during the year. No regard to breed will be paid in awarding the premium which will go to the best producer.

About thirty breeders of Holsteins in Washington county met recently at West Bend and organized the Washington County Holstein-Friesian Breeders' Association with Walter Schroeder as president; W. Meuschke as first vice president; J. Buckley, second vice president; John W. Gehl, secretary, and Henry Schowalter, treasurer. The constitution and by-laws will be approved and other unfinished business transacted at a special meeting on March 24th, called for this purpose. Dues were fixed at $1 per year for breeders with only grade cattle and $2 for those with pure breds. This is a splendid step by the Washington county breeders who expect through co-operative effort to advertise the Holsteins in that community and draw the attention of buyers to the many fine herds in Washington county. Township representatives were appointed as follows: Addison, And. Endlich; Barton, Chr. Rosenthal; Erin, Harry Malloy; Farmington, Wm. H. Gruhle; Germantown, Ira Gettelman; Hartford, C. Eifert; Jackson, John A. Joekel; Polk, Chas. Eckert; Richfield, Martin Groth; Trenton, Herbert Schroeder; West Bend, Paul Horlamus; Wayne, J. C. Meyer; Kewaskum, Wm. Quandt.

The annual meeting of the Wood County Guernsey Breeders' Association was held recently at Vesper and it was decided to hold the summer picnic and meeting at Arpin. The breeders will be the guests of Charles Tomfohrde, a prominent Guernsey breeder, and plans are already being made to make this the biggest summer meeting ever held. June 21st was selected as the date. The recent meeting was well attended, despite the stormy weather, and a picnic dinner was served by the women who were afterwards elected honorary members of the association. J. Ross Porter was chosen president; Charles Tomfohrde, vice president; A. P. Bean, secretary, and William Burhopp, treasurer. Mr. Burhopp, Mr. Bean, Mr. Paulson and Mr. Porter were elected members of a committee to arrange the program for the summer meeting.

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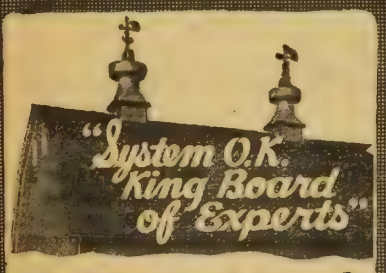

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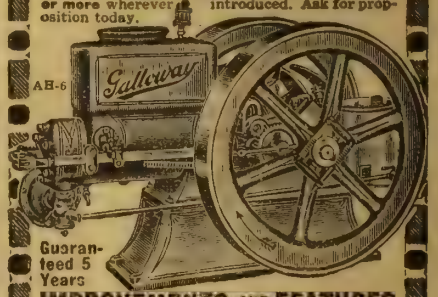

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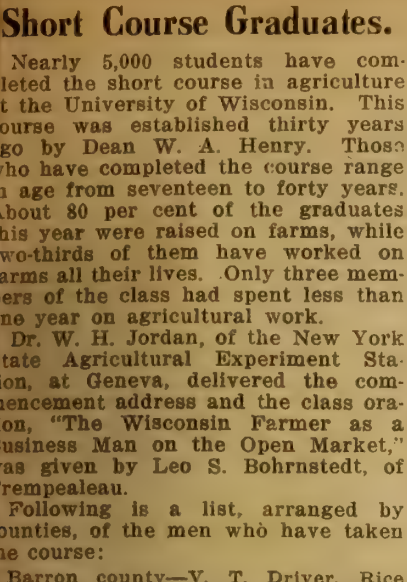
Short Course Graduates.

Nearly 5,000 students have completed the short course in agriculture at the University of Wisconsin. This course was established thirty years ago by Dean W. A. Henry. Those who have completed the course range in age from seventeen to forty years. About 80 per cent of the graduates this year were raised on farms, while two-thirds of them have worked on farms all their lives. Only three members of the class had spent less than one year on agricultural work.

Dr. W. H. Jordan, of the New York State Agricultural Experiment Station, at Geneva, delivered the commencement address and the class oration, "The Wisconsin Farmer as a Business Man on the Open Market," was given by Leo S. Bohrnstedt, of Trempealeau.

Following is a list, arranged by counties, of the men who have taken the course:

Barron county—V. T. Driver, Rice Lake; E. R. Phillips, Comstock. Bayfield county—E. A. Bresette, Bayfield; R. E. Wittwer, Cable. Buffalo county—Wayne Adams, Mondovi; F. Rosenthal, Mondovi. Clark county—W. H. Crothers, Neillsville; E. L. Dyre, Greenwood; E. M. Peterson, Curtiss; F. D. Wood, Owen. Columbia county—A. M. Derr, Columbia. Dane county—S. C. Bathum, Madison; A. H. Chalfant, F. P. Currier, W. H. Goth, B. A. Hamm, Madison; Donald Heffron, Waunakee; G. R. Lalor, Oregon; A. J. Voitn, Sun Prairie. Dodge county—R. B. Caniff, Juneau; A. Isken, Brownsville; N. O. Pahlke, Juneau. Door county—R. W. Bavry, Egg Harbor; W. R. Swenson, Sister Bay. Douglas county—R. W. Findlay, South Range; H. D. Ward, Solon Springs. Dunn county—T. M. Curran, Menomonie; Milford Dodge, I. Langseth, Harrison Metzger, Menomonie. Eau Claire county—E. C. Frye, Eau Claire; V. W. Jackson, A. M. Tinker, R. B. Wilson, Eau Claire. Fond du Lac county—L. N. Bush, Waupun; V. C. Grennell, Brandon; C. E. Schmoldt, Rosendale; M. T. Schea, Campbellsport; Hanry Stanz, Fond du Lac. Grant county—L. L. Chitwood, Blue River; W. G. Hudson, Boscobel; E. B. Morse, Mt. Hope; W. B. Patten, Boscobel; Leo Pink, Lancaster; E. J. Runde, Sinsinawa; E. C. Swenson, Mt. Horeb; Oscar Weinberger, Platteville. Green county—F. R. Hinkamp, Monroe; Kenneth Turnbull, Monroe. Iowa county—W. G. Lauper, Hollandale; H. L. Shannon, Avoca; W. E. Swenson, Hollandale. Jackson county—P. E. Olson, Northfield. Jefferson county—V. M. Bauer, Jefferson; R. W. Bridge, Lake Mills; C. G. Huppert, L. W. Huppert, Harry Lowe, L. F. Lowe, Ft. Atkinson; F. G. Northey, Palmyra; W. A. Woelffer, Waterloo. Juneau county—F. L. Cuenot, Mauston; J. M. Nowicki, Mauston. Kenosha county—G. G. Kerkoff, Bassett. Lafayette county—J. R. Chapman, South Wayne; E. H. Helms, Belmont. Langlade county—Albert Oldenburg, Antigo. Manitowoc county—F. C. Kiel, Manitowoc; A. F. Mandel, Two Rivers; E. T. Rogney, Valders; F. C. Sampe, Manitowoc. Marinette county—Ray Remington, Marinette. Marquette county—H. E. Martl, Packwaukee. Milwaukee county—C. H. Angelroth, E. N. A. Benecke, O. F. Kossman, E. H. Stuckert, Milwaukee. Monroe county—A. E. Verken, Norwalk. Outagamie county—S. I. Jamieson, Appleton, E. M. Masche, Hortonville; E. C. Rahmlow, Appleton; F. D. Williams, Bear Creek; F. W. Tubbs, Seymour. Pierce county—C. P. Alton, River Falls; E. L. Preston, Ellsworth; H. V. Goodwin, Prescott. Racine county—O. T. Bartos, Racine. Richland county—E. H. Jewel, Richland Center; Harry Turgasen, Richland Center. Rock county—A. Howarth, Janesville; L. A. Kramer, Edgerton; L. B. Shaw, Orfordville; L. H. Strouse, Edgerton; F. J. Eldeman, Janesville. St. Croix county—Emil Meinke, Somerset; Theo. Pederson, Glenwood City; Fred Thome, Hudson. Sauk county—Raymond Metcalf, Spring Green; P. C. Thomas, Baraboo. Sawyer county—J. H. Monson, Hayward, Shavano county—R. B. Johnson, Rose Lawn; F. S. Pleshek, Shawano. Sheboygan county—C. G. Rock, Donald Rock, Plymouth. Trempealeau county—Leo S. Bohrnstedt, Trempealeau; C. W. Burns, Galesville; G. E. Chappell, Trempealeau. Vernon county—J. K. Davis, Viroqua; B. Eckhart, Viroqua; Pearl Getter, Viroqua; J. A. Gianoli, Genoa; A. N. Johnson, Westby; Ray McMullin, Viroqua; Kenneth Miller, Viroqua; F. T. Sebion, Westby; P. Shumway, Genoa; R. S. Welch, Viroqua. Vilas county—Karl Baackes, Sayner. Walworth county—Lloyd Ames, Elkhorn; Geo. Brennan, Lake Geneva; H. C. Kuenzli, Lake Beulah; C. J. Poster, Whitewater; P. J. Thomson, Genoa Junction; R. A. Westphal, Elkhorn. Washburn county—Sigvart Melby, Spooner. Washington county—A. A. Ebling, Richfield; H. C. Joeckel, Jackson. Waukesha county—Roy Bowe, Oconomowoc; H. E. Hensel, Dousman; L. E. Husten, Eagle; C. H. Kuhtz, Waukesha; LeRoy Lean, Dousman; Herman Lewandoske, Oconomowoc; L. F. Lobdell, Mukwonago; W. M. Longley, Dousman; L. M. Lajeskie, Waukesha; A. G. Miller, Oconomowoc; Peter Nelson, Oconomowoc. Waupaca county—E. C. Boyce, Waupaca; D. A. Daniels, New London; J. F. Harlan; New London; Wm. Knapstein, New London; C. G. Knutson, Ogdenburg; H. E. Stichtman, New London; O. A. Tubaas, Iola; H. A. Weinnmann, Iola. Waushara county—C. E. Simonson, Wautoma; E. N. Thompson, Wautoma; H. H. Thompson, Wautoma; F. L. Tibbitts, Plainfield.



DR. W. H. JORDAN, NEW YORK.
Speaker at short course graduation this year.

Calf Gains and Rations.

To the Editor:—There are now forty-one entries in the Rock county calf contest. Each contestant is keeping a monthly feeding record. The highest gains for February are as follows: Sixty-six pounds, sixty-three pounds, fifty-five pounds, fifty-three pounds, forty-eight pounds and forty-six pounds.

The calf which gained sixty-six pounds received 522 pounds of skimmed milk, fifty-eight pounds of grain, nine pounds of calf meal and alfalfa hay.

The calf which gained sixty-three pounds received 464 pounds of whole milk, twenty-five pounds of grain and twenty-five pounds of hay.

The calf which gained fifty-five pounds used 480 pounds of skimmed milk, thirty-four and a half pounds of grain and eighteen and one-third pounds of hay.

The calf which gained fifty-three pounds used seventy pounds of whole milk, fourteen pounds of calf meal, twenty-two pounds of grain and hay.

The calf which gained sixty-six pounds is a Durham grade.

The calf which gained sixty-three pounds is a pure-bred Short-horn.

The calf which gained fifty-five pounds is a grade Holstein.

The calf which gained fifty-three pounds is a grade Aberdeen Angus.

All of the contestants show excellent interest in keeping the records and the contest on the whole is exciting a good deal of comment.

L. A. Markham.

Rock Co., Y. M. C. A., Janesville, Wis.

[Editor's Note.—The calf contest in Rock county under the auspices of the Rock County Stock Breeders' Association, was announced in The Wisconsin Farmer, December 16, 1915. The contest began in January, the calves being taken at birth. The calves are to be cared for until June 1st, the purpose being for each boy to personally care for his own calf for a period approximating five months. In awarding the prizes the breed, gain, cost of gain and the character or record kept by the boy, will all be taken into consideration.]

DR. DAVID ROBERTS, WAUKESHA.
Recently elected president, Wisconsin Ayrshire Breeders' Association.

Velie Six

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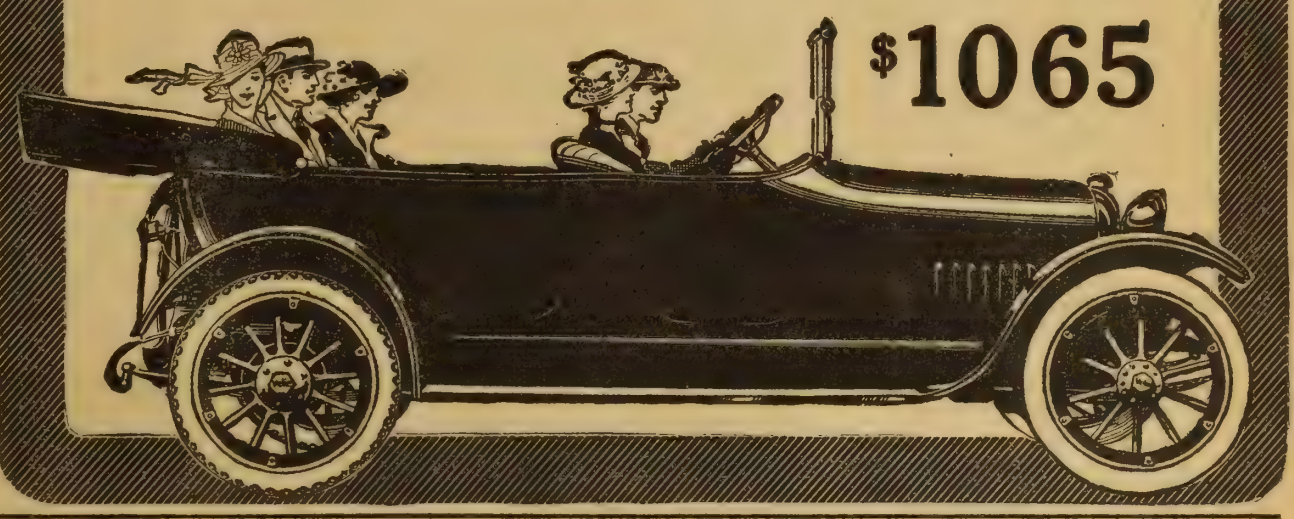
We can positively insure you the delivery of your car on the day you want it. We are protected against the general shortage of materials and shipping facilities, and will maintain the regular price for the present, at least—and immediate Velie purchasers have the benefit.

But if you could obtain today any car in the light Six class, you could not surpass Velie Values at any price and you could not match it at anywhere near $1065—in power, in refinement, in luxury, in equipment and in economy. See your Velie Dealer—come to the factory direct—or write for catalog.

Velie Motor Vehicle Co., 118 Velie Place, Moline, Illinois



ALL I do is to put in the hot suds—then the clothes—clamp down the cover—and turn on the power. No back-breaking washboard scrubbing for me—no arm-breaking wringing.

Triumph Power Washer With Swinging Wringer

does all the washing—all the wringing. Dainty lingerie—baby's clothes—heavy bed clothes, all come out clean, sweet, not a thread broken. Rapidly reversing dolly swirls the garments at high speed in the tub. Suds forced through clothes—carries all dirt, grease with it. Wringer takes 4 positions—no tub changing. Try the Triumph for 30 days. Write for special circular today. Dept N139

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Sold on 30 Days' Trial

THE VALUE OF THE SIRE.

A WORLD-BEATING TYPE OF SHORT-HORN.

A "DEEP-RIBBED, DEEP-FLANKED, FULL-THIGHED" HEREFORD.

OF ALL THE investments on the farm none has so much potency for good as the good sire. It has so often been said that the sire is half the herd that it has become so common as to merit but little attention. If he is truly worth half the herd, why do we keep sires which in actual money value are worth less than the individual female? Why do we keep the scrub sire, that nondescript creature with no breeding, to head our herd? Head of the herd, it is to laugh, the head of herds kept on so many farms. It would appear to be the chief function of most to get the cows with calf. How foolish, how unutterably lacking in good, common sense is such a practice.

Let us look at him for a minute. underfed, angular without the angularity of good dairy type; beefy without the form and substance of the good beef sire; masculine without that masculine look that is found in prepotent sires. He is no head of the herd. Rather, he is a part of the herd and a minor part at that, only he has the power for so much evil and lacks so much the power which he ought to possess, the power to improve his get. A scrub sire, and scrub is the word. He surely is a worthless brute. Who wants to associate with him? Who wants to own him? The head of the herd, indeed!

Why are so many such sires kept? So many stockmen do not appreciate the value of breeding. If they do they keep him because it is the easy way. They breed them young, letting him run with the cows in the pasture. No trouble, no bother, no money invested and, yes, no returns but a wasted life caring for scrub stock. Put money in a good sire. Breed don't count, they say. If it doesn't they ought to have the best animals in the world, but they haven't. They have the worst.

Let us look at this magnificent fellow. He only cost $200, but what an animal. He weighs nearly a ton. What depth, what length, what vigor. Masculine, intensively so. He looks as if put in a ring with other bulls they would not survive a minute. Head of the herd, he. Of course he is and he knows it and you know it. He fears nobody. No cut up, shallow middle there. He has capacity. He has good digestion. His sleek coat lies close over his mellow hide. If dairy, he has the angularity of his type; if beef, he has that smoothness of hip, that covering of flesh and depth so characteristic of the good beef sire. Deep ribbed, deep flanked, deep, full thighed. Even if you do not need him you want to own him, to possess him, to feed and care for him and to use him. He is worth having. He is a jewel without price. There is money in him. He may make you a fortune.

NO CUT UP SHALLOW MIDDLE IN THIS TYPE OF ABERDEEN ANGUS.

But you can't afford to pay $200 for him, you say. You cannot afford to be without him. Better pay some other farmer to keep the scrub sire at $100 a year and use the good sire. You will be money ahead. Let us see, you have forty cows between you, you and your neighbor; you get thirty-six head of calves each year; you raise and sell all of them for beef at two years old. They weigh 1,200 pounds. One hundred and eight head in all; a total selling weight of 129,600. All right. Take your scrub bull and use him. Look at his get. They lack uniformity of color, of shape, of growth. They are angular, some are cat-hammed, coarse in the head. Contrast them with the product of a good, well-bred, prepotent Angus, Hereford or Shorthorn bull. Without considering the cheaper gains, what have you? You have uniformity of color, size, shape. Any buyer will readily give you 1 to 2 cents more for such cattle. One cent difference is $1,296, 2 cents would be $2,592. The extra weight would add another $1,000. Does it pay to pay $200 for a good sire, or does it pay to use the scrub with his immaturity and lack of vigor, size and shape? It is up to you.

Take the case of the pure-bred dairy bull. Such a one must have individuality of the right sort. His dam must have not a week's record nor a month's record, but a yearly record, or, better still, years of records for high production. Use a scrub sire with common cows and you get common stock, no better and often worse than their dams. You do not increase production. But if we cross a good dairy sire whose dam has a production of 400 pounds or over with the common cow of 160 pounds butter fat or less we are apt to get some increase. Take your pencil and figure it out. Thirty females from sixty cows means ninety females. These, when grown, take the place of the common cows and stay on the job on the average eight years. A gain of 100 pounds of fat is possible, fifty pounds is an assured fact. Fifty pounds increase means $15 at 30 cent valuation for butter. Multiply by eight year factor and you get $120. Multiply that again by ninety females and you have $10,800. Against that you have a little more interest on money invested in sire, a little extra cost in feeding, a larger loss if animal is sold for beef. As a matter of fact, he is the one to buy to head your herd, that is, if your neighbor owns him now.

Even at that the story is not told in either the beef or dairy sires. What about the value of the impulse to proper and more profitable beef form, the impulse to greater dairy production in the second and third generation? What about the stimulated interest of your children in better stock and better farming? What about the results of breeding a poor bull with high-producing females? The sire is half the herd. He is more. He makes or unmakes a herd. His full measure is not found during his lifetime and often good sires are discovered too late. There are some bulls sold for beef whose value cannot be measured except in numbers with three figures.

In buying bulls get a good one. Pay as much as you can pay and with each new sire increase the price and further improve. Buy the tried bull, buy health, buy size, buy masculinity, buy beauty of form, buy production as indicated by form and records of dam. Large farms don't and can't afford to use an untried bull. They must see what he will do. They keep him until they know. Life is too short to use a bull because he is a male. He must have centuries of purpose; if beef, cheap beef costs; if dairy, cheap dairy costs. One cannot any longer on high-priced land afford to saw wood with a hammer or even use a poor hammer or a dull saw. You do when you use the scrub or poor sire.

John Bower.

PURE-BRED DAIRY BULLS OF ANY OF THE BREEDS MUST HAVE INDIVIDUALITY OF THE RIGHT SORT.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Corn Experiment in Rock County.

To the Editor:—My experiments with Wisconsin No. 8 began in 1914 when I carried on an ear test on a small plot. The result of the first year's work demonstrated that it was well suited to my locality. Therefore, we planted the acre crop with this variety the past season. The field in which it was planted had grown clover the previous year. It was well manured during the winter and plowed in the spring. The land was well disked and harrowed until a fine seed bed was secured. The corn was planted in drills about May 2d. The cultivator was put to work as soon as the corn appeared above the ground, beginning with narrow shovels on the cultivator and finishing with the horse hoe, throwing the ground into the rows when the cultivation was made. The object at all times was to keep up a soil mulch. The corn was fully matured September 12th and was husked by hand when well cured. It yielded at the rate of three double wagon boxes to the acre, or about seventy-five bushels shelled corn per acre. This is the largest ever made in this neighborhood. I attribute my success with corn not only to the fact that it is a good-yielding variety but to the careful selection of the seed, the testing of each individual ear and good cultivation. Every ear that did not show strong germination qualities was discarded, so that each kernel planted produced a good, strong stalk. The product of the best-yielding row grown the previous year was planted on one side of the field. The results proved that like produces like in corn as well as in live stock. The yield was far greater on this part of the field and there were more and better seed ears. The Wisconsin No. 8 corn grows to a height of seven and eight feet and has a stalk of sufficient strength to withstand the storms that generally cause corn to grow down just before ripening. It has plenty of leaves; therefore, it is an excellent corn for fodder. It is a good yielder, as the results of two years have proven and its early maturing qualities make it an ideal corn for our locality.

A. Austin.

Rock Co., Wisconsin.

Wisconsin Farmer Article Gave Him His Start.

To the Editor:—In the spring of 1910 I seeded a five-acre piece to a good grade of medium red clover, the stand obtained being rather thin, but very healthy appearing. The summer of 1911 an article on clover appeared in The Wisconsin Farmer of which I took careful notice and got my first good points on handling clover from print. The first stand was cut for hay and a very good grade of clover hay was obtained. The second stand was left for seed and cut when nearly all the heads had ripened well and cut in the morning while damp with dew. To prevent shelling, the raking was also done in the morning, but the stacking was done in the afternoon when perfectly dry. The return from these five acres was about thirty-one bushels of seed that sold in the local market here at $11.50 per bushel as it came from the huller, one peck being shown at the bankers' association grain show at Columbus, Wisconsin, uncleaned as from the huller, winning first premium. The lecture of Professor Moore interested me sufficiently at the time to cause me to enter the short course in December, 1912, which I finished in 1914.

A. AUSTIN, ROCK COUNTY—SHOWING OF MR. AUSTIN'S GOLDEN GLOW CORN.

My contention is that clover, as well as all grains, should never be sown too thick to get the best seeds of good weight. I sow four or five quarts of clover seed to the acre and always get a good stand. As nearly as possible, I cut the hay when all blossoms have opened and for seed when all are as nearly ripe as possible. For seed the cutting is done when the clover is damp and is also raked damp to prevent shelling as little as possible. The stacking and hulling is done when the clover is as dry as possible. I have never obtained another yield of six bushels per acre. Two to three and a half bushels are about the average. After a good cleaning this clover seed has not only won premiums at bankers' association grain shows but at county and state fairs and farmers' institutes and four times in succession at the Wisconsin Agricultural Experiment Association grain show and once at the Fifth National Corn Exposition at Columbia, S. C., 1913. It all depends on the care and attention you give your grains, corn or clover, especially if you desire to exhibit them, then it only pays you to have the best. This is proven by the fact that I was awarded six premiums on seven exhibits made at the Wisconsin Agricultural Experiment Association grain show this year.

Dodge Co., Wis. J. L. Krause.

A Tractor on Every Farm

Keep fewer horses. Let the Eagle Tractor do your plowing easier, quicker, cheaper—and you'll need less hired help. Then when you require Belt Power the EAGLE GAS TRACTOR will be right on the job. It is the famous Eagle two-cylinder engine built for tractor service.

In the EAGLE TRACTOR you get superior engine qualities—3 bearing crank shaft—Cylinders cast in pairs—Valve-in-Head action, which gives more power and cleaner combustion for both tractor and belt work. You get *compactness* which specially fits it for small farm work.

Why buy for tractor work alone? Why buy a portable engine? You can get *both* in the EAGLE GAS TRACTOR. Why do without a tractor when you can get one built to fit Wisconsin farm conditions at a reasonable price—and save money by using it?

Every EAGLE TRACTOR has four wheels with two drivers; also radiator, pump and fan, sliding gear shift and four-block clutch applied at rim of pulley. High tension magneto with impulse starter does away with batteries. 80

Write for full description and prices.

EAGLE MFG. CO., 673 Winnebago Street APPLETON, WIS.

Kirstin ONE-MAN STUMP PULLER

Makes Land Clearing Easy, Economical, Practical

You can't realize the wonderful *strength, speed and power* of the new Double Leverage Model Kirstin until you see one at work. Compound leverage gives any man the strength of a giant—enables him to quickly pull biggest stumps with ease. The Kirstin way is quickest, easiest and cheapest way to clear stump land. No heavy cumbersome machines to pull around, tip over or get stuck in boggy places. No sweeps to break, no horses to risk, no dynamite, no danger. With a Kirstin you simply walk into your stump field and "clean it up" in no time at all. You can

Try The KIRSTIN For Ten Days

Used Anywhere—Hills, Swamps, Rough Ground or Thick Timber.

Prove to yourself that it clears your land cheaper. Let the Kirstin's superior features demonstrate their value right on your own farm. Less weight—greater strength—lower cost—greater speed—all these valuable qualities are made possible by the Kirstin Quick-Detachable Connections, Auto Release, Non-Twisting Cable and other Kirstin patented features.

Write Today For The Big New Kirstin Catalog

which gives you full details about the Improved Double Leverage Kirstin One-Man Stump Pullers, Kirstin Service, Free Information Bureau, Time Payment Plans, etc. *Agents Wanted.*

A. J. KIRSTIN CO.
5531 Ludington St., Escanaba, Mich.

Don't Throw Away Your Worn Tires

European Motorists are getting 10,000 to 15,000 miles from a set of tires by "half-soling" them with Steel-Studded Treads—you can do the same—Durable Treads are **guaranteed 5000 miles without puncture**

We deliver free without a cent deposit, prepay express and allow you to judge. Applied in your own garage in thirty minutes.

Special discount to motorists in new territory on first shipment direct from factory. Write for sample-state tire size.

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Don't Send Any Money--Just Your Name

On a postcard say: "**I want you to send me a shetland pony and buggy, free**". Address:

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FREE to a Few Men. Suit made to measure in latest style and chance to make money in spare time. For samples and offer write KNICKERBOCKER TAILORING CO., Dept. 374, Chicago

Price---Dependability---Roominess

The Pullman's dependability---sturdy, clean-cut chassis, powerful motor, smart lines, and luxurious appointments are known and recognizable features.

But do you know that the Pullman is the roomiest car of its class on the market? No car gives the roomy comfort that a Pullman gives for $740.

Leg space is ample in driver's compartment and the rear seats are so built that there is no chance of crowding or cramping. The seats are real leather over real curled hair. A Pullman seat is the easy chair of the road.

As optional equipment to the Pullman, the C-H Magnetic Gear Shift may be had for $110 extra.

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SPECIFICATIONS: 114-inch wheel base; 32-H. P. four-cylinder motor; Batavia non-skid tires all four wheels; cantilever rear springs; Independent electric starting and lighting systems; Dixie high-tension magneto; honeycomb radiator; one-man top; full floating rear axle.

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ADD $1000 to the Value of YOUR FARM with PEERLESS FENCING and GATES

THERE is more than one way to save money besides putting it in the bank. One of the best ways is to improve your farm. An investment of a few dollars in fencing pays more than 6%. You know it is perfectly safe and relieves worry.

You can replace any bad stretches with Peerless fencing at little cost, save time mending the old fence, save possible injury to animals, and save crops that might be ruined. *Good fences enable you to get full forage value from all your fields.*

There is a style for every purpose in the Peerless Line.

Hog, Field and Poultry Fences

All made from the best quality of Open Hearth Steel Wire, heavily galvanized by a special process. One-piece cross-bars give the fence upright rigidity and the special knot prevents wire slipping in any direction. Poultry fences are close spaced and are designed to stretch up straight and true without top or bottom rails.

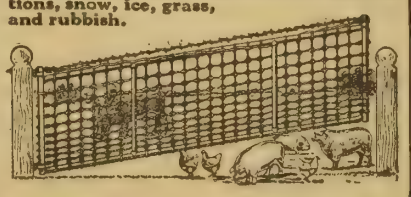
Peerless Gates

You are not saving money by using board gates. They may be a little cheaper in first cost, if you don't consider your time worth anything, but they are more expensive in the long run. Peerless steel and wire gates, with their big frames, heavy wire filling, handy and efficient fittings, last many times as long as any wooden gate and improve the looks of the place. There are many different styles, and you can find one to just suit you.

Before you buy a rod of fence or a single gate you should send for our big free catalogue and get full details about Peerless fencing and gates.

The Peerless Self-Raising Gate

Is one of the best selling styles in our entire line. It is no longer necessary to lug around the old-fashioned sagging, dragging, heavy gates. The Peerless lifts automatically and swings over all obstructions, snow, ice, grass, and rubbish.



In addition to being self-raising, it is extra heavy in both frame and filling. Big, massive frames of 1⅝-inch tubing and close woven all No. 9 wire, close mesh filling, insures long life.

Every part heavily electro-galvanized—no paint to wash or wear off in a year or two.

PEERLESS WIRE FENCE CO., 216 Michigan St., Adrian, Mich.

Cow-Testing Reports.

Chilton Dairymen Organize.

The Chilton Co-operative Cow-Testing Association is the latest addition to the list of cow-testing associations in Wisconsin. This association, whose members reside in Calumet county in the vicinity of Chilton, began work on March 10th with Oscar Kassman, of Sheboygan, as official tester. A fee of $1.15 per cow will be charged by this association. John Salm was elected president; John P. Koehler, vice president; Edwin T. Weeks, secretary-treasurer, and Lewis McGrath and Nick Bernard, directors. This is the second association for this county, as one has been operating at New Holstein for several months. The members and the number of cows entered follow:

John Salm	30
Lewis McGrath	20
J. P. Koehler	15
Nick Bernard	20
E. T. Weeks	18
Arthur Peik	18
Harry Merrill	15
Walter Seefeld	15
Cornelius Schmidt	15
Bert Classen	16
Alex O'Donnell	20
John Fox	15
E. Frank Davis	20
Henry Roach	15
Frank Nennig	25
John Bittner	14
Hertel Bros	16
Robt. Bittner	15
Julius Bowe	18
Meyer Bros.	20
Ortlieb Bros.	20
Alex Pilling	18
O. C. Pilling	20
B. H. McCabe	20
Jos. Koehler	15

Winnebago Records.

February closed with some fine records in the Wisconsin County Cow-Testing Association, according to a letter to The Wisconsin Farmer from Archibald R. House, official tester. Cows throughout the association show a fine record. The forty-found list, however, is a little below that for January. The highest average in February was earned by the H. B. Mosely herd. He had six that averaged 50.6 pounds of butter fat. Milton Mackie was second with seven cows averaging 49.3 pounds of butter fat. The February report is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
C. H. Slayton					
Fin Dell, G. G.	6	12-1-15	1104	8.1	89.4
H. R. Mosely					
Delma, P. B.G.	6	8-20-15	657	7.6	49.8
Bertha, G. G..	6	9-25-15	812	5.0	40.6
Daisy, G. G...	8	11-7-15	928	5.7	52.9
Lillie, G. G...	3	1-30-16	750	8.0	60.0
Himone, P.B.G.	3	1-28-15	720	7.1	51.1
Pet, G. G.....	2	1-23-16	600	8.2	49.2
Milton Mackie					
Glory, G. G...	7	12-8-15	1008	4.2	42.3
Silver, G. G...	6	12-16-15	1092	5.4	59.0
Beauty, G. G..	7	12-17-15	978	4.6	45.0
Baird, G. H...	8	12-18-15	984	4.8	47.2
Florence, G. J.	10	10-20-15	1038	4.2	43.6
Butterfly, G.G.	7	1-27-16	1146	4.3	49.3
Rosabell, G.D.	10	12-17-15	1275	4.6	58.7
Arthur Lloyd					
Ellen, P. B. G.	3	1-27-16	1068	4.6	49.1
N. A. Rassmussen					
Beauty, G. G.	7	12-9-15	966	4.9	47.3
Bo Peep, G. G.	5	11-5-15	1080	4.5	48.6
L. E. Brunson					
Lady Calidor					
P. B. J.....	13	1-26-16	834	5.0	41.7
Kate, G. J....	6	1-18-16	1044	5.4	56.4
Satchy, P.B. J.	5	10-27-15	792	5.7	45.1
Frank Barnett					
Brin, G. J.....	7	11-18-15	834	4.8	40.0
Maid, G. J....	7	12-20-15	846	5.8	49.1
Stut, G. J. ...	6	1-1-16	930	4.7	43.7
Last, G. J....	6	1-16-16	936	5.8	54.3
Edward Race					
No. 11, G. H...	4	12-24-15	1556	3.0	46.7
Chas. Ruelke					
Primrose, G.G.	6	11-30-15	996	4.1	40.8
Dolly, G. G...	7	12-20-15	1158	4.8	55.6
Edna, G. G....	6	12-12-15	1038	4.0	41.5
T. A. Farrow					
Lulu G. G....11		1-22-16	960	5.0	48.0
Ethel, G. G...	5	1-27-16	756	5.7	43.1
Jerry Shea					
No. 2, N.		1-10-16	1080	4.2	45.1
W. L. De Voin					
Daisy, P. B. H.	7	12-31-15	1508	3.4	51.3
Quick, G. H...	8	11-18-15	1314	3.3	43.4
Kate, G. H...	3	1-21-15	1284	3.2	41.1
Ray Ward					
Lily, G. G.....	4	10-16-15	891	5.4	48.1
Reddie, G.R.P.	8	1-21-16	1137	3.7	42.1
Tenant Bros.					
Bertie Fisher,					
P. B. J.....10		12-11-15	1041	4.4	45.8
Hattie, G. J...	6	12-5-15	1009	4.0	40.3
Kate, G. J....	5	11-5-15	919	4.4	40.4
Annah, G. J...	3	1-3-16	931	5.4	50.2
Susan, P. B. J.	13	12-10-15	705	6.4	43.0
G. E. Washburn					
Spots, G. J. ..	6	10-30-15	756	5.7	43.1
Rose 2d, P.B.J.	5	12-15-15	828	5.4	44.7
Happie, G. G.	8	12-26-15	1038	4.3	44.6
Susie, P. B. J.	5	12-26-15	900	5.0	45.0
A. C. Marshall					
Fairview, N...	3	10-27-15	771	5.6	43.2
Minnie, N....	12	10-26-15	1038	4.6	47.7
Jessie, G. J...	13	10-30-15	744	5.3	41.0
E. E. Mackie					
Lady of Waukesha, G. G..	7	12-19-15	1050	4.0	42.0
Queen, G. G...	9	2-3-16	1314	3.8	49.9
Spot, G. G....	6	1-4-16	1017	4.0	40.7
Marry, G. G...	7	10-22-15	873	4.6	40.2
Eva, N.	8	11-9-15	1170	4.0	46.8
Daisy, G. G...	8	10-24-15	921	4.6	42.4
Sarah, G. G...	4	12-20-15	870	5.1	44.4
A. L. King					
Molly, G. G...	5	10-31-15	946	4.5	42.6
Bessie, G. J...	13	12-10-15	1061	4.2	44.6
M. A. Kolph					
Kate, G. D....		2-22-16	1068	3.8	40.6
Buffalo, G. D.		2-22-16	1152	3.7	42.6
June, G. D...		2-22-16	1083	4.0	43.6
Jennings Bros.					
Queen, G. J...	4	11-30-15	828	5.0	41.4
H. R. Meilahn					
Cuttie, G. D...	7	11-7-15	960	4.2	40.3
Whiteleg, G.H.	6	12-27-15	1242	3.4	42.2

A. R. House, Official Tester.

Grade Holstein Leads.

The report of Ivor Jones, tester for the New Richmond Co-operative Cow-Testing Association, for the month ending March 4th shows that a grade Holstein in the herd of Alvin C. Kruschke led with a production of sixty-two pounds of fat. This cow during the last three months gave 5,157 pounds of milk. The tester's report follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Henry Leuhman					
Polly, G. H.....	4	Dec.	1041	4.0	41.6
Sally, N.	5	Dec.	1071	3.9	41.8
Wm. Albert					
Trixie, G. H.....	5	Dec.	1173	3.6	42.2
Henry Bernd					
Nellie, N.	4	Jan.	1077	3.7	40.0
Red Mouse, N..	6	Sep.	1161	3.5	40.6
Daisy, G. H.....	8	Jan.	1569	3.3	51.8
Peachy, G. H....	8	Jan.	1668	3.0	50.0
Dolly, N.	4	Jan.	1050	3.8	40.0
Corroll, G. H....	4	Jan.	1380	3.7	51.1
Fannie, G. H....	3	Jan.	1113	4.8	53.4
W. E. Bennett					
Nancy, G. H.....	6	Jan.	960	4.3	41.3
Blue Girl, G. H..	4	Dec.	1320	3.8	50.2
Minnie, G. H.....	4	Dec.	1170	3.5	41.0
Arnquist & Sons					
May Nora, S. H..	4	Dec.	969	4.2	40.7
Bob Tail, G. H...	4	Dec.	1095	3.9	42.7
Nigger, G. H....	4	Jan.	1056	4.0	42.2
Dixie, G. S. H...	6	Dec.	1056	4.1	42.3
Henry Wieland					
Nettie, G. H....	6	Nov.	1119	3.6	40.3
Beauty, G. H.....	2	Jan.	999	4.0	40.0
Geo. Lewerenz					
Bessie, G. H....	7	Dec.	1104	5.2	57.4
Mayflower, G. H.	3	Dec.	834	5.0	41.7
Ida, G. H.....	6	Dec.	912	5.4	49.2
N. R. Hemenway					
Fancy, G. H.....10		Dec.	933	4.4	41.1
Percy Adams					
Plum, G. S. H....	8	Dec.	930	4.3	40.0
A. C. Kruschke					
Johanna, G. H...	8	Oct.	1770	3.5	62.0
Bell, G. H.....	6	Oct.	1510	3.3	48.3
Madge, G. H.	4	Jan.	1443	3.6	51.9
Fred Wieland, Sr.					
Poke, G. H.....	3	Nov.	918	4.4	40.4
Bessie, G. H....	5	Nov.	1206	4.0	48.2
Dairy Maid, G.H.	6	Nov.	1266	3.6	45.7
W. W. Silver					
Poker, G. H.....	5	Jan.	1113	3.8	42.3
Bernd & Poston					
Dorothy, G. H...	3	Nov.	1050	3.8	40.0
Sette, G. H.....	2	Jan.	1269	5.7	47.0
Pete Tollefson					
Millie, G. S. H...	7	Jan.	1230	4.4	54.1
Nancy, N.	7	Jan.	990	4.2	41.6
Two-year-old heifers making thirty-five pounds or over.					
Henry Wieland					
Young Beauty, G. H.	2	Jan.	999	4.0	40.0
George Lewerenz					
Rival Girl, G. H.	2	Jan.	950	4.8	36.0

Ivor Jones, Official Tester.

Manitowoc Association.

The following table gives the names and records of the cows in the Manitowoc County Cow-Testing Association which have produced more than forty pounds of butter fat during the period of thirty days, ending February 18, 1916:

Owner and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
Christ Muth				
Gr. Guernsey..	6	1079	3.8	41.0
Gr. Guernsey..	10	1274	5.4	67.8
Gr. Guernsey ..	10	1200	4.5	54.0
Gr. Guernsey ..	9	1321	3.4	44.9
Gr. Guernsey..	2	843	4.9	41.3
Gr. Guernsey ..	6	989	4.1	40.0
Robert Rabenhorst				
Gr. Holstein....	4	1450	3.2	45.4
Gr. Holstein....	8	1343	3.7	49.7
Gr. Holstein....	7	1373	3.0	41.2
Gr. Holstein....	6	1316	3.0	40.0
Gr. Holstein....	6	1152	3.5	40.2
Gr. Holstein....	4	1211	3.3	40.0
Gr. Holstein....	8	1496	3.3	50.4
Gr. Holstein....	7	1333	3.1	41.3
Chas. Achenback				
Gr. Holstein....	3	1420	3.4	48.2
Gr. Holstein....	3	1351	4.0	54.0
Gr. Holstein....	2	1058	4.1	43.0
Gr. Holstein....	8	1298	3.7	47.9
Walter Behm				
Gr. Holstein....	3	919	4.4	40.4
Gr. Holstein....	6	1067	4.6	49.1
Gr. Holstein....	6	1001	4.8	48.0

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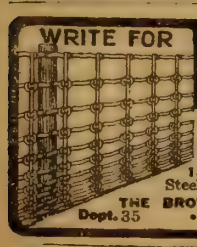

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Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Clifford Gunderson					
Gr. Holstein	4		1034	4.2	43.4
J. E. Paulson					
Gr. Guernsey	5		1179	3.8	44.8
Gr. Guernsey	4		868	4.8	41.7
Mrs. N. O. Nelson					
Gr. Guernsey	8		952	4.6	43.8
J. A. Griffin					
Gr. Guernsey	4		1203	4.6	55.3
Gr. Guernsey	9		1011	4.4	44.4
N. T. Nelson					
Gr. Guernsey	9		1091	4.6	50.3
Gr. Guernsey	9		803	5.3	45.2
Oscar Pederson					
Gr. Holstein	2		874	4.8	42.0
Tom Thompson					
Gr. Holstein	8		1426	3.4	48.5
Gr. Holstein	7		1070	3.8	40.7
John Johnston					
Gr. Holstein	9		890	5.0	44.5
John Larson					
Gr. Holstein	4		973	4.6	44.8
G. Holstein	4		750	5.9	44.3
Elmer Thompson					
Holstein	2		1000	4.5	45.0
Geo. Thompson					
Holstein	3		950	4.2	40.0
Otis Markin					
Guernsey	4		967	5.1	49.3
Guernsey	2		863	5.0	43.2
Guernsey	4		1086	4.6	50.0
Guernsey	6		1083	4.6	49.7
Guernsey	2		984	4.6	43.6
Guernsey	2		871	5.0	43.6
Guernsey	4		1039	5.1	53.0
Guernsey	4		770	5.6	43.1
Guernsey	6		960	4.8	46.1
Guernsey	4		1130	4.4	49.7
Guernsey	2		962	4.6	44.3
Guernsey	6		903	5.4	48.8
Guernsey	2		803	5.0	40.2
Anton Berge					
Guernsey	11		1209	4.3	52.0
Guernsey	8		1228	4.0	49.1
Guernsey	4		1023	5.2	53.2
Guernsey	7		1041	4.0	41.6
Guernsey	11		1179	3.6	41.4
Guernsey	7		1340	4.4	59.0
Adolph Otto					
Holstein	9		1578	3.3	52.1
Holstein	3		1584	3.3	52.3
Holstein	4		967	4.4	42.0
Holstein	4		1389	3.4	46.0
Holstein	2		1618	3.4	55.0
Holstein	9		1122	3.6	40.4
Holstein	2		1476	3.5	51.7
Holstein	4		1326	3.4	41.0

J. A. Bauders, Official Tester.
Ed A. Knutson, Secretary.

Dunn County Report.

Fifty-two cows are included in the forty-pound list in the February report of the Dunn County Cow-Testing Association No. 1. Six of those in this list did better than fifty pounds of fat. The report follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Sam Erb					
Lulu, G. H.	7	1	1440	4.0	57.6
Lark, G. H.	7	1	1580	3.4	53.7
Charles Harshman					
Pride, G. G.	3	1	861	5.2	44.8
Louise, G. G.	4	1	902	4.5	40.6
Blossom, G. G.	3	1	1041	3.9	40.6
Pauline, G. G.	8	1	897	4.6	41.2
Heart, G. G.	3	2	981	4.3	42.1
Frau, P. B. G.	6	2	753	5.9	44.4
Mary, G. G.	6	4	876	5.8	50.8
A. F. Klatt					
Queen, G. G.	3	2	960	4.3	41.2
Bo-Peep, G. G.	4	2	837	5.2	43.2
Nora, G. G.	4	2	931	5.0	46.5
Daisy, G. G.	4	2	949	6.2	58.8
Budd Young					
Alice, G. H.	6	2	1097	3.8	41.7
Hilda, G. H.	4	3	1165	3.6	41.9
Max Maves					
White, G. H.	9	2	876	4.8	42.0
E. C. Jacobs					
Hulda, G. J.	10	3	875	5.0	43.7
Bessie Beautiful, P. B. J.	2	3	1047	4.4	46.0
Betsey, G. J.	9	1	841	4.8	40.4
Polly, G. J.	2	1	745	5.8	43.2
H. L. Spink					
Spot, G. G.	7	12	855	4.9	41.9
J. F. Ausman					
Dolly, G. J.	5	3	834	5.8	48.4
Buttercup, G. J.	3	3	705	5.8	40.9
Ed Webert					
Daisy, G. J.	6	3	901	4.5	40.5
Meyer Bros.					
Moose, G. D.	4	3	918	4.4	40.0
Lazy, G. D.	5	3	1113	4.2	46.7
Edna, G. D.	7	2	732	6.2	45.4
Red, G. D.	5	2	1077	4.0	43.0
Andy, G. D.	5	1	1029	4.2	43.3
F. J. Hones					
No. 2, G. G.	5	2	1278	3.5	44.7
No. 7, P. B. G.	4	3	900	5.5	49.5
No. 3, G. G.	4	1	1080	4.1	44.3
No. 39, G. G.	4	3	1080	3.7	40.0
No. 21, G. G.	6	3	948	4.5	42.7
Chas. Ludvigson					
Pet, G. G.	8	2	885	4.9	43.4
Puss, G. G.	6	2	1030	4.8	49.4
Dolly, G. G.	5	2	872	4.6	40.1
Sam Blume					
Stubby, G. H.	5	2	1218	3.8	46.3
Maid, G. H.	6	3	1174	3.5	41.0
Rose, G. H.	10	2	1333	3.2	42.7
Kent Bros.					
No. 17, G. G.	5	2	846	4.8	40.6
No. 9, G. G.	5	2	1017	4.2	42.7
John Schellhouse					
Star		2	845	5.8	49.0
Andrew Becker					
Queen, G. G.	8	3	858	4.7	40.2
Fanny, G. G.	5	1	954	4.3	41.0
John Cramer					
No. 35, P. B. G.	2	2	874	5.0	43.7
No. 29, G. G.	8	3	1161	3.5	40.6
No. 24, G. G.	4	3	955	4.5	42.9
No. 23, G. G.	4	3	797	5.2	41.4
No. 22, G. G.	4	3	813	5.1	40.6
No. 17, G. G.	5	1	740	5.6	41.4
William Sanderson					
Bell, G. G.	5	1	1071	4.8	51.4

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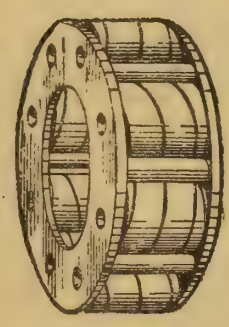

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Testing 95%. A limited amount of genuine 1915 Godard's Silver King grown here (fifteen miles from Minn. line) and picked before the frost, now drying in our new brick seed house. Also Choice Silver King grown by others. Have drying also the following varieties of fancy seed ears: **Minnesota, No. 13; Wimple's Yellow Dent; N. W. Dent.** We also have several lots of fancy 1914 seed corn. If preferred, we can furnish our Minnesota patrons with choice seed grown in the latitude of Northfield, Minn. We give you all the time you need after receiving the seed to test it and satisfy yourself of its high quality, and will promptly refund your money if dissatisfied. Write today for our "Guaranteed Seed-Corn" prices and descriptions.

THE ADAMS SEED COMPANY **BOX 50, DECORAH, IOWA**

don't buy those EXTRA HORSES

Save DISCING, HARROWING, ROLLING. Do all this work while you plow. Hitch a Kramer Rotary Harrow behind your plow—disc, level, harrow and pulverize as you go. Save extra teams right during the busy season. Produces a moist seed bed that germinates quickly—no clods or dry dirt to hold back your crops—no missing hills. Fits any plow, satisfaction absolutely guaranteed. Works in all kinds of soil—light draft, no extra horses required. The "Kramer" does more work than discing and harrowing the old way. Big FREE Illustrated Folder.

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Olds' Scotch Rural

350 Bushels Per Acre

A main-crop, Rural type potato of new blood. Smooth, not overgrown, good cooking and good tasting.

Yields Twice as Much

as Rural and other standard varieties. Not affected by blight, drouth or bugs.

Olds' 96-Page Catalog

gives full description and prices of this and other varieties potatoes, field seeds, garden seeds, etc. Ask for our **FREE Collection** Field Seeds. Write today.

L. L. Olds Seed Co., 14 Olds Building Madison, Wisconsin

TESTED SEED

$3.00 Per Bu. Corn crop short. ORDER EARLY. Supply limited. Big germination guaranteed. Varieties true to name. 1915 Crop. NOT touched by frost.

Reid's Yellow Dent, Iowa Mammoth Yellow, Early Iowa Dent, Pride of the North, Iowa Gold Mine, Minnesota No. 13, Silver King, Boone County White, Mammoth White Dent, Bloody Butcher, and Early Flint. State number of bushels wanted. Orders filled in rotation. This price holds good in ten-bushel lots, bags free. Make up your order now, direct from this ad. Get our new 1915 seed book, free.

Galloway Bros. & Co.
33 Galloway Bldgs., Waterloo, Iowa

1915 SEED CORN

Brings better results than old corn. Our seed is from the new crop. We have both rack dried and dried in the field. Test 90% to 98%. Satisfaction guaranteed. You can test the seed before you pay us. Don't take chances on old corn. Write for catalog.

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Big Evergreen Bargain

100 2 Year Old, Root-Pruned $1.50

Most ever offered for the money. Hardy, young trees that will grow for you. Plenty of roots. Write for big, free Ferris bargain catalog, today.

EARL FERRIS NURSERY CO.
265 Bridge Street
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SEED CORN Disco Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

Buy quick! Save money—be sure of getting good seed. We fortunately carried over a few thousand bushels of choice seed from 1914 season, now offered at bargain prices. Write now for price list. Order early and get good seed.

Dakota Improved Seed Co. 27 Main St., Mitchell, S. D.

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The Best of the hardy varieties, bargain prices. Kellogg's Hardy Northern grown fruit plants are well grown and productive. None better. Also

THE EVERBEARING STRAWBERRIES

fruits from early summer till Nov. Send today for price list and pamphlet of instructions—**62 years experience.**

KELLOGG'S NURSERY, Box 224, Janesville, Wis.

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STRAND'S NURSERY, Box 26 Taylors Falls, Minn.

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J. L. TODD & CO. R3 Box C Des Moines, Ia

HORTICULTURE

Disinfection of Seed Potatoes.

The treatment of seed potatoes with formaldehyde or with corrosive sublimite has been recommended for many years as a preventive of scab and other diseases carried on the tubers.

Such treatment is, on the whole, profitable, but has several limitations which should be clearly recognized to prevent disappointment, according to the specialists of the United States Department of Agriculture. The object of disinfecting seed potatoes is to destroy the germs of scab and other surface parasites which might otherwise be planted with the seed and infect the new crop. Only surface infections are reached by this method. It is only partially effective against deep pits of common scab. Formaldehyde is less effective than corrosive sublimate against the black sclerotia or resting bodies of Rhizoctonia or russet scab, and against powdery scab. Neither chemical, as ordinarily used, will destroy silver scurf. Either one will kill surface infections of blackleg, but neither will reach the internal infections common in tubers from blackleg hills. Neither fusarium wilt nor late blight infection in potato tubers can be reached by any seed treatment, nor can any of the nonparasitic diseases of potatoes, such as mosaic, leaf roll and curly dwarf, be prevented. See farmers' bulletin 544 for description of these troubles.

Clearly, therefore, the most important precaution against these diseases is to select clean, disease-free seed potatoes from healthy, vigorous plants, as determined by field inspection during the growing season and at harvest. Seed treatment should then be applied as an additional precaution. It will not be effective, however, if the soil where the potatoes are to be planted is already full of disease.

Soil conditions have an important relation to potato tuber diseases and many of these are widely spread throughout the country, perhaps native to some soils. Common scab is favored by a neutral or slightly alkaline soil and seldom gives trouble in acid soils. It is, therefore, increased by liming and by fresh stable manure, wood ashes and alkaline fertilizers, such as nitrate of soda and ground bone, while acid phosphate and sulphate of ammonia tend to diminish scab.

Rhizoctonia occurs to some extent in nearly all soils, but appears to attack potatoes most when the conditions are unfavorable to the best development of the potato plant. Bring the land to an ideal state of tilth to minimize loss from Rhizoctonia.

Powdery scab is worst on cold, wet or poorly drained soils. Blackleg, on the other hand, is carried by infected seed. No potatoes showing a deep brown discoloration at the stem end should be planted.

Sulphur tends to prevent common scab. It is not a substitute for corrosive sublimate or formaldehyde, but is a good drier for cut seed. Applied to scab-infected soils at the rate of 500 pounds per acre it reduces the scab, but such heavy applications cannot be generally recommended as profitable. Preliminary experimental trials are advised.

The formaldehyde treatment consists in soaking the potatoes, before cutting, for two hours in a solution made by adding one pint of formeldehyde to thirty gallons of water. The solution can be used repeatedly. The gas treatment is no longer recommended.

Corrosive sublimate is used at the rate of 1-1,000 for one and one-half to two hours. Dissolve two ounces of the salt in hot water and dilute to fifteen gallons. This is a deadly poison. Use with great care. It must also be kept in wood, porcelain or glass vessels, as it attacks metal. It is more effective than formaldehyde, particularly against Rhizoctonia and powdery scab. Do not use the same solution more than three times, as the strength diminishes with each lot of potatoes soaked.

To treat large quantities, set several barrels on a slightly elevated platform. Fit a plug in a hole in the bottom of each barrel, fill with potatoes, cover with solution, let stand two hours, draw off solution and pour into another barrel. Increase the number of barrels in proportion to the quantity to be treated. Another method is to use a large wooden vat or trough, into which the potatoes in sacks are lowered by a rope and pulley and later hauled out, drained and dried on slatted racks.

Seed potatoes may be treated several weeks before planting, provided they are not re-enforced by storing in old containers or storage bins.

Sprouted potatoes are injured by

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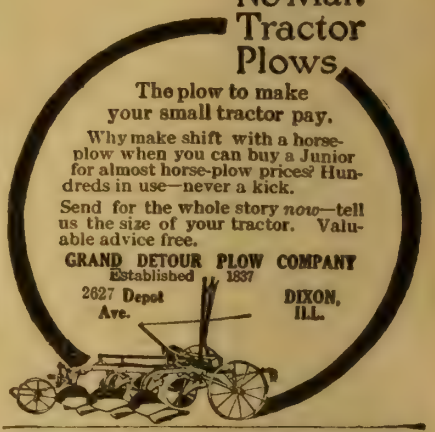

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Saves money for you. Marks, furrows, drops and covers at one operation. Plants whole or cut potatoes 14, 16, 18 or 20 inches apart.

ONE HORSE DOES THE WORK

Pole furnished for team. Never misses. Simply and strongly built. Safe, light, well-balanced and easy running. Easy to adjust. Absolutely guaranteed. Write for description and **special** low prices.

HIRSCH BROS.
269 Reed St.
MILWAUKEE WIS.

STRAWBERRY PLANTS THAT GROW

Of well-tried-out and reliable varieties. Send for prices. Address

HANCHETT FRUIT FARM, SPARTA, WIS.

ALFALFA SEED $16 per bushel. Order direct from this advertisement, as we have plots of fifty different strains of alfalfa under test which enables us to send you seed adapted to your locality. Swartz Brothers, Cornfalfa Farms, Waukesha, Wisconsin, winners of the World's Gold Medal Alfalfa Sheaf at the Panama-Pacific Exposition. Also the largest alfalfa hay growers in Wisconsin.

BEING centrally located in the clover seed section of Wisconsin, we have a large quantity of alsike, red clover and timothy seed for sale and also a large stock of alsike and timothy mixed. Our seeds are guaranteed. Every bushel is inspected by the agricultural seed inspection department. Write for prices and samples. Pickart Bros., Malone, Wis.

CUT RATES, lumber, shingles. Hurry! Prices advancing. "Tacoma" Dimension Lumber, guaranteed full two inches thick, 20 per cent stronger. "Dakota" Clear Shingles, guaranteed half-inch butts, everlasting. To insure lowest prices send list for estimate. We quote delivered; pay after inspection. Reference, any Tacoma bank. Local Lumber Company, Tacoma, Wash.

10 APPLE TREES 10

2 TO 4 feet $1. Two each Dudley, Lowland, Snow, Delicious and Golden Russet. Get our fine catalog. It's free. **Wisconsin Nurseries, Box 88, Union Grove, Wisconsin.**

STRAWBERRY PLANTS 250 best 3 varieties $1; $3.50 per 1,000. Cuthbert Red Raspberry, $1.25 per 100. Fresh, live plants. C. R. Tuttle, Baraboo, Wisconsin.

SEED CORN Silver King, Pride of the North, 1914 grown. Tested 94%. $4.50 per bushel. Edwin Foth, Norwalk, Wisconsin.

1915 Murdock Seed corn, fire cured. Germination 92 to 95 per cent. C. I. Morrison, Fort Atkinson, Wisconsin.

Strawberry PLANTS FREE To introduce our *Pedigreed Everbearing* strawberries we will send 25 fine plants free. PEDIGREED NURSERY CO., SULLIVAN, MO.

treatment, but will throw out new sprouts. In general, however, potatoes will not be injured by following the above directions. Many growers believe germination is improved by treatment.

Best Varieties to Select.

To the Editor:—For the best results in fruit growing, selection of the best varieties and those best adapted to our climate is required first of all.

In selecting apples the Jonathan, McIntosh, Wealthy, Snow, Shiwassee Beauty, Rawles' Janet and Northwestern Greening are fine for local trade as well as commercial purposes. The McMahon and Wolf River are profitable varieties and demand a good price when shipped to large cities. The soil should be kept rich and full of humus; trees should be kept well trimmed, leaving only three or four main limbs from the trunk. The branches should be well thinned out so as to have the fruit all of uniform size, as it is the large fruit that possesses the best quality. The trees should be well sprayed for scab and curculio as soon as the fruit buds begin to show pink, then every ten days or two weeks until fruit is an inch thick. One and one-half gallons commercial lime sulphur to fifty gallons of water, with three pounds arsenate of lead, is a good formula to use.

Early Richmond and Montmorenci cherries do best and must be well sprayed, and, like plums, for best results the soil must be rich and well cultivated.

Raspberries and blackberries must have winter protection and be well mulched during the growing season to be brought to perfection. This may be done by laying the canes down one way and turning a back furrow over them, then cover the ground with a mulch of straw. As soon as the ground thaws in the spring the straw should be removed, the furrow worked down level and the mulch placed back around canes. Keep on in this way until all is level and mulched. Then the canes should be cut back one-third of the previous year's growth and cultivated between the rows, which should be nine or ten feet apart.

John T. Wood.

Richland Co., Wis.

Plant Food in Screenings.

It takes the same kind of plant food to make weeds as to produce the grain crops. In an eight years' investigation of wheat and screenings at the North Dakota Experiment Station, a determination was made of the plant food removed in the screenings. This data applied to the screenings in the 1915 wheat crop, as marketed, shows that these screenings contained enough plant food to produce 5,500,000 bushels of wheat.

The weed seed that make up the screenings in oats and barley would increase this amount considerably. A large proportion of the weed seed shatters before the grain is cut, when it is being cut and when the cut grain is being handled. The plant food used up by weeds would produce a good many million bushels of grain.

SCENE IN JOHN T. WOODS' ORCHARD, RICHLAND COUNTY, WISCONSIN.

SINGLE CLUSTER McMAHON APPLES, GROWN BY JOHN T. WOOD, RICHLAND COUNTY, WIS.

A Successful Meeting.

To the Editor:—The most successful meeting in the history of the Marathon County Order of the Wisconsin Experiment Association was held at the court house at Wausau, Saturday, March 4th. About fifty members from all parts of the county were in attendance.

The following topics were discussed: "Experimental Plots of Corn and Alfalfa," by H. H. Humphrey, county field man; "Prospects for the 1916 Fair," by J. D. Christie, secretary of the Marathon County Fair; "Projects for the Season," by Prin. A. G. Burg, of the agricultural school; "County Exhibits at the State Fair," by L. H. Cook.

A large number of the farmers will sow experimental trial plots of alfalfa the coming season. The large shipment of pure-bred Wisconsin seed corn brought into the county by the agricultural school also found a ready market from the members of the association. Sufficient orders for limestone to make up a carload order were also taken. The pure-bred Wisconsin grains and corn are now thoroughly established in Marathon county and are being rapidly disseminated by the members of this order and steadily grow in popularity. Golden Glow and Wisconsin No. 8 are the leading varieties of corn and the Pedigreed Oderbrucker barley, Wisconsin Pedigreed No. 1 oats and Swedish Select Pedigreed No. 5 are the most popular varieties of grain.

A very pleasant feature of the meeting was the banquet given at noon to the members of the association by the business men's organizations of Wausau. In addition to the members about thirty of the leading business men of the city were present and no one present failed to be impressed by the hearty spirit of co-operation between the business men and farmers. Mr. A. L. Pradt was toastmaster and Mayor John Ringle, Senator Albers, J. D. Christie, F. J. Bandy among the speakers.

The following officers were re-elected unanimously for the following year: F. J. Bandy, president; Herman Amhaus, vice president; A. G. Burg, secretary-treasurer.

H. H. Humphrey.

Marathon Co., Wisconsin.

About 150 young men and young women will be graduated from the school of agriculture at University Farm, St. Paul; March 29th. These young men and young women will have completed three years of study and practical work, six months of study out of each year being spent at the school and six months in practical work on farms and in farm homes.

Ask your neighbor to subscribe for The Wisconsin Farmer.

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The CHEAPEST Way

Explosives are recommended by the U. S. Department of Agriculture and by the leading State Experiment Stations as the cheapest means of removing stumps. Blast out your stumps—turn that idle land into money. You can do the work yourself easily and quickly with

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THE SAFEST EXPLOSIVE
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Bore a hole, put in the charge, light a fuse, and the work is *done!* Atlas Farm Powder blows the stump entirely out of the ground, splitting it up so it can be handled easily. It breaks up the subsoil and greatly increases its fertility. Atlas Farm Powder costs little and works wonders in clearing land of stumps and boulders, breaking up subsoil, tree planting, ditching and draining. It saves labor, time and money.

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Pfister & Vogel Leather Co., Milwaukee, Wis.
Please send me free sample of P & V Farm Shoe Dressing.
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This dressing will keep the leather in your work shoes soft and strong, protect it from barnyard acids, keep out water.

P & V Farm Shoe Dressing

The Tanner's Own Dressing, is made in the tannery from the animal greases used in heavy leather. Give your shoe dealer's name.

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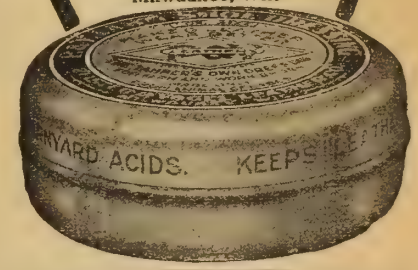
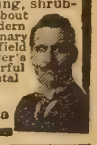


FREE 1916 PLANTING GUIDE AND PURE SEED BOOK

This 116-page four color book describes all new 1916 varieties vegetable and grain crops. Hundreds of illustrations, beautiful grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. All about alfalfa, clover, vetch, modern varieties field corn. A dictionary of gardening; encyclopedia of field crops! A flower lover's delight! A berry grower's book! An orchardist's manual! Most wonderful gardening guide-catalog ever published. A postal brings it to your home. Don't miss this book!



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140 Egg Incubator and 140 Chick Brooder BOTH FOR $10

If ordered together. 30 days trial, 10-year Guarantee. Order direct from this advertisement—money back if not satisfactory. Incubator is covered with galvanized iron, triple walls, copper tank, nursery egg tester. Set up ready to run. The Brooder is roomy and well made. Send for free catalogue. **Freight Paid East of Rockies**

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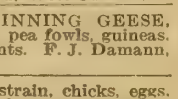

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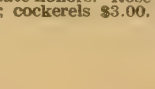

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PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

MY S. C. REDS won highest state honors. Rose and single comb; eggs $2.00; cockerels $3.00. Wm. Wichern, Baraboo, Wis.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Follow Instructions in Handling Incubator.

To the Editor:—In poultry raising what a large field to work on if you put your heart and hands in it and lots of work, yet without work we have nothing and we must not expect a dollar for every lick or step we take, for there is many a step and hour put in without returns. In the end, however, we have a fine flock of chickens if we keep at it. Just at present is such a busy time for the farmer's wife, with garden coming on and housecleaning and the poultry. She must have good health and strength if she wants to keep ahead or even up with her work.

If we want any early chicks now is the time to do your licks, as the early bird catches the worm. We not only have early fries but also good fall and winter layers, which means a whole lot. If you use hens set several at once. Look the eggs over every few days. If they are dirty and some have been broken, clean at once. Then when they hatch give to one or two hens and there won't be so many hens to look after.

If you use an incubator tend it as per instruction. Don't be afraid to air them a plenty, as that gives strength. About the eighteenth day take a few eggs out of the incubator and put them under as many hens as you will need and when they hatch those they will take all the chicks you give them. I never put in the brooder, as I think the hen much better and according to nature and we can't improve on that.

I always keep whole black pepper on hand and as soon as I see a hen or chick sick or droopy I give black pepper, to the hens a teaspoonful and to the chicks one kernel. It is a tonic and quite often helps. As a rule I don't believe in doctoring chickens, for you hardly ever succeed. The best way is to prevent all the trouble you can by giving proper care.

For keeping down mites and lice I have found no equal to coal oil and crude carbolic acid, two parts of coal oil and one of crude carbolic acid. Spray roosts and nest once a month and you will not be bothered with either. Keep fighting vermin and disease and put in lots of hard work and good will. Discouragements will come, but don't let it get the upper hand and you will succeed. S. M. R.

Homemade Brooder.

To the Editor:—In your March 9th issue W. S. wants directions for a homemade brooder. His plan of putting a stovepipe up through the middle of a box with a lamp under the box will not be very satisfactory, as the heat in the box will not be distributed very evenly and most of the heat will escape through the pipe. A better plan will be to take a box about two feet square and a foot deep or larger, according to the number of chickens, cut a round hole five inches in diameter three inches from the top in one end and a three-inch hole four inches from the top in the opposite end. Get your tinner to make a three-inch pipe long enough to extend through the box with an elbow at each end and about six inches of pipe on one elbow. Also a five-inch pipe long enough to extend into the middle of the box with one elbow and a short piece on the elbow. The three-inch pipe goes inside the five-inch pipe. The lamp is placed under the elbow having the short piece of pipe and other elbow turns down, the object being to prevent too much heat from escaping through the pipe. The object of the five-inch pipe is to provide ventilation. There will be a constant stream of fresh, warm air entering the brooder through the space between the pipes and a few holes should be bored through the box near the floor to allow the foul air to escape. The box will have to be set up a little from the floor to have room for the lamp and the lamp must be a few inches lower than the opening in opposite end of pipe to provide draft. The small pipe can be made the right size to fit on lamp burner and with a small hole covered with mica opposite the flame no chimney is needed. Glass and doors can be put in the top or sides to suit and exercising compartments added if needed.

H. E. Roberts.

Tells why chicks die

Write today for the poultry expert's valuable free book, "White Diarrhoea and How to Cure It." This book contains scientific facts on White Diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 95 per cent of every hatch. The valuable book is free. Send your name and address for it now. E. J. REEFER, 8483 Reefer Building, Kansas City, Mo.

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AND furnish rig and all expenses to introduce our guaranteed poultry and stock powders. Bigler Company, X 660, Springfield, Illinois

I Will Tell You How to Make Poultry Healthy, Make Hens Lay, Make Chicks Grow

Now that mating time has arrived, it's up to you to see that your poultry get a tonic and internal antiseptics to make them vigorous and free of disease. *Therefore, feed Pan-a-ce-a.*

In that condition your hens will lay better, you will get more healthy, fertile eggs and the chicks will stand a better show of reaching maturity. *Therefore, feed Pan-a-ce-a.*

And, before the hatches come, I want to warn against gapes, leg weakness and indigestion, for these ailments are responsible for half the baby-chick losses. *Therefore, feed Pan-a-ce-a*—it will save you these losses.

Dr. Hess Poultry PAN-A-CE-A

It's a Tonic—Not a Stimulant

Here are a few of the valuable ingredients in Pan-a-ce-a to meet the requirements of your poultry which I have just stated: *Nux Vomica*, a nerve tonic; *Carbonate of Lime*, a shell former; *Hyposulphite of Soda*, an internal antiseptic; *Quassia*, an appetizer; *Iron*, to enrich the blood, and other valuable ingredients, all well known and recommended by the highest medical and veterinary authorities.

Perhaps the strongest argument in favor of Pan-a-ce-a is the fact that it has been on the market for 22 years and is growing in favor each year. Read the guarantee in the right-hand panel—that is your protection. There is a Dr. Hess dealer in your town, a man whom you know, a man who stands back of my guarantee and will return your money if Pan-a-ce-a fails to make good. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail, $2.50 (except in Canada and the far West).

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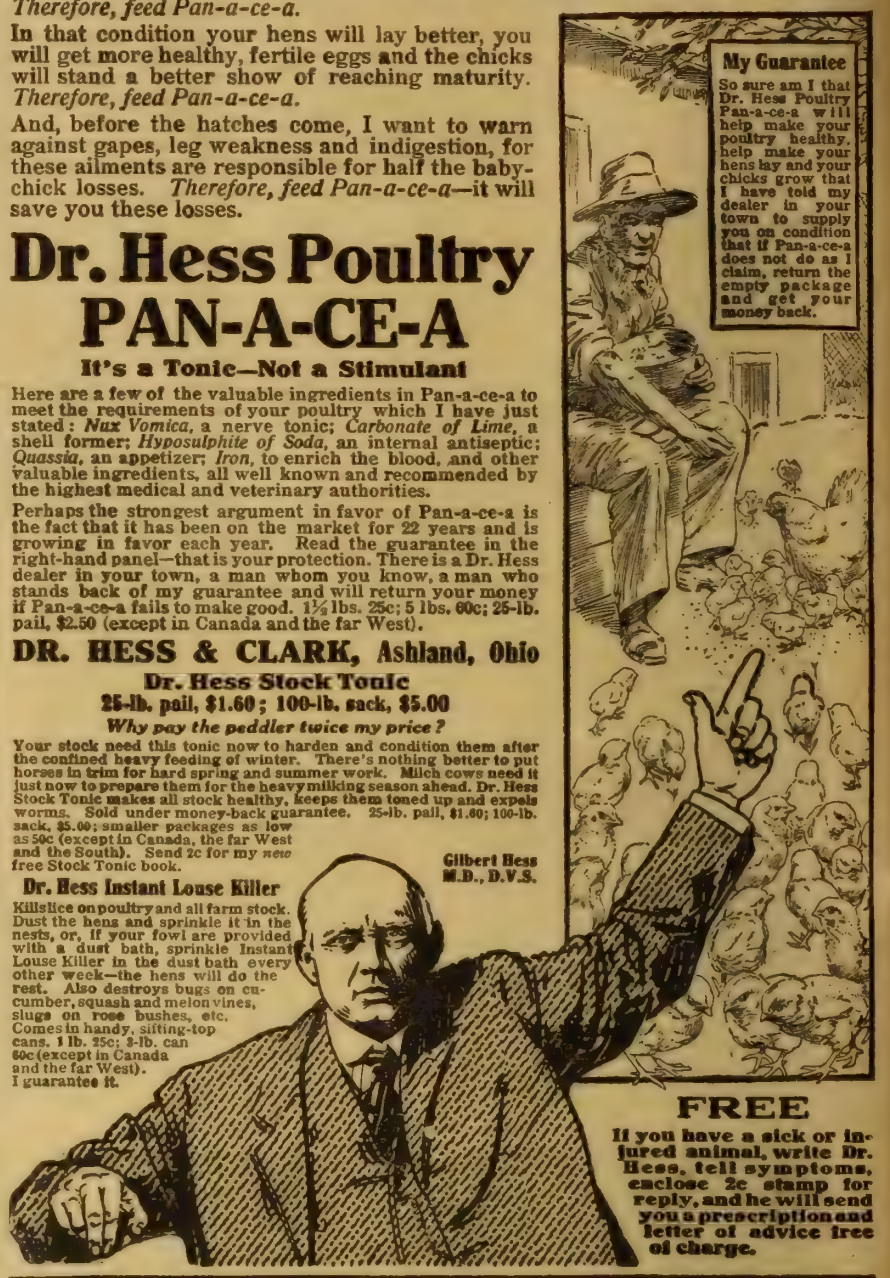
Dr. Hess Stock Tonic
25-lb. pail, $1.60; 100-lb. sack, $5.00
Why pay the peddler twice my price?

Your stock need this tonic now to harden and condition them after the confined heavy feeding of winter. There's nothing better to put horses in trim for hard spring and summer work. Milch cows need it just now to prepare them for the heavy milking season ahead. Dr. Hess Stock Tonic makes all stock healthy, keeps them toned up and expels worms. Sold under money-back guarantee. 25-lb. pail, $1.60; 100-lb. sack, $5.00; smaller packages as low as 50c (except in Canada, the far West and the South). Send 2c for my *new* free Stock Tonic book.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and sprinkle it in the nests, or, if your fowl are provided with a dust bath, sprinkle Instant Louse Killer in the dust bath every other week—the hens will do the rest. Also destroys bugs on cucumber, squash and melon vines, slugs on rose bushes, etc. Comes in handy, sifting-top cans. 1 lb. 25c; 3-lb. can 60c (except in Canada and the far West). I guarantee it.

Gilbert Hess M.D., D.V.S.



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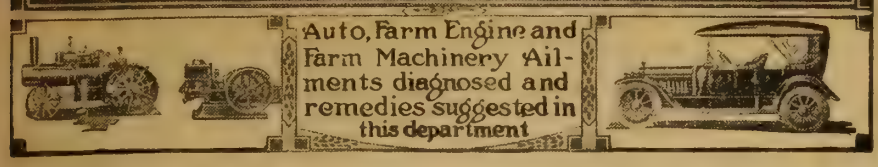
FARM MECHANICS



QUESTIONS AND ANSWERS.

Making an Ammeter.

I would like to have you explain how to make a practical ammeter.

Answer.—It is not practical to make an ammeter on the farm. An ammeter is a delicate instrument and special costly apparatus is necessary to make it and to adjust or "calibrate" it.

Engine Overheats.

I have a thirty-horse-power Waukesha motor in a tractor. The motor was giving fine service until all at once it failed. The trouble is that it boils around the cylinders and the valves stick; it pops in the carburetor and loses power, almost stopping. The valves have been ground and the cylinders cleaned. The water pump seems to work all right and the water in the radiator seems cool. The spark is set correctly. The motor is not overworked. It runs all right for two or three minutes until the cylinder becomes hot. What is wrong?

Answer.—Possibly your fan belt is too loose or your fan is not working properly. There may be sediment in the bottom of the radiator that hinders the water circulation. You may be using too much gasoline. The most probable trouble is that the spark is not properly timed, occurring too late. Carbon deposits also cause overheating.

Speed of Tractor.

I am planning making a tractor, using a Ford engine and differential, placing twenty-five-tooth sprocket wheels on the axles in place of the auto rear wheels and driving a thirty-six-inch sprocket on the bull wheels from the twenty-five-tooth sprocket, which is ten inches diameter. The bull wheels are forty-eight inches diameter. At 900 revolutions per minute, what would be the speed of the tractor on high and low, and what would be the draw-bar pull?

Answer.—The Ford gear ratio is 3.636 to 1 on high and 9.96 to 1 on low. Your speed on high would be about nine miles an hour; on low about two and one-half miles per hour. While the Ford motor will deliver twenty-two horse power at high speed its power at 900 revolutions per minute would probably not exceed twelve horse power. As considerable power is always lost in transmission, you could not count on over seven horse power at the drawbar. At two and one-half miles per hour this would correspond to a pull of 1,050 pounds; at nine miles per hour the pull would be only 300 pounds.

New Engine Lacks Compression.

I have bought a new five-horse-power engine. After trying it out I find that it lacks compression. I have twice notified the dealer that sold it to me and each time he sent out an "expert" to put it in working order, but after he got through with it the engine was no better than before. The expert told me the engine had not run enough to have compression. When he took the piston head off I noticed a lot of carbon on it. It looks to me like the piston is secondhand with new rings, and I think the cylinder is also secondhand. I told the dealer to either give me a new engine in exchange or my money back, but he refused to do either, saying that if the engine had no compression in three years he would give me a new cylinder and piston. Please tell me what to do.

Answer.—In the first place, we would advise you to avoid business dealings with the above dealer. No reputable dealer would care to unload a worthless, secondhand engine upon a customer. Every good engine is lapped in and tested at the factory and should have good compression when it reaches the customer.

In the second place, since you have the engine on your hands, give it a fair trial. If the rings are new your compression will become better after the engine has run for some time. Make sure that the valves are seating. It may be that the valve stem guides are too long, holding the valves off the seats or that the push rods are too long, also holding the valves off their seats. The carbon is probably due to too much oil working past the poorly fitting rings.

Benzine as Engine Fuel.

Will benzine work satisfactorily in a two-horse-power marine engine?

Answer.—It would not excepting under very favorable circumstances. Benzine freezes at 43 degrees Fahrenheit.

Generator Proportions.

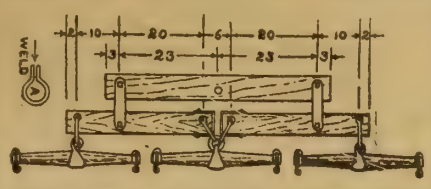
I am constructing a ten K. W. 220-volt fifty-ampere generator to run at 1,600 R. P. M. I am puzzled about the winding. The generator has four poles. The frame is made of one-half-inch by six-inch wrought iron, sixteen inches in diameter on the inside. Each of the four field cores are one and one-half inches by four and one-half inches. They are made of wrought iron. The pole pieces are wrought iron, five inches long and four inches wide. The armature is five and one-half inches in diameter. It is made of thin sheets of soft iron, and has thirty-six slots, one inch deep and about five-sixteenths of an inch wide at the top. I have a book that says to allow 500 circular units for each ampere flowing; and that only one-half the current is found in any one wire at any time. According to this rule, number nine wire would be the right size to use. The book also says to allow thirty to thirty-six inches of wire for each volt. By this rule, twelve turns in each slot would be enough. Is this right? How many ampere turns should the field coils have? What size wire? Each bobbin has a winding space two and one-half inches deep and four and one-half inches long on each side.

Answer.—You would get better results with your frame made of one-inch by six-inch iron. No. 9 B. and S. gauge wire is all right for your armature. You should have about twenty-four wires in each slot, but you will probably not have room for more than eighteen. Each pole will require 400 ampere turns. Use No. 16 B. S. G. wire.

A Three-Horse Evener.

Please give me the measurements for making a three-horse evener for a riding cultivator. Please give the measurements of the doubletrees and all the strap irons.

Answer.—The figure shows how such an evener may be constructed. All the length dimensions of the doubletrees are shown in the figure. The singletrees should be twenty-eight inches long. The singletrees



should be about two and three-eighths inches in diameter at the middle and about one and three-fourths inches in diameter at the ends. Hickory is the best wood for both doubletrees and singletrees. The two short singletrees should be about one and three-eighths inches thick, three and three-fourths inches wide. The long doubletree should be about one and three-fourths inches thick and four and one-half inches wide. In order to prevent the ends from splitting it is best to bind the ends of the doubletrees with strap iron about one-eighth of an inch thick, fastening it with a bolt or rivet five-sixteenths of an inch in diameter. These straps are particularly essential at the inner ends of the short doubletrees to keep the clevis pins from pulling out.

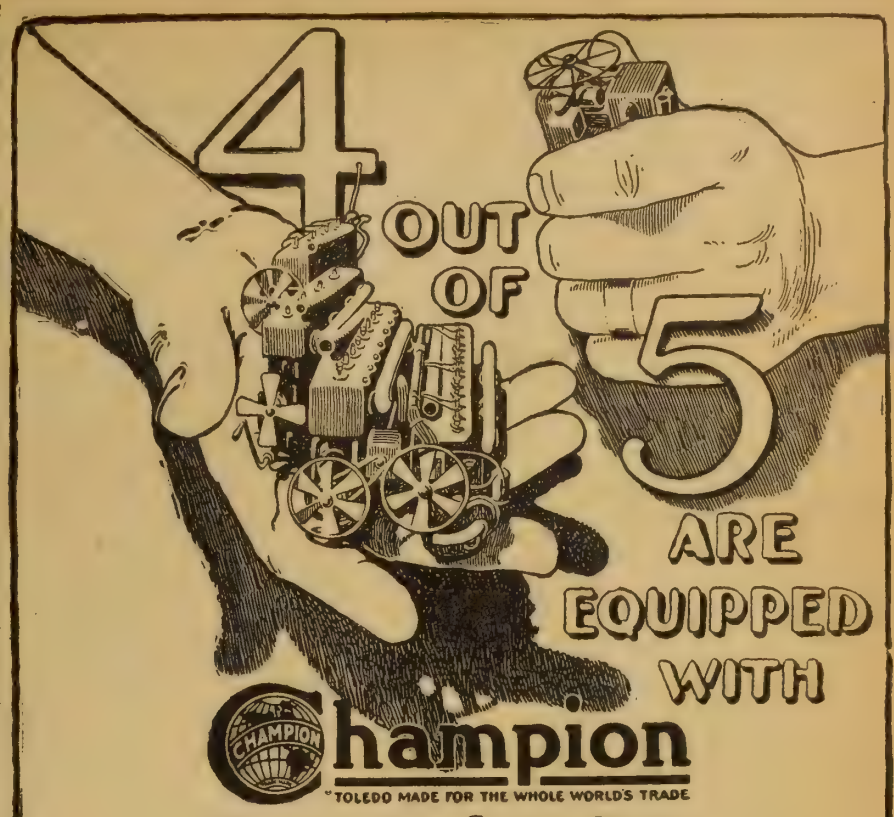
The ends of the singletrees should be protected by ferrules. These may be made of strap iron one-eighth of an inch thick and one and one-half inches wide, bent as shown at A in the figure and the two ends welded. These ends then form a lug through which a hole should be punched to retain the hooks. The hooks should be made of three-eighths inch round iron or steel. The center clips and ring should be made of one-half inch round iron or steel. To forge, upset and flatten out the middle first; then scarf the ends, bend to shape and weld. The clips for the two end singletrees are given a quarter twist, as shown in the figure. The connections between the singletrees and short doubletrees are ordinary one-half inch clevises. The straps between the doubletrees may be three-eighths of an inch thick, two inches wide and ten inches long. Use two straps at each end, one on top, one below. Use five-eighths inch machine bolts to fasten the straps.

Some House Wiring Questions.

Which is the better, solid or split knobs? Is double braid wire better than single braid? To what are the heavy electric light fixtures fastened to keep them from falling from the ceiling? Will a 110-volt lamp burn out on a 220-volt circuit? Do sharp corners do any harm in wiring for electric lights? Do lighting plants having 220-volt circuits also have 110-volt?

Answer.—It is a matter of personal choice as to the type of knob. The writer favors the solid type. Double braid wire is often preferable. There are several ways in which fixtures are fastened to the ceiling. They may be screwed to a gas pipe or conduit, using an insulating joint; they are sometimes fitted with a little foot or bracket that is fastened to the lath or joist by means of screws; or the outlet box may have a plug and the fixture screwed on the plug. A 110-volt lamp will burn out on a 220-volt circuit unless two lamps are connected in series. Many power plants use a three-wire system. The voltage between either outside wire and the middle wire is 110 volts, while the voltage between the two outside wires is 220 volts. Thus by making proper connections either 110 volts or 220 volts may be taken from the main lines. Sharp corners do no harm if they are not sharp enough to injure the wire mechanically.

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield, but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.



Dependable Spark Plugs

THE *official estimate* of the AUTOMOBILE CHAMBER OF COMMERCE on automobile production this year is—

One million four hundred thousand cars.

Of these, over a million will be Fords, Overlands, Studebakers and Maxwells, equipped with Champion Dependable Spark Plugs.

The Manufacturers of *over one hundred other cars* will equip this year *exclusively* with Champions. *Their production will exceed 120,000 cars.*

So of all the automobiles produced this year it is apparent that more than four out of five will be dependably equipped—with Champions.

Champions have been selected by these hundred and more manufacturers because their exhaustive tests have shown that the Champions designed for their motors *give the best results.* Remember *their* conclusions when *you* replace the plugs in *your car.*

CHAMPION SPARK PLUG COMPANY, 506 UPTON AVE., TOLEDO, O

Enjoy City Comforts

Have clear, steady, bright electric lights in all the buildings on your farm. Don't get along with the ill-smelling, dirty, dim oil lamps any longer. You don't have to, now that for very little money you can get the

Wisconsin Farm Electric Lighting Plant

Four simple parts: engine, generator, switchboard, battery. Run engine a few hours a week to charge batteries; use engine for other work rest of time. Easy to install and operate. Low fuel cost. Ask for our free book.

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Oscillating, double-edged blade cuts the weeds and loosens the soil. Runs close to plants and under shrubs. Bound to replace the hoe.

GILSON WEEDER

Does more work and better in one hour than hoe does in four. Much easier work. 6 foot handle. 4 widths; 3 1-2 to 6 inches. Reversed it's a rake. Saves time, labor and money in any vegetable or flower garden. Write for folder and prices.

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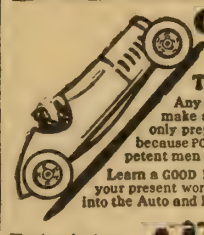

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Three Thousand New Wisconsin Farmers.

To the Editor:—Men who can read the alphabet no longer question the farm development of Upper Wisconsin. Any section of any state that exhibits an increase of 200 per cent in value of all farm property during a period of ten years furnishes ample proof of productiveness by this item alone. That northern Wisconsin is opening up into an agricultural region of excellence and promise is seen in the fact that 1,300 families located along the lines of one railroad in 1915. These were all new settlers going on the land. The true worth of Upper Wisconsin and its possibilities for the production of cereals, potatoes, fruits and a wide variety of feeds for stock is rapidly becoming understood and further enrichment is chiefly a matter of presenting these opportunities to homeseekers with the means to settle and cash in on the crops.

And the division of immigration of the Wisconsin Department of Agriculture is in touch with a large number of prospective settlers possessing the financial ability to convert these uncultivated lands into productive farms. Last season about 3,000 new farmers were added to the upper counties, a very good showing in view of the widespread prevalence of the foot-and-mouth disease. In ever-increasing numbers we are hearing from those residing in the high-priced sections of other states. In Illinois—aside from Cook county—these districts include Rock Island, Winnebago, Sangamon, Dupage, Kane, Lake, La Salle and Champaign counties, while in Iowa, Blackhawk, Cerro Gordo, Dubuque, Linn, Marshall, Polk, Woodbury and Scott counties manifest the greatest interest in Wisconsin. Southern Minnesota and Indiana also have supplied the Badger state with a large number of excellent farmers.

The welfare of the new settler is the welfare of the commonwealth, so what can the state do to make the prospective homeseeker's venture a success? In the first place, the state can advise that the newcomer buy no more land than he can use. Those familiar with development will agree that too many purchase more land than can profitably be handled—sometimes paid for. Admitting the amount to buy depends upon the capital and individuality of the prospect, it is nevertheless true that in most parts of the north settlers are found who have burdened themselves with land beyond their means. Eighty acres makes a nice-sized farm and is sufficient for the man who proposes to develop and work the land himself.

The state also can insist that homeseekers locate on land that is productive and well situated as to roads. The farmer who goes in and spends his time, money and effort in developing the cut-over country is justly entitled to good land to begin with, not gravel ridges, coarse sand nor undrained swamp. To help in making that selection no state is so well supplied with information as Wisconsin. The soils department of the college of agriculture has made an extensive study of the subject and the entire northern part of the state now has been surveyed as to types of soil and soil maps are offered to any person who cares sufficiently for them to write a postal.

The crops especially suited to the various soils also are briefly outlined in publications issued by the department of agriculture, while methods of preparing the soil, seed selection, cultivation of crops and harvesting receive full discussion in bulletins of the agricultural college. The crop statistics division of the department of agriculture will furnish data on the acreage and production of all crops in every county of the state.

The location of the new lands, their fertility conditions, their situation with reference to market, how to open up the farm, what crops to grow and how to grow them. These are subjects with which every prospective settler should become familiar. To do so practically insures his success. And these are topics that may be understood before he locates, and, better still, before he invests his money.

B. G. Packer.
Immigration Com., Madison, Wis.

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THE Happy Farmer Tractor—sturdy—light in weight. Greatest value ever offered in light tractors.

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All steel frame—prevents racking—keeps all parts firmly in place. Two-thirds usual parts found on tractors of equal strength. Enclosed gears run in oil. Strain borne on wooden clutch shoes, pins and rollers—quickly and economically replaced. Eighty-eight per cent of the weight falls on traction wheels—where it belongs. Perfect steering control—runs clear across field without attention. Extremely light in weight—means fuel economy.

Write for full specifications. Let us show you how to save money and increase your capacity for work.

Dealers: Absolutely the greatest bargain ever offered you—1916 output limited—write today—factory or distributor—for terms and territory.

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THE HAPPY FARMER TRACTOR CO.

Timothy With Alsike.

To the Editor:—Some six years ago we started raising clover seed by selecting the very best seed that we could get at that time. This seed we sowed with a nurse crop of oats which was cut when fully ripe. The clover had an excellent stand at the time. The field was pastured lightly during the fall months and at the time winter set in there was enough growth to hold the snow. The following year found that alsike will lodge very badly when there are heavy rains after the blossoms appear. We believe it is better to have a high percentage of light seed to overcome this. We now sow about fifteen to twenty pounds of timothy seed with the alsike. The timothy will help to hold up the alsike, which will then ripen out more fully. In harvesting the crop we have found the presence of timothy a great help, as it holds up the alsike so that the mower will cut below the heads. It also slides off the windrower more easily than the alsike alone would. Another advantage of the mixture is the quality of the straw after hulling. The straw is clean and brighter and cattle eat it more readily. We have also found that alsike seed will be larger and more plump when grown with a mixture of 15 to 25 per cent of timothy, than it would if grown alone. After our seed is hulled we reclean it. We find no trouble in cleaning out all but 2 to 5 per cent of the timothy.

Timothy can all be cleaned out of the alsike, but, of course, it is a much slower job than cleaning down to 2 to 5 per cent of timothy seed. The timothy and light alsike which is cleaned out will make excellent seed to sow on cut-over lands for pasture. We have sowed it on our fields for hay with excellent results.

Douglas Co., Wis. Schmidt Bros.

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You read a great deal about the uses of

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Sooner or later you'll begin to use it. When you do, you want to be sure it's good cement. To make sure—

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The brand is

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As lasting as the pyramids

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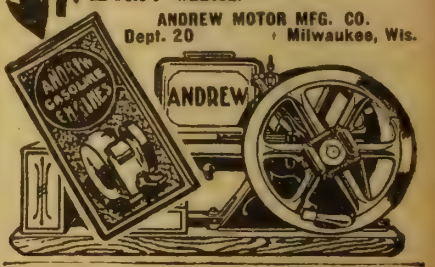

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The HERCULES—

All Steel Triple Power Stump Puller pulls an acre of stumps a day—increases the value of your land 100%. Makes room for *money* crops. Guaranteed for 3 years against breakage from any cause. Send name for fine free book, 30 days free trial offer and special low-price proposition.

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AT WHOLESALE—BUY NOW

Our price very low. Hi-Quality. Get new 116-page catalog. All kinds of farm seeds—Alfalfa, Seed Corn, Vetch, etc. Also Tested Alfalfa, Grass Seed, Sweet Clover, Alsike, etc., at lowest prices. Full information and prices in big 4-color book—a postal gets it. Free samples.

GALLOWAY BROS & CO., Dept. 37 Waterloo, Iowa

DAIRY

Looks of Animals Deceive.

When the inexperienced dairyman undertakes to buy cows he is very often deceived. In many cases he has to pay dearly in the transaction. This may be in paying overvalue for a useful cow, or what is more expensive still, for cows that prove to be very unproductive. Such cows not only give a small flow of milk, but if resold must be dispensed with at a great sacrifice.

Some men who are unacquainted with the features possessed by a good cow may think that the largest, finest-looking animals are the best to buy, but this is more often untrue than otherwise. They may bring fine, big calves. Indeed, the poor milkers generally produce the largest and handsomest-looking calves. They may be tempting to purchase, but no one should let this be an influence when selecting good milk producers for dairy purposes. Quality and quantity of milk are the most essential points to be considered and if the cow meets one's desire in these respects her looks do not amount to much, provided she is in good health and not too old. Cows having a handsome appearance may be desirable, but those possessed of the greatest milking capabilities are often unattractive.

In starting out to buy cows for the dairy if one is not a good judge himself it will pay him to enlist the services of a competent man who is enabled to select good milkers.

It is not an easy matter to find good cows and when found they cost a good deal, but no one should stand back on the price unless it is out of reason, for the purchaser will be well repaid for money thus invested. By breeding the kind of cows wanted the difficulty in finding animals of the desired sort can in time be overcome. The better class of cows from high-producing dams should be retained and bred to pure-bred dairy bulls. The first calves from such cows will be one-half pure, and, gradually, by the persistent and successive use of such sires, the original native blood will be so diluted by pure blood that the resultant animals will be practically pure bred.

Simple Method of Testing.

Every dairyman ought to have a Babcock testing outfit of his own, or at least himself and a neighbor or two own one between them. There are, however, many who haven't got a tester, nor have their cows been tested by someone else. By the following simple method they may test their cows so as to get a comparative idea of their value.

Get as many small-necked bottles as there are cows in the herd and immediately after milking each cow perfectly dry weigh her milk to get the number of pounds. Then stir or pour it from one vessel to another until it is thoroughly mixed and from the milk of each cow fill one of the bottles full and set it away in a cool place until the cream has risen. The amount of cream showing in the neck of the bottles will show at once which cows give the richest milk.

It is important that the bottles are all of the same size and make. Long-necked bottles in which soft drinks are sold or bottles in which catsup has been packed for sale in stores will make good test bottles for this purpose. A label should be pasted on each bottle on which is written the name or color of the cow from which the milk came. You know how many pounds of milk each cow gives and which one's milk is the richest. Take the milk obtained from the best cow and that from the poorest one to a creamery and have it tested, being sure to mix the milk thoroughly from each cow before taking the samples for testing. If a dairyman closer than the creamery has a testing outfit the samples can be taken to him.

The Babcock tester will show exactly what each cow is doing and from observing the difference in the various test bottles a very close estimate can be made of what any cow in the herd is doing. The man who makes a careful test of his cows often meets with a surprise in finding that some members of his herd are getting their board without having to pay anything for it. When he finds this to be true he will, of course, lose no time in getting rid of them and putting better ones in their places.

When the Tester Comes.

To the Editor:—Farmers and dairymen usually gain a great deal of information from the association tester when he comes on his monthly trips. One time the writer spent a night at a farm home in southern Minnesota in company with the tester for the cow-testing association of that locality. Literally it would have seemed that all members of the family had been saving up questions for a month. The good housewife told of her experience with butter and with the cream. She asked whether it paid best to sell butter or cream. The tester was able to give her suggestions from his own experience, from what he had seen in the twenty-five other homes on his circuit.

The good woman was delighted, and after her queries on dairy subjects had been satisfied he propounded further questions on garden and features of homemaking.

Finally milking time came. Twenty-five or thirty cows were to be milked. Almost the whole family was on the job. There was the farmer, his two well-grown sons and the mother doing the milking and two or three small children assisting in one way or other. Many topics were brought up for discussion as the milking progressed. Always they referred to the tester to give them some enlightenment. One of the boys was very anxious to know whether their cream separator was skimming clean. The tester promised that he would try out a sample of skimming milk from the machine the next morning. Every member of the family was interested in knowing the weight of milk from each cow as it was determined. The testing had then been progressing for half a year.

After the milking was finished the father had remarked that he had been considering the advisability of changing the separator to another location. Certainly a corner of the barn was a poor place for it. He had known that for a while, yet had not been sufficiently interested to think of mowing it. The tester agreed that it would be desirable to move the machine. He was tactful and agreeable. Together they planned to remodel a small building already on the farm and to make it a very satisfactory little milk house.

At the supper table there was a general good visit. The tester told of the neighbors with whom he had spent the month. In turn the various members of the family told him what they had been doing since his preceding visit. Truly the tester was welcome at this farm home every time he would come. Doubtless he should have been welcome twice each month or even once each week.

Later in the evening the farmer said: "I've been looking over the records of the herd. Some of the cows aren't making any money. It looks as though it may be necessary to dispose of some of them. Maybe I need to feed differently. The boys think we ought to have a silo another year." The tester went to his suitcase and brought forth a copy of Henry's Feeds and Feeding. The four of them discussed all manner of feeds and combinations of feeds. In the end they seemed to have agreed that two feeds would be highly desirable on the farm, namely: Silage and alfalfa. The evening was very profitable to the farmer and his sons, so they said. At eleven we retired.

The tester said: "Every family is just like this one. They simply cannot ask enough questions in an evening."

In Utah the young man that was hired by a testing association was called a "dairy missionary." Doubtless that was one of the most perfectly descriptive terms ever applied to a young man on that sort of a job. He was a missionary of better dairying and so is every other who is employed as a tester if he is at all suited to that line of work.

H. E. McCartney.

When Is a Cow Old?

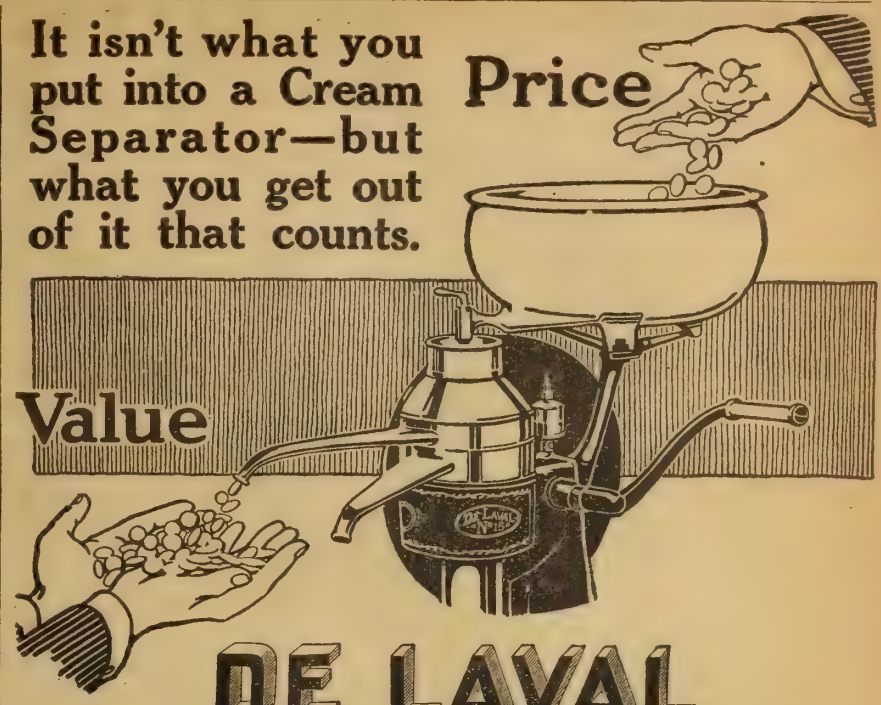
To the Editor:—Some men seem inclined to draw a line, hard and fast, and say, "We never ought to keep a cow after she is so old." It may be ten years, it may be eight. No matter what a cow may be doing when she comes to that dead line she is done and might as well be turned off. She never will do anything more worth while.

I had a Jersey cow that was just as good when she was thirteen years old as she was when she was six and she was the best cow we ever had on the place. She seemed determined to give milk the year 'round. It was almost impossible to dry her off and her milk stood the highest when we made our tests of any in the herd. For a number of years after the old cow had her calf we would say, "Maybe we had better turn her off next fall. She is getting pretty old now." But she would do so well and her calves were such good cows that when it came time to shape up the herd for another year we were pretty likely to say, "She has done well this year; her teeth are all right. We would like to have just one more of her calves!" So she went along until the wrinkles on her horns reached thirteen. And even then she was a pretty good old cow.

The fact is thousands of real good cows are turned off too soon. If instead of getting rid of them at a certain age we were expecting them to stay with us right along we could get several more years of good service from them.

Sometimes it seems as if it were not worth while to be fair with a cow that is getting along in years. She is coming up to the dead line; drop off some of the feed; don't groom her any more. What is the use of fussing with her when we can put a younger cow in her place? So we think and so we act. It is a mistake. What we need to do is to bestow a little extra care on the cow as she grows old. Put a bit more good, hearty grain in her manger. Curry her a bit more carefully and baby her more than you do the other cows. If she ever had it

It isn't what you put into a Cream Separator—but what you get out of it that counts.



DE LAVAL

Cream Separators are by far the most economical

REAL economy is never short-sighted. It never confuses PRICE with VALUE.

PRICE is what you pay for an article—what you put into it.

VALUE depends upon the amount and quality of service the article gives you—what you get out of it.

You get by far the greatest actual VALUE for your money when you buy a De Laval—BECAUSE it will give you much better and longer SERVICE than any other separator.

From the standpoint of its greater durability alone the De Laval is the most economical cream separator to buy, and when you also take into consideration its cleaner skimming, easier running, greater capacity and less cost for repairs, the price of the "cheapest" machine on the market is most exorbitant compared with that of the De Laval.

And there is no reason why you should let its FIRST COST stand in the way either, because the De Laval may be purchased on such liberal terms that it will actually pay for itself out of its own savings.

A De Laval catalog to be had for the asking tells more fully why the De Laval is the most economical cream separator, or the nearest local De Laval agent will be glad to explain this and many other points of De Laval superiority. If you don't know the nearest local agent, simply write the nearest De Laval main office as below.

THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

"Good News for Farm Women"

Orange, N. J., March 1, 1916

Dear Mrs. Dairywoman:—

The bearer of good news is always welcome; and I have some very good news for farm women. We've a new separator at our house and it's a wonder.

One splendid feature of this new invention which must have been planned with the comfort of the dairy woman in mind is the knee-high supply can. This does away with the hard, high lift no woman should be asked to endure day after day. It's only a few inches to lift and a tilt of the pail, even for a small boy. This is *one* item of good news.

Cleanliness is the beginning, middle, and end of good dairy work. You know how quickly the separator shows the effect of any slight letting up in this direction. With dishes to wash three times a day, cooking utensils, calf pails, milk pails, etc., a big pile of separator disks is just about the "last straw", isn't it? But with our new Sharples there are only three pieces to clean, not one heavy, bulky, or fussy. This is the *second* piece of good news.

Formerly, a slight slowing of speed in turning the handle of the separator meant a loss of cream—and money. One's attention had to be strictly on turning the crank at an unvarying high speed, which was trying to both mind and strength. My *third* and best piece of good news is that

THE NEW SHARPLES SUCTION-FEED

Separator draws up into the bowl just the right amount of milk—always in proportion to the separating force. If you feel out of sorts, you may turn slowly and the bowl will drink up just enough milk for clean skimming and no more. If you feel spry and want to get through to sew, to trim a hat, or to visit a neighbor, turn as fast as you please and the bowl will take up proportionally more milk, yet the cream will be of the same thickness. Smooth, even cream, such as the Suction-feed gives you makes quality butter that brings top prices.

The separator has only one thing to do while you have many tasks. The separator has always been a tyrant which insisted on being turned at regulation speed, whether you were well or ill, worried or happy, rested or worn out. But this new Suction-feed Separator *meets your moods.* Its speed is your speed and yet, it *gets all the cream all the time.*

Why don't you drop a postal to the Sharples people for their new book? Then, you can show your husband that this new invention will be a money saver for him as well as a labor saver for you.

Yours truly,

A Dairywoman

What this farm woman says in her letter is absolutely true. There are many other pieces of g od news in our new book, "Velvet" for Dairymen, which fully describes this wonderful separator. Send for your copy today. Address Dept. 44.

The bowl is easy to wash. There are only three parts, and *no disks.*

The Sharples Separator Co.

Also Sharples Milkers and Gasoline Engines

West Chester - - - Pennsylvania

Chicago San Francisco Portland Toronto

SEEDS **"Purity Brands"** have always been the highest qualities obtainable each year. Hundreds of farmers will not experiment with any other. All seeds sold on absolute guarantee of **purity** and **germination**—being subject to your test and inspection and money refunded if not better than we represent. **Timothy, Clovers, Alfalfa, Mixed Timothy and Alsike, Blue Grass, Millets, Seed Corn, Seed Oats, Seed Flax, Seed Grains,** etc. Samples and prices free on request.

THE ADAMS SEED COMPANY **BOX 50** **DECORAH, IOWA**

in her to respond to good, kind treatment she will do it now.

In still another way favoritism is all right toward the old cow. If she has been accustomed to being the leader of the herd see to it that no strange cow is introduced into the herd that may prove her master. I have seen old cows fight to the very limit under such circumstances. They seem to have some pride about the matter. They want to hold the seigniory. It distresses them to be cowed and outfought. So they fight day after day until they are actually spoiled so far as good work in the dairy is concerned. It is never wise to permit such fights to go on. Either put the contestants in separate pastures or remove one of them from the farm. Quarrels of this sort not only affect unfavorably the two which are concerned in them, but the efficiency of the entire herd is lowered by the excitement that is kept up. There is such a thing as good government and discipline among cows. A wise master does all he can to further this, for he realizes that there is money in it.

Subscriber.

Feeding Silage to Dairy Cattle.

The Silo Is a Necessity if Maximum Profits Are to Be Made From Dairying---By H. H. Kildee.

THE value of silage was first realized by dairy farmers, for nowhere is the silo so much a necessity as upon the dairy farm. And no dairy farm is complete in its equipment that does not have at least one silo for winter feeding and one with a smaller diameter for summer feeding.

While dairy farmers are not the only ones who now recognize the fact that silage is absolutely necessary if they are to receive the greatest possible profit from their farms and live stock, we find the largest number of silos in the older dairy sections.

The characteristics of good corn silage make it preeminently a feed for dairy cattle. It is palatable, succulent, bulky, beneficial to the digestive tract, and economical. These are among the leading characteristics of the ration which is essential to the largest and most economical flow of milk. In fact, most dairy farmers in the corn belt realize that to secure the largest possible profits from a herd of cows they must feed corn silage. In regions where corn cannot be grown successfully for silage, many dairy men have silos in which they cure other crops.

GOOD EQUIPMENT COUNTS FOR MUCH IN DAIRYING.

Experiments carried on at the different experiment stations show conclusively that silage is far superior to shock corn or hay in milk production. Silage-fed cows produced from 10 to 13 per cent more milk than cows fed fodder from the same acreage.

Contrary to the opinion formerly held, the milk from silage-fed cows is not inferior in flavor or odor to the milk from cows fed dry feed. The condensed milk companies which formerly did not favor milk from silage-fed cows, are now advising their patrons to put up silos.

Great care should be taken, however, to prevent the odor of silage from contaminating the freshly-drawn milk which takes up odors very quickly. It is best to feed the silage after milking and just what will be eaten up clean at that feed. The silos should be shut off from the barn proper. The idea still held by some, that corn silage will destroy the teeth and digestive tract of the cow and induce diseases, such as tuberculosis, is erroneous.

The principal reason why a dairy cow increases her milk flow when she is turned out to pasture in the spring is that she is receiving a succulent feed.

We all know the difference between a ripe, juicy apple and the dried product. In the drying of fruit, as well as of fodder, water is the chief constituent taken away, and with it go certain flavoring substances that do not weigh much on the chemist scales but are of great importance in rendering the food palatable. Thus, if we wish to secure a large and persistent flow of milk during the winter months we must feed some succulent feed that will take the place of the pasture grass of summer. The two most common succulent feeds for winter are corn silage and roots. Experimental work has proved that the silage yields more heavily per acre, costs less and gives equal results from similar weights of dry matter.

One of the chief reasons why so many cows are unprofitable is that they lack persistency or do not keep up their flow of milk for a long period. While this is largely due to inherited characteristics, yet if all cows were properly fed on corn silage and other desirable feeds, much less trouble would be experienced in trying to keep cows up to their normal flow. Silage and alfalfa or clover hay should form the basis of our rations for dairy cows in winter. With good silage in the ration less expensive concentrates may be utilized than when these more expensive feeds have to keep the system in tone. A good ration would be twenty-five to forty-five pounds of good corn silage, all the alfalfa or clover hay the cows wish, or ten to fifteen pounds, and seven pounds of grain for each pound of butter fat, or one pound of grain for each two and one-half pounds to four pounds of milk produced, depending upon the amount and richness of the milk.

During the latter part of July and the month of August, the pastures are usually very short, due to hot weather and lack of rainfall. If we are to keep up the flow of milk at this critical time we must supply additional feed.

In fact, as pastures are ordinarily handled during this season of the year they oftentimes prove to be the least profitable acres of the entire farm. This is especially true from the dairy farmer's standpoint, as the grasses usually grown for pastures do not furnish the abundance of green feed needed by milk-producing cows during the dry, hot months. There are many soiling crops which will supply the necessary feed in acceptable form, but most of them require more labor in getting them to the animals than the average farmer can spare at this busy season of the year. Therefore, a silo small in diameter filled for summer use is the most satisfactory and economical solution of this problem, on the average farm. The value of silage at this season does not lie solely in the temporary increase in milk flow, but we know that if a cow once declines in her milk flow it is practically impossible to bring her back to her normal for the remainder of her lactation period.

Silage also plays a very important role in the most economical and efficient ration for young, growing dairy animals. It has a very beneficial effect upon the system in keeping the digestive organs in the best of condition and as an aid in developing large digestive capacity. In attaining this last effect, it is materially aided by alfalfa or clover hay. When these feeds are given it is not necessary to feed very much grain to the animals after the end of the first year.

A good winter ration for yearling heifers is corn silage, fifteen to twenty

"I Thought She Would Never Amount to Anything"

Many cow owners all over the country know what it is to see a cow that they were about ready to sell to the butcher become one of their best producers through a judicious use of the great cow medicine

KOW-KURE

There is nothing mysterious about Kow-Kure; it is simply a medicine for cows that stimulates and builds up the vital organs and makes them perform properly. It has been found especially effective for the prevention and cure of such diseases as Abortion, Barrenness, Milk Fever, Scouring, Lost Appetite, Bunches, Retained Afterbirth

GET THIS FREE BOOK

When a cow is sick, first aid is most valuable, and to know just what to do may save the life of a valuable animal. Our free treatise, "The Home Cow Doctor," has been very carefully prepared and ought to be in every farmer's library. Write us today for your copy.

Kow-Kure is sold by feed dealers and druggists in 50c and $1.00 packages.

DAIRY ASSOCIATION CO.
Lyndonville, Vt.

Raised Without Milk!

Her name is "Daisy" and her owner, W. A. Riddle, of Chapin, Iowa, raised her on Blatchford's Calf Meal, which costs less than half as much as milk.

Blatchford's Calf Meal

A useful preventive of scouring. Calves raised "The Blatchford's Way" are heavier, bigger-boned and healthier. Known as the complete milk substitute since the year 1875. Sold by your dealer or direct from the manufacturer.

Blatchford's Pig Meal insures rapid, sturdy growth of young pigs at weaning time. Prevents setback.

See Actual Figures —based on results—that show you how to increase your calf profits. Write today.

Blatchford Calf Meal Factory, Dept. 63 Waukegan, Illinois

$15.95 Upward ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

ABSOLUTELY ON APPROVAL

Different from picture, which illustrates our large capacity machines. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address:

AMERICAN SEPARATOR CO.
Box 4126 Bainbridge, N. Y.

Outlive their guarantee

ZYRO TRADE MARK METAL SILOS

SEND for FREE BOOK

Save the loss of experimental dollars—learn the truth about silos. Zyro Pure Galvanized Iron Silos stay air tight—no spoilage—rust-resisting—can't shrink or swell—storm proof—cost less to build. Write today for Book of Silo Facts.

ZYRO METAL SILOS GUARANTEED

The Canton Culvert & Silo Company
Box 414 Canton, Ohio

When writing to advertisers please mention The Wisconsin Farmer.

pounds, alfalfa or clover hay, eight to ten pounds, grain mixture consisting of equal parts corn, oats and bran, two pounds.

Dairy farmers are practically unanimous in the opinion that a too liberal ration of silage should not be fed to the herd bull. When so fed, the animal is usually rather heavy middled, sluggish and slow in breeding. The large amount of silage distends the middle unduly and does not supply the balance of nutrients necessary to keep the animal vigorous and active in service.

However, a limited ration of 10 to 25 pounds daily will improve any ration fed the bulls and will decrease the cost of the ration necessary to keep the animal in a vigorous, healthy condition at all times.

In general it may be said that dairy farmers who have given the contents of a properly filled silo a fair trial are the most enthusiastic and their opinions are identical with the writers that after feeding corn silage they would not attempt to feed dairy cows on a corn belt farm without it. And if they were in a section where corn could not be grown they would use one of the substitute crops in filling a silo.

Ex-Governor Hoard Resigns.

To the Editor:—The National Dairy Union at a recent meeting in Chicago passed the following resolutions:

Whereas, In the natural method of making butter, circumstances are often such that without the knowledge or intent of the maker the butter may retain 16 or more per centum of moisture; and,

Whereas, The present method of sampling and assessing fines and taxes upon such butter has worked a grievous wrong on many innocent makers and sellers of butter; therefore,

Resolved, By the directors of the National Dairy Union that we use our utmost efforts with congress and with the internal revenue department to bring about such changes in existing laws and rulings as will properly protect the consumer and at the same time prevent excessive punishment and hardship being imposed upon well-meaning makers and sellers of butter.

On account of advanced age and continued ill health, Hon. W. D. Hoard, ex-governor of Wisconsin, and for a number of years treasurer of the National Dairy Union, sent in his resignation as director and treasurer. The resignation was positive, and for the reasons stated, it was accepted. For singleness of purpose and devotion to agriculture, and his great work for furthering dairy legislation, he stands second to no one in this country. His splendid farm and his most excellent dairy paper (Hoard's Dairyman) is part proof of the above assertion. He was one of the first to advocate that a permanent agriculture depended on some form of animal industry and led the way in dairying.

Following the instructions laid down by the by-laws of the organization, S. B. Shilling, of Chicago, Illinois, was unanimously elected director and treasurer. Mr. Shilling was a former official of the National Dairy Union, and one of its founders, a veteran in the work, and now manager of the Chicago Dairy Produce.

In view of the fact that the oleomargarine interests have already introduced two bills to repeal the present oleomargarine laws, it was unanimously decided that the secretary put in shape the Haugen oleomargarine bill, and have it introduced in congress the early part of March.

Catawissa, Pa. Wm. T. Creasy,
Secretary the Nation Dairy Union.

Raising the dairy herd lessens the danger from contagious abortion, tuberculosis and other infectious diseases.

Users of Champion Dependable Spark Plugs.

THE Champion Spark Plug Co., 506 Upton Ave., Toledo, Ohio, estimate that four out of five cars produced this year will be equipped with Champion Dependable spark plugs. They use the official estimate of the automobile chamber of commerce, who place the total production at 1,400,000 cars. Of this number, over a million will be Fords, Overlands, Studebakers and Maxwells, all equipped with Champions. In addition, manufacturers of over a hundred other makes will equip with Champion plugs. Their production will be about 120,000 cars. The total, then, is over 1,120,000 cars equipped with Champion Dependable spark plugs. When you replace the spark plugs in your car, why not follow the lead of these manufacturers? The advertisement appears on page 15 of this issue. —Adv.

?

Ask Yourself —

What have I lost through Abortion

—in calves?
—in milk?
—in injury to cows and heifers?

Is it not time for me to clean up my herd, when I can give the treatment myself at small cost?

Cow Abortion Driven Out

Here's the evidence of men in the livestock business. It covers nearly twenty years. You can do what they did if you do as I tell you to do.—*Roberts.*

What is lost on one good calf would pay for the treatment of an average herd.

1898 "My herd of twenty-two cows was afflicted with Infectious Abortion in 1898. After losing a number of calves I began treating them with DR. ROBERTS' ANTI-ABORTION TREATMENT. I feel that they were permanently cured, for I have not lost any calves since that time, five years ago."—(J. A. Griswold, Duplainville, Wis.) "My herd of cows, eleven in number, was troubled with Infectious Abortion. I tried various remedies, without any relief; then I began treating my herd with ROBERTS' ANTI-ABORTION. I had ten live, strong, healthy calves come that year and have not lost a calf since that time—over three years ago."—(Sworn statement of Herman Shirley, deceased, Waukesha, Wis.)

1902 "My herd of twenty-two cows being afflicted with Abortion in 1902, I decided to try DR. ROBERTS' ANTI-ABORTION TREATMENT, which I did with results satisfactory, and I believe if used according to directions is a sure cure every time."—(I. Vandeburg, Kingston, Ill.)

1913-14-15 "In 1913 I applied your ANTI-ABORTION TREATMENT to my herd of forty-two head, and hereby wish to state that I cured my herd entirely and that I haven't had a single case of abortion since that time."—(Jos. F. Jira, Cary Sta., Ill.) "Several years ago we had Contagious Abortion in our herd and with your treatment completely eradicated it."—(Connecticut. Name on request.) "I am well pleased with your TREATMENT FOR ABORTION. I have nine fine calves and one cow left to calve yet. Two of the calves are from cows that aborted last year. I finished your treatment July 15, 1915, two months ago, and have seen no signs of disease since then."—(Iowa. Name on request.)

If your herd is afflicted with Contagious Abortion, and is free from tuberculosis, you can, with the Dr. Roberts treatment, clean up your herd and wipe out abortion. All Abortion Treatments are shipped direct from our laboratories at Waukesha.

Write us today for free Abortion book, "Questions and Answers"

DR. DAVID ROBERTS VETERINARY COMPANY
950 Wisconsin Avenue
Waukesha, Wis.

A Monument to a Man's Good Judgement—A

B. V. T. SILO

It is the most necessary, most permanent, best looking improvement you can build on your farm. It will preserve your silage in the best of condition year after year. When you want to sell your farm it will be a big inducement to the buyer.

Built of Tile Made From Finest Clay in the World

Our Brazil fire clay makes the hardest, most durable and non-porous vitrified tile in the world. Used exclusively in B. V. T. Silos. These tile will not crack or chip off. Absolutely impervious to moisture and air; fireproof, weather-proof, frost resisting, enduring. Triple air spaces and interlocking mortar joints insure an air-tight silo. Much of value in our free Silo Book E.

Brazil Hollow Brick & Tile Co.
Brazil, Ind.

PAPEC ENSILAGE CUTTERS

YOUR ENGINE will run the old reliable "Papec" because it runs at LOW SPEED—only 600 R. P. M.—taking LESS POWER. Thousands being operated on 4 to 8 H. P. gasoline engines. Low speed also means durability of wearing parts. The Papec is simple—few parts—all easy to get at. SIX fans instead of FOUR increase blowing power. Small, convenient pipe is all there is to set up or take down. Blades easily adjusted in a minute. Cutting parts STAY set.

Learn the many other advantages; time, men and power saving features. See description of wonderful new patented revolving feeder—handles hay and other small growths, also corn.

Convenient Distributing Points throughout the U. S.

THE PAPEC

PAPEC MACHINE CO.,
Box 71 Shortsville, N. Y.

WRITE FOR 1916 CATALOG FREE

CHAMPION SILO

The best in the world. Oil-filled staves make it rot-proof. Interlocking anchoring system makes it wind-proof. Low prices make it biggest value. Buy now. Save money. Write for 4-color picture, 26x30, showing Champion Silo on Model Farm. Address

WESTERN SILO CO.
115 11th Street
DES MOINES - IOWA

DON'T FORGET

There's a big difference in cupolas; difference in price, in material and in construction. The Queen was the original. On the market over 15 years. Good from the start. Still ahead. Used by thousands. Made of steel reinforced with heavy braces. Bird proof, snow proof, leak proof. Write for catalog and prices or ask your lumber dealer. QUEEN CUPOLA CO., 815 PECK ST. CRESCO, IOWA.

QUEEN CUPOLAS

When writing to advertisers please mention The Wisconsin Farmer.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Home Decorating.

One of our readers has written to us for some good color combinations, ideas for wall decoration, curtains, draperies, furniture and floor coverings for living room and bed rooms. We are all more or less busy just now along this line and perhaps a few suggetions might be interesting to many.

Simplicity and appropriateness are the two big words in home decoration. It should be the homemaker's chief object to surround her family with good, wholesome and useful objects. The question of money does not enter into the matter so much as does a study of what is most essential to the comfort of the occupants and a knowledge of good taste in color and design.

The list of wall coverings is long and varied and may include kalsomine, papers, burlap, tapestry, grass cloth, cretonne, chintz, etc. Kalsomine is attractive and inexpensive and may be obtained in all shades and tints, burlap is used a great deal in dining rooms, cretonne and chintz are pleasing for bed rooms, but probably the most satisfactory for all purposes is paper. The variety here is unlimited. There are the gray greens, dull browns, tans, reds and blues, either in plain colors or in small, indistinct designs, for the living room. Real tapestry, of course, is expensive, but sometimes tapestry papers may be found that are lovely for living room, dining room or hall. For bed rooms, white and cream papers, or almost any of the dainty colors in delicate shades, are particularly attractive. They come plain or with faint tracings of flowers and vines and dainty borders and drop designs for the angles of the rooms and around the door and window casings.

As to floor coverings nothing is more satisfactory where it is possible to have a hardwood or even a painted floor, than rugs. They are much more easily cared for than carpets and when once one has had them on the floors the carpets never will come back. Small rugs are perhaps best for the bed rooms. The washable rag rugs for this purpose come now in beautiful shades and patterns. It is always best in choosing any floor covering to select either a plain material or one with a small pattern.

The color to be used depends a good deal on the location of the room, its relation to other rooms, light, etc. One very attractive living room we happen to know about has a south and west exposure and the keynote of the color scheme here is brown. The walls are papered with a plain dull brown paper and the ceiling, which is beamed, is a cream. Then there is a narrow border that has in it just a suggestion of dull rose. The rugs are of the same shades of brown with a little of the rose and tan to relieve it. The curtains are a plain cream net with dull rose side drapes. A davenport is upholstered in tapestry of the same shades and just a little green, and the big easy chairs are wicker, stained brown and with soft tapestry cushions and deep magazine pockets at the sides. The piano and table are mahogany. There isn't a thing in this room that isn't useful and comfort-giving and the whole is most pleasing, indeed. There are no nick-nacks to catch the dust and be a worry to the housewife. Pictures, ferns, a pair of candlesticks and a fancy basket or two for flowers constitute about the entire list of decorations.

There are unlimited possibilities in carrying out a green or gray or blue color scheme and each individual taste with a little thought and care will evolve a room that will be a pleasure.

The dantier colors, blue, pink, yellow, light green or gray or cream are all good for the bed rooms. One pretty room was papered with a cream background and a very pale shade of blue in the design. A deep, cut-out border of blue came below a white picture molding. The woodwork had been painted creamy white and the furniture, bed, dresser, a chest of drawers and chairs were the same, and these, by the way, were an old set done over by the housewife herself. The curtains were white Swiss with blue-flowered chintz side drapes and cushions of the same blue chintz made a big willow rocker the most comfortable looking thing in the world. Blue wash rugs of a shade to match the drapes covered the floor. The room was dainty and airy and easy to keep clean.

The same idea can be carried out in any color and the white furniture substituted with anything the individual taste may call for. The main things are harmony and comfort. Add to the ease with which you can care for the room and you are sure to have a home that will be a pleasure to you as well as to the family and to the friends who frequent it.

Double Fireless Cooker.

It would be a good idea now, before the heavy spring work begins, to look ahead to the long, hot days of summer and have the man of the house make a fireless cooker. It will save time, fuel and the strength of the housekeeper. Directions for making a double fireless cooker are given in a recent bulletin and they are so simple that there is no reason why every kitchen should not be equipped with this useful article.

The materials needed include three wooden boxes, one long box and two square ones (the long box must be large enough to hold the other two and still leave three inches of space between all the boxes); five and a half yards sheet asbestos, one yard wide; two covered enamel pails, cooking pails; burlap, denim or canton-flannel, one yard.

To make, first line the bottoms and sides of all three boxes with the sheet asbestos, then in the bottom of the long box lay newspapers flat, or torn into fine pieces to a depth of about one-half inch. Then put two inches of sawdust on top of this layer of newspapers. Then place the two square boxes inside the long one, leaving three inches of space between the two square boxes. Fill all the spaces between all the boxes with sawdust, felt or mineral wools. Then tack a strip of denim or other material from the edges of the square boxes to the outside edge of the long box, also across the space between the two square boxes, so that the strip of denim will cover all the spaces that are filled with sawdust. The outside box must have a wooden lid. Line the lid with sheet asbestos to within a half inch of the edge of the lid. Then put a layer of sawdust one inch deep on top of the asbestos. Then tack a piece of denim or other material over the sawdust, still leaving the edge free and clear so that the cover will fit down tightly. The lid may be lined with asbestos or a pillow made of denim, or canton-flannel and filled with sawdust that will fit tightly down into the top of the box.

New Testament True Creed.

To the Editor:—I would say to "Constant Reader" that I don't see how a church can be true unless the New Testament is its creed. Read the last chapter of Revelations. If a person can be a Christian and be saved without coming into the church by being baptized, why did Christ establish the church? Read Romans, sixth chapter, and I think you will understand that we are to be buried in baptism. In another place He says, "Except a man be born of water and of the Spirit he cannot enter into the Kingdom of God."

I could write a great deal more on the subject, but will only advise "Constant Reader" to read the New Testament from beginning to end.

A Christian.

RUBY, RUTH AND ROLLAND HARKER.

Christ the Church.

To Constant Reader:—While others are giving their views of your question I wish to give mine. I don't think anyone has to put their name on any of the church rolls to be saved. Christ is the church and the only church that will save us. The creeds and denominations are the creeds and doctrines of men. Christ said, "He that believeth on the Son hath everlasting life." So if we consecrate ourselves to the Lord and try to follow in His footsteps as closely as we possibly can, seeking to do His will, we belong to the church and the only church, the body of our Lord Jesus Christ.

We should assemble ourselves to study the scriptures, for the good Bible so says. Can we read where the apostles exacted great price for their work as the creeds are doing? No, the Lord told them, "Go your ways. behold I send you forth as lambs among wolves. Carry neither purse nor scrip nor shoes."

We wonder at the falling away and unbelief that is in the churches of this age. Surely Babylon is falling.

N. R. B.

Why Is Baby Cross?

If the baby cries don't spank him:

Maybe he's cross and tired from being tossed about all day.

Maybe he's too warm or too cold or too wet.

Maybe a pin is scratching him.

Maybe there's wrinkles in his bed clothes.

Maybe he's lying in a cramped position.

Maybe he's hungry and thirsty.

Try rubbing his back gently along the spine, suggest the home economics authorities at Iowa State College. It is often more effective than anything else in quieting the baby. To keep him comfortable during his nap turn him over two or three times. Don't forget to give him a teaspoonful of water once or twice a day.

Babies Most Important.

To the Editor:—As an interested reader of your paper I have been watching the "baby department" to see if Dickinson county, Iowa, was on the map in baby raising. As I have never seen any from this county and for fear people might get the idea that we were too far north to raise babies successfully I am sending a picture of my babies, who have all been born and raised in Dickinson county.

The oldest is a girl, age fourteen, the next a girl, age four, and the youngest a boy, age two. The last two babies weighed four and four and one-half pounds respectively, so you see they have made a great gain. They are all well and happy.

So don't let anyone stay away from northern Iowa thinking we are too far north to raise babies, for it is the most important crop that Iowa has, and Dickinson county has a host of fine babies that are unsurpassed by any county in this state.

My babies' names are Ruby, Ruth and Rolland. As we live on the shore

of West Okoboji they have no trouble getting fresh air.

Mrs. Ellsworth Harker.

Moonlight Schools.

Five years ago Cora Wilson Stewart, a Kentucky woman, launched the idea of "moonlight schools" for the illiterate adults in the mountain regions of her state. In a few weeks she had 1,200 pupils ranging from eighteen to eighty-seven years old, studying in schoolhouses nights when the light of the moon made travel over the rough roads possible. Now the idea has spread to seventeen states and as illiteracy in the United States is largely a question of rural or sparsely settled districts it seems as though one simple little woman had solved a problem that long distressed the masculine mind.

Begin Training Early.

To the Editor:—I am so interested in the mothers' letters that I am sending a picture of our baby, Ralph Henry, age seven and one-half months, weight twenty and one-half pounds.

The picture was taken when he was fourteen weeks old. He is large and

RALPH HENRY SCHWARTZ.

strong and very bright for his age. He is a mother-fed baby and never has been sick. He had two teeth at six months. He eats and sleeps well, goes to bed when I do, at any time, and sleeps all night. I feed him the first thing in the morning and then he sleeps all forenoon, so I get my work all done. I believe in training babies from the time they are very small. I have never had any trouble with my baby. Won't some of the other mothers tell how they get along with their babies? Mrs. F. J. Schwartz.

Strawberries Keep Well.

To the Editor:—I have thought so often of adding my mite to the Home Department and since reading Mrs. H. A.'s inquiry for canning strawberries I have concluded to give her my experience and am sure if she tries it she will never use any other method. By this method the strawberries are just as nice as though just off the vine and they keep splendidly. They do not have the strong, biting taste, but are very mild and light in color.

I usually pick the berries in the morning and immediately float them in a large pan of water while stemming. In this way the dirt sinks to the bottom and the berries rise to the top. Then I fill the jars. I usually use quart jars. Shake the berries down as tightly as possible, but do not press to spoil the shape. A sirup is then made of one and one-half cupfuls of sugar and two cupfuls of water to a quart of berries. Boil a few minutes and fill the jars. Tighten the lids and stand in a bucket or any vessel that is taller than the jars. In the meantime have a kettle of boiling water ready and pour it over and around the jars, letting the force of the water hit the side of the vessel and pouring slowly. Fill almost to the rubber, cover with a lid and a piece of carpet or anything that will keep in the heat and let stand until cold and there you have a beautiful, rich red strawberry fit for a queen.

Now here is something a shade better, "sunshine strawberry preserves." Prepare the berries as above mentioned and when stemming put them into a pint or measuring cup, then into a larger vessel until you have four heaping measures in. I get them all ready, about four vessels at once, as this is about as much as one can do at one time. Then take four meas-

EUGENE AND FLORINEL BALDWIN ON THEIR PONY, TRIXIE.

ures of sugar for each vessel separately with just enough water to dissolve the sugar. Let this boil up, then add a pan of the berries and boil ten to fifteen minutes. Watch closely or they will boil over. Skim, dip out into plates or shallow granite pie pans (never use tin), set in warming oven and about the stove and keep just warm. If they are too hot they will turn brown. Keep a slow fire until evening. In the morning they will be a beautiful jellied mass and you will want to eat them at once. Put into jars and seal. They can be set in the sun if you can prevent the flies from helping themselves. Cherries are also lovely this way, while raspberries are fine canned by the first method. Mrs. Alvira Watts.

Early to Bed.

To the Editor:—I am sending you a picture of our boy. It was taken when he was six months old and he weighed twenty-one pounds. His name is Anthony Eugene Hager. He

ANTHONY HENRY HAGER.

is now one year old and has a sister thirteen months older than he. They are both healthy children and great little playmates. Our children are asleep every night at 7:30 o'clock. We think it a good rule and one that should be taught to all children.

Mrs. J. A. Hager.

A Quick Method.

To the Editor:—In reply to Mrs. H. A.'s request for recipe for canning strawberries will send mine. I use two cups of sugar to one cup of water. Boil this to a sirup. Then drop the strawberries in the sirup and let come just to a boil, then can. They will keep their rich color and are excellent. Mrs. John P. Voss.

Like Fresh Berries.

To the Editor:—I want to tell Mrs. H. A. how I can strawberries. Pick the berries over, put them in a colander, pour cold water over and let them drain well. Then put them in an enamel kettle or pan, put on what sugar you wish and let them stand a few hours, or overnight. In the morning set on the stove and just let them get good and hot through, then hurry them into the cans and when sealed lay the cans down and turn every once in a while till cold. This keeps them from rising to top of can. Then wrap in paper and set in a dark, cool place and they will be just as nice as fresh berries. Mrs. A. J.

Care of Irons.

To the Editor:—I wish to answer N. N. in regard to what to do with her flatirons to keep them from staining the clothes. If she will get a small limb from a cedar tree and rub the irons on it while they are hot, then on a damp cloth, I think she will have no more trouble. Mrs. W. E. Snepp.

Recipes.

Oyster Bouillon.—Chop one quart of oysters (washed and freed from bits of shell); add the liquid strained through a cheese cloth, six cups of cold water, two slices of onion, two stalks of celery and a bit of mace; let heat over a hot fire to the boiling point and boil five minutes, then strain and press out all the liquid; add two cups of chicken broth, about a teaspoonful of salt and half a teaspoonful of paprika. Serve hot with a tablespoonful of whipped cream on the top of the soup in each cup. Use the oysters with fresh fish (white) for croquettes or a creamed dish.

Individual Chicken Pies.—Cut tender cooked chicken into pieces about an inch long. For a cup of meat melt two tablespoonfuls of butter; in it cook two tablespoonfuls of flour and one-fourth teaspoonful each of salt and pepper; add two-thirds of a cup of chicken broth or milk, or half of each, and stir until boiling. Have ready some small baking powder biscuit, turn the chicken into an individual serving dish and set three or four of the small biscuits above.

Custard Pudding.—Spread slices of stale sponge or plain cup cake with strawberry or raspberry jam and lay them lightly in a buttered pudding dish. Beat three eggs; add half a teaspoonful of salt, two tablespoonfuls of sugar and two cups of milk, mix and turn over the cake. Let bake in a moderate oven until the center is firm. When cold turn from the dish and serve with whipped cream. Use a quart mold; line the mold neatly with buttered paper, then dredge the butter with granulated sugar.

Egg Toast.—Break five eggs in a shallow dish or pan, add a pinch of salt and a cup of sugar. Beat up well. Dip slices of stale bread in and fry in lard, not too hot.—E. F.

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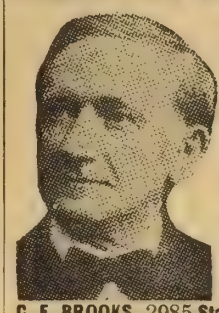

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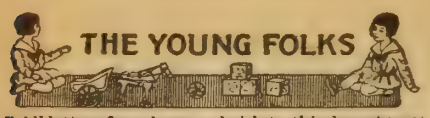


All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Another Fairy Tale.

One of our little readers, Victoria Kellgren, says she has been reading the stories for the Young Folks, but one of her favorites she has not seen and she wants us to tell you the story of Hans and Grettel.

Hans one day took his sister, Grettel, by the hand and said, "Since our poor mother died we have had no happy day, for our new mother is not good to us and when we go near her she pushes us away. We have nothing but hard bread to eat and the little dog that lies by the fire is better off than we, for sometimes he has a nice piece of meat thrown to him. Oh, if our poor mother knew how we are treated! Come, we will go and travel over the wide world."

They walked all day long over the fields until in the evening they came to a great wood. By that time they were so tired and so hungry that they sat down in a big hollow tree and soon were fast asleep. In the morning when they awoke the sun had risen high above the trees and was shining warmly upon the hollow tree.

Then Hans said, "Sister, I am very thirsty. If I could find a brook I would go and drink and fetch you some water, too. Listen, I think I hear the sound of one." So Hans got up, and, taking Grettel by the hand, went to find the brook.

But their cruel stepmother was a fairy and had followed them into the woods to do them harm and when they had found a brook Hans stooped down to get a drink. But as he did so Grettel thought she heard the brook say, "Whoever drinks here will be turned into a tiger." Grettel was frightened and cried, "Oh, brother, do not drink or you will be turned into a wild beast and tear me to pieces."

Hans was very thirsty, but he listened to Grettel and went on in search of another brook. But when they came to the next brook Grettel again thought she heard a voice say, "Whoever drinks here will become a wolf." And again she begged her brother not to drink. Hans was a little vexed by this time, but he yielded, saying "I will wait for the next brook, but there I will drink, say what you will."

When they came to the third brook Grettel listened and heard the voice say, "Whoever drinks here will become a fawn." "Oh, brother," she cried, "do not drink, or you will become a fawn and run away from me."

But Hans was already at the brook and as his lips touched the water he became a fawn. Grettel cried bitterly and the fawn lay beside her with tears streaming from his eyes. Grettel comforted him and vowed she would never leave him, and she took from her neck a golden necklace and put it around his neck. Then she gathered some rushes and plaited them into a soft string to fasten to the chain and by this she led him farther into the woods.

Thus they traveled a long, long way until they finally came to a little cottage. It was empty and Grettel decided they would live there. She gathered leaves and moss to make a soft bed for the fawn and every morning she went out and gathered nuts, roots and berries for herself and sweet shrubs and tender grass for the fawn, which ate from her hand and was very happy.

They lived this way for a long time until one day the king of the country came to the wood to hold a great hunt. The fawn heard the dogs bark and begged his sister to let him go and see what was happening. Grettel finally let him go, making him promise to come back to her in the evening. "I shall shut up the door," she said, "and when you say 'Sister, let me in' I shall let you in."

The king and his men saw the beautiful fawn and followed him, but were unable to take him, and when it grew dark he returned to Grettel's little house and said, "Sister, let me in," and she opened the door and he ran in.

The next morning he heard the dogs again and the horns of the huntsmen and was so anxious to go that Grettel again let him out, making him promise to come back in the evening.

Soon the king and his men spied him and gave chase, but he was too quick for them. One of the huntsmen, however, wounded him in the foot. This huntsman followed close behind the fawn as he ran to the little house, and he heard him say, "Sister, let me in." And when he saw the door open and the fawn jump inside he returned to the king and told him what he had seen. "Tomorrow," said the king, "we will have another chase."

Grettel was very much frightened when she saw that the fawn was wounded, but she sent him to bed and made him comfortable.

The next morning when the hunters' horn blew the fawn wanted to go but Grettel was so afraid they would kill him that she begged him to stay at home. The fawn would not listen to her and ran away into the woods where the king and his men soon gave chase. The king followed him all day and in the evening he saw him return to the little house, tap on the door and say, "Sister, sister, let me in." The door opened and the fawn jumped in.

Then the king tapped on the door and when Grettel opened it she was greatly surprised to see a king. "Will you come and be my wife?" asked the king. "Yes," answered Grettel, "but the fawn must go with me." The king agreed to this and took Grettel to the palace where they celebrated their marriage.

The king and Grettel were happy for a time, but when a little son came to them the wicked fairy was so angry at Grettel's good fortune and happiness that she set about finding a way to harm her. She had a very ugly daughter and she managed to put this daughter in Grettel's place and kept the king from knowing of the change. She thought this was a fine idea, but one night the real queen, Grettel, stole into the palace to look at the baby and the fawn which lay in one corner of the room. The nurse saw her and told the king what had happened.

The next night the king himself watched and when the queen came in he recognized her as his lovely wife and this broke the spells woven by the wicked fairy.

When the king heard of all the wicked things the fairy had done he ordered that she and her daughter should die. With their death the fawn changed again into Hans, which made Grettel very happy.

International Sunday School Lesson.

Lesson for March 26, 1916
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Review—the Great Multitude.

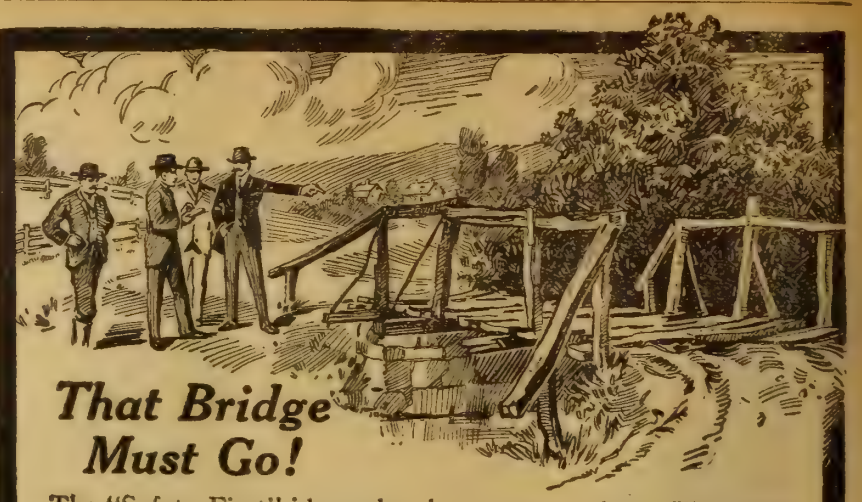
READING LESSON—Revelation 7:9-17.

GOLDEN TEXT—They shall hunger no more, neither thirst any more; neither shall the sun strike upon them, nor any heat; for the lamb that is in the midst of the throne shall be their shepherd, and shall guide them unto fountains of waters of life; and God shall wipe away all tears from their eyes.—Rev. 7:16, 17.

I. **General Information** — Omitting lessons 4, 7 and 11, all of the past quarter's work has to do with the early, the apostolic church, covering a period of time from A. D. 30 to perhaps A. D. 37, six or seven years. The chief events are the resurrection of Jesus, the coming of the Holy Spirit, the change in the apostles, particularly Peter, the conversion and baptism of 3,000 believers, fellowship and wonders worked among these believers, the beginning of persecution, the selection of seven deacons, Stephen's testimony and death, the dispersion of the Christians, the work of Philip, great growth in the early church.

Historically these lessons have to do with the things that Jesus began and continued to do after his resurrection through the power of the Holy Spirit. It is, therefore, a story of the power of the risen Christ. The principal characters are of two classes. (1) The leading workers. Of these are: Peter and John, apostles; the 120 disciples, Barnabas, the seven deacons, particularly Stephen and Philip; the Ethiopian eunuch and Gamaliel, who gave some friendly assistance. (2) The chief enemies: Those who falsely accused the apostles, the rulers of the Jews and the temple, Ananias and Sapphira, Saul and Simon Magnus.

It is not difficult to paint a word picture of the events of the past quarter. This may be done by assigning to separate pupils such questions as: Where, when and why did the event



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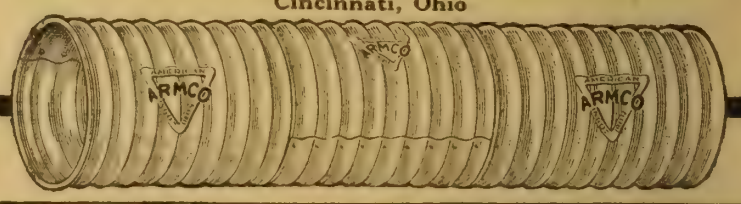

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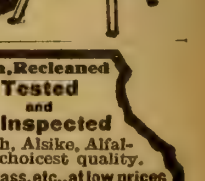

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of this lesson occur? To another pupil assign the task of telling what he thinks the scene looked like, and to still another to name the chief persons mentioned in each lesson. Let these assignments omit lessons 4, 7 and 11, which do not chronologically fit into the work of this quarter. The remaining pupils should be primed to supply any omitted facts and to correct any mistakes.

I. **The Coming of Power.** Lesson 1. The ascension of Jesus is one that shows us the risen Christ as the giver of the Holy Spirit and He is the All Powerful One who has carried forward the things Jesus "began to do." Lesson 2. This is very much the same except that it suggests the man side of this transaction. As the early disciples obeyed, they received. In like manner the Spirit is given today to those that "ask him." Lesson 3 shows what effect we may anticipate when we proclaim the fact of the risen Christ.

II. **The Use of Power.** Lesson 5 (omitting No. 4) has to do with the daily walk and work of those who had so recently received this newly bestowed power. Through his servants, Jesus, by the power of the Spirit, heals and makes strong the lame man at the temple gate—a case of "applied Christianity," the power of practical social service. As a result of this service Peter and John (Lesson 6) had opportunity to give their testimony to the rulers, the result of which confounded the enemies who thought they had conquered Christ at Calvary—the use of power in testimony. The further evidence of how this new power was using men is that given in lesson 8, the Christian Brotherhood at Jerusalem.

III. **The Test of Power.** Stephen (lesson 10) was one of those who had been separated for the care of the temporal affairs of the early church, yet his testimony and martyrdom easily makes him more famous than most of the apostles and forever exalts the layman in the Christian church.

One other (lesson 12) of those seven deacons, Philip, was also so signally used and blessed that his name and deeds are almost as familiar to us as is the work of Stephen.

In the first case this newly bestowed power filled the witness with a calmness and courage that will always remain an inspiration, while in the second illustration Philip so gave himself to the direction and leadership of the Spirit as to go where he was sent; and when to human judgment his presence was essential to the carrying on of a great revival, he obeyed the new command and left the multitude to deal with a single individual.

Jesus makes no reference to the "mass consciousness" and the Holy Spirit's power receives no greater or more far-reaching test than that which had to do with its dealings with the individual soul.

Each teacher should see to it that each scholar reads these eight chapters several times, if possible, before the review occurs, in order that they may see the quarter's work as a whole, for it is indeed one story; the story of the risen Christ winning men to Himself and equipping them to go forth in obedience to his last command (Luke 24:46-49; Acts 1:8).

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7668 Ladies' Waist.—Cut in sizes 36 to 44 inches bust measure. A perfectly plain waist and yet there are interesting touches of detail that will set off the garment when made up. The full blouse has front closing and so deftly does the insertion outline this closing that we see an inset vest suggested.

7574 Girl's Dress.—Cut in sizes 6, 8, 10, 12 and 14 years. The side front closing relieves the plainness of the blouse of this dress and there is also an ornamental Quaker collar at the high neck. The plain sleeves are full at the wrist with Quaker cuffs. The skirt is gathered and has the lower portion of differing material.

7679 Ladies' Waist.—Cut in sizes 34 to 40 inches bust measure. This ladies' dress, with a dressy tone but with a simplicity that appeals, has a one piece gathered skirt. The waist, in fullness that is the mode, has collar and stylish revers in pointed effect. The long loose sleeves are finished with a dainty frill.

7676 Girl's Dress. Cut in sizes 6, 8, 10 and 12 years. Embroidered flouncing and plain material are used in making this pretty dress. The dress closes at the back and has a separate blouse and skirt. Sleeves may be in long or short length.

7642 Ladies' Shirt Waist.—Cut in sizes 34 to 42 inches bust measure. Popular because of its practical lines, this waist is made with two plaits at each side of front; the closing at center is visible and made with buttons; a smart collar and neat cuffs bring out its lines for simplicity of style, with a bow tie to give just the right dash to such design.

7654 Ladies' Dress.—Cut in sizes 36 to 42 inches bust measure. This very pretty design shows a dress which has a plain bodice closing at the center of the front. At the neck is a small, square collar. The sleeves are full length. The four gored skirt is attached to a body lining.

7663 Ladies' Chemise.—Cut in sizes 36, 40 and 44 inches bust measure. Cambric, batiste or crepe de Chine can be used to make this chemise. The chemise may have round or square neck and the lower portion may be finished in the envelop or regulation style.

7577 Ladies' Apron.—Cut in sizes 34 to 44 inches bust measure. This apron closes in front and the overlap is so great that it is all but double in front and can be let out to accomodate the figure without corsets and drawn in to fit when they are worn. Sleeves are in one with the body, the pieces joined at shoulder and underarm seams.

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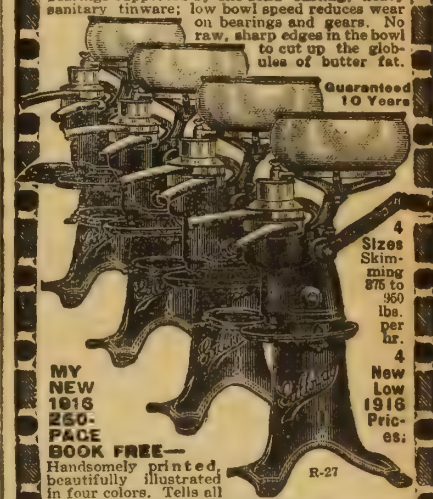

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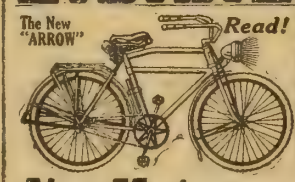

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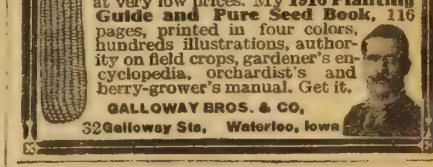

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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CHAPTER XIII.

The Circus.

THE Maxwells were, in fact, effectively stirring up the ambition of their flock, routing the older members out of a too easy-going acceptance of things as they are and giving to the younger ones vistas of a life imbued with more color and variety than had hitherto entered their consciousness. And yet it happened at Durford, on occasion, that this awakening of new talents and individuality produced unlooked for complications.

"Oh, yes," Hepsey remarked one day to Mrs. Betty, when the subject of conversation had turned to Mrs. Burke's son and heir, "Nickey means to be a good boy, but he's as restless as a kitten on a hot Johnny cake. He isn't a bit vicious, but he do run his heels down at the corners and he's awful wearin' on his pants bottoms and keeps me patchin' and mendin' most of the time—'contributing to the end in view,' as Abraham Lincoln said. But, womanlike, I guess he finds the warmest spot in my heart when I'm doin' some sort of repairin' on him or his clothes. It would be easier if his intentions wasn't so good, 'cause I could spank him with a clear conscience if he was vicious. But, after all, Nickey seems to have a winnin' way about him. He knows every farmer within three miles; he'll stop any team he meets, climb into the wagon seat, take the reins and enjoy himself to his heart's content. All the men seem to like him and give in to him; more's the pity! And he seems to just naturally lead the other kids in their games and mischief."

"Oh well, I wouldn't give a cent for a boy who didn't get into mischief sometimes," consoled Mrs. Betty.

At which valuation Nickey was then in process of putting himself and his young friends at a premium. For, about this time, in their efforts to amuse themselves, Nickey and some of his friends constructed a circus ring back of the barn. After organizing a stock company and conducting several rehearsals, the rest of the boys in the neighborhood were invited to form an audience, and take seats which had been reserved for them without extra charge on an adjoining lumber pile. Besides the regular artists there were a number of specialists or "freaks," who added much to interest and excitement of the show.

For example, Sam Cooley, attired in one of Mrs. Burke's discarded underskirts, filched from the rag bag, with some dried cornstalk gummed on his face, impersonated the famous Bearded Lady from Hoboken.

Billy Burns, wearing a very hot and stuffy pillow buttoned under his coat and thrust down into his trousers, represented the world-renowned Fat Man from Spoonville. His was rather a difficult role to fill gracefully, because the squashy pillow would persist in bulging out between his trousers and his coat in a most indecent manner; and it kept him busy most of the time tucking it in.

Dimple Perkins took the part of the Snake Charmer from Brooklyn, and at intervals wrestled fearlessly with a short piece of garden hose which was labeled on the bills as an "Anna Condy." This he wound around his neck in the most reckless manner possible; it was quite enough to make one's blood run cold to watch him.

The King of the Cannibal Islands was draped in a buffalo robe, with a gilt paper crown adorning his head, and a very suggestive mutton bone in his hand.

Poor little Herman Amdursky was selected for the Living Skeleton, because of the spindlelike character of his nethermost limbs. He had to remove his trousers and his coat and submit to having his ribs wound with yards of torn sheeting, in order that what little flesh he had might be compressed to the smallest possible compass. The result was astonishingly satisfactory.

The Wild Man from Borneo wore his clothes wrong side out, as it is well known wild men from Borneo always do; and he ate grass with avidity. Wry-mouthed and squint-eyed, he was the incarnation of the cubist ideal.

When all this splendid array of talent issued from the dressing room and marched triumphantly around the ring it was indeed a proud moment in the annals of Durford and the applause from the lumber pile could be heard at least two blocks.

After the procession the entertainment proper consisted of some high and lofty tumbling, the various "turns" of the respective stars, and then, last of all, as a grand finale, Charley, the old raw-boned farm horse who had been retired on a pension for at least a year, was led triumphantly into the ring, with Nickey Burke standing on his back!

Charley, whose melancholy aspect was a trifle more abject than usual, and steps more halting, meekly followed the procession of actors around the ring, led by Dimple, the Snake Charmer. Nickey's entree created a most profound sensation and was greeted with tumultuous applause—a tribute both to his equestrian feat and to his costume.

Nickey had once attended a circus at which he had been greatly impressed by the artistic decorations on the skin of a tattooed man, and by the skill of the bareback rider who had turned somersaults while the horse was in motion. It occurred to him that perhaps he might present somewhat of both these attractions, in one character.

Maxwell had innocently stimulated this taste by lending him a book illustrated with lurid color plates of Indians in full war paint, according to tribe.

So Nickey removed his clothes, attired himself in abbreviated red swimming trunks and submitted to the artistic efforts of Dimple, who painted most intricate, elaborate and beautiful designs on Nickey's person, with a thick solution of indigo purloined from the laundry.

Nickey's breast was adorned with a picture of a ship under full sail. On his back was a large heart pierced with two arrows. A vine of full blown roses twined around each arm, while his legs were powdered with stars, periods, dashes and exclamation points in rich profusion. A triangle was painted on each cheek and dabs of indigo were added to the end of his nose and to the lobe of each ear by way of finishing touches.

When the work was complete Nickey surveyed himself in a piece of broken mirror in the dressing room, and to tell the truth, was somewhat appalled at his appearance; but Dimple Perkins hastened to assure him, saying that a dip in the river would easily remove the indigo; and that he was the living spit and image of a tattooed man, and that his appearance, posed on the back of Charley, would certainly bring the house down.

Dimple proved to be quite justified in his statement, so far as the effect on the audience was concerned; for, as Nickey entered the ring, after one moment of breathless astonishment, the entire crowd arose as one man and cheered itself hoarse, in a frenzy of frantic delight. Now whether Charley was enthused by the applause or whether the situation reminded him of some festive horseplay of his youth, one cannot tell. At any rate, what little life was left in Charley's blood asserted itself. Quickly jerking the rope from the astonished hand of Dimple Perkins, Charley turned briskly around and trotted out of the yard and into the road, while Nickey, who had found himself suddenly astride Charley's back, made frantic efforts to stop him.

As Charley emerged from the gate the freaks, the regular artists, the gymnasts and the entire audience followed, trailing along behind the

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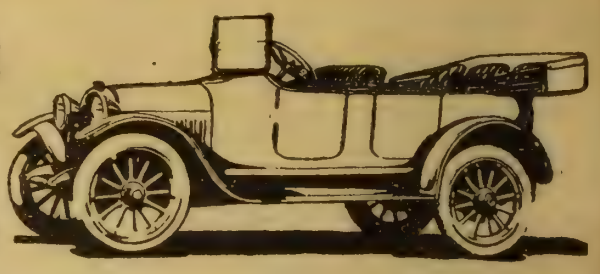

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mounted tattooed man and shouting themselves hoarse with encouragement and derision.

As Charley rose to the occasion and quickened his pace the heat of the sun, the violent exercise of riding bareback and the nervous excitement produced by the horror of the situation threw Nickey into a profuse sweat. The bluing began to run. The decorations on his forehead trickled down into his eyes; and as he tried to rub off the moisture with the back of his hand the indigo was smeared liberally over his face. His personal identity was hopelessly obscured in the indigo smudge; and the most vivid imagination could not conjecture what had happened to the boy. It was by no means an easy feat to retain his seat on Charley's back; it would have been still more difficult to dismount, at his steed's brisk pace; and Nickey was most painfully conscious of his attire, as Charley turned up the road which led straight to the village. At each corner the procession was re-enforced by a number of village boys who added their quota to the general uproar and varied the monotony of the proceeding by occasionally throwing a tin can at the rider on the white horse. When Charley passed the rectory and the green and turned into Church Street, Nickey felt that he had struck rock bottom of shameful humiliation.

For many years it had been Charley's habit to take Mrs. Burke down to church on Wednesday afternoons for the five o'clock service; and, although he had been out of commission and docked for repairs for some time, his sublimal self must have got in its work, and the old habit asserted itself. To the church he went, attended at a respectful distance by the Bearded Lady, the Fat Man, the Snake Charmer, the King of the Cannibal Islands, the Living Skeleton and the Wild Man from Borneo, to say nothing of a large and effective chorus of roaring villagers bringing up the rear.

It really was quite clever of Charley to recall that, this being Wednesday, it was the proper day to visit the church—as clever as it was disturbing to Nickey, when he, too, recalled that it was about time for the service to be over and that his mother must be somewhere on the premises, to say nothing of the assembled mothers of the entire stock company—and the rector and the rector's wife.

Mrs. Burke, poor woman, was quite unconscious of what awaited her, as she emerged from the service with the rest of the congregation. It was an amazed parent that caught sight of her son and their scrambling off the back of his steed onto the horse block in front of the church, clad in short swimming trunks and much bluing. The freaks, the regular artists, the gymnasts and the circus audience generally shrieked and howled and fought each other, in frantic effort to succeed to Nickey's place on Charley's back—for Charley now stood undismayed and immovable, with a gentle, pious look in his soft old eyes.

For one instant Mrs. Burke and her friends stood paralyzed with horror; and then like the good mothers in Israel that they were, each jumped to the rescue of her own particular darling—that is, as soon as she could identify him. Consternation reigned supreme. Mrs. Cooley caught the Bearded Lady by the arm and shook him fiercely, just as he was about to land an uppercut on the jaw of the King of the Cannibal Islands. Mrs. Burns found her offspring, the Fat Man, lying dispossessed on his back in the gutter, while Sime Wilkins, the Man Who Ate Glass, sat comfortably on his stomach. Sime immediately apologized to Mrs. Burns and disappeared. Next, Mrs. Perkins took the Snake Charmer by his collar and rapped him soundly with the piece of garden hose which she captured as he was using it to chastise the predatory Wild Man from Borneo. Other members of the company received equally unlooked-for censure of their dramatic efforts.

Nickey, meantime, had fled to the pump behind the church, where he made his ablutions as best he could; then, seeing the vestry room door ajar, he, in his extremity, bolted for the quiet seclusion of the sanctuary.

To his surprise and horror he found Maxwell seated at a table looking over the parish records; and when Nickey appeared, still rather blue, attired in short red trunks, otherwise unadorned, Donald gazed at him in mute astonishment. For one moment there was silence as they eyed each other; and then Maxwell burst into roars of uncontrollable laughter, which were not quite subdued as Nickey gave a rather incoherent account of the misfortune which had brought him to such a predicament.

"So you were the Tattooed Man, were you! Well, I suppose you know that it's not generally customary to appear in church in red tights; but as you couldn't help it I shall have to see what can be done for you to get you home clothed and in your right mind. I'll tell you! You can put on one of the choir boy's cassocks, and skip home the back way. If any body stops you tell them you were practicing for the choir and it will be all right. But really, Nickey, if I were in your place, the next time I posed as a mounted Tattooed Man, I'd be careful to choose some old quadruped that couldn't run away with you!"

"Then you aren't mad at me!"

"Certainly not. I'll leave that to my betters! You just get home as fast as you can."

"Gee! but you're white all right—you know it didn't say nothing in the book about what kind of paint to use!"

Maxwell's eyes opened. "What book are you talking about, Nickey?" he asked.

"The one you let me take, with the Indians in it."

Maxwell had to laugh again. "So that's where the idea for this 'Carnival of Wild West Sports' originated, eh?"

"Yes, sir," Nickey nodded. "Everybody wanted to be the tattooed man, but seeing as I had the book and old Charley was my horse, I couldn't see any good reason why I shouldn't get tattooed. Gee! I'll bet ma will be mad!"

After being properly vested in a cassock two sizes too large for him, Nickey started on a dead run for home, and, having reached the barn, dressed himself in his customary attire. When he appeared at supper Mrs. Burke did not say anything; but after the dishes were washed she took him apart and listened to his version of the affair.

"Nicholas Burke," she said, "if this thing occurs again I shall punish you in a way you won't like."

"Well, I'm awfully sorry," said Nickey, "but it didn't seem to feaze Mr. Maxwell a little bit. He just sat and roared as if he'd split his sides. I guess I ain't goin' to be put out of the church just yet, anyway."

Mrs. Burke looked a bit annoyed.

"Never mind about Mr. Maxwell. You won't laugh if anything like this occurs again, I can tell you," she replied.

"Now, ma," soothed Nickey, "don't you worry about it occurrin' again. You don't suppose I did it on purpose, do you? Gosh no! I wouldn't get onto Charley's back again with my clothes off any more than I'd sit on a hornet's nest. How'd you like to ride through the town with nothin' on but your swimmin' trunks and drippin' with bluin' water, I'd like to know?"

Mrs. Burke did not care to prolong the interview any further, so she said in her severest tones:

"Nicholas Burke, you go to bed instantly. I've heard enough of you and seen enough of you for one day."

Nickey went.

(To be Continued.)

One of the cardinal truths emphasized at the first Northwest Dairy Show and Convention in Spokane, February 24th to 26th, was that the world's greatest economic problem leads to the farm, says August Wolf, in the March issue of Western Union Life Monthly. Grains and grasses, beef, pork and mutton and poultry and fruits and vegetables are the soil builders, the home builders, the town and city builders. More foodstuffs mean factories, more hay means live stock, which, in turn, calls for packing plants; fruits and vegetables demand storage houses and canneries, and creameries follow the milk cow. Great areas of land throughout the Northwest, which once went begging for buyers at from 50 cents to $1.25 an acre, are now bearing enough foodstuffs to raise their value a hundredfold. The land was always worth 100 times more than its selling price, but not to the man who did not or would not improve it. Today there is a new order of things—the farmer who wasted a dozen acres on one steer must hand that land over to the modern dairyman, who will build a silo with his barn and make the land support as many persons.

Big Profit in Poultry Possible.

WITH present prospects of high prices for poultry and eggs, poultry raisers should make some big profits this year. Right now is a good time to enlarge your poultry business. Chicks hatched at this time will make plump frys or broilers in the early summer, or fall layers that will continue laying throughout the winter. Vigorous, early-hatched chicks are money-makers, but to get this kind you must have a first-class incubator. Old Trusty incubators have the name of being perfectly constructed and of getting big average hatches of strong chicks in all kinds of weather. Over 650,000 are now in use and are making money for their owners. They are built by M. M. Johnson Company, Clay Center, Neb. Send to the company for their free "Know-How" book on poultry and you can learn how to increase your profits in the poultry business. Mention of this paper is always appreciated.—Adv.

Are You One of the Losers?

Low Corn King
Low Cloverleaf

SOMETIMES Americans wonder why they get only about half the crop yields from an acre that are produced in other countries. Well, here's one reason—a large majority of the farmers in this country own no manure spreader. One corn belt state lost $20,000,000 last year by the wasting and poor handling of manure. Are you one of the farmers who shared in this loss? If you are, you need an **IHC** manure spreader.

International Harvester spreaders, **Low Corn King** and **Low Cloverleaf**—besides being low, strong, durable, simple in beater and apron mechanism, with good traction, light draft, and plenty of clearance—have a really successful wide-spreading device.

Low Corn King and **Low Cloverleaf** spreaders are low for easy loading and narrow for easy handling in yard, stable or field. From a box 45 inches wide either of these spreaders covers an even strip of ground 8 feet wide, or better. It saves time and labor, and keeps wheels and horses well away from the slippery manure already spread.

See the **I H C** dealer about a **Low Corn King** or **Low Cloverleaf** made to stand by you for years. Write us for catalogue.

International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

Save 20% Buy the Famous Riverside Tires

Guaranteed 5000 MILES
Ford Size 4000
All Others

GET our 1916 prices before you buy tires. We save you one dollar out of every five, of others prices. And we *unconditionally guarantee the mileage.* Famous racers have broken all records on Riverside Tires.

SEND FOR AUTO BOOK

Showing Riverside construction—wrapped tread—one cure—toughest fabric, with pure Upper River Para Rubber, extra thick tread. Book shows similar saving on *all automobile accessories.* Sent free on request. Write today

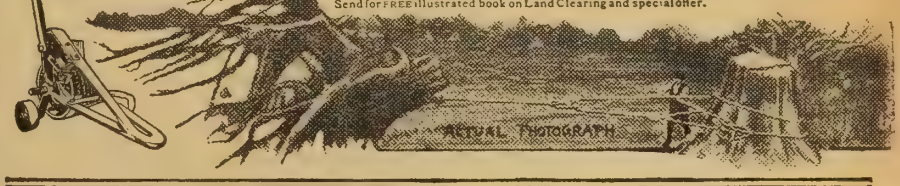
Montgomery Ward & Co. Dept. C139
New York Chicago Kansas City Ft. Worth Portland
Write to the house most convenient to you

HAND POWER
K Stump Puller

Land clearing an easy, one-man job—big stumps pulled clean with this wonderful machine.

Works on *any* land. Operated by hand! No horses; no digging. Made of forged Krupp steel—guaranteed. Adopted and used by U.S. Government officials and many states. Send for FREE illustrated book on Land Clearing and special offer.

Drop a postal to
W. J. FITZPATRICK
Box B 182 Fifth Street
San Francisco, Calif.



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30 DAYS FREE TRIAL and *freight prepaid* on the new 1916 "RANGER" bicycle. **Write at once for our *big catalog* and *special offer*.**

Improved Models, prices reduced. Extraordinary *new offers. You cannot afford to buy* without getting our *latest propositions.* WRITE TODAY.

Boys, be a "Rider Agent" and make big money taking orders for bicycles and supplies. Get our *liberal terms* on a sample to introduce the new **"RANGER."**

TIRES, equipment, sundries and everything in the bicycle line **half usual prices.** A few second-hand bicycles $3 to $8 to clear.

MEAD CYCLE CO., DEPT. L-184, CHICAGO

Send for Catalog

FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 65 Elm St., Quincy, Ill.

BEES PAY BIG PROFITS

Raise your own honey. We start you right. Send today for **Bee Supply Catalog** and Sample copy of *American Bee Journal.* Oldest Bee paper in America—all **FREE**

DADANT & SONS, Box 19, Hamilton, Ill.

MEN WANTED

We positively teach you at home by mail to earn $25 to $50 weekly as Chauffeur or Repairman. Students assisted to positions. Best system, lowest price. MODELS FURNISHED. Write for Free Book.

Practical Auto School, 69X Beaver Street, New York

The Province of MANITOBA, CANADA
Calls for Farm Helpers

There is a very urgent call for farm workers this spring for the Province of Manitoba, Canada. Owing to the keen demand for all kinds of foodstuffs caused by the war, together with the enlistment of so many thousands of our young men, the farmers of Manitoba find themselves face to face with a serious labor shortage. In order to encourage farmers' sons and other farm workers from the United States to answer to this call the Railway Companies are offering reduced rates to all such passengers from all points on the International boundary line northward, going West in Canada. This will enable anyone who wishes to see Western Canada to do so at a very small cost, and will permit inspection at first hand of the thousands of acres of cheap land which are still available.

The scale of wages for experienced men will run from $25.00 to $45.00 per month according to experience, and it is estimated that from 3,000 to 3,500 such men are needed. In order to allay any apprehension on the question, it may be asserted that absolutely no military obligation of whatever sort is imposed upon anyone coming into or living in Canada.

If you are interested, write or apply personally to the

MANITOBA IMMIGRATION OFFICE
323 Jackson Street
ST. PAUL MINNESOTA

Wanted 50,000 Farm Hands
of experience at once on the farms of Western Canada

To replace the young farmers who have enlisted for the war. Good wages and full season's work assured.

There is no danger or possibility of Conscription in Canada.

References required from all applicants. For special railway rates and other information apply to

GEORGE A. HALL,
123 Second St. Milwaukee, Wis.
Authorized Canadian Government Agent

WE CAN USE YOUR SPARE TIME

Do you have a few hours spare time each week that you would like to devote to some pleasant and profitable employment?

If so, you are probably just the person we are looking for to represent us in your immediate vicinity. We have openings for reliable men or women to look after the collections on new and renewal subscriptions to The Wisconsin Farmer.

Our proposition is desirable to anyone in a position to handle it, and we offer splendid permanent positions to those who make a good showing.

Let us tell you about it. Address your inqury to

AGENCY DIVISION, WISCONSIN FARMER
MADISON, WISCONSIN

ARE YOU LOOKING FOR A
NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

O. O. WHITED CO.
Radisson Wisconsin

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

Southern Farms: Mississippi, Arkansas, Tennessee. Send for booklet. Martin & Cole, Memphis, Tenn.

LANDOLOGY FREE A magazine giving the FACTS in regard to the land situation. 3 months' trial subscription free. If for a home or investment you are thinking of buying good farm land, simply write me a letter marking it "Personal" and say "Mail Landology and all particulars free."
Address: **LLOYD M. SKINNER, Gen. Mgr.**
Skidmore Land Co., 23 Hall Ave., Marinette, Wis.

FARMS IN WISCONSIN

TAYLOR county and adjoining counties. Dairy land region of north central Wisconsin. Genuine bargains. Liberal terms. We are OWNERS. Desirable property sometimes accepted in part payment. LOEB-HAMMEL REALTY CO., (not Inc.). 343-4 Marquette Bldg., Chicago, Illinois.

ONEIDA COUNTY

WINNER of premiums in potatoes. I own and offer about 1900 acres cut-over hardwood lands along the Milwaukee road, including one town site, with running water, timber and water power. For sale in tracts of 40, 80, 120 acres and so on. Get my maps and price list. C. P. Crosby, Rhinelander, Wisconsin.

Own a Farm in Minnesota

BUY now while lands are cheap and terms liberal. Maps and literature telling all about the state sent free. Write to Fred D. Sherman, State Immigration Commissioner, Room 604, State Capitol, St. Paul, Minnesota.

THE upper Wisconsin cheap land region is dotted with fine growing cities and towns, has the best of railroad service, rural mails and telephones, pure water, no floods or drouths—quite a combination. A postal gets official crop reports and state map. Wis. Advancement Assn., 1590 First Nat. Bank Bldg., Milwaukee, Wis.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Loss In Sheep.

I would like to know what is the matter with my sheep. They get weak, stumble and fall and cannot get up. They froth at the mouth and some lie for days and finally die. The wool also gets loose on some of them. The last one that took sick seemed to get down in the hind parts first, then staggered and fell and hasn't got up yet. Do you think it might be worms? Does salting sheep keep worms down? I am feeding clover hay.

Digestive disturbances are quite common in sheep at this time of year and it is possible your sheep are victims of disturbance of this kind. Look well to the feed and water to see that they are wholesome and clean. Try withholding the feed for twenty-four hours and then feed on good quality of hay. Avoid too much concentrates. A change of feed often overcomes the trouble.

Tumorous Growth in Ear.

I have a four-year-old cow that has a big wart growing from the inner wall of the ear and it is extending out of the ear. It is pear-shaped and on the outside looks like a hardened sponge. It interferes with the animal's hearing and seems to hurt her. When I pick the wart it bleeds and it also bleeds if the animal shakes her head and it seems to make the condition worse and more sensitive. The root of the wart is about at the base of the ear inside.

This condition is not met with very frequently, especially in this exact location. It is possible this tumorous mass may return again even after being removed. Would advise that your local veterinarian cast this animal and cut away all of the growth and some of the healthy tissue so as to be sure none of the growth is left. Then cleanse parts and sprinkle a small amount of arsenious acid over the parts. This may bring about a cure.

Rheumatism In Hogs.

I am writing to ask if you can tell me what ails my hogs. They get stiff. The legs are straight when they walk and they step only half as far as a healthy hog. When they try to run it is sort of a jump. As they get larger and are eating they keep stepping and have their hind feet far under the body. They eat as much as good hogs but grow very little and do not fatten. I sold my hogs recently and the stiff ones weighed from 120 to 170 pounds, while the good ones averaged 265 pounds. In the spring of 1914 the first one to get stiff was about two weeks old and they continued to get that way until about six months old. In 1914 with about forty-five shoats four were stiff, but I lost all of them with cholera. Of the fall shoats I only saved one that was stiff and it died in the wagon, as I was hauling them to market.

The disturbance you describe sounds like rheumatism, but in the last year or two there has been quite wide spread an arthritis which may be the result of an organism (bacillus suscepticus) (streptococcus) or some other organism, and thus far no medical agents have been found that will overcome it.

Scouring in Mares.

I would like to know if you could give me any information as to what causes my mares to scour. I first noticed them three days ago and they are getting worse right along and they are getting to look very shaggy. They are both in foal. The only feed I am giving them is seven ears of corn apiece twice a day and oat straw at night besides running in the stalks. I have five other head that I am giving the same feed, but they are all right.

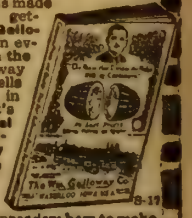
It is very possible your mares are suffering from some digestive disturbance which is causing diarrhea. Just what the cause of the trouble is is hard to say when so few symptoms of the trouble are given. Pregnant mares are most subject to these disturbances than other horses. Would advise you to get a competent veterinarian to look these mares over if one is available. If this is not possible you should look carefully to the feeding so as to be sure the feed is wholesome. It is well to look to the water supply also. If the diarrhea persists you may give one and one-half teaspoonfuls of tincture of gambic and one tablespoonful of fluid ginger. This may be given in one-half pint of water or oat meal gruel. Do not repeat unless necessary.

Ask your neighbor to subscribe for The Wisconsin Farmer.

SPREAD NOW!

SPECIAL PROPOSITION
10,000 GALLOWAY NO. 8 SPREADERS

This extra offer is made with the idea of getting ten or more Galloway Spreaders in every township in the next few weeks. One Galloway No. 8 Spreader always sells from one to a dozen more in the same community. That's why I make this new special offer to distribute 10000 advertising spreaders quickly



LOOK! Our new 250 page catalog. Tells you all about the special patented features on the famous Galloway Manure Spreader; how to make a spreader pay for itself in six months' time; shows why 3 exclusive Galloway patented features make the Galloway Spreader worth $50 more than any other spreader, but cost nothing extra on the Galloway; also shows full line of other Galloway implements and merchandise.

NEW SELLING PLANS

Cash or time—one year to pay—installment plan—note settlement—half cash half note—bank deposit or cash, at prices so low you cannot afford to do without a manure spreader now. We sell direct at less than wholesale from factory to farm at the actual cost of material, actual cost of labor and only one small profit based on tremendous output.

LOOK! 3 GREAT INVENTIONS

They make the Galloway Spreader in a class by itself, are:

1. **Invincible Roller Feed** worth $25 on any other spreader. Exclusive on the Galloway, but costs you nothing extra. One of the secrets of our light draft.
2. **Patented Automatic Stop, Uniform Clean-Out Push-Board** worth $10 on any spreader. Costs nothing extra on the Galloway.
3. **New Steel Everlasting Beater** with **V-Rake** which gives wide spreading and tears the manure into shreds for uniform available **plant-food.** This exclusive feature alone worth $15. Costs nothing extra on the Galloway.

Many other **special 1916 features:** low down; double chain drive; cut-under front wheels; channel steel frame, trussed like a steel bridge; steel tongue; endless force feed apron; top of box only 42 in. high; front wheels under the box, and other special features make it easy for two average horses to handle.

SPREADER PRICES LOWER

Get in on this special distribution advertising offer from now until seeding time.

At the end of twelve months, if the Galloway spreader has not paid for itself, if you have hauled out 100 loads of manure or more, and it has not proven everything I say for it, I agree to take it back, pay freight both ways and return your money, no matter on which plan you buy. Could I make this offer if I was not sure of my ground? Every sale backed by a $25,000 bank bond—an additional guarantee to you! Galloway spreaders have passed a field test in every state and almost every county.

Ask for this new 250-page book and special proposition today.

Spreaders shipped from Waterloo, Kansas City, Council Bluffs, St. Paul and Chicago.

Wm. Galloway Co., Box 39 Waterloo, Iowa
Manure Spreader Manufacturing Specialists

MAKE BIG CROPS!

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

Reduces Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from Bruises or Strains; stops Spavin Lameness, allays pain. Does not blister, remove the hair or lay up the horse. $2.00 a bottle at druggists or delivered. Book 1 M free.

ABSORBINE, JR., for mankind—an antiseptic liniment for bruises, cuts, wounds, strains, painful, swollen veins or glands. It heals and soothes. $1.00 a bottle at druggists or postpaid. Will tell you more if you write. Made in the U. S. A. by

W. F. YOUNG, P.D.F., 101 Temple St., Springfield, Mass.

$20,000,000.00 Steel Works now in operation at Duluth. Employs many highly paid workmen. They are good eaters and need food. Wanted at once, 500 Farmers to supply them. L. B. Arnold, Land Agent, C. R. I. & P. Ry. Co., 151 Wolvin Bldg., Duluth, Minn.

FREE GOVERNMENT LANDS

COLORADO. Fine soil and climate. Unusual opportunity. Official pamphlets free. Immigration Dept., 1513 Tremont Place, Denver, Colo.

WANTED TO HEAR FROM OWNER OF good farm for sale. Send description and cash price. R. G. LIST, Minneapolis, Minnesota.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

WISCONSIN IMPROVED FARMS near St. Paul and Minneapolis. Write for lists to COOLIDGE, Downing, Wisconsin.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

A Holstein Sale of Importance.

THE greatest sale of Holstein cattle ever made in southwestern Wisconsin will be made by the Richland County Holstein-Friesian Breeders' Association, at Richland Center, Wis., Friday, April 7th. Richland county is one of the greatest dairy counties in the state and in order to make this sale a success the contributors have selected some of the best they have. This association expects to hold an annual sale, and, as this is their first sale, they are offering a class of cattle that will please the buyers and cause them to attend the sales in the future. Fifty head have been cataloged, consisting of about fifteen cows that are in milk or soon to freshen, ten bred heifers, ten open heifers and fifteen bulls of serviceable age. S. B. Fries, secretary of the association and a member of the firm of C. C. Fries & Son, consigns about twenty head from their high-class herd. The Fries herd is full of high-testing cows, among them being Aaggie Texal Wayne 2d that has a seven-day record of thirty pounds butter, and she will soon have completed a year test which will be over 1,000 pounds butter. We simply mention this to let you know that you can expect something good in this sale, for they produce the good ones. Heading the Fries herd is perhaps the best son of King of the Pontiacs in the West. An illustration of this bull appears in the advertisement on page 28 of this issue and besides being a show bull, he is siring some wonderful daughters. There will be ten heifers in this sale sired by him from dams with A. R. O. records up to 24.75 pounds butter in seven days. These grand heifers with this breeding should appeal to the particular breeder. There will be cows and heifers in the sale with A. R. O. records. Bulls from A. R. O. dams. Someone wanting a tried sire and one that has made good, should attend this sale and see Johanna Rossela De Kol, a four-year-old bull that sells in the sale. He is by Johanna Pontiac De Kol out of a dam that made twenty-three pounds butter in seven days and with a yearly record of 800 pounds made when thirteen years old. The breeder can find cattle in this sale that will be a credit to this herd and the beginner can find individuals that will make an excellent foundation for a high-class Holstein herd. The catalog is interesting and gives a detailed description of each animal. Everything has been tested for tuberculosis. Write at once for a catalog. Address F. B. Fries, Richland Center, Wis., and please mention The Wisconsin Farmer. Watch next week's issue for further information. See page 28.—Adv.

Distinctive Features of the Sharples Separator.

THE value of a ceram separator depends on whether it will save time, labor and cream; and the more efficiently it does these things, the better separator it is. The new Sharples Suction-Feed separator is surprisingly efficient in this respect, due largely to three distinctive features. One is the knee-high supply can, which does away with the back-breaking high lift, so tiresome at the close of a day's work. The second is that there are only three pieces to clean, not one is heavy or difficult to handle. A separator must be kept perfectly clean, but with the Sharples this work is reduced to a minimum. The third is the section-feed which draws exactly the right amount of milk into the bowl for perfect skimming, no matter what the speed of turning. If you are tired or exhausted you can turn at slower rate or you can turn faster when in a hurry. In either case the suction-feed regulates the separating so that you get all the cream. Few people will turn a separator at regulation speed all the time—and when they don't cream is lost in the skim milk. The Sharples suction feed saves this cream. It will pay you to have the new book, "Velvet." It may be secured free by addressing The Sharples Separator Co., West Chester, Pa., and mentioning this paper. See page 18.—Adv.

Nuttleman's Chesters.

ADOLPH NUTTLEMAN, of West Salem, Wis., is having excellent success with his spring crop of Chester Whites. He now has about fifty February and March pigs and we haven't seen any pigs that look better than these. Mr. Nuttleman has two good boars in his herd. One is Hood Combination sired by Combination 2d, one of the best Chester sires that we have ever seen. His dam, Sophia is by Inspector O. K., one of the good sires of the breed. The other boar is Joy Boy 29637 by White Prince out of a daughter of Correct. This is a very good boar and he is siring a very uniform lot of pigs. He was shown when six months old and was junior champion at that time. Mr. Nuttleman has had a great demand for fall boars and is sold out, but he is offering some very choice fall gilts. Now is the time to buy fall pigs and these will suit the most critical. Write at once and mention The Wisconsin Farmer. See page 29.—Adv.

Son of Carnot for Sale.

J. R. JUSTICE, Galesburg, Ill., announces in his advertisement on page 32 that he has an extra good imported son of the $40,000 Carnot for sale worth the money. He is dark, with size, quality and substance. Mr. Justice has other good Percherons for sale, and will also put attractive prices on some imported Belgian stallions and mares. His horses are a quality, lot all the way through, and he invites the inspection of discriminating buyers.—Adv.

Horsemen's Opportunity.

OWING to the death of J. F. Jones, West Salem, Wis., the estate is offering for sale one Belgian stallion and one Percheron mare. The stallion is five years old, was imported in 1914, is bay in color and weighs over a ton. This is one of the best Belgian colts that we know of and if it had not been for the untimely death of Mr. Jones he would not be offered for sale. This stallion has been in the stud for two years and he met with such favors among the farmers that it was impossible to take care of the business that came to him. Few Belgians move as straight and strong as this horse. He has a world of quality and is very sure. We don't know of a better Belgian being offered for sale. The Percheron mare was imported by Fred Pabst. She is gray and nine years old this spring. She is a mare that could easily weigh a ton and has been a good brood mare. She was shipped to North Bend, Wis, to be bred to a Percheron stallion that Mr. Jones considered the best in the state. She will foal in May. Here is an opportunity that should not be overlooked, for it is seldom that one has a chance to buy such good horses at the reasonable figures being asked for this pair. The estate wishes to dispose of these horses by April 1st, so those interested should write at once to J. F. Jones Estate, West Salem, Wis. See page 32.—Adv.

Angus Activities in Wisconsin.

ABERDEEN ANGUS cattle are becoming more popular in Wisconsin each year and well they should, for they must be considered when talking about economical beef production, and Wisconsin needs more good beef cattle. Mr. Orville Rundle, Dodgeville, Wis., has just purchased eleven head of registered Aberdeen Angus cows and heifers and a bull from the noted McKevitt herd, of Bridgeport. We recently saw some of the animals that he selected and we see no reason why he should not be very successful with them. Some of these cows were among the best in the McKevitt's large herd, being regular producers of the good ones. The bull he selected is by Edgerton of Woodcote 143705, and one of the best bulls they had. We would like to see Mr. Rundle finish this young bull and take him out to the fairs this fall, for we feel that he would make a creditable showing.—Adv.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

Big Opportunities for Young Men.

DO you want a good job or a chance to buy cheap farming land? You can get either in the Province of Manitoba, Canada. Or you can make a trip to visit the country at low rates. Great opportunities await the farmer in Manitoba because of the keen demand for foodstuffs caused by the war. Wages for farm labor ru s from $25 to $45 a month, and the government estimates that from 3,000 to 3,500 good men are needed in Manitoba alone. To encourage migration, railroads are offering low fares to persons going east or west in Canada from points on the international boundary line and northward. Young man, if you want a good job in a growing country or if you want a chance to be a farm owner, Manitoba is the place for you. The government assures all prospective immigrants that no military obligations will be required; they want workers to develop the resources of the country. If you are interested, write or apply personally to the Manitoba Immigration Office, 323 Jackson St., St. Paul, Minn., where full information will be supplied. See page 26.—Adv.

Motorcycle Type Bicycle on Easy Terms.

AN opportunity to get a new motorcycle type bicycle on small, monthly payments is advertised on page 23 by the Arrow Cycle Co. Riding is a great pleasure on this bicycle because of the wonderful conveniences with which it is equipped. An easy motorcycle saddle, coaster brake, motorcycle pedals, stand and luggage carrier and long motorcycle handle bars are part of the equipment. If you are interested in bicycles, you should have the 1916 Arrow catalog. Write for it today to Arrow Cycle Co., Dept. 4483, California & Nineteenths Sts., Chicago, Ill., and please refer to this paper.—Adv.

McKevitt Bros. Have Excellent Angus Herd.

IN Grant county, Wis., there is a herd of Aberdeen Angus cattle that is second to none in the state. This herd is owned by McKevitt Bros., of Bridgeport, and we understand that they have one of the oldest established herds in the state. At this time they have a few bulls for sale, from six to sixteen months old, several of which are outstanding individuals. There are four that we saw, around a year old, that with proper care would make a creditable showing this fall at some of the fairs. They are very smooth, well grown and of the most popular breeding, being sired by Edgerton Woodcote, a Pride bull of great individuality. A feature that impressed us was the size of the females in this herd, combined with their milking qualities. No cow is maintained in this herd that will not raise her own calf. Such families as the Queen Mother, Pride, Erica and Ruby are represented. These gentlemen will price a few cows and heifers, bred to calve in the spring and we are glad to recommend this herd to any one wanting cattle of this breed. Their prices are reasonable and you get the worth of your money. Besides raising Angus cattle, they also keep Percheron horses and at this time they have six head that they will sell. One black five-year-old stallion has been used in the stud and they can show you some choice colts sired by him. He is a stallion of great breed character, an excellent top and underpinning, in fact is a horse that will do someone a great deal of good. A roan two year old and a yearling out of the same mare are good prospects. The yearling is very growthy and in our estimation is a colt that has a great future if someone will take care of him. He has a great frame, good bone and is large for his age. They are also offering their Shire stallion. He is a bay, ten years of age and an excellent sire. In view of the fact that they have used him in the stud for several years, they cannot use him to advantage any longer and for that reason they are offering him for sale at a moderate price. A weanling stallion and an aged mare completes the offering. An attractive price will be made on one of the lot. Write these gentlemen for information relative to their Angus cattle and Percheron horses. Please mention this paper. See page 32.—Adv.

A Great Labor Saver on Wash Day.

ALL farm women will welcome the Triumph Power Washer with swinging wringer which relieves the drudgery of wash day. Very likely the farm washing has been the cause of more backaches, more colds and sickness than any other work on the farm. When a labor-saving machine which will do this disagreeable work can be purchased at reasonable cost, every farm should have one. A Triumph Power Washer will wash the finest lingerie, as well as the heaviest bed clothes, without tearing. All that is necessary is to put the hot suds in the washer, then the clothes, clamp down the lid and turn on the power. Triumph power washers are constructed with the idea of saving labor and at the same time washing the clothes thoroughly. Let it do your washing for thirty days on trial. If you are not satisfied, the company will take it back. See the advertisement on page 7 and write for the special circular. Address Montgomery Ward & Co., Dept. N139, Chicago, Ill., and please mention this paper.—Adv.

Opportunity in South Dakota.

TO the young men who wish to become farm owners, South Dakota offers unusual opportunities. We have traveled extensively in this state and have seen many prosperous farmers who began with nothing and grew up with the country. Good bargains in land are still available, but the rate at which the state is being settled up would suggest that low-priced land will not continue for a great length of time. Big crops and healthy live stock are common in South Dakota, and these mean money for the farmer. Why not visit the region and see for yourself? The Dakota book will give you some reliable information on this subject; read the advertisement on page 6 and send to the Chicago, Milwaukee & St. Paul railway, Geo. B. Haynes, General Passenger Agent, Chicago, for a copy of the book.—Adv.

Seed Corn.

THE Vermilion Seed Co., Vermilion, S. D., reports having sold a lot of seed corn throughout the northern country, as well as considerable to buyers further south. This company was fortunate in securing a large quantity of high-class seed. Much of their seed was rack dried by artificial heat and has, practically, perfect germination test. Those who have bought this seed from them and have tested it are all reporting that they have had the very best of results—they are more than pleased. This is northern grown seed, dried under perfect conditions—every ear should be perfect. Their great capacity makes it possible for them to handle an immense business. The writer has been familiar with their methods of doing business for several years and he has yet to learn of a single buyer who was not satisfied and pleased. See page 12.—Adv.

Cement as Lasting as the Pyramids.

THE use of Portland cement on the farm has long since passed its experimental stages. It has proved its great worth, and sooner or later you will be using it. When you want good, substantial, serviceable cement get the Marquette brand, which is as lasting as the pyramids of Egypt. Every bag of Marquette Portland Cement is labeled with a green zig-zag tag as shown in the advertisement on page 16. If your dealer does not carry it, send your dealer's name and address to the Marquette Cement Manufacturing Co., Chicago, Ill., and they will advise you the nearest point where it may be obtained. —Adv.

Absorbine as a Farm Remedy.

EVERY farmer should keep a bottle of good liniment on his place to use in case of live stock injuries. It may prevent a minor injury from becoming fatal. A bottle of Absorbine, costing $2, is an excellent liniment to keep on

COMPETITORS 208 of THEM BEAT $29.80

"In competition with 208 separators in our district, our New Golden Harvest outskimmed all others and left least amount of cream in skimmed milk."
J. W. Meyers, West Salem, Illinois

Gets All the Cream All the Time

Makes dairying more profitable. Skims 350 pounds per hour. Many great improvements not found in other separators. Sanitary Bowl. Cleaned in 3 minutes.

Golden Harvest Cream Separator

Fewer working parts. Extremely simple construction. No complicated parts to cause costly repairs. Ball bearing. Long wearing. So light running that child can operate it. Self-oiling — no mussy oil cups to fuss with. An improved separator at an immense saving. 60 Days' Free Trial. 20 Year Guarantee. Get all the facts about this better separator. Learn how it is making and saving money for *other* farmers. All told in illustrated Dairy Catalog No. M139 Send for *your* copy today.

Montgomery Ward & Co.
New York Chicago Kansas City Ft. Worth
Portland, Oregon
Write House Most Convenient

BIG MONEY IN FRUIT

Replenish your orchard; plant your roadside. Write for low wholesale prices on our hardy nursery stock—apple, plum, cherry, grapes, etc. Also how you can, without using any crop land, make from $2.00 to $3.00 per acre extra profit. You also get our 1916 FOUR-COLOR PURE SEED BOOK AND PLANTING GUIDE FREE. Field, vegetable, flower seed; fruits, shrubbery, trees, plants—all kinds. Send postal today.
GALLOWAY BROS. & CO., Dept. 36 Waterloo, Iowa

NEW CROP, WESTERN GROWN, UPLAND ALFALFA TESTED FOR PURITY
At special bargain prices. Write for samples, price list, and illustrated circulars telling how to grow and use the crop.
SWEET CLOVER WHITE OR YELLOW
Of excellent purity and quality. Samples, circular of information and Red Ink Bargain Price List FREE.
IOWA SEED COMPANY
Dept. D8 DES MOINES, IOWA

SOUTHWESTERN WISCONSIN'S

GREATEST HOLSTEIN EVENT

To Be Made By Richland County Holstein-Friesian Breeders' Association

RICHLAND CENTER, WISCONSIN, FRIDAY, APRIL 7, '16

50 HEAD

REGISTERED COWS HEIFERS AND BULLS

50 HEAD

KING PONTIAC PORTIA, THE BEST SON OF KING OF THE PONTIACS. TEN HEIFERS BY THIS BULL IN THE SALE.

15 COWS IN MILK

10 BRED HEIFERS

10 OPEN HEIFERS

15 BULLS

NOTICE what this offering contains: Granddaughters of King of the Pontiacs, Colantha Johanna Lad, Pontiac Aaggie Korndyke, Pontiac Korndyke, Pontiac Apollo: Sir Fayne Concordia and others. Cows with A. R. O. records and their daughters bred to some of the best bulls in the state. Young bulls of serviceable age with A. R. O. backing. This is the first sale to be made by this Association and we expect to make it an annual event, consequently we are offering stock that will please and give us a reputation for future sales. **EVERYTHING TUBERCULIN TESTED.** Richland Center is only a short way west of Madison and east of Prairie du Chien, on the Milwaukee railroad. Good railroad connections from either direction. Get a catalog containing a tabulated pedigree of each animal, and don't miss this opportunity to buy Holsteins. J. E. Mack, Auct. Write at once to

F. B. FRIES **RICHLAND CENTER, WISCONSIN**

hand. It has been found valuable in relieving soreness, bruises and strains and in reducing pain from these ailments. Absorbine Jr., costing $1 a bottle, is recommended for bruises, cuts and wounds of mankind. Both of these remedies are made by W. F. Young, P. D. F., 101 Temple St., Springfield, Mass., who is advertising on page 26. Write for his free book on Absorbine and say you saw his advertisement in this paper.—Adv.

Game Farming for Profit and Pleasure.

DO you know that game farming is a profitable business? Many game farms scattered over the United States are money-makers for their owners. In Europe they are quite common. There is a big demand for game birds at high prices in the cities, and the farmer who has the facilities can supply this demand. Pheasants, mallard ducks or wild turkeys can be raised almost as easily as poultry and they sell at much higher prices. You can get a very interesting free book on "Game Farming for Profit and Pleasure" which will tell you all about this new industry. It is advertised on page 2 and may be obtained by writing to the Game Breeding Dept., Room 196, Hercules Powder Co., Wilmington, Del. Please mention The Wisconsin Farmer when you write.—Adv.

Get Fine Short-horns From Iowa.

MACMILLAN & MACMILLAN, of Lodi, Wis., were bidders at the Prichard-Jackson Short-horn sale held at Avoca, Iowa, last week, and the top of the females sold, Victoria Jen, November, 1907, was purchased by them. These well-known Wisconsin breeders went to the Iowa sale to select the best and they also purchased Victor's Queen, December, 1913, the second highest-priced female sold. The price paid for the former of these two high-class females was $525 and for the latter $500, being the two big purchases of the sale. MacMillan & MacMillan also bought other excellent females to add to their Lodi herd, paying from $275 up to $500. They bid only on the very highest class females offered, and took a big part of the pick of the offering.—Adv.

Three Features of the Pullman $740.

LOW price, absolute dependability, and plenty of room are three important characteristics of the Pullman $740 motor car. Low price means the best material and craftsmanship possible for $740; dependability means a sturdy, clean-cut chassis, powerful motor and strong parts throughout; plenty of room means a wide, comfortable rear seat and ample space in the driver's compartment. Many other features make the Pullman a highly desirable car. Read the specifications in the advertisement on page 10 and for further information write to the Pullman Motor Car Co., Dept. 5, York, Pa. Please refer to The Wisconsin Farmer when you write.—Adv.

A Car of Power, Comfort and Beauty.

HAVE you ever ridden in an Inter-State car? We have, and can testify to its good qualities. Before buying a car, we suggest that you investigate the Inter-State $850. It has power in abundance and will take the steepest grades quietly and easily. The Inter-State motor, built for power, is the overhead valve, removable cylinder type with all movable parts enclosed, yet easily accessible. Besides power, you want comfort in a car. The smooth, easy riding qualities of the Inter-State are unexcelled. The springs, underslung on the rear axle and shackled at both ends, take up all the jar and jolting from rough roads, and the extra wide seats and deep Turkish cushions add all that can be desired for complete comfort. While power and comfort come first, it cannot be denied that the beauty of a car adds much to the pleasures of motoring. Makers of the Inter-State have realized this and have built a well-proportioned car embodying the latest stream line design and possessing grace and refinement throughout. See the advertisement on page 24 and write for the catalog to Fowler Motor Sales Co., 445-449 Jackson St., Milwaukee, Wis.—Adv.

Prichard Offers Percherons.

THE Percheron stallions advertised on page 32 by W. E. Prichard & Sons, Ottawa, Ill., are a strong, rugged lot, with bone, substance and conformation, and will be priced worth the money. They have a few imported horses and some American-bred colts that are as good as any of the imported animals. If you are in the market for a horse get in touch with Prichard & Sons. They are a reliable firm and they handle reliable horses.—Adv.

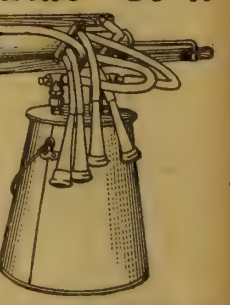
Low Speed Ensilage Cutters.

THOUSANDS of Papec ensilage cutters are being operated on four to eight-horse-power engines—they do not require greater power because they run at low speed, 600 revolutions per minute. Though they save power they do not sacrifice efficiency. Few parts, perfectly adjusted cutting blades, greater blowing power from six fans, instead of four, all make for efficiency. Many other advantages of these machines may be learned by reading the advertisement on page 19 and writing for the 1916 catalog of the Papec Machine Co., Box 71, Shortsville, N. Y. We appreciate mention of this paper to advertisers.—Adv.

SHORT-HORN HERD AND OTHER LIVE STOCK ON THE FARM OF FRANK MORLEY, BARABOO, WIS.

KEEP THE BOYS

ON THE FARM. AVOID THE MILKING DRUDGERY. THE "E. & S. TWINS" DO IT



POSSIBLY NOT PERFECT, BUT NEARLY AND NEAREST SO. "IN A CLASS BY ITSELF."

Milks six cows—two at once. Extensions for any number more. Adjustable vacuum and alternate suction. **Positively no Injury to the Cow—We Guarantee This.** Does work of 4 men. Complete F. O. B. St. Paul, $100. Simple to operate. Always in order. Address

E. & S. MACHINERY COMPANY
312 Endicott Bldg., St. Paul, Minn.

WISCONSIN! 65 farms, 15,000 acres wild land. Corn, dairy, clover belt. Counties, Barron, Polk. Easy terms. Lowest prices. List free. L. Rivard, Turtle Lake, Wisconsin.

12,000 acres Montana wheat land, in tracts to suit. Lowest prices, most liberal terms. For particulars write JOHN BURCHARD, Owner, Drawer J, St. Paul, Minnesota.

CANADIAN FIELD PEAS for sale. Write us for prices. Address Frosch & Sons, Grimms, Wisconsin.

BEST 40-ACRE FARM in Broome Co., $2,000. Particulars, photos on request. A. Mathewson, Owner, Lisle, N. Y.

Nehrling's Holsteins.

THE Holstein herd of J. C. Nehrling, Plymouth, Wis., is one of special merit. The cows are well bred, of the best dairy type, and with large, well-developed milk producing organs. Official testing is being done and many creditable records have been made in the past, and prospects for the future are exceptionally bright. The herd is headed by a twenty-three-pound bull of great individual merit. The junior herd sire which has recently been put

into service is of the Colantha Johanna strain, coming from the great Fred Field herd at Brockton, Mass. Mr. Nehrling has a few young bulls for sale which he is offering at very reasonable prices. One is eight months old, a very fine individual and almost white in color. His sire is a twenty-three-pound bull and his dam as a two year old made sixteen pounds of butter in seven days. Look for Mr. Nehrling's advertisement on page 31 in the Shebaygon County Holstein Breeders' page advertisement.—Adv.

Percherons at Homewood Stock Farm.

A LOT of good Percheron stallions and mares, both imported and home bred are for sale by S. Metz & Sons, Homewood, Ill. They have some extra good two, three and four-year-old stallions and mares on which they will make very attractive prices and make terms to suit the buyer. Their advertisement appears on page 32.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Plan Potato Show.

The potato interests of Wisconsin met at Eau Claire on March 15th to perfect preliminary arrangements for the convention of the Wisconsin Potato Growers' Association, which will be held at Eau Claire November 21-24, 1916. Leading potato growers, potato dealers, railroad men, commercial interests, county agricultural agents and many organized agricultural associations in Wisconsin were represented. This conference was arranged by the Wisconsin Potato Growers' Association in co-operation with the civic and commerce association, of Eau Claire, and the bankers' agricultural committee, of Eau Claire.

A definite organization of committees was completed to handle local conditions at Eau Claire and to make the necessary local arrangements. The committee chairmen are as follows:

On transportation—Mr. George Wallas, freight agent of the Omaha railroad.

On publicity—Mr. W. L. Swift, of the Eau Claire Press Company.

On entertainment and reception—Secretary R. F. Kaiser, of the Eau Claire Civic and Commerce Association.

On finance—Mr. W. S. Woodruff, chairman of the bankers' committee, the First National Bank, of Eau Claire.

The general arrangements for the convention will be handled through the office of the civic and commerce association, of Eau Claire, of which Mr. Kaiser is chairman.

The outlook for the greatest convention Wisconsin has ever held is promising. Eau Claire is within 150 miles of all important potato-growing sections of Wisconsin. The state association has organized work in twenty-five counties of the state. With a favorable season this year the exhibits should double those of the last convention, which was the largest gathering of potato interests and potato exhibits ever assembled in this country.

The state association is just issuing an attractive, special bulletin on "Potato Development Work in Wisconsin," completely illustrated throughout with all of the views of the last state convention held at Marinette and containing a summary of all the addresses delivered at that convention. This bulletin also contains special announcements relative to important phases of potato development work in Wisconsin.

A special edition is being printed in co-operation with commercial interests of the state.

SOME OF THE COWS IN THE RICHLAND COUNTY HOLSTEIN SALE, AT RICHLAND CENTER, WIS., APRIL 7TH. SEE PAGE 28.

FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

CHESTER WHITE SWINE.

CHESTER WHITE SPRING BOARS AND GILTS
SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address
W. F. Miller **West Salem, Wis.**

CHESTER WHITES
FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address
John Simon **Campbellsport, Wis.**

CHESTER WHITES
FALL GILTS for sale by Hood Combination and Joy Boy 29637. Only the best shipped. Write
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY
Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. **The National Auctioneering School of America,** Dept. 103 Lincoln, Nebr., U. S. A.

TOO LATE TO CLASSIFY.

PERCHERONS FOR SALE
IMPORTED or home-bred stallions and mares, from weanlings to mature animals, mostly blacks and grays. Write for prices and pedigrees.
A. R. Ives **Delavan, Wisconsin**

LAW QUESTIONS.

Administrator—Settlement of Estate.

A Subscriber, Black River Falls, Wis.—A was the owner of real and personal property in Wisconsin and died leaving a widow and children. The widow was appointed as guardian of the children. B was appointed administrator of A's estate. (1) Can B sell the personal property without the widow's consent? (2) Can he collect all debts due to the estate, and pay all bills against it, without giving the widow statements thereof? (3) What are B's duties about the estate, and when does the law require him to settle it?

Answer.—(1) B can sell the personal property by permission and order of the county court without the widow's consent. (2) B, as administrator, is required by law to collect debts due the estate and pay claims allowed against it and he is not required to make statements thereof direct to the widow, but is required to make reports of his acts to the county court, where the widow may examine them. (3) B's duties as administrator are to collect debts against the estate, preserve and take care of the property, pay debts and settle up the estate without unreasonable delay. He should finally settle the estate in about fifteen months, but for good cause shown the county may extend the time for six months or a year if necessary.

It will cost most dairymen less to raise heifers than it will to buy cows.

HORSES.

FRANK IAMS'

"Peaches and Cream" Horses are "Town Talk"

Horsemen—1916 is the **"Get Rich Quick"** year for **Horse Breeders** and **Stallioners.** Get into the **"Money-Making Game"** of Breeding Draft Horses. **Europe "doffs"** her **"War Cap"** to **U. S. Horses. Europe** buys **500 Horses daily of U. S.** (at $125 to $200). Europe will buy **"a MILLION"** Horses of U. S. You make **more "Easy Money"** in **Breeding Horses** than any other business for **next ten years.**

His 34 years of success in *Importing, Breeding* and Selling *5,640 registered horses*—his "50 trips" across the ocean—make Iams *a safe man* to buy *stallions from.* His *"old customers"* are *"best Page advertisers,"* his *Breeding Guarantee* backed by *"1-2 Million Dollars."* *Iams' Imported* and *Home-bred horses* are *"classy, model big drafters"* of *large bone, fine form, quality, finish,* and *flash movers.* Several European **"Gold Medal and State Prize-Winners,"** *"Iams' kind,"* and in the *"Pink of Condition."*

Bought at *"bargain prices"* and *must be sold.* *"Iams sells horses on honor."* A lady can buy as cheap as a man. *Iams is not in "stallion trust,"* and is *selling more pounds of "model draft horse"* for the *money* than any *competitor.* *Iams* is *cutting the middle* out of *high prices* on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected by Governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse Iams sells

IMPORTED STALLIONS AT $1,000 AND $1,400

(few higher). **"Home-Breds" come cheapest.** Registered 1,800 to 2,100-lb. mares at $700 to $1,000. **Terms cash, or one year's time at 7 per cent; land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare;** gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads. with a **$500 guarantee** that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks. St. Paul, Neb.

ST. PAUL, NEB.

POLAND CHINA SWINE.

Silver Cup Big-Type Poland Chinas! The greatest prize-winning herd in the state. We proved this by winning 61 ribbons at Wisconsin State Fair. This included 3 champions and 1 grand champion. At the Northern Wisconsin State Fair, we made a clean sweep, getting 1st and 2d on all the herds. We have for sale boars and sows of all ages. This stuff has the size, bone and quality out of big prolific sows that weigh up to 800 pounds, litters averaged 10. Can furnish you sows and boar not related. Pedigrees furnished. Write your wants.
J. D. McDONALD, **NORTH BEND, WISCONSIN**

BIG-TYPE POLAND CHINAS
SPRING GILTS. Some now bred for March and April litters. Others will be bred for April and May litters or will be sold open as desired. There are daughters of **King Jumbo** by Long Jumbo, that weigh 1106 pounds. **Fall Yearling Gilts,** bred for spring litters to **Big Wonder,** first prize under six months boar at 1915 Minnesota State Fair. **Some Fine Yearlings and Spring Boars** that will do you a lot of good. **SHORT-HORNS. 10 Fine Yearling Bulls,**—roans, red and whites, sired by **Highland Sultan,** a grandson of Whitehall Sultan. **25 Cows and Heifers** from six months old and up. These are of Scotch and Bates breeding. Most of them are of heavy milk producing strains. If you want Short-horns of big size you can get them here. My Short-horns won all first prizes but one at the 1915 Beaver Dam Fair against heavy competition.
W. J. BERND - - - **NEW RICHMOND, WISCONSIN**

Big-Type Poland China Hogs
MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address
W. T. Hartley, **R. 3, La Crosse, Wisconsin**

Registered Poland Chinas
HAVE a nice bunch of bred gilts priced for quick sale. Will ship on approval. Booking orders for spring pigs. (Registered Holsteins.) Write
Marinette County Asylum, Peshtigo, Wis.

BIG TYPE POLAND CHINAS
SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

HAMPSHIRE SWINE.

HAMPSHIRE SOWS
I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

DUROC JERSEY SWINE.

MOUNT VERNON DUROC JERSEY
BRED GILTS, noted everywhere for their size, quality and popular blood lines, such as Rose Hill Guard 171721, Educator 67139 and Select Chief 173601, at farmers' prices. See them or write M. J. DOWD, Route 1, LANSING, MINN.

BIG-TYPE POLAND CHINAS—Growthy September pigs, both sexes at special prices. Address A. Menke & Sons, Route 1, Markesan, Wis.

DUROC JERSEY SWINE.

Duroc Spring Gilts
OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to
CRITIC TOP NOTCHER
half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address
B. W. LITTLE **JANESVILLE, WIS.**

Burn Brae Farm
ROSENDALE, WIS.
CHAS. A. PETERSON, Prop.
DUROC SPRING GILTS bred for May and June litters to Burn Brae Golden Model. A few spring and fall boars for sale at reasonable prices. My herd is nominated for the Duroc Futurity.

Cholera Immune Duroc Gilts
MARCH and April farrow. Sired by Defender's Golden Model and Wonder Boy, both sons of grand champion sires. Priced for quick sale.
E. H. PARKER **JANESVILLE, WIS.**

DUROC BOARS AND GILTS
FARROWED in April. Sired by Professor II, and out of sows of Chief J.E.D., Ohio Chief and Grant's Col. breeding. Price $20 and up.
W. T. Green **Orfordville, Wisconsin**

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland,** his dam, a granddaughter of **Golden Fern's Lad, gave 57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

What Is Gained by Testing Cows

Testing your cows tells whether they are earning money for you. By the Register of Merit work you can now build up your herd from animals of known production. Science is driving guesswork out of the dairy business. Government records show that the average net profit per cow was increased 129% in eight years by testing. Selection based upon actual dairy merit will produce like results in your herd. Our booklet, "What is Accomplished by Testing Cows," will help you. Send for it now. It's free.

The American Jersey Cattle Club
338 West 23rd Street
New York City

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

SHORT-HORN CATTLE.

We have several choice young registered
Short-horn Bulls
of serviceable age on our farm at
AUBURNDALE
that we want to dispose of. These young bulls are sired by our imported
BRILLIANT BANDSMAN
and we have a few choice animals left that we want to dispose of this spring. We also have for sale one registered Holstein bull, coming three years old, from the Pontiac, Michigan, stock. Address
R. CONNOR CO., MARSHFIELD, WIS.

Oak Lawn Farm
Short-horns

SHORT-HORNS of quality for sale at reasonable prices. Four heifers coming 3 years old, safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also ten heifers coming one year old.
J. E. KENNEDY **JANESVILLE, WIS.**

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
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GOLDEN Maid's Viscount by Imp. Golden Maid's Prince. Noble of Avaranch by Imp. Noble of Oakland. Young bulls by the above sires, from Advanced Registry dams. 100 head of wonderful cows in herd. Write your wants. Fred Stubley, Black Earth, Wis. (20 miles west of Madison).

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EGLANTINE OF SPARTA
A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
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REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address
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I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.
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THREE ready for service. One 4 years old. Also registered and grade females. King of the May and Yeksa breeding.
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150 HEAD

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OFFER a few choice sons of King Pietertje Hengerveld Ormsby, a full brother to 35-lb. cow, Pietertje Maid Ormsby, from A. R. O and untested cows of Alacartra, Johanna and Ormsby breeding.
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IN GOOD, healthy, thrifty condition. The cows have A. R. O. records from 16.96 to 21.89 lbs. butter in 7 days. Two of the heifers are daughters of the **35.43 lb. bull, Sir Pontiac Chief 100732,** whose dam, Pontiac DeNijlander, made three consecutive records of 30.11—32.73—35.43 lbs. butter and gave 750 lbs. of milk in 7 days. Six of the cows for sale are bred to this bull. This is an opportunity to get some exceptionally high-producing cows. A. M. Anderson, Whitewater, Wis.

SONS OF THE 32-LB. HOLSTEIN BULL COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 10 months old. Out of heavy producing dams.
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Sons of Serviceable Age of
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IN which is combined the Holstein blood of Sir Johanna DeKol, Sarcastic Lad and Belle Korndyke. Bulls from A. R. O. and untested cows for sale at reasonable prices. Address
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RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address
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AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
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Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
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AND others from A. R. O. cows, ready for immediate service. Well grown, nicely marked, good individuals. Prices $50 at 4 months up to $125. Frank Holt, Pleasant Prairie, Wisconsin.

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TEN registered Holstein bull calves, oldest 7 months, sired by King Walker Segis 3d, Sir Witra Clyde Segis and University Johanna Excelle. Can spare a few females. (Poland China hogs.)
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OFFERS registered Holsteins. 8 cows $100 to $200. 4 heifers $100 to $150. 6 bulls $40 to $150. Write your wants. **KIRKPATRICK BROTHERS, Reedsburg, Sauk Co., Wis.**

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offer a richly bred young Holstein bull,
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HIS dam as a four year old made **27.99 pounds butter in seven days, 786 pounds butter in a year.** Send for pedigree and price to
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OF SERVICEABLE AGE, sired by the richly bred bull, **Homestead Jr. De Kol 2d,** a son of Homestead Jr. De Kol, out of a daughter of De Kol Burke, that has 70 A. R. O. daughters, seven with records above 30 pounds. These young bulls are out of A. R. O. cows. Write for extended pedigrees. Mention Wisconsin Farmer and address
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2 HOLSTEIN BULLS

READY for service. Sired by our senior herd sire, Johanna Spofford Corona 71305, and out of A.R.O. dams. No. 1, record of 20 lbs. butter in seven days. No. 2, record of 17 pounds butter in seven days. Address
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Holstein Bulls

OF serviceable age and younger, sired by **Piebe Longheid De Kol** and out of untested and A. R. O. cows with records up to 24 pounds butter in seven days and 750 pounds in a year.
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SIRED by the richly bred bull, SIR ORMSBY PIEBE BURKE, brother to the 41-pound cow, Sadie Vale Corcordia 4th. These are from A. R. O. cows of De Kol Burke, Ormsby and Korndyke breeding. W. F. Mielenz, 97 Wisconsin treet, Milwaukee, Wisconsin.

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TO increase your profits buy a bull sired by Princess Mercedes Piebe Champion 98024, whose dam has a record of 26.39 pounds butter in seven days as a four year old, and 667.4 pounds in one year as a two year old. Write for description and price.
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KING Segis Alcartra Beauty Herd Sire 136938. Sire, King Segis Pontiac Alcartra 76602, the $50,000 bull, a grandson of King Segis, and dam a 23½ pound two year old daughter of Johanna McKinley Segis, the $25,000 son of King Segis and Johanna De Kol Van Beers, the 40 pound $7,000 cow with butter record as follows: 7 days, 40.07; 30 days, 151.39; 60 days, 288.45; 90 days, 416.71; 120 days, 541.35. He is a beautiful individual with all the dairy qualities we like. He will weigh 2000 pounds at two years old. A few choice bull calves nicely marked. Price and description mailed on application. Jas. Doyle, R. 23, Waldo, Wis.

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ONE bull of serviceable age and three ranging in age from two to ten weeks. Two of these bulls are out of creditable A. R. O. dams and one which has given 48 pounds at the age one year and six months. Prices reasonable as we are overstocked and must sell.
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A FEW heifers and bull calves, well bred, mostly white. All pure breds sired by the famous bull, Sir Veeman Hengerveld Wayne 9th.
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SEVEN months old, well-marked, one-half white, well grown. Priced right.
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FOR SALE—Several registered heifer calves, well marked.

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OFFERS senior herd sire, ARTIS WALKER DE KOL, a first-class individual, strong and straight on the back, a deep barrel and shows exceptionally good vein development. His five nearest dams average 23.55 pounds butter in seven days. He is 90% white and throws 80% heifer calves. Also a yearling bull, ready for service.
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Pure-bred and high grade

Cows, Heifers and Service Bulls

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CURRENT EVENTS

HEAVY fighting was still in progress around Verdun, the French stronghold, at last reports, the Germans making slight gains, but at a tremendous cost. Both the French and the German are shelling the countryside in the most terrific artillery bombardment the world has ever known and men are being sacrificed, on both sides, literally by the thousands. Verdun still remains intact, although some of the outlying towns and forts have fallen before the Germans. The Russian offensive against the Germans in northwest Russia has increased in intensity and fighting is in progress day and night. The latest official statement from Russian general headquarters says that desperate infantry fighting is proceeding north of the town of Postav, where the Germans launched violent counter attacks in an attempt to dislodge the Russians from trenches which they had previously completed. Respecting this operation, the Berlin communication says that at this point the Russians delivered their attack and their losses reached "extraordinarily high figures, even for the number of Russians in action."

THE American troops, some 5,000 strong, in command of General Pershing, were still pursuing the Mexican bandit, Villa, in Mexican territory, at last reports. Conflicting rumors have been rife that various Carranza chieftains have revolted and have either openly joined Villa or have declared war against the United States on their account, so that the authorities at Washington are considerably worried, for the situation becomes more complicated and threatening every day. One of the first Carranza chiefs to revolt was General Luis Herrera, commander at Chihuahua, who has 2,000 men (the best fighters in northern Mexico) behind him. Gen. Luis Herrera was one of Villa's brigade commanders from 1913 to 1915. He, with his brother Maclovio Herrera, were born in southern Chihuahua and raised a brigade of troops from that region which attained great prominence in the early Villa campaigns. Maclovio Herrera, the younger of the two, was the active leader in the field and was regarded as one of the most dashing of Villa's leaders, while Luis Herrera's services were freely used in an administrative capacity in the territory captured by Villa. At one time last week Villa was said to be caught in a trap, the Carranza forces hemming him in at the south and the American troops at the north. It is not likely, however, that the sly bandit who defied Diaz and his soldiers for eight years, even with a heavy price on his head, would have been caught so easily. Serious trouble looms ominous and imminent in Mexico these days.

AIR raids over the English seacoast towns and cities continue, usually with the loss of numerous lives. The last raid resulted in the killing of nine persons and the injuring of thirty-one others. A British airman brought down one of the four German raiders, the German observer being killed in the action. The first bomb, dropped on one of the coast towns, fell squarely on an automobile, killing the driver and setting fire to the gasoline tank. Pieces of the bomb fell among children on their way to Sunday school, killing four of them. Other bombs hit a business block, a barber shop and several residences. One bomb fell through the gable of a hospital to the floor below, but nobody was injured. The weather was clear and the attacking machine flew very high. A dozen bombs were dropped in Dover, and four persons were killed there. One of the missiles crashed through the roof of an orphanage, causing extensive damage and injuring a nun. The children in the institution suffered no injury, having been taken to the cellar at the first alarm. The terrible part of these air raids is that women and children suffer most heavily, paying the penalty of war, although not participating therein and absolutely unarmed and helpless.

COLE YOUNGER, the notorious outlaw of border days, died last week at his home in Lees Summit, Missouri, at the age of seventy-two. He was one of the last of the members of the notorious robber bands that infested western Missouri during and after the civil war. He was a member of the Quantrell band of guerillas and with his two brothers took part with the James boys in bank and train robberies in Missouri and neighboring states that netted the looters more than $100,000. Among the notorious robberies of the decade following the war that were laid at their door were: The raid on the Liberty, Mo., bank in 1866; one bank defender shot dead and $72,000 stolen. The looting of a Russellville, Ky., bank in 1868 for $17,000. The Gallatin, Mo., bank robbery of 1868, in which the cashier was shot and killed. Raids of Lexington and Savannah, Mo., banks in 1867. Ten thousand dollars stolen from the Kansas City Fair Association in 1871, while 1,000 persons looked on. The Corydon, Ia., bank was robbed of $40,000 the same year.

PEACE rumors were revived last week, but there seems little foundation in fact for the revival. The stock market was seriously affected for a day or two, but quickly rallied, because of the absence of any official confirmation of the reports. Germany's enemies, by not taking advantage of the announcement of Chancellor von Bethmann-Hollweg on December 9th, that Germany would consider peace proposals whenever her foes are willing to ask terms, have lost the day of grace. This is the conclusion to be drawn from a leading article in the semi-official Lokal Anzeiger, of Berlin, in which it is declared flatly the time has now come to carry out the chancellor's warning of December 9th that if the enemies of this country did not ask for peace in a reasonable period they would have to pay more dearly for it. In the meantime, the French and English papers and some of the high officials, are maintaining that victory is in sight for them, for practically the first time, in view of which the peace talk would hardly have emanated from them.

NO TEMPORARY chairman for the republican national convention, to be held in Chicago in June, was elected at the meeting of the committee which has this matter in charge last week. When the committee adjourned the three candidates most favored appeared to be Senator Warren G. Harding, of Ohio; Philander C. Knox, of Pennsylvania, and Congressman James R. Mann, of Illinois. Dr. Nicholas Murray Butler, president of Columbia University, New York, telegraphed asking that his name be not considered. It is thought likely that Senator Knox will be the ultimate choice, provided his selection is satisfactory to Senator Penrose, of Pennsylvania. The matter will be definitely settled at a postponed meeting of the committee in April.

THE interstate commerce commission has ordered a nation-wide inquiry into railroad rates on live stock and all live stock products. The investigation, which is intended to be the most exhaustive yet made by the commission, will reach into every direction. Representatives of Chicago packers predicted yesterday that a year's time would be consumed by the commission in gathering the testimony. Hearings will be held in all sections of the country under the personal direction of Commissioner Hall. Luther Walters, attorney for the Chicago packers in the western rate advance case, said that it would probably be two months before the preliminary arrangements could be made for the hearings.

Give Alfalfa a Try-Out.

By mixing alfalfa with timothy and clover at the rate of two pounds to the acre farmers may, without any great outlay of money, easily get an idea of how alfalfa is suited to their land.

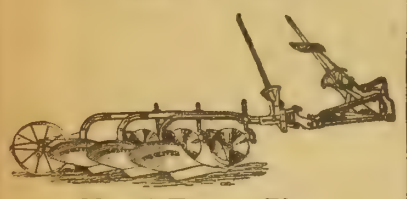
Sown in this way alfalfa will not only prove the quality of the hay crop but will inoculate the soil for future crops.

Nearly one-half of the alfalfa failures in Wisconsin last year resulted from lack of lime and inoculation. Sowing small amounts of alfalfa in with this spring's seeding will help put the land in proper shape at a cost of less than 50 cents an acre. It's worth trying out.—[Wisconsin Bulletin.

Finding Good Seed Corn.

In the early part of February the several Y. M. C. A. groups in Rock county arranged for meetings at ten points in the county. Illustrated lectures were given showing the value of seed-corn testing and as a result of these meetings about 500 persons were reached. A great many of that number have agreed to give all their corn the ear test this season. As a result a considerable amount of real good seed is being discovered. The Y. M. C. A. work in Rock county is in general charge of L. A. Markham, superintendent.

OLIVER



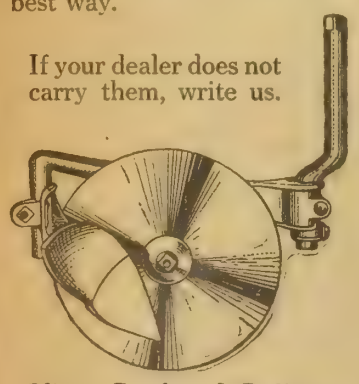
No. 62 Tractor Plow

The Oliver No. 62 tractor plow equipped with the combined rolling coulter and jointer rivals the work of master plowmen.

Plowing must be done this year so as to put weeds on the bottom of the furrow deep enough to prevent the harrow teeth from pulling them out, otherwise the danger from weeds will be great.

The No. 62 and the combined rolling coulter and jointer does this work in the best way.

If your dealer does not carry them, write us.



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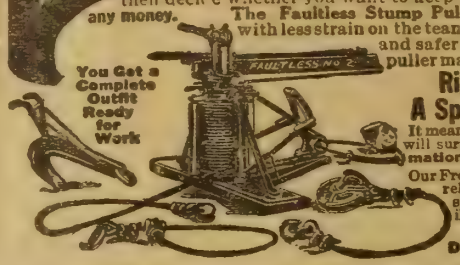

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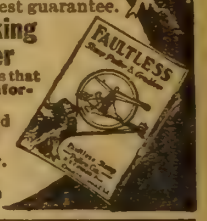

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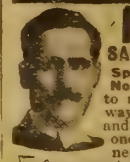

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Special Proposition from Now till Grass—in addition to my new low prices. My way of opening new territory and making further sales, as one separator sold in a neighborhood always sells from one to twenty-five more. Every customer boosts—their statements coming from my lips would be called "exaggeration." Every Galloway Separator is equal to if not better than other separators selling for $75 to $96.---users say "way ahead." I only ask one thing—before you buy a separator of any make, kind or at any price, get my big book—pick out the separator you want, try it 90 days—180 times—at my expense. If you decide to keep it (you don't have to) I'll give you the choice of 5 open, fair and square selling plans and guarantee my separator for 10 years against defective workmanship and material! A $25,000 bank bond backs every sale!

NOTE THIS BUILT-IN QUALITY

Heavy, high carbon steel gear shafts and bowl spindle; extra long bearings; strong, sanitary bowl, discs not fastened together; oil bath lubrication; big, roomy, seamless, pressed steel supply tank; both gear shafts and both spindle bearings supported by one solid casting; heavy sanitary tinware; low bowl speed reduces wear on bearings and gears. No raw, sharp edges in the bowl to cut up the globules of butter fat.

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The Wisconsin Farmer

THURSDAY, MARCH 30, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE BLAME FOR HIGH PRICES.

HARDLY a farmer, on any trip to town, but hears himself blamed by some consumer for the high price of living. Is he to blame? Let us look at the question impartially for a few minutes.

I have just finished reading a very interesting and enlightening article entitled "The Costly Corner Grocery." The writer of this article has investigated the matter thoroughly and has come to the conclusion it is not the farmer but the corner grocer, in town, who is most to blame. Let us follow his line of argument. To begin with, it costs the farmer something more than the mere price of production to get his produce to market. There is the expensive item of hauling. Dr. Clyde L. King, of the University of Pennsylvania, asserts that:

> The average cost of hauling produce from farms to shipping points in the United States as a whole ranges from 7 to 44 cents per 100 pounds, with an average of 11 cents. It costs the United States $75,000,000 annually to haul its produce for twelve main crops from farm to shipping point or market.

This, then, must be deducted from the price which the farmer receives for his produce, to secure his actual net earnings. The ordinary city man to the contrary, it is not all profit to the farmer, this price which he receives for his produce.

But the matter does not rest here. The magazine writer whom I am quoting is authority for the statement that in New York the corner grocer adds 16.9 per cent to the wholesale cost of creamery butter, 30.42 per cent to eggs, 71.5 per cent to fresh milk, 57.81 per cent to potatoes, from 60 to 110 per cent to fresh vegetables, from 40 per cent on oranges to 125.2 per cent on bananas to fruits, 70 per cent to choice and 34.5 per cent to cheap cuts of beef, 45.45 per cent to pork, 31.1 per cent to lamb, 25 per cent to poultry, 25 to 180 per cent to fish, 33.3 per cent to sugar, 20 per cent to flour, 23 per cent to coffee, 111.87 per cent to tea, 50 per cent to macaroni, 31.8 per cent to lard, 114.2 per cent to dried codfish, and from 20 to 81.8 per cent to various canned goods. The New York Food Investigating Commission estimates that, while the wholesaler adds 10 per cent to the cost, the retailer adds 33 per cent.

We must not make the mistake, however, of saying that there is no excuse for this added profit; in many cases there is much excuse. The fault is not the grocer's (nor any retailer's, for that matter) so much as it is the system's. Why, for instance, should the ultimate consumer be obliged to pay the expense of duplicating delivery wagons which traverse the same route, day after day, sometimes as many as twenty different firms making deliveries in one city block? Why do not more towns and cities adopt the idea of co-operative delivery, which has supplanted the old-style, every-body-for-himself method, with its duplications, rivalry and excessive cost? I am delighted to be able to state that this plan was first tried out here in the grain belt—in Waukesha, Wisconsin, to be exact—where it proved so successful that other wideawake Wisconsin towns investigated and imitated, Depere, Beaver Dam, Janesville, Green Bay and other progressive communities now having adopted the plan.

The idea originated, I am advised, in the fertile brain of Mr. Charles A. Ham, of Waukesha. He could not see either sense or economy in having a butcher wagon drive alongside a grocery wagon, with the delivery van of a dry-goods merchant trailing close behind, all three covering the same ground to deliver three little packages, possibly all to the same person. He advised a plan of communal delivery. In the beginning, eight Waukesha merchants joined hands (deliveries, rather) in a sixty-day try-out of the plan. At a certain hour they turned in their delivery wagons, seventeen in number. By co-operative delivery ten wagons were found ample to do the work of the seventeen. Each delivery man was assigned a route and a schedule. He went to certain stores, brought the goods to be delivered to a central house or station, where they were distributed much as mail is distributed; then he set out, carrying a little bit of everything from tooth paste, needles and rib roasts to shirt waists and garden rakes.

At the end of thirty days it was learned that the total cost for the service was 3½ cents an order, about half the old cost. The merchants did not wait for the sixty days to elapse. They organized the Waukesha Co-operative Delivery Company, which today has twenty members and ten wagons. These wagons make five trips a day, running over a regular route on a regular schedule, distributing on an average of 1,200 packages a day. One day last winter the ten wagons delivered 2,500 packages, and not one driver was late at the close of the day's work. Recently a freight and dray service has been added and the company now handles local freight and the largest shipments for transport. A substantial dividend declared the first year (the plan was started in June, 1914) has been allowed to remain in the treasury to buy motor cars before the present year is out.

The idea was so successful in Waukesha it was not long before twelve merchants at Depere adopted a similar plan, the first six months showing 100,000 deliveries, or about 650 a day, on six routes. At Green Bay motor trucks are used. At Beaver Dam eleven merchants joined the organization and five wagons do the work. At Janesville there are seventeen merchants in the organization and ten outside stores are operated with fourteen motor trucks. The merchants like the new idea because it saves expense and useless duplication. The customers like it because there are five deliveries a day and the wagons come as regularly as the postman and over twice as often.

Why cannot this idea be adopted generally throughout the entire country? If it succeeds in Wisconsin why should it not succeed in Massachusetts and California? Here is another grain-belt reform idea which I believe is destined to work wonders in reducing the high price of living and lifting the blame from the farmer's shoulders, where it never belonged.

After all, it is the abuse of any system with which our quarrel lies, rather than with the use. Let us look about, see where we can remedy things and work together to make conditions better, rather than sit down helplessly and lay the blame altogether on farmer, corner grocer or any other one man, cogs in a wheel without which we would be in a sorry position, indeed, both producers and consumers.

FARM MACHINERY AND WAR.

MY RECENT article setting forth the statement of a magazine writer that the chief reason why the prejudice of the Russian peasant has been aroused against the Germans is because the Germans have introduced improved agricultural machinery into Russia seems to have aroused considerable interest, judging from the number of letters I have received. Here is a very interesting and enlightening one, written to me by Mr. John J. Kizler, cashier of the Hillsboro State Bank, of Hillsboro, Kansas:

> I had some personal experience in Russia with harvest hands and heard them say that in one locality where the reaper was then being introduced some of the itinerant laborers, figuring that the machines would take away their jobs, went and drove iron stakes in the wheat fields that were about to be harvested, in order to thus ruin the machines in resentment of their intrusion.
>
> That was a little over thirty years ago, but a country that had no public schools could likely have stood still in respect to such matters for this length of time.
>
> At that time, though, Germans were highly respected where I was. But I understand that there was a systematic agitation of the Russian population against the Germans, who were settled there in great numbers, and the peasants were easily taken in by such agitators because the Germans, as progressive farmers, became in a short time large landowners and their prosperity excited the envy of the Russians.
>
> I for myself cannot see where there would be any benefit to the world at large were the Russian arms to prevail in the present conflict.

Here is first-hand information on the subject which is of marked value, tending to corroborate the claim of the magazine writer heretofore quoted. I can only repeat my former statement: Any war which has no greater principle at stake than prejudice against farm machinery is so useless, inexcusable and un-Christianlike as to stand condemned in the eyes of every man. Rather than taking up arms, in a flare of national passion, against a people who are trying to make them more prosperous and progressive (through the general use of agricultural implements) the Russian peasants would far better be striving to free themselves from the serfdom in which the ruling classes have held them for all too many years, a serfdom which the revolutionizing of labor methods would overthrow more quickly than almost any other thing. Another one of my correspondents, Mr. L. B. Hetrick, of Elwood, Indiana, raises this very point when he says:

> Now the hateful and dirty thing revealed in the facts you have so masterfully presented is this: The very owners, landlords and ruling elements of Russia, the very ones that profit most by the use of labor-saving devices, are also the very demons that shout into the ears of the peasant class about improved machinery being detrimental to the laboring element of society. Machinery should be a blessing for all and should not mean gluttony for one class and abject poverty for another.

The introduction and invention of labor-saving devices has done more than any other one thing to put farming in America ahead of farming in any other land. We who have been quick to adopt time-saving and labor-saving appliances—having almost two billion dollars invested in farm machinery today—are the ones who have brought agriculture to its highest pinnacle of general production and prosperity. It would be a shame, indeed, if millions of men were at each others' throats, like so many snarling dogs, for no other reason than that a downtrodden people should object to being freed by the riding cultivator, the binder and the threshing machine.

HARVESTS IN WAR TIME.

PERHAPS it is because I have myself seen the most menial labor of farming, even in peace times, being performed by the women of Europe—particularly of the southern countries—that I am so interested in the reports which tell of the way farming operations are being carried on, now that the able-bodied men of almost every nation of Europe, literally by the millions, have been called to the colors. If it had not been for the women the harvest fields last fall would not have yielded the grain which had been brought through to maturity in the face of almost insurmountable obstacles and heartbreaking difficulties.

I read, recently, a very graphic picture of the harvest fields in Galicia (the Austrian crown lands) last fall. Between the first trenches of the Austrians and the first trenches of the Russians there was a strip of land about a mile wide, and here, while the enemies watched each other like hawks and "sniped" whoever was venturesome enough to thrust his head above the fortifications, the Galician women went calmly about the harvest, gathering the precious stalks, by hand, as though they were so many pretty flowers, to form a bouquet. Here is the way the writer described it:

> Up out of the field where they had been mowing, came a little company of barefooted peasant women with their bundles of gleanings on their heads and talking in that sing-song monotone of theirs, as detached as so many birds, they went pat-patting across the bridge. If one of these women could but write her impressions of war!
>
> They had done their part, these peasant women and old men and children left behind. All over Galicia, round the burned villages, right through barbed wire entanglements up to the very trenches, stretched the yellow wheat. Somehow they had plowed and sowed and brought it to harvest and now with scythe, with knives even sometimes, they were getting it under cover.
>
> At home we know gleaners generally only in rather sentimental pictures; here we saw them day after day, barefooted women and children going over the stubble and picking up the forgotten wheat heads and arranging them in one hand as if they were a bouquet. There will be no wheat wasted.

Has not war undergone a great change, indeed, when, instead of pictures of dashing cavalry charges, with sabres flashing in the bright sunlight and foam-flecked horses bearing the "gallant 600" to fame and the Victoria cross, we have men hiding behind embankments of earth and sand, "sniping" the unwary, artillery bombarding positions for days at a time, with never a sight of the enemy many miles away, and wrinkled peasant women gathering wheat heads by hand, like so many children picking flowers in the spring, but with none of the childish enthusiasm and gayety? The war in Europe is being fought to a finish at a great, an awful cost, but it is being fought in such a manner as to take away, for all time, all glamour and romance which made it appeal to those who thought only of the heroics and not of the sacrifices and suffering. By the time peace shall have been declared there will be few left to whom war has any appeal whatever, a consummation devoutly to be wished and one which will make a repetition of the present titanic struggle hardly to be considered, in my opinion.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Good Seed Grain For Wisconsin.

SEED grain selection and treatment of the seed is one of the important works of Wisconsin farmers at this season. It was never more necessary to treat against smut, as this disease had a free hand and a favorable season last year. This matter has been discussed previously in these columns, and unless the small grain grower take the necessary precautions against smut by treating the seed they are liable to disappointment in their crops this fall.

No farmer can afford to grow scrub grains. Records of the experiment station shows that it pays to grow the pure-bred seed grains, and after sixteen years of breeding work in Wisconsin splendid seed is to be had at fair prices. So it is not necessary for any farmer to hang back on the question of price, as the pure-bred seed costs little more than the scrub seed, and the yields will be far better and much greater.

No. 1 and No. 5 oats, experiments have proved, often yield twice as much as the common kind, and other varieties yield from ten to twelve bushels more per acre than the common kind. No. 1 is recommended for the red soils and No. 5 for the worn and light soils, and the increased yields will far more than compensate for the small additional cost of good seed.

In using formaldehyde it should be remembered that it is not a cure-all for every disease. The grain diseases controlled by formaldehyde are oat smut, barley smut, and the leaf stripe disease and the sticking smut of wheat. Formaldehyde will not prevent loose smut in wheat; the blotch disease of barley or rusts of various kinds. Wisconsin farmers who are growing pure-bred grains for seed purposes find it very profitable, while those who use the pure-bred seed for the crops they produce have learned that the increased yields make good seed a paying investment.

Making a Wisconsin Barn.

ATTENTION of our readers is called to the illustrated articles on pages six and seven, telling about the Glenn Keyes barn in Richland county. This barn is not set up as a sample of just what every dairy farm in Wisconsin should have, but it has some very attractive features. The Wisconsin Farmer is anxious that its readers get the benefit of experiences in such construction and hopes that they will profit thereby. Not every farmer who builds a barn will decide on the same character of construction or the same material. The use which Mr. Keyes has made of cement, of metal lath, of a special system of ventilation, and of barn equipment throughout, is the result of careful study on his part, and every farmer who intends to erect a new dairy barn should give the same careful thought and study to the work. Our barn buildings are a source of great pride, but that should not be the chief end in view in erecting a barn. Service is the chief item, and permanency is another which should be taken into consideration. The days of "barn raisin's" in Wisconsin have long since passed away. The farm barn now is planned. Advice of experts is asked for. It is not advisable to spend a large sum of money on a barn unless one has selected a plan.

Value of the Farmers' Clubs.

AS COMMUNITY builders we know of nothing better than well-organized, properly-conducted clubs. Every farming unit should have a farmers' club; every small town a commercial club; every community an organization of some kind which can work for the upbuilding of the community as well as for the enjoyment of the members.

Wisconsin is rapidly forging in the organization of farmers' clubs, and the great value of a successfully organized and conducted club was demonstrated again recently in Walworth county by the Lakeview Farmers' Club in the town of Linn. Walworth county has some of the strongest farmers' clubs in the state and they do not seem afraid to undertake anything. The Lakeview Club recently held a "corn and dairy week," the average forenoon attendance for the four days being 160 and the average afternoon attendance 250. Everything of interest to the farmer-dairymen was discussed by competent speakers during this week, and those who attended contend it was one of the most successful affairs ever held in Walworth county. During this week a cow-testing association was organized and 445 cows were signed up, with the result that testing will begin within a few weeks.

The Lakeview Farmers' Club is a young organization, but it is distinguishing itself for doing something. Such a club as this is a tonic for the community, and enthusiasm is kept constantly at fever heat. Neighbors are brought together for the common good, and where a community has begun to run down and enthusiasm is dying out a successful and properly-organized club will fill a long-felt want. The Lakeview club has a community hall at Zenda which the writer visited last year, and it stands as a monument to the progressive spirit manifest in that neighborhood. It is not necessary that a club have its own quarters. The schoolhouse makes a good meeting place but the important point in organizing is to get everyone interested; take particular pains to see that no one is slighted or overlooked and then pull together. The holding of meetings such as that held recently by the Lakeview club is a matter to be worked out after the club has been started and should not be undertaken too soon by a new organization. These clubs can be social as well as instructional. They are what the members make them, and once started on the right track and with the proper amount of interest and enthusiasm they become important factors in the social and agricultural development of their respective communities.

Our Bright Rural Scholars.

STATE SUPT. C. P. CARY is responsible for the statement that the average country boy and girl can complete the prescribed high school course in considerably less time than the average city boy and girl. Statistics which he has compiled show that it takes the average city boy and girl 4.22 years to complete the course. It takes the average country boy and girl only 3.68 years. To arrive at these figures records were taken on over 200 students in each group. While this is not a very considerable number of the school population of Wisconsin, the result obtained bears out previous investigations which have been conducted along this line.

We feel sure that the farmers of the state will be interested in the following, clipped from a recent letter sent out by Superintendent Cary:

> If the country pupil in the high school does outrank the city pupil on the average, and there seems to be a good deal of evidence that he does, there are no doubt reasons for it, but the burden of explanation is on the city schools. The difference, if any exists, is scarcely worth mentioning, except for the fact that we have in Wisconsin a small group of city men who seem to be abnormally interested in what they call the deplorable condition of the country schools. That they know nothing about the actual conditions, except from heresay, is true enough, and their ignorance of the laws of the state in relation to education is evident to anyone who listens to them.
>
> Nevertheless, this persistent reiteration, if treated by school men with the silence it deserves, is apt to do the state of Wisconsin rank injustice. Word reaches this department from time to time that some public speaker within the state or outside the state quotes these irreponsible statements of irresponsible men to the disadvantage of Wisconsin.
>
> In striking contrast with this periodic wail was the statement a few weeks ago by a United States government official, whose business it is to study country schools, to the effect that no state in the Union had made more advancement in her country schools in the past few years than has Wisconsin. In a subsequent statement he made it even stronger, and said that no state had done as much as had Wisconsin for the improvement of her country schools in the past ten years.

The Wisconsin Farmer believes in good country schools. We believe the rural children are entitled to the same advantages as the city children. When they have the same advantages we know that the rural children will make records which will cause some of our city "educators" to sit up and take notice.

It Pays to Improve Farm Land.

SIX years ago J. H. Harris bought 100 acres of land near Elkhorn, Wisconsin, at $90 per acre. Last week he sold the property at $250 an acre. This is a profit of $26.67 per acre every year that Mr. Harris owned the farm. It means a total profit of $16,000 in six years. In addition to the value of the land sold, Mr. Harris had also accumulated a considerable amount of personal property, which he sold for $7,000 and which was added to the deal. The purchaser is D. E. Davis, a young man of Monroe, Wisconsin, who expects to still further develop this fine dairy farm.

Two important items entered into the advance in value of this land from $9,000 to $25,000 in six years. Of course, the difference in the two selling prices may not represent all profit by any means. Mr. Harris believed in improving his place and he spent a considerable amount of money in improvements. He also spent considerable money in fertilizers. It is fair to presume that he paid for a considerable part of the improvements out of the profits of the farm. If he paid for all of the improvements in this way he certainly made a nice profit. It is fairly representative of the value of money properly invested in Wisconsin dairy farms, to say that Mr. Harris' $9,000 earned him nearly 30 per cent a year.

Buyers will pay well for farm property provided the soil has not been robbed and the improvements have been kept in good shape. The right kind of improvements on Wisconsin dairy farms will earn big dividends, and it is a mistaken economy to stand back and assert that the old methods and old equipment of dairy farms will do. Mr. Harris not only kept about seventy head of cattle on this 100 acres and used the fertilizer to the best advantage, but he also used commercial fertilizer and reports say that he considers his investment a profitable one.

Wisconsin Farmer-Banker Meeting.

WISCONSIN farmers and bankers who were so fortunate as to attend the banker-farmer meeting at Madison this week doubtless returned home with new ideals, greater enthusiasm and a better knowledge of their state than they had ever had previously. This meeting, scheduled to open Tuesday and close Wednesday evening, was arranged so that the bankers of the state might get together and learn at first-hand the great things in agriculture which are being undertaken in Wisconsin. The bankers have been anxious to co-operate to improve our farming conditions. Farmers were invited that they might meet the bankers on common ground and learn of these accomplishments and the plans of the bankers. The valuable man in any business or in any community is the man who can and will co-operate with other men. So the banker-farmer movement, which is nothing more than co-operation between banker and farmer, was discussed fully and in detail. In addition to discussing these matters the bankers and farmers present at the meeting were privileged at the university farm to see stock demonstrations, etc., which should prove of great value in promoting a better agriculture.

Mr. B. F. Harris, president of the First National Bank, of Champaign, Ill., and chairman of the agricultural commission of the American Bankers' Association, was a guest of the meeting and one of the principal speakers. Sometimes it takes an outsider to point out the good points about a state, just as it is often necessary to go away from home to appreciate how fine home really is. This Mr. Harris, an outsider, was enabled to do, and he gave those present a splendid insight into the existing conditions in Wisconsin. In the following few paragraphs he summed up Wisconsin's present greatness:

> You have a model state, with agriculture far and away the dominant interest. I know of no real agricultural state whose agricultural interests are any better balanced or diversified. I note the sum total of your eleven chief agricultural products (dairying, hay, corn, oats, potatoes, barley, tobacco, rye, wheat, poultry and vegetables) aggregates over $286,000,000 annually—almost half of this sum, not including live stock, coming from the three single items, dairying, eggs and poultry, and vegetables. These are the three things that take away least of soil fertility. You have in addition over $180,000,000 invested in live stock and it consumes not a little of your crops and still further adds to soil fertility.
>
> You have perhaps the very largest percentage of owners among your farmers that is found in any state of your class, and while many of them carry large mortgages, or a large per cent of mortgages, statistics show that your mortgaged farmers are in many respects better equipped and doing better than those otherwise situated, and finally, while Illinois leads you and all the states in the great middle section in the value of all crops produced per improved acre, having such an average production of $13.37 per acre, you lead all these states in the value of all live stock products per improved acre, your average being $10.
>
> When crops and stock per improved acre are added together, Wisconsin total $22.46, leading all the twelve great northern central states. Illinois follows with $20.81; Iowa, $20.30; Ohio, $20.19; Indiana, $20.16; Michigan, $19.77; Missouri, $17.47; Minnesota, $14.20; Nebraska, $13.14; Kansas, $12.02; South Dakota, $11.22; North Dakota, $10.02.
>
> Your average dairy income per farm is $304.12, followed by an average income of $187.14 in Minnesota, $143.73 in Iowa, and $125.73 in Illinois.

Mr. Harris' tribute was only one of many and those present could not have gone home without a new realization that Wisconsin ranks with the best. Elsewhere in this issue we are printing Mr. Harris' address on "Diversification—Co-operation," which is a tribute to the diversified live stock farming of this state. Others extolled Wisconsin's agricultural wealth, and in our next issue will appear a complete report of the banker-farmer meeting.

Wisconsin Man's Idea on Treatment of Foal.

THERE is a heavy mortality among young foals every spring, and unquestionably the loss could be materially cut down if the caretakers of the foals could be persuaded to take certain precautions. This subject was taken up in detail in Circular No. 13, published by Dr. A. S. Alexander, of the Wisconsin Experiment Station, and from this bulletin we quote:

> Attend to the navel cord as soon as the nose of the foal has been cleared of afterbirth. If possible, avoid tying the navel cord. It is best for it to break off naturally. If it fails to break and the mare is lying down, make her get up and the cord may then break.
>
> If found necessary to tie the cord use a clean, disinfected string. A dirty string may cause infection. Soak the string in a 5 per cent solution of lysol or carbolic acid, or a 1-500 solution of corrosive sublimate (bichloride of mercury). Tie the cord

one inch or a little more from the belly; then sever the cord with a clean knife.

Saturate the stump of the navel cord immediately, whether tied or not, with the following disinfectant: Powdered corrosive sublimate, two drams; boiling water, one pint. When it has cooled, color the solution with two drams of tincture of iron, label the bottle "poison" and keep it out of the way of children. Repeat the application twice a day until the cord shrivels up, drops off and no raw spot remains. To keep the solution from blistering the foal's belly smear carbolized vaseline or unsalted lard around the navel before making the first application.

A good way to use the solution is to put some of it in a shallow, wide-necked bottle, then hold the bottle against the foal's belly with the navel stump immersed so that it will be completely covered by the fluid. If the navel cord has been tied remove the strings as soon as possible, squeeze out the blood clot and instantly soak the navel stump with the corrosive sublimate solution. Use the solution twice a day until the navel is perfectly healed. Remove sloughing portions of the cord each morning, so far as possible, to allow the solution to wet all raw parts of the cord.

A strong foal will be on its feet and trying to nurse in less than an hour from birth. Such a foal needs no help, but a weak one will have to be held up to suck until strong enough to do so without help. Wash the udder of the mare with a lukewarm 2 per cent solution of coal tar disinfectant and then rinse off with warm water before the foal is allowed to suck for the first time. The external organs (genitals), tail and hind parts of the mare should be washed with a similar solution once a day for the first week or so after the birth of the foal.

Keeping the udder free from infective matter in this way tends to prevent the foal from scouring, for that condition of the bowels often is due to germ infection of the intestinal tract by way of the mouth. Disinfection of the navel cord also tends to prevent scouring. At birth the intestine of the foal contains a sticky mass of fecal matter. This should come away promptly and usually this is accomplished by the first milk which possesses purgative properties. To assist nature, either insert a small tallow dip candle (made for this purpose) in the foal's rectum, or, within an hour from birth, give an injection of either warm water, warm slippery elm bark tea, flaxseed tea, sweet oil, or a mixture of equal parts of cream, molasses and warm water, and repeat in twelve hours if required. Harm may be done by injecting a large quantity of strong, soapy warm water with an ordinary "horse syringe." A fountain syringe is to be preferred and small, hard rubber nozzle, or a small, clean rubber hose and funnel. Smear vaseline or lard on the nozzle and in rectum before giving the injection. If the bowels do not move within twenty-four hours from birth and the foal seems sick, shake up two to four tablespoonfuls of pure castor oil in milk, or a mixture of equal quantities of castor oil and sweet oil, according to size of foal, and give as one dose. Then continue the injections at intervals of six hours.

In the same bulletin from which the above is quoted attention is called to the importance of having an absolutely clean foaling place. Dr. Alexander advises cleaning and scraping the floor, and recommends that a coal tar disinfectant be used freely. A good disinfectant is also made by adding four ounces of sulphate of copper to one gallon of water. It is even a good plan to cleanse the ceiling, and so much the better if the walls of the stalls can be whitewashed, to each gallon of which has been added one-third of a pound of chloride of lime. The aim to be attained is to prevent infection, and it follows naturally that the removal of the filth is the first step to be taken in attaining this end while, secondly, the sensible use of disinfectants becomes an absolute essential.

Weeds Cut Tremendously Into Profits.

IT WOULD be interesting to ascertain what proportion of the average person's time during the growing season is devoted to the task of fighting weeds. In the case of intertillage crops two results are attained at the same time from cultivation, particularly during dry seasons—namely, the destruction of weeds and the creation of a mulch. In wet seasons, however, we must perform just as much labor, or even more, in fighting weeds as would be required to keep an effective mulch on the surface.

In a bulletin published by the national department of agriculture last year on the control of weeds it was acknowledged that the full reason why weeds reduced the yield of crops is not definitely known. The author of this bulletin, Mr. H. R. Cox, points out that it is well recognized that weeds deprive crops of moisture, plant food and sunlight, and by these means cause decreased yields. Experiments have shown, however, that even where there is a supply of moisture and plant food sufficient for the needs of both the weeds and the crop, weeds still exert a detrimental effect. This may be due in part to the weed roots giving off substances which are poisonous to crops. The fact that weeds do harm in more ways than has been supposed is all the more reason why the farmer should make strenuous efforts to subdue these invaders. Land that should produce sixty bushels of corn may yield no more than twenty bushels if weeds are not kept down by adequate cultivation, and the net profit to the farmer is relatively much less for the resulting poor crop than these figures on yield show.

Another loss results from the presence of weed seeds in crop seeds, according to Mr. Cox. This necessitates much labor in separating or results in dockage by dealers if the separation is not made. Wheat containing wild-onion bulblets is sometimes docked as much as 50 per cent, and in some cases there is no sale at all for such wheat. The agricultural experiment station of Minnesota estimates that in that state alone the damage to wheat due to weed seeds amounts to $2,500,000 yearly.

There are other cases of damage resulting from weeds, which in some cases are important. The harvesting and curing of crops are sometimes made difficult by the presence of weeds. Russian thistle, bindweed and Canada thistle usually are a source of great annoyance at harvest time to the growers of small grains. Again, some weeds harbor fungous and insect troubles which attack near-by crops; the clubroot of cabbage is fostered on the wild-mustard tribe of weeds, and the Colorado potato beetle lives also on nightshade and henbane. Furthermore, some weeds are poisonous or otherwise injurious to man, live stock or live-stock products. Poison ivy, sumac, jimson weed, and the seeds of corn cockle are poisonous to man; wild onion and bitterweed spoil dairy products.

It is difficult to estimate the damage of weeds, but it is probable that they cost the American farmer several hundred million dollars every year.

Good Covering For Grass Seed Essential.

A CONSIDERABLE number of farmers adopt the plan of sowing grass seed early in the spring so that it is covered by the process of freezing and thawing. This is entirely practicable where fall-sown crops like winter wheat and rye are seeded down. Where this plan is followed the freezing seldom, if ever, injures the seed, but, on the other hand, the frost performs a real service in cracking the hard shell so that when favorable conditions of heat and moisture are present the germ starts into a lively existence.

Where spring grains like oats or barley are used as a nurse crop, the plan of seeding early cannot be carried out. For example, it is impracticable to go into a cornfield and sow the grass seed while the ground is frozen, because in that case the seed will be distributed very unevenly. It will roll from the high to the low places, so that the plants will be bunched and, on the other hand, large patches will be bare. Because of this some work on the surface with tillage implements must be done before seeding, and the question comes up as to when the grass seed should be sown so as to insure a covering that will most ideally favor germination.

We do not favor the plan of sowing the grass seed after the crop is in, trusting to the rains to perform the covering task. Sometimes when this plan is followed a fair degree of success is attained, but ordinarily it is a little risky. A much better method is to sow the grass seed before giving the surface a good harrowing. If, for example, cornstalk land is double disked and the grain and grass seed are then sown with a broadcast seeder the harrowing of the surface will usually give fairly satisfactory results. Some of the seed in this case may be covered as deeply as an inch, but this is not too much. Under certain conditions clover seed will come up through two or even three inches of soil.

Unquestionably the most ideal plan of sowing timothy and clover is to put in the nurse crop with a drill after properly preparing the soil, and at the same time using a grass seeder attachment. When this plan is followed the grass seed will be scattered between the grain rows and the disk drill will cover the seed sufficiently, but it will not bury it deeply enough so that the plants will never get through the surface. There is some advantage in having grass seed come up between the rows of grain, because in that case the soil from which the timothy and clover plants draw their nourishment is not so thoroughly dried out as it is in the immediate vicinity of the rows of grain.

Two Effects of Lime on Soils.

MOST of the experiment stations of the central West have published bulletins in recent years on the question of liming soils. Of course, it has long been known that under certain conditions the growth of crops was greatly improved by an application of lime, althoug the practice of liming soils has not been strongly indorsed until recent years because lime was not regarded as a plant food but rather as a stimulant. However, since farmers of the central West have begun to grow alfalfa a new interest has been created in the practice of applying lime to land.

There are two reasons why an interest in lime is created in the minds of those who attempt to grow alfalfa. In the first place, alfalfa is a greedy lime crop, taking from the soil large quantities at every cutting, and, in the second place, lime neutralizes soil acidity. The latter is an important function because when a soil is sour root organisms cannot thrive, and in the absence of certain forms of germ life legume crops like alfalfa cannot sustain anything like a lively existence.

In a bulletin from the Missouri station lime is classified as a soil builder and a soil destroyer. Its application for the purpose of favoring the growth of legumes which, in turn, increases the nitrogen content of soils, constitutes the building up process. On the other hand, the destructive process resulting from liming consists in the more rapid decomposition of organic matter and liberation and reduction of the stock of plant food material stored in the soil. A rank crop of clover that results from liming means that this larger crop is drawing heavily upon other plant food ingredients, more particularly phosphorus and potassium. Indeed, lime acts chemically in a way that liberates these elements so that they become available. In this sense it is a stimulant, and for that reason where lime is used one must be prepared to carry out the policy of soil replenishment. It almost goes without saying that where large crops are produced this means a heavy draft upon the mineral matters in the soil. In turn, these must be supplemented either in the form of commercial fertilizers or by using farm-yard manure liberally.

Of the many forms of lime that might be considered, none are so well adapted to general use as ground limestone. Professor Hopkins, of the Illinois Experiment Station, has investigated this matter thoroughly, and as a result of his experimental work he recommends this form.

As to time of applying lime it has been ascertained by the Missouri station that better results are obtained when it is added to the land before planting or sowing a crop. Other things being equal, it is preferable to apply it to plowed land, after which it should be thoroughly worked in by the use of surface-stirring implements like the disk or the harrow. On light soils spring application is advised, but, generally speaking, good results will always be obtained on certain types of soil by adding lime at any time.

As to the amount of lime required to bring a sour soil into good condition, it may be said that this varies greatly according to conditions. A thousand pounds of finely-ground limestone will sometimes have a very noticeable and beneficial effect, and this amount may correct a certain degree of acidity. Generally speaking, however, one ton per acre is needed, and in the case of very sour soils even two tons per acre may be required to bring a soil into condition to produce alfalfa.

Mistakes in Oat Sowing.

WITHIN a short time teams will be in the field in certain localities preparing cornstalk ground for oats. In the very necessity of the case there is a great difference of opinion among farmers regarding the best way to prepare ground for oats. In the following communication one of our subscribers takes up the question and describes the system of soil preparation which he has found to give the best results. He writes:

Having observed many mistakes in the seeding of oats, I decided to try out different methods of preparing the soil for this grain, on corn-stubble land, to ascertain the relative merits of these various systems. As a general statement, it may be said, that oat seeding is not given the careful attention it deserves, and, as a result, the yield of this important grain is far below what it should be.

On one strip of ground, in the above-mentioned experiment, I disked the land once, sowed the oats, at the rate of from three and a half to four bushels of seed to the acre, and followed the seeding with a thorough working of the spike-tooth harrow.

Another strip of land on the same field had the seed applied to it at the same rate, but they were sown on the ground without any preparation of seed bed whatever (as we often see farmers do). Following the seeding, the ground was given a double or lap disking. That is, at each "round" of the disk, one-half of it was allowed to tap over onto the ground which had been disked the previous "round." A good harrowing followed the seeding, as with the other strip of ground.

With the first system of seeding, the ground was not worked sufficiently to form a good seed bed; in fact, there were small strips of ground all over the field (points between where the two sections of the disk ran) that were not worked up at all. Not only this, but most all of the seed which fell on these strips bounced off. Thus many strips across the field had no oat plants whatever on them, giving a streaked appearance, and cutting down the yield materially. On the other hand, much seed fell into the furrows cut by the disks running near these skipped strips of ground, and here some of the grains were covered too deep for a "surface" growth like oats. Besides, when all the oats came up there were too many of them along these furrows to promote proper development.

Again, this single disking left a ridge thrown up where the two outside disks turned the soil outward, and this very rarely was entirely smoothed down by the subsequent harrowing. Also, this was another point at which there was apt to be a thin stand of oat plants.

On the second strip of land in this experiment, the stand of oats was more uniform than on the first, because of the fact that every inch of the ground was worked up evenly. Still, many of the seeds were covered too deep by the double working of the ground, and in case the weather was cold and damp for any great length of time about the time oats were sown, rot would be sure to set in with much of the deep-covered seed.

Many farmers disk the ground and cross disk in sowing oats, but this is less desirable than the lap disking, since the latter method leaves the ground smoother for subsequent working and harvesting of the grain, while the former (cross disking) leaves it rough and uneven.

After many experiences with variou methods of seeding oats I employ one plan exclusively, as follows:

The ground is lap disked, double worked, before the seeding (not seeded, then disked, as many do). This gives a surface which, while evenly worked, still contains depressions of about the proper depth for the seed to lodge in and be harrowed under. The method also insures a more uniform stand of plants than any of the others, thus giving a heavier yield of grain; while the smoothness of the ground for the promotion of harvesting is another point in favor of this method of seeding.

The lap disking also furnishes a much better surface for the teams to walk over than the other plans; in fact, there is one-half the time during which half of the horses walk on unworked ground. This rests them greatly. Ease of riding for the driver is an important item in this connection, also.

This plan of lapping half the disk in preparing corn ground for oats has much to recommend it and unquestionably the labor involved will pay handsomely in increased drop. Sowing by broadcast method without first putting work on the surface means invariably a very uneven stand. There will be plenty of bare places in a field so prepared, and it may be depended upon that where no oats make their appearance there will be plenty of weed growth. It is true, however, that where the drill is used we can sometimes get along by doing less work on the surface because the disk drill will burrow down and find a lodging place for every kernel that is seeded.

KEYES BARN ATTRACTIVE.

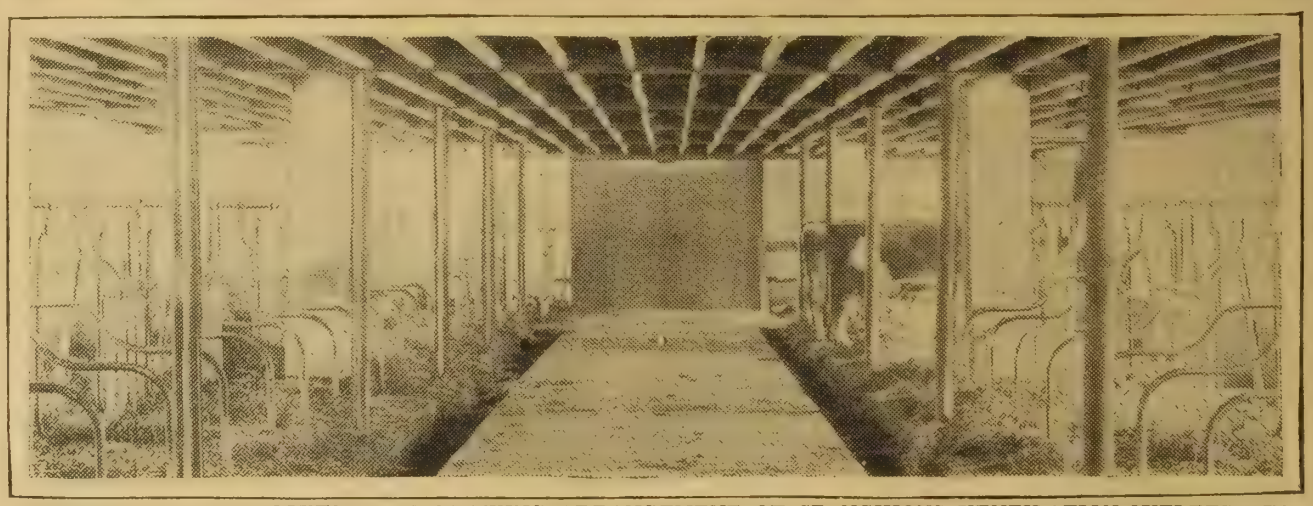
Richland County Son of Successful Farmer-Father Builds Dairy Barn Along Unique Lines—Has Ventilation System and Modern Barn Equipment—Something About the Construction.

THE NEW CEMENT STUCCO FINISH BARN AND SILO OF MR. C. GLENN KEYES, RICHLAND COUNTY, WIS.

WHEN son succeeds father on the home farm one usually looks for those changes and improvements inspired by youthful enthusiasm. Not that the old home, the old barn, the old cows, are not good enough for the son. But youth remembers "father's start" and father's success after years of constant effort. And youth is anxious to give expression to his ideals just as father did, and, in short, to "make a success on his own hook." Just a year ago C. G. Keyes, better known to his intimate friends and neighbors as Glenn Keyes, succeeded his father, C. B. Keyes, on the old Keyes farm in Richland county, a few miles from the county seat, Richland Center, Wis. After thirty years of service on this farm Mr. Keyes has retired to the city to enjoy the fruits of his labor and his son has taken up the work where he left off. This work Glenn Keyes assumed with considerable pleasure, as in passing to him the farm passed to the third generation. His grandfather cut the Keyes farm from the woods in the pioneer days of Richland county. Born and reared on this farm, Glenn Keyes takes therein great pride. His years of experience as a boy under the direction of his father he has supplemented with a course at the college of agriculture. Today he has the opportunity to apply his own ideas and adopt his own methods while his father sits by and watches him work out his own success.

THE SILO.

The farm consists of 345 acres, lying in the fertile valleys that abound in Richland county and 170 of these 345 acres are under the plow. From the day that Mr. Keyes can remember there have been milk cows on this farm, his father starting with the old Durhams, while the son is working rapidly to the strictly dairy breeds, having chosen the Holstein. The elder Keyes succeeded admirably with corn and grains, but it remains for the son to start the alfalfa fields and adopt the newer things in agriculture that are expected to increase the farmers' profits. Seven acres of alfalfa last year yielded about three and one-half tons per acre in three cuttings. Mr. Keyes desires more alfalfa, say twenty acres, and this he will use to supplement the corn and grain crops which will be continued, for these are indispensable on any farm. So it was with many new ideals that Glenn Keyes assumed the management of the farm, and it was a very pleasant afternoon which an editor of The Wisconsin Farmer spent recently with Mr. Keyes on his farm. One of the first improvements planned and carried out was the building of a new dairy barn. The old barn which had housed the good old productive Durhams of his father was no longer sufficient to house his rapidly increasing herd of Holsteins. The elder Keyes had left this task to the son and when the son went at it he determined upon one thing—that the new barn should be as comfortable a cow home as it is possible to build.



INTERIOR VIEW OF KEYES BARN, SHOWING ARRANGEMENT OF STANCHIONS, VENTILATION OUTLETS, ETC.

ONE OF MR. KEYES' TWO HERD BULLS.

Mr. Keyes went at the barn-building game with two things in view. One was to erect a modern, well-ventilated, well-lighted, commodious barn. The other was to make this barn artistic and pleasing to the eye and an ornament to the farm, and this he accomplished without much added expense. First his barn must be practicable and substantial and secondly pleasing to the eye. So many lose the artistic touch in barn construction that it is indeed a pleasure to see a barn well designed and architecturally correct. The usual thought is that a barn is merely to shelter the stock and little attention is paid to the exterior appearance. But with Mr. Keyes it was different. He desired a barn which would attract attention.

His first decision was to make the exterior of cement in the pebble-dash finish. Then he decided that instead of putting all the loft windows in the gables that he would put in dormers in the roof at the top of the pitch, as this would lend much to the artistic outward appearance. Then came the correct location of the silo and proper treatment of the windows. The result is a stucco finish barn that is something out of the ordinary and one of the show barns of Richland county.

Mr. Keyes, in building this barn, broke away from many of the established ideas, and after a winter's use he is convinced as to the practicability of his own plans, worked out according to his own ideas. One departure from the majority of the barns is the foundation, which does not extend to the top of the windows, as is so frequently the case. This foundation is only eighteen inches deep and eight inches thick and the basement walls are of the ordinary house construction. The foundation is of concrete and on top rests the 2x6 studding, eighteen feet high, which forms the wall.

For an outside wall there is metal lath, nailed directly to the studding and plastered with cement which is finished in the pebble-dash effect. This is built the same as residences finished in cement exteriors.

The inside wall is of tar paper, lath and plaster, the same as a residence wall. The tar paper is nailed directly to the studding, covered with a patent

lath and this plastered with a wood fiber plaster that is white and easy to care for. This inside wall finish is carried to the basement ceiling and thus provides a basement wall with a six-inch dead air space. Double glass single window sash are used, which

THE KEYES HOMESTEAD, COMFORTABLE AND HOMELIKE.

not only tends to keep the barn warmer but keeps the frost off the glass. The construction, with the dead air space, Mr. Keyes found very satisfactory during the past winter, which was unusually cold, and with perfect ventilation the barn was kept warm and entirely free from frost and odors of any kind.

The exterior cement wall carries up to the roof, but it is not finished inside about the floor of the hay loft. Eighteen-foot 2x6 studdings were used with 2x8's doubled for the main posts. The

THE BARN AND SILO FROM ANOTHER ANGLE.

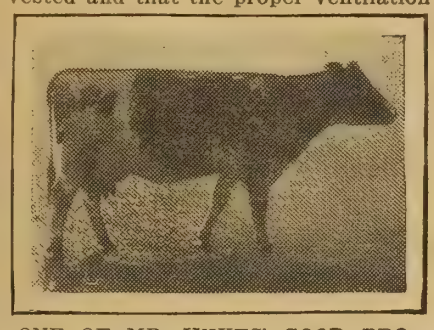
studding rests on the eighteen-inch concrete foundation and on top of the studs rests the eighteen-foot rafters that form part of the hip. The barn is 36x98 feet, inside dimensions, and the silo, built of concrete, is of the double wall type and is thirty-six feet high and fourteen feet in diameter. A ladder on the outside assists in going to the top whenever this is found necessary. The exterior of the silo is also finished in the pebble-dash stucco style.

Mr. Keyes told the writer that the cement stucco finish was not so expensive as he presumed it would be and he urged every farmer considering building to figure on cement exterior as well as other materials. "I estimate it cost me about $200 more than the next cheapest exterior material," he said, "and this will soon be offset by the fact that the barn does not have to be painted. The painting upkeep expense will be very little, as the trim is all that will require painting."

It must be borne in mind that Mr. Keyes secured his sand from a river a few rods from his barn and did all of the hauling himself. This lessened the expense, but he estimates that the difference would have been less than $700 had he bought all of his sand and gravel and hired the hauling done, as he figured on various kinds of construction. The total cost he estimates at about $5,000.

Ventilation, interior arrangement of stanchions, stalls, feed bins and equipment were next given his attention.

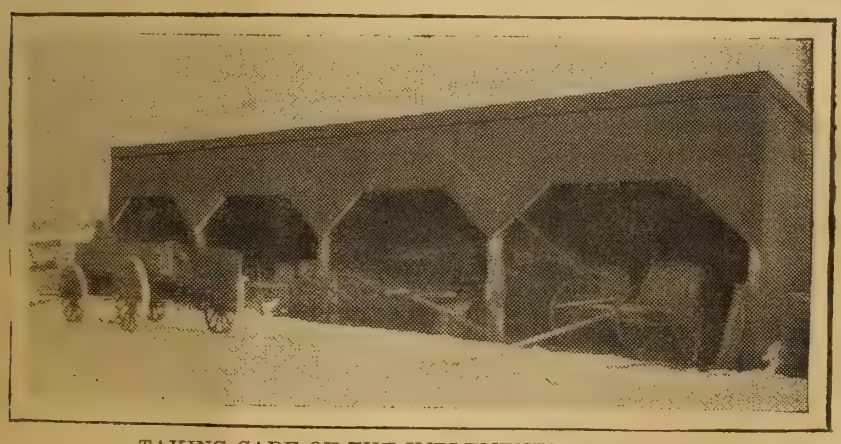
The King system of ventilation is used throughout and it has worked splendidly and to his entire satisfaction. There is the required number of windows for the cow capacity of his barn and six drops connected with the aerators provide the required ventilation, while the windows flood his entire barn with sunlight. It cost Mr. Keyes about $360 to install his ventilating system and he told the writer that he considered this money well invested and that the proper ventilation



ONE OF MR. KEYES' GOOD PRODUCERS.

of his barn was worth far more than the ventilating system cost.

The fresh air is brought into the barn through the outside wall registers, which are shown below the windows in the illustration accompanying this article and the foul air taken out through the aerators. The interior view of the barn, shown herewith, was taken the afternoon the writer visited Mr. Keyes. The photographer used a flashlight and the success of the ventilation system in this barn is indicated by the fact that the barn was cleared of the smoke from the flash-



TAKING CARE OF THE IMPLEMENTS IN WINTER.

light in less than five minutes without opening a single window or door. Our readers who have been present when flashlight photographs have been taken and where ventilation was poor can appreciate this, as it sometimes is an hour or more before a small room can be cleared of the smoke. During the winter Mr. Keyes found it necessary only on one or two days to close any of the registers in the north wall to regulate the cold air and that was when the mercury dropped to 20 degrees below zero. The barn sets east and west and it was never necessary to close all of the north wall registers or any of the south wall registers.

The equipment throughout is modern in every respect and the loft has a capacity for 150 tons of hay. This is in addition to the grain bins which are at the west end, while the silo is at the east end. Chutes operated by slides bring this grain down to the basement so that it is convenient to feed and an elevator has been provided for lifting the grain after harvest into the bins.

Mr. Keyes chose to face his cows to the light instead of towards the center. He has a center driveway which is eight feet two inches from gutter to gutter. Along each wall and back of the concrete feed mangers he has a four-foot feed alley. This manger is separated with steel divisions that lift up so that the entire manger can be flushed and cleaned. The gutters connect with tiling at the lower end and will empty into a manure pit that is the next improvement so that none of the fertility from the barn will be wasted. This summer he plans to build a concrete milk house on the end opposite the silo.

The dormer windows in the roof add much to the outward appearances of the barn and have the added advantage of flooding the entire loft with sunlight. Mr. Keyes figures that they cost more than gable windows, as they are set in on the pitch of the roof and require little extra work to build.

These improvements are not the only new ideas he has carried to the farm. His father sold whole milk, but he is now separating, selling the cream at just as much profit and keeping the skim milk on the farm for his calves. Mr. Keyes is not much of a swine man and believes the only use for the hog on the dairy farm is to eat the swill and the waste, as to his mind the value of a hog is determined entirely by what he will bring as pork.

Mr. Keyes now has a herd of about fifty registered Holsteins. He is gradually getting into the dairy breed entirely and in his herd are representatives of the Korndyke, Ormsby, Johanna and De Kol families. His senior herd sire is Johanna Rosella Pontiac De Kol, a son of Johanna Pontiac De Kol and a daughter of Aaltje Salo Rosella. His junior sire now in service is Sir Johanna Bouheur Ormsby, that is out of Pietertje Maid Ormsby and sired by Johanna Bouheur Champion.

Let These

NORTH DAKOTA Battleships Protect Your Prosperity

Here is North Dakota's *invincible Preparedness Fleet* in one town of less than one thousand population—giant elevators which house the farmers' grain.

Why don't *you* come and enjoy this protection with our North Dakota farmers? PREPAREDNESS with them means more acres of grain, more live stock, comfortable homes, schools and churches. NORTH DAKOTA is coming rapidly into its own. The 1915 crop of grain along the Great Northern Ry. in that state amounted to more than EIGHTY-SIX MILLION bushels. The acreage of corn and alfalfa is increasing enormously every year. This means stock raising, combined with grain growing, for bigger and steady profits. Dairy and live stock products have more than doubled in the past few years.

Are you farming on high-priced lands? Then read of results on low-priced land in North Dakota.

M. C. Crockett, one of our big farmers writes:—"I came from Iowa to North Dakota—came from a good stock country, and I have always kept a good herd of cattle and some hogs, and know that all kinds of live stock can be profitably raised here just as well as in Iowa. I now own 2080 acres which I have added to my homestead as I could pay for it, and I figure my soil and farm just as good as they have in Iowa for $200 per acre. And farm is not for sale."

Medium-Sized Farms Pay Best

Joseph Kasal is a 160-acre farmer in North Dakota. In 1915 he threshed from 127 acres in grain, wheat, 1,743 bushels—oats, 841—barley, 813. Cows, pigs and poultry supply the table necessities.

The Great Northern Railway has no land for sale in North Dakota, but there are hundreds of large farms like Mr. Crockett's and larger—there is a great amount of land owned by non-residents. We are interested in having these large farms divided into 160 and 320 acre working farms.

If you own or rent high-priced land, you will be interested in learning what our North Dakota farmers are doing on land equally productive, but which costs only about one-fifth as much and may be secured on very easy terms. In fact, what is ordinarily paid by renters will make the payments on a North Dakota farm.

"See America First" GREAT NORTHERN RAILWAY Glacier National Park

North Dakota Bulletin FREE

Write for free bulletin and map and facts about the soil, affidavits of crop yields, experience letters from actual settlers. We will assist you in every way possible in finding a suitable location in any part of the state and our services to you are FREE. Special Low Fares for Home-Seekers. Write today. Address me personally. E. C. LEEDY, General Immigration Agent, Dept. 216 Great Northern Railway, St. Paul, Minn.

MEMORY JOGGER

I will send this today to E. C. LEEDY, General Immigration Agent, Dept. 216 Great Northern Ry., St. Paul, Minn.

Please send me free booklets and full information regarding money-making farms along the Great Northern Railway in North Dakota.

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This dressing will keep the leather in your work shoes soft and strong, protect it from barnyard acids, keep out water.

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The Tanner's Own Dressing, is made in the tannery from the animal greases used in heavy leather. Give your shoe dealer's name.

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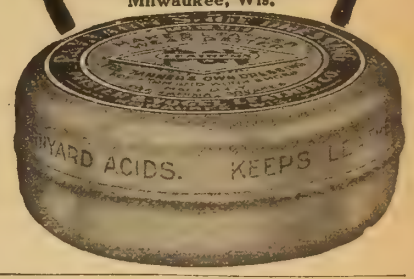

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Varied Farming and Co-operation

Address by B. F. Harris, of the American Bankers' Association, at the Banker-Farmer Conference in Madison This Week.

THE dawn of the new agriculture has broken on nearly every section of this great nation, and if one of its searching rays, more than another, has lighted up and wakened up most farms and farmers, it is that of diversification.

Diversification is the biggest single factor in soil rejuvenation and maintenance; in the eradication and prevention of soil and crop pests; in insurance against much of the loss and vicissitudes of uncertain seasons, weather and markets.

In practical effect it is simply putting your eggs in a number of baskets; distributing your work and risks through all the seasons and farm opportunities, with no tremendous effort and concentration—no big gain or loss at any one time or in any one thing, but with somethig doing, something going to market and some profit coming in all the time—the steady, sure pull.

Diversification is not narrow or limited in its meaning as is rotation. Rotation in farming simply means changing the character of the crop grown on the soil each year, while diversification means all of this and in addition opens up the great field of animal husbandry and every development and change to which the farm may be susceptible.

It seems to me that the honest, conscientious and co-operative interest of the country banker has done, should and will do greater service to the cause of better agriculture than any one agency. The banker's advice and counsel are sought after, appreciated and usually followed.

It has been demonstrated that no system of rotation alone can build up soil fertility, but that it should have live stock, diversified farming, to bring better results—to make a better farm and profit, a broader farmer, and to interest the sons and daughters.

Of course, anybody is supposed to be able to run a farm whether he can run anything else or not, but I believe it is becoming clearer every day that farming is a man's job—that it takes a bigger man to run a farm to its possibilities than to run the average place of business in the town.

Many farmers are on the dead line—they need the counsel and aid of their banker to help them put their farm on a diversified basis—to make it a profit earner.

It is really up to the country banker to make the advance—to help the honest, capable, industrious farmer get the results that are so near at hand and that should be cashed in for the welfare of the general community, as well as for that of the particular individual.

Every farmer must have one or several cows, if for no other reason than to provide necessary milk and butter. The average cow is nondescript; she does not pay for her feed and her calf is of the same variety. If we cannot have a better cow to start with it is an easy matter, by breeding, to get a cow whose milk will more than pay for her keep and whose heifer calf can follow in her footsteps or the steer calf sell as a yearling feeder at a good profit.

Diversification means, and my whole point is, that the average farmer should not overdo or go too far or too largely into any one crop or feature of farming. No farm work can add to soil and bank reserve like properly conducted and remunerative dairying. Selling butter fat, machine separated, rather than the whole milk keeps practically all the soil fertility at home. The milk separated from the cream does wonders for the pigs and calves, balanced up with other feeds.

The cattle business of this country can't be built up, our meat can't be raised, our shortage made up in any sudden or wholesale way, but only slowly and through the aid of each and every progressive and wise farmer following such a plan.

Present grain farming methods become a liability, eating into the soil reserve and reducing land values, while live stock, or dairy farming in particular, becomes an asset, returning to soil fertility at least 85 per cent of the production.

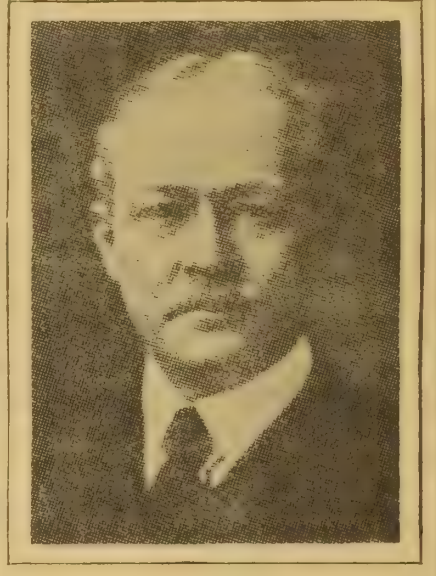
Each farm must be more of a factory—selling less crops and more meat, milk, butter and eggs. A ton of butter carries away but 6 cents from the farm fertility, while selling the feed required to produce the ton carries away $374.67. There are $161.22 worth of soil fertilizing elements in the feed we ship off the farm, which if fed would produce a ton of beef and then only $21.99 in fertility would leave the farm.

The utilization of these facts has helped make prosperous the farmers and doubly fertile fields of Denmark, Germany and other wise nations. The great states of New York and Wisconsin are beginning to appreciate these facts. The average farm in New York contains 102.2 acres, has an average of seven cows and makes a dairy products' income of $360.89. The average Wisconsin farm has 118.9 acres, with 8.3 cows and a $304.12 dairy income.

Every state, every farm neighborhood, has an opportunity to double or treble the number of hogs and cows on each of its farms and add literally millions to its income and soil fertility.

The regular weekly or monthly dairy pay checks help maintain farming on a cash basis and banish much of the rural credit talk.

I have yet to see a dairy community that is not unusually prosperous. It



B. F. HARRIS,
Chairman agricultural commission, American Bankers' Association.

is a crop that does not fail—the element of speculation is eliminated.

The silo, alfalfa, the cows and pigs are the four sure cornerstones of farm profit and fertility. There is nothing to be compared with it.

With all these attractions and profitable processes going on, with the tractor and other interesting labor and profit-saving devices the whole family lends a hand and the old farm comes into its own as the greatest and best place God ever made.

Dairying teaches detail, care and thoroughness—the fundamental principles of every business on earth—and makes a better farmer; it helps bring good roads and gives daily contact with the outside, which helps to break the routine of farm life.

The farmer cannot get along without a separator—that tremendous aid to profitable dairying. There is no substitute for good milk and butter and the demand grows faster than the supply.

Minnesota and Michigan show respectively gains of 96.5 per cent and 74 per cent during the same period, and even old New York, who used to lead, shows 36.7 per cent gain.

Every township should have its farmers' club; every country town its commercial club; and these, with the country bankers in the vanguard, should be working to build up diversified farming and every phase of rural life—for farming is a life as well as a business and must be made more likable, as well as more profitable.

All these agencies should be working to bring in the best breeds of milking and beef stock, horses, hogs and sheep; to encourage the building of silos, the introduction of every modern tool and appliance; and ways should and can easily be found to finance these things.

Such stock, equipment and appliances are all highly productive, bringing an immediate and increasing income, and when manned or backed by a competent farmer or his wife, are excellent security for any merchant or bank and are the advance agents of prosperity and the beginning of real agriculture.

[Editor's Note.—Mr. Harris, who is president of the First National Bank, of Champaign, Ill., is also chairman of the agricultural commission of the American Bankers' Association. He was one of the principal speakers at the banker-farmer conference in Madison this week, a full report of which will be made in the next issue of The Wisconsin Farmer.]

Practical Farm Buildings.

To the Editor:—In spite of its drawbacks, there is very little doubt but that wood will remain the principal material for farm buildings for at least another generation. It is so readily obtainable in most localities and has become so firmly established in the minds of multitudes of people as appropriate dwelling houses, barns and other rural structures that it will probably continue to lead all others for many years to come.

Our forests are receding. Good lumber is constantly becoming scarcer and more expensive and our national losses by fire (resulting chiefly from the employment of wood in construction) are appalling. These facts are responsible for the increasing popularity of brick, stone, concrete and sheet metal and it will be more and more the case that our cities and large towns are constructed wholly from unburnable materials. Conflagrations are one of the horrors of our great cities, and, of course, the close crowding of a great number of buildings multiplies the danger of fire. On the other hand, the almost entire lack of fire-fighting apparatus in the rural districts is responsible for the complete destruction of many buildings, which, having once caught fire, are burned to the ground. Every progressive farmer should build not only his dwelling house but also his barns and sheds with the idea prominently in mind that an attack by the fire fiend is not at all improbable. This means a much greater employment of fire-resistant construction.

A great deal may be accomplished in this direction by the employment of sheet metal roofs even upon frame buildings, since these will not take fire from sparks and brands and will operate to some extent to smother a fire in the interior. Another great improvement over the house-building methods of forty years ago is the use of metal lath in place of the old-fashioned wooden supports for the plastering. Some of the worst fires start as the result of a defective chimney and travel in the interior of the partitions, burning laths and joists, until entirely beyond control. This sort of danger is, of course, wholly done away with by the use of metal lath.

Corrugated galvanized iron is a very practical form of construction as roofing and siding for store houses, wagon sheds and hoghouses. Where these structures are of sheet iron it is often possible to confine a fire to the wooden building originally attacked and to avoid the Belgiumlike desolation of farmsteads, where dwelling houses, barns and sheds have all alike been swept away.

The desirability of sheet metal construction, however, depends upon the length of service which may fairly be expected. Many farmers have good reason to be shy of so-called "galvanized iron." Much of this material by reason of a high content of impurities is viciously attacked by rust and corrosion. Scientific researches of the past ten or fifteen years have clearly established the fact that the secret of the remarkable durability of the iron of 100 years ago was its high purity. Numerous analyses show that material usually had a very low content of such impurities as manganese, carbon, copper, sulphur, etc., all of which are likely to be rather high in the products of modern steel furnaces.

As a result of investigations instituted by the United States Department of Agriculture methods were developed for the production of iron in open hearth furnaces of a purity equal to or greater than that of the old-time puddled iron. This iron has been very extensively employed for corrugated culverts and in this form has given very good service, resisting the corrosive action of the elements in a manner very similar to that of the old-time pure iron. Neither the old or the new is rust proof, but the manner of their rusting shows a striking similarity. The coating of rust which accumulates on a sheet or plate of such material, when deprived of any protecting coating and exposed to the elements is very fine and even and closely adherent to the base. For this reason it acts to some extent as a protective coating somewhat after the manner of the rust which attacks sheet lead. Of course, this protection is not absolute and indeed the new pure iron is for most purposes given a coating of galvanizing. The relation of high purity iron, either old or new, to the ordinary commercial products may be compared to that of a cedar fence post as contrasted from one made of maple or birch. It will give much longer service in any event, but this service is still further increased by a good protective coating which, of course, absolutely preserves it for quite a length of time.

Durable construction is a mark of the progressive farmer. The man who always avails himself of the discount for prompt payment of taxes and who buys tools and materials where spot cash means a saving, who never employs hand labor for anything which can be more efficiently and economically done by machinery is the sort who will build his dwelling of stone or brick, if possible, and roof all his buildings with fireproof and long-lived materials. Paul H. Weston.

Wages of Male Farm Labor.

Farm wages advanced slightly during the past year in the principal grain states and remained stationary or declined slightly in the cotton states. The higher grain prices and lower cotton prices influenced such changes. During the past year there was less scarcity of farm labor than during a number of preceding years. For the entire United States wages per day of male farm labor increased about 1 per cent during the past year and averaged about $1.47 without board and $1.13 with board. For labor hired by the month the rate without board increased during the year 27 cents, to $30.15, as compared with $29.88 last year. Rates with board, which is the more general method of hiring, increased from $21.05 to $21.26, an increase of 21 cents. Wages have been tending upward almost steadily since 1894. The increase in the past five years is about 10 per cent and in the past twenty years about 65 per cent.

Farm wages vary widely in different sections of the United States. Thus, wages per month with board averaged $23.71 in the New England states, $24.78 in the east north-central states, $27.38 in the west north-central states, $33.50 in the far western states, $15.01 in the South Atlantic states, and $16.16 in the south-central states. Generally speaking, the wages tend to increase in going from east to west and in going from south to north. These estimates are based upon reports from correspondents of the bureau of crop estimates.

For Killing Insects.

Formaldehyde is worthless as a fumigant for killing insects, warns J. G. Sanders, state entomologist of the department of agriculture.

Many people have the notion that the formalin of formaldehyde fumigation used in disinfection for infectious diseases also is good for killing household insects and the result has been much waste of time, money and considerable disappointment.

A druggist in one of the cities of Wisconsin recently recommended formaldehyde fumigation for killing moths in a general store. The cost of the treatment recommended would have been about $40.

The storekeeper, however, wrote to the state entomologist for information and as a result saved $40 and made use of a treatment that rid his store of moths.

The state entomologist welcomes all inquiries concerning matters in his department, and all inquiries are given prompt attention.

Keep the Spring Pig Growing.

A Balanced Ration Is the Thing---Digestion Troubles Come From Failure to Comply With Simple Feeding Principles.

MOST of the successful hog raisers have found that the great essential of success is to keep the pig growing rapidly from the day it is weaned until selling time. The care of the sow and pigs before weaning time has no place in this article. Most farmers have good luck with pigs until they are weaned. Often the runts are started on their career of misery a short time after they are removed from the sow. The recipe for making runts from pigs is exceedingly simple and easy to understand. Get the pig's digestive system upset by giving the wrong ration; keep the animal in unsanitary surroundings; give it water once every two or three days and a perfect specimen of a runt will result. But the average hog raiser is more interested in a "growthy" pig than in a runt.

THRIFTY PIGS MAY BE RUNTED QUICKLY BY IRRATIONAL FEEDING METHODS.

Milk makes the best ration for the young pigs after their removal from the sow. If no milk is at hand, or if the supply is not sufficient, a slop had better be mixed. The water used for this purpose had better be lukewarm. Cold slop, especially in chilly weather, is not good for the animals.

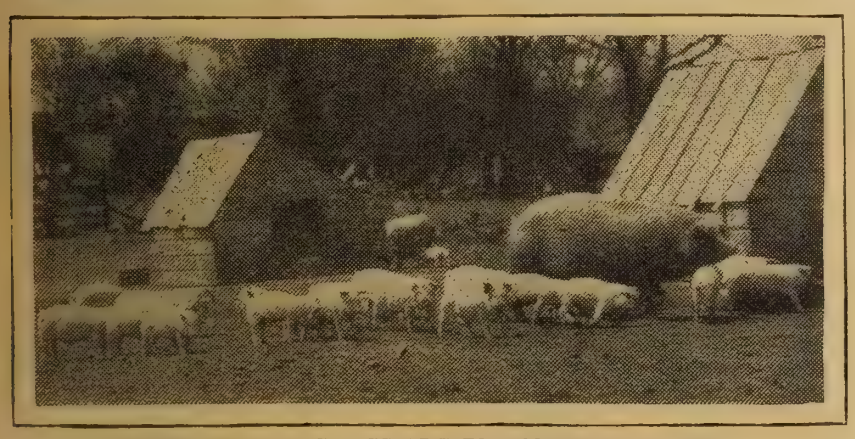
Shorts, bran and oil meal are mill feeds from which a good slop can be made. At first take 70 per cent shorts, 15 per cent bran and 15 per cent oil meal. Mix the mill feed with sufficient water so the slop is not much thicker than milk. It is better to feed a small amount frequently than a large amount at long separated intervals.

After a week or so the pigs will forget they ever had a mother. They should receive corn every day. As a general rule chop is the best for young pigs. A shallow trough filled with shorts and placed where the pigs can reach it easily is an easy method of feeding the chop.

While most hog raisers prefer to give the pigs slop or milk after they have been removed from the sow, many men who have excellent success believe that dry feeding is the better method of feeding after the pigs have become used to doing without their mothers' milk. Giving a balanced ration of dry feed is one of the best methods of feeding.

A balanced ration always gives the greatest amount of growth. One very successful hog raiser gives a balanced ration of dry feed throughout the summer. At the same time the pigs run upon the alfalfa pasture and have an abundance of fresh water. The chances are all in favor of this farmer's pigs making a profitable growth. Some hog raisers feed corn chop, shorts and tankage. This combination is a good one. When giving these feeds they should be mixed in the proportion of about 65 per cent corn chop, 25 per cent shorts and 10 per cent tankage.

There are other farmers who give oil meal in preference to tankage. The usual method of mixing the dry feeds when oil meal is given is to use about 60 per cent corn chop, 20 per cent shorts and 20 per cent oil meal. The farmer can soon decide which ration is the cheapest in his case. Tankage is the highest of any of the feeds as far as price in proportion to quality goes, but it should be remembered that tankage is 60 per cent protein. A small amount at a time is sufficient. Oil meal comes next in line. Oil meal sells cheaper than tankage, but oil meal only contains about 32 per cent protein. Shorts sell cheaper than oil meal, but shorts contain not more than 15 per cent protein on the average. Oil meal and shorts contain fiber and a certain per cent of fat which adds value to their feeding qualities.



GROWTHY YOUNG PIGS ARE THE MONEY-MAKERS.

Alfalfa has the reputation of being the best hog pasture which can be grown, but alfalfa is not a perfect food for hogs. Pigs that are forced to get their living from an alfalfa pasture, no matter how good a pasture it may be, will not make the speedy growth which hog raisers desire. However, alfalfa pasture, when used along with the balanced grain ration, will give at least as good results as any green feed. The more successful hog raisers have a few rules which they take into consideration when pasturing alfalfa. One of these is to fence the alfalfa field into several divisions. It is much better to fence a ten-acre field into three divisions than to have the hogs running over the whole pasture at once. One farmer believes in having several small pastures. He has better success at raising hogs than the average man, so it seems his methods have some system. A little study of the matter will convince any farmer that the small pastures are the best. The hogs can be turned into one pasture, then when they get it eaten down they can be turned into another. The first patch will grow up again while the hogs are pasturing elsewhere. When this method of pasturing is carried out the animals always have a supply of succulent feed and the alfalfa plants do not get killed out by the continual tramping. Alfalfa requires a rest occasionally.

If a farmer has no alfalfa he should not let this fact keep him from raising hogs. There are other crops which make excellent pasture for the animals. For this purpose rape is regarded highly by many hog raisers. There are a few rules which should be kept in mind when sowing and pasturing rape. Rape makes an exceedingly cheap hog pasture. From four to six pounds to the acre will insure a good stand when the seed is sown broadcast.

The variety of rape most widely grown for hog pasture is the Dwarf Essex. The ground should be plowed deeply and thoroughly harrowed before the seed is sown. The best results from the rape crops will be obtained if the plant is sown early. It may be sown about any time during the spring and summer, but early sowing is usually preferable. However, there are many farmers who sow the rape at different intervals. Then they have a fresh pasture for their hogs when the old one is done for. Small pigs can be turned upon the rape while the plants are quite small, but large hogs should never be allowed upon it until the plants are at least a foot in height. However, the other extreme should be avoided, viz., allowing the rape plants to get so large and coarse that the hogs will not eat them.

AFTER A FEW WEEKS WEANED PIGS FORGET THAT THEY EVER HAD A MOTHER.

Some farmers believe it is a good plan to drill the rape seed in rows. These rows may be drilled from twenty to thirty inches apart. When this method of planting is followed about two or three pounds of seed to the acre will be required. This method of seeding has some advantage. If the ground where the rape is planted happens to be foul with weed seed some cultivation can take place between the drilled rows and the weeds be exterminated. When the rape is in rows cultivation can be accomplished after the hogs have the plants eaten down. Rape which is cultivated will grow up much more rapidly than that which receives no cultivation. Some farmers get as much as three good crops from the same patch when careful cultivation is practiced. However, when the farmer has plenty of ground the successional seeding plan will provide plenty of pasture.

Many successful farmers sow a mixture of rape and oats for an early pasture. This is a good plan. Oats are relished by the hogs. Some men seed the two crops at the same time; others prefer to sow the rape seed broadcast after the oats are up and gently harrow them in.

To be profitable pigs should make a more rapid growth than other animals. The men who depend on corn and alfalfa soon find that something is lacking. Their hogs are not developing the size and bone which they should. The absence of protein and mineral matter in the ration is responsible for the slow development of pigs. The successful hog raiser endeavors to have an abundance of protein and mineral matter in the ration which he feeds his pigs. Lime is an important mineral. It is a bone builder. The legume plants are rich in lime. Phosphorus is another important element which helps develop bone. It is found in tankage, wheat bran, etc. The main rule for the successful feeding of pigs is to give a wide variety. What one feed does not contain another will. In this manner each hog will receive the feed elements necessary for a quick and profitable growth.

The successful hog raiser knows that the building up of the pig's body is due to the elements of growth which the animal's digestive organs extract from the ration given. The careful feeder leaves nothing to chance. He studies out the ration which will give the best results in his section of the country.

Exercise and a balanced ration go together. Pure water is another important factor. A hog requires as pure water as any other animal. The successful hog raiser knows the automatic fountain is a sanitary utensil which will pay for itself in a short time. The automatic fountain keeps a supply of fresh water before the pigs at all hours.

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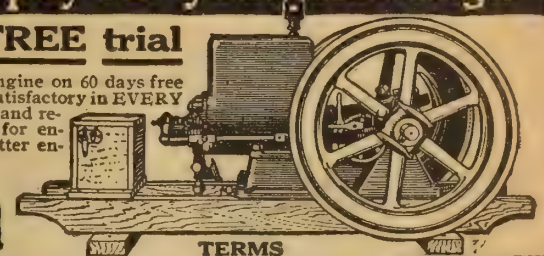
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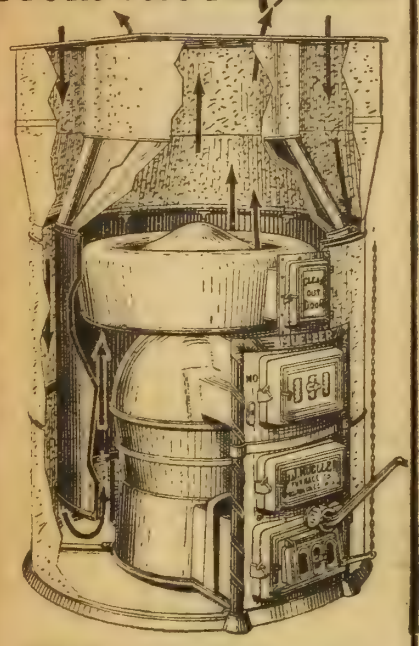

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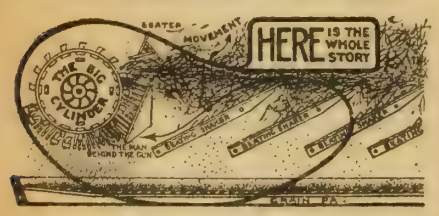

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In and Around Wisconsin

St Croix Valley Holstein Breeders and Growers of Pure-Bred Seeds Elect Officers—Other Items of Interest to Farmers.

A report from Walworth county shows 1915 seed corn testing 60 to 100 per cent and the 1914 seed averaging considerably higher.

Rusk county has another cheese factory, the third to be established in that county. It was built by H. W. Flunker, of Plymouth, and will begin manufacturing cheese on May 1st. It is located near Ladysmith.

The Jackson County Order of the Wisconsin Experiment Association re-elected the present officers for the coming year at the recent annual meeting at Black River Falls. C. S. Ristow is president; P. A. Hemmy, vice president, and P. W. Jones, secretary and treasurer.

Fred Wittenwyler, show secretary for the 1915 show of the Watertown Poultry and Pet Stock Association, has been chosen again for the 1916 show. The association now has ninety-six members. Officers elected were: President, W. F. Gruetzmacher; vice president, Arthur Heide; secretary-treasurer, T. J. Berto; directors for two years, Robert Doerr, Albert Zier, Emil Doerr.

William Wedegartner, of Manitowoc, was chosen president of the Cheese Dealers' Association at the annual meeting in Milwaukee. F. T. Pauly, of that city, was elected first vice president; C. A. Straubel, Green Bay, second vice president; A. A. Jones, Fond du Lac, secretary; P. H. Peacock, Sheboygan, treasurer; J. H. Wheeler, P. W. Wagner, B. W. Rowe, Plymouth; A. Newman, Marshfield, and the newly elected officers were chosen directors.

From all parts of Upper Wisconsin come reports of increased interest in better dairy stock and A. J. Wentzel, vice president of the United States National Bank, at Superior, Douglas county, says in a recent interview that he expects many pure-bred sires to be imported into that county this year. Mr. Wentzel reports an active demand by farmers for small loans with which to buy pure-bred sires and better females which shows that the Upper Wisconsin farmers are working for better stock. This bank recently went a step further in aiding the live stock industry by placing in the county two registered Ayrshire sires.

The Pierce County Guernsey Breeders' Association was organized recently with twelve charter members at a meeting held at Spring Valley. George Wild, of Elmwood, was chosen president; Gust Crosman, of Elmwood, vice president; Mehrie Hammer, of Rock Elm, secretary, and Russell Rudisell, of Baldwin, treasurer. Secretary Hammer writes The Wisconsin Farmer that the association starts with excellent prospects and that the next meeting will be held on June 3d at the Rudisell farm at Baldwin. Speakers have been secured and a good program will be arranged. An active membership campaign has been begun and any Guernsey breeder in that vicinity may secure full information by communication with any of the officers.

The Jackson County Journal in a recent issue refers to the experience of Jippe Wielinga, of Midway, Wisconsin, whose corn yields average more than 100 bushels an acre. The Journal notes that he has a ten-acre farm near Midway, in La Crosse county, and the fame of his little place has spread far and wide. If his farm was situated in California undoubtedly it would have long been advertised the country over as a remarkable indication of what could be done with the soil of the far West, but in Wisconsin not so much is said relative to remarkable farming exploits, so that the only advertising his farming operations have received has come mainly from the spread of his reputation as a grower of corn. Mr. Wielinga raises the Golden Glow No. 12 corn, and he has won many prizes at the corn shows. He frequently sells a couple hundred bushels for seed from his little place, the excellence of his seed causing it to bring a high price in the market. The average yield of his corn plats is over 100 bushels per acre.

The Jackson County Agricultural Society at its recent annual meeting chose Sept. 26th-29th as the dates for the county fair at Black River Falls. C. S. Ristow was re-elected president; P. A. Hemmy, vice president; J. E. Dimmick, secretary; W. J. McNab, treasurer, and George Koehler, William Mulry and W. F. Dittinger, directors.

The Central Wisconsin Fair Association, of Marshfield, received an appropriation of $500 from the common council of that city to be used for fair purposes. The early preparations are being made for the fair and this season promises to outdo anything that has been staged previous to this time. The work for this year will include the erection of a new educational building.

Vilas county boosters met recently at Eagle River and organized the Vilas County Agricultural Society, which will hold its first fair this fall at Eagle River. It was organized under the state aid law by which the state pays 80 per cent of the premium awards. Hans Hanson was chosen president; Stanley Korpal, vice president; Oscar Gunderson, secretary, and N. M. Emmons, treasurer.

The St. Croix Order of the Wisconsin Experiment Association met recently at New Richmond and elected R. H. Brunner, of Hudson, as president for another term. Mr. Brunner has been the president of this order since its organization. P. A. Paulson, of Hudson, was chosen vice president; William Schwandt, of Deer Park, secretary, and Charles R. Styles, of River Falls, treasurer. The association now has fifty-two members and an aggressive campaign will be carried on this year among the pure-bred seed growers for new members.

C. J. Galpin, in charge of the community center work with the state university, says there are few communities which have this work better organized than the one at Honey Creek, Wisconsin. This community has a fine hall and a good lecture course has been given the past season. Three basket socials were held within a month and over $200 raised. This money will be expended for community betterment. The village of Honey Creek has street lights which are paid for from the receipts of an annual basket supper and at this supper the baskets bring a good sum.

Wisconsin has added interest in the Mexican situation because a number of her own people are engaged in the fighting along the border. Some of the Wisconsin members who are officers with the army on the Mexican border are: Captain Lorraine T. Richardson, Janesville, with the Twenty-second infantry. Captain Clement A. Troth, Milwaukee, with the Eighth infantry. Captain Edward K. Masse, Green Bay. First Lieut. Charles S. Hamilton, Milwaukee, with the Eleventh. Lieutenants Harley B. Bullock, Appleton, and Jacob Gerhardt, Milwaukee, and Second Lieut. Florian Lampert, Jr., Oshkosh, with the Twenty-third. O. H. Pitz, of Manitowoc county is a lieutenant with General Funston. Joseph Kruetz, another Manitowoc county boy, was stationed at Douglas, Arizona, when the Villistas crossed the border and perpetrated the Columbus, N. M., outrage.

The St. Croix Valley Holstein Breeders' Association held its annual meeting recently at New Richmond, St. Croix county, and elected David Imrie, of Roberts, to succeed himself as president. John F. Cody, of Stanton, was chosen vice president; George H. Kruschke, of Stanton, secretary-treasurer, and John F. Kinne, of New Richmond, and Charles Sette, of Stanton, directors. The meeting was not as well attended as the officers would have liked, but those present were enthusiastic for the breed. Secretary Kruschke reported that the demand for St. Croix county Holsteins had been especially good during the last year and that three carlots had been shipped from that vicinity in addition to many animals sold privately and separately. It was decided not to attempt an association sale this spring, as the breeders do not believe there was sufficient surplus stock in the county to make it successful.

Mineral Elements in Plants.

To the Editor:—Plants, like animals and human beings, live and grow. If they live and grow they certainly must eat. This is a fact—they do eat.

About thirteen elements are found in plants, of which potassium, nitrogen, phosphorus and calcium are the most important.

Potassium is found in the stem of the plant and comes from the soil, in solution in water, into the plant.

Phosphorus also comes from the soil to the plant in the form of a salt, in solution in water. This, and nitrogen, are found in the grain or seed of the plant.

Nitrogen, in the case of legumes, comes from the air, but to other plants from the soil. Of course, legumes take some nitrogen from the soil. Legumes have on their roots little nodules which are a home for a certain kind of bacteria that change the nitrogen of the air to ammonia, then to nitrites and then to nitrates, when it is in a form available for the plant to use. This is called the nitrogen cycle.

Calcium is found in the leaves of the plant. Nitrogen is also in the leaves. Yellow, sickly leaves denote a deficiency of nitrogen.

Light, also, is needed for the growth of a plant. Light contains the coloring matter, called chlorophyll, which gives to plants their rich, green color. Light is needed too for the building up of the carbohydrates of the plant, which are formed of carbon, hydrogen and oxygen. Carbon comes from the air, the hydrogen from water and the oxygen from the air and water. Water is made up of hydrogen and oxygen.

Water is an important thing for plant growth, for besides being a plant food itself it carries most of the other plant foods in solution to the different parts of the plant. Too much water in the soil keeps out the air and air is essential for plant growth.

Now, if the plant is then fed to the animals on the farm, the plant foods will naturally be found in the manure of the animal. Here is a very important phase of farming—save all the manure carefully. The liquid manure contains the nitrogen, while the solid excreta and litter contain the other plant foods. The value of the manure depends on the age of the animal, the kind of animal, kind and amount of litter used and the care of the manure.

Many farmers are very careless in this respect. They do not carefully save the manure produced, especially the liquid manure, which is the best part of it. Losses of plant foods may result from leaching from fields or manure heaps, washing and sale of products from the farm.

Clover plowed under green is a good nitrogen fertilizer, but is expensive in some cases. Commercial fertilizers are good in some instances, but on sandy soil leaching will take place rapidly and on hillsides washing and losses will result.

Iowa Co., Wis. Edward Harrigan.

The grade in a road determines the size of load that can be pulled over it. A good way to learn the effect of grade is to ride a bicycle on the level and up different grades. It will very quickly be found out how grades effect the pull. One argument against going around a hill is that it makes the distance greater. This is not always the case. The bail of a pail is no longer when laying down than when standing up. One bad grade in a road may easily double the cost of hauling over the road. The work of grading down a hill usually costs more than to buy the land required to go around it.

Trials have been made in inoculating alfalfa with soil from a sweet clover field and from an alfalfa field. No difference was noted in increase in growth.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Auxiliary Air Cock.

Would it be advisable to put a pet cock in the intake manifold of my car for the purpose of taking in air after the motor is warmed up?

Answer.—We doubt that there is any benefit to be derived from this scheme if you have a good carburetor properly adjusted.

Coil Trouble.

We have a Buick car that ran fine until a few days ago. While on our way to town, the spark became weak and at the garage the motor would not start. They put a new coil on the dash just above the generator and the engine ran fine. The mechanic said the old coil was worthless. I took it home and removed it from the case and tried it. The engine ran fine with it. Since I put it back in the case, the engine will not run with it. What is the reason it will not work?

Answer.—Evidently your coil is all right. There is some defect in the case, probably a loose connection or a broken wire that is causing the trouble. The trouble may also be due to a "ground" or "short circuit."

Refilling Prest-o-Lite Tank.

Please advise me if it would be possible to make a pump to fill a prest-o-lite tank, using the gas from a carbide generator. My tank holds 220 pounds of gas. The cylinder I intend to use for the pump is a force pump cylinder, two and one-half inch bore, twelve inches long. Would it be possible to pump that amount of pressure with such a cylinder? Should I connect it to the tank by a pipe or a hose? I would use an engine to run the pump.

Answer.—It might be possible, but it would be dangerous and would probably be regarded by the prest-o-lite company as an infringement on their patent. If you wish to try the experiment use strong pipe for connections and be sure the piping is air tight. At best you will be risking a serious explosion.

Speed of Feed Grinder.

I have a four-horse-power McVicker engine with a sixteen-inch belt pulley; also a Storer feed mill having a twelve-inch belt pulley and eight-inch burrs. The feed mill seems to have too great a speed and the engine has to work too hard under load. How high a speed should the feed mill have? Would a ten-inch or twelve-inch pulley on the engine be better? Does a feed mill grind the most grain at a certain speed? If so, what speed?

Answer.—There is a certain speed at which the burrs will do the most work. This speed is a matter of experiment, depending to a considerable extent upon the dressing of the burrs and the grain being ground. Too high a speed causes the burrs to glaze and heat. In some cases the capacity may be increased by deepening the furrows, as a burr with deep furrows has less tendency to glaze. It would be well for you to try a twelve-inch pulley on your engine or a sixteen inch pulley on the mill.

Some House Wiring Questions.

In wiring, when using tubes, could the wires between the tubes be covered with loom to insure greater fire protection? (When a house does not require over twelve lights, would any fuse blocks be required excepting the ten ampere fuse on the main cut out, number fourteen wire being used? The circuit is 110 volts. Are twelve lights all you can have on one circuit? Is that why there must be several circuits, each one having a fuse block? I have read that there should not be over six or eight amperes on one circuit. If six amperes is allowable, would it not be all right to put tweny-five twenty-watt lights on a circuit, as they require only six amperes?

Answer.—It would be all right to cover the wires between the tubes with loom, but it adds to the expense of wiring and is not required where the wires are one and three-fourths inches from the wood. Loom is required where the wires cross a piece of metal, as a gas pipe or furnace pipe. If not over ten amperes of current is used the main fuse is sufficient under the above conditions unless there is some local ordinance to the contrary. You can use as many lights as you wish on one circuit if you do not exceed the capacity of the circuit, say, eight amperes. There may also be local ordinances regulating the number of lights usable. Some cities arbitrarily rate each socket as one-half ampere, in which case only twelve lights could be used on a six-ampere circuit. If you are wiring under such an ordinance and wish to use more than twelve lights it would be necessary for you to have two or more branch circuits, each protected by a fuse.

Removing Wheel From Shaft.

I am writing you in regard to my manure spreader. One drive wheel pulls the apron and the other drive wheel pulls the beater. I wish to take up end play on one of the shafts, but cannot remove the gear on the end of the shaft. If I could get it off, I could put in washers to take up the end play. The gear wheel is keyed on the axle by a square key. How can I remove the gear?

Answer.—First, remove any set screw or pin in the hub of the gear that may be used to hold the gear in place. Then if you cannot remove the gear by hammering the end of a piece of steel held against the hub of the gear it may be necessary to make a "wheel puller" somewhat like Figure 1 or Figure 2. In Figure 1 A is a set screw screwing into a steel bar, B. The two bolts, CC, are threaded at

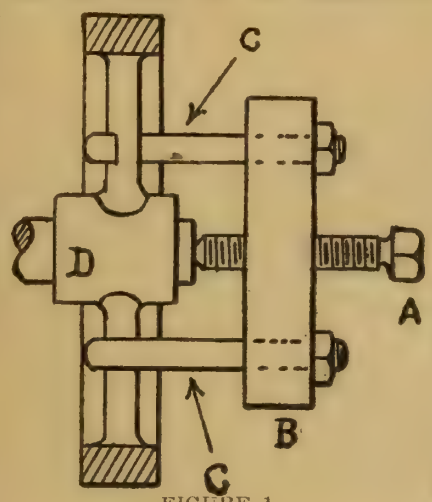

FIGURE 1.

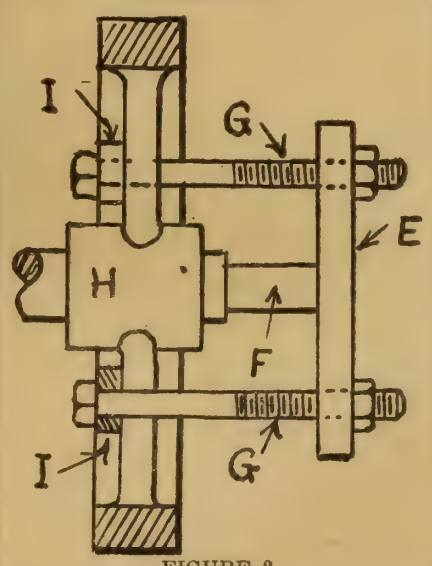

FIGURE 2.

one end and bent like a hook at the other. The hooks catch the spokes of the wheel, D. The apparatus is placed in position as shown, the end of the set screw pushing against the end of the shaft. As the set screw is screwed in the pulley is pulled off the shaft.

Figure 2 shows a somewhat different arrangement. GG are two ordinary machine bolts. II are two pieces of steel with a hole drilled in the middle for the bolts. E is a piece of steel with holes for the bolts and F is a steel distance block small enough to pass through the hub of the gear. The wheel is pulled off the shaft by tightening the nuts on the bolts.

Size of Generator.

I have a four-horse-power, four-cycle gas engine installed in my shop. It runs a sixteen-foot line shaft to which I have belted five different machines. My general store and residence are near the shop. What size generator should I use to light fifteen tungsten lamps of sixteen candle power each? I may want to install a storage battery later on. Could I use a machine strong enough to run a "movie" machine if I use a rheostat to reduce the current for the lamps? How many six-volt, sixteen-candle-power auto lamps can be operated by an eight-volt, ten-ampere generator?

Answer.—Use a 300-watt generator, about one-half horse power. Use lamps of the same voltage that is required to operate your picture machine and no rheostat will be required. Use a generator of the same voltage. It is not economical to run lights through a rheostat.

The eight-volt, ten-ampere generator would operate four fifteen-candle-power auto lights. If you have trouble with your six-volt lights burning out use eight-volt lights.

LAW QUESTIONS.

Partition Fences.

Mr. G. C. Terrell, Bora, Wis.—(1) Can I compel my neighbor who owns land adjoining mine, to build one-half of the partition fence hog tight if he does not use his land for hog pasture? (2) If an adjoining owner does not use or occupy his land, can I compel him to build half of the partition fence?

Answer.—(1) There are various kinds of partition fences declared to be lawful in Wisconsin. Some of them are hog tight and some not. You can compel your neighbor to put in half a lawful partition fence on the line, although he does not use his land for a hog pasture. A description of all the kinds of lawful partition fences is too long for these columns. See chapter 91 laws of Wisconsin, 1907. (2) If an adjoining owner does not use his land and allows it to lie open you cannot compel him to build half of a partition fence.

Establishing Road—Damages.

A Subscriber, Glen Flora, Wis.—I own eighty acres of land lying east and west in the southeast corner of a section. A public road runs north and south along the west end of my land. A neighbor owns forty acres north of and adjoining my east forty. He petitioned for a public road to his place, beginning at the southwest corner of my land, running east half a mile to the section corner, thence north a quarter of a mile to his place. I signed his petition, and said road was laid out four rods wide and takes three acres of my land, for which I paid $30 per acre eighteen months ago. I did not object to the road, but I want reasonable compensation for the land taken. The town board tells me I must take $1 per acre, or nothing. The road is not yet completed. (1) Can I stop the construction of it till I am paid for the land? (2) The road is of no special use to me. Can I compel payment of damages for the land taken?

Answer.—(1) You should have claimed damages or compensation when the proceedings were started to establish the road, but you cannot now stop the construction of it till you are paid. (2) We think you can still recover damages for the land taken from your farm for the road. You will have to employ a lawyer to compel payment of such damages.

Protection for Shoe Leather.

WE wish to call the attention of our readers to P. & V. farm shoe dressing advertised on page 7. This material when applied to work shoes will keep the leather soft, strong and waterproof, and will protect it from barnyard acids which eat leather. Every farmer should use this dressing to increase the life of his shoes and protect his feet from dampness. Cut out the coupon in the advertisement and send it to Pfister & Vogel Leather Co., Milwaukee, Wis., and receive a free sample of this shoe dressing.—Adv.

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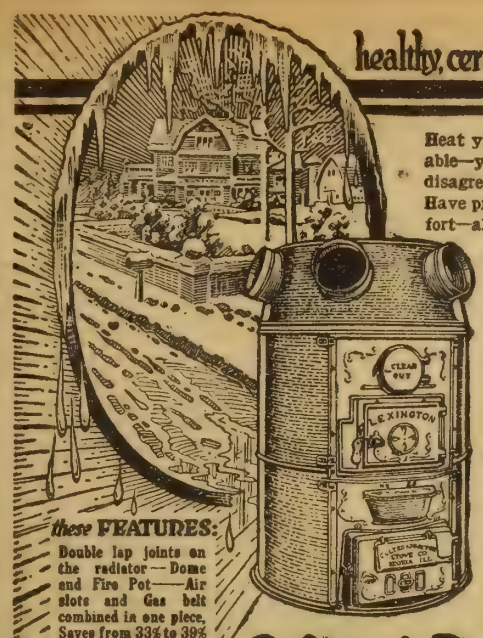

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The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Twelve Years' Alfalfa Experience in Wisconsin.

To the Editor:—My experience with alfalfa has extended over a period of some twelve years. The first part of this period was somewhat discouraging, it is true, but I feel that this is perhaps the case with most new undertakings. The early growers of this crop did not have the combined experience of the successful growers of our day to draw upon for information and hence made some mistakes that can be avoided at present by taking the best advice of successful men.

Perhaps the most common mistake in the past was to sow seed gathered from the irrigated districts of the West on soil that was not inoculated with the proper bacteria and too low in fertility. Our present practice is to obtain seed of strong vitality, grown on nonirrigated land and sow it on a well-prepared seed bed not later than May 15th at the rate of sixteen pounds per acre.

If the field to be sown has not grown alfalfa before we would sow considerably more seed than this and always take the precaution to inoculate the land with the proper bacteria. This can best be done by spreading soil from an old alfalfa field or soil where sweet clover is growing. The amount is not so particular as it is to have it evenly distributed.

It is our practice to aim to get a deeply worked, compact and smooth seed bed. To obtain this no implement, barring the plow, is better than a disk harrow. Use this freely on preferably fall-plowed land. Smooth by using a spike-tooth harrow, planker, roller or any tool that will leave a firm, smooth seed bed.

We sow our seed with a seeding attachment, such as is regularly furnished at a small extra cost with most grain drills, and mixed with from three pecks to a bushel of barley. This gives us a very good crop of barley and our stand of young alfalfa is not injured in any way.

The impression has sprung up that alfalfa, although a very desirable crop to grow, takes so much coddling and nursing it is hardly worth the extra care. In our judgment, the alfalfa plant is even more hardy than the common clovers and can be sown and handled in much the same way. Of course, one must pay more attention to having a cleaner field, free from June grass, being sure the soil is inoculated and giving the small seedlings every chance to grow and develop, for while the older plants are very hardy and will stand much abuse the small plants are somewhat tender.

All efforts to obtain a good stand may fail if alfalfa is sown on sour or soggy land, and, as it is quite useless to try to make it grow on the latter kind of soil, land that is well drained should always be selected and if the soil is sour this should first be remedied by liming. Our land is reasonably free from acid and well drained.

P. A. Paulson.

Polk Co., Wisconsin.

Experience with Kherson Oats.

To the Editor:—I have grown Kherson oats for the past eight years. In that time they have always yielded as well as the later varieties and three of these years they were much better. In 1914 when rust and blight caught all the oats in this vicinity the Kherson oats were harvested before they were affected and our yield was ninety bushels to the acre. In 1916 when late oats were lodged badly with late storms the Kherson oats were in the shock. Not only that but they were as good as barley to use as a nurse crop for clover or alfalfa. So farmers who do not wish to grow barley may grow Kherson oats instead. Also where a large acreage of oats is grown the Kherson helps to divide up the harvest, as they are fully two weeks ahead of most oats. They are also good for the rich soils, as they are short in straw. The berry of the Kherson oats is medium size, but has a very thin hull. There is fully 2 per cent less hull on Kherson oats than the Swedish Select. For the past two years because we have been unable to get men to put up good stacks we have done our threshing from the field or shock. Since we have gotten into this habit we have always gotten our grain in in fine shape. The grain is all capped when shocked, with a well-spread bundle. The shocks are made of eight bundles and one cap, making nine bundles in all. Some years we did not profit much by the cap bundle, but in a wet season like 1915 it has saved enough grain to pay for the extra labor of capping for ten years.

THRESHING ON H. E. KRUEGER FARMS.
Threshing from the shock—note the wing-feeders on thresher. The pitchers do not have to go near the machine, but can keep away out of the dirt.

GOOD STAND OF ALFALFA.
This field on the H. E. Krueger farm, Dodge county, produced 106 bushels of Kherson oats to the acres. This picture was taken four weeks after the oats had been harvested.

H. E. Krueger.

Beaver Dam, Wisconsin.

Institute Work.

To the Editor:—The regular winter season of farmers' institutes closed on March 10th. No "round-up institute" was held. That annual feature could be held in one place only and cost the state anywhere from $550 to $750, a sum which would defray the expenses connected with twelve or fifteen regular institutes and reach that many communities. In view of the fact that not all of the places which apply for institutes can be satisfied in any one year it would seem that it would be wise policy to spend the money which was spent upon the "round-up" on at least a dozen of the places which are ordinarily denied institutes.

A new feature of this institute season has been the endeavor to make the institute work more immediately effective by securing the names of farmers who have signified their desire for assistance with special problems. Over 400 names are card-indexed in the office of the superintendent and an effort will be made to assist these farmers specifically with reference to their problems. So far as practicable these projects will become the basis of future demonstration meetings.

A number of letters have come to the superintendent from people who have attended this season's institutes and these letters have commended very heartily the work of the institutes. Almost without exception the desire has been expressed for institutes in these same places next year. The superintendent has received some very thoughtful comments and suggestions looking towards the improvement of the institutes. From these there would appear to be a growing demand for a somewhat different type of institute. Farmers' institutes began at a time when few people thought that there could be any educational work connected with agriculture. Thirty years of preaching better things and better practices among the rural folks have brought about a marked change in the attitude of farmers towards agricultural education, so that now there is coming the demand for knowledge concerning the scientific background of successful practice and for a more intense and specific treatment of farm problems.

It is the desire of the superintendent to try to satisfy this new and growing demand. Before anything like success in this undertaking will be realized we must expect to experiment a little and the experimenting will begin at once. Ten one-day institutes will be held at Necedah, Arkdale, Grand March, Endeavor, Westfield, Coloma, Bancroft, Wild Rose, Plover and Amherst. Only one crop, potatoes, will be considered at these institutes and something specific and definite will be secured in organizing the farmers in these communities to improve potato production to their greater profit. Whatever is started at these institutes will be followed up during the summer and will result in definite education and accomplishments.

This summer the superintendent hopes to assist with several better-colt institutes, to carry on several farm demonstration institutes and to put on several one-day women's institutes during the canning season. These canning institutes will be carried on with the view of saving a great deal of valuable garden food which now goes to waste and to secure a more diversified winter diet on the average farm.

The superintendent desires that the institutes assist in special work like organizing cow-testing associations, breeders' associations, better-poultry clubs, community clubs, colt shows, pig shows, county fairs, and wherever local and special needs appear.

But to inaugurate the new farmers' institutes in accordance with the ideas of the people who have been interested and thoughtful enough to write to the superintendent, the people must signify that a number of people in a community wish a certain special assistance by signing an application for a special institute. People having in mind ways in which the office of farmers' institutes may assist them in special institutes will please write to the superintendent of Farmers' Institutes, Madison, Wisconsin, for application blanks.

E. L. Luther.

Location of Buildings and Work.

To the Editor:—The location of the buildings on a farm has a great deal to do with the time it takes to do the work. It will often pay to move some of the buildings in order to secure a more convenient arrangement. This was done on one farm with the following results. Under the old plan it required walking fifty-three miles a year just carrying in water. Under the new plan the water was piped into the house—no walking required. Bringing in the wood under the old plan required walking twenty-two miles. Under the new arrangement this was reduced to 8¾ miles. The trips made to the machine shed during the year amounted to 57 1-3 miles, by the new arrangement it was reduced to 11¾ miles. By the new arrangement the year's trips in feeding the hogs was reduced 102½ miles, and in caring for the chickens 3 miles saved. The total saving for the year through rearranging the farmstead was 217 1-3 miles.

It was also figured up and found that at giving wages that the time used in walking these 217 1-3 miles was worth $36.74. It must be remembered that it was not only a case of walking these miles but it was usually with something to carry.

W. C. Palmer,
North Dakota Experiment Station.

Had Prize No. 25 Wisconsin Corn.

To the Editor:—I herewith enclose a card showing my No. 25 corn which took first prize at the recent Madison show. This corn was grown on alfalfa sod after having been planted with potatoes for one season. It was cultivated sufficiently to keep free from weeds and retain the moisture. Seed was selected promiscuously from the entire field during husking season, and from this was selected the best ten ears.

MARINETTE COUNTY MAN'S CORN AND TROPHIES.

F. E. Lueke.

Marinette Co., Wisconsin.

Three hundred and seventy dollars in prizes are being offered in the fifth acre yield corn contest to be conducted by the extension department of the North Dakota Agricultural College. Boys who want to enter should write to the extension department for entry blanks and full information.

DAIRY

Rock County Report.

Although February was not an ideal month for dairy cows kept under ordinary conditions, Joseph E. Feinberg, tester for the Rock county association, writes The Wisconsin Farmer that his association that month reported ten forty-pound cows. F. O. Uehling held first place with 54.3 pounds of fat to her credit. The report:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
R. Marquart					
Johnny, G. S. H.	6	1-16	1238	3.5	43.3
H. B. Paul					
Daisy, G. H.	6	1-16	1189	3.4	40.4
J. B. Palmer					
Ann, G. H.	9	12-15	1050	3.9	40.9
Madge, G. H.	7	12-15	1143	3.6	41.1
A. Templeton					
Betty, G. H.	4	1-16	1143	3.6	41.1
J. Van Etta					
Ethelyne, A.	8	12-15	1276	3.2	40.8
H. H. Little					
Lilly Clay 4th, S. H.	7	10-15	901	4.5	40.5
Lady Mayflower No. 22, S. H.	8	11-15	1108	3.8	42.1
W. D. Austin					
Brown Sue, A.	6	12-15	1199	3.8	45.5
F. O. Uehling					
Marguerite, G. G.	7	12-15	1359	4.0	54.3

Eau Claire County Report.

E. G. Sutton, tester for the Eau Claire County Cow-Testing Association No. 2, writes The Wisconsin Farmer that twenty-three cows in his association made the forty-pound list for the month ending March 11th. The report follows:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
A. C. Russell					
R. Guern.	9	12-15	935	4.6	43.0
S. W. Halbert					
Native	4	11-15	850	4.8	40.8
R. H. Zempel					
Gr. Guern.	7	12-15	960	4.4	42.2
Frank Redlaczyk					
Gr. Hols.	4	1-16	969	4.2	40.7
Gr. Hols.	9	12-15	1111	4.0	44.4
Otto Stelter					
Native	4	11-15	1201	4.0	48.0
Native	7	1-16	1218	3.8	46.3
D. B. Strader					
Gr. Jersey	5	12-15	1165	4.2	48.9
Native	10	11-15	1074	4.8	51.5
Gr. Jersey	8	11-15	982	5.2	51.0
Gr. Jersey	6	11-15	1135	4.9	55.6
Gr. Jersey	5	12-15	944	4.8	45.3
Victory & Zell					
Native	8	12-15	1148	5.1	60.4
Gr. Guern.	5	1-16	995	5.6	55.7
Ray E. Ketchum					
Gr. Jersey	9	11-15	704	5.7	40.1
Gr. Jersey	5	12-15	725	5.6	40.6
Gr. Jersey	5	11-15	735	6.0	44.2
McCauley & Son					
Gr. Jersey	5	1-16	876	4.6	40.3
Elmer Chryster					
Gr. Guern.	5	11-15	930	4.7	43.7
Native	7	1-16	1026	4.0	41.0
Fred Gerike					
Native	9	1-16	1009	4.3	43.4
Native	9	2-16	1015	4.0	40.6
Native	7	10-15	963	5.2	50.1

Treating Affected Teats.

When a cow doesn't yield her milk in a proper manner, gives bloody milk, etc., the trouble can often be found in some disorder of the teats. In fact, it would be hard to find a dairy herd in which at least one member of the herd is not more or less affected with either leaky teats, blocked teats, sore teats or warts on the teats.

Leaking from the teats may occur when a cow is milking heavily and the periods between milking are not evenly divided, or it may be because the sphincter muscle is not properly performing its duties. As there is no remedy for this trouble, about the only thing that can be done in case conditions warrant is to place a rubber band around the lower part of the teat.

Warts on the teats do not, as a general thing, cause much trouble at first, but after they are well developed they tend to make the teat tender to handle, besides adding to the danger of increasing the possibility of contaminating the milk through infectious material which may be found upon them. The best way I know of to get rid of warts is to tie a piece of waxed silk tightly around the wart as close to the teat as possible. After a few days the wart will drop off and cause no more trouble. For the warts that are too small to tie around with silk an easy way of removing them is to touch them with a feather dipped in butter of antimony. This is very strong and care should be taken not to touch the teat at all with it. Olive oil is also good in removing warts. They are smeared thickly with the pure oil, several applications usually being necessary.

Sore teats are a difficult proposition, as milking opens the sores, and we can't allow a cow in full milk to lay off for a week or so to enable her teats to heal up. Many cases of sore teats are caused by leaving the teats wet after milking and when the cows are turned out into the lot or pasture the wind chaps and cuts the teats. The teats should by all means be thoroughly dried after milking is completed.

Here is a way of treating sore teats that I have tried and found very successful. To one ounce of glycerine add one dram of boracic acid. Mix this in one-half pint of warm water and put in a narrow jam jar. After milking put the teat in this mixture, holding the jar close up to the cow's udder, and let the affected teat soak therein for a few minutes. This mixture may be kept and used again and again. A little touch with a crystal of alum after this bath will help the more obstinate sores to heal, but care must be exercised not to apply anything that will cause the skin of the teat to wrinkle and pucker up when the sores heal. Oxide of zinc ointment, applied after each milking, is also a good remedy for sore teats.

Blocked teats are always a bother, as they interfere with the flow of the milk, and, moreover, make it very hard to strip the quarter clean. They are caused by a little ball of flesh inside. In nature these growths are very much like the warts on the outside of the teats. Some are only attached to the lining of the skin by a little string and can be pushed out of the way by the insertion of a teat syphon. Sometimes they break off and come away of their own accord. I have seen the more obstinate ones removed by the use of a large-sized milk syphon with one side filed to a sharp edge in exactly the same manner as an apple is cored with a patent corer.

The syphon is held in the right hand and the teat held extended in the left. After the syphon is introduced into the teat it is slowly turned around, with the sharp edge against the lump. It is a simple little operation and yet it is easy to lose the quarter in performing it. The syphon must be sterilized in boiling water before being inserted, and every precaution should be taken to insure absolute cleanliness. There will be a little blood come from the teat and this should be milked out and the teat syringed out with a 7 per cent mixture of boracic acid and warm water. The lining of the teat will soon heal, so long as it is kept free from germs. This can only be done by keeping everything spotlessly clean. No one but a competent operator should attempt to cut away these lumps in teats, otherwise more harm is apt to result than good accomplished.

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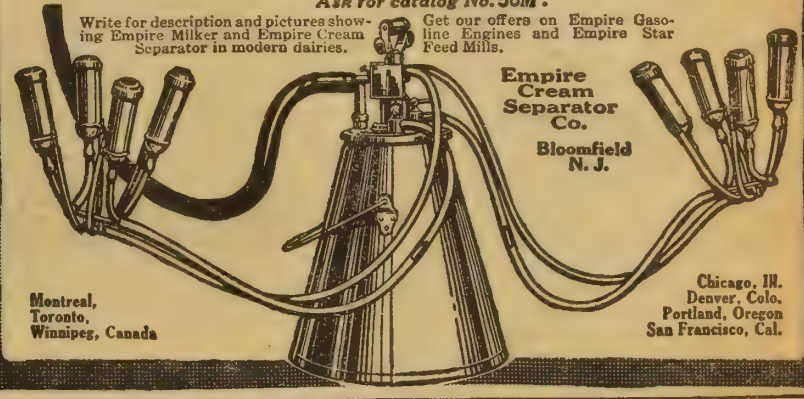

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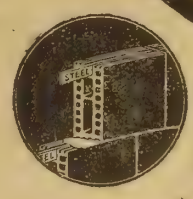

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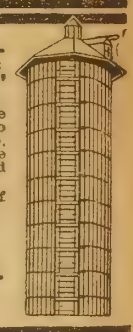

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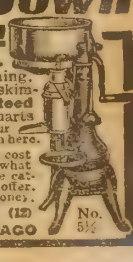

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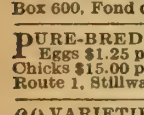

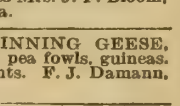

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50 VARIETIES Chickens, Bronze White Holland, Bourbon Red Turkeys, Toulouse, Embden, African China Geese, Pekin, Rouen, Indian Runner, Muscovy Ducks, Guineas, Incubators and Brooders. Catalog 2c. **THEO. FRANZ, Box 104, Mankato, Minn.**

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WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

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FROM my heavy winter-laying, money-making S. C. and R. C. Strains. Our capacity tripled for 1916. Quick shipment via p. post, W. F. express or American express to any point in U. S., $2 per 15. **R.E.Daly Poultry Farm, Necedah, Wis.**

BARRED Rock eggs 15, $1.50; 30, $2.50; 100, $7.50. From quality birds with size, breeding and barring. Prize-winners. Our egg customers are not disappointed when chicks are grown. 19 years a breeder. Guarantee fertility. Circular free. S. V. Latcham, Cottonwood, Minnesota.

WANTED TO BUY EGGS from thoroughbred fowls, turkeys, Toulouse Geese, Pekin Ducks, Indian Runner Ducks and Buff Orpington eggs. Elmer Skink. 511 S. Tenth St., Lyons, Iowa.

SILNER WYANDOTTES. "The Aristocrats." Eggs from the grandest matings on earth. My mating list tells all. It's free. Write for it. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

WINTER LAYERS Large type, strictly business strains, S. C. W. Leghorns. Eggs, stock, chicks. Satisfaction guaranteed. Certified Egg Farm, Madison, Wisconsin.

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P.W. Condon, West Chester, O.

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HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

PURE-BRED WHITE and BARRED ROCKS. Eggs $1.25 per setting prepaid; $5.00 per 100. Chicks $15.00 per 100. Address Mrs. J. F. Bloom, Route 1, Stillwater, Minnesota.

60 VARIETIES PRIZE-WINNING GEESE, ducks, turkeys, chickens, pea fowls, guineas. Stock; eggs cheap. Write wants. F. J. Damann, Farmington, Minnesota.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

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MY S. C. REDS ARE MONEY MAKERS. Eggs postpaid, prices right, circular free. Mrs. G. Ellis, West Salem, Wisconsin.

MY S. C. REDS won highest state honors. Rose and single comb; eggs $2.00; cockerels $3.00. Wm. Wichern, Baraboo, Wis.

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Green Feed For Geese.

To the Editor:—As it is the time of year when geese are beginning to lay I will try to tell you something about my flock. My geese have already commenced to lay. I got the first egg February 27th. I always mark the date on the egg so as to be sure to set first the ones laid first. I keep the eggs in the basement in a pan of oats and turn them every other day and have kept them this way for two weeks and in some cases longer. You can test the eggs after they have been set on for ten or twelve days and if they are clear throw them away or boil them for the young chicks. There is no use in keeping a hen sitting for four weeks on an infertile egg. Some sprinkle the eggs, but I have found it best to leave them entirely alone. After hatching the hen will care for them for awhile, but not for long, as they wander away and do not do well shut up in a small place. Any pasture except clover is good for them Dandelions, beet tops, lettuce, radish tops, etc., are very good for them. When I first started to raise geese I asked a German lady what to feed them and she said "green, green, everything green." That advice I have found to be very good. Feed corn meal night and morning until nearly grown when they eat whole corn. Close them in a small place a month or six weeks before selling and fatten on corn meal. Keep the old geese for breeding purposes and always get the largest and best. Young geese are very tender and must be kept warm and dry and clean, especially where they roost. With a little good care geese are very easy to raise.

Mrs. A. L. Lackey.

Walworth Co., Wisconsin.

GEESE ON MRS. A. L. LACKEY FARM, WALWORTH COUNTY.

Losses by Vermin.

To the Editor:—If through the columns of your paper you can agitate and spur neglectful poultry keepers to the true realization of the woeful loss sustained by the scourge of vermin in their flock of chickens you will indeed be an angel of mercy to the poultry industry and in addition add many dollars to the already billion-dollar output from the hens of the United States.

The duty of keeping poultry free from vermin is as important as it is unlovely. It certainly is one of the very disagreeable pieces of work one must perform if he practices thrift in his poultry raising. Thrift will get you further up life's ladder than any other quality and waste will carry you down faster."

It surely is a great waste to allow lice on the hens or mites in the poultry house.

No doubt there are many good remedies. We have tried a great many things, but we cannot say that we have tried all the good remedies. Sufficient for us that we have found something that does the work effectively and with very little effort compared with others we have used.

Perhaps the best help of all is the fact that we never neglect to look after this trouble systematically and keep eternally at the prevention rather than the cure.

None of us like to believe that vermin has invaded our flock and it takes some time to convince a disbeliever that it really is lice or mites, often both, that are spoiling his profits and consuming the feed that should be making eggs to furnish his table and pay for groceries.

Chickens will leave a henhouse containing mites and roost on fences, wood piles, trees or anywhere to escape the nights of horrid torture by mites.

As the mites stay in the coops and houses, secreting themselves in every crack and crevice, convenient for their night raids on the helpless birds, it is the houses and coops we should doctor for mites. Purchase a good preparation for spraying and a small spray pump. We paid 40 cents for one about six years ago and it is in good condition today. We use a liquid lice killer. It is absolutely sure death to mites and it never freezes nor clogs the spray pump. It is not very expensive and always ready, but it must be used and not looked at, simply.

It takes less than a minute every time the dropping boards are cleaned, twice a week at least, to spray about the walls adjacent to the roosts, the dropping boards and roosts. If this practice is continued the year around there will never be a mite about those premises so treated.

If one begins spraying at once in a perfectly new house as they should do the preparation referred to above may be diluted one-fourth with kerosene, but if your poultry house is infected with vermin use it full strength for a year to be perfectly safe before you begin diluting it.

It is very true that farm flocks, as a rule, are much more free from lice than are those confined in limited quarters.

A hen prefers to be clean. She will take frequent earth baths and delights in the fine moist dirt. If you doubt it prepare a nice bed for flowers or vegetables and then allow your hens to get onto it for a few minutes and see what they will do.

Most hens will rid themselves of lice if given the opportunity.

We can have the largest, finest matured pullet that can be raised and if she becomes lousy, with no opportunity to clean herself, she will become inactive, light weight, eat much more than she would ordinarily and lay but few eggs, if any at all.

It would surprise us to know how much valuable chicken feed goes to satisfy lice and mites every year, when this food should be producing eggs and meat, all because of improper methods and a hopeless inertia to concern ourselves with the proper care of our birds. There are a great many good lice powders on the market and we have used several varieties with more or less success.

The one we use is liquid and is easily applied, does not poison the hen or subject her to the annoyance that dusting her with powder does. This is also a good cure for scaly leg. It removes cancer. By oiling the white spots they will come off in a few hours.

The same liquid also must be applied often for lice if not done carefully the first time. We have found it safe in the flock if used once in three months.

The greatest satisfaction comes in its use with sitting hens. We apply it to the broody hen two or three days before giving her the hatching eggs. We mix it with lard and rub her head thoroughly with it the first and third week while she is sitting. After the chickens are hatched I use the preparation with half lard on the baby chick's head and under the beak on the throat. After such treatment they will go through the season to the end of the year without further trouble provided they are not allowed to mix with other birds in doubtful condition and their coops and roosting shelters kept properly sprayed.

When the hot weather comes again and the birds are not on free range there is apt to be trouble.

We always go through the flock thoroughly before making up the breeding pens. It is safer not to start in the season's business with these lurking terrors to contend with. A thorough search may hold a surprise for you.

If you have not taken the proper precautions and you find your baby chicks have lice on their bodies (because body lice and head lice belong to two different families) sift lice powder over them and work it all through their down, the lice will drop off and this will not leave too much strong powder on the body of the little chicken.

Carry thrift into your poultry raising as you do in all other lines of business that are carried to success, and do not waste your profits in feeding millions of lice and mites every year. Take warning and look out for Mrs. Louse. She is waiting for our 1916 flock of youngsters and she'll say to us what Mike did to Pat.

Mike and Pat had not been on the best terms of friendship and Pat was going away. On the day of his departure, meeting Mike, he said, "Good-by to you, Mike, and bad luck to ye," to which Mike replied, "Good-by to ye, Pat, good luck to ye and may both our prayers miss."

Mrs. A. J. Schloerb.

Winnebago Co., Wisconsin.

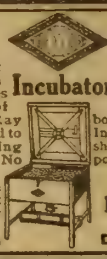
Tells why chicks die

Write today for the poultry expert's valuable free book, "White Diarrhoea and How to Cure It." This book contains scientific facts on White Diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every batch. The valuable book is free. Send your name and address for it now. S. J. REEVES, 9483 Reefer Building, Kansas City, Mo

One Gallon Oil

Heat Underneath

DUPLEX Central Heating Plant squarely underneath—heat ascends—takes up proper amount of moisture from X-Ray Generator, is carried to all parts of hatching chamber uniformly. No cold sides or corners. Put a gallon of oil in X-Ray tank, light lamp and forget. Only 1 filling of tank required for entire hatch



Biggest Hatches

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FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

Sparrows and Tuberculosis.

In investigating poultry tuberculosis at the North Dakota Experiment Station twelve sparrows were fed one meal of chopped tuberculosis chicken liver. All the birds died with generalized tuberculosis, two in seventy-three days, two in seventy-five days, one in 100 days, one in 104 days, one in 105 days, one in 118 days, one in 128 days, one in 131 days, one in 186 days and the last one in 202 days.

Fruits and Garden

Tobacco Seed Beds.

Sterilizing tobacco seed beds has been found profitable in Connecticut, Pennsylvania and Wisconsin, and there are many advantages in the practice which recommend it. It is certain to destroy the weeds, and in this way saves much labor by avoiding hand weeding. According to tobacco specialists in the department, it is also the most effective remedy for root rot and other fungous troubles. This disease is receiving much more scientific attention now than in the past, and it has been learned already that the damage which it does is much greater than was formerly supposed. The sterilization of the seed bed effectively protects the tobacco plants in their earlier stages.

The sterilization of the tobacco field itself is, of course, an impossibility in practice. If the plants, however, can be kept free from disease in the seed bed, their power of resistance will be greatly strengthened in the field. In Connecticut it has been found that the cost of sterilizing, when the necessary apparatus for it is at hand, is less than the cost of labor involved in weeding the seed bed. This does not take into account the extra safeguard afforded by sterilization against fungous troubles.

These can be guarded against in the field to a certain extent by crop rotation, but economic conditions do not always make rotation possible in the case of tobacco. This is especially true in New England, where shades erected for the tobacco fields make the use of the land for any other purpose impossible.

In the South an imperfect form of sterilization has been practiced by tobacco growers for some time. It is the custom to burn over the seed bed, and in this way the surface for a depth of two or three inches is sterilized. This method, however, requires much fuel, is likely to damage the soil, and is less certain in results, so that in the opinion of the government specialists it would pay tobacco growers to invest in an effective sterilizing apparatus. In many cases the purchase of the outfit or its operation could be handled on a community or co-operative basis to advantage.

The outfit should consist of a portable steam boiler which will maintain a pressure of not less than ninety pounds, and steam hose with the necessary connections. In addition, there should be a pan six by ten feet square and six inches deep fitted with a nipple for the hose connection. A tight wooden box of about the same measurement is equally effective.

When the seed bed has been fertilized, spaded, raked smooth, and made ready for sowing, the sterilizing box or pan is inverted well into the soil. Steam is then turned on and kept at a pressure of at least ninety pounds for about thirty minutes. In computing the pressure of the steam, however, it must be remembered that the pressure of the boiler is by no means the measure under the pan. The size of the pipe and the distance of the pan from the boiler must be taken into consideration. A convenient way of gauging the actual pressure at the seed bed is to notice whether or not the pan shows a tendency to rise. If it does there is sufficient pressure to force the steam downward through the soil.

Another very simple but effective method of ascertaining whether or not the sterilization has been done properly is to place an ordinary potato from four to six inches under the soil. If this is thoroughly cooked by the steam it is safe to assume that all the other smaller seeds and germs in the soil have also been destroyed. After the portion of the seed bed covered by the pan has been sterilized the pan is moved on and more of the soil subjected to the same treatment. It is desirable to cover the steamed soil with burlap in order to hold in the heat as long as possible.

For some hours after treatment the seed bed is, of course, too hot for planting. It is, indeed, probable that the best results under some circumstances will be secured by not planting for a period of ten days after sterilization. On the other hand, this affords an opportunity for reinfection of the soil unless the beds are effectively covered; and, furthermore, the necessity of getting the crop started may make this delay most inadvisable. Sterilization should never be attempted when the seed bed is wet, as it requires very much more steam under such circumstances than when the land is dry. For this reason it is sometimes necessary to put off sterilization until quite late in the season. On the whole, therefore, it is perhaps better to plant as soon as the bed has cooled off. The plants may not grow well for some days thereafter, but, once started, they will do much better than in an unsterilized bed. It should be remembered that effective steaming causes the surface soil to dry somewhat more rapidly, so that watering just after planting may be necessary.

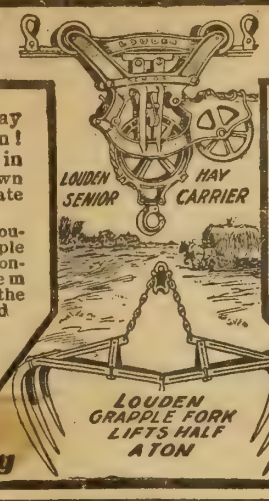
When apparatus for steam sterilization is not available the treatment of the bed with formalin (two quarts of 1:50 solution per square foot) is sometimes substituted when root rot or other diseases are present. This, however, is not so satisfactory since it cannot be relied upon to destroy the weeds. It is essential that the formalin vapors be allowed to escape before sowing the seed.

Spraying Table.

WHAT?	WHY?	HOW?	WHEN? 1st Spraying	WHEN? 2d Spraying	WHEN? 3d Spraying	REMARKS
Apple	Scab	Bordeaux mixture	Just before blossoms open	Just after blossoms drop	10 days after 2d spraying	
	Codling moth	Arsenate of lead combined with Bordeaux	Just after blossoms drop	10 days later	Last week of July or 1st week of August for 2d brood	1st and 2d spraying same as 2d and 3d for scab; merely add arsenate of lead to Bordeaux
	Oyster shell scale	Lime sulphur 1 part L. S. to 6 of water	March or early April but before growth starts			Do not use lime sulphur, 1 to 6 on growing plants
Cherry and plum	Mildew and shothole fungus	Bordeaux mixture 3—4—50	When leaves are about 1-3 grown	10 to 12 days later	10 to 12 days later	
Currant and gooseberry	Mildew, blight and currant worm	Bordeaux and arsenate of lead	When leaves are fully developed	2 to 3 weeks later		
Grapes	Mildew and Anthracnose	Bordeaux	Before leaf buds open	2 to 3 weeks later	3d, 4th and 5th application at intervals of 2 weeks if required	
Strawberry	Leaf-spot or blight and leaf eating insects	Bordeaux and arsenate of lead	When first leaves appear	After blossoms fall		
Raspberry and blackberry	Anthracnose and fungous diseases	Bordeaux	As above	2 weeks later		Spray new growth after fruit harvest

[Prepared and distributed by the Wisconsin State Horticultural Society of Madison, Wis.]

LOUDEN HAY TOOLS



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You can do it with Louden Hay Tools. Simple design and strong construction make them trouble-proof, even in the hands of inexperienced help.

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The Louden Senior Fork Carrier and Balance Grapple Fork make a powerful combination. They handle half-ton loads safely and easily. Work well in any kind of hay—long, short, dry or green.

Try them out this season. They'll save you time, labor and expense. They'll help you save the crop!

THE LOUDEN MACHINERY CO.
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1705 Court Street
Fairfield, Iowa

Ask for illustrated catalog.

"Everything for the Barn"

SEED CORN

Testing 95%. A limited amount of genuine 1915 Godard's Silver King grown here (fifteen miles from Minn. line) and picked before the frost, now drying in our new brick seed house. Also Choice Silver King grown by others. Have drying also the following varieties of fancy seed ears: Minnesota, No. 13; Wimple's Yellow Dent; N. W. Dent. We also have several lots of fancy 1914 seed corn. If preferred, we can furnish our Minnesota patrons with choice seed grown in the latitude of Northfield, Minn. We give you all the time you need after receiving the seed to test it and satisfy yourself of its high quality, and will promptly refund your money if dissatisfied. Write today for our "Guaranteed Seed-Corn" prices and descriptions.

THE ADAMS SEED COMPANY BOX 50, DECORAH, IOWA

The Threshing Problem Solved

Threshes cowpeas and soy beans from the mown vines wheat, oats, rye and barley. A perfect combination machine. Nothing like it. "The machine I have been looking for for 20 years," W. F. Massey. "It will meet every demand," H. A. Morgan, Director Tenn. Exp. Station. Department 14. Koger Pea & Bean Thresher Co., Morristown, Tenn.

SEED CORN Disco Buy Quick Save Money

LIMITED STOCK 1914 CROP AT SPECIAL PRICES

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SELECTED ears, 1914 crop. Minn. No. 13, test 93 %, $3.50; Early Murdock, test 93 %, $3.50; Northwestern Dent, test 95 %, $4.00. All home grown. Bags free. A. J. Pietrus, Sleepy Eye, Minn.

STRAWBERRY PLANTS 250 best 3 varieties $1; $3.50 per 1,000 Cuthbert Red Raspberry, $1.25 per 100. Fresh, live plants. C. R. Tuttle, Baraboo, Wisconsin.

CANADIAN FIELD PEAS for sale. Write us for prices. Address Frosch & Sons, Grimms, Wisconsin.

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Tested: Sold subject to your approval.

SAMPLES FREE ON REQUEST: Thoroughly matured, hand picked, butted and tipped; each ear critically examined as to vitality; carefully graded for edge drop planter; shows germination of 95 to 98 per cent. Every bushel sold subject to 12 days approval and if not satisfactory to be returned, our expense, and purchase price promptly refunded. Iowa Yellow Dent, Reid's Yellow Dent, Iowa Gold Mine, Early Champion White, Iowa Silver Mine, Silver King, Price of North, Dakota Bloody Butcher and all best Flint Varieties. Special Seed Corn Booklet mailed free. Send for it before you order.

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2 early; 2 Winter; 2 Crabapple. Hardy tested varieties—Kellogg's Hardy Northern Grown trees are backed by 62 years in the nursery business. Send today for this bargain collection, also our 1916 Price List of trees, shrubs and small fruit plants. It is FREE

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GALLOWAY BROS. & COMPANY
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STRAWBERRY PLANTS THAT GROW

Of well-tried-out and reliable varieties. Send for prices. Address

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ALFALFA SEED $16 per bushel. Order direct from this advertisement, as we have plots of fifty different strains of alfalfa under test which enables us to send you seed adapted to your locality. Swartz Brothers, Cornfalfa Farms, Waukesha, Wisconsin, winners of the World's Gold Medal Alfalfa Sheaf at the Panama-Pacific Exposition. Also the largest alfalfa hay growers in Wisconsin.

BEING centrally located in the clover seed section of Wisconsin, we have a large quantity of alsike, red clover and timothy seed for sale and also a large stock of alsike and timothy mixed. Our seeds are guaranteed. Every bushel is inspected by the agricultural seed inspection department. Write for prices and samples. Pickart Bros., Malone, Wis.

12 Ever Bearing Strawberries Free and 200 other choice varieties postpaid $1.25, 100 Dunlap and 50 each of two choice varieties with our book of instructions howto plant and grow them.

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2 TO 4 feet $1. Two each Dudley, Lowland, Snow, Delicious and Golden Russet. Get our fine catalog. It's free. Wisconsin Nurseries, Box 88, Union Grove, Wisconsin.

APPLE TREES 5c, WILLOWS 3 FT. 1c

Raspberries 1c, Currants, Gooseberries 5c. Everbearing Strawberries. All trees and shrubbery at a bargain. Catalog free. Mankato Nursery, Mankato, Minn.

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Also Pedigree Barley. Sacks free. Address H. P. West Ripon Wisconsin

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10,000 GALLOWAY
NO. 8 SPREADERS

This extra offer is made with the idea of getting ten or more Galloway Spreaders in every township in the next few weeks. One Galloway No. 8 Spreader always sells from one to a dozen more in the same community. That's why I make this new special offer to distribute 10000 advertising spreaders quickly

LOOK! Our new 250 page catalog. Tells you all about the special patented features on the famous Galloway Manure Spreader; how to make a spreader pay for itself in six months' time; shows why 3 exclusive Galloway patented features make the Galloway Spreader worth $50 more than any other spreader, but cost nothing extra on the Galloway; also shows full line of other Galloway implements and merchandise.

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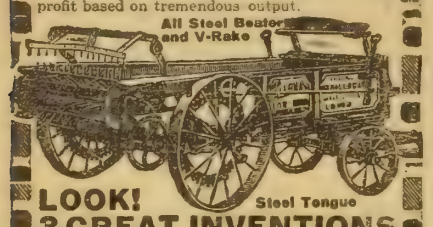
Cash or time—one year to pay—installment plan—note settlement—half cash half note—bank deposit or cash, at prices so low you cannot afford to do without a manure spreader now. We sell direct at less than wholesale from factory to farm at the actual cost of material, actual cost of labor and only one small profit based on tremendous output.

All Steel Beater and V-Rake



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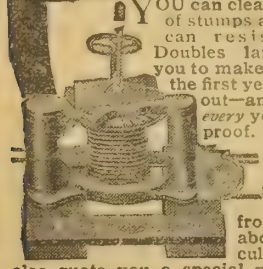

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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CHAPTER XIV.

On the Side Porch.

IN THE evening, after his work was done, a day or two after his talk with Mrs. Maxwell, Jonathan went into the house and took a long look at himself in the glass, with the satisfactory conclusion that he didn't look so old after all. Why shouldn't he take Mrs. Betty's advice and marry? To be sure, there was no fool like an old fool, but no man could be called a fool who was discriminating enough and resourceful enough to win the hand of Hepsey Burke. To his certain knowledge she had plenty of eligible suitors since her husband's death. She was the acknowledged past master of doughnuts; and her pickled cucumbers done in salad oil were dreams of delight. What more could a man want?

So he found that the question was deciding itself apparently without any volition whatever on his part. His fate was sealed; he had lost his heart and his appetite to his neighbor. Having come to this conclusion, it was wonderful how the thought excited him. He took a bath and changed his clothes, and then proceeded to town and bought himself a white necktie and a scarf pin that cost 75 cents. He was going to do the thing in the proper way if he did it at all.

After supper he mustered sufficient courage to present himself at the side porch where Mrs. Burke was knitting on a scarlet sweater for Nickey.

"Good evenin', Hepsey," he began. "How are you feelin' tonight?"

"Oh, not so frisky as I might, Jonathan; I'd be all right if it weren't for my rheumatiz."

"Well, we all have our troubles, Hepsey; and if it isn't one thing it's most generally another. You musn't rebel against rheumatiz. It's one of those things sent to make us better, and we must bear up against it, you know."

Hepsey did not respond to this philosophy and Jonathan felt that it was high time that he got down to business. So he began again:

"It seems to me as if we might have rain before long if the wind don't change."

"Shouldn't be surprised, Jonathan. One—two—three—four—" Mrs. Burke replied, her attention divided between her visitor and her sweater. "Got your hay all in?"

"Yes, most of it. 'Twon't be long before the long fall evenin's will be comin' on, and I kinder dread 'em. They're awful lonesome, Hepsey."

"Purl two, knit two, an inch and a half—" Mrs. Burke muttered to herself as she read the printed directions which lay in her lap, and then she added encouragingly:

"So you get lonesome, do you, Jonathan, durin' the long evenin's, when it gets dark early."

"Oh, awful lonesome," Jonathan responded. "Don't you ever get lonesome yourself, Hepsey?"

"I can't say as it kept me awake nights. 'Tisn't bein' alone that makes you lonesome. The most awful lonesomeness in the world is bein' in a crowd that's not your kind."

"That's so, Hepsey. But two isn't a crowd. Don't you think you'd like to get married if you had a right good chance, now?"

Hepsey gave her visitor a quick, sharp glance and inquired:

"What would you consider a right good chance, Jonathan?"

"Oh, suppose that some respectable widower with a tidy sum in the bank should ask you to marry him; what would you say, Hepsey?"

"Can't say until I'd seen the widower, to say nothin' of the bank book—one, two, three, four, five, six—"

Jonathan felt that the crisis was now approaching; so, moving his chair a little nearer, he resumed excitedly:

"You've seen him, Hepsey; you've seen him lots of times, and he don't live a thousand miles away, neither."

"Hm! Must be he lives in Martin's Junction. Is he good lookin', Jonathan?"

"Oh, fair to middlin'. That is—of course—I well—I—I should think he was: but tastes differ."

"Well, you know I'm right particular, Jonathan. Is he real smart and clever?"

"I don't know as—I ought to—to—say, Hepsey; but I rather guess he knows enough to go in when it rains."

"That's good as far as it goes. The next time you see him you tell him to call around and let me look him over. Maybe I could give him a job on the farm, even if I didn't want to marry him."

"But he doesn't want any job on the farm, Hepsey. He just wants you, that's all."

"How do you know he does? Did he ever tell you?"

"Hepsey Burke, don't you know who I'm alludin' at? Haven't you ever suspected nothin'?"

"Yes, I've suspected lots of things. Now there's Jack Dempsey. I've suspected him waterin' the milk for some time. Haven't you suspected anythin' yourself, Jonathan?"

"Well, I guess I'm suspectin' that you're tryin' to make a fool of me, all right."

"Oh no! Fools come ready-made, and there's a glut in the market just now; seven—eight—nine—ten; no use makin' more until the supply's exhausted. But what made you think you wanted to marry? This is so powerful sudden."

Now that the point was reached, Jonathan got a little nervous: "To—to tell you the truth, Hepsey," he stuttered, "I was in doubt about it myself for some time; but bein' as I am a Christian man I turned to the Bible for light on my path."

"Hm! And how did the light shine?"

"Well, I just shut my eyes and opened my Bible at random, and put my finger on a text. Then I opened my eyes and read what was written."

"Yes! What did you find?"

"I read somethin' about 'not a man of them escaped save six hundred that rode away on camels.'"

"Did that clear up all your difficulties?"

"No, can't say as it did. But those words about 'no man escapin'' seemed to point towards matrimony as far as they went. Then I tried a second time."

"Oh, did you? I should think that six hundred camels would be enough for one round-up. What luck did you have the second time?"

"Well, I read, 'Moab is my wash pot, over Edom will I cast my shoe.' You've seen 'em cast shoes at the carriages of brides and grooms, haven't you, Hepsey? Just for luck, you know. So it seemed to point towards matrimony again."

"Say, Jonathan, you certainly have a wonderful gift for interpretin' Scripture."

"Well, Scripture or no Scripture, I want you, Hepsey."

"Am I to understand that you're just fadin' and pinin' away for love of me? You don't look thin."

"Oh, we ain't neither of us as young as we once was, Hepsey. Of course, I can't be expected to pine real hard."

"I'm afraid it's not the real thing, Jonathan, unless you pine. Don't it keep you awake nights, or take away your appetite, or make you want to play the banjo, or nothin'?"

"No, Hepsey; to tell you the plain truth, it don't. But I feel awful lonesome, and I like you a whole lot, and I—I love you as much as anyone, I guess."

"So you are in love are you, Jonathan. Then let me give you some good advice. When you're in love don't believe all you think, or half you feel, or anything at all you are perfectly sure of. It's dangerous business. But I am afraid that you're askin' me because it makes you think that you are young and giddy, like the rest of the village boys, to be proposin' to a shy young thing like me."

"No, Hepsey; you aren't no shy young thing and you haven't been for nigh on forty years. I wouldn't be proposin' to you if you were."

"Jonathan, your manners need mendin' a whole lot. The idea of insinuatin' that I am not a shy young

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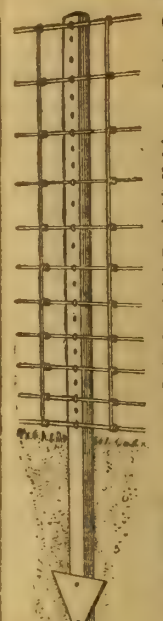

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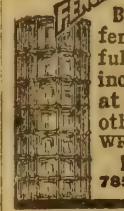

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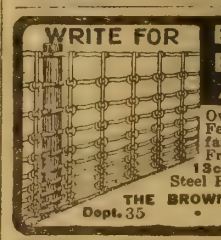

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thing. I'm ashamed of you, and I'm positive we could never get along together."

"But I can't tell a lie about you, even if I do want to marry you. You don't want to marry a liar, do you?"

"Well, the fact is, Jonathan, polite lyin's the real foundation of all good manners. What we'll ever do when we get to heaven where we have to tell the truth whether we want to or not I'm sure I don't know. It'll be awful uncomfortable until we get used to it."

"The law says you should tell the truth, the whole truth and nothin' but the truth," persisted the literal wooer.

"Now, see here, Jonathan. Would you say that a dog's tail was false and misleadin' just because it isn't the whole dog?"

This proposition was exceedingly confusing to Jonathan's intelligence, but after careful consideration he felt obliged to say "No."

"Of course you wouldn't," Mrs. Burke continued triumphantly, quickly following up her advantage. "You see a dog's tail couldn't be misleading, 'cause the dog leads the tail and not the tail the dog. Any fool could see that."

Jonathan felt that he had been tricked, although he could not see just how the thing had been accomplished; so he began again:

"Now, Hepsey, we're wanderin' from the point, and you're just talkin' to amuse yourself. Can't you come down to business? Here I am a widower and here you are a widowess, and we're both lonesome, and we——"

"Who told you I was lonesome, I'd like to know?"

"Well, of course, you didn't, 'cause you never tell anything to anyone. But I guessed you was sometimes from the looks of you."

Hepsey bent her head over her work and counted stitches a long time before she looked up. Then she remarked slowly:

"There's an awful lot of sick people in the world and I'm mighty sorry for 'em; but they'll die, or get well. I guess I'm more sorry for people who have to go on livin', and workin' hard, when they're just dyin' for somebody to love 'em, and somebody to love, until the pain of it hurts like a wisdom tooth. No, I can't afford to be lonesome much, and that's a fact. So I just keep busy, and if I get too lonesome I just go and jolly somebody that's lonesomer than I am, and we both feel better; and if I get lonely lyin' awake at night, I light a lamp and read Webster's Dictionary. Try it, Jonathan; it's a sure anti-doubt."

"There you go again, tryin' to change the subject, just when I thought you was goin' to say somethin'."

"But you don't really want to marry me. I'm not young and I'm not interestin'; one or the other you've just got to be."

"You're mighty interestin' to me, Hepsey, anyway; and—and you're mighty unselfish."

"Well, you needn't throw that in my face; I'm not to blame for bein' unselfish. I've just had to be, whether I wanted to be or not. It's my misfortune, not my fault. Lots of people are unselfish because they're too weak to stand up for their own rights." She paused—and then looked up at him, smiling whimsically, and added: "Well well, Jonathan; see here now—I'll think it over and perhaps some day before—go 'way, you horrid thing! L t go my hand, I tell you. There! You've made me drop a whole row of stitches. If you don't run over home right now, before you're tempted to do any more flirtin', I'll—I'll hold you for breach of promise."

(To be continued.)

Light seedings have given good results at the Northwest Demonstration Farm and Station at Duluth. M. J. Thompson, superintendent of the station, suggests two bushels of oats to an acre, six pecks of barley, and six pecks of rye. These, he says, should be sown with drills. In this cool climate the plants stool freely, making it possible to use a minimum amount of seed.

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Easy Housecleaning.

Housecleaning time is almost here and that means that more than one woman is dreading that annual upheaval. Of course, there is always a good deal of work connected with this process, but if it can be so arranged as to reduce the amount of labor required and avoid a state of confusion we have gone a long ways toward solving the housecleaning problem. The feeling of satisfaction one has in contemplating a fresh and shining house is just a little bit marred many times, we think, by the weariness that follows. Many of our readers, no doubt, have ideas of their own about the easiest way to do the housecleaning and we wish they would write and tell us about it.

Perhaps you know some method of cleaning the walls, windows, carpets, curtains, pillows, etc., that is better than someone else's method. Pass it along to other farm women who are just as rushed for time as you are. Tell them how you store your winter clothes in order to keep them safe from moths, how you care for your blankets, what you do with your old magazines or how you manage your housecleaning so that the regular routine work of the house goes on just the same and the family is not inconvenienced and harassed by a week or two of confused cleaning, while at the same time you yourself are not worn out by the time the ordeal is over. Here is a chance to help some other farm woman and to let some other farm woman help you.

Christianity Constructive.

To the Editor:—In a recent issue a question was asked, when to join church, and signed "Mabel." I know there are many more qualified to answer that than I, but I feel like I can't keep still.

I do not know their names or where they live or their surroundings, but want to say this much, anyone who puts off so important a question makes a great mistake. A man or woman should first be converted, then the question of when to join church and where will be solved. The longer

NADINE JANETT OVERMEYER.
A seventeen-months-old girl who fairly lives out of doors.

one puts it off the harder it is to break old habits and form new ones.

Has anyone a right to say I will do so and so when I am forty years of age? Do you know you will still be living, able bodied and able minded?

The young men spoken of in this young lady's letter as being unfaithful to the church probably never were really converted, but merely "jined the meetin' house."

It is perfectly right for young married people to be industrious and want a home of their own, but we are taught in the Bible to "Seek ye first the kingdom of God and all things will be added unto you." We may never be rich, but we can serve God and also work for an honest living. Remember not converted and become as a little child ye cannot enter into the kingdom of heaven. To get more light on this read St. John 3d chapter, also St. John 14th chapter, 12th to 30th verses.

It is all right to try to get a home and make money as long as we make it honestly. A Christian can make money just as well as a sinner. Everybody ought to be honest. God wants us to be industrious, for He gave some talents and he gave the one who made

LAWRENCE SCHIPULL AND HIS TWIN SISTERS, MARTHA AND MARIE.

this, that Christianity is constructive and infidelity is destructive. The first builds up and the second tears down. I hope and trust these young married people may accept Christ soon and become faithful workers in the church and community where they live.

Mrs. J. H. R.

Children Always Well.

To the Editor:—I have enjoyed the baby pictures so much that I am sending you a picture of our twins and little boy together. The twins, Martha and Marie, were fourteen months old at the time this picture was taken, and the boy, Lawrence, was three years old. The girls are now eighteen months old. One has light hair and the other dark. They weighed six and seven pounds when they were born and now weigh twenty-six and twenty-seven pounds. Lawrence weighs forty-seven pounds. They have always been well and happy.

I hope to see more baby pictures in the Home Department. I always enjoy reading about them.

Mrs. August Schipull.

Faith Most Essential.

To the Editor:—I noticed Mabel's letter asking if forty is the right age to join church. I say it is not, for it is too dangerous to put off such an important matter and one may not live to see forty. If he does the percentage of people who join church or are saved is much less at that age than those who are saved at the age of twenty-one. As a rule, as the age advances the heart becomes harder and one is harder to reach with the gospel message.

But joining the church is not the first step. The first thing is to get right with God. Christ says if ye are the most of his talents twice as much as the one with a few talents. Read Matt. 25.

But he says, "Seek ye first the kingdom of God and His Righteousness and all these things shall be added unto you"—Matt. 6:30. And to those seeking only riches on earth read James 5:1-6. There is danger in putting off such an important matter, for we might be cut down without a chance of getting right with God. What profit is it to gain the world and lose your own soul, or what would a man give in exchange for his soul?

If you have children they will follow in the footsteps of the father and they will need the training of Christian parents. You could not afford to let them go off in sin. God forbid, for they might be lost and take other associates with them.

Now joining the church is all right and all Christians should belong to some church and help to keep it up, but do not join a church or have anyone do so unless you are first saved. I want to say to Mabel that it is very important for her and her husband to attend Sunday school and church and read the Holy Bible. If you will do this and yield to the leading of the Spirit God will knock at your hearts, for He says, "Son, give me thine heart."

I trust there may be something in this answer or in the scriptures I have suggested that will induce Mabel and her husband to both be early seekers and sure finders of God's eternal joy.

C. H. Miles.

To Make Paper Stick.

To the Editor:—I think perhaps I can help the lady out who wanted to know how to treat her whitewashed walls so that paper would stick. If she will go to the trouble to try my way she will be rewarded for her labor. Make a thin paste with flour and cold water and add about half a cup of salt to each gallon. Then take a cloth and go over all the walls with this paste and put the paper on as you would any other wall. It is quite a job, but you will not regret it, as your paper will never come off. The walls I treated this way have been repapered many times and it has never come off.

Mrs. F. E. T.

Your Influence Needed.

To the Editor:—I wish to reply to an item in your paper of March 9th entitled "When to Join Church," a question of vital importance to every person who has not as yet made his or her personal application as heir to that mansion prepared for the faithful in the heavenly Canaan with the Christ.

First, do I want to spend eternity in hell? I believe every son and daughter of Adam would answer no.

Second, is heaven worth striving for? I believe all would answer yes.

Third, what is time? A human existence from birth until death. It is divided into three periods or divisions to all who have longevity, namely, infancy, youth and age. Each period is a representation, namely, innocence, accountability and responsibility. Christ never did nor never will punish innocence. Accountability begins when we can distinguish right from wrong yet under parental or other guardian influence molding or shaping our character. Should we join church at this period? We may if we so desire, but undue persuasion should not be used to this end. Responsibility comes to us when we are cast on our own resources and lasts until death.

This third period is one of the most importance, as it is the period when we take on ourselves social, moral, parental and governmental responsibilities. It was to those in this period of life that Christ said, "He that believeth and is baptized shall be saved." It is at the beginning of this period that our religious duties are forcibly enjoined upon us; it is at the beginning of this period that we should take up our religious duties, obey Peter's

WILLIAM JONES.
Two-year-old son of Mr. and Mrs. Geo. W. Jones. Note the white vest and kid gloves. How is that for a farmer boy?

command to the erring in Acts 2:38-39, and walk the new life spoken of by Paul in Romans 6:4. If we take up our religious duties at the beginning of this period we will have no lost time to answer for to God, but should one wait until forty years old he or

he would have several years of wasted time to answer for. Christ wants your influence. It is not so much what you do as when and where you do it that it may influence those with whom you come in contact so that they, too, may help hold high the banner of King Emanuel and His cause, the church.

Let us view the picture of the moral man for a moment. He does this or that because it is right. Does he stop to think that it was the religion of Jesus Christ and its influence which taught him thus? Does he give Christ the glory thereof? Do you think there is salvation in it? Christ says, "Verily, they shall have their reward.

G. E. Clark.

Food For Young Children.

Children between three and six years of age should be given special attention in the matter of diet. Their food should be chosen with reference to their bodily needs and should be carefully prepared and set before them in as attractive and inviting a form as possible. A child so fed should receive every day at least one food from each of the following groups:

1. Milk and dishes made chiefly of milk, which is most important of the group as regards children's diet; meat, fish, poultry, eggs and meat substitutes.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets.

The diet need not be monotonous, for many foods come under each of these five classes.

This subject is taken up by Caroline L. Hunt in a recent farmers' bulletin and a number of menus are suggested for each of the three meals. These are simple, easy to prepare and are liked by most healthy children. The heaviest meal should be served in the middle of the day. It is not wise to think of any one meal apart from the other two. It is seldom convenient to provide at one meal all the materials needed by a growing body, and those which are omitted from one meal should be supplied at one of the other meals. The menus here given are arranged with this in view. In each case enough milk should be given to make up the required daily amount, which is about a quart.

BREAKFAST.

Orange (juice only for the youngest children), farina with milk, bread and butter.

Apple sauce, oatmeal with milk, toast and butter.

Baked pears (pulp only for the youngest children), milk toast, cocoa.

Stewed prunes (pulp only for the youngest children), cornmeal mush and milk, toast and butter.

Grapefruit (juice only for the youngest children), milk toast with grated yolk of hard-boiled egg.

Apple (scraped for very little children), toast, hot milk.

DINNER.

Meat soup, egg on toast, string beans, rice pudding.

Roast beef, baked potato, asparagus, bread and jelly.

Lamb stew with carrots and potatoes, twice-baked bread, tapioca custard.

Creamed potatoes, green peas, stewed plums with thin cereal milk pudding.

Baked halibut, boiled potatoes, stewed celery, boiled rice with honey or sirup.

Broiled meat, cakes, grits, creamed carrots, bread, butter and sugar sandwiches.

SUPPER.

Baked potatoes, served with cream and salt, or with milk gravy, cookies.

Bread and milk, apple sauce, sponge cake.

Potato-milk soup, twice-baked bread, marmalade sandwiches.

Graham crackers and milk, baked custard.

Milk toast, stewed peaches, cup cake.

Celery-milk soup, toast, floating island.

Cook Berries in Small Quantities.

To the Editor:—If Mrs. H. A. will try my recipe for canning strawberries she will not have any trouble with them being too strong. We think they are fine.

For every quart of firm, fresh berries allow one teacupful of granulated sugar. Add the sugar in layers alternately with berries and allow the fruit to stand covered for one hour. Put on stove and bring slowly to the boiling point, letting them simmer two minutes. Do not stir the fruit. When done dip carefully into sterilized jars and seal. I turn the jars upside down to be sure they are perfectly sealed, then wrap each jar in paper before putting away. Do not try to cook more than two or three quarts in one vessel at a time.

Will also send a recipe for nut bread which I think is fine, especially for lunches. One egg, one teaspoonful salt, one scant cupful sugar, one cupful milk, four cupfuls flour, four teaspoonfuls baking powder, one cupful nut meats ground. Egg should be well beaten and baking powder sifted with flour. Mix thoroughly and let rise thirty minutes and bake in rather slow oven. Mrs. E. N. S.

Takes First Prize on Canned Fruit.

To the Editor:—As I was looking over the Home Department I saw the request made by Mrs. H. A. for directions for canning strawberries. I take a great interest in canning fruits, especially small fruits such as berries, and I took first and second prizes on strawberries and other canned fruits at two county fairs last fall and the year before.

I select firm strawberries. Heat jars and fill them to the rim with berries. Make a sirup of equal parts sugar and water. Pour boiling sirup over fruit, filling the jars to overflowing, and snap on the covers. Place jars in a tub or other receptacle deep enough to hold water to cover them. Pour boiling hot water into the tub until jars are submerged and allow them to stand in the water until it is cold, when the fruit will be found perfectly cooked. Berries canned in this way retain their color, shape and fresh flavor.

I have used the above recipe a good many years and have not had a jar spoil. I think it is about the easiest and quickest way to can berries, as they do not have to be boiled on the stove.

I would like very much if someone would give a recipe for a good fruit cake. Mrs. R. A. F.

Put Sugar in Paste.

To the Editor:—If Mrs. M. A. G. will put sugar in the paste for papering I am sure she will have no trouble in getting paper to stick on any wall, whitewashed, painted or kalsomined. Make the paste real sweet on the wall that has been whitewashed.

R. G. L.

Household Notes.

Dry lemon peel, grated, is very nice for flavoring sauces and puddings.

To test nutmegs prick them with a pin and if they are good oil will instantly spread around the puncture.

Paint stains may be removed from woolen fabrics by rubbing with turpentine. If the stains are old and do not respond to this treatment add ammonia to the turpentine.

White felt hats may be cleaned beautifully with corn meal. Rub the felt well with the meal and then brush out with a whisk broom. If the corn meal is dampened with a little gasoline it will do the work even better.

If the baby is afraid of the water and cries and screams when taking his bath, buy several prettily colored cork "bobbers," such as fishermen use. Throw these in the bathtub and baby will get so busy trying to catch them that he will forget to be afraid of his morning bath and even learn to like it.

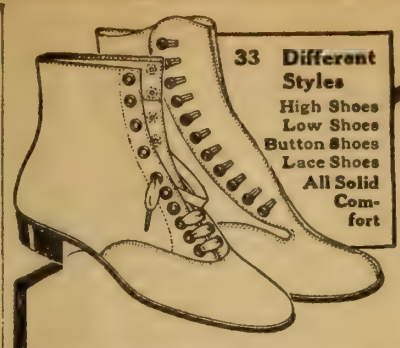
When running dates, figs or raisins through the food chopper add a few drops of lemon juice to prevent the fruit from clogging the chopper.

When potting plants put a piece of coarse muslin over the hole in the pot before putting in the bits of stone and sod, which keeps the drainage good. The muslin prevents the earth from washing away.

Milk is an absolute essential in the diet of a child and should never be wholly omitted. If it does not appear at one meal the child should by all means receive it at the next. Such dishes as milk toast, milk soups with vegetables, fish or vegetable chowders and cocoa are valuable foods and are excellent luncheon dishes. They are easily prepared and contain elements which are important to the child's proper development. Milk contains a large number of nourishing substances in forms easily assimilated, and, moreover, in some way not yet fully understood, it seems to promote growth and help the body of the child make good use of other foods. It is rich in most kinds of mineral matter, particularly lime, useful in the development of bone and tissue. The food value of skim milk should not be overlooked, for it contains a larger percentage of protein than full milk, though less fat.

A CHARMING TRIO.

At the time this picture was taken Rena, Roy and Ruth Rilea were eleven months old. They are now three years and healthier, happier little triplets you could not find.



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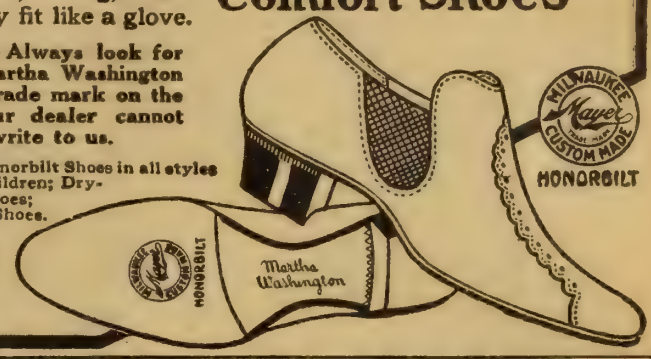
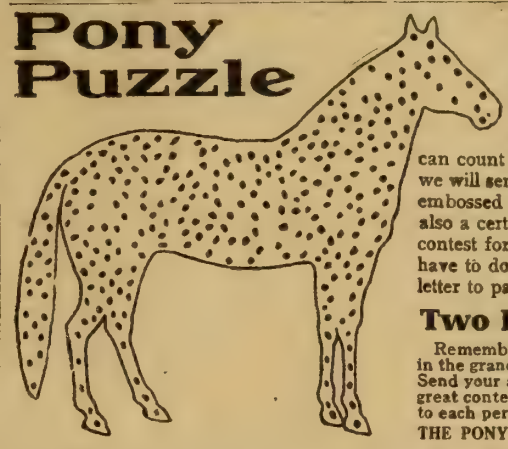


Pony Puzzle



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Here is a Shetland pony covered with dots. By being careful any boy or girl can count the dots on this pony. If you can do this we will send you as a prize, a packet of five beautiful embossed postcards lithographed in rich colors, and also a certificate for 1500 Free Votes in our grand contest for two beautiful Shetland ponies. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

Two Beautiful Ponies Given

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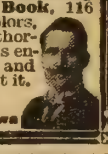

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Recipes.

Layer Sponge Cake.—Four eggs, two cupfuls of light sea sugar, a little salt, eight tablespoonfuls of water, two cupfuls of flour, two teaspoonfuls of baking powder. Flavor with vanilla. For icing beat the whites of two eggs to a stiff froth; boil one cupful of granulated sugar and one-half cupful of cold water together until it threads when dropped from the spoon; pour in a fine stream while boiling hot into beaten eggs, stirring briskly all the time.—Aunt Sarah.

Winter Cookies.—Six cupfuls of flour, three cupfuls of sugar (part sea sugar is best), one cupful of lard or butter, half teaspoonful of salt, three tablespoonfuls of sour cream, one egg and one cupful of buttermilk, one large teaspoonful of soda. Flavor to taste. Work it well with the hand and roll thin as you like. These cookies are best in cold water.—Aunt Sarah.

Lemon Pie.—One cup sugar, one-half cup water, one-half cup milk, juice and grated rind of one lemon, two tablespoons flour, piece of butter large as a walnut, two eggs, reserving whites for top. Cook all together and put in baked crust. Two lemons will make three pies.—E. F.

Apple and Raisin Salad.—Pare, quarter and core three choice apples; cut the prepared apple into small pieces and over them squeeze the juice of a lemon. Add one cup of large table raisins, soaked overnight in cold water and dried on a cloth, (or the raisins may be soaked in boiling water until well plumped, then dried), and about a cup of heart stalks of celery cut in one-fourth inch slices. Sprinkle on half a teaspoonful of salt and from four to six tablespoonfuls of cool olive oil. Mix all together thoroughly and serve on crisp lettuce leaves.

Cheese Muffins.—Sift together one cup, each, of rye meal and pastry flour, two slightly rounding teaspoonfuls of baking powder, half a teaspoonful of salt and one-fourth cupful of sugar. Beat one egg; add one cup of milk and stir into the dry ingredients with three or four tablespoonfuls of melted butter. Have ready an iron muffin pan, hot and well buttered; put a generous spoonful of the mixture in each compartment of the pan, lay a thin slice of cheese on each and cover with the rest of the mixture. Bake about twenty-five minutes.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

My Shadow.

I have a little shadow that goes in and
out with me,
And what can be the use of him is
more than I can see.
He is very, very like me from the heels
up to the head;
And I see him jump before me when I
jump into my bed.

The funniest thing about him is the
way he likes to grow—
Not at all like proper children, which
is always very slow;
For he sometimes shoots up taller, like
an India rubber ball,
And he sometimes gets so little that
there's none of him at all.

He hasn't got a notion of how children
ought to play;
And can only make a fool of me in
every sort of way.
He stays so close beside me, he's a
coward, you can see;
I'd think shame to stick to nursie as
that shadow sticks to me.

One morning, very early, before the sun
was up,
I rose and found the shining dew on
every buttercup;
But my lazy little shadow, like an
arrant sleepy head,
Had stayed at home behind me, and
was fast asleep in bed.
—Robert Louis Stevenson.

Gyp a Good Playmate.

Dear Young Folks:—I am a reader of the Young Folks' page and enjoy your letters very much. I am twelve years old and have one brother, Faye, older than I am. We live on a ninety-acre farm half a mile from a little trading point where there is nothing more than a grocery store, Lutheran church and gynmasium and a beautiful park. During the summer months we have some very nice times in the park. I am in the eighth grade and go to school very much.

Now I will tell you about my two pet dogs, Troubles and Gyp. Troubles is a rat dog. He will stand on his hind feet when he wants something to eat. Gyp is a Scotch collie. I drive her to my wagon and sled and she loves to be hitched up. I drive her to the store for groceries. She will just run and bark. The picture I am sending is of Gyp and myself when we were out for a drive.
—Merle.

Faithful Jippy.

Dear Young Folks:—I will tell you about a dog we used to have. One day when I was about four years old I went out in the pasture across the road to pick some strawberries for myself. My dog, Jippy, went with me and also her puppy. When I had picked all the berries I wanted I went home and Jippy followed me. Our house was a long distance from the road.

When I got home I started to play with Jippy, and after a while I noticed that the puppy was not with us. I started to look for him but could not find him anywhere. Jippy must have understood what I was looking for because she started to whine and look at me very funny. Then I saw her run down the road and into the pasture, and she soon came back, bringing the puppy with her. I was very glad that she had found the puppy. She has been on the farm ever since, but last summer we had to kill her because she was very old and she was sick besides. We had one of our neighbors do it. Jippy was yellow and white and she had white paws and yellow legs and a white collar and shirt, as we called it. She was a Shepherd dog and was a good watch dog. Perhaps I will tell you some more about faithful old Jippy some time.
—Edith.

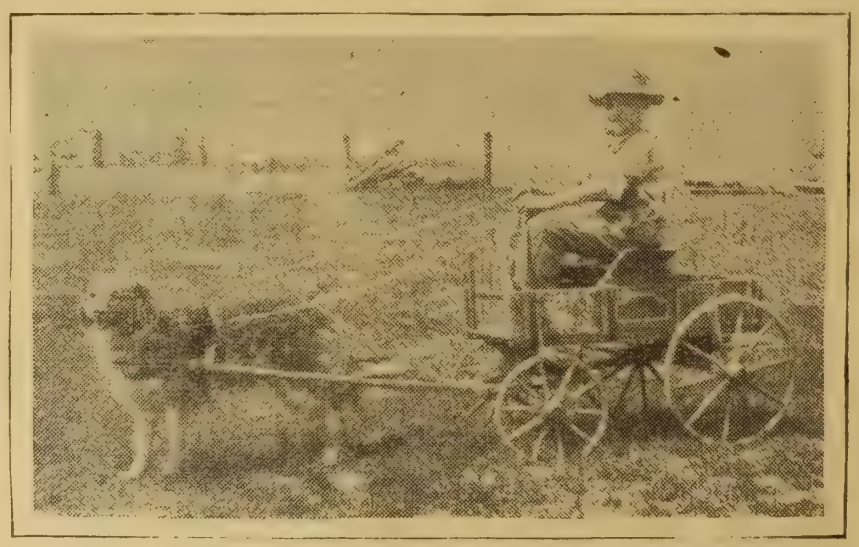
Catches Biscuits Off Nose.

Dear Young Folks:—I have been reading your letters and am greatly interested in them. I am thirteen years old and am in the seventh grade. We have sewing and domestic science in our school, and I like it very much.

I want to tell you about my pet dog. He is a brown dog. Every day I comb his hair, and after I do that I put a biscuit on his nose. Then I say, "Monday, Tuesday, Wednesday, Thursday, Friday." When I say "Friday" he shakes his head and catches the biscuit in his mouth and wants to get another one. —Ella.

Is Raising a Calf.

Dear Young Folks:—I am twelve years old and am in the sixth grade. I am going to tell you how I got my pet calf. I raised a sheep and sold it at Christmas time to my father. He gave me $3 for it. Then I bought a calf from my father for $1.50. Now it is two months old, and this summer I will raise corn and cow beets for it. Then I want to fatten her and sell her and get a Shetland pony.
—Theresa.



GYP AND MERLE GO FOR THE GROCERIES.

Combinations of vegetables are palatable, and sometimes using two or three together is an economy, since there may not be on hand enough of either to serve the family. Carrots and peas, either fresh or canned, make a good and well-known combination, and here color, as well as flavor, plays a part. Carrots cooked and cut into pieces not much larger than the peas may be combined with them in any convenient amount.

Who Wants a Pony?

I AM THE PONY KING OF AMERICA.

I have given away 364 Ponies to children. Now, I am going to give away more Ponies—some of the finest Shetland Ponies I could pick out. **I want every family that reads this paper** to stand an equal chance. If you are a Boy or Girl, send your name. **If you are the Father or Mother** of a Boy or Girl, send in your child's name. I will enter the name in my Big Free-for-All Pony Club—that starts right away. Remember, every child has the same good chance to get a Pony and Outfit if he will only send me his name right away. Mail the Coupon!

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Sign Your Name
Tear It Off
Do It Now

International Sunday School Lesson.

Lesson for April 2, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Conversion of Paul.

LESSON TEXT—Acts 9:1, 31 (See also Gal. 1:11, 17; I Tim. 1:12,17).
GOLDEN TEXT—Faithful is the saying and worthy of all acceptation, that Christ Jesus came into the world to save sinners: of whom I am chief.—I Tim. 1:15 R. V.

No other man, save our Lord, has made such an impress upon history as the "Jew of Tarsus." Read carefully and repeatedly Acts, chapters 9:22, 23 and 26.

I. Saul the Man. (1) Physically. We know but little of Saul (see Ramsey, Conybeare and others), but we know from his labors that he was a man of tremendous vitality. Distant Damascus knew of his work (v. 13) and he himself testifies as to his activities (22:3-26:11). (2) Religiously he belonged to the strictest of the strict, the Pharisees (26:5-9-11). His anger at Jesus and the disciples was a consuming passion; literally, he "breathed threatening and slaughter" (v. 1). In all his violence he was conscientious, but yet he was awfully and terribly wrong, and what is more, his actions were not alone against the disciples

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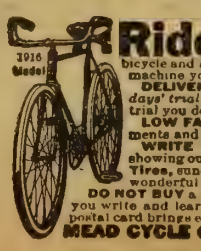

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t against Jesus (v. 5). (3) Politi-lly Saul was perfectly legal in keep-ig the law and in his executions in e name of the law. Doubtless a ember of the Sanhedrin (26:10), his tred knew no pity; it included all o believed in Jesus. (4) Mentally s man transcends all who have ever lowed Jesus. A man of intense con-tions, a slave to a misdirected con-lence, a titan of gigantic force and wer once in the right channel.

II. Saul Saved. (1) This man was st humbled (v. 4). God put forth s hand to save the elect at Damas-s, though he let Saul go a long way his mad career. When he did act was "suddenly" and by means of e glory of Christ's resurrection . 7, I. Cor. 15:8). Though it was bout noon," yet this glory outshone e brightness of the Syrian sun ts. 26:13). Many who speak bold sphemous words would also be st down did they but really see his ory. (2) Saul is not left thus icken, but it is called from above . 5). The question of Jesus (v. 4) s a most startling one and that, th the answer to his honest inquiry, nvicted him of what must have been lurking suspicion in his mind, viz: at he was wrong and Jesus was ly the Messiah.

II. Saul Sent. The first evidence the change wrought in Saul was: 1) Obedience (v. 8). His companions ard but did not understand. There no contradiction (v. 7, Acts 22:9), this is the translation used else-ere. Saul is given three days for editation (v. 9), and he made good Jerusalem. This period is similar to the "hidden years at Nazareth" which our Lord spent ere he began his ministry.

It was a time of rest, reflection, analysis, meditation and formulation of his "gospel" (Rom. 3:19-28).

(2) At Jerusalem. His testimony was distasteful at Damascus (v. 23-25) and so he sought Jerusalem, only there also to find distrust and rejection.

Then Barnabas did a great work for the Kingdom by showing his brotherly fellowship and trust and becoming sponsor for him to the early church.

It was not long ere he had to flee Jerusalem and finally return to his childhood home, Tarsus (v. 31).

Saul, the Pharisee, becomes a preacher of the Cross, the Master Empire-Builder.

Let this lesson be a trumpet call to the unconverted in your class and school. The same Jesus is calling today for other lives of service and testimony.

JOHN EDGAR COATSWORTH.

Son of Mr. and Mrs. Wm. Coatsworth. n was nine and one-half months old d weighed twenty-four pounds when s picture was taken.

e of the time. (2) Praying (v. 11). e result was (3) a vision (v. 12) t only one, as there are others re-ded) which resulted in changed in-iduals and nations. But his vision s (4) a thorough commission (v. . (a) to the Romans—"kings,") Greeks—"Gentiles," and (c) Jews "children of Israel." Along with his ion and commission there was given abling power, the enduement of the irit. The agent God chose for the stowing was Ananias, not an offi-l, merely "a certain disciple." The t of the Spirit for power and serv-is not necessarily by the "laying of hands." It came to Mr. Moody he walked the streets of New York thout earthly companions. But the her conditions were fulfilled, a re-tant, prayerful man and a ready d obedient servant who, though ed with fear and protest (v. 13, 14) t takes God at his word and goes once to his task. As we read verses and 18 we discover that this spe-l filling of the Spirit was very evi-ntly given to Saul before he re-ved Christian baptism—read the der of events carefully.

IV. Saul Serving (1) At Damascus. ul is given refreshment (he always s emphasis upon the body) and aightway began to testify to the azement of the people. From Gal. 15, 17 it is plain that he did not main all of the time in the city, nor d he at once return to his friends in

OUR FASHION DEPARTMENT.

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7682 Ladies' Shirt Waist.—Cut in sizes 36, 38 and 40 inches bust measure. Taffeta, crepe de chine or linen can be used for this waist with the collar and band closing of a contrasting color. This waist may be made with or without the crepe and with long or short sleeves.

7645 Children's Rompers.—Cut in sizes 2, 4 and 6 years. Rompers have a place among the things made at home, for they not only protect, but dress the little tot. That there should be shape and fit to rompers, however simple the foundation, may be seen in the pattern illustrated.

7295 Ladies' Shirt Waist.—Cut in sizes 34 to 44 inches bust measure. In this pretty waist the fullness is held in by smocking in the new manner in front while the back is left plain. There is a handsome collar at the neck and scallops at the closing in front. The sleeves are either long or short.

7686 Girls' Dress.—Cut in sizes 6, 8, 10 and 12 years. In this practical design we have a frock which is suitable for either school or home wear. It has a plain guimpe with round collar and short or long sleeves. The skirt is joined to the long-waisted blouse.

7635 Ladies' Princess Slip.—Cut in sizes 34 to 42 inches bust measure. Semi-princess slips are daily growing in favor of women. The corset cover is in one piece and the petticoat is cut in three gores. These garments are made of cambric, batiste, crepe de chine and wash silk.

7665 Boys' Suit.—Cut in sizes 4, 6 and 8 years. "Manly" in its cut is the comment deserved by this little suit; the coat, in its abrupt outward line from the neck opens the fronts to the better display a smart vest that is made of the same contrasting goods trimming the cuffs of sleeves and forming the collar. The trousers have a straight lower edge.

7675 Ladies' Apron.—Cut in sizes 36, 40 and 44 inches bust measure. Chambray, gingham, linen and any of the pretty percales may be used for this apron with the edges finished with braid banding. The apron closes at the back and has a three-gored skirt.

7669 Ladies' Skirt.—Cut in sizes 24 to 32 inches waist measure. Fancy effects without much labor are always among the desired things and in the model herewith shown we have such a design. The skirt has three gores and may be made with or without the belt. Linen, serge or gabardine can be used for this skirt.

7288 Ladies' Skirt.—Cut in sizes 22 to 32 inches waist measure. This skirt is a two-gore model, plain to yoke depth, and with a box pleat turned under at each side seam from the yoke line to the hem. Either waistline may be used and the small pocket may be omitted.

7636 Ladies' House Dress.—Cut in sizes 34 to 42 inches bust measure. Linen, gingham or calico can be used to make this house dress with the collar and cuffs of plain or contrasting material. The dress closes at the front and has a three-gored skirt. The sleeves may be long or short.

Price of any of these patterns 10 cents each.

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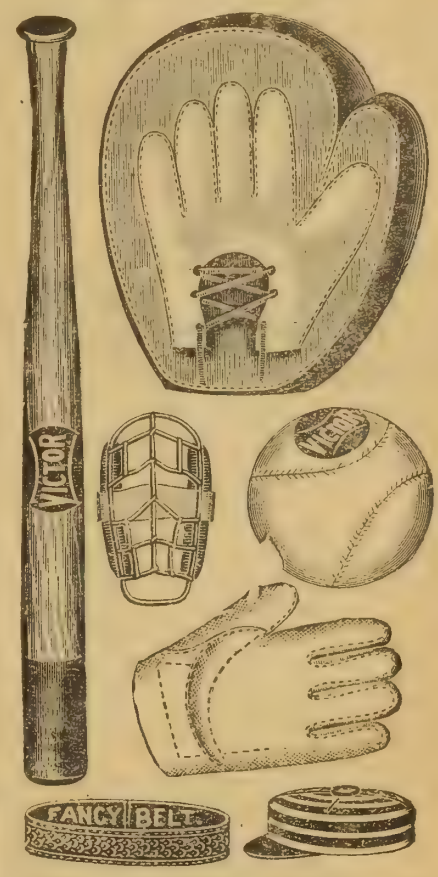

There are seven splendid pieces in this great outfit. The ash bat is a good one. The mask is made of heavy wire, full size. The catcher's mitt is thickly padded, very heavy and has patented fastener. The glove is of tanned leather and has patent clasp. The ball is strongly stitched and will last. A neat, adjustable belt and a dandy cap complete this great outfit. Remember you get the whole outfit of seven pieces for a little easy work. Write me to-day and I will tell you just how to get it.
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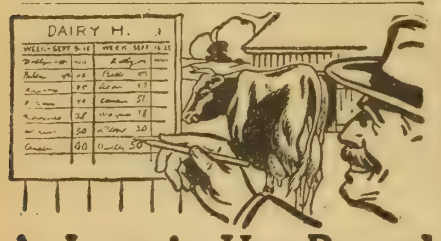

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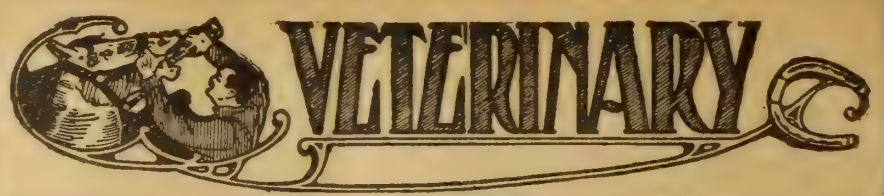

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Unthriftiness in Horse.

I have a horse with something the matter with his right jaw. It seems to be kind of drying out. There is no more flesh on it, nothing but the skin which seems to be glued to the jaw. I can push on it with my hand and it does not seem to hurt him at all. He seems to eat as well as ever except that he chews a little slower. I feed him two gallons of oats and a quart of bran and still he can't work a week steady. He gets weak and won't go any more.

The case you mention is indeed a queer one, but from your few named symptoms one could hardly venture a diagnosis. Our advice to you would be to take this animal to a competent veterinarian and have him make a thorough examination to ascertain if possible the cause of the existing condition.

Gid (Coenurosis).

My sheep have grub of the head and I would like to know if there is any remedy for them or ought I use a preventive? I examined four of them and found that the grub was killing them.

In the first stage of this trouble cold applications to the head and purgatives are indicated to alleviate the symptoms produced by the inflammation. In the second stage only removal of the cyst by trepanning can lead to recovery. This should be done by a competent man. Prevention of the trouble is not so easy as one may be led to believe. All sheep dogs around where sheep are should be treated for tapeworm and during treatment be confined so as the feces can be destroyed. Care should be taken to destroy by burning the dead sheep. In this way the loss of sheep may be materially lessened.

Lame Horse.

Recently I bought a seven-year-old horse which has an enlarged hind ankle. The original owner tells me that this was caused by the horse having a very hard spell of distemper about a year ago. The distemper settled in this leg, causing a running sore, and his hogs gnawed quite a wound one night. This ankle is probably three inches larger than natural, has fever in it, and the horse is considerably lame, especially on frozen ground. The sore is entirely healed and there is no open wound.

The lameness and swelling in the ankle of your horse is of a chronic nature long ago. Probably some of the important structures have been involved, therefore leaving this trouble. It is very probable that to get results in a case like this would require a course of long drawn out and expensive treatment which would grow old to you and still small results be obtained.

Abortion in Mare and Cow.

I have a cow which lost her calf by abortion a little over a week ago. I also have a mare which lost her colt by abortion last Saturday. Last year I lost nearly all my calves that way and was advised to disinfect surroundings and drench cows twice a week with a teaspoonful of carbolic acid, which I did. This year all the cows saved their calves but this last one. The mare had been doing just ordinary work and was hitched to spreader with high load when this happened. Now what I would like to ask is this: Is abortion contagious from cattle to mares? What remedy would you advise in either case? Is there danger of injuring animals by using syringe if one has had no experience?

In infectious abortion the infection spreads, as a rule, only among animals of the same species. At times, however, animals of other species are attacked. Your second question has been answered a number of times in these columns, but will say that treatment and prevention would depend upon the cause of the trouble. If of contagious nature would separate infected from noninfected and destroy all dead young and coverings soon as found. Clean and disinfect premises and then begin a system of irrigation of the affected animal's vagina and womb with antiseptic solution, such as lysol, creolin, etc., used in 2 per cent solution. This should be carried on at first once or twice daily and gradually diminish in number until the discharge ceases. Do not breed affected animals for two months after abortion. The male should have his penis and sheath thoroughly cleansed with antiseptic solution used at times of use. There is not usually any danger of injury to animals from the use of the syringe if same is metal and used carefully.

Lack of Estral Period.

I have a number of Duroc Jersey gilts, nine months old, which I wish to breed. Can you suggest through the Veterinary Department any treatment, feed or care to cause them to come in heat, as there is no indication. They weigh around 225 and are not fat.

Lack of estrum may be brought about in so many ways, such as lack of feed, too much feed, lack of exercise, diseased condition of generative organs, etc. Would advise you to give fairly good amount of wholesome, nutritious food at regular intervals and also see that these animals get plenty of exercise in the open. Exercise is a very essential thing in cases of this kind. With the opening of spring and with good care your gilts should come along all right.

Sore Neck.

I have a horse that has a sore neck. I have been putting on some salve and healing powder, but it doesn't seem to heal. There are two little holes in her neck just where the collar lies. I clean her neck off twice a week with salt water. That seems to relieve her for a few days. She is getting ugly to put her collar on.

This trouble is of quite common occurrence in horses, especially those that are worked hard under the collar. In treating one must see that all dead tissue is removed before healing is attempted. After this is done it is best to rest the ho e for a few days and apply tincture of iodine once daily for three days, or the use of a wash composed of zinc sulphate, sugar of lead and powdered alum, each one-half ounce. Put this in a quart of water and shake thoroughly before using. Do not forget that all dead tissue must be removed before healing can be expected.

Infection in Cows.

Will you kindly advise me through your veterinary department a prevention or a cure for my troubles. This past year my neighbor brought cows to my bull for service that were what I think contagious. They have come in heat several times and they always come back again. They were bred to his bull last spring before he shipped him to market. Now I would like to know if this will take to my herd or not, as one of my cows has come into heat now five times with a bull with them at all times. If it is contagious, is there a cure or could it be prevented by some solution or dip, as I do not like to sell my cows or the bull either.

We would like to advise you in regard to treatment of your cows, but do not think it advisable without there being a thorough examination of the cattle and surroundings made. It is very probable the trouble is of an infectious nature, but just what is hard to say without a thorough examination. We would advise you to seek the advice of a competent veterinarian who can be on the premises and make an examination. This will probably mean dollars to you in the long run.

Hog Pastures.

Pigs make the cheapest gains on pasture. Trials at the North Dakota Experiment Station indicate that brood sows running on good pasture and nursing litters will do as well when receiving one to one and a half pounds of grain per each 100 pounds live weight of sow, as sows in dry lot receiving two and one-half pounds grain per day per each 100 pounds live weight. The pasture just about cuts the feed cost in two. The pasture alone does not furnish enough feed for either the brood sow with litter or for the weaned pigs. They should be fed some grain, so as to make a rapid growth. In this way the spring pig can be ready for market before real cold weather sets in.

Alfalfa, clover, bromus and winter rye make the earliest pastures. When these have not been provided early spring seeding of such grains as oats and barley or rape are the next best thing.

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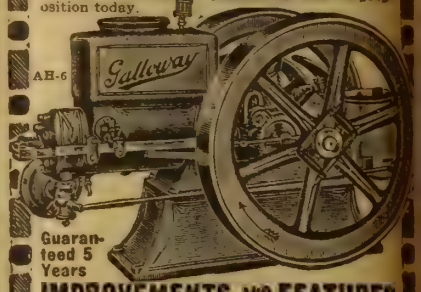

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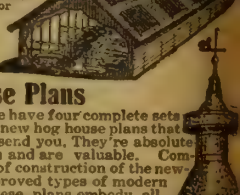

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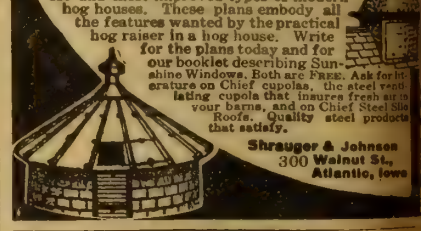

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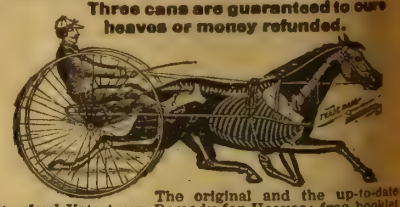

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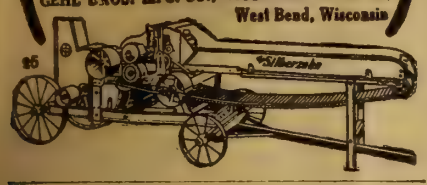

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Pure Seed on Credit.

To the Editor:—Realizing the splendid development in dairying which has resulted in Marinette county since it was made possible for farmers to secure blooded dairy cattle on credit, a plan has just been put into operation whereby farmers may obtain pedigree grain and grass seed and pure-bred potato seed on credit. The new plan will be carried out under the auspices of the Marinette County Experiment Association and the funds will be advanced by the banks of Marinette county.

Practically the same plan as adopted for the sale of blooded dairy cattle on credit has been chosen for the pedigree seed plan, except that credit of five years is allowed, if desired, in the purchase of cattle and loans will become due on or before December 1st each year in the seed plan. This allows for payment after harvest.

The chief purpose of the new plan is to make it possible for new settlers to plant pedigree seed. By giving security—either a 6 per cent chattel mortgage or a note signed by a responsible party—they can buy pedigree seed during the winter through the Marinette County Experiment Association and pay for it the following fall after harvest. A charge of 4 per cent for administration of the plan will be made in each case. This can either be added to the face of the note or the purchaser can pay it at the time the transaction is made.

While the new plan will be a boon to new settlers, it will also be an advantage to the many farmers who have been devoting themselves to producing pedigree grains and grasses for a number of years, for it will provide them with a home market. The county as a whole will be greatly helped, for it will be the means of increasing the yield per acre of grains, grasses and potatoes and will also improve the quality. All applicants must agree to treat grain and potato seed with formaldehyde for the prevention of disease. This means that to a certain extent at least treatment of all seed to prevent disease will become compulsory in Marinette county and will each year raise the standard of pure-bred seed raised in the county.

Recently E. J. Delwiche, of the state experiment station at Ashland, in an address at Marinette said that it had been recognized at the state university for some time that through a combination of climate, due to the nearness to Green Bay and Lake Michigan, soil and topography in general, that Marinette county was destined to be the supply source for pedigree grain and grass seed for the entire upper part of the state, and the plan just put into operation is a step toward the realization of that prediction.

In a recent meeting at Wausaukee to discuss silo building it developed that not less than twenty silos will be built during the spring and summer in what is known as the "new country"—the locality where new settlers have been developing farms. While Marinette county now has over 400 silos, a gain of over 100 in 1915, there are comparatively few silos in the localities where new settlers are developing lands and the building of twenty this year means, it is expected, the rapid spread of silos throughout the newer parts of the country. Among those contemplating building silos in the Wausaukee district this year are Bernard DeGroot, Frank Stichart, Louis M. Edlbeck, Cornelius DeGroot, William Wartick, Charles Redeman, H. F. Steinbrecher, Robert Wolf, J. C. Williamson, Anton V. Edlbeck, Alex Colard, J. C. Macauley, A. L. Schofield, J. A. Capps, William W. Stewart and L. N. Ferguson.

Rapid progress continues to be made in the development of the cheese and creamery industry in Marinette county. Last year the county had seventeen cheese factories and creameries in operation, a gain of 200 per cent in three years, and already this year there are three new projects under way. Joseph Gosling, wholesale ice cream dealer of Marinette, has taken new quarters and will manufacture creamery butter during the winter and spring months as well as ice cream throughout the year. Benjamin Weidenhaft, of Abrams, who recently sold his cheese factory there, will start one in Grover township in this county, and a cheese factory will be opened in Middle Inlet during the summer. The farms in Middle Inlet are nearly all new ones which have been developed by settlers in the past ten years.

Prospects for the development of new lands never looked better in Marinette county than during the present spring. During the latter part of February and the present month over thirty families have arrived at Wausaukee to take up lands purchased last year. Nearly all of them brought a carload or more of household goods, farm machinery and stock.

Howard I. Wood.

Holstein Breeders Meet.

Langlade county Holstein enthusiasts gathered at the court house at Antigo on March 21st to discuss matters of interest to their breed and organization. Officers for the coming year were elected as follows:

President—Robt. Bonner.
Vice President—Wm. Wagner.
Secretary—F. G. Swoboda.
Treasurer—Adam Guenthner.

It was voted to hold a summer meeting at the farm of one of the members.

The Holstein is making rapid progress in Langlade county. At a conservative estimate there are 2,000 grades of this breed in the county. There are in excess of fifty pure-bred sires and about eighty pure-bred females. Present interest indicates a stronger feeling toward the pure-bred than has ever existed in the county before. A number of men who have a good start on grades are seriously contemplating the purchase of one or more pure-bred females.

A splendid illustration of what a herd of pure breds may mean to a community is seen in the town of Summit. Mr. S. Simon, one of the leading farmers in that locality, made a start on pure breds a few years ago. Since that time his neighbors have purchased sires from him. Today in that locality practically every farmer has a good start in Holsteins. In another thinly settled community about Kent in the eastern part of the county, J. W. Smith has kept a pure-bred Holstein for years, result, the black and whites predominate in that locality. Some of the best steers brought to the Antigo market last fall were Holstein grades two year olds, offsprings of Mr. Smith's sire. These steers were developed on wild pasture largely and showed what may be expected from a Holstein cross on common native cows.

While it may, no doubt, be years before the county will have Holsteins to offer for outside shipment at the present rate of increase Holsteins will predominate.

Chris Schroeder, secretary of the Wisconsin Holstein Breeders' Association, was one of the speakers at the meeting.

SPECIAL PRICES ON RELIABLE SEEDS

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MINNESOTA GROWN SEED CORN

Minnesota No. 13, germination 92 per cent	$3.90 per bu.
Minnesota No. 13, germination 85 per cent	2.40 " "
Early Murdock, germination 90 per cent	3.90 " "
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SOUTH DAKOTA AND IOWA GROWN SEED CORN.

Minnesota No. 13, germination 94 per cent	$2.00 per bu.
Early Murdock, germination 95 per cent	2.00 " "
Minnesota Ideal, germination 92 per cent	2.00 " "
Specilo Silo, germination 94 per cent	1.75 " "
Fancy Timothy Seed	$ 7.50 per cwt.
Timothy and Alsyke Mixture	9.50 " "
Fancy Alsyke Clover	17.50 " "
Fancy South Dakota Alfalfa	19.25 " "
Dwarf Essex Rape	7.25 " "
New Marquis Wheat	1.85 " "
Swedish Select Oats	1.00 " "
American Banner Oats	1.00 " "

All bags 23 cents extra.
Our seeds comply with all pure-seed laws.
Order quick. Supply limited.

FARIBAULT SEED CO. BOX E, FARIBAULT, MINN.

ALSYKE $5.00 and Timothy

Per bu. Northern grown, hardy, productive. Cheapest and best pasture and hay crop. Sample free. Clovers, Alfalfa, Northern grown Seed Corn, etc. All seeds guaranteed.
THE ADAMS SEED COMPANY, Bx. 50, Decorah, Ia.

HOME CANNERS—All sizes. Used by U. S. Govt. Schools, Girls' Clubs, Collaborators and Farmers everywhere. Headquarters for cans and labels. For catalog and special offer, write Royal Home Canner Co., Dept. 220, Albion, Illinois.

Wigs, makeups, tricks, puzzles, jokes. Big catalog Free. Oaks Magic Co., Dept. 279, Oshkosh, Wis.

GERANIUMS, assorted, 8 for 25c; 18, 50c; prepaid. Far West Nursery, Los Angeles, Cal.

Jackson
"No Hill Too Steep No Sand Too Deep"

Comfort—
is a conspicuous feature of the new Jackson "34." It begins with the swift, even impulses of the high-duty balanced motor; it is emphasized by the four full elliptic springs which permit the Jackson to take rough roads in comfort, the deep luxurious upholstery, the roomy body and the wonderful completeness of equipment.

Model "34" Four, $ 985
Model "348" Eight, 1195
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TESTED SEED $3.00 Per Bu. Corn crop short. ORDER EARLY. Supply limited. High germination guaranteed. Varieties true to name. 1915 Crop. NOT touched by frost

Reid's Yellow Dent, Iowa Mammoth Yellow, Early Iowa Dent, Pride of the North, Iowa Gold Mine, Minnesota No. 13, Silver King, Boone County White, Mammoth White Dent, Bloody Butcher and Early Flint. State number of bushels wanted. Orders filled in rotation. This price holds good in ten-bushel lots, bags free. Make up your order now, direct from this ad. Get our new 1916 seed book, free.

Galloway Bros. & Co.
33 Galloway Bldgs., Waterloo, Iowa

Rx for a wet day
TOWER'S FISH BRAND
REFLEX SLICKER $3

Keeps you dry and keeps you well.
A. J. Tower Co.,
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TOWER'S FISH BRAND

WENZELMANN FARM ELEVATORS

BOTH portable and stationary. Best by test for 15 years. Write for free catalog of Elevators, Washing Machines, Gate Fixtures, Hayrack Lifters and other Farm Specialties. Mention The Wisconsin Farmer and address
WENZELMANN MFG. CO. Galesburg, Ill.

Clean Pail—Adjustable MILK STOOL

Handiest tool on the farm. Will serve you 730 times a year for life for $1.25.

Pail always clean and right side up. Sample stool $1.25. Check for $2.50 will bring two stools prepaid and agent's terms.

BOYS—we want AGENTS

KEITH & KENNETH
Iowa Falls, Ia.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Don't Forget the Richland County Holstein Sale.

IF YOU are interested in good Holstein cattle and don't attend the sale to be made by the Richland County Holstein Breeders' Association, at Richland Center, Wis., Friday, April 7th, you will have missed a grand opportunity to buy cattle. Of the fifty head cataloged, fifteen are in milk or will soon freshen. There will be no old, worn-out cows, but animals in the prime of life. Many of them have A. R. O. records. There will be ten coming two year olds that are safely in calf to some of the best bulls in the state. The dams of these and the open yearling heifers have A. R. O. records up to 24.75 pounds butter. Ten of the above heifers are sired by King Pontiac Portia, a son of King of the Pontiacs and Pontiac Portia (20.56 pounds butter as a three year old). This bull is considered by many as being the best son of his great sire, so buyers will have a chance to bid on the cream of the Fries herd at this sale. There will be cows and heifers bred to this bull. Anyone in need of a herd bull should attend this sale, for several good prospects are being consigned. One bull is out of a two-year-old dam that has a yearly record of 654 pounds butter. Two others have dams with records of 800 pounds butter in a year. Besides the young bulls, Johanna Rossella De Kol will be sold. He is a son of Johanna Pontiac De Kol out of a twenty-three-pound dam. He is a tried and proven sire and someone should buy him that has a high-class herd of cows. We failed to mention that several of the females are bred to Richland Pontiac Butter Boy. This is the junior herd bull in the Fries & Son herd. He is by Crown Pontiac Korndyke that has nine A. R. O. daughters. His dam, Aberdeen Shadeland Concordia has a seven-day record of 31.76 and a thirty-day record of 127.73. He is an excellent individual and one of the best bred bulls in the state and daughters of King Pontiac Portia bred to this grand young bull should be attractions. There are several consignors to this sale and each man is drawing from the tops of his herd for the association wishes to use this sale as an advertisement for the annual sales that they expect to hold in the future. Every animal is tuberculin tested. By all means get one of the catalogs, read it through carefully then arrange to attend this sale, the greatest ever held in southwestern Wisconsin. Address F. B. Fries, Richland Center, Wis., for a catalog and please mention The Wisconsin Farmer whe nwriting. See page 28.—Adv.

Lefebure's Belgians.

H. LEFEBURE & SONS, Fairfax, Iowa, are generally recognized as the largest breeders and dealers in registered Belgians in America. Their winnings at the St. Louis world's fair and at the San Francisco world's fair fully demonstrate the superior merit of the horses bred and imported by this firm. Premier championships were awarded to this firm at both of the world's fairs. Belgians are kept on the five farms owned by the Lefebures and only the best will be found in their pastures or barns. In the advertisement on page 46 will be found an illustration of twelve stallions, every one of which is for sale, that have an average weight of over 2,200 pounds. This firm can show twenty-one stallions that weigh over 2,100 pounds. The writer, a representative of this paper, recently visited the farm and was impressed with the weight, bone and character of the stallions that this firm have to offer. It is very doubtful if this firm ever offered better stallions for sale than at the present time. A few American-bred Belgian fillies will be priced worth the money. Among their recent sales are a ton bay to J. L. Minard, Bridgewater, S. D.; a 2,300-pound four-year-old Belgian to the Bollman Farm, Georgetown, Minn.; an imported ton Belgian stallion to Dr. W. A. Hamilton, Paullina, Iowa; an imported bay ton Belgian stallion to F. J. Schoenberger, Academy, S. D.; a span of large mares to Clinton Falls Nursery Co., Owatonna, Minn.; and a team of sorrel yearlings to Wm. Casey, Iowa City, Iowa. Among the twelve horses shown in the advertisement is Jules Remi 6166, the blue roan at the head of the Lefebure stud, and he is proving a wonderful sire. He weighs 2,400 pounds in good breeding condition and it is a pleasure to look over his roan colts weighing as two year olds a ton, as yearlings 1,800 pounds and as coming yearlings 1,200 pounds. Jules Remi was the second-prize and reserve champion stallion at San Francisco, first-prize and reserve champion of Iowa for two years in succession. This stallion is for sale and to the man who appreciates the value of a strictly high-class Belgian stallion we could strongly recommend this great horse. Write for any information you want, kindly mentioning this paper. See page 27.—Adv.

Ray Lewis' Guernseys.

RAY LEWIS, one of the good breeders of Guernsey cattle around West Salem, Wis., advises us that he is sold out of bulls and heifers. This shows that the demand for his good stuff comes faster than he can produce it. He recently sold to some New York buyers several May Rose females. He has several young bulls that will be old enough for service about the middle of the summer. They are sired by the good herd bull, Robert's Boy of West Salem he by the noted imported Robert's Boy. Mr. Lewis has one of the good herds of Guernseys in the state and while he hasn't anything to offer at this time, keep this herd in mind for future reference. See page 25.—Adv.

Chief Defender-Big Col.

IN visiting the various herds of swine one will often see one good boar at the head of a herd, but it is seldom that one breeder has two boars that can be considered outstanding. We recently called on a Duroc breeder that has two herd boars that are the equal to any we have seen for some time. This man is Geo. H. Willsie, of Prosper, Minn. If some breeders had his boars they would be known wherever Durocs are raised, but Mr. Willsie has never made much noise about his herd and no doubt there are but a few that know there are two such boars in eastern Minnesota. One is Big Col., a three-year-old (this spring) boar, that is in the 1,000-pound class. He is sired by that sire of big ones, King the Col., and is out of Pet by Golden Model 11th, one of the best brood sows O. S. Larson ever owned. This boar has a wonderful back, there is not a wrinkle on him, good on his feet, in fact we consider him an excellent boar. The other boar that took our eye is Chief Defender. In the first place he is by the immortal Defender, that denotes size, then comes his dam that gives more prestage—Lucy Wonder 112th by Chief's Col. the best of Browning's great Lucy Wonder family. Chief Defender is a litter brother to the grand champion, Disturber, and also to Wilson's Defender. This boar is now five years old, and even at this age he has no wrinkles, is spry on his feet and after you see the good sows Mr. Willsie has on his farm you will give it to this boar as being "some sire." There are several good things about this herd, but one thing we might mention is the sows sired by Crimson King. This boar is by King the Col. and is the only boar that ever won grand champion honors two years in succession at the Sioux City Interstate Fair, and they have a swine show at that fair second only to Iowa. This is the only litter that we know of in this territory by Crimson King and we only mention this to show that Mr. Willsie has purchased only the best. He has some big spring litters and the present plans are to make a fall boar sale, if he does you can expect to see one of the best boar offerings ever sold in the state of Minnesota. When you think of Durocs, don't forget Chief Defender and Big Col. See page 25.—Adv.

The Higgins' Duroc Herd.

A MAN that will be heard from in the future is J. W. Higgins, breeder of Duroc Jerseys at Gotham, Wis. He is just getting nicely started, but he is a hard worker, likes the pure-bred hog business, is a student of pedigrees and our prediction is that he will make a success of it. Heading ihs herd is a big yearling boar by the grand champion, Lee's Defender, out of a dam by Marion's Wonder. The sows by Marion's Wonder are the best in the Atwater herd and Mr. Higgins was fortunate in getting a boar with this good family back of him. There are also some gilts in the herd by Lee's Defender. Two good sows in this herd are by Cedarwood Chief, a boar that the writer has seen and one that headed a good herd in northern Iowa. The spring pigs are doing nicely and as Mr. Higgins has entered the Duroc futurity to be held this fall we feel that he will be able to make a creditable showing at Milwaukee when the time comes. We will have more to say about this herd at a later date. See page 25.—Adv.

Temptation in Incubator Building.

IN these days of keen competition there is every temptation to produce shoddy goods—something that appears good enough, but will not stand the test of time and use. It is met with in the incubator business—the most immediate profit is in making thin-walled machines with cheap, short-lived tanks and lamps. But J. S. Gilcrest, of the Des Moines Incubator Co., has not yielded to this temptation. For twenty-three years he has put the best material possible into his incubators, and his customers always get satisfaction. His best recommendations come from old customers. Anyone interested in the poultry business should have his catalog because it tells of a money-making machine that every poultry raiser should know about. This catalog is free if you will address J. S. Gilcrest, Des Moines Incubator Co., Des Moines, Iowa, and mention this paper.—Adv.

Laird's Famous Hampshires.

NO breed of hogs has made the advancement, the last few years as have the Hampshires. They have gained in popularity on individual merit, not by being "boomed." Statistics tell us that this is one of the oldest breeds in the world, yet it is only in the last few years that they have become so popular for both the feeder and the breeder. For the producer, the Hampshire raises large, healthy litters, and he is perhaps the best "rustler" of any breed of hogs. The packer likes him because of the delicacy in the texture of meat and the long, lean hams. One of the best herds of Hampshires in Wisconsin is owned by A. W. Laird, of Prairie du Chien. His herd is made up of big, roomy sows that raise large litters, and he has some of the best pedigrees known to the breed. Heading his herd is Kornfalfa King, a son of the noted Brook's Choice. He is an excellent two-year-old boar and was junior champion at the 1915 Wisconsin State Fair and Mr. Laird expects to have him at the head of his show herd again this year. His foundation sows came from the herd of C. A. Brooks. He has good daughters of Teddy B. he by Blythedale Duke 3d. One choice sow sired by Choice Compeer by Compeer. Birdie 4th is one of the best in the herd. She is by Signet Over 3d by the noted Signet and her dam is by Captain Aylor. One of the best gilts we have seen and which will be included in the show herd is out of the Teddy B. sow and sired by Laird's Rexall, a son of the Brook's boar, Joe. At the recent closing-out sale of Rob't Currie, Viola, Wis., and one of the pioneer breeders of the state, Mr. Laird secured the tops of this sale. Several of them are by Aristocrat, others by Orchard Hill Duke and he has some nice spring litters by Orchard Hill Duke Jr. There is a great demand at this time for bred sows and anyone wanting sows bred for May farrow can find them in Mr. Laird's herd. They are being priced reasonable, are nicely belted and as we have mentioned they possess some of the best blood lines known to the breed. If you are interested in Hampshires, write A. M. Laird. He will tell you about his hogs and will also send you a circular telling the history of the Hampshire breed wihch is very interesting. Notice his advertisement in this issue. In writing please mention this publication. See page 25.—Adv.

J. E. Kennedy Buys Choice Shorthorns.

J. E. KENNEDY, owner of Oak Lawn Farm, Janesville, Wis., has one of the few real choice Scotch Short-horn herds in the state of Wisconsin, and by adding some of the good cattle sold in the recent Illinois sale he places his herd another notch nearer the top. At the sale held by J. A. Kilgour, Sterling, Ill., without a doubt one of the best breeders in the United States, Mr. Kennedy purchased three of the good females of the sale. One sired by Fair Arces Sultan, without a doubt one of the greatest sons of Whitehall Sultan and out of Village Nell, she by Villager, one of the best bulls in service today, and many times champion. Besides carrying the best of blood lines she is well along in calf to Champion Goods, in Mr. Kilgour's estimation the best bull he ever owned. Another good bull was Silver Grace, also by Fair Acres Sultan out of Golden Grace by King Banff. Geo. E. Ward purchased King Banff at a long price to head his herd at Hawarden, Iowa. He is sired by imported Lord Banff, the bull that put Milton E. Jones on the map. Silver Grace belongs to the Cruickshank Victoria family and carrying a calf to the service of Champion Goods makes her a valuable asset in any herd. Mr. Kennedy made an excellent buy in Violet Cup with a heifer calf at foot. She comes from the Cruickshank Violet family, one of the best families of the breed. Her sire, Marshall Cup is by Whitehall Marshall the bull that was shown and used so successfully by Elmendorf Farm, Lexington, Ky. Besides buying the above heifers, Mr. Kennedy also purchased some top heifers in the sale of King, Hiett & Ludwig that they showed sucessfully the past season. The Oak Lawn Short-horn herd is rich in the blood of Whitehall Sultan, and no breeder could possess more desirable blood lines. A grandson of Whitehall Sultan heads this herd and he is an excellent individual. Keep this good herd in mind and when in need of good Short-horns write Mr. Kennedy your wants. See page 27.—Adv.

Frank Iams' Offering.

IT takes more than a war in Europe to put Frank Iams, of St. Paul, Neb., out of the draft horse business. He is indeed in it more enthusiastically than ever and concerning his offering writes: Mr. Ikey Boy! Cheer up, it's "10 to 1" that the "Gringoes" will get the "Mexicans" all righty. "Get busy," buy a real draft stallion or mare. "Iams' kind," a big-boned "ton horse" of quality. Open up your "money bags," be a "self starter" in the breeding of "big drafters," then you will not need a "preparedness bill" or to be "cranked up" daily, as you will be at "peace and on Easy street" and "coining money" fast. Frank Iams, the expert horseman and successful business man of thirty-four years. He has the best bunch of Percheron and Belgian horses in United States, two to six years old, weight 1,900 to 2,400 pounds, only four horses less than a ton. They are "big, up-to-the-minute kind." Seventy-five per cent of Iams' horses are winners of medals and prizes at Paris, Brussels and Iowa and Nebraska State Fairs. To make a "clean up" and close out my "big bunch" of horses I have reduced prices on each horse from $100 to $500 on "show and business horses." Iams sells only choice, big-boned horses of quality and finish. They are all in "show yard" condition and ready for a quick selling. They will do "their own talking" for business. Iams has the largest and best two, three and four-year-old stallions in United States, weight 2,100, 2,240 and 2,410 pounds. Worth going 2,000 miles to see. "Iams' daily horse show" is an "eye opener." Iams' "selling clothes" fit all buyers. Iams and the "pink lady" will sure sell you a horse if you visit Iams. All Iams horses have state certificates (marked sound) by Nebraska stallion board. "Mamma" Iams is a "hot advertiser," but he has the horses. He makes all competitors get their "hammers" out and "knock" Iams, but it is "dollars to doughnuts" that if you see Iams and his horses that you will buy of Iams. Iams sells top stallion at $800 and $1,400 (some little higher) guaranteed 60 per cent breeders and as represented. Write for Iams' 1916 catalog, the most "up-to-the-minute" horse book in the world, sweethearts, mothers and up-to-date business men, read it and "swear by it." It is "Iams' way" of sell horses. It is full of first-class horses. True to life. Go and see Iams, the "king horseman." He will sure save you $1,000 and sell you a better horse than you will see elsewhere. Iams is not in the stallion trust and does business on honor. See page 27.—Adv.

Angus (Pride) Bulls for Sale.

HAUK BROS., Cassville, Grant county, Wis., have for sale, several young Aberdeen Angus bulls. They range in age from seven to twelve months. This herd contains about fifty head of as good Angus cattle as we have seen in Wisconsin. Some of the very best and most fashionable families are represented, such as the Prides, Pride of Aberdeens, Ericas, Heatherblooms and one Duchess. The herd bull is Patna, a Pride bull, sired by imported Proteros, out of Pride McHenry 28th. He was bred by W. A. McHenry, Denison, Iowa, one of the most constructive breeders of the United States. Patna is now seven years old and he has proven himself an exceptional sire in this good herd, and if you could see the young stuff on the Hauk farm sired by him, you would agree with us in this assertion. Of the four bulls that are old enough for service there is one bull that is outstanding. He is a double Pride, has excellent lines, very smooth and ideal head and neck and if he is not sold within a short time the owners expect to show him this fall. Here is an opportunity for someone that wants a junior yearling show bull or a bull suitable to head a pure-bred herd. By featuring this bull, we do not mean that the others are inferior—they are good bulls in every respect, in fact some men might pick one of the others in preference to the one above mentioned. The prices asked for these bulls is far below their value and they will no doubt be sold within a short time, so if you are interested in Angus cattle get into communication with the owners at once. Cassville is on the C., B. & Q. railroad, thirty miles up the river from Dubuque. Good shipping facilities. Write at once and in so doing please mention The Wisconsin Farmer. See page 27.—Adv.

Smiths' Milking Short-horns.

THE writer recently had the pleasure of visiting one of Wisconsin's many good Short-horn herds in that of Geo. Smith & Son, Burnett, Wis. This herd has been established a great many years and has been developed along lines of high milk production. A milking machine is used and every convenience has been installed for the care and maintenance of the animals. Particular care is given to the raising of calves, as the Smiths feel that the production ability of a cow depends quite largely on her early development. The calves seen by the writer are an

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

evidence of the success which they have attained in the raising of good calves. They look bright, are very active and are well grown. The sire of these calves is milkman a richly bred Bates bull which traces to the noted cow, Profitable, one of the great foundation cows. The dam of milkman gave over sixty pounds of milk per day and tested 4.4 per cent butter fat. At the present time young bulls are being advertised for sale on page 27. Write to them for breeding and description.—Adv.

Two Choice Percheron Stallions Offered.

THOSE that desire to purchase Percheron stallions for the coming season should investigate some of the horses being advertised in The Wisconsin Farmer. Two outstanding Percheron stallions are being offered by L. P. Martiny, Chippewa Falls, Wis. One of these is a black four year old that weighs right at 1,900 pounds. This horse has been used and is a proven sire. The other one he has for sale is a black gray three year old and a colt that would make good in any locality. He weighs 1,900 or better, is the correct Percheron type and as a two year old won first at the Northern Wisconsin Fair. Mr. Martiny is known as one of the good Poland China hog men of the state and these stallions that he is offering are in keeping with his high-class herd of hogs—both good as can be found. These horses are being priced low in order to make a sale. Get in touch with him at once and in writing please mention The Wisconsin Farmer. See page 27.—Adv.

Atwater Offers Duroc Boars.

L. F. ATWATER, Bangor, Wis., one of the most popular breeders of Durocs in the state is now offering his fall boars for sale. He hasn't a great many to sell, but what he has are good ones and come from the line of breeding that has done so much for him at the fairs. In this bunch of boars you have the get of the grand champion, Lee's Defender, the grand champion, Prince Illustrator and Model King, a son of the noted champion and sire, High Model, out of a dam by King the Col. You can pick out any breeding you want, as the blood of four of the greatest recent-day sires is represented—Defender, Illustrator, Golden Model 2d and King the Col. Get busy at once if you want a boar for future use. Buy one in the rough and grow him out yourself, it is the cheapest way. First come first served. Write and mention The Wisconsin Farmer. See this page.—Adv.

Furnace Satisfaction.

THE heating system has a great deal to do with the healthfulness and comfort of a home and a reliable furnace is a source of much more satisfaction than its cost would indicate. The Lexington furnace is particularly efficient in distributing the heat throughout the house properly and in using fuel economically. This accounts largely for the satisfaction it gives. The material used in its construction is guaranteed for five years and will not cause expense for repairs. The new Lexington catalog explains this furnace in detail. If you are looking for a first-class furnace you should by all means have this catalog. See the advertisement on page 11 and write for information to the Cutler & Proctor Stove Co., Dept. 40, Peoria, Ill. Please mention this paper when you write.—Adv.

Getting in the Hay Crop.

TIME is an important factor in the haying season. Sometimes a few hours decides whether the crop will be saved or ruined. Therefore, get the hay under cover as soon as it is thoroughly dry is a good rule to follow. Louden hay tools will do the work in record time; they require no time for repairs because they are strong and trouble proof, and they handle big loads quickly. The Louden Senior fork carrier and balance grapple fork will handle half-ton loads of any kind of hay safely and easily. These tools will save time and expense and maybe an occasional hay crop. They are advertised on page 15 by the Louden Machinery Co., 1705 Court St., Fairfield, Iowa, who will send their illustrated catalog of barn equipment free if this paper is mentioned.—Adv.

Milking Machine Company is Growing Rapidly.

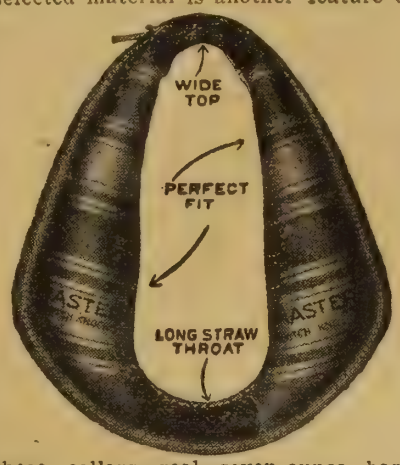
THE Hinman Milking Machine Co., 8292 Elizabeth St., Oneida, N. Y., have recently enlarged their plant and are now able to produce their machines at twice the former capacity. The Hinman milker is sold in every state in the Union and in several foreign countries and the aggressive policy of the company is opening up considerable new territory. With this large scale production, they are able to put a very high grade of material and workmanship into the machines. The valve-type milking machines, which the Hinman people make, have proven their worth wherever they have been tried and the successful expansion of the company's business will undoubtedly continue. Anyone interested in milking machines would do well to investigate the Hinman milker before buying.—Adv.

The Oliver Tractor Plow.

GOOD plowing demands that the weeds are turned under deep enough so that they will not be pulled out by the harrow to cause trouble. To do this effectively the Oliver No. 62 tractor plow is equipped with a combined rolling coulter and jointer. The weeds are cut up and turned under deeply where they decay in the soil. Many other features make the Oliver a highly desirable tractor plow. If your dealer cannot tell you about this plow, write directly to the Oliver Chilled Plow Works, South Bend, Ind. The advertisement is found on page 2.—Adv.

A Short Talk on Horse Collars.

THE collar is probably the most important part of a set of harness. At least it seems to affect the horse most. We once knew a horse that was cured of balking by changing his collar to one that fit his neck and shoulders. Many horses will not pull their best because their collar pains them and horsemen who try to give their horses the best care possible, sometimes neglect this point. Scotch Knocker collars are designed to do away with collar trouble; their perfect fit prevents galled necks, sore shoulders and strained muscles; and they conform to every bone and muscle that they bear upon. In the picture you will notice the wide top, the long straw throat and the well-shaped pads that throw the pressure on the horses' shoulders where it belongs. Carefully selected material is another feature of



these collars—real seven-ounce bark tanned leather is used, stuffed with hand-flailed, long rye straw with a facing of soft, sweat and rain proof buckwheat hulls. You can get a free book on Scotch Knocker leather collars by sending to the Minnesota Harness Factory, Inc., 106 Second St., Winona, Minn. This book will interest you—write for it today.—Adv.

Silo Requirements and How They Are Met.

THE first requirement of a silo is to keep the silage sweet, juicy and nutritious; the second is to resist storms and bad weather; and the third is to add rather than detract from the appearance of the farmstead. Perhaps there are other requirements, but the silo that meets these three will undoubtedly please the most particular buyer. Natco imperishable silos are built to meet them. The hollow, vitrified clay tile are impervious to air and moisture—no silage juices can escape

JOY BOY 29637, first under six months at La Crosse, now heading Adolph Nuttleman's Chester herd, West Salem, Wis. See advertisement on this page.

and no destructive bacterial action or oxidation can occur. Furthermore, dead air spaces in the walls keep out the frost. Thus the first requirement is met—the silage keeps palatable and nutritious. The second requirement is met with a sturdy construction, reenforced with continuous steel bands, laid in the mortar, and the third is met particularly by the handsome glazed tile contrasting with the white markings of the mortar, the smooth walls and the neatly shaped hip roof shown in the advertisement on page 13. Anyone interested in silos or in any other farm buildings can obtain valuable information on them by writing to The National Fire Proofing Company, 1123 Fulton Building, Pittsburgh, Pa., and mentioning The Wisconsin Farmer.—Adv.

Freehoff's Berkshires.

LARGER Berkshires is the aim of W. A. Freehoff, Waukesha, Wis. With this in mind he recently bought St. Elmo, a senior yearling boar, from the Farmer Farm, Farmington, Minn. St. Elmo is sired by Northern Light, a 1,000-pound son of Laurel Champion, that is sired by Rival's Champion's Best, at present at the head of the herd of Dean Curtiss, Ames, Iowa. St. Elmo promises to weigh 900 pounds when shown this fall and will eventually make 1,000 pounds. He is the real thing in big-type boars. Young sows will be bred to him for August farrow, and orders for the same will be booked now. See this page.—Adv.

Successful Milking by Machinery.

IF you want to be independent of a hired hand to do the milking or want to be relieved of the drudgery yourself, you should have an Empire mechanical milker. With this machine one man can take care of twenty to thirty cows per hour. Operating by natural air pressure, uniformly and quietly, the Empire gets all the milk and keeps up the cow's milk flow. In some cases, particularly with nervous cows, the milk flow is increased because there is nothing to excite or frighten the cow. The catalog No. 56M, advertised on page 13 will explain this milker fully with descriptions and pictures. Send for it to the Empire Cream Separator Co., Bloomfield, N. J. Please say you saw the advertisement in this paper.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Langlade County Grain Show.

Splendid exhibits of grains were made at the Second Annual Grain Show of the Langlade County Experiment Association at Antigo on March 18th. Professor Wojta, who acted as judge, pronounced the quality equal to that of many of the large shows at which he had officiated this year. The year 1915 produced excellent yields of small grains in the county, and outside of a little discoloration, due to excessive moisture, quality was good.

The experiment association is the

This 116-page four color book describes all new 1916 varieties vegetable and grain crops. Hundreds of illustrations, beautiful grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. All about alfalfa, clover, vetch, modern varieties field corn. A dictionary of gardening; encyclopedia of field crops! A flower lover's delight! A berry grower's book! An orchardist's manual! Most wonderful gardening guide-catalog ever published. A postal brings it to your home. Don't miss this book!
GALLOWAY BROS. & CO:
31 Galloway Sts, Waterloo, Iowa

WANTED CALF RENNETS
FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us.
THE MARSCHALL DAIRY LABORATORY
Madison, Wis.

POLAND CHINA SWINE.

REGISTERED POLAND CHINAS
SOLD out except August and September fall gilts. Will breed to order. Booking orders for spring pigs. (Registered Holsteins). Address
Marinette County Asylum Peshtigo, Wis.

Big-Type Poland China Hogs
MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address
W. T. Hartley, R. 3, La Crosse, Wisconsin

BIG TYPE POLAND CHINAS
SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

BIG-TYPE POLAND CHINAS—Growthy September pigs, both sexes at special prices. Address A. Menke & Sons, Route 1, Markesan, Wis.

CHESTER WHITE SWINE.

CHESTER WHITE SPRING BOARS AND GILTS
SIRED by Combination C and St. Elmo Chief. Bred and fed for size, type and quality. Write for prices and description. Address
W. F. Miller West Salem, Wis.

CHESTER WHITES
FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address
John Simon Campbellsport, Wis.

CHESTER WHITES
FALL GILTS for sale by Hood Combination and Joy Boy 29637. Only the best shipped. Write
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

BERKSHIRE SWINE.

THOSE LARGE BERKSHIRES
YOUNG sows bred to big-type boar for August farrow, $35 to $50. W. A. Freehoff, Waukesha, Wisconsin.

MULE-FOOTED SWINE.

FREE catalog illustrating, describing, pricing big-type Mule-Foot hogs. Cholera immuned by double treatment. C. D. Thompson, Letts, Ind.

GOATS.

ANGORA GOATS For Sale
Ingerid Bergum, Millville, via Woodman, Wis.

GUERNSEY CATTLE.

THORN HILL FARM GUERNSEYS
I HAVE for sale some very fine Guernsey bulls of all ages, from Advance Register cows and at very low prices, $50 up. I am overstocked and must sell at your price. Herd regularly tested for tuberculosis. Every animal guaranteed. Write for prices and description. Address
Thorn Hill Farm Deerfield, Illinois

BIRCHWOOD GUERNSEYS
REGISTERED Guernsey heifers and yearling bulls, sired by Dairymaid's King 12898, a full brother to the great cow, Dairymaid of Pinehurst, A.R. record 910 pounds fat. These are out of A.R. cows of choice breeding. Send for sale list. Prices reasonable. Address
M. L. Welles Rosendale, Wis.

At the Present Time
I OFFER you some especially good Guernsey heifers and young cows both in registered and high grades. I also have several nice yearling bulls from high producing dams and of noted blood lines. Write for prices.
Alfred I. Stubbs West Salem, Wis.

REGISTERED Guernsey Bulls
OF serviceable age. Two sons of King Belle 4th, 10 and 16 months of age. One 2-year-old son of Imp. Roberts' Boy. Two bull calves sired by King of the Roses. Priced right for quick sale. Address
Ray Lewis West Salem, Wis

Registered Guernsey Bulls
THREE ready for service. One 1 years old. Also registered and grade females. King of the May and Yeksa breeding.
BASSE BROS, Route 5, West Allis, Wisconsin

JIM CEDARWOOD 34252, yrlg. Guernsey bull, combining Golden Hero, Gov. of the Chene, Master's Sequel blood, straight rump, well-grown, light fawn, ¼ white. D. E. HOAG, Oakfield, Wis.

REGISTERED GUERNSEY bulls whose dams or sisters are now on A. R. test, for sale at farmers' prices. Harvey Longley, Dousman, Wis.

DUROC JERSEY SWINE.

Duroc Spring Gilts
OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to
CRITIC TOP NOTCHER
half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address
B. W. LITTLE JANESVILLE, WIS.

Burn Brae Farm
ROSENDALE, WIS.
CHAS. A. PETERSON, Prop.
DUROC SPRING GILTS bred for May and June litters to Burn Brae Golden Model. A few spring and fall boars for sale at reasonable prices. My herd is nominated for the Duroc Futurity.

DUROC JERSEYS
HAVE had a big trade in gilts and am sold out. We have an **Orion Cherry King** boar and one by **The Chief's Col.** Keep this in mind for future reference. Address
E. H. PARKER & SON, JANESVILLE, WIS.

ATWATER DUROCS
FALL BOARS for sale from **fashionable** and **champion** blood lines. Also four choice yearlings. Write L. F. ATWATER, BANGOR, WIS.

HIGGINS' MODEL DUROCS
NOTHING to sell, but still in the game. J. W. Higgins, Gotham, Wis.

DUROCS
CHIEF DEFENDER by Defender, dam Lucy Wonder 112 by Chief's Col. Big Col. by King the Col., dam by Golden Model II. No herd has two better herd boars. Keep this in mind. Geo. H. Willsie, Prosper, Minn.

MOUNT VERNON DUROC JERSEY
BRED GILTS, noted everywhere for their size, quality and popular blood lines, such as Rose Hill Guard 171721, Educator 67139 and Select Chief 173601, at farmers' prices. See them or write M. J. DOWD, Route 1, LANSING, MINN.

DUROC BOARS AND GILTS
FARROWED in April. Sired by Professor II, and out of sows of Chief J.E.D., Ohio Chief and Grant's Col. breeding. Price $20 and up.
W. T. Green Orfordville, Wisconsin

HAMPSHIRE SWINE.

LAIRD'S FAMOUS HAMPSHIRES
BRED sows for sale—big and well belted. Best breeding. Write
A. M. Laird Prairie du Chien, Wisconsin

HAMPSHIRE SOWS
I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE VIOLA, WISCONSIN

only positive movement in the county working for systematic grain improvement, and the elimination of useless numbers of varieties. Officers for the coming year were elected as follows:

President—Geo. Wunderlich.
Vice President—Chas. Schotte.
Secretary-Treasurer—F. G. Swoboda.

To stimulate the introduction of the pedigreed grains these were offered as prizes in many of the classes instead of cash. To further stimulate competition four silver cups were given as sweepstakes prizes by the banks and by real estate men. These cups are to be won three years before becoming the permanent property of an exhibitor.

Sweepstakes prizes were won as follows: On oats, Chas. Schotte, Antigo, real estate men's cup; barley, John Schwartz, Fidelity Bank cup; winter grains, Chas. Parsons, First National Bank cup; legumes, Frank Pesl, Jos. Duchac & Son cup.

Short course students' prize for student winning most premiums, Anton Opichka, year's subscription to Antigo Daily Journal.

Women's clubs in Wisconsin started a movement through the conservation committee of which Mrs. Fred Luedke, of Milwaukee, is chairman, to have the observance of Arbor Day changed to make the day not so much one of tree planting as of instruction to children in conservation.

WITH OUR ADVERTISERS.

Daisy Cultivator Shields.

A GREAT deal of time and labor can be saved in cultivating by putting Daisy revolving shields on the cultivator. These shields keep clods from falling on the corn, but allow the fine dirt to sift through and cover the grass and weeds around the hills. The smallest corn can be plowed as rapidly as the biggest and the shields never get out of adjustment. A picture of them may be seen in the advertisement on page 2. Write for the descriptive folder to the Munson Mfg. Co., 118 E. Court, Winterset, Iowa, and kindly mention this paper.—Adv.

Wenzlemann's Farm Elevators.

THE farm elevators, both portable and stationary, manufactured by the Wenzlemann Manufacturing Co., Galesburg, Ill., have a reputation for efficiency and durabiliy that is exceeded by no other elevator. For fifteen years this firm has been manufacturing elevators, and they have been used with success and satisfaction in all parts of the grain belt. This concern also manufactures washing machines, gate fixtures, hayrack lifters and other farm specialties, and will send particulars upon request. See page 23.—Adv.

Shekleton's Stallions.

FRANK P. SHEKLETON & SONS, Lawler, Iowa, write as follows: "Business with us for the past week couldn't have been better. We are selling stallions every day and the outlook for the future of the business is fine. We have recently sold to Gilbert Olstad, Zumbrota, Minn.; a five-year-old black ton Percheron stallion to put on the stand. Index, a rising four-year-old Black Percheron, goes to O. C. Olson, Forest City. Mr. Olson is an old-time horseman and knows a good one when he sees him, and, as Index is the low-down, blocky kind and a good breeder he will do well by his new owner. Lincoln Knapp, of Centerville, Iowa, after a week's search for a good Percheron stallion came to our barns and selected the three-year-old dark gray Percheron stallion, Old Hickory.

HOUWTZE CALAMITY VALE, butter seven days, 26.96, milk 537.7. Owned by C. C. Fries & Son. They consign twenty head to the Richland county Holstein sale at Richland Center, Wis. April 7th. Write for catalog of this sale. See advertisement on page 28.

Mr. Knapp pronounced him the best colt he saw on his trip and is well satisfied with his purchase. To Lee E. Taplin, Miles, Iowa; goes the sorrel Belgian stallion, Bon Courage. This horse is four years old and will weigh 2,200 pounds. Mr. Taplin has some good grade mares and made a wise selection. Orson Chase, Mapleton, Minn., selected the two-year-old black Percheron, Tedd R. B. This is a growthy colt and will make a very large horse and is a fine taker with the people. Butler Bros., Estherville, Iowa, selected the brown Belgian stallion, Brin D'Or. These gentlemen wanted a horse to put on the stand and do heavy breeding. They will find all that could be asked for in this horse. To O. V. Cooper, Opheim, Mont., goes the three-year-old gray Percheron and the black imported Percheron stallion, Vigoreux. Mr. Cooper has a large herd of mares, and he was looking for something low down with plenty of bone. Three horses he will turn out on the range and use them on his own herd of mares exclusively. Jim Dunsmore, Floyd, Iowa, selected our large black jack to cross with grade Percheron mares. We are going to close out all of our stallions this spring and are offering great bargains in good young stallions." See page 27 and write for what you want mentioning this paper.—Adv.

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland** his dam, a granddaughter of **Golden Fern's Lad,** gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

ELMDALE FARM . . . **JERSEYS**

REGISTERED yearling bulls ready for immediate service and younger, sired by Sage's Victor and Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price. Address
H. Holt & Son **Oconomowoc, Wis.**

STUBLEY'S JERSEY BULLS

GOLDEN Maid's Viscount by Imp. Golden Maid's Prince. Noble of Avaranch by Imp. Noble of Oakland. Young bulls by the above sires, from Advanced Registry dams. 100 head of wonderful cows in herd. Write your wants. Fred Stubley, Black Earth, Wis. (20 miles west of Madison).

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

The Jackson Car Gives Comfort.

COMFORT is a conspicuous feature of the Jackson cars. It is evident in the smooth-running, high-duty motor, which causes no care or concern, in the four full elliptic springs, in the deep, luxurious upholstery, the roomy body and the complete equipment. All these features combine to make the Jackson an easy-riding free from trouble, service giving car. Three models are advertised on page 23 by the Jackson Automobile Co., Jackson, Mich. If you expect to buy a car, don't fail to investigate this company's product. —Adv.

Specialists in Threshing Machinery.

FOR nearly three-quarters of a century the Nichols & Shepard Co., Battle Creek, Mich., have been building threshing machinery. They are specialists in this line and by concentrating their energy and thought have perfected the Red River Special outfit which has an enviable reputation among threshermen. See the advertisement on page 10. The principle of beating out the grain used in Red River Special separators largely accounts for their rapid, cheap, clean separation. Full particulars on the Red River Special line may be obtained by writing the company named above and referring to The Wisconsin Farmer.—Adv.

Great Opportunity in North Dakota.

THE best development of a country depends on having the land divided into medium sized farms. For this reason the Great Northern railway is interested in having the large tracts of land along its road in North Dakota divided into 160 or 320-acre farms and occupied by thrifty farmers. They have no land to sell, but want to encourage farmers in the thickly settled regions to take hold of the unusual opportunities in the productive regions of North Dakota. Nearly all the farmers who have gone into this territory have done exceptionally well; comfortable homes, schools, churches and giant elevators are rapidly springing up and the bumper crops and profit-making live stock are making the farmers independent. Full information about this coming country may be obtained by sending the coupon in the advertisement on page 7 to the Great Northern representative named in the advertisement.—Adv.

Aladdin Homes.

WE wish to call the attention of our readers to the advertisement on page 21 of Aladdin homes. Those planning to build a home will be particularly interested. By dealing direct with the Aladdin Home Co., Bay City, Mich., four profits may be saved on lumber, millwork, hardware and labor. The material is cut to fit and shipped ready to set up. Get the big catalog as suggested in the advertisement if you expect to build a home, and please say you saw the advertisement in this paper.—Adv.

Low Prices on Rawleigh Engines.

THE very low prices on Rawleigh engines, advertised on page 9, are possible because the Rawleigh Manufacturing Company sells direct to the farmer. However, the Rawleigh engines are not made of cheap material, but are built for heavy use. Every part receives close attention—each cylinder is cast separately, the piston is carefully ground to size and the drop forged crank is ground to a mirror finish. A sixty days' free trial and special liberal terms are features of the Rawleigh selling plan. Send for the new catalog to Rawleigh Manufacturing Co., 104 Taylor Ave., Freeport, Ill., and kindly mention this paper.—Adv.

IAMS AND SOME DRAFTER MODELS.

Frank Iams, St. Paul, Neb., is offering Percherons and Belgians weighing from 1,900 to 2,400 pounds at greatly reduced prices. See advertisement on page 27

HORSES.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

WE now have in our barns more big-boned, rugged draft colts, from yearlings to 4 and 5 years, of the different breeds than ever before. We have two-year-olds that weigh over a ton—herd headers and show propositions.

Five farms over 1,000 acres devoted to the horse business. We do all our own buying and selling, grow all our own feed. Our economical way of handling stallions saves money for the purchaser. We guarantee all horses sold and can sell you a high-class stallion cheaper than any other firm in America.

We are located in North Central Iowa, 20 miles from the Minnesota line, on the C. M. & St. P. Ry., midway between Mason City and McGregor.

Send 20c in stamps for large Horse Hanger which shows our Main Farm and sales stables. Correspondence a pleasure. **We have a horse for every purse.**

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

PERCHERONS FOR SALE

IMPORTED or home-bred stallions and mares, from weanlings to mature animals, mostly blacks and grays. Write for prices and pedigrees.
A. R. Ives **Delavan, Wisconsin**

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address
M. Bodenheimer & Co. **Green Bay, Wis.**

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

Kindly mention this paper when writing

12 PERCHERONS 12

FROM two to six years old. Six stallions and six mares. Good size with good breeding and mostly black. One seal brown and a good one. All farm raised and in good condition.
E. M. REEVES,
Waverly, - - Iowa

I GUARANTEE MY

PERCHERON STALLIONS

BEING sound and sure breeders. One black 4 years old, one gray 7 years old, one gray 8 years old, one imported bay Belgian. Weigh from 1,900 to 2,100. Have been used in studs. The price is so you can afford to buy one or all. Write for description. Address **THOS. McNAMARA, Grant County, BLOOMINGTON, WIS.**

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

SHORT-HORN CATTLE.

AMERICAN SHORT-HORN BREEDERS' ASSOCIATION

WE call attention to the Central Short-horn Breeders' Show and Sale of Short-horns, April 5th and 6th, Kansas City, Mo. E. M. Hall, Secretary, Carthage, Mo., will supply catalogs on request. If you send in your name to this office, along with the name of a prospective breeder or customer for Short-horns, the first number of THE SHORT-HORN IN AMERICA will be sent. It is free and it is for your benefit. Address 13 DEXTER PARK AVENUE, CHICAGO, ILLINOIS.

We have several choice young registered

Short-horn Bulls

of serviceable age on our farm at

AUBURNDALE

that we want to dispose of. These young bulls are sired by our imported

BRILLIANT BANDSMAN

and we have a few choice animals left that we want to dispose of this spring. We also have for sale one registered Holstein bull, coming three years old, from the Pontiac, Michigan, stock. Address
R. CONNOR CO., MARSHFIELD, WIS.

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

BATES MILKING SHORT-HORN

HEIFERS 8 to 20 months old and bulls of serviceable age and younger. Big-type Poland China spring boars and fall gilts for sale.
A. T. Grundy & Sons, R. 6, Bx. 43, Oshkosh, Wis.

Oak Lawn Farm

Short-horns

SHORT-HORNS of quality for sale at reasonable prices. Four heifers coming 3 years old, safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also ten heifers coming one year old.
J. E. KENNEDY **JANESVILLE, WIS.**

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
Geo. Wenham & Sons, **Ft. Atkinson, Wis.**

Registered Short-horn Heifers

AND yearling bulls. Sired by KING CREST A 39857, a Duchess of Gloster bull, and out of Arabella and Imp. Bertha bred cows. Prices right.
John Notseter **Deerfield, Wisconsin**

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address
UNDERWOOD STOCK FARM
L. C. Underwood, Prop. **Avoca, Wisconsin**

HEIFERS RED POLLS FOR SALE BULLS

WILL sell a limited number of bred and open heifers and some young bulls. The best of breeding and well grown. Attractive individuals. Write or visit E. L. Bennett, Black Earth, Wis.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

AYRSHIRE CATTLE.

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10 BRED HEIFERS

10 OPEN HEIFERS

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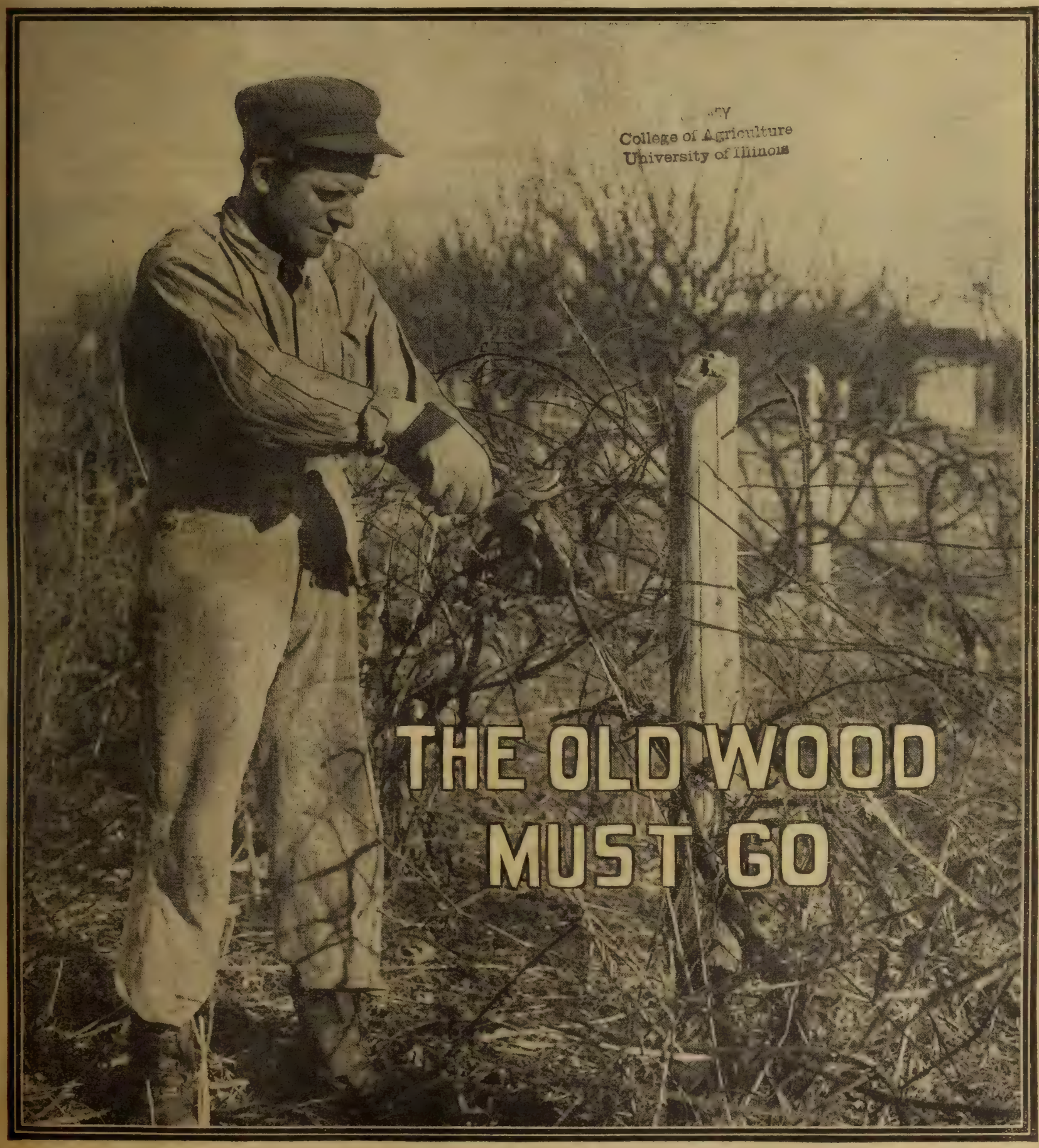
VOL. XLV. NO. 14. THURSDAY, APRIL 6, 1916. WHOLE NO. 1784


THE OLD WOOD
MUST GO

College of Agriculture
University of Illinois

CURRENT EVENTS

THAT the United States navy be restored as soon as possible to second place among the world powers on the sea was recommended by Assistant Secretary Roosevelt to the house naval committee. Answering questions by members of the committee who were interested in comparing the German and American navies, he said the United States navy could outstrip Germany in a race for naval supremacy. In case of war, he said, the United States would need 225,000 men in its navy, judging from England's experience in trebling her naval forces since the war began. The administration's five-year program alone would entail doubling the present number of men and officers. The present navy, Mr. Roosevelt asserted, was not sufficient to cope with a first-class power, or a combination of lesser powers, if the government's policy was to protect both coasts, the Panama canal, its outlying possessions and maintain its international policy with respect to Latin-America. Cheaper labor and material, he said, enabled Germany to build and maintain her navy at less cost than this nation.

MORE American lives were sacrificed when the English steamer Sussex was sunk in the British channel, with the loss of 102 passengers, among them five American citizens. The Sussex had 436 passengers aboard, three-fourths of whom were picked up and saved. The loss of life was caused by the explosion, when the ship was struck by a torpedo from a submarine, and by drowning, when two lifeboats capsized and only a few of their occupants could be rescued. The Sussex is said to have been torpedoed without warning, many witnesses testifying that they saw the torpedo approaching when it was a distance of about ten yards, without time left to avoid it. The affair complicates the already delicate relations between the United States and the Teutonic powers, held responsible for this disaster, as well as the others of recent occurrence in which American lives have been lost or imperiled. Should Germany admit responsibility for any of the attacks and attempt to satisfy the United States by saying that a mistake had been made, offer to make reparation and to punish the submarine commander, the issue would not by any means be disposed of. It is regarded as certain that the United States would not accept such an explanation as satisfactory at least until time had shown what punishment actually was meted out to the offending submarine commander and whether any value could longer be attached to Germany's promises. The situation is considered serious in the extreme at Washington, with an open break possible almost any time.

GENERAL PERSHING and the American troops were still in pursuit of Villa, the Mexican bandit-murderer, at last reports. The American force was 250 miles below the international border and still pushing on. The troops had encountered all sorts of weather, from burning sun to biting snow and sleet, but were pushing ahead, uninterruptedly, making an average of thirty-five miles a day, with a flying squadron of cavalry constantly scouting for signs of Villa. The bandit was about fifty miles ahead of the Americans at last reports, making for the mountains, not seeking to try his luck in an open battle with his pursuers. The Americans were handicapped for a time by the refusal of General Carranza to allow them to use the railroads for their supplies. At last a grudging permission to do this was granted. War department officials were greatly relieved by the removal of the necessity for maintaining a motor truck supply line over desert roads for a distance of more than 200 miles. A cloudburst or great storm might render the roads impassable for a considerable space of time, cutting off the troops from their source of supply at the border. While the physical condition of the Mexico Northwestern is not good, many bridges have been destroyed during the years of revolution in Mexico, army engineers should have little difficulty in keeping it open. Army officials declare that it may be months before Villa is tracked down and disposed of, as he knows every one of the mountain trails and is among friends who will give him every assistance.

THE Germans were still pounding at Verdun at last reports, a few more of the outlying villages falling into their hands, after terrific artillery bombardments and costly infantry charges. The French fortress has been the scene of the fiercest fighting of the war for almost a month now and the defenders take heart in the fact that the first fierce onslaught of the Germans was repulsed and the gains have been small since and made at an immense cost in human lives. There have been no marked or decisive advances by either side for the past week or more.

THEODORE ROOSEVELT has returned from a rather extended vacation in the West Indies and has launched himself, with characteristic vigor, into the political campaign. He returned to find a very healthy boom for Justice Hughes for president prevailing. Whether he will oppose this boom or not has not developed, but there are many indications that his name will be presented at the Chicago convention and every effort made to land the nomination for him. Ex-President Taft is publicly quoted as being favorable to the Hughes nomination and as saying that Roosevelt stands little or no show. Justice Hughes has repeatedly stated that he is not a candidate. He is satisfied with his present position and intends to do what he can to keep politics out of the supreme court. In the meantime, the states which have thus far held presidential primaries have, for the most part, chosen uninstructed delegates, with Fairbanks, of Indiana, having the largest number of instructed delegates, Cummins, of Iowa, next and La Follette, of Wisconsin, third.

THE United States shipped 678,443 horses and mules, worth $131,914,000, to Europe for the allied armies the last year and a half, according to export figures assembled at the bureau of foreign and domestic commerce. In 1913 only a few more than 30,000 horses and mules went to Europe from the United States, but three months after hostilities began they were going at the rate of 30,000 a month, the steady flow reaching its height last October when 56,000 were shipped. Despite a diminished supply the price of farm animals has dropped considerably within the last few months, which is explained by the statement that officially the best horses left the country, lowering the general standard, and also by the increased use of gas engines and motor cars. The average price January 1, 1916, was $101.60, compared with $103.15 a year ago and $109.14 in 1914. The average price of animals supplied to the allies was upwards of $200.

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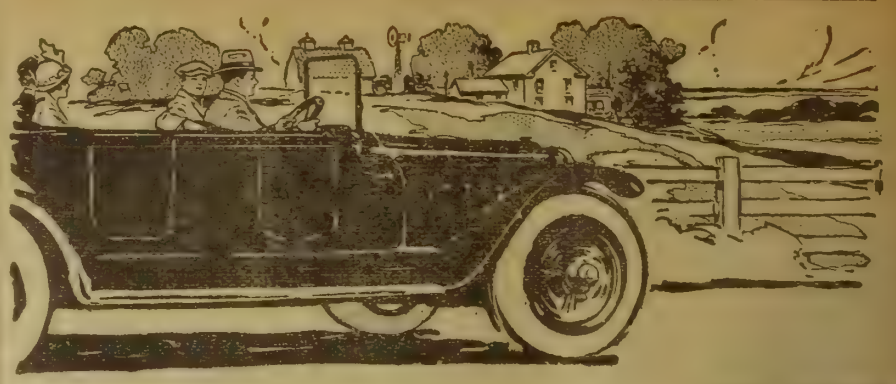

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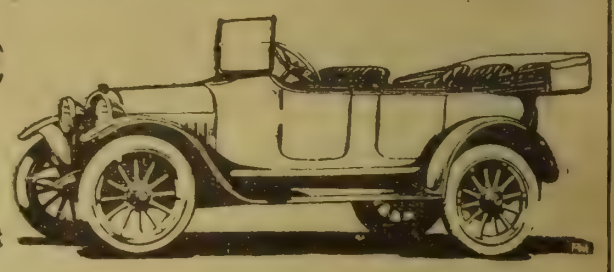

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The Wisconsin Farmer

THURSDAY, APRIL 6, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

SWAT THE FLY.

I RATHER imagine that my annual warning in regard to the danger from house flies and mosquitoes falls on deaf or unheeding ears, for the most part, but I would be derelict to my duty were I not to sound it. There is too much at stake, in human life on the farm, to permit me letting the matter go by default.

With the spring rains upon us, I want to urge upon all my readers that they take precautions to prevent the breeding of mosquitoes, than which there is no more deadly distributor of disease. There is no worse thing to be found upon the farm, at this time of the year, than the old-fashioned rain barrel, left uncovered and uncleaned, a breeding place for the mosquitoes which will soon be carrying disease germs from the sick to the well and starting epidemics which it will cost many dollars and certainly some human lives to check. Tin cans left lying around the farmyard, to catch waste water, are also good breeding places for these pests. If we cannot be induced to clean up the place in order to make it more attractive to the eye, can we not be induced to clean it up so as to minimize disease? The mosquito may seem a small thing for us to be bothering about thus early, but a hurry-up call for the doctor many miles away, in the middle of the night, with a dread disease just setting in, is a very serious matter indeed. Let us guard against it while there is yet time.

But the mosquito is not our only deadly enemy at this time of the year. There remains the pestilential house fly. It has been conclusively proven by medical experts that the fly is responsible for much of the spread of such dread diseases as typhoid, malaria, dysentery, summer complaint, tuberculosis and so on. Should we not take every precaution in order to minimize the chances of the fly bringing these maladies to those we love? And this is the time of the year to begin the work. Flies cannot thrive in absolutely clean and sanitary surroundings. Screen the windows and doors, swat the fly as you would attack a burglar on the point of breaking into your home, clean out the cracks and crevices so that there will be no breeding places left to it, leave nothing undone to make the life and the lot of the very first fly so miserable it will seek a home more to its liking, where it will find a better welcome. I am not going to bore or scare you with figures, but when you realize that one fly, of the early spring, laying 120 eggs, multiplies, before the summer is over, into so many billions of flies that it would take a whole line of this article to hold the ciphers of the figure, perhaps you may be quickened into the "preparedness" I am urging of you.

After all, the little things are the ones we must look after, in every line of work and walk of life. The mosquito and the fly are little things, but the tombstone out in the graveyard yonder is a very big thing indeed, one which we cannot shut out from our eyes, even though we close them and try to forget the things we might have done.

THE TARIFF COMMISSION.

WITH another busy crop season upon us and the presidential campaign already well under way, in many of the states of the grain belt, let us not overlook the important matter of the proposed non-partisan tariff commission, concerning which I have written often and forcibly in these columns. I am in receipt of word from Washington that Congressman Rainey, of Illinois, has introduced a revised bill on the subject, which it is said has the full approval of President Wilson. I have not yet received a copy of this revised bill and am quite anxious to see it. The first bill introduced by Mr. Rainey did not provide for the representation of agriculture on the board. In my opinion, this is a serious mistake. Agriculture is too big and vital an industry not to have direct representation.

Those who do me the honor to read my page regularly will recall that the bill championed so ardently the past year by Mr. H. H. Gross, president of the Tariff Commission League, named agriculture as the very first industry to be represented on the board. Mr. Gross spent a day with me recently, here in my office, and we talked this matter over, pro and con. He informed me that there was much opposition to this representation of agriculture, but that he was insisting upon it, with such force that, nine cases out of ten, he converted the opposition to his way of thinking. Mr. Gross informed me that there was an agricultural editor right here in the grain belt, who said to him that it did not matter whether agriculture was represented or not, that "the farmer wasn't much of a business man, anyway," and it would be "hard work finding a man big enough among the farmers." I hoped Mr. Gross was mistaken in regard to this, but before he left I was convinced he was quoting the farm paper editor rightly. I am sincerely sorry that such a man should be taken as representing the farmers and as speaking the minds of millions of progressive Americans. In my opinion any board which attempts to solve as big a business problem as the tariff, without agriculture being represented, is doomed to failure, for no man can understand the complexities of farming until he has had personal experience. An industry which annually adds between ten and eleven billion dollars to our national wealth is certainly big and important enough to demand consideration.

This tariff question is no longer a partisan one, it rises far above that. We have had enough tariff tinkering, with an eye single to party advantage, rather than commercial needs and welfare. It is regrettable that the tariff should ever have been made a matter for politicians to decide, rather than the representatives of all the big commercial industries of the nation. But because we have gone along thus heedlessly for many years is no reason why we should indefinitely continue the old and obsolete system. A non-partisan tariff commission, with ample powers to make an investigation which shall be authoritative, and reporting directly to the president, the house ways and means committee and the senate finance committee, is demanded and should be given to the people without undue delay. Congress has many important matters before it at the present session. I sincerely hope, however, that it will not adjourn until it has given us relief in this bothersome tariff matter. It will do so if the farmers write to their congressmen, indorsing the commission idea as a whole, but insistently demanding that argiculture be represented thereon.

HOT LUNCHES AT SCHOOL.

I AM greatly interested in a report which comes to me from Kansas, where a particularly bright country school-teacher solved a vexatious problem by feeding her pupils hot rabbit practically every noon last winter. The boys of the school set traps, caught the rabbits and then dressed them, and at 11 o'clock the teacher put them on the big school stove and let them cook, with occasional attention from her, while she heard the classes recite. At noon the children were regaled with a hot meal and were kept in better spirits and health than is at all possible with the aid only of the cold lunch usually brought from home, in the early morning.

This problem of proper food for rural school children is a big and vital one. I am delighted that at least one of our grain-belt teachers should have solved it so successfully. I can imagine the glee with which the boys set about the work of trapping, while the girls received some good domestic science training in helping to prepare the dish palatably. There is much to commend in this work, indeed.

The United States Department of Agriculture realizes the importance of this problem, for it has recently issued a bulletin (known as Farmers' Bulletin No. 712) on this very subject, wherein are suggested the following economical and easily-prepared bills of fare for the school lunch:

1. Vegetable-milk soup, crackers, rolls, fruit, plain cake.
2. Meat and vegetable stew, bread and butter, sweet chocolate.
3. Boiled custard, lettuce sandwiches, fruit, cookies.
4. Dried codfish chowder, crackers, fruit, maple sugar sandwiches.
5. Bean soup, crackers, baked apples, sponge cake.

The question of equipment is a vexatious one, for there are few districts which have any school funds to waste and there are always those who hold back when some innovation like hot lunches is suggested. Yet I have it on the authority of a bright teacher that $25 will equip the average country school with all that is needed to give the pupils at least one hot dish every noon. Would it not be money well invested to provide such an equipment? I certainly believe so.

One of the chief objections to the consolidated school is that the busses too often call for the children before daylight, on winter mornings, and do not get them back until after nightfall. Children of school age demand warm, palatable and nourishing food and when they go without it from before daylight until after nightfall they are certainly not receiving proper attention. I hope that before another winter comes we will be prepared to give our young folks better attention in this particular way, for it is most important.

IN THE SPRING.

NOW that the dull browns of winter have given way to the vivid greens of spring and another season of vegetation is upon us, should we not rejoice that we of the farm, of all people, have the greatest opportunity to enjoy the beauties of Nature? Long before the first wild flower springs into blossom, even before the last bit of snow has vanished from the sun-protected crannies and crevices, there comes the grass, giving promise of another springtime of prosperity and plenty. Shall we not stop long enough, in the busy season that is upon us, to recall the words of the prose-poet of the grain belt, who wrote this tribute to grass:

Lying in the sunshine among the buttercups and dandelions of May, scarcely higher in intelligence than the minute tenants of that mimic wilderness, our earliest recollections are of grass; and when the fitful fever is ended and the foolish wrangle of the market and forum is closed, grass heals over the scar which our descent into the bosom of the earth has made, and the carpet of the infant becomes the blanket of the dead. Grass is the forgiveness of Nature—her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carnage is forgotten. Streets abandoned by traffic become grass-grown, like rural lanes, and are obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleagured by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality and emerges upon the first solicitation of spring. Sown by the winds, by the wandering birds, propagated by the subtle agriculture of the elements which are its ministers and servants, it softens the rude outline of the world. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, and yet, should its harvest fail for a single year, famine would depopulate the world.

After all, there is much of joy in farm work, no matter how arduous it may seem at times; no other life presents such heaped-up abundance of philosophical satisfaction. I like, every little while, to give my readers a timely poetical offering here on this page of mine; I could not do better just now than to reprint the verses, "When the Cows Are in the Grass," which I found in a grain-belt newspaper today:

There's a lot of satisfaction
For a farmer in the spring,
When the snow melts from the medder,
And the birds begin to sing;
When the cottonwoods are hummin'
To the breezes as they pass,
And the green gits in the willer,
And the cows are in the grass.

In the long, sweet grasses growin'
By the windin' river's brink,
Where the lappin' ripples dimple
When the cattle come to drink;
Where the rushes fringe the margin,
And the gray snakefeeder sips
From the eddy where the willer
Dips its graceful finger tips.

In the springtime when the grass comes
In the medder plot again,
When the stanchion stalls are empty
And the cows go lazyin'
Down the long lane toward the river
Where the sweetest grasses hide,
Tell you what, it sets a feller
Feelin' mighty good inside.

For I allus love the springtime,
When the cows are in the grass,
And the winds go down the medder,
Singin' love songs as they pass;
When the daisy blooms are dottin'
Meadow reaches like the stars
Dot the heavens in the evenin'
When the cows are at the bars.

With the promise of another year of bumper crops such as we have enjoyed for several years past, with our beloved country at peace, with the green grass giving evidence of the beauties so shortly to be everywhere round about us, can we not all join in saying, with heartfelt unanimity:

There's a lot of satisfaction
For a farmer in the spring.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Predicts Great Growth in Wisconsin.

A RECENT issue of The Wisconsin Farmer presented some interesting facts regarding Oneida county. This is in line with our policy of giving publicity to the great advantages and wonderful opportunities of our state.

The mail brings us a letter from Mr. C. P. Crosby, of Rhinelander, Oneida county, dealer in wholesale lumber and Upper Wisconsin lands, which corroborates our bright hopes for that section. He writes:

That was a nice article on Oneida county, and I want to thank you for giving it space. These things all help to bring Upper Wisconsin to the attention of the farmers. This country is settling up rather slowly, but the growth is steady. As I go along the road in the country I meet Jones, who is from Kansas, Smith who has come to us from Missouri, Brown and Jackson, former residents of Indiana, and Wilson from Chicago, and so on. A few of the older farmers have sold out and I think the change is more toward opening up new farms, clearing lands, etc. The inquiries I am receiving this year show that the people are really in earnest in their desire to learn more about this Upper Wisconsin country. Many letters come from those who have been residents of Wisconsin and moved away. Almost all of these are anxious to return. It is my opinion that Upper Wisconsin is going to have quite a boom in lands in the coming year.

The Wisconsin Farmer sincerely believes that Mr. Crosby is right in his prediction of a busy season for Upper Wisconsin. The land business is closely related to the development of any new country. If it is good it means more settlers, and all that Upper Wisconsin lacks, to make it a garden spot, is more settlers. The questions of whether farming and dairying are a success in Upper Wisconsin are no longer debatable. The positive proof is shown on every hand in good-paying farms, big barns and profitable dairy herds.

The only problem now is to get the right kind of farmers to occupy the vast tillable acres awaiting improvement and cultivation there. The right kind of farmers will come as soon as they know the facts, and The Wisconsin Farmer intends to do its part to see that these facts are made known far and wide.

Getting Acquainted With Your Banker.

THE banker holds an intimate relationship with almost everyone in his community, but especially with the business men of his town. In many cases it is regrettable that this business intimacy does not exist in an equal degree with the farmer of the community, who is a business man on a considerably larger scale than the average storekeeper.

Consider the matter from the standpoint of investment. Land at $100 an acre in the grain belt is cheap land, provided it has good soil, reasonably good drainage and is in a proper state of cultivation. Even at this low figure a quarter section represents an investment of $16,000, and in most of our grain-belt states quarter sections worth much more than $16,000 are the rule rather than the exception.

Nor does his land represent all the farmer's investment. He must have stock and machinery and, like the business man in town, he must hire help with his work or "have the boys do it." So the average farm represents not only the big permanent land investment, but also a good-sized sum in machinery and labor cost, as well. All this calls for careful business management of a high order.

The Wisconsin Farmer is pleased to say that Wisconsin bankers have been among the first to recognize the importance of the farm plant and to grasp the close relationship of the farming business to the general business conditions of the community. Any banker who gives a little thought to the matter soon realizes that the prosperity of the town or village depends largely on increased profits from the farm. If cows make money then perhaps more cows can be raised on the same acreage and make the farmers bigger profits. Some cows pay better than others, so it is important that the farmer have the best animals if he is to realize maximum profits. It has been proven that diseases of grains and animals are costly, and it follows that the very best methods of controlling and eradicating these diseases are a good investment.

It is natural and right that the banker, seeing these things, should try to help develop the business end of farming. In other lines of business he lends money where the prospects of good returns are brightest and the larger and surer the probable return the more reasonable the terms. These same banking principles should be applied to the farm plant the same as to a manufacturing plant. The banker is justified in extending liberal credit to any farmer who has shown by years of hard work and good farming that he can earn big returns on his investment. The banker is justified in assisting a farmer who has the ambition to get better stock or more stock, because it has been proven over and over again that live stock, and especially the best grades of live stock, will pay rich returns on the money invested if handled by a competent farmer. Just a word to those who sometimes say that a banker hasn't any business to be connected with a movement "to teach the farmers how to farm." So far as we know, no Wisconsin banker has ever been connected with such a movement, but many of them are trying to gain a better knowledge of farming and agricultural conditions, and it is right and necessary that they should do this, just as they do it in regard to other lines of business. How can the banker be expected to understand and respond to the needs of the farming interests of his community unless he gets out among the farmers and sees things from their viewpoint? How can the banker know what farmers are deserving of the most liberal credit unless he goes into the fields when they are being cultivated and notices what farmers are careless and slovenly in their work and which ones are doing it in the best way? It will pay him to see on what farms the stock is being kept up well, where the fences are in the best condition and where the evidences of prosperity, labor and thrift most prevail, just as it pays him to watch closely the evidences of care and wisdom in the management of the stores and other business interests of the town.

So the farmer should welcome as a friend the banker who comes to him for a closer knowledge of agricultural conditions. If the banker makes a mistake and offers you wrong advice about running your farm, tell him so, frankly and graciously. Tell him in such a way that he will feel that you are glad to have him interested in you and your work. Don't reply in a way that means, "You run your bank and I'll tend to this farming myself." Such an attitude will tend to interfere with that intimate and harmonious relationship which is just as important to the farmer as it is to the banker. Get acquainted with your banker, and in most cases you will find him a loyal and helpful friend.

Clean Herds in Wisconsin.

ERADICATION of tuberculosis from the cattle herds of Wisconsin has occupied considerable attention of breeders the past winter because of the efforts of the department of agriculture to work out plans for establishing a state list of accredited tuberculin-tested herds. Wherever cattle breeders have met this matter has been discussed and elsewhere in this issue we are outlining the completed plans of the commissioner of agriculture, the state veterinarian and the state live stock sanitary board for the accredited tuberculin-tested list.

Wisconsin has no more tuberculosis in its herds than any other state, but the actions of some unscrupulous persons in the past have caused considerable grief to breeders who wish to ship out of the state, several states refusing to accept cattle that have been only state tested, these requiring a government test. Under the existing arrangement all cattle sold for interstate shipment must be tested prior to shipment. Some states accepted the state's test; others required the federal test.

The new plan of the state department will, when in good working order, eliminate much of this red tape, and by co-operating with other states make it possible to ship to other states without the test now required before shipment. Of course, this applies only to herds which have been admitted to the accredited list and which list will contain only those herds which have been tested by the state; which have been found clean and which meet all the requirements. If reactors are found the owner may dispose of them, and after further tests that show no reactors the herd may be admitted. Several of the states which now require a federal test have agreed to accept cattle from these accredited herds without further tests, and many that have demanded state tests have also fallen into line. The federal department has also been interested, and it is hoped to make this work national in its scope so that a free interchange of cattle may take place without the expense and delay of testing prior to shipment.

The plan has been worked out after months of study and conference with breeders. Most of the state breed associations have approved the plan and several herds have already been entered for the test. It must be borne in mind that this is entirely a voluntary matter. Breeders may elect to take advantage of this plan or they may remain out, just as they desire. The costs must be borne by the breeders and it is believed that they will be the beneficiaries. This cost has been placed at 75 cents per head or a minimum of $18 for a herd in order to make the work thorough; satisfactory and self-sustaining and the owner must comply with all the terms of the agreement set forth in another column.

The purpose of this movement is not to advertise the herds with tuberculosis. Its purpose is to advertise those herds that are free from it. Nothing will be said of the herds containing reactors. That information will be for the owner himself, and he can begin to clean up. But the breeder with a clean herd will be admitted to this list; his herd will be so advertised and with the privilege of shipping outside the state without further testing it should prove a satisfactory investment to pay for the test. Animals in such herds should command more money. Buyers from other states, when they learn of the plan, will undoubtedly feel more favorable toward the herds so listed, and in turn the farmers should reap the harvest in dollars and cents. It will also serve to place Wisconsin in growing and important trade in cattle on a firmer basis, and will serve to eliminate that annoyance now caused by the conflicting rulings of various states relative to the tuberculin test.

Interest in Farm Records.

THE winners in the various counties engaged in the Wisconsin farm management contest during 1915 are just now being announced, and with more farmers entered for the 1916 contest than ever before an increasing interest in farm records is indicated. The state contest will be held at Fort Atkinson in June, when the state winners will be announced—these awards being made upon the basis of the best-managed farms in the state contest. Barron, Douglas, Dunn, Eau Claire, Fond du Lac, Green, Jefferson, La Crosse, Oneida, Price, Polk, Langlade, Lincoln, Racine, Rock, Sauk, Taylor, Waukesha, Winnebago and Wood were the twenty counties entered in 1915, and it is thought each county will be represented at the state round-up in June. There were 640 farmers who kept records in this contest last year, and the 1916 contest which is already under way is interesting an increased number.

The winners in each of the counties thus far announced are as follows:

Dunn County—S. A. Ausman, Elk Mound; Roy McDonald, Menomonie; Val Wallenstein, Knapp.

Eau Claire County—Harvey Chrysler, Osseo; Clarence Campbell, Augusta; M. A. Pierce, Fall Creek.

Langlade County—A. Guenther, Antigo; Ralph Hedley, Antigo; Mrs. J. Knox, Antigo.

Waukesha County—Baird Brothers, S. A. Bain, John H. Williams, Waukesha.

Fond du Lac County—S. W. Bird, South Byron, H. P. West, Ripon; W. A. Lawson, C. A. Peterson, Rosendale.

La Crosse County—George Roeth, La Crosse; L. A. Jones, Bangor; C. F. Passo, La Crosse.

Green County—Arthur Callentine, Monroe; John Hiltbrand, Juda; W. N. Preston, Juda.

Barron County—R. J. Plenty, Rice Lake; C. R. Gotham, Chetek; P. L. Lehman, Barron; S. E. Severson, Cameron; W. H. Clark, Rice Lake.

Douglas County—Otto Schmidt, Foxboro; B. N. Stone, South Range; P. A. Peterson, Carl Lovett, Poplar.

Polk County—G. L. Anderson, Chas. Lumbers, Osceola; Henry Peterson, Centuria.

Prince County—Klein Brothers, A. Rehagen, E. A. Young, Phillips.

Racine County—P. G. Warmington, Honey Creek; S. F. Worthington, Corliss; J. J. Wynhoff, Kenosha; M. R. Zechar, Racine.

Sauk County—John Alexander, Glen Johnson, Riley Martiny, Baraboo; F. C. Kruse, Ladysmith.

Taylor County—A. J. Brandt, Frank Halopka, A. Reierson, Medford.

Winnebago County—N. A. Rasmussen, Oshkosh; C. D. Smith, F. Busse, Omro.

Prizes will be awarded to each of the county winners, and in addition all have an opportunity to win some of the state prizes which are separate from the county prizes. Every farmer should keep records just as the business man or the banker keeps records. Unless he does it is impossible to discover the leaks; impossible to learn whether operating capital, etc., is too high or too low. Much is being accomplished through the farm management contest in interesting Wisconsin farmers in better farming through keeping accurate and complete records. This applies not only to those in contest work but it reaches farther and induces many not in the contest to keep their own books so that they can learn for themselves where the income comes from and where the money is expended.

Another Wisconsin "Hired Man."

WITH the selection of Mr. Glenn M. Householder as agricultural representative for Rusk county, Wisconsin has fifteen such "hired men" as Mr. E. L. Luther, state supervisor of county agricultural representatives, often calls them. Mr. Householder has just been recommended by the Rusk county board, and upon approval of the board of regents of the college of agriculture he will begin his new duties. Mr. Householder is a native of Richland county, Wisconsin, and has spent several years in agricultural work in this state, South Dakota and Minnesota. During the past three years he has had charge of the agricultural departments of the Dawson and Spring Valley, Minnesota, high schools, in which position he has done much extension work along the lines of cow testing, grain breeding and farm

management. Having spent a year in seed inspection and grain breeding work he is familiar with the movement in Wisconsin to produce varieties of grains which are adapted to Wisconsin conditions.

The county representative has grown in favor in Wisconsin very rapidly during the past year and it is noteworthy and a testimonial to the progressive spirit of Upper Wisconsin that only one of the present fifteen representatives are in a southern Wisconsin county. When the counties which have called for these "hired men" are supplied Wisconsin will have provided all that the legislature has provided for, which is a total of seventeen. In 1917 two more may be employed under the law, making a total of nineteen, and after that the legislature must amend the existing law if any other counties are to employ these representatives. Walworth is the only county in the southern half of the state which has a representative which is shown by the following list of county agricultural representatives:

Ashland County—C. B. Post.
Barron County—R. L. Cuff.
Douglas County—John M. Walz.
Eau Claire County—G. R. Ingalls.
Forest County—John Swenehart, Jr.
Langlade County—F. G. Swoboda.
Lincoln County—A. H. Cole.
Oneida County—W. D. Juday.
Polk County—John Klinka.
Portage County—J. M. Coyner.
Price County—Griffith Richards.
Sawyer County—C. P. West.
Taylor County—R. A. Kolb.
Vilas County—Oscar Gunderson.
Walworth County—L. L. Oldham.

No doubt there will be more if the law did not prevent counties with county agricultural schools from having representatives. Each of the seven counties with these schools have field men who are doing similar work. Indications are that the next legislature will be asked to provide for additional representatives, as the counties which have employed them have found it a paying investment.

Grading Seed Corn Improves Stand.

NOT a kernel of good corn should be wasted this spring, and even the product of the butts and tips may be worth saving. This seed, however, should not be mixed with corn from the body of the ear unless a good grader can be used, which will carefully sort the seed later on.

We have always liked the plan of shelling corn intended for seed by hand, not but what seed put through the sheller will grow but, rather, that the taking of this amount of care will result in a more uniform product and, in turn, it will lead to a more even stand.

It might not be possible this year to do all the planting with one set of plates. There will be, in the first place, the seed from the deep kerneled ears which should be sorted out, the tip and butt kernels discarded and the seed from the middle part of the ear made to constitute one supply. In turn, there will be found in almost every supply of seed corn a considerable number of ears that tend to become flinty, and these kernels, of course, are shallow. Such corn should not be mixed with seed of an entirely different type, because the planter has no intelligence and must handle the grains just as they come.

The third grade would be the tips and butts, which may be used this year with ample justification. Of course, as a rule, it is wise to have on hand a sufficient supply of seed from the middle of the ears to do for the first planting and the grain from the tips and butts may come in handy later on if part of the crop is to be replanted.

We realize that there will be a great many instances where corn will not be classified as above suggested before being shelled, and in that case some sort of grader should be used. There are many types on the market. The main advantage in grading corn is to save seed in the first place because it is absolutely senseless to plant thicker than is required, while, secondly, graded seed will be dropped much more uniformly by the average planter than will seed that is not graded. The extra labor involved in sorting the ears before they are shelled and in grading the grain afterward is profitable always, but this year, when seed corn is high in price and exceedingly scarce, the profit on labor expended in this way may be increased many fold over what it is when the corn is in normal condition.

Father and Son Divide Returns From Farm.

IT IS not always a simple matter to formulate a farm lease for father and son when each has a share in the farm work. True it is that it is more or less simple when the son takes entire charge of affairs, because in that case a business-like lease may be drawn up just as would be the case if strangers were dealing with one another.

At this time one of our subscribers calls attention to a specific case. After spending a year or two away from home, an elder son asked permission to return home and help to operate a 240-acre farm. This was in the spring of 1915. The son, in this case, owned five work horses and three brood sows, while the father had three work horses and one brood sow. On the other hand, the son had no cattle, whereas the father had nine head. The son bought seed for thirty acres of oats but the feed for the horses and hogs came out of the 1914 crop and was supplied by the father. A thirty-acre field of wheat seeded in the fall of 1914 yielded 400 bushels. Considerable hay was produced last year, and the thirty acres of oats yielded 1,300 bushels. No arrangement whatever was made in the beginning, and everything is going along harmoniously, the intention being to handle the land this year in a co-operative way as was done last year. The question comes up: How should the products of this farm be divided so that each will get his just share of the returns? It is not stated, but we assume that the labor of each was equivalent to that of the other. Of course, the expenses of the home had to be carried, and there were younger children in the family. The advice of this paper and its readers is sought in this instance on the question of making a suitable division of the proceeds of this farm.

We can find the record of no lease in all available land renting literature that will cover a case of this kind, because of the mixed ownership of the live stock, the land and the grain fed to live stock. We encounter a complexity right in the beginning when we undertake to divide the returns on the wheat field, because the expense of preparing the soil and the cost of the seed all fell upon the father in this case in 1914. It would seem therefore, that the son's interest in this wheat crop could not be more than simply wages for the time spent in harvesting, threshing and marketing the crop. Of course, a good, faithful son should be compensated on a different basis than the individual who simply works to get in his time and who has no special concern about the ultimate outcome.

When it comes to the hogs we assume that not only the brood sows but the pigs were pastured and that they were fed from grain on hand produced the previous year. The only plan, therefore, that could be followed in determining the division of the returns would be to compute the value of grain consumed and credit this to the father's share. Make some allowance for the pasture, also, and the returns after that would largely accrue to the son, excepting only that each should be justly paid for the labor involved in caring for the hogs.

When we come to the horse power we again have an unequal interest, as one owns five head and the other three. If all the horses are fed out of the grain on hand grown in 1914 the father should be credited for the full value of this grain, and it is worth just what could be obtained for it on the market.

Then there is the question of interest on the investment in the land which must be taken into consideration. If the son is charged interest on say one-third the value of the land, it might be possible to decide upon an equitable division of the returns. However, there are so many irregular factors in the arrangement that we very much doubt if it can be scientifically worked out. It might be possible to have enough offsetting charges to practically wipe out the profits of the son in this case, and this will not be justice. Possibly the best solution that can be given would be to allow the son current wages and, in addition, possibly one-third of the gross returns from the hogs, and he will still retain his interest in the hogs and possibly a half interest in the number that are kept over for 1916. The son still owns the horses and so the matter will remain complex just as long as both parties to the transaction own part of the property. If this partnership is continued, some written agreement should be entered into concerning the interest that each will have in increasing the live stock. Otherwise it may be a little difficult later on to dissolve the partnership without working injustice to one or the other of the parties concerned. In a case of this kind, however, a father can always afford to be liberal with a son who is taking an interest in affairs and who is desirous of getting a start so that he cen eventually become the owner of farm land. This prospect ought to have a tangible value, and yet at the same time a practical program should be carried out so that each shall maintain to some extent their financial independence.

The Brood Mare in Harness.

BY TAKING a few sensible precautions in handling the brood mare before and after foaling she may be made almost as useful from the standpoint of labor performed as the gelding or as the mare that raises no colt. In spring work where brood mares have not been in the harness during winter a little special care should be taken the first few days. We have in mind an instance where a pair of mixed-bred mares (the standard blood predominating) were put to the task of raking stalks the first time they were in harness, and in a ten-hour day they covered thirty acres, but in two hours after quitting time in the evening one of these mares was dead. The day was cool and there was no overheating, but it was simply a case of overwork, and we cite this instance not because experienced horsemen are liable to make this mistake, but rather because young men and boys are likely to err in this direction and overwork the mares during the first few days in the spring.

In "The Horse Book" J. H. S. Johnstone gives a little wholesale advice on the care of the brood mare after foaling, when it is the intention to make her earn her keep at labor. On this point we beg to quote:

> After foaling the mare may have her ration gradually increased to its usual size. As a rule when a mare has been worked regularly almost up to her parturition a holiday of two weeks after it should see her in shape to go back to light work. About the third day, or even on the second, if the weather is fine, give her a chance to get out into some dry lot for exercise. At the end of two weeks she should have been gradually gotten back onto her usual feed and, of course, she should run out in the lot whenever she wants to. When it comes time to put her back in the harness leave the foal in the box stall when she is taken out to work. He will fret at first, but he will soon get accustomed to doing without his mammy. At first work the mare but half a day. She will be soft and worry greatly, probably heating herself up quite badly. A good plan in such cases is, on coming in at noon, to milk the mare almost dry and then put her in a stall in the work stable to eat a little hay and cool off. After she has cooled off so she may be watered she may be taken to the box stall, turned in with the foal and fed her grain. Beginning with half a day in this fashion, she may be gradually toughened back into doing her full share of the regular team work. Never let a foal suck milk from a warm mare. It sets up indigestion and starts scours. Keep a bucket of water in the boxstall so the foal may take a drink whenever he wants it.

The same principle, it will be noted, is emphasized by Mr. Johnstone, namely, that of getting the mare gradually seasoned to labor when she is suckling her colt. There is a temptation under certain conditions to put the mare into the collar too soon after foaling, but in the long run it does not pay. The holiday of two weeks, as above suggested, affords time for the mare to get in condition so that when she is put into service on the plows or harrows or cultivators she will stand the work well and at the same time take good care of the foal.

It goes without saying that some special attention should be given to the foal, and an ideal opportunity is afforded to do this when the little fellow is kept in a boxstall. He should have his private grain box and it is surprising how quickly he will take to eating if a little pains are taken to get him started. By putting grain in his mouth so that he gets the taste of it he will start eating earlier than if left alone, and a start is all that is needed. If one can succeed in getting a reasonable amount of colt flesh on during the first month there is no reason why it cannot be maintained by a system of grain feeding even though the mare is put to hard labor.

Long or Short Ears For Seed Purposes.

THOSE who have devoted special attention toward the improvement of any particular variety of corn soon reach the conclusion that it is advisable in selecting seed to choose ears that are uniform in appearance. If the conditions of a given locality are such that a ten-inch ear can be matured then it may be depended upon that there will be a strenuous effort made to maintain length. In doing this the first advantage is that seed grown on ears that are similar in appearance, even including length, is more apt to be uniform in size of kernels than will be the case if the ears are lacking in uniformity.

Of course, it is possible to find short, thick kernels on one ten-inch ear and narrow, deep kernels on another, but, taking all things into consideration, the seed that we put in the planter is apt to be dropped uniformly if attention is given to the matter before shelling.

There is one respect in which the results in the form of yield are somewhat disappointing, and what we have in mind has been studied with a good deal of care at the Ohio station. For a ten-year period experiments were conducted at that station, the object being to compare the yielding ability of long and short ears. In the one case seed was used from ears that averaged 9.21 inches in length, and the average yield from this corn for a ten-year period was 69.55 bushels per acre. On the other hand, when the seed ears were only 6.77 inches long the average yield for the ten-year period was 68.16 bushels per acre. Here was a difference in actual yield of only 1.39 bushels per acre, and in a bulletin describing the results of these experiments attention is called to the fact that this difference is no greater than it might have been if seed used in both series of experiments had been identical. Length of ear is apparently a matter of environment and it cannot be expected, according to these results, to influence materially succeeding generations.

In this connection, however, it is interesting to note that while the yield is not materially affected, yet there is, after all, a slight hereditary influence. It was found that when all the corn from the long ears was measured that the average length of the ear was 7.23, while the corn from short ears averaged 6.44 inches. Just why this difference in length should not show up more in the yield per acre is difficult to understand unless it be that the short ears tend to grow a little larger in circumference and therefore make up in weight to some extent what they lack in length.

We are calling attention to this matter at this time in order that those who are searching their cribs with great zeal for good corn may not overlook the solid ears even though they are much shorter than the type most admired. In the experiment referred to some of the ears were as short as six inches and such a type we would refer to naturally as a "nubbin" though, as a matter of fact, if the seed is sound there is reasonable justification for selecting even a six-inch ear. Unquestionably, it will be the kernel that we will have to study this spring, and if we can get vital corn that looks well when shelled, we will have every reason to congratulate ourselves even though ears of varying length have been selected in the first place.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Corn on Sandy Soil.

To the Editor:—My prize-winning corn was grown on a sandy soil. The seed was selected at husking time, special care being taken to obtain mature and uniform ears. Then it was

L. E. HUSTEN, EAGLE, WIS.

kiln dried and shelled just before planting time. The ground was well manured through the winter, the manure having been drawn directly from the stable. The rotation followed on this ground was oats, clover, potatoes and corn. As the ground was subject to erosion it was plowed in the early spring and was well harrowed with a peg-tooth harrow, then rolled, marked and planted with a hand planter in rows three feet and six inches apart each way. In the course of growth the corn was given four thorough cultivations. After cutting and being allowed to cure in the shock the seed was again selected and from this selection the prize-winning ten-ear sample was taken. This corn was grown on Burr Oaks Farm in the town of East Troy, Walworth county.

Lauren E. Husten.
Walworth Co., Wisconsin.

Like Begets Like in Grain Production.

To the Editor:—As it is of interest to many people to know how a first-prize peck of grain should be grown I will give a little outline of my methods. I had no intention of growing my Pedigree No. 1 for exhibition. My only object in view was the yield, which was quite satisfactory, being eighty-five bushels per acre. It received no extra attention whatever, as I have three other varieties and wanted to give all an equal chance so I could decide which were the best to keep. I have not had much experience as an exhibitor and have yet much to learn about preparing grain for exhibition. I have found that a good way to learn is by trying.

Like begets like, so we must first have good seed, thoroughly cleaned, then treated with formaldehyde to prevent smut, etc.

Next is the preparation of the seed bed. Fall plowing suits us the best and should be done as early in the fall as possible. We try to follow a four-year rotation of corn, oats or barley, then clover. If this system is followed a good seed bed can be had by the use of a disk or a good spring-tooth harrow if the work is done at the proper time. Our soil is a clay loam and we get good results from plowing at a good depth—say about eight or nine inches. Disking before plowing gives good results and if done early it will cause common weed seeds to sprout, which when turned under will cause no more trouble. As soon as the soil is dry enough in the spring to work up well we start with four good horses and a spring-tooth harrow to fit the soil for the seed, then it is sown with a seeder at the rate of ten to twelve pecks of oats per acre. Then the finishing touch is put on with a spike-tooth harrow.

Harvesting must be done at the proper time and other precautions taken to preserve the color if intended for exhibition.

We try to do a little better each year than we did the year before and feel better satisfied with the season's work when we have done this.

Of course, we cannot control weather conditions, but there are many things that lie in our power to

H. W. WHITEHEAD.

do whereby we may increase the quality of our crops. Then if the weather is favorable so much the better.

H. W. Whitehead.
La Crosse, Co., Wisconsin.

More About University.

To the Editor:—In your issue of March 16th you answer fully and fairly my question in regard to the amount of taxes we pay toward the state university. It is only in the latter part of the answer when you quote from the "friends of the university" that I begin to hesitate to give consent.

"Friends" of the university claim that "in most cases" the university costs the taxpayers "in many localities" nothing. Why? Because, they say, we get back more for local education than we contribute in direct taxes to the university. Now I would like to ask these "friends" of the university if the university ever pays back any of the more or less than $2,000,000 that it gets from the taxpayers of the state each year? No, the university does not pay back a cent; therefore, their claim that we get back more for local education than the amount of taxes we pay toward the university each year is not well taken.

If the university paid this money back then their claim would be true. But because we get some money from the indirect method of taxation or from corporation taxes that is not getting it from the university. The university is not the state.

The claim of the "friends" of the university that "in most cases in many localities" the university costs us nothing, sounds to me like sophistry. To me it appears specious; it looks like subterfuge.

This is not a question for or against the university. It is only a question to find out the burden of taxation we have to carry for its support. The university was established for the enlightenment of the people. And now, if its "friends" instead of enlightening us want to keep us in the dark, want to hoodwink the taxpayers, it is time the people knew it.

Lewis Ostenson.
Waukesha Co., Wisconsin.

Grant County Club.

To the Editor:—From time to time I see in your good paper, The Wisconsin Farmer, articles written by you for the welfare of the farmers. I enjoy reading these articles, as I am a farmer's son. I go to high school and I am taking the agricultural course. This year is the first year for the course in our school, but it is gaining favor and coming to the front.

This fall our agriculture teacher expressed a wish to get the farmers here interested in this course and get in touch with them. I talked it over with him and I suggested we form a farmers' club. He said if I would get the farmers of my neighborhood to meet in the district schoolhouse he would go out with me and talk to them on some agricultural topic and if we got the club he would go out every time and talk to us.

I got them to meet in the schoolhouse, with the result that we have a farmers' club with about twenty-five members. The farmers took up the idea and the more they know the more they want to know. We have met twice, but we have gotten a lot out of material. We meet every two weeks on Wednesday evening from 7:30 p. m. to 10 p. m. This is the only club I know of in Grant county.

Grant Co., Wis. Lavern Clark.

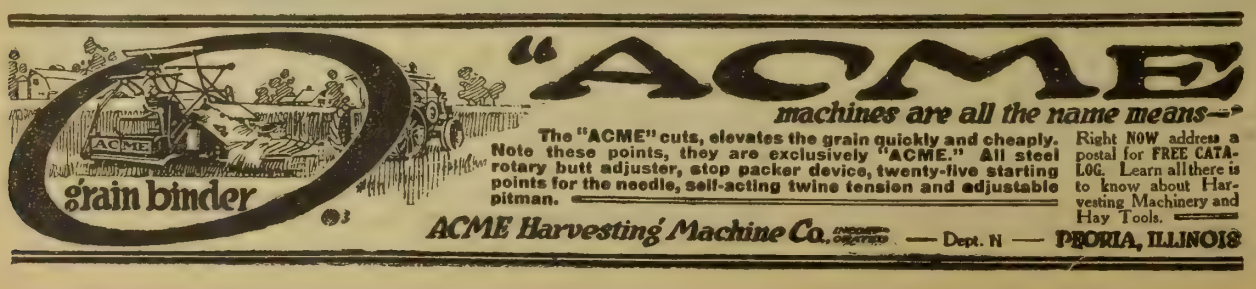
Short Course For Indians.

The Menomonie Indians have been learning the virtues of the "white man's medicine" when used to correct soil, crop and stock ills. Representatives of the college of agriculture, University of Wisconsin, have been cooperating with officials of the United States Indian Service in holding the first Indian farmers' course ever given in this state.

Never before in the history of this or any other Wisconsin reservation have the most approved agricultural practices been explained and demonstrated to the red men in a regular farmers' institute, and, as would be expected the seed is falling upon good ground. The Indians, young and old, gather eagerly about the instructors as they test seed corn, treat potato seed or judge live stock and give proof positive that the work is being appreciated.

The program includes most of the essential things with which the Indians of that region should become familiar if they care to succeed in farming as carried on in Wisconsin. All addresses are made in the simplest terms possible. The services of an interpreter are needed only for about 20 per cent of the audience, old men and women of the tribe, who are unable to grasp English words quickly. Nearly all of the 160 students in the government school, as well as the students of the St. Joseph Industrial School, nearly 300 in number, are in attendance at all of the sessions. Regular school work for the upper grades was dispensed with for the entire week, to give these students ample time for special study in agriculture.

The population of the reservation is about 1,750. One hundred and forty of the families live on farms ranging in size from five to fifty acres. Some of the farms in the South Branch division have large herds of good live stock, pure bred and grade, and these farmers sell quantities of farm products throughout the year. The government farm of 340 acres is used for experimental purpose.



Plan Accredited Tuberculin List.

Wisconsin Department of Agriculture Completes Plans to Eliminate Tuberculosis From Cattle in the State.

THE Wisconsin Department of Agriculture has finally completed its plans for establishing in Wisconsin an accredited list of tuberculin-tested herds of cattle, and as soon as sufficient entries are received state veterinarians will begin testing.

This plan, which has been submitted and approved by most of the cattle breeders' associations in Wisconsin during the past winter, has created considerable interest among breeders, and has been given considerable attention in recent issues of The Wisconsin Farmer. The commissioner of agriculture, working with the state veterinarian and the live stock sanitary board, have finally agreed upon the requirements and the cost, and when started it is believed many of the obstacles now facing Wisconsin breeders who wish to ship outside the state will be overcome.

The department believes that in establishing this "state accredited tuberculin-tested herd" list that much will be accomplished in eradicating tuberculosis from the state. Breeders who attended any of the winter meetings understand more or less fully the details which were presented at the various meetings. The rules adopted are the result of many conferences with breeders who are anxious to place the cattle business upon a better basis, and as the result of a conference of representatives from all the breed associations.

The United States Department of Agriculture has also given attention to this matter, and it is believed that that department will co-operate with this and other states in the establishment of "accredited tuberculin-tested herds," so that shipment may be made from these herds to any state in the Union without the necessity of testing immediately prior to shipment.

Moreover, the Wisconsin Department of Agriculture has already received assurance from many states in the Union that the live stock sanitary board of such states will accept cattle from the "accredited tuberculin-tested herds" without testing immediately prior to shipment.

The Wisconsin plan for the establishment of the "state accredited tuberculin-tested herds class" is therefore presented to the farmers of the state in final form.

The live stock sanitary board of the department of agriculture hereby invites the farmers of the state to make application to the state veterinarian of the department of agriculture to have their herds tested for entrance to the "accredited tuberculin-tested class."

A number of applications have already been received, and as soon as a sufficient number of applications are at hand from any one part of the state veterinarians, employes of the state department of agriculture, will be sent out on a schedule to test herds for admission to the list.

When the test and history of the herd indicate it to be safe, it will be entered into the "accredited tuberculin-tested herds class."

The following agreement will be entered into by farmers who make application:

DEPARTMENT OF AGRICULTURE
LIVE STOCK SANITARY BOARD
C. P. Norgord, Commissioner.
O. H. Eliason, State Veterinarian

I, the undersigned, ... of ..... county of ..... hereby agree to place my herd of ..... cattle in the care of the department of agriculture and Wisconsin Live Stock Sanitary Board for tuberculin testing by its employes for the purpose of placing such herd in the "accredited tuberculin tested herds class," when it is considered clean from tuberculosis by the said board.

I also agree to follow instructions as to removal of reactors and suspects, such as shall be issued by the said board through written orders as given by the state verterinarian and his assistants. I further agree to pay to the said board, seventy-five cents (75c) per head or a minimum of $18 for each test of my herd, said tests to be conducted annually or as often as the board deems necessary.

.....

The testing of these cattle will be done in a very painstaking manner by the most competent veterinarians obtainable.

The number of cattle to be tested at one time will be limited so as to give the veterinarian an opportunity to study each individual animal. If at any time reactors are found, they shall be removed and the premises shall be disinfected under the direction of and in a manner satisfactory to the board.

In order to prevent the infection of the herd, all milk from creameries or whey from cheese factories shall be pasteurized before it can be fed to calves. Adult animals introduced into the herd shall be tuberculin-tested, and calves introduced into the herd must either be tuberculin tested or segregated from the herd until such time as they can be tested. No animal introduced into the herd, except when coming from a herd on the accredited list can be sold as belonging to the class of tuberculin-tested herds until it has passed the next annual test after its introduction. Nurse cows or other cows introduced into herds must be on the same basis as above.

Much time and consideration has been given to the rates of testing. This work must be self-sustaining, and a fee sufficient to cover the expense must be remitted to the board and paid into the state treasury. For this year the fee will be 75 cents per animal with a minimum charge of $18 for any herd of less than twenty-four head. These rates will be raised of lowered according to the experience of this first year. Only sufficient fee will be charged to make the work self-sustaining.

The necessity for having the work done by a veterinarian in the employ of the state lies in the fact that the co-operation of other states to admit cattle from these herds cannot otherwise be secured. Moreover, it is necessary that the work be done by a person entirely disinterested, subject to no orders save those of the department of agriculture.

It is entirely necessary that pure-bred breeders especially, make strenuous effort to clean up their herd if they expect to keep the trade in cattle from other states, due to the fact that if the entire herds are not tested complaint often arises over cattle shipped out on a health certificate made on one or more animals of a herd, without knowing the condition of the balance of the herd. It has also resulted in a reflection on the integrity of the person who has made the test, when it was a condition over which he had no control.

The purpose of this movement is to advertise the herds that are free, or have been freed from tuberculosis, rather than to advertise the presence of re-actors discovered by the test.

Animals in such herds should be much more valuable and command a mich higher price than those in common herds. This, taken into consideration with the fact that animals can be shipped to other states without test and that buyers from other states will prefer animals from tuberculin-tested herds and pay greater prices for them, should give the farmers of the state an opportunity to reap the benefit in dollars and cents from the trouble and expenditures of testing.

LAW QUESTIONS.

Inheritance in Wisconsin.

A Subscriber, Viroqua, Wis.—(1) If a man should die without making a will in Wisconsin, leaving a widow, but no children or descendants, would his widow be the sole heir to his property? (2) If a man should die without making a will, leaving a widow and one child which has been lawfully adopted by another person, would such child inherit any part of his estate?

Answer.—(1) His widow would be the sole heir to his property in such a case. (2) In such case the widow would be entitled to dower in the real estate, being one-third of it for her lifetime, and subject to this right the child would inherit the land. The widow would get what is called the widow's allowance out of the personal property and the balance of it be equally divided between her and the child.

Sheep Killing Dogs.

A Subsriber, Dallas, Wis.—About a week ago dogs went into an open shed belonging to my brother and destroyed sheep of the value of $100, and some time before that dogs destroyed $100 worth of sheep for another man in the same neighborhood. Several other persons including myself have suffered loss from dogs killing sheep and other domestic animals. What remedy have we in such cases

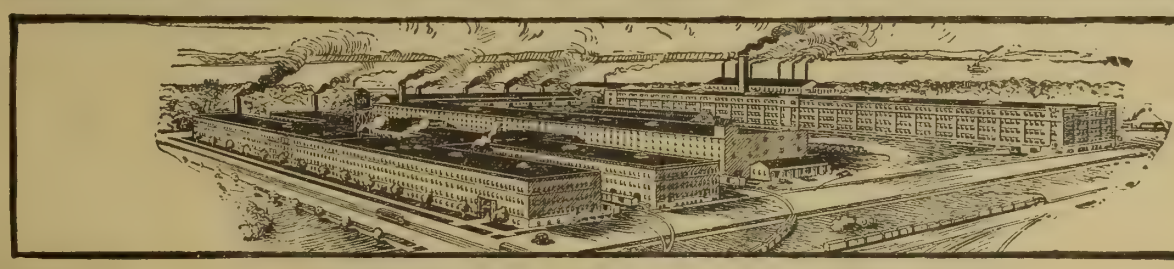
Answer.—The law provides that dogs found chasing, worrying or killing sheep or other domestic animals may be killed without liability when found in the act. Besides this the owners of such dogs are liable for damages to any person whose stock is injured or killed by the dogs and such damages may be recovered by suits at law.

A Question of Inheritance.

A Subscriber, St. James, Minn.—Ten years ago my father died without making a will, leaving my mother and four children including myself. My father owned at the time of his death, 160 acres of land in Minnesota, and the heirs decided to leave the farm undivided, and allow the mother to have the eight acres on which the buildings were situated. One of the boys has kept the whole farm rented continually and keeps the income from it, and occasionally places some money in the bank to mother's account, but the other heirs get nothing, and are allowed no voice in the matter. How shall I proceed to get my share of the land and also my share of the income from it for these last years?

Answer.—You will have to employ a lawyer and have him make application for you to the probate court to make a decree of distribution and assign to you your share of the land and also your share of the rentals and profits therefrom, which have been wrongfully appropriated by your brother.

Commissioner of Agriculture C. P. Norgord, accompanied by Architect A. C. Clas, of Milwaukee, is on a tour of the fair grounds of three states, Illinois, Iowa and Minnesota. The purpose of the trip is to investigate the sheep and swine exhibition sheds occupied by the three states.



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Beautifying the Farm Home.

A Plea For Beauty For the Benefit of the Farm Families—By Clara T. Lund, of Winneconne, Wis.

HOW to keep the young people on the farm is today the most important problem in agriculture. The solution is simple: Make home life and surroundings on the farm so interesting to the young that they will desire to stay there. It will require earnest, honest, prayerful thought to succeed, but it can be done. It will require sacrifice of prejudices and willingness to learn on the part of parents. It will also require that less money be deposited in the bank and more spent on the home, but it will be the best investment that a farmer ever made in the end, for his family and himself. We need experienced farmers to remain on their farms and the children they have taught to farm to live on and till the same acres after them, if we are to receive the greatest benefits from and make the most progress in agriculture. The growing custom of tenant farmers is a mistake. It is bad for the farms and for the future of farmers' sons and daughters. The ordinary life of the neighboring village does not compare in advantages for education or discipline for success in life to that on the farm. The social problems of a small town are serious ones, and offer no recompense for the loss of the home training on the farm.

You mothers and fathers on the farm, if you wish to make your children happy and contented and good, surround them with beauty in every way you can. Satisfy their longing to express it. You can give them no nobler education. Its advantages will accrue to every member of the family. In no place in the world is it so possible to do this with so little cost in money as on the farm, yet if you stop to consider it, generally speaking, our farm homes are pitifully plain and unattractive. Is it not the common thought that one must go to the city to see beautiful and attractive homes? Too much the appearance and thought of the farm home express hard work, economy and even drudgery to the young, so that they seek the city for the things they think exist there more to their liking. We are so accustomed to think of values in terms of dollars and cents that we attempt to measure all things by that narrow rule. But beauty will not consent to that, you cannot measure it so.

The home and its surroundings have a great deal to do with our happiness and contentment in life. Let us begin with the home. Ask yourselves the question: "Is my home beautiful, comfortable and convenient inside and out?" Lighting, heating and water systems in these days of modern conveniences have become necessities, and nowhere are they more necessary than in the farm home. The lack of these things takes many a young girl or boy from the farm. Down deep in human nature there is the inherent desire to be like other folks, and to suffer a feeling of shame or inferiority if our conditions of living are very different; hence a desire for a change. The addition of these conveniences should be considered an investment, the same as the farm implements and made as soon as possible.

My special plea would be, first of all, a more beautiful setting for the farm home. With all out-of-doors for a landscape there is no limit for the possibilities for improvement. All that is needed is careful thought and effort and a small amount of money. If you will observe in passing through the country, many houses seem to be set in the wrong place. They seem to be just set down and left there. Now a real homelike place has an atmosphere of contentment and satisfaction. In other words it seems to belong there. The buildings cluster around, and the whole place, while not beautiful because undeveloped, is in harmony.

Wire fencing is cheap, requires no care and lasts indefinitely. It makes a splendid support for vines and high perennials in the hardy border that you will have some day when a beginning has been made. Allow sixty feet or less according to size of ground used from house to front line of fence. This will give plenty of scope for lawn and hardy border. I should prefer no trees at all in the yard unless grouped at the back of house on both sides, but not close to it. Do not hesitate to cut down all trees that exclude the sun from the house. Let the sun flood the house; it gives health and good cheer. Vines and awnings can be used to temper its rays where needed. The place for trees is around the outside of the yard just inside the wire fencing, and grouped at the back of the house on each side, to give the home the proper setting, like a picture in a frame.

The first thing to do is to set trees every twenty feet, around the house plot just inside the wire fence. In most localities splendid young trees can be got in the woods free of cost. The elm and hard maple are no doubt the best. Do not set any common, quick-growing trees. Set trees that will live for generations. Your children's children will rise up and call you blessed for a wise selection. Dig the holes wide and deep. Take care in digging to preserve as many of the fine, hairy roots as possible. Cut off all broken roots, and trim top and roots to balance in size. Study your tree. It has a front, back and sides. Set the front toward you. It requires two people to set a tree properly. One to hold it in place and one to shovel in the soft dirt. A pail of water should always be thrown in after the tree is in, and then the tree gently raised and lowered to cover the fine hair roots with mud. Now continue the filling with soft dirt, and tramp down hard. Repeat this process till hole is filled. Cover top of mound with loose dirt. Set your trees now. This is only the beginning of our

MAPLE LODGE FARM HOME AND GROUNDS.

frame for the home, as the hardy border will be of hardy shrubs and perennials set all around the house plot in front of these trees.

Now that the trees and fence are in

Don't pay too much
—nor too little

WHEN you buy a car apply those same prudent principles that guided you in other purchases that turned out well. Buy a KisselKar—the price is just right to give you the greatest value.

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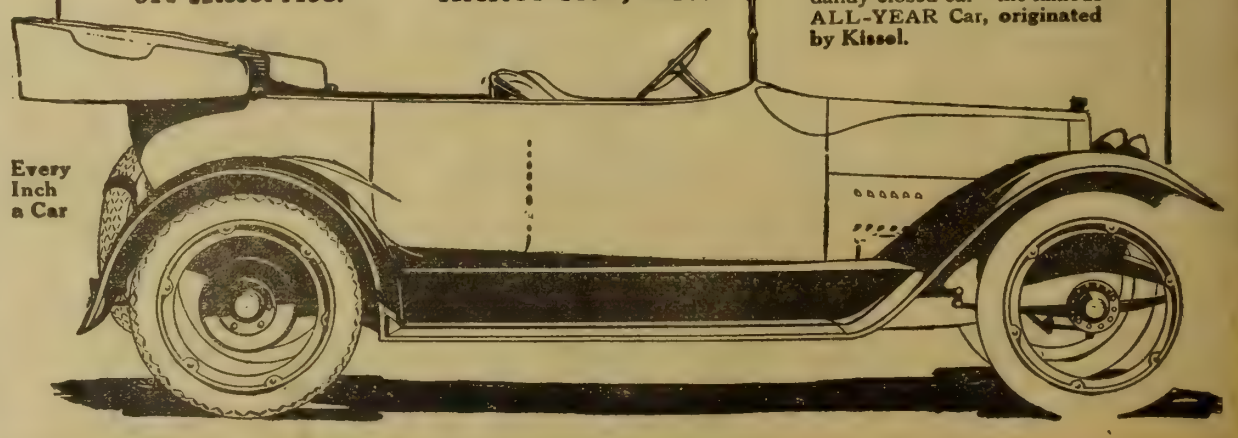

Every Inch a Car

place, let us do away with the barren appearance of the house. As soon as the ground can be worked in the spring, have a space three feet wide across the front of the house spaded up as deep as possible and the ground well mixed with old, well-rotted cow manure. Keep line of bed straight, and lay in six-inch boards to within three inches of the top of the ground. Fasten securely in place with strong stakes driven in the ground. This bed can in time extend around the sides of the house. Into this bed we will set hardy shrubs and perennials and thus cover entirely the unattractive stone foundation with a living

THE SAME PLACE AS SHOWN ON PAGE 8 AFTER FOUR YEARS' GROWTH OF SHRUBBERY.

growth of green and bloom. The home will then have the appearance of nestling on the bosom of the green lawn through a soft set of foliage.

One foot from the stone foundation of the house and six feet apart set the shrub, forsythia, or golden bell. It is a very early flowering shrub with profuse drooping golden yellow flowers. Between these shrubs set double shrubs, and eighteen inches apart in the row set the perennial north star chrysanthemum. Alternating with the last row and the same distance from it, set the perennial aquilegia or columbine. The north star chrysanthemum is a large, single white star that remains in full bloom for six weeks in summer. The columbine, a beautiful bright blue of early spring. Edge your bed with a sowing of Little Gem sweet alyssum seeds, and you will have a low, thick mat of sweet white flowers for a border that will bloom till snow comes.

Figuring eight shrubs at 35 cents each, thirty perennials at 15 cents, seed at 15 cents, we have an outlay of $7.45. But it is done for all time and will grow in beauty each year.

Examine the two illustrations given herewith. Both represent the same country home. If this were a medicine advertisement I should label them "before and after taking." The barren picture represents the home when purchased, and the other as it now appears after four years of time under a simple plan of home improvement. A little city girl walking for the first time in this garden exclaimed: "Oh, how I wish I lived here!"

Apart from its beauty, the abiding joy of a garden is found in its constant change and growth, thus giving freedom to the mind and scope to the imagination. The hard work and monotony of farm life makes a garden a necessity to all the family.

Send for the seed catalogs as advertised in papers and magazines and thus collect a little library on the subject free of cost. Write the author of this article in care of The Wisconsin Farmer and names of reliable dealers in shrubs and trees will be sent to you. Do not put off the beginning of this garden setting for your home. Begin now.

The man who displays kindness in handling his live stock is always ahead of the game. It is a fine thing to see an old cow peacefully chewing her cud and allowing her owner to pass around her without the thought entering her contented mind that she is in the way. That cow will give more milk than the cow that makes a dive for the gate every time anybody enters the yard. Kind treatment counts not only in handling cattle and horses but also in looking after hogs. You must give farm animals a "good time" if they are to return you good profits and the individual had better take up grain farming who has not the patience to fondle and caress the animals with which he comes in contact.

If every road officer does his duty the mud will fly this spring. Road drags have already been taken from under cover and thousands and tens of thousands of miles of road in the corn belt have been rounded up. Let the good work continue. It aids in moving produce to market and it adds wonderfully to the pleasure of those who travel by auto or horse vehicle. Men disagree on just how far we should go in surfacing our roads, but no two opinions exist concerning the necessity of making our earth roads just as smooth as possible.

What's Your Notion of GOOD Threshing?

THIS IS OURS!

The Red River Special
With

THE BIG CYLINDER
Power, weight and momentum. The strongest and largest design that is used.

THE MAN BEHIND THE GUN
Our patented device that separates most of the grain right at the Big Cylinder.

THE BEATING SHAKERS
That BEAT the straw from the under side and knock out every kernel of grain that is in it.

THE ADJUSTABLE CHAFFER
That cleans the grain as it should be cleaned, ready for market.

THE N. & S. WIND STACKER
That gets rid of *all* of the straw, but *none* of the grain. This is a special feature, peculiar to the make.

Many of your own neighbors have written to tell us their opinion of the Red River Special and the work that it has done for them. The Home Edition of our threshing paper contains their letters. Send for a copy. Ask for the Big Catalog as well when you write. We'll be glad to send you one.

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(In Continuous Business Since 1848)
BUILDERS EXCLUSIVELY OF
THRESHING MACHINERY
Red River Special Threshers, Feeders, Wind Stackers
Steam and Oil-Gas Traction Engines
(4) BATTLE CREEK, • MICHIGAN

Big Ben

Just As a *Clock*

If he didn't have an *alarm* in his make-up he'd be the best two-fifty *clock* that ever kept track of the day on any farm.

As it *is*, he's *two good clocks in one*—a reliable alarm to get up by, a punctual timekeeper to serve in parlor, dining room, or kitchen. He goes quietly about his work—you hear him only when he calls.

Handle him with reasonable care, — he'll last for years.

7 inches tall. Price $2.50 in the States, $3.00 in Canada. If your jeweler hasn't him, send a money order to his makers and he'll come direct by parcel post, all charges prepaid.

Western Clock Co.
La Salle, Ill., U.S.A. **Makers of *Westclox***

Don't Pot Your Trees

Spade-dug holes, like pots, confine and cramp the roots. Set your trees out in blasted holes. Stop the big percentage of early losses. Make them grow sturdy, hearty and fast. Cash in on your investment quicker by getting earlier yields.

Drawn from actual photo.—Note marked difference in growth between tree planted in blasted hole and tree planted in spade-dug hole.

Practical Proofs

E. J. BARKER, Beech Bluff, Tenn., says: "I would not set trees without first subsoiling with explosives, even if it cost four times the amount."

J. C. SAYLOR, Penna., says: "Blasted trees the finest in the orchard."

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Red Cross Farm Powder

lightens labor and increases profits. It loosens the earth, makes better rootage and provides increased nourishment for young trees. It rejuvenates old trees and makes them bear.

GET THIS BIG BOOK FREE

Describes the use of Red Cross Farm Powder for tree planting, land clearing, subsoiling, ditching and many other things. Tells what this modern method has done for hundreds of orchardists and farmers. Write to-day for this interesting 188-page

Handbook of Explosives No. 35

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Wilmington, Delaware

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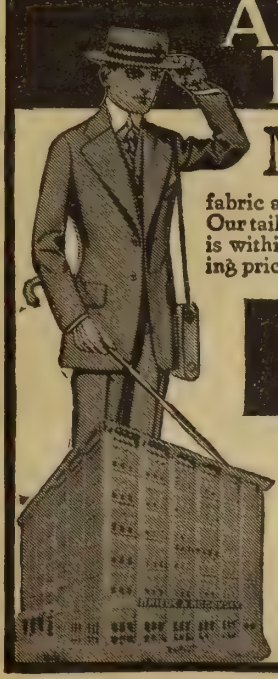

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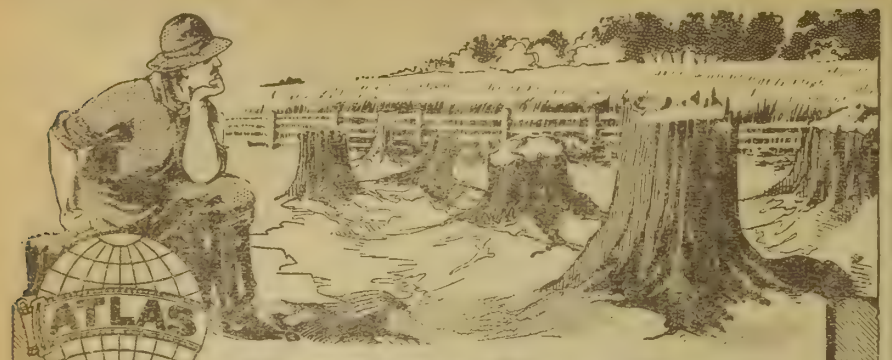

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There are dollars under the stumps—crop money that belongs to you. Get it out. Remove the stumps yourself. Blow them into easily handled pieces with Farm Powder. You can do it quickly, easily and thoroughly in the most economical way. No experience or skill is needed if you use

Atlas Farm Powder
THE SAFEST EXPLOSIVE
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"Better Farming," fully illustrated, shows how Atlas Farm Powder may be used to increase the fertility of the soil, improve orchards, and save money in many kinds of work. Mail the coupon.

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This difference in weight means a great reduction in vibration and more power. By cutting down vibration you'll have greater riding comfort—less noise and rattle—more speed and flexibility and fewer repairs.

LYNITE Aluminum Pistons are acknowledged to be the greatest engineering improvement of 1916. Their use in the best of the season's high-priced cars proves this.

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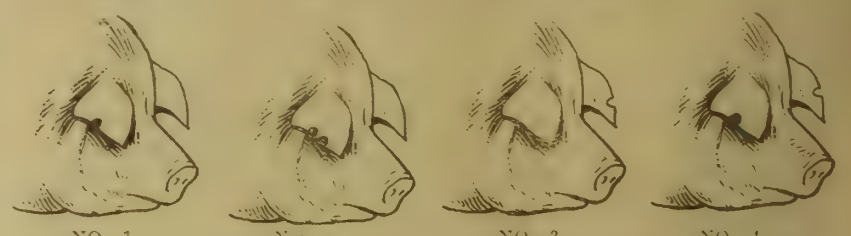
THE ADAMS SEED COMPANY **BOX 50, DECORAH, IOWA**

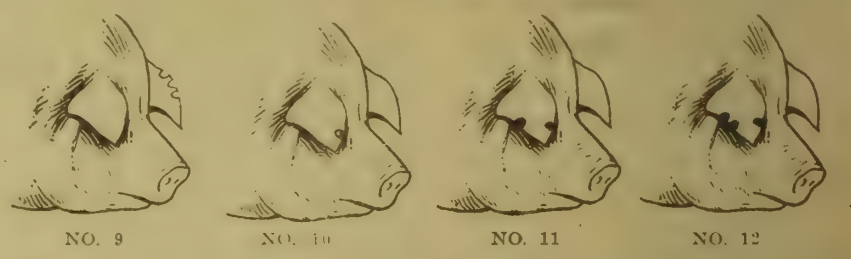
Marking Pure-Bred Hogs.

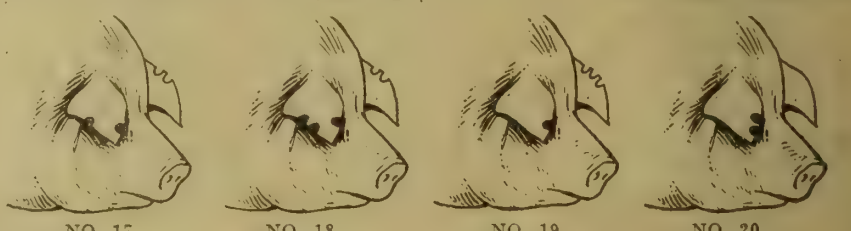
Simple System Makes It Possible to Identify Any Pig, Thereby Eliminating Error or Chance—Facilitates Keeping Records.

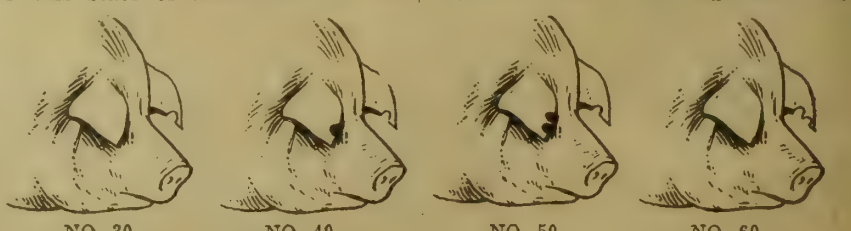
WHERE a number of pure-bred sows are kept for breeding purposes an ear-marking system becomes an absolute necessity. For a time a shrewd caretaker will be able to identify the pigs from the various sows, but it simplifies matters materially and absolutely eliminates all danger of making mistakes when the little pigs are marked early in life. There is the ear-tagging system by which the pigs can be numbered, but no confidence can be placed in this plan where the herd is large, as too many of the metal tags are apt to be torn out and when this occurs a mixup is inevitable.

Nearly all breeders who handle pure-bred hogs on anything like an extensive scale have the same system of marking and when one becomes accustomed to it it is just as simple a matter to read the number of a hog as it is to read the letters of the alphabet. Of course, in any marking system one must keep in mind that pigs from the various litters will be kept for breeding purposes year after year and it is not uncommon to find yearling, two-year-old, three-year-old and even older sows on the same farm, and for that reason in adopting a given marking system one must make allowance for this state of affairs and no two sows in the herd at any time should have the same ear mark, excepting they are litter mates. Special attention is called to this matter in a communication from one of our subscribers who asks for a system of marking that will not duplicate itself and thereby cause confusion. He states that he has one sow, for example, marked No. 10 and he is planning on keeping some gilts from this sow for breeding purposes. If these gilts are marked No. 10 there will be trouble later on, but as a matter of fact no such difficulty will occur if a good system of marking is adopted in the first place. By a study of the accompanying illustrations one may very soon comprehend the plan of markings we propose to describe at this time, so that when it is once put into use the herdsman or caretaker can tell instantly the number of an individual from the ear marks. Beginning in the spring with the first litter all the pigs in this litter should be marked with one notch on the lower side of the right ear. A special ear punch will have to be employed, although it is entirely practicable to cut a small three-cornered notch with a sharp pair of shears. The notch always should be made small, because if it is deep it will weaken the ear so that it is more apt to be torn later on. Litter No. 2 should be marked with two notches on the lower side of the right ear. By the simple process of addition, one and one added together make two. One notch on the lower side of the left ear signifies litter No. 3 and the pigs









in the third litter should be so marked. As one notch on the right ear means "one" and one notch on the left ear means "three," then it follows that litter No. 4 should be marked with one notch on the lower side of the right ear and one notch on the lower side of the left ear, because three and one added together make four. Continuing now the whole process is a matter of simple addition. Litter No. 5 will naturally be marked with two notches on the lower side of the right ear and one notch on the lower side of the left ear, because three and two added together make five. Two notches on the left ear would be the mark of the sixth litter, because three and three make six. Continuing, you find that two notches on the lower side of the left ear and one notch on the lower side of the right ear would be the mark for No. 7, while two notches on the lower side of the right ear and two on the lower side of the left ear would answer for litter No. 8. Three notches on the lower side of the left ear would be the mark of the ninth litter because three "threes" added together make nine. At this point we introduce a mark that has a different valuation. For example, one notch on the upper part of the right ear signifies "ten" and the tenth litter is so marked. All the litters marked between ten and twenty must have this notch on the upper part of the right ear and, in addition, use the same marks as were employed in the case of litters from one to nine. When the pigs are marked up to No. 19 then two notches on the upper part of the right ear will mean the twentieth litter. From twenty to twenty-nine repeat the markings that were used on litters from one to nine, and these, with the two notches on the upper part of the right ear, will indicate that the numbers are in the twenties.

And so the matter goes. The thirties are indicated by one notch on the upper part of the left ear, this being used in conjunction with the same marks as were employed on litters from one to nine. Mark the fortieth litter one notch on the upper part of the left and one notch on the upper part of the right ear and repeat the other markings from forty to forty-nine. When you come to the fiftieth litter the mark should be two notches on the upper part of the right ear and one on the upper part of the left ear, and between this number and fifty-nine use the same markings as were used on litters between one and nine. Litter No. 60 will be marked with two notches on the upper part of the left ear. Then use the markings from one to nine as given before and this will take you up to the sixty-ninth litter. By continuing a system of markings on the upper part of both ears it is possible to mark 100 litters without any confusion whatever and it is altogether likely, unless in the case of exceptionally large herds, that it will be practicable to start over again when this point is reached and begin with No. 1.

In connection with any ear-marking system there should be used a good-sized record book and a page of this book should be given over to every sow kept for breeding purposes. She will be designated by her ear number and we take it for granted that she will be recorded before or soon after she farrows her first litter so that her certificate number should also go on the same page, and so much the better if the name of her sire and dam can be given and their certificate numbers. At farrowing time make a record on this page of the number of pigs farrowed and also the number saved and the sex, and their ear marks should be indicated. If this plan is followed there will be no mix-up and it will absolutely eliminate guesswork, not only for the time being but for all time to come. This will make a permanent record and one that can be understood even by those who have had nothing to do with making it out.

Better Potatoes.

The yield of potatoes as commonly grown is small, discouragingly small. Comparatively few farmers exercise care in seed selection, and yet experiments in many places have proved conclusively that with no other crop will it pay better to exercise great and persistent care. It will not do to select good tubers for one year only, for while there will be a manifest gain by so doing it is in the following up all advance made that you get increased yield.

A system about like the following has been advocated and followed by some intelligent experimenters with surprisingly valuable results. Experiments are made on the principle that breeding to better types is always possible by selecting the best. Take any ordinary potato field where the yield is about 150 bushels per acre. At digging time select 500 of the best. If they are Early Ohio let them be of the right type, good typical shape. Then the following spring plant these selected tubers in a field by themselves. As they grow, watch them for signs of thrift and the contrary. Those which are manifestly weak and degenerate and also those which are first attacked by blight, destroy at once. Pull and burn immediately. When you come to dig in the fall, dig each hill by itself for purposes of comparison. Reject each hill that falls below a certain standard. Six or seven good potatoes of the right shape for the variety should be the standard. Suppose you have 1,000 hills and find only 100 which reach your standard. Well and good, you are after excellence. Save those 100 hills for the next effort.

Do not plant all of these selects. Pick out the best. If half of them are of the right size and shape you are fortunate. And for future results you must be exacting at this stage of the game.

The next season follow the same general plan. Destroy the weak and the blighting individuals. And in digging save only the best. About this time you will see a marked improvement, some of the hills being perhaps twice as good as in any previous year. Again select only the best hills for seed and the best tubers in those hills, even if you still have to reject half the crop.

Follow this system for five years and you will get crops with from eight to ten good potatoes per hill. You will then have spuds which will yield about 400 bushels per acre instead of 200 bushels or less. By continued care it is possible to push the yield even higher. Now this is no theory but the plan has been followed in practice by practical men who will vouch for the correctness of these statements. We can do better with our crops if we are willing to pay the price. It seems at first like puttering, unprofitable work, but at the last the gains come in abundantly.

Think a minute. What would you be willing to pay this spring for seed potatoes guaranteed to yield 400 bushels per acre? Why every acre planted with such seed means to you a surplus profit of from $150 to $200. There is a good field here for some enterprising farmer to go to raising pedigree seed potatoes and in time he can make a fortune selling to his neighbors who have no time for seed selection.

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AN EXTRA SPECIAL PROPOSITION ON 10,000 NEW GALLOWAY No 8 SPREADERS FROM *NOW* UNTIL SEEDING TIME

This extra offer is made with the idea of getting ten or more Genuine Galloway Spreaders in every township in the next few weeks! One Galloway No. 8 always sells from one to a dozen more! I make this new special offer to get 10,000 advertising spreaders distributed quickly, which will build up an enormous amount of summer and fall sales. I sell on terms to suit you. Six selling plans—cash or credit!

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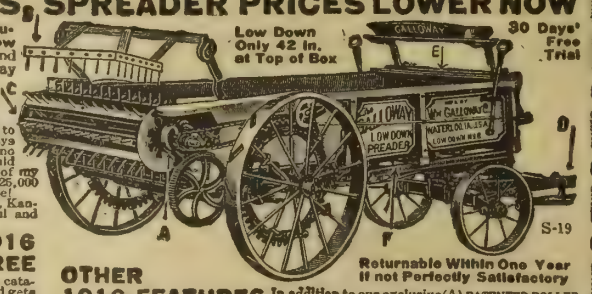

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In and Around Wisconsin

Walworth County Holstein Breeders Elect Officers—Potato Growers at Necedah Organize an Association.

Eau Claire county is pushing to the front as a potato county and a series of potato conferences have been arranged for that county the second week in April. The purpose is to interest the farmers more deeply in better potatoes and standard varieties and G. R. Ingalls, county agricultural representative, will be assisted by J. W. Hicks, president of the Wisconsin State Potato Growers' Association. The conferences will be held at Allen on April 12th, Fairchild on April 13th, Augusta on April 14th, Fall Creek on April 15th, Eau Claire on April 16th and Ludington on April 16th.

So well pleased were the Benson county (North Dakota) farmers with their first "traveling short course" through Wisconsin that they are planning to revisit the state in June. According to word just received from F. R. Crane, the agricultural extension agent who was in charge of the excursion from Benson county in February, the delegation will visit stock raising centers of Wisconsin and northern Illinois, paying particular attention to the methods used in fitting live stock for the Chicago market. On their former visit several days were spent visiting farmers in some of the leading districts of the state. A day was also spent at the university.

One hundred bushels of corn per acre was grown last year in the Washington county acre corn contest. This honor goes to Howard Schacht, of the town of Trenton, who carried off first honors in the acre contest. The winners in the contest have just been announced and Howard's corn under test germinated 100 per cent. The three silver cups for the best corn in the ear went to Everett Schubert, of Polk; Arthur Doll, of Addison, and Orrin Peters, of West Bend, in the order named. The town winners were: Town of Addison, first, Arthur Doll; town of Barton, first, Edwin Moldenhauer; second, Erwin Moldenhauer; third, Edwin Techtmann; town of Erin, first, Henry Simon; town of Polk, first, Everett Schubert; second, Walter Thiel; third, Raymond Storck; town of Richfield, first, Walter Lofy; second, Joseph Wiedmeyer; third, B. Mueller; town of West Bend, first, Orrin Peters.

The Walworth County Holstein Breeders' Association held its annual meeting recently at the court house at Elkhorn and elected E. B. Watrous, of Troy Center, president; D. E. LaBar, of Delavan, vice president; L. G. Rockwell, of Elkhorn, secretary, and M. E. Cusack, of Darien, treasurer. J. G. Voss, of Elkhorn, was named a director. About thirty breeders were present and it was decided to hold a summer meeting and picnic in June at the farm of Mr. LaBar, who extended an invitation. Members of the Elkhorn Booster Club will be invited in order to bring the business men and the farmers closer together. Dr. O. H. Eliason explained the plans for the accredited tuberculin-tested herds' list and the plan was approved. W. L. Baird, secretary of the Waukesha County Holstein Breeders' Association, told of the work of the Waukesha organization and L. L. Oldham, county agricultural representative, discussed the subject "Quality First."

Potato growers in the vicinity of Necedah, Juneau county, organized the Necedah Potato Growers' Association at the recent potato institute held in that city. Fred Rattunde was elected president and John A. Loescher was chosen secretary. The institute was held on March 20th by J. W. Hicks, president of the state association, and was very well attended. Mr. Hicks strongly advocated the growing of a few standard varieties, those best adapted to that locality. He suggested four early and four late varieties which have been found good for Wisconsin and the new association decided to secure certified seed for its members. Rural New Yorkers and Green Mountains will be given a trial this year by the members. The early varieties suggested by Mr. Hicks are the Early Ohio, Early Rose, Irish Cobbler and the Triumph. Late varieties suggested are the Burbanks, Green Mountain, Peerless and the Rural New Yorker. Potato diseases and remedies were also discussed and the association plans to carry on an active campaign this year for better potatoes.

The annual meeting of the Taylor County Fair association at Medford recently resulted in the election of the following officers for the coming year: J. H. Wheelock, president; John Gamper, vice president; Herman Koehler, treasurer; J. C. Hoffman, director; John Kraemer, director; Herman Leicht, director. R. A. Kolb was elected superintendent of stock.

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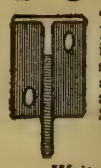

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DAIRY

Sanitary Utensil an Important Factor.

In the effort to produce sanitary milk, much attention is given to reducing the number of bacteria to a minimum. From the time the milk leaves the milk glands until it is placed in the final vessel in which it is sold, it is exposed to contamination through many sources.

With this fact in view, the investigation of the utensils as a source of bacteria in milk has been undertaken by the dairy department of the University of Illinois. The result of the investigation shows that when utensils are cleaned in just the ordinary manner, which is found in all too many instances, where the milk pails are washed in common with the supper dishes, and not sterilized with boiling water or steam, a very large number of bacteria are added to the milk.

The extent of the contamination of milk was brought out in one of the experiments in this investigation. In this experiment all of the vessels were steamed before each milking for fourteen days, and the samples of milk were taken as it was passed into the respective utensils.

During the following two weeks the samples were taken with the utensils being washed but not steamed. The results are summarized in the following table:

	Bacteria per cc
UTENSILS STERILE.	
Milk leaving barn	2,277
Same milk, one hour later, bottled	3,875
UTENSILS NOT STERILE.	
Increase due to three pails	57,077
Increase due to strainer	15,353
Increase due to clarifier	172,763
Increase due to cooler	19,841
Increase due to bottler	247,611
Total in bottled milk one hour old	515,200

Heretofore stable conditions have been considered responsible for contaminated milk. In this experiment only 2,277 bacteria were due to barn conditions, and more than a half million bacteria were introduced into the milk through the agency of washed, instead of steamed utensils.

We cannot dodge this experiment, neither give it a passing thought and drop it with the comfortable assurance, "It's all very well, for theory, but of no practical use in everyday life." In a lesser scale it will apply to anyone who keeps even one cow. Bitter milk, streaked butter, stringy milk, milk that curds before it becomes sour, cream only a few days old that becomes rancid—all this and much more could be traced directly to slipshod washing of the utensils.

Milker to Blame For Kicking.

To the Editor:—Most bad habits are detrimental to the individuals that possess them, but in the case of the kicking cow it is the milker who pays the price by the loss of his temper, his patience and sometimes his religion, to say nothing of the milk which is spilled. In nine cases out of ten, however, the milker is the direct cause of the trouble, for he has been careless during the first two weeks of the heifer's motherhood.

The reason that some cows learn to kick and others do not when milked by the same person is easily explained. Cows are like people, some are much more sensitive than others. The moment one finds that a heifer is inclined to kick she should be milked as carefully as possible. The teats should be squeezed firmly, but gently, for the opening through which the milk flows is frequently quite small at first. It should be remembered, also, that there is always more or less inflammation in a heifer's udder; in fact, many of them suffer with caked udder to some extent, hence very little pressure causes pain.

Another reason for the kicking habit is the long hairs which surround the teats of some heifers. In most heifers and cows these are short, but when they are long it is extremely difficult to keep from pulling them while milking. To realize how severe the pain is it is only necessary for one to catch a bunch of his own hair and pull it sharply. A fine sensitive cow cannot stand such pain, so she kicks in self-defense. These long hairs should be kept clipped from the udders of both young and old cows. If the milker fails to recognize these simple rules in handling a fine cow he should kick himself and not the cow.

In the case of an obstinate kicker that kicks from mere habit the following named device will enable one to quickly and surely fasten her to a complete standstill, and to the comfort and safety of the milker. It consists simply of a small, tough pole, just long enough to reach in front of the cow with the butt end fastened to the stanchion with a strap. The small end of the pole should reach out two or three feet behind the cow. Crowd the cow over against the end partition, swing the small end of the pole over against the cow and fasten it with a strap. There should be a buckle on the strap so that the fastening and the loosening can be quickly done. The pole should be just high enough on the side of the cow's flank so as not to interfere with the milking. With this arrangement any kicker can be milked with the minimum of trouble. W. H. U.

No Longer Two Acres Per Cow.

To the Editor:—Long before the commercial side of the cow had been well developed she was considered almost sacred. It mattered not how poverty stricken a family was, if there was a cow about the premises it meant that the babies were fed and fed with the one food that is perfect. Since the beginning of time man has depended on the cow as the mainstay of the family.

Time was when the cows were permitted to wander where they would. Who does not remember the tinkle of the bell in the distance—the peculiar tinkle that belonged to our herd alone? It may be that the herd was only a short distance from us, but there were trees then, and only by using the intermittent tinkle as a guide did we locate the perverse creatures, who fully understood that all there was for it was to turn towards home.

Later there were the prairie farms that boasted not of fences, lots or trees and the quiet pastoral scene was broken up. No longer was the kine permitted to "run at large." Instead, the cows were staked with a long rope attached to an iron stake driven into the ground. There were many waste places on all farms in those days and the cow converted what would have been waste into the indispensable products of life.

Another decade and people had started "tame pastures." It was easier work, too, and in some cases farmers had the hardihood to keep as many as four cows. To be sure, butter was only about 10 to 15 cents a pound, but then, you see, everything under the sun was on a similar basis, and so why should "we worry?"

The price of land mounted skyward and then it was that farmers "could not afford" to keep a couple of acres of pasture for a cow when the land put into corn would "cash in" many times the value of the products from the cow. It was a practically virgin soil. No thought was given to the future and many times farms could be found that grew corn and corn alone—oats, wheat and clover did not "pay out."

For the most part, the land that was rolling and dry had been improved first. All the drainage was very crude and the lower land would "drown out." After another decade of indifferent culture, in which the manure heap smoking behind the barn played no important part, it was discovered with some alarm that the fields were getting "thin." It was a long, toilsome, discouraging road from this stage to the present, and through it all the cow has played the all-important part.

No longer is it necessary to apportion a couple of acres for pasture and dry feed six months in the year besides. The writer was privileged to see this statement in black and white backed up by the speaker's own practical experience, where everything went "over the scales" and was recorded in a book, such as every farmer should keep.

The speaker first told the audience how he grew alfalfa, then some good, hard facts about the silo. Told us how two cows could and had been kept at their place on one acre of silage per cow each day and fifteen tons to be produced from each acre, which is a very conservative estimate: $40\times2\times365=29{,}200$ pounds required for two cows one year. $15\times2{,}000=30{,}000$ pounds per acre. $30{,}000-29{,}200=800$ pounds over the stipulated amount for a cow.

The speaker, who is authority, not from a theoretical basis but from practical experience, does not advise this for best results. Cottonseed meal or alfalfa are recommended to balance the ration.

Today the dairy cow is reclaiming our farms, putting up modern improvements, educating our boys and girls for their life job, making possible many luxuries that could not otherwise be afforded, and who is it that does not count on the weekly cream check from which to buy the necessities—"running expenses," as it were?

Given a silo, a cream separator,

JERSEYS IN WINNEBAGO COUNTY.
Three generations on the L. E. Brunson farm. Mr. Brunson is a member of the Winnebago County Cow-Testing Association.

Right Now
you need a
DE LAVAL
CREAM SEPARATOR

1st—If you are still using some gravity or setting process of creaming—

BECAUSE your cows have likely freshened now and your supply of milk is greater.

BECAUSE your spring work requires every minute of your time and a good cream separator will be a great time and labor saver.

BECAUSE your young calves will thrive best with warm, sweet separator skim-milk.

BECAUSE with your increased milk flow your greater waste of cream, without a good cream separator, must run into more money than you can afford to lose.

2nd—If you have a very old De Laval or an inferior separator whether new or old—

BECAUSE the losses of the poor separator from incomplete skimming, and the tainted product of the hard-to-clean and unsanitary separator mean most when your volume of milk is the greatest.

BECAUSE of the ample and "more than advertised" capacity of the De Laval, you can separate more quickly and save time when time means most to you.

BECAUSE an Improved De Laval Cream Separator is so much simpler and more easily handled and cared for than any other, and you can't afford to waste time these busy days fussing with an inferior or half worn-out machine.

BECAUSE the De Laval Separator of today is just as superior to other separators as other separators are to gravity setting.

Let the De Laval start saving cream for you right now. See the nearest De Laval agent at once, or if you do not know him, write us direct for any desired information.

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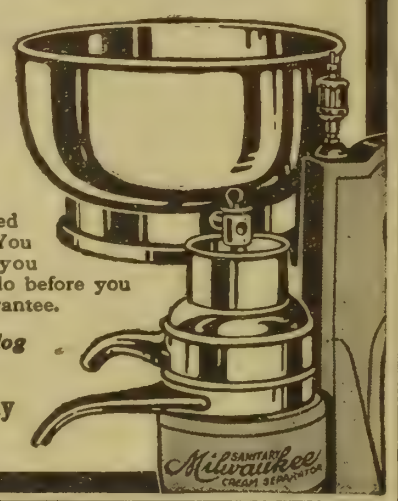
Gets More Cream With Half as Many Discs

The skimming bowl in the **Sanitary Milwaukee** is a wonder for quick, easy, clean skimming. The discs are made of rust proof aluminum. Because of their tapered thickness and the proportional feed slides, the **Sanitary Milwaukee** does better work with only half as many discs as in other separators. The discs are ***not numbered.*** Put them on bowl core in any order. There are no holes or pockets to catch and hold impurities. The smooth aluminum discs are as easy to wash as a coffee cup, no trouble at all to thoroughly clean—not ***merely rinse*** them.



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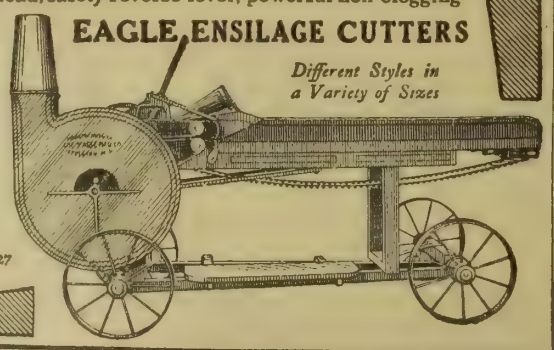

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three cans and as many cows as conditions will permit for the best of care and any farm is independent.

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Scandinavia Finishes Year of Testing.

To the Editor:—The Scandinavia Co-operative Cow-Testing Association, which comprises thirty-one herds in the vicinity of Glenwood City, St. Croix county, has just finished another successful year of testing and the following data shows the average for each individual herd and the average for each cow for the year. There were 405 cows which completed the year's work and the highest record was made by a grade Guernsey who produced 9,521 pounds of milk, testing 4.72 and making a total of 449.5 pounds of butter fat. A grade Short-horn was second with 9,963 pounds of milk testing 4.45 and making 443.5 pounds of butter fat. A native took third honors with 11,677 pounds of milk testing 3.74 and making 437.4 pounds of fat.

HERD RECORDS FOR THE YEAR.

Herd No.	Average lbs. milk	Average test	Average lbs. butter fat	Gross returns	Average cost of feed	Average profit	Return for $1 feed fed
1	6,849	3.37	230.90	$ 74.68	$52.36	$22.32	$1.43
2	7,591	3.54	268.48	86.63	54.47	32.16	1.52
3	7,736	3.60	278.58	96.69	45.03	51.66	2.15
4	8,725	3.76	327.65	110.81	54.71	56.10	2.02
5	7,051	3.91	275.09	93.31	48.87	44.44	1.91
6	6,898	4.13	287.28	95.34	36.98	58.36	2.58
7	7,801	3.83	307.38	102.92	43.19	59.73	2.38
8	5,750	4.51	259.63	85.22	31.25	53.97	2.73
9	5,435	4.51	245.32	83.48	39.95	43.53	2.09
10	7,493	4.26	319.36	107.33	44.33	63.00	2.42
11	5,489	4.58	251.63	86.19	38.70	47.49	2.23
12	5,670	4.82	273.32	91.87	40.46	51.41	2.28
13	6,198	4.27	264.95	89.44	43.00	46.44	2.08
14	6,319	4.85	306.31	102.92	40.80	62.12	2.52
15	5,524	4.22	233.35	77.99	38.72	39.27	2.01
16	5,867	4.60	269.63	90.00	44.72	45.28	2.01
17	4,847	4.92	237.44	79.58	37.72	41.86	2.11
18	5,732	4.60	263.31	92.99	37.14	55.85	2.50
19	6,830	3.82	260.92	86.79	35.63	51.16	2.44
20	5,563	3.54	197.28	66.60	32.72	33.88	2.04
21	5,060	4.87	246.63	81.95	35.54	46.41	2.31
22	3,415	4.73	161.51	54.67	34.95	19.72	1.56
23	5,175	4.22	218.30	72.23	45.59	26.64	1.58
24	8,299	3.37	279.52	95.72	52.48	43.24	1.82
25	6,839	3.16	217.29	74.67	34.59	40.08	2.16
26	6,009	3.73	224.03	75.99	32.70	43.24	2.32
27	3,407	5.06	273.97	91.48	39.80	51.68	2.30
28	6,620	4.13	273.65	94.00	42.05	51.95	2.23
29	5,944	3.70	219.95	74.68	39.53	35.15	1.89
30	5,368	4.36	239.75	79.76	39.76	40.00	2.04
31	7,398	3.41	252.66	83.40			
Total	194,902		7,965.07	2,679.33	1,237.74	1,358.19	2.02
Average per cow	6,287	4.09	256.94	86.43	41.26	45.27	

The highest record of any of the registered animals was 423.1 pounds of fat from a registered Guernsey in the herd of Harry Herbert and a registered Holstein with 359.8 pounds of fat and owned by H. A. Livetan took second among registered cows.

From the 405 cows which finished and completed a year's work six cows produced from 400 to 450 pounds of butter fat, nineteen cows produced from 350 to 400 pounds of butter fat, sixty-five cows produced from 300 to 350 pounds of butter fat, 131 cows produced from 250 to 300 pounds of butter fat, 111 cows produced from 200 to 250 pounds of butter fat, fifty-eight cows produced from 150 to 200 pounds of butter fat, twelve cows produced from 100 to 150 pounds of butter fat. There were three cows which did not reach 100 pounds of butter fat and four cows which did not pay for their feed. Some of these were sold at once, others will be as soon as they start weeding out cows. In most instances where a cow does not pay for the feed and a little more it is on account of improper care and feeding.

The above table shows the herd records for the year.

Farmers who are in a testing association feel more interested in dairying and take better care of their cows and keep the stables as clean as possible. They try to do all they can to make better dairy products. They get to know each individual cow and can weed out the poorest cows. Some farmers started in with registered stock and will soon be able to do official testing. Most of the farmers own or use pure-bred sires. A pure-bred sire should always be used.

There would be more testing associations if the farmers knew the work they are doing and what it could do for them. Some of the farmers of this association have tested three years and the majority of them have tested two years or more. They have full records of each cow of one lactation.

A grade Guernsey made the biggest returns bringing $3.29 for every $1 worth of feed. The biggest profit was $102.83 by a grade Guernsey. A registered Guernsey had a total profit of $98.53. C. G. Carlson, Tester.

E. A. Hotz, Sec.
O. H. Grenlie, Pres.

Good Waupaca Report.

To the Editor:—I am herewith enclosing my report for February for the Waupaca and Butternut Ridge Co-operative Cow-Testing Association. Fifty-five cows produced more than forty pounds of butter fat. Two did better than sixty pounds and fifteen produced above fifty pounds. Ira Harley had nine grade Holsteins that averaged 50.7 pounds and Herman Becker had eight grade Jerseys that averaged forty-five pounds. The best producer during the month was a registered Guernsey in the herd of C. A. Peterson and G. R. Miller. She gave 1,172 pounds of milk testing 5.9 and producing 69.1 pounds of fat.

I wish to thank you very much for the space you are giving these reports. Our February list of forty pounders follows:

Owner, name and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
C. C. Boyce					
Fannie, G. H.	10	1-25	1300	4.3	55.9
Roddie, G. H.	9	10-9	2151	3.4	42.5
Trixy, G. H.	5	11-25	1344	3.8	51.1
Crawler, G. H.	9	1-14	1182	4.6	54.4
F. T. Jorgenson					
Mercedes, G. H.	7	12-28	1512	3.4	50.4
Vangeline, G. H.	9	1-18	1311	3.1	40.6
J. M. Christenson					
June, N.	5	12-15	1011	4.0	40.4
Blossom, N.	9	2-4	1362	3.3	44.9
Eva, N.	5	1-18	1341	3.3	44.3
Pinkerton Bros.					
Queen, R. H.	2	12-11	1365	3.0	40.9
Aggie I, R. H.	10	10-15	1515	3.9	59.1
Aggie II, R. H.	2	2-10	1332	4.0	53.3
Aggie III, R. H.	2	2-11	1023	4.0	48.1
E. F. Schroeder					
Charlotte, G. J.	3	1-17	915	4.4	40.3
Belle Guern. G. G.	3	11-6	663	6.2	41.1
E. O. Frihart					
Daisy, G. H.	4	1-1	1260	3.2	40.3
Herman Becker					
Spot, G. J.	7	1-18	1005	4.8	48.2

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Get our offer on Climax Silage Cutters and Bidwell Threshers.

Now is time to buy. Prices lowest, quality highest, saving the greatest. Interlocking anchoring system, oil filled staves, modern improvements is why farmers who investigate all say that

CHAMPION SILO

is the best. Write for colored picture 26x30 of CHAMPION Silo on Modern Farm.
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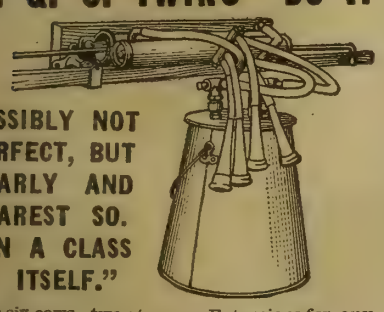
DES MOINES - IOWA

May, G. J.	5	1-8	852	4.7	40.0
Nigger, G. J.	9	10-6	705	5.9	41.6
Bessie, G. J.	6	12-27	858	5.1	48.3
Grandma, G. J.	12	10-18	675	6.2	41.9
Greese Box, G. G.	8	10-16	831	5.7	47.4
Goldy, G. J.	3	10-2	651	6.5	42.3
Silvy, G. J.	7	2-10	1104	4.7	51.9
M. J. House					
Daisy, G. H.	3	2-18	1360	3.8	51.7
Susie, G. H.	5	11-23	1002	4.4	44.1
Eva, N.	6	2-23	1377	4.0	55.1
Harriet, G. H.	4	2-19	978	4.6	45.0
H. C. Frihart					
Loretta, G. J.	5	2-3	900	4.5	40.5
Beauty, G. J.	4	1-1	666	6.2	41.3
J. C. Backer					
Pauline, G. G.	11	12-7	996	4.3	42.8
Rocksie, G. G.	5	1-16	840	5.2	43.7
Ira Farley					
Belle, G. H.	4	11-1	1347	3.8	51.2
Brownie, N.	10	10-9	1092	5.4	59.0
Lady Caroline, G. H.	2	1-3	1056	3.8	40.1
Bessie, G. H.	6	1-2	1278	4.4	56.2
Jewel, G. H.	5	11-18	1083	4.4	47.7
Jessie, G. H.	6	11-23	1389	4.1	56.9
Daisy, G. H.	4	1-11	1471	3.4	50.0
Eva, G. H.	2	1-13	1215	4.5	48.6
Emma, G. H.	2	1-16	1368	3.9	46.5
Wm. Kneip					
Maid, N.	2	3-4	1044	4.5	47.0
Fred Dunbar					
Nig, N.	5	1-21	1116	3.9	43.5
Wm. Rossy					
Libby, G. G.	5	2-12	1158	4.4	51.0
Dandy, G. G.	5	10-31	903	5.4	48.8
Ed Munch					
Belle, G. G.	8	11-15	795	5.3	42.1
Mrs. A. M. Bennett					
Candece, G. J.	3	2-3	987	5.0	49.3
John E. Peterson					
Crystal, G. G.	3	3-1	852	5.2	44.3
July, G. G.	6	2-11	879	4.7	41.3

KEEP THE BOYS

ON THE FARM. AVOID THE MILKING DRUDGERY. THE "E. & S. TWINS" DO IT



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Milks six cows—two at once. Extensions for any number more. Adjustable vacuum and alternate suction. **Positively no injury to the Cow—We Guarantee This.** Does work of 4 men. Complete F. O. B. St. Paul, $100. Simple to operate. Always in order. Address

E. & S. MACHINERY COMPANY
312 Endicott Bldg., St. Paul, Minn.

PRICES CHOPPED

10,000 NEW 1916 GALLOWAY SANITARY CREAM SEPARATORS

SPECIAL PROPOSITION from NOW till GRASS—in addition to my new low prices. My way of opening new territory, as one separator sold in a neighborhood always sells from one to twenty-five more. EVERY GALLOWAY SEPARATOR is equal to if not better than other separators selling for $75 to $95. Users say "way ahead of others." I only ask one thing—before you buy a separator of any make, kind or any price, get my big book; look out the separator you want, try it 90 days, 180 times, at my expense. If you decide to keep it you don't have to. I'll give you the choice of 5 open, fair and square selling plans and guarantee my separator for 10 years against defective workmanship and material and a $25,000 bank bond backs every sale. You take no chances.

4 Good Sizes

4 New Prices

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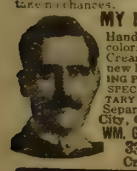

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Handsomely printed, beautifully illustrated in 4 colors. Tells all about my new 1916 Sanitary Cream Separators, how I build them, gives my 4 new low prices on 4 new sizes, also 5 EASY SELLING PLANS, cash or terms, etc. I'll also send my SPECIAL PROPOSITION ON 10,000 GALLOWAY SANITARY CREAM SEPARATORS. Drop me a postal today. Separators are shipped from Waterloo, Kansas City, Council Bluffs, St. Paul or Chicago.

WM. GALLOWAY, Pres., THE WM GALLOWAY COMPANY
33 GALLOWAY STATION WATERLOO, IOWA
Cream Separator Manufacturing Specialists.

$15.95 Upward ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a **sanitary marvel**; easily cleaned.

ABSOLUTELY ON APPROVAL

Different from picture, which illustrates our large capacity machines. **Western orders filled from western points.** Whether dairy is large or small write for handsome free catalog. **Address:**

AMERICAN SEPARATOR CO.
Box 4126 Bainbridge, N. Y.

Clean Pail—Adjustable MILK STOOL

Handiest tool on the farm. Will serve you 730 times a year for life for $1.25.

Pail always clean and right side up. Sample stool $1.25. Check for $2.50 will bring two stools prepaid and agent's terms.

KEITH & KENNETH
Iowa Falls, Ia.

BOYS, we want AGENTS

C. A. Peterson and G. R. Miller					
Daisy, N.	5	2-8	1305	4.6	60.0
Murna's Queen of Norwood, R. G.	1	1-15	1172	5.9	69.1
Art Glocke					
Queen, G. G.	2	1-9	677	6.0	40.6
Frome's Fascination, R. G.	2	12-17	748	5.4	40.4
C. A. Stinchfield					
No. 18, G. G.	12	10-12	780	5.2	40.6
No. 20, G. H.	4	12-25	1032	4.2	43.3

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

The Geneva Report.

The Wisconsin Farmer is indebted to Charles L. Turney, secretary of the Geneva (Walworth county) Cow-Testing Association, for the February report. Sixty-five cows during that month made the forty-pound list and nineteen two year olds produced thirty pounds or more of butter fat. Frank Drake is tester for the association, which is among the very best in the state. The report for the twenty-nine days ending February 29th of the cows which gave more than forty-five pounds of fat and the two year olds that produced more than thirty pounds follow:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Merton Petrie					
Pietje, H.	3	1-28	1105	7.4	81.8
Jas Henderson					
Edith, H.	6	1-11	1905	3.8	72.4
Mechthilde, H.	6	1-8	2001	3.6	72.0
Ora Taylor					
Eleven %, J.	3	1-1	911	7.0	63.8
Harry Dunbar					
Hengerveld, H.	4	12-5	1511	4.2	63.5
Queen, H.	6	9.29	1560	3.8	59.3
Merton Petrie					
Belle, H.	5	1-10	1505	3.9	58.7
Chas. Turner					
Susie, H.	8	12-14	1610	3.6	58.0
Jas Henderson					
Gem, H.	7	1-11	1392	4.1	57.1
Piebe, H.	7	1-3	1699	3.3	56.1
Harry Ames					
Nig, G. H.	9	12-27	1305	4.3	56.1
Merton Petrie					
Elandjax, H.	4	1-23	1931	2.9	56.0
Chas. Turner					
Marian, H.	3	1-5	1525	3.6	54.9
Rockwell Bros.					
Countess, G. H.	7	1-30	1482	3.7	54.8
Ora Taylor					
Dark Pansy, J.	3	12-30	1021	5.3	54.1
Moss Bros.					
Vevie, H.	10	21-27	1581	3.4	53.8
J. W. Finnell					
Bettie, G. H.	4	1-29	1372	3.8	52.1
Rockwell Bros.					
Emma, G. H.	7	1-8	1204	4.2	50.6
J. H. Henderson					
Guernsey, G. G.	7	12-26	1053	4.8	50.5
A. G. Palmer & Sons					
Johnson, G. H.	8	12-30	1517	3.3	50.1
H. D. Dunbar					
Elgin, H.	3	12-21	1346	3.7	49.8
Rockwell Bros.					
Jolly, G. H.	7	1-25	1293	3.8	49.1
J. W. Finnell					
Nellie, G. H.	3	12-25	1015	4.8	48.7
Rockwell Bros.					
Peggie, G. H.	7	1-27	1317	3.7	48.7
W. E. Palmer					
Lady, H.	5	11-29	1615	3.0	48.5
H. D. Dunbar					
Clyde, H.	7	2-6	1355	3.5	47.4
A. G. Palmer & Sons					
Daisy, H.	5	12-3	1247	3.8	47.4
Moss Bros.					
Lorina, H.	3	12-27	1563	3.0	46.9
Howard Mills					
No. 6, G. H.	9	12-7	1197	4.0	46.7
A. G. Palmer & Sons					
Lorina, H.	3	1-14	1372	3.4	46.6
Emil Papenfus					
No. 15, G. H.	6	1-16	1328	3.5	46.5
Jas. Henderson					
Mildred, H.	3	1-3	1604	2.9	46.5
Ora Taylor					
Pansy, J.	5	1-29	915	5.1	46.4
Alfred Holt					
Belle, G. G.	5	12-16	1093	4.2	45.9
Rockwell Brors.					
Fay Violet, G. H.	6	12-8	1204	3.8	45.8
Ideal Girl, G. H.	7	11-17-1140		4.0	45.6
A. G. Palmer & Sons					
Chas, H.	5	12-14	1264	3.6	45.5
Rockwell Brors.					
Jewell, H.	8	10-8	1256	3.6	45.2
A. G. Palmer & Sons					
Beauty, H.	8	11-26	1502	3.0	45.1
TWO YEAR OLDS.					
Merton Petrie					
Echo, H.	2	1-28	1694	4.2	71.1
H. D. Dunbar					
Walker, H.	2	10-10	1438	3.8	54.6
Adeline, H.	2	12-8	1346	3.8	51.3
Lady, H.	2	12-4	1537	3.2	49.2
Jas. Henderson					
Princess, H.	2	1-18	1583	3.0	47.5
Merton Petrie					
Alban, H.	2	2-3	1211	3.8	46.0
Ora Taylor					
Bromley, J.	2	2-15	563	7.3	41.1
H. D. Dunbar					
Y. Burke, H.	2	10-27	1114	3.6	40.1
A. G. Palmer & Sons					
Netherland, H.	2	12-17	951	3.9	37.1
Queen M., H.	2	12-15	1073	3.4	36.5
J. W. Finnell					
Callie, G. H.	2	10-23	966	3.7	35.7
A. G. Palmer & Sons					
W. Gem, H.	2	12-14	1027	3.4	34.9
Harry Farrar					
Grandma, G. G.	2	11-16	723	4.8	34.7
H. D. Dunbar					
W. Hengerveld, H.	2	1-15	740	4.5	33.3
Moss Bros.					
Ethel, G. H.	2	11-15	966	3.4	32.8
J. W. Finnell					
Gray Neck, G. H.	2	12-22	960	3.4	32.6
A. G. Palmer & Son					
Walker, H.	2	12-15	1357	3.1	32.1
Alfred Holt					
Brindle, G. G.	2	9-15	476	6.4	30.9
S. B. Fish					
Kate, G. H.	2	12-10	635	4.8	30.5

Good-by, Guess Work

THE New Sharples "Suction-Feed" is the only cream separator which eliminates guess work from cream production. All other separators have to be turned at exactly the speed indicated on the crank or they will lose from 7 to 13 pounds of butterfat per cow per year. The Purdue Experiment Station and other scientific investigators have proven these figures (see Bulletin No. 116, Vol. 13.)

This "guess" speed is used by 19 operators out of 20, because it is impossible to turn the crank at exactly the right speed.—It is much easier to turn it slower—and, whenever you do, you lose cream. Even a speed indicator will help but very little, as you won't and can't watch it every minute.

So we say to you dairymen: Quit guessing about your separator speed and your separator profits. Use

THE NEW SHARPLES SUCTION-FEED

Separator and know that you get *all the cream all the time.*

Whether you turn faster or slower, the bowl of the Suction-Feed *drinks in just the right quantity of milk.* The feature is entirely automatic; if you are tired, you turn slower (which is easier) and, if in a hurry, you turn faster and finish so much sooner. No matter how you turn the New Sharples always skims clean.

The Sharples cream is always of *even thickness,* whether you turn fast or slow. The Supply can is but knee high so you can fill it without any back breaking effort. The three-piece Sharples bowl is lighter and simpler than any other—*no discs to wash.*

All these money-saving and trouble-preventing features are described in a handsome catalogue; ***"Velvet" for Dairymen.*** Send for a copy, now, while you think of it. Address Dept. 44.

The Sharples Separator Co.

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ALSYKE and Timothy $5.00

Per bu. of 50 lbs., bags 22c extra. Northern grown, hardy, productive. Cheapest and best pasture and hay crop. Sample free. Clovers, Alfalfa, Northern grown Seed Corn, etc. All seeds guaranteed.
THE ADAMS SEED COMPANY, Box 50, Decorah, Iowa

WISCONSIN BANKER-FARMER

BANKERS AND FARMERS PRESENT AT MEETING AT COLLEGE OF AGRICULTURE LAST WEEK UNDER AUSPICES OF THE WIS

CO-OPERATION between bankers and farmers in Wisconsin was never better expressed than it was at the banker-farmer excursion to the college of agriculture at Madison last week. More than 500 bankers and farmers availed themselves of this opportunity to visit the college and the excursion was so successful that in all probability it will be repeated next spring and made an annual affair.

The excursion was under the direction of the Wisconsin Bankers' Association which during the past few years has done splendid work in spreading throughout the state the doctrine of better farming and better breeding. The registration lists showed an actual attendance of 468 visitors, but it is estimated that at least fifty, possibly 100, failed to register, which places the total attendance well above the 500 mark. The excursion was handled entirely by the bankers and great credit is due them for bringing together so large a body of farmers, at least 90 per cent of those present being farmers. Forty-one counties in the state were represented.

For several years the college of agriculture has been receiving and entertaining delegations of farmers, bankers and business men from other states who have traveled to Madison to learn what is being done for the Wisconsin farmer. So it occurred to Wisconsin bankers this winter that it would be a splendid movement if they could hold a similar excursion made up of Wisconsin farmers and bankers. The matter was quickly approved by the college and the excursion of last week was the result. "Know Wisconsin" would have been a splendid slogan. The bankers agreed that if delegations from other states found it valuable to visit the college it would be doubly valuable to Wisconsin bankers and farmers. This was the first excursion or meeting of its kind ever held in Wisconsin and the success was beyond expectations.

Honors for the largest delegation went to Marathon county, where A. W. Von Berg, banker at Mosinee and chairman of the agricultural commission of the state association, interested sixty-eight farmers in the excursion. Mosinee alone sent fifty-six farmers and, as Mosinee is a full day's ride from Madison, it is all the more noteworthy. This delegation came in three special sleepers which were sidetracked near the college and they lived in these sleepers during their stay in Madison. The La Crosse county delegation came in one special sleeper and part of the way to Madison the La Crosse and Mosinee sleepers made up a special train. Mosinee and Mr. Von Berg set a new precedent for excursions of this kind and Mr. Von Berg believes that next year he can bring on such a trip a trainload of farmers from his own district.

The purpose of the excursion was twofold—first to point out to the visiting farmers and bankers the new things in agriculture; the value of good breeding, not only in live stock, but also in grains; the value of good feeding, etc., and secondly, to bind closer together bankers and farmers in this co-operative movement that is gaining headway rapidly in this state. The Wisconsin spirit was manifest on every hand and this is the spirit that is making this a greater agricultural state every year. The bankers realize that in aiding the farmer they are contributing their share and at the same time helping themselves. The valuable man in any business or any community is the man who can and will co-operate with other men and men succeed only as they utilize the services and ideas of other men. The meetings at Madison were held in agricultural hall and the demonstrations in the university farm buildings. The entire facilities of the college were placed at the disposal of the visitors and the writer doubts if a better opportunity was ever afforded during an equal length of time to learn of the work of this institution. The two-day program was crowded with demonstrations and addresses of interest to the bankers and farmers and the live stock demonstrations on the forenoon of the second day were eye openers to many and no doubt scores of bankers went home with a better idea of how to loan money to a farmer and scores of farmers and breeders returned with new ideals and determined to breed better stock. Five sessions were held and at each session a banker presided as chairman. S. M. Smith, of Janesville, president of the Wisconsin Bankers' Association; J. R. Wheeler, of Columbus, vice president; C. R. Thomson, of Richland Center, chairman of the sub-committee of the association; George D. Bartlett, of Milwaukee, secretary, and H. J. Maxwell, of Princeton, member of the agricultural committee, presided.

H. J. MAXWELL, PRINCETON.

J. R. WHEELER, COLUMBUS.

S. M. SM

FIVE BANKERS WHO SERVED AS CHA

Dean H. L. Russell opened the program with an explanation of what the banker-farmer movement means to Wisconsin. He pointed out that all increase in knowledge is gained as a result of observation and experiment. The state has provided for the experimental work through the college, as it would be impracticable for every farmer to make his own experiments and the net cost of the college, he said, was a dime per $1,000 of assessed valuation of property. These experiments, he explained, are of little value if the results cannot be scattered broadcast and in this work the Wisconsin bankers have been co-operating with splendid results. Of the group which has assisted in carrying the results of experimental work to the farmers he paid the bankers' association the following tribute:

> Of this group, the largest and most important factor has been the Wisconsin State Bankers' Association. For the past six years this organization has carried on a series of corn and grain contests through the country banks. This work has been extended to live stock, introduction of better cattle, organization of cow-testing associations; in fact, all phases of agriculture and rural life. The influence exerted through the efforts of local bankers, backed by a strong state association has resulted in bringing the town and the country nearer together, ha... country, done much to intro... tions, and dignify the profess... distributed, at their own ex... bulletins a month, and now t... such co-operation it is no w... as in the vanguard of progres... campaigns of this type cann... constructive development of...

R. A. Moore, of the experin... pure-bred grains and warne... should give this attention as... Grains and forage crops in W...

VISITORS ATTENDING BEEF CATTLE DEMONSTRATION AND LECTURE.

000 a year and the experime... convinced most farmers of t... corn has been found to produ... mon kind and well-bred barl... Graber, of the State Alfalfa ... alfalfa and pointed out the ... likely to get into if he doesn ... ditions. He explained the n... lation and proper care at see...

J. R. Wheeler, of Columb... neighborhood is familiar to ... article last winter on the w... ciation, spoke on "The Valu... and vice president of the st... ested in the welfare of the f...

Mr. Wheeler said that it ... know a good cow when he se... good cow. A large part of th... fact that the farmer is afra... co-operation and proper treatm... "how a banker can loan mor... stock and farm values?" T... stock from scrub stock, go... Wheeler said, is in a positio... The banker is also able to m... said, was one reason why ev... he should join such excursio...

Referring to the value of ... results of testing in the Colu... twenty-four herds for the ye... 3.8 per cent; butter fat, 249... feed, $38.71, and a net profi... cows, which were not the ... milk, 336 pounds of fat and m... for feed. The best cow ma... these figures to show how p... total profits from the twent... ever, if the herds had averag... the profits would have been ...

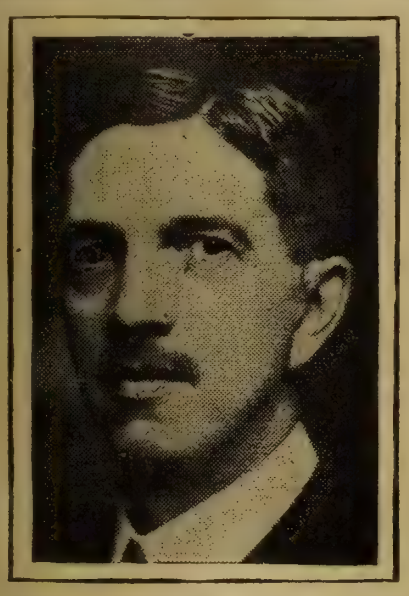
MEETING HELD AT MADISON.

BANKERS' ASSOCIATION. MORE THAN FIVE HUNDRED DELEGATES ATTENDED THE LECTURES AND DEMONSTRATIONS

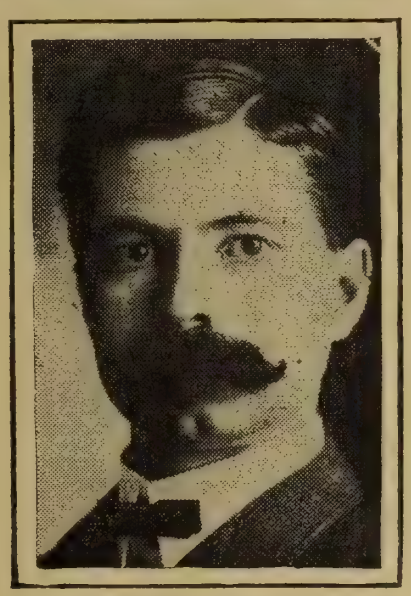
bettering conditions in the ess methods in farm opera- ning. About 100 banks have e 30,000 specially prepared rganized this meeting. With onsi is regarded by many ltural movements. Energetic e a marked influence on the nt agriculture.

ation, discussed the value of aners and bankers that they etter breeding in live stock. he said, are worth $300,000,- herd, $18,000; if as well as the best herd, $22,000. The experience of one farmer was also cited. The first year he had ten cows under test which averaged 299 pounds of fat; made a gross return of $61 at a cost for feed of $34 and a net profit of $27. The second year this same farmer with seven cows averaged 379 pounds of fat, $119 gross returns, $45 for cost of feed and net profit of $77. This was the result of herd records, for it convinced the farmer he was not feeding heavily enough and that he had to do some weeding out. The value of such records to the banker is that they increase the farmer's profits and in turn the bank deposits. He cited one creamery in his territory as an example of how a bank might be benefited. Six hundred and thirty cows supply this creamery with 82,000 pounds of milk, but if these 630 cows were as good as the fifteen selected cows the creamery would handle just twice as much milk from the same number of cows. This would mean cream checks would be doubled, and the business of the creamery doubled at a very small additional expense.

ESVILLE.



GEO. D. BARTLETT, MILWAUKEE.



C. R. THOMSON, RICHLAND CTR.

AT THE BANKER-FARMER MEETING.

breeding pure-bred grains have of such breeding. Well-bred n times as much as the com- o ten times as much. L. F. oke on how to succeed with hich the average farmer is s alfalfa under the right con- liming the acid soils, inocu- etc.

splendid work in his own our readers who read the Columbus Cow-Testing Asso- Records." He is a banker tion, but is very much inter- d in better agriculture.

important that the banker it is that the farmer know a roblem, he said, is due to the into the bank and demand should like to ask," he said, rmer if he is not a judge of whose banker knows good g from poor farming, Mr. e better justice at the bank. and safer loans and this, he r should study farming, why banker-farmer excursion.

rds Mr. Wheeler cited the sociation. The record for the d: Milk, 6,493 pounds; test, ross returns, $79.18; cost of . However, fifteen selected , averaged 8,617 pounds of t of $64.60 at a cost of $44.36 of $106. Mr. Wheeler used t have been increased. The s was about $11,000. How- as the fifteen selected cows as well as the best in each

Farm management was discussed by D. H. Otis, in which he outlined the work of the state contest and the value of farm records to a well-conducted farm. G. C. Humphrey discussed the management of the dairy herd, followed by a demonstration of feeding the university herd.

B. F. Harris, president of the First National Bank, of Champaign, Ill., and chairman of the agricultural commission of the American Bankers' Association, discussed the duties of the bankers to the farmers and diversified farming, which was reported in The Wisconsin Farmer last week. J. C. Fuller discussed swine management; Dr. A. S. Alexander gave his illustrated lecture on horse breeding, and J. C. Halpin explained the care of farm poultry. The farmer, he said, should strive for the egg-laying strains and not the show birds and also those breeds which develop easily for meat.

The first demonstration on the forenoon of the second day was making the hens lay which was held at the poultry plant. Mr. Humphrey at the dairy barn explained the selection of a dairy herd and gave bankers some splendid pointers on how to judge a good animal from looks. The sheep stables were next visited and Frank Kleinheinz, the shepherd of the university flock, paraded out his best rams and ewes for demonstration purposes. He also explained certain feeding experiments now under way and predicted that the wool and mutton industry in Wisconsin is destined to increase very rapidly in the future.

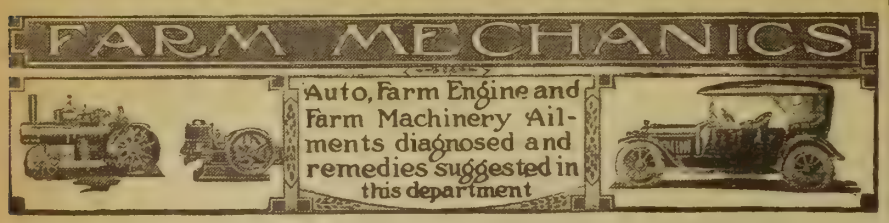
The swine barn was crowded to capacity when Mr. Fuller began his demonstration. The university at that time had twelve litters with a total of 106 pigs, so, as Mr. Fuller explained, those who looked for litters of fifteen were disappointed. The loss in these litters has been 14 per cent to date and Mr. Fuller urged very forcefully the importance of extra care of March pigs until weaning time. It is an unnatural time in Wisconsin for farrowing and improper care will send the losses very high. The day was cloudy and drizzly and he urged farmers not to let their spring pigs out on such days, although there is the attendant danger in keeping them up that they will overeat and from lack of exercise become slumpy and die. Therefore it is necessary to watch their feed very carefully. He used the brood sows to show how it is planned to put on from fifty to sixty pounds between breeding and farrowing time, as this is usually lost between farrowing and weaning and therefore urged good feeding of the sow right after she is bred. Dr. S. A. Beach discussed hog cholera, which, he says, causes 99 per cent of the losses in Wisconsin hogs after the weaning period.

Next the visitors filed into the stock pavilion for the beef cattle demonstration by J. L. Tormey and the horse demonstration by Mr. Fuller.

Mr. Tormey showed Hereford, Short-horn and Angus steers to emphasize contentions that the beef man should produce the types that the butchers demand and that to do this good breeding is very essential. He showed a yearling Angus weighing 950 pounds which had the breeding and had matured early in contrast to a cross-bred between an Angus and a Jersey. The difference was quickly noticeable and the difference, he said, was entirely in the breeding. He told of Wisconsin's standing at the Chicago yards and said that the farmer who is looking for the profits in the beef cattle business must look carefully to the breeding end.

Mr. Fuller trotted out the pure-bred draft horses belonging to the university and went fully into the question of breeding. Considerable interest was manifest in the draft foals shown and many questions were asked from the audience. Mr. Fuller said he had found it cheaper to produce the kind of horses he wished than to buy them and estimated the average cost of bringing a draft foal to 1,000 pounds at a year old at $64. He allows $20 for service, $35 for grain and $9 for timothy hay. Of the grain 20 per cent is bran and 80 per cent oats and is fed at the rate of twelve and one-half pounds per day after weaning. He gives all the timothy hay they can eat and for the seven and one-half months of feeding they average three-fourths of a ton. During the past year he has fed twice daily which he believes a little cheaper and just as satisfactory as feeding three times daily. Some crushed oats are fed and some whole oats, but Mr. Fuller said it made little difference. In summer the foals are turned out to pasture without grain. This feeding cost is based on seven and one-half months and is the average for producing the draft foal to 1,000 pounds with the mare working half time.

LOOKING OVER THE HORSES AFTER THE DEMONSTRATION.



QUESTIONS AND ANSWERS.

Storage Battery Capacity.

If I connect five six-volt, fifty-ampere hour auto storage batteries in series, what would be the voltage, amperage and wattage?

Answer.—The five batteries connected in series would give thirty volts, fifty ampere hours, 1,500 watt hours. Connected in multiple they would give six volts, 250 ampere hours, 1,500 watt hours.

Soldering Copper Wires.

Please tell me how to solder copper wires used in house wiring.

Answer.—Copper solders easily. Clean the wires by scraping with a knife or rubbing with sandpaper. Apply a little soldering fluid and rub the solder on the wire with a hot soldering iron. A good soldering fluid is made by dissolving zinc in muriatic acid. Sal ammoniac is often used as a flux to make solder stick to copper.

Wire for Magneto Winding.

Is enameled wire as good for magneto winding as cotton-covered wire? Can annunciator wire be used?

Answer.—Enameled wire is particularly suitable for winding spark coils, magneto coils, etc., where the coils do not have to be formed and where there is little danger of mechanical injury. It has the advantage that more wire may be wound in the same place than when cotton-covered wire is used. Annunciator wire may be used if a suitable size can be obtained.

A Friction Clutch.

Please tell me how to make a friction clutch that can be used on a six-horse-power marine engine. I do not need a reverse gear, but I would like to have a clutch.

Answer.—We advise you to write to the manufacturer of your engine, as they can probably furnish you a clutch. If not, some other engine manufacturer would do so. We would not advise you to attempt to make one unless you have most of the parts, as considerable machine work would be required and the cost would, therefore, be excessive.

Electric Light Bulbs.

Is there any difference between the construction of an electric light bulb that is to be used with a battery and a bulb that is to be supplied with current from a Ford magneto? How large a bulb can I use in a spot light that draws its current from a Ford magneto?

Answer.—There is no difference between the bulbs. A light bulb works equally well on direct or alternating current. Use a twenty-candle-power light. For a moderate engine speed use a sixteen-volt light. Increase the engine speed if the light does not burn bright enough. Too great a speed will burn out the light.

Grinding Ford Valves.

Please explain to me how to remove the valves from a Ford engine and how to grind them. Would also like to know if there are any especially particular points about taking a carburetor apart and cleaning it.

Answer.—You should send to the Ford Company for a "Ford Manual." This book is free to Ford owners and contains very clear instructions for removing the valves, grinding the valves and caring for the carburetor. The following general instructions apply to the grinding of any valve: By means of a pinch bar or other device compress the valve spring. The slotted collar or key at the end of the valve stem may then be removed, which leaves the valve free from the spring. Remove the valve and clean off the carbon. If a groove is worn in the valve seat file off the high places, taking care not to file the part of the seat that forms the joint. It is well to place a small spring between the valve head and the cylinder to lift the valve off its seat.

Having prepared the valve as above, obtain some valve grinding compound or mix a little emery flour and engine oil to form a thin paste. Apply a small amount of the compound or paste to the valve seat in the cylinder and on the valve. Be sure that none of the paste falls into the cylinder barrel. Using a very light pressure rotate the valve backward and forward on the seat about one-third of a revolution by means of a screwdriver or a brace. Lift the valve from its seat every eight or ten strokes. This allows the paste to work down and prevents ridges. Give the valve half a turn quite often so that the valve changes its position relative to the cylinder. This prevents low places in the valve seat. When the valve is perfectly ground a large number of very fine chalk marks on the valve seat will be rubbed off by giving the valve a very slight turn in the cylinder.

Making a Storage Battery.

Would it cost more to make a storage battery than to buy one? How is a twenty-volt battery made? How often would it have to be recharged to run a three-candle-power light?

Answer.—It would be more satisfactory and possibly cheaper for you to buy a storage battery. A twenty-volt battery has ten cells connected in series. A six-volt, forty-ampere battery would probably answer your purpose. This battery would run a three-candle-power light for about fifty hours without recharging.

Adjusting Rod Bearings.

I would like to inquire as to how tight connecting rod bearings should be adjusted. I put oil on my rod bearings and took them up quite snugly. After running the motor with the crank case cover off, the bearings were so hot that they could hardly be touched with the hand. My motor has a splash oiling system. Would you consider these bearings too tight?

Answer.—You probably have the bearings fitted a little too tight. New bearings should be fitted quite tight. When readjusting old bearings fit them just tight enough to produce a slight drag. They will heat a little at first, but will soon "run in."

Vulcanizers.

Is a steam vulcanizer better than one in which no steam is used? Is there any danger of the "Marvel" steam vulcanizer exploding? The water is sealed in it at the factory.

Answer.—The efficiency of a vulcanizer does not depend upon whether steam heat, gas or electric heat is used, but upon its ability to maintain an even heat at the required temperature. It is, as a rule, easier to regulate the heat with a steam vulcanizer, as there is a definite temperature for each steam gauge pressure. More depends upon the design of the vulcanizer than upon the method of heating. We are not familiar with the "Marvel."

A Tractor.

I am intending to make a small tractor from a single-cylinder, eighteen horse-power Cadillac. I intend to use thirty-six-inch binder wheels with eighteen-inch sprockets. Can this outfit be geared down enough to make three miles per hour on high gear? If so, how heavy a load would it pull? Would a six-horse-power stationary engine have more power than the auto engine at the same speed?

Answer.—For a speed of three miles per hour count on a speed of about thirty revolutions per minute for your drive wheels. Mount a jackshaft between your engine and drive wheels. Drive your eighteen-inch sprocket by a four-inch sprocket on the jackshaft. Drive the jackshaft by an eighteen-inch sprocket on the jackshaft and a four-inch on the engine. This gearing would give three miles per hour at an engine speed of 600 R. P. M. At this speed the engine should develop eight horse power, possibly more. It should pull a fourteen-inch plow. Your tractor would not pull much more than one-half of its own weight.

Reducing Voltage When Charging.

I note in your issue of January 27th you advise a party to use resistance when charging a six-volt battery from a fifty-volt generator. Why the resistance? I have a twenty-eight-volt storage battery light plant, using a thirty-ampere, forty-volt dynamo to charge with. I also have a six-volt auto battery, and have been charging it by cutting the light battery off and putting the six-volt battery on, only, of course, at a less amperage—about five to eight amperes, using no resistance. The voltmeter shows about forty volts when charging the light plant, and eight volts when charging the six-volt battery. Some parties say I should use resistance, while the man I bought it of says it is not necessary to use resistance. Kindly give me your opinion.

Answer.—From your letter we presume that you have a voltage regulator on your generator that will permit you to generate any voltage between eight and forty. In this case it would not be wise to use a resistance, but simply regulate the voltage to charge the battery at the proper rate. It would not do for you to charge your battery at forty volts, however, as such rapid charging would soon ruin the battery.

UPPER WISCONSIN

Wheat Growing in Upper Wisconsin.

Scores of questions such as the following have been received during the past winter by The Wisconsin Farmer and the college of agriculture at Madison: "We are considering the advisability of sowing a substantial acreage of wheat on our farm in Upper Wisconsin. Is this advisable? Do you consider the soil and climate favorable to the production of a profitable crop?"

This is only natural with the war-time advance in the price of foodstuffs, coupled with the urgent request of President Wilson that the American farmer be alert to do his share in shouldering the task of feeding the world.

Caution and prudence and a thorough study of the wheat situation should be the ruling factors in guiding Wisconsin farmers who contemplate going more extensively into the growing of the staff of life cereal. First, as a general statement, wheat can be sold for cash at all times, which is not the case with many other crops grown in the state. There are undoubtedly special instances, however, even where wheat can be grown well that, in order to supply local markets for seed and other purposes, other grains may be preferable.

RED CLAYS OF SUPERIOR REGIONS ARE WELL ADAPTED TO SMALL GRAINS.

The upper half of Wisconsin is in the "hard wheat belt." That is, the climate in normal times favors the production of hard wheat, either spring or winter varieties. Climate, the wheat men say, is to a great extent the determining factor so far as the quality of the grain is concerned. This is particularly true where wheat is grown in rotation with other crops in such a way that the soil fertility is kept high.

Wheat cannot be grown on all classes of soil. When grown in rotation wheat does well on heavy loams and red clays, but is not adapted to light soils. There is a belt of red clay south of Lake Superior, extending through parts of Douglas, Bayfield, Ashland and Iron counties which is well adapted to both spring and winter kinds. Another favorable area is in the east, along Lake Michigan. Still a third portion of the state, that lying in Polk, St. Croix and Barron counties, is pronounced good for wheat by such men as E. J. Delwiche and R. A. Moore. The southern and central sections of the state are in part adapted to wheat production, but the prevalence of dairy farming precludes grain growing to any extent, except in very limited areas.

Some of the clay soils in Upper Wisconsin lack nitrogen. The growing of clover in rotation with wheat will be necessary in order to supply that element. Hence this factor must also be taken into consideration.

Winter wheat is to be preferred to spring wheat in the Lake Superior country, providing enough help is available to get the ground in shape and the seed sown before September 10th. As a rule winter wheat has proved better than the spring varieties for Wisconsin in general under ordinary conditions, although in some parts of the southern counties there is danger of winter killing.

While spring wheat commands a higher price per bushel on the market, nevertheless winter wheat usually yields from five to ten bushels more an acre. Experiments with a certain new kind of spring wheat called the Marquis, which was bred in Canada and tested at the Wisconsin experiment stations at Madison and Ashland, have shown it to be far ahead of the common spring wheats in yield with the pedigree strains of wheat perfected by the station and so at the present no actual recommendations can be given in regard to the Marquis strain.

During the past six years, according to a statement by E. J. Delwiche, superintendent of the northern stations, extensive experiment work with wheat has been carried on at Ashland and Superior, and to a less degree at Conrath, in Rusk county. Co-operative tests on individual farms have also been tried. Yields of from twenty to thirty-five bushels have been obtained in trials at Ashland and Superior. Spring wheat has even given some higher averages than winter varieties there. Where winter wheat of the right variety was sown early fully as good results were obtained as with the spring wheat, however, in most cases.

As to varieties Mr. Delwiche says that only four of a possible eleven or twelve have made good under the rigid requirements. These are all hard winter varieties of the Turkey Red type. Kharkoff, Basca and Beloglina stand about in the order given in relative merit for this region. Padi, a beardless wheat from the land of the czar, gave good yields and showed wonderful vitality, but was quite subject to rust under conditions favorable to the development of rust fungi.

The Blue Stem proved to be best among the spring varieties. The Durum varieties were not found superior in point of yield to the flour wheats. Winter wheat of the Kharkoff variety was found best for the north-central sections and hence is the standard recommended by the station for this particular climate and soil type. At Conrath a yield of twenty bushels an acre was obtained two years ago.

Much has been done in the way of purifying the different strains and bringing them up to a standard uniformity in the matter of time of maturity as well as to improve the yielding power. Over 400 different pure line selections were tried, only a few of which have been saved for further work. Numerous crosses have been made with the object of creating new strains with unusual frost-resistant power and immunity from rust.

Wisconsin is twenty-sixth in the rank of wheat growing states. Probably it will never attain a high position in this field, save perhaps in point of local record yields per acre. Still wheat is something that is always in demand, and, while dairy farming may continue to push the great cereal out of the new regions to some extent, the late flurry in prices has caused many people to shift their gaze from the balanced ration sheet to the pit quotations and wonder if it means anything to them.

There is something about a neat letterhead that gives standing to a man who is obliged to do considerable corresponding in connection with his farm work. In the first place, the farm should be named and then if one is breeding pure-bred stock the name of the breed as well as the name of the farm should appear on the letterhead. It goes without saying that the name of the owner should also appear. Sometimes in our hurry we do not write very plainly and in that case a letterhead helps out immensely. Two or three dollars will buy enough paper to do a great deal of corresponding and it is always a good investment.

Between Today and Tomorrow—

AFTER a day's work in the blistering hot sun, when your muscles ache clear down to the tip of your toes, and the bed-room is so hot that you hate the very thought of "turning in"—imagine the effect of a five or ten mile trip on a

Harley-Davidson

Gliding over the road, up hill and down dale with the cool breeze fanning your cheeks, the troubles of yesterday and tasks of tomorrow are soon forgotten. Breathing in great draughts of dewladen air, you remember only the present and that it is good to be alive—that's ***Motorcycling***.

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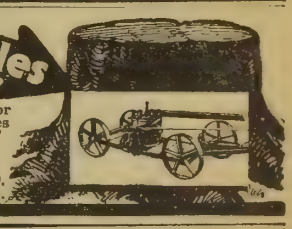

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Brightening the Kitchen.

One of our Home page readers writes as follows:

I would like some advice about painting and cleaning a kitchen. The kitchen is on the north side of the house and has only two windows. It is painted a very dark gray and is so gloomy it is no pleasure to work there. The woodwork and all is gray. I would like a color for walls and woodwork that would be cheerful and would be suitable for a kitchen.

No matter what the walls of this kitchen are to be we would suggest

RAYMOND HENRY SMITS.

At the age of three months Raymond weighed sixteen pounds. He is the son of Mr. and Mrs. Peter Smits, and his mother says that fresh air and good, pure water have helped to keep him strong and well.

white enamel for the woodwork. It will probably take several coats to cover up the dark gray, but the result will be well worth the effort. White paint is no harder to keep clean than dark paint. The only difference is that soil and finger marks show up plainer on the white and we are apt to be more particular about keeping it spotless than is the case with dark paint. An excellent cleaner and polisher for white woodwork, or any other kind of woodwork for that matter, is made of equal parts of sweet oil, turpentine and vinegar. You can mix it yourself in any quantity. Always shake well before using and rub perfectly dry with a clean, soft cloth, otherwise a little of the oil may be left to catch the dust. This does not dull the finish as does soap and water. If you need to use soap, use the polish immediately afterward.

If the walls are to be painted they might be made a light buff or cream, with the ceiling a trifle lighter shade. This will give a little the effect of sunshine and is more cheerful for a north room than gray. Or if paper is to be used on the walls, why not get one of the small tile designs in blue? They are very pretty and the washable papers clean beautifully.

Linoleum is the best thing with which to cover the floor and it should be chosen in a color to correspond with the color selected for the walls. If the floor is to have no covering it should be laid with narrow boards and given an oil finish. This permits scrubbing and mopping and an occasional coat of oil keeps it in shape. An old floor may be planed smooth, the cracks filled and several coats of paint applied. This, however, is not nearly so satisfactory as either linoleum or oil finish. If there is no covering for the floor, rubber mats will add greatly to the comfort of the worker. Carpet should never be used in the kitchen except in the form of rag rugs that may be washed.

Now put at the windows sheer white curtains that hang from the top and are pushed back a bit from the center of the window, provide a rocking chair (painted white to correspond with the woodwork) and see if your kitchen will not be a little more pleasant to work in.

Woman's Fitness For the Ballot.

A remarkable illustration of woman's fitness for the ballot is carried in the educational directory issued recently by the bureau of education of the Department of the Interior at Washington. One cannot study this report long and remain in doubt as to whether women should have the right to vote, for nearly one-fourth of the administrative offices of prominence in the country are filled most capably by women. Today we have women college presidents, women serving as state superintendents of public instruction, county superintendents, department heads in colleges and schools, industrial training directors, librarians, in fact there is no branch or department in which women have not demonstrated their full capability of filling such positions.

Of the 12,000 more important positions in the administrative world, women are filling 2,500, and are making gains each year. There are twenty-four women serving as college presidents out of the 622 institutions of this character in the United States. More than 500 of the 3,000 county school superintendents of the country are women, and in Montana there is not a single man holding such a position. Wyoming has two men, while in Kentucky there are twenty-six women county school heads. Fifteen of the seventeen institutions for the blind have women executives, and women are at the head of ten schools for the deaf. Fourteen women are serving as executives of industrial training schools, and forty-eight art schools out of 200 have women executives. The office of librarian is almost monopolized by the women of the country, who are filling 1,075 of the 1,300 positions of this character, while in the bureau of education itself eleven of the thirty-three bureau officials are women.

EARNEST W. PRESTON.

Earnest is the son of Mr. and Mrs. S. W. Preston, and was two years old at the time this picture was taken. His mother says he has never needed a doctor in his life.

Women have been demonstrating their ability to become leaders in the educational world, and this subject is not a new one. A majority of the school-teachers are women, and the majority of librarians are women. If women can teach school, fill executive positions in the educational world and manage libraries, why should they be denied the right of the vote.

The school-teachers have gone on record as favoring suffrage, and there is no doubt but that they will use the ballot once it is accorded them.

Look After the Teeth.

Crooked, twisted, gnarled and deformed teeth are a source of danger to the child, family and state as well. Buck Teeth Ben soon gets too sensitive to be in touch with his playmates, and he stays in the background—getting further and further away from his fellows.

The child is in danger of being a recluse, a backward. Dentists are to be found all over the land. Call on them.

In every state, in almost every county, you will find people, societies calling the attention of mothers to the necessities of dental cleanliness. Clean the teeth. You will find that a clean tooth never decays—you will find dark spots on the teeth under which lurk small germs that eat holes in the teeth. Get a little orris root and a good brush and rub your teeth. Get a brush for the boy and one for the girl. When you find the teeth and gums sore, bleeding, the teeth falling into holes, the gums separate from the teeth, black spots on the teeth inside and outside of jaw, there is bacteria on the teeth. See a dentist before the teeth are in the last stages of decay.

Don't wait until you have lost your best teeth to look after your mouth. Watch the boy's and girl's mouth. Disease often comes from decayed teeth. Margaret Hudson.

Boiled Water For Colic.

To the Editor:—I am sending you a picture of our baby, Mary Jane, taken when she was five months old, at which time her weight was seventeen pounds.

She is a very healthy baby, sleeps in a well-ventilated room away from the fire and was able to sit alone when four months old. She has never taken any medicine except boiled water, which I think is the greatest colic remedy in the world and perfectly harmless. By filling the stomach with water the gas is driven out.

Mrs. G. E. Nichols.

MARY JANE NICHOLS.

Has Had Calla Lily Twenty-six Years.

To the Editor:—I have been much interested in the letters in the Home Department, so thought I could help a little. I want to tell the lady who asked about the care of a calla lily how I care for mine. I have had it for over twenty-six years and have never failed to have from four to six lilies each winter.

In the spring after it quits blooming I put it out on the porch or in the shade somewhere with a few other plants that I do not set out in the ground, and when I water them I always water the lily too. About the first week of August I take it up, take off all the old dirt and re-pot with very rich soil. Then I bring it in the house, put it in a sunny window and water with lukewarm water. It must be kept quite wet. Occasionally add a few drops of ammonia to the water. I generally have a lily by Thanksgiving. It must have a sunny window in the winter. So many have asked me what I do to make my lily bloom as it does, and this is all I do. I do not think it is wise to let it dry out in the summer, and find my way is a good one.

I also think that this lady's geraniums do not get sun enough or they would bloom. I love flowers and plants and always try to have some.

Mrs. Laura J. Swan.

Uses Sirup in Bread.

To the Editor:—I have had the same trouble as the lady signing her letter C. E. with the drying out of bread, and found that using syrup (Karo is what I used) for sweetening instead of sugar helped keep it moist.

Did the lady who complained of having strong strawberries ever can them this way? One teacup sugar to every quart by actual measurement of fruit. Make a thin sirup of one teacup water and half a cup of sugar. When it boils, skim and add fruit. Let it simmer gently five minutes, add the rest of the sugar, let come to a boil again, then can and seal at once. Press berries gently under sirup but do not crush or mash them.

I use this method for blackberries, raspberries, ground cherries and for blue berries with the addition of the juice of one lemon to every three quarts of blueberries. J. R.

More Trouble.

To the Editor:—Can some of the Home page readers help me? I am living in an old house which is infested with bed bugs. They are in the walls of all the sleeping rooms. I intend to paper this spring and I thought perhaps there was something one could put into the paste. I have found many useful hints in your paper and shall be grateful if someone can help me now. A Subscriber.

Today Is Day of Salvation.

To the Editor:—In reply to "Mabel" as to when to join the church I want to say that now is the time, today is the day of salvation. Why put it off and live away from God all those years? How can anyone become better able to serve God by rejecting him even if he be permitted to live? But life is so uncertain. What if the call should come for this man; what would his answer be? Could he meet his God whom he had refused to obey and love? God's Word reads something like this, "He that gathers not with me scattereth abroad" and "If you are not for me, you are against

me." Now, dear young man, what a work for the evil one all these twenty years would be and what a bad influence for others who may be guided by you.

In regard to those young folks you spoke of belonging to the church who swear and do many things they ought not to do, you should join the church and be an example to them and help them. The Bible says, "Wheat and chaff will remain together until the harvest." We must watch ourselves.

I pray this young man may decide to join the church, and while building his earthly home may lay up treasure in heaven where the people of God will dwell forever. This life is only a preparation for a better life, so let us all strive to be prepared and help others. A Christian.

Wooden Box Dries Bread.

To the Editor:—I notice in a recent issue that one of the readers has trouble with her bread drying out. She must be keeping it in a wooden box, as that will always dry it out. I keep my bread in a big lard can where I cover it up tightly, and it stays moist for a couple of weeks, or as long as it lasts. In the summer time you cannot keep it that long because it molds unless it is in a cold place. Try this and you will have no more bother with your bread drying out.

Another reader wants to know how to remove the whitewash in order to paper. I think if she will make a paste and give the walls a good sizing she will not have any trouble with the paper not sticking. I used to do that and it stuck fine. Mrs. H. N. C.

Enjoys Baby Pictures.

To the Editor:—I am sending you the pictures of our little girl, Cecelia M. Jacob, age six months, weight

CECELIA M. JACOB.

twenty pounds, and our little son, Harold R. Jacob, age six months, weight twenty-five pounds. Both children were raised on mother's milk and were healthy babies. They are now going to school, being seven and nine years of age.

Mrs. Harry Jacob.

Born in Virginia.

To the Editor:—John Edwin Smith, whose picture I am sending you, is the fifth child and the fourth son of James A. and Stella Wymore Smith. He was three months old at the time this picture was taken and weighed thirty-six pounds. He was born in Powhatan county, Virginia, January 28, 1903. The picture was taken in Richmond, Virginia. His parents moved from Mahaska county, Iowa, to Virginia in the fall of 1901, returning in the spring of 1906 and now residing on a farm here in the corn belt. John now has five more brothers younger than he, making a total of eight brothers and one sister.

John Edwin Smith

J. A. Smith.

Sonny Boy.

To the Editor:—I am sending you a picture of our sonny boy which you may put into your paper with the rest of the healthy babies.

This picture of our sonny boy was taken when he was five months old

JERALD ARMSTRONG JENSEN.

and he then weighed twenty-four pounds. His name is Jerald Armstrong Jensen. Jerald is another baby who eats and sleeps regularly. He nurses every two hours and goes to sleep every hour and a half from the time he wakens. He gets nothing but mother's milk and a little warm water every day. I never rock my baby to sleep, as many mothers do. I do not approve of it.

Jerald's father is very proud of him. He throws him up in the air and rolls him around on the bed and that gives him lots of exercise and makes his bowels move regularly, which is very important.

This is our first baby and we are very proud of him.

Mrs. H. G. Jensen.

Hot Water For Lily.

To the Editor:—I saw in a recent issue that one of your readers was having trouble with her calla lily. If she will place her lily in a flower pot with a hole in the bottom and place the pot in a deep pan or dish and each morning fill this pan or dish

HAROLD R. JACOB.

with boiling water from the teakettle I think her lily will bloom.

I enjoy the Home Department of your paper very much.

An Interested Reader.

Keeps Buds Picked Off.

To the Editor:—For the benefit of the reader who wants to know how to make geraniums bloom in the winter time I want to tell how I do it.

I generally slip my plants some time in June in good dirt and set them somewhere in a partly shaded place until they become well rooted. I think the main thing is to keep all buds picked off until about the 1st of September. Then I leave them on, so by the time I take them into the house they are starting to bloom and will keep it up all winter.

I also water them well with fresh liquid horse manure about once in the fall and a couple of times through the winter. And how they do bloom. At the present time I have eighteen different kinds in bloom and have had all winter. I water them about every other day with warm soft water. They also like lots of sunshine and not too warm a room.

Old plants will bloom just as well in winter if buds are kept picked off through the summer and the plants treated the same as slips.

I think if this reader will rest her calla lily through the summer and re-pot in the fall with good rich dirt and give plenty of good warm water it will surely bloom. They are great feeders. Mrs. M. Frederickson.

Care of Roses.

To the Editor:—Would some of the readers of the Home page please tell me about roses, when they should be planted, in what kind of soil, and how to care for them both in summer and in fall and winter? Would it be necessary to wrap the bushes the first year or just throw some coarse straw or manure over the roots? Any information would be much appreciated.

Mrs. Maude Clary.

White of Egg in Paste.

To the Editor:—M. A. G. writes for help concerning papering over whitewashed walls. We have tried the following method successfully on a ceiling and the paper has now been on for four years.

Beat stiff the whites of four eggs and add to a gallon of paste which has been cooled sufficiently so that it will not cook the eggs. If M. A. G. will do this I am sure she will have no trouble in making the paper stick.

H. J. A

Gelatine Recipes.

Marshmallows.—One envelope gelatine, one and one-fourth cup water, two cups fine granulated sugar, a few grains of salt, one teaspoonful vanilla. Soak gelatine in one-half the water for five minutes. Put remaining water and sugar in saucepan, bring to the boiling

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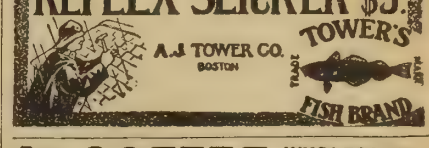

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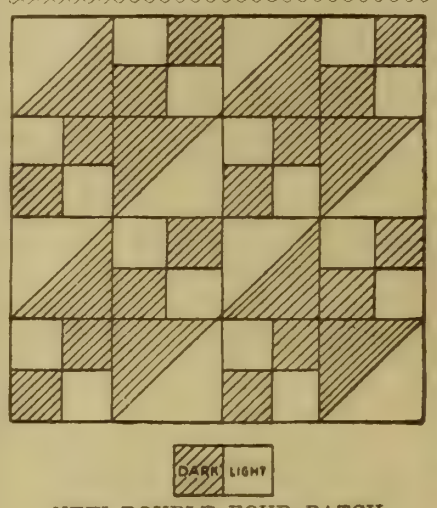
point and let boil until sirup will spin a thread when dropped from tip of spoon. Add soaked gelatine and let stand until partially cooled; then add salt and flavoring. Beat until mixture becomes white and thick. Pour into granite pans, thickly dusted with powdered sugar, having mixture one inch in depth. Let stand in a cool place until thoroughly chilled. Turn on a board, cut in cubes and roll in powdered sugar. This recipe makes about one hundred marshmallows.

Turkish Delight.—One and one-half envelopes gelatine, one-half cup boiling water, grated rind of one orange, juice of one orange, juice of one lemon, red fruit coloring. Soak gelatine in cold water ten minutes. Put sugar and boiling water in saucepan, bring to the boiling point, add soaked gelatine and let boil twenty minutes. Add flavoring and coloring, strain and turn into a bread pan (first dipped in cold water) to one inch in depth. Let stand until firm, remove to board, cut in cubes and roll in powdered sugar. Half a cup of chopped nut meats may be added if desired.

Jellied Prunes.—One envelope gelatine, one-third pound prunes, two and one-half cups cold water, one cup sugar, one-fourth cup lemon juice. Pick over, wash and soak prunes for several hours in two cups cold water, and cook in same water until soft. Remove prunes, stone, and cut in quarters. To prune water add enough boiling water to make two cups. Soak gelatine in half cup cold water, dissolve in hot liquid, add sugar and lemon juice, then strain, add prunes, mold and chill. Stir once or twice while cooling to prevent prunes from settling. Serve with sugar and cream.

Jellied Chicken.—Dress, clean and cut up a fowl. Put in a stewpan with two slices onion, cover with boiling water and cook slowly until meat falls from bones. When half cooked add one-half tablespoonful salt. Remove chicken, reduce stock to two cups, strain, skim off fat and add one tablespoonful of gelatine which has been soaked in four tablespoonfuls cold water. Decorate bottom of a mold with parsley and slices of hard-boiled eggs. Pack in meat, freed from skin and bone, and sprinkle with salt and pepper. Pour on stock and place mold under heavy weight. Keep in a cold place until firm.

Ham Mousse.—Soak half an envelope of gelatine in one-fourth cup cold water, dissolved in one-half cup hot water and add to it two cups chopped cold ham. When cool add one teaspoonful mixed mustard, a few grains cayenne and one-half cup heavy cream beaten until stiff. Turn into a mold, first dipped in cold water. Chill, remove from mold and garnish with parsley.



NEW DOUBLE FOUR PATCH.

One of our readers who signs her letter Aunt Laura sends us this pretty double four patch design which we think will interest many of our needlework friends.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Visits Institute.

Dear Young Folks:—I have been reading the letters in the Young Folks' department for so long and have enjoyed them so much that I thought I would write one, too. I will tell you about my trip to Fargo, N. D., where the boys and girls' institute was held. I was staying with a lady whose own little girl won a prize and so they took me with them. I had a lovely time and saw so many things I shall never forget it. I am going to try for a prize myself some time so I can go again.

We arrived in Fargo at night and the next day we went up to the college. A Mr. Kirk was our guide. There were 143 delegates.

The little boys and girls won prizes on different things, raising pigs, chickens, corn, making butter, canning, sewing, crocheting and many other things. Mr. Farrel gave a canning demonstration and told stories about little boys and girls' canning clubs while he worked. He has been all over the United States and lives in Washington, D. C.

Our guide took us around to the different buildings. The first place we went to was the greenhouse, where I saw a pear tree, a banana tree and an orange tree and beautiful flowers of all kinds. Then he took us to the animal room. I saw a badger and some alligators and pet jack rabbits and different kinds of snakes. I saw 320 guinea pigs and a little chipmunk in a cage.

Some days we walked eight miles and one day we walked eleven. One day we went down to some of the places in the city. The first place we visited was the fire department. The manager talked to us a little and then he rang the fire alarm and out came the horses. They went right under their harness and it was only four seconds and a half until they were harnessed. The firemen came down the posts dressed in their uniforms.

Next we went to the candy factory and watched them make candy. They made lots of it. After that we went to the cracker factory and watched them make crackers. They gave all the boys and girls a box of crackers. Then we went up to the printing office and saw them printing the Fargo Forum. We also visited the knitting mills and watched them spin sweaters and other things.

We went to the new schoolhouse and the professor of the school took us into a room and talked to us about air and ventilation. Then he showed us all over the school and when we were through there we had supper at the Copper Kettle Inn.

After supper we went to the Armory and played games until nine or ten o'clock.

The next day our guide took us to the dairy barns. There were a lot of cattle of all kinds. We got there just as they were ready to milk. They had all their names written on paper and nailed above their stanchions.

Next we went where the horses were and they had their names written above their stalls. We saw the pigs, too. The men who took care of them washed them and kept them clean. We saw lots of sheep and chickens. It seemed to me like they had every kind.

Our guide took us where there were twelve deer. I could tell you of many cunning things that they did, but it would take too much room.

In the power house we saw all the engines that gave light and heat all over the campus and buildings. In one big room they had boilers that furnished steam to run the engines. The furnace will burn seven tons of coal in three hours at 35 degrees below zero. The coal was lignite coal and was mined in North Dakota.

One day our guide and four other students and two doctors operated on a horse for a broken shoulder.

After spending an interesting week we came home well satisfied with our trip.

I am eleven years old and love to go to schcol. —Angeline.

Belongs to Bird Club.

Dear Young Folks:—I certainly enjoy reading the letters and stories on the Young Folks' page. I am eleven years old and in the sixth grade at school. I go to Sunday school every Sunday.

We have a Pullman automobile, a buggy and six horses, so we do not have to walk to Sunday school or to any of our relatives.

I have three pet kittens and one dog. The kittens' names are George, Snowball and Tabby, and the dog's name is Rover. I also have a horse, a cow and calf and a pig that grandpa gave me.

At school I belong to a bird club. We have already studied the chickadee, the tree sparrow, the robin and the screech owl. I do wish that all you young folks could read about them, especially the robins, just to see how they are killed in the North and how they are protected, also how much good they do the farmers and everyone in the United States. I think that every boy and girl should try to protect the birds.

We live on a farm one mile from town. I can tat, crochet and play on the piano. —Lorna.

Wants to Be a Farmer.

Dear Young Folks:—I am very much interested in your letters and I think it is my turn to write to you. I am a little boy; anyway, that's what they call me, but I think I am big.

I live in town with my father and mother. They are very good to me and we have a nice big home and a blacksmith shop. My father is making good money and he gives me nickels and dimes. I am saving all my money, because when I am a man I don't want to be a blacksmith. I would like better to be a big farmer like my grandfather. I like grandfather's farm. Every time I go down there I want to stay, because they let me drive the horses and I like that better than anything else.

I am seven years old and am in the second grade. I go to school every day. —Samuel.

International Sunday School Lesson.

Lesson for April 9, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

AENEAS AND DORCAS.

LESSON TEXT—Acts 9:32-43. (See also Prov. 31:10-31.)

GOLDEN TEXT—In all things showing thyself an ensample of good works. —Titus 2:7.

Step by step the Gospel can be traced, spreading itself, but "beginning at Jerusalem." Paul's conversion is one of the greatest evidences of Christianity. The two miracles of today's lesson are additional evidence that it is of God.

I. **At Lydda** (vs. 32-35). Caligula, emperor of Rome in A. D. 39, ordered his statue to be erected in Jerusalem that he might be worshipped as a god there as elsewhere. The excitement and conflict which arose in opposition to this sacrilege lasted for two years, during which time Christian persecutions ceased. Following Saul's visit at Jerusalem, and during this time of quiet, Peter made this tour of visitation. Lydda (modern Ludd) is about twenty-five miles northwest of Jerusalem. Here dwelt certain saints (v. 32) literally "holy ones," converted disciples of Christ, not ones of special honor, for all who are members of the body of Christ, are "saints" (Phil. 1:1). Here also dwelt Aeneas, "a certain man," possibly not a believer, but having great need (v. 26:3:2; 10:1, 14:8; 9:10), and of years standing (v. 33). Notice Luke, the physician's careful record. Peter must have seen many such, yet this man is one Peter "found"; he was evidently looking for him. Peter's pity was not sentimental but practical and his

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words powerful, for back of them was the Living and Powerful Christ. He knew who could work a cure. The long weariness is to be relieved. Yet those days of illness gave time for meditation and probably prepared the man's heart to respond in faith to Peter's words. Peter does not attract attention to himself, but rather to Jesus. His was but to be the instrument of the cure. The healing was a means to an end, for when those who dwelt in Lydda and Sharon (v. 35) heard of the miracle, or saw this healed man, it was to them a demonstration of the power of the risen Christ, and they "turned to the Lord" (v. 35). There is no comparing Peter with modern "healers." Peter's words and actions were a living demonstration, not for profit, of the power of Jesus in his life and testimony.

II. **At Joppa** (vs. 36-43), Joppa was the only seaport the Jews ever possessed for themselves. It was and is still a rather insignificant town, and now marks the beginning of the railroad leading to Jerusalem, 35 miles distant. No name is recorded of any of its rich or prominent citizens, only that of an humble woman. The record of her life, however, is inspiring (v. 36), and her name is a common one adopted by organizations of women. Like her master her life was full of "good deeds"; like him she was not ministered unto, but ministered. This is real greatness and it is open to all of us. Her name "Tabitha" (Hebrew), Dorcas (Greek), means gazelle, which in the East is a favorite type of beauty. This "certain disciple" was beautiful in life as well, for she was first a believer, then a doer. We believe in order to do, not do in order to believe. This woman is an example of the wise and capable woman mentioned in Prov. 31:10-31, a picture well worth studying in these days of the "feminist movement." She is a good type to be followed by church women, and by us all in the fact that her reputation rested upon deeds "which she did" (v. 36), not ones she was about to do, nor did she wait for some great opportunity of service. The life of Dorcas reveals one of the causes of the triumph of Christianity in the Roman empire. It was a source of wonder that those early Christians should so love each other. The reason why Dorcas was allowed to die lies in the providence of God. He loved his work and this recorded incident has served to raise up multitudes of other Dorcases. Her death also reveals that being "full of good works and alms deeds" woes not exempt his servants from sickness and death, and that God evidently has other purposes in sickness than to chastise our sin or to humble our pride (John 9:3, II Kings 13:14). The friends of Dorcas were folks of faith, for as yet there was no case of apostolic power to raise the dead as far as we know, and it was now about ten years after the resurrection of Christ. Peter followed the example of his Lord (Luke 8:2, 54), dismissed all spectators and "prayed" (v. 40). The way to revive a dead pastor, church, school, personal experience, or person "dead in trespasses and sins," is by prayer. Peter also did as he had seen his Master do to his mother-in-law (Mark 1:30, 31), and gave Dorcas his hand to help her arise.

This gave an opportunity for fruitful work among the converts (v. 41) and the enlistment of many new believers (v. 42), so that Peter abode in Joppa for some time in the house of "Simon, a tanner."

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THE agricultural division of E. I. Du Pont de Nemours & Company has secured the services of Thomas M. Knight to aid the company in promoting the use of dynamite in agriculture. Mr. Knight is a practical farmer, an expert on fertilizers and a popular lecturer on general agricultural topics. He will collaborate with the company's agronomist, Dr. J. H. Squires, in field tests and lectures at agricultural meetings. His former position was editor of the Practical Farmer, Philadelphia, Pa. See page 9.—Adv.

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1501 Ladies' shirt waist with convertible collar. The fronts are full and gathered to square yoke portions. The pattern is cut in seven sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2¾ yards of 40-inch material for a 36-inch size.

1537 Ladies' dressing sacque and underskirt, with or without flounce. The pattern comprising both styles illustrated, is cut in three sizes: Small, medium and large. It requires 2½ yards for the sacque, and 4¼ yards for the skirt, without flounce, of 36-inch material; with the flounce the skirt requires 6¼ yards.

1342 Ladies 'apron, with or without band trimming. The pattern is cut in three sizes: Small, medium and large. It requires 5⅛ yards of 36-inch material for a medium size.

1615 Ladies' camisole in kimono style. The pattern is cut in three sizes: Small, medium and large. It requires 1¼ yards of 36-inch material for a medium size.

1475 Ladies' house or home dress, with sleeve in either of two lengths. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8 yards of 36-inch material for a 36-inch size.

1571 Girls' overblouse dress with guimpe, having sleeve in either of two lengths. This style is easy to develop. The pattern is cut in five sizes: 4, 6, 8, 10 and 12 years. It requires 2 yards of 27-inch material for the guimpe or underwaist, and 4 yards for the dress for a 10-year size.

1617 Junior dress in high or low neck, empire style, with or without bolero and with two styles of sleeves. The pattern is cut in three sizes: 12, 14 and 16 years. It requires 5½ yards of 30-inch material for the dress, and 2 yards for the bolero, for a 14-year size.

1556-1558 A jaunty trim middy suit.—Blouse pattern 1556 and skirt pattern 1558 are here combined. The blouse has the convertible collar and big, roomy pockets. The patterns are cut in four sizes: 14, 16, 18 and 20 years. It requires 3½ yards of 36-inch material without the cuff. The cuff requires 1¼ yards for a 16-year size. The blouse requires 2⅝ yards of 44-inch material. Two separate patterns 10 cents for each pattern.

1687 Boys' blouse suit, with straight side or diagonal closing. The broad collar is new and jaunty. The pattern is cut in four sizes: 3, 4, 5 and 6 years. It requires 2¾ yards of 44-inch material for a 4-year size.

1674 Ladies' house gown or negligee, with sleeve in either of two lengths. The yoke facings may be omitted, and the yoke effect simulated by beading or insertion. The pattern is cut in three sizes: Small, medium and large. It requires 5¾ yards of 44-inch material for a medium size.

1676 Girls dress with sleeve in either of two lengths. This pattern is cut in four sizes: 6, 8, 10 and 12 years. It requires 3 yards of 44-inch material for a 6-year size.

1648-1656 A splendid style for business or afternoon wear. Waist 1648 and skirt 1656. The waist pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 7⅞ yards of 36-inch material for a medium size. Two separate patterns 10 cents for each pattern.

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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CHAPTER XV.

Nickey's Social Ambitions.

TO NICKEY the Maxwells were in the nature of a revelation. At his impressionable stage of boyhood, and because of their freedom from airs and graces of any kind, he was quick to notice the difference in type--"some class to them; not snobs or dudes, but the real thing," as he expressed it. His ardent admiration of Donald and his adoration of Mrs. Betty gave him ambition to find the key to their secret and to partake of it.

He was too shy to speak of it—to his mother last of all, as is the nature of a boy—and had to rely on an observant and receptive mind for the earlier steps in his quest. When Maxwell boarded with them Nickey had discovered that he was wont to exercise with dumb bells each morning before breakfast. The very keenness of his desire to be initiated held him silent. A visit to the town library, on his mother's behalf, chanced to bring his eyes—generally oblivious of everything in the shape of a book—upon the title of a certain volume designed to instruct in various parlor feats of physical prowess.

The book was borrowed from the librarian—a little shamefacedly. The next morning Mrs. Burke was somewhat alarmed at the noise which came from Nickey's room and when there was a crash as if the chimney had fallen she could stand it no longer and hurried aloft. Nickey stood in the middle of the floor, clad in swimming trunks, gripping a large weight (purloined from the barn) in either hand, very red in the face and much out of breath.

As the door unexpectedly opened he dived for bed and pulled the clothes under his chin.

"Land sakes!" Hepsey breathed, aghast. "What's all this about? If there's a nail loose in the flooring I can lend you a hammer for the asking," and she examined several jagged dents in the boards.

"Say, ma," urged Nickey in moving tones. "If I'd a pair of dumb bells like Mr. Maxwell's, I c'd hold onto 'em. I've pretty near smashed my feet with them things—gosh darn it," he added ruefully, nursing the bruised member under the clothes.

"I guess you can get 'em, next time you go to Martin's Junction; but if it's exercise you want," his parent remarked unsympathetically, "there's plenty of kindlin' in the woodshed wants choppin'."

She retired chuckling to herself, as she caught a glimmer of what was working in her son's mind.

The "reading habit" having been inculcated by his lucky find at the library, it was not long before Nickey acquired from the same source a veritable collection of volumes on the polite arts and crafts—"The Ready Letter Writer;" "Manners Maketh Man;" "Seven Thousand Errors of Speech;" "Social Culture in the Smart Set," and the like.

Nickey laboriously studied from these authorities how to enter a ball room, how to respond to a toast at a dinner given in one's honor, how to propose the health of his hostess and how to apologize for treading on a lady's train.

In the secrecy of his chamber he put into practice the helpful suggestions of these invaluable manuals. He bowed to the washstand, begged the favor of the next dance from the towel rack, trod on the window shade and made the prescribed apology. Then he discussed the latest novel at dinner with a distinguished personage; and having smoked an invisible cigar, interspersed with such wit as accords with walnuts and wine, after the ladies had retired, he entered the drawing room, exchanged parting amenities with the guests, bade the hostess good night, and gracefully withdrew to the clothes press.

Several times Hepsey caught glimpses of him going through the dumb show of "Social Culture in the Smart Set," and her wondering soul was filled with astonishment at his amazing evolutions. She found it in her heart to speak of it to Mrs. Betty and Maxwell and ask for their interpretation of the matter.

So, one day, during this seizure of feverish enthusiasm for self-culture, Hepsey and Nickey received an invitation to take supper at the rectory. Nevertheless, Mrs. Burke thought it prudent to give her son some good advice in regard to his behavior. She realized, perhaps, that a book is good so far as it goes, but is apt to ignore elementals. So she called him aside before they started:

"Now, Nickey, remember to act like a gentleman, especially at the table; you must try to do credit to your bringin' up."

"Yes, I'll do my level best if it kills me," the boy replied.

"Well, what do you do with your napkin when you first sit down to the table?"

"Tie it 'round my neck, of course!"

"Oh, no, you musn't do anything of the sort; you must just tuck it in your collar, like any gentleman would. And when we come home what you goin' to say to Mrs. Maxwell?"

"Oh, I'll say, 'I'll see you later.'"

"Mercy, no! Say, 'I've had a very nice time.'"

"But suppose I didn't have a nice time—what'd I say?"

For a moment Hepsey struggled to reconcile her code of ethics with her idea of good manners and then replied:

"Why say, 'Mrs. Maxwell, it was awfully good of you to ask me,' and I don't believe she'll notice anything wrong about that."

"Hm!" Nickey retorted scornfully. "Seems pretty much like the same thing to me."

"Oh no! Not in the least. Now what will you wear when we go to the rectory?"

"My gray suit and tan shoes and the green tie with the purple spots on it."

"Who'll be the first to sit down to the table?"

"Search me—maybe I will, if there's good eats."

"Nonsense! You must wait for Mrs. Maxwell and the rector to be seated first."

"Well," Nickey exclaimed in exasperation, "I'm bound to make some horrible break anyway, so don't you worry, ma. It seems to me from what them books say that when you go visitin' you've got to tell lies like a sinner; and you can't tell the truth till you get home with the door shut. I never was good at lyin'; I always get caught."

"It isn't exactly lyin', Nickey; its just sayin' nice things and keepin' your mouth shut about the rest. Now suppose you dropped a fork under the table, what'd you say?"

"I'd say, 'scuse me, Mrs. Maxwell, but one of my forks has gone and you can go through my clothes if you want to before I go home."

"Hm!" Hepsey remarked dryly, "I guess the less you say the better."

Arrived at the rectory, Nickey felt under some restraint when they first sat down to the supper table; but under the genial manner of Mrs. Maxwell he soon felt at his ease, and not even his observant mother detected any dire breach of table etiquette. His conversation was somewhat spare, his attention being absorbed and equally divided between observation of his host and consumption of the feast set before him. With sure tact, Mrs. Betty—though regarding Nickey as the guest of honor—that evening—deferred testing the results of his conversational studies until after supper. One thing at once, she decided, was fair play.

After the meal was over they repaired together to the parlor and while Hepsey took out her wash rag knitting and Maxwell smoked his cigar, Mrs. Betty gave Nickey her undivided attention.

In order to interest the young people of the place in the missionary work of the parish Mrs. Betty had organized a guild of boys who were to earn what they could towards the support of a missionary in the West. The Guild had been placed under the fostering care and supervision of Nickey as its treasurer, and was known by the name of "The Juvenile Band of Gleaners." In the course of the evening Mrs. Maxwell took occasion to inquire what progress they were making, thereby unconsciously challenging a somewhat surprising recountal.

"Well," Nickey replied readily, "we've got forty-six cents in the treasury; that's just me, you know; I keep the cash in my pants pocket."

Then he smiled uneasily and fidgeted in his chair.

There was something in Nickey's tone and look that excited Mrs. Betty's curiosity and made his mother stop knitting and look at him anxiously over her glasses.

"That is very good for a start," Mrs. Betty commended. "How did you raise all that, Nickey?"

For a moment Nickey colored hotly, looked embarrassed, and made no reply. Then mustering up his courage, and laughing, he began:

"Well, Mrs. Maxwell, it was just like this. Maybe you won't like it, but I 'll tell you all the same. Bein' as I was the president of the Juv'nal Band of Gleaners, I thought I'd get the kids together, and start somethin'. Saturday it rained cats and dogs, so Billy Burns, Sam Cooley, Dimple Perkins and me, we went up into the hay loft, and I said to the kids, 'You fellows have got to cough up some dough for the church, and—'"

"Contribute money, Nickey. Don't be slangy," his mother interjected.

"Well I says, 'I'm runnin' the Juv'nals, and you've got to do just what I say. I've got a dandy scheme for raisin' money and we'll have some fun doin' it, or I miss my guess.' Then I asked Sam Cooley how much money he'd got, and Sam, he had 44 cents, Billy Burns had 52 cents, and Dimple had only 2. Dimp never did have much loose cash, any way. But I said to Dimp, 'Never mind, Dimp; you ain't to blame. Your dad's an old skinflint. I'll lend you 6 to start off with.' Then I made Billy Burns sweep the floor, while Sam went down to the chicken yard and caught my bantam rooster, Tooley. Then I sent Dimp after some chalk, and an empty peach basket, and a piece of cord. Then we was ready for business.

"I marked a big circle on the barn floor with the chalk, and divided it into four quarters with straight lines runnin' through the middle. Then I turned the peach basket upside down, and tied one end of the string on the bottom and threw the other end up over a beam overhead, so I could pull the basket off from the floor up to the beam by the string. You see," Nickey illlustrated with graphic gestures, "the basket hung just over the middle of the circle like a bell. Then I took the rooster and stuck his head under the basket. Tooley hollered and scratched like Sam Hill and —"

"For mercy sake, Nickey! What will you say next?"

"Say, ma, you just wait and see Well, Tooley kicked like everything,

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but he had to go under just the same. Then I said to the kids to sit around the circle on the floor and each choose one of the four quarters for hisself—one for each of us. 'Now,' I said, 'you must each cough up—'"

"Nicholas!"

"Oh, ma, do let me tell it without callin' me down every time. 'You kids must hand a cent apiece and put it on the floor in your own quarter. Then, when I say ready, I'll pull the string and raise the basket and let Tooley out. Tooley'll get scared and run. If he runs off the circle through my quarter, then the 4 cents are mine; but if he runs through Dimp's quarter, then the 4 cents are Dimp's.'

"It was real excitin' when I pulled the string, and the basket went up. You'd ought to 've been there, Mrs. Maxwell. You'd have laughed fit to split—"

"Nicholas Burke, you must stop talkin' like that, or I'll send you home," reproved Mrs. Burke, looking severely at her son, and with deprecating side glances at his audience.

"Excuse me, ma. It will be all over in a minute. But really, you'd have laughed like sin—I mean you'd have laughed yourself sick. Tooley was awful nervous when the basket went up. For a minute he crouched and stood still, scared stiff at the three kids, all yellin' like mad; then h ducked his head and bolted off the circle through my quarter and flew up on a beam I thought the kids would bust."

Mrs. Burke sighed heavily.

"Well, burst, then. But while they were laughin' I raked in the cash. You see I just had to. I won it for fair. I'd kept quiet and that's why Tooley come across my quarter."

Mrs. Maxwell was sorting over her music, while Maxwell's face was hidden behind a paper. Mrs. Burke was silent through despair. Nickey glanced furtively at his hearers for a moment and then continued:

"Yes, the kids was tickled, but they got awful quiet when I told them to fork over another cent apiece for the jackpot."

"What in the name of conscience is a jackpot?" Hepsey asked.

Donald laughed and Nickey continued:

"A jackpot's a jackpot; there isn't no other name that I ever heard of. We caught Tooley and stuck him under the basket and made him do it all over again. You see, every time when Tooley got loose the kids all leant forward and yelled like mad; but I just kept my mouth shut and leaned back out of the way so that Tooley'd run out through my quarter. So I won most all the time."

There was a pause, while Nickey looked a bit apprehensively at his audience. But he went on gamely to the end of the chapter.

"Once Tooley made a bolt in a straight line through Dimp's quarter and hit Dimp in the mouth and bowled him over like a nine-pin. Dimp was scared to death and howled like murder till he found he'd scooped the pot; then he got quiet. After we made Tooley run ten times he struck and wouldn't run any more, so we just let him go; but I didn't care nothin' about that, 'cause you see I had the kids' cash in my pants pocket and that was what I was after. Well, sir, when it was all over, 'cause I'd busted the bank——"

"Nicholas Burke, I am ashamed of you."

"Never mind, ma; I'm most through now. When they found I'd busted the bank they looked kind of blue and Dimp Perkins said it was a skin game and I was a bunco steerer."

"What did you say to that?" Donald inquired.

"Oh, I just said it was all for religion, it was church money and it was all right. I was just gleanin' what few cents they had to pay the church debt to the missionary, and they ought to be ashamed to have a church debt hangin' over 'em, and they'd be more cheerful 'bout givin' a little somethin' toward raisin' of it."

When Nickey had finished there was an ominous silence for a moment or two and then his mother said sternly:

"What do you suppose Mrs. Perkins will say when she finds that you've tricked her son into a regular gambling scheme to get his money away from him?"

"Mrs. Perkins," retorted Nickey, thoroughly aroused by the soft impeachment. "I should worry! At the church fair, before Mr. Maxwell came, she ran a fancy table and tried to sell a baby blanket to an old bachelor; but he wouldn't take it. Then when he wasn't lookin', blessed if she didn't turn around and tie the four corners together with a bit of ribbon and sell it to him for a handkerchief case. She got two dollars for it and it wasn't worth seventy-five cents. She was as proud as a dog with two tails and went around tellin' everybody."

Silence reigned, ominous and genera', and Nickey braced himself for the storm. Even Mrs. Maxwell didn't look at him and that was pretty bad. He began to get hot all over and the matter was fast assuming a new aspect in his own mind which made him ashamed of himself. His spirits sank lower and lower. Finally his mother remarked quietly:

"Nickey, I thought you were goin' to be a gentleman."

"That's straight, all right, what I've told you," he murmured abashed.

There was another silent pause—presently broken by Nickey.

"I guess I hadn't thought about it just that way. I guess I'll give the kids their money back," he volunteered despondently—"only I'll have to make it up some way in the treasury." He felt in his pockets and jingled the coins.

Another pause—with only the ticking of his mother's knitting needle to relieve the oppressive silence. Suddenly the worried pucker disappeared from his brow and his face brightened like a sunburst.

"I've got it, Mrs. Maxwell," he cried. "I've got seventy-five cents comin' to me down at the Variety Store for birch-bark frames and I'll give that for the blamed old missionaries. That's square, ain't it now?"

Mrs. Betty's commendation and her smile were salve to the wounds of her young guest and Donald's hearty laughter soon dispelled the sense of social failure which was beginning to cloud Nickey's happy spirit.

"Say, Nickey," said Maxwell, throwing down his paper, "Mrs. Betty and I want to start a Boy Scout Corps in the parish and with your resourceful genius you could get the boys together and explain it to them and soon we should have the whole thing in shipshape order. Will you do it?"

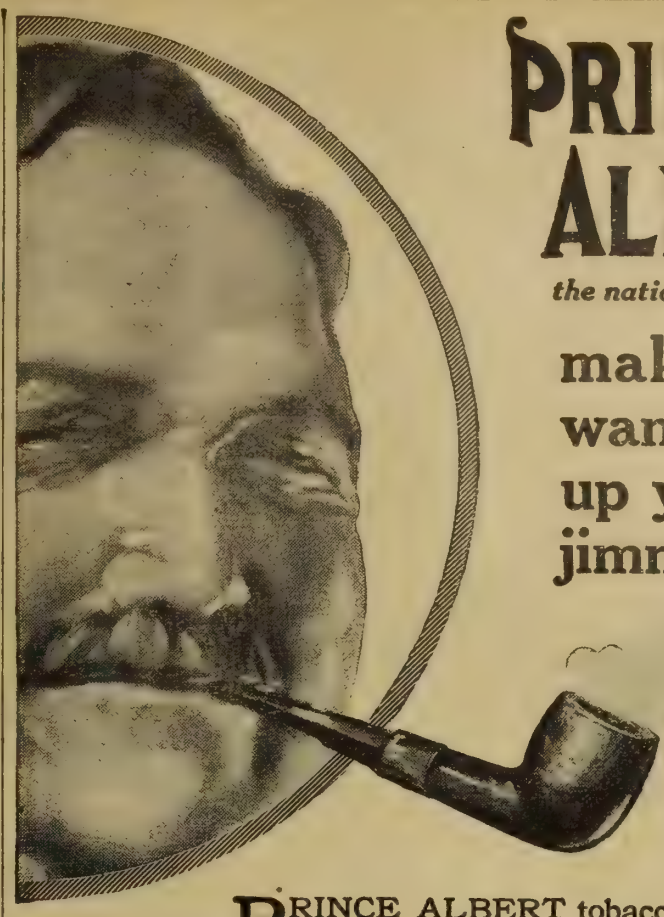
"Will I?" exclaimed the delighted recruit. "I guess so—but some of 'em ain't 'Piscopals, Mr. Maxwell; there's Sam Cooley, he's a Methodist, and—"

"That doesn't cut any ice, Nickey—excuse my slang, ladies," he apologized to his wife and Hepsey, at which the boy grinned with delight. "We're out to welcome all comers. I've got the books that we shall need upstairs. Let's go up to my den and talk it all over. We shall have to spend evenings getting thoroughly up in it ourselves—rules and knots and first-aid and the rest. Mrs. Burke will allay parental anxiety as to the bodily welfare of the recruits and the pacific object of the organization and Mrs. Maxwell will make the colors. Come on!"

With sparkling eyes Nickey followed Donald out of the room. As they disappeared Hepsey slowly shook her head in grateful deprecation at Betty.

"Bless him!" ejaculated Hepsey. "Mixin' up religion with a little wholesome fun is the only way you can serve it to boys like Nickey and get results. Boys that are ever goin' to amount to anything are too full of life to stand 'em up in a row, with a prayer book in one hand and a hymnal in the other, and expect 'em to sprout wings. It can't be done. Keep a boy outside enough and he'll turn out all right. Fresh air and open fields have a mighty helpful influence on 'em. The way I've got it figgered out all of us can absorb a lot of the right kind of religion if we'll only go out and watch old-Mother Nature now and then."

(To be continued.)



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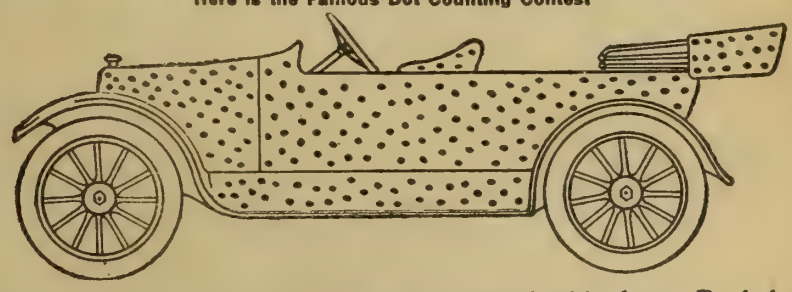

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AILING ANIMALS.

Hard-Milking Cows.

Will you please tell me if there is any cure for hard-milking cows and if there is any instrument or operation that will make them milk easier?

If your cows naturally milk hard it will pay you to just leave the teats alone and not run the risk of making matters worse. If the trouble is not natural and is brought about through some inflammatory condition of the udder the services of a veterinarian may be of some benefit to you.

Unthriftiness in Mare.

I have a five-year-old mare which fell off after the first of December and is poor now. She raised a colt last summer and is not in foal now. She just drags along. I feed her six ears of corn and half a gallon of oats twice a day. For roughness she gets clover hay and oat straw and can have plenty of both. Her appetite is good. Some say she has bots and others say not. Please give me some advice.

Your mare seems to be badly in need of a general tonic, since she is so badly run down in condition. These conditions are sometimes met with this time of year. Give your mare good quarters, wholesome food and water. Also give the following tonic mixture: Powdered cinchona, nine ounces; iron sulphate (dried), three ounces; powdered nux vomica, three ounces; powdered fennel, two ounces. Mix and make into twenty-four powders and give one powder three times daily in the feed. As to your mare being infected with bots, will say that bots very seldom do horses much damage.

Unnatural Discharge at Estral Period.

I have a Jersey heifer coming three years old that after she came fresh last spring began to discharge blood every time she came in heat and she still continues this way. She has been served three times and is not with calf yet. I am rather particular to get her in calf for she is an extra good milker. Is there any use to try again?

From your description we hardly know whether you mean that your cow has a discharge just at estral time or all the time and, therefore, it is hard to say just what the trouble is. It is possible she is troubled with a chronic inflammatory condition of the vagina or womb or both. An examination should be made to see if the womb is involved and if it is the passage way should be thoroughly flushed out with a solution of chlorid of zinc, one-half dram to a quart of water. A tonic given in the feed once daily is also advisable. Give three drams of sulphate of iron and one-half ounce ground ginger in feed once daily. Since this is a valuable animal it might mean dollars to you to have a competent veterinarian examine her.

Scouring in Horse.

I would like to know what to do for a seven-year-old horse that is inclined to run off at the bowels when in use. Has been that way for some three months and gets worse. I feed him prairie hay and corn.

Diarrhea is usually due to indigestion or internal catarrh or to irritation of the bowels from eating moldy or musty food, drinking stagnant water, diseased condition of teeth, eating irritating substances, exposure during cold nights, or low, damp stables. Some horses are predisposed to scour and are called "washy" by horsemen. Diarrhea may exist as complication of some other diseases. In treating, look well to food and water supply and see that they are all right. It often proves beneficial to change feed and give sparingly of good, easily digested foods. If it is thought some irritating substance has been causing the trouble an oleaginous purge of castor oil or raw linseed oil may be administered and sometimes with the cessation of the operation of the medicine the diarrhea will be overcome. With that peculiar build of horses which scour on the road but little can be done as a rule. Give them feed and water a considerable time before driving and this will help some. It is not advisable to resort to the astringents if it can be helped, but if it is necessary the use of powdered opium, two drams, and sub-nitrate of bismuth, one ounce, may be given three times daily.

Inflammation of Udder.

I have a cow that came in fresh about three weeks ago and she does not give over a quart of milk at a milking, but she has been milking all the time till fresh and the last three or four days before fresh her milk was thick and her udder seemed hard. I have changed her feed, but that does not seem to help her to milk more. I feed her clover hay, corn fodder, corn oats and bran. She is a good milk cow and is in good flesh. Is there anything I can do for her? Do you think she will be all right after she has another calf?

You should have had this cow attended to by your veterinarian as soon as the disturbance was noticed. The udder is a very delicate part and should be well cared for. Start treating your cow by giving her a purge of magnesium sulphate one to one and a half pounds. Then give the following internally. Fluid extract of phytolacca three ounces, potassium acetate one ounce, water enough to make eight ounces. Give two ounces in warm water three times daily. Massage the udder with hot water twice daily. Avoid rough usage of the udder. The above treatment may be of some benefit to the cow.

Paralysis.

Will you please tell me what to do for sheep that are getting lame in the back? They seem to lose the use of their backs entirely.

Your description is lacking in detail, but the trouble is probably paralysis brought about by some other existing trouble. It may be that your feed is at fault and that a change of feed would bring about relief in a few days.

Inflammation of Testicles.

I have a Red Polled bull that has been in the feed yard the last four or five months with other cattle and a bunch of hogs. Shortly after he was placed in the yard I noticed a small sore or scratch on the lower part of his scrotum and it had also swelled some, mostly on the one side. It continued to swell gradually till it was about three times its natural size and it has been that way for about three months. The swelling is quite hard and it seems to pain him some. The bull is in good flesh and is doing quite well. Any advice you could give me on this would be appreciated.

Your bull is probably the victom of an inflammatory condition of the testicles or scrotum. This trouble is of long standing, according to your letter, and should have been handled long ago. It is possible he will be ruined for breeding purposes and may have to be castrated. We could give you a line of treatment, but do not think it advisable in a case of such long standing. Our advice to you would be to get a veterinarian who is a competent man and have him make a thorough examination and find out whether the testicles are involved. It is very possible there is pus formation in this swelling that will need to be liberated and this can best be done by a competent veterinarian.

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Will reduce **Inflamed, Strained, Swollen Tendons, Ligaments, or Muscles.** Stops the **lameness** and **pain from a Splint, Side Bone** or **Bone Spavin.** No blister, no hair gone and horse can be used. $2 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse **Book 2 M Free.**

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Send name on postal. New catalog quotes factory prices, 13c per rod up. Freight prepaid. Sample free also. Address. AND FENCE SAMPLE **FREE**
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402,000 in use. Get the whole story told by the Championship Winners in my big free book, **"Hatching Facts."** With book comes full description of incubator and brooder—my 10-year money-back guaranty—low prices—full particulars—**and my $1300.00 Gold Offers.** Learn how I paid one user $156, another $50, many from $15 down. Write today for **Free Book.** Jim Rohan, Pres.

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At special bargain prices. Write for samples, price list, and illustrated circulars telling how to grow and use the crop.

SWEET CLOVER WHITE OR YELLOW

Of excellent purity and quality. Samples, circular of information and Red Ink Bargain Price List FREE.

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STRONG, healthy baby chicks or eggs for hatching, W. Wyandottes. Our White Wyandottes are utility birds and are not like some so-called utility stock that consists of birds culled from flocks raised for exhibition purposes only. If you want stock that will lay well you must breed them for that purpose. Come and see these birds, or write for catalog giving list of matings, records and prices. Pine Lake Poultry Farm, Chas. H. Benjamin, Mgr., Dept. 12, Hartland, Wis.

EGGS. Sunshine Leghorn for hatching. Large, chalk white hatching eggs from vigorous, farm raised, winter laying, business birds, full of vitality. Sunshine hens are fed according to latest government methods. Fifteen eggs, $1.50, prepaid $2.00, guaranteed. Sunshine Poultry Farm, R. F. D. 8, La Crosse, Wisconsin.

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STOCK and hatching eggs. Good breeders, both males and females, $2.50 to $5. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

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WE are breeders of prize-winning S. C. White Leghorns, W. P. Rocks, Barred P. Rocks, R. I. Reds, Toulouse geese, Pekin ducks. Old and young stock for sale. Also eggs for hatching. Fred H. Thiele, Specialty Breeder, Prop. Elmwood Pigeon and Poultry Farm, R. 12, N. Milwaukee, Wis.

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FROM my heavy winter-laying, money-making S. C. and R. C. Strains. Our capacity tripled for 1916. Quick shipment via p. post, W. F. express or American express to any point in U. S., $2 per 15. **R.E.Daly Poultry Farm, Necedah, Wis.**

BARRED Rock eggs 15, $1.50; 30, $2.50; 100, $7.50. From quality birds with size, breeding and barring. Prize-winners. Our egg customers are not disappointed when chicks are grown. 19 years a breeder. Guarantee fertility. Circular free. S. V. Latcham, Cottonwood, Minnesota.

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WINTER LAYERS Large type, strictly business strains, S. C. W. Leghorns. Eggs, stock, chicks. Satisfaction guaranteed. Certified Egg Farm, Madison, Wisconsin.

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P.W. Condon, West Chester, O.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

PURE-BRED WHITE and BARRED ROCKS. Eggs $1.25 per setting prepaid; $5.00 per 100. Chicks $15.00 per 100. Address Mrs. J. F. Bloom, Route 1, Stillwater, Minnesota.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

EGGS FOR HATCHING. Pure R. C. Rhode Island Reds, $1.25 per 15, $5.00 per 100. Address Fred M. Smith, Route 7, Elkhorn, Wis.

SINGLE Comb Buff Leghorn eggs from high-class stock at $1 per 15, 100, $4.50. Chas. Schmit, R. 22, Hortonville, Wisconsin.

MY R. C. REDS ARE MONEY MAKERS. Eggs postpaid, prices right, circular free. Mrs. G. Ellis, West Salem, Wisconsin.

MY S. C. REDS won highest state honors. Rose and single comb; eggs $2.00; cockerels $3.00. Wm. Wichern, Baraboo, Wis.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Shade For Hens In Hot Weather.

To the Editor:—The poultry should have plenty of shade in the hot weather. About noon the hens will get out of the hot sun and remain in the shade until three or four o'clock when they will again return to the field or range and stay until time to go to roost.

The shade may be furnished in a few months if plum and cherry trees are planted about the chicken runs. The orchard is also a nice place for the hens, because out there they find many bugs and worms while scratching beneath the shade of the apple trees. I have seen the hens out in the wooded lot enjoying themselves in the heat of the day as they scratched in the leaves or grass. If the flock must remain in the poultry house to find refuge from the hot sun, the hens will simply sit around very inactive until the day gets cooler.

When the poultry must be confined to a small lot, I find it a good plan if no shade is available, to make an artificial shade. One summer I drove three foot posts into the ground, one at each corner of a parallelogram six feet wide and twelve feet long. I nailed two-by-fours to the top of these posts and covered with boards. A curtain of burlap was hung to the south side so that the sun would not shine beneath it in the mid day. Here the hens would come and scratch and dust themselves during the heated portion of the day. So I have made it a point to see that the hens have a good shade in the warm weather. It pays.

Subscriber.

Raising More Geese.

To the Editor:—Every farmer who has a good orchard or low pasture should put a poultry fence around it and raise geese. A good many farmers say they are such a bother and are around the house all the time. If you have no spare space and let them roam around, your dwelling and lawn will be ruined. Geese are the biggest pests on the farm if allowed to roam at will. They are into everything they shouldn't be and the sidewalks and porches are like a pig pen. I feel sorry for the farmer who tries to raise geese without having a place to keep them up.

Geese are the cheapest birds to raise on the farm and they are very easy to raise. Keep them on green stuff, such as grass, dandelions, lettuce and sugar beet leaves until one month before Thanksgiving. Then give them all the corn they will eat and you will have your geese in good condition, that is, a good eating goose. If you want a lot of goose oil put in fattening pen a couple of weeks earlier. Always dispose of the early hatched first and the late hatched by the holidays. Last Christmas and New Year's we had a shortage of geese and they were paying 21 and 22 cents per pound for nice geese.

I have had a few inquiries why geese do not hatch better than they generally do. Most farmers feed too heavy and fattening food during the winter. Your breeding geese should be fed only oats and potato peelings, then you will have fertile eggs. I always use chicks and get good results. I put as many as eight eggs under a chick, just according to the size of the hen. When you set your hen give her a large nest, put ground on the bottom and then fine chaff. Make the nest deep and roomy. Now, with a lead pencil put a line on every egg lengthwise, on only one side of the egg. This is so you can tell which egg you have turned. The eggs are too large for a hen to turn properly. After two or three days you should turn the eggs twice a day—morning and evening—and move the outside eggs to the center of the nest and the center eggs to the outside. Keep this up until the twenty-seventh day, then keep them set up on the point. From the twenty-second day you should moisten the eggs freely and you'll hatch them all. If some of the goslings dry up in the shell and can't come out, free them by cracking shell, dip them in a pan of fairly warm water and put back under the hen. I've had them come out nice after being in the egg thirty-two days.

When you get ready to set the hens try setting two or three at one time. Candle your eggs by the seventh or eighth day, throw out the clear ones and double up with the other hen. If you haven't any more goose eggs set them with chicken eggs. We must learn to economize even with the chicks.

Where a lot of farmers make a mistake is that they try to wean the young too soon. When a gosling gets cold it's done for. When the chilly rains come they need the hen and you must watch her closely. Better shut her up in a large box or in the barn where she must set down and warm the goslings. Many a farmer will say he hasn't time to fool around with young stock. Why don't you give them to your daughter or son to care for and let them have the profit for pin money? It comes just around Christmas time when they need a little extra money. Fred H. Thiele.

Milwaukee Co., Wisconsin.

Tells why chicks die

E. J. Reefer, poultry expert, 4484 Reefer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every batch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

Get Rid of WORMS and INDIGESTION

Do you know that ninety per cent of all live stock losses are caused by Worms and Indigestion and both these conditions are preventable? Get rid of the blood-sucking worms and you will remove the chief cause of losses. Wormy animals can't thrive; the food they eat is largely wasted; they run down in condition — become easy victims to diseases. Worms eat up your high cost feed — bring on indigestion — cause heavy loss. Get rid of the worms with—

The Great Worm Destroyer SAL-VET The Great Live Stock Conditioner

The medicated salt without Antimony. Give your animals free access to it; they'll rid themselves of worms. Costs only 1-12 of a cent a day for each sheep or hog and only 1-3 of a cent a day for each horse or head of cattle. **SAL-VET** will do the work; I'll prove it or no pay.

PRICES

40 lb. pkg.	$ 2.25
100 lb. pkg.	6.00
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Extra discount in larger quantities.

Not less than 40 lbs. sent on this 60-day offer. 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog and 4 lbs. for each horse or head of cattle. Dealers sell Sal-Vet at above prices but in the far West and South the prices are a little higher on account of the extra freight charges.

DON'T SEND MONEY—JUST THE COUPON

Fill in the coupon below—tell me how many head of stock you have; I'll supply you enough **SAL-VET** to last your animals 60 days. You pay the freight when it arrives; feed as directed, make a specific report at the end of 60 days. If **SAL-VET** does not do what I claim it will cost you nothing.

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The Feil Mfg. Co.,
Chemists
Dept. 137
Cleveland, Ohio

THE FEIL MFG. CO., Chemists
Dept. 137-4-6-16 Cleveland, Ohio

Supply me enough **SAL-VET** to last my stock sixty days. I agree to pay the freight, feed it as directed, and will then pay for it if it does what you claim. If it fails and I so report specifically in sixty days you are to cancel the charge and I will owe you nothing.

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I have.....hogs.....sheep.....horses.....cattle

Name .....

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To introduce our goods we will send these three little labor-saving sanitary "Star" pans to any address in the United States for 25c., postpaid. They are made of heavy, rust-proof material and will fit any Mason jar. **SIMPLEX SUPPLY HOUSE, 43 Pontiac Bldg. Chicago, Ill.** Send for catalogue describing our Feather Brooders, Automatic Feeders and other poultry appliances.

Both Machines $10 Freight Paid Only

Think of it! These two **UNBEATABLE** Wisconsin Machines—**Winners in five great National Hatching Contests**, both for only $10, freight paid east of Rockies. Guaranteed 10 years and sold on **30 Days' Trial**—

30 Days Free Trial

MONEY BACK IF NOT SATISFIED

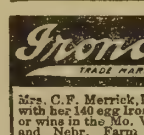
Wisconsins are made of genuine California Redwood. Incubators have double walls, double glass doors, copper tanks, self-regulating. Shipped complete with thermometers, egg tester, lamps, etc., ready to run. **Biggest incubator bargain of the year.** Send for our new 1916 catalog fully describing this outfit. A postal brings it by return mail. **180-Egg Incubator and Brooder, both only $12**

WISCONSIN INCUBATOR COMPANY
Box 102 Racine, Wis.

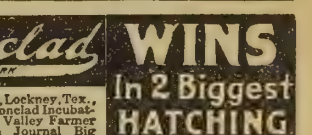
Ironclad TRADE MARK **WINS In 2 Biggest HATCHING CONTESTS Ever Held**

Mrs. C. F. Merrick, Lockney, Tex., with her 140 egg Ironclad Incubator wins in the Mo. Valley Farmer and Nebr. Farm Journal Big Hatching Contest. She placed 148 eggs in the incubator and hatched 148 strong chicks. Think of that. You can now get these famous winners, made of Calif. Redwood.

140 Egg Incubator Chick Brooder } BOTH FOR $10



If ordered together. 30 days trial, 10-year Guarantee. Order direct from this advertisement—money back if not satisfactory. Incubator is covered with galvanized iron, triple walls, copper tank, nursery egg tester. Set up ready to run. The Brooder is roomy and well made. Send for free catalogue. **Freight Paid East of Rockies**



Ironclad Incubator Co.
Box 113, Racine, Wis. (3)

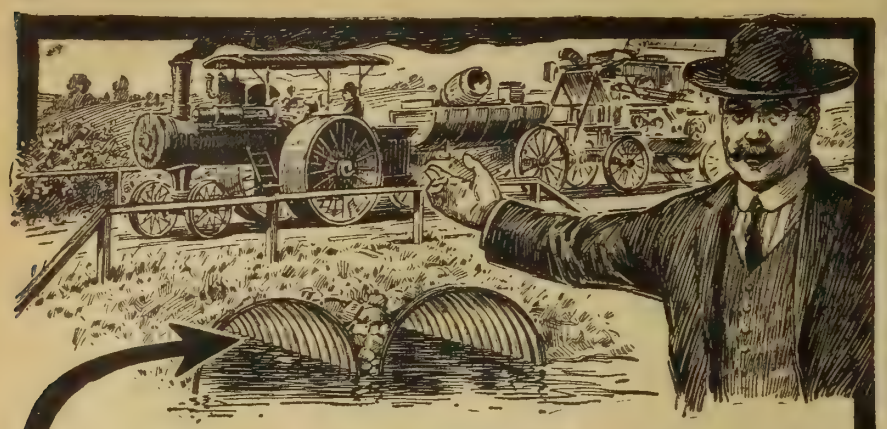
FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

A Cream Separator with Automatic Feed.

IT IS a good deal of bother to figure out how fast th cream separator ought to be turned in order to get all the cream, or to keep close watch on the speed indicator and turn the crank at the same time. The farmer has learned this, so have the Sharples Separator Co., West Chester, Pa. Therefore, the new Sharples suction-feed separator is made to control the milk flow automatically no matter what the speed of turning. By turning fast or slow the skimming is fast or slow, but it gets all the cream either way. Other special features of the Sharples are the knee-high supply can which saves lifting and the three-piece bowl which is very easy to wash. See advertisement on page 15 and get the handsome catalog, "Velvet for Dairymen," by sending to the company named above, and mentioning this paper.—Adv.

GET IT **AMERICAN POULTRY JOURNAL** Tells everything about the fascinating and profitable poultry industry. Issued monthly; 10 cents. We want you to know how good it is and will send it 6 months for 25c. Order now A. P. J. 1472-542 S. Dearborn, Chicago, Ill. **25 CTS**



No Danger There!

THE weighty tractor, the heaviest threshing outfit—the kind of traffic that does not dare to venture across the ordinary bridge, but is compelled to go a long way round—all these can pass without risk and without loss of time over the road on which are used

"ARMCO" IRON CORRUGATED CULVERTS

In every State "Armco" Iron Culverts have been installed to take the place of dangerous bridges. Years of service have proved them safe. Thousands of installations have also been made on the road-beds of the great railway and traction lines. "Armco" (American Ingot) Iron Culverts are also economical in the long run. Being *pure* iron (never less than 99.84% pure) they resist rust and defy the forces that cause ordinary culverts to deteriorate. They are easily hauled to the job, and quickly installed.

Look for the triangle trade-mark on every section. If you do not find it, the culvert is not genuine "Armco" Iron.

ARMCO IRON CULVERT MFRS. ASSOCIATION, Cincinnati, Ohio

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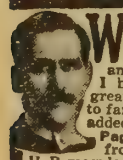
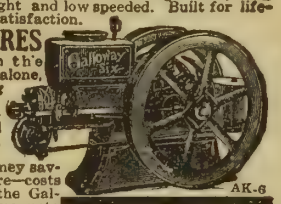


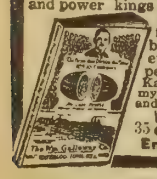
WAIT! **Get my 1916 price!** Don't buy an engine of any make or kind or price until you first get my low 1916 prices and **easy buying plans**, including easy terms. I build these Masterpiece engines in my great chain of factories and sell them direct to farm and shop with only one small profit added to actual cost. My **New 1916, 250-Page Book** illustrates and describes all sizes from 1 3-4 H. P. light work engines to 16 H. P. moguls for biggest, toughest, heaviest jobs. All Galloway Masterpiece engines are large bore, long stroke, heavy weight and low speeded. Built for life-time service and satisfaction.

1916 FEATURES Include valves in the head, (worth $15 alone, but costs nothing extra), extra large cooling surfaces, perfected oiling system, economy carburet or (a fuel) and money saver, worth $10 more—costs nothing extra on the Galloway), built-in magneto and Hercules water-cooled cylinder head, an arch of strength, mechanically perfect in design, (worth $25 extra, but costs you nothing!)



AK-6

LOOK! **This new 1916, 250-page Book** tells all about these features and many others that make Masterpiece engines superior engines and power kings in every field. Don't do a thing about buying an engine until you first get my book! Every sale backed by $25,000 bank bond guarantee, for every customer's satisfaction! Shipped from Waterloo, Council Bluffs, Kansas City, St. Paul and Chicago. Ask for my SPECIAL PROPOSITION on 10,000 engines and new book today. Address



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1915 SEED CORN

Brings better results than old corn. Our seed is from the new crop. We have both rack dried and dried in the field. Test 90% to 98%. Satisfaction guaranteed. You can test the seed before you pay us. Don't take chances on old corn Write for catalog.

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STRAWBERRY Catalog Free

The Best of the hardy varieties, bargain prices. Kellogg's Hardy Northern grown fruit plants are well grown and productive. None better. Also

THE EVERBEARING STRAWBERRIES

fruits from early summer till Nov. Send today for price list and pamphlet of instructions—**62 years experience.**

KELLOGG'S NURSERY, Box 224, Janesville, Wis.

$10 A DAY MADE EASY

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JOHN STAHL, STATE AGENT,
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STRAWBERRY PLANTS THAT GROW

Of well-tried-out and reliable varieties. Send for prices. Address

HANCHETT FRUIT FARM, SPARTA, WIS.

Nitrates Added to the Soil 1-2c a Pound

NITROGERM 40c per acre. Best for inoculating farm seeds. Instructive circular No. 2, free. Our endorsement—sole distributors of Nitro-Cultures (Trade Mark registered U. S. Pat. Office.) Sold by State Agricultural Departments. Write Dept. 20, Standard Nitrogerm Co., Glen Ridge, N. J. Soil tested for acidity, 25c.

ALFALFA SEED $16 per bushel. Order direct from this advertisement, as we have plots of fifty different strains of alfalfa under test which enables us to send you seed adapted to your locality. Swartz Brothers, Cornfalfa Farms, Waukesha, Wisconsin, winners of the World's Gold Medal Alfalfa Sheaf at the Panama-Pacific Exposition. Also the largest alfalfa hay growers in Wisconsin.

BEING centrally located in the clover seed section of Wisconsin, we have a large quantity of alsike, red clover and timothy seed for sale and also a large stock of alsike and timothy mixed. Our seeds are guaranteed. Every bushel is inspected by the agricultural seed inspection department. Write for prices and samples. Pickart Bros., Malone, Wis.

10 APPLE TREES 10

3 TO 4 feet $1. Two each Dudley, Lowland, Snow, Delicious and Golden Russet. Get our fine catalog. It's free. **Wisconsin Nurseries, Box 88, Union Grove, Wisconsin.**

EAR SEED CORN

SELECTED ears, 1914 crop. Minn. No. 13, test 93 %, $3.50; Early Murdock, test 93 %, $3.50; Northwestern Dent, test 95 %, $4.00. All home grown. Bags free. A. J. Pietrus, Sleepy Eye, Minn.

STRAWBERRY PLANTS 250 best 3 varieties $1; $3.50 per 1,000 Cuthbert Red Raspberry, $1.25 per 100. Fresh, live plants. O. R. Tuttle, Baraboo, Wisconsin.

PEDIGREE OATS NOS. 1 AND 5

Also Pedigree Barley. Sacks free. Address
H. P. West **Ripon Wisconsin**

SEED OATS for sale. Wis. White Bonanza, short and stiff in straw, yields 80 bu. per acre, state tested. Albert Wollin, Johnson Creek, Wisconsin.

CANADIAN FIELD PEAS for sale. Write us for prices. Address Frosch & Sons, Grimms, Wisconsin.

HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

Fruit and Garden

More About Spraying.

Spraying for the control of insects and fungoid growths injurious to trees and plants is a very large subject. All that is important to know about it cannot be condensed into a short article. Only hints can be given and the reader must think these out to their logical conclusion.

In the use of Paris green to kill insects the right proportions are one and a half pounds of the poison to one pound of fresh lime and 200 gallons of water. But note in using this that it must be kept stirred else the poison will settle, as it is heavier than water. Buy the green in the original package, guaranteed pure. In this formula the lime is used to overcome the caustic poison which might otherwise injure foliage.

For fungous troubles add to this same mixture six or eight pounds of copper sulphate or bluestone. The bluestone is always to be dissolved in water in a separate vessel and not mixed with the limewater until just before using. The bluestone is best dissolved by enclosing in a burlap sack and suspending it in the water.

Another poison largely used instead of Paris green is arsenate of lead. This has some advantages over the other. It remains in solution longer, it adheres to the foliage better and there is less danger of injury to the foliage. Two pounds of the arsenate to fifty gallons of water is the right proportion. This may be added to the Bordeaux mixture also.

A substitute for the Bordeaux is the lime-sulphur solution, and some fruit men prefer this when the trees are dormant.

This is doubtless the best treatment for scales and all sucking insects. The lime-sulphur is a commercial article and may be bought in all sized packages up to barrel size. One gallon of this to eight of water is the proper mixture, but do not apply to growing plants. Arsenate of lead may be added if a poison is desired.

Another spray much used when it is desired to destroy sucking insects is the kerosene emulsion. To make this in quantity dissolve a half pound of hard soap in a gallon of boiling water and add at once two gallons of oil. Churn with violence until it is fully mixed. When ready to use add ten gallons of water to one of this prepared solution.

White hellebore is a useful poison to control currant and cabbage worms. An ounce of the powder to three gallons of water is the formula in general use. Just as good a way is to use it dry, mixing an ounce of hellebore with five times as much flour or air-slaked lime or plaster Paris.

Some people confuse the uses of these various mixtures, but the practical man must get it clearly in mind that the Bordeaux will not kill insects. It is only to control rust, rot and scab. You must add to this the poison if you have also bugs to kill.

Be sure to get a spraying outfit adapted to your business. Much depends upon having your solutions well prepared, with no lumps which will clog in the nozzle. And have the best possible nozzle, for there are different kinds. Also you will need an extension rod to lengthen your hose and carry the spray mist well up above the tree.

Spraying is not advised for the cutworm, often so destructive in our gardens. They are best destroyed by feeding them poisoned bran. Mix in the proportion of forty pounds of wheat bran, one pound of Paris green, one quart of molasses. It is best to mix bran and poison dry and then add the sweetening. Scatter this feed in the late evening at the places where the worms are known to be working. They will eat it and it will be their last meal.

The handling of plants having woody or semi-woody stems is a fine art. Most persons break the stems or cut them with shears and plunge them into cold water. These are exactly the wrong things to do. The stems should be cut off with a sharp knife, making a clean, slanting cut. Each stem should be free of joints, since water is drawn up through the jointed stem. The stems should be placed in a deep vase filled with warm water. Finally the blooms should be set where they are out of the bright sunshine and not exposed to strong drafts. When handled in this way such flowers quickly draw up water and maintain their freshness.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Columbias Put GO into Engines

Marine, auto and stationary engines run "smooth as silk" when hooked to Columbia Batteries. Lanterns blaze, bells clang, blasts roar—with COLUMBIAS. Made better each year for 27 years! Sold everywhere!

NATIONAL CARBON COMPANY
Cleveland, Ohio

Convenient Fahnestock spring-clip binding posts, no extra charge.

Columbia Batteries

For silo owners

Let us send you valuable information and suggestions to help you decide right in the selection of your silo filler. For a cutter that will cut the corn as fast as you can supply it—elevate as high as needed—run with your regular farm engine—investigate the

BLIZZARD
Ensilage Cutter

It is the tried and true cutter for the farmer. Simple to understand and run. Unusually safe. Makes even-cut silage. Durable. Repair cost small.

gine, for valuable information, also free booklets. WRITE today, mentioning size of silo and of en- "1916 Catalog," "What Users Say," "Making Silage Pay Better."

The Jos. Dick Mfg. Co.
Box 64 Canton, Ohio

Note self feed table

Sold mounted or unmounted

SPALDING POTATO PLANTER

Saves money for you. Marks, furrows, drops and covers at one operation. Plants whole or cut potatoes 14, 16, 18 or 20 inches apart.

ONE HORSE DOES THE WORK

Pole furnished for team. Never misses. Simply and strongly built. Safe, light, well-balanced and easy running. Easy to adjust. Absolutely guaranteed.

Write for description and **special** low prices.

HIRSCH BROS.
269 Reed St.
MILWAUKEE
WIS.

FREE GARAGE TRAINING

TO all young men who enroll in our 4-week laboratory and electrical course starting May 1st. Course built on 15 years' experience. Catalog and information FREE. Write ALLEN AUTO SCHOOL, 2005 Forest Ave., Des Moines, Iowa.

EVERBEARING STRAWBERRIES
HARDIEST PLANTS & TREES
AT RIGHT PRICES
CATALOG FREE.
Strand's Nursery, Box 26 Taylors Falls, Minn.

FARMERS HAVING BEES. A postal brings the booklet—How to Care for Bees—and prices on bee supplies. Address Gus Dittmer Company, Augusta, Wisconsin.

I PAY 25c each for Lincoln pennies and Buffalo nickles, several dates. Complete coin list 10c. Conrad, 231-Q, Altoona Pa.

Strawberry PLANTS **FREE** To introduce our *Pedigreed Everbearing* strawberries we will send 25 fine plants free. PEDIGREED NURSERY CO., SULLIVAN, MO.

Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

Griswold Bros.' Scotch Short-horns and Percherons.

WE recently visited Griswold Bros., Livingston, Wis., and were surprised to find such a high-class lot of stock on their farms. Not but what they are competent to raise as good cattle and horses as anyone, but they have never made much noise about their breeding operations and we didn't know what they had. We found one of the good Short-horn herds of the state—mostly all Scotch of the most fashionable families. We saw several daughters of the renown Villager, some Cruickshank Victorias, Butterflys and several daughters of the famous Whitehall Sultan. The outstanding daughter of the latter bull is Diamond Anoka, a cow that has won the purple ribbon at several shows and a gold mine as a producer, on this farm. She is the dam of the senior herd bull, Hopeful Sultan. He is an excellent roan, very smooth and one of the best quartered bulls we have ever seen. He is by Hopeful Knight, a son of Gallant Knight bred by Colonel Harris. Another good bull in service is Cumberland King he by Royal Cumberland 2d out of Lovely Queen by Victor Archer. The young stuff on the farm by him will impress you and prove to you that he is a sire of merit. These gentlemen have a real show prospect in a white bull sired by Denmark 6th. He is a wonderful yearling and if he continues to do well he should make a creditable showing at the fall fairs. Messrs. Griswold expect to make some of the state fairs this fall and their Short-horn herd is in charge of George Clubb a feeder whom we have known for several years and a competent man with a good herd of cattle. Consistent with their cattle herd is their Percheron stud. They have a band of brood mares that we believe are second to none in the state. They have daughters of Calypso, a stallion that has sired more prize winners than any Percheron stallion that has ever headed a stud. Other mares are by Inscrit, an International winner and a stallion that was exported to Canada at a long price. The mares are sure and regular breeders. Keep this firm in mind, for they have Short-horns and Percherons that will make a reputation for them as breeders.—Adv.

Furnace Facts for Farmers.

FARMERS with the Mueller furnace in their homes say they wouldn't be without it. It saves them fuel and labor, so they say, and gets rid of the dirt and inconvenience of stoves. The health of everyone in the family is better because of the even, comfortable, smokeless heat which the Mueller furnace gives. Even though summer time is coming on, there will be many damp, chilly days when the house should be slightly heated. A small amount of fuel in a Mueller will take the chill off the house without requiring any attention after starting. A furnace, installed now, will furnish heat if needed on cold days in spring and summer and will be ready for next winter. Don't wait until next fall and have the cold weather surprise you before you are ready. The L. J. Mueller Furnace Co., 204 Reed St., Milwaukee, Wis., makes steam and hot water boilers, hot air furnaces and vapor heating systems. The Mueller pipeless furnace is especially desirable where it is not practical to tear up the walls to install pipes and flues. No flues or pipes are needed, because it heats the whole house from one central register. Write to the company named above to assist you in solding your heating problems. They will give you real, honest advice.—Adv.

The Seed for Bumper Crops.

SEED which will produce bumper crops must have two outstanding characteristics: High germination which will give a full, even stand and strong vitality which will produce large, sturdy plants. Such seed is a good investment; though the cost is greater, it is more than offset in larger yields. Northrup, King & Co., have selected seeds for both these characteristics and have marked them with three brands, Sterling, Northland and Viking. Seeds so marked are dependable—they are large, plump, fully matured and free from dirt and foreign seed. Ask your dealer for these brands. A descriptive seed catalog will be sent on request if you write to Northrup, King & Co., Seedsmen, Hennepin Ave., at First St., Minneapolis, Minn., and mention this paper. See the advertisement on page 11.—Adv.

Little's Milking Short-horns.

MR. HARVEY H. LITTLE, Evansville, Wis., has, without a doubt, one of the best herds of dual-purpose Short-horns in the state of Wisconsin. He has a large herd made up of cows that are great milkers. Mr. Little's success is due largely to the fact that he is an excellent feeder and caretaker, and should you visit his farm you will find his cattle in the very best possible condition for good service. Not only is the Little herd made up of good individuals, but they possess breeding that is most popular. A bull that did good service in this herd was Gifford Clay. He was sired by Cecil Palmer, that in turn was the sire of Belle of Glenside, the dam of Rose of Glenside, that holds the world's record for a dairy Short-horn. At a recent sale of milking Short-horns held in Ohio, and the greatest sale of the breed in years, the top females were of this Rose family and we feel confident that Mr. Little has as much or more of that breeding in his herd than any other breeder in the state. It is very seldom one will find Mr. Little with a surplus of Short-horns, there is a place for everyone he wishes to sell. Keep this good herd in mind. See page 31.—Adv.

Herds Nominated in the State Duroc Futurity.

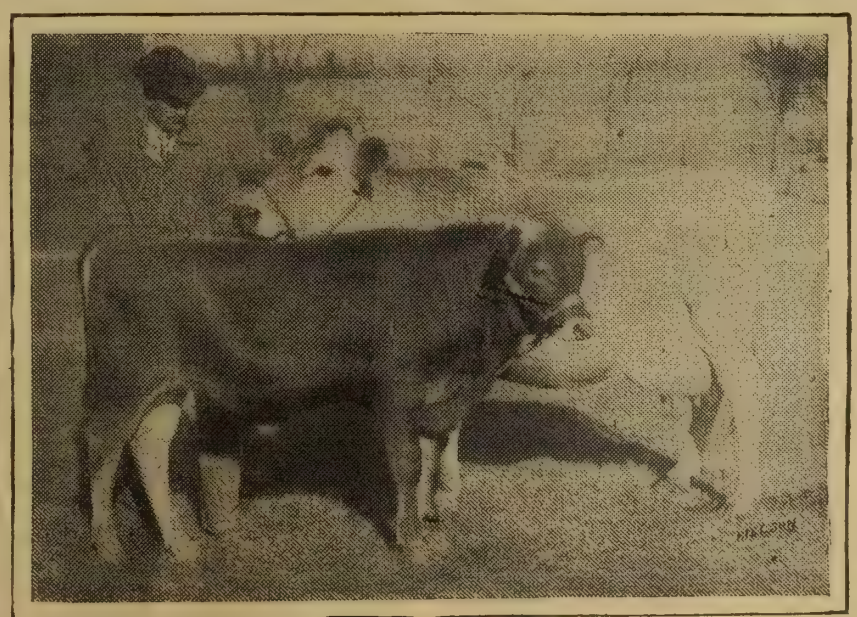
WE are pleased to advise our readers and especially those interested in better swine, that the necessary nominations, twenty in number, for the Duroc Futurity have been received, consequently this show is guaranteed by the National Duroc Record Association and will be staged at the Wisconsin State Fair this fall. A futurity at a fair stimulates interest that can't be obtained in any other manner. It is the greatest feature of the horse and cattle classes and where swine futurities have been put on they have been a grand success. The futurity is for pigs under six months old, age to be governed by the rules of the state fair in which the futurity is held. It is a separate classification from the regular state fair premium list and the prize money is a great deal more than given by the fair board, in the open classes. A breeder can enter in both the futurity and open classes and if he is fortunate enough to get a place, his winnings are considerable. The small breeder has an equal chance with the old-time showman and we might mention the fact that at two of the futurity shows that the writer attended last year, the heaviest winners were breeders making a show for the first time. Besides the cash awards, a beautiful cup will be given by the Duroc Bulletin and also one by The Wisconsin Farmer. Every man interested in Durocs should boost this show, for by so doing he is helping his own game. Those that have made entries should pick out a few of the prospects and give them some special care, do not wait until the middle of the summer to begin fitting your pigs, this fast and forced feeding isn't good for the pigs and it is impossible to get the growth and finish to them that you can if you will grow and finish them from the start. Each of you have the same chance to get a place this fall and if you do you will be well repaid for the time spent. We follow with a list of the men that have nominated their herds and while some of them may not show it shows a disposition on their part to boost the Durog hog in this state. J. W. Thomas, North Bend; Chas. A. Peterson, Rosendale; L. F. Atwater, Bangor; Stubbs & Hyzer, West Salem; W. C. Jenkins, Bangor; Geo. V. Koehler & Sons, Hixton; Brian L. Rundell, Hammond; W. G. Bartholf, Burlington; Dennis Shea, Melvina; M. H. O'Keefe, Waunakee; J. W. Higgins, Gotham; Grant's Farm, Delavan; E. H. Parker & Son, Janesville; Fred Leonard & Sons, Jefferson; John L. Fisher, Janesville; W. C. Taylor, Bagley; Alex Knutson, Brodhead; F. R. Constance, Waupaca; McClurg Bros., Viroqua; Chas. Burt & Son, Brodhead.—Adv.

Rich Farm Land for Sale.

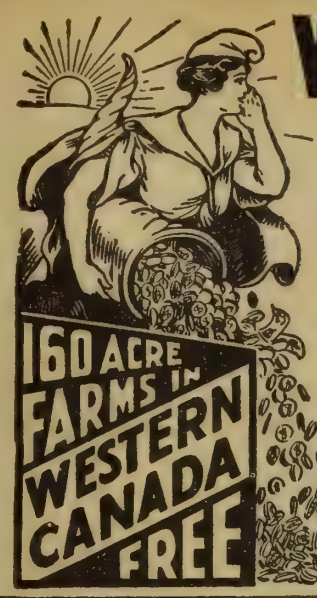
THE farmers of Canada are enjoying an unusual degree of prosperity. The crops are large and sell at high prices while the taxes and other expenses are low. A large amount of good farming land is still open for settlement along the Canadian Pacific railway and offers a wonderful opportunity for anyone wanting a money-making farm. This land sells for $1 to $30 an acre, with twenty years in which to pay, and is owned by the railway. If you are interested in this proposition, read the advertisement on page 12 and send for the free book describing this land of opportunity. Address J. S. Dennis, Assistant to the President, Canadian Pacific Ry., 82 Ninth Ave., Alberta, Can.—Adv.

The Use of Powder on the Farm.

ATLAS farm powder has an excellent use in clearing unproductive land of stumps and preparing it for cultivation. It blows the stumps into pieces which may be easily carried away and no experience or skill is required to use it. In these days of high-priced farm products, idle land is decidedly un-



ONE of the Jerseys in the Fred Stubley herd, Black Earth, Wis. Seven-day record 410 pounds milk, 20.38 pounds butter fat. See advertisement on page 30.



Wanted 50,000 Farm Hands

of experience at once on the farms of Western Canada

To replace the young farmers who have enlisted for the war. Good wages and full season's work assured.

There is no danger or possibility of Conscription in Canada.

References required from all applicants. For special railway rates and other information apply to

GEORGE A. HALL,
123 Second St., Milwaukee, Wis.
Authorized Canadian Government Agent

A complete line at different prices. Strength, easy to operate, safe and simple locks. The best of materials are used in all models. Wood, or steel with wood lining. They are

Adjustable to Small Calf or Large Cow

We also make a complete line of Steel Stalls for cattle or horses; Water Bowls; Cow, Calf and Bull Pens; Feed Trucks and 26 styles of Carriers. Ask us about Stanchion No. 3—it's a winner.

MITCHELL MFG. CO., 2906 Forest Home Ave. MILWAUKEE, WIS.

MITCHELL STANCHIONS

STEEL STALLS

SEND FOR CATALOG of MITCHELL BARN EQUIPMENT

PAPEC Pneumatic Ensilage Cutters

are light running and durable. It is the old reliable cutter, built to last. Cuts, elevates and distributes with an actual saving of power, time and money over other machines. The Papec construction is simple; a few strong parts that are easily adjusted, and keep in perfect alignment. All this, and more, is shown in our new 1916 Catalog; describes the new patented self-feeding device which handles hay or other small growths, also corn. Send postal today.

PAPEC MACHINE CO., Box 71, Shortsville, N. Y.
Convenient Distributing Points throughout the U.S.

A Great Opportunity

A FINE 320-acre farm, 2½ miles from town and R. R., good soil, new modern house 26x38, basement barn 36x72, hog house 24x42, silo 16x30, and other buildings. In consolidated school district, telephone, good roads, $50 per acre, terms. Write at once, to Chas. P. Jenks, Owner, Trego, Wis.

MINNESOTA

THE opportunity spot of America today. Wild land from $10 to $35 per acre. Improved farms $40 to $125 per acre. Maps and literature sent free. Write Fred D. Sherman, State Immigration Commissioner, Room 604, State Capitol, St. Paul, Minn.

IF you want to know about the great increase in dairying in the cheap land districts of Upper Wisconsin and get a state map and other information including U. S. crop figures, address a postal simply 1590 First Nat. Bank Bldg., Milwaukee, Wisconsin.

LET ME HELP you bny, sell or exchange farm or business property anywhere. Booklet free. G. L. WILLITS, 33 Palace Building, Minneapolis, Minnesota.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

BEST 40-ACRE FARM in Broome Co., $2,000. Particulars, photos on request. A. Mathewson, Owner, Lisle, N. Y.

Southern Farms: Mississippi, Arkansas, Tennessee. Send for booklet. Martin & Cole, Memphis, Tenn.

ARE YOU LOOKING FOR A NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

O. O. WHITED CO
Radisson Wisconsin

63 Acres, $3,800
Muskingum County Bargains

ALL rich limestone soil that cannot be beat for corn, wheat, alfalfa and clover; lot of fruit; in village high school district. Convenient 6-room house, 40-foot barn and outbuildings. Family plans changed and they make the low price, $3,800, part down. See page 62, our new spring catalog, just out, for details of this and other remarkable bargains in good Ohio, New York and Maryland farms; write for your copy today. E. A. Strout Farm Agency, Dept. 3015, 150 Nassau Street., New York.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

FARMS IN WISCONSIN

TAYLOR county and adjoining counties. Dairy land region of North Central Wisconsin. Genuine bargains. Liberal terms. We are OWNERS. Desirable property accepted in part payment. **LOEB-HAMMEL REALTY COMPANY,** (not Inc.), Medford, Wis., or 343-4 Marquette Bldg., Chicago, Ill.

ONEIDA COUNTY

WINNER of premiums in potatoes. I own and offer about 1900 acres cut-over hardwood lands along the Milwaukee road, including one town site, with running water, timber and water power. For sale in tracts of 40, 80, 120 acres and so on. Get my maps and price list. C. P. Crosby, Rhinelander, Wisconsin.

1,000 Farmers Badly Needed

TO raise supplies to feed the employes of the $20,000,000.00 steel plant, which is now in operation at Duluth. L. B. Arnold, Land Agent, C. R.I.& P Ry.Co., 151 Wolvin Bldg., Duluth, Minn

40 ACRES level, rich soil, 8 cleared, loghouse, barn, fenced, four miles Hawthorne, Wisconsin. $950, $300 cash, balance 8 years. Address First State Bank, Solon Springs, Wisconsin.

MONTANA wheat-alfalfa lands. Finest in state. Near Judith Basin. Half the price. Liberal plan. Write owner direct. Address John Burchard, Drawer J, St. Paul, Minnesota.

economical and many farmers will welcome this cheap means of getting their stump land under cultivation. Atlas farm powder is also efficient in digging ditches, making tree holes and blasting hardpan subsoil. The "Better Farming book tells how to do this work. Send the coupon attached to the advertisement on page 10 and get the book. Address the Atlas Powder Co., Wilmington, Del., and kindly mention this paper.—Adv.

A Duchess Ormsby Bred Bull.

THE great seven-day and yearly records made recently by Holstein cows of the Duchess Ormsby strain have attracted the attention of the entire dairy world, and reminds one of the excitement caused when Johanna McKinley Segis made her forty-pound record. A young bull combining the breeding of both these animals is offered for sale on this page by L. Lindauer, Kaukauna, Wis. This bull is out of a daughter of the $25,000 bull, Johanna McKinley Segis, a son of the forty-pound cow, Johanna De Kol Van Beers. He is sired by Fairmont Pietje Ormsby whose three nearest dams average over thirty pounds butter in seven days. Fairmont Pietje Ormsby is out of Piebe Ormsby Duchess, a sister to the new forty-one-pound cow, Sadie Vale Concordia 4th. Piebe Ormsby Duchess is by Duchess Ormsby Piebe Burke and out of Piebe Queen, a full sister in blood to Duchess Ormsby. Fairmont Pietje Ormsby is, therefore, a very richly bred Ormsby on his dam's side. His sire, Hillside Pietje, is out of the thirty-two-pound cow, Hillside Dodo. The young bull offered for sale, therefore, has two forty-pound records, eight thirty-pound records in his pedigree and combines the blood of Johanna De Kol Van Beers, Duchess Ormsby and Hillside Dodo. If you are in the market for an exceptionally well-bred bull, send for the pedigree of this one.—Adv.

A Choice Guernsey Bull.

A CHOICELY-BRED Guernsey bull is offered for sale on this page by E. R. Whitcomb, Whitefish Bay, Wis. He is not only choicely bred, but is also an outstanding individual, well grown, well marked and backed by heavy producing blood. His dam, Dube's Pretty Duchess 2d, gave over 11,000 pounds of milk in a year and made 638 pounds of fat. She is a daughter of Two Creeks, a son of the great show cow, Select's O. K., which won grand championship at the Wisconsin State Fair several years in succession. The sire of the bull offered for sale is Glenwood's King Coral, a son of Glenwood's Stranford, whose dam made 725 pounds of fat in a year. Glenwood's King Coral is a grandson of Glenwood Boy of Haddon, that has thirty A. R. daughters and King Coral that has twenty-five A. R. daughters. The three nearest dams of this young bull average 632 pounds of fat for the year. It will be seen that he is fit to head the best of pure-bred herds. For charted pedigree and further information write to the above address.—Adv.

Get These Building Plans and Estimates.

THE Gordon-Van Tine Co., Case St., Davenport, Iowa, are large distributors of lumber, shingles, paints and hardware for building. Anyone who is expecting to build should have their illustrated catalog because they can save you money on anything from a chicken house to a barn. They will send you all materials necessary for buildings and complete plans. Whatever you have in mind in the building line, you should consult their catalog. Gordon-Van Tine Co., also have plan books and guaranteed estimates which may be had on request. If you are interested, fill in the coupon attached to the advertisement on page 12 and send to the company. You will receive a prompt reply if you mention this paper. —Adv.

Good Barn Equipment is Important.

HOW is your barn equipped? Is the stock cared for in the best way? Does the arrangement save steps and labor? These questions confront every farmer. Good farming demands labor-saving, profit-making equipment. The Mitchell Mfg. Co., 2906 Forest Home Ave., Milwaukee, Wis., have some trustworthy information on this kind of equipment—steel stalls, water bowls, stanchions, calf and bull pens, and feed trucks are included in their line. Write for the catalog of Mitchell barn equipment advertised on page 29. It will make a handy reference book for you.—Adv.

A Suggestion to Cattlemen.

CATTLEMEN should read the advertisement on page 26 of "Easy to Use" cattle instruments. The outfit includes instruments for treating milk fever, bloat, garget and several other ailments which often prove fatal to cattle. Frequently a valuable animal is lost because the veterinarian arrived too late. With these instruments a cattleman can do the work himself, before it is too late. A book on the treatment of cattle ailments will be sent upon request to G. P. Pilling & Son Co., 2318 Arch St., Philadelphia, Pa. Cattlemen should get this book.—Adv.

The KisselKar Combines High Efficiency and Low Price.

THE KisselKar is built to give the greatest efficiency possible without adding construction costs that will do no practical good. Therefore, the price of $1,050 for a KisselKar buys real service and not useless refinements. It is a wonderfully low price for a car of such high efficiency and stanch, skillful construction. The appearance of this car compares favorably with any car on the market. Write for the literature describing the great Kissel-Kar models, which you will find both interesting and instructive. Address Kissel Motor Car Co., 312 Kissel Ave., Hartford, Wis., and kindly mention this paper in your letter. See advertisement on page 8.—Adv.

Wiegands' Jerseys.

AN opportunity to obtain an exceptionally fine yearling Jersey bull is offered on this page by L. P. Wiegand & Sons, Cleveland, Wis. This bull, Pandora's King Sappho, is a fine individual of good, straight type, well grown and from heavy producing lines of blood. His dam is now on yearly test and in January made 82.9 pounds of fat. This is equivalent to 103.6 pounds of 80 per cent butter. She is a large, fine, typey cow, showing great capacity and constitution. She is a choicely bred animal being a daughter of the noted bull, King Sappho King, that has a large number of register of merit daughters. She is expected to make considerably over 600 pounds of fat. The sire of the bull offered for sale is Bonnetta King, whose dam has a fine register of merit record made in eleven months. Here is an opportunity for our readers to purchase a very choice herd header.—Adv.

The Acme Line.

THE Acme Harvesting Machine Co., Peoria, Ill., are advertising a grain binder on page 6 that has several features which will appeal to farmers who have cut much grain. They are an all steel rotary butt adjuster, a stop packer device, twenty-five starting points for the needle, self-acting twine tension and adjustable pitman. All Acme harvesting machinery and hay tools are made to please the farmer and they stand first class in every respect. Perhape you will be needing a new implement in a short time. The best way to buy machinery is to find out the best one for your needs before time to order. To do this get the new Acme catalog which contains a complete discussion of harvesting and haying machinery. Write direct to the company for it and please mention The Wisconsin Farmer in your letter.—Adv.

SALE DATES.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

New Crop, Iowa Grown, Recleaned
CLOVER Tested and Inspected
Medium Red, Mammoth, Alsike, Alfalfa and Sweet Clover of choicest quality.
TIMOTHY Blue Grass, etc., at low prices
NOW is the time to BUY
Ask for samples and copy of our Special Red Ink Price List. Large illustrated Catalog of Seed FREE.
IOWA SEED COMPANY
Dept. D8 DES MOINES, IOWA

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address
UNDERWOOD STOCK FARM
L. C. Underwood, Prop. Avoca, Wisconsin

HEIFERS RED POLLS FOR SALE **BULLS**

WILL sell a limited number of bred and open heifers and some young bulls. The best of breeding and well grown. Attractive individuals. Write or visit E. L. Bennett, Black Earth, Wis.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin Gotham, Wis.

TOO LATE TO CLASSIFY.

Some Combination

OF BLOOD. Yearling Holstein bull out of a daughter of the $25,000 bull, Johanna McKinley Segis, and sired by the 29-lb bull, Fairmont Pietje Ormsby, whose three nearest dams average over 30 pounds, and that is out of a sister to the 41-lb. cow, Sadie Vale Concordia 4th. His dam is out of a full sister in blood to Duchess Ormsby. A fine individual and priced reasonable.
L. Lindauer Kaukauna, Wis.

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.
Grenwode Farm, E. R. Whitcomb, Prop. Whitefish Bay, Wisconsin.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

WANTED FARMS—Have 3,357 buyers; describe your unsold property, give price, acreage, location. 769 Farmers' Exchange, Denver, Colo.

FRANK IAMS'

"Peaches and Cream" Horses are "Town Talk"

Horsemen—1916 is the **"Get Rich Quick"** year for **Horse Breeders** and **Stallioners.** Get into the **"Money-Making Game"** of Breeding Draft Horses. **Europe "doffs"** her **"War Cap"** to **U. S. Horses. Europe** buys **500 Horses daily of U. S.** (at $125 to $200). Europe will buy **"a MILLION"** Horses of U. S. You make **more "Easy Money"** in **Breeding Horses** than any other business for **next ten years.**

His 34 years of success in *Importing, Breeding* and Selling *5,640 registered horses*—his "50 trips" across the ocean—make Iams *a safe man* to buy *stallions from.* His *"old customers"* are *"best Page advertisers,"* his *Breeding Guarantee* backed by *"1-2 Million Dollars."* *Iams' Imported* and *Home-bred horses* are *"classy, model big draffters"* of *large bone, fine form, quality, finish,* and *flash movers.* Several European **"Gold Medal and State Prize-Winners,"** *"Iams' kind,"* and in the *"Pink of Condition."*

Bought at *"bargain prices"* and *must be sold.* *"Iams sells horses on honor."* A lady can buy as cheap as a man. *Iams is not in "stallion trust,"* and is *selling more pounds of "model draft horse"* for the *money* than any *competitor. Iams* is *cutting the middle* out of *high prices* on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

3 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected by Governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse Iams sells

IMPORTED STALLIONS AT $1,000 AND $1,400

(few higher). **"Home-Breds" come cheapest.** Registered 1,800 to 2,100-lb. mares at $700 to $1,000. **Terms cash, or one year's time at 7 per cent; land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare;** gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads. with a **$500 guarantee** that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. CASSVILLE, WIS.
30 miles up river from Dubuque

JERSEY CATTLE.

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MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address

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OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

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FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Chariton, Iowa.

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ONE black, 4 years old, weight 1,850 pounds, a real high-class stallion. One black gray, 3 years old, weight 1,900 pounds. First prize 2 year old at the North Wisconsin State Fair. A very drafty horse. These horses will be sold cheap.

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YOUNG stallions and fillies, priced reasonable. Short-horn Bulls, sired by Golden Light; dams big milkers with size. Address

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THE PALMER FARM HERD

COMBINES individuality, breeding and high production. Two service bulls, bull calves and yearling heifers priced to sell. Come or write.

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FROM 3 months to 18 months old, at prices from $40 to $70. Sired by son of Mutual Piebe De Kol from 840 lb. 3-year-old dam. Herd now headed by the 31.37 lb. bull, Finderne Hengerveld Jewel Pontiac. Address

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SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address

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IN order to quickly reduce our herd to our limited barn room we will sell fourteen head of A. R. O. Holstein cows and heifers at public auction, Wednesday, March 8, 1916, at 2 P. M. Send for sale list. Address

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Farm 2½ miles southeast of Elknorn.

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BULL from 26.41-pound dam, 9 months old; one from 19.60-pound dam, 7 months old. Also two yearlings from dams that will soon be tested. They are straight nice individuals, light color, all sired by Sir Pontiac Korndyke Count 82741, a 28.80-pound bull. Bull calf, one month old, from 22.31-pound dam sired by a 34-pound bull. Can spare a few young cows. For further information address

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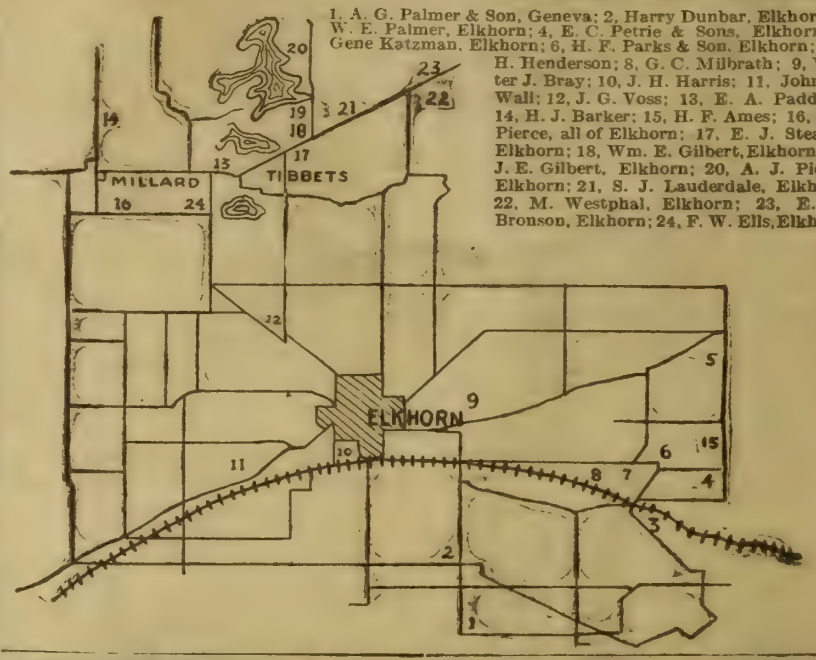

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REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

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BOTH from Advanced Registry dams. One just past two years old. Kind, sure and O. K. in all respects. More white than dark. Gets nice calves. Price $100. One about thirteen months. Dam's record over 17 pounds as a two year old. Nice individual, more dark than light. Big enough for heavy service. Price $100. For extended pedigree and complete description write me. Address

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19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.

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OUT of my 822 pound herd sire, that has 30 A. R. O. daughters. No. 1, born March 16, 1915, a splendid show bull, ready for service, weight about 800 pounds, out of a 15.36 pound, two year old; price $100. No. 2, born October 8, 1915, well grown and evenly marked. Satisfaction guaranteed. Address

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now consists of 70 head of Holstein

COWS AND HEIFERS

BULLS all sold except a few calves. When in want of cattle COME to the Meadow Spring Farm or write

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SONS OF THE 35.43-POUND BULL

Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69, 24.65, 22.35, 20.46, 16.96. Here are bulls that will improve pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

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COWS and heifers bred to the 27.82-pound proven sire, Knight Errant 39566. Also bull calves from one to five months old sired by Champion Johanna Colantha 70478. Address

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Breeder of registered cattle. Stock for sale at all times.

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TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn Wisconsin.

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My herd bull

CANARY HOMESTEAD FRISBY107723

For price and pedigree address

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7-8 WHITE, yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address

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BREEDER of pure-bred Holstein-Friesian Cattle and Duroc Jersey Swine.

REGISTERED BULL

CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address

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SONS OF THE 32-LB. HOLSTEIN BULL

COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 10 months old. Out of heavy producing dams.

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TO avoid inbreeding I will sell my senior sire, Sir Canary Alcartra 78433. His sire is the famous Canary Paul. His dam, Nellie Alcartra Rue 180005, made 874.32 lbs. butter in one year. Only five of his daughters have been tested yet and they have made from 13 to 20.075 lbs. butter in 7 days as two year olds. He is 5 years old, very straight, a show bull, mostly all white, gentle and a sure getter. Also 6 of his daughters, one year old, cheap to make room. A. L. Rowe, Route 4, Waupaca, Wisconsin.

Sons of Serviceable Age of

SIR JOHANNA AALTJE KORNDYKE

IN which is combined the Holstein blood of Sir Johanna DeKol, Sarcastic Lad and Belle Korndyke. Bulls from A. R. O. and untested cows for sale at reasonable prices. Address

W. D. McGILL, - **Menomonee Falls, Wis.**

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address

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Holstein Bulls

OF serviceable age and younger, sired by **Piebe Longheld De Kol** and out of untested and A. R. O. cows with records up to 24 pounds butter in seven days and 750 pounds in a year.

C. Tochtermann - - **Monroe, Wis.**

Hillside Stock Farm

OFFERS registered Holsteins. 8 cows $100 to $200. 4 heifers $100 to $150. 6 bulls $40 to $150. Write your wants. **KIRKPATRICK BROTHERS, Reedsburg, Sauk Co., Wis.**

REGISTERED HOLSTEINS

TEN registered Holstein bull calves, oldest 7 months, sired by King Walker Segis 3d, Sir Witra Clyde Segis and University Johanna Excelle. Can spare a few females. (Poland China hogs.)

Marinette County Asylum, Peshtigo, Wis.

BONNIE MEAD STOCK FARMS

OFFER a few choice sons of King Pietertje Hengerveld Ormsby, a full brother to 35-lb. cow, Pietertje Maid Ormsby, from A. R. O. and untested cows of Alacartra, Johanna and Ormsby breeding.

HUTCHINSON BROS. & BURBACH **RANDOLPH, WISCONSIN**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt - **Oxford, Wisconsin**

Rust Brothers' Stock Farms

offer a richly bred young Holstein bull,

CORNUCOPIA NETHERLAND PONTIAC

HIS dam as a four year old made **27.99 pounds butter in seven days, 756 pounds butter in a year.** Send for pedigree and price to

ARTHUR RUST, • **West Allis, Wisconsin**

400 HOLSTEINS

Pure-bred and high grade

Cows, Heifers and Service Bulls

THEY are first class individuals, well bred, tuberculin tested and right in every respect. Exceptionally low prices. (We have some choice GUERNSEYS.) Write for particulars. Address

EDGEWATER STOCK FARM, Fort Atkinson, Wis.

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address

JOHN NORTH, • **Kilbourn, Wisconsin.**

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins

John Hasse **Monroe, Wisconsin**

22.19-POUND YEARLING HOLSTEIN BULL

AND others from A. R. O. cows, ready for immediate service. Well grown, nicely marked, good individuals. Prices $50 at 4 months up to $125. Frank Holt, Pleasant Prairie, Wisconsin.

REGISTERED HOLSTEIN HEIFERS and COWS

Some with A. R. O. records. Choicely bred and of straight, large conformation.

REGISTERED PERCHERON STALLIONS

Sucking colts—2 year old—5 year old. Write for pedigrees and price.

Beautiful full marked sable and white Collie pups, males from natural workers, 10 weeks old. Price $5. Pedigree furnished. Address

Paddock Bros. - **Augusta, Wisconsin**

26.30-POUND HOLSTEIN BULL

THREE YEARS OLD. Dam's A. R. O. record, 26.30 pounds of butter in seven days. Another bull born May 27, 1915; dam's A. R. O. record, 24.48. These bulls are straight individuals and nicely marked. Price $150 each. Write for pedigrees and description. Address

Truttschel Bros., Sheboygan Falls, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

ADAM LORENZ

Sheboygan Falls **Wisconsin**

2 HOLSTEIN BULLS

READY for service. Sired by our senior herd sire, Johanna Spofford Corona 71305, and out of A.R.O. dams. No. 1, record of 20 lbs. butter in seven days. No. 2, record of 17 pounds butter in seven days. Address

Cook Brothers **Burlington, Wisconsin**

REGISTERED HOLSTEIN HEIFERS

SIRED by the richly bred bull, SIR ORMSBY PIEBE BURKE, brother to the 41-pound cow, Sadie Vale Concordia 4th. These are from A. R. O. cows of De Kol Burke, Ormsby and Korndyke breeding. W. F. Mielenz, 97 Wisconsin treet, Milwaukee, Wisconsin.

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HOLSTEIN BULLS

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THE FARMER-MECHANIC

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The Wisconsin Farmer

THURSDAY, APRIL 13, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

A RURAL THRIFT CAMPAIGN.

I AM greatly interested in a report which comes to me of the inauguration of a thrift campaign for country boys and girls. My only regret is that the idea did not originate in the grain belt. It remained for an eastern state (Pennsylvania) to launch the campaign, which already bids fair to be quite generally adopted, here in the grain belt more than any place else, I sincerely hope.

The manner in which the plan was worked out, as a subscriber in the East sets forth in a letter to me, was this: The county agent, the local bankers and other interested parties visited a typical country school and informal talks were made on the value of saving the pennies when one is young. Then a poll of the class was taken. Of the thirty-one pupils in the school, five or six already had savings accounts, while all the remainder expressed a desire to start such an account. A day was set for the trip to town. On that day one of the town banks sent out a big motor truck, in which all the thirty-one pupils and their teachers rode, in high glee, to town. Both the local banks were visited, and when the last deposit had been entered it was found that thirty-one pupils of that one rural school were possessors of pass books with sums ranging from 50 cents to $3 to their credit. The day ended with a tour of inspection of the banks, the great steel doors of the vaults, with their intricate time locks, being particularly interesting to young and old.

I am confident in my own mind, that the plan will work out well and am free to predict that every one of those thirty-one farm boys and girls will be found willing savers, taking or sending their savings to town every little while and finding the greatest happiness in watching their deposits increase. I earnestly hope that we of the grain belt will not let our pride overmaster us, but will copy the Pennsylvania plan, perhaps improving upon it, wherever possible, for the thrift habit is undoubtedly strong with us here in the middle West, where the deposits in our banks (both state and national) are steadily increasing and where many farmers are loaning money instead of borrowing, with mortgages on their farms as security. The grain-belt banker is right, who said:

> A habit is like quicksand. The longer you remain within its control the tighter its grasp becomes. The savings habit is no exception. From a small beginning the child or young man or young woman sees the possibilities of saving money, and from time to time new ways of saving appear here and there, which are incorporated into the habit easily and handily.

The other day one of the richest and best-known bankers of Chicago retired from active business. He is worth millions and is a power in the financial world. A newspaper reporter asked him the secret of his success, and the powerful banker gave it in one word: Thrift. He went on to declare that he never speculated, admitting that he cannot even now read the stock broker's ticker intelligently. He added:

> What fortune I have was built on my early savings. If a man never starts to save he will never get anywhere. The start is everything. Once a savings account is started the rest is tolerably smooth sailing.

I do not know when the value of keeping everlastingly at it has been more strikingly impressed upon my mind than by an item, of only a few lines, which I found in a country newspaper the other day. It went on to state that the $1,000 prize offered by a certain bank to the person who would start an account with 1 cent and double the deposit for thirty consecutive days has not been claimed. "It set some folks to figuring and one answer was that it could be done with $14,928,720.07." I was "from Missouri" when it came to this last assertion, but a few minutes' figuring showed me that the statement was correct. If you will deposit 1 cent in a bank today, 2 cents tomorrow, 4 cents the next day, 8 cents the next, and so on for thirty days, the deposit on the thirtieth day will be $5,322,309.12. Now I am not going so far as to say that there is any grain-belt farmer, prosperous as they are, who is rich enough to do this; that would be silly. But I do pass the item and the fact along to you to show how little things multiply if we keep everlastingly at it. Some of my young friends have joined what are called Christmas savings clubs. They started out by depositing a nickel in the bank the first week, 10 cents the second, 15 cents the third, and so on; increasing the deposit 5 cents each week. At the end of fifty weeks they will have $63.75 on deposit, to which the bank promises to add enough interest to bring the total up over $65. The idea is that the depositors will have enough money to buy their next Christmas presents, simply by saving a few nickels each week, which will never be missed, but which amount to quite a sum, in the aggregate.

The Pennsylvania thrift plan is a good one; I am delighted to see the rural sections in the grain belt waking up to the value of small savings. Even in these piping times of prosperity we should save the pennies, and particularly should the farm boys and girls be encouraged to commence their savings accounts early. Shall we all join in the thrift campaign as set forth herewith?

THE GASOLINE SITUATION.

AS THE gasoline situation becomes more serious, relief looms more imminent. An investigation by the attorney-general of the United States, to determine whether a criminal conspiracy is back of the rise in price, was ordered last week by the United States senate. The debate was spirited and brought out the fact that the members are hearing from the folks "back home," particularly here in the grain belt, in most emphatic fashion.

But congress is not the only avenue of possible relief. During the past week manufacturers of motor cars connected with the National Automobile Chamber of Commerce announced their intention to incorporate a company with an ultimate capital of from $5,000,000 to $10,000,000 to produce gasoline and other products of petroleum, with the purpose of "demonstrating that gasoline can be produced and sold at a profit at a price somewhat lower than that now prevailing, and within the means of all users of motor cars and motor boats." Personally, I can see greater prospects of relief here than from almost any other source. The automobile manufacturers realize that the day is coming when the sale of motor cars will show a decided slump unless the price of the motive fuel is brought down within the reach of all. With the knowledge that their sales will be affected, the motor manufacturers may be relied upon to do everything in their power, and to utilize the inventive ability at their command to the utmost, to bring relief. The bright minds which have been devising new motor conveniences and accessories for some years past will be put to the task either of finding a substitute for gasoline or making its distillation a more economical matter so that the price may be reduced. With the motor manufacturers thus at work and with congress trying to find out if the price of the product, as now distilled and marketed, is unduly high, I predict the day is near when we can fill our tanks for 12 to 15 cents a gallon, as we were doing last summer, before the present unprecedented rise in price began.

One thing is certain: The farmers will never give up the new hired man which has taken so much of the arduous labor off their hands—the gasoline engine. Neither will they ever forego the business-increasing and pleasure-adding automobile which is a necessity now upon the farm, no longer the luxury which it was once an extravagance to buy. I repeat: The gasoline situation is serious, but relief is in sight. I believe it will come sooner than now seems possible to many of us.

SUCCESS OF CO-OPERATIVE BUYING.

NO SUBJECT upon which I write seems to bring forth a greater number of letters from interested readers than the one of co-operative selling and buying. It is quite evident to me that the great body of farmers, the grain belt over, are ready for such a "get together" movement as was never witnessed before in agricultural sections.

Here, for instance, is Mr. E. E. Shull, of Ottawa, Kansas, writing me a most interesting and valuable letter setting forth the work in detail of a farmers' co-operative organization, of which he is a member. I cannot refrain from passing some of the facts along to my readers. Mr. Shull tells how, by organization and shrewd investigation, a carload of seed oats was bought at 52 cents a bushel, delivered, the purchasing committee being allowed a half cent a bushel for their trouble. The same kind of oats, he adds, was selling at the elevator for 60 cents. The organization also bought a carload of kafir seed for $1.01 a hundredweight, allowing the purchasing committee 4 cents a hundredweight for their trouble and to pay any possible shortage that might be found. He gives the details of this deal in this manner:

> This car of kafir was bought in Oklahoma, from a grain company, and shipped to a member of the committee with a bill of lading attached and paid through one of the local banks. Arrangements were previously agreed upon with the bank. The committee gave the bank a note for five days, until the farmers in our club could come in and get the amount of kafir they subscribed for. This committee collected from each farmer for the amount he hauled away and turned the cash back to the bank to pay this note.. In three days' time everything was settled, note paid and the committee turned back into the farmers' club treasury over $8 above their cost of labor and other little expenses. The local dealer was charging $1.25 a hundredweight, or 24 cents more than we bought it for co-operatively. The committee is allowed $1.50 a day apiece for the actual time used in buying and disposing of a car. They first go to the local dealer and get his lowest price on a car. They try to deal with him, if possible, making it clear to him it is a cash deal and the farmers will take it off the car. Give your local dealer the first chance, then he cannot have a grudge if you do better elsewhere. You cannot succeed in this co-operative buying unless you buy in car lots.

I have had many letters on this subject, but none are more encouraging and inspiriting than Mr. Shull's. He goes right to the heart of the subject and gives information and advice that should lead many other communities to get together and buy co-operatively, as well as to market their produce in that way.

I have in mind a little town in central Iowa which is practically owned and controlled by farmers, who have established their co-operative headquarters there and who buy and sell together as a unit. The grain elevator is the prime and central interest, but everything from coal to lumber and groceries is bought in wholesale lots and retailed to the farmer members of the co-operative organization at actual cost, while the entire countryside markets as a unit, in large lots and with their produce all graded and standardized so as to top the market. In the last year, so I am informed, the elevator company has taken in more than 400,000 bushels of grain and paid out over $200,000 to farmers. At that, the business has been quite profitable, for the first year of its existence the organization paid 95 per cent profit upon a capitalization of $5,000.

I should like very much, indeed, to have other letters like the one written me by Mr. Shull. Let us have figures showing the actual working of these co-operative organizations. It is all very well to write theoretically of the underlying idea and to say we favor it and so on; what we need are facts with which to confuse and confound the opposition and to stimulate ourselves to larger endeavors, so that the movement may make more headway and bring greater profit to farmers generally.

NEIGHBORHOOD CLUBS.

SINCE writing on the subject of neighborhood farm clubs, a couple of weeks ago, I have had several dozen requests, from interested subscribers, for suggestions on organization, drafts of constitution and by-laws, specimen programs, and so on. I have answered each and every one of these, to the best of my ability, in every case sending the information or suggestions desired. I have been glad, indeed, to do this, as nothing pleases me more than the tendency manifest in our rural sections nowadays to "get together," in both a social and a business way.

I want to take this opportunity to repeat my former offer, to help in any way that I can in the formation of these neighborhood clubs. Do not hesitate to write to me, fearing that it may put me to some trouble or bother; nothing delights me more than to be of such assistance to my readers. I will personally see to it that a copy of what I consider a model draft of the necessary constitution and by-laws is sent to you, by return mail. Sometimes the requests for seasonable programs take a little time to answer, as I must give the matter careful thought, but I am only too glad to suggest subjects, both of agricultural and national interest, which farmers, wherever they congregate, may well afford to discuss together, pro and con. We can solve many of the vexatious problems of the day if only we can give this farmers' club movement a big impetus and set ourselves to the task—a very pleasant one, too, after we become used to it—of studying matters and discussing them together with congenial friends and neighbors in regular "get together" club sessions.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Wisconsin Tractor Demonstration.

MADISON, Wisconsin, has been chosen as the location of one of the eight big tractor shows to be held in the country this fall. The dates are September 4th, 5th, 6th, 7th and 8th. At a meeting of the Rotary Club, held in Madison last week plans for taking care of the demonstration were discussed. F. M. White, head of the agricultural engineering division of the college of agriculture, has general charge of the arrangements. The Madison demonstration will celebrate the twentieth anniversary of tractor building in Wisconsin. While in other states the tractor is a new thing comparatively, in Wisconsin tractors were made twenty years ago. Two tractor makers, now operating one of the largest tractor manufacturing enterprises in the entire country, were residents of Madison twenty years ago and were at that time studying upon and working out the first principles of tractor farming.

The writer has attended some of the big tractor demonstrations of the country and has no hesitancy in saying that a tractor show, properly put on, is one of the most interesting sights that a farmer can witness. Last year at Fremont, Nebraska, we saw tractors of all sizes and prices competing in plowing contests. We saw tractors on road construction work. We saw the light tractor which may be used with success and profit by the small farmer. We saw thousands of farmers looking on with intense interest while tractors were plowing up great fields. The demonstration was a difficult one from the tractor standpoint because of the wet and soggy condition of the ground. But the tractors did the work well and to the satisfaction of everyone concerned. There were farmers there who insisted that a plow with six or eight bottoms could not be drawn through the wet fields selected for the work. But the tractors did the work well and surprised everyone.

The tractor must be reckoned with in the future by the small farmer as well as the man who has large areas to cultivate. There are now various makes of tractors, almost 100 in all, and these are designed to fit the varying conditions of agriculture.

It is some time yet until the Madison show, but we advise our readers to begin thinking about tractors and plan to attend the show. Do a little figuring on your own farm. What work would you expect a tractor to perform if you had one? What do you think you could afford to pay for a tractor? How much does it now cost you to do the work which a tractor would do for you? These and other problems in farming will be answered at the Madison Tractor Demonstration, September 4th-8th, and it will pay Wisconsin farmers to be there. Further announcements concerning the arrangements for the big events will appear in The Wisconsin Farmer in later issues.

Live Stock Quarantine Raised.

UNDER date of March 31st the United States Department of Agriculture formally lifted the foot-and-mouth disease quarantine and the several states have followed example. The order signed, specifically removes the quarantine from a small district in Christian county, Illinois, the last area which was under suspicion. Along with the removal of this local quarantine the various federal orders restricting shipment of cattle are rescinded, so that dealers may now ship their cattle just as they did before the first foot-and-mouth quarantine was imposed. Upon notification that the United States is free from the disease all foreign governments which have placed embargoes on American cattle are expected to remove their embargoes, so that cattle raisers will then be able to resume shipments to these foreign countries.

Before this disease was controlled it had gained a temporary foothold in twenty-two states and in the District of Columbia. The disease appeared and was controlled in 269 different counties. The disease appeared in Denmark about the same time that it appeared in the United States. The area of Denmark is approximately the same as that of the three New England states, Massachusetts, Connecticut and Rhode Island. Denmark is a great dairying country and it has been estimated that the total losses there from foot-and-mouth disease in one year, amounted, approximately, to one-third of the cost of eradicating the disease in twenty-two of our states. The Danish officials were unable to carry out their former policy of slaughter and were compelled to resort to quarantine and other restrictions.

Farmers and breeders have been hard hit by the foot-and-mouth disease. There has been strenuous objection in some districts to the slaughter method, but we believe the government plan has been demonstrated to be the right one. Veterinarians throughout the country will not cease their vigilance regarding this disease. Further trouble, however, is not anticipated.

Wisconsin shippers are now free to receive and consign live stock to any quarter. Our shipping relations with Illinois and Iowa, and other surrounding states are resumed and placed in the same position as they were before the foot-and-mouth quarantine. Wisconsin still makes an exception of Oregon and Washington, and it is necessary to have a special permit to ship cattle to New Mexico, Kansas, Arizona, Nevada and Oklahoma.

In brief the action of the federal department and of the Wisconsin state department, removes the restrictions which have been an embarrassment to our live stock shippers for the past year and a half. This action is expected to stimulate the sale of our surplus stock in other states, especially the considerable amount of surplus dairy breeding stock which is now on hand in the state.

Larger Wisconsin State Fair Grounds.

AFTER many years of litigation and delay the ten acres known as the Fleming tract, which lies just east of the present state fair grounds at Milwaukee, has been turned over to the state, and visitors to the 1916 fair next September will see larger fair grounds. The deeds conveying the property to the state were signed recently and these ten acres will be a part of the fair grounds. The deeds conveying the property to the state were signed recently and these ten acres will be a part of the fair grounds and fenced in before the next fair opens.

In addition to affording the fair additional ground space, which was badly needed, the deeding of this ground to the state makes it possible to spend $100,000 this year on permanent improvements. This $100,000 is a part of the state legislature's appropriation which was to become available as soon as this land became the property of the state by gift. Milwaukee county bought the property; deeded it to the state as an appreciation of the fair and in an effort to help enlarge the fair. In case the fair is ever moved from Milwaukee the property automatically reverts, by the reading of the deeds, to Milwaukee county, so that it can only be used for state fair purposes.

Of the $100,000 available $50,000 will be spent on the new sheep and swine pavilion, which will be completed for the 1916 show. The remaining $50,000 will be spent for an addition to the grand stand, which will be enlarged as future appropriations, dependent upon the transferring of this land, become available. The new fence will be completed with funds that will be derived by the sale of four houses deeded to the state with the ten acres. This will greatly improve the appearance of the grounds, and work on all these improvements will start within a few weeks.

Wisconsin Jersey Enthusiasm.

ENTHUSIASM and co-operation among dairymen in Waukesha county, Wisconsin, is not confined by any means to the lovers of the Holsteins and Guernseys, as many have been led to believe. Although these two breeds predominate the Jersey breeders are contributing their share toward putting this Wisconsin county on the map as one of the great dairy breeding counties of the nation.

The writer had the pleasure recently of attending the annual meeting of the Waukesha County Jersey Breeders' Association at Waukesha. There were present about thirty breeders who were as enthusiastic as any we have met.

These breeders are convinced that the Jersey is an economical producer of milk and that the only reason she has not kept pace with the Holstein and Guernsey breeds in Wisconsin, in point of numbers, is that breeders have been too easily satisfied. They have failed to realize the value of co-operation and advertising. The association formed two years ago has thirty-five members in good standing. Its members have been interested in general dairy stock development in Waukesha county. To this end they have subscribed to the sales pavilion fund. The association has offered a male calf as a prize in the county calf contest. These efforts are along the line of co-operation to the end that Waukesha county shall become known as a center for foundation stock for all the dairy breeds. The Wisconsin Farmer has had a good deal to say in the past about the enthusiasm of the Guernsey and Holstein breeders in Waukesha county. Now we are glad to report that the Jersey men are also joining hands. Ayrshire breeders, though few in numbers at this time, are catching the same spirit, not only in Waukesha county but in the entire state. That this community effort wins is evidenced by the fact that Waukesha county dairy stock has a ready sale at all times.

Mr. F. F. Showers, of Delavan, president of the Wisconsin Jersey Breeders' Association, outlined plans for the coming state convention. The Waukesha association has invited the state association to meet in Waukesha at the same time as the county summer meeting. Selection of the place is left to the directors as well as the date. Delavan has also been suggested by the Walworth county breeders. Mr. Showers said that Jersey enthusiasm is increasing so rapidly this winter that two state conventions will be held this year—one in Southern Wisconsin and one in Upper Wisconsin. These conventions will be held on succeeding days with the same speakers. The aim is to reach a greater number of breeders. Waupaca, Eau Claire and Wausau have been suggested for the Upper Wisconsin convention. The dates will be late in June or early July, and President Munn, of the American Jersey Cattle Club, has promised to attend both conventions. The details will be announced later, but it will be well for every Jersey breeder to be planning now to attend. As Mr. Showers said, the future of the Jersey breed, despite its wonderful outlook, depends largely upon the interest taken by Jersey breeders of the state. Backed by enthusiasm like that in Waukesha county the state association could soon become one of the largest in the country and make Wisconsin the leading Jersey state of the Union.

Where Wisconsin Leads.

B. F. HARRIS, of Champaign, Illinois, chairman of the agricultural committee of the American Bankers' Association, gave Wisconsin farmers a vision of their wealth and possibilities, in his recent address in Madison. He showed that there is no state in which agriculture is better balanced than Wisconsin. Illinois leads Wisconsin in the value of crops per improved acre. None of us deny that part of Illinois has very rich soil and wonderful producing power. But Wisconsin gets the best of her sister state in the value of live stock products per acre, and at the same time occupies an enviable position in the value of crops per acre. So great is the live stock wealth of this state that it overshadows the slight loss we have on value of products taken directly from the soil. When we add the crop values per improved acre, and the live stock values per improved acre, Wisconsin leads other leading agricultural states, the following being the figures as quoted by Mr. Harris:

Wisconsin, $22.45 per acre; Illinois, $20.81 per acre; Iowa, $20.30 per acre; Ohio, $20.19 per acre; Indiana, $20.16 per acre; Michigan, $19.77 per acre; Missouri, $17.45 per acre; Minnesota, $14.20 per acre; Nebraska, $13.14 per acre; Kansas $12.02 per acre; South Dakota, $11.22 per acre; North Dakota, $10.02 per acre.

Here we have a forcible illustration of the value of diversified and live stock farming. The average dairy income per farm in Wisconsin, according to Mr. Harris, is $302.12. In Minnesota the average dairy income per farm is $187.14 per farm; in Iowa it is $143.73 per farm, and in Illinois $125.73 per farm.

With these interesting figures at hand it is not difficult to understand why farming is a profitable occupation in Wisconsin. Dairying is not all the game, although in many sections it is the chief industry. But it is an industry which does not interfere entirely with other branches of profitable farming in our state. We come almost up to the average of other rich agricultural states in farm crops, and the dairy business thrown in for good measure puts us away over.

So we find that Wisconsin is not first in corn, not first in wheat, not first in a number of the leading crops, but at the same time she has an average revenue per farm which is the envy of her sister agricultural states. And she is keeping up the fertility of the soil, which means much. Wisconsin farms under a proper management of dairying grow richer instead of poorer.

Wisconsin Dairymen Interested.

WISCONSIN is interested in a bill recently introduced in congress by Representative Linthicum, of Maryland. The bill calls for an investigation of the dairy business and its ultimate object is a system of federal inspection of creameries. The "whereas" section of the bill contains an alleged statement from the bureau of animal husbandry saying that almost 95 per cent of the creameries of the country are insanitary to a greater or less degree; that over 61 per cent of the cream used is unclean, decomposed or both; that 72 per cent of the cream is not pasteurized; that a large per cent of all dairy cattle are affected with tuberculosis; that infected dairy products are among the active agents in the spread of tuberculosis, typhoid fever and other infectious diseases.

Having read the preamble to this bill one is more than half inclined to discard all milk, cheese and butter from the house and never permit any of these products to gain an entrance to the home again.

After painting as black a picture as possible in the "whereas" department of the bill, the author continues to resolve as follows:

Resolved, That the speaker of the house of representatives appoint a committee of five members of

the house whose duty it shall be to investigate and report as speedily as practicable (a) whether conditions prevailing in dairies and dairy products seriously menace the health and property of the people of the United States; (b) whether federal inspection and supervision, either alone or in co-operation with state and municipal inspection and supervision is necessary to the reasonable protection of the health and property of the citizens of the United States; (c) if so, then the best and most economic methods of inaugurating and enforcing such inspection and supervision.

Second. That for the purpose of fulfilling its functions said committee is empowered to summon and examine witnesses, enforce the production of records, and to do all other things needful and lawful to accomplish its purpose.

Resolved further, That the expenses of said inquiry and investigation shall be paid out of the contingent fund of the house upon vouchers approved by the chairman of said committee, to be immediately available.

In his speech supporting this proposed investigation Congressman Linthicum calls attention to the work of one McCann, of New York City, and this reference may not strengthen the measure among many Wisconsin dairy people.

This is largely a case of magnifying a half truth until it is made to appear terrible. A barrel of butter in which there is one speck of dust may be truthfully said to be "more or less" unsanitary and unclean. And we are inclined to the belief that just about such extreme cases as this must have been taken into account when the bureau of animal husbandry arrived at its conclusion that 95 per cent of the creameries of the country are unsanitary.

The Wisconsin Farmer is positive that there is no such percentage of unsanitary creameries in this state. We are just as positive that there are creameries which can stand a great deal of cleaning up.

The farmer-dairyman would probably lose nothing if the federal government were to take over the inspection of milk, butter and other dairy products. It would mean a revolution in some sections of the country, as the government would no doubt be as thorough as it has been in cleaning up other lines. There is an element of good sense in this matter of having the federal government handle the inspection of food products. The government has demonstrated its efficiency in the administration of the pure-food law. Another excellent example is the stamping out of the foot-and-mouth disease among cattle.

The government does things thoroughly. But this offers no occasion for making the dairy situation appear so black just for the sake of cleaning up some spots. In his address before congress, Congresman Linthicum admits that he has no personal knowledge of the dairy situation in the country. He is doubtless inspired by McCann and others. As we have before stated, McCann visited Wisconsin some months ago and the trail of contradictions and denials of his statements regarding Wisconsin and what people told him here, has been so long as to warrant us all in taking his stories with a decided mental reservation.

But the progress of this effort to put all dairy inspection in the hands of the government will be watched with interest by Wisconsin farmers.

Wisconsin Land Clearing Special.

ARRANGEMENTS have been made for a Land Clearing Special train to make sixteen stops in eleven of the principal counties in Upper Wisconsin, some time within the next few weeks. This train will run via C. & N. W. and Chicago, St. Paul, Minneapolis and Omaha railroads. The demonstration work will be in charge of the Wisconsin College of Agriculture. Manufacturers of stump-pulling machines will co-operate. While the schedule of dates is not definitely fixed it is practically decided that stops will be made at Mountain in Oconto county; Deerbrook and Elcho, in Langlade county; Crandon, in Forest county; Three Lakes and Woodruff, in Oneida county; Eagle River, in Vilas county; Bayfield and Ashland Junction, in Bayfield county; Hayward and Radisson, in Sawyer county; Bennett or Solon Springs, in Douglas county; Spooner, in Washburn county; Barron and Rice Lake, in Barron county; and Cornell, in Chippewa county.

There will be demonstrations of the various methods of land clearing, and this should attract great attention in Upper Wisconsin.

At Lambing Time.

THE lambing season is upon us and if there ever was a year when the shepherd should take more than ordinary precautions to save as many newcomers as possible, this is certainly one of them. Prices are steadily advancing, records being made every few days. There are a number of precautions to be taken before the lambs come. The ewes should be kept as quiet as possible. Rams should be taken away from the flock, otherwise they are almost sure to injure some of the ewes with their horns.

While the ewes should be kept quiet, they should have exercise which can best be secured in a pasture, preferably close to the buildings. At night they should be housed in open, dry sheds well provided with plenty of bedding. While separate stalls should be provided for the ewes a day or two before lambing it is nevertheless well to keep the quarters for the entire flock clean and dry so that all may be comfortable, and if any lambs should come at unexpected times they will not suffer.

The ewes should be well fed before lambing, so that they may be strong and in condition to provide a good flow of milk. Good alfalfa or other legume hays make excellent roughage; with this a small amount of corn and oats should be furnished. If legume hay is not available a little more grain should be provided—a little bran being excellent before lambing to prevent any tendency to constipation. With alfalfa or clover, bran will not be necessary.

Every man who understands sheep knows how necessary it is to give the closest attention to the lambs until they are about two days old, or until they know their mother and her udder has been carefully examined to see that the milk flow is normal. Here is some good advice offered by an experienced shepherd that will be of special interest to beginners. He writes:

> Always have an attendant present when the lambs are born, because it often happens that some of them come with a covering over their nostrils that the weak lambs cannot break. When that happens the lamb soon dies unless someone is present to render assistance. By taking such cases immediately after birth and opening the lamb's mouth and blowing into it strongly enough to inflate its lungs it may easily be saved. That is only an example of why someone should be present at lambing; many other things may happen. Sometimes the youngster may need to be warmed by rubbing, or weak ones may be helped by giving them a teaspoonful of brandy in a little warm milk.
>
> It is especially necessary to watch the lambing ewes during chilly, damp weather. There is, perhaps nothing more disastrous to either lamb or ewe than wet weather at the time of birth. Every man who attempts to raise lambs should be provided with a milk bottle and be ready to provide extra feed for the little ones during the first few days, should any of the ewes fail to give a sufficient flow at first. The successful sheep man must be prepared and willing to lose some sleep during the lambing season, for while a single lamb may not be so very valuable, yet if half a dozen are unnecessarily lost a big sum of money is gone.

The trouble with a great many beginners in the sheep business is that they fail to give proper attention to the ewes a week or two before lambing and of the lambs until they are one or two days old. Once a lamb is two days old there is little danger of its getting in trouble, but before that it is extremely delicate and subject to many mishaps. Lamb raising will undoubtedly be very profitable this year and it will pay unusually well to look after all the little details incident to the business.

Death of Mr. Orlo H. Martin.

MR. ORLO H. MARTIN, well known in Wisconsin live stock circles as a successful breeder of Scotch Short-horns, Shropshires and Perckerons, died at the home farm four miles west of the village of Bloomington, Grant county, on Sunday, April 2d. He was fifty-one years old and his entire lifetime had been spent in the county in which he passed to his reward. Leakage of the heart hastened the end, and burial was in Lumpkin cemetery on Tuesday, April 4th.

Mr. Martin was born February 4, 1865, in the house and on the farm where he died. With the exception of about two years in business in the village of Bloomington his life was spent on the Martin farm, and in every movement for better farming and better breeding he was always a prominent figure. He always took an active interest in the government of his town, and at the time of his death was chairman of the town board. Although busy with his farming he had time to devote to the interests of his town; served it faithfully for many years and was repeatedly chosen chairman of the town board.

Mr. Martin never had the desire to leave the farm that so often is found in the young men of today. He took the greatest pleasure in his chosen vocation, farming and stock breeding. He secured his education in the little "red schoolhouse" of Grant county, and thirty years ago assumed management of the Martin farm when his father died. He was then a young man, just entering upon his life work. To succeed he realized that he must find pleasure in his work and must study farming and breeding just as he would have to study any other business. The Scotch Short-horn was his favorite breed of cattle, and thirty years of breeding and study made him an authority on Short-horns. Last fall he was instrumental in assisting in the organization of the Grant County Short-horn Breeders' Association, and served as its secretary and treasurer until his death. He developed some splendid specimens of the breed and had attained a more than local reputation. He believed in the aristocracy of agriculture, and to his credit he brought up in the same belief his sons who will now assume the management of the farm. Mr. Martin, in late years, had developed considerable skill in veterinary surgery.

Grant county breeders, in the death of Mr. Martin, have lost an enthusiastic live stock man and a competent adviser. The town of Bloomington has lost an efficient and faithful official and the live stock interests of the state are deprived of the services of an able breeder. Mr. Martin leaves besides his widow three sons, Jay, Milton and Roy, all of whom live on the home farm, and one daughter, Frances. The Wisconsin Farmer learns with deep regret of Mr. Martin's death.

Wisconsin Auto Sales Increase.

DUE largely to the prosperity of our Wisconsin farmers the number of automobiles in Wisconsin is increasing by leaps and bounds. On March 31, 1915, there were 30,000 machines registered and the total number on the same date this year is 50,500. This does not include the total number of automobiles in the state in either instance, but simply the total registered to March 31st. Mr. Alex Cobban, who has charge of issuing licenses, says that at the present rate of registrations the total number will probably run to 110,000 this year. This will produce $550,000 in revenue for the state.

The increased service which automobile manufacturers are offering in their cars and the general reduction in price, as well as the propsperous condition of the state, are responsible for the big increase. There will be anywhere from 35,000 to 40,000 new cars sold in Wisconsin this year if past records may be taken as a criterion.

Painting to Protect and Beautify.

THE value of proper painting lies not only in its protecting and preserving qualities but is very evident in what artists and others are pleased to call our esthetic sense—in plain English—our sense of beauty. There are but few people, no matter how poor or humble or illiterate, that do not take pride in a well-kept home. In a day's drive in almost any community one will find many humble homes that have been shined and polished with a love that is akin to righteousness—places that shrubs and paint and loving labor have transformed. And the wonder of it all is that with the opportunities each of us have for beautifying our homes, some still fail to advance.

Paint and shrubbery will transfigure the meanest looking house in the world. In artistic circles we have the habit of calling this planting of shrubs and making lawns by the title of landscape gardening, and probably that is correct, but after all it is nothing more nor less than the gift of beautifying homes. We know a man who is making a very comfortable living at it, and this is his plan: He will buy a run-down farm and proceed to repair the buildings and fences. Then he begins to paint and plant. Of course, he aims to build up the soil as he goes along, but he seldom gets much done along that line, for the paint attracts buyers before he owns the farm long enough to make much headway. That is his intention, and he started this work after he had failed in business and was at the end of his resources. Lack of capital prevents his working on a large scale, but nevertheless he is making good. The strangest part of it is that most of his buyers profess to have no love for the things he has done. They say that paint is cheap and they do not care for the "trimmings." It is soil they want—they say—yet we have seen buyer after buyer pass soil that was as good and often much better and come to his terms. The looks of the place attracted them whether or not they knew or would admit it.

Paint is not expensive and under present methods of marketing can be purchased ready mixed in a form that the novice can put on with perfect assurance of excellent results. Or if he prefers he can mix his own paint, but unless one has had some experience in mixing colors one had better stick to white lead and oil or other standard colors or buy his paint ready mixed.

For first coat work on material that has never been painted plenty of oil is necessary and it should be well worked into the timber. Second coat work is much more particular unless three coats are to be used. In this case the brush laps may be left somewhat uneven and the third coat will cover them. But on the last coat be sure to work out the brush marks and spread the paint evenly. One cannot be told how to properly do this and it must come by experience or have someone who has had experience show how it is done by skilled painters. The last is by far the best manner of learning, for an experienced painter can show you more in thirty minutes than you will learn from a dozen articles, and you will know it better for having seen with your own eyes.

For inside painting it is best to use the paint especially prepared by the manufacturers for that class of work or to use turpentine instead of linseed oil in mixing and thinning the colors. This makes a dull finish instead of the glossy outside work and is known as flat finish. It is preferable to the high gloss for walls and ceilings. No better looking interiors can be had than those finished with paint of the right sort, and besides looking well they are sanitary and easily cleaned. The standard sorts of inside paint sold will stand washing, and physicians agree that painted walls are much better than papered ones.

The amount of outside painting one man can do in a given time depends on the man himself and the conditions under which he is working. However, an ordinarily handy man can spread from five to ten squares in a day (not square feet—squares are reckoned as being ten by ten feet), depending upon the surface upon which he is working and his ability to work rapidly. First coat work should go on slow enough to allow a thorough working in of both oil and paint and all knots and blemishes should be shellacked before the paint is spread. This is the important coat, for upon it depends the worth of the other one or two as the case may be. Then in the other coats it is best to use either turpentine or the so-called commercial driers as sparingly as is consistent, for drier used to excess will eventually cause paint to peel and blister

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

The Growth of Alfalfa.

To the Editor:—Clover and alfalfa are especially valuable crops, as hay and as a means of restoring plant food, nitrogen to the soil. They are crops which are rich in animal foods that produce fat, butter fat and energy which is required in nearly all phases of animal life. In our eastern states we find alfalfa used to a very great extent in the production of milk and butter; we also find it used in the production of eggs. In many states of the corn belt we find it used as a means of fattening hogs for market. In the West it is used extensively as a means of fattening sheep and cattle for early winter markets. In all of these ways it may be used as either green feed or hay. We find in many sections of Wisconsin men who have large dairies, say they would not know what to do without it. Now we could easily say that if one of our farmers were to raise it that it was his luck to succeed, but we don't say that of those who all over the United States are succeeding. It is one proof that it should have a place in our rotations.

Alfalfa like other crops is not adapted to any and all climates. We have learned from our experience that corn from Missouri and Tennessee will not do well in Wisconsin or in other words it is not acclimated. So in selecting seed of either corn or alfalfa we must get seed we know is adapted to this state and region. Don't buy seed from some Missouri seed firm, and if it does not grow say alfalfa is no crop for Wisconsin. Let us give it a fair trial at least and get seeds from Wisconsin-grown alfalfa.

Soil is another question we must consider in growing alfalfa. Most any deep, fertile, well-drained soil is good. That is, we don't want a soil that is shallow, hard, and lumpy, but one with a surface that is from eight inches to two feet deep at least, and this surface soil must be rich in humus and contain the plant foods required for crop growth. Then too, the successful growth of alfalfa depends a great deal upon the amount of water in the soil. We say the soil must be well drained, that is to say that we shouldn't expect alfalfa to grow on soil where nothing else will grow, and that at a certain season of the year we find water standing on top of the soil. Drainage is the most important thing in the growth of alfalfa. Why? Because if there is water in the soil we know from our experience of late springs the soil is in a very cold condition. We find in the growth of alfalfa that we must have a warm soil and one well drained. We often find alfalfa grows best in a rolling country, and this is due to the fact that in rolling lands we have our soil in a natural drainage system. So in selecting your field for alfalfa take the soil and the lay of the land into consideration.

In preparing the seed bed for its growth let's remember the fact that alfalfa is a deep rooted plant and plow deep so as to give it a chance. It is found that the best results have been secured on soil that has been sown to some cultivated crop. The reason for this can be brought out better by a little illustration. Did you ever try to dig a post hole in land that had been in sod for three or four years? If you have you realize that it is much easier to reach the depth desired in a field that has been in a cultivated crop. So it is with the growth of alfalfa roots. A method that is very often used in preparing the soil is this:

Fertilize the field with barnyard manure and plow in the fall and early spring, disk and harrow several times until the soil is very mellow. Keep repeating this harrowing every week until seeding time so as to guard against weeds and to conserve the moisture. One must not be afraid to put too much work in preparing the soil, because it is one step toward a successful crop.

Alfalfa, like all other leguminous crops, forms nodules on its roots when certain bacteria are present in the soil. These bacteria make their home in the nodules and benefit the plant on which they exist by taking nitrogen from the air and furnishing it to the plant on which it lives.

In soils where these bacteria are present alfalfa always thrives much better than where the bacteria are not present.

The benefits due to the presence of bacteria are more marked in some soils than in others.

In view of this fact the practice of artificially inoculating fields where alfalfa is to be grown, with the alfalfa bacteria, has become rather common. One of the most used methods of doing this is by taking soil from an old alfalfa field that has been giving good results. In this method one should scatter over his fields on a very cloudy day from 100 to 200 pounds of such soil per acre and drag it in. I believe this method to be the best, taking everything into consideration. I would not advise anyone in this section to attempt to grow alfalfa without first treating the soil with the soil from an old field. Now, don't think that soil from a clover field will do as well, even though it is true that we have bacteria in connection with clover, but it is not the same kind.

Now that we have taken up the treatment of the soil we now must consider the time, rate and method of seeding. Alfalfa, unlike many crops, is not a crop to sow at the opening of spring, but it is much better to wait until later. Sowing any time between May 15th and July 1st has been found to obtain good results. In sowing, many of us think of the cost and attempt to get a good yield on from five to ten pounds per acre. In cases of these kinds we find our stand is very thin. In this section fifteen to twenty pounds would not be too much sown with a nurse crop of barley either by drill or by seeder. Of course, unlike most meadow crops, we must take care of it. It is true that alfalfa will survive without a large supply of water, but every bit of water we can save can be profitably used by the crop. In holding moisture in an alfalfa field about the only thing to do is to disk the field when conditions are right. An ordinary disk may be used for this purpose, but better than this a special spike-tooth disk can be used. This means of cultivation can be used any time after the second year just after cutting a crop or before the growth has started in the spring. This process not only serves to work the ground and hold the moisture but has a tendency to break up the crown of the plants and cause them to shoot out from lower points and thicken the stand. It also tends to keep the field free from weeds.

In harvesting we can follow the methods used in clover but we must take pains to cure it well in the cocks right after cutting before putting it in the barn, as there is great danger of alfalfa heating and so making it useless as feed. The crop should be cut when the lower leaves turn yellow even though few blossoms are out or when sprouts appear from the crown.

We should not attempt to pasture it until the third year and then one must take great care that the cattle and sheep do not become bloated. Hogs do very well in alfalfa pasture and have been known to be put in almost a condition for market without the help of other foods.

One great disadvantage is the number of weeds we have to contend with. In buying seed we should not look for the number of weeds so much as the kind, because some weeds are smothered out by alfalfa while others are not. The one most feared by buyers is dodder, a plant that lives entirely upon the alfalfa plant which makes the purchase of alfalfa seed, containing this weed seed, dangerous. There are others too numerous to mention at this time, but bear in mind any weed is bad enough.

We will close this article with a few alfalfa don't's:

Don't sow seed not acclimated.
Don't sow on poorly drained lands.
Don't sow on new ground if you have suitable old ground.
Don't use land where snow accumulates and forms ice sheets.
Don't forget that hardy seed is the safest and cheapest in the end.
Don't sow seed until you have weeds under control.
Don't sow until you have your seed bed "like a garden," and then go over it again just for luck.
Don't sow seed very deep.
Don't waste good seed on poorly-prepared land.
Don't pasture alfalfa the first two years.
Don't forget hay cut in early bloom has the greatest food value.
Don't forget that the leaves are the valuable part of alfalfa hay.
Don't let your field go into winter without a good growth for protection.
Don't sow on acid soil.
Don't forget these don'ts.

J. B. Keenan.
Grant Co., Wisconsin.

Rye on Corn Land.

To the Editor:—In growing pure-bred seed grains my motto is to plant only the very best of good seed on a well-prepared seed bed. In growing rye I try to put it on corn ground when season permits. As I find it

JOHN SCHWARTZ.

does not lodge as easily as other grain, I grade out only the largest seed and plant one and one-half bushels to the acre. Last fall I threshed forty bushels per acre—that is, machine measure. Think if it had been carefully weighed it would have done much better. By growing rye it does not leave so much work for spring.

John Schwartz.
Langlade Co., Wis.

Seed Cleaned and Graded.

To the Editor:—In raising grains for show purposes there are a number of things to be taken into consideration. Special attention must be given to the selection of the seed, preparation of the seed bed, cultural methods and harvesting. Every farmer should consider these points whether he plans to show his products or not. If he does the increase in yield and the quality of his products will repay him well for his trouble.

In selecting seed we try to get the variety best adapted to our particular type of soil. Having a heavy clay soil we selected the Marquis wheat because it has a short, stiff straw and withstands drouth and is more resistant against smut than some of the other varieties that we have tried. It is a heavy yielder, the kernels being plump and hard.

After having decided upon the variety we demand that the seed be absolutely pure bred. Life is too short to waste time upon mixed or scrub seed. The seed is cleaned and graded carefully and nothing but the heaviest and plumpest kernels are sown, as we have found that these kernels give stronger and more vigorous plants.

The next in importance is the seed bed and care of the crop throughout

EDWARD PETERS, LA CROSSE CO.

the growing season. Our rye ground is plowed early in the fall and allowed to settle for some time before seeding. After harrowing the seed is broadcasted with a seeder and harrowed in twice. When it has grown sufficiently the calves are turned on to it and it is pastured. This tends to cause stooling and as a final result a heavier yield.

Our wheat ground is plowed in the fall and we like to turn down clover sod when possible for this crop. Early in the spring the ground is disked. Last year we commenced the 7th of April. After disking the harrow is put into operation and as a result we have a fine, mellow seed bed. The seed is broadcasted and the ground harrowed twice. By following these methods we have never failed to get good returns.

Harvesting is not a minor operation with us. The grain that is to be used for show purposes has to be carefully selected and handled and, of course, extra time must be put upon it. All the grain is carefully shocked to prevent discoloration as much as possible and later stacked.

We will say little about showing because we feel that to become a successful showman requires experience. The man who can produce good grains can learn to show them to advantage providing he is willing to work and learn. He must be a good observer and a good student. So much for the showing end of the business.

We feel deeply indebted to our county school of agriculture for the training received there. We plan to attend all the farmers' courses and grain shows within reasonable distance and we have never yet failed to learn something new and helpful at each meeting. Edward Peters.
La Crosse Co., Wisconsin.

Putting Hay Into Barn.

To the Editor:—At the 1913 state fair at Milwaukee there was a man in the hayloft of the modern barn who demonstrated a method of putting hay into the barn without horses. He used a large stone weight. I did not fully understand his method and would like very much to know more about it. Will you be kind enough to publish this letter in your Forum columns and request information on this subject from your subscribers?

Auburndale, Wis. C. E. Aldrich.

CURRENT EVENTS

THEODORE ROOSEVELT and Elihu Root are reported to have "made up," which would indicate that Colonel Roosevelt is either going to work for the republican nomination for president or he will support whoever receives that nomination. It will be recalled that Roosevelt and Root were the best of friends some years ago, Root sitting in Roosevelt's cabinet as secretary of state. They fell out four years ago, however, Secretary Root being chairman of the republican national convention, at Chicago, which Colonel Roosevelt bolted, after the "steam roller" tactics had convinced him that he could not get a square deal either from the chairman or from the main body of delegates. The two men have been very bitter against each other ever since. The surprise of the public was considerable, therefore, when it became known last week that the two had met at dinner, in company with Senator Lodge, of Massachusetts, Robert Bacon (former ambassador to France), and other notable men, all high in the councils of the republican party. The men are said to have discussed the preparedness program altogether, saying nothing whatever about politics. The fact that Colonel Roosevelt is coming back into the republican fold, on any pretext, is the important one, however, rather than the particular issue discussed. There is a growing conviction that it will be either Roosevelt or Hughes who will be nominated by the republicans in Chicago in June and that Roosevelt will support the republican nominee, whoever he may be.

THAT Germany has absolutely no aggressive aims against the United States, Canada, Brazil or any American territory, that she is not fighting for any new territory whatever, was asserted in the most emphatic terms by the German chancellor, Dr. von Bethmann-Hollweg, in a speech before the reichstag last week. The chancellor continued by declaring that any suggestions of peace on the basis of the destruction of the Prussian military power would make possible only one answer: the German sword. If Germany's adversaries desired to continue the slaughter of men and the devastation of Europe the guilt would be theirs, he said. He characterized as "the silliest of imputations" against Germany the report that at the end of the war Germany would take measures against the American continent and attempt to conquer Canada. With respect to Belgium the chancellor said: "We must create real guarantees that Belgium shall never be a Franco-British vassal; never shall be used as a military or economic fortification against Germany." The chancellor's utterances were the most important that have been made in many months and created a profound impression. He made it clear that the kaiser is not picking a quarrel with the United States and that everything possible, within what they believe to be reason, will be done to continue friendly relations with this country, thus setting at rest the reports that Germany was deliberately estranging the United States and hoping to involve it in the general melee.

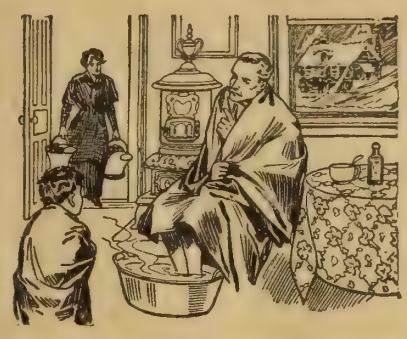
THE immigration bill, providing a literacy test and excluding all Asiatics, was passed by the lower house of congress by a vote of 308 to 87. It is now before the senate, where favorable action is anticipated. The literacy test, about which the fight against the bill had centered, passed by a vote of 284 to 107. This provision has been the cause of vetoes of similar immigration bills by Presidents Cleveland, Taft and Wilson. Sponsors of the bill believe that they have sufficient strength to pass it over a veto, should President Wilson file one. The literacy test as adopted would exclude all aliens over sixteen years old, physically capable of reading, who cannot read English or some other language, except certain relatives of persons already in this country and certain classes of refugees from religious persecution. Asiatic exclusion provisions specifically bar Hindus and add to the excluded classes "persons who cannot become eligible under existing law to become citizens of the United States by naturalization unless otherwise provided for" by existing or future treaties, conventions or agreement. Pacific coast members were satisfied with this provision, which gives legislative recognition to the existing so-called "gentlemen's agreement" with Japan for the exclusion of Japanese laborers.

THE second most destructive Zeppelin raid of the war occurred last week, when the German flying machines dropped bombs which killed fifty-nine persons and wounded 166 more. Air raids were made three nights in succession, the coast of Scotland and the northern and southeastern counties of England being attacked. For the first time since the inception of this method of warfare on the British coast, not only has one raiding Zeppelin been brought down and its crew taken prisoners but the official report recounts an exciting aerial fight between a Zeppelin and a British airman, Lieutenant Brandon, who, mounting to a height of 9,000 feet, flew over the raider and dropped several bombs on it with effect. One of the Zeppelins fell into the Thames and the crew was captured. The others succeeded in making their escape safely. Zeppelin attacks are becoming more numerous, although the English people continue to watch them with more curiosity than fear. They stimulate enlistments among the English, enraged at this method of carrying on warfare, but are exacting a heavy toll among women, children and noncombatants generally.

THE pursuit of Villa and the remnants of his band of Mexican bandits was continuing at last reports. The brilliant feat of Colonel Dodd, in riding fifty-five miles in seventeen hours, surprising and wellnigh exterminating part of the band, was repeated a few days later when another detachment of American troops caught up with another band of Villistas and in a running fight killed thirty Mexicans, wounding as many more. There are conflicting reports concerning Villa's personal condition, some asserting that he is seriously wounded, others claiming he is in good health. He is known to be making for the mountains, through a country with which he is perfectly familiar and among a people entirely friendly to him, so that the advantages are all on his side. At the same time General Pershing and his troops are following close on his heels and are prepared for a long chase, not proposing to give up until he is captured or killed, even if months shall be necessary to bring this about.

A FORMER Kansas governor, W. R. Stubbs, and a former Missouri judge, W. H. Wallace, who said they had learned by raising cattle themselves that meat packers by fixing combinations were crushing live stock growers, pleaded with a house judiciary subcommittee in congress to aid in inaugurating sweeping reforms in the packing industry. They appeared as counsel for western growers and feeders. Speaking on the Borland resolution, which would order a federal trade commission inquiry to determine whether the packers are violating the anti-trust laws, they indorsed the proposal strongly and suggested making laws prohibiting the restraint of trade in foodstuffs generally more stringent. Jail sentences instead of fines were particularly urged. "Fines are jokes," Mr. Stubbs declared. They are not effective. The producers and the consumers pay the penalty. Anyone who juggles with the prices of food when millions are struggling for bread should be imprisoned and not fined.

Have balmy spring at home during cold, raw weather!



Early spring chills and colds are inevitable with old-fashioned, drafty, uneven heating methods

The mild, delightful warmth of radiator heating makes every one happy and healthy

Real spring rarely sets in "for good" until it is nearly summer. The cold, damp, chilly days cause a lot of sickness and discomfort in homes which are not properly heated.

AMERICAN RADIATORS & IDEAL BOILERS

An IDEAL Heating outfit will show you its worth more forcibly during changeable, raw weather than at any other time. The IDEAL Boiler is made to give just the volume of heat to keep the house genially warmed and comfortable *all over*, without waste of fuel or everlasting tinkering with the fire. These IDEAL outfits are easily put in old or new farm houses. One charge of fuel lasts 12 hours or more during chilly spring days.

Get the heat that costs the least

Decide now to put in IDEAL-AMERICAN heat. Don't spend another winter without it. Safeguard your family's health. Get the Ideal outfit which will just suit your needs. Running water not necessary. Burn the inexpensive fuels of your locality and make your *house* a real HOME!

A No. 020 IDEAL Boiler and 262 ft. of 38-in. AMERICAN Radiators, costing the owner $185, were used to heat this farm house, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions. The IDEAL outfit is the *only* feature of the house which is never worth *less* than you paid for it.

Don't put it off

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AMERICAN RADIATOR COMPANY

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Imported Hemp Seed.

With hemp of the 1915 crop selling at 10 to 11½ cents per pound, double its normal price as it leaves the farm, there is a strong demand for all the seed available for sowing a larger crop this spring. Hemp seed recently has been selling in Kentucky at $11 to $12.50 per bushel, about three times its normal price, and it is impossible to supply the demand even at these high prices.

Under these conditions there may be a temptation to sow imported hemp seed, such as is purchased in Japan, Manchuria or China at less than $1 per bushel, and bought in to be sold for bird seed and poultry feed. This seed looks like that of good fiber hemp, except that it is usually larger and lighter in color. It rarely germinates more than 30 per cent. It produces short, quick-maturing plants practically valueless for fiber production.

Varieties of fiber hemp are cultivated in Japan, China and Manchuria and it may be possible to secure seed from those countries that will give fair results in the United States. The most promising varieties of foreign hemp seed for sowing in this country are Tochigi (pronounced Tochingi) and Hiroshima, from Japan, and Ferrara and Carmagnola, from northern Italy. The first generation from imported seed, however, is rarely equal to that from Kentucky seed.

If imported seed is used the purchaser should insist upon a guaranty of germination of at least 90 per cent and a statement as to the approximate height of the plants from which it is obtained. Seed from plants less than eight feet high is not likely to prove satisfactory.

Road Drags vs. Duster.

When dry weather comes the dust from the road becomes a great nuisance to the housewife who lives near the road. In many cases windows have to be kept closed tight to lessen the amount of dust that seeps in. The most effective way of reducing the dust nuisance is the use of a split log drag on the road after every rain. The road dust comes largely from the grinding up of the turned up edges of ruts made by wheels and horses' hoofs. These cannot form unless water can stand on the road bed and water cannot stand on the road bed if it is kept well crowned and well packed, as it will be if the road drag is used regularly. Dragging the roads will mean a good deal to the housewife, as well as to travelers and those who have to haul to and from the market.—[W. C. Palmer, North Dakota Experiment Station.

Patrons of the New Richmond Cheese and Dairy Company during February received an average of 45 cents per pound for their butter fat.

WOOD COUNTY TESTING PAYS.

Some Interesting Information For Farmer-Dairymen Which Has Been Learned as Result of Cow-Testing Association Work in Wood County, Wisconsin.

MANY interesting things were brought to light during the first year of testing by the Wood County Cow-Testing Association and the farmers in that vicinity are so well convinced that this is the only way in which to judge a cow's value that two additional associations have been organized for the coming year.

The Wood county association has been reorganized and is starting on its second year with a few new members who took the place of several old ones who dropped out. It was not difficult to fill their places, as the records kept during the year convinced every member and scores who were not members that the use of the scales and the test is the way to judge dairy production. There were plenty of farmers willing to go in, so it was necessary to form two other associations—one at Marshfield, known as Wood County Cow-Testing Association No. 2, which began work February 15th, and one located in the vicinity of Pittsville, known as Wood County Cow-Testing Association No. 3, which began work March 1st.

HOME OF J. C. KIEFFER, WOOD COUNTY, WHOSE COW CARRIED OFF INDIVIDUAL HONORS IN TESTING ASSOCIATION.

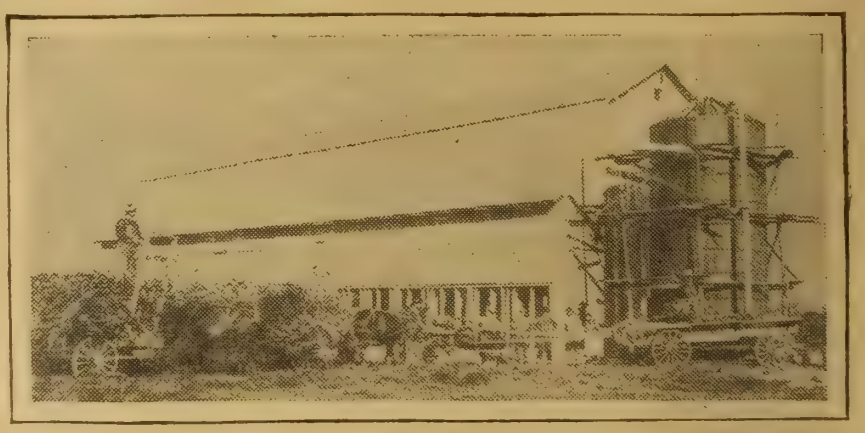
The Wisconsin Farmer is indebted to W. W. Clark, superintendent of the county agricultural school at Grand Rapids and secretary of the Wood county association, for a report of the first year's work. This report is very interesting and was compiled with the assistance of William Bassler, the tester. In looking over the herds and individual records for the year it is noted that some records are very good and some not so good. Mr. Clark reports that there is chance for considerable culling and weeding out of boarders and much of this was done during the year and much more will be done the coming year.

The best three herds during the year were those of E. E. Butters, of Marshfield; W. A. Schultz, of Auburndale, and Charles Tomfohrde, of Arpin.

Mr. Butter's herd, which was first, consists of only pure-bred Holsteins and their performance is a splendid recommendation for using only pure breds. This herd, which includes all cows that were run in the test throughout the year, averaged 13,285 pounds of milk, 449 pounds of fat, valued at $130.93. The cost of producing this fat was $62.20, which left Mr. Butters an average profit of $60.59 for his herd, which averaged about eight cows for the year. Four of these were heifers with first calves and were in test only nine months. The average production of these four heifers for the nine months was 340 pounds of fat. These heifers also have good official seven-day records. In Mr. Butters' herd four cows completed a full year's work, averaging 14,180 pounds of milk and 472 pounds of fat.

The herd of Mr. Schultz, of Auburndale, which was second, consists of both pure-bred and grade Holsteins. This herd has been built up by many years of culling through means of the scales and the Babcock test and this careful selection certainly pays. Some cows were sold and some bought during the entire year and averaged 11,378 pounds of milk and 422 pounds of fat. Two of these were two year olds and are sisters. His entire herd for the year averaged 10,034 pounds of milk, 72 pounds of fat, valued at $106.10. It cost Mr. Schultz only $46.60 to produce this fat, which left him an average profit for his herd of $59.91.

Mr. Tomfohrde, whose farm is at Arpin, has a Guernsey herd of good grades with only one pure bred. His herd finished in third place and averaged 7,488 pounds of milk, 343 pounds of fat, valued at $101.13. This fat was produced at a cost of $49.38, which left Mr. Tomfohrde an average profit of $52.27 per cow. The average number of cows in this herd for the different months was almost twenty and this is certainly a splendid showing for so large a herd. This is another herd built up by careful selection, but it is expected all of the three high herds after a few more years of testing will show much higher production. Twelve of Mr. Tomfohrde's cows were in the test the full year and these twelve averaged 7,801 pounds of milk and 376 pounds of butter fat. The herd of J. C. Kieffer, of Auburndale, president of the Central Wisconsin Fair, ranked fourth and eleven of his cows which were in test work throughout the year averaged 10,918 pounds of milk from which the average fat production was 370 pounds.



NEW BARN ON FARM OF W. A. SCHULTZ, WHOSE HERD RANKED SECOND

Princess Maude Mechthilde, nine years old, an argument for pure breds. Stock from her sold for $1,540 besides heifer on hand valued at $500.

PORTION OF HERD OF CHARLES TOMFOHRDE WHICH RANKED THIRD IN YEAR'S TESTING OF WOOD COUNTY ASSOCIATION.

The best cow in the association during the year belonged to the Kieffer herd. She was a grade Holstein that freshened November 7, 1914, and, as the test did not start until January of the following year, she lost two of her best months. Even with this handicap she carried off the individual honors, making 17,910 pounds of fat with an average test of 3.2 per cent. Her fat production was 566 pounds and her profit $117.46.

The second best individual was a pure-bred Holstein in the herd of Mr. Butters and quite a few others with records close to her records. She produced 551.2 pounds of fat. The best four Guernseys in the herd of Mr. Tomfohrde averaged 460 pounds of fat.

Among the interesting developments of the year's testing was the experience of William Bebling, of Vesper. Mr. Bebling is a splendid booster now for the test association, for his judgment of the value of a cow has been entirely upset by his use of the scales and the test.

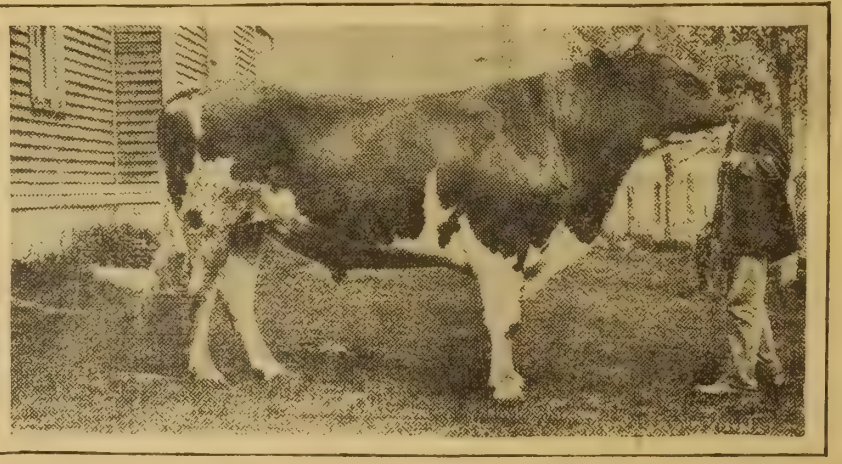
When the association year opened a cattle buyer went to his farm and tried to buy some of his cows. One little brown cow he priced to him at $50, but he would not pay it and she stayed in the herd. He also had a nice looking black and white for which the buyer offered him $75, but Mr. Bebling would not sell at that price, as he considered her worth considerable more. The result was that both cows entered the test and this is what the test brought to light:

The little brown cow he offered to sell for $50 made 6,383 pounds of milk, an average test of 5.2 per cent and from the 333 pounds of fat she produced he made a net profit of $48.01 for the year. The black and white he refused $75 for made 4,366 pounds of milk, tested 3.4 per cent and from the 148.9 pounds of fat she produced made him a net profit for the year of 38 cents. In other words, he milked this cow a year for 38 cents and the other one for $48.01. To use Mr. Bebling's own expression, "The little $50 brown cow doesn't leave the barn now for less than $100; the black and white cow is for sale at $50."

An argument for pure breds was made by Princess Maude Mechthilde, a nine year old, from whom the owner has sold $1,540 worth of stock and has a heifer valued at $500 on hand.

The herd records for the year show that the average profit per cow for the thirty-one herds was $33.61, average milk production 6,750 pounds, average fat 258 pounds, which is considerable above the state average. Following are the herd averages, which are worth studying. These averages include only cows in test for the entire year and by comparison with these herd figures farmers can ascertain the value of their own herds:

Herd No.	Age	Lbs. milk	Lbs. fat	Profit	Breed
1	4	11180	472	$63.93	R. H.
2	10	5712	203	29.64	G. H.
3	15	7412	273	41.77	G. H
4	11	10918	370	69.64	G. H.
5	4	11378	422	69.52	G. H.
7	16	7684	281	38.84	G. H.
8	20	6538	230	32.34	G. H.
9	19	6728	216	32.68	G. & P. H.
10	20	5928	204	26.97	G. H
11	13	4728	207	30.32	G. G.
12	5	4567	192	27.55	G. G. & G H.
13	3	6123	275	45.06	G. G.
14	9	6535	293	46.87	G. G.
16	12	6962	244	19.56	G. H.
19	10	3820	155	8.58	N. & G. H.
20		4136	207	33.13	R. G.
21	13	5497	233	27.01	G. G.
23	9	4481	209	29.44	G. G.
24	10	8347	258	32.26	G. H.
25	6	6232	220	22.29	G. G.
27	6	6668	295	42.86	G. G.
28	16	5547	219	30.99	N. & G. H.
29	10	7619	248	36.66	P. & G. H.
31	5	6655	281	51.12	G. G.
32	4	5067	203	19.61	G. H.
34	14	7843	243	46.70	G. H.
35	8	6689	243	40.09	G. H.
36	14	6480	246	26.43	G. H. & N.
17	9	7370	262	34.92	G. H.
22	10	4406	212	29.24	G. G.
26	12	7801	376	61.53	



SIRE AT HEAD OF HERD OWNED BY E. E. BUTTERS, FOUR OF WHOSE HEIFERS AVERAGD 340 POUNDS IN NINE MONTHS.

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Washington County Breeders.

"Cow Day" Inaugurated by the Holstein Lovers Brings Out Big Crowd at Gathering at West Bend.

WASHINGTON county Holstein breeders, who recently organized the Washington County Holstein-Friesian Association, have started their work with an enthusiasm that should make it one of the best community organizations in the state. This was demonstrated recently when farmers and dairymen, on invitation of the association, crowded the commercial club rooms at West Bend to overflowing. The occasion was known as "Cow Day" and was the first meeting held by the association since the organization meeting. The business men were well represented, which showed the co-operation between the commercial and the farming interests and the presence of many women at the meeting proved their interest in the cause of better dairying.

J. P. Riordan, of Mayville, former president of the Wisconsin Holstein-Friesian Breeders' Association; Chris Schroeder, of Racine, the present state secretary, and F. W. Bucklin, of West Bend, an attorney, were the principal speakers. The meeting was called to order by Walter Schroeder, president, who explained the purposes of the new association, which is organized both for sociability and business. Such an association, he said, would enable breeders of Holstein cattle in Washington county to get the money their stock is worth and will do much toward improving conditions on the farms and in weeding out the boarders. John W. Gehl, secretary, cheered the members by reading a letter from a distant buyer who was in the market for a carload of Holstein heifers. The association, he pointed out, could handle such inquiries by the members listing their stock. In this way buyers for car lots would come to a county where a strong association is in existence, for they could fill a car quick and at smaller expense than where they go into unorganized counties and must visit every dairy farm in the county in order to make up a car lot.

Mr. Bucklin took as his subject the "Business Man's Interest in the Dairy Cow."

He mentioned the encouragement which the plan of organizing a Holstein breeders' association found with the local commercial club. An organization of this kind should not be confounded with a monopoly. The times when business men were prejudiced against farmers are past. It is the business man who gains when the farmers of the surrounding country prosper. It is in the interest of the business men of all sorts to see that the farmers of the neighborhood do well. If the farmers take in more money they will spend more, the standard of living will be raised, for we all have desires for better things, for things that we cannot hope to get with a small income. Every storekeeper will feel the prosperity of the farmer. And finally, when people fall all over themselves in hauling in money and get hurt, the lawyer even will come in for a little share in the "flush times," the speaker added jocularly. He also touched upon the marketing problem, the low price which the farmer gets for his produce and the high price which the consumer has to pay, and the waste which goes with our poor system of marketing, one section of the country getting much more than it needs, and another not enough. In this, the speaker declared, we are twenty-five years behind Germany and other European countries. Marketing of produce is not only a community affair but a state and national affair. He also expressed as his opinion that business men should join the breeders' association and gave an instance, taken from a paper, in which business men of another city financially helped breeders to acquire pure-bred cattle.

Mr. Schroeder told of the splendid results being obtained in other counties through co-operation and community organizations and invited those present to become members of the state association.

Mr. Riordan spoke on his favorite theme, "Why We Should Raise More Holstein Cattle." He is a Holstein admirer through and through. He is a Washington county boy, although now a resident of Dodge county, but he demonstrated that his heart was still with the home county.

He advised his listeners to go into Holstein cattle breeding with the Washington county spirit. He then related how dairying is helping Upper Wisconsin, where they have not so many acres to a farm, but two-cow farms, ten-cow farms, etc. Wisconsin land is not as favorable to agriculture as land in some neighboring states. The speaker said that he is not particular as to cows of any strain. Holstein cows are much attacked by publi tions devoted to other breeds, but Wisconsin has cast her ballot for the Holstein cow. There are two Holsteins for each Guernsey in the state, and more for other kinds. Five thousand farmers in the state today say that Holstein cows are the best. Mr. Riordan gave some of his experience on the large farms near Mayville. When he took charge of them the soil was worn out and its fertility had to be restored by the cow, by manuring the impoverished soil. Referring to Holstein cows, the speaker gave their characteristics as phlegmatic temper and absence of nervousness. They do not fuss much about the milker and can stand much more than other kinds of cows. They are in big demand and sell fast. The pure-bred Holsteins give more milk and cheaper milk than any other cow.

NEW SHORT-HORN VOLUME

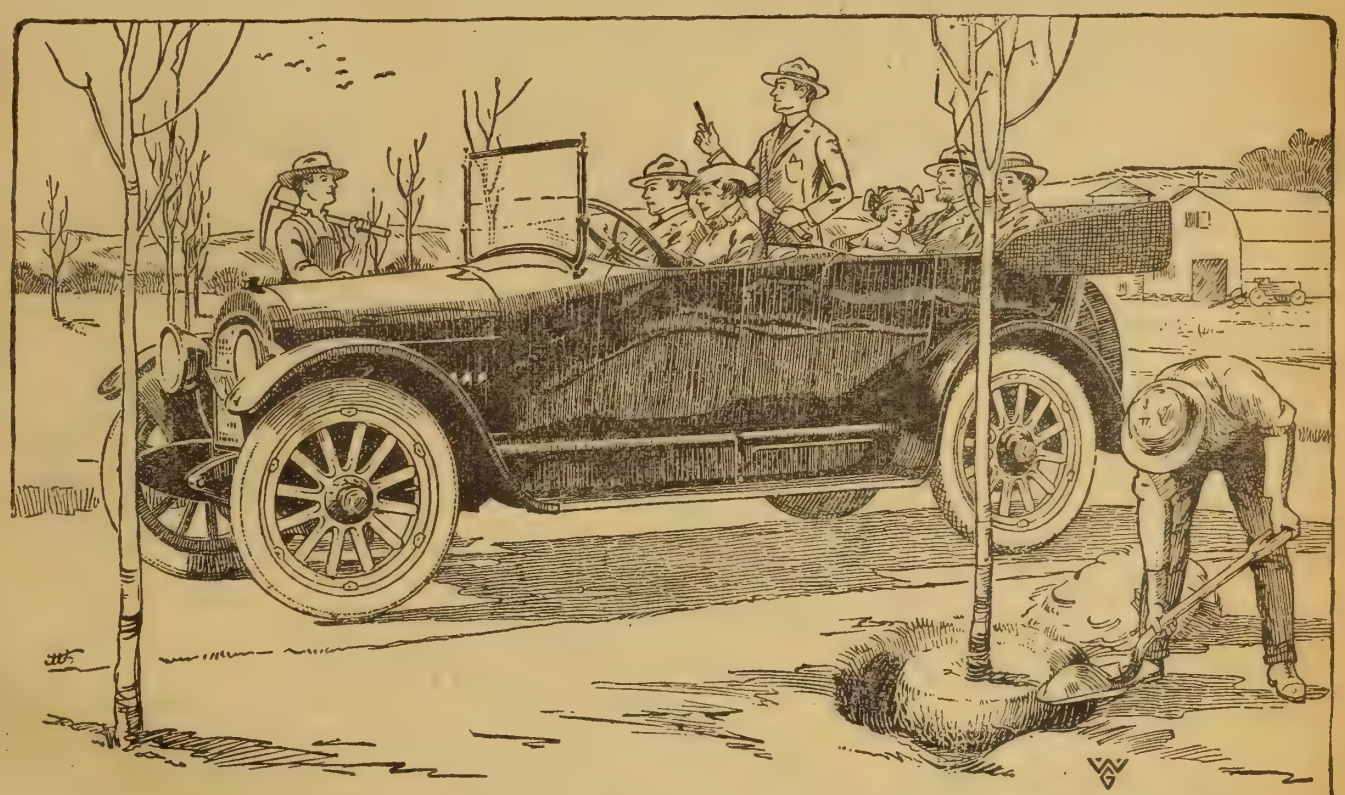
American Short-horn Breeders' Association Starts Paper.

Under the title "The Short-horn in America," a new publication has made its bow to stockmen of the United States. This is to be published monthly under the auspices of the Short-horn Breeders' Association, with Frank D. Tomson at the editorial wheel. It is the purpose of this publication to supply breeders as well as the agricultural press with accurate and useful information pertaining to the Short-horns. It will chronicle from time to time all important events relating to this important breed and it will be edited with the thought in mind that eventually it will become a history upon which future generations may safely rely.

It is not the purpose of the American Short-horn Breeders' Association to profit by the publication of this journal, but rather to stimulate interest in this great breed. Mr. Tomson's long experience in the practical work of breeding and his wide knowledge of Short-horn affairs will inspire confidence in this new publication from the very beginning.

The first volume contains contributions from men who are well known by the breeding fraternity. The writers include ex-Secretary F. D. Coburn, of Kansas; Col. F. M. Woods, Prof. C. F. Curtiss, Robert Miller and Geo. E. Martin. All in all the first volume of this publication reflects only the highest degree of credit upon those connected with it and without doubt or question it has an important mission to perform in the encouragement it will furnish to breeders in general to engage in the raising of improved live stock Day by day it is getting harder for the scrub to exist and if those who are in charge of this new publication have their way the scrub will be relegated to utter oblivion.

Ask your neighbor to subscribe for The Wisconsin Farmer.



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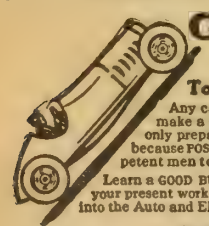

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In And Around Wisconsin.

La Crosse County Guernsey Breeders Elect Officers For Coming Year—Kewaunee County Dairymen and Factory Operators Meet—Other Interesting Items.

Mr. William E. Rockhill has resigned as manager of the Gustav Pabst stock farm near Oconomowoc.

Marinette county claims the record for the largest calf born to a dairy cow in the middle West. The calf is the offspring of a pure-bred Holstein cow on the farm of Augustine Brothers in the town of Grover, and it weighed 120 pounds at birth.

September 26th-29th has been selected as the dates for the 1916 fair of the Rusk County Agricultural Society at Ladysmith. The amount of premiums in grasses and grains and pure-bred potatoes have been doubled, which is expected to bring out a fine showing.

It is announced that the Benson county, North Dakota, farmers who recently visited Wisconsin, were so well pleased with their trip that they expect to come again in June. The delegation which comes in June will visit stock-raising centers in Wisconsin and northern Illinois.

County Superintendent Ames, of Dane county, has agreed to furnish free corn and tomato seed to pupils of the rural schools who will enter the contest for these products again this year. It is also proposed to conduct an acre corn contest, and $100 in prizes will be divided among those producing the largest amount of Wisconsin No. 7 corn from an acre.

Martin Bonerud, of Moscow, Wisconsin, who was summoned to serve as a petit juror at this term of circuit court, walked seventeen miles to get from Moscow to Dodgeville in time to serve. Owing to the floods, the trains on the Illinois Central were not running and the roads were so bad it was almost impossible to drive through.

Wood county boys and girls will be given a chance to demonstrate their ability in sewing and manual training, the Wood County Agricultural School having put up $24 in prizes for the best articles entered. Entrants must be under nineteen years of age unless enrolled in a country school, and no student in a city high school can enter.

The Kewaunee County Cheesemakers', Buttermakers' and Dairymen's Association held a very interesting meeting recently at Kewaunee with thirty-two members present. Addresses were made by Professor Bullock, of Marinette; J. B. Linzmeyer, of Green Bay; and Dr. W. M. Wochos. On invitation of Senator Perry the next meeting probably will be held at Algoma. A. W. Teske is president of the association and Louis Blahnik is secretary.

The annual meeting of the La Crosse County Guernsey Breeders for the purpose of electing officers and the transaction of other business was held at West Salem, Saturday, April 1st and the following officers were elected: Sherman L. Dudley, president; L. C. McClintock, W. J. Dawson, H. M. Bonsack, K. O. Gaarder and W. Labus, vice presidents; T. H. Champion, secretary; H. M. Bonsack, treasurer; W. D. Sandman, Otto Wolf and H. D. Lovejoy, executive committee. It was decided to hold a summer meeting and picnic. The following were appointed as a committeee to make the necessary arrangements for such a meeting: H. J. Aldrich, H. D. Lovejoy and W. D. Sandman. The advisability of holding a fall sale was discussed and it was voted to leave the question open until the summer meeting. The executive board, after the regular meeting, decided to work out an advertising plan for further developing the breeding of Guernseys in the county, and plans for suitable stationery for members of the association were made. It was also decided that the secretary should issue a monthly sales list, after which a vote of thanks was given to the retiring officers, Pres. Odolph Nuttleman and Sec. Ray Lewis, for their past untiring efforts in behalf of the organization.

Farmers in Langlade county interested in honey production will meet in Antigo on April 18th to form a county beekeepers' association. N. E. France, state inspector of apiaries, has been invited to attend and talk on beekeeping.

A. C. Ellickson, of the town of Arlington, Portage county, won laurels recently on the Chicago market when he disposed of a carload of fat cattle averaging 1,194 pounds at $9.70 per hundred. The commission merchant men said that it was one of the finest lot of steers ever sold on the Chicago market. Mr. Ellickson was formerly a Dane county farmer.

The Waukesha County Guernsey Breeders' Association will hold its annual summer picnic on June 2d at the home of Roy Burton, northwest of Eagle. This will give the breeders the opportunity to visit one of the best Guernsey herds in the county. This meeting will precede the Guernsey sale a few days, as June 7th has been chosen as the date for the sale.

GLEN M. HOUSEHOLDER.
Recommended for county agricultural agent in Rusk county, Wis.

An interesting discovery has recently been announced from the farm products laboratory of the University of Wisconsin. Director Howard F. Weiss believes that a substitute for gasoline has been found. This substitute is made from sawdust at a cost of from 13 to 15 cents a gallon. Director Weiss believes the discovery will revolutionize the gasoline industry. The new product is made from alcohol produced from wood and is claimed to be almost 100 per cent pure.

Rice Lake, Barron county, is assured a condensery, as enough milk has been pledged by farmers within a radius of five miles of that city to keep one busy. The Oatman Company will operate the new plant, which will start with the daily output of about 3,500 cows. Whole milk prices on the basis of 3.5 per cent milk will be paid with an additional premium for higher-testing milk. The condensery is expected to start operations May 1st.

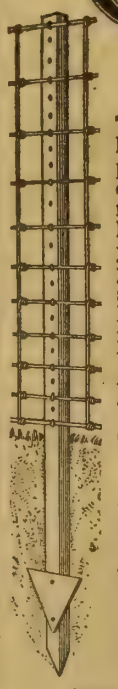
The trout season in Wisconsin, excepting the counties of Ashland, Douglas, Bayfield and Iron, opens on April 15th, and under the new law it is unlawful to catch trout less than seven inches in length. In the four counties mentioned above the season opens May 1st under the new law. September 1st remains the closing date and the limit of forty-five in one day still applies. Bass, pike and pickerel fishing begins on May 30th. Farmers should be careful to observe the provisions of the new statutes, as the state game warden has announced a rigid policy for law enforcement this season.

Dean Albert S. Woods, of the Minnesota Agricultural College, predicts a big year for Minnesota farmers. He reports that fruit, and especially small fruit, in the southern portion of the state is in excellent condition. Some varieties of plums are reported to have been killed, but the outlook is good for apples, and for strawberries, raspberries, blackberries and all kinds of small fruit.

Game Warden John Egan and County Clerk Auton received a request recently from a farmer in Sheboygan county asking permission to keep a pet deer which he had captured near his home. The animal was slightly injured and made little effort to escape. The matter has been taken up with the state conservation committee. This is the first instance on record where a deer has strayed onto a farm and become domesticated. Since the animal has recovered from its injuries it has refused to leave the farm and mingles with the other domestic animals.

County Representative F. G. Swoboda, of Langlade county, and the county superintendent, A. M. Arveson, are co-operating in a calf-raising contest. Prizes are to be offered to the boys making the best showing, and provision will be made at the next county fair for recognizing the contest in the premium list. The same gentlemen are arranging for a potato-growing contest this year. Seed potatoes will be furnished to those who apply. The contest is open to those who have Rural New Yorker seed, or who will secure that variety. Last year Langlade county won the banner at the state show.

Chicago STEEL FENCE POSTS



Can't Help But Save You Money

They cost less to install—last a lifetime without repair. They guard your crops from insects that live in wood posts and fence-line weeds. With them you can burn clean through your fence, kill the insects and gain more tillable land. Build your new fence and replace rotting wood posts with Chicago Steel Posts. *Made from same material used in old black wire.*

Guard Your Cattle With These Posts

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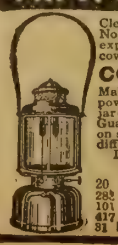

Clean it only once a year. No wick. No glass globe. No danger even if rolled around in straw. Can't explode. Can't spill. Use it around barns, cow sheds, chicken houses, cellars, etc. The

COLEMAN GAS LANTERN

Makes and burns its own gas. Gives 300 candle power of strong steady light. Can't blow out or jar out. Made of heavily nickeled brass, Mica Globe. Guaranteed for five years. Ask your dealer—if not on sale in your town yet, write for catalog of 20 different kinds Gas Lanterns, Table Lamps, etc. Dealers or agents wanted in every locality.

THE COLEMAN LAMP COMPANY
20 St. Francis Ss., - - - Wichita, Kansas
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101 Summit Street, - - - - - Toledo, Ohio
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A Gasoline Farmer?

Power for the farm is a big problem. Some farmers, successful ones, too, use oil-gas, others use steam, and still others use the horse or the mule and say that results are good enough. You pay your money and you take your choice; but whatever the choice,

BE SURE THAT YOUR POWER-PLANT IS RELIABLE

For nothing that you possess will pay you better, provided that you keep it at work and that it will work according to specifications.

Some widely heralded inventions in gasoline-power devices have done everything but *work*.

Others, less widely known, *do nothing but work*. That's just what the Nichols-Shepard Oil-Gas Tractor has done and is doing. It has a five-year record of work accomplished. It has no record of failure.

So, if you are interested in an explosive engine, let us tell you about one that you won't have to mortgage the farm to keep going—one that will saw in the winter, plow in the spring, haul in the summer, thresh in the fall, and pick up odd jobs at any kind of power requirement between whiles. We build this kind of an Oil-Gas Tractor and we guarantee it to be a reliable power producer that *will* work.

Of Course It's a Red River Special

If you have never had experience with an oil-gas engine it may help you to know what neighbors of yours say about ours. Send your name and address to us and say that you would like a copy of the Home Edition of the Red River Special paper issued for your vicinity. We will be glad to take the matter up with you and send a Big Catalog that covers our entire line.

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BUILDERS *EXCLUSIVELY* OF
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ONLY HYDRAULIC GRAIN DUMP made

Do not buy a grain elevator until you know all about the "CAMP" Hydraulic Dump. It's different from all others. Does the work cheaper, quicker and better. New principle—it will appeal to you in every way. Write today for Free crib plans and Free catalog.

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The Engine for You

$2.75 per H.P.

The Chase Motor

This engine is simple, easy to run, smooth running, frictionless and practically fool-proof. Its three cylinders deliver a world of power at a minimum of cost, to do your farm work, run your tractor or truck. Big enough for all purposes, small enough for convenience. It is a general utility engine built on the principle of service. Complete with carburetor, coil, spark plugs, wires, batteries, etc. You can save $25 if you buy now. Write for special offer and full particulars.

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Made Easy—Bigger crops—better farms with Martin Farm Ditcher & Road Grader

10 days' trial. Money-back guarantee. Cuts ditch to 4 ft. Grades roads. All Steel—Practical—Adjustable—Reversible

Cleans ditches, cuts and works out dirt at same time. Does work of big machines. Soon pays for itself. Write for free booklet and introductory proposition.

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"More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate, A simple, strong, durable machine. Write for CATALOG, price, etc.

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SEED CORN Redwood county, Minnesota, grown 1914. Very early yellow dent—test 98. Write for particulars. Address J. B. FRAZIER MILROY, MINNESOTA

Kindly mention this paper when writing

Care of Sow and Pigs.

Farmers who intelligently feed and care for their pregnant sows, so as not to overload them with fat, but instead give them feeds for the development of bone and muscle, are on the right road toward the production of strong, healthy litters. Their preparedness program, however, does not end here.

Two weeks before farrowing the sow should be put into a farrowing pen so that she will become acquainted and contented in her new quarters. The farrowing pen should be dry and free from drafts. Provide the pen with a guardrail made of 2x4-inch planks set eight inches from the wall and eight inches from the floor to prevent the sow from crushing the pigs against the wall. Use only a small quantity of bedding; leaves or straw are preferable. See that the sow has plenty of fresh water.

It pays to keep the sow quiet. Assistance at the time of farrowing should be at hand if needed, but the sow need not be helped if she is getting along well. In cold weather put the newly-born pigs in a well-warmed basket and after farrowing is over the pigs should be placed with the sow, care being taken that each one gets to a teat. When the afterbirth is passed it should be removed from the pen at once and burned or buried.

After farrowing the sow should have nothing but water and a little thin slop for the first day. The feeding for the first three or four days should be light and the time consumed in getting the sow on full feed should be from a week to ten days, depending on the condition of the sow and the size and thrift of the litter. It takes plenty of sow's milk to make healthy, growing pigs. If the pigs begin to scour feed the sow less and give her plenty of strong limewater.

It is very necessary that the little pigs have plenty of exercise and all the sunlight that can be given them.

By putting into practice the essential points above mentioned the number of pigs raised to weaning should be increased. Hogs never fail to respond to good care. Kind treatment always means contentment, with its corresponding profits.

Fair Superintendents.

The staff of superintendents who will have charge of the 1916 Wisconsin State Fair has been chosen, and the list, as announced recently by Sec. Oliver E. Remey, is as follows:

Administration Building—Oliver E. Remey, state fair park.
Admissions—A. H. Jenson, Edgerton.
Agriculture—F. S. Campbell, Three Lakes.
Amphitheater Arcade—D. W. Larkin, Sturgeon Bay.
Amusements—Thomas Saxe, Milwaukee.
Automobiles—B. J. Ruddle, Milwaukee.
Bees and Honey—N. E. France, Platteville.
Cattle—H. W. Claflin, Muskego.
County Exhibits—E. L. Luther, Madison.
Dairy—Fred Marty, Monroe.
Department of Health—F. W. Luening, Milwaukee.
Education—George W. Davies, North Freedom.
Forage—E. Y. Hayhurst, Watertown.
Grand Stand—J. S. Miller, Madison.
Grounds—M. J. Sweeney, State Fair Park.
Horses—W. K. Caldwell, Morrisonville.
Horticulture—N. A. Rasmussen, Oshkosh.
Machinery—J. A. Chinnock, Hudson.
Physician—J. Robert Newman, Madison.
Poultry and Pigeons—George W. Hackett, North Freedom.
Privileges—Charles W. Harte, Watertown.
Publicity—Joseph W. Smith, Milwaukee.
Public Safety—Captain W. F. Mehl, Milwaukee.
Purchasing Agent—M. F. Blumenfeld, State Purchasing Agent.
Sheep—Ira M. J. Chryst, Hudson.
Speed—Richard J. White, Milwaukee.
Swine—James Dillon, Mondovi.
Transportation—A. W. Kalbus, State Fair Park.
Veterinarian—O. H. Eliason, State Veterinarian.
Woman's Rest, Playground, Hospital—Mrs. H. E. Stadler, Wauwatosa.
Woman's Work—Mrs. Vincent W. James, Eau Claire.
Young People's Club—T. L. Bewick, University of Wisconsin.

There has been but one important change. Professor Halpin resigned as head of the poultry department and he has been succeeded by George W. Hackett, of North Freedom, a nationally known poultry man.

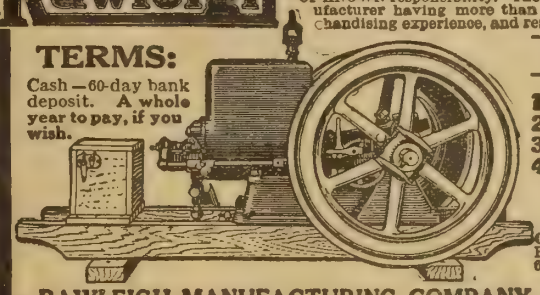
Ask your neighbor to subscribe for The Wisconsin Farmer.

Our New Catalog Tells the Whole Story

WRITE TODAY FOR A COPY

Every Rawleigh Engine is *tested on brake* to pull *15% MORE than* its rated H. P., continuously. Rawleigh Engines use gasolene, kerosene, distillate or gas; 4 cycle; make and break ignition; contact points can be cleaned while running; cylinders cast separate from base; positive speed changer; hopper cooled cylinder of semi-steel; piston ground to size; malleable connecting rod; drop forged crank, ground to mirror finish. The best made and finest finished engine on the market. You can not buy a better engine at ANY price. Buy direct from a manufacturer of KNOWN responsibility. The Rawleigh engine is backed by a manufacturer having more than a quarter century of successful merchandising experience, and resources of nearly four million dollars.

The Rawleigh



TERMS: Cash—60-day bank deposit. A whole year to pay, if you wish.

Read These Prices

1½ H.P.	$25.70
2½ H.P.	38.90
3½ H.P.	49.80
4½ H.P.	69.90
7 H.P.	96.85
9 H.P.	139.65

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W. T. RAWLEIGH, President Rawleigh Manufacturing Co.

RAWLEIGH MANUFACTURING COMPANY, 404 Taylor Ave., Freeport, Ill.

10 HP ENDURING POWER

USES KEROSENE for Fuel

First Real Solution of the Light Farm Tractor Problem

Pulls two plows in any soil fit to cultivate—three in stubble. Wide scope of utility. All gears run in oil, enclosed in dust-tight casings, on

The DURABLE DENNING

Equipped with Waukesha Motor, Perfex Radiator, Bennett Carburetor, Dixie Magneto, New Departure Ball Bearings. Write for description.

DENNING TRACTOR COMPANY Cedar Rapids, Iowa

10 horsepower at draw-bar—at any speed. Weight 3600 lbs.

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BROOKS' APPLIANCE, the modern scientific invention, the wonderful new discovery that relieves rupture will be sent on trial. No obnoxious springs or pads. Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. **Sent on trial to prove it.** Protected by U. S. patents. Catalogue and measure blanks mailed free. Send name and address today.

C. E. BROOKS, 2985 State Street, Marshall, Mich.

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A FINE 320-acre farm, 2½ miles from town and R. R., good soil, new modern house 26x38, basement barn 36x72, hog house 24x42, silo 16x30, and other buildings. In consolidated school district, telephone, good roads, $50 per acre, terms. Write at once, to Chas. P. Jenks, Owner, Trego, Wis.

UPPER WISCONSIN has the great markets of St. Paul and Minneapolis on the westward, Superior and Duluth on the north, and Milwaukee and Chicago on the south—through lines of railroad. Its cheap lands out produce—but let us send you official crop figures and state map. Wisconsin Advancement Association, 1590 First Nat. Bank Bldg., Milwaukee, Wis.

LAND SHORTAGE NEAR!

PRICES of lands near markets advancing fast. Our lands still selling in tracts to suit, at low prices and on easy terms, near $20,000,000 steel works, now running here. Free literature. Arnold, Land Agent, Rock Island Railway, 152 Wolvin Bldg., Duluth, Minn.

WANTED FARMS—Have 3,357 buyers; describe your unsold property, give price, acreage, location. 769 Farmers' Exchange, Denver, Colo.

IMPROVED and prairie farms for sale on easy terms in Red River Valley. Write for list. Dvorak Land Co., Wyndmere, N. D.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

BEST 40-ACRE FARM in Broome Co., $2,000. Particulars, photos on request. A. Mathewson, Owner, Lisle, N. Y.

KEROSENE ATTACHMENT

FOR your gas engine. A new invention that burns kesosene, alcohol or distillate in your gas engine, developing more power per gallon than gasoline. Guaranteed satisfaction. Price $5.00 prepaid. Address

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$1.00 PER WEEK Enough said. Write the Wisconsin School of Telegraphy, Dept. A, Oshkosh, Wisconsin.

HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

ARE YOU LOOKING FOR A

NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

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ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

FARMS IN WISCONSIN

TAYLOR county and adjoining counties. Dairy land region of North Central Wisconsin. Genuine bargains. Liberal terms. We are OWNERS. Desirable property accepted in part payment. LOEB-HAMMEL REALTY COMPANY, (not Inc.), Medford, Wis., or 343-4 Marquette Bldg., Chicago, Ill.

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WINNER of premiums in potatoes. I own and offer about 1900 acres cut-over hardwood lands along the Milwaukee road, including one town site, with running water, timber and water power. For sale in tracts of 40, 80, 120 acres and so on. Get my maps and price list. C. P. Crosby, Rhinelander, Wisconsin.

40 ACRES level, rich soil, 8 cleared, loghouse, barn, fenced, four miles Hawthorne, Wisconsin. $950, $300 cash, balance 8 years. Address First State Bank, Solon Springs, Wisconsin.

DAIRY-TRUCK Farmers, Attention! Send for illustrated literature describing our low priced lands near Duluth. Arnold, Commissioner, Iron Range Railway, 513 Wolvin Bldg., Duluth, Minn.

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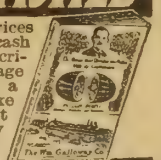
My new, 1916 low prices and selling plans, cash or time, are fully described in my new 250-page book. **Do not buy** a spreader of any make or kind until you get this book. Ask for my **special proposition** on spreaders from now **until seeding** time. My new model spreader with all steel beater, all steel V-rake, low down, light draft, double chain drive, cut under front wheels, channel steel frame, trussed like a steel bridge, steel tongue, **endless apron** and force feed makes a finer and **wider spreading** machine than ever. Shipped from Waterloo, Kansas City, St. Paul, Council Bluffs and Chicago. All styles and sizes of spreaders and spreader boxes fully described in this **big, new book.**



LOOK at our new 250 page catalog. Tells you all about the special patented features on the famous Galloway Manure Spreader; how to make a spreader pay for itself in six months time; shows why exclusive Galloway patented features make the Galloway spreader worth $25 more than any other but cost nothing extra on the Galloway; also shows full line of other Galloway implements and merchandise.

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WM. GALLOWAY, Pres.
Wm. Galloway Co., Box 30, Waterloo, Iowa
Manure Spreader Manufacturing Specialists

don't buy those EXTRA HORSES

Save DISCING, HARROWING, ROLLING.
Do all this work while you plow. Hitch a Kramer Rotary Harrow behind your plow—disc, level, harrow and pulverize as you go. Save extra teams right during the busy season. Produces a moist seed bed that germinates quickly—no clods or dry dirt to hold back your crops—no missing hills. Fits any plow, satisfaction absolutely guaranteed. Works in all kinds of soil—light draft, no extra horses required. The "Kramer" does more work than discing and harrowing the old way. Big FREE Illustrated Folder.

KRAMER ROTARY HARROW COMPANY
215 Main St.
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Raise More Corn!
Daisy Cultivator Shields Insure Bigger Crops

Absolutely the best shields ever put on a cultivator. Pay for themselves half a dozen times in one season in saving time, labor and money. Mean more corn and better corn; more profits with less labor. Used on thousands of farms. Daisy Revolving Shields absolutely prevent clods falling on young corn. Enable you to plow corn one-fourth faster and do better work. **Fine dirt passes through the shields, covering weeds and grass—clods are thrown away from the corn.** Shields revolve like a wheel on the surface of the ground—don't pick up trash and cannot get out of adjustment. Write for folder describing Daisy Shields. Send your dealer's name and we will send a pair for your inspection. Don't put off investigating this modern shield—write today.

MUNSON MFG. CO.
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AGENTS Make Money Fast With GILSON WEEDERS

THIS new, two-in-one tool takes the place of the hoe; does better work, easier, and four times as quick. Saves time, labor and money in field, truck patch, garden or flower bed. Sells on sight—everybody wants it. Nothing like it on market. Now's the time to clean up on this big money-maker. Get in quick. Liberal commissions. Write for circular and agents' proposition.

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6 Apple Trees 50c
Four to Six Feet Tall

2 early; 2 Winter; 2 Crabapple. Hardy tested varieties—Kellogg's Hardy Northern Grown trees are **backed by 62 years in the nursery business.** Send today for this bargain collection, also our 1916 Price List of trees, shrubs and small fruit plants. It is **FREE**

KELLOGG'S NURSERY, Box 224, Janesville, Wis.

The Threshing Problem Solved

Threshes cowpeas and soy beans from the mown vines wheat, oats, rye and barley. A perfect combination machine. Nothing like it. "The machine I have been looking for for 20 years," W.F. Massey. "It will meet every demand," H. A. Morgan, Director Tenn. Exp. Station. Department 14. **Koger Pea & Bean Thresher Co., Morristown, Tenn.**

Fruit and Garden

Annual Flowering Plants.

There are hosts of people who cannot be happy without a good display of flowers. You find them in town and country alike. With many growers, how to get their favorites early is an interesting question. This may be managed easily with some varieties which bear transplanting, but there are other very desirable flowers which will not bear the least disturbance of their roots and such must have the seed sown where the plants are to remain. Among these sensative beauties are poppies, sweet peas, phlox and corn flower, also the balsam and portulaca are best grown by sowing the seed where it is to grow permanently.

But some of these may be sown in the open much easier than others. There is no danger of planting the sweet pea too early, for it does best in a cool, moist climate, and it is an advantage to give it all possible of the cool spring weather. Also, all of the poppy family should be early sown, but the method of sowing seed is quite different from that used with peas. They should be planted in drills an inch deep, but the poppy seed should be scattered upon the surface. If the bed has been prepared in the fall all the better. Simply level it and scatter the seed thinly. Do not try to cover it more than to draw the back of the rake over the surface.

The phlox drummondii is another early bird and its bloom will be more satisfactory if it has the chance for an early start. The balsam and portulaca need not be planted until May 15th, for they need a warm soil and weather and nothing is gained by early planting out-of-doors, neither by hotbed starting.

But there is a long list of the flowering annuals which may, with advantage, be hotbed started. They transplant easily and every day of growth secured in early spring forwards the blooming season that much. Sweet alyssum, asters, marigolds, calliopsis, coxcomb, pansies, pinks, zinnias, stock, nasturtium, snapdragon, etc., with good hotbed space may be sown the last of March. It is always best to sow seed thinly to secure a stocky growth. And after the plants are well started remove to flats, giving each plant three inches of space. There should be about three inches of dirt in the flats. The advantage of this method is that when you are ready to remove to the permanent outdoor beds a month later they can be transplanted without any shock or injury whatever. All you have to do is to cut down between the plants, removing the entire earth, and the plants will never know that they have changed locations.

The varieties which we have named are the standards. They are the ones which give satisfaction. There are dozens of other varieties, all of them more or less curious and interesting, and they will do for purposes of experiment, but the ones named are reasonably sure to do well and they will give you an abundance of bloom both for cut flowers and for garden display.

Interest in Cabbage.

The season of 1916 will mark a revival in the cabbage production of southeastern Wisconsin, particularly in Racine county. The new disease-resistant variety of the Holland type will be planted in large quantities by many of the growers in that section. Through the co-operation of a local committee of cabbage men considerable seed from this resistant type has, during the winter, been distributed among the growers.

Each grower will be encouraged to grow his own seed from carefully selected plants of this Wisconsin Hollander strain. Meanwhile the college of agriculture is working to perfect a disease-resistant kraut strain.

It takes two years to mature cabbage seed in Wisconsin, but in order to save one season selected heads were sent last summer to points in Florida, Texas and Louisiana, and reports from these places indicate that the plants are already in blossom and good yields of seed for planting in Wisconsin in May will no doubt be available.

Control of Cabbage Maggot.

Considerable study has been given at the Minnesota farm to the matter of controlling cabbage pests. This study has been directed chiefly to the control of cabbage and onion maggots. The director of the station issues the following statement, which will be of interest to our Wisconsin growers: In experiments at University Farm last year and the year before this mixture was used for cabbages: Lead arsenate, three-fourths ounce; New Orleans molasses, one-half pint; water, one gallon.

This mixture was sprayed over the plants every week, or twice a week in rainy weather, from the time they were set out until May 20th. For a second brood of the pests the spray was applied from July 1st to 20th.

A spray that has been used to destroy the onion maggot at University Farm is made of: Sodium arsenate, one-fifth ounce; New Orleans molasses, one-half pint; water, one gallon.

Such a solution, however, tends to burn the leaves of cabbages. The barred wing onion maggot is controlled by destroying all old, infested onions in the spring.

The first indication of the cabbage or onion maggots is the wilting of the plant after the pest has attacked the underground parts.

Guaranteed Seed Corn

WE recently sent average identical sample of our Northern Iowa latitude grown and Central Minnesota (Redwood Co.) grown seed corn to the foremost agricultural college of this country and have just received their official report, as follows:

Nor. Iowa lat. grown.		Cen. Minn. (Redwood Co.) grown.	
Wimple's Yellow Dent	97%	Northwestern Dent	96%
Iowa Gold Mine	96%	Wis. No. 7 or Silver King	92%
Goddard's Sil. King	94%	Minnesota King	96%
Reid's Yellow Dent	97%	Minnesota No. 13	88%
Minnesota No. 13	90%	Minnesota Early White Dent	73%

The above tests prove that our stocks of genuine NORTHERN GROWN Seed Corn are the highest qualities you can buy—regardless of price.

We Give You a Sworn Statement as to Where Our Seeds are Grown

We do not handle any dent corn from either central or southern Iowa, Nebraska, Kansas, Missouri or Illinois, as such seed, although of good germination, cannot ripen and mature in the north. Look at your map. **Don't buy seed corn that is grown south of you.**

We GUARANTEE every bushel of Seed Corn we ship to be exactly as represented in every particular or money refunded.

Get our FREE catalog at once and send your order promptly if you want any of the above lots.

THE ADAMS SEED COMPANY
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This Man Makes $45.00 Per Week

His name is A. J. Roberts. He lives in Missouri. For a number of years he was "tied to a desk," but the salary and the irksome duties connected with his position were discouraging.

Fortunately, he became interested in our proposition. Result—he is now his "own boss," makes bigger money than ever before, and invests nothing but his own energy and personality.

Perhaps ours is just the proposition YOU are looking for? Address your inquiry to

AGENCY DIVISION, THE WISCONSIN FARMER, MADISON, WIS.

Pierces' Farm Weeklies are composed of the following well-known publications:

The Wisconsin Farmer, Madison, Wis.
The Iowa Homestead, Des Moines, Iowa.
The Farmer and Stockman, Kansas City, Mo.

NEW CROP, WESTERN GROWN, UPLAND **ALFALFA** TESTED FOR PURITY
At special bargain prices. Write for samples, price list, and illustrated circulars telling how to grow and use the crop.
SWEET CLOVER WHITE OR YELLOW
Of excellent purity and quality. Samples, circular of information and Red Ink Bargain Price List FREE.
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EAR SEED CORN
SELECTED ears, 1914 crop. Minn. No. 13, test 93 %, $3.50; Early Murdock, test 93 %, $3.50; Northwestern Dent, test 95 %, $4.00. All home grown. Bags free. A.J. Pietrus, Sleepy Eye, Minn.

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When writing to advertisers please mention The Wisconsin Farmer.

UPPER WISCONSIN

Farming Pays in Douglas County.

In a letter recently made public Mr. W. H. Webb, of Superior, Wisconsin, answers the question, "Does Farming in Douglas County really pay?" His answer is an emphatic "yes." He remarks that the trouble with a good many of the visitors to this county is they rarely go outside of the city of Superior. This gives them absolutely no opportunity to judge of the wonderful development among the farmers of the county. Mr. Webb further charges that the bankers of the city of Superior do not take the trouble to acquaint themselves with the agricultural development of their county. He says that he could furnish the names and addresses of hundreds of farmers in Douglas county who are not only earning, but also saving thousands of dollars each year.

Seven years ago the two Christensen Bros., at Wentworth were worth less than $1,000 together, and today you could not buy their farm for $30,000 over and above all indebtedness. They have cleared nearly $5,000 a year over and above their living and all expenses. There is not an acre of improved land around Poplar or Foxboro that can be bought for $100 per acre. Ten years ago these lands were bought for $5 to $10 per acre. The difference of at least $90 per acre has been so much clear profit to the men who have lived on and cleared the land—besides a good living for themselves and family, and these lands are paying at least 25 per cent per annum on the valuation of $100 per acre.

Mr. Vaughn and Mr. Jacobs, of Poplar, recently paid $10 per acre—including unimproved as well as improved land—and they would not sell now at that figure.

Mr. Webb suggests those interested ask Schmidt Bros. or Sigmund Haidacher or a dozen other Foxboro farmers what they will take for their farms and whether farming pays or not.

Last year Mr. Webb harvested forty acres of oats near Brule—on new breaking—that paid the entire cost of the land, paid for the clearing, breaking, disking, sowing, harvesting, threshing and marketing the crop, and something besides, and that same land today is actually worth $100 per acre because it will pay a handsome net rate of profit on that valuation over and above all expenses.

Rutabagas in the Ration.

Mr. Ottos H. Bergh, of the Grand Rapids, Minnesota, experiment station, is advising the use of rutabagas as a substitute for corn on newly cleared land. He finds considerable land on which corn for silage is not a certain crop. He says that as a succulent feed for dairy cows, young stock and hogs, a twenty-ton crop of rutabagas is equivalent to a twelve-ton crop of corn. By introducing clover hay and oats a well-balanced ration may be maintained. Twenty pounds of clover, fifty pounds of rutabagas and six pounds of oats make an ample daily ration for a cow giving thirty pounds of milk containing 4 per cent of butter fat. From fifteen to twenty tons of roots to the acre is the average yield in northern Minnesota on well-manured land, so an acre yield, on the average, will provide fifty pounds daily to each of three cows for seven or eight months. Mr. Bergh's observations are applicable to many points in Upper Wisconsin. He advises planting rutabagas in June. The seed bed should be thoroughly prepared. One and one-half pounds of seed will sow an acre, and seed can be bought in northern counties at from 50 to 75 cents per pound. An ordinary grain drill with a grass seeder attachment is a good machine for sowing.

Three out of every four holes should be stopped up in a seven-inch drill. This will make the rows twenty-eight inches apart. In a six-inch drill, four out of every five holes should be stopped. The seed drill can then be set as for clover seed, of course setting it for four or five times the amount indicated on the register, as only one-fourth or one-fifth of the holes are left open.

The plants may be thinned with a hoe. A strong plant at from every nine to twelve inches will give the largest yield. Cultivation should be like that of potatoes. When ready to harvest the tops may be cut off with a hoe and the roots dug up with a potato digger.

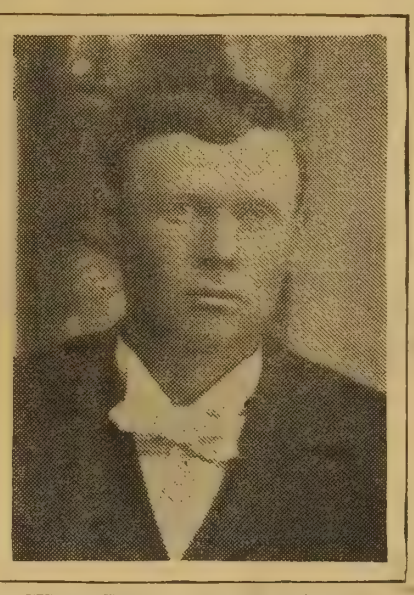
The roots may be stored in a cellar or root house, which saves the expense of a silo.

The dairymen of Denmark and neighboring countries grow little corn, and depend largely upon rutabagas for feed for their herds. Young animals wintered on rutabagas make faster gains when turned out on pasture in the spring than stock fed on grain.

Corn Experience in Upper Wisconsin.

To the Editor:—Would be pleased to give you some of my experience in growing corn:

First, I bought eighty acres of heavily timbered land, mostly maple, some rock elm and butternut. We took off from 9,000 to 10,000 feet of saw-log timber to the acre and about ten cords of body maple cord wood. I moved ten acres of this timber in the winter of 1913, and in the spring we cleared the land all up and burnt everything clean by the 16th of May and planted my first Yellow Dent on that date. I didn't have time to drag with a spring-



CHAS. HULL, TIGERTON, WIS.

tooth harrow. I thought I had better get the corn in, as it was very warm. We took three round poles, two inches in diameter and eight feet long, and peeled the bark off and set them in line to plant by. As we approached each stake we set it over four feet. By doing this we got our rows straight enough to use a spring tooth cultivator and one horse. This is new-land farming in Upper Wisconsin. The ground sloped to the south and the soil is a deep, black loam. My corn was ripe by the 10th of September and it went 122 bushels to the acre.

The next year, 1914, I did the same thing—planted on new land that's logged off in the winter—and got 138 bushels per acre of the same kind of corn, planting on the 16th of May, and my corn was ripe enough to pick seed from on September 3d.

Last season I did the same, but planted on the 12th of May. It was ripe about the 12th of September, and some of this crop was what I sent to Madison for exhibition. I got 100 bushels to the acre this year and took third prize in the state for No. 8.

In selecting my seed I have selected just the very prettiest cylinder-shaped ears, as they ripen quicker than the larger, stubby ones.

It is hard work to farm new land, but I sold lots of seed corn and had a good crop of everything. Had lots of strawberries. Everything grows good here if you take care of it.

Shawano Co., Wis. Chas. Hull.

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Please send me free booklets and full information regarding money-making farms along the Great Northern Railway in Montana.
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Studying the Potato.

R. A. Kolb, agricultural agent for Taylor county, has planned a series of illustrated talks in the rural schools during April and May. The boys and girls will be asked to learn such important facts as vine and tuber characteristics, seed stock which is disease-free and which conforms to Rural New Yorker type requirements, and the best methods of fighting the common potato diseases.

Four Feet of Snow.

Records kept by H. A. Dimock, a pharmacist at Ladysmith, Rusk county, show that during the past winter about four feet of snow fell in that neighborhood. The heaviest snowfall was on February 8th, when the total was six inches. Six inches of snow also fell between the 10th and 12th days of February. February had the heaviest total fall of snow.

Feeding Cattle in Rusk County.

Gus Mitchell, of Rusk county, has arranged to ship 400 head of cattle from Chicago to his ranch north of Ladysmith. These cattle will be fattened and returned to the Chicago market. It is the understanding that Mr. Mitchell is doing this work on a commission basis and dealing directly with one of the largest packing firms in Chicago. On this basis, as reported, Mr. Mitchell makes no outlay of capital, and if this system is found to be satisfactory it may open up a new industry for Upper Wisconsin farmers.

Farmers Store Burned.

A farm store at New Auburn was recently burned with a loss of $23,000, including building and stock. This was one of a string of stores operated by the Farmers' Store Company at Bloomer, Chetek, Cameron, Sand Creek and New Auburn. Steps have been already taken to build a modern new building at New Auburn. The new store will be practically fireproof.

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DAIRY

Advice on Raising Calves.

The calf should be left with its mother for the first two to four days so that it may get the colustrum or "first milk." From then until it is four weeks old it should be fed from two to five pounds of its mother's milk three times a day. Experienced breeders feed calves which are weak a smaller amount, but give it oftener. There is more danger from overfeeding than from underfeeding a young calf. Have the pails clean and the temperature of the milk as near as possible that of the freshly drawn milk. This advice and many other important pointers in the raising of better dairy calves are made public in a Wisconsin College of Agriculture bulletin recently written by G. C. Humphrey and W. E. Markey.

During the fifth week change gradually from whole to skim milk. Do not increase the amount fed until about the eighth week, when the calf needs from six to ten pounds twice daily. Froth, which rises on separator milk, should not be fed to calves. It is almost sure to produce indigestion, bloat and scours. If available, skim milk can be fed profitably until the calf is a year or more old. In order to get the greatest returns from the milk the amount fed to any calf should not exceed twenty pounds a day. Corn silage, free from coarse corn and butts and fed in small amounts, makes a good feed for calves which are a month or six weeks of age.

When the calf is from ten days to two weeks old give it a small amount of choice mixed, clover or alfalfa hay. A little later give a very small amount of grain and increase the allowance gradually as the young animal develops. It is well to keep a calf a little hungry, rather than to tax its digestive organs. A calf's appetite and the condition of its bowels are the two arms to the guide post which mark the course the feeder should follow.

Prevent young calves from eating coarse butts of fodder or cobs from silage, as these will cause serious indigestion and scours. Nothing of this kind should be left in the feed or bedding. Occasionally a craving appetite for hay and straw results in too much being eaten and indigestion follows. In such cases separate the ailing calf from its mates and reduce its feed until the appetite becomes normal.

THE DELICATE AGE.

First four weeks when care should be exercised to keep the calf clean, comfortable and thrifty.

The calves should be separated and penned in groups according to their ages. They can be fastened in

SKIM MILK AGE.

There should be a gradual change from whole milk to skim milk.

stanchions when milk is fed and grain can be supplied them immediately after they drink. Feeding the grain at this time and keeping them locked in the stanchions until the grain is eaten helps to overcome the habit of sucking. Calves that continue to suck one another after being turned loose should be separated or some other means taken to prevent the practice. Heifers often have their udders injured by being sucked.

A good grain mixture for young calves consists of fifty parts of whole oats, thirty parts of wheat bran, ten parts of corn meal and ten parts of oil meal. After calves are six months old less grain will be wasted if it is ground. The amount of grain fed should vary from a small handful for the young calf to three pounds, or possibly more, in some instances, to heifers from twenty-four to thirty months of age. If for any reason a heifer is thin an extra amount of grain should be fed to get her in good condition.

SIX TO FIFTEEN MONTHS.

An often neglected stage in the calf's life.

During the first year feed the calves regularly in the barn and turn out for exercise in shady paddocks, or during the nights only. This will insure satisfactory growth at an age when it may be secured at lowest cost. Supply water and salt to the calves daily.

During their second year feed or pasture the heifers in such a way as to get the maximum growth. It has been found that the most productive and profitable cows are produced by getting the maximum growth from birth to maturity. Heifers which are bred at from sixteen to twenty months of age and that are in good flesh at calving time usually develop satisfactorily.

Calf pens should be kept clean and comfortable. The calves should be protected from cold cement floors by board overlays. Cold drafts of air often prove fatal and should be carefully avoided. Abundant window space lets the sunlight in during winter and in the summer can be darkened to keep out flies and heat. The stable needs ventilating so as to supply fresh air and to regulate the temperature. Young calves should never be exposed to a hot, burning sun. Watch the calves carefully and whenever necessary treat them for lice and ringworm.

THE BREEDING AGE.

Fifteen to twenty months. Do not breed younger than fifteen months.

Where skim milk is not available for feeding purposes calves are very likely to suffer and make an unsatisfactory growth. However, if care be taken calves may be grown successfully without skim milk.

In one of the prominent cheese districts of Wisconsin it is an interesting fact that very few calves are fed whey. The whey is fed to pigs and the calves raised on whole milk, oil meal gruel and hay and grain. The usual practice is to feed whole milk regularly until the calf is from four to six weeks old. Then a tablespoonful of oil meal, thoroughly cooked, is added to a pint of water and substituted for a pint of the whole milk. Every third day following an additional pint of water and a tablespoonful of cooked oil meal is substituted for a pint of the whole milk until half the milk ration consists of oil meal and water. This half-and-half mixture is usually continued until the calf is from three to four months old and able to do well on the ration of hay and grain.

In a prominent condensery district a breeder of fine Holstein cattle who gets splendid size in his cows feeds whole milk until the calves are twelve weeks old and then depends on whole oats, hay and pasture. In all instances calves should be encouraged at as early an age as possible to eat grain and hay. Oats alone, or bran and oats, or a mixture of fifty parts oats, thirty parts bran, ten parts oil

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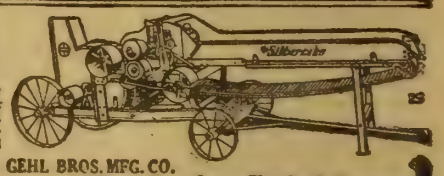

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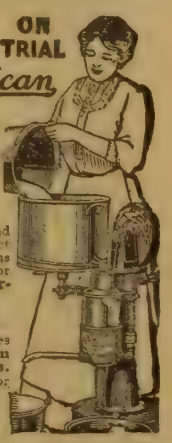

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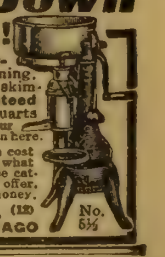

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No. 6½

meal and ten parts corn meal make a good ration. Hay of fine quality and preferably well-cured second cutting of clover or alfalfa should be fed. Pure, fresh water should be supplied daily. Calves should have free access to salt at all times and everything should be done to provide clean and comfortable quarters.

If whey is used for raising calves it should be sweet and clean and fed at about the temperature of freshly drawn milk. Each patron of a cheese factory should have special cans for getting as much whey each day as will be needed for the calves and have these filled directly from the cheese vat. Whey from the general whey vat is likely to be sour or otherwise unfit to feed to calves. Sweet whey should be fed only after the calf has been well started on whole milk.

One man reports good results from feeding sweet whey and shelled corn. If a handful of shelled corn is thrown into the whey the calf soon learns to eat this immediately after drinking the whey. Whey, shelled corn, good hay and pasture, when in season, together with good care, gave good results for this stockman.

Good judgment must be used in feeding the calf when it is very young. Have feeding buckets clean at all times. To keep the calf healthy and growing feed at regular intervals and increase or change the feed gradually. With all the knowledge that can be gained from reading the calf feeder must profit by experience and learn as soon as possible what system of care or feeding will under his conditions produce the best results.

Good Record by Grade.

The Wisconsin Farmer presents herewith a reproduction of a kodak picture of a ten-year-old grade cow. This cow was second best in the report of the Eau Claire County Cow-Testing Association No. 2. The

TEN-YEAR-OLD GRADE COW OWNED IN EAU CLAIRE COUNTY.

record covered the year 1915. This grade produced 452.9 pounds of butter fat from 9,224 pounds of milk with an average test of 4.91 per cent. This same grade Jersey has three daughters in the same herd that produced as follows:

	Age	Lbs. milk	Test	Lbs. B. fat
No. 1	7	6948	4.79	333.2
No. 2	6	7057	5.76	406.6
No. 3	4	7394	4.64	343.4

This record goes to show that this cow is not only a good producer but she is also a reproducer.

Waukesha Jersey Breeders Meet.

The annual meeting of the Waukesha County Jersey Breeders' Associatoin was held at the Fountain Inn Hotel, Waukesha, on Friday, March 31st, with about thirty enthusiastic Jersey breeders present. The forenoon was devoted to the business session which was followed by a banquet at noon and a speaking program.

William Peffer, of Pewaukee, was elected president at the annual election of officers and Julius Ries, of Brookfield, was honored with re-election as secretary. George Elliott, of Templeton, was chosen first vice president; Miss A. E. Fintell, of Genesee, second vice president, and William Knight, of Eagle, treasurer.

F. F. Showers, of Delavan, president of the state Jersey Breeders' Association, was present and asked the Waukesha county breeders to issue an invitation for holding the state convention this summer in that county. Delavan had been suggested by the Walworth county breeders, but he desired an invitation from Waukesha county and such an invitation was issued. It is proposed to hold the state meeting in late June or early July and Mr. Showers said that the association directors expected to hold two meetings—one in the southern part of the state and the other in the upper half of the state, probably Waupaca, Eau Claire or some other point, on the following day. The Waukesha breeders in inviting the state association also asked permission to hold the convention at the Fewacres Farm of Frederic Underwood, which can be reached by street cars. Final decision will be made by the officers of the state association.

Mr. Showers filled the place on the program assigned to H. C. Taylor, of Beloit, who was unable to attend. Mr. Showers, with forty-seven head of Jerseys on a forty-acre farm, made a rousing good Jersey speech and praised in glowing terms the enthusiasm now being shown by Jersey breeders who are determined that she shall come into her own. The state association, he said, is growing rapidly and he expects the coming conventions to be the largest and best ever held.

J. R. Danks, of the college of agriculture at Madison, followed Mr. Showers with an enthusiastic Jersey talk. He declared that she can produce milk as economically as any cow on earth and that one reason she had not kept pace with the other breeds was that her owners were too contented and too easily satisfied. Mr. Danks spoke of market conditions as they affect the Jersey and said that the Southwest and other sections where the Jersey seems ideally adapted are in the market for pure-bred stock and that Wisconsin will get its share of this trade when the Jersey men acquaint the buyers with the quality of Wisconsin Jerseys. Wisconsin had just as well be the producer of foundation herds of Jerseys for other communities as Holsteins, Guernseys and others, he said.

The association approved the action of Mr. Ries in offering a pure-bred calf to the winner in the Waukesha county calf contest which closes August 31st. Each of the associations are offering a bull calf and twenty have so far qualified in this contest, the prizes in which go to the youngsters raising the calves the most economically. S. A. Baird, representing the Holstein association, explained the status of the sales pavilion which is to be built and completed in Waukesha before June. All the breeds are interested in this pavilion. Musical selections and the presence of many women boosters of the Jerseys at the banquet served to make an already enjoyable meeting all the more successful.

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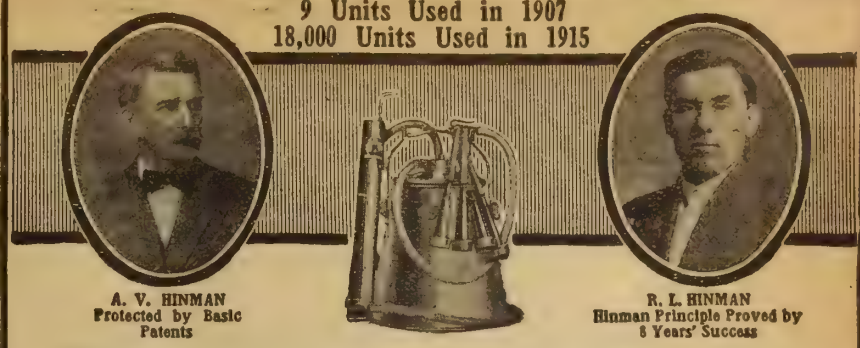

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FROM the first we have worked on the principle of a Valve Chamber in pail cover—and to make and break air pressure by an individual pump connected to Valve Chamber by air hose. We thus did away with complications of compressed air tank and pipe line and saved over one-half the cost.

OUR plant has been doubled three times. Today we are turniug out 500 machines a week. This alone is evidence that the *Hinman Milker* is right. Our practical farming and dairy experience has enabled us to solve the milking problem. Hardly a day passes but that we receive expressions of deep regard from the dairyman who found that the

HINMAN MILKER

has made it possible and profitable for them to remain in the dairy business.

Write us your requirements and we will advise you to the best of our ability. We will not advise a larger outfit than you really need, or a smaller one than you can use to advantage.

We have an outfit at a price that we know will pay for itself in a short time.

It is *SIMPLE, DURABLE and EFFICIENT.*

SEND COUPON FOR FREE INFORMATION

Out of our experience as dairymen and with our eight years' success selling **HINMAN** Milkers, we can advise you about size of equipment that will handle your dairy economically.

Hinman Milking Machine Company

62-72 Elizabeth St. Oneida, N. Y.
Service dealers everywhere

Mail Today — Clip Coupon

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Hinman Milking Machine Co., 62-72 Elizabeth St., Oneida, N.Y.
Without obligation to me, send catalog and quote approximate price on outfit to milk:
No. of Cows ..... No. of Stanchions .....
Dist. between each.....Kind of power.....
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Proof Against Wisconsin Weather

The Wood Tire Hollow Wall Silo prevents freezing, even when the mercury ranges from 20 to 30 degrees below zero, except sometimes a very little. It is built on a new (patented) principle which gives you a *real building*, so rigid and strong that it will resist storms and be as permanent as your house or barn. Moreover, it is easy to erect as it forms its own scaffolding. No guy wires needed—no hoops to keep adjusted—no staves to shrink or swell, but a continuous, smooth, double wall with a 3¾ inch air space from base to roof, the inner wall being of *California Redwood.*

GUARANTEED FOR 20 YEARS
"But Lasts a Lifetime"

Hundreds of Wood Tire Silos are in use in Wisconsin and neighboring states, perhaps one near where you can examine it and talk with the owner. Not a single one has ever blown down or even racked out of plumb. All give perfect service. If you are planning to buy a silo, send at once for our folder which shows how they are built. A postal brings it to you by return mail. Write today. *Agents wanted.*

Wood Tire Silo Co.
7 Clark St., Sheboygan Falls, Wis.

SECTION OF WOOD TIRE

Patented March 10, '14.

ROSS Ensilage Cutters and Silo Fillers with Blower

Guaranteed free from defects for life of machine.

Are built especially for the Thresherman who has steam power. Our Nos. 16-18-20 and 24 Silo Fillers are equipped with STEEL Cutting Apparatus and STEEL Blower. The Thresherman who makes a business of filling silos will find it profitable to use The Ross Silo Filler on account of its low cost of upkeep. **There is nothing on the market like the Ross.** You will find it to your interest to buy early as delay means advance in price. **Write today.**

THE E. W. ROSS CO., Box 154 Springfield, O.

ROSS

A complete line at different prices. Strength, easy to operate, safe and simple locks. The best of materials are used in all models. Wood, or steel with wood lining. They are

Adjustable to Small Calf or Large Cow

We also make a complete line of Steel Stalls for cattle or horses; Water Bowls; Cow, Calf and Bull Pens; Feed Trucks and 26 styles of Carriers. Ask us about Stanchion No. 3—it's a winner.

MITCHELL MFG. CO., 2906 Forest Home Ave. MILWAUKEE, WIS.

MITCHELL STANCHIONS

STEEL STALLS

SEND FOR CATALOG of MITCHELL BARN EQUIPMENT

Internal and External Cleanliness

Vigorous Action During the Spring Months in Cleaning and Disinfecting Will Cut Down Losses From Diseases.

CLEAN up and keep clean" might well be the slogan of every corn-belt stockman. The sentiment of such a slogan applies alike to sheds, stables, barns, yards and pens, and even the thrifty housewife might not be averse to appropriating some of the sentiment as she performs her daily tasks.

The matter of preserving good health of farm animals always forces itself upon the special attention of stockmen during the spring months. This is partly due to the fact that new-born animals have to be dealt with at such a time. The bawling of calves, the squealing of pigs and the bleating of lambs, these are the sounds that greet the stockman's ear during the spring days. If there is health and strength and vigor among the new-born, then there is harmony in the chorus, but if weakness, ill health and contagious disease find foothold, then every squeal or bawl or bleat is a rasping discord on the nerves of the stock owner.

Formerly the law of luck or chance played an important part in the live stock program, particularly as applied to the control of disease. Men were helpless because they did not understand the nature of the ailments the farm animals were heir to and it was consequently uphill work to save the day against the spread of many forms of contagious diseases. Vast changes have taken place in this regard and every stockman today is more or less familiar with the theory of germ life. With the spread of knowledge there have been introduced new and efficient means of combating dangerous forms of contagion and the stock farm is badly equipped and very much out of date today that is not stocked with disinfectants and antiseptics, together with appliances and equipment for the utilization of these products in the most effective way.

THE HOG YARDS SHOULD BE DISINFECTED.

GOING AFTER THE ROOSTS AND DROPPING BOARDS.

FENCES AND WALL SHOULD NOT BE OMITTED.

Stables are frequently given a regular old-fashioned housecleaning. Old litter is removed and worthless rubbish destroyed so that the walls, floors, mangers and stalls can be completely and thoroughly disinfected. The hand spray pump has lightened this task and the inexpensive coal-tar product has become a most effective agency in destroying dangerous forms of germ life. The coal-tar products, while possessing powerful disinfecting qualities, are, at the same time, not in the least injurious to the skins or coats of farm animals, so that in sousing the walls and floors it is frequently the custom to give the animals themselves a going over, thereby destroying lice, mange and other skin parasites and diseases.

It has been demonstrated over and over again that hog cholera can be stamped out and kept out by a system of yard and pen cleansing and by thoroughly disinfecting accompanied by the sensible use of serum. Cholera is without doubt a germ disease, although the specific organism responsible for the enormous loss from this disease has never been isolated by the scientists. The use of disinfectants, however, indicates that whatever the agency is that is responsible for spreading the disease, it succumbs to the attack of the spray pump when the right ingredients are utilized in plentiful supply. Stockmen who are making the most conspicuous financial success are invariably strong believers in the principle of yard, pen and stall disinfection. Around the hog quarters they are most painstaking in the care they give to the feeding utensils, barrels and troughs. Lime is used freely in yards and around feeding quarters and not infrequently in drinking water. Indeed, many stockmen place a peck or so of slaked lime in the large drinking trough used by horses and cattle, and they claim it to be so much the better if hogs can have access to water containing a little lime. It has a sweetening effect in the digestive processes and it is never injurious, assert those who have tried the plan.

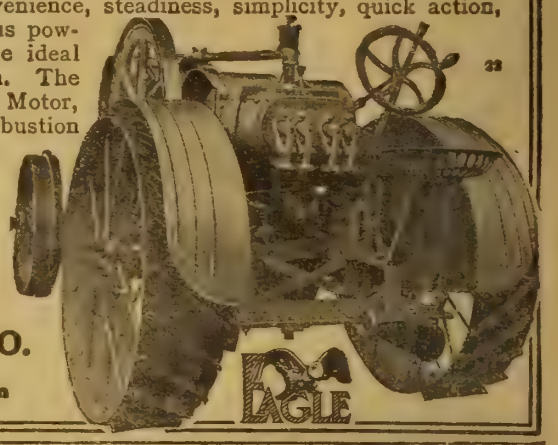
But there are other enemies whose attack must be watched just as assiduously as the injurious forms of germs. We refer to the internal parasites which are responsible for such heavy losses, particularly among our hog population. It would not be putting the matter too strongly to say that hundreds of thousands of dollars are wasted annually in feedstuffs consumed by animals infested with internal parasites. The hog's nature contributes to this internal infestation, because we all have to concede that

The Tractor For Small Farms

To meet the demand for a reliable tractor for small farms, we are building our famous EAGLE two-cylinder engine in tractor form. You get a perfectly-balanced, compact and *dependable* tractor that hits the hard places and goes through with power to spare—and still works smoothly. And when you put it at threshing, cutting silage or other belt work,

You Get Power—And to Spare

You want a tractor that will give you perfect service for *both* your belt and traction work—one that is built as much for the one purpose as for the other. Safety, convenience, steadiness, simplicity, quick action, perfect control and surplus power make the EAGLE the ideal tractor for the small farm. The EAGLE Valve-in-Head Motor, which gives cleaner combustion and more power than the ordinary type of engine, is one of the secrets of the success of EAGLE GAS TRACTORS.



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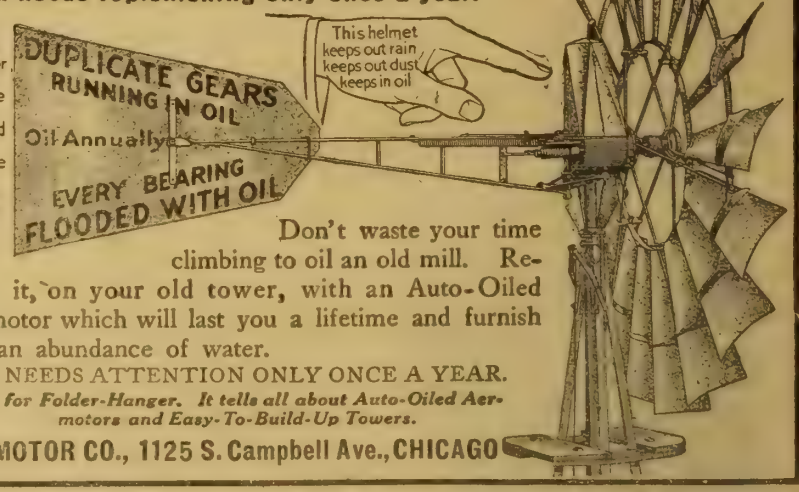
ALL WORKING PARTS INCLOSED
and **flooded with oil** from the supply in the gear case, which **needs replenishing only once a year.**

Put your old Aermotor wheel and vane on this self-oiled motor, and have an up-to-date outfit at small cost.



Don't waste your time climbing to oil an old mill. Replace it, on your old tower, with an Auto-Oiled Aermotor which will last you a lifetime and furnish you an abundance of water.

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SEEDS

"Purity Brands" have always been the highest qualities obtainable each year. Hundreds of farmers will not experiment with any other. All seeds sold on absolute guarantee of **purity** and **germination**—being subject to your test and inspection and money refunded if not better than we represent. **Timothy, Clovers, Alfalfa, Mixed Timothy and Alsike, Blue Grass, Millets, Seed Corn, Seed Oats, Seed Flax, Seed Grains,** etc. Samples and prices free on request.

THE ADAMS SEED COMPANY **BOX 50** **DECORAH, IOWA**

the hog's table manners are bad. He prefers clean quarters and he likes a clean feeding ground, nevertheless the hog is continually on the hunt for food and he will find it even if he has to root over all kinds of filth in the finding. This means that the eggs of injurious parasites are taken into the intestinal tract, where they find conditions favorable for their incubation and sooner or later injurious results are in evidence from their habitation of the intestines.

SERIOUS AILMENTS MAY BE AVOIDED BY FREE USE OF THE HAND SPRAYER AND A GOOD DISINFECTANT.

Nature has fortified these pests with effective means of persistence and their dislodgment from the system only comes when they are destroyed. Fortunately, ways and means have been found to kill these parasites without injuring the hog, and with the present high price of feed no man is justified in taking the risk of wasting large quantities of feed by shoveling it to hogs that are infested. There are various means of destroying these pests and these are frequently referred to in the veterinary department of this paper. There are commercial worm remedies upon which stockmen are now placing great reliance. Formerly santonin was used in large quantities, but the price of this product has almost placed it beyond the reach of stockmen, so that more and more men are resorting to the use of other ingredients.

Then, above all else, it must be remembered that there is a close relationship between certain classes of the stockman's enemies, namely, between germ life and parasite life. Individuals can be found here and there who are firmly entrenched in the belief that by a system of proper feeding and care they can build up the constitutions of their animals so that they become immune from the attack of contagious diseases. And there is apparent foundation for their belief, because, in the case of hog cholera, certain individuals in almost every herd seem to possess a natural immunity. It may be due to vigorous constitutional powers and to an inheritance that naturally fortifies them against disease.

The existence of such "immunes" furnishes the foundation of the belief of men who have spent a lifetime raising hogs without having disease on their premises. It goes without saying, however, that this natural immunity can never exist where animals are weakened by ravages of internal parasites. No inherited force can withstand the weakening influences of these pests and when once the constitution is undermined the way is paved for the introduction of the dangerous contagious diseases. Thousands of cases might be cited where a mistaken diagnosis of disease has been made when the blunder has been traceable to the presence of parasites, and what could be more irrational than the practice of using serum and virus on hogs weakened almost to the staggering point by the presence of intestinal parasites? A few days following the treatment the hogs are swept away like stubble before a prairie fire and the loss mistakenly attributed to carelessness on the part of the individual who administered the treatment, or, on the other hand, to the impotency of the serum product.

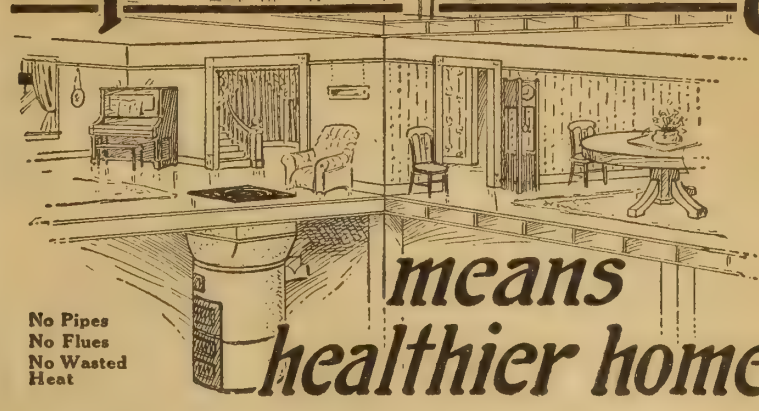
WARFARE AGAINST GERMS MUST BE CONSTANT.

It is up to the stockman to clear the decks in advance, building up the constitutional powers of his animals by the wise practice of keeping their quarters clean, judicious feeding methods, coupled with sensible and rational use of the proper kinds of internal parasite-destroying agencies. But the greatest of all health-giving agencies comes to the stockman without cost to him either in labor or money. It is the beneficent sunshine. No germ of contagion can exist longer than a few seconds in the presence of sunshine rays and this is why all farm buildings should be planned so that the greater portion of them can receive a sunshine bath some time during the day. There are many reasons why the so-called individual hoghouse has become popular and the chief of these is the advantage that it affords in respect to the admission of sunlight. Not only is it possible to move these houses from place to place but when once removed their old quarters are immediately disinfected by nature. In proportion to wall space there is usually a much greater area of glass in these small houses than in the central hoghouse and what can be more helpful to young stock on a cold day when the winds are bleak from the North or Northwest than to have the kindly rays of the sun bathing the little pigs, the lambs and even the chicks? To shut out the sunshine is to close the door to life itself, and great is the loss that is annually caused among young stock by our failure to utilize in the fullest sense this great life-giving force.

INTERIORS, BOTH FLOORS AND WALLS, OUGHT TO HAVE AN OCCASIONAL LIMING.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Pipeless Heating



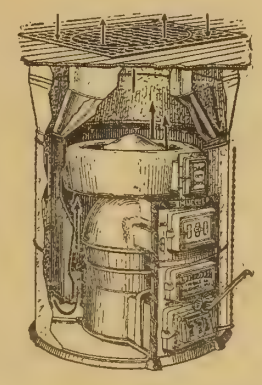
No Pipes
No Flues
No Wasted Heat

means healthier homes

PUT a Mueller Pipeless Furnace into your cellar and watch the difference in your family's health. Dangers of "catching cold" by going from warm rooms to chilly ones will be lessened, for the Mueller Pipeless will keep every room in the house at a comfortable temperature. The constant circulation of air will tend to prevent headaches, colds, catarrh and other ills.

And oh, the comfort of it! No more piling out on the icy floor to build the fire of a zero morning—no more lugging coal in and ashes out—no more of that twice-a-year wrestle of setting up and taking down the stove. No more dirty walls and sooty ceilings. Even heat in every room—and it all comes **from one register**—you don't have the costly, disagreeable job of tearing up your house to put in flues and pipes.

The Mueller Pipeless Furnace can be used successfully in both large homes and small. It is easily installed in any cellar, or can be used in homes having no cellar, simply by digging a pit to place it in. No heat wasted—no spoilage of produce stored in cellar. Easy to run. Burns hard or soft coal, coke or wood.



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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Hitching to Tractor.

Would you please give an illustration of the best way to hitch two drills to a tractor, also a drag behind the drills?

Answer.—There are many different tractors on the market requiring different hitches. It is impossible for us to give you much definite information as to your particular outfit. You should write direct to the manufacturer of your tractor. He will be pleased to give you instructions for making the best hitch possible for his machine.

Repairing a Cracked Jacket.

I have a gasoline engine that has a cracked water jacket. Is there any way in which it can be soldered?

Answer.—It can be soldered if proper care be taken to make the solder stick. File a V-shaped groove the full length of the crack and about half way through the jacket wall. The groove may be chipped out if the wall is quite strong, using a small, sharp diamond nose chisel. It is safer to file it out. After the groove has been made it should be tinned. Keep the groove absolutely free from grease or dirt of any kind. Dissolve a small piece of copper sulphate in water, using as much copper sulphate as will dissolve. Wash the sides of the groove with this solution, which leaves a thin copper plate on the cast iron, to which the solder easily sticks. With a blow torch heat the cylinder jacket quite warm around the groove. Apply some soldering fluid to the groove and with a hot soldering iron rub the solder on the sides of the groove until the sides are well tinned. Then fill the groove with solder. This makes a very good job when properly done.

Ford Magneto Contact.

I have a 1915 Ford runabout. Should the magneto post point come in contact with the magneto cover at the lower end of the point? I have to press the post very hard to set the screws back in place.

Answer.—The spring on the contact point should hold it firmly against the terminal on the coil support. The point must not touch the flywheel housing.

A Gasoline Tank.

I have a heavy threshing engine fender tank. It has some bolt holes and a manhole in it. I would like to use it for an underground gasoline tank. Is there anything or any preparation that will make this tank gasoline tight? If I lay the tank in concrete would it help? How could I make an inexpensive pump? If I give the tank a thick coat of white lead inside would it leak?

Answer.—We would not advise you to attempt to stop a gasoline leak by any mixture, as gasoline cuts nearly all mixtures, including white lead. A small gasoline leak may sometimes be stopped by using common soap as a packing. Obtain some copper plugs for the bolt holes and rivet them over well. Or, tap the holes with a pipe tap and screw in a pipe plug. Use a copper-asbestos gasket under the manhole cover, or a gasket made of asbestos and copper wires.

Some Ford Questions.

I have a Ford car. If I raise one rear wheel, leaving the other on the ground, could I put a belt on the free wheel and run a cider mill from it? How much would a lighting and electric starting outfit for a Ford car cost? What can be done for a car that won't start in cold weather by using hot water on the carburetor?

Answer.—When a car is used as stated above the driving is done through the differential gears. While it might be all right to use the car in this way for an occasional job, the differential would wear out under steady service of this kind. The car would have to be blocked, otherwise it would move forward when the load was applied to the free wheel. Electric starting and lighting outfits for Ford cars can be purchased for about $75.

When starting a Ford car in cold weather give the carburetor dash adjustment a quarter turn to the left, hold out the priming rod which extends through the radiator and then crank as rapidly as possible. In very cold weather hot water on the carburetor is a great aid. As a last resort remove the spark plugs and "prime" the motor with a teaspoonful of gasoline in each cylinder.

Wet Batteries.

I would like to know how to make wet batteries to use on a gas engine. The dry cells cost too much and I can obtain enough zinc and carbon from old dry cells to make the wet batteries. Could I take the zinc from old dry cells and melt it, molding it into a solid block? Does it hurt wet batteries to freeze?

Answer.—For gas engine use you would require three cells, each cell made as described below. Connect the cells in series.

Obtain a glass jar six inches in diameter and eight inches high. The jar may be china or glazed earthenware. Cast a cone-shaped piece of zinc weighing about three pounds and having a piece of No. 8 copper wire running out of the top of the cone. Obtain a porous earthenware cup about three inches in diameter and eight inches high. Place the zinc cone in the cup and pour in enough mercury to cover the bottom of the cup one-eighth inch deep. Fill the cup within one inch of the top with very dilute sulphuric acid and water. Set the cup in the jar and fill the space between the jar and the cup with a solution made as follows: Dilute two pounds of sulphuric acid with four pounds of water, pouring the acid into the water. Dissolve one pound of potassium bichromate in three pounds of boiling water. When cool mix the two solutions and add an equal amount of water.

Having placed this solution in the jar suspend in the solution three battery carbons, connecting the carbons by a copper wire. The battery should stand two days before use. Freezing may crack the jars, but does not injure the electrolyte.

Speed of Auto Motors.

Why is it that the latest Chalmers has more revolutions per minute than other motors? I have read that the Chalmers engine can make 3,400 revolutions per minute and that many other motors can make only 2,600.

Answer.—The present tendency in automobile design is toward motors of very high speed in order to obtain as much power as possible from a given weight of engine, and also to give the car a more even motion. High speed motors have comparatively small, but perfectly balanced crankshafts, extremely light pistons and connecting rods and large valves.

Vulcanizers.

Is a steam vulcanizer better than one in which no steam is used? Is there any danger of the "Marvel" steam vulcanizer exploding? The water is sealed in it at the factory.

Answer.—The efficiency of a vulcanizer does not depend upon whether steam heat, gas or electric heat is used, but upon its ability to maintain an even heat at the required temperature. It is, as a rule, easier to regulate the heat with a steam vulcanizer, as there is a definite temperature for each steam gauge pressure. More depends upon the design of the vulcanizer than upon the method of heating. We are not familiar with the "Marvel."

Motor Horse Power.

In a former issue you state that to find the horse power of an automobile motor, multiply the square of the cylinder diameter by the number of cylinders and divide by two and one-half. It seems to me that the length of stroke and the speed of the motor has something to do with the horse power. Was something forgotten in the above rule?

Answer.—The above rule is known as the A. L. A. M. rule and is correct as stated above. The factor two and one-half takes care of the speed, length of stroke, mean effective pressure and also one factor used in finding the area. At the time this rule was made it was considered that the longer the stroke the slower the motor would run; that what extra power a motor gained by a longer stroke would be lost by a decreased number of revolutions. This is no longer strictly true, due to the lightening of the moving parts of the motor by use of very high-grade materials. However, as all gas engine rating is nominal, excepting actual brake test, the above rule is still in general use for auto motors. The rule does not apply to stationary gas engines.

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THE swinging joint makes Apex Fence flexible—self-adjusting to hills and hollows. Easy to set up. No bagging or sagging — doubly strong at every joint — strains and shocks evenly distributed — rigid, reinforced construction keeps the fence in shape. Made of open hearth steel wire — heavily galvanized. Write for booklet.

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Apex Steel Drive Posts

Just think what this saves you! Drive the posts without leaving your wagon. Save on hauling and handling — save 8 to 10 cents a post in setting. Drive Apex Posts in any soil, gravel or soft shale. Made of elastic carbon angle steel—tough and strong—can't be injured. Last for generations—do not bend, break, rot or burn.

Write for the "Apex Way" booklet and see how you can save a lot of work, time and money and have better fencing on your farm.

Janesville Barb Wire Co.
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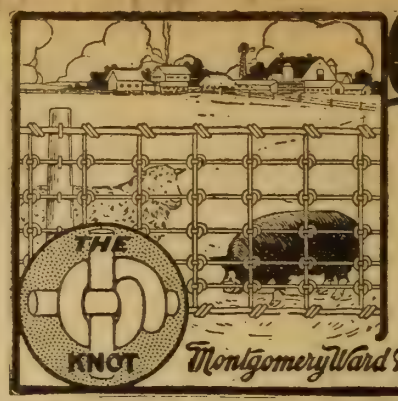

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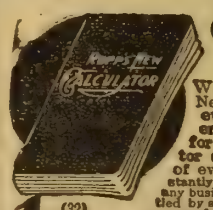

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Which tells you why it is better than any other fence and where to get it. Land owners, if you want a farm fence that will last, and stay trim and tight the year round, write for these FREE books today.

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potassium bichromate in three pounds of boiling water. When cool mix the two solutions and add an equal amount of water.

Having placed this solution in the jar suspend in the solution three battery carbons, connecting the carbons by a copper wire. The battery should stand two days before use. Freezing may crack the jars, but does not injure the electrolyte.

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Carbo Fence Supporting System is as big an advance over wood, concrete, or steel posts as fencing wire was over the split rail.

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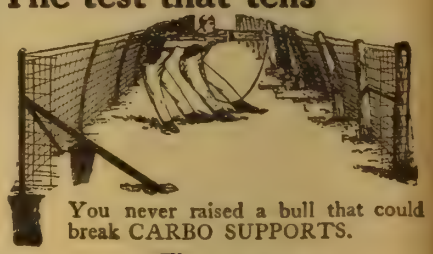

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Preserving Eggs.

Now is the time to preserve eggs. The waterglass method worked out by Prof. E. F. Ladd, of the North Dakota Agricultural College, is very simple. Eggs put up according to it will retain their original flavor.

Directions: The eggs must be fresh and clean. Washing an egg spoils its keeping qualities. Galvanized iron vessels, crocks, jars or wooden kegs may be used. The vessel must be clean. If of wood it must be thoroughly scalded. Use a good grade of waterglass. One like a heavy white jelly that flows like cold molasses. Use one quart of the waterglass to ten quarts of pure water that has been boiled. Pour into the vessel when cool. Fresh eggs can be put into it from time to time until the jar is filled. There should be two inches of the solution above the eggs.

Second-prize Buff Plymouth Rock cockerel. This bird was shown at the Greater Chicago Poultry Show in January, 1916. It was bred and is owned by Milan C. Astle, Momence, Ill.

Keep the preserved eggs in a cool place, as in a cellar. The eggs will contain some gas and so crack when boiled. This can be prevented by making a pin hole in the blunt end of egg before boiling them.

Prize pullet at Chicago. This bird was first pullet, Buff Plymouth Rock, at the Chicago show in January, 1916. It was bred and is owned by Milan C. Astle, Momence, Ill.

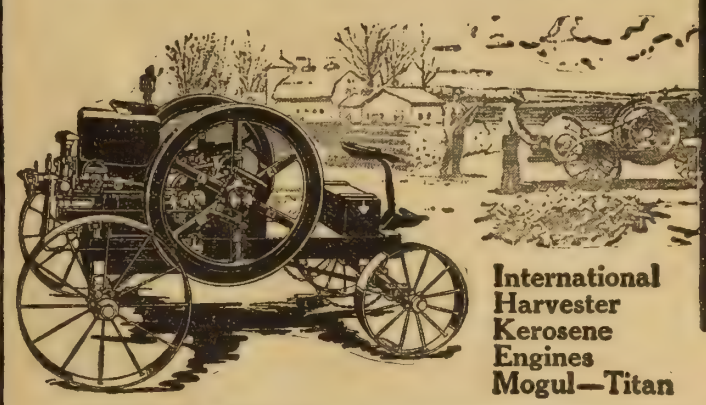
Spoiling the Hatch.

To the Editor:—I wish some of your readers would describe in these columns a method of treating eggs so that they will not hatch and at the same time producing no injury to them for market purposes. I have a fine flock of pure-bred White Wyandottes and it frequently happens that I have more eggs than I can dispose of to my customers and these all pure breds it follows that the eggs from my flock would be excellent for hatching purposes. I find it quite a common practice for the storekeeper to set aside these eggs for certain of his customers, trading them without boot on either side for the eggs that the customers bring to his store. I claim this is not fair. I pay from $3 to $5 each for my cockerels and have gone to considerable expense in building up my flock and yet others can use eggs from my flock and they will very soon be competitors of mine and yet I get no benefit from their trade.

I would like to know what your readers think of adopting some plan by which eggs might be ruined for hatching and yet not injured for market. I have heard that if you just dip them in hot water this will do it, but I have never tried it. I have also heard that if you stick a pin into the shell of an egg the germ will die and never hatch. It seems to me that this would let air in and that the egg would spoil. I will wait anxiously to see if some of your subscribers have any advice to give on this matter. It may seem unethical, to be sure, but I claim that it is unethical to ask your storekeeper to become a party to any such dishonest transaction.

Subscriber.

Welcome News on Engines



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Ask the I H C dealer to show you a Mogul or Titan engine—sizes from 1 to 50-H. P. If you prefer to write us, we will tell you where you can see our engines and send you catalogues at the same time. Drop a card to the address below.

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Grade Flock Makes a Good Record.

To the Editor:—I have a mixed flock of seventy hens (many of them being late pullets) and started keeping a record of the number of eggs laid each day the first of February. I got 1,027 eggs during the twenty-nine days of February, making an average of thirty-five eggs per day. So far this month they have averaged forty-two eggs per day.

I have not a very suitable henhouse, that is, as to light, having only two small windows, one in each end, but plan to improve it this coming summer. The building is only 14x16 feet, no doubt small for so many hens, but I thought they did well under such circumstances.

As to feeding, in the morning I feed about five quarts of oats and a pail of corn on the cob, the morning feed being taken into the house the night before so as not to be fed cold. In the evening I feed warm bran mash and oats with a few additional boiled potatoes and scraps from the table. I keep them well supplied with oyster shells, gravel, ashes and plenty of clean, fresh water.

I have also found that one of the most important things is to keep the coop dry and this can be done by keeping plenty of clean straw on the floor. I also scatter the dry feed in the straw, thus making the hens work for their feed. Occasionally they have been given meat scraps and thick sour milk.

Now this is not to be considered as boasting, but merely to show what can be done with common stock (some call it scrub stock) if given proper care, for everyone knows than anything, to do its best, must be given proper care.

Would like to hear through your paper from others as to their experience with chickens. A. H. Dahl.

FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

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Cleaning a Paint Brush.

To the Editor:—I wish some of your subscribers would tell me what to do with a good paint brush which is to be reserved for some future time after being once used. Should it be put in water after finishing painting or should it be cleaned and laid away dry? What should be used to clean the brush with? Art Knuteson.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Attention to Teeth Important.

According to Dr. C. N. Johnson, of Chicago, proper care of children's teeth will eliminate epidemics of diphtheria, measles and scarlet fever. Dr. Johnson was chairman of the public service commission of the Chicago Dental Society, which established dental clinics in the public schools of that city. These clinics were taken over by the city two years ago and have since been maintained by it.

Ample opportunity was afforded by means of these clinics for the study of the above-named contagious diseases, and it was estimated that in 1915 the actual cost to the citizens of the city of Chicago of diphtheria, measles and scarlet fever among children was more than $6,500,000.

Nor does that take into consideration the number of deaths. All of these diseases are preventable. The germs were communicated simply by bad teeth.

This was demonstrated by a circumstance in one of the schools while the commission, with Dr. Johnson at its head, was studying the problem. There had been an epidemic of scarlet fever and it seemed impossible to stamp it out effectually. It was then decided to allow no children who had scarlet fever to return to school until their teeth had been examined and treated. This measure stopped the sporadic epidemics in that school.

Of the 80,000 school children examined by the dentists' commission, 80 to 97 per cent had defective teeth.

These are startling figures and when we consider the influence of bad teeth over the health of the children we realize the importance of constant attention to the matter of keeping them clean and in perfect condition.

Noon Meal With Reference to Children.

There is no reason why the ordinary family dinner should not be suitable for school children or served in a way that adapts it to their needs. The usual first course of meat and vegetables contains nothing, except the meat, which cannot be given to the youngest children. The vegetables, providing they are carefully prepared by simple methods, are especially needed and can often be made attractive to children by being served with a little meat gravy. As a substitute for the meat itself, milk can

THREE LITTLE FARMER FOLKS.
Hazel, Elda and Edwin, children of Mr. and Mrs. Henry Camp.

be provided in the case of the younger children. These articles, with the bread and butter, provide most of the food needed.

The dessert course is suitable for children as well as for grown people, unless it consists of rich pastries or puddings. The latter are not considered wholesome for children, if for no other reason than that they are likely to lead to overeating. Such desserts as fruit, fresh or cooked, with cake; cereals with milk or cream and sugar; custards and custard puddings; gelatin dishes; simple ice cream; water ices; and other simple desserts may be given.

Whether or not the family meal is healthful for children depends not only on the food materials selected, but also on the way in which they are cooked. Simple methods are to be preferred from the standpoint of health as well as from that of the housekeeper's time. All dishes that

CARL AND CLIFFORD SPINDEN.

are likely to contain overheated and scorched fats, such as foods carelessly fried in a pan in a small amount of fat, should be avoided. Deep-fat frying is open to fewer objections, since, if properly done, foods will absorb little fat and the fat will not scorch. Vegetables cooked in water or in their own juices and seasoned with salt and a little butter or cream are easier to prepare than those that are served with white sauce, scalloped, or cooked in other elaborate ways.

What is said above applies equally to all meals. There is, however, one special precaution that applies to the noon meal when it is hurried. This refers to tough, hard foods that are likely to escape proper mastication. It is a mistake to think that the foods given to children must always be soft or finely divided, for children's teeth need exercise quite as much as their muscles do. When time for eating is limited, however, it is well to omit foods that are difficult to chew, and in extreme cases it may be necessary to serve only soft or finely divided foods—sandwiches made from crustless bread with finely chopped fillings, for example. Before resorting to this, however, it is well to make sure that the time for eating and for insistence of good table manners is not unnecessarily cut short. The advantage of putting the meal on the table promptly and of having foods served in individual portions, or at least ready to eat when they are brought to the table, should be kept in mind. To have the meat already sliced and the dessert in cups instead of in one large dish from which individual portions must be served, and to follow the same general plan with other foods, may change a hurried meal into one at which there is plenty of time for attention to details essential to health and good manners.

The United States Department of Agriculture has just issued a bulletin containing some valuable information on the subject of lunches for school children. This bulletin may be had by writing to the Department of Agriculture, Washington, D. C., and asking for Farmers' Bulletin 712.

No Idle Moments For Her.

To the Editor:—I think the Home Department is just fine, we can learn so many different ways of doing things. I like to read the story too and the babies are so nice. My own babies are all grown up and all married but one. They have babies of their own and I have nine nice little grandchildren.

As I have no babies to take care of I have a good deal of spare time in winter. I do not get out much but I am a lover of flowers and fancy work, and I will tell you how I have spent my spare time this winter. I hope you won't think I just want to brag about myself, for I just love to read what others are doing.

I have all my scraps and rags made up in useful things and there is nothing to lie around at housecleaning time. I braided two nice rag rugs, one blue and white with a touch of pink for my blue bedroom; made two sofa pillows, one of silk pieces and one of velvet (not the common crazy patch, but very pretty), three porch pillows of nice gunny sacks, and two large centerpieces with crocheted lace on them. I also cut out all my worsted scraps for a comfort top.

This is my first visit to the Home Department as a letter writer, but I do enjoy reading the letters from others. Mrs. F. E. T.

Three Cheers For the Babies.

To the Editor:—We enjoy seeing the pictures of the dear babies and decided to send the picture of our twin boys, Carl and Clifford, born September 25, 1914. They were fifteen months old when this picture was taken and weighed twenty-seven and twenty-eight pounds. They are bottle babies. They are bright, active youngsters. Three cheers for the babies who will in a few short years be the men and women of our country.

Mrs. C. F. Spinden.

Saves the Baby Pictures.

To the Editor:—I have been so interested in the mothers' letters and the baby pictures, all of which I am saving, that I thought I would do my part toward the department and send a picture of my little girl. She will soon be four years old and has always been well and strong. We have one other child besides, a baby boy nearly ten months old.

We live on my father's farm of 147 acres, which we run in partnership with my youngest brother. Both my husband and my oldest brother are graduates of the state agricultural college, while my youngest brother is now taking the short course, so you see the men folks at least like the farm. We are all interested in it and most particularly in the farmer babies.

Mrs. G. H. Beach.

How to Treat Wall Paper Before Papering.

To the Editor:—I noticed M. A. G.'s letter in regard to papering over whitewash. To make the paper stick take a half pound of glue and one cake of silk soap (cut fine), put in a vessel with one quart of hot water. Let stand overnight. It will be thick jelly in the morning. Thin with water and apply to wall with a brush. Let dry before papering. Sweep the wall before applying the glue. L. R. W.

Lily Blooms Every Month.

To the Editor:—I noticed in one of the papers a reader's request for information as to the care of a calla lily. I have a two-year-old plant which has had a blossom on it every month for more than a year. I have always kept it in the house even during summer. It is planted in a gallon sirup pail and that placed in a jardiniere so that it can be watered from below. I always use hot water, which, of course, is impossible if not put into some other jar. I also give it a few drops of ammonia in the water every week.

At present my lily has a large blossom and also a bud and six large leaves. I took a little one from beside it last spring and that has had a flower, too. Be sure to give the lily all the sunshine possible.

A Reader.

More About That Lily.

To the Editor:—One of your readers asks how to make calla lilies and geraniums bloom. Would like to give my experience.

Calla lilies are mostly through blooming in May, when they are given a rest by letting them stand dry in a cellar for about two months. In July take the bulbs out of pots, take off all dry leaves and roots and repot in a rich soil, covering bulbs with soil just

ALMA AND RACHEL GENTNER.
Five and three-year-old daughters of Mr. and Mrs. A. B. Gentner.

enough to let crown appear. Calla lilies are heavy feeders. After pot gets filled with roots a watering of liquid manure will benefit, or a little bone meal scattered on top of the soil will answer the purpose.

Geraniums are often potted in too

rich a soil, especially manure mixtures, which gives them a rank, soft growth and causes them to bloom sparingly. A good compost is any good soil with a little bone meal added. Care must be taken not to use too much bone meal because it is a strong fertilizer. Planting in too large a pot is also a practice some people have, the soil turning sour before the roots are able to fill the pot. Most pot plants like to be root-bound before they bloom. J. H.

How to Clean Irons.

To the Editor:—I want to tell the lady who has trouble with her irons turning the clothes yellow how to take care of them. Wash them in good soapsuds and scour them with any

LITTLE MISS BEACH.

good scouring powder. Then wash them again with good soapy water and dry them with a clean, dry cloth and the irons will be as good and clean as new and will not rub off. Another good way is to have a newspaper with a little kerosene on it. Rub the iron on this and then on a clean paper. You will have good results from this. A Subscriber.

Grease the Bread.

To the Editor:—I noticed in one of the late papers that someone wanted

A BEAUTIFUL PAIR OF TWINS.
Alberta and Adalberta Logan, eight months old, are the daughters of Mr. and Mrs D. R. Logan.

to know of something to keep bread from drying out. If she will grease the bread on top before it is baked and again when she takes it from the oven I think she will find that it will not dry out so fast. Mrs. E. T.

Slips Geraniums in July.

To the Editor:—I enjoy reading your paper very much and note in a late issue a request for care of flowers in winter. I take a small slip from a blooming geranium in July and give it plenty of water and sunshine. It never fails to bloom in the winter.

My calla lily I take out of doors in the open to rest the first of August. The first of September I bring it in the house, give it new sandy loam and plenty of lukewarm water and sunshine and it blooms every spring. A Reader.

Sun Preserves.

To the Editor:—To make sun preserves strawberries use one cup of sugar to one cup of berries. Turn together and boil for five minutes. You can have three or four small basins on the stove at once. When cooked, place on platter and cover with glass in the sun. As the moisture forms on the glass turn it over. I use a window glass. Have a glass large enough to cover dish up tightly. When moisture ceases to form the berries can be stored away the same as other preserves in a dark place. Illinois.

A Few Pointers.

If you want to iron an article immediately after sprinkling it try dampening it with boiling hot water. Roll it tightly for a moment or two, shake it out and iron with a hot iron.

Embroidery flounces on petticoats will wear much longer if a narrow lace edging is stitched underneath the flounce. This protects the points of the embroidery and gives a pretty finish, too.

When cleaning brass fenders or andirons mix a little powdered alum with the polish if you want a brilliant polish with about half the work of rubbing that is necessary with ordinary cleaning.

A bit of cloth or chamois should be kept in the sewing machine drawer to wipe off the machine before beginning to stitch.

Never fold an umbrella when it is wet, but keep it folded when it is dry.

The hands should be dipped in cold water before making pastry.

Rice pudding sweetened with brown sugar will have a much richer flavor.

Recipes.

Fruit Cake.—Four eggs, one cup sugar, two cups molasses, one and one-half cups butter, one-half cup milk, one teaspoonful soda, one pound raisins, one-half pound currants, one-half pound citron sliced fine, one heaping teaspoonful each cinnamon, cloves, nutmeg, five cups flour. Bake two and one-half hours in a slow oven.—Mrs. C. H. G.

Drop Cookies.—Cream together one cup of butter and one and three-fourths cups of sugar. Add four well-beaten eggs, one teaspoonful of soda dissolved in one-half cup of sweet milk, four cups of flour sifted with two teaspoonfuls of baking powder, one teaspoonful of vanilla. Drop from a spoon on a buttered pan. Raisins can be added if liked.—Mrs. A. C. C.

Cocoanut Bars.—One-half cup of rich milk, one and one-half cups of sugar, one tablespoonful of butter, boil just twelve minutes, add one-half teaspoonful of vanilla and one cup of cocoanut. Beat till creamy. Pour on buttered pan and when nearly cold cut in squares. Nut meats may be added in place of cocoanut if liked.—Mrs. A. C. C.

Souffle of Cold Meat.—Four tablespoonfuls butter, four tablespoonfuls flour, two cups milk, one-half teaspoonful salt, one-eighth teaspoonful pepper, one-fourth teaspoonful paprika, slight grating of nutmeg, two cups chopped ham, three eggs. Melt butter in saucepan, add flour, stir until blended, add gradually, while stirring constantly, scalded milk and cook until thick. Season with salt, pepper, paprika and nutmeg. Add ham, then egg yolks beaten until thick, and last the whites also stiffly beaten. Cook over boiling water fifty minutes. Serve with green pepper sauce.

Green Pepper Sauce.—Two cups stock, four tablespoonfuls each pepper, fat and flour. To meat stock add finely cut pepper, simmer one-half hour and strain. Melt fat, skimmed from stock, add flour and let brown, then add stock slowly, stirring constantly. Boil two minutes and season.

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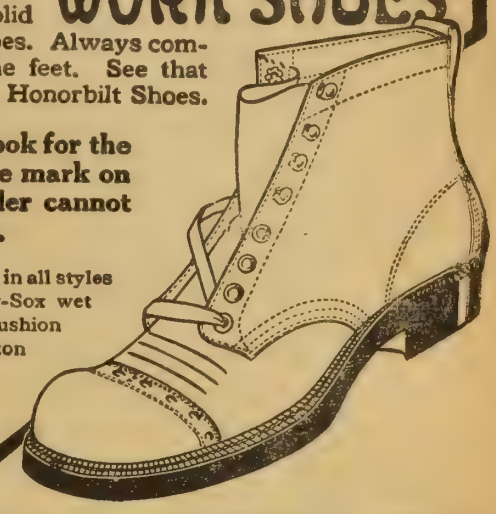

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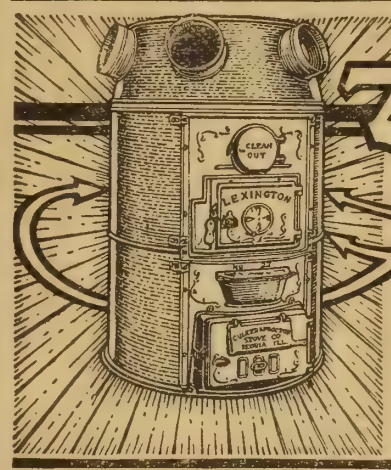

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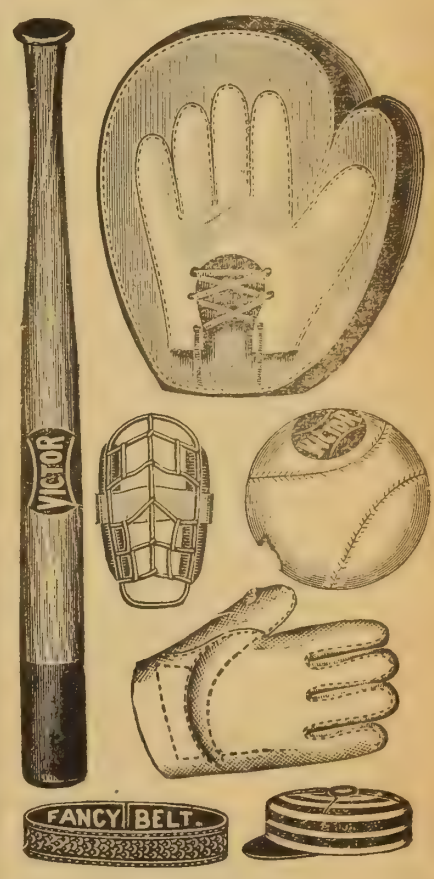
Buy Your COFFEE WHOLESALE IN 10-LB LOTS
Get the BEST and SAVE 10 cts per pound.
WE PAY POST, EXPRESS or FREIGHT
IF YOU LOVE GOOD COFFEE SEND FOR PRICE LIST
JEVNE COFFEE CO. (Est. 1881) Coffee Specialists
Dept. 16, 2855-57 W. Madison St., CHICAGO.

HOME CANNERS—All sizes. Used by U. S. Govt. Schools, Girls' Clubs, Collaborators and Farmers everywhere. Headquarters for cans and labels. For catalog and special offer, write Royal Home Canner Co., Dept. 220, Albion, Illinois.

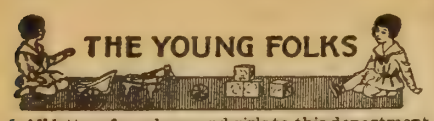
Baseball Outfit for You



There are seven splendid pieces in this great outfit. The ash bat is a good one. The mask is made of heavy wire, full size. The catcher's mitt is thickly padded, very heavy and has patented fastener. The glove is of tanned leather and has patent clasp. The ball is strongly stitched and will last. A neat, adjustable belt and a dandy cap complete this great outfit. Remember you get the whole outfit of seven pieces for a little easy work. Write me to-day and I will tell you just how to get it.

A. M. PIPER 99 Popular Bldg., Des Moines, Iowa.

Kindly mention this paper when writing



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Be Kind to Animals.

Dear Young Folks:—I have been reading the Young Folks' stories for a long time and think they are very interesting. I am going to write about kindness to dumb animals.

I think that we should always be kind to dumb animals. I have seen them treated very cruelly and it always makes me feel badly. Some of them, such as horses and cattle, we could hardly do without.

An animal that is treated cruelly by its master will always be expecting some cruel act whenever its master comes near. They are harder to control, too, when they are not treated kindly. I think people who can stand to treat animals that way must have very hard hearts.

I help take care of several animals and I never intend to be cruel to them.

—Eunice Marie.

Takes Prize in Spelling.

Dear Young Folks:—I am reading your letters and take great interest in them. I can hardly wait until the mail carrier goes by.

We live on an eighty-acre farm and have about a quarter of a mile to go to school. I like to go to school very much. Our school was out the 3d of March. We did not have a regular program, but we invited our parents to school and had a few studies. We also spelled down and I won. We girls served a lunch consisting of potato salad, cocoa and cake for our domestic science lesson.

Our teacher gives us prizes for the most head marks in spelling. I got the most in our class. I most always get the most. Last year we had a township spelling contest. Seven schools were represented. I won that time, too. We are going to have an oyster supper for the prize this time. I am eleven years old and in the seventh grade.

I have a horse named Lady that I drive to town to take my music lesson. I love music and take lessons on the piano.

My father raises Chester White swine and Holstein cattle and takes pigs to the state fair. I want to go with him this year. —Juanita.

Makes Cookies All Alone.

Dear Young Folks:—I am a little girl nine years old and I have always lived in the city until a year ago. Then my mamma died and I came out in the country to live with my uncle and aunt. I like the country very well and think it is a very good place for girls and boys. I have gained twelve pounds since I came here. The folks I live with are very good to me.

I am in the fourth grade at school and I haven't missed a day. Every Saturday I take my music lesson. I took music lessons in the city, too.

I have two pet chickens, a little rooster and a hen. They are very cute and every time I go to the chicken house with some feed for them they fly up on my arm and start eating out of my hand or the basin. I like to call the cattle into the barn at night.

I am having vacation now and Saturday I am going to take my music lesson and after that I am going back to the city to visit. I had a birthday the other day and had a cake with nine candles on it. A week ago I made my first cookies all alone. I am going to learn to be a good housekeeper. —Iris.

Always Tell the Truth.

Dear Young Folks:—One day as I was dusting in the parlor the globe to our lamp was standing on the bookcase. When I walked past it I came against it some way and it fell to the floor and broke in several pieces. It was mamma's and papa's wedding present and I knew they wouldn't lose it for anything and I was afraid I would get a scolding. So I ran upstairs and began to cry. In a few minutes mamma came upstairs. She asked me what I was crying for and I told her I had broken the globe to the lamp. Then she said, "Don't cry, I would rather lose everything I have than have you tell a lie."

—Golden Hair.

Takes Trip to Montana.

Dear Young Folks:—I live on a 320-acre farm two miles from town. I live with my grandparents and uncle and aunt. I am twelve years old and am in the seventh grade.

I have a married sister and a brother who live with my father in Montana and a sister eleven months older than I who lives with my other grandparents in town.

I went to Montana with my grandfather and aunt when I was about four years old and then I went again when I was ten years old. We went to the town of Intake and there we saw the headgates where they irrigate the land. On the way back from Intake I rode my brother's Indian pony about seven miles of the way. It was thirty-five miles from uncle's to Intake. The pony's name was Buck. I rode him several times after that.

There are a lot of rattlesnakes in Montana and once when my little cousin saw a snake he said that it just rattled its tail at him and ran in a hole. —Alma.

POTATOES AND SEEDS ALMOST GIVEN AWAY.

TO INTRODUCE—I offer 20 Big Hills of genuine Early Six Weeks' Potatoes—best quality and earliest in the wide world—also $1.00 worth the finest Vegetable and Flower Seeds—all mailed for 30 cents. Two lots 60 cents. Seven lots and splendid American Watch with Mariner's Compass for $2.10. Order now. Any boy or girl can show this and get a club of seven. Try it now. Address AUG. COOK, Seedsman, Hyde Park, N. Y.—Adv.

WITH OUR ADVERTISERS.

A Solution of the Light Tractor Problem.

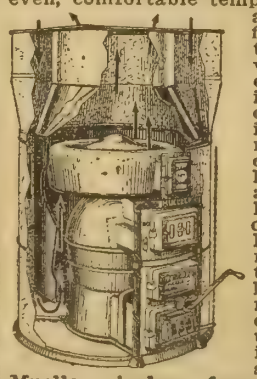
WE have a solution of the light farm tractor problem in the Denning Model E light farm tractor. This engine weighs but 3,600 pounds, will develop ten horse power at the draw bar at any speed and will pull two plows in any soil fit to cultivate. All gears run in oil in dust-tight casings, which provides for the durability of these parts. The equipment includes a Waukesha motor, Perfex radiator, Bennett carburetor, Dixie magneto and New Departure ball bearings. Kerosene is used for fuel. Write for a complete description of this modern light farm tractor. Address the Denning Tractor Company, Cedar Rapids, Iowa, and kindly mention this paper. See advertisement on page 11.—Adv.

The Opportunity State.

MONTANA is a land of opportunity. In the past six years 29,000,000 acres of government and Indian lands were disposed of to settlers. In the past year 23,000 original and final homestead filings have been made in that part of Montana reached by the Great Northern railway—this record is unequaled by any state, in the operations of the general land office. The homestead lands of agricultural value are going fast, but deeded land may be purchased at very low prices at present. This is an opportunity for you; cut out the coupon from the advertisement on page 13 and send today for the free Montana bulletin illustrated and fully descriptive of this remarkable country. Write to the address given in the advertisement.—Adv.

Thousands of Users Endorse Pipeless Heating.

A MUELLER pipeless furnace is one of the best protections against colds, catarrh, headaches and other ills. It provides the whole house with an even, comfortable temperature without any pipes or flues running through the walls. It is very easy to install in either large or small homes; if the house has no cellar a pit dug beneath the house will serve admirably. One large register connected directly with the furnace furnishes the heat—no heat is lost lost, no fuel is wasted, and no produce in the cellar is in danger of spoiling. The Mueller pipeless furnace burns hard or soft coal, coke or wood efficiently. Thousands of users endorse this furnace heartily. Right now is the best time to find out about this most convenient heating system. Write today for the free illustrated booklet which gives complete information. Address L. J. Mueller Furnace Co., 204 Reed St., Milwaukee, Wis., and kindly mention this paper. See page 17.—Adv.

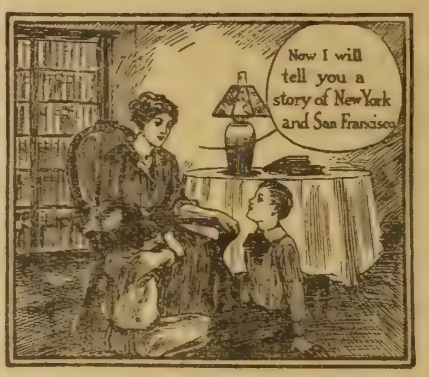


A $3,500.00 Home Game

419 Cash Prizes for

GIVING NAMES TO PICTURES

Idle Hour Entertainment---No Expense Required



$3,500.00 CASH

419 PRIZES

First prize	$1,250.00 cash
Second prize	625.00 cash
Third prize	350.00 cash
Fourth prize	250.00 cash
Fifth prize	150.00 cash
Sixth prize	100.00 cash
7th, $75.00; 8th, $50.00; 9th, $20.00.	
10th to 24th, each $2.50	$ 37.50
25th to 419th, each $1.50	$592.50

Should there be a tie for any prize, the full prize tied for will be paid each tying contestant.

There is no work connected with the Picturegame in any way. It is what we say it is—a picture-naming entertainment for all the family to play during their idle moments; and we will give the great cash prizes to those who use their common sense best. All contestants will be assured of equal treatment, and splendid fun. Send in at once and learn all about this unique opportunity game. **Do that at once, and have it over with!**

Today's Magazine offers every person the opportunity of competing in a great cash pastime, something with which to fill spare moments at home with money interest. **You** may win a great cash sum playing! See the picture to the left? It's an example, to show you how the $3,500 Book Title Picturegame is played. It shows a Woman saying to two children, "Now I will tell you a story of New York and San Francisco". What book title would make a good name for that picture? Why, the title, "A Tale of Two Cities". That's plain, isn't it?

You will be offered a list of book titles, arranged in alphabetical order, from which all titles for the pictures must be chosen. All contestants will glance over the titles, and submit those they think best fit for the pictures. The prizes will be given for the 419 best sets of answers. No book knowledge at all is used none is needed in the picturegame at all.

We have provided a way by which all may compete free of charge without one cent of expense. Send in the coupon **right now** and learn all about this home game. At least know what it is—it may prove to be a gold mine for you.

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Picturegame Editor,
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Please send me free, by return mail, complete illustrated explanation of the $3,500 Cash Book Title Picturegame, with Rules, and everything to show me just how to play.

Name .....

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Send in this coupon, or just write (a post-card will do) "Send me free Picturegame explanation."

Photos of 6 Baseball Stars FREE

NAPOLEON LAJOIE

Send No Money these six fine photos are absolutely free to boys and young men who are interested in baseball. Here are the names of the world famous stars whose photos I'll send you free:

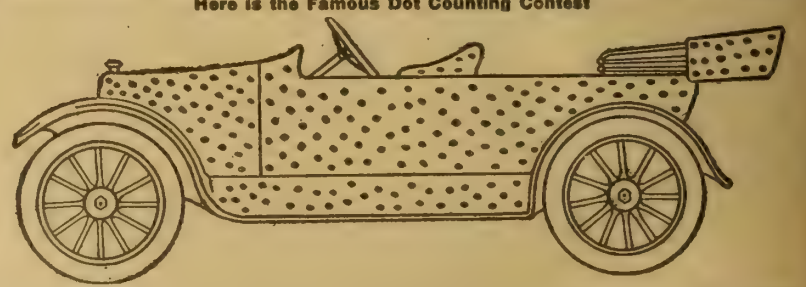
Grover Alexander, *pitcher* for Philadelphia Nationals.
J. Franklin Baker, *third baseman* for N.Y. Americans.
Joe Jackson, *left fielder* for Chicago Americans.
Napoleon Lajoie, *second baseman* for Phila. Athletics.
"Heinie" Zimmerman, *3d baseman* for Chicago Cubs.
John J. Evers, *second baseman* for Boston Nationals.

These life-like action pictures are not the ordinary kind. The photos are so good that they show the features of the players almost as plainly as they would be shown in photos costing $5 a dozen. After you've seen these photos you'd recognize the players if you passed them on the road. You probably know the history of each of these great players. Your friends will be greatly interested in the photos. We're offering these photos absolutely free and postpaid because we want your name if you're in any way interested in baseball. We have photos of 194 other great baseball players we'd like to send you, making a complete set of 200. Baseball fans go wild over this splendid collection of life-like photos of world famous baseball players. We also have a large line of baseball gloves, mitts, balls, etc., that we know will interest you. Our baseball goods are given as rewards to our friends who will do a little friendly boosting for Successful Farming and take a few subscriptions for us. I'll gladly tell you all about my dandy new plan for helping you get 194 additional photos and all the baseball supplies you want, without paying out any of your own money. Send your name and address today for the six free pictures—a post card will do.

E. T. MEREDITH, Publisher,
Successful Farming, 60 Success Bldg., Des Moines, Ia.

Count the Dots and Win a Prize

Here is the Famous Dot Counting Contest



You see in the picture, an Automobile covered with dots. By being careful and thinking you can count the number of dots on this Auto. If you can do this, we will send you as a prize, *a surprize package of beautiful season and greeting post cards,* lithographed in rich colors and also a certificate of entry in our grand contest for an Overland Automobile. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

OVERLAND AUTO GIVEN AWAY

Remember the Overland will absolutely be given away at the close of the grand contest. In case of a tie an Overland will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

THE AUTO MAN, Dept. 300 Des Moines, Iowa

International Sunday School Lesson.

Lesson for April 16, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Peter and Cornelius.

LESSON TEXT—Acts 10:1-23.

GOLDEN TEXT—There is no distinction between Jew and Greek; for the same Lord is Lord of all, and is rich unto all that call upon him.—Rom. 10:12.

Thus far Christianity had to do with Jews and Jewish proselytes only. Now its circle begins to widen so as to include the Gentiles. The central figure of this lesson, Cornelius, was a captain commanding one hundred men in the Roman army. The chasm between blacks and whites, which so widely existed in America, is nothing compared to that which divided the Jew and Gentile. We take the whole story of Cornelius in today's lesson and consider the Easter story next week.

1. A Prepared Convert (vs. 1-8). (1) His position. Caesarea was on the great sea and was the political capital of Judea. It was about seventy miles from Jerusalem and thirty from Joppa. Cornelius, who was captain of a band of men born in Italy, was a Roman citizen, and perhaps had been connected with the great Roman general Scipio. (2) His character. He was a man of promptness, appreciation and obedience, (v. 33). He was also a God-fearing man, whose piety included his whole household. He was a man of prayer and generosity (vs. 31, 32), for he gave "much alms" to both Jews and Gentiles. The result was that he was honored greatly by all, especially by the Jews. It does not seem that Cornelius was a proselyte to the Jewish faith (vs. 28-11:3), and he certainly was not as yet a saved man (11:13, 14). Cornelius was a man of a vision, not of dreams or of trances, for this vision came in the open daylight (v. 30), when an angel, looking like a man, appeared unto him. His fear was calmed and he was informed that his prayer, for he was a "seeker after God," had been heard. The "memorial" (v. 4) spoken of was that part of the meat offering which the priest burned upon the altar and which ascended unto the Lord as a sweet savor (see also Mal. 3:16). Cornelius is put to a strange test. He is to send for an unknown man to receive instruction. The angel was not to enlighten him, as it is man's province to witness for God. There is not a recorded Bible conversion without some human instrumentality. Cornelius, soldier that he was, at once obeyed instructions and sent out two devout retainers after Peter. Man alone could finish the work of the angels.

II. The Prepared Preacher (vs. 9-23). Tanning was considered an unclean occupation, but in Simon's house was the man God wanted to use on this occasion. No matter how poor a preacher, or unlikely the situation, if we obey God we can preach better than Gabriel. God laid, as it were, his right hand on Cornelius and his left upon Peter and drew them together. Again God uses a dream, linking the natural and the supernatural. A hungry man dreams of food, a very common occurrence, and God gave supernatural direction to a natural dream. God knows the right time to do the right thing. We do not need dreams for our guidance, as we have a full and sufficient revelation in the Word for our guidance.

III. The Prepared Ones Meet (vs. 23-33). Cornelius had his whole household ready when Peter arrived (v. 24), perhaps more people than on the day of the first great Pentecost. He said, "We are all here present in the sight of God to hear all the things that have been commanded thee of the Lord." This is a great statement if we consider its full content. Peter refused to accept worship, that alone belongs to Christ (v. 25) and he explained how God had thrust him outside of the circle of Jewish believers. He then rehearsed what God had done and asserted that "He is no respecter of persons," and that in response to those in every nation who work righteousness God had sent forth Jesus for the salvation of men, (1) That men might have peace through him (v. 36); (2) That he might be Lord over all; (3) That he had been anointed with the Holy Spirit and power; (4) That he had been crucified (1 Pet. 1; 18, 19; 2:24); (5) That God had raised him from the dead; (6) That he is to be the judge, and (7) That because of what he had done—"through the name of Jesus"—all that believe shall have "remission of sins." (This is a good sermon outline.) Following this wonderful sermon there occurred the Gentile Pentecost (vs. 44-46).

Practical. Cornelius had a lack, and he went to God to have it supplied (v. 4). Peter found his enlightenment in prayer.

God revealed his regard for all mankind and that Jesus Christ can and will save all who come to him by faith.

At Caesarea the infant church discovered that its field is the world and that the Pentecostal program was for all mankind.

This occasion taught Peter and the church that henceforth we are to regard all men as brothers and seek to win them for their Savior and ours.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery.

CATALOG OF SPRING AND SUMMER FASHIONS.

Send 10 cents in silver or stamps for our up-to-date 1916 large spring and summer catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1604. Ladies' apron with or without belt. The pattern is cut in three sizes: Small, medium and large. It requires 4⅞ yards of 36-inch material for a medium size.

1614. Children's set, comprising a yoke dress with sleeve in wrist or elbow length, a slip and one-piece drawers. The pattern comprising all styles illustrated, is cut in four sizes: 1, 2, 4 and 5 years. The dress requires 2½ yards, the slip 2 yards and the drawers ¾ yard of 36-inch material, for a 2-year size.

1664. Ladies' empire night gown. The pattern is cut in three sizes: Small, medium and large. It requires 5½ yards of 36-inch material for a medium size.

1650. A pretty dress for the growing girl (with or without overblouse, and with two styles of sleeve). The pattern is cut in four sizes: 8, 10, 12 and 14 years. It requires 3⅝ yards of 44-inch material for a 10-year size for the dress, with 1½ yards for the overblouse.

1616. Costume for misses and small women. This desirable model has new and becoming style features. The pattern is cut in three sizes: 16, 18 and 20 years. It requires 5⅜ yards of 44-inch material for an 18-year size.

1364. A simple and becoming dress, suitable for house, porch or business wear, with sleeve in either of two lengths. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size.

1592. A practical, comfortable dress or apron with bloomers for girls. The pattern comprises both and is cut in five sizes: 2, 4, 6, 8 and 10 years. It requires for a 6-year size 3¼ yards of 27-inch material, with 2¼ yards for the bloomers.

1593-1594. A smart costume for many occasions. Composed of ladies' waist pattern 1593 and ladies' skirt pattern 1594. This combination is especially nice for mature figures. The pattern for the waist is cut in six sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt pattern in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 3¼ yards of 36-inch material for the waist, and 4 yards of 44-inch material for the skirt for a medium size. To make the skirt and waist of one material will require 8 yards of 36-inch material. Two separate patterns 10 cents for each pattern.

1542. Boys' blouse with convertible collar and straight or French cuff. The pattern is cut in five sizes; 6, 8, 10, 12 and 14 years. It requires 2 yards of 36-inch material for a 10-year size.

1668. A very smart dress for mother's girl (with sleeve in either of two lengths). The pattern is cut in four sizes: 4, 6, 8 and 10 years. It requires 3⅛ yards of 44-inch material for an 8-year size.

1662. Ladies' waist, with drop shoulder and with sleeve in either of two lengths. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3 yards of 36-inch material for a 36-inch size.

1658-1659. A charming gown. Composed of ladies' waist pattern 1658, and ladies' skirt pattern 1659. The waist pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt is cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 7¾ yards of 44-inch material for the entire gown for a 36-inch size. Two separate patterns 10 cents for each pattern.

Ask your neighbor to subscribe for The Wisconsin Farmer.

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SPECIAL PROPOSITION from NOW till GRASS—in addition to my new low prices. My way of opening new territory, as one separator sold in a neighborhood always sells from one to twenty-five more. EVERY GALLOWAY SEPARATOR is equal to if not better than other separators selling for $75 to $95. Users say "way ahead of others." I only ask one thing—before you buy a separator of any make, kind or any price, get my big book; pick out the separator you want, try it 90 days, 180 times, at my expense. If you decide to keep it (you don't have to) I'll give you the choice of 6 open, fair and square selling plans and guarantee my separator for 10 years against defective workmanship and material and a $25,000 bank bond backs every sale. You take no chances.

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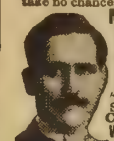

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SAFETY
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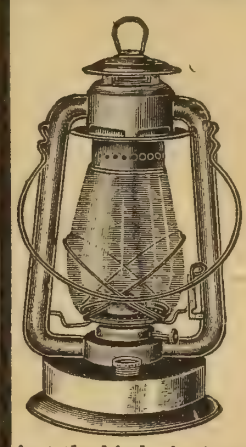


This Safety Lantern cannot catch fire or explode. It is absolutely safe at all times and on all occasions. If you drop it in the hay loft, no oil can escape; if the cow kicks it over, it goes out at once.

It cannot blow out in a cyclone because of the storm blast feature. It is just the kind of a lantern every farmer needs about the house and barn.

Patent opening device raises and swings the globe free for lighting, filling and trimming. This lantern is fully guaranteed and is endorsed by the highest authorities on fire insurance, fire fighting and explosives. If dropped or turned over it immediately goes out. Oil cannot run. Impossible to catch fire. A lantern you will always feel safe with in the house or barn.

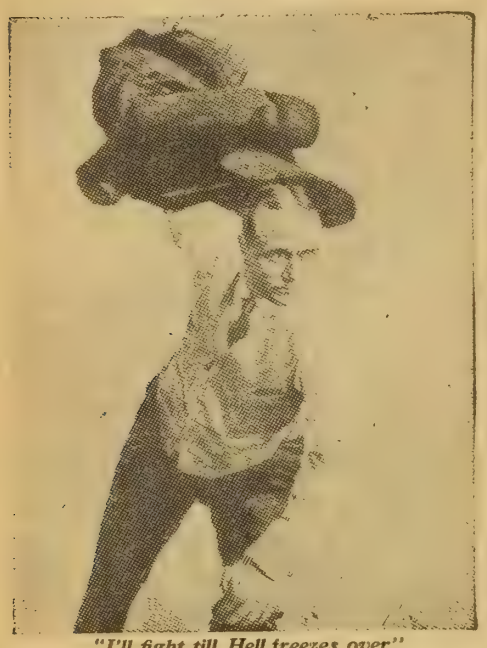
OUR OFFER

Send $2.00 for a three year new or renewal subscription to The Wisconsin Farmer and we will send you one of these Safety Storm Blast Lanterns as a premium free and postpaid.

Mail all orders to

THE WISCONSIN FARMER
MADISON, WIS.

"Billy" Sunday—
The Man and His Message



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It carries the message that led over 200,000 to hit the Sawdust Trail

"Billy" Sunday has probably led more persons to make a public confession of discipleship to Jesus Christ than any other man who ever lived. Making Christians is from all angles the greatest work in the world. Therefore the world may well ask "What manner of man is this?" For over 200,000 men and women have taken Mr. Sunday's hand in token that henceforth their lives would belong to Christ. Over 2,000,000 persons have listened to Mr. Sunday's voice and still the work goes on. Tens of thousands of those men who have been converted under Mr. Sunday's influence were husbands—hundreds of whom had been separated from their wives and children by sin. Now in reunited homes, whole families bless the memory of the Man of God, who gave them back husbands and fathers.

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The crowds follow him. Neither rain nor cold, not even a blizzard, can keep them away. Week after week vast throngs of people wend their way daily to hear a strong man preach a strong gospel which can meet the real need of every human heart. This man is doing what college professors, political demagogues, statesmen, lecturers, orators and the most eloquent preachers are unable to do. He compels men and women to hear him. He reaches their hearts.

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

CHAPTER XVI.

Practical Temperance Reform.

THE small town of Durford was not immune from the curse of drink. There was no doubt about that. Other reforms of viciousness there were in plenty, but the nine saloons did more harm than all the rest of the evil influences put together and Maxwell, though far from being a fanatic, was doing much in a quiet way to neutralize their bad influence. He turned the Sunday School room into a reading room during the week days, organized a gymnasium, kept watch of the younger men individually and offered as best he could some chance for the expression of the gregarious instinct which drew them together after the work of the day was over. In the face of his work in these directions, it happened that a venturesome and enterprising saloon-keeper bought a vacant property adjacent to the church and opened up an aggressive business—much to Maxwell's dismay.

Among the women of the parish there was a "Ladies' Temperance League," of which Mrs. Burke was president. They held quarterly meetings, and it was at one of these meetings held at Thunder Cliff, and at which Mrs. Burke presided, that she remarked severely:

"Mrs. Sapley, you're out of order. There's a motion before the house, and I've got something to say about it myself. Mrs. Perkins, as Mrs. Maxwell was unable to be present, will you kindly take the chair, or anything else you can lay your hands on, and I'll say what I've got to say."

Mrs. Perkins took Mrs. Burke's place as the president, while Mrs. Burke rubbed her glasses in an impatient way; and having adjusted them, began in a decided tone from which there was meant to be no appeal: "The fact is, ladies, we're not gettin' down to business as we ought to, if we are to accomplish anything. We've been singing hymns and recitin' lovely poems and listenin' to reports as to how money spent for liquor would pay off the national debt, and we've been sayin' prayers and pledgin' ourselves not to do things none of us ever was tempted to do, or thought of doin', and wearin' ribbons and attendin' conventions and talkin' about influencin' legislation at Washington, and eatin' sandwiches and drinkin' weak tea and doin' goodness knows what, but we've not done a blessed thing to stop men drinkin' right here in Durford and breakin' the town law; you know that well enough."

Mrs. Burke paused for breath after this astounding revolutionary statement and there was a murmur of scandalized dissent from the assembled ladies at this outspoken expression on the part of the honorable president of the Parish Guild.

"No," she continued emphatically, "don't you fool yourselves. If we can't help matters right here where we live then there's no use havin' imitation church sociables and goin' home thinkin' we've helped the temperance cause and callin' everybody else bad names who don't exactly agree with us."

"Men have got to go somewheres when their work is over and have a good time and I believe that we won't accomplish anything until we fix up a nice, attractive set of rooms with games and give 'em something to drink."

"I didn't say whiskey, did I? Anybody would think I'd offered to treat you the way you receive my remarks. Now we can't get the rooms right off, 'cause we can't yet afford to pay the rent of 'em. But there's one thing we can do. There's Silas Bingham—the new man. He's gone and opened up a saloon within about a hundred feet of the church, and he's sellin' liquor to children and runnin' a slot machine besides. It's all against the law, but if you think the village trustees are goin' to do anythin' to enforce the law you're just dead wrong, every one of you. The trustees are most of 'em in it for graft and they ain't goin' to close no saloon when it's comin' election day 'fore long, not if Bingham serves cocktails between the hymns in church. Maybe the trustees'd come to church better if he did. Maybe you think I'm usin' strong language, but it's true all the same, and you know it's true. Silas Bingham's move is a sassy challenge to us. Are we goin' to lie down under it?"

"I must say that I'm painfully surprised at you, Mrs. Burke," Mrs. Burns began. "You surely can't forget what wonderful things the League has accomplished in Virginia and——"

"Yes," Mrs. Burke interrupted, "but you see Durford ain't in Virginia so far as heard from, and it's our business to get up and hustle right here where we live. Did you think we were tryin' to reform Virginia or Alaska by absent treatment?"

Mrs. Sapley could not contain herself another moment; so, rising to her feet excitedly, she sputtered:

"I do not agree with you, Mrs. Burke; I do not agree with you at all. Our meetings have been very inspiring and helpful to us all, I am perfectly sure; very uplifting and encouraging; and I am astonished that you should speak as you do."

"I'm very glad you've found them so, Mrs. Sapley. I don't drink myself and I don't need no encouragin' and upliftin'. It's the weak man that drinks who needs encouragin' and upliftin'; and he wouldn't come near one of our meetin's any more than a bantam rooster would try to hatch turtles from moth balls. We've got to clear Silas Bingham from off the church steps."

"Well," Mrs. Burns inquired, "what do you propose to do about it, if I may be allowed to inquire?"

"Do?" The first thing I propose to do is to interview Silas Bingham myself privately and see what I can do with him. Perhaps I won't accomplish nothin'; but I'm goin' to try anyway, and make him get out of that location."

"You can, if anybody can," Mrs. Sapley remarked.

"Thank you for the compliment, Mrs. Sapley. Now Mrs. President, I move, sir—that is, madam—that the Parish League appoints me to interview Bingham."

The motion was duly seconded and passed, notwithstanding some mild protests from the opposition, and Mrs. Burke resumed her place as presiding officer of the meeting. Then she continued:

"Excuse me; I forgot the previous question which somebody moved. Shall we have lettuce or chicken sandwiches at our next meetin'? You have heard the question. Those in favor of chicken please say aye. Ah! The ayes have the chicken, and the chicken is unanimously carried. Any more business to come before the meetin'? If not, we'll proceed to carry out the lit'ary program arranged by Miss Perkins. Then we'll close this meetin' by singin' the 224th hymn. Don't forget the basket by the door."

Silas Bingham was an undersized, timid, pulpy soul, with a horizontal forehead, watery blue eyes and a receding chin. Out of "office hours" he looked like a meek solicitor for a Sunday School magazine. One bright morning just as he had finished sweeping out the saloon and was polishing the brass rod on the front of the bar, Mrs. Burke walked in and extended her hand to the astonished barkeeper, whose chin dropped from sheer amazement. She introduced herself in the most cordial and sympathetic of tones, saying:

"How do you do, Mr. Bingham? I haven't had the pleasure of meetin' you before, but I always make it a point to call on strangers when they come to town. It must be awful lonesome when you first arrive and don't know a livin' soul. I hope your wife is tolerable well."

Bingham gradually pulled himself together and turned very red, as he replied:

"Thanks! But my wife doesn't live here. It's awful kind of you, I'm sure, but you'll find my wife in the third house beyond the bakery, down two blocks—turn to the right. She'll be glad to see you."

"That's good," Hepsey responded,

"but you see I don't have much to do on Thursdays, and I'll just have a little visit with you, now I'm here. Fine day, isn't it?"

Mrs. Burke drew up a chair and sat down, adjusted her feet comfortably to the rung of another chair and pulled out her knitting from her work bag, much to the consternation of the proprietor of the place.

"How nice you've got things fixed up, Mr. Bingham," Hepsey remarked, gazing serenely at the seductive variety of bottles and glasses and the glare of the mirrors behind the bar. "Nothin' like havin' a fine lookin' place to draw trade. Is business prosperin' nowadays?"

Silas turned three shades redder and stammered badly as he replied:

"Yes, I'm doin' as well as I can expect—er—I suppose."

"Probably as well as your customers are doin', I should imagine? You don't need to get discouraged. It takes time to work up a trade like yours in a nice, decent neighborhood like this."

Silas stared hard at the unwelcome intruder, glancing apprehensively at the door from which several customers had already turned away when, through the glass, they had caught sight of Mrs. Burke. He was desperately ill at ease and far from responding cordially to Hepsey's friendly advances; and his nervousness increased as his patrons continually retreated, occasionally grinning derisively at him through the glass in the door.

"If you don't mind my sayin' it, Mrs. Burke, I think you'd be a lot more comfortable at my house than you are here."

"Oh, I'm perfectly comfortable, thanks; perfectly comfortable. Don't you worry a bit about me."

"But this is a saloon and it ain't just what you might call respectable for ladies to be sittin' in a saloon, now, is it?"

"Why not?"

The question was so sudden, sharp and unexpected that Silas jumped and almost knocked over a bottle of gin, and then stared in silent chagrin at his guest, his nervous lips moving without speech.

"I don't see," Hepsey continued, "just why the men should have all the fun, and then when a woman takes to enjoyin' herself say that it isn't respectable. What's the difference, I'd like to know? This is a right cheerful place and I feel just like stayin' as long as I want to. There's no law against a woman goin' to a saloon, is there? I saw Jane Dwire come out of here Saturday night. To be sure, Jane ain't just what you'd call a 'society' lady, as you might say; but as long as I behave myself I don't see why I should go."

"But, ma'am," Silas protested in wrathful desperation, "I must ask you to go. You'll hurt my trade if you stay here any longer."

"Hurt your trade! Nonsense! You aren't half as polite as I thought you were. I'm awful popular with the gentlemen. You ought to be payin' me a commission to sit here and entertain' your customers, instead of insinuatin' that I ain't welcome. Ah! Here comes Martin Crowfoot. Haven't seen Martin in the longest time."

Martin slouched in and reached the bar before he caught sight of Mrs. Burke. He was just raising the glass to his lips when Hepsey stepped up briskly, and extending her hand, exclaimed:

"How do you do, Martin? How are the folks at home? Awful glad to see you."

Martin stared vacantly at Mrs. Burke, dropped his glass, and muttered incoherently. Then he bolted hastily from the place without paying for his drink.

Bingham was now getting a bit hysterical over the situation and was about to make another vigorous protest, when Hiram Green entered and called for some beer. Again Hepsey extended her hand cordially, and Hiram jumped as if he had seen a ghost—for they had been friendly for years.

"Hepsey Burke, what in the name of all that's decent are you doin' in a place like this?" he demanded when he could get his breath. "Don't you know you'll ruin your reputation if you're seen sittin' in a saloon?"

"Oh, don't let that worry you, Hiram. My reputation 'd freeze a stroke of lightnin'. You don't seem to be worryin' much about your own reputation."

"Oh well, a man can do a lot of things a woman can't without losin' his reputation."

For an instant the color flamed into Mrs. Burke's face as she retorted hotly:

"Yes, there's the whole business. A man can drink and knock the seventh commandment into a cocked hat and then when he wants to settle down and get married he demands a wife as white as snow. If he gets drunk it's a lark. If she gets drunk it's a crime. But I didn't come here to preach or hold a revival, and as for my welfare and my reputation, Mr. Bingham and I was just havin' a pleasant afternoon together when you came in and interrupted us. He's awful nice when you get to know him real intimate. Now, Hiram, I hate to spoil your fun and you do look a bit thirsty. Suppose you have a lemonade on me, if you're sure it won't go to your head. It isn't often that we get out like this together. Lemonades for two, Mr. Bingham, and make Hiram's real sweet."

Mrs. Burke enjoyed hugely the disgust and the grimaces with which Green swallowed the sirupy mixture. He then beat a hasty retreat down the street. For two hours Hepsey received all who were courageous enough to venture in, with most engaging smiles and cordial handshakes, until Silas was bordering on madness. Finally he emerged from the bar and mustered up sufficient courage to threaten:

"Mrs. Burke, if you don't quit I'll send for the police," he blustered.

Hepsey gazed calmly at her victim and replied:

"I wouldn't if I were in your place."

"Well then, I give you fair warning I'll put you out myself if you don't go peaceable in five minutes."

"No, Silas; you're wrong as usual. You can't put me out of here until I'm ready to go. I could wring you out like a mop and drop you down a knot hole and nobody 'd be the wiser."

The door now opened slowly and a small girl, miserably clad, entered the saloon. Her head was covered with a worn, soiled shawl. From underneath the shawl she produced a battered tin pail and placed it on the bar with the phlegmatic remark, "Pa wants a quart of beer."

Mrs. Burke looked at the girl and then at Bingham and then back at the girl inquiringly.

"Are you in the habit of gettin' beer here, child?"

"Sure thing!" the girl replied, cheerfully.

"How old are you?"

"Ten, goin' on eleven."

"And you sell it to her?" Hepsey asked, turning to Bingham.

"Oh, it's for her father. He sends for it." He frowned at the child and she quickly disappeared, leaving the can behind her.

"Does he? But I thought you said a saloon was no place for a woman; and surely it can't be a decent place for a girl under age. Now, my friend, I've got something to say to you."

"You are the very devil and all," Silas remarked.

"Thanks, Silas. The devil sticks to his job, anyway; and owin' to the likes of you he wins out nine times out of ten. Now will you clear out of this location or won't you?"

"Another day like this would send me to the lunatic asylum."

"Then I'll be around in the mornin' at six-thirty sharp."

"You just get out of here," he threatened.

"If you promise to clear out yourself within three days."

"I guess I'd clear out of Heaven to get rid of you."

"Very well; and if you are still here Saturday afternoon ten of us women will come and sit on your steps until you go. A woman can't vote whether you shall be allowed to entice her menfolk into a place like this and at the very church door, but the average woman can be mighty disagreeable when she tries."

Silas Bingham had a good business head. He reckoned up the costs—and cleared out.

(To be continued.)

Cave Life or Civilization

Civilized man is distinguished from the cave man by his habit of co-operation.

The cave man lived for and by himself; independent of others, but always in danger from natural laws.

To the extent that we assist one another, dividing up the tasks, we increase our capacity for production, and attain the advantages of civilization.

We may sometimes disregard our dependence on others. But suppose the farmer, for example, undertook to live strictly by his own efforts. He might eke out an existence, but it would not be a civilized existence nor would it satisfy him.

He needs better food and clothes and shelter and implements than he could provide unassisted. He requires a market for his surplus products, and the means of transportation and exchange.

He should not forget who makes his clothes, his shoes, his tools, his vehicles and his tableware, or who mines his metals, or who provides his pepper and salt, his books and papers, or who furnishes the ready means of transportation and exchange whereby his myriad wants are supplied.

Neither should he forget that the more he assists others the more they can assist him.

Take the telephone specialists of the Bell System: the more efficient they are, the more effectively the farmer and every other human factor of civilization can provide for their own needs and comforts.

Or take our government, entrusted with the task of regulating, controlling and protecting a hundred million people. It is to the advantage of everyone that the government shall be so efficient in its special task that all of us may perform our duties under the most favorable conditions. Interdependence means civilized existence.

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100	"	"	"	2.50	"	4.00	" "
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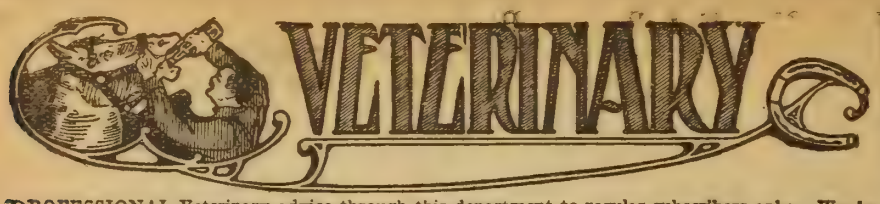


PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Ringbone.

I would like some information regarding a lame horse. I have a chestnut western horse, coming nine years this spring, that went lame two years ago when I had him on the road quite a bit. The lameness is in the right front foot. I blistered him several times after that from his ankle down to the hoof and kept him on the farm. After that he seemed to be all right, but a little hard driving on the road makes him limp as badly as ever. I have repeated this four or five times, each time blistering and resting him up, but each time he goes lame on the road.

Judging from your small amount of named symptoms and that you seemingly got some results by the use of blistering, we would be led to think your animal was troubled with ringbone. These causes are sometimes hard to overcome. The radical treatment of firing must be resorted to at times. I would advise you to have a competent veterinarian examine this horse to see if the existing trouble is ringbone.

Loss of Sow After Farrowing.

I had a Chester White sow, two and a half years old, that had eight pigs three days ago. Two of them were smothered, dying shortly afterwards. She was in good condition at that time, ate well after having the pigs, but this morning she was dead, having discharged some blood matter and some afterbirth.

It would be impossible to make a diagnosis of cause of death in the sow with so few symptoms given.

Chronic Laminitis.

I have a black horse, four years old, which was foundered a year ago, or supposed to be foundered. There was no treatment given the first four or five days. He was pretty sore, although he would walk around and did not refuse a light feed. He had fever in both front feet. Then we poulticed his feet in flax meal until the fever left, which I think was about four or five days, and gave him saltpeter in drinking water, advised by a veterinarian. He then appeared to be as good as before. In about six weeks he seemed to be a little sore. On examination we found hoof separated from the heart of the foot and extending upward from a fourth to an inch appeared to be deeper on sides than at toe. There was no matter or discharge. Two months after we noticed the separation we had him shod, having shoes reset once a month until his feet were grown out again. Then we took the shoes off, turning him in pasture for six weeks, at which time his feet appeared in good condition. But when we started to drive him again his hoof separated again as bad as the first time. Two weeks after this we had shoes put on again, which has been about three weeks now. He appears to be a little sore starting, but after that travels well. Hoof is smooth and sound otherwise. Do you know of any treatment that would help?

Your horse is troubled with chronic laminitis and will be hard to treat and expect any degree of success. This case should have been properly taken care of in the first twenty-four to forty-eight hours. You may get some results by having the horseshoer properly trim the feet and then have the horse shod with a bar shoe and leather soles and then blister the region immediately above the hoof once or twice. The blistering will help promote a healthy growth of horn.

Testing Cattle.

(1) How is it that a man has to have his cattle tested before he moves to another state when he can go to the Sioux City market and buy a load and ship them into Dakota or Minnesota without having them inspected? (2) If you call a veterinarian to test your cattle for you can he force you to sell them? Does the state pay for testing if they take the cattle in their hands? (3) Do they have to be tagged when you ship them? And does the veterinarian have to inform them they are coming so they can be on the lookout for them? If so, what are the government inspectors there for? Are they there to protect the packers and soak the innocent farmer?

(1) A shipper must comply with the regulations of the state authorities to which he wishes to send the stock. If the requirements are not the same from the farm to the other state as they are from a center or stockyards where federal inspection is maintained it is evident the state authorities have confidence in the inspection. (2) The veterinarian will not endeavor to force you to sell your cattle that have reacted to the tuberculin test. If he is a friend he will advise you to sell them and if you would serve your own best interests you will do so. The state authorities will do your testing free in case they have authority to do so and have the necessary funds to meet the expense. They do not have to be tagged before shipment, yet the owner would lose nothing if they were. The local veterinarian does not inform the government inspectors the reactors "are coming," yet the owner should not object if he did unless he (the owner) wanted to try to put something over on the inspectors. This would do no good, for if they are tubercular the inspector will find them and dispose of them properly, without any previous warning. A farmer that would try to knowingly dispose of tubercular cattle for food for the public could scarcely be called "innocent." Contrariwise, the farmer that says "my cattle have reacted; inspect them and deal justly by me and the public" can be called "innocent" (of any wrong doing) and will not suffer at the hands of the packers or the government inspectors.

Eversion of Uterus.

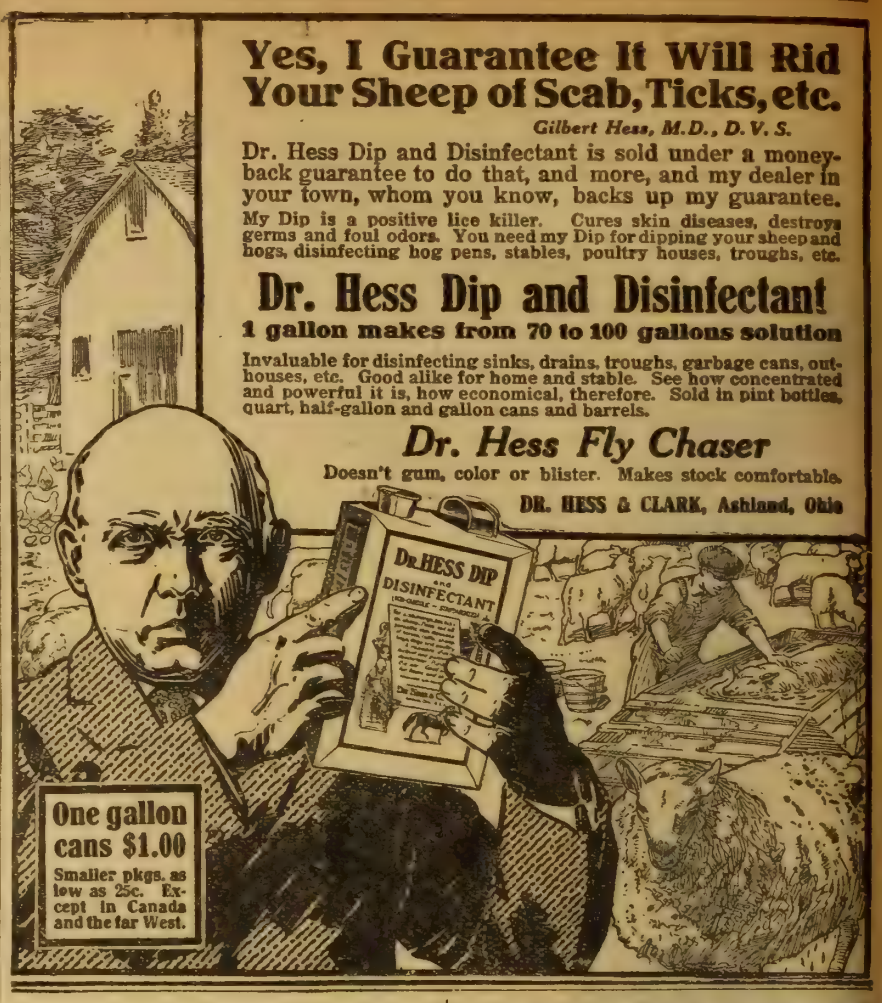
I have a three-year-old cow whose womb came out two days after calving. What treatment should a cow have for this trouble, and what should she be fed? What causes this ailment, and is the cow likely to get in normal condition again?

Eversion of the uterus or womb is brought about through failure of closure of the neck of the womb. An everted womb should be replaced as soon as possible and best be done by an experienced hand. If the womb has been completely everted it is impossible for it to return of its own accord. If it is left for some time the parts become inflamed and swollen to such an extent that the parts cannot be replaced without first cleansing and reducing the inflammation and swelling. A cow in this condition should be fed rather soft and easily digested food and have good care until the system is in good condition again.

Splints.

I have a four-year-old black mare which I broke last spring. After I got the crops in I turned her in the pasture day times and had her in the barn nights on a dirt floor. She had the habit of pawing and had quite a hole for her front feet. I rode her some. She was never shod up to this time. One morning I went to hitch her onto the buggy and I noticed that her left shoulder was swollen and it kept on until it was as big as a milk pail. When this swelling left she was lame and has been lame off and on ever since. I have not worked her any since but have ridden and driven her. Now there is a knot on the inside of each front leg about two inches below the knee and about the size of a marble. Are these knots "splints" or "sidebones," and has the swelling anything to do with this? Is there any cure for these swellings on the side of the legs?

It is possible your animal has splints on her forelegs. We do not think the swelling of the shoulder had anything to do with the enlargements on the limbs. Have you noticed whether your animal is sweenied in the shoulder region since the swelling subsided? In treating splints you should take into consideration several things, such as the following: Are the splints causing the lameness; are the splints large or small; length of standing of the trouble, etc. Splints are of very common occurrence in horses. As a mild treatmen would advise the application of tinc ture of iodine to the affected part several times daily, and if this fail the use of a Spanish fly blister ma prove effective. The actual cauter is a very good radical means to use.



Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Sheboygan County Holstein Breeders' Sale.

THE Sheboygan County Holstein Breeders will hold their second annual sale on Monday, May 8th, at Plymouth, Wis. Sheboygan county breeders need no introduction to the readers of The Wisconsin Farmer. They have been carrying a full page advertisement once a month for the past four months, and several herds in the county have been written up by our editors. As far back as 1883 registered Holsteins were being bred in Sheboygan county and it has long been known as one of the largest cheese-producing centers in the world. Dairying is by far the chief line of agriculture, and particular attention has been paid to improving the quality of the cattle on the farms. No pains nor money were spared in producing the best of animals to build up their herds. The result of these many years of constructive breeding is apparent in the herds now in the county. There are some seventy-five herds of pure-bred Holsteins in the county, and 46,000 dairy animals of various breeds. Official testing has been done by a great many of the breeders in the county who have made very creditable records. One breeder in the county has recently made three yearly records ranging from 1,000 to 1,200 pounds of butter. Another breeder has made large yearly records up to 1,200 pounds of butter. Many others have made large seven-day records, as high as twenty-six and thirty pounds of butter in seven days on two-year-old heifers. These are cited as examples of the high production ability of the cows in this county. On Monday, May 8th, the breeders will hold their second annual sale, consisting of seventy-five head of registered animals. The offering will include some twenty-five cows, many with A. R. records, a fine lot of yearling and two-year-old heifers and young cows and a number of choicely-bred bulls from A. R. O. and interested dams. For further particulars in regard to the animals in this sale see address on page 29. When writing for catalog kindly mention The Wisconsin Farmer.—Adv.

Provide a Heating System Now.

IN the damp, chilly days of spring, living in a cold, poorly heated house may cause much sickness and discomfort in the family, and in the summer and fall there are days on which the house should be heated. Right now is an excellent time to put a heating system in your house if you have none. It will be a great convenience on occasional cold days which come in spring and summer and will be in good working condition when cold weather sets in next fall. Stoves are bothersome and uneconomical when compared with an ideal heating outfit. This outfit is easily installed in old or new farm homes and gives a uniform heat of any volume desired. For health, comfort and economy the ideal system is highly recommended by those who use it. Don't put off investigating this system until next fall, but write for the Ideal heating book today. It is advertised on page 7 and may be obtained free by writing to the American Radiator Company, Dept. F-39, Chicago, Ill., and mentioning The Wisconsin Farmer.—Adv.

No Need to Sacrifice Pride or Comfort to Economy.

THE Overland is a small, light, economical car, but it is roomy, sturdy, powerful and complete to the last detail. It has all the style, easy riding qualities and comfort of the big, high-priced cars, but it is sold at the extreme low price of $615. Both exacting pride and strict economy are satisfied in this car. If you want a top class car at bottom price, get an Overland. The success with which it has swept the country indicates that it will please you. See your Overland dealer today or send to the Willys-Overland Company, Dept. 578, Toledo, Ohio, for a catalog. Mention that you saw the advertisement in this paper. See page 32.—Adv.

Truttschel Bros.' Holsteins.

THE records made by Truttshel Bros., Sheboygan Falls, Wis., in the past three years place their herd as one of the foremost in Wisconsin. Last year thirteen cows were put on test most of them two year olds. The thirteen head averaged over twenty-two pounds of butter in seven days. One of them as a two year old made over twenty-six pounds of butter in seven days and this year made thirty pounds. Two others also increased their records over four pounds this year. They are now offering a 26.30-pound bull and a 24.48-pound bull for sale on page 30.—Adv.

The Freeman Ensilage Cutter.

IF you want to know about an ensilage cutter that is inexpensive, operates on very small cost and combines quality and economy, get the free book advertised on page 14 by the S. Freeman & Sons Mfg. Co., Racine, Wis. This book tells their full line of ensilage and feed cutters, carriers and blower-elevators. The Freeman ensilage cutter is well known for its efficient work. If you use silage and are interested in cutters, write for this book today. A letter sent to the address given in the advertisement will bring a prompt reply if you mention this paper. —Adv.

Miller's Chester Whites.

W. F. MILLER, West Salem, Wis., has one of the good Chester White herds in Western Wisconsin. He has been raising Chesters for a dozen years and knows the type that the buying public wants—the big kind with quality. The attraction in his herd is the junior boar sired by the champion, Wykoff Lad. This young boar is out of the ordinary, he has great length, an excellent back, and ideal head and ear and is well grown. We don't know whether Mr. Miller expects to show this boar or not, but if he does someone will have to have a good senior yearling to beat him. The senior herd boar is a son of the noted Combination 2d and he is a worthy son of his grand old sire. The latter boar is the sire of most of the spring pigs and at the time the writer was there Mr. Miller had over fifty early March pigs all doing nicely, consequently he will have some good pigs to offer his trade at a later date. He expected to have over 100 March and April pigs. Owing to the heavy mail order trade that Mr. Miller has enjoyed he is sold out of bred sows and all he has to offer will be his spring pigs to be shipped at weaning time. His Chesters are in demand and he has already booked several orders for shipment at weaning time. If you are going to want Chesters, and wish to buy where you get breeding and individuality it would be well to place your order early, so as to get the pick. Write Mr. Miller your wants, he will tell you just what he has. Don't forget to mention The Wisconsin Farmer.—Adv.

Power in the Paige.

THE automobile with power is the one for the farmer. He does not have occasion to run sixty or seventy miles an hour, but he does have hills to climb and rough places to pull over. He wants to feel as he drives his car that he has a vast store of reserve power at his command and can take the heaviest roads "on high." Then he wants to know that his car is sturdy and staunch—ready to work when there is work to be done. For the farmer's purpose the Paige fills the bill. It has just the qualifications that the farmer wants and will meet his needs day in and day out. Furthermore Paige cars are handsome; their owners make no apologies or excuses; and breakdowns are exceedingly rare with the Paige. Two models are made of this car, a five-passenger Six-38 and a seven-passenger Six-46. They are advertised on page 2 by the Paige-Detroit Motor Car Co., Detroit, Mich. Ask your nearest dealer to show you the Paige cars.—Adv.

Holts' Holsteins.

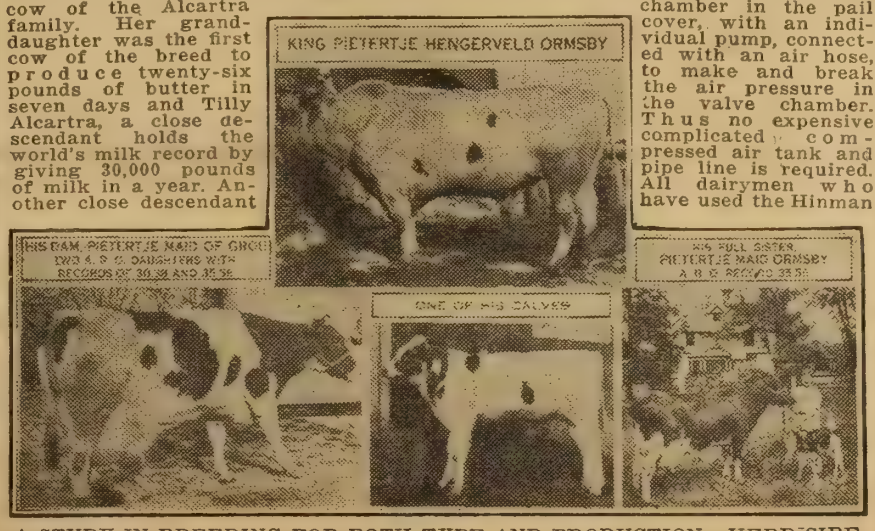
A 21.19-pound Holstein bull is advertised for sale on page 30 by Frank Holt & Son, Pleasant Prairie, Wis. They also have a few others from A. R. O. dams of choice breeding ready for immediate service. Their prices are low and the animals good. Write to them for pedigrees and prices.—Adv.

Currie's Hampshires.

ONE of Wisconsin's most progressive breeders of Hampshire swine is R. L. Currie, Viola, Wis. He has been breeding Hampshires for a number of years and has bred and developed many of the finest animals in the state. When in need of breeding stock write to him. See page 31.—Adv.

A Fine Wisconsin Holstein Herd.

THE Bonnie Mead Farms, Randolph, Wis., herd of Holsteins is one of the oldest and best bred herds in Wisconsin. It was established in 1892 with three choicely bred cows. The offspring of these three foundation cows have proven to be some of the best animals in the breed. One of these foundation cows was Alcartra 2d, the foundation cow of the Alcartra family. Her granddaughter was the first cow of the breed to produce twenty-six pounds of butter in seven days and Tilly Alcartra, a close descendant holds the world's milk record by giving 30,000 pounds of milk in a year. Another close descendant is King Segis Pontiac Alcartra the world's highest priced Holstein bull, a half interest being sold for $25,000. The majority of the cows in the present herd trace to Alcartra 2d. Another of the foundation cows was Wisconsin Belle, There is a long line of her descendants which have made very creditable A. R. O. records. Another foundation cow was Lady Van Beers, of the noted Van Beers family that produced the world's first fonty-pound cow, Johanna De Kol Van Beers. It will be seen that the foundation of this herd was extraordinarily good, and the records recently made by members of these same families show that their judgment in selecting these cows was very wise. The present herd has been buiilt up on these cows and their offspring mated to choicely bred sires. One of the bulls used was Canary Mercedes Royal Sirocco, whose sons and daughters have proven him a great sire. His son, Sir Clyde, has a long list of A. A. O. daughters including three with records from thirty to thirty-three pounds of butter in seven days. Another bull used was Sir Johanna De Kol Wit, a son of the great bull, Sir Johanna De Kol, sire of the forty-pound cow, Johanna De Kol Van Beers. The next bull used was Meg Van Beers Sirocco, a half brother to Sir Clyde. Sir Aaggie Ormsby was then used that is by a brother to Pietertje Maid Ormsby, the world's first cow to make 35.56 pounds of butter in seven days. Sir Aaggie Ormsby is also a grandson of Skylark De Kol Johanna, which makes him of the same line of breeding as Duchess Skylark Ormsby, that recently broke the world's butter record by producing 1507.36 pounds butter in a year. The next bull used was Sir Johanna De Kol 14th, a brother to the forty-pound cow, Johanna De Kol Van Beers. He is also a grandson of Netherland Van Beers, the grandsire of the forty-pound cow, making him 93.75 per cent the same blood as the forty-pound cow. The next bull used was North Star Grisela Sir Beets, a 28.06-pound son of the great show bull, Sir Beets Cornucopia Netherland, that was never defeated in the show ring. Official testing has been conducted for three years in this herd, and daughters of practically every bull mentioned have made creditable A. R. O. records, some as high as twenty-seven pounds of butter in seven days. From the foregoing it will be seen that this herd carries a double cross of the same breeding that produced the great bull, Sir Clyde—the forty-pound cow, Johanna De Kol Van Beers and Pietertje Maid Ormsby, as her full brother is now at the head of the herd. This bull, King Pontiac Hengerveld Ormsby, is one of the finest individuals in the state. His full sister made 35.56 pounds butter in seven days, another half sister made 30.38, another made 33.32 and twenty-six others made from twenty to 29.28 pounds butter in seven days. At the present time bull calves sired by King Pietertje Hengerveld Ormsby are advertised for sale on page 30.—Adv.



A STUDY IN BREEDING FOR BOTH TYPE AND PRODUCTION. HERD SIRE AT BONNIE MEAD FARMS, RANDOLPH WIS. SEE PAGE 30.

Big Farm Bargain Book.

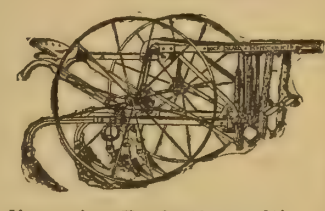
MONTGOMERY, WARD & CO., are advertising a big farm bargain book on page 18, which they want every farmer to have. This book is intended to save the farmer money on everything used on the farm. One of the bargains is a hard, tough spring sheep and hog fence, twenty-six inches high, which will not rust or get out of shape, offered at 23½ cents a rod. Send your name and address for this book today. See the advertisement for the company's address.—Adv.

Milking Machine Efficiency.

PERHAPS the most important reason for the success and efficiency of the Hinman milking machine is the practical, hard-earned experience of the makers of this machine. They are farmers and established their first shop on their farm near Stockbridge, N. Y. Later they moved to a well-equipped machine shop at Oneida, N. Y., and began perfecting the details of their milking machine. From the first they worked on the principle of a valve chamber in the pail cover, with an individual pump, connected with an air hose, to make and break the air pressure in the valve chamber. Thus no expensive complicated compressed air tank and pipe line is required. All dairymen who have used the Hinman milker praise it, because it solves the milking problem. If you have a milking problem, it will be to your advantage to fill in the coupon attached to the advertisement on page 15 and send it to the Hinman Milking Machine Co. You will not be under obligation, but will get some good pointers on practical milking machines.—Adv.

Get this Catalog on Farm Tools.

WE would urge our readers who are planning to buy a new cultivator this year, or who are not satisfied with the work their old one is doing, to get a copy of the Rock Island Plow Company's catalog and read the discussion on perfection cultivators. You will find it interesting and instructive. At the same time you will have a reference book of farm implements. In discussing Perfection cultivators, which have proved unusually popular with farmers, it brings out the self-balancing feature by which the cultivator is automatically balanced when the gangs are lifted, so that the seat remains rigid and the pole does not fly up. Among other features are the easy adjustment by which the cultivator may be used for walking or riding, the absolute control of the gangs with but very little effort, and the absence of levers, rachets and chains which obstruct the view and are cumbersome to handle. The illustration is a reduced picture of the Perfection cultivator shown in the catalog. Send for this catalog today. You will find it a source of solid, practical information. Address the Rock Island Plow Co., Rock Island, Ill., and mention this paper in order to receive a prompt reply.—Adv.



Good Holstein Calves for Sale.

THE Edgewood Farm, Whitewater, Wis., is making an effort to dispose of all its calves this spring. These include both sexes and the price is put at $20 each. Considering the quality of the calves offered, this is regarded as a very low price. It is a good opportunity for anyone wishing to get a start in this breed or to increase their present herd. These calves are sent out at four to six weeks of age and are crated in light, strong crates so that they may be safely and economically shipped long distances. They are guaranteed to arrive in good condition. These calves are bred strictly for heavy milking purposes and the owner gives assurance that they are practically pure Holstein, typical to the breed, although not registered. We request that those who write the Edgewood farm regarding these calves mention The Wisconsin Farmer. See advertisement on page 30.—Adv.

Save Time and Cream.

ON most farms the cows have freshened at this time of year and the supply of milk is greater. This means more cream separating. Besides the spring work is beginning and time is very scarce. Under these circumstances a De Laval cream separator will be of great advantage. All the cream will be saved from this increased milk supply and it can be handled in less time. The De Laval is very simple and easy to handle, also easy to clean and keep sanitary. Because of its ample capacity this separator will do the skimming quickly and efficiently. See your nearest dealer about the De Laval, or if you do not know him, write direct to the De Laval Separator Co., 29 E. Madison St., Chicago, Ill.—Adv.

A Picture Book of California.

TWO trainloads of eastern farmers made a special rail and auto trip in California last fall. They inspected first hand the productive farms and orchards, they traveled among the scenic mountains and broad plains. The sights they saw and the impressions they received have been collected into a beautiful illustrated book. You can get a copy of this book free by writing to C. L. Seagraves, Gen. Col. Agent, A. T. & S. F. Ry., Chicago, and mentioning this paper.—Adv.

Valuable Suggestions to Silo Owners.

SILO owners can get some valuable information and suggestions on selecting a silo filler and on handling silage from the literature of the Jos. Dick Mfg. Co., Canton, Ohio, if they will write for it. This company makes the Blizzard ensilage cutters, which are thoroughly tried and tested machines, and they can give reliable information on silage subjects. Write for their free booklets today.—Adv.

Birchwood Guernseys.

REGISTERED Guernsey heifers and yearling bulls are advertised for sale on page 29 by M. L. Welles, Rosendale, Wis. These were sired by Dairymaid's King 12898, that is a full brother to the great cow, Dairymaid of Pinehurst. This cow made 910 pounds of fat in a year, holding the world's record

at the time. The animals offered for sale are out of A. R. cows of choice breeding.—Adv.

A Guernsey Sale of Importance.

A SALE of Guernsey cattle that should appeal to all lovers of this breed will be held at West Salem, Wis., Wednesday, May 3d. For this sale sixty head of imported and American-bred Guernseys have been cataloged. This will include several cows now in milk, cows and heifers soon to freshen, breeding bulls and bull calves. A feature of the sale will be several cows that have large A. R. records. This offering is sired by some of the noted bulls of the breed. Several individuals are by Imp. Holden 4th 12179, that is the sire of the present world's record two-year-old Guernsey heifer. There will be twenty cows in calf to this bull. There will be several daughters sired by Bob Rilma, the only son of May Rilma, a cow that until recently held the world's record. Cows of such breeding are not often offered in a public sale, but the consignors desire to make this the best sale of Guernsey cattle ever held in the middle West and for that purpose in mind they have selected from the very tops of their good herds. Besides the get of the above mentioned bulls there will be several outstanding individuals by Langwater Princeling and Masher 63d, two sires that have proven their worth in these herds. This stock is in fine breeding condition and they are ready to make good in the hands of prospective Guernsey buyers. All stock has been tuberculin tested. Consignors to this sale are Rundell Brothers, of Hammond and Roberts, Wis., and Alfred I. Stubbs, West Salem, Wis. Remember these breeders are offering you the best they have and not the "tail ends." If you are interested in this breed don't fail to attend the sale. Catalogs are now ready and the same can be had by addressing A. L. Hyzer, sales manager, West Salem, Wis. Kindly mention The Wisconsin Farmer when writing. See page 29.—Adv.

Recent Sales Made by McKevitt Bros.

IF a breeder has "the goods" and will let this fact be known he will have no trouble in disposing of his surplus stock. As we have mentioned before, McKevitt Bros., Bridgeport, Wis., have one of the best Angus herds in that state and we believe we are safe in saying, that they sell more Angus cattle than any other breeder in the state. They have recently been advertising four stallions for sale and we have been advised that they sold one Shire and one two-year-old Percheron stallion to August Stagman, Sisseton, S. D. The Percheron weighed 1,820 pounds the day he was shipped. They also report the following sales of Aberdeen Angus cattle: One bull to Frank Marvats, Eastman, Wis.; a bull each to R. R. Hughes, Rewey, Wis.; Harry Young, Bridgeport, Wis., and Fred E. Foster, Beetown, Wis. To Lou Chouinard, Baylon, Mont., they sold two very choice females. Walter Scott, Bagley, Wis., selected one of their very best bulls. The McKevitts raise good cattle and good cattle are always in demand. If you are in the market for a cheap bull, or some bred heifers that are inferior in quality, don't visit this herd. They cater to discriminating buyers and if you belong to that class, they will try hard to please you. Keep the herd in mind.—Adv.

Spring is Tonic Time.

SPRINGTIME is tonic time, and that's just as true with animals as with the human family. It is a good plan to start now and give all the animals a general toning up. The horses that have been closely stabled and fed dry feed all winter will soon have to get into heavy spring work. Many farm animals are troubled with constipation in the spring and are bothered with worms. For these reasons it is a good plan to lay in a supply of Dr. Hess Stock Tonic and feed it regularly. You will find it a valuable addition to your feeding at this time of year. It is a compound of ingredients that the animal system needs; nux vomica aids digestion, sulphate of soda acts on the bowels and liver, sulphate of iron purifies the blood and expels worms, nitrate of potash acts on the kidneys, etc. Dr. Hess Stock Tonic is a sure cure for worms, which cause serious trouble especially in hogs. See the advertisement on page 26 and ask your dealer for a package of this valuable stock remedy.—Adv.

A Postless Fencing System.

A NEW method of supporting fences is advertised on page 18 by the Carbo Corporation 235 Rand McNally Bldg., Chicago, Ill. This method is claimed to have a great advantage over wood, concrete or steel fence posts. Full information concerning it may be obtained by filling in the coupon attached to the advertisement and sending it to the company. Mention that you saw the advertisement in this paper.—Adv.

A Three-Cylinder Engine for Farm Work.

THE Auto Parts Co., Chicago, Ill., is advertising on page 11 a smooth-running, frictionless, three-cylinder engine which is well adapted to do general farm work. The engine is sold with complete equipment at a bargain price. Read the advertisement and write for the special price offer and full particulars to the address given in the advertisement.—Adv.

Marinette County Asylum Holsteins.

THE Marinette County Asylum, Peshtigo, Wis., have an excellent herd of Registered Holstein cattle. They are very careful in the selection of their breeding stock, using great care and discrimination to get only the best obtainable. At the present time they are advertising young bulls sired by King Walker Segis 3d, Sir Witra Clyde Segis and University Johanna Excelle. They can also spare a few females.—Adv.

Offer Northern-Grown Seed Corn.

THE Adams Seed Co., Dept. 50, Decorah, Iowa, is offering northern-grown seed corn which has tested fine and which is claimed to be entirely satisfactory for Wisconsin and Minnesota farmers. This company has made very careful selection of its seed corn and its offering is on the basis of seed grown in this territory. They state that samples of this corn have been presented to one of the foremost agricultural colleges of the country and they give in their advertisement on page — the results of tests which have been made by this college. Included in the list offered is Wisconsin No. 7, better known to our readers as Silver King, Northwestern Dent, Minnesota No. 13, Minnesota King, and other northern-grown varieties. This company also offers a sworn statement as to where their seed corn is grown. Every bushel of seed sold by them is guaranteed to be as represented in every particular or money refunded. Free catalog of seed corn with price list will be forwarded to anyone who will write to the address given above. Please be kind enough to mention The Wisconsin Farmer when you write. See page 12.—Adv.

Sir Canary Alcartra 78433.

IN order to avoid in breeding A. L. Rowe, Waupun, Wis., is offering his fine herd bull for sale on page 30. This bull, Sir Canary Alcartra, is one fit to head any herd of pure-bred cattle. As an individual he cannot be faulted. He is a large animal, being both very long and deep, with a straight rump and high tail setting. He is nearly white in color, and shows great constitution and capacity. His sire is the noted bull, Canary Paul, which sold three times for $1,000. His dam, Nellie Alcartra Rue, made 874.32 pounds of butter in a year. The bull offered for sale has five A. R. O. daughters with records as high as twenty pounds of butter in seven days as two year olds. Those of our readers who are in the market for an exceptionally good animal should send for the extended pedigree of this bull. In order to make room Mr. Rowe also offers six of his daughters for sale. See page 30.—Adv.

A Self-Oiling Windmill.

A SELF-OILING windmill which seldom gets out of repair is a time and labor saver when compared with a rusty, squeaking windmill that is almost certain to need constant repair. The Aermotor Co., 1125 S. Campbell Ave., Chicago, Ill., make a windmill of the self-oiling type. Its working parts are flooded with oil from the supply in the gear cases which needs replenishing only once a year. A metal helmet or hood covers these parts and keeps out all rain or dust. An old wheel and vane may be attached to the self-oiling motor and provide an up-to-date outfit at small cost. This would be a good thing for the farmer who already has a windmill that is not giving the most efficient service. The company named above has a very attractive folder on Auto-Oiled Aermotors which will be sent to anyone on request. See advertisement on page 16.—Adv.

The Ross Silage Machinery.

THE thresherman who makes a business of filling silos will find it profitable to use the Ross silo filler on account of its low cost of upkeep and rapid work. They are built especially for the thresherman who has steam power and wants a filler that can stand hard, continuous work. Ross silo fillers are sturdily built and free from defects. Models 16, 18, 20 and 24 are equipped with steel cutting apparatus and steel blower. Because of advancing prices you will find it advantageous to buy early. See the advertisement on page 15 and write today for complete information. Address E. W. Ross Co., Box 154, Springfield, Ohio.—Adv.

Mielenz Holsteins.

W. F. MIELENZ, Milwaukee, Wis., is offering a number of richly bred Ormsby bulls for sale on page 30. These were sired by Sir Ormsby Piebe Burke, a brother to the forty-one-pound cow, Sadie Vale Concordia 4th. These bulls are from A. R. O. cows of De Kol Burke Ormsby and Korndyke breeding. For extended pedigrees and further information write to the above address.—Adv.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Holstein-Friesian Cattle.

Apr. 18, Quinello Farm Holstein Dispersion Sale, Thiensville, Wis.
May 2-3, Thirteenth Semiannual Consignment Sale of the Lake Mills Holstein Breeders' Sales Company, Lake Mills, Wis. Frank H. Everson, Mgr.
May 4-5, Wisconsin Breeders' Eighth Annual Sale, Watertown, Wis. S. B. Jones, Mgr.
May 7, Sheboygan County Holstein Breeders, Plymouth, Wis.
May 10, Wood & Dunn County Holstein Breeders.
May 10-11, Central Wisconsin Holstein Breeders' Association, Marshfield, Wis. E. E. Butters, Sale Manager.
June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

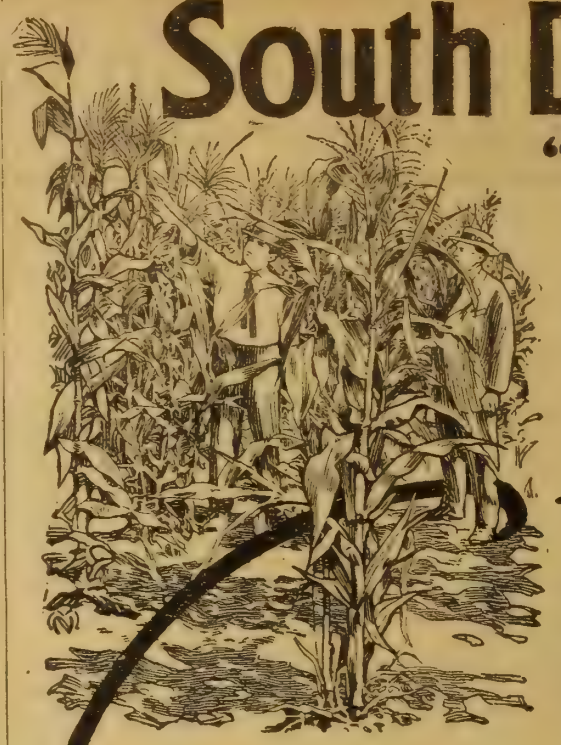
Short-horn Cattle.

Nov. 1. Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Hereford Cattle.

May 18. Birch & Thompson, Lake Geneva, Wis.

South Dakota:



"the place for a poor man to get a start"

Nowhere else is individual opportunity so great. The Government figures show that South Dakota returns more in value annually to each inhabitant than does any other state. Here thousands of farmers have become well to do in the last few years. Read what some of these farmers say:

"I know of no country where a living can be so easily obtained as here."—"My oats went 60 bushels per acre in 1914. Have now 50 head of cattle and 18 head of horses and do not owe a dollar on my personal property or farm."—"Have 12 head of good horses, 18 head of cattle, 12 hogs and all farm machinery and do not owe a dollar. I had $100 when I moved here."

Many others can give like testimony. These letters and full and reliable information about the state are contained in our Dakota book. Send today for a copy—address

CHICAGO
Milwaukee & St. Paul
RAILWAY

GEO. B. HAYNES, General Passenger Agent
H. F. HUNTER, General Agent
613 Railway Exchange
CHICAGO

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland**; his dam, a granddaughter of **Golden Fern's Lad**, gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

SALE DATES.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Richland County Holstein Sale.

The sale of Holstein cattle made by the Richland County Holstein Breeders' Association at Richland Center, Wis., was a success. This was the first sale ever made by this association, and, as is often the case, several of the animals went far below their value. There was a large crowd in attendance and the bidding on the better individuals was spirited throughout the entire sale. Some of the consignors did not have their stock in as good condition as it should have been. C. C. Fries & Son sold a grand lot of heifers sired by their good herd bull, King Pontiac Portia. C. G. Keys had a nice consignment of young stuff. H. A. Brace consigned the animal that topped the sale, number 34 of the catalog going at $400. There was a good demand for the stuff out of record dams and with good breeding and in the future these breeders will have a great call for the good stuff at their annual sales. The men making this sale expressed themselves as being well pleased with the outcome of this, their first sale. Several bull calves, from four to six months old were sold. Col. J. E. Mack, Ft. Atkinson, Wis., sold the offering in his usual high-class manner. We follow with a list of those selling for $75 and over:

C. C. FRIES & SON, RICHLAND CENTER, WIS.

1.	John Nee, Richland Center, Wis.	$180
2.	E. C. Nelson, Superior, Neb.	175
3.	C. S. Franklin, Evansville, Wis.	115
4.	Paul M. Schmitz, Richland Center, Wis.	105
5.	Paul M. Schmitz	155
6.	J. E. Mack, Ft. Atkinson, Wis.	155
7.	O. A. Haney, Lone Rock, Wis.	100
8.	E. C. Nelson	75
9.	Joe H. Rockweiler, Cazenovia, Wis.	250
10.	A. A. Thompson, Richland Center, Wis.	125
11.	Paul M. Schmitz	150
12.	C. E. Nelson	140
13.	C. E. Nelson	200
14.	O. Allison, Richland Center, Wis.	150
15.	F. Cranz, Muscoda, Wis.	80
16.	Paul M. Schmitz	180
17.	Joe H. Rockweiler	185
18.	C. E. Nelson	200
20.	Joe H. Rockweiler	205

C. G. KEYES, RICHLAND CENTER, WIS.

21.	C. R. Thompson, Richland Center, Wis.	$125
26.	W. N. Meyers, LaCrosse, Wis.	150
27.	M. S. Stewart, Richland Center, Wis.	85
28.	F. Cranz	100
32.	A. A. Thompson	95

H. A. BRACE, LONE ROCK, WIS.

33.	J. E. Mack	110
34.	Frank Shadenwald, Gotham, Wis.	400
37.	Wm. Cook, Lone Rock, Wis.	120

Yearling Jersey Bull

OF choice breeding. Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

ELMDALE FARM . . . JERSEYS

REGISTERED yearling bulls ready for immediate service and younger, sired by Sage's Victor and Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price. Address
H. Holt & Son Oconomowoc, Wis.

STUBLEY'S JERSEY BULLS

GOLDEN Maid's Viscount by Imp. Golden Maid's Prince. Noble of Avaranch by Imp. Noble of Oakland. Young bulls by the above sires, from Advanced Registry dams. 100 head of wonderful cows in herd. Write your wants. Fred Stubley, Black Earth, Wis. (20 miles west of Madison).

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort Tomah, Wis.

COMBINATION SALE OF REG.

GUERNSEYS

WEST SALEM, WISCONSIN
WEDNESDAY, MAY 3, '16

60 HEAD

Imported and American-Bred Guernseys

COWS in milk, cows soon to freshen, heifers and breeding bulls. Several cows with large A. R. records. Note what this offering is sired by---Imp. Holden 4th 12179, the sire of the present world's record two-year-old-heifer, Bob Rilma, the only son of May Rilma, until recently the world's record cow. Others by Langwater Princeling and Masher 63d. Twenty head of cows in calf to Imp. Holden 4th. Everything in excellent breeding condition, has been tuberculin tested and will be sold regardless of price. Consignors: Alfred I. Stubbs, West Salem; Rundell Brothers, of Hammond and Roberts, Wisconsin. Catalogs now ready. Address

A. L. HYZER, Sales Mgr.
West Salem **Wisconsin**

Sheboygan County
Holstein Breeders' Sale

PLYMOUTH, WISCONSIN
MONDAY, MAY 8, 1916

75 HEAD of choice, pure-bred Holsteins; over 20 fine cows, many with big records of their own. Some extra nice young stock ready to grow into money. Write for catalog. Address

FranK Ubbelohde, Sec., Sheboygan Falls, Wis.

COMING
TWO GREAT HOLSTEIN SALES
MAY 2d AND 3d, LAKE MILLS, WIS.
F. H. EVERSON, Manager
MAY 4th AND 5th, WATERTOWN, WIS.
S. E. JONES, Manager

A VERY choice lot of dependable cattle. A clean, straight sale in every way. Some of the finest stock in the state, from breeders' herds. Write for catalogs.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

A ROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

SHORT-HORN CATTLE.

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STATEMENT OF THE OWNERSHIP, management, circulation, etc., required by the act of congress of August 24, 1912, of The Wisconsin Farmer, published weekly at Des Moines, Iowa, for April 1, 1916.

State of Iowa, County of Polk, ss.

Before me, a Notary Public, in and the state and county aforesaid, personally appeared J. W. Wickham, who, having been duly sworn according to law, deposes and says that he is the Assistant Business Manager of The Wisconsin Farmer, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—James M. Pierce, Des Moines, Iowa.

Editor—James Atkinson, Des Moines, Iowa.

Managing Editor—James Atkinson, Des Moines, Iowa.

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Assist. Bus. Mgr.

Sworn to and subscribed before me this 1st day of April, 1916.

M. M. LOWMAN,
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[Seal.]

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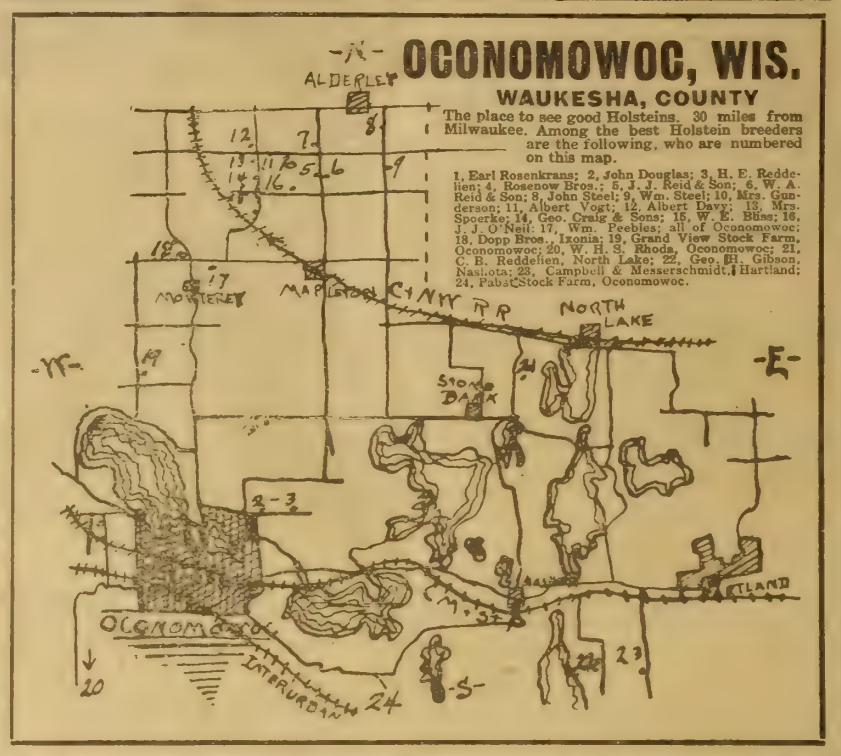

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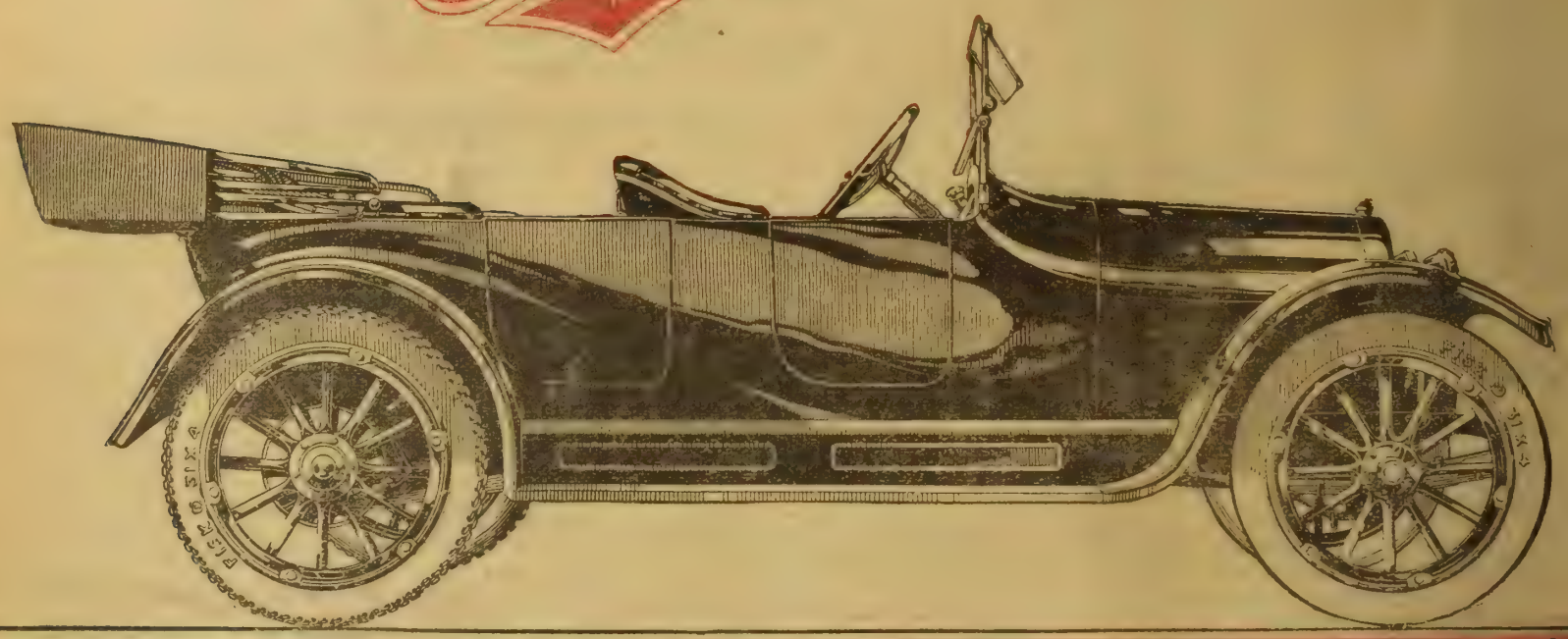

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VOL. XLV. NO. 16. THURSDAY, APRIL 20, 1916. WHOLE NO. 1786

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CURRENT EVENTS

THE New York Tribune, one of the nation's oldest and most reliable journals, which, four years ago, was bitterly opposed to Roosevelt, last week came out in favor of his nomination for the presidency at the republican national convention to be held in Chicago in June. The Tribune said: "We are for Colonel Roosevelt because we believe the country needs him. No one else will quicken the pulse of the nation as he will quicken it. No one else will stir the conscience of the people as he will stir it. No one else will inspire patriotism as he will inspire it. No one else personifies the issue which the republican party must make as he personifies it. No one else presents so effective an antithesis to Wilson as he. If we are Americans, real Americans, the colonel is our man. While timid politicians were consulting the census books and counting the German vote, he spoke and the country hearkened. He is the leader in the fight for Americanism and we don't believe in changing leaders when we are going to the front." There is a growing belief that when June comes Roosevelt will be found to be the strongest candidate and that the progressives and republicans will unite upon him. There is much Hughes talk nowadays, but Justice Hughes is known to be perfectly content with his life job on the United States supreme bench.

SENATOR WARREN G. HARDING, of Ohio, has been selected as the temporary chairman of the republican national convention, to meet in Chicago in June. Senator Harding's principal opponent was Representative James R. Mann, of Illinois, whom he defeated by one vote. One of the strongest arguments in Senator Harding's favor, with the committee which selected him, is that he is the only republican senator from the middle West who is not a candidate for the presidency in his own right. He is also the only republican senator, since the 1912 smashup, to have gone to a direct primary and won his nomination, followed by a successful election, in which the republicans and progressives were together. Men in close touch with what has been happening said that Senator Harding's nomination and election to the senate came as a result of a republican-progressive coalition. The day after he was elected temporary chairman Senator Harding delivered a speech in Chicago, in the course of which he said: "It is useless to talk of 1912. I had rather forget it, and let a nation wearied anew by the democratic party join us in four years of happy forgetting. Every essential remains, even the inspiring name; there is every assurance of the concord of leadership, and, more significant still, there is the unmistakable readiness of the people to pledge themselves anew to the republican faith." It is predicted that he will do everything in his power to conciliate both the republicans and the progressives and to unite the various factions of the G. O. P. so as to increase the chances of party victory next November.

HENRY FORD, the multi-millionaire automobile manufacturer, was victorious over Senator William Alden Smith in the Michigan presidential primaries, the voters choosing him as the "favorite son" of that state in the Chicago nominating race. After the returns were all in and Mr. Ford found that he was victorious by some 5,000 votes, he issued a public statement in which he said the victory was one for peace, rather than for himself. He released the Michigan delegates from their obligation to vote for him, saying Senator Smith could have their support if he wished it, as he (Ford) was not in politics. He then announced his intention to return to Europe in May and continue his efforts in behalf of peace. He said: "I'd like to take a vote of the men in the trenches to determine the sentiment for peace. The vote for Henry Ford in Michigan wouldn't be a bagatelle to the plurality peace would get in the trenches. I know the sentiment there. It is for peace. But negotiations must be started before our candidate can be elected. My candidate until Europe's returns come in will be peace. I hope to nominate him. I believe there's a saying in politics, 'He is the people's man.' That's peace." There is no question but that Mr. Ford is sincere in his efforts to bring about peace, although whether anything is actually being accomplished by his propaganda is a debatable question.

THE farmers of Illinois and Wisconsin who furnish the bulk of the milk supply of Chicago (estimated at between 1,500,000 and 1,750,000 quarts a day) were victorious in their strike and have secured the desired advance in price. Hereafter the milk dealers will be obliged to pay $1.55 a hundredweight, an increase of 22 cents over the old price. Whether the price to the consumer will be raised from 8 cents to 9 cents by all the Chicago dealers, or by just a few, has not yet developed. The strike was brought to an end by the intermediation of Health Commissioner John D. Roberson. While the peace conference was being held the district attorney announced he would launch a federal grand jury investigation to determine whether or not either the Milk Producers' Association or the dealers have violated the Sherman anti-trust law, as applied to interstate commerce, by attempting to fix prices. The officers of both associations assert that they will welcome an investigation. The success of the milk producers is convincing testimony to the value of "getting together" in the way of organization and co-operation, one of the most notable victories any farmers' organization has ever won, in securing better prices for farm commodities by united action.

PRESIDENTIAL preference primaries were held in several states last week, but in none were the contests close or exciting. President Wilson has had no opposition whatever in any of the states where the democrats have expressed their preference at the polls. With the republicans, the primaries have been mainly a complimentary vote for certain favorite sons. Thus, in Michigan, it was for Henry Ford. In Iowa Senator Cummins had no opposition whatever and the vote was extremely light, not more than 50,000 republicans in the entire state taking the trouble to go to the polls, while 40,000 democrats contented themselves by voting for Wilson, the others staying at home. In Illinois Senator Sherman won all the state's delegates except two, who will be instructed for Roosevelt. The first ballot at the Chicago nominating convention will find so many favorite sons among the republicans that it will be little, if any, indication of the ultimate result.

THE American troops were still upon the trail of Villa, the Mexican bandit, at last reports, although conflicting rumors have been rife as to their possible early withdrawal. There were reports during the week that Villa was dead, but these were never confirmed. It was rumored that he had been seriously shot in battle, that blood poisoning had set in and that he had died, for lack of medical treatment, there being only one doctor in all the country traversed by him. Just what the troops under General Pershing have been doing for the past week has not been definitely disclosed by the press dispatches, although it is reasonable to assume they are pushing ahead rapidly as possible. At last repo[illegible] the troops were almost 400 miles below the border, maintaining an unbroken line of connection with the headquarters this side the line.

The Wisconsin Farmer

THURSDAY, APRIL 20, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

LIFE INSURANCE AND THRIFT

I HAVE already set forth my views on the value (necessity would more aptly express it) of life insurance to the farmer. Last week I wrote at some length on the important part which thrift plays in successful lives. Let me take a few minutes of your time now to join these two subjects together.

I have in mind a young man who took out a life insurance policy for $1,000 twenty years ago. He had just gone to the city from the country and had taken the only position which presented itself. The pay was small, but from it he saved enough to meet the insurance premium, which, in his case, was $26 a year. In the twenty years which have passed since then, the way has been uphill and downhill, but never was there a time when this young man allowed his life insurance policy to lapse. At whatever personal sacrifice he saved the money for the annual premium. The other day he received a check from the company for $500. In the twenty years he had paid in $520; he received every cent of it back, save $20, which gave him life insurance protection for twenty years, at an average cost of $1 a year for $1,000. The young man took the life insurance company's check for $500 and paid off the last remaining debt on his home, reinsuring his life for another $1,000, in order to give ample protection to his wife and little ones.

Now, I consider this a good example of the combination of life insurance and thrift. For only $1 a year that young man was protected, for $1,000, against death. Today, he owns his home, free of all incumbrance, the last $500 of the debt having been wiped away by the life insurance company's check. It is a foregone conclusion that had he not taken out a life insurance policy at an early age and determined to save the amount of the premium every year, no matter what happened, he would not be so well and comfortably fixed as he is today. I want my young men readers to consider this matter very seriously; it should cause them to realize that while the annual premium seems large today, if they will only keep at it, year by year, they will get their money back, in time—and in time to enjoy it themselves, too.

Life insurance, industry and thrift: There is a combination which almost inevitably leads to independence and success. The eminent divine, T. DeWitt Talmage, was right when he said:

> The day before or the day after you get married, go to a life insurance company of established reputation, and get the medical examiner to put the stethoscope to your lungs and his ear close up to your heart, with your vest off, and have signed, sealed and delivered to you a document that will, in case of your sudden departure, make for that lovely girl the difference between a queen and a pauper.
>
> I have known men that have had an income of $3,000, $4,000, $5,000 a year, who did not leave one farthing to the surviving household. Now, that man's death is a defalcation, an outrage, a swindle. He did not die; he absconded.

Let me urge upon all my readers that they give this their serious attention; nothing is more important. Let us all be for a preparedness which discounts and dispels the terrors of poverty in our old age and allows us to confront the twilight of our lives without fear of want.

A SERIOUS OMISSION.

I AM quite disappointed to find that the Rainey bill, for the establishment of a non-partisan tariff commission, does not provide for the representation of agriculture. To my mind, this is a very serious mistake. As I wrote Mr. H. H. Gross (the man who is heading the movement to get this bill through congress at the present session), an industry which annually adds $11,000,000,000 to the wealth of the nation deserves to be represented on the commission. I personally know that Mr. Gross believes it is a mistake to leave agriculture unrepresented and that he is hoping the bill will be amended, before it is passed, so as to give the farmers the direct representation to which they are entitled.

I have already written to the congressman from my district asking him to exert all his influence to give the farmers a voice on this commission, which shall substitute businesslike efficiency for partisan expediency in the important matter of revising the tariff. The Tariff Commission League puts the matter admirably when it says:

> For three generations we have worried along under tariffs made for political expediency. Every tariff act during this time has been honeycombed with favoritism, misinformation, twisted facts and juggled classification. None have worked out as promised, and, one after another, they have been repudiated by the people. It is time to call a halt; it is time to substitute scientific accuracy for reckless conjecture, to substitute facts for fancy, and to make tariffs for the benefit of all and not for the advantage of the few. We never will reach a sound, economic basis and make for real, permanent prosperity until politics is taken out of the tariff and the tariff is taken out of politics. It is time to take Mr. Guess-So off the job and put Mr. Know-So in his place.

I want to suggest that every farmer write his congressman, without delay, urging that the provision giving agriculture a member on the commission be restored before the bill is finally passed. We who produce that which is the basis of all national wealth, who are the financial anchor in times of national stress and storm, are entitled to a voice and vote on the commission whose findings will have such weight with the president and congress when Mr. Know-So takes the place of Mr. Guess-So. Write your congressman in regard to this matter without delay.

A SLICK SCHEME.

I AM in receipt of a letter from a grain-belt farmer giving the details of what appears to be a very slick scheme. Inasmuch as I have had reports of the same plan being worked elsewhere in the middle West, and the men may show up almost any place and attempt to interest other farmers in their plan, I am going to set forth the entire letter of my subscriber, who has already lost $120 on the deal, with little or no recourse in sight. Here is his letter in full:

> There are two men here interesting the farmers in concrete fence posts and claiming to be representatives of a concrete mold company. But they sell no molds, just sign up contracts with the agent for a township, then get him to give a note for $120 as a guarantee of good faith, which money shall be full payment for twelve sets of molds when they come, the agent always getting one mold at once. The molds are good, although inexpensive, and the whole affair looks good, barring the price of the molds to the farmers, which is supposed to be $15. The mold actually contains about $2.50 worth of materials.
>
> In a few days back the men come and say, "Here, we had a letter from the company and they are getting anxious to get these molds out among the farmers, so they are willing to give you a good thing if you will help us a little." Then they get you to sign up a new contract, cancel the old one and apply the $120 on a county agency by which all molds sold in the county are ordered through you or, if you want to trust the company and let the township agent order direct from the factory, you get a rake-off from the head office. These fellows are good and fast talkers and can explain away any difficulty you see in their plans, and when you are through you have given them a bankable note for a good sum for a county agency for an article that after more serious thought is too high in price considering the material and labor involved in making, and it will, therefore, never sell well enough to make the agency worth anything.
>
> Now as soon as you have signed the county agency contract they get to town and cash in your note before you have time to have a change of heart. Then when you come to town and want further explanation they "are all right and mean business; you do your part and we will do ours." But you can't get any further without risking more money of your own with them or by helping to get township agents and these in turn giving $120 notes for molds, part of these notes going to you as reimbursement for your good faith notes and part to the company for twelve molds.
>
> Now to get myself square I would have to sign these notes, which would amount to a guarantee if the bank could not collect, which I would never do. There were three of us taken in on this deal here. One's paper proved unsalable and that was lucky for him. I tried to stop my note the second day after I signed, but the banker said I was too late. But it stirred up a hornets' nest. My two neighbors suspected nothing—hadn't even looked at their contracts since they signed them, but they went right after the agents for new contracts, but "nothing doing." These men are still staying here. I do not know what they are doing, as I do not go near them, but I wish I could get at them in some way. I showed my contract to my attorney and explained to him all about the agreement between us, of which the contract says nothing, and he said it looked like fraud to him. He also consulted the state's attorney about it, and he said it was evidently a fraud, but the contract was so carefully drawn th t it would be hard, if not impossible, to get at them without other evidence. A townsman here told me that one of the men evidently goes by two names. The general agent for this company told me that one young fellow cleaned up $4,000 in one year selling these molds. I never believed him, but I thought I would ask you if you ever have heard of this company.

As I view it, both from this letter and from similar reports which come to me from other sections of the grain belt, the trouble is just this: The molds are good, but they cannot be sold for the price demanded, which is six times what they actually cost to make. The farmer who signs up for an agency pays $120 for the rights and for twelve molds, making them cost him $10 each. He finds it almost impossible to dispose of any for a higher figure and thus has the stock left on his hands, while his note for $120 finds a ready market at the local bank. On the face, it appears to be a remarkably smooth scheme, with no recourse in law.

The moral of the incident is not hard to find. It is this: Do not patronize strangers who come to the farm with any "get rich quick" plan. If concrete fence molds are needed, buy them of your local dealer or from a reputable concern which advertises in a reputable paper or magazine. Then, if the molds are not as represented, you have some recourse. The day has passed, never to return, when the farmer could be taken in by any old scheme which looked good on its face but was really valueless. The farmer is a harder man to swindle today than the average business man in the city. Yet there are a few of the smooth-talking gentry left who can make gold bricks sell like hot cakes. They can only be driven to cover by publicity and I am glad my farmer friend has come to me promptly, so that I can print his letter and warn his fellow farmers in ample time. If there are others who have been taken in in a similar manner I wish they would write to me. We can drive the last of the smooth-talking gentry out of the country and out of business if we will counsel together and sound the warning before they can come among us, with their fast, glib talk, which all too often costs us money and makes us the laughing stock of the countryside.

DEMAND FOR WAR HORSES.

THE market for the surplus horseflesh of the farm is quite active again, due to the resumption of buying for the European war and the advertising for 6,200 horses for the cavalry and artillery branches of the United States army. As a result, I predict that many a farmer's bank account, here in the grain belt, will fatten, while farming operations will not suffer materially, as the horses which are being sold are not the best grade, but those which the farmer can well afford to dispose of at the good prices offered, particularly in these times when the automobile and the tractor are displacing the horse to an extent never known, or even dreamed of, before.

The demand for horses by the United States army is the heaviest it has been at any time since the Spanish-American war, eighteen years ago. I am advised that the demand is not a direct result of the Mexican flurry, however, as it is the intention of the war department to build the army up to its statutory strength, 100,000, and to equip the cavalry and artillery branches with the best horses obtainable at present.

While this local demand is in progress the buying of mounts for the European armies has been resumed, British officers arriving in several grain-belt cities during the past week and renewing activities. One day last week thirty carloads of mules, more than 600 head, left the Kansas City yards for Newport News, where they will be loaded for Europe. A day or two later came the first inspection of horses by the British, in this territory, since last November, which, in my opinion, is weighty evidence offsetting the rumors of early peace. A few months ago, when the remount officers were withdrawn from this territory, I hoped—almost against hope, I must confess—that this action meant an early cessation of hostilities, for the war cannot be carried on long without horseflesh, notwithstanding the fact that this is a war of tractors, automobiles and motorcycles as never before. My hopes have not been borne out by subsequent developments, however, and now that the officers are back in our midst I fear it means the war must continue to the bitter end. I might let my hopes for an early peace lead me to believe that the demand for our surplus farm horses was an indication that the warring nations would soon be using them for farming operations, but there is no evidence sufficient to justify this optimistic prediction. I very much fear that the entire summer must be given over to the brutal murder which passes for war and that hundreds of thousands of more brave men must give up their lives before this awful madness is ended. It is a far cry from the peaceful pastures of the grain belt to the shell-riddled fields of Europe. The resumption of horse-buying can hardly have any other meaning than that war is to continue through another harvest—making the third which has seen the golden grain deluged with red life blood, in the awful struggle men are waging across the seas.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Value of the Silo in Wisconsin.

FARM studies and investigations which have been carried on in Wisconsin in recent years by representatives of the college of agriculture have revealed many interesting things but nothing more interesting than the value of the silo. Farm management results during the past year have disclosed in many instances that the silo has paid for itself the first year in use, and county surveys now in progress are revealing a similar condition.

An investigation in the neighborhood of Omro, in Winnebago county, which was conducted some time ago under the direction of Mr. H. A. Watrud, of Madison, and Mr. Emil Rauchenstein, teacher of agriculture in the schools at Omro, disclosed the fact that the average labor income on farms with silos was much larger than on farms without, and that returns per cow were also larger. Seventy-nine farms were studied in this area, the results of which have just been compiled. These figures and charts show the need of more and better cows; the advantages of the silos and other interesting facts on general farm management and efficiency. Relative to silos the investigation on these seventy-nine farms disclosed that:

The average income on farms with silos was....$419
The average income on farms without silos was. 266
Returns per cow for milk and cream on farms with silo 72
On farms without silos..... 61

Other enterprises on the farms contributing to the income, such as hogs, sale of crops, etc., did not influence the results of each group. The importance of the dairy cow was also seen by the fact that on farms where the milk and cream receipts were the highest the labor income was the greatest. On farms where the milk and cream receipts per cow were on an average more than $70 a year the average labor income was $551; where the receipts per cow were between $60 and $70 the average labor income was $331, and when the receipts fell below $60 per cow the labor income dropped to $134. This tends to strengthen the argument for better cows, while the comparisons between labor income and those farms with and without silos indicate that a good silo is just as necessary as good cows if the farmer is to receive the maximum income for his labor.

A similar investigation was carried out by Mr. Watrud in Port Edwards township in Wood county, assisted by Mr. W. W. Clark, of the county agricultural school at Grand Rapids. Records of fifty farms, all on sandy soil, were kept in this area. These farms were settled largely by artisans and mechanics from large cities and by renters from Illinois. Some were found to be doing very well while others lacked sufficient farm experience, but it was discovered that in this area the average labor income per farm with silos was $194 compared with $94 for farms without silos. Labor income, it must be borne in mind, is the part left to the farmer operator as pay for his time after paying 5 per cent on the investment. Aside from this he has had a home and farm products for the table. An investigation has also been carried on in Walworth county where the production of milk for the retail trade, large condenseries and creameries will have an important bearing on the results, the announcement of which will be watched with considerable interest.

Wisconsin Farmers Must Spray.

NOW is a good time for the Wisconsin orchardist or the farmer with a home orchard to get out his spraying apparatus and be in readiness for the first call to arms against the insects. Every orchard has its insect pests and the large yields; and fine fruit come from those orchards which are sprayed. The pumps and sprays which have been lying idle for several months should be looked over and repaired if they need it in order that spraying may be done at the proper time. This is especially important as the apples, for instance, must be sprayed at certain periods and a delay in getting the necessary apparatus together may mean failure in the end. Elsewhere in this issue Mr. J. G. Moore discusses the question of spraying. He points out the necessity, the time for spraying, the needed materials, etc., and every man not familiar with this subject should read his article.

Many farmers with a few dozen trees do not consider it worth their time to spray. This is a mistake, for the farmer with a dozen trees should desire as good and as heavy a yield of fruit per tree as the orchardist with 1,000 trees. Spraying is not a difficult operation when the operator has the necessary equipment. The important thing is to spray. Secure an outfit of the proper size, whether it be a hand atomizer, an air pressure outfit, bucket pump or a barrel pump. Every fruit tree in Wisconsin is worthy of such attention and it will pay the owner of every tree to protect it against the insect pests which do such a great damage to the fruit crop of this state every year.

Wisconsin Crop Rotations.

CROP rotations are practiced, probably, by more farmers in Wisconsin than in any other state in the grain belt. Rotations have gone hand in hand with live stock farming and a recent inquiry among Upper Wisconsin farmers developed the fact that at least forty out of every hundred farmers in the newer sections follow some form of systematic crop rotation. However, there are many who still hold to the one or two crop methods despite the fact that experience has shown larger yields are to be obtained by following the three, four or five year rotation. It has been possible to support a cow to the acre in Wisconsin on intensely cultivated farms where a sensible system of rotating crops has been carried out. Furthermore rotations lessen the damage from insect pests and fungous diseases.

The most common three year rotation—small grain seeded to clover, followed by clover and then by a cultivated crop—is discussed with other types of rotations in a new bulletin just put out by the experiment station. It is written by Mr. E. J. Delwiche and is entitled, "Crop Rotations for Upper Wisconsin," in which section Mr. Delwiche has had many years of experience. The rotations suggested, however, are applicable to almost any farm in the state although designed primarily for the upper half of the state. Mr. Delwiche, in discussing the advantages of crop rotations, sums it up briefly and concisely in these lines:

Helps to control weeds.
Aids in controlling plant diseases.
Serves to check insect pests.
Increases humus supply of the soil.
Maintains supply of available nitrogen in the soil.
Provides for efficient labor distribution throughout the year.
Aids in keeping soil in proper sanitary condition.
Grows proper crop in proper time and at proper place.
Increases net returns to the acre.
Improves the appearance of the farm.

There are many factors to be taken into consideration in deciding upon a systematic form of rotations as well as in following out the rotation after it has been started. These are all discussed by Mr. Delwiche, and elsewhere in this issue we are making further mention of this subject which is of great importance to the farming and live stock interests of the state.

Wisconsin Sheep.

SHEEP raising is gaining in favor more and more in Wisconsin each year, especially in the upper half of the state, where it has been found profitable to pasture them on the cutover lands, which have been kept clear of second growth. The growing importance of this industry has led to the issuance by the experiment association of a bulletin on sheep raising. It was prepared by Mr. Frank Kleinheinz, the shepherd at the University farms and a splendid authority on sheep raising. Mr. Kleinheinz discusses the subject in a clear, concise manner and at this time his advice on early lambs is particularly timely:

The early lamb is more profitable than the late lamb. A lamb weighing sixty to seventy pounds in good flesh commands a high price on the market in May or June. At this time the lambs will bring about as much, or possibly more, than the same lambs later in the fall when they weigh heavier. The reason for this is the fact that there is a shortage of lambs on the market in May and June. The old crop of lambs has been marketed and it is early for the new crop.

In order to have the lambs at proper weight at an early age, it is necessary to give them something besides their mothers' milk. Lambs will start eating when they are from twelve to fifteen days old. An enclosure should be made at one end of the shed or barn where the lambs can be fed separately. This enclosure can be made quite simply. Take two boards, 1x6 inches, put one on top and the other on the bottom, about three feet apart. Then on these up and down strips should be nailed far enough apart to let the lambs through and yet to keep the mothers inside. Inside this enclosure, a trough should be placed in which a grain mixture of bran, oats, a little oil meal and some finely ground corn meal may be placed. In a separate rack, some good clover or alfalfa hay should be offered to the lambs. It is surprising how lambs can be made to grow and thrive with a little extra feeding.

The bulletin contains much other valuable information for farmers interested in sheep, and Mr. Kleinheinz points out that the old idea that the sheep must carry their fleeces into the hot weather is wrong. When the weather gets warm enough so that there is no danger of the sheep taking cold the fleece should be removed. Sheep are forced to carry their fleece against their will, and often suffer severely from the heat. The owner thinks he can increase the yolk or grease in the wool by late shearing, but as a matter of fact the sheep lose more than the value of this increased grease in body weight.

Wisconsin Looks Good in the Figures.

RARELY do we see a government crop report that does not show Wisconsin in fine shape as compared to some of the sister states or as compared to the nation as a whole. Here are some interesting comparisons in the April report of the department of agriculture:

Condition of wheat in Wisconsin April 1st, this year, 86 per cent. The condition of wheat in the nation as a whole was 78.3 per cent April 1st.

Condition of rye in Wisconsin April 1st, this year, 90 per cent. The condition of rye in the nation as a whole was 87.8 per cent April 1st.

Hog losses from disease in Wisconsin last year, 2.5 per cent. Losses of hogs from disease in nation as a whole last year, 6.63 per cent.

Losses of cattle from disease last year in Wisconsin, 1.8 per cent. Losses of cattle from disease in nation as a whole, 1.96 per cent.

Losses of sheep from disease in Wisconsin last year, 1.7 per cent. Losses of sheep from disease in nation as a whole, 2.16 per cent.

Losses of horses and mules from disease in Wisconsin last year, 1.8 per cent. Losses of horses and mules from disease in the nation as a whole last year, 1.75 per cent.

Barring the last item, Wisconsin shows up much better in the comparison than the general average for all the other states. In Wisconsin last year 0.4 per cent of cattle were lost from exposure. In the nation as a whole the losses of cattle from exposure was 1.07 per cent. Wisconsin shepherds lost 0.6 per cent of their sheep last year from exposure, and the percentage of such losses in the entire country was 2.17.

These figures seem to indicate that farming is pretty safe and dependable in the grand old state of Wisconsin.

Horse Disease From Public Watering Troughs.

THERE is agitation in many cities in favor of abolishing the public watering trough used for horses. This is due to the fact that some of the worst diseases of horses, such as glanders and distemper, are disseminated through the medium of a contaminated trough. Many companies using large numbers of horses absolutely prohibit teamsters from using the water at public troughs, and the teamster that violates this rule suffers the penalty of instant dismissal.

What can be more annoying than to have a bad case of distemper break out right in the middle of spring work? It means loss of time at a critical period, saying nothing of the risk that is involved of losing a valuable animal. We have always supposed that town and city horses developed a sort of immunity from certain types of disease, whereas the country horse, used to the one kind of water most of the time, very easily succumbs to an attack of any of these diseases which horseflesh is heir to.

The danger is easily eliminated by simply taking along a watering pail whenever the horses leave the farm. It is a simple matter to put this in a wagon or even in a buggy, to be used when the water is taken from a public well.

A Cornfield an Expensive Testing Box.

THIS paper has almost nagged its readers about the importance of having on hand a supply of seed corn that is positively known to be vital. Beginning about two months ago, we pointed out the urgent need of making a start on the testing program, and reference was made to the fact that it might be necessary to sort over a great deal of corn in order to obtain a supply of good seed. Upon making inquiry, we find that farmers generally have been diligent in seeking out a supply of good seed so that, after all, the agitation on this important matter has accomplished something.

However, it is possible to find here and there individuals who are trusting too much to pot luck. They have an intuitive feeling that their corn is in good condition, though they are absolutely without accurate knowledge concerning its vitality. To such individuals we would like to say that a forty or an eighty-acre field is a mighty expensive testing box. No man can afford to put his labor on a half stand and it meets the situation in a very poor way to plant corn thickly, thereby hoping to make up in number of kernels per hill what is lacking in vitality. It would be difficult to suggest a worse mess than what results from this kind of planting. No man ever got a full crop of corn by planting four, five or six kernels per hill, because too thick a stand is almost as bad as one that is too thin.

We are referring to this subject possibly for the last time this season, hoping that here and there some of our subscribers will be induced to make one final attempt to test out their seed. As the temperature moderates seed testing becomes a simple matter and it should be possible to determine the vitality of one batch of seed in the course of five or six days. The weak and the dead corn

can be promptly discarded and another supply placed in the tester. In the course of a month one can handle a large supply of corn in this way, and there is no reason why the tester cannot be in service while the ground is being prepared for the crop. It should be remembered that it requires just as much labor to handle a thin stand as a normal stand of corn. On the whole, help is scarce and no man will have a minute to waste this season. It would be much better to plant a forty-acre field with good corn and put in an extra field of small grain than to undertake to grow an eighty-acre field of corn with seed that is not absolutely up to the highest possible standard in its germination qualities.

It goes without saying that testing should be done in the ear while this is possible, because in that way when the tester shows up a dead kernel this means that a thousand others may be discarded when the ear from which it is taken is laid aside. This corn is good for feeding purposes but wholly useless for seed, so that there is no sense in putting it in the ground, only to be followed by going through the trying experience of caring for a thin, scraggly stand of corn.

Catching Weeds off Their Guard.

IF WE had control of weather conditions weed destruction would be a simple operation, but as it is it is a form of warfare in which the one who attacks is greatly handicapped. The methods employed one year, and which gave satisfactory results, may utterly fail the next time they are tried.

Our concern, of course, is with the weeds in the cornfields and, as is the case in actual warfare, the best kind of defense is an attack. For that reason we like the plan of doing the spring plowing early wherever this is possible in order that a crop of weeds may germinate and in turn be destroyed by surface cultivation. There is some advantage if the soil is immediately harrowed after plowing, because this prepares the seed bed for weeds as it were and insures vigorous and uniform growth. A good disking, and particularly a double disking, will effectively destroy every weed enemy that starts, and if the planter is started the next day it is quite likely that the corn will always be ahead of the weeds.

Unless the soil has been impacted by heavy rains after plowing, the harrow will sometimes answer every purpose of weed destruction, but if the soil becomes crusted it will take a weighty implement like the disk to do the right kind of service. Furthermore, such labor as is spent on the ground after plowing tends to bring the soil into an improved condition for corn growth, so that in going after the weeds in the most effective manner our labor has a secondary result that is much to be desired. We are aware of the fact that where there is much cornstalk ground and small grain stubble to plow on any one farm it cannot all be done early. Rush the work as we will, some of it will have to be plowed immediately before planting, thereby giving weeds no opportunity to make their growth in time to work their destruction with heavy implements of tillage. When planting is done immediately after plowing, two or three good harrowings will pay and pay well. Conditions are then ideal as favoring the practice of blind plowing. Some of our best farmers in all their later plantings follow the planter with the cultivator. They throw anywhere from two to three inches of soil over the corn row and then leave the surface untouched until the weeds begin to make their appearance. The harrow is then used religiously, and where there is time the field is gone over at least twice and sometimes three times. This works all kinds of havoc among weeds, and if the labor is performed at the right time you will find the corn peeking through the soil when uprooted weeds are wilting with their white roots in the sun. With this start the corn, with reasonable treatment from this time on, will be ahead of the weed pests so that the work of cultivating can be done much more quickly than will be possible where the weeds are running a neck and neck race with the crop.

Letting Grass Get a Start.

THERE is a strong temptation to turn live stock into the pastures too early. Where stockmen do not have a supply of ensilage they get tired feeding dry fodder. Toward spring this fodder deteriorates until it is very poor rubbish so that the cattle are generally losing in weight just before the grass period. In many cases their hair becomes dry and they have a poverty stricken look, and it is little to be wondered at that they are rushed to the pastures too early.

An Iowa subscriber believes that this is a fatal mistake and in a brief communication calls attention to a little personal experience. He writes:

> It often happens, when you allow your stock to remain in the pasture as soon as the weather is warm, that your pasture never seems to be able to grow faster than the stock eat it. Now, last year, we kept our cattle and horses inside the barnyard and fed them fodder until the grass in the pasture had attained a fair growth. Also, before warm weather, we had spread fine manure over a great part of the grass land, and thus hastened the grass. When everything looked green, we allowed the stock to go into the pasture, and that summer, what with the head start that it received, the pasture never had that close-cropped look of other years, due, I believe, to the chance we gave it for growing a bit in the early spring.

It is very easy to explain why this particular pasture became closely cropped during the entire season. If considerable leafage is allowed to develop this also means a corresponding vigor in root growing. Unless this development is attained early in the season there will be a stingy growth of grass. In case of light rainfall the pasture cropped early in the season will be the first to go and it will be the last to respond to the refreshing influence of late spring and summer rains.

Spraying For the Mustard Pest.

WILD mustard is an annual weed but it almost amounts to a scourge when it once becomes well established. The oily nature of the seed fortifies it against destruction, and if it is buried too deeply in the soil to germinate it will remain there for years so that when it is brought near the surface by tillage implements it springs from the soil in the fullness of its vigor. No man who understands the real nature of the mustard plant will ever let it get possession of his land. Straggling plants should be pulled, though of course this is entirely impracticable when once the soil becomes thoroughly seeded.

At the present time one of our subscribers, Mr. M. Grady, writes for information concerning the matter of destroying mustard by the spraying method. He has to deal with a field that has become thoroughly seeded down with this pest and he realizes that heroic treatment must be given this year or mustard will have complete possession of this land.

Considerable experimental work has been done to ascertain the practicability of destroying mustard by the spraying process. The North Dakota station has been most diligent along this particular line, and the scientists at the South Dakota station have by no means been inactive. For large fields a special power sprayer will have to be used. Some of these are made to operate with the liquid spray under a pressure varying from eighty to 120 pounds. The necessity for high pressure is due to the fact that a sufficiently fine spray cannot otherwise be made. Iron sulphate is the product that is used for this purpose. The general plan for preparing the spraying mixture is to dissolve 100 pounds of this product in about fifty gallons of water. This will make what is known as a solution of about 20 per cent strength. It should be stirred vigorously until all the iron sulphate is dissolved. In pouring this solution into the machine it should be run through several thicknesses of cheesecloth in order to strain out the fibers and add undissolved materials. Unless this is done difficulty will be experienced later in the clogging up of the spray nozzle.

Mustard is sprayed when the weeds and the grain are about six inches high, or just before the mustard plants begin to bloom. Some very good results have been obtained by spraying after the mustard has been blooming for some time. The most effective work is done just after the dew is off on a bright sunshiny day. If a rain soon follows the material is washed off the plants and no good is accomplished. When the work is carefully done the mustard plant leaves will rapidly wither and dry out so that in twenty-four hours they are practically dead. An occasional plant may escape destruction and these should be plucked by hand. Some slight injury may result to the grain from spraying, but when it varies in height from six inches to a foot the bases of the leaves are well protected so that the leaves come on rapidly and soon outgrow the setback received from the spraying operation. It has even been found in some cases that grain is benefited by an application of iron sulphate used for the destruction of mustard plants.

While it is true, as stated above, that spraying for the destruction of mustard has been found more or less practicable, not only in an experimental way but also on a large scale, nevertheless this paper is not enthusiastic about this plan of killing weeds as it applies to the average farmer. We much prefer to recommend the adoption of the kind of farming methods that will keep them out, and even in those cases where pernicious annuals get a foothold, it is entirely practicable to eradicate them by adopting the right kind of cropping methods. Intertillage crops will have to be grown, and even the summer fallow may have to be employed so that by frequently and repeatedly stirring the surface all the seed within three or four inches of the surface will be made to germinate and, in turn, be destroyed. On general principles these farming methods are to be preferred to the other plan.

Value of Forage Feeds For Swine.

ALFALFA heads the list of forage crops for swine, according to the results of extensive tests made at the Iowa Experiment Station. Red clover comes next, after which follow rape, blue grass and sweet clover. Young, tender, succulent blue grass contains from 35 to 39 per cent of protein in its dry matter, though, of course, it is acknowledged that this percentage of high protein content lasts but a short time. In a few weeks it drops down to 25 per cent and there may, during the summer months when it is dry, be as low as 8 or 10 per cent of protein. On the other hand, pastured alfalfa tends to remain more constant in its high protein content, running from 20 to 30 per cent in dry matter, while rape is very similar in the amount of flesh-forming constituents it contains.

In formulating rations for hogs of different sizes the Iowa station recommends corn, middlings and tankage for young suckling pigs, these products to be fed in a self-feeder. If at the same time the pigs are running on good alfalfa or clover pasture they will not eat much tankage.

After pigs are weaned and during the time when they weigh from thirty to 100 pounds, exceedingly satisfactory results may be expected if they have access to a self-feeder containing corn, middlings and tankage, in which case they will consume approximately 95 per cent of corn and 5 per cent of tankage.

After they get older and heavier they will consume even a smaller proportion of tankage and they will make good gains if they have access to corn and takage alone, in which case their ration will be made up of from 96 to 98 pounds of corn and from four to two pounds of tankage. When they reach the 175-pound mark and from that to 300 pounds exceedingly good gains will be made on corn alone. In all cases salt is advised, and usually it is best to feed this product in some sort of a self-feeder.

The above grain rations apply when the hogs at the same time have access to what is known as high-protein pastures, such as alfalfa, rape or tender sweet clover or, on the other hand, short, tender blue grass.

Keep Farm Records.

WHAT does it cost to keep a horse a year? What is the expense connected with raising a colt to the age of two or three years? How much feed is your silo saving annually? What is the difference in the cost of raising alfalfa and timothy on a field for three or four consecutive years? How much milk and butter fat does the average cow in your herd produce annually? How much does your best and how much does your poorest cow produce? Which are the cows that are annually losing money for you instead of yielding a profit? These and many other questions are important, and farmers should be in position to answer them.

It is difficult to get the farmer interested in maintaining records, first, because he considers himself too busy for such things, and second because he can see no material advantage in accumulating data of that sort, much of which will vary with the season. There is truth and common sense in both of these contentions, but let us not overlook the fact that all other business men keep records, and from those records the business policy is largely determined and all are as busy as the farmer. The fact that some records will be influenced by weather conditions is not a good reason for not keeping them. The very fact that certain lines of farm work are greatly influenced by the weather may be a reason for discontinuing or altering them in some way.

To guess at whether this or that pays on the farm has ruined many a man and should be done away with. In guessing one is very apt to forget some of the cost figures. For example, the government has gathered a lot of figures from farmers in regard to the cost of raising a heifer calf till the age of two years. The data collected showed that on the average it cost $62.06 to bring a heifer to the age of two years. The various items entering into this cost figure were as follows: Feed, 65.6 per cent; labor, 12.9 per cent; interest charges, 5.9 per cent; and "other" charges, 15.6 per cent. The "other charges" included buildings, equipment, bedding, etc., and totaled no less than $9.72 for a two-year-old heifer. In guessing at cost figures it is just such items as are included under "other charges" that are frequently overlooked.

Why would it not be a good plan to get up a simple farm record system and let one of the boys take charge of it? Start with one thing. For example, keep an account with the horses. Ascertain the amount of feed consumed, the cost of shoeing, of keeping the harness in repair, etc. Then, too, jot down daily, in some convenient place, how many hours each horse works per day. At the end of a year you will be surprised. You will realize as you have never realized before that a horse is a mighty expensive animal on the farm, and that he does much less work than you used to figure he did. In other words, the cost of an hour's labor will be much higher than you had thought. Such knowledge might lead to substituting mares for geldings or perhaps the buying of a tractor.

A horse account may not be so important as one kept of the dairy herd or of some other enterprise, but we simply mentioned horses as an example. Of course, you might arrange to keep a complete set of farm records, but we fear that would prove too complicated for the average farmer to undertake on the start, and that is why we suggest starting with one single enterprise. As interest in the work grows and its value becomes more apparent the system will naturally expand of its own accord.

Farm prices of hogs, cattle, sheep and chickens averaged 16.4 per cent higher on March 15th than they were on that date a year ago and 12.7 per cent higher than the average of the last six years on March 15th. A report of the department of agriculture says the level of prices paid to producers of the country for meat animals increased 8.4 per cent from February 15th to March 15th this year, compared with an average increase of 3.1 per cent in the same period of the last six years. Prices paid for hogs showed an increase of $1.53 per 100 pounds over March 15th a year ago and 63 cents over the average of the last six years; beef cattle increased 45 cents over last year and 98 cents over the six-year average for March 15th.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Growing and Marketing Potatoes.

To the Editor:—I am very much interested in growing and marketing a better potato and read everything I can find written in that line. I expect to buy a high-pressure potato sprayer this season to spray for blight.

In studying potato culture with the aim of increasing the yield as well as quality I have noticed two methods of raising seed potatoes which appear to be of great value, namely:

1. Several good potato growers in the West make a practice of planting well-matured potatoes late in the season and close together, so as to produce a crop of small, immature potatoes. It is claimed these immature potatoes have more vitality and produce a much larger yield, if planted early the next season, than fully matured potatoes.

2. Potatoes planted under a straw mulch will produce a crop of potatoes that will produce a much larger yield when planted the following season than seed grown in open cultivation.

This second method has been tried out by the Nebraska Experiment Station. In 1904 a plat of potatoes was mulched with straw and an adjoining plat was given careful cultivation. The soil of the two plats was practically uniform and the seed planted was taken from the same lot of tubers. Seed was saved from the mulched and cultivated plats separately, kept under the same conditions during the winter, planted on adjoining plats in the spring of 1905 and given identical cultivation during the summer. In 1906 the experiment was repeated with seed grown in mulched and in cultivated ground the year before. The result of this experiment was that the use of seed grown under a mulch the preceding year increased the yield of potatoes 47 per cent in 1905 and 41 per cent in 1906.

In order to determine whether these methods are of value to me I am going to experiment with both systems and also one other, a combination of the two; that is, if potatoes grown under mulch are better for seed than potatoes grown under regular cultivation, and if immature potatoes are more productive than fully matured potatoes, then it appears to me that a crop of immature potatoes, grown under mulch, would be better for seed than either of the other methods. For that reason I shall experiment in that line also and with the help of our county agent, Mr. R. L. Cuff, I hope to get some data that will be of interest to myself and the readers of The Wisconsin Farmer. Karl T. Hazelberg.

Barron Co., Wisconsin.

Fencing Problems.

To the Editor:—Being a subscriber to your valuable paper I would be very much indebted to your other subscribers for answers to the following questions on correct farm fencing.

I intend to build a legal line fence fifty inches high, with posts sixteen feet apart, and to use woven wire fencing. Will staple fence up two or three inches from ground and one barbed wire will be used on top to make the completed fence just fifty inches high from ground. It seems that the placing of the one wire on top very often spoils the looks of the whole fence. so would like to know the best manner of placing the wire, whether directly on top of the woven wire or some inches above, and if some inches above, how many? Of course, I would not sacrifice looks for a saving in the difference of price between a lower and a higher wire. I have about three miles of fence along roadsides. Should these be built fifty inches high the same as line fences?

In woven wire farm fencing what is the best distance for line wires to be apart?

For best fencing should line and stay wires be all of the same heavy wire, and, if so, what number should it be?

Which is the better mesh, the diamond or square, and which conforms better to the lay of the ground on gently rolling land?

For a square mesh which are better, the welded or movable stays? On some makes the stays are so loose as to very easily get out of shape, which spoils the looks of a fence. Would you advise the six or twelve-inch mesh?

What height and width is best for farm gates between field lots, driveways and barnyards?

Is galvanized pipe frame best and strongest and what size should pipe be? Is the swinging or roller gate best? How are those that can be lifted over snow banks, or to shut up cattle and let hogs or poultry pass under? Does diamond or square mesh look better in gates? What height and width is best for walk gates? Are there any lift walk gates?

In sawing tops of posts off evenly after fence is completed how many inches above last wire looks best?

Wish to paint some wooden posts for use around an orchard. What color would you advise? For around a barnyard?

I believe that many of your subscribers have had enough practical experience in fencing to answer the above inquiries in detail and I hope they will give me this information through the Forum department of The Wisconsin Farmer. Louis Denis.

Brown Co., Wisconsin.

Gold Mine Oats.

To the Editor:—We have had some interesting experiences in raising Gold Mine oats, and I was very much pleased that we were able to be

DE WITT DAMP.

among the prize winners at the last grain show in Madison. We have found the Gold Mine superior to any variety of oats that we have ever raised. I procured my seed from my father about three years ago. He got his first Gold Mine oats from a neighbor some ten to eleven years ago, or the first year they were grown in this neighborhood. This neighbor got his seed from an Iowa seedsman in 1905 or 1906. They have been grown here ever since, have never been treated for smut and are free from it now. They stand up well on our prairie farms and the yield is wonderful.

The land on which my prize-winning sample was raised is a black prairie loam on which corn was raised in 1914, a light coat of manure being applied that spring. After the corn was cut and stacked the land was plowed late in the fall. (I always prefer early plowing.) About the 10th of April, 1915, I dragged the land, worked it up with a seeder, dragged it again and then sowed it with a shoe drill, after which I dragged it again. The seed was thoroughly cleaned and sowed about an inch and a half deep at the rate of two bushels per acre. The oats went down in spots, but not bad. I cut them about the 27th of July and as soon as the shocks were thoroughly dry I stacked them and they were threshed about the 8th or 9th of November. The lodged spots were stacked separately and my sample and also seed was saved from that part of the field which did not lodge.

In preparing the sample for exhibition I first thoroughly cleaned about one bushel, blowing and grading out all of the light and small oats, also chaff, etc. I then worked them by putting in a bag and tramping, care being taken not to overdo this. I then cleaned them again and finally went over the sample by hand and removed all discolored kernels.

De Witt Damp.

Dane Co., Wisconsin.

Mixing Kerosene With Gasoline.

To the Editor:—As the price of gasoline is getting so it is almost impossible to buy I have a little information which ought to be welcome news to many a gas engine owner and something that will save them many hundreds of dollars.

I have put a second tank to my one and three-fourths horse gas engine, in which I put kerosene. I start the engine on gasoline and after the engine gets good and warm I turn on the kerosene and shut off the gasoline. I find that my engine works just as well on kerosene as it does on gasoline, at least I could notice no difference in the power.

We are paying 30 cents per gallon for gasoline and 10 cents per gallon for kerosene, so this is a saving of 20 cents on each gallon used. Heretofore it cost us 75 to 80 cents for gasoline to do our washing, but the last washing cost 30 cents for gasoline and kerosene together—quite a saving. There is no doubt in my mind that if automobile owners would equip their cars with a second tank they could cut their gasoline bill considerably. I believe they could cut their fuel bill in half and they could run their cars as well on kerosene as on gasoline, after the engine is warmed up.

I hope many of The Wisconsin Farmer readers will find this information beneficial. B. H. Diny.

Brown Co., Wisconsin.

Pet Cock in Intake Tube.

To the Editor:—In looking over the questions and answers in your Farm Mechanics department I noticed someone inquired if it would be advisable to put a pet cock in the intake manifold of a car. I just wish to give some of my experience.

I have a Model 10 Buick with a Schebler carburetor Model D. I could run from ten to twelve miles on one gallon of gasoline. I made up my mind that was too much and thought I would try the pet cock system of using more air and less gas. I bought a pet cock and had it put on, which cost me 35 cents. I now average sixteen miles on all kinds of roads. This has proved a good gas-saving system for me. With a high-speed engine I think they would be of greater value yet, such as Krit or Ford. On Ford cars this system has proven to run on one-third less gasoline than before.

This pet cock should be placed about two inches above the carburetor, with a light rod attached to it running to the dash for opening and closing.

I am not writing this to offend anyone, but just simply to give what has been tried out around home, thinking you might wish to hear of different experiences. Art Knuteson.

New Jackson Model "34"—motor 3½ x 5-inch; 112-inch wheelbase; 32 x 4-inch tires—fully equipped, including one-man top; Stewart Vacuum Fuel System, Springs full elliptic front and rear **$985**

Jackson "34" is One of the Great Cars of the Year

Its motor is a wonder! It is a *four* with all the *economy* of the four, of the high duty balanced type, small bore and long stroke—a veritable miser with fuel.

It develops 38 H. P. And you will notice that on hills and grades it moves along as if it were happy and eager to be tested. You don't have to push it. It gives you that comfortable feeling of inexhaustible power.

It not only has the swift acceleration that means flexibility but it has also the strong, steady pull that means *power*.

So easy-riding that you will wonder why you ever considered *any* car without four full elliptic springs.

And the more you know of Jackson "34" the more convinced you'll be that the motor hasn't a cross grained streak in its system. There's not a chance for disappointment. You'll notice the absolute truth of the Jackson slogan, "No hill too steep, no sand too deep."

Don't buy *any* car till you have had a chance to test out Jackson "34." We believe it is one of the greatest four-cylinder automobiles ever built.

If you want an *"eight"*—there are two of them in the Jackson line. Both have the easy-riding qualities for which Jacksons are famous. *Model "348"*—112-inch wheel base, eight cylinders develops 45 H. P. and is priced at *$1195*. Weighs 2565 lbs.

Model "68" is the big "Jackson"—124-inch wheel base—seats and room for 7 passengers—70 H. P. motor. Compare it with *any* eight at *any* price. And do not forget that the Jackson sells for $1685. Catalogue on request.

JACKSON AUTOMOBILE CO., 1503 East Main St., JACKSON, MICH.

E. W. Clark Motor Co.,
Fond du Lac, Wis.,
Distributor.

Are The Horses You Own

or drive shod with Capewell nails? For years placed first by the experts.

Not cheapest regardless of quality, but the best nail in the world at a fair price.

The man who takes your horses to be shod should know this too if you are to get the nail which holds best, is safest and saves you needless shoeing bills. Remember it's The Capewell you want.

$1.00 PER WEEK Enough said. Write the Wisconsin School of Telegraphy, Dept. A, Oshkosh, Wisconsin.

Spraying Pointers For Wisconsin.

Time Is Almost at Hand For Earlier Work in Spraying—Rules Suggested by J. G. Moore, of Horticultural Station.

SPRAYING in Wisconsin varies more or less with seasonable conditions. The time is almost at hand for early work of this nature and as a result a circular just issued by J. G. Moore, of the Wisconsin College of Agriculture, is not only timely but very valuable. Most fruits must be sprayed to make possible a good product and Mr. Moore sets forth the necessary treatments for various fruits if the fruit is to be pest free this year. Spraying at the right time and with the right materials is important. The owner of every orchard should spray. It not only improves the character of the fruit, but it also reduces the number of culls to the minimum. The appearance is also improved, which makes it easier to get good prices.

To control scale insects on apples lime sulphur used as a spray just before growth starts is invaluable. However, as growth is now starting it is a little late to use lime sulphur at a strength strong enough to destroy scale insects. The winter strength is five gallons of commercial lime sulphur to forty or forty-five gallons of water, but this strength would damage growing plants or trees.

If plant lice on apples were present during the past season spray with 40 per cent nicotine sulphate, one part to 700 of water (one pint to eighty-seven gallons of water) to which should be added three pounds of soap in solution. Apply just as the buds begin to show green. The above applications may or may not be necessary. The following applications, known as summer spraying, must be made if the best results in producing pest-free apple fruit are to be secured:

1. Spray with a fungicide and arsenate of lead when blossoms show pink. If plant lice are present, add 40 per cent nicotine sulphate, one part to 700 of spray material.

2. Spray with fungicide and arsenate of lead from three to five days after most of the petals have fallen.

3. Spray with same material ten days to two weeks later.

4. Spray with same material about July 20th to 30th, depending upon the section of the state and whether the season is relatively early or late.

If the weather is moist and warm, make an application between applications 3 and 4.

The fungicide used may be either lime sulphur, one and one-half gallons to fifty gallons of water (summer strength) or Bordeaux mixture.

Arsenate of lead is most conveniently used in the powdered form. One and one-half pounds to fifty gallons of spray material will be a satisfactory strength.

Bordeaux mixture is pobably preferable as a fungicide in all applications except 3 and 4, but the present price of the materials may make it necessary to substitute lime sulphur.

CHERRY.

It is not necessary to spray the cherry for scale insects.

Bordeaux is preferable to lime sulphur as a fungicide on cherries.

1. Spray with fungicide and arsenate of lead just before blossoms open, using material of the same strength as for the summer sprays of the apple.

2. Spray with same material when calyx (shuck) falls.

3. Spray with same material two to three weeks later.

4. Spray with same material as soon as possible after fruit is picked.

If aphis (plant lice) are present, spray with nicotine sulphate as directed in the control of apple aphis.

PLUM.

1. Spray with fungicide (summer strength) and arsenate of lead just before the blossoms open.

2. Spray with same material when calyx (shuck) falls.

3. Spray with same materials two to three weeks later.

4. Use a fungicide shortly before fruit begins to ripen.

GRAPE.

Spray with Bordeaux mixture about June 10th and July 1st. Other applications may be made if fungous diseases appear.

Use kerosene emulsion or nicotine sulphate if leaf hoppers or other sucking insects become troublesome.

CURRANT GOOSEBERRY.

1. Use nicotine sulphate, one pint to eighty-seven gallons of water, to which add three pounds of soap in solution, just as buds show green.

2. If aphis are present, repeat in about ten days.

3. Spray with Bordeaux mixture and arsenate of lead about June 10th.

4. Spray with same materials after fruit is harvested.

Arsenate of lead or Paris green should be applied whenever the currant worm is present. Examine plantation at least once a week from May 15th to September 1st for the presence of this pest.

Institutes Next Year.

E. L. Luther, superintendent of farmers' institutes in Wisconsin, advises The Wisconsin Farmer that he is already planning for institutes and domestic economy schools for next winter. Application blanks for the meetings of the 1916-1917 season are now ready to be forwarded to those interested. The usual rules as to placing institutes only where demand and interest is shown, will be followed. Address E. L. Luther, Madison, Wisconsin, for further particulars.

Blasting Soil to Prevent Washing.

To the Editor:—A red shale hill on which corn had been planted lay above the road, or rather where the road had been, for there was eighteen inches of thin red mud over the track. It was out of the question for our car to go through. We backed up past another cornfield and went in to the farmhouse to inquire about another way round. In conversation with the owner of the land it came out that both cornfields belonged to him and that he had been trying to prevent the serious erosion by every known method.

It had been raining for three days, he told us. The results were there to see, before our eyes. In the field where the mud had come from were gullies two feet deep. In fact, both the crop and the field were practically ruined for that year. But the other field showed no washing whatever. There wasn't a gully three inches deep anywhere in it.

This man tried terracing, cultivating with shovel plows to get deep furrows sideways of the hill, cultivating with light weeders to get a smooth, even surface, leaving strips of sod, blasting the subsoil and subsoiling with a regular subsoil plow.

Of all the methods only the two last named showed any measure of success that might be called satisfactory and only blasting showed complete success. On the part of the hill that was blasted the rainwater seemed to soak down into the ground as fast as it fell and then seeped and percolated slowly down the hill at a depth of several feet beneath the surface, coming out in the form of springs and underground water in the low ground below.

The most serious loss in the gullied field was not the time and work it would take to fill the water ruts, but the fertility lost by leaching and washing away. That thin red mud on the road was very rich. It contained the best of what had been on the whole surface of the cornfield. But it never could be used there on the road. It was lost forever to the owner of the land—while the state paid to have it hauled away and dumped into a swamp. J. R. Mattern.

Furnishing Wheat For the French.

From the United States Commerce Report of October, 13th, we learn that the available supply of wheat in France this year will be approximately only 212,830,600 bushels. The average annual production in normal times is 340,529,000 which is entirely consumed in the republic. If the large influx of Belgium refugees this year be considered as partially offsetting the decreased consumption due to the fact that a portion of France is invaded, it is estimated that the total consumption will approximate 312,151,600 bushels. It will therefore be necessary to import about 100,000,000 bushels of wheat representing a value of approximately $180,000,000. Where will this shortage be made up? Not from Russia. Canada is shipping across all she can to England. It looks as though the American farmer who used every means to make two blades of wheat grow where one grew before, and will do the same again, is the man of the hour who will save France the pangs of hunger for bread.

I WILL SEND YOU THIS HANDSOME STOCKMAN'S WATCH FREE

This beautiful special stockman's watch is as handsome a time-piece as anyone could want. It is a genuine New York Standard Watch—both case and movement being American made. It is seven full jewels, stem wind and stem set, with heavy bevelled crystal, double sunk dial, brequet hair spring, etc. The case is genuine nickel silver, handsomely engraved with a locomotive on the back. It is a watch that is specially designed to withstand a lifetime of the hardest and roughest usage and is Absolutely guaranteed in every way.

To introduce MY Stock Tonic to just a thousand more readers of this paper **I am going to give away** one thousand **magnificent Stockmen's Watches—Absolutely Free**—I'll send them at once—**to the first thousand readers** of this paper who send in the coupon below. With this watch I will also agree to send a big trial feeding of

WILBUR'S STOCK TONIC the Greatest of All Live Stock Conditioners.

What is more, I will send you this Stock Tonic with the **distinct understanding** that it is to be used for **two whole months at my risk**—that if at the end of two months feeding the Stock Tonic has not been entirely satisfactory **no charge is to be made.** I simply want you to make a two months' trial of my Stock Tonic with the understanding that **if it does not fatten up your live stock—kill the worms—that if it has not paid you to feed it**—no charge is to be made. Then as a special inducement and to pay you for the trouble in making the test I will give you—Absolutely Free—one of the Stockman's Watches shown above.

I Will Prove To You

that my Stock Tonic will positively **rid your live stock of worms, fatten them up and keep them in the pink of condition.** I will prove to you that you will actually get **more milk from your cows,** that you will **fatten your hogs, steers, sheep and poultry** for market in less time, that you will **save grain, prevent disease and make more money from each animal you own.** I have such absolute faith in Wilbur's Stock Tonic that **I take all the risk** in this trial feeding.

There Is No Secret About This Tonic

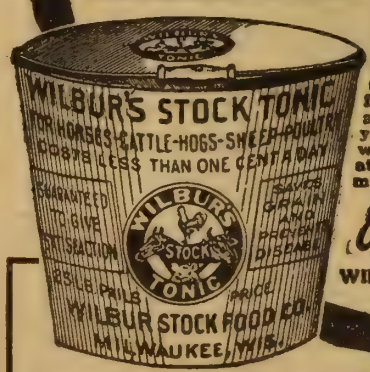
It is composed of twelve separate ingredients—plainly printed on every package—each one carefully selected and absolutely pure. These ingredients are acknowledged by veterinarians everywhere to be the **finest tonics, appetizers, digestive aids and worm dispellers known to medical science.** Each one has a special purpose. A compound of these herbs, roots, etc., is absolutely sure to **condition any animal—keep the blood clear—the system free from worms and disease and force the animal to put on fat rapidly.** I have proved it so often **there is no doubt about it.** I have made and sold this Tonic for over thirty years and over a million of the best stock raisers in America are feeding it every day—I have thousands upon thousands of the finest kind of letters from all parts of the country telling me of the wonderful results from feeding this Stock Tonic. Now all I want to do is to **show you that what it will do for others it will do for you.** And as a special inducement just to get you to make this trial—at my risk—**I am going to send you one of the handsome Stockman's Watch.**

This Handsome Watch is Yours—FREE

It never costs you a cent. It is yours—forever—to keep and use every day—**whether you ever pay for the trial feeding of Tonic or not.** It's a handsome, dependable, fully guaranteed timepiece—would cost you $6.00 to $8.00 in any store. A watch you or any one will be proud to own, and **remember, it's free.**

E. B. MARSHALL, Pres.
Wilbur Stock Food Co., 983 Huron Street, Milwaukee, Wis.

Please send me at once one of your **Stockman's Watches.** Also send me 4 25 lb. pails of Wilbur's Stock Tonic. I agree to feed the tonic as directed for two months, and if it does what you claim, I will pay you for it at the rate of only $2.00 per month until I have paid $14.00. If it fails and I so report in sixty days, **you are to cancel the charge and I will owe you nothing.** You are also to ship me—**FREE**—enough **Wilbur's Poultry Tonic**—your guaranteed egg producer—to offset all freight charges on the shipment. **It is understood that the Stockman's Watch and this pail of Poultry Tonic are to be mine—Absolutely Free—whether I pay for the Stock Tonic or not.**



Simply Fill Out The Coupon

SEND NO MONEY. Just find out by actual test on your own stock that **my tonic will make money for you.** I have a watch all ready for you if you send that coupon right away. **You can't possibly lose anything—you have everything to gain. Isn't it worth a postage stamp? Do it now—at my risk—fill out the coupon and mail it to me at once.**

E B Marshall
President
WILBUR STOCK FOOD CO.
983 Huron Street
Milwaukee, Wis.

357-W

Name_____ R.F.D._____

P. O._____ State_____

Freight Office_____ State_____

I own_____cattle_____horses_____hogs_____sheep

_____poultry. I own_____acres of land. I rent_____acres

of land. I am_____years of age.

NOTE:—This liberal offer only open to responsible farmers or stock raisers over 21 years of age.

If you already know what Wilbur's Tonic will do and do not want the trial offer but wish to sell a few pails to your neighbors, making a little money in addition to this Watch Free place an X in this square and we will tell you how you can easily sell your extra pails. ☐

Agents Wanted to sell Wilbur's Stock Tonic, Veterinary Remedies, Extracts, Spices, Medicines, etc. We pay liberal commission and equip you with a **Ford Automobile Free.** No capital or experience necessary. We furnish everything. Write for details of our plan. Address Desk K Wilbur Stock Food Co., Milwaukee, Wis.

MAKING HOUSEWORK EASIER.

Farm Girls' Training in Cooking and Sewing, Kitchen Economics and Sanitation, as Taught in the Agricultural School of Today—By Mary E. Pease, of Milwaukee County.

THE farm woman of today needs the help and aid of science and education much more than the city dweller, because of the lack of means and conveniences which have year by year become a part and portion of city life.

The real farmer realizes more and more the fact that washing machines and vacuum cleaners are as much necessary accessories for the home as are the threshing machine and tractor for the farm. Each in its particular environment accomplishes a greater amount of work, with much less expenditure of energy than was necessary by the old-fashioned method. The one makes more efficient the work in and around the house; the other helps produce the maximum results in dollars and cents from a certain number of producing acres.

The first steps in assisting in the work of the farm household are in teaching the girl or woman to use intelligently what she now has, and from time to time to learn of those things which will make her work more endurable and enjoyable, and to purchase them in the most economical way.

Farm schools are now being started throughout the United States more rapidly in some sections than in others, perhaps, as necessity demands. The Milwaukee County School of Agriculture and Domestic Economy is one of the best examples of this type of school in Wisconsin. The girls who attend this as well as others of its kind, come from the farming districts of the county to learn what they can about making their work easier and pleasanter and to make their homes better and happier.

The first year in such institutions the girls are taught the fundamentals of sewing and cooking. Instead of the old-fashioned, laborious method of basting seams in dressmaking, they are shown how to substitute pinning. This is one of the many ways they learn to get better results by easier and quicker methods.

The same idea of economy of time is carried out in the kitchen, teaching the future mothers of America how to collect material for a cake, mix it, bake it, and have the dishes all cleaned up in ten minutes.

In so far as it is practical, they are taught to make use of the dishes as they are ordinarily found in their own homes, but when, for a single expenditure, some tool or utensil can be purchased which will save time and energy economically, it is made use of in the laboratory to show just why the saving is worth the expenditure. The egg-beater, the spatula and the frying basket are very good examples.

Again the pupil soon discovers that in order to get good results every time, a certain amount of care must be exercised in making the particular article under consideration. The necessity for accurate measuring cups, spoons, and other cooking utensils in cooking, and tape measure in sewing, soon becomes apparent, as does also the necessity of their accurate use.

After the first year of learning and experience in the best and easiest ways of doing the work of the housewife; cooking, sewing, laundry, etc., the girls are then ready for the more difficult problem of keeping house in the easiest and best ways. No one learns all in school, but the preliminary instruction teaches the worker to watch for methods of eliminating unnecessary drudgery and expense in her future work.

Sometimes the housewife wastes her energy, becomes tired out, and cannot accomplish her task because she does not perform each individual portion of the work in the easiest or most economical way, from a labor standpoint. Maybe it is because she failed to plan her work as a whole, intelligently.

Once the easy way is discovered, a task should always be performed in that way, until the action becomes automatic. As a habit, work is not laborious. If you have ever watched a little child just learning to dress herself you will see the reason. First, she picks up her undershirt and that goes on all right. Then she sees her petticoat, so she puts that on and laboriously buttons it, for the task is new. Then she discovers she has forgotten her underwaist and drawers, so off comes the petticoat. All those wasted moments and all those wasted motions are what makes it a hard task.

If the housewife starts the dishes, remembers she hasn't opened the beds to air and runs upstairs for that, she not only has the extra trip but the wasted time from her dishwashing to account for. Then the water gets cold, and has to be reheated and she is again delayed. While she makes the beds she remembers she hasn't fed the chickens and she stops for that. Another extra trip is the result.

The girls are taught to plan their work so the least energy and the least time are lost and the least fuel wasted that is possible. The upstairs work is all done at the one trip. The downstairs work is planned to fit in most conveniently and the plan is written out. These plans are brought to class and criticised. Sometimes after a discusion they are changed and improved. At times the discussion brings a firmer conviction that the plan as outlined is best without change.

On Saturdays the girls are urged to follow out their plans at home in order to demonstrate that they actually prove efficient. The routine or daily "ever present" work is thus systematized. The housewife loses no time wondering which task to take up next. The dishwater is hot when needed; the beds sufficiently aired when it comes time to make them. Furthermore the mind of the housewife is free to think of other things. She never bothers her head as to how she washed the dishes, any more than she actively thinks how she walks around. Her hands learn to wash the dishes just as her feet learn to walk without constant supervision being a definite task for the brain.

Interruptions will occur from time to time in the routine of the work, such as answering the phone or the door bell, and many other distracting things. But the girl with a system will soon discourage lengthy chats over the phone during her morning work hours, and will quickly, yet courteously, dismiss the peddler who may have something she does not want.

After the girls have completely worked out plans for managing their own work in their own homes, they outline in detail a plan for a young girl going to school and living in the the practice flat of the school. A complete list of the work for the home and a time allowance for the getting of the girl's regular school work and attending her classes, is made. When the student is satisfied that the plan is correct and complete, she is allowed a week in the home to see whether or not it will work out in every way.

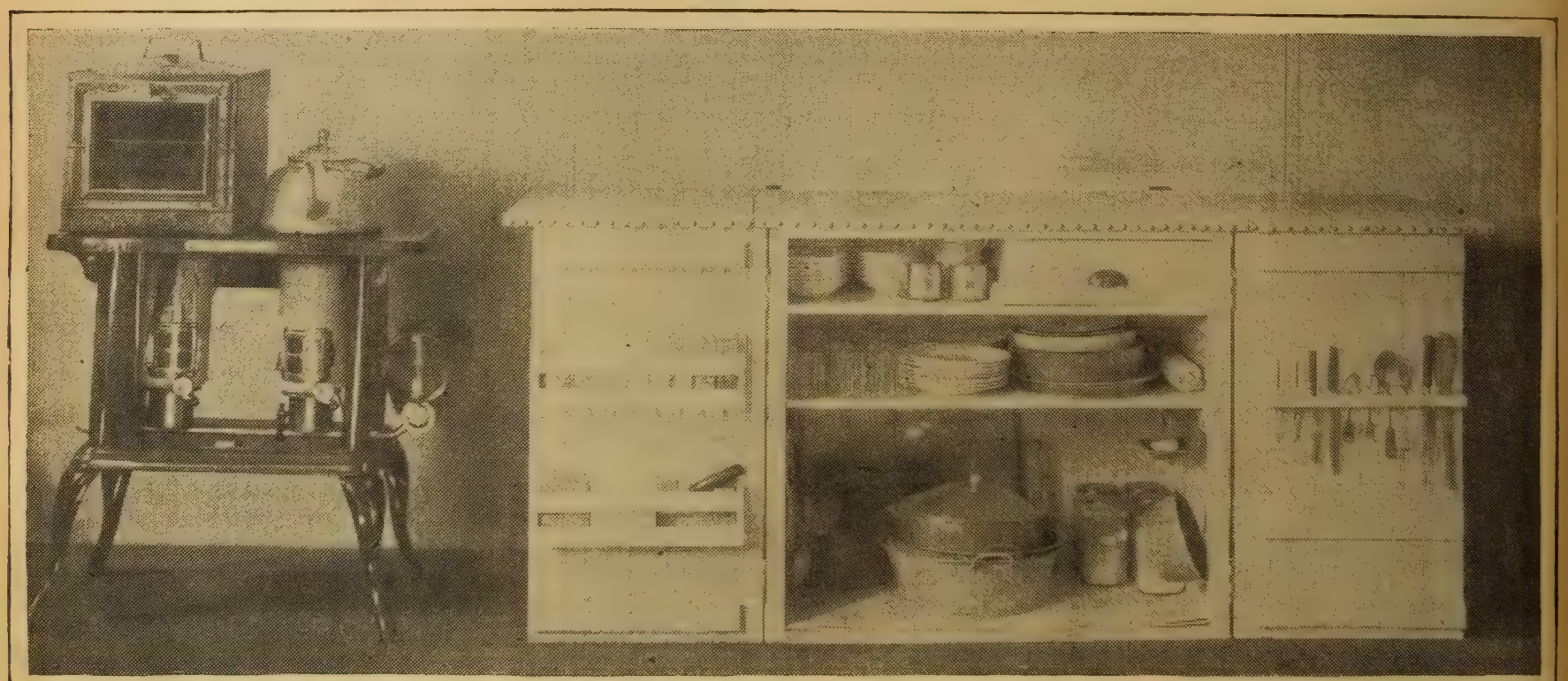
These girls when they go to their homes, help to rearrange work in their mothers' kitchens so that the work will be easier, and they have a great deal to do with persuading their fathers to purchase the necessary articles to help put in their plans.

Another course taken up in conjunction with their work takes as a model a family of five in which the mother does all her own work. A plan is drawn for a complete house, taking into consideration the arrangement of all rooms, and the furniture in them, also step-saving devices of many kinds, which in actual experience have proven themselves worthy of adoption.

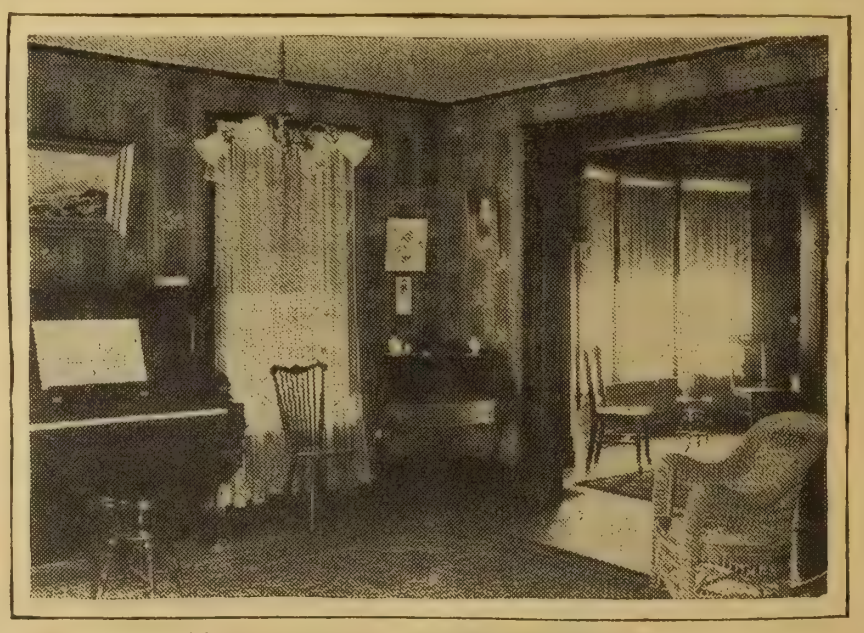
The arrangement of sink, stove and table in relation to the icebox, cellar steps, dining room, etc., is carefully studied and laid out to permit the maximum amount of work with the minimum amount of energy. Steps are energy, and a few saved during the day makes life a lot more livable.

Simple devices like a dumb waiter

(Concluded on page 25.)



ONE GLIMPSE AT THE BETTER FARM KITCHEN OF TODAY.



CORNER IN WELL FURNISHED PARLOR.

Methods of Clearing Stump Land.

"Land-Clearing Limited Will Acquaint Farmers With the Best Methods of Removing Stumps and Brush.

SETTLERS in Upper Wisconsin are interested in nothing so much as land clearing. This subject ranks first in their estimation, for as soon as it is practicable they want to clear much

A JOB SUCH AS LAND CLEARING SPECIAL WILL TACKLE.

of their farms of the stumps. To answer this need the college of agriculture will co-operate with railroad and manufacturing companies in May and June in the operation of a series of land-clearing demonstrations.

To accomplish this the "Land Clearing Limited" will be operated through eleven counties in Upper Wisconsin. It will consist of six cars carrying a number of different styles of stump pullers and dynamite blasting apparatus for demonstration purposes.

The train will start from Madison, where it will be equipped under the direction of the department of agricultural engineering. Six companies engaged in the manufacture of land-

A HANDY DYNAMITE KIT FOR THE FARMER WHO HAS LAND TO CLEAR.

clearing machinery and explosives will supply apparatus and aid in the demonstrations. From Madison it will be sent to Mountain, Oconto county, where the first demonstration will be made, lasting, as will the others, for two or three days. The work will be done on a plot of about ten acres of land as near the tracks as possible. Local arrangements will be in charge of county agricultural representatives, bankers and business men.

The other points in the itinerary are: Deerbrook and Elcho, Langlade county; Crandon, Forest county; Three Lakes, Oneida county; Eagle River and Woodruff, Vilas county; Bayfield and Ashland Junction, Bay-

ONEIDA COUNTY TRACTOR AT WORK CLEARING LAND.

field county; Hayward and Radisson, Sawyer county; Bennett, Douglas county; Spooner, Washburn county; Barronette and Rice Lake, Barron county; Cornell, Chippewa county.

Prices, cost of operation, methods of engineering, plans for co-operative associations and all such subjects of interest to land-clearing workers will be taken up and discussed. The men in charge of the train will be in their shirt sleeves from morning to night and always ready to answer questions or take part in demonstrations. The opinions of settlers on homemade devices for land clearing will be noted and where feasible such machines will be given a trial.

Communications in regard to the train and its work will be given attention if directed to the college of agriculture, Madison.

The companies which have promised to co-operate in the work are: Bay Iron Works, Bayfield, Wisconsin; George Drazick, Escanaba, Michigan; E. I. Du Pont de Nemours, Chicago; Flynn Stump Puller Co., Superior, Wisconsin; Hercules Manufacturing Co., Centerville, Iowa; A. J. Kirstin Co., Escanaba, Michigan.

The demonstrations will give a good idea of the several methods of land clearing which may be classified as follows:

One-Man Hand Stumpers.—Several types of more or less merit in use in the lake states. Good for soft ground or where the "down stuff" is too thick for horses to work well. Cost, from $15 to $200.

Horse Stumping Machines.—Have been improved for quicker and easier operation. Two varieties in common use—the capstan and the tripod. Horse stumpers and pilers are used together. The stumpers range in price from $20 for the stripped machine to $500 for a complete puller and piler.

Dynamite, alone and in combination with power stumpers, has a recognized place in land clearing operations in Wisconsin. The cost varies with the kind used, which in turn depends upon factors of soil and the resistance of the stumps. If rightly used dynamite will serve a wonderful purpose in helping to clear Upper Wisconsin.

Steam Stumpers.—A success where the soil is light and working area is large. To work to best advantage these machines must have a crew of from five to eight men. Large investment involved, sometimes as high as $16,000. Best adapted for community land clearing work.

Tractor Land Clearing.—Some cheap clearing has been done by operators in this state who have converted their tractors into land clearing machines, running them upon a heavy frame work which rests upon skids. A double drum hoist and piling boom is attached to the forward end of the skids. This is driven by a chain belt from the sprocket wheel fastened to the flywheel of the tractor.

Gasoline Stumpers.—Gaining popularity rapidly, and are being made with and without stump piling devices. Light enough to be easily moved by horses, do not require a large crew, and will pull the strongest stumps, when aided by small quantities of dynamite.

POTATOES WILL GROW BETWEEN STUMPS AS WELL AS IN OPEN LAND.

The spring maintenance of earth roads requires preventive measures, which must be taken the previous fall or summer, so that the road will go into winter properly graded, well compacted, and with good provisions for drainage.

Lessen Your Road Tax

EVERY mile of road is a tax on your tires. Upon tire quality depends the amount of road tax your tires pay. Firestone Tires give you "Most Miles per Dollar" —less tax—greater mileage. This added value is due to Firestone Extras. Extra toughness, extra resiliency, extra thickness of pure rubber tread.

The new Firestone Tires with their red side walls and black treads give promise in appearance of the good service they will give in actual use.

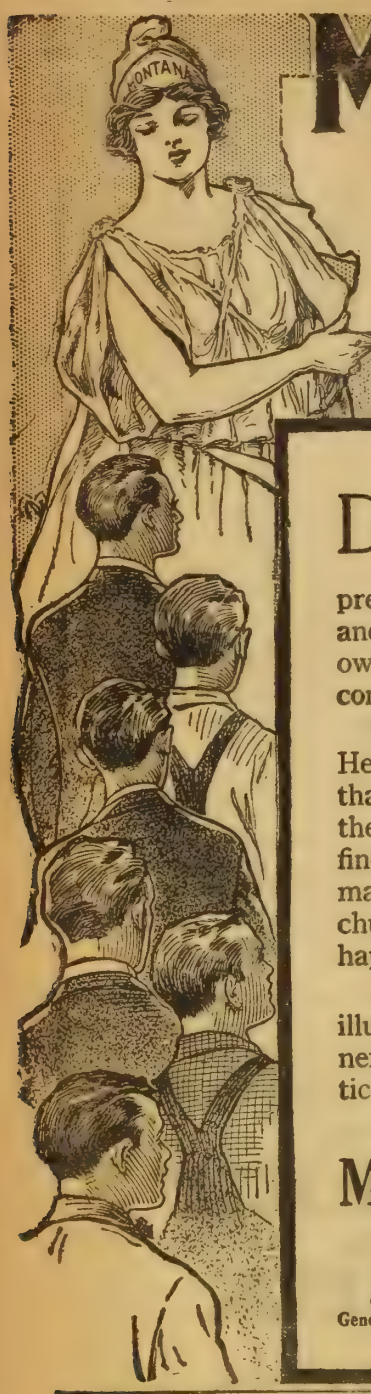
Quality alone—proven by "Most Miles per Dollar"—has produced the demand that has made the Firestone plant the largest exclusive tire factory in the world.

FREE OFFER. Send us your dealer's name and address and the make of tires you are now using and we will send you, free, a waterproof tube bag. It will keep your extra inner tubes in good condition. Write today and ask also for free book, "Care and Repair of Tires," No. 17

Firestone Tire & Rubber Company
"America's Largest Exclusive Tire and Rim Makers"
Akron, Ohio—Branches and Dealers Everywhere

Firestone

RED Side Wall and BLACK Tread TIRES



MONTANA

Is the Country of Opportunity for Ambitious Young Men

DON'T let your boys go to the city—keep them in the country where their health and morals are both preserved and make them successful and independent farmers, owning their own farms and sharing an interesting community life.

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A. J. KIRSTIN CO., 5532 Ludington St., Escanaba, Mich.

SUBSCRIBERS who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention, inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delaying printed answers, those to whom it is important to receive an immediate reply by mail, should remit $1.00, addressed as above. All inquiries must be signed if they are to receive attention.

Lending Personal Property

When a person hires from another the use of a team, carriage, wagon, auto or other article of personal property for a certain period of time he is entitled to the possession of such property till the time expires, even as against the real owner. Such right is similar to the right of a renter who has leased land for a certain period of time. The relation of the lender and borrower involves mutual benefit and advantage to both parties, the borrower receiving the use of the property so hired and the lender receiving compensation for such use. The borrower is bound to use ordinary care and diligence in preserving the property and is liable only for negligence. He is required by law to take care of such property with that degree of diligence which prudent men ordinarily use in caring for their own property of the same kind. For instance, if a man hires a team he is bound to drive it with moderation and treat it as carefully as men of ordinary prudence would treat their own animals of like character and to furnish proper food and shelter, and if he does this and the team becomes injured or lamed while in his possession without his fault he is not responsible to the owner for damages, but he may become liable for damages by reason of injuries caused by the negligence, carelessness or fault of his children or employes.

If the thing hired is injured or lost by inevitable accident or superior force, without any fault on the part of the borrower, he is not liable for damages. The owner is not responsible to third persons who may be injured by the negligent use of the thing hired by the borrower nor for the negligent use of it by the employes of the borrower.

The owner or lender need not look solely to the borrower of property for damages on account of injuries or wrongs done to it by a third party. If a borrower assumes to sell or pledge the hired property as his own it amounts to a wrongful conversion and the owner may immediately bring a suit of replevin against the third party who has possession of the property. The borrower may sue a third party for an injury done to his actual possession of the hired property and may include in such suit a claim for damages for all injuries done to the property, being himself accountable for the same to the owner. The owner may sue a third party for any permanent injury done by him to the property while it is in possession of the borrower and recover damages to the extent of the depreciation in value caused by such injury.

Where a person lends an animal or other article of personal property to another merely for accommodation and without compensation the transaction is not like hiring, but wholly for the benefit of the borrower and he is for this reason held accountable by law for the highest degree of care and diligence in caring for and preserving the property and returning it in good condition to the owner. The borrower who pays nothing for the use of such property is liable for all injuries to it while in his possession which arise from any neglect or carelessness on his part, however slight it may be, but he is not liable for injury or loss which occurs wholly without his fault. The borrower is liable for all ordinary and necessary expenses of keeping the property in good condition while in his possession, but he is not liable for extraordinary expenses unless caused by his misuse of the property. For instance, if a borrowed farm implement, like a reaper, mower, plow or wagon, should need slight repairs, made necessary by ordinary use, it would be the duty of the borrower to furnish them at his own expense, but if a borrowed reaper should break down in the field or lose a wheel by reason of some defect in it and without any fault or negligence on the part of the borrower he could not be held liable to the owner for the expense necessary to put the machine in working order.

LAW QUESTIONS.

Cutting Bee Tree on Another's Land.

A Subscriber, Bertha, Minn.—I have traced the line of a wild bee to the hive in a tree located on another man's land. Can I cut the bee tree and take the honey without the owner's consent, under the laws of Minnesota?

Answer.—You cannot do so under the laws of Minnesota or any other state. Such an act would be a trespass upon the property of the owner, for which he could recover damages from you and possibly prosecute you for a criminal offense.

U. S. Stamp Law.

A Subscriber, Upham, N. D.—(1) Can a note without a United States revenue stamp on it, be collected by law? (2) Who should put a stamp on a note and cancel it? (3) When a note is found without a stamp, who is liable and what is the penalty?

Answer.—(1) If such note was given after the first day of December, 1914, it cannot be collected by law. (2) The person who gives a note should put the stamp on it and cancel it. (3) The person giving the note is liable and the penalty is a fine of $50.

Damages for Misrepresentation.

A Subscriber, Cresbard, S. D.—A bought a team of horses from B for a certain sum of money, and at the time of the sale B represented the horses in the presence of two witnesses, to be sound in every way. After taking the horses home, A found that one of them was lame and unsound. What can A do about it by law?

Answer.—A can sue B for damages and get a judgment against him, for the difference between what the lame horse is actually worth and what he would have been worth if he had been a sound horse.

Damage by Automobile,

A Subscriber, Oconomowoc, Wis.—(1) Where the driver of a horse, or animal drawn vehicle on the public road will not turn out to give half the road to an automobile which overtakes it, and the driver of the automobile wishes to pass, can he lawfully run slowly against or into the foremost vehicle to cause it to turn out? (2) In such a case, would the driver of the automobile be liable for any damage he caused to the other vehicle or its occupants?

Answer.—(1) He cannot lawfully do so. (2) The driver of the automobile would be liable for any damage done by him to the other vehicle and its occupants.

Exempt Wages, Limitation on Note.

A Subscriber, Correll, Minn.—A sold B an accident insurance policy and took his note for it. B has nothing whatever except what he earns as wages for his labor. (1) Can A take B's wages to pay the note? (2) How long does a note stand good in Minnesota? (3) If B leaves Minnesota and goes to work in another state can his wages there be taken to pay the note?

Answer.—(1) B can claim his wages to the extent of $25 earned in the thirty days preceding an execution or attachment, exempt from execution and attachment. (2) Six years after it is due. (3) It depends upon the laws of the state to which he goes—you have not specified the state.

Verbal Contract Not Valid.

A Subscriber, Douglas Co., Wis.—A made a verbal contract with B to buy ten acres of B's land, and B allowed A to go on the land and cut logs and build a shack of one room which cost less than $10. A lived on the land thirteen months, making fuel from the timber on it, and refused to clear the land, and violated three verbal agreements about payments and finally left the state of Wisconsin, but claims the right to sell the land and the shack. There were no papers made out between A and B. Has A any lawful right to the land or the shack?

Answer.—A has no lawful right to either the land or the shack. A verbal contract for the purchase of land is not binding or valid. Such a contract must be in writing to have any force or effect.

Some Mistakes in Hog Raising.

No Profit in Pursuing the Policy "in One Year and Out the Next"---By John Bower.

NOT all hog raisers are good hog caretakers. To be a good breeder of hogs means work. It means study. It takes the best that is in one to succeed. One cannot be a "slacker" and get anywhere. There may be "easy money" in pork production, but there is no easy way to get results. There are too many mistakes; too many costly blunders. Let us look at some of them: Lack of persistence; too many "in" and "outers;" too small litters; improper care and handling of the brood sow; feeding without study of the needs of the animal; keeping too many or too few hogs; improper housing; unsanitary housing; failure to provide suitable pasture; use of a poor sire and immature breeding stock; breed shifting; failure to recognize value of hog manure; poor feed arrangements; not enough time given to study of markets; failure to recognize breed and blood.

Is that all, you ask? No, not all, but it is enough. Let us look at the first one. Who ever heard tell of anyone making money in the hog business, or any other for that matter, who was "in" one year and "out" the next? When prices drop they sell out their good brood sows. There is no money in hogs, they declare. Then when prices advance they buy, at enhanced prices, other men's brood sows. And they are sure they are going to make a barrel of money in hogs. They buy plenty. Such men are usually long on finished pork when low prices prevail and short when prices rule high. To succeed, one must stay with the game year in and year out. High and low prices, cholera or no cholera, stay with the business. There is good money in pork production.

It has been said the hog is a mortgage lifter. That is all right as far as it goes. Let us see. It costs about $20 a year to keep a brood sow. If she has two of a litter each little pig costs $10. That is a pretty big mortgage for the little fellow to lift. Even if there are four in a litter each little pig starts with a mortgage of $5. He never will lift that in the world. That is why the successful pork producer insists on larger litters and in many districts two litters a year. There is a reason. The large litter is one of the most important factors in cheapening the cost of pork production.

Not only must the litters be of fair size but they must start off strong. The parents should be in vigorous, healthy condition when bred and the sow given plenty of exercise and the right kind of feed. There is a very close relationship between the character of the feed fed and the vigor, size and healthfulness of the young. I am told one hog raiser during a season of low prices for potatoes fed liberally this product to the sows. The resultant litters lacked size, lacked vigor and even lacked hair. Too much starch. The sow cannot make something from nothing. She needs protein and bone—and even hair-producing material if she is to make a litter of vigorous, well-nourished offspring. When the litter does come don't crowd the sow with a lot of milk-making material. For forty-eight hours very little feed should be given. She should be on full feed at the end of a week and at the end of a month needs outside assistance in the form of skim milk for her brood.

The same study of the needs of the sow can be applied to the growing young animal. Bone and muscle-building materials are needed. Get growth and get it quickly and cheaply. Corn won't do it. Not alone, at any rate. Corn and tankage! Corn and clover! Corn and alfalfa! Corn and skim milk! Corn and buttermilk! If the self-feeder fills the bill use it, but be sure to give the pigs a chance. Get growth. Get bone. Get size. The breeder who fails here fails as a breeder. Not only get it, but get it cheaply.

And here is where pasture comes in. The average hog pasture is a joke. About forty hogs are turned into a two-acre pasture and when they have eaten what little is above ground they proceed to eat everything below ground. You then use language not fit for church. Better ring them, of course. But, better still, give them more acreage. Give them ten acres of good clover pasture and they will make a gain of twenty-five to thirty pounds an acre and you can cut a good crop of hay besides. If you have not a clover field handy, winter rye, peas and oats, barley, alfalfa or rape will suit his majesty very well. If you have not any sow some. You cannot afford to neglect pasture, plenty of pasture, if you want to lessen the cost of production. If it is a fall litter and winter growth is the end in view, second crop clover or well-cured alfalfa will turn the trick and change loss to profit. But don't forget corn.

In no case should one keep more pigs than can be properly fed and cared for. Well lighted, well bedded with clean, dry straw and built free from drafts, that is the kind of a house Mr. Hog wants. He is kind of particular. He doesn't like to creep out of a steaming manure pile when it is 20 degrees below zero. He is just ornery enough to contract pneumonia and contract it right, too. It is foolish to attempt to keep hogs under those conditions. Make conditions right and he will do right by you.

Space will not permit a discussion of all the points. Look them over. You will find food for thought. Take a pencil and paper and write out your mistakes. You may not have all those recorded above. You may have some others. Choose a breed and stick to it. Breed from mature stock. Save labor by "hogging" down corn. Study the markets, but, above all, do not fail to recognize blood as found in the stock of a good breeder. Breed counts. Blood talks. Care, study, all help to make the successful feeder and breeder of the cheap meat producer, the hog.

Bulletins and maps descriptive of the soils of Waushara, La Crosse, Kewaunee and Juneau counties, the Bayfield area, and fifteen counties in northwestern Wisconsin have been issued by the division of soils of the Wisconsin geological survey. Bulletins covering the soils of Columbia and Jefferson counties are now in press. A survey of the northeastern part of the state has also been made, a report of which is now being published. A report and map are in course of preparation covering Vilas Oneida, Price and Iron counties, and the field work has been completed in Marathon, Lincoln, Taylor, Clary, Wood and Portage counties.

Tests Reveal The Danger In Planting 1915 Seed Corn

CORN experts say that only 5% of the 1915 Corn crop is fit for seed. If you use weak, sickly 1915 Corn, the small amount of seed which grows will make puny sprouts that will soon die if exposed to unfavorable spring weather. Even if it should have the advantage of warmth and sunshine so as to survive, the growth would be slow and there would be slight chance of its ripening.

The illustrations above show the comparative strength of the germs of both 1914 and 1915 Seed Corn. The 1915 Corn in the box at the left shows weak sprouts and few side or lateral roots.

Contrast with these, the strong, vigorous lateral roots and sprouts of the 1914 Seed Corn which we are selling. Its germination is about 90%. This Minnesota Grown, 1914 Seed Corn is early maturing, sound and dry. It was selected from the short kerneled, earlier types of Corn. This is practically the only Seed Corn which is safe for planting this spring in Minnesota, Northern Wisconsin and North Dakota. We recommend this also for South Dakota and Southern Wisconsin.

Dealers Everywhere Sell NORTHRUP, KING & CO.'S SEEDS

You can buy this tested Seed Corn from your dealer. If he has not ordered from us, urge him to get it for you. Every bag we ship bears a tag on which appears our name, germination test, and the county in which the seed was grown.

Our Catalogue Tells the Seed Corn Story

It gives the reasons for the failure of the 1915 Seed Corn crop and is interesting to every one who plants Corn or any other crop. A practical planting guide for field and garden.

Catalogue Sent Free to Any Address Upon Request

NORTHRUP, KING & CO., *Seedsmen*,
Hennepin Ave. at First St., Minneapolis, Minn.

Fruits and Garden

The Codling Moth.

The codling moth or apple worm causes the greatest loss to the apple crop in the United States, and particularly in Wisconsin it may be considered our greatest apple pest at this time. This insect was introduced from Europe many years ago and is now found in practically all of the apple-growing regions of the country as well as many foreign countries. Its ravages and damage to fruits can be readily controlled by spraying at the proper time with arsenical poisons as described below.

Before treatment it is well to know the main points in the life history of this insect which produces two broods during the year—two broods of the apple worm being produced each summer.

The insect overwinters as a larva in silken cocoons spun underneath loose pieces of bark on the tree or in cracks of boards, boxes or barrels or rubbish wherever lodgment can be found in the fall. Early in the spring the larva in a cocoon changes to a chrysalis and emerges as a tiny moth soon after the blooming period of the apples.

Eggs are laid on the young apples and leaves at this time from which hatch tiny larvae or "worms" which burrow into the apple and work to the core causing the young apple to drop from the tree in a short time. The well-known "June drop" is generally the result of this attack. When the larva is mature it spins a cocoon from which hatches an adult moth about the last week of July.

Eggs are laid about the last week of July or the 1st of August and another life cycle as above is passed, except that in Wisconsin the mature larvae spin up in favorable locations and remain so over winter, as described above.

A spray of arsenate of lead, one to one and a half pounds of powdered (three pounds of paste) in each fifty gallons of water, should be applied just after the petals have fallen from the trees. A second application of the same strength should be made about two weeks later. No further spraying will then be necessary until the last week of July or the first few days of August, at which time a second brood will be developing.

These three sprayings may be combined with lime-sulphur solution, using one and one-half gallons of the commercial material to each fifty gallons of water. This lime-sulphur solution (or Bordeaux mixture) is, of course, used to control the "apple scab."

These sprayings will also control all other foliage-eating caterpillars so that additional applications of poison will not be necessary. These treatments are cheap and easily applied with the aid of proper spraying apparatus, such as a barrel pump or power outfit.

Any questions concerning insect pests and their control are gladly answered by J. G. Sanders, state entomologist, state capitol, Madison, Wisconsin.

Growers Must Spray.

Nothing would do more to improve Wisconsin's reputation as a fruit-producing state than for everyone who owns an orchard to spend just a little time and money this year in spraying his trees.

This prediction is made by horticulturists at the agricultural experiment station. They are of the opinion that Wisconsin will have a smaller apple crop this season than last and that there will a greater chance to place surplus fruit upon the market but are convinced that the fruit which will be produced will neither be suitable for marketing or for home use unless the grower sprays. Growers who take proper care of their fruit usually find that even in seasons of abundant supply, as in the case of last year, they are able to get remunerative prices for it, while their neighbors who do not take care of it, cannot sell their fruit.

According to the state authorities, the adoption of the following spraying program should enable every grower in the state to produce fruit which will be satisfactory for home use and the surplus of which would find a ready sale upon the market.

If trees are infested with scale insects, spray with lime sulphur shortly before growth starts. Use five gallons commercial lime sulphur in 40-45 gallons water.

If plant lice were prevalent the past season, spray with 40 per cent nicotine sulphate one part to 700 parts of water (one pint to eighty-seven and one-half gallons of water) to which should be added three pounds of soap solution. Apply just as buds begin to show green.

The regular seasonal applications are as follows:

Spray with fungicide and arsenate of lead when blossoms show pink. Add nicotine sulphate as above, but without the soap, if plant lice are present.

Spray again with the same materials within three to five days after most of the petals have fallen, then about ten days to two weeks later, and on later varieties about July 20th to 30th, depending on section of state and whether season is relatively early or late.

If the weather is moist and warm, make an application between the last early and the July sprayings.

The fungicide used may be either commercial lime sulphur, five to six quarts in fifty gallons of water, or 4-4-50 Bordeaux mixture, which consists of four pounds of copper sulphate, four of lime and fifty gallons of water. This year when the price of copper sulphate is so high it would probably be advisable to use a 3-3-50 Bordeaux.

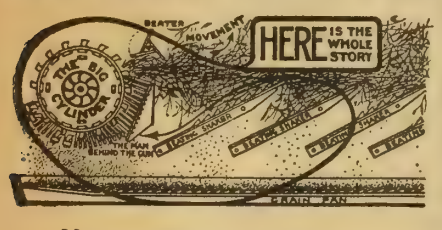
Arsenate of lead is most conveniently used in the powdered form at the rate of one and one-half pounds to fifty gallons of water.

The spraying will vary somewhat with the pests present, but this program will be applicable in most cases.

Substitute For Paris Green

On account of the rise in price of Paris green, which is now selling at 50 cents a pound even in large quantities, an effort has been made by potato growers and orchardists to find a substitute. A. F. Ruggles, of the Minnesota station, says that arsenate of lead is a better insecticide than Paris green and that it has not advanced in price. He is authority for the statement that arsenate of lead in powdered form may be obtained for about 25 cents per pound and one and one-half pounds of the powder is used in making fifty gallons of spray mixture. In experiments at the Minnesota station it has been found that arsenate of lead is even better than Paris green as a remedy for potato bugs and all orchard insects. The orchardist should get his spray materials as early as possible this year, as it is hard to tell when arsenate of lead may begin to go skyward in price, following the Paris green.

WAR ON WASTE
WITH THE
Man Behind the Gun



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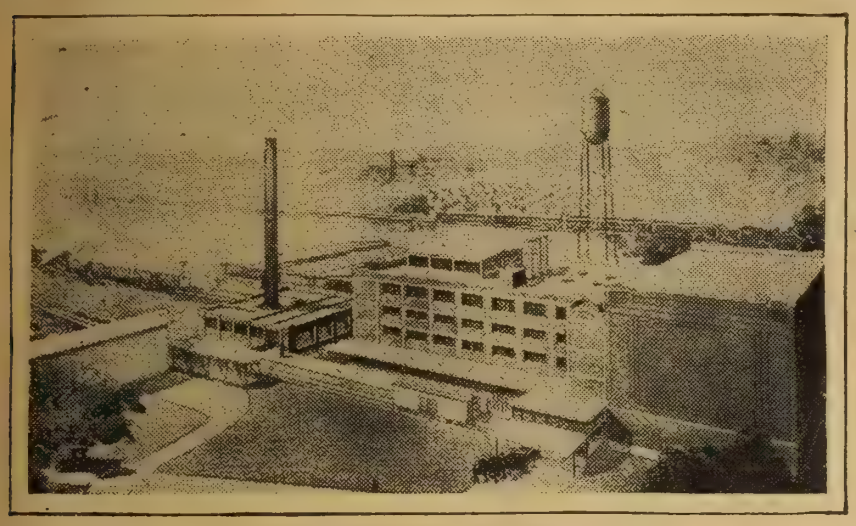
In and Around Wisconsin

County Orders of the Experiment Association Elect Officers For Coming Year---Other Interesting Items.

Peter Tollefson, of Stanton, St. Croix county, reports that he has a Short-horn cow, seventeen years old, who has twenty calves to her credit. She recently dropped twin calves which performance has become a habit with her.

Farmers and dairymen in the town of Empire, Fond du Lac county, have started a movement to form a cow-testing association and F. H. Scribner, Math Michels and H. C. Searles addressed a recent meeting in the town for this purpose.

Edwards Wittwer & Bros., of Monroe, Green county, have let the contract for a cold storage building which



PROPOSED FARMERS' PACKING PLANT.
This plant is being erected at Madison. Photo taken from architect's drawing.

will be completed about August 1st. It will be used exclusively for storing cheese and will be three stories high and of fireproof construction.

The Barron county order of the experiment association met recently at Barron and elected William Bartlett, of Barron as president; W. H. Clark, of Rice Lake, vice president; R. L. Cuff, of Barron, secretary and treasurer. Mr. R. A. Moore addressed the meeting and emphasized the need of growing pure-bred grains.

The Wood county order of the experiment association has elected these officers for the coming year: President, A. P. Bean; vice president, J. F. Schmidt; secretary and treasurer, W. W. Clark. The county farm management winners were also announced at the meeting. Herman Bassuener won first; Filliam Ehlert, second, and Mrs. G. H. Tenpas, third.

The Douglas county board of supervisors, which appropriated $10,000 some time ago for the county fair has just made available for immediate work $2,500 of this amount. The remainder will be turned over to the fair association about June 1st. This money will be used in equipping the fair grounds and making improvements that will make this one of the best fairs in Upper Wisconsin.

Another organization to boost better agriculture has been formed in Rock county and is known as the Rock County Farm Improvement Association. It will have charge of the farm management work in the counties and other activities which will improve agricultural conditions. The growing of alfalfa is being urged at the present time and it is hoped to materially increase the acreage this year.

The town of Geneva, in Walworth county, at the spring election voted $2,800 for the purpose of building a new town hall or rather a community house. The project was backed by the Worthwhile Farmers' Club, which followed the precedent set by other farmers' clubs in that county in inducing the towns to vote money for town halls which can be used as places in which the community associations can gather. The club agreed to stand any expense over $2,800 and the hall, which will be located at Como, will be first class in every respect. H. E. Brooks went to the expense of getting the plans which were submitted to the voters for approval.

Juneau county cheesemakers, farmers and others interested in the factories of the county, gathered recently at Juneau and heard E. L. Aderhold explain the workings of the new license law and see a demonstration of the Babcock test by Prof. J. L. Sammis, of Madison.

John M. Taylor, of Walworth county, has some White Plume chickens which he thinks have a splendid egg record, considering that they have received only ordinary care. The layers are all July pullets and on February 1st the first one began to lay; on the 2d the second one began and on the 8th the third began to lay. During February these three laid fifty-six eggs and in the forty days after the first one began to lay they laid seventy-nine eggs. Mr. Taylor says that he did not wish to force them, as he desired the eggs for hatching.

The Dunn County Agricultural Society is now organized with $10,000 capital stock consisting of 1,000 shares at $10 each. The stock is to be offered for sale.

George A. Phillipi, sheep breeder of Bear Creek, Shawano county, recently brought to his Wisconsin farm a pair of Persian Flat-tail sheep with which he will do experimental breeding.

Glenn M. Householder, who was recently appointed county representative of Rusk county, has taken up his new duties and will have his headquarters and offices in the court house at Ladysmith.

The directors of the Rock county fair at Janesville are planning extensive improvements for the 1916 fair and an addition to the cattle barns will probably be built. The cattle entries last year were very large and tents had to be used for about half the stock exhibited and indications point to a larger entry list this year.

All except $500 of the originally authorized capital stock of $250,000 for the Inter-County Co-operative Packing Plant at New Richmond has now been subscribed. Farmers in the St. Croix valley and adjacent counties are interested in the project and the promoters have announced that only five $100 shares remain to be sold.

The Polk County Order of the Wisconsin Experiment Association elected V. A. Miller, of Osceola, as president for the coming year at its recent annual meeting. Joseph Clark, of Dresser Junction, was elected vice president and J. S. Klinka, county agricultural representative, secretary. The secretary's report showed that the members have enjoyed a good business in seed grains this spring and that they have on hand about 5,000 bushels. During the coming season it is planned to extend the work into every section of the county and more farmers than ever before have agreed to raise pure-bred grains and certified potatoes.

Value of Farm Lands.

The value of farm lands of the United States, without improvements, is estimated at $45.55 per acre, as compared with $40.85 a year ago, $40.31 two years ago, $38.10 three years ago and $36.23 four years ago. The census reported the value of farm lands in 1910 as $32.40, and in 1900 as $15.57 per acre.

In recent years the value of farm lands has been increasing at the rate of about 5 per cent a year, or approximately $2 per acre per year. The exceptional increase of the past year may be explained partly by the reaction in the southern cotton states following a temporary depression last year, and partly by the stimulus given by the war to prices, particularly of grain.

Increases have been general throughout the United States, the only noteworthy exceptions being orchard lands and some irrigated lands in the northwest, which apparently had been overvalued before.

The percentage increases in value of farm lands in the past year by sections of the United States are: North Atlantic States, 10 per cent; eastern part of North Central States, 9 per cent; western part of North Central States, 12 per cent; South Atlantic States, 19 per cent; South Central States, 11 per cent; Far Western States, 11 per cent; entire United States, 11.5 per cent.

The percentage increases in farm land values in four years, that is since 1912, are: North Atlantic States, 17 per cent; eastern part of North Central States, 20 per cent; western part of North Central States, 28 per cent; South Atlantic States, 23 per cent; South Central States, 25 per cent; Far Western States, 34 per cent; entire United States, 25.7 per cent.

These estimates are based upon reports from crop reporters of the Bureau of Crop Estimates. Details by states of prices of plow lands and of all farm lands with improvements and without improvements, will appear in the April Monthly Crop Report.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Windmill Power.

Would it be possible to run a feed grinder by a windmill? The tower is forty feet high with an eight-foot wheel.

Answer.—We do not think it practical to run a feed grinder with an eight-foot windmill.

Capacity of Dynamo.

I have a dynamo that generates eight volts and ten amperes at 2,500 R. P. M. How many six-volt, fifteen-candle-power lights will it supply? What size dynamo is required for a moving picture machine?

Answer.—Your generator should supply three fifteen-candle-power lights. The size of generator required depends upon the moving picture machine. The agent can give you this information.

A Cement Mixer.

Please publish plans for a homemade cement mixer, to be run by an engine. I intend to build a cement tank in the spring, and I would like to know if any of the readers ever have heard of putting piers under the tank instead of a deep foundation. The piers to be about ten inches across and extend below the frost line; about three on a side of a tank eight feet wide and sixteen feet long. The local cement man says this is practical. Please give your opinion.

Answer.—Figure 1 shows the side view and Figure 2 the top view of a homemade cement mixer. It consists of a strong barrel mounted on an axle shaft, supported by a wooden framework. The barrel is fastened to the

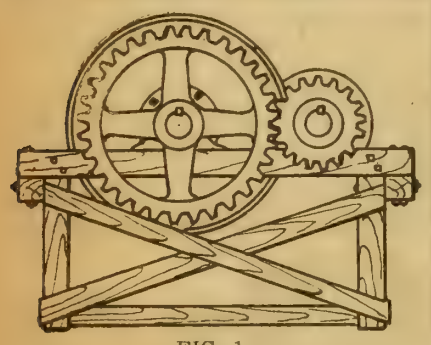


FIG. 1.

shaft by cast iron hubs or flanges bolted to the barrel heads and keyed to the axle shaft. A gear nearly as large as the barrel is keyed to the shaft. The gear is driven by a small pinion on a belt pulley shaft. At the other end of the belt pulley shaft is a tight-and-loose pulley. A solid pulley may be used if the engine has a clutch. The cement is put into the barrel through a trap door on the side. The door may be made of a piece of boiler plate and fastened by a hasp and two strong staples. The edges of the opening in the barrel should be strongly bound with strap iron. Diagonal cleats on the inside of the barrel aid the mixing. The cleats should run alternately right and left. The boxing for the axle and shaft, also the shafting, may be obtained from a dealer in machinery or hardware. Gear the out-

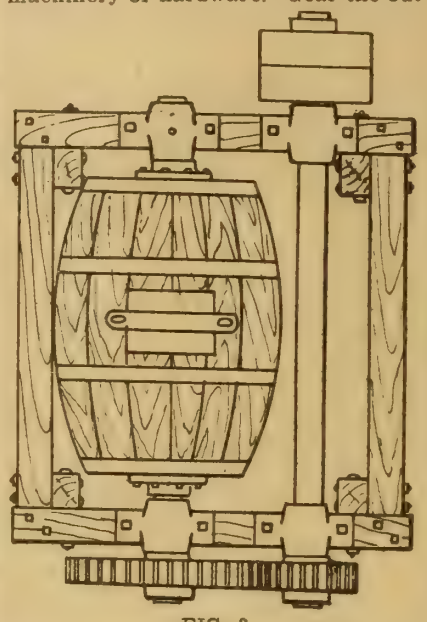


FIG. 2.

fit so that the barrel revolves about thirty times per minute.

The piers should be all right to support the tank if they rest on solid ground. We would advise you to make your piers one foot square and place them not over four feet apart. The cement should be re-enforced with iron rods or wire.

Size of Motor for Pumping.

How large a motor would be required to operate a compression tank pump? The pump has a capacity of 700 gallons per hour. The water is pumped to fifty pounds pressure. The pump is equipped with a twelve-inch pulley that runs 125 R. P. M. Will it be necessary to install a line shaft or will it operate direct from the motor?

Answer.—A one-half horse power motor would be suitable for the above pump under ordinary conditions. If the water is lifted or forced to a considerable height and the pump used continuously a somewhat larger motor might be advisable. No line shaft would be required unless you wish to use the motor to run other machinery.

Distilling Water.

I would like to know how to distill water. Is rain water all right to use in storage batteries? How is the water put into the storage cells?

Answer.—Apparatus for distilling water in small quantities may be made from a copper teakettle having all the openings stopped and a piece of quarter-inch copper tubing soldered into the top. The tubing should be about four feet long and bent to form a coil. When in use immerse the coil in cold water to condense the steam.

Clear, fresh rain water may be used in mixing the electrolyte of a storage battery. It is best to test the electrolyte with a hydrometer. It should test about 1.3 when the battery is fully charged. If it tests more than this water may be added to replace the electrolyte that has evaporated. To fill the cells unscrew the vent hole plugs and pour the electrolyte in, using a glass funnel.

Steam Engine Horse Power.

What is the correct method of estimating the horse power of a steam engine? Should a boiler be left full or empty when not in use?

Answer.—The horse power of any engine is equal to

$$\frac{PLAN}{33000}$$

in which P=average pressure in pounds per square inch on the piston, L=length of stroke in feet, A= piston head area in square inches and N= the number of power strokes. For a steam engine, P, the average pressure, is best obtained from an indicator card. It may be roughly estimated as 60 per cent of the boiler pressure. L is the cross head travel in feet. To find A multiply the diameter of the piston by itself and multiply the result by .7854. For a steam engine N =twice the R. P. M. Multiplying the average pressure by the length of stroke by the piston area and by twice the number of revolutions per minute and dividing by 33000 gives the steam engine horse power.

When standing idle the boiler should be drained and the handhole covers removed, so that the air can get at the tubes. The air tends to loosen the scale. Before closing the hand holes, wash the boiler out and remove the scale that has fallen to the bottom.

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Money in Turkeys.

For those who are favorably situated for raising turkeys, a more profitable side line can hardly be found. Given plenty of range where the turkeys can find grasshoppers and other insects, green vegetation, the seeds of weeds and grasses, waste grain, acorns and nuts of various kinds, the cost of raising them is very small and the profits large. Grain and stock farms are particularly well adapted to turkey raising, and it is on such farms that most of the turkeys are found. Little has ever been done in the way of raising turkeys in confinement, and where it has been tried the results have been discouraging. Plenty of range is essential to success in turkey raising.

In selecting turkeys for breeding the most important factors to be considered are vigor, size, shape, bone, early maturity and color of plumage. The body should be deep and wide, the back broad, and the breast round and full. The head should be of good size and of a clean, healthy appearance. A strong, well-made skeleton is shown by thick, sturdy shanks and straight, strong toes. It should be the aim of every turkey raiser to have a flock of pure-bred turkeys, even though they are sold at market prices. The male at the head of the flock should by all means be a pure bred of the best type obtainable. The male is one-half the entire flock, and by continually selecting the best females of a similar type and mating these with a pure-bred male one can soon have a flock of uniformly large, early-maturing, strong-boned, long and deep-bodied turkeys of the same color.

Fifteen turkey hens can safely be mated to a vigorous tom. If twenty-five or thirty hens are kept, two toms should not be allowed to run with them at the same time, but one should be confined one day and the other the next. When two toms are allowed to run together during the mating season they fight badly, and the stronger does practically all of the mating.

Turkey hens are wont to "steal" their nests in hidden places, such as a patch of weeds, tall grass or thick brush, and often wander a half mile or more from home before they find locations that suit them. To find these stolen nests often proves to be a long and tedious task, the usual method being to follow each turkey hen as she separates from the flock and starts toward her nest, care being taken that she does not know she is being followed. A much easier and quicker method than this is to confine the hens early some morning soon after they have come down from roost and let them out late in the afternoon. Those that are laying will then head for their nests in order to lay the eggs they have been holding.

If many turkeys are kept the use of a breeding pen will be found a great convenience. This pen should cover a sufficient area to allow the turkeys some exercise, an acre for fifteen birds being none too large. A hog-tight wire fence three feet high will hold most turkeys, and if any persist in flying out, the flight feathers of one wing should be clipped. Nests should be scattered about the pen, those which turkey hens take to most readily being barrels turned on their sides and nests shaped in them with straw.

Turkey hens, chicken hens and incubators are commonly used to incubate turkey eggs. During the early part of the laying season it often happens that one has on hand a number of eggs that should be incubated before any of the turkey hens are through laying their first litter and become "broody." In such case and also when it is desired that the turkey hens lay more than one litter, some of the eggs have to be incubated under chicken hens or in an incubator. About a week before the poults are due to hatch, turkey hens enough should be allowed to sit to take all the poults hatched. They can be given a few eggs from the incubator or from under the chicken hens and allowed to hatch the poults themselves, or at night a newly-hatched poult can be slipped under each turkey hen that is to be given a brood of poults, and by morning she will be glad to take them.

Lice are a great annoyance to sitting hens, and are one of the worst enemies of young poults. To prevent their getting a foothold, dust the hen thoroughly with some good lice powder before she is placed on the nest and once a week thereafter while she is sitting. The nesting material should be kept clean, and if the eggs become dirty they should be washed with lukewarm water.

If the weather is warm and dry no shelter is required, as the poults do better in the open. Should it be rainy, however, they need to be protected, for nothing is more injurious than for them to become wet and chilled. The most satisfactory plan is to confine the mother turkey hen to a coop and allow the poults to run in and out whenever the rain does not prevent. This coop should be placed in a field where they can run out and find grasshoppers, green vegetation and other feed. The coop should be moved to fresh ground every day. Improper feeding and close confinement, has been the cause of many failures in turkey raising. Given free range on the average farm, the poults can easily pick up their own living, and one light feed a day for the purpose of inducing them to come in at night is sufficient. If the mother hen is confined to a coop and the poults allowed to run in and out three times a day is often enough to feed and very little should be given at a time. The poults should always be ready to eat; if given all they will clean up several times a day, indigestion will be the result. If there is little or no feed outside the coop for the poults to pick up, then they should be fed about five times a day, feeding only a small quantity at a time. A good feed for the first few days is stale bread soaked in milk and squeezed dry. Corn bread crumbs and clabbered milk of cottage cheese is also quite often fed and with excellent results. Green feed and grit should be on hand at all times. As the polts grow older the ration should gradually be changed to grain.

A PRIZE ORPINGTON.

This White Orpington cockerel won first prize at the Greater Chicago Show, 1916. This cockerel was bred and is owned by Mrs. Louis Montague, Ottumwa, Iowa.

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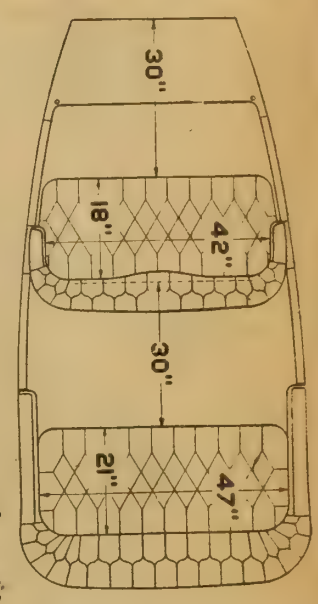

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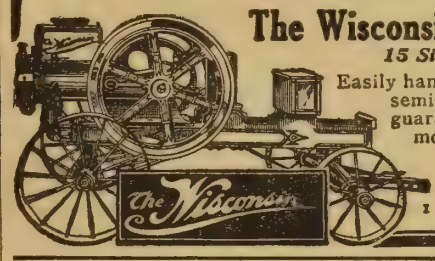

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Farmers' Institute For Indians.

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TELL your friends among the white farmers that we are trying hard to improve our conditions and learn better agriculture. We know that the best things we possess are locked up in the soil of our reservation and we wish to thank you for bringing us the key to our own gold mine."

Thus Reginald Oshkosh, grandson of the famous Menominee chief after whom the "metropolis of Lake Winnebago" is named, responded to the efforts of the extension department, college of agriculture, which held a four-day farmers' course at the Keshena Indian Agency last month.

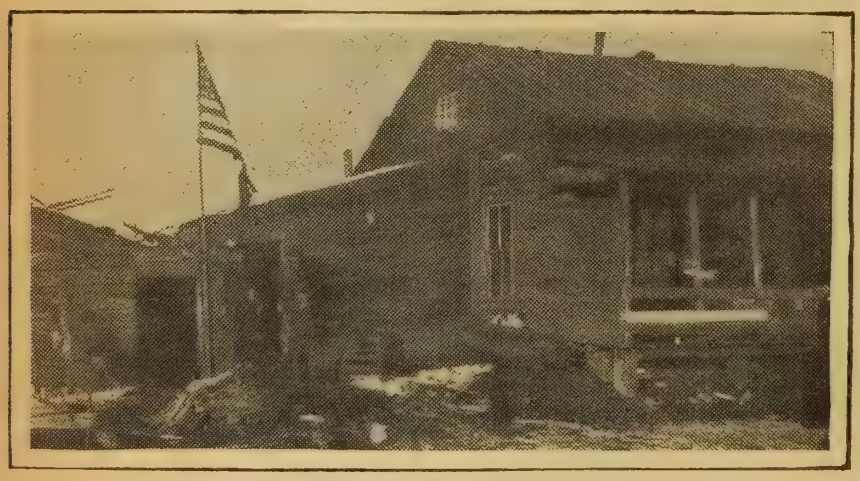
MENOMINEE INDIAN OF YESTERDAY AND TODAY.

These four days, packed full of excitement for the isolated inhabitants of the Menominee reservation in Shawano county, undoubtedly fulfilled a long-felt want and did much to promote friendship and understanding between the white "medicine men" from the state farm school at Madison and the reservation people. If it accomplished nothing more the four days' work has been successful.

Distrust and suspicion, so much a natural part of the Indian's outlook upon life in general ever since the discovery of the New World, still present themselves as obstacles to progressive agriculture on all Indian reservations. Menominee is no exception. When the first petitions were started for the holding of the farmers' course at Keshena many of the red brothers sullenly refused to sign, many of them thinking of former treaty rights which had gone a-glimmering in the flourish of a pen, or tribal funds embezzled through defraudulent schemes, cloaked in attractive form.

But now things are different here at least. The "wise ones" have come and gone, leaving behind vivid memories of plain, honest talk about taking care of cattle and horses, plowing and cultivating corn and potatoes, raising clover for hay and manuring crops—all delightfully blended with pretty colored pictures thrown upon a big white cloth, showing the best of the white man's live stock and farm crops, easily within the possibility of ambitious Indian husbandry if properly applied.

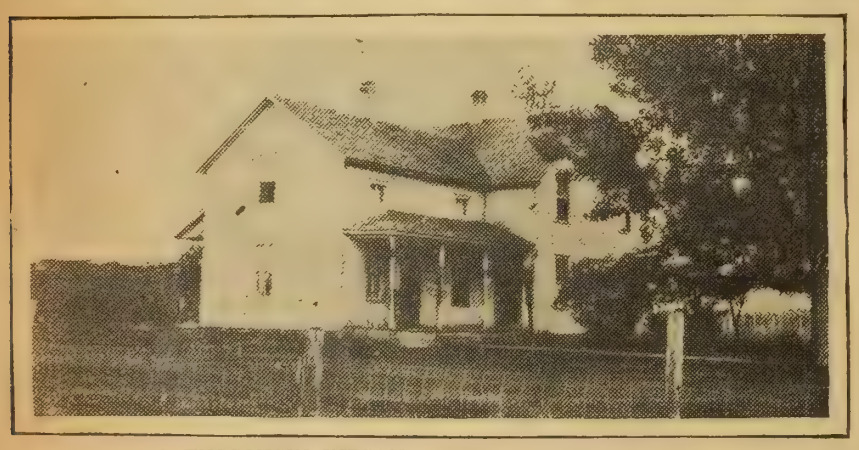
The men sent by the college of agriculture, J. R. Danks and J. F. Wojta, restricted their conversation to the simplest terms. Not once did "phosphorus," "legumes," "lactation," "nodules" or "acidity" pass their lips. It wouldn't do, and further, it proved good practice, this speaking strongly and plainly in Anglo-Saxon, so that every Indian farmer might understand.



OLD TYPE WISCONSIN INDIAN FARM HOME.

For 20 per cent of the audience an interpreter was needed, which made the work rather slow. Driving truths home by repetition was resorted to as the best means of doing good. As nearly all of the people could understand Menominee, hearing the same subjects twice, first in English and later by translation, served to emphasize the points involved.

Through the co-operation of the Indian service the meetings were held in the assembly hall of the government school, which was dismissed part of each day so that all students might attend the sessions. Board and room for the instructors from the college of agriculture, as well as transportation between the agency and Shawano, were supplied by the reservation officials, A. S. Nicholson, superintendent, and H. P. Marble, assistant superintendent.



A WISCONSIN INDIAN FARM HOME OF TODAY.

Further work on other Indian reservations in Wisconsin will undoubtedly result. Cato M. Sells, commissioner of Indian affairs, realizes that in scientific farming the Indian must seek independence.

Further work of this same kind may be carried out on other Indian reservations in Wisconsin next winter. Cato M. Sells, commissioner of Indian affairs, realizes that the Indian must seek his best livelihood in farming and mechanics. In these branches the Indian naturally excels, providing he can overcome an inborn tendency to take life easy.

It is not because the Menominee Indians are poor, as a tribe, that they need help. Their tribal treasury is well filled. On the contrary, there is need for teaching them to create new capital of their own by their own individual work, rather than to "odd-job it" intermittently and wait for pay day.

New houses of a modern type and large barns well equipped are fast going up on the village sites of other days, where the wigwam smoke curled aloft. And wonder of wonders! The new generation of young men look with disgust upon the old men sleeping near the fire while their aged wives split wood and carry water for the noon-day meal.

On the Menominee reservation there are 205 farmers, with 6,040 acres fenced and 3,012 acres under the plow. The total population of the reservation is 1,750, many of whom are engaged in lumbering at Neopit on the Indian timber lands, or working in the sawmill operated by the government there.

In 1915 the corn crop was a failure, 427 acres yielding about 1,800 bushels. Other records for the past season follow: Hay, 722 acres, 990 tons; oats, 422 acres, 10,814 bushels; wheat, twenty-two acres, 390 bushels; rye, sixty-two acres, 737 bushels; buckwheat, forty-five acres, 356 bushels; potatoes, 362 acres, 12,081 bushels.

About 360 ponies, 156 horses, 130 dairy cows, 520 hogs and a score of sheep constitute the domestic animal census. A number of pure-bred cattle are maintained at the government school at Keshena.

For a Good Corn Yield

International and C B & Q Planters

WHAT makes a good corn yield? Well, here is what a veteran corn grower says on this point: "Even planting of tested seed at the right depth, the same number of kernels in each hill, will do more to increase the corn crop on most any sort of soil than anything else that could be done."

For this—nothing is better than an **International** or **C B & Q** corn planter, machines that have been building up good names for themselves for years. They have a very simple variable drop, by means of which 2, 3 or 4 kernels can be planted in every hill. They also have a foot drop which enables the driver to space accurately the rows at the ends of the field. Another simple change, and they drill the seed in at distances ranging from 6 to 32½ inches, and they last because they are made of steel.

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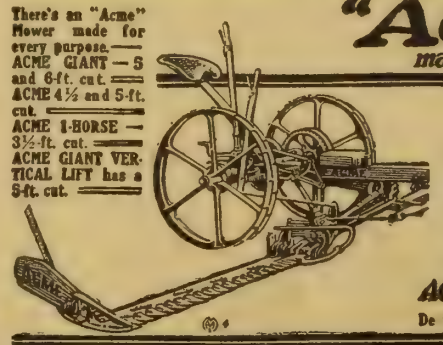

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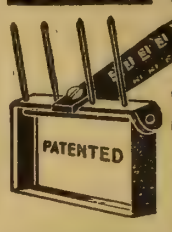

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When writing mention this paper.

DAIRY

New Richmond Completes Year of Test.

The New Richmond (St. Croix county) Cow-Testing Association has just finished a year of testing under the direction of Ivor Jones, tester. Mr. Jones has now taken up official testing and an effort is being made to recognize the New Richmond association.

The records of the association for the year show conclusively that it pays to keep good cows; that it pays to test them and that it pays to feed them well. The best three cows in the association made a profit of $313.23, while the poorest three made a profit of only $15.14. In other words, the men who milked these three poor cows received about an average of $5 for caring for each cow for 365 days. It would take thirty-nine like the poorest to make the profit earned by the best cow and 113 cows like the poorest to produce as much as the best three cows. These records for the year are:

POOR COWS.

Milk	Fat	Ret.	Feed	Profit
2,190	87.7	$28.09	$25.00	$ 3.09
2,678	109.6	34.25	25.00	9.25
2,790	95.0	30.54	27.18	2.76
7,658	292.3	$92.88	$77.78	$15.14

GOOD COWS.

Milk	Fat	Ret.	Feed	Profit
14,034	460.1	$168.89	$59.10	$109.79
11,166	426.2	143.73	41.98	101.75
10,512	410.6	143.90	42.21	101.69
35,721	1,296.9	$456.52	$143.29	$313.23

In speaking of the year's work Mr. Jones writes:

There were 386 cows that finished the year's record. There were eighty-three cows sold. Most of them brought good prices, and what brought the good prices was the records that they made.

Cows in the future are going to be sold, not so much by the individual, but by the records they make and the breeding back of them.

Other cows were sold, and they, too, were sold on their records. They were sold as canners because their records proved them to be unprofitable as milk and butter fat producers.

What the farmers are doing and ought to continue to do is to get good foundation stock.

Pure-bred sires are the most essential thing, and then breed up into good grades.

In this connection let us ask ourselves: What are we doing in Wisconsin and what is our aim? Our aim is to improve our live stock, to produce better dairy products, for more cleanliness all along the line. We want Wisconsin to be the leading dairy state of the Union. It can and should be. How are we going to accomplish this? First, by carefully weeding out all the unprofitable stock, and, second, by breeding into higher grade stock. How is this to be done? By the cow-testing association. More can be done along the line of extension work by the cow-testing associations than in any other way, first, by the definite records thus obtained; second, by better breeding and better feeding; third, by the power of example by the results obtained. Therefore, every good, loyal, progressive dairyman will encourage this testing association work in every way.

The testers cannot do the work alone. They need and must have the help and co-operation of the farmers. The farmers should show their interest in this work in every way, and by their interest they will encourage the testers and further the movement.

Cow-testing associations are going to be needed more and more, and as the years go by are going to be bigger factors in dairying success than ever before, and more are going to be organized in Wisconsin.

Many of the "boarders" now in existence that lower Wisconsin's butter fat average are going to the butcher's block. Of course, this is going to be hard in some cases, for not infrequently these "boarders" are pets of the old folks as well as the children, and they will not want her sold even if she is a "boarder." But why not transfer their affections and make that pet a good, profit-producing cow and thus encourage the children to take an interest in better feeding and better care?

The record shows that forty-four, or less than 12 per cent, of the cows that finished a year's work produced more than 300 pounds of butter fat. It is significant that the cow that produced the most fat and made the most profit consumed the most feed as indicated by the following report of the 300-pounders for the year:

Owner	Lbs. fat	Gross returns	Cost of feed	Profit
Wm. Wilen	388.2	$102.47	$31.71	$70.76
Wm. Albert	325.7	107.70	40.80	66.90
	326.9	114.12	40.80	73.32
	372.5	135.02	40.80	94.22
Schnell Bros.	315.2	100.84	34.92	65.92
A. Buettner	359.2	120.83	36.34	83.49
	300.8	101.48	30.25	71.13
Henry Bernd	300.3	110.58	49.06	61.52
	409.0	147.10	49.42	97.68
	370.7	133.06	41.22	91.84
	312.4	115.43	44.32	71.71
	392.1	139.99	41.22	98.77
	350.8	125.92	41.22	83.70
W. E. Bennett	339.8	113.84	57.87	55.97
Arnquist & Sons	384.1	135.83	40.09	94.84
G. Lewerenze	319.7	121.13	33.07	88.06
H. Wieland	327.0	119.61	45.76	73.85
	319.6	108.39	38.34	70.05
N. R. Hemenway	308.4	107.01	33.52	73.49
	332.4	116.53	33.52	83.01
	310.7	109.19	33.52	75.67
Chas. Sette	326.3	117.31	42.23	75.08
A. C. Kruschke	318.1	115.38	51.15	64.23
	460.1	168.89	59.10	109.79
	400.0	146.97	58.40	88.57
Chas. Albert	301.5	104.82	43.88	61.94
F. Wieland, Sr.	329.9	113.53	32.65	80.88
	333.6	124.78	39.00	85.78
	308.1	114.92	30.99	75.92
W. W. Silver	300.0	105.78	37.11	68.67
G. H. Kruschke	327.2	114.22	45.17	69.05
	302.2	106.52	40.35	66.17
	410.6	143.90	42.21	101.69
	338.7	119.96	40.53	79.43
	317.9	112.19	45.64	66.55
	301.5	100.25	41.03	59.22
	387.6	125.66	38.53	87.13
Bernd & Poston	315.2	103.21	40.91	63.30
	300.0	109.60	44.21	65.39
	426.2	143.73	41.98	101.75
O. C. Kruger	343.1	116.02	37.55	78.47
T. W. Cook	316.4	102.18	31.79	70.39
G. Rennick	312.9	101.20	24.22	76.98
P. Tollefson	317.3	113.13	34.08	79.05
	312.9	111.06	34.08	76.98

Marathon County Report.

The following is the report of the Stratford, Marathon county, Wisconsin, Cow-Testing Association for the month of February, 1916. Francis Woodward, official tester, writes us that the report is brief compared to many others which have been published in The Wisconsin Farmer, but he hopes to have more cows and more owners in the list next season:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Chrowser Bros.					
No. 3, R. H.	6	5-11-15	1579	3.5	55.3
No. 15, G. H.	4	24-11-15	1142	4.4	50.2
No. 8, G. H.	4	14-12-15	1312.4	3.6	47.2
Jacob Spindler					
Lillie, N.	8	21-1-16	1190	3.7	44.0
Nellie, N.	8	20-11-15	1070	4.1	43.9
Arnold Baesemann					
No. 8, G. G.	5	4-11-15	808	5.0	40.4
Chrowser Bros.					
No. 0, G. H.	4	6-12-15	1181	3.4	40.2
No. 25, G. H.	2	23-10-15	931.1	3.7	34.4
No. 22, G. H.	2	6-11-15	1082.5	3.1	34.0

Garrett Hughes, President.
James L. Chrowser, Secretary.
Francis J. Woodward, Official Tester.

Winnebago Report.

The March report of the Winnebago Cow-Testing Association, furnished by Archibald House, tester, shows sixty-seven cows in the forty-pound list. Mr. House reports that the milk flow is not so heavy but that there is a gain in butter fat. Every member of this association has a silo and is getting splendid results from a balanced ration. The report follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent fat	Pounds B. fat
Tenant Bros.					
Bertie Fisher, P. B. J.	10	12-11	852	5.0	42.6
Zella, G. J.	6	1-15	933	5.9	55.0
Bernice, P. B. J.	6	2-9	921	5.0	46.1
Kate, G. J.	5	11-5	864	5.4	46.7
Annie, G. J.	3	1-3	885	5.8	51.3
Hattie, G. J.	6	12-15	918	5.2	47.7
Ed Race					
No. 1, G. H.			1464	2.8	41.0
Levi Brunson					
Lady Calidor, P. B. J.	13	1-26	822	5.8	47.1
Kate, G. J.	6	1-18	978	5.2	50.9
Topsy, G. J.	10	12-1	717	6.0	43.0
Blue Bell, P. B. J.	4	3-6	915	5.2	49.5
Satchy, P. B. J.	5	10-27	738	5.6	41.3
Susie, G. J.	5	3-2	945	4.4	41.6
C. H. Slayton					
Finn Dell, G. G.	5	12-6	813	5.0	40.7
Dolly, G. G.	5	2-20	1017	4.0	40.7
Sequel, G. G.	4	2-22	1098	4.6	50.5
Ray Ward					
Tiny, G. G.	2	2-1	1110	4.0	44.4
Lilly, G. G.	4	10-16	777	5.2	40.4
Reddie, G. R. P.	8	1-21	1089	3.8	41.4
Frank Barnett					
Brin, G. J.	7	11-8	792	5.2	41.2
Maid, G. J.	7	12-20	816	6.4	52.2
Last, G. R. P.	12	1-10	894	4.7	42.0
Stubb, G. J.	6	1-1	915	4.4	40.3
N. A. Rasmussen					
Bo Peep, G. G.	5	12-10	846	4.7	43.8
Beauty, G. G.	7	12-9	852	4.8	40.9
G. E. Washburn					
Rose of Algonna, P. B. J.	15	2-22	1023	5.2	53.2
Spot, G. J.	6	10-20	735	6.1	44.8
Hoppie, G. G.	8	12-26	975	4.4	42.9
Susie, P. B. J.	5	12-26	918	4.8	44.1
J. J. Ihrig					
Delight, P. B. J.	4	12-8	739	5.8	42.9
Chas. Ruelke					
Dolly, G. G.	7	12-20	1170	5.0	58.5
T. A. Farrow					
Lulu, G. G.	11	1-22	1002	4.2	42.1
Caroline, G. G.	13	10-12	639	6.4	40.9
Hazel, G. G.	5	2-29	888	5.7	50.6
Milton Mackie					
Silver, G. G.	6	12-16	1029	6.0	61.7
Baird, G. H.	8	12-18	918	5.9	54.2
Betsy, G. D.	10	12-17	1098	4.2	46.1
Butterfly, G. G.	7	1-27	1002	4.3	43.1
Ed Mackie					
Queen, G. G.	9	2-3	1227	3.8	46.6
Spot, G. G.	6	1-4	909	4.4	40.0
Many, G. G.	7	10-22	828	5.4	44.7
Eva of Mackiwy, N.	8	11-9	960	4.2	40.3
Daisy, G. G.	8	10-24	804	5.4	43.4
Dolly, N.	10	12-22	993	4.2	41.7
Oren Miller					
No. 15, G. J.	7	10-15	804	5.0	40.2
No. 22, G. J.	4	1-19	849	4.9	41.6
J. F. Shea					
Esther, N.		3-15	1147	4.2	48.3
M. L. De Voin					
Daisy, P. B. H.	7	12-31	1720	3.5	60.2
Gravy, G. H.	8	11-6	1055	3.8	40.1
Quick, G. H.	8	11-8	1439	3.3	42.5
Kate, G. H.	3	1-21	1443	3.1	44.7
Neta, G. H.	5	3-26	1320	3.8	50.2
Babe, P. B. H.	5	3-21	1530	3.6	55.1
H. R. Mosely					
Kate, G. G.	4	2-22	1003	4.3	43.1
Heirmone, P. B. G.	3	1-28	750	5.7	42.8
Delma, P. B. G.	6	8-20	644	8.3	53.5
Lillie, G. G.	3	1-30	764	8.8	67.2
Daisy, G. G.	8	11-7	864	5.2	44.9
Molly, G. G.	3	3-10	780	5.4	42.1
Carrie, G. G.		3-17	1200	5.4	64.8
Rosy, G. G.		2-5	907	6.2	56.2
M. A. Nolph					
Belle, G. D.		3-11	1290	3.2	41.3
Buffalo, G. D.		2-12	1140	4.4	50.2
Roan, G. D.		2-17	1110	3.8	42.2
June, G. D.		2-22	960	4.8	46.1
Jersey, G. J.		2-21	840	4.8	40.3
W. P. Bussey					
No. 2, G. J.	5	3-1	960	5.0	48.0

Archibald R. House, Official Tester.

Holstein Breeders Meet.

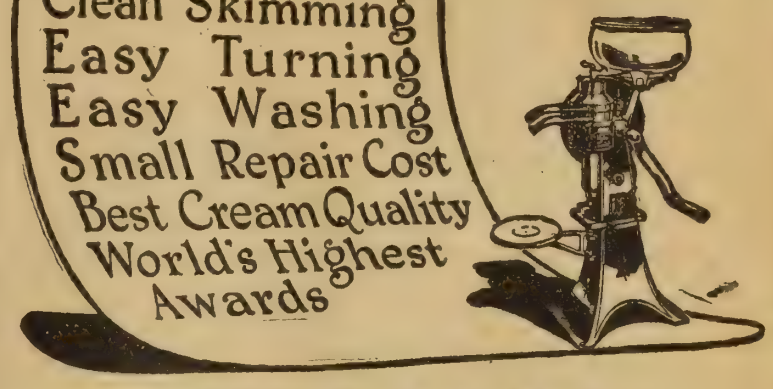
The Lake Superior Holstein Breeders' Association held its annual meeting at the city hall in Ashland, Thursday, April 6th. In order to further promote the Holstein breed in that locality $15 was appropriated to be used for prizes at the Ashland County Fair, for children under fourteen years of age residing within Ashland, Bayfield, Douglas, Sawyer or Iron counties, for the best essay on the Holstein cow. First prize, $2; second prize, $1.50; third and fourth prize, $1 each.

Being desirous for better cared for animals and as an inducement for such training, prizes will be offered at the Ashland County Fair to children under fourteen years of age showing the best groomed and cared for pure-bred Holstein calf under one year, first prize $2, second prize $1.50, third prize $1. Also for the best groomed and cared for grade Holstein calf under one year, $2, second prize $1.50, third prize $1.

A committee was appointed to secure six useful articles to be contributed by merchants, same to be arranged by the committee into two sets of prizes, first, second and third, and given at the fair as follows: To anyone showing the best groomed and cared for registered Holstein cow; to anyone showing the best groomed and cared for grade Holstein cow.

The Lake Superior Holstein Breeders' Association have worked out a plan to aid its members in buying and selling pure-bred and grade Holstein cattle. Each member having animals for sale lists them with the secretary, giving description and price, and those who are in the market for Holstein cattle file such information with the secretary.

This places the buyer and seller in touch with each other. The present



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It has always been recognized as the closest skimming cream separator. That's the main reason why 98% of the world's creameries use it to the exclusion of all others.

Because of its cleaner skimming, ease of operation and wonderful durability, every De Laval user is a "booster" and the better its work is known in a neighborhood the more popular it becomes.

The better quality of cream it produces is attested by the fact that De Laval produced cream and butter have scored highest at every annual contest of the National Buttermakers' Association for twenty-four years and in every great representative contest for over thirty years. Last but not least, the De Laval was awarded the Grand Prize at the San Francisco Exposition in 1915 as at every other great exposition since its invention.

The creamerymen's choice can't be far wrong. The world's greatest dairymen and mechanical experts who act as judges at the great expositions can be depended upon to recognize real merit, and the fact that the De Laval is the choice of the majority of all cream separator buyers must mean a good deal to you. In your purchase of a cream separator can you afford to ignore these considerations?

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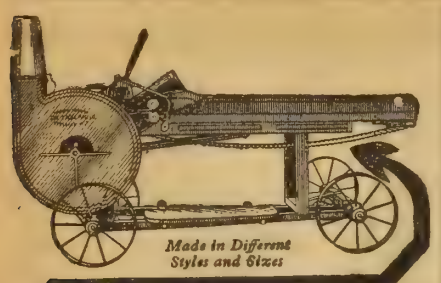

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are simple, durable, light running machines. The deep-grooved and non-winding spike rolls give far greater feeding possibilities than any other cutter. **Reverse lever permits instant stopping and reversing.** They are machines with easy running, durable, positive-drive blowers that will not clog. *Get catalog at once showing other special features.* 26

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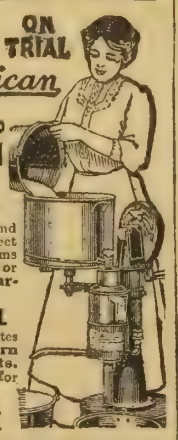

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list shows only registered male calves for sale and no cows or heifers. There are several applications to purchase on file. The following officers were elected for the ensuing year: A. N. Newell, Butternut, president; D. W. Emerson, Ashland, secretary; Edward Carlson, Ashland, treasurer.

Testing Associations and Milking Machines.

To the Editor:—I have been working hard to get a cow-testing association started in this county and I find the double unit milking machine with an undivided bucket quite a setback and it is keeping many farmers from entering their herds. Most of the dairymen having milking machines use the undivided bucket. It seems to me very foolish for any dairyman to install a double unit milking machine with a single bucket. If there are two cows standing side by side, one giving twelve pounds with a low test and the other giving twenty-five pounds with a high test, there is no way for these dairymen to know what their cows are doing. The cows are milked in the same bucket and thirty-seven pounds in a bucket seems a good lot, but the poor cow gets as much credit as the good cow.

I think this matter should be given more attention and I, for one, would like to see some good articles in your paper on milking machines. We are not using a milking machine, but we are weighing our milk morning and evening and it is surprising what a difference there is between two cows. Though there is a difference of only three or four pounds at a milking it makes quite a difference in a month's milk. Now I will be looking for articles in your paper on this subject.

Brown Co., Wis. B. H. Diny.

Dealing With Young Cows.

To the Editor:—Young cows do not always get the fair treatment they ought to have as members of the farm dairy. If they do not in the first few years of their lives prove good, or even extra-good cows, they are quite likely to be condemned and sent away, whereas if their owners had done just the fair thing by them and had a little more patience with them they would have developed into very choice cows.

It is held by a great many farmers that the fourth year of a heifer's life she is apt to be the poorest she ever will be. Just where that belief came from or what warrant there is for it is more than I ever knew. I have watched my own heifers and so far as I could see the fourth year was not less worthy than the third or the second. As a matter of fact, there ought to be steady progress year after year until the cow reaches the climax of her accomplishments. Then we may expect a deterioration.

For a moment let us see what is the right thing to do by a young cow, so that she may soon reach the very best possible attainments. In the first place, she ought to be where she is all the time free in mind—if a cow has a mind—and comfortable in body. By that I mean that she should not be bossed around or abused by other members of the herd or by anybody else. I do not know how it is, but a sense of comfort and freedom from fear are necessary to the best work on the part of a cow, young or old.

And then, we need to remember that the young cow is still growing. She needs, and must have, to reach her best in size as well as in milk-producing qualities, feed which will favor growth all round. From a calf up the dairy cow should be fed for dairy business. It is not best to feed so that there shall be an excess of fat. We should aim, rather, at a large body, good-sized bones and fine muscular development. That is why skim milk is better than full milk, especially after the first few weeks. Other feeds that tend in the same direction are wheat feed, wheat middlings, oats, some linseed meal and a liberal amount of hay as soon as the calf will take it.

This generous diet should be kept up right along as the young cow grows older. Fine, clean hay, timothy and clover mixed, good ensilage and some roots, with not too large rations of ground oats, wheat bran, middlings and some gluten, with corn meal if the flesh is not what it is desired that it should be.

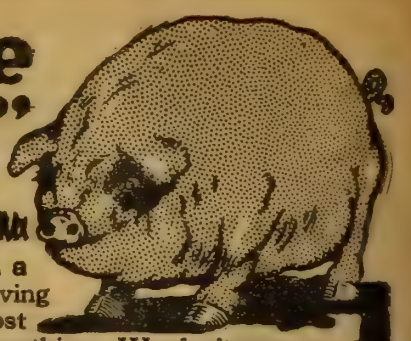
After the first calf is born is a critical time with the heifer. Then she needs extra-good care. Not only should the feed be such as to promote growth but to maintain the body against the drain of producing milk. At this period of her life corn meal may be fed in somewhat larger quantities than formerly. There are heifers that are inclined to "milk their flesh off," that is, to turn the feed given them more to milk than to flesh. Corn meal is particularly good where this is the case.

This plan of feeding, with good, kind care and stabling in winter, alternating with comfort out in the pasture in summer, will bring out the best there is in a cow. But we are not to expect her to be an old cow when she is only a young heifer. It takes time to develop any kind of a farm animal. A Reader.

Care of a Cow's Udder.

To the Editor:—It is a calamity to have anything happen to a cow's bag. Before now we have paid a great deal of attention to the breeding, feeding and growth of a certain cow, only to have it all upset and undone by some accident to the udder. After that happens little is to be done but to turn the cow off, for practically noth-

"What's Time To A Hog?"



That's what a fellow said when a stranger suggested a way of saving time in fattening his hogs. To most of us, our *own* time is worth something. We don't want to waste it doing unnecessary work—especially work we have to do 365 days in the year, like washing the cream separator bowl.

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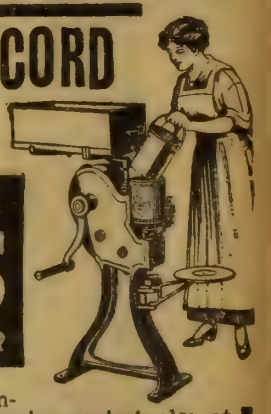

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ing can be done for many injuries that come to this most delicate organ.

These difficulties arise from having the udder or one of the teats stepped on by a cow standing next to the sufferer; or they are due to injuries received while fighting; or in far too many cases some man who ought to know better strikes or kicks the cow in this exceedingly tender place and the trouble is one that cannot be overcome. I have known cows to be very seriously hurt in the bag by being hit with a stone thrown by the boy or man who was sent after the herd. Here, too, the injury is one that can rarely be remedied.

For this reason and others which need not be spoken of here it stands us in hand to see to it that every possible attention be given the udder of all cows. Many times men and boys do not realize what they are doing when they kick or strike the teats or upper part of the cow's bag. Whenever a new man comes into the barn to help about the milking he ought to be given clear instructions on this point, particularly if it develops that he is not inclined to be kind to animals. Young folks are especially apt to be thoughtless in this respect. They do not understand why the udder is not as tough as any other part of the body, when the fact is it is a great mass of tissue, with an intricate system of canals or ducts, all abundantly supplied with blood vessels, nerves and lymphatics. These may be easily obstructed or otherwise permanently injured. It is a thing to be startled at to see a single drop of blood coming from the udder of a cow, for it is a prophecy of the failure of the cow.

To my mind the box stall is the ideal way of stabling the cow. I hope to live to see the day when every cow will have her own roomy place to stay while in the barn. This will obviate many a serious injury of the udder from neighboring cows, as well as work to the comfort and advantage of the animal in many other ways.

There are some diseases, too, which affect the udder unfavorably. Some of these we can keep off, others it is not so easy to escape, but every possible pains ought to be taken to keep clear of mammitis, or garget and inflammation of the udder, as this trouble is sometimes called, as well as all other infections of the mammary gland. Even going too long without milking, so that the bag is terribly distended, is a bad thing and ought to be guarded against in all possible ways.

But the one great source of danger, that which comes from harsh and unkind treatment, never ought to be permitted in any dairy. We have hard things enough to bear that cannot be obviated without bringing any such thing on ourselves. E. L. Vincent.

Giving the Calf a Good Start.

To the Editor:—To raise a good dairy calf by hand is a particular job. In the first place let us notice the calf helping itself to its mother's milk. It takes a little at a time, but takes it often, thus allowing the juices of the stomach to become thoroughly mixed with the milk. Then when satisfied it lies down and remains quiet. But the poor calf that must eat out of a pail is expected, nay forced in some cases, to put its head in the pail and keep it there till the bottom is reached, and the quicker the better, so some of us think. Then many times it is hustled around and kept moving so it will forget to suck some other calf's ears. When I first started in to raise calves I did that very thing, never stopping to consider the result, but after some dismal failures I started in to do better, and with much more success.

The great danger in feeding calves, no matter how or what we feed, is in overfeeding. Don't do it. It is much better to err by feeding too little, as that can be easily remedied, but the calf that suffers a bad attack of scours will be a long time in catching up. As soon as the signs of scours are detected, however, which many times are noticeable by the odor before anything wrong would otherwise be noticed, the thing to do is to cut down on the feed sharply, both milk and grain. It is important, too, to see that the pen is clean and dry, as a damp, ill-smelling pen often causes trouble when all else is right. I have succeeded best when using the following method: The calf is allowed to stay with the cow until the ninth milking. The cow is milked at the regular time, all the milk being taken that the calf leaves. Many cows give much more milk than their calf can take. Also the cow, especially if she is young, becomes accustomed to having her udder handled and relieved and does not fret so much when the calf is taken away.

I once had a little experience that taught me a lot. In this case the calf, a big, strong, hearty youngster, took its milk all right, but insisted on having my fingers to help along, or else it balked right off and vented its displeasure by bunting everything in sight, myself included. Well, it was a good calf and I fussed with it till it was nearly three weeks old. Finally getting disgusted, I turned the milk into a trough that happened to be fastened to the floor of the pen and walked off. I was no sooner out of sight than that miserable calf began drinking like an old cow. It never got any more fingers, but never would it drink while I remained in sight.

But to go back to the feeding subject, the amount of milk should be very slowly increased till the calf is getting what it can manage well. It is not easy to adjust the amount of milk to the needs of a calf. Often one calf will not be getting enough, while another of the same age is receiving too much, even when one is taking as much as the other. So it is just as important to decrease as it is to increase the amount of milk fed. When the calf is two weeks old it will take a little grain in addition to the skim milk, ground oats and bran being good, and these, or whatever grain is used, must be fed sparingly till the calf is five weeks or more old. The amount can then be increased to a fair feed, the size of the feed even then depending on the ability of the calf to make good use of it, but in every case haste should be made slowly. If the grain is carefuly spread over the bottom of a small, shallow box the calf can then only get a little at a time and eat slowly, which is much better for it than if it gulped the feed down quickly. A little alfalfa or clover hay is good for the calf to nibble at between the regular feeds of milk and grain. Periods of regular feeding should be strictly adhered to. Cleanliness in all things and at all times is extremely important in the feeding and management of calves.

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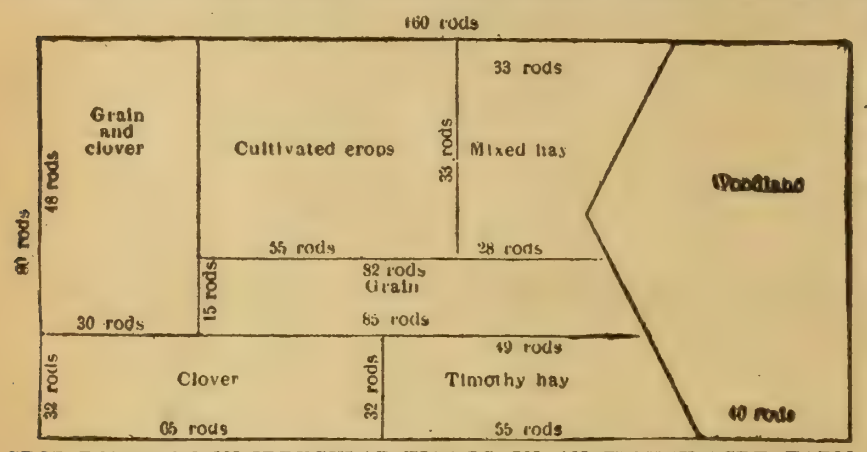
Crop Rotations For Upper Wisconsin.

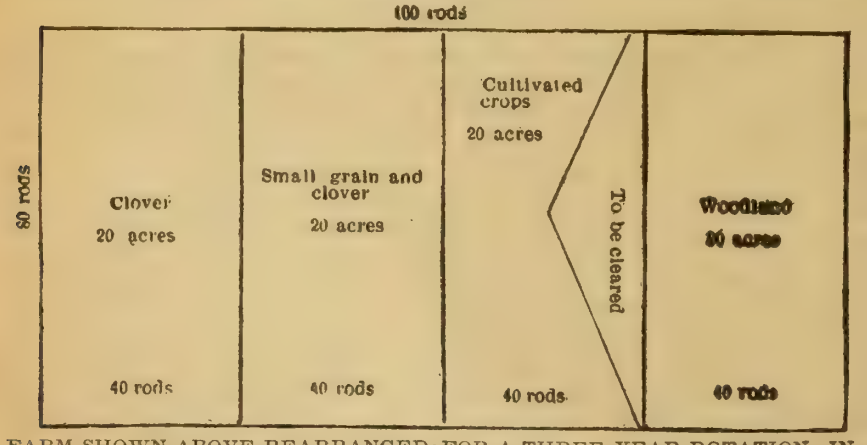
Although a considerable number of farmers of Upper Wisconsin follow some system of crop rotation, the practice is by no means general. Investigation by the Wisconsin experiment station shows that about 40 per cent of the farmers in the upper half of the state follow some form of systematic crop rotation and the interest in rotations has brought about the issuance this month of a bulletin by E. J. Delwiche on "Crop Rotations for Upper Wisconsin." Although the suggested rotations are primarily for Upper Wisconsin, they are just as applicable, in most cases, to any farm in the state. This bulletin fills a long-felt want and



CROP ROTATION ON IRREGULAR FIELDS ON AN EIGHTY-ACRE FARM, NEARLY SIXTY ACRES OF WHICH IS CLEARED.

demand from the farmers, especially the new settlers, and in succeeding issues of The Wisconsin Farmer we will discuss the suggestions for three-year, four-year, five-year rotations; the place of potatoes in rotations, etc. In those countries where agriculture is most advanced and where highest yields to the acre are obtained crops are grown almost invariably in rotation.

Many reasons for practicing some systematic crop rotations may be given. Crop rotation is necessary to maintain the productivity of the land. It is a well-established fact that continuous cropping to a single crop reduces yields which may be due to one or more of several causes. Among



FARM SHOWN ABOVE REARRANGED FOR A THREE-YEAR ROTATION. IN ORDER TO SQUARE UP THE FIELDS A SMALL TRIANGULAR WOODED PIECE HAD TO BE CLEARED.

these are the exhaustion of certain elements or compounds of plant food, the accumulation of poisonous substances in the soil, the appearance of fungous or bacterial diseases and pests, such as the chinch bug, Hessian fly and pea weevil. To a great extent, these may all be controlled by suitable crop rotations. Weeds, which also greatly reduce crop returns, can be checked in the same way. Experiments made both in this country and abroad point conclusively to the necessity of crop rotation to maintain the productivity of the soil.

The value of systematic crop rotation was evident in the results obtained on the substation farms of the state in 1910. The season was abnormally dry, the rainfall being about one-half of the normal average for the Lake Superior section. Nevertheless, the yields of grain and root crops on the substation farms were much above the average for the state. The yield of hay was not so good, being somewhat less than the average. In contrast to this, neighboring farms which had been cropped without due attention to systems of rotation, produced from one-third to one-half of a normal yield.

It is of great importance that in selecting crops to grow on a farm careful consideration be given to the matter of climate. This is practically the only factor which the farmer absolutely cannot control. For while poor soil may be improved, better markets found, better labor secured, or more capital invested, the farmer is powerless to change climatic conditions. He must, therefore, select such crops as are suited to his climate. For example, to attempt to grow a variety or type of corn which would not mature in the season of a given locality is sure to result in failure.

The soil is also a factor of great importance in the selection of a crop rotation. As a general rule, small grain crops do better on heavy than on light soil. The same is also true of grasses grown for hay. On the other hand, the same variety of corn requires a shorter season for maturity on light than on heavy soil. Rather light soils and those of intermediate texture are also better adapted to growing potatoes and root crops. Hence, on such soils a greater acreage should be devoted on hoed crops than on the heavy types.

Shipping and marketing facilities must also be considered in planning a rotation for a given farm. For instance, the farmer located on a sandy loam farm, close to a railway station or a home market, will ordinarily find it profitable to include potatoes in his scheme of crop rotation. If, on the other hand, he is located more than six or seven miles from a station the profits from growing potatoes and other bulky cash crops will be much lessened. It will then pay him better to raise more corn and roots for stock feeding and to convert these crops into dairy products, which are far less bulky and which for the same bulk have much greater value. For example, it will pay to grow clover seed on a heavy clay farm located from ten to fifteen miles from a good shipping point, where, without counting the cost of marketing, wheat, barley, oats, peas or clover seed give approximately equal returns on an acre. A load of clover seed costs no more to haul than a load of these other crops, but it is worth from seven to eight times as much.

The availability of farm labor also has an important bearing upon the selection of a rotation. By following a carefully planned rotation it is possible to distribute the farm work throughout the season much better than can be done with single or two-crop farming. Where sufficient live stock is kept to keep labor employed during the winter it is possible, if the proper rotation is followed, to do the season's work without hiring much transcient help. Lack of a supply of competent labor may make it necessary to adopt a different system of farming than would otherwise be followed. The farmer who is dependent on hired labor must carefully consider the labor factor in planning his rotation.

More capital to the acre must be invested in equipment where a rotation is followed which involves intensive farming methods than where ordinary cash crop farming is practiced. However, the returns on the investment are usually enough greater to fully justify the investment. If a farmer plans to put one-third or one-fourth of his land in corn it will, of course, be necessary for him to provide proper storage and he should plan to make good use of the crop. This means that he must have live stock and that suitable barns should be erected to shelter them. All this requires more capital than would be needed if no live stock were kept.

The size of the farm should determine, to a great extent, the character or system of farming to be carried on and the rotation to follow. Of necessity, small farms are better suited to intensive farming methods than are large places. The limiting factors, such as working capital and available labor, are usually felt more keenly on large farms. The short rotation, say that of three years, is likely to succeed best on small farms and perhaps is more necessary.

The managerial ability of the farmer, or manager, should also play an important part in selecting a rotation. Some men might succeed well in growing potatoes who could not succeed in growing crops to feed dairy animals, or the opposite might be true. To quite an extent the tastes and training of the farmer himself should determine the line of farming he is to follow.

These are some of the chief factors to be considered in working out a plan of farming. They are largely interdependent and hence should be considered with reference to one another rather than singly.

Before deciding just what crop to grow it is well for the farmer to divide his farm into fields of about equal size. This arrangement enables him to raise a more or less fixed amount of feed and forage.

Of course, it is not always possible to have every field of exactly the same size, but an effort should be made to have the areas of land in the different rotation stages as nearly of the same size as is practicable. In Upper Wisconsin, on account of the land having been cleared at different times and in different ways, fields are often irregular in outline. Much time is wasted in working such a farm. Owing to differences in soil, slope or drainage, it is not possible, on some farms, to have all land in the same stage of rotation in one single field. In most cases, however, the farm can be divided into a few fields of uniform shape and size and of the same number as there are years in the rotation followed. The sketches with this article show how irregular fields on an eighty-acre farm, of which about sixty acres is cleared land, may be arranged in a three-year rotation.

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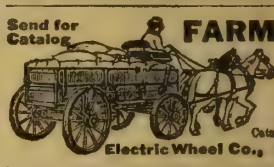

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Refinish Old Furniture.

The old furniture may look a little shabby when the spring cleaning is done, but with the expenditure of a little time and money it can be made to look like new. Mr. J. T. Parker, assistant in woodwork in the Kansas State Agricultural College, tells how to do this in a recent issue of the Industrialist.

First, the old finish must be taken off the furniture, points out Mr. Parker. This may be done with a varnish remover which may be purchased at a hardware store. Two quarts will remove the varnish from all the furniture in the average living room.

This remover should be applied with a brush or a cloth and allowed to stand for a few minutes. It must then be rubbed or scraped off. After this the scraper should be used until the wood is reached because a varnish will not take a stain.

If the wood is an open grain piece, such as chestnut, walnut or oak, a filler must be used to make a smooth surface. This may be bought or prepared at home. The formula for the preparation is as follows: One pound of corn starch and three-fourths of a pint of boiled linseed oil or turpentine, colored with burnt umber or lampblack.

A filler will color the wood slightly, but if a dark finish is wanted it is better to stain the wood before the filler is applied. The filler should be rubbed on the furniture and allowed to stand fifteen minutes. Then all the surplus filler should be removed. The wood that is not open grain, such as cypress, maple, and pine, does not need a filler.

After the stain and the filler have been applied the wood may be covered with a floor or furniture varnish or a wax. If a wax finish is desired the stain should be put on and allowed to stand until the next day, when the wax or varnish may be applied. Wax is the preferable finish, since it does not gather up the dust particles so readily as the varnish and is more easily applied. It does not scratch so easily and if it is scratched more wax may be easily added and the polish secured again.

The wax should be applied sparingly with a soft woolen cloth and allowed to stand from five to ten minutes. After this it should be rubbed vigorously to give it a polish. Two coats of wax are advised since it makes a much better finish. The wax should not be allowed to stand too long before it is polished or it will show the slightest finger mark.

If a varnish is desired it should be put on and allowed to stand two days so that it will dry properly. Then it should be rubbed with very fine sandpaper to smooth the surface. A second coat of varnish should now be added and the furniture is as good as new.

For ordinary furniture the golden oak, the cathedral oak, the early English, or the mission wood dyes are the best to use. Any of them make a more tasteful finish than the mahogany or the red and green wood dyes.

With newly finished furniture, a freshly varnished floor, a tastefully selected rug, cool cretonne curtains and a few comfortable cushions the living room is a new place in which to spend the hot summer day.

Sound Housecleaning Advice.

To the Editor:—By no stretch of the imagination can I make housecleaning "easy" work. Right here I would like to drop this thought: Our attitude toward any work goes far in making it drudgery or pleasure.

We read so much about making housecleaning a comfortable time for the men; how the poor dears are annoyed with cold dinners and the general upheaval. Well, it is just as certain that the women are eating cold dinners at the same time, and disorder in the home is a heap more trying to the average woman than to the average man. The men and boys need to cultivate the proper attitude. They can do a lot toward keeping the waters untroubled.

Why not all join in and make a game out of a hard job? Be pioneers or on a camping trip and enjoy eating on the cabinet or center table in the parlor while the kitchen is being painted, and sleeping in the parlor or kitchen while the bedrooms are being renovated.

We read a lot about doing one room at a time, piecing up the scraps into quilts, serving delicious cold dinners, etc. I have found these things won't work in the ordinary home where one woman, helped by husband and children, must see to everything. Most homes are just such common homes. I think housecleaning should be extended over as long a time as the one woman finds necessary. Health, serenity and joy in her work are of more importance than a spick and span house accomplished in three or four days.

But there is much we can do toward getting ready for the real work. Begin several weeks before by taking the curtains down, a room at a time, and laundering and laying away each week, so that no one week's washing and ironing will be greatly increased.

Take up the carpets, dust, sun, wash if necessary, and fold away until ready for them. You may not believe it, but the curtainless windows and bare floors, well wiped and with a few rugs scattered about, make you want to take a recess in your work. The change proves restful for a time.

Be sure you are well supplied with paper, paint, alabastine, varnish or whatever you have decided to use, before you start. If you paint, don't neglect to have turpentine on hand. It is very annoying to ask the man to stop work to go to town for something you should have had in store. Don't forget the bundle of clean, soft rags, plenty of soap and washing powder, and a bottle of some antiseptic, all in a convenient place.

Let the "emergency shelf" be well stocked with a few cans of fish flakes, tuna, salmon and dried beef. If you haven't canned vegetables, lay in a supply of tomatoes, corn, peas and baked beans; also a few packages of small cakes or graham crackers. Should the stranger unfortunately stop for dinner at this time you can quickly prepare a healthful, palatable meal. Fruit from the cellar, served with the cakes, is sufficient dessert.

I have no objection to the strong, healthy, bustling woman making as short work as possible of the spring cleaning. To those of limited strength and with nerves easily "set a-jangle" I say remember there is no more necessity for this hurry and flurry at housecleaning time than at any other season. Keep patient, sweet and happy and try my plan of making housecleaning a long journey, if need be, taken by easy stages.

Mary Story Whitsitt.

THE RIGHT KIND OF LIVING ROOM.
Book-filled shelves, fireplace and easy chairs make a comfortable place to read and rest.

Women at the Front.

German women have been put at the front in Petrograd and are now substituting for soldiers in the field kitchens and for work in the rear of the army, so as to release the men for fighting. This fact disposes neatly of the contention that "women should not vote because they cannot go to war."

Wanted—Rust Remover.

To the Editor:—I am interested in the household department and I have come for some help. Will some of the readers tell me how to remove rust from clothes? M. Michal.

Another Needs Help.

To the Editor:—This is the first time I have ever written to the Home Department, but I have received lots of good from it and I would like to know now if anyone knows how to destroy roaches. I have been trying to keep the house as clean as possible but all in vain. Had roaches in the house all last summer. I sprinkled insect powder about, which seemed to help some. But now this spring I notice a few here again and they are all over the house, in the cellar as well as the third floor or attic.

A friend tells me she thinks these bugs are roaches but I never saw any before, so I don't know for sure. They look black with brown specks on the wings, while others are all black. They are quite large. Their leavings or worms are about half an inch to an inch long and are brown with white underneath, and a great many feet. Can anyone tell me why they are in the house and how they first get there? They don't seem to do much harm except in the pantry, where they get into the food. But it is very horrid to have them and I can't seem to get rid of them. This is my second spring of housekeeping and I would like very much if someone could help me out, as those bugs and worms are worrying me quite a little. Mrs. S. W. Z.

To Clean Nickel.

To the Editor:—I have been a reader of your paper since last October and can hardly wait for it to arrive. I wish it would come every day, for it has been a great help to me in every way.

I am going to give some of our readers a little help in regard to keeping the nickel of a stove clean. I have found it very successful for cleaning all spots except rust. Could someone tell me how I could clean the rust off the door of the fire box?

For cleaning nickel I use a large pinch of cleaning powder, enough warm (not hot) water to make a thick suds, and to this I add a generous amount of kerosene. Then I apply it with a soft cloth, going all over the nickel with it. Then when I have all the spots off I use a dry cloth to shine it. I use pieces of old gauze, as it is soft and yet firm enough to give it a good shine.

I hope this will be a help to some of our readers, and may I hear through an early paper from some one in answer to my question? A Reader.

Remedy For Bugs.

To the Editor:—I read in your paper where a subscriber wants a remedy for destroying bed bugs. If she will put equal parts of turpentine and carbolic acid in her paste when she papers and be sure to cover all the cracks around the windows and doors she won't be troubled any more. Make the paste good and strong with the turpentine and carbolic acid.

M. P.

Wants Mincemeat Recipe.

To the Editor:—I would like for some of the ladies to send for publication in the Home Department some good mincemeat recipes. I would also like to know something about growing cauliflower and preparing it for the table. All of us should plant a little extra patch of beans, potatoes and, in fact, everything that can be stored away for winter use, for with war and rumors of war to contend with everything is high and will be higher and a good garden will go a long way toward providing for the winter.

I am sending a tested recipe for angel food cake. Whites of eleven eggs, one level teaspoonful cream of tartar, one pint of flour, one and one-half pints of sugar, one teaspoonful of vanilla. Bake forty-five minutes. First measure your flour, sugar and cream of tartar and sift together eleven times. Then whip your whites of eggs to a stiff froth. Then add gradually the sifted flour. Bake very slowly. Mrs. W. S. G.

Success in Care of Roses.

To the Editor:—In regard to Mrs. Maude Clary's questions about roses I want to say that I have had considerable success in caring for and planting roses and I think the best time to plant them is early in May, as soon as it is warm and the frost is out of the ground.

Nice black soil from the woods is a very good soil to plant roses in. Dig the hole deep and large enough so that the roots have room enough and need not be crushed when covered. Have at least six inches of loose dirt in the bottom of the hole. I usually put some of the packing around the rosebush roots, but it isn't

necessary to do this. Dirt from a barnyard, placed on top of the roots, aids the growth of the bush and keeps the roots moist.

After planting, the bushes should be shaded by shingles for about three weeks and kept well watered.

If bothered by plant lice, a louse-killing compound can be bought at any seed store.

During the winter I have my rose bushes tied to a stake driven into the ground so that the top of the stake is about three inches above the ground. The bush is tied into a bundle around the stake. Then I lay the bush on the ground and cover with leaves. If this is done, when the snow and ice has disappeared the rose bush will have nice green buds and almost open when uncovered. In order to straighten the bush after uncovering, drive a tall stake into the ground and tie the bush to this stake.

Eugene Benseur.

One Woman's Precious Vote.

Peter Gordon Mackenzie, a singer of Great Britain, thought enough of his wife's vote to apply for naturalization papers for American citizenship. Mrs. Mackenzie, an American by birth, had voted in California before her marriage, but lost her citizenship when she married an alien. The supreme court to whom she had carried a suit for recognition of her right of suffrage, made this judgment of the case and her husband, therefore, secured the right for her.

Recipes.

Nut Foam Chocolates (candy)—Two cupfuls of sugar, one-half cupful of water, one-fourth teaspoonful of cream of tartar, nuts and chocolate, one teaspoonful of vanilla, whites of two eggs. put the sugar, water, cream of tartar into a saucepan. Boil till it will harden in water. Take from the fire and add the vanilla and over the stiffly beaten whites of eggs pour the mixture. Beat until light. Drop by spoonfuls onto a buttered plate that has been spread with finely chopped nut meats., Roll each bon bon in these until entirely coated. Let cool, then dip into unsweetened melted chocolate. They should be allowed to mellow and improve with age.—Mrs. W. S. G.

Apple Sauce Cake.—One cupful of brown sugar, one scant cupful of butter, one and one-half cupfuls of apple sauce, two cupfuls of flour, one cupful of raisins, one cupful of walnut meats (English or black) two level teaspoonfuls soda sifted with the flour, one-half teaspoonful each kind of spices. Have the apple sauce fairly thick and not lumpy.—Mrs. G. G. B.

Fruit Cake.—One and one-half cupfuls flour, one and one-half cupfuls butter, one-half cupful brown sugar, one-half cupful molasses, one cupful currants, one cupful raisins, one-half cupful sour milk, one teaspoonful each cloves, cinnamon, allspice, one-half teaspoonful soda, two eggs.—Mrs. C. H. T.

Creamed Corn Beef.—Let three cups of milk scald with two slices of onion and two stalks of celery fifteen minutes. Pick out the vegetables. Beat one-fourth cup of butter to a cream; gradually beat in one-fourth cup of flour; add some of the hot milk and stir until smooth, then stir into the rest of the hot milk and continue to stir until the sauce is smooth and thickened. Cover and let cook fifteen minutes. Add three cups of cold corned beef, cut into half-inch cubes, and pour into a buttered dish. Cover with three-fourths of a cup of cracker crumbs mixed with one-third of a cup of melted butter and set in the oven to brown the crumbs.

Macaroni Baked With Cheese.—Cook a cup of macaroni broken in pieces in rapidly boiling salted water until tender. Drain, rinse in cold water and drain again. Turn into a baking dish, add about a cup of grated cheese, half a teaspoonful of salt, a dash of paprika and lift with a spoon and fork to mix thoroughly. Pour on hot milk almost to cover the macaroni and let cook in the oven until browned a little on top and very hot throughout. Serve as a vegetable at dinner or as the main dish at supper.

Fifteen per cent of the timber cut in the United States is wasted every year and government experts in Washington are engaged in experiments to determine how much may be saved by utilizing the waste. One experiment is the utilization of sawdust in the manufacture of alcohol. Another interesting possibility is the utilization of hydrolyzed sawdust as a carbohydrate cattle food.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

So Many Letters.

Dear Young Folks:—The boys and girls who read the Young Folks' page have been writing so many letters that it has been impossible to use them all, and the editor has been a little worried for fear some of our little friends would be disappointed when they fail to find their letters in the paper, and we want to assure them that it is only because there is not space for all. Your letters are all very welcome, and even if they do not find a place in the Young Folks' page the editor has the pleasure of reading them and hopes that you will write again. —The Editor.

An "April Fool" Joke.

Dear Young Folks:—My mother takes the paper and I can hardly wait until it comes, for I love to read the letters on the Young Folks', page.

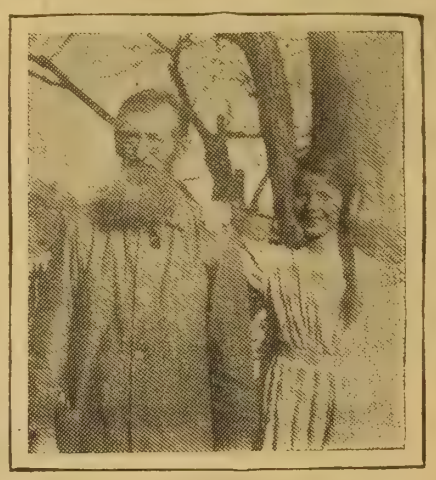
I am eleven years old. I have light brown hair and blue eyes. I go to the consolidated school and am in the sixth grade. I live on a 140-acre farm about a mile and a half from town.

I want to tell you about how we "April fooled" some people this year. My brother took an old paper sugar sack and filled it with dirt. Then he tied it up and wrote "April Fool" on each side. He then put it on the road as if someone had dropped it. Many people got fooled as they went to town.

I have never written to this department before and I hope my letter will be printed. Some time I will write again. —Susie.

Gets Two Prizes.

Dear Young Folks:—I have been reading your letters and enjoy them very much. I am staying on the farm with my grandparents and have about a mile to go to school. Our winter term closed the 3d of March. I received two prizes, a liberty bell for highest averages and a certificate of



ELLA AND GRANDFATHER.

award for being neither absent nor tardy. During my vacation I will go to see my parents. My sister is teaching me to crochet different kinds of lace.

I will tell you about my pets. I have four cats. My favorite is a large white one that I call Snowball.

I am sending you a picture of grandfather and myself. —Ella.

A Trip on the Mississippi.

Dear Young Folks:—I enjoy reading your letters and thought I would write to you. I am thirteen years old and am in the seventh grade. I like my teacher very much. She reads us good stories in spare time.

I live in the country and am one mile from school. Our farm consists of eighty acres. It is called the Pleasant Ridge farm. We have eighteen head of cattle, six head of horses, some hogs and chickens. I have for my pets one calf and three bantams. I think lots of them.

How many of the young folks like to ride horseback? I do, for one. We have just been on the farm one year since we came back from our trip to Florida. I will tell you a little about it. My father's health was not very good and the doctor told him to go South. We went part of the way on the train and then took the steamer and went down the Mississippi and Ohio rivers. It was a fine trip and we liked Florida pretty well, but we were glad to get back on the farm.

—Esther.

Sings at Entertainments.

Dear Young Folks:—I have been reading your letters and enjoy them very much. I have never written before.

I live on a farm and we have four horses, three cows and some hogs. I like to live on the farm. I have always lived on the same farm.

My mother died when I was seven years old. I have a sister and brother older than myself. My sister does most of the housework. My father is good to us and we have a good home. I have a big dog for my pet. His name is Sport.

I go to school every day. Our dog comes to meet us when we come from school.

We have a music teacher in our township. I like music and I sing songs by myself at the school entertainments. —Roy.

Your Mother Saved Money on Soap

Why Don't You?

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International Sunday School Lesson.

Lesson for April 23, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

EASTER LESSON.

LESSON TEXT—I Cor. 15:1-28.

GOLDEN TEXT—But now is Christ risen from the dead, and become the first fruits of them that sleep.—I Cor. 15:20.

If teachers can impress indelibly upon the minds of their scholars the fact that Jesus rose from the dead and is as truly alive today as when walking the hills of Galilee this repetition of the Easter story will not be in vain. For the pupils to take notes of the points of the argument and to recite upon those notes at the end of the class hour would greatly help to fix the facts in their minds. This account considered today is perhaps the oldest written record we have of this great fact, written about 56 A. D., hence the significance of verse six.

1. **The Triumphant Fact** (vs. 1-4). If Christian workers would be more familiar with this passage they would more intelligently understand what the term "Gospel" means. The fact of the resurrection loomed larger in Paul's mind than the virgin birth; the former was and is the greater miracle. This, one of the supreme chapters of the Bible, tells us what the gospel is, and what its results are to be. (1) What it is. Not a new cure for tuberculosis, nor a new social environment, but the good news of one who was God incarnate (Paul does not use his earthly name Jesus), Christ the Anointed One, who died for our sins just as the Scriptures had foretold, and was buried. On the third day, "according to the Scriptures," He rose again and is now and ever shall be alive. Any gospel that ignores the incarnation, passion and resurrection of Jesus is false to the Scriptures and a lie. (2) The result of preaching or testifying to this great program is twofold: First, salvation, "saved, restored to right relations with God;" and second, perseverance, "wherein ye stand." The "God-story," good news, evangel or gospel—they are all the same—is "the power of God unto salvation," and the strong doctrine of the resurrection will cause men to walk straight, to stand upright. "Christ died for my sins according to the scriptures" (Isa. 53:5-10).

II. **Witnesses to the Fact** (vs. 5-12). Paul (v. 3) received the resurrection truth from many witnesses, whom he

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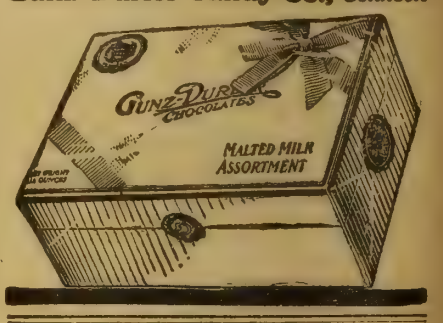

proceeds to enumerate, for it was not a matter of his own invention. The incredulity of the disciples at the first is frankly recorded (Luke 24:12). Jesus did not appear first to John, Pilate or the Sanhedrin, but to a woman, and the change of the apostles from a spirit of despair to that of confident, joyous certainty was most astonishing. There are eleven recorded appearances of Jesus after His resurrection, and not one of them was made to His enemies. Paul does not mention all of the appearances. He is probably naming only those persons, witnesses of His appearances, with whom He had conversed, or at least a few from each group. (1) Peter, referred to indirectly in Luke 24:34; (2) the apostles, to be exact, the first ten, Judas being dead and Thomas absent; (3) the apostles with Thomas present; (4) 500, the only record of this great company, though perhaps implied in the "brethren" of Matt. 28:10. "Half a thousand witnesses are enough to establish any case." Of these the greater number were alive twenty-five years after the event; (5) James, probably our Lord's brother, the honored head of the Jerusalem church; (6) "Then all the apostles," a larger circle than the twelve (See Luke 28:48, Acts 1:6-8). This may have been the appearance in the morn at the Sea of Galilee; (7) "me also."

III. **The Fact Applied.** (vs. 13-20). The Corinthians, to whom Paul was writing, did not deny Christ's immortality, but seemed to deny that the same power which had raised Him could be applied to us who are only human. Paul answers this by presenting four arguments:

(1) The resurrection of Christ proves the possibility of the resurrection from the dead, if only of Jesus. The Sadducees taught the contrary. The Stoics taught that the dead were re-absorbed in God. To say Christ is not risen is to claim death as annihilation, to destroy faith in Jesus (v. 14) and to impugn the testimony of those who had seen him (v. 15). A dead Christ means dead Christians (v. 17) and our heaviest sorrow will be to face the grave (v. 18).

(2) The Christian is "in Christ," and His resurrection carries ours with it. Paul's emphasis upon this term "in Christ" (vs. 18, 19, 22, 23 and elsewhere) is important to note.

(3) Christ, the second Adam, brings life; our common human nature dies like as the first Adam, but our second Adam rose and "in Him" we live.

(4) If Christ conquered death only for Himself it was no real victory, nor could He give back to the Father a redeemed world.

Death is the last "enemy," for until sin is banished it will be present (Rom. 6:23).

Beware Turnip Rape Seed.

Two hundred thousand pounds of turnip rape seed, or enough to sow approximately 50,000 acres, have been imported from Argentina and Japan and are being sold as winter rape. The seed specialists of the U. S. Dept. of Agriculture, therefore, are again cautioning farmers to avoid the purchase and seeding of turnip rape—which is not winter rape and is not suitable for the forage purposes for which winter rape is grown.

The seeds of turnip rape are smaller and have more deeply pitted surface than those of winter rape. The young plants are easily distinguished by the difference in habit of growth and the character and color of the leaves. Winter rape produces a definite stem with the leaves occurring along it at intervals. Turnip rape does not produce a definite stem, the leaves all growing in an apparent whorl at the surface of the ground. The leaves of winter rape are thick and succulent, free from hairs, and covered with a grayish bloom. The leaves of turnip rape are thin, hairy and bright green like those of the garden turnip.

Persons purchasing rape seed may submit samples to the Seed Laboratory, U. S. Dept. of Agriculture, Washington, D. C., for determination as to whether the seed is that of the turnip rape or winter rape. Samples of both turnip rape and winter rape seed, for comparison, will be sent on application to the Seed Laboratory.

Trees Increase Crops.

Trees will actually increase the yields of crops. This was determined by an investigation in Minnesota, Iowa, Nebraska and Kansas. It was found that one-fifth of the farm could be in trees without reducing the yield. That is, trees, in protecting the crops, increased the crops enough to make up for the space occupied by the trees. From this it is plain that the resulting trees would not cost anything except the cost of the planting and care. This same thing has been found to be the case in Europe. As a result the general plan there is to have one-third of the land area in trees. And the reason is that this is the way that the greatest returns are secured.

If one-fifth of the area of Minnesota, Wisconsin and North Dakota can be in trees without reducing the yield of the crops, perhaps even a greater proportion of the land in North Dakota could be in trees without reducing the yields.

The planting of trees would do much to make a state like North Dakota a more homelike state. The trees would also reduce the effects of winds and especially of hot winds. The spreading of weed seed would be lessened. The light soils would not blow and the snow would quietly settle where it fell.—[North Dakota Experiment Station.

Tractor show for Wisconsin will be held at Madison the week of September 4th-8th. This is one of the big national shows.

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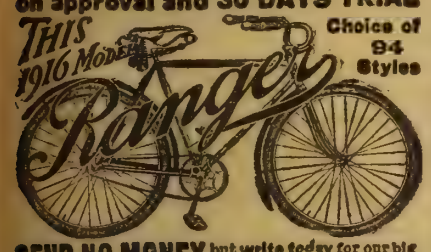

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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CHAPTER XVI.
Notice to Quit.

BEFORE the year was over Mrs. Betty had become popular with Maxwell's parishioners through her unfailing good nature, cordiality and persistent optimism. Even Mrs. Nolan, who lived down by the bridge and made rag carpets and suffered from chronic dyspepsia, remarked to Mrs. Burke that she thought the parson's wife was very nice "'cause she ain't a bit better than any of the rest of us"—which tribute to Mrs. Betty's tact made Mrs. Burke smile and look pleased. All the young men and girls of the parish simply adored her, and it was marvelous how she managed to keep in touch with all the guilds, do her own housework and learn to know everyone intimately. Hepsey warned her that she was attempting to do too much.

"The best parson's wife," she said, "is the one who makes the rest work, while she attends to her own household and keeps her health. Her business is not to do the work of the parson, but to look after him, keep him well nourished and cheer him up a little bit when he is tempted to take the next trolley for Timbuctoo."

The retort was so tempting that Mrs. Betty could not help saying:

"There's not a person in this town who does so much for others as you do and who makes so little fuss about it. It's the force of your example that has led me astray, you see."

"Hm!" Hepsey replied. "I'm glad you called my attention to it. I shall try to break myself of the habit at once."

As for Maxwell, his practical cheerfulness in forwarding the social life of the place, without in the least applying that phase of his activities as a lever for spiritual upheavels, and his ready sympathy for and interest in the needs and doings of young and old, irrespective of class or caste, gradually reaped for him the affection and respect of all sorts and conditions. In fact, the year had been a pleasant one for him and was marred by only one circumstance, the continued and growing hostility of his Senior Warden, Mr. Bascom. From the first he had been distinctly unfriendly towards his rector; but soon after Maxwell's marriage his annoying opposition was quite open and pronounced, and the weight of his personal influence was thrown against every move which Maxwell made towards the development of the parish life and work.

To those more "in the know" than the Maxwells themselves it was evident that a certain keen aggressiveness evinced by the Senior Warden was foreign to his phlegmatic, brooding character, and it was clear to them that the actively malicious virus was being administered by the disappointed Virginia. That she was plotting punishment, in revenge for wounded amour propre, was clear to the initiated, who were apprehensive of the bomb she was evidently preparing to burst over the unconscious heads of the rector and his wife. But what could her scheme be?

Gradually Mrs. Burke noticed that Betty began to show fatigue and anxiety and was losing the freshness of her delicate color, while Donald had become silent and reserved and wore a worried look which was quite unnatural to him. Something was going wrong; of that she felt sure; but observant though she was she failed to trace the trouble to its source.

Matters came to a crisis one day when Maxwell was informed that someone was waiting to see him in the parlor. The visitor was dressed in very pronounced clothes and carried himself with a self-assertive swagger. Maxwell had seen him in Bascom's office and knew who was waiting for him long before he reached the parlor by the odor of patchouli which penetrated to the hall.

"Good morning, Mr. Nelson," said Maxwell. "Did you wish to see me?"

"Yes, I did, Mr. Maxwell, and I am sure it is a great pleasure."

The man seated himself comfortably in a large chair, put the tips of his fingers together and gazed about the room with an expression of pleased patronage.

"Very pretty home you have here," he remarked suavely.

"Yes," Maxwell replied. "We manage to make ourselves comfortable. Did you wish to see me on business?"

"Oh yes," the lawyer replied, "a mere technicality. I represent the firm of Bascom & Nelson, or rather I should say I am Mr. Bascom's legal agent just at present, as I have not yet been admitted as his partner—"

The man stopped, smirked and evidently relished prolonging his interview with Maxwell, who was getting impatient. Maxwell drew his watch from his pocket and there was a look in his eye which made the lawyer proceed:

"The fact is, Rector, that I came to see you on a matter of business about the rectory—as Mr. Bascom's agent."

"Will you kindly state it?"

"It concerns the use of this house."

"In what way? This is the rectory of the church and the rental of it is part of my salary."

"You are mistaken. Mr. Bascom owns the house and you are staying here merely on sufferance."

For a moment Maxwell was too astonished to speak; then he began:

"Mr. Bascom owns this house? What do you mean? The house is part of the property of the church."

"You are mistaken, my friend."

"You will kindly not repeat that form of address and explain what you mean," replied Maxwell heatedly.

"Come, come; there's no use in losing your temper, my dear rector," retorted Nelson offensively.

"You have just two minutes to explain yourself, sir; and I strongly advise you to improve the opportunity, before I put you out of this house."

Nelson, like most bullies, was a coward, and evidently concluded that he would take no risks. He continued:

"As I said before, Sylvester Bascom practically owns this house. It does not belong to the church property. The Episcopals made a big bluff at buying it years ago and made a very small payment in cash; Bascom took a mortgage for the rest. The interest was paid regularly for a while and then payments began to fall off. As you have reason to know Bascom is a generous and kind-hearted man, who would not for the world inconvenience his rector and so he has allowed the matter to go by default until the back interest amounts to a considerable sum. Of course, the mortgage is long past due and as he needs the money he has commissioned me to see you and inform you that he is about to foreclose and to ask you to vacate the premises as soon as you conveniently can. I hope that I make myself reasonably clear."

In a perfectly steady voice Maxwell replied:

"What you say is clear enough; whether it is true is another matter. I will see Mr. Bascom at once and ask for his own statement of the case."

"I don't think it necessary to see him, as he has expressly authorized me to act for him in the case."

"Then I suppose you came here to serve the notice of ejectment on me."

"Oh, we won't use such strong language as that. I came here merely to tell you that the house must be vacated as soon as possible. Mr. Bascom has gone to New York on business and will not be back for two weeks. Meanwhile he wishes the house vacated so that he can rent it to other parties."

"When does the Senior Warden propose to eject his rector, if I may be allowed to ask?"

"Oh, there is no immediate hurry. Any time this week will do."

"What does he want for this place?"

"I believe he expects fifteen dollars a month."

"Well, of course, that is prohibitive. Tell Mr. Bascom that we will surrender the house on Wednesday and that we are greatly indebted to him for allowing us to occupy it rent free for so long a time."

As Donald showed the objectionable visitor out of the house he caught sight of Hepsey Burke walking towards it. He half hoped she would pass by, but with a glance of suspicion and barely civil greeting to Nelson as he walked away she came on and with a friendly nod to Maxwell entered the rectory.

"I've just been talkin' to Mrs. Betty for her good," she remarked. "I met her in town lookin' as peaked as if she'd been fastin' double shifts, and I had a notion to come in and complete the good work on yourself."

Maxwell's worried face told its own story. He was so nonplused by the bolt just dropped from the blue that he could find no words of responsive raillery wherewith to change the subject.

Hepsey led the way to the parlor and seated herself, facing him judicially. In her quick mind the new evidence soon crystallized into proof of her already half-formed suspicions. She came straight to the point.

"Is Bascom making you any trouble? If he is, say so, 'cause I happen to have the whip-hand so far as he's concerned. That Nelson's nothin' but a tool of his and a dull tool at that."

"He's an objectionable person, I must say," remarked Maxwell, and hesitated to trust himself further.

Mrs. Burke gazed at Maxwell for some time in silence and then began:

"You look about done up—I don't want to be pryin', but I guess you'd better own up. Something's the matter."

"I am just worried and anxious and I suppose I can't help showing it," he replied wearily.

"So you're worried, are you. Now don't you get the worried habit; if it makes a start it will grow on you till you find yourself worryin' for fear the moon won't rise. Worryin's like usin' rusty scissors, it sets your mouth awry. You just take things as they come and when it seems as if everything was goin' to smash and you couldn't help it put on your overalls and paint a fence or hammer tacks, or any old thing that comes handy. What has that rascal Bascom been doin'? Excuse me—my diplomacy's

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of the hammer-and-tongs order; you're not gettin' your salary paid?"

For some time Maxwell hesitated and then answered:

"Well, I guess I might as well tell you, because you will know all about it anyway in a day or two and you might as well get a correct version of the affair from me, though I hate awfully to trouble you. The parish owes me two hundred and fifty dollars. I spoke to Reynolds about it several times, but he says that Bascom and several of his intimate friends won't pay their subscriptions promptly and so he can't pay me. But the shortage in my salary is not the worst of it. Did you know that the rectory was heavily mortgaged and that Bascom holds the mortgage?"

"Yes, I knew it, but we paid something down and the interest's been kept up and we hoped that if we did that Bascom would be satisfied."

"It seems that the interest has not been paid in some time and the real reason why Nelson called just now was to inform me that as Bascom was about to foreclose we must get out as soon as we could. I told him that we would leavè on Wednesday next."

For a moment there was a look on Mrs. Burke's face which Maxwell never had seen before and which boded ill for Bascom, but she made no immediate reply.

"To tell you the truth," she said finally, "I have been afraid of this. That was the only thing that worried me about your gettin' married. But I felt that no good would come from worryin,' and that if Bascom was goin' to play you some dirty trick he'd do it; and now he's done it. What's got into the man all of a sudden? He's a skinflint—always closer than hair to a dog's back, but I don't believe I've ever known him to do somethin' downright ugly like this."

"Oh, I know well enough," remarked Donald. "If I had been aware of how matters stood about the rectory I should have acted differently. I wrote him a pretty stiff letter a day or two ago calling upon him, as Senior Warden, to use his influence to fulfill the contract with me and get the arrears of my salary paid up. I suppose he had thought I would just get out of the place if my salary was held back—and he's wanted to get rid of me for some time. Now he's taken this other means of ejecting me not only from his house but from the town itself. He knows I can't afford to pay the rent out of my salary—let alone out of half of it!" He laughed rather bitterly.

"He'll be singing a different tune before I've done with him," said Hepsey. "Now you leave this to me—I'll have a twitch on old Bascom's nose that'll make him think of something else than ejecting his rector. I'll go and visit with him a little this afternoon."

"But Nelson said that he was in New York."

"I know better than that," snorted Hepsey. "But I guess he'll want to go there and stay the winter there, too, maybe, when I've had my say. No sir—I'm goin' to take my knittin' up to his office and sit awhile and if he doesn't have the time of his life it won't be my fault."

She turned to leave the room, with a belligerent swing of her shoulders.

"Mrs. Burke," said Maxwell gently, "you are kindness itself, but I don't want you to do this—at least not yet. I want to fight this thing through myself, and rather to shame Bascom into doing the right thing than force him to do it—even if the latter were possible. I must think things out a bit. I shall want your help—we always do, Betty and I."

"I don't know but you're right, but if your plan don't work, remember mine will. Well, Mrs. Betty'll be coming in soon and I'll leave you. Meantime I shall go home and load my guns. I'm out for Bascom's hide sooner or later." (To be continued.)

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Making Housework Easier.

(Continued from page 8.)

to bring up wood, coal, vegetables, preserves, etc., from the cellar, although apparently a small thing, is one of the backache savers in any home. A sliding panel between the dining room and the kitchen, through which food can be passed, saves many steps each meal.

Even the location of the telephone is worthy of consideration. And it, with many others, is considered and discussed at length before definite locations are selected. The cost of each is an important part of every discussion, for the amount available for the new house may prohibit some things which later on will be added, and for which provisons must be made in planning.

After this, the house is equipped. Lists are made after a discussion has been made as to styles of furniture and prices of every article for each room are determined. Furniture, rugs, pictures, lamps, table linen, dishes, bed linen, and all are included.

Each girl makes two or three lists complete. One shows what would be purchased had the girl $1,000 to spend; one had she but $500 and a third showing her proposed expenditure of $250 for furnishing the complete home. The list takes up even a detailed statement of the kitchen equipment showing just what articles are deemed necessary in the three lists, and the proportionate expense to the rest of the home furnishings.

It is interesting to note that in many instances the girls will select a less expensive pattern for their china to have enough funds to insure a washing machine, or a bread mixer, or a vacuum cleaner. Every effort is made to have a wise selection made for the money available.

When these girls complete their courses at the school and return home they have a pretty definite idea as to how to make the work at home easier, and have more fun. The ideas are practical, for they know how much can be done with a certain amount of money whatever is available, and the work which was a drudgery becomes a pleasure because they realize how much intelligence and training it takes to run a household in the easiest and most pleasant manner.

The school meets the needs of two classes of people. There is one course from which a girl entering from eighth grade or grammar school graduates in three years. This prepares her to be an intelligent and happy home-maker capable of doing either all the work of a home such as sewing, cooking, laundering, accounting, etc., or of supervising as many maids as she may be fortunate enough to have.

The second course requires four years of study before graduation. This is for girls who wish to continue their education at a normal school, college, or university.

Work along these lines in Wisconsin is in a very thorough stage of development, although comparatively new as a county educational school system. Efforts are being made to establish more schools of this sort in localities which need them. The work is absolutely in accord with the general educational system of the rural, city and accredited schools, as well as the normal and university courses, where a desire is expressed on the part of the student to make it a part of her general educational plans.

Inter-County Holstein Breeders' Sale.

One of the most successful consignment sales of Holstein cattle held since the foot-and-mouth disease started, was that of the Inter-County Holstein Breeders at Watertown, Wis., Wednesday and Thursday, April 5th and 6th. The offering was one of particular merit and drew buyers from several states. It is very evident that the scare over foot-and-mouth disease has entirely disappeared and cattle breeders and dealers in southern Wisconsin say that they have never seen such a great demand for cattle as there is at the present time. At this sale there were buyers from Kentucky, Michigan, Ohio, Illinois, Iowa, Kansas, West Virginia, California and Minnesota, as well as from northern and western Wisconsin. The top price was paid by W. S. Moscrip, Lake Elmo, Minn., for Johanna Rue Burke 2d. Her daughter was sold for $700 to F. Johnson, Swanson, Mich. Altogether it was a very good sale and indications are that the demand for dairy animals is steadily growing. Below we list those selling for $50 and over:

BULLS.

Canary Paul 11th, Oct. 29, 1914; Randall & Luedthe, Watertown, Wis.	$375
No. 9, April 6, 1915; J. H. Pester, Whitewater, Wis.	160
Sarcastic Clover Lawn, Feb. 13, 1914; G. Millisch, Johnson Creek, Wis.	140
No. 62, March 6, 1915; F. Johnson, Swanson, Mich.	280
Netherland Mercedes Tritomia	115
Lorea De Kol Segis King, Feb. 24, 1915; A. E. Armitage, Seymour, Wis.	150
No. 101, June 14, 1915; R. Wichman, Oconomowoc, Wis.	55
No. 102, Sept. 30, 1915; Henry Westphal, Columbus, Wis.	65
Colontha Sir Aaggie Johanna, Oct. 10, 1915; G. Weithen, Watertown, Wis.	105
Duke Johanna Inka 5th, Jan. 11, 1914; G. Ruesch, Watertown, Wis.	200
McKinley Korndyke of Rock Farm, calved Feb. 3, 1915; C. F. Lathers, Beloit, Wis.	75

FEMALES.

Johanna Rue Burke 2d, Nov. 12, 1908; W. S. Moscrip, Lake Elmo, Minn.	850
Johanna Rue Burke Canary, Mar. 24,1913; F. Johnson	700
Miss Johanna Burke Canary, Mar. 12, 1914; Arthur Collentine, Monroe, Wis.	305
No. 4, Feb. 28, 1915; W. S. Moscrip	300
Johanna Rue Burke Homestead 2d, Oct. 26, 1914; W. H. Whitacre, Cleveland, Ohio	310
Wisconsin Bess Fayne, Nov. 13, 1908; W. S. Moscrip	360
Wisconsin Bess Fayne 2d, March 15, 1913; W. H. Whitacre	505
No. 8, Feb. 21, 1915; W. H. Whitacre	305
Johanna Faune Gewina, June 26, 1909; W. S. Moscrip	510
Johanna Fayne Surprise, June 21, 1909; C. H. Stevens, Jefferson, Wis.	420
Neta Paul's De Kol's Beauty 2d, Jan. 24, 1907; C. Stevens	300
No. 12½; S. E. Jones, Watertown, Wis.	145
Neta Paul Canary, May 31, 1913; C. Stevens	255
No. 14, April 8, 1915; J. T. Cody, New Richmond, Wis.	165
No. 15, Nov. 29, 1915; S. E. Jones	140
Princess Colantha Anne 2d, Oct. 27, 1909; S. E. Turville, Oconomowoc, Wis.	200
Princess Colantha Anne 3d, Sept. 13, 1912; S. E. Turville	305
Princess Anne Hamilton, Oct. 25, 1914; H. T. Fitzsimmons, Granger, Wis.	260
Daisy Queen Canary, Oct. 6, 1912; S. E. Turville	285
Daisy Queen Canary 2d, Nov. 14, 1914; C. H. Stevens	260
No. 22, Jan. 26, 1916; John F. Cody	125
Netherland Colantha Jewel 3d, June 5, 1912; S. Ubert, Monroe, Wis.	270
No. 24, Jan. 24, 1916; Everson Bros., Lake Mills, Wis.	120
Black Princess De Kol, Aug. 6, 1911; Imig Bros., Neillsville, Wis.	210
Black Princess De Kol 2d, Oct. 8, 1913; C. H. Stevens	240
Black Princess De Kol 3d, Oct. 15, 1914; H. T. Fitzsimmons	155
Lady Fobes Tritomia De Kol, July 10, 1910; Frank Fick, Union Center, Wis.	300
Lady Fobes Tritomia De Kol, Oct. 23, 1914; H. T. Fitzsimmons	260
Annabelle Ormsby De Kol 2d, Nov. 10, 1918; Henry Anthes, Jefferson, Wis.	260
Barbetta De Kol Beets, Dec. 6, 1913; J. Mullen, Watertown, Wis.	215
Lulu Beets De Kol, Oct. 19, 1911; S. E. Truville	90
Aaggie Belle Burke, March 10, 1911; Fred Wobig, Clinton, Wis.	190
Barbetta De Kol Burke 2d, Jan. 10, 1911; J. Hertel	175
Rijaneta Colanthus Burke, Sept. 26, 1910; H. J. Barker, Elkhorn, Wis.	175
Babe Piebe Estata De Kol 5th, March 25, 1913; A. Sattler, Poysippi, Wis.	110
Babe Piebe Estata De Kol 2d, Jan. 12, 1910; J. R. Lamb, Janesville, Wis.	175
Malvina Johanna Katydid, Jan. 12, 1913; S. E. Turville	160
Inka Fern of Gilt Edge, Dec. 23, 1913; P. Myltra, Richwood, Wis.	150
Pauline Katydid Canary, Feb. 16, 1913; W. Berglin, Shawano, Wis.	130
Hengerveld Fern Tritomia, March 15, 1914; E. Krehn, Horicon, Wis.	175
Aspirante De Kol Canary 2d, Jan. 13, 1914; H. S. Fitzsimmons	250
Inky Hengerveld Canary, May 13, 1912; P. Mylstra	100
Pauline Katydid Fern, July 23, 1913; H. S. Kath & Son, Lowell, Wis.	150
Empress Katydid Tritomia, Dec. 23, 1913; H. E. Kath & Son	140
Mercedes Hengerveld Tritomia, April 16, 1913; W. Berglin	100
Katydid Pauline De Kol, July 5, 1914; Carl Moling, Waterloo Wis.	170
Netherland Clothilde Tyressa Mar. 14, 1906; W. W. Fenton, Winona, Minn.	155
Jessie De Kol Elbaje, Oct. 17, 1910; W. C. Hardke, Watertown, Wis.	170
Wisconsin Daisy De Kol, Jan. 11, 1910; W. Beiglin	140
Paula Lilith De Kol, Oct. 17, 1907; N. W. Fenton	180
Ormsby Clover Lawn 2d, Mar. 27, 1913; W. Beiglin	200
Ormsby Clover Lawn, Jan. 22, 1911; W. Beiglin	170
Countess Netherland Waldorf, Sept. 10, 1914; F. Johnson	180
Alcartra Johanna De Kol Burke 2d, Feb. 17, 1913; H. E. Kath	100
Gem Rigtje Baby De Kol, Jan. 2, 1906; Wm. Coogan, Watertown, Wis.	70
Susie Aaggie De Kol, Oct. 15, 1906; Imig Bros.	210
Bella Rose Mercedes, Jan. 30, 1907; Carl Ruesch	350
Lady Forster 2d, Jan. 10, 1911; Sacred Heart College, Watertown, Wis.	305
Magda Lass Bessie, Dec. 15, 1910; H. A. Semecker, Waterloo, Iowa	250
Substitute for No. 70; F. S. Fitzsimmons	325
Johanna Van Beers Primrose De Kol, Sept. 20, 1913; N. W. Fenten	300
Sunrise of Elm Grove, Jan. 30, 1914; H. S. Fitzsimmons	325
No. 76; J. F. Rocke, Doylestown, Wis.	115
No. 77, April 14, 1915; A. L. Leuz, Watertown, Wis.	85
Creole Bell Hiawatha, Jan. 17, 1907; H. S. Fitzsimmons	250
Bluff City Snowball, May 27, 1910; S. E. Turville	185
Daisy Pietertje of Rock 2d, July 26, 1914; Fred Wobring	145
Ota Van Friesland Beets 3d, March 13, 1915; A. C. Kruschke, New Richmond, Wis.	135
Jewel Aaggie Canary 2d, Dec. 26, 1914; W. J. Boppe, Waterloo, Wis.	115
Royal Burke Rowena Maid 2d, Jan. 16, 1915; N. W. Feitner	135
Lady Friesland Beets Diploma, Mar. 28, 1915; W. J. Bopp	130
Princess Monona Segis, Dec. 25, 1914; N. W. Guenther	105
Heilo Segis Diploma 3d, calved Dec. 26, 1914; J. M. Taussenz, Stockton, Ill.	95
Mabel Flossie De Kol, Feb. 14, 1913; Art Collentine, Monroe, Wis.	300
Louisa Beets Segis, Sept. 28, 1914; N. W. Feitner	150
Ace of Clubs Daisy Korndyke, Oct. 18, 1911; Frank Gronet, Watertown, Wis.	240
Sairy Gamp Beets, May 31, 1914; H. S. Fitzsimmons, Granger, Ia.	150
Lorna Beets, Sept. 25, 1913; E. A. Steinbrecker, Swanson, Mich.	330
Lady Empress De Kol, March 26, 1911; T. S. Fitzsimmons	225
Wisconsin Bess Gewina Fobes, June 17, 1914; Fred Wobig	165
Wisconsin Homestead Bride, Dec. 23, 1911; H. A. Schmicker, Waterloo, Wis.	300
No. 97½, heifer calf; H. A. Schmickler, Waterloo, Wis.	60
Wisconsin Bess Homestead De Kol, May 19, 1911; H. F. Fitzsimmons	195
Hengerveld True Lass Piebe, April 16,1914; H. Anthes	185
No. 100 (Sub.); E. Gibbs, Fox Lake, Wis.	275
Nudine Serena Lucy, Aug. 31, 1907; Wm. Berglin	315
Hilda Lassie Dora, Nov. 16, 1913; Erwin Hartman, West Allis, Wis.	230
Lady Colantha De Vries, Jan. 22, 1914; W. J. Pester, Whitewater, Wis.	245
Gracie Johanna De Kol, Feb. 13, 1915; W. H. Whitacre	260
Katy Johanna De Kol 2d, Nov. 20, 1913; Sam Ubert, Monroe, Wis.	260
Idyl De Kol Bonheur, April 8, 1912; Sam Ubert	305
Mercedes Anna De Kol Pietertje 2d, Oct. 27, 1907; C. A. Masche, Watertown, Wis.	140
Kayewood Elsie Tenhassen, April 6, 1909; H. J. Barker, Elkhorn, Wis.	240
Maid Mercedes Terzool, June 1, 1912; E. S. Turville	250
Countess Johanna Fayne, Feb. 18, 1914; Martin Zwaster, Wilwaukee, Wis.	205
Rhoda Mercedes De Kol, Dec. 29, 1908; H. J. Barker	290
Reka Dora, Mar. 7, 1906; N. F. Feitzer	215
Cora Hengerveld Beets, July 15, 1914; W. J. Bopp	165
Lady North Star, July 23, 1914; E. O. Steinbrecker	175
No. 119, Jan. 4, 1916; A. C. Kruschke	155
Pauline Astrea 2d, Oct. 18, 1915; S. E. Jones	150
Daughter of Minnetka Georgia De Kol 2d, July 4, 1915; S. E. Jones	115
Lenore McKinley, Sept. 1, 1915; P. C. Rauch, Corcoran, Cal.	125
Jennie Segis De Kol, Oct. 24, 1915; H. Anthes	85
Lucy Cleome Ormsby, Oct. 19, 1907; H. S. Fitzsimmons	240
Gipsey Girl Clothilde 2d, Aug. 1, 1914; H. F. Fitzsimmons	150
Roland McKinley of Rock Farm, Sept. 12, 1915; J. F. Cody	125
Flossie Freddie De Kol, Feb. 3, 1907; M. A. Witte, Watertown, Wis.	300
Miss Sidney Veeman, Jan. 3, 1910; Max Witte, Watertown, Wis.	160
No. 131 (Sub.); E. J. Fargo	70
Gem Fobes Oak De Kol, April 20, 1915; Wm. Everson, Fort Atkinson, Wis.	130
Rosetta Douglas De Kol, April 1, 1915; Henry Westphal	130
Emma Hamilton, June 12, 1915; T. J. Mullen	95
May Ruth Douglas, May 3, 1915; E. Krueshe, Horicon, Wis.	150
No. 137 (Sub.); P. Lehner, Princeton	115
May Mercedes Fayne De Kol, Feb. 20, 1910; H. A. Schmiche, Watertown, Wis.	235
Marcade Jewel, April 10, 1910; J. R. Lamb, Janesville, Wis.	175
Elmdale Irene De Kol 2d, Mar. 22, 1914; W. J. Bopp	225
Elmdale Rooney De Kol 2d, Sept. 14, 1914; H. Westphal	210
Dinah Johanna Rue, Nov. 25, 1914; F. Wobig	165
Lady Irene Johanna, Sept. 12, 1914; W. J. Bopp	230
Lady Alcartra Johanna, Jan. 8, 1915; T. Wobig	150
Trinda Klondike De Kol 4th, Jan. 7, 1915; T. Wobig, Clinton, Wis.	125
Bess Boon Lillith Pauline 2d, Nov. 5, 1914; Fred Wobig	125
Elmdale Charity Belle 4th, Oct. 18, 1914; F. Wobig	145
Maid Kilka, Nov. 20, 1907; H. Anthes	325
Jessie Fobes Myrtle Beets, June 19, 1915; F. Moscript	350
Jessie Fobes Myrtle Homestead, Jan. 10, 1907; H. F. Fitzsimmons.	330
Moensje Aurora Pietertje, Oct. 4, 1909; H. S. Fitzsimmons	405

FEMALES.

129 females.	$27,760;	average....	$215.12
18 bulls ...	1,930;	average....	107.02
147 head ...	29,690;	average....	201.29

Cut Your Feeding Costs In Half

Alfalfa Recutting Attachment

Yes, sir! Clean in two. Don't say you *can't*. For *thousands* of farmers are doing it *every day*.

They are *selling* their No. 1 hay and milling their *off grades* for feeding. They are fattening cattle, sheep, hogs and poultry with the *finest* alfalfa chop you ever saw. They are making *combination feeds* of alfalfa with oats, corn and peas. Many are milling clover, rice straw, bean straw, pea vines and *dried cornstalks*. Alfalfa—leaves, stems and all—is made into a fine grade of chop without injuring the color of the hay. The only way you can do this and get a positive guarantee of big capacity (1200 to 2700 lbs. of meal per hour) is with the wonderful recutting attachment in sizes 12 to 26.

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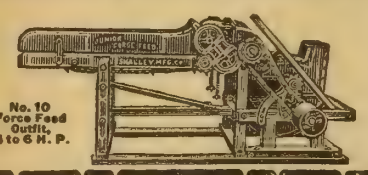
(7 sizes) Silo-Filler (7 sizes)

No grinding or hammering. Powerful, whirling, bevel-edge blades cut like a lawn mower. Feed is fine, even and uniform resulting in *greater tonnage* in the silo. Famous grip hook, forces feed table saves work of *two men*. Wide flaring sides and deep throat on every cutter.

Patented, low-speed, one pulley chain drive not only makes a *cleaner, faster* job, but saves one-fifth to one-fourth *power cost* and cuts out *unnecessary wear* on belt. Blower is built *independent* of cutter so fan speed can be increased or decreased *without changing speed of knife or shaft*.

Powerfully built for hard, long service. See for yourself how *thousands* of farmers are cutting feeding costs in two; saving time, labor and power costs; getting better and greater silo tonnage. Send for the handsome, illustrated FREE Book *today*. It tells the story.

Smalley Mfg. Co., Dept. 13 Manitowoc, Wis.



No. 10 Force Feed Outfit, 4 to 6 H. P.

THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with

ABSORBINE

also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. $2 per bottle delivered. Book 3 M free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. $1 and $2 a bottle at dealers or delivered. Book "Evidence" free.
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SAFETY STORM BLAST LANTERN FREE

This Safety Lantern cannot catch fire or explode. It is absolutely safe at all times and on all occasions. If you drop it in the hay loft, no oil can escape; if the cow kicks it over, it goes out at once.

It cannot blow out in a cyclone because of the storm blast feature. It is just the kind of a lantern every farmer needs about the house and barn.

Patent opening device raises and swings the globe free for lighting, filling and trimming. This lantern is fully guaranteed and is endorsed by the highest authorities on fire insurance, fire fighting and explosives. If dropped or turned over it immediately goes out. Oil cannot run. Impossible to catch fire. A lantern you will always feel safe with in the house or barn.

OUR OFFER

Send $2.00 for a three year new or renewal subscription to The Wisconsin Farmer and we will send you one of these Safety Storm Blast Lanterns as a premium free and postpaid.

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VETERINARY

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Loss of Pigs.

Does it affect small pigs before they are born to feed their mother ground barley? Have had two sows farrow and all the pigs from one of them were dead when they were born and from the other the first four were alive and seven were dead.

If a good grade of barley is used it should have no ill effects on your sows, causing them to lose their pigs.

Sterility in Mare.

I have a Shire mare, nine years old, which had a colt when four years old and, although she has been bred every year since, both natural and artificial, she will not get with foal. She looks healthy. The last time she was bred she remained in heat for two weeks and then came in heat in twenty-one days. Please let me know what to do with her.

There are a number of conditions any one of which may be the cause of your mare not being able to conceive. Among them are lax condition of womb, diseased ovaries, excessive heat periods, etc. Would advise you to have a competent veterinarian examine this mare and see if he can find the cause of the trouble.

Heaves.

I have two horses, fifteen and twenty years old, which are affected with heaves. They are rather thin. Their teeth are fairly good. I would like to put more flesh on them. Would Fowler's Solution or Arsenic be good for them? Please tell me how to feed it. Would it stop the heaves?

Fowler's Solution would be a good general tonic for these horses and might be some aid in holding heaves in check if proper attention is also paid to feeding. Feed small amounts of wholesome hay and good ration of grain. Water often and not so heavy at one time. Give from two to four teaspoonfuls of Fowler's Solution of Arsenic in half a pint of water once daily.

Cough and Scouring in Calves.

My calves cough and get very thin and when they drink their milk they shake themselves all over. They have the scours badly also. They have been sick all winter and have had ringworms. I feed them separator milk and calf meal and second crop hay.

Your calves seem to be victims of some digestive disorder which may be parasitic in origin or may come from some undesirable feed. However, it would be hard to state just what the primary cause of this disorder is without a thorough examination of the animals, the feed and water supply, etc. You should secure the service of a competent veterinarian and have him examine the animals.

Nodular Disease.

We have lost six ewes this winter, some before lambing and some afterward. Have also had this trouble before. They become weak, the liver turns whitish and the blood becomes watery. Sometimes the intestines and the viscera almost rot. The intestines have nodules too. What is the trouble and what can be done to cure?

Your sheep are probably victims of nodular disease, which is caused by an internal parasite which affects the intestines in the cystic form. Nothing can be done to rid animals of the cystic form, but the adults may be gotten rid of by use of some of the vermifuges, such as creosote and thymol. Sanitation is all-important. Clean up the premises and if possible rotation of pastures should be practiced.

General Debility.

I have a horse that I have been feeding alfalfa for some time and was working him all the time. About a month ago he began to lose in flesh, then he got lame in the right hind leg. After a while he got tired and lay down. He ate well and walked well, but after a while began to weave from one foot to the other. He is eight years old. What would you advise me to do? I have had two local veterinarians.

Your description of this case is not very clear and, therefore, it would be hard to make a diagnosis with any certainty. It seems if you have had two local veterinarians and neither knew the trouble that there is little use for one who has not seen the animal to attempt a diagnosis.

Indurated Areas on Udder.

I have several cows that have hard bunches in the udder about the size of a goose egg. Some have it close to the teats and some about half way between. I have tried turpentine, lard and salt. This is generally very good, but I am getting poor results. The cause I think comes from cold cement, as they scratch the bedding away. They are heavy milkers.

It is possible the indurated areas on your cows' udders have been brought about by coming in contact with the cement floors. These spots may be of just a callous nature and some may be of an abscess nature. It would not be advisable for us to advise you until the exact character of the swellings are known. Since you have more than one cow affected and they are heavy milkers it would be policy for you to have a veterinarian examine these cows and offer treatment and also any other advice needed as to prevention, etc.

Stricture of Milk Duct.

I have two fresh milk cows that seem to have a lump in one teat. I can't get much milk from that teat at a time, just have to strip it. Is the milk good to use? Tell me what causes this and what I can do for it.

These cows are troubled with stricture of the milk duct. Sometimes this can be remedied by use of a stricture remover, but the best thing to do is to fatten and sell such animals before they give you too much trouble. A milking tube may be used on such cases and the milk let run out at milking time. The tubes should be thoroughly cleansed before using each time.

Abortion in Cattle.

Can you tell me the cause of abortion in cattle and what the remedy is, if there is one that can be depended upon? Also please tell me whether or not the cow may be infected through the bull which has served cows that have aborted. If so, is there anything that can be done to disinfect or sterilize the bull so as to do away with this condition? I have heard a number of surmises and guesses about this matter and I will appreciate some authoritative information.

The subject of abortion is a big one and if of the infectious nature the treatment and eradication are still bigger than the subject. The cause of infectious abortion is the bacillus of infectious abortion gaining entrance into the generative organs. As to prevention and treatment, the first thing to do is to remove noninfected animals from infected animals and then thoroughly clean up and disinfect the premises. You should burn the dead fetus along with membranes and afterbirth. Males which have covered infected females, or in which there is a suspicion in this direction, should be subjected to treatment by cutting the hair off the end of the sheath and then washing the prepuse sack with a ½ to 1 per cent lysol solution or 1 per cent soda solution. Following each covering the washing should be repeated with pure lukewarm water or one of the above solutions. In treating those cows which have aborted the vagina and uterus should be irrigated with warm antiseptic solution 1 to 2 per cent creolin or lysol. This treatment should be continued at first once or twice daily and later every two or three days until the discharge has ceased for several days. Do not breed the animals for at least two months after abortion and subsequent treatment. Treatment of contagious abortion takes time and patience and should be supervised by a competent veterinarian, and in this way some results may be realized.

American Beauty Buggies

$56.95

Always on Trial

If at any time you feel that your American Beauty Buggy is not giving you the service you have a right to expect, you can return the buggy to us and we will send you your money together with any freight charges you paid.

It takes the highest quality of material and workmanship to stand a trial offer like this. There are no better buggies made today than American Beauty Buggies, and by shipping from a warehouse near you we are able to lay down at your station a genuine American Beauty Buggy at a price that means a very large saving.

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In our catalog we show buggies as low as $26.95, also a full line of road carts, surreys, spring wagons and pony vehicles at money saving prices. Send today for our vehicle proposition No. 74W90

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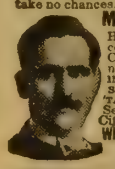
PRICES CHOPPED

10,000 NEW 1916 GALLOWAY SANITARY CREAM SEPARATORS

SPECIAL PROPOSITION from NOW till GRASS—in addition to my new low prices. My way of opening new territory, as one separator sold in a neighborhood always sells from one to twenty-five more. EVERY GALLOWAY SEPARATOR is equal to if not better than other separators selling for $75 to $96. Users say "way ahead of others." I only ask one thing—before you buy a separator of any make, kind or any price, get my big book; pick out the separator you want, try it 90 days, 180 times, at my expense. If you decide to keep it (you don't have to) I'll give you the choice of 5 open, fair and square selling plans and guarantee my separator for 10 years against defective workmanship and material and a $25,000 bank bond backs every sale. You take no chances.



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Handsomely printed, beautifully illustrated in colors. Tells all about my new 1916 Sanitary Cream Separators, how I build them, gives my new low prices on 4 new sizes, also 5 EASY SELLING PLANS, cash or terms, etc. I'll also send my SPECIAL PROPOSITION ON 10,000 GALLOWAY SANITARY CREAM SEPARATORS. Drop me a postal today. Separators are shipped from Waterloo, Kansas City, Council Bluffs, St. Paul or Chicago.

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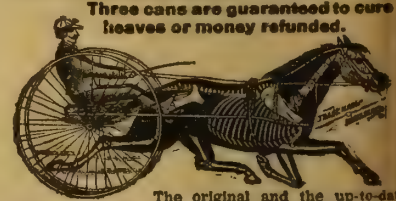
Cream Separator Manufacturing Specialists.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.
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FOG, DRIZZLE or DELUGE What matter? Inside a **FISH BRAND REFLEX SLICKER $3**

you're always dry and happy. A. J. TOWER CO. BOSTON

TOWER'S FISH BRAND

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Holstein Sale by the Lake Mills Consignment Sales Company.

THE Lake Mills Holstein Breeders' Consignment Sales Co., will hold their thirteenth semiannual sale. Tuesday and Wednesday, May 2d and 3d, in the company's sales building, Lake Mills, Wis. This will probably be one of the greatest Holstein sales ever held in Lake Mills or even in the middle West. The company's high reputation for fair dealing, the brisk demand for cattle this spring and the excellent quality of the cattle consigned will tend to make this sale a great success. More extra-choice cattle are entered in this sale than heretofore, and a greater number of cows have outstanding records of their own. Fletcher Bros., Waupun, Wis., have among others a 26.66-pound daughter of Sir Netherland Korndyke. Fred M. Smith, Elkhorn, Wis., consigns a number of fine A. R. O. cows bred to Dutchland Sir Pietertje Colantha. F. J. Bristol & Sons, Oakfield, Wis., have a large consignment of excellent quality, among which are several fine sons of the famous bull, King Segis Pontiac Polkadot, also a number of very choice females with good two-year-old records, including a 21.5-pound two year old sired by Johanna McKinley Segis and out of a twenty-five-pound dam. S. M. Randall, Waupun, Wis., consigns a number of fine animals bred to Joe Oak De Kol Fobes, among them an 18.88-pound two year old. F. B. Green & Son, Evansville, Wis., have a choice consignment of cows, some of which will raise their records before the sale. In addition they have a remarkably well-bred bull from Canary Homestead Oak De Kol and a 24.63-pound three-year-old. Geo. Williams, Orfordville, Wis., offers a fine bunch of young heifers, some bred to Dwight Aaggie Segis Johanna. H. S. Hoard, Madison, Wis., has a large consignment of a number of good A. R. O. cows. His lot includes a nice bunch of choice, well-bred heifers, bred to Colantha De Kol Pietertje, a thirty-pound son of Colantha Johanna Lad. S. C. Stanchfield, Fond du Lac, Wis., consigns some fine A. R. O. cows with records up to 23.44 pounds, most of them bred to Colantha Johanna Champion 4th. John Hetts, Ft. Atkinson, Wis., has entered a number of choice young heifers, sired by Mutual Piebe De Kol, Johanna King of Rock and King Segis Hengerveld of Rock. C. E. Friday, Oregon, Wis., offers a half dozen good young cows, bred to his registered sire, Emblagaard Tritomia Joseph, which is to be sold. The estate of Dr. H. B. Favill offers five very choice cows with the following records: 23.06, 20.88, two at nineteen and one at seventeen. Some of these cows, which will be retested before the sale will show an increase over their present records. C. C. Fries & Son, Richland Center, Wis., have in the sale a fine bunch of first-class A. R. O. cows, which will be heard from in the future if given the right kind of care. De Kol Pietertje Vale, with a present record of 22.375 pounds, is expected to develop into a thirty pounder. Richland Pontiac Butter Boy, a grandson of Pontiac Butter Boy and from a 31.77-pound four year old is perfect in every way and will make an excellent herd header. Anyone who can possibly be in Lake Mills, May 2d and 3d, should do so and see this great sale and also get some dependable cattle. The same company will hold another sale at Watertown, Wis., Thursday and Friday, May 6th and 7th. Write for catalog, which contains full list of consignments and other facts well worth while. Address Frank H. Everson, Mgr., Lake Mills, Wis. See page 29.—Adv.

Northrup, King & Company's Seed Book.

IT IS reported that only 5 per cent of the 1915 corn crop is fit for seed, because the weather was unfavorable for its proper development. Even if 1915 seed corn should germinate, the possibility of its maturing thoroughly is very small unless the weather for this season is nearly ideal. A comparison of the vitality of 1914 and 1915 seed corn, sprouted in boxes, is shown on page 11. Northrup, King & Co., Seedsmen, Minneapolis, Minn., in their latest catalog have an interesting discussion of the failure of the 1915 seed corn crop. They explain why the 1914 seed corn, which they are selling, has greater germinating power and vitality than 1915 seed. The catalog also contains valuable information on other seeds and is a practical planting guide for garden and field. Wisconsin Farmer readers should send for a copy of this catalog, which will be a great help in selecting seed for this season's planting. It will be sent free to any address upon request if you mention The Wisconsin Farmer.—Adv.

Perfect Skimming Efficiency in United States Separators.

IN actual working tests at the Pan-American and Alaska-Yukon Expositions, the United States cream separator scored perfect in skimming efficiency. This same perfection is found in United States separators on thousands of farms and dairies, where day after day they save the farmer time and money. If wanting a cream separator, you cannot afford to be without a catalog of the Vermont Farm Machine Company, Bellows Falls, Vt., which explains the efficiency and construction of United States separators. Write for this catalog today and look it over at your leisure. Please mention this paper when writing. See advertisement on page 18.—Adv.

Guernsey Cattle Breeders—Attention.

THE banner sale of Guernsey cattle to be held in the western part of Wisconsin will be held at West Salem, Wednesday, May 3d, at which time sixty head of imported and American-bred cattle will be sold at public auction. Mr. Alfred I. Stubbs, of West Salem, Wis., has maintained a large herd of Guernseys, but does not wish to keep so many in the future, consequently he is consigning some of his best females as well as bulls, to this sale. Rundell Brothers, have farms at Hammond and Roberts, Wisconsin, and the cattle they are selling are choice throughout. There will be several cows in the sale that have large A. R. records, also daughters and sons out of A. R. cows. Imported Holden 4th 12179 is the sire of the present world's record two-year-old Guernsey heifer and the fact that he is the sire of some of the animals in the offering, should prove an attraction for anyone wanting the best. Bob Rilma 16141 the only son of May Rilma, until recently the world's record cow, is the sire of some of the individuals to be sold. The get of such bulls as imported Holden 4th, Bob Rilma, Langwater Princeling, Masher 63d and others, should be in demand by critical buyers. The offering will consist of cows that are in milk, cows and heifers that will soon freshen, breeding bulls and calves. Remember the fact, that there will be twenty cows safe in calves to imported Holden 4th. All stock has been tuberculin tested, and can be shipped to any point. West Salem is the first station west of La Crosse on the C., M. & St. P. and the C. & N. W. and the railroad connections are the very best from either direction. The catalogs are now ready, a postal will get you one. Write A. J. Hyzer, sales manager, West Salem, Wis., and in so doing kindly mention The Wisconsin Farmer. See page 29.—Adv.

Jersey Bulls for Sale.

JERSEYS have made good for Fred Stubley, Black Earth, Wis., and they will make good for you. He has one of the good herds of the state of Wisconsin and few herds contain better bred individuals. His herd is made up of about 100 head, twenty of which are imported cows. Imported Noble of Oakland was one of the greatest bulls the breed has ever produced and the breeder that has been fortunate enough to get one of his sons has been able to forge ahead. Mr. stubley had one of these sons that he called Noble of Avaranch and the get of this bull has made good in this herd. Another bull that has sired some wonderful females as well as herd bulls is Golden Maid's Viscount by Imp. Golden Maid's Prince, a bull that is known wherever Jerseys are raised. Bulls of serviceable age are being offered for sale at this time and several of them come from the above line of breeding. For their dams they have cows with advanced registry backing. You get the best when you buy Jerseys from the Stubley herd. Write him for further information and in so doing please mention this paper. See page 31.—Adv.

Piano Player Offer.

A GREAT many of our readers have thought that they would some day get a piano player. These readers will be interested in the announcement of the Story & Clark Piano Co., 86 Wisconsin street, Milwaukee, Wis., which appears on page 32 of this issue. This special offer appears to be very attractive and worthy the attention of anyone who is interested either in a player piano or a piano. The Story & Clark Company is a reliable concern which has been dealing in pianos and organs for many years and most of the readers of this paper are acquainted with them. Those who do not have the cash at hand to pay all down on a player piano or piano may arrange for small monthly payments and yet have the use of the instrument all the time it is being paid for. The free trial coupon in their advertisement places those who write under no obligation to purchase unless they wish to do so. We ask that those who write answering the Story & Clark advertisement be kind enough to mention The Wisconsin Farmer in their letter.—Adv.

Registered Holstein Heifers for Sale.

ADAM LORENZ, Sheboygan Falls, Wis., is offering ten registered Holstein females for sale on page 31. He also offers a few registered cows and young bulls. Our readers who are in the market for Holsteins can do no better than by writing to this breeder.—Adv.

Two Young Holstein Bulls for Sale.

D. W. EMERSON, Ashland, Wis., has for sale two young registered Holstein bulls at $110 each, f. o. b. cars, Ashland, Wis. These bulls were born in August, 1915; weigh about 700 pounds each, and are ready for service. They are descendants of Berl Wayne Paul De Kol and Bell Korndyke, butter 25.77, and are nicely marked, bout half white and half black. See the advertisement on page 29 and kindly mention The Wisconsin Farmer in writing Mr. Emerson.—Adv.

Berg's Holstein Consignment.

BENJ. F. BERG, Lake Mills, Wis., is one of Wisconsin's most progressive Holstein breeders. This has again been recently demonstrated by the official records which his cows have made. Mr. Berg is a discriminating judge of good cattle and a student of pedigrees. He has selected his breeding stock for both good ancestry, high production ability and good dairy type. He has consigned four head of choice animals to the Wisconsin Breeders' Sale at Watertown, Wis., to be held May 4th and 5th. One of these is the son of the thirty-pound cow, Lady Oak 2d De Kol. She just completed her thirty-pound record on April 5th. She is a daughter of Homestead Jr. De Kol the noted bull that has sixty-nine A. R. O. daughters, seven of which now have records ranging from thirty to 35.55 pounds of butter in seven days. Her dam is the great foundation cow, Lady Oak, which now has three A. R. O. daughters with records from thirty to 31.54 pounds butter in seven days, and one of the few cows of the breed to have three thirty-pound daughters. Lady Oak 2d De Kol will be kept on yearly test and a high record is looked for. The sire of the thirty-pound bull to be offered for sale is Canary Fobes Helena De Kol, the fine sire at the head of Mr. Berg's herd. He is a son of the thirty-five-pound bull, Canary Paul Fobes Homestead, a son of the great bull, Canary Paul, and the thirty-five-pound cow, Jessie Fobes Bessie Homestead. The dam of Canary Fobes Helena De Kol is a twenty-six-pound daughter of Fobes Tritomia Mutual De Kol, which has thirty-four A. R. O. daughters, five with records from thirty to 36.44 pounds butter in seven days. Mr. Berg has also consigned a fifteen-pound two-year-old daughter and a yearling daughter of Canary Fobes Helena De Kol. There will also be sold a bull calf out of the fifteen-pound two-year-old heifer. This calf was sired by King Segis Pontiac Alcartra, that is 100 per cent the same breeding as the $50,000 bull, King Segis Pontiac Alcartra. We advise our readers to attend this sale and look over these good animals. See page 29.—Adv.

Three Thousand Owners Praise the Inter-State Car.

THE Inter-State motor car at $850 has definitely proved that it has power to meet all emergencies, comfort to satisfy all requirements and beauty to please the most artistic. More than 3,000 Inter-State owners can testify to the truth of this statement. They have driven their cars under all conditions of every day use and find the Inter-State equal to all emergencies. Full motor satisfaction is found in the overhead valve type, four-cylinder Inter-State motor with removable cylinder heads, three and one-half inch bore and five-inch stroke. The carburetor has an automatic float feed and is very economical in fuel consumption. The body of the car is built as a five-passenger or as a roadster, with deep cowl, extra wide doors, wide seats and genuine leather upholstery. Each car is provided with an electric starting and lighting system and complete equipment. If you want to buy a car, be sure to write for catalog and literature of the Inter-State, advertised on page 15. Address the Fowler Motor Sales Co., 447 Jackson St., Milwaukee, Wis.—Adv.

A Free Watch With Each Trial Shipment of Stock Tonic.

A VERY liberal offer to farmers and stock raisers may be found on page 7 in the advertisement of Wilbur's Stock Tonic. In order to increase the use of this useful stock tonic, E. B. Marshall, president of Wilbur Stock Food Co., Milwaukee, Wis., will give a New York Standard Watch to each of the first 1,000 readers of The Wisconsin Farmer who will send for a trial feeding of Wilbur's Stock Tonic. If the tonic does not fatten live stock, rid them of worms and put them in the pink of condition, there will be no charge for the tonic, and the watch may be kept to pay for your trouble. This watch would cost from $6 to $8 in any store. If you are interested in this liberal offer, read carefully the advertisement mentioned above and fill in and mail the coupon attached. Don't forget to mention The Wisconsin Farmer when you write.—Adv.

Red Polls for Sale.

IF interested in Red Polls, you will be interested in the herd owned by E. L. Bennett, Black Earth, Wis. Owing to lack of room he will sell a limited number of bred or open heifers and a few bulls around a year old. These females and bulls are in good condition, in fact far better than the average run of stock this spring. They will continue to do well on grass and there is no reason why they should not make money for the prospective purchaser. Mr. Bennett is quoting prices that will appeal to you. His cattle, individually are good and they come from the very choicest line of breeding. Communicate with him, it will pay you. Please mention this paper when writing. See page 30.—Adv.

Frank Iam's Offering.

MR. FRANK IAMS, of St. Paul, Neb., proposes to make a clean-up on his draft stallions and mares in the next thirty days. Concerning his offering he writes: Be a "wise business man." Take "Frank Iams' tip," that United States is on the "high brink" of a "horse famine." United States placed contracts for 10,000 horses last week for "war horses" for Mexico. Europe is buying 500 horses daily, and has bought of United States 1,000,000 horses now for "war." Prices are advancing. Three and four-year-old horses, and 25 per cent gray horses are being bought. A draft gelding sold at Chicago auction last week at $425. No horses will be imported in ten years. First-class registered draft stallions are extremely scarce, and not 50 per cent enough to do "the service of mares" for 1916. Frank Iams is "closing out" all his horses. (Must be sold at some price) and has "reduced prices" on all his "show and business stallions and mares' from $100 to $500 less than formerly on each stallion and mare, to made a "clean up" in next thirty days. Uncle Dudley:—Be a "live wire," get into the "easy money" making game of breeding "big Percherons and Belgians." Be a "self-starter." Don't wait for your neighbor to "pluck" the "big profits" from your "cherry tree." Pull out the "spark plug" this "year of war" is best time "in fifty years" to "coin money in horses." Time to buy "a new stallion" or "pair of mares" of "Iams." The year 1316 is the "mascot year" for "big profits' to stallioners and breeders of "full bloods" and "big drafters." The "early bird" gets the "big money." Buy a "through ticket" to "Iams' Town" and get choice of his imported and home-bred Percheron and Belgian stallions and mares. All in the "pink of condition." They include my 1915 "show herd" of Paris and Belgian winners. "Iams' kind" are "big, classy," "peaches and cream" drafters and the best bunch of "herd headers" and "business stallions' 'owned by one man. They are two to six years old, weight 1,800 to 2,400 pounds, 80 per cent blacks, 80 per cent "ton horses." —All at "bargain prices" and must be sold. I have all my "medal and state prize winners" and best and largest horses from my 1914 importation. Have a "choice, classy bunch" of "ho.se-bred" horses. "Real drafters," bought for "spot cash" and "first choice" from "best breeders." That make "Ikey boys" sit up and take notice. I guarantee to show you horses that you will wish to buy and choice of my stallions for $800 and $1,300 (bar four, a little higher) better than are being sold to "stock companies" for $4,000 each. One year's time at 7 per cent bankable or secured notes. One and two years' time at 6 per cent security, $100 less price for cash than time. "Grays" and "h.me-bred" stallions come $200 cheaper. My registered Percheron mares are "real drafters," three to six years old, weight 1,800 to 2,100 pounds, blacks and grays. In foal and broke to work, mares $800 and $1,000. These mares bring colts that sell for $500 at six months old. If you visit me, and do not find every statement in "advertisement or catalog" true, I will pay you $500. I pay freight of horse and fare of one buyer both ways. Give breeding guarantee of 60 per cent, (backed by $500,000). I can place $1,500 insurance. Iams' imported stallions and mares are registered, approved, "branded," "inspected" and pedigrees stamped O. K. by governments of United States and France. Also inspected by a Nebraska deupty veterinarian and a certificate of "health and soundness" given with each horse. "Special prices" made at barns only. "Reduced prices" on "show horses." Come and see Iams and "big black boys." My "new selling clothes" fit all buyers. I'll treat you "square" and "save you" $1,000. I sell horses. Come on along. Try "Iams" "dad", and write for his 1916 catalog and "eye-opener." See page 30.—Adv.

The One-Man Stump Puller.

FARMERS who have stump land can get some valuable suggestions on clearing same and getting it under cultivation in a cheap and efficient way, by sending for the Kirstin book on land clearing. This book tells how to pull stumps, trees, brush and hedge without the help of a force of men and horses. It explains the use of the one-man stump puller and how to operate it most efficiently. The one-man stump puller is designed on mechanical principles to multiply the force of one man so that mammoth stumps can be pulled by him. Send for this book today to A. J. Kirstin Co., Escanaba, Mich., and please mention The Wisconsin Farmer in your letter. See advertisement on page 10.—Adv.

Morley Co.—Short-horns and Percherons.

DO you need a Short-horn bull whose dams are heavy milkers, if so write R. A. Morley Co., Baraboo, Wis. They are offering several good young bulls at prices that are attractive. In Percherons, they have a few young stallions, sound and right in every way, and, as they wish to dispose of them this spring, they are making prices far be-

low their value. Write the above firm at once and mention The Wisconsin-Farmer. See page 30.—Adv.

Chippewa Stock Farm.

THE writer recently spent the day with L. P. Martiny, Chippewa Falls, Wis., and found him to be the owner of one of the most modern and up-to-date breeding establishments that we have visited in the state. We don't know whether Mr. Martiny is a "progressive" in politics, but he is indeed progressive in his live stock and farming operations. Chippewa Stock Farm consists of 320 acres, located about five miles from the above town. This is an ideal stock farm, there being 200 acres of level farming land, as good as any man would wish to own—120 acres is used for pasture and hay land and through this good grazing land runs a small creek that furnishes fresh water for the stock the year around. His cattle barn, horse barn and hog barn are as modern as they can be made. Guernsey cattle, Poland China hogs and Percheron horses represent the breeds of live stock raised on the place. The Guernsey herd is one of the best, though not the largest, in the state. Heading the herd is Stranford's Glenwood of Pinehurst 6th he by Stranford's Glenwood of Pinehurst that has nine A. R. daughters. His dam, Selma of Pinehurst 4th has a two-year-old record of 485 pounds of fat and was the first cow of the breed to make five A. R. records. This bull is a double grandson of the noted Glenwood Bo of Haddon. One of his sons was first and junior champion at Minnesota State Fair, also at the Wisconsin State Fair, last year. The junior herd bull is Dasher of Sarina by Selma's Glenwood. The sire of this bull and the dam of the first mentioned bull are full brother and sister. Mr. Martiny's herd is rich in Glenwood breeding. Perhaps the owner is better known as a Poland China man, owing to the fact that he has been showing his hogs at state fairs for the past fifteen years. One hundred spring pigs represent this year's crop and they are a fine, thrifty bunch of "rooters." The blood of several noted boars runs through the veins of these pigs. There are some litters out of daughters of Smooth Big Bone sired by Black Big Bone 2d, both grand champion boars of Iowa. Litters by Mollie Jones Lad he a son of Big Tom the 1914 Minnesota grand champion. Some are by Chief price he by the noted Chief Price Again and out of Pawnee Lady 5th, one of the greatest brood sows ever owned in Iowa. Daughters of the great boar, Repeater and Black Jumbo have litters sired by High Wonder, a good son of Long Wonder 2d. Big Tom is a grand champion of Nebraska and a daughter of his has a litter by Long King he by Iowa King a boar known wherever Polands are raised. This does not cover all the fashionable breeding in this herd, we simply mention it to show the character of the blood lines. What took our eye was a September boar sired by Golden Gate King. This is an excellent boar of his age—great length, a high back the best of feet and an ideal head and ear. The pig has never been pushed, but has plenty of size now for his age. We are in hopes Mr. Martiny will fit him for the fall shows, but he wishes to use him quite heavily and after the spring service it isn't likely he can get him in condition for the fairs. His sire, Golden Gate King, is owned by Henry Dorr, Remsen, Iowa, and he considers him the best boar he ever owned—and he has owned some of the best. At the present time Mr. Martiny is offering fall boars for sale. They are in nice condition and there are several in the lot that are good herd-boar prospects. This is going to be a good year to raise hogs, and, of course, no one should use anything but a pure-bred boar and these boars will suit you. Get his prices and place your order at once, for naturally the first buyers get the pick of the lot. Keep this herd in mind for it is without a doubt one of the best Poland herds in the state. They are big type, yet they have that quality that many of the big-type hogs fail to have. Write your wants and in so doing kindly mention the fact that you saw the advertisement in The Wisconsin Farmer. See page 30.—Adv.

Red Poll Bargains.

WITH this issue of Wisconsin Farmer Natt Kimball, Black River Falls, Wis., starts his advertisement calling attention to the Red Polled bulls he has for sale. Mr. Kimball is not the largest breeder in the state, but he maintains a few select cows, and keeps the females in his herd, selling only the bulls. In this way he has built up a herd of uniform type and knows just what to expect from the families represented in the herd. At this time he has for sale, one yearling and one two-year-old bull. Mr. Kimball is a good farmer, feeder and business man and when one finds a good, up-to-date farmer, he generally finds stock in a healthy, thrifty condition. His cattle are in good condition and the two bulls being offered for sale are ready to go into service and continue to do well. There is a growing demand for Red Poll cattle and if you are interested in this breed communicate with Mr. Kimball at once. In writing please mention The Wisconsin Farmer. See page 30.—Adv.

Reduce Feeding Costs.

THOUSANDS of farmers are reducing their feeding costs, saving time, labor and power and getting greater silo tonnage with Smalley machines. You can learn how they do it. Simply get the illustrated free book of the Smalley Manufacturing Co., Manitowoc, Wis. This company makes silage and milling machines of a very high grade, which are designed for long, hard service. Send for the book mentioned in the advertisement on page 26 and learn how these machines are used to reduce feeding costs and utilize products that are now going to waste on the farm. The information may mean greater profits for you. Kindly refer to this paper when you write.—Adv.

Salter & Sons' Red Polls.

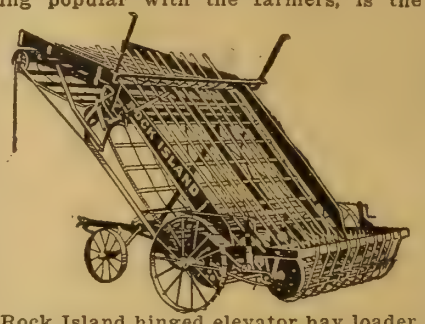
J. W. SALTER, Unity, Wis., belongs to the pioneer class of Red Poll breeders in the state. He moved from Madison to Unity thirty-five years ago and for thirty years, he has been breeding Red Polled cattle. The first animal he purchased was a Red Polled bull to use on his grade cows, this cross improved his grades so much, in both beef and milk, that he took a liking to the breed and purchased some registered cows from the then popular breeder, E. W. Keys, Madison. The first cow was Tonywatha Belle 11891 by Juda 1889, out of Hecuba 3499. This original cow proved to be an excellent breeding matron and she was useful until she died at the age of almost twenty years. Tonywatha Belle formed the nucleus for the present herd of some forty head and it goes without saying that this must be a good family or Mr. Salter would not have staid with it. Such bulls as Prince Bismarck 12073 by Hobson 8239 and Prince 21188 by Senator have been used with good success. The present herd bull came from the noted Martin herd and is sired by Luna Lad 18th 22074 out of Poe 34714. Recently Mr. Stalter took his sons into partnership and the excellent appearance of the herd is due to the untiring efforts of Ted Salter. He is an enthusiastic cattle man and having been brought up with the Red Polled cattle he is well versed on this breed. At the present time they have two bulls for sale—both dark red, and one of them, about fifteen months old, is a very choice individual. He has an excellent head and neck, good top line, fine spring of rib, in fact he is suitable to head a pure-bred herd, and the price is very reasonable. There are some excellent milkers in this herd and the owners expect to begin testing this coming summer. Keep this herd in mind and if you need a bull it will pay you to do some corresponding. In writing please mention The Wiscoinsin Farmer. See page 29.—Adv.

Bargains in Stallions.

IF you are going to buy a stallion to use and put on the stand for the coming season, it is time you was making your selection. We are glad to recommend the stallions being offered by Thos. McNamara, Bloomington, Wis. He has four Percherons and one imported Belgian stallion and inasmuch as these horses have been used in the stud and have made good, you are taking no chances in buying a non-breeder. A good guarantee is given with each horse and the prices asked are very conservative. His horses have size with quality and are sound. It will pay you to investigate. Write at once and mention The Wisconsin Farmer. See page 30.—Adv.

The Latest Improvement in Hay Loaders.

ONE of the latest improvements in the hay tool line, that is rapidly becoming popular with the farmers, is the



Rock Island hinged elevator hay loader. The most prominent feature of this loader is the jointed elevator, which carries the hay well over the wagon and makes loading many times easier. As the wagon becomes loaded the elevator is gradually raised, so that the hay is always dropped just where it is wanted. The return elevator is out of the way and cannot drag hay off the load, and there is no danger of the wind blowing the hay away, as it is being delivered from the loader. Loading the wagon is made easy with the Rock Island hinged elevator loader. A solid steel frame with steel bracing and steel construction underneath gives this loader strength and durability equal to any loader made. This tool is made by the Rock Island Plow Company, Rock Island, Ill., who have a recognized high standing in the implement field. They make a full line of high-grade farm tools which are fully described in their book "Rock Island Farm Tools." We would advise our readers to send for this book, as it is a very valuable source of information on the subject. Even if you are not ready to buy just at present, you should have the book for reference. Simply write to the company for it and mention this paper in your letter.—Adv.

Milwaukee Separator is Easy to Clean and Operate.

THE Sanitary Milwaukee cream separator gets all the cream. This, of course, is the first point in its favor. But another very important point is the simple construction and small number of disks, which make this machine very easy to clean and operate. The discs are made of aluminum, from which grease and impurities are easily removed, and they need not be kept in numbered rotation or put on a wire holder when taken off the bowl core. Before you buy a separator write for a catalog of the Sanitary Milwaukee and learn how this machine will save you time and work. Address Milwaukee Separator Mfg. Co., Milwaukee, Wis., and please mention this paper when you write. See page 18.—Adv.

Hoesly's Holsteins.

BALTZ HOESLY, New Glarus, Wis., is offering a few cracking good young bulls for sale at the present time. These are sons of the thirty-two-pound bull, Colantha De Kol Pietertje, one of the best sires in the middle West. His dam is Ida De Kol Pauline, that made 30.64 pounds of butter in seven days. His sire is Colantha Johanna Lad, a son of the great cow, Colantha 4th Johanna. He has ninety-nine A. R. O. daughters, six with records from thirty to thirty-four pounds of butter in seven days. The bulls offered for sale are out of well-bred, heavy-producing cows. Send for pedigrees and prices of these fine young bulls. See page 31.—Adv.

Delicious Gunz-Durler Chocolates.

GUNZ-DURLER chocolates can always be depended on for delicious taste and absolute purity. The thick, velvety, chocolate coating and the variety of tantalizing flavors make these chocolates distinctive. If you give them one trial, you will be an enthusiast. Get a box today, or if your local candy dealer does not have them, write to Gunz-Durler Candy Co., Oshkosh, Wis. The boxes are in different sizes at prices of 50, 60, 80 cents and $1. See advertisement on page 22.—Adv.

Trade in Your Old Separator on Liberal Terms.

ANYONE having a cream separator that is not giving entire satisfaction can turn it in as part payment on

MODELS of imported and home-bred stallions and mares offered by Mr. Frank Iams, St. Paul, Neb. Prices have been reduced from $100 to $500 per animal. Everything mustbe sold within thirty days—hence the bargains. See advertisement on page 30.

COMBINATION SALE OF REG.

GUERNSEYS

WEST SALEM, WISCONSIN
WEDNESDAY, MAY 3, '16

60 HEAD

Imported and American-Bred Guernseys

COWS in milk, cows soon to freshen, heifers and breeding bulls. Several cows with large A. R. records. Note what this offering is sired by---Imp. Holden 4th 12179, the sire of the present world's record two-year-old-heifer, Bob Rilma, the only son of May Rilma, until recently the world's record cow. Others by Langwater Princeling and Masher 63d. Twenty head of cows in calf to Imp. Holden 4th. Everything in excellent breeding condition, has been tuberculin tested and will be sold regardless of price. Consignors: Alfred I. Stubbs, West Salem; Rundell Brothers, of Hammond and Roberts, Wisconsin. Catalogs now ready. Address

A. L. HYZER, Sales Mgr.

West Salem **Wisconsin**

Sheboygan County
Holstein Breeders' Sale

PLYMOUTH, WISCONSIN
MONDAY, MAY 8, 1916

THE Sheboygan County Breeders have been making wonderful records with Holsteins in the past year. They are offering 75 head of choice, pure-bred Holsteins from good herds. Over 20 fine cows, some with records up to 27.27 lbs. Extra choice heifers and young bulls. Some from 30-lb. cows. Write for catalog. Address

Frank Ubbelohde, Sec., Sheboygan Falls, Wis.

Lady Oak 2d De Kol, 30-lb. dau. of Homestead Jr. De Kol, bull calf in sale.

Benj. F. Berg's Consignment

To the Wisconsin Breeders' Sale

Watertown, Wisconsin, May 4th and 5th

30 pound bull calf, sired by **Canary Fobes Helena De Kol** and out of **Lady Oak 2d De Kol;** a 30-pound daughter of **Homestead Jr. De Kol,** that has six daughters with records from 30 to 35.55 pounds of butter in seven days; one **15-pound two-year-old daughter** and one **yearling daughter of Canary Fobes Helena De Kol;** one 15-pound son of the $6,800 bull, King Segis Pontiac Alcartra.

Benj. F Berg **Lake Mills, Wis.**

Canary Fobes Helena De Kol, 2 of his daughters and 1 20-lb. son in sale.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the A Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

one of the best cream separators on the market. This offer is being made for a limited time only by the Rock Island Plow Co., Rock Island, Ill., on their Great Western separators advertised on page 19. If you have an old separator, this company will allow you a good price for it and for a small cost you can get the Great Western separator. This machine is built with a low-down tank, high crank and perfect flushing bowl, which make the work of operating and cleaning as light as possible. You should take advantage of this offer while it lasts. Write to the Rock Island Plow Co., specifying the size of separator you want, and they will make you a liberal proposition.—Adv.

REGISTERED Holstein cows, heifers and young bulls are offered at very reasonable prices by Kirkpatrick Bros., Reedsburg, Wis. They have one of the good herds of the state, headed by a grandson of the great bull, King of the Pontiacs. See their advertisement on page 31.—Adv.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

TOO LATE TO CLASSIFY.

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

SALE DATES.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Holstein-Friesian Cattle.

May 2-3, Thirteenth Semiannual Consignment Sale of the Lake Mills Holstein Breeders' Sales Company, Lake Mills, Wis. Frank H. Everson, Mgr.
May 4-5, Wisconsin Breeders' Eighth Annual Sale, Watertown, Wis. S. B. Jones, Mgr.
May 7, Sheboygan County Holstein Breeders, Plymouth, Wis.
May 10, Wood & Dunn County Holstein Breeders.
May 10-11, Central Wisconsin Holstein Breeders' Association, Marshfield, Wis. E. E. Butters, Sale Manager.
June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

DON'T FORGET THE TWO GREAT HOLSTEIN SALES

MAY 2d AND 3d, LAKE MILLS, WIS.

F. H. EVERSON, Manager

MAY 4th AND 5th, WATERTOWN, WIS.

S. E. JONES, Manager

THESE sales have become noted for their sterling character and worth, and are waited for by many who are looking for dependable cattle. The stock in these sales comes from some of the best breeders' herds in the state of Wisconsin. There area large number of high record cows and some extra choice young stock. Write for catalogs.

TOO LATE TO CLASSIFY.

McCLURG BROS.' DUROCS FOR SALE

SEPTEMBER farrow, either sex, sired by Prince Defender, a giant son of Lee's Defender. For future reference we have spring litters by Lee's Defender, Prince Defender and by Royal King 4th, a son of the $2,650 Royal King, grand champion. Write McClurg Bros., Viroqua, Wisconsin.

CHESTER WHITES

FALL GILTS for sale by Hood Combination and Joy Boy 29637. Only the best shipped. Write
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

RED POLL Headquarters

YEARLING BULLS of herd-heading quality. **Breeding** and **individuality** the best. Write us. **J. W. SALTER & SONS, Unity, Wis.**

HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

TOO LATE TO CLASSIFY.

WE NOW OFFER

Two Young Registered

HOLSTEIN BULLS

READY for service. Born in August, 1915, weight about 700 pounds each. Descendants of Berl Wayne's Paul De Kol and Bell Korndyke. Butter 25.77. Nicely marked, half white and half black. Straight as an arrow. First offering price $110 each F. O. B. cars Ashland, Wisconsin. Address

D. W. EMERSON, ASHLAND, WIS.

HORSES.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

STALLION BUYERS ATTENTION. For the next thirty days we are going to reduce our prices on all of our big young stallions in order to close them out. We have a very large bunch of big ton, rugged stallions running in ages from two to six years that must be sold this season, consequently anyone that is looking for a right good one will save money by writing to us and getting our prices and descriptions before buying. We especially have a very strong collection of Belgian stallions, in weight from a ton to 2,300 pounds, from two to five years old, that should be on some good farms the coming season. We also have ten tried sires, Percherons and Belgians, that we have taken in on trade on younger stallions, that we are offering very reasonable.

We are located in north central Iowa on the C. M. & St. P. R. R., midway between Mason City and North McGregor, Iowa. Send 20c in stamps for large horse calendar which shows our main farm and sales stables. Correspondence a pleasure.

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

POLAND CHINA SWINE.

Martiny's Poland China Boars

15 FALL boars of September farrow, sired by Wisconsin Jumbo, the 1st prize and Jr. champion boar at the Wisconsin State Fair, 1914. I believe he was the biggest boar of his age shown that year, he weighing 510 pounds at eleven months old. This will be the last chance to get a herd header from this great boar. The wise man will raise a few fall pigs this year if he never did before. I will sell these boars now for less than they will bring for pork after you get through using them next fall, as I wish to make room for my 100 spring pigs I already have on hand.

L. P. Martiny **Chippewa Falls, Wis.**

Big-Type Poland China Hogs

MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address

W. T. Hartley, R. 3, La Crosse, Wisconsin

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address

JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

BIG-TYPE POLAND CHINAS—Growthy September pigs, both sexes at special prices. Address A. Menke & Sons, Route 1, Markesan, Wis.

DUROC JERSEY SWINE.

Duroc Spring Gilts

OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

CRITIC TOP NOTCHER

half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address

B. W. LITTLE JANESVILLE, WIS.

Burn Brae Farm

ROSENDALE, WIS.

CHAS. A. PETERSON, Prop.

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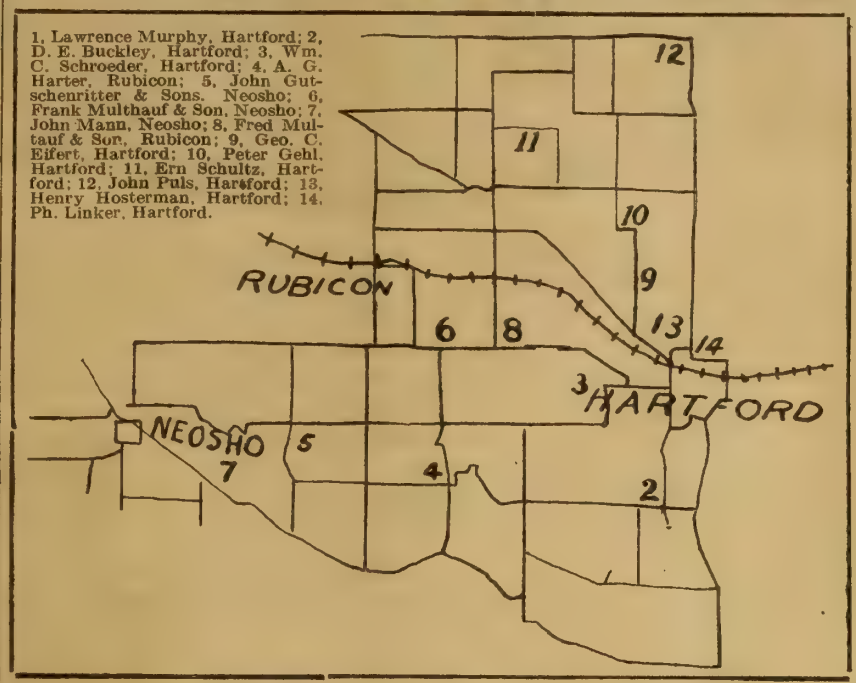

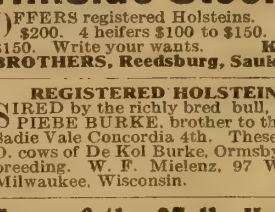
Johanna Colantha Sarcastic Lad

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AND bulls fit for service sired by Rag Apple Pontiac Polkadot, a son of the $6,800 bull, King Segis Pontiac Polkadot. Address
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BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland** his dam, a granddaughter of **Golden Fern's Lad,** gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.
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100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
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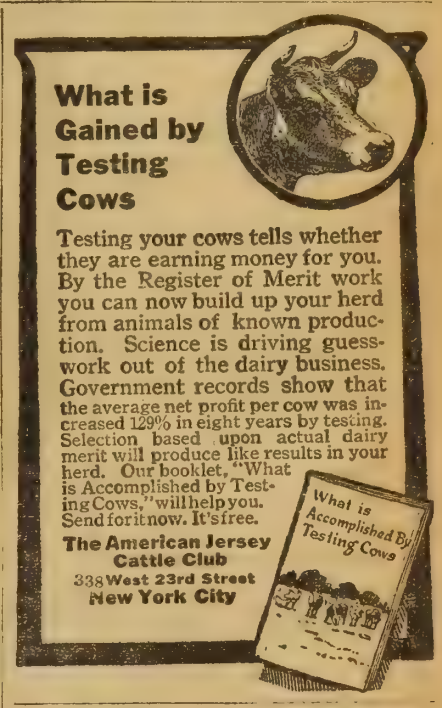

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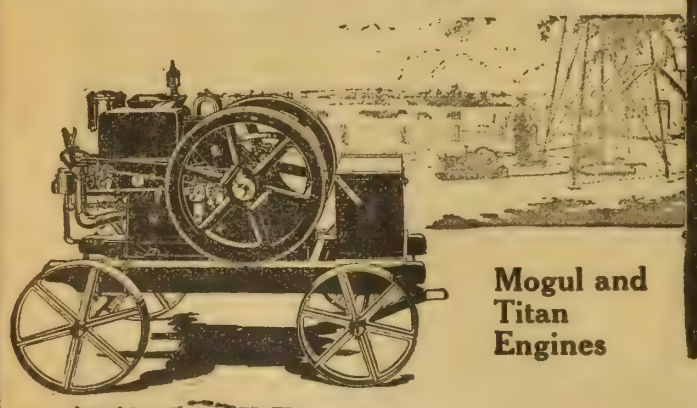

WON HIGHEST AWARD PANAMA-PACIFIC INTERNATIONAL EXPOSITION SAN FRANCISCO 1915

Mogul and Titan Engines

TWENTY **Titan** engines of all sizes, all kerosene burners, were lined up in front of the I H C dealer's store at Litchfield, Minn., one day last summer. That day their new owners took them out to supply good, reliable power on twenty farms. A few months later Litchfield saw twenty more farmers take **Titan** engines out to their farms.

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CURRENT EVENTS

PRESIDENT WILSON issued an ultimatum to Germany last week which brings the question of submarine warfare, as waged by the Teutonic powers, to a crisis. The president plainly informed Germany that if the present methods are not amended it would be necessary for him to break off all diplomatic relations with that country, an act which with but one single exception has always been followed by a declaration of war. The same day on which the kaiser's government received this latest note the president went before congress, in joint session, and explained his stand, not asking congress to back him up, but simply to keep all branches of the government informed as to the situation. In his speech to congress the president said: "I have deemed it my duty to say to the imperial German government that if it is still its purpose to prosecute relentless and indiscriminate warfare * * * the government of the United States is at last forced to the conclusion that there is but one course it can pursue; and that unless the imperial German government should now declare and effect abandonment of its present methods of warfare against passenger and freight carrying vessels this government can have no choice but to sever diplomatic relations altogether." In his note to Berlin the president did not mince words, but plainly stated that the submarine warfare, as now carried on, is "utterly incompatible with the principles of humanity, the long-established and incontrovertible rights of neutrals and the sacred immunities of noncombatants." The German government is expected to answer the note promptly. In the meantime, most of the leaders in congress are standing solidly back of the president, although Congressman Mann, of Illinois, republican leader of the lower house, is quoted as saying that "it is perfectly evident that the president, as a campaign political dodge, is trying to work up to a point where he can get into a war with Germany during a presidential campaign." Few public men have expressed themselves in such an unpatriotic manner, the stand of Senator Lodge, of Massachusetts, one of the republican leaders, being in marked contrast. Senator Lodge said: "I think the president could not possibly have done less in the circumstances. He has made a very clear case of Germany's case and policies of submarine warfare and the rights of ships carrying neutrals and noncombatants." "If war comes out of this," declared Senator Kenyon, republican, of Iowa, "I hope the first to enlist will be those who have insisted on riding on armed belligerent ships." The situation between the two countries is the most strained and serious it has ever been, with no man able to foretell what the ultimate outcome will be.

AN ARMY reorganization bill that would produce regular army and reserve military forces in the United States aggregating 1,000,000 men was passed by the senate without a record vote. It is a substitute for the Hay bill passed by the house and goes much further than that measure in increasing the military strength and resources of the nation. In the closing hours of debate the senate made provision for a regular standing army with a peace strength of 250,000 men, as compared with 140,000 in the Hay bill, retained after a close fight the plan for a federal volunteer army reserve force calculated 261,000 men, and federalized the national guard forces of the states at an estimated strength of 280,000 men. In addition to this combined regular and reserve force of 790,000 men, an amendment was passed to create a school and college youths' reserve corps in time of war or threatened war which would recruit a force of trained young men, schooled by officers of the regular army, the estimated strength of which is put at anywhere from 200,000 to 400,000. The differences between the senate and house bills will be worked out in conference, the probable result being a greatly increased army, especially in view of the grave international situation in which the nation now finds itself.

SERIOUS charges were preferred against the national guard of the various states by Senator Borah, republican, of Idaho, in the course of a speech in the senate last week. He asserted that the $8,000,000 a year now appropriated by the government for the national guard was "shamefully wasted" and some of it "embezzled." He denounced the efforts of some of the senators to strengthen the guard, instead of the regular army, and said they were merely playing politics in order to "stand in" with the guard leaders in their states. He continued: "The way the officers of the national guard have been utilizing the federal fund to themselves to the exclusion of enlisted men is perfectly shameful and cannot be defended except for political exigency. In this bill you are not preparing for war. You are not giving the people what they are expecting to pay for. We are filling this bill up from beginning to end with purely political appropriations and you couldn't proceed a step under the guise of national preparedness." The national guard has come in for a lot of discussion at this session of congress, inasmuch as it has been maintaining a lobby at Washington in its interests and going into politics deeper than ever before. It is extremely doubtful if congress will take any radical action, for the guard has too much political strength, but there is a growing conviction that the state troops are not measuring up to the standard which should be demanded of them.

AGITATION for a greater navy at the expense of army increases was begun in congress last week, Senator Stone, of Missouri, and Senator Borah, of Idaho, being the leaders. Senator Stone, who is chairman of the foreign relations committee, made a plea for a navy big enough to fight offensively on the high seas anywhere in the world and Senator Borah, on the republican side, urged that proposed army increases be sacrificed in order to strengthen the navy. While he deplored any program that could be construed as either navalism or militarism in the United States, the Missouri senator said he was for adequate defense and thought the navy was by far more important than the army. Both Senators Stone and Borah advocated a reasonable standing army. When asked if they thought the United States had an adequate force in case "unpleasantness" should follow developments in Mexico, the former said he thought an adequate force speedily could be procured for an emergency. Senator Borah was emphatic in his championship of the navy, not only as the first line of national defense but also as the last line of defense. With a strong navy it is argued the United States is free from the perils of invasion, just as England is successful in keeping its enemies away from its shores, save by one route: the air.

GEORGE W. PECK, former governor of Wisconsin for two terms and one time mayor of Milwaukee, died at his home in Milwaukee last week, at the age of seventy-five years. Governor Peck was as well known for his writings as for his political achievements, he being the author of the widely read "Peck's Bad Boy" series, the best-known works being "Peck's Bad Boy and His Pa," "The Groceryman and Peck's Bad Boy," "Peck's Bad Boy With the Circus" and "Peck's Bad Boy With the Cowboys." Peck was one of three democrats who since the admission of Wisconsin to the Union in 1848, held the position of governor. He was governor from 1890 to 1895. In 1892 his opponent on the republican ticket was former United States Senator John C. Spooner, whom he defeated.

State tractor demonstration at Madison, September 4th-8th. This is one of the national circuit tractor shows.

The Wisconsin Farmer

THURSDAY, APRIL 27, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

FARMERS AS HEROES.

THROUGH the kindness of the secretary of the Carnegie Hero Fund Commission I have been furnished with a copy of the report of that body for 1915. I am delighted to learn that farming continues to provide the most American heroes, no other calling or profession coming near to supplying so large a number of people who put all selfish thoughts out of their heads and risked their lives to save their fellow beings. "Greater love hath no man than this, that a man lay down his life for his friends." The most peaceful profession in the world, farming, has furnished the world with its most heroes.

A few minutes' study of the 1915 report of the Carnegie Hero Fund Commission has shown me that during the past year medals were awarded to twenty-two farmers. The count for those professions which, by their daily hazards, might be expected to furnish the most heroes, is as follows: Followers of the sea, eight; railroad men, fourteen. In short, as many men were decorated by the commission from the fields of agriculture as from those who follow the sea and from those who work upon the railroads of the land put together. One-sixth of all those whose exploits the Carnegie commission decided were worthy of recognition followed the peaceful profession of tilling the soil and bringing crops through to harvest.

The record is a splendid one. By turning to the back reports, which I have on hand here in my office, I find that in the eleven years Mr. Carnegie has been decorating men and women of heroic mold, no less than 1,145 awards have been made, of which 111 were to farmers, while only fifty-five were to sailors, fishermen and those who follow the sea for a living, sixty-five to miners (whose calling is one of the most hazardous) and ninety-two to railroad men, who are daily surrounded by dangers. The supremacy of the farmer in the display of heroic talents is unquestioned.

I imagine that this summarizing of the professions which furnish our national heroes of peace will be a surprise to a great many people. Farming is classified as a peaceful profession, the risks of which are not comparable to those of many of the professions of the city. Yet in the quiet solitude in which the farmer works, much of his day, there are born heroic impulses which, in the emergency, find expression in heroic deeds in a twinkling, without thought of the great personal cost at which these deeds are performed. When some great sculptor comes to give to the world the figure of the typical American—independent in thought, heroic in mold, great in everything that goes to make our country deservedly prosperous—what better figure could he possibly choose than the sower or the plowman going about his peaceful yet heroic task, a veritable warrior in the fertile fields of peace?

A HELPFUL FARM WIFE.

I WISH it were possible to publish all the interesting letters I receive. They cover such a variety of subjects; they reveal the writers' minds and hearts so intimately. Opening the day's mail is as much a treat to me as anything in my life; it puts me in such intimate, heart-to-heart relationship with my readers. That is why I am always urging farmers to write to me, either for advice or instruction or just in a sociable, chatty spirit; the pleasure of receiving and reading their letters is a very great one, indeed.

Here, for instance, is a letter which not only gave me pleasure, but which should be an inspiration to all who read it, whether they live on the farm or not, for it shows what a determined person (man or woman) can do, once they put their mind to a thing resolutely. This letter is from a farm woman here in the grain belt:

I have decided to run an advertisement in your paper for a year. We are renters and last year were able to raise only a very small portion of our rent, and have had to buy feed for the stock all winter. I run my poultry business in my own name, and in spite of having to move occasionally, and with poor accommodations for poultry (except as we build or repair at our own expense) I clean up and disinfect, have the grounds plowed around all the buildings where poultry is kept, and for the past four years have made $250 a year above all my expenses on my chickens. Handling this business myself has given me a better business education than I could have gotten had it been in my husband's name, as I have attended to all the business details myself. The money, of course, goes where it is most needed, for a kitchen range, manure spreader, blacksmith bill, children's clothing, garden seed, seed corn, or whatever is most needed, but each year I buy for myself something to make my work easier. One year a kitchen cabinet, one year a dress form, or, if the year is extra hard, I content myself with only a bread mixer or a carpet sweeper, but each year I add some comfort for the home out of my chicken money. I enjoy these things better because I earn them myself. I have no expensive equipment, and what would be usually considered very poor accommodations, but I do my best with what I have and have made something of a success. I raise 500 chicks each year; from that number I pick out ninety to 100 of the very best for my breeding stock. Your paper helps me to sell the rest at a price that brings me a reasonable profit and satisfies my customers. I am getting orders for eggs just about as fast as I can fill them.

Here, certainly, is a letter full of cheery inspiration. I can picture to myself that happy, contented farm wife going about her daily work amid her humble surroundings, not knowing whether they will have to move again next year or not, but determined to do the best she can with the accommodations provided her. There is a heroism in such labor that should both shame and inspire us all; shame us who may have an easier lot in life, because we grumble for so little cause; inspire us all, whatever our lot, to do the very best that lies in us. What wonders we could accomplish, on the farm as in the city, if only we would live up to the very topnotch of our possibilities. If a tenant farmer's wife, with but meager accommodations, can keep up her courage so splendidly and work such wonders, shall we not all determine to keep apace of her and make our efforts yield still greater results?

I honor that farm wife and wish for her the greatest success possible. Helping her husband with her chicken money, and spending the little balance to the best advantage, so as to make her work easier and thus relieve herself of some of the burdensome cares and duties which might distract her and cause her to be a less inspiriting helpmate to her husband, she is building up the ideal American farm home, though they do not own a foot of land. All honor to a woman who can do so much with so little and be so cheery withal.

INTEREST IN FARM CLUBS.

THE response to my offer to do what I could to assist in the organization of farmers' neighborhood clubs has been far greater than I ever anticipated. I am delighted with the prospect. If the number of requests for constitutions and by-laws is any indication—and I believe it is—there will be several hundred more of these clubs started within the next few weeks. I have had what I consider a model draft of the necessary constitution and by-laws printed in a neat little four-page circular and I am sending these to all who request it, being only too glad to be of this little assistance. If you have not already written for one of these circulars, and want one, let me know at once.

I cannot refrain from quoting a few brief extracts from some of the letters already received. They are characteristic of the great interest manifest throughout the entire grain belt:

"I would be pleased to receive any information regarding the organization of a neighborhood club of young people from fifteen to twenty-five years of age, some with musical talents, but none of us have much of a talent to lead. We have quite a number of Catholic boys and girls who would be considered in an organization of this kind. Any help you can render will be greatly appreciated."

"I have read your paper for three years and like it better every week. I read in last week's issue that you offer to help any neighborhood club in the way of giving instructions. In our neighborhood here we have just organized a club, of which I am president, and I feel that I need the information that you so kindly offer."

"We are organizing a community club here and expect to build a community house this summer. We would be glad if you will please send us a model draft of constitution and by-laws as you offered."

"We have in our county some twenty local farm clubs, but have plans under way whereby one central organization may be perfected with these clubs as units. The purpose would be to better marketing and buying conditions, as well as social advantages. On April 30th a committee of five meet to draw up constitution and by-laws. I write you seeking help in this matter and assure you any suggestions will be gratefully received."

I can only repeat: Nothing gives me greater pleasure than to receive letters such as these and to answer them to the best of my ability. Sometimes I cannot go as fully into particulars as I would like, for my mail brings hundreds of letters each day and all must be answered. But whenever I can be of any assistance I give it gladly, for that, I believe, is one of the provinces of a publisher: To aid his readers and patrons to get more out of life in every possible way. So I repeat the invitation: Write me for whatever advice or information you need; I will do the very best I can in reply.

THE COUNTRY IN SPRING-TIME.

I RAN across a little gem last night in my reading, and while I do not know to whom the credit of authorship belongs, I am going to pass it along to you so that we may all enjoy it together. It is entitled "The Country Boy's Creed," and is as follows:

I believe that the country which God made is more beautiful than the city which man made; the life out of doors and in touch with the earth is the natural life of man. I believe that work is work wherever I find it, but that work with Nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do, but on how you do it; that opportunity comes to a boy on the farm as often as to a boy in the city, that life is larger and freer and happier on the farm than in the town, that my success depends not upon my location, but upon myself—not upon my dreams, but upon what I actually do; not upon luck, but upon pluck. I believe in working when you work, and in playing when you play, and in giving and demanding a square deal in every act of life.

My friends, that has the right ring; it puts the superiority of rural life into such words as we can all understand and subscribe to, such words as spur us on to do our part in making the country a still better place in which to live. The country boy who learns this creed by heart and says it to himself every little while is not going to be lured away to the city, with its heartaches and disappointments, but is going to stay by the old home place and make good. I wish something like this might be recited by one of the boys at every neighborhood club meeting, or wherever the community congregates to dedicate itself anew to making country life more enjoyable and soul-satisfying.

While I am passing the good things of print along to you I am going to set forth a poem which strikes a responsive chord in my breast at this springtime of another year, when the buds are giving promise of the fruit and all the world is on tiptoe with expectation. It is entitled "Spring's a-Comin'":

When the hens begin to cackle in a sort of frantic way,
An' the yellow-crusted eggs is strewed about upon the hay;
When the smoke's a-breezin' over from the bresh piles on the hill,
An' the turkey gobbler gobbles as he's struttin' with a will,
When the lambs is cuttin' capers while their mammies nip the grass,
An' the women is a-fixin' for to grow some garden sass,
When they're sortin' out the onions an' a-fixin' of the peas;
When a sort o' drone is comin' from the shanties of the bees;
When the mules is steppin' stately down across the stubble fields,
An' Aunt Dinah's pickin' sallet from the tops the turnips yields—
Why, the spring's a-comin' certain, from its home down yonder south,
An' a fellow keeps a-workin' with the whistle in his mouth.

When the jonquils is a-bloomin' up an' down the gravel walks;
When the hoes is whackin' steady, in the wheat fields cuttin' stalks;
When the pigeons play at lovin' at th' mossy stable roofs;
When the colts is gettin' frisky an' a-tryin' of their hoofs;
When the children's shoes is rusty with some windows at the toes,
An' a sort o' subtle sweetness whispers in the wind that blows;
When the hams is brown as walnuts, an' they're ready for the sacks,
An' the hay's a gettin' meager where it's wintered in the stacks;
When the peach buds is a-swellin' with a little glint o' green,
An' Milinda is a-stitchin' for to be a Easter queen—
Why, the spring's a-comin' certain, though it's maybe raw an' cold,
An' a fellow feels a youngster, though he knows he's gettin' old.

What difference do a few more years make if "a fellow feels a youngster," and isn't spring the time when youth is in the ascendancy and the years fall off our backs, like a peddler's pack loosed at the end of a day? I may be a bit sentimental, but a poem like this puts good spirits and renewed vitality into my veins for many a day. Some of the old-fashioned poems and songs, written in a day when they believed in enshrining sentiment in literature and were not ashamed to express their emotions, can touch me more quickly than anything else I know. We must work hard and we must be practical to get ahead in the world, but let us not overlook the sentimental side of life.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Appreciates Wisconsin Farmer Articles.

THE WISCONSIN FARMER receives many letters of commendation from farmers and business men of the state, which are welcomed because of the spirit of co-operation which they express.

It is seldom, however, that we get a letter which pleases us so much by its atmosphere of appreciation and mutual helpfulness as the following, from Mr. George D. Bartlett, of Milwaukee, secretary of the Wisconsin Bankers' Association:

Editor Wisconsin Farmer, Madison, Wis. Dear Sir:—I want to thank you, on behalf of our Wisconsin Bankers' Association and our agricultural committee, for the splendid write-up you gave our recent Banker-Farmer Conference at Madison. I also very much appreciate your recent editorial entitled "Getting Acquainted With Your Banker." I shall try to see that a reprint of this editorial reaches every banker in Wisconsin, with the recommendation that "the banker get acquainted with his farmers." Those of us who have been active in trying to establish a closer relationship between the banker and farmer have realized how hard it is to interest many bankers in this proposition. This is not because the banker does not feel that he is interested in the farmer and his occupation, but because many of them have felt that the farmer does not welcome any suggestions from the banker along the lines of agricultural betterment. Your editorial very truthfully states that the bankers of Wisconsin are not undertaking "to teach the farmers how to farm." But we have been trying to call the attention of Wisconsin farmers to the results of experiments carried on for years through the Wisconsin College of Agriculture, and which have resulted in many improved methods of farming, as compared with the way "grandfather used to farm." We are very glad to have so many words of commendation for our efforts from the 458 farmers who attended the recent conference at Madison. Again thanking you for your kind mention of our efforts, Respectfully yours,

GEO. D. BARTLETT,
Secretary Wisconsin Bankers' Association.

The Wisconsin Farmer devoted considerable attention to the recent Banker-Farmer Conference at Madison because it represented exactly the sort of co-operation between the business interests of the town and farm that we believe will result in the greatest good to the state. In no state that we know of can such a harmonious relationship accomplish greater good, and in none are the farmers and bankers alike so awake to the mutual advantages of such co-operation as in Wisconsin.

In a large measure this spirit is due to the splendid leadership of the officers of the Wisconsin Bankers' Association, such as Mr. Bartlett. The vast majority of bankers in an agricultural state like Wisconsin are country bankers, who understand the problems of the farmer. Most of the officers of the state association for years have been men from small rural communities like Mr. Bartlett, who came from Stanley county. They appreciate the farmer's viewpoint and understand much about his problems and they are always ready and anxious to learn more.

The average banker is a deep student; he knows that land is the basis of all wealth and that its proper development and improvement mean prosperity all around—for the town as well as for the country.

So again we say to our farmer readers: Get acquainted with your banker. Welcome his interest in your business—the largest business interest with which he has to deal. Help him to a more complete understanding of your needs and problems, and in nine cases out of ten you will find in him an interested and sympathetic friend, who can and will help you to bigger and better things for yourself, your community and your state.

The Wisconsin Farmer trusts that the banker-farmer idea will not end with a single conference. Others like the one at Madison should be held in course of time. The possibilities for good from such co-operation are unlimited, and we pledge our heartiest support in helping farmers and bankers alike to realize these possibilities for the good of the entire state.

Wisconsin Cow-Testing Reports.

THE WISCONSIN FARMER is in receipt of a letter from W. E. Meyer, assistant in the division of Western Dairy Investigations, under the department of agriculture. Mr. Meyer was recently a resident of Wisconsin and he is very much interested in the cow-testing reports which are run regularly in The Wisconsin Farmer as a special and exclusive feature of this paper. Mr. Meyer writes:

With considerable interest and enthusiasm I have been reading the reports of cow-testing associations in Wisconsin, having spent some time in co-operation with Mr. Searles in organizing a number of these associations last year.

Mr. Meyer also encloses reports from the Enumclaw, Washington, and Buhl, Idaho, associations, which demonstate the possibilities in dairying in this western country. The Washington report shows seventeen cows above the fifty-pound butterfat mark for January. The stock is mostly Jersey and Holstein. A good deal of the better dairy stock in the state of Washington came from Wisconsin and it is interesting to know that records are being kept and that western dairymen are catching the spirit of "better cows."

The Buhl, Idaho, report sent us by Mr. Meyer, contains a list of forty-one cows with a record for February of forty pounds of butter fat or better. The record cow for the month is a grade Holstein, aged five years, freshened January 5, 1916. She gave 2,111 pounds of milk in February, with an average test of 3.8 per cent, and a total butter fat production of 80.2 pounds. The three top cows on the list were grade Holsteins and the fourth cow a registered Jersey.

It occurs to us that Wisconsin dairymen should take satisfaction in reading these far western records. It leads us to consider the wonderful records which are made in the way of production here at home, and to be grateful to the fact that we are close to big markets.

Since dairying has become such a profitable industry, it is not surprising that it is taken up with vigor in other parts of the country, where until recently dairying has been neglected. Wisconsin is furnishing the standard as well as a good deal of the stock for these far western dairy herds. As these herds increase, and as more and more western farmers engage in dairying, the demand for good foundation stock from Wisconsin will continue to grow. It appears that good dairy stock is a very staple property for a Wisconsin farmer to own. The better it is the more staple it is. These western farmers are constantly looking for better stock.

Only a few months ago the writer visited creameries in Cheyenne, Wyoming, and Boulder, Colorado. We were surprised to find the extent to which the dairy business is growing in this country. The creameries are modern in every respect and the product extra good. These western creameries are new and they embody the best in modern creamery construction and operation. They collect cream by express from a large area. Creameries in this section are few and far between, but they are up-to-date in every particular. In this respect Wisconsin will have to be alert to the end that the newer dairy countries do not get ahead of us.

The Farmer and the Tractor.

MR. C. F. ROEMER, president of the Iowa Implement Dealers' Association, accompanied the farm paper publishers who recently made a trip to Indianapolis, Detroit, Buffalo, Cleveland and Cincinnati. Representatives of the Wisconsin farm papers accompanied this tour. Mr. Roemer was asked concerning the interest which farmers in northern Iowa have in tractors. He replied as follows:

I sold a tractor just a few days before I left home. The tractor is coming into prominence in farming. The farmers are very greatly interested in it. Just as soon as we can assure the farmer that we can sell him one which will do the work, and which will continue to deliver the goods for a reasonable length of time, the farmer will buy tractors.

The remarks of this well-known implement dealer are of interest to our Wisconsin farmers. He resides in a northeastern Iowa county where the dairy business is increasing rapidly. He is the owner of a dairy barn, built on modern lines. He has recently installed milking machines. He is up-to-date and is a success as an implement dealer because he makes a study of his business. He studies the farmer and his needs and makes an honest effort to get the sort of machinery and equipment which will best please and best serve the farmer. Asked if tractors could be sold to the farmer on a cash basis, just as automobiles are now sold, Mr. Roemer answered in the affirmative. He ought to know, as he is engaged in the automobile business and sells about $100,000 worth of cars every season. Asked how much a farmer will pay for a tractor, Mr. Roemer replied that he will pay a fair price provided he can be assured an article which will give service.

Implement dealers of Wisconsin are also making a study of the tractor. At the last meeting of the Wisconsin Implement and Vehicle Dealers' Association in Milwaukee, tractors were discussed at length. The farmer may depend upon it that the implement dealer is going to offer him soon a farm tractor for general work.

One of the great tractor shows on the national circuit this year will be held in Madison, September 4th-8th. This will give an excellent opportunity for the farmers of this state to make a study of the tractor and see whether it will do what the manufacturers claim. The show at Madison should attract the attention of thousands and we believe it will. It is called a tractor show. In reality it is a tractor demonstration where the tractor will be put to the test in actual field operations.

For Wisconsin Beekeepers.

MONGREL bees have no more right for a place on the Wisconsin farm than scrub live stock. What breeding and selection is doing for the live stock industry breeding and selection is doing for the bee industry and the beekeeper, whether he owns only a few hives or is producing honey on a commercial scale, cannot afford to give the mongrels yard room. Successful beekeepers have found that pure-bred bees, better queens, clean honey and neat packages mean larger profits. The importance of better queens as well as other subjects relative to honey production are discussed in a recent bulletin from the college of agriculture. Mr. H. F. Wilson is the author. The queen is the most important individual in every colony because upon her depends the kind of bees the keeper gets. She is also the producing factor and upon her depends the strength and vitality of each colony. He sums up the requirements for a satisfactory strain of bees as follows:

Bees that will gather the maximum of honey and produce well-filled cells with clean, white combs and cappings.
Bees that build few queen cells and do not swarm excessively.
Bees that do not require too much care.
Bees that are gentle and do not run on the comb.
Bees that keep their hives clean and do not smear everything with propolis (bee glue).

Breeding for production is discussed and Mr. Wilson points out that there are at present, perhaps a dozen strains of the common honey bee, each one having been developed under conditions that have given rise to considerable variation both in color and temperament. The almost universal verdict of American keepers, he says, is that the Italians are the best. Settling upon this strain as the best, the next step would be to improve the existing stock concerning which he writes:

With these things in mind, it is proposed to encourage beekeepers to do away with all inferior stock and to develop the Italian strain only. In this way, it is hoped to reduce disease to a minimum, and, at the same time, develop other desirable traits for better honey production. This can be brought about in just two ways. First, provide ourselves with good, sound and vigorous Italian queens. Then, by preparing our honey properly and using only clean honey, lacing it in neat, clean packages. The bees will take care of themselves and the honey will need no salesman.

Too much stress cannot be placed upon getting rid of queens in weak or sickly colonies and on providing new queens for colonies that are not resistant to disease. Similarly, a new queen should be provided for a colony that is lazy, cross, or in any way undesirable. The beekeeper who has queens that are strong and vigorous and whose bees are good producers, should use her daughters in place of less desirable stock.

Fire on the Farm.

FIRE is a farm terror. But as a rule the farm fire has a small beginning. There are thousands of instances where total loss could have been averted if there had been some means at hand to fight the fire. Buckets of water may stop a blaze if the buckets are in place and enough men are near by to handle them. A modern plan to nip fires in the bud is to be supplied with bottled chemicals which may be kept constantly ready for use at the points about the house and barn where fire is most likely to occur. The expense of such protection is nominal compared to the saving which might be made on one fire. These chemicals are put up for instant use? If a blaze starts from a gasoline or oil stove or from the kitchen range, it may easily be confined to one room, and often to one corner of the room. Thus the balance of the home is saved, together with all the valuable furnishings.

The overturning of a lamp in a bedroom may cause a blaze which would get a big start before it could be subdued by buckets of water. But the blaze might be put out in a jiffy with chemicals which could be reached with a few steps. It will pay the farmer to investigate these matters. Many people now carry such protection along with them when they go motoring. A few dashes of the right chemical may save lives as well as property. It is worth looking into. The farmer has greater need for these modern methods of fighting small fires than has his neighbor in the city or town. The farmer has no fire department service which he may call out with the sounding of an alarm. He must depend upon his neighbors coming in when they see the house or barn or other building all ablaze. Help which comes at such a time is too late to be of any value.

The publisher of The Wisconsin Farmer has had some experience with fire. His publishing plant is equipped with a sprinkling system which provides a flow of water in any room or hallway just as soon as there is blaze enough to melt the wax covering the opening in the pipes. This system is put in because the publisher has large investments in his plant and would be seriously hampered if his property were destroyed. But the plant where The Wisconsin Farmer is published could be replaced in a short time. A fire would probably not occa-

sion any loss of life. When the farm barn burns and destroys the stock and crops it is proportionately a greater loss than any business house would sustain. It is no light matter to build up a paying herd. Crops saved for feed may be replaced but at a cost usually which robs the farmer of his year's profits. Hence the farmer should be a student of fire prevention and should avail himself of modern methods of stamping out the incipient blaze before it licks up his property.

Another Wisconsin Sale and Show Barn.

IT IS announced that a contract has been let for the new sale and show barn at Waukesha, which is to be erected by the Waukesha County Live Stock Breeders' Association. A portion of the building will be finished by June 1st to accommodate the annual Holstein sale, June 1st, and the annual Guernsey sale, June 7th. These two events are of greatest importance to the live stock interests of the county.

Because of the increased cost of building materials there was some talk of postponing the erection of this sales pavilion for another year. But the breeders have come to the decision that the value of the property for this year will be sufficient to warrant the increased cost of construction. Arrangements have been made to take care of the additional funds needed. This sale pavilion, when finished, will be an important center in the Wisconsin and western live stock world.

Why Packers Are Buying Direct.

IF THERE formerly existed collusion between live stock commission firms and the packers the situation has entirely changed and they are now experiencing the results of collision. It is a rumpus of no mean proportion, as it involves the whole question of employing a third party to dispose of live stock when it reaches destination. The commission agents have in the past taken the place of stock owners who in thousands and tens of thousands of cases do not accompany live stock to market. Under this system certain abuses have grown up according to the views of the packers, and to correct these an attempt has been made during the last year to buy direct. In other words, the packers send live stock representatives right out to the farmers, where they make purchases on the basis of weights at the terminal market. This, of course, cuts out the middleman and results in a serious clash of interests.

As there are two sides to every question, this one is presumably not an exception, and in a recent issue of the National Provisioner the packers' side is presented. From the following statement taken from this paper the reader will be able to get a fairly clear idea of the argument used by the packers in defense of the direct buying plan:

It may be that direct country buying had its inception through a desire to avoid impositions put upon customers for live stock in the open markets.

One of these impositions was the unloading of diseased animals on the packer, who paid for them at meat price and had to run the risk of government condemnation for disease afterward. The live stock man pocketed his money and went home happy, leaving the packer to stand the loss.

The other imposition is the one just referred to, the practice of filling up meat animals with hay, salt and water to inflate their weight before they pass over the scales to the packer. The latter is made to pay meat price for something that evaporates between the time he buys the animal and the time it is slaughtered.

This practice is familiar to the trade as the "fill." There is no secret about it. No apology is made for it. On the contrary, live stock commission agents advertise their ability to "get a big fill" for their clients—that is, they claim ability to defraud the packer by selling him water at meat prices. And on this ability they base their claim for business, and their arguments in behalf of the "open market" as contrasted with direct country buying.

Some time ago the National Provisioner reproduced an illustration, appearing in the advertisement of a live stock commission firm in a Kansas City market paper, which tells the story better than words can picture it. It shows that the live stock men even joke about the fraud they perpetrate on the packers. It pictures a live stock man pumping water into a beef steer with the aid of a fire hose, with the legend underneath: "We get the Big Fill!"

Right now a live stock exchange is publishing a series of letters to live stock shippers, advertising and advocating this practice. Knowing what the "fill" is and what it means, the following extracts are certainly rich reading:

"The fill at the market will always more than pay market expenses."

That is, the added weight secured through this practice is enough to counterbalance the cost of marketing.

"Hogs are sold on the open and competitive market with a fill; and the price of that fill is so much money in the pocket of the shipper. Consigned to the packinghouse direct, they are weighed empty (!), right off the cars, and the tickets are marked at average prices of the day, based on sales made on the open market, where the owner is paid full price for the fill."

That is, sell your live stock through us, for we get full meat price for the water we pump into your animals; while if you ship them direct to the packer he pays you only for the actual meat weight of the animal. Lovely ethics, these of the live stock men!

"Current fills are 400 to 700 pounds."

The live stock commission men even go into figures showing exactly how they work it.

"One load, sixty-four head of hogs, weighed 14,060 pounds off the cars; 16,640 pounds when sold, a fill of 660 pounds."

Other illustrations are given and the experience of an Iowa shipper is quoted, showing how he got pay for 400 pounds more per car on hogs "waterlogged" before being sold to the packers!

There is a lot more similar ingenuous statements as to details of this practice, and argument in its favor, contained in the advertisement referred to. None of it is more ingenuous than this:

"Why give the packer $50 per car, or more, as a gratuity? When he buys on the open market he pays that much, or more, for the fill!"

The advocates of this practice are even so bold as to admit their published statement that the packer would avoid this imposition if he could; but he can't! They say:

"Packers undoubtedly would buy without a fill at the open market, but the practice there being firmly established, they are doing their best to cheapen cost by weighing direct consignments empty."

That is, without the salt-water filling!

And yet these same live stock men are at this moment asking the government to proceed against the packers for illegal collusion in attempting to buy live stock to the best advantage—that is, to avoid as far as possible this and other impositions practiced on them by live stock interests and agents!

While every stockman is familiar with the practice here referred to as getting a "fill" at the central market, it has always been supposed that allowance was made for this artificial increase in weight in the fixation of values. In other words, it is fair to assume that buyers for the packers, knowing that this practice of "filling" prevailed, placed a lower valuation on every animal purchased than would have been levied had all animals been bought direct from the cars. It could scarcely be otherwise, as indicated by the fact that the business of the packer has been a profitable one. He would have faced dire disaster long ago, for it would not be possible to pay market prices for say fifty pounds of "fill" on every steer and yet come out even on the dressed meat, saying nothing of realizing a profit. Somewhere along the line the matter has been cared for in the regulation of prices.

This paper will endeavor in the near future to obtain for its readers the arguments advanced in opposition to the plan of buying direct.

Smut-Treated Oats Not Injurious to Live Stock.

A NUMBER of subscribers have called attention to the fact that they have a supply of seed oats left over, these having been treated with formalin to destroy smut. The question with these individuals is: Can these oats be used for feeding purposes without in any way endangering the health of animals?

Formalin used in this way is in no sense injurious. It is a powerful disinfectant, but it is not a poison in the ordinarily accepted sense of the term. Used in such small proportion as is the case in treating oats for smut, the amount of formalin adhering to the grain is so small as to be entirely negligible. There need be no hesitation whatever in feeding grain of this kind to horses, cattle or hogs. If the grain proves to be in any way unpalatable this can be overcome by mixing it thoroughly with untreated grain. However, we have never known a case where the formalin treatment even resulted in making grain unpalatable.

Horsemen Must Safeguard Their Own Interests.

A COMMUNICATION appeared in a recent issue of this paper from a subscriber who claimed that certain horsemen overworked the idea of finding blemishes. These individuals, he claimed, looked with greater diligence for defects than for utility points, and the practice was roundly denounced. His communication has brought another subscriber to his feet, and he, in turn, is of the opinion that there are two sides to this question. If the so-called "blemish eye" is a disease it is not of a seriously infectious character, and this subscriber is of the opinion that most horsemen would benefit by a slight touch of it. Among other things, he says:

There are a variety of blemishes, the hereditary ones and those which are caused by injury. There are also venereal diseases which should also be considered as blemishes. All of these have their weight on the value of a horse if thrown on the market, while the hereditary ones should be avoided with breeding animals.

Sires with sidebones, bogs or periodic ophthalmia (moon blindness) are very apt to transmit these forms of unsoundness to a certain percentage of their offspring.

On the farm there are a great many horses that work their natural lives with blemishes that would make them practically worthless on the open markets, and I don't believe there are many professional horsemen running around over the country pointing out these faults just by way of displaying their ability as judges. On the other hand some quack who imagines that he is a keen judge of horseflesh is the man that really has the blemish eye and he goes around calling attention to those things, simply to convince the public that he knows what he is talking about, and I'll admit that it is sometimes disgusting to listen to him.

It is also very noticeable that many farmers over the country are lacking in horse lore and I believe that the place that it can be noticed the easiest is at the country auction.

In the past I have often stood in the ring at a farm sale and listened to a farmer represent his horses as sound (through ignorance) when they were carrying various blemishes on which they could be rejected, and I have almost as often seen some farmer bid off a sideboney, windy, heavy or blue-eyed horse just because he didn't know the difference.

I have shown quite a lot of pure-bred draft horses at different state fairs and live stock expositions, and, as I look back over my experience I find that I never won a championship with a blemished horse, and then again following up the horse markets I find that the buyer that hasn't a good eye for blemishes seldom prospers.

Every man who has ever purchased a blemished horse with the hope of selling him again could fill the space of several paragraphs if he rightly expressed his disappointment. The facts in the case are that even the best of judges and those most competent to detect forms of unsoundness and blemishes are in some instances deceived in a way that involves them in a loss if they make purchases. Just recently our attention was called to an instance where an expert horseman, a gentleman who purchases thousands of animals every year, paid a good round price for a gelding afflicted with a malignant type of poll evil. This horse had been operated on several times, but no recovery was effected save only for short intervals when the wound would heal, only to break out again a few weeks later. A very large scar appeared on this horse's poll, but this seasoned horseman failed to exercise his "blemish eye" in this case, and he paid $175 for a horse that was absolutely worthless.

Then there is the jack spavin which has fooled many a horseman. As this form of unsoundness affects the bone, the value of many a horse is greatly reduced by this defect. In spite of this, buyer after buyer will pick up an individual of this kind without being able to detect the unsoundness, possibly on account of the natural prominent character of the hock joint. Soon the horse goes lame and the owner's heart fills with sadness. Individuals of his type are responsible for spreading the disease known as the "blemish eye."

The First Cutting of Alfalfa.

WHERE alfalfa has come through the winter in good shape it is now forging ahead of the grasses, and it will only be a short time until the sickle will need grinding for an attack on the first crop. Those who have had experience in the past are familiar with the habits of the crop and they need little advice about when to start the mower. On the other hand, the beginner should be willing to learn from the experience of others, and on this question of cutting something may be learned from a brief review of the dominant character of this crop.

Until within the last few years it was customary to gauge the time of cutting by the condition of the bloom, but in recent times it has been found that this is not a safe rule to follow. Cutting when one-tenth of the plants are in bloom may, under certain conditions, answer the needs of the situation, but it is a much better plan to observe the new plants that spring from the old crowns. At a given signal from nature there is developed from these crowns certain leaf buds, and when these buds begin to open, thereby showing tiny sprouts, this means get the mower ready.

These sprouts are nothing more nor less than the second crop coming on. They develop rapidly under favorable conditions and unless the first crop is cut the mower is apt to sever these tender leaves, thereby severely checking the second growth. If the crop is cut before these buds open out they are retarded in their development for the simple reason that they depend upon nourishment from the roots and leaves of the mother plant for their food supply and they must actually have this supply in order to insure a vigorous growth until the leaves open out to the air and sunshine. These buds are not self-sustaining, and while early cutting may not kill the crop, owing to the large supply of food materials in the root, still it will check growth and unquestionably lessen the yield of the second crop. It is most fortunate that the alfalfa crop reaches the ideal condition for curing into nutritious hay just at a time when the leaf buds referred to begin to open out. If cutting is long delayed it means that the crop will be woody in its nature, while premature cutting would result in a green, washy product that is very difficult to cure into hay.

Meaning of Term "Thoroughbred."

THE term "thoroughbred" is a much misused word in connection with live stock breeding operations. Mr. F. A. Geitz brings the matter up at this time and asks for information concerning the proper use of this term.

This term has one correct application only, namely, the name of a breed of English running horses. It should never be used synonymously with "pure bred," the latter being the term employed to denote the absence of alien blood in the ancestry of an animal.

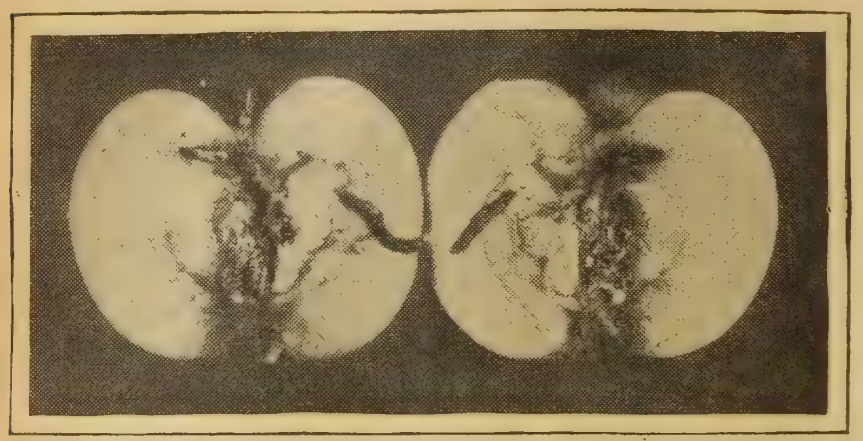
From what already has been said the conclusion will be at once reached that there is no such animal as a "thoroughbred Guernsey" or a "thoroughbred Jersey" or "thoroughbred poultry," although, on the other hand, there are thousands of "pure-bred" Jerseys and Guernseys and innumerable yards full of "pure-bred" poultry.

It is quite likely that those who have misapplied this term will continue the practice in spite of anything that is here said, but our hope in calling attention to the matter at this time is that our younger readers will learn early in life the proper use of this term. It requires no mental effort to apply the term correctly under all conditions and correct speaking, particularly when we come to deal with pure-bred animals, is an important part of the business. The successful breeder acquires the habit of being somewhat exacting in all his practices. This applies to the feeding methods that he employs and to breeding operations. He acquires, as it were, a technique peculiar to his own business, and there is just as good reason for the breeder being technically correct in all his remarks as a professional man, be he in the profession of law, medicine or dealing in the fine art of literature itself.

SPRAYING FOR CLEAN FRUIT.

The Apple Worm, Wisconsin's Greatest and Most Costly Apple Pest, May Be Easily and Successfully Controlled by Applying Poisons—Will Also Check Leaf-Eating Insects—Hints on Spraying Materials.

IN THE life of every insect there are certain periods when practical control measures can be applied with greater success than other periods. In the case of the codling moth or "apple worm," which is Wisconsin's greatest apple pest at this time, the period of control is between the hatching of the eggs and the entrance of the larvae into the fruit. The consequence is that this is the season when the orchardist and the farmer with the home orchard must be on the alert to prevent damage to his coming apple crop.



SHOWING THE WORK OF THE CODLING MOTH IN A SPLIT-OPEN APPLE —THIS PEST COSTS WISCONSIN FARMERS AND ORCHARDISTS APPROXIMATELY $1,000,000 A YEAR.

The codling moth is found in practically every apple-growing region of the country and its ravages, estimated to cost Wisconsin farmers about $1,000,000 a year, can be readily controlled by the application of arsenical poisons at the proper periods. This insect, which is to be found in almost every apple orchard, causes the young apple to drop from the tree and the well-known "June drop" is usually due to its attacks. Two broods are produced annually and to successfully control it spraying must be continued throughout the summer.

The first brood appears when the apple trees are in bloom, at which time the larva emerges from the cocoon in which it has passed the winter beneath rough bark or among rubbish and lays its eggs on the young apples or leaves, from which hatch the tiny "worms" that burrow into the apple. The larva, when mature, spins a cocoon from which hatches an adult moth about the last week of July. When the eggs are again laid about the first week of August another life cycle as above has passed, except that in Wisconsin the mature larvae spin up in favorable locations and remain so over winter, ready for the next spring. There is an abundance of evidence to show that spraying for the codling moth can be made from 90 to 99 per cent efficient. As high as 99 per cent fruit has been secured from the calyx spray alone, although J. S. Sanders, state entomologist, and H. F. Wilson, entomologist at the college of agriculture, advocate at least three sprayings, while more than four Mr. Wilson considers unnecessary. The first spray should be applied just after the petals fall from the tree, as about 60 per cent of the larvae of the first generation enter the fruit at the calyx end and the others from the side. By keeping the leaves and skin of the apples coated with poison the death of the insect before serious damage is done is sure to result. This first spray, according to Mr. Sanders, should be of arsenate of lead, one to one and a half pounds of powdered (three pounds of paste) in each fifty gallons of water.

The second application should come from ten days to two weeks later and should be of the same strength as for the first. In speaking of the time of application, Mr. Wilson, before the last convention of the Wisconsin State Horticultural society, said that although there may be some disagreement over the time for the second, third and fourth applications, that all must agree that the first should be applied after the petals drop and before the calyx lobes close. These close within a week or ten days after the petals fall and if the poison does not reach the calyx cup the most vital point of attack is left unprotected. The second spray is planned when the eggs are hatching and the first brood of tiny "worms" are entering the fruit, which is from ten to fourteen days after the first spraying.

The third application is made to catch the larvae of the second brood and should be made during the last week in July or early in August. At this season the Wisconsin orchardist is interested in the two initial sprays, which, properly done, will result in clean fruit for him this year.

Lime-sulphur solution (or Bordeaux mixture) may be combined with all these three sprayings to control the "apple scab" by using one and a half gallons of commercial lime sulphur to each fifty gallons of water. These sprayings will also control the foliage-eating caterpillars as well as the codling moth. When a fourth application is deemed advisable for late "worms" and bud moth larvae spray three weeks after the third application.

Mr. Wilson points out that unsuccessful control of the codling moth may usually be found due to one or more of the four factors that follows:

1. Lack of personal supervision of the spraying operations.
2. Inefficient spray outfits.
3. Careless application of spray and failure to cover the leaves and fruit thoroughly.
4. Lack of knowledge of the habits of the insect and the damage it does.

In spraying the following practice should prove satisfactory in all cases:

1. Never spray when your engine is running under 150 pounds pressure.
2. A forceful spray, whether driving or mist, is absolutely essential for thorough work and penetration to all parts of the tree.
3. A driving spray should be used for the first application in order to reach the inner cup.
4. A mist spray, being more economical than the driving and just as effective, should be used for later applications.

The terms used in methods of application designate driving sprays and mist sprays. A driving spray is one in which the spray is forced through a coarse nozzle in a heavy stream, so as to completely drench the trees or foliage. A mist spray is one in which the spray is forced through a fine nozzle in the form of mist and it is desired to thoroughly coat all parts with a fine film without causing the spray to form into drops and run off. From the standpoint of economy the mist spray is the more desirable, since only half as much spray will be used in this as in the drenching spray. In either case, satisfactory results can only be obtained by steady and strong pressure. A little experimental work by the orchardist himself will most likely determine the proper method to be used in his case.

The necessity of great care in using combination sprays was brought out by Mr. Wilson, who pointed out that in the economy of spraying combination or mixed sprays have been evolved for the purpose of fighting insect pests and fungous diseases with a single spray. In this work arsenate of lead, Black Leaf-40, etc., seem to mix well with the fungous sprays and these mixtures are now a part of general orchard practice. The greatest difficulty comes from the fact that both Bordeaux mixture and lime sulphur have a tendency to cause spray injury and in the case of lime sulphur when the arsenates of lead are added such injury is apparently greatly increased.

Experiments show that at the time of the first application for codling moth the combinations are much safer than for later applications. That climatic conditions may and do enter to complicate the spray problems is quite evident. Just why spray injury is more prevalent in some seasons is a problem that still needs considerable research work and until solved or until some fungicide is found that will control apple scab without causing spray injury the growers must expect to suffer a loss in this manner. There is a general agitation at this time regarding sulphur as the most likely material to do this and there are a number of sulphur compounds on the market which give promise of some merit. Just how they are going to turn out, Mr. Wilson says, is still an open question.

THE APPLE BLOSSOM AT THE PROPER TIME FOR SPRAYING FOR THE CODLING MOTH WHICH CAN BE EASILY AND SUCCESSFULLY CONTROLLED.

EFFICIENT SPRAYING MACHINERY MAKES THE WORK EASIER AND MORE THOROUGH. CLOSE ATTENTION TO THIS DETAIL IS ONE OF THE FACTORS INSURING CLEAN FRUIT.

Mr. Wilson, in speaking of efficient spraying machinery at the horticultural convention, said:

No orchardist can hope to be lucky enough to successfully control insect pests and fungous diseases year after year if he has an inferior and inefficient spray outfit. In any enterprise success depends upon efficiency, and, as the efficiency is great or small, so will the enterprise be. In my opinion, after thorough application, the most necessary thing in successful spraying is pressure; not pressure that varies from fifty to 250 pounds, but pressure that stands at 150 pounds or over all the time. It is sometimes hard to keep this up on account of leaky valves, poor packing in the pump, etc., but certainly there is no economy in permitting such conditions to continue. Neither is there economy in using worn out, leaky hose or connections. Probably the most provoking and sometimes unavoidable trouble is with the engine. Of all the tortures invented by the evil one, certainly the poorly working spray engine is the father of them all. The outfit to be used rests mostly upon the judgment of the grower. Of the various power machines manufactured, it is hard to choose the best. Any one of the standard makes should prove satisfactory.

By adopting these methods we can raise clean fruit.

Where Testing Pays and Why.

Experiences of Dairymen in Waupaca County as Shown by Annual Testing Report---By George L. Moss, Official Tester.

FOLLOWING is the report of the Waupaca and Butternut Ridge Cow-Testing Association for the past year. In all 361 cows completed the year's work. Our best cow produced 10,201 pounds of milk, testing 5.38 per cent, making 5,494 pounds of butter fat valued at $181.15. This was a native cow owned by Tom Farley. She consumed $29.82 worth of roughage and $37.79 worth of grain, making a total feed cost of $67.61, bringing a net profit of $113.54, returning $2.68 for every dollar's worth of feed. This cow is a persistent producer as she has been in the association for three years and she has returned a profit of $335.33. She belongs in the herd that produced an average of 386.9 pounds of butter fat, with an average production of 9,182 pounds of milk from eleven cows testing 4.21 per cent. The gross income per cow is $125.83. The average cost of roughage is $28.73 and grain $23.08, making the total feed cost $51.81 per cow. The average profit is $74.02 per cow, returning $2.42 on every dollar expended for feed.

Our best herd for returns on the dollar is a grade Jersey herd owned by Herman Becker. They returned $2.58. His average production of butter fat is 337.5 pounds from fifteen cows, 5,822 pounds of milk is average milk production, testing 5.79 per cent. His cost of feed was $41.71, leaving a net profit of $66.80.

Our second best herd for butter fat production is owned by E. L. Schroeder. The herd consisted of five grade Guernseys, two grade Jerseys and three natives. Their average was 346.6 pounds butter fat, with 7,186 pounds of milk testing 4.82 per cent; $111.41 was the average gross returns and $52.33 was the average cost of feed, making a net profit of $59.08, returning $2.13. This herd did remarkably well, as their pasture was not as good as most herds have. They had to be fed more grain to balance poor pasture. This is the cause for lower returns than from the former herds mentioned.

The herd that came third for returns was a grade Guernsey herd owned by John C. Backes. They returned $2.38. We have several herds that did exceptionally well, many herds averaging over 300 pounds of butter fat. Our poorest herd averaged 169.8 pounds butter fat, with 4,317 pounds of 3.93 per cent milk. Average gross return was $55.40, with an average feed cost of $35.50, leaving a net profit of $19.90 per cow, returning $1.56 for every dollar expended for feed. This is one place where the farmer was tested as well as the herd. His ration was 1-12 before he joined the association. A year ago he received $19.45 profit from sixteen cows. This month the cows show a profit of $59.50. Seven thousand three hundred and thirty-nine pounds of milk was total milk production the first month he was in the association. This month his total was 9,795 pounds from sixteen cows and 389.2 pounds of butter fat, where it was only 265.4 a year ago. If everything goes well I believe this herd will reach an average of 225 to 250 pounds butter fat this year. The poorest cow belongs to this herd, making 111.8 pounds of butter fat from 2,776 pounds of 4.02 per cent milk. Her total cost of feed being $32.72 and her gross income only $36.35, she returned only $3.63 profit, or $1.11 for every dollar expended for feed.

We have two heifers in this association that made a fine showing. Mr. L. R. Constance has one that produced 350 pounds of butter fat and Mr. E. L. Schroeder has the other which produced 363 pounds of butter fat. Both these records are well worth comment and are a very fine showing for the first year's work.

This association is on with its fourth year's work, which is good evidence that it pays to continue cow testing. Mr. H. C. Frihart says one reason why he continues cow testing is he cannot afford to feed $600 or $700 worth of feed without knowing what each cow is doing. Another reason is that the work is done on time whether he is busy or not or whether he is home or not and he always has a full record of all his cows for the year. Mr. M. J. House says after he joined the cow-testing association he took more interest in his cows, fed better and gave them better care. He culled out two cows and has replaced them by four heifers, and he is receiving a check for $100 every month, where he was receiving only $60 a month a year ago. Since that time he has installed a milking machine and other up-to-date machinery. The cow tester didn't buy these for him, but Mr. House did it because he took more interest in his cows and could see there was more money in dairying if handled right. This is just an instance to show why it pays to belong to a cow-testing association. It is often said by some farmers, "Do you suppose I would pay a 'tester' to come and tell me what to do—how I should feed my cows and tell me what cows I should keep, and what cows I should sell? Not much. Do you suppose I would feed his horse and board him once a month and pay him besides, just to visit me? I guess not." Such remarks are often made by farmers who do not understand cow testing, also farmers who are in the dairy business but in the dark as to the benefits of cow testing. Some men wouldn't pay out a dollar if they knew it would return them ten, because the other fellow would have the dollar. The profitable feeding of dairy animals is one of the hardest problems of the American farmer today and they need help to get the most out of them with the least expense.

THE BEST FIFTEEN HERDS FOR THE PAST YEAR.

Rank	No. cows	Ave. milk	Ave. test	Ave. fat	Ave. cost of feed	Profit
1. Holsteins	11	9182	4.21	386.9	$51.81	$74.02
2. Guernseys	10	7186	4.82	346.6	52.33	59.08
3. Jerseys	15	5822	5.79	337.5	41.71	66.08
4. Guernseys	2	6259	5.38	337.1	56.33	52.91
5. Holsteins	22	9408	3.45	320.4	88.18	13.38
6. Holsteins	12	8856	3.61	319.9	56.34	46.65
7. Jerseys	5	6556	4.78	313.8	42.38	56.95
8. Jerseys	11	6071	4.99	303.3	41.98	56.48
9. Jerseys	20	5304	5.71	303.2	48.38	49.45
10. Guernseys	11	6135	4.76	292.0	44.09	49.18
11. Guernseys	9	6139	4.74	291.2	39.97	53.14
12. Guernseys	9	6095	4.61	281.5	40.21	52.50
13. Guernseys	7	6043	4.49	271.6	38.22	48.58
14. Guernseys	7	4892	4.95	271.1	32.05	44.00
15. Guernsey-Holstein	15	6033	4.42	266.8	39.95	45.43
Total	166	99981		4642.9	$713.93	$770.55
Average		6023	4.64	279.7	43.00	46.41

Less Politics—More Business

THE **biggest** business in this country is the business of the Nation itself. The Government of the United States represents a group of huge enterprises; each one a **department** in the Nation's business.

The Farming Industry is the most **important department** in the business—it is the backbone of our whole commercial body.

The problems of running the Government are therefore the problems of the Farmer—**your** problems, and to be assured of their solution **you** must actively interest yourself in them.

What do the stockholders of a great business concern do when they want to find the man most capable of directing its affairs?

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No! They employ one who **knows**; one who has met and overcome the problems of production—of labor—of transportation—of distribution—a **Business** man who is familiar with the operation of every department of their business.

Then let us get together—for each one of us is a stockholder in this Nation's huge business—and elect a man to the Presidency of the United States who will be fitted and experienced to run our business—not a theorist nor a politician—but a Business Man.

Let us elect a man who will make the Flag, and not the Pork Barrel, the Nation's trade-mark.

Let's Put the AMERICAN FLAG Ahead of POLITICAL PATRONAGE

Let's have a President—a government manager—with enough knowledge of **business** to exact efficient **service** from the country's employes; to obtain maximum **value** from the Nation's tremendous expenditures.

It costs a billion dollars a year to run the Government. Experts have agreed that thirty per cent—three hundred millions—of this is wasted.

The latest report of the Secretary of the Treasury shows that it cost **SEVENTY-TWO PER CENT MORE PER CAPITA** to run the Government of the United States in **1915** than it did in **1886.**

This is no cheap country. It has money to spend, and the people are willing to spend it. But the people want to know that they are getting all that they pay for—dollar for dollar.

CO-OPERATION, which means markets; **TRANSPORTATION,** which means market roads; and **INCREASED PRODUCTION,** which means protection;—the big problems of the American Farmer—are essentially **BUSINESS** problems. Don't you think the man at the head of the National Government, who has so much to do with that solution, should be a Business Man?

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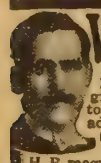

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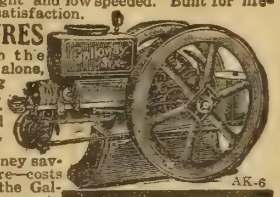

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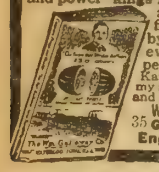

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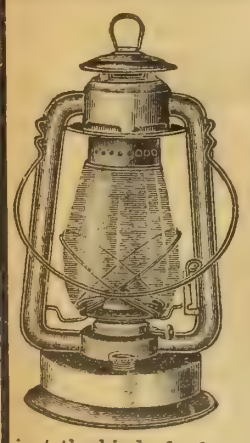

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Patent opening device raises and swings the globe free for lighting, filling and trimming. This lantern is fully guaranteed and is endorsed by the highest authorities on fire insurance, fire fighting and explosives. If dropped or turned over it immediately goes out. Oil cannot run. Impossible to catch fire. A lantern you will always feel safe with in the house or barn.

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The Farmers' Open Forum
WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Figuring Farm Profits.

To the Editor:—The big factor in figuring farm profits is cost of production. As we are engaged in dairying and hog raising it is, of course, in these lines I am interested. I shall write in terms of cattle, but the principles will apply to both.

In feeding cattle there is always a point in production where a man gets the most returns for feed used. Economists call it "point of maximum returns." Now, unless a man is going after production records, if he can find this point in his feeding operations he had better stop there and that is what I try to do. By knowing what milk will net us we can tell pretty accurately how much grain we can feed besides our alfalfa and silage and it is surprising how small that amount is. We find it by adding a pound of grain at a time until the gain in milk does not pay for the increased feed, then back up from there till it does.

After cost of production comes care in handling the herd and I believe the two go hand in hand, for unless a man is careful in his handling methods he will not be able to figure costs.

Another phase of cost of production is keeping the help busy all of the time and planning the work so as to accomplish the greatest amount with the smallest number of men. We find that it is usually a good plan to have several jobs going so that the men are scattered a little, as then there is not apt to be so much carelessness and loafing.

The next factor is to know when to sell home-grown feeds and buy others. This we have been able to do to good advantage quite often.

I hope to be better qualified to write of successful farming methods later, as I have been at this business but four years and am trying to build up a herd of Holsteins from common cattle.

Green Co., Wis. W. N. Preston.

H. S. CHRYSLER, TREMPEALEAU COUNTY, WIS.

PRESTON FARM HOME, GREEN COUNTY, WISCONSIN.

Increase Herds and Flocks.

To the Editor:—I was very much surprised when I learned that I had been selected as one of the winners in our county farm management contest. Although much has been written on the topic, "How to increase the production of our farms," I think we have as yet a great deal to learn. There are very few of us farmers who realize what our farms will actually produce if they are managed in the best possible manner. For one thing, we must increase our herds and flocks. We must pay a great deal more attention to the sires we are using. This will make it possible for us to double production. If we look after these matters in the way we should it may be easily possible to treble the profits. When we get down to bare facts that is what we are after. I feel sure this contest will open the eyes of a good many of us. We will see to it hereafter that we make a profit in our farming operations. The farm management contest sets an example before us of what our more successful brother farmers have been able to do.

H. S. Chrysler.

Trempealeau Co., Wisconsin.

H. S. Chrysler farm buildings, Trempealeau county, Wisconsin. Mr. Chrysler was a winner in the county farm management contest.

Farmer May Grow His Own Nitrogen.

To the Editor:—"Trade at home" has become a familiar slogan of the business world today. Well may the business farmer adopt this phrase in a modified form in so far as the fertilizer situation is concerned and instead of sending away for his nitrogen he should "grow his own."

It has long been known that the soy bean in common with other legumes possesses the ability to gather nitrogen from the air. Since this plant will thrive on sandy and other types of soils on which other legumes will not do well it stands in a class by itself as a nitrogen gatherer for worn-out soils.

The soy bean was introduced from the orient. While it has long been grown in the South, it is only within recent years that varieties have been developed which will mature in the northern part of this state. The "Early Black" is perhaps the only variety that can be depended upon to mature year after year in this part of the state. If intended for hay or green manuring the "ItoSan" should be planted. In a favorable season it will mature its seed. This variety should be planted in preference to the "Early Black" wherever it will reach maturity. It grows to a larger size and yields heavier than the first-mentioned variety. Other varieties which reach maturity about the same time as the "ItoSan" are the "Early Brown" and "Medium Early Black." All these varieties may be safely planted for seed in the southern part of the state and for forage in the northern part.

Either spring or fall-plowed ground is prepared the same as one would prepare it for corn. Since the soy bean has a longer growing season than the common white or navy bean it must be planted earlier. Corn planting time or very soon thereafter is about right. Drill the beans in rows thirty to thirty-six inches apart, using about one-half bushel of seed per acre if intended for seed. I find an ordinary grain drill, with some of the spouts stopped up, a rapid and very satisfactory way of planting. If wanted for hay leave all spouts open, drilling in one and one-half to two bushels per acre. Plant about one and one-half inches deep. After the beans come up cultivation should be continued same as for corn.

To enable this plant to gather nitrogen from the air and thus enrich the soil with this valuable fertilizer it is necessary that the soil be inoculated with the proper nitrogen-fixing bacteria. This may be done by dampening the seed at planting time and sprinkling it with soil taken from a field on which soy beans have grown the year previous. If plenty of soil is available it may be spread broadcast at the rate of one-half ton per acre. To prevent the sunlight from killing the bacteria the broadcasting should be done on a cloudy day and the inoculated soil immediately harrowed in.

Of late years it has become quite a common practice to plant soy beans with corn grown either for silage or for "hogging off." It is claimed by advocates of this system that the corn does even better than if planted alone and that the beans which may be grown between the corn represent so much clear gain. This way of planting, however, should not be attempted if the ground is weedy.

Unlike other beans, the soy bean does not shell easily. The seed crop should not be harvested until all the beans on the pod have completely ripened. Through several years' experience I have found that this plant will "wait" to be harvested for weeks and even for months after it is ripe without spoiling or deteriorating in the least even under adverse weather conditions. While to wait this long is, of course, not the best practice it certainly gives these beans a decided advantage over white beans, which will spoil in spite of all you may do if the season is rainy.

The harvesting may be done with a bean puller or with a mower.

The threshing may be done with either a bean huller or the regular threshing machine. Because of the heavy stalk and the tough pod either method will leave some of the seed in the straw. Being very rich in protein this seed should not be wasted. Any kind of live stock given access to the straw will get the valuable parts. There is perhaps no better way of exercising a drove of hogs than to give them a lot of soy bean straw to work over.

Door Co., Wis. J. A. Haas.

Treat Potato Seed Against Disease

Disinfection Means Freedom From Scab and Blackleg in Addition to Increasing the Yield---Hints For Wisconsin Growers.

PRECAUTIONS taken against disease now by the potato growers in Wisconsin will mean greater profits when the crop is harvested this fall. The most serious potato diseases are introduced on the seed, so that disinfection before planting will greatly reduce the danger from this source. Certain diseases, when once introduced, persist in the soil and it is necessary to rotate with other crops to free this soil of this disease which makes it doubly important that the farmer know that his seed are healthy and sound.

The potato is now one of Wisconsin's most important cash crops and is becoming more so each year with the work which is being carried on for standardization. The acreage of certified seed potatoes will be much greater this year and it is within the means of almost every potato grower to get hold of some of last year's certified seed if he so desires. This seed is grown under inspection and the growers who produced healthy stock have been granted certificates to that effect. Use of this seed will insure a disease-free seed, but those who do not know under what conditions their seed was grown or who import from other states will do well to take the precautions against disease.

Scab is the greatest parasitic disease, although it is not the only one with which the potato grower has to contend. Scab can be easily controlled by the use of formalin as a disinfectant for the seed. As the expense is small no farmer need take any chance with scab. The same treatment applies to blackleg, and this with other potato diseases is discussed by L. R. Jones, of the Wisconsin Experiment Association, in his last bulletin, on the control of potato diseases. There are, of course, many diseases, such as blight and others, that require spraying of the growing plants, but this article deals only with treatment of the seed which is of the greatest importance at this time.

While grown everywhere successfully in Wisconsin the potato is at its best on the newer lands, owing to the favorable combination of climate and soil conditions. The crop in this section is comparatively free from disease, which not only insures the heaviest yields but it makes the crop of especial value for seed purposes. It is, therefore, doubly important that the potato growers of these new sections are to use only seed free from disease.

Potato scab is caused by a parasitic growth on the surface of the tubers. The spores or germs are carried over winter in the old scab spots, or scattered in the dust from scabby potatoes which may cling to the surface of smooth tubers. The scab parasite persists in the soil many years after a crop of scabby potatoes. It will also pass through the digestive tract of stock fed on scabby potatoes. Morse, of the Maine Experiment Station, has proved that manure from horses so fed causes more scab than that of the cow. The scab germ thrives best in an alkaline soil and is checked by acidity. Hence, lime or ashes increases it, and plowing under green crops renders the soil less liable to it.

Minute insects, scab mites, and beetles often invade the scab spots and enlarge and deepen the injury. White grub and wire worm injuries may also be coupled with those of scab, but they have no regular association and are readily distinguishable.

To remedy this potato disease smooth seed potatoes should be selected; disinfect with formaldehyde (or formalin) and plant on clean soil. Clover sod is best, but any green crop turned under is helpful. Cook scabby potatoes before feeding to stock and do not use fresh manure on potato land or apply lime or ashes. Rotate potatoes with other crops, and if scab develops do not grow potatoes on that soil for five years or more.

Blackleg is a bacterial disease carried on the seed tubers. There is but little in this state now, but there is evidence that it is being introduced with seed imported from the East. It causes the seed tuber to rot early, sometimes before the sprouts break through the ground, thus giving an irregular stand and weak plants. The rot then spreads up the base of the stem, which turns black and rots as far as the surface of the soil or above. As a result of this, the plant stops growing and the leaves become pale and bend upward, giving the plant a sickly, narrow and spindling appearance. Diseased plants generally die soon without setting any tubers.

The disease is worst in heavy, moist soils, and in some cases, where it is bad, it may spread from the stem of the tubers, causing a rapid soft rot. Although this disease is not yet serious anywhere in Wisconsin, it occurs widely, and steps should be taken to control it before it becomes common, especially where potatoes are being grown for seed purposes.

This disease, also, has been the subject of careful study by Morse, of the Maine Experiment Station, who has shown that it is carried on the seed and that it is controlled by selecting sound seed potatoes and disinfecting them with formaldehyde as for scab. In addition it is well to pull up all diseased plants as soon as detected in the summer, so that they will not form tubers which contaminate the crop.

SEED POTATOES OF ALOIS STENGL, LANGLADE COUNTY, READY TO BE TREATED WITH FORMALDYHYDE AS A PRECAUTION AGAINST SCAB AND BLACKLEG.

Let These

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Are you farming on high-priced lands? Then read of results on low-priced land in North Dakota.

M. C. Crockett, one of our big farmers writes:—"I came from Iowa to North Dakota—came from a good stock country, and I have always kept a good herd of cattle and some hogs, and know that all kinds of live stock can be profitably raised here just as well as in Iowa. I now own 2080 acres which I have added to my homestead as I could pay for it, and I figure my soil and farm just as good as they have in Iowa for $200 per acre. And farm is not for sale."

Medium-Sized Farms Pay Best

Joseph Kasal is a 160-acre farmer in North Dakota. In 1915 he threshed from 127 acres in grain, wheat, 1,743 bushels—oats, 841—barley, 813. Cows, pigs and poultry supply the table necessities.

The Great Northern Railway has no land for sale in North Dakota, but there are hundreds of large farms like Mr. Crockett's and larger—there is a great amount of land owned by non-residents. We are interested in having these large farms divided into 160 and 320 acre working farms.

If you own or rent high-priced land, you will be interested in learning what our North Dakota farmers are doing on land equally productive, but which costs only about one-fifth as much and may be secured on very easy terms. In fact, what is ordinarily paid by renters will make the payments on a North Dakota farm.

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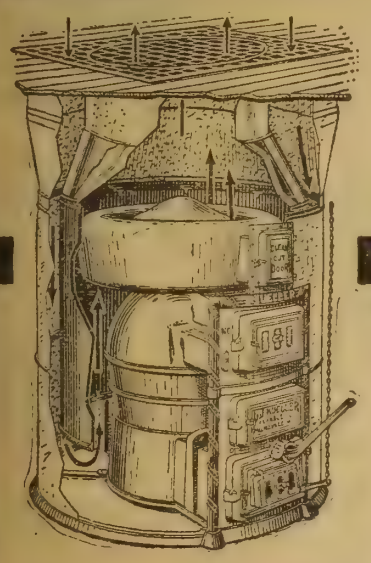

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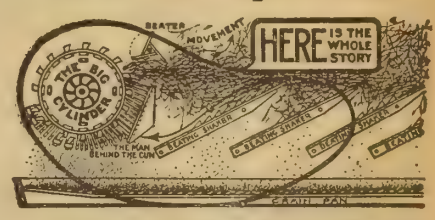

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Cow-Testing Reports.

Stanley County Cow Testing.

The Wisconsin Farmer has received the annual report of Richard F. Adams, tester of the Stanley, Wisconsin, association. There were 313 cows completing the year. They gave a total of 1,839,661 pounds of milk, averaging 4.2 per cent test and yielding a total of 77,426 pounds of butter fat. The gross returns in cash amount to 23,602. Other figures of interest are as follows:

Cost of feed, $10,663.
Profit for members, $12,939.
Average milk per cow, 5,878 pounds.
Average fat per cow, 245 pounds.
Gross returns per cow, $75.40.
Cost of feed per cow, $34.
Profit per cow, $41.33.
Return for each dollar invested in feed, $2.21.

The best ten cows produced 4,114.7 pounds of fat with gross return of 1,277,74; cost of feed $442.52; profit, $835.20.

Average of best ten cows: 411.4 pounds fat; gross return $127.77; cost of feed, $44.25; profit, $83.52; return for $1 in feed, $2.88.

The poorest ten cows produced 1,230.5 pounds fat; gross return, $361.94; cost of feed, $339.44; profit, $22.50.

Average of poorest ten cows: 123 pounds fat; grass return, $36.19; cost of feed, $33.94; profit, $2.25; return for $1 in feed, $1.06.

There were six cows which produced more than 300 pounds of butter fat each. Their average gross returns is $110.26, and the profit on each is $66.28; 252 cows below the 300-pound mark averaged gross returns of $66.96, with a profit of $34.80.

The highest average for a herd was that of G. C. Leslie, being 9,750 pounds of milk; fat, 371 pounds; profit, $59.23.

Second best herd average by P. A. Lien, 7,723 pounds milk, 316 pounds fat; profit, $56.34.

Third best herd average, Geo. Weissenberg, milk, 8,595 pounds; fat, 295 pounds; profit, $46.08.

The highest producer is owned by P. A. Lien. Her record is 513 pounds of fat, and she shows a profit of $107.90.

The second highest producer is owned by Frank Smalley, 460 pounds fat, and third by Geo. Weissenberg, 441 pounds fat.

One hundred ninety-three cows of the 300-pound class would have produced as much profit as did the 313 cows of the association. Dispensing with these 120 would have made that many less to house, feed and care for, and it would have made room of an equal number of the $83 class. Do you take the hint?

The loss of these 120 cows at the average cost of feed was $4,080. One association in the state reports ninety-five forty-pound cows this month. Another reported but fifty. The Stanley county can equal that. The advantages of right feeding are very apparent from the above figures. The well-fed cows show the profits. One of the purposes of the association is to study feeds and feeding.

Rock County Testing.

Joseph Z. Finberg, as tester, sends The Wisconsin Farmer the March report of the Rock county association, which shows that J. B. Palmer, of Milton, has the best record to date in this new association. He is milking ten cows and in March six did better than forty pounds of fat. F. O. Uehling's Guernsey still holds first place with 52.8 pounds of fat. The report follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
R. Marquart					
Johnny, G. S. H.	6	1-2	1355	3.2	43.3
C. Heritage					
Whitey, G. G.	6	2-28	970	4.3	41.7
H. B. Paul					
Mary, G. H.	6	2-7	1153	3.8	43.8
J. B. Palmer					
Babe, G. H.	6	10-26	1122	4.0	44.8
Nig, G. H.	8	11-20	1088	3.7	40.2
Madge, G. S. H.	7	12-2	1321	3.5	46.2
Maude, G. H.	7	11-20	1197	3.5	41.8
Mary, G. H.	6	12-12	1206	3.6	43.4
Mame, G. H.	4	2-14	1414	3.4	48.0
H. H. Little					
Lady Mayflower No. 22, S. H.	8	11-6	1128	4.0	45.1
Lily Clay 4th, S.H.	7	10-5	911	5.1	46.4
W. D. Austin					
Brown Sue, G. A.	6	12-24	1138	4.0	45.5
F. O. Uehling					
Marguerette, G. G.	7	12-29	1202	4.4	52.8
E. P. Coon					
Gypsy, G. H.	7	1-15	1122	4.0	44.8
Lauer Bros.					
Elsie, G. H.	4	2-17	992	4.3	42.6
Bessie, G. H.	4	11-5	1094	3.8	41.5
G. Hol.	5	3-1	1395	3.2	44.64
Frank Sontag					
G. Hol.	8	1-14	1202	3.4	40.87
John Salm					
P. B. Hol.	6	12-20	2170	3.9	84.63
P. B. Hol.	6	10-5	1271	3.7	47.03
P. B. Hol.	7	2-28	1333	4.0	53.32
G. Hol.	12	10-15	1302	3.4	44.29
G. Hol.	6	11-10	1023	4.0	40.92
G. Hol.	8	12-10	1395	4.0	55.80
G. Hol.	8	10-10	1271	3.5	44.49
G. Hol.	7	1-4	1178	4.0	47.12
G. Hol.	12	10-25	1116	4.0	44.64
G. Jersey	12	12-5	1116	4.0	44.64
G. Hol.	5	1-8	1240	4.0	48.60
G. Hol.	6	2-27	1116	4.0	44.64
G. Hol.	12	11-7	1333	3.8	50.65
G. Hol.	12	12-3	1023	4.2	42.97
O. C. Pilling					
G. Hol.	6	2-20	1363	3.6	49.07
G. Hol.	6	2-1	1240	3.8	47.12
G. Hol.	2	2-15	992	4.2	41.66
G. Hol.	2	2-27	1054	3.8	40.05
Alex Pilling					
G. Guern.	4	1-22	992	4.2	41.66
G. Hol.	8	2-15	1364	3.4	46.38
G. Guern.	5	2-16	1209	3.8	45.94
G. Guern.	6	1-7	1240	3.6	44.64
Frank Nennig					
G. Hol.	9	1-1	1023	4.0	40.92
P. B. Hol.	6	12-25	1054	4.0	42.16
P. B. Hol.	6	1-15	930	4.4	40.92
Joe Weninger					
P. B. Hol.	7	12-16	1333	3.8	50.65
Robert Bittner					
G. Jersey	5	2-3	1116	4.0	44.64
Mayer Bros.					
P. B. Guern.	8	3-9	1209	5.6	67.69
G. Guern.	11	12-12	1209	4.0	48.36
G. Durham.	6	3-6	1395	4.0	55.80
G. Durham.	5	1-4	1147	3.9	44.73
John P. Koehler					
G. Guern.	3	9-15	744	5.6	41.86
G. Guern.	9	11-1	868	5.5	47.74
G. Guern.	5	11-15	837	5.2	43.52
G. Guern.	4	3-5	1116	4.8	53.57
Native	6	12-12	930	4.6	42.78
Joseph Koehler					
P. Durham.	5	3-10	1023	4.8	49.06
G. Guern.	6	3-5	1118	3.8	44.76

An Excellent Start.

The newly organized Chilton Cow-Testing Association, Calumet county, completed its first month of testing April 12th with seventy-three cows producing more than forty pounds of fat. This is a splendid start and shows some excellent producers. Oscar Kossman is the tester and his first report follows:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
Arthur C. Peik					
G. Guern.	6	12-26	812	5.0	40.61
Native	8	12-31	1001	4.0	40.05
Walter Seefeld					
G. Hol.	6	11-16	1200	4.3	51.60
G. Guern.	4	1-17	1028	4.0	41.12
John Fuchs					
G. Hol.	6	1-15	1085	3.9	42.21
G. Hol.	6	1-15	1094	4.0	43.76
Nick Bernard					
G. Hol.	7		1234	4.2	51.83
G. Hol.	7		1277	3.4	43.40
G. Hol.	7		924	4.4	40.61
G. Hol.	7		1333	3.8	50.65
Harry Merrill					
G. Hol.	4	1-6	1255.5	3.8	47.71
G. Hol.	4	2-24	1100.5	3.8	41.82
G. Hol.	4	2-19	1472.5	4.0	58.90
G. Hol.	4	2-12	1109.8	4.2	46.61
Frank Davis					
G. Jersey	7	2-2	976	4.3	40.97
Louis McGrath					
P. B. Guern.	10	2-5	924	4.7	43.43
P. B. Guern.	6	12-23	1172	6.8	79.70
G. Guern.	8	2-2	1336	7.0	93.52
G. Guern.	5	1-1	1240	6.0	74.40
G. Jersey	5	2-22	812	6.2	50.34
G. Guern.	3	10-20	899	5.4	48.55
Native	11	11-1	1110	4.7	52.17
P. B. Guern.	3	7-15	763	5.4	41.20
G. Jersey	1-10	2-25	924	4.4	40.66
Julius Bowe					
G. Durham.	10	12-20	1426	3.2	45.63
G. Hol.	4	1-1	1364	3.0	40.92
G. Durham.	7	1-1	1076	3.8	40.79
G. Guern.	6	12-8	1138	3.6	40.77
G. Durham.	9	12-20	1116	3.7	41.29
G. Hol.	4	2-15	1442	3.2	46.14
G. Hol.	4	1-15	1482	3.6	53.35
G. Hol.	5	2-15	1582	2.8	44.30
P. B. Hol.	3	3-1	1209	4.0	48.36

Dunn County Report.

Thirty-six cows in the Dunn County Cow-Testing Association made the forty-pound list in March, the report of which follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Sam Erb					
White, G. H.	2	1	876	4.7	41.1
Mabel, G. H.	4	1	1473	4.0	58.8
Dollie, G. H.	7	3	1194	3.5	41.8
Queen, G. H.	4	1	1314	3.3	43.4
Lark, G. H.	7	2	1440	3.0	43.2
Lulu, G. H.	7	2	1641	3.0	49.2
Charles Harshman					
Pride, G. G.	3	2	822	5.6	46.0
Heart, G. G.	3	2	880	4.8	42.2
Frau, P. B. G.	6	3	672	6.4	43.0
Mary, G. G.	6	5	837	5.7	47.7
A. F. Klatt					
Pauline, G. G.	4	1	890	5.4	48.1
Daisy, G. G.	4	2	753	6.0	45.2
Max Maves					
Rose, Mixed	6	1	1044	4.9	51.0
White, G. H.	9	3	978	4.1	40.1
J. F. Ausman					
Arbutus, G. J.	3	1	918	4.8	44.0
E. C. Jacobs					
Ludie, G. J.	9	4	815	5.0	40.7
Norma, G. J.	9	3	970	4.2	40.7
Bessie B., P. B. J.	2	3	964	4.5	43.4
Pauline, G. J.	8	1	998	4.6	40.9

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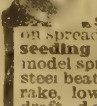

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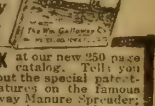

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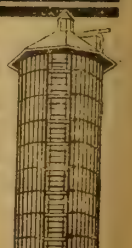

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William Burk					
Daisy, G. G.	4	3	1078	4.5	48.4
Nellie, G. G.	4	2	1035	4.7	48.6
Topsy, G. J.	9	5	960	5.4	41.8
Sam Elume					
Stubby, G. H.	4	4	1076	3.8	40.9
Maid, G. H.	5	4	1092	4.0	43.7
Rose, G. H.	4	3	1214	3.2	40.1
John Cramer					
No. 17, G. G.	6	2	938	4.7	44.0

New Hope Report.

M. E. Smith, official tested of the Alban & New Hope Cow-Testing Association, Portage county, sends the following report for the thirty days ending April 10th:

Owner and breed	Age	When fresh	Pounds milk	Per cent B. fat	Pounds of fat
Tom Olson					
Native	5	2-26-16	1086	3.8	41.0
Native	11	2-9-16	1240	3.6	44.6
J. J. Olstad					
Native	7	2-29-16	1147	3.5	40.1
Native	3	2-20-16	1116	3.8	42.4
C. E. Erickson					
Gr. Guern.	8	2-29-16	1153	4.0	46.1
M. J. Wrolstad					
Gr. Guern.	12	1-27-16	1318	4.8	63.3
Gr. Guern.	9	11-25-15	983	4.8	47.2
C. C. Wagsland					
Gr. Guern.	9	2-1-16	788	5.1	40.1
Henry Wagsland					
Native	7	3-6-16	1035	4.4	45.5

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Care of a Cow's Udder.

To the Editor:—It is a calamity to have anything happen to a cow's bag. Before now we have paid a great deal of attention to the breeding, feeding and growth of a certain cow, only to have it all upset and undone by some accident to the udder. After that happens little is to be done but to turn the cow off, for practically nothing can be done for many injuries that come to this most delicate organ.

These difficulties arise from having the udder or one of the teats stepped on by a cow standing next to the sufferer; or they are due to injuries received while fighting; or in far too many cases some man who ought to know better strikes or kicks the cow in this exceedingly tender place and the trouble is one that cannot be overcome. I have known cows to be very seriously hurt in the bag by being hit with a stone thrown by the boy or man who was sent after the herd.

For this reason and others which need not be spoken of here it stands us in hand to see to it that every possible attention be given the udder of all cows. Many times men and boys do not realize what they are doing when they kick or strike the teats or upper part of the cow's bag. Whenever a new man comes into the barn to help about the milking he ought to be given clear instructions on this point, particularly if it develops that he is not inclined to be kind to animals. Young folks are especially apt to be thoughtless in this respect. They do not understand why the udder is not as tough as any other part of the body, when the fact is it is a great mass of tissue, with an intricate system of canals or ducts, all abundantly supplied with blood vessels, nerves and lymphatics. These may be easily obstructed or otherwise permanently injured. It is a thing to be startled at to see a single drop of blood coming from the udder of a cow, for it is a prophecy of the failure of the cow.

To my mind the box stall is the ideal way of stabling the cow. I hope to live to see the day when every cow will have her own roomy place to stay while in the barn. This will obviate many a serious injury of the udder from neighboring cows, as well as work to the comfort and advantage of the animal in many other ways.

E. L. Vincent.

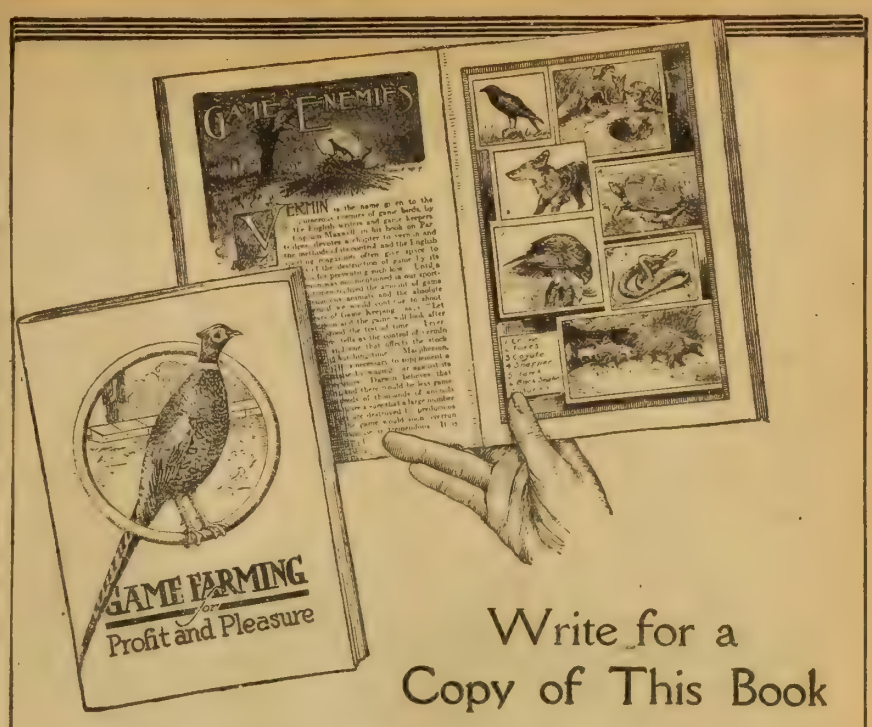
Special State Holstein Meeting.

To the Editor:—A special meeting of the Holstein-Friesian Association of Wisconsin will be held at Watertown, Wisconsin, on the evening of May 4, 1916, for the purpose of submitting to the breeders for their discussion and adoption plans which have been developed by the secretary and a special committee for making this association a more active and effective organization—one that will be of constructive service to its members and the Holstein breeding interests of the state. Every Holstein breeder in the state is invited to attend. As the Wisconsin Breeders' Holstein Sale is held at Watertown on May 4th-5th, breeders who attend the special state meeting will also have an opportunity to attend the sale. By order of the president. C. J. Schroeder, Sec.

This has been the busiest season for the State Seed Inspection Service since it was established in 1909. The regular run of dealers' samples and an unusually large number of other samples of agricultural seeds have been sent to the laboratory at the college of agriculture for inspection and test.

THE IMPLEMENT BLUE BOOK FREE.

The Midland Publishing Co., St. Louis, Mo., has left over a few hundred copies of 1915 Implement Blue Book, one of which it offers to mail free of charge, to any subscriber to this paper who will send 20 cents to pay the packing, postage, etc. The book has over 500 Royal Octavo pages, weighs two pounds and contains complete classified descriptive lists of all farming implements, tractors, tractor plows, vehicles, wagons, and kindred goods made in the United States, with names and addresses of manufacturers.—Adv.



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As a practical farmer you are interested in any subject which has to do with increasing the productiveness of your farm. For this reason we ask you to write for a copy of "Game Farming for Profit and Pleasure." You will find that this book contains a mine of information that will be both of interest and value to you.

"Game Farming for Profit and Pleasure" is a carefully edited and profusely illustrated manual on the breeding of game birds. It describes in detail the habits, foods and enemies of wild turkeys, pheasants, grouse, quail, wild ducks, and related species. It tells of the best methods for rearing. It discusses the questions of marketing and hunting.

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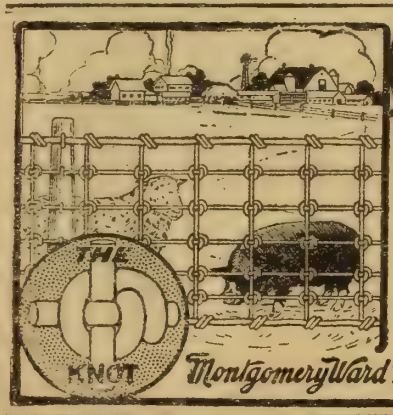

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In and Around Wisconsin

Dairymen Form Locals in Walworth County---Cheese Organization Discussed at Meeting Held at Marshfield.

Outagamie county, at the recent spring election, voted bonds for $700,000 for road improvement in that county. It is planned to build about 100 miles of good road with this money.

Winter, Sawyer county, is assured a creamery, the details for the opening having been made recently at a meeting there. As a means of assisting the new concern the Edward Hines Farm Land Company will ship into the county four cars of Holstein and Guernsey grade cows and several pure-bred sires which will be sold reasonably to the settlers.

WINNEBAGO COUNTY ALFALFA FIELD.
On the Levi Brunson Farm near the city of Omro.

John H. Witte, a Dodge county poultry fancier at Juneau, reports that his flock of twenty Rhode Island Reds made an average of a fraction more than fifteen eggs daily during March. For the thirty-one days these twenty pullets laid 466 eggs.

Dairymen and cheesemakers to the number of several hundred attended a meeting recently at Marshfield, Wood county, to discuss plans for organizing a cheese producers' federation there, similar to the Sheboygan County Cheese Producers' Association. A committee to investigate and report later was appointed and consists of Alvin and Ed Brehm, of Marathon county; Robert Morrison, of Wood county, and Henry Fromme and W. R. Happe, of Clark county. Former Senator Henry Krumrey, president of the Sheboygan federation, and M. C. Riley, of the National Agricultural Organization Society, were the speakers.

Extensive tests with grains and forage crops will be undertaken by members of the Wisconsin experiment association this year. About forty experiments will be made with acid phosphate to determine if it will, when added to the soil, aid in producing early maturity of corn. Four hundred and twenty-five tests are listed on Silver King and Golden Glow corn, twenty-five on pedigree barley, twenty-five on spring wheat, 125 on pedigree No. 1 oats, 150 on pedigree No. 5 oats, 100 each on Turkey Red winter wheat, and pedigree rye, seventy-five on sweet clover, and a number on alfalfa and soy beans.

The Pierce County Holstein Breeders' Association was organized recently at a meeting at River Falls, which was attended by about thirty breeders of the county. J. L. Chapman was chosen president; Dwight Flower, secretary; Hugh Lowe, treasurer; H. A. Chinnock, of Troy; Fred Kurtz, of Kinnickinnic; Wm. Finley, of Clifton, and Fred Smith, of River Falls, will represent their towns as vice presidents; H. E. Bailey and Elmer Enloe, executive committee.

The creamery association at Hayward, Sawyer county, has purchased a motor truck which will be used in gathering cream in a radius of fifteen miles of the creamery. This is the first truck ever bought in that county for this purpose and will be a big boost for the dairy industry as well as the creamery.

Potato growers in the vicinity of New Hope, Portage county, have organized a local association with Ben Halverson as president and A. P. Swenson, secretary-treasurer. About fifty growers attended the local meeting. Local associations had previously been organized at Plover, Bancroft and Amherst in this county under the direction of J. M. Coyner, the new county agricultural representative.

RETURN OF SPRING RECALLS HAPPY TIMES IN THE COUNTRY.

Delavan, Walworth county, dairymen have formed a local milk producers' association with a membership of twenty-six farmers. D. E. La Bar is president and John G. Redenius is secretary and treasurer. Two organizers from the central association at Chicago were present.

Western breeders are looking more and more to Wisconsin for foundation dairy stock, and recently twenty-five pure-bred Holstein cows were shipped to the Hollywood farm, Seattle, Wash. All were of the Johanna strain and came from the Schroeder herds at West Bend, the O'Neil herd at Thiensville and the Gillette herd at Rosendale.

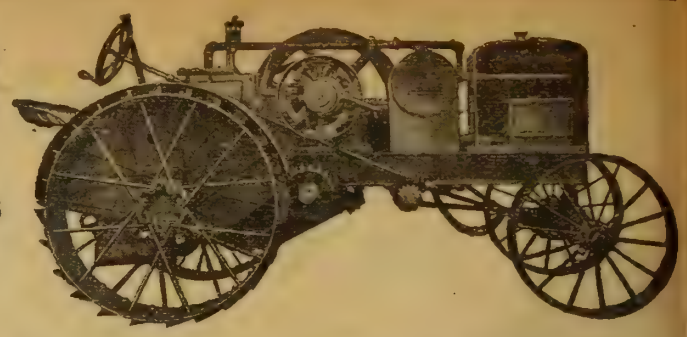
Farmers about Stoughton, Dane county, who have been growing from twenty to forty acres of tobacco annually, are reported to be cutting their tobacco acreage this year and giving more attention to dairying. They believe that less acreage and better attention to the fields will boost their tobacco profits.

Colfax, Dunn county, potato growers recently organized a local association with S. S. Sivertson as president; Martin Fruvog, vice president, and George T. Vorland secretary-treasurer. The association also voted to send a Dunn county exhibit to the state potato show next fall at Eau Claire. Growers who used certified Green Mountain seed last year reported favorable returns and showed to the meeting some splendid samples of seed.

Walworth county dairymen met recently at Elkhorn and organized a local branch of the Milk Producers' Association with a membership of 122. This organization followed the recent Chicago milk "strike," although few of the members ship to the Chicago market and had nothing to do with the "strike." Most of them are patrons of the Elkhorn factory, and M. C. Flack, of Como, was chosen president and Harry D. Dunbar, of Geneva, secretary and treasurer. Walworth, Genoa Junction and Lake Geneva were the Walworth county centers affected by the strike, and the Elkhorn association was organized largely to aid the producers in those territories. Considerable complaint was made against Chicago board of health inspectors. It was charged that they are often too authoritative, and too particular, often being ignorant of what constitutes sanitary conditions. This latter was conceded to be the exception rather than the rule, and most of those present felt favorable to inspection, if it did not go to too great an extreme. As one man expressed it, "I will produce any kind of milk they want, under whatever sanitary conditions they dictate, if they will pay me the right price for it."

The importance of the muskrat trapping industry in Wisconsin, especially about Lake Winnebago, was indicated recently at a hearing for special licenses at Oshkosh. Licenses were issued to ninety-five farmers to trap immediately, some of whom have as many as 3,000 traps. Many individuals reported individual sales of $6,000 a year. The marshes about Lake Winnebago and the Wolf and Fox rivers abound with muskrat, and the farmers lease these for trapping purposes.

EAGLE GAS Tractors



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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Igniter Insulation.

I would like to know how to put in insulation in a make-and-break igniter so that it will be gas tight. Should the insulation extend the whole length of the stationary electrode? I am using a magneto for ignition. A short time ago I put new insulation in the igniter and it burned out and blew through in a few minutes. I found part of a broken carbon brush laying in the magneto. Could that have caused too much current? The mica tube for insulating is seven-sixteenths of an inch outside diameter, five-sixteenths of an inch hole.

Answer.—The broken magneto brush had nothing to do with the insulation burning out. If you are using mica for insulation it is simply a question of doing a good machanical job. If you do not get results with the mica tube obtain some sheet mica and cut mica washers enough to fill the electrode. Cut a large mica washer about one-sixteenth of an inch thick for each end. Be sure that the holes in the washers fit the electrode tight. If possible have the outside of the washers turned in a lathe to fit the igniter barrel.

Some Wiring Questions.

Do dead ending wires do any harm? Why do they put a fuse block right next to a lamp in a show case when there is only one lamp? Would a ten-ampere fuse be used? Please show how to take ceiling outlets from the circuit above when the wires are parallel with the beams; also crosswise, where tubes are used running through the beams. How far should the circular loom extend below the ceiling? Is it as good to use porcelain tubes in 2x6's as in 2x8's? Living one-half mile from the light plant would number 10 weather proof wire do for the line wire?

Answer.—Dead ending wires do no harm. Tape the ends. There is no necessity for an extra fuse for a show case lamp. The fuse would be small enough to protect the wire.

Take off the ceiling leads from the main line wires near the outlet. An "outlet box" should be used. This is fastened flush in the ceiling. The main line wires should have a support where the lead wires are taken off; or the lead wires may be run to a support and then to the outlet. The loom should extend from the support well into the outlet box. It is all right to use porcelain tubes in 2x6's if the beams are not overloaded.

Using number ten wire you would have a drop in voltage of twenty-eight volts when using five amperes of current. When using less current the drop would decrease. Using number five wire the drop would be about eight volts for five amperes.

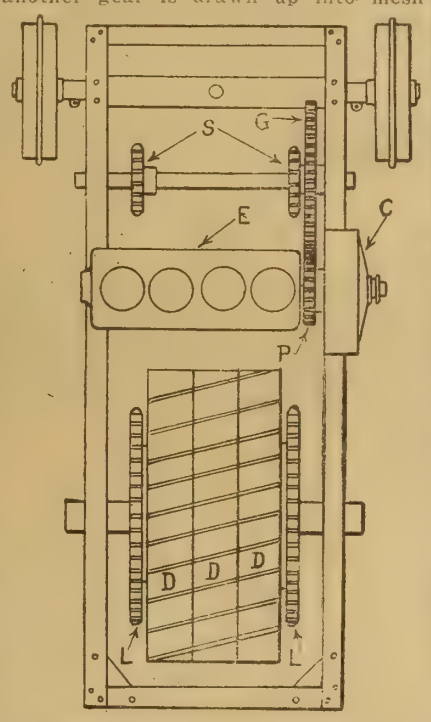
Ground Wire for Lightning.

Does a barn covered with painted sheet steel need any ground wires as a protection from lightning? If it is advisable to use a ground wire how shall I do it?

Answer.—It is a disputed point as to whether or not a ground wire is a protection against lightning. We are inclined to favor the ground wire idea. Use braided copper cable, that may be purchased from any dealer in lightning rods, or from your hardware dealer. It would be best to use at least two ground wires from opposite corners.

A Homemade Tractor.

I have a thirty-horse-power motor that I wish to use in a tractor. I am sending you a sketch of my tractor. I am using three Plano binder bull wheels for the drivers. These wheels are thirty-four inches in diameter. At an engine speed of 600 R. P. M., how fast will the tractor travel? What will be its drawbar pull? How many plows will it pull? The reverse gears are not shown on the sketch. For reverse, the engine slides back out of mesh with the countershaft gear, and another gear is drawn up into mesh



with both. In the sketch, C is the engine clutch and B a wheel, E is the engine, P is the clutch drive pinion, meshing with the countershaft gear, G. S S are the countershaft sprockets; L L are the drive wheel sprockets, and D D D are the drive wheels. P is six inches in diameter, G is thirty inches in diameter, S is five inches in diameter, L is twenty inches in diameter.

Answer.—The following rules may aid our readers in solving their gearing problems:

To find the countershaft speed multiply the engine speed by the diameter of the engine pinion and divide by the diameter of the countershaft gear.

To find the drive wheel speed multiply the countershaft speed by the diameter of the countershaft sprocket and divide by the diameter of the drive wheel sprocket.

To find the miles per hour multiply the diameter of the drivers in inches by 3.1416 and divide by 12. Multiply by the revolutions per minute of the drivers and multiply this result by 60. Divide by 5280.

Applying the above rules to this tractor.

$$600 \times 6 \div 30 = 120$$

therefore, the countershaft makes 120 R. P. M.

$$120 \times 5 \div 20 = 30$$

therefore, the drivers make 30 R. P. M.

$$34 \times 3.1416 \div 12 = 8.9$$
$$8.9 \times 30 \times 60 \div 5280 = 3$$

Therefore, the tractor should travel three miles per hour when the engine is running 600 R. P. M. There would be some slippage at the drive wheels, however.

As you are using a thirty horse power engine, you have plenty of power to slip the drive wheels. The drawbar pull will, therefore, depend upon the weight of your tractor and the ground you are working on. You can estimate your drawbar pull at about 1,500 pounds—half the probable weight of your tractor. It should pull two fourteen-inch plows under ordinary conditions.

You may have to change the cleating on your drivers to prevent side thrust. Put straight cleats on the middle wheel and right and left cleats on the two outside wheels.

Engine Horse Power.

Please send me the formula for finding the horse power of an engine.

Answer.—The general formula was given in our last issue. For a steam engine multiply the mean effective pressure by the length of stroke in feet by the piston head area in square inches by twice the revolutions per minute and divide by 33,000. The mean effective pressure may be assumed as 60 per cent of the boiler pressure. For a stationary gas engine multiply the average pressure by the length of stroke in feet by the piston head area by one-half the number of revolutions by the number of cylinders and divide by 33,000. The average pressure may be assumed as seventy pounds. For automobile engines multiply the square of the cylinder diameter by the number of cylinders and divide by two and one-half.

Power of Auto Engine.

Is there more power in a thirty-horse-power, six-cylinder motor than in a thirty-five-horse-power, four-cylinder motor. Does a six-cylinder motor use more gasoline than a four-cylinder motor of the same horse power? How can the horse power of a motor be determined?

Answer.—The six-cylinder motor pulls more evenly than the four-cylinder motor, but, if honestly rated, a thirty horse power six has no more power than a thirty horse power four. The amount of gasoline and oil would be somewhat in favor of the four, other things being equal. The mechanical condition of the motor, the design and the carburetor adjustment influence the oil and gasoline consumption more than the number of cylinders. The method of finding the rated horse power is given above. The only reliable way of finding the horse power of a gas engine is by brake test. We will publish in the near future a sketch showing how this is done.

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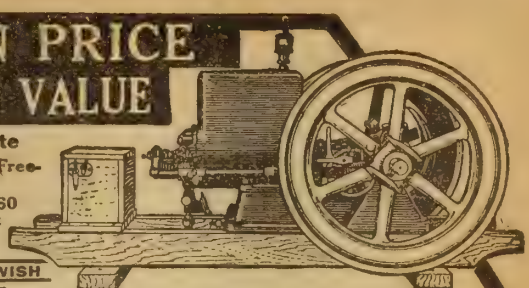

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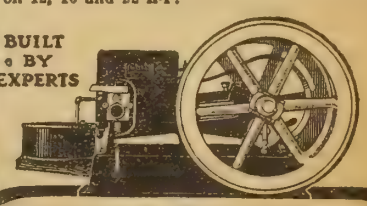

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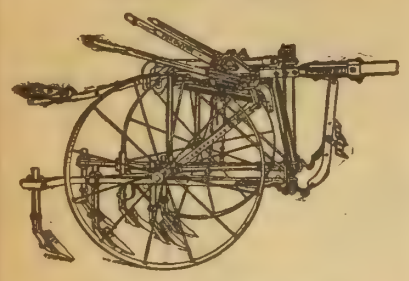

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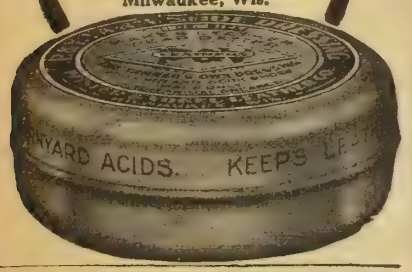

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UPPER WISCONSIN

Three-Year Crop Rotations For Upper Wisconsin.

(Continued from last week.)

A three-year rotation, popular with many of the best dairy farmers, consists of small grain seeded to clover, clover and corn or some other cultivated crop. Much the larger proportion of the corn is cut for silage to be fed to dairy animals. The clover is made into hay and fed to stock.

As it usually produces two crops in one season, medium red is the most profitable variety of clover to grow on the richer soils. The second crop may be cut for hay or for seed or may be pastured. Pasturing is advisable on well-stocked dairy farms.

Some successful dairymen pasture the first crop of clover for about two weeks in early spring or until June 10th. This retards, somewhat, the time of cutting, but does not greatly affect the yield. Part of the small grain crop should be allowed to ripen and the rest cut for hay. In most localities it probably will be most advantageous to use oats as the small grain in the rotation, although barley, rye and wheat can also be grown for that purpose.

This rotation is the dairyman's best rotation. It provides a good supply of leguminous hay and plenty of silage. Whatever small grain is raised should be incidental to seeding down to clover. In no case should the grain be allowed to ripen if doing so is likely to prevent a good seeding of clover. When clover fails to "catch," some other leguminous crop should be substituted for it. Soy beans are good for this purpose. Yields of from one to three tons of cured hay have been obtained on sandy soils at the branch experiment stations. Peas and oats, mixed, also make excellent hay and are valuable substitutes for clover, particularly on the heavier loams and clays.

On farms where this rotation is used it is possible to keep a great deal of stock. Several farmers in Upper Wisconsin are, under these conditions, now keeping the equivalent of one cow to the acre. In such cases much manure is produced and the most convenient and profitable place to apply it is on land intended for corn. Where there is difficulty in getting clover to "catch," it is well, so as to help the young clover, to apply the manure to the small grain crop. A third method is to apply manure on the new clover in the fall or winter.

This rotation, by increasing the supply of nitrogen and humus, will improve the productivity of most Upper Wisconsin farms. No special portion of the land is devoted to pasturage in this scheme of farming. The spring sown, as well as the second crop of clover, may be fall pastured. It is presumed that some waste, or but partially cleared land is in permanent pasture, and that sufficient corn silage is produced to have a supply for summer feeding when needed.

The three-year rotation can be made into a four-year rotation by leaving the clover for two years and pasturing the field the second year. In this case a small amount of grass seed, such as timothy and orchard grass, should be sown with the clover. This is a good rotation and is also well adapted to maintaining the productivity of the soil.

Of course, one or more crops of different kinds, but of the same class, may be grown in the same stage of rotation. For instance, the small grain crop may consist of rye, oats, wheat and barley instead of any one of these alone. Where twenty acres or less are put into grain crops time is saved, of course, to sow but one or two kinds of grain. The same is true of the cultivated crops. Root crops may be grown profitably on most farms and in the same stage of rotation as corn. If soy beans are grown for hay the land may, in many instances, be sown to rye immediately after the beans are harvested.

In this rotation manure, as a rule, is applied to the cultivated crops. Where the soil is low in fertility, all crops except peas should be fed on the farm. If the land has been heavily cropped to peas and small grain, it may be necessary to use some phosphate fertilizer.

Three-year rotation for a dairy farm. The farm is divided into three fields and each year the same crops are grown, but changed from field to field.

Bennie Keen, of Langlade county, and the pure-bred Holstein bull calf which he won as first prize in the boys' judging contest at the 1915 Langlade County Fair.

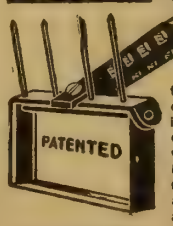
Cup For Best Wheat.

New countries are developed to a large extent by the progressive land men who bring in the settlers and stand by them until they can get a start. The Wisconsin Farmer is pleased to note in this connection that the Farmers' Land & Cattle Co., of St. Paul, through its Douglas county representative, John Greiff, is endeavoring to interest farmers in better wheat by offering a silver cup, a picture of which is herewith reproduced. This cup is to be awarded to the farmer raising the best half bushel of wheat in Douglas county, Wisconsin. The contest covers three growing seasons and the cup is to become the property of the farmer who has the best wheat three years in succession. No particular grade of wheat has been specified. The field from which the half bushel is taken must contain at least one acre. The Douglas County Fair Association has the contest in charge and has authority to make conditions.

FOR BEST DOUGLAS COUNTY WHEAT.

Last year Wisconsin had a bumper apple crop. Most sections in which this fruit was grown had many more apples than could be utilized locally and so hundreds of bushels went to waste. Due to lack of attention in preventing infection by fungous and insect pests, a considerable amount of the fruit was lost because it was not of a character that could be placed upon the market. The time is past in Wisconsin when we can expect to produce fruit which is suitable even for home use without giving it this care.

AGENTS Make Money Fast With GILSON WEEDERS



THIS new, two-in-one tool takes the place of the hoe; does better work, easier, and four times as quick. Saves time, labor and money in field, truck patch, garden or flower bed. Sells on sight--everybody wants it. Nothing like it on market. Now's the time to clean up on this big money-maker. Get in quick. Liberal commissions. Write for circular and agents' proposition.

J.E. GILSONCO., Dept. 18 Pt. Washington, Wis.

DAIRY

Record-Breaking Two-Year-Old Holstein.

Another record in the dairy world has been broken and a new world's two-year-old champion has been crowned. We refer to the record made by Beauty Girl Pontiac Segis, owned by the Arden Farms, St. Paul, Minn. The following is her official record at two years and twenty-nine days.

Butter, one day	4.242 lbs.
Milk, one day	77.1 "
Butter, seven days	28.73 "
Milk, seven days	507.4 "
Butter, fourteen days	56.574 "
Milk, fourteen days	1,018.3 "
Butter, thirty days	116.478 "
Milk, thirty days	2,088 "
Butter, sixty days	218.624 "
Milk, sixty days	4,041.5 "

Beauty Girl Pontiac Segis, sired by King Segis Pontiac Count, a grandson of King Segis and Pontiac Clothilde De Kol 2d. He is a three-quarter brother to the $50,000 bull, King Segis Pontiac Alcartra. The records of his dam and sire's dam are: Butter, seven days, 33.12; butter, thirty days, 33.93; milk, one year, 23,773.90; butter, one year, 1,157.44. With respect to the average yearly butter record of his dam and sire's dam he surpasses every other sire in service. He combines in the closest degree the blood of King Segis, Pontiac Korndyke and Hengerveld De Kol. His dam, K. P. Lilith Clothilde, was the best yearly record daughter of King of the Pontiacs, and the world's record junior four year old for a year's production of milk and has the second largest year's butter record in her class. She is a sister to the only forty-four pound cow and to the greatest lot of semi-officially tested heifers ever credited to any one sire.

KING SEGIS PONTIAC COUNT.

BEAUTY GIRL PONTIAC SEGIS.

Uniformity of the Dairy Herd Desirable.

J. A. R., Wisconsin, is losing cream in the process of churning. This inquirer writes:

We keep Jerseys, Ayrshires and a couple of Short-horns in our herd. The cream tests 39 per cent and the milk 5.2. The cream is made into butter at a temperature of about 65. When the buttermilk is drained off it is thick with cream that does not seem to quite break into butter. What is the trouble, and what can be done to remedy it?

There are several causes for the trouble mentioned, the most common being a wide difference in the breed of cattle, the length of the period of lactation and the lack of uniformity in the acidity of the cream. Also, if the cream is churned at a temperature too high, some loss is experienced in butter, though it would not seem that this applies to our inquirers' problem.

Sour and sweet cream should never be mixed just before churning. It requires longer for sweet cream to break, and in the interim the sour cream becomes butter, leaving the other in the milk, with the result that our correspondent mentions. Each time that sweet cream is added to the jar the whole mass should be carefully stirred so that it is well mixed. One woman who makes very superior butter says that this is the prime factor in her success. She does not count the care in sterilizing and all the rest of it that goes with the dairy; that is considered as a matter of course.

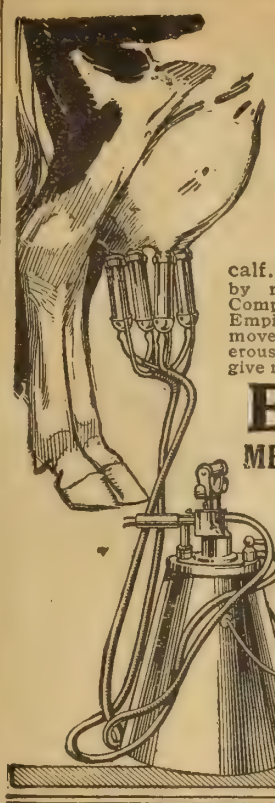
As the cows become advanced in the period of lactation, the milk becomes more adhesive and the globules smaller, and as a rule somewhat harder, causing trouble in getting the butter to gather. However, this trouble is for the most part overcome by having fresh cows in the herd. Much more trouble is experienced in the late winter when the cows are on dry feed, and sometimes disappears to an extent with the coming of grass or other succulent feed. Carelessness in the matter of salt often gives the farm dairyman trouble. Unless there is a supply where the cows have access at all times they rarely get as much salt as they really require.

Unless one understands the why of it, it would seem ridiculous to say that the different breeds in a herd could have any bearing whatever. The basis of this cause is the fact that large globules unite readily, while the smaller ones do not, and are lost. The Jersey cow's milk contains the largest globules of all, and is, therefore, the easiest to churn from. The Short-horn is medium and the Ayrshire contains the smallest fat globules of all. In the process of churning the dairyman in question very probably gets all of the fat from the Jersey, while some is lost from the Short-horn and much from the Ayrshires. It is always the small globules that pass off in the buttermilk.

When the writer began to care for cream after years spent at something else, the Jersey had supplanted the common cow of the earlier time. With the former, if the butter when through churning was firm enough and abundant enough to "hold up the dash," that cow was a wonder. It was a long cry from such condition to that of the dash getting imbedded in the thick, thick cream, so much so that it was impossible to longer "work the dash."

This subject is one that rarely troubles the dairyman who sells cream instead of churning, and the result is that it rarely is discussed. In this case it would be advisable to churn at a slightly lower temperature, about 60 degrees. A starter would be undesirable. It is not convenient for the farmer to use a commercial starter, but he can easily prepare one for his own use. This may be done by keeping a small quantity of milk in a small vessel until it sours, adding it to the cream, or what is equally as desirable, adding a small quantity from the last churning. Don't you remember when your mother used to place the fresh cream in the jar before it was washed, when the weather was so cold that it was difficult to get the cream ripened? It is exactly on the same plan, and it was not carelessness, neither unsanitary, either, though using a small quantity of the cream and sterilizing the jar is better.

After all that's said and done, the real trouble lies in the fact that the fat from the different cows varies so widely in the matter of viscousness that the fat fails to unite at the same time. The better plan is to keep the herd uniform. Until that time try churning the cream at a density of about 30 per cent.



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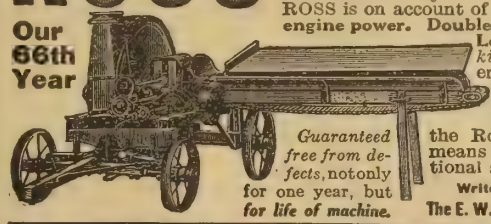

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No. 6½

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Plumbing For the Farmhouse.

The introduction of running water with a satisfactory plumbing system makes it possible to secure a greater degree of comfort for the housewife in the performance of her duties as well as personal cleanliness for each member of the family. It costs no more to put water into a farmhouse than it does in a city house and every farm family, if they do not already have this convenience, should plan to make a plumbing system the next improvement about the place.

The plumbing itself should be open and simple. The old method of enclosing the pipes in wood is not to be thought of for a moment. Let the pipes show. Then any damp or dark places around the sink or bath tub may easily be detected and remedied at once. Those dark and damp places are the abode of disease germs and strict attention to all such matters is a great factor in the health of the family.

The accompanying illustration is a good example of the open plumbing under the sink. There is nothing here that cannot be seen at a glance so that there would be absolutely no excuse for any dangerous lurking place for dirt and disease.

The best location for the sink is under or near a window. The sink here shown is just at the right of the window, a shelf occupying the space just beneath the window. This is a good arrangement for dish washing. Also, the sink should be near the cupboard or cabinet where the dishes are kept so that many steps will not be required to put them away after washing. White enamel is the best material for the sink. It is easily kept clean and presents an attractive appearance.

The height of the sink from the floor is not one of the least things to be considered. It should be at a distance from the floor that will allow the worker to stand erect. For instance, for a woman five feet two inches tall the sink should be twenty-seven inches from the floor, or for one five feet four inches tall about thirty inches.

And while you are putting in the water system don't forget to make ample provisions for hot water, both for the kitchen and the bath. In the winter this can be supplied by the heating plant, but for summer a small laundry stove with heating coils will furnish plenty of heat. The satisfaction to be had from turning on a faucet of hot water is not to be compared with any other convenience in the kitchen or bath.

Will Mrs. J. D. Write Again?

To the Editor:—Will the lady, Mrs. J. D., who found relief from headaches in osteopathy please state how many treatments she had to take and whether she was troubled with sick headaches or just a common headache? I am subject to sick headaches and have tried everything, even osteopathy. I took fifteen treatments, but only found relief while taking them and when I stopped I had them just as hard as ever.

I am sure that there are others besides myself who would like to hear more from Mrs. J. D. Mrs. W. B.

Directions For Smocking.

One of our subscribers has asked for directions for smocking, and, as this is a popular trimming at the present time, we are glad to comply with her request.

Mark your material with small dots from three-eighths to one-fourth inch apart. Then take up the material at these dots with small stitches on the right side of the material. Run the threads along on each line of dots until you have your material all gathered. Then fasten the threads at the end, leaving the material the correct fullness or width desired. This will make smocking very easy. All that is necessary is to follow along the dots with the various stitches which you desire to use. All work starts at the left side and works toward the right.

The material required for smocking usually averages about one yard for every twelve inches of smocked goods, varying somewhat according to the design used.

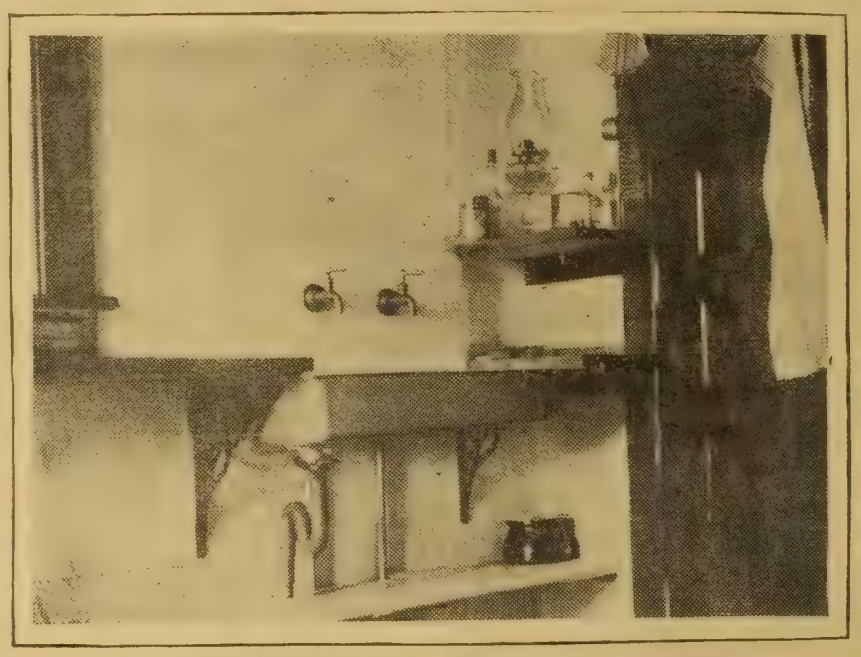
Single Cable Stitch: In making this stitch one must follow the gathering thread and keep the work perfectly straight. Begin with the thread on the first pleat on the wrong side of goods and bring the needles up on the right side. Work from left to right and keep the thread above the needle in the first stitch and below needle in the second stitch, then above needle in the third stitch and below needle in fourth stitch, etc., continuing in this manner to end of row.

For double cable stitch work the row of single stitch, keeping it slightly above the gathering thread, then work another in the same manner, keeping it below the gathering thread, but reversing the order above needle and below needle. That is, if the first row is started with thread above, the next row should start with thread below, etc.

Wave Stitch: Begin on first pleat at left hand. Insert needle from wrong to right side of material with thread above needle, take four stitches in the next four pleats, grading them down and ending on the second gathering thread. With thread under needle take four stitches in the next four pleats, grading upwards and ending on first gathering thread. Continue in this manner across with thread above needle and under needle alternately each four stitches.

Diamond stitch is made by using two rows of this wave stitch, with the points meeting forming a diamond in the center.

After all smocking is finished the original gathering threads should be pulled out.



SIMPLE BUT CONVENIENT ARRANGEMENT FOR SINK.

When Sickness Comes to the Farm Home.

Often the recovery of health depends in a great degree on the food furnished to the convalescent and so this is a subject of vast importance to those who have the care of the sick. The food should be so served that it will appeal to the sight, as the appetite is often entirely gone and it must be stimulated. Foods furnished to the sick should be delicate, delicious, attractive, and, more important, digestible and nutritious.

If a diet of milk is ordered it need not follow that it should always be served in the same dish or in the same form. Always under the physician's direction milk may be served in junket form, in koumis, as bulgarzoon (a sour milk that is particularly liked by those who enjoy buttermilk), and in custards or egg nogs—thus a great deal of nourishment may be given.

It is necessary that a nurse understand the food principles, be able to furnish variety, and, above all, make a dish taste and look well.

When preparing a meal for a patient have the tray all ready with the prettiest dishes the house affords and let the tray be roomy enough to hold all necessary dishes. When serving hot food to a patient see that he gets it fresh and hot. The amount to serve is worthy of consideration. Too much is often discouraging and it may even cause nausea, while the proper amount is attractive.

Any food becomes distasteful if always served in the same form. Variety is indeed "the spice of life" to an invalid, for his life is rather plain and uneventful, so that a surprise of some dainty dish will please him wonderfully. Care should be taken that all foods like fish or flesh should be perfectly good, for often a slight change in meat that a well person would not notice will cause digestive trouble with an invalid.

Fish is a food which rapidly deteriorates and the nurse should herself pick out such food and see that it is in prime condition before offering it to her patient. Meat and fish will spoil very quickly if left standing in a warm kitchen.

When a liquid diet is used entirely a variety of ways of serving milk will be found helpful by adding limewater, acid preparations as rennet or junket tablets, wheys, broths of milk, cream soups using oysters and clams for variety when obtainable. Gruels are most valuable and should be well cooked and carefully made. For oatmeal gruel use a tablespoonful of oatmeal to a pint of boiling water and a quarter of a teaspoonful of salt. Let this cook for an hour or longer. When ready to serve add as much milk as gruel.

Lemon Whey: Add one-half tablespoonful of lemon juice to a cupful of hot milk. Heat until a clear whey is seen, then strain, add sugar to taste and serve.

Chicken Broth: Cut up a hen as for stewing, put the bony pieces in the bottom of the kettle and the breast on top. Cover with cold water and cook slowly four hours. Pour off the broth and let stand to chill the fat. Remove the fat and serve broth with a little cooked rice all heated until hot.

Dessert for an Invalid: Heat in a double boiler a quart of fresh milk; when hot add a teaspoonful of salt and a third of a cup of cream of wheat. Let cook one-half hour, stirring occasionally the first fifteen minutes. When the cereal is cooked pour it over one egg beaten until light and two tablespoonfuls of sugar and stir until well blended. Serve hot or cold with cream or fresh fruit.—Nellie Maxwell.

Death to the Bugs.

To the Editor:—I am writing this for the benefit of the subscriber who had trouble with bedbugs.

Remove every picture, tear off all the paper that is loose, cork doors and windows up tight so fumes cannot get out and put a couple of pounds of rolled brimstone in an iron kettle and set it on fire. It will draw into all the cracks and kill both bugs and nits. If the whole house is affected put two or three kettles in different rooms, some upstairs, some down, closing all outer doors and all windows. Seven pounds will clear a whole house. You might have to repeat the operation if the bugs were more than thick, but I doubt it. The brimstone will burn all day.

Don't use sulphur, because it doesn't burn long enough and is not strong enough.

The fumes will tarnish any silver or other metal, so remove everything of this kind. This will have to be done on some day when the family can be away or out-of-doors, as the house must be kept tightly closed. So much the better if it can remain closed all day and night. A Reader.

Another Method.

To the Editor:—To get rid of bed bugs tear all the wall paper off you can. Then take equal parts flour and salt for paste. Boil until you have a good paste. Into some of the paste put cayenne pepper. I also put in some carbolic acid. Then rub this paste into all cracks and crevices. I always strip the cracks with old window shades torn in strips about two inches wide.

If the bugs bother on the beds either paint or varnish the bedstead. After this treatment I don't think there will be any more trouble. R. A.

Poisoned 'Em.

To the Editor:—In a recent issue a subscriber asks for help in ridding a house of bedbugs where they are in the walls. Having had that to do at one time where the walls were plastered, I put two ounces of corrosive sublimate in a large pitcher and poured boiling water over it which soon dissolved the poison. Then saturated every place where the bugs were with this solution, killing both bugs and eggs. This was eighteen years before formalin was heard of.

Now, I am told if formaldehyde is put in the paste used in papering a bug will never be seen again. On compo board or any walls made of wood, tack tar felt on and cover with wall or building paper and you will be rid of the bugs. Tar paper on roofs of henhouses will keep away bugs and also mites and hen lice.

Mrs. B. H. J.

Pointers.

Don't add the flavoring to soft custard until the custard is cold.

A small piece of window glass is useful to hold the leaves of the cook book apart, so that one can read a

recipe and not soil the book by handling.

It is a good plan to line the clothes basket with oilcloth, as it can then be kept perfectly clean.

A little vinegar added to the furniture polish will add greatly to the brilliancy of the article polished.

Blotting paper on medicine cabinet shelves reduces the noise of handling bottles and absorbs spilled medicine. It can easily be replaced when soiled and if white is used your cabinet always looks immaculate.

A Suffragist For Fifty Years.

Dr. Anna Manning Comfort, fifty years a practicing physician and a pioneer in the suffrage movement as well as in her profession, was recently entertained at an anniversary dinner by the trustees of the New York Medical College and Hospital for Women, from which she graduated in 1866. Dr. Comfort was the first woman to practice medicine in Connecticut and when she graduated she was the youngest medical graduate in the world.

Recipes.

Cinnamon Tea Biscuit.—Two cupfuls flour, one-half cupful sugar, two eggs, one-half cupful butter, one-half teaspoonful ground cinnamon. Sift the dry ingredients together, with a few grains of salt; rub in the butter and mix to a stiff paste with the eggs. Roll out thinly, cut into rounds and bake fifteen minutes.

Raisin Pie.—Take one pound of raisins (washed and seeded), turn over them one quart of boiling water, and boil until tender. Keep adding water so there will be a quart when done. Grate the rind of one lemon into a cupful of sugar, three tablespoonfuls of flour and one egg. Mix well together, turn the raisins over the mixture, stirring all the while. This makes three pies. Bake in double crusts as other pies.—N. M. T.

Dumplings With Meat.—To each cup of flour add two teaspoonfuls of baking powder, a pinch of salt and just enough water to make a mixture very hard to stir with a spoon. Butter steamer and place over a kettle of boiling water. Drop a tablespoonful of the mixture on a place and steam twenty minutes without taking off the cover. Take out and put into your meat gravy and let stand a minute or two. To be eaten immediately. These are never heavy.—G. D.

Jellied Salmon Salad.—One pint canned salmon, drain and remove skin and bones. Mince fine, add tablespoonful lemon juice, dash of pepper, teaspoonful minced parsley and salt to taste. Mix together and bind with any desired salad dressing and one tablespoonful powdered gelatine dissolved in one-fourth cup of water. Fill small molds and set on ice to chill. Turn out on crisp lettuce leaves. Garnish with olives and serve with mayonnaise.

Chocolate Cups.—Make a plain custard, using one quart milk, three eggs, six tablespoonfuls sugar and a pinch of salt. Flavor with a square of chocolate scraped and melted, and bake in custard cups. Chill thoroughly and just before serving scoop a spoonful from the center, replacing with whipped cream.

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THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

The Bell of Justice.

Dear Young Folks:—I have been reading your letters and enjoy them very much. I am thirteen years old and live on a farm. I thought I would write one of my favorite fairy tales. It is called "The Bell of Justice."

Once upon a time in a country of the old world there lived a good king named Nemo. He was very good, always looking out for the good of his people. One day he thought his people were getting rather quarrelsome and he decided to try to prevent it. So after a while he thought of a plan.

He called the people to the old church on the hill, and when they got there he said:

"I have watched my people and have noticed your defects. I thought I would try to remedy it. I have had a bell made—a large, bronze one, the largest ever made—and I am going to put it in this church tower and a large, long rope is going to be tied to it. This shall be called the bell of justice, which means that everyone who has a wrong done to him may come and ring the bell and some of my judges shall come and hear the complaint anyone has to put in."

The plan worked well after that. The people all liked it. After many years the old king died and his son

GEORGE HOWARD WILLIAMS.
This is a really, truly fresh air baby, having slept for the first six weeks of his life in a new house where the windows were not yet in. He is the son of Mr. and Mrs. H. Williams.

ruled. The new king was just like his father, a very good, kind king.

Not long after he was made king the bell rope broke. They put another in its place, but it was old and rotten. The bell rope had to be so long that few ropes could be found for it. So when the second rope broke they could find none to take its place. The country was very dry and the grasses and trees were not green, but dried up and brown. Finally an old farmer said that he had an old grape vine that could be put on the bell. They put this on and it worked very well, except that it was rather short and the people could just reach it. Still it served the purpose.

Now the people in the town were not all alike and some were very wicked. There was one old man who lived on the edge of town and whom the people did not like and did not have much to do with. He was a miser. Old and rich, he lived on a farm. When he was a young man he had been in the king's service. He had fought for the king in a war with a distant country and had been so faithful that he had received much money for his services. With this money he bought a farm on the edge of town and there he settled. As he kept making money faster and faster he began to think much of it. After a while he began to love it more and more and he got very greedy for it and then turned into a miser.

While in the war he had been given a young horse. The horse and master were always together and loved each other, and many times the horse had saved the life of his master when in danger in the war.

When the war was over the master took his horse home with him and for many years kept him and loved him. After he became a miser he gave the poor horse less and less to eat and sometimes the poor fellow went without for many a day.

One day the master came out to the stable and told his horse that he could not afford to keep him any more and that he must go.

The horse went. He was very hungry and there was nothing to eat. The pastures were dry, the weeds were gone from the roadside and the leaves were gone from the trees. He went along the road for many miles but could find nothing. Finally he came to the town. The sun was very hot and he was very thirsty. He could scarcely walk, but he hobbled along as best he could.

Many people looked at the poor old horse as he dragged along, and felt very sorry for him. On he hobbled to the church and there he saw the grape vine. He straightened up and dragged his tired legs along a little faster.

When he came to the grape vine he ate it ravenously, and when it got pretty high for him to reach he heard a stronge noise. Every time he took a bite something strange rang overhead.

The bell was ringing. Yes, the bell was ringing to tell the judges to come and give justice to this poor old horse.

By and by the judges came and the king came with them. When they saw nothing but the old horse they were very angry and wanted to turn back immediately. But the king saw the horse and recognized it, for he had seen it many times. He knew what the miser was like and he knew that he would give his horse no food. So he told one of the judges that he should go and get the old miser that lived on the edge of town.

The miser was brought and they made him tell his story. After the king heard what he had to say he said:

"The horse has come here and asked for justice and he shall have it. My father put this bell here and said we should always respect it, so now I am going to have you make your choice between having all your money taken away or keeping your horse comfortable all the rest of his life."

The miser went home and took his horse with him, for he did not like to see the horse go, and he wanted his money.

The people who had seen all this went to their homes better people and thanked God for their good king.

I hope all the young folks will like my favorite story. —Hilda.

Loves the Country.

Dear Young Folks:—I like to read your letters every week. We used to live in St. Louis but last summer we moved out in the country. We have three horses, some cows and some sheep and a little pet lamb. Mama has 125 little chickens and they are such cute little things. I am eight years old and have a mile to go to school. I go every day and I have a nice teacher. We live three miles from town and I love the country very much.

AT THE PARK.
Bernadine with her brothers and little sister.

I am sending you my picture with my brothers and little sister. It was taken last summer at the park in St. Louis. —Bernadine.

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Send 10 cents in silver or stamps for our up-to-date 1916 large spring and summer catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1633—Ladies kimono sack (in either of three styles). The pattern is cut in three sizes: Small, medium and large. It requires 2¼ yards of 44-inch material for a medium size.

1652—Girls' dress, with sleeve in either of two outlines. The pattern is cut in four sizes: 4, 6, 8 and 10 years. It requires 2¾ yards of 44-inch material for a 6-year size.

1685—A set of new collars. These styles are good for coats or dresses, and much in vogue this season. The pattern, including all styles is cut in three sizes: Small, medium and large. It requires for either style, ⅜ yard of 22-inch or wider material for a medium size.

1504—Ladies' combination camisole and envelope skirt drawers. The pattern is cut in three sizes: Small, medium and large, and requires 3¼ yards of 36-inch material for a medium size.

1637-1657—A trim and attractive business suit. Composed of ladies' shirt waist pattern 1637 and ladies' skirt pattern 1657. The waist pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inch bust measure. It requires 2¼ yards of 44-inch material for a 36-inch size. The skirt is cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure, and requires 4 yards of 44-inch material for a 24-inch size. Two separate patterns 10 cents for each pattern.

1535—Ladies' overall apron. The pattern is cut in three sizes: Small, medium and large. It requires 6¼ yards of 36-inch material for a medium size.

1581—Costume for misses and small women (with sleeve in either of two lengths). The pattern is cut in three sizes: 16, 18 and 20 years. Size 16 will require 6⅜ yards of 36-inch material.

1655—Juniors' dress, with or without bolero, with sleeve in either of two styles and with round or square neck edge. The pattern is cut in three sizes: 12, 14 and 16 years. It requires 5 yards of 44-inch material for a 16-year size: without the bolero it will require ¾ yard less.

1690—A dainty summer frock. The waist fronts are lapped at the closing. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8½ yards of 44-inch material for a 36-inch size.

1675—Girls' dress in surplice style, with two styles of sleeve. The fullness of the fronts at the shoulders is caught under tab extensions of the back. The pattern is cut in four sizes; 6, 8, 10 and 12 years. It requires 3¼ yards of 44-inch material for an 8-year size.

1588—Girls' dress in one-piece style with sleeve in wrist or elbow length. The fullness of the dress is held by a belt. The pattern is cut in five sizes: 4, 6, 8, 10 and 12 years. It requires 3 yards of 44-inch material for a 6-year size.

1547—Ladies' home or morning dress, with sleeve in either of two lengths. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5⅝ yards of 44-inch material for a 36-inch size.

POTATOES AND SEEDS ALMOST GIVEN AWAY.

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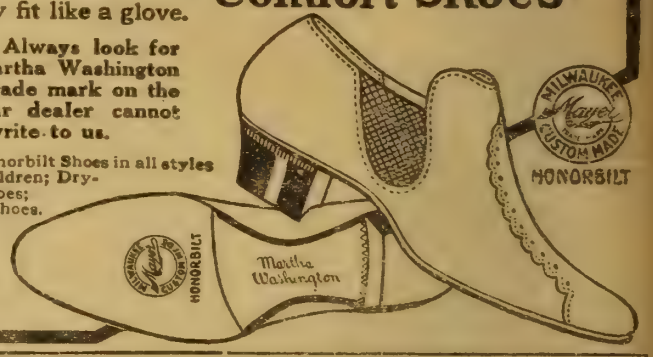

International Sunday School Lesson.

Lesson for April 30, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

PETER DELIVERED FROM PRISON.

LESSON TEXT—Acts 12:1-19.

GOLDEN TEXT—The angel of Jehovah encampeth round about them that fear him, and delivereth them.—Psalms 34:7.

One day the "sons of Zebedee" desired Jesus to grant a carte blanche petition. Pressed further as to their particular request, they petitioned for the seats of authority on the right and left hand of Jesus in glory. In reply Jesus said that such a petition was not a proper one nor intelligently asked, but according to their intrepid assertions of willingness they should be baptized with his baptism of death (Mark 10:35-45), and that the greatest of his followers should be "servant of all." Today's lesson is a fulfillment of that prophecy.

I. Peter in Prison, the Church Praying (vs. 1-6). Persecutions had been resumed (9:31) after a temporary lull. Some people serve Christ by living, others by yielding up their lives for His sake. James (not the one mentioned in chapter 15) was slain and Peter's death delayed in order not to pollute the feast of the Jewish Holy week. Peter's position was perilous. Sixteen soldiers guarded him in a Roman dungeon. But his enemies had left God out of their calculations and the believers had linked themselves through prayer with the source of all power. Against such a force Herod's cunning plan, whereby he might curry favor with the Jews (v. 3), is powerless. But it is now almost the hour for Peter's execution. Why the delay? The greater to demonstrate the power of God. Herod and the Jews cared not for, nor recognized, Easter, but God cared for His servant and honored the prayers of His saints. Peter's faith in the plans and purposes of God is indicated by his slumber and the need of being fully awakened by the angel. There are four things about that vigil of prayer (v. 5) offered by the church on Peter's behalf, which was so wondrously answered. (1) It was directed "unto God." Some prayers are offered to audiences or the ears of man, but not such as are answered. We have heard prayers, so-called, offered where the name of Jesus is never mentioned, and scarcely the name of God. Literally (v. 5) this was a "stretch-out-ed-ly" prayer, and its earnestness was such as to circumvent this vile grandson of Herod the Great. (2) It was made "without ceasing" ("earnestly" R. V.). There was a sincerity and an intensity of desire on Peter's behalf which language can scarcely express (See also Rom. 8:26). The same word is used of our Lord's prayer in the garden when "His sweat was as great drops of blood falling down to the ground." (Luke 22:44, Rome. 15:30, Col. 4:12, 13, R. V.). There is little such prayer to be found, but once found it is answered.

II. Prayer Answered, Peter at Liberty (vs. 7-11). The messenger of God (v. 7) brought light, yet the servant of God needed awakening, a suggestion to apply to our modern church life. His method of awakening Peter suggests that it often takes sharp blows to arouse us to our duties and privileges. The sinner has to be awakened before he can be delivered. Deliverance is more needed than sleep.

III. Joy and Amazement (vs. 12-17). Peter, finding himself untrammeled and free upon the streets of the city, and no longer angel-accompanied, at once repaired to his friends. Do we seek the prayer meetings? It was startling indeed for the subject of their prayers to knock at the door; perhaps he should have been more considerate of their feelings. One, Rhoda, readily responded, and it was her persistent faith that finally overcame the lack of faith on the part of the others. While they were yet speaking God had answered (Isa. 65:24), but such a prompt and complete deliverance was not expected, and it amazed and bewildered them. Rhoda seemed to be expecting Peter, for as soon as she answered Peter's rap at the door she recognized his voice (v. 14), and from sheer joy over the good news she was able to communicate it to those praying, but she neglected the important duty of opening the door for Peter. She was only a "ma'd" and her message was but foolishness (Luke 24: 11), which her elders sought to explain, but poor Peter still outside, "continued knocking," which soon convinced those within, and upon opening the door they "saw him" and were "astonished."

Calming their fears and admonishing them to hold their peace (v. 17), Peter turned their thoughts from himself to Jesus and commanded that James, the leader of the Jerusalem church, and "the brethren," be informed of his deliverance.

Meanwhile he went to "another place."

Herod when he sought to execute Peter according to his plan (vs. 3, 4) was angered at the turn of events, vented his wrath upon Peter's guards (v. 19), and in seeming disgust and dudgeon over the escape of this great leader, retired to his capital, Caesarea.

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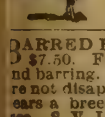

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Handling Young Chicks.

Chicks need no food from two to three days after hatching. They should be kept warm. During the first week the temperature should not fall below 95 degrees and during the second week it should be held up to 90 degrees. When they crowd under the hover of the brooder it is a sign that they are cold. Fifty chicks are enough for one brooder. When too many are put together they sometimes pile on top of each other and some smother. When the chicks are forty-eight to sixty hours old feed them equal parts of bread crumbs and oat meal to which add a little chick grit. Feed four or five times a day and only what they will eat up in a few minutes. After the third day feed a good quality of chick feed. Sprinkle it in the litter, which should be made up of a thin layer of short-cut alfalfa or fine straw. A homemade chick feed can be made as follows: Cracked wheat, twenty-five pounds; fine screened cracked corn, twenty pounds; pinhead oat meal, ten pounds; crushed peas, three pounds; millet seed, two pounds, and fine charcoal, three pounds. Keep grit, charcoal and water before them all the time. After the first week begin giving beef scraps in small quantity. Feed sparingly at first, one ounce for forty or fifty a day. Provide green food; sprouted oats are best. Mangels, green clover and lettuce are also good. When on open range the grass will answer. After the chicks are two weeks old a mixture of equal parts of wheat bran and beef scraps may be kept before them all the time. When four weeks old the following mash mixture can be fed in hopper: Equal parts of bran, corn meal, wheat middlings and rolled oats to which add 10 per cent of meat scraps. When the chicks are six weeks old ground oats may be used in place of the rolled oats. And when six weeks old the chicks' feed can be discontinued and equal parts of wheat and cracked corn fed in its place. Keep the mash before them in hopper.

Meat Ration For Birds.

Some form of meat must be fed the chickens in the breeding season. These are to take the place of the grasshoppers, worms and bugs that are obtained in late spring and summer. Fresh meat scraps are good, but are hard to supply regularly without becoming tainted. Fresh cut bone is very good. Prepared meat scraps that are dried can be bought on the market. This is in a form so it will keep. —[E. J. F., North Dakota Experiment Station.

Making Bordeaux.

There are a number of ways of preparing Bordeaux mixture. The following method has given good results in work carried on by the Wisconsin Experiment Station:

Blue vitriol (copper sulphate)	8 lbs.*
Lime	8 lbs.
Water	100 gal.

Dissolve the blue vitriol in a barrel and dilute to fifty gallons. Slake the lime, being careful to avoid "drowning" or "burning." When thoroughly slaked, dilute to fifty gallons. Dip from the two barrels and pour together through a gunny sack or other strainer into the spray tank or barrel.

Where a large number of trees are to be sprayed it will be found best to prepare a large quantity of the material at one time. This can be done providing they are not mixed until ready for using. These stock solutions may be prepared as follows:

Stock Solution of Blue Vitriol.—Suspend forty pounds of blue vitriol in a burlap sack in forty gallons of water. Hang it well up from the bottom of the barrel. In about five hours the crystals will be dissolved. One gallon stock solution equals one pound of blue vitriol. Do not allow this solution to stand in tin or iron vessels. Keep the barrel tightly covered to avoid losses by evaporation. Mark the height of the liquid in the barrel if it is to be left standing for a time before using. The material should be brought to this point before using by adding water.

Stock Solution of Lime.—Slake forty pounds of lime. Add about two pailfuls of water at first, and then allow lime to heat well before stirring. When hot add more water slowly as it is absorbed, and stir thoroughly. The hot lime improves by standing about one hour if stirred frequently. Add water to make forty gallons. One gallon of stock solution equals one pound of lime.

These stock solutions can be kept for considerable periods and Bordeaux made as desired. To prepare 100 gallons of Bordeaux stir the stock solution, measure eight** gallons of blue vitriol stock solution into a fifty-gallon barrel and fill with water. Measure eight** gallons of lime stock solution into another barrel and fill with water. Stir both thoroughly. Strain equal amounts of each solution at the same time through a gunny sack or strainer into a third barrel, two men pouring, or run the mixtures through a trough or spout into the spray tank.

Test of Bordeaux.—It is a good plan to test the Bordeaux. The best test is to add a drop of a solution prepared by dissolving a few crystals of potassium ferro-cyanide in a small amount of water to a small quantity of Bordeaux. If a brown discoloration occurs, more lime should be added.

*At present prices, formula may be reduced to six pounds each lime and copper sulphate.

**Six gallons, if the reduced formula is used.

Destroying Strawberry Worms.

To the Editor:—Will tell you my success in getting rid of worms in strawberries. Have had trouble with them for three years. Last year when they began to take the plants I got a barrel of air-slaked lime and put some in a gunny sack and sprinkled or scattered it on the plants. Was soon rid of all the worms. The lime will also be good for the plants and no harm is done to the berries. There is no need of plowing up the bed.

Chas. Stetzel.

Alexander Legge, general manager of the International Harvester Company, denies that the company has bought more sisal than it needed for binder twine this year, with a view to creating an impression of a shortage to embarrass the Yucatan Planters' Sisal Marketing Association. Mr. Legge testified that the supply of binder twine carried over from last season was the smallest that had ever lasted from one season to another.

Guaranteed Seed Corn

WE recently sent average identical sample of our Northern Iowa latitude grown and Central Minnesota (Redwood Co.) grown seed corn to the foremost agricultural college of this country and have just received their official report, as follows:

Nor. Iowa lat. grown.		Cen. Minn. (Redwood Co.) grown.	
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Minnesota No. 13	90%	Minnesota No. 13	88%
		Minnesota Early White Dent	73%

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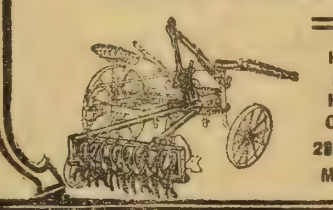

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HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

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CHAPTER XVIII.
The New Rectory.

WHEN Betty returned and Donald told her the happenings of the morning the clouds dispersed somewhat and before long the dictum that "there is humor in all things"—even in ejection from house and home—seemed proven true. After lunch they sat in Donald's den and were laughingly suggesting every kind of habitat, possible and impossible, from purchasing and fitting up the iceman's covered wagon and perambulating round the town to taking a store and increasing their income by purveying Betty's tempting preserves and confections.

Their consultation was interrupted by the arrival of Nickey, armed with a Boy Scouts' "Manual."

"Gee! Mr. Maxwell, Uncle Jonathan Jackson's all right; I'll never do another thing to guy him. He's loaned us his tent for our Boy Scouts' corpse, and I've been studyin' out how to pitch it proper, so I can show the kids the ropes, but——"

"Donald!" cried Betty. "The very thing—let's camp out on the church lot."

"By Jinks!" exclaimed Maxwell, unclerically. "We'll have that tent up this very afternoon—if Nickey will lend it to us, second hand, and get his men together."

Nickey flushed with delight. "You betcher life I will," he shouted excitedly. "Is it for a revival stunt? You ain't goin' to live there, are you?"

"That's just what we are going to do, if Jonathan and you'll lend us the tent for a few months. Mr. Bascom wants to let the rectory to some other tenants and we've got to find some where else to lay our heads. Why, it's the very way! There's not a thing against it that I can see. Let's go and see the tent and consult Mrs. Burke. Come along, both of you."

And off they hurried, like three children bent on a new game. It was soon arranged and Hepsey rose to the occasion with her usual vim. To her and Nickey the transportation of the tent was consigned, while Maxwell went off to purchase the necessary boarding for a floor and Mrs. Betty returned to the rectory to pack up their belongings.

"We'll have to occupy our new quarters tonight," said Maxwell, "or our friend the enemy may raid the church lot in the night and vanish with tent and all."

An hour or so later, when Maxwell arrived at the church, clad in overalls and riding on a wagon of planks he found Mrs. Burke and Nickey with a contingent of stalwarts awaiting him. There was a heap of canvas and some coils of rope lying on the ground near by. Hepsey greeted him with a smile from under the shade of her sunbonnet.

"You seem ready for business, even if you don't look a little bit like the Archbishop of Canterbury in that rig," she remarked. "I'm afraid there'll be an awful scandal in the parish if you go wanderin' around dressed like a carpenter, but it can't be helped and if the Bishop excommunicates you I'll give you a job on the farm."

"I don't mind about the looks of it, but I suppose the vestry will have something to say about our camping on church property."

"That needn't worry you. Maybe it'll bring 'em to their senses and maybe they'll be ashamed when they see their parson driven out of his house and havin' to live in a tent—though I ain't holdin' out much hope of that to you. Folks that are the most religious are usually the hardest to shame. I always said, financially speakin', that preachin' wasn't a sound business. It's all give and no get, but this is the first time I've ever heard of a parish wanting a parson to preach without eating and to sleep without a roof over his head. Most of us seem to forget that rectors are human like the rest of us. If religion is worth havin' it's worth payin' for."

The planking was soon laid and the erection of the tent was left to Nickey's captaining—all hands assisting. With his manual in one hand he laid it out, rope by rope, poles in position and each helper at his place. Then at a word up it soared, with a "bravo" from the puzzled onlookers.

"We want a poet here," laughed Maxwell. "Longfellow's 'Building of the Ship,' or Ralph Connor's 'Building the Barn' aren't a circumstance to Nickey's 'Pitching the Parson's Tent.'"

It was next divided off into three convenient rooms, for sleeping, eating and cooking—and Hepsey, with three scouts, having driven across to the old rectory while the finishing touches were being put to the new, she and her military escort soon returned with Mrs. Betty and a load of furniture and other belongings.

"Why, this is perfect!" cried Betty. "The only thing lacking to complete the illusion is a trout brook in the front yard and the smell of pines and the damp, mossy earth of the forests. We'll wear our old clothes and have a bonfire at night and roast potatoes and corn in the hot coals and have the most beautiful time imaginable."

The town visitors who still lingered on the scene were received cordially by Maxwell and Mrs. Betty, who seemed to be in rather high spirits, but when the visitors made any inquiries concerning structural matters they were politely referred to Nickey Burke for any information they desired, as he had assumed official management of the work.

Just before the various helpers left at six o'clock smoke began to issue from the little stovepipe sticking out through the canvas of the rear of the tent and Mrs. Betty, with her sleeves rolled up to her elbows and her cooking apron on, came out to watch it with all the pride of a good housekeeper.

"Isn't it jolly, Mrs. Burke," she exclaimed. "I was afraid that it would not draw, but it really does, you see. This will be more fun than a month at the seashore, and tomorrow we are going to have you and Nickey dine with us in the tent, so don't make any other engagement. Don't forget."

By noon of the following day everybody in town knew that the Maxwells had been dispossessed and were camping on the church lot, and before night most of the women and a few of the men had called to satisfy their curiosity and to express their sympathy with the rector and his wife, who, however, seemed to be quite comfortable and happy in their new quarters. On the other hand, some of the vestry hinted strongly that tents could not be put upon church property without their formal permission and a few of the more pious suggested that it was little short of sacrilege thus to violate the sanctity of a consecrated place. Nickey had painted a large sign with the word "rectory" on it, in truly rustic lettering and had hung it at the entrance of the tent. The editor of the Durford Daily Bugle appeared with the village photographer, and after an interview with Maxwell requested him and his wife to pose for a picture in front of the tent. This they declined with thanks, but a half-column article giving a sensational account of the affair appeared in the next issue of the paper, headed by a half-tone picture of the tent and the church. Public sentiment ran strongly against Bascom, to whom rumor quickly awarded the onus of the incident. In reply to offers of hospitality Maxwell and Mrs. Betty insisted that they were very comfortable for the time being and were not going to move or make any plans for the immediate future. The morning of the fourth day Maxwell announced to Mrs. Betty that he had a strong presentiment that Bascom would soon make another move in the game, and he was not surprised when he saw Nelson approaching.

"Thank goodness we are in the open air this time," Maxwell remarked to Betty as he caught sight of the visitor. "I'll talk to him outside—and perhaps you'd better shut the door and keep out the language. I may have to express myself more forcibly than politely."

Nelson began:

"I am sorry to have to intrude upon you again, Mr. Maxwell, but I must

inform you that you will have to vacate that tent and find lodgings elsewhere."

"Why, pray? This tent is my property for as long as I require it."

"Ah! But you see it has been put up on the land that belongs to the church and you have no title to use the land, you know, for private purposes."

"Pardon me," Maxwell replied, "but while the legal title to all church property is held by the wardens and vestry collectively, the freehold use of the church building and grounds is held by the rector for the purpose of the exercise of his office as rector. No church property is injured by this tent. This lot was originally purchased for a rectory. To all intents and purposes (excuse me, I am not punning) this tent is the rectory pro tem. The use of a rectory was offered me as part of the original agreement when I accepted the call to come to this parish."

"Hm! You speak quite as if you belonged to the legal profession yourself, Mr. Maxwell. However, I am afraid that you will have to get off the lot just the same. You must remember that I am simply carrying out Mr. Bascom's instructions."

"Very well, please give my compliments to Mr. Bascom and tell him that he is welcome to come here and put me out as soon as he thinks best. Moreover, you might remind him that he is not an autocrat, and that he cannot take any legal action in the matter without a formal meeting of the vestry, which I will call and at which I will preside. He can appeal to the Bishop if he sees fit."

"Then I understand that you propose to stay where you are, in defiance of Mr. Bascom's orders?"

"I most certainly do. It is well known that Mr. Bascom has successfully intimidated every one of my predecessors, but he has met his match for once. I shall not budge from this tent until I see fit."

"Well, I should be very sorry to see you forcibly ejected."

"Don't waste any sympathy on me, sir. If Mr. Bascom attempts to molest me I shall take the matter to the courts and sue him for damages."

"Your language is somewhat forcible, considering that you are supposed to be his pastor and spiritual adviser."

"Very well, tell Mr. Bascom that as his spiritual adviser I strongly suggest that his spiritual condition will not be much improved by attempting to molest us here."

"But to be perfectly frank with you, Mr. Maxwell, he can force you to leave by stopping the payment of your salary, even if he does not eject you by force."

"I rather think not. Until he can bring specific charges against me, he is liable for the fulfillment of our original contract, in his writing. Moreover, I may have more friends in the parish than he imagines."

Nelson was visibly disturbed by the rector's firm hold on the situation.

"But," he stuttered, "Mr. Bascom is the richest man in the parish and his influence is strong. You will find that everyone defers to his judgment as a matter of course."

"All right, then let me add, for your own information, that I can earn my living honestly in this town and take care of myself without Mr. Bascom's assistance, if necessary, and do my parish work at the same time. I have two muscular arms, and if it comes down to earning a livelihood, independent of my salary, I can work on the state road hauling stone. Williamson told me yesterday he was looking for men."

"I can scarcely think that the parishioners would hold with their rector working like a common laborer, Mr. Maxwell," admonished Nelson.

"We are all 'common,' in the right sense, Mr. Nelson. My view is that work of any kind is always honorable when necessary, except in the eyes of the ignorant. If Mr. Bascom is mortified to have me earn my living by manual labor, when he is not ashamed to repudiate a contract, and try to force me out of the parish by a process of slow starvation, his sense of fitness equals his standard of honor."

"Well, I am sure that I do not know what I can do."

"Do you want me to tell you?"

"If it will relieve your feelings," Nelson drawled insolently.

"Then get out of this place and stay out. If you return again for any purpose whatever I am afraid it is I who will have to eject you. We will not argue the matter again."

"Well, I regret this unfortunate encounter, and to have been forced to listen to the unguarded vituperation of my rector." With which retort he departed.

Soon after Nelson had left, Mrs. Burke called in, and Betty gave her a highly amusing and somewhat colored version of the interview.

"You know, I think that our theological seminaries don't teach budding parsons all they ought to by any means," she concluded.

"I quite agree with you, Betty dear, and I thank my stars for college athletics," laughed Maxwell, squaring up to the tent pole.

"What did I tell you," reminded Hepsey, "when you had all those books up in your room at my place. It's just as important for a country parson to know how to make a wiped joint or run a chicken farm or pull teeth, as it is to study church history and theology. A parson's got to live somehow, and a trade school ought to be attached to every seminary, according to my way of thinking! St. Paul made tents, and wasn't a bit ashamed of it. Well, I'm mighty glad that Bascom has got come up with for once. Don't you give in and it will be my turn the next move, if this don't bring him to his senses. You just wait and see."

(To be continued.)

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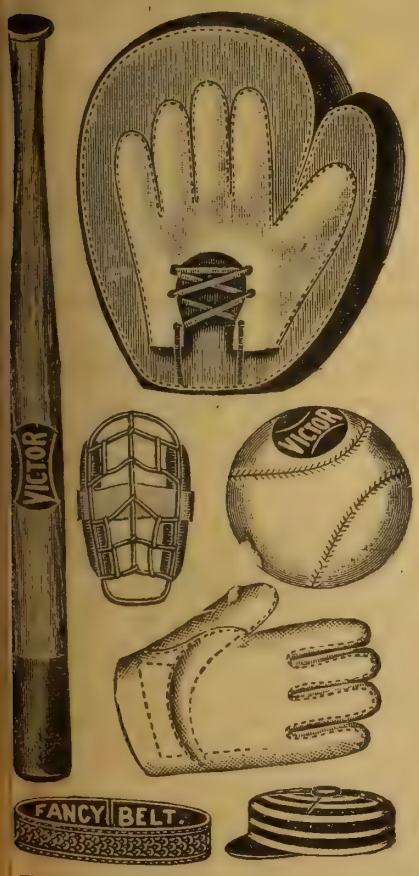

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AILING ANIMALS.

Indigestion.

Please tell me what is the matter with my Water Spaniel pup. He is a very good hunting as well as watch dog, but I have noticed that at times the saliva hangs in long strings from his mouth and many times he throws up what he eats. Is this due to his teeth or has he some disease? He is eighteen months old.

Give your dog's feed attention. Give a reasonable quantity of clean, wholesome food regularly, with plenty of fresh, clean water to drink. Give one ounce of sirup of Buckthorn every day for a week until the bowels act regularly. Regular exercise is also essential.

Shoe Boil.

Please inform me what to do for my horse. It has had a shoe boil for three years and it now has become inflamed and swollen and a little hole has formed and matter is leaking out. Should I open it or should I call a veterinarian and have him cut it out? What medicine should I use?

You should have had this attended to long ago. Would advise you to keep a knife out of this. However, would also advise you to have a competent veterinarian cut this growth out if you expect to get good results. The use of caustics is sometimes employed, but they do not prove very satisfactory, as it takes too long and the results are not always the best.

Swollen Feet in Pigs.

Some of my little pigs are affected with a swelling in their front feet which makes them lame. They are about three weeks old and in a good, thrifty condition, having good, dry quarters with plenty of exercise. The swelling takes place in the toes and is very hard, but not seemingly feverish nor sore to the touch. In one case the leg is swollen about three times its natural size as far up as the shoulders. I have never known anything like it before. Is it rheumatism?

We have seen any number of these cases and usually find they are brought about by the mother injuring them by stepping on them or otherwise. We do not think the trouble you speak of has anything to do with rheumatism.

Testing Cattle.

(1) How is it that a man has to have his cattle tested before he moves to another state when he can go to the Sioux City market and buy a load and ship them into Dakota or Minnesota without having them inspected? (2) If you call a veterinarian to test your cattle for you can he force you to sell them? Does the state pay for testing if they take the cattle in their hands? (3) Do they have to be tagged when you ship them? And does the veterinarian have to inform them they are coming so they can be on the lookout for them? If so, what are the government inspectors there for? Are they there to protect the packers and soak the innocent farmer?

(1) A shipper must comply with the regulations of the state authorities to which he wishes to send the stock. If the requirements are not the same from the farm to the other state as they are from a center or stockyards where federal inspection is maintained it is evident the state authorities have confidence in the inspection. (2) The veterinarian will not endeavor to force you to sell your cattle that have reacted to the tuberculin test. If he is a friend he will advise you to sell them and if you would serve your own best interests you will do so. The state authorities will do your testing free in case they have authority to do so and have the necessary funds to meet the expense. They do not have to be tagged before shipment, yet the owner would lose nothing if they were. The local veterinarian does not inform the government inspectors the reactors "are coming," yet the owner should not object if he did unless he (the owner) wanted to try to put something over on the inspectors. This would do no good, for if they are tubercular the inspector will find them and dispose of them properly, without any previous warning. A farmer that would try to knowingly dispose of tubercular cattle for food for the public could scarcely be called "innocent." Contrariwise, the farmer that says "my cattle have reacted; inspect them and deal justly by me and the public" can be called "innocent" (of any wrong doing) and will not suffer at the hands of the packers or the government inspectors.

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PURIFIES.

It has so many uses that it is a necessity on every farm.

USED IN THE TREATMENT OF MANGE, SCAB, RINGWORM, SCRATCHES, ETC.

Destroys Disease Germs
DRIVES AWAY FLIES

For Sale by All Druggists
Write for Free Booklets

PARKE, DAVIS & CO.
DEPARTMENT OF ANIMAL INDUSTRY
DETROIT, - - MICHIGAN

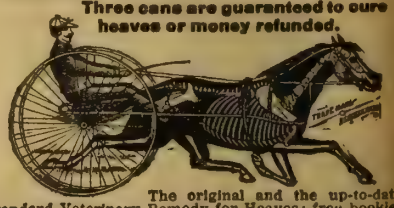
Market the Milk
Raise your calves and get the bigger money to which you are entitled. But do not feed the calf whole milk, with butter fat worth $600 a ton.
You can sell all the mother cow's milk or butter and make your calf pay you a big profit on its feed, by raising it on

RAISE YOUR CALVES WITH BLATCHFORD'S CALF MEAL

Blatchford's Calf Meal
The Recognized Milk Equal
You get 100 gallons of rich milk feed from 100 pounds of Blatchford's Calf Meal, and it costs you only one-fourth as much. It will make your calf grow fast and well.
Blatchford's Calf Meal is composed of the elements the young calf needs in the most trying period of its life; is thoroughly steam cooked—prevents bowel troubles and other ills due to improper milk substitutes.
Blatchford's Pig Meal insures quick, sturdy growth of young pigs at weaning time, without setback or falling off.
Write us for our Free Book on "How to Raise Calves Cheaply and Successfully Without Milk."

Blatchford Calf Meal Factory
63 Madison St., Waukegan, Ill.
L. C. Beard, Hagerstown, Md., writes: "I can say Blatchford's Calf Meal will pay anyone 100 Pct. that has calves to raise."

DEATH TO HEAVES
NEWTON'S Heave, Cough, Distemper and Indigestion Cure
Some cases cured by 1st or 2nd $1 can.
Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 24 years sale and veterinary use.
CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER
Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.
THE NEWTON REMEDY CO., Toledo, Ohio

HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

$1.00 PER WEEK Enough said. Write the Wisconsin School of Telegraphy, Dept. A, Oshkosh, Wisconsin.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

A Richly Bred Guernsey Bull.

THE Fox River Valley, Wisconsin, is the home of many fine herds of registered Guernsey cattle. Recently when on a tour of inspection of these herds the writer was surprised to find the great progress which these breeders have made in the past few years. One of the oldest and best herds in this section of the state is that of Chas. G. Schmidt, at Wrightstown. This herd was established about twenty years ago and a fine lot of animals were developed. The herd now consists of over forty registered animals. They are all imported or offspring of the imported animals and are of big size, of the best Guernsey type. The imported cows are daughters of Galaxy's Sequel, Imp. Francis Masher, Gov. of the Chene and Imp. Raymond of the Preel. The bull at the head of the herd is Goodwill's Hero, an outstanding son of Imp. Golden of L'Etinnerie. He, therefore, is a brother to the noted bull, Imp. Golden Hero. He also has four advance registry sisters. The dam of Goodwill's Hero is Imp. Goodwill II of the Grove that has an A. R. record of 52.62 pounds of fat and 8,384 pounds of milk in a year. She is a daughter of the great bull, Gov. of the Chene. He is, therefore, from imported animals on both sides with the additional value of being from a heavy producing A. R. dam. Mr. Schmidt is advertising a yearling bull for sale on page 25. This young bull is out of the cow, Imp. Sunpari XXXI 26702, a daughter of Galaxy's Sequel by Masher Sequel. Her dam is a daughter of Gov. of the Chene. From this limited description it will be seen that the breeding of this herd is of the best in the breed and that the bull offered for sale carries the best of blood in his veins. He is a fine individual being well grown, well marked and of good, straight type. Our readers who are looking for a high-class herd sire will do well to send for a pedigree of this one.—Adv.

Holstein Sale at Elkhorn, Wis.

MR. A. J. PIERCE, of Elkhorn, Wis., has decided to dispose of his fine herd of pure-bred Holstein cattle. This herd, including forty-four females and eight young bulls will be offered at public auction at the fai rground at Elkhorn, Wis., May 9th. This sale comes just after the sale at Watertown and Lake Mills. The females offered are for the most part young stock, coming fresh with first or second calf and includes also some yearlings and a few heifer calves. The eight young bulls offered are three months old to yearlings. A description of the blood lines of this young stock may be found by referring to Mr. Pierce's advertisement which appears on page 26 of this issue. This is a rare offering of young stock to be put up at public auction. The stock is tuberculin tested and sold with a positive guarantee to be as represented. Our readers who are desirous of conferring with Mr. Pierce by mail to secure any further information should address him at Elkhorn, Wis. Please be kind enough to mention The Wisconsin Farmer in your letter.—Adv.

Game Farming Is a Profitable Business.

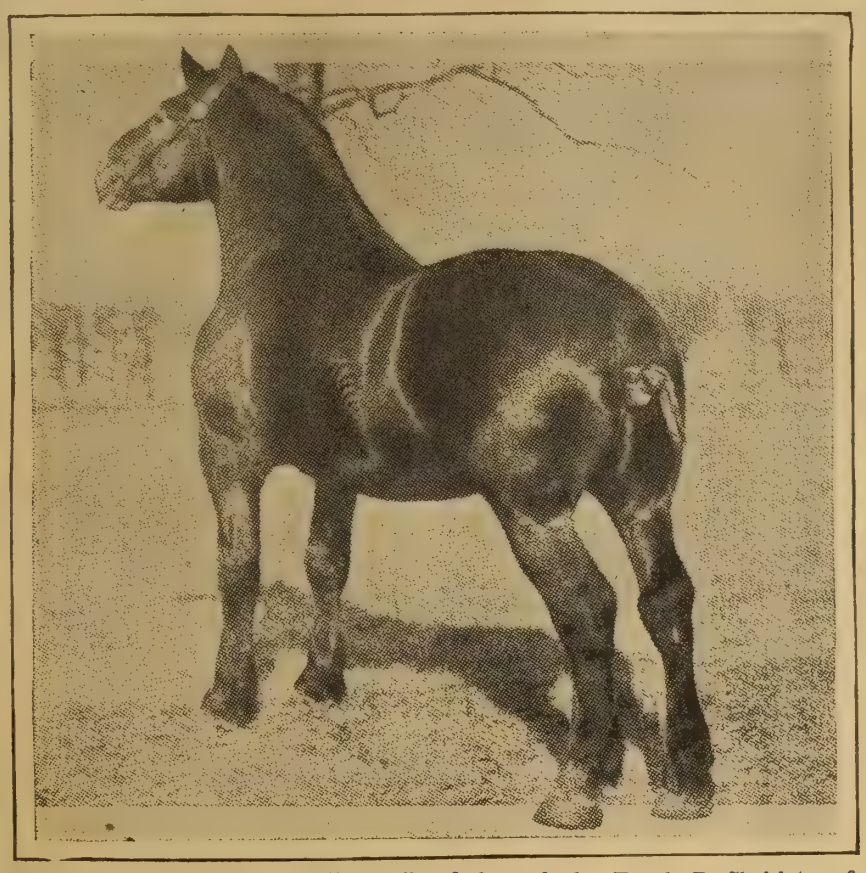
THE subject of game farming is not well understood in this country; in some of the older countries it has received considerable attention, and many farmers have found a very profitable business in rearing game birds and animals. A very profitable and enjoyable business can be built up in this line by anyone who has the knowledge and equipment necessary to undertake it. As a side line to general farming, game farming is receiving considerable attention. The possibilities in this are greater than one thinks. "Game Farming for Profit and Pleasure" is the title of a book which explains the various phases of this new business. The book is written largely for practical farmers, who will find it very interesting reading. To get this book write your name on the coupon attached to the advertisement on page 11 and send to Game Breeding Dept., Hercules Powder Co., Wilmington, Del. Kindly mention this paper.—Adv.

Write for This Free Book on Silos.

FARMERS interested in getting a new silo should send for the free silo booklet which is published by the Canton Culvert and Silo Company, Canton, Ohio. This book tells of the success of Zyro metal silos, which have proven very efficient in keeping ensilage sweet and nutritious. They are built of pure galvanized iron which is rust-resisting and durable. The flanged metal sheets are easily fitted together and made absolutely air tight and moisture tight. These silos can be erected at small cost and will be proof against wind, fire, shrinking, swelling and collapse. Read the advertisement on page 10 and send for the booklet today. Please mention The Wisconsin Farmer. —Adv.

Could Shoe Entire U. S. Army in Five Days.

BY keeping its factory going at full capacity day and night for five days, a pair of shoes could be made for every soldier of the United States standing army of 120,000 men. This interesting news was given out by the officials of the well-known Mayer Boot & Shoe Company, of Milwaukee, to convey some idea of the magnitude of a present-day modern shoe factory. The regular working capacity of the Mayer factory is 10,000 pair of shoes for every ten-hour working day. This is at the rate of seventeen complete pairs of shoes every minute. In other words, there is available in this one plant facilities for turning out 3,000,000 complete pairs of shoes during every working year of 300 days. But still more astonishing is the fact that each shoe requires an average of seventy-five operations in the making. This means 450,000,000 operations during each working year, which keeps industrious hands busy and provides employment for many. The product of the Mayer Boot & Shoe Company is well known to our readers, having been advertised with us for years. The company has been in business for over thirty-five years and grew from a very small beginning to the present big proportion, simply by making good shoes. They manufacture the well-known Mayer Honorbilt shoes for men, women and children, Martha Washington comfort shoes, Dry-Sox wet weather shoes and Honorbilt cushion shoes. See page 18.—Adv.



THE type of Percheron stallions offered for sale by Frank P. Shekleton & Sons, Lawler, Iowa, on page 27. This horse and many others of excellent merit are to be found in their barns.

Sheboygan County Holstein Sale.

THE Holstein Breeders' of Sheboygan county, Wis., will hold their second annual Holstein sale at Plymouth on May 8th. The offering will be one of the best ever put through a sale ring in this country. During the past three years a great deal of official testing has been done in the county and a large number of these A. R. O. cows or their offspring will be consigned. Sheboygan county has long been known as one of the greatest dairy counties of this the greatest dairy state. It is now gaining the reputation of the home of great producing Holstein cows. Last year the world's first thirty-pound two-year-old record was made in this county. This year two Sheboygan county cows made over 1,200 pounds butter in the year. Several others made over 1,000 pounds. A three-year-old heifer made over thirty pounds butter in seven days. These animals are representative of the type of animals to be found in the county. It will be a sale well worth attending and we advise our readers to send for catalogs. See advertisement on page 24. —Adv.

Marshfield Sale May 10th-11th.

CATALOGS for the big Marshfield sale to be held at the new sales pavilion in Marshfield, Wis., May 10th and 11th, may be secured now by anyone who will write to E. E. Butters, Marshfield, Wis. In this sale there will be 125 pure-bred Holsteins offered. These are consigned by some of the best breeders of Wisconsin, including Mr. T. Vannedom, of Marshfield; Imig Bros., of Neillsville; Jake Schmidt, of Arpin; E. E. Butters, of Marshfield; J. C. Kieffer & Sons, of Auburndale; Wm. Krause, of Thorp; McMillan Bros., of McMillan; F. W. Fisher, of Thorpe; John F. Kelly, of Neillsville; C. H. Imig, of Junction City, and O. J. Leu, of Grand Rapids. A description of the offerings and some mention in detail of the individuals will be found in an advertisement on page —of this issue. In addition to the 125 pure-bred Holsteins to be offered there will also be a few pure-bred Guernseys, one pure-bred Percheron draft stallion and two grade Percheron draft mares consigned to this auction. This is the third sale held in the Marshfield pavilion. This barn contains 176 patent stanchions and sixteen box stalls. There is an abundance of room for the showing of stock and a great opportunity for every buyer to make careful inspection. There is a sixty-foot sale ring in the center of this barn with a seating capacity for over 1,000 people. It is expected that the sale will be a great success. We request that our readers who write for catalog please mention The Wisconsin Farmer in their letter. See page 25.—Adv.

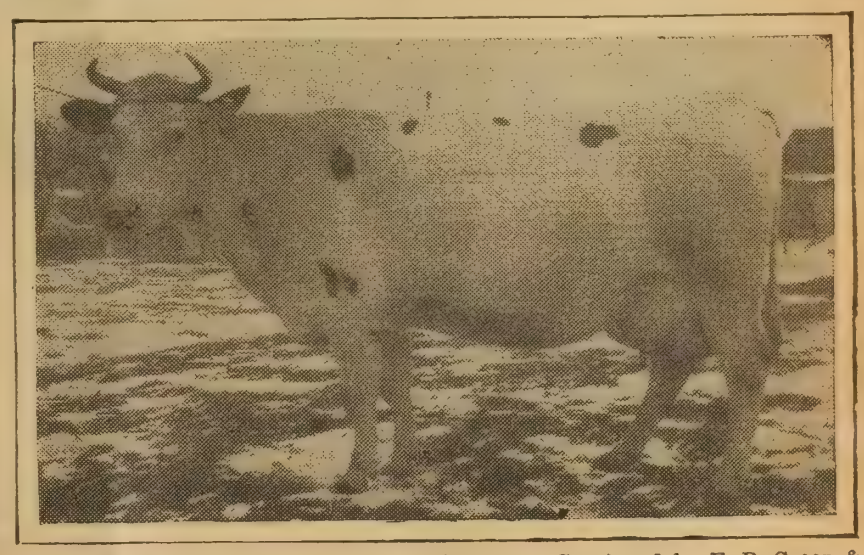
Last Call for West Salem Guernsey Cattle Sale.

THIS is the last opportunity we will have to call your attention to the sale of imported and American-bred Guernsey cattle to be sold at West Salem, Wis., Wednesday, May 3d. In our previous issues we have mentioned what has been listed for this sale, but since then we have seen the individuals that go to make up this sale and we are glad to advise our readers that they are a useful lot of cattle, being very well bred and several with A. R. records. Mr. Stubbs is selling about twenty head of cows and heifers that are in calf to the great sire, Imported Holden 4th. The fact that he is the sire of the present world's record two-year-old heifer is recommendation enough for him. Females bred to him should be in demand. Rundell Brothers are selling several daughters sired by the bull they imported, Governor of St. Croix he by the great Governor of the Chene. There will also be some cows well along in calf to him. A picture of this bull appears in this issue. If you haven't received a catalog write for one at once and arrange your plans so that you can attend this good sale. Mr. A. L. Hyzer is sale manager and if you will address him at West Salem, Wis., you will receive your catalog. In writing please mention The Wisconsin Farmer.—Adv.

Another Duroc Breeder for Wisconsin.

THE Duroc Jersey continues to gain in popularity and one of the recent additions to the Duroc fraternity in the state of Wisconsin is, Brain L Rundell, Hammond, Wis. Mr. Rundell is widely known as a breeder and importer of Guernsey cattle and the Duroc men should feel glad to know that they have such a progressive man for a fellow breeder. He purchased his first sows last winter and only a few and, even though he does not expect to show at the state fair, he was one of the first to nominate his herd in the Duroc

IMPORTED GOVERNOR OF ST. CROIX, a son of Governor of the Chene. Cows bred to him and heifers sired by him will be sold by Rundell Brothers in the West Salem, Wis., sale, May 3d.



TOOTSIE FIEKJE 117455, A. R. O. 26.14 pounds. Consigned by F. B. Green & Son, Evansville, Wis., to the Lake Mills Consignment sale on May 2d and 3d. See advertisement on page 24.

futurity, which goes to show the spirit in which he has entered the game. If there were more breeders in the state that would take an interest in the Duroc breed, instead of a selfish interest in their own herd, there would be co-operation, which would greatly benefit this good breed in the state of Wisconsin. Get together and boost your own game, for no one else will do that for you. The Wisconsin Farmer is at the service of the swine breeders of the state. We believe the territory covered by this paper has a great future in the swine industry and if we will all work together we will show the public that Wisconsin can raise as good hogs as any state.—Adv.

Holstein Bull of Rare Quality.

IT IS a well-established fact, conceded by all good breeders that the herd bull is half the herd. For this reason every breeder whether a beginner or one long established in the business, should definitely plan that each succeeding bull used in his herd shall be better than the last. He should always aim to be breeding his herd for higher production instead of letting them stand still or go backward in production ability. It is a problem, however, to locate a herd sire that is above the average, for they are indeed scarce and the demand for them is very large. There is one now being advertised for sale on page 26 by Arthur J. Rust, West Allis, Wis., and readers of this paper, who are looking for an exceptionally well-bred bull will find in this one an opportunity to get a bull of rare quality. His dam, Ida Lotta 5th, as a four year old made 29.74 pounds of butter in seven days. She gave 556 pounds of milk, testing 4.20 per cent fat. As a junior three year old she made 816.91 pounds of butter and gave 17,890 pounds of milk in a year. She is a daughter of the great cow, Ida Lotta, that made 27.11 pounds of butter and gave 662.70 pounds of milk in seven days. Ida Lotta 5th has four sisters with records of 33.65, 28.63, 27.54 and 27.99. She is a daughter of Johanna Pontiac De Kol, that has twenty-three A. R. O. daughters, twelve of which have records ranging from twenty to thirty-three pounds of butter in seven days. The sire of the young bull offered for sale is Cornucopia Netherland Mechthilde, that won third prize as a yearling at the 1913 Wisconsin State Fair. His dam, Aaltje Salo Netherland Mechthilde, has a record of 23.35 pounds of butter in seven days and is the dam of Aaltje Salo Netherland Mechthilde 4th, that made 28.63 pounds of butter in seven days as a four year old. For extended pedigree and further information in regard to this animal write to the above address.—Adv.

A Big, Powerful Car at a Remarkably Low Price.

THE remarkably low price of $740 buys the Pullman five-passenger, four-cylinder, thirty-two-horse-power motor car. It is not a racer, but is noted for its large size and abundant power. The Pullman is claimed to be the largest car on the market at the price; the wheel base is 114 inches. The equipment includes Batavia non-skid tires on all four wheels, cantilever rear springs, independent electric starting and lighting systems, Dixie high-tension magneto, honeycomb radiator and full floating rear axle. Pullman cars may also be purchased in two and three passenger models. For wonderful flexibility and consistent performance the Pullman is a great car. If you are in the market for a car, don't fail to get a catalog from the Pullman Motor Car Co., York, Pa. Kindly mention The Wisconsin Farmer. See page 2.—Adv.

NEXT WEEK'S SALE PROGRAM

Tuesday, May 2d	Holsteins, F. H. Everson, Manager, Lake Mills, Wis.
Wednesday, May 3d	Holsteins, F. H. Everson, Manager, Lake Mills, Wis. Guernseys, A. L. Hyzer, Sales Mgr., West Salem, Wis.
Thursday, May 4th	Holsteins, S. E. Jones, Manager, Watertown, Wis. Holsteins, Benj. F. Berg, Watertown, Wis.
Friday, May 5th	Holsteins, S. E. Jones, Manager, Watertown, Wis. Holsteins, Benj. F. Berg, Watertown, Wis.

Delay Planting on White Grub Land

These Pests Were Very Destructive in 1915 and Steps Should Be Taken to Eradicate Them During the Present Season.

WHEREVER the white grub was destructive last year or wherever spring cultivating shows large, white grubs in the soil the farmer should regard these facts as calling (1) for action to protect his 1916 crops from damage, and (2) for continued warfare on the white grub to prevent heavy destruction of crops in 1918.

The white grubs that were so destructive during the summer of 1915 will have wintered in the ground and may be expected to come nearer the surface as large grubs in April and May. These large grubs will feed to some extent on the roots of plants and may be expected to do some early damage to this year's crop, but fortunately by the middle of June they will become dormant, change to pupae early in July and by the first of September become beetles which remain underground until the spring of 1917.

As the mature white grubs and the pupae are tender and more easily killed by a disturbance of the soil than are the beetles, the entomologists of the United States Department of Agriculture advise the farmer to plow up his land as soon after July 15, 1916, as practicable. The beetles, if allowed to winter in the earth, will emerge as May beetles in May, 1917, lay their eggs and thus start another destructive brood of white grubs that if not destroyed may do as much damage in 1918 as grubs did to crops during 1915.

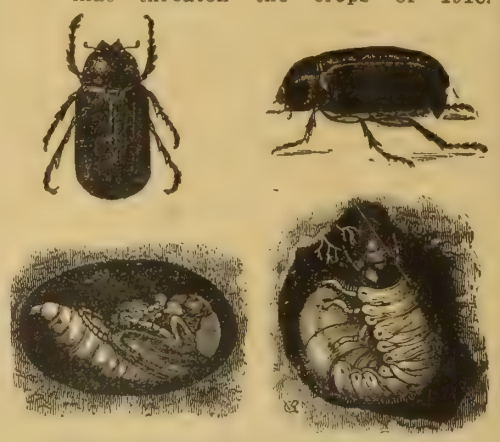
To lessen the damage during 1916 from the brief spring feeding of these large grubs the following measures are important:

(a) If the ground is to be plowed or cultivated in the spring, delay plowing as late as possible, or until the grubs have returned to near the surface (about last of April) and have chickens follow the plow to destroy the grubs that are turned up.

(b) Delay planting until the 15th or 20th of May or a little later if practicable. The object of this is to have the roots of the young plants develop so late that this year's large grubs will not have much chance to do damage before they become dormant early in June.

(c) Where possible, on land that is infested avoid planting corn, timothy, strawberries or early potatoes.

As has been stated, the large grubs that appear this spring will become the May beetles of the 1917 flight, which lay the eggs for and thus begin the three-year cycle of white grubs that threaten the crops of 1918.



THE WHITE GRUB AND ITS MATURE FORM—THE MAY BEETLE.

Therefore, as soon after July 15, 1916, as is practicable in all infested regions farmers should plow up every piece of ground which contained quantities of grubs in 1915 or showed large grubs in any quantity this spring. A plow which will break up the soil as it is overturned should be used, or if this is not possible the ground should be deeply disked after it is plowed in order to break up the soil and disturb the insects in it. The work done in the fall of 1916 will be a good beginning of preventive measures which must be carried out each year to avert the heavy destruction of crops by this brood in 1918. To carry out

Sheboygan County Holstein Breeders' Sale

MONDAY, MAY 8, 1916
PLYMOUTH, WISCONSIN

75 HEAD of choice, pure-bred Holsteins. Twenty-five good cows, many with A. R. O. records. A fine 27.27-pound cow. Extra choice yearling and two-year-old heifers, well bred. A few fine young bulls one from a 30-pound dam. Don't miss this sale. Auctioneer, Col. J. E. Mack. Ring manager, F. H. Everson. Write for catalog to

Frank Ubbelohde, Sec., Sheboygan Falls, Wis.

LAST CALL FOR THE TWO GREAT HOLSTEIN SALES

MAY 2 AND 3 — LAKE MILLS, WIS.

MAY 4 AND 5 — WATERTOWN, WIS.

CATTLE from some of the best beeders' herds in the state of Wisconsin. More high-record cows than ever before; some sure prospects for 30 pounders. Choice, well-bred heifers, some bred to the greatest blood of the breed. A few bulls, some from 30-pound dams. Write for catalogs.

F. H. EVERSON, MGR., Lake Mills, Wis.

S. E. JONES, MGR., Watertown, Wis.

ARE YOU LOOKING FOR A NEW FARM?

We own a number of fine cut-over, hardwood clay soil farms in southern Sawyer county, Wisconsin. Prices $22.00 to $28.00 per acre. Terms if desired.

Write for descriptive booklet and map.

O. O. WHITED CO.
Radisson Wisconsin

FARMS IN WISCONSIN

TAYLOR county and adjoining counties. Dairy land region of North Central Wisconsin. Genuine bargains. Liberal terms. We are OWNERS. Desirable property accepted in part payment. LOEB-HAMMEL REALTY COMPANY, (not Inc.), Medford, Wis., or 343-4 Marquette Bldg., Chicago, Ill.

CHEAP land with splendid railroad, rural mail and telephone accommodations—sure crops—no floods—markets on all sides—that is the situation in upper Wisconsin. For maps and information write to Wisconsin Advancement Ass'n, 1590 First Nat. Bank Bldg., Milwaukee, Wis.

WISCONSIN! 65 farms, 15,000 acres wild land. Corn, dairy, clover belt. Counties, Barron, Polk. Easy terms. Lowest prices. List free. L. Rivard, Turtle Lake, Wisconsin.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

ONEIDA COUNTY

WINNER of premiums in potatoes. I own and offer about 1900 acres cut-over hardwood lands along the Milwaukee road, including one town site, with running water, timber and water power. For sale in tracts of 40, 80, 120 acres and so on. Get my maps and price list. C. P. Crosby, Rhinelander, Wisconsin.

LAND SHORTAGE NEAR!

PRICES of lands near markets advancing fast. Our lands still selling in tracts to suit, at low prices and on easy terms, near $20,000,000 steel works, now running here. Free literature. Arnold, Land Agent, Rock Island Railway, 152 Wolvin Bldg., Duluth, Minn.

UPPER MICHIGAN Ideal place to settle; best soil and climate for grains, fruits, vegetables; 40, 80, 160 acre tracts; low prices; easy terms. Get literature. Northern Michigan Land Co., 222 Gilfillan Blk., Saint Paul, Minnesota.

1916 MINNESOTA invites you. Rich dairy trucking lands—low prices. Easy terms. Illustrated literature free. Arnold, Commissioner, Iron Range Ry., 513 Wolvin Bldg., Duluth, Minn.

FREE GOVERNMENT LANDS

COLORADO. Fine soil and climate. Unusual opportunity. Official pamphlets free. Immigration Dept., 1513 Tremont Place, Denver, Colo.

WANTED FARMS—Have 3,357 buyers; describe your unsold property, give price, acreage, location. 769 Farmers' Exchange, Denver, Colo.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 742 Temple Court, Minnea polis, Minnesota.

Kindly mention this paper when writing

125 PURE-BRED HOLSTEINS FOR SALE

A Few Pure-Bred Guernseys, One Pure-Bred Percheron Draft Stallion and Two Grade Percheron Draft Mares also offered at

MARSHFIELD, WIS., WEDNESDAY-THURSDAY, MAY 10-11

AT THIS the third sale in the magnificent sale and show barn in Marshfield, a better quality of stock is offered, and there is every promise that this sale will make new records. Breeders in the vicinity of Marshfield are united in their efforts to produce better stock and they have been meeting with wonderful success. A picture of the sale and show barn in which this sale is to be held will be found herewith. This barn contains 176 patent stanchions and sixteen box stalls. We have ample room to show stock and give buyers the best of chance to see what they are buying. There is a sixty-foot sale ring in the center of this barn with seats for over 1,000 people. One hundred and twenty-five pure-bred Holsteins will be offered for sale on the above dates and place. T. F. Vannedom, of Marshfield, will contribute three head that are stable mates of Minerva Beets 85791, grand champion at the 1914 dairy show. Mr. Vannedom raised the above cow, and what he is contributing is of the same quality. Imig Bros., of Neillsville, are putting six head in the sale, one an eight-months-old bull whose dam and sire's dam average 20.4 lbs. butter. The five cows are as follows: A two-year-old daughter of a 14-lb. two year old. A three-year-old daughter of a 20 lb. three year old. The other three have 20-pound dams. Four of the five are A. R. O. cows, and all are sired by Plain View Johanna Fayne. Jake Schmidt, of Arpin, is consigning several head. In this herd we have some very good yearlings as well as seven-day records. Mr. Schmidt has twelve cows in the local cow-testing association. Last month they averaged over fifty pounds of butter fat. E. E. Butters is offering some very good bulls. One from a 22-pound two year old. Others about equally good. Following are the names of some of the other contributors: J. C. Kieffer & Sons, Auburndale; Wm. Krause, Thorp, Wisconsin; McMillan Bros., McMillan, Wisconsin; F. W. Fisher, Thorp, Wisconsin; John F. Kelley, Neillsville, Wisconsin; C. H. Imig, Junction City, Wisconsin; O. J. Leu, Grand Rapids, Wisconsin. A few pure-bred Guernseys will be offered. One pure-bred Percheron draft stallion. Two grade Percheron draft mares, and one good farm team. For catalog write to

E. E. BUTTERS

MARSHFIELD -:- WISCONSIN

the rest of the work it is particularly important to watch the time of occurrence of the beetle and the grub and to note its abundance so as to take adequate protective measures. For example, if there is a heavy flight of May beetles—and this can be expected in April and May, 1917—farmers should use lantern traps at night and spray trees with arsenicals to destroy beetles feeding and breeding on them. Next, in the fall of 1917, grass and small grain should be plowed previous to October 15, 1917, to destroy the young grubs hatched from the eggs of the beetle.

Where the land shows small grubs in the fall of 1917 the owner should plow it thoroughly prior to October 1st and seed it to small grain or clover for the following year. Corn or potatoes should not be planted on such land the following season. Hogs should be pastured on it and chickens allowed the run of the fields when plowed. Finally, if in the spring of 1918 small grubs are abundant, heavy damage may be expected during the coming summer. Seed such land to small grain or clover. Do not plant corn or wide-row crops on such land. Put corn, potatoes, field beans, etc., on ground clean cultivated the preceding year. Pasture hogs on the infested ground at any time, but more especially between April 15th and October 15th, as they do much to root out and destroy the grubs.

Rotations are especially important in avoiding grub injury. A rotation of oats, clover and corn has proven very satisfactory in some sections. Ground which is in corn or has a heavy stand of pure clover during the year the beetles are flying, which will be 1917 in the infested area referred to, will ordinarily contain few grubs, since the beetles will not seek such land for laying their eggs. The beetles prefer land in small grains, timothy or covered with weeds for egg laying. Land which is in oats during the flight of the beetles will contain many grubs, but if clover, which is one of the least susceptible crops, follows, the grubs will scarcely injure that crop. It is asserted that clover winter kills badly in southern Wisconsin, northern Illinois and similar latitudes, but there is reason to believe that winter-killing is due to the fact that the clover is not sufficiently strong to survive severe winters and the remedy is liming or otherwise treating the land so as to grow a vigorous stand of clover. Aside from this rotation it is desirable to so arrange the crops that the least amount of land will be in timothy and small grain the year the beetles (1917) are abundant, and the following year (1918) to plant corn on corn ground and use for small grain and timothy the ground which was in these crops the previous year.

To Inoculate Seed.

Coating the seed of legumes with inoculated soil before planting is a simple method of insuring the soil inoculation at slight cost. County agents in Illinois have found ordinary furniture glue effective in holding particles of inoculated soil to the seeds. This method gives each individual seed some of the particles of inoculated soil which it carries with it when it is planted. The scheme requires but a small amount of inoculated soil and costs but a few cents an acre. The method is described in Farmers' Bulletin No. 704 of the United States Department of Agriculture as follows:

Dissolve two handfuls of furniture glue for every gallon of boiling water and allow the solution to cool. Put the seed in a washtub and then sprinkle enough of the solution on the seed to moisten, but not to wet it (one quart per bushel is sufficient) and stir the mixture thoroughly until all the seed are moistened.

Secure the inoculated soil from a place where the same kind of plants as the seed are growing, making sure that the roots have a vigorous development of nodules. Dry the soil in the shade, preferably in the barn or basement and pulverize it thoroughly into a dust. Scatter this dust over the moistened seed, using from one-half to one gallon of dirt for each bushel of seed, mixing thoroughly until the seed no longer stick together. The seed are then ready to sow.

Wisconsin Farmer Live Stock Advertisements Bring the Business.

Wisconsin Farmer, Madison, Wis:—Call and see us, as we want to fix up an advertisement for you. Your advertising seems to be the one which has reached most of the buyers for us. You may use our endorsement of your advertising all you want to, as your paper sure gets the business.

M'KEVITT BROTHERS,
Breeders of Percheron Horses, Angus Cattle, Duroc Jersey and Hampshire Hogs.

THE above letter was received by The Wisconsin Farmer under date of April 3, 1916. McKevitt Brothers write us that they have sold their Shire stallion and two-year-old Percheron stallion to August Stagman, of Sisseton, South Dakota. This two year old weighed about 1,820 pounds the day he was sold. These same breeders also report to The Wisconsin Farmer the sale of the following cattle: One bull, to Frank Marvats, Eastman, Wisconsin; one bull to R. R. Hughes, Rewey, Wisconsin; one bull to Harry Young, Bridgeport, Wisconsin; one bull to Fred E. Foster, Beetown, Wisconsin; one bull to Walter Scott, Bagley, Wisconsin; two cows to Lou Chouinard, Bayton, Montana.

Other breeders may avail themselves of the wonderful pulling power of The Wisconsin Farmer live stock advertising columns. H. S. Hoard, 201 Washington Building, Madison, Wisconsin, is field representative of this paper in eastern Wisconsin. T. P. Shreve, who may be reached at the same address, is field representative in the western half of the state. Write them for further particulars and rates on live stock advertising.

TOO LATE TO CLASSIFY.

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov of the Chene. Address
Charles Schmidt Wrightstown, Wisconsin

An official order extending to every non-commissioned officer and man in active service in Canada leave of absence not exceeding one month to go out on farms, has solved western Canada's problem of finding help to plant this year's grain crop, in the opinion of government officials in Winnipeg, Can. Under the provisions of the order the soldiers will receive full pay for their service in the army in addition to the payment received from farmers for their work. Free transportation from camp to farm will be provided by the government to the extent of 300 miles and operation of the military order will begin as soon as conditions permit of working the land.

DISPERSION SALE OF HOLSTEIN-FRIESIAN CATTLE

Due to press of other business, will sell my fine herd of pure-bred Holsteins at public auction on

FAIR GROUNDS, ELKHORN, WIS., MAY 9TH

44 Head of females, most all young stock, coming fresh with first and second calf, some yearlings and a few heifer calves. Eight young bulls, three months old to yearlings.

THE BLOOD LINES of this young stock are all that could be desired; the near ancestors on the dam's side are such cows as Pontiac Order, 21.03 lbs. butter, 7 days; Duchess De Dikkert, 20.20 lbs., 7 days; Alice De Vries De Kol, 21.61 lbs., 7 days; Gerben 7th, 20.20 lbs., 7 days; De Dikkert Johanna, 14.80 lbs., 7 days; Brookside Akkrum, 16.30 lbs., 7 days, and others just as good. Near ancestors on sire's side are Sir Topsy Pontiac by King of the Pontiacs, his dam Aggie Topsy De Kol, 29.57 lbs., 7 days; Paul Calamity De Kol, his dam, Calamity Jane, 29.57 lbs., 7 days. De Kol 2d's Butter Boy 3, his dam, De Kol 2d. Homestead Hengerveld De Kol and other good sires. It is rarely such a fine lot of young stock is offered at a public auction; all are well grown, good, thrifty stock, tuberculin tested and sold with a guarantee to be as represented. Remember the date, May 9th, just after the Watertown and Lake Mills sales. If you do not find what you want, come to Elkhorn, May 9, 1916.

A. J. PIERCE - - - ELKHORN, WISCONSIN

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

SHORT-HORN CATTLE.

THE AMERICAN SHORT-HORN BREEDERS' ASSOCIATION

THROUGH its extension department placed in 1915, 1,500 registered Short-horns in sections that would not, otherwise, have been reached. The demand for both beef and milking Short-horns is general from coast to coast, due to the increasing recognition of the practical, adaptable merit of the Short-horn. The service of the association's extension department is free to you. Ask for THE SHORT-HORN IN AMERICA, just out. It is free. Address, American Short-horn Breeders' Ass'n, 13 Dexter Park Ave., Chicago, Ill.

Old-Time Automobiles.

A VERY interesting little booklet entitled "The Final Proof" has come to the editor's desk. This booklet attracts our attention especially because it contains the pictures of a number of automobiles which have been run for many thousand miles. An automobile which is shown in this book, and which is the property of F. E. Slason, of Plainsville, Kan., has a record of 261,800 miles. There are several cars shown in this book which have run over 200,000 miles. The book is issued by the Hyatt Roller Bearing Company to emphasize the value of their product. Each one of the old cars pictured in this book is equipped with Hyatt roller bearings. In each case the cars are still running on the original bearings. Certainly no better evidence of the value of the Hyatt product could be shown than this long service. Readers of this paper may secure a complimentary copy of this interesting little booklet by addressing the Hyatt Roller Bearing Company, Detroit, Mich. Please mention this paper when you write. —Adv.

Record Increased.

BENJ. BERG, Lake Mills, Wis., writes as follows, under date of April 11th: "As requested when you were here I am sending you the latest report on Lady Oak 2d De Kol. She has 31.07 pounds butter to her credit today. She is still increasing in milk and holding her test and has been going at a thirty-two-pound rate the last three days." Mr. Berg advertised her bull calf for sale in the April 13th Wisconsin Farmer. At that time we stated that she had only a thirty-pound record, but are pleased to be able to publish the fact that she has increased this record. This young bull will be sold at the Watertown Holstein sale on May 4th and 5th.—Adv.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Holstein-Friesian Cattle.

May 7, Sheboygan County Holstein Breeders, Plymouth, Wis.
May 9, A. J. Pierce, Elkhorn, Wis.
May 10, Wood & Dunn County Holstein Breeders.
May 10-11, Central Wisconsin Holstein Breeders' Association, Marshfield, Wis. E. E. Butters, Sale Manager.
June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls, sired by Oxford Duke I. Prices reasonable. Address
Geo. Wenham & Sons, Ft. Atkinson, Wis.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

Oak Lawn Farm Short-horns

SHORT-HORNS of quality for sale at reasonable prices. Four heifers coming 3 years old, safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also ten heifers coming one year old.
J. E. KENNEDY **JANESVILLE, WIS.**

Milking Short-horn Yearling Bulls and Heifers

SIRED by KING CREST 39857, a Duchess of Gloster bull and out of Arabella and Imp. Bertha bred cows. Prices right. Address
John Notseter **Deerfield, Wisconsin**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

ELM VALLEY HOLSTEINS

MY senior herd sire, Sir Canary Alcartra 78433, went to M. L. De Voin, Eureka, Wis. He is a grand bull and will be herad from in the future. I have a fine yearling bull sired by Comhurst Pontiac Prince 113096, a son of Pontiac Aaggie Korndyke, and out of a granddaughter of King of the Pontiacs, that made 15.830 butter, 7 days at two years old. Also a lot of yearling heifers and calves for sale. Address
A. L. ROWE **R. 4, WAUPACA, WIS.**

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland**; his dam, a granddaughter of **Golden Fern's Lad**, gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.
FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

Yearling Jersey Bull

OF choice breeding, Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

ELMDALE FARM . . . JERSEYS

REGISTERED yearling bulls ready for immediate service and younger, sired by Sage's Victor and Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price. Address
H. Holt & Son **Oconomowoc, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write FRED STUBLEY BLACK EARTH, WIS.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

HOLSTEIN-FRIESIAN CATTLE.

BONNIE MEAD STOCK FARMS

OFFER a few choice sons of Kl g Pietertje Hengerveld Ormsby, a full brother to 35-lb. cow, Pietertje Maid Ormsby, from A. R. O and untested cows of Alacartra, Johanna and Ormsby breeding.
HUTCHINSON BROS. & BURBACH **RANDOLPH, WISCONSIN**

WE NOW OFFER

Two Young Registered

HOLSTEIN BULLS

READY for service. Born in August, 1915, weight about 700 pounds each. Descendants of Beri Wayne's Paul De Kol and Bell Korndyke. Butter 25.77. Nicely marked, half white and half black. Straight as an arrow. First offering price $110 each F. O. B. cars Ashland, Wisconsin. Address
D. W. EMERSON, ASHLAND, WIS.

Purebred Registered

HOLSTEIN CATTLE

If you are not ready to buy purebred registered Holstein cows for foundation stock, why not grade up your common cows by using a purebred Registered Holstein bull? The Dairy Department of the Illinois Agricultural College has figured that $150 invested in a good purebred bull earns in six years nearly 1000 per cent profit in the increased production alone, not taking into account the increased value of the herd. Can you invest $100 or $200 so that it will pay you more profit? Investigate the big "Black-and-Whites."

Send for FREE *Illustrated Descriptive Booklet.*

The Holstein-Friesian Association of America
F. Houghton, Sec'y, Box 143, Brattleboro, Vt

RUST BROS.' STOCK FARMS

The Kind That Will Improve Your Herd.

29.74 lb. HOLSTEIN BULL

SIR Ida Lottie Cornucopia. His dam made 29.74 lbs. butter in 7 days, 816.91 lbs. butter in a year. She has 3 sisters with records of 27.54, 27.99, 28.63, 33.65. Her dam made 27.11. Here is a bull fit to head any herd. Send for picture and pedigree. Address
Arthur Rust **West Allis, Wisconsin**

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address
Watson & Will **Menomonee Falls, Wis.**

Sons of Serviceable Age of

SIR JOHANNA AALTJE KORNDYKE

IN which is combined the Holstein blood of Sir Johanna DeKol, Sarcastic Lad and Belle Korndyke. Bulls from A. R. O. and untested cows for sale at reasonable prices. Address
W. D. McGILL, - Menomonee Falls, Wis.

10 CHOICE Holstein heifers and 2 bulls 15-16ths pure, $20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wisconsin.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer **Kaukauna, Wisconsin**

2 HOLSTEIN BULLS

READY for service. Sired by our senior herd sire, Johanna Spofford Corona 71305, and out of A.R.O. dams. No. 1, record of 20 lbs. butter in seven days. No. 2, record of 17 pounds butter in seven days. Address
Cook Brothers **Burlington, Wisconsin**

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, - Kilbourn, Wisconsin.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle DeKol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse **Monroe, Wisconsin**

HORSES.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

STALLION BUYERS ATTENTION. For the next thirty days we are going to reduce our prices on all of our big young stallions in order to close them out. We have very large bunch of big ton, rugged stallions running in ages from two to six years that must be sold this season, consequently anyone that is looking for a right good one will save money by writing to us and getting our prices and descriptions before buying. We especially have a very strong collection of Belgian stallions, in weight from a ton to 2,300 pounds, from two to five years old, that should be on some good farms the coming season. We also have ten tried sires, Percherons and Belgians, that we have taken in on trade on younger stallions, that we are offering very reasonable.

We are located in north central Iowa on the C. M. & St. P. R. R., midway between Mason City and North McGregor, Iowa. Send 20c in stamps for large horse calendar which shows our main farm and sales stables. Correspondence a pleasure.

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

POLAND CHINA SWINE.

Martiny's Poland China Boars

15 FALL boars of September farrow, sired by Wisconsin Jumbo, the 1st prize and Jr. champion boar at the Wisconsin State Fair, 1914. I believe he was the biggest boar of his age shown that year, he weighing 510 pounds at eleven months old. This will be the last chance to get a herd header from this great boar. The wise man will raise a few fall pigs this year if he never did before. I will sell these boars now for less than they will bring for pork after you get through using them next fall, as I wish to make room for my 100 spring pigs I already have on hand.

L. P. Martiny **Chippewa Falls, Wis.**

Big-Type Poland China Hogs

MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address

W. T. Hartley, R. 3, La Crosse, Wisconsin

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address

JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

BIG-TYPE POLAND CHINAS—Growthy September pigs, both sexes at special prices. Address A. Menke & Sons, Route 1, Markesan, Wis.

DUROC JERSEY SWINE.

Duroc Spring Gilts

OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

CRITIC TOP NOTCHER

half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address

B. W. LITTLE JANESVILLE, WIS.

Burn Brae Farm

ROSENDALE, WIS.

CHAS. A. PETERSON, Prop.

DUROC JERSEY spring and fall boars for sale at reasonable prices. Sows and gilts are all sold. My herd is nominated for the Duroc Futurity.

McCLURG BROS.' DUROCS FOR SALE

SEPTEMBER farrow, either sex, sired by Prince Defender, a giant son of Lee's Defender. For future reference we have spring litters by Lee's Defender, Prince Defender and by Royal King 4th, a son of the $2,650 Royal King, grand champion. Write McClurg Bros., Viroqua, Wisconsin.

DUROC JERSEYS

HAVE had a big trade in gilts and am sold out. We have an **Orion Cherry King** boar and one by **The Chief's Col.** Keep this in mind for future reference. Address

E. H. PARKER & SON, JANESVILLE, WIS.

ATWATER DUROCS

FALL BOARS for sale from **fashionable and champion** blood lines. Also four choice yearlings. Write L. F. ATWATER, BANGOR, WIS.

HIGGINS' MODEL DUROCS

NOTHING to sell, but still in the game. J. W. Higgins, Gotham, Wis.

DUROCS

CHIEF DEFENDER by Defender, dam Lucy Wonder 112 by Chief's Col. Big Col. by King the Col., dam by Golden Model II. No herd has two better herd boars. Keep this in mind. Geo. H. Willsie, Prosper, Minn.

CHESTER WHITE SWINE.

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address

W. F. Miller West Salem, Wis.

CHESTER WHITES

FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address

John Simon Campbellsport, Wis.

GUERNSEY CATTLE.

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address

W. H. & B. L. Hanchett Sparta, Wisconsin

THORN HILL FARM GUERNSEYS

I HAVE for sale some very fine Guernsey bulls of all ages, from Advance Register cows and at very low prices, $50 up. I am overstocked and must sell at your price. Herd regularly tested for tuberculosis. Every animal guaranteed. Write for prices and description. Address

Thorn Hill Farm Deerfield, Illinois

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.

Grenwode Farm, E. R. Whitcomb, Prop. Whitefish Bay, Wisconsin.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman Fort Atkinson, Wisconsin

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address

UNDERWOOD STOCK FARM
L. C. Underwood, Prop. Avoca, Wisconsin

RED POLL Headquarters

YEARLING BULLS of herd-heading quality. **Breeding** and **individuality** the best. Write us. **J. W. SALTER & SONS, Unity, Wis.**

LOOK! RED POLL BULLS

1 YEARLING—1 two year old. Well grown, well bred. Priced right. Write at once. Guarantee satisfaction. Address

Natt Kimball Black River Falls, Wis.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin Gotham, Wis.

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Chariton, Iowa.

BERKSHIRE SWINE.

THOSE LARGE BERKSHIRES

YOUNG sows bred to big-type boar for August farrow, $35 to $50. W. A. Freehoff, Waukesha, Wisconsin.

HORSES.

FRANK IAMS'

Iams owns the three largest and best 2, 3 and 5-year-old Percheron Stallions in U. S. weight 2,100, 2,230 and 2,410 lbs., all "Paris and Gold Medal Winners." Iams owns "Dentist," "champion" double "Gold Medal" winning Percheron 3-year-old. Try Iams—"Dad." His Belgians are 'Eye-Openers." We take no chances. He sells horses "On honor" and all his horses will be sold at some price.

Is "closing-out" and has "reduced prices" on all his "Show and Business Stallions and Mares"—from $100 to $500 less than formerly on each stallion or mare—to make a quick "clean-up." He has all his largest and best horses—many "Big Snaps"—"Mr. Buyer," Be a "Self-Starter." 1916 is the "Get-Rich-Quick" year for "Up-To-Snuff" Horse Breeders—Pull the "Spark-Plug"—Plunge into the "Easy-Money Game"—Buy a stallion and a pair of mares of Iams—His "Big Horses" and "Cut Prices" are the "Town Talk." His 34 years of success in importing, breeding and selling 5575 registered horses, his "fifty trips" across the ocean—makes Iams a safe man to buy stallions from. His "old customers" are "best Page advertisers," his Breeding guarantee backed by "½ Million Dollars." Iams' Imported and Home-bred horses are "classy, model drafters" of big size, large bone, fine form, quality and finish. Many

"Gold Medal and State Prize-Winners,"

"Iams' Kind," and in the "Pink of condition." Bought at "Bargain Prices," and must be sold. Iams sells horses on Honor. A lady can buy as cheap as a man. Is not in the "Stallion Trust," and is selling more pounds of "Model Draft Horse" for the money than any competitor. Iams is cutting the middle out of high prices on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, wt. 1,800 to 2,410 pounds, all "Branded," "Approved," "Registered" and "Inspected" by Governments of France and U. S., and certificates stamped "O. K." All "Inspected" by a Nebr. Deputy State Veterinarian, and certificates of "Health and Soundness" are given with each horse.

REGISTERED STALLIONS AT $800.00 AND $1,300.00

(Four little higher.) "Home-Breds" come cheapest. Terms cash, or one year's time at 7 per cent: land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare; gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads with $500 guarantee that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb., all St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

PERCHERONS FOR SALE

IMPORTED or home-bred stallions and mares, from weanlings to mature animals, mostly blacks and grays. Write for prices and pedigrees.

A. R. Ives Delavan, Wisconsin

Percheron Stallions

YOUNG stallions and fillies, priced reasonable. Short-horn Bulls, sired by Golden Light; dams big milkers with size. Address

R. A. MORLEY CO., - Baraboo, Wis.

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address

M. Bodenheimer & Co. Green Bay, Wis.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS... HAMPSHIRES

BRED sows for sale—big and well belted. Best breeding. Write

A. M. Laird Prairie du Chien, Wisconsin

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.

R. L. CURRIE VIOLA, WISCONSIN

MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages, priced to sell. 80 big-type sows, bred to champion boars. Catalog free. C. D. Thompson, Letts, Ind.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER — EARN $15 TO $100 PER DAY

Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.

HOMESTEAD COMPANY
Engraving Dept. Des Moines, Iowa

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares: 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

I GUARANTEE MY

PERCHERON STALLIONS

BEING sound and sure breeders. One black 4 years old, one gray 7 years old, one gray 8 years old, one imported bay Belgian. Weigh from 1,900 to 2,100. Have been used in studs. The price is so you can afford to buy one or all. Write for description. Address **THOS. McNAMARA, Grant County, BLOOMINGTON, WIS.**

IMPORTED STALLIONS

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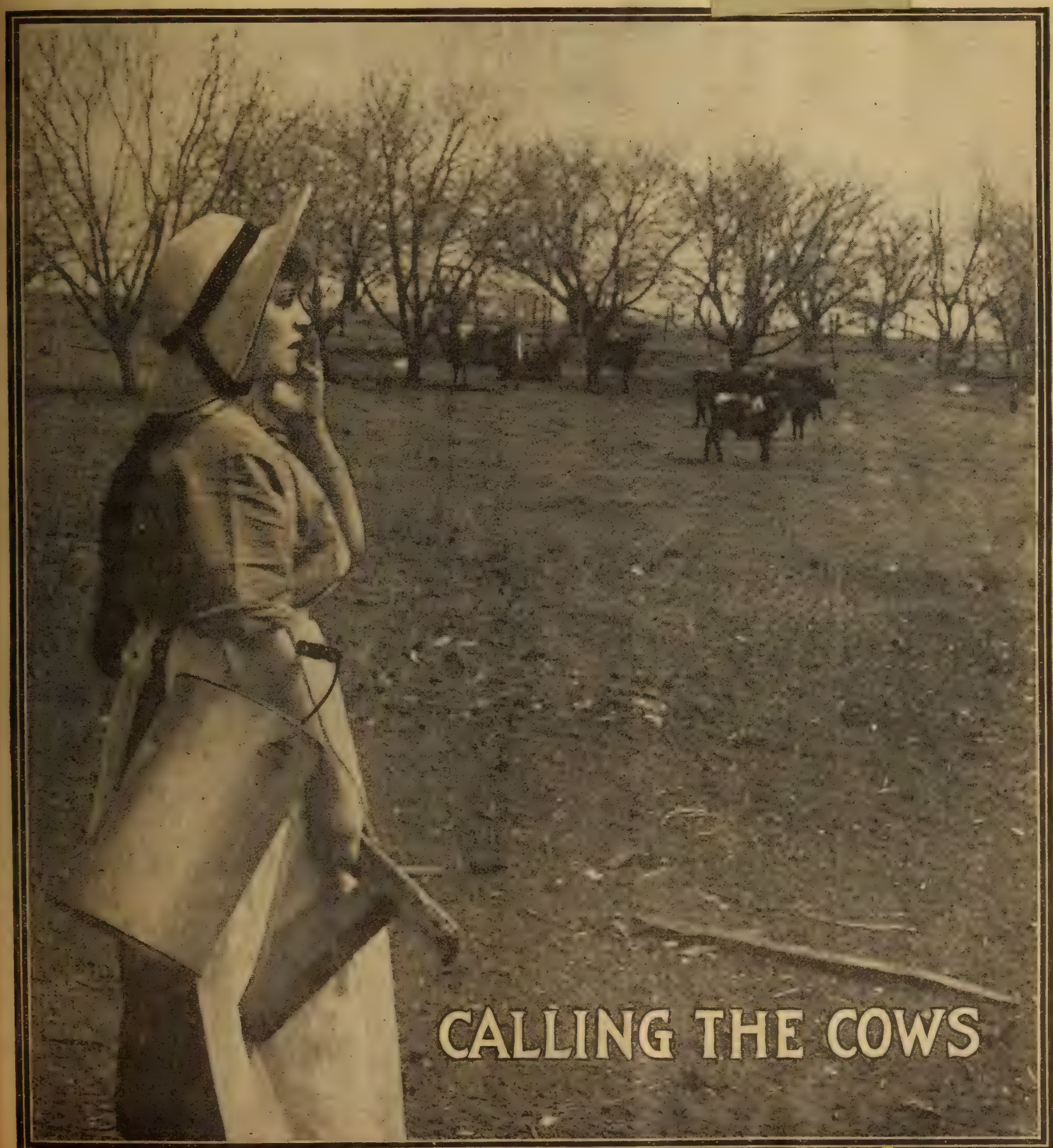
W. H. Carey Argyle, Wisconsin

College of Agriculture
University of Illinois

THE WISCONSIN FARMER

VOL. XLV. NO. 18. THURSDAY, MAY 4, 1916. HOLE NO. 1788



CALLING THE COWS

CURRENT EVENTS

THE fact that Henry Ford, the wealthy automobile manufacturer and peace advocate, carried his home state, Michigan, by a good majority, polling over 25,000 votes, and was the choice of at least 15,000 republicans in Nebraska, has opened the eyes of many people, particularly in the East, to the possibilities of Mr. Ford in politics and to the anti-preparedness sentiment in the middle West. When Mr. Ford was in New York he was interviewed, with the following result: "I think the feeling in this country is against excessive preparedness, lavish preparedness. I believe in reasonable preparedness. But what's the use of building dreadnaughts? They're only good to be sealed up in the Kiel canal or the Orkney Islands. That's where they are, you know; all of them." "Are you going to take advantage of your personal popularity, or the popularity of the things you believe in and run for president?" "I don't know what I might do," Ford replied soberly. "I don't think anyone ought to run for president, or for any other important office. When a man runs for office he generally has a motive. The man for president ought to be picked." Mr. For' was emphatic in declaring that he would not finance any third ticket, no matter how many states might declare for him.

THE German reply to the ultimatum issued by President Wilson in regard to submarine warfare and the danger to neutral ships and travelers had not been received in Washington up to the first of the present week. There were many conflicting rumors, but the one which seemed to carry the most authority was to the effect that the kaiser is expressing a desire to follow a course which will lead Germany and the United States out of the present crisis. Public opinion in Germany remains divided into two factions. One would welcome a break with the United States, simplifying the international situation and making it possible for Germany not only to continue but to increase its submarine activities. The other would maintain the present friendly relations, even making concessions which will restrain the submarines, in a measure, although not dispensing with them entirely. The German reply is expected any day now. In the meantime the fighting continues around Verdun, with no gain for either force. The international situation was somewhat complicated last week by rioting in Dublin, in which several lives were lost. The Irish question had been well-nigh lost sight of in the European war, the Irish enlisting for Great Britain in large numbers. Some malcontents started trouble in Dublin last week, however, and the situation looked serious for a time.

SENATOR J. HAMILTON LEWIS, of Illinois, predicts that another political party will be founded immediately after the national republican and democratic conventions this summer. This new party will be founded on "peace, prohibition and prosperity." Neither of the old parties, he says, can afford to take "any sort of action in international affairs which would show Europe that the country is not backing the administration's policy." A defensive alliance of all countries of the western hemisphere was suggested by him as the only means by which the United States could avoid early conflict with countries of Europe and Asia. "Such an alliance must carry with it a new doctrine of international law," said the senator, "ordaining that any country violating the fundamental rights of the republican form of government would be punished by the combined resentment of the whole western hemisphere." It has been suggested by other public men that after the European war there will be a central tribunal, armed by all the nations, which shall have the power to punish any nation which does not live up to its agreements or to the decisions of this international tribunal, which shall be unlike the present court of arbitration at The Hague in that it will have the men and the guns to enforce its rulings on any nation the world over.

MAJ.-GEN. HUGH SCOTT, chief of staff of the United States army, spent the past week in conference with General Funston, on the Mexican frontier, trying to arrive at a conclusion in regard to the Mexican situation. There were rumors that the American troops were to be withdrawn from Mexico, leaving the task of capturing Villa and dispersing the bandits to the Carranza troops, but these were dispersed by an unofficial statement of General Scott to the effect that the American forces in Mexico were to be strengthened rather than withdrawn. General Obregon, minister of war under Carranza, came north to hold a conference with General Scott, at which it is expected a definite policy will be decided upon. The Carranza leaders are insistent that the United States should withdraw its troops, but this is hardly probable until better order is secured in Mexico, with less likelihood of the Columbus raid being repeated. At last reports it was about decided to retain the American troops to police the northern part of Mexico until the Carranza forces have shown themselves able and willing to maintain order and to keep Villa down with a strong hand.

REPORTS that Col. Theodore Roosevelt might support Elihu Root if Mr. Root obtained the republican nomination for president, were declared without foundation by Judge Albert D. Nortoni, of the Missouri Court of Appeals, after a conference with Mr. Roosevelt. "I know that Colonel Roosevelt will not support Senator Root on the republican ticket," was his statement. "I know that no such support has been promised by Colonel Roosevelt, either directly or indirectly. If Mr. Root is nominated it will simply mean a straight out third party fight right down the line, just as in 1912." Colonel Roosevelt has issued a public statement, vigorously opposing the administration and promising that he, his four sons and possibly two sons-in-law would enlist in the event that the United States became embroiled in war. The colonel said: "Men are saying that they stand behind the president or by the president. I wish to speak for the men who, in the event of war, will stand in front of the president and between him and the foreign enemy, and who, therefore, will stand between danger and the men who are behind or beside the president. These are the men who will go to the war at once if there is war with Germany, or with any other great power, and who feel as I do, that we would far rather go to war unprepared than to see our women and children murdered with impunity and the honor of the flag stained."

SINCE the beginning of the war more than $350,000,000 worth of horses, automobiles and automobile accessories have been exported from the United States, according to a statement issued by the foreign trade department of the National City Bank, of New York. France and her allies received the major portion of these exports. Out of a total of $160,000,000 in automobile exports, $100,000,000 worth were of the commercial and freight carrying type, the remainder passenger cars. The number of horses exported was about 600,000, and of mules 150,000. In the seven months ended in January, last, France alone received 122,000 horses and mules, while Great Britain bought 38,000.

THE German government has agreed to permit exportation to the United States of 15,000 tons of dyestuffs, lack of which has seriously affected American textile manufacturers. Notification to this effect was contained in a note delivered by Count Von Bernstorff, the German ambassador, to Secretary Lansing. The communication explains that, while Germany refused at first to permit exportations of dyestuffs unless they be exchanged for American goods, now excluded from Germany by the British blockade, after careful consideration of the situation it has been seen that "this blockade has resulted in serious embarrassment to those American industries which are in need of dyestuffs," and the imperial German government now is prepared to make "a single exception" in permitting exportation in this instance. It is required only that the dyestuffs shall be consumed by American manufacturers and not re-exported to Great Britain or her allies.

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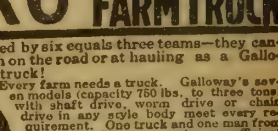


Wm. Galloway, Pres., Wm. Galloway Co.
31 Galloway Station Waterloo, Iowa

The Wisconsin Farmer

THURSDAY, MAY 4, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

TOMORROW THE TRACTOR'S.

NOTHING is more certain, to my way of thinking, than that the next few years will find the mechanical aids to farming developed and adopted to an unusual degree. Particularly, I believe, will it be the era of the tractor. Let me give you a few facts to confirm my individual opinion.

In the ten years between 1900 and 1910 (when the last federal census was taken) the average value of implements and machinery per acre of improved land in farms increased, in the United States as a whole, from $1.81 to $2.64. The percentage of increase was 45.9. In the same time, here in the grain belt (where the bulk of the farming operations of the nation are carried on) the percentage of increase was 57, while the average increase was 6 cents per acre above the average increase in the United States as a whole. In some of the grain-belt states the supremacy was overwhelming. In Wisconsin, for instance, the census bureau gives the average value of implements and machinery per acre of improved land in farms as $4.45, whereas in the United States as a whole it is but $2.64. In other words, the farmers of Wisconsin are spending $1.81 more per acre for mechanical aids to farming than are the farmers of the nation as a whole. In Iowa they are spending 60 cents an acre more. In South Dakota the farmers almost doubled their expenditure for implements and machinery between 1900 and 1910, the actual percentage of increase being 97.2, whereas in the nation as a whole it was but 45.9. In other words, South Dakota farmers are just twice as quick to see the possibilities of agricultural machinery as are the farmers of America generally.

Now what does all this portend? In my opinion, just this: The ultimate supplanting of brawn by the inventions of brain, the increase in production by more efficient cultivation. I am not predicting that the day will ever come when the work horse and the hired man will no longer be known on the farms of America. But I am predicting a day when agricultural implements and machinery will double our present production, cut the labor exertion and the labor expense squarely in two and increase our farming profits most materially. The short-sighted ones who predicted that the reaper would displace hand labor on the farm altogether, and fought the reaper on this theory, have long since seen the error of their ways and would be the last today to go back to the old order of the sickle and the cradle. Neither the work horse nor the hired man will ever disappear from our farms, yet the day is undoubtedly coming, in my opinion, when we will look back upon our farming operations of today as we now look back upon the operations of a day before the reaper and the binder came.

Take the case of the tractor, for instance. Mr. Phillip S. Rose, editor of The American Thresherman, places the number of gasoline and oil tractors in use today, in the United States, at 20,000. To this he adds 100,000 steam tractors and 1,000,000 gasoline and oil engines, averaging five horse power each. Here we have a total of 9,600,000 horse power developed by these mechanical aids to farming, two-thirds of the power of all the horses and mules to be found on all the farms of the nation. And the day of the tractor is only fairly breaking. Last week the secretary of the Kansas City Tractor Club received a letter from France which is most instructive. The writer points out that after the war Europe will be so short of horses (and they will be so high priced) and so filled with wounded and crippled men who cannot do their work without riding, that thousands upon thousands of tractors will be in immediate demand. He continues:

> Just to give you an idea of the situation, one school here, representing the people for a certain section of France, is now training 1,300 maimed men to handle tractors with which to do farm work and every other sort of work that the tractor does. These are thirteen hundred out of thousands and tens of thousands of men who must have tractors and cannot afford horses. They will be bought in vast quantities.

Stricken Europe will naturally turn to the tractor to solve its land cultivation problem, for a crippled man who cannot plow and cultivate on foot can sit upon a tractor and operate it effectively. The tractor will restore and increase the fertility of Europe's blood-stained fields. But what will America be doing all this while? To meet the new competition it must adopt the new methods to a still greater degree than Europe adopts them. For every tractor put in use on Europe's farms a half dozen, yes, a dozen, must be put to use on America's farms. In no other way can our efficiency and our production be increased so as to maintain our agricultural supremacy.

I am not a prophet, nor the son of one, yet I freely predict that the next census will find the percentage of increase in the use of mechanical aids to farming far greater than the last census found it, and in this I see a good sign of the times. The day is coming—and rapidly, too—when our agricultural supremacy will not depend upon new lands being put under cultivation, but upon the increased productiveness of our old lands. The agricultural implement—and particularly the tractor—will be the dominating factor in bringing this new order about.

THE COST OF WAR.

I HAD the pleasure, the other evening, of talking for some time with a man who has spent the last five months in Europe, visiting practically all the belligerent countries and meeting many of the high officials whose names are constantly in the press dispatches. This man returns to the United States, and to the grain belt, a most determined pacificist, for he has seen war's horrors and realizes full well the intensity of the suffering which war entails.

I want to tell you a few things this man told me of the cost of the present war. He has carefully figured it out and has learned that the amount spent on the war so far—with no immediate end in sight—would build a comfortable home for every family in France, Germany and England. Think of that, you who would embroil this nation of ours in the titanic struggle for little or no reason and sacrifice millions of human lives—your sons and mine—in a conflict in which no great principle (worth the dying of a single man) is at stake so far. But this does not bring the matter as close home as another remark made by my friend. He tells me that every time a large gun is fired—and they are fired every minute of the day, by the thousands—the cost is as great as that required for the education of two young men for five years in the best universities of the world. Think of that, you fathers and mothers of the farm who toil and skimp for years in order to get enough money together to send the boy or the girl to the state agricultural college for a year or two, that they may have the advantages denied you in your youth. Is war worth more than the education of every young man, of every young woman, in this fair land of ours? I answer, "No," most emphatically.

I have just been reading some facts contained in a booklet issued by one of the big eastern banks. From this booklet I learn that two years of the war (it will be two years the first of August since the war began) will cost six times more than the full amount expended in the civil war, will reach a sum forty times more than the amount of our national debt, and will be 120 times more than the cost of the Panama canal. And yet there are among us some who would throw the stars and stripes into the international cockpit, dyeing it a still deeper red in the blood of our best young manhood. Shame on them for such awful blood-lust.

My friend holds views which I have long held, and frequently expressed here. He believes that Europe will be in no condition, nor have any desire, to enter into any other war for the next 100 years at least. Twenty million men are under arms (or, having been under arms, are now under the sod) in Europe. Once peace is declared nothing will be dearer to them than the shade and happiness of their own rooftree; nothing will be able to lure them from the pursuits of peace to the murderous slaughter of the trenches. Nor will the children of today, nor their children, be any more anxious for war, for this titanic struggle will leave scars which it will take fully a century to efface. We of the United States are in no danger of foreign invasion for the next 100 years at least.

Let us think of these things, coolly and calmly, as we go about the spring's work of another crop year. If we keep cool heads we can hold the war-mad ones in leash. Could we dedicate ourselves to a better, a nobler task?

HELP WANTED.

I HAVE frequently spoken of the pleasure derived by me in opening and reading the mail, from the intimate heart stories revealed by the letters of my farmer correspondents. Without violating any confidence in the least, I am going to reprint herewith portions of a letter received a few days ago. This letter was written by a young Wisconsin woman, the daughter of a farmer, who is good enough to say that she has read my editorials "until I feel that you are a personal friend," while "father reads your paper from cover to cover." Having thus established themselves as close friends, is it to be wondered at that I am most deeply touched by the recital of their troubles, which follows:

> Dear Mr. Pierce:—We have a beautiful farm of 300 acres which was almost free from debt when father helped a brother, who did not prove worthy, and now at seventy-eight finds himself heavily in debt. When mother died, sixteen years ago, I came home to keep house, have taught school and kept house ever since, but with hired men of every type, things have gone from bad to worse and I cannot pay the debt, taxes high, help too, and father not able to do much more than the chores. Father and mother came on to the farm fifty-seven years ago, so you can readily see how we cannot give up. Something within tells me to hold out, but it takes money and that right now. We tried advertising for help and found that worse than the poorest help we could hire right here. If we could rent to a thorough, up-to-date young farmer who would put the farm on a paying basis, that is what I would like to do, but where find him? Do you, through your experience, know of such a person? If so, will you kindly let me know about him. If we could sell 120 acres we could manage to pull through. Do you know of someone who would like to start a dairy farm? This 120 is particularly adapted to that purpose. I will appreciate advice and help.

A letter like this makes me realize the inadequacy of any words at my command to express my sympathy. It fairly makes my heart ache to think of this young farm girl struggling along against such heavy odds, of the sleepless nights she must put in trying to devise ways and means to save the old home place. The best I could do was to write her a letter of sympathy and general advice, of which the following is a portion:

> I can fully understand why you encounter great difficulty in operating your 300-acre farm with the kind of help that is available in this day and age. I take it for granted that you do not have a second house on the farm so that you could hire a married man. This plan sometimes works out quite well, because an individual who has a permanent home is apt to give better service than one who is here today and away tomorrow. Of course it is too late to rent the land this year unless you could lease it to a neighbor. While it might not be practicable to do this, still I make the suggestion.
>
> When the present crop season is over you will then know how you are coming out financially and if you cannot meet your maturing debts you should certainly plan to sell 120 acres. In the meantime, your financial situation should be explained in detail to your local banker, as I feel sure that his advice would be of material aid to you. If you should have a few small nagging debts he might be willing to loan you money to pay these off and take your note for a six-month or eight-month period. This would relieve you of worry and in the meantime you would have an opportunity to get something from the land.
>
> I only regret that I cannot refer you to a purchaser for your 120 acres. It is just possible, however, that you might offer this acreage for sale through a reliable real estate agent. Such persons have a much better opportunity to find a purchaser for land than the individual who is not engaged in that special line of endeavor.

The whole trouble resolves itself down to this: The inability to secure good farm help. If this young woman and her aged father could only get the right man to take hold of the place and work it on shares—a tenant with a family, every member of which would have an interest in restoring and maintaining the productiveness of the place—their troubles would be well-nigh ended and the rest would take care of itself in time. I am not a pessimist altogether on the labor question, but my farmer friend who asserts that when he advertises for help and twenty men apply he hires them all, knowing that only one (if any) will show up at the time appointed, is about right. Our future agricultural prosperity depends as much upon this element of available and efficient labor as upon any other factor. No matter how fertile and productive our acres are, if we cannot get the labor to till them our capital is invested and our own efforts are expended to but small avail.

Could I answer my young correspondent in any better manner? Should I have gone further? Did I go too far in encouraging her to hold on to the old home place? I will gladly receive suggestions, for by co-operating together we may be able to lift the burden from this young woman's shoulders and put an end to the worries which, I have no doubt, are making her old before her time and saddening the sunset years of her aged father, who sees a life of hard and honest toil thus brought to naught. May we not join in this effort to make two smiles bloom where there were none before? For surely, thereby, we would be doing better than merely making two blades of grass grow where there was only one before, of which the Good Book tells us.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Support Your Country Newspaper.

NOT long ago one of the editors of The Wisconsin Farmer attended a gathering of advertising men in which the country newspaper was a subject of discussion. It was surprising to note the dense ignorance which these men displayed with reference to the power of the country press. They were all convinced of the great value of farm journals as advertising mediums. They were very certain of the value of the magazine with national circulation and of the city daily. They regarded the trade paper with favor. But a goodly number of them failed to grasp the importance of the country newspaper.

This was partly due to the fact that most of the men in the meeting had been born and raised in the city. The privilege of spending part of their lives on a farm or in a rural community had unfortunately been denied them—a thing which we believe is a very serious loss to any man.

The country editor and his paper need no defense from us, but we cannot help saying that the community which does not support its local paper is missing a wonderful opportunity. The local paper cannot carry all the news of the world; it cannot fill the need for a farm paper that exists in every farm home; it cannot furnish the comic supplements or illustrations of the Sunday papers and magazines—and it does not pretend to do these things. But it has a field all its own and it supplies a need which no other publication can meet. The country paper which fills its mission is a power for good and a beloved institution in every home into which it goes.

Every farmer should support and read his county paper. In no other medium can he learn the facts regarding the happenings in his community, with its record of marriages, births and deaths. No other paper brings him news of the sick in his neighborhood or informs him of the date and hour of his social, business, religious and political gatherings. Nowhere else can he learn of the bargains which the local stores have to offer or of the thousand and one little things of the most intimate concern to himself and his family. In no other way can he keep posted on local matters of vital interest to him as a public spirited citizen and taxpayer. There is no substitute for the country newspaper—no other means of publicity and information can ever take its place.

Of course there are good country newspapers and better country newspapers, but it is almost always true that the best ones are those that receive the most loyal support and interest of the community in which they circulate. Where there is a spirit of co-operation among his readers there is very likely to be an editor who will respond to the demand for a good, live, clean, home paper. The country newspaper man who has the necessary energy and ambition may make a success without much help from his readers, but he can do it much easier and much better and have more time and enthusiasm to devote to the community interests if he has the help of all the members of his community.

The farmer who gets a good country weekly for $1.50 a year should consider himself fortunate and should always keep his subscription paid in advance. Country newspapers should be sold for cash and there ought to be no difficulty in getting cash for them, because they are worth much more than they cost if they are well edited, as most of them are. There are dozens of country newspapers throughout Wisconsin that are to be counted among the greatest powers for good in the communities which they serve. Such local Wisconsin papers as the Fennimore Times, Dodgeville Chronicle, Elkhorn Independent, Hartford Times, Waukesha Freeman, Sauk County News and others we might name, are worth many times their cost to the farmers of their communities. We mention these papers in particular because of the enterprising way in which they handle the news and the interesting matter with which they are filled. If your local newspaper is like these just mentioned, give it the support it deserves; if it isn't, help it to become better by giving it the support which it needs.

Report of Wisconsin Crop and Live Stock Conditions.

THE WISCONSIN FARMER presents this week a new department under the heading, "Crop and Live Stock Conditions." Our aim will be to give concise, accurate reports weekly covering all the counties of the state. This will be extended eventually to cover some of the border counties in adjoining states. The reports which will be presented will be independent of state or government reports. Exclusive reports are received weekly from each section of the state. In response to requests from this paper a number of the very best farmers of Wisconsin have agreed to assist us in this matter, and we take this early opportunity of expressing our appreciation of their efforts.

Wisconsin farmers produce nearly $350,000,000 worth of farm products in a year, and this is by far the most important single industry in the state. The condition of the business pulse of the state is most faithfully represented by an accurate estimate of the crop and live stock conditions. The Wisconsin Farmer believes that no accurate estimate of these conditions can be secured without individual reports from farmers who will cover only a limited area. In brief we expect that each one of our reporters will have intimate knowledge of the entire section concerning which he makes a report. By collaborating these reports we expect to get a fair estimate each week of the crop and live stock conditions in this territory.

The varied branches of the farming industry in Wisconsin will be taken into consideration by our reporters. In counties where tobacco is a leading product special mention will be made of the condition of that crop. Where potato growing is the chief industry our reporters will take that into consideration. The same may be said of the cabbage sections and the cranberry growing sections. The condition of corn and small grain over the entire state will be reported regularly.

Special effort will be made to report accurately the condition of pasture and forage crops. The reports on live stock will come from men who understand the live stock business and who have a special acquaintance with the dairy industry. While the state and federal governments have given very accurate reports on grain and other crops, no comprehensive reports on live stock conditions in Wisconsin have ever been available from week to week. The Wisconsin Farmer hopes to make the reports such as will be of great interest to every reader. In this connection, if any of our readers have suggestions to make from time to time which will aid us in bettering these reports, we should be very much pleased to receive them.

Consolidated Schools in Wisconsin.

THE WISCONSIN FARMER receives a good many inquiries relating to the subject of consolidated schools. Those of our readers who have particular interest in this subject will do well to secure the Educational News Bulletin for May 1, 1916. This is the consolidation school number, and some very interesting facts concerning the subject of consolidated schools in Wisconsin may be found in this bulletin. Copies of the bulletin may be secured by addressing the state superintendent, C. P. Cary, care Wisconsin State Department of Education, Madison, Wisconsin.

Most of our readers are interested in knowing just how country school districts may be united. Mr. W. E. Larson, of the Wisconsin State Department of Education, answers this question in the bulletin above referred to. One method is for at least 5 per cent of the electors in each of two or more contiguous districts to petition the school boards to bring the question of consolidation before the people of the district for a vote. The election date must be the same in all of the districts, and a majority of the votes in each district is necessary to carry the proposition. In the event the proposition does carry in all of the districts then, under the law, the districts have consolidated themselves.

The second method of consolidating rural school districts is by union of the town or village boards in whose jurisdiction the interested districts are located. These boards may initiate the subject of consolidation on their own motion for two or more districts. They proceed in the same manner that they would to make alterations in school district boundaries. A hearing, however, must be granted after due notice so that all persons favoring or opposed to consolidating may have an opportunity to be heard. The decision of the board after the hearing is final. However, any person who may consider himself aggrieved by the action of the board may appeal to the county committee of common schools. In the event that the decision is still unsatisfactory further appeal may be taken from the action of this committee to the state superintendent of instructions. A special statute provides that the matter of consolidation may be brought before town boards upon a petition of one-third of the voters in each school district which it is proposed to unite, and upon presentation of this petition to the president of the town or village boards, said officer is required by law to call a meeting within twenty days and act upon the petition. In the event the president of the town boa refuses to call a meeting action may be taken ov his head to the state superintendent of publ instruction.

Districts which establish and maintain conso idated schools receive state aid as follows:

If two or more districts consolidate and establis a one-room school, the state will pay one-half th cost of the building and equipment not to exce $1,000.

If two districts consolidate and establish a tw room graded school, the state will assist in the erec tion and equipment of the school building not to ex ceed a total of $1,500.

Under the same rules, $2,000 is the maximum for three-room graded school; $3,000 in the event of th consolidation of three districts and the erection of school with four departments; $5,000 in the event o the consolidation of all the districts in any town an the establishment of a high school in addition t grades. In each case the state aid sum must no exceed one-half of the total sum expended.

State aid for the matter of transportation in cludes reimbursement of the district at the rat of 10 cents per mile per day for each child trans ported not more than two miles; not more than cents per day for each child transported more tha one mile but not more than two miles. The law makes it compulsory for the district to transpor all children living more than two miles from th school. Children living two miles or less may b transported. In case of consolidation of district by the town board, state aid is available for th transportation of children beyond the two-mil limit only.

In the matter of maintenance state aid is avail able for consolidated schools as follows:

To schools having two departments, $200 a year schools having three or more departments, $300 year. To state graded schools or other schools giving work in agricultural and industrial subjects des ignated by the State Superintendent, an additiona $100 per year is granted. In case a high school is maintained in a consolidated rural school district the state will pay one-half of the cost of instructio not to exceed $900 for a principal and one assistant $1,200 for a principal and two assistants; and $1,50 for a principal and three or more assistants.

Our Wisconsin farmers are divided on the question of consolidation, but many believe it is the final solution of the rural school problem. To such as are favorable to consolidation these pointers will be of interest.

Wisconsin Land Clearing Tour.

WITH county representatives, bankers, business men, farmers and school men busy in the interests of the land-clearing demonstrations, the success of the "Stumping Special" which will tour twelve counties in Upper Wisconsin next month is assured.

Local committees in every one of the places on the route of the land-clearing train are making extensive preparations to entertain large crowds of farmers and settlers during the demonstrations. Plots of land about ten acres in area have been secured at each point, located as near the railroad as possible for the convenience of the demonstrators.

The six co-operative companies that are allied with the college of agriculture in furthering the work will ship their land-clearing apparatus and materials to Madison, where the train, consisting of one flat car, two box cars, one boarding car and bunk car, will be equipped and furnished for the trip.

The complete schedule for the portion of the tour over the lines of the Chicago & Northwestern railroad has been arranged. The exact itinerary and time table for the latter half of the excursion, which will be on the Chicago, St. Paul, Minneapolis & Omaha lines, has not been finally decided, although it will probably include a number of stops of two days each in Bayfield, Douglas, Barron, Washburn, Sawyer and Chippewa counties.

Mountain, Oconto county, May 8th and 9th.
Deerbrook, Langlade county, May 11th and 12th.
Elcho, Langlade county, May 13th and 15th.
Crandon, Forest county, May 16th, 17th and 18th.
Three Lakes, Oneida county, May 19th, 20th and 22d.
Eagle River, Vilas county, May 22d, 23d and 24th.
Woodruff, Vilas county, May 25th and 26th.

From Woodruff the train will proceed to Ashland, where it will be turned over to the officials of the Chicago, St. Paul, Minneapolis and Omaha railroad for further transportation to other points in the cut-over country.

Interest which has developed during the past two weeks indicates that it will be one of the most interesting affairs in the history of the sate. This demonstration will be under the supervision of the engineering department of the college of agriculture, with the co-operation of the manufacturers of stump pulling machinery and explosives. The original plan was to hold on an average two demonstrations a week for about seven weeks, but the demand that is now being made upon those in charge indicates that it will be continued for a longer period.

This is the first demonstration of its kind ever held in Wisconsin, and so far as we know in the United States. When it is realized that stumps are keeping over 7,500,000 acres of splendid land from cultivation in Wisconsin it is readily seen how important such a demonstration might become and the importance has only dawned upon many communities in the last few days after the plans had been largely completed. Communities which were tendered an invitation for a demonstration last winter when it was not believed the tour would be of much interest and using all kinds of means

o secure a demonstration. This change in sentiment follows a keen interest throughout the upper alf of the state and the result is that many communities will have to be disappointed. Mr. Carl ivingstone, who is in charge, says that sufficient owns have asked for demonstrations to keep the lemonstrators going without a breathing spell until rost. At the beginning it was doubtful if enough communities would co-operate to make it successful.

The farmer and the landowner with stumps to remove cannot afford to miss these demonstrations. They will be held near the stations in the towns set forth above and the strict rules set down for the manufacturers of stump pullers and explosives to follow make it sure that the work will be done under actual working conditions. This will not only afford the owner of stump land an opportunity to learn how to remove these barriers to cultivation, but it also gives him the chance to look over the equipment on the market and determine for himself which puller he can afford and which he would prefer to buy. The rules require that at least the equivalent of two three-hour periods will be set aside during which the exhibitors will be expected to operate under practical working conditions. The men doing the actual work are not to be interfered with by either their own agents or the spectators. The spectators, of course, are at liberty to watch the machines in progress. At the end of this time the land must be cleared as far as the work has progressed. Each outfit must clear as it goes and allow neither roots nor small stumps to remain in the ground that would interfere with the plow, excepting snags that would have to be cut off before being pulled. All dirt must be removed that would interfere with the complete burning of the stump when piled. It would be advisable to pile as much of the material as is possible. To do so would make a better showing. At times other than these three-hour periods, the agents of the manufacturers may demonstrate the merits of their products, talk with the farmers and otherwise operate their machines on tracts set aside for the purpose. It is expected, however, that the demonstrators will keep at work most of the working day.

For Better Horses in Wisconsin.

DR. A. S. ALEXANDER, of the Wisconsin College of Agriculture, has written an interesting story on the subject, "Draft Horses Produce Bank Drafts" for the May Wisconsin Bankers' Farm Bulletin. He leads his article with this very significant statement:

Wisconsin possesses the necessary condition for the breeding and raising of fine horses. The 1,271 grade and scrub sires now in use prevent proper progress.

After presenting this general indictment Dr. Alexander proceeds to particularize as follows:

Grade and scrub sires beget scrub horses which cost as much to raise as those from pure-bred sires and sell for far less money. The good brood mare is prolific. Her foals prove profitable and replace her when she dies. Well developed, sound, high-grade horses are needed on every farm and are in demand at remunerative prices for work in the woods and in the cities. The supply of such horses has never equaled the demand and the demand promises to be more active than ever at the end of the war. Misfit, mongrel and nondescript horses, largely the get of grade and scrub stallions, from unsuitable or unsound mares, are, always have been, and will remain a drug on the market. Farm land is rapidly increasing in value. Feed is high in price and farm help scarce and expensive. It does not pay to produce anything but the best products possible on our farms. Why waste time, feed and money in producing scrub horses from grade and scrub sires. Stop such foolish and ruinous practices this spring. Choose only sound, good-tempered, well-developed mares, for breeding, and mate them only with sound individually excellent pure-bred stallions that are kept efficient and prepotent by adequate work or exercise instead of pampering.

Practically every reader of The Wisconsin Farmer realizes without being told that every statement which Dr. Alexander makes is true. How many are going to heed this new gospel of better farm animals. Dr. Alexander is making a determined effort to lead in the right path. The bankers are dispensing information at their own expense and without promise of direct reward. Will the farmers who get the bulletin and who know that what it says is absolutely true, so arrange their practices as to follow the advice given by Dr. Alexander?

Surveying a Farm Before Purchase.

MR. J. S. McDOWELL, in the United States Department of Agriculture Yearbook for 1915, has given us some interesting pointers on purchasing a farm. In brief, the buyer must be careful that he is not charged an acre price on a quarter section for instance, on the basis of the best portions of the quarter. He cites an instance where a farmer was about to buy 160 acres at $100 per acre. This appeared to be a very reasonable price for a farm in the region where the farm was situated, and it was a very reasonable price for the productive part of the farm. A careful analysis, however, brought out some very interesting facts. Eighty acres of the quarter was a rich, sandy loam, not stony, nor rough, but gently sloping, well drained, etc. There was no doubt about this land being worth $100 an acre. In fact, in figuring the value of the properly the prospective buyer put this portion of the farm in at $125 an acre. He found that thirty-five acres of the piece was poor pasture land, wet land that might be drained but probably not at a profit, and he figured that this land would actually produce to the extent that it could be valued at $10 an acre. The remaining forty-five acres he found was very poor land, sandy, stony, rough, hilly, and had little or no producing value. This land he figured in at no value at all. Adding $2,450 for the improvements, this buyer arrived at a total estimated value of the farm as $12,800. This would be at the rate of $80 per acre for the entire farm. While good land generally in the neighborhood was easily worth $100, a more careful survey proved that this particular piece of land had eighty acres away below the average in producing value.

Studying a farm before purchase may be carried even further in itemizing the value of improvements to be sure that there is enough improvement value to bring up the cost per acre to the price asked. But the main point of interest is the producing value of the land, either in crops or pasturage. In Wisconsin in a great many places the value of the timber must also be taken into consideration.

Keeping the Swine Record up to Date.

IT IS a simple matter for those who have never had experience in handling pure-bred hogs to get records of breeding so thoroughly mixed up that they cannot be straightened out later on. Where many sows are kept the breeder seldom trusts his memory, so that the chief danger is found in the case of those who have but three or four brood sows.

There is only one safe rule to follow and that is to ear mark little pigs before they are twenty-four hours old, and make a record of the markings in a book kept for that purpose. A recent issue of this paper contained ear illustrations showing how to avoid complications that are sure to show up in the absence of some such plan. It will be remembered that litter No. 1 is marked with one notch on the lower side of the right ear, litter No. 2 is marked with two notches in the same location. Litter No. 3 is marked with one notch on the left ear. Litter No. 4 is marked with one notch on the left ear and one on the right, while the mark for No. 5 is one on the left and two on the right. This system may be continued indefinitely, simply bearing in mind that a notch on the lower part of the left ear represents "three," and a notch on the lower part of the right ear represents "one." The tenth litter is marked with one notch on the upper part of the right ear, and all litters between ten and twenty are similarly marked and, in addition, the same markings are used on the lower portions of the ear as were used between one and nine.

A page should be given up in the record book to each sow. When she farrows, the total number of pigs in the litter should be recorded, also the number saved and the sex, and it goes without saying that the ear mark of the pigs in this litter should be recorded also on this page. We have known instances where pigs were marked in the same way as their dam, but this is a mistake, and some plan should be followed by which even a stranger could go into the herd and determine from the records and the ear marks the breeding of every pig.

We urge upon the attention of our readers the importance of keeping a private herd ledger right up to date. If a pure-bred sow is not registered before she farrows she should be recorded at onee, because this places the breeder in position to furnish pedigrees promptly when he makes sales from his young stock later on. Almost endless delays are sometimes due to the fact that the foundation stock is not kept recorded, so that when sales are made the buyer's patience becomes exhausted in some cases before he receives his pedigrees. By following the plan that we have suggested of having the breeding stock all recorded, it is then possible to send pedigrees the very day that a pig is sold. This appeals to the buyer as a business-like proposition and therefore cultivates in him a favorable regard for your method of conducting your affairs.

Use of Ensilage Lowers Cost of Gain.

A VERY interesting experiment has recently been concluded at the Iowa station. It involved the feeding of two-year-old steers for a period of 120 days. These steers (Herefords) were purchased in the Omaha market on November 29th of last year at $6.90 per hundred pounds. They weighed approximately 1,000 pounds when put on feed December 5th, and at that time they were divided into five lots.

A different ration was fed each lot—different in amount, though the feedstuffs used were similar in every lot. Lot No. 1 was carried for the four-month period on a full corn ration, this being fed in conjunction with ensilage and oil meal. The steers ate an average of 17.1 pounds of corn daily, two pounds of oil meal and 30.6 pounds of ensilage. On this ration these steers made an average daily gain of 2.98 pounds per head. When marketed they sold for $9.35 per hundred pounds. The steers in this lot had access to shelled corn continuously. In other words, they were fed on the self-feeder plan. The profit on these steers was $24.83 per head.

The steers in Lot 2 were kept on full feed but were fed twice daily. They consumed an average of 17.2 pounds of corn and 28.7 pounds of ensilage daily. In addition they received two pounds of oil meal each daily. They made an average daily gain of 2.93 pounds, and they sold for $9.55 per hundred pounds. The profit on the steers in Lot 2 was $27.02 per head.

In the case of Lot 3 what is known as a 75 per cent grain ration was fed, which means 12.9 pounds of corn daily, 39.9 pounds of ensilage and two pounds of oil meal. On this ration the steers gained an average of 2.80 pounds daily, and when finished they sold for $9.40, or 15 cents per hundredweight lower than the steers full fed twice daily. The profit on the steers in this lot was $26.24 per head.

Coming now to Lot 4, we find that these steers were fed a 50 per cent ration of corn, or an average of 8.6 pounds of corn daily, 51.4 pounds of ensilage and two pounds of oil meal. These steers gained an average of 3.21 pounds daily. They sold for $9.30 per hundred pounds when marketed and the profit on these cattle was $30.89 per steer.

The steers in Lot 5 were fed a 25 per cent ration of shelled corn. They consumed 4.3 pounds or corn, 53.8 pounds of ensilage and two pounds of oil meal daily. They made an average daily gain of 2.56 pounds and they sold for $9.45, or within 10 cents per hundred pounds of the steers fed a full corn ration twice daily. The profit on this lot was $31.97 per head.

Ensilage makes an exceedingly good showing in this experiment. Not only were good daily gains made in every instance, but the cattle were well finished. Old-time feeders will be somewhat amazed to learn that cattle fed only 4.3 pounds of corn daily brought $9.45 per hundred pounds while, on the other hand, steers that consumed 17.1 pounds daily during the entire feeding period only sold for $9.35 per hundred pounds. Substituting roughage in the form of ensilage for grain resulted in this case in cheapening the ration and, in addition, in bringing the cattle to a higher finish during the 120-day period.

Finishing Hogs on Alfalfa Pasture and Corn.

SOME interesting experiments have been conducted at the Nebraska station for the purpose of determining the value of alfalfa pasture as a supplement to corn in fattening hogs. In one instance fourteen shoats weighing 148 pounds were turned onto alfalfa pasture April 25th. They were fed 2.91 pounds of corn daily per head for each hundred pounds of live weight. In fifty-six days they gained an average of seventy-seven pounds each, which is a daily increase in weight of 1.37 pounds per head. These hogs were taken from the pasture June 20th, at which time they weighed 225 pounds. It required 392 pounds of corn to make 100 pounds increase in weight.

A similar lot of hogs were pastured on alfalfa but received only 1.9 pounds of grain daily for each hundred pounds of live weight, whereas the first lot received 2.9 pounds. These pigs weighed an average of 147 pounds on April 25th, at which time they were turned into the alfalfa. They did not reach the 225-pound mark until July 11th, whereas the lot receiving a heavier corn ration tipped the beam at 225 pounds on June 20th. The shoats fed the lighter grain ration gained practically one pound each daily. It required in this case 346 pounds of corn to make 100 pounds of gain. They returned 95 cents for each bushel of corn eaten while the hogs fed the heavier ration returned 84 cents per bushel for the corn eaten.

A third lot of hogs similar to the other two was pastured on alfalfa for eleven weeks, beginning April 25th. They were fed no grain whatever but from the pasture alone made an average daily gain of .52 pounds during the eleven weeks. These hogs, beginning July 11th, were fed a corn ration of 3.1 pounds daily for each hundred pounds of live weight, the theory being that cheap gains could be made by getting a quick finish on hogs that received pasture only for the first eleven weeks. These hogs gained 1.32 pounds per head daily during the five-week period when they were fed grain. It required 407.2 pounds of corn for each hundred pounds of gain. During the short fattening period they required more grain for a given gain than the hogs in the other lots.

Reviewing the three experiments, we find that when hogs were allowed the run of alfalfa pasture and fed 2.91 pounds of corn daily for each hundred pounds of live weight it required a period of eight weeks to increase their weight from 148 to 225 pounds. The second lot that received 1.9 pounds of corn daily for each hundred pounds of live weight required eleven weeks to bring them to the 225-pound mark. On the other hand, it required sixteen weeks to attain this weight when hogs were run on alfalfa pasture alone without grain eleven weeks and fed heavily on corn and pasture during the balance of the period.

As to which method of feeding should be adopted, something depends upon the price of grain as well as upon the abundance of the pasture. Where alfalfa is abundant, cheaper gains can be made by carrying hogs on alfalfa for a time without grain and afterward finishing them quickly, but it requires a longer time to get them ready for market and naturally more extensive use is made of alfalfa and a smaller amount of grain consumed. On the other hand, where there are other hogs coming on so that one shipment goes out and others take their place in the pasture the heavier grain feeding method may be used to advantage.

MORE MODERN FARM HOMES.

Interest by Wisconsin Farmers in Sewage Disposal Indicates Increasing Demand for Modern Equipment, Such as Bathrooms, etc.—Septic and Other Systems Make This Possible on the Farm.

WISCONSIN farmers are becoming more and more interested in the subject of sewage disposal. This important factor in the modern and sanitary home is considered by most farmers who think of building new dwellings. Farmers' institutes and other state meetings have discussed the subject. Letters to The Wisconsin Farmer, to institute workers and to members of the Wisconsin Agricultural College staff, indicate in no uncertain way that sewage disposal on farms is being given careful attention and study.

Pure water and the proper disposal of all sorts of impurities are very important factors making for health and happiness on the farm. Surface drainage has failed to carry away the matter which contaminates water and results in sickness. Drainage from the barnyard and sewage from the house must be disposed of in a manner to make sure that none of it can seep through the porous ground and come in contact with the drinking water. In these days the farmers are equipping their homes with bathtubs, lavatories, sinks, and waste carriers, and some kind of sewage disposal system is necessary, as the farmer does not have the advantages of a community system such as we find in the cities and towns.

The modern and popular way of disposing of sewage is by the septic tank. One of these systems can be built in connection with the average farm home at a very small outlay. If the farmer is able to furnish some of the materials, such as planking, sand, gravel and stone, and supply some of the labor, he may keep the expense down to a minimum. An efficient sewage disposal system consisting of a treatment tank, syphon chamber, and drainage tile for an ordinary farm home with about eight people, can, under favorable conditions, be installed for about $75, according to an estimate of the Wisconsin State Board of Health. It can even be done for $50 under very favorable conditions. The cost of such a residential tank will depend largely upon the character of the soil. If this is sandy or gravelly and well fitted for absorbing sewage wastes, there need be no expense for those materials, but if the farm lacks such soil and it is necessary to haul gravel and sand from a distance, this will add to the total expense.

A septic tank [illegible] localities can be installed to work satisfactorily for an indefinite period and it will render waste harmless. Its use is strongly recommended. Hundreds of farmers in Wisconsin have installed these tanks and provided their homes with modern plumbing and drainage. This tank is outlined in detail in the state plumbing code which can be secured free of cost by writing the Wisconsin State Board of Health at Madison. The state board also assists farmers in planning their sewage disposal plants and construction of wells and the increasing demand for this service by farmers is another indication of the growing demands for modern bathrooms, laundries, etc.

Safe sewage disposal consists in keeping the sewage away from flies and animals and so that it cannot reach the water supply. Cesspools and wells existing side by side are dangerous in any place where people live. Cesspools often overflow; disease-breeding sewage from such pits may easily penetrate the wells from which the family derives its water, and the result is likely to be typhoid fever or other disease. The danger of contamination from an outhouse or leaching cesspool depends almost entirely upon the character of soil and the length of time the utility has been in use.

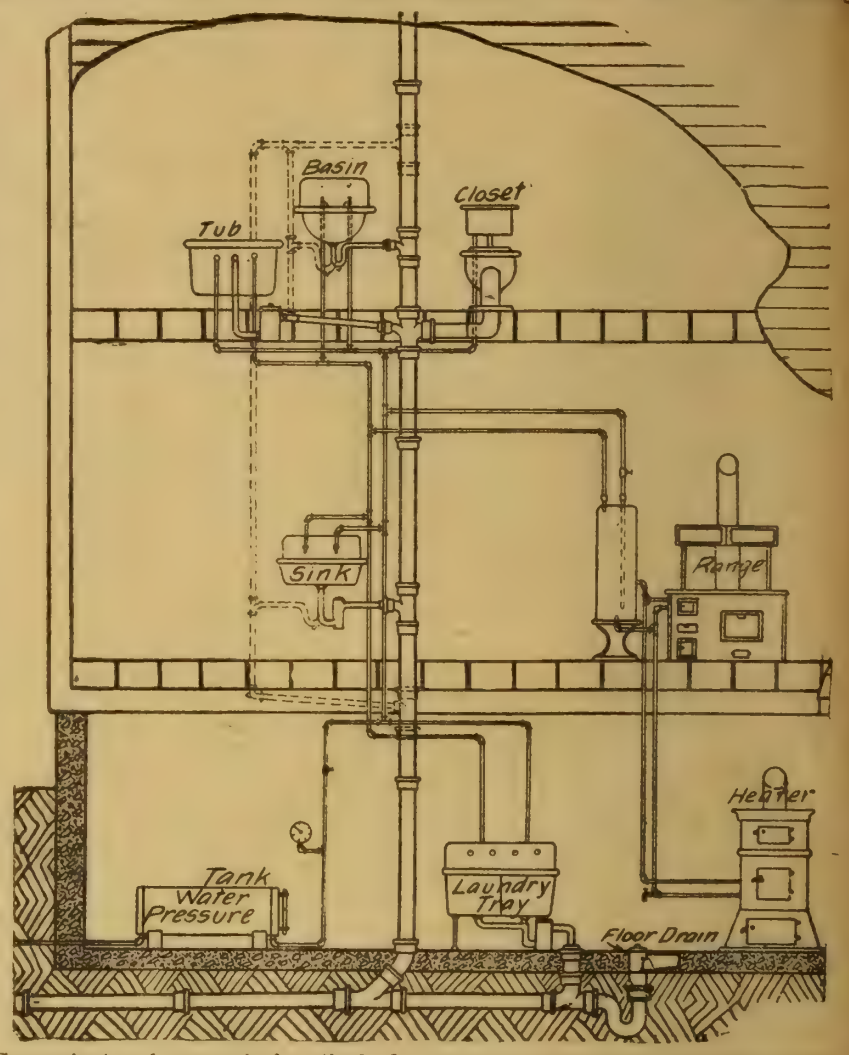
According to the state plumbing code, septic tanks must have one compartment constructed of materials impervious to moisture. The second compartment may consist of a leaching basin, dry well, drain tile, filter beds, or an efficient combination of any of these. The size of the tank should be based on the number of persons using it. It should have a minimum capacity of thirty-two cubic feet, two feet wide, four feet long, by four feet deep, below the level of the outlet pipe, and should allow for a flow of sewage of thirty gallons (four cubic feet) per day, per person, flowing into the tank. Where unusually large volumes of laundry or other clear water are to be emptied into the tank the capacity should be increased in the ratio of one cubic foot of space to every twenty gallons of such surplus water. Surface and rain water leaders and cistern and other overflow pipes should not discharge into a septic or other treatment tank for sewage disposal.

All tanks should be constructed with the longest dimensions parallel to the direction of the flow, which should be at least twice the width, and of a depth of not less than four feet below the outlet. Both the inlet and the outlet should be submerged below the level of the water in the tank. The tank should have at least one manhole and cover. The main sewer where it enters the tank should be provided with standard cast-iron vent, and a similar vent should be provided on the top of the tank or a free circulation of air otherwise provided.

The liquid flowing from a septic tank should be discharged into a leaching basin, drainage tile, filter beds, or a watercourse which is not used as a water supply for domestic purposes, if it does not cause objectionable pollution. Where the effluent is discharged into drain tile or upon filters it is recommended that it first pass into a syphon chamber having an adequate syphon which will discharge the contents of the chamber periodically into the tile or upon the filters. A four-inch syphon is recommended for tanks of ordinary capacity, but a larger one should be provided if necessary. A syphon should be given regular attention. A syphon is not necessary or advisable except when the dry well is to serve as a sprinkling filter or when drain tile is used. All tight cesspool compartments and septic tanks must be cleaned out whenever the sludge contents occupy one-third of the cubic contents of the tank. The leaching compartment must be cleaned out whenever the level of the liquid does not recede below a level of five feet from the bottom and is gradually rising. The sludge from these tanks should be hauled away and buried, or burned in an incinerator when such is available.

The dry well consists of a chamber or well walled up with dry rubble, dry brick work or other material which allows water to percolate through it. The bottom should be left open to the soil. The capacity of this compartment should be such as to provide one square foot of percolating surface (including bottom) to every five to ten gallons of water per day entering the tank. It should be at least ten feet deep by four feet in diameter. The lower limit is to be taken for clayey or compact soil and the upper limit for sand and gravel. This compartment should have a manhole and cover. The sewage from the dwelling should flow first through the water-tight compartment and thence by trapped outlet to the leaching compartment, drainage tile or filter beds.

The use of a dry well or leaching drain (Fig. 1) for disposing of the effluent is not recommended except when there is no possible danger of polluting any private or public water supply or where the use of drain tile or filter beds is impracticable. As



Convenient and economical method of plumbing arrangement in a farm home. All fixtures located near soil pipe that empties into disposal system.

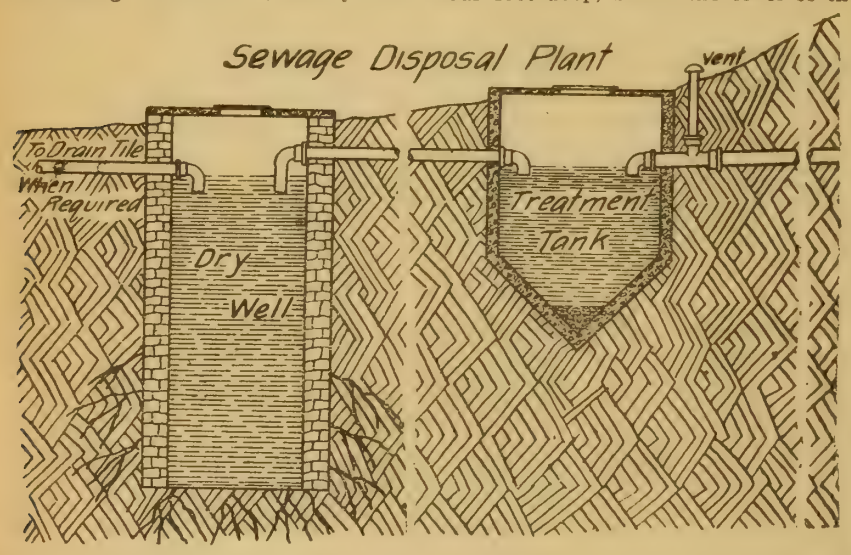


Fig. 1—Sewage by this method may be disposed of by letting it leach from the dry well by connection with drainage tile; filter beds or watercourse.

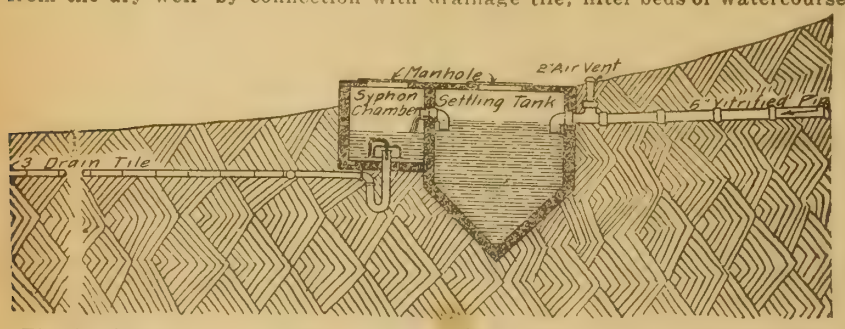


Fig. 2—This method of disposal is favored instead of system shown in Fig. 1 where surface soil for three to six feet is sandy or gravelly.

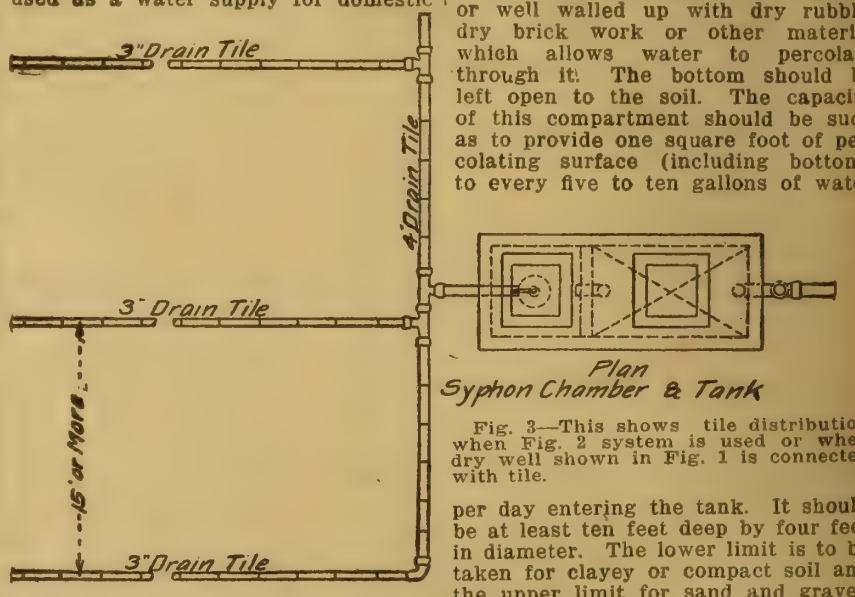


Fig. 3—This shows tile distribution when Fig. 2 system is used or when dry well shown in Fig. 1 is connected with tile.

usually constructed a leaching basin or dry well does not furnish as good facilities for purifying the effluent as filter beds or drain tile laid near the surface of the soil.

A leaching basin or dry well should not be located where there is any danger of contaminating a water supply, well, spring, lake or stream or of causing a nuisance. No water-tight compartment should be located within two feet of any lot line or ten feet from any cistern or twenty feet from any well, spring or other source of water supply used for domestic purposes. They may be permitted within fifty feet of a drilled well where the casing extends 100 feet below the surface of the ground and is driven firmly into rock. No abandoned water supply may be used as a leaching compartment of the disposal system.

The danger of contamination depends almost entirely upon the character of the soil into which the sewage is discharged and upon the length of time the dry well or leaching compartment has been in use since cleaning. A clayey soil full of seams, a porous rock or one full of crevices, or a very coarse gravel will allow the effluent from the leaching basin or dry well to flow directly to the well with little or no purification. A sandy or gravelly soil is the best and safest in which to locate leaching basins, dry wells or drain tile. Where the effluent discharges into a leaching basin located in clayey soil full of seams, a porous rock or one full of crevices, or where there is danger of contaminating the water supply, further protection can be provided by filling the leaching basin with broken brick or rock of similar material, and extending from the bottom of the basin inlet two four-inch vitrified clay pipes with inverted y's at intervals of two feet, and by providing an adequately anchored cone-shaped deflector under the inlet and two feet above the stone contents of the basin, and so designed and installed that it will deposit the discharged effluent in such a manner that it is equally distributed upon the stone or filtering material. The basin must be provided with a six-inch fresh air inlet. A leaching basin thus designed will materially improve the character of the effluent and will afford additional protection.

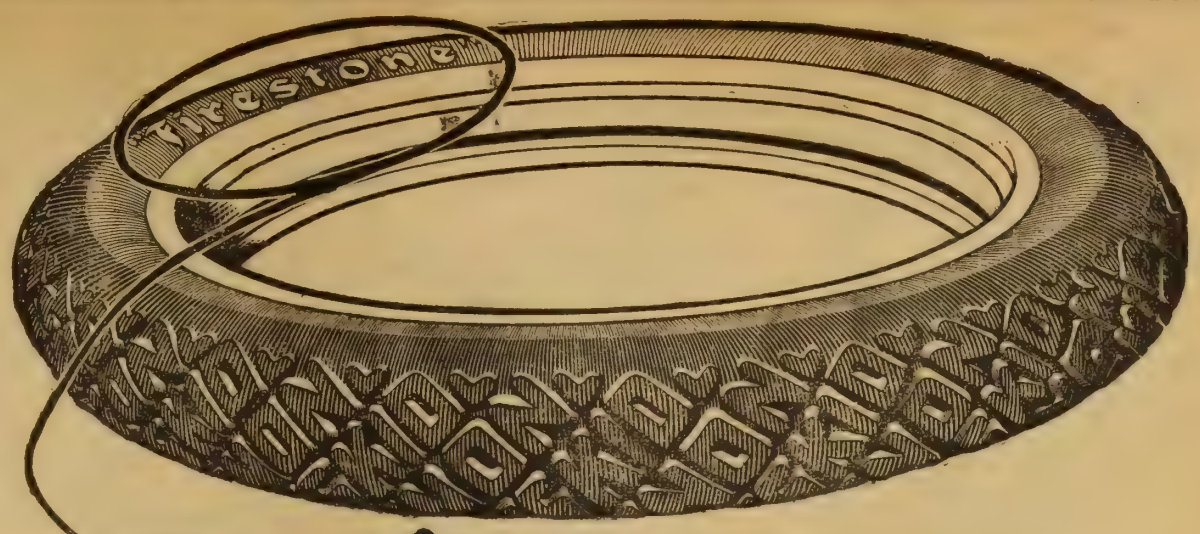
Drainage tile (Fig. 3) should be used in place of a dry well where the surface soil for three to six feet deep is sandy or gravelly. It should be laid twelve inches to three feet below the ground and in a very slight grade away from the tank (about two inches in 100 feet). The tile should be laid in straight or curved parallel lines fifteen feet or more apart. The joints should be left one-fourth inch apart and blinded with burlap or broken tile. The amount of tile laid should be based on twenty to 100 feet per person using the tank, according to the character of the soil. The effluent from the tank should be discharged into the tile by an adequate automatic syphon, located in a chamber adjacent to the tank. The capacity of the syphon chamber below the water line should be equal to the cubic contents of the tile required for the particular installation and must have a water head sufficient to insure proper syphonic action. Each foot of thirty-inch drain tile has a capacity of .367 gallons; four-inch tile, .652 gallons; five-inch tile, 1.02 gallons; six-inch tile, 1.46 gallons. The amount of tile required is governed by the lay of the land and character of the soil. It should be laid about one foot below the surface of the ground, and where it is necessary to lay it deeper than two feet an adequate system of ventilation should be provided.

A water-tight treatment tank, syphon chamber and leaching basin (Fig. 2) should be provided with adequate cement or stone cover or a twenty-inch cast iron ring and cover, and be vented with a four-inch vent pipe extending not less than ten inches above the ground and not less than twenty feet from any window, door or other opening in dwellings.

The sewer from the building must be vented with a two-inch cast iron vent located within two feet of the tight compartment or an adequate free circulation of air otherwise provided. A method recommended for venting is fully illustrated in illustrations 1 and 2.

The outlet from the water-tight compartment should be through a deep invert, the same size as the house sewer, provided with an adequate vent; and the piping between the tight and leaching basin may be either of earthenware or cast iron. The water-tight compartment need not be located adjacent to the leaching compartment; they may be any distance apart, if connected with piping as specified in the code.

The plumbing division of the state board of health will freely assist, without charge, any Wisconsin citizen in making a full investigation of all factors to be considered in determining what system of sewage disposal should be adopted.



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Why Not Breed Registered Cattle?

To the Editor:—When it is considered that the use of pure-bred sires has raised the standard of merit wherever it has been introduced it seems rather inconsistent that registered stock are not more generally bred and in larger numbers. If all of the registered animals of the Shorthorn breed, this being the strongest bovine breed in point of numbers in America, and admittedly the best adapted to farm conditions in all parts of the country, were placed within a state of average size, there would not be nearly enough animals to stock one-half of the farms within its borders.

That pure blood is potent and works improvement there is none to deny, and in view of this a more general production of registered animals will not only raise the standard of merit but will prove a profitable undertaking. I have often heard this reply from men when appealed to in public auctions of registered cattle, to make an investment. "Oh, I am not a full-blood man," meaning that they regarded it as a business distinct from the production of unregistered cattle. This prevailing impression is unfortunate. Because of it many men have refrained from taking advantage of the larger profits which the breeding of registered cattle offers.

If the average man will make selections of breeding stock, adhering to the type which he holds in favor, he will realize larger profits and an increased interest in the business over the breeding and handling of grade stock. The keeping of records involves but little time and is in no sense complicated. It requires merely making a notation of the birth date of the calves, crediting them to the proper parentage, giving them a name and sending them for record in accordance with the simple rules of the pedigree associations. If the owner does not wish to sell the male calves for breeding purposes they may be sent to the feed lot. Yet, in seven years out of ten they will pay larger profits if sold for breeding purposes. The prevailing practice among experienced breeders is to consign the least promising ones to the feed lot, a plan that works for the improvement of the breed.

There is no longer any doubt as to the superior merit, for practical purposes, of registered stock. Cattle are no longer grown to be subjected to trying conditions of endurance. They are grown to meet the market requirements and the better they are fed and cared for the earlier they are matured, the more certain the profits for the producer. It is under this treatment that the registered animal, the well-bred animal, responds better than the grade carrying a varying percentage of inferior blood. This isn't a theory. It is an established fact that has been so widely demonstrated that there is no longer any question as to its reliability.

If there is a reader of this paper who clings to grade cattle on the assumption that full-blooded cattle are not adapted to his purpose or that there is something professional in their production he will do well to modify his views to conform to the accepted experience of the present day. Comparatively few men will rely wholly upon the patronage of breeders of registered cattle to take their output for breeding purposes, but a large majority will find it profitable to grow registered or full-blood cattle for market purposes. The practice will insure increased profits to any intelligent man who follows it. It required good judgment, intelligent care and liberal feeding, and what successful stockman can proceed on any other basis. The subject merits thoughtful consideration.

F. D. Tomson.

The French government has granted authority for the shipment of 2,000 carloads of American corn for Switzerland which has been delayed many weeks in Marseilles. The forwarding already has begun.

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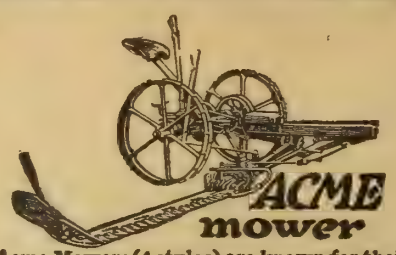

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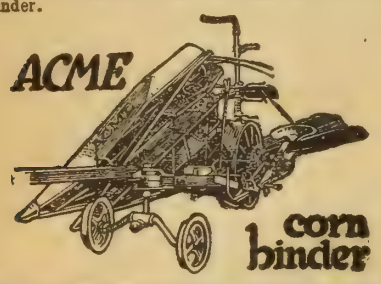

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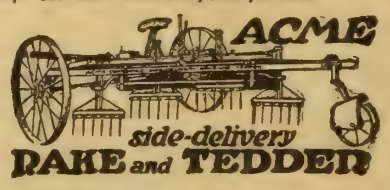

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The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Profited by Studying Farm Management.

To the Editor:—I entered the farm management contest in this county this year to see what the several departments on our farm were really bringing us. I wanted to know what we were making in each department in dollars and cents and to find where improvements could be made in our system. At the end of the year I found that the only reason we could be among the winners; in fact, the main reason why we were making money on the farm was our dairy herd. This proved to us what a dairy herd is capable of doing. There were practically no field crops sold except as they were marketed through the dairy cow. The cream supplies a fancy city trade and the skim milk is used to feed the calves and the remainder given to a few shoats kept for that purpose. Very little income was realized from the sale of surplus stock, as all the heifers, both grade and pure bred were raised, and only the grade bulls and two pure breds, together with a few unprofitable cows, were sold. The farm is composed of 200 acres, forty of which is in timber and not used except to pasture a few sheep. We worked this farm with the help of a married man, who lives in the tenant house, and one single man. During the busiest summer months, or for about two months, there was another single man. We plan to keep from fifty to sixty head of cattle, about half pure bred and half grade, together with forty-five sheep and what hogs are needed to feed up the surplus skim milk. The hogs also get the corn left after filling two silos. We kept twenty-eight Guernsey cows and milk on an average of twenty-three. These twenty-eight cows gave us an average of $110 per head. The farm management contest has taught us that we do not practice diversified farming to a large enough extent. We should have had a larger income from surplus stock and also from field crops. One mistake we made was not using more pedigreed seed. We harvested a large crop of small grain, which should have, after enough was set aside for farm use, been sold for seed instead being sent to the grain elevator for the market price. The same thing is true of our corn crop, but as it did not mature so very well last year the loss was not so great as it would have been in a good corn year.

I am very much pleased with the farm management work and I hope to profit even more next year. I have this last year's experience as a guide and certainly expect to profit by them.

W. A. Lawson.

Fond du Lac Co., Wisconsin.

W. A. LAWSON, FOND DU LAC CO.
One of the Farm Management Contest winners in his county this year.

Farm Management in Fond Du Lac County.

To the Editor:—Our aim at Burn Brae is to breed and develop the best possible Jersey cattle and Duroc hogs, not only for the financial returns, but for the satisfaction derived from owning good stock, and that we like to feel that we are having some small part in promoting the general welfare of our community and state. In the selection of our breeding animals we take into consideration blood lines, performance records and individual merit, and will retain no animal in the herd, no matter how well bred, or how good an individual, that fails to produce creditably; nor will we keep as a breeder a good producer that is decidedly lacking in general conformation. We expect our animals to respond to good feeding and care, and have not in many cases been disappointed.

We believe that the soil is the foundation of the live stock industry, and on our farm have been constantly striving to bring it up to the highest state of fertility and physical condition. We do not consider a soil rich in plant food but lacking in texture, friability and those things which go to make up what we call physical condition, a proper home for plants to grow and develop in. As well expect our cows to produce economically if fed plenty of grain and roughage but deprived of comfortable quarters and a necessary supply of water and fresh air.

Our farm is laid out in four fields of equal size, besides several calf and hog lots, and we practice a four-year rotation of corn, oats, clover and pasture. When we get alfalfa established we expect to change to a three-year rotation of corn, oats and pasture. All crops grown on the farm are fed at home, and in addition we purchased concentrates for over $1,000 the past year. All manure is carefully saved, and applied daily as far as possible, using a manure

RICHMOND LION 75604.
Owned by W. A. Lawson, Fond du Lac county. This bull is a worthy descendant of Glenwood Boy of Hudson, through Glenwood's Stranford. Has daughters who are making fine records.

spreader, which we think indispensable. We have had splendid crops of clover, but expect to use some lime and rock phosphate in the future.

Our corn is given the most thorough cultivation possible. Last season the corn was cultivated thirteen times with a two-horse cultivator. The oat ground is prepared, first by plowing twelve inches deep in the fall, using a jointer on the plow, which effectively turns under all trash and helps to mix the soil, then in the spring we work the ground until we have a good seed bed. We like to sow early, but not so early but what the ground works up nice and mellow. We sow our oats at the rate of 1¾ bushels per acre. However, if our land were poorer and not so well prepared we should use more seed. The grass seed is sown at the same time as the oats, using six quarts red clover, two quarts alfalfa and two quarts timothy per acre. The timothy is used mainly for the pasture it furnishes the second year. The hay is cut early and carefully cured, put up in cocks when well wilted, and left to cure three or four days, then opened up to air out. It comes out of the mow in the winter with the leaves on, is nice and green and feels soft. We realize that time could be saved by sun drying the hay, but it would be worth far less, and would be an economic waste.

In buying feed to supplement what is raised on the farm we are governed by the relative price, feeding value, palatability and wholesomeness, and do not see how any of these considerations could well be left out. We cannot understand why so many farmers are afraid to purchase feed in addition to what they grow. They must think there is a very small margin of profit in feeding their own when they are so unwilling to purchase feed grown by others at a 2 or 3 cent per bushel advance over what their own will bring at the elevator. If the profit is small it is nearly always due to unproductive stock. We think a nice profit is realized on all feed we buy, and besides have the manurial value of this feed to enrich our own land, which is a no small item.

Much help and valuable information is received from agricultural and live stock publications of which we take a number, we also make free use of our experiment station when in need of advice as to problems that may arise. Another source of help and inspiration are the various associations to which we belong, and we have never failed to receive much more profit from attendance on association meetings and conventions, as well as visiting successful farms and talking with successful men engaged in our own line of work than such trips have cost us.

Liberal use of advertising space in reliable journals is, we consider, an important factor in our operations, and one which we do not see how we could possibly dispense with. Exhibiting at fairs is also a profitable form of advertising as well as being highly instructive.

In conclusion will say that in our business dealings we endeavor to treat others as we would in like circumstances like to be treated, and sell nothing but what we consider good stock, making good anything that is not right or rectify any error we may make. We wish to say, however, that we have not yet been called upon in any such way.

Fond du Lac Co. C. A. Peterson.

[Winner in County Farm Management Contest.]

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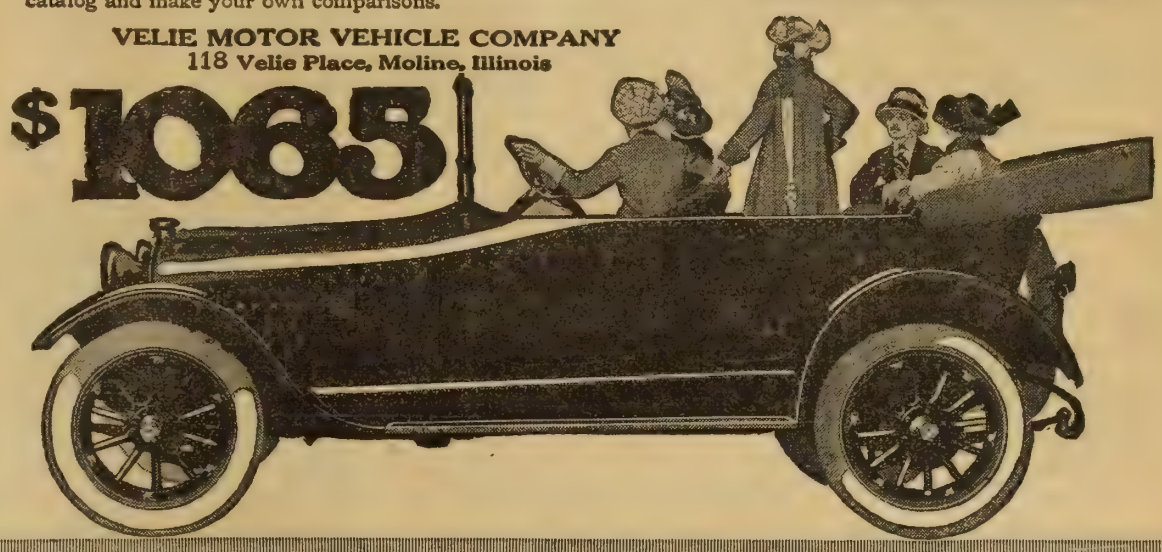

Answering Those Fencing Questions.

To the Editor:—Through the kindness of one of your subscribers I received a copy of your paper and note that Louis Denis, of Brown county, Wisconsin, wishes to know about fencing. Will say that I have had considerable experience at the business and will try to give him a few pointers that may help him.

In answer to his first question, it all depends on what he is fencing against. Cattle alone will not need as close a fence as will sheep and hogs, but most of the ready-woven fences of standard makes are spaced about right to turn all kinds of stock.

Most of the square mesh fences have the middle line wires and the stay wires of the same size, while the diamond mesh usually use a smaller wire for stays. As to what number they should be, the price he wishes to pay for his fence will determine that. The higher-priced fences of the standard makes are usually heavier than the cheaper fences. The best fence I ever put up was No. 8 top and bottom with No. 10 line and stays, while the most of the fence is made of No. 12 line and stay, which makes a very good fence.

As to which is best, diamond or square mesh fence, both are good if properly put up and either will follow hilly or uneven ground if stretched right.

From past experience I would say the twisted stay is better than the welded. I had some welded and it was so hard that when the snow sagged it and I tried to straighten it up the wires broke at the weld. I had trouble also with the hogs pushing their noses through the meshes and breaking the wires at the weld, but a good, tight twisted stay of No. 10-12 wire will straighten up good after being sagged and will not slip along the line wires. By all means, use the six-inch spaced stays. It will cost a trifle more, but will last a great deal longer and looks better.

As to gates between fields, that would depend on how his farm is plotted. If the gates open from a lane they should be at least sixteen feet in the clear or some careless hired man is going to hook on to the post with the spreader, but if the gates are where all travel is straight through then fourteen feet is long enough. As to the rest of the questions about gates, will say that is merely a matter of choice. I could name a dozen standard makes of gates—all good—but the malleable that is adjustable up and down, made by a well-known gate company, I believe is the best gate on the market. They are made in all heights and lengths, look neat and are as near indestructible as any that are made.

Instead of sawing those posts off after the fence is completed try using a gauge stick and set them all the same height and try to leave half as much space above the top wire as you have between the top and second wire.

About painting those posts around the orchard and barnyard, why not paint them the same color as the barn and trim them on top with the same color as the barn trimming? I have painted some that way and like the effect fine. All colors are alike and they can be repainted when the other paint is renewed with just a little extra paint of the same kind and color.

Now, just a few general hints about fencing: First, above all things, make your corner posts solid. I have tried many ways of bracing, but I find the best way is to use a good heavy post for the corner or end and anchor by mortising a piece of two-by-four two feet from the bottom, like a cross, and set the post so that the two-by-four is under the fence you are building. Then mortise the brace three inches above the ground on the corner post and half way to the top of the second post. Now run a No. 8 wire around the second post near the ground and twist it up tight. Carry it around the end post half way to the top, return to the bottom of the second and wind as before, then twist until it sings. When you splice a wire use the lineman's splice. It is a neater and stronger job than the common Dutchman's splice. It may be a little harder for a beginner, but you will soon forget the other way after you have made a few splices.

When building fence I use a carpenter's apron. I have the staples in the left pocket and a few spikes, for spiking the braces, in the right. Also have a pair of small pliers for splicing in the right pocket. Between the pockets, where the carpenter carries the rule, I keep the large pliers and on the right edge of the apron is a loop for the hammer. After one gets used to returning the tools to their proper places you can work much faster and won't be racing up and down the fence hunting a lost hammer or pliers. When setting or driving posts I lay aside the apron, as it is apt to swing in the way.

In making a stretch on woven wire don't try to stretch too much at once and don't try to stretch over a hill. It is not necessary to put in a brace where you want to stretch in the middle of a line. Just tie the post you are stretching from to the bottom of the next post and tie the top of that one to the bottom of the next. If the ground is very soft put on the third tie, and after the fence has been stretched and fastened to the end post you can remove the ties and use them again.

I hope these suggestions will be of some help and if more definite answers are wanted address me personally and I will send you sketches showing bracing, tying and anchoring.

Brown Co., Minnesota. J. S. C.

Increasing Farm Values.

To the Editor:—Intelligent farmers are fast learning that dynamite should have a use on the farm and that the farm equipment is not complete without a few augers, a blasting machine, a case or more of explosives and other blasting supplies. By experience I find this one of the quickest and cheapest ways of increasing farm values. I find when I have a stumpy piece of ground that I can make a good profit by putting it in shape and so I spend a few dollars and get the services of a competent blaster. The blaster who is out for business is supplied with the proper tools, including a blasting machine, and with the aid of another hand or two can blast from fifty to 100 stumps a day. I know of a middle Tennessee farmer who bought a piece of land for speculative purposes. He was offered $7,000 for it and held it at $7,500. An experienced blaster finally persuaded him to have all the stumps cleared, pointing out to him that it would probably be a good investment. He promised to take out the stumps and put them in shape for hauling for 15 cents per stump for the tools and labor. The cost of explosives and other supplies was $37.80. The complete job was $157.80. The farmer then asked his prospective buyer to come around and the farm was sold for $8,000. The original owner made a profit on the blasting cost of $157.70 of $842.20. I know of other places where the work of a good blaster has been just as efficient in raising the price of land and I am firmly convinced that removing stumps by explosives pays. A. H. Harris.

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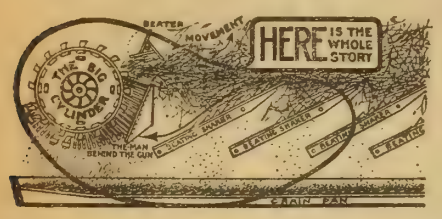

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In And Around Wisconsin.

Several of Wisconsin's leading Jersey cattle breeders will attend the annual meeting of the American Jersey Cattle Club, which is to be held in New York, Wednesday, May 3d.

Mr. E. L. Luther, superintendent of farmers' institutes in Wisconsin, is considering holding a big institute at the Wisconsin State Fair. As such a meeting he would call upon the grain institute workers, the potato institute workers, poultry institute workers and live stock institute workers to assist him in arranging a general program of institutional work.

Sayner, Vilas county, has been very successful with social center work. A large number of the Vilas county rural schools have had parents' day or mothers' day and these have been well attended. Sectional teachers' meetings have been fairly well attended. These are of a very informal character—teachers bring specimens of seat work, penmanship, etc., and carry on an exchange of ideas.

Many Wisconsin farmers have adopted the following in their fight against weeds because it gets results: On plowed fields the disk harrow is used frequently before and after planting. One good dragging won't do. It may kill the first crop of pink and green weedlets, but other seeds brought near the surface by the operation will soon sprout. A second disking within a week's time is the best policy. An early start and persistent cultivation means cleaner fields and bigger crops.

Cleanliness in the rural school is a topic of general interest in Wisconsin. Statistics on scrubbing of the schoolhouse have been collected in Door county. It has been found that out of sixty-three country schools in the county included in the survey, one was not scrubbed for an entire year. Five of these schoolhouses were scrubbed once a year. Fifteen were scrubbed twice a year two three times a year, eight four times a year, three five times a year, seven every six weeks, twenty once a month, and two every two weeks.

During the week of the Wisconsin State Fair at Milwaukee, September 11th to 16th, there will be held a camp for boys and girls outside the city of Milwaukee, who will compete in the Boys and Girls' Agricultural Club work. There will be separate camps for boys and girls under the supervision of the Y. M. C. A. and Y. W. C. A. respectively. Meals will be furnished at cost, which will be between 30 and 40 cents each day. For a part of the day the boys and girls will be engaged in work and for the balance of the time they will enjoy athletic sports and visits to the various departments of the fair. Their trips through the exhibits will be in charge of competent guides who will explain the nature and purposes of the exhibits. A physician will be in charge of each camp and proper care will be taken in the selection and preparation of foods. Prof. Thomas L. Bewick, of the Wisconsin College of Agriculture, is in charge of the camps and he will be assisted by many well-known educators of the state. The fair management is planning for 1,000 boys and 200 girls this year.

Wisconsin sheepmen are greatly encouraged over the prospects for sheep raising in this state. Not in thirty years, according to Frank Kleinheinz, shepherd of the experiment station flocks, has the outlook been brighter. He predicts a continuance of good prices for both mutton and wool. "Many ways," he declares, "are open in Wisconsin to make money with sheep if a man uses good judgment and is familiar with the details of the business."

Mr. E. E. Wyatt has been interested in the organization of rural community work in his neighborhood, near Tomah. Mr. Wyatt is secretary of the Wisconsin Jersey Breeders' Association and actively engaged in promoting better live stock.

"New York wrests the banner from Wisconsin." So writes a zealous resident of the Empire State. He claims the dairying supremacy for his state for the reason that forty-seven active cow-testing associations have been formed in New York, whereas in February there were but forty-five in Wisconsin. Since that date, however, three new associations have been formed, which still continues Wisconsin in the lead.

According to Ex-Governor W. D. Hoard, the first pure-bred Holstein sire was taken into Jefferson county in 1875, and ten years later the first pure-bred Guernsey sire was introduced in this now great dairy county. Today the revenues of the farmers of

ROBERT SMILEY, ALBANY, WIS.
Recently chosen president Wisconsin Poland China Breeders' Association.

Jefferson county from the sale of pure-bred and grade Guernsey and Holstein cattle amounts, according to Mr. Hoard, to very large sums every year. This goes to show what constant agitation will do for the enrichment and development of a section.

The annual report of the Wood County Cow-Testing Association places the herd of Holsteins owned by E. E. Butters, of Marshfield, at the head of the averages, and that of W. A. Schulz, of Auburndale, second. Four cows of each herd completed a full year's work averaging 14,180 pounds of milk and 472 pounds of butter fat, and 11,378 pounds of milk and 422 pounds of butter fat, respectively. J. C. Keiffer & Son owned the cow which carried off individual honors. She made, in the year while under test, 17,910 pounds of milk and 566 pounds of butter fat.

Cow racing is becoming a popular pastime in many sections of the state. While this diversion may lack some of the excitement furnished by horse racing, those who are in it claim that it makes up for this deficiency by yielding snug profits. There are forty-eight cow-testing associations in the state at this time. This means that a thousand or more farmers are finding which are the loafers in their herds and getting rid of these unprofitable cows. The work is under the general supervision of H. C. Searles and Paul Burchard, of the Wisconsin Dairymen's Association, and N. E. Negley, of the United States Department of Agriculture and the College of Agriculture.

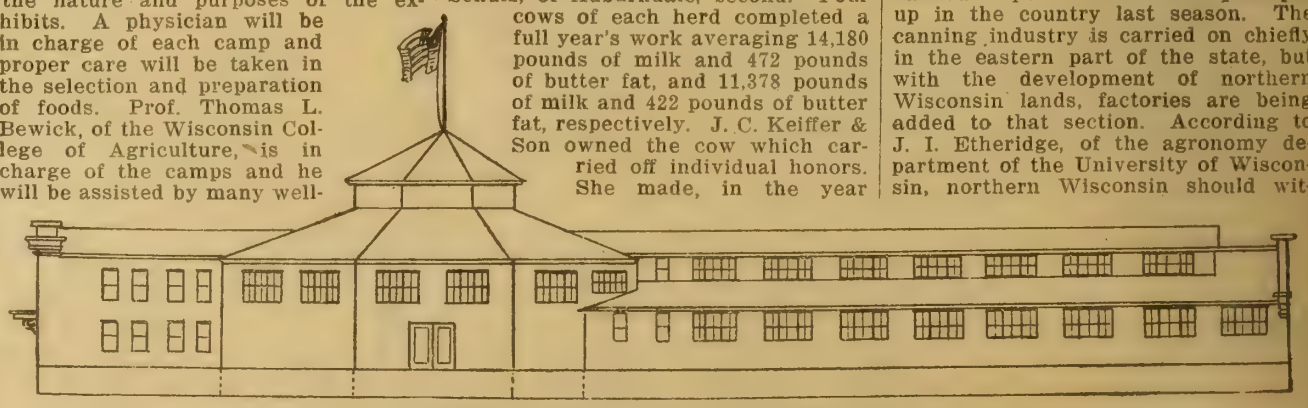
Several agricultural contests have been planned for boys and girls in Walworth county. These include a corn contest for boys from twelve to eighteen years of age, a potato contest for boys of the same age living in the city who cannot raise corn. There will also be a tomato contest for girls twelve to eighteen years of age. About $300 is offered in prizes. Mr. L. L. Oldham, the county agent, has the contest in charge.

Reports from Washington county indicate a splendid demand for pure-bred cattle, with the supply not equal to the demand. A number of sales have been made recently by persons in the vicinity of Hartford to those who are building up herds in other states. Mr. Lawrence S. Murphy, of Badger Stock Farms, has made two shipments recently to Oklahoma and one to Zion City, Illinois. He also reports a deal on for a carload of good stock for Windom, Minnesota.

A teacher of agriculture in a Clark county high school spends his forenoons in the class room, and his afternoons and evenings in testing fourteen dairy herds in his section. He spends one night with each patron of the association, taking milk samples night and morning, and making out feed records. He also has a farmers' club and a boys' and girls' club, and in other ways is a booster for Clark county's agricultural interests. Needless to say he is hired for twelve months a year.

Inspection of cranberry vines is the latest avenue of work which will be undertaken under the direction of the state entomologist, J. G. Sanders. Under his power given by the Wisconsin State Board of Agriculture the state entomologist will require inspection of vines offered for sale for propagation, and vines which are to be moved to a new location to start cranberry beds. These will be included in the regulations of nursery stock shipments. The state law forbids shipments by railroad or express companies of nursery stock, including small fruits, unless the same bear the official state inspection tag. Wood county is the state cranberry center. In 1915 there were 7,117 acres in cranberries in Wisconsin.

The value of peas canned in Wisconsin last year reached large sums. The seventy factories of the state canned 37 per cent of all the peas put up in the country last season. The canning industry is carried on chiefly in the eastern part of the state, but with the development of northern Wisconsin lands, factories are being added to that section. According to J. I. Etheridge, of the agronomy department of the University of Wisconsin, northern Wisconsin should witness a rapid growth in the pea-canning industry. The climate is good, seasons are long enough to grow any late variety and the soil is ready to be mellowed with this crop. A recent meeting of Wisconsin Pea Canners resulted in the organization of a corporation to advertise Wisconsin peas. The activities of the organization will undoubtedly help to keep Wisconsin the foremost state in the production of peas.



WAUKESHA COUNTY SALES AND SHOW PAVILION.
Erected by live stock breeders of Waukesha county, Wis. Part of this barn will be occupied for the big Holstein and Guernsey sales early in June this year.

Condition of Crops and Live Stock

THIS department is making its appearance this week in response to urgent requests made by Wisconsin Farmer subscribers. It is the result of a careful survey made by men who make observations and who report accurately the result of their findings. It will appear each week until the crop season is closed and it is the purpose to have every part of the state of Wisconsin represented from time to time. If any of our readers have a desire to join our crop reporting staff we will be pleased, indeed, to furnish suitable blanks and stationery. The Wisconsin Farmer is not competing with crop and weather bureaus of state or federal government and it will not hesitate to use data from these sources when it concerns Wisconsin Farmer readers. By having our own staff, however, we are placed in the position of reducing the problem of crop and live stock reporting almost to a science.

Burnett County—Spring work is delayed on account of heavy rains and snows. Early thunderstorms in April were very severe; cold winds came from the north and northwest. Meadows are still under water. Winter wheat appears in good condition on both high and low ground. Pastures will be fine, unless frost comes. Cattle are in fairly good condition, after the severe winter, but many cows are abortive, some herds having 50 per cent. Hogs are in prime condition.—E. H. Johnson.

Clark County—Cold, rainy weather has delayed work very much. Some plowing has been done and seeding has started on high, sandy lands, grass is starting slowly because of cold weather. Both the old and new seedings of clover have been badly damaged by the ice which covered the ground nearly all winter. Fall seeded grains were also damaged by ice. Many fruit trees were broken down by ice clinging to their branches. Young pigs and calves are doing well. Horses have been troubled with distemper and heaves.—Louis Buddenhagen.

Douglas County—Late rains have delayed sowing of small grains. Meadows and pastures are starting out fine. Hay is scarce and selling for $12 a ton in the country. Dairymen are having good luck with their calves.—J. N. Ottun.

Dunn County—Unfavorable weather conditions retarded spring seeding some, but it is now under full swing. Winter grains and grasses came through in fine condition. Fruit trees and berry bushes have suffered little; strawberries are unusually promising. Losses of spring pigs are unusually heavy.—J. D. Millar.

Fond du Lac County—Spring is backward, being very cold and wet. Very little seeding has been done, and will not likely begin before May 1st. Corn planting will be late. Rye is in good condition, but fall wheat is badly damaged. Old seeding of clover winterkilled badly, but new seeding has a fair stand. The losses in young pigs have been considerable.—A. L. Williams.

Iron County—Weather is cold and very rainy. No spring work, whatever, has been done. A considerable increase in the amount of potatoes planted is expected. Calves seem to be doing fine. The dairy industry is developing rapidly in this region.—J. A. Becker.

Jackson County—Both the old and new seedings of clover are almost a total loss; a little clover is left on the low spots. Alfalfa stood the winter better. Rye and winter wheat winterkilled considerably. The cold, wet weather has delayed work; little seeding has been done. The seed corn situation is improving; dealers are well supplied with Minnesota grown 1914 corn of good germination. Pastures will come along with a rush when the weather warms up.—P. W. Jones.

Lafayette County—Weather is cool and wet. Grass is coming up very slowly. Hay is not plentiful and the quality is poor. Farmers are buying feed. High-testing seed corn is scarce. Clover and alfalfa winterkilled badly. Horses are plentiful and cheap. Hogs are scarce, not so many brood sows, but early pigs are doing fine. Cheese factories are contracting milk at $1.35 and $1.40 per cwt.—W. J. Martin.

Langlade County—Too much rain has delayed seeding. Winter wheat and rye are looking good; so, also, are the meadows and pastures. Calves are doing well, but the losses on young pigs are heavy.—Charles Parsons.

Marquette County—Weather is cool and rainy. The percentage of spring pigs is normal, and they are doing well. Nearly everyone has had good luck with their colts and calves.—Emil Hein.

Oneida County—About one-fourth the small grains are planted. The land is not dried out enough in most places to work, because of a week of continuous wet weather. Clover seeding is exceptionally good; very few cases of freezing out. A few acres of early potatoes have been planted. Spring pigs are scarce, because brood sows were killed last fall on account of corn failure. Percentage of pigs being saved is about normal. Calves and colts are doing fine, but colts are fewer, although more mares were bred in 1915 than ever before. Many complain that mares are not breeding.—Clyde Burkhart.

Outagamie County—The loss of winter wheat is about 50 per cent, but rye looks fairly good. Meadows and young clover were badly damaged by sleet, ice and late winds. Cold, wet weather has caused the pig crop to be about 50 per cent below normal. White scours caused a loss of about 10 per cent of the calves.—Harry Lepplu.

Pierce County—Weather is very cold and wet. Only a small amount of seeding has been done. Many farmers are plowing and cultivating, and have not started sowing. Early sown rye looks good, but the late sowing is a failure and will have to be reseeded. Some clover winterkilled. There is very little feed in the pastures. Cattle, as a rule, are looking good. Calves and pigs seem to be doing nicely. One of the best maple sugar seasons on record has just closed, but demand is still unsatisfied at $1.50 a gallon.—G. K. Moore.

Price County—Season is late. Seeding has scarcely begun. Winter grains and upland meadows came through the winter safely and are in prime condition. Pastures look good. No damage to fruit trees is noticeable. Live stock are doing well.—C. F. Glissendorf.

Richland County—Spring is cold and backward, with occasional frosts. Seeding is nearly finished, but some barley is yet to be sown. Recent rains have delayed seeding. Pastures are turning green slowly. Farmers are still feeding hay, which is getting scarce. Winter wheat is almost a failure, and some are reseeding to barley and oats. A few early potatoes are planted, and strawberries are being set out. Pig crop is better than last year. Some dairymen are losing their calves.—E. C. Stewart.

Rusk County—Farmers are preparing ground for small grain. Winter wheat and rye look good and were not injured to any extent by freezing. Grass is starting and cattle will be out on pasture about May 1st. Meadows are in good condition. Dairy cattle are in fine condition after having gone through an extremely cold winter. Most farmers are having success with their calves this spring.—T. M. Thomas.

Sawyer County—Cold and excessively rainy weather has held back the usual spring work. Many fields and low places are completely flooded; swamps and lakes are overflowing. On light, well-drained soil, plowing and disking for grain has commenced, but no seeding. Hay meadows and clover fields, especially the well-drained areas are looking fine, and the new seeding is coming in good shape. Cold, wet weather is causing trouble with the lambs.—Jens Uhrenholdt.

St. Croix County—Spring is cool, wet and late. A little seeding has been done, also some plowing. The acreage of rye is not as large as last year's, but conditions are favorable and the growing grain looks fine. Meadows promise abundant hay and pasture. Farmers have fewer brood sows than usual, and the cold, wet weather is hard on little pigs. The percentage of pigs saved is below normal. Cows and calves are doing nicely.—Stephen Everson.

Taylor County—Spring is late with lots of rain. Not much seeding has been done, but it will start in about a week. All planting will be late. Farmers intend to sow a large acreage of small grain this season. Stock wintered over well, and plenty of feed is left. Spring pigs are not very plentiful and sell from $3 to $4 a pair. Young calves are doing nicely. Most cheese factories started April 1st.—E. H. Dehne.

Washburn County—Winter grain and clover came through winter in excellent condition. Pastures and meadows are starting. Recent heavy rains have delayed farm work; heavy soils are too wet to work, but some plowing and seeding has been done on lighter soils. Live stock wintered well and are healthy. Milk cows are in good demand and selling high, but demand for horses is slack. Numbers of young colts, calves and spring pigs are about normal. Seed oats are selling at 60 to 80 cents; corn, $6 to $8; hay, about $15.—L. D. Garnhart.

Quineilo Farm's Holstein Sale.

Quite a successful Holstein dispersion sale was held at Thiensville, Wis., April 18th, at the Quineilo farm. This sale was held under the auspices of the E. M. Hastings Co., of Madison. It was an exceptionally good bunch of cattle some of the cows having a record of 874 pounds of butter in a year. The entire allotment had been tuberculin tested and a sixty-day guarantee accompanied the sale of each animal. Some idea of the range of prices may be gotten from the following enumeration of the principal sales:

BULLS.

Sir Johanna De Kol 19th, Jan. 5, 1909; T. C. McMillan, Wilwaukee, Wis. ..... $ 925
Quineilo Canary Paul Lad, June 8, 1914; Nutricia Farms, Thiensville, Wis. 150
Quineilo Johanna Korndyke Lad, July 28, 1915; R. C. Stolpher, Random Lake, Wis. 105
Quineilo Johanna Hengerveld Lad, May 14, 1914; F. C. Bulgrim, So. Germantown, Wis. 90
Quineilo Johanna Pontiac Lad, Dec. 28, 1914; Felix Armbruster, Cedarburg, Wis. 100
Quineilo Sir Johanna Fobes, Nov. 25, 1914; J. Ullman, Dousman, Wis. 85

FEMALES.

Daisy Rose 2d, May 25, 1907; H. W. Halbach, Waterford, Wis. 375
Quineilo Daisy Rose De Kol, June 13, 1912; Mr. Stimson, Holywood, Wash. 450
Quineilo Rosebud Hengerveld, May 31, 1913; Mr. Stimson 400
Quineilo Small Hopes Johanna, Nov. 25, 1911; H. W. Halbach 350
Quineilo Ester Hopes Johanna, April 7, 1915; T. C. McMillan ... 245
Quineilo Pietertje De Kol, Dec. 1, 1911; Mr. Stimson 600
Quineilo Korndyke Johanna Girl, May 11, 1914; J. Ullman 200
Quineilo Canary Hope Johanna, June 7, 1914; T. C. McMillan 225
Quineilo Lady Johanna, Aug. 7, 1915; J. Ullman 190
Quineilo Princess De Kol, June 20, 1914; R. E. Benson, Dousman, Wis. 185
Quineilo Johanna Ormsby Sunbeam, Oct. 9, 1914; E. A. Swan, Milwaukee, Wis. 180
Quineilo Lillian Johanna De Kol, March 7, 1915; H. J. Goelzer, Plymouth, Wis. 250
Quineilo Johanna Homestead Girl, March 26, 1915; H. J. Goelzer 175
Quineilo Buttercup Segis De Kol Sept. 28, 1911; Nutricia Farms.. 250
Quineilo Lady Buttercup De Kol, July 30, 1915; T. C. McMillan.... 160
Quineilo America Lady De Kol, Aug. 1, 1915; J. H. Dance, Brookfield, Wis. 220
Quineilo Rosebud Johanna, Nov. 22, 1915; Roy Henderson, Eagle, Wis. 170
Quineilo Lady Johanna Pontiac, Nov. 24, 1915; H. W. Halbach.... 160
Quineilo Johanna Hengerveld Girl, Nov. 18, 1915; C. F. Dineen, Cedarburg, Wis. 140
Mercedes Johanna Korndyke, June 3, 1909; T. C. McMillan..... 370
May Carema De Kol, Feb. 27, 1912; Nellie M. Hart, Waupaca, Ia..... 325
Quineilo Algo Hengerveld De Kol, June 4, 1913; Mr. Stimson..... 400
Quineilo Pauline Hengerveld De Kol, June 1, 1913; Mr. Stimson 400
Quineilo Fobes Homestead De Kol, June 9, 1912; T. C. McMillan.... 275
Nellie Alcartra Rue, April 2, 1907; Mr. Stimson 1,000
Quineilo Lady Pontiac De Kol, June 19, 1912; T. C. McMillan.... 360
Monona Tritomia, Dec. 7, 1907; T. C. McMillan, Milwaukee..... 370
Quineilo Johanna Beinmkje De Kol, Dec. 6, 1911; J. Ullman..... 330
Lady Artis Hengerveld De Kol 3d, Jan. 26, 1910; T. C. McMillan.... 350

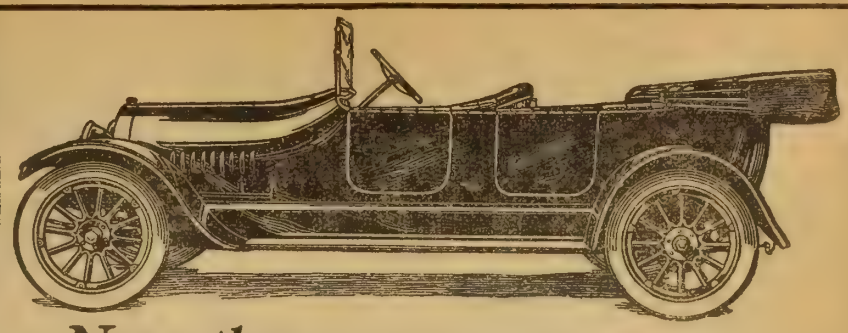
Likes Loose-Bottom Coops.

To the Editor:—Lice is one of the biggest knocks to the poultry raisers I know of. Keep all coops clean, not part of the time but all the time. We like the loose bottom coops the best, as they are easily cleaned. Just tip the coop over and there you are. You can clean them much easier and leave them exposed to the sun several hours. That helps to purify and keep them dry. We use roofing paper for the roof. It lasts several summers if cared for, so is not as expensive as a cheaper roof that has to be renewed each season. — F. & A. Fay.

Independence, Iowa.

It is being proved that returned Australian soldiers, no matter how "citified" they were before they went to the front, prefer employment out of doors in roomy places in preference to the walls of offices or business places. It is being discovered that there are extensive possibilities in the matter of providing at small cost opportunities for soldiers to become occupiers of agricultural holdings near the market offered by the larger cities and holding out possibilities of good returns for steady, intelligent work. A promising beginning has been made with a scheme for making available for returned soldiers farmlets of about five acres each, suitable for growing supplies of Sydney's needs, only partly satisfied at present, as regards poultry, eggs, fresh vegetables and fruit. A start has been made with the getting ready of an installment of thirty-seven of such farmlets handy to Sydney. It is proposed to place these farmlets, ready for occupation and cultivation, at the disposal of returned heroes at a rental of about $10 a year.

A total of 1,600 carloads of celery were shipped from the celery growing regions in the Sacramento and San Joaquin deltas last summer, according to reports received by railroad officials of California.



Now the

Crow Elk-hart "30"

at $725.00

Here is the most startling motor car value of the year. A big, light-weight, roomy, 5 passenger, 34.9 horse power touring car (112 inch wheel base) at $725.00, backed by **eight-years-proved chassis construction.**

The Year's Big Motor Car Value

Never before has such a big, powerful car of proved merit been offered at this astoundingly low price. The Crow Elk-hart "30" has many exclusive features, such as: motor with detachable head; piston port holes for oil conservation and prevention of smoking, equal distribution of weight, giving riding comfort and roadability. Body has superb grace and finish, with no body squeaks.

You will want a Crow Elk-hart "30." See the beauty, roominess and power of this sturdy car today and place your order at once.

FEATURES
Wheel base—112 inches.
Motor—34.9 h. p., 4 Cyl. en bloc.
Electric Equipment—Dyneto 6-volt system, starting and lighting; Willard storage battery.
Clutch—Multiple disc, 7 plate Raybestos lined-in oil spray.
Tread—56 inches.
Rear Axle—FULL floating type.
Body—Full streamline, 5 passenger, beautifully upholstered—instruments on cowl.
Weight—1970 lbs.
Price—$725.00 f. o. b. Elkhart, Ind., fully equipped.

Wisconsin Motor Car Co., *Distributors*
Janesville, Wis.
Crow Motor Car Co., Manufacturers, Dept. C, Elkhart, Ind.

FARMERS take bigger chances than anybody with FIRE Within an hour or two the finest farm-homestead is in ruins from fire. Write for our booklet on our BLAZE KILLER. Fire cannot burn where it is thrown. Write today; tomorrow may be too late. Best, quickest, handiest, cheapest fire estinguisher.
CHEMIC-SPECIALTY CO.
1122 Walnut St., Milwaukee, Wis.
Used by Big City Fire Departments. Put one on Your Auto
$3.00

WANTED, farmers' attention! We want every farmer that reads this ad. to mail us a postal card (and say) we would like to have some information on your proposition to farmer. Immediate attention will bring valuable results. Write your name and address plainly, R. F. D. or post office. Address Farmers' Economy Co., Sheboygan, Wis.

OUR COMPANY HELPS FARMERS
TO select and locate on our choice dairy lands. A small amount of money only necessary, as we sell our own lands. Send for literature. ARNOLD, Land Agent, Rock Island Ry., 151 Wolvin Bldg., Duluth, Minnesota.

PRINTING. 100 envelopes, 100 letterheads with your name and address, $1.00 by mail. Larson Printing Co., 202 King St., Madison, Wisconsin.

FILLING THE FOOD BASKET.

Population Growth Will Bring No Hunger, Says Investigator.

Many men are inclined to sound a pessimistic note as to the adequacy of the world's food supply for future generations, and, like Malthus a hundred years ago, are inclined to predict that the day has at last come when the human race must cease to expand its numbers or else face inevitable hunger, says the National Geographic Magazine.

And when we consider how many mouths there are in this world to feed and how much food it takes to satisfy them, little room is there to wonder at this pessimism.

The earth's population today reaches a grand total of about 1,700,000,000 souls. If they were all set down at a banquet it would require sixteen tables reaching around the globe to seat them. For every ounce of food they ate the host would have to provide 53,000 tons of provisions, and if the dinner were no more than a dollar-a-plate affair it would cost, in the aggregate, as much as it costs to run the United States government a year and a half. Expressed in terms of annual consumption, the world's market basket is one that defies portrayal in weight and size. One is forced to cast around for new units of measurement to give a proper idea of its proportions. Assuming that the average inhabitant of the earth uses two pounds of provisions a day, the total for the year would amount to 1,250,000,000 tons. It would require a string of cars, carrying thirty tons to the car and reaching eight times around the earth, to haul this material.

The fact, however, is that the average inhabitant of the earth probably uses more than two pounds of provisions a day. The steerage passengers on English ships are allowed two and a half pounds each day. Even the prisoner in the average jail gets more than two pounds, the Russian conscript four pounds and the Austrian common soldier two and a half pounds a day.

Still another way to get an idea of the size of the world's food problem is to assume that the average individual consumes 10 cents' worth of food daily. On this basis it would require the entire national wealth of the United States, the richest nation of all history, to pay the world's food bill for twenty-six months. For every cent per day per capita that the cost of living increased more than $6,000,000,000 is added to the world's annual market basket expense.

But when one considers the possibilities of future food production it is difficult to have much faith in the prophecies of pessimism of these twentieth century successors of Malthus. For instance, in the United States we have 935,000,000 acres of arable land, only 400,000,000 of which are under cultivation. Yet, with less than half of our available land utilized, the United States produces one-sixth of the world's wheat, seven-ninths of its corn, one-fourth of its oats, one-eighth of its cattle, one-third of its hogs and one-twelfth of its sheep.

Even with the land now under cultivation, if we produced as much wheat per acre as England and Germany, we could supply the world with two-thirds of its flour. If we produced as much corn to the acre as they do we could double the world's supply of that product.

Today the United States has a total cereal crop of 5,000,000,000 bushels. Were all of our arable land under cultivation and producing only according to our present standard, which is less than half as high as that of western Europe, we could add enough cereals to take care of an additional population the size of that of Europe.

When one has lived on land which, at the end of the civil war did not produce more than eight bushels of wheat and twenty bushels of corn to the acre and has seen this land produce as high as forty-five bushels of wheat and 100 bushels of corn, it is difficult to take any other than an optimistic view of the possibilities of American agriculture.

Not only are there infinite possibilities yet untouched in our own country, but also in most of the other countries of the earth as well. For instance, Russia, that land for which nature has done so much, endowing it with food-producing possibilities such as few other countries possess, has a wheat yield of only ten bushels to the acre.

When the day comes, as come it certainly will, that Russia produces as much per acre as Germany and England, and when the untold millions of acres of undeveloped land are opened up and settled, as they are destined to be, it alone can supply the world's present needs in cereals except rice and corn.

BUY DIRECT AND SAVE 1/3

LATE SOWING CROPS AT REDUCED PRICES

The seed situation, which has been really alarming, is growing daily more and more serious. The Galloway Brothers & Co. Royal Purple Grand Champion Pure Tested Seeds have proved a boon to the farmers of this and other sections of our country. Orders have been pouring in by the thousands, yet we still have a supply of all seeds on hand, taken from both the 1914 and 1915 yields. These seeds will give from 95% to 98% germination test. Our alfalfa, Sudan Grass, Feterita, Sweet Clover and other legumes cannot be excelled for price or purity. Inoculated with "NITROGEN" the roots take hold of the ground firmly and cling to the soil with the tenacity of the thistle. Try a small plot of these seeds this year. It is not yet too late. Below we give you a list of crops that can yet be planted this year.

Galloway Bros. & Company Royal Purple Grand Champion PURE TESTED SEEDS

EARLY YELLOW SOY BEANS

The Only Variety Suited to the Climatic Conditions of the North and Middle West.

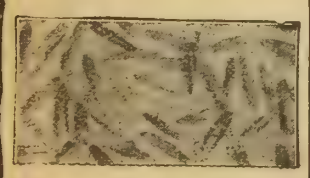
SOY BEANS are in great demand for sowing with corn as a supplement. The advantage of such a combination lies in the fact that SOY BEANS are great nitrogen gatherers, and hence are richer in nitrogenous compounds than corn silage alone. Mixed corn and SOY BEAN silage is a much more evenly balanced feed than corn silage alone. One half-bushel of SOY BEANS will sow down one acre when sown alone, in drills two and one-half feet between rows.

Price by express or freight: 1-2 bushel, $1.50; 1 bushel, $2; 5 bushel lots, per bushel, $2.95.

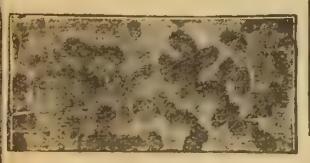
FETERITA

A very prolific yielder. Extra early. A great drought resister. Twenty days earlier than Kafir. A fine forage crop. Will produce from 60 to 100 bushels of grain per acre on any good average land. Grain makes excellent feed for hogs and chickens. Use 6 pounds of seed per acre in drills 40 inches apart in the rows. Use 10 to 15 pounds per acre when sowing broadcast.

Postpaid, per pound, 12c; 5 lbs. 55c; by express or freight, 20 lbs., $1.00; 50 lbs., $2.00; 100 lbs., $3.50.



Pure Tested Perennial Rye Grass Seed.



Pure Tested Alfalfa Seed.

SUDAN GRASS

The greatest hay and forage crop ever introduced into the United States. Will grow on rich or poor land, dry or damp land. Whether it is for beef or milk, for work or driving animals, you'll find no feed equal to SUDAN GRASS. Stock find it particularly palatable, preferring it to other forage. It exceeds timothy in nutritive value, is more satisfactory than sorghum or millet; is easily cured and handled, making the finest hay and splendid ensilage. In the short time since its introduction into this country by the Department of Agriculture, its wonderful properties have placed it at the head of all forage crops. "There is no better grass in the world for conditioning work animals or milk production than SUDAN." It produces feed in abundance wherever grown, with or without rain. It is a marvelous drouth resistant. Thrives in spite of excessive moisture. Five pounds of seed will plant an acre, drilled. That amount will return 500 to 800 pounds of seed and two tons of hay the first cutting, grows again immediately from the stubble; good for two or three more cuttings each season, one to two tons per acre each cutting. Can be sown broadcast, using 10 to 15 pounds of seed per acre.

Price: Per lb., postpaid, 25c; 5 lbs., sufficient for one acre, $1.15. Price by express or freight: 20 lbs. $3.20, 50 lbs. $7.00, 100 lbs. $14.

ALFALFA

Northern Grown, Non-Irrigated Seed, 99% pure

This splendid strain of ALFALFA is especially suited to Northern latitudes and high, exposed places. It is perfectly hardy and can be depended upon to withstand soil and climatic conditions that would be fatal to most other less robust types of ALFALFA. Get your order in early for some of this exceptionally choice seed.

20 lbs., $4.90
60 lbs., $13.10
100 lbs., $23.50

JAPANESE MILLET

(Billion Dollar Grass)

This is a type of MILLET absolutely distinct from all others. It is sometimes calleed BILLION DOLLAR GRASS. It grows from 6 to 9 feet high; stands up well and yields enormous crops. When cured it makes excellent hay, which is considered superior to corn fodder in quality and is eaten readily by all kinds of stock.

It is usually sown broadcast at the rate of 15 pounds per acre, but yields better if sown in drills 12 to 18 inches apart, using about 12 pounds of seed per acre. Cultivate until about 18 inches high; after which its growth will smother out all weeds. This variety does best on low, moist ground. We have a very choice stock of this seed and would strongly recommend our farmer friends to sow a few acres of this valuable fodder this spring.

Price (by freight or express).
20 lbs., $1.20
50 lbs., $2.95
100 lbs., $5.90

MANGEL WURZELS

Galloway's Famous Imported

MANGEL WURZELS are an indispensable part of the winter ration for dairy stock. Go to the great Dairy Shows during the Fall of the year and ask the herdsmen what they feed their Prize Stock, and in every case you will get the same answer; MANGELS! There is a reason! During the winter months when the dairy cows are unable to pasture, they need something to keep them in condition, something that will insure a continuous flow of good rich milk and a high percentage of cream. MANGEL WURZELS insure this. Remember, too, that they yield two or three times as much as Turnips and Ruta Bagas and can be grown just as easily. On our own farm we have had yields of 40 to 50 tons of MANGELS per acre. Sow 6 to 8 pounds of seed per acre in rows 2 feet apart. Any good soil will grow MANGEL WURZELS.

	1 lb. postpaid	5 lbs (Sufficient for 1 acre--express)
Dairymen's Pride	$ .55	$3.00
Eckendorfer Giant Red	.50	2.70
Mammoth Long Red	.45	2.40
Goldon Tankard	.45	2.40
Goldfinder Yellow Globe	.45	2.40
Giant Half-Long Sugar	.45	2.40

MILLET

Genuine Southern German or Golden

This grows very rank and is one of the best varieties for hay or fodder. On good, rich soil it will make a growth of 4 to 5 feet high, and although the hay may seem coarse, it is so tender that, if cut at the right stage, which is when in full bloom, even the hogs will eat the cured hay quite greedily. A yield of 5 tons of hay per acre is nothing unusual.

Price by express or freight: 20 lbs., 90c, 50 lbs., $1.90; 100 lbs., $3.80.

WHITE BLOSSOM SWEET CLOVER

The Great Soil Builder

For restoring worn out soil, nothing equals this clover. It seems to grow in all climates and with little regard to the character of the soil. It is found growing in gravel pits, heavy clay soils and sometimes in almost pure sand. Nor is it particular as to moisture. It stands more dry weather than alfalfa, yet is often found growing in low, wet soils. It sends its roots to a great depth. It is a legume like Red Clover and Cow Peas and like these plants has the faculty of extracting nitrogen from the air and storing it up in the roots, thus fertilizing the soil for the use of succeeding crops. It is a valuable forage crop. Stock like it and thrive on it. In food value it does not differ from alfalfa. The crop may be pastured closely and there is little danger of bloating. For hay it should be cut just as it is coming into bloom, and is handled in much the same way as alfalfa. A second cutting can usually be secured from 40 to 60 days later, if not pastured. It is also used to some extent as an ensilage crop, put into the silo and fed successfully in this way. Sow 20 to 25 pounds per acre.

10 lbs., $1.90
25 lbs., $4.25
60 lbs., $10.20
100 lbs., $16.00

VARIETIES OF CORN	1-4 bu	1-2 bu.	1bu.	5 bu. per bu.	10 bu. or ov. pr.bu.
Reid's Yellow Dent	$1.00	$1.75	$3.25	$3.15	$3.00
Minnesota No. 13	1.25	2.00	3.75	3.65	3.50
Iowa Gold Mine	1.00	1.75	3.25	3.15	3.00
Iowa Mammoth Yellow Dent	.75	1.50	2.75	2.65	2.50
Silver King	1.00	1.90	3.50	3.40	3.25
Boone County White	1.00	1.75	3.25	3.15	3.00
Iowa Silver Mine	1.00	1.75	3.25	3.15	3.00
Iowa Mammoth White Dent	1.00	1.75	3.25	3.15	3.00
Dakota Bloody Butcher	1.00	1.75	3.50	3.25	3.00

	Postpaid per lb.	(freight or express) 20 lbs.	per bu.	100 lbs.
ALFALFA				
Grimm Quality	$ .35	$6.10	$17.95	$29.90
Kansas Grown	.36	4.25	12.55	20.85
CLOVERS				
Medium Red(extra fancy)	.30	4.90	13.75	22.90
Medium Red(choice)	.30	4.80	12.85	21.40
Mammoth	.30	4.95	14.05	23.40
Fancy Alsike	.30	4.50	12.60	21.00
Fancy Crimson	.25	3.05	8.40	13.75
Fancy White Dutch	.60	9.00	27.00	45.00
GRASSES	per lb.	20 lbs.	per bu.	100 lbs.
Kentucky Blue Fancy	$ .17		$1.90	$13.25
English Blue or Meadow Fescue	.20		1.55	11.00
Brome Grass or Bromus Inermus	.20	$2.95	1.85	13.00
Orchard Grass	.25		2.45	17.50
English or Perennial Rye Grass	.15	2.40		11.00
Red Top Fancy(solid seed)	.20		2.00	14.00
Timothy Fancy	.15	2.35	4.10	9.00

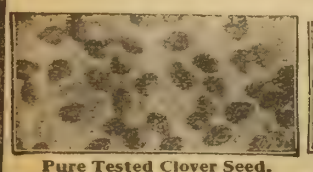
OATS	1 bu. per bu	5 bu. per bu	10 bu. per bu
Iowa 103	$ .80	.70	.60
Kherson, Yellow	.80	.70	.60
Kherson, White	.80	.70	.60
Sixty Day	.80	.70	.60
Silver Mine	.80	.70	.60
Regenerated Swedish Select	.80	.70	.60

PASTURE MIXTURES	(By Freight or Express) 10 lbs.	20 lbs.	50 lbs.	100 lbs.
Timothy and Alsike Mixed	$1.35	$2.45	$ 5.75	$11.50
Permanent Pasture Mixture for bottom land	2.25	4.40	10.50	21.00
Permanent Pasture Mixture for rolling land	1.80	3.40	8.00	16.00
Annual Hog Pasture Mixture	.50	.90	2.00	4.00
Permanent Hay Pasture Mixture	1.95	3.80	7.50	14.75

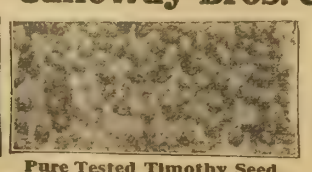
MISCELLANEOUS			
Buckwheat, Japanese	$	$1.65	$
Barley, Oderbrucker		1.25	
Cow Peas, New Era	1.20	3.25	
Cow Peas, Whippoorwill	1.20	3.25	
Field Pea, Canadian	1.10	3.00	
Kafir Corn	1.00	2.20	3.75
Rape, Dwarf Essex	3.00	4.95	9.90
Sunflower	1.80		8.65
Sugar Cane	.75	1.35	
Rye, Giant Spring		1.50	

Remember, the above prices are for **guaranteed** seeds. If the seeds do not suit you on arrival after a thorough examination, return them to us at our expense and your money will be refunded. This is our guarantee of satisfaction.

Galloway Bros. & Co., Dept. A3, Waterloo, Iowa



Pure Tested Clover Seed.



Pure Tested Timothy Seed.

Only TESTED seed is good enough for our customers. We hire an expert to devote his whole time to testing Galloway seeds.

Prompt Delivery

You can save from one to five days on delivery by purchasing your seeds of Galloway Bros. & Co., especially if you live in the middle west. Their central location geographically, and their unexcelled shipping facilities, enable them to make shipments with greatest promptness.

Order Direct From This Ad

You'll never get another opportunity to buy seeds as low as quoted here. Don't wait a minute. Sit right down and order now. Remember, we can ship any quantity you need the same day we receive your order.

Reid's Yellow Dent
The most popular variety in the corn belt. Always brings good prices.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

A Dead Magneto.

I have a Tritt magneto that will not generate any current. The magneto seems to be in fairly good condition and I can find n thing wrong. The magneto has not been used for several years. Your advice will be apreciated.

Answer.—Turn the armature over by hand. If the armature has a good "kick" the magnets are all right. If the armature does not turn harder in one position than in another the magnets need to be charged. Examine the magneto for broken brushes. See that the breaker box and distributor are free from rust, dirt and gum. See that the contact points are in good condition and that they open and close correctly. If you cannot locate any trouble you better send the magneto to the maker for repairs.

Set Screw Trouble.

I have a ten-horse-power engine mounted on a truck. It is hopper cooled. There are three large set screws on each side of the hopper cooler which hold the hopper tight on the engine. These screws are somewhat loose, and the hopper shakes when the engine is running. I tried to tighten these screws, but I could not turn them either way. I twisted one off. Is there any way I can tighten these screws so that the hopper will not shake?

Answer.—You might make some wedge-shaped shims and drive under the points of the screws. Often a stuck set screw may be loosened by giving it a few sharp blows on the head with a hammer. To remove the broken set screw drill a hole into the screw slightly smaller than the bottom of the thread. Drive a square, tapered, hardened plug tight into the hole and turn the plug by a monkey wrench.

Spark Out of Time.

I have a 1911 Ford car. The timer wore out and I got a new one that is exactly like the old one so far as I can see, but when I put it on and try to crank the car, it fires back through the carburetor. I have tried advancing and retarding the spark, but it still has that sputtering through the carburetor. The wiring is put on just as it was on the old one and is in good condition. I cannot find anything wrong with the connections or coil.

Answer.—Your spark is not occurring at the right time or two of your cylinders are connected wrong. See that the commutator brush points upward when the exhaust valve of the front cylinder is closed. The firing order 1, 2, 4, 3. To check your timing. crank the engine over until the piston in number one cylinder is at the end of the compression stroke. The commutator roller should then be in position to make contact with the terminal of the wire leading to number one terminal of the coil box. Then give the motor exactly one-half a turn. The commutator roller will then rest on the terminal of number 2. Give the motor another half turn. The roller will then rest on the number four terminal.

Differential Trouble.

I have a 1913 Ford car. Last year the differential gear and pinion broke. From that time the differential makes a deep grinding sound. What is the trouble and how can it be remedied?

Answer.—One or both of your axles may be bent. They should be removed and replaced or repaired if defective. It may be that the housing is sprung in such a way as to cause the gears to mesh a little too tight. Make sure that the axles are not badly worn at the bearings. A heavy transmission grease will lessen the noise, but if there is any serious mechanical trouble it should be corrected. Some gears are noisy when no trouble exists and the reason for the noise is often impossible to discover. The most probable cause of your trouble is sprung axles.

Oil Works Up.

We have a 1915 Ford car. Since the weather has become a little warmer, the cylinder oil works up into the spark plugs and out of the muffler. What causes this? What is the remedy? Does this oil injure the spark plugs or any other parts of the car? The oil we are using is not very thick.

Answer.—It is better to use a thicker oil in summer than in winter. Oil of itself does no injury to the spark plugs or muffler, but it is very likely to form carbon deposits and interfere with the ignition. It also causes smoke and your car is evidently wasting considerable oil. Try using a heavier oil and do not carry more oil in the crank case than the regulation amount. If this does not eliminate the trouble you should obtain new rings or slightly larger pistons. Small pistons are often the cause of too much oil working up.

Telephone Generator for Ignition.

How could I make a magneto for a two-horse-power gas engine out of a telephone generator? The engine uses a jump spark coil. The generator is five bar, 1,600 ohm. Turning it by hand, the generator generates three volts. Would this generator give a good spark at engine speed of 700 R. P. M.?

Answer.—We do not recommend the use of a telephone generator on an engine. The telephone generators are seldom made durable enough to stand the strain of continuous service. You might mount your generator on or near the engine and run it by a belt from the engine shaft. It is probable that a speed of 500 R. P. M. would be sufficient. This is a matter of experiment. Ground one terminal of the generator and run the other to a three-point switch. Ground one terminal of your battery and run a wire from the other terminal to the switch. Run a wire from the center post of the switch to the battery terminal of the coil. To start place the switch on "battery." Throw the switch to the magneto side after the engine reaches running speed.

Ford Axle Trouble.

Am asking your advice on a Ford car that has rear axle trouble. A boy once assembled the rear axle, leaving out the thin washers. The housing would not come together and it leaked grease. Also some parts were worn out and broken on this account. I put in new parts and assembled the axle with the washers in place, and the housing closed up nicely. The car jerked some before I worked on it and it did afterwards, but I attributed that to worn transmission bands. The car had already stripped three sets of gears. The gears stripped again and one axle shaft broke. The man who worked on it said that an axle shaft had been sprung, which caused the car to jerk and chip the gears. Do you think this theory is correct? How can I test the axle shafts for trueness?

Answer.—A sprung axle shaft could cause your gear trouble. The best way to test an axle shaft is to remove it from the car and put it in an engine lathe. If the shaft is out very much it can be noticed by the "wobble" of the wheel on that axle. This is not a sure test, as the wheel itself may not be true. We are rather inclined to believe that your axle housing itself is sprung. This also would cause your trouble. As your car was run for some time when improperly bolted together, it is very likely that the housing itself is sprung If you have any more trouble you better send the whole rear system to the nearest Ford branch house, stating the trouble you have had.

When You Overhaul that Engine

Install

McQUAY-NORRIS LEAK-PROOF PISTON RINGS

Stop power waste—save fuel and oil—reduce carbon

Get them from your supply dealer. If he hasn't them—write us. We'll see that you are supplied. Send for FREE book—"To Have and to Hold Power."

McQuay-Norris Mfg. Co.
2818 Locust Street St. Louis, Mo.

Polarine and Dependability Go Hand in Hand

POLARINE FRICTION-REDUCING MOTOR OIL

Use Polarine and your car will stay in service summer and winter. You won't have to lay it up for repairs caused by excess friction.

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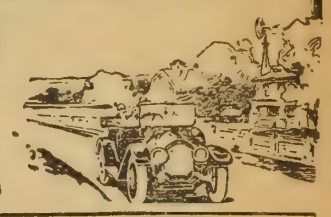

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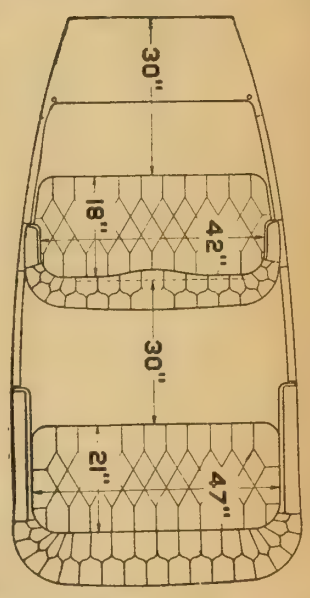

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Equipped with Waukesha Motor, Perfex Radiator, Bennett Carburetor, Dixie Magneto, New Departure Ball Bearings. Write for description.

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10 horsepower at draw-bar—at any speed. Weight 3600 lbs.

PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send for three free books: inventions wanted, etc. I market your invention without charge. Richard B. Owen, 37 Owen Bldg., Washington, D. C.

Kindly mention this paper when writing

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Number of Males to Keep With Flock.

"E. L. L." asks the following question in regard to the number of males to keep in a farm flock:

Will you please advise me how many roosters to keep? People have such widely different opinion in regard to this matter. I have 130 hens, and have kept fifteen males, and rather think it too many. Would be pleased to know what is right.

Much depends on the breed of fowls kept. The smaller, more active breeds do not require nearly so many as the larger, heavier kinds.

Leghorns do very well with not more than one male to fifteen or twenty hens. It always seems that one Leghorn in the flock and the chicks are all Leghorn, or partly at least.

For the larger and somewhat less aggressive breeds, like the Rocks, Wyandottes, etc., we keep one male for each dozen hens and one extra for every six, which would make your number not far wrong. One or more of the cockerels are almost certain to be impotent and then we must take the chance on losing some.

On the other hand, too many males is fully as bad as too few, and especially if they be kept in limited quarters.

If there seems to be unnecessary worry of the hens confine a few of the heads of the ranch and hold them in reserve for possible need.

Canker Complicated With Chickenpox.

"Mrs. F. M. F." is experiencing trouble in her flock of White Wyandotte fowls from canker and later the trouble is made worse by the appearance of chickenpox. She writes:

I have several White Wyandotte cockerels that are pure bred, and they seem to be troubled with canker in the throat. I have used permanganate of potash, burnt alum, tincture of iron besides burning the throats with caustic potash. Nothing seems to cure them. One has had the trouble all winter, and does not die, neither get well. Also, one cockerel broke out with pocks all over his head, he died. Can you give me any cure or probable cause of the trouble? I have fed wheat, bran and ear corn. All the skim milk they could drink, and grit always before them. There is litter for them to exercise and a window covered with burlap has been open all winter.

The trouble is canker in the throat and in the cockerel that died the trouble is chickenpox. The former ailment is a severe type of roup or diphtheria, as it is sometimes called. Only that there are patches in the back of the throat it would be difficult to know when roup leaves off and diphtheria begins.

These patches become enlarged, run together and in some cases the fowl cannot get its breath. Death often comes from constitutional poisoning. Treatment is doubtful wisdom and, even though the fowl gets well, apparently, it would be fully six months before it would be well for practical purposes.

If doctor you must, twist a bit of absorbent cotton about a toothpick and dip in creolin. Hold it a moment against the membrane, being very careful that not enough is on the cotton to drop into the windpipe. Move the cotton gently over the patches and they will finally come away, leaving sore spots. Apply boric acid solution and dust with flowers of sulphur.

As you value your future flock, do nothing of the kind. Kill every bird that is affected, burn the carcass and clean up all litter and spray houses and yards with a strong antiseptic.

The permanganate of potash is all right. It is not a medicine, but a germicide that keeps the trouble from spreading through the water.

This drastic measure does not apply to the fowls that have pocks broke out over their heads. This is only chickenpox, which of itself is not serious. The death of the cockerel was very probably not from canker, but from a complication of troubles. Do not destroy a bird because it has chickenpox. Unless it is so anemic from disease as to be constitutionally weak it should come out all right. Many cases of chickenpox are confused with canker and other forms of roup.

The potash in the drinking water will help to keep this trouble in check, which, as a rule, soon passes and the fowl is no worse for the trouble.

Preserving Eggs.

Now is the time to preserve eggs. The waterglass method worked out by Prof. E. F. Ladd, of the North Dakota Agricultural College, is very simple. Eggs put up according to it will retain their original flavor.

Directions: The eggs must be fresh and clean. Washing an egg spoils its keeping qualities. Galvanized iron vessels, crocks, jars or wooden kegs may be used. The vessel must be clean. If of wood it must be thoroughly scalded. Use a good grade of waterglass. One like a heavy white jelly that flows like cold molasses. Use one quart of the waterglass to ten quarts of pure water that has been boiled. Pour into the vessel when cool. Fresh eggs can be put into it from time to time until the jar is filled. There should be two inches of the solution above the eggs.

Keep the preserved eggs in a cool place, as in a cellar. The eggs will contain some gas and so crack when boiled. This can be prevented by making a pin hole in the blunt end of egg before boiling them.

Shipping Little Chicks.

To the Editor:—If the lady who wanted to know how to ship little chicks will fix a basket as follows I do not think she will lose many chicks by shipping. Take a market basket and place two thicknesses of newspaper in the bottom and just high enough around the sides to leave a row of holes all around the sides. Then put in chaff from the hay mow to a depth of about one inch. In this I put a little fine chick food. Then place thirty-five chicks in the basket and put a piece of flannel over the top. Let this hang down far enough to almost touch the chicks. Put a piece of burlap over this and sew tightly over basket. I send chicks this way and purchasers pay for the live ones received. I have not lost very many in shipping. Have shipped fifty in one basket if large.

Mrs. Robert Hunt.

A Good Start For the Chicks.

To the Editor:—The early life of the chick is always the most critical. Many chicks are lost between the ages of one or two weeks. This is not only due to improper feeding but to the improper selection of the breeding stock from which the chicks are hatched.

Now, commencing with the very beginning of the chick's life, if the chicks are hatched under a hen I would advise taking them from under her as soon as the chicks are dry, only have one or two under her and putting the remainder of them in a basket lined with flannel or other woolen goods. Set them near the stove or in the sun. Chicks may be left in an incubator, although sometimes it is necessary to remove them because of need of room.

After the chicks are two days old we put them with the hen or in the brooder. They are now given their first feed, which consists of a few dry bread crumbs and steel cut oat meal. Be sure to not give them wet feed, as the feeding of highly moistened feed ends up with bowel trouble. Always give them just a sufficient amount of feed so that they clean it up at each meal. Overfeeding is perhaps the most important factor in rearing the chicks. It is a very easy matter to do this and one must feed sparingly for the first week or so.

They are also given their first drink, which must be placed in shallow fountains. I would suggest a good home-made fountain made with a saucer of water with a tumbler upended in it. This affords a small fountain, but will auswer the purpose for the first two weeks. The chicks cannot get wet when water is given to them in this way. This is an important matter when the chick is at this stage of life.

Continue the ration of steel cut oat meal, dry bread crumbs and a very small portion of boiled eggs, which perhaps have been tested out and found infertile and set aside for this purpose. I would not advise giving the chicks much of the boiled egg in the start, as it is hard to digest and there are other foods which are more essential.

The second week feed steel cut oat meal, cracked wheat, dry bread crumbs, milk mash, with a necessary amount of grit and charcoal, also giving them free range and plenty of green food.

The third and fourth weeks continue the steel cut oat meal, cracked wheat and a small amount of cracked corn, and throw this mixture into a litter of chaff, etc., about three inches deep. This affords them the proper amount of exercise and at the same time they are having their regular feed.

I would suggest the use of milk or buttermilk, as it affords the chick a change in its daily rations and is one of the best nourishing foods to be had. After the chicks reach the age of six weeks more coarsely cracked feeds may be fed, such as a mixture of wheat, corn, oats, barley, rye, buckwheat and kafir corn, and twice a week they should be fed meat scraps.

Another important part in the rearing of chicks is to rid the chick of its greatest enemy, the louse. Perhaps the most simple method of extermination is by the use of lard. A drop of lard rubbed upon the head of the chick will usually be sufficient, as the louse always stays near the head of the chick. The lard will be found to be very effective, although some insect powders are just as good.

Clarence C. Bisdorf.

BUY NOW! ONLY 30 DAYS MORE!

If you want to take advantage of my special 90-day proposition and buy Galloway Spreaders, Cream Separators or Gasoline Engines at the lowest prices they've ever been offered you must act quickly. 30 days are all you have left. May 31st is positively the last day. I repeat the offer briefly. For a limited time—until May 31st—I am making a special proposition to the first ten or more men in each township, as a special advertising proposition.

10,000 GALLOWAY ENGINES

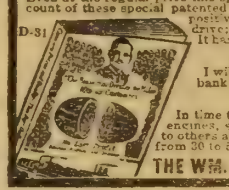
Galloway engines are so far ahead of other engines that one invariably sells from two to six more in each neighborhood. For that reason I can afford to cut THE PRICE of the FIRST TEN INTRODUCTORY ENGINES sold because of the great number THEY will sell. I'm doing the GREATEST ENGINE BUSINESS in the country. But I'm not satisfied. I want to treble it. I want to sell 10,000 ENGINES during the 90 days up to May 31st, and I have taken THIS WAY of doing it.

10,000 GALLOWAY SANITARY CREAM SEPARATORS

What I have said of my engines also applies to my Sanitary Cream Separators. YEAR BY YEAR my cream separator business has GROWN BY LEAPS AND BOUNDS. I've SAVED farmers MONEY and in return they've SOLD THEIR FRIENDS. These friends have BOUGHT, SAVED MONEY and told their friends until my separator business has reached the point WHERE IT IS ENORMOUS. If you are not acquainted with the Galloway separator, send for my free catalog. Read it over. Then order one of these machines BEFORE MY 90-DAY OFFER EXPIRES.

10,000 GALLOWAY MANURE SPREADERS

I have also included my New No. 8 Low Down Manure Spreader in this 90-day offer. Even at the regular price this spreader is WORTH $50 MORE than any other spreader made on account of these special patented features, exclusive on Galloway. All-steel beater and V-Bar; positive roller feed, patented automatic push board; double chain drive; cut-under front trucks and pressed steel unbreakable tongue. It has no equal at any price. Order one on trial.



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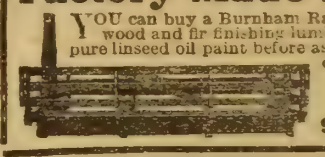
Factory Made Rack at Home Made Price



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POULTRY.

WINTER LAYERS

TO INTRODUCE the Certified Winter Layer strain. Eggs for hatching now $4 per 100, 75c per 15. Certified Egg Farm, Madison, Wis.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, cheap. Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

POULTRY.

EGGS SUNSHINE STRAIN Large, chalk white S. C. W. LEGHORN hatching eggs from vigorous, farm raised winter laying, business birds full of vitality. Specially priced Sunshine hens during May $1.00 each. 15 eggs $1.00—100 for $6.00. SUNSHINE POULTRY FARM, R. F. D. 8, La Crosse, Wisconsin.

FOR SALE—S. C. R. I. REDS

STOCK and hatching eggs. Good breeders, both males and females, $2.50 to $5. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1916. Winnebago Poultry Yards, R. 23, Omro, Wis.

50 VARIETIES Chickens, Bronze White Holland, Bourbon Red Turkeys, Toulouse, Embden, African China Geese, Pekin, Rouen, Indian Runner, Muscovy Ducks, Guineas, Incubators and Brooders. Catalog 2c. THEO. FRANZ, Box 104, Mankato, Minn.

RHODE ISLAND RED HATCHING EGGS

FROM my heavy, winter-laying, money-making S. C. and R. C. strains; $1 per 15, prepaid; $4 per 100 after May 1st. Quick shipment. R. E. Daly Poultry Farm Necedah, Wis.

BARRED Rock eggs 15, $1.50; 30, $2.50; 100, $7.50. From quality birds with size, breeding and barring. Prize-winners. Our egg customers are not disappointed when chicks are grown. 19 years a breeder. Guarantee fertility. Circular free. S. V. Latcham, Cottonwood, Minnesota.

BLUE Andalusians, S. Hamburgs, S. C. W. Minorcas, W. Lang's, Buckeyes, R. I. Reds, Buff Orps., Lt. Brahmas; eggs, $1.50, 15; Houdans, Buff Cochins, $2.50. R. Weinkauf, New Ulm, Minn.

SILVER WYANDOTTES. "The Aristocrats." Eggs from the grandest matings on earth. My mating list tells all. It's free. Write for it. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Lodge View Poultry Farms, Box W.F., Fond du Lac, Wis

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P.W. Condon, West Chester, O.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

PURE-BRED WHITE and BARRED ROCKS. Eggs $1.25 per setting prepaid; $5.00 per 100. Chicks $15.00 per 100. Address Mrs. J. F. Bloom, Route 1, Stillwater, Minnesota.

MAMMOTH BRONZE turkey eggs 25c each. Single Comb Brown Leghorns, $1.00 for 15, $4.00 for 100. Mrs. Peter Millfried, Cazenovia, Wis.

SILVER Laced Wyandottes, Barred Plymouth Rocks and White Crested Black Polish. Eggs for hatching. Cascade Poultry Yards, Cascade, Ia.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

EGGS FOR HATCHING. Pure R. C. Rhode Island Reds, $1.25 per 15, $5.00 per 100. Address Fred M. Smith, Route 7, Elkhorn, Wis.

SINGLE Comb Buff Leghorn eggs from high-class stock at $1 per 15, 100, $4.50. Chas. Schmit, R. 22, Hortonville, Wisconsin.

MY R. C. REDS ARE MONEY MAKERS. Eggs postpaid, prices right, circular free. Mrs. G. Ellis, West Salem Wisconsin.

LEGAL DEPARTMENT

SUBSCRIBERS who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention, inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delaying printed answers, those to whom it is important to receive an immediate reply by mail, should remit $1.00, addressed as above. All inquiries must be signed if they are to receive attention.

Private Property For Public Use.

Eminent domain is the power of the state to take private property for public use, without the owner's consent. This power belongs to every independent government. It is an inherent element of sovereignty. The people of this country have delegated the right to exercise this power to the legislative bodies of the various states, and to congress, by constitutional provisions containing express limitations. The substance of such limitations generally is that private property shall not be taken for public use without just compensation being paid to the owner thereof.

Private property is taken for public use by what is generally known as condemnation proceedings, and the compensation to the owner is assessed by a jury, or by commissioners of freeholders appointed for that purpose—there being some differences of detail among the laws of the several states. Just compensation to the landowner necessarily embraces two main elements of damage to his property. First, damage arising from a certain quantity of his land being actually taken and occupied for the public use. Second, damage resulting to the residue of his farm or tract, by reason of the public use being so located. As a right of way for a public road, or space for other public uses, actually occupies a certain area of land, it is comparatively easy to determine what damage will result to the owner by being perpetually deprived of its use. Generally this is the actual value of the area taken. As to the second element of damage, there is usually considerable difficulty in reaching a fair and equitable estimate of the owner's damage. For instance, a public road, or a railroad might be located across a farm in a diagonal direction, causing fields to be of irregular shape, or might separate a small area from the main body of the farm and impair its value, aside from the land actually taken, or it might interfere with the flow of surface water or cause extra fencing, or be so near buildings as to cause inconvenience. All such matters should be fully considered in estimating the second element of damage, that done to the residue of the owner's land. These matters affect the value of the land not actually taken for use, and when they are fully considered the question to be determined is this, viz.: What is the difference between the value of the residue before the public use was exercised and its value afterwards? In other words, how much less is the residue of the land worth after the strip for right of way is taken than it was worth before? Whatever that difference is in money constitutes the second element of compensation or damage above mentioned.

In estimating the value of land before and after a right of way has been taken from it the probable general effect of a road, railroad or other improvement upon the value of property should not be considered at all. For instance, suppose a farm over which a railroad right of way is to be taken is worth $100 per acre and other similar farms in the neighborhood are of like value, but the effect of the railroad enhances real estate values and causes such farms to be worth $125 per acre such effect is not to be considered by the jury or commissioners in assessing the compensation to be paid to owner whose land is taken for such public use. The expected benefits and advantages which the proposed road or railroad will bring to the landowner in common with others in the same locality cannot be set off against this claim for compensation, or in settlement of any part of it.

LAW QUESTIONS.

Ownership of Organ.

A Subscriber, Glidden, Wis.—My stepson bought an organ when he was nineteen years old and living at home. He is now married and has a family and he claims that the organ belongs to him and that his mother told him he could have it at her death. His mother died last summer. Has he a right to have the organ?

Answer.—The organ belongs to your stepson and he has a right to take it.

Renter's Rights—Township Board.

A South Dakota Subscriber.—(1) I leased a building for pool hall purposes, for six months at $10 per month payable in advance on the 19th day of every month. All fixtures to remain in the building until the rent has been paid. My lease expires on the 19th day of May, 1916. Can I pay all the rent, and move out at any time, or can the lessor compel me to stay until my lease expires? (2) Has the township board the right to close a pool room at eleven o'clock p. m. in an unincorporated town in South Dakota?

Answer.—(1) You can pay all the rent and move your fixtures from the place at any time. (2) The township board has power by law to make rules or by-laws closing a pool room in the township at eleven o'clock p. m.

Exempt Property.

A Subscriber, Wheeler, Wis.—(1) A widow owning only forty acres of land, and some personal property, made a will leaving her property to her son. Before her death a judgment was rendered against her. Will her son have to pay said judgment in order to get clear title to the land? (2) How much personal property can A person in Wisconsin hold exempt against a judgment?

Answer.—(1) The forty acres of land owned by the widow was exempt against the judgment rendered against her and her son will not have to pay the judgment in order to get title to the land. (1) The following personal property is exempt as against a judgment, viz.; Bible, books and pictures, household and kitchen furniture, one gun and sewing machine and other dofestic utensils, farming implements, yoke of oxen or a team of horses or mules with harness or tackle, two cows, ten sheep, ten hogs and feed for said stock for one year, provisions and fuel for family for one year, one wagon, cart or dray, one plow and drag, and wages earned of $60 if one has a family.

Partition Fence—Notice to Trespassers.

A Subscriber, Hancock, Wis.—(1) My farm is partly under cultivation, and the land adjoining is timber land. The partition line has not been fixed by a survey. Can I compel the owner of the timber land to make his share of a partition fence? (2) If a survey of the division line is necessary to be made, who is liable for the expenses of the survey? (3) How shall I post notices to keep hunters and trespassers off my farm?

Answer.—(1) If the owner of the adjoining timber land does not use it for cultivation or farming purposes, but allows it to lie open and unfenced you cannot compel him to build any part of a partition fence between his land and yours. (2) Even if he encloses his land and uses it for farming purposes before a partition fence is erected the division line must be fixed, either by agreement or a survey, and the expense of such survey should be borne by both parties. (3) Post in conspicuous places two sign boards one foot square on each forty acres of your land forbidding hunters and trespassers from going thereon.

Contract by Officer.

Mr. O. M. A., Buffalo Lake, Minn.—Does a member of a town board in Minnesota have a right to take a contract to do road work, or other public work let by the town board, by which such member will receive a financial benefit and if not, what is the remedy in such a case?

Answer.—In such a case the member of the town board would be guilty of a gross misdemeanor, the penalty for which is imprisonment in jail not more than one year or a fine not exceeding $1,000.

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Just write me a postcard with your name and address and I'll send you my big new 1916 Buggy Book with my special price-splitting, money-saving offer. Think of it!—a genuine Split Hickory this year as low as only $39.25 and up. Remember, I give—
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—*why*, it can't bite your tongue;

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—*why*, you can smoke it as long and as hard as you like without any comeback but *real* tobacco happiness!

On the reverse side of every Prince Albert package you will read:

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That means to you a lot of tobacco enjoyment. Prince Albert has always been sold without coupons or premiums. We prefer to give quality! And read this:

PRINCE ALBERT
the national joy smoke

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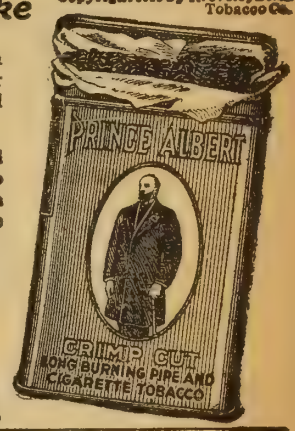

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For Prince Albert is tobacco made by an exclusive patented process *that cuts out bite and parch* and lets you fill up your pipe or roll 'em to your heart's content without a flareback of any kind! You'll get chummy with Prince Albert in a mighty short time.

Prince Albert is sold everywhere in toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors and in that fine pound crystal-glass humidor with sponge-moistener top that keeps the tobacco in such perfect trim—always!

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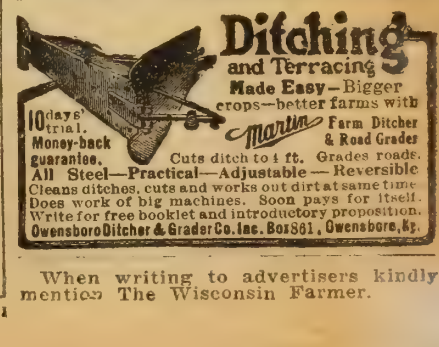
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Potato Organization.

A number of Rusk county farmers met recently and organized a Ladysmith Potato Growers' Association. Mr. Dell Richards was selected leader and Mr. A. A. Hadden secretary and treasurer. Twenty farmers joined the organization and the association adopted the Rural New Yorker and Green Mountain varieties as community potatoes. Each member had agreed to plant at least one bushel of these varieties this season. The purpose of the organization is to standardize potatoes as to variety in the neighborhood of Ladysmith and incidentally to make Ladysmith a potato seed center. The association has decided to offer a silver cup to the member who exhibits the best bushel of potatoes at the Rusk County Fair.

Rusk County Crop Yields.

Mr. A. G. Martindale, of Rusk county, is one of the successful Upper Wisconsin farmers. He has succeeded in making some splendid crop records. In 1914 he raied 640 bushels of potatoes to the acre and sold these potatoes at an average of $1 a bushel. The same year he raised onions that yielded at the rate of 416 bushels to the acre and sold these also at an average price of $1 a bushel. Last year he raised parsnips which yielded 648 bushels to the acre and which he sold for 75c a bushel. On the parsnip crop his returns were at the rate of $486 an acre. These records are an evidence of what can be done in Upper Wisconsin by careful farming. Mr. Martindale is not an extensive user of commercial fertilizer. He is, however, a careful farmer.

Seed Situation in Rusk County.

G. M. Householder, Rusk county agricultural representative, has been assisting farmers in the work of securing seed corn which will be good for Upper Wisconsin this year. He has found a limited quantity of Northwestern Dent, and Early Yellow Dent, according to his report. The representative further has agreed to assist those farmers who have good seed corn for sale, to market the same. In this manner he is aiding the farmer who is short on seed corn and the farmer who has a surplus to get together. Mr. Householder has advised his people that seed corn will cost considerable money this year, but that it is preferable to pay a good price for seed which will germinate than to get seed at a small price which will not come up. A good deal of seed corn which will be used in Rusk county this year is the kind which will be purchased for $4 to $5 per bushel. Mr. Householder says that the buyer of seed corn should consider that a bushel of first-class seed corn ought to produce 300 bushels of corn and that this should be worth from $130 to $150 next fall. So that a dollar or two on the price of seed is not a matter of such great importance as is the matter of getting the right kind of seed.

Treatment For Smut.

Mr. J. S. Klinka, county agent for Polk county, has called attention to the damage from grain smuts last year. These smuts were unusually destructive in 1915 on account of the weather conditions. Smut was especially noticeable upon oats. Mr. Klinka reports that in one of the fields near the town of Balsam Lake the loss due to smut was 8.8 bushels per acre, or about 13 per cent, on the assumption that the average yield was sixty bushels per acre. Mr. Klinka reports that as far back as 1700 grain was treated for smut. In those early days salt water was used and the process was generally spoken of as "pickling grain." In 1880 Jensen, of Copen- d the hot water treatment. found to be effective, but rather a dangerous method, for the reason that a very small rise in the degree of temperature of the water would kill the grain. Mr. Klinka is advising the farmers of his county to use formaldehyde today. It is generally used throughout the country for the prevention of all smut. A pint of formaldehyde in thirty gallons of water will make a solution that will control losses from smut. The usual method is to put the oats into a gunny sack and soak in the solution for five minutes or until all the kernels have been moistened. Pour the oats upon the floor of the granary or barn and cover for a few hours. Avoid heating the grain and increase the usual rate of seeding three or four pecks.

Barron Creamery Report.

According to a report of the Barron County Creamery, located at Barron, Wisconsin, there were 265,730 pounds of cream received during the month of March, 1916. The total butter fat production for the month was 67,819.6 pounds, and the price paid averaged 40c. This creamery has 720 patrons and more than 200 of them received cash to the amount of $50 or more during March.

The Strawberry Weevil.

The strawberry weevil will be active soon. He was discovered coming out of his winter-long hibernation at University Farm, St. Paul, by S. Mareovitch, of the division of economic zoology, April 20th.

A shortage in the number of blossoms is the first indication of the work of the strawberry weevil. It cuts off the buds, after depositing eggs in them. The weevil is about one-tenth of an inch long, and because it is seldom seen on account of its size, the effect of its ravages are usually blamed on the frost, hail or climatic conditions.

The strawberry weevil has been successfully fought at the New Jersey experiment station by a dust spray of a mixture of arsenate of lead and sulphur. One pound of each was used as a repellant, giving almost perfect protection. The mixture was applied April 30th and May 6th. Another method advocated by S. Mareovitch, who discovered the pest at University Farm, is removing the straw from one or two rows to hasten the maturity of the buds and to keep the straw on the rest of the patch to force the weevils to the uncovered row. They could then be destroyed either by plowing them under or burning over the uncovered row.

The weevils do not scatter readily and hibernate in the field, so the one-crop system is a safe method of fighting them. The ground should have crops changed for at least a year if the weevils are found.

Garden Notes.

The "follow up" planting of late sweet corn or fall turnips after crops of early peas and radishes should have a place in the garden plan. If one worked out a chart it would show the arrangement or rows, all spaced at least twenty-four inches apart to allow for horse cultivation, which should be frequent so as to keep the soil in good tilth, conserve moisture and destroy weeds.

A few things to remember in garden making as given by J. R. Hepler, gardener at the agricultural experiment station, are:

Give each vegetable plenty of room to develop. Plants with spreading tendencies, like tomatoes and squash, must not be placed too close in the rows. Four by four feet for the former and five by six feet for the latter are suitable distances.

To save space, sow an early crop of lettuce or peas between the squash or tomatoes. Radishes, turnips, onions, spinach and endive are other crops which may be used for fillers.

Get the garden soil in good condition to receive plants from the hotbed Plowing or spading must be followed by harrowing or raking until the soil is fine and loose.

Puddling the roots in water or watering the plants right after setting out should be practiced to keep them from wilting. It may be advisable to cut off half the leaf surface in setting out the plants so as to balance the top with the roots which are frequently broken off in planting.

Little Potato Disease.

The little potato disease causes little potatoes as big as a pea or a little larger to form on the stems, and no potatoes form on the roots. The reason is that this disease closes up the pores in the stem so the starch made in the leaves cannot go back to the roots to form potatoes. Potatoes affected with this disease have small spots on the surface made up of germ masses, that look like a little soil stuck on the surface. The difference comes out when one tries to remove the spots. They do not come off, while soil will. This disease is also called russet scab and Rhizoctonia. It is best not to use affected potatoes for seed. If they must be used first treat for two hours in a solution of four ounces of corrosive sublimate to thirty gallons of water. (Corrosive sublimate is now $4 a pound.)—[D. G. M., North Dakota Experiment Station.

The Cabbage Crop.

To the Editor:—There are many charms in cabbage culture not to be had with other crops. They are easy to germinate, easy to transplant and give response to rich soil and good cultivation. Besides the satisfaction of having all the cabbage that can be utilized on the table, there is always a good cash remuneration from the salable cabbage.

Cabbage requires a rich and moist soil for rapid development. The soil should be stirred deep—twelve inches being none too deep for the roots to be able to penetrate well into the soil. Low land is preferable for cabbage growing, yet clay land mixed with sand and a liberal application of well-rotted stable manure will grow good cabbage. It doesn't matter so much what kind of land, if it is good soil and contains plenty of moisture. Cabbage will yield all the way from five to fifteen tons of cabbage to the acre.

It is one thing to grow a crop of cabbage and another to get them off to market at a profit. The cabbage grower should plan out his work ahead, considering the varieties that would be best suited to his location, and also the marketing problem. The man who jumps to the conclusion that all there is to cabbage culture is the art of growing them and that the marketing will only be an afterthought is sure to end in a rash failure and one crop will be all he is looking for, being now ready to turn to another failing venture.

When setting the plants the rows must be made straight, as the first plowing must be done with the cultivator, going as close to the plants as is advisable. The number of plants grown upon an acre must be decided by the habits of the varieties. From 6,000 to 7,000 Early Jersey Wakefield may be planted on an acre and will do well crowded in, while half that number of late cabbage will be sufficient on the same amount of ground. Frost-proof plants may be set in the field as early as April 15th and from that time on till June. The earliest cabbage on the market is usually the ones that command the best price. Plants are easy to transplant if the soil is mellow and moist.

To grow cabbage successfully the fields must be free from weeds. The first cultivations cause the plants to make more rapid growth, covering the ground so that cultivation becomes unnecessary.

If the ground is plowed deep in the fall it will not need reworking in the spring except a thorough harrowing. Worms are never bad on early cabbage, making them much easier to grow than late ones. The ground should be stirred at least once a week till they are too large for cultivation.

E. E. R.

A South Lincolnshire, England, farmer who has extensive lands is now employing more than sixty women and proposes shortly to engage many more.

Guaranteed Seed Corn

WE recently sent average identical sample of our Northern Iowa latitude grown and Central Minnesota (Redwood Co.) grown seed corn to the foremost agricultural college of this country and have just received their official report, as follows:

Nor. Iowa lat. grown.		Cen. Minn. (Redwood Co.) grown.	
Wimple's Yellow Dent	97%	Northwestern Dent	96%
Iowa Gold Mine	96%	Wis. No. 7 or Silver King	92%
Goddard's Sil. King	94%	Minnesota King	96%
Reid's Yellow Dent	97%	Minn. Ea. Yel. Dent	92%
Minnesota No. 13	90%	Minnesota No. 13	88%
		Minnesota Early White Dent	73%

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The above tests prove that our stocks of genuine NORTHERN GROWN Seed Corn are the highest qualities you can buy—regardless of price.

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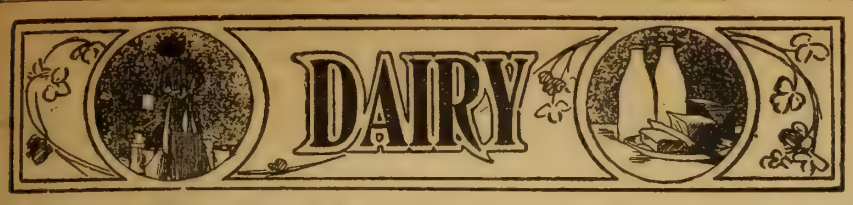
SEED CORN—Reid's Yellow Dent. Matures from 90 to 100 days; germination from 95% to 98%. J. N. Hutchinson, Dixon, Illinois.



Ropy Milk Caused By Bacteria.

Summer dairying is occasionally a source of worry to the dairyman because the milk becomes "ropy." A condition of this kind usually causes considerable loss because of the fact that milk so affected is absolutely unsalable or unusable. It is practically on a par with sour milk and in so far as human consumption is concerned is just as much of a waste. In the first place, ropy milk is caused by bacteria of some kind. In some cases udder troubles are the original causes, in others contamination with bacteria outside of the udder is responsible. If the condition of the udder is responsible this fact will be noticeable when the milk is being drawn. If the milk does not become ropy until afterwards the cause is probably an external one.

If a bad case of udder trouble is responsible it may be advisable to at once consult a veterinarian and have the trouble remedied. If the cause is external the condition of the utensils being used should be noted. Crevices and inaccessible places in pail or can filled with bacteria may be responsible. If such is the case the remedy is obvious.

Brooks to which the cows have access may be filled with the bacteria and these bacteria may find their way to the flanks and udders of the cows and thence to the milk pail. In any case ropy condition of the milk is directly under the control of the dairyman and if he allows a drain upon the season's profit without attempting the comparatively simple remedies sympathy would be wasted. The careful dairyman will not be troubled long with ropy milk in his herd unless in the case of garget or severe udder troubles and in these cases the herd should at once be placed in a veterinarian's hands for a quick cure.

Better Butter From Graded Cream.

When butter is sold at the neighborhood store it is impossible to discriminate between a good and bad product, if the merchant values his customers or his reputation. Men may face cannon or brave death in many ways, but no man ever yet had the hardihood to tell a woman that she made poor butter.

As dairy people become more dependent on the creamery it lessens the liability of making enemies of them. People are not slow to grasp an opportunity if there be an addition to their incomes at the end of it, and especially if there is a like opportunity to lose out. A grain belt dairyman is on the right road to improvement, by grading all cream that is brought to him. He sends out small circulars which say:

I will hereafter grade all cream. It is only treating everybody fair. It is not fair for one patron to take good care of his cream and another not care for his cream. The market demands a better grade of b tter, and the creamery that can produce a high grade will get the top price. The better grade of cream we can get, the better grade of butter we can make. That will bring the patrons more money, and bring the creamery more patrons. Now, let us work together; I will give you some rules for caring for your cream, and if you follow them you will have first-grade cream.

In the winter keep your cream just as cool as possible, so that it will not freeze, until the night before going to the creamery. Set it in a room where there is a fire in freezing weather. If it freezes it will grade second.

In the summertime, separate your milk as soon after being drawn as possible. Set the cream in a pan of cold water and cool as soon as possible. Then pour the cream into the can and hang in the well.

Do not mix warm cream with cold. I will make two grades. There will be No. 1 and No. 2. No. 1 will be worth 2 cents more than No. 2. Cream that will not grade as No. 2 will be returned to the patron who sent it.

This creamery is setting an example that will benefit its stockholders, its patrons and humanity in general. There is just as much opportunity to help the uplifting problem of which we hear so much these days, in applying educational methods to our common everyday work as in all other lines combined. More and more, each and every line of work and industry is being lifted to a higher plane. The result is twofold it makes better living possible, as well as training the mind along the path of higher ideals.

Care of Dairy Products, Cooling Emphasized.

To the Editor:—There are two seasons of the year when the buttermaker or cheesemaker has the most trouble with the quality of milk or cream delivered. They are spring, the first warm spring days, and the fall, during the busy time of threshing. The reasons for this condition are as follows: During the winter nature undertakes to cool the milk or cream, last winter very effectively, and it takes a little time before the farmer realizes that he has to be on the job. It is only when he gets a complaint from factory, creamery or station that he gets busy. During threshing season the farmer is simply so busy he neglects the cooling process, so necessary in producing dairy products of quality. As a result, poorer butter and cheese is made at these seasons than any other.

Another possible reason for poor quality spring cream or milk is access to wild onions. This is not common everywhere, but it is serious while it lasts. Then, again, as feed becomes short, usually the poorer grades are fed. This latter condition also affects fall grade of milk and cream. As grass becomes short cows eat, of necessity, not from choice, weeds which give peculiar and undesirable flavors to milk.

The two important factors in the care of milk and cream are cleanliness and low temperatures. Of the two, the latter is by far the more important. Still more important is the speed with which the milk or cream is cooled to this low temperature. Not one farmer out of ten realizes that to produce milk of good quality or cream that will make high-grade butter the milk or cream has to be cooled at once and kept cool. How cool? As low as the temperature of most freshly pumped well water, between 50 and 60 degrees.

You say, why the hurry to get it cooled? In the first place, the milk does not stand around warm, absorbing odors of stable. In the second place, to keep the bacteria from multiplying. Suppose you leave milk or cream standing around for two hours. At the end of that time it is sixty-four times as dirty from a dairy standpoint as it was at the beginning. How can that be? Simple enough. It is well known that bacteria multiply by fission or division. Under right conditions of feed and temperature each plant divides and becomes two at the end of twenty minutes. Now, warm milk is just right. At the end of twenty minutes there are two; at forty, four; at sixty minutes, eight bacteria; at the end of two hours, sixty-four bacteria. Your milk is just sixty-four times as dirty as it was.

Cool and cool at once. How? By setting the can of milk or cream in cold water and then leaving it. That will help, of course. But if you think a little you must know that unless stirred the outside body of the liquid becomes cooled while the center is still warm. Here, in the warm center of milk or cream, the bacteria rejoice and wax exceedingly fat and abundant. Therefore, stir the liquid occasionally and the water around the can, too. A little ice would help; in fact, if it is milk for city delivery, both ice and mechanical coolers are needed. But for the farmer, if his cooling tank is between his stock tank and pump, and covered, with forced circulation through all parts of the tank, he can easily keep his cream sweet three days and more. How marked a difference in quality of butter there would be if all cream producers delivered sweet cream. It would mean millions in the pockets of the farmers.

How about cooling the warm cream before mixing? Sure. Same reason as above. To keep the bacteria from multiplying. Add warm cream to cream already cooled. You raise the temperature of the whole lot and the bacteria, dormant for a time, again become active. Cool and keep cool.

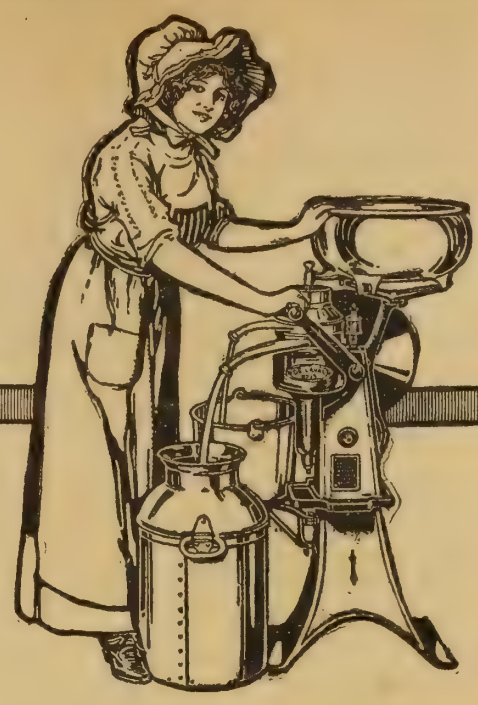
But, you say, what is the use? Doesn't the buttermaker sour the cream anyway? Yes, he does, but he does not get the same uniform results if he accepts your sour cream, your neighbor's sour cream and that of several other neighbors and mixes it all together that he would if he took sweet cream and soured it himself with an artificial pure culture of sour milk and had control of the ripening process. The best butter in the world may be made on the farm, but it is not. It varies in flavor, texture, grain, salt, color. So with mixed lots of sour cream. There is no uniformity in flavor. The buttermaker or cheesemaker is not asking for sweet goods, asking you to go to more work to save himself work. Not so. The easiest way for him is to dump it all into the vat, sour and sweet, cool it and churn it. He asks you to care for your milk and cream so that he can take pains with a fighting chance to get a No. 1, uniform article. In return, you get more for your goods.

Be cleanly in your milking practice. You can't all wear white suits, but you can have clean hands. You can also construct your cow stalls that the cow, with little care, will keep herself clean. You may not be able to tell one bacteria from another under the microscope, but you can understand that milk as it comes from the cow, between 90 and 100 degrees, or body heat, is ideal for the multiplication of germ or bacteria life. You can cool your milk and cream at once and keep it cool. You can use your best judgment as to the easiest and best plan to do this. You can do your part in raising the standard of quality of dairy products in your state. Do it.

John Bower.

Clipping the Udder.

To the Editor:—It is not at all uncommon among dairy cows to find the udder covered with a thick growth of long hair, which may be of some protection to the udder in some respects, still from a sanitary standpoint and a comfort to the cow while she is being milked these hairs are detrimental. Under the usual farm conditions this growth of hair is commonly covered with filth and even in well-kept dairies this hair, unless kept well clipped, will collect more or less dirt and trash. In many cases, too, these hairs will persist in falling into the milk pail. To prevent occurrences such as these the



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Supreme in Skimming Efficiency

Over 35 years of experience and thousands of tests and contests the world over have demonstrated the De Laval to be the only thoroughly clean skimming cream separator, under all the varying actual use conditions, favorable as well as unfavorable.

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This applies to every part of the machine—to the bowl, the driving mechanism, the frame and the tinware. The De Laval Patent Protected Split-Wing Tubular Shaft Feeding Device makes possible greater capacity, cleaner skimming and a heavier cream than can be secured with any other machine.

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The De Laval is substantially built. The driving mechanism is perfectly oiled and the bowl runs at slow speed, all of which are conducive to durability and the long life of the machine. While the life of other cream separators averages from three to five years, a De Laval will last from fifteen to twenty years.

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This has been the greatest factor in De Laval success. Not a year goes by but what some improvement is made in De Laval machines. Some of the best engineers in America and Europe are constantly experimenting and testing new devices and methods, and those which stand the test are adopted.

Supreme in Service

With its worldwide organization and with agents and representatives in almost every locality where cows are milked, no stone is left unturned by the De Laval Company to insure that every De Laval user shall get the very best and the greatest possible service from his machine.

Supreme in Satisfaction

De Laval users are satisfied users, not only when the machine is new, but during the many years of its use.

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Because they are supreme in efficiency, construction, durability, improvements, service and satisfaction, more De Laval Cream Separators are sold every year than all other makes combined.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below.

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udder should be clipped closely at least twice each year, and in this way prevent the accumulation of filth and making a much better success of cleaning the udder.

Leaving these long hairs on the udder is a good way to make a bad kicking cow out of a heifer that has the making of a fine cow. When the milker clasps the teat during the milking process the long hair surrounding the upper part of the teat is included and as each stream is drawn these hairs are given a hard, vigorous pull. It is no wonder, then, that the young cow protests with a lively kick.

A common pair of clippers, such as are used on horses, is the best for clipping the hair from the cow's udder. The clipping should extend over the flank and thigh on the right side, as this will make it more easy to keep the pail clean. In the production of strictly first-class milk, the above precaution should always be observed, as well as the usual cleaning of the udders. It is certainly a cleanly custom.

W. H. U.

Nettle Hill Cow-Testing Association.

The following table gives the names and records of the cows in the association which have produced more than forty pounds of butter fat or 771 pounds of milk during the period of thirty days ending February 26, 1916:

Owner and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
John W. Mahnke				
Gr. Holstein ...	6	1230	3.4	41.8
W. H. Ohlea				
Gr. Holstein....	5	1232	3.6	44.3
Chas. Behnke				
Gr. Holstein....	9	1147	4.0	45.9
Gr. Holstein....	5	1162	4.1	47.6
Otto Mahnke				
Gr. Holstein....	7	1566	3.0	47.0
Gr. Holstein....	8	1041	3.9	40.6
Gr. Holstein....	5	1270	3.5	44.4
Frank Pischel				
Gr. Holstein....	7	1391	3.5	48.7
Gr. Holstein....	9	1315	3.2	42.2
Gr. Holstein....	3	1180	4.3	50.7
Theo Pritzel				
Holstein	3	1310	3.5	45.8
Gr. Holstein....	6	1304	3.6	47.0
Gr. Holstein....	4	952	4.3	40.9
Chas. McCulley				
Gr. Holstein....	6	1295	3.4	44.0
Gr. Holstein....	6	1560	3.8	59.3
Geo. W. Kiel				
Guernsey	2	771	5.3	40.8
Godfrey Fetzer				
Gr. Holstein....	2	1137	4.0	45.5
Bernard Fetzer				
Gr. Holstein....	6	1228	3.7	45.4
Jerry Hussey				
Gr. Holstein....	5	1363	3.6	49.1
Gr. Holstein....10		1302	3.4	44.3
Gr. Holstein....	9	1220	4.2	51.2
Gr. Holstein....	6	1436	4.3	61.7
Pat Cahill				
Gr. Holstein....	6	1260	3.9	49.1
Gr. Holstein....	7	1142	4.8	54.8
Gr. Holstein....10		1376	3.9	53.7
Gr. Holstein....	7	1331	3.6	47.9
Gr. Holstein....	8	1337	3.2	42.8
Hugh Halloran				
Gr. Holstein....	3	1104	3.7	40.8

Manford D. Pease, Official Tester.
Geo. W. Kiel, Secretary.

Geneva Cow-Testing Report

The following is the official report of the Geneva Cow-Testing Association for the month ending March 1, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
A. G. Palmer & Sons					
M.&W. Girl, H.	3	2-28-16	2167	3.7	80.2
Johnson, H....	8	12-30-15	1566	3.5	54.8
Daisy, H.....	5	12-3-15	1463	3.6	52.7
Lorina, H.....	3	1-14-16	1541	3.3	50.9
Chase, H.....	5	12-14-15	1469	3.3	48.5
Queen, H.....	3	2-2-16	1218	3.6	43.8
Howutje, H...	7	12-3-15	1246	3.4	42.4
Queen M., H...	2	12-15-15	1234	4.0	49.4
Netherland, H.	2	12-17-15	1107	3.8	42.1
W. Gem. H....	2	12-14-15	1237	3.1	38.3
Walker, H....	2	12-15-15	1404	2.7	37.9
Breeze, H.....	3	11-26-15	1265	3.2	40.5
Rockwell Bros.					
Ideal Girl,G.H.	7	11-17-15	1401	5.3	74.3
Evlyn, G. H...	5	3-2-16	1143	4.6	52.8
Johanna, H. ..	8	2-12-16	1342	3.6	48.3
Lina, G. H....	4	2-14-16	1342	3.5	47.0
Emma, G. H...	7	1-8-16	1175	3.9	45.8
Coalie, G. H...	6	10-8-15	1020	4.4	44.9
Nellie, G. H...	4	2-12-16	1333	3.3	44.0
Fay, G. H.....	6	12-8-15	1135	3.8	43.1
Fannie, G. H..	7	1-1-16	1262	3.4	42.9
Skylark, G. H.	5	11-18-15	1187	3.6	42.7
Bonnie, G. H..	6	11-6-15	1181	3.6	42.5
Peggie, G. H..	7	1-27-16	1277	3.2	40.9
Floe, G. H.....	6	3-4-16	996	4.1	40.8
Dew Drop,G.H.	6	1-25-16	1200	3.4	40.8
Jolly, G. H....	7	1-25-16	1232	3.3	40.6
Irene, G. H....	7	11-13-15	1119	3.6	40.3
Sunlight, H...	3	1-3-16	1054	3.8	40.1
H. D. Dunbar					
Queen, H.....	6	9-29-15	1535	3.7	56.8
Clyde, H.....	7	2-6-16	1748	3.0	52.4
Fannie, H.....	7	2-25-16	992	4.1	40.7
Ormsby, H....	3	3-9-16	952	4.2	40.0
Korndyke, H.	2	2-25-16	967	3.4	32.9
Walker, H....	2	10-10-15	1442	3.9	56.2
Lady, H.	2	12-4-15	1584	3.0	47.5
Adeline, H....	2	12-8-15	1243	3.4	42.3
Burke, H.....	2	10-27-15	1252	3.0	37.6
Elgin, H.....	3	12-21-15	1574	3.0	47.2
Chas. L. Turner					
Dorothy, H...	3	3-5-16	1990	3.6	71.6
Mink, H.....	3	2-29-16	1876	3.6	67.5
Jessie, H.....	3	12-22-15	1358	3.9	53.0
Marian, H.....	3	1-5-16	1497	3.4	50.9
Susie, H.....	8	12-14-15	1550	3.2	49.6
Erma, H.....	2	3-14-16	783	4.1	32.1
Eula, H.....	3	3-2-16	1686	3.5	59.0
Jas. Henderson					
Mechthilde, H.	6	1-8-16	2196	3.5	76.9
Edith, H.....	6	1-11-16	1767	3.7	65.4
Piebe, H.....	7	1-3-16	1810	3.5	63.4
Gem. H.....	7	1-11-16	1590	3.8	60.4
Mildred, H....	3	1-3-16	1646	3.4	56.0
Guernsey, G.G.	7	12-26-15	1135	4.0	45.4
Piebe O., H....	4	9-22-15	1113	3.6	40.1
Princess, H...	2	1-18-16	1556	3.0	46.7
Emil Papenfus					
No. 6, G. H....	6	3-6-16	905	6.3	57.0
No. 15, G. H...	6	1-11-16	1414	3.4	48.1
No. 3, G. H....	6	1-2-16	930	4.3	40.0
Ora Taylor					
O.Slattery, G.J.	7	11-26-15	955	5.8	55.4
D.Knight, G. J.	4	11-24-15	955	5.7	54.4
Eleven %, J...	3	1-1-16	732	7.4	54.2
D. Pansy, J...	3	12-20-15	899	5.9	53.0
Y.Slattery,G.J.	5	1-1-16	865	5.8	50.2
Pansy, J.....	5	1-29-16	915	5.1	46.7
W. Queen, J...	6	10-16-15	896	5.0	44.8
Spot, J.....	5	3-1-16	905	4.7	42.5
Horns, J.....	6	8-15-15	719	5.9	42.4
Lineback, G. J.	7	11-6-15	918	4.6	42.2
Costigan, J...	3	10-20-15	639	6.6	42.2
R. Bromley, J.	2	2-15-16	508	6.7	34.0
G. M. Maid, J..	2	1-15-16	462	6.6	30.5
Moss Bros.					
Vivie, H.....10		12-27-15	1618	3.4	55.0
Lorina, H.....	3	12-27-15	1135	4.4	49.9
Cora, G. H....	2	11-4-15	815	3.7	30.2
Ethel, G. H...	2	11-15-15	970	3.1	30.1
J. W. Finnell					
Carnie, G. H...	6	3-2-16	871	5.8	50.5
Bettie, G. H...	4	1-29-16	1209	3.5	42.3
Gray Neck, H.	2	12-22-15	960	3.2	30.7
Callie, G. H...	2	10-25-15	853	3.9	33.3
Harry Ames					
Nig, G. H.....	9	12-27-15	1122	4.4	49.4
S. B. Fish					
Wonder, G. H.			1411	3.4	48.0
W. E. Palmer					
Inka, H.....	2	10-18-15	828	3.8	31.5
Pauline, H....	2	2-5-16	1116	3.4	37.9
Lady H.....	5	11-29-15	1662	3.0	49.9
Corona, H.....	3	10-22-15	1423	3.0	42.7
Korndyke, H..	3	3-5-16	1118	3.7	41.4
Nettie, H.....	4	11-21-15	1287	3.2	41.2
Queen, H.....			1411	2.9	40.9
E. H. Lean					
Pansy, G. H...	4	2-10-16	1163	3.9	45.4
Fern, G. H....	6	11-8-15	1032	3.9	40.2
D. Dalrymple					
ComoBelle,G.H.	2	3-2-16	958	3.5	33.5
Bluebell, G. H.	4	3-4-16	927	4.4	40.8
Chas. Fish					
Lady, G. H....	2	2-14-16	849	3.7	31.4
Wm. Rouse					
Daisy, G. D....	8	3-1-16	1050	4.3	45.2
Wm. Schulz, Sr.					
Rose, G. D....12		11-1-15	1076	4.1	44.1
Molly, G. D...	8	3-15-16	1262	3.8	48.0
Perry Harrington					
Luna, H.....11		1-16-16	1212	3.4	41.2
A. Holt					
Dott, J.	3	8-20-15	533	7.6	40.5
Norton & Randall					
Belle, G. H....	2	2-27-16	890	3.4	30.3
Ishmal Baker					
Y. Daisy, G. J.	2	3-2-16	831	5.1	42.4

F. Drake, Official Tester.
C. Turner, Secretary.

Rock County Guernsey Men Organize.

Breeders of Guernsey cattle in Rock county were organized recently. Fifteen charter members were enrolled. The association is known as the Rock County Guernsey Breeders' Association and the following are the officers for the first year: Dr. W. A. Munn, Janesville, president; Theodore A. Clarke, Edgerton, first vice president; M. S. Kellogg, Janesville, second vice president. I. M. Erickson, Janesville, secretary, and J. A. McComb, Milton, treasurer. Any live stock breeder who uses a pure-bred Guernsey sire is eligible to membership in the association. The number of county Guernsey societies in Wisconsin is increasing. Formerly, Waukesha county was the most conspicuous for Guernsey organizations. It is planned to arrange for a summer meeting of the Rock county association. While the membership is only fifteen to start with, it is remembered that the large organization in Waukesha county began with

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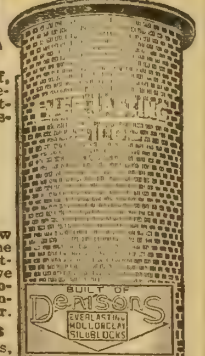

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Long Feed Table, large feed opening, four knives, four edged cutting bar, safety cylinder head, safety reverse lever, powerful non-clogging blower and easy adjustment for different length cuts. No belt slippage.

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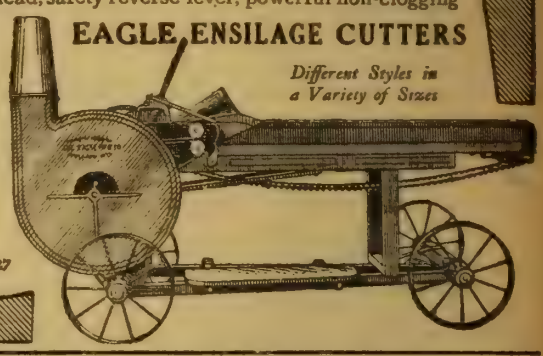

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The winnings of Western Canada at the Soil Products Exposition at Denver were easily made. The list comprised Wheat, Oats, Barley and Grasses, the most important being the prizes for Wheat and Oats and sweep stake on Alfalfa.

No less important than the splendid quality of Western Canada's wheat and other grains, is the excellence of the cattle fed and fattened on the grasses of that country. A recent shipment of cattle to Chicago topped the market in that city for quality and price.

Western Canada produced in 1915 one-third as much wheat as all of the United States, or over 300,000,000 bushels.

Canada in proportion to population has a greater exportable surplus of wheat this year than any country in the world, and at present prices you can figure out the revenue for the producer. In Western Canada you will find good markets, splendid schools, exceptional social conditions, perfect climate, and other great attractions. **There is no war tax on land and no conscription.**

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Radisson Wisconsin

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FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

eight charter members. One of the plans on foot in Rock county is to have a Rock county exhibit of Guernsey cattle and to take this exhibit to a number of the county and district fairs.

Have Cows Freshen in the Fall.

To the Editor:—The old practice of having cows freshen in the spring and go dry in the fall is giving way to better methods. It goes without argument that fall is the best time to have the cows freshen, to keep up the milk flow. A cow will naturally begin to fall off in milk production when six to seven months in lactation. A cow that comes in fresh in the fall will reach this stage when pasture grasses are good. This will counteract the natural tendency and through the summer months she will just about hold her own with the cow that freshens in the spring.

A cow should always be permitted to go dry two months before calving. Say we let her dry up in July or August. Isn't this the time that the milk supply would naturally slacken up on account of the flies, heat, short pastures, etc? Some dairymen claim that it is better to have the whole herd to freshen in the fall or early winter.

It is not best to feed the cow heavily on grains previous to calving. They will not require a heavy grain ration if they freshen in the fall, owing to the pasture grasses and green feeds at hand.

The fall calf usually gets a better start in the world than the one that arrives in the spring. The farmer will have more time to take care of the calves in winter than summer; the fall pastures are coming on, furnishing the cow an abundance of good, green stuff that produces a large milk flow. The fall pastures are more nourishing than the spring grasses, owing to the fact that they do not contain so much water. There are no flies or heat to bother either the cow or calf, and if dropped early enough the calf will get a good start and learn to eat well before cold weather sets in.

Milk products are much easier taken care of in winter than summer and milk and butter prices are at their best at this time.

The cow and calf will have to be carefully housed during the cold months. Keeping them housed in muddy, filthy stalls that are full of drafts and feeding them just anything that happens to be on hand will not work well with either the cow or calf. They must have good attention if profitable returns are expected.

E. E. R.

How I Raised My Calf.

[Editor's Note.—The following article by J. C. Robinson, of Evansville, Wisconsin, was written to encourage the Rock county boys who have engaged in the calf-raising contest.]

Now you boys who have selected your calves, have them entered in the Baby Beef Contest and have your work started, perhaps some of you have been wondering how you will feed them.

At the stockyards they say that "very few feeders can turn out a fat yearling." Can't we change that idea, boys? In attempting to do this remember that we want you to get all the help you can from your father or anyone else. That's the only way that anyone can really learn, because no one knows all about live stock, and especially "baby beef" production.

Definite rules for feeding baby beeves cannot be given, as every successful feeder has a little different method. But we will try to give you the general plan which most of these men follow and you can make changes to fit your conditions. However, there is one rule upon which all feeders are agreed. That is, "do not lose the calf fat," and it means that you must keep the calf "coming" all the time, especially during the weaning period. That's the most important time in the life of a baby beef.

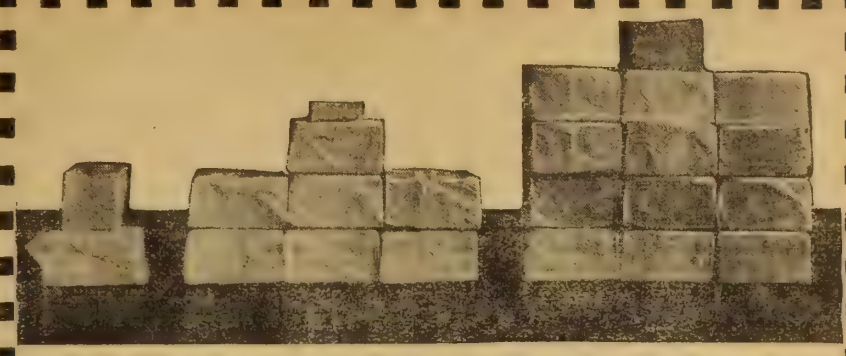
Most of you will be feeding a fall calf, and the following plan will possibly be of aid to you.

Fall calves usually come in September or October. Most feeders say that milk is necessary for profitable baby beef production, and so they let the calves run with their mothers or turn them to their mothers twice a day. Allow them to eat grain as soon as they will take it. Keep the cows away while they are eating; build a "creep" for the calves or turn them in a separate lot. Corn and oats, mixed half and half by measure will make a good mixture to start them on. Gradually increase the corn and decrease the oats until at the end of eigth or nine weeks they are getting no oats at all. Add a little oil meal as you take out the oats until, when they are on full feed they are getting twenty pounds of oil meal to eighty pounds of corn. A small amount of bran with this mixture, say ten pounds, improves it, to my notion. Cottonseed meal can be substituted for oil meal, although many feeders say that oil meal is better while the calves are nursing. Give them plenty of good clover, alfalfa or mixed hay. When weaning time comes they will scarcely notice that the milk supply has stopped. I would keep fall calves off pasture entirely, feeding them in a darkened shed or stall. Of course, they will want some exercise, but not much. A little corn silage, if you have it, or green corn will be relished by them. They should be on full feed by July or August and should be eating about two pounds of grain for every hundred pounds of live weight. They should weigh from 400 to 600 pounds at the start. When the calves are twelve to fourteen months old they should be in prime condition and ready for the Christmas market which is usually the highest of the year for cattle of quality and finish.

Spring calves dropped in March and April are usually finished for the May and June markets which are generally good, since few prime cattle are for sale at this time. Most men allow the calves to run with their dams on grass, nursing until the cows are dry. Others keep the calves in a well-bedded, darkened stable, allowing them to suck night and morning, thus avoiding much fly trouble. During December and January they should be on full feed so as to get to market during May and June.

Three thousand boy scouts received 4,000 mulberry trees from the state game commissioner, John M. Phillips, of Carrick, Pa., to plant. This species was selected by Mr. Phillips because the birds, which destroy many bugs and insects in an orchard, prefer mulberries and will not destroy more desirable fruits when mulberries are obtainable.

Ask your neighbor to subscribe for The Wisconsin Farmer.



Separator running at full speed. Loss of butter 1.75 pounds

Speed reduced 10 revolutions. Loss of butter 7.28 pounds

Speed reduced 20 revolutions. Loss of butter 12.74 pounds

Which pile did *you* lose?

These figures from the Purdue Experiment Station Bulletin No. 116, show the loss in butter resulting from not turning a fixed-feed separator at exactly the speed stamped on the crank.

And investigations showed that 19 out of every 20 separator operators thruout the country turned their machines too slow much of the time.

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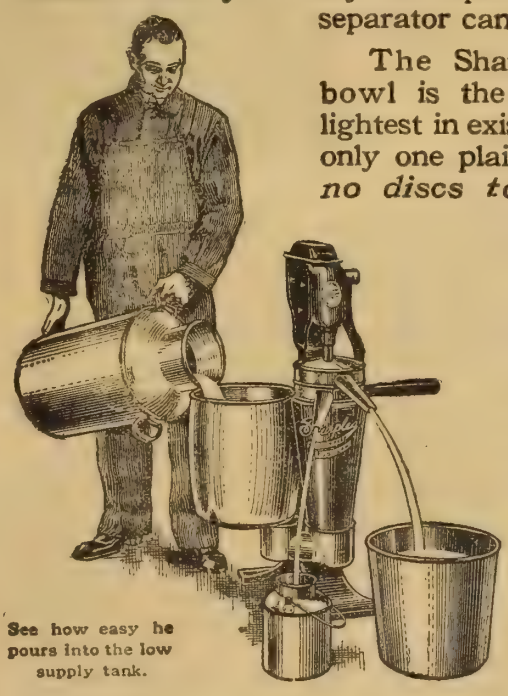
is the *only* separator made which *will not lose cream at varying speeds.* The wonderful "Suction-feed" always feeds the milk to the bowl in exact proportion to the separating force being generated. At 45 revolutions it *skims clean;* at 55 it *skims clean* and at 35 revolutions it *skims equally clean.* No other separator can do it.

No matter how you turn the New Sharples you always get *even thickness* cream. Just set the cream screw at the desired thickness and it will come out *velvety* and *even*—no matter how you vary the speed. No other separator can do it.



See how easy he pours into the low supply tank.

The Sharples Tubular bowl is the simplest and lightest in existence. It has only one plain part in it—*no discs to wash* and bother with.

All these and many other features explain why the New Sharples is the profitable separator for *you* to use. It is described in detail in catalog *"Velvet" for Dairymen.* Send for your copy today. Write Dept. 44.

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—but the discs are easier to wash. They're made of aluminum and rust-proof. They're smooth as glass—no holes or raised bosses to catch dirt. And with fewer discs the Sanitary Milwaukee skims quicker, cleaner and easier.

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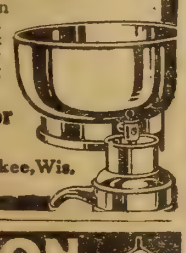

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Swat the Fly Poison!

With the approach of the warm spring days will come the fly nuisance, and, while we are just as enthusiastic over the "swat the fly" program as anyone, we want, before ever a fly appears, to sound a warning as to the manner of "swatting."

We recommend screens, clean yards, barns and outhouses, and the prompt burning or burying of all waste matter that is apt to attract these pests.

We condemn fly poisons.

Did you know that fly poisons were made of arsenic? And did you know what a toll these poisonous fly-killers claim every year in little lives—lives of the wee folks who don't know any better than to eat or drink anything their small hands can reach? The cases on record vary anywhere from twenty-five to fifty a year, and that probably is not the true number. The symptoms of arsenical poisoning are so similar to those of cholera infantum that it is quite likely there have been many more cases than have been reported, because the children generally are too small to tell what they have done, and if they are not seen taking the poison, cholera infantum may easily be inferred from the nature of the illness.

Do not buy the stuff and rest serenely content that you have put it out of reach of little hands. Mothers have done that before, only to find, when it was too late, that in some unaccountable way the fly killer had fallen to the floor, or the drawer in which it was hidden was left open.

For two years the Child Betterment Bureau has waged war on this evil. Through the efforts of this organization a bill was introduced and passed in the Michigan legislature regulating the manufacture and sale of poisonous fly killers. Legislators of other states should and eventually will follow this good example. In the meantime each individual can do his part by barring this dangerous substance from the house and providing for the annihilation of the fly in a more safe and sane manner—screens and cleanliness.

Look to Your Ice Box.

The refrigerator and its care are important factors in the health of the family.

The lining of the refrigerator should be smooth and free from seams or visible soldering. The corners should be rounded. As to the material used, galvanized iron is almost impossible to keep clean. Perhaps you have noticed a white powder that collects on a zinc lining. This is a chemical poison—oxide of zinc—and therefore to be avoided. White enamel is easily cleaned, but it scales if it is put on over a zinc base. Tile and glass are easily cleaned, also, and look nice, but they crack and break easily. Porcelain does none of these things and is altogether the most satisfactory lining to be had.

There are "friendly" and "unfriendly" bacteria which affect food, and there is a deal of difference between the two when shut up in the family ice box. One changes the taste without creating harmful conditions; the other creates ptomaines and a whole family of ills. If you are not quite sure which is which, you'd better ask. It will be worth your while, as the housekeeper and the guardian of the family health. And be sure your ice supply is pure.

Roses.

To the Editor:—"If you would grow roses you must have love in your heart." Someone, sometime, somewhere, said those words, though who I cannot remember. I do know though that all the love you bear in your heart for a rose will not bring it to perfection unless you also have a streak of stick-to-itive-ness which will cause you to give it the necessary attention.

One of the most necessary requirements is cultivation, another fertilization, and with them, a hand that ruthlessly pushes aside all tender feelings you may entertain for the beautiful long new growth which springs up from the effects of the cultivation, etc.

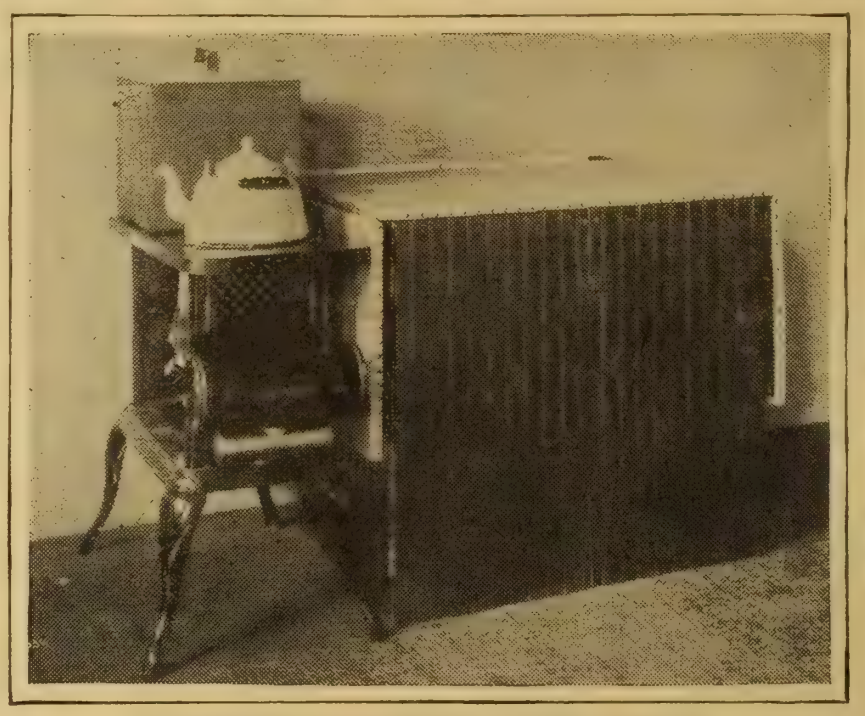
The nipping back of these branches brings the flowers in abundance in their season.

The easiest way to fertilize a rose is to take a No. 3 old tin can, punch a few holes in the bottom, fill it half full of cow manure, make a slight depression near the bush, set the can in this depression and keep it filled with water as it seeps away day by day.

Roses are great feeders. You who are fortunate enough to live on a farm where you are bound to have once in awhile a chicken which gets tired of living, will find no place where you can recover a little of the loss from its death as quickly as you will if you bury your dead beneath the shade of the rose bush.

Incidentally you would be surprised at what these cans of fertilizers will do for tomato plants. Try it.

Minnie Hatton Jewell.



A SUGGESTION FOR SUMMER KITCHEN COMFORT.

Transplanting.

To the Editor:—To transplant a seedling so it will not droop I think is a great accomplishment, and I have been able to do that since I have followed the method I will describe.

I take an old bread pan about two inches deep, and punch a few holes in the bottom. Then I take old post cards or stiff covers off magazines, etc., and cut them into strips as long as I think I need them and about two inches in height, depending on the kind of seed I am planting. Some are not more than two inches long and some as much as four. I tie them in a circle with thread, then place them side by side in the pan, filling it full. Then I fill each little circle with good loam, pressing it down well and having it filled to very near the top. In each of these card board circles I plant two or three seeds.

To water, I spread a loose-meshed cloth over the top and pour water on it till the earth is damp enough, After the first damping I pour a little with a spoon in each circle unless I keep the pan where I do not care if it does drip water, and then I pour in the pan, but never pour in the circle because of washing the dirt from the seeds or burying them too deep, if small.

When they have started enough to determine the strongest seedling I pull out the two weaker ones or, if only two seedlings, I pull only one, leaving just one seedling in a circle.

To transplant, I take the pan to the garden or flower bed where I am going to put the plants for the rest of the season, take out a circle at a time, snip the thread, and push into the loose dirt. If the leaves on the seedling are small enough I pull the cardboard circle up. If not, I let it remain; it does no harm anyway. My seeds, started this way and so transplanted, never know they have been removed from the place of their birth.

When I start seeds in the hotbed by this method I put the circles right into the dirt without a pan, but, of course, the card board is dirtier to handle when you transplant, while these in the pan are clean. It is also very necessary that you do not let them dry out in the house.

J. A. J.

Rich Soil For Roses.

To the Editor:—In a recent issue I noticed a request for information about roses. I find them very easy to raise and will give my experience.

Roses require a very rich soil, as they are heavy feeders. The latter part of May or the first of June is the best time to plant new bushes in the open. If well-rotted stable manure can be had, mix it generously with the soil before setting the plants, and press the soil firmly around the roots. It is well to remember that the more roses you cut (I mean the perpetual bloomers, of course) the more roses the plant will produce. If the flowers are cut with long stems and the blossom cut off the stem as soon as it begins to fade, and the stem then planted with a glass jar turned over it, many times the stems will grow. Do not remove the jar until the plant is well started.

Where I live, in Iowa, the winters are so severe that I always start the new plants in boxes or pots that they may be brought into the house during the winter. If they are kept well watered and in a sunny window they will be blooming by spring.

If roses are to be left out all winter it is best to give them some protection in this severe climate. This may be fallen leaves or straw, etc.

For successful growing of climbing roses be very generous with the fertilizer. This point cannot be too strongly emphasized if you want them to cover a porch in one season. After the plant is through blooming in June or early July, cut out all the canes that have bloomed this season. It is the new canes that will bloom next summer. If the ground has been well fertilized the new canes will have become as large as those cut out by September.

Mrs. Mabel Schlichter.

Care of Cured Meat.

Do not sprinkle meat with borax to keep off the skippers, but wrap it thoroughly and hang in an airy place where the mice cannot get at it. The best method of wrapping meat for keeping over summer is to enclose first in a cloth flour sack and then in a paper flour sack; tie the ends of the sack tight enough so that flies cannot get in around the string.

Pieces of meat should not touch each other or they will mold considerably. In damp, muggy weather cured meat will mold in spite of all you can do. The mold, however, is only on the surface and can easily be removed. Do not try to hold the shoul ders until fall, as the mold penetrates into the fatty tissue of the shoulder and there is considerable waste in removing this moldy part. The ham muscle is more compact and the loss in removing the moldy part is very small.

If the smokehouse is dark and fly-tight the meat can be kept through the summer without wrapping.—[P. F. Trowbridge, Mo. Agri. Exp. Sta.

Wants to Know How to Wash Sweater.

To the Editor:—I wish some of the readers would tell me how to wash a very fine white wool sweater for a baby. The sweater and cap have pink and blue trimming and I want to know how to wash or clean them so they will look like new and the color won't fade. It is a very fine sweater and I don't like to start at it until I know that I am going to do it right. Does anyone know of a good way? Y. Z.

Will Mrs. F. E. T. Write Again?

To the Editor:—I wish Mrs. F. E. T. would write to the Home Department again and tell us how she makes sofa pillows out of silk and velvet, and also send a diagram of the pattern she uses. I have a great many pieces I would like to use up and I would like to get some new patterns.

E. M. S.

[Note.—We have another request for Mrs. F. E. T. to tell how she made porch pillows from gunny sacks. Most of our readers, we think, would be interested in another letter from Mrs. F. E. T., telling how she makes her pillows and sending a pattern so that it might be copied.—The Editor.]

Crocheted Cap.

This cap requires two spools of crochet or knitting silk and should be made with a No. 7 steel hook.

Chain six and join to form a ring.

First Row—Thirty double crochet in the ring, joining last to the first.

Second Row—Chain five, over twice, take a stitch in first double crochet, over and through two, over and through two, over twice, take a stitch in next double crochet (over and through two), three times, over twice, take a stitch in next double crochet, work the stitches off two at a time, single crochet around the end of the point. Repeat the point until ten are made with five chain between.

Third Row—Five double crochet in

each five chain and one double crochet in tip of the point.

Fourth Row—Like the second row, with three chain instead of five.

Fifth Row—Three double crochet in three chain and one double crochet in the point.

Sixth Row—Like the fourth.

Seventh Row—Like the fifth.

Eighth Row—Chain four, four double crochet in four double crochet, single crochet in the next, chain four, four double crochet in next four double crochet, single crochet in next and repeat to end of row, single crochet in four chain, turn.

Ninth Row—Chain four, four double

CROCHETED HOOD FOR BABY.

crochet in four chain, single crochet in next four chain, and repeat to end of row. Turn at end of each row.

Tenth Row—Leave six shells at neck and finish as ninth row.

Repeat tenth row eleven times, then make two more rows all around the cap.

First Row of Edge—Point like second row between two shells, chain one, double crochet in second double crochet of shell, chain one, point between next two shells and repeat around.

Second Row—Shell of (two chain, double crochet, picot, chain one, double crochet, picot, chain one, double crochet, picot, chain one, double crochet, picot, chain one, double crochet, chain two) in each point and single crochet in the double crochet between the points.

Corn Sirup in Canning Operations

The value of corn sirup in canning and preserving fruit and in jelly making is so well established that

ELLEN JOHNSON.
Daughter of Mr. and Mrs. A. A. Johnson.

many domestic science schools are recommending a blending of this product with sugar to obtain the best results. By its use the natural flavor of the fruit is much more apparent and a heavy sirup is obtained without the cloying sweetness of the all-sugar sirup. Corn sirup, blended with sugar, not only prevents fermentation of the fruit but also does away with the crystallization of the sirup which so often occurs in jellies and jams.

For canning fruit the following table may be of use to those who propose trying corn sirup for the first time:

Apples—sour, 5 lbs.; sugar, 1½ lbs.; corn sirup, ½ lb.; water, 3 pts.; boil 15 to 20 min.

Apricots, 5 lbs.; sugar, 1¼ lbs.; corn sirup, ⅜ lb.; water, 1 pt.; boil 10 to 15 min.

Berries, 5 lbs.; sugar, 1½ lbs.; corn sirup, ½ lb.; water, 1 cup; boil 15 min. slow.

Cherries—sour, 5 lbs.; sugar, 2½ lbs.; corn sirup, ¾ lb.; water, 1½ pts.; boil 15 min.

Cherries—sweet, 5 lbs.; sugar, 1½ lbs.; corn sirup, ⅜ lb.; water, 1½ pts.; boil 15 min.

Currants, 5 lbs.; sugar, 3 lbs.; corn sirup, 1 lb.; water, 1 pt.; boil 15 min.

Green gooseberries, 5 lbs.; sugar, 3 lbs.; corn sirup, 1 lb.; water, 1 pt., boil 15 min.

Peaches, 5 lbs.; sugar, 1¼ lbs.; corn sirup, ⅜ lb.; water, 1 pt.; boil 10 to 15 min.

Pears, 5 lbs.; sugar, 1¼ lbs.; corn sirup, ⅜ lb.; water, 1½ pts.; boil 15 min.

Pineapples, 5 lbs.; sugar, 1¼ lbs.; corn sirup, ⅜ lb.; water, 1½ pts.; boil 20 min.

Plums, 5 lbs.; sugar, 2 lbs.; corn sirup, ¾ lb.; water, 1 pt.; boil 20 min.

Prunes, 5 lbs.; sugar, 1½ lbs.; corn sirup, ½ lb.; water, 1 pt.; boil 20 min.

Quinces, 5 lbs.; sugar, 1½ lbs.; corn sirup, ½ lb.; water, 3 pts.; boil 20 to 30 min.

Arithmetic of the Mixing Bowl.

There are a number of fixed proportions used in all recipes, and the following are standard:

One-half as much liquid as flour for muffin and cake batters.

One-third as much liquid as flour for soft doughs, as for biscuit.

One-fourth as much liquid as flour for stiff doughs, as for bread.

One-third to one-half as much butter as sugar for all butter cakes.

One to one and a half teaspoonfuls of baking powder to a cupful of flour for batters or doughs.

One-third as much shortening as flour for pastry.

One teaspoonful of soda to one pint of sour milk.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Likes to Play Ball.

Dear Young Folks:—I enjoy reading your stories very much. I am ten years old and am in the fifth grade at school. I like to go to school, but sometimes I have to stay home and help papa and mamma. We have domestic science at our school and we cook every Thursday. There are four of us boys and we take turns with the girls because they know more about cooking than we do. We also sew every day just before noon.

We often play ball at our school, too, and I often make a home run. I like to be a batter and bat the ball over the fence. I like to be pitcher when the other boys bat me a fly and I catch it and get them out. It's fun for me to get the bigger boys out. I think it is good exercise to play ball. When I was little I used to like to play ball, but every time I'd get up to bat I'd get out. I didn't like that very well, but afterward I began to think the best way to learn was to keep on trying and now I can bat a long ways.

—Lawrence.

Try This One, Girls.

Dear Young Folks:—I certainly enjoy reading your letters and the stories on the Young Folk's page. We live on a farm 103 acres and we have to go two and one-half miles to school. I am twelve years old and mend my own clothes and do nearly all the cake making that is done at our house. Here is one that I make. It is devil's food cake. I take one egg, one-half cup of sugar, one-half cup of sweet milk, one-third cup of grated, unsweetened chocolate; cook until thickened, then let cool. Cream one cup of sugar with one-half cup of butter. Add two eggs, beaten separately, one-half cup of sweet milk, two cups of flour, one-half teaspoonful of vanilla and one-half teaspoonful of soda dissolved in the milk. Mix all thoroughly and add the chocolate paste. Beat well, bake

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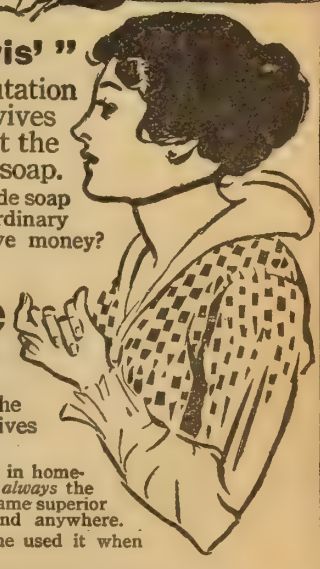

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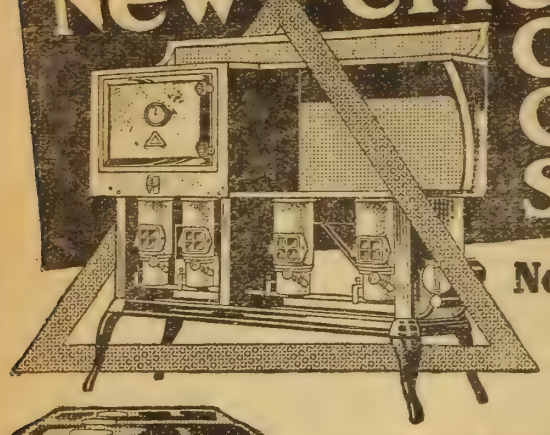

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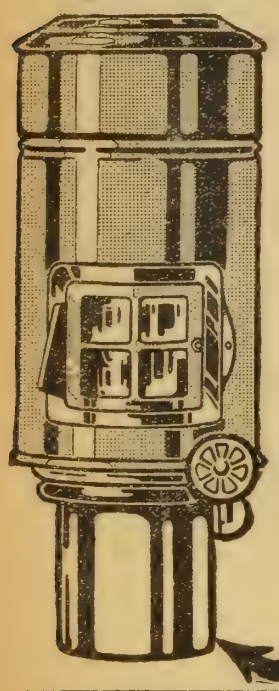

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in layers and put together with white frosting.

I have five sisters (two of them are twins) and we are all happy together.
—Margaret.

School Better Than Vacation.

Dear Young Folks:—I am a little farmer girl. We live on grandpa's farm. I am nine years old and my little sister is six. Our birthdays are on the same day, the 24th of March.

We walk one mile to school every day. We would rather go to school than to have vacation. After school our chores are to carry in the wood, hunt the eggs and get supper. Sometimes when we get lazy we skip down to grandma's, but mamma usually calls us back.

We have a pet bull dog which we call Beaute. We think he is a very fine dog.

I love flowers and my favorites are roses, pansies and lilies-of-the-valley. I have a little hotbed of cabbage plants. I think when I grow up I shall like gardening. —Wenona.

A Captive Crane.

Dear Young Folks:—I live on a 180-acre farm and I like the country very much. I have a mile and a half to walk to school and am in the eighth grade. I expect to graduate from country school next year.

Last night my brother came home from hunting with a crane which he had wounded in the wing. My sister Mildred and I took it and put it in the

PALS.

cob house. We bandaged the wing up and gave the crane something to eat and drink. We expect to tame it and call it Dickie Daddles. —Ruth.

Mabel and Sister Are Partners.

Dear Young Folks:—I am a little girl nine years old and will be ten the 19th of June. We live on a farm and have two geese, quite a few hens and roosters, besides horses, cattle, pigs, some little calves and two little colts. We have sixteen little chickens already. This morning I went to the henhouse with mamma and fed the two old hens that have the chickens. I fed them out of my hand. One old hen has eleven chickens and the other five.

I can cook a little, but mamma has to help me with it. I can also tat and crochet a little.

My sister and I have a calf together. We paid papa $11 for it. Each of us gave $5.50. I had a pig, too. I paid $2 for it and when I sold it I gave papa $2 for feed and pasture and then I had $13.92 left from it.

I go to school with my sister and brother. I am in the fourth grade and I like to go to school. —Mabel.

Robin Redbreast.

Little Robin Redbreast sat upon a tree,
Up went pussy cat, and down went he;
Down came pussy cat, and away Robin ran;
Said little Robin Redbreast, "Catch me if you can."

Little Robin Redbreast jumped upon a wall,
Pussy cat jumped after him, and almost got a fall;
Little Robin chirped and sang, and what did pussy say?
Pussy cat said naught but "Mew," and Robin flew away. —Anon.

International Sunday School Lesson.

Lesson for May 7, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

The Missionaries of Antioch.

LESSON TEXT—Acts 11:19-30; 12:25; 13:12.

GOLDEN TEXT—Go ye, therefore, and make disciples of all nations—Matthew 28:19.

An interesting introduction to this lesson would be to review the outstanding features of the life of Barnabas up to this time. His attractive character, introduction and associations with Paul are full of rich and suggestive lessons. Following Peter's deliverance of last Sunday's lesson we read of the end of the vile Herod (12:20-25). The origin of this Antioch church was perhaps in A. D. 40, following the dispersion after the death of Stephen (11:19-26). These converts gave proof of their new love by ministering to the brethren in Jerusalem (11:27-30).

I. A Great Church (11:19-30). (1) Their testimony. This new sect, "Christians" (v. 26) made a deep impression upon this great city though as yet its testimony was to the Jews only (v. 19). The first evangelists to this city from the home of Judeaism at the outset, however, spake to Gentile Greeks. (a) They "spake the word" (v. 19), as travelers and fugatives they carried the message wherever they journeyed. (b) "They prached Jesus," the only message that will reach and stir an entire city. (c) They did it in a conversational way (v. 20 R. V.). (2) The workers (3:1). It is an amazing array of names mentioned as one of the results of this Antioch revival. Step by step God has widened the sphere of activities of those who accepted the gospel, and with every step the stamp of divine approval was seen (11:21). Those who "turned unto the Lord" not only believed but gave evidence of repentance and under the leadership of Barnabas, who had brought Saul with him from Tarsus (v. 25), large numbers were assembled and taught (v. 26). This ministry of teaching is a commendable type of evangelism and while the term "Christian" is applied to these followers of Jesus (not of Barnabas and Saul), it was doubtless first applied in derision, and it has become the accepted and glorious title (often abused or confused with Christendom) of those who follow our Lord.

II. A Great Commission (13:1-3). The separation which took place after Barnabas and Saul had resided in the city for a year's time (11:26), and while they were meeting with such outward success reminds us of the way the spirit separates Philip from his work in Samaria (8:6, 26, 27). The Holy Spirit knew what was best for these followers of Jesus as the results demonstrated. Among the great leaders the Spirit separated two for this particular task, and the quietness with which it was done as suggested by the text, is in marked contrast with most of our modern plans for "advanced steps." No "dollar dinner" or committee luncheons and meetings. This duty was presented: (1) While in the discharge of their regular duties, "as they ministered" (v. 2). Just the form of this ministry is not accurately stated, but it included fasting and prayer (v. 3): and it "was to the Lord." There are plenty today who can do "church work," but far too few who can minister to the Lord (not to people) and who can by fasting and prayers know what the mind of the Spirit is relative to any advance steps needful in the church. (2) Under the Spirit's direction. Just how the Spirit spoke to this people we do not know nor much care, but his message was unmistakable, whether audible or in the deep recesses of their hearts. (3) It came while they prayed. An overly filled stomach is apt to divert a Spirit-filled mind. But an attitude of prayer is the only one which can render us susceptible to the Spirit's voice. He is ever ready to speak and if we supply the open heart and the ready mind there will be no vague, uncertain impulse such as men often call "the Spirit's voice;" rather a definite task.

III. A Glorious Conquest (v. 4-12). (1) The journey (v. 4). It was but natural for the leader of this expedi-

tion to direct his steps first to his home (4:36). If our testimony will not receive a hearing at home it is not of any great value. (2) The work (v. 5). They followed the same plan as before, entered the synagogues where teaching and discussion were the order of service and, to the Jews, gave the "word of God" (Matt. 5:17). Are we able to thus teach the word, how Jesus "fulfilled" and what the result is in that he did fulfill "all righteousness?" (3) The resistance (v. 6-8). Bar-Jesus, or "Elymas, the sorcerer," must not be confused with our modern necromancers or sleight-of-hand artists. He was a leading scientist of his time and his position in the Roman deputy's household is significant. He readily saw that for the deputy to hear the gospel would destroy his power and influence (v. 8). Paul, now first so-called (v. 9), knew the blight of blindness, physical and spiritual, and caused this man, temporarily (v. 11) to be smitten even as he had been (9:8, 17, 18). The deputy had desired to "hear" (v. 7) the Word.

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1366—Ladies' house dress with reversible fronts, with or without collar, with sleeve in either of two lengths and with cap. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The cap is cut in one size only, medium. The pattern for the dress requires 7 yards of 36-inch material for a medium size. The cap requires ¾ yard of 27-inch material.

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1422—Girls' overblouse dress with guimpe. The pattern is cut in four sizes: 6, 8, 10 and 12 years. It requires 1½ yards of 27-inch material for the guimpe for an 8-year size, with 3½ yards of 36-inch material for the dress.

1715—Ladies' apron, with or without sleeve. The pattern is cut in three sizes: Small, medium and large. It requires 6¾ yards of 36-inch material for a medium size, with sleeves, without sleeves, 6 yards.

1696—Boys' blouse suit with shield. The pattern is cut in four sizes: 3, 4, 5 and 6 years. It requires 3 yards of 44-inch material for a 4-year size.

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1693—Dress with or without peplum, with sleeve in either of two lengths for misses and small women. The pattern is cut in three sizes: 16, 18 and 20 years. It requires 6½ yards of 36-inch material for an 18-year size.

1397—Girls' dress with sleeves in either of two lengths. The pattern is cut in four sizes: 2, 4, 6 and 8 years. It requires 3 yards of 44-inch material for a 6-year size.

1328—Ladies' shirt waist with convertible collar. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. In size 36 the pattern will require 2⅜ yards of 44-inch material for a 36-inch size.

1375—Ladies' dress with sleeve in either of two lengths, and with eight-gore skirt. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8 yards of 36-inch material for a 36-inch size.

Waist 1718, Skirt 1719—A pretty summer gown. Waist 1718 cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1719 cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. The entire dress requires 8¾ yards of 44-inch material for a 36-inch size. Two separate patterns 10 cents for each pattern.

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New Use For Onions.

The well-known offensive odor of the onion has suggested to some enterprising gardeners that it be turned into an asset, using it in defensive work against insects. A multitude of tests show that nearly all insects are averse to the onion. They appear to have a keen sense of smell and not only refuse to eat it but will not haunt the neighborhood where they smell it.

It is easy to see how this fact can be utilized. You have only to plant the onions with the other vegetables which you wish to protect. An Arkansas peach grower claims to have perfectly controlled the borer by planting winter onions near his trees. It is probable that this variety of the onion is the best to use for this purpose, because of its intense strength and odor. Those who have tried it claim that planting the onion in the hills of melons, cucumbers and squashes will discourage the yellow beetle and save the vines. This method of fighting is so easy that it is worth a thorough test.

Tomato vines have been recommended for this same purpose and it is very likely that their odor will disgust any self-respecting bug, but the difficulty is to get the tomato big enough to use at the time the bugs appear.

We suggest that gardeners try, say three sets per hill, of the winter onion for all those tender vines which the yellow bug eats. If you cannot easily get that sort of onion use the sets of other varieties and about the time the bugs are expected crush some of the onion leaves. By doing this you can liberate the odor, making it strong enough for all reasonable use.

The "enlistment" of dogs in the hospital corps of the United States army is assured if legislation recommended by Surgeon Gen. William C. Gorgas is passed by congress. General Gorgas appeared before the house military affairs committee to urge the enactment of a measure permitting the feeding of the dogs from the food stores of the army. The value of the work of dogs in hunting out the wounded on the battle fields already has been recognized by European nations. The German army is using 6,000 of the animals in its hospital service.

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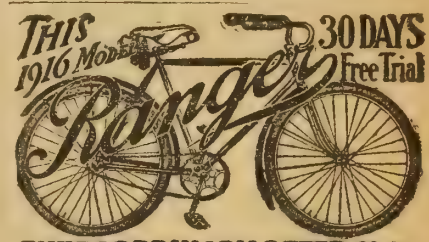

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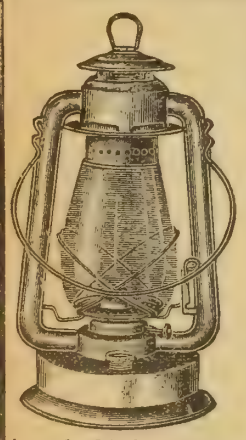

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THE WISCONSIN FARMER
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An Old-Fashioned Farm Kitchen.

Our Grandmothers and Great-Grandmothers Did Not Have the Modern Kitchen Ranges and Utensils Used in Farm Homes Today.

THE scene illustrated herewith will be a familiar one to the older folks, but some of our younger readers will have to be told that it is an old-fashioned farm kitchen. The farm housewife of today will ask at once, "Where is the kitchen range?" or "Where do they do the cooking?"

Only within the past fifty years have ranges and modern cooking utensils come into common everyday use on the farms of the country. The scene herewith depicted illustrates a farm kitchen of seventy-five years ago. In revolutionary days such kitchens were common and a kitchen like the one herein shown was regarded as a model in the early days of settling up the grain-belt states. Some years before the war between the North and South a number of fine farm homes had sprung up near the Mississippi river in Wisconsin, Illinois, Iowa and Missouri and many of them had kitchens very similar to the one shown herewith.

The old-fashioned fireplace was the stove. The fire was held in place by use of "dogs" or "andirons" shown in the center of the picture. Cooking usually started when there was a fine bed of coals and this was made possible by using good-sized dry logs. From one side of the fireplace a long crane made of wrought iron extended over the blaze of coals. This crane was heavily braced and would hold several pots and kettles. The pots and kettles were suspended from the crane by means of pot-hooks of varying length. There was no way to regulate the heat so the pots had to be moved up and down to get them farther away or closer to the fire.

All of the utensils were iron and very heavy. The modern farm woman with her granite ware and aluminum ware would consider the old-fashioned utensils very heavy indeed.

Hanging at one side of the fireplace is the bellows which was used to "poke up" the fire or to start it when things moved rather slowly in the early morning. The teakettle was almost always singing over the fireplace and it was a peculiar kettle in that it had an iron standard in front by means of which it was tipped forward so that the water would run out easily. Modern compartment utensils were not heard of in those days and every article of food prepared was placed in a separate kettle. About the only exception to this was when the popular "boiled dinner" was on the menu. We still have our "New England Boiled Dinners," but they are prepared much differently than in the olden days.

Our women readers may wonder how the housewife seventy-five years ago heated irons on ironing day. Most farm women had what was called an iron furnace and this was filled with hot coals and covered with a flat lid. The flatiron rested on the lid until heated. Occasionally on a big ironing day the coals had to be changed several times, but it is surprising how long good live coals will retain heat in a furnace of this kind.

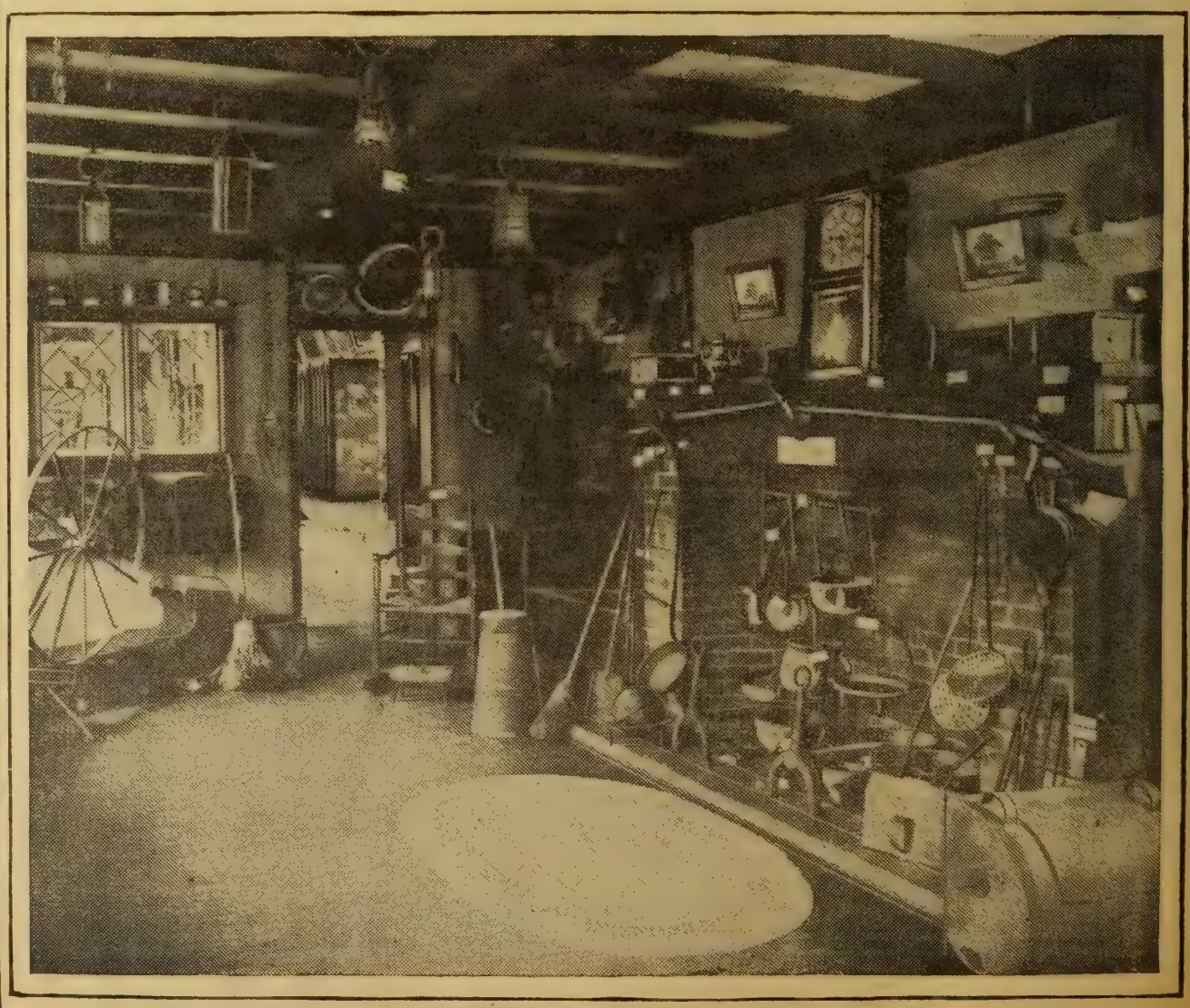
At the left of this fireplace rests a globelike utensil which is the old-time coffee roaster. Our ancestors did not get roasted and ground coffee in packages as we do now, but bought the green beans and placed them in this roaster which has a crank and can be revolved rapidly to keep the coffee from burning. The roaster was set on the fire when the coals were low.

At the extreme right of this picture is an old-fashioned "Dutch oven." This was used in colonial days for roasting birds and joints. The carcass was fastened by means of skewers and the oven turned with its open side toward the fire. The opening in the back was provided in order that the bird or roast might get the proper amount of basting without the cook getting her hands burned. Basting was considered a most important part of roasting by our earlier housewives. The skillet, frying pan and spider were in universal use seventy-five years ago. Now the names are often used interchangeably, but in those days each utensil had a separate use and identity. The spider was used for baking hoe-cake, a coarse bread made from Indian meal, salt and water. The skillet was considerably like a spider in appearance, but was smaller across and deeper, and was used for boiling eggs, making gravy and gruel. The frying pan was very much the sort of an utensil as the housewife uses today for frying chops and steaks. It was supplied with long iron legs and could be set in on top of the fire. A great many such pans were in early use in Wisconsin among the pioneers. Often the pan had a long iron handle sometimes with a wooden end, the purpose being to save the cook from the heat of the fire. Another common utensil of the early days was the griddle which was much like the griddle of today, only heavier, and with sides about three-quarters of an inch in height. Evidently they made thicker pancakes a hundred years ago than they do today.

It was, of course, very hot about this old-time kitchen fire and the cook was supplied with long iron forks. Hanging at the right of the fireplace will be seen a couple of skimmers, used to take grease off soups or to strain the water off any vegetables when taken from the pot.

Resting on the floor in front of the fire and near the "Dutch oven" is the broiler. The side toward the fire is open and supplied with sharp points which held the meat in place.

The scene herein shown is typical of the very early days in this country, having been universal in the homes of the colonists, and copied in the West until stoves and other more modern kitchen utensils came into use. This picture was taken in the historical museum of Wisconsin and the exhibit was gathered by the state. Parts of the exhibit came from many points in the West and from New England and New York. While not all of our western people, even the older ones, have ever seen a kitchen like this, they do remember the days when all cooking was done by the fireplace and when the spinning wheel, wooden cradle, churn and the rag rug graced the culinary department. The mantel clock shown in this picture is typical of the old days and there are many farm homes where such a clock is still running today.



FARM KITCHEN SCENE IN COLONIAL DAYS.

HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

CHAPTER XIX.

Couleur de Rose.

HEPSEY had been so busy with helping the Maxwells that for some time no opportunity had occurred for Jonathan to press his ardent suit. Since his first attempt and its abrupt termination he had been somewhat bewildered; he had failed to decide whether he was an engaged man open to congratulations or a rejected suitor to be condoled with. He tried to recall exactly what she had said. As near as he could recollect it was: "I'll think it over and perhaps some day—" Then he had committed the indiscretion of grasping her hand, causing her to drop her stitches before she had ended what she was going to say. He could have sworn at himself to think that it was all his fault that she had stopped just at the critical moment, when she might have committed herself and given him some real encouragement. But he consoled himself by the thought that she had evidently taken him seriously at last; and so to the "perhaps some day" he added, in imagination, the words "I will take you;" and this seemed reasonable.

The matter was more difficult from the very fact that they had been on such intimate terms for such a long time, and she had never hitherto given him any reason to think that she cared for him other than as a good neighbor and a friend. Ever since the death of his wife she seemed to feel that he had been left an orphan in a cold and unsympathetic world, and that it was her duty to look after him much as she would a child. She was in the habit of walking over whenever she pleased and giving directions to Mary McGuire in regard to matters which she thought needed attention in his house. And all this had been done in the most open and matter-of-fact way, so that the most accomplished gossip in Durford never accused her of making matrimonial advances to the lonesome widower. Even Jonathan himself had been clever enough to see that she regarded him much as she would an overgrown boy, and had always accepted her many attentions without misinterpreting them. She was a born manager and she managed him; that was all. Nothing could be more unsentimental than the way in which she would make him take off his coat during a friendly call and let her sponge and press it for him; or the imperative fashion in which she sent him to the barber's to have his beard trimmed. How could a man make love to a woman after she had acted like this?

But he reminded himself that if he was ever to win her he must begin to carry out the advice outlined by Mrs. Betty; and so the apparently unsuspecting Hepsey would find on her side porch in the morning some specially fine corn which had been placed there after dark without the name of the donor. Once a fine melon was accompanied by a bottle of perfumery; and again a basket of peaches had secreted in its center a package of toilet soap "strong enough to kill the grass," as Hepsey remarked as she sniffed at it. Finally matters reached a climax when a bushel of potatoes arrived on the scene in the early dawn and with it a canary bird in a tin cage. When Hepsey saw Jonathan later, she remarked casually that she "guessed she'd keep the potatoes, but she didn't need a canary bird any more than a turtle needs a toothpick, and he had better take it away and get his money back."

However, Jonathan never allowed her occasional rebuffs to discourage him or stop his attentions. He kept a close watch on all Hepsey's domestic interests, and if there were any small repairs to be made at Thunder Cliff, a hole in the roof to be mended, or the bricks on the top of the chimney to be relaid, or the conductor pipe to be readjusted, Jonathan was on the spot. Then Jonathan would receive in return a layer cake with chopped walnuts in the filling, and would accept it in the same matter-of-fact way in which Hepsey permitted his services as general caretaker.

This give-and-take business went on for some time. At last it occurred to him that Mrs. Burke's front porch ought to be painted, and he conceived the notion of doing the work without her knowledge, as a pleasant surprise to her. He waited a long time for some day when she should be going over to shop at Martin's Junction—when Nickey usually managed to be taken along—so that he could do the work unobserved. Meantime, he collected from the hardware store various cards with samples of different colors on them. These he would combine and re-combine at his leisure, in the effort to decide just what colors would harmonize. He finally decided that a rather dark blue for the body work would go quite well, with a bright magenta for the trimmings, and laid in a stock of paint and brushes, and possessed his soul in patience.

So one afternoon, arriving home burdened with the spoils of Martin's Junction, great was Mrs. Burke's astonishment and wrath when she discovered the porch resplendent in dark blue and magenta.

"Sakes alive! Have I got to live inside of that?" she snorted. "Why, it's the worst lookin' thing I ever saw. If I don't settle him," she added. "—paintin' my porch as if it belonged to him—and me as well," she added ambiguously. And, catching up her sunbonnet, she hastened over to her neighbor's and inquired for Jonathan. "Sure, he's gone to Martin's Junction to see his brother, Mrs. Burke. He said he'd stay overnight, and I needn't come in again till tomorrow dinner-time," Mary McGuire replied.

Hepsey hastened home, and gathering all the rags she could find, she summoned Nickey and Mullen, one of the men from the farm, and they worked with turpentine for nearly two hours, cleaning off the fresh paint from the porch. Then she sent Nickey down to the hardware store for some light gray paint and some vivid scarlet paint, and a bit of dryer. It did not take very long to repaint her porch gray—every trace of the blue and the majenta having been removed by the vigorous efforts of the three.

When it was finished, she opened the can of scarlet, and pouring in a large quantity of dryer she sent Nickey over to see if Mary McGuire had gone home. All three set to work that evening to paint the porch in front of Jonathan's house. At first Mullen protested anxiously that it was none of his business to be painting another man's porch, but Mrs. Burke gave him a look which changed his convictions; so he and Nickey proceeded gleefully to fulfill their appointed task, while she got supper.

When the work was quite finished Hepsey went over to inspect it, and remarked thoughtfully to herself: "I should think that a half pint of dryer might be able to get in considerable work before tomorrow noon. I hope Jonathan'll like scarlet. To be sure it does look rather strikin' on a white house; but then variety helps to relieve the monotony of a dead alive town like Durford; and if he don't like it plain he can trim it green. I'll teach him to come paintin' my house without so much as a by-your-leave, or with-your-leave, lettin' the whole place think things."

As it happened, Jonathan returned late that night to Durford—quite too late to see the transformation of his own front porch, and since he entered by the side door as usual, he did not even smell the new paint. The next morning he sauntered over to Thunder Cliff, all agog for his reward, and Mrs. Burke greeted him at her side door, smiling sweetly.

"Good mornin', Jonathan. It was awful good of you to paint my front porch. It has needed paintin' for some time now, but I never seemed to get around to it."

"Don't mention it, Hepsey," Jonathan replied affably. "Don't mention it. You're always doin' somethin' for me, and it's a pity if I can't do a little thing like that for you once in a while."

Hepsey had strolled round to the front, as if to admire his work, Jonathan following. Suddenly he came to a halt; his jaw dropped, and he stared as if he had gone out of his senses.

"Such a lovely color; gray just suits the house, you know," Mrs. Burke observed. "You certainly ought to have been an artist, Jonathan. Any man with such an eye for color ought not to be wastin' his time on a farm."

Jonathan still gazed at the porch in amazement, blinked hard, wiped his eyes and his glasses with his handkerchief, and looked again.

"What's the matter with you? Have you a headache?" Hepsey inquired solicitously.

"No, I haven't got no headache; but when I left that porch yesterday noon it was blue, and now I'm blamed if it don't seem gray. Does it look gray-like to you, Hepsey?"

"Why certainly! What's that you say? Do you say you painted it blue? That certainly's mighty queer.

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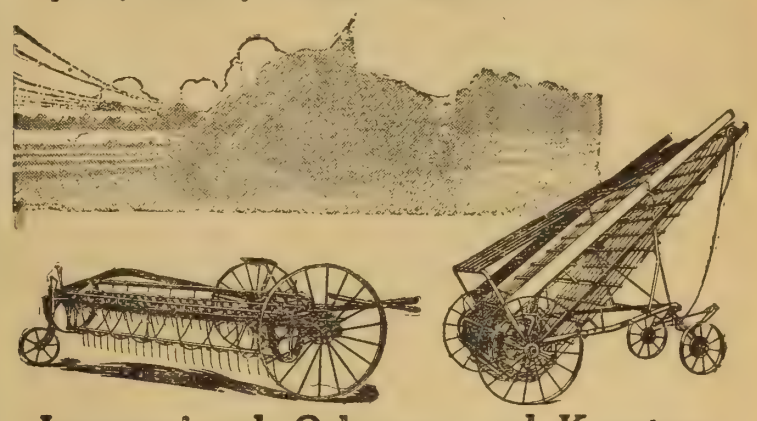

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If you ted your hay after mowing and do not throw it up in windrows, use a rake loader which takes in 8 feet of swath, elevates the hay to a height of 9 feet, and is handled by one man on the load. It gets in close to the fences; it handles the hay as gently as any good farmer could wish, and it rakes clean.

International, Osborne, and Keystone side delivery rakes, tedders, rake loaders, windrow loaders, sweep rakes and stackers, are sold by I H C dealers wherever farmers use these machines. If you want to get your hay in with the least trouble and expense, in the least time, and in the best condition, buy International Harvester hay tools. Write us for catalogues.

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But then you know some kinds of paint fade—some kinds do!" She nodded, looking suspiciously at the work.

"Fade!" Jonathan sneered. "Paints don't fade by moonlight in one night. That isn't no faded blue. It's just plain gray. I must be goin' color blind, or something."

"It looks gray to me, and I'm glad it is gray, so don't you worry about it, Jonathan. Blue would be somethin' awful on the front of a white house, you know."

"Well," continued the bewildered junior warden, "I'm blessed if this isn't the queerest thing I ever see in all my born days. If I catch the fellow that sold me that paint I'll make it lively for him or my name isn't Jackson."

"Oh, I wouldn't do anything like that! What difference does it make, so long as I like the color myself; it's my house. I should have been very much put out if you'd painted it blue; yes, I should."

"But I don't like to be cheated down at the store; and I won't, by gum! They said it was the best quality paint! I'll go down to Crosscut's and see about this business, right now. I've traded with him nigh on twenty years, and he don't bamboozle me that way."

Hepsey turned away choking with laughter, and retreated to her kitchen.

Jonathan started back towards his house to get his hat and coat, and then for the first time he caught sight of his own porch, done in flaming scarlet, which fairly seemed to radiate heat in the brilliant sunlight. He stood motionless for nearly a minute, paralyzed. Then the color began to rise in his neck and face as he muttered under his breath:

"H'm! I'm onto the whole business now. I ought to have known that Hepsey would get the best of me. I guess I won't go down to Crosscut's after all."

Then he walked up to the porch and touched the scarlet paint with his finger and remarked:

"Set harder than a rock, by gum! She must have used a whole lot of dryer. I'll get even with her for this. See if I don't."

In the afternoon Jonathan brought over some fine apples and presented them to Hepsey, who was knitting on her side porch. She thanked him for the gift, and the conversation drifted from one thing to another while she waited for the expected outburst of reproach which she knew would come sooner or later. But curiously enough, Jonathan was more cheery and cordial than usual, and made no allusion whatever to the scarlet porch, which was conspicuously visible from where they sat. Again and again Hepsey led the conversation around to the point where it seemed as if he must break covert, but he remained oblivious, and changed the subject readily. Not a word on the subject passed his lips that afternoon.

Then, from day to day the neighbors called and inquired of her if Jackson had gone off his head, or what was the matter. His flaming porch outraged Durford's sense of decency. She was at her wits end to answer, without actually lying or compromising herself; so the only thing she said was that she had noticed that he had been acting a bit peculiar lately, now they mentioned it. As time went on, the scarlet porch became the talk of the town. It was duly discussed at the sewing society, and the reading club, and the general sentiment was practically unanimous that Jackson must be suffering from incipient cataract or senile dementia, and needed a guardian. Even Mary McGuire remarked to Mrs. Burke that she was afraid "that there front porch would sure set the house on fire, if it wasn't put out before." Everybody agreed that if his wife had lived, the thing never could have happened.

Meantime, Jonathan went about his daily business, serene and happy, apparently oblivious of the fact that there was anything unusual in the decoration of his house. When his friends began to chaff him about the porch he seemed surprised, and guessed it was his privilege to paint his house any color he had a mind to, and there was no law ag'in' it; it was nobody's business but his own. Tastes in color differed, and there was no reason in the world why all houses should be painted alike. He liked variety himself, and nobody could say that scarlet wasn't a real cheerful color on a white house.

Occasionally people who were driving by stopped to contemplate the porch; and the Durford Daily Bugle devoted a long, facetious paragraph to the matter. All of which Mrs. Burke knew very well, and it was having its effect on her nerves. The porch was the most conspicuous object in view from Hepsey's sitting-room windows, and every time she entered the room she found herself looking at the flaming terror with increasing exasperation. Verily, if Jonathan wanted revenge he was getting far more than he knew; the biter was badly bit. The matter came to a crisis one day when Jonathan concluded a discussion with Mrs. Burke about the pasture fence. She burst out abruptly:

"Say, Jonathan Jackson, why in the name of conscience don't you paint your porch a Christian color? It's simply awful, and I'm not goin' to sit in my house and have to look at it all winter."

Jonathan did not seem greatly stirred, and replied in an absent-minded way:

"Why don't you move your sittin' room over to the other side of the house, Hepsey? Then you wouldn't have to see it. Don't you like scarlet?"

"No, I don't like it, and if you don't paint it out, I will."

"Don't do nothin' rash, Hepsey. You know sometimes colors fade in the moonlight—some colors, that is. Maybe that scarlet porch'll turn to a light gray if you let it alone."

Mrs. Burke could stand it no longer; so, laying down her work she exploded her pent-up wrath:

"Jonathan Jackson, if that paint isn't gone before tomorrow, I'll come over and paint it myself."

"Oh, that isn't necessary, Hepsey. And it might set people talkin'. But if you won't move your sittin'-room to the other side of your house, why don't you move it over to my house? You wouldn't see so much of the red paint then."

Hepsey snorted and spluttered in baffled rage.

"Now, now, Hepsey," soothed Jonathan, "if that don't suit you I'll tell you what I'll do: I'll paint it over myself on one condition!"

"And what's that, I'd like to know?"

"That you'll marry me," snapped Jonathan hungrily.

Instead of resenting such bold tactics on the part of her suitor, Mrs. Burke gazed at him a long time with a rather discouraged look on her face.

"Land sakes!' she exclaimed at last with assumed weariness and a whimsical smile, "I didn't know I'd ever come to this; but I guess I'll have to marry you to keep you from makin' another kind of fool of yourself; widowers are such helpless mortals, and you certainly do need a guardian." She shook her head at him despondently.

Jonathan advanced towards her deliberately, and clinched the matter:

"Well, Hepsey, seein' that we're engaged—"

"Engaged? What do you mean? Get away, you—" She rose from her chair in a hurry.

"Now Hepsey, a bargain's a bargain: You just said you'd have to marry me, and I guess the sooner you do it and have it over with, the better. So, seein' that we are engaged to be married, as I was about to remark when you interrupted me . . ." Relentlessly he approached her once more. She retreated a step or two.

"Well! Sakes alive, Jonathan! Whatever's come over you to make you so masterful. Well, yes then—I suppose a bargain's a bargain, all right. But before your side of it's paid up you've got to go right over and paint that porch of yours a respectable color."

So, for once, Hepsey's strategy had been manipulated to her own defeat: Jonathan went off to town with flying colors, and bought himself a can of pure white paint.-To be continued.

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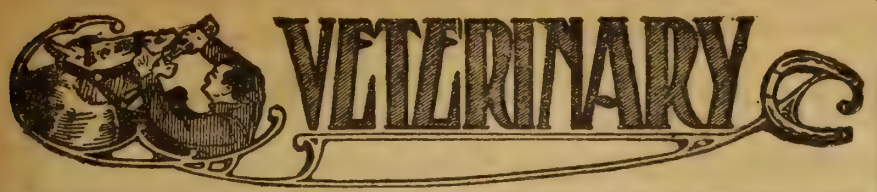

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Sidebone.

Will you please tell me if sidebone causes lameness in horses? I have a brown Morgan mare coming six years old that has been lame since last fall and I cannot see anything wrong with her except that she has sidebones on her front foot. At first she only limped when trotting. Last week I put her on the disk one day and since that she has been worse. One veterinarian told me sidebones did not cause lameness. Another said it was the cause and gave some medicine to blister them with, which I am using now. The mare is with foal.

Sidebone in the acute stage of development causes lameness, while in horses where its development has been arrested before going far the lameness is not noticed much. Even a sidebone that is "killed," so to speak, may cause lameness if it attained considerable size.

Black Teeth in Pigs.

I have pigs about two weeks old. They have sore mouths and I would like to know what is the cause and what could be done for it. The roof of the mouth and nose is sore and the lower jaw is festered. They have black teeth, but I don't know whether that would cause the trouble or not. My neighbor's pigs have black teeth and are doing well. What do those teeth look like and how many do they have? Do they have them below and above?

Black teeth in young pigs often cause a very painful, swollen condition of the tongue. These teeth are found on each side and usually project in such a way as to injure the tongue. These teeth should be removed with a pair of pincers. It does not seem, however, that these teeth are causing the trouble in your pigs. It is possible your pigs have either a stomatitis or have become infected with the bacillus causing necrobacillosis. Would advise you to clean and disinfect the pens and also clean and scrape off any scab formation on the pigs and wash the affected parts with a 2 to 5 per cent solution of creolin or lysol.

Sows Farrowing Dead Pigs.

I have a herd of thirty last spring sows that were bred last December and are now due to farrow. Some will have one or two live pigs and the rest in the litter are one-third formed, while most of the sows have no live pigs at all. The pigs are about four or five inches long and seem to be almost petrified. I have two male hogs which are full brothers. At breeding time last December I put fifteen sows to each male hog. I put them in pens far enough away so they could not see each other. I have been feeding corn and water, same as I have always done in the past, with the exception that this winter I have fed some stock food. My sows are Duroc Jerseys, as are the male hogs also. They have always had good appetites and have not been sick and do not seem sick now when they lose their pigs. They are always up for their feed. What do you think about breeding them two weeks from now to a different male for fall pigs? Please let me know what to do.

We have heard considerable complaint from farmers in regard to sows losing their pigs, some of which are mummified, some seem to have died just a short time before birth and other cases seem to be where the mother has had a case of abortion. Now, it is hard to say just what is at the bottom of some of these cases, but we have thought in some that it was a lack of exercise during the winter months, in others the feed seemed to be at fault and in still others too many pregnant sows were kept together and consequently some became injured. In your case we can see very little cause for trouble in the feed, but probably you have not let them have sufficient exercise. If there has not been any trouble with your sows on your premises before and these sows are of your own raising we see no reason why you should not breed them again as soon as the effects of the farrowing or abortion have passed off.

Nasal Discharge.

I have a five-year-old mare that discharges from one of her nostrils a sort of bloody pus which has a very bad odor. She has been smelling badly for a year, but I thought it was a bad tooth. I had that removed this winter, but with no benefit. At first she discharged a little when she was pulling or working heavy, but now it is all the time. She foaled April 3d. Her colt is in good shape, strong and all right every way. Can you tell me a cure, as this is a valuable mare.

It would seem from your description that your animal is suffering from diseased turbinates (turbinate bones of the head) or else has a diseased condition of the sinuses existing. There are a number of conditions which may cause such a discharge or a similar one. One must know just what is causing the condition before he can advise proper treatment. Your local veterinarian should be able to give you some light on this condition after making an examination. Things to be looked for where nasal discharges are found are such as diseased turbinates, diseased sinuses, decayed teeth, glanders and catarrhal conditions of the nasal chambers.

Abortion in Cows.

We would like a little advice on the subject of contagious abortion. We have about thirty high-grade Shorthorn cows and we are beginning to lose calves. About a year ago we shipped in a load of cows, some of which aborted and have since been disposed of. Now this spring the disease has spread to our own cattle. Can you give us a line of treatment that will enable us to keep our cows over, or would it be best to ship everything out and start afresh? We hate to do this, as it will be hard to replace them.

This subject has been handled before through the veterinary columns, but it will not come amiss in being published again. Contagious abortion is not only hard to handle, but brings about losses financially from losing calves, etc. Those which have not aborted should be kept in clean, sanitary quarters away from those affected. When a cow aborts the calf, afterbirth and secretions should be burned or buried in lime, and the infected quarters thoroughly disinfected with five ounces of sulphate of copper to one gallon of water. Bulls which serve the cows should have the sheath and belly washed before and after each service with 1 to 2 per cent creolin solution. Cows which have aborted should have their womb and vagina irrigated daily with a warm antiseptic solution until discharge has discontinued. They should not be bred for two or three months after aborting. One should not forget that this trouble is easily spread, and too much care cannot be taken. All body excretions, such as vaginal discharge, feces, urine, etc., are carriers. The use of abortus bacterin has proven quite successful in the hands of competent veterinarians. If one will use the abortus bacterin and use all other means of disinfecting, etc., results may be expected, but it takes time and patience. One should use care in introducing new cows on infected premises and have the bacterin used on them. You should employ the services of a veterinarian to give you first-hand advice, which he will be able to do after looking over the herd and the premises.

Soil conditions have an important relation to potato tuber diseases and many of these are widely spread throughout the country, perhaps native to some soils. Common scab is favored by a neutral or slightly alkaline soil and seldom gives trouble in acid soils. It is, therefore, increased by liming and by fresh stable manure, wood ashes and alkaline fertilizers, such as nitrate of soda and ground bone, while acid phosphate and sulphate of ammonia tend to diminish scab.

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

A Great Sale of Holsteins to be Held at Marshfield, Wisconsin.

ON Wednesday and Thursday, May 10th and 11th, there will be a sale of Holstein cattle at Marshfield, Wis., that should appeal to all lovers of this breed. For this, the third public sale made by this association, the consignors are selling Holsteins superior to any sold in previous sales. This is not a sale where the culls, non-breeders and tuberculin cattle are sold, but one where animals of the choicest breeding and individuality will be offered. The Marshfield consignors enjoy the reputation for square dealings and you will find the same thing true of this coming sale. In all 125 head of Holsteins have been listed by consignors whose names appear in the advertisement which is on page — of this issue. T. F. Vannedom, of Marshfield, will contribute three head that would be attractions in any sale. Mr. Vannedom has the honor of raising the grand champion female of the 1914 dairy show, Minerva Beets 85791, and the three head that he is selling are of the same high-class caliber. Imig Bros., popular breeders of Neillsville, Wis., are consigning several head, among them being an eight-months-old bull that is a comer. His dam and sire's dam average 29.41 pounds butter. Here is a good herd bull prospect. They are also selling five females, four of which are out of A. R. O. dams and all are sired by their good breeding bull, Plain View Johanna Fayne. J. Schmidt, of Arpin, has one of the good herds of Wood county. Several cows in his breeding herd have good seven-day and yearly records and twelve cows that were in the local testing association made an average of over 50 pounds butter fat during the month of February. The fact that he is selling some of these good cows or their daughters should prove drawing cards. E. E. Butters, Marshfield, and one of the live wires of the association, is selling some good bulls in the sale. Among them is one out of a twenty-two-pound two year old. Those attending this sale will be most comfortable, immaterial of weather conditions, for the sale will be held in one of the most modern sale pavilions in the Northwest. The catalog is very complete and interesting and will appeal to all lovers of this breed. If you haven't received your catalog you will get one if you will write E. E. Butters, Marshfield, Wis., and mention The Wisconsin Farmer. Don't forget the time and place and arrange your business so that you can attend one or both days. See page 29.—Adv.

Birch & Thompson's Hereford Sale.

BIRCH & THOMPSON, Lake Geneva, Wis., will hold their second annual sale of Hereford cattle on Thursday, May 18th, on their farm, one mile east of Williams Bay. The writer recently had the pleasure of spending a day at this farm and looking over this worthy and well-known herd of white-faced cattle. This herd is not surpassed nor even equaled, but by few herds, either in breeding, in breed type or in development. The foundation stock came from the well-known herd of Thompson & Son, Illinois, who have been breeding for a quarter of a century. The bulk of the breeding is along the noted Bonnie Brae and Beau Perfection lines. For several years a show herd has been sent out from this farm and the many ribbons won testify to the high quality of the animals shown. The offering in the sale consists of forty-eight head of choicely bred and developed animals. There are fifteen yearling bulls, several of which are outstanding individuals and worthy of the attention of the best breeders. They are great show prospects and will prove great breeders. The offering of females is especially attractive all the way through, and our readers who are in the market for a few additional females cannot afford to miss this opportunity. Colonel Reppert assisted by Colonel Igelheart will cry the sale. H. S. Hoard will represent The Wisconsin Farmer. All trains coming to Walworth, Elkhorn and Williams Bay will be met. For further information write to the above address. When writing kindly mention The Wisconsin Farmer. See page 30.—Adv.

Chief Defender-Big Col.

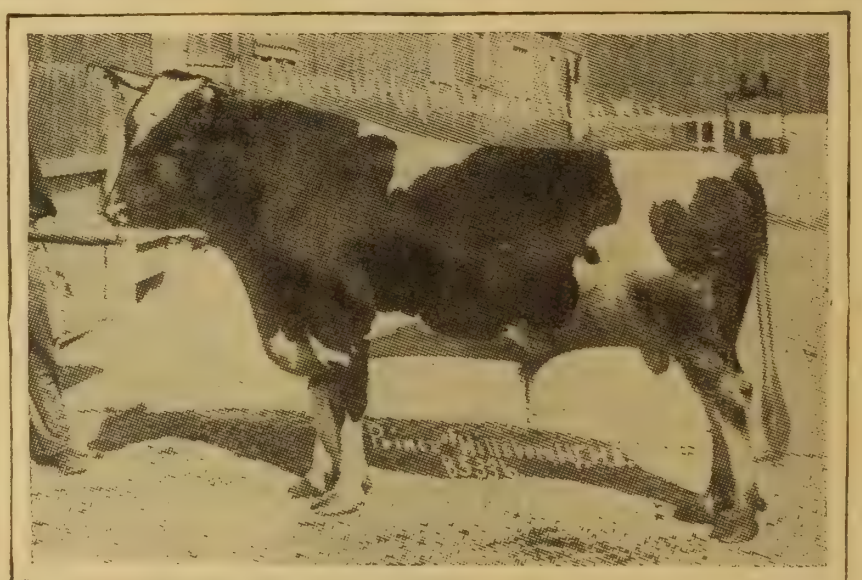
WE have just had a letter from Geo. H. Willsie, Prosper, Minn., owner of the two great boars, Chief Defender by Defender and Big Col. by King the Col. Some time ago we called attention to these boars as being two of the best Duroc boars that we have seen in the Northwest. Mr. Willsie writes that he is raising the best bunch of pigs he ever had farrowed on his farm, most of them by the above-mentioned boars. The sows in this herd are big and having litters by these two big-type boars the result should produce something good. Don't forget about these boars and this herd. The owner doesn't care to sell anything at this time, though I suppose he would price a pair or a trio and if he will it would be a good place to send your order. If you write please mention The Wisconsin Farmer. See page 31.—Adv.

Freehoff's Berkshires.

W. A. FREEHOFF, of Waukesha, Wis., whose Berkshire advertisement is appearing regularly in this paper, is offering a herd boar at a bargain. His is Sallie's Superbus, a son of the great Superbus at the head of the Corsa herd. He is two years old, a fine individual and a sure breeder of large litters. If bought within the next month, he will be sold for $50; or gilts will be taken in exchange. Mr. Freehoff is also offering a fine lot of sows being bred for fall farrow at $35 to $50 and not a cull in the lot. Better add one of these to your herd. He also has five fine fall boars for sale at $15 to $35, depending on quality. When writing him, mention this paper. See page 32.—Adv.

Lindauer's Holsteins.

ANOTHER choicely bred Holstein bull is advertised for sale on page 32 by L. Lindauer, Kaukauna, Wis. This young bull was born September 20, 1915. He was sired by King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Both of these bulls were sired by the thirty-seven-pound bull, King Segis Pontiac, a son of King Segis and both of them were out of daughters of King of the Pontiacs and the cow, Alcartra Polkadot Ormsby. The dam of the young bull offered for sale at two years and four months of age made fourteen pounds of butter in seven days. She is a granddaughter of the noted bull, King Segis and also Sir Hengerveld Model Johanna, that has twenty-four A. R. O. daughters with very creditable records, several of them above twenty-five pounds of butter in seven days. His dam's dam, Rigtje 3d Lady Hengerveld, at three years and three months of age, made 22.96 pounds of butter. As official testing is continually being done in this herd, the young bull offered for sale, will grow more valuable the next time his dam is tested. For an extended pedigree and further information write to the above address.—Adv.



PRINCE OF HILLSBORO 85336. Sire of the twenty-one-pound Holstein bull advertised for sale on page 32 by Griem & Hipke, New Holstein, Wis.

The 1916 I. H. C. Hay Tools.

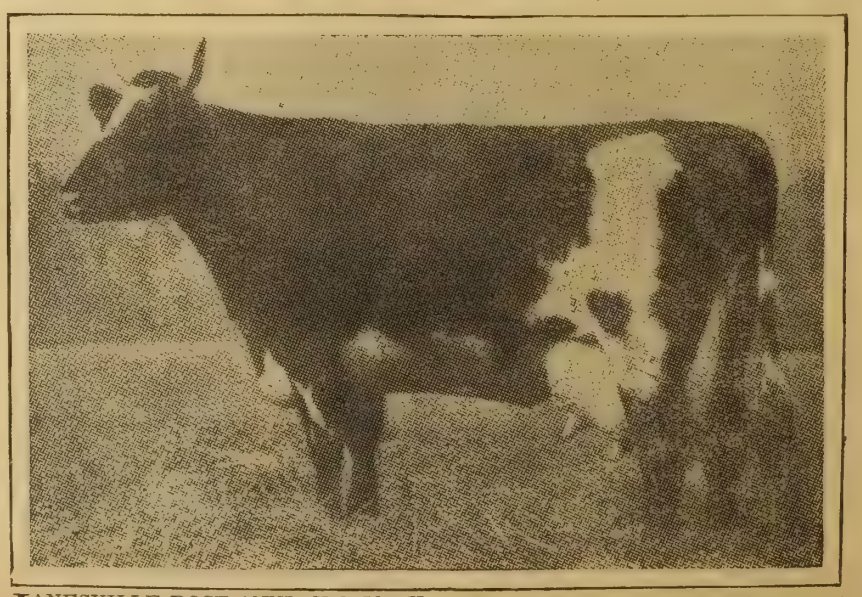
HOW are you supplied with hay tools, this season? Perhaps you will need a new rake or loader. If so, you should see the new 1916 International, Osborne and Keystone side delivery rakes and hay loaders, and decide what you want before the haying season starts. These new side delivery rakes are all left-hand rakes, which enables them to take up the stems as the mower drops them, pick them up broadside, and slide them into light, airy windrows without crumbling the leaves. The cylinders can be raised or lowered at both ends, giving perfect adjustment. The new hay loaders are made as windrow or rake loaders. They are easily hitched to the hay rack and the man on the load can unhitch them by simply pulling a rope. All of these tools have the superior strength and durability characteristic of machines made by the International Harvester Company. They are for sale by all I. H. C. dealers. Be sure to send for the catalogs of these tools; address International Harvester Company, Chicago, Ill., and kindly mention this paper. See page 25.—Adv.

Hank Derenthal's Chester Whites.

IT will please the many friends of Hank Derenthal to know that he will be able to leave the hospital, where he has been since Thanksgiving, on April 24th, and after that one can find him among his good Chester Whites at Wykoff, Minn. Mr. Derenthal has, perhaps, the best herd of this breed in the state, at least animals from his herd have won more premiums than his competitors. The boar that helped to put this herd "on the map" was Wykoff Lad, a boar that has five championships to his credit. No one in the state has more good sows than Mr. Derenthal and some of the best are by this boar. He has retained one of the best sons of Wykoff Lad for his own use. This boar he has named Ignatz and even though being handicapped with such a name, he succeeded in winning junior champion honors at Minnesota, North Dakota and La Crosse Interstate Fairs. Around 150 pigs represent the spring crop and they are doing fine at this writing. He expects to get busy with his show stuff and if he takes out a herd you will, of course, see one that is fitted to the minute, for Mr. Derenthal is a caretaker. We will have more to say about this herd in the future.—Adv.

Angus Bulls and Females for Sale.

F. C. LEWIS, Bridgeport, Wis., is offering some young Angus bulls and a few females for sale. These are very choice individuals and the prices asked is reasonable. Here is your opportunity. Write for prices and description and please mention The Wisconsin Farmer. See page 30.—Adv.



JANESVILLE ROSE 12TH. Vol. 58. Has a record of 336 pounds of 4.1 per cent milk in seven days. Sire, Gifford Clay 152044. Her dam, Janesville Champion Rose 102, gave at St. Louis World's Fair in 120 days 3,563.5 pounds of milk which made 149 pounds of butter. Owned by Harvey H. Little, Evansville, Wis., whose herd contains many descendants of this great cow. See page 31.

Cloverdale Farm.

ONE of the beautiful farms of Rock county, Wis., is "Cloverdale" owned by Jas. Van Etta, Lima Center, breeder of registered Clydesdale horses, Ayrshire cattle and Duroc Jersey swine. Even though Mr. Van Etta has not been before the public long, as a live stock breeder, he has demonstrated the fact that he can bring out stock as good and oftentimes better, than his competitor. If the owner's plans materialize, Cloverdale will be one of the most modern farms in the state. We do not mean that it will be a "picture farm," but the buildings will be up to date and modern for the purpose intended. Mr. Van Etta was the only breeder from Wisconsin that was represented at the World's Fair. He showed his Clydesdale horses and was the heaviest winner showing this breed. The breed's sensational horse was Charter Oak, first-prize aged stallion and grand champion of the show. This horse was owned and shown by Mr. Van Etta and now heads the Cloverdale stud of "Clydes." Charter Oak is the flashiest mover of this breed that we have ever seen—he has wonderful knee and hock action and goes perfectly straight. He is a wonderful stallion from inheritance, being a grandson of the one and only Baron's Pride, on the sire's side, his dam, Mae Summers, is by Prince Punctual, the greatest sire that Donald Campbell ever owned, and he in turn by Handsome Prince, the stallion that made such a reputation for the McLay Brothers. There is a wonderful two-year-old stallion on this farm. We will give you his show record and you can judge for yourself. As a yearling: First at Iowa and Wisconsin State Fairs, first and reserve champion at the Minnesota State Fair. As a two-year-old he was first at Iowa and Minnesota and second in the open class at the World's Fair. He will be a hard colt to beat in his class this fall. Of the mares on Cloverdale Farm, a rising two year old is the attraction. She is a wonderful filly in all respects. She was shown at the Iowa State Fair as a foal and was first and reserve champion. She was shown in her yearling form at the coast and was placed second. She is out of Princess Hansome by Hansome Prince, the only mare that ever won first at the International four times. We will have more to say about the "Clydes" at a later date, but bear in mind the fact that they have few equals in the country. Within the past year an Ayrshire herd has been added and we are glad to say that they are in keeping with the individual excellence of the other pure-bred stock on the farm. Those that follow this breed of cattle know of the great Ayrshire herd owned by John Sherwin, Willoughby, Ohio, said to have the largest herd in America. Mr. Van Etta purchased thirty-five head and several calves from Mr. Sherwin. Of the thirty-five head purchased twenty-four have A. R. records. White Cloud of Hickory Island is the sire of nine head of females in this herd that have large milk and butter records. This bull has twenty-seven A. R. daughters whose average milk production is larger than that of any other bull of the breed. At the present time two young bulls are being offered for sale, either of which are herd bull prospects. One born August 3, 1915, mostly white, sired by imported Craigbrae Lord Roseberry by Craigbrae Buccleuch, out of Bonnie Miss Casanet of So. Farm and her dam has a three-year-old record of 480 pounds butter and 11,141 pounds milk. Here is an excellent individual and he is being priced far below his value. The other bull being offered was born October 22, 1915, evenly marked and sired by So. Farm Spicy John, whose dam has a record of 598 pounds butter. The dam of the young bull is Miss Flossy of So. Farm whish has six A. R. sisters. This cow was sired by the White Cloud bull mentioned above. It would be hard to get better backing than these two young bulls have and as individuals they will bear inspection. We urge anyone in need of an Ayrshire bull to investigate these—they will please you. Notice the advertisement on page 31. Write for further information and please mention The Wisconsin Farmer. —Adv.

Complete Farm Buyers' Directory Free.

THE Farm Directory, just issued by the Strout Farm Agency, should be in the hands of every person who is interested in buying a farm. In this booklet are listed 360 carefully selected farms which are for sale, in the fertile districts of the eastern states, from Maine to Maryland, and west to Ohio. Accurate descriptions and prices of these farms are also given; the location, buildings, character of soil, markets and shipping facilities are clearly set forth, and the terms of sale are stated with the price. For ready reference, this handy farm buyer's directory is divided into ninety separate sections and the advantages of each region are concisely stated. Another advantage of this directory is the complete directions given for reaching each farm, while the name, address and telephone number of the nearest Strout Farm Agent are also included. The experienced farmer or the city man who wants to get back

125 PURE-BRED HOLSTEINS FOR SALE

A Few Pure-Bred Guernseys, One Pure-Bred Percheron Draft Stallion and Two Grade Percheron Draft Mares also offered at

MARSHFIELD, WIS., WEDNESDAY-THURSDAY, MAY 10-11

AT THIS the third sale in the magnificent sale and show barn in Marshfield, a better quality of stock is offered, and there is every promise that this sale will make new records. Breeders in the vicinity of Marshfield are united in their efforts to produce better stock and they have been meeting with wonderful success. A picture of the sale and show barn in which this sale is to be held will be found herewith. This barn contains 176 patent stanchions and sixteen box stalls. We have ample room to show stock and give buyers the best of chance to see what they are buying. There is a sixty-foot sale ring in the center of this barn with seats for over 1,000 people. One hundred and twenty-five pure-bred Holsteins will be offered for sale on the above dates and place. T. F. Vannedom, of Marshfield, will contribute three head that are stable mates of Minerva Beets 85791, grand champion at the 1914 dairy show. Mr. Vannedom raised the above cow, and what he is contributing is of the same quality. Imig Bros., of Neillsville, are putting six head in the sale, one an eight-months-old bull whose dam and sire's dam average 20.4 lbs. butter. The five cows are as follows: A two-year-old daughter of a 14-lb. two year old. A three-year-old daughter of a 20 lb. three year old. The other three have 20-pound dams. Four of the five are A. R. O. cows, and all are sired by Plain View Johanna Fayne. Jake Schmidt, of Arpin, is consigning several head. In this herd we have some very good yearlings as well as seven-day records. Mr. Schmidt has twelve cows in the local cow-testing association. Last month they averaged over fifty pounds of butter fat. E. E. Butters is offering some very good bulls. One from a 22-pound two year old. Others about equally good. Following are the names of some of the other contributors: J. C. Kieffer & Sons, Auburndale; Wm. Krause, Thorp, Wisconsin; McMillan Bros., McMillan, Wisconsin; F. W. Fisher, Thorp, Wisconsin; John F. Kelley, Neillsville, Wisconsin; C. H. Imig, Junction City, Wisconsin; O. J. Leu, Grand Rapids, Wisconsin. A few pure-bred Guernseys will be offered. One pure-bred Percheron draft stallion. Two grade Percheron draft mares, and one good farm team. For catalog write to

E. E. BUTTERS

MARSHFIELD -:- WISCONSIN

to the land can get a vast fund of reliable information from this booklet, without cost. Simply send a post card or letter request to the Strout Farm Agency, who have offices in Boston, Philadelphia and New York City, and mention this paper.—Adv.

A Pioneer Poland China Breeder.

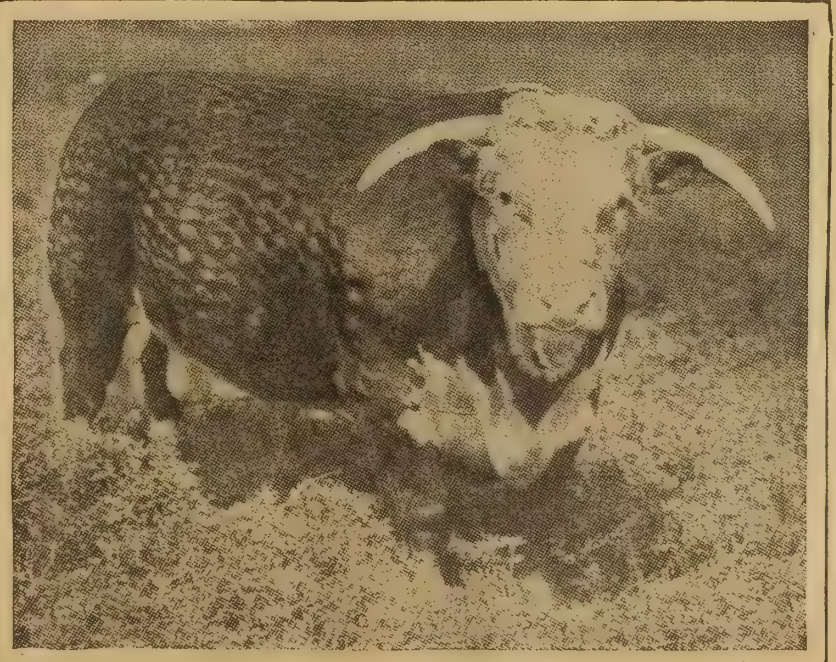
WE doubt if there is a breeder of Polands in the state of Wisconsin that has been in the game longer than R. Meinking, of Bangor, Wis. He bought his first pair of registered Poland Chinas some twenty-five years ago and since that time he has never ceased to raise the pure-bred Polands. His first pair of pigs cost him $75 and many in his locality thought that he would surely go broke paying so much for a couple of pigs. The fact that he stayed by the Polands this quarter of a century should be proof that they have made him money. Naturally Mr. Meinking has been through the ups and downs of the hog game—has seen the fads come and go, but he continued to "raise hogs." Mr. Meinking's favorite early strains were the Sunshines, Perfections and Bankers. When the tide turned to the big type he did not sell off his hogs at once and go in for the big, rough boar, but stayed by the type it had taken years to build up. We all know that the medium type had the quality that we all like, but we also know that they didn't have the size that we liked best. This breeder, like many others, kept his best medium-type sows and bred them to a big-type boar. He increased the individual size of his herd, yet he maintained that wonderful smoothness and quality. He has some sows of the strictly big-type breeding, one being a daughter of Big Joe out of a dam by A Wonder 107353. He has the Hadley-Chief Price 2d cross. Some are sired by boars of Big Bone 2d breeding. His present herd boar is Big Victor by Victor, tracing to Big Bone. His dam is by Blue Valley Exp. Jr. by Blue Valley Exp. This is a real good boar, full of quality and will weigh at this time right at 700 pounds in his two-year-old form. We saw a grand spring litter by this boar out of a line-bred Dry Creek Chief sow. This is some litter. In all he has around 130 pigs, most of which are of March farrow. At the present time fall boars are being offered for sale. They are nicely grown and we feel confident they will make good. Write R. Meinking, Bangor, Wis., and let him tell you about his Poland Chinas. Don't forget to mention The Wisconsin Farmer. See page 31.—Adv.

Reid's Yellow Dent Seed Corn for Sale.

HIGH quality Reid's Yellow Dent seed corn is advertised for sale on page 16 by J. N. Hutchinson, Dixon, Ill. This corn will test from 95 to 98 per cent germination. It is an early maturing corn and will do well where the growing season is from ninety to one hundred days long. If you want good seed corn of strong vitality, write to Mr. Hutchinson for it.—Adv.

The Alcartra Family of Holsteins.

THE Alcartra family of Holsteins has attracted the attention of the whole dairy world continuously for the past twenty years. Wisconsin may well feel proud of this great family of Holsteins, for wherever found, whether in the hands of experts or ordinary dairymen, or whether in California, Wisconsin or New York, they prove to be outstanding animals. This has been true of the Alcartra-bred cows in the herd of Griem & Hiphe, New Holstein, Wis. Nine years ago they purchased the cow, Nig Alcartra Pearl, a daughter of the great bull, Pearl of the Dairy Joe De Kol, which has seventy-five A. R. O. daughters. Her dam was Nig Alcartra 2d which has six A. R. O. daughters, a record equalled by but few cows. Three of her daughters have records of 23.95, 24.18 and 25.49 respectively. However, her daughter, Nig Alcartra Pearl, has equalled her record and also has six A. R. O. daughters, three with records of 21.60, 24.22 and 27.54 pounds respectively. Nig Alcartra Pearl is therefore a heavy producing cow which has inherited heavy producing blood and has transmitted it to her daughters. In breeding she is 75 per cent the same blood as the great cow, Alcartra Polkadot, which astounded the dairy world many years ago by making the then world's record of twenty-six pounds of butter in seven days. She now has a twenty-nine-pound record. Nig Alcartra Pearl is by the same sire and is out of a sister to her dam. Tilly Alcartra, a granddaughter of Alcartra Polkadot, holds the world's milk record by giving 30,000 pounds of milk in a year and 60,000 pounds in two years. Another member of the Alcartra family that startled the dairy world was when a half interest in the bull, King Segis Pontiac Alcartra, sold for $25,000. He is a close descendant of Alcartra Polkadot. It will be seen that the Alcartra family is one of exceptional productive ability and their worth is recognized by the best breeders. At the present time Griem & Hipke are advertising a yearling bull for sale on page 32. He is out of Nig Alcartra Pearl Daisy that made 21.60 pounds butter and 89.86 pounds butter in thirty days. She is a daughter of the foundation cow, Nig Alcartra Pearl, and her sire was Bergsmer Canary Paul that has twenty A. R. O. daughters. The bull offered for sale is sired by Prince of Hillsboro 4th that already has five A. R. O. daughters and a large number of others to go on test in the fall. For an extended pedigree and further information in regard to this bull write to the above address.—Adv.



BEAU PERFECTION 33D, sire of many of the Herefords to be sold May 18th by Birch & Thompson, Lake Geneva, Wisconsin. See page 30.

Reports Good Boar Sales.

WE have just had a letter from L. F. Atwater, the popular Duroc breeder, of Bangor, Wis., advising that he has 160 spring pigs, 120 of which came in March. These are sired by the champion, Lee's Defender, the champion, Prince Illustrator, and Model King, a son of the many times champion, High Model. This is a grand assortment of breeding and buyers will have an opportunity to buy the very best this fall. At this time Mr. Atwater has a few fall boars that are ready to ship. Most of them are by Lee's Defender and out of the good, big sows for which the Atwater herd is noted. He is also offering three yearlings. One is by Lee's Defender, one by Corrector and one Model Gano boar. Among the recent sales he reports the sale of a yearling to Cedar Lake Farm, Mikana, Wis. This boar Mr. Atwater expected to retain for the shows this fall, but he got his price and let him go. Another yearling has been sold to John H. Cashel, Worthington, Minn. One yearling has gone to Nels Johnson, Waukon, Iowa. Those who will want a boar to use for fall litters should get busy at once and make your selection before the boars have been picked over. We might say right here that the good fall boars are very scarce this year, for owing to the short corn crop few breeders carried them over. So again we say, order early. Write Mr. Atwater. He has boars for the breeder and farmer and prices them accordingly. Don't forget to mention The Wisconsin Farmer. See page 31.—Adv.

Popularity of the Velie Six Is Growing Tremendously.

THE volume of sales of the Velie Six for April were much greater than for any similar period, and still greater increases are expected. Without doubt, the Velie Six is growing in popularity tremendously. The reason for this lies in the exceptional quality of the car and a broadening knowledge of the soundness and integrity of the Velie organization. The Velie Six offers all

that may be expected in a combination of beauty, convenience, comfort and economy. A few of the prominent Velie features are listed in the advertisement on page 9; you should have a catalog, if you would be interested in a new car, and learn all about the Velie. Write for one today to the Velie Motor Vehicle Company, Moline, Ill., and please mention this paper.—Adv.

The Best Two-Year-Old Duroc Boar We Have Seen in Wisconsin.

THE above is a pretty strong statement to make, but we make it without fear of contradiction. There may be another boar equally as good "in the woods" some place that we have not seen, but the McClurg Bros., of Viroqua, Wis., have the best boar of this age and breed that we have seen in the state. This boar has just turned two years old—March 22, 1914—and he is some boar from end to end. The McClurg Bros. are young in the game and have not pushed this boar at all and he is not fat by any means, yet he will weigh right at 700 pounds now. The writer measured him, with his head up, and from his poll to the root of his tail he measured sixty-four inches; understand, that is not from tip to tip. He has a sixty-two-inch heart girth and with the cord pulled tight he showed an eight and one-half-inch bone. He is as smooth as he can be made, has a wonderful back and few boars of the breed have better or deeper hams. Those of our readers who expect to show boars of this age at the state fair want to get busy right away, for if the owners will give him proper care it is going to take a good boar to beat him. He is sired by Lee's Defender and his dam, Golden Queen 38th, was by Golden Model 2d. He gets his size from the Defender side and his wonderful quality from the Golden Models, a most desirable cross. Just keep this boar in mind and if any of our readers have a boar that they think is a contender we would be glad to have them write this office, for we are trying to get a line on the good boars of the state. Another young boar in this herd is Royal King 4th. This fellow is a March yearling and one of great frame, though very thin at this writing. He is sired by the $2,650 boar, Royal King. As above mentioned this boar is very thin, yet he has an excellent, strong arched back, has good bone and with a little finish is a very fair boar—above the average. the only one made which can be run at varying speeds without losing cream. It skims clean at thirty-five, forty-five or fifty-five revolutions a minute with equal efficiency. Experiment stations have shown that a considerable amount of cream is lost by some separators when the speed is reduced. Such is not the case with the Sharples. In addition the Sharples is an exceptionally easy separator to operate and clean. The low supply tank makes it easy to fill; the crank turns easily; and there are no discs to wash and bother with. If you keep dairy cows for profit, the the Sharples catalog will interest you. Write today for a copy. Address The Sharples Separator Co., West Chester, Pa., and kindly mention this paper in your letter. See page 19.—Adv.

A Great Herd of Poland Chinas.

WHEN talking about a good Poland China herd one can't overlook the one owned by E. W. Hendricks, Hazel Green, Wis. He is a brother to J. C. and if you think these boys can't produce Polands you are mistaken. J. C. has been in the business longer than his brother, but E. W. is such a close second for his brother that there is no fun in it. In all herds there is some one boar that has been instrumental in making a reputation for his owner. Big Bug was a wonderful boar in this herd, but his true value wasn't realized until his daughters had come to maturity. Big Bug was by Big Bone. The sensation as a breeder in this herd at the present time is Black Jumbo, a boar that is a wonderful producer. Black jumbo is sired by Heavy Bone, he a grandson of Big Bone. His dam, Big Mollie is by Chief Nelson, he in turn by Chief Price 2d. With this breeding, is it any wonder that he is a breeder out of the ordinary? In Mr. Hendricks' last winter sale, the first one he ever held, eleven gilts sired by Black Jumbo made an average of $79. Eleven sows bred to him averaged $81.50. This showed what the breeders thought of him and knew it was to their advantage to get some of his blood in their respective herds. There is a fall yearling in this herd that is siring a likely bunch of Polands. His name is Big Oakland and is sired by the 1,000-pound boar, Oakland's Equal, that by the way is a full brother to what Henry Fesenmeyer thinks is the greatest boar he ever owned since A Wonder-Big Joe. The dam of Big Oakland is A Wonder Belle by A Wonder 107353. It will be no accident if this boar makes one of 1,000 pounds at maturity. Most of the spring pigs are by Black Jumbo and E. W. will have some Polands to show his friends this fall that will be "eye openers." Mr. Hendricks can tell some of the "old timers" something about raising big-type Polands and when some of you Poland China breeders want to see some of the good herds of the state just make it a point to visit this herd. We will have more to say about this good herd in the future; in the meantime if you are in need of anything in the way of Polands, this would be a good herd to investigate. His advertisement appears in this issue and if you write please mention The Wisconsin Farmer. See page 31.—Adv.

NEXT WEEK'S SALE PROGRAM

Monday, May 8	Holsteins, Frank Ubbelohde, Sec., Plymouth, Wis.
Wednesday, May 10	Holsteins, Guernseys and Percherons, E. E. Butters, Marshfield, Wis.
Thursday, May 11	Holsteins, Guernseys and Percherons, E. E. Butters, Marshfield, Wis.

These gentlemen are offering three fall gilts and three fall boars for sale, sired by Prince Defender, the first boar mentioned. As is the general rule this year, the fall stuff has not been cared for as they should have been and these boars and gilts are no exception to the rule. Of the gilts there is one that is worth what they are asking for the three if someone will take her and grow her out. There is also one real good fall boar. Here is a chance for someone to get bargains in either gilts or boars. Better buy the three gilts and if this boar gets the place we think he will at the state fair, you can double your money. In case you write McClurg Bros. for information or prices will you please mention the fact that you saw the advertisement in The Wisconsin Farmer. See page 31.—Adv.

Don't Overlook Hauk Brothers' Angus.

IF you are interested in Aberdeen Angus cattle you will be pleased with the herd owned by Hauk Brothers, Cassville, Wis. They haven't the largest herd in the state, but they have some good individuals and they have a choicely-bred bull at the head of their herd. Ther breeding herd represents the noted families of the breed. They have a few bulls of serviceable age and some fine youngsters that will be ready for service in a very short time. Maybe you are not ready for a bull at this time, but it would be well to get a "line on" this herd and then when you want something in the future you would know where to find the class of stock you want. We gladly recommend this herd. In writing for pedigree and other information, will you kindly mention The Wisconsin Farmer? See this page.—Adv.

Write Today for the Sharples Catalog.

EVERY farmer and dairyman should have a copy of the Sharples catalog, "Velvet for Dairymen," because it contains valuable information on dairying subjects, particularly cream separators. This information is presented in an interesting, concise form for busy me to read. The new Sharples Suction-Feed cream separator is described in detail. This separator is claimed to be

WITTE

You can't buy any *good* engine at a lower price. You can't buy a *better* engine at double the price. Sold direct factory to user. Established 1870.

WITTE ENGINE WORKS,
2710 Oakland Av. Kansas City, Mo.
2710 Empire Bldg., Pittsburgh, Pa.

2 H-P. $29.95
3 H-P. $47.85
4 H-P. $64.75
6 H-P. $89.90
8 H-P. $129.80
Write for prices on sizes 12, 1 and 22 H-P.

Bulls From Milking Short-horns.

WITH this issue of The Wisconsin Farmer R. W. Lamb & Son, Janesville, Wis., start their advertisement offering five Short-horn bulls for sale. This name may not sound familiar to many of the Short-horn breeders, though the senior member of the firm has been breeding registered cattle since 1893. He started with the Bates families. They made good for him and he has stayed by them ever since. His original cows were of the Arabella and Duchess strains and many individuals of the present herd are descendants of these cows. The present herd bull is Choice Gift 385962 by Flashlight out of Bright Eyes tracing to imported Beauty. This bull has good scale and is siring a uniform lot of calves. The five bulls now offered for sale are sired by this bull and out of their good milking cows. These bulls are old enough for service and in nice condition for immediate use. They are red in color and good typey individuals. The owners wish to move them at once to make room for the spring crop of calves, consequently they are being priced below their real value. Anyone wanting a bull in the dual purpose class can find something suitable here. Notice the advertisement on this page and write for pedigree and prices. Please mention The Wisconsin Farmer when writing. —Adv.

Wenatchee, Wash.—A large golden headed eagle exhibited by Lee Haight at the Chelan County Poultry Show was given its freedom recently. After circling about town a short time it returned and sought entrance to its cage. It has been in captivity three months. It was captured near Coulee City, having been caught in a trap set for coyotes.

Birch & Thompson's 2d Annual

HEREFORD SALE

WILLIAMS BAY, WISCONSIN

THURSDAY, MAY 18, '16

A TYPICAL BONNIE BRAE HEIFER

48 HEAD Choicely bred and developed. 15 yearling bulls, 15 cows, 18 yearling and 2-year-old heifers of Bonnie Brae and Beau Perfection Breeding. This includes six head consigned by J. Price, Onalaska, Wis., (formerly of firm of Cargill & Price).

This is an exceptional offering of both males and females. Do not fail to attend.

We will meet trains at Walworth, Elkhorn and Williams Bay. Sale starts at 1 p. m. Auctioneers: Reppert & Igelheart. H. S. Hoard will represent The Wisconsin Farmer.

When writing for catalog kindly mention The Wisconsin Farmer.

BIRCH & THOMPSON, Lake Geneva, Wis.

JERSEY CATTLE.

Fewacres Farm's Jerseys

BULL, born Nov. 21, 1914, well grown, weighs over 800 lbs., is a grandson of **Nobles of Oakland**; his dam, a granddaughter of **Golden Fern's Lad**, gave **57 lbs. of milk per day** in official test. Other yearling bulls from heavy producing dams of choice breeding at reasonable prices. Send for charted pedigrees and pictures.

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTAD, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Yearling Jersey Bull

OF choice breeding, Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

TOO LATE TO CLASSIFY.

BULLS

FROM MILKING STRAIN OF

SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Holstein-Friesian Cattle.

June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

FOR SALE—PURE-BRED ANGUS BULLS and females of show caliber. F. C. Lewis, Bridgeport, Wisconsin.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS . . . HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

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I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
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HORSES.

IMPORTERS AND BREEDERS OF

PERCHERON, BELGIAN AND CLYDESDALE STALLIONS AND MARES

STALLION BUYERS ATTENTION. For the next thirty days we are going to reduce our prices on all of our big young stallions in order to close them out. We have very large bunch of big ton, rugged stallions running in ages from two to six years that must be sold this season, consequently anyone that is looking for a right good one will save money by writing to us and getting our prices and descriptions before buying. We especially have a very strong collection of Belgian stallions, in weight from a ton to 2,300 pounds, from two to five years old, that should be on some good farms the coming season. We also have ten tried sires, Percherons and Belgians, that we have taken in on trade on younger stallions, that we are offering very reasonable.

We are located in north central Iowa on the C. M. & St. P. R. R., midway between Mason City and North McGregor, Iowa. Send 20c in stamps for large horse calendar which shows our main farm and sales stables. Correspondence a pleasure.

FRANK P. SHEKLETON & SONS, LAWLER, CHICKASAW CO., IOWA

POLAND CHINA SWINE.

Martiny's Poland China Boars

15 FALL boars of September farrow, sired by Wisconsin Jumbo, the 1st prize and Jr. champion boar at the Wisconsin State Fair, 1914. I believe he was the biggest boar of his age shown that year, he weighing 510 pounds at eleven months old. This will be the last chance to get a herd header from this great boar. The wise man will raise a few fall pigs this year if he never did before. I will sell these boars now for less than they will bring for pork after you get through using them next fall, as I wish to make room for my 100 spring pigs I already have on hand.

L. P. Martiny **Chippewa Falls, Wis.**

POLANDS

HAVE some fine fall **BOARS** to be sold at **BARGAIN PRICES** during the next month. Write. Everything guaranteed.

R. MEINKING - - BANGOR, WIS.

BLACK JUMBO 221231

A FEW good Poland China sows bred for fall litters to the great boar, Black Jumbo.

BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks **Hazel Green, Wisconsin**

Big-Type Poland China Hogs

MARCH boars and gilts, good ones at $20 for 10 days. I will ship on approval. Also Short-horn cattle. Mention the Wisconsin Farmer and address

W. T. Hartley, R. 3, La Crosse, Wisconsin

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address

JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov of the Chene. Address

Charles Schmidt **Wrightstown, Wisconsin**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address

W. H. & B. L. Hanchett **Sparta, Wisconsin**

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.

Grenwode Farm, E. R. Whitcomb, Prop. Whitefish Bay, Wisconsin.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman **Fort Atkinson, Wisconsin**

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

Kindly mention this paper when writing

DUROC JERSEY SWINE.

LEE'S DEFENDER

THE CHAMPION OF CHAMPIONS

HAVE a few choice fall boars by **Lee's Defender** from my best sows. Also a yearling by **Model Gano** and one by **Corrector.** These boars must please you. Write and mention Wisconsin Farmer. **L. F. Atwater, Bangor, Wisconsin.**

Duroc Spring Gilts

OF Defender-Ohio King and Wonder lines of blood—bred for March and April farrow to

CRITIC TOP NOTCHER

half brother to the grand champion at the 1912 Nebraska State Fair. Send for pedigrees and description. Prices low for quick sale. Address

B. W. LITTLE **JANESVILLE, WIS.**

DUROC JERSEYS

CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)

HAVE the best spring pigs I ever raised. They are wonderful sires. Write.

Geo. H. Willsie - - Prosper, Minn.

McCLURG BROS.' DUROCS FOR SALE

SEPTEMBER farrow, either sex, sired by Prince Defender, a giant son of Lee's Defender. For future reference we have spring litters by Lee's Defender, Prince Defender and by Royal King 4th, a son of the $2,650 Royal King, grand champion. Write McClurg Bros., Viroqua, Wisconsin.

DUROC JERSEYS

HAVE had a big trade in gilts and am sold out. We have an **Orion Cherry King** boar and one by **The Chief's Col.** Keep this in mind for future reference. Address

E. H. PARKER & SON, JANESVILLE, WIS.

HIGGINS' MODEL DUROCS

NOTHING to sell, but still in the game. J. W. Higgins, Gotham, Wis.

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

AYRSHIRE CATTLE.

Breeding Ayrshire Bull Individuality

BORN August 3, 1915. Sire: imported **Craigbrae Lord Rosebery** 15001. Dam: **Bonny Miss Casanet of So. Farm out of** 480 pound three-year-old. He is more white than red and is guaranteed in every way. If you see him you'll buy him if you know Ayrshires. Your inspection and correspondence are invited. Write

Jas. Van Etta **Lima Center, Wis.**
(Rock County)

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. O. S. Hechtner, Chariton, Iowa.

HORSES.

FRANK IAMS'

Iams owns the three largest and best 2, 3 and 5-year-old Percheron Stallions in U. S. weight 2,100, 2,230 and 2,410 lbs., all "Paris and Gold Medal Winners." Iams owns "Dentist," "champion" double "Gold Medal" winning Percheron 3-year-old. Try Iams—"Dad." His Belgians are 'Eye-Openers." We take no chances. He sells horses "On honor" and all his horses will be sold at some price.

Is "closing-out" and has "reduced prices" on all his "Show and Business Stallions and Mares"—from $100 to $500 less than formerly on each stallion or mare—to make a quick "clean-up." He has all his largest and best horses—many "Big Snaps"—"Mr. Buyer." Be a "Self-Starter." 1916 is the "Get-Rich-Quick" year for "Up-To-Snuff" Horse Breeders—Pull the "Spark-Plug"—Plunge into the "Easy-Money Game"—Buy a stallion and a pair of mares of Iams—His "Big Horses" and "Cut Prices" are the "Town Talk." His 34 years of success in importing, breeding and selling 5575 registered horses, his "fifty trips" across the ocean—makes Iams a safe man to buy stallions from. His "old customers" are "best Page advertisers," his Breeding guarantee backed by "¼ Million Dollars." Iams Imported and Home-bred horses are "classy, model drafters" of big size, large bone, fine form, quality and finish. Many

"Gold Medal and State Prize-Winners,"

"Iams' Kind," and in the "Pink of condition." Bought at "Bargain Prices," and must be sold. Iams sells horses on Honor. A lady can buy as cheap as a man. Is not in the "Stallion Trust," and is selling more pounds of "Model Draft Horse" for the money than any competitor. Iams is cutting the middle out of high prices on his choice collection

OF PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, wt. 1,800 to 2,410 pounds, all "Branded," "Approved," "Registered" and "Inspected" by Governments of France and U. S., and certificates stamped "O. K." All "Inspected" by a Nebr. Deputy State Veterinarian, and certificates of "Health and Soundness" are given with each horse.

REGISTERED STALLIONS AT $800.00 AND $1,300.00

(Four little higher.) "Home-Breds" come cheapest. Terms cash, or one year's time at 7 per cent: land security at 6 per cent; $100 less price for cash than time. Iams pays freight and buyer's fare: gives 60 per cent breeding guarantee. Can place $1,500 insurance. Iams backs up his ads with $500 guarantee that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb., all St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address

M. Bodenheimer & Co. **Green Bay, Wis.**

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

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BATES DAIRY Short-horns

WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address

Geo. Wenham & Sons, Ft. Atkinson, Wis.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address

Harvey H. Little **Evansville, Wis.**

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SHORT-HORNS of quality for sale at reasonable prices. Four heifers coming 3 years old, safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also ten heifers coming one year old.

J. E. KENNEDY **JANESVILLE, WIS.**

MILKING SHORT-HORN BULLS

SIRED by KING CREST 39857, a Duchess of Gloster bred bull, and out of Arabella and Imp. Bertha bred cows. Prices right. Address

John Notseter **Deerfield, Wisconsin**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

IMPORTED STALLIONS

WE have a grand lot of imported and home bred Percheron and Be gian stallions for sale. They have size, big bone, quality and action. Ages from yearlings past to six years. Prices reasonable; terms to suit purchaser. Every horse fully guaranteed. Address

CHAMPLIN BROS., - - - - Clinton, Iowa

PERCHERONS

THE rugged kind with size and quality. We can suit you. A few imported horses and some extra good American bred colts. Barns in town. Co me and see what we have to offer.

W. E. PRICHARD & SONS

OTTAWA **ILLINOIS**

Homewood Stock Farm

IMPORTED and American-bred **PERCHERON** stallions and mares. First-class 2, 3 and 4-year-old stallions and mares with size, bone and quality at very attractive prices. A few big, sound, aged stallions very cheap. Every animal strictly guaranteed. Terms to suit. Call or write.

S. METZ & SONS, HOMEWOOD, ILLINOIS

CHESTER WHITE SWINE.

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address

W. F. Miller **West Salem, Wis.**

CHESTER WHITES

FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address

John Simon **Campbellsport, Wis.**

HOLSTEIN-FRIESIAN CATTLE.

THE PALMER FARM HERD

COMBINES individuality, breeding and high production. Two service bulls, bull calves and yearling heifers priced to sell. Come or write.

W. E. Palmer **Elkhorn, Wisconsin**

PURE-BRED BULL CALVES

FOR SALE. Sired by a 30-pound bull, several out of A. R. O. dams. Also a few high-grade heifer calves from one to twelve months old.

S. J. Lauderdale **Elkhorn, Wisconsin**

REG. HOLSTEINS

1 YEARLING bull, more black than white, well bred, $60.00. Bull calves from dams with records up to 25.72 pounds. Also some females. Herd headed by 31.37 pound bull. Write your wants to

E. A. Paddock **Elkhorn, Wis.**

HOLSTEINS

REGISTERED bull calves, great grandsons of Belle Korndyke; also high-grade heifers, two years old for sale.

E. J. Stearns **Elkhorn, Wisconsin**

HAMSTAFA HERD OF HOLSTEINS

SERVICEABLE aged bulls all sold. We breed for production, size and individuality. Write for prices on our fall bulls, or come and see them.

A. G. Palmer & Sons **Lake Geneva, Wis.**

HOLSTEIN BULLS

SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address

H. J. Barker **Elkhorn, Wisconsin**

Oak Lodge Stock Farm

THE place where show winners and large record makers are bred. Several bull calves from dams with A. R. O. records, some with good yearly records. Sired by bulls, 5 of whose 7 nearest dams have records of over 30 pounds of butter in seven days. Address

Harry D. Dunbar **Elkhorn, Wisconsin**

Farm 2½ miles southeast Elkhorn on state road

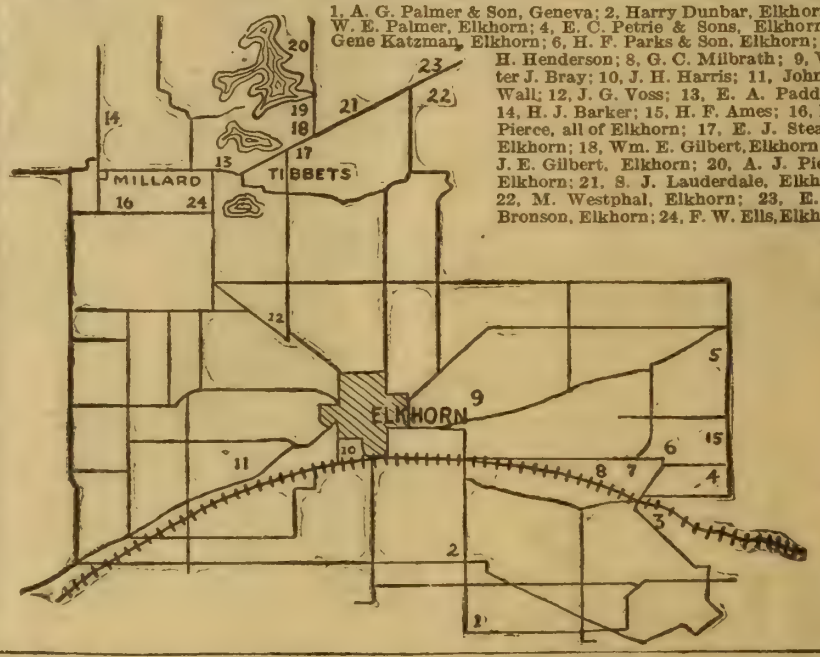
Holsteins For Sale

BULL from 26.41-pound dam, 9 months old; one from 19.60-pound dam, 7 months old. Also two yearlings from dams that will soon be tested. They are straight nice individuals, light color, all sired by Sir Pontiac Korndyke Count 82741, a 28.80-pound bull. Bull calf, one month old, from 22.31-pound dam sired by a 34-pound bull. Can spare a few young cows. For further information address

E. C. Petrie & Sons **Elkhorn, Wisconsin**

AN EXCEPTIONAL HERD SIRE

WESTSIDE LADOGA PRINCE 77130, practically perfect individual, proven sire, splendid breeder, 4 yrs. old, will be sold due to fact that he cannot be used longer in herd. Pedigree has no weak spots. His dam is a 27.38-lb. junior 3 year old, his nearest three dams average 27 lbs. and his nearest seven dams average 22 lbs. His paternal ancestors are likewise strong, the nearest three in particular have large number of A. R. O. daughters. Two Holstein bulls sired by Westside Ladoga Prince are also offered for sale. J.H.Harris, Holstein Dairy Farm, Elkhorn, Wis.



1, A. G. Palmer & Son, Geneva; 2, Harry Dunbar, Elkhorn; 3, W. E. Palmer, Elkhorn; 4, E. C. Petrie & Sons, Elkhorn, 5, Gene Katzman, Elkhorn; 6, H. F. Parks & Son, Elkhorn; 7, J. H. Henderson; 8, G. C. Milbrath; 9, Walter J. Bray; 10, J. H. Harris; 11, John H. Wall; 12, J. G. Voss; 13, E. A. Paddock; 14, H. J. Barker; 15, H. F. Ames; 16, Earl Pierce, all of Elkhorn; 17, E. J. Stearns, Elkhorn; 18, Wm. E. Gilbert, Elkhorn; 19, J. E. Gilbert, Elkhorn; 20, A. J. Pierce, Elkhorn; 21, S. J. Lauderdale, Elkhorn; 22, M. Westphal, Elkhorn; 23, E. H. Bronson, Elkhorn; 24, F. W. Ells, Elkhorn.

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Elkhorn, Wis.

REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

2 HOLSTEIN-FRIESIAN BULLS

BOTH from Advanced Registry dams. One just past two years old. Kind, sure and O. K. in all respects. More white than dark. Gets nice calves. Price $100. One about thirteen months. Dam's record over 17 pounds as a two year old. Nice individual, more dark than light. Big enough for heavy service. Price $100. For extended pedigree and complete description write me. Address

John G. Voss **Elkhorn, Wisconsin**

19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.

H. F. Parks & Son **Elkhorn, Wisconsin**

Two Bulls Left

OUT of my 822 pound herd sire, that has 30 A. R. O. daughters. No. 1, born March 16, 1915, a splendid show bull, ready for service, weight about 800 pounds, out of a 15.36 pound, two year old; price $100. No. 2, born October 8, 1915, well grown and evenly marked. Satisfaction guaranteed. Address

Earl Pierce **Elkhorn, Wisconsin**

MEADOW SPRING FARM HERD

now consists of 70 head of Holstein

COWS AND HEIFERS

BULLS all sold except a few calves. When in want of cattle COME to the Meadow Spring Farm or write

M. Westphal **Route 6, Elkhorn, Wis.**

SONS OF THE 35.43-POUND BULL

Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69, 24.65, 22.35, 20.46, 16.96. Here are bulls that will improve pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

HOLSTEINS FOR SALE

COWS and heifers bred to the 27.82-pound proven sire, Knight Errant 39566. Also bull calves from one to five months old sired by Champion Johanna Colantha 70478. Address

Gene Katzman **Elkhorn, Wisconsin**

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Breeder of registered cattle. Stock for sale at all times.

FOUR GRADE HOLSTEIN HEIFERS

TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn, Wisconsin.

FOR SALE

My herd bull

CANARY HOMESTEAD FRISBY 107723

For price and pedigree address

Walter J. Bray **Elkhorn, Wisconsin**

WELL MARKED

7-8 WHITE, yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address

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ELKHORN, WIS.

BREEDER of pure-bred Holstein-Friesian Cattle and Duroc Jersey Swine.

REGISTERED BULL

CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address

Wm. E. Gilbert **Elkhorn, Wisconsin**

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows.

BONNIE MEAD STOCK FARMS, Randolph, Wis.

400 HOLSTEINS

Pure-bred and high grade

Cows, Heifers and Service Bulls

THEY are first class individuals, well bred, tuberculin tested and right in every respect. Exceptionally low prices. (We have some choice GUERNSEYS.) Write for particulars. Address

EDGEWATER STOCK FARM, Fort Atkinson, Wis.

Young Holstein Bulls

SIRED by our Junior herd sire **Butter Boy Mink Pontiac** 133161, from tested dams. Also

CHESTER WHITE SWINE

both sexes. For pedigree and prices write Cook Brothers, Burlington, Wisconsin. Cedar Lawn Stock Farm.

WE NOW OFFER

Two Young Registered

HOLSTEIN BULLS

READY for service. Born in August, 1915, weight about 700 pounds each. Descendants of Berl Wayne's Paul De Kol and Bell Korndyke. Butter 25.77. Nicely marked, half white and half black. Straight as an arrow. First offering price $110 each F. O. B. cars Ashland, Wisconsin. Address

D. W. EMERSON, ASHLAND, WIS.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer **Kaukauna, Wisconsin**

ELM VALLEY HOLSTEINS

MY senior herd sire, Sir Canary Alcartra 78433, went to M. L. De Voin, Eureka, Wis. He is a grand bull and will be herad from in the future. I have a fine yearling bull sired by Comhurst Pontiac Prince 113096, a son of Pontiac Aaggie Korndyke, and out of a granddaughter of King of the Pontiacs, that made 15.830 butter, 7 days at two years old. Also a lot of yearling heifers and calves for sale. Address

A. L. ROWE **R. 4, WAUPACA, WIS.**

SONS OF THE 32-LB. HOLSTEIN BULL

COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 10 months old. Out of heavy producing dams.

Baltz Hoesly - **New Glarus, Wisconsin**

$35 WILL BUY

HIGH-GRADE yearling Holstein Bull. 99% pure. Dam a high producer. Also good hound pups, $3 and $4. Write Lawrence Mofried, Cazenovia, Wisconsin.

RED POLLED CATTLE.

RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigree and prices. Address

UNDERWOOD STOCK FARM

L. C. Underwood, Prop. **Avoca, Wisconsin**

RUST BROS.' STOCK FARMS

The Kind That Will Improve Your Herd.

29.74 lb. HOLSTEIN BULL

SIR Ida Lottie Cornucopia. His dam made 29.74 lbs. butter in 7 days, 816.91 lbs. butter in a year. She has 3 sisters with records of 27.54, 27.99, 28.63, 33.65. Her dam made 27.11. Here is a bull fit to head any herd. Send for picture and pedigree. Address

Arthur Rust **West Allis, Wisconsin**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Vn Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt - **Oxford, Wisconsin**

26.30-POUND HOLSTEIN BULL

THREE YEARS OLD. Dam's A. R. O. record, 26.30 pounds of butter in seven days. Another bull born May 27, 1915; dam's A. R. O. record, 24.48. These buls are straight individuals and nicely marked. Price $150 each. Write for pedigrees and description. Address

Truttschel Bros., Sheboygan Falls, Wisconsin

RED POLL Headquarters

YEARLING BULLS of herd-heading quality. **Breeding** and **individuality** the best. Write us. **J. W. SALTER & SONS, Unity, Wis.**

21.60-LB. HOLSTEIN BULL

BORN Dec. 30, 1914; ready for heavy service; well grown, good, straight type; sired by **Prince of Hillsboro** that has 5 A. R. O. daughters and is by a 27-lb. bull out of a dam testing 4.39% fat, dam of bull **Nig Alcartra Pearl Daisy**, A. R. O. record 21.60; her sire has 25 A. R. O. daughters; her dam is a daughter of **Pearl of the Dairy Joe De Kol**; she has 6 A.R.O. daughters and her dam has 6 A. R. O. daughters, an unusual combination. Send for pedigree.

Griem & Hipke - **New Holstein, Wis.**

Ready For Service
Holstein Bull

OF Johanna Korndyke Ormsby breeding, out of an A.R.O. dam. Straight and level; well grown and marked. Priced right. Address

W. D. McGILL - **Menomonee Falls, Wis.**

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

ADAM LORENZ

Sheboygan Falls **Wisconsin**

LOOK! RED POLL BULLS

1 YEARLING—1 two year old. Well grown, well bred. Priced right. Write at once. Guarantee satisfaction. Address

Natt Kimball **Black River Falls, Wis.**

HOLSTEIN BULLS

READY for service. Sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 28 pounds butter in 7 days. Dam, Spring Valley Lindora 241565, that gave 428.3 lbs. milk, 17 lbs. butter in 7 days; 13,129.8 lbs. milk, 558.3 lbs. butter in one year at 2 years, 20 days of age.

Monroe, Wisconsin

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

HOLSTEIN BULLS

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THE WISCONSIN FARMER

VOL. XLV. NO. 19. THURSDAY, MAY 11, 1916. WHOLE NO. 1789

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HE FEELS FINE

CURRENT EVENTS

THE American troops in Mexico will probably be withdrawn within the next thirty days. This is the general understanding, following the recent conference at El Paso between Gen. Hugh L. Scott, chief of staff of the United States army, and General Obregon, minister of war of Mexico. The conference lasted several days. It began by General Obregon demanding the immediate withdrawal of the American troops, but General Scott lost no time in convincing him that this was not contemplated by the United States nor would it even be considered until a much better semblance of peace had been restored in northern Mexico. On assurance from General Carranza that the bandits are dispersed, the northward movement of American troops will attain full speed and it will not be long until the last trooper crosses over the international boundary line. After the conference had adjourned General Obregon issued the following public statement: "As a result of the conference yesterday with General Scott the atmosphere seems now completely cleared up. There is a much better feeling between Americans and Mexicans and all tension seems vanished." There have been several brushes recently between the American troops and the Mexican bandits, but no official word has been received as to the whereabouts or condition of Villa or any general engagement which could be considered as being decisive.

THE uprising of the Irish rebels, at Dublin, was short lived and disastrous. After capturing and barricading themselves in the Dublin postoffice and entrenching themselves in one of the public squares, the rebels were driven out by bombs and grenades, after a heavy loss in life, so that within a few days the uprising was completely crushed by the authorities. The general postoffice was burned down and considerable property damaged before the affair was brought to an end. Fully 1,000 prisoners were taken at the last, among them being a countess who has always been one of the leaders of the rebels in Ireland. It was expected that the disaffection would spread throughout the entire country, but it seems to have been confined to Dublin, for the most part. There are numerous reports to the effect that the outbreak was caused, or aided, by German influence and that the plans were laid here in the United States. The exact truth has not yet been disclosed. The Irish problem was a serious one to Great Britain when the war broke out, two years ago next August, but since that time the Irish have put it away, enlisting in large numbers to fight for the Union Jack. The rebels took advantage of a time when there is considerable dissatisfaction because of the proposed conscription policy, but their uprising availed them nothing and cost many lives.

PREMIER ASQUITH announced last week that the English government had at last agreed on a bill for immediate general military compulsion for the duration of the war. This is the first time in history that England has adopted such rigorous methods in order to insure a sufficient military force. In announcing the plan Premier Asquith added that the needful men could not be obtained by the existing machinery, but that they were available and could readily be spared by the industries essential for the successful prosecution of the war. Having given interesting details of the nation's success in its prodigious effort in raising 5,000,000 men for army and navy, the premier expressed confidence that the bill proposed would end, once and for all, the prolonged controversy, and, in a general statement of the war situation, challenged the house to indicate if the government had lost the country's confidence. A restricted conscription bill has been in effect in England for some time, this being the first time, likewise, that England has resorted to such a measure. Only two general classes were exempt; those engaged in occupations absolutely necessary to the welfare of the empire and those who had conscientious scruples against war, overbalancing their patriotism and the need of their country for their services. The general compulsory service law will remove even these exemptions henceforth.

APPROXIMATELY 100,000 persons employed in the various trades in New York City are now on strike and thousands more are threatening to quit work unless their demands are met. The labor situation is said to be more critical in New York than it has been for many years. With shipping virtually at a standstill, owing to the walkout of engineers and firemen employed on tugboats and lighters and the garment industry almost completely paralyzed by a lockout and strike, employers generally declared that not in many years had labor conditions here been so chaotic. One of the remarkable things about the strike is that there has been but little rioting or disorder, the strikers being peaceful for the most part. The effect to industry in general, however, is undoubtedly severe.

THE British suffered a defeat in their campaign against the Turks, when the army commanded by General Townshend was obliged to surrender after a siege lasting 143 days. The British campaign had as its chief aim the capture of that ancient city. To divert Turkish forces from Gallipoli was another object. When almost at the point of achieving its main object last year, the effort broke down eighteen miles from Bagdad, when the Turks, alarmed for the safety of the town of fabled memory, rushed up reinforcements, inflicted a defeat upon the British, and compelled their retreat 110 miles down the Tigris to Kut-El-Amar, where the Turks soon had them securely bottled up. General Townshend held out for 143 days, his supplies steadily growing lower as he awaited the relief army which battled its way up the Tigris toward him. This army encountered strong positions of the Turks, and, although several of these were carried, it was unable to work much closer to the beleaguered garrison than a score of miles. This is one of the few instances within the last 100 years when a British army has had to surrender in its entirety and is unquestionably a severe blow to the pride, even if not to the cause, of England. The army which surrendered numbered about 10,000 men.

THE administration's fight for the Philippine bill, with its amendment authorizing independence for the islands within four years, was defeated in the lower house of congress by a decisive vote. The house then passed the Jones bill, providing for a greater measure of self-government and carrying a preamble declaring the intention of the United States to grant independence ultimately, but without fixing a date. The vote is looked upon as a great republican or anti-administration victory, inasmuch as President Wilson was strongly in favor of releasing the Philippines within a few years. There is nothing in the body of the Jones bill promising independence to the Filipinos nor anything in any part of it setting a definite time for a declaration of their independence. The preamble merely states that it always has been the intention of the United States government to grant the islands their freedom, and in order that they may be better prepared for it a larger degree of control over their domestic affairs is placed in their hands.

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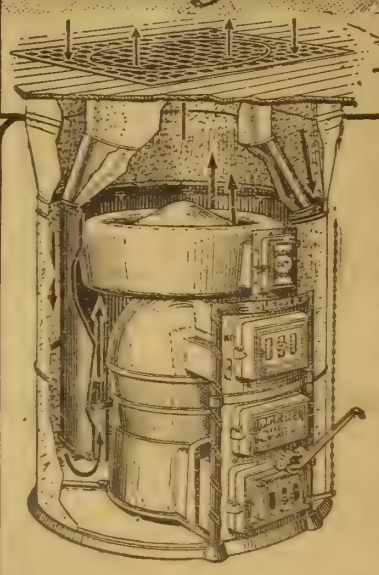

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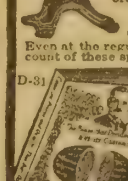

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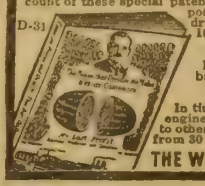

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The Wisconsin Farmer

THURSDAY, MAY 11, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE GASOLINE ENGINE IN WAR.

IT IS the irony of fate that the one thing which, more than any other, has increased man's productiveness in the last ten years should likewise be that which is proving his most deadly enemy. I refer to the internal combustion engine.

If I were called upon to name the one thing which has done the most in recent years to increase man's efficiency on the farm, to make his work easier and to enhance profitable production, I would have no hesitancy in naming the gasoline engine, in its various forms. Gasoline is the new hired man of the farm, and well and faithfully is it performing its duties. Scores of farming processes which formerly taxed man's energy to the limit are now being carried on by gasoline engines, which not only do the work better than it was formerly done (so laboriously) by hand, but also give the farmer the time and strength to devote to other and more profitable processes, thus saving him physically and enriching him financially. If this were not so would we find a million gasoline engines, of an average of five horse power, in use in the United States today? Farmers are not adopting machinery which does not serve them faithfully and efficiently.

Yet, in view of all this, have you ever stopped to think that it is the gasoline engine which is exacting the most frightful toll of human life in the war-mad countries of Europe today? How do we find the gasoline engine manifest there? Not in machines which increase man's productiveness, but in engines of destruction: Aeroplanes and Zeppelins, dropping their death-dealing bombs on women and children; automobiles and trucks, bearing their frightful loads of munitions of war; submarines, sent at a terrific pace through the water to their shining mark by the gasoline engine, with the lives of thousands of innocent ones, aboard the unsuspecting liner, at stake on the efficiency of that engine. It is the irony of fate, I repeat, that that which was devised and perfected to augment peace and prosperity should be diverted and perverted to a use exactly contrary to the purpose of its creation.

Secretary of State Lansing recognized this condition of affairs recently when he said, speaking of the manner in which the present struggle of the great empires of Europe is shaking international law to its foundations:

If I was asked what was the chief cause of the new conditions and changed method of land and naval warfare, I would unhesitatingly answer the invention of the internal combustion engine. It has made practicable the motor car, the submarine, the aeroplane and the dirigible. It has made surprise almost impossible on land and it has vastly increased the possibility of surprise at sea. The change of conditions which this invention, aided by the telephone, the wireless and the camera, has brought about is comparable only with that which was wrought by the invention and use of gunpowder. These new conditions offer to the student of international law a field of speculation which is at once attractive and difficult.

Wheat fields given over to carnage, harvest fields drenched with human blood, gasoline engines intended for production venting their force in destruction—could any greater contrasts exist, could anything more forcibly impress upon our minds the awfulness, the wastefulness of war? So long as I have breath left in my body I shall decry and denounce those things which make for war, those people who would have us forsake the paths of honorable peace. Shall the gasoline engine, wonderful servant of man that it is, be taken from the fertile fields of America and devoted solely to the taking of those human lives for the betterment of which it was devised and intended? Never, if I can prevent it.

GRANGE VS. CLUB.

A VALUED subscriber, Mr. G. H. Guthrie, of Kirkville, Iowa, raises the interesting point that as long as there are national organizations of farmers, with their local branches, the need of farmers' neighborhood clubs is minimized. He says:

I would suggest that you recommend the grange to farmers where they want an organization, as the grange covers all the features of a club and also is both statewide and nationwide in its scope. Farmers' clubs are all right as far as they go and I am glad to see the farmers taking an interest in them, but as long as we have a national organization why start another? Clubs of one locality have no connection with those of other localities, while the grange has a national constitution and binds farmers together all over the country.

Here is a good subject for discussion. Will my friends write me, giving their experiences with both local neighborhood clubs and the National Grange, so that we may see if the two conflict in any manner or if there is not room and opportunity for both?

MORE SWINDLING SCHEMES.

WHILE holding firmly to my original statement (made in these columns a fortnight ago) that the farmer is a harder man to swindle today than the average business man in the city, I am surprised at the number of letters I have received since the publication of my article in regard to the concrete-fence-post-mold scheme. It begins to look as though there were more men thriving on the credulity of their fellows than I thought. But all my correspondents agree that we can drive the swindlers to cover by publicity, so I shall do my share while the subject is fresh in our minds.

"A little warning may be good for our weaker and less-informed brothers," pertinently remarks one of my correspondents, narrating how a similar scheme was worked on his father several yars ago, not with concrete molds, but with wire fence machines, worth about $2, but which the farmer-agents must sell for $10 in order to get back the money they had paid out to secure a valueless "agency." Most of these "get-rich-quick" men who are fleecing the farmers nowadays are working under the cover of the law; they are slick enough to see to it that there is no real downright swindle in their plan on which they could be arrested and brought to justice. Usually they work on the vanity of some farmer—telling him he has been selected because he is prominent in the community and his indorsement will sell the article quickly—or his cupidity, and then leave the neighborhood before the victim wakens to the fact that he has given a perfectly good note for what is, at best, a long chance on ever getting his investment back, let alone making any money. Let me quote somewhat at length from one of my correspondents:

In reading the article, "A Slick Scheme," in your paper I was reminded of the old saying, "There is nothing new under the sun." This same scheme was worked years ago to my knowledge, not with post molds, but with wire fence machines, possibly by the same men. It was the same story—a dozen small, cheap machines for a price that would not let them sell. In other words, a $2 machine to sell for $10. And the would-be agent would find on second thought, or on trying to sell a few, that no farmer would pay $10 for a $2 machine that he might never use. The swindlers would be back in a few days with lots of flattery, "the agent was a man among men and should be promoted to take charge of the whole county with prospects of lots of money from dozens of agents working under "him," and so on. Of course this general agency, as it was called, meant another contract and more notes to initiate you into the Order of Fleecers. And then the farmer would find out that he didn't have the ability or the heart to go out among his own people and start collecting notes from them. I guess that ended the matter except, of course, going to your home banker and paying the notes. The main cry of these men was that they meant business, all they wanted your note for was to show your good faith, as they would be soon shipping you many dollars' worth of goods.

Previous to this the country had been worked by "gate" agents who sold territory at large figures. The patent gate was good of itself. You opened and shut your gate from your rig, but they were not selling quite so much gates as territory, and I knew men to buy territory in distant states where they found, upon investigation, that fence was needed worse than gates. I also knew a farmer to get in with an agent and travel and try to sell his brother farmers a certain article for about ten times what it was worth on the claim that this article would last indefinitely while other smaller articles would soon wear out. The farmer with the agent had "bought" one, of course, and, in turn, was to get a rake-off for any they could sell. To show that he had bought one the agent required him to give his note for the full amount. The idea was to help sell goods by showing the note. The farmer had an understanding that he was to get the note back, but no sales were made and the farmer did not receive his note back, but afterward paid it.

I earnestly trust that by giving these men this publicity the great body of farmers the grain belt over may be saved from their nefarious schemes. As a general rule it is best to eye with suspicion any flattering offer made by a stranger or, at least, to postpone final action until there has been time to think the matter over or to talk it over with neighbor or wife. Signing a note and giving it to an utter stranger is a serious matter and should never be done without investigation and reflection. We are so accustomed to hearing that opportunity knocks but once, many of us are straining our ears for the knock and mistake many other sounds for the rap of fickle fortune. It might be better in the long run to be altogether deaf to the sound than to be taken in by miscellaneous "get-rich-quick" schemes which leave us poorer rather than richer and subject us to humiliation when the story of our affair gets abroad in the neighborhood.

THEY SERVE WITHOUT PRICE.

THE gasoline situation is improving, for which the farmer with an automobile or a gas engine is duly thankful. Not that the price has actually gone down in many places. But, on the other hand, there has been no increase for two months now, and if I am any prophet the grain belt is not going to see gasoline much, if any, higher the entire summer than it is now.

It would be difficult, if not impossible, to give any one reason for the price not advancing, as was feared and predicted. Perhaps the market manipulators have come to the conclusion they have gone as far as would be healthy for them. Perhaps the fact that congress and the department of justice appear to be in real earnest in their investigation of prices has deterred them from killing the goose that lays the golden egg. Perhaps the fact that a score of inventive geniuses are working day and night in a frantic attempt to find a substitute for gasoline has caused them to foresee the day when their monopoly might come to an end. But, over and above all, in my opinion, is the fact that, in the emergency (as so often happens in the United States), relief appears to be in sight as the result of the efforts of a man who puts the common good above any question of personal profit and advancement.

Let me digress just a minute to call your attention to one or two similar instances in our agricultural annals. It is only a few weeks ago that the great state of Wisconsin paid deserved homage to a man whose invention has caused dairying to advance (among the profitable branches of general farming) by leaps and bounds. The value of the services to the agricultural world of Dr. Stephen M. Babcock, inventor of the Babcock milk test, cannot be computed in dollars and cents. Dr. Babcock would have been a millionaire many times over, had he accepted only a small royalty from each machine manufactured. Yet because he knew his invention was for the public good, he relinquished all claims to wealth, giving it to the public that farming might become more profitable. Millions have waxed rich, with their dairy herds, because of what Dr. Babcock did for them, without price.

A short time ago another great state, Iowa, announced the invention of a machine which it is believed will solve the vexatious problem that has long beset the farmer who plants the seeds of certain legumes. A scarifying machine which scratches the hard surface of these leguminous seeds, thus increasing or quickening their germinating powers, has been given to the farmers of America by the man who invented it. Like Dr. Babcock, he might have waxed rich on his invention; but, like Dr. Babcock, he unselfishly put fortune behind him in order that the rank and file of farmers might profit and the production of millions of acres of American fields might be increased.

These and similar instances come to my mind as I stop to size up the gasoline situation today. Just when the situation seems most serious, a government chemist, Dr. Rittman by name, announces that he has perfected a device which will increase gasoline production from 15 to 45 per cent of the crude oil used. Such an invention is worth more than its weight in refined gold; with the immense demand for gasoline the world over, it is almost priceless. Yet Dr. Rittman has given his invention to the government, and last week congress took the necessary steps to accept it and to devote it for all time to come to the use of the public. Shall we not honor men who do such noble work as this, unselfishly putting aside the great chance to enrich themselves, serving the public in its hour of need, devoting their unusual gifts to the greatest good of the greatest number?

Gasoline has become one of the necessities of the age. We could hardly maintain our present standards of living and our present record-breaking production without it. Do we not owe a great debt to anyone who makes it possible for this wonderful motive power to remain within reach of us all, turning the wheels upon which depend our pleasure and our prosperity, the continued production of our fields and the plenty which makes us take front rank among all the nations of the earth?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Effort to Revive Wisconsin Holstein Breeders' Association.

IN ANOTHER column of this paper will be found a report of the meeting of the Holstein-Friesian Breeders' Association of Wisconsin, held last week in Watertown. It has been the custom of the association to meet once a year at some Holstein center, enjoy good speeches and a banquet, and return home to forget all about it. A few of the faithful have been keeping up annual dues. But the fee of $2 a year, paid by only fifty to 100 of the 1,200 members, has been insufficient to supply the secretary with printed matter and postage, and allow any appropriation for active work. In brief, the members have been paying $2 annually for the privilege of belonging to a club of good fellows. They got no real service for their money. The association had no well-defined plans. The majority of members, being unable to attend the annual meeting, have failed to become enthused concerning the work of the association.

Lack of interest has been particularly noticeable in the matter of representation in the Holstein-Friesian Association of America. Two years ago at Chicago, Wisconsin breeders should have dominated the association meeting. Instead of doing it they sent nearly 600 proxies to eastern breeders. In the event of a clash of interests on any topic the easterners had the votes. This was largely due to the fact that no one took sufficient interest in the Wisconsin association to worry about it. An effort has been made this year to get proxies, but less than 300 had been collected up to last week. It is no less than a month until the national meeting is held in Detroit.

The statement has been made that co-operation among farmers is dependent upon the farmer getting some service for his investment of money and time. Members of the state association admit that they have not been giving the breeders of the state much service, and they now propose to remedy the situation. The plan as outlined in another article on page 10, provides for issuing a book which shall be the official Holstein-Friesian directory of Wisconsin. First of all the plan, if successfully carried out, will furnish money; second, it will give at least some advertising service to the persons who subscribe; third, if the book is properly gotten out and is representative, it should create a favorable impression of the dignity of Holstein interests in Wisconsin.

The mere publication of a book is not going to set the world on fire for the Holstein breed. Those who advertise in the book should not expect to get many direct returns in the way of sales. The book has a big value because it will be the only ready reference Holstein directory for Wisconsin. It will give names and post office addresses and the number of cattle each breeder owns, also those which have been under A. R. O. test.

To be of greatest value the new directory should contain the name of every one of the 1,200 members of the association. The danger will be that the big fellows will get into the book and the little fellow will be out of the active work of the association, as they are out now. However, there must aways be leaders in work of this kind. Often one or two good men have to do all the work. The number of subscribers to the fund will increase or decrease each year as the value of the book is proved or disproved.

The Wisconsin Farmer does not wish to go on record at this time as affirming that the book plan will revive the state Holstein association. This state has more than $30,000,000 invested in Holstein cattle and it should not be necessary to resort to this method to make a state association a success. Most of those who will support the book would support any other plan which had the same object. Our hope is that the loyal band of workers now connected with the association will be able to enlist also the rank and file. And our advice to the rank and file is that they are making a great mistake in not supporting the state association. Rather than make it a primary objective, we should say the book plan should be only an incident. The world is calling for better dairy cattle at this time. Mr. O. E. Reid, of Kansas, a bidder at the Watertown sale, said that 90 per cent of the Kansas farmers who want better stock want Holsteins. This is indicative of a splendid market. Iowa and Minnesota and the Dakotas can use thousands of pure-bred Holsteins. There are yet thousands of farms in Wisconsin which have not been graced with the presence of the pure-bred Holstein. There are other farms where scrubs hold sway. Every proper method should be adopted to emphasize the importance of pure breds in dairy herds. In this effort the proposed book will undoubtedly help. The agricultural press, while it will not be able to give one breed special prominence over all others, can well afford to bring out the strong qualities of the pure-bred Holstein. The breed papers will be glad to help; and above all things these matters designed to help the breed should not be bottled up for the benefit of the few, but should be of such nature and scope as to create an advantage for all breeders, big and little, in this great Holstein state.

Holstein breeders should get behind this book plan, with the hope that it may be simply an incident leading to bigger things.

Enforcing the License Law in Wisconsin.

MR. C. E. Lee, with the State Dairy and Food Commission, reports that the commission won out in the recent test case on the new Wisconsin license law. Mr. Lee called upon the operator of a butter and cheese factory and found the place in an unsanitary condition. He notified the operator that the permit to operate a butter and cheese factory, as well as his buttermaker's permit would expire April 8th. This same man had previously been prosecuted and fined for maintaining a factory and utensils in an unsanitary condition. The arrest and fine did not seem to have the desired effect. According to reports on file in the office of the state dairy and food commissioner, this operator returned to his place of business with no better standards. The closing of the factory involved a considerable loss to the owner. There were about 100 milk and cream producers affected. Notice of closing, however, had the desired effect, and in place of paying another $25 fine and costs, an investment of $29 was made for paint. Mr. Lee reports that this factory has been thoroughly cleaned. The churn, ripener and vats have been cleaned with a white coat of paint. Then the attic where the whey and buttermilk tank is kept has been whitewashed. The curing room has been cleaned and whitewashed. The ripener has been retinned and new metal followers have been ordered. The oil engine and boiler have been removed from the factory make room, and other minor improvements are being made. When it came to a show-down the operator was not only willing but glad to make the changes. He is reported to have written to Mr. Lee as follows:

I did not realize the condition of my factory. It is an easy matter to let things slide, but from now on a new standard will be maintained. If I had been prosecuted, it probably would have been the same old story as before. Tell Mr. Weigle that he and his inspectors will find my factory clean and sanitary any time they may care to call, in the future.

It is difficult to estimate the value of such work within this one Wisconsin community. It was certainly an eye opener to milk and cream producers. The farmers who now visit the factory are delighted at the change. Two farmers who visited this factory recently asked where they could secure information regarding the construction of a sanitary milkhouse. Other farmers have determined to clean up their barns and whitewash more frequently.

The new license law contains this clause:

An operator's permit or license and at least one copy of the rules and regulations of the proper methods of operating butter and cheese factories shall be conspicuously displayed at the factory.

Farmers who do not find these rules so displayed should ask the operator to put them up. Factory operators and makers should study the rules and regulations. It is a poor idea to wait until a representative of the Dairy and Food Commission comes along.

Wisconsin Man Discusses Milk War.

MANY Wisconsin people are interested in the recent milk war won by farmers near Chicago. Mr. George F. Comings, of Eau Claire county, writes The Wisconsin Farmer that the culmination of the Chicago milk war was a "victory won for justice, American manhood and the American farm home." Attention of our readers is called to a special story on this milk war, written by one of our editors who visited the scene of the conflict and who tells the story first-hand.

Referring again to Mr. Comings' letter, we quote the following:

For twenty-five years it has seemed to the writer a self-evident truth—an axiom—that if laborers and capitalists organize the farmers must do so or their name is "Dennis." They have only begun the good work and it should be vigorously pushed forward. On our own farm for more than a dozen years we have produced and retailed milk and cream to a very nice city trade.

Our experience is that if milk is charged to the wagon in bulk at 4½ cents per quart and 25 per cent cream is charged at 20 cents per quart and is bottled and delivered at 7 cents per quart for milk and 30 cents per quart for the cream, that the wagon end of the business is the one with very much the larger per cent of profit. (And ours is a herd of large producing Holsteins.)

To put the proposition another way. If one should invest $4,000 to $6,000 in three delivery rigs, milk and bottling house, ice house and all the paraphernalia required to run a retail business in nice shape, and had a business of the size, say of 800 quarts of milk and fourteen gallons of cream delivered daily, which is proportionate to the business done by our wagon for many years, in a small city like ours, he would make a much better per cent on the investment and earn a much larger salary than any dairy farm can pay in producing these goods at the prices named above.

In fact, I think if the milk was charged at 5 cents per quart and the cream at the price mentioned that a retailer will make more than the producer.

The farmers ought not to sell good, clean, 3½ per cent Holstein milk at less than 4 cents per quart at their door.

It makes my blood boil to think of the arrogance of the distributors in posting the prices they will pay for a six-months' period. Such things might pass in Russia, but should not be tolerated in America.

I should think the farmers' hearts would beat with joy that the mighty, the rich, the powerful, have been obliged to acknowledge that it takes two parties to make a bargain.

Mr. Comings is former proprietor of Silver Spring Farm in Eau Claire county. He has had a great deal of experience in dairying. His sons are now conducting the farm.

When the farmer-dairyman comes to the point where he understands his own business, and keeps books on it, as we have no doubt Mr. Comings has, he will be in a better position to demand his rights. The big concerns of which Mr. Comings speaks know to a penny every month just what profit has been earned. They know what expense has been incurred. They know how to get more money in case they are not satisfied with the profit. What facts does the average farmer have to present? Does he know what each cow is producing and the test of the milk? Does he know the cost of the feed and labor? As a matter of fact does he really know whether he is making or losing money each month on his milk sales? Covering a period of years he may be certain whether he has accumulated wealth by paying for his property, by adding to his herd, by buildings, or by money in the bank, or whether he has accumulated mortgages upon which it is hard to pay the interest, buildings which are rotting into decay, and unpaid notes at the bank. When farmers know certainly their costs, and have some system of comparing them with receipts and of striking a weekly or monthly balance which will be fairly accurate, we will be nearer the time when farmers will insist upon a reasonable profit for their investment and labor.

Certified Wisconsin Potato Seed.

MORE certified potato seed will be grown in Wisconsin this year than ever before, as the potato growers are learning that it pays to produce standard, healthy seed, and buyers have discovered it pays to buy such seed. There are many things to be said in favor of certification, which was begun only a few years ago in Wisconsin, and the following advice given by Mr. W. D. Juday, county agricultural representative of Oneida county, which county won first prizes at the state and national shows last fall, is of value to every potato grower in the state:

Certification should be considered both from the buyer's and from the producer's standpoint.

The buyer wants his seed potato stock to be variety pure, free from serious disease, fairly true to type and reasonably uniform in shape. He is generally buying from men concerning whom he knows little or nothing, men who do not always give him the quality of seed he rightly expects. For this reason he welcomes a system which will reasonably assure him that he is getting what he pays for; and for this assurance he is willing to pay a little premium.

In viewing certification from the farmers' standpoint we can readily see that all potato growers do not want and should not try to get certified seed. Certification is for the man who is willing to treat his seed, spray with Bordeaux mixture, pull diseased and mixed hills from his field, exhibit at fairs and potato shows and sell only well-graded stock of his own growing. A grower with a less ideal should not attempt it.

The next question is "How much of a premium is the farmer to get for all this trouble?" A reasonable charge is fifty cents per bushel above market price for the well-sorted stock. Charging exorbitant prices will tend to make certification unpopular with the prospective buyer and discouraging to the grower.

A farmer should consider too that part of the benefit derived from certification comes in the form of increased yield and added ability to grow a better crop. The practices desirable for certification are practices which will always give more bushels of better potatoes to the acre. Even for table stock, a better price can be obtained from this grade than for the average sort.

Farmers receiving certification also get valuable information concerning the different phases of the potato game. They are shown diseases that they did not know were in their fields and at the same time given methods of control, the best cultural practices are taken up with the inspector, new potato problem discussed, and plans for grading, exhibiting and advertising talked over. In short, the services of an expert are possible for every applicant. All the farmer has to do is show his willingness to learn.

The scope of certification is limited. It carries with it a personally responsibility and must, therefore, be an individual rather than a community affair. It is now established on a sound basis and each farmer should strive to keep it so, by having field conditions right by practicing a strict grading on the field or in the bin, and by offering his product at a reasonable quotation. The measure of its success will depend upon the number of satisfied customers. The ideal should be to carry on the work so that it will be a profitable protection both to the buyer and to the seller.

The prices have been slightly increased for the inspection service this year in order to make it

self-sustaining, but the advantages gained by the growers of seed in securing certificates far more than offset the cost of the inspections. More than a hundred growers received certificates last year and indications point to an increased acreage this year.

Wisconsin Surplus Stock Disappearing.

THE writer took particular pains to ask breeders at the recent Lake Mills and Watertown sales whether there still remain any considerable amount of good dairy stock for sale in their neighborhoods. Apparently the surplus which was talked of a few weeks ago is rapidly disappearing. There is a splendid demand for good grades with the supply about exhausted in the dairy breeds, and a good demand for pure-bred stock with the supply diminishing. More stock has gone to the Southwest this year than ever before. in the opinion of leading breeders. Former Governor Stubbs, of Kansas, was a bidder at both the Watertown and Lake Mills sales, and he is authority for the statement that Wisconsin may expect many purchasers of dairy stock from Kansas in the near future. Mr. O. E. Reid, of the Kansas State Agricultural College, Manhattan, said in an address at Watertown that 90 per cent of the Kansas farmers who want dairy stock want Holsteins. This big percentage will probably not be maintained through other territories. There is a splendid demand for good Guernseys and for other fancy Wisconsin dairy stock.

Because of the poor shipping conditions the past two years it had been anticipated that there would be a considerable amount of stock for sale this spring and summer. A good deal of the stock held through last fall and winter, however, had been sold and was shipped as soon as the restrictions were removed. The fact that there had been some falling off in purchases led to heavy private sales this spring. Prices at dairy stock sales thus far have been generally good, the averages being in the main quite satisfactory. Good breeding has told more than ever this year in the sales, and the topliners have been in every instance those backed by records and pedigrees.

One breeder estimates that there have been 5,000 dairy stock shipped out of the state since the removal of quarantine. It is likely that this is high, though the sales have been heavy and probably more than 3,000 pure breds have left the state. This is an estimate, however.

With diminished stock no slump in prices is expected this season. Good individuals are selling up well in all divisions of live stock, and a successful season is the result.

Seventy-five Thousand Autos in Wisconsin.

ON MAY 1st licenses had been issued in Wisconsin for 75,747 privately owned automomiles, which is within 4,000 of the total number of automobile licenses issued for the entire year of 1915. It is expected that by May 15th the 1915 record will have been passed and a new high-water mark set for Wisconsin. With the same ratio of increase for the remaining eight months of 1916 that prevailed during the same period in 1915 over 1914, Wisconsin by the end of the year should have at least 125,000 automobiles in private hands. This is one of the many signs indicating prosperity which is more manifest this spring than ever before in Wisconsin. It has been figured that the automobiles in this state average $1,000 each, which means that the grand sum of $75,000,000 is now represented. As more than 45 per cent of the autos are owned on rural routes, according to estimates of the dealers, it is evident Wisconsin farmers have the buying power and are spending their money.

Wisconsin Rennets Are Needed.

EVERY Wisconsin dairy farmer interested in the welfare of any cheese factory should make an effort, especially at this time, to see that no rennets are wasted in his community and that those saved go into the proper channels for the making of rennet extract. Such vigilance will not only assure the farmers that their cheese factories will be able to continue to operate but will add an additional source of income, as leading rennet manufacturers in this country have for more than a year offered as high as 12 cents apiece for them when properly prepared.

Something like a million and a half calf stomachs are used annually in the United States by its 5,000 cheese factories. These yield about 100,000 gallons of rennet extract. In the past the supply of rennets, as these calf stomachs are called, came from the European countries, but with the war affecting this industry it is necessary for the manufacturers to look to this country for its supply. Wisconsin, being so largely a dairy state and at the same time the nation's largest producer of cheese, is therefore very directly affected, as a continued shortage in the supply of rennet extract may compel many factories in the near future to close. One of the leading factories making extract in America is located in Wisconsin, and by seeing that rennets are saved and turned into the proper sources the dairyman not only is aiding in filling a need, but is also deriving an income from a product otherwise wasted.

Attention to the condition of the rennet extract market is called by J. L. Sammis, of the Wisconsin Dairy School, who points out the need of Wisconsin rennets. It is now difficult for any dealer or cheese factory to obtain more than ten gallons at a time, and frequently not more than one or two gallons. Ordinarily, factory patrons are careless about saving rennets or in seeing that they are saved by the local butchers, but existing shortage, brought about by the war, makes it imperative to develop and utilize more fully the resources at command in this country. Mr. Sammis says that as an inducement to get factory operators and patrons to aid in the collection of rennets, it may be necessary for extract makers to supply extract at market prices only to those factories which furnish rennets in good condition in exchange.

The stomach of a calf gives the largest amount and the best quality of rennet extract if the calf is slaughtered before it has eaten solid food, and when hungry for eighteen or twenty hours since last fed. If left hungry longer, the stomach becomes congested with blood, and gives an inferior product. Calves shipped a long distance on the cars are apt to try to satisfy their hunger with the straw, refuse, etc., on the floor of the car, and such stomachs are often found to be of inferior quality for making rennet extract.

As soon as the calf is slaughtered the stomach should be removed and taken care of at once. The fourth stomach, which is the rennet, is cut off at its wide end as close as possible to where it joins the next stomach called the book. About two inches of the thick muscular neck at the narrow end of the rennet should be cut off, as it is of no value. The contents should be squeezed out, and any fat on the outside peeled off. It should not be washed with water, but may be slit open with a knife, stretched well, salted heavily on both sides, and put in a cool place for a day or two to drain. Plenty of salt must be left on both sides. When well drained so as to not leak brine in shipping, the rennets may be counted, packed in a box or bag and shipped by express to the manufacturer of rennet extract who buys them. Or the salted and drained stomachs may be hung up to dry where there is a good circulation of air and where they are protected from flies until a sufficient number are collected for shipment.

The European rennets are usually inflated with air, the ends tied, and hung up in a cool, airy place, protected from flies, until dry, and afterward are flattened, tied in bundles, and packed in a box. But the easiest way to handle rennets is to slit and salt them as described above.

Poor Chance in Agriculture Without "Horse Sense."

WE HAVE had occasion in the past to quote from a bulletin prepared by Carl Vrooman, assistant secretary of agriculture, dealing with the question of grain farming in the corn belt with live stock as a side line. Mr. Vrooman, we are informed, is an extensive landowner and he has made an enviable reputation because of the businesslike methods he has applied to the handling of his land. At this time we beg leave to refer to the emphasis which Mr. Vrooman places upon the utilization of what he calls "horse sense." Legumes, lime, live stock, saving of waste, business methods, horse sense—these are the essentials for the highest success in corn-belt farming, and the greatest of these is horse sense, for in a way, it includes all the others.

Without horse sense, there's a poor show for making a real money success of farming of any kind. Without that faculty, otherwise called "business ability," industry, capital, credit, and even a thorough knowledge of the most approved scientific methods of agriculture all will be of little avail. To qualify as a business farmer, a man must have that peculiar sort of "gumption" which enables him to shape his work and change his plans according to changing weather, shifting markets, and up-and-down business conditions. He must be able to decide whether he can best dispose of his crop by feeding or by selling on the market. In selling either live stock or grain the farmer should know enough of the actual value of his product to know when the local buyers are offering him a fair price. To know the actual value of his product he must know the freight rates to market, what commissions, insurance, and other expenses must be met, as well as probable shrinkage, etc., but these are facts that any farmer can easily secure.

It is not enough to grow a good crop, says Secretary Vrooman, or even to grow a good crop at low cost. To make the big crop a business success it must be disposed of as efficiently as it is grown—must be so graded and packed as to meet market standards and so marketed as to bring the farmer the highest current prices.

Moreover, the farmer who is too suspicious to get together with his neighbors in order to do co-operatively what none can do alone is sure to pay dearly for his lack of confidence and his incapacity for team work. The social spirit and a capacity for co-operative effort are fundamental necessities of the new agriculture. The day of the Ishmaelite and the individualist is over. The future belongs to the men who are able to co-operate with their fellows in pursuit of their common interests.

The farmer who sells all his crops at the elevator is robbing his own soil, his own purse, and his own children—selling his birthright for a mess of pottage. The farmer who not only does this, but also burns all his cornstalks and straw, reminds one of the burglar who takes all the valuables he can carry off and sets fire to what is left.

According to figures gathered recently by the department of agriculture, American farmers burn each year $65,000,000 worth of straw. When we consider, in addition to the straw thus wasted, the vast quantity of cornstalks burned, worth, on an average, $3 per acre for manure, and estimated to total in value fully as much as the straw burned, we begin to get some idea of the fertility that goes up in smoke on American farms each year. In exceptional cases it may be found advisable to burn straw and cornstalks. For instance, in order to get rid of insect pests, or in case there is no live stock to consume the straw, nor enough moisture to rot it if it is turned under. But it is safe to say that every year in the United States $100,000,000 worth of straw and cornstalks are burned that could advantageously be used for feed or fertilizer.

A man who fails to make a success of farming because of his failure to apply recognized principles of successful agriculture, or because of his failure to conform to recognized business principles, has largely himself to blame. Success today cannot be gained by slipshod or happy-go-lucky methods. Certain well-known methods produce certain highly desirable results. A man may get a good crop occasionally in spite of inefficient methods. But to get the best obtainable crops and the best obtainable prices for those crops year after year requires a working knowledge of the science of agriculture and of sound business practice.

Need For Modernizing the Farm Home.

WHEN property valuations run into the billions they get beyond the comprehension of the average person. However, when used for purposes of comparison the matter is simplified. It is said, for example, that the railroads of the United States are worth $15,000,000,000 and that they are mortgaged for $11,000,000,000, or 80 per cent of their value. On the other hand, the farms of the United Sstates are worth $40,000,000,000, and they are carrying a debt burden of only $6,000,000,000, or 15 per cent. There are those who are of the opinion that this farm indebtedness can be increased to great advantage by improving the conditions in the average farm home.

This matter was taken up at the last meeting of the American Society of Agricultural Engineers by Xenophon Caverno, who claims that farmers, with a greater mortgage load, could greatly increase their producing power, providing the money is wisely spent. Some of it could be spent to splendid advantage in the improvement of the home, which would contribute immensely to comfort in living, healthfulness and to all-around efficiency of every member of the family.

Mr. Caverno believes that the lot of the farm wife can be greatly improved. On this subject he says:

> The work of the farmer's wife is not only hard and exhausting, it is continuous and practically unvarying. The seasonal changes, which relieve the monotony of the outdoor work on the farm do not penetrate to the kitchen. There is the same lugging of water and slops, the washing and ironing, the sweeping and scrubbing, the filling of lamps and making of beds, the sewing and mending, the care of the children and the everlasting three meals a day. No other class has derived so little from modern progress and invention, in comfort and luxury, in relief from grinding toil, as the farmer's wife. This is a neglect for which the whole nation is paying an awful price in the high cost of living.
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> Not only has modern labor-saving invention passed the farmer's wife by, modern sanitation has as well. The stronghold of typhoid fever, dysentery, and all enteric diseases is now in the country. Privies and cesspools distribute diseases through the medium of flies and polluted drinking water. An overtired body is not resistant to disease. The personal cleanliness required for health is almost impossible without a heated house, a bathtub, and running water. The chill of unheated rooms, the sudden plunge from the heated kitchen to the pump in the yard, the chill from going to the outside privy in winter, and the poisoning of the system from staying away through dread of the exposure, complete the invitation to disease. An overworked body, the presence of disease germs, the lowering of vitality by exposure, the mental depression from the monotonous routine, this is a combination which few farmers' wives escape. Some have the strength to stand up under it; most of them do not.
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> We recoil from the concentrated misery of the city slums, of the sweat-shops and factories because it is concentrated. We tolerate the great sum of individual miseries on the farm because they are individual. If all of them could be massed before our eyes a cry of horror would go up to heaven. And behind the pity of it lies the economic waste; the crippling of the one great basic industry of our country on which all others depend. And in the individual economic waste, as in the individual misery, we lose sight of the grand total.

Of course, there are thousands and even tens of thousands of homes in the central West where every modern convenience can be found. The bath tub is no longer regarded as a luxury, but an absolute necessity, and the old-fashioned style of lighting the farm home is rapidly disappearing. The installation of a water system in the home and conduits to carry away the waste has cut down the irksome part of home labor anywhere from 25 to 50 per cent. Here and there families live under the handicap of a poor home equipment, and it is just possible that if these poorly equipped homes were placed side by side as in the cities they would present a condition that would be regarded as intolerable.

We are coming to believe that good health is the greatest asset of all, and that, therefore, no reasonable expense should be spared to cut out the druggery, to supply ourselves with pure water and to provide the most effective means of carrying away waste that might otherwise become dangerous to health.

FARMERS SET MILK PRICE.

Co-operation and Organization Enable Dairymen in Chicago District to Increase Their Receipts $8,000 Daily and Wrest From the "Milk Trust" the Power It Has Exercised For Fifty Years in Setting Prices.

DETERMINED FARMERS AT BATAVIA, ILL., WHO JOINED UNANIMOUSLY IN THE PRODUCERS' DEMANDS FOR A BETTER PRICE FOR THEIR MILK.

FOR more than half a century the prices that the dairymen in the Chicago district received for their milk were made by the "milk trust," but in April, 1916, this custom was reversed and the farmers began setting the price. This came as the result of co-operation and organization of the farmers into the Milk Producers' Association, and its success in the recent fight in the Chicago district demonstrated beyond question that what organization has done for the trades it can do for the farmers.

R. B. SWIFT, PRESIDENT.

The recent "strike" in Chicago when the farmers forced the distributors to raise the price paid the dairymen from $1.33 to $1.55 per 100 pounds is familiar now to most of our readers. By cutting off the supply from Chicago the shippers forced the wholesalers to meet their summer price demands and as a result the Milk Producers' Association, representing about 13,000 farmers, suddenly sprang into national prominence. Prior to this victory the association was hardly known outside of its own district, but from every corner of the land now comes inquiries as to what this organization is; when was it formed; how did it succeed in raising the prices and what have been its experiences that would help farmers in other sections to receive better pay for their milk. Its "stick together" spirit enabled it to upset a custom of fifty years' standing by taking from the distributors their self-inherited power of setting the milk prices and with continued wise counsel and direction it should remain in position to dictate in the future the prices which its farmer members shall receive for their product.

The 22 cents a hundred pounds, applied to the daily milk supply in Chicago, means that the 13,000 dairymen in that district will get $8,000 more each day for their milk than they would have received at the price offered by the distributors. This is an average of about 62 cents a day for each farmer and was obtained entirely because the distributors realized that the farmers meant business and that all efforts to offer "half a loaf" would be futile. "We'll confer, but not arbitrate," was the motto of the association and all efforts of distributors to reach agreements with "ifs" attached and make contracts with many "conditions" written therein failed. One company tried to gain special privilege by agreeing to the April price and offering to arbitrate for the other five months. This was refused, as were all other offers except an absolute compliance with the producer's demands, and resulted in the victory that was proclaimed by the increase to $1.55.

"SCAB MILK" POURED INTO THE STREETS AT CROWN POINT.

Wisconsin's interest in the Chicago situation is twofold—first in the benefits farmers in Walworth, Rock and Kenosha counties who ship to Chicago will receive from higher prices and secondly in the stimulus it will give the dairymen in the Milwaukee district in their efforts to get a better price for their milk. Milwaukee shippers, according to Alfred Fuller, of North Lake, president of the Milwaukee Milk Shippers' Association, will receive $1.10 per 100 pounds during May for 3 per cent milk; $1 during June; $1.25 during July and $1.35 during August, September and October, amounting to about 15 cents per 100 pounds. For months the Milwaukee shippers have been clamoring for better prices and the victory of the Chicago shippers will no doubt place them in a better position to force the distributors to meet their demands. On July 1st the Milwaukee association plans to open in that city a distributing depot of its own for which a company, capitalized at $10,000, has just been incorporated. These plans were under way before the Chicago fight began and Mr. Fuller expects the association to accomplish the same results as the Chicago shippers accomplished only in this different method.

Farmers who, prior to the Chicago victory, scoffed at the shippers' association and declined to become members are now rushing in their application blanks. During the last month W. J. Kittle, of Chicago, secretary, informed an editor of The Wisconsin Farmer every mail has brought in scores of new members until it is predicted that this organization will number among its members every shipper in the Chicago district. Locals are being organized even outside the district in order to help neighboring farmers who are in the district. The power of organization has been demonstrated. That farmers can better themselves by pulling together has been proven and there is now a grand rush to get into the band wagon, all the result of a single victory.

The wonder is that the revolt, as R. B. Swift, of Libertyville, president, calls the recent Chicago fight, did not come sooner. With gluten at $26; bran, $23; cottonseed meal, $36; alfalfa hay, $16, and silage $5 a ton, the Chicago shippers were confronted with the problem of not getting enough for their milk at $1.33, the price offered by the Chicago distributors, to buy the feed needed to produce the milk. For years these farmers have realized the narrowing of their profits, but as individuals they were not able to oppose the big distributing corporations

W. J. KITTLE, SECRETARY.

and at each semiannual contract making had to submit to the prices offered.

This year, though, the time seemed ripe. The Milk Producers' Association, which was organized in February, 1909, had grown to be a large, influential organization. No surplus milk could be found anywhere; the spring supply bid fair to be short; storage warehouses were cleaned of their butter; cheese had reached the wholesale price of 19 cents; casein was up from six and a fraction to 23 cents a pound. With all these conditions favoring the farmers and an organization behind them, although its strength had not previously stood such a severe test, it was decided to strike while the iron was hot. So on April 1st the bulk of the farmers declined the $1.33 average for the summer and the "strike" began. They asked for $1.55 and the distributors who had made the prices for fifty years smiled. Throughout the district there were 150 locals which organized to cut off Chicago's supply and the distributors started to fight. Some farmers had signed up, but the members met these on their way to the loading platforms or the bottling plants and poured

MEMBERS OF ANTIOCH ASSOCIATION, WHERE ALL EXCEPT ONE FARMER REMAINED LOYAL.

their milk into the ditch. In most instances the locals paid for this milk, but the next day, if the men tried to ship again, it was confiscated without pay. The distributors then tried shipping in from the East; from outside the district in Wisconsin; from condensing plants. They tried every way to break the back of the organization whose strength was growing daily and which reached out and stopped these outside shipments. With two-thirds of Chicago's milk supply cut off completely the so-called "milk trust" had to yield and contracts were signed on the basis of the farmer's demands. Then the prices were increased from 8 to 9 cents on quarts to Chicago consumers. As Mr. Kittle explained, the farmers are getting their share now, but this increase to 9 cents places the association in a splendid position to demand better winter prices at contract making next fall.

The Milk Producers' Association is organized like our great labor unions. Shippers become members of local organizations which affiliate with the parent association and a part of the dues paid into the local stays with the local for its expenses and the other goes to the parent organization.

The association sprang into existence in 1909 as a protest against a Chicago ordinance requiring that all milk must come from tuberculin-tested herds or be pasteurized. This aroused the farmer to a sense of his importance and strength to accomplish great good to himself and his industry by co-operative organization and working and pulling together. The result was that in this matter of testing and pasteurizing the association won its first victory. Next came attention to prices, as the distributors had jockeyed them at will for many decades, endeavoring to keep the cost down and the selling price up. During the first year efforts of the association to force prices up failed and the infant organization had to submit to the trust prices. On November 1, 1909, the association asked $2 as a winter price, but could not enforce its demands and the distributors offered $1.66 which was accepted. This was a small advance used by the trust as a lever to force milk up 1 cent a quart in Chicago to the users, but the district attorney's investigation aided the association in checking this increase. However, the association during the next two contract periods secured slight increases which finally enabled the distributors to establish the 8 cents per quart price which prevailed in Chicago until this spring. Of this 1 cent increase to the consumer the farmer got only a very small fraction.

The history of the organization has been one of many ups and downs and it is not rosy by any means. Waning interest in 1911 after the retail price of 8 cents was established enabled the distributors to reduce the prices to the farmers 4 cents on the summer and 9 cents per hundred on the winter prices.

This aroused the farmers again to the power of organization and since 1912 the association has been growing rapidly until it reached the place where it is today—able to demand a fair price for the dairyman's product.

The officers of the association are: President, R. B. Swift, Libertyville, Ill.; first vice president, F. T. Holt, Pleasant Prairie, Wis.; second vice president, A. C. Gumm, Hobart, Ind.; third vice president, J. K. Rathburn, Lombard, Ill.; treasurer, F. H. Reese, Dundee, Ill.; secretary, W. J. Kittle, 29 S. La Salle St., Chicago.

BUILD OF HEMLOCK
The "Old Faithful" Lumber

This Is Building Time

Maybe the **BARN** has to have an addition—or are you going to build a new one? Certainly it's better to build the new **GRANARY** or **CORN CRIB** *now* than to wait till harvest time is upon you, and then have to postpone it until next year because you're too busy.

Wasn't it you who said last fall that you were not going to put off the **NEW HOUSE** another single year? Now is the best building time so let's consider what to build of.

A good many people, when it comes time to build, simply say: "Well, we'll need so-much lumber" and go ahead and buy it without much thought as to what is the best wood for their purpose. They don't always stop to think that for every kind of tree there is some particular best use to which lumber made from it can be put, or that wood usually lasts better and in general behaves better when used in the climate in which it is grown and not brought in from a great distance. Neither do they stop to think that home lumber helps pay home taxes.

The *special use* of "Old Faithful" HEMLOCK is for all rough lumber purposes—for framing, siding, rough boarding, under-floors, barn floors, platforms. It is strong, easy to work, and holds nails and paint remarkably well. It contains *no pitch* and does not take fire easily. Except in contact with the soil or in other "wet and dry" locations it will last a hundred years or so *at least*. It does not make good posts.

You see we don't advocate it for uses for which other wood is better, but *for its OWN USES* we just want to say to you that *there IS nothing better*. It grows mostly in Wisconsin and Northern Michigan and so it is right for this climate. Its price is right, too.

We want to make just one suggestion: Before you buy lumber go to your **LOCAL LUMBER DEALER** and talk to him about "Old Faithful" HEMLOCK. You'll get the right figures and the right advice. Also send to us for our

FREE PLAN BOOK—192 pages of plans and pictures of practical country buildings of "Old Faithful" HEMLOCK—the wood that has been doing the hard work on American farms for over 200 years. This is a valuable book and worth having.

The Hemlock Manufacturers
(Of Wis. and Upper Mich.)
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The Farmers' Open Forum
WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Managing the Farm.

To the Editor:—I have spent considerable time in study as to what is the most important factor in making the farm a success from the managerial standpoint. It is rather a hard question to decide. To my mind, however, a most important factor is the care of the farm property. What property you have, much or little, attend to it from a business standpoint, as farming is a very particular business and one where you have to be careful if you are going to make the right amount of profit.

My farm is 120 acres, of which I cultivate about sixty acres. I used to raise quite a lot of oats and sell them, but I find that it pays better to raise more cattle and hogs and feed what I raise on the farm. I also raise more corn and I built a silo two years ago 14x38 feet. I have on hand now thirty-nine head of cattle, nineteen of which are full-blooded Short-horns of the milk strain. The balance of them are high quality grades. I have sixteen milk cows this year and keep a hired man during the summer months. I also raise a few steers and pure-bred Poland China hogs. I raise clover, timothy and alsike mixed. I feed cattle all they will eat and try to have them in as good condition in the spring as when I take them off the pasture in the fall. I did not really know that I was entered in the farm management contest of this county, but received the account book from our county agent, Mr. Klinka.

Polk Co., Wis. Henry Peterson.

More on Fencing Problems.

To the Editor:—In reading The Wisconsin Farmer of last week I noticed fencing problems by Louis Denis and I feel like making a few suggestions which may be of some help.

First, I would advise that he leave off the top barbed wire, because with posts sixteen feet apart that wire will always sag and look shabby. Rather raise the woven wire a few inches from the ground to make the legal height. I would not try to have the roadside fence of legal height only but use a forty-two inch and keep to six inches from the ground.

The height of farm gates should be the same as the rest of the fence, the width to suit the purpose for which the gate is to be used. I would not make them more than fourteen feet. I believe pipe frame for gates is best made from one-inch pipe and on rollers rather than hinges. For hogs and poultry put in an extra post and make a small door.

I think the best fence is the square mesh, welded, with the stays six inches apart.

Saw the posts two inches above the top wire, paint orchard fence tinted white or gray, or if the orchard is near the house paint posts same as the house; the posts in the barnyard the same as the barn.

Now I want to say something about what I consider the most important in fence building, namely, setting the posts. In the first place, I would pick out a good-sized post—about six inches in diameter—dig the hole, to the depth of twelve inches, about fourteen inches in diameter, dig the rest of the hole the same size as the post and then fill in around the post with concrete. I find that one sack of cement will set from twelve to fifteen posts and when they are thus set they are rigid and last ever so much longer. The concrete should extend a little above the ground, as the post always rots just at the surface of the ground.

I hope my suggestions may be of some benefit. Wm. Braid.

Racine Co., Wisconsin.

Sudan Grass.

To the Editor:—On the 4th of June last year I sowed half an acre to Sudan grass. Part of the seed I received from the United States Department of Agriculture. The rest was purchased from a seed company. On the 27th of July I cut part of it for hay and part for green feed for stock. Cows, calves and pigs all seemed to relish it. That which was cured made excellent hay. At the first cutting the grass was three and one-half feet high. On the 9th of September the second crop was cut. It was two and one-half feet high at that time and it made fine hay also. On the 6th of October, when we had our first heavy frost, the third crop was eighteen inches high. This, however, was not cut, but the cattle were turned in to eat it off and they seemed to like it.

The first crop yielded at the rate of three and one-fourth tons per acre, the second cutting one and three-fourths tons, and I judged the third would have yielded one and one-fourth tons if cut. I left a little on one side of the field and the seed matured before frost. I believe it should have been sown about May 10th or 15th for best results. While I do not think we have a great need for it in this state, where clover and alfalfa grow so well, in case of winterkilling of clover Sudan grass would make a good hay to take its place and if it could be sown early in the spring would yield two or three crops of hay in one season.

I trust this will be of interest to your readers. H. E. Krueger.

Dodge Co., Wisconsin.

Making Good in Dakota.

To the Editor:—I hope you can find room in your valuable columns for a few words from a North Dakota farmer. I was raised in Wisconsin on the farm near Argyle, Lafayette county. I am certainly an old friend of The Wisconsin Farmer. It is like getting a letter from home every time I get the paper. My parents settled near Argyle, Wisconsin, in 1866. I was born there in 1871 and grew up until 1897, when I came to North Dakota and worked out for the farmers around here until 1902. In that year I filed on a homestead, thirty miles north of Williston, Williams county, and I have lived here ever since. The climate here is fine and the crops average as good as in any part of the state. The soil is mostly clay. Our biggest drawback is that we are a long ways from a railroad. The nearest stations are Williston and Wild Rose, thirty miles away, but the Great Northern is going to build this summer on west through the mountains, so there will be a great change here in Williams county. We expect prosperity among the farmers in this vicinity, if wheat prices will stay around the dollar mark. There are a great many Wisconsin people here and they are all farmers, which is the right road to success. We have had a long winter and late spring and farmers are now busy seeding. This winter was the coldest since I came here. It was fifty below zero in January one time. It is lucky that we have a coal mine near by our place, and it sells coal at $1.60 a ton at the mine. A Subscriber.

Mormon, North Dakota.

LAW QUESTIONS.

Compensation of Supervisors.

A Subscriber, Suring, Wis.—(1) What compensation does the law of Wisconsin provide for supervisors of a township? (2) If supervisors hold a meeting for only one hour, can they rightfully call it a day?

Answer.—(1) The compensation of supervisors is to be fixed at the annual town meeting and when there is a failure to do this the law allows each supervisor $3 per day actually served and at the same rate for parts of days. (2) They cannot. It would be but part of a day.

Land Sale—Shortage.

Mr. Fred Luebeck, Suring, Wis.—I bought a lot in a town in Wisconsin, and the deed calls for eighty feet by ten rods, but the lot actually measures eighty feet by eight and a half rods. Am I entitled to what the deed calls for?

Answer.—If the person who sold the lot to you had good title to what your deed calls for you are entitled to the area of eighty feet by ten rods, but if he only had title to eighty feet by eight and one-half rods that is all you can claim of land, but you would have a good cause of action against him for damages on account of the shortage.

The United States produces 40 per cent of the world's iron output; 50 per cent of copper; 60 per cent petroleum; cotton, 50 per cent; silver, 25; corn, 60; oats, 30; and tobacco, 80.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Condition of Crops and Live Stock

WISCONSIN.

Bayfield County.—The cold, wet weather is unfavorable for seeding. Little seeding has been done. Plowing has commenced, but heavy soils are too wet to plow yet. Meadows came through the winter in fine shape, especially the new seeding. Winter grains have a fair stand. Fruit prospects are good, because snow and cold weather held buds back. Cherry buds are swelling. There will be more colts and pigs this year than usual. Live stock look fine; dairying is coming to the front. Sheep wintered well and the percentage of lambs is high.—E. C. Stevens.

Brown County.—Spring is very backward—cold and wet with little sunshine. Two inches of snow fell on April 30th. Seeding is not half done. No planting has been done. Old meadows are poor; clover and timothy that was cut last year winterkilled. Last year's seeding of clover is good. Live stock wintered well. Pig crop is about normal, but prices are high, from $8 to $10 a pair. There is a strong demand for pure-bred dairy stock at good prices.—J. D. McAllister.

Clark County.—Cold weather continues with heavy frosts at night and cutting winds. Some oats and barley have been sown. All meadows have winterkilled badly; so, also, have pastures and fall grains. Farmers are short on feed, and hay is scarce. Cherry and plum trees show an abundance of fruit buds; strawberries promise well. —Louis Buddenhagen.

Dunn County.—Frost occurred on May 1st, but no damage was done. Weather is cold and grain will not germinate. Grass has not grown much. —J. D. Miller.

Iron County.—Weather continues cold and rainy, and very little farm work has been accomplished. The percentage of young pigs is normal. Dairying is coming to the front in this region. Calves seem to be doing fine. There are many more good cows here than there were a year ago.—J. A. Becker.

Jackson County.—Weather conditions are improving slightly. More than half the oats and barley are in. Not much work has been done on corn ground, and planting will be late. If the supply of seed proves adequate, there will be an increased acreage of corn this spring on account of loss of the clover seeding. Pastures are very backward, and many cattle will not be turned out before May 10th or 15th. A good many silos may be put up this year to help out the hay shortage. Some farmers have already sold cattle they had intended to keep another winter, and many more will sell before fall. An increased acreage of barley has been sown for feeding.—P. W. Jones.

Langlade County.—Farmers are beginning seeding. Ground is wet and cold. Clover is looking good, but is not growing much on account of cold weather. Pastures are beginning to look green. Farmers have had poor luck in raising young pigs, many pigs dying within twenty-four hours after birth. Calves are in normal condition. A few cases of contagious abortion are reported this spring.—Chas. Lade.

Oneida County.—About two-thirds of the oats are planted. Clover seeding is looking fine. Because of cold weather, pasture is not coming on very fast, which is a hardship to those who are short of hay. Very little hay and no silage are left. Farmers are showing an interest in pure-bred poultry; more eggs and day-old chicks have been purchased in the county than ever before.—Clyde Burkhart.

Outagamie County.—The season is later than it has been for many years. Spring seeding has scarcely commenced. Much spring plowing is yet to be done. Very little hay is being shipped out. Winter grain and meadows came through the winter in fair condition. Corn is very poor and high priced. Because of last year's corn failure, hogs and pigs have been marketed and now pigs are very scarce and sell for $3 or $4 each. Cases of abortion have been reported among stock this spring.—Peter Tubbs.

Pierce County.—Weather is wet and cold. A soaking rain fell April 29th and a hard frost came May 2d. Spring seeding will be finished this week. Early sown grain is up and is looking good in spite of cold. Feed in the pastures is still very short.—G. K. Moore.

Price County.—Season is late. Seeding has begun. Ground is in good condition but somewhat wet. Grass is coming slowly. General crop prospects are good. Fruit trees have not been damaged. Stock are in fair condition. —C. F. Glissendorf.

Richland County.—Weather is cold with lots of rain. Early sown oats are up and doing nicely. Some are plowing for corn. Good seed corn is scarce. There is no pasture yet. Some early potatoes and gardens have been planted. Stock is in good condition. Roads are bad in places.—E. C. Stewart.

Rusk County.—Weather is backward and cold. Fall seeding appears to be in fine shape. Pastures are backward. Some seeding has been done. Live stock look good, but feed is scarce. Some farmers are buying hay for $17 a ton.—V. V. Miller.

Sawyer County.—Field work is very much delayed. On light soils plowing and seeding is being pushed, and about 75 per cent of it is finished. On heavy soils little work has been done. In some fields the water is still standing. Clover and grass are coming up slowly. Pastures are not sufficient to allow barn feeding to be discontinued.—Jens Uhrenholdt.

St. Croix County.—Weather continues cold and wet and farm work is behind. Considerable seeding has been done on light sandy soils in the western part of the county, but very little on the heavy clay of the eastern half. Winter rye looks fine, also the grass which was seeded last year. Old meadows are not doing as well as last year's seeding. More early potatoes have been planted than usual. Pig crop is short and many farmers are complaining of poor luck. Wet, cold weather and lack of nourishing feed are partly responsible for the loss of pigs. There is no disease among live stock at present.—Stephen Everson.

Taylor County.—Spring is late, but grass has a fine start. Seeding has begun and more oats will be sown than last year. Hay meadows look good, but are late because of cool, rainy weather. Old hay is scarce and sells for $15 a ton. Lots of calves are being shipped out every week. Spring pigs are scarce. Seed oats and seed potatoes are scarce.—E. H. Dehne.

Washburn County.—Oats seeding will be finished next week. There has been too much wet, cold weather and cloudy days. Pastures and meadows are very short. Rye is looking good. The pig crop is poor. There is a good demand for young cattle and fresh cows.—John W. McCulloch.

Winnebago County.—Spring is cold and backward—later than it has been for several years. Land is very wet and plowing has not commenced. A little grain has been sown on knolls and highland. Pastures and meadows are starting. Clover and alfalfa winterkilled badly. About 50 per cent of the little pigs have died. Most calves are sold for veal.—Seymour L. Smith.

Lake Mills Holstein Breeders' Sale.

The thirteenth annual sale of the Lake Mills Holstein Breeders, Lake Mills, Wis., though establishing no high record average for this sale, was very satisfactory to the most of the consignors. There was probably the largest attendance from the southwestern states that has ever been seen at a Wisconsin sale of dairy cattle. There were a great many buyers present from Iowa, Missouri, Kansas, Texas, Tennessee, Colorado, and they were heavy buyers. The southwestern part of the United States is just awakening to the possibilities of dairying and to the fact that Wisconsin can supply them with a larger quantity and a healthier, better type of cattle than any other section of the United States. One of the heaviest buyers of the best animals was Ex-Governor Stubbs, of Kansas. He is a careful, discriminating judge and was willing to recognize their value. Other liberal buyers were D. H. Brinkman, Sheldon, Iowa; Ed Solomon, El Paso, Texas; G. H. Burrill, Le Mars, Iowa; Ernst Nass, Jefferson, Wis.; F. M. Sharp, Madison, Wis.; Geo. Williams & Son, Orfordville, Wis. A two-day-old heifer calf sired by Colantha De Kol Pietertje sold for $175, and a three-weeks-old bull calf consigned by Ben Berg, Lake Mills, Wis., sold for $650. There were a fine lot of cows that sold for from $400 to $525, one selling for $1,000, consigned by C. C. Fries & Son, Richland Center, Wis. A detailed list of the sale is given below:

BULLS.

Emblagaard Tritomia Joseph, March, 1912; Fred Wittwer, Mt. Horeb, Wis.	$ 125
Canary Forbes De Kol Homestead 5th; John Hetts	125
King Segis Pontiac Polkadot 15th, Dec., 1914; Everson & Brown, Lake Mills, Wis.	135
King Segis Pontiac Polkadot 14th, Dec., 1914; R. N. Martin & Sons, Blue Mounds, Wis.	205
King Segis Pontiac Polkadot 11th, Nov., 1914; J. W. Uglow, Jefferson, Wis.	210
King Segis Pontiac Polkadot 9th, Nov., 1914; E. H. & A. E. Koenecke, Reedsburg, Wis.	220
Glen Pontiac Mooie, Dec., 1915; Herman Duwe, Johnson Creek, Wis.	135
Sir Johanna Champion Korndyke, Dec., 1914; Girod & Robinson	105
Johanna Segis Pet King, Dec., 1913; W. H. Ketner, Broomfield, Colo.	130
Windsor Homestead Oak De Kol, Jan., 1915; Louis Klass	650
No. 115; C. E. Friday, Oregon, Wis.	175
No. 162, Jan., 1916; Milan Demerit, Lake Mills, Wis.	160
King Howtje Pontiac, Oct., 1914; H. A. Armeson	300
Johanna McKinley Shadeland, Dec., 1914; E. J. Keyes, Plymouth, Wis.	195
No. 185; Everson Bros.	200
No. 186; Geo. Williams, Orfordville, Wis.	280
No. 187; H. E. Anderson, Whitewater, Wis.	230
No. 189; H. A. Tulloch, Genoa, Wis.	600

FEMALES.

Uneeda Korndyke Bertina, Jan., 1910; H. A. Tulloch	550
No. 1½; A. E. Tullege, Oakfield, Wis.	380
Johanna Griepe Pearl 2d, Nov., 1910; H. A. Arneson, Barneveld, Wis.	500
Rigtje Hengerveld De Kol, May, 1913; Imig Bros., Neillsville, Wis.	245
Piebe Korndyke Fobes, June, 1913; W. B. Gibbs, Martin, Tenn.	195
Agnes Akkrum Korndyke, Sept., 1913; G. H. Burrill, Le Mars, Ia.	185
Mutual Bienmkje of Rock, Oct., 1913; L. M. Wakeley, Haward, Ill.	180
Mutual Queen Segis, Oct., 1913; Imig Bros.	250
Mutual Flora of Rock, Oct., 1913; L. M. Wakeley	195
Flora Mutual Piebe, Oct., 1913; Sam Stanchfield, Oakfield, Wis.	295
Uneeda Korndyke Erma, Nov., 1912; J. F. Ennis, Orfordville, Wis.	210
Uneeda Korndyke Dora, Oct., 1911; Ernst Nass, Jefferson, Wis.	265
Uneeda Korndyke Charity, Nov., 1910; Fletcher Bros., Waupun, Wis.	580
Luecke De Kol Van Beers, Oct., 1912; G. H. Burrill	190
Zuba Johanna De Kol, May, 1914; Roy Hitts, Ft. Atkinson, Wis.	200
Uneeda Segis Faustina, April, 1914; Imig Bros.	180
Queen De Kol Rosa Bonheur 2d, Feb., 1914; L. H. Field, Osseo, Wis.	245
Uneeda Korndyke Florence, Dec., 1913; Imig Bros.	175
Uneeda Korndyke Florinda, Feb., 1914; R. E. Haeger, Algonquin, Ill.	330
Clothilde Beets of Bonnie Meade, Jan., 1914; Henry Anthes, Jefferson, Wis.	225
Belle Beets of Bonnie Meade, Jan., 1914; Roy Hetts	245
Laura View Pontiac, Dec., 1915; C. C. Fries & Son, Richland Center, Wis.	205
Mayview Pontiac, Sept., 1915; C. C. Lee, Old People's Home, Stoughton, Wis.	155
May Doty 3d, Sept., 1914; W. R. Stubbs, Lawrence, Kan.	255
Margery Joice Mutual, April, 1907; Ira Gettelman, Germantown, Wis.	255
Aaggie Mooie Mutual, Oct., 1906; G. W. Williams, Orfordville, Wis.	135
Aaggie Mooie Mutual 2d, Sept., 1911; Imig Bros.	205
Helena Fobes De Kol Burke 2d, Nov., 1911; H. A. Arneson	285
Greendale Korndyke, Feb., 1913; Ernst Nasse	300
Allie Rue Kimball, April, 1913; Ernst Nass	225
Wase Korndyke Shadeland, Dec., 1907; W. R. Stubbs	515
Jenette Korndyke Rue, April, 1913; F. M. Sharp, Madison, Wis.	335
Lady Cleveland Fobes, Feb., 1912; F. M. Sharp	180
No. 53; J. M. Kelley, Baraboo, Wis.	125
Ellen Homestead De Kol, Nov., 1914; U. H. Kettner, Broomfield, Colo.	140
Netherland Jannetje's Beets 3d, Aug., 1908; Hans Hansen; Lake Mills, Wis.	185
Aaltje Bonnie Girl, July, 1907; J. W. Cook, Harveyville, Kan.	150
Aaltje Beechwood, Dec., 1909; W. B. Gibbs, Martin, Tenn.	170
Fobes Piebe Hengerveld De Kol, Dec., 1908; Geo. Williams	150
Laura Beets, Sept., 1910; Roy Hetts	290
Jumbo Queen Johanna 2d, Dec., 1910; W. R. Stubbs	275
Daisy Colantha Burke 2d, Nov., 1915; Harry Faville, Lake Mills, Wis.	115
Queen Johanna Lily, Dec., 1908; W. R. Stubbs	285
Queen Johanna Lily 2d, Dec., 1915; Girod & Robinson	165
Mabel Pontiac Rijeneta 2d, Aug., 1914; D. H. Brinkman	155
Rijaneta De Kol Johanna 2d, Oct., 1908; W. R. Stubbs	240
No. 68; F. B. Green, Evansville, Wis.	130
An Colantha, July, 1915; Girod & Robinson	175
Colantha Mercedes De Kol, Nov., 1914; Girod & Robinson	200
Aaggie Snow, Oct., 1906; Hans Hansen	175
Bessie Beechwood Segis, Sept., 1914; Henry Anthes	140
No. 75; J. M. Kelley, Baraboo, Wis.	120
Canary De Kol Johanna, Feb., 1914; Ed Solomon, El Paso, Tex.	255
Suse Homestead Rue, April, 1914; F. M. Sharp	710
Maid Mechthilde Canary, May, 1914; Ed Solomon	200
Greenvale Johanna Paul, Mar., 1914; Ed Solomon	185
Lady Johanna Alegra, Sept., 1914; Ernst Nass	160
No. 82, March, 1915; Roy E. Markell, Darien, Wis.	125
No. 84, Mar., 1915; J. M. Kelley	115
Duchess Johanna Pietertje Pontiac, May, 1914; F. M. Sharpe	145
Johanna Boneta, April, 1914; F. J. Bristol & Sons, Oakfield, Wis.	200
Princess Clothilde Aaggie, May, 1915; Everson & Brown	160
Johanna Inka Flora Summers Aaggie, Jan., 1915; Ed J. Kisow, Cambridge, Wis.	125
D'Etta Mercedes of Shady Nook 3d, Nov., 1914; U. H. Ketner	185
Johanna Clothilde Beauty, Feb., 1915; U. H. Ketner	170
Genevra Pauline Burke, Sept., 1915; Girod & Robinson	175
Lady Coniston Burke, Oct., 1915; R. E. Moore, Humbrid, Wis.	180
Tootsie Feikje, Oct., 1908; Ed J. Kisow	545
Longfield Butter King Princess, Sept., 1908; W. R. Stubbs	545
Polly Corona Burke 2d, Sept., 1911; J. W. Cook	170
Irma Spofford De Kol, Nov., 1909; Louis H. Klass, Maple Park, Ill.	240
Viola Yeslet, June, 1906; Fred Zumkehr	115
Milford Pledge Oak De Kol, Oct. 1914; Ed Solomon	260
Queen Feikje, Dec., 1910; D. H. Brinkman	160
Queen Tweedledee, Nov., 1906;	

(Continued on page 10.)

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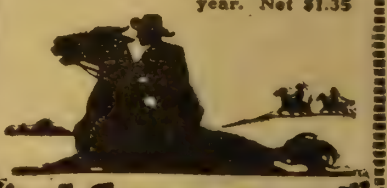

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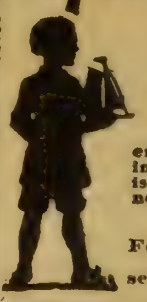

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The Raising of Spring Lambs.

A Good Spring Lamb Market Should Encourage Extraordinary Care of the Flock---By Howard Hackedorn.

A PART of a load of spring lambs from Iowa sold for 17 cents per pound at Chicago recently. This foreshadowing of a good spring lamb market means that every care possible must be given these new lambs. Lambs lost means dollars lost.

In the first place, the ewes must receive feed enough to produce an abundance of milk for the lambs. It is just as important, or more so, to the sheep men to have a high production of milk in his ewes as it is to a dairyman to have high producing cows.

If the grass or rye pasture is not quite ready to turn on, a ewe suckling a lamb will need milk producing feeds such as bran, oil cake, clover or alfalfa hay and silage, if good, clean, sweet silage is available. Corn and timothy hay are poor feeds for ewes suckling lambs. A ration of six parts corn, three parts bran, one part linseed oil meal with clover or alfalfa is a good one. An average ewe should receive a pound to a pound and a half of the grain mixture and all the hay she will clean up.

DOCKED LAMBS PRESENT AN ATTRACTIVE APPEARANCE TO THE BUYER.

Rye sown in the cornfield in the fall after the corn is taken off makes an excellent early pasture for ewe and lamb. It usually will be ready to pasture two to three weeks before blue grass. Thus considerable feed is saved and the ewes relish the green fed. As soon as the grass grows enough to furnish an abundance of feed additional feeding will not be necessary.

Feeding lambs grain in "creeps" is a good practice. A "creep" can be fixed up in any sheltered, sunny spot, preferably in a shed open to the south. A pen is fenced off with several openings large enough to admit the lambs but too small to allow the ewes to get through. A trough should be put in the creep to feed grain in. This trough should have a board fixed over it to keep the lambs from getting into it with their feet but high enough so as not to interfere with the lambs' eating. A ration of six parts cracked corn, two parts bran, and one part oil meal is a good one to start the lambs on, gradually eliminating the bran and cake. The lambs will not eat much, and unless the grain is clean and sweet they will eat very little. Fresh grain should be given daily. Any left-over grain can be fed the ewes.

The docking and castrating of the lambs should not be neglected. Docking is a very simple operation and can be accomplished with practically no danger. Market men state that docked lambs are worth from 25 to 50 cents more per 100 pounds, primarily because they present a more attractive, uniform appearance, which is of much value. Lambs usually scour a little when first turned on grass, and the dung collects on the tail, making a very bad appearance and an excellent place for maggots to grow and cause trouble.

If the lambs are young the tails can be taken off with a knife about one inch from the body. Lambs up to two weeks of age can be successfully docked with a knife. This method has the advantage of requiring less labor and the wound heals more quickly than when the docking is done with hot pincers. The hot pincers are used more successfully on older lambs because by this method there is practically no danger from bleeding. The pincers are nothing more than large iron shears which are heated to a good red heat in a portable forge or more conveniently in the flame from a tinsmith's gasoline blow torch. These shears can be purchased from sheep supply houses for $1.25 to $1.50 per pair.

When docking lambs with hot pincers care should be taken not to be too quick or to have the irons too hot. The end of the blood vessels must be thoroughly seared to prevent bleeding.

Castrating is not so important as docking if the lambs are to be sold in June or early July. However, if they are to be kept over the summer, castration of the ram lambs becomes very necessary. It should be done at the same time as the docking is done.

One should select a warm, bright day for docking and castration to prevent colds and other attendant difficulties, in case the lambs should bleed badly and become weak in condition. It is also preferable to dock and castrate the lambs as soon as they become good and strong, at from two to three weeks of age, depending upon the condition of the lambs. However, if the farm work does not permit of docking and castrating at this time it can be successfully done at an older age.

New castrated lambs should not be disturbed for twelve to fourteen hours. That is, they should not be driven any distance. If one is careful and clean there is practically no danger from docking and castrating lambs.

Cold, damp storms of early Spring never bother the cozy household warmed by AMERICAN Radiators and IDEAL Boilers, which furnish heat to suit the weather.

Defeat chill days of early Spring

Farm life in the early Spring, when weather is changeable and dangerous, can be made most pleasant and healthful by flooding the entire house with the health and comfort-giving warmth of an IDEAL heating outfit.

AMERICAN RADIATORS & IDEAL BOILERS

If you have managed to get through the entire winter with stoves or other old-fashioned methods of heating, you have suffered more of discomforts and inconveniences during one winter than you will ever again experience if you adopt the IDEAL heating way.

So decide now to find out all about AMERICAN Radiators and IDEAL Boilers. They give you and the family the warm, healthful home to which you are entitled.

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During chilly days and blizzard days the IDEAL Boiler furnishes just the heat required to keep the house comfortable all over without waste of fuel. Gives any farm house all comforts of a city home. Water mains not necessary. Saves labor and burns smallest amount of fuel. Thousands in use in every State in the Union. Farm houses have use for IDEAL heating at least eight months in the year, and on sudden cool Summer days a little kindling-fire instantly puts genial warmth all through the house.

A No. 020 IDEAL Boiler and 262 ft. of 38-in. AMERICAN Radiators, costing the owner $185, were used to heat this farm house, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions.

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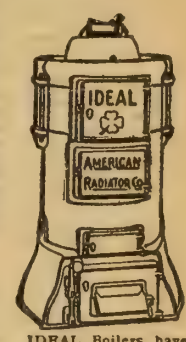
You will get this valuable book free, by return mail. Get started on your outfit right away. Prices are attractive, so act at once!



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AMERICAN RADIATOR COMPANY

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Chicago

A CATCH CROP OF RYE AFTER CORN MAKES EARLY SPRING FEED FOR EWES AND SUCKLING LAMBS.

YIELD PER ACRE GROWS.

Statistics Show Gradual Increase in Last Twenty-five Years.

Crops in America are by slow degrees increasing in yield per acre. The department of agriculture has ascertained that during the past twenty-five years the production per acre in this country has shown an increase at the rate of nearly 1 per cent per annum.

This upward trend is not readily observed in yields from one year to another, owing to the wide yearly variations caused by the vicissitudes of the seasons. But when averages are obtained of a series of years the effect of the seasonal variations is neutralized and the general trend is readily observed.

During the decade of the 70's and 80's when there was a vast expansion in farm areas in the West and crops were grown on a more extensive scale, the tendency of yield per acre was downward. Since the early 90's, however, the trend has been decidedly upward.

In France 100 years ago the yield per acre of wheat was less than the average now in the United States, but the yield increased in each decade, the average now being about twenty bushels; the increase during the 100 years has averaged about ¾ of 1 per cent a year. Similar increases have been made in other countries.

A striking reversal of the general trend, due to a specified cause, is the reduced yield per acre of cotton in those sections affected by the ravages of the boll weevil. Before the presence of boll weevil the yield per acre in both states tended upward. But since 1906 the boll weevil has caused the average yield in Louisiana to fall rapidly, while the yield in North Carolina and other non-affected states, has continued to increase.

The total value of crop production in the United States in 1915 is estimated as about $6,471,000, as compared with $5,929,000 in 1914, an increase of 9 per cent.

Cannon loaded with sand have been found effective in breaking up swarms of locusts that frequently appear in Costa Rica.

LANDS AND HOMES

PROSPERITY IN CANADA—$900,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated lands from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privileges of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready-made farms for sale. Special easy terms. Loans for livestock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interests are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

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$1000 TO $8,000 in TAYLOR, Marathon, Lincoln and other counties. Very liberal terms. Trades made. We are OWNERS. We sell horses, wagons, etc., on liberal terms; also choice holding of unimproved, $15 to $30 per acre. LOEB-HAMMEL REALTY COMPANY (not inc.), Medford, Wisconsin. Write Chicago office: 343-3 Marquette Building. Live agents wanted.

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A PIECE of unimproved land, a partially improved or wholly improved farm at prices ranging from $10 to $25 per acre for the former, and from $35 to $100 per acre for the latter, I have the place you want. Write for my booklet describing more than 100 choice places on easy terms in the best part of Wisconsin. W. E. Webster, Hudson, Wisconsin.

HURRY! OUR AITKIN COUNTY LANDS WILL not last long. Located in choice dairying district, near railway and big competing markets. Our prices are low and terms easy for you. Come or send for folders. Arnold, Land Agent, Rock Island Ry., 151 Wolvin Bldg., Duluth, Minn.

UPPER MICHIGAN Ideal place to settle; best soil and climate for grains, fruits, vegetables; 40, 80, 160 acre tracts; low prices; easy terms. Get literature. Northern Michigan Land Co., 222 Gilfillan Blk., Saint Paul, Minnesota.

IMPROVED farm, especially adapted to dairying, near successful co-operative creamery, low prices. Easy terms. Act quickly. Arnold, Land Commissioner, 513 Wolvin Bldg., Duluth, Minn.

FREE GOVERNMENT LANDS
COLORADO. Fine soil and climate. Unusual opportunity. Official pamphlets free. Immigration Dept., 1513 Tremont Place, Denver, Colo.

WISCONSIN! 65 farms, 15,000 acres wild land. Corn, dairy, clover belt. Counties, Barron, Polk. Easy terms. Lowest prices. List free. L. Rivard, Turtle Lake, Wisconsin.

POOR MAN'S CHANCE **$5 DOWN, $5 monthly** buys 40 acres productive land; near town, some timber, price $200. Other bargains. Box 425-H, Carthage, Missouri.

FARMS and improved land near Baudette and Pitt, where "Clover is a weed," cheap. Cash or easy terms. Address H. M. Evenstad, Sec. Farmers' Club, Pitt, Minnesota.

SEND a postal to the Wisconsin Advancement Ass'n, 1590 First Nat. Bank Bldg., Milwaukee, Wis., and say, "I want to know about the best cheap lands in America." That is all.

OUR BOOKLET FREE 80 to 320 acre farms near State Capital, Montana, fine stock ranches. Western States Land & Dev. Co., Helena, Montana.

FARM or business anywhere sold quickly for cash. Trades a specialty. Information free. Kubat Realty Co., Desk 10, Chippewa Falls, Wis.

WANTED FARMS—Have 3,357 buyers; describe your unsold property, give price, acreage, location. 769 Farmers' Exchange, Denver, Colo.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

FOR SALE High-grade Guernsey heifer calves at $15 each. Address Fern A. Findlay, Whitewater, Wisconsin.

Revive State Holstein Association

Called Meeting Held in Watertown Takes up the Matter of Issuing Annually an Official State Holstein Directory.

THE Holstein-Friesian Breeders' Association of Wisconsin at a called meeting held in Watertown May 4th adopted plans for enlarging the scope of its activities. It was decided to issue in the near future a directory of Wisconsin Holstein breeders. The plan approved provides that the cost of the book shall be met by a charge for individual advertisements and also a charge for insertion of the name of each breeder and the number of cattle he has to sell. The purpose of the whole plan is to revive the state association. While there are about 1,200 so-called members of the association in Wisconsin, it was reported that only about fifty had paid their dues and less than 300 were sufficiently interested in the work of the association to forward their proxies as members of the Holstein-Friesian Association of America, which meets in Detroit, Michigan, June 7th.

Any Holstein-Friesian breeder in Wisconsin may have his name and the number of cattle he owns inserted in the Wisconsin directory under either of the following plans:

First—By taking an advertisement of a quarter page or more in the directory. The minimum cost of $9 for quarter page, and the cost for half page is $15 and for full page $25. This cost also includes a year's membership in the state association.

Second—By taking a smaller advertisement and paying a fee of $1. This includes a year's membership in the association.

Third—By taking a year's membership in the association and paying $2.50 for the same. This last proposition is open to all breeders whether they advertise in the book or not.

Each breeder who becomes a member under any of the plans suggested will receive a copy of the book. Advertisements in weekly and monthly papers which reach farmers and dairymen are expected to bring inquiries for the book. Copies will also be sent to any prospective purchasers of stock, names of same to be handed to the secretary of the association. It is proposed to issue 5,000 of these books at a cost of approximately $500. Breeders who have half tones in the book will pay for the cuts at cost price.

An important feature of the new plan is a pledge to be given to the association by such member as is willing, to the effect that he will annually execute a proxy for his vote in the Holstein-Friesian Association of America. Said proxy is to be made in favor of the Wisconsin association proxy committee and is for the purpose of insuring united representation in the national association on any problems which may come up. Of course, any member may retain his vote for his own use, but under the new plan he pledges his proxy on the theory that he will not be present to vote it in person. In the past a large portion of the Wisconsin proxies have been voted by easterners. An effort made to gather Wisconsin proxies this year has resulted in less than 300 being placed in the hands of the committee. Eastern interests have been able to get double that number of proxies to vote at national association meetings. Expressions of opinion regarding the new plan were given by J. P. Riordan, C. F. Comings, Pres. R. J. Schaefer, A. W. Hopkins, Sidney Jones, George C. Humphrey, Mr. Bristol, Fred Pabst and others. There was an apparent unanimity of sentiment that the publication of the book will help unite the Holstein-Friesian interests of the state and also furnish needed funds. A large number of breeders who were in Watertown attending the sale last week subscribed to the advertising columns of the book. Having the official sanction of the association, Sec. C. J. Schroeder is now confident the plan will work out fine.

BOOK ON SMALL GRAIN.

M. A. Carleton Produces Best Volume Ever Published.

Unquestionably the highest authority in the United States on problems relating to grain crops is Mark Alfred Carleton, in charge of the work of cereal investigation in the United States Department of Agriculture. From time to time this expert has prepared bulletins for general distribution and these have proven to be most valuable, indeed. At this time we are able to announce the publication of a most excellent volume by this author under the title, "The Small Grains." While this book is intended primarily for instruction in colleges, it is nevertheless well adapted to the specific needs of grain growers. A considerable part of the volume is devoted to the problem of grain improvement. Under this heading the cleaning and grading of grain is taken up in detail and also the question of selection in its relation to grain improvement.

The author of this volume devotes considerable attention to soil problems and he takes up and discusses with a very marked degree of thoroughness weed pests. An interesting phase of this volume is that devoted to the study of the characteristics of the various crops. It is a well-known fact that crop rotation is altogether based on the difference in feeding habits and root characteristics, so that knowledge of these matters is of the utmost importance to the grain grower. Even those whose practices are sound will find pleasure and profit in adding to their knowledge as to why and wherefor of these practices. In the volume referred to these matters are elucidated most clearly and interestingly. This is a book that should be in the library of every farm home and arrangements have been made by The Wisconsin Farmer whereby it will be furnished readers at the regular publisher's price, $1.75.

News of the Sale Ring.

(Continued from page 8.)

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Geraldine Boone Pontiac, Nov., 1912; L. M. Wakeley, Harvard, Ill. 145
Geraldine Boone De Kol 2d, March, 1907; F. M. Sharp 150
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Gem Rigtje Baby De Kol Mercedes, May, 1906; Geo. Williams 125
Esther Walker Beets, April, 1912; Ed Solomon, El Paso, Texas.... 300
Rachaela Ferndale Paul Beets, Dec., 1912; D. H. Brinkman 170
Abbie Wayne Cornucopia De Kol 4th, Oct., 1910; D. H. Brinkman 115
Elsie Twisk Beauty, Nov., 1912; Henry Anthes 250
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Jessie Perfection De Kol 3d; Ernst Nass 170
Piebe Juliana Gem Inka, Dec., 1915; Roy Hetts 125
Oakland Paul Walker Pietertje, Sept., 1915; Ernst Nass..... 130
Butter Boys' Canary Wild Rose, Oct., 1915; Ernst Naas 110
Selma De Kol Segis, June, 1913; D. H. Brinkman..... 150
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Mutual Artis De Kol, Nov., 1914; W. H. Wilson, Ft. Atkinson, Wis. 155
Duke's Johanna Aaggie Mechthilde, Jan., 1916; John Hetts.. 100
Primrose Pietertje Witkop De Kol, March, 1908; F. B. Green..... 325
Milford Primrose Oak De Kol, Feb., 1913; L. H. Field..... 310
Primrose Pietertje Longfield, Feb., 1912; Ernst Nass 320
Gem Rigtje De Kol Daisy Mink, Jan., 1906; Geo. Williams..... 265
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No. 172, Dec., 1915; Fred Gurr.... 130
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No. 176, Jan., 1916; H. Anthes.... 100
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Alta Maid Fayne, Dec., 1913; J. E. Couch 285
Lady Reka Mooie Granddaughter, Jan., 1915; F. J. Bristol..... 275

West Salem Guernsey Sale.

The sale of Guernsey cattle made by Rundell Bros. and A. I. Stubbs at West Salem, May 3d was a success in many ways. There was one feature, however, that was somewhat detrimental to the sale, that being the fact that the farmers are so very busy at this time and consequently the attendance was not as large as at some of the previous sales, however, there was a good crowd of breeders who bid well on the better stuff throughout the sale. The get of the great bull, imported Holden 4th, was in demand and the nice lot of young stuff in the sale demonstrated his ability as a sire above the ordinary. The top of the sale was two yearling heifers sired by Holden 4th. These sold for $725 each and went to Glen Ayre Farm, Glenview, Ill. This was an excellent buy at that figure. This farm also purchased No. 29 of the catalog, also by the above bull, paying $500 for same. They bought several of the best things in the sale. Females sired by Imp. Gov. of St. Croix, the excellent bull heading the Rundell Bros. herd were also in demand. This was the first time that the Rundell Bros. consigned to the West Salem sale and they offered animals that were pleasing and that will be advertisements for them in the respective territories to which they go. Col. N. G. Kraschel, the noted Iowa auctioneer cried the sale and, although this was one of the few Guernsey sales he has made in Wisconsin, the results were very satisfactory and he made many friends by the manner in which he conducted the sale. We follow with a list of prices and buyers of all cattle.

RUNDELL BROS.' CONSIGNMENT FEMALES.

Louisa of Oakdale, March 3, 1913; W. W. Kinyon, Eau Claire, Wis. $195
Imp. Frosine Beauty, Aug. 25, 1912; Economy Stock Farm, Shenandoah, Ia. 165
Royal Maid of Oakdale, April 28, 1913; Braircombe Farm Co., Winona, Minn. 235
Anemone of Haddon, June 1, 1910; Braircombe Farm Co..... 185
Mona of Bound Brook, Nov. 15, 1911; W. W. Clarke, Grand Rapids, Wis. 140
Dyle, Oct. 3, 1914; E. D. Dair, Farmington, Minn. 205
Anna of Oakdale, March 17, 1913; W. F. Bauhut, West Salem, Wis. 225
Princeling's Ro, Oct. 9, 1910; Onalaska Agricultural College, Onalaska, Wis. 260
Dora's Pride of Hammond, July 28, 1914; W. W. Clarke 135
Heifer, Sundari's Lily, Dec. 7, 1914; F. W. Kimball, Waltham, Minn. 155
Imp. Alta of St. Croix, Sept. 1, 1912; W. W. Clarke 150
Heifer, Penelope of St. Croix, Jan. 21, 1914; A. G. Ellwood, Osseo, Wis. 165

BULLS.

Langwater Princeling, Feb. 7, 1909; W. W. Clarke 330
Squires' Knight, April 10, 1915; A. H. Long, Prairie du Chien, Wis. 105

ALFRED I. STUBB'S CONSIGNMENT.

FEMALES.

Imp. Princess Elaine, July 16, 1910; M. J. Quiggle, West Salem, Wis. 210
Royal Marcella Millwood, March 10, 1913; W. W. Clarke 125
Imp. Herivel's Betty, March 30, 1907; Dr. Munn, Janesville, Wis. 305
Nanette of Seven Elms Farm, April 7, 1913; M. J. Quiggle..... 205
Jesse's Rilma of Iowa, May 10, 1912; M. E. Schirar, Sparta, Wis..... 125
Rose of Belrnetown, Jan. 27, 1914; Dr. Munn 175
Golden Bells of Beirnetown, Oct. 9, 1913; Arthur W. Dahlin, Silver Lake, Minn. 200
Golden Gleam 2d, May 7, 1908; Dr. Munn 280
Heifer, Holden's Rose, Oct. 8, 1914; Glen Ayre Farm, Glenview, Ill... 725
Heifer, Holden's Lassie, April 4, Glen Ayre Farm 500
Heifer, Holden's Lady, Jan. 28, 1915; Glen Ayre Farm 725
Jewel's Queen of Fairview, Jan. 5, 1909; J. M. Halderson, Holman, Wis. 205
Mildred of the Glen, Aug. 20, 1904; A. G. Ellwood 105
Rustic Lady, June 19, 1913; L. J. Delahaut, Green Bay, Wis..... 155
Heifer, Nov. 9, 1914; H. D. Lovejoy, West Salem, Wis..... 120
Heifer, Marie Cook, Oct. 3, 1915; W. W. Kinyon 135
Heifer, Netsey Josephine, June 27, 1915; Dr. Munn 115

BULLS.

Holden's Monogram, Feb. 16, 1913; Lawrence Humble, Rushford, Minn. 210
Bull calf, Aug. 12, 1915; E. C. Hoff, Holman, Wis. 220
Bull calf, Aug. 16, 1915; Braircombe Farm Co. 105
Bull, Chronicler II, Nov. 25, 1914; A. J. Grotenhuis & Son, Sioux Center, Ia. 105
King of Stevenstown, June 12, 1914 95

OTHER CONSIGNMENTS.

Jetwood of Appleton, Dec. 14, 1910; Dr. Munn 320
Heifer, Imp. Beauty's Pride of

(Concluded on page 23.)

In and Around Wisconsin

Plan on Foot to Enact Law For Selling Eggs by Weight Instead of by Count---Other Items of Interest to Our Readers

County Field Representative H. H. Humphrey is arranging to organize a cow-testing association in the neighborhood of Mosinee, Marathon county.

A new method to avoid the expense of steaming tobacco beds has been tried out by a few growers with some degree of success. It is to saturate the beds with gasoline or kerosene and apply the torch. It is claimed that the weed seeds are killed as effectually as by steam, but the plants do not make quite as rapid growth. If the price of gasoline gets higher it is not recommended as an economical plan.

The state department of weights and measures now contemplates a Wisconsin law which will require that eggs be sold by weight instead of by the dozen. An effort is being made to get the sentiment of dealers along this line. In some cities eggs are divided into the larger and smaller grades and sold at a difference of a penny or 2 cents a dozen. If there is to be a distinction made, however, it would seem that the weight system would be the more equitable. Eggs are about the last farm product which it is proposed to put into the weight class.

A Wisconsin tobacco dealer who keeps close tab on all matters relating to his business, figures that the 1915 crop of Wisconsin yielded close to 38,000,000 pounds. This is at least 2,000,000 pounds in excess of the government estimate. It is generally believed that the agricultural department's figures of our crop statistics have been below the actual production in this state for some years past. The revenue department's statistics of tobacco on hand, issued twice a year, bear out this contention, for it is a check on the crop estimates issued by the agricultural department.

E. L. Luther, superintendent of the Wisconsin county agents, recently toured Sawyer county in company with C. P. West, the Sawyer county representative. Meetings were held at Weigor, Exeland, Winter, Radisson, Stone Lake and Seeley. The discussions revolved mainly around the subject of potato raising. Mr. Luther made several talks on dairying. He said a man might start a dairy herd with $400 or $500 invested in fairly good cows and a registered sire for breeding purposes. He ridiculed the idea that it was necessary to have $5,000 capital to get started in the dairy business in Upper Wisconsin.

Grocers in Taylor county are cooperating with their patrons in a movement which is expected to increase the poultry and egg production. The grocers are furnishing in many instances a setting of Rhode Island Red eggs. No charge is made, but the boy or girl who gets the setting must agree to handle the hatching properly, take good care of the stock produced and give the grocer a setting next spring. In this manner the plan can be put on a revolving basis and the grocers will have a cash outlay only for the settings furnished the first year. This is a splendid effort to aid the young people of Taylor county to get a start in the poultry business.

Prof. A. G. Burg, superintendent of the Marathon County Agricultural School, is assisting the school and city officials of Wausau in a novel plan to help the poor. Land will be furnished free, to be used by poor people, who will be expected to seed it and cultivate it and care for the crop. Professor Berg will help to select the seed, to advise the gardeners on any subject which may come up and to see to it generally that the agricultural part of the plan is a success. The city and school board have a number of vacant lots which can be used and which at present are lying idle. This is rather an intensive system, but there is no reason why the poor who are unable to lease land may not raise a considerable amount of stuff to aid in their support through the winter. At least the plan seems to be better than for the county simply to dole out money and provisions. There may be a few of the county poor who will not care to work on this basis, but a majority of them will probably be glad of a chance.

Waushara county will have a boys' corn-growing contest this year and a number of young fellows are entering. Pure-bred seed is furnished through the courtesy of one of the bankers of the county. There is seed for about twenty acres and liberal premiums are offered the bankers of the county for the boys who win places in the contest.

Walworth county has planned many contests for this summer to interest the boys and girls of that county in better farming. There will be a corn contest for country boys between twelve and eighteen years old; a potato contest for city boys of the same age who are not situated so they can raise corn, and a tomato contest for girls, open to all. About $300 in prizes is announced. The judging will all be done at the county fair. In addition there is the "baby beef" contest which will be decided at the fair.

Co-operating with the department of farmers' institutes the Wisconsin Live Stock Breeders' Association and the Wisconsin Sheep Breeders' Association will hold a series of special sheep institutes this summer in some of the northern and western counties of the state. Frank Kleinheinz, shepherd of the agricultural experiment station flocks, will assist at several of these meetings.

Floods have done a great deal of damage the past few weeks in the western, southwestern and northeastern portions of the state. The Wisconsin river has been on a rampage and the Mississippi has been high all along the western border. Seeding has been delayed by the floods and cold and in some instances considerable damage has been done to property by the high water.

Arthur Broughton, president of the Wisconsin Live Stock Breeders' Association, has appointed C. W. Thompson, of Lake Geneva; J. P. Riordan, of Mayville; H. C. Taylor, of Orfordville; C. L. Hill, of Rosendale; Eben E. Jones, of Rockland; John Erickson, of Waupaca; Frank Swoboda, of Antigo; James Dillon, of Mondovi; Frank T. Stare, of Ladysmith and Frank Swan, of Wauwatosa, as district representatives of the organization

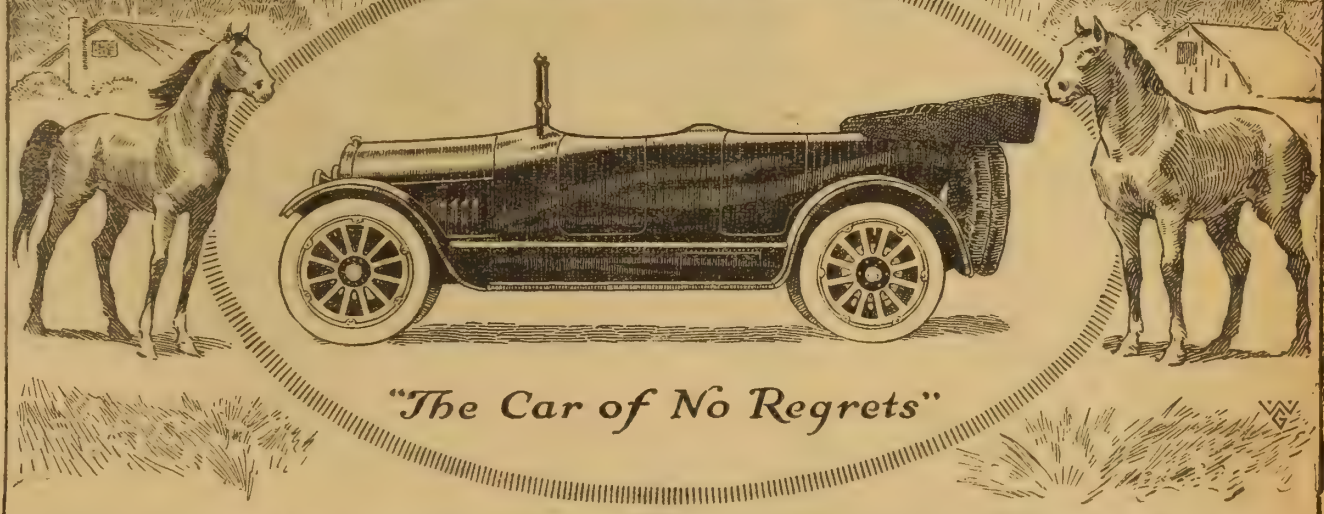
J. G. Milward, secretary of the Wisconsin Potato Growers' Association, will hold, during the next few weeks, a series of conferences with farmers and business men at a number of points in the "potato belt." The first of these sessions will be held at Waupaca, Chippewa Falls, Tomahawk, Seeley, Spooner, Barron, Marinette and Crivitz.

Brick cheesemakers of Dodge, Washington, Jefferson and adjoining counties have been discussing the advisability of changing their basis of buying milk from the present weight system to the fat system. Under the new plan milk would be sold according to its value in fat. The Babcock test has been used for twenty years as a basis of payment for milk for the cheddar cheese factories.

Seven hundred and fifty thousand acres of land have been opened for homestead purposes in southern California. The government has also opened 1,500,000 acres in South Dakota.

KING

EIGHT CYLINDER



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The admired characteristics of Thoroughbred and Percheron are combined in this *pioneer* Eight. The Speed, Grace and Stamina of one are merged with the Power, Sturdiness and Reliability of the other

The Farmer is quick to recognize *quality* in stock and no less appreciative when he finds it in machinery. His motor car is as personal to him as his fine horses and is generally purchased with the same care.

We are confident that the King is so very much the car he has long desired, that we urge his investigation of this successful Eight before deciding on *any* other make.

The Eight-Cylinder King has been in operation for over a year throughout America and in more than thirty foreign lands. Prior to this, the King Four made a most enviable reputation the world over for efficiency and reliability.

The new Model E is larger and more powerful than our *pioneer* Eight, and contains many thoroughly tried advances in automobile engineering.

Aluminum pistons are a feature of this model; one-third the weight of iron pistons, they greatly increase engine power and reduce the strain on crank-shaft, bearings and all reciprocating parts. They also resist carbon and economize fuel.

Cantilever Springs—which the King introduced to America—reach their highest efficiency as designed for this car. These springs give a restful, lazy motion over the roughest roads and keep the tires gripped to the road.

From a stand-still this car will accelerate to 25 miles per hour *in eleven seconds*, without gear-changing, and lightning "get-a-way" from a start "in high" is only a small part in the amazing performance of the King's super-motor. Hills melt before this powerful car, and they're mostly taken in high gear. "Locomotive" speed is always ready—for the need that comes once in a lifetime. Silence, economy, and ease of operation are naturally features of this perfect mechanism.

Model E, 7-Passenger, 60-Horse-power Touring Car, $1350

SEND FOR CATALOG AND NAME OF NEAREST KING DEALER

KING MOTOR CAR COMPANY, DETROIT, MICHIGAN

VIEWS ON USE OF TRACTOR.

Letters From Farmers Who Have Either Had First-Hand Experience or Have Some Views as to What They Expect a Good Tractor Should Do.

Fourteen-Year-Old Boy Handles Tractor.

To the Editor.—I am going to relate some of my experiences with a light tractor. I purchased this tractor November 4th last year. I have had enough trial now to know that I like

DOING IT ALL IN ONE OPERATION WITH A TRACTOR.

it very much. It is twenty horse power on the belt and seven horse power on the drawbar. It is a three-wheel tractor. The drive wheel runs in the furrow and has lugs three or four inches long and two and one-half inches wide and never packs the ground. It subsoils in place of packing it. I plowed thirty acres with it and I used two fourteen-inch bottom gang plows. It all depends on the land you plow. If the land is level or rolling and not too hilly you can plow six to seven acres per ten hours' work. It will take fourteen gallons of gasoline, one gallon lubricating oil and one-half pound of cup grease. I am using the tractor this spring. We use a gang disk and drag in the rear and it does very fine work. I can disk and drag eighteen to twenty acres a day, putting it in fine shape to sow. A man plows it with the team and uses the gang. In that way we get over a good field in a day. I find it takes a mighty good walking team to follow this light tractor.

Another thing, this tractor does not pack the soil while disking, for the most weight is on the driver and that subsoils more than packs. My farm contains 145 acres. I do not regard it as a real tractor farm because we have some ground which we are unable to plow with the tractor. I have three work horses, all good size. We finish up the bad land with the team. I have a boy fourteen years old. He can run this tractor on the gang plow or on the disk. However, I believe in running your tractor yourself in order to keep it well oiled, because oil is the life of the machine. If you take good care of a tractor it is about the same amount of work as it takes to care for a team of horses. Give the tractor good care and it will last a long time.

We have done some belt work on a big feed cutter with a blower. The tractor has plenty of power to spare. It runs ten hours on heavy belt work on ten gallons of gasoline, one gallon of oil and one-half the grease it would take on ten hours' plowing. I certainly believe the tractor is well worth what it costs. It takes the heavy work off the horses and lets you keep less horses to do the work. It also does the work quicker and better. Furthermore, you are able to work your land any depth you want it and it doesn't hurt the tractor like it would the horses. I believe any man who has a nice, level farm should have a tractor, but be sure to get one that doesn't pack the ground. I believe there are some tractors which do pack the ground. Furthermore, we have a combination gang plow for sod or stubble. It turns both over very nicely and we intend to plow our sod for corn with the tractor and run the disk behind the gang plow and do both at the same time and with this arrangement, I feel sure, we will have power to spare. We tried the experiment last fall and it worked fine. There is a great deal of other work which you can do with a tractor, but this letter will be of interest to some of your readers.

Mr. Fred Weippenbach.
Waukesha Co., Wisconsin.

Believes Tractor Has Come to Stay.

To the Editor:—Last fall we bought a 7-20 and find that we picked the right type. The main thing to consider is the type. In so doing one must consider the lay of his ground, climatic conditions, size of farm, and the amount of work to perform. There are many different kinds of tractors on the market, but some have advantages over the others. Especially is this type in regard to traction. Without the proper traction one has no use for his machine.

TRACTOR IS USEFUL IN GARDEN AND ORCHARD TOO.

The prospective purchaser must consider the horse power necessary to fit the above conditions. I do not believe in the heavy, cumbersome machine which is hard to handle. The light-weight tractor, in my opinion, will not pack or injure the soil any more than horses. I would suggest that it should not weigh over 6,000 pounds, so if this weight is properly distributed and on the right kind of a base, no injury will be done the soil unless it is exceedingly wet.

After the purchaser finds the horse power necessary and the proper traction qualities, then he should examine carefully and observantly every detail of his power plant. I wouldn't give 2 cents for a fine-looking tractor with the above attributes if it has a bum power plant. About the only way a novice can find this out for himself is to examine some dozen or so of the standard makes, and that one which seems the simplest to him is usually the one which he will understand the best. At its best a tractor is a complicated piece of machinery, and like all gas engines, it has its whims. It is as unlike other farm machinery as can be, and needs strict attention. Its work is hard and it is subject to all kinds of strains, and so it must have endurance. Therein lies the one great economy of the tractor. Here again is where the problem of the power plant confronts the purchaser. As the insides of a horse must be in prime condition, so must the insides of a tractor be also. Examine closely the cylinders, pistons, connecting rods, crankshaft, bearings, electrical parts, and above all the lubricating system. As the life of a tractor depends upon its power plant so does the power plant upon its lubrication. Your repair bill must be reduced to the minimum, and unless lubrication is properly introduced to the vital bearings you may as well keep your horses and pay a veterinarian.

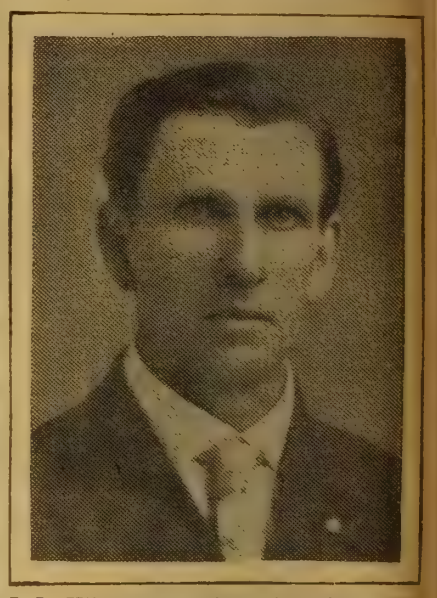
One must choose the type of tractor best suited to his needs. He must look over the various machines and figure for himself which one he wants. Don't let some salesman sell you something you don't want; don't be afraid of making two or three or half a dozen of them sore, but get what you want to spend your money for.

I shall now give a brief account of my personal experience, which goes to show that it depends a good deal upon the operator as to whether he likes a tractor or not. If he can learn to handle it and get the idea out of his head that he isn't driving a horse or mules, then he will have better luck.

We have a 240-acre farm, some of it lying pretty rough. Being shy on horses, we considered whether to buy four more or their equivalent. We needed also a power plant for belt work and figured that a twelve-horse engine was needed. Now, after due deliberation, we decided that the horses and engine were too much money invested and decided that a tractor would pay us. It cost less, would do more work, and if properly taken care of would last a long while.

THIS TRACTOR HAS TAKEN THE PLACE OF SIX HORSES.

Well, we ordered our machine. It did not take me very long to find out that I had a different kind of animal to handle than any I had had any experience with before. The first thing I did was to run her off a fill across a ditch and run her nose into a bank. I was lucky that I didn't injure something, but it took us three hours to



J. L. KRAUSE, DODGE COUNTY, WIS.

get her out of the ditch. Then I started to plow with her. After the first day I was not so enthusiastic as I had been. It was the hardest work I ever did, and I made some sorry looking furrows, believe me. But after experimenting with it awhile I found that it wasn't the machine, but the driver. I found that even a tractor has its limitations. Some places you think they will go and they won't, and some places you think they won't go and they will. One must not drive into doubtful mudholes. I've stuck several times, and it's seldom ever easy to get out.

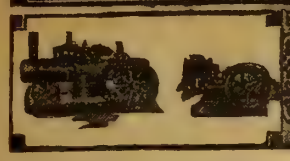
So I began to put it to the test. I wanted to see what she would do. Up to this time I have had that tractor in all kinds of places; I have plowed up over hills, around hills, through clay and gumbo, and I have plowed deeper than any four horses could ever be expected to pull a plow. I've ground feed on a ten-inch burr mill, sawed wood, hauled water, disked, harrowed, and everything which I have done with it has been under the most adverse conditions. I have worked with it until I know about what it will do and what it won't do, and that at a minimum expense.

Now here's another important item, and that is the consumption of fuel. I've just finished plowing forty acres and I used 110 gallons of gasoline, an average of two and three-fourths gallons per acre. It uses a gallon of lubricating oil per day.

As an illustration, we will figure three gallons per acre. Including the

(Concluded on page 14.)

FARM MECHANICS



Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Belt Power of Motor.

What horse power would a two-cylinder Buick engine develop on the belt? What would be its power in common gas engine rating? Would it pull as much as a single cylinder, ten-horse-power stationary gas engine?

Answer.—It should develop ten H. P. to fifteen H. P. and should pull as much as a single cylinder stationary engine of that rating.

Noisy Gears.

Please tell me why the gears on my car grind when shifting gears. Are the gears worn, or is there something wrong with the clutch?

Answer.—If your gears run quietly except when being shifted the trouble is probably caused by the clutch "spinning," that is, the clutch keeps on revolving at near engine speed after the clutch is released. Before the gears are shifted the clutch should come almost to a standstill. Clutch "spinning" may be caused by too tight adjustment or poor lubrication. It may also be due to faulty mechanical construction. A leather-faced disk is often placed about half an inch back from the rim of a cone clutch to act as a brake when the cone is out.

It may be that some of the gear teeth are battered on the end. It would be well to remove the transmission case cover and examine the gears. If there are any burrs on the teeth the gears should be removed so that the burrs may be ground off.

Motor Power.

Which is the more economical, a high speed or a low speed gas engine? What would be the highest speed that an automobile motor could be safely run all day? Will an auto engine running at 1,500 R. P. M. develop twice as much power as the same engine running at 750 R. P. M.? Would a 4⅛x4¾ four-cylinder auto motor develop enough power to run a thirty-two-inch cylinder separator with all the attachments?

Answer.—The high-speed engine is considered more economical, as there are less frictional and heat losses. A great deal depends upon the carburetor and governor. An auto engine at 1,500 R. P. M. will not develop twice as much power as when running 750, as the mean effective pressure is less at high speed. The engine does not have time to take in as heavy a charge at high speed and the explosion does not act as strongly on the rapidly moving piston as on the piston moving more slowly. The auto engine of the above size would pull the separator, but a heavy duty engine would be better for the purpose. About 1,000 R. P. M. is a safe speed for the average auto engine.

A Rip Saw Carriage.

I have a cord wood saw frame with a tilting table that I wish to build over so that I can saw larger timber without requiring a man to hold up the end. I also wish to use a rip saw for sawing out boards. I wish to make an outfit that I can use either as a cut off or a rip saw. I think I will need a carriage that I can run either way. I want the whole thing small enough to place on a farm truck, having a three-horse-power engine on the front end. I have been using a twenty-six-inch cut off saw, the balance wheel weighing sixty pounds. With a heavier balance wheel I think I can use a thirty-two-inch saw. How large a rip saw can I use?

Answer.—As this outfit requires considerable detail designing we will not be able to give you much positive information. We suggest that you arrange an extension to your swinging table somewhat over half the length of the longest poles you wish to saw. For your log sawing carriage we suggest an outfit somewhat like the one shown by Figure 1 and Figure 2, Figure 1 being the top view and Figure 2 a sectional view showing the carriage drive disks. In the figures J is the saw countershaft, F is the flywheel, B is the belt pulley, C is the carriage, P is the carriage drive pinion, R the carriage rack meshing with

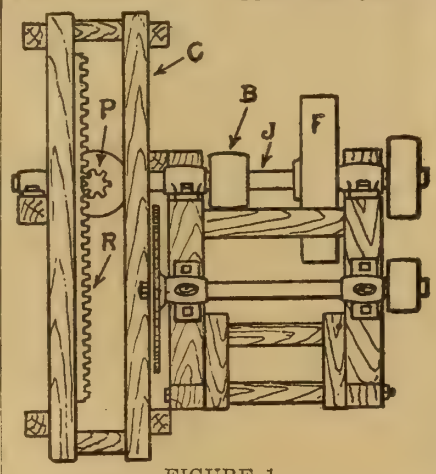


FIGURE 1.

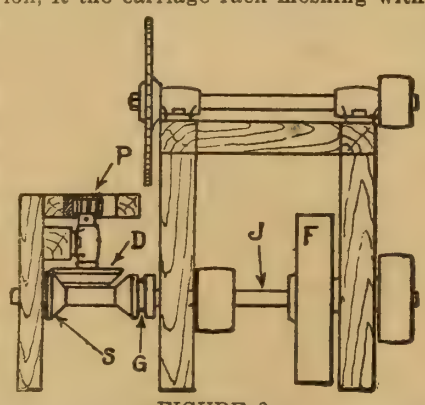


FIGURE 2.

the pinion P, G is a groove for the shifting fork that slides the two bevel disks, S, which are mounted on a sleeve, sliding on the shaft J. The disks are driven by a feather key in shaft J. The pinion P is fastened to a vertical shaft, on the lower end of which is the large bevel disk D, which is driven either backward or forward by the small bevel disks S. The disks should be made of paper or leather. The small disks may be made of iron. Gears should not be used. The sawyer controls the motion of the carriage by means of a lever that shifts the small disks S.

We doubt that your engine would pull a thirty-two-inch saw successfully. You might use a twenty-eight-inch saw, but it is best not to overload your engine.

Lighting From Dry Cells.

How long will two dry cells connected in series, light a 2.7-volt light?

Answer.—That depends upon the candle power of the light. Unless the current consumed was considerably less than half an ampere the voltage of the cells would soon drop too low to operate the light. Using a one-half candle power light the battery might last five hours of continuous running.

Governor Works Badly.

The governor on my one and one-half horse power pumping engine is not satisfactory. I want to know if there is a carburetor that can be attached to it so that it will run about 700 revolutions per minute? I have no objection to spending a little money on it if I can make it govern satisfactorily. It appears to be a well-made little engine, but the governor has never worked properly.

Answer.—You can buy a small carburetor with a butterfly valve. Attach the butterfly valve lever to the controlling mechanism of the governor. A dealer in motorcycles can quote you prices on small carburetors. You should write direct to the manufacturer of your engine about your governor trouble. This manufacturer makes a specialty of high-grade, throttle-governed engines and doubtless will help you out of your trouble.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Why Expect a Ton of Power from an Ounce of Gasoline

The power to drive the threshing machine is a most important factor in getting good results.

It must be steady, strong and sure.

For work at the belt the explosive engine does not yet successfully compete with steam without handicap in the shape of weight and bulk that is cumbersome.

The Nichols & Shepard Co. Recommend the Steam Tractor

For driving their Red River Special separator, and they build it in all sizes from 13 to 100 horse-power.

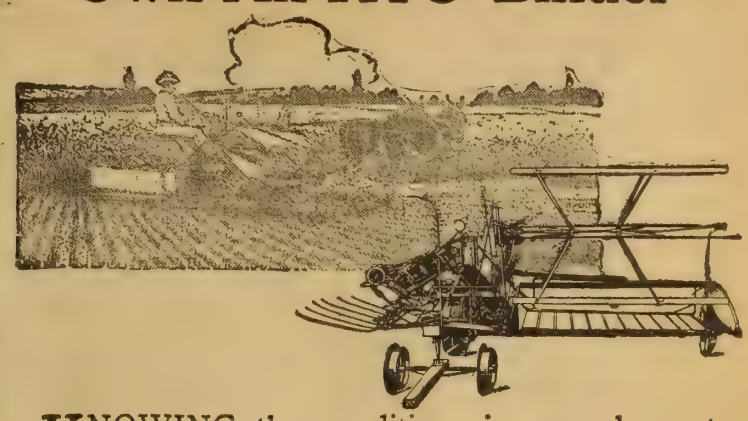
No better or more highly developed engine is made for all around farm purposes in regions where the use of steam can be practised with economy.

With Good Water and Good Fuel Use Steam

There is a lot of matter about the reliable work that is being done with the steam tractor of N. & S. Co. make to be found in the Home Edition of the Red River Special paper. One of your own neighbors may have written some mighty good reasons as to why he prefers to own one. Write for a copy and argue it out with him if you don't believe what he says. Ask for a Big Catalog when requesting your paper.

NICHOLS & SHEPARD CO.
(In Continuous Business Since 1848)
BUILDERS EXCLUSIVELY OF
THRESHING MACHINERY
Red River Special Threshers, Feeders, Wind Stackers
Steam and Oil-Gas Traction Engines
(7) BATTLE CREEK, - MICHIGAN

Own An IHC Binder



KNOWING the conditions in your harvest fields as well as you do, it will be an easy matter for you to pick out the right grain binder for your work. Note the details of construction—How is the main frame built? Is the main wheel large enough and wide enough to give plenty of traction? Is there a simple means provided for quickly and easily taking the strain off the canvas at night, or when the binder is out of use? Are ball and roller bearings provided to lighten the draft? Will the elevator take care of both light and heavy stands of grain? Is the knotter simple and sure in action? These are the things that count.

In the **I H C** binders—**Champion, Deering, McCormick, Milwaukee, Osborne** and **Plano**—these things and all other details are taken care of. Own an I H C binder.

The same arguments hold good for the twine you use. Ask for and insist upon getting an I H C twine, made to work in the binder you buy, and sold at the lowest price consistent with I H C quality.

Your local dealer can furnish you with I H C binders, repairs and twine. See him or write to us for complete information.

International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

Auto-Oiled Windmill
ALL WORKING PARTS INCLOSED
and **flooded with oil** from the supply in the gear case, which **needs replenishing only once a year.**

Put your old Aermotor wheel and vane on this self-oiled motor, and have an up-to-date outfit at small cost.

Don't waste your time climbing to oil an old mill. Replace it, on your old tower, with an Auto-Oiled Aermotor which will last you a lifetime and furnish you an abundance of water.

IT NEEDS ATTENTION ONLY ONCE A YEAR.

Write for Folder-Hanger. It tells all about Auto-Oiled Aermotors and Easy-To-Build-Up Towers.

AERMOTOR CO., 1125 S. Campbell Ave., CHICAGO

SAVES A TEAM 4 H. P. Cushman on a Binder. Same Engine Does All Other Farm Work.

The one successful Binder Engine. Attachments for any binder. Two horses easily pull 8-ft binder in heavy grain, as engine drives sickle and all machinery.

Cushman Light Weight Engines
For All Farm Work

Throttle Governed. Very light weight. 4 H. P. only 190 lbs. Forced water cooling system prevents overheating. Tank on front balances engine on rear. Friction Clutch Pulley. Ask for Engine Book. 4 to 20 H. P.

4 H. P. Outfit for All-Purpose Work. Same Engine Used on Binder

Cushman Motor Works
855 North 21st Street
LINCOLN, NEBRASKA

Four-Year Crop Rotations For Upper Wisconsin.

(Continued from April 27th.)

Four-year rotation with clover and timothy is one of the most popular rotations in Wisconsin. It differs from the three-year rotation described last week in that timothy is usually sown with the clover and the crop is cut for hay the second year. The rotation consists of small grain, mixed clover and timothy and some cultivated crop. Where land in permanent pasture is available for early pasturage the mixed clover and timothy is cut for hay and the field pastured until plowed in the fall. Where no permanent pasture can be had this mixed tivated crops. When necessary to help clover to "catch," it is applied to the grain crop. This rotation may be followed on all soils where clover does well. It is also possible to use soy beans as a substitute for clover, but in order to furnish pasture the next season it becomes necessary to sow rye after the soy bean crop is removed. The same suggestions regarding getting a clover catch also apply here. This rotation is probably not so well adapted to light as it is to loam and clay soils.

A COMMON FOUR-YEAR ROTATION.

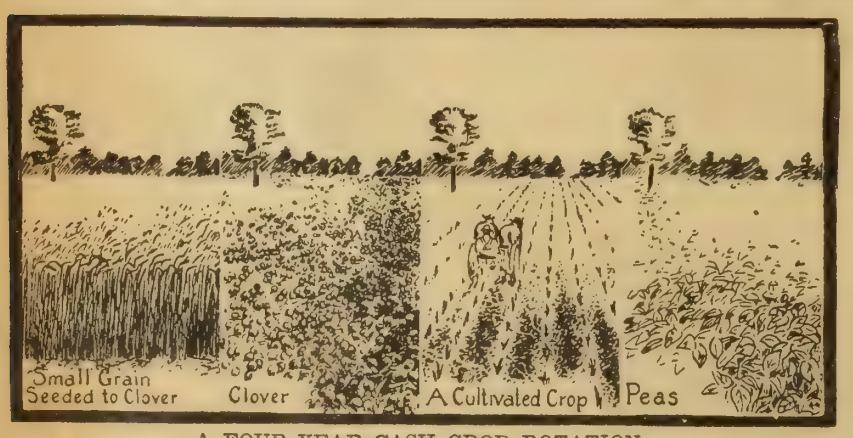
Field	First Year	Second Year	Third Year	Fourth Year
A	Clover	Mixed hay	Corn	Small grain
B	Mixed hay	Corn	Small grain	Clover
C	Corn	Small grain	Clover	Mixed hay
D	Small grain	Clover	Mixed hay	Corn

In localities where peas do well this rotation is often followed: Small grain, clover, mixed hay and peas. This rotation is well adapted to farms of good size on which dairying is not a specialty, but where small grain, grass and clover is used for pasturage. Under these conditions this rotation is well adapted to dairy farming and is well calculated to maintain soil fertility if little or no grain is sold from the farm.

A FOUR-YEAR ROTATION FOR A GRAIN FARM.

Field	First Year	Second Year	Third Year	Fourth Year
A	Small grain	Clover	Mixed hay	Peas
B	Clover	Mixed hay	Peas	Small grain
C	Mixed hay	Peas	Small grain	Clover
D	Peas	Small grain	Clover	Mixed hay

This four-year rotation is adapted to a wide range of conditions. It is particularly adapted to stock raising. The manure produced is usually applied to the sod land before corn or other cul- clover seed and peas are to be grown for market. Sheep can be kept and wintered profitably on the pea and clover straw produced. It is believed that this rotation may be followed with success on the heavy clay lands in the Lake Superior region and other sections where the crops named do well. More land is needed for this system than where dairy farming is practiced. Under these conditions sheep can be raised, for the lambing season is usually over before spring work begins.



A FOUR-YEAR CASH CROP ROTATION.

Field	First Year	Second Year	Third Year	Fourth Year
A	Small grain	Clover	Cultivated crop	Peas
B	Clover	Cultivated crop	Peas	Small grain
C	Cultivated crop	Peas	Small grain	Clover
D	Peas	Small grain	Clover	Cultivated crop

As this rotation draws heavily on the mineral matter of the soil, it will be necessary in order to permanently maintain the fertility of the soil to use phosphate fertilizers. Weeds can be kept down by working the pea stubble immediately after the crop is removed. This rotation provides for the maintenance of the nitrogen and humus supply. It can be operated with less help to the acre under cultivation than that which includes a cultivated crop.

Another four-year rotation which is well adapted where dairy farming is practiced is: Small grain, clover, cultivated crops and peas (as a cash crop). This rotation provides for a cultivated crop every four years, and on that account it is well adapted to sections where peas are grown, but where through faulty systems of farming, weeds have become troublesome. This system is well adapted to the older pea-growing regions.

In this rotation manure, as a rule, is applied to the cultivated crops. Where the soil is low in fertility all crops except peas should be fed on the farm. If the land has been heavily cropped to peas and small grain it may be necessary to use some phosphate fertilizer.

10 HP ENDURING POWER

USES KEROSENE for Fuel

First Real Solution of the Light Farm Tractor Problem

Pulls two plows in any soil fit to cultivate—three in stubble. Wide scope of utility. All gears run in oil, enclosed in dust-tight casings, on

The DURABLE DENNING

Equipped with Waukesha Motor, Perfex Radiator, Bennett Carburetor, Dixie Magneto, New Departure Ball Bearings. Write for description.

DENNING TRACTOR COMPANY Cedar Rapids, Iowa

10 horsepower at draw-bar—at any speed. Weight 3600 lbs.

Views on Use of Tractor.

(Continued from page 12.)

oil, we will say that it costs 55 cents per acre, quoting gas at 18.5; with good traction and in the toughest ground one can average six to eight acres per day. Thus, fifty-five times seven is $3.85. So you see under the maximum expense rate the tractor is as profitable, if not more so than horses.

But you ask, how about the depreciation of machinery? I say, buy the right type, run it right, that is, use plenty of oil, fuel and keep the nuts tight, and the depreciation will be less than 5 per cent. Therefore, if you can't make over 5 per cent on your investment you had better leave it alone.

It is possible but very improbable that the tractor will entirely displace the horse. But the small farm tractor will easily take the place of from four to eight horses in the heavy spring work, besides its various other advantages. But it has come to stay and it only remains for time to give us the best type at the lowest price.

A. H. Dilley.

The Farm Tractor.

To the Editor:—I have given the farm tractor proposition considerable attention of late years and have come to the conclusion that the subject is well worthy of consideration. We have been working two farms of 360 acres the past four years and I have often thought that a tractor would be a good paying investment if we were assured of a dependable machine and a reasonable price for the fuel used.

In the first place, a dependable tractor and a small threshing machine would assure the farmer of getting his grain handled in the most practical way and to the best advantage. The grain itself would be worth more per bushel and the threshing bill saved besides. Then if a shredder could be added that would be another great advantage. A tractor would always be in demand for silo filling and for road grading it would be unexcelled. For plowing large fields I believe also it would be of considerable advantage and would hasten this kind of work very much, although I can see no advantage on small fields.

Where one farmer does not feel that it is a paying proposition to own a tractor alone it would be a very wise move for about four members to buy a tractor together. In this way they could get their work done up in good order and still receive a very good dividend on their investment when they figured up their benefits.

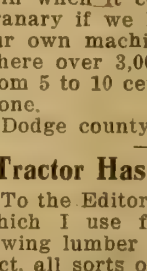
The price of a tractor would be rather a hard matter to decide, but if one can get the best for a difference of $100 or $200 such difference should not be allowed to stand in the way of getting a good machine. It is very much like buying a horse. It is not just the horse, but the value that is in it that really counts in the end. I certainly feel that we could make a good tractor a paying proposition on the land that we work.

There is another time in the past few years when I have been led to give the tractor considerable thought. That is when our grain had been in fine condition to be threshed for about a week or so and then got a soaking rain a few days or a week of it at a time, just because the threshing machine had not yet got to our place. Or if it actually did get there often the grain had to be threshed in an unfit condition simply because the neighbors were waiting for the machine. This came to my attention especially last fall when we had a fine field of oats get over a week of pretty steady rain when it could have been in the granary if we had been blessed with our own machine. Here was a case where over 3,000 bushels of oats lost from 5 to 10 cents' value through rain alone.

J. L. Krause.

Dodge county, Wisconsin.

The Beaver Storm-Proof Silo



STANDS like an oak. Our eight cross rod anchor system and double angle iron inner hoops, top and bottom, together with self-adjusting hoops, make our silo non-collapsible when not in use.

For the past ten years thousands of satisfied farmers have been using the Beaver Silo. Now why aren't you?

Write for circular "F."

BEAVER SILO & BOX MFG. CO. Inc.,

BEAVER DAM, WISCONSIN

Tractor Has Speed Advantage.

To the Editor:—I have a gas tractor which I use for hauling, threshing, sawing lumber and freighting, and, in fact, all sorts of work that I formerly used horses for. I use the gas tractor for road grading every year. While I do not find it quite as strong as horses, it makes up the loss in the speed. It will travel five miles an hour, drawing ten to fifteen ton load, and one man can handle it. It is a 20-40 and is estimated to weigh 13,000 pounds. I find that it does not pack the ground like a steam engine. In every line of work which I have tried this tractor in it has been very satisfactory in every way.

Iowa Co., Wis. Thos. F. Collins.

DAIRY

High-Producing Grade Holsteins.

The records of many cow-testing associations in Wisconsin speak wonders for the grade cows and the highest producing herd in the Waupaca and Butternut Ridge Cow-Testing Association last year proved a grade Holstein herd. This herd of eleven cows was owned and tested by Ira Farley, of Weyauwega, Waupaca county, and returned for him an average profit of $74.02.

The accompanying pictures show four of Mr. Farley's cows which made him a good profit and aided in enabling his herd to lead the association which has just entered upon its fourth year of testing with George L. Moss as official tester. Mr. Moss, in the April 27th issue of The Wisconsin Farmer, discussed the results of the last year's testing and pointed out how farmers who have been testing for many years have built up their herds because testing makes them take more interest in their cows. H.

Mr. Farley's native which has made him a profit of $335.33 in three years.

C. Frihart, president, says that he continues testing year after year, although he knows fairly well the performances of his cows, because he does not feel that he can afford to feed $600 to $700 worth of feed a year without knowing what his cows are giving him in return.

Mr. Farley's native, Brownie, who

Annie, five years, member of highest producing herd. Fat record, 461.8 pounds.

led the association with her individual production of 10,201 pounds of milk that made 549.4 pounds of fat, is ten years old and has been a consistent producer for years, as she has been in the association for three years and has returned a profit of $335.33 during that period. Her milk tested 5.38 per

Jessie, six years, (fat 443.1) which helped make the association record.

cent and in leading the association in production she produced more than 360 other cows. She consumed $29.82 worth of roughage and $37.79 worth of grain, making a total feed cost of $67.61 last year, bringing a net profit of $113.54, returning $2.68 for every dollar's worth of feed. She belongs

Bessie, six years. (Fat 441.2). Another profit maker for Mr. Farley.

in the herd that produced an average of 386.9 pounds of butter fat, with an average production of 9,182 pounds of milk from eleven cows testing 4.21 per cent. The gross income per cow is $125.83. The average cost of roughage is $28.73 and grain $23.08, making

Look Here! Stock Raisers

Thousands of stock raisers are now saving ⅓ their feeding costs and filling their silos with ⅓ the labor cost and ¼ the power you use.

Smalley Silo Filler

Patented recutting attachment makes dandy Alfalfa Chop for fattening cattle, sheep, hogs and poultry. *Handles leaves, stems and all without waste or injuring color of the hay.* Sell your No. 1 hay and mill the *off-grades* for feeding. Make combination feeds from clover, rice straw, bean straw, pea vines, oats and rye, or dried corn stalks. Capacities 1200 to 2700 pounds per hour. 500 to 800 pounds of meal per hour can be made with Junior recutting Mill (operated with 6 to 8 H. P. engine.)

Grip Hook Table feeds cutter automatically, saving wages and board of two to three men on large sizes. Low speed, one pulley chain drive blower saves ¼ power cost of silo filling.

Blower independent of cutter. Fan speed increased or decreased without changing speed of knives. Send NOW for FREE Book.

Smalley Mfg. Co., Dept. 13, Manitowoc, Wis.

Use A Wood Tire Hollow Wall Silo

Cannot Sag, Blow Down or Rot.

Cures and preserves silage perfectly. Prevents freezing of silage. Easy to construct. A real farm building, permanent and rigid. No hoops to get loose. No guy wires. No staves to shrink or swell, but a smooth, double wall from base to roof, the inner wall being of *California Redwood.*

Guaranteed for 20 Years

"But Lasts a Lifetime" WOOD TIRE—AIR SPACE—INNER WALL—OUTER WALL—

The patented wood "tire" is built up of inch boards, and shipped in sections. The boards overlap in step formation at both ends. When nailed together, these sections form a ring of unusual strength. The silo frame forms its own scaffolding.

Send for our folder which shows how the Wood Tire Silo is built, and also what owners think of them. A postal brings it. Write today.

Agents Wanted in unassigned territory.

WOOD TIRE SILO CO. 4
7 Clark Street
Sheboygan Falls, Wisconsin

FILL SILOS QUICK

Three sizes, 6 to 18 H. P., direct drive to main cutterhead shaft, 2⅝ in. in diameter, powerful 6-blade fan on same shaft. Emery wheel attached.

Sold on trial

FREE FARMERS ACCOUNT BOOK

ROSENTHAL SILO FILLERS

Backed by guarantee. Write for free Farmer's account and record book also catalog.

ROSENTHAL CORN HUSKER CO.
Box 15 Milwaukee, Wis.

MONTANA

Your Opportunity State

Thirty Million Bushels

—of grain was produced in Montana along the Great Northern Railway in 1915. Six years ago this same territory produced only Five Million bushels.

Big facts that make you realize that Montana *leads the world* in rapid development of farm lands. What is more, Montana leads in *quality* of grain produced—was awarded the Grand Prize on Exhibits of Grain over all the rival nations — over every other state — exhibiting at the San Francisco Panama-Pacific Exposition—winning a total of 513 medals.

Learn More About Montana

Then you will understand the wonderful tide of immigration to the Agricultural Treasure-State where every furrow is a pay streak for the profit-seeking crop-raiser. U. S. Land Commissioner, Washington, D. C. reports more than Twenty Nine Million acres Government and Indian lands in Montana disposed of to settlers in the past six years. During the past fiscal year, over Twenty Three Thousand original and final homestead filings have been made in that part of Montana reached by the Great Northern—a record absolutely unequalled by any state, in the operations of the General Land Office.

The homestead lands of agricultural value in Montana are going fast, but you have remarkable opportunity to purchase deeded land at very low prices. Come to the great, new, golden Montana country. Rich soil, favorable climate, convenient market and good prices for all you grow. Get the information—then decide for yourself. Send coupon *today* for

"See America First" GREAT NORTHERN RAILWAY Glacier National Park

FREE — Montana Bulletin

Illustrated and fully descriptive, with experience-letters from settlers—affidavits of crop yields and information concerning opportunities offered home-seekers. **Special Low Fares for Home-Seekers.** Please use coupon.

E. C. LEEDY
General Immigration Agent — Dept. 219
GREAT NORTHERN RAILWAY
St. Paul, Minn.

MEMORY JOGGER
I will send this today to
E. C. LEEDY, General Immigration Agent
Dept. 219 Great Northern Railway, St. Paul, Minn.
Please send me free booklets and full information regarding money-making farms along the Great Northern Railway in Montana.
Name..... Address.....

APPLETON Silo Filler

Actual records prove that Appleton Silo Fillers cost the least in service

per ton of silage put up or per year of life. Tremendously strong construction makes an Appleton practically proof against breakdown. Solid oak and steel frame, mortised, braced and bolted; impossible to pull out of line. Many exclusive power and labor saving features, such as independent belt driven blower allowing speed to be adjusted for minimum use of power for any height silo; frictionless feed table running on chilled iron rollers; knives spiraled to give clean shearing cut, requiring least use of power. (10 lengths of cut, 5-16 to 2½ inches.) Lowdown cut-under frame, easy to handle. Both feed rolls and table controlled by single lever. Positive self-working safety device

Two Books Free: One on silo building and silage crops; the other a complete catalog of Appleton Silo Fillers in four sizes for 4 h. p. gasoline engines and up. Write

Appleton Mfg. Co., 4122 Fargo Street, Batavia, Ill.

Guaranteed to do more and better work with less power than any other silo filler.

Silo filled in 8 hours

"This Silo 10 x 24, filled with No. 9 Blizzard with a 4 1-2 H. P. gasolene engine in 8 hours, by R. A. Blood & Co., Goshen, Ind." was the information sent us with the picture shown. The

BLIZZARD
Ensilage Cutter

is the tried and true machine for the farmer. Simple, safe, easy to run. Small engine big enough. Elevating ability unlimited. Capacity limited only to how fast you can bring the corn. Steady as a clock. Repair expense small. Earliest machines still in use, and none to our knowledge worn out.

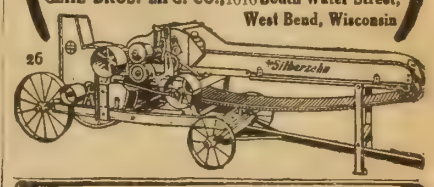
WRITE US size of silos and engine for information and booklets.

The Jos. Dick Mfg. Co.
Box 64 Canton, Ohio

Light Running **Silberzahn**

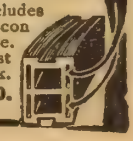
Write today for free book which explains all details of new Silberzahn Ensilage Cutters—the cutters that hold record for simplicity, safety, clean cutting and great capacity. 10 sizes. *All-steel frame;* low feed table; automatic feeding; positive safety device; *6 fan blower* that can be regulated to height of silo; *independent control* of blower and cutter head *saves power.* Get the Silberzahn book before you buy. Write today.

GEHL BROS. MFG. CO., 1010 South Water Street, West Bend, Wisconsin

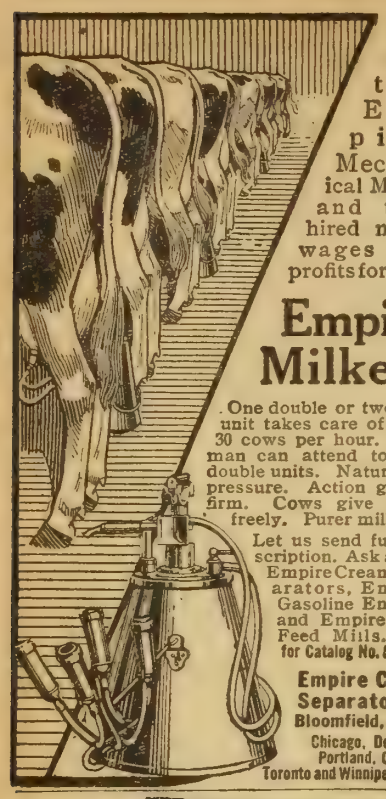


B. V. T. SILO

Notice the patented block. Excludes air and moisture. Permanent construction. Block indestructible. Why not have a Silo that will last forever? Write for free Silo book.



BRAZIL HOLLOW BRICK & TILE CO.
BRAZIL, INDIANA



Install the Empire Mechanical Milker and turn hired men's wages into profits for you.

Empire Milkers

One double or two-cow unit takes care of 20 to 30 cows per hour. One man can attend to two double units. Natural air pressure. Action gentle, firm. Cows give down freely. Purer milk.

Let us send full description. Ask about Empire Cream Separators, Empire Gasoline Engines and Empire Star Feed Mills. Ask for Catalog No. 56. M

Empire Cream Separator Co.
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"Natco On The Farm"
is the title of our new book that every farmer who takes pride in his farm buildings should have. It shows with many fine illustrations the use of Natco Hollow Tile for barns, houses, corn cribs, etc. Send for it. Study it. Also get our Silo Catalog and learn about the money-saving, worryless, repairless

Natco Imperishable Silo
"The Silo That Lasts for Generations"
—that perfect ensilage preserver that can never blow down, decay, warp, crack, crumble or burn. So efficient that a great demand for other Natco buildings was created and they are now springing up everywhere. Send for these books. Ask for free plans and advice. Let us save you money for years to come. Write *now.*

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23 Factories—Prompt shipments.

THE FREEMAN ENSILAGE CUTTER

—The Cutter That Saves You Money
Costs less to buy—less to operate—less for upkeep. The Freeman combines the limit of quality and economy.

Standard For 30 Years

Runs easiest—on least power. Cuts clean and fast. Traveling force feed table—handles big bundles easily. Has extra strong frame, large feed rolls, adjustable knives, safety fly wheel, safety stop lever.

Steel Enclosed Carrier
reduces running expense, prevents feed blowing away.
GET OUR FREE BOOK showing full line Ensilage and Feed Cutters, Carriers and Blower-Elevators.
THE S. FREEMAN & SONS MFG. CO.
219 Michigan St. Racine, Wis.

We can furnish Blower or Enclosed Steel Carrier as desired.

Only $2 Down
One Year to Pay!
$24
Buys the New Butterfly Jr. No. 2. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime.** Skims 95 quarts per hour. Made also in four larger sizes up to 510 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog, folder and "direct-from-factory" offer. Buy from the manufacturer and save money.
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DON'T FORGET
There's a big difference in cupolas; difference in price, in material and in construction. The Queen was the original. On the market over 15 years. Good from the start. Still ahead. Used by thousands. Made of steel reinforced with heavy braces. Bird proof, snow proof, leak proof. Write for catalog and prices or ask your lumber dealer. QUEEN CUPOLA CO., 410 PECK ST. CRESCO, IOWA.

QUEEN CUPOLAS

the total feed cost $51.81 per cow. The average profit is $74.02 per cow, returning $2.42 on every dollar expended for feed.

The report of the association for the month of March follows:

Owner, name and breed	Age	When fresh	Pounds milk	Pounds B. fat	Per cent of fat
C. C. Boyce					
Blossom, G. H.	5	1-15-16	1193	4.0	47.7
Crawler, G. H.	10	1-14-16	1113	4.5	50.1
Petram, G. H..	6	12-17-15	1497	2.8	41.9
F. T. Jorgensen					
Ciff, G. H.....	10	11-17-15	1178	4.2	49.5
Mercedes, G.H.	8	1-18-16	1717	3.6	61.8
Vengeline, G.H.	10	12-28-15	1479	3.0	44.4
E. O. Frihart					
Daisy, G. H...	5	1-1-15	1162	3.6	41.8
Esther, G. H..	7	3-1-16	1128	3.8	42.9
Everette Tunks					
Pet, G. J.....	9	12-16-15	837	5.6	46.9
Herman Becker					
May, G. J.....	8	1-8-16	837	5.2	43.5
Nugger, G. J..	10	10-6-15	670	6.2	41.5
Bessie, G. J...	7	12-27-15	728	5.7	41.5
Nellie, G. J....	8	3-18-16	945	5.3	50.1
Belle Min, G.J.	7	3-11-16	964	5.2	50.1
Silvy, G. J....	6	3-14-16	995	4.8	47.8
Alvin Faulks					
Ware, G. H...	8	3-24-16	1271	3.4	43.2
M. J. House					
Daisy, G. H...	4	2-18-16	1193	3.5	41.8
M. J. House					
Daisy, G. H...	4	2-18-16	1193	3.5	41.8
Eva, N.	7	2-22-16	1454	3.7	53.8
Harriet, G. H.	5	2-19-16	1141	4.0	45.6
H. C. Frihart					
Loretta, G. J..	6	2-3-16	955	4.4	42.0
Cherry, G. J...	9	12-25-15	778	5.3	41.2
Chas. Rasmussen					
May, G. J.....	3	3-22-16	756	5.9	44.6
John C. Backes					
Pauline, G. G.	12	1-27-16	1014	4.4	44.6
Bessie, G. G...	4	1-3-16	980	4.8	47.0
Spot, G. G....	6	10-16-15	908	4.8	43.6
Rocksie, G. G.	6	1-16-16	871	5.0	43.5
Theo. A. Bauer					
Esther, G. J...	6	11-14-15	747	5.4	40.3
E. E. Haire					
Daisy, G. H...	8	3-26-16	1255	4.1	51.5
Ira Farley					
Belle, G. H....	5	11-1-16	1423	3.6	51.2
Brownie, N...	11	10-9-15	1001	5.2	52.1
Bessie, G. H...	7	1-2-16	1221	4.0	48.8
Lilly, G. H....	7	3-28-16	1348	3.8	51.2
Jewel, G. H...	6	11-18-15	1113	4.4	49.0
Jessie, G. H...	6	11-23-15	1293	4.0	51.7
Daisy, G. H...	5	1-11-16	1482	3.4	50.4
Eva, G. H.....	3	1-13-16	1259	4.0	50.4
Emma, G. H...	3	1-16-16	1224	3.4	41.6
Maud, G. H...	3	3-10-16	1206	3.4	41.0
Wm. Kneip					
Hart, N.....	7	12-31-15	976	4.7	46.6
Quick, N.....	10	4-2-16	1166	3.5	40.8
Maid, N.	3	3-2-16	1088	4.0	43.5
Clara, N.	8	3-25-16	1221	4.0	48.8
Wm. Rossy					
Libby, G. H...	6	3-12-16	949	5.0	47.4
Dandy, G. G...	6	10-31-15	921	5.4	49.7
Fred Dunbar					
Nig, N.	6	1-21-16	983	4.3	42.3
Ed Munsch					
Daisy, G. G...	5	3-30-16	1150	4.5	51.7
C. A. Peterson & G. R. Miller					
Rose, G. G.....	4	3-13-16	803	5.7	45.8
Alice, N.	5	3-17-16	759	5.3	40.2
Daisy, G. G....	6	2-8-16	1302	4.0	52.1
Marnas' Queen of Norwood, R.G.	8	1-15-16	1252	4.9	61.3
Arthur Glocke					
Frances Fascination, R. G..	3	12-17-15	614	11.0	67.5
C. A. Stinchfield					
No. 6, G. G....	9	4-8-16	1035	5.6	58.0
John Hanson					
Clara, N.	8	3-19-16	1389	4.0	55.6
Marts, N.	2	3-1-16	1172	4.2	49.2

Geo. L. Moss, Official Tester.

Manitowoc Cow-Testing Associations Reorganize.

The Manitowoc County Cow-Testing Associations, formerly known as the Nettle Hill and Manitowoc County Associations, were combined and reorganized for 1916. The name of the new association is "Manitowoc County Cow-Testing Association No. 1." The new organization has thirty-seven members and a total of 525 cows. At the recent meeting Adolph Otto was chosen president, Ferd Limburger is the new vice president and G. W. Keil is secretary-treasurer. The work was begun April 17th. One herd of this organization worthy of mention is that of Louis Geraldson, of Pinery Stock Farms, Manitowoc, Wisconsin. This herd consists of only twelve milk cows. All are registered and have made the following record for the month: No. 11, two year old, Pinery Ormsby Pontiac 250698 produced forty-five pounds of butter fat in twenty-five days, ending February 29th. This same cow produced forty-one pounds of fat for the month of March.

Mr. Geraldson was a member of the old association.

The facts contained herein are furnished The Wisconsin Farmer by H. R. Brewster, supervisor of tests:

Name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Artasia N. P., R.H.	4	3-16-16	1728	4.0	69.1
Martha K. C. R., R. H.	4	2-1-16	1599	3.8	60.8
Pauline, O. P. R.H.	4	2-16-16	1512	3.5	52.9
Piebe H. Rose, R. H, ...	4	3-14-16	1512	3.3	49.9
Canary M. P., R.H.	4	1-21-16	1104	4.5	49.7

THE HINMAN MILKER

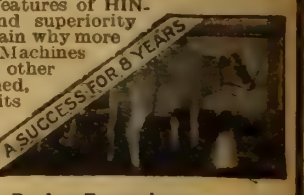
The HINMAN Teat Cup combines the good features of human hand and nature's way.

Safe Simple Durable

teat cup is not a rubber sack, but simply a pure rubber ring slipped over a metal cup, easier to clean—more natural in action—very durable.

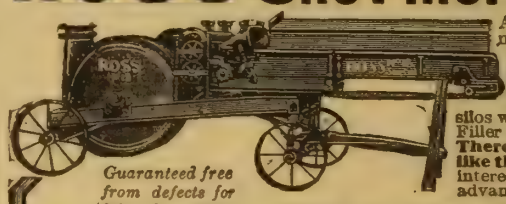
As the vacuum suction starts, rubber ring is drawn down, acting like the first finger in hand milking. As the gentle vacuum suction continues, teat is drawn against the side of the cup, much as the other three fingers act in hand milking. The whole principle is more like soft lips and mouth of a calf. The vacuum pressure is intermittently relieved in the same natural way so that circulation of blood is natural.

WRITE TODAY FOR OUR FREE CATALOG
It explains other features of HINMAN simplicity and superiority that not only explain why more HINMAN Milking Machines are sold than all other machines combined, but explains why its simplicity means its low cost.



HINMAN MILKING MACHINE COMPANY
62-72 Elizabeth St., Oneida, N. Y.
Service Dealers Everywhere
Service Dealers Everywhere

ROSS Ensilage Cutters and Silo Fillers with Blower



Guaranteed free from defects for life of machine.

Are built especially for the Thresherman who has steam power. Our Nos. 16-18-20 and 24 Silo Fillers are equipped with STEEL Cutting Apparatus and STEEL Blower. The Thresherman who makes a business of filling silos will find it profitable to use The Ross Silo Filler on account of its low cost of upkeep. **There is nothing on the market like the Ross.** You will find it to your interest to buy early as delay means advance in price. **Write today.**

THE E. W. ROSS CO., Box 154 Springfield, O.
ROSS

Labriga Fancy 2d, R. H.	4	2-19-16	1452	3.2	46.5
Korndyke S. P., R. H.	4	2-25-16	1479	3.0	44.4
Canary M. Maud, R. H.	4	2-7-16	1350	3.2	43.2
Canary A. J., R.H.	4	3-11-16	1260	3.4	42.8
Labriga Fancy 3d, R. H.	3	1-16-16	1164	3.1	36.0
Pinery O. P., R.H.	2	2-4-16	1254	3.0	37.6
Pinery C. M., R.H.	2	2-21-16	727	3.4	24.6
Total milk					16,141
Average test					3.45
Total fat					557.5

Stanley Testing Report.

Mr. Richard F. Adams, official tester of the Stanley Co-operative Cow-Testing Association, sent us the forty-pound list for April, which is given herewith. Mr. Adams says the members are enthusiastic in the work and expect to have something tangible to show for their labors, at the end of the year. Interest is such in the Stanley neighborhood that those who are in the association and have tested cows, are beginning to realize results in a little better prices for their surplus stock. The members of the association are also taking up the matter of community buying of feed in carload lots and a considerable saving will be effected by this method. The testing report is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Geo. Weissenberg					
Queen, R. H...	3	3-9-16	1212	3.4	41.2
Beatrice, R. H.	5	3-4-16	1650	3.1	51.1
Johanna, R. H.	5	1-16-16	1197	3.5	41.9
Albert Birkholz					
Queen, G. H...	4	3-18-16	1020	4.1	41.8
Frank Smalley					
Yankee, R. H..	8	1-31-16	2055	3.2	65.8
Pinto, R. H....	10	2-4-16	1857	3.1	57.6
Auldine, R. H.	3	3-2-16	1383	3.3	45.6
Rosetta, R. H.	5	9-17-15	1296	3.7	47.9
Henry Stuttgen					
Mollie, N.....	4	3-20-16	978	4.2	41.1
Ramie, N.....	5	3-16-16	786	5.2	40.9
White Head, N.	10	2-13-16	771	6.6	50.9
Geo. Schunk					
Fairy, G. H...	3	2-10-16	1146	4.1	47.0
Geo. Mason					
Bessie, G. H...	9	2-2-16	1185	3.9	46.2
Frank H. Schmidt					
Kleckner, G.H.	6	12-25-15	1143	3.5	40.0
Theodore Albert					
Pet, G. H.....	5	4-1-16	1212	3.5	42.4

Richard F. Adams, Official Tester.
Frank Smalley, Secretary.

If the robin could testify for itself it would tell you that it much prefers elderberries to cherries, and that it likes mulberries or wild cherries best of all. So if you want to keep these birds out of your orchard, plant a mulberry or a wild cherry tree near by and the birds will forget all about your cultivated cherries.

The artichoke, which originally came from Barbary, is not a botanical species, but a variety of the thistle, which grows spontaneously all along the African coast of the Mediterranean from Morocco to Palestine.

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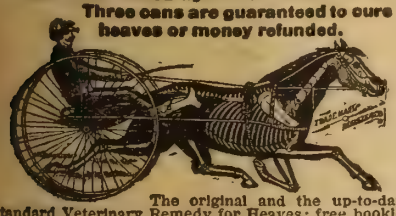

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Please mention this paper when writing

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Catarrhal Fever.

I have three horses which have been sick with catarrhal fever. Would you advise vaccination for a working horse? How should they be treated?

We would advise the use of anti-toxin as a preventive in those not affected, and as an aid in hastening recovery and avoiding complications in those affected. Those which have severe cough and heart and bowel irregularities should be specially treated. Animals affected should have the best of care and should be kept from work. The anti-toxin should be administered by a veterinarian.

Collar Bruise.

I have a ten-year-old mare that has a swollen place on her shoulder about half way between the point of her shoulder and the top of her neck. This is as large as a man's hand and was caused from the collar. It doesn't seem much sore, but doesn't get any better. Would like to know what to do for it. I need her work very much and would like to find some remedy for this swelling.

Your horse is troubled with a collar bruise and it should have been opened and contents let drain out. You had, by all means, better have a veterinarian open this and see that good drainage is established, as it will not get well till this is done.

Ringbone.

Please tell me treatment and cure for ringbone on horse's front foot. They tell me there are two kinds, high and low. This has been on the horse about six months.

Ringbones are known as low down and high up ringbone. You should clip the hair off the affected parts and apply the following blister: Biniodide of mercury, two drams; vaseline, one ounce. This is enough to blister an ordinary ringbone two or three times. Apply one-third of the blister, rub in thoroughly and grease the third day after blistering. Continue blistering every four weeks till cured. If this does not effect a cure have your veterinarian fire him.

Unable to Eat Naturally.

I have a yearling Holstein heifer that c not eat off the ground unless she gets on her knees. It seems to be in her back. Have tried no treatment, as I do not know what is the matter with her. She is in perfect health otherwise. I do not think it is habit, as she has be n this way for about two months. Any information will be appreciated.

We would not attempt to say just what the cause of the trouble in this case is. There might be a number of conditions, any one of which could cause this animal to be troubled this way. We would advise you to obtain the services of a competent veterinarian and he can, in all probability, tell you what is causing the trouble after looking the animal over carefully.

Sore Mouths in Pigs.

I would like to know what ails my little pigs. They are about three weeks old and they have sore mouths. Most of them get yellowish growths inside their mouths, mostly on the outside of the jaws. Some are affected around the eyes and a few under the belly. I have heard some people say it is a kind of cancer. What causes this and what cure is there for it, if any?

Since a number of your pigs have this it must be of an infectious nature and should be treated as such. If any of these places break and discharge pus or fluid it should be cleaned off and washed with a 2 per cent solution of creolin or lysol. This wash should be applied to all parts affected, being careful not to let any of the fluid enter the eyes while treating around them.

Chronic Cough.

I have a ten-year-old horse that has a bad cough. The cough is dry and at times the horse puffs a little as if he might be getting the heaves. What treatment could you give, if any? This horse had distemper a year ago last winter. There was a little swelling under his neck at the time, but it did not break through. Do you think that this would cause him to cough now? I have been feeding him oats and a little corn and timothy hay. He is in good condition.

Your animal probably contracted his cough at the time he was affected with distemper and it has now become chronic. Would advise you to feed l ss hay to your animal, water more often and not let fill too much at a time. Administer daily with syringe one-half ounce of solution of potassium arsenate U. S. P. This should be diluted with a half pint of water before giving. If this is continued over considerable length of time results may be obtained.

Unsuccessful efforts were made in the senate to amend the Shackelford-Bankhead Good Roads bill so that 25 per cent instead of the cost of roads to be built under the bill would be borne by the federal government. Senators Shaforth and Norris led the fight for a reduction. The only roll call showed only eleven senators for it and thirty-six against.

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THE Wisconsin Big Brothers have a number of deserving boys who would like to get farm jobs. Farmers are urged to write to L. B. Ring, The Big Brother, 41 Loan and Trust Bldg., Milwaukee.

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Cut Down the Routine Work.

In a recent talk on housekeeping Miss Stella Mather, lecturer in the extension division of the Kansas State Agricultural College, declared that a housekeeper can reduce by one-half the amount of labor expended in the regular routine of duties.

According to Miss Mather this can be accomplished by making out a schedule of the various tasks to be done each day. Plan all the things that have to be done every day and also those that must be done but once a week, estimate the length of time required for each duty and give allowance for that time in the schedule.

The planning of meals in advance will save a lot of unnecessary hurry and flurry at meal time.

It saves time to note the contents of the refrigerator and make use of the leftovers in planning meals. Desserts may be prepared in the morning. The use of the fireless cooker saves time. Cereal for breakfast may be started the night before and also such fruits as prunes, and even rice for luncheon the following noon.

The importance of having a definite place for every utensil and all food materials so that no time is lost in looking for things, is emphasized my Miss Mather.

How to Cook Tough Meat.

Tough meat, because never included in the choice cuts of a carcass, is often thought to be of little value for food. Indeed, meat from those muscles which are used the most by the animal contains more nourishment than the most tender portions if it is properly cooked.

The main factor to keep in mind when cooking tough meat is to break up the connective tissues and at the same time keep the juices. The round or rump and the extreme ends of the shanks are tough, but rich in juices.

An appetizing dish for dinner is braised beef. Take about three pounds of rump beef, wipe and sprinkle with salt and pepper and dredge with flour. Brown in a skillet or kettle, using pork fat in the frying, and be careful when turning the meat so as not to pierce the surface, for this allows the juice to escape. When the entire surface is well browned place in a roaster or earthen casserole and surround with one-fourth cup each of carrot, turnip, onion and celery cut into dice. Also add one-half teaspoonful pepper corns and pour in three or four cups of boiling water. Cover and bake four hours in a slow oven, basting every half hour and turning once during baking. Gravy may be made from the liquor in the pan.

Chicken may also be braised. The whole vegetables, if small, may be placed in the pan.

Boiled meat need not be tasteless and ragged looking if properly handled. An old chicken may be made palatable by boiling in just enough water to cover until quite tender, but not falling away from the bones. It is then placed in the oven and roasted until thoroughly done. The browning of the surface may be accomplished by leaving off the cover of the pan for fifteen or twenty minutes. Or the chicken may be boiled, then cut up as for frying, dredged with salt, pepper and flour and pan broiled until tender. This makes it as nice as spring chicken and more economical.

Boiling ham may have one-half cup of vinegar added to each quart of boiling water to help make it more tender and palatable. It may first be boiled for two hours then removed, skinned and the surface sprinkled with salt and pepper and covered with bread crumbs moistened with vinegar. It is then baked until tender. As is true of other meats, properly roasted ham requires fifteen minutes for each inch of thickness.—[Margaret Harris.

Successful Country Club.

To the Editor:—I would like to tell your readers about a Mothers' Neighborhood Club and a Girls' Country Club that have been organized in the rural districts adjoining Wesley Chapel, a country church located six miles northeast of Mt. Pleasant, Iowa. The organization of these two clubs was made possible through the efficient leadership of one of our number, Mrs. Robert Willits.

The Mothers' Neighborhood Club was organized in February and has held but two meetings, but much has already been accomplished. Through the efforts of this club interest has been aroused in a consolidated school for four school districts. A petition has already been circulated, with scarcely any opposition, and in all probability before many months have passed the pupils will be enjoying the advantages of a fine, modern, accredited school.

The club has also decided to have dental inspection in the schools.

They meet once a month at the home of a member. A program is previously arranged and all join heartily in discussions of subjects of vital interest to home and school. Socially, it has proven to be a splendid way for the women of the neighborhood to become better acquainted. By means of socials, entertainments, etc., they expect to raise money with which to purchase various things for the benefit of the schools.

The club has a president, secretary and treasurer, and each of the four districts has a vice president and a program and refreshment committee. A picnic is planned, to be held the last day of school.

Through the efforts of the club a Parent-Teachers' Association has been organized in each district. Meetings are held at the school buildings once a month during the school year. These meetings consist of music, readings, papers and discussions of school problems.

The Girls' Country Club was organized a year ago. There are about twenty members, girls from twelve to twenty years of age. Meetings are held once a month. The object of the club is to promote a better social life among the rural young people of Wesley vicinity.

They have given Halloween and April fool parties to which the young men were invited. Last September a mock fair was held at the Willits home and the girls netted a neat sun. All the attractions of a fair were in evidence—stands, fortune-telling tent, exhibition tent, baby rack and even a band. A program was given on the front porch, consisting mostly of quartet music, tableaux and pantomimes. The fair was held at night. A large crowd was present and many expressed a wish that it might become an annual event.

FEEDING THE DUCKS IS NO FUN.

The girls are planning to buy a tennis outfit for summer recreation and will dress alike in white middy suits. The club colors are green and white.

If their plans mature the club expects to hold a festival in May and give the May pole and other drills. They will have stands and devise other ways of earning money, as they hope to present Wesley church with a piano.

The young people are certainly having nice times and much credit is due Mrs. Willits, who is patroness of the club and helps them in all their plans. Mrs. Jessie Farquer.

Mrs. J. D. Comes Again.

To the Editor:—I noticed in a recent issue that one of your readers, Mrs. W. B., wants more information as to how I cured my headaches through osteopathy and I am glad, indeed, to tell her and others all I can if it will only help them.

From my own experience, I am afraid that Mrs. W. B. did not keep at the treatment long enough, as she says she only took fifteen treatments. I do not know just how many treatments I took, but I kept steadily at it for several months. Maybe I could have stopped sooner than I did but I was so determined to give it a good trial and was so satisfied with the results obtained from the first that I was loath to give it up, and kept right on. I do not think I lost anything by it, and even now if I feel a little run down I take a few treatments just to be on the safe side.

Mrs. W. B. asks if I had sick headaches or "just a common headache." Well, maybe it was "just a common headache," but just the same I have gone to bed with them many a time, and I never want any worse headache than "just a common" one. And when I did go to bed they would get better so I think the rest helped, but the treatments did more than just help—they cured me.

I wish Mrs. W. B. would take my advice and keep on with the osteopathy. If she found relief at all that surely is a good sign. It doesn't seem to me fifteen treatments is much of a trial. You wouldn't expect fifteen doses of medicine to cure an ailment you had had for years, would you? Maybe I am overenthusiastic, but really I believe osteopathy and rest will do wonders for some of us headachy women folks. Mrs. J. D.

Lemon and Salt For Rust.

To the Editor:—I would like to send a very simple remedy to the lady who asked how to remove rust from clothes, and it is well worth remembering.

Cover the rust spots with salt and lemon juice and lay it in the sunshine or hold it over steam from the spout of the teakettle. If one application does not remove all the rust, try it again.

To bleach linens that have become yellow add a tablespoonful of turpentine to the suds in which you boil the clothes. A Reader.

Another Rust Remedy.

To the Editor:—I enjoy reading the Home page and as I have received help from it I wish to help others. If the lady wishing to remove rust from clothes will put 10 cents' worth of tartaric acid in from one to one a half gallons of water in a stone jar, place clothes in it and leave overnight the rust will disappear when rinsed in clear water. I took rust from a pink dress with this and did not spoil the pink, as I feared it would.

To restore color in woolen goods where fish brine or substances have caused it to fade in streaks place 10 cents' worth of aqua ammonia in one to one and a half gallons of water. Place garment in same for half an hour or so. Then hang up to dry. I treated a skirt in this way. I had thought it was entirely ruined but could not tell where the streaks had been when dry and pressed. If smaller spots are to be treated, mix a small amount and wet faded spots.

Mrs. C. C. Brooks.

Alum For Bugs and Roaches.

To the Editor:—I saw a request for getting rid of bed bugs and will give a method I have used and have never failed to get rid of them.

Take alum and dissolve two-thirds of a teacupful in one gallon of boiling water. Let stand on the stove until all the alum is dissolved. Use a clean oil can and squirt this alum water into all cracks, holes in the walls, under and behind baseboards if they are loose, around the edges of carpets, on bedsteads, mattresses, in fact any place where they bother. Do this before papering and no bugs will be

found behind the paper. This is a clean method, leaves no odor and will not fade carpets, etc.

This will also rid cupboards, sinks, etc., of ants, cockroaches, etc. Either sprinkle the pulverized alum or wash the shelves with the alum water, leaving it to dry without wiping.

Mrs. E. U. R.

Remedy For Roaches.

To the Editor:—In regard to Mrs. S. W. Z.'s inquiry for some way to exterminate roaches I want to say that I have found a generous sprinkling of borax very successful. L. G.

How Do You Can Ground Cherries?

To the Editor:—I would like a little advice about growing and canning ground cherries. Mine are always very late in coming and I would like

GRETCHEN GERTRUDE GILCHRIST AND HERSELF.

to know how others grow them, and also how they can them. Do you take the stone out or not? I would also like to know how to can gooseberries for sauce. It is soon coming time to put up fruit and I want to know how to do it before the season is here.

Mrs. H. E. O.

When Buying Wall Paper Remember.

A figured paper always makes the room appear smaller than does a plain paper.

Red absorbs more light than any other color and should never be used in a small or dark room. As a rule, it is a poor color to pick in buying wallpaper.

Yellow adds light and warmth and should be used in rooms having northern exposure.

Green or blue should be used in rooms having much sunshine.

Pink of a light shade adds light and warmth to a room.

Wallpaper should be light or dark enough to make a good background for the furniture. The design should never be prominent enough to compete with the furniture or people.

Honey, as an article of food, has a value that is well established and unquestionable. Apart from its pleasing taste and odor, it has specific qualities that entitle it to a high place in the list of natural food products. After it has been collected it does not need to be subjected to any additional treatment to be made fit for use; it is in reality a "natural" product. Its use as such has been known from the earliest times, and its popularity will undoubtedly remain unimpaired while the need for human food endures.

In Jamaica there are trees called the "whip trees," and from these the natives make strong whips with the lash and handle all in one.

Recipes.

Boiled Pot Roast.—Three and a half pounds from the round, one and a half pints of water, one level tablespoonful of salt, one tablespoonful of sliced onion, six whole cloves, one-fourth level teaspoonful nutmeg, two bay leaves, one-half level teaspoonful of white pepper, two tablespoonfuls bacon fat or lard. Place the fat in the frying pan. When hot add the meat and brown thoroughly on all sides. Place the water in a stew kettle and when boiling add the meat. Pour in also any gravy which is left in the frying pan. Lower the fire or set on back of range, add the salt, onion, cloves, nutmeg, bay leaves and pepper. Cook slowly for two hours. Keep covered. The meat may be served hot or cold and the meatstock used for soup.

Horseradish Sauce for Hot Beef.—One tablespoonful of butter, one level tablespoonful of browned flour, one-fourth level teaspoonful of salt, one cup of meat stock, one-half teaspoonful of chopped parsley, two tablespoonfuls horseradish. Melt the butter, add the flour and mix thoroughly. Add the salt and the meatstock. Boil three minutes. Add the parsley and horseradish. Pour the sauce around the meat.

Lemon Mock Mince.—One pound of raisins. Pour over them one quart of boiling water. Let them stand on the stove and simmer. Juice of two lemons, two teacupfuls of sugar, two well-beaten eggs, three tablespoonfuls of flour. Stir the lemons, eggs, sugar and flour together. Add to the raisins and cook a few minutes. This will make three large pies.—Mrs. R. H. L.

Strawberry Charlotte.—Make a boiled custard with one quart of milk, yolks of six eggs and three-fourths of a cupful of sugar. Flavor to taste. Line a glass dish with slices of sponge cake dipped in sweet cream. Lay on them ripe strawberries sweetened to taste, then a layer of cake and strawberries as before. When the custard is cold pour over the whole. Then beat the whites of the eggs to a stiff froth, add a little sugar and put over the top. Decorate with ripe strawberries.—Mrs. H. G.

Mince Meat.—To one quart of cooked, chopped meat (I use tenderloin) add two quarts chopped apples, one quart measure of sugar, one pound chopped suet, one cup vinegar, one cup molasses, one teaspoonful nutmeg, one tablespoonful allspice, two tablespoonfuls cinnamon, one-half tablespoonful cloves, one pound raisins, one pound currants and juice of one or more lemons. If it is too dry, add water and cook until currants and raisins are done. Then put in jars and seal. If the tops of the jars are filled with boiling water the mince meat will not spoil nor become dry.—Mrs. H. J. P.

Lyonnaise Eggs.—Chop fine one small onion and cook it without browning in butter for ten minutes; then stir in a tablespoonful of flour and cook until it froths. Add one and one-half cupfuls of milk and stir while cooking three minutes. Season with a half teaspoonful of salt and two dashes of pepper. When sauce is thick and smooth pour it into a deep, hot plate and carefully break in six eggs; sprinkle buttered bread crumbs over the eggs, set dish in oven and bake until eggs are set. Serve at once.

Just Remember It.

Every household should possess a good electric flash light. It is invaluable to the mother when there are little children and she often has to get up at night. Flash it into the medicine cabinet and there will be no tragedies of mistaken bottles gotten in the dark. Even in the daytime it is handy to look into dark closets, attics, drawers or dark corners. The beauty of it is that one may throw a strong light just where it is needed without a particle of danger from fire. You may even flash it into the gasoline tank with safety.

An excellent remedy for mildew is to saturate an article with kerosene. Roll it up and let it stand for twenty-four hours and then wash in very hot soapsuds.

Never sun feather beds or feather pillows. Air them on a windy day in a cool place. The sun draws the oil and the feathers will have a rancid smell if they remain in the sun.

Brown boots and shoes should be rubbed over with a slice of raw potato before the polish is applied. This will clean and remove the stains.

Warm a lemon before squeezing it and you will get much more juice.

A spoonful of vinegar will set a poached egg.

Do not have too hot an oven when baking custard, or the custard will become watery. Set the custard in a pan of hot water and be sure the water does not boil during the cooking.

HOME ENTERTAINMENT AND GREAT CASH PRIZES

An Example Picture

Today's Magazine is presenting a home game to everybody—a game that consists of 32 plain pictures. One of them is shown below. A list of titles is printed, and offered to all. You simply look over this list, and pick out titles to fit the 32 pictures. Those submitting the titles that fit the pictures best will be awarded $3,500.00 in cash.

That picture to the left is an example picture, to show you how the game is played. We think it is fitted very well by "An Old Fashioned Girl," which is one of the titles in the list you will have. The girl is dressed in old-fashioned clothes, and that title is the best one in the list for the picture.

A Regular Picture

Here is one of the regular Picturegame pictures. Couldn't you look through the list of titles, and pick out one that would fit this picture? There is no reason why **you,** in a few evenings of absorbing amusement, should not pick out of the list the titles that fit all the 32 pictures best—that make the best **names** for the pictures.

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There isn't any work whatever connected with the Picturegame in any way. There isn't any soliciting or canvassing required. This is what Today's Magazine says it is—a home game for all the family to play for their great entertainment. A way is provided for free participation, without one cent of expense.

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Name.....

Address.....

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Blue Beard.

Dear Young Folks:—I read your letters every week and I like them very much. I am going to write one of the fairy tales I like to tell. It is about Blue Beard.

Blue Beard was a lord and had a very large castle. One day he came to a little house and asked if he could come in.

They let him in and he said he

MOTHER'S HELPERS.

wanted one of the two girls who lived there to be his wife. He chose the younger and took her and the rest of the family to his castle.

One day Blue Beard and his men went hunting and Blue Beard gave the keys to his wife and told her not to unlock a certain door.

But after he had gone his wife's sister took the keys and opened the door. There in the room were his other seven wives. They had been killed and there was blood all over the floor. Some were hanging by their hair and others did not have any heads. When they looked for the key they found it in the blood on the floor.

They picked up the key and tried to rub the blood off, but they could not.

When Blue Beard came in he saw his wife and her sister white with terror. He asked what was the matter, but they would not tell. But he told his wife if she did not tell he would kill her, so her sister said, "I took the keys and unlocked the door."

Blue Beard was so angry that he took his sword and said he was going

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to kill his wife. She begged him to let her have one minute, and this he promised her, but no more.

The girls went to the window and when they looked out they saw their brothers coming.

When the brothers came and saw Blue Beard ready to kill their sister they killed him instead and their sister became the ruler of the land.

—Vivian.

Helps Mother With Work.

Dear Young Folks:—May I join your circle? I am a girl nine years old. I live on a farm and have four black kittens for pets. I have three sisters. One is teaching, one is in high school and the other is in the state university. I also have three brothers. One is in high school and the other two are at home.

I help mamma with her work. I set the table, wash and wipe the dishes and sometimes sweep. I feed the little chickens and help my brother gather the eggs.

I have been taking music lessons from mamma.

I would rather get the mail on Friday than any other day of the week, because that is the day we get the paper. —Ida.

Had Fun in the Ocean.

Dear Young Folks:—I enjoy your letters very much and I am going to tell you about my trip to California. Mamma and I went to California last fall. We went to see my grandpa who lives at Long Beach. We were at Los Angeles, San Diego and San Pedro.

I had a very fine time. We went down on the beach every afternoon. I rode on the merry-go-round every day and was in the ocean two or three times.

When we went down to San Diego we went to the fair and I saw a cow and milkmaid made of butter. They had electric cars at the fair and you had to pay $1 an hour for them. There were Indians there, too.

Some time when I write again I will tell you more about my trip.

—Lillian.

Makes Useful Things at School.

Dear Young Folks:—I live on a farm near a little village. I am twelve years old and am in the eighth grade.

We take several farm papers and I like to read the Young Folk's page very much.

We have six horses and their names are Daisy, Colonel, Rock, Queen, Bell and Dake. I also have a pet dog. His name is Rover. He usually comes to meet me when I come from school.

I have made several things at school in manual training this year. I have made a sled, bird house, footstool, milk stool and a seed tester.

—Melvin.

The Lost Doll.

I once had a sweet little doll, dears,
The prettiest doll in the world;
Her cheeks were so red and so white, dears,
And her hair was so charmingly curled.

But I lost my poor little doll, dears,
As I played on the heath one day;
And I cried for more than a week, dears,
But I never could find where she lay.

I found my poor little doll, dears,
As I played on the heath one day:
Folks say she is terribly changed, dears,
For her paint is all washed away.

And her arms trodden off by the cows, dears,
And her hair is not the least bit curled;
Yet for old sake's sake, she is still, dears,
The prettiest doll in the world.

—Charles Kingsley.

International Sunday School Lesson.

Lesson for May 14, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

"Lo, We Turn to the Gentiles."

LESSON TEXT—Acts 12:13-52.

GOLDEN TEXT—I have set thee for a light of the Gentiles, that thou shouldest be for salvation unto the uttermost part of the earth.—Acts 13:47.

In the unfolding and ever-widening of the program of power we are again confronted with a crucial event. It is suggestive that at this time Paul, whose name has just been changed from Saul, now assumes his place of leadership, succeeding Barnabas. Perga, the capital of Pamphylia, was on the southern coast of Asia Minor, and Antioch, the capital of Pisidia (southern Galatia) was ninety miles north. Paul is now in full control and no other man save our Lord has so deeply impressed human history.

I. Paul's Opening (vv. 13-15). We are not told why John Mark returned to Jerusalem. He may have objected to the changed leadership; there may have been sickness involved; as a Jew he may have objected to Paul's actions. His subsequent missionary zeal restored him to Paul's favor (II. Tim. 4:11). Departing from Perga (v. 14), perhaps on account of an attack of fever (Gal. 4:13, 14), the party ascended to the higher altitude of the important city of Antioch, the site of which is now marked by extensive and impressive ruins. After finding lodgings they repaired to the synagogue on the Sabbath day. Here they could meet the people and would be given opportunity to speak of Jesus. Paul put himself in the way of opportunity and opportunity beckoned to him. They did not demand this privilege because they were Christian workers. Their participation in the service and other actions commended them to the respect of the leaders of the synagogue, which was the great democratic forum of the Jewish nation.

II. Paul's Sermon (vv. 16-41). Paul began his remarks, even as Peter did at Pentecost, by quoting the Old Testament, and referring to Jewish history, using the same to lead up to his testimony about Jesus. (Matt. 5:17.) "It is ours to show wherein Christ fulfilled the law, the obligation resting upon us by reason of his covenant of grace, and the blessings which issue therefrom." This is one of Paul's three recorded missionary sermons (see also Acts 14:15-18; 17:22-31). The last two were to Gentiles only. This is a scriptural discourse. (1) Messiah's people and ancestry (17-23); (2) Messiah's forerunner (24, 25); Messiah rejected (26-29); (4) Messiah risen from the dead (30-37); (5) Jesus the Justifier (38-39); (6) the application, a word of warning (40, 41). There must have been some evidence of restlessness in his audience, hence his sharp warning (41).

III. Paul's Decision (vv. 42-47). After the separation of Jews from Greek proselytes the latter besought Paul to continue his testimony literally "the Sabbath between," perhaps at the midweek meetings. Questions and discussions were the order in the breaking up of the synagogue service, and as Paul and his company departed they were accompanied by some who had believed (v. 43). Knowing the testing which would follow, Paul and Barnabas did personal work with these, exhorting to steadfastness (John 8:31, 32; Col. 1:23) in the grace of God (v. 38, 39; Rom. 3:24; Eph. 2:8). It is only in grace that any are able to "continue" (Rom. 5:2; Gal. 5:1, 4). It is personal work which gathers a crowd and such was the method of Paul and Barnabas during the intervening week. So well was the work done and so great was the power of their testimony that "almost the whole city" gathered the next Sabbath to "hear the Word of God." Such evident interest in this new teaching aroused the jealousy of the Jews. Years of Jewish proselyting had never secured such a result as this one address of a doubtful stranger produced. But back of this jealousy was the greater sin of unbelief. To hear the Word of God (II Titus 4:2; I Thess. 2:13) does not necessarily produce obedience and faith (Luke 8:5-7); not always the greatest number of hearers will produce the greatest number of conversions. To interrupt a speaker is not unknown in synagogues today. The opponents "contradicted and blasphemed," doubtless contending that all who hang on a tree are accursed (Gal. 3:13) and they produced a wild tempest of voice and confusion. Only to attack and to destroy the work of Paul and Barnabas could save these Jewish leaders. Human nature is the same everywhere.

Paul and Barnabas thrived upon opposition. We believe they foresaw this development and were prepared for the emergency (v. 46). Because of long training the Jews were best fitted to receive the Gospel. It was no accident that the first apostles were Jews, but it is serious business to reject the Christ, and the history of the Jewish nation since rejecting Jesus has been written in blood and tears. Paul's "Lo we turn" (v. 46) marked the Rubicon of spiritual history. Christianity is to become world wide, not by means of the Jews, but in spite of them.

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1351—Dress for misses and small women, with or without bolero, with two styles of sleeve, and with skirt in raised or normal waistline. The pattern is cut in three sizes: 16, 18 and 20 years. It requires 7½ yards of 27-inch material for an 18-year size, with one yard for bolero.

1387—Girls' dress with middy blouse, having sleeve in either of two lengths, and with separate skirt, joined to an underwaist. The pattern is cut in five sizes: 6, 8, 10, 12 and 14 years. It requires 3⅞ yards of 36-inch material for a 10-year size.

1596—Ladies' home or morning dress. This model has a four-gore skirt. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6⅜ yards of 36-inch material for a 36-inch size.

1704—Girls, dress (to be closed in front or slipped over the head). The pattern is cut in four sizes: 4, 6, 8 and 10 years. It requires 3½ yards of 36-inch material for an 8-year size.

Waist 1700-Skirt 1699—Ladies' costume. Waist 1700 cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1699 cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. The entire dress requires 7¾ yards of 44-inch material for a medium size. Two separate patterns, 10 cents for each pattern.

1714—Girls' one-piece dress. The pattern is cut in five sizes: 4, 6, 8, 10 and 12 years. It requires 3½ yards of 27-inch material for a 10-year size.

1711—Ladies' and misses' bathing suit (with bloomers). The pattern is cut in three sizes: For misses, 16, 18 and 20 years, and in five sizes for ladies, 36, 38, 40, 42 and 44 inches bust measure. It requires 3½ yards of 44-inch material for an 18-year size. Size 38 would require 3¾ yards.

1705—Girls' dress with long sleeve finished with a cuff, or with sleeve in short puff style. The pattern is cut in five sizes: 4, 6, 8, 10 and 12 years. It requires 3¼ yards of 40-inch material for an 8-year size.

1708—Ladies' apron. A practical and serviceable model. The pattern is cut in three sizes: Small, medium and large. It requires 4½ yards of 36-inch material for a medium size.

1671—Ladies' middy blouse with sleeve in either of two lengths. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3 yards of 44-inch material for a 36-inch size.

1586—Ladies' dressing or house sack, a very serviceable and comfortable garment. The pattern is cut in six sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. Size 36 will require 3¼ yards of 44-inch material.

1717—A smart frock in tailored style for ladies, with sleeve in either of two lengths. The pattern is cut in six sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires six yards of 44-inch material for a 36-inch size.

HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

CHAPTER XX.
Muscular Christianity.

IT WAS eleven o'clock at night. Mrs. Betty had retired, while her husband was still struggling to finish a sermon on the importance of foreign missions. Ordinarily, the work would have been congenial and easy for him, because he was an enthusiast in the matter of missionary work; but now for some reason his thoughts were confused; his enthusiasm was lacking, and his pen dragged. He tried hard to pull himself together, but over and over again the question kept repeating itself in his tired brain: Why should the church support foreign missions, while she lets her hard-working clergy at home suffer and half starve in their old age, and even while they are working in their prime? Why should a doctor reach his highest professional value at seventy, and a parson be past the "deadline" at forty-five? Here he was, subject to the caprice and ill-will of a sour and miserly senior warden, and a cowed and at least partially "bossed" vestry—and he, the rector, with no practical power of appeal for the enforcement of his legal contract. It was only thanks to Jonathan Jackson, the junior warden, that any revenue at all reached him; for Bascom had used every grain of influence he possessed to reduce or stop Maxwell's salary. Mrs. Betty, plucky and cheery though she was, already showed the results of the weary struggle; it was not the work that took the color from her cheeks and the freshness from her face, but the worry incidental to causes which, in any other calling in life but his, would be removable.

Already he had parted with a considerable number of his books to eke out, and meet the many calls upon him—urgent and insistent calls. It became abundantly clear, as his mind strayed from the manuscript before him and turned to their immediate situation, that he was already forced to choose between two alternatives: Either he must give up, and own himself and all the better influences in the place beaten by Bascom and his satellites; or he must find some means of augmenting his means of living, without allowing his time and energy to be monopolized to the neglect of essential parish and church duties.

As he thought on these things, somehow his enthusiasm for foreign missions ebbed away, and left him desperately tired and worried. He made several abortive attempts to put some fire into his missionary plea, but it was useless; and he was about to give up when he heard Mrs. Betty's gentle voice inquiring from the next room:

"May I come in? Haven't you finished that wretched old missionary sermon yet?"

"No, dear; but why aren't you asleep?"

"I have been anxious about you. You are worn out and you need your rest. Now just let the heathen rage, and go to bed."

Maxwell made no reply, but picked up his manuscript aimlessly with his pen. Betty looked into his face, and then the whole stress of the situation pierced her; and sitting down by his side she dropped her head on his shoulder and with one arm around his neck stroked his cheek with her fingers. For a few moments neither of them spoke; and then Maxwell said quietly:

"Betty, love, I am going to work."

"But Donny, you are one of the hardest working men in this town. What do you mean?"

"Oh, I mean that I am going to find secular work, the work of a day laborer, if necessary. Matters have come to a crisis, and I simply cannot stand this sort of thing any longer. If I were alone I might get along; but I have you, sweetheart, and——"

Maxwell stopped suddenly, and the brave little woman at his side said:

"Yes, I know all about it, Donald, and I think you are fully justified in doing anything you think best."

"And you wouldn't feel ashamed of me if I handled a shovel or dug in the street?"

"I'd be the proudest woman in the town, Donny; you are just your fine dear self, whatever you do; and if you have the courage to put your pride in your pocket and work in overalls, that would make you all the finer to me. Manual work would relieve the tension of your nerves. You seem to be in fairly good physical condition. Don't you worry one bit about me. I am going to wash some lace curtains for Mrs. Roscoe-Jones, and that will keep me out of mischief. Now, if you will allow me, I am going to tear up that sermon on foreign missions, and start a little home mission of my own by sending you to bed."

The second morning after this ruthless destruction of Maxwell's eloquent plea for the mission at Bankolulu, Danny Dolan drove up to the tent-rectory at half past six, dressed in a rather soiled suit of overalls: Danny was a teamster, a good looking youth, and a devoted friend of Maxwell's since the parson had taken care of him and his family through an attack of malignant diphtheria. But while Danny was a most loyal friend, he was not of the emotional type, and so, when Maxwell had seated himself comfortably and had lighted his briar pipe, Danny started down the road at a vigorous pace, grinning broadly at Maxwell's attire as he remarked:

"So you're really goin' to work like the rest of us, I reckon."

"Right you are, Danny—four days a week, anyhow. Don't I look like the real thing?"

"Sure you do; only you better not shave every day, and you'll have to get your hands dirty before you can fool anybody, and maybe your face'll give you away then. Be you comfortable in them clothes?"

"Sure thing; I'm never so contented as I am in working clothes."

"That's all right. You're the stuff. But how about the proper old maids in the parish who ogle and dance around you; they won't cotton to your clothes a little bit. They'll think you're degradin' of yourself and disgracin' of the parish. Here you be ridin' on a stone wagon and you don't look a bit better than me, if I do say it."

"I'm afraid they'll have to survive the shock somehow or other; a man has to dress according to his work."

"Hm! Now there's that there Mrs. Roscoe-Jones and Miss Bascom; I'll bet if they saw you in that rig they'd throw a fit."

"Oh no; it isn't as bad as that, Danny."

"They'd think you'd been disgraced for life, to become a laborin' man, you bet."

"A what?"

"A laborin' man."

"Then you think that a parson doesn't labor?"

"Well, I always thought that bein' a parson was a dead easy job and a nice, clean job, too."

"Danny," Maxwell inquired after a momentary silence, "don't you suppose that a man labors with his brain as well as his muscles? And sometimes a parson labors with his heart, and that is the hardest kind of work a man ever does. The man who is most of a laboring man is the man who labors with every power and faculty he possesses."

"Well, now, I guess that may be right, if you look at it that way."

"Yes; you speak of a laboring man and you mean a man who uses his muscles and lets his brain and his feelings die of starvation. To try to help someone you're fond of, who is going to the bad, is the most nerve-racking and exhausting work any man can possibly do."

"Hh! you always was a dum queer parson, more like the rest of us, somehow. And you don't hold that you're disgracin' your profession ridin' with me, and shovelin' gravel?"

"I don't seem to be worrying much about it, do I?"

"No," he agreed—and added, "and I'm sure I would like a day off now and then from preachin' and callin' on old maids, if I was you. But there's times I might be willin' for to let you take my work for yours."

"Now see here, if you'll do my work for a few days I'll do yours."

"Well, what'd I have to do? I ain't makin' any contract without specifications."

"Well, suppose we say you do my work Saturday and Sunday. That means you finish up two sermons which must be original and interesting when you are preaching to the same set of people about a hundred and fifty times a year. Then you must go and see a woman who is always complaining and listen to her woes for three-quarters of an hour. Then you must go and see what you can do for Tom Bradshaw, who is dying of tuberculosis. Then you must conduct a choir rehearsal—not always the highest gratification of a musical ear. Sunday you must conduct four services and try to rouse a handful of people, who stare at you from the back pews, to some higher ideals of life and common decency. Then——"

"Oh, heavens, man! Sure, an' that's enough; I stick to the stone wagon every time."

"You'd be a fool if you didn't," replied Maxwell straightly. "Then again you get your pay promptly every Saturday night. I never know when I am going to get mine."

"You don't? Begad, and I wouldn't work for anybody if I wasn't paid prompt. I'd sue the Bishop or Pope or somebody."

"Parsons don't sue. It's considered improper."

"Well, well," muttered the astonished Danny. "Be you sure you can shovel stone then?" he asked.

Maxwell unbuttoned his wristband, rolled up his sleeve. "If I can't, I'll know the reason why," he remarked tersely.

"That's the stuff," laughed Danny, looking at Maxwell's muscle. "I guess I don't want to meet you out walkin' after dark without a gun. But, say, why don't you swat the Bishop one and get your pay?"

"The Bishop isn't responsible."

"Well, I'll bet I know who is, and

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I'd like to swat him one for you, the miserable old bag-of-bones."

"Never you mind, Danny; I can take care of myself."

"Sure you can, and I guess you're a laborin' man all right, even if you don't belong to the union. Why don't you get up a parson's union and go on strike? By jove! I would.

"Danny, don't you think it looks like rain?"

"No, neither do you; but here we are at the stone pile. My! but how the fellers will grin when they see a tenderfoot like you, and a parson at that, shovelin' stone. But they won't think any the less of you for it, mind you," he reassured his companion.

Maxwell knew most of the men and greeted them by name, and when he rolled up his sleeves and began work they quickly saw that he was "no slouch," and that he did not "soldier," or shirk, as many of them did—though sometimes they were inclined to rest on their shovels and chaff him good-naturedly and ask him if he had his union card with him.

Shoveling stone is no picnic, as Danny and his fellows would have put it. It is not only the hard, obstructed thrust, thrust of the shovel into the heap of broken stone, and the constant lift and swing of each shovelful into the wagon; it is the slow monotony of repetition of unvarying motion that becomes most irksome to the tyro, and wears down the nervous system of the old hand till his whole being is leveled to the insensibility of a soulless machine.

But, though new to the process itself, Maxwell was not ignorant of its effects; and soon he found himself distracting his attention from the strain of the muscular tension by fitting the action to the rhythm of some old sailor's chanteys he had learned at college. The effect amused the men; and then as some of them caught the beat, and others joined in, soon the whole gang was ringing the changes on the simple airs, and found it a rousing and cheerful diversion from the monotony of labor.

If a pause came, soon one of them would call out: "Come on, Parson, strike up the hymn."

One by one the wagons were loaded and driven to the road. After they had filled the last wagon, Danny put on his coat and he and Maxwell mounted and drove out of the yard.

"Where are we going with this?" Maxwell inquired.

"Down on the state road, first turn to the left."

"Why, that must be near Willow Bluff, Mr. Bascom's place, isn't it?"

"Right opposite. Bascom, he come out yesterday and said he wouldn't stand for that steam roller snortin' back and forth in front of his house. But Jim Ferris told him he had orders from Williamson and he wasn't goin' to be held up by nobody until Williamson told him to stop. Jim isn't any kind of fool."

When they arrived in front of Willow Bluff they stopped, dismounted and dumped the crushed stone and then returned to the stone yard. At noon they camped out on the curb in front of Willow Bluff. After Maxwell had done full justice to the contents of his dinner pail he stretched himself full length on the grass for a few moments, chatting with his mates in friendly fashion. Then he went over to the roller and assisted the engineer in "oiling up." Being a novice at the business, he managed to get his hands black with oil and smeared a streak across one cheek, which, while it helped to obscure his identity, did not add to his facial beauty. He was blissfully unconscious of this. About three o'clock Bascom returned from his office, just as Maxwell was dismounting from the wagon after bringing the load. At first glance Bascom did not recognize the rector, but a second glance brought the awful truth home to his subliminal self, and he stopped and stared at Maxwell, stricken dumb. Maxwell politely touched his hat and smilingly remarked that it was a fine day. Bascom made no reply at first.

"Can it be possible that this is you, Mr. Maxwell?" he almost whispered, at last.

"It is, to the best of my knowledge and belief."

"What in the name of heaven are you working with these men for, if I may ask?"

"To earn sufficient money to pay my grocer's bill."

Bascom colored hotly and sputtered:

"I consider it a shame and a disgrace to the parish to have our rector in filthy clothes, drawing stone with a lot of ruffians."

Maxwell colored as hotly and replied:

"These are not ruffians, sir; they are honest men, supporting their families in a perfectly legitimate way, giving their labor and"—significantly—"receiving their pay for it."

"And you, sir, are engaged to work for the parish as a minister of God."

"Unfortunately, I am not being paid by the parish; that is why I am working here. Neither my wife nor myself is going to starve."

"You haven't any pride, sir!" Bascom fumed, his temper out of control. "We have had many incompetent rectors, but this really surpasses anything. We have never had anyone like you."

Maxwell paused again in his work, and, leaning on his shovel, looked Bascom in the eye:

"By which you mean that you have never had anyone who was independent enough to grip the situation in both hands and do exactly what he thought best, independent of your dictation."

"I will not converse with you any more. You are insulting."

"As the corporation is paying me for my time I prefer work to conversation."

Bascom strode along the road towards his home. Danny Dolan, who had been a shameless auditor of this conversation, from the other side of the wagon, was beside himself with delight:

"Holy Moses! but didn't you give it to the old man. And here be all your adorers from town after comin' to tea at the house and you lookin' like the stoker of an engine with black grease half an inch thick on your cheek."

Maxwell pulled out his handkerchief and made an abortive effort to get his face clean.

"How is it now, Danny?"

"Oh, it ain't nearly as thick in any one place; it's mostly all over your face now." Then Danny laughed irreverently again. "Sure, an' you certainly do look like the real thing now."

Maxwell was raking gravel when the guests for the afternoon tea were passing; and, though he did not look up, he fully realized that they had recognized him from the buzz of talk and the turning of heads.

Danny returned from his safer distance when he saw the coast was clear. Maxwell had a shrewd suspicion that the boy had taken himself off believing it might embarrass Maxwell less if any of the ladies should speak to him.

"Did none of 'em know you, then?" he asked.

"Not one of them spoke; I guess my disguise is pretty complete."

"Thank hiven!" Danny exclaimed. "Then the crisis is passed for today at least and your reputation is saved, but if you don't get out of this they'll be comin' out again, and then nobody knows what'll happen. Better smear some more oil over the other cheek to cover the last bit of decency left in you."

At the end of the day's work Maxwell threw his shovel into Dolan's wagon and jumped up on the seat with him and drove back to town.

"Well," said Maxwell's friend, delightedly, "you done a mighty good day's work for a tenderfoot, but you done more with that old Bascom than in all the rest of the day put together My! but I thought I'd split my sides to see you puttin' him where he belonged, and you lookin' like a coal heaver. But it's a howlin' shame you didn't speak to them women, goin' all rigged up for the party. That would've been the finishin' touch."

He swayed about on his seat, laughing heartily, until they drew up before the rectory, where Mrs. Maxwell was waiting to greet Maxwell.

Danny touched his cap shyly—but Betty came down to the wagon and gave him a cheery greeting.

"Well—you've brought him back alive, Mr. Dolan, anyway."

"Yes ma'am! And I reckon he'll keep you busy puttin' the food to him, if he eats like he works; he's a glutton for work, is Mr. Maxwell."

(To be continued.)

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Letter of Experience.

To the Editor:—An experience which the writer remembers and will always remember is one which caused a great loss among chicks one spring years ago. We had a very fine bunch of Reds which we had been nursing along, after having had very successful hatches, and took pride in the fact that our birds were doing exceptionally well, growing, taking on an extra fine coat of feathers, etc., and, in fact, promising to be the season's pride. From time to time we noticed that the flocks were diminishing, until we were forced to admit that we were perplexed. We finally accidentally hit upon the solution of the affair. Chancing one day to be in time to catch Mr. Big Rat carrying off one of the large-sized cockerels into his domain under the barn, we took a tumble. Investigating, we did find the remains of our long-lost chicks. Then we got busy.

All coops were flat upon the ground. A ground floor giving plenty of opportunity for Mr. Rat and his family to take a scoot into the chick quarters. This they did with much benefit to themselves. Immediately upon finding this state of affairs we proceeded to make small horses, such as carpenters use for their work, but only a foot high. We inserted these under the coops and made small run boards two and one-half feet long, with small strips nailed across, making a runway for small chicks to climb up into the coops and made a board floor for the coop proper. This solved the matter, and from this day on we have had no further trouble. This also remedied another trouble which had been causing us considerable worry, damp and wet floors for chicks. We found the higher up floors admirably adopted and this was one of the big

Single Comb White Leghorn pullet, owned and bred by E. F. Pomplin, Fond du Lac county, Wis.

bugbears, a high and dry floor, free from rats, and the very finest coop for any weather. This system we have followed and to this date we have had no trouble at all. It is absolutely the very best we ever undertook to do.

We would advise the safe and sane method of caring for chicks in wet and inclement weather. A coop with a glass window, small blind, with a wire netting stretched across the front and made to open in hot weather to admit fresh air and sunlight, a double door, which has this advantage, when you want to care for a hen with chicks, by opening the top door you can safely care for chicks without the trouble of having them run out on you and of causing you endless trouble. It is a boon to the poultryman to procure such conveniences, which are without cost, practically, and of such a great amount of benefit that one wonders how one has been without them before. A safely guarded chick is a chick that will always grow and thrive and rear into a wonderful specimen. Chick coops are too much neglected and oftentimes made of too poorly constructed design, no light, no ventilation, no way of keeping out mites and lice. It's a "pest house" instead of a coop made to rear superb specimens.

C. L. Pre Fontaine.

Fond du Lac Co., Wisconsin.

News of the Sale Ring.

(Continued from page 10.)

Hammond, Onalaska Agric. Col. 200
Gypsy's Twinkle, Feb. 28, 1910; Braircombe Farm Co. 235
Bull, Haynes Wena 3d Show Me, June 5, 1915; H. W. Whitehead, Rockland, Wis. 100

RUNDEL BROTHERS' AVERAGE.

14 head .....$2,650; average....$189.28

ALFRED STUBBS' AVERAGE.

22 head ....$5,145; average....$233.86

AVERAGE OF ENTIRE SALE.

40 head .....$8,650; average....$216.25

Watertown Holstein Sale.

The Watertown Holstein Sale, held May 4th and 5th, was one of the good sales of the season. Prices ranged high and bidding was brisk most of the time. The demand for the Sunnyside Farm cattle was a tribute to the great breeder, the late S. B. Jones, who is recognized as one of the most honorable breeders and best judges of cattle in the United States. It is regrettable that this great herd could not have been kept intact by an equally square and discriminating breeder. However, they are going out and will do a great amount of good as foundation stock for other herds. The consignments of Archie Reid, Janesville, Wis.; J. E. Piper, Watertown; F. M. Ames, Brooklyn, Wis.; J. W. Goldthorpe and John Jones, of Milton Junction, Wis., Harvest Farms, Mayville, Wis., were also of special merit.

BULLS.

Canary Paul Fobes Homestead, March, 1909; W. R. Stubbs, Lawrence, Kan. $970
Oak De Kol Ollie Homestead Fobes, Feb., 1912; W. R. Stubbs.. 110
Longfield Paul Fobes Homestead, Jan., 1915; Th. Heuhn, Horicon, Wis. 500
Pioneer Oaks White Prince, Jan., 1916; T. C. Jones, Watertown, Wis. 145
No. 42, June, 1915; F. B. Green, Evansville, Wis. 140
Duke Johanna Inka Pontiac, Jan., 1915; W. R. Stubbs. 155
Admiral Walker Prilly 9th, March, 1914; H. H. Bridge, Lake Mills, Wis. 205
Substitute Bull, Pearce Bros., Monticello, Wis. 410
Sir Johanna Pontiac Polkadot 4th, March, 1915; J. E. Piper, Watertown, Wis. 215
Johanna Korndyke Sarcastic Lad, July, 1915; Edwin Schulta, Neosha, Wis. 260
Harvest Johanna Segis, Aug., 1915; Girod & Robinson, Towanda, Kan. 190
No. 122, E. H. Smith, Duluth, Minn.. 170
No. 123, J. F. Morse, Mt. Hope, Wis. 600
No. 9, March, 1915; Arnold Groners, Watertown, Wis. 450
No. 24, Feb., 1916; Senaca Jones.... 960
Houwtje Woodcrest Lad, Oct., 1913; B. A. Richardt, New Lisbon, Wis.. 205
Admiral Walker Prilly 9th, March, 1914; H. W. Halback. 250
Sir Johanna Pontiac Polkadot, Dec., 1912; C. R. Fleming, Jefferson, Wis. 210
Harvest Lilith Agatha Pontiac, Nov., 1915; Harvest Farms..... 165

FEMALES.

Blanche Frisby 3d, June, 1912; Herman Luebke, Lebanon, Wis... 360
Lady Piebe Canary, Feb., 1915; A. K. Luebke, Lebanon, Wis..... 390
Lady Longfield Homestead Maid 3d, Oct., 1914; Otto Brandt, Horicon, Wis. 300
Lady Oak Canary Homestead De Kol 2d, Nov., 1914; A. R. Luebke 395
Mary Rag Apple Korndyke 3d, Jan., 1915; J. W. Goldthorp, Milton Junction, Wis. 480
Genevieve Korndyke Homestead, May, 1914; H. H. Bridge, Lake Mills, Wis. 285
No. 32, May, 1915; Alvin Adams, Lowell, Wis. 140
Pioneer Oaks Julia De Kol, June, 1914; Wm. O'Leary, Honey Creek, Wis. 220
No. 38, Nov., 1915; S. T. Jones, Lebanon, Wis. 285
No. 40, May, 1915; Girod & Robinson 250
No. 41, May, 1915; L. H. Field, Osseo, Wis. 200
Substitute; W. R. Stubbs, Lawrence, Kan. 250
Princess Hengerveld Ormsby, Jan., 1912; H. W. Halback. 165
Evelyn Elbaje Pontiac Johanna, March, 1914; W. R. Stubbs..... 285
Maid Rosa Inka Johanna, Jan., 1915; J. P. Torrey & Son, Kenosha, Wis. 285
Rose Inka Johanna, Jan., 1915; J. P. Torrey & Son 295
Hill Farm Mutual Friend 2d, Nov., 1910; F. M. Sharp 230
Lady Neeltje De Kol 2d, Feb., 1913; L. H. Field 260
Anna Neeltje De Kol 3d, April, 1913; J. F. Poe, Oconomowoc, Wis 130
Hillsboro Oak Lawn, Jan., 1913; L. J. Lange, Watertown, Wis..... 225
Substitute, Jan., 1914; Harvest Farms, Mayville, Wis. 200
No. 92, Jan., 1916; S. H. Bird, South Byron, Wis. 135
Edith Colonel Beets, May, 1913; J. Christopherson, Oconomowoc, Wis. 250
No. 105, April, 1915; M. Ryan, Kaubauna, Wis. 175
Substitute; W. R. Stubbs..... 225
Korndyke Paul Queen, July, 1915; Alvin Adams, Lowell, Wis..... 150
No. 125, May, 1907; W. R. Stubbs.. 250
Lady Oak Homestead Canary, April, 1911; L. H. Field, Osseo, Wis..... 670
Lady Longfield Homestead Maid 2d, April, 1912; A. K. Luebke..... 400
Lady Oak Fobes, Oct., 1914; Aug. Luebke 500
Jessie Fobes Hamilton, Nov., 1915; Alt Luebke, Lebanon, Wis..... 350
Grace Fayne Canary Hamilton, Oct., 1915; S. H. Bird, South Byron, Wis. 235
Canry Longfield 2d's Pet Oak, Nov., 1915; S. A. Jones, Lebanon, Wis. 225
Jessie Fobes De Kol Homestead 2d, Dec., 1914; R. F. Benson, Dousman, Wis. 255
Jessie Fobes Helena Colantha, Feb., 1915; Albert Luebke, Lebanon, Wis. 250
Jessie Fobes Agantha Pontiac, Feb., 1915; Harvest Farms 1,100
Blanche Frisby Colantha, Nov., 1914; Girod & Robinson 155
No. 21, Jan., 1916; S. H. Bird..... 200
No. 22, Jan., 1916; C. C. Fries & Son, Richland Center, Wis..... 230
Josie Segis Watson, April, 1914; W. R. Stubbs 195
Alderly Piebe De Kol, June, 1914; Luther Lindauer, Kaukauna, Wis. 110
Rebecca De Kol Vale, May, 1914; W. R. Stubbs 200
Windsor Pauline Roxie De Kol, Feb., 1914; W. R. Stubbs..... 210
No. 31, Nov., 1914; Th. Kuehn, Horicon, Wis. 160
Una Walker Hamilton, Nov., 1914; W. D. Kuehr 160
No. 36, Jan., 1916; E. P. Coon, Milton Junction, Wis..... 145
No. 37, March, 1915; E. P. Coon.... 170
Princess Hengerveld 4th, Feb., 1912; R. E. Haeger, Algonquin, Ill. 355
No. 54, May, 1915; E. H. Smith..... 140
No. 55, May, 1915; F. B. Green..... 135
Piebe Pinehurst Belle 2d, E. F. Kuehn, Horicon, Wis. 120
No. 57, Mar., 1915; H. W. Halbach, Burlington, Wis. 150
Princess Johanna Ormsby, April, 1915; J. Hutchinson, Rudolph.... 145
Lady Walker Calamity De Kol, April, 1913; H. H. Bridge, Lake Mills, Wis. 200
Vernon Pontiac Johanna Inka, Mch., 1913; W. R. Stubbs..... 430
Princess Una Fobes 2d, Oct., 1915; Theo. Kuehn 165
Crescent Willis 2d, Nov., 1913; W. R. Stubbs 230
Bryonia Burke Johanna, Sept., 1905; T. M. Shark, Cable, Wis..... 140
White Foot Bergsma, Feb., 1913; Ed Solomon, El Paso, Tex..... 195
Neeltje Hillsboro, Jan., 1913; L. H. Field 220
Nellie Jane Pietertje 2d, Sept., 1909; O. E. Mullen, Watertown, Wis.... 235
Queen of Wild Rose, Sept., 1909; R. E. Luedthe, Juneau, Wis..... 205
No. 91, Nov., 1915; H. S. Bird..... 180
No. 93, Jan., 1916; H. S. Bird..... 180
No. 94, Jan., 1915; Gramling Bros., Dousman, Wis. 205
No. 95, Nov., 1915; Henry Peterson, Oconomowoc, Wis. 165
Harvest Bette Longfield, Dec., 1912; W. R. Stubbs..... 290
Harvest Bonnie Agatha Pontiac, Feb., 1915; E. H. Smith..... 525
Canary Paul Butter Girl, Aug., 1913; F. M. Shark, Cable, Wis..... 120
Anna Butter Lily, June, 1909; W. R. Stubbs 195

Potato planting machinery that can be attached to an ordinary plow has been invented by an Englishman.

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FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

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FROM my heavy, winter-laying, money-making S. C. and R. C. strains; $1 per 15, prepaid; $4 per 100 after May 1st. Quick shipment.
R. E. Daly Poultry Farm **Necedah, Wis.**

BARRED Rock eggs 15, $1.50; 30, $2.50; 100, $7.50. From quality birds with size, breeding and barring. Prize-winners. Our egg customers are not disappointed when chicks are grown. 19 years a breeder. Guarantee fertility. Circular free. S. V. Latcham, Cottonwood, Minnesota.

BLUE Andalusians, S. Hamburgs, S. C. W. Minorcas, W. Lang's, Buckeyes, R. I. R ds, Buff Orps., Lt. Brahmas; eggs, $1.50, 15; Houdans, Buff Cochins, $2.50. R. Weinkauf, New Ulm, Minn.

SILVER WYANDOTTES. "The Aristocrats." Eggs from the grandest matings on earth. My mating list tells all. It's free. Write for it. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P.W. Condon, West Chester, O.

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TO INTRODUCE the Certified Winter Layer strain. Eggs for hatching **now** $4 per 100, 75c per 15. Certified Egg Farm, Madison, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

MAMMOTH BRONZE turkey eggs 25c each. Single Comb Brown Leghorns, $1.00 for 15. $5.00 for 100. Mrs. Peter Milfried, Cazenovia, Wis,

SILVER Laced Wyandottes, Barred Plymouth Rocks and White Crested Black Polish. Eggs for hatching. Cascade Poultry Yards, Cascade, Ia.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

EGGS FOR HATCHING. Pure R. C. Rhode Island Reds, $1.25 per 15, $5.00 per 100. Address Fred M. Smith, Route 7, Elkhorn, Wis.

SINGLE Comb Buff Leghorn eggs from high-class stock at $1 per 15, 100, $4.50. Chas. Schmit, R. 22, Hortonville, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

MY R. C. REDS ARE MONEY MAKERS. Eggs postpaid, prices right, circular free. Mrs. G. Eills, West Salem Wisconsin.

Guaranteed Seed Corn

WE recently sent average identical sample of our Northern Iowa latitude grown and Central Minnesota (Redwood Co.) grown seed corn to the foremost agricultural college of this country and have just received their official report, as follows:

CEN. MINN. (REDWOOD CO.) GROWN.

Northwestern Dent	96%	Minn. Ea. Yel. Dent	92%
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THESE LOTS ARE ALL 1914 CROP

The above tests prove that our stocks of genuine NORTHERN GROWN Seed Corn are the highest qualities you can buy—regardless of price.

We Give You a Sworn Statement as to Where Our Seeds are Grown

We do not handle any dent corn from either central or southern Iowa, Nebraska, Kansas, Missouri or Illinois, as such seed, although of good germination, cannot ripen and mature in the North. Look at your map. **Don't buy seed corn that is grown south of you.**

SPECIAL NOTICE.—Until sold out and for prompt orders we offer you a varieties of our

CENTRAL MINNESOTA GROWN

Graded, shelled, high test (1914) seed corn as follows: Bushel $5.00; in 5-bushel lots $4.85 per bushel; in 10-bushel lots, $4.75 per bushel. New "American A"—bags included **free.**

We GUARANTEE every bushel of Seed Corn we ship to be exactly as represented in every particular or mo..ey refunded.

Send your order promptly if you want any of the above lots at these prices.

THE ADAMS SEED COMPANY **BOX 50** **DECORAH, IOWA**

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WINNER of premiums in potatoes. I own and offer about 1900 acres cut-over hardwood lands along the Milwaukee road, including one town site, with running water, timber and water power. For sale in tracts of 40, 80, 120 acres and so on. Get my maps and price list. C. P. Crosby, Rhinelander, Wisconsin.

SILO The Northfield continuous solid steel door frames with safety ladders and 2-in. plank doors for concrete, tile, brick or block silos are the tightest, most economical, convenient and substantial silo doors made. They never stick nor get loose. Will pay you to investigate.
Northfield Iron Co., 122 **Nico Sta., Northfield, Minn.**

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Ask for sample and price.
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YELLOW DENT Ear tested, Golden Glow seed corn, Fire dried, 1915 crop, 95% guarantee. Price $6.00 per bushel. Money refunded if corn is tested by the Holden method and is not up to guarantee. Address Harry H. Hoard, Waupun, Wisconsin.

AGENTS—Big money selling our 15 household inventions. New, live, quick sellers. Every home buys one or more. Samples furnished active workers. Write. W. T. Carpenter Co., 5711 Harper Ave., Chicago, Illinois.

SEED CORN—Reid's Yellow Dent. Matures from 90 to 100 days; germination from 95% to 98%. J. N. Hutchinson, Dixon, Illinois.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Another Good Duroc Herd.

IT IS always a pleasure to look over a good herd of breeding stock whether horses, cattle or swine. There is also great satisfaction in talking to men that are working for the betterment of their chosen breed and the live stock interests as a whole. Consequently when we spent a day recently with E. H. Parker & Son, of Janesviille, Wis., we met men of the above caliber and also saw one of the good herds of Durocs in the state of Wisconsin. Mr. Parker, senior, is one of the live wires of the Duroc fraternity of the state of Wisconsin. He is also one of the "wheel horses" of the Rock County Fair and at this time is putting forth all of his spare time in the interest of the baby beef contest that is to be put on at the county fair this fall. When Parker puts his 250 pounds behind a proposition one can rest assured that it is going to be a success. Now pertaining to the Durocs, as above mentioned he has one of the best herds we have seen in the state. At the present time he has almost 100 spring pigs, ranging in age from the first of March up to the middle of April. One of the best brood sows in the herd is Opal Orion by Orion Chief and she has a very fine litter of eight by Cherry King's Rival he by Cherry King by Cherry Chief. This is the best litter at this time and the man who gets a pig or two from this litter will be fortunate. The best individual sow on the place is a daughter of Marion's Wonder—at least she appeals to us most on account of her size and quality and while her litter is young they are strong and thrifty. Their sire is Defender's Gold Model. In last week's issue we called attention to the best two-year-old Duroc boar we had seen in Wisconsin, Prince Defender. This Defender Gold Model is a litter brother, being by Lee's Defender out of a Golden Model 2d dam. A daughter of the illustrious Illustrator has a fine litter by Red Advance he by Wonder Boy by Marion's Wonder. A Dominant Col. sow out of an Illustrator dam has a nice litter of eight by King Royal he by the Royal champion, Royal King. A daughter of the champion, Lee's Defender has a fine litter of nine by King Royal. Messrs, Parker will certainly have a nice lot of Durocs to offer the trade this year and they represent blood lines that are most popular. The attraction in this herd at the present time is a September boar sired by the Chief Col. by Cherry Chief dam by Pal's Col. This is one of the best boars of his age we have seen in the state and we are in hopes Mr. Parker will show him at the state fair this fall. He certainly should make a creditable showing. Don't overlook this good Duroc herd and while we didn't ask Mr. Parker if he would sell some pigs at weaning time, no doubt he would price a few. If you are interested get his prices on some of the above mentioned litters for we feel confident they will please you. Kindly mention The Wisconsin Farmer when writing. See page 26.—Adv.

John Steele's Holsteins.

THE Holstein herd of John Steele, Oconomowoc, Wis., is one of the best producing herds in the state of Wisconsin. The high production ability of the individuals in this herd has been demonstrated by the official records which have been made during the past two years. About half the animals of milking age have been put on official test and to the writer's knowledge there have been none that have not qualified. Records over twenty-eight pounds of butter in seven days have been made and a large number above twenty pounds. In a communication recently received from Mr. Steele he states, "I have not bought a female in twenty-four years. My present herd is entirely of my own breeding. The great grandam of the original females was imported by Thomas B. Wales, then secretary of the Holstein-Friesian Association. I have had two bulls from Henry Stevens & Sons, one from S. B. Jones and two from M. S. Nye." At the present time Mr. Steele is advertising six heifers for sale on page 27 in the Oconomowoc Holstein Breeders' advertisement. These were sired by Contest Colantha Crown De Kol 98171, whose dam was grand champion at the New York State Fair for two years and his sister was also grand champion at the same fair. These heifers are all straight and level and fit to stand in any show ring. For pedigrees and further information in regard to these animals write to the above address.—Adv.

Keep Stock in Condition All the Time.

IF the horses or cattle begin to go "off their feed" and to be sluggish and listless; if the cows' milk yield becomes scanty and the pigs are irritable and not laying on fat as they should, it's a sure sign that a good tonic is needed. Digestive and intestinal troubles and that all-too-prevalent pest—worms—play havoc with your stock, and unless remedial measures are taken quickly, losses are bound to ensue. Get a good, quick-acting medicine, something that combines the properties of tonic, laxative and worm destroyer, such as Dr. Hess Stock Tonic, a remedy that has been successfully employed by farmers and cattle raisers all over the country for the last twenty-four years. Dr. Hess, the compounder, is not only a doctor of veterinary science, but a doctor of medicine, so you can depend on his practical, scientific knowledge of animals and their ailments. This stock tonic, made according to his own formula, is guaranteed to bring the desired results, or the dealer will accept your empty packages and refund your money. Use it regularly and your stock will be in prime condition all the time.—Adv.

Little's Short-horns and Durocs.

IT IS always a pleasure to visit a breeder and find him doing business with the breed he handles. When a man has been in the game for a number of years and continues to enjoy a good trade it shows that he treats his customers right or he would soon be out of business. We recently looked over the Short-horns and Durocs owned by B. W. Little, Janesville, Wis. His Short-horns are strictly Bates breeding, his cows coming from Bates foundation and he has always used a Bates-bred bull. In this way he has kept his herd pure and has had excellent results. His cows are heavy milkers and they produce a uniform lot of calves and being by the good bulls, they are even better than the dams. Mr. Little's bulls and heifers are in demand as soon as they are of serviceable age. He has some fine young things coming on but has had such a demand for his bulls, that he is sold out of anything suitable for immediate service. This is a good herd to keep in mind. In Durocs we found close to a hundred pigs of spring farrow, mostly March and we have not seen a thriftier bunch this year. This herd is rich in the blood of Defiance, a Browning bred boar, sired by Defender. Some of his best sows are by this boar. The spring pigs are by Critic Top Notcher, a son of Dusty Critic 2d and out of a Top Notcher dam. Dusty Critic 2d is the sire of Critic B., the Nebraska grand champion, so it will be seen that the Little boar comes of good breeding. There are also several good litters by King Defender he by Ohio King and his dam by Defiance. This boar has great scale and is the sire of a desirable lot of Durocs. Mr. Little has already received several orders for spring pigs to be shipped at weaning time, and if you are going to want Durocs this is a good time and place to buy them. He can supply you with pairs or trios not related. Get your order in early and in writing please say you saw the advertisement in The Wisconsin Farmer. See page 26.—Adv.

Rushing Business in Hampshires.

WE have just had a letter from A. M. Laird who owns one of the best herds of Hampshires in the Northwest, located at Prairie du Chien, Wis. He writes as follows: "I've been out of sows due to farrow in May for about thirty days. One man said I had better change my advertisement, so I am sending change of copy, for I don't like to have to write so many letters and tell them that I can't fill their orders. My herd is sold down to where it looks slim. Sows bred for early June all gone and only have a few left that are bred for late june and July farrow. Have a few winter pigs ready to ship, but I can see now that I'll not be able to fill all orders this summer unless I can buy some good pigs, but as you know I can't use them unless they are good. The nicest part of my business is that I continue to get repeat orders from last year's customers and have had splendid reports from sows shipped the past winter. I credit my success to my satisfied customers. Have 101 spring pigs and I never had a bunch that are doing nicer. Drop in when in this vicinity." The fact that Mr. Laird has had such a good trade is due to the fact that he handles good Hampshires and treats his customers fair. The best recommendation a breeder can have is satisfied customers. We are glad to refer our readers to Laird's famous Hampshires when in the market for anything of this good breed of swine. His spring pigs will soon be ready to ship, singles, pairs or trios, unrelated, better order early and get the pick. Write at once and please mention this paper. See page 26.—Adv.

THREE Herefords from the herd of Birch & Thompson, Lake Geneva, Wis. Typical of the animals to be sold in their sale, May 18th. See advertisement on page 26 of this issue.

A Powerful Car at Low Price.

THE Overland is a light, economical car, but it is like the big cars in that it has abundant power. The Overland is an exception to the rule that automobile prices vary according to power—it develops thirty-five horse power with ease and sells for only $695. A tremendoes volume of business is the thing that permits the sale of this car at such a low price. The Willys-Overland Company claim to make twice as many cars as any other producer of a car of like class. Indications are for a car shortage this spring, and if you want a car, your order should go in early. Write for the beautiful Overland catalog, and investigate the merits of this car. Address, the Willys-Overland Company, Toledo, Ohio. See advertisement on page 28.—Adv.

Birch & Thompson Hereford Sale.

ATTENTION is called to the Hereford offering of Birch & Thompson at Tawasentha Farm near Williams Bay, Wis., on May 18th. Last year they held their annual sale on June 5th which was the first pure-bred Hereford auction in the state and it was quite well supported both by Wisconsin breeders and a few breeders from outside the state, principally W. T. McCray, Kentland, Ind., and J. D. Miles, Livingston, Mont. The latter purchased some of Birch & Thompson's offering at the Montana State Fair at Helena, Mont., and was so well pleased that he came out here to attend the sale and bought very liberally. The encouragement that this firm received has encouraged them to continue with their annual offering and this year upon the suggestion of Colonel Reppert and others, have selected May 18th, the day following W. T. McCray's sale at Kentland, Ind. Birch & Thompson are so desirous of getting the support of the better class of Hereford buyers, that they have consigned, this year, practically all of their desirable young Herefords with just a few of the big type of thick-meated cows that make a valuable addition to any herd. There are fifteen cows three years old and over. The ten two year olds are a uniform lot. Among these as well as the cows, are some that would make valuable show animals and most of them are bred to Maple's Lad 71st, a son of Robinson's Bonnie Brae 8th. The e are eight very nice yearling heifers that are very attractive, especially for anyone wishing to start in the pure-bred Herefords without too great an investment. The fifteen yearling bulls are a choice lot of young bulls and nearly every one is fit to head a herd of pure-bred Herefords. These, no doubt, will offer a great opportunity for anyone wishing a good Hereford bull. Three of the bulls and three of the heifers are consigned by the noted exhibitor and breeder, James Price, of Onalaska, Wis. Mr. Price's offering is extremely desirable, and, of course, Mr. Price always presents his cattle in a most desirable condition. This offering of forty-eigth head of registered Herefords together with the breeding cows of Birch & Thompson's herd will make a cattle show of exceptional worth and the readers of The Wisconsin Farmer are respectfully urged to avail themselves of this opportunity to attend this show and sale on May 18th. See advertisement on page 26.—Adv.

Hemlock Is an Ideal Wood for Rough Lumber Purposes.

THE season for building and repairing is at hand, and the farmer who is planning on a new house, barn or other building must decide on the kind of lumber which is best for his purpose. Lumber from trees grown near home will save trasportation costs and usually lasts longer than wood grown at some distant place where the climate is different. For all rough lumber purposes, you will find "Old Faithful" Hemlock just the wood you want. It is strong and durable and under ordinary conditions will last about a hundred years; it contains no pitch and, therefore, will not take fire easily; it is grown in Wisconsin and northern Michigan and is adapted to your climate. Read the advertisement on page 7 then go to your local lumber dealer and get information and prices on "Old Faithful" Hemlock. In addition, you should send for the valuable free plan book containing 192 pages of plans and illustrations of practical farm buildings made of Hemlock. You will be pleased with this book. Send for it to the Hemlock Manufacturers, Oshkosh, Wis., and please say you saw the advertisement in The Wisconsin Farmer.—Adv.

"The Car of No Regrets."

THE eight-cylinder, seven passenger King touring car is called "The Car of No Regrets," because those who have purchased this car have never found cause to complain of it. Prospective purchasers, also, will have no regret if they buy an eight-cylinder King. Especially will the farmer be pleased with this car which combines quality and power, for he has been trained to quickly recognize and appreciate these qualities in his live stock and farm machinery. The eight-cylinder King has great speed, grace and stamina, but it also has plenty of power, sturdiness and reliability in addition. Aluminum pistons are a feature of this car; they increase power, reduce strain on the crankshaft, resist carbon and economize fuel. Cantilever springs are another feature and they reach their highest efficiency as designed for this car; rough roads are made smooth with these spring and tires are kept gripped to the road. Rapid acceleration and

His Advertising in The Wisconsin Farmer Brought Inquiries and Sales.

THE WISCONSIN FARMER is making a splendid record in selling good live stock. Letters which come to us from live stock breeders of this state and the counties adjoining in other states, prove that these men are getting business direct from their advertising in these columns. Here is a recent letter which is added proof of our assertion:

Wisconsin Farmer, Madison, Wis. April 10, 1916. Gentlemen:—My advertisement in your paper has brought innumerable inquiries and some sales. It sold my senior herd bull for me quickly. So I will have to change my copy again and offer some other stuff. Enclosed please find a new advertisement to run for the next four weeks.

A. L. ROWE,
Proprietor Elm Valley Dairy Farm,
R. R. 4, Waupaca, Wisconsin.

With over 80,000 circulation, the greatest portion of which is concentrated in Wisconsin, The Wisconsin Farmer is easily the leading farm paper in the state. No other paper has ever had so large a list of Wisconsin readers and this fact is largely responsible for the splendid returns from live stock advertising. Our readers should not fail to scan carefully the live stock columns of this paper, as the offerings presented there come from the very best breeders of the state.

You can nearly always find just what you want in the way of live stock by referring to the advertising columns of The Wisconsin Farmer.

flexibility are other features and result from the remarkable performance of the King super-motor. You should have a catalog of this "Car of No Regrets." Write for it today to the King Motor Car Company, Detroit, Mich., and kindly mention this paper in your letter. See page 11.—Adv.

The J. E. Kennedy Short-horn Herd.

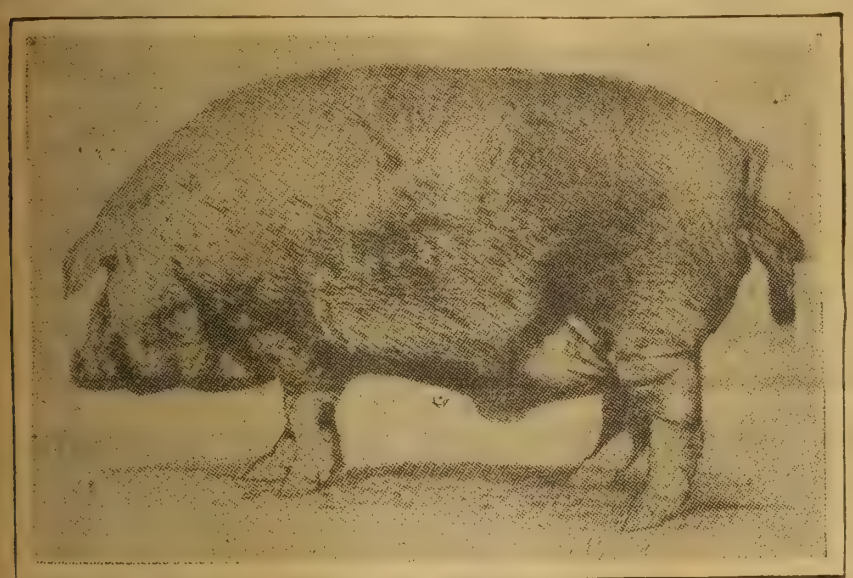
ROCK COUNTY, WIS., is noted for its good cattle of the various breeds and the leading herd of Scotch Short-horns can be seen at Oak Lawn Farm and owned by J. E. Kennedy, Janesville, Wis. We doubt if there is another Short-horn breeder in the state who has added as many richly-bred Scotch cattle to their herd within the past year as Mr. Kennedy. Some time ago he purchased a farm two miles from town, the farm was in a high state of cutlivation, but the buildings were in a dilapidated condition. New buildings of the most modern construction now grace Oak Lawn Farm. Heading the Short-horn herd is the good roan bull, Denmark 8th he by the noted Village Denmark and his dam being Barmpton Leaflet by Whitehall King by Whitehall Sultan. One need only see the calves on the place to be convinced that he is an impressive sire. Several imported cows of the best Scotch breeding are in the herd. There are also excellent daughters of the noted sire, Fair Acres Sultan carrying calves to the service of Kilgour's great Champion Goods. Violet Cup, a four-year-old daughter of Marshall Cup by Whitehall Marshall has a show calf by Champion Goods. Space will not permit the mentioning of all the good Scotch families represented in this good herd. In passing we might mention the fact that Mr. Kennedy has seven cows in the herd of the Princess Royal family and those that follow this breed closely will remember that the highest-priced bulls of the spring sales in Scotland this year were members of the Princess Royal tribe. There has been and is at the present time a growing demand for Short-horns of the milking strain, straight Scotch and Scotch-topped and inasmuch as Mr. Kennedy is getting together a herd of straight Scotch cattle he will sell a dozen heifers that have several Scotch tops in their pedigree. Most of them are sired by Strathallan King he by Whitehall King by Whitehall Sultan and they are a very uniform lot of heifers and in good condition. An attractive price is being made on this bunch of heifers and he will sell one or all. Anyone interested will buy them if they could see them. He also has one Scotch bull left that is for sale. He will be a year old in July, is roan in color and is sired by an imported bull. Here is a good buy for someone that wants a herd bull prospect. Keep this herd in mind, it will be heard from in the future, and in the meantime if you want a few heifers or a bull, write J. E. Kennedy, Janesville, Wis., and don't forget to mention this publication.—Adv.

The John L. Fisher Duroc Herd.

PROBABLY no Duroc breeder in Wisconsin has purchased more sows of fashionable breeding than John L. Fisher, Janesville. Many of the great boars of the breed are represented in this herd. The feature of the herd is the herd boar, Gold Bond. This boar has a wonderful back, great length, the best of bone and while in thin condition now, we believe that if he was properly fitted he would make a creditable showing. We have been advised that he won first in the senior yearling class at the Wisconsin State Fair last year and was in only ordinary flesh. No boar could have better breeding. Sired by Disturber he by Defender out of Lucy Wonder 112th, dam Tattletale 2d by Defender out of Tattletale by Educator by Ohio Chief. It would be hard to write a better pedigree. One of the best sows on the place is a litter mate to the grand champion, Lee's Defender. She has a good litter by Chief's Col. Fisher a son of the noted Chief's Col. A sow by the champion, Illustrator, has a litter by Chief's Col. Fisher. Two litters are by King the Col. The champion, Volunteer, has a good daughter in this herd. A Lincoln Model sow has a litter by S. & H.'s Col., a son of King the Col. There is one litter by Top Col.'s Defender by Defender. Three litters on the place by Lincoln Model. Those posted in Duroc pedigree will recognize the popular breeding in this herd. Mr. Fisher is offering some fall boars at this time sired by Top Col. Defender. Durocs are becoming popular in all parts of the world. Mr. Fisher showed us a letter written by a man in Alaska asking for prices on bred sows. Write Mr. Fisher if interested in Durocs. Kindly mention this publication. See page 26.—Adv.

A Free Book on Modern Methods of Land Clearing.

IF farming is to keep pace with other industries, it must adopt modern methods that have been proven to be of advantage to it. The uses of Atlas farm powder for blasting out stumps and boulders, digging holes for trees, and similar operations are modern, but they are no longer experiments. The Minnesota Experiment Station found that explosives "blew stumps entirely out and broke them into pieces easily handled." Similar results have been found at other experiment stations. Convenience, small cost and proven efficiency are characteristics of Atlas farm powder for farm use. Do you have idle stump land on your farm? If so, the free book, "Better Farming," has a message for you. This book, published by the Atlas Powder Co., Wilmington, Del., tells how stump land, land underlaid with hardpan, and land covered with boulders can be made productive and profitable at small cost and with little expenditure of time. See the advertisement on page 17 and write for the free book to the company named above. Use the coupon attached to the advertisement in order to receive a prompt reply.—Adv.



GOLD BOND 196177.

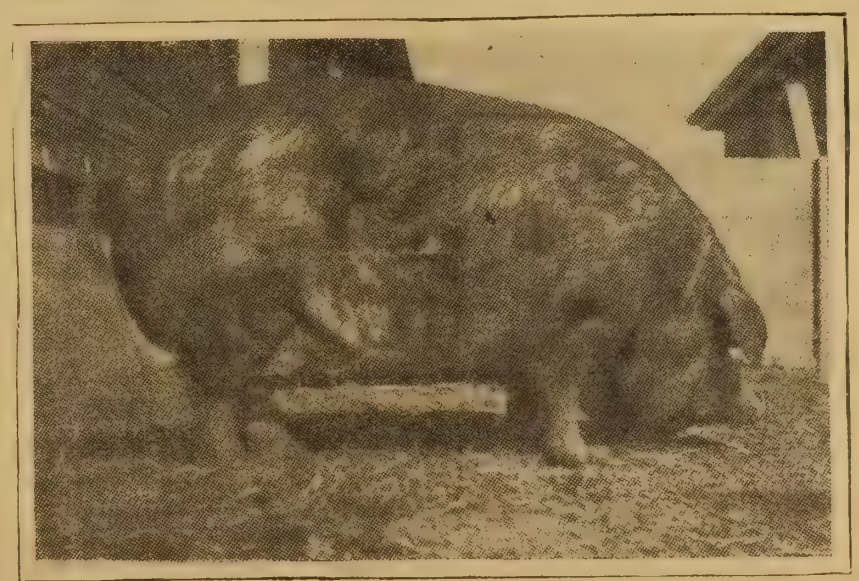
FIRST-PRIZE senior yearling Duroc boar at the Wisconsin State Fair, 1915; from a litter of fourteen; the big, prolific type. Owned by John L. Fisher, Janesville, Wis. See advertisement on page 26.

Chester White Pigs for Sale.

A FINE lot of Chester White spring pigs of February and March farrow are offered for sale by Jos. Egelhof, Edmund, Wis. These pigs are first-class stock of direct breeding from a $400 boar; no runts are in the lot. A shortage of feed makes the sale of this stock necessary. Prices are $12 each for males and $10 for females. If you want some of these pigs, see the advertisement on this page and write Mr. Egelhof. Kindly mention The Wisconsin Farmer if you write.—Adv.

Lefebures' Belgians.

H. LEFEBURE & SONS, Fairfax, Ia., write as follows, regarding their Belgians. "We have enjoyed a nice trade in our Belgian draft horses through April, but the majority of our b tter stallions remain in the barns on account of price. We now wish to announce to your readers that we have decided to make a big reduction in the price of these most valuable stallions in order to sell a few more this year. We have them in blue roans, strawberry roans, sorrels, browns and bays weighing from 2,100 to 2,400 pounds each and sound and right in every way. Anyone interested should come to Cedar Rapids and telephone us at Fairfax. Interurban service is hourly and we will meet you at any time." The advertisement appears on page 26. When writing kindly mention this paper.—Adv.



THE type of Durocs seen in the Atwater herd, Bangor, Wis. She has a fine litter by Lee's Defender. Picture taken February 28th. See the advertisement on page 26.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Holstein-Friesian Cattle.

June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

Hereford Cattle.

May 18, Birch & Thompson, Lake Geneva, Wis.

HARVEST EVERY MONTH.

In Some Country or Other Wheat Is Always Being Reaped.

All through the year wheat is being harvested. In January it is cut in the great fields of the Argentine and in New Zealand. In February and March it is cut in the East Indies and Egypt. The wheat fields are harvested in April in Cyprus, Asia Minor, Persia and Cuba, and in May in China and Japan.

June is the busiest harvest month of the whole year, for then Turkey, Greece, Spain and southern France, as well as most of the southern states of America are all cutting wheat.

The northerly states of America, as well as most of the southern states of Russia do their harvest-gathering in July.

August sees the wheat crop gathered in Great Britain, and September and October for Sweden and Norway. Peru and South Africa are busy harvesting in November and December.

The trees and shrubs which produce some sort of rubber are said to grow in a narrow belt round the world, within five degrees north and south of the equator.

Waukesha County Holstein Breeders' Association Third Annual Sale

Waukesha, Wisconsin, June 1

90 HEAD of the best animals in the country will be offered for sale. Fifteen of the largest breeders are consigning some of their choicest animals. These animals have all been inspected by a committee of three, one of whom is a veterinarian, to eliminate culls and inferior stock. Animals over ten months of age are tuberculin tested prior to sale by a veterinarian, under the supervision of the Ohio L. S. Sanitary Board. Each animal is guaranteed to be a breeder. No by-bidding allowed. There are cows, heifers and calves, some with 30-lb. breeding. A few choice bulls of Ormsby, Pontiac and Segis blood. The Waukesha Breeders' Association is the oldest Holstein association of its kind in the state. We have a reputation for fair dealings to maintain. We are in the business to stay. Come to the sale June 1st.

W. L. Baird, Mgr.

Waukesha **Wisconsin**

Auctioneers: Lose, Krause and Walker

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov of the Chene. Address
Charles Schmidt **Wrightstown, Wisconsin**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.
Grenwode Farm, E. R. Whitcomb, Prop. Whitefish Bay, Wisconsin.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman **Fort Atkinson, Wisconsin**

TOO LATE TO CLASSIFY.

CHESTER WHITE SPRING PIGS

OF February and March farrow, direct breeding of a $400 boar. Boars $12, sows $10 each. Shortage of feed forces this sale. A No. 1 stock; no runts. Cash with order gets first choice.
Jos. Egelhof **Edmond, Wisconsin**

Birch & Thompson's 2d Annual

HEREFORD SALE

WILLIAMS BAY, WISCONSIN

THURSDAY, MAY 18, '16

A TYPICAL BONNIE BRAE HEIFER

48 HEAD Choicely bred and developed. 15 yearling bulls, 15 cows, 18 yearling and 2-year-old heifers of Bonnie Brae and Beau Perfection Breeding. This includes six head consigned by J. Price, Onalaska, Wis., (formerly of firm of Cargill & Price).

This is an exceptional offering of both males and females. Do not fail to attend.

We will meet trains at Walworth, Elkhorn and Williams Bay. Sale starts at 1 p. m. Auctioneers: Reppert & Igelheart. H. S. Hoard will represent The Wisconsin Farmer.

When writing for catalog kindly mention The Wisconsin Farmer.

BIRCH & THOMPSON, Lake Geneva, Wis.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Yearling Jersey Bull

OF choice breeding. Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

FOR SALE—PURE-BRED ANGUS BULLS and females of show caliber. F. C. Lewis, Bridgeport, Wisconsin.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS . . . HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY

Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

AYRSHIRE CATTLE.

Breeding Ayrshire Bull Individuality

BORN August 3, 1915. Sire: imported **Craigbrae Lord Rosebery** 15001. Dam: **Bonny Miss Casanet of So. Farm out of** 480 pound three-year-old. He is more white than red and is guaranteed in every way. If you see him you'll buy him if you know Ayrshires. Your inspection and correspondence are invited. Write
Jas. Van Etta **Lima Center, Wis.**
(Rock County)

GALLOWAY CATTLE.

10 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. O S. Hechtner, Cheriton, Iowa.

POLAND CHINA SWINE.

Martiny's Poland China Boars

15 FALL boars of September farrow, sired by Wisconsin Jumbo, the 1st prize and Jr. champion boar at the Wisconsin State Fair, 1914. I believe he was the biggest boar of his age shown that year, he weighing 510 pounds at eleven months old. This will be the last chance to get a herd header from this great boar. The wise man will raise a few fall pigs this year if he never did before. I will sell these boars now for less than they will bring for pork after you get through using them next fall, as I wish to make room for my 100 spring pigs I already have on hand.
L. P. Martiny **Chippewa Falls, Wis.**

POLANDS

HAVE some fine fall **BOARS** to be sold at **BARGAIN PRICES** during the next month. Write. Everything guaranteed.
R. MEINKING - - BANGOR, WIS.

BLACK JUMBO

221231

A FEW good Poland China sows bred for fall litters to the great boar, Black Jumbo.

BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks **Hazel Green, Wisconsin**

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

HORSES.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

IMPORTED STALLIONS

WE have a grand lot of imported and home bred Percheron and Belgian stallions for sale. They have size, big bone, quality and action. Ages from yearlings past to six years. Prices reasonable; terms to suit purchaser. Every horse fully guaranteed. Address
CHAMPLIN BROS., - - - - Clinton, Iowa

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address
M. Bodenheimer & Co. **Green Bay, Wis.**

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

SHORT-HORN CATTLE.

THE AMERICAN SHORT-HORN BREEDERS' ASSOCIATION

THROUGH its extension department placed in 1915 1,500 registered Short-horns in sections that would not, otherwise, have been reached. The demand for both beef and milking Short-horns is general from coast to coast, due to the increasing recognition of the practical, adaptable merit of the Short-horn. The service of the association's extension department is free to you. Ask for THE SHORT-HORN IN AMERICA, just out. It is free. Address American Short-horn Breeders' Ass'n, 13 Dexter Park Ave., Chicago, Ill.

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SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
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WE are offering some extra good daughters of Clay Buttercup 19588, a son of Imp. Duke Buttercup, eight of whose daughters gave from 9,000 to 11,000 pounds of milk in a year. Some of these are due to freshen soon; bred to Oxford Duke I 2d; five choice yearling bulls sired by Oxford Duke I. Prices reasonable. Address
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YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
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Bates Short-horns Fashionable Durocs

STOCK of both breeds for sale. Gigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

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SIRED by KING CREST 39857, a Duchess of Gloster bred bull, and out of Arabella and Imp. Bertha bred cows. Prices right. Address
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ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
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SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

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CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)

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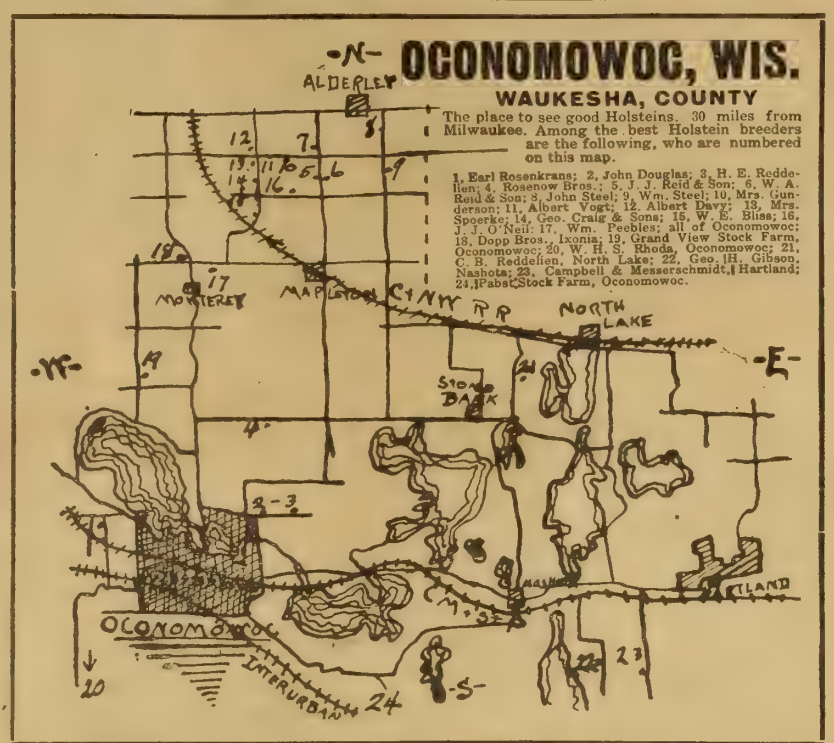

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Half white and half black. Dam, Mandane Homestead Pride, 26.195 butter, 641.1 milk in seven days.
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THE blood that has made the black and whites famous. Herd sire, Hillvale Champion. 6 generations have a 4% test, one over 5%. This bull carries 50% of the blood of Sir Ormsby Hengerveld De Kol, the grandsire to Dutch Skylark Ormsby. Two bulls five months old for sale from A. R. O. dams. Satisfaction guaranteed. E. E. Rosenkrans, Oconomowoc, Wis.

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A HALF-BROTHER to sire of Ormsby Jane Segis Aaggie (world's record cow). Also closely related to Duchess Skylark Ormsby (world's yearly record cow) and from a 30 lb. cow with over 100 lbs. milk per day. An individual hard to fault. Sound and gentle. Sixty-day retest can be had by writing for conditions before sale.
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SIRED by a grandson of Sir Ormsby Hengerveld De Kol, and out of daughters of Paul Ormsby, the grandsire of Ormsby Jane Segis Aaggie (latest world's champion).
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HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. **BONNIE MEAD STOCK FARMS, Randolph, Wis.**

Purebred Registered
HOLSTEIN CATTLE

As evidencing the enthusiasm with which members of the Holstein-Friesian Association apply themselves to the exploitation of the "Black-and White" breed, it is only necessary to state that over 4,000 certified reports of official tests were received at the Advanced Registry Office during the month of April, 1915. The Holstein-Friesian Association distributes each year $15,000 in prizes for milk and butter production. Begin with Holstein if you do nothing more than to buy a purebred bull to use on your grades. Investigate the big "Black-and-Whites."

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The Kind That Will Improve Your Herd.

29.74 lb. HOLSTEIN BULL

SIR Ida Lottie Cornucopia. His dam made 29.74 lbs. butter in 7 days, 816.91 lbs. butter in a year. She has 3 sisters with records of 27.54, 27.99, 28.63, 33.65. Her dam made 27.11. Here is a bull fit to head any herd. Send for picture and pedigree. Address
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21.60-LB. HOLSTEIN BULL

BORN Dec. 30, 1914; ready for heavy service; well grown, good, straight type; sired by **Prince of Hillsboro** that has 5 A. R. O. daughters and is by a 27-lb. bull out of a dam testing 4.39% fat, dam of bull **Nig Alcartra Pearl Daisy**, A. R. O. record 21.60; her sire has 25 A. R. O. daughters; her dam is a daughter of **Pearl of the Dairy Doe De Kol**; she has 6 A.R.O. daughters and her dam has 6 A. R. O. daughters, an unusual combination. Send for pedigree.
Griem & Hipke - New Holstein, Wis.

HOLSTEIN BULLS

READY for service. Sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 28 pounds butter in 7 days. Dam, Spring Valley Lindora 241565, that gave 428.3 lbs. milk, 17 lbs. butter in 7 days; 13,129.8 lbs. milk, 558.3 lbs. butter in one year at 2 years, 20 days of age.
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Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
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MY senior herd sire, Sir Canary Alcartra 78433, went to M. L. De Voin, Eureka, Wis. He is a grand bull and will be herad from in the future. I have a fine yearling bull sired by Comhurst Pontiac Prince 113096, a son of Pontiac Aaggie Korndyke, and out of a granddaughter of King of the Pontiacs, that made 15.830 butter, 7 days at two years old. Also a lot of yearling heifers and calves for sale. Address
A. L. ROWE **R. 4, WAUPACA, WIS.**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Vrn Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
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Ready For Service Holstein Bull

OF Johanna Korndyke Ormsby breeding, out of an A.R.O. dam. Straight and level; well grown and marked. Priced right. Address
W. D. McGILL - Menomonee Falls, Wis.

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BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

10 CHOICE Holstein heifers and 2 bulls 15-16ths pure, $20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wisconsin.

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Pure-bred and high grade

Cows, Heifers and Service Bulls

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EDGEWATER STOCK FARM, Fort Atkinson, Wis.

SONS OF THE 32-LB. HOLSTEIN BULL COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 10 months old. Out of heavy producing dams.
Baltz Hoesly - New Glarus, Wisconsin

26.30-POUND HOLSTEIN BULL

THREE YEARS OLD. Dam's A. R. O. record, 26.30 pounds of butter in seven days. Another bull born May 27, 1915; dam's A. R. O. record, 24.48. These bulls are straight individuals and nicely marked. Price $150 each. Write for pedigrees and description. Address
Truttschel Bros., Sheboygan Falls, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address
Watson & Will **Menomonee Falls, Wis.**

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, Kilbourn, Wisconsin.

Young Holstein Bulls

SIRED by our Junior herd sire **Butter Boy Mink Pontiac** 133161, from tested dams. Also
CHESTER WHITE SWINE
both sexes. For pedigree and prices write Cook Brothers, Burlington, Wisconsin. Cedar Lawn Stock Farm.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
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HIGH-GRADE yearling Holstein Bull. 99% pure. Dam a high producer. Also good hound pups, $3 and $4. Write Lawrence Milfried, Cazenovia, Wisconsin.

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RED POLLED HEIFERS AND COWS

OF choice breeding and heavy producers. Bulls of serviceable age and younger. These are very closely related to Corporal, the greatest breeding bull ever in America. Send for pedigrees and prices. Address
UNDERWOOD STOCK FARM
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RED POLL Headquarters

YEARLING BULLS of herd-heading quality. **Breeding** and **individuality** the best. Write us. **J. W. SALTER & SONS, Unity, Wis.**

LOOK! RED POLL BULLS

1 YEARLING—1 two year old. Well grown; well bred. Priced right. Write at once. Guarantee satisfaction. Address
Natt Kimball **Black River Falls, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

BERKSHIRE SWINE.

BERKSHIRES Am breeding bunch of fine sows for fall farrow to big-type boar. Fall and spring boars for sale. Also herd boar. W. A. Freehoff, Waukesha, Wis.

No such power in any other car unless you pay nearly $200 more

As a rule automobile prices vary according to power.

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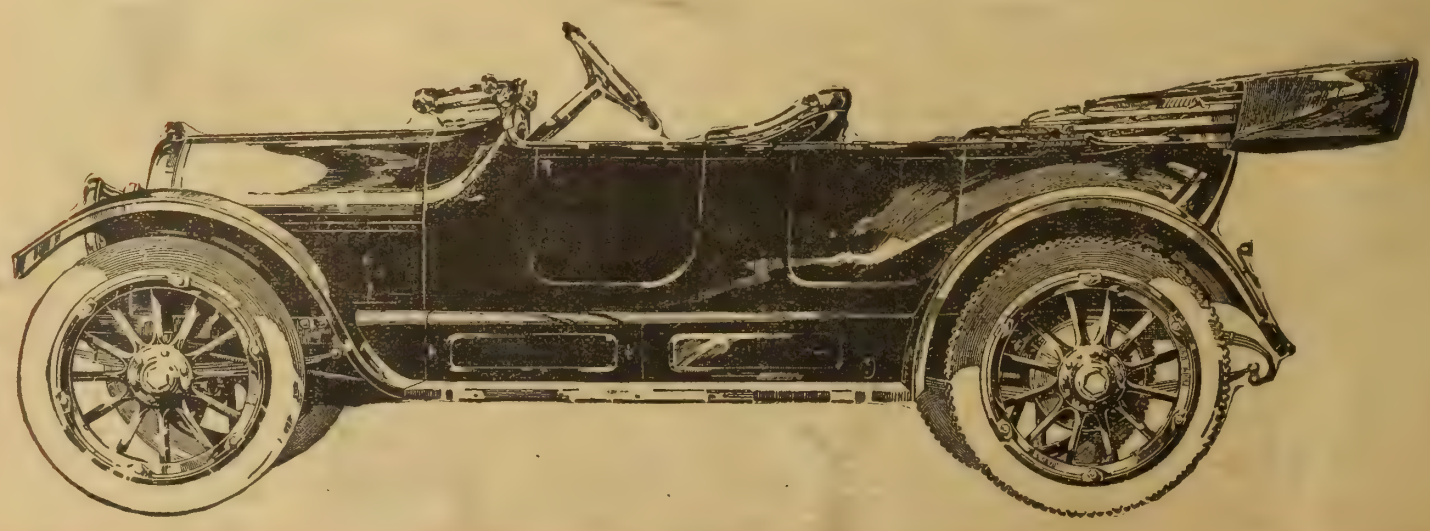

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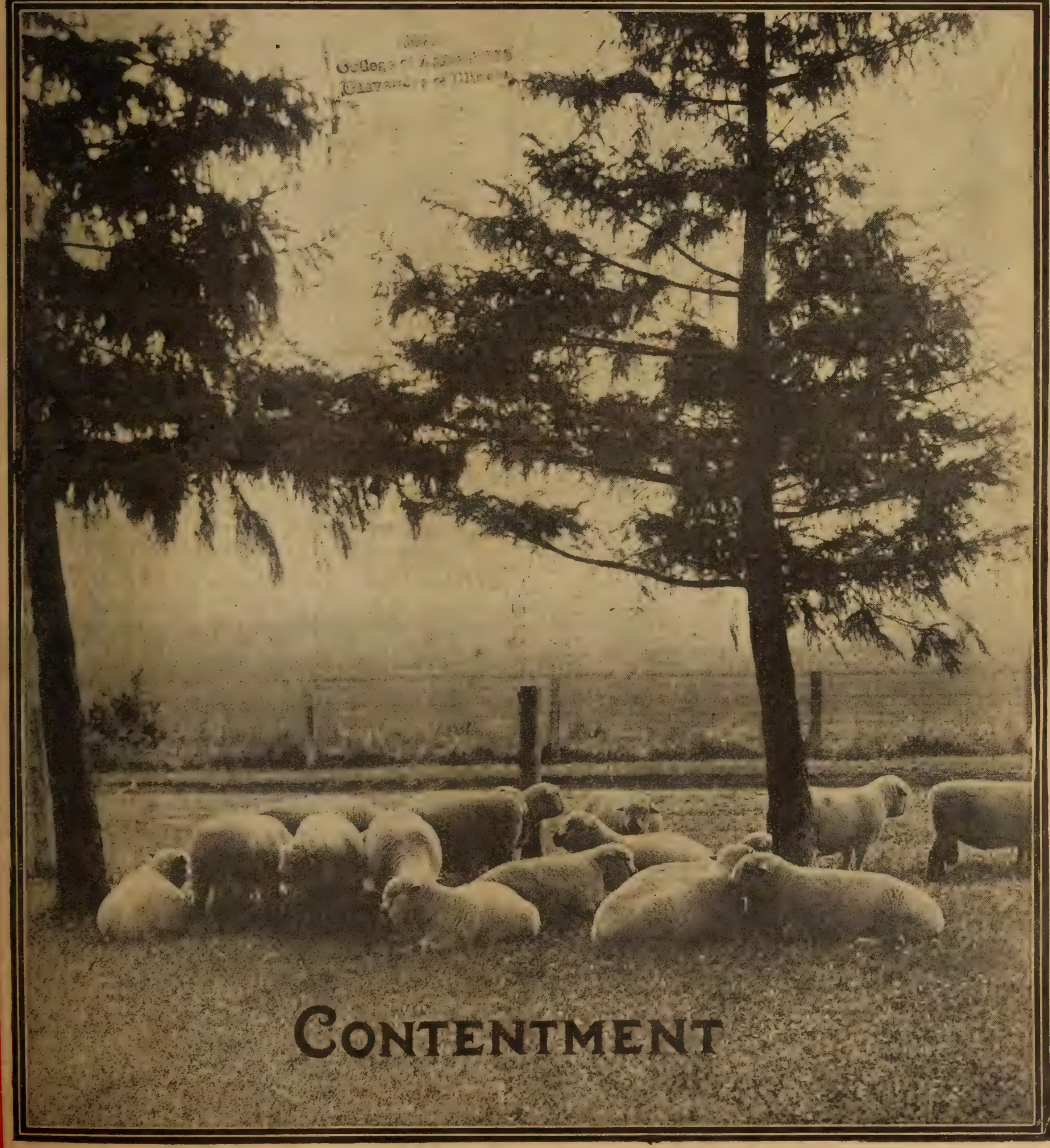

CONTENTMENT

CURRENT EVENTS

PRESIDENT WILSON has notified the German government he accepts its assurances that its submarine warfare will be changed so as no longer to destroy merchant vessels unless there is attempted flight or resistance and without giving the crew and passengers time to get to safety, but that there is nothing in the diplomatic correspondence between the two nations making Germany's changed policy dependent upon the outcome of the proposed negotiations between the United States and England on the question of the blockade of Germany. The president has sent a final note to Germany in which he says: "In order to avoid any possible misunderstanding the government of the United States notifies the imperial government that it cannot for a moment entertain, much less discuss, a suggestion that respect by German naval authorities for the rights of citizens of the United States upon the high seas should in any way or in the slightest degree be made contingent upon the conduct of any other government affecting the rights of neutrals and noncombatants. Responsibility in such matters is single, not joint; absolute, not relative." Secretary of State Lansing summed up the situation as it exists today when he said: "So long as Germany lives up to this altered policy we can have no reason to quarrel with her on that score, though the losses resulting from the violation of American rights by German submarine commanders operating under the former policy will have to be settled."

THE short-lived and ill-fated outbreak of the Irish rebels resulted most disastrously, several hundred lives being sacrificed during the revolt and a dozen of the leaders having been executed since then as the result of court-martials. Included among those who paid the penalty with their lives was the schoolmaster who was made president of the short-lived Irish republic. Countess Markovicz, one of the prominent figures in the revolt, was sentenced to death, but this sentence was later commuted to penal servitude for life. Sir Roger Casement, who is held by many to be the real head of the revolt, is imprisoned in the Tower of London, his fate to be decided later. Sir Roger held important consular positions under Great Britain for eighteen years, but was found to have visited Germany recently and to have been a party to bringing German guns and munitions to Ireland. It is claimed that this was to aid the rebels in the revolt, although Sir Roger's friends maintain otherwise. The fact that he has held so many high positions of honor under the government makes his participation in the recent outbreak all the more notable. As a result of the revolt the member of the British cabinet in charge of Irish affairs has been forced to resign.

HOPE that at the end of the present war the nations of the world would undertake a joint effort to keep the peace, backed by a common police force, was expressed by President Wilson last week in reply to a committee of the American Union Against Militarism which called to protest against his preparedness program. The president emphatically asserted that he is "just as much opposed to militarism as any man living; I think it is a deadly thing to get into the spirit of a nation and I do not think there is the slightest danger of its getting into the spirit of this nation," but added, "only I have to determine a very practical problem." The president amplified his views by saying: "It is not inconsistent with American tradition that everybody should know how to shoot and take care of himself; on the contrary, that is distinctly implied in our bill of rights, where the right to carry arms is reserved to all of us. There is no use carrying arms if you don't know what to do with them. I should say it was not inconsistent with the traditions of the country that the people should know how to take care of themselves, but it is inconsistent with the traditions of the country that their knowledge of arms should be used by a governmental organization which would make and organize a great army subject to orders to do what a particular group of men might at the time think was best to have it do. That is the militarism of Europe where a few persons can determine what an armed nation is to do. That is what I understand militarism to be." President Wilson is known to be for preparedness as a matter of defense rather than of offense, taking middle ground between the positions held by Theodore Roosevelt and Wm. J. Bryan.

THPEE American soldiers and a ten-year-old boy, the son of a civilian, were killed in another outbreak of Mexican bandits last week. Following the successful tactics which they pursued when they raided Columbus, the bandits crossed the boundary line stealthily, taking three small settlements by surprise, and before the few soldiers scattered along the border could get their arms the bandits had wreaked their vengeance, making good their escape. This later outbreak came just when Mexican affairs seemed about to be amicably settled, inasmuch as General Obregon, minister of war under Carranza, and Gen. Hugh L. Scott, chief of staff of the United States army, had the day prior reached an agreement as to the future conduct of international affairs. This agreement was to the effect that the United States soldiers were to be withdrawn slowly, as it appeared that the Carranza forces were able to restore and to maintain order, the American troops to go no farther south than the point where they are now. This latest outbreak will probably retard the return movement of the American troops, the president and Secretary of War Baker having no intention to remove them entirely until the danger of these outbreaks is completely removed. Following this latest outbreak the president called out the national guard to Texas, New Mexico and Arizona to assist in border patrol duty.

THE senate passed without a record vote the Bankhead good roads bill to spend $85,000,000 in construction of post roads, contingent on an equal expenditure by the states. Appropriation for $10,000,000 for roads in national forests is included. The bill appropriates $5,000,000 for the year ending June 30, 1917, with increasing appropriations until 1921, when the entire amount is to have been spent. The money is to be apportioned by the secretary of agriculture, according to the terms of the bill, on a basis of one-third in the ratio of the area to which the states bear to the total area of the country, one-third in the ratio of the population and one-third in the ratio which the mileage of rural delivery routes bears to the total mileage in the country.

EUROPE'S foodstuff purchases in the United States, as shown in figures published by the bureau of foreign and domestic commerce, have fallen off sharply within the last few months compared with the enormous shipments that crossed the Atlantic in the first year of the war. Foodstuff exports in the nine months ending with March show a decline in value of $63,000,000 from the corresponding period of the year before. Shipments of meat and meat products increased, totaling within the nine months $180,000,000 against $132,000,000 the year before, but declining breadstuff exports reduced the aggregate value of food shipments from $956,000,000 to $893,000,000.

LAW QUESTIONS.

Mortgagor's Fixtures.

A Wisconsin Subscriber.—There is a mortgage upon my farm. After the mortgage was given I built a silo on the farm. Can I lawfully remove it from the place?

Answer.—If the silo is a mere temporary structure and not fixed to the premises you can remove it, but if it is fixed to the premises and of a permanent character you have no right to remove it.

Mortgagor's Right to Timber.

A Subscriber, Greenleaf, Wis.—A holds a mortgage on B's eighty acres of land, given in 1912, and due in April, 1917. A holds a second mortgage on the same land, given in 1915, and due in May, 1917. One mortgage is for $4,000 and the other is for $900. The eighty acres is worth about $7,500. There is about fifteen acres of timber on it. (1) Can A prevent B from cutting down the timber on the land? (2) If B fails to pay interest promptly on the two mortgages, can A foreclose the mortgages without giving B notice?

Answer.—(1) B has a right to cut timber on the mortgaged premises for necessary fuel or for repairs needed on the place, but for no other purposes. If he attempts to cut or remove timber for other purposes A can prevent him from doing so by an injunction from the court. (2) This depends entirely upon the terms and conditions expressed in the mortgages. You will have to examine the mortgages to determine this matter.

Cemetery—Condemnation of Land.

A Subscriber, Long Prairie, Minn.—(1) Can a landowner in Minnesota be compelled by law to sell a part of his land for cemetery purposes to a church, to be used strictly as a denominational cemetery? (2) Can a city or county condemn and take land from an owner for cemetery purposes?

Answer.—(1) He cannot and a church cannot condemn land under the law of eminent domain for cemetery purposes to be used as a strictly denominational or sectarian burial place. (2) A city or county can condemn land for such a purpose.

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Portland Cement

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The Wisconsin Farmer

THURSDAY, MAY 18, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

A LAST WORD ON INSURANCE

MY RECENT article setting forth the value of thrift and life insurance seems to have awakened much interest in both. Subscribers are writing to me in regard to the matter in large number, and fully a half dozen of the leading insurance companies have asked permission to reproduce the article in their literature. I had no idea, when writing the editorial, that it was destined for such wide circulation, or that it would occasion so much interest. I merely expressed my honest convictions on a subject which I consider most important in these days of high, and almost extravagant, living.

I am going to take the liberty to set forth three letters which the article occasioned, representing three different and distinct points of view: That of the insurance agent who sells the policy, that of the farmer who takes out the policy, and that of the company which writes the policy. The first letter is from Mr. L. H. Burling, assistant cashier of the Green Lake State Bank, of Green Lake, Wisconsin:

Dear Mr. Pierce:—I am writing to thank you for your splendid article entitled "Thrift and Insurance." As a banker and insurance agent, I realize the value of an article of this kind in your paper. Little talks of this kind by disinterested parties will do more to put life insuance on a higher plane than all the arguments which the men in the insurance business can advance. I hope to see more articles along this line.

The second is from a grain-belt farmer whose attention was directed to this most important matter by my article. He writes:

I never stopped to think what might become of the wife and little ones after I was gone. If I ever did think of it, it seemed to me that leaving the farm to them was as much as could be expected of me. But what of the ready cash while the estate was being settled? What of the money to pay off the mortgage I have carried on the farm most of our married life? I can see now where the good wife would be up against it if there were no insurance money to tide her over until she realized on the farm. Can you give me the name of a good, reliable company that I can write to about this?

The last letter is from a high official of the insurance company which recently paid my young friend $500 for his policy, he taking this money to wipe out the last cent of indebtedness on his little home:

If a greater number of editors would take the position you have taken, it is hard to estimate the value that would be derived by the young men of the country. When approached by the company, or its representatives, they always have the feeling that we have a pecuniary interest in any insurance effected by them. It is hard to make the young men realize the importance of buying insurance while they are young. Experience is a great teacher and we rarely mature a policy without hearing the insured state that he "wished he had started sooner, or that he had taken a larger amount."

I am going to leave this matter with you, with these letters. They need no comment from me. Here we have the young man, at the age of eighteen, just in to the large city from the country, taking out an insurance policy for $1,000 and keeping up the payments, year after year, no matter what he had to deny himself to save the amount, and now receiving $500, which he uses to pay off the last indebtedness on his little home. Here we have the agent, the policy holder, the company, all approving the idea. And over against these we have those who thoughtlessly, heedlessly let the matter of insurance slip by day by day, thinking there is no hurry, or that the agent is only considering his own commission and "it's somewhat of a 'bunk' game anyway," suddenly shuffling off this mortal coil, leaving loved ones without ready money, to shift for themselves as best they can. Which side will you line up with, my friend who reads this article? Is this not a "preparedness" in which we may all readily, heartily join?

DIVERSIFIED FARMING.

I HEARD a story the other evening which seems to me to be in line with a little talk on diversified farming I have been intending to make here for quite a while. Let me tell the story first. It was told at the last national conference on marketing and farm credits by Governor Ferguson, of Texas, to illustrate his contention that farmers in his section have heretofore been contented, as he put it, with "continually buying something from somebody else and selling nothing to anybody." He continued:

Now, to illustrate what I am talking about, I want to call your attention to the fact that when you awake in the morning it is to the alarm of a Connecticut clock. You get up and button your Chicago suspenders on to your Detroit overalls. You go out and wash your face in the morning in a Toledo washpan, with Cincinnati soap. You sit down to the table and you eat breakfast from a table made in Grand Rapids, Mich. And for your breakfast you eat Chicago meat and Tennessee flour cooked on a St. Louis stove. You go out and put a New York bridle on a Kentucky mule fed on Iowa corn, And all day you plow a farm covered with a Massachusetts mortgage with a plow made in Chattanooga, Tenn., and when your day's work is over and you go home at night you read a Bible printed in Boston, you say a prayer written in Jerusalem and you crawl under a blanket manufactured in the state of New Jersey, to be kept awake all night by a darned dog, the only home product on the farm.

This is just about the best thing of its kind I ever heard. That it is grossly exaggerated we will all admit, yet there is a point to it which is not completely lost in the exaggeration. The point is just this: The successful farmer sees to it that a great part of that which is necessary for his daily sustenance is produced on his own fields.

I am not saying that the grain-belt farmer who succeeds is going to make his own alarm clock, print his own Bible and mold his own stove. That is out of the question. But I am arguing that the farmer who confines himself to one thing in farming (even while this is the age of the specialist) is not so likely to get ahead, in the long run, as the man who has a diversity of interests; rather, a diversity of crops. Let me illustrate:

When the middle West put its main reliance upon wheat raising the interest rate on farm mortgages was high, ranging from 7 per cent to 12. When it changed to diversified farming values began to increase and interest rates to decrease. The present high interest rates in the South can be attributed to the passion for raising cotton in a like manner. When the banker or the insurance agent who places a loan finds that the farm which secures the loan produces a variety of crops he knows he is protected against much, if any, possibility of crop failure and deferred interest payments. We had good proof of this last year. Our corn crop was short throughout much of the grain belt and of poor quality, but we produced bumper hay, oats and wheat crops which made 1915 the best crop year, from a dollar and cents standpoint, we have ever enjoyed. We practiced diversified farming and found ourselves many million dollars better off at the end of the year because of this fact.

I was talking this matter over with a banker friend the other night and he made a remark which impressed me as being of much merit. It was anent the farm credit bills now pending in congress. My banker friend said: "Any rural credit legislation should make borrowers participating under its provisions qualify to a simple standard of diversification of crop raising and live stock operations." He told me that another banker had put the matter even more strikingly, in this manner: "Better and more efficient farming and a prohibition of soil robbing should be the slogan of all concerned in the handling of rural credits."

I have already told you of the progressive southern woman who specifies in her farm leases exactly how much land shall be planted to various crops, so as to insure her tenants having ready money all the year around, rather than a lump sum when the cotton is picked and be moneyless the remainder of the year. The incidents I have narrated all tend, in my opinion, to prove my point, which is just this: We must fit our crops to our fields and not plant haphazard, and we must grow those things which bring us a ready and steady income, rather than to trust all in one big venture. The agricultural prosperity of the next century depends upon this, in my opinion.

SYMPATHY FOR YOUNG WOMAN.

NO ARTICLE which I ever wrote has occasioned more interest, to judge by the large number of letters received from subscribers, than the one which appeared a couple of weeks ago under the heading, "Help Wanted." Readers will recall that it told the story of a young Wisconsin woman whose father, now seventy-eight years old, and mother have lived for the past fifty-seven years upon the farm which she fears they will have to give up because she cannot get it properly worked. I printed a portion of this young woman's heart-touching letter and my answer to her, together with the suggestion that if any of my readers could give better advice they let me know, so that we might co-operate to save the farm to its aged owner.

I long ago learned to expect many letters in response to any article I might write asking for help or sympathy or advice, but even after a lifetime in journalism I am astounded at the perfect avalanche of letters caused by this "Help Wanted" editorial of mine. It is absolutely impossible for me to answer all the letters individually. Likewise, it is not only impossible, but it would not be right for me to send the name and address of this young Wisconsin woman, as most of my correspondents ask me to do. I do not have her permission to do so, and I doubt very much if she would ever give me this permission, as she does not want her plight advertised far and wide. I printed the letter without identification so that not even her friends and neighbors would recognize the story as hers, for I do not want to humiliate or embarrass her in the least. All I want to do—and all any of us should want to do—is to aid her in her extremity so as to save the farm to her gray-haired father now in the twilight of his long and useful life.

I earnestly hope that the hundreds of sympathizing farmers who have written me in regard to this matter will understand, from this, why I cannot comply with their wishes and send them the name and address or any more detailed information.

LOAFING IN THE STABLE.

IT IS now something like a dozen years since Coates Kinney passed away. His name may not be familiar to many of my readers; yet he was the author of a poem which always affected me deeply. It was entitled, "Rain on the Roof." I can easily recall some of the lines:

Earth hath naught of tone or cadence
That can work with such a spell,
In the soul's mysterious fountain whence the tears of rapture well,
As that melody of Nature,
That subdued, subduing strain
That is played upon the shingles by the patter of the rain.

Who that has ever lain in attic or mow, as I have, listening to the musical patter of the rain, can forget the reveries which this hypnotizing sound impelled? One's mind wanders far afield at the sound of running water, whether it be the little brook which meanders over its pebbly bottom across the meadow, or the gigantic fall of Niagara. We shut our eyes and the whole world passes in review, so wonderful is the compelling force of the sound. That is why I am so immensely pleased with a little poem I found in one of the magazines this week. It is entitled "Loafin' in the Stable" and deserves, in my opinion, to rank with the Coates Kinney verses:

When the day's too wet for plowin',
And the clouds are in the sky,
You'll be apt to find me loafin'
In the stable where it's dry;
Kinda tink'rin' with the harness,
Or abright'nin' up the plows,
Or aplannin' out the stanchions
So they're handier for the cows.

Or may be I'm just aloafin'
In a lazy kind of way
In the stable loft, adreamin'
In the sweet alfalfa hay,
And the tinkle, drip and dribble
Of the raindrops runnin' down
Mossy shingles on the gable
Is a mighty soothin' soun'.

Prop myself up by the winder
So's to watch the broad expanse
Of the cornfields and the medders
Where the raindrops splash and dance;
Watch the wheat fields dip and billow
As the breezes come and go,
Jest lay back there in the shelter
Of the eaves and watch her grow.

We sometimes think of a rainy day as so much time lost in our busy life; but is there not an inspiration even from "loafin' in the stable," a chance to philosophize, to lay still bigger plans for the future? Some of the most momentous plans of my life have originated as I lay sleepless in my bed at night. Will we not all agree that others have sprung into our minds as we listened to the subdued, subduing strain "that is played upon the shingles by the patter of the rain" or the "tinkle, drip and dribble of the raindrops runnin' down mossy shingles on the gable," while we were "loafin' in the stable"?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Wanted—Wisconsin Man With a Vision.

THERE has been some talk of turning the Milwaukee County School of Agriculture into a home for the feeble-minded. Efficiency experts have given it as their opinion that this should be done. In their humble estimation it would save money now needed to transport feeble-minded patients to an institution many miles distant from Milwaukee. On account of some legal complication, the details of which are dull and uninteresting, it is now announced that it will not be possible to break up the Milwaukee county school, and for the present the school will run along as usual until the lawyers can "find a way."

Milwaukee county needs some man with a vision big enough to realize the possibilities of the Milwaukee County School of Agriculture. The present attitude of the officials of Milwaukee is something like this:

We present the Milwaukee County School of Agriculture with a $500,000 property, with grounds and equipment. It is our opinion that the whole thing will be a fizzle and as soon as this can be proved we will use the building and grounds for other purposes.

Fine chance Superintendent Sievers and his helpers have with such support. Isn't there somewhere in Milwaukee a man with a broad enough mind to comprehend what might be made out of the Milwaukee County School of Agriculture? Milwaukee has over 50,000 children in her schools. Here's an opportunity to take a few hundred of them every year, out of the cramped and crowded conditions of the city and introduce them into country life. Boys and girls who are running the streets, accomplishing little more than mental anguish for fond parents, might get a real vision of life, if some plan were arranged whereby they could study farming, dairying, sewing, cooking or some other useful occupation. Have we become so fond of books that we forget that God loves the farmer and has proved it by making an opening for so many of them?

Boards and councils and politicians waste their time and the people's money bickering about matters which are of such small importance. Why palaver so much about details? Can't the superintendent of the Milwaukee schools, or the mayor, or the president of the county board, or the women's club, or some intelligent individual work out a plan to utilize to the advantage of the youth of Milwaukee county the magnificent farm plant at Wauwatosa? Are the broad, fertile acres, the hothouses, dairy barns, etc., erected for the Milwaukee County School of Agriculture, to be overrun with the feeble-minded? This school has equipment sufficient to care for more than 1,000 pupils, and these pupils could be taught useful, healthful and manly occupations, which would take them, in many cases, out of an undesirable environment and establish them in profitable business.

The Wisconsin Farmer feels a pang of regret for the low mental status of the officials of Milwaukee if they cannot see the possibilities of this agricultural and trade school located in their dooryard. Down at Seventh and Cedar streets in Milwaukee they are calling for expert dairymen through the state employment department. They are sending across the seas for dairymen. Seven miles away there is a school which will turn out good dairymen, and it is proposed to turn it over to the feeble-minded. In Milwaukee pulpits they are pleading with fathers and mothers to take their children off the streets and see that they learn a useful occupation. And a few miles away there is an institution which will accomplish this desired end if it is given proper support.

Would it not be a good plan to have a compulsory education which affects the hands as well as the head? It should be the easiest matter in the world to find 1,000 boys and girls every year who will want to avail themselves of the agricultural and domestic science teaching at the county school. Under proper direction boys should be making a great garden out of the Wauwatosa farm. The Wisconsin Farmer believes there are 5,000 parents in Milwaukee today who would be glad to have their children in the Wauwatosa school if they understood the situation. The city could well afford to find some way to take the children to school and return them home. Work on the farm or in the kitchen could be made a part of the city school course.

In some of our cities the Rotary Club is accomplishing big things. Such an organization ought to investigate the possibilities of the Milwaukee county school. The investment has been made. It would be about as sensible to turn the First National Bank building into a livery stable as to fail to use the County School of Agriculture, with its beautiful grounds and equipment, for any other purpose than that for which they were intended. We are in favor of taking good care of the feeble-minded. It is a state duty. But if a few more of our youth were brought up in a better atmosphere and taught more useful things there would be less expense for feeble-minded.

Someone in Milwaukee city or county ought to be big enough to get behind this school, jerk it from the political caldron and start it out on a career of usefulness. The needs of the rising generation demand it.

Rock County, Wisconsin, Setting Pace For Co-operation.

THE present year will be one of extreme activity along agricultural contest lines in Rock county, and the farm boy in that county who fails to take advantage of these contests will not only overlook the opportunity to learn some of the new things in agriculture but also the opportunity to win some spending money of his own. Business men, bankers and breeders have made these contests possible for the farm boys of the county by offering the necessary prizes, and it is up to the younger farmers to take advantage of them.

Six contests are being conducted this year that are of direct interest to the boys of the county. Three of these six promote interest in live stock farming; two in corn growing and one in keeping the public roads in good condition. The Janesville fair has offered prizes to the boy who can produce the best baby beef at the smallest expense; the breeders' association has put up the money in a contest for the rearing of a calf from birth, and the breeders in co-operation with the bankers are sponsoring a pig-raising contest. Any farm boy in the county can get into all three contests, and we venture to predict that by the end of the contest he will be far wiser than he is today. The same holds true of the acre and the ten-ear corn-growing contests which were inaugurated in this county two years ago and which have proven so successful. These contests offer the opportunity to learn by actual experience how to raise live stock at the least expense; how to make an acre yield its maximum of corn and in addition to getting such valuable experience the winners receive prize money which can be used in many different ways by the boys. The experience alone is worth the effort, to say nothing of the awards, and as an additional inducement there are the state contests along the same lines.

Three other activities are being pushed in the county this spring as the result of the splendid co-operation in that county between the business men and bankers and the farmers and breeders. One is the county school ground improvement contest. Shrubbery, trees, etc., have been furnished by the commercial organizations to the rural schools entered in the contest and the schools which keep their grounds in the best condition will participate in the prize money. The Wisconsin Farmer wishes that every rural school in the state were entered in such a contest, as it might tend to beautify the hundreds of neglected school grounds. Another activity is the farm mannagement contest in which seventy-five farmers are keeping books and the other is an automobile alfalfa campaign that is to be conducted throughout the county.

These nine activities have been made possible through the co-operation between the business men and the farmers that exists in that county. The business men apparently go on the theory that nothing is too good for the farmer. They realize that what benefits the farming communities benefit the cities. Rock county is setting a pace in co-operation that will be hard for other Wisconsin counties to follow.

Get Out the Road Drag.

EVERY farmer should take enough interest in the roads that run by his farm to see that they are kept in good, passable condition. The use of the drag at this season in Wisconsin will do wonders in putting dirt roads in shape for summer travel and at the first spare moment now the farmer should be at work with the drag on the part that runs past his farm, and in turn collect his mileage from the county board.

The heavy spring rains have left many of the roads in bad condition, as they were badly cut up during the wet, muddy weather. On roads that have been properly drained and graded the drag will whip these into condition very rapidly, and on those not so well drained and graded it will do much good. We realize this is a busy time for Wisconsin farmers, but if every farm owner would look after the roads that pass his farm our dirt roads would be surprisingly good by the mere use of the drag.

Frequently the writer meets farmers on the drag that have enough personal pride in the work to donate their services. One instance occurred recently near Stoughton in Dane county when we found a farmer dragging the road by his place with a tractor and drag. This farmer was making splendid use of a tractor idle just at that particular time, and when we inquired if he was paid by the county for what he did he replied that he did it free of cost to his county in order to keep the road in good condition, as he did not like a rough, bumpy road by his farm. That is the spirit that means better roads.

Wisconsin Law Which Is Hardship on Pea Packers.

SOMETIMES in the enactment of our laws legislatures impose restrictions that are unjust and a burden upon certain classes of individuals or business. This is particularly true in Wisconsin in regard to the ten-hour working day for women, as prescribed by statute, and as it affects the pea-canning industry, the magnitude of which is called to the attention of our readers on another page of this issue of The Wisconsin Farmer. To this industry the enforcement of this law will work a hardship, and by a decision of the supreme court recently this statute will be enforced to the letter during the 1916 canning season.

For three years the industrial commission has permitted pea-canning factories to employ women for longer than ten hours as the peculiarity of the business demanded it. Peas must be packed within a few hours after they are cut. Of this the pea packers convinced the industrial commission which prescribed the conditions under which women workers could work more than ten hours. Now comes the supreme court, it holds the law valid and legal, and the result will be that the industrial commission must cease its leniency toward the pea packers and compel them to obey the law or suffer arrest and fine for each violation.

The farmers are interested in this law and this decision because they must depend upon the packers to take their peas when they are ready to be cut and ready for delivery to the viners. If cutting is delayed the quality of the peas is lowered. It is, therefore, necessary that the cannery have sufficient help at all times to take care of the farmers' product when it is ready for delivery to the cannery. Unless the cannery can do this it must refuse to accept more peas than it can handle each day, and a farmer who has cut his peas may find himself in the predicament of a load of peas on his hands and no place to dispose of them before it is too late to pack them. The canning season at its best is short, and as most of the plants are in smaller cities labor is scarce and hard to obtain. For that reason it has been found necessary under present conditions to work women more than ten hours daily. Double shifts are out of the question when it is almost impossible to secure enough labor for one shift.

This is the condition that now confronts the pea packers and the farmers who grow peas. Either the packers must import labor and cut down their output or the growers must arrange with nature to have their peas not all ripen at the same time. The Wisconsin Farmer does not disapprove the law limiting the hours of woman labor. It merely wishes to call attention to how the enforcement of some laws prove burdensome and appear unjust, especially when by arrangement satisfactory to both the women workers and the state industrial commission women during the three years of litigation over the law have been permitted to work longer than ten hours in the pea-canning plants. These matters should all be taken into consideration by our legislators so as not to enact laws that tend to curb any legitimate industry.

Selecting a Good Bull.

IT IS essential that the bull selected to head a grade herd of cows should be pure bred, but it is equally necessary that he should be a good individual. While this is a self-evident fact, it is nevertheless a matter that is frequently overlooked. A short time ago we attended a bull sale to which many inferior individuals had been consigned, but all sold at high prices. While it is true that the best bulls in the offering brought better than the medium and rather inferior individuals, the best were in reality the cheapest.

The first cost of a bull is the stumbling block in the way of a great many farmers when they start out to hunt for a sire to improve the next calf crop. Such should not be the case. The man who has a herd of twenty to thirty cows ought not to consider $50 to $100 more or less as a factor of great importance. He should first find the bull that is reasonably certain to improve his herd, and then pay the price necessary to get him, rather than to take one of doubtful value and thereby save a few dollars. A bull can be used for at least two or three years, so that first cost really becomes a matter of comparatively small importance.

The question arises as to what constitutes a good bull. What is a man to look for, and what should he avoid? In the first place select one of good scale with a decided masculine character, heavy

bone, and a bold, wide walk. He should show good fleshing qualities, have a deep chest, a full heart girth, and a large, roomy barrel, indicating great capacity for food. He should have a strongly masculine head, large, bright eyes, big nostrils, and firm muscles. Large, bright eyes indicate strong nerve power and big nostrils are the result of deep breathing and well-developed lungs. With all these things, the bull should have an easy carriage and a general thrifty appearance.

The bull should also be a good representative of the breed to which he belongs. In other words, he should show good breed type, as this is an indication of prepotency—ability to transmit the characteristics for which his breed is noted. Then comes the matter referred to under the term "quality," as shown by the fineness of hair, texture of bone, and pliableness of the skin. These things are indicative of feeding quality and general health and vigor. One is more apt to find high quality in a small animal than in one of large scale, hence care should be taken not to err in the matter of size, which we mentioned as one of the first points to look for. The bull should be broad and deep of body, rather low set, with straight top and bottom lines, and be rectangular in form.

Avoid narrow-chested, rough-shouldered, long-headed bulls. Such animals are lacking in constitution and prepotency. Similarly avoid flat ribs, a narrow back, and poorly developed loins and hips.

Much is said about the bull being the most important part of the herd, and the saying that "the bull is half the herd" is in a sense very true. However, it is true only in so far as 50 per cent of the bull's blood is reproduced in each calf. So far as the individual calf is concerned, its dam influences it just as much as its sire, and therefore it is also important to look well to the quality of the females in the herd. In other words, in building up a herd of breeding cows, heifers from none but the best cows should be retained for breeding purposes. Thus, while great care should be given to the selection of the bull, the same care and attention should also be given to the selection of females for the herd. Only through such a combination can continued improvement be effected.

Fruit Growing in Upper Wisconsin.

THE horticultural division of the College of Agriculture has called special attention to the opportunities for growing fruits in Upper Wisconsin. Settlers in the cut-over regions may enjoy the pleasures of growing fruit in season. Home orchards have been planted in many Upper Wisconsin counties with gratifying success. One of our leading Wisconsin fruit growers writes as follows concerning the opportunities for growing fruit in Upper Wisconsin:

Speaking of the chances for fruit growing in the inland area not influenced by the mild climate of Lake Superior, there are a few things to be taken into account before good results can be obtained.

Fruit trees two years old should be selected, as anything younger than that is likely to suffer frost injury. Planting should be made on the north slopes, protected where possible from severe west winds. Settlers have found that it doesn't pay to plant orchards on the lighter sandy soils, or on the low marshy spots.

In discussing the better varieties for use in the upper counties, experienced fruit growers usually recommend the following as being almost certain to survive and produce abundant fruit, with proper care. Apples—Duchess, Wealthy, Dudley, Hibernal, Patten's Greening; plums—Sapa and Opata, two of the Hansen hybrids, originated on the Dakota prairies; blackberry—Snyder; strawberry—Warfield, Dunlap; black raspberry—Gregg; red raspberry—Cuthbert; currant—Perfection.

The Dudley apple is a good, hardy, sound and attractive variety. The Hibernal, while a hardy cooking apple, is not as good for table purposes, as it lacks the flavor and color that some other well-known varieties have. Patten's Greening is a good, reliable type, making excellent pies. The Newell and Duchess of Oldenburg have also been tried with success in northern orchards.

The Compass plum, a cross between the plum and cherry, although not favored by many people, is still a reliable fruit for sauce and preserves, and beats stumps as a food product anyhow. It will thrive well on new land.

The above-named varieties of bush fruits and strawberries have been given a fair trial in northern Wisconsin, and reports indicate that they do well if given a chance under ordinary conditions.

Advice and suggestions about fruit growing in the northern areas of the state will be gladly furnished by the College of Agriculture, University of Wisconsin, or the State Horticultural Society, both located at Madison. Tests in trial orchards under varying conditions of soil and climates have furnished data by which the officials of these institutions can base their recommendations with a fair degree of certainty. Extending the fruit belt into the timber regions of the state will take many years of experiment and experience, but with patience and perseverance it will be accomplished in the same successful manner that the corn belt has been gradually worked northward.

Tractor vs. Animal Power.

JUDGING from the information which we have recently been gathering direct from farmer tractor users there is considerable difference of opinion among them in regard to the relative value of gasoline and kerosene as fuel for tractors. Some claim that kerosene develops more power per gallon than gasoline, while others hold exactly the opposite opinion. Most farmers, however, tell us that there is an advantage in having an engine that can burn both fuels equally well, thus giving them a chance to use either one or the other, depending upon prices. So far not over one farmer in a hundred with whom we are in touch has had anything but praise for the tractor for general farm work, except for cultivating corn, and some are using their tractors for that purpose with satisfactory results.

Much has been said in the past about the first cost of tractors being too high, but we find that actual users are not complaining on that score, because as a rule the engines are displacing enough horses to pay for themselves. Many of the small makes, used on small farms, have displaced from four to six horses, hence "first cost" becomes unimportant. Whether a tractor will displace enough horses to pay for itself on a given farm depends, of course, upon the nature of the farming carried on. On farms where the acreage of small grain is very large a tractor will displace more horses than where the corn acreage predominates.

Of course, not all land is adapted for tractor farming, nor are all systems of farming equally well suited for tractor power, owing to the fact that but few engines have been developed with which corn can be cultivated to advantage, but wherever the tractor can be used to advantage the question of cost resolves itself down to the consumption of fuel and lubricating oil, repairs and annual deterioration.

On the cost of repairs and rate of annual deterioration it is impossible to get reliable information because comparatively few farmers have used tractors long enough to make their figures trustworthy. This much can be said, however, that most tractor owners are confident that their engines will last as long as the average horse and that cost of repairs has not been excessive.

The cost per acre of fuel and oil for plowing, disking, drilling, and similar work is considered by most users as not higher than the cost of horse feed while the work is actually being done, while some consider it slightly higher. However, since horses have to be fed the year round, whether they work or not, the tractor has a great advantage in consuming no fuel except when actually at work. It is a well-known fact that the average farm horse works less than one-third of the actual number of work days in a year.

On this point some very definite figures have been gathered by the Minnesota Experiment Station on a large number of Minnesota farms during a period of five or six years. Accurate daily records were kept right on farms in different sections of the state of all the work done by horses. From these records it appears that in Rice and Marshall counties, where diversified farming is carried on, during the five-year period of 1908-1912, inclusive, the horses averaged 1,072 days of work of ten hours each a year, while in Norman county, where small grain farming is the rule, they averaged only 976 days of work per year. Thus considering 300 as the actual number of working days in a year, the horses averaged a little less than 3.5 hours of work per day, and the average cost of horse labor per hour on that basis was 9.25 cents per hour or 92.5 cents per full working day. These high-cost figures, and if anything they are higher today, have been a surprise to many, but they are based upon actual records—not guesswork—and can, therefore, not be disputed.

While comparatively few farmers have figures of this kind of their own, everyone realizes that the cost of keeping horses is a tremendous drain on the farm income since grain and hay have become so high in price, and that is really at the bottom of the present demand for tractor power. From these figures it can readily be seen that tractor fuel and lubricating oil are cheaper than horse feed, and that a tractor that can do a large share of the heavy work on the farm is an economical institution.

No Help For Oat Rust.

VERY effective remedies for the destruction of oat smut are in use, and there is not a community in the corn belt where men cannot be found who have repeatedly used formalin to destroy smut. The success attained in this matter has aroused interest in the rust question, and an Illinois farmer asks for information concerning ways and means that might be employed to prevent grain crops from being injured by this blight.

Unfortunately, there is no practical remedy for rust in so far as this end can be attained by the treatment of the seed grain. Rust spores, under certain conditions, inhabit the atmosphere in innumerable quantities, and these find lodgment on the leaves and stems of the growing plants under certain peculiar atmospheric conditions. Hot, muggy weather lasting only a short period of a day or two will, in many instances, cut the yield of a grain crop squarely in two.

Rust is nothing more nor less than a parasitic form of life, and when it once penetrates the tissue of small grain this means that the juices, instead of being utilized in the making of grain, are spent in sustaining the parasitic inhabitants of the leaves and stems.

While there is no practical remedy for rust in so far as the treatment of grain is concerned, many farmers lessen the loss from this source in the character of the rotations that they use and in the manner of preparing the soil. Anything that will prevent an unusually rank growth of stalk and leaf will tend to lessen the danger from rust. But, of course, nothing can be done at this season of the year, as the crop is now under way. Where there is a boundless supply of fertility this end can sometimes be attained by putting enough labor on the surface to make the seed bed exceedingly firm. Pasturing back the crop in some cases accomplishes the same end by preventing the kind of rank growth that will make it an easy prey to parasitic attack. Of course it must be remembered that too free pasturing will delay the ripening process and this must be kept in mind by those who undertake to cut down the rankness of growth by this method.

With reference to the matter of rotation in its relation to succulent growth, on certain types of soil it is sometimes necessary to take two and even three crops of corn following the plowing under of a sod before the land is used for small grain. By this practice the supply of nitrogen is cut down materially, and this always tends to lessen leaf development. Of course, in this respect, as in the case of preparing the land, nothing can be done for the crop of 1916, but reference is made to these matters in the hope that some of our readers may be benefited by these suggestions at a future time.

We have known cases where a badly rusted crop has been cut and cured for hay rather than allowed to mature as grain. When rust is likely to be real bad, better results can be obtained in this way, particularly when there is plenty of live stock to use the hay, than by allowing the grain to mature in the ordinary fashion. Badly rusted oats are always light in weight and very low in feeding qualities.

The Struggle With Perennial Weeds.

ALL weeds that are able to live on year after year without reseeding are classed as perennials. On account of their persistence they are generally looked upon as a greater menace than weeds that spring annually from seed. Chief among the pests of this class in the corn belt might be mentioned Canada thistle, quack grass, milkweed and bindweed. All these have sturdy underground stems and horizontal roots, with the result that a mere disturbing of the roots in many cases only increases growth activity. This is due to the fact that new leaves and stems spring from the lacerated parts. That is why it is useless to attack these perennials in anything like a half-hearted manner.

When it comes to their destruction one principle should be kept in mind, namely, that they cannot last longer than a few months if one can prevent the development of leaves and stems. This is the key to the whole matter, and where large areas are infested the task of destruction must be undertaken with heavy implements and these must be used at frequent intervals and with a marked degree of thoroughness. It is almost impossible to destroy these weeds and at the same time grow an intertillage crop like corn, it being a much better plan to keep the ground stirred from time to time until late in the growing season, and then undertake to produce a smother crop like cane or millet.

There are thousands of fields in every state of the central West that are so badly infested with bindweed that they should not be planted to corn at all this year. The work done up to this time in preparing the seed bed will answer an important purpose, because it has kept the weeds in check. Let it be continued for another month or six weeks and follow this up by sowing about three pecks of millet seed per acre or about 100 pounds of cane seed, and the perennial weeds will disappear in all probability from this land entirely. The theory underlying this practice is simply this, that the roots are being weakened because they cannot get nourishment from the atmosphere, and in their weakened condition they cannot withstand the opposition that they will meet during the late summer and fall from such smother crops as have been mentioned. The work of weed destruction will be very ineffective in case there has been any opportunity for the development of leaves and stems thus far, because this means that the root systems have been strengthened so that the pests are ready to put up a fight for their existence. They may in that case hold their own with a smother crop and store up a fine supply of food in the roots and, as a result, they will come on next year just as strong as ever.

There are those who believe that it is better to continue cultivation from time to time throughout the whole growing season in order to be done with these stubborn weeds for all time. Under certain conditions this plan is practicable, but it means the loss of the land for a whole year, whereas in following the suggestions made above one may accomplish the desired end and at the same time obtain a fine crop of roughage.

Hand work in fighting perennial weeds is only recommended in those cases where there are but few weeds. Their first introduction may frequently be headed off in this way because it seldom happens that a farm becomes seeded down to any special class of weeds during a single season. As a rule they work in and spread year after year until we finally are brought face to face with the realization that they will soon be our masters unless heroic methods for their eradication are carried out.

MONEY IN GROWING PEAS.

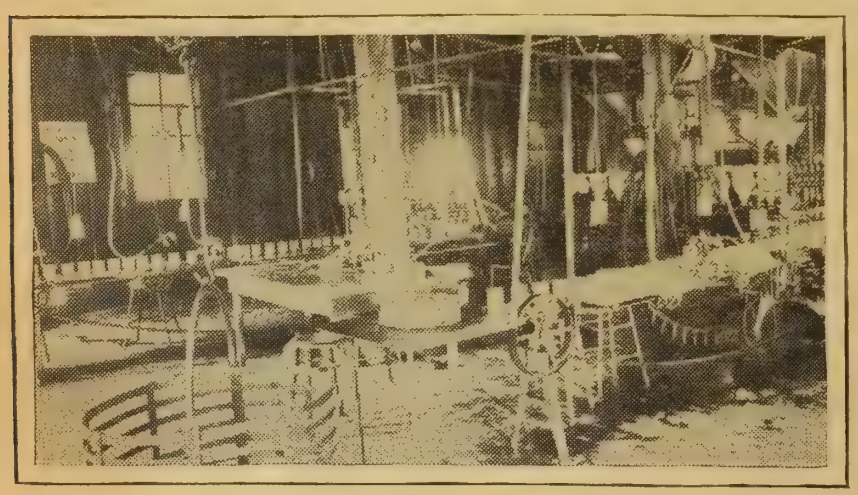
Wisconsin Farmers Find Them Profitable Cash Crop and Good Soil Builders—Thirty-seven Per Cent of Peas Canned in the United States Are Handled in the Eighty Factories in This State.

THE importance of the pea crop in Wisconsin, although it is in certain localities one of the largest farming operations, is realized by comparatively few persons. This applies not only to visitors to this state but also to residents who are not aware that 37 per cent of the peas packed in the United States last year were grown on Wisconsin farms and handled in Wisconsin canneries. With favorable conditions for peas, such as soil and climate, Wisconsin has made rapid strides in this industry since the first peas were grown for canning purposes twenty-five years ago. Farmers have found it not only a profitable cash crop but also a good soil builder, and, as most of the problems confronting the growers in the early days of the industry have been solved, the acreage is being increased each year and new factories are being built annually to care for the crop.

Twenty per cent of peas of United States canned within this circle.

It is estimated that about 90,000 acres of peas were grown in Wisconsin last year and that about $10,000,000 was paid out by the factories to the farmers and for help during the canning season. The profits per acre vary from a few cents to more than $100, but a profit of from $35 to $45 is considered good. Soil and weather conditions have much to do with the returns to the farmer and if these are right many farmers contend that peas will return them a greater profit, considering the labor involved, than any other crop.

There are now approximately eighty factories in the state canning peas and these factories have built up a splendid reputation abroad from Wisconsin peas. Last year 9,272,000 cases were packed in the United States, of which 3,430,600 were packed in this state. These factories are scattered throughout the state, but are mostly in the eastern part, along Lake Michigan. Within a radius of twenty-five miles of the northeastern corner of Dodge county are forty factories which packed 20 per cent of the peas canned in this country. These factories take the crop as it comes from the farm and the conditions under which the crop is canned are ideal and sanitary. Most of the peas are canned within five hours from the time they are taken from the field and during the process are hardly touched by the human hands.



INTERIOR OF THE NEW HOLSTEIN PLANT, SHOWING MODERN MACHINERY USED IN PACKING WISCONSIN PEAS.

Soil preparation, seed selection, drainage and rotation are important matters for the pea grower to consider. In the older sections all of these are given careful consideration, as in most instances the canneries supply the seed and supervise the work, as it is to their interest to secure a high quality crop. Rotation with other crops has been found to keep out pea blight which a few years ago caused considerable grief where peas were grown year after year on the same soil.

Drainage is especially important, as peas seem to be able to withstand any weather or climatic condition except "wet feet." This condition has led to large drainage projects in the pea districts, for it has been found that the crop is not only increased but the quality greatly improved when peas are grown on well-drained land. Where the water table on pea ground is higher than eighteen inches or two feet it is always advisable to tile for the best results.

Rotations are not necessary except as a preventive of blight, as peas are a leguminous crop and remove very little fertility from the soil. One of the popular rotations in the eastern part of the state is to follow peas by sowing rye in September followed by seeding to clover the following spring. Cut the first crop of clover for hay; plow under the second crop in the fall and return to peas the next spring. Follow this pea crop with corn, for which the ground should be manured, and follow the corn with peas again. Sometimes oats instead of rye are used. Some grow peas two years running and others have worked out different rotations, especially where factories pack corn when sweet corn is worked into the rotation.

Farmers contemplating growing peas for canning purposes should bear in mind that proximity to a factory is of the utmost importance. The grower must be near, as the grower who cannot cut and deliver two loads a day had better not undertake peas, as they must be packed the day they are cut. Of the early varieties the Alaska is mostly grown and of the late varieties the Market Garden, Advancer and Admiral are the leaders. Where the companies furnish the seed to the growers the grower receives about 2 cents a pound for his peas after they are vined. The vines are now used by most factories for feeding purposes and are run into silos during the vining process.

The seed bed should be prepared along the garden idea, as peas are nothing more than a garden plant. The right way to plow for peas is to plow about eight inches deep, or deeper if the subsoil will permit, the year previous to planting peas. This loosens up the deep soil and prepares a somewhat loose bottom for peas to root deep.

TYPICAL WISCONSIN PEA CANNERY, PLANT OF THE NEW HOLSTEIN CANNIN · COMPANY, CALUMET COUNTY.

IF THE LAND IS LUMPY IT SHOULD ALWAYS BE ROLLED.

In preparing the land for peas there should be fall plowing about six inches deep and plow your land well. Fall plowing is by far the best, especially in a dry season, as growers are not mind readers or weather prophets and the only safe thing is to figure on the possibility of getting a dry season and if by chance it is a wet season there is no harm done.

In the spring the land should have at least one double disking with disk harrow and at times land is hard and lumpy, when it needs going over twice, half lapping with pulverizer each time and follow with light smoothing harrow. This prepares land for the drill. After drilling if the land is lumpy it should be rolled, then followed with light smoothing drag to rough up the land to keep from blowing. If the land is not lumpy enough follow drill with smoothing drag. The usual way to plant peas is to use a single disk drill, known as the six-inch drill, planting about four bushels of peas to the acre. Plant the peas deep, three to four inches deep, so as to get the seed down where it will stand the dry, hot weather and do not plant peas on wet land. Allow it to dry off and mellow up before planting.

FOUR TEAMS DOUBLE DISKING FOR PEAS ON FARM OF COLUMBUS CANNING COMPANY.

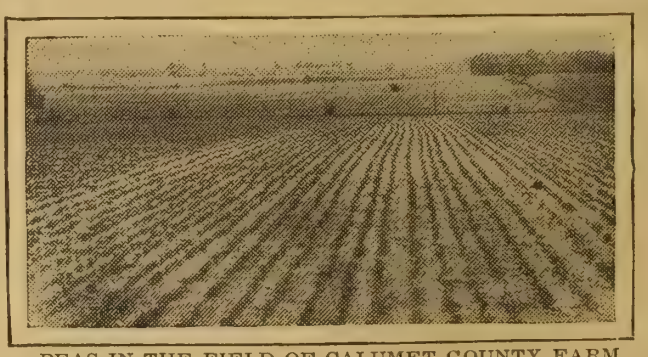
Clay loam or loose land is the best land for peas under all conditions on account of its coolness. Clay land that is apt to cake and bake is not very desirable for peas. Sand loam is, however, good pea land if planted early in the season and favorable weather conditions with frequent rains; but, as a rule, sandy soil or sandy loam is too quick to produce the best results on account of the crop ripening off too fast, which makes too many low-grade goods in the can, therefore not profitable for canning. Low, wet, cold and marshy land is not desirable land for peas.

When peas show 70 per cent of the pods with peas in them, covering all sizes, then it is high time to cut and deliver to vining machines. There is no time to be lost, as in a good many cases where other work is considered first and more essential than the peas, that being the fault in most cases, the delay shows up the inferior stock for the canner. The time to deliver peas to the vining machines is when they are at their best and not to wait for every last pod to get filled, when a good many of the older pods will shell out hard and wrinkled peas which are unfit for canning purposes.

The sizing and grading of peas is done by the packers after they are delivered by the farmers. Peas are packed in at least five sizes and three grades, as follows:

No. 1 is called Petit Pois.
No. 2 is called Extra Sifted.
No. 3 is called Sifted.
No. 4 is called Selected.
No. 5 is called June Peas.

All sizes may be purchased in the three grades, which are Fancy, Extra Standard and Standard. This is where knowledge of sizes and grades by the housewife will enable her to purchase the canned pea that she desires. Fancy peas are the best, the Extra Standard the tender and the Standard the tougher grade. A small pea does not necessarily mean a fancy, tender pea, as many housewives presume; neither does a large pea mean a tough pea. It is possible to buy a No. 2 Extra Sifted in a Standard which is the tougher grade or it is possible to buy the large No. 5 June pea in a fancy or the best grade. Sizes are marked on all labels with the brand. The grade is not marked on the label, but can be told by the price. The fancy is the higher priced in that size; the Extra Standard next and the Standard the cheaper. The state association of packers is doing splendid work to improve the quality and market for Wisconsin peas, the officers of which are. President, A. T. Hipke, New Holstein; vice president, W. H. Fromm, Thiensville; secretary, J. A. Hageman, Fort Atkinson.

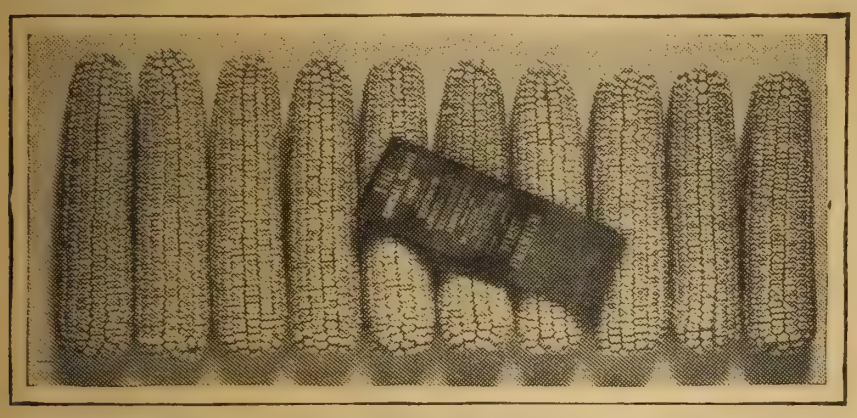


PEAS IN THE FIELD OF CALUMET COUNTY FARM.

The Farmers' Open Forum
WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Experience in Growing Select Seed Corn.

To the Editor:—My experiment with growing pure-bred seed corn commenced in the spring of 1911. Having listened to a lecture given by Professor Moore at the college of agriculture on pure-bred seed grains, I was sufficiently interested to become a member of the Wisconsin Experiment Association. A peck of Golden Glow seed corn was sent out to each member. Having received my corn I planted it in a separate plot some distance from our other fields of corn. When the corn from this plot was harvested it was compared with our common or mixed corn. The yield and quality of the two was highly in favor of the pedigree corn. I decided to continue the experiment. The select seed from this plot was saved for the next season's planting. That same spring I also received a peck of Silver King No. 7 seed from the Wisconsin Experiment Association. The select ears of Golden Glow and the peck of Silver King were each planted in separate plots. When harvested each plot made a most satisfactory crop. A large quantity of fine seed was picked. A single ear of Golden Glow was exhibited at Madison, winning second prize. The same ear was awarded third premium at the National Grain Show held at South Carolina. It was at this time I became interested in growing corn for exhibition.



TEN-EAR SAMPLE GROWN BY MR. BRUNKER WHICH WAS AWARDED GOLD MEDAL AT PANAMA EXPOSITION.

To grow corn for show and obtain a lot of high-class seed is by no means an easy undertaking. It requires considerable hard labor and study. Without seed that has inherent tendency to produce show ears it is difficult to produce a prize-winning sample. In order to improve the type of my corn I purchased some highly bred show ears. These I planted in a small plot. When the corn was harvested a lot of select ears were obtained from which was selected a fine sample of show corn.

The method of planting and cultivation used in producing this sample, and I might say generally used in growing our corn, does not differ greatly from the method of the average corn grower. Our soil is mostly black loam with a clay subsoil. A good application of stable manure is spread on the field during the winter. This was plowed under to a depth of six inches early in the spring. The weeds are then given a chance to start. When they have started we commence disking. The harrow is then used until a fine seed bed is secured. The time of planting in the case of this plot was the 10th of May. Our corn is planted with a check row planter. I prefer this method, as it can be given the most effective cultivation. The field is generally harrowed three times after planting, once just after planting, again when the corn is just coming up. By harrowing at this time no corn is covered up. The last harrowing is done when the corn is a few inches high. We then commence cultivating. The first cultivation is deep, then shallow, until the corn is too large for the riding cultivator. The one-horse tooth cultivator is then used, going through the field after a heavy rain, the object being to remove the crust formed and prevent evaporation, also killing the weeds that have started. This is done until the corn is tasseled out.

When the corn is sufficiently matured to enable drying we pass through the field selecting the seed from the standing corn. After the seed is taken to our seed house another selection is made. Those ears that are prospects for a show sample are set aside. The seed is hung on the drying racks where artificial heat and good ventilation is applied. The ears intended for exhibition are dried under different conditions. We find that if dried slower better results are obtained for the production of show corn. When the final selection of the sample intended for exhibition is made we have a large number of carefully selected ears. One must have in mind an ideal ear, pick out one nearest to this, then proceed to find nine more like it. If you do not win out do not be discouraged, as there is glory even in defeat. J. A. Brunker.

Iowa Co., Wisconsin.

Making Ditches With Explosives

To the Editor:—There seems to be great differences in the response of different soils to the action of explosives. In going over the figures and the record pictures, of a dozen or more ditches that had been blasted out, in Maryland, Pennsylvania, Michigan, Louisiana, Mississippi, and other states, it was plain that no one rule could be laid down for all the cases.

Economical ditch blasting can be done only when the ground is wet. Yet if it is too wet experience has shown that a successful ditch cannot be made. For instance, in muck swamps in Maryland and Louisiana, where the material was semi-fluid, the explosives threw out enough material to leave a ditch, but the banks immediately moved in and closed up the cavity. Fortunately these conditions do not prevail at all over a large part of the country. Such ground is almost unknown in the North. Sandy soil offers another problem. When there is just enough water to bind the sand and what little loam and clay may be mixed with it, and not enough to make the sand soft, ditches can be blasted out very effectively and satisfactorily. You should see that the charges are placed shallow enough so that they do not tend to send their gases to useless depths in the softer subsoil. Do not try to blast ditches in dry sand, or, for that matter, in dry ground of any kind, though if you cannot wait for the wet season and you are willing to meet an increased expense, you can blast ditches through dry clay or heavy loam.

The most economical and satisfactory soils in which to blast ditches are the lighter clays, or heavy loams, such as prevail in many states. Here whenever the ground is water soaked, or even fairly moist, the results of blasting are surprisingly good. One reason probably is that the substrata of earth nearly always are solid and gas resisting. J. R. Mathern.

Will Do Work of Seven Horses.

To the Editor:—My experience with a tractor is rather short. It dates from September 10, 1915. I use a tractor which has a manufacturer's guarantee and which has twenty horse power at the belt and seven horse power on the drawbar. As our farm is only forty acres it is rather small for a tractor of this size, so I go out and do some work for my neighbors. With two fourteen-inch bottoms I have plowed seven acres in ten hours. I tried it with three bottoms, but it was too much for the engine. It would stall on a hard spot, but where the field was in good condition we plowed an acre an hour.

In working up land this spring we used a seventeen-tooth spring harrow and did more than two times the work of a three-horse team. This is because there are no stops for rest. The engine could have handled a twenty-five tooth harrow, but no more, as it would lose its traction then. I have not had any difficulty about packing the soil. The lugs as they leave the soil break it up. In plowing the drive wheel works in the furrow, working up the subsoil. On this account some farmers claim a crop increase as high as 33 1-3 per cent over horse plowing. I do not think this tractor will harm any soil unless it be used when the soil is too wet. A man who has a good tractor can afford to wait until the soil is dry enough to work because he knows he can easily make up the time. With horses he has to get at it as soon as the water is off the top of the ground or he might fail to get through in proper season.

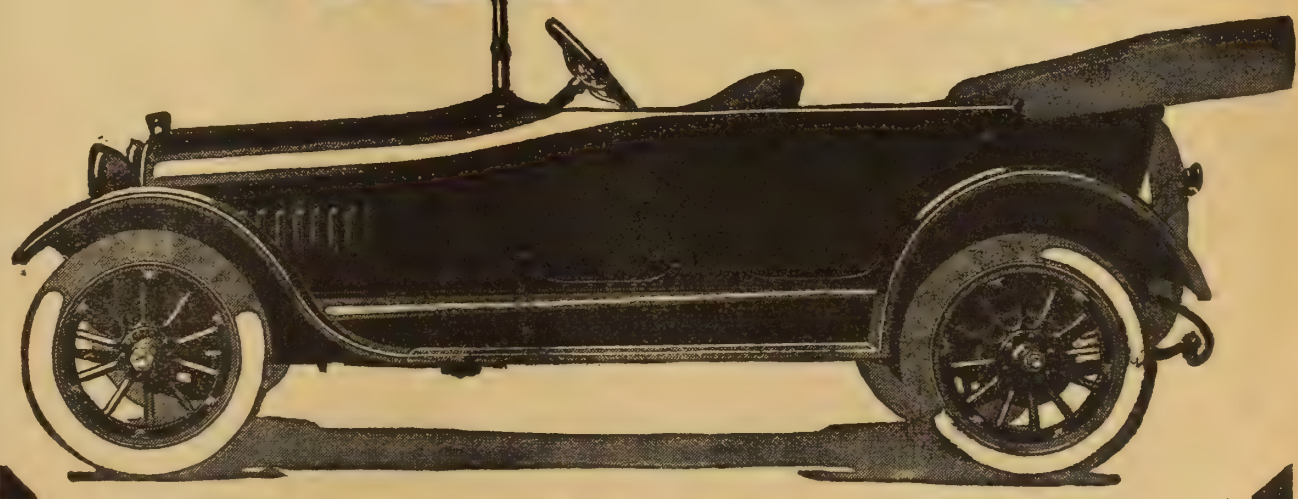
It took about two and one-fourth gallons to plow one acre and one and one-half pint lubricating oil. Gasoline is now 19 cents a gallon and lubricating oil 30 cents a gallon, so it cost about 49 cents to plow an acre. The depreciation may be put at 40 cents per acre.

One advantage is that the cost stops when the tractor stops. Of course, it has to be cleaned and adjusted from time to time, but this is a great deal less than the cost of caring for horses.

If a tractor the size of mine takes the place of two good horses it is paying for itself, but it will easily do the work of seven good horses.

Racine Co., Wis. Vitus Hloushek.

Velie Six



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Season Is Late, But Crop Conditions Are Improving

Weather Is Getting Warmer and Grass Is Growing Better---Ground Is too Wet in Some Localities---Small Grain Making Good Growth, But Part of the Acreage Not Yet Seeded.

WISCONSIN.

Buffalo County.—Cold, rainy weather has delayed spring work very much. A few farmers have finished the seeding of small grain, and some have commenced plowing for corn. Winter wheat is about one-half a crop. Clover and alfalfa completely winterkilled. Grass on the meadows is fine and promises a good yield. Cows are in thrifty condition and young calves are doing well. Pig crop is about normal. Cheese factories started April 1st.—James G. Bates.

Crawford County.—Spring is somewhat late and crops are behind. Clover meadows look good, although they winterkilled some. Timothy meadows are good, but still short. Rye is ready to shoot heads—oats and other small grain are about two inches high and growing nicely. Corn planting will begin next week on the sandy soil, but it will be about a week later on the clay soils. The pig crop is about normal—we have averaged nine pigs from each sow. Everyone is having good luck with their colts and calves.—H. H. Stukey.

Door County.—Spring is very late and not much seeding has been done. Clover winterkilled badly. Cherry trees are well covered with fruit spurs. Farmers are losing many small pigs. Good beef cattle are selling from $6 to $6.50, live weight; thin stuff at $3.50 to $4.50. —John Aznoe.

Douglas County.—Spring has been very backward. The seeding of small grains is not more than half done. Oats will be the principal crop, but more barley is being sown each year. Pastures are above the average for this time of year, and live stock are not needing any more feed. Newly seeded meadows are looking good; the excessive drifts of snow last winter served as a protection. The acreage of potatoes may be restricted because of the high price of seed. Young pigs are scarce and high; $8 a pair is asked for them. Farmers are taking more interest and care in breeding their mares and in most cases are using pure-bred stallions.—B. N. Stone.

Eau Claire County.—Small grain is nearly all seeded. Ground is in good condition to work. Some grain is coming up and looks good. Farmers are getting ready to plant corn, but none has been planted yet. About the usual acreage of corn will be planted. Not many potatoes have been planted; the acreage will be about as usual. Meadows are a little late in starting, but most of them look good, except some clover which winterkilled. Young pigs are very scarce; there are not as many brood sows as usual, and the percentage of pigs saved is below the average. The pig crop will be about half normal. Colts are as good as usual. Cattle are very scarce, because more were sold last fall than usual.—S. S. Wethern.

Fond du Lac County.—Seeding is progressing nicely. Grass is very backward and nearly all the old seeding of clover and some of the new, winterkilled. Corn planting will be very late. —A. L. Williams.

Lafayette County.—The weather has been warmer for the last week. Farmers are plowing for corn; a small amount has been planted. Small grain and pastures are growing rapidly. Pig crop is an average. Many good calves are going to market. Several buyers have been looking for grade Holsteins in this community.—W. J. Martin.

Langlade County.—Strong winds on May 8th blew down a few silos. No hard frosts have occurred lately. Ground is in good condition to work and seeding is finished in the hilly part of the country. Spring wheat is well started. Some farmers are preparing corn ground. Early potatoes are planted. The number of young pigs is not increasing. Cattle will still eat good hay. Cheese factories have been working daily for several weeks.—Chas. Parsons.

Manitowoc County.—Rains have been frequent. Seeding is late; about half of the small grain seeding is done. Winter wheat looks good. Hay crop has a good start and looks good, except the clover. Last year's clover seeding was damaged by frost or sleet.—Otto Berger.

Marquette County.—A violent sand storm on May 8th did great damage to rye, oats, young clover and garden truck. Rye and last year's clover winterkilled badly. Meadows and pastures are good. Oats are not all in on the low lands. About half the corn ground is plowed. Hay is very scarce and high, and farmers are buying feed. All kinds of live stock are in healthy condition; most lambs and calves were saved. Corn is selling at from 80 to 90 cents; oats, 50 cents; potatoes, 70 cents; beans, $3.50; bran, $26 a ton; shorts, $23; tame hay, $10 to $14; wild hay, $9.—J. M. Williams.

Oneida County.—Moisture conditions are more favorable, but weather is too cool and windy. Farmers are well along in seeding oats and other small grains. No grains are above ground, except winter rye, which is doing nicely. Plowing and dragging for corn and potatoes is under way. A few early potatoes have been planted. Pastures are hardly good enough to use, but cattle have been turned onto them. Last year's clover seeding looks fine. The loss in young pigs is small, but not many are raised here.—F. S. Campbell.

Polk County.—Season is at least two weeks late. Very little small grain was sown before May 1st and seeding is not finished yet on the poorly-drained soils. The early sown grain is coming up nicely. Clover and alfalfa came through the winter in good shape. Old meadows were damaged by the white grub last fall. Pastures promise to be earlier than usual, which is a fine thing since feed is getting scarce. Although some have had poor results, the early pig crop is about an average. Cattle are a little thin because of the poor quality of silage and corn fodder fed, and the severe winter.—P. F. Amery.

Rusk County.—Weather has turned warm and pastures and meadows are looking fine. Farmers have most of the small grain sown and some are beginning to prepare land for corn and potatoes. Most of the farmers through the organization of the potato growers' association are planting pure-bred seed potatoes. Many people are coming from Iowa and Illinois where land is $150 to $200 an acre and investing in cut-over and partly improved farms from $15 to $75 an acre. They report that grasses and conditions that make dairying a success are much farther advanced here than the localities from which they came. Milk cows are in demand and are bringing fancy prices. Many silos are being erected this season.—T. M. Thomas.

Sawyer County.—Spring has been very backward. Everything will be late; oats, wheat and corn will not be put in as early as usual. Winter rye and grasses are just commencing to leaf out. Potatoes are selling around $1 a bushel and are very scarce at that price. Farmers will plant more potatoes this year. The supply of hay has been short among stockmen, and dairy cows and cattle have been turned onto pasture sooner than usual. Success with young pigs is just fair; it would have been above normal except for the late spring and cold weather. Young dairy and beef calves have been doing well. One farmer reports wintering forty head of cattle on wild hay and a little grain; they had been pastured on cut-over land previously. Live stock in this region are free from disease, and buyers have been coming in for dairy stock. —F. O. Setter.

St. Croix County.—Seeding is all finished and the early seeding is coming up nicely. No corn has been planted, excepting some for early market. Pastures are very slow and backward. Meadows have a good, thick stand, but are slow and backward.—J. D.

Washburn County.—Season is late, but the last week of warm weather has brought the meadows and pastures forward. Not more than 50 per cent of the spring seeding is done. Some are plowing for corn. A few early potatoes have been planted. Fruit trees are budding. Live stock are still on feed.—L. D. Garnhart.

Wisconsin Crop Report.

A summary of the May crop report for the state of Wisconsin and for the United States, as compiled by the bureau of crop estimates (and transmitted through the weather bureau), United States Department of Agriculture, is as follows:

WINTER WHEAT.

State—May 1st forecast, 1,480,000 bushels; production last year (final estimate) 2,300,000; two years ago, 1,828,000; 1909-13 average, 1,591,000 bushels.

United States—May 1st forecast, 499,000,000 bushels; production last year (final estimate), 655,045,000; two years ago, 684,990,000; 1909-13 average, 441,212,000 bushels.

RYE.

State—May 1st forecast, 6,450,000 bushels; production last year (final estimate), 7,770,000; two years ago, 6,798,000 bushels.

United States—May 1st forecast, 44,300,000 bushels; production last year (final estimate), 49,190,000; two years ago, 42,779,000 bushels.

MEADOWS.

State—May 1st condition 79, compared with the ten-year average of 87.

United States—May 1st condition 88.4, compared with the ten-year average of 88.3.

PASTURE.

State—May 1st condition 76, compared with the ten-year average of 84.

United States—May 1st condition 85.2, compared with the ten-year average of 85.9.

SPRING PLOWING.

State—Per cent done to May 1, 1916, estimated 65 per cent, compared with 75 May 1st last year, and 64 the ten-year average.

United States—Per cent done to May 1, 1916, estimated 70.4 per cent, compared with 78.3 per cent on May 1st last year, and 68.6 the ten-year average.

SPRING PLANTING.

State—Per cent done to May 1, 1916, estimated 43 per cent, compared with 65 May 1st last year, and 56 the ten-year average.

United States—Per cent done to May 1, 1916, estimated 56.7 per cent, compared with 65.3 per cent on May 1st last year, and 55.9 the ten-year average.

HAY.

State—Old crop on farms May 1st, estimated 451,000 tons, compared with 580,000 a year ago and 577,000 two years ago.

United States—Old crop on farms May 1st, estimated 11,000,000 tons, compared with 8,468,000 a year ago and 7,832,000 two years ago.

PRICES.

The first price given below is the average on May 1st this year, and the second the average on May 1st last year:

State—Wheat, 107 and 134 cents per bushel. Corn, 74 and 73. Oats, 43 and 53. Potatoes, 77 and 34. Hay, $12 and $10.30 per ton. Eggs, 19 and 17 cents per dozen.

United States—Wheat, 102 and 139.6 cents per bushel. Corn, 72.3 and 77.7 cents. Oats, 42.6 and 53.4 cents. Potatoes, 94.8 and 50.5 cents. Hay, $12.20 and $11.82 per ton. Cotton, 11.5 and 9.1 cents per pound. Eggs, 18.1 and 17.1 cents per dozen.

Ways to Reduce Meat Bill.

Miss Nellie Maxwell, department of farmers' institutes of the University of Wisconsin, in a leaflet on Reducing the Meat Bill says that the high cost of living is not entirely the higher prices of foodstuffs, but the taste for luxury.

"Too many of us are like the man who said he could get along without the necessities if he could have the luxuries," she states. "The meat bill may be easily reduced in three ways —in quality, quantity or substitution of other foods. If we want the choicest cuts of meat, we must pay the choice price. We cannot hope to have fillets of beef or sweetbreads at the price of round steak or hamburger. The wise woman appreciates the value of the cheaper cuts, using the tough portions for long, slow casserole cookery in combination with vegetables of various kinds, making a small amount of meat of cheap quality season a good sized dish of vegetables. Meat on the farm may be placed in a cold place where it will keep until the whole animal is used. By smoking, corning and salting, it may be kept all summer, thus reducing the summer meat bill. Sausage, head cheese and scrapple are most satisfactory methods of using small and undesirable portions. Meat should be hung long enough to develop the flavor which increases in the hanging. The lactic acid then developed softens the connective tissue, making the meat more tender. Very tender meat, such as porterhouse steak, may be cooked quickly at first at a high temperature. The tougher portions need long, slow cooking to soften the connective tissue and the much used muscles.

Meat being the chief source of our tissue-building food, if lessened, something which will supply protein and fat must be substituted. Oatmeal with milk is a good tissue building food—the protein is formed in the oatmeal with some fat, the milk supplying more. Eggs are fully as valuable as meat in composition. When reasonable in price they are a good substitute. Cheese yields twice as much protein to the pound as meat, and if properly masticated is as easy of digestion. Among the legumes, peas, beans, lentils and peanuts are cheap and sustaining. Nuts of various kinds are rich in oils and high in protein, especially the almond. Using any of the above meat substitutes a housewife may prepare a well-balanced meal, although the use of meat occasionally is to be recommended, since the appetizing flavor of meat extractives has no substitute."

Insect Inklings.

Corn root worms yield best to crop rotation, systematic clean culture and fall plowing.

Garden web worms eat alfalfa, live and spin webs over the plant. If your field is badly infested cut the alfalfa and disk the ground.

Wire worms injure corn and potatoes most, but feed freely on wheat and oats. They thrive best in sod ground and may be controlled by crop rotation, fall plowing and good cultivation. So may the grub worms.

Grasshoppers damage field and garden crops and fruit and shade trees. Poison bran mash sowed early in the morning kills them and their eggs may be destroyed by cultivating pastures, meadows and waste lands late in the fall.

Corn root lice suck the juices from the roots of corn, grasses and weeds. They depend on colonies of small brown ants for protection and transportation and may be controlled by crop rotation, fall plowing and early spring cultivation to destroy weeds and grasses.

The army worm which eats the leaves of field and garden crops may be trapped in dusty ditches or killed with poison bran mash sowed broadcast late in the evening. Badly infested meadows should be cut at once to save much of the hay as possible.

Hessian fly grubs feed between the leaf sheath and the stalk at the crown and lower joints of the plant. Destroy the "flax seeds" which produce next year's crop by disking and plowing stubble as soon after harvesting as possible. Keep down all volunteer wheat, sow late in the fall and get your neighbors to do the same.

The chinch bug sucks the juices of corn, wheat, sorghums and other plants of the grass family. They may be trapped in dusty ditches if they go from wheat to corn or in rainy weather an oil or tar barrier may be necessary. If they get to the corn spray it with soapsuds, emulsion or tobacco solutions. The clump-forming grasses by roadsides and in waste lands may be burned in late fall and early winter to kill chinch bugs which collect there for the winter.

The poison bran mash recommended by the colleges of agriculture for the control of many insect pests is made of half a pound of powdered lead arsenate or half a pound of Paris green mixed with ten pounds of wheat bran. Add two gallons of water into which the pulp of two oranges or two lemons has been mixed together with a quart of molasses or sirup. This amount of poison bait is sufficient for sowing broadcast on two or three acres of the field to be protected. The proper use of this mixture in cutworm time should save about half of the replanting each year.

Walworth county is considering the matter of bonding to the extent of $600,000 for better roads. A county good roads organization is being effected. Under the new plan practically every section of the county will be connected with a concrete roadway. The plan is similar to that which is being worked out in Outagamie county, Wisconsin.

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Dates for Wisconsin County Fairs

No Let-up in Interest in the Smaller Expositions This Year---All Anticipate Big Season.

WITH the prosperity of Wisconsin at high tide the secretaries of the hundred or more county and district fairs anticipate that 1916 will be the record season and that many previous attendance figures will be broken this year.

The fair season in Wisconsin opens in full swing in August and continues until early in October. Of the dates thus far reported the Sparta fair is first and will inaugurate the season. The fairs which have reported their dates follow. The first name is that of the fair, the second that of the secretary; the location of the fair precedes the date. Where no date is given the fair has not yet reported. The dates, etc., follow:

Adams County Agricultural Society—G. W. Bingham, Friendship; September 19-22.
Ashland County Agricultural Society—Otto D. Premo, Ashland; September 20-22.
Athens Advancement and Agricultural Association—F. H. Eisold, Athens; September 15-16.
Baraboo Valley Agricultural Society—W. H. Hahn, Reedsburg; August 1-4.
Barron County Agricultural Society—J. G. Rude, Rice Lake; September 12-15.
Bayfield County Fair Association—E. F. Daniels, Iron River; September 26-28.
Blakes Prairie Agricultural Society—Oscar Knapp, Bloomington; August 16-18.
Boscobel Agricultural and Driving Park Association—J. T. Ruka, Boscobel; August 9-11.
Brown County Agricultural and Fair Association—Herb J. Smith, De Pere, August 28-31.
Buffalo County Agricultural Society—J. W. Luetscher, Mondovi, October 3-6.
Burnett County Agricultural Society—Grantsburg.
Calumet County Agricultural Society—Chilton.
Central Wisconsin State Fair Association—R. R. Williams, Marshfield; August 29-September 1.
Central Agricultural and Driving Park Association—E. G. Briggs, Gays Mills; October 9-12.
Columbia County Agricultural Society—F. A. Rhyme, Portage; September 14-17.
Clark County Agricultural Society—Myron E. Wilding, Neillsville; August 30-September 1.
Dane County Agricultural Society—M. M. Parkinson, Madison; August 29-September 1.
Dodge County Fair Association—C. W. Harvey, Beaver Dam; September 25-29.
Door County Agricultural Society, A. C. Greaves, Sturgeon Bay; September 19-22.
Douglas County Fair Association—I. P. Lord, Superior; September 12-15.
Dunn County Agricultural Society—Menomonie.
East Monroe County Agricultural Society—F. J. Rehberg, Tunnell City (fair held at Tomah); August 15-18.
Eau Claire County Agricultural Society—Augusta.
Elroy Fair Association—D. F. Conway, Elroy; September 12-14.
Evansville, Rock County Agricultural Society—F. W. Gillman, Evansville; August 16-19.
Fond du Lac County Agricultural Society, E. R. Zamzow, Fond du Lac; September 19-22.
Forest County Agricultural Society—Crandon.
Fox River Fair and Driving Association—John M. Balliet, Appleton; September 5-8.
Glenwood Inter County Fair Association—Glenwood City.
Grant County Agricultural Society—L. A. Clark, Lancaster; September 5-8.
Green County Agricultural Society—Leland C. White, Monroe; September 5-9.
Green Lake County Agricultural Society—C. W. Hitchcock, Berlin; September 12-15.
Inter County Fair—J. E. Barnard, Spring Green; August 22-25.
Inter County Fair—Frank S. Grubb, Stanley; September 12-15.
Inter-Township Fair Association—A. J. Peterson, Oconto Falls; September 19-21.
Jackson County Agricultural Society—James Dimmick, Black River Falls; September 26-29.
Janesville Park Association—Harry O. Nowlan, Janesville; August 8-11.
Jefferson County and Rock River Valley Agricultural Society—R. B. Helen, Jefferson; August 29-September 1.
Juneau County Agricultural Society—Mauston.
Kickapoo Valley Agricultural and Driving Park Association—W. B. Van Vinter, Viola; October 4-6.
Kilbourn Inter-County Fair Association—W. B. Gillespie, Kilbourn; September 26-29.
La Crosse Interstate Fair Association—C. S. Van Auken, La Crosse; September 26-29.
Lafayette County Agricultural Society—Thos. Kirwan, Darlington; August 22-25.
Langlade County Agricultural Association—Antigo.
Lincoln County Agricultural Association—A. H. Smith, Merrill; September 20-22.
Lodi Union Agricultural Society—W. T. Richards, Lodi, September 5-8.
Manitowoc County Fair, F. C. Boerdt, Jr., Manitowoc; August 29-31.
Marathon County Agricultural Society, J. D. Christie, Schofield (fair held at Wausau); September 5-8.
Marquette County Agricultural Society—W. P. Fuller, Jr., Westfield; September 6-8.
New Richmond Fair Association—New Richmond.
North Wisconsin State Fair Association—C. E. Johnson, Chippewa Falls; September 18-22.
Oconto County Fair Association—J. B. Chase, Oconto; September 5-8.
Oneida County Agricultural Society—Arthur Taylor, Rhinelander, September 5-7.
Outagamie County Agricultural Society—Hortonville.
Ozaukee County Agricultural Society—A. W. Horn, Cedarburg; Octtober 5-7.
Pepin County Agricultural Society—Henry Pattison, Durand; September 6-8.
Pierce County Agricultural Society, Oscar Halls, Ellsworth.
Platteville Fair and Agricultural Society—C. H. Gribble, Platteville; August 29-September 1.
Polk County Fair Society—St. Croix Falls.
Portage County Agricultural Society—John Kremer, Amherst.
Price County Agricultural Society—Phillips.
Richland County Agricultural Society—W. F. J. Fogo, Richland Center; September 26-29.
Rusk County Agricultural Society—V. V. Miller, Ladysmith; September 26-29.
Sauk County Agricultural Society—S. A. Pelton, Baraboo; September 19-22.
Sawyer County Agricultural and Fair Association—J. A. Ballard, Hayward; September 26-28.
Seymour Fair and Driving Park Association—G. F. Fielder, Seymour; September 14-16.
Shawano County Agricultural Society—Shawano.
Sheboygan County Agricultural Society—Otto Gaffron, Plymouth; September 6-9.
Southwestern Wisconsin Fair Association—W. J. Penhallegan, Mineral Point; August 15-18.
Sparta Driving and Agricultural Association—Sid N. Smith, Sparta; July 25-28.
Stevens Point Fair Association—J. M. Pfiffney, Stevens Point; September 12-15.
Taylor County Mechanical and Agricultural Society—Medford.
Trempealeau County Agricultural Society—Ben W. Davis, Galesville; August 22-24.
Vernon County Agricultural Society—F. W. Alexander, Viroqua; September 13-16.
Walworth County Agricultural Society—Samuel Mitchell, Elkhorn; September 19-22.
Washburn County Agricultural Association—Spooner.
Washington County Agricultural Society—Jos. F. Huber, West Bend; October 2-4.
Watertown Inter-County Fair—C. W. Harte, Watertown; September 5-8.
Waushara County Agricultural Society—Chas. T. Taylor, Wautoma; September 27-29.
Waupaca County Agricultural Society—A. J. Rieck, Weyauwega; September 5-8.
Winnebago County Agricultural Society, Fred Badger, Oshkosh; September 19-22.
Wisconsin State Fair, Oliver E. Remey, Madison* (fair held at Milwaukee); September 11-16.

*From June 1st to September 20th, State Fair Park, West Allis, Wis.

Spring Work in Garden and Orchard.

To the Editor:—Too much rain makes the grass grow, but hinders the garden and field work. We have just had thirty-six hours' steady rain, probably two inches. I have no jar out. By putting a two-quart jar out in the open anyone can keep tag of the rainfall. An inch is a thousand barrels to the acre, so you see it is impossible to water a garden without proper facilities prepared beforehand.

Your early garden seed should have been planted the first week in April, while the ground was in working order. Strawberry plants should have been set then, or the last week in April. Much of the time since the 10th of April it has been too wet to properly work the ground unless it was sandy. If the ground is plowed or spaded when too wet it makes it so lumpy it will not get over it all summer.

One strawberry plant set in April in Wisconsin or the first week in May is worth a dozen set in June or twenty-five set in August. Summer planting, unless with potted plants or taken with a full spade of earth from a near-by bed, is never as satisfactory as early spring planting. Then one plant will make from twenty to fifty plants. Of course, we don't want such an increase except for plants. For big fruit it is best to keep the plants in hills, not allowing any runners. The next best plan for extra nice fruit is to let four plants form around each parent plant and keep off all other runners.

Now about grafting, top work; I have just grafted over 300 plum trees, seedlings in the nursery, four feet high, putting in three kinds of the De Soto new choice kinds. If your scions can be kept dormant and in good condition you can graft successfully until the 10th of June. The success in grafting is getting the inner bark of the scion and stock together and properly waxing. Grafting wax is frequently kept on sale by druggists or seedsmen. It is made of two parts tallow, four of beeswax and eight of rosin, melted, turned into cold water and worked as you would candy. Then the rolls can be laid away in oiled paper and kept for years. To use the wax from this roll, if the weather is cool, keep it in warm water; if hot, keep it in cold water, using a little tallow on your fingers. If much grafting is to be done it is better to have a little furnace like a tinner's furnace, so that the wax can be kept warm—not hot. Use a swab, taking care that every crack is covered, and, while the wax is still warm wrap the graft in old cotton cloth. This protects from the hot sun and keeps everything in good shape. Perhaps the lower bud of the scion may need looking after to open up the cover. Be sure that sprouts do not rob the scions or that they do not grow too fast. If they do, pinch them. About three buds to the scion is better than more. The most satisfactory size of limb to graft is the size of your thumb. Cut it as a boy makes a whistle, split it and insert one scion. If larger, split it with a chisel or grafting knife and insert two scions. The next spring cut off one of them. Never use a limb larger than a hoe handle.

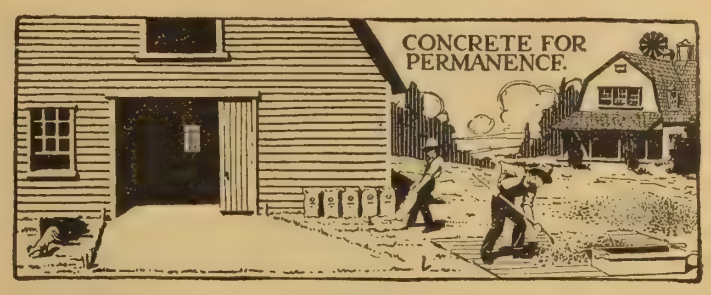
As soon as the ground will do to work keep the cultivator running without any let-up. A garden rake is one of the best tools you can use in a garden. Keep the surface of the soil loose at all times. This will hold the moisture in the soil. The finer the teeth of the cultivator the better and run it shallow; don't turn up the moist soil and don't get too deep near the roots. Keep a dust mulch in the garden and cornfields. Geo. J. Kellogg.

Rock Co., Wisconsin.

Another Short-horn Volume.

Volume 87 of the American Shorthorn herd book is now ready for distribution. It contains 20,000 pedigrees, of which 8,000 are bulls numbered from 421,001 to 429,000, and 12,000 are cows numbered from 193,001 to 205,000. This volume sells to nonmembers for $2, charges prepaid, and those who are interested are requested to write American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill.

Ask your neighbor to subscribe for The Wisconsin Farmer.



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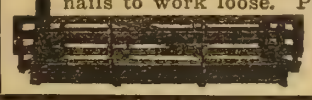

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In and Around Wisconsin

New Condensery at Oconomowoc Opens and One Will Be Established Soon at Neillsville—Other Items of State Interest.

A. Schultz, residing in the hemp district on the Fox Lake road near Waupun, Wisconsin, recently marketed seven loads of hemp. The total weight was 23,062 pounds, making a little over a carload and netting the grower $2,300.

County Agent Klinka, of Polk county, Wisconsin, recently contracted for fifteen tons of lime, to be distributed among the farmers in the vicinity of Dresser Junction. A similar deal has been put through by the farmers near Roberts, Wisconsin.

The annual convention of the Rural Letter Carriers' Association of Wisconsin will be held at Eau Claire on May 30th. Adolph S. Erickson is in charge of the local arrangements at Eau Claire and he promises the visiting R. F. D. boys a splendid convention. The program will be announced soon.

Mr. George T. Vorland, banker of Colfax, Wisconsin, took a company of potato growers to the recent Chippewa county growers' meeting. Mr. Vorland paid the expenses of the party. He has shown great interest in the farmers of his neighborhood and has been a great booster for the Wisconsin Potato Growers' Association.

The last shares of the $250,000 needed to establish a farmers' packing plant in New Richmond Wisconsin, was subscribed last week. The first share was sold April 5, 1915. It took just a little over a year to round up the stock promotion work. The Wausau plant began business January 10th last, and the first quarterly report, it is said, shows a 6 per cent earning on the investment.

Potato growers of Chippewa county met recently in the Cote House. They were entertained at a banquet by the Progressive Club, of Chippewa Falls. Arrangements have been made to distribute good seed this year through the Northern Wisconsin State Fair officials. School children will be urged to enter potato-growing contests on much the same basis that they have been interested in corn-growing contests.

The gasoline engine is a prominent factor in farm work on the Upland Farm, Walworth county. One engine is used to pump water; another drives the dynamo which supplies the farm with electric lights; still another engine is used for the milking machine. In addition there is a large portable engine which is moved about the farm for general work. This farm has a sixty horse power tractor which handles most of the plowing. The owner, Mr. Travis, is well pleased with the service given by his gasoline engines.

Wisconsin people are interested in another national organization designed to give relief to the farmer. This new association has the high-sounding name, National Agricultural Organization Society. The farmer's economic ailments, although more or less vaguely defined, are to be ironed out by the new organization. Frank L. McVey, Gifford Pinchot, our own Charles McCarthy and others are interested in the new organization. As an evidence of the power of the American farmers when properly organized, leaders of the N. A. O. S. point to the recent milk war in Chicago.

The Carnation Milk Products Company has opened its new condensery at Oconomowoc. Thus Carnation Milk is to become a strictly Wisconsin product. The machinery of the plant was put into operation last week. The new plant is 196x246 feet with a capacity, when it is completed, of 300,000 pounds of milk daily. The cost of the new plant will be approximately $250,000. C. A. Allweg, formerly of Richland Center, Wisconsin, is the new superintendent. At the present time there is nowhere near enough milk offered to keep the plant busy. There is a probability, however, that some of the smaller creameries near Oconomowoc will either close down or be bought up by the Carnation people and their factory people given employment in the condensery. The Carnation people own their own farm near Oconomowoc and they are developing some good Holsteins on the farm.

The contract for the new farmers' packing plant at Madison has been let and construction work begun. It is expected to have it in operation this fall. The cost, completed, will be about $225,000.

Dairymen of Dunn county, Wisconsin, have arranged for their annual picnic June 10th. The picnic will be held on the D. C. Coolidge farm near Downing. A general invitation has been extended to all dairymen.

The Dodge County Fair Association has raised the gate admission fee to 50 cents. This is one of the last of the big fairs to come to the higher rate. A number of the smaller fairs in Wisconsin started the 50-cent gate last fall.

The New Richmond, Wisconsin, Cheese and Dairy Company is handling 5,200 pounds of milk daily. This is an increase of about 2,000 pounds over last year. The company is making a number of improvements this spring in its building and equipment.

Several banks in Rusk county have arranged to supply the necessary funds to purchase certified potato seed to be distributed in one peck lots to rural school children who will grow potatoes under direction of County Representative Householder. The county fair association offers prizes.

Lewis J. Smith has resigned as official tester of the Dunn County, Wisconsin, Cow-Testing Association No. 1. Walter Rasmussen, of Hammond, Wisconsin, an official tester for the state, will hold the position temporarily. Mr. Smith goes to the P. C. Wilson Grassland Stock Farm, where he has a fine position.

A movement is under way for consolidated schools in Dunn county, Wisconsin. The plan will be tried out at Elk Mound unless the voters turn down a proposition which will be presented to them soon. Elk Mound is already supporting four school wagons reaching out in each direction for rural scholars.

THE WAY THEY SHIP HOGS FROM SOUTHWESTERN WISCONSIN. (DOBSON & EASTMAN, LANCASTER, WIS.)

Bayfield county is the latest Wisconsin county to call for a county agricultural representative. This action was taken by the county board recently when it made the necessary appropriation to pay the county's share of the cost. As soon as a competent man can be decided upon he will begin his work.

The Oatman Condensed Milk Company, of Dundee, Illinois, has decided to locate a condensery at Neillsville, Clark county, Wisconsin. The company has purchased the Neillsville Milling Company property and will remodel it and use it for condensing purposes. The plant will open about July 1st and will have a capacity of 50,000 pounds of milk at the start. About thirty men will be employed. The promoters of this new enterprise consider that the dairy business in Clark county is only about 30 per cent developed. They see room for many more [illegible] and are planning to use a product considerably in excess of that now supplied at Neillsville. This is another instance of the faith which large concerns have in the future of the dairy business in central Wisconsin.

The creamery at Brill, Barron county, was burned to the ground May 2d. The loss is partly covered by insurance. The plant will be rebuilt immediately. Meanwhile the Haugen creamery is taking care of the Brill patrons.

There is a proposal on foot in Langlade county to throw the county fair open, free of charge, to the public. A committee has reported that by appropriating $1,600 the county board can make a free fair possible and thus receive $2,500 state aid. The matter is now under consideration by the board which is favorably inclined to accept the proposal.

The Wisconsin Jersey Breeders' Association has decided to hold two summer meetings this year on succeeding days. The first meeting will be held at Waupaca on June 29th and the second meeting on the following day, June 30th, at Fewacres Farm, Wauwatosa. Two strong programs are being arranged and F. F. Showers, of Delavan, president, advises The Wisconsin Farmer that indications are that both meetings will be largely attended.

E. L. Liddle, secretary of the Western Wisconsin Holstein - Friesian Breeders' Association, advises The Wisconsin Farmer that the summer meeting will be held at the Indian School farm at Tomah on June 17th. C. P. Norgord, commissioner of agriculture, will speak. This association, organized eighteen months ago with nineteen members, now has a membership of fifty-four.

W. R. Stubbs, of Lawrence, Kan., who was one of the heavy buyers at the recent Holstein sales at Lake Mills and Watertown, is the former governor of Kansas. His recent purchase of thirty animals in Wisconsin brings his herd to seventy head, which he says is now headed by three of the finest bulls of that breed in America. Mr. Stubbs set out two years ago to prove that dairying in Kansas can be made profitable, and he is setting a fine example by looking to Wisconsin for his profit-paying stock.

R. A. Kolb, county agent in Taylor county, Wisconsin, is a real booster for annual cleaning up on the farm. He conducted a campaign to interest farmers in observing "clean-up" week this year and was very successful. In a signed statement to farmers he said that the housewife has her annual cleaning, but that too often that is as far as it goes on the farm.

LANDS AND HOMES

The Wheat Yield Tells the Story

of Western Canada's Rapid Progress

160 ACRE FARMS IN WESTERN CANADA FREE

The heavy crops in Western Canada have caused new records to be made in the handling of grains by railroads. For while the movement of these heavy shipments has been wonderfully rapid, the resources of the different roads, despite enlarged equipments and increased facilities, have been strained as never before, and previous records have thus been broken in all directions. The largest Canadian wheat shipments through New York ever known are reported for the period up to October 15th,

upwards of four and a quarter million bushels being exported in less than six weeks,

and this was but the overflow of shipments to Montreal, through which point shipments were much larger than to New York.

Yields as high as 60 bushels of wheat per acre are reported from all parts of the country; while yields of 45 bushels per acre are common.

Thousands of American farmers have taken part in this wonderful production. Land prices are still low and free homestead lands are easily secured in good localities, convenient to churches, schools, markets, railways, etc.

There is no war tax on land and no conscription.

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Canadian Government Agent.

No passports are neccessary to enter Canada.

Wisconsin Farms

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Prices $15.00 to $28.00 per acre.

Liberal terms if desired.

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$1000 TO $8,000 in TAYLOR, Marathon, Lincoln and other counties. Very liberal terms. Trades made. We are OWNERS. We sell horses, wagons, etc., on liberal terms; also choice holdings of unimproved, $15 to $30 per acre. LOEB-HAMMEL REALTY COMPANY (not inc.), Medford, Wisconsin. Write Chicago office: 343-3 Marquette Building. Live agents wanted.

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BUY now while lands are cheap and terms liberal. Maps and literature telling all about the state sent free. Write to Fred D. Sherman, State Immigration Commissioner, Room 604, State Capitol, St. Paul, Minnesota.

OUR COMPANY HELPS FARMERS

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THE best cheap lands of clover, alfalfa, corn, small grains, peas, sugar beets, and vegetables—no floods or drouths. Information and map free Wisconsin Advancement Ass'n, 1590 First Nat. Bank Bldg., Milwaukee, Wis.

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FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

ey Cattle Club Elects.

forty-eighth annual meeting of nerican Jersey Cattle Club held dnesday, May 3d, at the Club on West Twenty-third street, ork, was one of the best at- and most successful meetings history of the club. The fiscal st ended showed the highest l report of any previous year, gress has been noted in many ranches of club work. A nota- ture of the register of merit ring the past year is that more have completed year's tests alified than have the cows of er breed.

dent Munn, in his address, ulated the club on the splen- endance; emphasized the fact e success of the club depended he active co-operation of its rs, whose suggestions and ad- ould be given; that all were to their convictions; that the y Jersey breeder is the man hom the success of the breed , and that heretofore there en an entirely erroneous idea rd to the club, but the view- f the farmer had now been d. Mr. Munn expressed his that we now stand on the ld of the greatest forward ent the dairy world has ever and that the possibilities of sey breed were never so great the present time. The presi- oke of the National Dairy Show d he wanted to see 500 Jerseys his year. He also outlined the policies of the club which he should be followed.

V. E. Skinner spoke in regard National Dairy Council and the l Dairy Show, of which he is y and general manager, giving tion as to the work of the and the preparations for this how at Springfield, Massachu-

rs elected at the meeting are: nt, M. D. Munn, Minnesota; r, John P. Hutchinson, New directors to serve three years: eirce, New Hampshire; D. B. Texas; F. W. Sessions, New . K. Dering, Illinois. To serve year (unexpired term of John p, resigned), F. J. Bannister, l. At the meeting of the board tors after the annual meeting, V. Potter was unanimously rice president of the club. R. was re-appointed secretary.

nn County Reports.

llowing cows in Dunn County ting Association No. 2 pro- ore than forty pounds of fat hirty days ending April 15th:

nd	Herd No.	Age	Lbs. milk	Per cent fat	Lbs. B. fat
Pk					
Elstein..	6	5	1299	3.2	41.5
Cliff					
.....	9	6	1119	4.4	49.2
C lidge					
Gernsey.	25	4	843	5.2	43.8
Vitke					
ElsteinN	1	7	969	4.5	43.6
Elstein..	9	2	1110	4.2	46.6
Sultz					
Elstein..	13	5	1284	3.5	44.9
Elstein..	6	4	1194	3.4	40.6
Jinson					
.....	13		804	5.0	40.2

rty pounders in Dunn County the month of March follow:

d	Lbs. milk	Test	Lbs. fat
te, Knapp			
rsey	1035.4	4.00	41.42
stein, Knapp			
sey	957.9	4.50	43.11
, Knapp			
Guernsey	892.8	4.50	40.18
.....	1023.0	4.40	45.01
Werbury, Knapp			
Gernsey	1181.1	3.60	42.52
es orga, Knapp			
Gernsey	806.0	5.20	41.91
Lering, Eau Galle			
Dham	1091.2	4.20	45.83
G teyer, Eau Galle			
Dham	1035.4	4.20	42.49
Dham	1004.4	4.00	40.18

ars Forty-pound List.

e Avan and New Hope Cow-Test- Association has just completed its nd month's work with fourteen on the forty-pound list. This is a gain of five cows over last month. This is not as many as the tester would like to see, but, considering that the farmers have not been paying much attention to the dairy business until just a few years ago, they are showing some good results. The report for the month ending May 10th follows:

Owner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
G. J. Olstad					
Native	8	3-17-16	1515	3.4	51.5
Native	7	2-29-16	1140	3.6	41.0
C. E. Erickson					
G. Guernsey.	7	3-29-16	1134	4.1	46.5
G. Guernsey.	8	3-26-16	1125	4.4	49.5
Oscar Colrud					
G. Holstein..	4	4-9-16	1293	3.4	44.0
Alfred Brekke					
G. Holstein..	9	12-19-15	1230	3.9	48.0
Anton Brekke					
G. Holstein..	6	3-3-16	1209	3.6	43.5
G. Holstein..	8	4-16-16	1071	3.8	40.7
Henry Wogsland					
Native	6	3-6-16	1245	4.0	49.8
A. Weinmann, Jr.					
G. Holstein..	7	2-17-16	1180	3.5	41.3
R. Holstein	2	3-26-16	1070	3.8	40.7
M. J. Wrolstad					
G. Guernsey.	12	1-27-16	1260	5.0	63.0
G. Guernsey.	9	11-25-15	924	5.0	46.2
Oscar Budsberg					
Native	6	4-30-16	1167	4.2	49.0

M. E. Smith, Official Tester.
M. J. Wrolstad, Secretary.

Pepsin in Cheesemaking.

Due to reduced imports from Europe there is immediate danger of a shortage in the supply of rennet extracted for cheese factory use.

The stomach of the milk-fed calf yields rennet extract suitable for making all kinds of rennet cheese. A similar product called pepsin is obtained from the stomachs of other animals, including the pig and the sheep. This has been proposed as a substitute for rennet in the making of some, but not all, kinds of cheese.

Pepsin dissolved in water will curdle satisfactorily the ripened milk used for making American cheese, but not the sweet milk used for Swiss and Limburger, and, although few trials have been made, it probably cannot be used for brick cheese. However, if large quantities of pepsin can be supplied and used at American cheese factories there will be less difficulty in supplying rennet extract for making the other varieties of cheese for which sweet milk is used.

In past years a few trials of cheesemaking with pepsin instead of rennet have been made at the Wisconsin station, in Ohio and at Ontario, Canada. The published reports of these trials indicate that the pepsin cheese was about equal to rennet cheese in all respects. No special advantages were observed in the use of pepsin and the principal disadvantage was that the pepsin must be weighed out fresh daily and dissolved for use. Slight variations observed in the yield of cheese made with pepsin were probably due to variations in moisture content, which in most cases was not determined.

At the present time pepsin cheese is being made daily by the dairy department of the University of Wisconsin. The oldest is now less than two weeks old, but appears entirely satisfactory, according to the judgment of cheese experts and dealers who have examined them. There appears to be little danger of loss in attempting to make good marketable cheese with pepsin. Makers of American cheese are advised to procure four-ounce or larger samples of pepsin and give it a trial at their own factories at once before their supply of rennet is exhausted. Then they will be able to judge from their own observation as to the quality of cheese obtained with pepsin instead of rennet extract.

Quality of Wisconsin Butter.

To the Editor:—A large number of creameries in Wisconsin are making butter of high quality because a great deal of attention is being given the kind of cream received daily. It is not a question of cream grading alone, but good cream only at all times.

Some Wisconsin butter is not of high quality, but the time is not far distant when these factories will fall into line. The price the output of these factories should bring will be one of the deciding factors.

The April butter entered at the scoring exhibition conducted by the dairy department of the college of agriculture is not an indication of the average quality of the state's product. Ten per cent of the factories were represented and only a small number of exhibits came from the creameries that make good butter at all times. The primary object of the exhibition work is to aid the men who are not making high quality butter, but it is understood that anyone can have his butter scored.

It is to be regretted that a large number of the men who make good butter do not take part in the exhibitions. It should be remembered that to win national honors one must keep in trim by constant training. When some of the butter placed before the judges at each scoring is of high quality it furnishes material from which many valuable comparisons can be made.

In the Wisconsin April exhibition butter some 12 per cent of the entries were not made within the state. Some of these lots, as well as a few Wisconsin tubs, contained a flavor indicating that the cream had been treated before being made into butter. There are a few factories that do not realize the importance of receiving only such cream as will make good table butter. The farmer will produce and offer for sale good cream when the factory doors are closed against tainted product.

The dairy and food department has co-operated with several creameries in bringing about a better grade of raw material. Creamery operators and those in charge of cream buying stations should study the dairy laws that deal with the manufacture of food from unsanitary cream.

"No person shall by himself, his servant or agent, or as the agent of any other person, or as the servant or agent of any firm, or corporation, manufacture for sale any article of food for man from any unsanitary milk or from any unsanitary cream." (Section 4607b-6 of the state.)

Wisconsin factory operators and makers should also make a closer study of the license law, rules and regulations.

Every factory owner, operator and maker, together with all men interested in the future of Wisconsin's dairy industry should realize that tainted, off-flavored raw material will never make good butter. Good workmanship at the factory counts, but it is impossible to restore the original

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DE LAVAL
and other
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THE difference between a modern De Laval and any other cream separator is apparent at first sight. And if you will take five minutes to compare the separating bowl construction, the size, material and finish of the working parts, particularly those subject to wear, the manner of oiling, and everything which enters into the design and construction of a separator as a simple durable machine, you will still further *see the difference.*

Then if you go a step farther and turn the cranks of the two machines side by side for fifteen minutes, running milk or water through the bowl, you will see still more difference.

And if you will run the two machines side by side in practical use, as any De Laval agent will be glad to have you do, the De Laval one day and the other machine the next, for a couple of weeks, you will see still greater difference in the work of the two machines.

Every De Laval agent considers it a privilege to show the difference between the De Laval and other separators and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it. If you don't know the nearest De Laval agent write to the nearest office as below.

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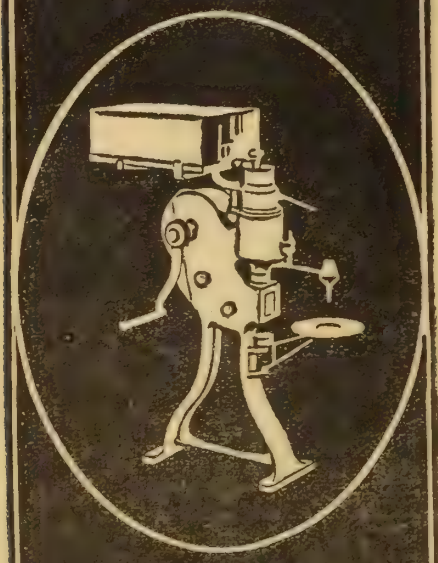

The ONLY sanitary cream separator.

The ONLY cream separator with Nickel Silver, non-rusting skimming device.

The ONLY cream separator with a successful Mechanical Washer.

The ONLY cream separator with a rustless Bowl Chamber Liner.

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with only half as many discs as other separators—discs smooth as glass, as easy to wash as a cup. Sanitary Milwaukee discs are made of aluminum—and they're rust-proof. They're interchangeable, too—go on the bowl core in any order. With fewer discs the Sanitary Milwaukee skims cleaner, quicker and easier. Means bigger cream checks for you—less work for your wife.

Catalog gives full information—write for your copy and name of your nearest dealer.

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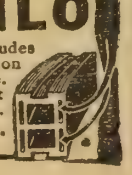
B. V. T. SILO

Notice the patented block. Excludes air and moisture. Permanent construction. Block indestructible. Why not have a Silo that will last forever? Write for free Silo book.



BRAZIL HOLLOW BRICK & TILE CO.
BRAZIL, INDIANA

flavor found in milk or cream if it is once destroyed.

The slogan for Wisconsin is "Pasteurized Butter a Safe Food." The improvement made in the quality of butter due to pasteurization is so slight that to the average consumer it is negative quantity, hence not a talking point. Factory men should not ask the question, "How much will it improve the quality to pasteurize the cream?" That is not the problem to be considered. In fact, it is not improvement in flavor of the butter that should be the question in connection with pasteurized butter. Pasteurization as applied to buttermaking from the consumer's viewpoint means more safe food. From this point of view the factory men of Wisconsin will listen to the plea for pasteurized butter.

C. E. Lee,
Wisconsin Dairy and Food Com.

Stratford Report.

The following is the March report of the cows in the Stratford Co-operative Cow-Testing Association, which during March produced more than forty pounds of fat:

Owner, name and breed	Age	When fresh	Lbs. milk	Per cent of fat	Lbs. B. fat
Wm. Schneider					
Flossy, G. J.	9	20-2	969	5.7	55.2
Sussie, G. H.	7	2-28	1348.2	3.1*41.8	
Lily, G. H.	2	2-19	1109	3.6	40.0
Spot, G. H.	6	3-6	1026.1	3.9*40.0	
Chrowser Bros.					
No. 3, R. H.	6	2-19	1466.5	3.7	54.3
No. 8, G. H.	4	12-14	1157.8	3.6	41.7
No. 15, G. H.	4	11-24	1052.8	3.8	40.0
Garrett Hughes					
Luna, R. H.	6	2-26	1754.9	3.0	52.7
Ed Hayes					
No. 28, G. H.	5	3-1	1320.6	3.8	50.2
Jacob Spindler					
Nellie, N.	8	11-20	1043.8	4.1	42.8
Fred Griesbach					
No. 11, G. J.	6	10-20	612.1	6.8	41.5

*The record of Sussie in for twenty-seven days and Spot twenty-one days.

Garrett Hughes, President.
James L. Chrowser, Secretary.
Francis Woodward, Official Tester.

Soiling For the Dairy Cow.

To the Editor:—Soiling is keeping animals away from pasture and bringing their feed green to them. Soiling is quite common in thickly settled districts, while it is almost unknown in sparcely settled districts.

This is because in thickly settled districts land is high and labor is generally cheap, while in thinly settled districts the land is cheaper and labor higher in price. In the thinly settled districts, therefore, the cheapest thing to do is to let the animals hunt their own food.

As fast as a country becomes settled it becomes more and more necessary to get all possible out of each piece of land. In the case of dairy cows soiling does this as compared to pasture. The chief reason is that the ground that produces the green food for cattle will produce a great deal more when it is not tramped than when it is tramped.

Every pressure of the cow's foot on the soil compacts it and reduces its power to produce food. Injury results both in dry weather and wet weather. In dry weather the soil particles are pressed together some, while in wet weather the feet of the animal break the thin sod and compact the soil below so that nothing will grow.

Sometimes a bare spot in the pasture will remain for several years unproductive. This, however, is avoided by soiling, and the land is made to produce its greatest possible crop of green feed for soiling.

But still there is another reason for soiling, and this is to save the manure from the cows, or other animals. When the manure is dropped on the pasture in dry weather much of it is destroyed before it gets into the soil. When the cows are kept in one place throughout the summer the manure produced during that time is as great as it is during the winter, and it is then put into the soil of the plowed fields, thus saving practically all of it.

There are other factors in favor of soiling where land is very high in price. One of these is that crops other than grass can be grown on the land, and a much greater amount of matter obtained than in the case of grass.

One of these plants, and a very valuable one, too, is corn, begin with the early sweet corn, which can be grown for soiling purposes far north of the latitude where it can be grown for the maturing of seed. Many who have tried soiling have been able to produce ten to fifteen tons per acre, for either green feeding or for silage making.

This makes it possible to keep on the same land more cows than can be kept where the cows are pastured in the summer and fed dry hay during the winter.

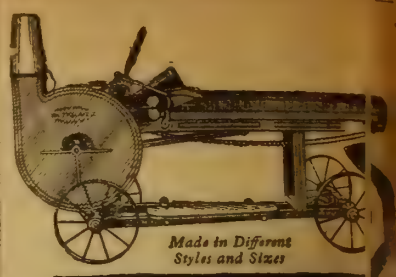
Soiling makes it possible for good sized herds of cows to be kept in the edges of cities where it would be impossible otherwise. In fact, it is one of the directions in which our dairying will be greatly developed in the future. We are bound to work toward the feeding of silage for winter and soiling for summer.

Subscriber.

Udder Development.

To the Editor:—Many owners of dairy cows do not place sufficient importance upon udder development in the cows that they keep and breed. The principle that like begets like has become one of the dominant factors in the handling of profitable milk producers. While we have known a few cows with apparently small udders that gave a good quantity of milk, we have also noticed that the majority of the same class will give a small quantity. An udder that hangs low is not to be coveted in a cow, as it does not add symmetry or beauty to the animal and too often its dangling motion when the cow is walking is an irritating influence. It cannot possibly give such good results as would an udder that reaches well to the front and rear.

When purchasing a cow always avoid one that has an inverted pyramid udder with teats that partake of the conical outline. A cow of that order is not a choice animal to milk and seldom gives good results at the pail. We have known dairymen to select one or two cows that had fine udders and teats for the purpose of building up a herd of the same order, but unless the dams have an ancestry well developed in this particular such a method is very much like a leap in the dark. Of course, a bull will influence this feature greatly, but as this function is not after his type the dam



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Every farmer who has used a EAGLE Ensilage Cutter knows its absolute reliability. When you cut corn or other silage feed is ready for the silo, you want quick service with safe, reliable, large capacity silo filler. Experience shows that the EAGLE is a compact, safe, well built, clean cutting machine of extra large cutting capacity and reliable self-feed.

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are simple, durable, light running machines. The deep-grooved and non-wearing spike rolls give far greater feeding possibilities than any other cutter. The reverse lever permits instant stopping and reversing. They are machines with easy running, durable, positive-driven blowers that will not clog. *Get catalog at once showing other special features.*

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Our Price For All Three **$.** You Save

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must be the greater factor to reproduce this development and to her and her ancestry she owes so much that pedigree has a large preparatory influence upon the unborn heifer.

There is so much real satisfaction in the milking and handling of cows that have good udders and good teats that it seems very strange that dairymen have so neglected this important feature of their herds, and by their seeming neglect far too many cows have small udders and consequently small, short teats. It will nearly always be noticed that cows with small udders, even in the best dairy breeds, usually carry too much flesh and lack that double wedge shape which is so desirable in the eyes of a modern dairyman. This is, of course, only one of the many points relating to the mating and breeding of good milk producers. W. H. U.

Reasons For Raising Baby Beef.

There have been some big changes in the beef-producing business in recent years.

In the early days large droves of steers, four, five and six years old, weighing in the neighborhood of a ton, were sent to market. You can likely remember when your father sold steers weighing 1,700 or 1,800 pounds. Those were the days of cheap grass and cheap corn. Visit the Chicago stockyards today and watch the cattle being driven over the scales you won't see many of the big fellows. You would see steers weighing 1,400 to 1,500 pounds—about the size of a good beef cow. Now I am speaking of the best class of beef cattle, those that we call "finished" or "prime" and commonly spoken of as "hog fat."

Stay at the yards long enough and you will see some steers that are smaller and still look to you to be just as "prime" as the big ones. You will hear the men around the pens say, "That's a fine bunch of yearlings."

See how things have changed? Fifty years ago a heavy steer must weigh a ton. Fifteen or twenty years ago a 1,700 or 1,800-pound steer was classed as heavy and today anything weighing over 1,400 pounds is called a heavy steer. What has caused this change?

All have bought meat at the butcher shop and you know that some pieces are cheaper. For instance, pot roast does not cost as much as round steak. Because meat has become so high priced in the past few years people who buy the expensive cuts feel that they cannot afford to buy large pieces. Now the only way to have small cuts and not destroy their shape is to cut them from smaller animals and so butchers like to buy baby beef. This class of animals furnish just as good or better meat than older cattle. Buyers will always pay top price for baby beef and will often pay more for it than for older cattle just as fat.

Younger animals get more out of their food than older ones. The digestive system—stomach and intestines—of a baby beef makes more and better use of feed than that of a three or four-year-old steer. Cattle feeders have proved that they could make cheaper gains on young cattle and we always want to do a thing the cheapest way providing we get as good results. That means dollars and cents to us and a "penny saved is a penny earned." Put the most meat on your steer at the lowest cost.

Two or three-year-old fat heifers will not bring as much money as a fat steer the same age. This is because older heifers very often carry calves. If they do their meat is too red and they don't "dress out" well. The packers know by experience about what per cent of heifers are in this condition and they make their prices accordingly. However, they will pay just as much for heifers as for steers in the baby beef class.

There has been another important change in beef production. Years ago cattlemen in this section of the country used to breed and grow their own beef, carry it until it was four, five or six years old and fatten it. But as land and corn increased in price they found that the ranchers in the West could grow an animal to two or three years of age cheaper than they could. So when the western man marketed his cattle they would go down to Chicago, buy these "feeders," as they are called, take them to their farms and "finish" or fatten them. And they made good profits because feeders were cheap and plentiful. But today they are scarce and high priced and the cattleman finds that he can grow his cattle as cheaply as he can buy them. That's why many men are quitting cattle feeding.

Now the American people are the biggest meat eaters in the world and they eat more beef than anything else. If the cattle feeder is quitting the game where are we to get beef? It will have to be bred, grown and fattened right on the farm, exactly like pork is produced. And now I come to the point I have been aiming at. Baby beef production takes the least money. Instead of having your money tied up in a breeding herd, calves, yearlings, two and three year olds and sometimes four and five year olds like grandad did, you have your money invested in cows and calves only. That means less interest and less risk. It means that you can turn your money quickly; it means that you will have more money to buy cows and a better bull and to help fix up the old farm a little. These things are important rules of good business and all successful stockmen are hard-headed business men.—[J. C. Robinson, Rock county, Wisconsin.

Shearing Time Is Here.

To the Editor:—Many flock owners will find a shearing machine has its advantages over the hand shear. With the machine the work is done faster and the sheep do not receive as many cuts if the shearer is at all careful, More wool is taken from the sheep and the fleece is taken off more evenly, which gives the flock a better and smoother appearance throughout the year.

A shearer should be able to remove the fleece from a sheep in one piece hanging together like an overcoat. Then it should be spread out on a clean table or boards, flesh side down, and all dirty locks or filthy parts, if any, discarded. The belly and neck pieces should now be turned in first, then both sides and then the whole rolled into a nice square bundle and tied with the new kind of twine (paper twine). Two strings crosswise are sufficient. If a little care is exercised in tying the fleece to get all of the flesh side on the outside attractive bundles can be made, making the wool clip salable at a higher price. It is of great importance that no other kind of twine than that made of paper be used for tying wool, as manufacturers of woolen goods object seriously to the use of any other and will pay less per pound for it, as it causes an extra expense for labor in picking out sisal from the wool which mix up with the fibers and do not take dye. This is prevented by the use of the smooth paper twine and consequently the manufacturer is willing to pay more for the wool if he can save the labor involved in picking out the sisal strands or in removing manure or filth from the fleece. Frank Kleinheinz.

The cheese industry of Outagamie county amounted to approximately a million dollars last year, according to John A. Brill, secretary of the Appleton board. He estimates that about a fifth of the cheese made in the county was sold on the Appleton board, the amount passing on the board being $193,878 during the last fiscal year.

Ask your neighbor to subscribe for The Wisconsin Farmer.

FOR sale, slightly used Kimball upright piano, beautiful case, in perfect condition, used about year, $150 cash. Flora Pfingston, care this paper.

Get all your Cows Earn

Every milch cow in your herd earned a nice profit for you that your separator *failed to deliver.* Where did the money go? Let us show you.

Every separator (except the New Sharples) loses cream if not turned at the exact speed marked on its crank. Experiment Stations and independent researches have brought out the surprising fact that 19 out of every 20 separator users turn their machines under speed and thus lose $2.40 to $12 per cow per year. (See Purdue Bulletin No. 116).

The New Sharples skims clean whether turned *fast* or *slow.* It will get you this extra profit your cows make for you, but which your fixed-feed Separator throws away.

THE NEW SHARPLES SUCTION-FEED

Separator feeds the milk into the bowl in exact proportion to the separating force. At 45 revolutions it skims clean; at 55 revolutions it skims clean; and at 35 revolutions it skims equally clean and always with *even quality cream.* No other separator has these two valuable features—*clean skimming* and *unchanging density of cream at varying speeds.*

The Suction-feed Separator has other important advantages. The hollow tubular bowl is easy to clean and easy to handle. There are no discs to wash. The oiling is automatic; no oil-caps or oil-holes; no dripping or mussing of oil; no oil waste. The top of the large supply-can is only two feet from the floor—a great convenience in filling.

Easily and quickly oiled. Once a month is sufficient.

These are some of the reasons why you should have a New Sharples and *get all the cream money all the time.*

Read the full story in our new book, *"Velvet" for Dairymen* which also explains our free trial plan. We will gladly send you a copy. Ask for it—*now.* Address Dept. 44.

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HOW UNUSED STUMP LAND MAY BE

A Glimpse of Upper Wisconsin Land When the Lumberman Has Finished His Work. The Same Land After Modern Land Clearing

FOR many years the efforts of the Wisconsin agricultural authorities have been directed chiefly toward the end of greater production. A few months ago Dean H. L. Russell conceived the idea that the Wisconsin College of Agriculture had completely overlooked a very important matter. He reasoned that considerable ammunition was being wasted in preaching better live stock, pedigreed grains, alfalfa, etc., to farmers whose land was largely covered by stumps and brush. This reasoning was father to the idea of a "Land Clearing Special," which at this time is sweeping across the northern counties of Wisconsin. Under the

BIG STUMPS WITH DEEP ROOTS REMOVED WITH MODERN STUMP PULLER.

personal direction of Mr. Carl Livingston a most unique series of demonstrations is being held. For the first time, Wisconsin settlers will be treated to a practical demonstration of land clearing. The agencies which are being used are stump pullers and dynamite. The first demonstration was held at the village of Mountain, Oconto county, May 8th and 9th. Mr. B. H. Rohan had charge of the local arrangements for this demonstration. About three hundred fifty farmers, every one of them with a land-clearing problem on his hands, were given a practical demonstration of the best methods by which unproductive stumpage may be transformed into profitable acres. The land-clearing special stopped May 11th, 12th, 13th and 15th in Langlade county. The Langlade county arrangements were in charge of Mr. Frank G. Swoboda, of Antigo, county agricultural representative. One demonstration was given in a ten-acre field of stumps a mile east of Antigo, and the other in a field near the village of Elcho. Continuing its course, the land-clearing schedule called

A FINE ORCHARD STARTEDWHEN THE WORST OF THE STUMPS WERE REMOVED.

for demonstrations at Crandon, May 16th, 17th and 18th; Three Lakes, May 19th and 20th; Eagle River, May 22d and 23d; Woodruff, May 25th and 26th; Mayfield, May 29th and 30th; Mason, May 31st and June 1st; Phipps, June 2d and 3d; Bennett, June 5th and 6th; Spooner, June 7th and 8th; Baronett, June 9th and 10th; Rice Lake, June 12th and 13th; Radisson, June 14th and 15th, and Cornell, June 16th and 17th. The local representatives in charge at the stations named are respectively as follows: John Swenehart, Jr., Forest county representative; W. D. Juday, Oneida county representative; Oscar Gunderson, Vilas county representative (for both Eagle River and Woodruf); A. H. Wilkinson, C. H. Worden, C. P. West, Sawyer county representative; J. M. Walz, Douglas county representative; E. M. Elliott, R. L. Cuff, Barron county representative (for both Baronett and Rice Lake); C. P. West, Sawyer county representative, and A. L. Fox.

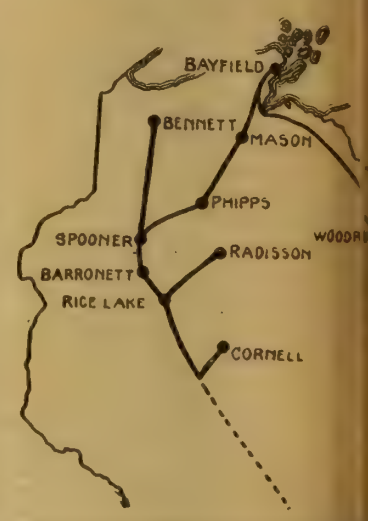
It would seem that land-clearing methods should have received much more attention long since in upper Wisconsin. The purpose of the series of demonstrations now arranged is to prove to farmers and settlers that land can be cleared at a small cost by use of both dynamite and mechanical power. The mechanical apparatus used in the demonstrations included several makes of stump pullers. There was one outfit which used man power only. The others used horse power. Mr. Livingston explained that there might have been added to this a demonstration of the use of steam and gasoline power. In quite a few localities the tractor has been used to good advantage in stump pulling. Gasoline power has also been found very useful for clearing the land after the stumps have been pulled. A great many very interesting facts and opinions were developed by the demonstrations. The representatives of the manufacturers took time to answer questions. Occasionally there was found a farmer who felt that the state was going to considerable expense to demonstrate the value of manufacturers' products. This thought was due entirely to a misunderstanding and a misconception of the plan of the campaign. As a matter of fact, the state paid practically nothing towards the expenses of the "Land Clearing Special." The

THE CAPSTAN STUMP PULLER WITH HORSE POWER SHOWING ANCHOR STUMP.

use of the machinery was donated by the manufacturers. The dynamite and powder used was donated by one of the large powder concerns. The demonstrators paid their own expenses. The advertising was done by the local committees, with some assistance from the College of Agriculture. The expense of transportation was met entirely by the railroads. Beginning at Mountain, the trip was made over the Chicago & Northwestern railroad to Bayfield. The balance of the trip was made over the Chicago, St. Paul, Minneapolis & Omaha railroad, a part of the Northwestern Lines. Mr. Ford J. Allen, representative of the Northwestern Lines, assisted in making the arrangements and accompanied the special several days.

The Wisconsin Farmer has repeatedly called attention to the fact that there are something like ten million acres of undeveloped land in upper Wisconsin. This land, when cleared, becomes a rich, rolling prairie, well drained, and adapted to general farm and garden crops. It is surprising how little is really known about land clearing. The United States Department of Agriculture has made a careful survey of upper Wisconsin and has announced that about 7,500,000 acres of uncleared land is suitable for farming. The College of Agriculture has issued bulletins on clearing. But the matter of the cost of clearing has been largely guesswork. Overenthusiastic land traders have placed the cost of clearing at a very low figure. Settlers who have attempted to clear lands by improper methods have given very discouraging reports as to the expense. Of course, conditions enter largely into the expense. One trouble with land clearing in upper Wisconsin has been that there was so little good equipment with which to work. We were surprised to find several counties where not more than two or three stump pullers had ever been used.

Many costly mistakes have been made in clearing. A good many farmers have attempted, to their sorrow, to pull green stumps. They have found dynamiting such stumps expensive. They have found that in some soils dynamite has brought to the surface



ROUTE OF THE LAND-CLEARI... WIS...

a considerable amount of subsoi... as is the top soil. The result ha... the removal of the stumps. Thi... too great a charge of explosive... sary to manure the land for t... fertility. In many cases careful... soil and big crops have been rai... few settlers get much ground w... all the larger stumps are old ... much more easily than a green...

It is apparent from the resul... method of clearing land. Mr ... figures on the cost of the vario... onstration is conducted somew... stration to this extent; the field ... companies represented in the ... field is allotted to the compan... portion is allotted to a one-m... divided up among the horse-po... investigations will determine ... He will get interesting facts anc... the straight side pull and the ... He will gather information fr... Eventually, he hopes to be able ... as to the real cost of clearing st...

The reliable stump puller of t... machine. The power exerted b... of the older stumps are pulled ...

REMOVING FIVE STUMPS AT O... CHARGE EXPLOD...

CONVERTED INTO FERTILE FARMS

ds Have Been Brought Into Play. **This Is the Final Result of Good Clearing Methods and Practical Farming.**

IAL THROUGH UPPER

bsoil is not rich and fertile or crops the year following n due in many instances to e cases it has been neces- e years to bring back its namite has not injured the st season. Of course, very are green stumps. Nearly e pulled out or blown out

ere is more than one good on is attempting to keep ls. The land-clearing dem- order of a tractor demon- divided among the various ration. A portion of the ting explosives. Another puller, and the balance pullers. Mr. Livingston's ve cost of each method. s to the difference between pull in removing stumps. rs and settlers en route. an authoritative statement under the various methods. ome to be a very practical ullers is very great. Most Stumps which have been

VITH DYNAMITE. THIS LECTRICITY.

standing five or six years, or longer, are, of course, much easier to pull, either by the straight upward or side pull, than the green stumps. Any method of removing stumps, outside of the use of dynamite, brings up a large amount of earth attached to the roots. The weight of earth is often as much as one ton and sometimes two or three tons. One of the demonstrators at the recent clearing show has adopted the plan of pulling with a stump puller and then inserting a charge of powder in the center of the stump so as to jar loose the dirt which has come up with the roots. This was found to work very well except in some instances where the dirt raised was a hard clay. In any light soil this method is very practical. Any discussion for the purpose of determining absolutely the best and cheapest method of clearing land under all circumstances would be futile. Everything depends on the age and character of the stumps and the condition of the soil. A charge of dynamite which would easily lift a certain kind of stump in a certain kind of soil might fail under other conditions. To clear land to the best advantage one should understand the character of the stumps and of the soil. The size of a stump does not necessarily determine whether it can be most easily pulled out of the ground. At one of the demonstrations a large hemlock was used for an anchor stump. The top of the hemlock had evidently been cut seven or eight years. It was a hardy, healthy looking stump, however, from outside appearances. The stump which was to be pulled was a small hard maple which had been cut about a year and a half ago. It was not surprising to the old settlers to see the little twelve-inch hard maple stand firm as a rock while the big thirty-inch hemlock anchor stump was pulled out. The small hard maple stump proved to be one of the hardest propositions on the field. Before it could be pulled with the stump puller which was being used on it, it was necessary to split the

SETTLERS SHOW GREAT INTEREST IN MODERN STUMP PULLING METHODS.

stump with a charge of powder. The demonstrator who had charge of the work with explosives accomplished this very easily and the stump was then pulled out, in two sections. While the ordinary method is to pull out stumps with a chain or cable it was found advisable frequently to use the steel stump hooks. These have the appearance of a clawhammer, only many times as large. The claw hook weighs about 100 to 150 pounds. It is a very useful tool in stump-pulling operations.

"Safety First" was the motto adopted during the demonstrations, as applied to the use of dynamite. Many who have never used explosives have an idea that dynamite is exploded like a firecracker —a fuse stuck into the stick. Such a method would probably only burn the cartridge. Blasting caps or detonators are used, and these are sensitive to shock, friction or heat and should be handled with great care. A cap box has been designed by the College of Agriculture. It is a foolish habit to keep blasting caps loose in the pocket. During the demonstration a small electric storage battery was used to explode the charges. Such a field battery is inexpensive and almost invaluable if any considerable amount of dynamiting is to be done.

Demonstrations as they have been conducted thus far prove conclusively that land can be cleared at a reasonable expense with stump pullers or dynamite and, further, that these two methods work well when combined. There are a great many stumps which can be taken out more economically with the use of powder or dynamite as a help, than could be pulled without the use of explosives. There are a great many instances where explosives are not necessary and where the stump puller can accomplish the work with ease.

The gist of the whole matter is that there are not nearly enough stump pullers in upper Wisconsin and not nearly so much explosives used as there should be. We have no doubt the campaign carried on by the manufacturers will result in great benefit to them. In every one of the twenty or more counties visited by the land-clearing special, interest has been aroused in these modern methods of clearing land. We were advised by some of the county agents that they have repeated calls for further information, both as to stump pullers and the use of explosives. Doubtless there will be many settlers who will approve one method and others who will approve another. It has been quite satisfactorily demonstrated that the big land-clearing projects, such as the one attempted recently by the Soo Line, have not been very satisfactory to the settler with a small tract. In the main it seems to be better for the clearing to be done in small jobs. The cost of an outfit such as some of the

A GOOD TEAM AND MEN WHO KNOW STUMPS FACILITATE LAND CLEARING.

railroad companies have undertaken to use runs up into several thousand dollars. It is necessary to have eight or ten men to operate it. It clears land rapidly but not so economically as might be supposed. Furthermore, it leaves a great amount of work to be done afterward by the settler. Mr. Livingston made the statement on one of his demonstrations that his investigations up to this time indicate to him that the good, clean job of clearing is most likely to be accomplished with the small outfit. It is not necessary for every settler to have a stump-pulling outfit, but it seems to be best for him to have a part in the work of clearing so that he may see that it is done well. We have no doubt many settlers will secure stump-pulling

SPLITTING A STUMP WITH POWDER SO THAT IT CAN BE HANDLED BY THE STUMP PULLER.

outfits and use them on their own farms and also on the farms of their neighbors. Others will make a more careful study of the use of explosives for the clearing of their own land and will also

Continued on page 19.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Batteries Wear Out.

Would you please advise me as to my gasoline engine? When I use it one day steadily it wears out a new set of dry cells.

Answer.—Either the contact points of the engine timer remain in contact too long or there is a short circuit in the wiring between the switch and the engine or a ground or short circuit at the timer. See that the contact points close only an instant. See that the insulation is good on all your wires and that no bare ends of the wires are sticking out from under the binding post nuts. Examine the timer and see that the parts are clean and that the insulation is good.

Cementing Canvas.

I would like to know what kind of cement I could use to cement canvas together and to cement canvas to rubber. I am putting one auto tire on top of another and I would like to get some kind of cement to stick them.

Answer.—Liquid glue may be used to cement canvas to canvas, the canvas being clamped together in a press while drying. For your purpose it would be better to use uncured rubber and rubber cement, washing the cemented sides of the canvas with the cement, placing a sheet of the uncured rubber between them, clamp them together in a vulcanizer and vulcanize them. You will not be able to do a very good job without a vulcanizing outfit.

Using Kerosene.

Owing to the increase in the price of gasoline, I would like to know if it would be injurious to a one-horsepower gasoline engine to use kerosene as fuel. My engine will run on kerosene after running a few minutes on gasoline, but it smokes badly. Do I need a different mixing chamber? Or could I run the feed pipe from the kerosene tank around the cylinder or exhaust pipe and then to the carburetor?

Answer.—Many engines will run on kerosene after they become hot. Kerosene should be used with caution. The smoking is a sure indication that the kerosene is not burning as it should and carbon troubles are sure to follow. The oil in the crank case must also be watched, as the unburned kerosene may work down into the oil, thinning it and making it unfit to lubricate. To aid the carburetion of the kerosene use a brass or copper feed pipe, wrapping it around the exhaust pipe four or five times as near as possible to the mixing valve or carburetor. Run a hot air pipe from the mixing valve or carburetor to a hood around the exhaust pipe or cylinder.

Steam Valve Setting.

I would like to know what is the matter with my engine. It takes so much wood and water. It is a Port Huron make, sixteen horse power, with piston valve.

Answer.—The valve may be worn so that it leaks badly or it may not be set properly. The piston may need new rings. It may be that the cylinder is also worn so that it should be rebored. The following instructions for setting a Port Huron piston valve are given by the makers:

Be sure to have the crank on dead center. Set the eccentric on the shaft opposite the crank pin. If the eccentric or shaft have not been replaced by others since leaving the factory holes will be found in the shaft for set screw points.

With crank on either dead center the strap should not move on the eccentric as the reverse lever is thrown backward and forward. If it does, note whether it moves with or opposite the direction of the throw of the lever. If it moves with on one center and opposite on the other center the eccentric is not quite to its correct position and should be put there before attempting to do anything else. If it moves with the lever on both centers the eccentric strap arm, connecting to the slide pin, is too short; and if it moves opposite it is too long. In either case the correct length can be made by cutting the babbitt out of the top end of the eccentric strap and adjusting to the correct length and rebabbitting.

This being done, run the engine slow and pry against the flywheel to make the engine labor a little so the sound of the exhaust will be distinct, and note if the exhaust at each end is equal and even. If unequal shift the length of the valve stem outside, a little at a time as the engine runs, until it is even. Reverse the engine and repeat the operation until the exhaust at both ends of the stroke, running in either direction, becomes equal.

Engine Lacks Power.

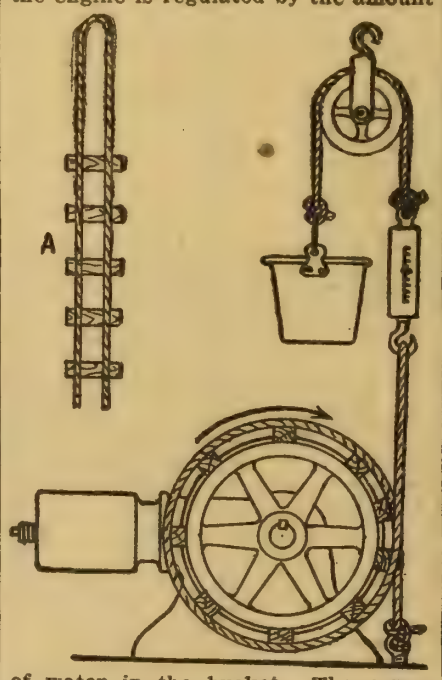
I have a stationary gasoline engine that has no power. The engine has a ten-inch bore and ten-inch stroke. It runs 250 revolutions per minute. What horse power is it?

Answer.—Your engine should develop seventeen horse power. The first thing necessary for power is good compression. If compression is not good examine the valves. See that they seat properly and do not leak. If they leak grind them in with emery flour and oil. If the engine has been run a long time the rings may be worn, in which case new rings are necessary. If the engine is new it may be the rings are not well "run in," in which case the compression will be better after the engine has run a few weeks. If the compression is good check up the timing. The exhaust valve should close and the intake valve open soon after the end of the exhaust stroke. The spark should occur near dead center at the end of the compression stroke when the spark is in starting position. See that your engine gets plenty of gasoline, but not enough to cause it to smoke. Also see that your engine bearings are well lubricated so that the engine runs freely.

Brake Horse Power.

Please publish a sketch showing how to test for brake horse power of a gasoline engine. Can a spring scale be used? How is the horse power figured from the pull on the scales?

Answer.—The figure shows how to arrange the apparatus. Several hardwood blocks, notched out to fit the rim of the flywheel, are fastened by staples or nails to a loop of rope, as shown at A in the figure. The ends of the rope are fastened to the floor. The rope is passed around the flywheel so that the wooden blocks bear against the face of the wheel. A pair of spring balances is hooked into the loop of the rope and suspended from the ceiling by a rope running over a pulley. At the other end of the rope is a basket. The amount of load on the engine is regulated by the amount



of water in the bucket. The arrow shows the direction of rotation of the flywheel. If the flywheel runs opposite place the scale on the other side, so that the flywheel pulls on the scale. Use a little oil on the blocks. It will be necessary to use water also to keep the block from burning, as considerable heat is generated.

To make the test, proceed as follows: Leaving the brake free with just enough weight on the bucket side to balance the weight of the scale and brake, read the scale to see how much dead weight there is. This dead weight must be subtracted from the scale reading when the engine is under load. Start the engine; allow it to run for some time with the brake loose, until the engine becomes warm. Then tighten the brake by pouring water into the bucket until the engine just begins to slow down, due to overload. Take the scale reading; also determine the R. P. M. of the flywheel. The diameter or circumference of the flywheel must also be known.

To figure the horse power multiply the circumference of the flywheel in feet by the revolutions per minute by the pull in pounds on the scale—deducting the dead weight—and divide by 33,000. The result is the brake horse power. Here is a typical example:

Diameter of flywheel, 36 inches.
Revolutions per minute 200.
Dead weight on scale, 3 pounds.
Total pull on scale, 63 pounds.

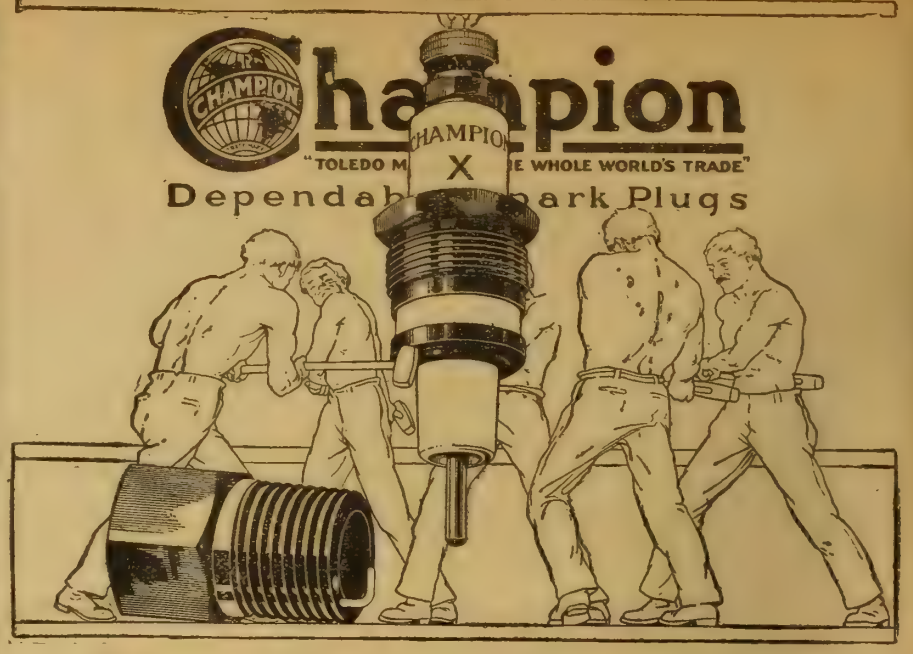
The circumference of the flywheel in feet=36×3.1416÷12=9.4248 ft.

The actual pull on the scales=63 lbs.—3 lbs.=60 lbs.

Applying the above rule,

9.4248×200×60÷33000=3.4.

Therefore, the above engine would test 3.4 horse power.



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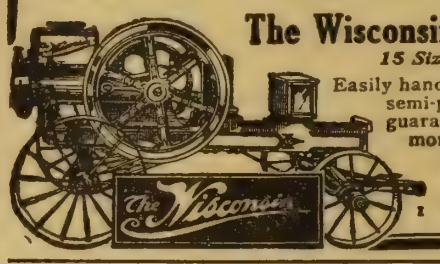

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UPPER WISCONSIN

County Settlers' Agent.

Marinette county has hired what is known as a "settlers' agent." His duties are not necessarily to promote scientific agriculture, but to help the new settlers when they arrive with their carloads of goods and stock, and get them located on their land, and get up some buildings to shelter their families and stock.

He also helps the settler to buy teams, dairy cattle, harness, wagons, feed and other supplies which they need, and which they do not know where to get it in a new country without paying exorbitant prices.

Although the new plan has been in effect only three weeks it can already be seen that it will be worth many hundreds of dollars each year in helping new settlers to make good and in keeping them from becoming discouraged and wanting to move back to the states from which they came from.

The position in Marinette county is filled by S. E. Bennett, a practical farmer who for the past three years has been chairman of the committee in charge of the great annual Marinette County New Settlers' Picnic, which was attended last year by over 4,000 people.

Mr. Bennett came to Marinette county as a settler from the state of Illinois, and it was not only his experience as a settler and a farmer which recommended him for the place, but his ability as an organizer, which was shown in the success of the big annual settlers' picnic. He will organize farmers' clubs, and co-operative land clearing, plowing, etc., in all the new settlements of the county.

One instance of the value of this work will give us an idea of the plan in general. A new settler had just arrived in the county and wanted to get enough land cleared to begin farming this year. He wanted a team in short order and was about to pay $600 to a horse dealer when he was referred to the new settlers' agent. Examination showed that one of the horses which he was about to buy was badly ruptured, and was almost useless for work.

The settlers' agent keeps a list of all good live stock which is for sale in the county, and he was able to direct the new settler to a man from whom a perfectly sound draft team of five and six year olds was purchased, together with a new harness for $375. The new settler was saved at least $200 on the deal.

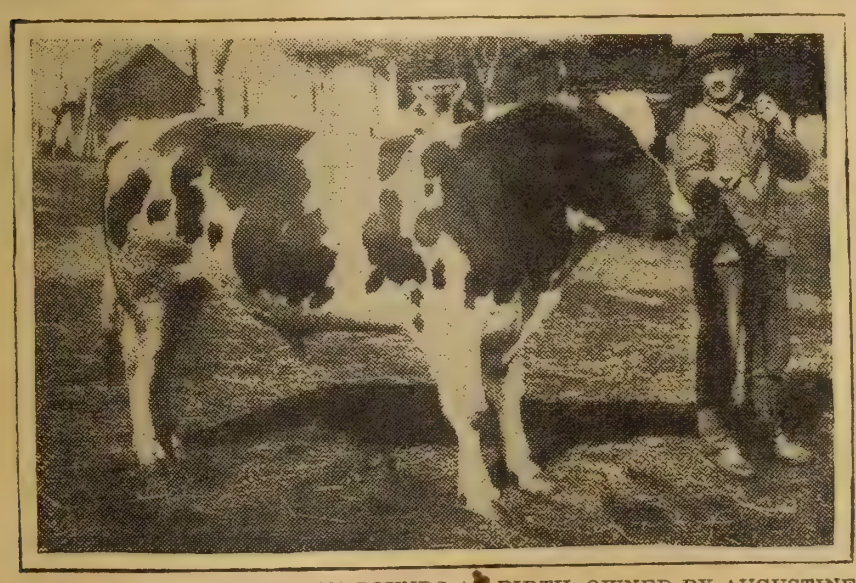
Feeling that he has a friend who will stand by him in getting located in a new country, and in getting acquainted with his neighbors the new settler and his family do not have the experience of loneliness which keeps so many from taking advantage of the very cheap good lands which they can get in Upper Wisconsin.

It is likely that the Marinette county plan will be followed in other Upper Wisconsin counties just as soon as the successor of the work is recognized.

Secretary Bennett works under the direction of the Marinette County Advancement Association, and has his office in Wausaukee, Wisconsin. The president of the association is Mr. George E. Bogrand, publisher of the Wausaukee Independent.

It was this association which started the co-operative dairy cattle plan in Marinette county which has since become known throughout the country, and which has brought over $20,000 worth of good dairy cattle into Marinette county in the past two years.

This pure-bred Holstein, with a seven-day record of 26.7 pounds of fat, is the highest producer in Upper Wisconsin, say her owners, Augustine Bros., Marinette county.



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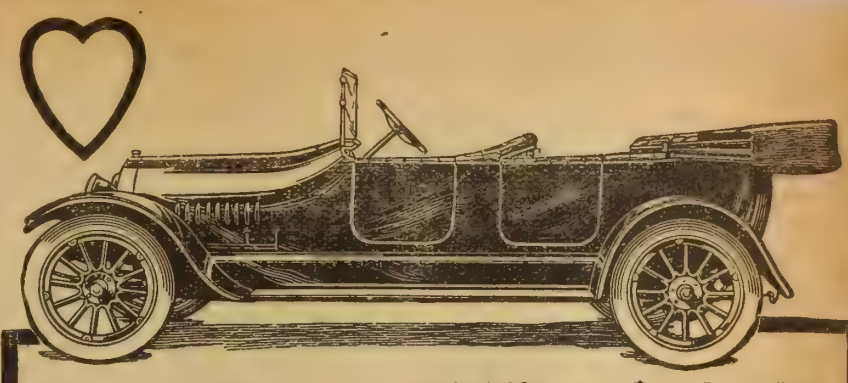

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Five-Year Rotation For Upper Wisconsin.

(Continued from last week.)

A good five-year rotation well adapted to the heavy clay lands of the Lake Superior region and the recently cleared loam soils of north-central Wisconsin consists of. Small grain and clover, clover, mixed clover and timothy, peas and cultivated crops. If the land is weedy it is preferable to let peas follow instead of precede cultivated crops. This rotation is not well adapted to farms of less than sixty acres. The section in mixed timothy may be pastured or cut for hay as desired.

A FIVE-YEAR ROTATION FOR HEAVY SOILS.

The rotation is a good one for naturally fertile soil and is well adapted to dairy farming with peas being grown as a cash crop. Good provision is made for maintaining the nitrogen and humus supply of the soil. The section in mixed clover and grasses may be pastured or cut for hay as circumstances may demand. As the soil requirements of alfalfa become better known it likely will replace clover on many Upper Wisconsin farms.

Extensive tests carried on by the experiment station have demonstrated that the red clay soils bordering Lake Superior are well adapted to growing clover for seed. Good results have been obtained by growing the crop in a rotation as follows: Small grain seeded to clover, one year; clover for seed, one year, and mixed hay, c year. The land is then plowed up a reseeded to clover with small gra preferably wheat. A better grade seed and a larger yield to the a would be obtained by following a tation which includes a cultiva crop, such as rutabagas, cabbage, tatoes or corn. The following thr year rotation: Small grain and ver, one year; clover for seed, year, and cultivated crops, one y is also suggested. This rotation be well adapted to new farms by c

bining sheep raising with the grov of clover for seed.

Potato raising when propery r aged is a profitable industry in n localities of Upper Wisconsin. though good crops may be grow heavy soils, the sandy loams are pecially well adapted to potato duction. For best results this should be grown in rotation with c crops and always following a leg of some kind. Potatoes should no low corn or corn potatoes, since crops draw heavily on the fertili the soil. Such a practice tends t haust the vegetable matter in the In the rotations which have been potatoes can be planted as one o cultivated crops. As a rule, it is b to apply manure to the clover rather than just before planting t tatoes, for scab is more common potatoes are planted on freshly nured land. The three-year rot just described is excellent for sec where potatoes are extensively g As a general rule, cropping to toes oftener than once in three is not to be recommended.

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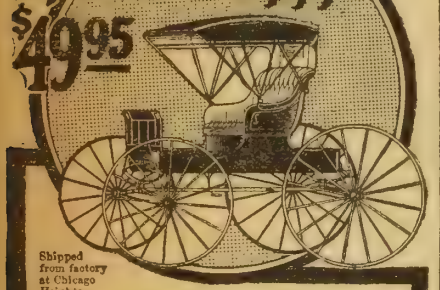

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ADANT & SONS, Box 19, Hamilton, Ill.

HEPSEY BURKE—A Sister to David Harum

By F. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

CHAPTER XXI.

Uninvited Guests.

A FEW nights later, when Maxwell returned from his work he found Mrs. Burke sitting on the front platform of the tent with Mrs. Betty, and, having washed and changed his clothes, he persuaded their visitor to stay to supper. After supper was over they sat out doors, chatting of Maxwell's amusing experiences.

They had not been sitting long when their attention was attracted by a noise up the street, and, going to the fence, they saw a horse, over which the driver evidently had lost control, galloping towards them, with a buggy which was swerving from side to side under the momentum of its terrific speed.

Maxwell rushed into the middle of the street to see if he could be of any assistance in stopping the horse and preventing a catastrophe, but before he could get near enough to be of any service the animal suddenly shied, the buggy gave a final lurch, overturned an was thrown violently against a telegraph pole. The horse, freed, dashed on, dragging the shafts and part of the harness. The occupant of the buggy had been thrown out against the telegraph pole with considerable force, knocked senseless, and lay in the gutter, stained with blood and dirt. Mrs. Maxwell and Betty lifted the body of the buggy, while Maxwell pulled out from under it the senseless form of a man; and when they had turned him over and wiped the blood from his face, they discovered, to their utter amazement, that the victim was no less a personage than the Senior Warden, Sylvester Bascom.

Of course, there was nothing to be done but to carry him as best they could into the tent and lay him on a lounge. Maxwell ran hastily for a doctor, while Hepsey and Mrs. Betty applied restoratives, washed the face of the injured man and bound up as best they could what appeared to be a serious wound on one wrist and another on the side of his head. The doctor responded promptly, and, after a thorough examination, announced that Bascom was seriously hurt and that at present it would be dangerous to remove him. So Mrs. Betty and her guest removed Maxwell's personal belongings and improvised a bed in the front room of the tent into which Bascom was lifted with the greatest care. Having done what he could, the doctor departed, promising to return soon.

In about twenty minutes there were signs of returning consciousness and for some time Bascom looked about him in a dazed way and groaned with pain. Mrs. Burke decided at once to remain all night with Mrs. Betty and assist in caring for the warden until Virginia could arrive and assume charge of the case. After about an hour Bascom seemed to be fully conscious as he gazed from one face to another and looked wonderingly at the canvas tent in which he found himself. Mrs. Burke bent over him and inquired: "Are you in much pain, Mr. Bascom?"

"Where am I?"

A curious expression of mild triumph and amusement played across Mrs. Burke's face as she replied:

"You are in Donald Maxwell's tent. This was the nearest place where we could bring you at the time."

For a moment a vestige of color appeared in Bascom's face and he whispered hoarsely:

"Why didn't you take me home?"

"Well, we were afraid to move you until the doctor had examined you thoroughly."

The patient closed his eyes wearily. It was evident that he was growing weaker and just as the doctor returned he again lapsed into unconsciousness. The doctor felt of Bascom's pulse and sent Maxwell hastily for Doctor Field for consultation. For fifteen minutes the doctors were alone in Bascom's room and then Doctor Field called Maxwell in and quietly informed him that the warden had lost so much blood from the wound in the wrist that there was danger of immediate collapse unless they resorted to extreme measures and bled someone to supply the patient. To this Maxwell instantly replied:

"I am strong and well. There is no reason why you should hesitate for a moment. Send for your instruments at once; but my wife must know nothing of it until it is all over with. Tell Mrs. Burke to take her over to Thunder Cliff for an hour or two on the pretext of getting some bedding. Yes, I insist on having my own way, and as you say, there is no time to be lost."

Doctor Field took Mrs. Burke aside and the women immediately departed for Thunder Cliff. The necessary instruments were brought and then the three men entered the sick room.

In about twenty minutes Maxwell came out of the invalid's room, assisted by Doctor Field, and stretched himself on the bed.

Bascom's color began slowly to return; his pulse quickened, and Dr. Field remarked to his colleague:

"Well, I think the old chap is going to pull through after all; but it was a mighty close squeak."

Meanwhile, the messenger who had been sent out to Willow Bluff to appraise Virginia of her father's accident returned with the information that Virginia had left the day before, to stay with friends, and could not possibly get home till next day. It was decided to telegraph for her; and in the meantime the doctors advised that Mr. Bascom be left quietly in his bed at the new "rectory," and be moved home next day, after having recovered some of his lost strength. Mrs. Betty and Mrs. Burke took turns in watching by the invalid that night and it might have been observed that his eyes remained closed, even when he did not sleep, while Mrs. Burke was in attendance, but that he watched Mrs. Betty with keen curiosity and wonder from between half-closed lids, as she sat at the foot of his bed sewing or moved noiselessly preparing the nourishment prescribed for him by the doctors and which the old gentleman took from her with unusual gentleness and patience.

It was Mrs. Burke who, having learned of the time when Virginia was expected to return home, drove out to Willow Bluff with Mr. Bascom and assisted in making him comfortable there before his daughter's arrival. He volunteered no word on their way thither, but lay back among his cushions and pillows with closed eyes, pale and exhausted—though the doctors assured the Maxwells that there was no cause for anxiety on the score of his removal, when they urged that he be left in their care until he had regained more strength.

It was a white and scared Virginia who listened to Hepsey's account of all that happened—an account which neither overstated the Bascoms' debt to the Maxwells nor spared Virginia's guilty conscience.

When she found that her father had been the guest of the Maxwells and that they had played the part of good Samaritans to him in the tent in which the Senior Warden had obliged them to take refuge, she was thoroughly mortified, and there was a struggle between false pride and proper gratitude.

"It is very awkward, is it not, Mrs. Burke?" she said. "I ought certainly to call on Mrs. Maxwell and thank her—but—under the circumstances——"

"What circumstances?" asked Hepsay.

"Well, you know, it will be very embarrassing for me to go to Mr. Maxwell's tent after what has happened between him and—my father."

"I'm not sure that I catch on, Virginia. Which happenin' do you mean? Your father's cold-blooded ejection of the Maxwells from their house or Mr. Maxwell's warm-blooded sacrifice to save your father's life? Perhaps it is a bit embarrassing, as you call it, to thank a man for givin' his blood to save your father."

"It is a more personal matter than that," replied Virginia, gazing dramatically out of the window. "You don't quite seem to appreciate the delicacy of the situation, Mrs. Burke."

"No, I'm blessed if I do. But then you know I'm very stupid about some things, Virginia. Fact is, I'm just stupid enough to imagine—no, I mean think—that it would be the most natural thing in the world to go straight to the Maxwells and thank 'em for all they've done for your father in takin' him in and givin' him the kind of care that money can't buy. There's special reasons that I needn't mention why you should say thank you and say it right."

Virginia examined the toe of her boot for some time in silence and then began:

"But you don't understand the situation, Mrs. Burke."

"Virginia, if you don't stop that kind of thing I shall certainly send for the police. Are you lookin' for a situation? If you have got anything to say, say it."

"Well, to be quite frank with you, Mrs. Burke, I must confess that at one time Mr. Maxwell and I were supposed to be very good friends."

"Naturally. You ought to be good friends with your rector. I don't see anything tragic about that."

"But we were something more than friends."

"Who told you? You can't believe all you hear in a town like this. Maybe someone was foolin' you."

"I ought to know what I am talking about. He accepted our hospitality at Willow Bluffs and was so attentive that people began to make remarks."

"Well, people have been makin' remarks ever since Eve told Adam to put his apron on for dinner. Any fool can make remarks and the biggest fool is the one who cares. Are you sure that you didn't make any remarks yourself, Virginia?"

Virginia instantly bridled and looked the picture of injured innocence.

"Certainly not!" she retorted. "Do you think that I would talk about such a delicate matter before others?"

"Oh, no, I suppose not. But you could look wise and foolish at the same time when Maxwell's name was mentioned, with a coy and kittenish air which would suggest more than ten volumes of Mary Jane Holmes."

"You are not very sympathetic, Mrs. Burke, when I am in deep trouble. I want your help, not ridicule and abuse."

"Well, I am sorry for you, Virginia, in more ways than one. But really I'd like to know what reason you have to think that Donald Maxwell was ever in love with you; I suppose that's what you mean."

Virginia blushed deeply, as became a gentlemaiden of her tender years, and replied:

"Oh, it is not a question of things which one can easily define. Love is vocal without words, you know."

"Hm! You don't mean that he made love to you and proposed to you through a phonograph? You know I had some sort of idea that love that was all wool and a yard wide meant business, usually got vocal at times."

"But Mr. Maxwell and I were thrown together in such an intimate way in parish work, you know."

"Which did the throwing?"

"You don't for one moment suppose that I would intrude myself or press myself on his attention do you?"

"Oh my gracious, no! He is not the kind of a man to be easily impressed. He may have seen a girl or two before he met you; of course, I mean just incidentally, as it were. Now, Virginia Bascom, allow me to ask you one or two plain questions. Did he ever ask you to marry him?"

"No, not in so many words."

"Did he ever give you any plain indiction that he wanted to marry you? Did he ever play the mandolin under your window at midnight? Did he ever steal one of your gloves or beg for a rose out of your bouquet or turn out the gas when he called?"

"No, but one night he sat on the sofa with me and told me that I was a great assistance to him in his parish work and that he felt greatly indebted to me."

"Hm! That's certainly rather pronounced, isn't it? Did you call your father or rise hastily and leave the room, or what did you do?"

"Well, of course, it was not a proposal, but the way he did it was very

suggestive and calculated to give a wrong impression, especially as he had his arm on the back of the sofa behind me."

"Maybe he was makin' love to the sofa. Didn't you know that Donald Maxwell was engaged to be married before he ever set foot in Durford?"

"Good gracious, no! What are you talking about?"

"Well, he certainly was, for keeps."

"Then he had no business to pose as a free man if he were engaged. It is dreadful to have to lose faith in one's rector. It is next to losing faith in—in——"

"The milk man. Yes, I quite agree with you. But you see I don't recall that Donald Maxwell did any posing. He simply kept quiet about his own affairs—though I do think it would have been better to let people know that he was engaged from the start. However, he may have concluded his private affairs were her own business. I know that's very stupid, but some people will persist in doin' it, in spite of all you can say to 'em. Perhaps it never occurred to him that he would be expected to marry anyone living in a little sawed-off settlement like this."

"There's no use in abusing your native village; and"—her voice quavered on the verge of tears—"I think you are very unsympathetic." She buried her nose in her handkerchief.

Mrs. Burke gazed sternly at Virginia for a full minute and then inquired:

"Well, do you want to know why? You started with just foolishness, but you've ended up with meanness, Virginia Bascom. You've taken your revenge on people who've done you nothin' but kindness. I know pretty well who it was that suggested to your father that the mortgage on the rectory should be foreclosed and the Maxwells turned out of house and home. He's always been close-fisted, but I've never known him to be dead ugly and vindictive before.

"Yes. You were behind all this wretched business—and you're sorry for it and wish you could undo the unkindness you've done. Now I am goin' to talk business—better than talkin' sympathy, because it'll make you feel better when you've done what I tell you. You go and call on Mrs. Betty immediately and tell her that you are very grateful to her husband for saving your father's life and that money couldn't possibly pay for the things she and Mr. Maxwell did for him and that you're everlastingly indebted to 'em both."

"But—but," wailed the repentant Virginia, "what can I say about the tent? Pa won't go back on that—not if his life had been saved twice over."

"Never you mind about that. You do your part of the business and leave the rest to the other feller. You can bet your bottom dollar it won't be the Maxwells that'll raise the question of who turned 'em out of the rectory."

"I'll go right away, before I weaken. Oh," she cried, as Hepsey put a strengthening arm about her, "I've been wrong—I know I have. However shall I make it right again?"

When Virginia arrived at the tent and pulled the bell cord Mrs. Betty pushed apart the curtains and greeted her visitor with the utmost cordiality.

"Oh, Miss Bascom! I am so glad to see you. Come right in. Donald is out just now, but he will return presently, and I'm sure will be delighted to see an old friend. This way, please. Is your father improving satisfactorily?"

This greeting was so utterly different from what she had expected that for the moment she was silent, but when they were seated she began:

"Mrs. Maxwell, I don't know how to express my gratitude to you for all you have done for my father. I—I—"

"Then I wouldn't try, Miss Bascom. Don't give the matter a single thought. We were glad to do what we could for your father and we made him as comfortable as we could."

Virginia's heart was quite atrophied and so with choking voice she began:

"And I'm afraid that I have not been very civil to you—in fact, I am sure that I owe you an apology——"

"No, never mind. It's all right now. Suppose you take off your things and stay to supper with us. Then we can have a real good visit and you will see how well we dwellers in tents can live!"

Virginia winced, but for some reason which she could not understand she found it quite impossible to decline the invitation.

"I'm sure you are very kind, Mrs. Maxwell, but I'm afraid I shall inconvenience you."

"Oh no, not a bit. Now will you be a real good Samaritan and help me a little, as I have no maid? You might set the table if you don't mind and when Donald comes we shall be ready for him. This is really quite jolly," she added, bustling about, showing Virginia where to find things.

"I am afraid," Virginia began with something like a sob in her voice, "that you are heaping coals of fire on my head."

"Oh no; not when coal is over seven dollars a ton. We couldn't afford such extravagant hospitality as that. You might arrange those carnations in the vase if you will, while I attend to the cooking. You will find the china and the silver in that chest. I won't apologize for the primitive character of our entertainment, because, you see, when we came down here we stored most of our things in Mrs. Burke's barn. It is awfully nice to have somebody with me; I am so much alone; you came just in time to save me from the blues."

When Mrs. Betty disappeared in the "kitchen," and Virginia began the task assigned her a very queer and not altogether pleasant sensation filled her heart. Was it remorse or penitence or self-reproach or indigestion? She could not be absolutely sure about it, but concluded that perhaps it was a combination of all four. When Donald returned and discovered Virginia trying to decide whether they would need two spoons or three at each plate, for an instant he was too astonished to speak; but quickly regaining his easy manner he welcomed her no less cordially than Mrs. Betty had done, remarking:

"Well, this is a treat; and so you are going to have supper with us? That will be a great pleasure."

Virginia almost collapsed in momentary embarrassment and could think of nothing better to ask.

"I am not sure what Mrs. Maxwell is going to have for supper and I really don't know whether to place two spoons or three. What would you advise, Mr. Maxwell?"

Maxwell scowled seriously, rubbed his chin and replied:

"Well, you know, I really can't say, but perhaps it would be on the safe side to have three spoons in case any emergency might arise, like a custard or jelly and whipped cream or something else which Betty likes to make as a surprise. Yes, on the whole, I think that three would be better than two."

When Virginia had placed the spoons and Maxwell had returned to assist her she hesitated a moment and looked at him with tears in her eyes and began:

"Mr. Maxwell, there is something I must say to you, an acknowledgement and an apology I must make. I have been so horribly——"

"Now see here, Miss Virginia," the rector replied, "you just forget it. We are awfully glad to have you here and we are going to have a right jolly supper together. Betty's muffins are simply fine and her creamed chicken is a dream. Besides, I want to consult you concerning the new wardrobe I am going to have built in the vestry. You see there is the question of the drawers and the shelves and——"

"Never mind the drawers and the shelves," Mrs. Betty remarked as she entered with the creamed chicken and the muffins. "You just sit down before these things get cold and you can talk business afterwards."

To her utter astonishment Virginia found herself eating heartily, utterly at ease in the cordial friendly atmosphere of tent life and when Maxwell took her home later in the evening she hadn't apologized or wallowed in an agony of self-reproach. She had only demanded the recipe for the muffins and had declared that she was coming again very soon if Mrs. Betty would only let her.

And last, but not least, the rector's polite attention in acting as her escort failed to work upon her dramatic temperament with any more startling effect than to produce a feeling that he was a very good friend.

In fact, she wondered, as she conned over the events of the evening, whether she had realized before all that the word "friendship" signified.

(To be continued.)

How Unused Stump Land May Be Converted Into Fertile Farms.

(Continued from page 15.)

be able to take jobs for their neighbors. Great progress has been made by the stump puller manufacturers in recent years. This may be said of those who have the power stump puller, those who have the horse stump puller and the one-man machines. Of course the power machines will be used chiefly by contractors or by farmers' co-operative land-clearing associations. Such machines will clear as much as an acre in a day. The horse-power, capstan puller will be more generally used by smaller contractors and by individual farmers and settlers. These modern machines have been made more efficient by the use of roller bearings instead of solid journals and by putting the frame on wheels to make them more easily moved. The latter improvement is one greatly appreciated by the operator. These pullers may be equipped with one or more take-ups and this adds greatly to the speed. While one stump may be pulled with one take-up, the other may be attached to another stump. It is well to have a sufficient amount of cable with these horse pullers. While it means a little extra expense at first, it facilitates the operation considerably. The settlers of small means will be interested in the one-man puller, a device which has been improved a great deal in the last two or three years. A one-man stump puller is well adapted to the settler who can clear only a limited area each season. Those who believe that dynamite is the quickest and surest way to remove stumps will find it interesting to make a study of the different kinds and strengths of these explosives and to learn the different effect each has. This was explained very carefully during the land-clearing demonstration and it was shown that the condition of the stumps and the character of the soil determined to a large degree which kind of dynamite and what strength is best to use. In many instances settlers gained their first accurate knowledge of the use of explosives during the land-clearing demonstrations. The educational value of the demonstrations, both as to the use of explosives and stump pullers, can scarcely be estimated. Many people said that the "Land Clearing Special" was more important to upper Wisconsin than the live stock specials or the dairy specials which have accomplished so much good.

The upper Wisconsin settler with a stump problem should not forget the great advantage which may be gained by using live stock to help clear land. Sheep are good land clearers and other stock will also help. Stumps are much more easily pulled or dynamited if they are allowed to stand a few years after the trees have been cut out. Stock will clear out a large part of the brush and tramp down the ground around the stumps. In a field which has been pastured, the stumps will be found soon with the roots sticking up, and the ground partly broken up around them. Stump ground makes fine pasture, and the sowing of clover or alsike in the field increases the pasture value very much.

Stump land is being used in many counties for fruit. It is not always necessary to take out all of the stumps to start the orchard. Many settlers are having great success with fruit on lands where the green stumps have been pulled out or dynamited. The use of dynamite has had no bad effect on the soil when it is to be used for fruits. On the contrary, it breaks up the subsoil and gives the roots a fine chance to catch deep. Some of the finest orchards in the country are grown on upper Wisconsin soil, from which the stumps have been entirely or partially removed.

One of the best first crops for stump land which has been cleared is potatoes. This is especially true in the sandy soil territory of upper Wisconsin. Great crops of potatoes have been raised the first year. Potatoes are usually considered about the best cash crop for the settler for his first season on cleared land. Small grain does well and all the grasses, especially clover, on cleared land.

In the year 1910 there were twenty-eight counties in Wisconsin with a total of 16,278,227 acres of uncleared land. These were counties for the most part north of the central portion of the state, and they averaged more than 500,000 uncleared acres to the county. In 1910 the cleared or improved land in these counties totalled 2,367,533 acres, an increase of about 500,000 acres in ten years. There has been much greater progress in this section since 1910 than before that year. In Rusk county, for instance, there was practically no improved land in 1900. In 1910 there were 25,000 acres. In the same year 113,000 acres of Rusk county land had been taken up by farmers and about one-fourth of that improved. Since that the work has been progressing rapidly. Rusk county has nearly 600,000 acres of land adaptable for farming, so it appeared that in 1910 only about one-sixth of the county had been opened up for settlers. Even in Wood county there were only 107,000 acres of improved land in 1910, and there were four times that many acres of good farming land which was not cleared. Dunn county with 245,000 acres of improved land in 1910, still had about an equal amount of good farming land which had not been cleared. Marinette county had only 80,000 improved acres in 1910 and more than ten times that of good agricultural land which had not been cleared. While these counties have made considerable progress in the last six years, there are still millions of good acres, better suited to agricultural than to forestry purposes, which may be developed into rich territory by the use of modern clearing methods.

Wisconsin Grain-Breeding Work Resumed.

Another season's activity in grain breeding and selection will soon be under way at the Wisconsin Experiment Station farm, where some of the world's champion strains of pedigree grains have been originated or improved during the past decade.

The selection and increase fields of wheat, barley, rye and oats are located on what is known as the Hill Farm, within a few miles of the University Farm. Details of the work have been placed in charge of B. D. Leith, of the field corps department.

Pedigree No. 2 winter wheat, which has yielded fifty bushels an acre in repeated trials under ordinary conditions, is being grown this year in increase plots amounting in all to about two acres. Further trials with Marquis, the successful variety of spring wheat for this region, will also be carried on another year. The best wheat obtainable from different parts of Wisconsin and neighboring states will be put in competitive tests with the station-bred pedigree varieties in a number of plots of one-fortieth of an acre each.

Pedigree rye, which yielded thirty-nine bushels an acre in 1915, will also be again tried out on increase plots, as well as a number of other varieties of rye in breeding rows and one-fortieth-acre plots.

Eleven pedigree varieties of oats and a number of non-pedigree kinds will be tried out against varieties from Canada and other states of the Union. Special selection and advanced breeding work will be continued with Pedigree No. 1 and No. 5, which will be grown this year for distribution. Pedigree No. 7, a variety of oats adapted especially for light, sandy soils, originated in Russia and developed in Nebraska, will be grown to obtain seed for trials in different parts of the state.

Varieties of highly-developed barley from Canada and Sweden will line up in the test plot trials against the best of Wisconsin's famous pedigree barleys, which have brought much honor to grain growers of the Badger state from time to time. Work on all these grain tests will be carried on in duplicate, in order to avoid possible errors or accident.

The soil on the Hill Farm, where these tests are under way, is in an average condition of tilth and fertility, and is not exceptional in any way. Fertilizer is supplied in the form of stable manure and green manuring crops plowed under. The only difference between these fields and those on an ordinary farm is that the former are much more heavily cropped.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Now the Iceless Refrigerator.

We heard someone say the other day in discussing home conveniences that the best was none too good for the country woman (which we firmly believe) and that it would be far better for her to devote herself to some money-making enterprise, such as chickens or garden, and earn the money to buy these conveniences than to waste her energy and time in manufacturing with her own hands a makeshift or "something that will do." We wish with all our hearts that every woman could have every convenience to be found in the up-to-date modern home and we hope the time will come when such will be the case. In the meantime, it may take a whole summer, or maybe two or three of them, for the egg or butter or garden money to accumulate to such proportion that all these things will be possible, and we know from experience that some of the despised makeshifts come pretty nearly being comforts, if not luxuries, when compared with the old way.

So while the egg and butter money is piling up suppose we construct an iceless refrigerator to go along with our fireless cooker. This homemade contrivance is not an experiment, for it has been tried out and found to be a pretty good substitute for the real thing. It is made by covering a wooden frame with canton flannel or some similar material. Though not absolutely necessary, it is desirable that the frame be screened. Wicks made of the same material as the covering rest in a pan of water on top of the refrigerator, allowing the water to seep down the sides. When evaporation takes place the heat is taken from the inside, with a consequent lowering of the temperature. On dry, hot days a temperature of 50 degrees can be obtained in this way. The following description will aid in the construction of this device:

Make a screened case three and one-half feet high with the other dimensions twelve by fifteen inches. If a solid top is used simply place the water pan on this. Otherwise fit the pan closely into the opening of the top frame and support it by one-inch cleats fastened to the inside of the frame. Place two movable shelves in the frame, twelve to fifteen inches apart. Use a biscuit pan twelve inches square on the top to hold water, and, where the refrigerator is to be used indoors, have the whole thing standing in a large pan to catch any drip. The pans and case may be painted white, allowed to dry and then enameled. A covering of white canton flannel should be made to fit the frame. Have the smooth side out and button the covering on the frame with buggy or automobile curtain hooks and eyes, arranged so that the door may be opened without unfastening these hooks. This can easily be done by putting one row of hooks on the edge of the door near the latch and the other just opposite the opening with the hem on each side extended far enough to cover the crack at the edge of the door, so as to keep out the warm, outside air and retain the cooled air. This dress or covering will have to be hooked around the top edge also. Two double strips one-half the width of each side should be sewed on the top of each side and allowed to extend over about two and one-half or three inches in the pan of water. The bottom of the covering should extend to the lower edge of the case.

Place the refrigerator in a shady place where air will circulate around it freely. If buttons and buttonholes are used on the canton flannel instead of buggy hooks the cost should not exceed 85 cents.

Cause of Iron Stain.

Iron stains are produced either by contact with the cloth with rust or with preparations containing iron, or they may be the result of using too alkaline soaps in washing the goods, the free alkali acting as a precipitant of iron compounds as derived from the bluing used. In using liquid bluing, therefore, care should be exercised to use soaps that are as nearly free from an excess of caustic alkali as possible. Such stains are in the form of oxides of iron, which are very insoluble in water and require an acid to dissolve them. As has been suggested by several of our readers, lemon juice and salt will remove such stains. When the iron spots occur on colored goods the dye may be removed during the process, in which case try a little ammonia for restoring the color, as ammonia will ofter restore the dye after the stain has been removed.

The Country Child's Play.

Running a race with another fellow when somebody is watching his efforts is more fun for a boy than chasing a cow over a pasture. Play with a motive behind it is one of the greatest needs of the country child, asserts Otis E. Hall, superintendent of boys and girls' clubs, division of extension, Kansas State Agricultural College.

HILDRETH AND HARL ABEL,
Twin daughter and son of Mr. and Mrs. M. H. Abel.

In the use of playground apparatus and the playing of organized games the child becomes less self-centered and learns how to co-operate with his fellows. According to Mr. Hall, this is of special importance to the country child whose social life is necessarily somewhat limited. Often he finds himself poorly prepared to meet a situation where a number of persons are concerned. When he grows up he finds he has worked individually so long that it is hard to adjust himself to a group.

HELEN AND HARLEY CAMPBELL.
The sixth and seventh children in the family of Mr. and Mrs. H. C. Campbell.

The child who plays hard and plays well usually reaches maturity with all his faculties alert and unexpected situations in his business and social life are not so likely to catch him off his guard as they are the child whose play life has been neglected.

Simple playground apparatus is not expensive and any teacher who really wants to can be a playground leader. The following list of apparatus shows how cheaply a small playground may be equipped: Sand box, $1; swings, $2 to $15; teeter board, $1.65; indoor baseball, $2; basketball, goals and backstop, $10; sliding board, $2.25; horizontal bar and frame, $2.50; merry-go-round, $5; baseball outfit, $15; croquet set, $1.50. Horseshoes for quoits can be supplied from the children's home.

Diet, Fresh Air and Exercise.

To the Editor:—In reply to Mrs. W. B. I want to say that in the case of sick headache quite often osteopathy (and other things also) will relieve the pain for the time being, but unless the cause is removed the old trouble will come back. When the cause is removed then the headache will cease. Quite frequently the cause may be removed by osteopathic treatments, but diet, fresh air, proper exercise and rest all come into this question of removing the cause and in a large number of cases are what really count. A great many times headaches are caused from stomach or intestinal troubles and a strengthening of the muscles of the abdomen with various exercises so that they may do their work properly and hold the organs in their normal position will be a great help. These exercises should be taken in a well-ventilated room. Learn to sit and stand correctly, thereby giving the organs a chance to function properly.

Such a position tires the muscles of the back and cramps the internal organs.

An erect, natural position is far more restful.

Then diet—especially those who live on the farm are apt to eat too rich foods and too much meat, more than the body needs. Quite often, also the food is eaten too hurriedly and so not thoroughly masticated.

Many times headaches come from overwork and worry. Take time to relax both mind and body for at least ten minutes every day. You will find that you will feel more like working after the rest. If your work is indoors get out and take a walk and forget about duties for a while, remembering to make use of the fresh air all around you.

When you retire, in order to rest properly you should be perfectly relaxed. A good way to relax is to lie flat on the back—and then just let go. Be sure to have the sleeping room well ventilated.

A cold bath every morning and a vigorous rub on arising sometimes helps to tone up the body.

I hope this may be of benefit to Mrs. W. B. and others. N. B.

Wants Remedy For Mildew.

To the Editor:—I enjoy reading the Home page so much and I have often thought I would write. Now I would like a little advice. How can I get mildew off of any white goods, or can it be done at all? Will some of the readers help me out? I have received lots of benefit from the letters from other farm wives.

We live in the country and I am sure we could not enjoy life very well anywhere else.

I loved the letters Mrs. F. E. T. wrote and think she must be a perfect homemaker. I think it would be a good thing for all of us young farm women to make our homes look as cozy and homelike as possible.

Mrs. C. R.

Recipe For Coffee Cake.

To the Editor:—Will some of the readers of the cooking department tell me how to make coffee cake with yeast (breakfast coffee cake) by taking some of the sponge from bread? I would like very much to know how to make this and I do not have a recipe. Mrs. A. G. J.

Care of Trumpet Plant.

To the Editor:—As I am an old subscriber and enjoy the paper very much I am asking some of my sisters how to care for an angel trumpet plant. I have had this plant three years and it has not blossomed yet. I set it in the ground in the spring. Please tell me what I can do to make it blossom. An Old Subscriber.

How to Make Colors in Gingham "Fast."

It might be well to take precautions to "set the colors" in gingham and other fabrics at the time the shrinking is done, before making them into new spring garments. Any chemical substance used to set colors is called a mordant. Common household mordants are as follows: Brine, sugar of lead, alum and vinegar. They may be used in the following proportions: To one gallon of water add one-half cup mild vinegar, or two cups salt, or one tablespoonful powdered alum, or one tablespoonful "sugar of lead" (poison).

In most cases allowing the material to soak for several hours in the mordant is sufficient, although with salt and vinegar solution no harm is done if the material soaks overnight. The material should be thoroughly dried before being washed and always hang in the shade. Vinegar is best for pinks, brine for blacks and reds, sugar of lead for blues and browns and alum for greens, lavenders, purples, etc.

To freshen colors soak garment in a weak solution of borax before washing. A little ox-gall in the borax wa-

ter will help keep weak colors bright. —[Miriam M. Haynes, Colorado Agricultural College.

Household Hints.

To remove chocolate stains from white dresses or table linen sprinkle the stain thickly with borax, place a saucer beneath it and pour on just enough water to moisten. Leave for several hours and then wash.

Real frying is done in deep fat; fat deep enough to cover the food in question. The fat should be very hot. It then immediately cooks the outside of the food and does not penetrate to the inside at all.

If painted walls are streaked after being washed take turpentine, dip a woolen rag in lightly and rub well into the wall. The walls will look as if they had been newly painted.

Always measure flour after sifting it once. Some old-fashioned recipes call for it measured before sifting, but all modern ones call for sifted flour.

When colored clothing is stained with mud let it dry and brush out all you can. Then apply a mixture of salt and flour. Let it remain on, in a dry place, for a day or two, then brush off.

When you put your shoes away for next season's wear stuff them full of cotton batting or newspaper.

If one of the gem pans is filled with water the muffins will never scorch.

If the feet perspire sprinkle a little powdered burnt alum in the stockings.

When cutting new cake dip your knife in cold water before cutting each slice.

Recipes.

Veal Croquettes.—Grind two cupfuls cooked veal, add salt, pepper, celery salt, one teaspoonful onion juice. Make a cream sauce of one and one-half cupfuls of milk, four tablespoonfuls of butter, six tablespoonfuls of flour. Add sauce to seasoned veal. Cool, shape into pyramids, dip in crumbs. Fry in deep fat.

Pressed Veal.—Two pounds veal, one-fourth can pimentos, one dozen small sweet pickles, one tablespoonful of gelatine, one tablespoonful of butter. Cook veal until tender. Put meat and pickles through food chopper. Cut pimentos into small pieces with knife. Dissolve gelatine in a cup of water. Add melted butter and salt and pepper to taste. Mix thoroughly and heat, not boil, then put into bowl and slice when cold.

Corn Balls.—One cupful canned or cut corn and one cupful of mashed potato. Mix and add one beaten egg, salt and pepper. Mold into balls, roll in flour and fry in hot butter.

Y. W. C. A. Cake.—Pour two cupfuls boiling water over one pound of raisins and boil fifteen minutes. Take from stove and add one cupful cold water, two cupfuls sugar, one-half cup lard, one teaspoonful each of cloves, cinnamon and nutmeg, a little salt. Sift one teaspoonful of soda into four cupfuls of flour. Bake in moderate oven. This makes two loaves.—E. C.

Suet Pudding.—One cupful suet after it is chopped fine, one cupful molasses, one cupful sweet milk, one egg, two cupfuls flour, one teaspoonful soda, one cupful raisins. Steam two hours. Serve with lemon sauce.—Mrs G. G. B.

Pork Cake.—One and one-half pounds fat salt pork chopped fine, one pound raisins, one pound currants, one-half pound citron (cut fine), one pound sugar, one pint molasses, one pint boiling water poured on chopped pork, one teaspoonful soda, spices. Nut meats may be added if desired.—Mrs. B. G.

PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send for three free books: inventions wanted, etc. I market your invention without charge. Richard B. Owen, 37 Owen Bldg., Washington, D. C.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Lives on the Bay.

My Dear Friends:—I have been reading almost all of the nice letters that you have written and I think I should write to you.

I live on a three-acre piece of land and about a quarter of a mile away we have an eighty-acre farm. I live right by a nice little bay. There are bluffs on both sides of the lake and right between the two bluffs I live. The bay grows larger and larger and then goes out into Green Bay. It is very beautiful. I go in swimming every summer and I have great sport.

I go to school every day. I live about five blocks from the schoolhouse. I am nine years old and am in the fifth grade.

I have a little sister two years old. She is very pretty and I love her dearly.

I have a cow named Rosy. She has had one calf and I sold the calf and got $8 for it. I put $1 in my little sister's bank and $7 in my bank. I have some nice white and black doves and two dogs. One dog's name is Bingo and the other is Pete. Bingo is a cow dog and Pete has a wagon and harness. I have runners for the wagon, so I make it a wagon in summer and a sleigh in winter. Pete pulls very well when hitched up and we have such fun. —Sylvia.

How Pigeon River Was Named.

Dear Young Folks:—I am a girl eight years old. One time when I was at my grandfather's for a vacation grandfather took me in a boat down the Pigeon river and he told me how this river came to be called Pigeon river. When grandfather was a little boy there were so many pigeons around that a flock would sometimes destroy a whole field of grain, so everyone who could shoot shot them so they would not destroy the grain. That is why they call it Pigeon river.

I love to visit at grandfather's. When I gather the eggs for grandmother she even doesn't care if I break an egg or two.

Grandfather has a trick dog. He can do many things. He will stand on his hind legs and when you ask him if he can pray he will bark.

—Alwine.

Father Likes Her Cookies.

Dear Young Folks:—I am eleven years old and in the seventh grade. I will be twelve years old this month. I have blue eyes and black hair. I weigh 108 pounds and am five feet two inches tall.

I have four brothers and one sister. My sister's name is Nora Elizabeth. She is seven months old and weighs eighteen pounds.

I like to go to school very much. School was out the 30th of March. We had a dinner and program. We sure had a good time. There were sixty-six people there.

We have ten horses, a dog and cat, ten calves, five milk cows and twenty head of other cattle. We live on a farm of 180 acres about four and a half miles from town.

I can bake and cook. I baked some cookies today and my oldest brother said, "My, but they are good," and papa said they were so good he would have to take another.

Say, Young Folks, suppose we give riddles in our letters. I will ask you one: What is it that has eyes and can't see? —Elsie.

School Plants Evergreen Trees.

Dear Young Folks:—I have been reading the letters in the Young Folk's department for so long and have enjoyed them so much that I thought I would write one, too. I am ten years old and in the fifth grade at school. I love to go to school.

I have three pet kittens and a pet dog. I am going to raise chickens and flowers this summer.

On Arbor Day our school went to a friend's house and he gave each of us an evergreen tree to set out in our school yard. We got eighteen trees. There was another school there to get trees while we were getting ours. When we got our trees we went back to the schoolhouse and set them out. Some of the men in the district came and helped us. —Goldie.

Your Mother Saved Money on Soap

Why Don't You?

Years ago, your grandmother made soap because she couldn't buy it. She taught your mother to make it and your mother can teach you because the important ingredient that your grandmother used is still for sale everywhere.

Lewis' Lye

The Standard for More Than Half a Century

The modern housewives do not appreciate how easily you can make clean, firm soap at home. Good lye is the secret. Lewis' Lye is good lye because it saponifies the grease perfectly and entirely. It makes just as good soap as you can buy—better than many—and it makes it cheaper. Get a can at your dealer's today and try it out at once. Lewis' is the lye you'll like for the many household uses.

Send for Booklet *"The Truth About a Lye"*

PENNSYLVANIA SALT MANUFACTURING COMPANY
Manufacturing Chemists PHILADELPHIA, PA.

International Sunday School Lesson.

Lesson for May 21, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE CRIPPLE OF LYSTRA.

LESSON TEXT—Acts 14.

GOLDEN TEXT—He giveth power to the faint; and to them that have no might be increaseth strength.—Isa. 40:29.

Make a list of the seven cities mentioned in this lesson and locate them on a map. Let seven pupils attach to the map a flag, or banner, to locate each one. The visit to Iconium occurred probably in the spring of A. D. 47 (Ramsey). Paul and Barnabas had a great triumph and a severe testing at Iconium, wrought a great victory of faith and became popular at Lystra, only to meet great tribulation. On their homeward journey they confirmed saints, set up rules and gave account of their labors to the home church of Antioch.

I. In Iconium (vv. 1-7). This was a Roman city of great antiquity and importance. The modern city Konia is an important Mohammedan and trade center. Tradition says Paul was imprisoned for being a magician and teaching a woman named Thekla not to marry. This woman endured great hardships and trials for the faith, finally becoming a nun at Selencia and dying at the advanced age of ninety. From this tradition we get most of our ideas of Paul's appearance—small, bandy-legged, large eyed, shaggy eyebrows, long nose; full of grace with sometimes the face of a man and at others of an angel. This is tradition only, but is probably somewhat near the truth. Paul followed his usual first witnessing in the synagogue, witnessing to the entire population, Jew and Gentile, and dividing them effectively by his words about Jesus.

II. In Lystra (vv. 8-21). (1) Popularity (vv. 8-18). Their introduction here would seem propitious, healing the cripple and at once gaining the esteem of the people. Adoration and gratitude appeal to the human heart. Underneath the heathen idea that the gods "came down to us in the likeness of men," is the great and glorious truth of the incarnation (John 1:14; Phil. 2:6, 7). We should hesitate to condemn these men of Lystra too severely, for what American community is not open to condemnation in this regard? Too many Christians offer garlands (v. 13) at the feet of the men whom God has used to work his mighty works. It was common complaint that in the days of his greatest victories, men could not find Mr. Moody when a service was dismissed, or get into his quarters at the hotels; he would give no opportunity for self-glorification. Paul and Barnabas had hard work to restrain these hero worshipers (v. 14), and to convince them who they were and how they had been enabled to accomplish such a wonderful miracle (v. 15). Paul was of "like stature" with them and would not accept worship as did the Caesars or Herod (12:22, 23). He exhorted the Lystrians to turn from "these vain things," i. e., such idol worship unto the "living God" (See also I Cor. 8:4; I Thess. 1:9). Hitherto God had not miraculously interfered to turn men from their evil ways (v. 16), but left them to their own devices to show their inability to find their way back to him (See Acts 17:30; I Cor. 1:21). Yet God is not "without witnesses" (v. 17). The seasons and the natural laws point to God, yet men still remain blind and ungrateful. Thus by vehement exhortation they prevented this act of sacrilege. (2) Persecution (vs. 19, 20). The mob is ever fickle, (v. 18), but it did not turn them "unto the living God" (v. 15). Conversion is the simple turning from idols (I Thess. 1-9), a rational thing, but one contrary to the pride of men who desire to "do something" whereby they may merit or can demand their salvation. Even as Paul had difficulty to turn people aside from idols, so today it is hard to keep men and women from idolatry, not the gross or vulgar idolatry of heathenism, but the refined idols of culture, success, power, money and pleasure. To his difficulties Paul had the added persecution of the vindictive Iconians and those from Antioch (v. 19). God delivered him from this trial (I Cor. 11:25, 27). All loyal witnesses must expect persecution from the God-hating world (II Tim. 3:12; John 15:18-20).

III. The Return (vv. 22-28). "When they had preached the gospel to the city" (v. 21) literally "having evangelized the city," they started home confirming believers and appointing leaders in each center visited. They did not take the short cut of 160 miles to Paul's home in Tarsus, but they visited their new converts.

Symbolically the cripple of Lystra is a type of sin, (a) helpless, (b) born in that condition (Psa. 51:5), (c) had to be helped from without, by outside

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power (Rom. 5:6); (d) all could see the change (James 2:18). This miracle wrought (a) Praise from the people, (b) Protestation on the part of Paul and Barnabas, (c) Persecution from the fickle and disappointed priests who incited the people. Persecution helped the proclamation of the gospel. Those who believed strengthened Paul by sharing his danger (v. 20) and because of this experience Paul "made many disciples."

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1681 Girls' dress with sleeve in either of two lengths. The pattern is cut in four sizes: 4, 6, 8 and 10 years. It requires 3 yards of 36-inch material for a 6-year size.

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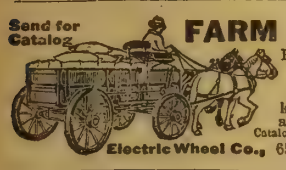

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AILING ANIMALS.

Sterility in Twins.

I have been told that twin heifer calves are sterile. Will you please tell me if this is a fact? If so, why is it not true of other animals?

We do not think this is always a fact by any means, but it probably is a fact at times just as any one animal is sterile at times.

Thumps in Pigs.

Please give me cause of thumps in small pigs. Is it contagious? Does a cough accompany it? What is the remedy, if any?

Thumps is a condition brought about through nervous disturbance causing spasms of the diaphragm. It is not of contagious nature and a cough does not necessarily accompany it, but it may. It is very hard to get results from treatment of small pigs, especially those of a few hours to a few days old. In small pigs two to five drops of spirits of chloroform diluted in water and given as a drench may prove beneficial. The dose should be regulated according to size.

Warts.

Will you please tell me how to cure a blood wart on a horse's cheek, also one above the eye?

If there is a neck part to these warts they may be cut off by use of stout cord tied around the base. Those around the eye are best treated with sharp pair of scissors, cutting the wart entirely away and touching the wound with caustic. The use of the knife or scissors is the quickest way and is fairly sure if the wound is touched with caustic afterward. Sloughing agents should not be applied to warts around the eye, but may be applied to warts on other parts of the body. Try applying the following to the wart on the cheek. Arsenous acid and gum arabic, each one dram, and water to make six drams. Apply some of this paste to the surface of the wart.

Farrowing Dead Pigs.

I have thirteen brood sows, last spring gilts. Seven of them have farrowed. Two of these farrowed all live pigs, and the other five only farrowed from one to three live pigs, the rest being dead. Some of these dead ones were not half matured and others look like they have died later. They are all different sizes. The live pigs are strong. The sows had exercise all winter. I fed them in slop fresh mixed equal parts daily oil meal, shorts and bran. Fed about a quart when mixed together daily and about three to four ears of corn twice daily. Some of this corn was not good quality and quite a lot of it was moldy. Now, what is the trouble? I thought it was the unsound corn.

There have been a number of complaints of this kind and various causes have been given for the trouble. We would be inclined to believe that the moldy feed is the cause of the trouble in this case and would advise you to discontinue the use of moldy corn and change to some clean, wholesome food.

Rheumatism.

I have a five-year-old cow that got something the matter with her hind legs last fall. It came on all of a sudden in her left ankle. It swelled and was very painful to the touch. Then after a time it went into her hip and that is still swollen. The swelling has left that ankle, but her right ankle has been swollen for some time now. Haven't done anything for her yet. She does not seem to have much of an appetite and she walks very stiff. She should come fresh in June, but does not look as though she will be fresh at all.

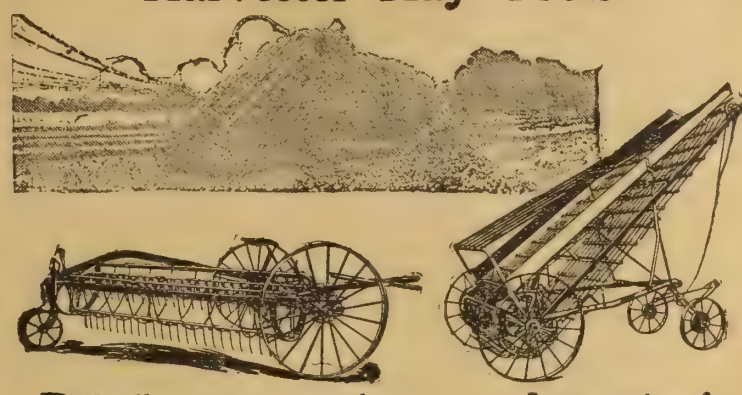
Your animal is probably the victim of rheumatism. This should have been attended to immediately upon noticing the trouble, as it would have been much easier then to get results. Give your animal the best of care, good housing and good food, which should be of a laxative nature. The use of potassium nitrate in one-half ounce doses given two or three times daily is indicated. The following tonic should also be given. Powdered cinchona, nine ounces; dried sulphate of iron and powdered nux vomica, each three ounces; powdered fennel two ounces. Mix and make into twenty-four powders and give one powder three times daily in feed. The application of iodine ointment to the swollen parts may be of some benefit.

Nervous Derangement.

I have a mare that is afflicted with locomotor ataxia, so my veterinarian tells me. He has been to see her once and left some medicine for her and directed me to give bromide of potash in case of severe agitation. Mare eats well, but is nervous and anxious to avoid one, and is poor. Has been afflicted for five weeks. What can I give her to help recovery?

Your animal is the victim of some nervous derangement which may be brought about from any one of a number of causes. Your veterinarian, if he is a good one, probably knows what he is talking about and his line of treatment will probably meet with as good success as any.

See These 1916 International Harvester Hay Tools



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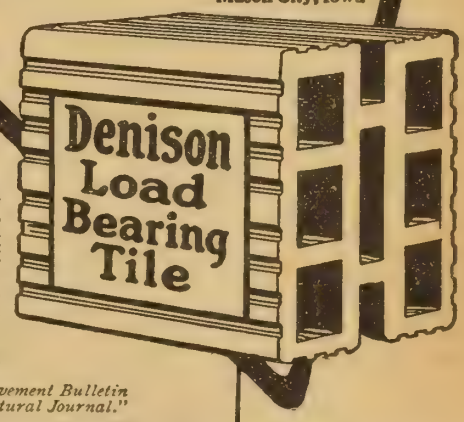

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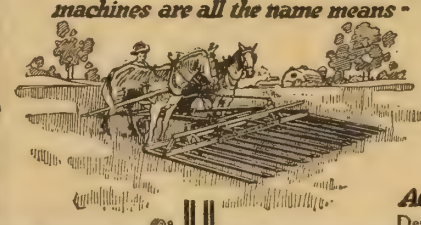

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POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Experience With Poultry.

To the Editor:—I have been a subscriber of The Wisconsin Farmer for years, and, as it is time that all so-called chicken "cranks" tell what they know and what they don't know, I will write a little on the subject.

Often when I am down in the city I am asked by poultry fanciers what kind of poultry would be best to start with, what kind laid the most eggs, also what I do to cure roup. Now I have been in the fancy chicken business for over thirty years and have been judging poultry nearly all that time at poultry shows and county fairs and yet I do not know it all. I have kept seventeen different breeds and still have eleven breeds, but will not pen them again and have nothing to sell. I have sold poultry and eggs all over the United States, but will now leave that to younger people. As to the best breeds to keep, that is a hard question to answer. I have had nearly all the common kinds and still I do not know. It depends on where you are and what you wish to do with them. Some breeds will do better if permitted to run where they choose. I lived in the city for seventeen years and I never thought it right to keep poultry shut up all the time, even when they had the best of care. At least, I can see the difference between city and farm-raised chickens. Almost any breed will do well if they receive proper care.

My best cure for roup—when I know they have it—is to cut their heads off, although I have treated some with success. A preventive is the best thing. I use Venetian Red. It is a red mineral used in painting barns. For twenty-five hens I put about half a pound in two gallons of water and do not let them have anything else to drink. They soon learn to like it. You will see by the appearance of the droppings that it has a cleansing effect. The mineral costs less than 5 cents per pound. I have used this for thirty years. I never have much roup, but I do not wait until they get sick. I use the solution about four times a year—sick or well.

I started with Barred Rocks, Rose Comb Brown Leghorns and White Face Black Spanish. I think I secured the first Rose Comb Brown Leghorns that were brought into this part of the state. I like the busy little brown hens and like all rose-comb breeds the best. In a cold country like Wisconsin I have observed that a single comb will freeze quickly and a hen with a sore comb will not lay. The Rock family are good all-around chickens, but the Rocks and I disagree on the sitting business.

Although I have different breeds of fowls on the farm I can learn more about poultry from the farmers' wives than from any other source. I think that women are naturally adapted to raising poultry. They seem to learn Biddy's ways and wants easily and can give us lots of valuable information on the subject. By talking to the farmers' wives, who are the principal exhibitors at the county fairs I learn that the Wyandotte is a good general-purpose fowl. The Orpington family is quite a favorite also and the Rhode Island Reds hold a good place. I have the Black Orpington, but would prefer the Buff or White. The White Face Black Spanish I found good layers and great hustlers, but the Wisconsin winters are too rigorous for this breed. The Hamburgs are also good layers, but a very small breed. I will say right here that it is hard for me to turn down the little brown rose-comb hen. She is always there with the goods—cold or warm—and never has time to sit, but this, you will say, is my fancy and perhaps you are right.

Proper care is the best medicine to give. A damp, drafty poultry house will furnish you with plenty of dead chicks. I will tell you how my poultry house is built. The one I have for 100 fowls is 12x36 feet, divided into three parts. Two rooms, each 12x12 feet, are for roosts. The balance has no floor in it. In this part I put lots of leaves and straw in the fall of the year. I put all grain and feed into the leaves. This makes the biddies work for all they get and all seem to enjoy it. There is nothing like exercise for them. Do not keep the house too warm, but be careful they are not open to drafts. I ventilate from above, using a wooden flue measuring about six inches inside. I use glass windows on the south, but think canvas is good to nail over the window openings. Nail lath across the windows to keep out stray marauders if you use canvas.

I feed mostly corn and wheat, corn always at night. I think wheat is a great egg producer. The farmers' wives say when the hens can get to the grain stacks they always look for more eggs and I find this is true. Corn is all right for poultry, but should be fed at night only. An abundance of gravel, ground oyster shells, etc., should be kept in the poultry house at all times. The fowls should have access at all times to good, clean water. Keep a large box of ashes or road dust handy for the hens to wallow in. Slaked lime is also good. Lice or mites cannot live in dust.

I have been asked how to rid the poultry house of mites and lice. I believe I have tried nearly everything and can think of nothing as good as hot water. I use a large boiler or kettle and make the water as hot as possible, put all the chicks out, then with a dipper I have it out with the mites and lice. Throw the water on the walls, roosts and floors. It runs down the wall and into all the cracks and neither mites, lice nor their larvae can stand hot water. If you repeat the process two or three times during the spring and summer you will not be troubled with mites.

I have used incubators with good success. Any make is good. They must be or they would not sell, but I have never gone back on the old hen as an incubator. Lice do not bother incubator chicks, but the chicks bother me, as they become great pets.

I think it is well for all poultry breeders to subscribe for a good farm journal or two, then write all they have learned about the business and send it to the farm journals. That is where I look for poultry news. I do not expect all to agree with me in all I write; neither do I swallow all I read, but I have obtained lots of good ideas from The Wisconsin Farmer. Perhaps you will see I have a choice of the different breeds, but that is my fancy. You may prefer another kind. If you do, give them a good chance and you will have success with any of them. I look well after my poultry and never let them out when the weather is cold enough to freeze their combs or their feet. J. T. Barto.

Richland Co., Wisconsin.

What Is Cause of Weak Chicks?

To the Editor:—I have a 200-egg incubator and am trying to raise lots of chickens, but have failed to be successful. This spring I hatched out about 125 of the 200 eggs. The chicks would pick the shell and sometimes the shell would be cracked clear around just ready for the chick to hatch out and it would die. Can any of your readers tell me the reason for that? We gathered the eggs three and four times a day for the incubator and turned them every day.

Now since my chicks are hatched they keep dying, three or four a day. They haven't bowel trouble and I could find no lice on them. They will eat all right all the time. Their wings get droopy and they just dump around till they die. I have fed them boiled eggs, Dutch cheese at first, now chick feed, bran and corn meal. Last year our chicks died of leg weakness, but they act different this year.

Mrs. F. L. Kirstein.

Wright Co., Iowa.

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VEGETABLES.

Asparagus—Palmetto.

Bean—Pencil Pod Black Wax, Refugee (green podded), Improved Goddard (green shelled) White Kidney (dry shelled), Golden Cluster (wax podded pole), Kentucky Wonder (green podded pole), Henderson's Bush Lima.

Beet—Edmond's Early, Detroit Dark Red.

Brussels Sprouts—Perfection.

Cabbage—Early: Jersey Wakefield, Copenhagen Market; Medium: Glory of Enkhuizen, Succession, Sure-Head, Flat Dutch; Late: Danish Ballhead, The Lupton, Hauser, Volga (kraut).

Carrot—Oxheart (heavy soils), Chantenay.

Cauliflower—Burpee's Dry Weather.

Celery—Golden Self-Bleaching, Winter Queen, White Plume.

Chard—Lucullus.

Cucumber—White Spine, Chicago Pickling.

Egg Plant—Black Beauty.

Endive—Broad-leaved Batavian.

Horseradish—Maliner Kren.

Kohl Rabi—Early White Vienna.

Lettuce—Grand Rapids, Way Ahead, Hanson.

Muskmelon—Rust Resistant Rocky Ford, Hoodoo, Emerald Gem.

Onions—Yellow Globe Danvers, Southport White Globe, Prize Taker, Southport Red Globe, Red Weathersfield.

Parsley—Dark Moss-curled.

Parsnip—Improved Guernsey.

Pea—Gradus, Telephone, Mott's Excelsion, Alderman.

Pepper—Mild: Sweet Upright, Ruby King; Hot: Long Red Cayenne.

Pumpkin—Small Sugar, Large Cheese.

Radish—Scarlet Globe, French Breakfast, Chartier, White Chinese (winter).

Rhubard—Linneaus.

Rutabaga—Golden Neckless.

Salsify—Sandwich Island Mammoth.

Spinach—Victoria.

Summer Squash—Ford Hook, Long White Marrow.

Sweet Corn—Colden Bantam, Early Minnesota, Maul's XXX, Stowell's Evergreen.

Tomato—Bonny Best, Chalk's Early Jewel, Globe (pink).

Turnip—Purple-top Milan, Red-top White Globe.

Winter Squash—Hubbard, Golden Hubbard.

SMALL FRUITS.

Red Raspberry—Cuthbert, Miller, Marlboro.

Black Cap Raspberry—Cumberland, Gregg, Nemaha, Kansas.

Purple Cane Raspberry—Columbian.

Black Berry—Snyder, Eldorado, Stone Hardy, Briton.

Gooseberry—Downing, Pearl, Josslyn.

Currant—Perfection, Cherry, London Market, Wilder, Red Cross.

Grapes—Green Mountain (early white), Wyoming (early red), Moore's Early (purple), Campbell's Early (black), Worden (blue), Concord (blue), Diamond (white), Niagara (white), Deleware (red), Brighton (red), Beta (hardy), Janesville (hardy).

Ask your neighbor to subscribe for The Wisconsin Farmer.

FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

BIG FOUR POULTRY JOURNAL—the Practical Poultry Paper for Practical Poultry Raisers; only paper devoted exclusively to the poultry interests of Ill., Ind., Mich. and Wis. It's **your** paper; you should read it. Bright, Snappy, Live. **Special Offer:** 6 mo. trial Sub. 15c. Send stamps. Big Four Poultry Journal, Desk 28, Chicago.

SILVER KING (WIS. NO. 7) **SEED CORN**

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WE WILL PAY YOU $120 TO distribute "Successful Farming" in your locality. Money-making book for farmers. Write at once for our new Institute plan. 60 days' work or less. No money required. INTERNATIONAL INSTITUTE, 467 Winston Bldg., Philadelphia

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

RHODE ISLAND RED HATCHING EGGS

FROM my heavy, winter-laying money-making S. C. and R. C. strains: $1 per 15, prepaid; $4 per 100 after May 1st. Quick shipment. R. E. Daly Poultry Farm Necedah, Wis.

BARRED Rock eggs 15, $1.50; 30, $2.50; 100, $7.50. From quality birds with size, breeding and barring. Prize-winners. Our egg customers are not disappointed when chicks are grown. 19 years a breeder. Guarantee fertility. Circular free. S. V. Latcham, Cottonwood, Minnesota.

SILVER WYANDOTTES. "The Aristocrats." Eggs from the grandest matings on earth. My mating list tells all. It's free. Write for it. Address Frank Fa'a, Jr., Box 620, Dyersville, Iowa.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

EGGS for hatching $6 per 100. Shipped C. O. D. and express prepaid. Barred, Buff and White Rocks, S. C. Reds, S. C. Brown Leghorns, W. Wyandottes. P. W. Condon, West Chester, O.

WINTER LAYERS

TO INTRODUCE the Certified Winter Layer strain. Eggs for hatching **now** $4 per 100, 75c per 15. Certified Egg Farm, Madison, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

SILVER Laced Wyandottes, Barred Plymouth Rocks and White Crested Black Polish. Eggs for hatching. Cascade Poultry Yards, Cascade, Ia.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

EGG. FOR HATCHING. Pure R. C. Rhode Island Reds, $1.25 per 15, $5.00 per 100. Address Fred M. Smith, Route 7, Elkhorn, Wis.

SINGLE Comb Buff Leghorn eggs from high-class stock at $1 per 15, 100, $4.50. Chas. Schmit, R. 22, Hortonville, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

MY R. C. REDS ARE MONEY MAKERS. Eggs postpaid, prices right, circular free. Mrs. G. Ellis, West Salem Wisconsin.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

J. D. McDonald a Real Hog Man.

EVER since coming to the state of Wisconsin we have heard of J. D. McDonald, the Poland China breeder of North Bend, however, we didn't have the pleasure of knowing him or seeing his herd until last week. We had heard many compliments in behalf of Mr. McDonald as a breeder and showman. All Poland China breeders whom we have met speak highly of Mr. McDonald and since we have seen his stock, The Wisconsin Farmer will continue to boost this herd for a man that has as many friends as he and with the good Polands he has we can say good words for him conscientiously. No doubt many of our readers would like to know what Mr. McDonald is going to take out this year, for if we have been informed correctly he furnishes strong competition at the fairs. The attraction on his farm at this time is his aged boar, McChief by Big Chief by Big Bug. His dam is by the good sire, Chief Price 2d. In the first place, McChief is a big hog and I will go on record now saying he will weigh over 1,000 pounds by fair time. The writer weighed him May 6th and he tipped the scale at 840 and he hadn't started to get fat yet. He is three years old and very smooth and if he stands the fitting all right, he will be competition this fall in the aged boar class. His senior yearling is King James by Wisconsin King by the noted Long King's Equal. His dam is by Big Bone. This boar has several outstanding points about him and you can rest assured that he will be a show hog when finished. The other hog, however, is our choice of the two boars—we consider him a great boar. His senior pig is Mc's King, a son of Golden Gate King. This boar is smooth as it is possible to make him and he will make an attractive show boar this fall. Of the sows, Crow's Model, the aged sow that was grand-champion last year is holding up fine. Is very smooth, is in nice condition and Mr. McDonald expects to take her out again this year. She is indeed a wonderful sow in all respects, however, there is another sow in the herd that may finish better than the champion sow. She is out of a dam by Chief Price 2d and we believe this sow will make a wonderful showing this fall. Of the fall gilts, he has several that are great, but the best one he does not expect to take out, as he figures she is more valuable as a brood sow than she is as a show sow. She is one of the best gilts of her age we ever saw. The ones that he will take, however, are up to standard. Mr. McDonald has several litters picked out for the futurity, but, of course, it is too early yet to tell much about them. They are all doing nicely. He expects to have a full herd out and will have all classes filled. Spring pigs number 160 and are sired by Jim Crow that by the way is by Crow's Kind. We have seen the latter boar several times and while there was not as much noise made about him as some sires in Iowa he was a wonderful sire of the smooth ones with size. Jim Crow is the sire of the litter of fall pigs that will show in the futurity. Other pigs are by Crow's Progress by Great Progress and Wisconsin Chief by Wisconsin Giant. There is also a good litter of ten by Black Jumbo the good boar heading the E. W. Hendricks herd. Some are by Repeater and Smooth Price the J. C. Hendricks boars and they look fine. Mr. McDonald has several fall boars that are suitable to ship out and he is pricing these well worth the money. They are sired by the first mentioned boars and out of some of his best sows. You will not make a mistake if you buy one of these fall boars. His advertisement appears in this issue and if you write Mr. McDonald please mention The Wisconsin Farmer. See page 27.—Adv.

Pingel's Holsteins.

A. G. PINGEL, Chilton, Wis., is one of the most prominent Holstein breeders in Calumet county. He has been breeding registered Holsteins for over twenty years and has developed an exceptionally good herd. The cows are largely of Korndyke breeding and are big, fine animals with exceptionally well-developed udders and long, smooth teats. The bull now at the head of the herd is Calumet Johanna Abbekerk Champion 105829. His dam, Dianah Johannah Abberkerk 2d made 28.71 pounds of butter and 623.70 pounds of milk in seven days. In 300 days she gave 16,177.90 pounds of milk and made 677.45 pounds of butter. Her dam, Dianah Johanna Abberkerk made 20.20 pounds of butter in seven days and has four A. R. O. daughters. The sire of Calumet Johanna Abberkerk Champion is Oakhurst Milk and Butter King, a twenty-five-pound son of the $10,000 bull, The Milk and Butter King. This bull is an outstanding individual both in size and conformation. The yearling bull advertised for sale on page 28 is well marked, being over one-half white, is of straight, level type and is ready for immediate service. When writing kindly mention The Wisconsin Farmer. —Adv.

Thompson's Mule-Foot Hogs.

TWO HUNDRED head of Mule-Foot hogs are advertised by Charles Thompson, Letts, Ind. These hogs are all immuned, are sired by or bred to champion boars, and will be priced worth the money. Mr. Thompson's hogs have been consistent winners at the big shows for years, and the hogs he offers are bred along the same lines as his winners. Mr. Thompson also breeds registered Hampshire sheep. See page 27.—Adv.

The Dennis Shea Duroc Herd.

ANOTHER one of the good fellows in the Duroc game in Wisconsin is Dennis Shea located at Melvina. This gentleman has not been in the game as long as some, but he has a herd a great deal better than many. Mr. Shea started, right, buying the good stuff as a foundation and consequently it hasn't taken him as long as some to get a good herd together. In the first place he is and has been using good boars. The senior herd boar at the present time is Col.'s Choice, a massive two year old sired by King the Col. and his dam was by H. A.'s Choice Goods. This boar is a good sire and the yearlings on the place by him are the best in the herd. A senior yearling boar is Wonder Chief, a son of Cherry Chief, out of a dam by Proud Ohio Chief. This boar is siring a bunch of pigs with worlds of quality. One of the boars with a future is Pal's Defender he by Lee's Defender and his dam was by Pal's Dude he by Pal's Col. Of the sow herd he has two wonderful sows by Col.'s Choice, out of a Marion Wonder dam. These matrons have the size, great backs and feet and are the dams of some of the best spring pigs we saw on the farm. Mr. Shea has a two-year-old sow that would look good in the show ring this fall. She is big, yet has world's of quality. She is by Col. Defender and is perhaps the best aged sow in the herd. We saw one of the best yearling (April) sows we have seen for some time. She has all the good points of a show and breeding sow. If Mr. Shea shows anything this year, she will be the attraction. She is sired by Col.'s Choice, her dam by Marion's Wonder. This breeder was one of the first to enter the futurity and in all probability he will take out a few, though he can't fill all classes this year. Mr. Shea has a pleasing personality and it is a pleasure to visit and talk "hog" with him. The plan now is to make a winter sale, his first, and if he does breeders can rest assured that they will find "some offering." Ninety pigs represent the spring crop and they are sired by the three boars mentioned above. His pigs are doing nicely and he will have a nice lot of boars to offer the trade this fall. Mr. Shea has a few very choice fall boars, in nice condition and if any of our readers are in need of a Duroc boar, these are being priced very reasonable. It will pay you to write Mr. Shea and in so doing please mention The Wisconsin Farmer. See page 27.—Adv.

Holt & Son's Jerseys.

ELMDALE FARM owned by Henry Holt & Sons, Oconomowoc, Wis., are offring some choicely bred Jersey bulls for sale on page 27. These bulls were sired by Inez Rosaries Oxford and are from heavy producing cows of good type and choice breeding. They range in age from nine to fifteen months, are well grown and of good, straight, level type. Their sire, Inex Rosaries Oxford, is backed by choice breeding and high production records. His dam, Inez Rosaries, made 720 pounds of 83 per cent butter in a year. She is a daughter of Rosaries Golden Lad, that has five register of merit daughters, all with very creditable records. Her dam was Miss Melia Ann, that made twenty-three pounds of butter and gave 319 pounds of milk in seven days. Inez Rosaries Oxford was sired by G. F. Primes Oxford, a brother to the $11,500 bull, Royal Majesty. He was by G. F. Oxford Lad by Champion Flying Fox. From this limited description of his pedigree it will be seen that he carries the blood of many of the highest producing animals of the breed. For more complete pedigrees, description and price write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

Higgins' Model Durocs.

J. W. HIGGINS, Gotham, Wis., and breeder of Durocs writes that he has had good success with his spring pigs. He has also had calls for bred sows, but was unable to fill the orders. Such is the demand of the men that raise the good ones. Mr. Higgins' herd is nominated in the Duroc futurity. Some of his pigs are about old enough to wean and he will sell a few—boars or gilts—at that time. They are well bred and we will warrant they are well grown for Mr. Higgins is a good caretaker. If interested get his prices on a pair or a trio. Mention The Wisconsin Farmer.—Adv.

Boost the Poland China Futurity.

EVERY man in the state that is a hog raiser, especially pure-bred, should boost a hog show and one of th greatest features of a hog show is the futurity. There has been no phase of the live stock shows that has enthused the public and breeders alike as has the futurities which have been put on by the various breed associations. The Poland men had a very successful futurity last year and it should be better this year and it will be if all Poland China breeders will pull together and boost their game. You men that breed Polands believe in that breed or you would not stay by it, then why not boost your breed as much as possible for the more men you can get interested in the breed which you handle, the more demand there will be for your product. The Wisconsin Farmer and its field men are doing everything in their power to stimulate more interest in the swine industry of Wisconsin and if the breeders and the press will pull together and "boost" the game, the results will be accomplished. The Wisconsin Farmer gives a silver trophy again this year. Every man in the state that claims to be a breeder of Poland Chinas should have entered his herd in the futurity even though he didn't expect to show a pig. By doing so he would have helped the breed and everyone connected with it. We follow with a list of the men that nominated their herds and made it possible to have a Poland China futurity at the Wisconsin State Fair this fall. They ai boosting the breed, are you? Smiley & Sons, Albany; J. F. Diley, Rush Lake; L. P. Martiny, Chippewa Falls; Madson & Sons, Madison; W. H. Erterly, Whitewater; J. D. McDonald, North Bend; M. Kinbz & Son, Berlin; J. C. Schoenfeld & Son, Fox Lake; Jas. Derivan, Fox Lake; E. P. Tobie, Amherst Junction; J. C. Hendricks, Hazel Green. E. W. Hendricks, Hazel Green; Dobson & Eastman Lancaster; Heck Bros., Lyons; Geo. Larch, Lyons; W. W. Quackenbush, Melrose; J. Leroy Larson, Iola; A. C. Diedrick, Rush Lake; J. S. Cross, Winnecomie; A. A. Erickson, Morrisonville. Boost for a bigger and better swine show.—Adv.

The R. Conner Short-horn Herd.

THE R. Conner Co., who have a large farm at Auburndale, Wis., are breeders of high-class Short-horns in fact most of them are of the best Scotch breeding. Excellent bulls have been used in this herd from time to time and one of the best if not the best is the imported bull, Brilliant Bandsman. He is sired by the great Bandsman and his dam, Favorite Missie, is only two places removed from the noted imported Missie 166. This bull has done a great deal of good in this herd as the young stuff on the place will show. No time in recent years has there been such a demand for good Short-horn cattle and the fact that the R. Conner Co., have bulls and females that they will sell should meet with favor among those wanting some choice cattle of this breed. The office of the above firm is at Marshfield, but don't forget that the cattle are at Auburndale, ten miles from Marshfield. If you want Short-horns don't wait, write at once and mention The Wisconsin Farmer.—Adv.

Send For this United States Separator Catalog.

ANY farmer or dairyman in need of a cream separator should send for Catalog 28 of the United States cream separator. This machine is made by the Vermont Farm Machine Co., Bellows Falls, Vt., and claims the world's record in the most severe competitive skimming contest ever held. A large number of distinctive features of this cream separator make it very efficient and desirable. The catalog contains a complete description. Write for it today, addressing the company named above. See advertisement on page 12. —Adv.

Square Deal Buggies Give Absolute Satisfaction.

ANYONE expecting to buy a buggy should send for the new circular of the Square Deal line of vehicles sold by Montgomery Ward & Co. This circular gives some special buggy bargains; the low prices quoted are made possible by direct selling with only one small profit added to the actual cost of labor and material. The materials and methods employed are of the highest type, and Square Deal buggies are guaranteed to give absolute satisfaction. Write for the circular today, using the address of the house nearest you as given in the advertisement on page 18. Kindly mention this paper when you write.—Adv.

Harford's Holsteins.

FRED HARFORD, Kaukauna, Wis., has one of the best herds of Holstein cattle in the Fox River Valley. The cows are large animals of good, straight type and have big, square udders, showing heavy production ability. Although but few have been run for advanced registry as yet there is every evidence that the majority of the cows in the herd are capable of making records well above twenty-five pounds of butter in seven days. Mr. Harford is now installing the most moderate dairy equipment and is getting his animals in condition to do official testing in the fall. The cows in the herd are exceptionally well bred. Many of them are daughters of the great bull, Hengerveld Sir De Kol, the sire of Pontiac Maid, that has a record of 30.21 pounds of butter in seven days and has an average test of 4.90. Hengerveld Sir De Kol is a son of Hengerveld De Kol, that has 116 A. R. O. daughters, ten of which have records from 30.15 to 33.62. The dams of Hengerveld Sir De Kol is Inka Darkness 2d's Queen, that at twelve years of age made 25.70 pounds of butter and has an average test of 4.17 per cent of fat. She is the dam of Pontiac Queen Korndyke, that made 31.01 pounds of butter in seven days and 121 pounds of butter in thirty days. She also has two other A. R. O. daughters, one a 36.40 four year old and the other a 20.68-pound three year old. In this herd there are also daughters of Pontiac Sadie Jewel, that has fourteen A. R. O. daughters one with a record of 30.78 pounds of butter and 516 pounds of milk in seven days. He is a brother to the celebrated bull, King Segis. He was sired by Mercedes Julip's Pietertje's Paul, that has eighty A. R. O. daughters. The dam of Pontiac Sadie Jewel is Sadie Vale Concordia Beryl, a sister to Sadie Vale Concordia 4th, that recently made 41.06 pounds of butter in seven days. There are also several daughters in the herd of King Sadie Cornucopia De Kol, that combines the breeding of the thirty-pound cow, Sadie Vale Concordia, with that of Aaggie Cornucopia Johanna Lad and Hengerveld De Kol. The present bull at the head of the herd is King Colanthus De Kol Korndyke, a twenty-five-pound grandson of Pontiac Korndyke. At the present time Mr. Harford is advertising young bulls for sale on page 28. For extended pedigrees and further information in regard to these animals write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

A Well-Known Short-horn Herd.

THE name Eben E. Jones, Rockland, Wis., is not new to Short-horn men in Wisconsin, however, it may be new to some of our readers. Mr. Jones has a show herd out each year and being president of the Wisconsin Short-horn Breeders' Association he has a wide acquaintance. When we looked over his herd last week we saw some very desirable cattle, and many of the best ones were sired by Prince Cumberland. This sire did a great deal of good in this herd and Mr. Jones was indeed fortunate when he purchased this bull. He is sired by Cumberland's Last. The present herd bull is Collynie Sultan, a son of the champion, Roan Sultan by Whitehall Sultan. His dam is Marchioness 19th by Royal Luxury. This bull just turned two years and the owner only has a few calves by him, but these look good, in fact some of his get will be showed this fall. One of the best things in the herd is a senior heifer calf sired by Prince Cumberland. She should make a creditable showing this fall. He also has a roan two year old that has done well since last year and in all probability she will be shown again this year. Mr. Jones won't have a full herd out this year, but he will have some strong entries for the classes in which he can fill. Just at this time he has a couple of bulls of serviceable age that he wishes to sell and they are being priced worth the money. They are guaranteed in every way. If you need Short-horns get a line on what Mr. Jones has to offer. Write him and in so doing please say you saw the advertisement in The Wisconsin Farmer. See page 27.—Adv.

Free Service in Buying and Selling Short-horns.

THROUGH the extension department of the American Short-horn Breeders' Association, over 2,000 Short-horns have been placed during the last twelve months, in sections that would not have been reached by individual breeders. The demand for Short-horns is steadily increasing. Short-horn breeders are invited to inform the association of their salable stock, and all prospective buyers may avail themselves of the free service of the association's extension department. The next number of

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

"The Short-horn in America" will be published July 1st, and everyone interested in Short-horns should keep this publication on file. Be sure to get a copy of the July issue, and if you want to buy or sell any stock, write to American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill.—Adv.

Williams Brothers' Short-horn Herd.

WILLIAMS BROS., Bangor, Wis., start a card in this issue calling attention to their herd of Short-horn cattle. This name may not be familiar to all breeders of the state, but it would be well to keep your eye on this herd, for these gentlemen, we feel sure, will come to the front rapidly. They have been breeding cattle for several years, but they have never made much noise about their herd, though they have individuals far better than many in the state. Their foundation cows were of the Red Rose and Annabelle strains. Princess of Fish Creek (Vol. 41, P. 566) was the first pure-bred cow purchased. She was by Emperor 3d and on down through British Ensign, Duke of Oxford 54th and Waterloo Duke 5th. She traced to the imported cow, Red Rose 2d. The other cow purchased at that time was 3d Red Rose of Fish Creek by Strathmore 2d and tracing to Imp. Annabella. These cows proved valuable breeding cows and excellent milkers consequently they and their produce were retained in the herd and today, practically the entire herd is descendants of these two cows. It stands to reason, that if these cows had not been good producers, both at the pail and in the quality of their offspring they certainly would not have retained this line of breeding in the herd. The herd is mostly roans and of nice quality. They have been using a son of Prince Cumberland, Nominee Cumberland, in the herd and he has sired some fine calves and they are being offered at this time. Prince Cumberland is sired by Cumberland's Last. The dam of Nominee Cumberland is Harvester's Fancy by Lord Harvester 217030, tracing to the imported cow, Rose of Strathallan by Allan. If you write these boys for information about their cattle you can rest assured they will tell you just what they have and if you visit their place you will find the cattle just as represented. It is worth something to do business with such men. We all know there is a great demand for Short-horns at this time and if you are in need of cattle of his breed, don't hesitate too long. When writing please mention The Wisconsin Farmer. See page 27.—Adv.

Use Medusa Cement Products.

NOW is the time to build a new barn, silo, feeding floor or watering trough; the building season is at hand, and if planning any kind of construction work, you should consider the use of Medusa cement. This material will make a concrete that is permanent, giving year after year of satisfactory service. Medusa cement is manufactured in either the gray or white form. The white is used for all sort of facings and gives a smooth, even, white surface. When a waterproof concrete is desired for a silo, barn or feeding floor, where moisture must not be allowed to seep through the walls or floor, Medusa Waterproofing should be mixed with the cement. Eight pounds of waterproofing to every barrel of cement will make the concrete impervious to water and prevent cracking or discoloration. Medusa Portland cement (gray or white) may be obtained already mixed with the right proportions of Medusa waterproofing. This is a good way to buy it when waterproof concrete is desired. Several valuable free booklets regarding the use of concrete for building may be obtained by writing to the Sandusky Portland Cement Company, Cleveland, Ohio, and mentioning this paper. See page 9. —Adv.

Short-horn Bulls and Females for Sale.

IF you want Short-horns of either sex you can find them in the Wm. Hickin herd of Lancaster, Wis. Owing to the fact that he cannot use his herd bull, Champion Banff 277574 to advantage any longer he is offering him for sale. He is also offering two other tried sires as well as some younger bulls ranging in age from six to fourteen months. Among the lot there is one straight Scotch bull. He will also sell a few cows and heifers, bred or open and either Scotch or Scotch-topped. Short-horns are in demand and especially females, so if you can use some of the animals offered by Mr. Hickin we would suggest that you write him at once. We will have more to say about this herd in a later issue. Don't forget to mention The Wisconsin Farmer. See page 27.—Adv.

A Low-Priced Car With a High Record.

AN investigation of the Crow-Elk-hart "30" at $725 should be made before investing in a new motor car. This five-pasenger car with 112-inch wheel base is big, roomy and comfortable and gives perfect riding satisfaction. Sturdy spring design and solidity of construction contribute to a long life of satisfactory car service, and economy in operating is shown by the fact that many owners report a mileage of from twenty-two to twenty-six miles per gallon of gasoline. Read the advertisement on page 17 by the Wisconsin Motor Car Co., Distributors, Janesville, Wis., and see the Crow-Elk-hart "30" before selecting your car.—Adv.

Marquette Cement, the Building Material For the Farm.

WHEN ready to build a feeding floor, watering trough, silo or any farm structure in which permanence and service is desired, do not fail to figure on the use of Marquette Portland cement, the material which is "as lasting as the pyramids." All cement sold under this brand is thoroughly tested and guaranteed. It may be identified by the green zig-zag tag found on each bag, which is shown in the advertisement on page 2. Ask your dealer for Marquette cement and mention that it is advertised in this paper.—Adv.

Some Great Spring Pigs.

WE have seen a great many pigs this spring, but we havn't seen any that look better or have been grown better than the Chester Whites owned by Adolph Nuttleman, West Salem, Wis. He has about forty pigs that came the latte part of February and they certainly have done well. One of the best sows on the place is a granddaughter of St. Elmo and she has a fine litter of seven by Joy Boy. Wykoff Silvia is a daughter of the champion, Wykoff Lad, and her litter of eleven show up well. They are by Joy Boy, in fact most of the pigs are by Joy Boy. He is by White Prince and his dam is by Comet. Joy Boy is a good two-year-old boar. Will weigh right at 600 pounds now and no doubt his owner will show him this fall. Mr. Nuttleman is offering spring pigs for sale, any number to suit the buyer and we will say right now that the buyer will be pleased with any of them. If when you get the pigs you don't like them ship ship them back and Mr. Nuttleman will gladly refund your money. Order early and get the pick. There are some show pigs in the lot. Mention The Wisconsin Farmer. See page 27.—Adv.

Engines for Every Engine Job on the Farm.

THE Wisconsin gas and gasoline engines can handle any engine job on the farm. They are made in fifteen sizes, running from one and one-half to thirty horse power and are furnished in stationary and portable types. Each engine is guaranteed and if it fails to do the work claimed for it, the purchase price will be refunded. Low fuel consumption is an important feature of these engines. See the advertisement on page 16 and send for the thirty-two-page catalog describing the Wisconsin engines and the literature on farm electric light plants, which may be had free on request to the Lawson-Lawton Co., De Pere, Wis., if you mention The Wisconsin Farmer.—Adv.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.

Holstein-Friesian Cattle.

June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

News of the Sale Ring.

Central Wisconsin Holstein Sale.

The third sale of Holstein cattle made by the Central Wisconsin Holstein Breeders' Association was held at Marshfield, May 10th and 11th. Owing to the fact that the farmers were so busy in the fields there was not as large an attendance as at some of the previous sales. There were some excellent cattle sold far below their value. There were also cattle listed that should not have been offered at public auction at all for it is a poor advertisement for a breeder to put up undesirable individuals. The top of the sale was Belle Hartog Zerma Netherland 231277, a three year old sired by Prince Idaline Pietertje Hartog 60810. She was consigned by Wm. Krause, Thorp, and M. L. Wogensen, Veedun, Wis., was the buyer, paying $285 for her. She was a good buy at that figure. The sale was well managed and Mr. W. W. Clarke and E. E. Butters worked hard for the success of the sale. Col. J. E. Mack sold the offering in his usual satisfactory manner. We follow with a list of those selling for $100 or over:

BULLS.

Signal Mercedes Bess Posch Lad, Oct. 20, 1915; E. O. Brecke, Stetsonville, Wis. $100
Rosetta Clothilde's Posch Lad, Sept. 10, 1915; August Mews, Auburndale, Wis. 105
No. 39, Feb. 15, 1915; Chas. Lovesee, Knowlton, Wis. 105
Jack Segis Emporia, March 9, 1915; Fred Behling, Withee, Wis. 150
No. 82, Feb. 1, 1916; O. J. Len, Grand Rapids, Wis. 115

FEMALES.

Johanna Vesta Netherland, Nov. 2, 1914; F. M. Pickett, Spencer, Wis. 180
Colusa Hengerveld De Kol 2d, Dec. 8, 1913; G. J. Liezen, Milladore, Wis. 135
Beauty Rue Letta, Aug. 31, 1914; S. M. Quaw, Wausau, Wis. 205
Sadie Zerma Netherland, Feb. 9, 1914; Wood County Asylum, Marshfield, Wis. 185
Agnes Clothilde Johanna Korndyke, April 26, 1914; G. J. Liezen..... 135
Prospect Johanna Clothilde 2d, Oct. 5, 1913; Wood County Asylum.. 200
Colanthus Pietertje Beatrice, Jan. 22, 1914; S. M. Quaw 205
Belle Hartog Zerma Netherland, Feb. 15, 1913; M. L. Wogensen, Veedun, Wis. 285
Jessie Fobes Homestead Una Lily, Nov. 22, 1908; Ernest G. Palmer, Neillsville, Wis. 155
Jessie Fobes Homestead Baby De Kol, calved Nov. 3, 1908; Jos. McNeight, Stratford, Wis. 145
Gem Rigtje Daisy Monk De Kol 2d, Nov. 18, 1916; H. F. Radtke, Grand Rapids, Wis. 235
Brandi's Violet 7th; G. J. Liezen.. 130
Elmwood Colantha Pontiac, June 20, 1914; Walter I. Booth, Litchfield, Minn. 115
Plain View Johanna Segis 2d, Feb. 25, 1912; C. B. Esselmann, Loyal, Wis. 100
Rosie of Sunny Side, Aug. 7, 1906; H. F. Bohn, Thorp, Wis. 125
Josephine Pietertje Adiofora, Sept. 1, 1913; S. M. Quaw 150
Piebe Mechthilde Efen Karmel, Jan. 31, 1912; Walter I Booth 120
Leila Aaggie Grace, Aug. 31, 1907; F. A. Herbest, Marshfield, Wis... 125
Leila Superb, Feb. 20, 1913; E. E. Royce 100
Piet 6th Pauline, Jan. 24, 1909; G. J. Liezen 130
Hornside Pietertje, April 18, 1914; Earl Habbard, Osseo, Wis. 200
Gertrude Johanna De Kol, May 9, 1905; E. E. Royce 135
No. 44½; Herman F. Radke, Grand Rapids, Wis. 105
Uneeda Korndyke Almeda, Jan. 5, 1909; H. J. Bassuerer, Vesper, Wis. 190
Aletta Inka Melchior, Jan. 6, 1911; Garrit J. Gravink, Arpin, Wis..... 160
Marguerite Alene Melchior, June 20, 1910; Garrit J. Gravink 170
Othilda Pocahontas Melchior, Aug. 30, 1910; E. E. Royce 185
Johanna Jessie Artis, April 14, 1914; Harry Garside, Auburndale, Wis. 185
Korndyke Artis Lady, Oct. 4, 1913; L. A. Kettler, Auburndale, Wis... 170
Korndyke Beets Hengerveld, March 7, 1914; Wood Co. Asylum 175
Johanna Genevra Korndyke, Jan. 7, 1914; G. J. Liezen 135
Johanna Genevra Ormsby, April 18, 1912; Earl Hubbard, Osseo, Wis... 205
Morna Ormsby, Aug. 26, 1907; G. N. Longhead, Marshfield, Wis. 105
Lady Belle Wood Pietertje 2d, April 12, 1910; George Kieffer, Auburndale, Wis. 210
Pearl Pontiac Premier, May 12, 1915; Walter I. Booth 105
Doris Pontiac Premier, April 12, 1915; Union Grove Dairy Farm Association, Grand Rapids, Wis. 115
Piebe Colantha Korndyke, July 15, 1914; Walter I. Booth 155
Dinah Mercedes Colantha 3d, Feb. 20, 1914; E. E. Petrick, Marshfield, Wis. 155
Segis Lockhart Ormsby, April 5, 1913; J. C. Kieffer, Auburndale, Wis. 245
No. 71, Nov. 21, 1915; Herman F. Radke 100
No. 72, Nov. 19, 1915; Union Grove Dairy Farm Asso. 105
Jessie Jen Colanthus 3d, June 13, 1915; G. J. Liezen 105
Jessie Jen Colanthus, Jan. 21, 1912; G. J. Liezen 105
No. 77, Dec. 1, 1915; Union Grove Dairy Farm Asso. 120
Bonheur Segis Colanthus, Dec. 7, 1913; Fred C. Betry, Berlin, Wis. 170
Plain View Johanna Pauline, Dec. 12, 1912; Walter I. Booth 175
Plain View Johanna Colantha, April 4, 1913; Bert V. Gates, Sherry, Wis. 170
Plain View Johanna Marie, Jan. 6, 1913; Wood County Asylum..... 160
Fannie De Kol Mechthilde 2d, April 16, 1906; H. J. Blenke, Blenke, Wis. 110

SUMMARY.

61 females $ 8,470;; average....$138.85
30 bulls .... 1,952; average.... 65.06
91 head .... 10,422; average.... 114.52

Sheboygan County Holstein Breeders' Sale.

There was a marked improvement in the sale this year over that of a year ago. In the first place there was a better lot of cattle offered and secondly the buyers seemed to more nearly appreciate the difference between the well bred and plainly bred animals. One of the features of the sale was the eight-weeks-old calf out of the thirty-pound three-year-old cow, Eagle Rigtje Jessie. John Goelzer, Plymouth, Wis., was the fortunate purchaser at $325. This calf was consigned by the Truttschel Bros., Sheboygan Falls, Wis. The twenty-seven-pound cow, Klazerina 2d's Gerben was purchased by Dr. G. H. Stamrard, Sheboygan, Wis. Although she was eleven years old she brought $350. A detailed list of the sale is given below:

BULLS.

No. 9, March, 1916; John Goelzer, Plymouth, Wis. $325
No. 24, March, 1916; Wm. J. Schreider, Sheboygan, Wis. 150
Segis Pontiac Korndyke Polkadot, March, 1913; O. J. Berglin, Shawano, Wis. 125
Kaiser Nig, June, 1914; John Sperl, Sheboygan Falls, Wis. 100
No. 57, J. W. Miller 155

FEMALES.

Blackie Korndyke Colanthus, Feb., 1914; Walter Behlow, Hilbert, Wis. 200
Jennie Walton Colanthus, July, 1907; O. J. Berglin, Shawano, Wis. 305
Blossom Korndyke Segis, Sept., 1912; Tom Kelly, Plymouth, Wis. 150
No. 5, March, 1916; H. C. Prange, Sheboygan, Wis. 240
Rigtje Johanna Wit, Dec., 1915; Fred Reyer, Sheboygan, Wis..... 165
Pietertje Johanna Wit, Dec., 1915; Fred Reyer 155
Klazerina 2d's Gerben, March, 1905; Dr. G. H. Stamrard, Sheboygan, Wis. 350
Bumble Bee 4th's Gerben 2d, March, 1905; Harry Keach, Glenbeulah, Wis. 150
Klazerina Beauty, Feb., 1911; S. Stanchfield 280
Queen Fannie, Dec., 1915; Tom Kelley, Plymouth, Wis. 125
Jewel Yeslet Madeline, Nov., 1915; S. M. Kyes, Owen, Wis. 130
Mabel Melchior Yeslet, June, 1915; H. L. Goelzer, Plymouth, Wis... 140
Mechthilde Sarcastic, April, 1909; H. Tohl, Plymouth, Wis. 180
Concordia De Kol Vale, March, 1905; W. A. Miller, Adell, Wis... 155
Bessie Johanna Korndyke, Jan., 1913; James Ogle, Waldo, Wis... 270
No. 23, March, 1916; Gramling Bros., Dousman, Wis. 175
Orphan Queen De Kol 2d, Dec., 1911; S. C. Stanchfield, Fond du Lac, Wis. 250
Queen Champion Mercedes, July, 1914; S. M. Kyes..... 175
Queen Piebe Mercedes De Kol, July, 1915; S. M. Kyes 155
Mala Melchior 3d, July, 1912; F. Ubbelohde, Sheboygan, Wis. 210
No. 29, April, 1915; Henry Burmeister, Two Rivers, Wis. 120
No. 30, April, 1915; Walter Behlow, Hilbert, Wis. 115
Henrietta Peeress, Jan., 1915; H. J. Goelzer 130

Clean-Up Prices **SEED CORN** Highest Quality

TO clean up our stock of high quality, high testing, pure bred, **true to name** seed corn we make these low, clean-up prices while our stocks last. All orders taken subject to previous sale. **Write, phone** or **wire orders** direct from this ad. Every shipment guaranteed to please you. This corn is worth twice as much as these figures, and corn no better has sold for $10 and $15 per bushel all spring. Here's your chance to get in on a real bargain on our clean-up sale of surplus stock.

SPECIAL CLEAN-UP PRICES

Bushels on hand		1 bu.	2 bu.	5 bu.	Germ.
1000	Reid's Yellow Dent	$2.75	$2.60	$2.50	90%
2200	Silver King	3.50	3.40	3.35	95%
700	Boone County White	3.00	2.90	2.80	92%
200	Iowa Gold Mine	3.00	2.90	2.75	88%

GALLOWAY BROS. & COMPANY 33 GALLOWAY STATION WATERLOO, IOWA

DRICO HOLLOW-WALL SILO IS FROST PROOF

INSIDE and outside wood lining forms three-inch dead air space. Strong, durable and securely anchored. No hoops to tighten, no guy wires to get loose. Sectional construction makes it easy to erect in a few hours, with no special scaffolding. No expert help needed. Has Expansion Doors which can't stick or bind. Write for catalog and attractive prices. Agents wanted.

DRICO SILO COMPANY
493 S. W. 9th St., Des Moines

Horse Nails That Hold

insure the best service for the Horse Owner. Someone's time must be wasted, someone's money needlessly spent if the nails fail.

You want maximum service, of course. Have **Capewell nails** used then. It pays. Not cheapest irrespective of quality but the best nails in the world at any price.

"THE CAPEWELL" THIS CHECKED HEAD IS OUR TRADE MARK THE CAPEWELL HORSE NAIL CO. HARTFORD, CONN., U.S.A.

WAUKESHA COUNTY HOLSTEIN SALE

WAUKESHA, WIS., JUNE 1, '16

A GREAT SALE

Great because of the high-class offerings. The offerings are strongly backed with 30-pound records. They are represented:

First—In the 30-pound bull himself. He is a son of Pearl Wartina, a 30-pound cow, and Paul Ormsby, that is grandsire of Ormsby Jane Segis Aaggie (44.42 pounds butter, world's record).

Second—In young sons and daughters with strong 30-pound breeding on both sides.

Third—In animals with A. R. O. records or breeding, bred to 30-pound bulls.

The Ormsby, Pontiac, Segis and Homestead blood lines are strongly represented throughout the entire sale entries. These animals are bred for production and individuality.

Among the consignors we find the following who are consigning some of the best animals of their herds: Schley Bros., S. A. Baird & Son, W. O. Briggs, Connell Bros., Geo. J. Schuster, Burmeister Bros., Dr. David Roberts, Dr. B. O. Nobles, H. E. Reddelien.

Catalogs now ready. Address

W. L. Baird, Mgr.

Waukesha **Wisconsin**

Auctioneers: Lose, Krause and Walker

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY

Study at home. Thore, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America. Dept. 103 Lincoln, Nebr., U. S. A.

TOO LATE TO CLASSIFY.

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

WINTER LAYERS. To more widely introduce the Certified strain S.C.W. Leghorns. Eggs for hatching NOW $4 per 100, 75c per 15. June chicks $10 per 100. Certified Egg Farm, Madison, Wis.

FOR SALE—Fine, high-grade, Chickering make upright piano, used as sample but good as new. Will sell for $165.00. Address Ella Mae Fredrikson, 879 Algoma St., Oshkosh, Wisconsin.

Florence Mercedes Melchior, April, 1915; S. M. Kyes	145
Johanna Segis Cornucopia De Kol, Aug., 1913; Tom Kelley	170
Easter Girl Cremontie 2d; John Sperl, Sheboygan Falls, Wis.	140
Belle De Wit De Kol, May, 1913; Henry Beul, Cedarberg, Wis.	215
Winkel Korndyke Duchess De Kol 2d, Dec., 1912; S. C. Stanchfield	140
No. 43, Dec., 1915; S. M. Kyes	105
Minnette Pauline Cedarside, Feb., 1913; S. C. Stanchfield	185
Lady Whitefoot Bergsma Canary De Kol, March, 1912; O. J. Berglin	180
Lady Bergsma De Kol, March, 1914; Carl Krumrey, Plymouth, Wis.	160
Butter Lily Canary, Sept., 1912; J. Ogle, Waldo, Wis.	230
Roxy Anna Watson Daisy, March, 1914; J. Ogle	160
Rippleton Segis Lass, Dec., 1914; S. M. Kyes	135
No. 51, Nov., 1915; Arno Eastman, Sheyboygan Falls, Wis.	100

Hope of relief for the pea-canning industry of Wisconsin was lost recently when the supreme court upheld the law forbidding employing women more than ten hours a day. As peas must be packed the day they are cut and because of the short season it is almost necessary that the plants run long hours. As labor at such times is scarce it is necessary that employes work overtime. Under the court ruling the canners must observe the ten-hour law to the letter, and the industrial commission is prevented from permitting women to work longer than ten hours daily, as has been done during the last three years.

AYRSHIRE CATTLE.

Breeding Ayrshire Bull Individuality

BORN August 3, 1915. Sire: imported **Craigbrae Lord Rosebery** 15001. Dam: **Bonny Miss Casanet of So. Farm out of** 480 pound three-year-old. He is more white than red and is guaranteed in every way. If you see him you'll buy him if you know Ayrshires. Your inspection and correspondence are invited. Write
Jas. Van Etta - Lima Center, Wis.
(Rock County)

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov. of the Chene. Address
Charles Schmidt Wrightstown, Wisconsin

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett Sparta, Wisconsin

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.
Grenwode Farm, E. R. Whitcomb, Prop.
Whitefish Bay, Wisconsin.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

FOR SALE High-grade Guernsey heifer calves at $15 each. Address Fern A. Findlay, Whitewater, Wisconsin.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son Oconomowoc, Wis.

Yearling Jersey Bull

OF choice breeding. Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort Tomah, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

POLAND CHINA SWINE.

Martiny's Poland China Boars

15 FALL boars of September farrow, sired by Wisconsin Jumbo, the 1st prize and Jr. champion boar at the Wisconsin State Fair, 1914. I believe he was the biggest boar of his age shown that year, he weighing 510 pounds at eleven months old. This will be the last chance to get a herd header from this great boar. The wise man will raise a few fall pigs this year if he never did before. I will sell these boars now for less than they will bring for pork after you get through using them next fall, as I wish to make room for my 100 spring pigs I already have on hand.
L. P. Martiny **Chippewa Falls, Wis.**

POLANDS

HAVE some fine fall **BOARS** to be sold at **BARGAIN PRICES** during the next month. Write. Everything guaranteed.
R. MEINKING - - BANGOR, WIS.

BLACK JUMBO 221231

A FEW good Poland China sows bred for fall litters to the great boar, Black Jumbo.

BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks Hazel Green, Wisconsin

McDONALD

HAS some good Poland China fall boars that must be sold at once. From my best sows and show boars. Write, mentioning The Wisconsin Farmer. J. D. McDonald, North Bend, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

CHESTER WHITE SWINE.

CHESTERS

OFFER spring pigs, February and March farrow, singly, pairs or trios. Sired by JOY BOY. Satisfaction or no pay. Address
Adolph Nuttleman, West Salem, Wisconsin

CHESTER WHITE SPRING PIGS

OF February and March farrow, direct breeding of a $400 boar. Boars $12, sows $10 each. Shortage of feed forces this sale. A No. 1 stock; no runts. Cash with order gets first choice.
Jos. Egelhof Edmond, Wisconsin

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address
W. F. Miller West Salem, Wis.

CHESTER WHITES

FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address
John Simon Campbellsport, Wis.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS . . . HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird Prairie du Chien, Wisconsin

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE VIOLA, WISCONSIN

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Charlton, Iowa.

HORSES.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address
M. Bodenheimer & Co. Green Bay, Wis.

PERCHERON and Belgian stallions and mares. Imported and home bred. Also some good fillies for sale. Come and see us. Barns in town. **HART BROS., OSCEOLA, IOWA.**

DUROC JERSEY SWINE.

Duroc Gold Bonds

TRIED brood sows and fall gilts being bred to Gold Bond, 1st prize senior yearling boar Wisconsin State Fair, 1915. Due to farrow in August and September. All kinds of Durocs. Prices reasonable. Address
JOHN L. FISHER JANESVILLE, WIS.

DUROCS

WHEN you think of **DUROCS** remember the champion of champions, **LEE'S DEFENDER.**
L. F. ATWATER BANGOR, WIS.

DENNIS SHEA

MELVINA, WIS.

OFFERING Duroc fall boars with quality and breeding. Spring pigs coming fine. Herd entered in futurity.

PRINCE DEFENDER

SEPT. Duroc boars and gilts by him for sale. Spring pigs by above boar, Lee's Defender and Royal King 4th. Shipped on approval. Keep your eye on Prince Defender.
McClurg Bros. Viroqua, Wis.

DUROC JERSEYS

CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)

HAVE the best spring pigs I ever raised. They are wonderful sires. Write.
Geo. H. Willsie - - Prosper, Minn.

DUROC JERSEYS

HAVE had a big trade in gilts and am sold out. We have an **Orion Cherry King** boar and one by **The Chief's Col.** Keep this in mind for future reference. Address
E. H. PARKER & SON, JANESVILLE, WIS.

HIGGINS' MODEL DUROCS

NOTHING to sell, but still in the game. J. W. Higgins, Gotham, Wis.

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

HOLSTEIN-FRIESIAN CATTLE.

JOHN MANN
NEOSHO, WISCONSIN

BREEDER of registered and high-grade Holsteins. Heifers, springers and cows for sale.

A. G. HARTER
RUBICON, WISCONSIN
BREEDER OF REGISTERED
HOLSTEIN CATTLE

Bred for high production ability, good type and along popular blood lines.

John Gutschenritter & Sons
Neosho, Wisconsin

BREEDERS of registered Holsteins that are well marked and of good breeding. A large herd to select from. Two bull calves for sale at the present time that are from high producing dams. Good individuals and at reasonable prices.

4 HOLSTEIN BULLS

MOSTLY white, ranging in ages from 5 to 10 months; and 4 Holstein heifers, more white than black, ranging in age from 3 to 7 months. Sired by Canary Frisbie Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead, and the 22.81-pound cow, Sadie Frisbie Homestead, a daughter of Homestead Jr. De Kol. Address
HENRY HOSTERMAN
257 N. Main St. Hartford, Wisconsin

PLEASANT VIEW STOCK FARM
Bulls From 2 Weeks to 9 Months

SIRED by the 22.81 pound bull, Canary Frisby Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead. The dams are high producing cows. One of them averaged 74 pounds of milk per day for 30 days. These bulls are ⅞ white, are well grown and have straight rumps. Address
Geo. C. Eifert Hartford, Wis.

A. R. O. BRED

WE have a few bulls left sired by King average over 29 lbs. butter in 7 days ter in 7 days, and 21,834 lbs. milk and daughters has just made over 20 lbs. in out of Johanna, Korndyke and Pontiac butter records. Write for particulars
Wisconsin Star Stock Farms,

HOLSTEIN BULLS

Artis Pontiac, whose dam and sire's dam and whose sire's dam made 31.7 lbs. butter, 1,076 lbs. butter in one year. One of his 7 days at 2 years of age. These bulls are bred dams backed by large milk and and price. Address
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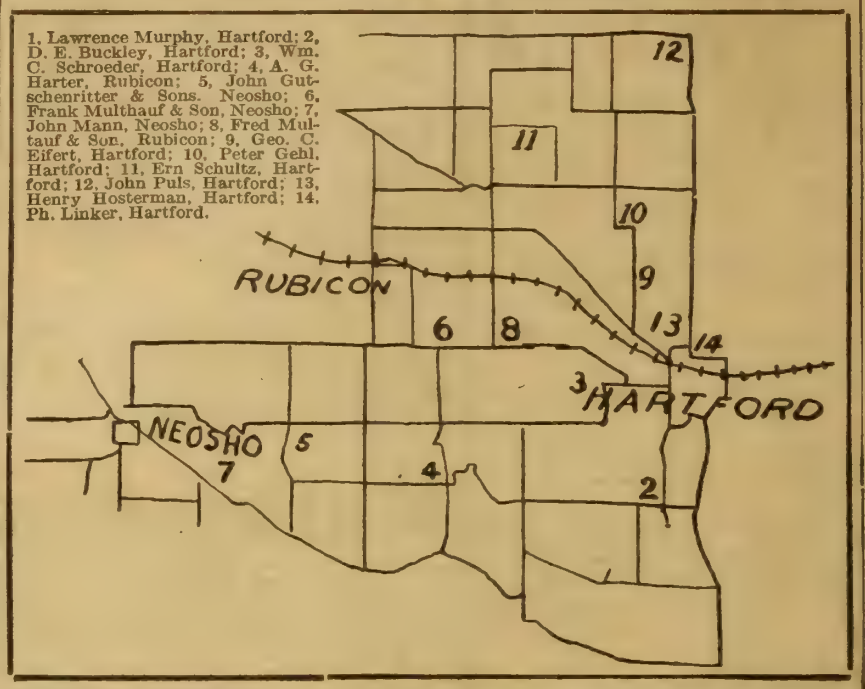

Johanna Colantha Sarcastic Lad

PREPAREDNESS

BE prepared when the time comes that your milk will be bought by the test, use a son of Springdale Roena Vale, record 24.87 pounds in seven days, just finished a yearly record of some 16,700 pounds of milk with an average test of better than 4.2 per cent fat. I now offer for sale a two year old son of hers, large, well grown, very gentle and like his sire, Johanna Colantha Sarcastic Lad, is a very good individual. Address
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Yearling Holstein Heifers

AND bulls fit for service sired by Rag Apple Pontiac Polkadot, a son of the $6,800 bull, King Segis Pontiac Polkadot. Address
Ph. Linker Hartford, Wis.

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THREE registered Holstein bull calves sired by the world's champion, Cleveland Johanna Sir Piebe 132446, whose dam is Molly Johanna Korndyke 184885, the only two year old that made 30.62 pounds butter in seven days. Prices reasonable. Write, or better come and see them. Two miles southwest of Hartford.
Wm. C. Schroeder, R. 5, Hartford, Wisconsin

HOLSTEINS FOR SALE

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P. L. GEHL'S FARM

TWO fine bulls, born September 12th and September 15, 1915. Sire is a son of King Segis Pontiac Polkadot, one of the greatest sires living. Their dams are Molly Carema Melchior 2d 260244 and Novelty Belle Ormsby 229169. These bulls are large, thrifty youngsters. Straight and long bodied, handsomely marked. Write for prices.
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BADGER STOCK FARM

OFFERS a car of extra choice grade yearlings, and a car or more of springing cows. Address
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REGISTERED AND HIGH-GRADE HOLSTEINS

OF choice breeding, well marked, good type and high production ability. When in need of Holsteins write us. Address
Fred Multhauf & Son Rubicon, Wis.

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HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows.
BONNIE MEAD STOCK FARMS, Randolph, Wis.

RUST BROS.' STOCK FARMS
The Kind That Will Improve Your Herd.
29.74 lb. HOLSTEIN BULL

SIR Ida Lottie Cornucopia. His dam made 29.74 lbs. butter in 7 days, 816.91 lbs. butter in a year. She has 3 sisters with records of 27.54, 27.99, 28.63, 33.65. Her dam made 27.11. Here is a bull fit to head any herd. Send for picture and pedigree. Address
Arthur Rust West Allis, Wisconsin

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
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ELM VALLEY HOLSTEINS

MY senior herd sire, Sir Canary Alcartra 78433, went to M. L. De Voin, Eureka, Wis. He is a grand bull and will be herad from in the future. I have a fine yearling bull sired by Comhurst Pontiac Prince 113096, a son of Pontiac Aaggie Korndyke, and out of a granddaughter of King of the Pontiacs, that made 15.830 butter, 7 days at two years old. Also a lot of yearling heifers and calves for sale. Address
A. L. ROWE R. 4, WAUPACA, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Vin Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

21.60-LB. HOLSTEIN BULL

BORN Dec. 30, 1914; ready for heavy service; well grown, good, straight type; sired by **Prince of Hillsboro** that has 5 A. R. O. daughters and is by a 27-lb. bull out of a dam testing 4.39% fat, dam of bull **Nig Alcartra Pearl Daisy**, A. R. O. record 21.60; her sire has 25 A. R. O. daughters; her dam is a daughter of **Pearl of the Dairy Joe De Kol**; she has 6 A.R.O. daughters and her dam has 6 A. R. O. daughters, an unusual combination. Send for pedigree.
Griem & Hipke - New Holstein, Wis.

HOLSTEIN BULLS

READY for service. Sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 28 pounds butter in 7 days. Dam, Spring Valley Lindora 241565, that gave 428.3 lbs. milk, 17 lbs. butter in 7 days; 13,129.8 lbs. milk, 558.3 lbs. butter in one year at 2 years, 20 days of age.
C. Tochtermann Monroe, Wisconsin

YEARLING SON

READY for service of the 28-pound Holstein bull, Calumet Johanna Abberkerk Champion 105829, whose dam gave 623.70 pounds milk and made 28.71 pounds butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. The bull offered for sale is 3-4 white, good and straight and well grown.
A. G. Pingel Chilton, Wis.

400 HOLSTEINS
Pure-bred and high grade
Cows, Heifers and Service Bulls

THEY are first class individuals, well bred, tuberculin tested and right in every respect. Exceptionally low prices. (We have some choice GUERNSEYS.) Write for particulars. Address
EDGEWATER STOCK FARM, Fort Atkinson, Wis.

SONS OF THE 32-LB. HOLSTEIN BULL
COLANTHA DE KOL PIETERTJE

SIRE, Colantha Johanna Lad, a son of the great Colantha 4th's Johanna. Dam, Ida De Kol Pauline, A. R. O. record 39.64 pounds butter. Can supply bulls of serviceable age, or from 1 month to 10 months old. Out of heavy producing dams.
Baltz Hoesly - New Glarus, Wisconsin

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address
Watson & Will Menomonee Falls, Wis.

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, Kilbourn, Wisconsin.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

10 CHOICE Holstein heifers and 2 bulls 15-16ths pure, $20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wisconsin.

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

Ready For Service
Holstein Bull

OF Johanna Korndyke Ormsby breeding, out of an A.R.O. dam. Straight and level; well grown and marked. Priced right. Address
W. D. McGILL - Menomonee Falls, Wis.

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SIRED by our Junior herd sire **Butter Boy Mink Pontiac** 133161, from tested dams. Also
CHESTER WHITE SWINE
both sexes. For pedigree and prices write Cook Brothers, Burlington, Wisconsin. Cedar Lawn Stock Farm.

Sons of the 37-lb. Holstein Buli

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse Monroe, Wisconsin

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HIGH-GRADE yearling Holstein Bull. 99% pure. Dam a high producer. Also good hound pups, $3 and $4. Write Lawrence Milfried, Cazenovia, Wisconsin.

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Red Polled Cattle

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UNDERWOOD STOCK FARM
L. C. Underwood, Prop. Avoca, Wis.

RED POLL Headquarters

YEARLING BULLS of herd-heading quality. **Breeding** and **individuality** the best. Write us. J. W. SALTER & SONS, Unity, Wis.

LOOK! RED POLL BULLS

1 YEARLING—1 two year old. Well grown, well bred. Priced right. Write at once. Guarantee satisfaction. Address
Natt Kimball Black River Falls, Wis.

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HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
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RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

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FOR sale at reasonable prices ten very good Scotch-top cows, either with calves by side or safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also one good roan bull coming one year old sired by Imported Raphael. Ten heifers coming 1 year old sired by Strathallan Ring, a very good grandson of Whitehall Sultan.
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FROM MILKING STRAIN OF
SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

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YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little Evansville, Wis.

Bates Short-horns
Fashionable Durocs

STOCK of both breeds for sale. Gigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

MILKING SHORT-HORN BULLS

SIRED by KING CREST 39857, a Duchess of Gloster bred bull, and out of Arabella and Imp. Bertha bred cows. Prices right. Address
John Notseter Deerfield, Wisconsin

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ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
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SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

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FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

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BERKSHIRES

Am breeding bunch of fine sows for fall farrow to big-type boar. Fall and spring boars for sale. Also herd boar. W. A. Freehoff, Waukesha, Wis.

THE WISCONSIN FARMER

VOL. XLV. NO. 21. THURSDAY, MAY 25, 1916. WHOLE NO. 1791

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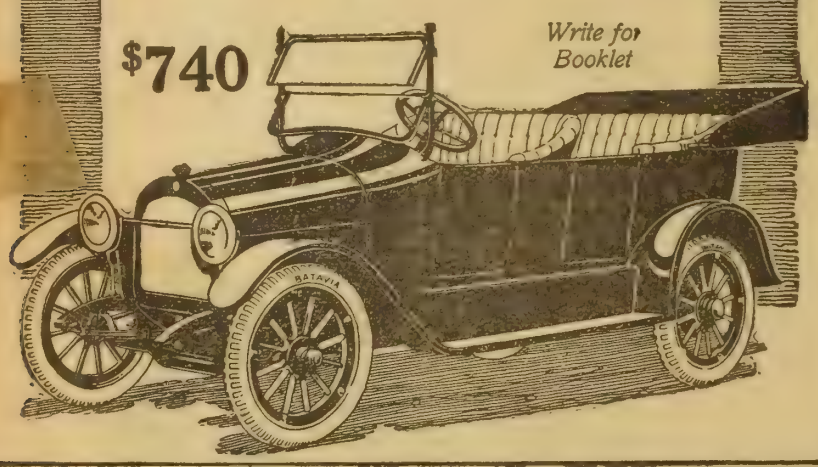

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CURRENT EVENTS

A RURAL credit bill, providing for a federal farm loan board and a system of twelve land banks, passed the lower house of congress last week by the decisive vote of 295 to 10. A similar measure has already passed the senate, the difference between the two bills to be made up in conference. Under its terms the land banks would lend money to farmers at not more than 6 per cent interest through local associations, mortgages running from five to thirty-six years. The mortgages would be used by the banks as the basis for farm loan bonds. The senate would limit loans on lands at 50 per cent with no recognition of improvements. The house proposed to grant 60 per cent on land values and 20 per cent on permanent insurable improvements. The senate proposes that no loan shall be made if the three members of the local loan company are not unanimous in their appraisement; the house would require a majority report of the committee. The senate makes the minimum loan $200; the house $100. The senate would charge borrowers 10 per cent interest on all defaulted payments; the house would charge only contract rates. It seems now almost certain that some form of rural credit legislation will be decided upon at this session of congress, sentiment being overwhelming in favor of it among the lawmakers.

AFFAIRS in Mexico continue unsettled. After conferring together for a week, General Scott, chief of staff of the United States army, and General Obregon, minister of war of Mexico, separated with but little actually accomplished. General Obregon continued to demand that the United States set a date when the American troops would be removed, but this was persistently refused by General Scott, acting under orders from Washington. The American troops will not be withdrawn until a semblance of order has been restored and raids across the border are discontinued, that much is assured. In the meantime American troops killed three Villa bandits last week, one of the number being one of Villa's lieutenants. Villa is reported to have recovered from his wounds and to be recruiting another army with which either to raid the border or attack the troops in Mexico. Altogether the situation is far from comforting, although there has been but little loss of life for some days.

WM. J. BRYAN has issued a signed statement in which he declares that the democratic party, to win the coming campaign, must "move toward peace" and thereby capture the peace element in the republican party. The surprising victory of Henry Ford in Michigan and his strength in the Nebraska primaries has convinced Mr. Bryan that there is a greater following for peace than was formerly thought. In order for the democrats to win (President Wilson being a minority president, in that he received fewer votes in 1912 than Roosevelt and Taft combined) they must get this peace following. Mr. Bryan concludes: "If this element is to be conciliated it must be done by a move toward peace. The opportunity is here. The German government, in accepting this government's position in the submarine controversy, gives as one of its reasons for doing so its unwillingness to be responsible for extending or spreading the war. It refers to the fact that it has twice expressed a desire to consider terms of peace. The way is open. Will the president take advantage of the opportunity? Failure to secure peace would bring no humiliation, while success would be of tremendous advantage to him politically, as well as a blessing to this country and the world. He can at one stroke destroy all the advantage the republican party now has and make the race on the record of a peacemaker. Will he give voice to the world's conscience—to humanity's hope?" Mr. Bryan has been delivering a number of speeches throughout the grain belt recently, mainly in the interests of prohibition and woman suffrage.

A REGULAR army of 254,000 men will be provided the United States as a result of pending legislation in congress. This figure was reached as a compromise between the Chamberlain bill in the senate and the Hay bill in the house. Under the agreement betwen the two houses of congress there are to be 175,000 fighting men, 5,733 scouts, 6,409 quartermaster corps men, 7,290 medical corps men, 3,387 signal corps men and 8,750 unassigned troops. This makes a total of 206,169. In the probable event of war the president is authorized without further authority from congress to recruit the army up to 125 per cent of its peace strength, or 254,000 men in all. With regard to the national guard and reserve features, the measure represents a compromise. It provides for 425,000 men in the national guard, 800 for each member of congress and each senator. It also contains the Wadsworth provision that national guardsmen shall first take an oath of allegiance to the national government. It is believed this oath will give the president the right to send them out of the country without further formalities in case he believes they are needed elsewhere. The enlisted period for the regular army is fixed at seven years, three with the colors and four in the reserve. A spirit is manifest in both houses of congress to increase the fighting forces of the nation, party lines being well-nigh obliterated in the scramble to get in on the preparedness bandwagon.

TAXES on incomes, inheritances and war munitions will be depended on to pay for the preparedness campaign, according to Chairman Kitchin, of the house ways and means committee of congress. The plan is said to have the support of President Wilson. Just what amount will have to be raised cannot be determined until the naval and military bills are completed. Other than a decision not to lower the present exemption limit for incomes ($3,000 for unmarried and $4,000 for married men) none of the details of the tax plan have been worked out. Plans for imposing stamp taxes on manufactured tobacco, liquors, beer, gasoline and other articles, Mr. Kitchin said, had been definitely abandoned. He declared the plan of taxation decided on would affect only those best able to pay the levy, falling exclusively on the wealthy and on foreign nations engaged in war. The big preparedness revenue measures will not be introduced in congress until after the national political conventions. Between now and that time the speeding up campaign inaugurated recently will be continued with a view to disposing of all other business by early July if possible.

THE tide of immigration will flow so strongly after the conclusion of the European war that a million foreigners will pour into America within the first twelve months of peace, according to a statement made by the commissioner of immigration, who said: "It is hard to tell now just what will be the effect of the close of the war upon unemployment. It is certain that immigration will be greatly increased. There were 17,000 immigrants in January last and 33,000 last month. It is safe to say there will be a million immigrants in the first year after peace is established. The people coming in from the outside will determine the weal or woe of this country." The Franco-Prussian war was followed by an immense increase in immigration to the United States and it is believed that the present war will present a similar situation.

Breeders in Oklahoma, who have been backward in taking up with the thoroughbred idea, have shipped into the state since the first of the year about 1,000 head of the best pedigreed bulls and heifers procurable.

The Wisconsin Farmer

THURSDAY, MAY 25, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

HAVE YOU MADE YOUR WILL?

I WANT to talk with my farmer friends who own property—both real and personal—on the important question of will-making. It is one of those things which many of us, for various reasons, are all too prone to put off, sometimes too long altogether.

I fear that farmers are even more neglectful of this important matter than other men. There is no reason why this should be so, for prosperity is more general in the country than in the city, and a far larger proportion of farmers own property than city men. Yet all too many farmers put off making their wills, because they believe it to be a legal matter which requires the services of a high-priced lawyer, and so they let week after week and year after year slip by, until sometimes the grim angel beats them in the race, and then the farm is tied up in litigation or there is a long delay in getting the property into the hands of those for whom it was intended and to whom it should go.

Let us see if will-making is such a difficult and complicated matter after all. I am advised by a lawyer that a will was once probated in Cook county, Illinois, which read as follows:

Everything to my wife.
WILLIAM BROWN. }
JAMES ROBINSON. } JOHN JONES.

This will was held to conform with every legal requirement and a considerable estate was settled under its provisions. All the important factors were present: First, the plain intention of the testator to give all his property to his wife; second, his signature; third, the necessary witnesses to his signature. Now, if you and I can arrange matters after our decease in so simple a manner, why do so many of us keep putting it off? Do not misunderstand me; I am not advising any of my readers to make a will like the one above; do not take such chances, but do make a will, even writing it yourself, if need be, and making it as simple as possible, and do not put off such an important matter too long.

I am indebted to a lawyer friend for some valuable advice on will-making which I am going to pass along to you for your guidance. Here is what he says:

Make up your mind as to how you propose to leave your property.

If the disposition is simple, such as leaving everything to your wife or your children in equal parts, any ordinary skilled person can draw the will.

Be sure to comply with all formalities required by the statute, especially the following: Subscribe your name to the will in the presence of witnesses. Declare it to be your will in their presence. Have at least two witnesses sign in your presence. If you sign by mark, or for any reason are unable to write your name, have at least three witnesses to the fact of your signing by mark or that you requested some other person to write your name.

Ask people who have long known you and who have no doubt as to your sanity to be witnesses to your will.

Place your will in the custody of some perfectly responsible person or in some receptacle where it will be safe.

Remember that any provisions you may make for your wife must at least equal her common-law rights, which are one-third of the personal property and a life interest in one-third of the real estate in the majority of states and one-third of all property in some, notably Iowa and Indiana.

Don't make a nonresident of your state the executor of your will. Don't have the man you selected as executor sign as a witness. Don't have anyone to whom you left any property sign as a witness.

Certainly there is nothing here so formidable and complicated that we cannot all attend to it. Many of us, however, fear that any will which we might draw up ourselves would be broken in some court. Are the possibilities of this as great as we fear? Let me quote from a recent article I read, as follows:

The truth is that it is harder to break a will than it is to break any other human contract. In the entire history of the state of Illinois fewer than ten wills have been "broken" by the supreme court.

The source of the idea that it is easy to break a will lies in the fact that almost any jury will break almost any will. If a will is contested by any heir or claimant who has been "cut off" seemingly unjustly, the chances are better than twenty to one that the jury will "break the will." If the case is carried to the higher courts the odds that the will will be upheld are all the other way.

The jury decides almost entirely upon sentiment, the higher court decides almost entirely upon the intent of the maker of the will. There are some things which are fatal to any will and which the higher courts cannot change; but if the high courts can get at the intent of the maker of the will from any construction, they will uphold his testament.

Contests usually arise from the "cutting off" of persons who, had the will maker died without a will, would have inherited under the common law. The jury sympathizes with such persons almost always, refuses to believe the complainant was treated rightly. As a matter of fact, a man can cut off anyone he desires, except his wife. He cannot deprive her of her share of the estate, even by agreement, providing she elects to break that agreement after his death.

I have talked quite a bit lately on the question of life insurance. This question of a will is equally important. Will you all attend to it, before it is too late, and save your loved ones unnecessary trouble and delay in securing what is so justly theirs?

RURAL CREDIT LEGISLATION

SOME form of rural credit legislation is almost certain to be enacted at this session of congress. In fact, bills have already passed both houses. Differing in important particulars, it becomes necessary to reach a compromise between them. This may be done before what I write is read; I doubt it, however, as congress is a deliberative body and proceeds slowly.

I was talking with a banker friend on this very subject last night. He is the executive officer of one of our large national banks and is thoroughly posted on most of the financial and economic questions of the day. He gave it as his earnest conviction that rural credit legislation is bound to come and that, in the long run, it will benefit farmer and banker alike. For the first dozen—perhaps the first score—of years, he said, the banker may find the legislation inimical to his welfare, for it will reduce interest rates and take away from the bank much of its now profitable loan business. In the long run, however, anything which makes for more widespread prosperity is beneficial to the bankers. They have been quick to realize this, therefore they have contributed generously to hire county agents, to run demonstration trains, to enable farmers to stock their farms with pure-bred animals, and so on. If a form of rural credit legislation enables a farmer to borrow money at a lower rate of interest, add to his land holdings or buy farm machinery or live stock which he cannot now afford, in a few years that farmer will be better off financially and will be a heavier depositor in the local bank, therefore the banker will profit by the transaction. "Looking at the matter in twenty-five-year periods and taking the welfare of the people (farmers and bankers alike) into consideration, I cannot help but believe that rural credit legislation will prove a wise and beneficial thing," concluded my banker friend quite emphatically.

I realize that some of his banking confreres do not hold this view, but I am inclined to believe that he is right. He put the issue up to me squarely when he asked: "How, in this day of $150 and $200 farm land, is a young man to get a start in farming?" I would like to pass the question on to my readers. I can give various answers, but they all resolve themselves into questions of thrift and perseverance and other cardinal virtues. Perhaps I cannot do better than to give the words of my banker friend as he wrote them out for me, so that I might quote him exactly:

Here seems to be the conclusion of the whole matter: A rural credit system which will extend the time of farm mortgages and reduce the interest rate; some practical state or national aid by which the worthy may get a place before their ambition is crushed; a diversified system of farming which will insure ready money all the year around, and a realization that, in farming as in all other lines of business, it is better to start at the bottom and work up than to start at the top and slide down.

He was arguing that most young men try to start out in farming, for themselves, on too large a scale. He said:

Instead of thinking of 160 to 320-acre farms, he should start on a ten or twenty-acre farm close enough to a fairly good town with good school and church facilities to take care of the social needs of his family and, if need be, rent a small cottage in the town and work the ten or twenty acres for all they can produce. Tenant farmers, like all beginners in other lines of business, must start at the bottom and work their way into larger things, by a system of close application to the work at hand, with the tools they have and by the exercise of thrift and economy fundamental to all success in this world.

This appears sound and logical to me. While farming is the most pleasant and productive calling in the world, and may easily be made among the most profitable, we should not assume, for a minute, that success is won in farming by any other methods or principles than apply to other callings: Perseverance, determination, thrift, industry and so on. There is no royal road to fortune along the furrow or the cowpath, except as we follow the way diligently, work industriously and apply ourselves conscientiously and with the utmost ability at our command to the needs of the hour.

I would like very much, indeed, to have an expression from my readers on this all-important subject. Will you write me, fully and frankly, telling me what you think of the matter in general, the need (if need there be) of remedial legislation, the manner in which the pending bills afford this relief and the situation as it exists throughout the grain belt generally on financial matters as they apply to the farm?

DECORATION DAY.

TUESDAY of next week will be Decoration Day. Another year has rolled around since we cut the lilacs, the snowballs, the peonies and other flowers with which our yards abound at this time of the year and reverently laid them on the graves of our soldier dead. It has been a year of stress and storm for many of us, a year of war and rumors of war in the land which is still at peace. We do well this year to put aside the duties of the season for a few hours and go out to the cemetery, where we may reflect on the great sacrifice of the heroes and heroines buried there and on the goodness of God in bringing us through another year in peace, when so many other nations are engaged in the death grapple.

Decoration Day is to me one of the saddest and loneliest of the whole year. I remember the years which have gone; the father who left the happy home circle, never to return, lying today in an unknown grave in the sunny Southland. I remember the uncles who likewise gave up their lives that this nation might be free and united. I remember the struggles and the sacrifices of my mother and my sisters, and as I remember them the tears well from my eyes and loneliness comes down around me and upon me, like shades of night. Such a goodly company of brave young men marched forth, dropping plow-lines and ledger, with fifes and drums quickening their pulses and their steps; and so few returned. And of that pitiful handful which came back, how few we have left with us today. The ranks or those who don the old and threadworn uniform to march out to the cemetery and honor their fallen comrades are thinning rapidly; but a few more years and there will be none left among us. Shall we not honor them while they are yet here? The poet was inspired, I believe, when he wrote these lines:

It's lonesome, sort o' lonesome, it's a Sund'y-day,
to me,
It 'pears-like, more'n any day I nearly ever see!
Yit, with the Stars and Stripes above, a-flutterin'
in the air,
On ev'ry soldier's grave I'd love to lay a lily thare.

Gone are the days when there was North or South, when there was division in our beloved land. Today we are united as never before, and as we strew our flowers and reverently lay our wreaths we do not think of whether the one we revere wore the blue or the gray; he was a hero and he fought for what he believed to be right. Let me give you three of the stanzas of a poem I love that you may read them over, at your leisure, between now and Decoration Day:

So when the summer calleth,
On forest and field of grain
With an equal murmur falleth
The cooling drip of the rain;
Under the sod and the dew,
Waiting the judgment day;
Wet with the rain, the Blue;
Wet with the rain, the Gray.

Sadly, but not with upbraiding,
The generous deed was done;
In the storm of the years that are fading,
No braver battle was won;
Under the sod and the dew,
Waiting the judgment day;
Under the blossoms, the Blue,
Under the garlands, the Gray.

No more shall the war-cry sever,
Or the winding river be red;
They banish our anger forever
When they laurel the graves of our dead.
Under the sod and the dew,
Waiting the judgment day;
Love and tears for the Blue,
Tears and love for the Gray.

Could we do better than to read these verses aloud, or teach one of the children to speak them at school, or ask that they be read at whatever exercises may be held in our cemeteries next Tuesday? We have been drawn together—we of the North and of the South, we of the farm and of the city—within the past year, in the face of a common danger, as never before. Shall we forget that there ever existed dividing lines, and unite, all together, in being true-blue Americans, dedicated to one another's welfare and prosperity, the greatest, most closely-knit nation the sun ever shone on?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Wisconsin Coummunity Dinners.

IN THE Upper Wisconsin Department this week will be found an interesting letter from one of our readers, A. R. Anklam, president of the North Crandon Potato Growers' Association, of Forest county. Mr. Anklam is also interested in the Guernsey breeders' club of his community, and The Wisconsin Farmer is delighted to note some of the interesting sidelights of this club's excellent work. Mr. Anklam's letter contains this statement:

One of the best parts of our Guernsey club meetings is the get-together dinner. A committee is ... ave charge of the dinner, and this com... s out a list of what each farmer is ex... g.

... of a community dinner for farmers as ... getting together to discuss matters of ... mon interest is one which is receiving more attention each year. Forest county breeders of Guernsey cattle are certainly to be congratulated upon the success which they have had with the plan. We suspect that some of the farm women have a "finger in the pie" to a very large extent, but that is neither here nor there so long as the dinner is provided and the farmers and breeders meet at the common board to talk over matters which are of vital importance to each and every one of them.

The dinner route is proving effective in all sorts of organization work. We happen to know of a Methodist church where there is a dinner of some kind almost every day. And they even serve lunch on Sunday so that members of the congregation need not go home between services provided they live a long distance. It happens that this church has the largest membership of any Methodist church in the state where it is situated.

Nothing will go further to promote good fellowship among the Guernsey breeders of Forest county than an occasional good dinner. Matters of importance for the benefit of the breed will come out in this way which would otherwise be entirely lost sight of.

The Wisconsin Farmer also takes this opportunity to commend the Guernsey breeders of Forest county for their efforts to interest the young people in good, clean amusements. Only recently, as Mr. Anklam states, the club provided a moving picture show for the boys and girls. For the entertainment of older folks at this same club meeting a lecture by the county agent, Mr. John Swenehart, with picture slides, and a spirited debate on the relative merits of the beef and dairy breeds of cattle were provided.

With all these activities in motion The Wisconsin Farmer expects to hear a good report from the Forest County Guernsey Club, and furthermore we are certain that these breeders will be prosperous and happy in their work.

Langlade County May Have Free Fair.

THE County Agricultural Society of Langlade county, Wisconsin, is debating the subject of a free fair. It is probable the plan will be tried out this fall.

This county is among the first in Wisconsin to give this matter serious attention. The Wisconsin Farmer has been discussing the free fair for some time. A free fair means that there is no admission at the gate. On the theory that a county fair is an educational institution, The Wisconsin Farmer has taken the position that it would be better to eliminate any admission charge. As we understand it, one great purpose of the fair in each county is to stimulate interest in better agricultural and live stock products. It is on this account that the state gives aid to county fairs. If the county fair is purely an amusement enterprise, conducted for the purpose of paying dividends to stockholders, then there is no excuse for the state giving financial aid.

There are special reasons why fairs should be free in Upper Wisconsin. Settlers should have every opportunity to see what can be grown in their community. If it is true that some would come when the admission is free who would otherwise stay away, then the admission should be free to accomplish the greatest possible good. The question arises as to how the fair may exist without making any admission charge. Of course, the money received as state aid can be used only for the purpose of paying premiums on live stock and agricultural products. The amusement part of any fair should take care of itself. Experience has shown that the attendance at fairs is wonderfully increased by the free gate. Amusement features are much more liberally patronized when no admission fee is charged to get into the ground. To maintain a free fair successfully there must be ample accommodation in the amphitheater. The free fair will attract a larger crowd than one where there is admission at the gate, hence the concessions are worth more money. These should provide an added source of revenue.

We believe that every county fair should be free to everybody just the same as the schools are free and the libraries are free. The counties can well afford to put up substantial buildings. When the county fairs are conducted as educational enterprises they are entitled to state aid and support from the county funds.

In the event the experiment is tried out in Langlade county, it will be watched throughout the state with considerable interest. Very few Wisconsin county fairs make any money, notwithstanding the state aid. There is quite a general belief that they are conducted on the wrong principle.

Western Wisconsin Holstein Breeders.

PLANS are being made for a big meeting of the Western Wisconsin Holstein-Friesian Breeders' Association, to be held at Tomah, June 17th. The secretary of this association, Mr. E. L. Liddle, has written The Wisconsin Farmer, relating some of the work of the association, and its future plans, as follows:

Our breeders' association was organized November 30, 1915, with an initial membership of nineteen. Since that time the association has been very active and we now have a membership of fifty-four enrolled. A winter meeting was held at Sparta, February 17th, in connection with the meetings of two other county breeders' associations. There were between 300 and 500 present and we had a fine program. A fine dinner was furnished by the advancement association, of Sparta.

Another similar meeting will be held June 17th at Tomah, Wis. We are planning to have the governor with us and there will be other good speakers on the program, further announcement of which I will send to The Wisconsin Farmer later. The meeting will be held on the Government Indian School grounds, and a basket dinner will be served. Part of the refreshments will be supplied by the school.

As our association covers five counties we have also arranged for other meetings to be held this summer on breeders' farms. In this way we hope to enlarge the membership and the influence of the work.

We intend to work out some plan in the future wherely we can increase official testing in our association and bring to ourselves a little more publicity. We have not done any advertising as yet, but we have had a number of calls for stock.

This report certainly indicates a healthy condition on the part of the Western Wisconsin Holstein-Friesian Breeders' Association. Such work as has been done and as has been planned for the future will certainly bring big returns to the breeders of western Wisconsin.

How Far Will Tractor Displace the Horse?

THE federal department of agriculture has been in communication with 400 owners of tractors in Illinois. The object has been to determine just to what extent the tractor is doing away with the horse for farm work. The investigators say it is apparent the tractor has not displaced the horse to any considerable extent. By this statement they do not mean to minimize the value of the tractor. They find the greatest advantage from the use of a tractor lies in the fact that it does the heavy work quickly, completing it within the proper season, and, furthermore, places at the farmer's command a large amount of power which he can use under many circumstances, when needed. The investigation shows that in a number of instances the average number of horses displaced was four, and that in these instances the value of the horses displaced represented slightly in excess of 5 per cent of the cost of the tractor outfit. One statement of interest is that the large outfit has apparently not displaced many more horses than the small outfit. The report says, however, that the number will vary under different conditions; the principal influencing factors being the number of acres farmed by horses and the distribution of work throughout the year. We quote from the report of the federal department of agriculture as follows:

On ninety-two Illinois farms where no change in the acreage was made after the purchase of the tractor, an average of twelve horses per farm had previously been kept. Two hundred and sixty-three horses were displaced on these farms, an average of not quite three horses per farm. On thirty-one, or about one-third, of these farms, no horses were laid off.

The raising of colts is an industry of considerable importance on farms in the corn belt, and it would seem natural to expect that where tractors were bought and the work stock thus relieved of the heavy field work the percentage of brood mares kept would be increased, and that the chances of raising more and healthier colts would be enhanced. It was found, however, that on a large group of farms in Illinois the brood mares constituted 33 per cent of the work stock before the tractors were bought, and while the work stock was decreased to some extent after the purchase of the tractor, the percentage of brood mares increased only 3 per cent, making the percentage now kept amount to 36 per cent.

The horse has been receiving many jolts the last few years. When the automobile appeared it was announced that the horse was doomed. But the number and value of horses are increasing. It remains to be seen just how far the farm tractor and the automobile truck will be able to accomplish the work wherein the pleasure automobile failed.

Breeders, Beware of the Self-Satisfied State.

THE WISCONSIN FARMER is in receipt of a letter from J. Wesley Raven, breeder of Holstein cattle at Bloomer, Chippewa county, and owner of Raven's Roost Farm. Mr. Raven, among other things, writes as follows:

The Holstein herds of this county are increasing about as fast as possible, but our association is on the decline. The members are too well satisfied with the results they are getting with their herds. Good sales for all surplus stock.

This letter may be a key to the explanation of what ails some of our Holstein organizations. With the largest representation by far of any dairy breed in the state, and with ample records as a foundation for bigger business, the State Holstein Association has been permitted to lag along. Efforts are now being made to revive it, and the plan has been discussed in previous issues of The Wisconsin Farmer. The farmer whose soil is rich doesn't worry about fertilizing. The orchardist too frequently doesn't spray until after the insects have spoiled his fruit. The Wisconsin Holstein breeder is doing so well that he fails to have the proper vision of what his business might be if he gave it more attention. In some counties the representatives of other dairy breeds are much more active than are the representatives of the Holstein breed. This may be explained by the fact that they have had to hustle to command attention. But they are commanding attention, and it is time for the Holstein breeders to wake up to the fact.

The Wisconsin Farmer is sorry to learn that the state association has abandoned for the present the effort to put a good field man on the job. The right kind of a traveling representative, a man who could devote all of his time to Holstein interests and be well paid for the work, should be of very great value to Holstein interests. This man should be an organizer and should visit the county organizations and keep them alive with interest. He could handle the book proposition which is now before the breeders and other matters which will need attention from time to time. He should be a man free from any other interests, and broad-gauged enough to work for the interests of the breed as a whole and not for the interests of any small clique of breeders.

The Wisconsin Holstein-Friesian Association ought not to suffer from politics as so many good interests in this state have suffered. It should be an association in which every breeder, little and big, will feel he has a part.

Above all things the Holstein breeders of this state should not permit themselves to reach the self-satisfied state. There are many splendid breeders in this state. The state association should have not less than 1,000 active paid-up members. This may be accomplished when the association gives some service to its members as it is now planned to do. But what is everybody's business is sometimes nobody's business. So we believe it would pay the association to have a paid secretary. Certainly there is no other $30,000,000 business in this state which is so lacking in effective organization as the Holstein breeders. And we know of no business interest in the state which has any greater possibilities. Let the leaders in the state association be big enough and broad minded enough to work for a general Holstein organization—one which will unite all the supporters of this breed, or at least a very large per cent of them, and an organization which will join hands with every agency which is friendly and wants to help.

The Wisconsin Holstein Association will never be a great success until breeders get over the self-satisfied feeling, and unite for the common good of Holstein interests in the state. Neither will it ever be a very great success until a policy of general friendliness prevails—a policy which admits that the Holstein tent is big enough to accommodate all the good friends of the breed, and to make use of all the available avenues of support.

Wisconsin Bank Report For May.

A REPORT of the Wisconsin banking department, showing the resources of Wisconsin state, mutual and savings banks and trust companies at the close of business May 1, 1916, is very encouraging. During the year from May 1, 1915, to May 1, 1916, the resources of Wisconsin state banks increased $27,236,937.15. The total resources of Wisconsin state banks on the last named date is given as $27,704,252.84. In practically every department of banking there has been an increase.

The increased banking resources are due, in part, to the increased farming business and part to the increased business in the cities. One important factor has been the way in which the price of dairy products has kept up. The gain in cheese prices

during the past year has been a great help to the smaller banks. The manufacturing cities of Wisconsin are now in a more prosperous condition than usual. Labor is generally employed. The market for live stock and other farm products has been generally good.

Saving Feed by Pasturing Work Horses.

THOSE who are having success in operating the small farm tractor are quick to point out when pressed that the chief saving is in the value of the food fed to idle horses. In most instances where good, serviceable tractors are used an eight-horse power machine can save anywhere from four to six horses during the rush season, and it is a well-known fact that a smaller number of horses are required during the period of corn cultivation and corn husking than is needed in preparing soil for crops.

Of course, in any event, it will be many years before all our farms will be supplied with tractors, and in the meantime the question of keeping down the cost of maintaining horses is one that should receive attention. On the one hand we find successful farmers who never turn their horses to pasture until the corn crop is laid by, while thousands of instances could be cited where very good work is done even during the rush season with horses that are pastured during the night.

This matter is brought up by an Iowa subscriber who calls attention to the fact that hay is high in price in his locality and it is a scarce article on his farm. Corn is of poor quality and also high in price. He has always been an advocate of keeping horses on dry feed until the hard work is over, but he is now of the opinion that he will change his practice and turn his horses out at night. He wants to know if it will be necessary to feed more grain than if the horses were on dry feed if they are kept in good flesh. He also asks if it is as safe to work horses hard when they sweat freely, as they will when they run on pasture, as it would be if they are kept on dry feed.

This paper has always believed in pasturing work horses. On most farms grass is the cheapest food available because it requires no labor to prepare it for use. There is a real saving in allowing horses to harvest it for themselves, and even though it is succulent enough of it is consumed by the work horse during the night to take the place, in a measure, of both roughage and grain.

Even while grazing on grass that is rank horses will always consume a certain amount of fresh, tender foliage, and this is exceedingly rich in flesh-forming matter, running up in some instances as high as 30 per cent protein in the dry material.

As said before, it is bulky and one must make up his mind in advance that the horses on grass will not present the prime market condition that they are frequently kept in when they are fed dry feed, but they will do a day's work every day while running on pasture at night if they are fed a reasonable ration of grain. In many cases a considerable part of the farm work is done with brood mares and certainly the mares with their colts are better off in the pasture than they will be in box stalls. It means that the colts will be more thrifty and unquestionably a brood mare will feed her colt better if she is fed a succulent ration than she will if kept on dry feed.

The average dairy cow will return a larger profit on pasture alone than she will if fed a heavy ration of grain along with pasture. While it is true she does not labor like the work mare, still this is an indication as to the possibility of grass feeding and the mare that is pastured at night will take good care of herself and her colt and she will put in a good ten-hour day every day if fed a suitable grain ration.

Possibly under certain conditions where an exceptionally strenuous season has to be put in with the horses one might be able to do a little more work on dry feed and possibly this extra work might pay for the increased cost of the dry feed. On the average, however, the pasturing plan cannot be too strongly indorsed, because we are firmly of the opinion that it materially cuts down the yearly cost of keeping a farm horse. The plan of pasturing is especially to be recommended where the work is done with three-year-old and four-year-old horses. Their mouths, as a rule, are in bad shape on account of their shedding their teeth, and they will do much better on grass than they will on dry feed. To be sure they will sweat more freely, but a sweating horse is seldom injured save only in cases where good sense is not used in supplying water. A horse's feet keep in better condition when he runs on pasture at night, and this counts for something, not only affecting his daily serviceability but materially affecting his value if he is placed on the market when the season of labor is over.

High-Water Mark in Herefords.

SOME splendid records have been made during the hundred years of Hereford cattle breeding operations carried on in the United States. This great breed, renowned from the beginning for meat-making qualities, has been making stronger and stronger appeal to men whose endeavors have to do with the annihilation of the scrub.

Great as have been certain selling records in the past and great as has been the achievement of the Hereford at national and international shows, the crowning event of all occurred last week when Warren T. McCray, of Kentland, Ind., sold seventy-five head for the sum of $96,575, or an average of $1,287 per head. These are astounding figures but they fittingly represent the achievement of one whose knowledge of hereditary forces in breeding operations has led to the fixing of a type in Hereford cattle for which the world is clamoring.

That thirteen sons of the great Perfection Fairfax should sell for $13,300 is a most noteworthy achievement, and its significance lies in the fact that these young bulls were purchased not for speculative purposes but to stamp Perfection Fairfax qualities on coming generations of Herefords. Astounding as the average of $1,287 may seem and splendid as the record is as an achievement for Mr. McCray, it is but the stepping stone to the further greater rewards that will be realized by Hereford breeders who attended this sale as year by year improvement is wrought in those herds where cattle of the McCray breeding are introduced.

No man can accurately predict what added wealth will result from this record-breaking event. If it is an unmatched record and if it is a momentous event in the life of Mr. McCray it is of still greater importance to the Hereford breeding fraternity. The blood lines of the great Perfection Fairfax as they flow on through the generations to come will mean added wealth to thousands of breeders. These cattle, purchased at a record-breaking price, will, under proper care, unquestionably lead to fame and fortune scores of those who had courage to compete for this superior Hereford lot.

Memorial Day Cover Page.

SOME weeks ago we introduced to readers of The Wisconsin Farmer Mr. Frank J. Eslinger, of Wisconsin, a farmer who has made conspicuous progress as an artist. Mr. Eslinger drew our cover page for the issue of February 17th, taking for his subject at that time, George Washington, father of his country, whose birthday anniversary we celebrated February 22d.

FRANK J. ESLINGER.

The cover page this week was drawn by the same artist, who has found time during the stress of spring farm work to make a drawing which will carry our thoughts back to the dark days of the rebellion, and remind us of the duties which we owe to those who "died that the nation might live."

It has occurred to the editor that many readers would be glad to see a portrait of this young farmer-artist. The same is presented herewith as evidence sufficient that Mr. Eslinger is a young man of promise.

In a previous issue we expressed our appreciation of Mr. Eslinger's work and made the prediction that he will be heard from later as an artist. The Wisconsin Farmer wishes him continued success in all of his work, and we express the sincere hope that he will be so prospered that he may find time to pursue his artistic studies.

Avoid Negligence as Well as Over-pampering of Mares.

A WRITER, in a recent issue of the London Live Stock Journal, points out that in the handling of brood mares there are two extremes, negligence and overpampering, and it is sometimes difficult to say which is attended with most disastrous results. In some cases breeders leave them to "nature," as they call it, but as a general thing there is great advantage if a caretaker is present at foaling time.

According to this writer great care should be taken to discover the first signs of navel hernia or navel ill in the foal, and they should be treated at once. The former, if slight, can generally be managed without calling in veterinary aid, but if the latter disease shows itself professional assistance should be called in at once, and the greatest care be taken of the patient. The disease is a most insidious one, and very frequently proves fatal. There is not any doubt, however, that if more care were taken in its earlier stages the proportion of fatal cases would show a material decrease. Mares that work should have at least a month's rest after they foal, and the owner may take it for granted that whatever they earn in that month is more than lost in the foal. In normal weather the turning out of the mare and foal to grass is not a matter which involves a great deal of trouble. They should be turned out when the day begins to get warm and be taken in early in the evening. But in variable and cold weather, such as we have experienced this spring, the greatest care is necessary. Nothing is so harmful to the foal as standing chilled to the bone at the lee side of a hedge. He should be taken into shelter at once, even if it should be necessary or desirable to turn him out again when the weather improved. A young foal should never be left out in cold rain. Some strong foals, especially if well bred, will be keen of a gallop. Sometimes their high spirits will cause them to gallop till they are in a profuse sweat. They should never be allowed to lie on the cold ground or stand about in a cold wind when in this state. If they are, scours and swelling of the joints, and eventual worthlessness, are almost certain. The eye of an experienced man must be constantly on the young foal if the best is to be made of him.

Letting Pigs Wean Themselves.

THERE is considerable variation in the practice of swine breeders as related to the plan followed in weaning pigs. On the one hand there are those who allow pigs to run with their dam until the milk dries up, while in other cases pigs are weaned at eight or nine weeks and this is done at a time when there is still considerable milk flow. In his work entitled "Forty Years' Experience of a Practical Hog Man," Mr. A. J. Lovejoy takes up this subject, and, among other things, says:

As weaning time approaches, which should not be earlier than ten to twelve weeks, in my opinion, the feed may be lessened for the sow and more given the litter, so that the sow would gradually give less milk and have no trouble when the pigs are taken entirely away.

Some breeders have made it a practice to gradually wean the litter by taking them away for a few hours and then returning them to the mother and following this up for a few days until they are taken away entirely.

Others have practiced taking one or more of the most thrifty pigs in the litter away from the mother first, then after a few days a few others, and finally taking those remaining, believing that pigs so weaned would leave the sow in better condition and less danger of swelling and soreness of the udder.

We never have practiced this, however, during our forty years of breeding pigs. By letting the litter suckle until it is ten to twelve weeks old or a little over, the sow naturally is inclined to wean them herself and if she has been properly fed the last part of this period she will practically give no milk at the end of three months or thereabouts.

When the litter is finally weaned the sow should be given a good, fresh pasture of some kind with a little grain and she will need very little else during the next month or two or until time to begin to bring her in condition for another season's breeding.

We pastured something like forty brood sows that had weaned their pigs in May, by turning them directly into a fresh white clover and blue grass pasture where there was plenty of shade. They had no grain or slop for four months, but were given daily from a water fountain all the fresh, clean water they could drink.

They did well on this grass and water diet, but in 1914 we will feed two or three ears of corn daily to each sow, besides the grass and water, as I believe for best results they should have a little grain. The sows that were bred for fall litters ran in the pasture with the others and were removed into individual lots about a month before farrowing, where they were given a little corn and some slop with plenty of grass.

Of course, where it is the intention to raise a fall litter earlier weaning becomes an absolute necessity, but where only one litter a year is raised we are frank to confess that Mr. Lovejoy's plan appeals to us strongly. There is no time that one can make as cheap gains as during the period when the pigs are getting the milk of the dam. At such a time one can well afford to feed the sows liberally, and let it be remembered that a vigorous sow with a large litter will eat almost as much grain as a dairy cow. She will give a good account of the food consumed, however, and if she is allowed to suckle her pigs until she weans them herself there will be no setback whatever at weaning time. The pigs should have a creep just as soon as they are old enough to eat. If they have access to a grain mixture they will make exceedingly rapid gains and these, as said before, will be put on at a comparatively low cost per pound.

Thirty more pure-bred Holstein cattle were shipped from Wisconsin to former Governor W. R. Stubbs' dairy farm near Mulvane, Kan. Included in the number were three of the greatest Holstein bulls in America, which are to be used in establishing a premier dairy herd in the state.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Lighting by Storage Battery.

I have a fifteen-volt dynamo that I would like to use to charge storage batteries for electric light. I would like to use eight lights, burning them about one hour each night. How many batteries would be required and how could I make them, using glass jars?

Answer.—You would require a ten-volt, 120-ampere hour storage battery. We doubt that you could make the battery successfully. If you wish to try obtain a book on storage batteries from a book dealer.

Strength of Electrolyte.

I would like to ask you a question in regard to my storage battery. What is the reason the cells in a battery do not test nearly the same? I have a battery in which one cell tests 1.3 when fully charged, and the other two test 1.26. What is the cause and the remedy?

Answer.—There is a little more acid in the first cell than in the other two. All three cells are all right, the slight difference in specific gravity not being a sign of trouble. The specific gravity should not exceed 1.4 or fall below 1.2 when the battery is fully charged.

Power of Engine.

I have an Argo roadster. The motor has a bore of two and five-sixteenths inches; stroke, four inches; four cylinders. What is its horse power? What is the advantage of a muffler cut out?

Answer.—Your engine would be rated at [illegible] horse power by the A. L. A. M. rule. A muffler causes some back pressure which reduces the power of the engine. The muffler cut-out enables the driver to allow the engine exhaust into the open air without the exhaust passing through the muffler, thereby giving the motor more power. On account of the noise of the free exhaust the cut out is seldom used except when starting.

Ford Differential Pins.

There are thrust plates on each side of the differential of a Ford car. It sometimes happens that these plates wear considerably. The pins also wear so much that sometimes the plates drop down on the roller bearing. Please tell me how to remove the old pins and put in new ones. On which side does the thirteen-thirty-second pin belong, and on which side the seven-thirty-second pin?

Answer.—Grip the projecting part of the old pins in a vise and pry up on the housing to remove them. If impossible to remove them in this manner file them off level with the housing and drill them out. After removing the old pins drive in the new ones. Both pins are thirteen-thirty-seconds long.

A Small Tractor.

I have the frame of a little tractor or auto that I made myself. It has a steering gear similar to that of a Ford car. We are thinking of buying a three-horse-power gas engine to pump water. I think I will mount it on the above frame, making a truck out of it, using mower wheels for the drivers. Are they all right? I would like for it to run ten miles per hour. Which will be the better, a belt or a chain from the engine to the jackshaft? I will have a small sprocket on each end of the jackshaft to drive the drive-wheel sprockets. How large a sprocket wheel must I use on the drivers and what size should the small sprockets be to speed the truck at ten miles per hour if the engine pulley is eight inches diameter and runs at 350 R. P. M.? How much will the truck haul?

Answer.—It would be better to use a chain from the engine to the jackshaft. You could use a belt if you mount the engine on skids so as to keep the belt tight. You will require a friction clutch either on your engine or on the jackshaft. The outfit will be very hard to steer without a differential. The mower wheels will be all right for your truck. Ten miles per hour is too high a speed for such a truck. Five miles would be high enough. In fact, the outfit on the road would soon jar itself to pieces even at five miles per hour.

You did not give the diameter of your mower wheels. If they are thirty inches in diameter you can use the following arrangement for a speed of ten miles per hour. Use a pulley on the jackshaft the same diameter as the engine pulley. Use fifteen-tooth sprockets on the jackshaft and forty-five-tooth sprockets on the drive wheels. If you wish to reduce the speed to five miles per hour use the same sprockets, but use a sixteen-inch pulley on the jackshaft. The outfit should pull about as much as one horse working at the same speed.

Burnt Out Lights.

Please tell me whether an electric light bulb on an automobile can be cleaned after it is once burnt out.

Answer.—It cannot. The black inside the bulb is the remains of the filament, which was destroyed. When a lamp burns out the filament vaporizes. The light cannot be repaired.

Noisy Timing Gears.

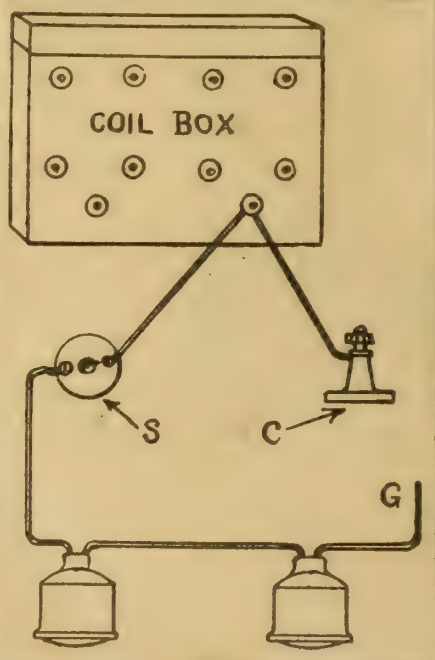
We have a 1913 Model R. C. H. car. The timing gears that drive the magneto clatter very badly. Will mixing clean sawdust with the grease remedy this annoying sound? Would the sawdust have a bad effect on the gears? If it would, what would you advise me to do?

Answer.—The clatter is due to the gears meshing too loosely. About all that can be done is to obtain a new set of gears. Even a new set of gears will not run quietly in a motor whose bearings are worn. Sawdust is a good gear silencer and would have no bad effect upon the gears themselves, but it might interfere with the lubrication and cause a bearing to burn out.

Ford Lights.

Can an Atwater-Kent ignition system be operated with current from a Ford magneto? How would it be connected? Please give diagram showing how the lights are connected on a Ford car. Is it necessary to loosen the rear system in a Ford car to remove the power plant? On an Overland the rear axle is placed above the lower half of the spring. What would be the best way to remove the rear system from this kind of a car?

Answer.—The Atwater Kent system can be operated by current from the Ford magneto. The figure shows how the lights are wired. C is the magneto contact post, S the switch on the dash and G the lamp wire grounded to the frame or radiator. The ground wire should be soldered to the radiator or frame. The dealer



will give you directions for installing the Atwater-Kent system. It is not necessary to loosen the rear system in order to take out the power plant. When removing a rear system it is often easier to leave the springs on the rear system, disconnecting them at the spring links or shackle or at the spring bracket on the frame. A positive rule cannot be given, as much depends upon how the car was assembled.

A Sulphated Battery.

I have a six-volt, forty-ampere storage battery that has given me a great deal of trouble. It had a short circuit inside of it, which I had repaired. It seemed to be all right. Last fall I took it out and put it where I know it did not freeze. Now it seems to be dead. What would you advise me to do with it?

Answer.—A storage battery should be given a small charge every two or three weeks even if not used. An idle battery slowly discharges itself and chemical action takes place. One result is the deposit of a white powder known as "sulphate" on the plates. The sulphate keeps the electrolyte away from the plates and, therefore, prevents the battery from acting.

Put your battery on charge and give it a good overcharge. See that the electrolyte covers the plates and that it tests about 1.23. If the battery will not charge all that can be done is to remove the plates and scrape off the sulphate.

Carburetor Adjustment.

I have a Model R. Schebler carburetor on my four-cylinder car. Since I have had it repaired, the carburetor is out of adjustment. Please tell me how to adjust it so that it will pick up rapidly and give power to the engine. The carburetor leaks at the air inlet. What is the reason?

Answer.—The first thing to do is to stop the leak. It may be that there is a little dirt or lint under the float valve that prevents the float valve from seating. It may be that the cork float is soaked with gasoline, in which case a new cork is needed. It may be that the arm of the float is bent. Before you can adjust your carburetor it is necessary to have the float valve seat gasoline tight and the gasoline level in the float chamber about one-eighth inch lower than the end of the needle valve nozzle—spraying nozzle.

Having attended to these points, get someone to drive your car while you sit on the running board and adjust the carburetor. It is necessary to have the engine under load when adjusting the carburetor. Vary the amount of air by changing the tension on the auxiliary air valve spring and vary the amount of gasoline by screwing the needle valve in and out. If the exhaust is sooty there is too much gas for the amount of air. It requires patience, good judgment and "knack" to properly adjust a carburetor. Holding up the auxiliary air valve with a pencil will often tell whether or not too much gas is used. The motor will speed up for an instant if the mixture has been too rich.

Why Take A Chance?

WHEN you buy your grain binder this spring, do not make the mistake of experimenting with an untried or cheap machine. You cannot make money that way. A binder is useful for one purpose only—to get all the grain cut and bound in the short time allowed for the harvest. That is no time to risk experiments, especially when you do not have to. Choose your binder from one of the old reliable, yet up-to-date in every way, **International Harvester** binders sold under the trade names—

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How to Establish Flock of Sheep.

Frank Kleinheinz, in Wisconsin Experiment Bulletin, Gives Pointers on Getting Started and Profits to Be Expected.

IT HAS never been disputed that sheep are of great value on the farm. Some men who have had years of practical experience with sheep and have raised a flock in connection with other classes of live stock, declare that they have derived the largest and easiest income from sheep. From the standpoint of profit they consider: First, the small sum of money required for the establishment of a flock; second, the small expense incurred in building suitable shelter for sheep; third, the little care sheep require in the summer, during the farmer's busiest time; fourth, the extermination of weeds on the farm by the sheep; fifth, the enrichment of the soil on which the sheep graze by the even distribution of their manure, which is much value to the land; sixth, that with present prices of wool a breeding ewe ought to pay for more than her keep and that her lamb or lambs are their net profit; and seventh, that since the demand for them is ever growing stronger, mutton and wool are constantly increasing in value.

SHEEP PASTURING ON CLEARED LANDS IN WISCONSIN.

One of the greatest advantages that Upper Wisconsin offers to the settler who raises sheep is the nearness of the market. Within one night's run or even less, sheep can be placed on the Saint Paul market. The Chicago or Milwaukee markets can be reached from the most distant part of the state in thirty hours. Because of the near-by markets, sheep do not have a heavy shrinkage in weight as when they are shipped from a greater distance. The additional advantage of not having to unload to feed and water while on the way to market is found in the short haul.

If the settler intends to engage in sheep raising for the mutton and for wool production a good start can be made with inexpensive females. The offspring can be improved rapidly by the use of a pure-bred sire. In the fall young breeding ewes of the Merino type from the western ranches can be purchased on the market for from $5 to $8 a head. These ewes are very hardy and should be mated to a pure-bred ram of one of the leading mutton breeds. This gives a cheap and also a profitable start. Western ewes are generally good mothers and producers.

The old saying that "the ram is half the flock" is true. No inferior ram ever helped in the improvement and upbuilding of a flock. When scrub rams are used the flock always degenerates. Flockowners should use only good rams, since they are the only kind that are profitable. The owner will be repaid many fold for a few dollars spent in the purchase of a better ram. The following season he will have a better crop of lambs.

It is not a good practice to use ram lambs for breeding. The ram lamb should be given time to develop and get his growth. A ram should be a year and a half old before he is used for breeding purposes. This age also holds true for the ewe lambs. Ewes should never be bred until they are past a year old. In order to secure the best result and the strongest lambs no ram should be bred to more than fifty ewes in a single season.

Each year before the breeding season the ewe flock should be carefully culled. All the old ewes which have lost some of their teeth should be fattened as much as possible and sold to the butcher. The younger ewes that have proved poor mothers or poor milkers, raising only tiny lambs, should also be removed from the flock and sold. Only the best ewe lambs from each year's crop which show the most promising mutton form should be kept to take the place of the unfit ewes.

The settler who goes to Upper Wisconsin should begin with a small flock. It is not a wise plan to buy large numbers of sheep to make a start. It is far better to start with a small flock and then to gradually let the flock grow in size as the settler's knowledge of the sheep grows.

A large flock should not be maintained unless there is a competent man to care for it. Many settlers who have started with large flocks and without experience, have, in a short time, had but a small flock left. With a large flock kept together sickness is far more likely to break out than in smaller flocks. Sheep multiply rapidly, and a large flock can soon be raised from a small beginning, thus requiring a smaller capital to be invested.

Many of the more successful settlers say that in order to have a good dairy farm in the upper part of the state, it is necessary to have sheep first to clear the land and put it in shape for dairying.

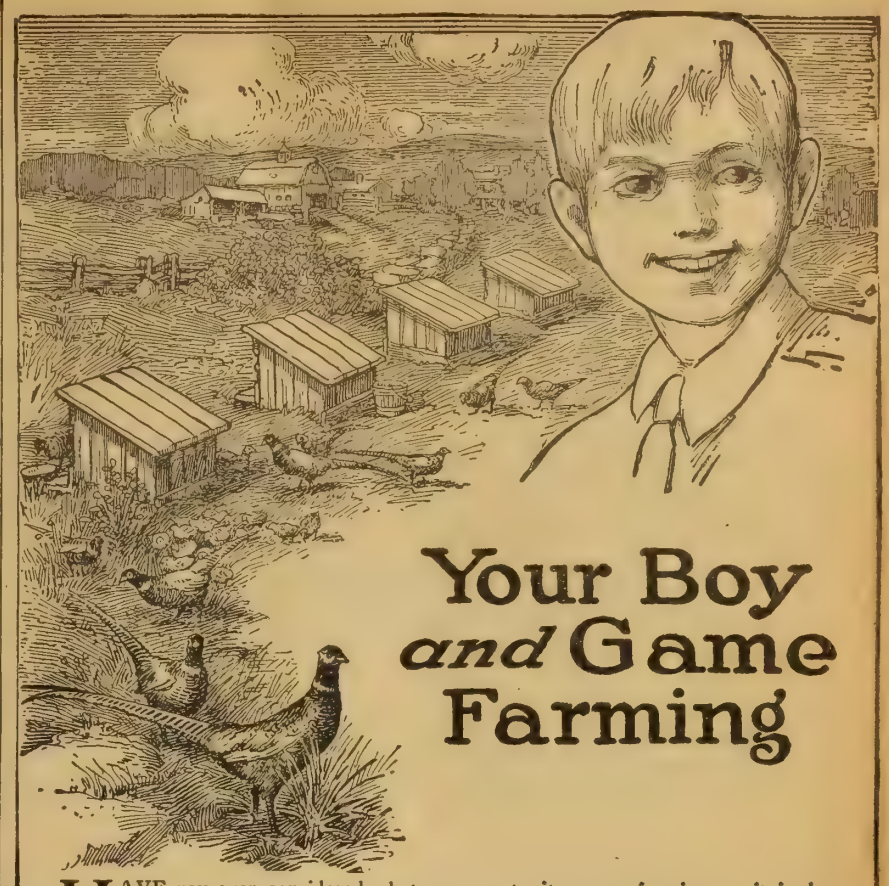
Although sheep do excellent work in clearing land of the brush, it needs to be remembered that sheep will not thrive and do well on a diet of brush alone. When sheep are used solely for clearing land a little grain of some kind should be fed with the brush ration. When the sheep have an opportunity to eat grass as well as the brush no grain is needed.

WHEN USED FOR LAND CLEARING SOLELY, SHEEP SHOULD ALSO BE FED A LITTLE GRAIN.

Many of the northern sheepmen buy a bunch of sheep in the spring, graze them during the summer, and send them to market in the fall. Others are finding it profitable to retain a flock of breeding ewes during the winter and sell the lambs in the fall.

During the early spring and late fall if the flock is allowed to graze along the roadsides and in fence rows, considerable useless vegetation which harbors insect pests will be destroyed. A small flock will do much toward cleaning out the fence row, and if fed some grain will fatten while doing it.

Fences can be built in Upper Wisconsin for less than it would cost in many other parts of the country. In many instances the settler can cut all the posts needed on his own land. A fence made of four-foot closely-woven wire, with two or three barbs on top, and one barb at the bottom to keep the dogs from digging underneath the woven wire, will keep the sheep in and will also prevent any dogs from getting in and molesting the flock. The fence will not cost as much to construct if a thirty-six-inch woven wire is hung on posts twenty feet apart. This fence will keep the sheep from straying. Such a fence, however, will not keep dogs or an occasional wolf from attacking the sheep. A good fence, while costing more in the beginning, does service for a much longer time than does one which may be more cheaply built.



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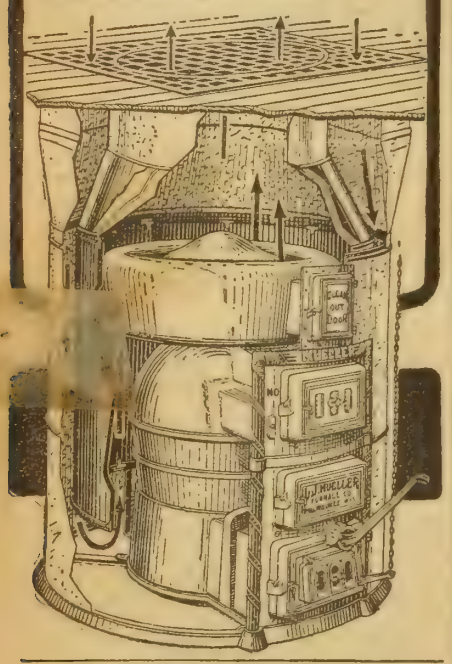

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In and Around Wisconsin

Breeders' Associations Planning Summer Meetings Which Will Be Held in Most Instances During Month of June.

The grand stand on the Ashland County Fair grounds at Ashland was blown down during a recent wind storm and the board estimates the damage at $700. The county board recently appropriated $1,500 aid to the fair.

J. W. Hutchinson, president of the Portage Prairie Holstein-Friesian Association, advises that the summer meeting will be held June 17th at Bonnie Meade Stock Farm, two miles from Randolph, Wisconsin, and a large attendance is expected.

E. A. Schiller, of Beaver Dam, secretary of the Calmus Holstein Breeders' Meeting, writes The Wisconsin Farmer that the association plans to hold a summer meeting some time in June, the day yet to be set. J. R. Wheeler, of Columbus, has been invited to speak.

The Fox River Valley Guernsey Breeders' Association has chosen June 7th at the farm of Edward Lawrence & Son, Appleton, for its summer gathering. A stock-judging contest at 10 o'clock will feature the forenoon session and in the afternoon George McKerrow will speak.

The Inter-County Guernsey Breeders' Association will hold its summer meeting at the farm of William Harmon, Arkansas, Wisconsin, on June 8th. W. M. Pace, secretary, advises that the association now has twenty active members, all of whom are using pure-bred sires, while several have a number of pure-bred females.

The Eau Claire County Holstein Breeders' Association will hold its summer picnic on June 16th at the Silver Springs Farm of George H. Comings at Eau Claire. Prof. G. C. Humphrey will be the principal speaker and will also conduct the judging contest in the forenoon. This is open to any person in the county.

The summer meeting of the Kewaunee County Holstein Breeders' Association will be held Sunday, June 25th, at the Foot Bridge Pavilion, Kewaunee. The association now has forty members and an enjoyable meeting is anticipated.

Polk county Holstein breeders are planning a trip to St. Paul and Stillwater on June 13th to see various farms and an enjoyable time is anticipated. The association is also considering holding a picnic some time this summer.

The Polk County Fair Association has chosen September 19th-22d as the date for the fair at Balsam Lake and have elected J. A. Mack president; H. F. Taylor, vice president; E. J. Iverson, secretary, and E. J. Day, treasurer.

The Monroe County Guernsey Breeders' Association will meet jointly with the other breed associations on June 17th at the Indian school farm at Tomah. The western Wisconsin Holstein breeders and the Monroe county Jersey breeders will co-operate and a big crowd is expected.

Three local potato growers' associations have been organized in Rusk county this spring for the promotion of the potato industry in that community. The associations and their secretaries are at Bruce, Ed Stahl, secretary; at Ladysmith, A. A. Hadden, secretary; at Weyerhauser, John Hurless, secretary.

R. A. Kolb, county agent of Taylor county, is warning the farmers not to be discouraged over the 1915 corn failure, as it is a good crop, even in Taylor county. This county now has 100 silos, but Mr. Kolb says it should have 200 and suggests to every farmer that he insure his corn crop by building a silo this year.

The fruit acreage in Bayfield county is being largely added to this spring with the planting of hundreds of acres of fruit trees in different parts of the county. Apples, cherries and plums are being largely planted and a few growers are experimenting with peaches and pears. The county now has some of the largest commercial orchards in the state.

There are indications that the strawberry crop on the peninsula will be a large one this season. The heavy snows of the past winter protected the vines and if weather conditions are right during the blossoming stage a record crop will be harvested. The Bayfield district is coming to the front as a strawberry center and the past few seasons more than 100 carloads of fruit have been shipped.

The summer meeting of the Waukesha County Guernsey Breeders' Association will be held on Friday, June 2d, at the farm of Roy Burton near Eagle. The Guernsey breeders hope to make this gathering the largest in the history of the association.

The picnic of the Washington County Holstein Breeders' Association will be held June 20th at Cedar Lawn Farms in the town of West Bend.

The Stevens Point Fair Association, co-operating with J. M. Coyner, county agricultural representative, has announced plans for a calf-growing contest. Prizes will be given to the best four calves shown at the county fair September 12th-15th. The first prize will be a pure-bred heifer calf of any breed the winner selects.

Farmers in the town of Empire, Fond du Lac county, have organized the third cow-testing association in that county with Wesley Keys as president; C. Schroeder, vice president, and E. A. Quick, secretary and treasurer. The other two associations are in the town of Alto and the town of Forest and it is planned to form associations in the near future at Rosendale and Eldorado.

The annual stock show which will be held at River Falls, Pierce county, on June 2d, promises to be the largest and best ever held. Cash prizes have been offered for the best three animals in each class and several new features have been added to make the show successful. Merchants plan to close their stores for a few hours during the afternoon in order to get acquainted with their farmer customers.

The Northern Wisconsin Guernsey Breeders' Association will meet jointly the last week in June with the northern Minnesota breeders at Island Farm, Island, Minn., a few miles from Duluth. The exact date has not been chosen at this writing. W. H. Caldwell will be the principal speaker and a big crowd is anticipated, as it is planned to run a special train from Duluth to accommodate members and guests.

Manitowoc county Holstein breeders hope to make the annual picnic on Sunday, June 18th, the largest gathering in the history of the association. This meeting will be at Lindsted Farm, Manitowoc, and F. B. Fries, of Richland Center will be the principal speaker. More than 600 attended the meeting last June and the accessibility of Lindsted farm, which is reached by the interurban, should draw a big crowd.

The Western Guernsey Breeders' Association will meet jointly with the Southwest Guernsey Breeders' Association on Thursday, June 1st, at Livingstone, Grant county. The meeting will be held at the farm of Dale E. Rundell and an invitation is extended to all who are interested in the breeding of Guernseys. The meeting will be addressed by Dr. M. B. Wood, of Mankato, Minnesota, on "1904 and 1916," and by Brian L. Rundell, of Hammond, Wisconsin, on "A Beginner's Experience." There will also be a color judging demonstration and a scoring contest with prizes to the winners. Livingston is on the C. & N. W. R. R. and a morning train for Livingston leaves Madison at 7:20 a. m., arriving in Livingston at 10:20, and the program will start immediately after the arrival of this train. Those who desire can leave Livingston at 2:55 p. m., arriving in Madison at 5:40.

Silo and frame work of new barn of Dr. C. L. Pickering, of Muscoda, Grant county, photographed during construction. This shows the class of improvements being made on southwestern Wisconsin farms.

Where Clover Has Winterkilled.

Mixed peas and oats will make a good crop on land where clover has been winterkilled, according to R. A. Moore, of the Wisconsin Agricultural Experiment Station. Sow at the rate of two bushels of oats and one bushel of peas to the acre. Cut when the oats are fairly well headed out and before they turn yellow. This combination will make good hay, Mr. Moore says. On heavier soils of Wisconsin Mr. Moore recommends the German, Hungarian or Japanese millets as a good catch crop.

Statistics show that the number of automobile accidents is decreasing steadily as compared with the number of machines in use.

Weather Is Still Too Cold and Wet for Crops.

Continued Cold Weather Is Retarding the Growth of Grass and Small Grains. Heavy Rains Have Delayed Farm Work and High Winds Have Caused Some Damage to Young Crops.

WISCONSIN.

Barron County.—This is the latest spring for many years. Considerable seeding is to be done yet, and no corn or potatoes have been planted. There will be the usual acreage of both of these crops. Snow protected the wintea grain, pastures and meadows and they are looking good now. Hay is very scarce and selling at from $10 to $15 a ton. A large number of small pigs were lost this season.—Wm. Bartlett.

Burnett County.—Weather continues cold and severe. Winds from the west have caused much damage to crops on light soils. All small grain is sown and farmers are ready for planting corn. Pastures are in fine shape. Winter wheat is good. Fruit trees are rich in blossom, but there is danger from frosts.—E. H. Johnson.

Chippewa County.—Nearly all small grain is up and looking good. Cold rains are holding back the hay and grain. Only about 10 per cent of the corn is planted. Late potatoes will not be planted until after the corn. Early potatoes have been planted about two weeks, but are not up on account of the cold, wet weather. Small grain, sown on sandy spots, was slightly damaged by recent heavy winds. Cattle are in very good health, but the long, hard winter has not left them in the best condition. Pastures are slow and the stock cannot get on to them. About 85 per cent of the small pigs are being saved and hogs are in good health. The bad weather keeps back the young pigs. The number of calves has been reduced by losses from scours and other ailments.—Jas. A. Smith.

Crawford County.—Winter wheat crop is fine. Meadows, pastures and oats are all good. Not many early potatoes are grown; late potatoes have not been planted yet. The principal crops will be corn, oats, wheat and hay. Fruit prospects are good. The percentage of young pigs saved is above normal. Dairymen are having good luck with their calves.—George Ashbacher.

Dodge County.—The heavy rains have not damaged the small grains much except in the low places. Early-sown barley and oats looks good; the late sown is not out of the ground yet. Very little corn has been planted, and only the early potatoes are in. Most of the farmers have turend the cattle out on pasture, but the grass is extremely thin. If the weather does not turn warm soon, pastures will be short all summer.—E. R. Fredrich.

Eau Claire County.—Oats and barley were covered with sand from the wind storms of May 8th and 10th. Clover is doing well; the old seeding has a good sod, but does not grow rapidly on account of the cold weather. Rye is doing well; only a small amount was sown. Early potatoes are coming up. Most of the corn will be planted soon. Pastures are short. Farmers are saving about 80 per cent of the young pigs. Only about 50 per cent of the calves are raised and the rest of them are vealed. —C. A. Koll.

Florence County.—Weather is cold and backward, with occasional freezes. Only part of the seeding is finished. The principal crops will be hay, oats and potatoes; some wheat will be raised, but practically no corn. There are a good many spring pigs. Most of the dairy cattle here are Holsteins.—Phil Kelmes.

Green Lake County.—Corn planting has been delayed on account of cold, wet weather. Small grain is doing well. Young pigs are about 85 per cent of a normal crop. Young colts are below average.—Geo. Wiedman.

Iron County.—Weather is cold with heavy winds. Meadows and pastures are very poor. Small grain seeding has started and early potatoes have been planted.—J. A. Becker.

Jackson County.—Spring seeding is about finished. Heavy rains have stopped work on corn ground. Wheat is about 90 per cent normal. Clover is less than 10 per cent normal, because of heavy ice on the ground in February and March. Timothy meadows are probably about 80 or 90 per cent normal. Rye is in fair condition. Many small pigs were lost this spring. Lambs are doing well.—J. P. E.

Juneau County.—Spring is wet and cold. Small grain went into the ground late and is not doing its best. Recent high winds have seriously damaged the grain on exposed sandy soils. Ground is too wet for plowing for corn, and no planting has been done yet. Fruit blossoms are just coming out and fruit prospects are fair.—J. H. McNown.

Kewaunee County.—Cold, wet weather has delayed grain seeding. About three-fourths of the grain is sown. Early sown oats and barley is up and looks good; rye looks fair, but wheat winterkilled badly. A great deal of clover in the old meadows is killed, and pastures have not advanced enough for grazing. Losses in young pigs have been considerable. No great losses in calves have been reported; early colts have done fairly well, but there were two cases of navel trouble which proved fatal. Several cases of blackleg have been reported among cattle.—Fred Lutz.

Lafayette County.—Oats and barley are backward because of cold weather. A large acreage of small grain was planted this spring. Pastures are beginning to look good. No corn is planted; farmers are waiting for more favorable weather. Clover is good, most of the new seeding came through the winter in good condition. Meadows are backward and need warmer weather. There were many small litters this spring and many of the pigs died. Several farmers have lost calves on account of white scours. One of the largest barns in this county was struck by lightning on May 8th, and several pure-bred Holstein cows were killed.—W. F. Pease.

Manitowoc County.—Season is late, cold and wet, with little sunshine. Most of the spring seeding has been done. Winter rye looks good, but much wheat winterkilled. Preparation of ground for corn is beginning. Clover that was cut last year winterkilled, also some of last year's clover seeding. Pastures are late and many farmers are getting short on feed.—Edward E. Straka.

Marinette County.—The season is very backward, and farmers are not more than half done sowing small grain. Corn and potato land remain untouched. Heavy rains have soaked the fields badly. Weather is windy and cold and fields are drying up very slowly. Grass is turning green and pastures are starting. Cattle have just been turned out. Hay is scarce because cattle were stabled so long.—H. B. Pederson.

Oneida County.—Weather has been quite cold, with heavy rains on the 14th and 15th. Alfalfa came through the winter in good shape and is now about two inches high. Practically all the small grain is sown. Fields that were sown first are beginning to look green. The grass seeding was damaged by high winds on the 8th and 10th. Pasture is fine and the new seeding promises a good crop. Corn planting has begun and a few potatoes, also, have been planted. Farmers as a rule are having poor luck with young pigs. —Clyde Burkhart.

Outagamie County.—Winter wheat is almost a total failure; winter rye is about 50 per cent of a crop. Heavy rains have delayed seeding. Meadows look poor and some of the clover is killed out. Fruit trees are just blossoming. Pig crop has improved lately and is now about 60 per cent normal. Young colts are not in good condition; about half the early colts were lost.—Henry Lepplu.

Polk County.—Spring is very cold and backward, with much wind and rain. All small grain and some potatoes are planted. Meadows are in good condition;

(Concluded on page 16.)

The Use Of Hercules Dynamite On Farm, Orchard and Ranch

See the State Land Clearing Demonstration

YOU have undoubtedly heard of the demonstration in land clearing which the State Special Excursion is giving. These demonstrations will be of great value to every Wisconsin farmer who attends them.

You owe it to yourself, your family, and your farm, to be present at the demonstration given near you. Find out when and where it will take place.

You will receive visual proof of the remarkable results which may be achieved by the use of dynamite in felling trees, stump removing, rock blasting and drainage work. You will realize why dynamite saves time, labor and money in work of this kind.

In addition to seeing the demonstration write us for a copy of "Progressive Cultivation". It will be sent free on request. It tells in detail how to use Hercules Dynamite to the best advantage on your land. Write for your copy today. Please use the coupon below.

HERCULES POWDER CO.

Please send me a free copy of your book, "Progressive Cultivation." I am interested in Dynamite for

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Tree Planting

The two illustrations above show fully the value of using dynamite in planting trees. These drawings are exact copies of photographs of two trees planted at the same time and in the same orchard. The one on the left was planted in a spaded hole, the other in a dynamited hole. The growth and development of the latter is almost twice that of the former. This difference always shows when Hercules Dynamite is used.

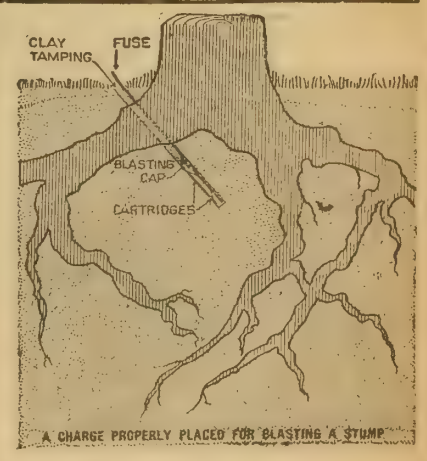
The ground is thoroughly broken up. The roots have a chance to spread in a natural manner. Also the work of planting is done more quickly and at less expense. In "Progressive Cultivation" are given interesting details with regard to the use of Hercules Dynamite for tree planting. Are you familiar with the method and its results?

Stump Blasting

Every man who has had experience in pulling stumps *without* the aid of dynamite knows only too well the amount of labor and time involved.

When you have land to clear, use Hercules Dynamite. You not only save labor and time—and, as a result, money—but you also thoroughly break up the subsoil and very effectively prepare the land for cultivation.

The diagram given shows the best way of removing one kind of stump, that with matted, spreading roots. When dynamiting a stump with a tap root the charge should be placed differently to get the best results. "Progressive Cultivation" tells just how stumps of various kinds can be most readily removed.



A CHARGE PROPERLY PLACED FOR BLASTING A STUMP

Drainage Work

The draining of swamps and ponds can be done better with Hercules Dynamite than by any other means. There are several ways in which dynamite may be used. We have room to illustrate only one of them — the crater method. By this method the hard soil forming the bed of the swamp is broken up and the water drains off through the loose stratum below.

In "Progressive Cultivation" full details with regard to drainage work with dynamite are given.

BLASTED CRATER FOR DRAINING SWAMPS AND PONDS

Success on Slashing in Langlade County.

Ten years ago Anton Greisinger, full of ambition, energy and willing to undergo the many privations of the settler, began farming on a 120-acre slashing in Langlade county, Wisconsin. With only a small amount of capital to start him our readers, especially those who have pioneered, can calculate for themselves the task he undertook, but today he is the owner of a fine Guernsey herd on this very same slashing; is quartered in a nice, comfortable home with good farm buildings and, as Mr. Greisinger says, he has "no one to blame except the cows."

What this Langlade county pioneer has accomplished during the last decade hundreds of farmers are accomplishing today in every county in Upper Wisconsin. Never was there more interest in this section than there is at the present time, and everywhere the settler's cabins can be seen going up in the slashings which cabins, like the experience of Mr. Griesinger, will give way in a few years to more modern homes and farm buildings.

Mr. Greisinger made his start with a few scrub cows, which were about the only kind to be found in that county ten years ago, but by intelligent breeding and careful management he has been able to breed up his herd and make it one of the best producing herds in the county cow-testing association. The resutls are that on the Greisinger farm on Route 1, out of the village of Bryant, are today twenty-four good producing grades in addition to two pure-bred females which he has imported. The pure-bred sire has made this all possible for at the first opportunity after settling on his slashing he bought such a sire and has used only a pure-bred since then. He now has his third pure-bred sire and he is going on four years of age.

The accompanying illustrations show the Greisinger home and farm buildings which he says the cows have made possible. The buildings to the left would do justice to the more settled counties in many older states and it is all the more remarkable that this result should be attained in ten years on a slashing that once was considered useless and of little value as a farming proposition. To the extreme right are shown the original buildings that went up when he settled on this place, and in time they will pass away as the cows make it possible to add additional equipment.

The oft-heard statement that dairying will make Upper Wisconsin seems to be borne out by Mr. Greisinger's experience as he found it a sure method for success and, situated near a factory for selling his raw product, he discovered the monthly cream check far more than convenient. With dairying has gone the general grain farming required on a dairy farm, and each year he has cleared a little more of his 120 acres so that the income might be raised by an increased acreage.

When it was proposed to start a cow-testing association in that county, that the owners might know just what the cows were doing for them, he was ready and willing to join. He had found that no farmer is rich enough to keep poor-producing cows, especially a settler who has to make both ends meet in addition to squeezing out enough for permanent improvements, etc. So he joined, and during 1914 he had twelve grade Guernsey cows in the association and under test. Of these four were two-year-old heifers which gave a good account of themselves, and his aged cow returned him a profit of $96.

Mr. Greisinger's total income for the year from these twelve cows was $981.82 and the net profit amounted to $641.64, or better than $51 per cow. The feed bill for the year totaled $340.18. Two of the cows, one of which made the $96 net profit, finished the year with very nice records, 444.1 pounds of fat for one and 408.1 pounds for the other. Of course, these two brought up the average but it is easy to figure that the others did well or the average profit of $51 and over for the twelve head could not have been maintained.

No obstacles seemed too great for Mr. Greisinger, and in spite of the fact that during the year these twelve cows were under test he was without silage of his own he hauled pea silage a distance of eight miles to feed his herd. This he got from the local canning factory, and paid the sum of $2.50 a ton for it. His feed was largely clover hay and a ration suggested by the tester at that time, J. J. Schmidt, but Mr. Greisinger figures now that he did not feed enough grain. Had he fed more grain he believes his production record for the year would have been much better.

The 1915 corn was caught by the frost, so in filling his new silo last fall Mr. Greisinger filled the top half with second cut clover, the corn only half filling it. He fed this silage during the winter and reports that it worked fine and that the cows relished it. Many told him he was foolish to run clover in on top of his corn, but he had the clover; realized the value of silage and therefore took the risk, much to his benefit. The clover was cut up with the feed cutter and run in on top of the corn without water.

Perseverance proved a big factor with Mr. Greisinger and in his own words: "It is not the money that made me where I am now, for I had very little when I first came here. All I have I owe to the good old cows." And he has taken care of these cows as his experience with them proves.

LDINGS OF ANTON GREISINGER, LANGLADE COUNTY. TEN YEARS AGO HE SETTLED ON THIS 120-CRE SLASHING WITH A FEW SCRUB COWS, DETERMINED TO WIN OUT AND HE SUCCEEDED.

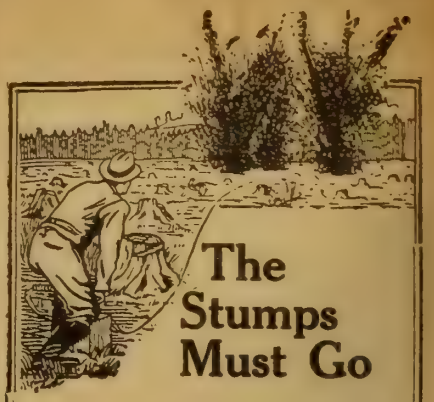
THREE OF THE GUERNSEY HERD SHOWN AT THE FAIR AT ANTIGO, TO WHICH MR. GREISINGER GIVES CREDIT FOR THE IMPROVEMENTS SHOWN IN THE ABOVE ILLUSTRATION. THE AGED GRADE COW SHOWN HERE NETTED HIM A PROFIT OF $96 IN ONE YEAR.

Guernsey Men Active in Forest County.

To the Editor:—Our County Guernsey Club held its meeting recently. The county agricultural representative showed some slides and several humorous pictures were shown for children. There was a thirty-minute debate on the relative merits of beef and dairy cattle. The potato growers of this section have held some very good meetings of late. At our last gathering we took action on buying co-operatively insecticides and fungicides. Invitations have been sent out to every potato grower in the county for the county meeting to be held at the county seat. It is proposed to form a county organization. It is also proposed in this connection to have a set of by-laws drawn up, in addition to our regular working constitution. Under these by-laws all members of the association agree to abide by certain rules relative to disease treatment, grading and varietal mixture. One of the most enjoyable features of our meetings is the get-together dinners. A committee has this matter in charge and the food is collected by assignment to the various farmers. Each man brings in what he is asked to bring. We expect to have our county meetings some time in June.

I get your Wisconsin Farmer every week and enjoy it very much.

Forest Co., Wis. A. R. Anklan.



The Stumps Must Go

Increasing population, growing demand and better prices for food stuffs are raising farm values. Stumps take up space, hinder work and cost you money. Get them out.

DU PONT

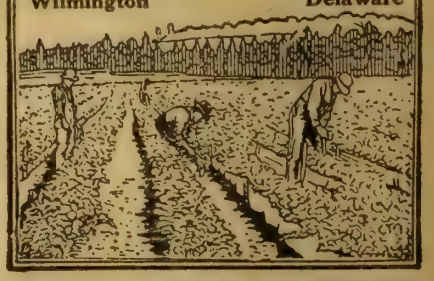
Red Cross Farm Powder

will remove them. In most cases Red Cross Farm Powder alone will do the work most quickly, easily and cheaply. Used in connection with other mechanical appliances it makes their work more efficient because it loosens the roots, shakes them free of dirt and leaves most of the soil in the hole. Long use by thousands of farmers has proved its merits for stumping, subsoiling, ditching, tree planting, etc.

Big Book Free

Tells just what you want to know about the use of dynamite on the farm. You ought to have it. Write today for **Handbook of Explosives No. 35.**

E. I. Du Pont De Nemours & Co.
Wilmington Delaware



TABER LINED SILO

Non-Shrinkable—Practically Everlasting, Rot-Proof, Worm-Proof, Storm-Proof, Acid-Proof.

The latest improved Silo. A woodstave Silo; choice of lumber. Entire Silo creosoted. Special paint for outside. Acid-Proof Lining for coating inside after erection. The finest door and door frame on the market.
Special Galvanized Steel Octagon Roof—best manufactured.

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ESTABLISHED 1855
AGENTS WANTED IMMEDIATELY.

Fine Ground For Tractor Show.

Tract Selected Near Madison For Tractor Demonstration, to Be Held September 4th to 8th, Is Beautifully Situated on Lake Monona—Good Transportation Facilities.

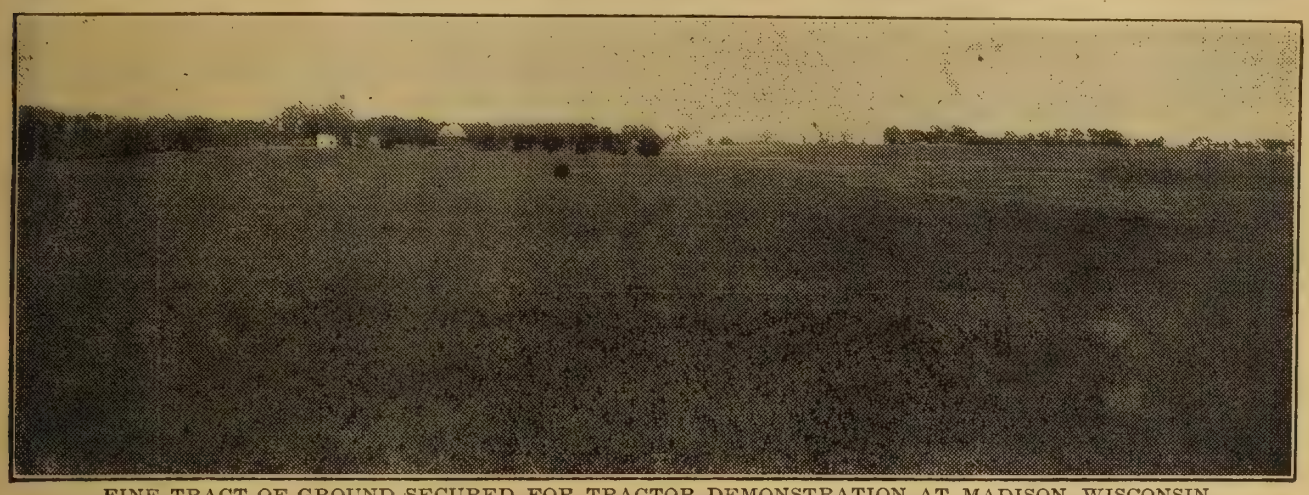
WISCONSIN is to have one of the eight great tractor shows to be held in the United States this year. The show will be held at Madison, September 4th-8th, and guests are expected by the tens of thousands. Already about fifty companies making many more machines have signed up to attend the 1,000 and a large portion of them have already been engaged. The Rotary Club and the commercial bodies are arranging to accommodate large numbers of visitors in private homes throughout the city.

The writer had a personal interview lately with Mr. Frank M. White and with some of the town and university people, who are uniting to make this tractor demonstration a great success. Mr. White is very well pleased with the grounds secured and especially with the transportation facilities to the grounds. Arrangements will be made for additional street car service and the automobile road will be policed for motorists. In addition, there will be a special boat service to the grounds, from the landing near the State House Square. Train service to Madison is favorable to those who wish to come in the early morning and leave in the evening. Madison is well supplied with restaurants and eating houses, in addition to hotels, and doubtless there will be no trouble in feeding the people.

At the time this article is written the following companies had entered for the demonstrations at Madison:

Advance-Rumely.....La Porte, Ind.
Albaugh-Dover Co.....Chicago
Allis-Chalmers ..... Milwaukee
Aaultman-Taylor.....Mansfield, Ohio
Avery Co.....Peoria
Avery & Sons, B. F.....Louisville, Ky.
Bull Tractor Co.....Minneapolis
Bullock Tractor Co.....Chicago
Case T. M. Co.....Racine
Case Plow Works.....Racine
Chase Motor Co.....Cyracuse
Dauch Mfg. Co.....Sandusky
Dayton-Dick Co.....Quincy
Deere & Co.....Moline, Ill.
Denning Tractor Co...Cedar Rapids, Ia.
Electric Wheel Co.....Quincy
Emerson-Brantingham .....Rockford
Grand Detour Plow Co.....Dixon, Ill.
Happy Farmer Co.....Minneapolis
Hart-Parr Co.....Charles City, Iowa
Holt Mfg. Co.....Peoria, Ill.
Huber Mfg. Co.....Marion, Ohio
International Gas Engine Co....Cudahy
International Harvester Co.....Chicago
Janesville Mch. Co.....Janesville
Joliet Oil Tractor Co.....Joliet
Kinnard-Haines Co.....Minneapolls
La Crosse Plow Co.....La Crosse
Lawter Tractor Co.....St. Marys, Ohio
May-Tag Co.....Newton, Iowa
Minneapolis Steel Mch. Co. Minneapolis
Moline Plow Co.....Moline
McIntyre Mfg. Co.....Columbus, Ohio
Nilson Farm Machine Co...Minneapolis
Oliver Chilled Plow Co.....South Bend
P. & O. Plow Co.....Canton, Ill.
Parrett Tractor Co.....Chicago
Peoria Tractor Co.....Peoria
Rock Island Plow Co.....Rock Island
Russell & Co.....Massillon, Ohio
Simplex Tractor Co.....Minneapolis
Steel King .....Detroit, Mich.
Waite Tractor Co.....Elgin
Wallis Tractor Co.....Racine
Waterloo Gas Engine Co...Waterloo, Ia.

This does not include the accessory companies. It is probable the final number of entries will be more than 100. The number of entries already arranged for exceeds that at a number of the big tractor shows last year.



FINE TRACT OF GROUND SECURED FOR TRACTOR DEMONSTRATION AT MADISON, WISCONSIN.

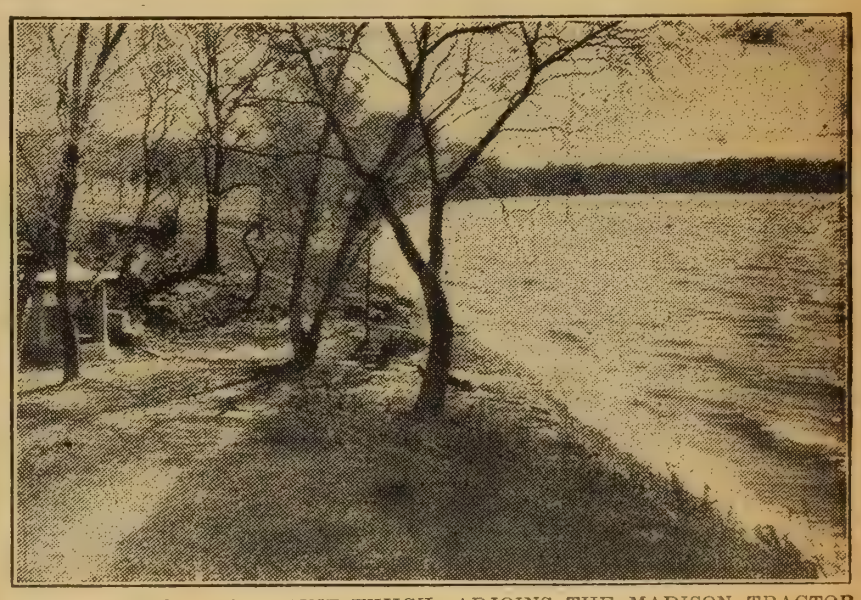
Wisconsin demonstrations. This insures a splendid show, with demonstrations of the several types. Special attention will be paid to the smaller and medium-sized tractors adaptable to small farms. This will be the first opportunity which farmers of this state will have to witness a practical demonstration of the tractor in a big way.

The Rotary Club, of Madison, has charge of the local arrangements for the demonstrations. Mr. Frank M. White, director of the agricultural engineering division of the University of Wisconsin, has been chosen manager of the Madison show. This show will be the eighth and last of the special tractor demonstrations and will be in a sense a sort of round-up.

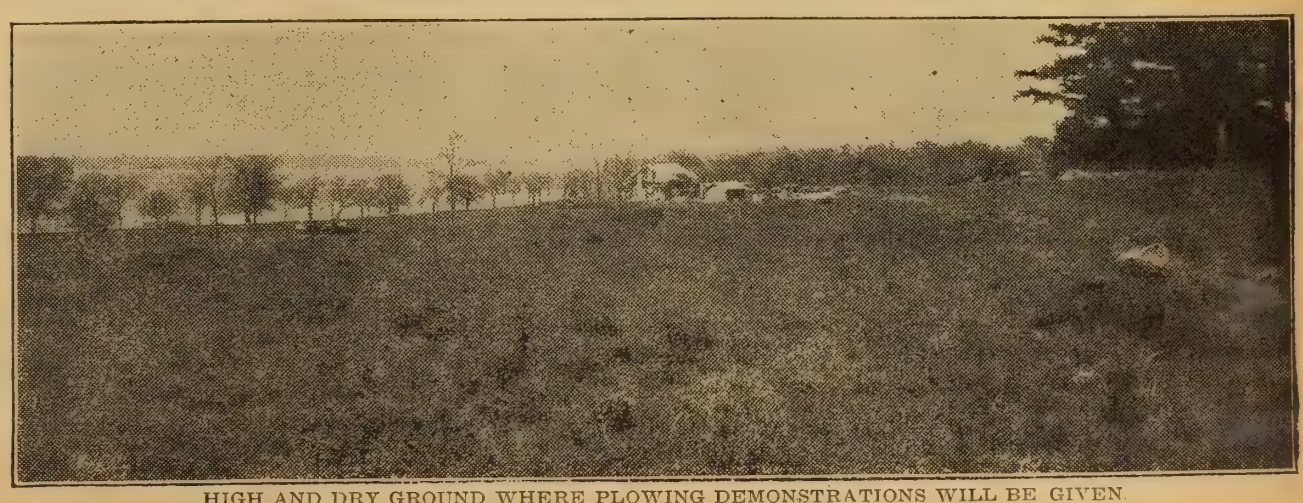
LOOKING FROM HEADQUARTERS ON TRACTOR GROUND ACROSS LAKE MONONA TO THE NEW STATE CAPITOL.

Mr. White is especially well pleased with the arrangements which have been made for grounds for the tractor demonstrations. It is doubtful if any better site could have been secured in the entire state of Wisconsin. The site includes several hundred acres and lies east and a little south of the city of Madison. The grounds are connected with the city by street car line and also a good automobile road. The grounds adjoin Lake Monona. Near the headquarters building there is a fine spring with running water all the time. This spring is quite famous with visitors along the shore of the lake and a handsome spring house has been erected over it.

Madison is making every effort to accommodate the crowds which are expected. The city has eleven hotels, besides a great many rooming houses. The rooms in hotels number about



LAKE MONONA SHORE LINE WHICH ADJOINS THE MADISON TRACTOR GROUNDS.



HIGH AND DRY GROUND WHERE PLOWING DEMONSTRATIONS WILL BE GIVEN.

Seed Stock For Schools.

The horticultural department has placed considerable of the best standard varieties of seed stock at the disposal of county school superintendents in Sauk, Chippewa, Washburn and Adams counties, where it will be used in conducting potato contests in rural schools. From fifty to 200 students in each county are expected to take part in the raising of these improved varieties of marketable potatoes. Competitive exhibits will be arranged at the close of the season, with a final round-up at the state potato growers' convention at Eau Claire next November.

Expects to Attend Madison Show.

To the Editor:—I have given the question of farm tractors some consideration. I think what I would need on my place is an 8-16. That would answer my purposes. I am using a four-roller shredder and a sixteen-inch silage cutter. I know a good many farmers think for this they should have a 10-20, but now for a farm of 160 acres an 8-16 would be big enough I think. I am using a ten horse power gasoline engine and do all my own work with it, but could use a little more power on the belt if I had it. I expect to be in Madison in September if possible to attend the big tractor show.

A. A. Goetsch.

More than 12,000 students are taking courses in agriculture in the colleges of the United States.

TRACTOR EFFICIENCY LARGELY DETERMINE

PROPHECY and prediction make scant appeal to men who are seeking information in regard to farm tractors. From such the pointed questions come: What is the tractor actually doing in farm affairs, and what is its sphere? Will it supplant or simply supplement horses? In brief, will the tractor augment farm profits in anything like a comfortable degree? If these inquiries are properly answered, an appeal must be made to the experience of men who have used and who are using tractors.

Mr. L. G. Jaques, of Greene county, Iowa, faced the situation squarely this spring. He planned on putting in 135 acres of corn and sixty acres of small grain. He had seven horses ready for the collar and provision had been made for employing but one hired man. Every practical man knows that it would take three 4-horse [illegible] crop in if the work were properly done. In other [illegible] would have to buy five more horses and, in addi- [illegible] hire an extra man. Instead of investing in horses, an 8-16 [illegible] was purchased and was put onto the land just as soon as [illegible] enough to till without packing or puddling. One of the first tasks was that of breaking a 30-acre native prairie—a sod so tough that the furrow, in a few instances, flew back like a spring trap from one end of the field to the other. It seemed like a hard task for a 5,000-pound machine, but the work was done in ten days with a two-bottom plow. The neighbor for whom this plowing was done had almost given it up in discouragement, believing that the task was almost impossible with horse power. In spite of the fact that an occasional "hard head" poked its nose to within a few inches of the surface, the work was done without a break either in the plow bottoms or in the tractor. About twenty-five gallons of kerosene, costing eight cents a gallon, and three gallons of lubricating oil was used daily, while the tractor was in the sod field. An acre a day or at the outside an acre and a half would have been good work with a 4-horse team.

Following the plowing of this native sod, Mr. Jaques turned his attention to the task of plowing, disking and harrowing cornstalk land. It was prepared for oats with a disk and harrow. A 12-foot and an 8-foot disk could be comfortably handled, thus cutting a strip twenty feet wide every time the tractor crossed the field. As much as thirty-five and even forty acres were disked in a day on a fuel supply not exceeding twenty-five gallons, together with three gallons of lubricating oil.

When the disking was done a 30-foot harrow followed, drawn by the tractor. With this equipment Mr. Jaques found that he could cover eighty acres a day of ten hours. Our readers may calculate for themselves just what horse power it would take to harrow eighty acres in one day. Every man will concede that such a harrow is too heavy for a 6-horse team, and even though six sturdy drafters might handle it, they would scarcely be equal to the task of covering eighty acres a day. In hot weather they could scarcely cover more than half this area, but, as Mr. Jaques says, "The tractor never sweats nor do you ever have your feelings lacerated, as in the case of horses when you are obliged to push them hard."

When it came to plowing old ground, the three-bottom plow came into use, and from ten to twelve acres was a day's work. There were no breakages in performing any of these tasks, so that the tractor was kept on the move practically ten hours every day. As a result, the land was prepared quickly for the crop. The plowing was done early, thereby affording an ideal opportunity for the growth of weeds. All Mr. Jaques' spring plowing was disked and some of it double-disked with the tractor. And as for harrowing, the seed bed was literally as fine as an onion patch.

NO DIFFICULTY IN HANDLING A "LOADED"

NO "WINDING" OF TRACTORS, BUT A STEADY, HONEST GAIT ALL DAY.

As before stated, there were seven horses on this farm besides the tractor, though but six were required. This number will be split up into three 3-horse teams for corn cultivation with an extra horse available when needed. A third man will be required during the cultivation season, but with that exception, 135 acres of corn will be put in and cared for by Mr. Jaques himself and one assistant. A little extra help will be needed at husking time, but there never will be occasion during the whole season for using more than the seven head of horses.

Not only has the tractor in this case saved the cost of an extra hired man and five or six horses, but its use has meant the cutting out of a lot of extra labor. It requires rapid work to properly care for and harness six or even four horses in an hour, and this is work that must be performed regularly every morning. Horses working hard, if they are kept in condition, will need at least an hour's work in the evening. The stable must be cared for, the stalls bedded down and every man who is worthy the name of teamster, will spend anywhere from ten to fifteen minutes on every horse daily with a currycomb and brush. Men who take pride in their horses will not hesitate to perform this labor and even then horses will be reduced in flesh, they will, in many cases, have collar galls, and when the corn crop is laid by, their bones will be showing through, even though they were sleek and fat in the spring.

In the past, this is a situation that has been accepted by the average man as a matter of course—as part of the game, as it were—but it looks now, as if the tractor will very soon change this situation on many farms. A few minutes spent in turning down the grease cups and putting in a supply of oil, is all the time that the tractor requires before it is ready for action. At regular intervals during the day it will require some attention, but the time lost will be infinitesimal compared with the time taken out on a hot day in "winding" horses. Skill is needed, to be sure, but who has ever seen a farm boy who could not handle an automobile if given a chance, and we have enough faith in the lads that are coming on now, to believe that they will literally take to the tractor like a duck to water. With a little experie[illegible] wear and tear comes and they [illegible] lubrication.

The life of the tractor will de[illegible] automobile, a good tractor will [illegible] bodies change, making a machi[illegible] out of date next year, thereby [illegible] buyers, but you will never find [illegible] farm tractor. If it will give se[illegible]

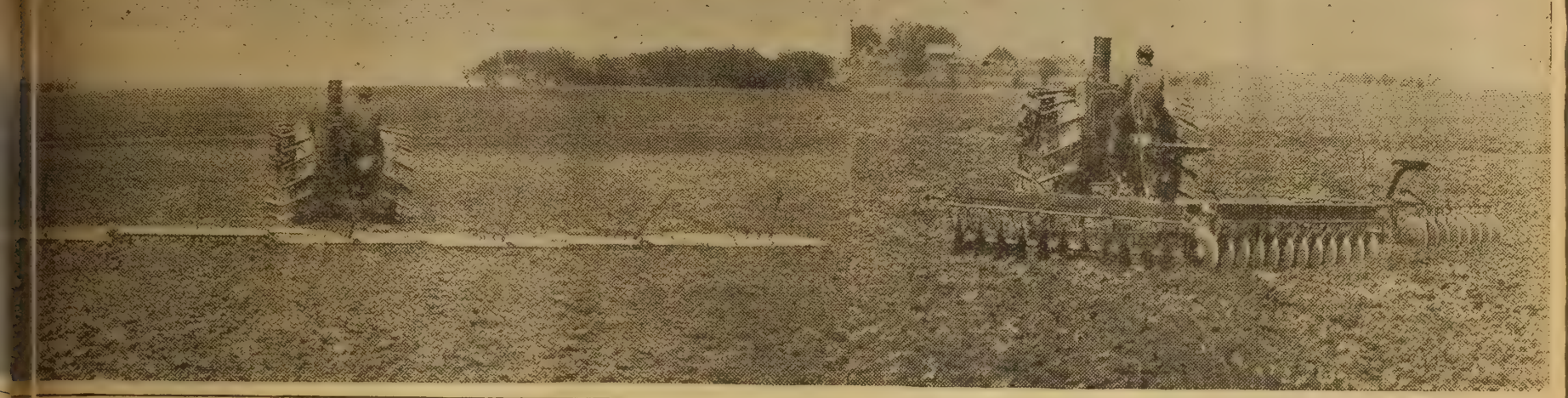
It is not purchased in the first pl[illegible] use, and every man who buys on [illegible] in proportion to the service that [illegible] do his plowing and disking and [illegible] can be found for it.

There is no depreciation with [illegible] with horses. The horse wears o[illegible] but the tractor only wears. Af[illegible] strenuous service referred to at [illegible] and no loose parts. Bearings [illegible] no expense from breakage. His [illegible] to the binder just as fresh and [illegible] it onto his farm. He does not k[illegible] years of service are locked up in [illegible] be five and it might be ten. In [illegible] outstrip in years of service the [illegible] wheels stop the expense stops. [illegible] when the tractor moves, but wit[illegible] almost as expensive as are the h[illegible]

Mr. Chas. G. Cockerill is also [illegible] tractor map. He is having his s[illegible] tractor and his success thus far [illegible] the kind of service that it has g[illegible] from ten to fifteen acres a day [illegible] ease. In preparing ground for s[illegible] singularly successful in operati[illegible] Two 8-foot disks and a 16-foot [illegible] thereby leaving the seed bed in [illegible] the result of one dual-purpose [illegible] twenty-two gallons of kerosene [illegible] pare anywhere from fifteen to tw[illegible] doing the work quickly when t[illegible] greatly reducing the chances o[illegible] rupted by rain.

Even on rolling ground Mr. Co[illegible] satisfaction. To be sure, the loa[illegible] ditions, but even then, an 8-foot [illegible] and this would make a load requ[illegible] again to the combining of the dis[illegible] that at least eight horses would

BY THE NUMBER OF HORSES DISPLACED



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a day as Mr. Cockerill has been able to do with his tractor. This, of course, is on level land and we call special attention to it for the information of those who are anxious to ascertain the exact truth regarding the number of horses that a tractor will displace. This might be considered an extreme case, but it shows the possibilities, and not only does the use of the tractor mean that the number of horses is greatly cut down but, as before stated, it means an important reduction in the number of hours that must be devoted to choring every day where horses are used. Even if you have an

SK REQUIRING SIX STURDY HORSES.

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Mr. Cockerill has been
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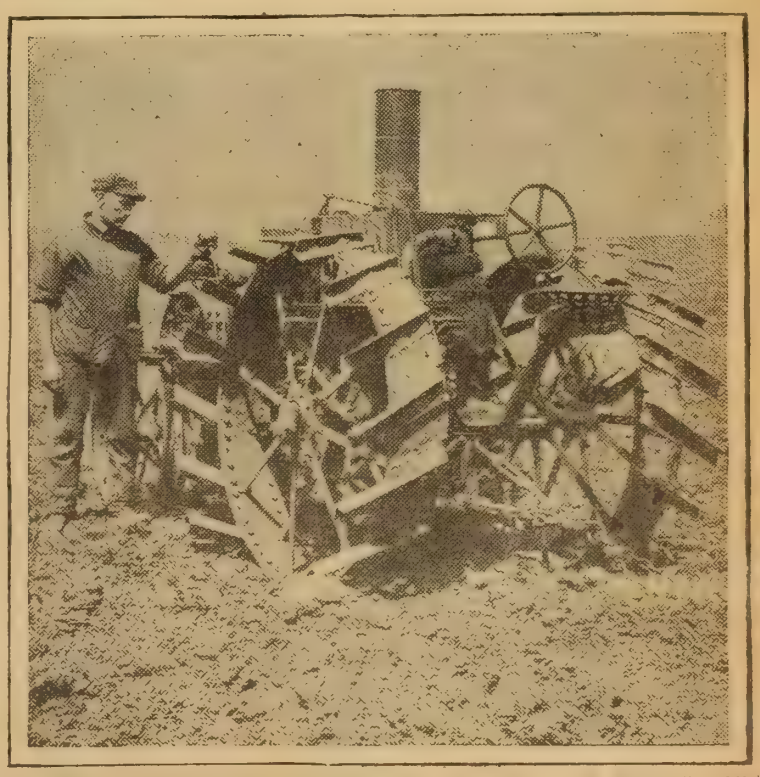
occasional breakage, you are still on the safe side, because, and as Mr. Cockerill puts it, "It is not an unheard of thing for a horse to lie down and die when you are right in the middle of your busy season. In case you have a break, your tractor is idle only two or three days, and if parts for it are kept locally, you may be out of its use only a few hours."

On both Mr. Jaques' and Mr. Cockerill's farms you will find the men who operate the tractors most enthusiastic over the kind of service that they are getting out of them. These men appreciate what it means to them at chore time both morning and evening, and they see the day dawning when farm work will not mean a sixteen-hour-a-day grind but, on the other hand, a rational, reasonable, comfortable day—strenuous to be sure, while it lasts, but still affording time and opportunity for rest and recreation, as well as for social pleasures even during the strenuous crop seasons. As these men see it, the tractor is bound to multiply the farmer's efficiency and returns are sure to be amplified because work can be done more quickly and more seasonably. Furthermore soil can be tilled more deeply with this form of power than with horses. In this respect, we must pay to the tractor the highest compliment of all. In the past, the surface only has been skimmed with our tillage implements and no man can accurately predict to what extent production will be increased by bringing under tillage forces a few more inches of soil and subsoil.

Soil packing is a question that instantly comes to the mind when the tractor is mentioned. There is a suspicion that soils will be ruined by firming them with the heavy tractor wheels, thereby undoing the very thing that we are trying to accomplish by frequent and thorough tillage. A very close investigation of this phase of the tractor problem reveals the fact that there is but little foundation for this fear, at least where the 5,000, 6,000 or 7,000-pound tractor is used. Instead of producing harmful results, several instances have been called to our attention where better returns were obtained on that part of the soil passed over by the tractor wheels. In endeavoring to obtain a deep, friable seed bed, there is such a thing as getting the soil too loose for the first crop, so that the use of the tractor renders deep tillage possible on the one hand, and on the other a certain degree of soil compaction required for thrifty growth is obtained. If under certain conditions there should be soil impaction to an injurious degree then it can be said that the greater ability of the tractor to stir a soil deeply much more than offsets this damage. If our plowing in the future is done at three or four inches greater depth than in the past we will have as one result of this greater depth a great wealth of mellow soil in the seed bed irrespective of the effect of the tractor wheels brought about in the process of tillage.

In considering tractors, there also comes to the mind the problem of operating them on soils that are wet. Those who have fought the introduction of the tractor, feeling that it would injure the horse industry, have been diligent in pointing out the helplessness of the tractor on a wet soil. As a matter of fact, there is no reasonable grounds for criticizing the tractor in this regard. In the great majority of instances, it is ruinous to till a soil when it is sticky and wet. This applies to all our clays and to nearly all clay loams. One had better turn his horses into the pasture or allow them to stand idle in the stable rather than to puddle the soil when it is wet or endeavor to mud in a crop when conditions are ruinously unfavorable. If a tractor of anything like reasonable weight cannot be used because the soil is soft and sticky, then there should be grounds for pause before implements of tillage are put into that same field and operated with horses. The sensible handling of the soil implies always that it should not be stirred when it is sticky, because this means its compaction into impervious chunks that cannot possibly be rendered friable until the amelioration process is brought about by the frosts of winter. Crop rootlets can make no headway in attacking these lumps, and plant food is locked in their hearts in a form that is not only physically inaccessible, but at the same time chemically impossible in so far as is concerned its availability for plants. On the score, therefore, of cultivating and tilling wet soils, it is but fair to say that there is an even break between the tractor and the horse. The possibility of the tractor increasing the number of working hours in a day means that advantage may be taken of the favorable weather spells in rushing the work because on a pinch it may be operated both night and day with a change of operators only.

There is scarcely a quarter section owner in the corn belt today who does not find his interest in the tractor more or less aroused. Thousands and tens of thousands will turn up at the various tractor demonstrations during the summer and fall. Many a man will meet his neighbor at one of these demonstrations, each having no thought in mind that the other would be there. First-hand information is being sought, and when investment is made it will be, let us hope, in a piece of machinery capable of giving service during every season of the year and repeating it year after year. They are looking for sturdy types that can handle a good load without strain and with but little wear.



A FEW MINUTES FOR "OILING UP" AND YOU ARE READY FOR BUSINESS.

Use A Wood Tire Hollow Wall Silo

Cannot Sag, Blow Down or Rot.

Cures and preserves silage perfectly. Prevents freezing of silage. Easy to construct. A real farm building, permanent and rigid. No hoops to get loose. No guy wires. No staves to shrink or swell, but a smooth, double wall from base to roof, the inner wall being of *California Redwood.*

Guaranteed for 20 Years

"But Lasts a Lifetime"

The patented wood "tire" is built up of inch boards, and shipped in sections. The boards overlap in step formation at both ends. When nailed together, these sections form a ring of unusual strength. The silo frame forms its own scaffolding.

WOOD TIRE
AIR SPACE
INNER WALL
OUTER WALL

Send for our folder which shows how the Wood Tire Silo is built, and also what owners think of them. A postal brings it. Write today.

Agents Wanted in unassigned territory.

WOOD TIRE SILO CO.
7 Clark Street
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Raised Without Milk!

...ne is "Daisy" and her owner, W. A. ...f Chapin, Iowa, raised her on Blatchford's ...al, which costs less than half as much as milk.

...tchford's Calf Meal

...eful preventive of scouring. Calves raised "The Blatchford's Way" are heavier, bigger-boned and healthier. Known as the complete milk substitute since the year 1875. Sold by your dealer or direct from the manufacturer.

Blatchford's Pig Meal insures rapid, sturdy growth of young pigs at weaning time. Prevents setback.

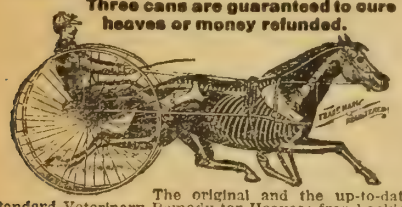
See Actual Figures —based on results—that show you how to increase your calf profits. Write today.

Blatchford Calf Meal Factory, Dept. 63 Waukegan, Illinois

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

THE NEWTON REMEDY CO., Toledo, Ohio

Shoo-Fly THE ANIMALS' FRIEND

For keeping flies and many other insects off of animals —in barn or pasture—longer than any imitation. Used and endorsed since 1885 by leading dairymen.

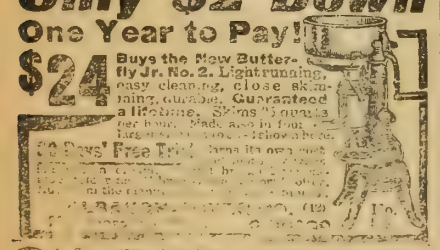
$1 WORTH SAVES $20.00 in milk and flesh on each cow in a single season. Excellent for galls. Allays itching. Aids in keeping animals from irritating sores by rubbing or stamping. Excellent for lice and mites in poultry houses.

$1.25 ($1.50 west of Mississippi River) will bring you enough Shoo-Fly to protect 10 cows 2 weeks, also our 2-tube gravity sprayer. EXPRESS PREPAID. Money back if not satisfactory. Name Express Office. Booklet FREE. Special terms to agents.

Shoo-Fly Mfg. Co., Dept. 21, 1310 N. 10th St., Phila. Editor knows from experience Shoo-Fly is O. K.

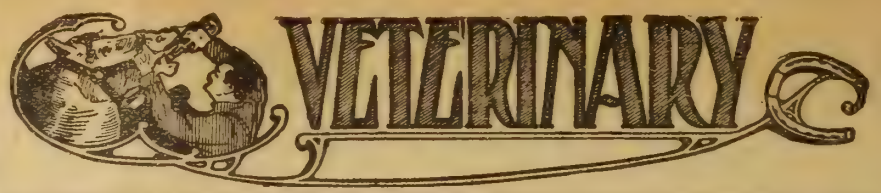
Only $2 Down

One Year to Pay!



$24 Buys the New Butterfly Jr. No. 2. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims ... quarts per hour. Made also in four larger sizes—to ... hours.

... Days' Free Trial ... its own cost ...



PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Scouring in Calves.

Please tell me what should be done for scours in calves.

The treatment of scours in calves depends upon the cause and the length of standing of the trouble. If the calves are real young and have been affected a short time would advise you to give one or two ounces of castor oil, according to size and age, and follow immediately with some carminative and demulcent agent, such as one dram anise water, one dram nitrate of bismuth and one dram gum arabic three times a day. The use of the remedies containing opium are good to use following the use of the oil, but opium preparations should be gotten through the veterinarian.

Shoulder Lameness.

I have a black four-year-old mare in foal. About a week ago I noticed after working her about three hours that she dragged her left front foot and limped on it. This condition has continued. The lameness does not seem to hurt her unless she has worked a little while or has to pull hard. I have examined her shoulder and leg, but cannot find anything that would hurt her. What do you think is the cause of this lameness, and what should I do for it?

Your animal is in all probability affected with what is commonly known as shoulder lameness. She should have complete rest and a good stimulating liniment applied over the shoulder region. These cases of lameness are often seen where very little soreness to touch is apparent. If your animal becomes sweenied from the injury you should have your veterinarian treat her.

Mange.

I have an old mare on which mange started last winter. The disease has spread to the rest of my horses. The hair rubbed off in patches on the hips, shoulders and back around the tail. The younger horses rub and bite themselves and the hair is loose all over. The skin is dry and covered with dandruff. The first treatment used was lard, sulphur and carbolic acid. Now I am using dip rubbed on with a brush. I find that rather strong. The horses are run down on account of poor hay this year. The old mare is with foal.

A great number of remedies have been prescribed for this disease and success has attended their repeated application in many cases. If there is any scab formation this should be removed before treatment is begun. This scab may be removed by applying cottonseed oil with 5 per cent creolin overnight. Remove scabs with green soap and water next morning. Now run in one of the following remedies with brush and when rubbed off by animal re-apply daily for a week. Then wash off and after a few days repeat the treatment two or three times. Soft soap and alcohol, each two ounces, may be used or creolin and soft soap, each one ounce, with alcohol eight ounces. You should be careful about using the dips in concentration, as they will do more damage than good.

Scours in Calves.

We have eleven calves that all have the scours. I have been feeding raw eggs, also flour and water mixed. I would be pleased if you would tell me some remedy that would be good for them. They suck the cows. We take all the milk except one teat.

Where a number of calves are scouring they should not be let go so long without drastic treatment being started. When they are let go for a couple of weeks they become weak and the disease is not so easily handled. Pay special attention to the diet and limit the amount of water for a few days. Give those that are not too weak about one-fourth pound of magnesium sulphate. Give this in a pint of warm water, and as soon as the physic has worked give the following: One teaspoonful of creolin and twenty grains of subnitrate of bismuth. Give this amount to each calf. The creolin and bismuth should be given every four hours. The use of two ounces of blackberry brandy and flaxseed tea would also aid in recovery. If the trouble has not become of an infectious nature the above treatment should aid in recoevry.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

White Diarrhea.

"Mrs. William Z." is experiencing wholesale losses in her flocks of small biddies from that dreadful scourge, white diarrhea. She writes:

Can you tell me a sure cure for white diarrhea? My young chickens after they are about five or six weeks old begin to die and in a short time the whole flock is dead. The crops bloat and they begin to tremble and in a day there will be a loss of from ten to twenty. My second hatch is going the same way. I have been feeding bran, mixed chick feed, hard boiled eggs and limewater. They have been kept warm enough so that they would not crowd. Can you tell me the cause?

The trouble is caused by a pesky little "bug," which scientifically is known as bacterium pullorium, and we regret to say that if there is a certain cure the writer has never heard of it. Ever so long there will be something new bob up that is certain death to the cause of this terrible disease, but so far, nothing has proved out. However, there are remedies, no doubt, that are a great help to keep the trouble in check. When there is a certain cure, if that time ever comes, the experiment stations will tell us all about it without price.

Another thing. Even if it were possible to cure those chickens, it would be the last thing on earth to advise. In a few cases they do not die, more's the pity. They are always stunted, distressed looking creatures, fit for neither food or to keep to raise from.

In most cases perfect sanitation and disinfection will finally win out. This is a rather sweeping problem, anl it may be that you think your houses are reasonably clean. They may be, but there is something to fight that is worse than all the sure enough live bugs in existence. Rake and burn all loose litter, clean and spray every available inch of space about the buildings, coops and yards. Leave no stone unturned to harbor the germs. This does not mean once, but many times, if you wish to get ready for business as far in advance as another season. It is assuredly too late to do any successful rearing this season.

Before storing your incubators wash them with a strong disinfectant, and again next spring when they are to begin operations. Wipe the eggs to be incubated with a cloth just dampened in a 90 per cent solution of alcohol.

These are only the elements of prevention; put your wits to work, and ways and means will open up once you understand the situation. It is possible to get rid of the trouble unless the hens are affected, and in this case the eggs are infected before being laid, and the chick only comes into the world to certain death. White Diarrhea in chickens and blackhead in turkeys are the bane of the poultry people today. The former so named because the evacuations are white, and the latter because the heads turn black.

If you are so unfortunate as to have any more chicks come off, try giving a teaspoonful of salts to a flock of fifteen or twenty, and remove them far from the yards where the other coops have been. Burn every dead chick, and isolate any that appear the least droopy. At the experiment station of Illinois sour milk is given to the chicks, and there has never been a case of white diarrhea.

Watch developments and try to learn whether infection rests with the hens; if so, all there is for it is to clear the place and start all over with stock that is known to be perfectly free from the trouble.

Good Record of Pullets.

To the Editor:—I have a bit of news that might be of interest to you and chicken fanciers.

I have ten Single Comb White Orpington pullets that were hatched April 2, 1915. On April 1, 1916, they had laid 870 eggs trap-nest count. They would have had a higher record if some of them had not been taken from the laying pen and entered in three different shows. It seems to me that is a good record, as the eggs were laid through the winter season. I would like to have you print letters from fanciers who can have beaten this record.

D. W. Davis
Chippewa county, Wisconsin.

Silo filled in 8 hours

"This Silo 10 x 24, filled with No. 9 Blizzard with a 4 1-2 H. P. gasolene engine in 8 hours, by R. A. Blood & Co., Goshen, Ind." was the information sent us with the picture shown. The

BLIZZARD
Ensilage Cutter

is the tried and true machine for the farmer. Simple, safe, easy to run. Small engine big enough. Elevating ability unlimited. Capacity limited only to how fast you can bring the corn. Steady as a clock. Repair expense small. Earliest machines still in use, and none to our knowledge worn out.

WRITE US size of silos and engine for information and booklets.

The Jos. Dick Mfg. Co.
Box 64 Canton, Ohio

FREE ILLUSTRATED Catalog. Big bargains on account of room. Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, cheap. Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. Latest co-operative plan.

WANTED 1,000 Red, Gray and Black fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

RHODE ISLAND RED HATCHING EGGS

FROM my heavy, winter-laying, money-making S. C. and R. C. strains: $1 per 15, prepaid; $4 per 100 after May 1st. Quick shipment.
R. E. Daly Poultry Farm Necedah, Wis.

BARRED Rock eggs 15, $1.50; 30, $2.50; 100, $7.50. From quality birds with size, breeding and barring. Prize-winners. Our egg customers are not disappointed when chicks are grown. 10 years a breeder. Guarantee fertility. Circular free. S. V. Latcham, Cottonwood, Minnesota.

SILVER WYANDOTTES. "The Aristocrats." Eggs from the grandest matings on earth. My mating list tells all. It's free. Write for it. Address Frank Faha, Jr., Box 620, Dyersville, Iowa.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

WINTER LAYERS. To more widely introduce the Certified strain S.C.W. Leghorns. Eggs for hatching NOW $4 per 100, 75c per 15. June chicks $10 per 100. Certified Egg Farm, Madison, Wis.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

SINGLE Comb Buff Leghorn eggs from high-class stock at $1 per 15, 100, $4.50. Chas. Schmit, R. 22, Hortonville, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Bear Lake, Wisconsin.

DAIRY

Guernsey Cattle Club Meeting.

The American Guernsey Cattle Club held its annual meeting in New York City May 10th. Reports of the secretary and treasurer showed a prosperous condition of the club's business. Within the fiscal year ending April 29, 1916, 1,745 more sets of papers were listed than the previous year. There were 333 more bulls and 155 more cows added to the register than in the preceding year. There were 1,313 more transfers than were recorded in the year ending April 29, 1915. A good showing has been made with the Journal and there is an increased balance of cash in the treasury. The club membership is now 530, a gain for the year of sixty-four. The register of bulls now number 37,862 and cows 63,954, making a total of 101,816. Five years ago there were only 44,286 animals on the register. This means a gain of 130 per cent in the herd book in five years. Ten years ago there were only 31,481; twenty years ago, 13,327; while in 1894, when the present secretary was chosen, there were only 1,029 recorded.

The war has had considerable effect on importations. Only two bulls and 130 cows came from Guernsey; three bulls and 136 cows from England, or a total of 244 animals for the past year. There have been imported since 1840, 466 bulls and 7,121 cows. This is a total of 7,587 animals, or less than 7.5 per cent of all the Guernseys now on the register. Certificates of 4,198 cows in the advanced register have been issued, 949 of which were issued the past year.

The average yield of 47,119 records is now 8,805.91 pounds of milk and 439.15 pounds of butter fat. This has been raised during the year by 138.18 pounds of milk and 5.24 pounds of butter fat. There are now 1,173 cows, representing 270 breeders in twenty-eight states, under test.

There are ten cows with four yearly records which average 11,915.7 pounds of milk and 360.93 pounds of butter fat. The Guernsey cow is making a splendid record for persistency, as attested by the following re-entries: 473 cows have two yearly records; seventy-three cows have three yearly records; ten cows have four yearly records; one cow has five yearly records. The last cow is Selma of Pinehurst 4th, 25703, A. R. 1235, whose records average 9,878.24 pounds of milk and 501.02 pounds of butter fat.

The secretary reports splendid progress with the Journal, which has gained something like 9,000 since 1910. It is proposed to raise the advertising rates in the Journal. Mr. F. B. Hills; assistant professor of dairy husbandry at the Delaware College, will join the American Guernsey Cattle Club organization next month. Mr. M. F. Rogers, who has been connected with the publicity work, has resigned and the details of the Journal are now in charge of Mr. Hurlburt. Considerable good has been accomplished in the way of increasing interest in the Guernsey breed on the Pacific coast. Among the new list of members are two from California, three from Oregon, two from Washington and one from Utah. The following officers were elected:

President—Mr. Jas. Logan Fisher, Alney P. O., Philadelphia, Pa.
Vice Presidents—Mr. W. D. Hoard, Fort Atkinson, Wis.; Mr. S. M. Shoemaker, Eccleston, Md.
Secretary and Treasurer—Mr. Wm. H. Caldwell, Peterboro, N. H.
Members of Executive Committee for four years—Mr. Rob't Scoville, New York, N. Y.; Mr. F. L. Ames, North Easton, Mass.; Mr. M. T. Phillips, Pomeroy, Pa.

Mixing Morning and Night Milk.

A Wisconsin subscriber, Mr. W. Aubry, asks for information concerning the advisability of mixing morning milk and night milk when using the product for cheese making purposes. In discussing this matter Prof. E. H. Farrington, of the Wisconsin Experiment Station, says that if cows are milked in the summer time about seven p. m. and then early in the morning at say five a. m., the difference in the number of hours between milkings is greater than during the winter season when the cows are milked about six o'clock in the morning and six at night. This difference in the number of hours between milkings has a tendency to make the morning and night milk vary in richness, but when approximately the same number of hours elapse between milkings, the milk from both is usually about the same test.

In the summer time when cows are milked early in the morning and late at night, the morning milk is usually richer than the night milk because there is a shorter time between milkings.

Any farmer will find that the number of hours between milkings is the important factor in determining the uniformity in test or the variation in test between the morning and the night milking.

There is usually an objection to the mixing of morning milk with night milk because of the difference in temperature. The night milk has been cooled, and if the warm morning milk is poured directly into it, the mixture will be just about warm enough to start the souring fermentations and may spoil both lots of milk for making the best kind of cheese, while if the two have been kept separate and cooled before mixing, the quality of the cheese will not suffer on this account.

Brown Swiss Cattle.

To the Editor:—There are about 100 breeders of Brown Swiss cattle in Wisconsin. Twenty-nine of these got together at the college of agriculture and organized a Wisconsin Brown Swiss Cattle Breeders' Association for the purpose of promoting the interests of their breed in this state. This meeting was held on February 11, 1916. The purpose of the organization is to educate farmers of the state of Wisconsin to know the value of the Brown Swiss as dairy cattle. It was, furthermore, the purpose to emphasize the dairy ideal among the members of the association. The Swiss are not properly called dual-purpose animals, but are properly called hardy dairy cattle.

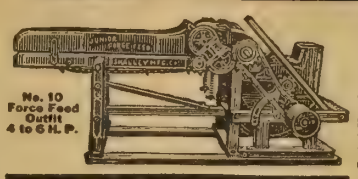
The Michigan Agricultural College keeps a herd of Brown Swiss cattle and have one cow, College Bravura 2d, with a record of 19,460.6 pounds of milk and 798.16 pounds of fat; another Brown Swiss cow, Ethel B., with a record of 18,816.2 pounds of milk and 779.97 pounds of fat. However, these high records are not what the Brown Swiss breeders are pushing for. What they want is to build up healthy herds of cattle which will average between 10,000 and 12,000 pounds of milk per annum for the herd and what is claimed for the Brown Swiss cow is that she is a persistent milker, little subject to fluctuations because of changes in weather and because of her hardy characteristics especially well suited to dairying in Wisconsin. The calm way in which the Brown Swiss cow spends her life results in a long period of usefulness. It is common to find Brown Swiss cows fifteen years of age bearing valuable offspring and producing a good flow of milk.

As is indicated by their name, the Brown Swiss cattle originated in Switzerland and have been introduced into the United States only recently. There were importations in 1869, 1882 and 1884. The largest importation was made by the late E. M. Barton, of Hinsdale, Illinois, in 1906. All told, 150 head of Brown Swiss cattle have been imported from Europe, but at the present time 13,000 have been recorded in this country. If the past rate of increase continues Brown Swiss cattle will be abundant in this country before the end of the present generation.

Based on herd averages I believe the Brown Swiss to be as productive of fat as the Holstein. Their milk averages about 4 per cent. This means that on the basis of herd averages the quantity of milk will be somewhat less, but the fat test will be enough higher to make up for the difference. Furthermore, the test made at the University of Wisconsin shows these cows to be most efficient, that is, they produce the maximum of butter fat per unit of feed consumed.

H. C. Taylor.

Here's A Silo Filler That Makes Alfalfa Chop



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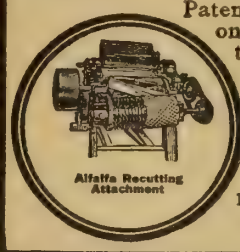
Blower built independent of cutter. Fan speed can be increased or decreased without changing speed of knife shaft.



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Steel in castings makes machine one-fourth heavier and far more durable than any other.

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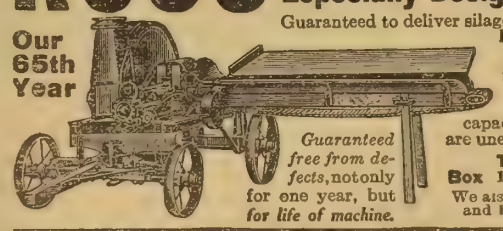

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A PIECE of unimproved land, a partially improved or wholly improved farm at prices ranging from $10 to $25 per acre for the former, and from $35 to $100 per acre for the latter, I have the place you want. Write for my booklet describing more than 100 choice places on easy terms in the best part of Wisconsin. W. E. Webster, Hudson, Wisconsin.

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FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

IMPROVED and unimproved farms for sale. Call on or address Fred L. Arduser, Route 1, Grantsburg, Wisconsin.

Further Interest in Land Clearing

Large Number of Farmers and Settlers Attended the Land-Clearing Demonstration at Elcho, Wis.

GREAT interest was manifested in land clearing methods by farmers and visitors who attended the demonstrations at Elcho, Langlade county, Saturday, May 20th, and Monday, May 22d. There were nearly 300 present on Saturday afternoon and over 200 Monday. Practically all the surrounding towns were represented, coming in from Kempster, Summit Lake, Post Lake, Pearson, Parrish, Enterprise, Pelican and other towns. The visitors were

POWER PULLERS AND PILERS AT WORK.

very much pleased with the demonstrations. They were especially impressed with the great power of the horse and man-power machines and the rapidity with which the clearing was accomplished. The value of electric discharging and blasting large stumps also made a particular appeal. All of the stumps in the demonstration field at Elcho were pine, having been cut over twenty years. There was a little difficulty with dirt clinging to the roots, an objectionable feature in the green stumps pulled in the Morrisey fields at Antigo.

The power machine made a splendid showing on Monday, each one moving the stumps over a wide radius. A rain storm softened up the ground to such an extent that it made walking rather difficult for horses in the sweeps and consequently interfered with the pulling. Despite this fact, a large number was pulled and was a great surprise to many.

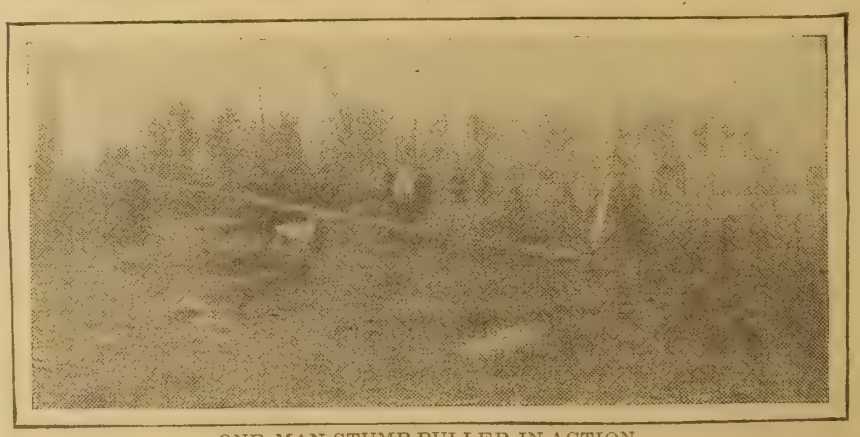
A representative of one of the large powder companies blasted a seventy-five-foot ditch, showing the possibilities of high-power explosives used in ditching. The demonstration showed that low power dynamites, viz., 20 per cent, farm powder, and 30 per cent have a distinct place. Under certain conditions they can be used at a decided saving to the farmer. The value of dynamite and power machines being used together is also shown in the demonstrations.

Dynamite is being used to crack stumps and shake off much of the dirt, the power machine later removing the stump in sections. Any one of the machines exhibited possessed ample power to handle any stump that would be encountered under average conditions.

The stump piler appealed very strongly to the farmers. "I'm not interested so much in the pullers as I am in the pilers," declared a spectator. "I'm sure I can get the stumps out, but what bothers me is getting them into a pile to be burned." This man saw the stump drawn to the top of the swinging arm of the piler and then suddenly released and dropped by a simple arrangement devised for the purpose. The drop to the pile, a distance of fifteen feet, shook off much of the clinging dirt and left the stump practically clean.

Small farmers especially took to the man power pulling device. Its cost and the fact that it can be operated without horses appealed to him.

PLENTY OF POWER FOR ALMOST ANY STUMP.



ONE-MAN STUMP PULLER IN ACTION.

Solving Farm Woman Problem.

The department of agriculture has begun to recognize the farm woman to the extent of asking her why she is not satified on the farm, and ponderously giving the composite answer of discontent on the farm as isolation, says Elizabeth Sears.

It isn't isolation. Where you are happy and busy you cannot be isolated. It isn't lack of advantages or hard work, or any of the other answers that have been given, because the farm women don't know exactly what is the matter with them. It is lack of adjustment.

When we farm women use our brains we see the folly of educating and drudging our children off the farm. When we recognize the necessity of making it attractive enough to make our children glad to return to the farm, and educating them back to the farm instead of away from it, we have solved a part of our problem.

Eight years two-thirds of the students at our agricultural schools were studying to be engineers and stenographers and teachers and nurses. Then the pendulum swung back, and two-thirds of them were studying agriculture, but studying to become instructors instead of farmers.

Having swung to both extremes, the pendulum is coming back where we hope to keep it; we emancipated farm women that love our work, right where our children can be educated to see all the possibilities in the farm and to realize that moving pictures and bright lights and theaters and fox trots are only a small portion of the recreation of life, not its principal ingredients.

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Weather Is Still Too Cold and Wet For Crops.

(Continued from page 9.)

clover wintered nicely. Alfalfa is about ten inches high; the crop will be heavy, but later than usual. Old hay is scarce and hard to get; the selling price is from $10 to $14 a ton. Corn planting is just starting. Not many gardens have been planted. Live stock, especially milk cows, are in good condition. Calves and lambs are doing well and little pigs will be about 80 per cent of a normal crop. Fruit blossoms are coming out, and prospects are good.—Wallace Fountain.

Price County.—Spring is late and weather is wet and cold. Much low land is still too wet to work. All grain seeding is from three to four weeks late. Cold rains on the 14th and 17th have delayed farm work. Early potatoes were planted by the first of May; late potatoes will be put in about June 1st. Many farmers are laying foundations for silos and this indicates that a good corn acreage will be planted. Young pigs are quite plentiful and doing fine. Cows are in good demand and sales are well attended. An increase in the number of colts is noticeable; all good mares were bred last year. Recent winds have done considerable damage to buildings and timber.—J. W. Fox.

Richland County.—Weather is still wet and cold. Little corn has been planted. Pastures are quite good; stock can live on them without hay. Meadows and oats look good. Some early potatoes are up. There will be some fruit if conditions are favorable, but not as much as last year; apple and plum trees are blossoming. Many veal calves are being sold, as this is principally a dairy country.—E. C. Stewart.

Sauk County.—Corn planting is progressing slowly; a small acreage was planted last week. There is an apparent shortage of good seed corn in this locality. Pastures and meadows are looking fine; so are winter wheat and rye. Oats and barley are starting in good shape. The weather continues wet and cold.—R. F. Klemm.

Sheboygan County.—Pastures are backward and many farmers are planning on not using them before June 1st. Alfalfa winterkilled badly. Old clover seedings are poor, but the new seeding is fairly good. Seeding of small grain was delayed, but it is nearly finished now, except in low spots. Grain sown by the middle of April is not very high yet, because of cold weather. Winter wheat is poor. Practically no corn has been planted, and much corn land is still to be plowed. Some potatoes are in. There is a heavy demand for early pigs, and the supply is not large—spring pigs sold for $4 or $5 at from six to eight weeks old.—M. J. Hoppert.

Taylor County.—The general condition of farm crops is good; clover and timothy are doing especially well. Oats and barley are practically all sown and are coming up. The ground is too wet and cold to plant potatoes and corn. Pastures are in fair condition. There have been no extremes of rain or drouth, but the weather has been too cold, particularly for fruit and vegetables. The crop of young pigs is about normal, but the demand exceeds the supply. Veal calves for shipping are high and the demand brisk. Losses of young pigs and calves have been light. The interest in better live stock is increasing.—John E. Miller.

HEPSEY BURKE--A Sister to David Harum

By G. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

CHAPTER XXII.

Hepsey's Diplomacy.

I DON'T rightly know what's got into Virginia Bascom," remarked Jonathan, as he sat on Hepsey's side porch one evening, making polite conversation as his new habit was. "She's buzzin' round Mrs. Betty like a bee round a flower—thicker'n thieves they be, by gum."

"Yes," cogitated Hepsey, half to herself and half in response, "the lamb's lyin' down all right and it's about time we'd got the lion curled up by her and purrin' like a cat. But I don't see the signs of it and I'll have to take my knittin' tomorrow and sit right down in his den and visit with him a little. If he won't purr I've got what'll make him roar good and proper or I've missed my guess."

"Now Hepsey, you go easy with my church partner, the Senior Warden. When his wife lived he was a decent sort of a feller, was Sylvester Bascom, and I reckon she got him comin' her way more with molasses than with vinegar."

And, though Hepsey snorted contempt for the advice of a mere male, she found the thought top-side of her mind as she started out next morning to pay Bascom a momentous call. After all, Jonathan had but echoed her own consistent philosophy of life. But with her usual shrewdness she decided to go armed with both kinds of ammunition.

Mrs. Burke puffed somewhat loudly as she paused on the landing which led to the door of Bascom's office. After wiping her forehead with her handkerchief she gave three loud knocks on the painted glass of the door which shook some of the putty loose onto the floor. After knocking the third time someone called out "Come in," and she opened the door, entered, and gazed calmly across the room. Bascom was seated at his desk talking to a farmer and when he turned around and discovered who his visitor was he ejaculated irreverently:

"Good Lord deliver us!"

"Oh, do excuse me!" Mrs. Burke replied. "I didn't know that you were sayin' the Litany. I'll just slip into the next room and wait till you get through."

Whereupon she stepped into the next room, closed the door, and made herself comfortable in a large armchair. There was a long table in the middle of the room and the walls were covered with shelves and yellow books of a monotonous binding. The air was musty and close. She quietly opened one of the windows, and, having resumed her seat, she pulled a washrag from her leather bag and began knitting calmly.

She waited for some time, occasionally glancing at the long table, which was covered with what appeared to be a hopeless confusion of letters, legal documents and books opened and turned face downward. Occasionally she sniffed in disgust at the general untidiness of the place. Evidently the appearances of the table in front of her was getting on her nerves and so she put her knitting away as she muttered to herself:

"I wonder Virginia don't come up here once in a while and put things to rights. It's simply awful!" Then she began sorting the papers and gathering them into little uniform piles by themselves. She seemed to have no notion whatever of their possible relation to each other, but arranged them according to their size and color in nice little separate piles. When there was nothing else left for her to do she resumed her knitting and waited patiently for the departure of the farmer. The two men seemed to be having a rather warm dispute over the interpretation of some legal contract; and if Bascom was hot-tempered and emphatic in his language, bordering on the profane, the client was stubborn and dull witted and hard to convince. Occasionally she overheard bits of the controversy which were not intended for her ears. Bascom insisted:

"But you're not such a fool as to think that a contract legally made between two parties is not binding are you? You admit that I have fulfilled my part and now you must pay for the services rendered or else I shall bring suit against you."

The reply to this was not audible, but the farmer did not seem to be quite convinced.

After what seemed to her an interminable interval the door banged and she knew that Bascom was alone. She did not wait for any invitation, but rising quietly she went into the inner office and took the chair vacated by the farmer. Bascom made a pretense of writing, in silence, with his back towards her, during which interval Hepsey waited patiently. Then, looking up with the expression of a deaf mute, he asked colorlessly:

"Well, Mrs. Burke, what may I do for you?"

"You can do nothing for me—but you can and must do something for the Maxwells," she replied firmly, but quietly.

"Don't you think it would be better to let Maxwell take care of his own affairs?"

"Yes, most certainly, if he were in a position to do so. But you know that the clergy are a long-sufferin' lot, more's the pity; they'll endure almost anythin' rather than complain. That's why you and others take advantage of them."

"Ah, but the earnest minister of the Gospel does not look for the loaves and fishes of his calling."

"I shouldn't think he would. I hate fish, myself, but Maxwell has a perfect right to look for the honest fulfillment of a contract made between you and him. Didn't I hear you tell that farmer that he was a fool if he thought that a contract made between two parties is not legally binding and that if you fulfilled your part he must pay for your services or you would sue him? Do you suppose that a contract with a carpenter or a plumber or a mason is binding, while a contract with a clergyman is not? What is the matter with you, anyway?"

Bascom made no reply, but turned his back towards Hepsey and started to write. She resumed:

"Donald Maxwell's salary is goin' to be paid him in full within the next two weeks or——"

Mrs. Burke came to a sudden silence and after a moment or two Bascom turned around and inquired sarcastically.

"Or what?"

Hepsey continued to knit in silence for a while, her face working in her effort to gain control of herself and speak calmly.

"Now see here, Sylvester Bascom, I didn't come here to have a scene with you and if I knit like I was fussed you must excuse me."

Her needles had been flashing lightning, and, truth to tell, Bascom, for all he dreaded Hepsey's sharp tongue as nothing else in Durford, had been unable to keep his eyes off those angry bits of sparkling steel. Suddenly they stopped—dead. The knitting fell into Hepsey's lap and she sat forward—a pair of kindly, moist eyes searching the depth of Bascom's, as he looked up at her. Her voice dropped to a lower tone as she continued:

"There's been just one person, and one person only, that's ever been able to keep the best of you on top—and she was my best friend, your wife. She kept you human and turned even the worst side of you to some account. If you did scrape and grub, 'most night and day, to make your pile and was hard on those that crossed your path while doin' of it, it was she that showed you there was pleasure in usin' it for others as well as yourself, and while she lived you did it. But since she's been gone,"—the old man tried to keep his face firm and his glance steady, but in vain—he winced—"since she's been gone the human in you's dried up like a sun-baked apple. And it's you, Sylvester Bascom, that's been made the most miserable, 'spite of all the little carks you've put on many another."

His face hardened again and Hepsey paused.

"What has all this to do with Mr. Maxwell, may I ask?"

"I'm comin' to that," continued Hepsey, patiently. "If Mary Bascom were alive today would the rector of Durford be livin' in a tent instead of in the rectory—the house she thought she had given over, without mortgage or anything else, to the church? And would you be holdin' back your subscription to the church and seein' that others held back, too? I never thought you'd have done, when she was dead, what'd have broken her heart if she'd been livin'. The church was her one great interest in life, after her husband and daughter, and it was her good work that brought the parish to make you Senior Warden. After you'd made money and moved to your new house, just before she died, she gave the old house, that was hers from her father, to the church, and you were to make the legal transfer of it. Then she died suddenly and you delayed and delayed—claiming the house as yours, and at last sold it to us subject to the mortgage."

The old man stirred uneasily in his chair.

"This is all quite beside the mark. What might have been proper to do in my wife's lifetime became a different matter altogether after her death. I had my daughter's welfare to think of; besides——"

"I'm not talkin' about your legal right. But you know that if you'd wanted to have it you could have got your interest on the mortgage quick enough. If you hadn't held back on his salary other's wouldn't have; or if they had you could have got after 'em. What's the use of tryin' to mix each other up? You couldn't keep Maxwell in your pocket and because he didn't come to you every day for orders you reckoned to turn him out of the parish. You've not one thing against him and you know it, Sylvester Bascom. He's shown you every kind of respect as his Senior Warden and more patience than you deserved. He let himself be—no, had himself—bled, to save your life. But instead of making him the best young friend you could have had and makin' yourself of real use to your town and your neighbors through him and his work you've let the devil get into you and when your accident come you'd got to where you were runnin' that fast down a steep place into the sea that I could 'most hear the splash."

She cocked her head on one side and smiled at him whimsically, hoping for some response to her humorous picture. A faint ghost of a smile—was it, or was it not?—flickered on the old man's lips, but he gave no sign of grace.

Hepsey sighed and paused for an instant. "Well—we can't sit here talkin' till midnight or I shall be compromisin' your reputation, I suppose. There'll be a meeting of the parishioners called at the end of this week and the rector won't be present at it, so, Warden, I suppose you'll preside. I hope you will. I've got to do my part—and that is to see that the parish understands just how their rector's placed, right now, both about his house and his salary. He's workin' as a laborer to get enough for him and that little wife of his to live on, and the town knows it—but they don't know that it's because the salary that's properly his is bein' held back on him, and by those that pay their chauffeurs more than the rector gets, by a good piece. I shall call on everyone at that meetin' to pay up; and I shall begin with the poorest and end up"—she fixed Bascom's eye significantly—"with the richest. And if it seems to be my duty to do it I may have somethin' more to say when the subscription's closed—but I don't believe—no," she added, opening her bag and rummaging about among its contents till she hit upon a letter and brought it forth, "no, I don't believe I'll have to say a thing. I've got a hunch, Sylvester Bascom, that it'll be you that'll have the last word, after all."

The old man's glance was riveted upon the familiar handwriting of the faded letter and without a word Hepsey started to read it, date and all, in a clear voice:

Willow Bluff, Durford.
September —, 19—.

Hepsey Dear:

I suppose you will never forgive me for making the move from the old house to Willow Bluff, as it's to be called, while you were not home to help me. But they got finished sooner than we thought for and Sylvester was as eager as a child with a new toy to get moved in. So here we are and the first letter I write from our new home is to you, who helped more than anyone to make the old home happy for me and mine—bless them and bless you!

Everything is out of the old house—"The Rectory" as I shall call it now—except such pieces of furniture as we did not want to take away, and we thought might be welcome to the parson (or the parsons, I suppose) who may occupy it. Sister Susan thought it slighting to Pa's generosity to give the house to the church, but I don't look at it like that. Anyway, it's done now and I'm very happy to think that the flock can offer a proper home to its shepherd as long as the old place stands.

If you get back Thursday I shall just be ready for you to help me with the shades and curtains if you care to.

Your friend,
Marion Anderson Bascom.

P. S. Ginty sends her love to Aunt Hepsey and says "to come to Boston quick!" She's a little confused, some way, and can't get it out of her head that we're not back home in Boston since we left the old place. I hope you are having a nice visit with Sally.

As Hepsey read, Sylvester Bascom turned, slowly, away from her, his head on his hand, gazing out of the window. When she had finished reading the letter was folded up and replaced in the bag along with her knitting. Then, laying her hand with a gentle, firm pressure on the old man's shoulder, Mrs. Burke departed.

(To be continued.)

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

How to Protect Rose Bushes From the Rose Aphis.

When new growth starts on the rose bushes in the spring and throughout the summer and fall, the young growth and the flower buds and stems are often covered with a small green or pinkish plant louse, known as the rose aphis, which sucks the sap from the tender portion of the plant and causes an unhealthy curled condition of the foliage and disappointment in the number and quality of the flowers produced.

The rose aphis passes the winter in the egg stage on the stems and dormant buds of the rose bushes, according to A. D. Hopkins, forest entomologist, United States Department of Agriculture. The insects hatching from these eggs reach maturity in about fifteen to twenty days. At this stage they begin to produce living young, and the reproduction process goes on at such a rapid rate that if prompt attention is not given to the rose bush all the tender new growth becomes literally coated with these pests.

The aphis thrives best in cloudy, humid, warm atmosphere, hence with the appearance of a hot and dry spell they often disappear as suddenly as they appeared. Driving rains, winds, etc., also decimate their numbers, but sometimes these natural checks come too late to save the flower crop, and it is advisable, therefore, to apply remedies as soon as the aphis is discovered. The presence of ants on the rose bushes is an indication that the aphis is present, because the ants collect the honey dew from the aphids.

Fortunately the rose aphis readily succumbs to artificial methods of control and, with the different styles of spray pumps on the market, there is no excuse for allowing roses to suffer from these insects.

The simplest, most commonly used, and often quite effective remedy is to turn a fine but forceful stream of water on them by means of the garden hose. Applied often enough this gives satisfactory results.

Solutions of fish-oil or cheaper grades of soap are often useful as a prompt remedy. The soap is used at the rate of one pound to four gallons of water. To make the solution, shave the soap into the water and dissolve by heating, adding enough water afterwards to make up for evaporation.

The best remedy for the rose aphis is 40 per cent nicotine sulphate (a liquid which can be purchased in most seed stores) diluted at the rate of one part to 1,000 to 2,000 parts of water, with fish-oil soap or laundry soap added at the rate of one pound to fifty gallons of the spray mixture. The simplest way to prepare the spray in small quantities and secure satisfactory proportions of the ingredients is to put one teaspoonful of the nicotine sulphate in from one to two gallons of water and then add one-half ounce of laundry soap. One spraying is usually 100 per cent effective, but if the first application has not been thoroughly made, a second one may be necessary.

In order to prevent the possible development of mildew as a result of frequent spraying it is advisable to make the applications in the early morning so that the spray will dry off the plants promptly.

The spraying device to use depends on the amount of spraying necessary. A cheap atomizer, such as can be bought in any seed store, is quite satisfactory for small plants and gardens. Good knapsack and barrel pumps are available for commercial growers.

An Ice Club.

A number of enterprising farmers formed an ice club made up of men who join in purchasing a wagon load of ice from a neighboring town and distribute it to the members of the club. In some sections a possible outgrowth of the idea might be a community ice house, especially if a group of homes were clustered about a crossroads, but where artificial ice is available it is often cheaper and always more sanitary than that obtained in winter from ponds or streams.

Help Sharpen the Scissors.

A few days ago while an organization of women who work every day making surgical dressings for the wounded soldiers in Europe were busily engaged, a swarthy, brown-eyed scissors grinder entered the room and asked the privilege of sharpening all the scissors which they used. He was too poor, he said, to contribute any money but he longed to do what he could for the sufferers across the seas —and so he sharpened the scissors.

Every day that the war continues adds new lists of wounded and suffering men and women and children, and great, free America is doing her part in the relief work. Perhaps not all of us are able to help by giving money but each of us can in one way or another "sharpen scissors."

Baby Will Be Well and Happy If He

Has clean, pure food.

Has a bath every day.

Is kept dry and clean.

Has his meals and sleep on time.

Sleeps alone in a cool, quiet place.

Breathes fresh air day and night.

Is given pure, cool water to drink.

Does not have to be shown off for visitors.

Is dressed according to the weather.

Is kept away from sick folks and crowds.

Is not exposed to diseases carried by flies and mosquitoes.

Is not exposed to the danger of your careless coughing and sneezing.

And if nobody kisses him on the mouth — not even his mother.

Reduce the High Cost of Living by Saving Fuel.

If asked about her fuel bills the average housewife will say, "I am just as careful as possible about wasting fuel." Most of us are careful about the large things, but "it is the little leak that sinks the great ship." Care about small wastes will become such a habit that the larger ones never occur.

In many towns, gas is so reasonable that anyone can afford to use it for cooking. Electricity is becoming more and more reasonable, and even in country homes, in many places, is being used in some measure for cooking.

Where neither of these fuels are obtainable there is always kerosene or gasoline. The modern, up-to-date oil range with the four griddles is an ideal stove. The heat is intense and the ovens so well made that the baking is even and satisfactory. With kerosene at 12 cents a gallon it costs 8 mills to run one burner an hour; that certainly is within the reach of our farm women everywhere.

One of the little wastes noted, which is most common, is the failure to turn off the heat before the dish is removed. With gas and electricity it should not be turned on until the dish is on the burner. In many foods when baking, the heat that is generated will finish the baking with the heat entirely turned off ten minutes before taking from the oven. On ironing day if one burner is used, as it should be for most families, arrange the irons on a steel plate which can be bought for a few cents, then cover with a saucepan with a handle to conserve the heat. There are patent arrangements that one may buy for ironing, but the homemade affairs answer fully as well.

When using the coal or wood range for ironing, it is a good time to have a large share of the oven baking done. Beans may be baked, casserole dishes, Indian puddings, and dishes that take a long time to bake. By tempering the heat almost any degree may be maintained.

The woman who plans to use the whole range, oven and top, with her cooking is one who gets the best results from her fuel, when burning coal or wood. The triplicate dishes which set on one burner are great fuel savers if one is using gas, electricity or oil, as three dishes are all cooked with the heat from one burner. Getting a meal on a gas or oil stove and wishing to keep the dishes warm is not always easy.

One method is to have a large pan of hot water to set the food in, cover it and it will keep hot for twenty minutes. When buying an oil stove it is well to see that the burners run up near the dish, otherwise the cooking takes too long.

A careful study of any stove used should be the first work of the cook. Learn the dampers, how to regulate the oven, study the drafts and checks. There are still women who have used a stove for years that do not understand its simple mechanism.

When purchasing a new stove it should be thoroughly gone over with the salesman, who should be qualified to make everything clear in regard to dampers, checks and drafts, heating the oven and cleaning out the ashes from under the oven, if it is a coal or wood range. If oil, the cleaning of the burners, and regulating the oven is important. With a thorough understanding of her stove and a disposition to economize there is no need of waste on fuel bills.—[Nellie Maxwell.

Clean Sweater With Dry Cleaner.

To the Editor:—Will answer the inquiry as to how to wash a sweater. Get a bottle of dry cleaner and use it in gasoline as soap is used in water. The directions are given on the bottle.

Use a granite or earthenware dish and put the garment to soak for an hour or more. Cover tightly so the gasoline will not evaporate. Rub with the hands and rinse well in clear gasoline. The same mixture can be used a number of times by letting it settle and draining off. When ready to use again add a little more cleaner.

This should be done in the open air and the gasoline should be kept in fruit jars or bottles in an outhouse. The cleaning should be done in the morning so as to have plenty of time for the goods to air.

If a dress is cleaned press by using a damp cloth over it.

This cleaner can be bought at any drug store. If a garment is extra soiled rinse a second time or until it leaves the gasoline clear.

This will clean any combination of goods or colors without fading or shrinking. It is hard on the hands, so it is well to wash them in warm water afterwards and rub well with an oily substance; I prefer vaseline.

Will send a good polishing preparation. Mix together equal parts of turpentine and kerosene and add about four times that amount of raw paint oil. Keep in a covered can or bottle and shake well before using. Use a soft cloth dampened with this and you will find it much cheaper and just as good as what you buy. Keep a separate cloth and can in the garage for the men to use on rainy days.

H. B.

Dry in the Dark.

To the Editor:—In a recent number I saw a request by Y. Z. for directions for washing a child's woolen sweater. I have had excellent results with the following:

Shave one-half bar of good soap, cover with a pint of water and boil ten minutes. Strain and add to a large pan of warm (not hot) soft water. Place your sweater in the suds and squeeze gently. Do not rub. Let it stand in the suds for half an hour. Squeeze the suds through the soiled spots until they disappear. Rinse carefully in warm, soft water and squeeze dry.

Place on a clean folded sheet in a warm, dark place. The sun is apt to turn the wool yellow. Straighten the sleeves and bottom of sweater. Do not pull, but push the cloth so that it is not stretched in any place. Let stand until fairly dry. It will need a little more straightening before it is entirely dry, to avoid any pressing or ironing.

If the colored sweater is of good quality this will not hurt it in the least. Mrs. L. C. Hutchins.

Cleans Knit Goods With Flour.

To the Editor:—I am a reader of your paper and have just noticed the inquiry of Y. Z. as to the best method of washing fine white wool sweater.

I cleaned my baby's white wool knit suit and cap with hot flour. Just heat the flour hot in the oven and put the articles to be cleaned in a pan with the flour, rubbing gently as though in water, going over all parts thoroughly. Then leave dredged with flour overnight, covered with a clean cloth. After thoroughly shaking the articles the next morning they will look like new, and without the wear and tear of soap and water.

Mrs. Chas. R. Tyler.

Starting Begonia.

To the Editor:—As this is such a helpful corner I come to see if anyone can tell me how to start a new or extra bulb from my tuberous rooted begonia. A friend gave it to me, so I do not know its name. First, it got one crown or shoot and then two. Now this year it has started three. Could I not start one of these for a separate bulb? My plant dies down every fall, then in March I replant it. It blooms all summer. I. E. K.

Helps For You.

Pulverized chalk moistened with ammonia will remove yellow stains from porcelain.

An excellent foot bath for tired feet is made by adding one ounce each of borax and sea salt and one-half ounce of alum to a simple hot foot bath.

An iron cement suitable for mending cracks in stoves or openings around pipes may be made from equal quantities of common salt and sifted wood ashes wet to a paste with cold water and a bit of stove polish to color. Let set before heating the iron.

Brittle finger nails should be treated with olive oil or almond oil. Dip them in the oil and keep them there for five or ten minutes. This will keep them soft. Never pull hangnails off. When absolutely necessary, cut them with small, curved scissors. Pulling them is injurious and it will only make them

sore and more painful than they were.

Have a wire spoon to remove croquettes or other fried food from deep fat. Have, also, a wire frying basket in which food to be fried can be put and then immersed in the hot fat.

Recipes.

Rhubard Conserve.—Four pounds of rhubarb, five pounds of sugar, one pound of seeded raisins, two oranges and one lemon. Wash and peel the stalks of rhubarb and cut into one-inch pieces. Put into a kettle, sprinkle with sugar, and add raisins, grated rind and juice of oranges and lemons. Mix, cover, and let stand for one-half hour. Place on the stove and bring to the boiling point. Let simmer for forty-five minutes, stirring almost constantly. Pour into glasses and seal.

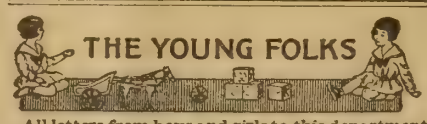
Boston Brown Muffins.—To two cupfuls whole wheat flour add one-half teaspoonful of salt, two well-beaten eggs, one-half cupful of sweet milk, two tablespoonfuls of melted butter, one-third cupful of molasses and one teaspoonful of soda dissolved in two tablespoonfuls of warm water. Mix well and bake in greased gem pans in a hot oven.

Cottage Pudding.—Two eggs, one cupful of sugar, one-half cupful of butter, one cupful of sour cream, two and one-half cupfuls flour, one teaspoonful soda, one teaspoonful cream of tartar. Mix thoroughly and bake in a long pan twenty minutes. Serve with cream or lemon sauce.—Mrs. H. J.

Frozen Pears.—Without opening, pack a can of pears in ice and salt, as for ice cream, for three or four hours. When taken out, cut can open around the middle. If frozen very hard, wrap with a towel dipped in hot water. Then the contents can be taken out without being broken. Cut into slices and serve with a spoonful of whipped cream on each slice.

Banana Cantaloupe.—Two tablespoonfuls gelatine, one-half cupful cold water, two egg whites, one-fourth cupful sugar, three-fourths cupful hot cream, two-thirds cupful sugar, four bananas, one tablespoonful lemon juice, three cupfuls whipped cream, lady fingers. Put the gelatine to soak in the cold water. Beat egg whites, add one-fourth cup sugar and hot cream. Cook over boiling water until it thickens. Then add the softened gelatine and two-thirds cupful sugar. Strain into a pan, set in ice water, add mashed bananas and lemon juice. Stir until it begins to thicken. Then fold in the whipped cream. Line a mold with lady fingers, turn in the mixture, spread evenly and chill.

Stuffed Egg Croquettes.—Take out the yolks from six hard-boiled eggs and put the whites carefully away on a plate until you are ready to use them. Rub the yolks smooth with a tablespoonful of melted butter, two tablespoonfuls of finely minced ham or tongue, a little chopped parsley, a few drops of onion juice, salt and pepper to taste. Fill the whites of the eggs with this mixture, press the halves together and stick the edges with a little beaten egg. Roll the eggs in fine crumbs, then in beaten egg, then again in the crumbs, lay in the frying basket and cook to a fine brown in boiling deep fat. Serve immediately.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

The Raggedy Man.

O the Raggedy Man! He works fer Pa;
An' he's the goodest man ever you saw!
He comes to our house every day,
An' waters the horses, an' feeds 'em hay;
An' he opens the shed—an' we all ist laugh
When he drives out our little old wobble-ly calf;
An' nen—ef our hired girl says he can—
He milks the cow fer 'Lizabuth Ann.
Ain't he a' awful good Raggedy Man?
Raggedy! Raggedy! Raggedy Man!

W'y the Raggedy Man—he's ist so good,
He splits the kindlin' an' chops the wood;
An' nen he spades in our garden, too.
An' does most things 'at boys can't do.
He climbed clean up in our big tree
An' shooked a' apple down fer me—
An' nother'n, too, fer 'Lizabuth Ann—
An' nother'n, too, for the Raggedy Man.
Ain't he a' awful kind Raggedy Man?
Raggedy! Raggedy! Raggedy Man!

An' the Raggedy Man, he knows most rhymes,
An' tells 'em, ef I be good, sometimes;
Knows 'bout Giunts, an' Griffuns, an' Elves,
An' the Squidgicum-Squees 'at swallers the'rselves!
An', wite by the pump in our pasture lot
He showed me the hole 'at the Wunks is got,
'At lives way deep in the ground, an' can
Turn into me er 'Lizabuth Ann!
Ain't he a funny old Raggedy Man?
Raggedy! Raggedy! Raggedy Man!

The Raggedy Man—one time, when he
Was makin' a little bow-'n'-orry fer me,
Says, "When you're big like your Pa is,
Air you goin' to keep a fine store like his—
An' be a rich merchunt—an' wear fine clothes?—
Er what air you goin' to be, goodness knows?"
An' nen he laughed at 'Lizabuth Ann,
An' I says, "'M go' to be a Raggedy Man!—
I'm ist go' to be a nice Raggedy Man!"
Raggedy! Raggedy! Raggedy Man!
—James Whitcomb Riley.

For Margaret.

To the Editor:—I thought perhaps the little girl by the name of Margaret, who sent the recipe for the devil's food cake, would be pleased to know that it has been tried, and with the best of success. I like it better than any I have tried.

We enjoy your paper very much, and I want to thank little Margaret again for her good cake recipe.

Mrs. W. B. Anderson.

Jim Crow a Mischief Maker.

Dear Young Folks:—I live on a farm and have two brothers and three sisters. I have several pets but am going to tell you about the one I like best. His name is Jim Crow. He is always causing trouble for someone.

One day last summer he found mamma's sewing basket sitting in the window where she had been using it the day before. He searched every part of the basket. The next time mamma went to sew her thimble was missing. We searched everywhere for it but all in vain. It was nowhere to be found. So mamma had to borrow one from one of the girls. When she was through with it she put it in her basket. It disappeared in the same way as the others. She also missed her buttons, small scissors and other little thing in her basket. In the same room my brother kept his marbles. They were missed too, which was displeasing to Frank.

One morning I ran into this room and who do you suppose I saw? No one but Jim, the crow. I watched him on the sly. After a while he found a button. He wandered out in the yard, then to the garden, then over under the sage bush, where he laid down his button and covered it with some leaves. After he was gone I searched in his hiding grounds and found buttons, thimbles, scissors, marbles and some nuts.

One time he went off with a bunch of wild crows and was gone about two weeks, but finally came back. He eats with the chickens, but roosts in a little house built on the south wall of the barn.

There is a small spring just a few yards from our house. During the summer Jim takes a bath in this spring every morning. With the drops of water among his feathers and the sun shining on him he looks like his feathers were dotted with diamonds. I think him rather cute even if he is a little mischief maker. —Alta.

A Visit to Colorado.

Dear Young Folks:—I have been reading the letters in the Young Folks' Department for so long and have enjoyed them so much that I thought I would write one too. I will tell you about my trip to Colorado.

My father, mother, grandpa, aunt, uncle and I started on Wednesday afternoon and reached Denver the next afternoon. We tried to get rooms and after a while we got some splendid ones.

The next morning we went on top of the Rocky mountains. We went in an auto, and stopped every now and then to see what was going on. We stayed about thirty-five minutes at the top to see the sights. As we were going back we saw an aster farm and many other beautiful things.

After lunch we went to the city park, which covers 350 acres. We first went to a small lake where we took a ride in a steamboat. Then we went to the museum where there were stuffed animals of all kinds. There were also live animals, such as the mountain goat, elk, buffalo, bear, wolf, monkey and birds of all kinds, including the beautiful green and yellow parrot. We also saw some beautiful flowers and the play grounds for the children. As we were watching the children play we ate some delicious ice cream.

When evening came we went back to our rooms in a street car. The next day, on Saturday, we went to Colorado Springs where we saw the Cave of the Winds, Garden of the God's, Pike's Peak, and Seven Falls.

We came home on Tuesday and we were glad to be home again even though we had had a nice time.

—Jennella.

The strawberry area in nineteen states, as reported by the department of agriculture, is 111,543 acres, 19.7 per cent more than a year ago. The Missouri area is 6,300 acres, an increase of 45 per cent. Tennessee leads as a strawberry state with 17,496 acres; Louisiana is second with 16,540, and Arkansas third with 13,880. The crop condition in nearly all important states is high.

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THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery.

CATALOG OF SPRING AND SUMMER FASHIONS.

Send 10 cents in silver or stamps for our up-to-date 1916 large spring and summer catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1720—Ladies' dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 36 will require 6 yards of 44-inch material.

1407—A dainty frock for mother's girl. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3½ yards of 36-inch material for a 10-year size, for the dress and ¾ yard for the bolero.

1716—Ladies' kimono. The sleeve is lengthened by a gathered ruffle. The pattern is cut in 3 sizes: Small, medium and large. It requires 5⅝ yards of 36-inch material for a medium size.

1697—Ladies' dress with sleeve in either of two lengths. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 6⅛ yards of 44-inch material for a 36-inch size.

1695—A dainty frock for mother's girl. The dress is a one-piece model, gathered at empire waistline. The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. It requires 2 yards of 36-inch material for a 4-year size.

1365—An attractive apron model. If desired, the back portion of the bib may be omitted. The pattern is cut in 3 sizes: Small, medium and large. It requires 4½ yards of 36-inch material for a medium size.

1710—Girls' apron. The pattern is cut in 5 sizes: 2, 4, 6, 8 and 10 years. It requires 2¼ yards of 36-inch material for a 6-year size.

1707—Ladies' princess slip with neck edge in round or square outline and with or without flounce. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6¾ yards of 36-inch material with 3½ yards of flouncing for a 36-inch size.

1419—Girls dress with sleeve in either of two lengths. The pattern provides a chemisette for high neck finish. The pattern is cut in 4 sizes; 6, 8, 10 and 12 years. Size 8 years requires 3 yards of 44-inch material.

1706—Dress for misses and small women. The pattern is cut in 3 sizes: 16, 18 and 20 years. To make as illustrated will require 4⅜ yards of 44-inch material for full portions of skirt, vest, collar, sleeve extension and skirt yoke, and 3⅜ yards for panels, sleeves, waist portions and drapery for an 18-year size.

Waist 1692, Skirt 1694—A smart and becoming dress. Waist 1692 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 1694 cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 8½ yards of 27-inch material for a 36-inch size. Two separate patterns 10 cents for each pattern.

1521—A trim and popular suit for mother's boy. The trousers are made with side closing. The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. It requires 2¾ yards of 36-inch material for a 4-year size.

The Mother.

The light of the mother's smile will survive our sun—the thrill of her kiss will last beyond the thrilling of stars; the sweetness of her lullaby will endure in the cradle songs of worlds yet unevolved; the tenderness of her faith will quicken the fervor of prayers to be made to the hosts of another heaven—to the gods of a time beyond time. And the nectar of her breasts can never fail; that snowy stream will still flow on, to nourish the life of some humanity more perfect than our own, when the milky way that spans our night shall have vanished forever out of space.

International Sunday School Lesson.

Lesson for May 28, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE COUNCIL AT JERUSALEM.

LESSON TEXT—Acts 15:1-35.

GOLDEN TEXT—For freedom did Christ set us free.—Gal. 5:1.

The events of this lesson are outstanding in Christian history. Paul's appeal to the Gentiles and the large number of them who accepted the Gospel made most acute the question, "Must Gentile believers become Jewish proselytes upon accepting the Christian faith and be governed by Jewish law and customs?" It would be exceedingly interesting to divide a class and let them debate this controversy stated as follows: "Resolved, That the Mosaic law should not have been imposed upon Gentile Christians." The date of this council was A. D. 50 or 51, and the scene is laid first in Antioch of Syria and then in Jerusalem.

I. A Division of Opinion (vv. 1-6). Luke does not name those who agitated and precipitated this controversy, but clearly indicates how the Holy Spirit dealt with the situation. "Is a man justified by faith, or by the works of the law?" is a similar question with modern application. The Holy Spirit, to avoid a rupture in the yet weak church, directs that Paul, Barnabas, Titus (Gal. 2:1) and "certain others" who are not named, should carry the question to the apostles and elders in Jerusalem. Those to whom they went were "of reputation" (Gal. 2:2), the "pillars" (Gal. 2:9) and they received the delegation from Antioch in public (15:4), also heard Paul in private (Gal. 2:2).

II. The Argument (vv. 6-18). It will not do to be harsh in condemning Paul's accusers. The Pharisees felt deeply their position. As God's chosen people they were marked by circumcision. Jesus, the promiseed Messiah, was a Jew. Social, religious and racial differences are hard to reconcile in one church today. But little was asked of the Gentiles in contrast with all they received. Entrance to church membership would not be too easy if circumcision were imposed as a test of their sincerity. Peter brought forward the plea before the council that God had given the Holy Spirit to the uncircumcised Christians, "and put no difference between us and them, purifying their hearts by faith" (vv. 8, 9). God bears the same witness today to those who refuse to be bound by Mosaic traditions as regards the seventh day and other such details. Paul's argument was that God had wrought signs and wonders among the Gentiles and thus set His seal upon his preaching of salvation as apart from legalistic works (v. 12). Read in this connection Gal. 2:16, Titus 3:20, 8:3, 10:4, and Phil. 3:9. The apostle James presented the third argument in connection with the verdict he pronounced. It was that it is according to Old Testament Scripture that God will take a people for his name from among the uncircumcised Gentiles as well as from among the law-keeping Jews (vs. 13-17). With Paul this was a vital question, and we can at least imagine his feelings as he puts forth a life-and-death struggle for the truth. As Peter reminded the people of the occasion when "the Holy Spirit came upon Cornelius and his household" he caused them to keep silence.

III. A Wise Decision (vv. 19-29.) It was James the Just, brother of our Lord, the writer of the epistle and the bishop overseer of the church at Jerusalem, who rendered the decision. In his argument (vs. 13-18) he saw in these Gentile converts reported by Barnabas and Saul a fulfillment of the prophecy of Amos, and to use the language of today he "made a motion," viz., that these Gentiles be not disturbed except in such matters as would tend to more fully separate them from the heathen idolatry they had just left, (a) "Pollution of idols," i. e., flesh offered in the sacrifices (b) "from fornication," the immorality connected with the pagan worship of Aphrodite and Cybele which actually consecrated vice, and (c) "from things strangled," for the heathen did not, as the Jews did, look upon the blood as life, the seat of the soul. The church readily agreed to this motion and took such precautions as were needed that no misrepresentations of their decision be carried back to Antioch. This consisted of a spirit-led choice of messengers and in a written statement of their decision (vs. 22, 23).

IV. The Result in Antioch (vv. 30-35). Great joy greeted the conclusion of this question.

It produced pleasant harmony in place of discord and in place of the irksome bondage of the law it gave the joyous liberty of the Gospel.

Jewish legalism gave way to Christian liberty. Judas and Silas, Spirit-filled, gave much profitable exhortation and instruction.

Silas after reporting to the Jerusalem church (v. 32) seems to have returned to his new-found friends (v. 34) and later became, along with Paul, a missionary (v. 40).

Thus the evil Paul's enemies thought to accomplish worked out to the good of all (Rom. 8:28).

Ask your neighbor to subscribe for The Wisconsin Farmer.

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Combination Pumping Outfit $44.95

Save time—save money—save strength! Don't toil and sweat this hot weather pumping by hand. Don't depend on a windmill! Let this Galloway outfit keep your stock always supplied with fresh water. It's simple and easy to set up, and anyone can operate it. Outfit consists of 2 1-4 H. P. engine, heavy double geared pump-jack with tight and loose pulley and 16 ft. of belt.

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Will run all day in any weather. Economical on fuel. Can be used for running churn, washer, separators, saws, feed grinders and other job work.
Special 90-day price of complete outfit only $44.95. Regular price $47.19. Buy now and save $2.24 over our regular price and $10 to $45 over prices of other outfits. Installment price $52.50. Installment orders shipped on receipt of $5.25; balance $5.25 monthly.

This Low Cash Price For 90 Days Only—Order Today—We Take All Risk
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ENGINE SPEED 450 rev. per min. BORE 4 1-8 in. STROKE 6 in. DRIVE PULLEY 6 in. diameter, 4 in. face. Floor space 26x28 in. Wt. 625 lbs. Add $6 for engine mounted on trucks; $7 for Webster Oscillating magneto.

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Write for prices on 12, 16 and 22 H-P.

You can't buy so *good* an engine at the same price. You can't buy a *better* engine at double the price. Lower fuel expense. Simple in construction. Easily started. 30 to 50 per cent surplus power. 90-Day Trial Offer. Sold direct, factory to user. Established 1870.

Write for free book, "How to Judge Engines," and for price list of all sizes and styles, Kerosene, Gasoline, Distillate, Naphtha and Gas.

ED. H. WITTE, WITTE ENGINE WORKS,
2717 Oakland Avenue, Kansas City, Mo.
2717 Empire Bldg., Pittsburgh, Pa.

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

More Red Poll News.

BUSINESS is booming"—such was the reply when we recently called on L. C. Underwood, Avoca, Wis., and asked him how business was. All breeders of Red Poll cattle seem to use this phrase very frequently this year for they have all enjoyed good business. We think we are safe in saying that Mr. Underwood has one of the best herds in the state or for that matter in the Northwest. The Underwood farm has been the home of the Red Poll since 1893, and, as the owners have been progressive in their breeding operations, their herd now ranks among the very best. In this herd the get of the good bull, Champion, is very prominent. The heifers and young bulls we saw are very uniform, are of the desired color—deep red—and have more size than many individuals in the herds we have seen. Champion is by Dewey, he by the show bull, Cremo. His dam traces to Corporal, consequently he comes from a line of breeding that is popular with the Red Poll men. Among the A. R. cows in the herd there are two that appealed to us very much. One named Helen, sired by Teddy has a record of 350 pounds fat and Flora by Peter Muggins has the same official record. These cows are most excellent specimens of the breed. Other cows in the herd have records from 294 to over 300 pounds of fat with milk records of between 8,000 and 9,000 pounds. Mr. Underwood's records show that he has several cows that gave forty pounds of milk a day and one of these tested 4.8. His sale report shows that he has shipped cattle to Iowa, Illinois, Michigan, Minnesota, both Dakotas and as far south as Texas and he now has an order for five females from a party in Canada. We simply mention this to show that "Underwood Red Polls" have more than a local reputation. At this time he has a few bull calves and a few cows and heifers that he is pricing and the advocates of this breed that desire to strengthen their own herds will do well by adding some of these good cattle that are being offered. His advertisement appears in this issue and if you write for further information and prices kindly say you saw the advertisement in The Wisconsin Farmer. See page 22.—Adv.

Free Machinery Shed Plans.

THE trade extension department of the National Lumber Manufacturers' Association is issuing a series of bulletins to farmers. The subjects covered are various types of farm buildings. The most recent bulletin is that which treats of implement sheds, and the text is written by Mr. J. T. Ekblaw. Mr. Ekblaw has carefully figured out the space required by the different types of implements which may be found on the average farm. Furthermore, he has discussed the types of implement sheds in a very interesting and practical way. If any reader of this paper has an idea of building an implement shed in the near future it will pay to get hold of this bulletin as it provides a very comprehensive study of the subject. No matter what type of implement shed one may desire to build it will be interesting to look over the plans which Mr. Ekblaw has worked out. The bulletin to which we refer is known as Farm Bulletin No. 1 on Farm Structures, and a copy may be had free by writing to the National Lumber Manufacturers' Association, Chicago. A prompt reply to your letter will be insured by mentioning the fact that you saw this notice in this paper.—Adv.

Burn Brae Farm Jerseys.

A RICHLY bred Jersey bull is advertised for sale on page 22 by Chas. A. Peterson, Rosendale, Wis. He combines the blood of many of the best known Jerseys ever owned in Wisconsin. He traces closely to Brown Bessie, that won first at the Chicago World's Fair; Double Time, a noted cow owned by F. Stubley; King Sappho King, one of the great bulls of the breed. He also carries the blood of Exile of Shomet which gives him the famous Olive Dunn breeding. This young bull is very growthy for his age and is of good, straight, level type. For pedigree and price write to the above address.—Adv.

Timblin's Short-horns.

A FINE yearling Short-horn bull is advertised for sale on page 22 by Timblin Bros., Eden, Wis. He is a growthy, straight, level youngster and is very well bred. His sire is Clara's Prince by Spicy Prince. His half-sister is owned by May & Otis and won second in the milking class at the International. She gave over 11,000 pounds of milk in a year. The dam of the bull offered for sale is a fine big cow, weighing 1,500 pounds as a three year old. For further information in regard to this animal write to the above address.—Adv.

Demand for Red Polls Continues.

WE have just received a letter from J. W. Salter & Sons, breeders of Red Polled cattle at Unity, Wis., advising that they sold the bulls they were advertising and to change their advertisement. They say that they will sell a few choice heifers, bred and open. Only a few will be offered and if you are interested you had better attend to this without delay. We have had some very encouraging letters from our Red Polled advertisers which shows that there is a growing demand for cattle of this breed. Write the above firm your needs and you can rest assured that they will tell you just what they have for sale and you will find the cattle just as represented. See page 22.—Adv.

Lawson's Guernseys.

ROSENDALE, WIS., has long been famous as a center of Guernsey breeding, and the herd of W. A. Lawson is one that will continue to keep Rosendale prominent as a Guernsey center. The herd is of very uniform type and noticeably good in udder and veining development. Advance registry testing has been done and some very creditable records made. The herd consists of both imported and home-bred cows, both of which have qualified with good A. R. records. The records are unusually valuable, as they represent the true ability of the animals under ordinary farm conditions. No attempt has been made at forced feeding and the cows were milked only twice a day. The herd is headed by Richmond Lion 15604, whose tested dams average 503 pounds of fat in a year. This bull has one A. R. daughter that made 373.74 pounds of fat with first calf. At the present time Mr. Lawson is offering a number of fine yearling bulls from advanced registry dams for sale. He is also offering a few heifers ranging in age from two months to two years. One of these bulls is from Maud G. 30521, the foundation cow of the herd. She has an A. A. record of 500 pounds of fat and two daughters with A. R. records of 373 and 380 pounds of fat as two and three year olds. An interesting sale list is issued giving a short description of each animal. Those of our readers who are in the market for Guernseys should send for this list. See page 22.—Adv.

Practical Mechanical Milking.

THE dairyman or farmer who wants to solve the problem of labor at milking time, but is not entirely convinced that he needs a mechanical milker, should send for descriptions and pictures of the Empire mechanical milker made by the Empire Cream Separator Company, Bloomfield, N. J. From these he can learn the principles upon which the machine operates and how other farmers have increased their profits and decreased their labor costs through its use. An important point with regard to the Empire is that it draws the milk in spurts like the calf sucks and the gentle, massaging pressure tends to increase the milk flow rather than decrease it. There is no need to fear that the Empire will cause sore teats or udders—experience proves that it does not. Then the clean, sanitary milk, free from germs and stable odors, is an advantage which must not be overlooked. The machine is easy to install, requiring but one tank and one pipe line, and one man can take care of at least thirty or forty cows an hour. When writing for the descriptions and pictures, ask also for Catalog No. 56M, as indicated in the advertisement on page 15.—Adv.

Shoo-Fly Protects Live Stock From Flies and Other Insects.

SHOO-FLY is a fly exterminator and skin disinfectant. When sprayed over cattle and horses it protects them from flies and other insects and keeps away irritating sores caused by rubbing and stamping. For dairy cows it is especially valuable, because annoyance from insects seriously affects the milk flow. A three-tube gravity sprayer and enough Shoo-Fly to protect ten cows for two weeks can be purchased for $1.25, express prepaid, at all points east of the Mississippi river; west of the river the price is $1.50. The saving value in milk or flesh will be many times this amount for each cow. Shoo-Fly may also be used to rid the poultry house of lice and mites. Send for the free booklet telling all about this wonderful insect exterminator made by Shoo-Fly Mfg. Co., Philadlphia, Pa. If you so desire, order direct from the advertisement on page 14 and you will receive prompt service, if you mention this paper.—Adv.

Silo Machinery Built Upon Sixty-five Years' Experience.

THE E. W. Ross Co., Springfield, Ohio, has been in the manufacturing business for sixty-five years and the vast fund of experience it has acquired in this time is offered to farmers in the famous Ross silo-filling machinery. Ross cutters and fillers work rapidly, but are very economical of power; they cut the silage in uniform lengths, which makes better feed and permits the storing of a greater tonnage in the silo. For durability, ample capacity, ease of operation and economy the Ross machines are hard to beat. Write for the catalog which tells all about these machines, also the Ross wood and In-destr-uct-o metal silos. See advertisement on page 15.—Adv.

Kitty Clay Durhams.

THE Kitty Clay herd of Polled Durhams is one of good type and heavy with producing ability. Many of the cows produce from 8,000 to 9,000 pounds of milk per year. One of the foundation cows in the herd is Kitty Clay 47th and her son is now at the head of the herd. She was by Duke of Aurora, whose dam gave eighty-four pounds of milk in one day. Her own dam, Kitty Clay 29th, won first prize as a two year old at the six-months butter contest at the St. Louis World's Fair. Her dam's dam, Kitty Clay 10th, won first prize as an aged cow at St. Louis and her great-grandam, Kitty Clay 7th, was a winner at the Chicago World's Fair. The great production of her great-great-grandam, Kitty Clay 4th, is known to all Short-horn and Durham breeders. She won third against the world and against all breeds as a milk producer at the Chicago World's Fair. The Kitty Clay family are descendants of the great cow, Fill Pail. One-fifth of all the dairy Short-horns shown at the Chicago World's Fair and nearly one-half of those shown at St. Louis were descendants of this cow. Many of the cows in this herd are daughters of Prince of Rosendale, a strongly bred Polled bull. He traces closely to Young Hamilton, and twice to the cow, Nellie Gwynne, two of the five original Polled Durhams. He also traces to Wild Eyes Duke and Bright Eyes Duke, two Bates bred bulls that have placed the Short-horns high in the ranks as milk producing animals. The Kitty Clay herd is unique in that it is a Polled herd of rich Bates breeding and high milk production ability. At the present time a very fine yearling bull is advertised for sale on page 22. For pedigree and further information write to J. Warren Hoyt, Rosendale, Wis.—Adv.

Excellent Ayrshire Bull for Sale.

IF you are interested in Ayrshire cattle you will be interested in the herd owned by Jas. Van Etta, Lima Center, Wis. He has the individuals that appeal to anyone that admires good stock, and a student of Ayrshire pedigrees can appreciate the value of the breeding in this herd. At this time a bull of serviceable age is being offered. He is mostly white, an excellent bull individually and is backed up with the very best breeding, being by imported Craigbrae Lord Roseberry and out of a daughter of imported Bargenoch Bonnie Scotland, a grand champion of Scotland, Canada and at Chicago. The grandam of the bull being offered has a 480-pound record as a three year old from 11,141 pounds milk. Now this bull is a real bargain at the price being quoted and if you want a bull of this breeding we don't believe you can equal it in the state. Mr. Van Etta has an excellent herd and your time will be well spent if you will spend a day at this farm. Write for further information and price and in so doing please mention The Wisconsin Farmer. See page 22.—Adv.

Are You Interested in Polled Durhams?

AT Kilbourn, Wis., there is a herd of Polled Durhams that is far above the average. This herd is owned by F. S. Bunker, a pioneer breeder of the the state and by far the leading Polled Durham man of the state. His cattle combine the blood of the noted Polled bulls and also the blood of the greatest Short-horn families. The present herd bull is a son of the noted Royal Silver, and is out of Missie Sultana, a Marr Missie cow. At this time he has six heifers for sale and they are dandies, two have the horns and are of the best Short-horn breeding and the balance are Polled. Some of these are by Grove 92d, a Cruickshank Butterfly and a grandson of imported Scottish Lady and Whitehall Sultan. Two bulls are being offered, nine and ten months old, sired by Red Sultan a grandson of Whitehall Marshall. Mr. Bunker has an excellent herd of breeding cows and his surplus is in demand, for during the month of April he shipped cattle to both Dakotas, Iowa, Minnesota, as well as many sales in Wisconsin. It is a pleasure to recommend this herd, for you will not be disappointed in the stock, even if you make a long trip to see them. Get his sale list and in writing will you please mention this publication? See page 22.—Adv.

The Smiley Poland Herd.

WM. SMILEY & SON are too well known to Wisconsin Farmer readers to need any introduction at this time. We recently spent a few hours at Walnut Grove Stock Farm near Albany and found the Messrs. Smiley with about 180 spring pigs. Naturally with this number, the ages vary but they have them sorted into bunches according to age and they are all doing nicely. Some of his pigs have as much size for their age as any we have seen, consequently we are sure they are getting good care. Three good boars are doing service in this herd. The senior boar, Wisconsin Jumbo 2d, is looking fine and we saw some good stuff on the farm sired by this boar. He comes from the best of big-type breeding being by Longfellow Jr. by Longfellow. Longfellow Jr. we believe, was the best of all the Longfellows. The dam of Wisconsin Jumbo 2d is Miss Mow that sold in Mouw's sale for $345. This boar is very large, yet he has smoothness and his get shows up well. Monarch is a full two year old and has several excellent points about him. He has a wonderful back and a good head and ear. He stands well on his feet and has good bone and is a boar with great depth and thickness. The pigs by him have a world of quality and plenty of size. Major Miller, a short two year old made the biggest hit with us, at this time, though he was not as fat as the other boars. He has plenty of stretch, a good back and feet and we believe he will make a grand boar at maturity. He is sired by Major Hadley and his dam, Miller's Lady Orange, was by the great old sire, Miller's Big Orange and out of Price Lady 2d by the one and only Chief Price 2d. The boar comes from a line of breeding that has made good. The most recent addition to this herd is a son of Golden Gate King. Mr. Smiley was at Henry Dorr's last winter and got the first pick of the fall boars sired by Golden Gate King, and he picked a good one when he got this fellow. He is the "Dorr type" and is full of quality combined with size. If he continues to do well he should make a creditable showing this fall. In all probability these gentlemen will have a show string out this fall and from the present outlook they will be strong contenders in many classes. For the benefit of those that want to buy pigs—boars or gilts—they are pricing some of the good ones at very conservative prices. They can sell you pairs or trios not related. They are good and will please you. Their advertisement appears in this issue. If interested write and please mention The Wisconsin Farmer. See page 22.—Adv.

Chester White March Pigs.

W. F. MILLER, West Salem, Wis., has a herd of Chesters that compare favorably with the good herds of the state. Of the spring pigs, he has about fifty that were farrowed in March and these are weaned and ready to ship at any time. They are good individually and are sired by good boars and if taken while they are young they won't cost you very much. He can sell you pairs or trios unrelated and a good guarantee goes with them. Get his prices and order before the tops are picked over. You can buy now and carry them over cheaper than you can by waiting until fall. Don't forget to mention The Wisconsin Farmer. See page 23.—Adv.

A Burnham Wagon Rack Cheaper than You Can Build One.

BEFORE buying a new wagon rack or building one yourself, write for the descriptive circulars and prices of the Burnham rack, which can be bought for less than the cost to build one at home. The Burnham rack is built of hardwood and fir finishing lumber and is securely fastened with bolts and rods—there are no nails to work loose. It is painted with pure linseed oil paint before assembling, in pearl gray and vermilion colors. Write for information to Burnham Mfg. Co., Charles City, Iowa. Mention of this paper is always appreciated.—Adv.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.

Holstein-Friesian Cattle.

June 1, Waukesha Holstein Breeders, Waukesha, Wis. W. Baird, Mgr.

NEWS OF THE SALE RING

Birch & Thompson's Hereford Sale.

Birch & Thompson's second annual Hereford sale held Thursday, May 18th, at Lake Geneva, Wis., was well attended. Wisconsin breeders bought liberally of the better class of cattle. The top price bull, Refiner 11th, was sold to Ing R. Thorsgord, Westby, Wis. L. M. Scott & Sons, Bagley, Wis., purchased several very fine heifers. W. H. Fountain, Elkhorn, Wis., was a heavy bidder and took some of the best of the females. A. C. Bartlett added a number of choice females to his herd at Lake Geneva and other Wisconsin breeders bought well. There were buyers present from Michigan, Illinois, New York, Indiana, North Dakota, Montana, Iowa, Ohio and other states:

BULLS.

Beau Perfection 72d, Oct., 1914; D. J. Olmstead, Woodstock, Ill. $200
Beau Perfection 74th, Nov., 1914; J. T. Tweeten, Rolette, N. D. 305
Lad's Perfection, Jan., 1915; Geo. Lee, Aurora, Ill. 395
Hero Perfection, Feb., 1915; Mayne & Brazie, Harlan, Ia. 195
Briton Boy, April, 1915; C. McCarty, Stoughton, Wis. 195
Viking, Jan., 1915; Tony Fox, Pewamo, Wis. 195
Prospect Lad, April, 1915; Mayne & Brazie 200
Refiner 10th, Oct., 1914; Mayne & Brazie 325
Refiner 11th, Nov., 1914; Ing R. Thorsgord, Westby, Wis. 400
Prince Majestic, Dec., 1914; Tony Fox 250

FEMALES.

Laura, Aug., 1909; Cyrus A. Tow, Norway, Iowa 300
Rose, April, 1907, and c. c.; Allen Bros., Paw Paw, Mich. 350
Maggie McCary, Nov., 1910, and b. c.; Nov., 1910; Mayne & Brazie ... 340
Sally, March, 1908; Foxton, Syracuse, N. Y. 275
Janna, Nov., 1910; and c. c.; Clifford Hatch, Williams Bay, Wis. 305
Daisy 2d, Oct., 1913; Foxton 270
Marian, March, 1907; and c. c.; R. D. Hubbel, Walworth, Wis. 225
Calla, Aug., 1906, and b. c.; Allen Bros. 350
Glenn Ellen, Feb., 1907; L. M. Scott & Son, Bagley, Wis. 175
Lady Masque 25th, Sept., 1912; Geo. A. Miller, Fairbank, Ia. 255
Susie Lavinia, June, 1915; A. C. Bartlett, Lake Geneva, Wis. 175
Gladys, Feb., 1913; and c. c.; A. C. Bartlett 630
Mary Jane, Nov., 1912; J. D. Hill, Roundhill, Ohio 700
Ruth, July, 1913; Geo. Miller 525
Daicy 6th, Feb., 1914; H. G. S. Cobb, Westfield, Ia. 400
Christ . April, 1912; H. G. S. Cobb 270
Surprise, May, 1914; Jenkins Bros., Orfords, Ind. 210
Lovland Belle, Bear Creek Ranch, Emerman, Mont. 200
Maricold, May, 1914; Foxton 390
Theo. Raymeto, July, 1914; L. M. Scott & Son 255
Blanche, April, 1914; A. C. Bartlett 260
Marjorie Marie, May, 1914; Hawthorne Farm, Chicago, Ill. 260
Bonnie, July, 1914; Hawthorne Farm 355
Mildred May, May 1, 1914; Jenkins Bros. 250
Daisy 3d, Oct., 1914; A. C. Bartlett 325
Trixie Wilton, Sept., 1914; Jenkins Bros. 200
Marietta, Sept., 1914; W. H. Fountain 225
Clio, Jan., 1915; W. H. Fountain ... 180
Beauty Bud, May, 1915; Hawthorne Farm 165
Miss Sensible, Dec., 1914; Foxton 300
Blue Bell, May, 1915; Hawthorne Farm 160
Vanity, May, 1915; W. H. Fountain 205

SUMMARY.

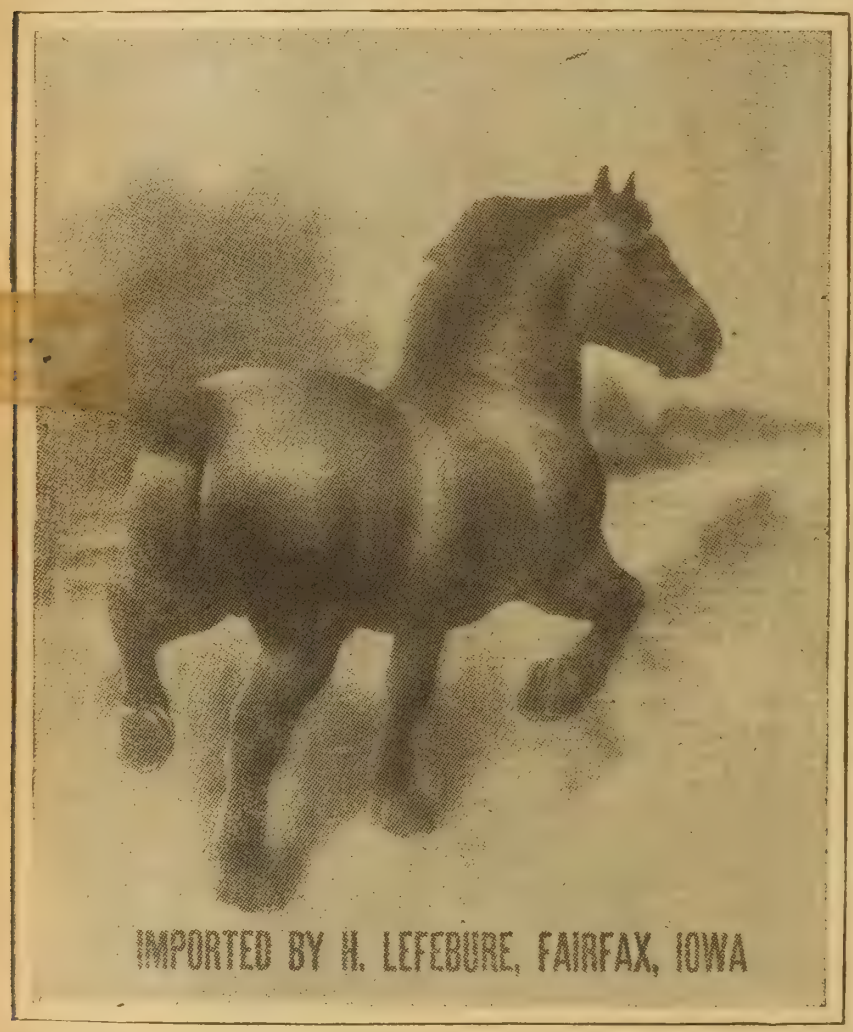
32 females average $293
10 bulls average 279
42 head average 286

Spraying Cherry and Apple Trees.

The shot hole disease affecting the cherry orchards of the famous Sturgeon Bay district, which has assumed threatening proportions in some sections of this area, is being investigated again this year by the growers themselves working in co-operation with specialists in plant diseases from the college of agriculture. Individual experiments will be resumed on a number of cherry plantations by E. W. Roark and assistants, with headquarters at Sturgeon Bay. Spraying tests will be conducted to control shot hole fungus of cherry and plum and some work will be conducted with the general diseases affecting blackberries and raspberries.

Co-operative spraying demonstrations, on the theory that two good apples saved will pay for a gallon of spray mixture, are being conducted this month on farms near Racine, Fond du Lac, Wyocena, Baraboo and Oshkosh by R. H. Roberts, of the horticultural department. In addition to the demonstrations with liquid sprays, the farmers who attend these meetings will have a chance to see the new dust spray apparatus in action. Powdered sulphur, arsenate of lead and a filler are the materials used and the dust is blown against the trees by a large power bellows mounted on trucks.

Mrs. E. E. Wells, of Vida, Ore., who without funds and at the age of seventy-one years, filed on a homestead near that place, has made final proof of residence and development of the tract. In the regular course of events she will receive title to the property. The money with which she paid for the work on the land she earned by "working out" for others.



THE above illustration is a likeness of the imported Belgian stallion, Farceur 7906 (77278), a bay with black points, weighing 2,400 pounds. He is a five year old and a winner in Belgium and at the Iowa and Minnesota State Fairs and at San Francisco. He and other good ones are offered for sale by H. Lefebure & Sons, Fairfax, Iowa. See advertisement on page 23

LAST CALL TO THE HOLSTEIN SALE
WAUKESHA COUNTY, JUNE 1ST

REMEMBER: That Waukesha county contains more tuberculin-tested cattle than any other county in the state; that so far as we know no tubercular animal have ever passed through our sales; that it is our aim to maintain this reputation; that no by-bidding is allowed; that this is a sale; that this is the place to buy foundation stock; and that we will treat you fair. Send for a catalog to W. L. Baird, secretary, Waukesha, Wis., or get one at the sale. Sale commences promptly at 10 o'clock on June 1st in city of Waukesha. Come and look the animals over before the sale.

RED POLLED CATTLE.

UNDERWOOD
RED POLLS
COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD — AVOCA, WIS.

RED POLL Headquarters
BULLS all sold. Will sell a few choice heifers. Price is right. Address
J. W. SALTER & SONS — UNITY, WIS.

LOOK! RED POLL BULLS
1 YEARLING—1 two year old. Well grown, well bred. Priced right. Write at once. Guarantee satisfaction. Address
Natt Kimball — Black River Falls, Wis.

RED POLLED HEIFERS
HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin — Gotham, Wis.

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

AYRSHIRE CATTLE.

SEVERAL YOUNG AYRSHIRE BULLS FOR SALE
LIKE picture here shown. One born August 3, 2915. Sire, imported Craigbrae Lord Rosebery 15001. Dam, Bonny Miss Casanet of So. Farm out of 480 pound three year old. He is more white than red and is guaranteed in every way. If you see him you'll buy him if you know Ayrshires. Your inspection and correspondence are invited. Write Jas. Van Etta, Lima Center, Rock county, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD
POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt — Rosendale, Wisconsin

POLLED DURHAMS
HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

TOO LATE TO CLASSIFY.

CHESTER WHITES
AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

REGISTERED GUERNSEY HEIFERS
3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson — Rosendale, Wisconsin

Registered Jersey Bull
BORN November 18, 1915, of Double Time-King Sappho King-Olive Dunn lines of blood. A big, growthy calf of straight, level type—absolutely guaranteed. Price $50. Burn Brae Farm, Chas. A. Peterson, Rosendale, Wisconsin.

Parker, of Janesville
OUR specialty is DUROCS. The breeding is the best and we don't have to make excuses about the individuals. When you want Durocs, remember
E. H. Parker & Son — Janesville, Wisconsin

BIG-TYPE POLANDS
SPRING pigs of either sex, sired by several noted boars. Best breeding and individuality. Buy while they come cheap. Address
Wm. Smiley & Son — Albany, Wisconsin

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

WANTED CALF RENNETS — FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY, Madison, Wis.

THE CREAM CHECK TELLS THE STORY

If you want to increase the size of your monthly or weekly cream checks; if you would like to make more dollars in dairying, attend the eighth semiannual

SALE OF GUERNSEYS WAUKESHA JUNE 7, 1916

We are going to make the offering representative of the 140 herds kept in the leading Guernsey Breeding County of America. 80 head will be sold, A. R. cows with good records, as well as prize winners. Consignors will not be allowed to bid or to permit any person to bid for them.

Send for illustrated catalog.

Waukesha County Guernsey Breeders' Association
F. E. FOX, Sec'y
WAUKESHA — WISCONSIN
LOVE, MACK & BENJAMIN, Auctioneers

LIVE STOCK AUCTIONEERS.

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Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

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At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones' Nat'l School of Auctioneering, 40 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, President.

HOLSTEIN-FRIESIAN CATTLE.

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. **BONNIE MEAD STOCK FARMS, Randolph, Wis.**

Purebred Registered
HOLSTEIN CATTLE

Holstein merit the basic principle. The sound administration of the Holstein-Friesian Association since 1871, has been the helpful influence, the educational advance agent, and not the basic principle, for the basic principle of Holstein prosperity is the genuine and demonstrated superiority of the purebred registered Holsteins as the largest and most economical producers of milk and the most profitable dual purpose breed. All of the clever exploitation and the most prolific advertising in the world would not have placed the Black-and-White breed where it is, had not genuine superior merit been its foundation. Investigate the big "Black-and Whites."

Send for **FREE** *Illustrated Descriptive Booklet.*
The Holstein-Friesian Association of America
F. Houghton, Sec'y, Box 143, Brattleboro, Vt

YEARLING SON

READY for service of the 28-pound Holstein bull, Calumet Johanna Abberkerk Champion 105829, whose dam gave 623.70 pounds milk and made 28.71 pounds butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. The bull offered for sale is 3-4 white, good and straight and well grown.
A. G. Pingel **Chilton, Wis.**

Ready For Service
Holstein Bull

OF Johanna Korndyke Ormsby breeding, out of an A.R.O. dam. Straight and level; well grown and marked. Priced right. Address
W. D. McGILL - Menomonee Falls, Wis.

HOLSTEIN BULLS

READY for service. Sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 28 pounds butter in 7 days. Dam, Spring Valley Lindora 241565, that gave 428.3 lbs. milk, 17 lbs. butter in 7 days; 13,129.8 lbs. milk, 558.3 lbs. butter in one year at 2 years, 20 days of age.
C. Tochtermann **Monroe, Wisconsin**

Young Holstein Bulls

SIRED by our Junior herd sire **Butter Boy Mink Pontiac** 133161, from tested dams. Also

CHESTER WHITE SWINE

both sexes. For pedigree and prices write Cook Brothers, Burlington, Wisconsin. Cedar Lawn Stock Farm.

HOLSTEIN BULLS

RICHLY-BRED yearling Holstein bulls from Duchess Ormsby and Johanna cows sired by Maplecrest De Kol Friend 104236, a half brother to Banostine Belle De Kol, that gave 27,404 lbs. milk and 1,322 lbs. butter in a year. The bulls are from A. R. O. cows. Prices low. Address
Watson & Will **Menomonee Falls, Wis.**

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, - Kilbourn, Wisconsin.

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

10 CHOICE Holstein heifers and 2 bulls 15-16ths pure, $20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wisconsin.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse **Monroe, Wisconsin**

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford **Kaukauna, Wis.**

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Yearling Jersey Bull

OF choice breeding. Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

POLAND CHINA SWINE.

Martiny's Poland China Boars

15 FALL boars of September farrow, sired by Wisconsin Jumbo, the 1st prize and Jr. champion boar at the Wisconsin State Fair, 1914. I believe he was the biggest boar of his age shown that year, he weighing 510 pounds at eleven months old. This will be the last chance to get a herd header from this great boar. The wise man will raise a few fall pigs this year if he never did before. I will sell these boars now for less than they will bring for pork after you get through using them next fall, as I wish to make room for my 100 spring pigs I already have on hand.
L. P. Martiny **Chippewa Falls, Wis.**

POLANDS

HAVE some fine fall **BOARS** to be sold at **BARGAIN PRICES** during the next month. Write. Everything guaranteed.
R. MEINKING - - BANGOR, WIS.

BLACK JUMBO
221231

A FEW good Poland China sows bred for fall litters to the great boar, Black Jumbo.

BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks **Hazel Green, Wisconsin**

McDONALD

HAS some good Poland China fall boars that must be sold at once. From my best sows and show boars. Write, mentioning The Wisconsin Farmer. J. D. McDonald, North Bend, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

HORSES.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address
M. Bodenheimer & Co. **Green Bay, Wis.**

SHORT-HORN CATTLE.

FREE SHORT-HORN SERVICE

THE American Short-horn Breeders' Association invites prospective buyers to avail themselves of the free service offered by the Association's Extension Department. It invites Short-horn breeders to inform the Association from time to time of their salable stock. During the past twelve months, through the Extension Department, over 2,000 Short-horns have been placed in sections that would not have been reached by individual breeders. The demand for Short-horns is steadily increasing. The next number of The Short-horn in America will be published July 1st. Keep this publication on file. Address American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago, Illinois.

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

Oak Lawn Farm
SHORT-HORNS OF QUALITY

FOR sale at reasonable prices ten very good Scotch-top cows, either with calves by side or safe in calf to Denmark 8th, that is one of Village's best grandsons. Also one good roan bull coming one year old sired by Imported Raphael. Ten heifers coming 1 year old sired by Strathallan Ring, a very good grandson of Whitehall Sultan.
J. E. KENNEDY **JANESVILLE, WIS.**

BULLS
FROM MILKING STRAIN OF
SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

MILKING SHORT-HORNS

YEARLING bulls ready for service and younger from cows giving up to 11,000 pounds of milk per year. These are sired by Bonnie Scotchman, a grandson of Whitehall Sultan. Send for pedigrees and description. Address
Harvey H. Little **Evansville, Wis.**

Bates Short-horns Fashionable Durocs

STOCK of both breeds for sale. Gigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

MILKING SHORT-HORN BULLS

SIRED by KING CREST 39857, a Duchess of Gloster bred bull, and out of Arabella and Imp. Bertha bred cows. Prices right. Address
John Notseter **Deerfield, Wisconsin**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

GUERNSEY CATTLE.

"EDGEWATER"
Holsteins and Guernseys

Now being offered for immediate sale.

450 Cows, Heifers and Service Bulls 450

We are offering first-class stock only; some of Southern Wisconsin's best. Write for particulars.
Edgewater Stock Farm **Fort Atkinson, Wis.**

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov. of the Chene. Address
Charles Schmidt **Wrightstown, Wisconsin**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.
Grenwode Farm, E. R. Whitcomb, Prop.
Whitefish Bay, Wisconsin.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman **Fort Atkinson, Wisconsin**

FOR SALE High-grade Guernsey heifer calves at $15 each. Address Fern A. Findlay, Whitewater, Wisconsin.

When writing to advertisers kindly mention The Wisconsin Farmer.

CHESTER WHITE SWINE.

CHESTERS

OFFER spring pigs, February and March farrow, singly, pairs or trios. Sired by JOY BOY. Satisfaction or no pay. Address
Adolph Nuttleman, West Salem, Wisconsin

CHESTER WHITE SPRING PIGS

OF February and March farrow, direct breeding of a $400 boar. Boars $12, sows $10 each. Shortage of feed forces this sale. A No. 1 stock; no runts. Cash with order gets first choice.
Jos. Egelhof **Edmond, Wisconsin**

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address
W. F. Miller **West Salem, Wis.**

CHESTER WHITES

FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address
John Simon **Campbellsport, Wis.**

HAMPSHIRE SWINE.

LAIRD'S FAMOUS . . . HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Chariton, Iowa.

DUROC JERSEY SWINE.

Duroc Gold Bonds

TRIED brood sows and fall gilts being bred to Gold Bond, 1st prize senior yearling boar Wisconsin State Fair, 1915. Due to farrow in August and September. All kinds of Durocs. Prices reasonable. Address
JOHN L. FISHER **JANESVILLE, WIS.**

DUROCS

WHEN you think of **DUROCS** remember the champion of champions, **LEE'S DEFENDER.**
L. F. ATWATER **BANGOR, WIS.**

DENNIS SHEA
MELVINA, WIS.

OFFERING Duroc fall boars with quality and breeding. Spring pigs coming fine. Herd entered in futurity.

PRINCE DEFENDER

SEPT. Duroc boars and gilts by him for sale. Spring pigs by above boar, Lee's Defender and Royal King 4th. Shipped on approval. Keep your eye on Prince Defender.
McClurg Bros. **Viroqua, Wis.**

DUROC JERSEYS

CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)

HAVE the best spring pigs I ever raised. They are wonderful sires. Write.
Geo. H. Willsie - - Prosper, Minn.

DUROC JERSEYS

HAVE had a big trade in gilts and am sold out. We have an **Orion Cherry King** boar and one by **The Chief's Col.** Keep this in mind for future reference. Address
E. H. PARKER & SON, JANESVILLE, WIS.

HIGGINS' MODEL DUROCS

NOTHING to sell, but still in the game. J. W. Higgins, Gotham, Wis.

OTTER CREEK FARM

BOOKING orders for March Durocs from large mature sows. B. M. Arries, Augusta, Wis.

BERKSHIRE SWINE.

BERKSHIRE gilts bred for fall farrow, $35 to $50. April boars shipped at weaning time, $10 up. Address W. A. Freehoff, Waukesha, Wisconsin.

MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

G. A. SCHULZ
Adell, Wisconsin
BREEDER OF HOLSTEIN CATTLE

For Sale

PEARL Longfield De Kol 147825. Seven day record 27.29; yearly record 28050.6 milk, 972.08 pounds fat, and her daughter, Pearl Longfield Spofford 159164. Seven day record at three years 23.06; yearly record at four years 22316 milk; 730 fat. Both cows safe in calf.
Harry Keach **Glenbeulah, Wis.**

GREENBUSH STOCK FARM

TO increase your profits buy a bull sired by Princess Mercedes Piebe Champion 98024, whose dam has a record of 26.39 pounds butter in seven days as a four year old, and 667.4 pounds in one year as a two year old. Write for description and price.
R. B. Melvin, Prop. **Glenbeulah, Wis.**

KING Segis Alcartra Beauty Herd Sire 136938. Sire, King Segis Pontiac Alcartra 76602, the $50,000 bull, a grandson of King Segis, and dam a 23½ pound two year old daughter of Johanna McKinley Segis, the $25,000 son of King Segis and Johanna De Kol Van Beers, the 40 pound $7,000 cow with butter record as follows: 7 days, 40.07; 30 days, 151.39; 60 days, 288.45; 90 days, 416.71; 120 days, 541.35. He is a beautiful individual with all the dairy qualities we like. He will weigh 2000 pounds at two years old. A few choice bull calves nicely marked. Price and description mailed on application. Jas. Doyle, R. 23, Waldo, Wis.

ONE bull five months old, a grandson of Pontiac Apollo 38544 that has 38 A.R.O. daughters, one with a record of 35.43 pounds butter in seven days at five years of age. This bull is ⅞ white, nicely marked, straight over the back and broad across the hips. A real good individual, wt. 400 pounds. His dam has an A.R.O. record as a three-yr.-old of 14.65 pounds butter and 365.20 pounds milk. This bull has a sister with a semi-official record of nearly 800 pounds but- d was recently sold for $500 at

tock Farm, J. B. Cain, Owner
Wisconsin

YEARLING HOLSTEIN
HEIFERS

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VOL. XLV. NO. 22. THURSDAY, JUNE 1, 1916. WHOLE NO. 1792

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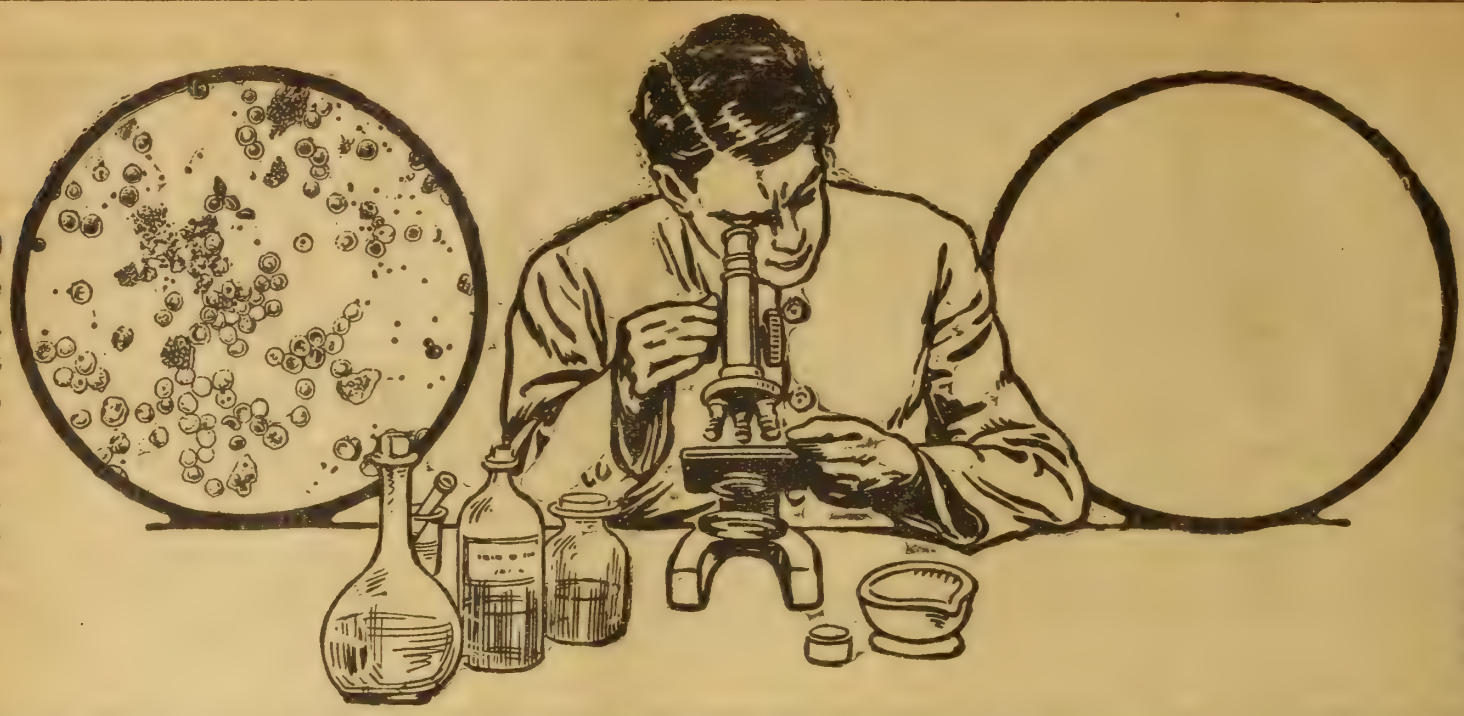

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The Wisconsin Farmer

THURSDAY, JUNE 1, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

CO-OPERATIVE BEGINNINGS.

I HAVE been making quite a study lately of the co-operative movement, as it applies to agricultural affairs and as farmers are becoming more and more interested in it. Not the least interesting chapter in the story is that which tells of the beginnings of this now world-wide movement.

It is a far cry from a hundred farmers banding together to buy a carload of flour for their own use, saving $78.90 thereby, as Mr. Hatch tells about in another column, and selling their produce in wholesale lots so as to dominate the market, to a little handful of poverty-stricken millworkers gathered together on a rainy November day in sheer desperation trying to devise some plan to better their miserable condition. Yet these are the two extremes of the co-operative story: The beginning and the present condition. Let me tell you the story as I gather it from authoritative sources.

Practical, common-sense co-operative work—such as has enrolled 5,000,000 people under its banner in America today, with farming giving the largest representation—began in a little, old, ramshackle building in a muddy street called Toad Lane, Rochdale, England, in 1844. Twenty-eight men, working in woolen mills for a wage that compelled them to live in poverty and destitution, made a solemn compact one gloomy November afternoon to save 4 cents a week for one year, the money to be used to start some kind of an institution that would enable them to buy the actual necessities of life a little cheaper. Each man made good his pledge and after twelve months of self-denial, saving a penny here and a penny there, they had in the treasury the sum of $140. After renting a little building and buying a few fixtures, they had $70 left to invest in a little sugar, a little pork, a little jam and a little oatmeal. And so the business was launched.

The business thus started is today the largest commercial institution known to mankind: The Wholesale and Retail Co-operative Societies of Great Britain, which, at the last available annual report, did a business for the year of $614,427,000, with a net profit of $66,446,520. The movement begun on that bleak, barren November afternoon by a handful of poverty-stricken millworkers has spread around the world, until today there is hardly a country which does not enroll thousands of advocates.

Aside from all question of co-operation, is there not inspiration here for all of us to do our very best, no matter how humble our sphere, to help ourselves and our fellowmen? Many of us have impulses at times which we fear or hesitate to follow because the task we would set about is so formidable and our efforts are so weak and puny. Yet think of the great movements which have grown from such humble beginnings as these millworkers staving off starvation in a ramshackle building more than seventy years ago. Should we hesitate to join hands with our fellowman and seek to remedy conditions when success in such notable measure has crowned the work often begun so humbly?

There is much that the farmer of today can accomplish if he will join hands with his neighbors (his brother farmers) and present a united front to those who stand between him and the ideal country life, the ideal farming condition. Shall we be discouraged, or fear that the obstacles are too great to be overcome, when a handful of millworkers can do so much with so few weapons at their command?

THE FREE-SEED GRAFT.

I AM glad to see that the United States senate has again taken a determined stand against the free-seed graft, cutting out the $200,000 appropriation therefor from the agricultural bill. The senate took similar action two years ago, and on that occasion I wrote:

> It is a question whether the free-seed custom ever did the farmer any good; of recent years it has been nothing more nor less than a political graft which should be ended without undue delay. Why, you ask me, do the senators and congressmen persist in continuing this practice? I answer that in my opinion Senator Kenyon was right when he declared that "the farmers resent it as a cheap method of currying favor at the expense of the government."

I stand back today of every word I wrote two years ago. There is no longer any reason or excuse for the government sending out miscellaneous assortments of all too often misbranded and infertile seeds which simply encumber the mails and serve no earthly purpose except to win favor for certain political candidates with some of the recipients. The government might just as well send out free pianos to music teachers or free gasoline to automobile owners.

In the beginning, there may have been a laudable desire to assist agriculture, but conditions have so changed that the plans of the originators of the scheme now miscarry most pitiably. Seeds are sent out broadcast over the country without any regard to their germinating ability in the climate and the soil to which they are consigned. As one of the senators pointed out to his confreres, two years ago, seeds which will propagate in one part of the country, under certain conditions, are absolutely worthless in other parts, yet they are sent out indiscriminately by congressmen. It is not only a waste of the seeds, but a big expense to the postal department and, in many cases, a waste of the land in which the seeds are planted.

The farmers of the grain belt are not asking any favors that they do not deserve. They are too independent and politically wide awake nowadays to trade their vote for a package of beet seeds which all too often grow into beans, if they grow at all. Instead of a package of garden seeds, farmers would rather have their representatives at Washington more truly represent them and their interests and serve the nation with more of an eye to the general welfare than to individual advancement. The lower house of congress will be playing the pettiest kind of politics if it restores the free-seed graft to the agricultural appropriation bill.

GRANGE VS. CLUB.

I AM indebted to my very good friend, Henry Hatch, of Gridley, Kansas, for a most timely communication on the relative merits of the grange and farmers' neighborhood clubs. You may recall that a few weeks ago I printed the letter of a subscriber suggesting that while the neighborhood club is good the grange is better, and that there is little or no need of scattering our efforts. At that time I invited a general discussion of this subject. Among all the numerous letters received none are more enlightening than Mr. Hatch's, which I print practically in full, as follows:

> The grange is better than a club, simply because incorporated in it are all the social features of the club, with the added advantages of organization, that is county, state and national in scope. This organization is of great benefit in legislative matters that affect the farmers as a whole, and also is becoming a great aid in co-operative buying and selling. We have found that when the granges of the state speak out in favor of or in opposition to some law that is before the legislature notice is taken of it. A few clubs, located here and there, with no binding in common, are not apt to "get together" so effectively, at least not if the time for action is short. The grange does not fight other orders or other trades, but it does stand up for the rights of the farmer, and whoever stands in the way of giving the farmer a square deal is naturally not looked upon with favor by the grange or its members. It often is said that you cannot get a bunch of farmers to stick together, but the hundreds of live grange organizations of Kansas furnish ample proof that such an idea is becoming obsolete.
>
> One of the "saving" features of the grange is the co-operative insurance it offers its members. We pay an average of one-third of what old-line insurance companies charge, and get prompt pay whenever we have a loss. The reason for this low rate is because we get it at cost.
>
> Buying and selling co-operatively is another great feature of the grange. We are making rapid progress along this line. The county has a general purchasing agent and each grange has its local agent or purchaser. We buy in car lots, and where one grange cannot use an entire carload of any commodity within its membership, neighboring granges club together. Tomorrow, weather permitting, the writer of this, as a local purchaser, will attend to the unloading of a car of flour, upon which the members of the grange will pocket a saving of $78.90. We feel that this money will do us as much good and will be used as intelligently in the upbuilding of the country as if it were donated by us to local merchants or middlemen. However, when local merchants treat us right we give them our orders, but so far most of them seem rather hostile to our efforts to save what rightly belongs to us when we buy for cash and in large quantities. With them, it seems anything to prevent us getting together; yet, a few are learning that their opposition only hastens what they try to prevent, and some have quotations to offer whenever we are in the market for a carload of flour, salt or produce of any kind.
>
> It does not seem to me that a club could do what our grange has done, at least not unless the same lines are followed as regards county and state organization. Since the grange has all the good features of the club socially and combines with it features that make it worth while financially, we consider the grange the better of the two.

Mr. Hatch is enthusiastic over the grange, and rightly so, for it has made wonderful progress in his part of the country, the county where he lives having twenty-four granges, with an average membership of seventy-five to 150. Here, in one county, we have between 2,000 and 3,000 farmers banded together for mutual advancement, buying and selling co-operatively and mingling together in the most friendly and sociable of relations. The advantages of such fellowship can hardly be overestimated. Still, I am inclined to believe there is room for both the neighborhood club and the grange. The one emphasizes the social and intellectual features, the other the political and economic; there seems to me to be a good field for both. To judge by the club meetings which I have attended and by the wonderfully enthusiastic reports which come to me from farmers' clubs all over the grain belt, there is an opportunity to do good with these community organizations, including the entire farm family, which cannot be overestimated. I am delighted to see that the programs of these club meetings are becoming more and more practical: The best variety of grain to plant, the comparative merits of different kinds of silos, the pros and cons of the road situation, the best breed of hogs and cattle, and so on. The grange does, indeed, find farmers banded together to make farming take higher rank among the useful and honorable professions, to make the great farming body secure more widespread recognition, but there remain a thousand and one of the little, intimate details of farm life which can be discussed at neighborhood club meetings (with their attendant problems solved there) better than any place else, in my opinion.

May I hear from more of my readers on this very interesting matter?

KNEE DEEP IN JUNE.

COULD I do any better, at the threshold of another June, than to print a part of James Whitcomb Riley's "Knee Deep in June"? I wish I had the space for all the stanzas, but here are five, which will have to suffice:

Tell you what I like the best—
'Long about knee-deep in June,
'Bout the time strawberries melts
On the vine,—some afternoon
Like to jes' git out and rest,
And not work at nothin' else!

Orchard's where I'd ruther be—
Needn't fence it in fer me!—
Jes' the whole sky overhead,
And the whole airth underneath—
Sort o' so's a man kin breathe—
Like he ort, and kind o' has
Elbow room to keerlessly
Sprawl out len'thways on the grass
Where the shadders thick and soft
As the kivvers on the bed
Mother fixes in the loft
Allus, when they's company!

Jes' a-sort o' lazin' there—
S' lazy, 'at you peek and peer
Through the waven' leaves above,
Like a feller 'at's in love
And don't know it, ner don't keer!
Ever'thing you hear and see
Got some sort o' interest—
Maybe find a bluebird's nest
Tucked up there conveenently
For the boy 'at's ap' to be
Up some other apple tree!
Watch the swallers skootin' past
'Bout as peert as you could ast;
Er the Bob-white raise and whiz
Where some other's whistle is.

Plague! If they ain't somepin' in
Work 'at kind o' goes ag'in'
My convictions!—'long about
Here in June especially!—
Under some old apple tree,
Jes, a-restin' through and through,
I could git along without
Nothin' else at all to do
Only jes' a-wishin' you
Wuz a'gittin' there like me,
And June wus eternity!

Lay out there and try to see
Jes' how lazy you kin be!—
Tumble round and souse yer head
In the clover-bloom, er pull
Yer straw hat acrost yer eyes
And peek through it at the skies,
Thinkin' of old chums 'at's dead,
Maybe, smilin' back at you
In betwixt the beautiful
Clouds o' gold and white and blue!—
Month a man kin railly love—
June, you know, I'm talkin' of!

I am a great lover of flowers and of poetry; that is why I so often print portions of my favorite poems here on this page of mine. Along about June most of us are too busy to "jes' git out and rest, and not work at nothing else," yet is there one among us who does not feel the desire to do no more than this some of these beautiful June mornings?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription advertising may be addressed.

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Splendid Co-operation in This Wisconsin County.

IN ANOTHER column of this issue of The Wisconsin Farmer Mr. Allen B. West writes concerning the corn contest work in Rock county. His articles give a splendid example of what co-operation will do. The work was started by a newspaper, the Janesville Gazette. Wide-awake editors with a vision of agricultural possibilities have a wonderful opportunity in a state like Wisconsin. Mr. Bliss, of the Janesville Gazette, is such an editor. Having started the movement for more corn to the acre and a better grade of corn in Rock county, this editor found that his ideas were soon appropriated and enlarged upon until the present plans have been worked out. It did not take the business men of Janesville long to see the value of the work which Editor Bliss was trying to do. The county superintendent of schools soon noted the beneficent effect of this work. The secretary of the county Y. M. C. A. was anxious to have a part. Best of all farmers began soon to appreciate the value of this work and to take a lively interest. This has been evidenced by the meetings which have been held. It has not been an easy matter to get the interest started among the farmers of the county. Not infrequently a good farmer was heard to say that he didn't expect the town folks would be able to teach him anything about raising corn. As a matter of fact the town folks were not able to teach him along this line. That notion is a mistaken one entirely. All that the town folks are able to do is to put the farmer in touch with certain agencies which have been studying corn cultivation for years, and give him the benefit of results which have been worked out by these agencies. The state of Wisconsin is spending a great many thousands of dollars each year in order that good conscientious men may devote all their time and energies to a careful and painstaking study of agricultural problems. The farmers are helping to pay this expense. Does it not seem reasonable that they should avail themselves of as much of this information as they can secure?

The clincher argument, however, is when the farmer boy raises seventy to 100 bushels of corn to the acre and the father knows his corn has been averaging about thirty to thirty-five bushels to the acre. The writer has had the pleasure of visiting Janesville when the final exhibits of corn in these contests have been held. It is a very great pleasure to see how proud the fathers and mothers are of the boys who won—in fact, of all the boys, as they all make a good deal better showing than the average corn yield of the county.

Rock county can easily raise the average production of corn ten bushels to the acre if proper attention is paid to seed, use of manures, and cultivation. The business man, of course, is selfishly interested in seeing this result accomplished. But give him credit with being interested from the standpoint of the county as a whole, rather than from the standpoint of the additional profits which might accrue in his individual enterprises.

Sudan Grass in Wisconsin.

THE WISCONSIN FARMER has had several inquiries relative to growing Sudan grass in this state. A good many of these letters were prompted by a communication in our Farm Forum Department, from H. E. Krueger, of Beaver Dam. There was also a great deal of interest in an article which appeared in The Wisconsin Farmer March 2d, and which was written by George B. Mortimer, of the Wisconsin Experiment Station. Both of these gentlemen say that Sudan grass will do well in Wisconsin. They write that Sudan grass needs a warm season with a fair amount of moisture, and a soil of reasonable fertility.

The Sudan grass grown at the Wisconsin station last year was sown rather late, but it yielded three and a half tons of hay to the acre. One advantage of Sudan grass is that it will stand considerable drouth. This, of course, was not any particular advantage last season. For the best growth, Mr. Mortimer writes that Sudan grass should have plenty of bright weather. In the ordinary season this crop should be sown between the middle of May and the first of June. With the season late, as it is this year, it would probably be all right to sow at once, provided, of course, the weather was favorable for the balance of the season. If broadcasted the authorities generally recommend twenty to twenty-five pounds to the acre. The seeding last year at the experiment station was June 23d and the yield reported was from one cutting. The seed was broadcasted at the rate of ten pounds to the acre. The portion of the experimental field where thirty-five pounds to the acre was sown yielded only two and a half tons of hay. From these tests it would appear that it is as bad to sow too much as too little. As with other grasses for which Wisconsin has already become famous, there is considerable opportunity in the seed proposition on Sudan grass. This part of the business has not yet received any attention in this state, but doubtless will when our farmers get to using any considerable amount of Sudan grass.

Wisconsin Bank's Potato Contest.

THE WISCONSIN FARMER has repeatedly called attention to the great work which bankers of the state have been doing to advance the interests of the farmers. One of the progressive banks in the state is the Old National Bank of Waupaca. The Wisconsin Farmer has a letter from Mr. William Dressen, cashier, in which he states that for fifteen years this bank utilized old-time publicity methods. More recently the bank officials inaugurated, in lieu of their former publicity plans, a potato-growing contest, and they hope to make it an annual affair. This contest is open to all school children between the ages of ten and eighteen years, living in ten townships immediately adjoining the city of Waupaca. The total of cash prizes awarded is $100; the first prize being $35, the second $25, the third $15, the fourth $10, and the fifth, sixth and seventh prizes, $5.

Those who engage in the contest make the following argument:

To attend all field, local and county meetings of instruction whenever possible.
To follow carefully instructions on club plat, crop management, sale and care of products.
To keep an accurate account of all items of expense, receipts, observations and experiments in connection with club plat.
To use only pure-bred seed of standard variety.
To charge expenses according to the following table:

Cost of horse labor per hour	$ .15
Cost of man labor per hour	.20
Load of ordinary barnyard fertilizer	1.00
Rent of land per acre	10.00
Rent of all farm implements per acre	2.00
Paris green and Bordeaux mixture to be charged according to actual amount used.	

Congressman Edward E. Browne, of Waupaca, representing the eighth Wisconsin district, has enlisted the co-operation of the federal department of agriculture. All of the information gathered by the department of agriculture will be available to each child who has entered in the Old National Bank potato contest.

Studying Farm Management in Wisconsin.

A SPLENDID opportunity for still further study of farm management has been afforded by the Wisconsin Farm Management contest which concludes with a meeting at Fort Atkinson June 5th. Several winners in the various county contests have already written articles for The Wisconsin Farmer, and these have been published in our Forum department. Following the meeting at Fort Atkinson there will be an opportunity for studying the management of successful and profitable farms. Methods of crop production, of handling live stock, and the influence of these matters on the success of the farm will be discussed from a practical viewpoint. Special emphasis will be placed on the labor-saving devices, both upon the farm and in the farm home. There will also be a special feature pertaining to the construction of farm buildings, and the construction of farm homes in particular. A large attendance is expected on the tour. The trip will include visits to Eau Claire and Barron counties, where the county representative work is in full blast.

During the state meeting at Fort Atkinson a visit will be made to the Hoard farm and to the Hoard's Dairyman plant. The plant of the James Manufacturing Company, makers of barn equipment, of the Creamery Package Manufacturing Company, and other points of interest at Fort Atkinson will be visited. Prizes will be awarded to those who have won in the state contest. Addresses will be delivered by J. A. Craig, H. V. Gunn, D. H. Otis, Miss Elizabeth Kelley, and by Prof. C. G. Hopkins, of the University of Illinois.

Drainage Paid Big Profits.

THOSE farmers who are taking the drainage question seriously and who are tile-draining their lands according to a definite system are finding that they are well paid for their work and cost. Our attention has been called to a statement by Mr. A. B. Wolff, who resides in Renville county, Minnesota. The Minnesota station makes the following comment on Mr. Wolff's drainage experiment:

As a first experiment in drainage, Mr. Wolff tiled a pothole of eleven acres at a cost of $184. This land has produced an average of about two tons of hay a year, but since he put in the drainage system, it has become the most productive land on the farm and has risen in value from almost nothing to $125 an acre.

Drainage has made not only the waste land productive; it has made the surrounding land yield more and has improved the field in general. What was formerly a broken-up section is now the best field on the farm. Physically the field has been made granular, porous and friable. The soil has become warmer, for there is less evaporation. The planting season is from one to two weeks earlier every year. On account of the warm soil, the seed germinates more readily and a better stand is secured than usual. The land can be cultivated sooner after a rain, as well as earlier in the spring.

From the dollars and cents point of view, the drainage has been satisfactory. The land produced sixty bushels of corn in 1915, worth then $36, an acre. Some of this corn has been sold for seed this spring at $10 a bushel. The cost of producing the crop was less than on the usual acre, because cultivation was easier in the field than in one broken up by sloughs and heavy with moisture until late in the season.

Since making that experiment, Mr. Wolff has installed a drainage system that takes in every part of his farm.

Drainage may be viewed in practically the same light as every other farm proposition. A good many things are suggested for the farmer to do. In the last analysis the real question is whether these suggestions will add to the farmer's profit. The result in the case of Mr. Wolff, and his experiments with drainage, seem to be very satisfactory.

Wisconsin Young People's Course.

BEGINNING June 19th and continuing until the 23d the Wisconsin College of Agriculture at Madison, will conduct a Young People's Course in Agriculture. This is the sixth annual course of this nature, and previous courses have resulted in a great deal of good. Last year there were eighty-five boys and girls registered and this year there will probably be over 100. A good many scholarships have been awarded in this course to boys and girls who have competed in agricultural and home economics contests. In a number of instances the personal expenses of those who attend the course will be paid by organizations in the counties from which the students come.

The program includes an introductory talk Tuesday, June 20th, by T. L. Bewick, who is in charge of the boys' and girls' agricultural contest work in the state. Other lectures and addresses which have been set for the week are as follows:

TUESDAY, JUNE 20TH.

Opportunities for Farm Boys and Girls	R. A. Moore
A Talk on King Corn	G. B. Mortimer
Bread Making	Elizabeth Kelley
Care of Calves at University Farm	A. C. Oosterhuis
Vegetable Gardening	J. R. Helper
Raising Chicks	J. G. Halpin
Moving Pictures on Farm Topics	J. A. James

WEDNESDAY, JUNE 21ST.

How to Prepare a Club Exhibit	T. L. Bewick
Exercise in Calf Judging	E. W. Fox
Food Principles	Miss Kelley
How to Grow a Prize Pig	J. G. Fuller
Canning Vegetables, and Meat	Miss Kelley
Beekeeping	C. W. Aeppler

THURSDAY, JUNE 22D.

Morning addresses by Dean Russell and C. P. Norgord	
Corn Judging	J. I. Etheridge
A Study of Pedigreed Grains	G. B. Mortimer
Wisconsin Potato Growing for Club Work	J. G. Milward
How to Know a Laying Hen	J. G. Halpin
Kindness to Dumb Animals (Illustrated)	A. S. Alexander

FRIDAY, JUNE 23D.

Health for Boys and Girls	C. L. Harper
A Study in Weeds	A. L. Stone
Sewing	Miss Kelley
How to Tie Some Rope Knots	F. M. White

The program skeleton as given above simply gives an idea of the course of studies and lectures. These talks will be supplemented by demonstrations at the University Farm, and there seems to be no doubt that the boys and girls who take this week's course at Madison will have a very profitable time.

Wisconsin Furnishes Good Men.

WISCONSIN has been furnishing a good many county agents for other sections of the country. The following list contains names of men who have attended the Wisconsin College of Agriculture and have been chosen for responsible positions in Wisconsin and other states:

W. M. Bewick, Berkeley county, W. Va.; Adrian A. Brown, Hampshire county, Mass.; Frank M. Foote, Raleigh county, W. Va.; J. N. Lipscomb, Greenbrier county, W. Va.; Paul C. Rouzer, Tyler county, W. Va.; T. M. Olson, Butler county, Mo.; J. E. Wethington, Cabell county, W. Va.; J. F. Kadonsky, Gogebic county, Mich.; W. E. Morris, Renville, county, Minn.; A. J. Gafke, McHenry county, Ill.; D. O. Thompson, McLean county Ill.; R. R. Marshall, Gibson county, Ind.; H. S. Smith, Alpena county, Mich.; S. Rosencrans, Fountain county, Ind.; J. M. Humphreys, Lamoure county, N. D.; W. A. Ostrander, First Congressional District, South Dakota; E. W. Hall, Spink county, S. D.; W. B. Richards, Dickeye county, N. D.; Oscar Gunderson, Vilas county, Wis.; W. D. Juday, Oneida county, Wis.; C. B. Post, Ashland county, Wis.; Griffith Richards, Price county, Wis.; John M. Walz, Douglas coutny, Wis.; R. L. Cuff, Barron county, Wis.; G. M. Householder, Rusk county, Wis.; L. L. Oldham, Walworth county, Wis.; R. A. Kolb, Taylor county, Wis.; F. G. Swoboda, Langlade county, Wis.; J. S. Klinka, Polk county, Wis.; E. L. Luther, state supervisor of Wisconsin county representatives; W. F. Handschin, state leader of Illinois; A. J. Meyer,

secretary of agricultural extension in Missouri College of Agriculture, Columbia.

The county agency work offers an interesting field of labor and one which is becoming more remunerative.

Alfalfa Shoots Indicate Cutting Time.

THOSE who have made a close study of alfalfa problems are most emphatic in their recommendations that alfalfa should be cut when the young shoots begin to make their appearance at the base of the plants. The Iowa station is emphasizing this matter more than ever this spring. In a recent press bulletin special attention is called to the fact that in many instances the bloom is entirely misleading, because sometimes the shoots make their appearance before any of the blossoms open out. It is true that under ordinary conditions a little of the bloom is showing when the buds begin to show up, and not infrequently one-tenth of the alfalfa is in blossom at the proper time of cutting.

If the alfalfa is cut before the shoots start the next cutting will be lessened materially while, on the other hand, if cutting is delayed until the shoots are three or four inches tall many of these will be cut off and this will reduce the yield of the next cutting.

There is still another factor that must be taken into consideration, namely, the quality of the hay. If alfalfa is allowed to get too old it will mean that the hay produced will be more or less woody. It will not be palatable, and such hay does not possess the nutritive value contained in alfalfa hay that is cut at the right time. It does not call for expert knowledge to determine the exact time of cutting, as it is simply necessary to go into the field and examine the roots closely. You will quickly detect the appearance of the root buds and the opening out of these is the signal for sharpening the mower sickle and getting haying machinery into working condition.

Available and Unavailable Plant Food.

A VERY successful crop grower had learned from experience to recognize from the physical appearance of a soil whether it will be productive or not. He may not have chemical terms on his tongue's end to describe the condition, but he knows it just the same. In a bulletin published some time ago by the Missouri station F. M. Miller discusses the question of plant food, describing two forms of it, namely, that which can be taken up by plants and that which cannot. On this subject Mr. Miller says:

Plants take up mineral plant foods only in solution in the soil water. In other words the mineral grains in which the bulk of this plant food is locked up, must gradually dissolve and give to the soil water these materials in solution if they are to be absorbed by the plant roots. This means that there exists in the soil first what is termed unavailable plant food, or that existing in these mineral grains and in the humus in more or less insoluble form; and, second, available plant food or that which is gradually dissolved from this rather insoluble supply. The larger part of the mineral plant foods in all soils exists in this unavailable form and, since the dissolving action goes on very slowly, there is in most soils only a very small part of the total supply that is soluble or available at any one time. The problem of the farmer is, therefore, to keep within the soil sufficient soluble nitrogen, phosphorus and potassium for maximum yields.

There are certain agencies which aid in making available the insoluble plant food of a soil, the most important being the action of decaying humus. When humus decays, certain organic acids are set free, which, as they are taken up by the soil moisture, enable it to dissolve this mineral plant food more rapidly. Other agencies have a place in this action, but it is to the presence of considerable quantities of decaying humus that the larger part of this dissolving action is due. Considerable quantities of plant food are also fixed within the humus itself, and as it decays these are made soluble. These two factors are in large measure responsible for the great productiveness of virgin soils containing large amounts of humus, as well as for the very beneficial effects of adding humus to a worn soil.

The fact that the supply of available plant food in a soil is largely determined by the quantity of humus present, gives to this constituent of soils a very great importance. Moreover, there are various other ways in which humus acts beneficially, such as in preserving a friable condition of the soil, in conserving moisture and in preventing washing. Humus is almost invariably associated with fertility. It is to the presence of humus that the dark color in soils is usually due and a dark color is almost always indicative of a fertile soil.

Unfortunately, the humus supply may be rapidly reduced in a soil by exhaustive systems of cropping. The continued culture of any crop which necessitates a considerable stirring of the soil, such as corn, or in a lesser degree small grain, will rapidly reduce the humus supply. When a soil is stirred frequently the conditions are most favorable for a rapid decay of the humus. Naturally in this decay considerable quantities of plant food are set free and this is one of the immediate benefits from cultivating corn, but when this practice is continued year after year on the same land the supply of humus ultimately becomes so low as to reduce the productiveness below a profitable basis. It is, of course, true that the constant removal of crops from the land removes large quantities of immediately available plant food and this has much to do with the decreasing productiveness of such soils, but the most important reason for its condition is the reduced humus supply which lessens the available plant food, allows the soil to become hard and compact and increases the amount of surface washing. One of the most disastrous effects of a decreased humus supply is this tendency to wash. Farmers must learn the methods of maintaining humus and of reducing washing if their soils are to remain permanently fertile.

It will be observed that the liberation of plant food is largely determined by the presence of vegetable matter in the soil. If it is assured that a soil is reasonably well drained it is then safe to conclude that a supply of humus such as comes from the plowing under of crops or from the addition of manures or from the decay of plant roots means that the mineral elements, such as potash and phosphoric acid, will quickly be brought into a form or condition so that plants can use them. The continuous growing of grain crops and the removal of the same without any return of vegetable matter to the land means harshness in soil texture and tardiness in plant food liberation. It is because vegetable matter is absolutely necessary if profitable crops are to be grown that short rotations are more and more being emphasized by students of soil problems. Working in a legume crop every four or five years and allowing its roots to thoroughly fill the soil and the upper subsoil means a great addition of vegetable matter, resulting from root decay. This, in turn, is the agent of activity in dissolving mineral substance so that they become available for crops.

Collar Galls Need Sensible Attention.

IT REQUIRES expert horsemanship to take horses through the busy spring season without collar sores or galls. The average farm horse is started into work in the spring plump and well fleshed, and a reduction in weight of 100 or even 200 pounds per horse is the rule and not the exception. Under such conditions the collar that fits well in the beginning is too wide later on and it is the wide collar that always causes the trouble.

Dr. C. C. Lipp, of the South Dakota station, compares the fitting of the collar to the adjustment of the shoe to the human foot. In a recent press bulletin he points out that the feet of no two persons are alike, consequently they cannot wear the same shoes comfortably unless they are first adjusted by several days of preliminary wear. During this period of adjustment the wearer's feet become tired, and blisters, callouses and corns may appear. Horses' shoulders are like men's feet in this respect. A horse wears a collar today that fits him, tomorrow one that is too small, and the next day one that is his size, but does not conform to his shoulders. The result of such management is sore shoulders and necks that refuse to heal even with the diligent application of a never-failing cure. It follows, therefore, that the first requisite for the prevention of sore shoulders is a perfect fitting collar.

There are numerous remedies for sore shoulders that give satisfactory results, providing all other conditions are favorable. The application of white lead ground in linseed oil, the kind used for mixing paint, every evening after the collar is removed, has proven satisfactory. A lotion composed of six drams of lead acetate and the same quantity of zinc sulphate in one pint of water makes a satisfactory wash for sore necks. Apply it three times a day. Oxide of zinc ointment is also very good applied several times daily.

When any medical treatment is applied it must be remembered that good results follow only when the collars fit perfectly and are kept scrupulously clean on the bearing surface by daily washing if necessary.

It should be said in fitting a collar that the main consideration is to keep it close to the sides of the neck. If this is not done the draft lands irritatingly on the point of the shoulder where there is motion at every step. This is bound to lead to galls and sores and unless the draft is changed it is an exceedingly difficult thing to cure these sores while the horse is still at work. It is necessary, therefore, to pull the collar in regardless of every other consideration so that the draft will come on the soft, fleshy tissue of the shoulder so that the collar will be stationary even while the horse is in action.

Lessening the Hours of Labor.

IN THE very nature of the case farm work calls for a relatively long workday during certain seasons of the year. The individual who is not willing to "speed up" during seeding and harvesting operations will sooner or later be compelled to change his occupation. However, the necessity for leading the strenuous life at certain seasons in too many instances fixes a habit which converts congenial employment into drudgery, and it is this phase of the matter to which we wish to call attention at this time.

In many cases advantage is not taken of the principle that work horses may be speeded up to some extent and the day thereby lessened in length so that the task of choring may be accomplished without running the hours of labor into the night. Excepting under rare conditions, it is too much to expect an individual to spend ten hours in the field and in addition do two hours' choring in the morning and the same in the evening. It is entirely practicable in most cases to step horses along a little livelier in the afternoon so that almost a full day's work can be accomplished even though the day in the field is shortened an hour or even two hours. To be sure this cannot be done in certain kinds of work. A good example of this kind is found in cultivating corn the first time through. So much care is required if the work is well done that it is impossible to speed up, but such does not apply in later cultivations or even in preparing soils for crops.

In the end the individual who depends upon hired help will find it greatly to his advantage if he plans his work during the rush season so that the hours of labor are reasonable and rational. Every farmer makes a reputation for himself along this particular line, and those who cannot get along unless everybody around the farm works fifteen or sixteen hours a day are having great difficulty in obtaining sufficient help to carry on affairs.

We have in mind one instance where a section of land is successfully farmed and the work of practically every day is completed by 6:30 o'clock in the evening, and never later than 7 o'clock. This is a stock farm, though as much as 150 acres of corn are grown annually, but in spite of this the plan is never adopted of using the hours of the night for labor as well as those of the day. In this case the labor of two men is required every morning to care for the live stock, and these men do not reach the field with their teams until eight and in some instances nine o'clock in the morning. To some extent they can make up for this lost time in the field, because the horses are fresh and are ready for strenuous toil. These men unhitch in the afternoon at 4:30 o'clock, and the tasks of choring are again taken up. As a rule, the work of the day is completed in good time, and not only is it a good arrangement from the standpoint of those who labor on the farm at outside work but it fits in admirably with the requirements of the home. In the past too little attention has been given to this matter and many a housewife has been prematurely worn out because of the long hours of toil required of her during the busy season.

If anything like a sufficient supply of farm help is obtained in the future more attention will have to be given to this matter of cutting down the work hours. It is just as important that the matter be emphasized where there are growing boys and girls, because the average free-spirited farm lad is not going to make a drudge of himself if he can avoid it, and farm work may be planned and often is planned so that it is congenial during all seasons, partaking even less of the nature of drudgery than are most forms of labor performed in our towns and cities.

The matter is something that should be made the subject for consultation by all concerned so that the work must be kept right up to season and at the same time may be enjoyed by all concerned, and particularly that it shall be carried on so that "mother" and "sister" may find themselves liberated by a material shortening of the hours of work.

Campbell Urges Better Drainage.

A. D. CAMPBELL, manager of the Wisconsin Advancement Association, urges better drainage as a most important feature in securing better roads in Wisconsin. He has issued the following letter to Wisconsin editors:

The writer wishes at this time to call attention to some phases of the highway situation. We are all for better roads, some thinking of expensive ones, others of moderate cost ones and still others of cheaper ones.

But we are all for better ones and in this connection I desire to suggest that as a slogan we can stand for and call for better drainage. During April and early May I drove a thousand miles in southern Wisconsin and northern Illinois, doing this when the roads were at their worst so that I might better understand the road problem.

Some talk concrete, some macadam, some surfacing, some oiling and some dragging, but after this thousand miles of strenuous driving—and being pulled out of the mud more than once—I want to talk drainage, just simple, plain, everyday drainage, such as can be made with a plow—that is the cure for most of our road trouble.

It was singular of this thousand miles of April and early May roads that a vast percentage of the almost impassable places were at the highest points—the very crown of the ridges. Why? In most cases twenty minutes' work with a plow—if done at the right time—would have kept these spots in good condition.

Think of it! Miserable holes on the crowns of ridges!

Now, it seems to me that every newspaper in the state ought to join in a campaign for road drainage, which costs almost nothing, but which in this case would have removed nine-tenths of the unpleasantness of this thousand miles of driving.

The Wisconsin Advancement Association is just completing a comprehensive system of route marking, a map of which will soon be published. We are doing this at a financial loss, but expect it will bring thousands of tourists into the state where they will spend a large aggregate of money each year. Can we not have the bad places (anyhow those on the crowns of the ridges) drained so that drives through the state will be pleasant?

Mr. Campbell has a laudable ambition to unite the best people of Wisconsin in enterprises which will advance the interests of the state as a whole. His letter is well worth reading and should receive attention. As pointed out, better drainage cannot be objected as an overexpensive proposition. Get the water off the average Wisconsin road and a big step toward good roads will have been made.

Over 125 farmers of Rock county, Wisconsin, joined in Alfalfa Day recently. L. F. Graber, secretary of the Wisconsin Alfalfa Order, said it was the finest turn-out he had ever seen in Wisconsin. Weather conditions were ideal and the gospel of more alfalfa for Rock county farms was preached to excellent effect. This series of farm meetings is a part of a general plan worked out by Mr. Graber to interest a larger number of farmers in Wisconsin in growing alfalfa. Other similar meetings and tours will be held in other counties of the state.

Building Roads in Rock County.

More Than One Hundred Thousand Dollars Annually Spent on Highways and Bridges Helps to Make Farm Life Easier and Far More Profitable.

ROCK county, Wisconsin, spent in round figures $100,000 on highways and bridge construction in 1915. Road work constituted the chief engineering and construction problem of the year in the county and provided a considerable amount of employment. This was not a one-year splurge on the part of Rock county. There was not quite so great an outlay in money as in 1914. A larger fund will be spent in 1916. Road building has become an established industry in the county, with an annual expenditure of $100,000 to $150,000 for new roads and for repair of roads and bridges. The Wisconsin Farmer is indebted to the Janesville Gazette for information contained in this article and for the illustrations which appear herewith.

As the result of four years of road building in the county under the present system and four years under the former county aid system there is completed a total mileage of 200 miles of macadam highways out of a system of something like 300 miles. Approximately forty miles of new construction work and resurfacing was completed in 1915, indicating the rapid pace at which the county is now building its modern thoroughfares. At this pace, allowing for probable extensions of the county system, the entire mileage will be constructed within the next four years. Then the problem which will confront the county will be, as it is now, repairs and maintenance, with the probable additional problem of building permanent roads.

It has been the county's policy during 1915, as during previous years, to construct its highways out of native material. Until this year, when the first experiment was made in concrete pavements, all roads of the county were of the macadam type, either being built of pit-run gravel, crushed gravel, rock and calcareous clay, or crushed limestone. All of these surfacing materials have been found close at hand in the various localities where highways have been constructed and it has been deemed economical to make use of them. The result, in the opinion of road experts, has been for the most part satisfactory and Rock county is favored with some of the best macadam pavements in the state. In many instances these roads have withstood traffic in excellent manner for as long as three years with scarcely any attention beyond the filling up of a few ruts.

It has, therefore, been the program to continue road building in Rock county along these lines until the entire county system has been finished. Then the problem will be, say the road experts, the maintenance of the thoroughfares already constructed and their replacement by a more permanent type of highway, such as concrete. The reason for a more permanent style of road is twofold: First, the excessive traffic which is continually increasing year after year, is terrific in its destructiveness of macadam surfacing; and, second, the native materials are becoming exhausted. The road builders of the next decade in this section will doubtless see a considerable amount of concrete pavements laid on the county system, replacing the admittedly temporary macadams with a more durable and permanent type of road, if experience proves cement to be the material which it is now heralded to be.

In the meantime, Rock county is "getting its hand" into the concrete construction work so that cement pavements may be tested out and proved satisfactory or unsatisfactory, as the case may be. This experimenting is also of value to the road contractors and the highway commissioner and his aids, since it gives them some knowledge of the method of laying concrete pavements. Three jobs of concrete paving were completed in 1915 in Rock county—4,000 feet of nine feet wide pavement in the town of Turtle, 836 feet of spillway at Hanover and two pieces of paving in the city of Edgerton.

The cost of cement paving in Rock county is comparatively cheap, owing to the fact that that material is readily available. The work in the town of Turtle this year cost at the rate of $6,200 per mile, which is three times the expense of laying macadam. A summary of the work in Turtle shows the cost as follows:

4,050 square yards of concrete. (The amount paid contractor)	$3,204.00
1,047 bbls. cement at $1.65	1,334.76
Gravel shoulder	493.40
Total	$5,068.16

Sand and gravel was purchased by the contractor from a sand and gravel company whose pit was in that vicinity. It would be the better practice to buy sand and gravel from the sand companies where it is properly screened, rather than have the contractor attempt to dig out the sand and gravel and screen it for each job.

County Highway Commissioner C. E. Moore favors a certain amount of concrete construction each year, but entertains the opinion that the county will be better satisfied with results if the present program of securing a good type of macadam road for the whole system is followed out, since it will mean but a few years when the entire county will be traversed by roads of excellent grade and a surfacing which will last for some years under proper care. Mr. Moore as well as county board members who are familiar with the road situation are confident that the life of the county macadam highways can be materially extended by oiling, which was given its first tryout on an extensive scale during the past season, although conditions were far from favorable. Oil will prevent the erosion of the macadam surface and at the same time aid in withstanding the effects of heavy rains.

Under new methods now being pursued Rock county is securing at the minimum amount of expense, as compared with the other counties of the state, a first-class system of roads which are yielding immediate returns to the community. In other words, the farmers and traveling public are getting the use of first-class thoroughfares without waiting for the expensive concrete pavements which could be laid only at the rate of a few miles a year unless the county assumed a heavy bonded indebtedness, which is generally considered impracticable. In fact, such a proposition is not considered at all among officials connected with the county highway extension.

Work done in Rock county during 1915 is summarized in the report of Highway Commissioner Moore to the state highway commission as follows:

Type of surfacing	Feet	Miles
Concrete	7,150	1 1-3
Crushed stone, macadam	23,450	4½
Crushed gravel, macadam	60,020	11½
Pit run gravel, macadam	116,068	22
Total	206,668	39 1-3

Number of miles oiled, twenty, at an average width of twelve feet.

Total gallons used, 40,000; total cost of surface treatment, $4,505.45.

Average number of men employed during construction, 160.

Number of road gangs employed, exclusive of bridge crews, thirteen.

Average number of teams employed during construction year, eighty.

Average daily wage paid to foreman, $3.

Average daily wage paid to laborers, $2.

Average daily pay for teams, $5.

Cost of state aid road construction	$80,104.82
Cost of county maintenance of roads and bridges	8,362.75
Cost of state and bridge construction	8,942.88
Total expenditures supervised	$97,410.45

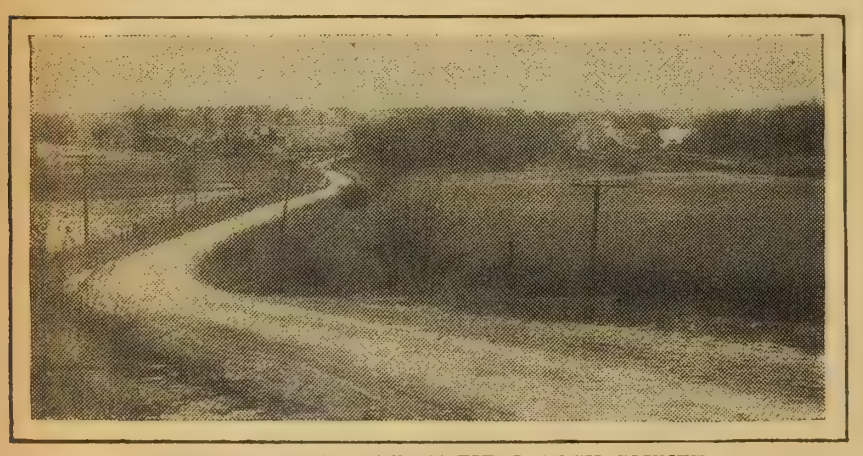
Other counties in Wisconsin are doing good road improvement work, but the work in Rock county is fairly representative of what is being accomplished.

CRUSHED GRAVEL MACADAM ROADWAY.

FINE STRETCH OF CONCRETE ROAD.

TEN-TEAM ROAD CREW AT NOON HOUR.

WORK WITH TRACTOR LAST DECEMBER.



WINDING THROUGH BEAUTIFUL ROCK COUNTY.

FALL SCENE ON AN OILED THOROUGHFARE.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Experience With Three Tractors.

To the Editor:—I have owned three styles of tractor gangs. The first I bought was two gangs, three plows in a gang, that I ran with a side crank steam engine rated twelve years ago as twenty horse power, but now the same company has to rate the same engine at sixty horse power, because our legislature passed laws compelling manufacturers to brand their engines for just what they could pull, consequently manufacturers had to put their engines under brake tests. One horse power is an engine that can raise 33,000 pounds one foot per minute, so my twenty horse power engine that was rated twenty horse power could develop sixty horse power and has to now be so rated.

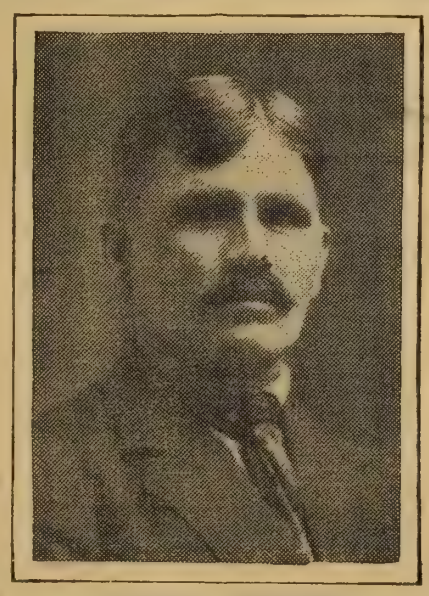
The second outfit I bought to take out to South Dakota was 110 horse power side crank, self-steering steam engine with big engine gang with ten breaker bottoms for breaking up wild prairie sod and I tell you it takes power to pull a rig like this, but this tractor certainly did the work. Sometimes we had a little trouble in soft footing and it encountered a little difficulty through gumbo patches.

Three years ago I bought a 20-40 gas tractor, that is, twenty horse power on the pull and forty horse power in the belt, for threshing and plowing. I first tried on a four-bottom plow all in one gang and it lifted with one lever. I did not really like this, because it lifted so hard. Then I bought a six-bottom gang, three gangs and two plows in one frame, and, of course, three levers to raise the plow out of the ground. At the time I bought this outfit plowing matches were scarce and plowing with tractors was in its infancy and I had to be guided by circulars. Last fall I went to a plowing match with tractors in Rock county. I live in Walworth county. A big manufacturer had his agents at the plowing match with his gang plows. I pointed out to him where his gangs failed and he owned up I was right. They are now making smaller gangs and engines for pulling than I have had any experience with. I have always advised all prospective buyers to purchase a little larger engine than they thought their work needed, for when you are stuck with an engine it does no good to swear and pound around. It is never possible for you to get anything out of the engine that is not in it. I have read in the papers that there is to be a big plowing contest this fall near Madison. If I am able to go I intend to be there. I have squandered a lot of money in the last fifty years I have followed threshing. I have been running steam and gas engines ever since 1877 and before that I run horse power rigs. According to what I read, I understand there are about eighty different manufacturers. I have only had experience with one gas tractor and the one I have had, I think, is as good as is made. I own 320 acres and my gas tractor is speeded low two miles per hour and high speed three miles per hour and pulls six fourteen-inch turf and stubble bottoms. It plows a strip seven feet wide. If the land is in the right condition it will pull it on high. If it is heavy plowing you will have to pull it on low. The tractor has a never-tiring power. About three or four gallons of gasoline is consumed per hour. My lands are pretty level and they are one-half mile long. One objection is that I cannot back up my plows, but there are small tractors that are so arranged that the plows are raised up and you can back up at the corners and plow all around. I have not seen these, but have looked over their circulars and read what they claim for them. I did not buy my gas tractor for plowing alone, but for threshing, hauling, shredding, filling silos and running portable saw mills, etc. Of course, gasoline is high now, but you can't feed a team for what gasoline will cost and oil is cheap. The more jobs you can work your tractor at the more profit. I would not advise a man with a very hilly farm to buy a tractor, for if the hills are very steep you could not climb them and pull the load. The tractor will pull an awful load in the highway on hard roads, but you must remember when plowing your land is a great deal softer than the highway land and all this reduces your power. I have not been able to use my tractor much in the rainy weather lately. I had seventy-five acres I wanted to plow, but it was so wet I had to put my teams to work and I am only about half through. I expect I will have to finish with teams the way the rain is rattling on the roof tonight. My land is mostly black prairie land. It is all underlaid with gravel and we have to go fifty to 120 feet to water. It is gravel all the way, but four to eight feet on top. I have plowed with a tractor when it was very wet, but it did not seem to do much harm. If it is too wet it takes your power away so you can't do much business. I think clay soils would be harmed if plowed wet, but black loam soil would not be harmed very much unless it was very wet. Most manufacturers have guarded against poor lubrication, but the operator must look after this or trouble will result. The worst place for dirt and grit is in the gearing. You should see that this is well protected.

Geo. H. Bromley.
Walworth Co., Wisconsin.

Surest Profits in Diversified Farming.

To the Editor:—I will endeavor to give some of my experiences in farm management. I think one of the most important factors in increasing farm



CHARLES LUNDBERG.
Winner in Polk County, Wis., Farm Management Contest.

profits is properly marketing the crops. The question of marketing the crop receives too little attention by the average farmer and, therefore, he does not receive the highest possible price. There are two things that tend to bring better prices for your crop. They are quantity and quality. Grain or live stock sold in carload lots brings a considerably higher price than in small lots. In case one farmer has not a carload of one commodity to sell he can easily co-operate with one or two neighbors. The other factor is quality of the goods. Of course, the best quality demands the highest price, and much can be gained in quality by grading and sorting at home.

To grow a crop that will be profitable it must yield well and be of good quality for market. In order to best insure this it is necessary to have good seed and to have the soil in good condition, both physically and chemically. Then when you have these sow your crops at the proper time. In my experience I have found early seeding the best. Many farmers make the mistake of planting too much of their farm to one crop. Some years they hit it, but more often they miss it, as the corn men did last year. More and surer profits can be expected in diversified farming. Work out a system of rotation which fits your conditions and follow it. Endeavor to build up the soil by growing legumes and keeping a lot of cattle.

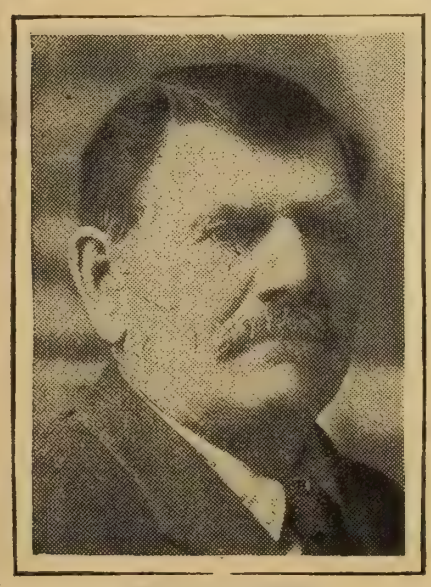
Another factor which I find important is that of harvesting the crops. Every practicable means of lessening the cost of production is necessary for the highest profits. One of the methods of harvesting which I have tried and which has proved very satisfactory is to feed the corn to young stock and steers in the form of bundles and provide plenty of clover pasture. I find that two acres per grown head is none too much of clover for a season. Last fall I tried a new method of feeding a bunch of steers. I turned them into a field of soft corn and let them harvest it. The steers did very well from it and I think it is a good method of feeding corn.

We have a farm of about 400 acres, with about 300 under cultivation. I trust the above items may be of interest to some of your subscribers. Would be glad to have any of them give their experiences along these lines through the Farm Forum.

Charles Lundberg.
Polk Co., Wis.

Showing Is a Big Help.

To the Editor:—The peck of Wisconsin pedigree barley which won sweepstakes at the state show of the Wisconsin Agricultural Experiment Association held at Madison this year, was the result of good seed, well



WILLIAM MOOS.
La Crosse County Wis., prize grain grower.

adapted and prepared soil properly handled. Of course, careful handling of the corn in harvesting and attention to fitting for the shows were also important factors in placing this particular barley above all others.

For a number of years we have been interested in pedigree grains and each year we have come to realize to a greater extent their value. Along with this realization has come a desire to make these grains better by forcing them to produce a greater number of bushels of better quality grain to the acre.

A year ago last fall we plowed a piece of potato ground that had manured clover sod turned down for potatoes in the spring. Early last spring this fall plowing was disked deeply and harrowed once before seeding. After carefully cleaning and grading the barley for seed, we sowed it broadcast with a seeder at the rate of one bushel and three pecks to the acre. After seeding we harrowed the field twice, which left it in an excellent condition.

When the barley was well ripened it was cut with a binder and shocked at the rate of nine bundles to the shock. Each shock was well capped with one or two bundles. While very little was damaged before threshing, all was badly discolored, due to the exceptionally wet year.

Each year for a number of years a corn and grain show has been held at our county school of agriculture at Onalaska under the auspices of the county order of the experiment association. These shows, the work of the school and the talks given by the speakers on the programs at these shows have been invaluable to me in my effort to improve my grains and to fit them for showing. Especially have the talks and judging work of Prof. R. A. Moore and Supt. C. P. Norgord been of great benefit.

Many feel that they have good small grains and corn, but until they get into competition they never know nor appreciate what a good sample really is nor what is required to produce it. There is nothing that will cause farmers to improve faster than to do some showing. They may not win at first, but by hard work and an effort on their part to learn finally succeed. To succeed in this work means to have improved—the showman must improve his products every year.

Wm. Moos.
La Crosse Co., Wis.

Increasing Farm Values.

To the Editor:—Intelligent and energetic farmers are fast learning that dynamite has a use, or should have a use, on every farm and that the farm equipment is not complete without a few augers, a blasting machine, a case or more of explosives and other blasting supplies.

By experience I find this one of the quickest and cheapest ways of increasing farm values.

That stumpy farm of yours which you have offered for sale will bring you considerably more money if you will spend a few dollars for dynamite and the services of a competent blaster.

The blaster who is really out for business is well supplied with proper tools and a blasting machine and with the aid of another hand or two can blast from fifty to 100 stumps per day.

A middle Tennessee farmer bought a farm merely for speculative purposes. For this he was offered $7,000. He refused this offer, asking $7,500. An experienced blaster finally persuaded him to have all the stumps cleared, pointing out to him that it would probably be a good investment. The blaster contracted to blast them into shape for hauling at 15 cents per stump for tools and labor.

The cost of explosives and other supplies cost this farmer $37.80. After the job was completed the cost of both material and labor was $157.80. The farmer then asked the man who had offered $7,000 for the farm to come again and look it over, which he did, and seeing the land in such shape that he could use modern machinery on it offered and paid $8,000 for it. The original owner's profit on the investment of $157.80 was $842.20, that being the amount he got for his farm net above what the purchaser had been willing to give him with the stumps on it.

Last winter I went to solicit a blasting job of a fellow. It being somewhat a new game with him he would not give me much satisfaction until I could prove to him what I could do with my guns, as he would call them. He at once became interested in seeing chunks fly into the air and I secured a nice job of work which lasted several days. He was real pleased with the job and cost.

A. H. Harris.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Failure to Get Catch of Clover.

Decrease in Clover Production in Some States, But States With Cool Climate Like Wisconsin Show No Loss.

THE federal department of agriculture has called attention to the serious decrease in the area devoted to red clover. In the northeastern states, for example, the acreage decreased 20 per cent in the ten years ending in 1909. In Ohio, an important clover state, the production of red clover in 1911 was only a little more than half what it was in 1897. Wisconsin and Michigan, however, showed a considerable increase in the clover area. In 1914 the total acreage was almost double what it was in 1897. However, during this same period the seed harvest in Illinois fell from 193,509 bushels to 42,409 bushels. This loss is attributed by the department officials to the increase in difficulty in getting a stand and in the less satisfactory growth of the crop when the stand is secured. Failure to get a catch of clover means loss of the money spent for seed and also loss of the anticipated benefit to the soil and loss of the hay crop for the year following the sowing. Professor Hughes, of Iowa, is quoted as saying that farmers of his state suffered a loss of one and three-quarter million dollars in 1910 and 1913 because of failure of the clover crop. In these particular years failure was due to drouths.

One reason for the increase of clover in Wisconsin and Michigan is that the failures referred to in other states have not occurred to any extent in this section. In Wisconsin the temperature and moisture conditions are right, as well as the soil. Clover delights in a cool, moist climate and in a fertile loamy soil containing plenty of vegetable matter, lime and phosphate. Inasmuch as one of the chief uses of clover is to improve the soil by putting vegetable matter into it farmers have a right to expect clover to grow at least reasonably well on soils whose fertility they wish to maintain or increase. The study made by the department, however, showed that it is a mistake to suppose that clover will grow on any soil, however much run down. Clover demands lime and phosphate. Farmers' bulletin No. 455, which may be secured by writing to the department of agriculture, Washington, D. C., says the following:

There are, it is true, conditions under which clover thrives on acid soils. These conditions are not yet fully understood, but they appear to be related to cool summers and plenty of moisture, which cannot be expected in most of the clover belt.

It is not always easy to tell when a soil has enough lime. There are several methods for testing the "lime requirement" of soils;, but for practical purposes, this may be roughly determined by the kind of plants growing on the land. If trouble has been experienced with red clover, but if a fair growth of timothy and of alsike clover can be gotten, the land probably needs some lime, say 1,000 pounds of ground limestone per acre; if timothy and alsike clover are crowded out by redtop, or if such weeds as sorrel are abundant, the land needs plenty of lime, at least a ton of ground limestone to the acre, and probably more. While the functions of lime both in the soil and in the plant are not thoroughly understood, we can confidently say that the clover plant is healthier when there is plenty of lime than when the soil is sour, and being healthier the young plants will withstand a dry spell better, and the old plants will come through the winter better than plants growing on sour soil. To sow red clover seed on so-called acid soils is usually to waste time and money.

The addition of phosphates has also been found to be very beneficial, but here again there is no way to tell how much is needed without trying. If clover has not done well on a farm, the need of lime or phosphorus or perhaps both is indicated and the farmer would do well to buy a bag or two of ground bone or of superphosphate and a ton of fine ground limestone and apply separately or in combination to a part of the field. The growth of the clover during the following season will tell the story of the needs of his soil. The bone meal a..d phosphate may be applied at the rate of 200 or 300 pounds per acre. Of course, if there is time and opportunity it will be well worth while to try different rates of application so as to find what rate will give best returns at smallest expense. On sandy soils potash may also be needed. For the healthy growth of the clover plant then, lime, phosphorus and potash must be present; the presence of nitrogen is of minor importance, though, of course, the young plants will do better if nitrates are available. If clover has not been on the land for many years it will be wise to scatter dirt from a clover field or to inoculate the seed with the nitrogen germ. When this is present the clover plant can draw on the nitrogen of the air.

The mechanical condition of the soil must be good; a soil that becomes hard, excluding the air from the roots, will not grow good clover. Lime will help loosen up such a soil, but decaying vegetable matter or humus is the greatest need of such land. This can be furnished in stable manure or by turning under other crops that are not as sensitive as is clover. A soil without humus will dry more readily than one with plenty of vegetable matter, and in a dry season this fact may be all important to the young plants. Most of our partly run-down soils have lost much of the organic matter they had originally. The growing of wheat and corn uses up the soil humus at a rapid rate and so the time comes when a severe drouth destroys the plants on a soil that does not hold the mosture to the extent that it formerly did. Then the plants die and the farmer blames the dry weather. While it is true that a severe dry spell may kill all vegetation, even when the soil is in good condition, it is just as true that clover plants can endure drier times and hotter weather on soil that has lime and humus, and that consequently produces stronger plants and holds what moisture there is, better than on a soil worn out by overcropping.

Good seed should, of course, be used; even though seed is high in price this year, poor seed is relatively higher than good seed, and should never be used. Clover seed is small and only those seeds can be expected to make plants that are dropped within a half inch or an inch below the surface. This is for the average land of clay loam soil; in sandy soil a little deeper planting will do no harm. Seeds dropped on the surface will sprout, if there is moisture, but the small plant is subjected to all the chances of hot days and cold nights and to the drying winds that so often come in spring, and they may be killed before they can get their roots down far enough for safety.

Clover is usually seeded on winter grain or with spring grain. In either event it is much better to put the seed in with a drill than to sow it broadcast. If sown with a drill only about one-half as much seed is needed as when sown broadcast and with seed worth around 20 cents per pound this may become a very important item. Less seed is needed because the chances of loss by leaving the seed on the surface or by having it drop into the cracks of a honeycombed field so deeply as to be lost, are avoided. If broadcasted the seed should be covered by running a light harrow over the field. This will not hurt the wheat and it is better to delay seeding the clover until the land can be harrowed than to sow on the frozen or wet ground and let the seedlings take the chances of the weather. It often happens that seed sown early germinates and then the young plants are killed by a late freeze. All this may be avoided by seeding a little later and harrowing the seed into the soil.

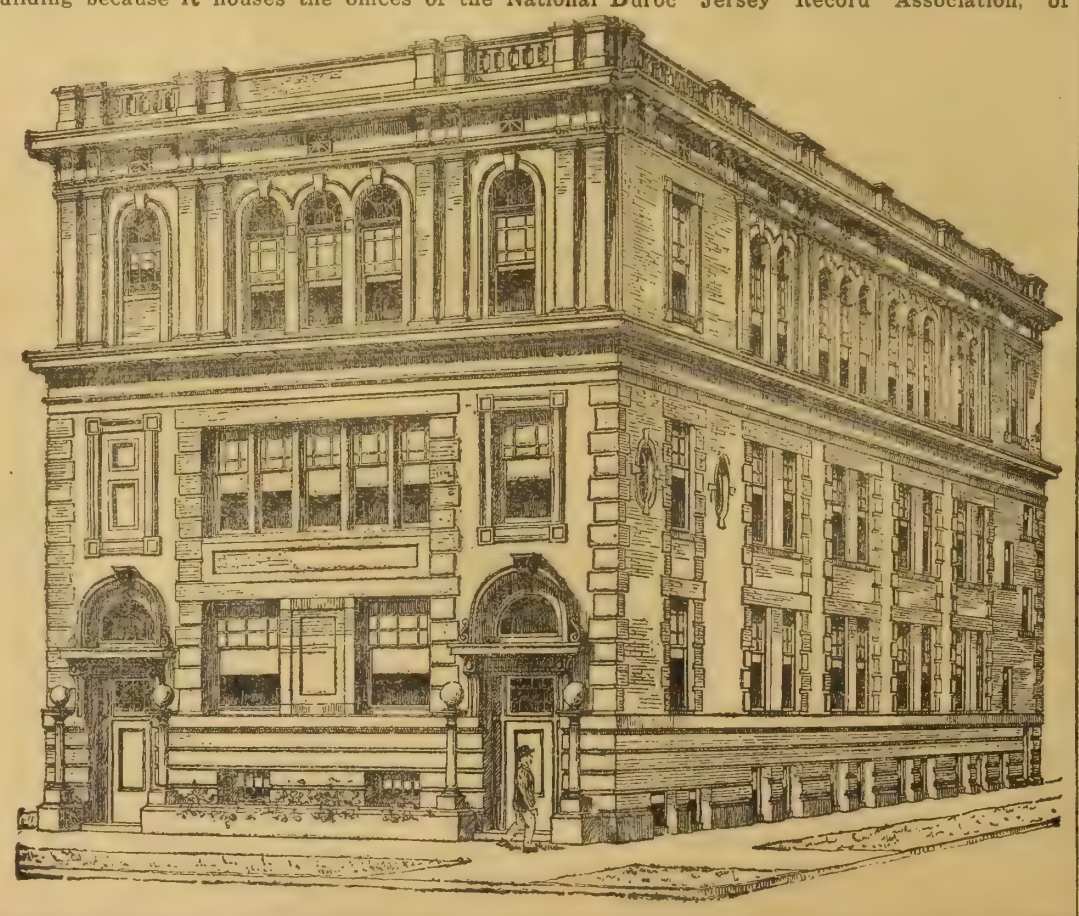
In many places, especially in the southern portion of the clover belt, clover is seeded in August, either in the corn or alone on a field from which small grain has been removed. This practice also has been successful as far north as Michigan and Connecticut, but is somewhat risky in those states. It is probable, however, that if rains follow the grain harvest it will pay to disk the fields at once and seed down to clover. Where this can be done by the first week in August there is every chance that the plants will grow strong enough to pass the winter safely.

The important facts that have been brought out by experience are, that seed should be covered as uniformly as possible and that the best depth in average soils is between one-half inch and one inch; that drilling saves seed and gives better results than broadcasting; that seed sown very early and left ly-

(Concluded on page 23.)

New Headquarters of National Duroc Jersey Breeders' Association, Peoria, Illinois.

A $50,000 building is shown in the accompanying illustration. Many readers of The Wisconsin Farmer have a special interest in this building because it houses the offices of the National Duroc Jersey Record Association, of Peoria, Ill. When the offices of the association are moved into this splendid structure it will be entirely paid for and it will afford ample room for expansion. The space not occupied by the offices of the association has already been contracted for with good tenants, so that the building, aside from its use in housing the offices of this important association, will bring in a splendid revenue. It is located two blocks east of the Peoria postoffice and it is in the same block with the Shrine temple. Secretary J. R. Pfander is most enthusiastic over the prospect of occupying this building about September 1st and in sending the accompanying illustration he assures The Wisconsin Farmer that Duroc Jersey breeders generally will take considerable pride in the new headquarters of the association because this building, in the opinion of Mr. Pfander, will stand for ages as a monument to the splendid achievement that has been attained by a great breed of hogs—a breed responsible for adding millions of dollars to the wealth of American swine breeders.

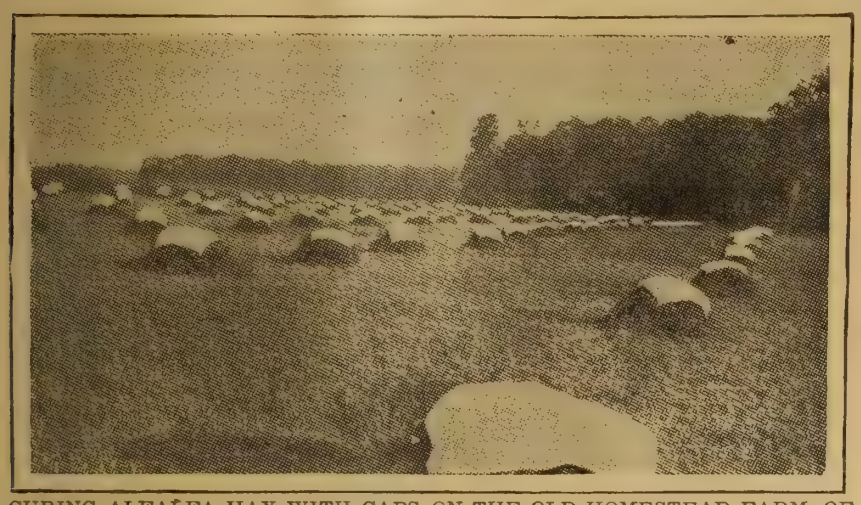


The Cutting and Curing of Alfalfa

Best Hay Is Made by Cocking and Covering With Hay Caps---By L. F. Graber, Wisconsin.

TO MAINTAIN a good stand of alfalfa nothing is so important as to cut the crop at the proper time. The first cutting will come in the early part of June —a trying time to cure the hay. The proper cutting stage is when the plants have just begun to bloom and the little shoots or sprouts at the crowns have made their appearance and are on the average not over an inch in length. To delay the cutting of alfalfa until the entire field is in blossom is a very poor practice. At this stage the little shoots or sprouts at the base of the stem which produce the second crop will have grown three to five inches in length. In mowing these will be clipped off and the second growth delayed two or three weeks. The third cutting will then not be ready until the middle or latter part of September. If the third crop is harvested at this time the alfalfa seldom secures sufficient growth before cold weather to withstand the winter. Many failures are due to late fall cutting. Alfalfa should never be cut after September 5th.

The best hay is made by cocking the alfalfa and covering it with hay caps, which insures protection against rains. The hay is bunched usually on the same day it is cut when in a good wilted condition. By allowing it to cure in this manner for two days, the leaves and stems dry out uniformly with little loss, and you get a bright green hay of the best quality.



CURING ALFALFA HAY WITH CAPS ON THE OLD HOMESTEAD FARM OF W. J. JAMISON & SONS, OUTAGAMIE COUNTY, WIS.

When alfalfa hay is harvested on a large scale, or if labor is scarce, hay caps are not always used. After the hay is well wilted it is raked into long windrows with a side-delivery rake and allowed to cure here for two days. It may be loaded with a drum hay loader or hauled in with sweep rakes. Alfalfa hay will stand more rain than either timothy or clover.

As a hay crop alfalfa excels all others in yields, feeding value, drouth resistance and soil enrichment. Yet it has its drawbacks and it is not always easy to get a good stand. It is a rather particular crop, requiring certain soil conditions and proper treatment. The beginner in alfalfa growing must first of all be a student of alfalfa. He must study the crop and learn its requirements. If he is not willing to pay attention to such important details as inoculation, liming, proper seeding methods, cutting at the proper stage and others to be mentioned he had better not try to grow alfalfa. Start in a small way with three to five acres and grow up with the business.

During the past three years over 1,000 reports on alfalfa growing in Wisconsin have been received by the alfalfa order, Wisconsin's Alfalfa Growers' Association. These reports clearly show that the principal causes for failures with alfalfa in Wisconsin are as follows:

1. Failure on part of farmer to inoculate the soil.
2. Attempting to grow alfalfa on sour or acid soils without liming the land.
3. Poor preparation of the seed and improper methods of seeding.
4. Weeds—heavy growths of which crowd out the alfalfa.
5. Too thick seeding of the nurse crop. Not over one bushel of grain should be sown with the alfalfa and if oats are used it should be cut for hay.
6. Late seeding. Seeding after August 15th is a dangerous practice. Sufficient growth is often not secured before cold weather sets in so that the alfalfa may stand the winter.
7. Late cutting. Cutting alfalfa after the first week in September has resulted in serious winterkilling of many otherwise good stands of alfalfa. Alfalfa should have at least six to eight inches' growth to afford sufficient winter protection.
8. Pasturing. Late and close pasturing are particularly dangerous.
9. Poor soils. Although alfalfa is a great soil enricher it requires at least a medium fertile soil. Poor soils should be well manured.
10. Low, flat, poorly-drained soils. Alfalfa requires a well-drained field. On flat, heavy clay soils which hold water from melting snows and heavy rains in the early spring alfalfa may be heaved out by alternate freezing and thawing weather. A sloping field which will provide ample run-off for surface water is more desirable.

For alfalfa choose a well-drained field having preferably a gentle slope so as to prevent an accumulation of water from melting snow or heavy spring rains.

Poor land should always be well manured. A medium clay loam is best. On heavy clays winterkilling is more apt to occur. Light, sandy soils generally require lime and manure. Alfalfa does well on river bottom lands but peat soils are too sour or acid.

It is best to have alfalfa follow some well-cultivated crop like corn, potatoes, tobacco, or sugar beets where the soil is freed of weed growth. Never put alfalfa on sod land, for the blue grass will cause difficulty. A virgin soil should always be first subdued by growing several cultivated crops to get the soil in good physical condition.

Inoculation often spells success where otherwise failure would result. It is easy to do and decidedly important. Spread a ton of soil taken from a successful alfalfa field or from the roadside where sweet clover is growing, on each acre of the land you are to seed to alfalfa. Do this just before sowing the alfalfa seed, and harrow it in. Then you have introduced the proper alfalfa bacteria in the soil which are so essential in securing a healthy, vigorous growing alfalfa crop. And, remember, a field once properly inoculated is always inoculated.

All farmers are advised to mix a quart of alfalfa seed per acre with the timothy and clover seed when seeding down, as this will get a few alfalfa plants established in the field which will become bacteria distributers and thus inoculate the soil for future crops of alfalfa.

Alfalfa will not do well on sour or acid soil. Before growing alfalfa the soil should be tested with blue litmus paper, which can be secured from a

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Think of it! ONLY $302.00 for one of the very latest PLAYER PIANOS

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the ENTIRE OUTFIT, mind you, like the above actual $550 worth for only

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druggist. Take a handful of moistened earth from a few inches beneath the surface of the ground and press into a ball. Break this mud ball into halves and place a strip of blue litmus on one of the halves and cover with the other. After five minutes examine the litmus paper, and if it has changed in color from blue to a distinct pink or becomes spotted with pink spots the soil is acid and needs lime for successful alfalfa growing.

On sour soils from two to four tons of air-slaked lime or ground limestone rock or marl or lime refuse should be applied. Whatever form is used it should always be applied to the surface of plowed land and harrowed or disked in. It may be put on in the fall or early spring, prior to seeding the alfalfa.

For the beginner seeding the alfalfa alone gives the best results. The soil is plowed in the fall or early spring and limed if necessary. Then the field is disked and harrowed often enough up to the first of June or July to clean the land of weeds.

Especially on fields which has grown alfalfa successfully seeding with a nurse crop gives good results. Where a crop of early potatoes has been grown the alfalfa may be seeded after their harvest, but not later than August 15th. Seeding alfalfa after this date nearly always results in failure, as the crop does not get sufficient growth before the first killing frost to withstand the winter. In those sections where canning peas are grown and harvested in June or the first part of July the soil may be disked and harrowed and inoculated immediately the peas are harvested and the alfalfa seeded at the rate of twenty pounds per acre with good results.

New Combination Tool For Land Clearers.

The new branch of the agricultural engineering department of the Wisconsin College of Agriculture which is devoted entirely to a study of the problems connected with clearing cut-over lands, has just devised a handy new tool to be used in dynamiting operations. It is a combination fuse cutter, cap crimper and fuse slitter, all in one.

There has been dissatisfaction with some combination crimper and fuse cutter tools on the market because the cutting edges do not stand up under the wear. They become dull, pinch the fuse off and soon leave a very ragged edge.

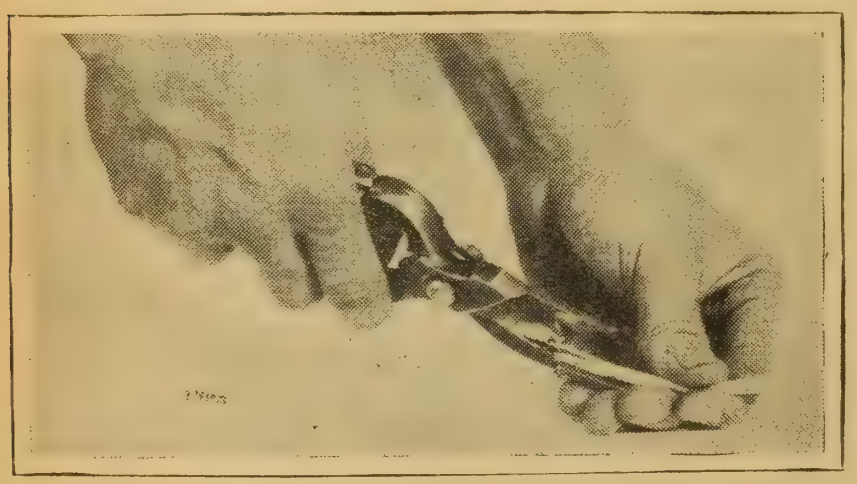
A blasting cup is one of the most sensitive agents employed in blasting operations. The white mercury fulminate contents should not be disturbed in any way. The fuse should slip easily into the cap and should never be punched or twisted against the explosive. Since the fuse is made just a little smaller than the cap there is no difficulty in using the cap on the fuse, if the fuse has been cut squarely. However, if the fuse end has been pinched flat or has a rough, ragged edge, it sometimes has to be worked into the cap, which means the fuse may be twisted against the fulminate. This is poor practice and may be avoided by having a clean cut, square fuse end.

The tool which is shaped on the pattern of a pair of pruning shears guarantees a clean cut. The cutting blade can be sharpened and adjusted. A cap is crimped on the fuse by the crimping device which is made directly under the axis. A firm, smooth and tight connection is made.

The idea of cutting fuse with a pair of pruning shears is not new, neither is the shape of the crimping device especially novel, but it is claimed that the slitting device on the end of the cutting blade is a new invention and very useful in splitting the fuse.

Ordinarily, when a fuse is to be lighted, the end is slit with a knife to expose the powder. If it happens to be a cold day the bitulitic cement used as a water proofing agent sometimes becomes very tough so that the knife often makes a poor opening. The fingers are often cut in performing this work.

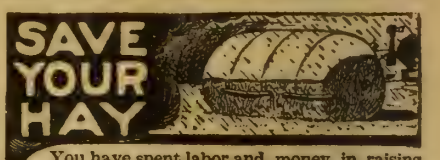
The slit itself is not always satisfactory, because if the opened ends drop over the powder spills out and a quick split is not obtained. By using this new tool a slit is made only through one layer of fuse casing. After slitting the fuse may be left for considerable length of time on a dry day and the powder will not fall out. When all the holes have been loaded the operator can open the slitted end with the thumb nails and expose a small pan of dry powder. A match with a slow-burning head can be scratched near this little cup of powder and forced into it before the flare has finished. A sure "spit" can be obtained in this way on the windiest day, thereby making it safer to shoot more holes at one time.



HANDY NEW TOOL USED IN DYNAMITING OPERATIONS IN LAND CLEARING.

Towns Plan Ahead For Farmers' Week Programs.

Four towns have already made formal applications and have been granted one week farmers' extension courses to be held next winter. These are Algoma, Mauston, Grand Rapids and Grantsburg. Other towns are getting in line and it is expected that more than the usual number of farmers' courses and women's schools will be conducted in 1916-17 by the agricultural extension department, University of Wisconsin. According to the rules, a committee desirous of securing any of these agricultural or home economics courses for their town must file an application accompanied with a list of not less than fifty farmers or their wives, who are likely to be present at the sessions. Complete details regarding the courses may be obtained upon writing to K. L. Hatch, college of agriculture, Madison.



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Crop Conditions Are Improving.

Grains and Grasses Respond to Warmer Weather---Continued Warm Weather Is Needed---Corn and Potato Planting Is Late.

Barron County.—Small grain is seeded and coming up nicely. Little corn has been planted yet because of wet weather. New seedings of clover and alfalfa wintered well and are making a good growth. About the usual acreage of potatoes will be planted; some farmers are treating seed potatoes with formaldehyde.—F. J. K.

Brown County.—Spring is cold, wet and backward. Seeding is nearly done, except on low lands. New grass seeding is good, but old meadows are poor. Rye winterkilled some and will be about 60 per cent of a crop. Corn and potato planting has begun. Pastures are short. Fruit prospects are good. Pure-bred live stock is in demand at good prices.—J. D. McAllister.

Clark County.—Abundance of moisture and warmer weather has caused a general improvement in meadows and pastures. Grain is up and looking thrifty. Winds have been severe, but the crops have not been damaged. A few silos were blown down and other buildings damaged. Some corn has been planted, but most farmers are still preparing the ground; considerable plowing is to be done yet. Some potatoes are in. Apple trees show an abundance of blossoms. Colts are exceptionally strong. A condensery at Neillsville will begin operations on July 1st.—Louis Buddenhagen.

Crawford County.—Corn planting is on in full blast. About the usual acreage will be planted. The spring seeding was a little late, but is now doing nicely. Pastures are in good condition and quite a few cattle have been shipped here to be put on pasture. Clover winterkilled badly. The alfalfa acreage is not large, but the crop wintered much better than clover. Many farmers seeded alfalfa this spring. There is a shortage of brood sows and the crop of pigs is light. Most farmers are buying grain and mill feeds and hoping for an early harvest. Interest in dairying is growing in this county; a cheese factory is being built near Prairie du Chien. Dairymen and hog raisers are prosperous.—A. M. Laird.

Douglas County.—Small grain is showing up fine. Meadows and pastures are doing well. Potato planting has scarcely started on account of cold, chilly weather. Cows are doing better as the pastures improve. Spring pigs are selling at $3 each. Heifer calves are in good demand.—J. N. Ottun.

Dunn County.—Grains and grasses are coming along with a rush, because of improved weather conditions for the last few days. Corn planting is nearly done. Fields that were planted early are sprouting nicely.—J. D. Millar.

Iowa County.—Oats, barley and other small grains are looking good; they are a little late because of cold weather, but the growth is even owing to the good rains during sowing time. Corn is backward because of cold, damp weather and poor quality of seed. Most of the farmers are through planting corn. Pastures are slow. Fruit trees are starting to bloom. Cattle came through the winter fairly well, considering the scarcity of feed.—J. M. Blotz.

Jackson County.—The cold, wet weather causes much delay; not more than 5 per cent of the corn is planted. Small grains are coming nicely and the grass looks good. The demand for seed potatoes has not been great as yet, which would indicate that the acreage will not be increased above the average.—P. W. Jones.

Juneau County.—Small grain is coming slowly because of the backward season. Heavy winds for the last two weeks has damaged the spring grains on sandy soil. Rains have delayed corn plowing, and cold weather has held back pastures. The hay crop will be good if warm weather comes. A good acreage of potatoes will be put in this season. Fruit trees have a fair bloom and should make half a crop at least. Stock are on pasture, but are thin for this time of year. Dairymen are doing well. Horses are in good condition, due probably to the extra good oats. Feed is high priced and breeding hogs are thin. Sheep are in good condition.—C. E. Haskins.

Langlade County.—Seeding of small grain is finished and most of it is up. Ground for corn and potatoes is getting into shape. Meadows and pastures are green, but short. Fruit trees have plenty of bloom. Farmers are having good luck raising colts. Weather is wet and cool.

Lafayette County.—Weather is getting warmer. Corn ground worked exceptionally well this year. Planting is nearly finished. Small grain, meadows and pastures are looking fine, but are late. Apple and plum trees have heavy bloom and small fruit prospects are good. Stock are on pasture.—W. J. Martin.

Manitowoc County.—Seeding of small grain is nearly done except in a few low places. Winter wheat and rye are not doing well because of recent cold, rainy weather, but a few warm days would work wonders with these crops. Pastures are short and barn feeding is continued. Farmers are preparing ground for corn; more corn will be planted this year, because many clover fields which killed out will be put in corn. Apple and cherry trees are covered with blossoms.—Edward E. Straka.

Outagamie County.—Early seeding of grain is coming up and looks fine; late seeding is just starting. Pastures and old meadows have improved. A great deal of the clover was killed by late frosts and sleet, and the land has been plowed up for corn. Only a small acreage of winter wheat is left. Little corn planting has been done, but if the weather continues warm, it will be rushed. The acreage of potatoes will be about an average. About half of the young colts have been lost. Pig crop will be about half normal. Fruit trees are in blossom and look fair; small fruits are doing well.—Harry Lepplu.

Rusk County.—Season is wet and backward. Over one-half the seeding is done. A few potatoes have been planted and some report that the seed is rotting in the ground. Some corn will have to be replanted; seed corn is scarce and poor in quality.—V. V. Miller.

Shawano County.—May has been cold and wet. Pastures are backward. Prospects are good for a heavy hay crop from the new seeding. Small grain looks fair. Corn is over half planted. The number of young pigs is less than usual; the litters are small. The percentage of calves is larger than usual. Farm labor is hard to get.—M. J. Walrich.

St. Croix County.—Weather continues wet and cold; a light frost occurred a few night ago, but no damage was done except to some of the fruit on low-lying land. Grain crops are looking fairly well; the stand is better than usual in the western part of the county. On heavy clay soil in the eastern half of the county, seeding is barely finished. Meadows look good, but the growth is slow because of lack of warm weather. Good acreages of corn and potatoes have been planted—more potatoes will be put in this year than last. The pig crop is short. Cattle are thin and good pasture is needed to bring them up in flesh. Dairying is receiving more attention than heretofore. The high price of dairy products will lessen the supply of beef cattle.—Stephen Everson.

Trempealeau County.—Season is late, but crops are starting nicely. Most of the winter grain winterkilled, but some pieces planted early are good. Spring grains are coming on nicely. Corn planting is about half finished. Old farmers say corn planting is unusually late this year. Wet, cold weather has delayed all spring work. Stock is in pasture and timothy, alsike clover and June grass pastures are splendid. Much clover of the new seeding winterkilled, and in some places which produced three tons last year, hardly a trace can be found. Because of the late spring, many farmers are short on ensilage and hay. Few gardens have been planted and some of the early vegetables were killed by frost.—John W. Lowe.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Corn Contest Work in Rock County

A Review of What Is Being Attempted in the Way of Improving Corn Yield--By Allen B. West, Agricultural Agent.

IN 1913 the Janesville Gazette inaugurated an acre corn growing contest among the Rock county boys under the management of Mr. Noyes Raessler, of Beloit. This contest created so much interest that in the following year, 1914, the work was taken over by the Janesville Commercial Club, who are now holding their third contest. Cooperating with them in this work are the agricultural department of the Janesville high school and the county Young Men's Christian Association. Mr. Allen B. West, teacher of agriculture at the high school, is director and secretary. L. A. Markham, of the Young Men's Christian Association is field manager.

The contest is limited to boys under twenty years of age who are residents of the county. Except in the case of young members each contestant must do all the work of preparing the ground, planting and cultivating an acre plot, which may be in a field alone or may be a portion of a larger field. The younger members who are unable to do the heavier work may hire it done and the others may have help in their work. The field manager appoints supervisors, one for each neighborhood, who advises the boys as to the care of the corn, measures the acres and weighs the corn as it is husked.

Each boy is to keep a complete and accurate record of his crop on blanks furnished by the committee.

These records give a description of the acre plot with the kind of soil and the drainage. It also gives the kind and amount of fertilizer used and the variety of corn planted. Dates of plowing and planting are recorded and number of times harrowing, rolling or floating is done. How the corn is planted is also recorded and the manner and number of times the corn is cultivated. Damage done by animals, insects or birds is noted and accurate expense account is kept in which all the labor is charged at 15 cents per hour with 10 cents for each horse and manure at $1 per two-horse load. Rent of land is estimated at $5 and cost of fitting and plowing $4.

The record also shows dates of husking and the number of pounds carefully weighed in the presence of the local representative, who also signs the report.

Seventy-five pounds of ear corn constitutes a bushel in the contest. The varieties recommended for planting are the Silver King (Wis. No. 7), Golden Glow (Wis. No. 12), Murdock's or Reid's Yellow Dent.

Entries must be made to the Janesville Commercial Club, Janesville, Wisconsin, on or before June 1, 1916.

The best ten ears are to be brought (or sent) to the office of the commercial club one week before the awarding of the prizes, which date will be announced later. The exhibits will remain the property of the grower and will be returned to him, but the commercial club reserves the right to exhibit them in other corn shows.

Prizes are awarded on the following basis:

1. Yield of bushels per acre	50 Points
2. Quality as shown by exhibit of best ten ears of corn selected from acre plot	20 Points
3. Financial account showing expenditures and value of labor in growing crop	20 Points
4. Written record of growing crop	10 Points
Total	100 Points

Suitable awards will be given the winners of the contest and an educational and recreational trip will be given all who complete the contest.

In 1914, which was a good corn year, forty-two boys completed the acre corn-growing contest, averaging eighty-nine and one-half bushels to the acre, thirteen of the boys raising over 100 bushels to the acre, the highest yield being that of 132 bushels and sixty-four pounds, which was not far from the record yield of the state.

The season of 1915, as we all remember, was a most unfavorable corn year. Nevertheless, about forty boys completed the contest and the highest yield was not so far from that of 1914, it being 123 bushels, this being the only acre yielding over 100 bushels. There were nine boys who raised over seventy bushels per acre, at a varying cost of from 15½ cents to 47 cents per bushel.

There are already about fifty entries in this contest for this year.

Beside the acre contest the commercial club of Janesville is also conducting a ten-ear corn contest for the younger boys and girls, or those under thirteen years of age.

In this the seed used is the Silver King and Golden Glow and is furnished free by the commercial club.

The teachers of the county are cooperating in this movement and the applications are made either through the teachers or to the county superintendent, O. D. Antisdel, Janesville, the applicant receiving a pint of pure-bred seed after making his application. A few days prior to the time set for awarding the prizes (to be announced later) the contestant is expected to send his best ten ears to the office of the commercial club. A list of twenty or more prizes will be offered to those showing the best ears.

This contest is proving very popular, there being already 220 entries. There is still room for others.

Vitrified Tile Construction.

Those farmers who have been making a study of construction materials have been greatly interested in vitrified tile for use in building barns, hog houses, henhouses, corncribs, silos, granaries, garages, machinery sheds, pump and power houses, ice houses, etc. Buildings erected of this tile are

A 10,000-BUSHEL CORNCRIB AT FARMERS' ELEVATOR, YALE, IA.

fireproof, rot-proof, warp-proof and vermin-proof. These buildings are warm in winter and cool in summer. They are easy to clean and handsome in appearance.

A special tile is now being made for various types of buildings. Accompanying illustrations show use of these tile for corncribs. Such a corn-

DETAIL OF TILE CORNCRIB CONSTRUCTION.

crib is not expensive to build. It has nearly 75 per cent of the wall surface open, hence the grain dries well and molding is prevented. This crib may be equipped with either outside or inside elevator and has built-in shoveling trenches. Such cribs may be built any size. It is not infrequent that they are built to hold 10,000 bushels. There is also being made a special tile to be utilized in silo building. These tile are burned hard and are waterproof. They are curved so that when laid end to end they make a true circle, leaving a smooth wall without angles to form an air-pocket. These tile are hollow. Each tile contains two separate dead-air spaces, which prevents any quick change of temperature in the silo. They hold the warmth in the silo and prevent freezing of the silage. Such construction is of a permanent character and such a silo is strong enough that it will not blow over. It needs no painting and repairing and will last almost indefinitely.

In addition to these special corncrib and silo tile the Adel Clay Products Company make two styles of special clay building blocks. One of these—Adel Texture Tile—is specially intended for residences. The other is suited to the erection of barns, garages, hog and hen houses and similar buildings. Both permit of fireproof construction and have all the advantages of any imperishable material.

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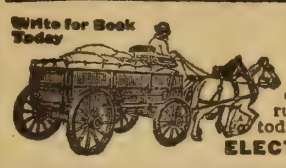

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IN AND AROUND WISCONSIN.

BEEHIVES ON THE NICK SCHLUTER FARM, MANITOWOC COUNTY, WIS.

The annual summer meeting of the La Crosse County Guernsey Breeders' Association will be held on June 10th at West Salem and Secretary Campion expects this to be the banner meeting of the organization.

The summer meeting of the Eau Claire County Jersey Breeders' Association will be held June 21st at the farm of C. C. Smith, four and one-half miles west of Augusta. W. H. Clark, the well-known Jersey breeder at Rice Lake, will be the speaker.

Rock county boys who are entered in the good roads contest are going to try an experiment this summer by growing beech nuts. George S. Parker, of Janesville, has distributed among the boys some nuts he secured directly from Denmark and they agreed to plant and look after them to see if they would grow in Wisconsin.

Charles Brown, of New Rome, Adams county, has taken a contract to furnish 200 crows to the United States Department of Biology, which is conducting an investigation to determine which species of birds is the most beneficial to farmers. They must be dressed under department regulations and for each crow he will receive 10 cents.

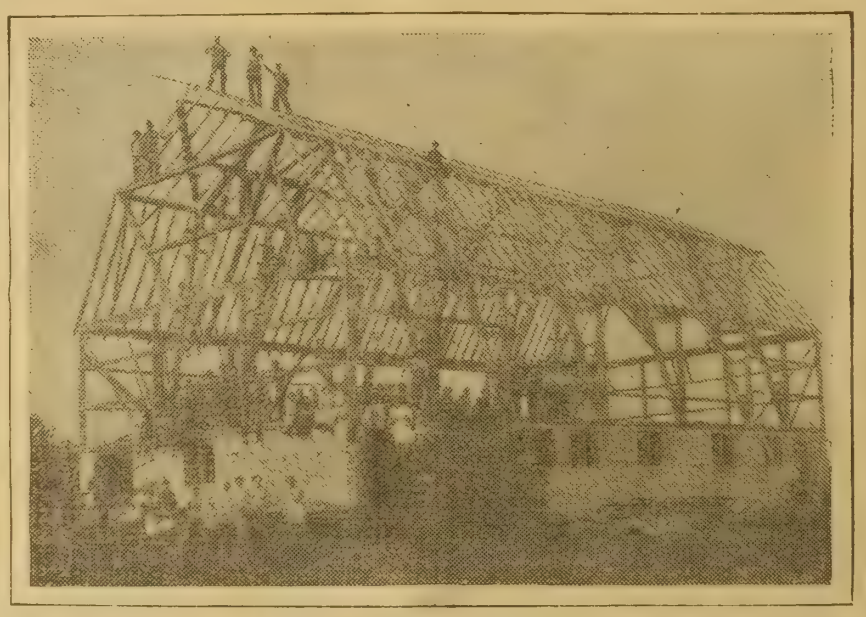
St. Croix county Guernsey breeders will gather at Roberts on June 6th at the farm of George Roberts for their annual summer picnic. Sec. Lloyd Rundell advises that twenty prizes have been offered for the high school judging contest and music will be rendered by the Roberts military band. He expects this to be the banner meeting of the association.

For the purpose of getting in closer touch with their rural neighbors the business men of Eau Claire set aside May 25th as "Farmers' Day." The day proved a big success and was enjoyed by many farmers and their families who took advantage of this hospitality of the Eau Claire business men. Everything was done to make visitors feel at home and automobile rides, free picture shows, etc., added to the entertainment.

Hardwood ashes, which are plentiful in Upper Wisconsin, are to be converted to the manufacture of potash at Antigo, Langlade county; where a plant has been located. The company expects to ship wood ashes from sawmills within a radius of from twenty to thirty miles. Ashes removed from the leaches still contain sufficient potash to be valuable for fertilizer. Unbleached hardwood ashes contain too much of this element to be used for fertilizer unless used very sparingly.

Stoughton, Dane county, is now assured a creamery through an arrangement with local boosters and farmers with the A. J. Olson Milk Company. Stoughton is in the heart of the tobacco-growing country and a campaign has been going on for several months to divert the attention of the farmers more to dairying. The operation of a creamery at Stoughton will do much along this line. Local enthusiasts have raised $25,000 to be held by them in trust for the building or purchase of the creamery. It is proposed to establish it in one of the tobacco warehouses there if it can be purchased and if not a new building, 40x200 feet, will be built. The creamery company expects it to be in operation before September 1st.

The Central Wisconsin Cheesemakers, Buttermakers and Dairymen's Association will hold a cheese scoring contest in connection with the meeting which will be held at Marshfield on June 10th. It is planned to make this the largest exhibition ever held by the association and a fine list of prizes have been offered for the winners.



JOSEPH NEUMEYER'S BARN 44x100 FEET ON HIS 200-ACRE FARM, MANITOWOC COUNTY, WISCONSIN.

Pierce county Guernsey breeders will hold their annual summer meeting at the farm of Rundell Bros. and their sister at Rock Elm, on Saturday, June 3d. Secretary Hammer notifies The Wisconsin Farmer that there will be a judging contest and an address by L. P. Martiny, of Chippewa Falls. Indications point to a successful meeting and a large attendance.

On June 17th the Minnesota State Horse Breeders' Association will meet in Lake City, Minn., in conjunction with the Horse Breeders' Association of Eastern Minnesota. Both associations have a large following of interested horsemen and since their interests are mutual much good is expected from the co-operative meeting.

The Portage Prairie Holstein-Friesian Association which will hold its summer meeting at Randolph on June 17th now has twenty-seven members interested in breeding pure breds and it is hoped to eventually conduct sales in that community. The officers chosen at the last meeting are: President, J. W. Hutchinson; first vice president, Jacob Burbach, Friesland; second vice president, W. W. Bird, Cambria; third vice president, E. A. Gibbs, Fox Lake; secretary, John Bradley, Randolph.

The fourth annual live stock show at River Falls, Pierce county, will be held on June 3d on the Normal school campus. Judging will be done by W. S. Moscrip, of Lake Elma, Minn., and G. C. Humphrey, of Madison.

CEDAR LOG, FOUR AND ONE-HALF FEET THROUGH, FIVE FEET FIVE INCHES AT BUTT, CUT ON BURKHARDT'S FARM, MANITOWOC COUNTY, LAST WINTER.

Frank W. Harding, of Waukesha; James W. Martin, of Gotham, and Fred Pabst, of Oconomowoc, represented Wisconsin on the International Stock Exposition Association Board. They attended a recent meeting at the Union Stockyards in Chicago, where arrangements for this year's International were discussed.

The Sauk County Farmer is the title of a new farm paper that has made its appearance. It is published at Baraboo and is edited by V. S. Pease and the first number of four pages is filled with interesting matter relative to the farm life of Sauk county.

The recent milk strike in Chicago has resulted in organization activity in Wisconsin districts which ship to that market and a new local has been formed among farmers at Beloit, Rock county, and another is proposed at Brooklyn, Wisconsin. There are 300 shippers at Brooklyn. The Milk Producers' Association is enlarging its territory every week and is reaching farther into Wisconsin, the plans being to reach into every outlying district from which milk may be shipped into Chicago and thus take care, during any crisis, of any "strike breaking milk."

Wisconsin contributed last year more members to the Guernsey Cattle Club than any other state in the Union. This announcement was made at the annual meeting of this organization which was recently held here. The members of the club voted to recommend fairs in 1916. In the list approved by the club appears the names of J. R. Danks, of DeSota, Vernon county; William Erbach, Athens, Marathon county; Frank E. Fox, Waukesha, Waukesha county; Charles L. Hill, Rosendale, Fond du Lac county; William M. Jones, Waukesha, Waukesha county, and Charles Solveson, Nashotah, Waukesha county.

In spite of the fact that to most of us Milwaukee suggests busy streets, manufacturing plants and well inhabited residence districts, an agricultural inventory will be taken of Milwaukee county this summer. According to the last official census figures, Milwaukee county has about 1,600 farms. The total area in improved land in the county is given at 60,700 acres. Land and farm buildings are valued at nearly $17,000,000 and constantly increasing. Land will be examined in all parts of the county and from the data gathered a soil map will be made to show the extent and distribution of the different types of soil. Samples of each kind of soil will be sent for analyses to Madison and to the United States Department of Agriculture at Washington.

Caring For Crowd at "National."

Realizing that the hospitality of Springfield and its neighbors will be on trial on the occasion of the National Dairy Show, October 12th to 21st, the Hotel Men's Association, the convention bureau of the board of trade and the directors of the Eastern States Agricultural and Industrial Exposition have united on a program which will guarantee suitable accommodations for every person who seeks reservations in advance of the opening of the show.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Making Farmers in a City School.

New Richmond High School, With Its Agricultural Course and Demonstration Work, Is Interesting More Than 100 Boys.

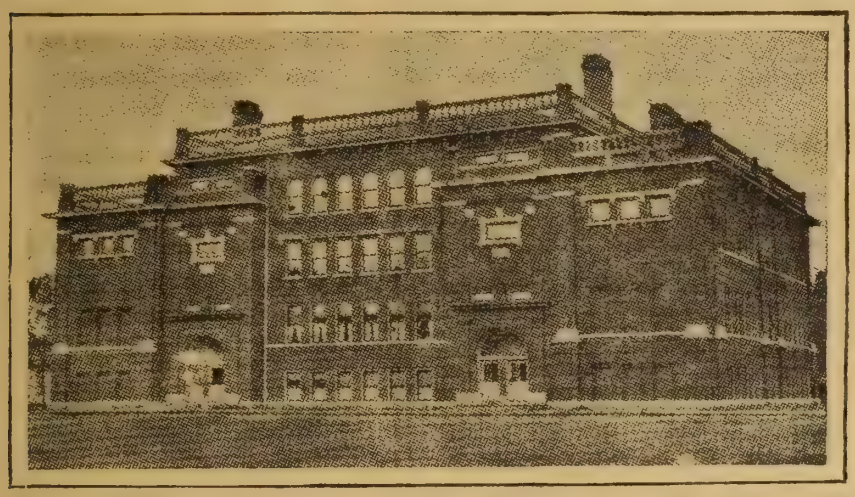
NEW RICHMOND, St. Croix county, Wisconsin, has a high school in which the farmers and the townspeople interested in better agriculture have reason to feel proud. The interest in which the farmers are taking is indicated by the large number of farm boys who are profiting by the course in agriculture provided in this city school which, aside from teaching them the fundamentals of a better agriculture, is giving them at the same time practical experience in various farming operations which will prove of inestimable value when they leave the school for the farm.

Steers and some of the boys in the New Richmond High School agricultural class. The feeding, care, etc., of these steers was left to the boys.

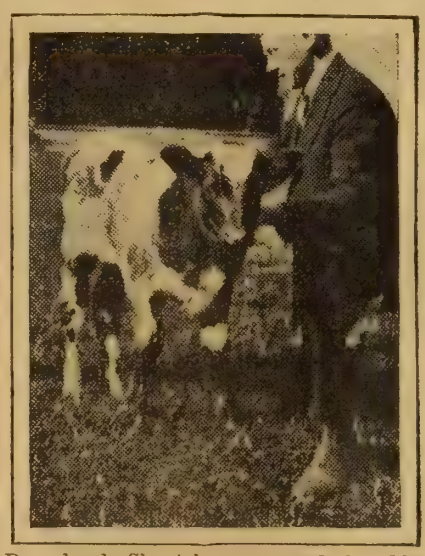
Wisconsin now has seventy odd city high schools which have agricultural courses, and the New Richmond school is among this number. All are doing good work while some are doing better than the others and the success at New Richmond has been the greatest the past year, which fact is due to the increasing confidence in the course and the knowledge that it is of practical value to a boy—not only one from the farm but also a boy in the city. There were over a hundred boys in the agricultural classes this past year. Many were from city homes and many from the farms in that vicinity but the work, under the direction of Harold M. Stephens, professor in agriculture, has been so laid out that it is of value to all boys. The same methods in planting, cultivating and harvesting potatoes are adapted on the city acre as on the farm ten acres; the same holds true of corn and other crops as well as the care of stock, and the boy who has finished such a course is certainly better fitted for work on the farm when he leaves school.

When Mr. Stephens took hold of the work two years ago he set out with one end in view, and that was to make the agricultural course of practical, everyday value. If this could be done and it has been done, he figured that the criticism often heard from farm boys that such courses are "too long on theory and too burdened with book agriculture" would be overcome. He also believed that more farm boys would take the course if it were made practical, and in this his hopes have been realized. Books are merely a part of the work. Just enough book work is given to teach the matters not available otherwise and then comes the actual experience of caring for cows, feeding steers, putting in and harvesting crops, etc. What is learned from the books is thusly put into practical use.

The first year Mr. Stephens arranged for some ground near the high school and there conducted an ear-to-the-row seed corn experiment with the boys. He also put in a half acre in potatoes and in this way got the boys interested in experimental work. Then each boy was required to care for a certain plot in connection with his father's farm or home garden. Each boy had to grow an acre of something—whether it be corn, potatoes, or something else. The choice of crop was left to the boys, and the fact that some of the boys took care of several acres demonstrates the interest shown in the work. With the experimental work carried on the two acres near the school this afforded each boy the opportunity to learn at first hand how to farm, and Mr. Stephens, pleased with the results, decided to go into the practical side on a little larger scale the following year.



NEW RICHMOND HIGH SCHOOL WHERE MORE THAN 100 BOYS ARE LEARNING THE A B C'S OF AGRICULTURE.



Pure-bred Short-horn owned by Mr. Stephens, instructor in agriculture.

Last fall, just before school opened, he rented on his own responsibility a twenty-acre farm adjoining the city and only a few blocks from the school. This farm was in pasture with an old barn, and Mr. Stephen's thought was to have the school boys do the chores about the farm, fix it up for cattle and do other work that is an everyday job on the average farm. Each boy, of course, was required to tend his acre as before, and this work is being carried on this spring. One boy on a quarter acre last year got a yield of sixty-two bushels of potatoes which was better than his father had.

The barn was in need of repairs, so the boys with their hammers and saws went to work and made the required improvements so that it would take care of several head of dairy cows. Stalls were built, a gas engine was set up to pump water to the tank in the barnyard and another gas engine was set up inside for grinding and cutting feed.

Mr. Stephens then arranged for a cow test which continued through the winter and will end in June. This was planned so the boys interested in dairying might get first-hand experience in caring for the cows. A cup was offered to the cow producing the most butter fat during that period at the smallest cost for feed. The management, feeding, etc., was left to the boys who were required to keep an accurate account of all the operations which in effect was a lesson in farm bookkeeping and farm management. Mr. Stephens had four cows of his own and arranged for the loan of the others.

Some were interested in the beef breeds and in experiments with feeding steers. So two steers were bought last fall, pastured and fed for seventy-five days and then sold at a net profit of $26.13. This work was also done by the boys.

Two other steers were fed during the winter and were recently disposed of when Mr Stephens and his class visited the stockyards at South St. Paul and witnessed the sale of two steers which they have been feeding since September 23, 1915. The animals, a grade Short-horn and a Galloway, sold creditably, one averaging 1,010 pounds, bringing $9.25 and the other, averaging 1,040, selling for $8.25.

The animals averaged 720 pounds when they were taken charge of by the high school lads. Their success today is expected to give the young men added encouragement to continue with their stock raising activities. The class was shown around the yards, the various market methods explained, and the members were present when their stock was disposed of.

Aside from the work he is doing in the school, Mr. Stephens has given his aid to other projects of interest to the farmers in that neighborhood, among them being the organization of the New Richmond Co-operative Cow-Testing Association. He also arranged with the boys in his class for an exhibit at the county fair last year.

The course extends through the four years in high school and includes crops, animal husbandry, agricultural chemistry, farm mechanics and farm management.

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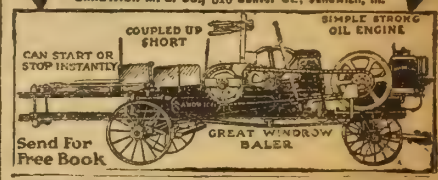

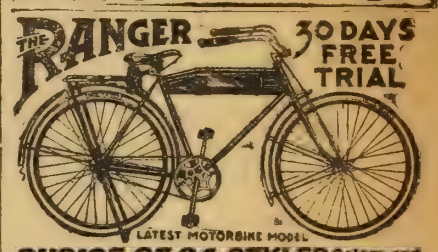

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UPPER WISCONSIN

Douglas County Farm.

Douglas county, Wisconsin, is doing a splendid work in behalf of its farmers through demonstration and actual farm work carried on each year at the county farm six miles from Superior. The county board has been very liberal in its support of the county farm and the accompanying illustration shows the kind of a barn which has been provided to house the dairy herd here.

One of the problems confronting the settler in Upper Wisconsin is the securing of pure-bred seed grains, potatoes, etc., and in determining what varieties are best suited for the conditions. These problems Douglas county is endeavoring to solve for its settlers and farmers by carrying on experiments at the farm. The county board hopes to make the county farm one of the best in the upper half of Wisconsin so that it will serve as an ideal toward which farmers can strive.

The county board last year appropriated money for the purchase of a pure-bred Guernsey sire which was bought, and funds have now been set aside to buy pure-bred heifers which will be the start in building up there a fine pure-bred dairy herd from which farmers can secure foundation stock. The barn is equipped with the most modern equipment and has running water and electric lights.

During the year ending June 30, 1915, the farm realized a revenue of $1,600 from live stock and poultry and $776 from the sale of barn, farm and garden products in addition to the consumption at the county institutions of barn, farm and garden products valued at $12,441. Charging off 4 per cent interest on the farm properties the barn, farm and garden showed a net profit for the year of $5,362.74 when the value of the products consumed is taken into consideration.

The county is cutting its farm from the timber land just as hundreds of settlers in the county are doing today, and to date has 160 acres under cultivation. Clearing operations are being extended each year, and with a continuance of the present desire of the board to appropriate funds for improving the herd, etc., this farm should eventually become one of the best in the state.

Considerable attention is being paid to pure-bred seed grains and standardized, certified potatoes. Last year prize potatoes were grown on the farm, and this year nothing but pure-bred seed grains are being used. The result will be that the county farm will be in a position next spring to supply Douglas county farmers with good seed grains as well as seed potatoes.

MODERN EQUIPPED BARN ON THE DOUGLAS COUNTY FARM, WHICH FARM THE COUNTY BOARD IS STOCKING WITH PURE-BRED DAIRY CATTLE.

Discusses Fruit Varieties.

To the Editor:—I have just been reading an article in The Wisconsin Farmer where the Gregg raspberry is recommended as the black raspberry to grow. I have lived in Langlade county, Wisconsin, since Janury, 1889, and have tested almost every kind of berries, and as for the Gregg, it kills to the ground every winter and all the fruit you get from it you have to dig into the ground to find. That would hardly be a money-making crop. The only black raspberry that is a success here in Langlade county is the Cumberland Black. I have these on my place and I have just measured some of the canes. Some measure ten feet and two inches and are alive clear to the end bud and two feet from the ground the cane measures three and a half inches around. All the protection they got was the cold northwest wind. It is the only black raspberry that will pay up here. The berries are large and firm, of good quality and make splendid shippers.

There is another raspberry of the same hardiness and a very rank and vigorous grower. It is called the Columbian Purple and is of the same style as the Cumberland Black. It is a great favorite for canning or for any other use. These are the only two varieties I would recommend for the northern section of Wisconsin. I am seventy-eight years old and have been testing all kinds of fruit and shrubbery all my life. I came to Wisconsin in the early forties and my father located at Rolling Prairie when that section was occupied mostly by Indians, wolves and deer.

As for apples, the best paying variety for this section are the following: Duchess, Wealthy, Patten's Greening, Red Astrachan, MacMahon's White, Gideon, Northwestern Greening, McIntosh Red and the Yellow Transparent. Though the last-named variety is troubled sometimes with blight it is a money-maker for an early apple.

The only cherry that will do anything in this location is the Compass cherry. It is a cross between the plum and cherry and comes into bearing very young. It is an excellent fruit for canning.

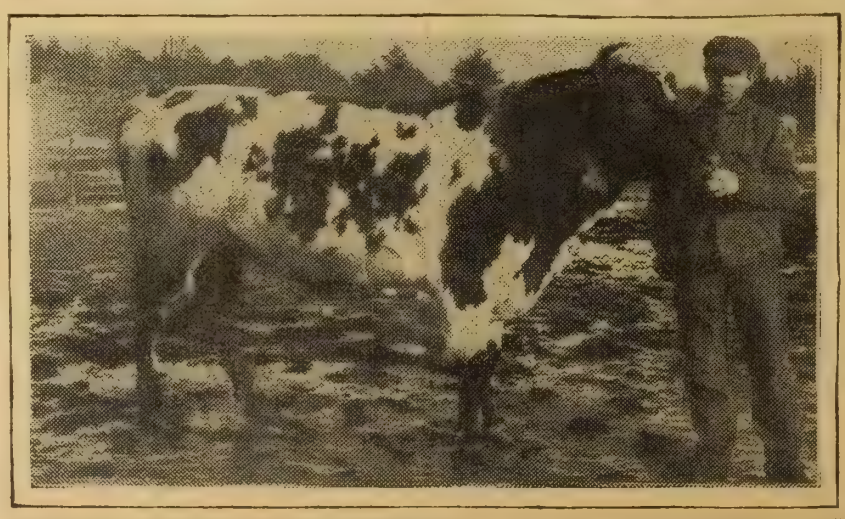
My choice of plums is the Forest Garden. I have three trees of that variety, about three inches through, and I have picked four bushels at a time from one tree. They are an annual bearer.

As for everbearing strawberries, I find the Superb and Progressive take the lead. The plants are strong growers and the berries are large and of good quality. These plants are always good yielders.

I have made fruit and shrubbery a life study and enjoy it as I do reading The Wisconsin Farmer.

The season is very late up here. Fruit trees are not in blossom, except a few plum trees. Apple blossoms have not yet begun to open, but the trees are loaded with fruit buds. We have had but a few warm, sunshiny days this spring, but I think we shall have a large fruit crop this season. About a week ago one farmer told me his alfalfa was over a foot high.

Langlade Co., Wis. H. F. Marsh.



THIS BULL, NORAH'S PRIDE, OWNEDBY W. D. RICE, BIG SUAMICO, WIS.

Hints on Home Grounds.

F. A. Aust, of the agricultural experiment station of the University of Wisconsin, offers these hints on home grounds planning: (1) The house is the central feature and should occupy the most prominent location. Other buildings are best put farther from the road and should, if possible, be screened off by trees and shrubs. (3) The lawn, being the foreground of the home, should look inviting, and should seem to say, "Come and rest," rather than "Keep off." (4) Shrubs are of good service, especially for filling in empty-looking places and screening off unsightly objects. (5) Vines give shade and beauty to the porch, and may be well used to cover fences, walks and outhouses. (6) Flowers lend variety and color, but as a rule should be made into borders rather than to occupy conspicuous places. (7) Walks, drives, etc., are best when inconspicuous. (8) Straight rows of trees or shrubs, and straight walks and drives are apt to be stiff and formal; curves are more graceful and pleasing. (9) Beauty lies, first of all, in simplicity and harmony. A few shrubs and trees arranged with some plan are more effective than a multitude scattered about aimlessly. Every single plant should fit in its place and not be out of tune with the rest.

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DAIRY

Contagious Abortion.

The federal department of agriculture attaches considerable significance to the spread of contagious abortion among cattle and announces in a recent bulletin that the annual loss from this source, as taken from the last reports, was $20,000,000. It is stated that contagious abortion bids fair to become one of the most important animal diseases. This disease has been quite generally considered in connection with dairy and farm beef herds, but, according to the federal department, has now found its way to the range, where losses in some instances have run as high as one-half of the calf crop. Conditions on the range make it difficult to control the disease. The department recommends sanitary and hygienic measures as means of control. Proper disinfection of premises and particular care of breeding animals are mentioned as important factors in minimizing the losses.

Inasmuch as the department of agriculture has given this matter considerable study, we quote portions of a statement recently sent out:

The organism which causes the disease may be conveyed from cow to cow by means of the bull or may enter the system with contaminated food. All aborting animals and all showing a discharge should, therefore, be isolated from the healthy members of the herd in order to eliminate, so far as possible, infective material. Infected stables should be thoroughly cleansed with a standard disinfectant applied with a force or spray pump, the disinfection of the contaminated stall being repeated after each abortion. Manure and contaminated litter should be promptly removed and plowed under to prevent access to it by other cattle.

Many herd owners fail to observe these precautions because they do not realize that the infection is present in their herds. The disease is insidious, it usually requires a long time to develop, does not reveal itself by warning symptoms, and does not, indeed, appear to affect in any way the general health of the animal. In consequence, it is quite likely that the infection will have spread throughout the herd before the owner is aware of any danger. There are, it is true, certain tests which can be employed to ascertain the presence of the infection, but from a practical standpoint these possess some drawbacks. All infected animals do not abort. Furthermore, after two or three abortions, cows appear to acquire a natural immunity, and are thereafter quite capable of normal reproduction, although they continue to react to the tests. A positive reaction, therefore, does not necessarily mean that a healthy calf will not be born.

On the other hand, the fact that several animals have aborted within a short period is in itself suggestive evidence of the presence of the disease. Furthermore, it sometimes happens that in cows which have acquired immunity, although apparently healthy themselves, the infection persists and they are able to transmit the disease to others. For this reason, when the infection has once established itself in a herd, the whole herd should be considered infected, and all abortions, retained afterbirths, and all tendency to sterility should be regarded as manifestations of the disease.

This does not mean, however, that all infected animals are to be disposed of. As a matter of fact, in herds in which the disease has gained a foothold, a cow that has aborted once or twice is in some ways more valuable than one that has not. It is safe to say that in practically no case do more than three abortions take place, and in the majority of instances there are not more than two. Cows which are not made sterile will in all probability resume normal reproduction. On the other hand, if they are removed to make way for fresh animals, there is a strong possibility that the newcomers already are, or soon will be, infected, and are actually further from immunity than the old ones. The elimination of infected animals is, therefore, not to be recommended as a means of controlling the disease, unless their value is not great enough to warrant the expense of treatment.

A train of complications often accompanies abortion, and of these retained afterbirth is perhaps the commonest. This, if neglected or improperly treated, may result in absorption of poisonous products, septicemia, and death. Also sterility may follow, ruining the cow for everything except slaughter. Calf scours, too, seems more destructive in herds affected with abortion.

These complications, together with the great loss in calves and the lessened milk production, make the wide and ever extending distribution of the disease a matter of tremendous importance both to the dairy and beef industries.

These studies by the department experts give us an idea of the serious nature of the disease. A good many inquiries come to The Wisconsin Farmer on this subject and these have been answered in our veterinary department.

June Dairy Scoring.

The quality of May butter and cheese made in a number of the factories of Wisconsin will be checked over from a commercial standpoint early next month, when the regular scoring exhibition will be held at the dairy school, college of agriculture, Madison.

Excessive moisture in cheese, which tends to defeat the aims of the cheesemaker by lowering both the grade and the resulting price received for the article, as well as "leaky" butter, a common fault of the spring's make, due to changing from stable feeds to pastures, will probably be overcome by a number of factories this year, where the best methods of manufacture are practiced. In others, however, these and other common errors in manufacture will doubtless creep in.

To aid factory operators of all degrees of experience by showing them how to improve their product is the real purpose of the scoring exhibitions. Thus it is not only the buttermaker or cheesemaker of experience who should submit samples for the tests, but workmen who have had difficulty in obtaining the high grade of product which they desire. Patrons of factories should also be interested in having samples of butter and cheese sent to Madison for the scoring exhibitions because an improved product should mean better prices for raw material.

The judging of butter and cheese will be done by men familiar with the requirements of commercial standards. Personal questions relative to any of the samples submitted will be answered as fully as possible.

Winnebago County Testing.

The Winnebago County Cow-Testing Association has just completed six months' work. According to Archibald R. House, official tester, a goodly number of boarders have been rooted out of the herds of members of the association. Of the cows in this association, belonging to different breeds, making a forty-pound record or better 36½ per cent are grade Guernseys, 26 per cent are grade Jerseys, 3.21 per cent are pure-bred Guernseys, 10.2 per cent are pure-bred Jerseys, 7.8 per cent are grade Durhams, 7.6 per cent are grade Holsteins, 1.7 per cent are pure-bred Holsteins, 6.1 per cent are natives and .6 per cent are graded Red Polled. The following is the last report for the month ending April 30th:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Tenant Bros.					
Zella, G. J....	6	1-15-16	1044	6.6	68.9
No. 13, G. J...	6	3-7-16	939	4.6	43.2
No. 22. P. B. J.	6	2-9-16	1071	5.1	54.6
Anna, G. J....	3	1-3-16	801	5.7	45.7
G. W. Searles					
Rilla, G. J....	5	3-29-16	821	5.0	41.1
Lady Allen,G.J.	6	3-24-16	723	6.2	44.8
Levi Brunson					
Lady Calidos, P. B. J.....13		1-26-16	738	5.8	42.8
Kate, G. J....	6	1-18-16	819	6.0	49.1
Topsy, G. J...10		12-1-15	696	6.3	43.8
Blue Bell,P.B.J.	4	3-6-16	1155	5.1	58.9
Satchy, P.B. J.	5	10-27-15	765	5.6	42.8
Susie, G. J....	5	3-2-16	1014	4.8	48.7
Laura, G. J...	5	3-21-16	1104	4.0	44.2
Queen, G. J...	4	3-7-16	1056	4.1	43.3
H. P. Zellmar					
Bessie, G. J...	7		741	5.6	41.5
Ed Race					
No. 7, G. H....	5	3-19-16	1149	4.7	54.0
Ray Ward					
Tiny, G. G....	2	2-1-16	981	4.2	41.2
Lily, G. G....	4	10-10-15	762	5.4	41.1
Reddie, G.R.P.	8	1-21-16	963	4.4	42.4
Frank Barnett					
Last, G. J.....	5	1-10-16	726	6.1	44.3
A. C. Marshall					
Fairview, N...	3	19-27-15	669	6.0	40.1
N. A. Rasmussen					
Bo Peep, G. G.	5	12-10-15	837	4.8	40.2
G. E. Washburn					
Rosilinda,P.B.J.8		3-22-16	1002	5.6	56.1
Rose of Algona, P. B. J.15		2-22-16	1086	5.0	54.3
Spots, G. J....	6	10-31-15	744	5.9	43.9
C. H. Slayton					
Sequal, G. G..	4		1023	4.0	40.9
Enzette, P.B.J.	4	4-13-16	993	6.7	66.5
FairMaid,P.B.G.	6	3-29-16	654	6.2	40.5
Chas. Ruelke					
Dolly, G. G....	7	12-20-15	1107	4.8	53.1
T. A. Farrow					
Ethel, G. G...	5	1-27-16	780	6.1	47.6
Hazel, G. G...	5	2-29-16	897	5.1	45.7
M. L. De Winn					
Daisy, P. B. H.	7	12-31-15	1500	3.4	51.0
Babe, P. B. H.	5	3-21-16	1590	3.4	54.1
Neta, P. B. H..	5	3-26-16	1680	3.0	50.4
H. R. Mosely					
Kate, G. G....	4	2-27-16	1107	4.3	47.6
Heirmone, P. B. J.....	3	1-28-16	765	6.4	49.0
Lilie, G. G....	3	1-30-16	732	6.1	44.7
Daisy, G. G...	8	11-7-15	826	5.2	43.0
Molly, G. G...	3	3-10-16	757	5.4	40.9
Carrie, G. G...		3-17-16	1307	5.4	70.6
Rosy, G. G....		2-5-16	998	5:0	49.9
Milton Mackie					
Florence, G. J.10		10-20-15	852	4.8	40.9
Butterfly, G.G.	7	1-27-16	981	4.7	46.1
Betsy, G. D...10		12-17-15	1056	4.2	44.4
J. T. Thrall					
Newel Cun.G.J.	9	10-18-15	621	7.2	44.7
Brindal, G. G..	3		915	5.6	51.2
Botrcitz Heifer, G. G.....	3	11-28-15	852	5.1	43.5
Oren Miller					
No. 1, G. J...	6	12-25-16	783	5.2	40.7
No. 7, G. J....10		2-8-16	744	5.5	40.9
M. A. Rolph					
Buffalo. G. D..		2-12-16	1050	3.9	41.0
Jersey, G. J...		2-21-16	795	5.6	44.5
Jerry Shea					
Tillie, G. G...10		4-15-16	1242	3.8	47.2
Esther, N.....10		3-15-16	876	5.2	45.6
W. P. Bussey					
No. 2, G. J...	4	2-29-16	896	4.8	43.2
No. 1, G. J....	5	3-28-16	1111	5.0	55.6
No. 5, G. D....	8	4-11-16	1234	3.4	42.0

Archibald House, Official Tester.

Eau Claire County Association No. 2.

To the Editor:—The following is the report of Eau Claire County Cow-Testing Association No. 2 for the monthly period ending May 10, 1916:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
B. M. Arris					
G. Holstein	4	2-16	1053	4.2	44.2
Otto Stelter					
Native	2	3-16	946	4.5	42.6
D. B. Strader					
G. Jersey ..	5	12-15	993	5.0	49.6
G. Jersey...	6	2-16	885	4.7	41.6
G. Jersey...	8	11-15	919	4.8	44.1
G. Jersey...	6	11-15	952	4.3	40.9
I. Jersey...	6	1-16	1125	4.7	52.9
G. Jersey...	6	2-16	1230	4.8	59.0
A. P. Shong					
Native	7	4-16	900	4.9	44.1
Henry Kohnke					
Native	9	3-16	1084	4.7	50.9
McCalley & Son					
G. Jersey...11		2-16	1218	3.7	45.0
R. Jersey...	5	2-16	912	4.6	41.9
Fred Gerike					
Native	7	10-15	801	5.0	40.0
Native	6	3-16	966	5.2	50.2
Ed L. Horton					
G. Guernsey	9	3-16	926	4.8	44.4
R. Guernsey	9	3-16	935	4.3	40.2
E. S. Rickard					
Native	7	4-16	1044	4.7	49.0
O. L. Craker					
G. Jersey..	6	3-16	822	5.0	41.1
G. Jersey...	7	4-16	1020	4.0	40.8

Erwin Sutton, Tester.

Mishicot Testing Report.

The following table gives the names and records of the cows in the association which have produced more than forty pounds of butter fat during the period of thirty days ending April 28, 1916:

Owner and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
Albert Johannes				
G. Holstein....	9	1560	3.3	51.48
Holstein	3	1494	3.6	53.78
G. Holstein....	6	1542	4.2	64.76
G. Holstein....	9	1368	3.6	49.14
H. W. Schmidt				
Native	8	1359	3.9	53.00
G. Guernsey...10		996	4.3	42.82
Native	5	1116	4.3	47.89
G. Guernsey...	8	1017	4.8	48.81
Native	4	1239	3.9	47.32
Native	8	1242	3.8	47.19
Fred Witte				
G. Holstein....	9	1404	3.1	43.52
G. Holstein....	9	1404	3.1	43.52
Fred Eisenmann				
G. Holstein....	4	1239	3.5	43.36

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TEN YEARS AGO THERE WERE A DOZEN DIFFERENT MAKES of creamery or factory separators in use. Today over 98 per cent of the world's creameries use De Laval Separators exclusively.

IT MEANS A DIFFERENCE OF SEVERAL THOUSAND DOLLARS a year whether a De Laval or some other make of separator is used in a creamery.

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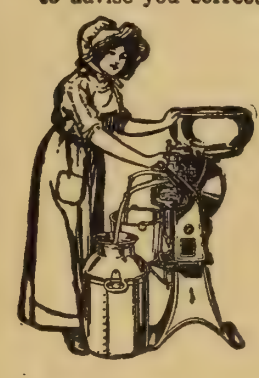

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G. Holstein....	7	1632	3.4	55.48
G. Holstein....	5	945	4.5	42.52
Holstein	8	1485	3.1	46.03
Ira Beyer				
G. S. Holstein.	5	1077	4.0	43.08
G. S. Holstein.	8	1005	4.6	46.23
Oscar Samz				
Native	8	798	5.5	43.89
Native	7	1059	3.9	41.30
G. Gurensey...	5	984	4.2	41.32
Mrs. Ed Palzer				
G. Holstein....	4	1200	3.9	46.80
Native	8	1041	3.9	40.59
Native	9	1164	4.0	46.56
George Wuellner				
G. Holstein....	6	1434	3.4	48.75
G. Holstein....	6	1446	3.2	46.27
Native	8	1197	4.1	49.08
Wm. Bartoleat				
Native	4	939	4.6	43.19
Native	7	1299	4.0	51.96
Wm. H. Spencer				
G. Holstein....	5	1047	4.1	42.92
G. Holstein....	5	1155	3.8	43.89
Chas. Kornely				
Holstein	5	1992	3.2	63.74
Chas. Hessel				
G. Holstein....	4	1059	4.1	43.42
Robert Hessel				
G. Holstein....	4	1158	3.6	41.69
G. Holstein....	4	1168	3.5	40.72
G. Holstein....	4	1389	3.4	47.23
Walter Zander				
G. Holstein....11		921	5.0	46.04
G. Red Poll...	7	1107	4.2	46.49

E. H. Meineke, Official Tester.
Albert Johannes, Secretary.

Chilton Co-operative Cow-Testing Association.

The following is a list furnished us by Edwin T. Weeks, secretary of the Chilton Co-operative Cow-Testing Association, of the official records of cows that produced more than forty pounds of butter fat during a period of thirty days ending May 13, 1916, as found by Oscar Kossmann, the official tester of the association:

Oowner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Walter Seefeld					
Gr. Holstein...	6	11-16	1236	4.0	49.44
Gr. Holstein...	5	3-4	1382	4.0	59.28
John Fuchs					
Gr. Holstein...	7	1-15	960	4.6	46.08
Nick Bernard					
P. B. Holstein.	7	3-13	1311	3.4	44.57
P. B. Holstein.	7	2-15	1215	3.4	41.31
Gr. Holstein...	7	2-15	1158	3.9	45.16
Gr. Holstein...	6	3-27	1005	4.2	42.21
Alex O'Donnell					
Gr. Holstein...	8	9-15	1002	4.0	40.08
Harry Merrill					
Gr. Jersey....	6	2-25	822	5.0	41.10
Gr. Holstein...	4	2-19	1149	4.2	48.26
Gr. Holstein...	4	2-12	1059	4.4	46.60
Louis McGrath					
P. B. Guernsey	10	2-5	795	5.2	41.34
P. B. Guernsey	6	12-31	1065	6.2	66.03
Gr. Gurensey..	8	2-2	1368	6.8	93.03
Gr. Guernsey..	5	1-1	1188	5.3	62.96
P. B. Guernsey	3	11-5	798	5.1	40.70
Gr. Jersey....	5	2-22	792	6.4	50.69
Gr. Guernsey..	3	10-20	1029	5.0	51.45
Native	11	11-1	1071	5.2	55.69
Julius Bowe					
Gr. Durham...	10	12-20	1119	3.6	40.28
Gr. Holstein...	4	1-1	1335	3.2	42.72
Gr. Holstein...	6	2-15	1380	3.0	41.40
P. B. Holstein.	3	3-1	1251	3.8	47.54
Gr. Holstein...	5	3	1572	3.6	56.59
Frank Sontag					
Gr. Holstein...	8	1-14	1194	4.0	47.76
Alex Pilling					
Gr. Holstein...	8	2-15	1185	3.6	42.66
Gr. Durham...	10	3-23	1155	3.5	40.43
Gr. Holstein...	8	3-16	1434	3.4	48.76
Gr. Guernsey..	5	2-16	1161	3.8	44.12
Gr. Guernsey..	6	1-7	1110	3.7	41.07
O. C. Pilling					
Gr. Holstein...	6	2-20	1302	3.8	49.48
Gr. Holstein...	7	3-27	1425	3.3	47.03
John Salm					
P. B. Holstein.	6	12-20	1722	3.9	67.16
Gr. Jersey.....	10	3-27	1383	4.0	55.32
P. B. Holstein.	7	2-28	1230	4.2	51.66
Gr. Holstein...	12	10-15	1071	3.8	40.70
Gr. Holstein...	8	12-10	1197	4.2	50.27
Gr. Holstein .	8	10-10	1377	4.2	57.83
Gr. Holstein...	12	10-25	1047	4.2	43.97
Gr. Jersey.....	12	12-5	915	4.6	42.09
Gr. Holstein...	5	1-8	1032	4.2	43.34

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Gr. Holstein...	8	3-27	1476	3.8	56.09
Gr. Holstein...	5	4-1	1128	4.2	47.38
Gr. Holstein...	5	3-15	1440	3.8	54.72
Gr. Holstein...	12	11-7	1260	4.0	50.40
Gr. Holstein...	12	12-3	1176	5.0	58.80
Frank Nennig					
Gr. Holstein...	9	1-1	1128	4.0	45.12
Gr. Holstein...	9	3-15	1248	4.0	49.92
Gr. Holstein...	7	2-15	1146	3.6	41.26
Gr. Holstein...	6	2-15	1197	3.8	45.49
P. B. Holstein.	6	12-15	1056	4.0	42.24
P. B. Holstein.	6	1-15	1116	3.8	42.41
Joe Wenninger					
P. B. Holstein.	7	12-16	1311	4.0	52.44
Gr. Holstein...	7	12-25	975	4.2	40.95
Mayer Bros.					
P. B. Guernsey	8	3-9	1113	5.8	64.55
Gr. Guernsey..	11	12-12	1179	4.0	47.16
Gr. Durham...	6	3-6	1365	3.4	46.41
Gr. Durham...	8	3-12	1140	4.0	45.60
Gr. Durham...	8	3-16	1188	4.4	52.27
Gr. Guernsey..	7	4-10	910	4.6	41.86
Gr. Durham...	12	4-8	1053	4.0	42.12
J. P. Koehler					
Gr. Guernsey..	9	11-1	882	5.3	46.75
Gr. Guernsey..	5	11-15	855	5.0	42.75
Gr. Guernsey..	5	3-24	1197	5.0	59.85
Gr. Guernsey..	4	3-5	888	5.0	44.40
Gr. Guernsey..	3	4-15	806	5.0	40.30
Joseph Koehler					
Gr. Holstein...	6	4-8	1242	3.8	47.20
Polled Durham	5	3-10	969	4.6	44.57
Gr. Holstein...	7	3-1	1071	4.0	42.84
Gr. Guernsey..	6	3-5	1125	4.0	45.00

Note—Seventy-one cows as compared to seventy-three last month.

Columbus Association.

The following report shows the forty-pound cows and those exceeding forty pounds in the Columbus, Wisconsin, association for the month of April:

Owner, name and breed	Test	Lbs. B. fat
John Swarthout		
Daisy Longfield, P. B. H.	3.4	44.6
Johanna Longfield, P. B. H.	3.3	48.2
White Face Pansy, P. B. H.	3.8	42.9
H. H. Huggett		
Smithdale Jane De Kol, H.	3.0	46.8
A. L. Leffingwell		
Jennie, G. Jersey	5.1	65.9
Eddy G. Jersey	5.3	60.7
Irene, G. Jersey	3.8	40.9
Lorene, G. Jersey	4.0	46.3
Norene, G. Jersey	4.0	41.3
Florence, G. Jersey	4.8	51.8
Jennie May, G. Jersey	4.5	54.0
Jay Waterworth		
No. 8, G. Holstein	4.3	48.6
No. 9, G. Holstein	4.0	54.5
No. 19, G. Holstein	4.0	47.4
No. 22, G. Holstein	3.5	41.3
Henry Westphal		
Rosie, G. Holstein	3.2	48.8
Best, G. Holstein	4.4	44.4
White, G. Holstein	3.4	41.3
Twin Sp. I, G. Holstein	3.7	41.5
C. J. Steinbach		
Lady Houpla, G. Holstein	2.9	41.2
Wm. Breyer		
No. 4, G. Guernsey	4.9	41.2
Jones Bros.		
Pearl, G. Short-horn	3.9	42.5
Paulina, G. Holstein	3.6	40.6

C. F. Wehrwein, Tester.

Geneva Cow-Testing Report

The following report of the Geneva Cow-Testing Association covers the monthly period ending April 30, 1916. Only cows making a forty-pound record or better are included:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Harry Dunbar					
Ormsby, H...	3	3-9-16	2625	4.4	115.5
Clyde, H.....	7	2-6-16	1689	3.7	62.5
Queen, H.....	6	3-29-16	1533	3.9	59.8
Mechthilde, H.	2	3-20-16	1353	3.5	47.4
Korndyke, H.	2	2-25-16	1239	3.6	44.6
Lady, H.....	2	12-4-15	1578	2.8	44.2
Adeline, H...	2	12-8-15	1257	3.5	44.0
Chas. L. Turner					
Dorothy, H...	2	3-5-16	2061	3.4	70.1
Boon, H.....	5	3-28-16	1578	4.4	69.4
Susie, H.....	8	12-14-15	1212	3.5	42.4
Mink, H.....	4	2-20-16	1809	3.6	65.1
Erma, H.....	2	3-14-16	1689	4.1	69.2
Eula, H.....	2	3-2-16	1407	3.3	46.4
Jessie, H.....	3	12-25-15	978	4.2	41.1
Fayne, H.....	2	3-16-16	1596	3.2	51.1
W. E. Palmer					
Korndyke, H.	3	3-5-16	1842	3.3	60.8
Lady, H.....	5	11-29-15	1593	3.0	47.8
Queen, H....	3	11-22-15	1416	3.0	42.5
A. G. Palmer & Sons					
Sadie, H.....	8	3-15-16	1899	3.2	60.8
Daisy, H.....	5	12-3-15	1425	3.9	55.6
Beauty, H....	8	11-26-15	1773	3.1	55.0
M. & W. Girl, H.	3	2-28-16	1470	3.4	50.0
Johnson, G.H.	8	12-30-15	1368	3.5	47.9
Chase, H.....	5	12-14-15	1386	3.0	41.6
Houwtje, H...	7	12-3-15	1182	3.5	41.4
Queen, H. ...	2	12-15-15	1200	3.5	42.0
Emil Papenfus					
No. 6, G. G...	6	3-6-16	1329	4.5	59.8
No. 15, G. H..	6	1-11-16	1188	3.7	44.0
Ora Taylor					
Eleven %, J..	3	1-1-16	714	8.3	59.3
D. Pansy, J...	3	12-20-15	906	5.7	51.6
Pansy, J.....	5	1-29-16	915	5.0	45.8
W. Queen, J..	6	10-16-15	891	5.0	44.6
Old Slattery, G. J.	7	11-26-15	699	5.9	41.2
Spot, G. J.....	5	3-1-16	876	4.7	41.2
Rockwell Bros.					
Evlyn, G. H...	5	3-2-16	1524	3.6	54.9
Vervie, H.....	8	3-12-16	1641	3.2	52.5
Jolly, G. H...	7	1-25-16	1233	3.9	48.1
Johanna, H...	8	2-12-16	1335	3.6	48.1
Ideal Girl, G.H.	7	11-17-15	1248	3.7	46.2
Coalie, G. H..	6	10-8-15	1047	4.2	44.0
Irene, G. H...	7	11-13-15	1224	3.5	42.8
Midnight, G.H.	6	11-11-15	1248	3.4	42.4
Cora, G. H...	6	3-8-16	1248	3.4	42.4
Emma, G. H..	7	1-18-16	1047	4.0	41.9
Jewell, H.....	8	10-18-15	1191	3.5	41.7
Skylark, G. H.	5	11-18-15	1167	3.5	40.8
Nellie, G. H...	4	2-12-16	1233	3.3	40.7

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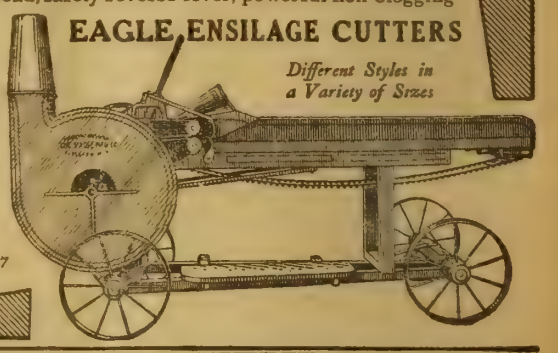

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per ton of silage put up or per year of life. Tremendously strong construction makes an Appleton practically proof against breakdown. Solid oak and steel frame, mortised, braced and bolted, impossible to pull out of line. Many exclusive power and labor saving features, such as independent belt driven blower allowing speed to be adjusted for minimum use of power for any height silo; frictionless feed table running on chilled iron rollers; knives spiraled to give clean shearing cut, requiring least use of power. (10 lengths of cut, 5-16 to 2½ inches.) Lowdown cut-under frame, easy to handle. Both feed rolls and table controlled by single lever. Positive self-working safety device.

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Floe, G. H...	6	3-4-16	1389	2.9	40.3
Jas. Henderson					
Baby D., H...	7	3-28-16	1503	3.6	54.1
Mechthilde, H.	6	1-8-16	1680	3.2	53.8
Gem, H.....	7	1-11-16	1311	4.0	52.4
Edith, H.....	6	1-11-16	1320	3.6	47.5
Piebe G., H...	7	1-3-16	1323	3.5	46.3
Mildred, H...	3	1-3-16	1239	3.3	40.9
M. C. Flack					
Guernsey, G.G.	5	3-29-16	1059	4.7	49.8
Y. Blue, G. H.	3	3-28-16	1248	3.6	44.9
Speck, G. D...	5	3-25-16	1158	3.6	41.7
Moss Bros.					
Esther, G. D..	7	3-25-16	1116	4.4	49.1
Vevie, H.....10		12-27-15	1374	3.3	45.3
Lorina, H....	3	12-27-15	1245	3.4	42.3
Wm. Schulz, Sr.					
No. 17, G. H...	9	3-6-16	1500	3.2	48.0
No. 8, G. D...	6	3-10-16	1260	3.4	42.8
Rose, G. D....12		11-1-15	1119	3.6	40.3
J. W. Finnel					
Carnie, G. H..	6	3-2-16	1080	4.4	47.5
Wm. Rouse					
Daisy, G. D...	8	3-1-16	1146	4.0	45.8
Horns, G. G...	4	3-5-16	786	5.6	44.0
S. B. Fish					
Spot, G. D....	6	3-20-16	1128	3.9	44.0
Wonder, G. H.	4	2-23-16	1245	3.4	42.3
D. Dalrymple					
Anna B., G. H.	4	3-28-16	1041	4.0	41.6
Floyd Lean					
Pride, G. H...		3-29-16	1257	3.3	41.5
Harry Ames					
Nigger, G. H.	9	12-27-15	963	4.3	41.4
Percy Harrington					
Luna, H.....11		1-6-16	1083	3.8	41.2
Lucien Curtis					
Nancy 2, G. H.	4	2-21-16	1037	3.9	40.4
Will Schulz, Jr.					
Elephant, G.D.	8	2-4-16	1290	3.2	41.3

Potato Inspection Calls Are Due July 1st.

Applications for inspection of potato fields under the certification plan operated through the horticultural department, University of Wisconsin, must be sent in on or before the first day of July.

Last year more than 100 potato growers in the state raised several thousand bushels of certified seed stock which had been both field and bin inspected by officials of the horticultural department. This seed stock is bringing the best of prices this spring.

New rates for inspection have been adopted this year. For a field of four acres or less the fee is $6. More than four acres, up to and including eight acres, is rated at $9. Half of the total fee must be included with the application blank and the remainder is due immediately before the second examination is made at harvest time.

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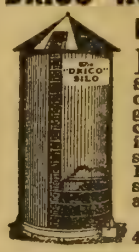

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Carburetor Floods.

I would like some advice as to what is wrong with my motor. It has a good spark, and seems to fire all right in the spark plugs, but when I run the motor it seems to flood. Is the carburetor to blame?

Answer.—If the carburetor does not flood so that the gasoline runs out of it when the motor is not running, the needle valve is open too far, and should be partly closed. Your trouble is probably with the way your carburetor is adjusted.

Storage Battery Rating.

Is a Westinghouse two-unit, eighty-ampere hour battery better than various other makes that do not state units or hours of storage?

Answer.—The quality of a battery does not depend upon volts, units, or ampere hours, but upon the design and mechanical construction of the battery. The "units" refer to the number of cells composing a battery, each cell being usually rated at two volts. The voltage varies with the amount of charge. The ampere hours refers to the capacity of the battery—the greater the ampere hours, the longer the battery will light a lamp. All batteries are rated in volts and ampere hours, or units and ampere hours, as these things describe the power of the battery.

Lighting System for Ford Car.

Please give me some information as to the best kind of lighting system for a Ford car. Would you advise a dry cell battery or a storage battery? How much would they cost and how would they be installed?

Answer.—The best outfit is a combination lighting and starting outfit. This may be purchased of a dealer in auto supplies for about $85. There are other outfits for lighting alone, complete with generator and storage battery, that sell for about $35. On Ford cars built since 1914, the magneto may be used for lighting. The manufacturers of the various outfits or the dealers can give you information for installing their systems. Dry cells would not be practical for auto lighting, and a storage battery would be rather expensive unless you have an outfit for charging it.

A Race Car.

I am thinking of converting my 1910 Model T. Ford car into a racer. What ignition system would you recommend? Would you advise taking off some of the cylinder rings? What changes would you make? Do Ford cars used as racers give satisfaction? What is the secret of successful racing?

Answer.—The Ford car is not designed for speed. The Bosch magneto has been used the most on race cars, but there are other magnetos that may be just as good. If your Ford magneto is in good order you should get good results from it. The following points on race cars may help you:

The pistons should fit the cylinder very loosely—about .012 inch loose on a four-inch piston. The piston should be made as light as possible. Often an inch or two is cut off the skirt. The rods also should be lightened as much as safety will permit. Rods must be of equal weight. Crank shaft must be in perfect balance, flywheel in balance, and pistons must be of equal weight. Use only one or two rings on each piston. Have special cams made, with a lift one-sixteenth inch higher than standard. If possible, use valves with one-fourth inch larger opening. File and scrape out all inlet and exhaust passages smooth. Fit rods, piston pins, etc., very free, but not loose enough to pound. Provide for an extra supply of oil and gasoline, having tanks with large openings, so that they may be quickly filled. See that every nut and bolt is properly cotterpinned or locked. Use a gear ratio of two and one-half to one, or three to one. The best ratio can only be determined by experiment.

Successful racing depends upon many things. The first thing necessary is a well-made car, with plenty of power, light moving parts, good lubrication, high-grade materials, and good riding balance and steering qualities. Equally important is a level-headed driver, who can cut the corners without burning his tires; who can feel just how hard he can drive his car without injuring it, and who can locate any defect in his car before it is too late. He must be a man of strong nerves and strong arms.

A Power Washer.

Please submit a drawing showing how I could run my washing machine with a one-horse-power engine. I have a "One Minute" washer, and a number of pieces of machinery from which I could obtain gearing. Could I make a friction wheel or clutch to use with it? Could I operate the engine on kerosene by pouring it into the tank after starting the engine on gasoline?

Answer.—Figure 1 shows a side view of the machine with a power attachment, and Figure 2 a top view of the attachment with the tub removed. A shaft is mounted on the bottom cross-pieces of the machine. This shaft—about three-fourths-inch diameter—has a tight and loose pulley D in the middle, a crank disc E at one end, and a small bevel pinion at the

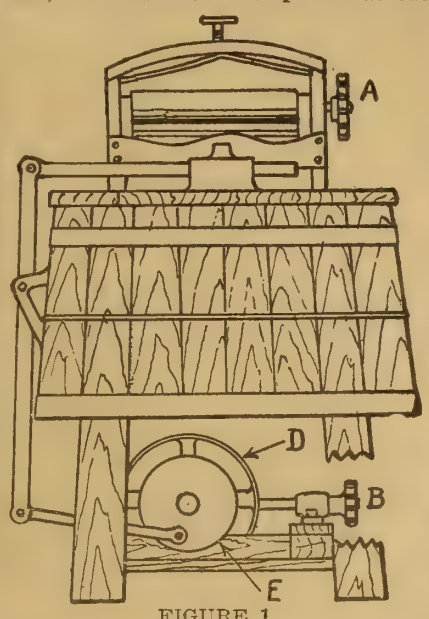


FIGURE 1.

other end. A is a sprocket wheel on the wringer, driven by a sprocket B on a shaft mounted as shown in Figure 2. This shaft is driven by the two bevel pinions C by a feather key, the pinions being mounted on a sliding sleeve. By shifting these pinions, the wringer may be run backward or forward, or stopped in the neutral position. The machine is started by shifting the drive belt from the loose pulley to the tight one. Many engines will run on kerosene after becoming warm. You can tell by trying. It should not cost you over five cents to

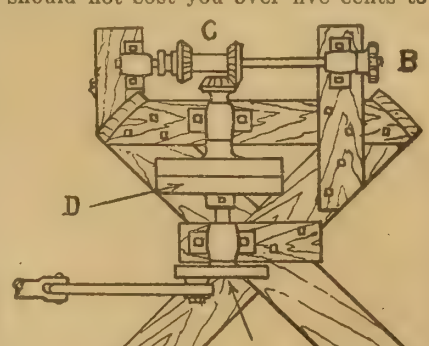


FIGURE 2.

do a washing, even at the present price of gasoline. The people who make the "One-Minute" washer, put out a power machine, and it might pay you to get their prices before making a machine yourself. A power washer is certainly a great labor saver.

A "Shocking" Question.

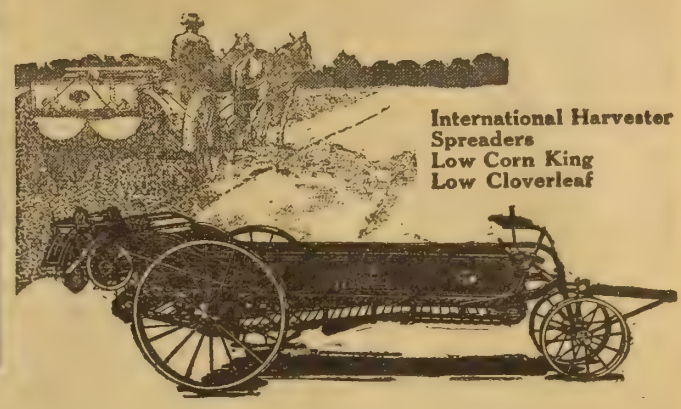
I wish to charge a chair so as to shock a person when sitting on it. I have a coil for six batteries that I can use. Please explain how this is done. I tried to make a sal ammoniac battery, but without success. I have made them before and made this one like the others. Can it be that the sal ammoniac was too old?

Answer.—The chair should have a metal seat or back, and wooden legs, which must be dry. The floor must be of sheet metal, or have metal strips on it for the person to stand on. Attach one battery terminal to the floor, the other to a switch. Run a wire from the switch to the "Bat" coil terminal, and ground the other coil terminal on the floor. Run a wire from the spark-plug terminal to the seat or back of the chair. Do not use over three dry cells. While considerable amusement can be obtained from this device under proper circumstances, it should be used with care. The operator, or perpetrator, should try it on himself first. It is possible that the outfit might have static capacity enough to cause a serious shock.

We suspicion that there was something wrong with your sal ammoniac more than age, as it keeps well. Dry cells are more suitable than any wet battery for starting tractors or auto engines. A dry cell is really a sal ammoniac battery, using very little water, and a "depolarizer" of manganese dioxide.

WON HIGHEST AWARD PANAMA-PACIFIC INTERNATIONAL EXPOSITION SAN FRANCISCO 1915

Eight Feet Wide, or Better



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Low Corn King
Low Cloverleaf

ONCE you have seen both kinds of work you will say: "There is certainly a wide gulf between the ordinary spreader and the modern **I H C** machine, with its good, wide-spreading device. Give me the up-to-date, time and labor-saving spreader."

International Harvester spreaders—Low Corn King and Low Cloverleaf—are made with wide spreaders that throw the manure out in a wide, even spread, and broken up into fine particles by the disks that give it a second beating. In this condition the soil takes up quickly and evenly the fertilizing elements.

Though they are narrow, conveniently handled spreaders, easy to drive right into stables for loading, they spread to a width of 8 feet, or better. This cuts the spreading time in half, increases the tractive power of the spreader by keeping the wheels off the slippery manure, and gives you the best machine made for top dressing. **I H C spreaders** are simply built, and very strong. They are low for easy loading. They are built in sizes to suit any buyer, and they do work that is uniformly satisfactory.

Be sure to see the **I H C** dealer who can sell you a **Low Corn King** or **Low Cloverleaf**—or write us for catalogue.

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First Real Solution of the Light Farm Tractor Problem

Pulls two plows in any soil fit to cultivate—three in stubble. Wide scope of utility. All gears run in oil, enclosed in dust-tight casings, on

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10 horsepower at draw-bar—at any speed. Weight 3600 lbs.
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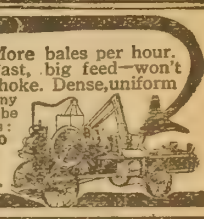
More bales per hour. Fast, big feed—won't choke. Dense, uniform



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Right now the blood-sucking stomach and intestinal worms are working destruction in your herds. They cause indigestion, off-feed conditions, prevent your farm animals from thriving, and lessen their power to resist disease. SAL-VET destroys these thieving, profit-eating parasites. Just write me how many head of hogs, sheep, horses and cattle you have and I'll supply you enough to last them 60 days. You pay the freight charges—feed it according to directions and watch results. If SAL-VET has not done what I claim and you make a specific report in 60 days, I'll cancel the charge—you won't owe me a penny. Address

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Lost No Lambs—No Sick Sheep

"I have fed SAL-VET all season and have not lost a single lamb, nor had a sick sheep since lambing time. This is the first time in five years that I have not lost between one and ten lambs, and an occasional ewe. SAL-VET has paid for itself several times over."

W. B. ELLSWORTH, Brookwood Farm, Ottawa, Ill.

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"My hogs were nearly dead with worms. I fed SAL-VET just as you told me to, and it has done them worlds of good. They are now sleek and fat, and in good condition. I also found it the best thing that I ever fed to my other stock."

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Prices: Ea. 40 lb. pkg. $2.25; Ea. 100 lb. pkg. 5.00; Ea. 200 lb. pkg. 9.00; Ea. 300 lb. pkg. 13.00; 500 lbs. 21.12. Extra discount in larger quantities. [251]

Not less than 40 lbs. sent on this 60-day offer. Shipments for 60 days' trial are based on 1 lb. of SAL-VET for each sheep or hog and 4 lbs. for each horse or head of cattle.

Your Best Cow May Die!

from milk fever. Attacks heaviest milkers—50 to 60% succumb quickly. Yet the **new air treatment saves nineteen out of every twenty** cases. With the Pilling "Easy to Use" Milk Fever Outfit you can give instant treatment—no dangerous wait for veterinarian.

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Best made, last longest. Backed by 100 years of service.

Write today for our 48-page book showing treatment for milk fever, bloat, garget, hard milkers, etc. Shows and prices all needed instruments.

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CLUB NO. 1.

St. Louis Twice-a-Week Republic	$ .50
Metropolitan	1.50
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Our Price For All Three **$1.60** You Save $1.40

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People's Home Journal	.50
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People's Popular Monthly	$ .25
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Peoples Home Journal	$ .50
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McCall's Magazine	$ .50
Boy's Magazine	1.00
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Metropolitan	$1.50
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Today's Magazine	$ .50
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People's Popular Monthly	.25
Wisconsin Farmer	1.00
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CLUB NO. 13.

Kansas City Weekly Star	$ .25
Boy's Magazine	1.00
Wisconsin Farmer	1.00
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Our Price For All Three **$1.15** You Save $1.10

CLUB NO. 14.

Woman's World	$ .35
Boy's Magazine	1.00
Wisconsin Farmer	1.00
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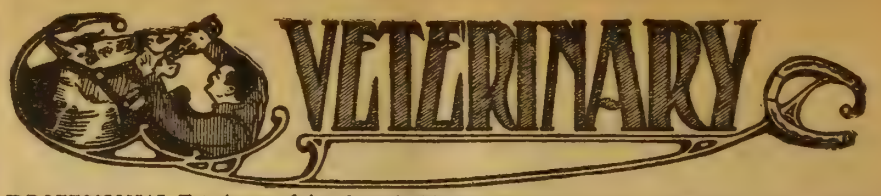
If none of the above combinations suit you, you can make up your own club of papers in the following way: First select The Wisconsin Farmer and figure it at $1.00 per year. Then select any of the papers or magazines listed above and figure them at half their regular subscription price as indicated above, choosing whatever papers or magazines that appeal to you. As an example, suppose you should want The Wisconsin Farmer, Kansas City Weekly Star, Woman's World and People's Home Journal. You would figure The Wisconsin Farmer in the combination at $1.00; then you would add up the regular subscription price of the other three papers, which amounts to $1.10. Half of that amount equals 55 cents. Add this to the regular price of The Wisconsin Farmer, which is $1.00, and you would have a total of $1.55, which would be the rate for The Wisconsin Farmer, Kansas City Weekly Star, Woman's World and People's Home Journal.

If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wis.



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AILING ANIMALS.

Yearling Colts Sucking Mares.

Is it injurious to mares to have yearling colts sucking them? Is it harmful to the colts?

It is probably no more injurious to mares for yearlings to suckle them than for young colts to suckle them, but it does not seem to us to be a very good practice. The first milk would probably not be very good for yearlings, but the milk later on should not hurt them.

Failure of Cow to Get in Calf.

I have a cow that has been milking for nineteen months and she is still milking eight to ten quarts a day and she is not with calf. I have brought her to the bull several times, but it did no good. What is the trouble?

This is a rather difficult question to answer without an examination of the animal in question. This trouble is brought about by any one of a number of causes. You had best have your local veterinarian examine this animal and he may be able to locate the cause of the trouble and can then prescribe according to his findings.

Injured Hock.

We have a bay gelding twelve years old which we turned into pasture with other horses. The next morning he was sore in the right hind leg. The pain increased so that he kept raising the leg from the ground. The hock joint started to swell till the joint was round. The pain seems most severe on the inside of the hock joint right on the projecting bone. This horse seems feverish. This happened on April 24th. Please state treatment.

Your animal is probably the victim of an injury in the hock region. You should have had this attended to immediately. If the injury seems purely of a local nature you may get results by applying a blistering agent to the affected parts after the painful stage has subsided some. Prompt treatment is in order, as your animal may develop a spavin.

Painful Condition of the Foot.

I have a two-year-old colt which has an aching foot. When walking and that foot is back something seems to move back just as she is bending the joint right above the hoof, and then it gives a tapping sound. I had her feet trimmed by a blacksmith. Could this have anything to do with it? What is the cause and what remedy do you think should be used? It does not hurt her very much. Is this dangerous as to her soundness?

It would seem from your description that your animal has injured herself over or near one of the lower joints and that she sets it down in an unnatural position, causing the peculiar movement you speak of. We would advise you to either take this animal to a veterinarian or have one come and see it and have him make a careful examination. The trimming of the hoof has probably not been the cause of the trouble.

Bloody Milk.

I have a Holstein cow that calved in January. I have milked her for two years and her milk has always seemed good until a few days ago. Now I find it bloody. The buttermilk looks like bloody water. She is about five years old. We have been feeding her warm chop feed twice a day all winter and alfalfa hay. Now she runs in a pasture where there is plenty of green grass and greasewood. Can you tell me what is the matter with her and what can be done for her?

Blood may escape with the milk when the udder has been injured by blows, also when it is congested or inflamed when the circulation through it has been suddenly increased by richer and more abundant food or when the cow is under the excitement of heat. The eating of acrid or irritant plants may be the cause. In milk which becomes red after it is drawn it may be due to the presence in it of the micrococcus prodigiosus. From the above statements you will see that it is all-important to know the cause of the trouble before treatment is begun. The treatment will vary with the cause. If congested glands, give one pound of epsom salts and daily thereafter one-half ounce of saltpeter with a dram of chlorate of potash. Bathe the bag with hot or cold water and rub with camphorated lard. If the food is too rich or abundant it must be reduced. If from acrid plants these must be kept from the animal.

Injury to Leg.

I have a seven-year-old mare that has had a discharge from her left hind leg since last October. She had not been working for some time so one day after a rain I rode her after the cows. She slipped and fell, but apparently she was all right. I put her in the barn and afterward turned her out. Next day I noticed her leg had begun to swell, but she was not lame. It broke the third day. I have syringed it out once daily. The opening begins at the lower portion of the muscle on the inside of the leg and runs eight inches in toward the stifle joint. I have used cresol and salt water as a disinfectant. Any information will be greatly appreciated.

Your mare has probably met with an injury which caused abscess formation. The cavity you speak of is probably just the space between the two layers of muscle. Keep the drainage established and syringe out once daily with mild antiseptic solution, such as lysol 1 per cent solution or mercuric chloride 1 to 1,000. It might be advisable for a veterinarian to examine this animal.

Dr. Hess Dip and Disinfectant

Kills Disease Germs Destroys Foul Odors

Nothing better for disinfecting stables, barns, sinks, troughs, garbage cans, outhouses, etc. Good alike for home and stable.

For scab, mange, hog lice, ticks on sheep, fleas on dogs, and all parasitic skin diseases of horses, cattle, sheep, dogs, hogs and poultry.

Pint bottles, quart, half-gallon and gallon cans and barrels. One gallon can, $1.00 (except in Canada and far West). Smaller packages as low as 25c.

Dr. Hess Fly Chaser

Doesn't gum, color or blister. Makes stock comfortable. At your local dealer's.

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DON'T CUT OUT

A Shoe Boil, Capped Hock or Bursitis

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will reduce them and leave no blemishes. Stops lameness promptly. **Does not blister** or remove the hair, and horse can be worked. $2 a bottle delivered. **Book 6 M free.**

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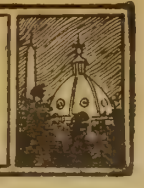
HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

CURRENT EVENTS



DAVID LLOYD GEORGE has been selected as the man best able to bring about a peaceful settlement of the troubled Irish question. Premier Asquith made a notable speech in parliament last week. Instead of giving details of his recent visit to Ireland and of any plan he might have formed to bring about peace there, by agreement among the contending parties, he announced that David Lloyd George had undertaken the delicate task of bringing the hostile factions together. The premier concluded with an appeal that for a time all debate on the question, both in the house of commons and outside be suspended, in view of the adverse effect such argument might have in the difficult undertaking facing the government. The premier's speech was heard with intense interest by the members and he had scarcely resumed his seat when John Redmond, the nationalist leader, arose and acquiesced in the premier's request, adding in a voice filled with emotion, his ardent desire for a solution of the difficulties of his country. Mr. Redmond was quickly followed by his political arch-enemy, Sir Edward Carson, who tentered his support to the proposition. Lloyd George is undoubtedly the strongest man in England today, for it was he who arranged the British financial affairs when war first broke out and who has speeded up the munition workers the past few months and made it possible for the allies to secure a sufficient supply of ammunition to hold the Germans and Austrians in check. The Irish question is the biggest he has tackled and how he will succeed remains to be seen.

CONGRESS completed its part in the enactment of the first of the administration preparedness measures last week and passed a compromise army bill which has already gone to President Wilson for his signature. The bill as finally agreed upon provides for a regular army with a peace strength of more than 200,000 men, backed by a federalized national guard of more than 400,000, and carries many reorganization features worked out by war department officials. To complete the main elements of the program of preparedness on which the administration plans to spend more than a billion dollars within the next five years, congress still has to perfect and pass the naval bill, embodying the navy increases, and the fortification bill, which includes provision for most of the equipment for the increased army. The bill provides for the establishment of a system of military training camps for civilians paid out of the federal treasury and for vocational education in the army. It is by all odds the longest step this country has ever taken in the matter of efficient military defense.

JUSTICE CHAS. E. HUGHES was nominated for the presidency by the republicans of Oregon, by a decisive plurality over Senator Cummins, of Iowa, and Senator Burton, of Ohio. As a result, his presidential stock went soaring. Justice Hughes had requested that his name be withdrawn from the Oregon ballots, but the courts refused this, so Oregon was the first state in which the question of his candidacy was put up to the republican voters, fairly and squarely, they having to content themselves in other states with writing his name on the ballot. Since the Oregon primaries there has been more talk of Hughes than of any other candidate, although large numbers of men are working night and day in the interests of Roosevelt. Justice Hughes has maintained absolute silence on political matters since being appointed a member of the United States supreme court, but his record while governor of New York still appeals to the rank and file of his party and he is unquestionably a strong man for the place. Another month will find the matter settled in both parties, the republican convention to be held in Chicago commencing June 7th and the democratic convention to be held in St. Louis commencing June 14th. President Wilson is certain to be renominated.

THE struggle around Verdun, the great French fortress, continues with unabated fury. The fighting last week was even more vigorous and deadly than any heretofore waged. At an immense cost in human lives the Germans succeeded in recapturing Fort Douamont, which the French had taken from them but a few days before. The Teutons were likewise successful in taking the outlying village of Cumieres, so that the week was rather favorable to them, although the victories were won at such great cost in human life as to seriously impair the Teutonic forces for the future. There is a growing conviction that Verdun may be the turning point of the war and so both sides are fighting with unparallelel fury. While this is going on the Austrians have been successful against the Italians, pushing them back, step by step, in the mountainous region between the two countries. The week closed with the central powers (Germany and Austria) having a little the better of the struggle.

THEODORE ROOSEVELT invaded the enemy's country and delivered a ringing speech on preparedness at Detroit, home of Henry Ford, pacificist. Colonel Roosevelt declared early in his speech that he had for Ford "not merely friendliness but in many respects a very genuine admiration," but he went on to classify him wtih the tories of the revolutionary war and the copperheads of the civil war. Emerging from the question of personalities he launched into a harangue for preparedness, saying: "There is not a nation in the world which believes that our course of conduct has been dictated by anything save timidity, unworthy shrinking from effort and responsibility, and cold and selfish love of money-making and of soft ease. The only right principle is to prepare thoroughly or not at all. The only right principle is to avoid hitting if it is possible to do so, but never under any circumstances to hit soft. To go to war a little, but not much, is the one absolutely certain way to insure disaster. To prepare a little, but not much, stands on a par with a city developing a fire department which, after a fire occurs, can put it out a little, but not much." In urging "universal military service based on universal training," Colonel Roosevelt said he believed in it because "it would be not only of incalculable benefit to the nation in the event of war, but of incalculable benefit to the individual undergoing it, and, therefore, to the nation, as regards the work of peace."

THAT Russia is able and willing to take a still greater part in the European war is evidenced by the fact that fully 30,000 Russian soldiers have been landed in France to assist in holding Verdun and other threatened points, while a large detachment has succeeded in joining hands with the British against the Turks in Asiatic Turkey. The Russians seem to be recovering from the defeat which Von Hindenburg and the Germans administered to them some months ago and to have the men and the munitions to figure prominently in future engagements. When the war broke out Russia was so honeycombed with graft and inefficiency it could not play the big part it was expected to play, but since then it has been steadily bringing order out of chaos and now stands second to none of the nations engaged in efficiency and willingness to bear the brunt of the burden.

Cost of Machinery.

Machinery makes money for its owner when in use, but costs him money when it is idle. The value of an implement is measured by the acreage covered per year and its life measured by days in which it has been in service. A machine makes the greatest possible profit for its owner when it is used continuously in profitable work till it is worn out. Then it is really worn out, it does not rot or rust out.

The United States Department of Agriculture says that the average farm implement is only about half worn out by use alone. The rest of the wear is due to rust and decay. Acres count in the life of a machine, not years. They have conducted studies of farm machinery with the purpose of determining the life of different machines and it was found that the cost per acre covered is the real measure of the value of the service given by an implement and that, on the average, the more acres covered per year the more profitable it proves to its owner. For example, it was found in one instance that the mower that covers but fourteen acres per year cost its owner 36 cents per acre, while the mower that covers fifty-three acres annually costs but 10 cents per acre cut.

Of the implements studied the walking plow shows the longest life in days of service, 224 days out of a total life of twelve years, while the two-row corn planter shows the shortest life in days of service, nine days out of eleven years. The cost of the walking plow was less than 10 cents per acre, mostly for repairs, while the cost of the corn planter was 80 cents per acre, mostly a "replacement cost," or the amount charged against the implement each year toward getting a new one when it is scrapped. These figures are based on data collected from a portion of the United States where the land is rolling and the soil rather heavy. Local conditions will have some effect on the life of machinery and this should be taken into consideration.

It was found that the grain binder costing $125 when new was used about three and one-half days each year, had a life of fifty-three days of work, over a period of nearly sixteen years, this was for covering about thirty-five acres per year. The total cost per acre was 40 cents. A corn binder costing $125 new was used about three and three-fourths days each year and had a life of forty days of work, covering twenty-one acres per year for a period of about eleven years. The total cost per acre covered was 84 cents. The spike-tooth harrow had a life of fourteen years doing forty-three days actual work and cost 3 cents per acre, as it cost only $10.50 when new. A grain drill costing $72 was found to have a life of sixteen and one-half years covering forty-six acres per year at a total cost of 17 cents per acre. The land roller cost about 4 cents per acre and had a life of sixteen years doing seventy-five days' actual work in this period.

LAW QUESTIONS.

Removing Mail Box—Damages.

A Subscriber, Klevenville, Wis.—A rented a farm from B for three years. There was a mail box on the place and B agreed to leave it there for A's use. After A used the box one year B took it away without A's consent. What can A do about the matter?

Answer.—A can sue B for damages for removing the box, and recover judgment against him, but it is such a trivial matter that it would not pay A to have a lawsuit about it.

License for Selling Feed.

A Subscriber, Kingston, Wis.—Where several farmers join together and buy a carload of feed, can they sell it at a profit without obtaining a license in the state of Wisconsin?

Answer.—The law of Wisconsin does not require a license for such an enterprise, but if the farmers are selling out the feed in a town or city there may be an ordinance of such town or city providing for a license, so they had better inquire of the town or city officers about it.

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Canning Vegetables on the Farm.

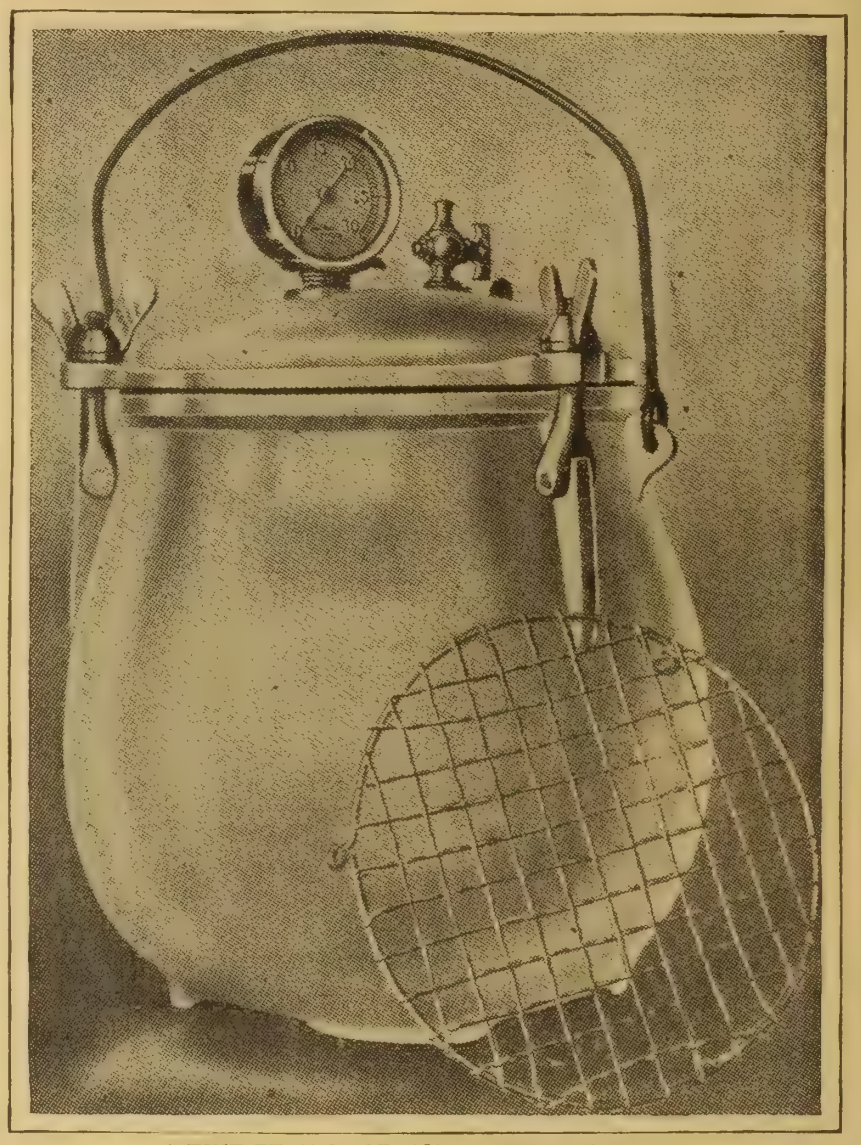
The canning season will soon be upon us. Evidently our readers are beginning to think of this, for within the past week we have had numerous requests for the best methods of canning tomatoes, peas, corn and beans. The writers of these letters state that they are planning to put up various kinds of vegetables, but that heretofore they have had trouble with such products keeping and are anxious this year to find a method of canning that will insure safe keeping for winter use.

Home canning is comparatively easy, but success in this line depends to a great extent on a knowledge of what causes canned fruits and vegetables to spoil. Micro-organisms, bacteria, yeast and mold are tiny little plants which cannot be seen with the naked eye, but are found practically everywhere, and it is a well-known fact that it is these little organisms that cause fruits and vegetables to decay and spoil. Therefore, every one of these living organisms must be killed before our canned products will keep. Moreover, the jars must be sealed air tight; this for the reason that the bacteria, yeast and mold are in the air and one tiny bubble of air may contain hundreds of these organisms.

Sterilization, or a killing of all living organisms by means of boiling water, is, therefore, the principle of all canning. In the case of actively growing organisms this end can be accomplished in five minutes, but the spores, the resting state of the bacteria, require a longer time. This is the secret of success in canning vegetables. Most everyone is successful in canning fruits and making jelly, preserves and pickles, but when it comes to vegetables many housewives make the mistake of not cooking them long enough to kill these spores. The thing to remember is that boiling water will kill the spores if the process is continued long enough.

It has formerly been the practice of some housewives to can their vegetables by what is known as the fractional method of sterilization. This means boiling the vegetables one hour a day for three consecutive days. The first hour's boiling kills all the growing organisms, but not the spores. Overnight the spores grow and the second day's boiling kills them. The third day's boiling kills all those which might not have been sufficiently developed to have been previously killed. This method requires time and is a great deal of trouble and for that reason most successful canners have discontinued it and are canning their vegetables in steam pressure outfits or by continuous boiling. The steam pressure method is perhaps the easiest and the quickest. By putting water under pressure the temperature at which it boils is raised. In this way a higher temperature is obtained and the spores are destroyed in a much shorter time. The continuous boiling method, however, is very satisfactory and no expensive outfit is necessary.

Those who are fortunate enough to possess one of the fine steam pressure outfits will have no trouble if they follow directions carefully. These are nice to have, but you are not necessarily seriously handicapped in the canning process if you do not possess one. A simple water bath outfit can be made in any home. All that is needed is a wash boiler, bucket, pan or any utensil with a tight-fitting top. Into the utensil should be fitted a rack made of wire, tin or narrow strips of boards. The rack should fit the container perfectly and should raise the jars at least three-fourths of an inch from the bottom of the container. Handles should also be attached to the racks so that the jars may be lifted in and out of the hot water in the rack.



A FINE TYPE OF STEAM PRESSURE OUTFIT.

In canning tomatoes select those of a uniform size, ripeness and color. Scald in water hot enough to loosen the skins and then plunge quickly in cold water. Remove core and skin. Pack in the jars whole and fill with hot tomato juice. Add one level teaspoonful of salt to each quart. Place rubber and cap in position; partially seal, but not tight. Sterilize twenty-two minutes in hot water bath outfit. Remove and tighten covers.

Sweet corn should be canned the same day as picked, as, indeed, should all vegetables and fruits. Remove husks and silks. Blanch on the cob in boiling water from five to fifteen minutes, then plunge quickly into cold water. Cut the corn from the cob with a thin, sharp knife. Pack the corn in jars tightly until full. Add one level teaspoonful of salt to each quart and hot water enough to fill. Place rubber and cap on jars and partially seal. Sterilize 180 minutes. Remove jars and tighten covers.

In canning Lima beans, string beans, peas, etc., cull, string and grade for uniform size and color. Blanch in boiling hot water from two to five minutes. Plunge quickly in cold water. Pack in jars, adding boiling hot water until full. Add one level teaspoonful of salt to each quart. Place rubbers and tops in position and partially seal. Sterilize for 120 minutes. Remove jars and tighten covers.

Carrots, parsnips, beats, turnips, sweet potatoes, etc., are canned in the same way, first carefully removing the skin (after being thoroughly washed) by scalding in hot water and then plunging into cold. One teaspoonful of salt should be added to each quart. These vegetables require a ninety-minute sterilizing period.

The directions here given are for canning in quart jars. If half-gallon jars are used 10 per cent of the time should be added. For instance, if your vegetable requires a ninety-minute period in quart jars half-gallon jars would require ninety-nine minutes. Begin to count time immediately after the water is boiling hard. This does not mean when bubbles begin to form on the bottom of the container nor even when bubbles begin to rise to the top, but when it is rolling and jumping vigorously. The jars, of course, are placed in the water bath before it is hot and care must be exercised also in removing the jars, as they would break if lifted immediately from the boiling water into the cool air.

Be sure your jars are clean and that the caps fit perfectly. Always use new rubbers, and it is best to buy the rubbers separately, as these are always of a better quality than those which come with the jars. With proper attention to all these details there is no reason why every farm woman cannot can all the surplus product from her garden and have it in perfect condition for winter use.

Package or Bulk Food For Your Family.

In this day, when the cost of living is soaring, there is much discusion about the value of package goods.

While the public may pay a few cents more for foods done up in packages, it is getting quality and cleanliness by this most sanitary method of distributing foods, which are not certain when distributed in bulk. The saving of a few cents at cost of health is not economy, and whenever buying in packages is of sanitary advantage the buyer should not buy in bulk.

The stanchest advocate of package goods is the American housewife herself. She has decreed that the old cracker barrel in the cross-roads grocery store shall go. Stored in this open barrel the crackers absorbed all the impurities of a breath-laden atmosphere of a crowded shop, as well as served as a repository for dust, flies, etc.

She will not tolerate the picking of dirt or refuse out of loose cereal. When she once observes a clerk brush up tea and with it dust from the

Carol John Pigott. Robert Henry Agne. Holger Larsen. Algie Marie Brunner. Helen Myrtle Twitchell. Emma Ray.

counter and put it back into the tea chest she says, "give me package tea."

The housewife has been growing in pure food wisdom, in confidence in her rights, in enthusiasm in protecting the health of her family, and today she is demanding the cleanest, purest and best in food producing and food selling. Back of her is the pure food official of her town, state and United States; the manufacturer of reliable food products, and her local dealer. Of these, the food manufacturer first came to the aid of the housewife in answer to her appeal for goods in as perfect shape as they left his factory. The label on all reputable package goods is a guarantee of quality and of well-prepared, weighed and carefully wrapped food products. The price is fixed at first to stand comparison with other goods and remains fixed. To raise the price by a fraction of a cent would be fatal just as a fraction of a cent too much in the beginning would be fatal by putting him at a disadvantage with competitors.

The prices of bulk goods fluctuate as the prices of meat, fruit and vegetables, etc., all of which are sold at the price the grocer thinks he can get. If his running expenses are high he feels justified in charging higher prices than the humble grocer on an unfashionable street.

Then, too, is there not a great deal more waste in a kitchen by deterioration when the housewife buys in the "paper bag?" Soda crackers, tea, coffee, raisins, currants, spices, etc., are good examples of foods that will deteriorate when purchased in bulk unless stored in covered containers. With the modern machinery for handling and wrapping package goods the increase in cost to the housewife is very small compared to the gain in quality and cleanliness of production.

Lewis B. Allyn, food chemist, says "that impurities, unreliable weights or measures, deterioration, waste, inconvenience, lack of guarantee and redress are the risks we take when purchasing in bulk, and that the package can guarantee us full weight or measure, perfect quality and condition and redress in case of dissatisfaction, because the manufacturer's name, the weight or quantity of contents—fixed by law, a true description or list of contents, the date of packing, and in cases, the number of packer, are printed upon the package.

The clean, light, ventilated, well-arranged model food store, with its attractive displays of package goods, instills into the mind of the purchaser a feeling of confidence which was never fostered by the open cracker barrel." —[Laura B. Breese.

Pure Water the Best Tonic.

Water taken as a tonic assures a happy disposition, a clear complexion, a good appetite and a liberal amount of "pep," in the opinion of Dr. R. T. Nichols, physician in the Kansas State Agricultural College.

The average person does not drink enough water. Doctor Nichols says water may be taken at any time by the average person without injury to the system. Old physicians have advised against drinking water at meal times. Their theory was incorrect, as no harm can result provided one does not wash down the food.

Water stimulates the kidneys, the bowels and the pores of the skin. A good digestive system is almost an assurance of perfect health. Pure water is a tonic for this system, and, moreover, is the best tonic a person can take.

Ice water should not be drunk by the healthy person no matter how hot the day, for its temperature is too far below that of the body. An athlete should not drink water just before or after a contest. Water taken on an empty stomach cleans out the digestive tract and prepares these organs better to digest the food.

Dr. Nichols believes there is such a thing as taking too much of nature's tonic. An excess of water overworks the excretory organs just as does an overdose of prepared tonic.

The source of tonic water should be tested several times a year. Although water is the best of tonics, it may carry the worst of germs. Always be sure drinking water is pure.

Cake From Bread Sponge.

To the Editor:—I have read the Home page with interest for more than five years, but have never before written to the editor. Last night I read of Mrs. A. G. J.'s request for cake made from bread sponge and as I have one my mother used to make—a favorite with us all—I thought I would send it in and perhaps help someone a little, for I have been helped a great deal by the contributions of others.

This is the recipe: Three cupfuls bread sponge, two cupfuls sugar, one cupful shortening, two eggs, two teaspoonfuls cinnamon, one teaspoonful cloves, one-half teaspoonful nutmeg, one cupful raisins, one teaspoonful soda, flour to make stiff as fruit cake. Let rise till light and bake about like fruit cake. This makes a large cake and I usually take just half the recipe.

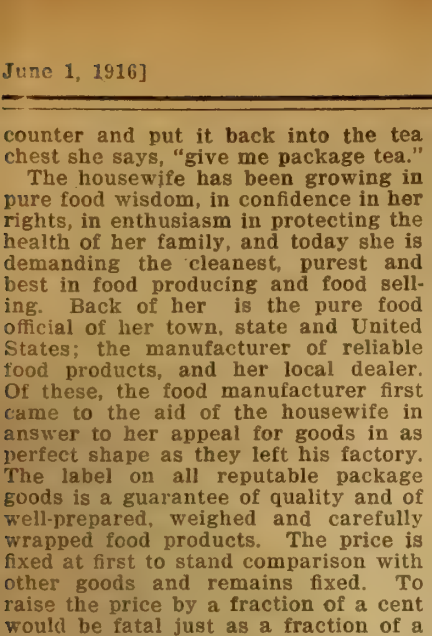
Another recipe I use is as follows: Take two cupfuls bread sponge, one egg, from one-fourth to one-half cupful sugar (depends on how sweet you like it), a pinch of salt, one-half cupful raisins (whole or chopped), flour enough to knead on board. Knead a few minutes and press in a pan about one inch in depth, spread with butter and sprinkle with sugar and cinnamon. Let rise till light and bake about half an hour.

Sometimes I have forgotten to save out the sponge, so I would take as much of the bread dough as I wanted and work in the eggs and raisins and it was all right.

How many have tried cinnamon rolls this way. Roll out bread dough about one-half inch thick, spread with butter, sprinkle with cinnamon and sugar and roll. Place in circle in pan and cut almost through about one inch apart and turn half over. It thus forms a flower. Place an extra one in center of ring. When light and just before placing in the oven pour over them a mixture made of one-half cupful sour cream and one-half cupful sugar. Bake. This dressing is sufficient for fifteen or more rolls.

For Mrs. C. R., who wanted a remedy for mildew, if stain is not too bad dipping in buttermilk and laying on the grass in the sun sometimes removes it. It is necessary to repeat two or three times in some cases. I have also used chloride of lime, a couple of tablespoonfuls in three or four quarts of water. Let goods lie half an hour or so. Rinse thoroughly, for the lime will eat if you do not.

Mrs. R. J. Gardiner.



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Recipes.

Coffee Cake.—Take about a quart of bread sponge and add one cup of sugar, one egg, one cup of raisins, four tablespoonfuls of melted lard, and a little nutmeg. Make stiff as for bread and set aside to rise. Then knead down again. Let rise a second time and put into round cake tins. Let rise and bake. When cool make an icing of powdered sugar and a little cream and flavoring. —Mrs. H. G.

Raisin Delight.—One-half pound each raisins, figs and shelled nuts, one-fourth cup pulverized sugar. Put fruit and nuts through food chopper and if not of smooth consistency put through a second time. Mix with the pulverized sugar and shape into a roll two inches in diameter. Wrap in wax paper until ready for use. This is excellent for school lunches and picnics.

Strawberry Blanc Mange.—One quart of milk, one-fourth cup of sugar, one cup of strawberry juice, four tablespoonfuls of cornstarch. Heat milk to boiling point. Add sugar, strawberry juice and cornstarch which has been rubbed smooth in a little cold milk. Cook until thick and pour into wet molds. When firm, turn out and garnish with whole strawberries and serve with sweetened whipped cream.

English Muffins.—Put two tablespoonfuls of lard and one teaspoonful of salt in a bowl and pour over it one cupful of scalded milk. When the mixture is lukewarm add one-fourth cake of yeast, broken in bits, and when yeast is dissolved add one and one-fourth cupfuls of flour. Cover and let rise until light. Cut down and cook on a hot buttered griddle, turning once, or cook in a hot oven in buttered muffin rings.

Chicken Imperiale.—Shred chicken with a silver fork. Make a rich cream sauce in the chafing dish, and add the chicken, together with a half cupful of good stock or one bouillon cube, a chopped Spanish pepper, a tablespoonful of chopped parsley and one-half can of button mushrooms. Season with salt and plenty of paprika and cook five minutes.

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FOR sale, slightly used Kimball upright piano, beautiful case, in perfect condition, used about year, $150 cash. Flora Pfingston, care this paper.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

The Endless Tale.

One of the Young Folks who signs her name "Elsie" has asked us to tell the story of The Endless Tale, so here it is.

There was once in the far East a great king who had nothing to do but sit all day long and listen to stories. He was very fond of stories and was always disappointed when the end came. He would listen through the longest story, and always when it was finished he would say, "There is only one fault to find with your story; it is too short." Story tellers from everywhere came to his palace and told him stories, some of them very, very long, but still the king was not satisfied.

At last he sent word into all the land offering a prize to anyone who should tell him an endless tale. And the prize for this endless tale was to be his fairest daughter as bride to the winner, and he also said he would make him his heir and therefore he should be king after him.

But the king was cruel, too, and he added to this offer that if any man should try to tell such a story and fail he should have his head cut off. This part of the king's message wasn't very attractive but the princess was very beautiful and there were many young men who would risk anything to win her, so some of them tried for the prize. One told a story that lasted for three months, but after that he could think of nothing more to tell and he had to give it up and pay the penalty. This was a warning to the others, so for a long, long time no one else tried it.

One day a stranger came to the palace and asked the king if it was true that he had offered his fairest daughter to the man who would tell him an endless tale. "Yes," said the king, "but if he fails he shall lose his head."

Then the stranger announced that he had a fine story about locusts that he would like to tell if the king would listen, to which the king agreed, and the story teller began.

"Once upon a time a certain king took all the corn in his country and stored it in a great, strong granary. A swarm of locusts came over the country and saw where the grain was stored. The granary was well-made and tight but the locusts sought day after day until they finally found on one side a crevice that was just big enough for one locust to pass through at a time. One locust went through this tiny hole and carried away a grain of corn; then another locust went in and carried away a grain of corn; then another locust went in and carried away a grain of corn."

For days and weeks and months the strange story teller kept saying over and over again, "Then another locust went in and carried away a grain of corn."

At the end of two years the king said, "How much longer will the locusts be going in and carrying away corn?"

"Why," said the story teller, "they have as yet cleared only one cubit and there are many, many thousands of cubits in the granary."

And the king cried out, "Man, you will drive me mad! I do not want to hear another word. Take my daughter; be my heir; rule my kingdom, but never let me hear another word about those locusts."

So the story teller married the king's daughter and they were very happy, indeed. And the king had been cured of his liking for long stories.

What Kind of Bird Is This?

Dear Young Folks:—I enjoy the letters which so many boys and girls have written. There are many boys and girls in our consolidated school. We are going to have a new schoolhouse built. I am in the fifth grade and like to go to school very much.

One day we went to the woods, where we picked flowers. After a while we had ice cream and marshmallows. We toasted the marshmallows over a fire.

I have read the story, "Rebecca of Sunnybrook Farm." It is a good story.

Has anyone ever seen a bird about the size of a catbird, or smaller than a blackbird? The tips of its wings and tail are black and the part around its eyes are also black. The breast is white. The back and top of its head are gray. The beak is curved like that of the parrot. I am interested in birds, so if someone knows the name of this bird will they please write to the Young Folks and tell us?

—Dorothy.

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1371—A pleasing frock for the little miss, in empire style, with or without bodice. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2¾ yards of 36-inch material for a 6-year size.

1731—Girls' "Middy" dress, with sleeve in either of two lengths. The pattern is cut in 5 sizes; 6, 8, 10, 12 and 14 years. It requires 4⅞ yards of 44-inch material for a 14-year size.

1612—A charming gown for the matron. It is especially attractive for the lovely combinations of material now in vogue. The pattern is cut in 6 sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 5⅞ yards of 44-inch material for a 36-inch size.

9355—Cool and comfortable sun bonnets for ladies and girls. The pattern including both styles is cut in one size, medium for ladies and for girls. It requires for No. 1, 1½ yards and for No. 2 1¾ yards of 32-inch material.

1644—Children's rompers, a practical, serviceable garment. The pattern is cut in 5 sizes; 1, 2, 3, 4 and 5 years. It requires 3 yards of 27-inch material for 4-year size.

1631—Girls' jumper dress with guimpe. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 2 yards of 27-inch material for the guimpe and 2⅛ yards for the dress for a 6-year size.

1728—Ladies' yoke petticoat. The pattern is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 3⅝ yards of 36-inch material for a 24-inch size.

International Sunday School Lesson.

Lesson for June 4, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

THE CALL OF THE WEST.

LESSON TEXT—Acts 15:36; 16:15.

GOLDEN TEXT—Come over into Macedonia and help us.—Acts 16:9.

Following the commission's report at Antioch of the decision of the Jerusalem church, Paul and Barnabas and others continued their evangelism in that city (Ch. 15:35). These leaders soon felt the need of revisiting the scenes of their former labors (v. 36), but when it came to the organization of their party, Paul refused to accede to the decision of Barnabas that John Mark should accompany them (vs. 37, 38, see Acts 14:13). So sharp a contention arose that two parties were organized. That Paul later forgave Mark is evidenced by his tender references to him.

I. A Closed Door. Ch. 16:1:8. Paul's companions for this second missionary tour were Silas (15:40), Luke (See use of word "we," v. 13), and Timothy (v. 1-3). The latter came of good ancestry, had good training and was of good report, still to avoid contention he submitted to the rite of circumcision. Paul's work was to promulgate the Jerusalem decree, to establish or to confirm the churches and to add to these churches new converts. But that did not entirely fulfill Paul's commission (9:15). The word "Asia" (v. 6) means the Roman province of Asia and, wisely obeying the Spirit's direction, Paul passed on until he came to the seaport town of Troas. At a later time Paul spoke the "word of the Lord Jesus" in Asia with wonderful effect (19: 1, 8, 19, 26, 27). It must have burned within the bones of Paul thus to be restrained, but it did not serve as an excuse for him to take a vacation, but rather to seek new fields wherein to preach. Thus he came to Troas.

II. The Macedonian Call. v. 9-13. Paul had several epoch-making visions; on the Damascus road (9:3, 4 and 26:19); in Jerusalem (23:11); at the time of his shipwreck (27:23), and the one we are now considering. A vision is a knowledge of the need and of the resources at one's command. Grecian beauty, philosophy, art and culture needed Christ. Christ as a resource was adequate and available to supply that need. This vision Paul saw: through it God called him to Macedonia. "We" (the first use of that pronoun in the book of Acts), Paul and Luke, immediately essayed to obey.

III. The Open Door, v. 14. 15. On what seeming trifles does history turn! An outcast wandering Jew coming to help a proud, cultured, influential foreign city, but he bears the Gospel which alone can be of help to them. Paul did not wait to "investigate the field" nor to establish a working organization. He knew a better point of contact, and that was to find those in that city who knew God even though ignorant of Christ. He began by preaching Jesus, not comparative religions, nor did he seek to found "community centers" with soup kitchens and social uplift. Paul knew that to elevate the individual by establishing him in the faith of Christ would soon result in community uplift. On the other hand, a faith which evaporates in words and does not give tangible, concrete evidence in works may well be challenged as to its being genuine. There was no supernatural direction as to what part of Macedonia Paul was to visit, and exercising his common sense, Paul went at once to the principal city. He did not begin at once to preach the gospel (v. 12 R. V.), but waited and watched for an opportunity, doubtless praying much for a favorable opening (Ch. 13:14; 17:2; 18:4).

The "man of Macedonia" seems to have been a woman unless we consider the Philippian jailer. This open-air

meeting was one of the most notable in history. The Lord opened the heart of pious Lydia and it was the turning point of the evangelization of Europe and America and the world. God must open the hearts of men and women (John 6:44, 45; Eph. 1:17, 18; Luke 24:45), and this he is willing and glad to do. The steps of this woman's conversion are clearly marked and present a good type. (1) She went out to pray (v. 13). (2) She heard the word (v. 13, 14; see also John 5:24). (3) She had her heart opened by the Lord (v. 14). (4) She "gave heed to the things which were spoken" (v. 13 and Mark 16:16). (5) She made public confession of her newly-found faith by baptism.

(6) She carried with her the whole household, perhaps children, workers in her business and servants (v. 31-33; I Cor. 1:16).

The use of the word "constrained" in verse 15 indicates a heart hunger to be helpful by being allowed to serve.

The Philippian church often helped Paul subsequently and doubtless Lydia was a leading spirit in such service.

The history of the Christian church relates many illustrations of the leadership and prominence of women of wealth and culture.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Starting a Boy in the Poultry Business.

A professional man who lives in the suburbs of his home city, whose estate consists of four or five acres of land, partly equipped for raising poultry, writes in regard to starting his boy in the business as follows:

I wish to ask your professional and personal opinion of the following: My son is thirteen years old, ready to understand and wishes to have a part in the poultry business. He is capable of doing a large share of the work and growing more capable each year. But he needs guidance and oversight more than many another, for he is quite forgetful. I could help him a good deal, especially in the matter of equipment, what to feed, why, how to feed, etc., but, of course, could not be there to see that the chicks were under cover. This boy would comprehend a ration and the reason for it, but he is careless. Would you advise waiting a year or two longer?

Do you see any plan, any corner of the business that the boy and I could take up a partnership, that would be likely to work out? Would expect losses, would expect to fail at this and that, and this is all right, to a measurable degree, if it will finally lead to measurable success. What limits could we set on this project, and still have it all right educationally for the boy? I mean if it were a half failure this first time. Please give me vour insight on this question.

Do not wait one year, neither one week or day; begin now. Try if you can, to find if the boy has a preference for some color that would play an important part. There is more in this than few people realize. Select an all-purpose breed, with the commercial part as the basis, and gradually grow into furnishing stock and eggs for customers, to head their yards.

Any time is a good time to go into the poultry business, but at this time the best plan is to buy a sitting of pure-bred eggs. These should not be the "best' as the trade mark goes, but from a dependable breeder and can be obtained at from $1 to $3 a sitting.

Caring for the possible chicks he will get from the eggs will be a starter in the matter of getting over being negligent. Something that is better than just an everyday chicken will help him in this matter. Who is it that does not wish to excel?

If he is fortunate as to raise some cockerels, and no one cares for them for breeders, have him to dress them and sell them to private customers about Thanksgiving. If there are only two, why, two it is, and an experience in one line of the business is to the good. Next spring purchase enough pullets of the same strain as you started with, at about $1 each, to make ten pullets, and a head of the mating should be purchased at from $3 to $5. This would give a good foundation, with unlimited future resources.

This may seem to be on a very small scale, but it is the only way with little or no experience. As the boy will have unlimited time, it will be possible for him to trapnest his hens. This is almost the first time I have ever recommended a trapnest; for the most part, our inquiries are from busy farm women. Please do not jump at the conclusion that the writer is averse to trapnesting. It is all right, but it has limitations.

Keep a record of the eggs, the feed and all expenses. Study feed values, as you never studied anything before, if you expect to break even on the expenses. It can be done, and $1.50 net value received for every business hen on the place. As you have some yards, there will be no expense on this score.

If September eggs are cheap, put them in waterglass until they are high. It rarely pays to do this though, where the prices are seldom below 25 cents per dozen. Anyhow, the boy would get his lesson, and as it is understood, this is the prime idea.

Whatever breed he selects, with your guidance, get a Standard of Perfection which may be procured at this office, and get the boy to compare his fowls with it. It will guide him in the selection of his own stock. With grit and determination, it is impossible to say what immense things the boy may do later.

And, above all, if the boy should fail to raise any chicks do not let him quit. The world has no use for a quitter. The next stage of the game would be to buy a pen of fowls as soon as the breeding season is over. It will cost something to feed them, but then the cost will be much less than later.

The start, whether with the eggs or stock, and what numbers, depends on the time of the year.

Cooked Oats For Chickens.

To the Editor:—I would like to say to the inquirer about feeding cooked oats to chickens that I have fed it for over a quarter of a century and did not lose any chickens from so doing. I cooked it dry, or if it was not dry I mixed it with bran or mixed ground grain so it would not be too moist. I like to feed cooked oats in the winter at noon by scattering it in clean straw. It does not take nearly as much oats cooked as if fed whole raw grains. I think it is a great aid to start the young pullets laying. Poultry Raiser.

Failure to Get Catch of Clover.

(Continued from page 8.)

ing on the surface is liable to be killed by the frost; and that early fall seeding can be successfully practiced in many places.

Clover is commonly seeded with small grain which is called the nurse crop. This nurse crop serves two functions, it keeps the weeds down and it produces a money crop while the clover is making its first year's growth. Whether it is wise to use a nurse crop depends on so many things that it cannot be discussed within the limits of a brief article; it has been abundantly shown, however, that if weeds are kept down by clipping, the clover will make a better growth when sown alone than when with a nurse crop. In dry seasons the nurse crop is pretty certain to cause the death of the clover by taking all the moisture and then leaving the young plants exposed to the heat of a July or August sun when in a weakened condition by reason of the lack of moisture. If a nurse crop is used, care should be taken not to seed it too thickly, since the thicker the grain the more certain it is to smother the clover or to take all the moisture and leave the soil dry at harvest time. Of the small grains rye shades the ground the least and oats the most and these crops represent both extremes of desirableness so far as red clover is concerned.

The consideration of the nurse crop brings us from getting a catch to maintaining a stand. The most frequeht causes of the death of young clover are the drouth and heat to which the plants are subjected upon the removal of the grain crop. The amount of injury caused will, of course, depend on the season. The summer of 1915 was very favorable to young clover, as there was plenty of rain throughout most of the clover belt, but such seasons are exceptional. Injury will also be worse on soils deficient in humus since these run together and dry out more than soils having plenty of organic matter. Top dressing the fields with manure during late winter is as good a preventive of this danger as can be suggested. The manure will not only prevent loss of moisture, but will furnish plant food for the young clover making stronger plants, better able to withstand drouth. It is also advisable to leave the grain stubble as long as possible so as to afford shelter to the young plants.

If there is a good stand of clover on a field in September and October there is every reason to expect a good stand in spring, barring, of course, most unusual weather conditions. If, however, the soil is deficient in lime the plant, though appearing fair in the fall, may lack the vigor to go through even a reasonably mild winter. Two mistakes are often made, and these should be guarded against. The young clover should not be pastured closely in the fall, nor should it be allowed to seed. Last fall, owing to the favorable summer young clover was found blossoming and seeding in many fields. This is bad because it weakens the plants and increases the number of clover seed insects, the late broods finding these flower heads a fine place in which to lay eggs which hatch into larvae, many of which may live over the next winter. Provided there is lime and phosporus enough in the land, second-year clover should give little trouble unless attacked by root borers or other insects. There are leaf-eating insects that do damage locally and some fungi have been known to kill whole fields or to reduce yields, but the insects working on the roots probably give more trouble than other insects or than diseases. When a field becomes infested with root-eating insects there is nothing to do but plow it up. The fact that insects and diseases of all kinds increase in a clover field is one of the best reasons why such a field should not be kept longer than two years.

The principles of successful clover growing may be summarized as follows:

Give the clover a chance to make a healthy plant by adding lime, phosphorus and potash to soils that need them. In some way add vegetable matter to the soil and keep up the supply by turning under clover often enough.

Give the seed a fair chance by placing it in mellow soil and covering it from one-half to one inch deep.

If sown with a nurse crop, give the young plants a chance by not seeding the grain crop too thickly, by top dressing with manure if practicable, and by cutting the stubble as high as possible.

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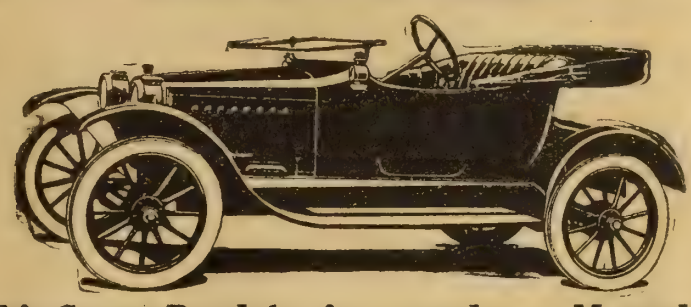

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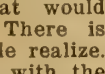

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POULTRY.

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HEPSEY BURKE—A Sister to David Harum

By F. N. Wescott, the Brother of the Author of "David Harum."

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CHAPTER XXIII.

Hepsey Calls a Meeting.

FOR the next few days Hepsey's mind worked in unfamiliar channels, for her nature was that of a benevolent autocrat, and she had found herself led by circumstances into a situation demanding the prowess and elasticity of the diplomat. To begin with, she must risk a gamble at the meeting. If the spiritual yeast did not rise in old Bascom, as she hoped it would, and crown her strategy with success she would have to fall back on belligerent tactics and see if it were not possible to get his duty out of him by threatened force of public opinion; and she knew that, with his obstinacy, it would be touch and go on which side of the fence he would fall in a situation of that kind—dependent, in fact, upon the half turn of a screw, more or less, for the result. Furthermore, she concluded that beyond the vaguest hint of her call on Bascom and the object of the meeting she could not show her hand to Maxwell; for he would feel it his duty to step in and prevent the possibility of any such open breach as failure on Hepsey's part would probably make in the parish solidarity. For once she must keep her own counsel—except for Jonathan, whose present infatuated condition made him an even safer and more satisfactory source of "advice" than he normally was. But the evening before the meeting, as he sat on Hepsey's porch, he began to experience qualms, perhaps in his capacity as Junior Warden. But Hepsey turned upon him relentlessly:

"Now see here! You know I don't start somethin' unless I can see it through and if it means a scrap, so much the better. Next to a good revival, a good hard scrap in a stupid parish has a real spiritual value. It stimulates the circulation, increases the appetite, gives people somethin' to think about and does a lot of good where peaceful ways would fail. The trouble with us is that we've always been a sight too peaceful. If I've got to do it I'm goin' to make a row, a real jolly row that'll make some people wish they'd never been born. No-no-no! Don't you try to interfere. We've come to a crisis and I'm goin' to meet it. Don't you worry until I begin to holler for first aid to the injured. A woman can't vote for a vestryman, though women form the bulk of the congregation and do most all of the parish work; and the whole church'd go to smithereens if it weren't for the women. But there's one thing a woman can always do: She can talk. They say that talk is cheap, but sometimes it's a mighty expensive article, if it's the right kind; and maybe the men will have to settle the bills. I'm going to talk; perhaps you think that's nothing new. But you don't know how I can talk when once I get my dander up. Somebody's goin' to sit up and pay attention this time. Bascom'll conclude to preside at the meetin'; whichever way he means to act; and I've fixed it so Maxwell will be engaged on other duties. No; go 'way. I don't want to see you around here again until the whole thing's over."

"All right, Hepsey, all right. I guess if it goes through the way you want you'll be that set up you'll be wantin' to marry old Bascom 'stead of me," chuckled Jonathan, as the lady of his choice turned to enter the house.

She faced round upon him as she reached the door, her features set with grim determination:

"If I get the whole caboodle, bag and baggage, from the meetin' and from Bascom there's no knowin' but what I'll send for the parson and be married right there and then. There isn't a thing I could think of in the line of a real expensive sacrifice that'd measure up as compensation for winnin' out—not even marryin' you, Jonathan Jackson."

So Hepsey laid down lines for control of the meeting, ready with a different variety of experiments from point to point in its progress, as Sylvester Bascom's attitude at the time might necessitate. For she felt very little anxiety as to her ability to carry the main body of the audience along with her.

The night of the meeting the Sunday School room, adjacent to the church, was filled full to a seat at least a quarter of an hour before the time announced for the meeting. Hepsey had provided herself with a chair in the center of the front row, directly facing the low platform to be occupied by the chairman. Her leather bag hung formidably on one arm and a long narrow blank book was laid on her lap. She took little notice of her surroundings and her anxiety was imperceptible as she thrummed with a pencil upon the book, glancing now and then at the side door, watching for Bascom's entrance. The meeting buzzed light conversation as a preliminary. Had she miscalculated on the very first move? Was he going to treat the whole affair with lofty disdain? As the hour struck dead silence reigned in the room, expectant, and Jonathan, who sat next her, fidgeted nervously.

"Five minutes' grace and that's all. If he's not here by then it'll be up to you to call the meetin' to order," whispered Hepsey.

"Sakes!" hissed the terrified Junior Warden, "you didn't say nothin' about that Hepsey," he protested.

She leveled a withering glance at him and was about to reduce him to utter impotence by some scathing remark when both were startled by a voice in front of them, issuing from "the chair." Silently the Senior Warden had entered and had proceeded to open the meeting. His face was set and stern and his voice hard and toneless. No help from that quarter, Hepsey mentally recorded.

"As the rector of this parish is not able to be present I have been asked to preside at this meeting. I believe that it was instigated—that is, suggested, by some of the ladies who believe that there are some matters of importance which need immediate attention and must be presented to the congregation without delay. I must beg to remind these ladies that the Wardens and Vestrymen are the business officers of the church; and it seems to my poor judgment that if any business is to be transacted the proper way would be for the Vestry to take care of it. However, I have complied with the request and have undertaken to preside, in the absence of the rector. The meeting is now open for business."

Bascom sat down and gazed at the audience, but with a stare so expressionless as gave no further index to his mood. For some time there was a rather painful silence, but at last Hepsey Burke arose and faced about to command the audience.

"Brethren and sisters," she began, "a few of us women have made up our minds that it's high time that somethin' was done towards payin' our rector what we owe him and that we furnish him with a proper house to live in."

At this point a faint murmur of applause interrupted the speaker, who replied: "There. There. Don't be too quick. You won't feel a bit like applaudin' when I get through. It's a burnin' shame and disgrace that we owe Mr. Maxwell about two hundred dollars, which means a mighty lot to him, because if he was paid in full every month he would get just about enough to keep his wife and himself from starvin' to death. I wasn't asked to call this meetin'; I asked the rector to and I asked the Senior Warden to preside. And I told the rector that some of us—both men and women—had business to talk about that wasn't for his ears. For all he knows, we're here to pass a vote of censure on him. The fact is that we have reached the point where somethin' has got to be done right off quick; and if none of the Vestrymen do it, then a poor shrinkin' little woman like myself has got to rise and mount the band wagon. I'm no woman's rights woman, but I have a conscience that'll keep me awake nights until I have freed my mind."

Here Hepsey paused, and twirling her pencil between her lips, gazed around at her auditors who were listening with breathless attention. Then she suddenly exclaimed with suppressed wrath and in her penetrating tones:

"What is the matter with you men, anyway? You'd have to pay your butcher or your baker or your grocer, whether you wanted to or not. Then why in the name of conscience don't you pay your parson? Certainly religion that don't cost nothin' is worse than nothin'. I'll tell you the reason why you don't support your parson. It's just because your rector's a gentleman and can't very well kick over the traces or balk or sue you even if you do starve him. So you prosperous, big-headed men think that you can sneak out of it. Oh, you needn't shuffle and look mad; you're goin' to get the truth for once, and I had Johnny Mullins lock the front door before I began."

The whole audience responded to this sally with a laugh, but the speaker relented not one iota. "Then when you've smit your rector on one cheek you quote the Bible to make him think he ought to turn his overcoat also." Another roar. "There, you don't need to think I'm havin' a game. I'm not through yet. Now let's get right down to business. We owe our rector a lot of money and he is livin' in a tent because we neglected to pay the interest on the rectory mortgage held by the Senior Warden of our church. Talkin' plain business, and nothin' else, turned him out of house and home and we broke our business contract with him. Yes we did! And now you know it.

"Some of us have been sayin'—and I was one of 'em till Mr. Maxwell corrected me—that it was mean of Mr. Bascom to turn the rector and his wife out of their house. But business is business and until we've paid the last cent of our contributions we haven't any right to throw stones at anyone. Wait till we've done our part for that! We've been the laughing stock of the whole town because of our pesky meanness. That tent of ours has stuck out on the landscape like a horse fly on a pillow sham.

"It's not my business to tell how the rector and his wife have had to economize and suffer to get along at all, or how nice and uncomplainin' they've been through it all. They wouldn't want me to say anythin' of that! sportsmen they are, both of 'em. The price of food's gone up and the rector's salary gone down like a teeter on a log.

"Now, as I remarked before, let's get right down to business. The only way to raise that money is to raise it! There's no use larkin' all 'round Robin Hood's barn, or scampering round the mulberry bush any longer. I don't care for fairs myself, where you have to go and buy somethin' you don't want for five times what it is worth and call it givin' to the Lord. And I don't care to give a chicken and then have to pay for eatin' the same old bird afterwards. I won't eat soda biscuit unless I know who made 'em. Church fairs are an invention of the devil to make people think they're religious when they are only mighty restless and selfish.

"The only thing to do is to put your hands in your trousers' pockets and pay, cash down, just as you would in any business transaction. And by cash I don't mean five cents in the plate Sunday and a dollar for a show on Tuesday. We've none of us any business to pretend to give to the Lord what doesn't cost a red cent, as the Bible says, somewheres. Now don't get nervous. I'm going to start a subscription paper right here and now. It'll save lots of trouble and you ought to jump at the chance. You'll be votin' me a plated ice water pitcher before we get through for being' so good to you—just as a little souvenir of the evenin'."

A disjointed murmur of disapproval rose from sundry parts of the room at this summary way of meeting the emergency. Nelson, who had tried in vain to catch the eye of the chair, rose at a venture and remarked truculently:

"This is a most unusual proceeding. Mrs. Burke."

The chair remained immobile—but Hepsey turned upon the foe like a flash of lightning.

"Precisely, Mr. Nelson. And we are a most unusual parish. I don't claim to have any information gained by world-wide travel, but livin' my life as I've found it here, in this town, I've got to say, that this is the first time I ever heard of a church turnin' its rector out of house and home and refusin' to give him salary enough to buy food for his family. Maybe in the course of your professional travels this thing has got to be an everyday occurrence to you—but there's some of us here that ain't got much interest in such goings-on outside of Durford."

"You have no authority to raise money for the church; I believe the Warden will concur in that opinion?" and he bowed towards Bascom.

"That is a point for the meeting to decide," he replied judicially, as Hepsey Burke turned towards him.

"Seems to me," continued Mrs. Burke, facing the audience, "that authority won't fill the rector's purse so well as cash. It's awful curious how a church with six Vestrymen and two Wardens, all of them good business men—men that can squeeze money out of a monkeywrench, and always get the best of the other fellow in a horse trade, and smoke cigars enough to pay the rector's whole salary—get limp and faint and find it necessary to fall back on talkin' about 'authority' when any money is to be raised. What we want in the parish is not authority, but just everyday plain business hustle, the sort of hustle that wears trousers, and as we don't seem to get that, the next best kind is the sort that wears skirts. I'd always rather that men shall do the public work than women, but if men won't women must. What we need right here in Durford is a few full-grown men who aren't shirks or quitters, who can put up prayers with one hand while they put down the cash with the other; and I don't believe the Lord ever laid it up against any man who paid first and prayed afterwards.

"Now brethren, don't all speak at once. I'm goin' to start takin' subscriptions. Who's goin' to head the list?"

(Continued next week.)

Beginning with the Boiler

And ending with the last brushful of paint, there is not a questionable item to be found in any engine that the Nichols & Shepard Company build. Everything is of the best.

A GOOD TRACTION ENGINE

Is the unfailing result of this method. When we say that it IS good we are backed by the openly expressed opinion of thousands of users who know in every detail what a good traction engine should be.

THE USER IS SATISFIED

That every convenience, that every economy of operation, that every safety device that is necessary or practical will be found right where it belongs on a—

RED RIVER SPECIAL ENGINE

Five sizes and sixteen variations are built, ranging from 13-40 to 30-98 H. P. Wood, coal or straw may be used for fuel, the engine may be had in single or double cylinder, the mounting may be center or rear. No matter what your needs may be for agricultural traction power we make an engine that will fill the bill.

Send for a copy of the Home Edition of the Red River Special paper. You will find that someone in your immediate vicinity has tried with success a Nichols & Shepard Co. traction engine on every kind of work that a tractor can do. They have been pleased with the results and have written us to tell just how well it performed. There is a lot of experience condensed in these letters that may be useful to you. Ask for a Big Catalog at the same time. It illustrates and describes the power that will haul the mortgage off the farm.

NICHOLS & SHEPARD CO.
(In Continuous Business Since 1848)
BUILDERS EXCLUSIVELY OF
THRESHING MACHINERY
Red River Special Threshers, Feeders, Wind Stackers
Steam and Oil-Gas Traction Engines
(8) BATTLE CREEK, - MICHIGAN

When writing to advertisers please mention The Wisconsin Farmer.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Brown Swiss Cattle of Quality.

WISCONSIN'S Brown Swiss cattle have been and are now attracting considerable attention both by the large milk records which they have been making and by their winnings in the show ring. Although there are not the large numbers of these worthy cattle that there are of some of the other breeds, they are competing very creditably with these breeds and these owners are highly enthusiastic in regard to their future success. Wisconsin now has the largest herd of Brown Swiss cattle in the United States owned by Mr. Voegli, of Green county. The herd of Mr. Allyn in Walworth county has been making some wonderful milk records during the past year. In addition to this, they have won a large number of very creditable prizes at the big dairy shows and state fairs during the past three years. The herd of Charles F. Lau, of Thiensville, Wis., is one which shows promise of demanding the attention of all breeders. His foundation herd consisted of seven cows and a sire purchased from J. P. Allyn, whose show records and production records have placed his herd among the leaders of the breed. At the present time Mr. Lau is offering some very fine yearling bulls for sale ready for immediate service. These were sired by Casper L., a son of Casper C., and come of prize-winning breeding on both sides. For further information in regard to these animals write to the above address. See page 27.—Adv.

Kohlwey's Holsteins.

PROBABLY the largest herd of registered cattle in Ozaukee county, is that of Fred Kohlwey, Grafton, Wis. The herd consists of some fifty head all choicely bred. The sire at the head of the herd is Cedarlawn Champion 3d, whose dam, Cedarlawn Bessie, has a record of 22.20 pounds of butter in seven days with first calf. The sire of Cedarlawn Champion 3d is Cedarlawn Champion, the great bull that heads the Cedarlawn herd of C. A. Schroeder, of West Bend, Wis. His dam was the former word's record two year old, making close to twenty-six pounds of butter in seven days. At the present time Mr. Kohlwey is offering bull calves sired by Cedarlawn Champion 3d and out of granddaughters of Sir Johanna De Kol, sire of the forty-pound cow, Johanna De Kol Van Beers, and many others with exceptionally high records. For further information in regard to the animals write to the above address. Kindly mention The Wisconsin Farmer when writing. See page 28.—Adv.

The Grand Champion Charter Oak Sold.

WHEN Oscar Knutson, Michigan City, N. D., purchased the Clydesdale stallion, Charter Oak, of Jas. Van Etta, Lima Center, Wis., he bought one of the best horses ever owned in the state. This horse has been a winner in whatever show he was entered. He was a winner at Chicago as a two year old and also as a three year old. As a four year old he was grand champion at the Wisconsin State Fair. As a five year old he was grand champion at Minnesota and at the World's Fair. Mr. Van Etta deserves a great deal of credit for bringing this horse out the way he has. We feel safe in saying that this is the highest-priced Clydesdale stallion that ever left Wisconsin. Mr. Van Etta has a grand stud of Clydes and at any time you want something of this breed we know of no better breeder to refer you to.—Adv.

Jos. Engelhof Chester Whites.

WE recently called on Jos. Egelhof, breeder of Chester White hogs near Edmund, Wis. He is offering bred sows and pigs for sale at very reasonable figures. The spring pigs are sired by Prince Triumph he by old Prince Triumph that sold for a long figure a couple of years ago in an Iowa sale. Owing to shortage of feed and pasture Mr. Egelhof wishes to cut his herd down in numbers and for that reason he will sell a dozen of his sows. In age they range from fall gilts to two years old. They are bred for fall litters. He also has some fall boars for sale and spring pigs, both sexes. These hogs are certainly being priced right and if you are interested it will pay you to write him or better yet see the hogs. See page 27.—Adv.

Peul's Holsteins.

HENRY PEUL, Cedarburg, Wis., is advertising two fine calves for sale on page 28. One was sired by Billy Elgin De Kol 134469. The other was sired by Korndyke De Kol Spoffard 6th. The dams of these two bulls are good, straight animals and good producers. The young bulls are well marked, of good, straight, square type and well grown. They are being offered very reasonably for quick sale.—Adv.

Do You Want Durocs?

IF you can use five or six Duroc sows that are bred for fall farrow you will be pleased with those being offered by J. W. Higgins, Gotham, Wis. They are sired by or bred to Model John, a son of the grand champion, Lee's Defender. Mr. Higgins is one of the Duroc boosters of the state and his herd is nominated in the futurity and if you want to show a futurity litter this fall buy one of these nominated litters. His spring pigs are looking fine and for a short time he will sell gilts and boars unrelated. We are glad to recommend this herd. See page 27.—Adv.

Short-horns for Sale.

IF you are in the market for Short-horns, either straight Scotch or Scotch-topped you can find them in the herd of Wm. Hickin, Lancaster, Wis. This breeder has a large herd and will sell cows, heifers or bulls. He will also sell three tried sires. Champion Banff, Aug. 17, 1906, sired by Nonpareil Banff 2d, out of Persis 5th by the Duthie bull, Highland Champion, second dam imported Persis 4th by Christmas Gift. Mr. Hickin can show you some good cattle, the get of this bull. Red Crest, a seven-year-old red is sired by Golden Crest out of imported Duchess 28th by Lester, second dam Duchess 15th by the great Cruickshank bull, Sittyton Fame. Prince Henry was calved June 20, 1912, and is sired by Starry Crest out of Marietta B. by King Alexander. He traces to imported Marietta 2d in the third cross by Prince Horace, bred by W. S. Marr. One can see from this breeding that the bulls are well bred and anyone wanting a bull for immediate service can find them in this herd. As mentioned above, heifers and cows are being offered for sale, some of them are by or bred to one of the above bulls. Notice the advertisement in this issue and write Mr. Hickin if interested in Short-horns. See page 27.—Adv.

The Art of Auctioneering.

NO profession offers more attractive possibilities for financial reward than does that of an auctioneer. There is constant and steady demand for the services of men equipped for satisfactory service in the profession. Special study and training is an essential to success in this work, and that can be secured at Jones National School of Auctioneering, 40 North Sacramento boulevard, Chicago, Ill. This is the oldest and most complete school of the kind in the country and offers to the student advantages that cannot be secured elsewhere. The graduate of the Jones school is thoroughly equipped to make a success of his chosen profession and in every section of the country will be found leading auctioneers who laid the foundation for their successful careers at the Jones institution. A complete and handsome catalog will be sent to any person interested. Address Jones' National School of Auctioneering, 40 North Sacramento avenue, Chicago, Ill. The advertisement appears on page 27.—Adv.

Good Lightning-Rod Proposition.

ON account of the number of storms last season we believe that farmers will be more interested than usual this year in lightning rods. The Cedar Rapids Lightning Rod Company, Cedar Rapids, Iowa, has a special proposition to make to dealers and agents who wish to handle their line. They are well supplied with good stock, being fortunate in having exceptionally good quality 98 per cent pure Lake Superior copper. Cedar Rapids has excellent shipping facilities and goods may be forwarded in a short time to any point within a radius of several hundred miles. We request that those who write to this company concerning their offer mention this paper in their letter.—Adv.

Harvey Little Offers Short-horns.

WE have just had a letter from Harvey H. Little who owns one of the very best herds of milking Short-horns in the state of Wisconsin, located near Evansville, advising that he has several young bulls that are old enough to ship. We recently saw these young bulls and gladly recommend them. They are from high-producing cows, as Mr. Little's records show and no herd in the state contains more quality milking Short-horns than this herd. Among this lot of bulls there are some suitable to head any herd if given proper care. It will pay you to get prices. In writing will you please mention The Wisconsin Farmer? See page 27.—Adv.

Well-Bred Jersey Bulls for Sale.

SEVERAL Jersey bulls of good breeding are advertised for sale on page 27 by Jos. G. Greene, Bangor, Wis. The two-year-old bulls are priced at from $75 to $85. There are some younger bulls in the lot; two bulls are from official record cows. Here is your opportunity to get a good Jersey bull. Write Mr. Greene at once regarding this offering and please say you saw his advertisement in The Wisconsin Farmer.—Adv.

Dineen's Holsteins.

THE Holstein herd of C. F. Dineen, Cedarburg, Wis., is one which we advise our readers to keep in mind. The herd has been carefully built up with good individual cows of high production ability. One of the foundation cows, that is still in the herd is Mechthilde Daisy Longfield, that made 22.45 pounds of butter in seven days. This cow not only is a heavy producing animal herself, but she transmits this ability to her daughters in a very marked degree. She has four A. R. O. daughters, one of which is a three year old and made 22.39 pounds of butter in seven days and another daughter made over twenty pounds. She was sired by Longfield Piebe De Kol, that has several A. R. O. daughters with creditable records. A son of this fine cow now stands at the head of the herd. He was sired by King Pontiac Mahomet, a son of the great bull, King of the Pontiacs, that has 174 A. R. O. daughters, fourteen with records above thirty pounds. He has thirty-one daughters that have an average of 113 pounds of butter in thirty days. At the present time Mr. Dineen is offering a yearling bull, ready for service, sired by a twenty-four-pound bull and out of a daughter of a sixteen-pound cow. For pedigree and further information write to the above address. See page 28.—Adv.

Don't Forget the Duroc Futurity Payments.

LEST you forget, we want to impress on you the importance of keeping your Duroc futurity nominations good. You have no doubt received letters from the association with blanks for the litter nominations that should have been in June 1st. If you have nominated your herd it will pay you to nominate your litter or litters. This only costs $1 per litter and while perhaps at the present time you can't tell very much about the outcome of the different litters, no doubt some of them will come along fine and you will want to show them, but if you fail to nominate the litter at this time, you lose your chance of showing this fall. Inasmuch as you have paid the $5 to nominate your herd, don't fail to keep the nomination good, but send in the litter nominations at once. If you haven't received the blank all you have to do is to send in the farrowing date of the litter and the record number of the sire and dam, together with the dollar for each litter you wish to nominate. If you Duroc men do your part we will have the greatest show of Durocs at the Wisconsin State Fair that they have ever had. Keep boosting all the time. Send your nomination direct to J. R. Pfander, Secretary, Peoria, Ill.—Adv.

Rid Your Live Stock of Worms.

AT this time of year, live stock are very apt to be troubled with stomach and intestinal worms which cause indigestion, decreased vitality and lowered resistance to disease. It is impossible to keep stock in good condition when they are bothered with worms. Therefore, it will be worth while for stockmen to read the advertisement on page 18 of Sal-Vet, the widely-known worm destroyer and live stock conditioner. A price list is included in the advertisement and also a sixty days' trial proposition, which allows for a trial of Sal-Vet in order that its value may be learned. If interested in this proposition, write to Sidney R. Feil, Pres., The Feil Mfg. Co., Cleveland, Ohio, and kindly mention this paper in your letter.—Adv.

Refined Hog Cholera Serum.

A STERILE, filtered hog cholera serum has at last been produced and the announcement of this fact appears in the advertisement of H. K. Mulford Co., Philadelphia, Pa., which appears on page 2 of this issue. Reduced to its simplest terms, it may be said that there is no form of germ life whatever in this product, so that when it is introduced into the tissue of animals it can by no manner of means result in introducing a dangerous infection. The production of this serum is the result of a scientific process that eliminates everything that should be eliminated and yet retains the full protective value of the product as an agent for preventing cholera. The use of this serum by a skilled veterinarian simply means the utter elimination of chance and the complete safeguarding of every treated animal. The process of sterilizing and filtering the serum so that it becomes an absolutely refined product has not been the result of chance work, but rather, the outcome of painstaking effort carried on at a fabulous cost for a period of five years. The use of this product in the future by swine breeders of the United States means that millions of dollars will be saved. As a protecting agency against hog cholera the Mulford refined serum might well be called a product of perfection. It may be used in the "single" treatment or in accordance with the so-called "simultaneous" plan. It is so pure in its composition that it is immediately absorbed by the system of the hog when it is injected and complications cannot arise from the use of this product because, as said before, it is absolutely free from germs. It only costs about 40 cents to inoculate a fifty-pound pig with this sterile and filtered serum. Provision has been made so that it will be placed in the hands of skilled veterinarians only. It would be well if every swine breeder who reads this paper would fix in his mind the name "H. K. Mulford Co." and in connection therewith remember that this is the company that makes the germless hog cholera serum. A postal card application to the company, addressed to Philadelphia, Pa., requesting Booklet No. 9, which contains much information about this serum, will meet with a prompt response and your request will be complied with immediately.—Adv.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

FAIR representatives of the Polled Durham bulls offered for sale by F. S. Bunker, Kilbourne, Wis. See advertisement on page 27 and write for catalog.

SALE DATES.

Guernsey Cattle.

June 7, Waukesha Co. Guernsey Breeders' Consignment sale, Waukesha, Wis., F. E. Fox, Sec.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.

"Those familiar with conditions pronounce that the cattle business for the next three years is going to be a profitable investment," F. W. Harding, of Chicago, secretary of the American Short-horn Breeders' Association, said. Mr. Harding has been making a tour of the middle West and the Southwest in the interest of the association, and says that prospects throughout the country are better than usual. "However, farmers throughout the United States are beginning to realize that 'scrub' cattle cannot compete on the market with thoroughbred cattle," he said. "When you hear of a farmer who has failed in the cattle business, you can generally mark him down as a dealer in 'scrubs' and not one who has awakened to the fact that thoroughbred stock is a sound investment."

AUTO SUPPLIES! SAVE MONEY
Get better goods. Galloway guaranteed tires, tubes, patches, vulcanizers, chains, lamps, horns, tools, plugs, greases, delivery bodies, etc., at lowest cash prices. Big illustrated catalog of these and other goods free.
Our light Arabian Roadster at $434.50 is supreme in its field. WM. GALLOWAY CO.
36 Galloway Sta. Waterloo, Iowa

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a grandson of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

A. F. BARSTOW

RANDOLPH, WISCONSIN
BREEDER of Registered Holstein Cattle. When in need of Holsteins send me your wants.

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

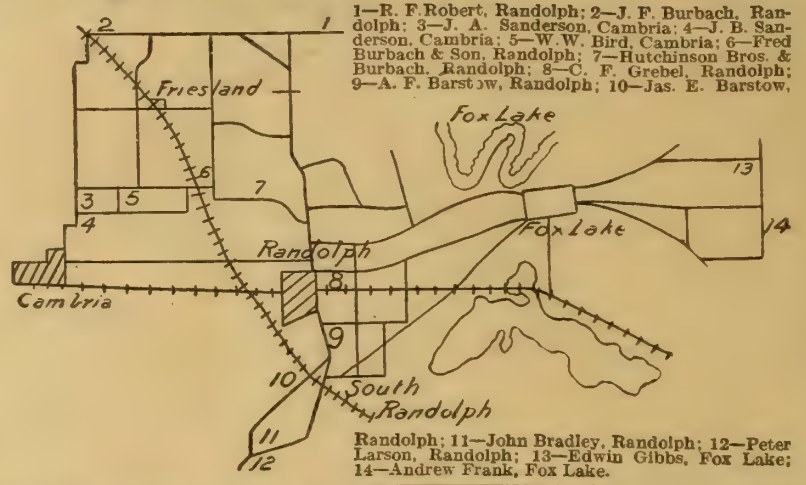
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

J. F. BURBACH Cambria, Wis.

WE HAVE a large herd of choicely bred Holstein cattle. We can spare a few females at the present time.

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. C. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - - Cambria, Wisconsin

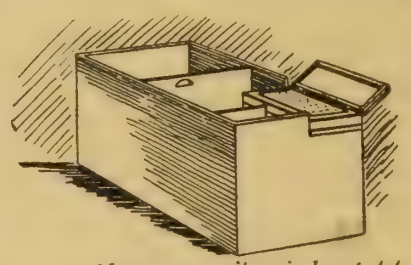
Safety First Box For Blasting Caps.

Dynamite is not exploded by merely inserting a fuse in the cartridge and lighting it. If this were done the cartridge would probably only burn. Some agent is needed so that the spark from the fuse will explode it, thereby detonate the dynamite. Blasting caps containing mercury fulminate serve this purpose.

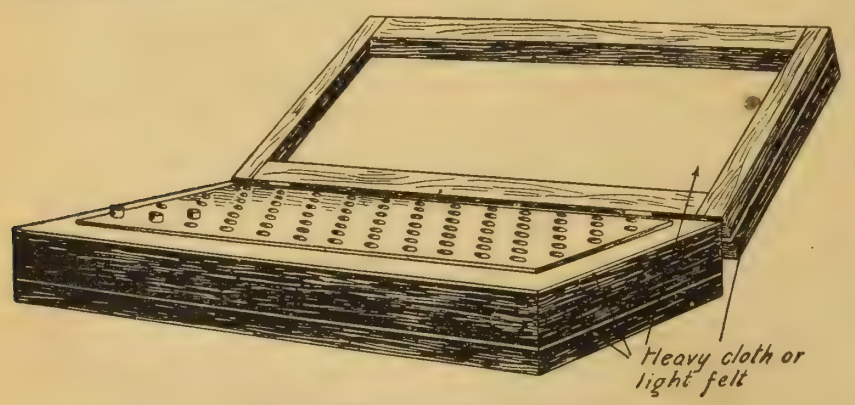
These blasting caps or detonators, as they are sometimes called, are quite sensitive to shocks, friction or heat and should always be treated with the greatest respect. When blasting in the field it is somewhat of a problem to have the caps convenient and at the same time in a safe place.

A cap box has been designed by the engineering department, Wisconsin College of Agriculture, which is both handy and almost fool proof.

The accompanying sketch shows the cap box in one corner of a handy dynamite kit in which may be carried the necessary tools, fuse, dynamite, matches, soap or grease used in blasting operations.



Showing position in handy kit



SAFETY FIRST BOX FOR CARRYING

The "Safety First" cap box itself is made, in part, of a pine block seven and one-half by one and one-eighth by four and three-fourths inches in which eighty-four quarter-inch holes are bored entirely through the block. A one-half inch space is left around the upper side of the block which is covered with felt and on which the edge of the cover rests. Felt, or a heavy, soft cloth, is tacked on the bottom of the pine block and this acts as a buffer between the cap and one-half-inch bottom board. A hinged cover with raised sides and padded top protects the caps from above.

Enough caps can be placed in the box to last all day. Since it is a snug fit there is no danger from jar or friction. As long as the cover is down sparks do not reach them and nothing bangs against them. They are handy to the fuse, dynamite and crimper.

It is a foolish practice to keep blasting caps loose in the pocket, because sooner or later it is certain that at least one or two of these will be left and forgotten until struck with a wrench, jack knife or spark from a tobacco pipe. It is equally bad to have them loose in the kit with the dynamite where tools are continually being jarred about. The "safety first" cap box does away with such practices and offers a safe and convenient means of carrying blasting caps.

Advice to Flock Owners.

After years of experience in the raising of sheep and after having seen dozens of farmers in Upper Wisconsin engage in the sheep business under all sorts of conditions, E. J. Delwiche, who superintends the northern branch stations, has these suggestions to offer to the prospective sheepman:

Avoid grazing sheep on wet, low lying lands, where stagnant water remains during most of the season.

Keep only enough sheep on a given acreage to keep the brush down. Thirty acres of cut-over land in the red clay districts will, on the average, provide pasture for approximately 100 head, fifty ewes and fifty lambs. On densely wooded mixed hardwood lands where grass has not gotten much of a foothold, half that number of sheep will be sufficient. On jack pine and scrub oak lands even a larger acreage is required.

The number of sheep for a given area can be increased from 30 to 50 per cent the second year.

Sheep pastures should be divided in no less than three divisions, and the flock allowed to graze on these only ten days to two weeks at a time. In this way the pasture will renew itself, parasites will be more or less eradicated, and sprouts will be kept down more uniformly than if sheep are given the run of the entire pasture at once.

Brush, if over five feet in height, should be cut close to the ground, taking care that no sharp stumps are left. A few trees should be left for shade.

Pile up all brush and windfalls, which are not flat on the ground. Remove all old, scratchy stumps or tree tops in which sheep are likely to get tangled. Many sheep are lost by getting caught in close thickets and tangled windfalls or tree tops.

It is well to have some shelter in a sheep pasture into which the animals can be driven at night and during wet and cold weather in early spring and late fall.

The best results in the use of sheep are secured only when the brush has been cut, but it is a help to brushing if the sheep are allowed to run over the unbrushed ground for a week or ten days before brushing is begun.

Sheep will often kill brush in one season's pasturing, but it is thought best to run them two seasons before clearing the land.

Clover and grass seed should be scattered in the sheep pasture so as to produce tame grasses, if they are not already found there.

The sheep pasture should be visited every day to make sure that none of the sheep have met with misfortune in the thick brush.

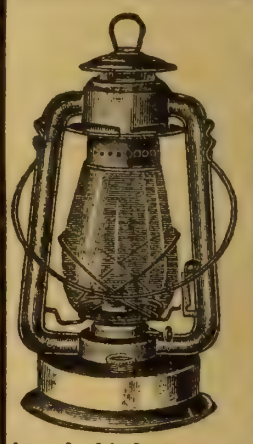
Roses and Bugs.

To the Editor.—Now is the time to look after the garden pests—aphis on the roses, on the plums, cherries and apples. Florists control this pest by cold water spraying, applied with force and at least three times a week. Kerosene emulsion is effectual. No poison does any good. Any of the tobacco extracts are good. These are found at most drug stores. If not you can get them at seed stores. Use them according to directions. Tobacco stems can be cut up and steeped, making a liquid strong enough to give satisfactory results. There is no danger of getting this remedy too strong. If there are only a few bushes or trees I have found that dipping the shoots in shallow pans is more effectual than spraying, especially if the leaves are curled up. I have found that a wing to wash up on the under side of the leaves is a good way to apply any of these remedies. Hand sprayers can be bought at seed stores that will be useful to apply any of these sprays. The orchard should have been sprayed before the leaf buds open and should be thoroughly sprayed again just as soon as the blossoms fall, for the codling moth, with the proper poisons. Any reliable nursery catalog will give the poison sprays, but the application must be thorough and at the right time. Spray thoroughly again ten days or two weeks after the blossoms fall. For the second brood spray the first of August. It is impossible to raise choice fruit without these sprayings.

Most of the injurious insects of the garden can be held in check by weak solutions of Paris green. One of the best and simplest remedies is soapsuds. One pound of whale oil soap sliced up and dissolved in four gallons of water is good for any of the rose insects and nearly all the garden pests.

Geo. J. Kellogg.

SAFETY STORM BLAST LANTERN FREE



This Safety Lantern cannot catch fire or explode. It is absolutely safe at all times and on all occasions. If you drop it in the hay loft, no oil can escape; if the cow kicks it over, it goes out at once.

It cannot blow out in a cyclone because of the storm blast feature. It is just the kind of a lantern every farmer needs about the house and barn.

Patent opening device raises and swings the globe free for lighting, filling and trimming. This lantern is fully guaranteed and is endorsed by the highest authorities on fire insurance, fire fighting and explosives. If dropped or turned over it immediately goes out. Oil cannot run. Impossible to catch fire. A lantern you will always feel safe with in the house or barn.

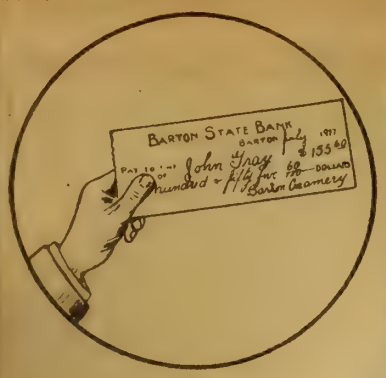
OUR OFFER

Send $2.00 for a three year new or renewal subscription to The Wisconsin Farmer and we will send you one of these Safety Storm Blast Lanterns as a premium free and postpaid.

Mail all orders to

THE WISCONSIN FARMER
MADISON, WIS.

Ask your neighbor to subscribe for The Wisconsin Farmer.



THE CREAM CHECK TELLS THE STORY

If you want to increase the size of your monthly or weekly cream checks; if you would like to make more dollars in dairying, attend the eighth semiannual

SALE OF GUERNSEYS WAUKESHA JUNE 7, 1916

We are going to make the offering representative of the 140 herds kept in the leading Guernsey Breeding County of America. 80 head will be sold, A. R. cows with good records, as well as prize winners. Consignors will not be allowed to bid or to permit any person to bid for them.

Send for illustrated catalog.

Waukesha County Guernsey Breeders' Association

F. E. FOX, Sec'y

WAUKESHA WISCONSIN

LOVE, MACK & BENJAMIN, Auctioneers

BROWN SWISS CATTLE.

Yearling Brown Swiss Bull

READY for heavy service. Well grow, of good, level type; sired by Casper L. and out of a heavy producing, show type cow. Allyn's breeding on both sides. Address
Chas. F. Lau **Thiensville, Wis.**

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LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY

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MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

Making Good Guernsey Sales.

WE have just had a letter from Alfred I. Stubbs, breeder of Guernsey cattle, West Salem, Wis., advising that he recently sold eight cows and heifers to Glenayre Farm, Glenayre, Ill. It will be remembered that this firm bought the two top heifers in the recent Guernsey sale at West Salem, paying $725 each, they were sired by imported Holden 4th the great breeding bull at the head of the Stubbs herd. The eight head just sold are bred to or sired by him. This lot brought $4,000 which shows the value of Holden 4th breeding. —Adv.

SHORT-HORN CATTLE.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little **Evansville, Wisconsin**

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

Oak Lawn Farm SHORT-HORNS OF QUALITY

FOR sale at reasonable prices ten very good Scotch-top cows, either with calves by side or safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also one good roan bull coming one year old sired by Imported Raphael. Ten heifers coming 1 year old sired by Strathallan Ring, a very good grandson of Whitehall Sultan.
J. E. KENNEDY **JANESVILLE, WIS.**

BULLS FROM MILKING STRAIN OF SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

Bates Short-horns Fashionable Durocs

STOCK of both breeds for sale. Gigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

MILKING SHORT-HORN BULLS

SIRED by KING CREST 39857, a Duchess of Gloster bred bull, and out of Arabella and Imp. Bertha bred cows. Prices right. Address
John Notseter **Deerfield, Wisconsin**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin.

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

RED POLLED CATTLE.

UNDERWOOD RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD **AVOCA, WIS.**

RED POLL Headquarters

BULLS all sold. Will sell a few choice heifers. Price is right. Address
J. W. SALTER & SONS **UNITY, WIS.**

LOOK! RED POLL BULLS

1 YEARLING—1 two year old. Well grown, well bred. Priced right. Write at once. Guarantee satisfaction. Address
Natt Kimball **Black River Falls, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt **Rosendale, Wisconsin**

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEY BULLS

OF good breeding, about 2 years old. Price $75 and $85, also some younger. Two from official record cows. Address
Jos. G. Greene **Bangor, Wis.**

Yearling Jersey Bull

OF choice breeding. Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Registered Jersey Bull

BORN November 18, 1915, of Double Time-King Sappho King-Olive Dunn lines of blood. A big, growthy calf of straight, level type—absolutely guaranteed. Price $50. Burn Brae Farm, Chas. A. Peterson, Rosendale, Wisconsin.

POLAND CHINA SWINE.

POLANDS

HAVE some fine fall **BOARS** to be sold at **BARGAIN PRICES** during the next month. Write. Everything guaranteed.
R. MEINKING - - **BANGOR, WIS.**

BLACK JUMBO 221231

A FEW good Poland China sows bred for fall litters to the great boar, Black Jumbo.

BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks **Hazel Green, Wisconsin**

Martiny's Poland Chinas

100 HEAD spring pigs of Wis., Minn., Iowa and Neb. championship breeding for sale, also sows bred for fall litters. Address
L. P. Martiny **Chippewa Falls, Wis.**

BIG-TYPE POLANDS

SPRING pigs of either sex, sired by several noted boars. Best breeding and individuality. Buy while they come cheap. Address
Wm. Smiley & Son **Albany, Wisconsin**

McDONALD

HAS some good Poland China fall boars that must be sold at once. From my best sows and show boars. Write, mentioning The Wisconsin Farmer. J. D. McDonald, North Bend, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

LARSON'S BIG-TYPE POLANDS. Am booking orders for pigs of March and April farrow at reasonable prices. Most of these will be from mature stock. J. Le Roy Larson, Iola, Wisconsin.

CHESTER WHITE SWINE.

CHESTER WHITES

AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

CHESTERS

OFFER spring pigs, February and March farrow, singly, pairs or trios. Sired by JOY BOY. Satisfaction or no pay. Address
Adolph Nuttleman, West Salem, Wisconsin

CHESTER WHITE SPRING PIGS

OF February and March farrow, direct breeding of a $400 boar. Boars $12, sows $10 each. Shortage of feed forces this sale. A No. 1 stock; no runts. Cash with order gets first choice.
Jos. Egelhof **Edmond, Wisconsin**

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address
W. F. Miller **West Salem, Wis.**

CHESTER WHITES

FOR SALE: Several early fall pigs. Spring pigs ready to ship in April and May. Address
John Simon **Campbellsport, Wis.**

BERKSHIRE SWINE.

BERKSHIRE gilts bred for fall farrow, $35 to $50. April boars shipped at weaning time, $10 up. Address W. A. Freehoff, Waukesha, Wisconsin.

HORSES.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorrels and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address **H. LEFEBURE & SONS, Fairfax, Iowa,** (8 miles west of Cedar Rapids).

STALLIONS for sale: 20 pure-bred, high-class black Percheron stallions from 2 to 6 years old. Will sell on time if desired and take other horses in exchange. Address
M. Bodenheimer & Co. **Green Bay, Wis.**

DUROC JERSEY SWINE.

Duroc Gold Bonds

TRIED brood sows and fall gilts being bred to Gold Bond, 1st prize senior yearling boar Wisconsin State Fair, 1915. Due to farrow in August and September. All kinds of Durocs. Prices reasonable. Address
JOHN L. FISHER **JANESVILLE, WIS.**

MODEL DUROCS

OFFERING five sows bred for fall litters. Also choice spring pigs—boars or gilts. Only the best shipped. Address
J. W. Higgins **Gotham, Wisconsin**
(Futurity Herd)

Parker, of Janesville

OUR specialty is DUROCS. The breeding is the best and we don't have to make excuses about the individuals. When you want Durocs, remember
E. H. Parker & Son **Janesville, Wisconsin**

DUROCS

WHEN you think of **DUROCS** remember the champion of champions, **LEE'S DEFENDER.**
L. F. ATWATER **BANGOR, WIS.**

DENNIS SHEA MELVINA, WIS.

OFFERING Duroc fall boars with quality and breeding. Spring pigs coming fine. Herd entered in futurity.

PRINCE DEFENDER

SEPT. Duroc boars and gilts by him for sale. Spring pigs by above boar, Lee's Defender and Royal King 4th. Shipped on approval. Keep your eye on Prince Defender.
McClurg Bros. **Viroqua, Wis.**

DUROC JERSEYS

CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)

HAVE the best spring pigs I ever raised. They are wonderful sires. Write.
Geo. H. Willsi - - **Prosper, Minn.**

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS . . . HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

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Kindly mention this paper when writing

HOLSTEIN-FRIESIAN CATTLE.

THE PALMER FARM HERD

COMBINES individuality, breeding and high production. Two service bulls, bull calves and yearling heifers priced to sell. Come or write.
W. E. Palmer — **Elkhorn, Wisconsin**

PURE-BRED BULL CALVES

FOR SALE. Sired by a 30-pound bull, several out of A. R. O. dams. Also a few high-grade heifer calves from one to twelve months old.
S. J. Lauderdale — **Elkhorn, Wisconsin**

REG. HOLSTEINS

YEARLING bulls are all sold, have only young calves up to four and five months old. One A. R. O. cow 8 years old, due to freshen June 3, 1916, bred to Finderne Hengerveld Jewell Pontiac; a 31.37 pound bull for sale. Address
E. A. Paddock — **Elkhorn, Wis.**

HOLSTEINS

REGISTERED bull calves, great grandsons of Belle Korndyke; also high-grade heifers, two years old for sale.
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4 PER CENT 4 PER CENT

Holstein Bull

DAM is a 14.88 pound two year old with yearly record backing that counts and sired by Beauty Walker Pietertje King, whose seven nearest dams average over 28 pounds in seven days. Call and see our herd.
A. G. Palmer & Sons — **Lake Geneva, Wis.**

HOLSTEIN BULLS

SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address
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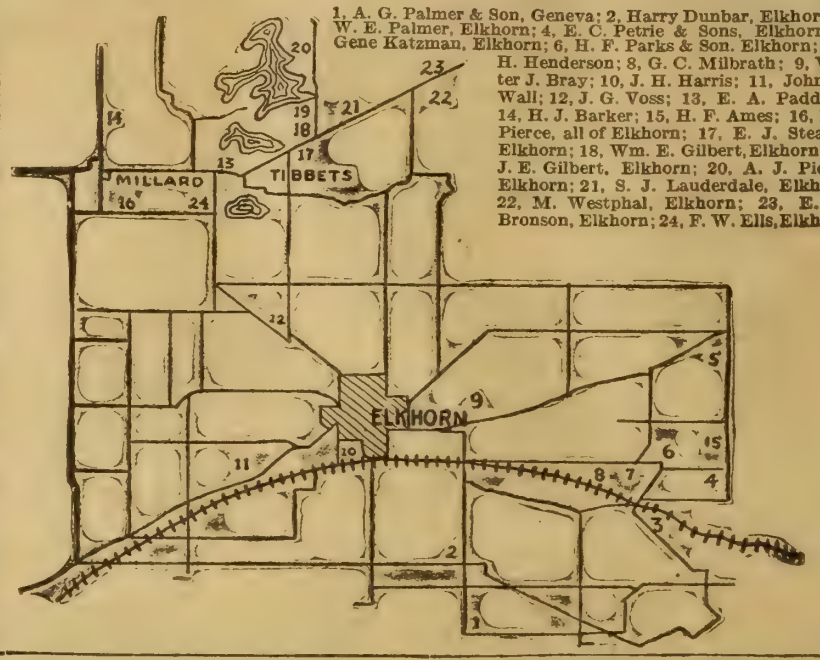
THE place where show winners and large record makers are bred. Several bull calves from dams with A. R. O. records, some with good yearly records. Sired by bulls, 5 of whose 7 nearest dams have records of over 30 pounds of butter in seven days. Address
Harry D. Dunbar — **Elkhorn, Wisconsin**
Farm 2½ miles southeast Elkhorn on state road

Holsteins For Sale

BULL from 26.41-pound dam, 9 months old; one from 19.60-pound dam, 7 months old. Also two yearlings from dams that will soon be tested. They are straight nice individuals, light color, all sired by Sir Pontiac Korndyke Count 82741, a 28.80-pound bull. Bull calf, one month old, from 22.31-pound dam sired by a 34-pound bull. Can spare a few young cows. For further information address
E. C. Petrie & Sons — **Elkhorn, Wisconsin**

AN EXCEPTIONAL HERD SIRE

WESTSIDE LADOGA PRINCE 77130, practically perfect individual, proven sire, splendid breeder, 4 yrs. old, will be sold due to fact that he cannot be used longer in herd. Pedigree has no weak spots. His dam is a 27.38-lb. junior 3 year old, his nearest three dams average 27 lbs. and his nearest seven dams average 22 lbs. His paternal ancestors are likewise strong, the nearest three in particular have large number of A. R. O. daughters. Two Holstein bulls sired by Westside Ladoga Prince are also offered for sale. J.H.Harris, Holstein Dairy Farm, Elkhorn, Wis.



1, A. G. Palmer & Son, Geneva; 2, Harry Dunbar, Elkhorn; 3, W. E. Palmer, Elkhorn; 4, E. C. Petrie & Sons, Elkhorn, 5, Gene Katzman, Elkhorn; 6, H. F. Parks & Son, Elkhorn; 7, J. H. Henderson; 8, G. C. Milbrath; 9, Walter J. Bray; 10, J. H. Harris; 11, John H. Wall; 12, J. G. Voss; 13, E. A. Paddock; 14, H. J. Barker; 15, H. F. Ames; 16, Earl Pierce, all of Elkhorn; 17, E. J. Stearns, Elkhorn; 18, Wm. E. Gilbert, Elkhorn; 19, J. E. Gilbert, Elkhorn; 20, A. J. Pierce, Elkhorn; 21, S. J. Lauderdale, Elkhorn; 22, M. Westphal, Elkhorn; 23, E. H. Bronson, Elkhorn; 24, F. W. Ells, Elkhorn.

A. J. PIERCE
Elkhorn, Wis.

REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

2 HOLSTEIN-FRIESIAN BULLS

BOTH from Advanced Registry dams. One just past two years old. Kind, sure and O. K. in all respects. More white than dark. Gets nice calves. Price $100. One about thirteen months. Dam's record over 17 pounds as a two year old. Nice individual, more dark than light. Big enough for heavy service. Price $100. For extended pedigree and complete description write me. Address
John G. Voss — **Elkhorn, Wisconsin**

19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.
H. F. Parks & Son — **Elkhorn, Wisconsin**

Two Bulls Left

OUT of my 822 pound herd sire, that has 30 A. R. O. daughters. No. 1, born March 16, 1915, a splendid show bull, ready for service, weight about 800 pounds, out of a 15.36 pound, two year old; price $100. No. 2, born October 8, 1915, well grown and evenly marked. Satisfaction guaranteed. Address
Earl Pierce — **Elkhorn, Wisconsin**

MEADOW SPRING FARM HERD

now consists of 70 head of Holstein

COWS AND HEIFERS

BULLS all sold except a few calves. When in want of cattle COME to the Meadow Spring Farm or write
M. Westphal — **Route 6, Elkhorn, Wis.**

SONS OF THE 35.43-POUND BULL

Sir Pontiac Chief 89699

AND from cows with A. R. O. records of 28.69, 24.65, 22.35, 20.46, 16.96. Here are bulls that will improve pedigrees and production ability of your calves. A. M. Anderson, Whitewater, Wis.

HOLSTEINS FOR SALE

COWS and heifers bred to the 27.82-pound proven sire, Knight Errant 39566. Also bull calves from one to five months old sired by Champion Johanna Colantha 70478. Address
Gene Katzman — **Elkhorn, Wisconsin**

F. W. Ells, Elkhorn

Breeder of registered cattle. Stock for sale at all times.

FOUR GRADE HOLSTEIN HEIFERS

TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn, Wisconsin.

FOR SALE

My herd bull
CANARY HOMESTEAD FRISBY107723
For price and pedigree address
Walter J. Bray — **Elkhorn, Wisconsin**

WELL MARKED

7-8 WHITE. yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address
G. C. Milbrath — **Elkhorn, Wisconsin**

J. E. Gilbert

ELKHORN, WIS.

BREEDER of pure-bred Holstein-Friesian Cattle and Duroc Jersey Swine.

REGISTERED BULL

CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address
Wm. E. Gilbert — **Elkhorn, Wisconsin**

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows.
BONNIE MEAD STOCK FARMS, Randolph, Wis.

21.60-LB. HOLSTEIN BULL

BORN Dec. 30, 1914; ready for heavy service; well grown, good, straight type; sired by **Prince of Hillsboro** that has 5 A. R. O. daughters and is by a 27-lb. bull out of a dam testing 4.39% fat, dam of bull **Nig Alcartra Pearl Daisy**, A. R. O. record 21.60; her sire has 25 A. R. O. daughters; her dam is a daughter of **Pearl of the Dairy Joe De Kol**; she has 6 A.R.O. daughters and her dam has 6 A. R. O. daughters, an unusual combination. Send for pedigree.
Griem & Hipke — **New Holstein, Wis.**

YEARLING SON

READY for service of the 28-pound Holstein bull, Calumet Johanna Abberkerk Champion 105829, whose dam gave 623.70 pounds milk and made 28.71 pounds butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. The bull offered for sale is 3-4 white, good and straight and well grown.
A. G. Pingel — **Chilton, Wis.**

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls — **Wisconsin**

GUERNSEY CATTLE.

"EDGEWATER"

Holsteins and Guernseys

Now being offered for immediate sale.

450 Cows, Heifers and Service Bulls 450

We are offering first-class stock only; some of Southern Wisconsin's best. Write for particulars.
Edgewater Stock Farm — **Fort Atkinson, Wis.**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt — **Oxford, Wisconsin**

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer — **Kaukauna, Wisconsin**

RUST BROS.' STOCK FARMS

The Kind That Will Improve Your Herd.

29.74 lb. HOLSTEIN BULL

SIR Ida Lottie Cornucopia. His dam made 29.74 lbs. butter in 7 days, 816.91 lbs. butter in a year. She has 3 sisters with records of 27.54, 27.99, 28.63, 33.65. Her dam made 27.11. Here is a bull fit to head any herd. Send for picture and pedigree. Address
Arthur Rust — **West Allis, Wisconsin**

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov of the Chene. Address
Charles Schmidt — **Wrightstown, Wisconsin**

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey — **Grafton, Wisconsin**

Ready For Service

Holstein Bull

OF Johanna Korndyke Ormsby breeding, out of an A.R.O. dam. Straight and level; well grown and marked. Priced right. Address
W. D. McGILL — **Menomonee Falls, Wis.**

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford — **Kaukauna, Wis.**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett — **Sparta, Wisconsin**

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SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen — **Cedarburg, Wisconsin**

Young Holstein Bulls

SIRED by our Junior herd sire **Butter Boy Mink Pontiac** 133161, from tested dams. Also
CHESTER WHITE SWINE
both sexes. For pedigree and prices write Cook Brothers, Burlington, Wisconsin. Cedar Lawn Stock Farm.

REGISTERED HOLSTEIN BULLS $40-$50

SIRED by Billy Elgin De Kol and Korndyke De Kol Spoffard 6th, well marked and well grown.
Henry Peul — **Cedarburg, Wisconsin**

AYRSHIRE CATTLE.

SEVERAL YOUNG AYRSHIRE BULLS FOR SALE

LIKE picture here shown. One born August 3, 2915. Sire, imported Craigbrae Lord Rosebery 15001. Dam, Bonny Miss Casanet of So. Farm out of 480 pound three year old. He is more white than red and is guaranteed in every way. If you see him you'll buy him if you know Ayrshires. Your inspection and correspondence are invited. Write Jas. Van Etta, Lima Center, Rock county, Wisconsin.

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH. — **Kilbourn, Wisconsin.**

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.
Grenwode Farm, E. R. Whitcomb, Prop. Whitefish Bay, Wisconsin.

REGISTERED GUERNSEY HEIFERS

3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson — **Rosendale, Wisconsin**

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse — **Monroe, Wisconsin**

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Chariton, Iowa.

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman — **Fort Atkinson, Wisconsin**

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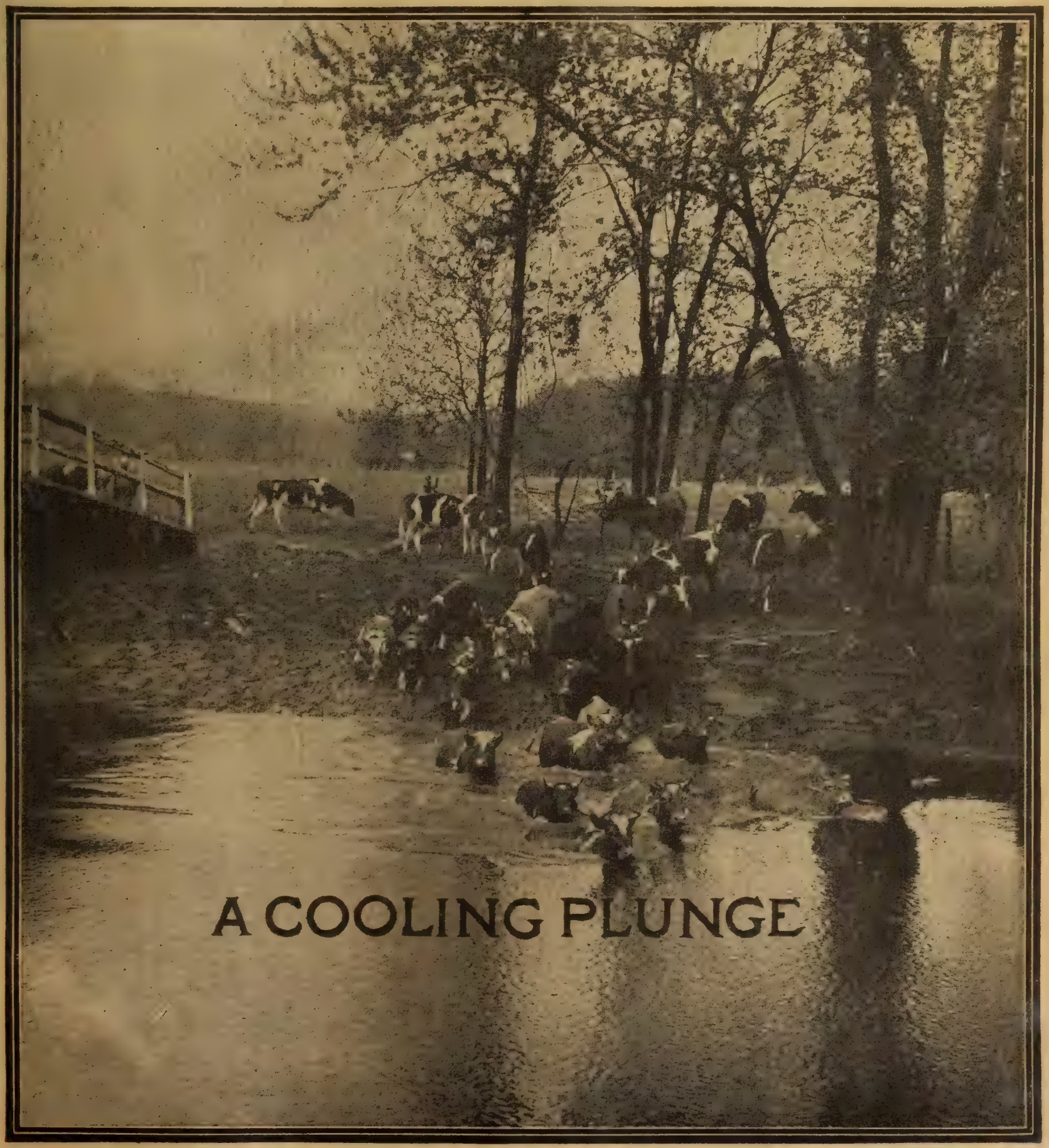
THE WISCONSIN FARMER

VOL. XLV. NO. 23. THURSDAY, JUNE 8, 1916. WHOLE NO. 1793



A COOLING PLUNGE

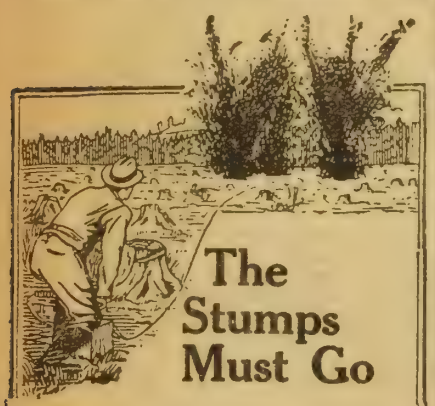
CURRENT EVENTS

CHARLES E. HUGHES, justice of the United States supreme court, against the field seemed to be the situation at the opening of the republican national convention in Chicago last week. The Hughes boom has been gaining strength steadily, and, notwithstanding the fact that Justice Hughes has absolutely refused to be quoted on any public issue, the pre-convention guesses were that he stood a better show of being nominated to make the race against President Wilson than any other republican, not excepting Theodore Roosevelt. At the same time, this week's convention promises to be a strenuous one, as there is a large field of favorite sons and it is anybody's race. The convention was scheduled to be called to order in the Chicago coliseum Wednesday of this week, with Senator Warren G. Harding, of Ohio, presiding as temporary chairman and delivering the keynote address.

JAMES J. HILL, the great railroad builder, died last week at his home in St. Paul, at the age of 78. He was one of the great men of the country and had built himself up to his commanding position from comparative poverty. He was born on a farm near Guelph, Ontario, Canada, but migrated to this country when a boy, on the advice of a stranger who happened to visit the farm and noted his eager, ambitious spirit. He soon got into the railroad business, and against great obstacles succeeded in building the Great Northern Railroad and in developing the "bread basket" of the Northwest: The great wheat states. Mr. Hill's wealth is estimated at between $200,000,000 and $500,000,000. An estimate of it was furnished when at the opening of the European war he called his bankers together and displayed a mass of his securities. More than $100,000,000 was said to have been in the boxes he laid before his bankers. "There should be no trouble," said Mr. Hill, "but if there is this amount is at your disposal." Mr. Hill had the absolute control of the First National Bank and the Northwestern Trust Company, which have a combined capital and surplus of $6,500,000. Mr. Hill was a large owner of stock in the Chase National Bank, of New York; First National Bank, of Chicago, and the Northwestern National Bank in Minneapolis. He was a large owner of the Great Northern Pacific Steamship Company. The greatest portion of Mr. Hill's wealth, however, was in the stocks and bonds of the Great Northern, Northern Pacific and Chicago, Burlington & Quincy railroads.

IN AN address before the League to Enforce Peace, President Wilson declared that the United States is ready to join in any feasible association of nations to preserve the peace of the world against "political ambition and selfish hostility" and in the service of "a common order, a common justice and a common peace." He expressed hope that peace terms which would end the present war would include such an arrangement. Outlining peace suggestions, which the president said he hoped the United States would make if it had the opportunity, he included provision for absolute freedom of the seas, a contention which has been the keystone of all the diplomatic discussion with Germany and Great Britain, and virtual guarantees of territorial integrity and political independence. The fundamentals of a lasting peace, President Wilson said he believes were: "First, that every people has a right to choose the sovereignty under which they shall live. Like other nations," the president said, "we have ourselves no doubt offended against that principle when for a little while controlled by selfish passion, as our franker historians have been honorable enough to admit, but it has become more and more our rule of life and action. Second, that the small states of the world have a right to enjoy the same respect for their sovereignty and for their territorial integrity that great and powerful nations expect and insist upon. And third, that the world has a right to be free from every disturbance of its peace that has its origin in aggression and disregard of the rights of people and nations." The speech is believed to be a preliminary feeler for peace in Europe, which seems a little nearer at present than at any time since the war began, but with nothing definite or tangible as yet upon which to build more than a faint hope.

HALF a billion dollars will be the government's internal revenue tax toll for the fiscal year ending June 30th, according to an announcement made by Secretary McAdoo, of the treasury department. This sum, which exceeds by many millions all previous estimates, will be made up as follows: Taxes on whisky, beer, cigars, cigarets and tobacco, $303,000,000; taxes on the incomes of individuals and corporations, $115,000,000; emergency tax collections, $83,000,000. The volume of money pouring into the treasury has steadily increased month by month since last fall until it is now greater than at any time since the effects of the war began to be felt. Mr. McAdoo accounts for the situation as follows: "The great boom in business is largely responsible for the increase in receipts from ordinary internal revenue. The prosperity of the country with the attendant wider scope of employment and increase in wages has in itself resulted in a large consumption of taxable articles, greatly augmenting the government's revenue." Consumption of whisky, cigars, cigarets and tobacco has increased, according to revenues received, while consumption of beer has decreased during the fiscal year.



The Stumps Must Go

Increasing population, growing demand and better prices for food stuffs are raising farm values. Stumps take up space, hinder work and cost you money. Get them out.

DU PONT

Red Cross Farm Powder

will remove them. In most cases Red Cross Farm Powder alone will do the work most quickly, easily and cheaply. Used in connection with other mechanical appliances it makes their work more efficient because it loosens the roots, shakes them free of dirt and leaves most of the soil in the hole. Long use by thousands of farmers has proved its merits for stumping, subsoiling, ditching, tree planting, etc.

Big Book Free

Tells just what you want to know about the use of dynamite on the farm. You ought to have it. Write today for **Handbook of Explosives No. 35.**

E. I. Du Pont De Nemours & Co.
Wilmington Delaware

Auto-Oiled Windmill

ALL WORKING PARTS INCLOSED

and flooded with oil from the supply in the gear case, which needs replenishing only once a year.

Put your old Aermotor wheel and vane on this self-oiled motor, and have an up-to-date outfit at small cost.

Don't waste your time climbing to oil an old mill. Replace it, on your old tower, with an Auto-Oiled Aermotor which will last you a lifetime and furnish you an abundance of water.

IT NEEDS ATTENTION ONLY ONCE A YEAR.

Write for Folder-Hanger. It tells all about Auto-Oiled Aermotors and Easy-To-Build-Up Towers.

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10 HP ENDURING POWER

First Real Solution of the Light Farm Tractor Problem

Pulls two plows in any soil fit to cultivate—three in stubble. Wide scope of utility. All gears run in oil, enclosed in dust-tight casings, on

The DURABLE DENNING

Equipped with Waukesha Motor, Perfex Radiator, Bennett Carburetor, Dixie Magneto, New Departure Ball Bearings. Write for description.

DENNING TRACTOR COMPANY Cedar Rapids, Iowa

10 horsepower at draw-bar—at any speed. Weight 3800 lbs.
Price $850 f. o. b. Cedar Rapids

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MAKE BIG PROFITS Simplicity, strength, durability, make the Lightning Press the most economical to buy; big capacity, quick work, no trouble, lasts for years, best farm money-maker.

We make a complete line of both heavy and light presses, horse, engine and tractor power. We will make good terms to right customers.

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30 YEARS THE LEADER

KANSAS CITY HAY PRESS CO., - KANSAS CITY, MISSOURI.

FOR quick sale will sacrifice $1,000 stock in the McClure Co., of Saginaw, Mich., manufacturers of the "Saginaw Silo," for $600. An exceptional opportunity for investment in an old established company. A. C. Christopher, Bx. 759, Houston, Tex.

POSITION WANTED Reliable man past fifty wants position on farm where he can get home for his family. Experienced in creamery work. Write G. E. H., care of this paper, for information.

Land Lost by Fencing.

The amount of land that is lost to cultivation along fence rows is a matter of importance, especially where the land is high priced. Hence it is well, in selecting a type of farm fencing, to give consideration to the space that the fence will occupy. The following table, derived from data obtained from a survey recently conducted by the department in twelve north-central states, reported in department bulletin 321, shows the width of the strip of land, from the center of the fence out on one side, which is made untillable by different types of fences:

Kind of fence	Amount of land made untillable Feet	Fence required to lose an acre of ground Rods
Woven wire	3.29	802
Barbed wire	3.42	772
Board	3.23	817
Picket	3.29	802
Hedge (well trimmed)	7.6	347
Straight rail	3.57	739
Worm rail	6.05	436

Should the fence run between two pasture fields, practically no land would be lost, but when it divides two cultivated fields the width of the strip of land made untillable, as shown by the table, should be doubled, and the number of rods of fence required to occupy an acre of ground would be one-half that stated in the table.

When a forage or small grain crop is grown, less land is lost along the fence row than when corn, potatoes or some other cultivated crop is grown, for much land is taken for turning along the fence row with the latter. Local practices also influence the amount of land along the fence row which is not cultivated. Thus, in certain parts of Iowa and adjacent states, it is not uncommon for a farmer to leave a headland ten to twelve feet in width along his fences; these are used for driveways. In many localities of the East it is the practice to use one horse to plow along the fence row in order to get as close to it as possible.

It will be noted from the table that wire, board and picket fences take up but a little over three feet on a side, while worm-rail fences occupy double this amount of land. The amount of land that the hedge fence renders useless for cultivation will depend upon the size of the hedge. If it is left untrimmed it will sap the fertility of the soil for more than a rod on each side of it; if it is kept well trimmed it occupies nearly double the amount of land taken by a wire fence. If the season is dry a hedge does much more damage than when there is plenty of rainfall, as its root system extends out to a considerable distance and takes up moisture that is needed by the crops in the adjacent fields.

The Wisconsin Farmer

THURSDAY, JUNE 8, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE LATE "JIM" HILL.

FEW men have lived a more interesting or inspiring life than the late James J. Hill, or "Jim" Hill, as he was known far and wide. His career shows the opportunities open to the farm boy of determination and spirit. I want to take a few minutes of your time to point out the lesson of Hill's life as it applies to the farm boy.

"Jim" Hill was born on a farm. He might have remained there all his life and the chances are he would have been a good farmer, for he did everything thoroughly. But he was needed elsewhere and today 400,000 prosperous farms, in six of the big states of the northwest, testify indirectly to the excellence of his work. The story of how the boy came to leave the Canadian farm, on which he was born, is extremely interesting.

A stranger had stopped at the Hill farm for dinner, after the fashion of folks in the country, knowing full well the hospitable temper of the people. He had left his horse at the gate. Young Hill saw that the animal was tired and carried it a pail of water. The stranger was pleased with the lad's thoughtfulness and love of dumb brutes, and as he drove off he tossed the boy a newspaper from the United States and called out gravely: "Go there, young man. That country needs youngsters of your spirit." "Jim" Hill read the paper carefully; it was a rare treat to the farm boy of that day: A recent paper "from the states," all his very own. The paper contained glowing accounts of opportunities in the United States. The boy resolved to investigate for himself. The next morning he chopped his last tree. Today there stands a tree stump on that old Hill farm, in Ontario, bearing this label: "The last tree chopped by James J. Hill." The boy broke all his home ties and set out across the boundary line to see if the opportunities did, indeed, exist as they had been pictured in the paper.

When "Jim" Hill died last week he left a fortune variously estimated at between $200,000,000 and $500,000,000 and the entire Northwest mourned his passing. He discovered the "breadbasket of the world" and led in its development from a wilderness into what now comprises six wealthy states dotted with 400,000 farms. He blazed a trail for transportation which eventually reached from Buffalo to Asia, with a total mileage of rail and steamship facilities that would nearly girdle the earth. All this the farm boy accomplished because he set forth to see if opportunities did really abound in the big world and because he had the spirit and the determination that hesitated at nothing. His indomitable will overcame every obstacle and he became one of America's greatest men, perhaps as great a self-made American as has ever lived.

Nor was James J. Hill one of those men whom success spoils. He was "Jim" Hill to thousands upon thousands of men to whom his enterprises gave profitable employment. He never lost his interest in agriculture and was one of the most forceful writers on farming topics that I have ever read. He would have made an ideal secretary of agriculture and was prominently mentioned for that position when President Wilson was making up his cabinet. In whatever line of activity his work led him "Jim" Hill could be relied upon to do things thoroughly and well.

And so the humble farm boy climbed to the very pinnacle of the pyramid, and when he passed a whole nation mourned, the wheels of commerce were stopped as a tribute to his memory and millions grieved. Is there not inspiration here to all of us, spurring us onward and upward in search of the opportunity which exists every bit as much today, in some field, as it did when the Canadian boy set out to see if the stories he had read in the chance-had newspaper were really true? What one farm boy has done another farm boy can do. And so the lesson of "Jim" Hill's life will last for many, many years, to thrill and inspire others to do the big, really-worth-while things of life.

GROWING OLD GRACEFULLY.

SOME months ago we had a most profitable discussion in these columns on the subject of whether or not the farmer should retire, in his old age, and move to the town or city. The general opinion seemed to be that while there are urban conveniences which attract many a farmer who has earned the right to rest, there is far more happiness to be found in spending the twilight of our lives on the old home place.

I do not believe there ever was any discussion in this paper which interested me more than this, for almost every writer had a heart-interest story to tell. I want to supplement those contributions from subscribers with something I found in one of the medical journals last evening. The article is written by a noted physician and tells how an old man passed the autumn of his life on the old farm with the utmost pleasure to himself and all about him, because he succeeded in finding enough little, odd jobs to occupy his mind, and so had no time to bemoan the oncoming of that grim visitor who is not to be denied by any of us. After reading this story I think we will all agree with the doctor who wrote it when he said, "There is a place for the old man on the farm." Here is the story:

Sitting on the porch one day the old man noticed that the yard was littered with trash. He gathered this, burned it, and then turned his attention to the dead leaves which had gathered in hollows. The leaves were raked up and hauled to the garden for fertilizing. Refuse wood was gathered and chopped into light cooking wood and kindling. He picked up many gunnysacks that had been carelessly dropped about, but which were needed when time came to dig potatoes.

The orchard was pruned, and the old man cut from the refuse many bean poles, firewood and burned the brush, using the ashes for the garden and grape vines. Ditches were cleared of weeds, and cresses were sown along the low spots. The heavier garden work was done by the hired men, but the old man kept it in fair condition with little trouble. He gathered the produce for the table and cut and pulled vegetables for the market.

And so his realm of usefulness grew, once he had looked about. He took charge of the chickens and increased their output. The skimmed milk was being thrown away. He went to town and found a market for quite a lot of cottage cheese. He evaporated the whey to a creamy consistence and fed it to the hens, saving grain and increasing the yield of eggs. His big fly traps caught many of the pests and cleared the house of them. He guarded the chicken yard from hawks and made war on ground squirrels when they appeared in the cornfield.

There were many other tasks, not too big for him to undertake, which the old man saw and did. He was happy. He felt a return of his self-respect. For he knew he still was able to earn his "keep" and bring in a profit to his sons by doing the little things that otherwise would have had to be left undone.

Age is a beautiful thing to contemplate when it finds us still engrossed in our life work, with a mind open and receptive to ideas, still interested in the affairs, both large and small, of the world round about us. It need never be the bugaboo and dread which many of the young folks make of it, so long as we maintain a healthy mind, even though it sometimes does find our bodies frail and weak. I can remember when fifty and even when forty-five seemed like a ripe old age, but now that I have only a few more years to live until the allotted three-score-years-and-ten of the prophets are mine, I look back to forty-five and even to fifty as being in the very prime of life. The secret of growing old gracefully, I believe, lies in keeping interested in one's own work and in the things that lie round about us. If we cannot all find chores to do about the old farm, as did the man of whom the physician writes in the medical journal, surely we can all take an interest in the affairs of the workaday world, either in our own locality or in the nation and world as a whole. When the eye grows dim and the faithful "specs" of an earlier day no longer suffice, if we have some loved one to read to us from the newspaper or farm journal and some loved one to talk over the world's events with, surely we can all look upon age as having its blessings and its comforts. The mistake too many old men make is in believing there is no longer any need of them, their services or their counsel. After all, age is a mental rather than a physical condition.

THE FARM HAND'S AUTO.

I WANT to add an interesting little postscript to the story of the relationship existing today between farmer and farm hand. A contract was signed a few days ago between an Illinois farmer and the man who works for him by which the farmer gives his helper $30 a month and, in addition, guarantees to pay for the upkeep of the latter's automobile. He is to provide gasoline and oil for the car throughout the entire season.

Surely, we have reached a high stage of prosperity when the farm hand who works for $30 a month can afford to keep an automobile. And, equally surely, we have reached a very amicable stage in our capital and labor partnership when the farmer finds it a profitable investment to pay the upkeep of his laborer's car.

FLAG DAY.

WEDNESDAY of next week is Flag Day. It is an occasion which most of us are all too prone to forget. Coming so soon after Decoration Day, we are wont to believe we have shown our patriotism enough, there is the hard work of the season before us and so Flag Day slips by unnoticed. Should this be so?

No man on earth owes more to the flag than the American farmer. Why are conditions so chaotic in Mexico today? Because of the land situation there; a few men, obtaining possession of great tracts through government grant and otherwise, have kept the rank and file of the people in economic slavery. If Mexico had a flag like the stars and stripes, standing for equality and liberty to all, farming and industrial conditions would not be at the low ebb they are in Mexico today and the southern republic would forge ahead until it might, in time, become a formidable rival to its northern neighbor. Why are a dozen or more nations at one another's throats in Europe today? Because their flags do not stand for the liberty and the unquestioned right to go about one's daily work that the stars and stripes stand for. I have already set forth in this page the story of how the Russian peasants have been inflamed against the Germans because the latter are held responsible for the introduction of labor-saving machinery into the Russian wheatfields. If the Russian flag insured to every man, woman and child beneath its folds an education such as every member of the American farm family is entitled to and receives; if it gave to the peasant farmers a chance to till the soil with some hopes of some day attaining industrial independence, as the stars and stripes give to the tenant farmers of America; there would be no war fought out, at a cost of millions of human lives, over no more principle than the prejudice of an uneducated people against labor-saving farm machinery. Believe me, friends, we attribute our success to our soil, to our modern farming methods, to the industry with which we set about our work and carry it through to the harvest, but there would be no agricultural prosperity in America today were it not for the flag. When we consider what makes us the greatest farming people in the world, do not forget that the flag is one of the greatest factors, for it stands for a stable government which permits us to work in peace, safe in the knowledge that we will reap where we have sown, that the reward of our work will belong to us and will not be taken away by any despot or trampled under the feet of a great army living off the labor of others.

That is why it seems to me we should remember that next Wednesday is flag day and not let the occasion pass unnoticed. Those of you who have flags, hang them out next Wednesday, as you did on Decoration Day. Those of you who do not have flags, just remember the day and think of what the flag means to you and yours, how it protects you from injustice, from the oppressor and the invader; how it makes it possible for your fields to yield abundantly and for you to prosper from the fruits of your labor; and when the day draws to a close, if you have time for nothing else, read with me the lines of the poet:

Hats off!
Along the street there comes
A blare of bugles, a ruffle of drums,
A flash of color beneath the sky:
Hats off!
The flag is passing by!

Blue and crimson and white it shines,
Over the steel-tipped, ordered lines.
Hats off!
The colors before us fly;
But more than the flag is passing by.

Sea-fights and land-fights, grim and great,
Fought to make and to save the State;
Weary marches and sinking ships;
Cheers of victory on dying lips.

Days of plenty and years of peace;
March of a strong land's swift increase;
Equal justice, right and law,
Stately honor and reverend awe;

Sign of a nation, great and strong
To ward her people from foreign wrong;
Pride and glory and honor—all
Live in the colors to stand or fall.

Hats off!
Along the street there comes
A blare of bugles, a ruffle of drums;
And loyal hearts are beating high:
Hats off!
The flag is passing by!

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

... AGRICULTURAL PUBLISHERS' ASSOCIATION
...BER AUDIT BUREAU OF CIRCULATIONS

...TION RATES—Single subscriptions, $1.00 a year. ... of ten, 75 cents a year and an extra copy to getter up ... clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

For Better Rural Mail Service in Wisconsin.

AT THE Eau Claire meeting of the Wisconsin Rural Carriers' Association, held May 30th-31st, one of the prominent members was kind enough to say that The Wisconsin Farmer has been the friend of the rural carrier. For the special compliment paid to Mr. James M. Pierce, publisher of The Wisconsin Farmer, by one of the speakers in open meeting, we desire to express our thankful appreciation.

The Wisconsin Farmer is devoted to the interests of the rural carrier because it recognizes in the free delivery system the greatest boon which has ever come to the farmer. When it was arranged to have mail delivered daily to the farm homes of the nation, a great forward step in better citizenship on the farm was made. This step was of greatest importance as affecting the educational interests of the farmer and all members of his household. This step was important from the business standpoint. It brought the backwoodsman up into town. It has resulted in bringing the farmers of the nation closer together. It has made it possible for them to organize for their own interest and advancement. There was a time when the joke about the farmer who had not heard about the assassination of Lincoln was a familiar one. Of course, this was a cruel and unkind joke at any time, for the farmer has never been so far behind the times as he has been pictured. But since the rural mail service has brought the daily mail to the farmer's door not even the wildest imagination can picture him as he once was. There are thousands upon thousands of people in the cities of Wisconsin who do not read so much or keep so well informed as the people on Wisconsin farms. Not long ago the state superintendent of instruction issued a statement which shows that rural children complete their school and high school courses in considerably less time than city children. Reference was made to this report in The Wisconsin Farmer several weeks ago. Only recently one of our editors visited with Superintendent Meating, of Outagamie county, a man who has been at the head of public schools of the county for fourteen years. We were not surprised to hear from him that in some years as high as 90 per cent of the valedictorians on the graduating programs of the high schools of that county are children who came from the farm homes. Of course, these facts are not all to be credited to the rural free delivery, but rural delivery is one of the most important agencies which has helped the farmer to keep abreast of the times.

It is our firm opinion that there are no more faithful men in any branch of the government service than those who travel the mail routes of the country. Sometimes it seems to us the big fellows in Washington do not appreciate the nature of the job which the carrier has. If we could send each congressman out for two or three days with a rural carrier, to travel the routes, and if we could pick a few real bad days when the work was the hardest, we believe that we could create a sympathy for the rural carrier which would redound to his lasting benefit as well as to the benefit of the service. Our congressmen, as a rule, are reasonably faithful to their duties, when they understand them. But a man who takes an occasional auto ride, when the roads are good and when it doesn't look like rain, has small conception of the everyday grind of the rural carrier who must be out in all kinds of weather and on all kinds of roads.

The Wisconsin Farmer may be relied upon always to be the friend of the carrier and in favor of extension of the rural mail service. There are a great many farms in this state which should have free delivery service and which do not have it. The Wisconsin Farmer believes that this state has pressing need of many new routes, and we urge that as many as can possibly and reasonably be cared for be added. The government officials should not make mail routes so long that no carrier can give good, prompt service. The rural mail service is past the experimental stage. Every move made now should be in the interest of greater efficiency. We are convinced that the carriers will do their part at any time to improve the service, if the rest of us, especially our members of congress, will do our part.

Wisconsin Guernsey Breeders Active.

REPORTS of the Western Guernsey Breeders' Association meeting at Livingston, Grant county, Wisconsin, and of the Waukesha County Breeders' meeting at Eagle, appear in this issue, also some views taken on these farms where Guernsey herds of prominence have been developed. One of the editors of The Wisconsin Farmer was present at each meeting and enjoyed the hospitality of the breeders.

Guernsey men are alive to the interests of this dairy breed and the prospects for better business both on the farm through the medium of the milk pail, and in the sale ring, were never better for Guernsey breeders than now.

It is the policy of The Wisconsin Farmer to give special attention to these breeders' meetings, and the editors have enjoyed a great deal of pleasure and derived a great deal of benefit from attending the sessions. Wisconsin ought to be the best organized state in the Union in so far as its relation to the several dairy breeds is concerned. Probably it is better organized in this respect now than any other state, but there is room for improvement. There are a great many good breeders in the state who are now actively supporting these associations. The Wisconsin Farmer would like to see them all get in. None of us know it all and it is not possible to attend such meetings as were held at Livingston and Eagle, and not pick up some good information which we had not previously given any special thought. It is a great thing to have an individual breeder thinking along the best lines of development of his herd. It is bigger to have all the breeders of a community enthused with the same spirit. When all the breeders of a county become interested and when breeders will meet and exchange experiences and learn the fine points which have resulted in the best herds of the county, then this community work begins to bear fruit.

Of course, organization will not take the place of individual effort, but it will go a long ways toward stimulating and sustaining such effort. The Wisconsin Farmer is glad to note that the Guernsey breeders of the state, and of the several counties, are awake to their interests as individuals and as a whole, and we may expect even greater improvement and advance in Guernsey interests in the future than in the past.

Our New Serial.

WE BEGIN the publication next week of our new serial story, "Told in The Hills," by Marah Ellis Ryan, author of "That Girl Montana," "The Bond Woman," and "My Quaker Maid." This is a story of the real West in the picturesque and romantic days when red-blooded people took part in real events. Miss Ryan is familiar with her material through long residence in the West, and has written a story which for genuine thrills and heart interest has not been surpassed by any novel published in recent years. We confidently assert that "Told in The Hills" is the biggest and best serial story ever offered its readers by any farm paper.

We have already given our readers a number of good serials, including "The Story of Waitstill Baxter," by Kate Douglas Wiggin; "Dawn O'Hara," by Edna Ferber; "Winning the Wilderness," by Margaret Hill McCarter, and "Hepsey Burke," by F. N. Westcott. "Told in The Hills" is a worthy successor to these and will be followed by other novels of high grade. It is our purpose to print from three to four good $1.50 novels each year, making a feature not surpassed by any other farm paper. The stories are chosen with care, and may safely and pleasanty be read by every member of the farm family.

The Question of Large Litters.

ONE of our subscribers, Mr. Carey R. Jones, of Barron county, Wisconsin, has had splendid success in his hog raising operations, this being shown particularly in the number of pigs per sow that he has been able to save during the last two years. In the following communication Mr. Jones gives the record he has made:

I have been reading the letter of one of your subscribers who raised 125 pigs from twelve sows. He sure did well. I suppose they were young sows, though he did not say. That is a good number for that many young sows.

Nine years ago I started raising the Duroc Jerseys. I got a good bunch—seven in all—of large type, also got the best registered hog. When it was time to wean the pigs there were fifty of them. That did not satisfy me, so the next year I watched and kept sows out of the largest litters. From that time on I would not keep a sow that was not raised in a litter of ten. I kept up the strain of hogs and always bought the very best full-blood Duroc Jersey hog I could get. This I think anyone should do to have good luck.

In 1914 I kept eight young sows that raised eighty-two pigs. That is, I sold that many in the fall and not a runt in the bunch—all nice, large-framed hogs. When those pigs were six weeks old I weaned them and turned the hog in with the sows. The same fall, in September, they raised eighty, that is, till after they were weaned, and no runts. The next spring I kept the same old sows. One lost all of her pigs and the others had sixty-three at weaning time, and all good ones. In the fall of 1915 the seven sows had seventy-three pigs at weaning time, and all good ones. Then I had a public sale and sold all the old sows and moved to Wisconsin. I saved only a few young sows, so have no pigs yet.

I was living at Iowa Falls, Iowa, at the time of which I write. I think that most of the farmers make a serious mistake in keeping young sows, and lots of them are not particular enough in choosing sows. They should never let $25 or $50 extra on the price of a good male hog keep them from getting him. I always reason that as long as an old sow will raise twenty or more good pigs in one year she is worth her keep, and once I get a good hog and a bunch of sows I keep them right along.

I never give my hogs any special care and always make them weigh about 240 or 250 at seven months old. I really do better with the fall pigs than with the spring pigs, as I have more milk in the winter for them, and the sows raise more and better pigs when they raise two litters a year.

I am sure that it is a mistake to cross-breed, using a black hog one year, a white one the next, and in a few years a red one. We should stick to one strain and change it only to improve.

The Wisconsin Farmer has very grave doubts if this splendid record can be matched by another breeder located anywhere in the great central West. A swine breeder who is able to raise and market an average of ten pigs per sow deserves special mention among the list of individuals who are making agricultural history. Most breeders think they are doing exceedingly well if they raise an average of seven pigs per sow. Mr. Jones' communication is doubly interesting because of the fact that he raises two litters from his sows every year. Ordinarily when a large litter is raised a sow is pulled down so much in flesh that she will not raise a good litter in the fall, but it seems that in this instance this regulation did not hold good. If any reader of The Wisconsin Farmer has anything like the equal of this record to report we shall be pleased indeed to hear from him.

Waupaca and Portage Association.

IT GIVES The Wisconsin Farmer editors a great deal of pleasure to review the progress of our live stock breeders' association. Whenever a determined effort is made to keep up interest in these associations a great deal of good is accomplished. A very excellent report comes to us from Mr. Arthur W. Ritchie, of Royalton, Wisconsin, secretary of the Waupaca and Portage County Holstein Breeders' Association. We quote from Mr. Ritchie's recent letter to The Wisconsin Farmer:

The Waupaca and Portage County Holstein Breeders' Association was organized January 18, 1913, with thirty-seven members. The membership has now increased to one hundred, representing about 600 pure-bred cattle. The first and great purpose of this association is to promote the Holstein breed in these two counties. Another aim is to increase the production of each individual herd. In addition to this the association hopes to increase the enthusiasm for better bred stock. With these points in view, we believe greater profits will be realized. Selling surplus stock can be done in no better way than through an association of this character. We now have in herds belonging to members of our association some of the very best blood that flows in Holstein veins. The call for Holstein cattle has become so great that it is impossible for individuals to supply the demand. It is on this account that we believe in organizations capable of furnishing more stock than any one individual could spare at any one time. One of the features of this association is a monthly report sent to the secretary by each member. This report includes a list of all the stock the member has for sale, with description of the stock and statement of breeding. In this manner it is easily possible at any time to make up a carload lot or more for shipment. It also makes it possible to find either pure breds or grades at the least possible expense, by simply corresponding with the secretary.

Official testing is going on very extensively and both seven-day and yearly reports are being made. This association holds two meetings each year. A business meeting is held in January, and a summer meeting which combines a picnic and business session. At the summer meetings a number of good speakers are procured. At the business meetings in the winter officers are elected and ways and means of advertising rediscussed. Our summer meeting is more of a social affair, where breeders and their families and others interested meet and exchange ideas and become better acquainted with each other. Lastly, but not least, we endeavor to establish hearty co-operation with our state and national organizations.

Although this is rather a brief statement of the excellent work done in Waupaca and Portage counties it is at the same time inspirational. This association has trebled its membership in three years. It is significant to note that the membership now owns 600 pure-bred Holstein cattle. If every Holstein breeders' association in Wisconsin could make a report like this one the worries concerning the state association would soon be over. Of course, a county association which succeeds as the Waupaca and Portage County Breeders' Association has, supports the state association. We have no doubt the success of the Waupaca and Portage County Association is due, to a considerable degree, to the officers. These men are to be congratuated upon the good work which they are doing.

A Tip to Wisconsin Farmers on Feed Buying.

MR. L. L. OLDHAM, county agent for Walworth county, is advising farmers to buy winter feed early. He says that reports from North Dakota, South Dakota, parts of Minnesota and Montana, also Nebraska and Kansas, indicate that we are facing a low acreage of wheat and a subsequent shorter crop the coming fall.

This means a shortage of bran and naturally a higher price for this product next fall. Those who possibly can should plan to purchase their bran within sixty days. Millers, jobbers and dealers are

not favorable to the idea of storage for this by-product, as the losses from various agencies are too great and the demand too slow during the summer months when cows are generally on grass. Mr. Oldham says:

The months of June and July see the price the lowest during the year. In the fall, however, when the new crop starts coming in and the demand picks up the price naturally follows the trend of events and rises. With a shortage in sight the situation is more serious. The increase in the price per ton when it comes will naturally catch and be to the disadvantage of our farmers who make a practice of feeding bran and middlings. These feeds are good feeds and are indispensable to the farm feeding. Buy now and store in a good tight bin, return the sacks for credit and the winter feed problem is settled. This is my advice to you.

Mr. Oldham recommends to Walworth county farmers that they consider such crops as peas and beans as a supplement to short pastures and a safeguard against a poor corn crop. Discussing the matter from the farmer's standpoint, and what he would do if he owned a Walworth county farm, he says:

I certainly should plant some peas and soy beans to increase the protein content of my cow feeds. These crops make excellent hay of about the same feeding value as alfalfa. Stored in the silo with corn in the proportion of corn three parts, beans or peas one part they make an excellent silage. A greater proportion of beans and peas and less corn may mean odorous milk and soft butter, so I would be careful how I mixed them for silage. Both of these crops are good growers, do well on all lands, are easily harvested, can be harvested, housed and later run in the cutter with the corn for silage. Put up for hay they are handled like any hay crop and are liked by all farm animals. They carry unusually high percentages of protein as figured in farm feeds and consequently add much to the value of a ration containing them. It's protein we folks buy in feeds when we buy. This is the best way of getting it—the cheapest and surest. Furthermore, none have assured me as yet that we are going to have a corn crop. It's everyday preparedness that counts in business today.

Dried brewers' grains, one of the most popular feeds for the dairy cow in this section of the state is selling right now at its lowest mark this year. Like most other feeds this feed price is lowered in the summer months when the brewer does not care to store, when the cows are on grass and the demand very slow. Our farmers can make money no easier and quicker than by purchasing their supply of this feed and bran during the next sixty days. Buy it, haul it, empty it in tight bins, return the sacks for credit and you are fixed for the coming winter's feed problem and at a saving of $3 to $5 to $8 per ton. The total winter's supply handled in this manner represents no mean saving to the thinking business manager.

These suggestions from Mr. Oldham, who is conversant with the situation, are well worth considering. It is a little too early to figure on shortage of crops, although the decreased acreage in some of the wheat sections would indicate that we might expect a shortage of bran.

The Madison Rotary Club.

IT IS apparent that the tractor demonstration be held in Madison September 4th-8th is to be a big success. Last week The Wisconsin Farmer published some facts relating to the splendid grounds which had been secured for this demonstration. Our attention has been called to an article by Mr. B. B. Clarke in a recent issue of the Madison Democrat. We quote the first two paragraphs:

That little old Rotary Club of Madison doesn't pay anybody big salaries to show it how to spend money, but when it comes to "doing things" it's there "hittin' " on all cylinders all the time.

The manner in which the Rotarians took hold and secured the greatest boom that Madison ever had, or will have, in the big "plowing demonstration" to be held here in September, proves that the Rotary Club knows how to do the J. Rufus Wallingford stunt in reality.

The time is coming when farmers will hear a great deal more about rotary clubs. The Rotary Club of Superior, Douglas county, has recently had a great deal to do with developing the farming areas in that section. Rotary clubs are usually successful because of the splendid spirit which prevails among the members. As indicated by Mr. Clarke, there are no high-salaried fellows in the rotary clubs. The clubs are made up of business and professional men. There is one member representing each line of business. This plan makes the club representative of the various interests in a city. The plan also has resulted in eliminating rivalry which might occur in a club where there were many prominent men representing the same line of business. The one aim and object of the rotary club is to do something worth while, and these organizations seem to be peculiarly fortunate in the small number of knockers enrolled. Rotary clubs stay out of party politics and have no axes to grind. They are in a position to help things which are worth helping and to do it with all their might.

That these things are true has been illustrated by the work of the Madison Rotary Club in connection with the round-up tractor demonstration to be held in Madison September 4th-8th. Mr. Clarke is right in saying that the rotarians are bringing to Madison one of the most important events which has ever been arranged for this city. He predicts that not less than 10,000 automobiles will be parked in Madison and along the lakes during the tractor demonstration. It is generally believed that Madison will have 100,000 visitors during this week. We are glad to note that the rotarians are on the job; that they have started off the demonstration plans in fine shape by getting beautiful grounds on the shore of Lake Monona; and we have not the slightest idea but that they will stay by the work until the demonstration shall be announced a complete success.

Concrete Water Tanks.

THE question of supplying an abundance of pure water for live stock is important as every farmer knows, and there is nothing nicer in the way of a tank than one made of concrete. The bottom of the tank should be connected with a drain so that the tank can be easily cleaned. It should also have an overflow pipe which may be connected with the same drain and thus avoid the disagreeable feature of having the water overflow into places where it is not wanted.

A concrete tank is not only cheap and very serviceable but it is also substantial and neat in appearance and makes a good impression on anyone who sees it. It is permanent and in line with modern ways of building. For those who may not know how to go about mixing the concrete and provide re-enforcement in the best manner possible we give the following directions from the Nebraska College of Agriculture:

A good mixture for a concrete tank may be made of one part Portland cement, two parts clean, coarse sand, and four parts screened gravel or crushed rock. Where neither gravel nor crushed rock is available use one part of cement to three of sand. If less cement is used than the amount given, the mixture will not wear. The foundation should be about six inches thick, enough so that there will be no danger of heaving from frost. It should be re-enforced with woven wire.

The sides of the tank may be re-enforced the same as the foundation, care being taken that the re-enforcement is placed near the outside wall. Only wire or iron of good quality should be used, as rusted material only fills space and does not re-enforce. There should be continuous re-enforcement around corners. Where the wire or other material laps, the laps should be several inches.

The form for the tank should be so made as not to crack the cement when taken apart. After the forms are removed, the inside of the tank may be waterproofed by applying a coat of concrete paste made of pure cement and water mixed to the consistency of cream.

These directions are right to the point and any man who will follow them carefully can build as good a tank as can be constructed. If you need a water tank don't forget to give concrete careful consideration before buying one of wood or steel.

The Right Way to Pasture Alfalfa.

ACCORDING to the opinion of those in charge of the Crop Improvement Association of Winnebago county, Ill., alfalfa is not a safe pasture for cattle and sheep because of the tendency of these animals to bloat. For putting growth and weight on young horses alfalfa excels. But its peculiar value and adaptation is as a pasture for hogs. For this purpose it has no equal. Every farmer who raises hogs should have an alfalfa hog pasture, according to the officials of this association. In fact, hogs cannot be raised with so great profit any other way. Much data could be given to prove the value of alfalfa pasture.

Some object to pasturing alfalfa because "pasturing kills it." And this is true if the alfalfa is pastured too closely. The reason is found when we observe the manner in which the alfalfa plant grows. Namely, it grows at the top of the stem. When the stem is grazed off the plant must start branches or new shoots from the crown, but if the grazing is too close and too long continued the alfalfa makes little growth and finally dies from exhaustion. With grass pastures the growth takes place at the base of the leaf blades, and close cropping, while it may reduce the yield, does not usually kill the grass.

The right way to pasture alfalfa is to have much more growth or area than the animals can graze off and then cut the alfalfa regularly for hay when it reaches the blooming stage. Or, a better way, in grazing hogs, is to have two pastures, or a divided pasture. Cut one early and allow the hogs to graze on the other until the new growth in the first pasture is six or eight inches high, then turn the hogs in and cut the hay on the second field. Turn the hogs into the second field again in two or three weeks, and cut the first field, thus maintaining always a fresh pasture for the hogs and yet not allowing them to graze off the young shoots or graze the older growth too closely.

Hogs on alfalfa pasture should not be allowed to root out the plants and eat the crowns and roots, which they are inclined to do unless prevented by ringing.

The alfalfa pasture should be cultivated each spring to break up and mellow the hard crust which forms from much tramping. Cultivation and regular clipping as described above is all the care which alfalfa pastures require. If not grazed too closely it should last several years, when other fields should be seeded and the old pasture plowed and planted to corn or other crops for two or three years before reseeding.

The Value of a Registered Sire.

IT is difficult to say just what a registered sire may add to the value of a herd, but if he is a good individual, it is safe to say that he will prove very profitable even in a small herd. There are many instances on record, especially in dairy herds, where sires have paid for themselves several times over in two or three years' time, by increasing the milk production of his heifer calves over and above that of their dams.

Such an instance has recently been brought to our attention by the Georgia Experiment Station, where an ordinary grade Jersey cow was purchased in 1908 for $35. She was bred to a registeerd Holstein bull and produced a heifer calf. This calf was raised and bred to calve at two years of age.

For two years accurate records were kept of the milk production of this heifer as well as of her dam with the following results: During the first two lactation periods the heifer produced an average of 8,976 pounds of milk per period, while the old cow produced an average of only 5,352 pounds. Thus the heifer produced an average of 3,624 pounds of milk per year more than her dam which, one may reasonably conclude, was due to the superior dairy blood she had inherited from her sire. This extra quantity of milk contained 145 pounds of butter fat worth, at 30 cents a pound, $43.50. In a herd of ten cows such results would mean an extra profit of $435 a year.

Such an increase in production, due to the introduction of improved blood through the sire, is by no means exceptional and may be expected as an average in a herd of twenty grade cows. When we take into consideration that the second cross with improved blood will bring another increase in production, though perhaps not quite so pronounced as the first, and that a third cross will bring still further improvement it is not difficult to realize that it pays to use registered sires in all milk-producing herds. and that one can afford to pay a good price for a bull of the right kind.

A Series of War Articles.

WE BEGIN the publication in The Wisconsin Farmer next week of a series of articles by Mr. Harry C. Evans, one of the most prominent members of the party which Henry Ford, the Detroit millionaire-manufacturer, took to Europe a few weeks ago in an effort to bring the war to an end and to hasten the day of international peace. Mr. Evans had exceptional opportunities to investigate conditions personally in Germany, Denmark, Sweden, Norway and the other countries of northern Europe which are either engaged in the present war or upon which devolves the duty of furnishing food supplies and asylum to the fighting nations. Mr. Evans was one of the most prominent members of the Ford party and refused an appointment to remain in Europe as one of the permanent representatives of Mr. Ford in his splendid efforts to bring about peace.

The first article written by Mr. Evans, especially for The Wisconsin Farmer, will appear in these columns next week. It will deal with present agricultural conditions in Germany, the manner in which the German empire is conserving its food supplies and increasing production so that no one need go hungry. Mr. Evans tells of things he actually saw while traveling back and forth through Germany. He also tells of the manner in which the German farmer dominates the affairs of the empire politically and of the attention which the kaiser and all in power pay to the farmer and his interests.

We are firmly of the opinion that no articles published by any farm paper since the war began give such a good impression of existing conditions in Germany and elsewhere in Enrope as those which Mr. Evans has written for The Wisconsin Farmer. While the first deals wholly with Germany, subsequent articles will take up other warring countries, the series ending with Mr. Evans' conclusions as to what will be the situation when the war comes to an end.

American Judges For Argentine.

THERE are many indications of a growing interest among Argentine breeders of live stock in the pure-bred stock raised in this country. Recently a number of important consignments of beef-breeding cattle were sent to the Argentine from this country at excellent prices. Argentine cattlemen are buyers of the very best breeding animals and have been for many years, but up till now British breeders have monopolized the business. In recent years a number of American breed associations have been active in calling the attention of Argentine ranchmen to the high quality of stock that is obtainable in this country, and now that the European war has interfered with normal commercial relations between Argentina and Europe it begins to look as though the time were ripe for trade in pure-bred live stock between American and Argentine breeders to begin in earnest.

To help cultivate friendly relations between the live stock interests of the two countries the International Live Stock Exposition has invited Senor Carlos M. Duggan, one of the leading ranch owners in Argentina, to serve as judge of grade and cross-bred bullocks at this year's show, and the invitation has been accepted. Ricardo F. Pearson, another distinguished Argentine breeder, will judge the pure-bred Short-horns at the International this fall.

What is perhaps still more important is the fact that the management of the Argentine National Live Stock Show have asked for four American judges to place the ribbons on the winners of the leading breeds at their great show in August. The judges selected to do this work are: Short-horns, Prof. C. F. Curtiss; Herefords and Angus, Frank Van Natta; Lincoln Sheep, Robert Miller; draft horses, Robert B. Ogilvie.

SUCCESSFUL FARM MANAGERS.

Wisconsin College of Agriculture Announces Winners in the State Farm Management Contest Covering the Entire Year of 1915—Meeting at Ft. Atkinson, June 5th.

BASED upon their records for 1915, twenty-six farmsteads in twelve counties of Wisconsin on June 5th were awarded the leading places in the state farm management contest. The announcement was made at a meeting held at Fort Atkinson. W. L. and J. W. Baird and wives, Waukesha county, secured first place; S. A. Baird & Son and wives, Waukesha county, won second place and J. H. Williams and wife, Waukesha county, were accorded third place. Farm management contests were held this year under the direction of the Wisconsin College of Agriculture in twenty-one counties. D. H. Otis and R. V. Gunn were in charge of the state work. Practically all those who had part in the contest competed without any thought of winning cash prizes. The first year of the contests was 1912 and the number of farmers entered at that time was 150. There were 365 entered in 1915 and about 800 have promised to enter this work and keep their own records in a farm account book in 1916.

The plan for this work has been explained at a farmers' meeting in each county where the work was undertaken. An opportunity has been given for any farmer who desired to hand in his name and address and take part in the contest. Each farm is given a number and survey date taken, showing the capital and its distribution, receipts and their sources, expenses and their sources, from which was figured the net results of the farm. In addition to this, consideration was given to the maintenance of fertility, the health of the herd, general appearance and the development of the home and home life. When the records are secured a meeting is held in each county, where the results for the year are explained and each contestant given statement as to the outcome of his farm operations for the year. He is shown just how his business stands and it is compared with the average in his county, and also is compared with farms where greater profits were made.

D. H. Otis, in charge of the farm management work, says this county work has been conducted as a demonstration and many farmers have been in it who never thought of entering because there might be a prize connected with the work. The prize feature is very insignificant, even almost negligible, so far as the county work is concerned.

The three farms that stand the highest in the county are selected to represent that county at the state contest, which is held after the local meetings, at which time the summary of the work in the state is presented, the factors making for success in farming emphasized and prizes awarded. Following the state meeting an inspection trip is taken to a few of the counties that have been making the best showing with a view of visiting some of the farms in each county and show on the farm what has been accomplished and how it has been accomplished. This inspection trip has been of special interest and value to those in the work.

The interest in this work is shown by the fact that there were 150 farmers in the movement the first year and 440 farmers the second year. At this point the plan of the work was changed to make it necessary for each farmer coming into the movement to promise to actually keep his records. On this basis there were over 500 who entered the third year, of which 365 kept full records of their inventory and financial accounts for the year. For the ensuing year over 800 farmers have promised in writing that they will keep their accounts in a farm account book and hand them in at the end of the year long enough for the college of agriculture to get the data needed for the farm management demonstration and contest work.

ENTRANCE TO THE S. A. BAIRD & SON FARM, WAUKESHA COUNTY, WIS.

The James Mfg. Co., Ft. Atkinson, Wisconsin, has materially assisted this work by furnishing account books for farmers. This company has donated a total sum of $500 for this purpose.

Prof. D. H. Otis advises Wisconsin farmers that material assistance in these contests is given from bankers throughout the state. Farmers engaged in the contests have been urged to transact their business by checks; in fact, handle the banking business the same as any other business institution would handle it. This system has been a great help in keeping the records of each individual contestant correct.

The state winners in the Wisconsin farm management contest this year are as follows:

1. W. L. Baird and J. W. Baird and wife, Waukesha county.
2. S. A. Baird & Son and wives, Waukesha county.
3. J. H. Williams and wife, Waukesha county.
4. H. P. West and wife, Fond du Lac county.
5. Dallas E. Davis and wife, Walworth county.
6. William Romberg and wife, Winnebago county.
7. N. A. Rasmussen and wife, Winnebago county.
8. S. W. Baird and wife, Fond du Lac county.
9. A. Callentine and wife, Green county.
10. G. F. Clark and wife, Polk county.
11. R. J. Plenty and wife, Barron county.
12. H. Anthus and wife, Jefferson county.
13. Will Preston and wife, Green county.
14. E. A. Jones and wife, La Crosse county.
15. P. L. Lehman and wife, Barron county.
16. W. A. Lawson and wife, Fond du Lac county.
17. C. A. Peterson and wife, Fond du Lac county.
18. G. Hoeth and wife, La Crosse county.
19. H. J. Bassuener and wife, Wood county.
20. S. E. Severson and wife, Barron county.
21. C. Lundberg and wife, Polk county.
22. P. G. Warmington and wife, Racine county.
23. R. Martiny & Son and wife, Sauk county.
24. Frank Squires and wife, Racine county.
25. S. A. B. Ausman and wife, Dunn county.
26. Mrs. G. H. Tenpas, Wood county.

The winners in the county contests are as follows:

Barron county, R. J. Plenty and wife.
Douglas county, Otto Schmidt and wife.
Dunn county, S. A. B. Ausman and wife.
Eau Claire county, H. Chrysler and wife.
Fond du Lac county, H. P. West and wife.
Green county, A. Callentine and wife.
Jefferson county, Ben E. Wolf and wife.
La Crosse county, E. A. Jones and wife.
Langlade county, A. Guenther and wife.
Lincoln county, E. R. Nelson and wife.
Oneida county, Arthur Blumenstein and wife.
Polk county, Chas. Lundberg and wife.
Price county, E. A. Young and wife.
Racine county, P. G. Warmington and wife.
Rock county, R. E. Voltz and wife.
Sauk county, R. Martiny & Son and wife.
Taylor county, Frank Halopka and wife.
Waukesha county, W. L. Baird and J. W. Baird and wife.
Winnebago county, N. A. Rasmussen and wife.
Wood county, H. J. Bassuener and wife.

A fine program was arranged for the state meeting at Ft. Atkinson, June 5th. At the time this article was written and published the program had not yet been given and more will be said concerning it in next week's issue. The arrangements provided for a visit to the Hoard Dairy Farm, James Mfg. Barn Equipment plant and the Creamery Package Mfg. plant. Among the speakers announced were J. A. Craig, Janesville; Ex-Governor W. D. Hoard, Cyril G. Hopkins, of the Illinois College of Agriculture; Dean H. L. Russell, Wisconsin College of Agriculture; Senator C. H. Everett, Miss Elizabeth Kelley, of the home economics department of the University of Wisconsin; D. H. Otis and R. V. Gunn.

The scope of the farm management work is very practical and every effort is made to bring the instruction and advice down to a point where it can easily be understood. It is not so much to encourage "fancy farming" as it is to encourage profitable methods that this contest is conducted each year. In summing up the results of the work equipment is taken into consideration. But the chief aim is to get the farmers of the state to make the most of what they have at hand and to encourage such additional equipment, additional stock and new ideas as will be within reason and will be sure to result in increased profits.

An important feature of the meeting held at Fort Atkinson was the attention paid to the wives who have done so much to make farm management plans succeed the past year. As Miss Elizabeth Kelley expressed it, "The truest sign that we are on the right road to the solution of the problem how to make the farm yield to the utmost, and of making a contented and prosperous farming community, is the number of ladies included in the list of prize winners this year." Miss Kelley urged better homes and better living conditions for the farms of Wisconsin. She said that the farm woman's part in management and profits is sufficiently large to warrant greater attention to the conveniences of the home. In other words, the women are entitled to better homes and better home conveniences because they actually earn them.

1 2 3 4 5 6 7 8

A FEW OF THE WINNERS IN THE WISCONSIN FARM MANAGEMENT CONTEST.

1, Riley Martiny, Sauk Co.; 2, Pierce Martiny, Sauk Co.; 3, H. J. Bassuener, Wood Co.; 4, R. E. Voltz, Rock Co.; 5, N. A. Rasmussen, Winnebago Co.; 6, Otto M. Schmidt, Douglas Co.; 7, Charles Lundberg, Polk Co.; 8, P. G. Warmington, Racine Co.

VIEW ON THE JOHN H. WILLIAMS FARM, WAUKESHA COUNTY, WIS.

Clover Seed Profitable Cash Crop

E. J. Delwiche, in Wisconsin Bankers' Bulletin, Says That It Sells For More Per Pound Than Any Other Cash Crop.

OF ALL the cash crops grown in Wisconsin, few, if any, sell for as much per pound as clover seed. The cost of marketing in proportion to value is much less than such crops as potatoes, hay, barley, oats, or wheat. A fifty-bushel load of barley worth 60 cents per bushel, if hauled twelve miles to market, costs about $4 for hauling, or one-ninth of its value. A one and one-half ton load of timothy hay worth $18 ($12 per ton), hauled for the same distance, costs two-ninths of its value for marketing. Out of every $9, $2 go to pay for hauling. A fifty-bushel load of wheat worth $50 ($1 per bushel) requires $1 out of every $12.50 of its value to market. A fifty-bushel load of potatoes worth $20, takes $1 out of every $5 to defray cost of marketing. In contrast to the above, a fifty-bushel load of clover seed worth $500, costs only $1 out of every $125 to get it to market.

Table I. Value of one and one-half tons of barley, clover seed, timothy hay and potatoes, compared with cost of hauling to market.

	Timothy Hay	Potatoes	Barley	Clover seed
Price	$12 per T.	40c per bu.	60c per bu.	
Value of 1½ ton load	$18	$20	$37.50	$500
Cost to haul 12 miles	4	4	4.00	4
Amount left after hauling	14	16	33.50	496
Per cent of value of load required to haul	22 2-10	20	10 6-10	8-10 of 1 per cent

Table II. Value of crops and value of fertility removed compared.

	Timothy Hay	Potatoes	Barley	Clover Seed
Value of 1½ tons	$18.00	$20	$37.50	$500
Fertility value in 1½ tons	7.50	5	9.00	9
Ratio of fertility to value of crops	7½ to 18	5 to 20	9 to 37½	9 to 500

Table II above shows the value of fertility in one and one-half tons of each of timothy hay, clover seed, barley and potatoes, on the basis of the fertilizer constituents. By far the smallest proportion goes with clover seed in comparison to value. In fact, if the amount of nitrogen fixed by the clover crop is considered, the growing of clover seed for market will leave the soil richer instead of poorer in fertility.

Clover grown for seed pays well under Wisconsin conditions when rightly handled. In 1915 at the Superior station, on heavy red clay soil, alsike clover yielded over five bushels per acre.

At Marshfield medium red clover gave a yield of 1¼ tons of cured hay in first crop and 3½ bushels of seed in the second crop. At $10 per bushel, the alsike seed crop was worth $50 per acre. The crop of medium red was worth, at $10 per ton, about $12 for the hay, and at $11 per bushel, $38.50 for the seed, or about $50.50 per acre. Compared with barley, which yielded forty-five bushels per acre and sold for 70 cents per bushel, giving a return of $31.50, the returns for the clover were very much in favor of clover seed as a cash crop. In comparison with timothy yielding two tons per acre and selling for $12 per ton, the returns from the clover crop were fully 100 per cent greater. Few crops pay better net returns than clover when the seed crops yield over two and one-half bushels of seed per acre.

To secure good yields of high-class clover seed only high-testing seed, free from weed seeds, should be sown. Unless clover seed has been carefully recleaned there is always danger of foul weed seeds being found in it. The safe way is to sow seed that has been tested for purity and germination.

In order to get pure stands of clover, plenty of seed should be sown—more than when the crop is intended for hay only. The stand of clover should be thick in order to crowd out annual weeds as much as possible. On heavy soils and loams, about ten pounds of alsike and about twelve pounds of red clover should be sown. On light soils, medium red and mammoth clover should be sown at the rate of about fifteen pounds per acre.

Good success usually follows the sowing of clover with winter grain. The seed is broadcasted either on the last snow, or early in the morning when the wet ground is frozen. As the ground thaws the seed sinks in the soil and is covered. On clay soils it is not usually necessary or desirable to harrow after seeding in rye or winter wheat unless the ground is very dry. In the case of light soil the land should be well harrowed so as to cover the seed properly. If done when the ground is fairly dry the grain will suffer no injury from the harrowing.

When sown with spring grain clover seed should be covered as a rule. In sowing with the grain drill with grass seed attachment we prefer broadcasting in front of the drill or seeder rather than to run the clover in the grain spouts. On heavy soils and loams we seldom harrow after seeding with the grain drill. On the lighter soil types we usually run the smoothing harrow after seeding. This helps to cover the clover seed more uniformly. On the lightest soils we prefer sowing the clover without a nurse crop, in which case seeding is done as soon as the ground is fit to work.

Clover, particularly alsike and mammoth, should be grown for seed only on clean land free from noxious weeds. Because the first crop of medium red clover is cut for hay this variety does not demand as clean land as the other clovers named. The best seed is grown on land in a good rotation, and when sown with small grain following a cultivated crop, such as corn, potatoes or roots.

State Fair Office at West Allis.

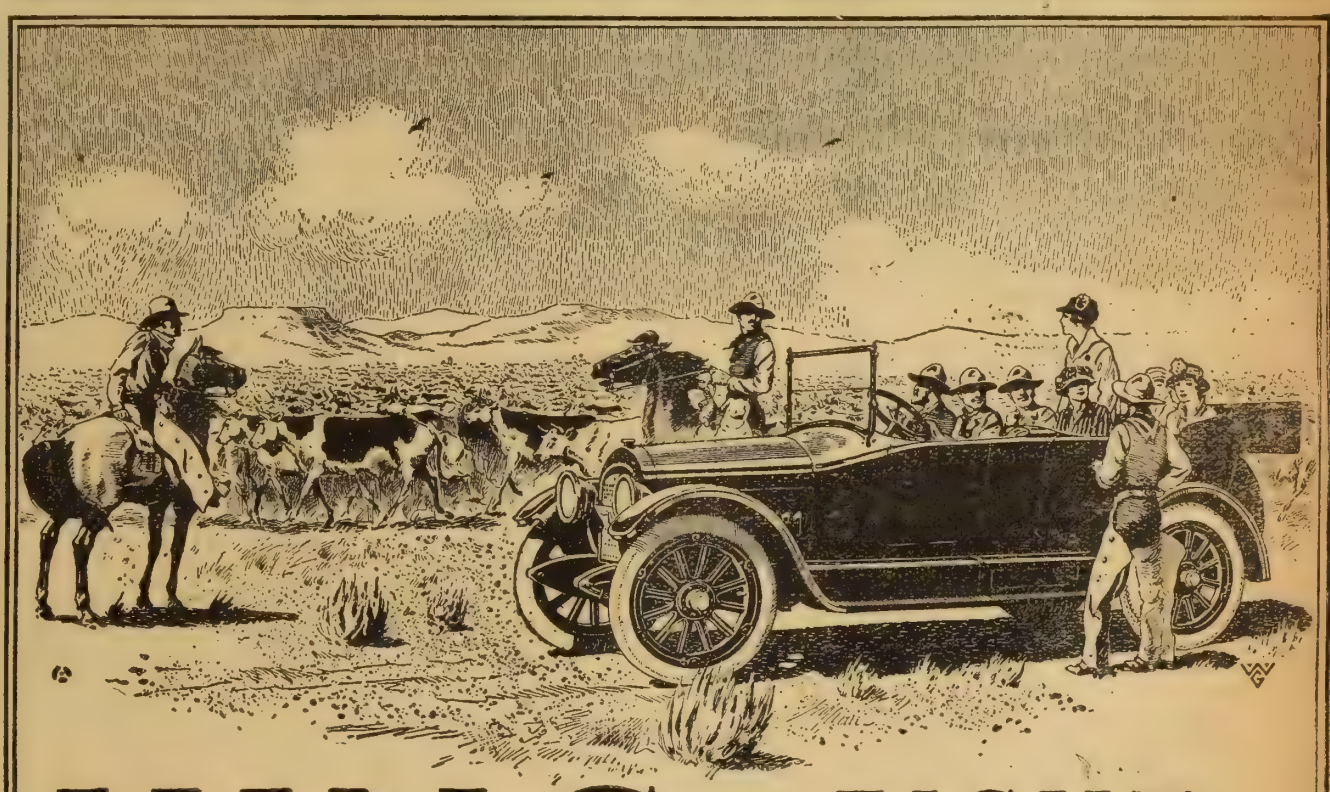
Beginning June 1st, the office of Oliver E. Remey, secretary of the State Fair, will be maintained on the State Fair grounds at West Allis until after this year's big exposition, the dates of which are September 2d to 16th.

The premium book for this year's fair is ready for prospective exhibitors and will be sent out during the present week. Plans for this year's fair were finally mapped out some time ago. From now until the opening date of the fair there will be much building activity on the grounds, and a large force of men is at work getting the grounds in shape for the fair. Within a week a force of painters will begin on exteriors and interiors of buildings.

One of the big departments of this year's fair will be that of the boys and girls' agricultural clubs contests, which was inaugurated last year. It is expected that over 1,000 boys and girls will compete. The cash premiums amount to over $1,500 and the special premiums exceed $6,000. Among those offering special prizes are George W. Browne, Fred Pabst, Fred Underwood, president of the Erie railroad, the Merchants' and Manufacturers' Association of Milwaukee, and the Wisconsin Bankers' Association.

An innovation this year will be a general sale of pure-bred horses and cattle on Friday, September 16th, under direction of Fred Pabst.

It is possible that President Wilson and the republican nominee for president may be special guests at this year's fair. Special invitations will be sent to both. It is understood that both are planning western trips for September.



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The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Work of Eau Claire County Breeders.

To the Editor:—We are planning a rousing meeting of the Eau Claire County Holstein Breeders' Association at the George H. Comings farm June 16th. Comings is one of our members who resides four miles southwest of the city of Eau Claire. There will be a scoring contest in the forenoon, a basket dinner at noon, and we expect [illegible]r Humphrey to be with us [illegible] us a talk in the afternoon. [illegible] ill be a business meeting for [illegible]ion of officers and the transother business. Mr. Comings [illegible] everything possible to make the meeting a success. In case of inclement weather the meeting will be held in his commodious barn.

While our association is not large in membership, they are all boosting for the Holstein breed and we have a few breeders whom we believe are as good as any in the state. In an advertising way we issue a quarterly list. Each member who has surplus stock for sale sends in the number, kind and prices to the secretary, who compiles all into a sales list. This list is sent to all members of the association and to others who may be interested in breeding Holstein cattle. We have also advertised in our local and county papers as much as our funds would permit. We have had a number of calls from buyers outside of the state and could sell ten times the cattle we do if we had them to sell. We sold a carload early in the spring to buyers in Minnesota. Recently a buyer from Tennessee was here looking for pure-bred Holsteins. We have also had an inquiry from Iowa wanting to get a line on several carloads of Holstein cattle. The letter says that Wisconsin is the best place they know to get this stock. Eau Claire is forging to the front with Holsteins and we expect to soon become known as a Holstein center.

B. F. Von Berg,
Secretary Eau Claire County Holstein Breeders' Association.

Milking Machine and Testing.

To the Editor:—In April 20th issue of The Wisconsin Farmer I noticed an article by B. H. Diny regarding milking machines. We are milking all our valuable registered Holsteins with double unit machine—and we are more than pleased with the results. I cannot see where a single unit machine would be of enough more advantage to warrant paying the extra cost. When it is desirable to keep the milk of a cow separate she can be milked alone with the double unit machine as quickly as she could be milked with a single unit machine. Testing associations usually use two milkings a month to determine the monthly production, and while it would take nearly double the time to milk them singly for these two milkings per month, don't think the time saved would justify extra cost of single units. In case we wanted to keep an exact record of every cow I should, of course, prefer the single unit machine, but I believe the monthly figures give near enough to a correct performance of a cow for us to know whether she is profitable or not. The machine is easy to clean and the milk is much cleaner than when hand milked. We haven't a cow in the herd but seems to do as well or better with the machine than with hand milking. We have taken a great deal of pleasure the last few years with our automobile, but if we had to dispose of either the car or the milker the auto would have to go. J. Roy Gordan.
Iowa Co., Wis.

Land Clearing With Tractor.

To the Editor:—I have had many years' experience with steam tractors, and am using one for clearing land, sawing lumber and threshing. But there is considerable new road building going on in this new country, so I made a purchase of a new gas tractor for that work. The size of the tractor is twenty-six-forty-four horse power as rated by the company. It is a three-wheel tractor, two drivers and steering wheel. It handles grader to perfection. The weight of tractor is 8,500 pounds and I find it a great advantage in this work compared with horse power. This is not a cheap gas tractor that I have, but I think a man gets his power too light in order to save on the first cost, then later he finds that he has not power enough to do the different kinds of work. My experience is to get a little more power at the first purchase than is actually needed. The gas tractor is a great advantage over steam in road work, and I also think it must be in field work. Where water is good and fuel plentiful and the work is stationary or such as clearing land of stumps, it is cheaper to use a steam tractor. I do not want to advertise by mentioning any name of tractor. There are many good tractors, but there are also some very poor tractors. An inexperienced man intending to purchase a tractor would do well to ask some experienced friend or buy through his home dealer from a reliable manufacturing company. There is a case here where two of my neighbors belong to a farm developing company that made a purchase of a new tractor cheap for cash, but it turned out to be high-priced experience at any cost. I think that the tractor is the future power of farming. J. J. Martin.
Aitkin Co., Minn.

Notes on Tree Growth in Blasted Ground.

To the Editor:—An examination of a good many orchards where the trees are growing in land prepared for them by blasting shows first of all that the trees are anchored more securely. There is far less of that leaning away from the wind that characterizes too many orchards. It not only is unsightly—it often means the breaking down of the trees under their usual loads of fruit. I do not know whether this can be attributed to a deeper root system or to more extensive root systems. Probably it is a combination of both.

I have not observed that in young trees the blasting of the ground results in much thicker growth of trunk, though only a few trees have been measured within my observation to check up this point. But in older trees that are growing in the ground containing hardpan, there is a decided increase in the thickness of the trunks of the trees where the ground has been blasted. Probably the young trees do not yet have vital need of the underlying strata of soil. Probably the trees begin to suffer from the lack of food and lack of water that stunts them and keeps them back only after they have thoroughly worked over the topsoil within reach of the roots. In one instance apple trees over hardpan were lifted by the forces of growth till the roots were exposed above the ground, simply because the hard ground beneath offered no opportunity for root penetration.

There probably are a good many soils that will not be benefited much by blasting, particularly if the blasting is not immediately followed in the right way with heavy-rooted cover crops. But these soils do not often occur in the fruit-growing sections, for there are problems in moisture storage and in the making available of insoluble plant foods which the blasting helps to solve, and these problems are present in clay and loam, and highland and lowland alike.

As for length and thickness and number of the twig growth of trees, I personally can bear witness to the fact that in blasted ground there is every reason to expect superiority. In only a half dozen instances out of a hundred that I have seen have the trees failed to make huskier, bigger tops in blasted ground. It is the rule rather than the exception to see whole blocks of 1,000 to 10,000 trees so planted, show an average growth of eighteen or twenty or twenty-four inches in a season, and alongside of this I reflect that on similar soils I have seen many orchards planted with inferior tillage, that would average only seven or eight or ten inches in twig growth in a season. It is only fair to say that I have seen a few orchards in light sandy soil, and in very heavy soil, where blasting apparently did no good, or even did harm. The sandy soil seemed to lose in moisture-holding capacity by the blasting. The clay seemed to hold water around the trees too long.

There may be some question about the value of blasting an open, fertile soil, but there can be no question at all when there is the least indication of plow sole, or hardpan, or a layer of clay. Blasting is intensive tillage. If you believe in tillage you automatically believe in the use of explosives to secure it, because there is no other method so effective, and none that you can use to get the same results, or to get results of a similar nature for so little money. J. R. Mattern.

Tractor Power For Thresher.

To the Editor.—I own a 20-40 gasoline tractor, but I have not done any farm work up to the present time. Last fall, however, I ran a thresher thirty-two-inch cylinder fifty-four separator with blower and bagger and a forty-inch cylinder clover huller. The tractor handled this machinery fairly well. It used but two gallons of oil a day and twenty-five to thirty gallons of gasoline while threshing. It used fifteen to seventeen gallons of gasoline while hulling clover. The average price paid for oil was 35 cents per gallon and gasoline 12½ cents per gallon. My repair bill was $1. Perhaps by next fall I can give you a better report on what this tractor actually does. I figure on pulling a road grader and on the farm I hope to use the tractor to move or pull out big stones. I have not thought very much about what I would do in the way of plowing, as our farm is small and quite hilly and I have been afraid the engine would mire down going up grade, so I would not go to the expense of buying a gang plow.

Ernst Kowalske.
Shawano Co., Wisconsin.

Prefers Heavy Tractor.

To the Editor:—I just got my tractor this winter and have done some plowing with it this spring and am not through yet. I like it fine so far. Next winter I will be able to tell you more about it and just exactly how I like it and what can be done with it. My tractor pulls four plows anywhere—uphill or down—in the toughest kind of soil, nine inches deep. It weighs 8,000 pounds, but does not pack the soil, as it has such large wheels. I prefer the heavy tractor. In my judgment better have a four-horse team and do just as much as one of the two-plow tractors.

Grant Co., Wis. Fred Kettler.

Business Principles Applied to Farming.

To the Editor:—Before I decided to make farming my life work I spent seven years in the grocery business and there learned that to be a successful business man I must sell a first-class article, display and advertise before the public and attend strictly to business. I have tried to apply these principles to the business of farming. I started to raise pure-bred chickens when I was a small boy at home in the city, and from that on decided that from the standpoint of profit pure-bred stock in all lines was the thing on the farm. My stock is all pure bred except the horses and they are high grades. I try to keep my stock in first-class condition so that they will be attractive to a buyer and a good advertisement to the farm. I am continually doing A. R. O. work and advertise by this means and also through the press and show ring. To secure the largest profit all feeds should be raised on the farm. To this end I have experimented with my soil and find it well adapted to alfalfa; also find it the best hay crop to raise. I also plant the best pure-bred seeds to be procured and follow a four-year crop rotation. I feed all my grain on the farm unless there is an advantage in selling and buying back a feed we can use to better advantage.

I find there is a great deal of pleasure in farming and have never regretted leaving the city for the country and am hoping to raise my boys and girls so that farm life will appeal to them also. S. H. Bird.

S. H. BIRD LIVE STOCK FARM, FOND DU LAC COUNTY.

The Sugar Beet Situation.

To the Editor:—Sugar beet planting has been somewhat retarded by recent rains. The soil undoubtedly now possessed considerable moisture and, all other things remaining equal, a good growth of beets may be expected. However, it did not take long this spring for the soil to get into right condition after the heavy rains. Planting was resumed early.

It is clear that at no other time of the year during the period of growth of beets will deep plowing be as effective as it is in times of excessive moisture. Deep plowing furnishes a storehouse for the water to run into, and thence into the subsoil. A good depth of cultivated soil will keep the winter moisture and take up the spring moisture and in this way equalize the dry and wet periods.

When the soil in the seed bed is deep the temperature is much more uniform and the air and moisture are admitted more freely. The food of the plant becomes more easily available, soil remains loose, weeds are kept down better and, on the whole, the sugar beets will grow better and the crop will be improved both in quality and quantity. Moisture after all is very important in the growth of beets. No matter how much fertility there may be stored in the soil, if it is not in a soluble form the plant will be unable to use it and the plant will not grow as expected. No matter how poor the soil may be in fertility, if it contains a reasonable amount of moisture a fair crop may be expected at least.

It appears that the subject of fertilizing the soil is given more attention now than ever before by our farmers. Proper amount of fertility, coupled with proper cultivation and judicious handling, will to a large degree warrant success in the growth of any farm crop. Every farmer should understand his soil as he would a book. The better knowledge he has of the needs of his soil and the better he can administer to these needs, just so much more will he succeed in raising a better crop, be it a crop of sugar beets or any other crop he may choose to grow. The application of fertility at the right time will add enormously to the permanent value of the field and the farm. J. F. Wotja.
College of Agriculture.

A Mississippi man is experimenting in the hope of developing a neckless species of cattle, a process on which British, French and American governments are said to be keeping close tab.

Western Guernsey Breeders Meet

Southwestern Wisconsin Association Is Host at Annual Summer Meeting at Rundell Bros.' Farm Near Livingston, Grant County.

EVERYTHING seemed just right for the combined meeting and summer picnic of the Western Guernsey Breeders' Association and the Southwestern Guernsey Breeders' Association at Livingston, Grant county, on June 1st. Guernsey breeders are awake to the possibilities. Secretary Olsen, of the southwestern association, informed the writer that there are at least three times as many Guernsey herds in this territory as four years ago, which indicates that this section, so

NORWOOD S. ALICE 31428—A. R. 2096.
A splendid Guernsey type. One of the Rundell herd, Ore Hill Farm.

The weather man presented the breeders with an ideal day, and more than 250 of them, with their wives and families, turned out to make this the most successful gathering of its kind in that section of the state.

This was the first time that the Western Guernsey Breeders' Association has ever met with the breeders in southwestern Wisconsin, and in long noted as Wisconsin's beef and swine section, is moving with the rest of the state into dairying, and that the Guernsey is keeping pace with the other breeds. The southwestern association now has about forty active members, who are using pure-bred sires or own pure-bred females and the officers expect to increase the

MARTILLA OF HADDON 32136—A. R. 2412.

MARTILLA OF LINWOOD 43781.
At two years she produced 11,525.9 pounds milk and 514.31 pounds fat.

choosing the farm of Mr. Dale Rundell a few miles from Livingston a wise selection was made. The meeting was held on the lawn at the Rundell farm and overlooked as picturesque and fertile farm lands as are to be found anywhere in this section. Mr. Rundell also has a splendid herd of about eighty pure-bred Guernseys which were on show for the benefit of the visitors and the success of this membership to a hundred during the coming year, which will be an easy matter if all the Guernsey breeders in the four counties take the interest that should be taken in such an organization. Only a short business session to discuss some pending matters was held by the local association and the program was turned over to the western association, which presented Dr. M. B. Wood, the well-

COW BARN ON ORE HILL FARM NEAR LIVINGSTON, WISCONSIN.

meeting should serve to greatly stimulate interest in the breed in Grant, Iowa, Lafayette and Crawford, the counties in which the members of the Southwestern Guernsey Breeders' Association reside. This section of Wisconsin with its rolling farm lands, dotted by beautiful trees and groves and noted for its wonderful blue grass pastures which have finished many a steer for market, is worth a visit from any person, and the breeders who missed this opportunity to see this country and attend this joint meeting missed a treat, to say the least.

Interest in dairying in this section is rapidly increasing and the known authority of Mankato, Minn., as the principal speaker. Dr. Wood is acquainted personally with most of the best cows of the breed in this country and his talk on the advancement and the fine qualities of the breed was as interesting as it was instructive.

Mr. H. W. Griswold, of West Salem, president, presided at the meeting which followed dinner served by the Ladies' Aid Society. Music found a strong place in the day's festivities and was furnished by the Platteville city band. The attendance of western breeders was not so large as had been anticipated but what was lacking in numbers was made up in enthusiasm with the result that a most enjoyable time was reported by all.

Dr. Wood in his address reviewed at length the advancement of the breed in America, and pointed out that twenty-eight states are now represented by the cows under test for entrance to the advanced registry. To his mind the greatest thing ever done for the breed was when the 1[illegible] Guernsey cow under official supervision established her record of 8[illegible]7 pounds of fat some twelve years ago as that led to renewed interest with the result that through better care and proper feeding many high records have been made since. On January 1,

(Concluded on page 12.)

Guernsey Meeting at Burton Farm

Waukesha County Breeders Hold Annual Session This Year in Southwest Part of the County---Meeting a Big Success.

THE annual summer meeting and picnic of the Waukesha County Guernsey Breeders' Association was held Friday, June 2d, at the Roy Burton farm, a few miles from Eagle. The picnic was in every way up to the standard of this organization, and more than 400 breeders with their families enjoyed the day's festivities. This was the first meeting of the association in the Mr. Burton as a meeting place the association exercised good judgment, for it is in this part of the county that the Guernsey industry is the weakest, if it can be truthfully said that it is at all weak in Waukesha county. The splendid pure-bred herd of Mr. Burton was on show for the occasion as well as the herd of Mr. H. N. Longley, who lives near by. Mr. Longley joined with Mr. Burton as

IMP. DAIRYMAID OF ST. CROIX 46679.
A. R. 391.44 pounds of fat at two years old. One of the Roy Burton Guernsey herd of Waukesha county, Wisconsin.

southwestern corner of the county, and the success which attended the gathering speaks well for the growing interest in Guernseys in that section of what the Waukesha county breeders have elected to term the "Guernsey capital of America."

Lowering skies threatened rain at most any moment during the day, but this did not keep the breeders away. By actual count there were seventy-two automobiles parked in the road that passes Eldwood farm in addition to nineteen buggies and one hay rack

VIENETTE 38249.
Now on test and has made 345.30 pounds fat in 293 days as a three year old.

which brought a big party. However, the weather man was kind and held off the rain although on the night before the tents erected for dining and speaking purposes were blown down, discommoding the women who prepared the bountiful dinner served to almost 400 persons at noon. This

IMP. VIOLET OF ST. CROIX 47088.
A. R. 465.81 pounds fat at two years old.

did not discourage the ladies, and everything was carried out per schedule on the open lawn instead of under canvass as had been planned.

In the selection of Eldwood farm of host on this occasion, and too much credit cannot be given Mrs. Burton and Mrs. Longley for their part in making the gathering a success.

The forenoon was devoted to a judging contest among the boys of the county. This developed unusual interest and forty-six boys were on hand when Prof. G. C. Humphrey lined up the cows and started the contest. Last year the Waukesha breeders held an essay contest; this year it was a judging contest and next year it will be something else. They never seem

IMP. LIZETTE OF ST. CROIX 46680.
Now on test and has made 334.39 pounds fat in 274 days as a senior two year old.

to run out of ideas for keeping interest at white heat, and especially in interesting the coming generation in the Guernsey cow. Professor Humphrey gave the boys a talk on the characteristics of the breed. He explained the methods of judging and the particular points to bear in mind and passed out score cards to each boy. Twenty minutes was given to pick the best cow in each of three classes. Considerable credit for the success of the contest is due Superintendent of Schools Rice, who had co-operated with the association in enlisting the boys in the contest, and Professor Humphrey praised very highly the good judgment shown by the boys.

First prize of $10 offered by the Farmers' Savings Bank and the Farmers' Mill at Palmyra, was awarded to Delbert Kingston who succeeded in placing ten out of twelve cows correctly. Earl Higgins was given second honors; H. J. Potter, third; L. Agathan fourth and Ralph Uglow fifth. Each boy received a prize of 50 cents whether he was a winner or not.

Mr. Gavin McKerrow, president, pre-

(Concluded on page 22.)

Warmer Weather Boosts Crops.

Present Conditions May Overcome Bad Effects of Late Spring ---Corn Planting Nearly Finished---Pastures Are Very Good.

WISCONSIN.

Adams County.—Meadows winterkilled badly. Wild pastures are good. Oats and winter rye were damaged by high winds. Corn planting is nearly completed. The season is about two weeks later than usual. Live stock look good. Only a small amount of fruit is raised here, but it looks fine.—W. B. Barnes.

Burnette County.—Until the last week rain and cold weather have in general, retarded the growth of everything except grass and pastures. Corn, which was planted in water-soaked, cold ground, stands a poor show of germinating properly. Sprouts of small corn are peeping through the ground and if the weather warms up bumper crops may be predicted. Winter wheat and rye are backward, but otherwise are healthy and look good. Pastures are in first-class condition. Some gardens are planted, but look bad. Fruit buds have not opened. Live stock are looking good, considering the serious winter. Many colts are dying when four or five days old from intestinal trouble. —E. H. Johnson.

Chippewa County.—Grain crops look good. Rain is plentiful. Meadows and pastures are growing fine. Hay is heavy. It is a little too wet for corn and some of it has not been planted. Fruit trees look healthly, but the weather has been cold for them. Live stock are doing well.—Gustave E. Rheingans.

Clark County.—Oats have a good color, but are small on account of cold, wet weather. Winter wheat, rye and clover badly winterkilled. Some corn has been planted, but it is not up yet. Much planting will be done as soon as the ground is dry enough. Pastures are getting good, and cows are giving a good flow of milk, except in cases where not wintered well.—Fred Ackerman.

Door County.—Spring is exceptionally late. Some who sold hay are now buying it. A few warm days will change this. Frequent rains have delayed seeding. Some small grain is just up; prospects for it are very good; it stools better in cool weather.—John Aznoe.

Fond du Lac County.—Weather is very favorable for crops. Grass is growing splendidly. Corn planting is progressing nicely; most of it has been planted. Small grain is doing well. Fruit prospects are good.—A. L. Williams.

Grant County.—Oats look fine; winter wheat winterkilled badly. Little barley, rye or spring wheat was sown. Meadows and pastures are fine. Alfalfa winterkilled some, but only a small per cent of the hay ground was sown to alfalfa. The last week has been warm and corn which has been planted is growing fine. Nearly 20 per cent of the corn is to be planted yet.—P. R. Stoffel.

Iowa County.—Hay crops, especially clover, are fine. Fall wheat and rye are fair, other small grains are good. Corn is nearly all planted and is coming up well. Some farmers who trusted seed picked last fall will have to replant. Gardens are fine and fruit prospects are fair.—Will Dowling.

Jackson County.—Weather has turned warm and everything is looking fine. Most of the corn is planted, but farmers complain that the early planting is not coming up as it should. More corn will be put in than usual because of the clover killing out. Young pigs are scarce and below average. Cows and fat cattle are scarce.—C. R. Ristow.

Kewaunee County.—Seeding is late; about 90 per cent has been done. The acreage of cereals is about the same as last year. Crops are backward and have suffered from heavy rains. Many farmers have sown from two to three acre patches of alfalfa. Pastures are good, and cows have been turned onto them. Timothy looks good, but clover badly winterkilled, especially in the western part of the county. One-half of the potatoes have been planted. Live stock looks fine, but there are a few cases of black leg and farmers are vaccinating their stock against it. Apples and cherries promise full crops. More hogs are on feed this year than last.—W. C. Katel.

La Crosse County.—Season is backward, but pastures are improving and oats and barley look good. More corn than usual is being planted because of the winterkilling of wheat and clover. Corn is not doing well on account of late frosts and late rains; some replanting is necessary. Live stock are doing well.—R. R. French.

Lafayette County.—Weather has been warmer, with a fine rain on May 29th. Corn planting is nearly finished, but some replanting is necessary on account of poor seed and cutworms. It is reported that a small white worm is eating the corn germ in some fields. Small grains and meadows have made a big growth during the last week and now look good. Pastures are good, and cows are producing well. The pig crop in this locality is about an average. Young colts are up to normal. Late potato planting is in progress this week. Fruit will be light crop from present indications. Several silos are being built.—Lloyd Scott.

Marinette County.—Frost was slow in coming out of the ground, which, together with excessive rainfall, has delayed spring seeding very much. The early seedings of oats and spring wheat are looking fine, so is the grass seeding. Pastures and meadows are in excellent condition and warm weather during the past week has done much to improve them. About 60 per cent of the corn is planted. Orchards promise bumper crops of apples, plums and cherries. Farmers are purchasing grade dairy cattle through the county advancement association. Young pigs are scarce, as many sows failed to breed.—W. B. Sanderson.

Monroe County.—Oats are looking good. Hay crop will be short as most of the clover winterkilled. The early planting of corn is being replanted; that planted after the ground was warm enough is coming up. Low pastures are furnishing fine feed.—D. F. Jones.

Oconto County.—Condition of grain at present is poor on account of wet weather; about half the seeding is done. Little corn or potato planting has been done. A large acreage of certified potatoes will be planted in Oconto county this year. In general, meadows and pastures are very good. Live stock are generally healthy; there is one case of blackleg and a few cases of tuberculosis in this region. The fruit crop promises to be good if frost does not come. The following prices for farm produce are current: Hay, $16; oats, 50 cents; certified seed potatoes, $1 a bushel; cows, $40 to $75; horses, $100 to $200.—Wm. J. Hinker.

Oneida County.—Warm rains have greatly helped the hay and small grain crops. Clover and alfalfa are about seven inches high. Practically all small grains are well out of the ground. Most of the corn and potatoes are planted, and if warm weather continues crops will be normal. About 80 per cent of the young pigs are saved.—A. Blumenstein.

Outagamie County.—Because of the late spring and frequent rains, oats seeding has just been finished recently. The early sowing is up and making rapid growth. Plowing for corn is under way, but very little planting has been done. Potato planting will follow corn planting; potatoes are scarce, bringing $1 and $1.25 a bushel. Pastures are just getting a good start. Old meadows are bare in spots, but the new seeding came through the winter in fine shape. Old hay is all gone. Pigs are scarce and high-priced, because brood sows were sold off on account of scarcity of corn. Few sheep are left on the farms. Work horses are in good demand. Many new silos are being built.—Peter Tubbs.

Ozaukee County.—Warm weather has set in and pastures, small grain and the new seeding of clover are making a good showing. A great deal of alfalfa was killed by a sheet of ice and sleet in March and the land has been plowed and will be put in corn and potatoes. Red clover did not kill as badly as alfalfa. Corn and potato planting is nearly finished. Plum and cherry trees did not blossom freely; apple prospects are good. Many farmers spray their fruit trees. The Ozaukee County Cooperative Cow-Testing Association was started on April 12th and its members are well pleased with the results. Many farmers are purchasing pure-bred sires to head their herds.—C. F. Dineen.

Pierce County.—Spring is very late. Oats and barley look good; rye winterkilled badly, some fields have been sown to barley. Not all corn is planted because of wet weather. Some fields are too wet to plow. Clover, pastures and meadows are doing fine. Large acreages of potatoes and cabbages are being planted. Prospects are good for a bumper crop of apples. Stock came through the winter in rather poor shape.—T. B. Eaton.

Taylor County.—Weather is getting warmer and crop prospects are better. Heavy rains have made crops late. Oats are coming on fine. Meadows look good, but hay will be late. Pastures are in fine shape. Most of the potatoes are planted. Strawberry crop is excellent. Lamb crop is fairly good; wool sells for from 30 to 35 cents. Roads are in poor shape at present, and farmers will be busy fixing them up.—E. H. Dehne.

Trempealeau County.—Nearly all wheat winterkilled. Some fields of rye are fair, but it winterkilled badly also. Oats, barley and timothy hay are growing well. Pastures are a little backward on account of cold weather. Early planted corn has suffered, due primarily to poor seed and cold weather. The later planting of corn is growing better where the seed is good. Clover winterkilled. Fruit, such as apples, may make a fair crop; strawberries were killed out. Farmers here are most interested in dairying, but scarcity of labor makes beef raising more convenient in some cases. Sheep and swine are well represented this year.—C. G. K.

Vernon County.—Corn planting is much later than normal; about one-half of the crop is in. Small grain is doing fine. Last year's planting of clover is growing well, but old clover killed out. Tobacco is doing well in the beds. Alfalfa suffered during the winter. Until last week pastures were a little slow. Small berry crops look well. Apple trees are in full bloom and no frosts have hurt them so far.—Chas. E. Butters.

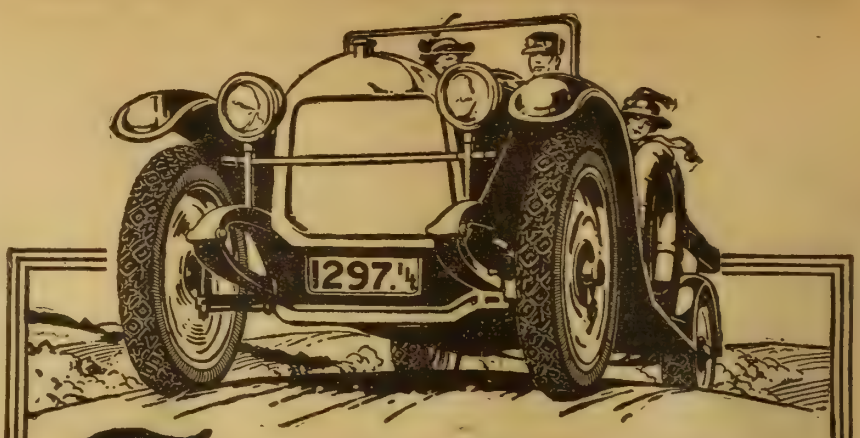
Walworth County.—Small grain, pastures and meadows are looking fine. The last week was very favorable for growth. Corn planting is more than two-thirds done and some shoots are coming up; the stand is good. Milk production is above the average this season. Pig crop is an average; hogs will not be marketed very early, as feed will have to be bought for them during the summer. Old corn is gone and feed will probably be high. There is a slight tendency for sheep raising to increase here, although dairying is the principal industry.—Arthur Emig.

Washburn County.—Pastures, meadows and small grains are good. The new seeding of clover is growing well. Nearly all the corn is planted. Oats acreage is slightly increased and corn acreage slightly decreased. Potatoes are being planted. Lamb crop is good. Weather is warmer, with a little too much rain.—John W. McCulloch.

MINNESOTA.

Dodge County.—Small grains are looking fine, except in low places where there was too much rain. Considerable corn planting is yet to be done; the first planting is coming up. The corn acreage is less than last year. Some potatoes have been planted. Meadows and pastures are looking good. Live stock are doing well.—Frank Houston.

Mower County.—Small grain is looking good. There has been too much rain for corn. Pastures and meadows are good. Fruit prospects are promising. Stock cattle are scarce. Hogs are also scarce because farmers sold most of them off on account of the scarcity of corn.—Walter H. Martin.



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Rural Carriers Meet at Eau Claire

Thirteenth Annual Session One of Great Profit to Our Friends Who Carry the Mail Over Wisconsin's Country Roads.

THE thirteenth annual meeting of the rural letter carriers of Wisconsin, faithful servitors of the public, which was held on May 30th and 31st at Eau Claire, turned out to be one of the most interesting meetings ever held by the association, and those carriers who were so unfortunate as not to attend missed a rare treat. Although the convention, in numbers, was not up to that of last year in Madison when the association celebrated the twelfth anniversary by meeting in the city which gave it birth, it was even more enthusiastic and a great year was predicted for the organization. The weather was ideal and about 200 carriers and visitors registered, of which about seventy-five were accredited delegates from county organizations.

Too much cannot be said in favor of the state organization which is doing a splendid work to advance the interest of the rural carriers, particularly in Wisconsin, and also in a national way through its support of national measures that are beneficial. The association now has 711 paid-up members, and it is hoped in another year to include every carrier in the membership rolls. During the past year several members have dropped out for one reason or another but plans were laid to get all of these to renew and add additional new members.

The organization of the rural delivery service has done as much for civilization as any other one thing, as farm life has been made all the more pleasant with the delivery of mail every day, rain or shine, hot or cold, by the faithful carriers who often do not get from the public the great credit they deserve. The carrier is the link between the city and the country folk, and it is such organizations as the Wisconsin Rural Letter Carriers' Association that are doing a splendid work in improving the service in all respects, for it usually turns out that what is good for the carrier is good for the public. On every hand expressions of enjoyment were heard during the convention, and in addition to the business sessions there was plenty of jollity and amusement for all. The convention is held on Memorial Day each year, enabling the carriers to leave their cares at home and get together for the benefit of the service, and for the benefit of themselves.

The convention opened on Tuesday morning with an invocation by Rev. F. L. Andrews and an address by Mayor J. E. Barron, of Eau Claire, who extended to the carriers the keys to the city and told them to enjoy themselves to the utmost. Mayor Barron said that he had never welcomed a gathering with more pleasure than the carriers' convention, and these sentiments were further voiced by Postmaster Charles F. West, of Eau Claire, in his greeting to the visitors. R. F. Kaiser, of the Civic and Commerce Association, extended a welcome on behalf of the business men of Eau Claire, which was followed by the introduction of W. G. Arle, of Sturgeon Bay, president, by B. Herrick. Mr. Arle has just finished his fourth year as president, and presided at all the sessions in his usual efficient manner while at his left E. S. Demarest, of Waupaca, attended faithfully to his duties as secretary. For eleven years Mr. Demarest has been secretary, and has seen the organization grow from one of thirty members to one of more than 700, and a carriers' convention without his presence would not seem like a real convention. C. L. Lind, of the U. N. A. P. O. C., spoke on matters concerning the service which address with the president's response to his introduction and several musical selections closed the forenoon program. On the first afternoon, as has been the custom for years, the carriers marched with the veterans in the annual Memorial Day parade and accompanied the Grand Army boys to the hall in which the services were held. This was followed by a banquet in the evening at the Rod and Gun Club. This banquet was served by the wives of the Eau Claire county carriers. Formality was thrown to the winds and everyone enjoyed immensely the splendid dinner provided and the short informal talks that followed, interspersed with music. One of the commendable features of the carriers' conventions is the musical programs which tend to provide the right kind of enthusiasm and put everyone at ease. Too much cannot be said in praise of the Eau Claire county carriers who were hosts on this occasion, as no stone was left unturned to make the convention successful from every standpoint.

The second day was devoted entirely to the business sessions which were well attended. President Arle presided, and after an address by the writer praising the work of the association and wishing for it a greater success the coming year Mr. Arle took occasion to announce the friendship of the carriers to The Wisconsin Farmer and their appreciation of the splendid editorials by Mr. James M. Pierce, publisher, on matters of the most vital importance to them. The Wisconsin Farmer has always regarded the rural carriers as one of the important factors in farm life, and Mr. Arle said that the carriers appreciated to the fullest Mr. Pierce's support, in his editorial columns and in other ways, in advancing those measures of interest to the carriers. "In Mr. Pierce the carriers have a strong friend and admirer," he said.

Mr. Arle, in his annual report, said that after four years as president he could no longer serve, and asked to be relieved of the guiding reins during the coming year. He also invited the association to meet in 1917 at Sturgeon Bay in addition to discussing matters of interest to the association, such as plans for getting new members; increasing finances, etc. A. L. Larson, of Sheridan, vice president,

(Concluded on page 22.)

The Use Of Hercules Dynamite On Farm, Orchard and Ranch

See the State Land Clearing Demonstration

YOU have undoubtedly heard of the demonstration in land clearing which the State Special Excursion is giving. These demonstrations will be of great value to every Wisconsin farmer who attends them.

You owe it to yourself, your family, and your farm, to be present at the demonstration given near you. Find out when and where it will take place.

You will receive visual proof of the remarkable results which may be achieved by the use of dynamite in felling trees, stump removing, rock blasting and drainage work. You will realize why dynamite saves time, labor and money in work of this kind.

In addition to seeing the demonstration write us for a copy of "Progressive Cultivation". It will be sent free on request. It tells in detail how to use Hercules Dynamite to the best advantage on your land. Write for your copy today. Please use the coupon below.

HERCULES POWDER CO.
3 West 10th St.
Wilmington, Del.

Please send me a free copy of your book, "Progressive Cultivation." I am interested in Dynamite for

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Tree Planting

The two illustrations above show fully the value of using dynamite in planting trees. These drawings are exact copies of photographs of two trees planted at the same time and in the same orchard. The one on the left was planted in a spaded hole, the other in a dynamited hole. The growth and development of the latter is almost twice that of the former. This difference always shows when Hercules Dynamite is used.

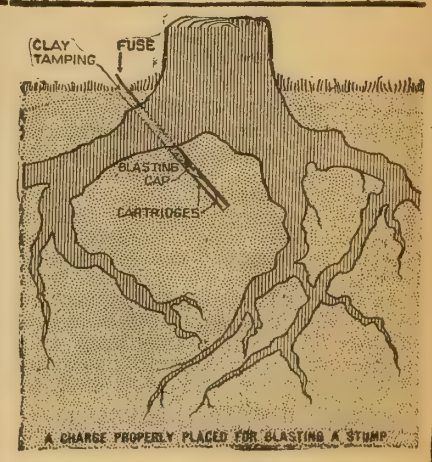
The ground is thoroughly broken up. The roots have a chance to spread in a natural manner. Also the work of planting is done more quickly and at less expense. In "Progressive Cultivation" are given interesting details with regard to the use of Hercules Dynamite for tree planting. Are you familiar with the method and its results?

Stump Blasting

Every man who has had experience in pulling stumps *without* the aid of dynamite knows only too well the amount of labor and time involved.

When you have land to clear, use Hercules Dynamite. You not only save labor and time—and, as a result, money—but you also thoroughly break up the subsoil and very effectively prepare the land for cultivation.

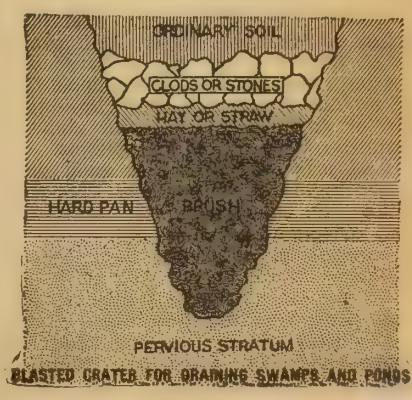
The diagram given shows the best way of removing one kind of stump, that with matted, spreading roots. When dynamiting a stump with a tap root the charge should be placed differently to get the best results. "Progressive Cultivation" tells just how stumps of various kinds can be most readily removed.



Drainage Work

The draining of swamps and ponds can be done better with Hercules Dynamite than by any other means. There are several ways in which dynamite may be used. We have room to illustrate only one of them — the crater method. By this method the hard soil forming the bed of the swamp is broken up and the water drains off through the loose stratum below.

In "Progressive Cultivation" full details with regard to drainage work with dynamite are given.



In And Around Wisconsin.

Walworth county, by vote of the county board recently, will go under the state and county road system in 1918.

The cranberry crop of Wisconsin is developing in good shape, according to C. G. Malde, of the Grand Rapids station. Injury from frosts and insects has been slight. Wisconsin will raise about 45,000 barrels of cranberries this year, according to Mr. Malde's estimate.

The Washington County Holstein-Friesian Breeders' Association is expecting to hold a county picnic Tuesday, June 20th, at Cedar Lawn Farms near the town of West Bend. This is a great Holstein center and the committee is endeavoring to make this meeting the best ever held in the county. The Cedar Lawn Farms will provide lunch.

Dean H. L. Russell, of the college of agriculture, will speak on "The Money Side of the Tuberculosis Question" at joint meetings of the Western Wisconsin Holstein Breeders' Association, Monroe County Guernsey Breeders' Association and Monroe County Jersey Breeders' Association, to be held at the Indian School at Tomah, June 17th.

The Portage-Prairie Holstein-Friesian Association will hold its annual picnic this year June 23d. The speakers will be John B. Irwin, of Minnesota, and E. L. Alderhold, of Neenah. H. S. Hoard, of The Wisconsin Farmer, will give a talk on publicity. Mr. J. W. Hutchinson, of Randolph, advises The Wisconsin Farmer by letter that a splendid summer meeting is anticipated.

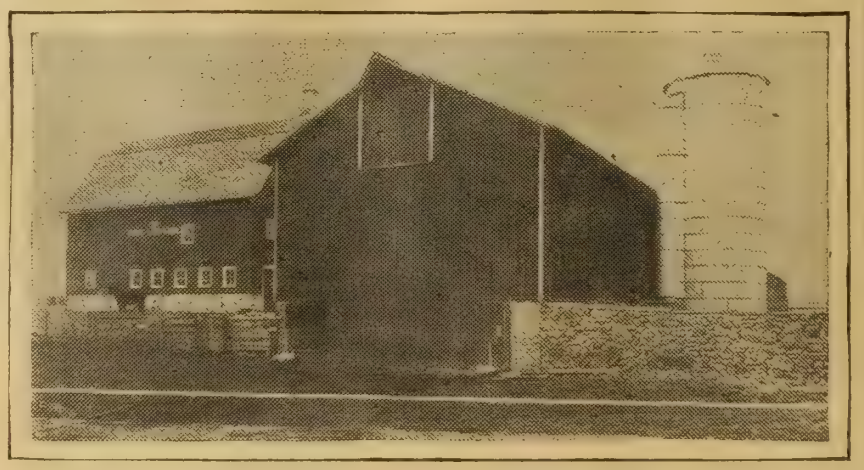
Facts brought out by the farm management contest in Eau Claire county, Wisconsin, are of interest. The following table was made up from reports from forty-nine farms:

Receipts per cow	Labor Income	No. of farms	Per cent of minus incomes
Less than $35	$ 80	10	70
$35 to $44	180	21	30
$45 and over	232	18	20

From this table it will be observed that farms on which the receipts per cow are $45 or more have an average labor income of $232, while those which have receipts per cow below $35 have an average labor income of $80 and those whose receipts per cow fall between $35 and $45 have an average labor income of $180. From these reports it is plainly evident that there is a difference of $312 in the net earnings of farmers who keep cows which return less than $35, and that class of farmers who keep cows returning $45 and over.

The boys' road dragging contest is on in Walworth county. Any township may enter, providing the chairman of the supervisors is willing to co-operate and employ the boys for dragging. Any boy may enter in any of the participating townships. Each contestant makes regular reports to the chairman of supervisors in his township. The chairman makes agreement as to payment for the work, either per mile or per hour, and assigns the stretch of road to the contestant. It is the rule that no stretch of road shall exceed two miles in length. The county Y. M. C. A. office at Delavan is assisting in keeping the records. It is provided that roads shall be dragged after each rain. The first prize in each township, provided that three or more contestants enter, will be a free trip and expenses to Madison next February to attend the university exercises known as Farmers' Week. All prizes are to be given on the basis of the best improved stretch of roads at the end of the contest season. The chairman of supervisors and the contest committee are to be the judges. A general prize is offered to each contestant finishing the contest. This will include an automobile trip and banquet, arrangements for which are to be announced later in the season. We know of no better way of interesting the boys in proper care of the roads than the road dragging contest. In the first place, the boy receives compensation for his work. This is as it should be. There is the added stimulus of the prospect of winning some of the prizes. Furthermore, there is a friendly rivalry established which will certainly result in better roads in Walworth county. The Y. M. C. A. at Delavan, the business men of that city and the newspapers are doing a great deal to further this work and are entitled to considerable credit.

Mr. A. L. Stone, state seed inspector, has resumed the work of cooperative weed control experiments on a number of Wisconsin farms in an effort to eradicate quack grass, Canada thistle, buckhorn, wild mustard and other weeds. The experimental farms are located at Eden, Fond du Lac county; Milwaukee; Deerfield, Dane county; Fountain City, Buffalo county; Three Lakes, Heaford Junction and Minocqua, Oneida county; Stiles, Oconto county; Appleton, Outagamie county, and Grantsburg, Burnett county.



A substantial and dependable silo, made of metal, on the H. S. Wentworth farm, near Edgerton, Wis. This silo is twelve feet four inches by thirty-three feet high.

Last week we made brief mention of the alfalfa tour of Rock county. We are advised by Mr. L. F. Graber, who has furnished The Wisconsin Farmer with the accompanying photographs, that about eighty farmers compose the party. Mr. L. A. Markham, of the Rock county Y. M. C. A., and Mr. Peter V. Kuhn, of the Janesville Commercial Club, directed the arrangements for the trip Some farmers supplied their own automobiles, but a large portion of them were supplied by the business men of Janesville. Mr. Graber is secretary of the Wisconsin Alfalfa Order, and he gave a number of short talks and demonstrations on various farms visited. Stops were made at the Wm. Hanke farm and at the J. R. Haddon farm. At the first-named place the soil is rich in limestone. At the Haddon farm alfalfa has been successfully grown in clay. The party also visited the Forrest Kemmerer farm, the E. L. Benedict farm and the W. J. Dougan farm. Mr. Benedict and Mr. Dougan have both been successful in growing alfalfa on level stretches. Many farmers were unable to make the entire trip, but visited the demonstrations and heard the lecture on the farm nearest them. The accompanying illustrations will give some idea of the interest which was taken in the affair.

ROCK COUNTY FARMERS IN ALFALFA FIELD.

L. F. GRABER, OF ALFALA ORDER, TALKS TO ROCK COUNTY FARMERS.

The following program has been arranged for the annual Guernsey breeders' picnic, to be held at the high school grounds, West Salem, Wisconsin, Saturday, June 10th:

Music, West Salem Band.
"The Future of Our Association," Pres. Sherman L. Dudley.
"Better Dairying," Prof. G. C. Humphrey.
Impromptu talks from breeder visitors.
Music, Band.
Address. "Citizenship," John F. Doherty.
Music, Band.
Judging contest for boys and men.
You are cordially invited to attend. Come!

The Wisconsin Experiment Station does not advise Wisconsin farmers to go very heavily into the broom corn crop. While the price may look promising, the statement which has just been sent out says that a large amount of labor is required to handle the straw and put it into proper condition for the buyer. This takes a great portion out of the selling price and reduces the profit very considerably. Furthermore, experiments at the Wisconsin station lead to the statement that most of the work on the broom corn crop comes at a very inopportune time for the average Wisconsin farmer. This crop requires particular attention at the time when corn needs to be harvested. The experiment station has never advocated broom corn for Wisconsin. Reports have called attention to the fact that the plant does best in a warm, sunny climate where there is a considerable amount of moisture during the early part of the growing season. Dry weather, however, must prevail at harvest time, in order that the brush may be dried rapidly and retain its fresh green color. Inasmuch as rains are not infrequent in Wisconsin during late summer and early fall, it is often impossible to produce a crop of good quality.

Western Guernsey Breeders Meet.

(Continued from page 9.)

1905, he said there were only 236 cows in the advanced registry, while on April 15, 1916, there were 4,719. The first champion, he said, was developed in Wisconsin, and the last champion was produced in Wisconsin, so that this state, he feels, has contributed its share to the success of the breed.

The owner of pure breds, Dr. Wood considers, has three objects. First, it is to produce; second to reproduce and third to sell. Without reproduction sale is impossible. For that reason he pleads for careful breeding for conformation as well as production. Investigation of the A. R. records he says bears out his contention that many families in the breed only await development and he advocates very strongly the development of families. The records show few bulls, he says, with more than a couple of A. R. cows to their credit which to him is proof that the families represented by these bulls should be further developed.

Dr. Wood is a strong believer in the Guernsey and during his address took occasion to read the report of the Winnebago County Cow-Testing Association which he had clipped from a recent issue of The Wisconsin Farmer. This report showed several grade Guernseys which had tested over 6 per cent and one in particular that tested more than 8 per cent and gave more than 1,100 pounds of milk during the month. Such work as this he said shows the qualities in the Guernsey and that the possibilities of the breed are unlimited.

Mr. C. H. Hurlbut, representing the breed paper, the Guernsey Breeders' Journal, announced the new policy agreed upon at the last meeting of the cattle club which is to the effect that after July 1st the Journal will be published twice a month instead of once a month, and will contain the A. R. records, etc. Mr. Chris Schroeder explained the plan adopted by the recent state convention of the Holstein breeders to issue a directory. The Guernsey breeders are planning to do likewise.

A judging contest concludes the day's festivities and proved quite interesting. No elections were held at this time as officers are chosen at the winter meetings. The officers of the Southwestern Association, which was host on the occasion are: G. C. Cramer, of Livingston, president; Fred Stanville, of Lancaster, vice president; A. O. Olsen, of Livingston, secretary-treasurer; Franklin Rundell, of Livingston, and John McLeod, of Platteville, members of the executive committee.

Farmers' Picnic at Tomah.

The Wisconsin Farmer has received a poster giving complete announcement of the farmers' picnic at Tomah, June 17th. This is a joint meeting of the Western Wisconsin Holstein-Friesian Breeders' Association, Monroe County Guernsey Breeders' Association and Monroe County Jersey Breeders' Association. Governor Philipp, Dean H. L. Russell, and Secretary C. P. Norgord, of the Wisconsin Department of Agriculture, will be speakers. It is expected this will be the biggest farm meeting ever held in the section of the state where it has been located. The picnic will be held on the Government Indian School campus. The Tomah military band has been engaged for the day.

Ask your neighbor to subscribe for The Wisconsin Farmer.

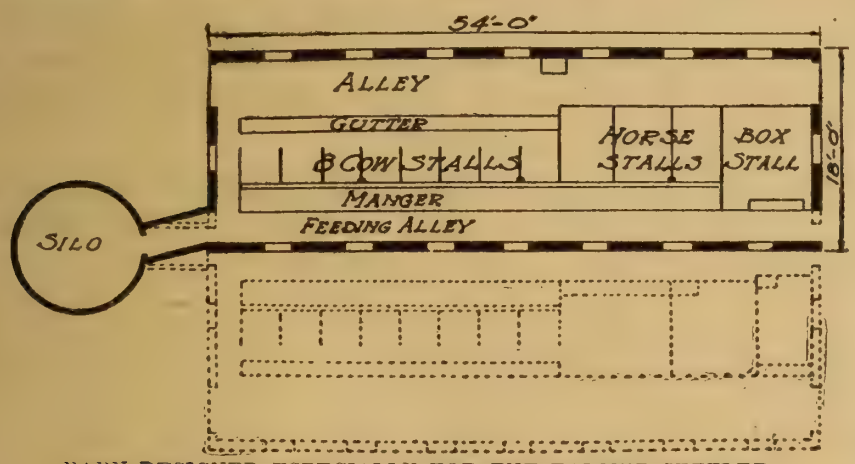
UPPER WISCONSIN

Have Good Potato Seed.

Mr. R. L. Cuff, county agricultural representative of Barron county, reports that a number of farmers in the northern part of his county have good potato seed. While not a very large per cent of this is certified stock, it has been examined by Mr. Cuff and found to be quite generally good. A good many farmers of this section will use certified seed this year. In order to stimulate interest in better potatoes Father Legulian, of Barron county, is offering special prizes for boys and girls. He is furnishing seed potatoes enough to plant one acre for the boys, and supplying the girls with seed corn and strawberry plants. According to all reports in the Barron county papers, this is keeping Father Legulian busy. He is reported, however, to be enjoying the work immensely and is no doubt doing a great deal of good.

Barn Designed For Wisconsin Settlers.

Upper Wisconsin settlers who are starting out with a few head of cows and just enough horses to do the work on their slashing will be interested in the pioneer barn especially designed for such conditions by the agricultural engineering department of the Wisconsin College of Agriculture. It is called a pioneer barn and is planned to meet the needs especially of the settler who expects to eventually



BARN DESIGNED ESPECIALLY FOR THE FARMER-SETTLER.

increase the size of his herd and in turn enlarge his barn to care for the additional stock.

The barn plan shown in the accompanying illustration is eighteen feet wide and fifty-four feet long and has been so planned that the barn can be added to easily and eventually be thirty-six feet wide and hold just double the present capacity of eight cows, three single horse stalls, one double stall and one box stall. The silo is so located that it will be accessible to the completed barn when the addition eventually contemplated is added. It will then be at the end of the main feeding alley which in such case will run through the center, the cows facing in. Particular attention has been paid to window space which affords plenty of light and fresh air.

In Sawyer County.

County Agent C. P. West, of Sawyer county, has introduced several carloads of registered and high-grade Holstein and Guernsey stock, including four registered sires. He has effected an organization of rural school children who are arranging to secure a plot of ground on the home farm for the purpose of producing pure seed potatoes and pedigreed seed corn. The county board has given Mr. West an acre for an experimental farm. This acre is near the court house in Hayward. In this acre he will raise No. 12 Wisconsin corn, alfalfa, soy beans and potatoes. Farmers will meet regularly throughout the summer to watch the progress of these crops. Sawyer county will have a display at the potato show to be held at Eau Claire next fall, and the exhibit will be in charge of Mr. West, assisted by Mr. Jens Uhrenholdt.

Root Crops For Dairy Farmer.

Mr. G. M. Householder, agricultural representative in Rusk county, is endeavoring to interest dairymen in root crops as feed for cows. He has addressed a letter to farmers of this county on the subject. In this letter he says that where winter dairying is practiced root crops become almost indispensable, especially on farms where there is no silo. He says that pound for pound root crops are as valuable as silage for dairy cows and that if care is used they will not taint the milk. Another special advantage is that grain crops do well after root crops, for the clean cultivation and long roots keep the soil open and in good tilth. We quote from Mr. Householder's letter as follows:

Clay and sand loam is the best for root crops. However, clays will produce good roots if twelve to twenty loads of well-rotted manure is applied per acre and the land well drained.

Roots require very thorough cultivation of the ground before seeding. The soil should be worked to a depth of six or eight inches. All large clods must be broken and the field gone over with a planker or spike-tooth harrow.

Yields of thirty tons per acre have been secured in Upper Wisconsin and twenty-ton yields are not uncommon. The kind of roots to grow depends upon your soil, kind of stock you expect to feed and the time of feeding.

Mangels furnish the largest yield per acre. They are comparatively easy to harvest and keep better than either sugar beets or turnips. Mangels are relished by all classes of stock. They are rather exacting as to soil and cultivation, more so than turnips or rutabagas. They are not so apt to taint the milk when fed to cows, as is the case with turnips or even rutabagas.

Carrots are high in feeding value; and are relished by all kinds of stock, including horses. They are probably adapted to lighter soils than mangels, and are about equal to the latter in cost of production per acre. They yield less per acre, however, and need more care in storage than mangels.

Rutabagas are high in feeding value and yield well on very heavy soils, fully as well as mangels. They cost less to produce than mangels or carrots and may be fed to all classes of stock. They may be planted later than either mangels or carrots, but do not keep as well as mangels, and when not fed judiciously they are apt to taint the milk.

Turnips can be grown on wet land better than either carrot or mangels so they can be sown nearly a month later. They are not so exacting as to soil requirements, and make rapid growth, so need less attention for weeding and are easily harvested. Turnips may be grown as a catch crop on new land, which is also true of rutabagas. On the other hand, they are not as good keepers as the other r ts mentioned, are comparatively low in feeding value, and taint the milk when given to a milk cow, unless fed with care. They are a fine feed for sheep, and in England they are extensively used for that purpose.

Barron County Breeders.

The Barron County Holstein Breeders' Association will hold its annual picnic at Krahenbuhl's Grove, June 15th. Arrangements were made at a special meeting of the executive committee May 21st. Mr. R. L. Cuff, the county agricultural representative, is in charge of the entertainment for the day. It is expected this will be the largest Holstein picnic ever held in Barron county.

LAW QUESTIONS.

Marriage Under Age.

A Subscriber, Barron, Wis.—A couple in Wisconsin were married and now have children. One of the parties was under age when married. (1) Can the marriage be set aside, because one of the parties was not of age? (2) In case such marriage should be set aside, who would have the custody of the children? (3) Could either of the parents take the children out of the state before the marriage was set aside?

Answer.—(1) It cannot. The couple now having children, it would be against public policy to have the marriage set aside for such cause. (2) In such a case the court would determine the matter. (2) The father could do so.

Election Ballot.

Mr. Louis Stenson, Bruce, Wis.—An election ballot on the question of a liquor license, was as follows, viz.:

LIQUOR LICENSE.
For License
Against License.

Nothing else appeared on the ballot. The ballot clerks did not sign their names on the back of the ballots. (1) Was said ballots legal? (2) Give the section of the Wisconsin statutes relating to such ballots?

Answer.—(1) Said ballot was legal. (2) Section 40-a, chapter 664, session laws of 1907.

That education pays on the farm is shown by the figures worked out by W. O. Lockhart, a Missourian, who has spent the past year in Wisconsin making a special study of this and allied subjects. He found that farmers visited who had stopped after finishing the common school were receiving an average income, after deducting all expenses, of $632 a year; those who had taken a short course in agriculture, $739; those who had graduated from high school, $893, and those who had a college education, $1,056.

Plantings of varieties of apples, crab apples and plums adapted to Wisconsin have been made on farms in Price county largely through the effort of the county representative. Mr. Richards has succeeded in getting out four young orchards and twenty-four trees each at points near Ogema, Cannon, Park Falls and Prentice.

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"TOLD IN THE HILLS"
The biggest serial treat ever offered by any farm paper.
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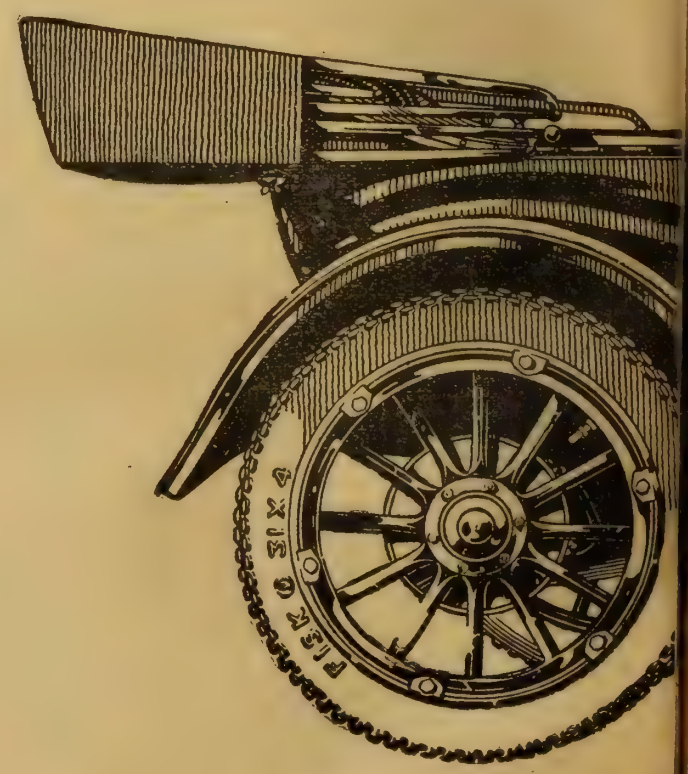
A small car with "big looks" that a man could buy and yet keep on speaking terms with both his pride and his pocketbook—

A small, light car that would reach a new low level of operating and upkeep expense—



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We increased our capacity to 1,000 s a day—more than double any vious output of cars of this class.

And the result is this comfortable small car, beautiful and complete, for $615.

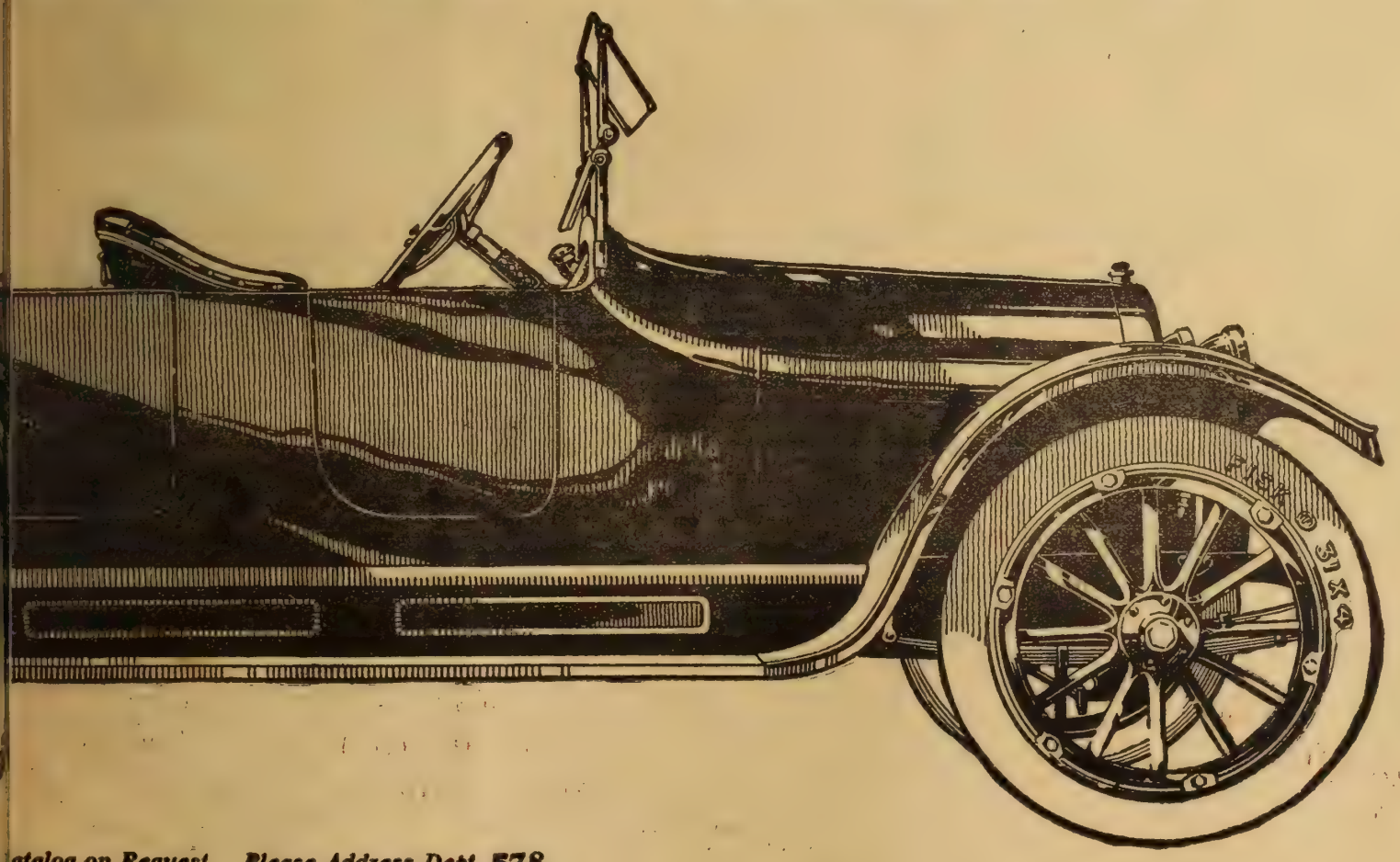
Never before has any complete automobile been sold at anywhere near so low a price.

And never before has any small, light, economical car been anywhere near so comfortable or so beautiful.

But so completely have we realized a popular ideal that 1,000 cars a day is not going to supply the demand.

If you order yours today it will not be a day too soon to avoid delay.

See the Overland dealer at once.



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QUESTIONS AND ANSWERS.

Power Transmitted.

Would you please tell me what power you will have from a one and three-fourths horse power engine, running a belt from a four-inch pulley on the engine to a twenty-inch pulley on the line shaft?

Answer.—Difference in size of pulleys does not change the horse power. The horse power that can be obtained from the line shaft is the same as that of the engine, less frictional losses. With the pulleys the line shaft will run only one-fourth as fast as the engine, but it will give four times as much belt pull from a A-inch pulley mounted on it, less frictional losses.

Defective Wiring.

I have a 1913 Model T. Ford car that will not run. It is equipped with a K-W vibrator. All the coils will buzz when out of the box, but when I try to start the motor with the coils in the box, only numbers one and two will buzz. Where can my trouble be?

Answer.—The coils and vibrator points are all right, since they work when out of the box. Trace the wiring carefully from the coil terminals to the binding posts on the timer, or "commutator," as the Ford people call it. You will probably find a broken wire or a place where all the insulation is worn off, permitting a ground. It may be that the commutator is worn or gummed so that it does not make contact at three and four.

The Fuel Question.

Will kerosene work in a high-speed motor? In a Model T Ford car, would it be practical to place a three-way cock in the fuel pipe and connect it to the kerosene and gasoline tanks in such a way that either tank may be switched on or off? Would two carburetors have to be used? If water must be used with kerosene would it do to have it enter the manifold from a tank placed over the cylinders, or must the water also be drawn in through the carburetor?

Answer.—Kerosene does not work well in a high-speed motor. Whether or not an engine will run on it can best be determined by trial. The three-way-cock plan, as given above, would make it easy to try. Water is not a necessity for burning kerosene. Where used it should be taken in through a spraying nozzle in the carburetor, so that it will enter the cylinder as a vapor.

Making a Motor.

I enclose a drawing of an electric motor I am going to make. Please tell me whether it will run, and if my wiring is correct. Which wire should be connected to the battery zinc? Please tell me the correct way to wind coils.

Answer.—We have not space to publish your diagram. A motor made on that principle would not work. An induction motor is somewhat similar to your design, but will work on alternating current only. For running a battery motor, it does not matter which terminal is connected to the zinc. Field coils are usually wound on wooden spools, using very fine single or double cotton-covered copper wire. The cotton should be shellaced as wound, and allowed to dry for several days in a warm place before using.

Engine Uses Too Much Oil.

What makes my Model 79 Overland consume so much lubricating oil? I cannot make over twenty miles to the quart; while my neighbor, with the same model car, makes as high as 100 miles per quart. The crank case has been drained and the carbon scraped out. There are no leaks anywhere in oil pump or crank case. The machine has run 9,000 miles. When the engine is speeded up, blue smoke pours out of the exhaust pipe. Could this be due to the piston rings? If I took the engine apart and scraped the carbon out from under the rings would this help?

Answer.—Evidently too much oil is working up past the rings. Do not carry too high an oil level in the crank case. It is probable that your rings are worn and should be replaced by new ones. Your pistons may be a little too small. A scored cylinder could cause the trouble. Scraping the carbon out from under the rings would do no good unless the rings were stuck, which is not probable. The blue smoke is due to too much oil. A new set of rings will probably overcome the difficulty after they wear in.

Electric Horn for Ford Car.

Can I connect an electric horn to the magneto of my 1915 Ford car? If so, please publish a wiring diagram.

Answer.—You can use a horn of the electric vibrator type, but not the kind operated by a revolving armature. The wiring is very simple. Run a wire from the magneto terminal on the coil box to the horn. From the other horn terminal run a wire to the switch. From the other switch terminal run a wire to the frame of the car and ground it.

Speed of Propeller.

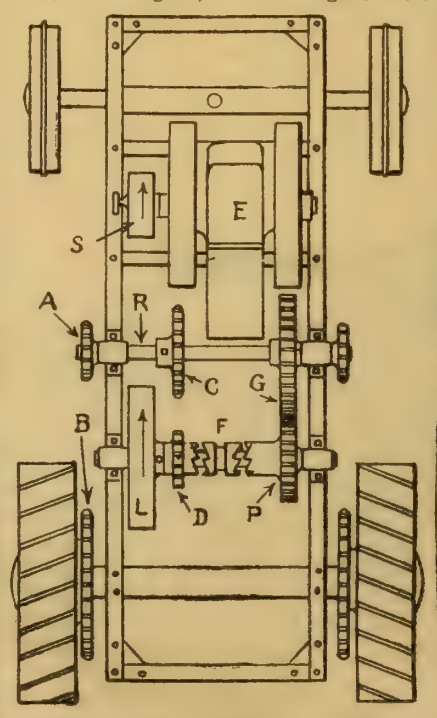
I have a five-horse-power Marine engine running at 800 R. P. M. I am thinking of mounting this on buggy wheels and driving the outfit by a seven-foot propeller. How fast should the propeller revolve to push the vehicle fifteen miles per hour? Could I make such an outfit work?

Answer.—Such an outfit is not practical for road work. It may be used as a novelty on a race track or smooth, level road. In designing a propeller, armature, flywheel or any other rapidly-rotating part, adjust the speed and outside diameter so that the part farthest out does not travel faster than one mile per minute. The angle of the blades of a propeller affect the push of the propeller. Make yours about 45 degrees at the ends.

Another Tractor.

I would like to have a few tractor questions answered. I have an engine rated at seven horse power at 375 R. P. M. It has an eight-inch belt pulley and friction clutch. I have this engine mounted on a very strong iron wagon truck. The rear wheels are thirty-six inches in diameter and four inches wide. How can I make a tractor out of it, and will it be strong enough to pull a four-teen-inch bottom? I enclose a sketch. What size sprocket would you suggest for A? How many teeth? How many at B? Would you suggest a belt or a chain drive between pulleys S and L? What should be the diameter of L? Please tell me how to make a reverse gear on it.

Answer.—We are publishing your sketch, with a reverse gear attached. E is the engine, S the engine belt



pulley; L the countershaft drive pulley, driven by a belt from S; D is a small sprocket and P is a small gear, both running free on the countershaft, but having a clutch hub so that either may be driven by the toothed clutch F, which slides on a key in the countershaft. R is the drive shaft. C is a large sprocket wheel, driven from D. G is a large gear, driven from P. Two small sprockets, A, drive the drive wheel sprockets, B. When F engages D, the tractor moves ahead; when F engages P, the tractor is reversed.

The drive wheels should make twenty-four revolutions per minute. All sprockets should be about one and one-half inch pitch. A should have fifteen teeth; B, forty-five teeth; C, thirty teeth; D, fifteen teeth. G should have at least twice as many teeth as P. L should be twenty inches diameter. The outfit would pull a four-teen-inch plow under favorable conditions.

Heating Gasoline by Exhaust.

As gasoline gives the best combustion at 290 degrees of heat, I have thought of a plan for warming the bowl of the carburetor. I would drill a hole in the exhaust pipe below the two middle cylinders and run a pipe about one-fourth inch inside diameter from the hole in the exhaust pipe straight down about twenty inches and turn the pipe up so that it will blow against the bottom of the carburetor bowl. By inserting a pet cock the force of the exhaust could be regulated. Would there be any danger? I also have a hot air pipe attachment. What would be the easiest way to start on gasoline and then use kerosene?

Answer—To use two kinds of fuel, place a three-way cock between the feed pipe to the carburetor and the two fuel tanks. Gasoline heated to 290 degrees in the carburetor bowl would vaporize and interfere with the spraying action of the needle valve. It would be dangerous to have a stream of exhaust on the bowl of carburetor, as any gasoline leak might cause a fire.

Motor Rating.

Will a three and three-fourths inch diameter automobile engine cylinder with a six-inch stroke give more power than one of the same diameter having a five-inch stroke? I see in the "Motor World" rating they do not give a five-inch stroke engine any more power than a four-inch stroke engine having the same cylinder diameter. If there is no more power in a long stroke cylinder, what is the use of having more than a two-inch stroke? Is a connecting rod ten inches long between centers better than one six inches long between centers?

Answer.—At the same speed, the long-stroke motor has more power than the short-stroke motor. The theory is, however, that the long-stroke motor cannot run as fast as the short-stroke motor, and that what power a motor gains by lengthening the stroke is lost by a reduction in speed; hence, the length of stroke is not considered in the usual auto-engine rating. The long-stroke motor pulls more evenly and is a better hill climber than the short-stroke motor, due to the greater leverage of the cranks. It is also more economical. It is slower and heavier than a short-stroke motor. Gasoline motors are not made with a stroke shorter than the diameter, as they would be wasteful of gasoline, a large part of the explosion pressure being lost, due to the early exhaust. The long connecting rod is the better. The longer the rod the less the pressure against the cylinder walls by the piston. Too long a rod would cause too much weight which would cut down the speed of the motor.

Champion
TOLEDO MADE FOR THE WHOLE WORLD'S TRADE
Dependable Spark Plugs

The Quality Plug for High Powered Cars

Champion Heavy Stone 7/8-18 Price, $1.25

Lift the hood of almost any de luxe car and see what plug supplies its spark of life.

The engineers who specify and recommend the vital equipment which best serves these master pieces among motor cars—

Have nothing to gain in specifying Champions except to supply unfailing dependability in the spark plug link of their ignition systems.

For most high powered cars the Champion Heavy Stone Plug has demonstrated its greater efficiency in the most gruelling tests.

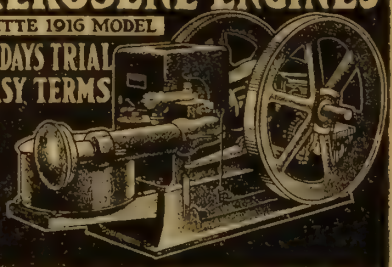
Your dealer knows the size your particular motor requires. If for any reason you are not already supplied with Champion Heavy Stone Plugs, install them at once and note the increased "pep" and "go" in your motor.

The Champion Guarantee

Complete satisfaction to the user—free repair, replacement or money back.

Champion Spark Plug Company, 509 Avondale Ave., Toledo, Ohio

KEROSENE ENGINES
WITTE 1916 MODEL
90 DAYS TRIAL EASY TERMS



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Pulls 30 to 50 per cent over factory rating. Sturdy; dependable; Lowest priced; Lowest cost of operation; Better built. My 30 years' engine experience and a $500,000 factory behind every engine I sell.

Inside Facts about the engine business are told in my Free 4-color book. Don't buy any engine at any price till you read it. Full of interesting information.

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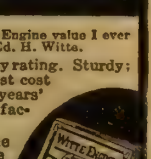

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4 H. P. Cushman on a Binder. Same Engine Does All Other Farm Work.

The one successful Binder Engine. Attachments for any binder. Two horses easily pull 8-ft binder in heavy grain, as engine drives sickle and all machinery.

Cushman Light Weight Engines
For All Farm Work

Throttle Governed. Very light weight. 4 H. P. only 190 lbs. Forced water cooling system prevents overheating. Tank on front balances engine on rear. Friction Clutch Pulley. Ask for Engine Book. 4 to 20 H. P.

4 H. P. Outfit for All-Purpose Work. Same Engine Used on Binder

Cushman Motor Works
855 North 21st Street
LINCOLN, NEBRASKA

You Can Depend On
SILVER'S "OHIO"
The Logical Silo Filler

and *dependability* is a big point at silo filling time. This is one of the reasons for the "Ohio" *unbeatable leadership*. It's *always* ready—built for *big capacity—fast work*—with least chances for breakage and delays. Backed by *62 years'* manufacturing experience—by the silo filler pioneers. Used by experiment stations and leading farmers everywhere. Big features: Automatic beater feed, power-saving direct drive, friction reverse, single lever control, "Bull-dog-grip" rollers, non-explosive blower. *Better cut silage*—packs *air tight—ferments better—better food for stock. Write for catalog, also book on Silverized Silage.*

THE SILVER MFG. CO.
312 Broadway, Salem, Ohio
Modern Silage Methods—264 Pages—10c. Coin or stamps.

No Stable Air Touches the Milk

The perfect fitting Empire teat cups prevent suction from drawing in impure stable air. Empire teat cups fit all teats. Milk passes from teat cup into rubber hose—then on into the covered pail.

EMPIRE
Mechanical Milker

Is operated by natural air pressure. Action is gentle and uniform. One double or two-cow unit milks 20 to 30 cows per hour. One man handles two double units.

Write for description and pictures showing Empire Milker and Empire Separator in modern dairies. Get our offers on Empire Gasoline Engines and Empire Star Feed Mills. *Write for Catalog No. 56M.*

Empire Cream Separator Co.
Bloomfield, New Jersey
Chicago, Ill.; Denver, Colo.; Portland, Ore.; San Francisco, Cal.; Montreal, Toronto, Winnipeg, Canada.

THE **FREEMAN ENSILAGE CUTTER**
—The Cutter That Saves You Money

Costs less to buy—less to operate—less for upkeep. The Freeman combines the limit of quality and economy.

Standard For 30 Years

Runs easiest—on least power. Cuts clean and fast. Traveling force feed table—handles big bundles easily. Has extra strong frame, large feed rolls, adjustable knives, safety fly wheel, safety stop lever.

Steel Enclosed Carrier reduces running expense, prevents feed blowing away.

GET OUR FREE BOOK showing full line Ensilage and Feed Cutters, Carriers and Blower-Elevators.

THE S. FREEMAN & SONS MFG. CO.
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We can furnish Blower or Enclosed Steel Carrier as desired.

Shoo-Fly THE ANIMALS' FRIEND

For keeping flies and many other insects off of animals—in barn or pasture—longer than any imitation. Used and endorsed since 1885 by leading dairymen.

$1 WORTH SAVES $20.00 in milk and flesh on each cow in a single season. Excellent for galls. Allays itching. Aids in keeping animals from irritating sores by rubbing or stamping. Excellent for lice and mites in poultry houses.

$1.25 ($1.50 west of Mississippi River) will bring you enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. EXPRESS PREPAID. Money back if not satisfactory. Name Express Office. Booklet FREE. Special terms to agents.

Shoo-Fly Mfg. Co., Dept. 21, 1310 N. 10th St., Phila.
Editor knows from experience Shoo-Fly is O. K.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

Waupaca and Butternut Ridge.

Attached will be found a report of the Waupaca and Butternut Ridge Co-operative Cow-Testing Association for the month ending May 20th. The highest producer is a registered Guernsey owned by C. A. Peterson and G. R. Miller. She is eight years old and freshened January 15th. She yielded 1,138 pounds of 5.6 per cent milk, making 63.1 pounds of butter fat. Fifty-one cows make up the list for this month, ten of them producing over fifty pounds of butter fat.

The annual picnic of the association will be held at H. C. Frihart's farm on the 4th of June. C. E. Lee, H. C. Searles and Noel Negley are the speakers. A band has been engaged for the day.

The monthly report, furnished by George L. Moss, official tester, is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. C. Boyce					
Blossom, G. H.	5	1-15-16	1014	4.2	42.6
Crook, G. H.	10	4-7-16	1416	3.0	42.5
Dora, G. H.	5	4-2-16	1413	3.0	42.4
Maud, G. H.	3	4-6-16	1278	3.6	46.0
Crawler, G. H.	10	1-4-16	1023	4.8	49.1
Fred T. Jorgensen					
Mercedes, G.H.	8	1-18-16	1446	3.9	56.4
Vangeline, G.H.	10	12-28-15	1122	3.8	42.6
E. F. Schroeder					
Daisy, N.	5	1-15-16	1044	3.9	40.7
E. O. Frihart					
Brownie, G. J.	6	3-28-16	1056	4.7	49.6
Nig, G. H.	4	4-10-16	1275	4.0	51.0
Herman Becker					
Spot, G. J.	8	1-18-16	831	5.6	46.5
May, G. J.	8	1-8-16	786	5.2	40.9
Nellie, G. J.	8	3-18-16	1044	5.0	52.2
Greese Box, G.J.	9	10-16-15	768	6.0	46.1
Belle Min, G.J.	7	3-11-16	972	6.1	59.3
Silvy, G. J.	8	2-10-16	879	5.2	45.7
Harness, G. J.	8	4-1-16	909	5.2	47.3
M. J. House					
Daisy, G. H.	4	2-18-16	1011	4.4	44.5
Eva, N.	7	2-22-16	1182	4.4	52.0
Chas. Rasmussen					
May, G. J.	4	3-22-16	803	5.5	44.2
John C. Backes					
Spot, G. G.	6	10-6-15	816	5.0	40.8
Rocksie, G. G.	6	1-16-16	870	5.2	45.2
E. E. Haire					
Daisy, G. H.	8	3-26-16	1020	4.4	44.9
Ira Farley					
Belle, G. H.	5	-1-16	1389	3.5	48.6
Browni[illegible], N.	11	10-9-15	963	5.6	53.9
Bessie, G. H.	7	1-2-16	1143	3.8	43.4
Lily, G. H.	7	3-28 16	1254	4.8	60.2
Jewel, G. H.	6	11-18-15	1011	4.5	45.5
Jessie, G. H.	7	11-23-15	1230	3.5	43.0
Daisy, G. H.	5	1-11-16	1413	4.1	57.9
Eva, G. H.	3	1-13-16	1218	3.9	47.5
Burnice, G. H.	3	4-28-16	1188	4.0	47.5
Andrew Robertson					
Horn, G. G.	7	4-1-16	942	4.7	44.3
Brindle, G. G.	9	4-23-16	1252	4.5	56.3
Wm. Kneip					
Zick, N.	10	4-1-16	996	4.1	40.8
Jewel, N.	8	3-25-16	1335	3.2	42.7
Wm. Rossy					
Libby, G. G.	6	2-12-16	1056	4.5	47.5
Fred Mall					
Dollie, G. R. P.	5	4-4-16	1062	3.9	41.4
Ed Munsch					
Daisy, G. G.	5	3-30-16	1038	4.1	42.6
C. A. Peterson & G. R. Miller					
Daisy, N.	6	2-8-16	1241	3.4	42.2
Maid, G. G.	3	4-25-16	918	4.7	43.1
Marna's Queen of Northwood, R.G.	8	1-15-16	1138	5.6	63.1
M. E. Lewis & Sons					
Laura, G. G.	5	4-8-16	903	4.6	41.5
Harriet, G. G.	8	2-12-16	696	6.2	40.2
Eva, N.	6	4-11-16	876	4.6	40.3
Arthur Glocke					
French Beauty of the Beyard, R. G.	5	11-11 15	777	5.6	43.5
Sadie, N.	8	4-1-16	999	4.6	46.0
C. A. Stinchfield					
No. 6, G. G.	9	4-8-16	930	5.2	48.4
John Hansen					
Jess, G. H.	5	5-9-16	1194	3.5	41.8
Susie, G. H.	3	4-30-16	1392	3.4	47.3
Clara, N.	8	3-19-16	1299	3.7	48.1

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

Well Satisfied With Milking Machine.

To the Editor:—My experience with the milking machine has proven to me that it is a practical machine for a practical dairyman, who has ten or more cows to milk. I find the cows take very kindly to it, and most all of them do as well when milked by the machine as when milked by hand, but there is an occasional one that will not milk with the machine, will not give down her milk for it as well as by hand. However, out of twenty-six cows we milked we only had one such cow, and I think you are apt to find about the same thing in any herd of as many cows.

There is no doubt about it being a saver of time, as one man can easily milk from twenty to thirty-five cows in an hour, and it also gives the dairyman an independence he cannot possibly have when depending on hand milkers. The problem of keeping help to do the milking was our greatest draw-back to the dairy business, and the machine relieved the situation greatly, as we were enabled to go ahead ourselves if we were suddenly and unexpectedly thrown out of help, and with no great inconvenience to ourselves.

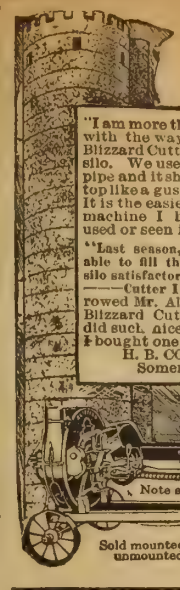
The success of the machine depends a great deal on the operator, but anyone who will use care and judgment can easily operate a machine, and secure good results, but I find you can no more trust every man you may hire to use the machine, than you can trust all of them to handle milk, as it is an easy thing to slight the work, and good results in the dairy come only by carefulness in all its lines.

I can freely give my endorsement in favor of the machine, and recommend it to anyone who knows himself to be a careful man, but if the man in question knows himself to be of the careless sort I would advise him to let the machine alone, and also quit the dairy business. Dr. R. B. Johnston.

Wisconsin Sheep Institutes.

Through the active co-operation of the Wisconsin Live Stock Breeders' Association and the department of farmers' institutes a series of special sheep institutes will be held next month in some of the sections of the state which are especially well adapted to sheep raising. Frank Kleinheinz, shepherd at the experiment station for more than a quarter of a century, will assist at a number of these meetings, which will be held at farms near Augusta and in Wilson township, Eau Claire county; Bayfield, Bayfield county; Wausau, Marathon county; Gays Mills, Soldier's Grove, Crawford county; Viola, Richland county, and LaFarge, Vernon county. Demonstrations with leading breeds of sheep will be given.

Ask your neighbor to subscribe for The Wisconsin Farmer.



BLIZZARD filled it after rival failed

Was it a case of "counting chickens before the eggs were hatched?" At any rate, the letter at the left, written December 21, 1915, corrects certain statements that have appeared in farm paper advertising and catalogs about the filling of Mr. Collom's 75 foot silo, at Somerville, Ohio. The

BLIZZARD
Ensilage Cutter

has unlimited elevating ability because it is designed scientifically right. The catalog explains it all. Other Blizzard *certainties* are—simple to understand and run—large cutting capacity—even cut silage—steady work—unusual safety—small repair cost—long life.

Write today giving size of silos to be filled and size of engine you plan using, for valuable suggestions and free booklets—"Making Silage Pay Better," "What Users Say" and "1916 Blizzard Catalog." Ask for any or all. They're free.

The Jos. Dick Mfg. Co.
Box 64 Canton, Ohio

ROSS Ensilage Cutters and Silo Fillers with Blower

STEEL Cutting Apparatus and Blower (instead of cast iron).

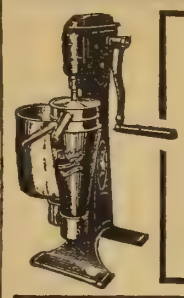
Especially designed for steam power and extraordinarily heavy work. Steel is known to be stronger than cast iron. The Ross is not an ordinary fodder cutter but a **special made machine for filling silos.** We have manufactured the Ross for **65 years,** and to-day it will by its own actions prove its superiority. Write for catalog.

We also manufacture the **Ross Wood** and **IN-DE-STR-UCT-O Metal Silo.**

Guaranteed free from defects for life of machine.

THE E. W. ROSS CO., Box 154 Springfield, O.

ROSS



SHARPLES SUCTION-FEED SEPARATOR

makes three cows earn more for you than four cows without it. And it will save from 7 to 13 pounds of butter per cow yearly that every other separator loses through imperfect separation. Still it is simpler, easier washed and easier kept clean than any other separator—*no discs,* no oil holes, no high lifting. It's truly a woman's separator. Ask for catalog, *"Velvet" for Dairymen,* and see your dealer as well.

The Sharples Separator Co., West Chester, Pa.
Also Sharples Milkers and Gasoline Engines
Branches: Chicago San Francisco Portland Toronto S1

Make Your Silo Pay Big Profits

Save the day wages and board of *two or three men* by getting a Smalley—the *only* machine with a real Grip Hook *self-feeding* table.

Save 1-5 to 1-4 the *power cost* and needless belt wear with the one pulley, low-speed chain drive on blower.

Save excessive *repair expenses,* break downs and delays. Steel in castings makes Smalley one-fourth heavier with a wonderful record for long service.

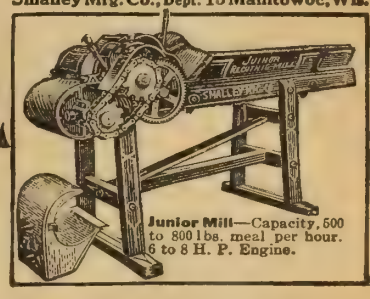
Smalley Silo Filler

Cut feeding costs in half. Fatten cattle, hogs, sheep and poultry with alfalfa chop. Patented alfalfa re-cutting attachment handles leaves, stems and all. No waste. Sell your No. 1 hay and mill off-grades for feeding. Make combination feeds from clover, rice straw, bean straw, oats and dried corn stalks.

Blower built independent of cutter. Fan speed increased or decreased without changing speed of knives. Extension table on hopper prevents accumulation of litter.

Send for FREE Book Now

Smalley Mfg. Co., Dept. 13 Manitowoc, Wis.



Junior Mill—Capacity, 500 to 800 lbs. meal per hour. 6 to 8 H. P. Engine.

Only $2 Down
One Year to Pay!

$24 Buys the New Butterfly Jr. No. 2. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime.** Skims 95 quarts per hour. Made also in four larger sizes up to 5 1-2 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog, folder and "direct-from-factory" offer. Buy from the manufacturer and save money.

ALBAUGH-DOVER CO. (12)
2158 Marshall Blvd. CHICAGO
No. 6½

SILO The Northfield continuous solid steel door frames with safety ladders and 2-in. plank doors for concrete, tile, brick or block silos are the tightest, most economical, convenient and substantial silo doors made. They never stick nor get loose. Will pay you to investigate.
Northfield Iron Co., 122 Nico Sta., Northfield, Minn.

Beautiful American Flag FREE

Free to everyone who sends for this big clubbing offer by June 25.

This Beautiful
American Flag

is made of fast color cotton bunting with sewed stripes, canvas heading and grommets.
Has the full 48 stars, is well made, and a beauty in every respect.
Every home should have an American Flag and this is your great opportunity to secure one without cost.

The Greatest Day in American History
JULY 4TH

will soon be here. Be sure and have a beautiful flag to use. Send for this combination by June 25 and we will mail you this fine, flag, prepaid, at once, to use not only on July 4th but on many other days as the flag will last for years if given proper care.

Here is Our Offer

This beautiful American Flag, sent free with this splendid clubbing combination if you send your order by June 25.

Here is the Club

People's Popular Monthly, 1 yr.
Farm and Home - 1 yr.
Woman's World - 1 yr.
McCall's Magazine - 1 yr.
One McCall Pattern

All only $1.00

and this beautiful American Flag 3ft.x5ft., free if you send your order by June 25th. Remember, this flag is not a cheap makeshift, but a big 3ft. x 5ft. flag, fast colors, sewed stripes, well made and a beauty in every respect.

Accept this Offer today

You'll never have a better opportunity to get a beautiful American Flag.

Address all mail to Dept. H.

People's Popular Monthly
Des Moines, Iowa

American Flag Coupon—Send this Coupon by June 25th.

People's Popular Monthly
Des Moines, Iowa

Gentlemen:—Enclosed find $1.00 for which send me The People's Popular Monthly 1 year—Farm and Home 1 year—Woman's World 1 year—McCall's Magazine 1 year. If I send this order by June 25, I am to receive prepaid, a fine 3ft. x 5ft., American Flag.

Name.....

Street or Rt.

Town.....State.....

HEPSEY BURKE—A Sister to David Harum

By F. N. Wescott, the Brother of the Author of "David Harum."

(Copyright 1915.)

CHAPTER XXIII—Continued.

A little withered old woman laboriously struggled to her feet and in a high-pitched, quavering voice began.

"I'd like to give suth'n' towards the end in view. Our rector were powerful good to my Thomas when he had the brown kitties in his throat. He came to see him mos' every day and read to him and said prayers with him and brought him papers and jelly. He certainly were powerful good to my Thomas; and once when Thomas had a fever our rector said that he thought that a bath would do my Thomas a heap of good and he guessed he'd give him one. So I got some water in a bowl and some soap and our rector he just took off his coat and his vest and his collar and his cuffs and our rector he washed Thomas and he washed him and he wa——"

"Well," Hepsey interrupted, to stay the flow of eloquence, "so you'd like to pay for his laundry now would you Mrs. Sumner? Shall I put you down for two dollars? Good! Mrs. Sumner sets the ball rollin' with two dollars. Who'll be next?"

As there was no response Mrs. Burke glanced critically over the assembly until she had picked her man and then announced:

"Hiram Mason, I'm sure you must be on the anxious bench?"

Hiram colored painfully as he replied:

"I don't know as I am prepared to say what I can give just at present Mrs. Burke."

"Well, now, let's think about it a little. Last night's Daily Bugle had your name in a list of those that gave $10 apiece at St. Bridget's fair. I suppose the Irish trade's valuable to a grocer like yourself; but you surely can't do less for your own church? I'll put you down for ten, though, of course, you can double it if you like."

"No," said Hiram, meditatively; "I guess ten'll do."

"Hiram Mason gives ten dollars. The Lord loveth a cheerful giver. Thanks, Hiram."

Again there was a pause, and, as no one volunteered, Hepsey continued:

"Sylvester Perkins, how much will you give?"

"I suppose I'll give five dollars," Sylvester responded before Mrs. Burke could have a chance to put him down for a larger sum. "But I don't like this way of doin' things a little bit. It's not a woman's place to hold up a man and rob him in public meetin'."

"No, a woman usually goes through her husband's pockets when he's asleep, I suppose. But you see I'm not your wife. Thanks, Mr. Perkins: Mr. Perkins, five dollars," she repeated as she entered his subscription in the book. "Next?" she called briskly.

"Mrs. Burke, I'll give twenty dollars, if you think that's enough," called a voice from the back timidly.

Everyone turned to the speaker in some surprise. He was a delicate, slender fellow, evidently in bad health. He trembled nervously and Mrs. Burke hesitated for an instant, between fear of hurting his feelings and letting him give more than she knew he could possibly afford.

"I am afraid you ought not to give so much, Amos. Let me put you down for five," she said kindly. "We mustn't rob Peter to pay Paul."

"No, ma'am, put me down for twenty," he persisted; and then burst forth—"and I wish it was twenty thousand. I'd do anything for Mr. Maxwell; I owe it to him, I tell you."

The speaker hesitated a moment and wiped his forehead with his handkerchief and then continued slowly, and with obvious effort:

"Maybe you'll think I am a fool to give myself away before a crowd like this and I a member of the church, but the simple fact is that Mr. Maxwell saved my life once when I was pretty near all in."

Again the speaker stopped, breathing heavily, and there was absolute silence in the room. Regaining his courage, he continued: "Yes, he saved me, body and soul, and I guess I'll tell the whole story. Most of you would have kicked me into the street or lodged me in jail, but he wasn't that kind, thank God!

"I was clerking in the postoffice a while back and I left town one night, suddenly. I'd been drinking some and when I left my accounts were two hundred dollars short. The thing was kept quiet. Only two men knew about it. Mr. Maxwell was one. He got the other man to keep his mouth shut, handed over the amount and chased after me and made me come back with him and stay at his house for a while. Then he gave me some work and helped me to make a new start. He didn't say a word of reproach, nor he didn't talk religion to me. He just acted as if he cared a whole lot for me and wanted to put me on my feet again.

'I didn't know for a long time where Mr. Maxwell got the money for me, but after a while I discovered that he'd given a chattel mortgage on his books and personal belongings. Do you suppose that there's anybody else in the world would have done that for me? It wasn't only his giving me the money; it was finding that somebody trusted me and cared for me who had no business to trust me and couldn't afford to trust me. That's what saved me and kept me straight.

"I haven't touched a drop since and I never will. I've been paying my debt to him as quick as I can and as far as money can pay it; but all the gold in the world wouldn't even me up with him. I don't know just why I've told all about it, but I guess it's because I felt you ought to know the kind of a man the rector is; and I'm glad he isn't here or he'd never have let me give him away like this."

Amos sat down, while the astonished gathering stared at him, the defaulter, who in a moment of gratitude had betrayed himself. The woman next to him edged a little farther away from him and watched him furtively, but he did not seem to care.

Under the stimulus of this confession the feelings of the people quickly responded to the occasion and a line soon formed without further need of wit or eloquence on Hepsey's part, to have their subscriptions recorded. In half an hour Mrs. Burke, whose face was glowing with pleasure—albeit she glanced anxiously from time to time towards old Mr. Bascom, in an endeavor to size up his mood and force his intentions—had written down the name of the last volunteer. She turned towards her audience:

"As I don't want to keep you waitin' here all night while I add up the subscriptions I'll ask the chairman to do it for me and let you know the result. He's quicker at figurin' than I am, I guess," with which compliment she smilingly handed the book to the Senior Warden. While the old man bent to his task the room buzzed with low, excited conversation. Enough was already known of Bascom's hostility to the rector to make the meeting decidedly curious as to his attitude towards Hepsey's remarks anent the mortgage; and they knew him well enough to be aware that he would not allow that item in her speech to go unanswered in some way or other.

All eyes rested upon the gaunt figure of the chairman, as he arose to his feet to announce the total of the subscription list. He cleared his throat and looked down at Hepsey Burke; and Jonathan, as he squinted anxiously at Hepsey by his side, noticed that she sat with her eyes tight-closed, oblivious of the chairman's glance. Jonathan looked hastily up at Bascom and noticed him shift his position a little nervously as he cleared his throat again.

"The amount subscribed on this list is two hundred and thirty-seven dollars and thirty-five cents," he said. The loud applause was instantaneous and Jonathan turned quickly to Hepsey, as he stamped his feet and clapped his hands.

"Thirty-seven thirty-five more than we owe him; Hepsey, you've done fine," he chortled.

But Hepsey's look was now rivited on the chairman and except for a half-absent smile of pleasure, the keenest anxiety showed in her expression.

Bascom cleared his voice again and then proceeded:

"Mrs. Burke informed you that the rector's salary was in arrears to the extent of about two hundred dollars. It is now for this meeting to pass a formal resolution for the application of the amount subscribed to the object in view."

Hepsey's lips narrowed; not a cent was down on the list to the name of the Senior Warden; the debt was being paid without assistance from him.

"I presume I may put it to the meeting that the amount, when collected, be paid over to the rector by a committee formed for that purpose?" proceeded the chairman.

This resolution being duly seconded and carried, Bascom continued:

"Before we adjourn I request the opportunity to make a few remarks in reply to Mrs. Burke's observations concerning the ejection of the rector from the house which he occupied. She was good enough to spare my feelings by pointing out that from a business or legal point of view it was not I who was responsible for that act, but the parishioners, who, having purchased the rectory subject to a mortgage, had failed to meet the interest upon it. That is what Mrs. Burke said. What she did not say and what none of you have said in public, though I reckon you've said it among yourselves, I will take upon myself to say for her and you."

He paused—and every eye was fixed upon him and every mouth agape in paralyzed astonishment, and the said features of Hepsey Burke were no exception to the rule.

"When," continued Bascom evenly and urbanely, "the word went round that the interest on the mortgage had got behind and the money must be collected for it those concerned no doubt remarked easily: "Oh, I guess that'll be all right. Bascom won't worry about that; he don't need it; anyway he can pay it to himself, for the parish, if he does."

There was an uncomfortable stirring of the audience at this shrewd thrust, but Hepsey could not contain herself and laughed right out, clapping loudly.

"And yet I don't mind saying that if I had thought of suggesting to any one of you such a method of collecting interest due to you you might have kicked some," he commented dryly.

"At the next step, when I ultimately concluded to act upon my right to eject Mr. Maxwell from the rectory, I've no doubt that on all sides it was: 'Well, did you ever know the likes of that? Turning the rector out of house and home! Well he's a skinflint for fair!'"

He paused and watched the effect. This time his hearers sat absolutely motionless.

"And I agree with you," he added presently, in a quiet voice: "I was a skinflint for fair!"

Almost Hepsey forgot herself so far as to clap thunderously; she caught her hands together just in time—recollecting that her demonstration would be taken too literally.

"But I would not have you misunderstand me. Though it was for me to call myself a skinflint for that act, it was not for you to do so. You did so on wrong grounds. Those who in making money have been less successful than others find it convenient to leave all such obligations upon the shoulders of the richer man and to say 'it's up to him; he can afford it.' Is it any wonder that it makes the rich man sour on subscriptions and philantrophies? He has as much, or more, of inducement to apply his earnings and savings to his own ends and pleasures; why, then, is it not up to all in their own proportions to meet social needs? A good many years of such meanness among his neighbors makes even a rich man sour and mean, I guess. And that's what it made me—and though that isn't a justification of my act, it gave me as much right to call you skinflints as for you to call me, all except one of you, Hepsey Burke."

The meeting quivered with tense ex-

citement. What did it all mean? If a chicken had sneezed the whole gathering would have been dissolved in hysterics, it was so keyed up with a sense of the impending disclosure of a deep mystery. As for Hepsey, she sat motionless, though Jonathan believed that he caught sight of a tear glistening in its descent.

"Hepsey Burke had a right to call me a skinflint, because she knew what none of you knew; but because it was private knowledge she wouldn't make use of it against me—not unless she couldn't have done what was right any other way. And now I'm going to tell you what she knew:

"The rectory was my wife's property and she intended it as a gift to the parish for the rectory of the church. I was preparing the deeds of transfer when she died—suddenly, as some of you remember," his voice made heroic efforts to keep clear and steady, "owing to her death before the transfer that house passed to our daughter; and what I intended to do was to buy it of her and present it to the parish. I delayed, at first for good reasons. And I suppose as I got more and more lonesome and mixed less and less with people I got sourer—and then I delayed from meanness. It would have been easy enough for me to buy it of my daughter and she'd have been willing enough; but as I saw more and more put upon me and less and less human recognition—I was 'a rich man,' and needed no personal sympathy or encouragement, it seemed—I held back. And I got so mean I couldn't make friends with the rector even."

He paused, and from the half smile on his face and the hint of brightness that passed over his expression the audience caught relief.

"I guess a good shaking up is good for a man's liver. It cures a sour stomach—and as there are those that say the way to a man's heart is through his stomach, perhaps it cures a sour heart. I got my shaking up all right, as you know; and perhaps that's been working a cure on me. Or perhaps it was the quiet ministrations of that little Mrs. Betty of yours"—applause—"or the infusion of some of the rector's blood in my veins (he let himself be bled to keep me alive, after I'd lost what little blood I had, as you probably have never heard)"—shouts of applause—"or possibly what cured me was a little knitting visit that Hepsey Burke paid me the other day and during which she dropped some home-truths: I can't say.

"Before I decided what I would do about the rectory I wanted to see what you would do, under Mrs. Burke's guidance, this evening. You've shouldered your share as far as the rector's salary is concerned. Well—I'll add what I consider my fair share to that, fifty dollars. The arrears due on the mortgage interest is one hundred and twenty dollars. I shall hold you to your side of that bargain, to date. If you pay the rector the two hundred dollars due him on his salary you will need to subscribe about another forty to make up the interest; that done, and paid to me, I will do my part and present the rectory to the parish in memory of my dear wife, as she desired."

He sat down.

Hepsey rose and called out in a clear voice:

"He's right; Mr. Bascom's dead right; it's up to us to do business first and clear ourselves of the debt on a business bargain; then we can accept the gift without too much worryin'." And she sent a very friendly smile over to Bascom.

Again there was some cheering, in the midst of which Jonathan Jackson jumped to his feet beside Hepsey; and facing the room, with his arm through hers, he shouted:

"Hepsey Burke and me will make up the difference!"

Another cheer went up, and Hepsey's face flamed scarlet amid the craning of necks and chaffing laughter—half puzzled, half understanding.

Sylvester Bascom rose to his feet and there was silence. With assumed seriousness he addressed Hepsey, still standing:

"Mrs. Burke, so that it may be quite in order, do you endorse Mr. Jackson's authority to speak for you in this matter?"

Every eye was turned upon them; but Hepsey could find not a word, so flabbergasted was she by this sudden move of Jonathan's. Jonathan himself colored furiously, but stuck to his guns, and Hepsey's arm:

"Well, to tell the truth," he replied in a jaunty voice, "Hepsey Burke and me's goin' to be married right now, so I guess we'll combine our resources, like."

This announcement gave the coup de grace to any further attempt at orderliness and the room became a seething chorus of congratulatory greetings aimed at Hepsey and Jonathan, in the midst of which Sylvester Bascom slipped out unnoticed.

CHAPTER XXIV.

Omnium Gatherum.

WHEN at last the room emptied and she was free to do so Hepsey, accompanied by the possessive Jonathan, found her way over to the Maxwells. Before she started to tell them the results of the meeting she cast a glance of whimsical affection at her palpitating fiance.

"I'd best let him get it off his chest—then we'll get down to business," she laughed.

So Jonathan, amid much handshaking and congratulation, told his victorious story—until, when he seemed to become too triumphant, she broke in with: "Now that's enough for you, Mr. Proudmouth. Let me just say a word or two, will you? The meetin' wasn't called for you and me and I want to tell about more important happenin's."

When they had heard of all that had been accomplished Mrs. Betty got up and put her arms round Hepsey's neck and gave her such a hug and a kiss on each cheek that brought the tears to Mrs. Burke's eyes. And Donald, moist-eyed in spite of himself, took her hand in both of his and expressed his feelings and relieved the tension at the same time by saying:

"Hepsey Burke, for all your molasses and the little bit of vinegar you say you keep by you, 'there are no flies on you,' as Nickey would put it."

At which sally Jonathan slapped his knee and ejaculated.

"No! there ain't, by gum! There ain't no flies on Hepsey, if I do say it myself."

At which proprietory speech Hepsey wagged her head warningly, saying, as they left—"There's no downin' him these days; I'm sure I don't know what's come over the man."

On their way home Jonathan was urgent for fixing the day.

"You said you'd marry me right there and then if the meetin' came your way, now you know you did, Hepsey," he argued. "So if we say tomorrow——"

But, though Hepsey would never go back on a promise, she protested against too summary an interpretation of it and insisted on due time to prepare herself for her wedding. So a day was set some two months hence.

Meanwhile, Sylvester Bascom's truer and pristine nature blossomed forth in the sunnier atmosphere around him and after he had delivered himself of his feelings to the Maxwells, in a visit which he paid them next day at their nomadic quarters he begged leave to put the rectory in full repair before he handed it over to the parish and the Maxwells returned to it.

And he was better than his word, for, with Hepsey and Virginia accompanying her, he insisted on Mrs. Betty taking a trip to the city a few days later for the purpose of selecting furnishings of various kinds dear to the hearts of housekeepers—Hepsey absorbing a share of the time in selecting her "trousseau."

Meanwhile, in due course the rectory was made a new place, inside and out, and a few weeks after their return the transformed house, repainted inside and out, papered and curtained and charmingly fitted with new furniture, was again occupied by the Maxwells.

That the interest of the parish should for a while be concentrated on the doings at the rectory and diverted from her own important preparations was a blessing to Hepsey—for she continually declared to Mrs. Betty that, little as she knew Jonathan in his new manner, she knew herself less!

It was decided that the wedding should be in the church and a reception held after the ceremony, for the bride and bridegroom, at the rectory—and that, in this way the whole parish would celebrate in honor of the auspicious occasion and of other happy results of Hepsey's parish meeting.

The day before the wedding, while Mrs. Betty and Virginia were busily occupied at Thunder Cliff and the rectory, dividing their attentions between the last touches to Hepsey's wardrobe and preparing confections for the wedding guests, Donald Maxwell was closeted with Mr. Bascom at Willow Bluff for a considerable time. It was known that the Senior Warden was to support his colleague, Jonathan, at the morrow's event, and it was presumed that the rector was prompting him in his duties for the occasion.

The ceremony next day at the church was a center of fervent and cordial good will and thanksgiving, as Jonathan, supported by Sylvester Bascom, took to wife Hepsey, given away by Mrs. Betty, with Virginia as a kind of maid of honor, hovering near. It was well for Donald Maxwell that his memory served him faithfully in conducting the service, for his eyes were in misty conflict with his bright smile. Nickey from the front pew, watched his mother with awestruck eyes, and with sonlike amazement at her self-possessed carriage under the blaze of so much public attention.

There followed a procession from the church and soon the rectory, house and garden were alive with chattering groups of all sorts and conditions, for the invitations had been general and public, irrespective of class or sect, at Hepsey's special request. There was a constant line of friends, known and unknown, filing past bride and bridegroom, with congratulatory greetings and cordial good wishes. There were speeches from delegations of various local bodies and from local notables of various degrees; and there were wedding presents out-vying each other, as it seemed, in kindly personal significance rather than in costliness. Among them all, and arranged by Mrs. Betty at the very center, the Vestry's gift to the bride stood easily first, a plated ice water pitcher!

It was left to Maxwell to make the farewell speech, as the company crowded round the automobile, lent by the Bascoms, in which Hepsey and Jonathan sat in smiling happiness, ready to drive to the station, on their way for a week's honeymoon.

"Friends!" he said, in a voice that reached to the skirts of the assembled throng, "before we give a valedictory 'three times three' to the happy couple I have to tell you of a plan that has been made to commemorate this day permanently—and so that Mrs. Jackson may not forget the place she holds in our hearts and always will hold, as Hepsey Burke.

"It is Mr. Bascom's idea and I know it will give lasting pleasure to Mrs. Burke—I mean Mrs. Jackson," he corrected himself, laughing, "as well as to all Durford, young and old. The beautiful piece of woodland, half a mile beyond Willow Bluff, is today presented by Mr. Bascom to the town and we shall shortly repair there to watch the boys erect the tent now on the church plot and which Mr. Jackson has kindly presented to the Boy Scouts."

"Gee," yelled Nickey, in astounded delight, and leading a cheer that interrupted the speaker for some moments.

Maxwell continued: "Mr. Bascom's generous gift to the town will be kept in order by the Boy Scouts, as their permanent camping ground—and I daresay Nickey Burke will not be averse to occupying the tent with his corps, during the week or so that Mrs. Jackson is to be away. The place is to be called in her honor—'Hepsey Burke Park.' And now—Three cheers for the bride and groom."

The cheers were given with wholehearted fervor, as the man at the wheel tooted and the auto started on its way with the smiling pair, followed by the people's delighted shouts of approbation at the happy plan for perpetuating among them the cheerful name of Hepsey Burke.

The End.

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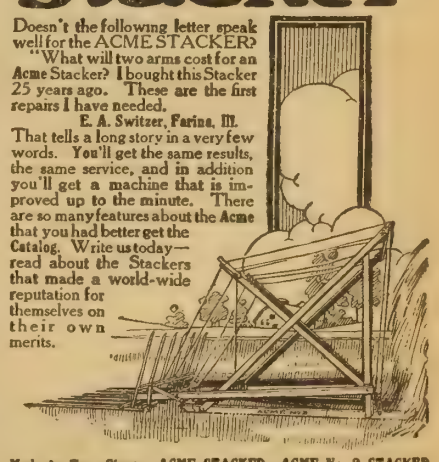

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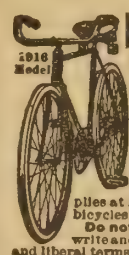

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Hygiene of the Eyes.

Many of the causes of blindness originate in infancy, and therefore the baby's eyes should be given careful attention. At birth the eyes should be looked after immediately, washed, the secretions removed and three drops of a 2 per cent silver nitrate solution dropped into each by the doctor or a trained nurse. Remember, by the doctor or a trained nurse, for while the solution is used to kill germs that are injurious to the sight it will destroy the sight itself if not properly used.

It is said that 80 per cent of blindness in children is caused by negligence in the cases of sore eyes in babies. If the baby's eyes become inflamed or mattery the doctor should be called and his directions implicitly followed. It does not pay at such times to apply a remedy someone wants you "to try." Get the advice of someone who knows. The doctor has made a study of that very thing for the sole purpose of saving baby eyes, and he will tell you what to do. Watery eyes may not be due to a cold, and prompt attention may save the little one serious trouble later on.

The disease known as pink eye is contagious, and precautions should be taken to prevent its spread by providing a separate towel and wash basin for the individual who has contracted the disease. Bathe the eyes frequently with warm boracic acid solution. Hot packs on the eyelids are good also.

Properly-fitted glasses should be provided for the cross-eyed baby. If taken in time most cases of crossed eyes can be cured in this way. Even at six months the baby will wear them, and by the time you think he is old enough to wear glasses he may not need them. Neglect of the cross-eyed baby may mean an operation in a few years.

Too much attention cannot be given this matter of the baby's eyes. It is a little thing to wash out his eyes each morning with boracic acid solution it is a little thing to protect his eyes from strong light and dust and wind; it is a little thing to call in the family doctor if the eyes do not look right; but it will be a big thing if he grows up with injured eyesight and lays it at the door of your carelessness or neglect.

Never Rub Woolens.

Grandmother knew how to launder woolens so they wouldn't harden and shrink. The same methods still apply, says the home economics department at Iowa State College, which suggests a few things to remember in washing woolens.

First. Wash the article by lifting it up and down in the water by hand or with suction hand washer, or wash in a machine that does not rub. Cut up soap in cold water, heat until dissolved and use instead of bar soap. Squeeze water out by hand or in loosely set wringer. Remove wrinkles by pressing one portion after another and not rubbing iron from place to place.

Second. Wash and rinse in lukewarm water and dry when sunlight is not too hot—never on a cold day. Press with warm, not hot, iron.

Third. Use soft water and a pure soap. Rinse in four waters to remove all soap.

Tatted Lace.

Directions.—Begin with the c l each r of 5 d s, 8 p with 2 d s between, 5 d s, fasten on spool thread, ch 6 d s., p, 2 d s, p, 2 d s, p, 4 d s, turn, r of 2 d s, p, 2 d s, join to 2nd p of c l, 2 d s, p, 2 d s. Ch of 4 d s, 3 p with 2 d s between, 4 d s. Alternate the r and ch until 12 rings and 11 chains are made, joining rings to each other and to picots of the c l as seen in illustration, ch like the 1st joining to 1st p of 1st ch by last p. Fasten threads in center of c l. Repeat these figures, joining by middle p of 2 chains.

Across the top make a double row of rings with ch between, r of 4 d s, 3 p with 4 d s between, 4 d s, and

A TATTED LACE SUITABLE FOR PETTICOAT TRIMMING.

ch of 4 d s. Join rings of each row to each other, and lower row to figures as seen in illustration.

Abbreviations—d s, double stitch or double knot; p, picot; ch, chain; l p, long picot; r, ring; c l, clover leaf.

Real German Coffee Cake.

To the Editor:—Seeing Mrs. A. G. J.'s request for a recipe for coffee cake I will send mine for German coffee cake.

One cupful scalded milk, one-third cupful butter, one-fourth cupful sugar, one-half teaspoonful salt, one egg, one-third yeast cake dissolved in one-fourth cupful water (or one-half cupful yeast sponge), one-half cupful seeded raisins, flour to make a stiff batter. Let rise. Spread in deep pan one-half inch thick. Let rise again. Before baking brush over with a beaten egg, then melt three tablespoonfuls butter and mix with it one-third cupful sugar, one teaspoonful cinnamon and three tablespoonfuls flour and spread over the top.

I will tell you of a cook book I made. I got a composition book and when I see a good recipe in some paper or magazine I copy it in my book. I put the different recipes, such as cakes, pies, salads, etc., on separate pages so I can find them easily. Miss B. W. M.

To Take Out Mildew.

To the Editor:—Will try to help Mrs. C. R. out on the mildew question. Take soft soap and salt and rub on the goods, then lay out on the grass overnight. If the mildew is bad it may take repeated doses, or just let the garment lie out for two or three days at a time. Buttermlik also may be used with equal success. Soak the clothes in sour buttermilk overnight or longer, then lay on the grass the same as when using soap and salt.

The lady who wanted to know how to clean a wool jacket will have good success with flour. Warm the flour and rub the garment in it just as though washing with water. Be sure to rub every part of the garment, and if not badly soiled she will be pleased with the result. Be sure to dust the flour out well. I have heard that corn meal is good too, but have not tried that. Flour is good for white bear skin also.

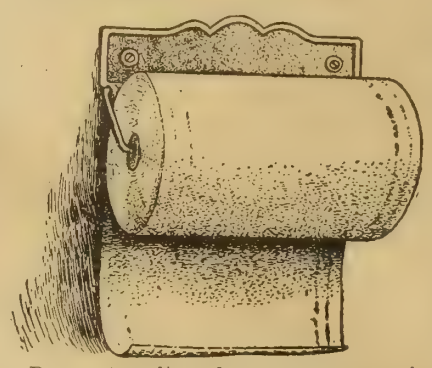
I hope this may help someone, as I find a good many helps in the paper. —Albertha.

Save Time and Steps in Kitchen.

Laura B. Breese Describes Some Inexpensive Devices Which Will Save Many Steps and Much Labor.

THE kitchen is literally the workshop in the home. The efficient homemaker will have this room most sanitary and convenient. The popular slogan today is "efficiency," and why should the home not standardize its processes of work as far as possible, just as all other business places are doing? When the routine of housework is reduced to the methods requiring the least amount of time and effort in its accomplishment, then we will recognize efficiency in the management and the housewife will find more time for recreational work.

Since the kitchen is used so much, let us study its possibilities first. The standard equipment, such as the sink, table, stove, cupboard for dishes, cabinet or supply cupboards, bear particular relation to each other. A

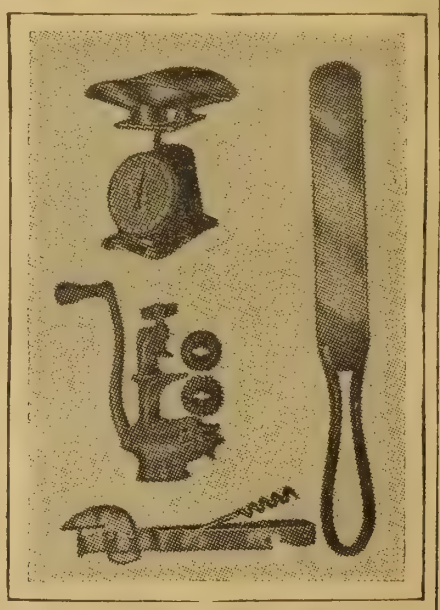


Paper toweling has many uses in the kitchen of the efficient and ingenious housewife of today.

housewife's work in her kitchen might be divided into two processes: those of preparing a meal and of clearing it away. Certain pieces of equipment are needed for each process, hence it would be a convenience to group these pieces together and in the order they are to be used. For example, in preparing the meal, she would need her cabinet, stove and small table. Mixing her dish at the cabinet, her stove should be close at hand for use next, and then the little table for holding serving dishes, etc. Her dining room would be her goal and it would save steps if she worked toward the goal.

In clearing away the meal the sink and cupboard should be close together and the process carried on toward the cupboard, which is the goal of this process.

The smaller utensils should be



SOME HANDY KITCHEN UTENSILS.

grouped about the larger pieces to save steps when they are needed, e. g., around the sink have the soaps, brushes, cleaning powders, etc., needed there. The utensils, mixing spoons, measuring cups, supplies for cooking will be convenient in the kitchen cabinet, or shelves, or in cupboards over the kitchen table. Holders, covers for cooking utensils, seasonings, etc., save steps if kept near the stove.

The kitchen should have good ventilation and light. Let the sunlight flood into all corners, as it is nature's best disinfectant. If the floor is pine, covering it with a good grade of linoleum will make it easier to keep clean, as well as save the feet.

Aluminum cooking utensils are much lighter to handle than the iron pots and kettles, and for nearly all cooking are most satisfactory.

Following is a list of labor-saving devices for the home which serve as strength, energy and time savers:

Bread mixer, meat grinder, potato ricer, double boiler, measuring cups, measuring spoons, stationary egg, cream and mayonnaise mixers, scales, vacuum cleaner, dustless duster, washing machine, fireless cooker, spatula, self-heating flatiron, self-wringing mop, collapsible step-ladder, and soup strainers.

"Skilled, intelligent work is more essential in the kitchen than in any department in the home. Hence, it requires intelligence linked with equipment to make the best ordered kitchen serve its intended purpose."

Many housekeepers make work harder for themselves by not having the equpiment of proper height. The table, ironing-board, and sink should all be high enough for the one who works over them to make it unnecessary for her to stoop at her work. This adjustment will save many a backache. Blocks of wood may be used under the table legs or the square top door stops screwed into them to raise the table to this required height.

The "Korner Kleaner"—a cork with a knob-handle will be found a great convenience for scouring cutlery. It sells for 10 cents.

The "Mistic Mit" is excellent for scouring utensils, particularly aluminum ware. It is made of fine copper strands and cotton twine and woven so the inside which covers the hand is soft, while the outside has the abrasive qualities of the metallic copper. It costs 10 cents.

The "Turbine Cream Whipper" is a joy for whipping a small amount of cream in shallow bowls. It does not spatter and costs only 10 cents.

Chloride of Lime For Mildew.

To the Editor:—If Mrs. C. R. will try my method of removing mildew from white goods (washable goods, of course) I am sure she will be pleased with the result.

Take a teaspoonful of chloride of lime and dissolve in boiling water. Strain through a piece of muslin to be sure all tiny lumps are out, as they rot the goods. Add enough hot water to cover the garment, which should be wet in cold water before placing in the bleach. Stir slowly for several minutes (leaving it on the stove) so the bleach will be all through. Then rinse well in several waters. Wash as usual and all mildew will be gone.

Will someone please tell me how to rid my pantry of the little red ants that have begun to bother already? I should be very thankful for the help.

If those who have lamps to fill, the bowls of which cannot be seen through, will set the lamp on the household scale and find how much a lampful of oil weighs and then remember it they will not need to be bothered with the oil running over. Anything that will save the busy housewife at this time of year, or any other time for that matter, is well worth trying. Mrs. S. H. N.

Notes For the Housewife.

Let potatoes lie in cold water for a little while before paring if you wish them to be white.

Chicken fat is excellent for shortening.

If they are oiled before putting

hem in the oven, stuffed peppers vill retain their green color.

To clean the inside of an enameled eapot, first fill the teapot with water nd a handful of soda. Put it into a varm oven in the evening and let it emain there. In the morning empty t and rub around with a flannel and he inside will be as white as when he teapot was new.

Do not turn down the wick of your erosene lamp and think that you are aving oil, for practically none is saved nd the air becomes vitiated and filled vith a disagreeable odor. Before dis-arding the old lamp burner try boil-ng it for half an hour in a strong olution of water and soda; dry thor-oughly before putting back on the amp and you will not need a new urner.

A new garbage can makes the best ontainer for sterilizing cans of fruits and vegetables when canning. It should be of the galvanized type and have a well-fitting lid. Use a piece of heavy wire netting or a frame made of slats as a false bot-tom to keep the fruit jars from com-ing into direct contact with the bot-tom of the can.

A neat, durable way to sew on hooks and eyes, snaps and patent fasteners is to buttonhole them into place, letting the purl of the button-hole stitch come to the outside of the ring. Fasteners put on in this way are on to stay.

Recipes.

Potato Cups.—Select large potatoes, peel and soak in ice-cold water. Use a cooky cutter to shape them in cylin-drical form, and a smaller cutter to shape the center. Then scoop out the potato, slice a piece off the end so it will rest flat on the plate, fry in deep fat until brown, and serve with the centers filled with creamed peas. Celery cooked until tender and served in pota-to cups is nice also.

Stuffed Onions With Ham.—Boil three large Spanish onions whole in salted water until tender, but unbroken. Cool and carefully remove the centers. Chop the centers with three-fourths of a cup of ham, a teaspoonful of chopped pars-ley and an egg well beaten, and suffi-cient cream to moisten. Mix and fill the onions. Place in a casserole, dredge with flour and dot with bits of butter. Pour a little milk in the bottom of the dish and bake twenty minutes, covered. Sprinkle with buttered crumbs, un-covered.

Corn Chowder—Fry a half pound of diced salt pork in a big saucepan until brown. Add one sliced onion and cook until light brown. Then add four sliced potatoes that have been parboiled ten minutes, a can of corn and a pint of boiling water. Cook until the vege-tables are tender, then add a quart of rich milk, pepper, salt and a half dozen crackers which have been soaked in a little milk. Serve with a cracker on each dish of soup.

Cereal Muffins.—To one-half cupful of breakfast cereal add one-half cupful of white flour, one rounding teaspoonful of baking powder, one-half level tea-spoonful of salt, one tablespoonful of sugar, one well-beaten egg, one-half cupful of sweet milk, and one table-spoonful of melted butter. Mix well and bake in greased gem pans in a hot oven.

Crullers.—Two tablespoonfuls of but-ter, two tablespoonfuls of sugar, one egg, two cupfuls of flour, one-eighth teaspoonful grated nutmeg and cinna-mon each, one-fourth teaspoonful of baking powder, one-half cupful of milk. Cream the butter and add the sugar gradually. Sift and mix together the flour, baking powder and spices. To the sugar and butter add the egg, the milk and the flour mixture alternately, beat-ing continually. Roll out, cut into strips and gash strips in four places. Take up by running finger through gashes. Drop into deep fat and fry.

Cabbage Salad.—Cut two slices of fat salt pork in cubes and fry a golden brown. Pour this hot fat and bits of pork over a small head of cabbage and one onion finely chopped. Season well with salt and pepper. Pour a little vine-gar into the fr ing pan when it is boil-ing hot, then pour over the cabbage and serve at once.

Chocolate Spice Cake.—One-half cu-ful of butter, one cupful of sugar, one-half cupful of milk, one-fourth tea-spoonful each allspice, cloves and nut-meg, one and one-half cupfuls of flour, two eggs (beaten separately) one and one-half teaspoonfuls of melted choco-late.—Miss B. W. M.

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THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Belongs to Canning Club.

Dear Young Folks:—I have been reading all of your letters and I enjoy them very much, so I thought it was time for me to write to you.

I live on a 140-acre farm. I live near a small marsh close to a river which is called Mink river. We have seventeen head of cattle. We milk six cows and I help milk. We also have three horses.

I go to school every day. I am twelve years old and am in the sev-enth grade. I have only missed two days of school. I like my teacher very much. We live two miles from school.

We have formed a club in our school for the boys and one for the girls. The girls' club is a canning club. In the summer we are going to raise dif-ferent kinds of fruits and vegetables for canning.

Elsie says we should give riddles, so I will ask you one: He has no eyes; he has no legs, but he has a mouth and he goes on forever. Can you guess it? The answer to Elsie's rid-dle, what has an eye but cannot see, I think is a needle. —Florence.

Another Answer For Elsie.

Dear Young Folks:—I read Elsie's letter about riddles. I think the an-swer to hers is a potato, as it has eyes but cannot see.

I am eleven years old and am in the sixth grade. We live on a farm nine miles from town. We have elev-en horses and two colts. We have several cows, too, but I don't know just how many.

I make cakes and also cook some. I sew quite a lot, too. Here is one of my cake recipes. It is for angel cake.

Beat the whites of eight eggs until frothy, add one teaspoonful cream of tartar, and continue beating till the eggs are stiff. Then add gradually, while beating constantly, one cupful fine granulated sugar. Fold in three-fourths cupful flour mixed with one-fourth teaspoonful salt and sifted four times. Add three-fourths teaspoonful of extract. Pour into an unbuttered angel cake pan and bake fifty minutes in a moderate oven. When done, re-move from pan. You may use any kind of white icing. —Stella.

The Sparrow's Nest.

Dear Young Folks:—I am a farm girl. I live on a 160-acre farm. I am ten years old and am in the fifth grade at school. My sister goes to high school in town.

I am going to tell you about the sparrow's nest that is in our buggy shed. It is in a can and it is made of hay and feathers. My brother found it and it had six eggs in it. Today I looked in and there were three little birds in it. I will write and tell the Young Folks when the birds go away.

I am raising flowers and chickens this summer. I can crochet and play on the organ. I am going to learn how to tat, too. My sister is going to teach me. —Golde.

Wishes She Lived in the Country.

Dear Young Folks:—I have been reading almost all of the nice letters that you have written and I think I would like to write to you.

I used to live in the country and I wish I still lived there. We had one of the loveliest orchards. I am in the seventh high grade and am twelve years old. We have a dog and a cat. The dog's name is Jack and the cat's name is Bright Eyes.

We used to go to the woods and get the largest and darkest blue violets.

I cook every week at school and can bake and cook quite a few things.

—Evelyn.

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International Sunday School Lesson.

Lesson for June 11, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

SOWING AND REAPING (TEMPERANCE LESSON.)

LESSON TEXT—Galatians 6.

GOLDEN TEXT—God is not mocked; for whatsoever a man soweth, that shall he also reap.—Gal. 6:7.

We turn aside today to consider the second temperance lesson for the year. Paul's letter to the churches of Galatia strongly contrasts law and grace. Its key verse is ch. 2:16, and its most prominent word is "law." Many claim verse one of Chapter 5 as its golden verse. This final chapter is a most practical one and rich in suggestion regarding our social rela-tions. Let each member come pre-pared to give a temperance applica-tion or to ask a temperance question.

I. "Bear Ye One Another's Burdens" (vv. 1-5). If a man trespass, be sur-prised in a sin, be caught in the very act, or surprised into committing a sin, "ye which are spiritual" (literal-ly guided and governed by the spirit; ch. 5:16-25) are to restore such a one. This is to be done not by cutting off or casting aside the erring one but as a dislocated limb is restored to its place, so we are to "restore" that one to his place as a believer; each be-liever being a member of the body of Christ (I Cor. 12:12, 14, 27); one who falls into sin is a dislocated limb or member, and the stronger ones are to restore him to his proper place. This must be done, however, not with any sense of our own infallibility but in meekness, gentleness and with great tenderness. (See II Tim. 2:24-26. Paul's reason for this, "lest thou also be tempted" should lay low the pride any of us who have not fallen might feel (v. 1; Math. 7:2-5; Jas, 2:13). In-stead of exclaiming, "I could never have done any such act," we ought rather to say, "But for the grace of God I might have done even worse than that." (I Cor. 10:13). The bur-dens (v. 2) or weights which we are to bear are not the unnecessary de-tails of the Mosaic law (Math. 23:4; Acts 15:10) but rather they are the temptations, weaknesses and failures of others. The master "came not to be ministered unto but to minister" and was "tempted in all points," "touched with a feeling of our infirmi-ties" and in our thus sharing with each other we but follow in his steps (Ch. 5:4; John 13:34, 15:12; Romans 15:3. This is the "law of Christ," not onerous, not a grievous burden, not necessarily an obligation, but a "law" because he, our "file leader," fully and perfectly exemplifies it (Phil. 2:5-8). It is chiefly self-conceit and spiritual pride (v. 3) which stands in the way of gentle forbearance in dealing with our erring brothers. Such pride does not usually deceive others (Jas. 1:22-24) and he who is so controlled, "de-ceiveth himself."

II. Whatsoever a Man Soweth" vv. 6-8. While each must so bear his burden, yet those who are taught are to help those who teach to bear their burdens by contributing "in all good things" (Rom. 15:27; I Cor. 9:11-14). Paul sounds a solemn warning to

those who refuse thus to help forward the work of righteousness, those who fail to support others and think that their selfishness will accrue to their advantage (v. 7). The natural world has many illustrations of this immutable law. Men may mock (sneer at) this law, but find eventually that there is no escape from its operations. This law has many applications. The one in the context is, first, a physical one (v. 8), a most familiar one to us all. The same is true spiritually, and has been repeatedly illustrated throughout the history of the Christian church. (II Cor. 9:56; Prov. 11:24). In all of our actions, physical, mental, moral, social, spiritual, we reap what we [illegible]e in kind, sown sparingly we [illegible] in abundance.

We shall Reap, If We Faint [illegible]" vv. 9-18. Paul now proceeds to [illegible] the practical application. If we [illegible] under the leadership of the Spirit (See ch. 5:16-25 we avoid carnal mindedness and the Spirit (who is life John 6:63; II Cor. 3:6), we shall reap "life eternal," i. e., life which is endless in duration and divine in its essence. There must be, however, persistence. We would not withhold the good seed nor refrain from sowing it if we are to reap the reward suggested in verses nine and ten. If we do so withhold, or should we sow ought but the "good seed," we will surely reap the awful harvest suggested in verses 7 and 8. Temporal weariness or discouragement will not excuse us for any negligence. Nor are we to be impatient, for "in due season," in God's time (I Tim. 6:14, 15) we shall reap; not perhaps immediately, but the issue is certain.

Some fail to reap because of laxity; others continue cultivation too long; still others, by overlooking their "opportunity" to do good (v. 10) and hence having not sown, they cannot reap.

Paul suggests (v. 12) that the sowing of which he speaks is not for any outward show, nor for conformity to the edicts and regulations of men in order to avoid persecution, (v. 12 R. V.).

Guernsey Meeting at Burton Farm.

(Continued from page 9.)

sided with Mr. F. E. Fox, secretary-treasurer. Only a short business session was held at which Earl Roberts, Clyde Fruit and C. J. Connell were named on the resolutions committee. It was decided to do away with the nominating committee and elect officers from the meeting next winter. Resolutions were passed thanking Mr. and Mrs. Burton and Mr. and Mrs. Longley and expressing sorrow over the recent death of Mr. A. E. Swan.

The directors asked for an expression from the members on the advisability of holding a grade and a bull sale this fall in addition to the regular sales. The sentiment was fairly strong for both, many favoring the grade sale on the ground that this would enable many breeders to secure good stock which, by using a pure-bred sire, would gradually get them into the pure-bred business when they cannot now afford to start with pure breds. Others suggested a combination grade female and pure-bred bull sale; some a bull sale by itself and some a grade female sale by itself. As one member expressed it, it would be a wise move to hold a grade sale even if some of the females had to go at a sacrifice, as they would not have to feed them over winter, and during that time the buyer could be using them. Final action on these matters was left to the directors.

Mr. F. W. Merrill, of Minneapolis, spoke in a most interesting manner on the dairy industry of the Northwest. He dwelt particularly on the trade possibilities for Wisconsin and pleaded for the greatest integrity in breeding and selling of pure-bred animals. Waukesha county is succeeding as a Guernsey center, he said, because the breeders have their hearts in the work and that in his opinion no man can develop a fine type of Guernsey without developing himself.

The dairyman, he said, is today overcoming the greatest obstacles that confront any class of farmers. First, he is operating on expensive land; second, his machine is costly and she is subject to disease. What the Northwest wants is cows like those in Wisconsin who can produce fat at a cost of from 12 to 15 cents a pound instead of those at 25 cents like now prevail in much of that country and he declared that they are coming to Wisconsin to get them.

Mr. Merrill flayed the cattle dealers in plain language and said that much of the bad reputation Wisconsin has in Montana, North Dakota and Idaho is the result of these dealers. "I tell them that the finest cattle and the healthiest cattle in the world are to be found in Wisconsin," he said, "if they will go where integrity backs every animal and will do business with the breeders." The accredited tubercular free list now being prepared in Wisconsin he believes will do much to help conditions and keep out the dealer who will take an automobile, drive through a county and furnish any old kind of cattle for $5 a head.

"The northwest has money and they want your cattle," he declared. "They are ready to buy and willing to pay the price, but they demand good stuff and they won't take diseased stock."

Mr. Merrill spoke pointedly on the necessity of honesty in breeding and selling and said that much of Waukesha's success has been due to these two things. But the state, he said, must co-operate as a whole as the breeders of Waukesha county have co-operated and then the word will go out that what comes from Wisconsin is good and is clean.

Too long has the impression prevailed, he said, that a pure bred is good because she is pure bred; that a Guernsey is good because she is a Guernsey. Mr. Merrill believes that the great problem facing the breeder today is to weed out the pure-bred scrubs from the pure-bred herds and to get away from the impression that a cow is a good cow just because she is pure bred. Nothing hurts, in his opinion, like selling a cow that will not pay for the investment and for this reason he says "get away from the undesirable pure bred. See to it that every animal sold at a private or public sale is worth the price that it brings."

Mr. Merrill is a great advocate of community breeding and does not believe that Waukesha county could have ever reached the place it occupies today in Guernsey history without the co-operative effort that has prevailed since 1904. No breed can be developed in his mind to a great degree by a breeder alone in his territory.

Mr. C. P. Norgord, commissioner of agriculture, discussed the functions of the new department and explained what it is trying to do for the farmers and breeders. He told of plans for the coming state fair and predicted it would be the greatest as well as the best in the history of Wisconsin.

Mr. Norgord also discussed the tuberculosis situation and appealed to the breeders to take particular precautions to keep their herds free of it, not only as a safeguard for their own families but as a duty to the state and nation as well as to their own financial benefit. Mr. Norgord explained how tuberculosis has been spread by the sale of whey and other by-products from cheese factories and creameries and advocated the enactment of a law in Wisconsin which would require the pasteurization of all such by-products before they could be fed to the calves or used in any way.

The fact that the farmer has to suffer in the cleaning up process he regretted, but under existing laws that is the only method. Some day he hopes to see a plan evolved where some of this burden will be lifted from the farmer and placed upon the state and nation which is also benefited.

Mr. C. J. Kaiser, vice president of the Farmers' Savings Bank, of Palmyra, explained a plan inaugurated by the bank to loan money to boys who wish to get into the breeding game on their own hook and invited them to take advantage of it.

Rural Carriers Meet at Eau Claire.

(Continued from page 11.)

said that Mr. Arle has performed his duties so faithfully that he has had nothing to do, and Secretary Demarest reported 711 paid-up members, and that Marathon county deserves special mention for increase in members in county organizations for the year. Several counties, he said, had failed to report, and an effort will be made to revive them. The dues are $1 a year, of which half goes to the national organization and every carrier not a member should immediately enlist and attend the conventions which are great stimulators of interest in the service.

Henry Gallenbeck, of Beaver Dam, state organizer, reported that he had gone slowly during the year in order not to run up expenses, but that what he has accomplished was done at a total expense of $34.40. Mr. Gallenbeck spoke at some length on the value of the organization, and pointed out that if the carriers are to get their just deserts they must organize and fight for them. Nothing has ever been won through individual effort, and he declared that every concession secured by the carriers from congress has been the result of concerted, organized effort. He said that never in history had a postmaster-general voluntarily recommended betterments which is an indication of the necessity of keeping the state association in good shape to back up the national association. "What we get from congress must come from organization," he said. Mr. Gallenbeck also discussed the question of pay and said that he did not believe any man could fix a scale for Wisconsin that would be fair to every carrier as conditions vary so largely in Wisconsin. In some parts he said some carriers really should get more for going twenty-six miles than others get for going thirty miles, as roads vary. In this he was applauded, which indicates a desire of Wisconsin carriers to adjust the wages on an equitable basis. G. C. Granger, of Sheboygan Falls, reported a balance of $612.08 in the treasury.

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Send 10 cents in silver or stamps for our up-to-date 1916 large spring and summer catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1666—A pretty negligee. The pattern is cut in 3 sizes: Small, medium and large. It requires 2 yards of 42-inch material for a medium size.

1713—A set of new tunics. These attractive styles may be used for any material. The pattern which includes all styles illustrated, is cut in 3 sizes: Small, medium and large. No. 1 will require 1⅝ yards of 44-inch material, No.

2 will require 3 yards and No. 3 will require 2⅝ yards for a medium size.

1381—A jaunty shirt waist. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 36 will require 2½ yards of 44-inch material.

1724—A smart and simple model. This portrays an ideal play or school dress. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2¾ yards of 36-inch material for the dress, and 1¼ yards for the bloomers for a 4-year size.

1736—A comfortable apron, easy to adjust. The pattern is cut in 3 sizes: Small, medium and large. It requires 6⅛ yards of 36-inch material for a medium size.

1647-1646—A good sport suit. This portrays a combination of middy blouse 1647 and skirt 1646. The blouse and skirt are cut in 4 sizes: 14, 16, 18 and 20 years. It requires 2½ yards for the blouse and 3½ yards for the skirt of material 44 inches wide for a 16-year size. Two separate patterns, 10 cents for each pattern.

9910—A dainty little apron model. The pattern is cut in 5 sizes: 2, 4, 6, 8, and 10 years. It requires 1⅞ yards of 36-inch material for a 6-year size.

1627—A pretty style ladies' dress, with body lining or yoke portions with long or short sleeves, and with or without ruffles. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6½ yards of 44-inch material for the dress, without ruffles. With ruffles it requires 7⅞ yards for a 36-inch size.

1727—A smart suit for the little boy. The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. It requires 2⅝ yards of 44-inch material for a 4-year size.

1743—Junior dress with two styles of sleeve and with under waist. The pattern is cut in 3 sizes; 12, 14 and 16 years. It requires 1¼ yards of 27-inch material for the underwaist and 5½ yards for the dress for a 14-year size.

9925—A splendid style for the growing girl. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 4 yards of 36-inch material for a 6-year size.

1726—A splendid model for house or porch wear. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Shade For Hens In Hot Weather.

To the Editor:—The poultry should have plenty of shade in the hot weather. About noon the hens will get out of the hot sun and remain in the shade until three or four o'clock when they will again return to the field or range and stay until time to go to roost.

The shade may be furnished in a few months if plum and cherry trees are planted about the chicken runs. The orchard is also a nice place for the hens, because out there they find many bugs and worms while scratching beneath the shade of the apple trees. I have seen the hens out in the wooded lot enjoying themselves in the heat of the day as they scratched in the leaves or grass. If the flock must remain in the poultry house to find refuge from the hot sun, the hens will simply sit around very inactive until the day gets cooler.

When the poultry must be confined to a small lot, I find it a good plan if no shade is available, to make an artificial shade. One summer I drove three foot posts into the ground, one at each corner of a parallelogram six feet wide and twelve feet long. I nailed two-by-fours to the top of these posts and covered with boards. A curtain of burlap was hung to the south side so that the sun would not shine beneath it in the mid day. Here the hens would come and scratch and dust themselves during the heated portion of the day. So I have made it a point to see that the hens have a good shade in the warm weather. It pays.

Subscriber.

Tankage For Poultry.

To the Editor:—I have about 100 hens. I do not have a warm place for them. Have been feeding corn and oats, more oats than corn, and bran by them all the time. They have all the sweet milk they can consume until noon, also warm water, table scraps and vegetables, mostly potato parings. They have about two quarts of tankage every other day. They will leave their grain for the tankage if fed at the same time. What I want to know is this, is the tankage of any value to them? I have got quite a few eggs all winter and about sixty eggs a day now. What do you poultry people say? E. J.

Feeding Oats to Fowls.

To the Editor:—Don't worry about what "they say." Oats is not only one of the best of feeds but a stimulant as well. The only runaway the writer was ever guilty of was from a horse "feeling his oats." The best calf we have on the place today has been given all the oats she could consume since first she began to nibble at them. A grade colt that is "all horse" to use the words of horsemen, had access to oats since he was born. The best poultry yards, from which we are gathering nine big brown eggs daily from eleven hens, are given little grain with the exception of oats. It is always thus oats are never found wanting at this place.

In our yards the oats are fed dry, in deep litter, and there is little danger of fowls overeating of them. This could not be said of any other kind of grain. If you are getting the right results from boiled oats, why boiled oats it is, and do not worry about trouble until trouble troubles you.

A woman who is very successful in caring for young chicks uses cooked oatmeal, instead of feeding it raw. This is contrary to the belief of many, but what's the use? It never pays to take things on at one gulp, any more than it does to be so narrow that we can see only one way and that way our own. About ever so often there is a revolution of opinion anyhow.

It may be that this would be a very good time to express our opinion about raw oatmeal; there are feeds preferable for very young chicks. Later it is O. K.

The only possible danger in feeding oats dry is if the fowl has been on short rations, has no grit, and then gorges the crop with this grain. The points may pierce the lining of the crop, causing death. If boiled and fed soft this slight danger would be eliminated. Subscriber.

AILING ANIMALS.

Scratches.

I would like to know how to treat scratches on colts. What would you recommend for this?

For scratches in colts, if it is of a simple nature, the use of a dry brush to take all dirt off and then the application once daily of tincture of iodine is very beneficial.

Breeding Young Mare.

I have a six-year-old mare that refuses to breed. She is a fine animal and I would like for her to raise colts. Can anything be done in a case of this kind?

The cause of the trouble with your young mare must be ascertained before any encouragement can be given about her breeding. Have your veterinarian examine her.

Prevention of Blackleg.

I have lost several head of calves with blackleg in the past two or three years. Have vaccinated them with blacklegoids since, but it is hard work. I have heard that there is some kind of wire used and wish to know if you can tell me the kind of wire used and where it is put, through the tail or through the brisket.

You speak of a wire being used as a prevention. Now the only thing we know of in this line is the thread method of vaccine which is put in the tail region. If one has a good place to confine animals the use of the blacklegoids is the simplest method known.

Troublesome Wire Cut.

I have a three-year-old sorrel mare that I bought about a month ago. She got cut in the wire last winter and it seemed all healed over when I bought her, but after a few days' work it broke open again. The cut was just above the hoof on the right fore foot and the foot is somewhat larger than the other. It has gone down some since I had her, but it still runs some. There is a small opening at each end of the cut. I have been syringing it out with a carbolic solution. Do you think there ought to be a larger opening, and which way ought it to be cut?

It is possible your animal has had an injury to the tendons or the bone when cut on the wire. We would advise you to have this examined by a veterinarian before doing any cutting and he may be able to locate the cause of the trouble.

Peculiar Death of Bull.

About a week ago I lost a valuable bull. Now this bull seemed all healthy and O. K. at night and in the morning I noticed he did not eat his feed up in the yard so I put him in the barn and fed him hay and oats. He ate them up and at noon I fed him more hay. He ate the hay, but would not drink and at five o'clock in the afternoon he was dead. He seemed to have a fit before he died and frothed at the mouth. He did not bloat after he died. I had a veterinarian see him and he could not tell what was the matter with him. He opened him up and found his heart full of blood and his kidneys were spotted and his bladder was full of blood.

It is rather hard for one who has not made an autopsy of this animal to make a diagnosis when one who did make an autopsy failed of diagnosis. However, we may say that the trouble seemed to be of an acute nature, probably internal hemorrhage, which might have been occasioned from any one of a number of acute diseases or conditions.

Scours in Calf.

I have a seven-weeks-old calf that has had scours for about four weeks. Do you know of a remedy? This calf has always sucked the cow; never been fed by hand. I never had a calf scour before sucking the cow. What causes it? The calf is turned to cow twice a day. Am satisfied the calf doesn't get too much milk. It craves salt, which is given to it nearly every morning. Has a good dry place to sleep and is turned out every nice day. Have been trying to get it to eat some ground corn, but have had no luck. Cow didn't clean when she calved for two or three weeks after, but seems to be all right now, eats well and bawls for calf now, something she didn't do until lately. She is just a heifer. This is her first calf.

First let us say to you, never be guilty of letting a cow go over twenty-four hours if she hasn't cleaned properly. She should be attended to by a veterinarian or one competent to do this work. The calf which is scouring should have been treated long ago. The following line of treatment may prove beneficial. Give one-fourth pound of magnesium sulphate in a pint of warm water. As soon as the physic has done its work give the following: Tincture of gambir, two drams, and chalk mixture, one ounce. Give a teaspoonful every four hours. You will have to get your druggist to put this medicine up for you. Do not water this calf very heavily for a few days and the above treatment may prove beneficial.

FREE ILLUSTRATED Catalog. **Big bargains on account of room.** Leading breeds, blooded poultry, pigs, sheep, all breeds calves. 30 blooded Barred Plymouth Rock eggs, $1.00; 100 eggs $3.50. S. C. White Leghorn eggs, Tom Barron celebrated strain, 272 eggs a year, **cheap.** Trained Shepherd, Collie and other dogs. All kinds hounds. Wolf and fast Fox hounds sent to try. Free dogs with orders. **Latest** co-operative plan.

WANTED 1,000 Red, Gray and **Black** fox cubs and old ones. Pay more alive than fur buyer, cash at your express office. Get rid of them and raise fancy poultry and eggs. Captain Richard P. Mason, V. P. National Stock Association. Bank references. Kirksville, Adair County, Missouri.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

RHODE ISLAND RED HATCHING EGGS

FROM my heavy, winter-laying, money-making S. C. and R. C. strains; $1 per 15, prepaid; $4 per 100 after May 1st. Quick shipment. R. E. Daily Poultry Farm Necedah, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

S. Wyandottes. "The Aristocrats." Eggs from grandest matings on earth. Free mating list. Write for it. Frank Faha, Jr., Bx. 620, Dyersville, Ia.

S. C. W. Leghorns, Wyckoff strain, chicks, eggs. Prices right. Flock headed from 288-egg strain. Mrs. Mollie Wachendorf, Monroe, Wisconsin.

PARTRIDGE and BARRED Plymouth Rocks. Eggs from choice pens of Partridge and Barred, $2 per setting. Dr. O. R. Rice, Delavan, Wis.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

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will Insure Your Live Stock

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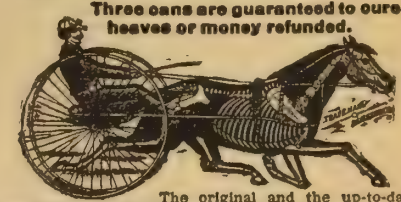

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Found—Another Good Duroc Boar.

SOME time ago we called attention to the good two-year-old Duroc Jersey boar owned by McClurg Bros., of Viroqua, Wis., and at that time we asked that we be notified if there were more "good boars in the woods." Since then we have received several letter from [illegible]s telling us of the good herd boars they had and we have gone to see [illegible] them. A couple of them were [illegible]ough "in the woods," and should stay there, and a breeder that has no more ambition than to use a boar, such as some we have seen, will also remain "in the woods" as far as constructive breeding goes. We realize that every breeder can't have a world beater, but every breeder can have the desire and ambition to raise better hogs, and when we call on a man that tells us he has "as good hogs as anyone" just because they have red hair and a pedigree, we can rest assured there is something wrong. We have seen another good Duroc boar, and one any breeder should feel proud of. He is owned by Emmett Cook & Son, the senior living near Richland Center and the son's postoffice is Boaz though his shipping point is Richland Center. We all hear and read about 1,000-pound boars, but those that follow the game kno that they are not as common as reported. The Cook boar is the best, 1,000-pound prospect we have seen in the state. Cook's Defender is by Defiance and he by Defender, his dam by Jewel Chief. He has just turned three years old, has one of the best backs we have seen for some time, great depth, bone and feet suitable to carry 1,000 pounds and the head and ear is almost ideal. He will be shown at some of the best county fairs, but the owners did not feel that they had the time necessary to get him in condition for the state fairs. Owing to the short corn crop most of his get were sold last fall, but we saw some fine spring pigs by him. There are also some good sows in this herd among them being a daughter of Defender, purchased last winter from McKee Bros., and she is raising a litter by Cherry King Defender. There is an excellent litter of eleven out of a daughter of Illustrator and they are sired by Cherry Chief Wonder the good boar heading the Van Meter herd in Illinois. Remember Cook's Defender, he will be crossed with good sows and we predict that his get will be heard from. His advertisement appears in this issue and if you should write about this boar or his get please mention this paper. See page 27.—Adv.

Dobson & Eastman Poland Herd.

THE name Dobson & Eastman, Lancaster, Wis., needs no introduction to Poland China breeders or readers of Wisconsin Farmer. Burlie Dobson is one of the popular boys at the fairs, making himself conspicuous by his winnings. They are raising a fine lot of spring pigs, not as many perhaps as in former years, owing to the fact that fewer sows were carried over, but what they have look like the money at this time. Perhaps some of you Poland exhibitors wonder what is going to be out this year from this farm. The big show right now is their junior yearling and when the fall shows start he will be an "eye-opener." On May 1st he weighed 505 pounds being thirteen months and twenty days old. Burlie says he is gaining about a pound a day and if he keeps that up he will be "some boar" by September. Any of you breeders that have junior yearlings want to keep busy from now on. They will also have an entry in the senior yearling class and two senior pigs. They are undecided whether they will take out the 1915 champion, Jumbo Hadley, or not. He is looking good, but they feel that he is worth more as a breeder than a show boar. They will show his get. All sow classes will be filled and they are going to be strong in senior sow pigs. They have three, any one of which will make a creditable showing. They have entered three futurity litters. Dobson & Eastman are lined up right for the fairs. During the winter the Grant county Poland China breeders formed an association and Mr. Dobson is the live wire of this association and it was due mainly to his efforts that this association was formed. To boost the breed in their county, October 10th has been claimed for an association boar sale. The motive of this sale will be to advertise more than to make a profit and they realize that good boars must be offered if they want to make a reputation for themselves and their association and with this thought in mind, the members have agreed to consign the very tops from their respective herds. There are some good herds in the state and if they will do this we can guarantee there will be some good boars in the sale. We will have more to say about the Dobson & Eastman herd at a later date.—Adv.

Drake's Short-horns.

SHORT-HORN cattle have been bred for many years by H. B. Drake & Sons, Beaver Dam, Wis. They have followed the dual-purpose line, breeding for both milk and beef along Scotch and Scotch-top strains. They have become well and favorably known, both as breeders and as honorable and square salesmen. The writer has yet to hear of a dissatisfied buyer, but on the other hand has heard nothing but favorable comments in regard to these men. The cows in the herd are big, roomy matrons, showing constitution and good, straight conformation. The herd is headed by Broadhooks Prince, one of the best grandsons of Whitehall Sultan. At the present time this firm is offering some good young bulls that are fit to head any herd. For breeding and further description write to the above address. See page 27.—Adv.

Watson & Will's Holsteins.

WATSON & WILL, Menomonee Falls, Wis., have a fine herd of Duchess Ormsby and Johanna bred cows. The cows are closely related to the new world's record cow, Duchess Skylark Ormsby, and the former world's record cow, Pietertje Maid Ormsby. The sire at the head of the herd is Maple Crest De Kol Friend 104236. He is a half brother to Banostine Belle De Kol, that gave 27,404 pounds of milk and made 1,322 pounds of butter in a year. Maple Crest De Kol Friend, is a son of Friend Hengerveld De Kol Butter Boy, that has four daughters with records over 1,000 pounds of butter and from 20,000 to 27,000 pounds of milk in a year. His dam is Maple Crest Pontiac Duchess, that made twenty-one pounds of butter and gave 507 pounds of milk in seven days. She is a daughter of Pontiac Aaggie Korndyke, that has four daughters that have made over 1,000 pounds of butter within a year. Maple Crest De Kol Friend is, therefore, one of the most richly-bred bulls in Wisconsin, being very strongly bred along heavy producing and long distance producing lines. At the present time Watson & Will are offering a number of yearling bulls ready for immediate service. These are from advanced registry cows of Duchess Ormsby and Johanna strains and sired by the above bull.—Adv.

McGill's Holsteins.

A HOLSTEIN bull ready for immediate service is advertised for sale on page 28 by W. D. McGill, Menomonee Falls, Wis. This youung bull is of Johanna, Korndyke, Ormsby lines of breeding. He was sired by Sir Johanna Aaltje Korndyke, whose dam is from a sister to Johanna De Kol Van Beers, the first forty-pound cow of the breed, and Netherland Johanna De Kol, that made 28.56 pounds of butter in seven days as a four year old. His sire, Dr. Johanna Korndyke, is a son of Korndyke Netherland Wayne De Kol, that has three daughters with records from twenty to twenty-seven pounds of butter in seven days. The dam of the young bull offered for sale has an advanced registry record. For further information in regard to this animal write to the above address.—Adv.

Tochterman's Holsteins.

ONE of the best herds of Holstein cattle in Green county which is noted for its good Holstein cattle is that of C. Tochtermann, Monroe, Wis. He has been breeding Holsteins for a great many years and has been very particular in his selection of both males and females. His herd is built upon the Johanna strain, he having purchased several bulls closely related to Colantha 4th's Johanna. Mr. Tochtermann has done considerable advance registry testing and has made a large number of very creditable records. At the present time he is advertising a fine young bull for sale on page 28, out of Spring Valley Lindora 241565. This cow, as a junior two year old, gave 428 pounds of milk and made seventeen pounds of butter. The bull offered for sale was sired by Johanna Bonheur Pieter 113138, whose fourteen nearest dams average over twenty-eight pounds of butter in seven days. For an extended pedigree and further information in regard to this animal write to the above address.—Adv.

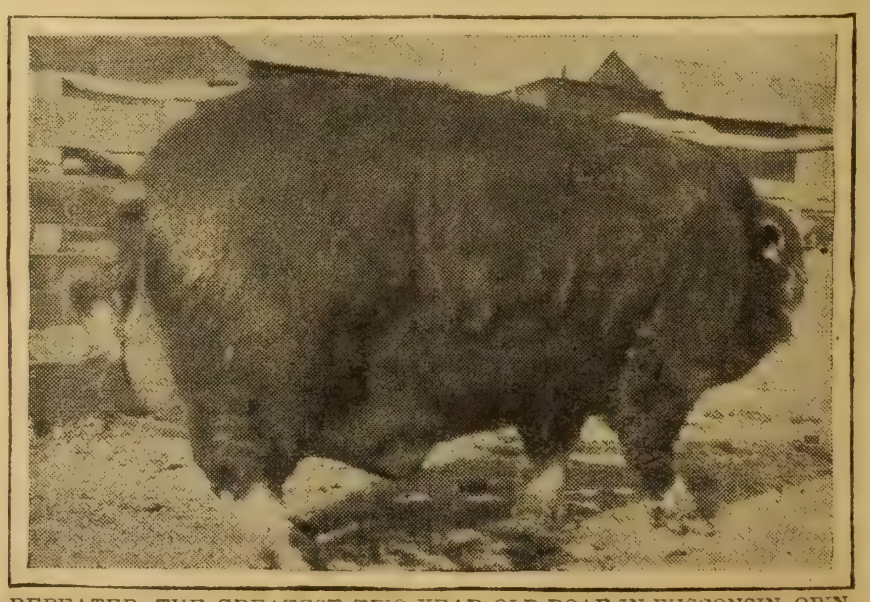
Smith's Short-horns.

THAT milking Shor horns are in great demand is shown by the fact of the heavy sales which George Smith & Sons, Burnett, Wis., have enjoyed during the past year. They have sold all of their yearling bulls and a number of younger ones and report that they could have sold many more had they had bulls ready for service. Their herd is one of high producing ability, in fact, they are using a milking machine, a thing unheard of on a great many Short-horn breeding farms. At the present time they are offering bulls from one to four months old, sired by Milkman. His dam gave over sixty pounds of milk per day, testing 4.4 per cent fat. Our readers will find it to their advantage to correspond with his firm when in the market for a herd header.—Adv.

ACME HARVESTING MACHINES IN ACTION. SEE FIELD NOTE ON PAGE 25.

Chester White News.

L. J. McBAIN is a breeder of Chester Whites and his postoffice is Bloom City, Wis., although he is only a few miles from Viola, his shipping point. A fellow breeder had told us that we would find some good hogs at this farm and we were not disappointed when we arrived. He is in the same predicament many others are this spring—didn't keep over enough sows and consequently he hasn't as many pigs as he should have. The five good sows that he retained have raised forty-five pigs and we are glad to report that there are some outstanding pigs among this number. The "big noise" on this farm is Iowa Boy, a son of the noted Iowa sire and show boar, Iowa First. This boar is a three year old and the fact that he had size and quality made him appeal to us. Three of the best sows are sired by him. The other boar in service is a two year old sired by the widely-known Combination 2d out of Sophia by Inspector O. K. This breeding needs no comment and individually he has a world of quality. This boar is one of the litter of eight boars that sold in the Evan's boar sale a year ago last fall at an average of $71. Besides the spring pigs that are sired by the above boars Mr. McBain has some fall boars and three or four of these are choice individuals. They are by the Combination boar, Ideal Combination. It would be well to keep this herd in mind, for, while Mr. McBain has never done much advertising, he now has his herd or will have in a very short time, to the point where he need not be ashamed to make a noise about it. We will have more to say about this herd later.—Adv.



REPEATER, THE GREATEST TWO-YEAR-OLD BOAR IN WISCONSIN. OWNED BY J. C. HENDRICKS, HAZEL GREEN, WIS. SEE PAGE 27.

A Poland Herd With Few Equals.

WE do not believe that the Poland China breeders, in general, appreciate the fact that Wisconsin has one of the best herds of this breed to be found anywhere. For the past five years the writer has been associated with the breeders of Iowa, Nebraska and South Dakota and he has seen the good herds of those states and inasmuch as Wisconsin is young in the swine industry, we thought, of course, there would be great room for improvement in this state, but J. C. Hendricks, Hazel Green, Wis., has a Poland China herd that deserves a berth with the best in the United States. It was our good fortune to attend the Hendricks sale the first week we were in the state and such an offering of Poland China gilts, we have seldom seen. If some of the highly advertised breeders of Iowa had had this offering they would have held a record-breaking sale. This was Mr. Hendricks first auction sale and the fact that he made an average of $72.75 on forty head and all but five of these were spring gilts, goes to show that he had the goods. In the first place J. C. is a natural hog man. He enjoys taking care of his hogs and he gets results. When we visited this herd the middle of March he had a great line up of spring pigs and it is useless to say that they were doing fine. Repeater, one of the herd boars is an outstanding individual. In the first place he is big, but his size was not gained at the expense of quality. He comes from big breeding by Orange Big Bone he by Big Bone, breeding that has made good wherever used. Mr. Hendricks demonstrated his ability as a breeder when he produced Smooth Price, in our estimation the best Poland boar of his age that we have seen in the state. We haven't seen all the herds in the state as yet and we make this assertion with all due respects to other Poland breeders. This boar was a year old last September. Is sired by Smooth Wonder by Wonderful by A Wonder 143421. His dam, Lady Wonder is by Chief Price 2d. A better pedigree could not be written. The owner may take this boar to the state fair this fall and if he does some one will know that there is a hog show. Keep this boar in mind, also Repeater, for they are two boars that will be heard from in the future. Notice the advertisement of this herd in this issue and if you need something in big-type Polands write Mr. Hendricks. When writing will you kindly mention The Wisconsin Farmer? See page 27.—Adv.

Lincoln Model an Excellent Duroc Boar.

MANY of the Duroc Jersey breeders of the Northwest have seen the good boar, Lincoln Model, and while there is no doubt difference of opinion about this hog, it must be conceded that he is one of the best. In our estimation, Lincoln Model is one of the four outstanding Duroc boars that we have seen in the state of Wisconsin. There are several good things about this boar that cannot be overlooked. He has a wonderful set of ears, eyes that are prominent and that will never "fat shut." Some might say that he has a "sow head"—that is not masculine enough, but we all know that there are more boars that can be faulted for having too coarse a head and ear with small eyes, than those with the "fine" head. He has a wonderful back and a spring of rib and "middle" that constitutes an easy feeder. He is now four years old and the writer has never seen a boar of his age that is smoother. He is entirely free from wrinkles, is not shielded and is as wide at the ham as he is at the shoulder. He is as good on his feet as a pig. Few boars of this age retain all these good points. Not only is Lincoln Model a good individual, but he is a good sire, and, as we visit the different herds we find some of the best pigs are by this boar, from sows that were purchased in the Stubbs & Hyzer sale last winter. Recently Mr. Albert L. Hyzer purchased Mr. Stubbs' interest in the Durocs and from now on Mr. Hyzer will be sole owner and you can rest assured that some good hogs of this breed will be produced at West Salem. Mr. Hyzer now has about seventy-five spring pigs most of which are by Lincoln Model. He expects to buy several high-class sows to cross with this boar and give Lincoln Model a chance to show what he can do when crossed on the best of sows. He will be shown this fall together with his get and we feel certain that he will make a creditable showing. Don't forget Lincoln Model, he is going to be heard from. Also remember that Albert L. Hyzer is the present owner. His advertisement appears in this issue. See page 27.—Adv.

Schultz's Chester Whites.

CHESTER WHITE pigs of March farrow are offered for sale on page 27 by L. A. Schultz, Poynette, Wis. These are the long, stretchy, heavy boned type of hogs that develop into big mature animals. Mr. Schultz is also offering five matured sows bred for

August farrow. For further information in regard to these animals write to the above address.—Adv.

Successful Harvester Line.

If great fields are to be cultivated and great crops to be grown, proper harvesting machinery is highly essential. This thought was the father of the old-time "Illinois Harvester" from which was developed the old-time Acme Hodges Header of today. The business established by Jonathan Haines flourished and continued under his direction until 1860 when it was purchased and enlarged by the founders of the Acme Harvesting Machine Company, which is today sending its highly developed harvesting machines and hay tools from its magnificent plant in Peoria, Ill., to every part of the world. The original ideal to which Jonathan Haines strove during his life has been continued and enlarged upon—the ideal of maximum efficiency combined with minimum cost and labor—and this ideal has been woven into every machine and tool produced today by this well-founded company. The Acme Harvesting Machine Company is today the largest independent manufacturer of machinery and hay tools in the world. The plant covers twenty-five acres of land with ideal shipping facilities at hand. The working condition throughout the entire factory are a source of pride to the owners and extreme comfort and delight to the many men and women employed in the shop and office. The first and last impression gained from a ground floor study of the "Acme" line of harvesting machines and hay tools is the thoroughness which characterizes every individual machine. A large force of field men is maintained for the purpose of studying the farmer's problems. These men make it their business to visit the various sections of the country and make a careful, scientific and extremely practical study of every phase and department of harvesting and haying. In addition to this force in the field the company maintains its own experimenting farms. Every conceivable condition of farming is purposely produced on these farms, in order that the machines may be rigorously tested out and demonstrated under the most diverse and adverse conditions. Every machine of the "Acme" line has been put through just such tests, and the machines, as they stand today, are the results of over fifty years of this same careful study and experiment. Possibly the best known of the "Acme" machines is the grain binder. This may be due to the fact that more machines of this type are in use than any other one kind. Wherever the binder is used it is giving the utmost satisfaction. Almost as well known and as widely used is the Acme Hodges Header. This machine dates away back to before the Civil war times, and through that long period and down to today it has held a leading place among machines that have given universal satisfaction wherever used. Rounding out their complete line of Harvesting machines, they also make the Acme corn binder; the four types of mowers, the Acme mower, Acme Giant mower, Acme Pony mower and Acme Giant vertical lift mower; the acme Lark self-dump sulky rake, the Acme combined side delivery rake and tedder, the Acme truss frame (two wheel) sweep rake; the acme (two-wheel) sweep rake; the Acme Giant (three-wheel) sweep rake; the New Acme (four-wheel) power-lift sweep rake; the Acme Monarch (folding) sweep rake; the Acme No. 2 stocker; the Acme stocker (with transport truck); the Acme reaper, the Acme Buncher; the Acme stock cover chains, and the Acme flax dump attachment. This is truly a strong array of machinery for handling all kinds and conditions of harvesting and haying, and the standing that the Acme Harvesting Machine Company enjoys among the farmers and dealers of the country, as well as the high esteem in which they are held by other concerns in similar lines of business is the strongest evidence of their value. See page 19.—Adv.

The Currie Hampshire Herd.

R. L. CURRIE, Viola, Wis., is one of the oldest breeders of Hampshires in the state. He called a sale last winter and cataloged over 100 head of sows, but this was too many to sell in one sale, so he kept some of the good ones and they have all raised good litters for him. If you are interested in this breed you can find anything you want in this herd. He has some good fall gilts, some sows bred for fall farrow and spring pigs of both sexes. His Gen. McArthur boar is a great belter and if you order from Mr. Currie you will get a hog well belted, if not you can send it back. Every Hampshire on the place is for sale and Currie has some good ones. It will pay you to get the first pick, so write at once and please mention The Wisconsin Farmer. See page 27.—Adv.

Grenwode Farm Guernseys.

A 638-pound Guernsey bull is advertised for sale on page 28 by E. R. Whitcomb, proprietor of Grenwode Farm, Whitefish Bay, Wis. This bull is sired by Glenwood King Coral, a grandson of Glenwood Boy of Haddon and King Coral, that have a total of fifty-one advanced registry daughters. His dam, Duke's Pretty Duchess 2d, gave 11,000 pounds of milk and made 630 pounds of fat in a year. The three nearest dams of the young bulls offered for sale average 632 pounds of fat in a year. This is a richly bred bull and an outstanding individual. For charted pedigree and further information write to the above address.—Adv.

Derivan's Poland Chinas.

BIG-TYPE Poland Chinas are advertised for sale on page 27 by Jas. Derivan, Fox Lake, Wis. He is now offering September pigs of both sexes, sired by the great boars, Black Expansion and King. Send for description and breeding of the animals to the above address.—Adv.

McNutt's Holsteins.

REGISTERED Holstien heifers and young cows are advertised for sale on page 28 by H. F. McNutt, Oxford, Wis. These animals are bred to their forty-pound bull, Johanna King Segis, one of the most richly-bred bulls in the United States. His sire was King Segis, declared by many prominent judges to be the greatest bull of the breed. Although he lived to be but six years old, he has six daughters with records over thirty pounds of butter in seven days. The dam of Johanna King Segis is Johanna De Kol Van Beers, the first forty-pound cow of he breed, that with three sons have sold for a total of $62,000. Johanna King Segis not only inherits high production ability, but he also transmits it to his offspring. One of his daughters, Belle Beauty Johanna Segis, is the largest record heifer of her age in the world. At twenty-three months of age she made an extraordinary record of 22.21 pounds of butter and 439.7 pounds of milk in seven days. Heifers and young cows bred to a bull that will produce such daughters are very valuable animals to own. Mr. McNutt can also furnish a carload or more of high-grade springers or young cows or yearling bulls ready for service from advanced registry and untested dams. For further information in regard to the animals now offered for sale write to the above address.—Adv.

Keep Your Animals Free From Parasites.

LICE may truly be reckoned among the "little things" which, as is so generally the case, are often a big source of annoyance and loss. Horses, cattle, sheep and hogs are all subject to some parasitic disease which affect, to a varying degree, their health, productiveness or appearance, as the case may be. For such conditions a good dip and disinfectant is essential, and, as it is often necessary to apply it locally, uniform strength is a highly desired attribute. What the farmer needs is a preparation that he can depend on for absolute uniformity, no matter where or when he buys it. A good example of this is Dr. Hess dip and disinfectant, judging from its wide usage and favorable repute. At all events, it is known that Dr. Hess, the compounder, is a skilled and experienced veterinarian, regarded by many as an authority on stock and poultry ailments, and what might be called the materia medica of the farmer's calling. All his preparations are covered by a broad guarantee whereby dealers are instructed to refund the customer's money if they do not fulfill all that is claimed for them. —Adv.

Edgewater Stock Farm.

EDGEWATER STOCK FARM, Ft. Atkinson, Wis., maintain one of the largest herds of dairy animals in the middle West. They have a herd of from 400 to 500 animals and are able to supply at all times from a single individual to several carloads of either Holsteins or Guernseys. The proprietors are careful and discriminating judges of good cattle and offer first-class stock only. They have several very choice bulls which they are offering at very reasonable prices and at the present time can supply a carload of high-grade Holstein or Guernsey springers or young cows due to freshen in the fall. No matter what your wants may be it will be to your advantage to get in correspondence with these people before buying elsewhere. See page 28.—Adv.

Kirkpatrick Brothers' Holsteins.

KIRKPATRICK BROS., Reedsburg, Wis., are offering some exceptionally good, young bulls for sale on page 28. These were sired by a grandson of King of Pontiacs, who now has 175 A. R. O. daughters, fourteen of which have records above thirty pounds. The dams of the young bulls offered for sale have creditable A. R. O. records, some as high as 600 pounds of milk and twenty-four pounds of butter in seven days. This firm is also offering five registered cows and two heifers for sale. For extended pedigrees and further information write to the above address.—Adv.

Larson's Poland Chinas.

ATTENTION is called to the change of advertisement J. Le Roy Larson, Iola, Wis. He is now offering a yearling boar, sired by Wisconsin Jumbo and a gilt bred for fall farrow to Fairview Jumbo by Wisconsin Jumbo. He is also booking orders for July, August and September pigs. In a letter received from Mr. Larson May 25th, he says, "I am all sold out of spring boars and have but a few gilts left. The Wisconsin Farmer is doing the work for me." When writing to our advertisers kindly mention that you saw their advertisement in The Wisconsin Farmer. See page 27.—Adv.

MONEY-SAVING CLUBS.

HERE is an opportunity for subscribers to The Wisconsin Farmer to buy all of their papers and magazines at one time at a big reduction in price. By ordering all your papers and magazines through The Wisconsin Farmer you are assured of prompt service and low prices. Pick out your club and send your order today. (We do not guarantee these prices longer that ten days beyond the date of issue in which these offers appear.)

CLUB NO. 1.

St. Louis Twice-a-Week Republic	$ .50
Metropolitan	1.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 2.

Kansas City Weekly Star	$ .25
People's Home Journal	.50
Wisconsin Farmer	1.00
Regular price per year	$1.75

Our Price For All Three **$1.10** You Save 65c

CLUB NO. 3.

Hearst's Magazine	$1.50
Kansas City Weekly Star	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Three **$1.50** You Save $1.25

CLUB NO. 4.

Ladies' World	$1.00
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.50** You Save $1.50

CLUB NO. 5.

Modern Priscilla	$1.00
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$2.35

Our Price For All Three **$1.45** You Save 90c

CLUB. NO. 6.

Mother's Magazine	$1.50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.50

Our Price For All Three **$1.75** You Save $1.75

CLUB NO. 7.

Good Housekeeping	$1.50
People's Home Journal	.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 8.

People's Popular Monthly	$ .25
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$1.60

Our Price For All Three **$1.05** You Save 55c

CLUB NO. 9.

St. Louis Twice-a-Week Republic	$ .50
Mother's Magazine	1.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 10.

McCall's Magazine	$ .50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.50

Our Price For All Three **$1.45** You Save $1.05

CLUB NO. 11.

Metropolitan	$1.50
McCall's Magazine	.50
Ladies' World	1.00
Wisconsin Farmer	1.00
Regular price per year	$4.00

Our Price For All Four **$2.25** You Save $1.75

CLUB NO. 12.

Today's Magazine	$ .50
Every Week	1.00
People's Popular Monthly	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Four **$1.40** You Save $1.35

CLUB NO. 13.

Kansas City Weekly Star	$ .25
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.25

Our Price For All Three **$1.15** You Save $1.10

CLUB NO. 14.

Every Week	$1.00
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.50** You Save $1.50

If none of the above combinations suit you, you can make your own club of papers in the following way: First select The Wisconsin Farmer and figure it at $1.00 per year. Then select any of the papers or magazines listed above and figure them at half their regular subscription price as indicated above, choosing whatever papers or magazines that appeal to you. As an example, suppose you should want The Wisconsin Farmer, Kansas City Weekly Star, Woman's World and People's Home Journal. You would figure The Wisconsin Farmer in the combination at $1.00; then you would add up the regular subscription price of the other three papers, which amounts to $1.10. Half of that amount equals 55 cents. Add this to the regular price of The Wisconsin Farmer, which is $1.00, and you would have a total of $1.55, which would be the rate for The Wisconsin Farmer, Kansas City Weekly Star, Woman's World, and People's Home Journal.

If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wisconsin.

Another Firm Joins the Duroc Ranks.

BEGINNING with this issue of The Wisconsin Farmer the name Geo. D. Sprain & Sons, West Salem, Wis., will appear regularly in the Duroc Jersey column. These gentlemen have been breeding pure-bred Durocs for the past three years. They got off on the right foot and now have a bunch of "red hogs" that they need not be ashamed of. Three of the best sows are by the champion, Lee's Defender, and are out of Marion Wonder dams. Without a doubt the best sows we have seen in the state are of this cross and these are no exception to the rule. Two of them have fine, large litters by the good boar, Lincoln Model, and one has a litter by Regular 2d. They have one sow by the dean of the big-type sires, King the Col. and the litter is by a grandson of the three-times champion, Missouri Model Top. The attraction on this Duroc farm at the present time is Grand Model 21st. This boar is of September 2, 1915, farrow and, while he is very thin at the present writing, he has the most stretch of any boar of his age we have seen this spring. He is sired by the great show and breeding boar, Grand Model, and his dam, Fancy May, is by Crimson Dusty Critic, he by Dusty Critic by old Glendale Critic, out of a daughter of old Crimson Wonder. This is the only boar by the noted Grand Model that we have seen in the state and if they can get him in condition he will be shown at the fairs this fall. Another good boar in this herd is a junior yearling called Corrector 2d he by Corrector by Sensation Wonder. His dam is by Pal's Dude. This is a very likely boar, good enough to deserve a berth in most any herd. The Duroc fraternity should be glad to have this firm join their ranks, for they are progressive breeders and have laid the foundation for a number one herd of Durocs. They expect to make a sow sale this winter and they will be in position to offer an attractive lot. They have about sixty-five spring pigs that are doing nicely. These are sired by Lincoln Model, Regulator 2d and Salem Model. A few of the boar pigs will be offered at this time. They are right in every way and you must be satisfied when they arrive at your station or you need not pay, send them back. Keep this herd in mind, for it is a comer. His advertisement appears in this issue and if you write please mention The Wisconsin Farmer. See page 27.—Adv.

Fewacres Farm Jerseys.

THE Fewacres Farm herd of Jerseys is attracting a great deal of attention by the register of merit records which they have been and are now making. Although the herd has been established but a few years, great care and discrimination was used in their selection, which has resulted in a herd of high producing animals. During the past year they have made a great many very creditable records. At the present time they are offering a number of very choice young bulls from one to ten months of age. There are variety of blood lines to choose from, including Nobles of Oakland, Oxford Majesty, Jacoba Irene, Loretta D., and Financial Countess, all of which will be recognized by Jersey breeders as among the leading strains of the breed. Pictures and pedigrees of these young bulls will be gladly sent on request. We recommend this herd of cattle to the readers of The Wisconsin Farmer and assure a square deal to purchasers of animals. See page 27.—Adv.

Merriman's Guernseys.

TWO registered Guernsey bulls of serviceable age are advertised for sale on page 28 by S. A. Merriman, Fort Atkinson, Wis. These are well marked, well grown and of good, straight conformation. They are being priced very low at the present time and we advise our readers who are looking for a herd header to write for their breeding and prices. Mr. Merriman is also offering several calves that will pay our readers to investigate. Kindly mention The Wisconsin Farmer.—Adv.

Notseter's Milking Short-horns.

JOHN NOTSETER, Deerfield, Wis., writes that he has sold the yearling heifers which he was advertising in The Wisconsin Farmer and is now offering several fine yearling bulls of the milking strain. These were sired by King Crest 39857, a choicely-bred bull of McLay breeding. The dams of the young bulls offered for sale are of Arabella and of Imported Bertha breeding, two lines which have proven to be heavy-milking strains. See page 27.—Adv.

Vandervort's Jerseys.

ROLLIE VANDERVORT, Tomah, Wis., is advertising some choice, young Jersey bulls for sale on page 27. These were sired by Golden Fern's Don and are from well-bred high-producing dams of good type. Several of these young bulls are ready for immediate service and are being priced right for quick sale. For pedigrees and further information write to the above address. —Adv.

Wiegand's Jerseys.

A YEARLING Jersey bull is advertised for sale on page 27 by L. P. Wiegand & Sons, Cleveland, Wis. His dam made 82.9 pounds of butter fat in thirty days in official test. She is a daughter of King Sappho King, that

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

has several other high-record register of merit daughters. The young bull offered for sale is a fine individual, well grown and of good, straight type.—Adv.

Schmidt's Guernseys.

THE Guernsey herd of Carl Schmidt, Wrightstown, Wis., is both choicely bred and of high production ability. The majority of the females in the herd are imported animals and are daughters of such bulls as Governor of the Chene, Galaxy Sequel and other bulls of equally choice breeding. The herd is headed by Goodwill Hero, whose dam is a 526-pound imported daughter of Governor of the Chene. His sire was Imported Golden Hero of L'Etinnerie, the sire of several A. R. daughters and also the sire of Imp. Holden 4th. At the present time Mr. Schmidt is offering a yearling bull ready for immediate service, sired by Goodwill Hero and out of [illegible]ndari XXXI, a daughter of Gal-[illegible]uel. This bull is an extra good [illegible] and will please the man who [illegible]. For further information [illegible] the above address. See page 28.

A Rare Combination of Economy and Luxury.

TO build a small car with all the appearances, comforts and easy riding qualities of a big, powerful car was the ideal that led the Willys-Overland Company, Toledo, Ohio, to build the $615 Overland car. This luxurious small car is one that any person should be proud to own, yet it has an unusually low level of operating and upkeep expense. Large production is one of the means of reducing the price of the Overland to $615; the capacity of the Overland plant is 1,000 cars a day, but even this rate will hardly supply the demand; those who want an Overland this year should order without delay. A beautiful, free catalog will be sent to anyone writing for it to the company named above. See their advertisement on page 14 and 15.—Adv.

Champion Plugs Have Unfailing Dependability.

CHAMPION spark plugs are recommended for high power cars because of their unfailing dependability. Many competent engineers specify Champions on account of the added "pep" they give to the motor. In all kinds of severe tests, the Champion heavy stone plug has demonstrated its value for constant, efficient service. Try them on your car, if you do not have them already, and note the new life they give to the car. The Champion Spark Plug Company, Toledo, Ohio, guarantees complete satisfaction to every Champion user—free repair, replacement or money back, if unsatisfactory. Your dealer knows the size of plug your motor requires. See advertisement on page 16.—Adv.

Hanchett's Guernseys.

A RICHLY-BRED Guernsey bull is advertised for sale on page 28 by W. H. & B. L. Hanchett, Sparta, Wis. He is a grandson of Glenwood's Reputation, sweepstakes bull at the Wisconsin State Fair. The dam of the young bull offered for sale is a heavy producing animal, having recently made forty-six pounds of fat in twenty-five days, which is equivalent to over two pounds of butter per day. For further information in regard to this young bull write to the above address.—Adv.

North's Holsteins.

JOHN NORTH, Kilbourn, Wis., is offering registered Holstein heifers and bull calves from one to fifteen months of age. Some of these were sired by Jewel Aaggie Alcartra, whose four nearest dams average over twenty-five pounds of butter in seven days. Mr. North is also offering a few choice registered cows for sale at the present time. For extended pedigrees and further information in regard to these animals write to the above address. See page 28.—Adv.

Simon's Chester Whites.

JOHN SIMON, Campbellsport, Wis., is one of Wisconsin's leading breeders of Chester White pigs. He is now offering for sale several early fall pigs and 1916 spring pigs of either sex to be shipped at weaning time. We advise our readers to buy early, as there is already a great demand for breeding stock, and by fall it will be very hard to secure. See page 27.—Adv.

A Thirty-seven-Pound Holstein Bull.

SIR CANARY BELLE DE KOL, the thirty-seven-pound Holstein bull, is the sire of the young bulls advertised for sale on page 28 by John Hasse, Monroe, Wis. These young bulls are out of heavy producing cows of good, straight type and typical dairy conformation. Mr. Hasse writes that he will also price a few females of various ages.—Adv.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.

Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.

Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.

Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.

Oct. 18, L. F. Atwater, Bangor, Wis.

Oct. 19, Geo. H. Willsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.

NEWS OF THE SALE RING

Waukesha County Holstein Breeders' Sale.

It is a pleasure to report a cattle sale in Waukesha county for the writer can always feel sure that he is reporting an actual sale and not a lot of fake sales and fictitious prices. At the third annual sale of the Waukesha County Holstein-Friesian Association, the buyers had everything their own way. There was no "boosting" of prices by the auctioneers, no side bidding by the consignors and no cattle bid in. Although prices did not average high they represent the money actually paid by the buyers. The Barion Farm, Byron, Ill., owned by Medill McCormick took eighteen head for $4,030. Henry Ringling, Baraboo, Wis., purchased four fine cows. Gustav Pabst, Milwaukee, Wis., purchased a large number to stock his 4,000-acre farm at Dousman. G. P. Mayer, Milwaukee, purchased several head. The top price female was No. 47, which brought $475. She is a very choicely bred cow and a fine individual. The top price bull was No. 35, a thirty-pound son of Paul Ormsby. Several of the females sold at over $400. Yearling and two-year-old heifers were in strong demand and the good individuals of good breeding brought from $200 to $275. A detailed list of the sale is given below.

FEMALES.

Roberts Pondyke Beauty, Nov. 5, 1911; E. E. Swan, Wauwotosa, Wis.	$320
Roberta Pontiac Colantha, Jan. 22, 1914; Robt. G. Swan, Wauwatosa, Wis.	240
Roberta Pontiac Briar De Kol, Feb. 12, 1916; J. C. Wilton, Eagle, Wis.	130
Roberta Cress Lawn Pontiac, July 23,1915; Barion Farm, Byron, Ill.	240
Roberta Pontiac Homestead Fayne, March 5, 1916; U. F. Schlaefer, South Germantown, Wis.	150
Roberta Pontiac Ormsby Gem, Jan. 22, 1916; U. F. Schlaefer	155
Roberta De Vries Pontiac, Aug. 12, 1915; Barion Farm	200
Roberta Johanna Korndyke De Kol, Jan. 9, 1914; Herman Buckholz, Manawa, Wis.	315
Bairdland Segis Beauty, Feb. 22, 1912; I. F. Poe, Oconomowoc, Wis.	140
Bairdland Pontiac Joy, Dec. 12, 1914; Barion Farm	280
Bairdland Pontiac Zulu, April 4, 1915; Barion Farm	180
Bairdland Pontiac Gretchen; D. J. Howell, Waukesha, Wis.	140
Bairdland Pontiac Mabel, Jan. 10, 1915; G. P. Mayer, Milwaukee, Wis.	270
Oasis Korndyke Wayne, Dec. 6, 1907; Arnold Buckholz, Manawa, Wis.	260
Jewel Texal 5th, July 15, 1911; Gustav Pabst, Dousman, Wis.	375
Jessie Segis Fobes, July 20, 1914; St. Marys Tr. School, Des Plaines, Ill.	230
Katinka Porcelein Wit, May 20, 1908; Barion Farm	315
No. 24, Aug. 1, 1915; Barion Farm	200
No. 25, Nov. 23, 1914;; J. H. Dance, Brookfield, Wis.	230
Corona Segis De Kol Burke; John A. Edwards, Nashota, Wis.	425
Nockdair Pontiac Urmagelsche, Jan. 7, 1914; Barion Farm	200
Johanna Queen Cataleta, Feb. 26, 1914; Arnold Buckholz	405
Clothilde Pontiac Zella De Kol 2d, May 31, 1914; Barion Farm	230
Lady Fobes De Kol 2d, Oct. 17, 1915; Barion Farm	145
Josephine Fobes De Kol 3d, Oct. 25, 1915; Barion Farm	145
Ruby May Arona, April 20, 1908; Gustav Pabst	300
Tarsee Goldleaf Burke Pontiac, Feb. 6, 1915; Herman Buckholz	205
Roberta Ormsby, July 15, 1910; Henry Ringling, Baraboo, Wis.	205
Ida Pontiac Hengerveld De Kol 2d, Jan. 17, 1915; Barion Farm	300
Berta Pontiac Ormsby, Aug. 24, 1914; Barion Farm	175
Ida Pontiac Hengerveld De Kol, Jan. 17, 1912; John A. Muldoon, Hartland, Wis.	300
Clothilde Canary Josephine, Nov. 15, 1914; S. P. Johnston, Deerfield, Ill.	250
Lady Pauline Canary De Kol, Aug. 9, 1914; John Kramer, Preston, Minn.	175
Aaggie Jettine Piebe De Kol 4th, Sept. 4, 1914; Barion Farm	190
Nagawicka Clothilde 4th, Sept. 3, 1913; S. P. Johnston, Deerfield, Ill.	215
Jessie Fobes De Kol, Jan. 23, 1910; Geo. P. Mayer, Milwaukee, Wis.	475
Jessie Homestead Canary, Aug. 25, 1913; S. P. Johnston, Deerfield, Ill.	165
Nagawicka De Kol 5th, Dec. 12, 1914; Barion Farm	190
Nagawicka De Kol 4th, Aug. 20, 1913; H. A. Silvernale, Mukwanago, Wis.	195
Queen Oxford De Kol 2d, June 27, 1905; Howard Peck, Elkhorn, Wis.	145
Queen Canary Paul, Jan. 30, 1915; Barion Farm	210
Queen Paul Oxford, Dec. 3, 1912; S. P. Johnston, Deerfield, Ill.	230
Springdale Blossom Canary, Dec. 18, 1914; Barion Farm	185
Elm Court Canary Johanna 2d, Nov. 19, 1914; Gustav Pabst, Dousman, Wis.	200
Elm Court Piebe Korndyke, June 12, 1915; Barion Farm	225
Elm Court Korndyke Johanna, Sept. 28, 1915; Geo. J. Schustu, Mukwanago, Wis.	200
Mooie Hengerveld Walker Greene, Aug. 20, 1913; W. H. Winne, Kilbourn, Wis.	190
Mooie Hengerveld Greene, Sept. 20, 1910; Wm. McLaughlin, Templeton, Wis.	185
Mooie Aaggie Hengerveld Greene, Aug. 24, 1911; Otto Sylvester, Jefferson, Wis.	195
Kate Spray Johanna, June 17, 1911; John A. Muldoon, Hartland, Wis.	370
Velox Overlooper 2d; G. P. Mayer, Milwaukee, Wis.	405
Johanna Yu-No, Feb. 3, 1913; John A. Muldoon	375
Princess Buckeye Johanna, Aug. 10, 1912; Henry Ringling, Baraboo, Wis.	400
Hazel Jetze of South Lawn, Oct. 26, 1914; G. P. Mayer, Milwaukee, Wis.	245
Elsie Barbetta of South Lawn, Dec. 1, 1914; Barion Farm	155
No. 73, Jan. 23, 1916; Gramling Bros., Dousman, Wis.	140
No. 75, Dec. 15, 1915; H. F. Schemmel, Cambria, Wis.	195
Harriette Korndyke of South Lawn, Mar. 11, 1914; R. L. Nye, Menominee, Mich.	235
No. 77, March 6, 1916; G. P. Mayer, Milwaukee, Wis.	105
Dieuwertye Pride De Kol Homestead, Dec. 31, 1913; Henry Ringling	235
No. 79, five-year-old substitute; Arnold Buckholz	260
No. 82, Aug., 1914; Barion Farm	265
Grace Johanna Piebe, Jan. 3, 1912; Arnold Buckholz	195

BULLS.

Roberts Fayne De Kol, Sept. 28, 1914; Harry Ellsworth, Elkhorn, Wis.	115
No. 26, Oct. 9, 1915; Shirley Harrison, Waukesha, Wis.	125
Nockdair King Segis Burke, Nov. 2, 1915; John Kramer, Preston, Minn.	100
Sir Johanna Homestead, July 15, H. F. Rieck, Elkhorn, Wis.	175
Hillvale Dandy, Jan. 23, 1911; S. E. Turville & E. F. Rosencranz, Oconomowoc, Wis.	440
No. 48, Nov. 2, 1915; O. P. Gaarder, Oxfordville, Wis.	120
No. 52, Nov. 6, 1915; Jno. Melius, Adell, Wis.	100
Elm Court Sir Johanna Spot, May 8, 1915; D. K. Zimmerman, Waukesha, Wis.	120
No. 74, March 5, 1916; Wm. A. Parsons, Ft. Atkinson, Wis.	155
No. 81, June 26, 1915; S. P. Johnston, Deerfield, Ill.	100

AVERAGES.

13 bulls	$134.65
65 females	240.79
78 head	215.00

Will Address Wisconsin Meetings.

The Wisconsin Farmer has a letter from Mr. R. Baker, assistant secretary Wisconsin Live Stock Breeders' Association, announcing several speeches in Wisconsin by J. B. Irwin, of Minneapolis Holstein Breeders' Association, who developed the famous Duchess Skylark Ormsby. Mr. Irwin will speak at the following meetings in Wisconsin in June:

Walworth County Holstein Breeders' Association, Elkhorn, June 20th.

Waukesha County Holstein Breeders' Association, Waukesha, June 21st.

Kenosha-Racine Holstein Breeders' Association, Kenosha, June 22d.

Blake's Prairie Holstein Breeders' Association, Randolph, June 23d.

Ozaukee County Holstein Breeders' Association, Cedarburg, June 24th.

These meetings are arranged on the co-operative plan, which provides that the Wisconsin Live Stock Breeders' Association pay one-half the expenses of the speakers; the Wisconsin Holstein Breeders' Association pay one-fourth and the Local Breeders' Association the remaining quarter. Mr. Irwin will, no doubt, be able to give Wisconsin breeders some valuable information.

The first Wisconsin tractor demonstration will be held in the city of Madison, September 4th to 8th. This will be the round-up of all the state tractor shows on the national circuit. It is expected 100,000 visitors will visit Madison for the demonstrations.

ALFALFA! SOW IT NOW ORDER DIRECT

Grow Alfalfa and your crop worries are over. It's a sure crop regardless of climatic conditions when once started. Produces 3 to 4 crops, often more, per year. Will actually earn from $60 to $100 an acre per year on land in the corn belt. Our double cleaned, non-irrigated Northern grown, high quality, pure tested Alfalfa seed at following prices: 20 lbs., $4.90; 60 lbs., $13.10; 100 lbs., $23.50. Also headquarters for Sweet Clover, Soy Beans, Cowpeas, Grass Seeds, Rape, Sudan Grass, Feterita, etc.

GALLOWAY BROS. & CO., 39 Galloway Sta. Waterloo, Iowa

AYRSHIRE CATTLE.

DAIRYMEN AND SHIPPERS

WHO want milk—lots of it—that will pass every test, are buying Ayrshires every day. Best milk for invalids and babies. AYRSHIRES are hardy, productive, prolific, profitable. Send for interesting information and list of nearest breeders.

AYRSHIRE BREEDERS' ASS'N
C. M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

HORSES.

LEFEBURE'S BELGIANS

THE largest Belgian breeding establishment. We won more prizes than any other at Iowa State, Minn. State and Frisco World's Fairs, 1915. We have a large collection of imported Belgian stallions 5 years old. 1,950 to 2,350 pounds. Strawberry roans, blue roans, sorreis and bays. American-Belgian stallions coming 3 and 4: 1,700 to 2,300 pounds. Choice young mares; 1916 free catalog ready. Address H. LEFEBURE & SONS, Fairfax, Iowa, (8 miles west of Cedar Rapids).

BERKSHIRE SWINE.

BERKSHIRE gilts bred for fall farrow, $35 to $50. April boars shipped at weaning time, $10 up. Address W. A. Freehoff, Waukesha, Wisconsin.

TOO LATE TO CLASSIFY.

GANT'S FARM DUROCS

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THE WISCONSIN FARMER

VOL. XLV. NO. 24. THURSDAY, JUNE 15, 1916. WHOLE NO. 1794

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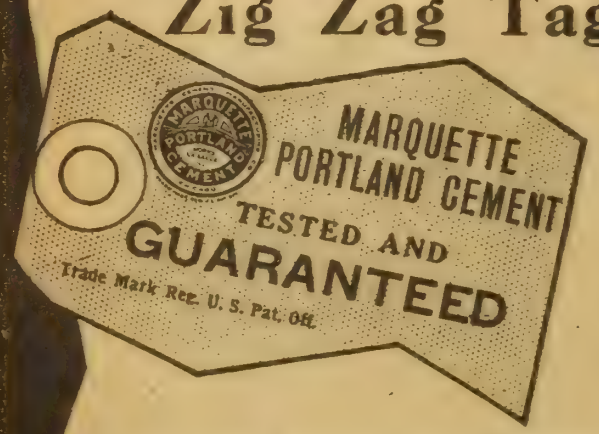

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CURRENT EVENTS

CHARLES E. HUGHES, of New York, and Charles W. Fairbanks, of Indiana, were nominated by the republican national convention last Saturday for the presidency and vice presidency, while at the same time Theodore Roosevelt, of New York, and John M. Parker, of Louisiana, were nominated by the progressives for the same high offices. Justice Hughes, who had not been an avowed candidate, immediately accepted the nomination, while Colonel Roosevelt immediately declined to accept, for the present at least, or until Justice Hughes can make his position plain on preparedness and the other big issues of the day in which Roosevelt is particularly interested. The race promises to be a three-party one, for the progressive national committee will meet again in Chicago on June 25th, at which time if Colonel Roosevelt persists in refusing to make the race a new progressive standard bearer (probably Victor Murdock, of Kansas, or Governor Hiram Johnson, of California) will be chosen in his stead. Justice Hughes was nominated on the third ballot, after it became apparent that the republicans and the progressives could neither unite on Roosevelt nor anyone he might name and that the favorite sons (prominent in the list being Sherman, of Illinois; LaFollette, of Wisconsin; Fairbanks, of Indiana; Cummins, of Iowa, and Burton, of Ohio) could not poll strength sufficient to beat Hughes. The convention nominated Hughes without knowing exactly where he stood on the big issues, but within an hour he had resigned from the supreme court and issued a statement coming out strongly for a protective tariff and ample national preparedness. He will enter into the campaign at once and is undoubtedly a strong candidate. Prior to being appointed to the supreme court, by President Taft, he was governor of New York for three years.

AS THE details of the recent sea battle between the English and the German fleets, in the North Sea, come in it becomes more apparent that the defeat was not the crushing one to the Britsh navy that it was first made to appear. According to late dispatches Vice-Admiral Beatty, of the British navy, with only a few ships at his disposal, fought the entire German high-seas fleet with his comparatively small squadron, exchanging shots at close range, and only the coming of night and a heavy mist just as the British battle fleet arrived saved the Germans. British naval experts gave this opinion of the battle and praised the daring and wonderful strategy of Admiral Beatty in attacking such a powerful enemy. Could Admiral Sir John Jellicoe have brought his dreadnaughts into battle an hour sooner, they hold, the German fleet would have been clearly and severely defeated. As it was it escaped under cover of darkness just as the British fleet arrived. While this is a crumb of comfort to the distracted Britons, the fact remains that Germany made a far better showing on water than it had ever hoped for, encouraging them until another battle is now almost a foregone conclusion, sooner or later.

LORD KITCHENER, England's greatest fighting man and secretary of war for Great Britain, was killed last week when the cruiser on which he was traveling to Russia, for an important conference with the czar, was destroyed in the North Sea, either by a floating mine or by a submarine. The loss is a terrific one to England, coming just as the Russians and the English were about to cooperate in a big drive against the Germans and Austrians. Along with Kitchener there perished most of the members of his personal staff, together with the officers and crew of the cruiser, a loss all told of some 500 men. It is to Kitchener that credit is due for the 5,000,000-strong army which Great Britain has put into the field since the outbreak of hostilities less than two years ago. When war broke out England had only a few hundred thousand trained troops, a mere handful compared with the number Germany and Austria pitted against them. With characteristic coolness and thoroughness Kitchener went about building up and drilling the immense army which the situation demanded, with the result that there are now millions in the field where before there were only hundreds of thousands. Kitchener was the idol of the British people so far as his fighting and executive qualities were concerned, and while his work may be carried on by others (the ones most prominently mentioned as his successor being the chief of staff, Sir William Robertson, or David Lloyd George) his death coming at such an inopportune time is a severe blow to Britain's chances in the great war. Kitchener had been in service for almost a half century, having secured his first taste for fighting by enlisting with the French in the Franco-Prussian war, in 1870. He saw distinguished service in Egypt and India and worked his way until he was the head and front of the British armed forces. He was a relentless fighting man, one of the really great soldiers of the last century.

THE republican national convention (the sixteenth of its kind) was held at Chicago last week, coincident with the progressive national convention (the second of its kind). Extreme lassitude, approaching almost to indifference, marked the opening sessions of the republicans, while extreme enthusiasm, approaching almost to frenzy, marked the opening session of the progressives. Seldom have the republicans gathered for such a purpose with a less clearly defined working plan in advance or with less enthusiasm attending the advent of noted party leaders. An air of funereal gloom characterized the opening session, at which Senator Warren G. Harding, of Ohio, delivered what was supposed to be the campaign keynote of speech, as temporary chairman. He pleaded for a forgetfulness of the breach of 1912 and a return to united peace, but his plea did not arouse much enthusiasm. Senator Harding was afterwards made permanent chairman and Senator Henry C. Lodge, of Massachusetts, one of the old wheel horses of the G. O. P., was made chairman of the important committee on resolutions. The keynote speech of the progressives was delivered by a noted social worker, Raymond Robins, acting as temporary chairman. William Allen White, of Kansas, George W. Perkins, of New York, and Gov. Hirman Johnson, of California, were among the most prominent men in the progressive convention.

THE democratic national convention is being held in St. Louis this week, with the renomination of President Wilson a foregone conclusion. The main fight is over the vice presidency, which is still in doubt. A very serious effort is being made to shelve the present incumbent, Marshall, of Indiana, the president's choice being said to be Newton D. Barker, of Ohio, his recent appointee as secretary of war. President Wilson spent a good part of last week writing the platform on which he will make the campaign for reelection. It is understood that the platform will point to the success of the administration in guarding the honor and interests of the United States in face of obstacles and at the same time keeping the nation at peace. The administration's championship against all belligerents of the rights of America and all neutrals on the high seas will be praised, with the statement that the results will be of great importance to American commerce. The Mexican situation will be referred to by praise of the president's action in refusing to allow the nation to be drawn into the internal strife raging in Mexico and of his prompt action in ordering troops across the border after the Columbus massacre.

The Wisconsin Farmer

THURSDAY, JUNE 15, 1916

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE FARMER AND THE CONVENTIONS.

IT IS difficult to estimate as yet just how much history was made in Chicago last week. Political conventions always are epochal to a certain extent. We either show our indifference to the fundamental principles of our republican form of government by remaining in a rut and accepting the instructions and the nominations of the bosses or else we make history rapidly by overthrowing the old order and inaugurating reforms which, in time, make for a bigger, better and more united country. I cannot say at this writing in which class of conventions the two held in Chicago last week will eventually find themselves.

Only one thing seems certain to me as I read the press dispatches from the convention city, and that is this: There is a growing realization that more attention must be paid, by all political parties and all candidates, to the interests of the farmer. With the possible exception of the laboring man of the city, the interests of no class of workers is being so seriously studied as the farmer's. That is why we find the republican platform, as adopted at Chicago last week, laying particular stress upon an effective system of rural credits and the extension of the rural free delivery system, to say nothing of a non-partisan tariff commission (which shall give the farmer the relief he has long needed from the rapacity and cupidity of the tariff-tinkering muddlers) and of equal suffrage, to which I believe most of the farmers of this part of the country are now firmly pledged. If the democratic convention is as awake to the interests of the farmers we shall enter upon a national campaign which can hardly fail to convince the entire nation that prosperity depends upon the farmer and that it is he, rather than any other one man, who must be considered when it becomes a question of bringing about the greatest good to the greatest number.

Personally, there is no plank in the republican party platform, adopted unanimously last week, which is more pleasing than the one which declares in favor of an extension of the rural free delivery system. We should not allow politics to decide this issue or to prejudice us one way or another, but there is no question in my mind but that the recent action of the authorities in this matter has been a serious mistake. Combining rural routes and expecting one carrier to cover fifty miles a day, the year around, regardless of weather and the roads, is a grave error which will seriously impair and even permanently cripple the efficiency of the R. F. D. service if persisted in for a long time. I hope the platform makers of the democratic party will take as firm a stand as the republicans have and will see to it that the farmer is enabled to get his mail regularly and the carrier to give stable, permanent service all the year around without killing his horse or wearing the life out of his automobile engine.

The platform adopted at Chicago last week declares in favor of "an effective system of rural credits." There is hardly a question before the nation today on which there is greater difference of opinion than this one of official relief to the farmer-borrower. Bankers themselves disagree as to the need of relief and as to the merits of the recently-passed legislation. Here is something we need to study scientifically, leaving all question of politics out of all consideration.

I was not able, because of the stress of business, to attend either the republican or the progressive conventions last week, but our editorial staff was well represented. I shall continue to discuss the issues as they are taken up by all the parties, not in the hope of making political capital therefrom, but with an eye single to the best interests of the farmers. We have an opportunity this year to make history as we have not had it in a half century. I hope our history makers will continue to consider the farmers' interests paramount. There is no better sign of the times manifest today, in my opinion.

A TALK ON TEMPER.

A DISTRESSING road accident occurred last week, and I want to use it as the text of a little talk on forbearance. A farmer, compelled to jump from the path of an automobile, lost his temper and hurled a bucket of corn, which he happened to be carrying, at the machine. The missile struck a little eight-year-old girl and broke her neck. The farmer is now in jail, charged with murder.

How many of us have lost our patience and even our temper leaping from the path of an onrushing motor car? There is nothing more delightful to me than the exhilaration of bowling along a good country road in an easy-running automobile; yet why is it so many motorists seem to think the possession of a car gives them the right to "hog" the whole road and to jeopardize the life and property of whoever is venturesome enough to dare get in their way? Why cannot all of us enjoy a moderate pace along a good road and realize that the man we are about to meet or to pass has just as much right to the road, and to life, as we have?

I do not want you to think for a minute that I condone the offense of the farmer who hurled the bucket of corn and hit the unoffending little girl, causing her death. He is guilty of manslaughter, at the least, and should be punished for his crime, although the moment before the motor car swooped down upon him he may have been the most law-abiding citizen in the land. No matter how sorely we are tempted, now and then, to take the law into our hands and deal summarily with motor speeders, nothing is more important than that we learn how to control our temper and to mete out justice equably and coolly. If there is anything more exasperating than a city man driving his motor car at breakneck speed through the country, killing chickens and dogs, and imperiling the lives of every other traveler on the road, I do not know what it is. Yet neither do I know of anything more important than cultivating a firm hold upon one's temper. The farmer who murdered the little girl in the car did not do so intentionally. He is probably grieving as much today as the mother who gave her life, yet he should be punished, not only for his own offense, but as a deterrent to the tempers of others who may read of his plight. The poet was right, beyond all question and argument, when he wrote:

> Of all bad things by which mankind are curst,
> Their own bad tempers surely are the worst.

GASOLINE IN WAR AND PEACE.

I HAVE already pointed out that the present great European war finds gasoline playing a most important part, notwithstanding the constant and heavy demand for American horses. In the end, the war may be decided on the ability of the contestants to secure the necessary gasoline supply, for this motive power is sending the heavy guns, the men and the supplies back and forth from one battle field and trench line to another as never before in the world's history.

The importance of gasoline in the present struggle is shown by the fact that England is already taking summary steps to conserve its supply, going so far, this week, as to issue orders prohibiting the running of all automobiles on Sunday, except in the most urgent cases. Here in the grain belt, where our country roads are ladened with pleasure riders on Sunday, we can readily understand how such an order will cut down the gasoline consumption and be a real saving of the national supply. Out of the million motor cars in the grain belt, it is conservative to estimate that fully 750,000 are driven every nice Sunday, with an average consumption of from five to fifteen gallons for each car. If the Sunday motoring habit has reached anything like this pretentiousness in England it is a serious drain, indeed, on the gasoline supply, and it is small wonder that the government has taken summary action to stop it. The success of the English arms in the field may depend upon a cutting down of the joy riding along hedge-lined English lanes.

While we are considering the importance of gasoline in war let us not forget how vastly more important it is in the necessary works and arts of peace. I have seen it figured that a single gallon of gasoline, intelligently used, will furnish power to milk 300 cows, mix thirty-five cubic yards of concrete, bale four tons of hay, plow three-fifths of an acre of land, move a truck fourteen miles and generate enough electricity to light a farmhouse for thirty hours. In view of which widespread usefulness to the man who tills the soil and is the real wealth producer of the world, is it not a shame, indeed, that so much gasoline should be used nowadays to no other purpose than to destroy life and to perpetuate the horrible murder which masks under the guise of international war?

USE AND ABUSE OF WILLS.

IF I MAY judge by the large number of letters received, many of my readers do not agree with me on the question of will making. Perhaps those who think my advice sound have not troubled themselves to write; it is quite noticeable, however, that by far the majority of those who have written cite incidents where wills thwarted justice rather than furthered it. Perhaps I cannot express the views of my numerous correspondents better than to quote this letter from Mr. E. E. Sisley, R. R. 1, Parkersburg, Iowa:

> My Dear Mr. Pierce:—In the article entitled "Have You Made Your Will?" I infer that you would advise all to do so. This is good advise if the will is a just one, but sometimes wills are made when he or she who makes them is sick unto death and surrounded by schemers who have laid plans whereby they will be benefited if the property is willed thus and so. The schemers are successful, the will is made; he or she who makes the will dies, the will is probated, the rightful heirs are deprived of what is justly theirs. In order to get what is rightly theirs, they must go into the courts or say to the schemers, "We will contest this will if you do not do thus and so, but rather than go into the courts we are willing to give you a certain amount," which offer is accepted by the schemers. They receive a sum of money which they would not have received if there had been no will made and the courts had made the distribution of the property according to law. I have persona knowledge of a case of this kind.

So many subscribers write to me in a similar frame of mind, I cannot blind myself to the fact that there is much opposition to will making. Are not these instances, however, the abuse of a system rather than the use? I think so. Strictly speaking, a man's interest in his property ends with his last breath; he cannot take it with him, it is only by the sufferance of the law that he is permitted to say what shall become of it after he passes on. That is the legal interpretation of the matter. There is another side that appeals to me, however, far more than this technically legal side. It is this: A man labors hard all his life; he works early and late; he is thrifty and abstemious; he amasses a competency; in his old age he finds he has not the time to do with his money what he planned to do when he was amassing it; has he not every right to say how the money which he earned and saved shall be expended, even to the extent of cutting off some of those who may have hoped to receive a large share of the estate? Perhaps something changed the tenor of his life in his early age, in later years his mind reverts to that incident and he names as a beneficiary the organization or society (church, lodge, or whatever it is) which played the leading part in the crisis of his early life. Shall that bequest be set aside because some individual feels himself slighted? There are two sides to this matter, as to all others.

There are few of us who have reached mature years who do not say, sometime or other in our lives, "I hope my boy never has to struggle as I did or put up with the hardships I put up with," and this thought is uppermost in our minds in making our wills. Yet were not those early struggles and hardships the very things which tempered our spirits and developed us into the men and women we now are? I am not arguing that every boy and girl should have to suffer, should have to slave; but is there not danger of reaching a period when our widespread farming prosperity may react on itself and breed up a race which will look down upon the pioneers who builded with brawn and blood and forget the credit due them for what they wrought so nobly?

I may be a bit old-fashioned, but it seems to me we owe such a debt to those who laid the foundation of our prosperity that they should have a say in how the prosperity should be passed around, long after they have gone on. That is why I favor will making, even though I agree with my numerous correspondents and admit that there are instances where wills disinherit the worthy and enrich the undeserving. But it is simply another case of the abuses not being sufficient to counteract the uses of a system, in my opinion. I acknowledge that many of the richest men of the country, men who are financial experts, do not agree with me on this. For instance, James J. Hill, who died a couple of weeks ago, did not leave any will, although his estate is worth fully $100,000,000. But for me, however, I very much prefer the making of a will in ample time and I continue to believe that this is good business policy for the average farmer.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Wisconsin Live Stock Shipments.

NEVER before has there been such a demand for Wisconsin pure-bred live stock. Recently The Wisconsin Farmer quoted well-known Kansas men who had visited the state as saying that 90 per cent of the demand for dairy stock in their state was for Holstein cattle, and a majority of those who wanted Holsteins preferred Wisconsin pure-bred stock. Reports from several of the live-stock associations in the state show that there is a good outside demand for carload lots of breeding stock. There is also a good state demand. Shipments have been made recently from some of the southern and eastern Wisconsin stock farms to points in the western and northwestern part of the state, and mention of some of these shipments has been made in The Wisconsin Farmer. We note that John L. Fisher, of Janesville, has recently shipped eleven pure-bred Durocs to Hershey, Penn., to the Hershey Stock Farm. This indicates that good hogs will sell as well as good dairy cattle. Wisconsin has been steadily gaining a more prominent place in the pure-bred live stock world, and it is coming time to reap some of the rewards. There is good stock coming on each year, and all that our breeders need to know is to let the prospective buyers in other states know where this stock can be found. The community association work is increasing larger shipments. Contrary to expectations there is not the surplus in Wisconsin this year that might have been expected following the foot-and-mouth disease quarantine. The demand existing at present is a harbinger of better prices and bigger profits for the Wisconsin farmer who will stick to the pure-bred game and be honest and square in his dealings.

Mr. Swoboda's Article.

IN THIS issue will be found a report of the annual meeting of the Holstein-Friesian Association, of America, written by Mr. F. G. Swoboda, agricultural agent for Langlade county, Wisconsin. Mr. Swoboda is keenly interested in the dairy development of Wisconsin. He has been acquainted with a number of dairy herds in the southern portion of the state and has been instrumental in purchasing and distributing good stock in Langlade county. Mr. Swoboda will be able to return to the farmers of Langlade county with a bigger conception of the value of the dairy cow and her possibilities. The Wisconsin Farmer was fortunate in being able to secure the services of Mr. Swoboda at the Detroit meeting and we are sure thousands of farmers and dairymen who know of Mr. Swoboda's excellent service to the state, will be glad to read his review of the national meeting in this issue. The Wisconsin Farmer is pleased to note from Mr. Swoboda's report that this state was well represented at the meeting and that almost 400 proxies from Wisconsin Holstein breeders were voted on the floor of the convention. Next year the annual Holstein meeting will be held in Worcester, Massachusetts, and the year following it will probably come west again. It may be possible to get this big meeting for Wisconsin in 1918.

Wisconsin Swine Week.

WITH the present record of 2,250,000 hogs raised on the farms of Wisconsin in 1915, with a value of about $20,000,000, the swine breeders of the state feel it is time to call special attention to the growing importance of the "porker."

The corn-belt hog has long held first place in the eyes of the nation, but within recent years the production of swine has increased rapidly on the dairy farms of the Northwest, particularly in Wisconsin.

To crystallize the idea of "bigger and better hogs" on Badger farms will be the purpose of the Swine Week, now being planned by a committee of the state's leading live stock exponents. At present it is thought best to hold the event at or near the time of the annual Farmers' Week held at the college of agriculture each winter.

While the main purpose of the convention of pork producers is to exhibit animals and make sales of attractive offerings, a carefully prepared program of addresses, demonstrations and conferences on problems of breeding, feeding and handling swine will be included as an important part of the week's events.

The committee in charge of the affair are: Andrew W. Hopkins, Wisconsin Live Stock Breeders' Association; E. H. Parker, Janesville, Wisconsin Duroc Jersey Breeders' Association; James Fisher, Eastman, Wisconsin Chester White Breeders' Association; M. Madson, Madison, Wisconsin, Poland China Breeders' Association; H. C. Taylor, Beloit, Wisconsin Berkshire Breeders' Association; G. C. Humphrey, animal husbandry department, college of agriculture, Madison.

War-Time Farming in Germany.

UNDER the title of "War-Time Farming in Germany," Mr. Harry C. Evans, a leading member of the recent Ford Peace Party, wrties most entertainingly on page 6 of agricultural conditions in Germany today, with the great war at its height. Mr. Evans had exceptional opportunities to observe the efficiency of the Germans in the matter of land cultivation and he tells his story breezily and convincingly. We advise all readers of The Wisconsin Farmer to turn to page 6 and read Mr. Evans' article. It is timely and authoritative.

Next week Mr. Evans will continue his story of German agriculture and the week after that he will deal with English farming conditions, and the cry of "back to the land," as it is sure to be taken up, in England, once this war is at an end. Mr. Evans is a trained newspaper writer and his series of three articles written expressly for The Wisconsin Farmer make the biggest feature of their kind ever offered by any farm paper.

Wisconsin's Clover Seed Crop.

HANDLING the clover crop for seed is one of the important farming operations confronting Wisconsin farmers just at this time, as experience has proven that great care should be used in handling so as not to waste seed in cutting, stocking and hulling. Mr. E. J. Delwiche, in our last issue, discussed the value of clover as a seed crop, considering that it produces a greater return per acre when compared with most other farm crops raised for market. June 15th is considered about the right time for cutting medium red in central Wisconsin; about a week earlier for the southern section and a week later for the upper counties. Alsike and mammoth are too late in maturing to permit cutting a first crop for hay, although some growers pasture for a few weeks to retard growth. This practice Mr. Delwiche does not recommend under average conditions, but on the other hand, medium red, as a rule, furnishes a hay and a seed crop. Growers who pasture the first crop of medium red instead of cutting for hay will find it advisable to run the mower over the field afterwards to give the plants an even start and also to cut down weeds.

Mr. Delwiche points out that the largest yield of seed from the second crop is usually secured by cutting the first crop when about two-thirds of the plants have started to bloom. Weather conditions may affect the yield, but as a rule the yield of seed increases in direct ratio with earliness of cutting. This is borne out by this experiment at the Marshfield station in Wood county:

Date of cutting first crop	Yield of cured hay in first crop	Yield of seed in second crop
June 15	2,650 lbs.	240 1-3 lbs.
June 25	3,855 "	196½ "
July 5	3,976 "	19½ "
July 15	3,520 "	4 "

The seed crop of mammoth and medium red should be cut when the heads are all brown, with the seed firm and shiny. When cut before it is well matured there is always a large proportion of shriveled seed. On the other hand, if cut too late, some of the heads are likely to break off and reduce the yields of seed. Alsike is cut when the heads are brown and the seed in the dough stage. Too late cutting means a loss by shattering.

Mr. Delwiche, in discussing the need of great care in handling the seed crop, says:

Care must be used in handling the seed crop; otherwise much of the seed is likely to be wasted. A clover seed windrowing attachment, costing from $12 to $15, should be used when cutting with the mower. Such an implement not only saves seed, but effects a great saving of time. It takes three men to take clover out of the way of the team as fast as it is cut, when an attachment is used. The practice of raking up clover with the horse rake is extremely wasteful of seed. If the crop is well ripened, in order to avoid shattering, it should be cut in the early morning or evening when damp with dew.

Clover for seed should be handled as little as possible. Uusually the crop can be left to cure in windrows and turned just before hauling. In wet weather it is often necessary to lift the wet clover out of the stubble with a fork so as to help in drying. The practice of leaving the clover lie in the field for several weeks after it is cured, is bad from two standpoints at least. Much seed is likely to spoil through contact with the damp ground, and the clover straw and hulls will become rotted and of little value for feed.

Clover for seed should be properly sheltered from the weather since it does not shed water, but absorbs it like a sponge. Unless stacks are well covered with either boards, canvas, or even marsh hay, there is bound to be much loss of seed in a wet fall. A well-enclosed shed or barn is the best place in which to store clover before hauling.

An inspection will determine whether a crop of clover should be left for seed. With a full stand, well headed, approximately one bushel of seed per acre can be expected with an average of fifteen seeds per head. Clover may be hulled as soon as freezing weather sets in in the fall or at any time after it has had time to go through a sweat. Care in cutting and handling just at this time, though, will do much to increase the yield of seed.

Wisconsin Boys and Girls at the State Fair.

BOYS' and girls' club work, which includes corn growing, calf and pig raising, school contests; road work, tomato growing and canning; sewing, etc., has already become state wide in importance, but the recognition to be given this work at the state fair at Milwaukee this fall should make it of even greater service. Something like $1,500 in premiums in addition to over $6,000 worth of special prizes have been offered for the boys and girls' department and it is believed a thousand boys and probably 300 girls will compete.

No department of the fair this year, aside from the horse, swine, cattle and sheep department, promises to develop more interestingly than the boys and girls' department. Mr. T. L. Bewick is superintendent and public-spirited men have lent a helping hand by offering pure-bred calves, money, etc., to encourage the work. The department was first inaugurated last year. It will be located this year in the new grand stand, work on which is now under way.

The Wisconsin Farmer is pleased to see this recognition which the state fair is according the boys and girls. It is common knowledge what the community breeders' associations are doing by interesting the boys in fine live stock through judging and essay work. Many counties are engaged in corn contest work and other endeavors of this nature, and there is no doubt but that it all makes for a better agriculture and a better state. We hope to see this work broadened; to see it gain in importance and recognition of it by the state fair officials should prove a great encouragement. Of course, this is just one of the new efforts to make our fair a greater fair concerning which we will be pleased to make announcements from time to time.

Wisconsin Live Stock Breeders' Directory.

THE annual breeders' directory of the Wisconsin Breeders' Association is off the press. This book lists nearly 1,500 members in good standing. These members represent practically every county in Wisconsin, and this book is the best available reference at this time showing the state's live stock interests and giving the location and addresses of breeders.

In addition to the lists of farmers and breeders featuring one or more special kinds of live stock, arranged by counties and breeds, the pamphlet contains lists of community breeders' associations in the state, information relative to the numerous national registry associations, officers of the Wisconsin stockmen's organizations, and a handy digest of laws of importance to animal husbandmen. The directory with its seventy pages of up-to-the-minute information, compiled by Raymond Baker, assistant secretary of the association, should be in the hands of all progressive stockmen in the state. Copies may be obtained as long as the supply lasts by writing to the home office at Madison.

The Wisconsin Live Stock Breeders' Association was organized in 1902. Its first officers were: George McKerrow, Pewaukee, president; F. W. Harding, Waukesha, secretary; Charles L. Hill, Rosendale, treasurer. The original board of directors were: J. Q. Emery, former state dairy and food commissioner; W. L. Carlyle, now dean and director of the Oklahoma Agricultural Experiment Station; W. L. Houser, Mondovi, former secretary of state, and George Wylie, Leeds, former state senator.

The present officers are: Arthur Broughton, Albany, president; Earl Roberts, Oconomowoc, vice president; L. P. Martiny, Chippewa Falls, treasurer; Andrew W. Hopkins, Madison, secretary, and Raymond Baker, Madison, assistant secretary.

Our New Serial Starts.

WE COMMENCE the publication, this week, on page 9, of our new serial, "Told in the Hills," by Marah Ellis Ryan. This is a thrilling story of the West, when the West stood for romance and red blood and all manner of heroic deeds. We confidently believe that the readers of The Wisconsin Farmer will find every chapter of "Told in the Hills" so full of heart interest that it will surpass any other serial we have printed and will rank in their minds as one of the very best stories they ever read.

We propose to print large installments of this new story so that its publication will not consume more than two or three months. This will give every member of the farm family splendid reading matter throughout the entire summer, making it possible for us to open up the autumn reading campaign with still another good story, which we will annonce in due time.

We earnestly recommend to all our readers that they turn to page 9 and read the first installment of this new story. They will find it well worth their time, for we guarantee the story to be a first-class one in every respect.

In and Around Wisconsin

The Langlade County Fair will be held September 19th to 22d the week following the Wisconsin State Fair.

The H. J. Heinz Pickle Company has decided to operate its factory at Washburn this season, and a number of contracts with farmers have been made.

Nicholas Mellum exhibited in Dodgeville, Wisconsin, last week a bunch of alfalfa of the first cutting twenty-seven inches in length. Mr. Mellum has between six and seven acres.

Winnebago county, Illinois, farmers, under the leadership of County Agent Ten Eyck, will make an auto trip through Green county, Wisconsin, June 16th. The purpose is to study some of the dairy methods of the successful farmers of Green county.

The summer meeting of the Holstein breeders of Walworth county will be held June 20th, according to Sec. L. G. Rockwell, at Lake Lawn, Delavan Lake. John B. Irwin, of Minnesota, who developed the champion Holstein cow, Duchess Skylark Ormsby, will be the speaker of the day.

Sec. L. LeRoy Larson, of the Portage & Waupaca County Guernsey Breeders' Association, informs The Wisconsin Farmer that the summer picnic will be held June 20th in Gordon's grove at Nelsonville and that a record-breaking attendance is expected. J. L. Tormey, of Madison, and H. D. Griswold, of West Salem, will be the speakers

H. M. Scott, of Waldo, was chosen president of the Wisconsin Cheesemakers' & Factorymen's Association at the meeting in Plymouth, Sheyboygan county, recently. About a hundred members were present. H. A. Kalk, of Sheboygan Falls, was chosen vice president; H. A. Chaplin, of Plymouth, secretary; J. H. Peters, of Sheboygan Falls, treasurer; and A. A. Bettner, of Adell, director.

A miniature model farm in which the buildings illustrate the use of lumber preserving solutions and fireproofing treatment of timber, is being built at the manual arts department of the University of Wisconsin in conjunction with the forest products laboratory. This exhibit will later be used by the National Lumber Manufacturers' Association and will be carried to the chief cities of the country and shown.

James Van Etta, of Lima, was recently re-elected president of the Rock County Live Stock Breeders' Association. Other officers for the coming year are George Hemingway, Hanover, vice president; J. I. Greene, Clinton, treasurer; J. H. Fisher, Evansville, secretary; J. F. Kemerer, Clinton, and Ira Inman, Beloit, were named members of the executive committee. Fifty breeders attended the meeting, which was held at the Y. M. C. A. in Janesville, and was followed by a banquet Addresses were delivered by A. W. Hopkins, agricultural editor, University of Wisconsin, and H. C. Taylor, a stockman of Green county. Short talks were given by J. A. Craig, L A Markham, both of Janesville, and J F. Kemerer, of Clinton.

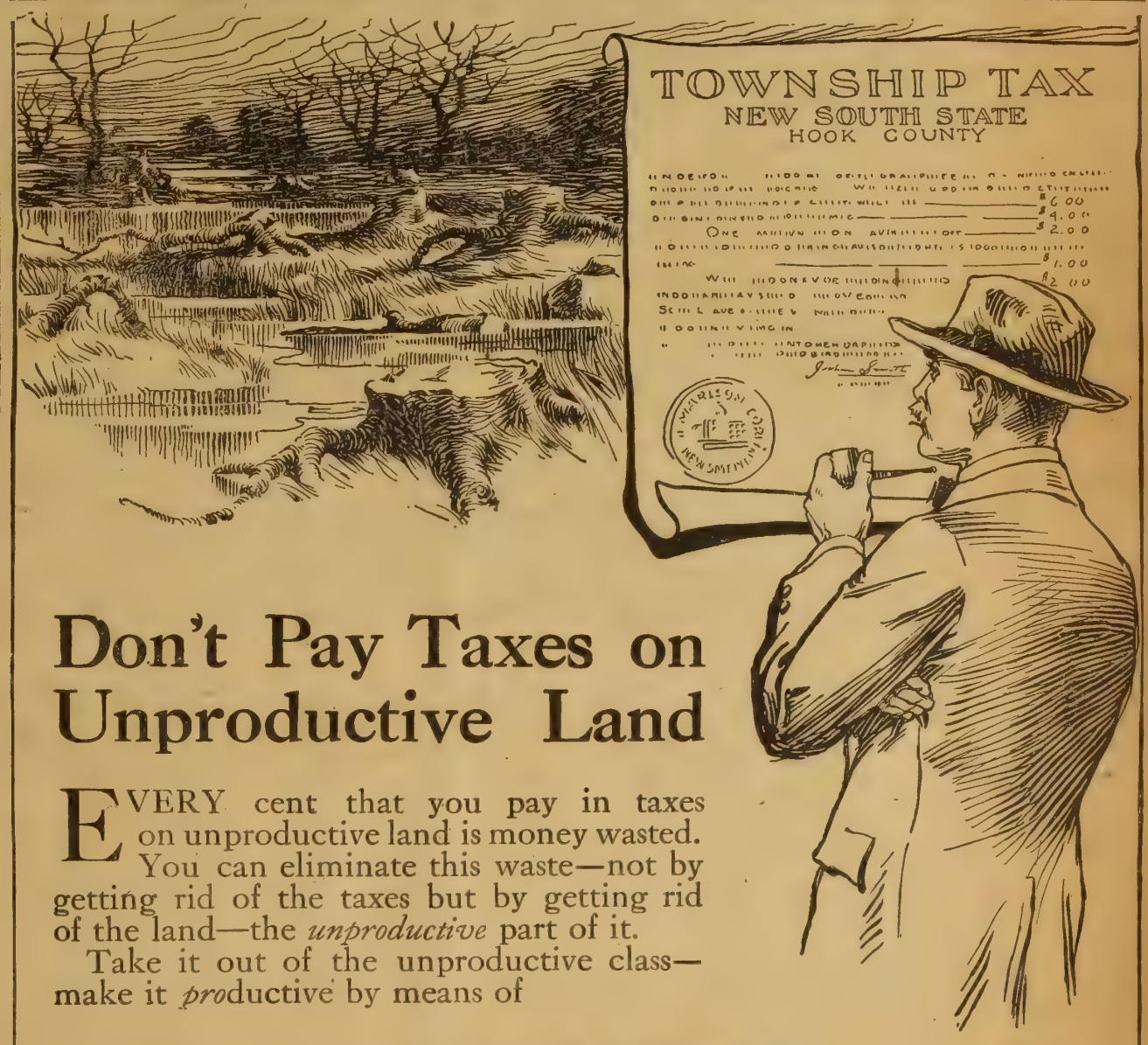
Minnesota has 622 co-operative creameries out of a total of 850. There are 189 individually owned creameries and thirty-nine centralized plants. A canvass made covering the month of March, showing that the co-operative creameries of the better grade paid 40 to 42 cents a pound for butter fat. A few of the co-operative creameries which are poorly supported paid as low as 30 cents. In each case where the price paid to farmers was low, the average production of butter was as low as 100 pounds a day. Many co-operative creameries making 200 to 300 pounds of butter a day paid 35 to 39 cents a pound for butter fat. Farmers who shipped cream, according to this statement, received an average of about 35 cents. The co-operative creameries which paid as high as 42 cents a pound for butter fat, were producing the highest amount of butter. The survey in brief, indicates that co-operative creameries pay the farmer the best price provided all the farmers will work together and stand by their own creamery. Even a co-operative business cannot be a great success where support is divided.

County Representative G. R. Ingalls and the superintendent of schools of Eau Claire county, Miss L. E. Johnson, have recently completed a census of the number of silos in Eau Claire county through the teachers and pupils of the rural schools. On January 1, 1915, there were 343 silos in the county. On January 1, 1916, there were 444 silos, or an increase of nearly 30 per cent during the year. The rural teachers took a great deal of interest in the work, and the count was made in a very short time.

A Colorado brewery, knocked out of business by the prohibition law, has been turned into a malted milk plant. An Iowa brewery which got the same jolt, is now making a success as a creamery.

C. P. Bull, of the division of agronomy, University Farm, St. Paul, has issued a warning to farmers to store all of the seed corn which they may have left over. This warning is due to the lateness of the present season. While the seed corn situation may be all right if we have a late summer and good fall season, it is best to be on the safe side. There are, however, not a very large number of farmers who will have seed corn to hold over.

Oconto county, Wisconsin, has organized its first cattle breeders' association. Fourteen Holstein breeders met recently at the Lehner & Lehner law office in Oconto Falls and formed an organization with the following officers: President, E. B. Dutton, Abrams; vice president, Leonard Fields, Spruce; secretary, Adolph P. Lehner, Oconto Falls; treasurer, A. L. Kieffer, Lena; directors, George Cota, Chase; Ira Telford, Little River; William Siegler, Oconto Falls; C. A. Maas, Lena; Charles Leemon, Chase. All breeders of Holstein cattle have been invited to join the association.



Don't Pay Taxes on Unproductive Land

EVERY cent that you pay in taxes on unproductive land is money wasted. You can eliminate this waste—not by getting rid of the taxes but by getting rid of the land—the *unproductive* part of it.

Take it out of the unproductive class—make it *pro*ductive by means of

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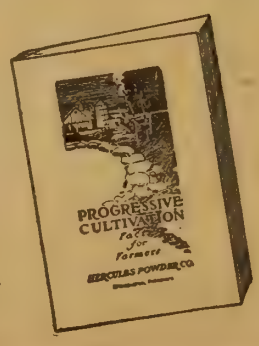
If you own land rendered useless by water, stumps, rocks, or by all three combined, Hercules Dynamite will clear it at the least possible expense.

If you have ever run a drainage ditch, pulled stumps, or removed rocks by hand power you know the amount of work involved. Hercules Dynamite will do the same job, and do it more thoroughly, at a small fraction of the cost in time, labor and money.

It will pay you to write us for an instructive and interesting book called "Progressive Cultivation". It is sent free on request. It treats fully not only the question of land clearing by means of dynamite but also subsoiling, tree planting, irrigation work, etc. Write for your copy today. Please use the coupon opposite.



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War-Time Farming in Germany.

Harry C. Evans, a Prominent Member of the Ford Peace Party, Writes His Observations of Agricultural Conditions in Germany, and Gives an Interesting Insight Into German Efficiency and Strength.

WHEN the German states were federated there commenced the greatest campaign for efficiency along all lines of human endeavor ever known among men, and the results of that campaign have been felt the world over. And in no line, not even in militarism or in the wonderful school system inaugurated, did the German thought toward efficiency run stronger than along the agricultural line. This thought was expressed by Bismarck, who said nearly fifty years ago:

> The German empire will collapse without firing a shot when German agriculture collapses.

And by another statesman of that early day in these words:

> Germany's armaments by land and sea and her industrial and commercial development are pointless and hopeless from the national standpoint except on the basis of Germany's national ability to feed her own population.

And again by Emperor Wilhelm:

> German agriculture must and can feed the whole of the population of Germany.

This language indicates not only the voice but the very heart of Germany.

A large portion of the very heart of Germany is a sandy plain. It reaches from the center of the empire north to the Baltic sea, from the Russian frontier, on the east, west to Holland, and comprises 100,000 square miles. Yet so efficient is the work of the German government and people, and so thorough the belief that every available inch of soil must be cultivated, this entire plain has been redeemed and today is an exceedingly valuable district.

Germany's financial and customs policy is based on the assumption that the agricultural population is most important to the welfare of the government. Agriculture is protected even by measures which bear hard upon the commercial and industrial population. The agricultural population, which is less than one-third of the total population, is the real backbone of the government. The Agrarian is one of the leading political parties. It is the party of the landowners. It is the kaiser's favorite party and this party usually supports the kaiser in all that he wants to do. The Agrarian is the conservative or the "stand pat" party of Germany. In return for their political support the kaiser favors the agriculturalists. They secure practically all the federal appointments. The government owns the railroads and if an agricultural district desires a spur of road into its territory it gets it. The government gets the profits from the railroads. In fact, they are the most important source of national income. This enables the government to levy a low rate of taxation and the lowest rate is upon land and money invested in land. If agriculture needs assistance the railroad rates are reduced to farmers. Thus are the farmer's products sent to market at minimum cost. One part of the country has never been discriminated against by railroad rates, as has been the practice in our country. The farmers and shippers have not been compelled to endure years of litigation in courts to secure fair rates, as our farmers and shippers have. No German business concern has ever been favored by rebates. The government has canalized the rivers and thus has further reduced the cost of transportation of farm products and also added to the source of national revenue.

HARRY C. EVANS.

Mr. Evans accompanied the Ford peace party which recently visited Europe in an effort to end the war and bring about international peace. Mr. Evans was one of the leaders of the party. He is a skilled newspaper observor and has prepared a series of three articles for this paper, giving his observation of agricultural condition in the nations now at war and interesting information, gathered first-hand on his recent visit, as to the cause and possible effect of the present great struggle. This first article deals with Germany; the other two will take up England and other nations. The second will appear next week.

The Agrarians are in favor of a high tariff. A heavy duty is laid on farm products, not so much for revenue as to protect the farmers from foreign competition. The tariff on live stock is practically prohibitive.

The political party of the Agrarians, or farmers, is as thoroughly organized as the German army or the German public schools. Notwithstanding the fact that they poll less votes than the social democrats and have a smaller representation than the social democrats in the Reichstag, nevertheless they are the most powerful political organization in Germany.

Two examples will suffice to show the activity of the Agrarians in German politics: At the time of the initiation of the German navy the landlords opposed the navy because they thought it would open up the way for imports of live stock and farm products into Germany. Their shibboleth is that Germany shall feed and support her own people. Similarly the Agrarians have opposed the canal schemes which connected the rich agricultural areas in eastern Germany with the industrial west and thus to the North sea. They think the canal will make it possible for the eastern provinces to be flooded by foreign produce shipped by canal.

Inasmuch as the government offices, including the civil service and places at court, are largely occupied by members of Agrarian families, who constantly watch agricultural interests, all other classes are officially discriminated against in favor of the farmer.

If there has been a crop failure of certain products, such as fodder for cattle, and the farmers are compelled to buy this particular product, the tariff is reduced or taken off for their benefit. There has been a long fight to introduce inheritance taxes, but inasmuch as the farms descend from father to sons the farmers have been able to defeat this proposition. In general, it may be stated that agriculture occupies a privileged position in Germany. This privileged position is partly due to remnants of feudalism and partly due to political influence of the farmers, but in the main it is based upon the theory that the agricultural population is the backbone of the empire and that, to quote the emperor, "Germany's agriculture must and can feed the whole population of Germany."

The amount of land under cultivation is about 80,000,000 acres. About 4,000,000 acres is divided into small holdings of about five acres each. About one-third of these small holdings is vine-growing land in southern Germany; another third is garden land. The next largest holdings, up to ten acres, are vineyards and corn lands. The middle-sized holdings, up to fifty acres, still show many vineyards and corn lands. Of the farms of 250 acres one-third is in beet sugar, one-third in corn and the balance in vineyards and roots. The farms of 300 acres and more are one-half planted to sugar beets and one-fourth to corn. These larger farms include about one-fourth of all the agricultural lands in Germany and farms in the neighborhood of 250 acres make up one-third of the total area of farm lands.

There are 2,000,000 land proprietors and 130,000 renters. There are 3,000,000 farm laborers, that is, "hired men." The condition of the farm laborer has been much improved in recent years, yet there is still much complaint of their maltreatment, low wages and abuses in connection with the electoral votes. The vote in many of the states of Germany is based on prop-

The German army plows the fields for the peasants of France and Belgium and thereby maintains the agricultural production of the land it has captured and now occupies. Herewith is shown a team of fifty-two plows at work in French territory held by the Germans.

erty holdings. Every man can cast one vote for a member of the Reichstag and he can cast additional votes in proportion to the property he owns. In one parliamentary district in Prussia on man owns so much property that he casts more votes than all the other men in the district.

The building up of the German industrial system has attracted many men from the farms, and, therefore, has compelled the landlords to be more considerate toward the farm laborers. A hundred years ago over 80 per cent of Germany's population was agricultural. Today less than 30 per cent is occupied by agriculture. While Germany has made faster strides in agriculture than most nations, she has outdistanced them all in her manufacturing industries. So it is that the drainage of labor from the farms to the towns has produced much better conditions among the farm laborers. Labor organizations have made but little progress in the country.

The average wage paid to the farm laborer is about 50 cents a day. A farm laborer whose wife also works in the field, and she usually does, can make an income of about $200 per annum. To this is to be added their housing and some dairy and garden produce.

When war broke out German agricultural experts agreed that an increase of 15 per cent in cereals and 5 per cent in meat was all that was necessary for Germany to feed her own population. That this deficit has been made up since the beginning of the war is evident. It has been done in

The bread ticket issued to Mr. Evans in Berlin, four coupons being torn off for two rolls.

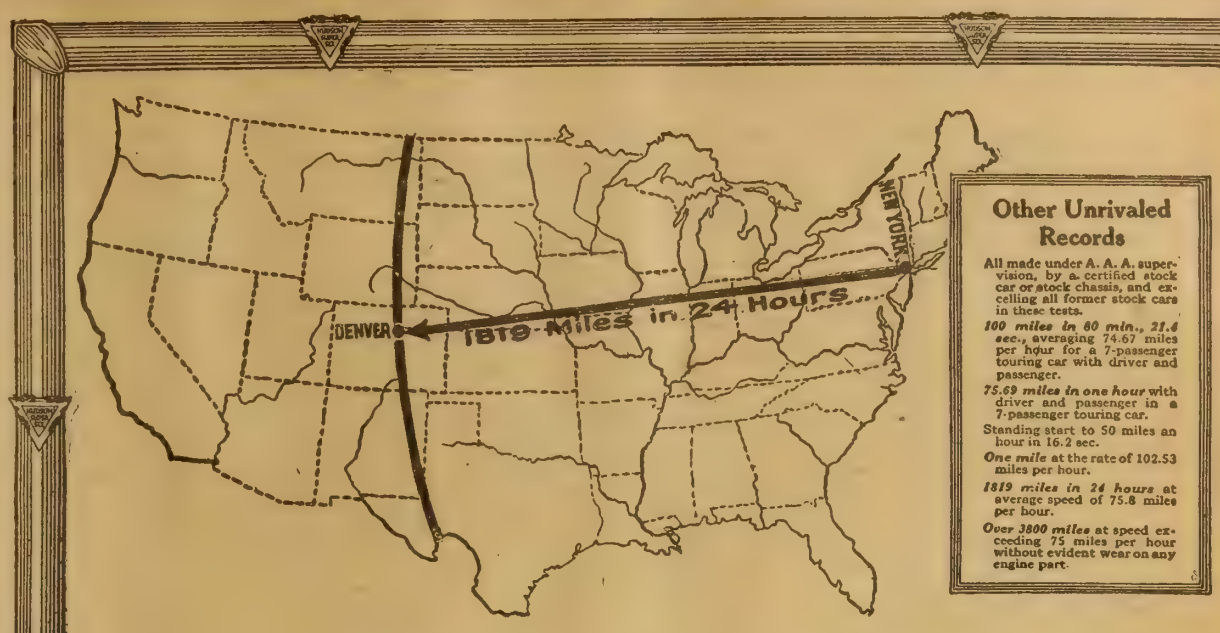
two ways. First, by an increase in the area of cultivated lands. I observed this increase in my travels through Germany. The land is cultivated clear up to the railroad tracks on either side; practically every front door yard in all the villages is under cultivation; in some of the larger cities I saw what had been extensive lawns about beautiful homes under cultivation; many of the graveyards have been plowed and planted to garden truck. The roads in Germany are not more than twenty feet wide, giving a saving to the farmers of thirty feet against the fifty-foot road in Iowa.

The second way of making up the deficit has been by saving. Two days out of each week no one, not even the kaiser, can buy any meat, and the amount he can buy on other days is limited. No one, from kaiser to peasant, can use more than five ordinary rolls of bread in a day. Bread tickets are issued daily to everybody in the hotels and cafes, and the amount of flour or meal that one family may buy per week is limited. Tickets are also issued for sugar, coffee and other necessities. I stopped at the Kaiserhoff Hotel as I passed through Berlin. I took one meal at this hotel. When I registered I was given a full day's bread ticket. Each ticket has ten coupons, and it takes two coupons to get one roll. At dinner I produced my bread ticket and ordered two rolls. Four coupons were torn off. The reader will find on this page a photograph of the balance of that bread ticket, showing six coupons remaining, which would have entitled me to three additional rolls that day. The ticket would have been taken up next morning had I remained and I would have been furnished with a new ticket for that day.

From these two sources, that is, the increased acreage and the saving, the observer is led to believe that the deficit has fairly been made up and that Germany today is producing sufficient foodstuffs to feed her people. This fact is tremendously important when we realize that England has established a blockade about Germany that prevents the importation of foodstuffs. Germany has conquered vast areas of farm territory during the war. She has all of Serbia, practically all of Belgium, a strip seventy miles by 200 miles of France, and she has driven a sheer 350 miles due east into the heart of Russia, and this Russian strip is 500 miles north and south. Elaborate preparations have been made by Germany since this territory was captured to farm it this year. It is now being prepared and seeded under the direction of German officials. The natives that are living in the captured territory will be assisted in this work by prisoners captured by Germany. There is no doubt in my mind but that the German army will have ample foodstuffs until the end of the war. If anyone is to suffer it will probably be the two and a half million prisoners Germany has captured and the inhabitants of the captured territories.

German agriculture perhaps was never maintained at a higher pitch than it will be this year, and, notwithstanding the fact that practically every young man has left the farms for the trench line, there will be no neglect of the farms. The German women know as much about farming as do the men. They have always worked in the fields. There are 400,000 unmarried women in Germany and many of these are field hands. These women and the prisoners will undoubtedly produce the greatest crop this year that Germany has ever known. In February I saw many women at work in the fields with ox teams. Even that early in southern Germany there was considerable plowing going on. I saw many women with ox carts scattering fertilization. The matter of fertilization and conservation of the soil and other details of farming in Germany will be treated in a subsequent article.

On the big farms, particularly those devoted to sugar beets which afford seasonable work, over 700,000 foreign laborers come into Germany to help



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All made under A. A. A. supervision, by a certified stock car or stock chassis, and excelling all former stock cars in these tests.

100 miles in 80 min., 21.4 sec., averaging 74.67 miles per hour for a 7-passenger touring car with driver and passenger.

75.69 miles in one hour with driver and passenger in a 7-passenger touring car.

Standing start to 50 miles an hour in 16.2 sec.

One mile at the rate of 102.53 miles per hour.

1819 miles in 24 hours at average speed of 75.8 miles per hour.

Over 3800 miles at speed exceeding 75 miles per hour without evident wear on any engine part.

Hudson Super-Six Sets New 24-Hour Endurance Mark

Fastest Time for Such Distance ever made by a Traveling Machine

No man today—if he knows the facts—doubts the Super-Six supremacy.

At first the truth seemed like a romance. Think of one new invention, applied to a light six, adding 80 per cent. to its power.

Then official records began to pile up, certified by the A. A. A. The whole motoring world then had to concede this the greatest motor built.

But many men asked, "What about the endurance? Can a motor so flexible, so speedy, so powerful, stand up in years of road use?"

So we asked Ralph Mulford to take a stock Super-Six chassis and, under official supervision, show the world its endurance.

All Records Broken

He took a Super-Six stock chassis—certified by A. A. A. officials.

It had already been driven over 2000 miles at speed exceeding 80 miles per hour.

It had made a mile at Daytona at the rate of 102.53 miles per hour.

And he drove that car 1819 miles, on Sheepshead Bay track, equal to the distance from New York to Denver—in 24 hours of continuous driving—at an average speed of 75.8 miles per hour. At the end of that test—after nearly 4,000 miles of record-breaking strain—the car, when officially examined, showed no appreciable wear.

How Much Endurance Has It?

It will be many years from now before we can tell you how long a Hudson Super-Six will last. But the records we cite cover the greatest strains a motor car ever met. Many a great engine has gone to pieces under far lesser strain. Years of ordinary driving would never tax a motor like those thousands of miles of speed tests.

Yet the wear on the Hudson Super-Six was almost nothing. Certain it is that no man has ever built a traveling machine to compare with this car in endurance.

Greatest Endurance Proved

That was the last question—this one of endurance. In all other ways it has long been evident that the Super-Six stands supreme. Never has a motor of this size shown anywhere near such power. Never was an engine made to match this in smoothness. Never has a stock car recorded equal performance—in hill-climbing, quick acceleration or speed.

Handsomer cars have never been shown. Finer engineering is simply unthinkable, with Howard E. Coffin at the head of this department.

You are getting the car of the day when you get the Super-Six. Every man who knows the facts knows that. And, in view of our patents, rivalry is impossible.

No Need to Wait

It is natural to say, "Let us wait and see," when we meet such radical advancements. We think that nothing can excel in so many ways without falling behind in one.

But not one fact about the Super-Six is left unproved today. Not in one respect has its performance been matched. Not in any way has a rival motor been made to compare with this.

There is no need to wait to get Time's verdict on the Super-Six. The records prove the Super-Six supreme. A half-hour's ride without those records would convince any man of the fact.

Thousands of these cars are now running. You will find them in every locality. And every owner will tell you that he never meets a car to compare with his, in looks or performance.

These are things to consider when you buy a car.

Phaeton, 7-passenger, $1475 Roadster, 2-passenger, $1475 Cabriolet, 3-passenger, $1775
Touring Sedan $2000 Limousine $2750
(Prices f. o. b. Detroit)

HUDSON MOTOR CAR COMPANY, DETROIT, MICH.

in the harvest. The wages paid these laborers are from 50 to 75 cents per day for the men and about 35 cents for the women.

Russia, the most productive country in the world, is so handicapped for the want of railroads that it is impossible to transport her products from one part of the country to another. Russia produces one-fifth of the cereals of the world today and corn is rotting in Siberia and selling at fabulous prices in Petrograd. There is but one railroad, and that a very poor one, out of Siberia to the markets of the world. Not so with Germany. In no country is the cost of inland transportation cheaper. The soil of the different states of Germany is varied and many states produce a cereal that is impossible to be produced in another state. There is, therefore, much interchange of products. The mileage of railroad to the area is very large and in addition there is the canalization of rivers and construction of artificial waterways. All this makes transportation between states very cheap. These improved methods of transportation are controlled and directed by the government in the interests of agriculture. In addition, various other schemes are devised for reducing the middleman's profits and for connecting the producer directly with the consumer.

The government is concerned not only in increasing products but in cheapening the production. One of the most important things relative to this is the improved machinery for farming and the developing of electric-driven agricultural machines; also the increase in the use of steam machinery. The number of steam threshing machines in Germany is now one-half million and there are thousands of steam plows.

Another institution benefiting the farmer is the co-operative societies. There are nearly 30,000 such societies connected with agriculture, with over 4,000,000 members. There are over 3,000 co-operative dairys, with 300,000 members. These cut out the profits of middlemen and commission men.

The value of the annual agricultural products of Germany is roughly estimated as follows:

Dairy products	$ 720,000,000
Sugar	115,000,000
Cattle and by-products	1,000,000,000
Grain and other products	1,000,000,000
Total	$2,835,000,000

Thinning Apples.

This month is "apple-thinning" time in Wisconsin. Orchardists in the state whose trees have experienced normal conditions this season will find it advisable to take off the over-abundant fruit. The time for doing this with the greatest success is after the "June drop" or early apple fall, which will soon be due.

The reasons for thinning apples are obvious. Under favorable conditions apple trees frequently "set" more fruit than can possibly mature to good advantage. This has been the case in most Wisconsin orchards this season, although all varieties have not been equally fruitful. If left alone, trees with too many "sets" would eventually bear an inferior product, and besides this their future producing power would be injured.

Bigger and better apples usually come from careful thinning at the right time. While the labor item is considerable in large orchards, it must be remembered that it is at least just as easy to pick apples at this time of the year as at harvest time. Because the crop is sure to be more uniform in quality and more nearly free from blemish, the cost of grading and packing is greatly reduced. Besides, the enhanced commercial value received for the better fruit will usually make the thinning operation highly profitable.

Some hints about thinning apples are given by George Potter, of the horticultural department, Wisconsin College of Agriculture, as follows:

The fingers or an ordinary pair of thinning shears and a ladder are all that are necessary with which to do the work. Care must be taken when picking off the fruit not to break off the spurs, or loosen other apples, which at this stage of their growth are usually about one-half to three-fourths of an inch in diameter. The shears will do a cleaner and safer job than hand thinning, but it takes more time.

Remove all apples at the ends of branches.

Whenever there are two or more apples on the same spur, it is well to remove all but one of them.

If the spurs are too close together, all the apples should be removed from some of them, so that no two apples will be within four or five inches of each other on the tree. For the larger sized apples on a tree, or the larger varieties, this distance may be increased to eight or ten inches.

In no case should any but the normal fruit be left to develop. Deformed, wormy, scabby apples should be removed. Next fall's satisfaction will pay for the extra trouble.

Wisconsin Land Clearing Special.

The Wisconsin Farmer is in receipt of a letter from Mr. Carl Livingston, in charge of the land clearing special train which is still touring Upper Wisconsin. Mr. Livingston advises us that the demonstrators have gotten down to the work in earnest and are clearing land much more rapidly than they were able to do at the first two or three stops. Most of the old timers in Upper Wisconsin are even admitting that they are learning a great deal from the demonstrations. The crews are able to clear land just about twice as fast as they did the first week. This proves that even the experts can learn by practical experience. Upper Wisconsin settlers are indebted to those who have made this land-clearing demonstration work possible, and we have no doubt more good will be accomplished than by any single activity of the state in the past year.

Farmers' Picnic at Onalaska.

More than 300 men, women and children representing farmers and business interests of La Crosse county gathered together Saturday, June 3d, on the beautiful grounds of the county agricultural school at Onalaska for the purpose of getting better acquainted, hearing good music and listening to interesting talks. It was the farmers' and business men's picnic day. The day was ideal, and not until late in the afternoon did the rain stop the ball game which ended ten to twenty-one in favor of the farmers.

The program was as follows:

11:15 a. m. C. P. Norgord, Commissioner of Agriculture, "The Business Man's Interest in Farming."
1:00 to 1:30 p. m. Music.
1:30 p. m. A. J. Glover, editor of Hoard's Dairyman, "How the Farmer May Benefit by Organization."
2:30 p. m. Baseball game, Farmers versus Business Men.

The West Salem Orchestra furnished music throughout the day.

Wisconsin Crops Coming Well.

Season a Little Late, But Small Grain Is Good, While Meadows and Pastures Are Excellent---Live Stock in Fine Condition.

Bayfield County.—Weather is too cool and wet for planting corn, but the crop is nearly all in. Most of the early potatoes are planted. Oats and spring wheat look good. Meadows are in good condition, especially the newly seeded clover. The acreage of strawberries planted this spring will be increased, in this locality, as much as 30 per cent and prospects are good for a splendid crop of berries. Apple and cherry trees are loaded with bloom. Cows are producing well on account of good pastures, but we need warmer weather.—E. C. Stevens.

Buffalo County.—Oats and barley are coming on in fine shape and there is every prospect of being a full crop. Corn is backward on account of wet weather and a few farmers are still planting. Meadows are excellent and pastures are good, so that live stock that have had a chance during the winter are now in fine shape. In spite of unfavorable weather, spring pigs are doing well. Gardens are late, but crops in them are thrifty.—Jas. G. Bates.

Chippewa County.—Clover is an excellent stand and it is now knee-high. Oats and wheat are well advanced and, although corn is a little backward on account of the heavy spring rains, there is every promise of a satisfactory crop. Early potatoes are up and looking good and late potatoes are now being planted. There will be more potatoes than usual in this locality and almost every farmer here will have from ten to ninety acres. No damage by frost to the fruit. Five carloads of live stock shipped to Duluth last week and one car sheep to Bayfield at fancy prices.—Ernest Netzel.

Crawford County.—Rye is headed out and oats and other spring grain crops are now about six inches high. Corn is all up, but it is not doing as well as it might. Heavy rains have beaten it down and the hillsides have washed badly. Some farmers are hustling the cultivators along. Potatoes are not up yet, but other vegetables are doing well. All classes of live sock are healthful and show an exceedingly thrifty condition this spring. Floods and heavy winds have done some damage in this locality. Pastures were never better.—H. H. Stuckey.

Douglas County.—We have too few warm days here and, therefore, conditions are a little backward for crops. Grass is doing well and live stock, therefore, is in good shape. Corn planting has been delayed and considerable acreage that was intended for corn will be seeded to barley and millet. Potato planting operations will close this week. There has never been better promise for hay crop.—B. W. Stone.

Juneau County.—We had a regular flood here on the first of June, and, therefore, our soil is too wet for growing crops, particularly on low ground. Corn planting is not yet finished and a considerable part of the early-planted corn has been replanted. Meadows and pastures are good.—C. W. Hale.

LaFayette County.—Oats and all small grain crops look good and these have flourished, especially during the last two weeks. Much grain has been replanted on account of poor seed the first time. Wireworms are working on sod corn, but not doing a great deal of damage. Meadows and pastures are in good shape, while early potatoes are looking thrifty, but somewhat late. Late potato planting has been practically completed. A number of young colts have died in this locality.—W. F. Pease.

Langlade County.—Corn and potatoes are up and cultivation will soon start. Small grains are looking fairly well. Hay is very scarce and high in price, selling from $18 to $20 per ton. Grass and clover are making fine headway. Young pigs are scarce in this locality. Those who are raising colts are meeting with fine success, as the little fellows are healthy and strong this spring. Stock of all kinds is healthy. Fruit trees are in good condition and insects are held back by the cool weather.—Chas. Parsons.

Manitowoc County.—Recent warm weather has given all kinds of grain crops a new start after a late seeding. Considerable corn has been planted and farmers are rushing the balance as rapidly as possible. The outlook is fair for a good crop of hay, as conditions have been favorable for the growth of grass.—Otto G. Birge.

Marinette County.—Spring work has been delayed at least three weeks by heavy rains and unseasonable cold weather. Low fields cannot be worked at all, so that the acreage of small grain and corn in this locality will be somewhat reduced. The small grain looks good and it has made exceedingly rapid growth during the last two weeks. Potato planting is about finished. Apple and cherry trees blossomed profusely and the fruit is, therefore good. Alfalfa and clover crops are killed on the low land.—W. E. Morton.

Marquette County.—The weather is fine in this locality and spring grains look good excepting where it was hurt by heavy winds. Winter rye is showing up 75 per cent of a crop and corn is all planted and the stand is good. Unfortunately, grub worms and cutworms are doing damage in the strawberries. The usual acreage of potatoes has been planted, but there will be more beans put in this year than usually. Pastures are good, but meadows will be light. All fruit is good, but strawberries are extra good. The young calf and colt crop never was better and young pigs are healthy and strong. Those who have sold cattle have realized excellent prices.—John M. Williams.

Pierce County.—Weather is wet and cold, but as fruit was late, it escaped the frost. Pastures and meadows are in fine condition. Rye will not make over two-thirds of a crop here. Spring grain is making a good showing thus far, excepting on the wet land, where it has turned yellow. Corn planting is practicallly finished and some cultivation has been done. Young colts are doing exceptionally well and cattle are in fine condition.—G. K. Moore.

Polk County.—Weather is still wet, but it is getting warmer and the corn that has been planted is showing up in fine shape. Potatoes will soon be all in and the entire acreage in this community has been planted with certified seed. Most growers have used "Rurals," "Green Mountains" and "Burbanks." Small grain is late, but it is looking good and meadows are excellent. The first crop of alfalfa will be ready to cut in ten days. Pickle growers are now putting in their crop. Many pigs were lost in this locality, as they seemed to lack vitality when they were young. Live stock is doing fine and the local creamery reports a heavy run.—P. F. Amery.

Portage County.—The recent warm weather accompanied by timely rains has greatly benefited crops, and, as a result, spring grain is looking exceedingly well. Corn is mostly all up and the stand is good. Some of the clover was winterkilled, and, therefore, meadows do not look extra well. Potatoes are about one-half planted and there will be about the average acreage put in this year. Live stock never was in better condition.—A. H. Peterson.

Price County.—Weather is too cold and wet here for best results in crops. Clover and timothy look good and oats are really looking fine considering all conditions. Potatoes are coming up and fruit trees are now in blossom, showing splendid promise. Corn is backward for this time of year. Live stock all doing well.—C. F. Glissendorf.

Rusk County.—Oats and barley are looking good and corn is beginning to show up in good shape. There are just a few farmers who have not finished planting. Meadows and pastures never were better, on account of the frequent rains, and as a result all live stock is in the pink of condition. Farmers' Co-operative Creamery here are receiving exceedingly large quantities of cream, indicating that we have good cows in this locality and that they are receiving milk-making foods.—T. M. Thomas.

St. Croix County.—All small grain excepting rye is in excellent condition and growth is very rapid. Rye is a thin stand for some unknown reason. Corn is all planted and is making very satisfactory headway. New clover seeding is excellent and prospects are very good for a good crop of hay. Pastures are growing faster than they can be eaten down by live stock, and milk production is, therefore, good. Some farmers are complaining of too much rain, but they are happy nevertheless.—A Subscriber.

Taylor County.—Hay land and pastures are looking good. Small grain is just looking fair. Considerable corn and potatoes are still to be planted, the delay being due to heavy and frequent rains. Truck crops are not very good on account of the weather being unfavorable for their growth.—J. C. Hoffman.

Washburn County.—The past two weeks of good growing weather has greatly improved crop conditions. Timothy meadows and pastures are good and I have never seen clover better. Some grain is a little late, but making good headway. A little corn still to plant here, but most of the crop is showing up fine. Cutworms are doing some damage. Apples, plums and berries promise well. The usual acreage of potatoes will be planted.—L. D. Gainhart.

Washington County.—Spring grain in this section is fine and there is no evidence of a cool spring having injured it in any way. Winter wheat and rye will be about one-half a crop. Two weeks ago, grass was poor, but now it is coming on in good shape. Two-thirds of the alfalfa was killed in this locality. Nine acres on my farm was entirely killed. Red and alsyke clover also suffered, although one-third of these crops might be left. Corn and potatoes are late and fruit blossoms were two weeks later than they were last year. The Holstein breeders' organization will hold a meeting in June. We have also a fine cow-testing association.—M. P. Salter.

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PART FIRST---The Pledge.

"THE only one of the name who is not a gentleman;" those words were repeated over and over by a young fellow who walked, one autumn morning, under the shade of old trees and along a street of aristocratic houses in old New Orleans.

He would have been handsome had it not been for the absolutely wicked expression of his face as he muttered to himself while he walked. He looked about twenty-five—dark and tall—so tall as to be a noticeable man among many men, and so well proportioned, and so confidently careless in movement as not to be ungainly—the confidence of strength.

Some negroes whom he passed turned to look after him, even the whites he met eyed him seriously. He looked like a man off a sleepless journey, his eyes were bloodshot, his face haggard, and over all was a malignant expression as of lurking devilishness.

He stopped at a house set back from the street, and half-smothered in the shade of the trees and great creeping vines that flung out long arms from the stone walls. There was a stately magnificence about its grand entrance, and its massive proportions—it showed so plainly the habitation of wealth. Evidently the ill-natured looking individual was not a frequent visitor there, for he examined the house, and the numbers about, with some indecision; then his eyes fell on the horse block, in the stone of which a name was carved. A muttered something, which was not a blessing, issued from his lips as he read it, but with indecision at an end he strode up the walk to the house. A question was answered by the dubious-looking darky at the door, and a message was sent somewhere to the upper regions; then the darky, looking no less puzzled, requested the gentleman to follow him to the "Young Massa's" study. The gentleman did so, noting with those wicked side glances of his the magnificence of the surroundings, and stopping short before a picture of a brunette, willowy girl that rested on an easel. The face was lovely enough to win praise from any man, but an expression, strangely akin to that bestowed on the carven name outside, escaped him. Through the lattice of the window the laughter of women came to him—as fresh and cheery as the light of the young sun, and bits of broken sentences also—words of banter and retort.

"Ah, but he is beautiful—your husband!" sighed a girlish voice with the accent of France; "so impressibly charming! And so young. You two children!"

Some gay remonstrance against childishness was returned and then the first voice went on:

"And the love of one quick meeting, and one quick grand passion that only the priest could bring cure for? And how shy you were, and how sweet—was it not delightful? Another Juliet and her Romeo. Only it is well your papa is not so ill-pleased."

"Why should he be? My family is no better than my husband's—only some richer; but we never thought of that—we two. I thought of his beautiful changeable eyes, and he thought of my black ones, and—well, I came home to papa a wife, and my husband said only, 'I love her,' when we were blamed for the haste and the secrecy, and papa was won—as I think everyone is, by his charming boyishness; but," with a little laugh, "he is not a boy."

"Though he is younger than yourself?"

"Well, what then? I am twenty-three. You see we are quite an old couple, for he is almost within a year of being as old. Come; my lord has not yet come down. I have time to show you the roses. I am sure they are the kind you want."

Their chatter and gaiety grew fainter as they walked away from the window, and their playful chat added no light to the visitor's face. He paced up and down the room with the eager restlessness of some caged thing. A step sounded outside that brought him to a halt—a step and a mellow voice with the sweetness of youth in it. Then the door opened and a tall form entered swiftly, and quick words of welcome and of surprise came from him as he held out his hand heartily.

But it was not taken. The visitor stuck his hands in the pockets of his coat, and surveyed his host with a good deal of contempt.

Yet he was a fine, manly looking fellow, almost as tall as his visitor, and fairer in coloring. His hair was a warmer brown, while the other man's was black. His eyes were frank and open, while the other's were scowling and contracted. They looked like allegorical types of light and darkness as they stood there, yet something in the breadth of forehead and form of the nose gave a suggestion of likeness to their faces.

The younger one clouded indignantly as he drew back his offered hand.

"Why, look here, old fellow, what's up?" he asked hastily, and then the indignation fled before some warmer feeling, and he went forward impulsively, laying his hand on the other's arm.

"Just drop that," growled his visitor, "I didn't come here for that sort of thing, but for business—yes—you can bet your money on that!"

His host laughed and dropped into a chair.

"Well, you don't look as if you come on a pleasure trip," he agreed, "and I think you might look a little more pleasant, considering the occasion and—and—everything. I thought father would come down sure, when I wrote I was married, but I didn't expect to see anyone come in this sort of a temper. What is it? Has your three-year-old come in last in the fall race, or have you lost money on some other fellow's stock, and what the mischief do you mean by sulking at me?"

"It isn't the three year old and it isn't money lost," and the dark eyes were watching every feature of the frank young face; "the business I've come on is—you."

"Look here," and the young fellow straightened up with the conviction that he had struck the question, "is it because of my—marriage?"

"Rather." Still those watchful eyes never changed.

"Well," and the fair face flushed a little, "I suppose it wasn't just the correct thing; but you're not exactly the preacher for correct deportment, are you?" and the words, though ironical, were accompanied by such a bright smile that no offense could be taken from them. "But I'll tell you how it happened. Sit down. I would have sent word before, if I'd suspected it myself, but I didn't. Now don't look so glum, old fellow. I never imagined you would care. You see we were invited to make up a yachting party and go to Key West. We never had seen each other until the trip, and—well, we made up for the time we had lost in the rest of our lives; though I honestly did not think of getting married—any more than you would. And then, all at once, what little brains I had were upset. It began in jest, one evening in Key West, and the finale of it was that before we went to sleep that night we were married. No one knew it until we got back to New Orleans, and then I wrote home at once. Now, I'm ready for objections."

"When you left home you were to be back in two months—it is four now. Why didn't you come?"

"Well, you know I was offered the position of assistant here to Doctor Grenier; that was too good to let go."

"Exactly; but you could have got off, I reckon, to have spent your devoted father's birthday at home—if you had wanted to."

"He was your father first," was the good-humored retort.

"Why didn't you come home?"

There was a hesitation in the younger face. For the first time he looked ill at ease.

"I don't know why I should give you any reason except that I did not want to," he returned, and then he arose, walking back and forth a couple of times across the room and stopping at a window, with his back to his visitor. "But I will," he added, impulsively. "I stayed away on account of—Annie."

The dark eyes fairly blazed at the name.

"Yes?"

"I—I was a fool when I was home last spring," continued the young fellow, still with his face to the window. "I had never realized before that she had grown up or that she was prettier than anyone I knew, until you warned me about it—you remember?"

"I reckon I do," was the grim reply.

"Well, I tried to be sensible. I did try," he protested, though no contradiction was made. "And after I left I concluded I had better stay away until—well, until we were both a little older and more level-headed."

"It's a pity you didn't reach that idea before you left," said the other significantly.

"What!"

"And before you turned back for that picture you had forgotten."

"What do you mean?" and for the first time a sort of terror shone in his face—a dread of the dark eyes that were watching him so cruelly. "Tell me what it is you mean, brother."

"You can just drop that word," was the cold remark. "I haven't any relatives to my knowledge. Your father told me this morning I was the only one of the name who was not a gentleman. I reckon I'll get along without either father or brother for the rest of my life. The thing I came here to see about is the homestead. It is yours and mine—or will be some day. What do you intend doing with your share?"

"Well, I'm not ready to make my will yet," said the other, still looking uneasy as he waited further explanations.

"I rather think you'll change your mind about that, and fix it right here, and now. Today I want you to transfer every acre of your share to Annie."

"What?"

"To insure her the home you promised your mother she should always have."

"But look here—"

"To insure it for her and—her child."

The face at the window was no longer merely startled, it was white as death.

"Surely you don't mean that!" he gasped. "It is not true. It can't be true!"

"You contemptible cur! You low-down liar!" muttered the other through his teeth. "You sit there like the whelp that you are, telling me of this woman you have married, with not a thought of that girl up in Kentucky that you had a right to marry. Shooting you wouldn't do her any good or I wouldn't leave the work undone. Now I reckon you'll make the transfer."

The other had sat down helplessly, with his head in his hands.

"I can't believe it—I can't believe it," he repeated heavily. "Why—why did she not write to me?"

"It wasn't an easy thing to write, I reckon," said the other bitterly, "and she waited for you to come back. She did send one letter, but you were out on the water with your fine friends and it was returned. The next we heard was the marriage. Word got there two days ago, and then—she told me."

"You!" and he really looked unsympathetic enough to exempt him from being chosen as confidant of heart secrets.

"Yes; and she shan't be sorry for it if I can help it. What about that transfer?"

"I'll make it;" and the younger man rose to his feet again with eyes in which tears shone. "I'll do anything under heaven for her! I've never got rid of the sight of her face. It—it hoodooed me. I couldn't get rid of it! —or of remorse. I thought it best to stay away, we were so young to marry, and there was my profession to work for yet; and then on top of all my sensible plans there came that invitation on the yacht—and so you know the whole story; and now—what will become of her?"

"You fix that transfer and I'll look after her."

"You! I don't deserve this of you, and—"

"No; I don't reckon you do," returned the other, tersely; "and when you—drat your conceit!—catch me doing that or anything else on your account, just let me know. It isn't for either one of you, for that matter. It's because I promised."

The younger dropped his arms and head on the table.

"You promised," he groaned. "I—I promised as well as you, and mother believed me—trusted me, and, now—oh, mother! mother!"

His remorseful emotion did not stir the least sympathy in his listener, only a chilly unconcern as to his feelings in the matter.

"You, you cried just about that way when you made the promise," he remarked indifferently. "It was wasted time and breath then, and I reckon it's the same thing now. You can put in the rest of your life in the wailing and gnashing of teeth business if you want to—you might get the woman you married to help you, if you tell her what she has for a husband. But just now there are other things to attend to. I am leaving this part of the country in less than six hours, and this thing must be settled first. I want your promise to transfer to Annie all interest you have in the homestead during your lifetime, and leave it to her by will in case the world is lucky enough to get rid of you."

"I promise."

His head was still on the table; he did not look up or resent in any way the taunts thrown at him. He seemed utterly crushed by the revelations he had listened to.

"And another thing I want settled is, that you are never again to put foot on that place or in that house, or allow the woman you married to go there, that you will neither write to Annie nor try to see her."

"But there might be circumstances —"

"There are no circumstances that will keep me from shooting you like the dog you are, if you don't make that promise, and keep it," said the other deliberately. "I don't intend to trust to your word. But you'll never find me too far out of the world to get back here if you make it necessary for me to come. And the promise I expect is that you'll never set foot on the old place again without my consent—" and the phrase was too ironical to leave much room for hope.

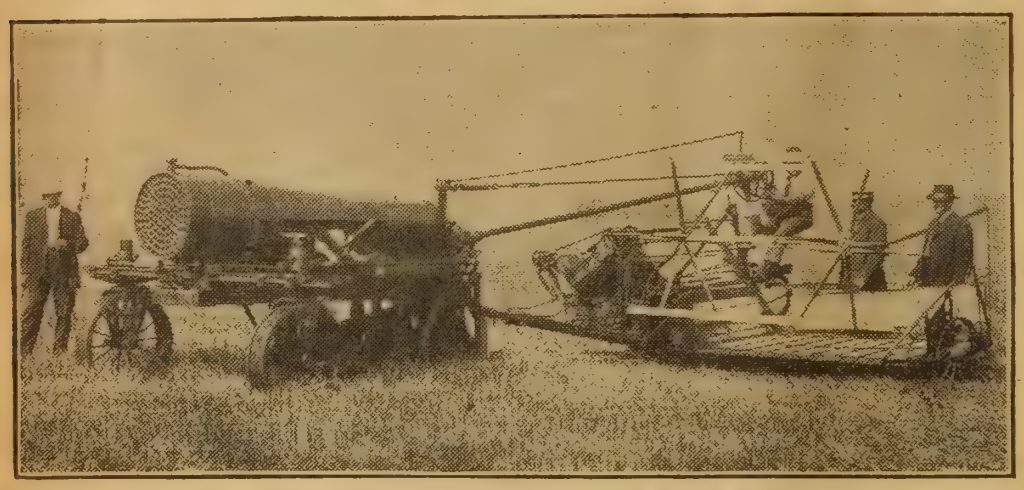
"I promise. I tell you I'll do anything to make amends," he moaned miserably.

"Your whole worthless life wouldn't do that!" was the bitter retort. "Now, there is one thing more I want understood," and his face became more set and hardened; "Annie and her child are to live in the house that should be theirs by right, and they are to live there respected—do you hear? That man you call father has about as much heart in him as a sponge. He would turn her out of the house if he knew the truth, and in this transfer of yours he is to know nothing of the reason—understand that. He is quite ready to think it prompted by your generous, affectionate heart, and the more he thinks the better it will be for Annie. You will have a chance to pose for the rest of your life as one of the most honorable of men, and the most loyal to a dead mother's trust," and a sound that would have been a laugh but for its bitterness broke from him as he walked to the door; that will suit you, I reckon. One more lie doesn't matter, and the thing I expect you to do is to make that transfer today and send it to Annie with a letter that anyone could read, and be none the wiser—the only letter you're ever to write her. You have betrayed that trust; it's mine now."

"And you'll be worth it," burst out the other heart-brokenly; "worth a dozen times over more than I ever could be if I tried my best. You'll

(Continued on page 19.)

VARIETY OF USES FOR TRACTOR



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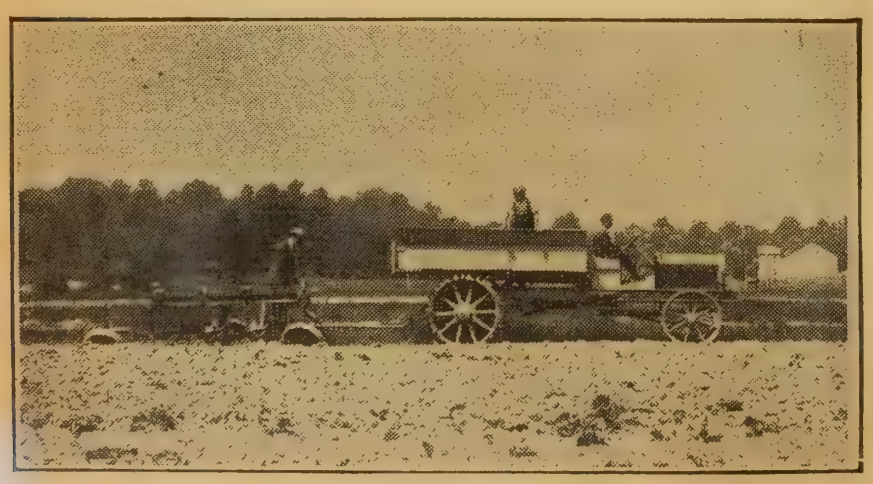

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Answer.—By the common rating, your motor has 28.9 horse power. As a rule it is not practical to run an automobile motor on kerosene. Kerosene should give more power per gallon than gasoline, but it will not unless it is well carburized. If you wish to experiment along this line, consult your auto supply man for prices on kerosene carburetors.

Installing Ammeter on Hudson Auto.

I have a 1914 model Hudson car with Delco lighting and starting system. How could I connect a charging and discharging gauge? For what current? Do you think it economical to mix high-grade kerosene with gasoline for use in an auto motor?

Answer.—You will find a small brass plate on your generator, with a binding post at one end and a nut at the other. Saw the plate apart half way between the post and the nut. Solder a wire to each of the halves of the plate. Connect the wires to the terminals of the gauge—a thirty-ampere ammeter. There is little economy in mixing kerosene with the gasoline.

Engine Misses Fire.

I have a 1910 Overland car that is causing me considerable trouble. The engine misses almost continually. Sometimes it fires fairly well, but at other times it only fires on two or three cylinders. The motor seems in good condition, scarcely worn at all. The car has run 10,000 miles. The magneto has been overhauled and the magnets recharged. The coil is O. K. New wires have been put on. The valves have been ground. The motor is free from carbon, and is timed correctly. I have tried an Air-friction carburetor without much success. Any advice you can give me will be appreciated.

Answer.—You have evidently attended to most of the conditions that usually are the cause of motor trouble. It may be that your trouble is due to a weak spark due to some overlooked defect in the magneto or wiring. It may be that your piston rings or cylinders are worn so that too much oil works up over the rings. If considerable smoke comes from the exhaust, and if you are bothered with fouled spark plugs and rapid accumulations of carbon, too much oil is undoubtedly the trouble. Test the spark plugs to make sure that each of them delivers a good, fat spark. See that the spark plug points are adjusted so that a smooth dime just passes between them.

One of the most common defects of an old car is worn valve stem guides. If the guides are worn on the intake side the air leaks into the intake, making the mixture uncertain, and thereby causing the motor to misfire. An air leak, squirt gasoline from an oil has the same effect. To test for an air leak, squire gasoline from an oil can onto the suspected points while the motor is running. If there is an air leak the motor will either slow down or speed up.

Pull of Motor; Lifting Magnets.

I would like to know how many pounds of pull there is to the explosion stroke of a motor that has a cylinder with a four-inch bore and four and three-fourths inch stroke. Where can I obtain literature on electric lifting magnets?

Answer.—The explosion pressure varies with the compression of the engine; the higher the compression, the greater the pressure. The average compression pressure is about sixty-five pounds per square inch. For this compression the explosion pressure is about 200 pounds per square inch. In a four-inch cylinder this would give a momentary pull—or rather, push—of 2,500 pounds. This pressure falls rapidly, averaging about seventy pounds per square inch for the whole stroke.

The International Correspondence schools of Scranton, Pa., publish a handbook that gives some information on the design of lifting magnets.

Lighting from Magneto and Battery.

Kindly advise me through the columns of your paper. I am using a storage battery for lights on my Ford car. How can I wire the same so that I can light on either magneto or storage battery at will?

Answer.—If you are using nine-volt lights and have an eighteen-volt battery the wiring would be as illustrated in Figure 1. Ground one battery terminal, and run the other to a three-point switch. The other two switch terminals are connected to the lights and magneto as shown. If you are using an eight-volt battery, wire as shown in Figure 2; which is the same as Figure 1, with the addition of a two pole, double throw switch, wired as shown, so that the lights are in series when using the magneto, and in parallel when using the battery. Each light should be protected by a fuse.

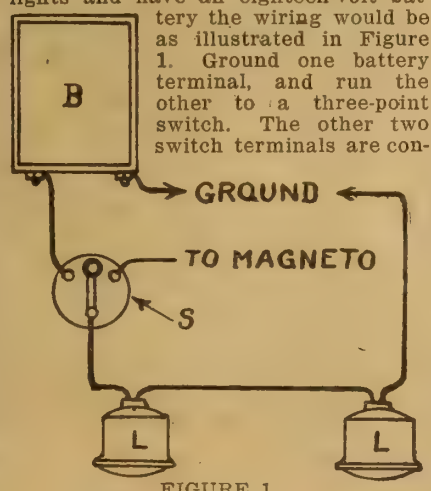


FIGURE 1.

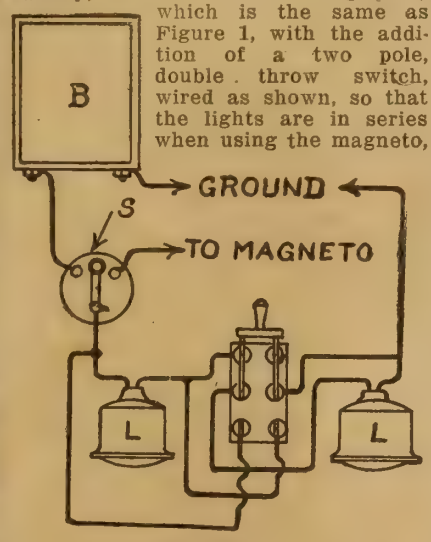


FIGURE 2.

For batteries of any other voltages it would be necessary to introduce resistance, which would not be economical for battery use, and might overload the magneto.

Eccentric or Crank.

Could an eccentric with a three-inch throw be run as fast as a crankshaft? Which would be the smoother running? Which would run the longer?

Answer.—The eccentric could not be run as fast, as the bearing surface is larger in diameter. The larger the diameter of a bearing the slower must be the speed. Cranks and eccentrics run equally smooth when properly adjusted. A crank may be used as either the driver or the driven member. An eccentric is seldom used except as a driver.

Carburetor Floods.

I have a Model A. Stromberg carburetor with a hot air pipe. Gasoline leaks out under the air shutter of the hot-air pipe. A new float was put in last August, but has not relieved the trouble. What would you advise me to do?

Answer.—Your carburetor is "flooding," due to lint or dirt under the float valve, a worn float valve, a leaky float, or some other defect of the float chamber mechanism. Remove the cover of the glass float chamber, and clean the parts thoroughly. Replace the float valve if worn. Make sure that the float does not leak. See that the float levers work freely.

Steam Boiler Compound.

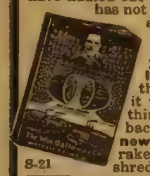
How can I stop the steam from leaking out at the joints of my steam engine? What is a good boiler compound to use where a lime feed water is used?

Answer.—If the steam leaks at a bolted joint put in a gasket of "Rainbow," "Permanite," or other sheet packing. If the leak is at a riveted joint beat the edge of the top plate down tight on the bottom plate, using a cold chisel with the end ground off flat. This is known as "calking." To stop leaks around the tubes, a tube expander is necessary. The expander expands the ends of the tubes out tight against the heads.

There are many fake boiler compounds on the market. The only sure way to get a good boiler compound is to have a chemist to analyze the feed water, and recommend what and how much compound to use. A compound that is good for some water may be worse than nothing for another. For gypsum waters, soda ash is generally used. For lime waters, milk of lime may be used. Hard scale may be softened by using kerosene in the boiler. Never use crude oil. The best way to use the kerosene is to fill the boiler nearly full of water and then put in the kerosene and allow the water to run out. The kerosene will stick to the scale and soften it so that it may be scraped out. Boiler compounds are likely to cause foaming. When compound is used, the boiler should be blown off frequently.

COULD I MAKE IT STRONGER?

At the end of twelve months if a Galloway Spreader has not paid for itself, provided you have hauled out 100 loads of manure or more, and it has not proven everything I say for it, I agree to take it back, pay freight both ways and return your money no matter on which of my six plans you buy. Could I make this offer if I was not sure of my ground—that the spreader would please you—that it would pay for itself—that everything I have said about it would be backed up by the spreader itself? My new steel beater and wide-spreading V-rake pulverizes and tears the manure to shreds—worth $15 extra on any spreader, costs you nothing extra on the Galloway. INVINCIBLE PATENTED ROLLER FEED; this great exclusive feature on the Galloway Spreader makes it superior to all others—the secret of light draft—a feature worth $25 alone on any spreader—exclusive on the Galloway, but costs you nothing extra. NEW EVERLASTING PRESSED STEEL unbreakable tongue worth $5 more on any spreader—no extra charge on a Galloway. PATENTED AUTOMATIC STOP uniform clean out push-board, worth $10 on any spreader, exclusive on the Galloway, but costs you nothing extra. These features have caused thousands of Galloway Spreader users to write us that the Galloway is the best spreader on earth. TOP DRESS CROPS NOW! Don't buy a spreader of any make or kind until you have tried a genuine Galloway at our risk.



S-21

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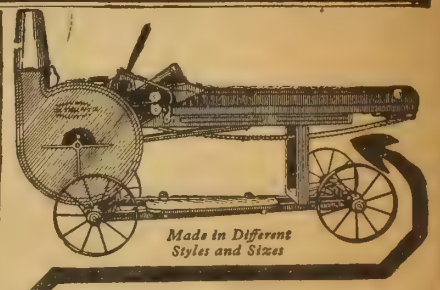

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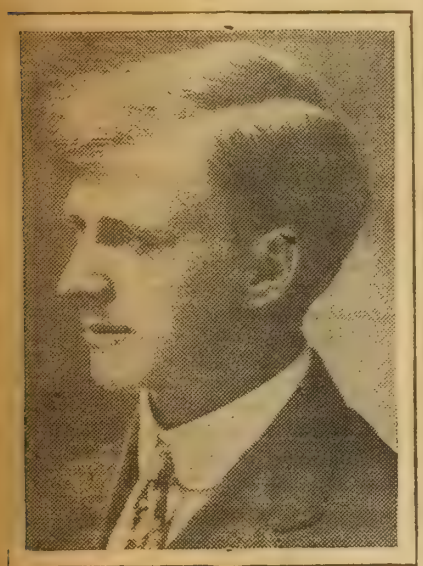
Delegates to the Thirty-first Annual Gathering of the National Holstein-Friesian Association of A

NATIONAL HOLSTEIN MEETING.

Greatest Gathering in the History of the Breed Meets in Detroit and Listens to Encouraging Reports—Wisconsin Well Represented—By F. G. Swoboda, of Langlade County, Wisconsin.

HOLSTEIN breeders of the nation gathered last week at Detroit, Michigan, for the thirty-first annual meeting. It was generally conceded to be the best meeting ever held by the Holstein-Friesian Association of America. The attendance was large and without question more thoroughly representative of all sections of the country than that at any previous session. In the words of one of the most widely-known breeders who has been attending these gatherings for years, "It was the best meeting of the association which I have ever known." There was evident a whole-souled spirit of co-operation and good will which



F. G. Swoboda, Langlade county, Wis., pecial representative for The Wisconsin Farmer at National Holstein meeting.

speaks volumes for the success of such a gathering and the cause represented. Capping the climax was the magnificent banquet served at Hotel Statler, to all the visiting breeders and their wives, by the Michigan breeders. Good fellowship abounded. The banqueters were most pleasantly and instructively entertained by addresses delivered by Hon. Carl Vrooman, assistant secretary of the department of agriculture; Dr. J. H. Kellogg, of Battle Creek; Prof. C. N. Anderson, of East Lansing, Michigan; A. J. Glover, of Fort Atkinson, Wisconsin; and James Schermerhorn, editor of the Detroit Times.

The Holstein sale, following the convention, proved to be the best of its kind the breed has yet known. The quality of the offerings was superior, I believe, to that gotten together in any sales ring regardless of breed, and a high level of prices was maintained. The average for the first day or sixty head sold was $1,044. The top of the sale was the bull calf, King [illegible] Apple Champion, consigned by Oliver Cabana, Jr., and this animal W. Green, Middlefield, Ohio. Numerous sales were made at $1,000 to $3,000 and better.

President Aitken's address before the breeders, the reports of the several under officers and committees and that of the superintendent of advanced registry, revealed progress and a condition of prosperity for the Holstein breed, such as the association has never before known. With a membership of almost 9,000 and with a cash balance of $215,390, the Holstein association occupies a position enviable among the breeders' associations of the country.

The amount of testing for advanced registry, done in the past year, far exceeded the record for any preceding year. This fact coupled with the wholesale breaking of records in practically every classification bespoke an enthusiasm for, and confidence in the future.

Hon, D. D. Aitken, of Flint, Michigan, was re-elected to the position of president for a third term. Col. G. W. French, of Davenport, Iowa, was chosen vice president. This office brought out an interesting contest. Other nominees for the office were Col. Fred Pabst, of Oconomowoc, Wisconsin, and O. L. Langworthy, of New York state. A. A. Cortelyou, of Somerville, New Jersey, and J. B. Erwin, of Minneapolis, were re-elected to succeed themselves as directors. William Bishop, of Washington, was chosen to fill the vacancy caused by the death of G. A. Dimoc, of Kalamazoo, Michigan. Frederick L. Houghton was, of course, returned to the position of secretary, and Malcom Gardner, of Delavan, Wisconsin, superintendent of advanced registry. William R. Smith, of Syracuse, New York, was re-elected to the position of treasurer, a post which he has filled with credit to himself for a number of years.

Special tribute was paid to two distinguished members of the association, Dr. Harry B. Favill, of Chicago (formerly of Wisconsin and a member of the Jefferson county family which has taken such a great interest in Holstein cattle) and Mr. G. A. Dimoc, of Kalamazoo, Michigan, who died during the year. Secretary Houghton reported sixty-five deaths of members within the year just passed.

The session voted to authorize, in the advanced registry classification for a 305-day test, under the same regulations and classifications as those now governing the 365-day test. The object of this new classification is to provide for breeders who want a long-period test without interfering with the normal calf production. Under the 365-day test it is not possible for a cow to produce a calf every year. It was provided that prizes be given for the 305-day records the same as for the 365-day records. Provision was also made, in cases where breeders so desire, to arrange for prolonging the 305-day test into the 365-day test.

Worcester, Mass., was chosen as the place of meeting for 1917. As an inducement for attendance of ladies next year, a Massachusetts breeder offers a $500 calf to the best looking lady in attendance at the 1917 convention.

Wisconsin was well represented both at the Detroit meeting and at the Holstein sale. About fifty Badger Holstein breeders were present and they took greater interest in the details of the proceedings than in any former meeting. Due to the special efforts of the secretary of the Wisconsin Holstein Breeders' Association nearly 400 Wisconsin proxies were represented on the floor of the convention. Among the Wisconsin men who were present and prominent at the meeting I noticed the following: Fred Pabst, F. Rhoda, Dr. David Roberts, S. S. Kramer, R. P. Ames, A. Babler, S. Randall, Sidney Jones, W. E. Jones, S. H. Bird, Jerry Riordan, R. A. Torrey, William Everson, F. H. Green, C. M. Beveridge, Mr. and Mrs. Malcom Gardner, R. E. Schaefer, F. G. Bemis, Mr. Gerow, A. J. Glover, Baird Brothers, Bert Baird, Harry Dunbar, Honselit & McNutt, H. S. Hoard, Will Mann, Will Wright, Jesse Crump, Gred Gurr, J. Favill, Mr. Hutchinson, H. A. Arneson, and A. A. Lukken.

The total attendance at the national meeting was about 400. These, with the proxies which had been gathered, represented a total voting strength of 2,683. The exact number of Wisconsin proxies represented was 386.

Secretary Houghton's report showed an exact membership in the Holstein-Friesian Association of America of 8,885, an increase of 1,260 during the year. Wisconsin ranks second in membership with 1,289, New York leading with 2,435. Ohio is third with 838 members. Michigan has 618, Minnesota 290, Iowa 211, Nebraska sixty-five and South Dakota fifty-five members. The following interesting comparisons give an idea of the increase in business in the national association:

	1916	1915
Cow registration	46,549	42,063
Bull registration	26,116	25,617
Cow transfers	42,014	41,117
Bull transfers	26,752	25,659
Totals	142,120	135,280
Total certificates, 1916	142,120	
Total certificates, 1915	135,280	
Gain, 1916	6,840	

The cash receipts of the secretary's office for the past year reached the total sum of $202,292, of which $128,833 was for registering pedigrees, $21,101 for transfers and $31,175 for memberships. Seventy-seven clerks have been employed to handle the immense amount of office work carried on by the association. Disbursements in the payment of labor and other items attendant upon the business of the association amounted to $79,321.84, leaving a balance of $119,318. The herd book will, owing to the large increase in number of registrations, be published in two separate volumes. Volume 34, now on the press, will contain 16,659 bulls and 28,879 cows.

Superintendent Gardner, of Delavan, Wisconsin, reports the amount of official testing done equivalent to the testing of 20,198 cows for a term of one

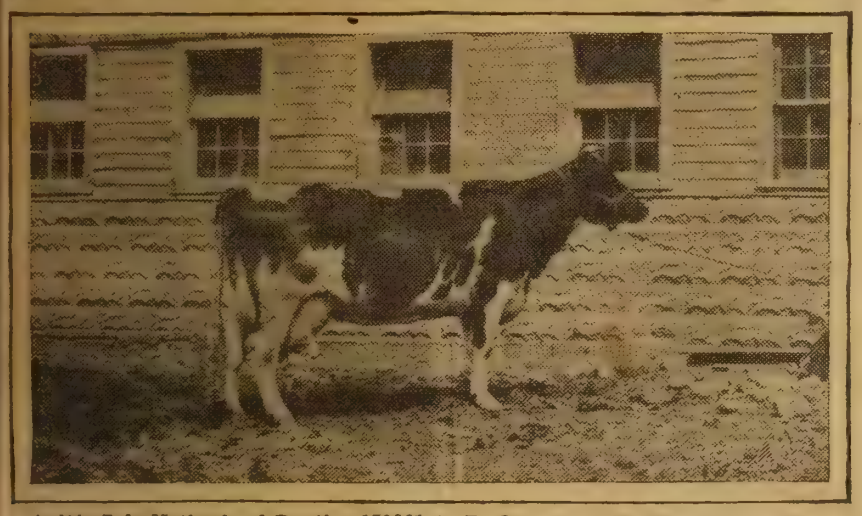
Aaggie Texal Wayne 2d, owned by C. C. Fries & Son, Richland Center, Wis.

King Pontiac Portia. Owned by C. C. Fries & Son, Richland Center, Wis.

, Standing in Front of Their Meeting Place at Hotel Statler, Detroit, Michigan.

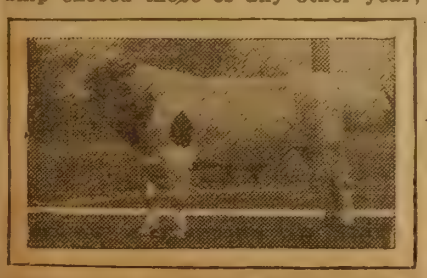
week each. Twelve thousand eight hundred and two cows were under test for periods of not less than seven days. Seven hundred and fifty cows met the requirements of semiofficial yearly test. Records of the preceding year were exceeded in thirty-two instances. This included eight times in the seven-day division, four times in the thirty-day division, thirteen times in the eight months' division and seven times in the yearly division.

An expenditure of $25,000 was made the past year by the publicity committee for advertising space taken in agricultural journals, magazines and journals of general circulation. A part of this sum was spent in distribution of literature. As an evidence of the value of this publicity it was reported that the average sale price at auction of Holstein cattle has increased from $156 a head in 1908 to $202 a head in 1915. The committee has a follow-up system to its advertising which includes sending out literature concerning the breed. This literature is sent to all members of the association. A total of 313,800 pieces under thirty-three titles were sent out last year. The committee on special prizes at fairs reported $1,955 spent in prizes at the Panama-Pacific Exposition. Prizes at all other fairs and shows withdrawn at the beginning of the year because of the existence of the foot-and-mouth disease.



Aaltje Salo Netherland Pontiac 152061, A. R. O. record, 33.66 pounds butter in seven days as a five year old. Owned by Arthur J. Rust, West Allis, Wis.

In his annual address Pres. D. D. Aitken said it is a fitting tribute to the organization that the attendance at this gathering was the largest in history; that the transactions of the past year were heretofore unequaled in volume; that the accessions in membership exceed those of any other year; that the world has witnessed the production by a Holstein cow of the largest yield of butter ever made by any cow. Receipts from registrations and transfers and memberships reached the magnificent sum of $181,109, and the favor of the Holstein cow with dairymen of the United States has shown a corresponding increase to the increase in business of the association. Accumulation of money designated as the reserve fund has now reached $163,999.01. A glance at the association accounts shows that the annual requirements are $50,000 for advanced registry and butter fat prizes, $25,000 for advertising, $8,000 for prizes at fairs, $11,000 for keeping up the herd book. A glance at the books might cause the thoughtless to say that the association has a lot of money standing idle. But this is not the case. It is the wealth of the association that gives it standing in the world. All money is earning at a rate of better than 3¾ per cent per annum.



Canary Oak De Kol Homestead 101268. Owned by S. W. Favill, Lake Mills, Wis.

President Aitken urged that a census of the number of pure-bred Holstein cattle be taken and that provision be made for its repetition at stated intervals.

President Aitken urged the encouragement of local and community breeders' clubs as a means of spreading the good news regarding the Holstein cow and consequent uplift of the dairy world.

The value of the Holstein cow as a general-purpose cow for the average farmer was forcibly shown by President Aitken. Not only did he characterize the Holstein as efficient as a milker but when her usefulness at the pail has been impaired by age or injury she has a distinct beef value greater than that of the usual strictly dairy cow. He cited instances showing that on the St. Paul market registered Holstein cows sold as high as $116 for beef and bulls as high as $161—record prices for cows and bulls of any breed on this market. In the matter of destruction of diseased cattle under federal authorization, President Aitken insists that the breeder should receive what the slaughtered animals was worth and that the remuneration should be determined by beef, dairy and breeding value. Fullest co-operation between breeders and the federal authorities was urged.

A campaign of education on the value of milk as a food, not only for children but for adults, was suggested by the president and appropriation of sufficient funds to make the campaign a success was urged. The work of the National Dairy Council was strongly endorsed.

Mr. Aitken defended in his address the position taken by the directors in regard to nonassumption of responsibility on the part of the association where certificates were fraudulently obtained. This plan, he says, will place the individual on his guard and prevent the association from being imposed upon. Concluding his address President Aitken said the Holstein association is not only the largest but the most progressive organization of pure-bred live stock owners in the world. He urged straightforward and honorable conduct on the part of each individual breeder as a safeguard against the association and its splendid work falling into disrepute.

Record-Breaking Sale.

Holstein breeders at Detroit last week established a new record for prices at a public sale. One hundred and forty-two head brought $155,715, or an average of $1,096.58 per head. Prices ran uniformly high throughout the sale, bulls, mature cows and heifers selling commonly at $800 to $1,000. The record price of the sale was the seven-months-old bull calf, King Champion Rag Apple, consigned by Oliver Cabana, Jr., of New York, and purchased by A. W. Green, of Middlefield, Ohio, for $20,000. This bull is a son of Rag Apple Korndyke 8th, the bull for which Mr. Cabana paid $25,000 at the dollar dispersion sale. His dam is the world's record three year old, Lady Pontiac Johanna, with a seven-day record of 41.81 pounds of butter at three and one-half years.

But this was not the only high-priced animal of the sale. A yearling son of King of the Pontiacs out of a dam with a thirty-three-pound seven-day record was sold to Flanders Farm, at Orchard Lake, Mich., for $6,000. Third highest-priced bull, a yearling consigned by John Arfman, went to the Allamuchy Farms, New Jersey, at $4,950.

Iowa laid claim to the record-priced cow, Jessie Fobes Bessie Homestead, a 34.96 pound cow consigned by Munsol Co., of Washington, selling to the Cass Farms at Sumner, Iowa, for $4,600. This cow was a magnificent animal, easily one of the choicest ones of the sale. Her two-year-old daughters sold for $2,000. Next highest-priced female was Pietertje Hengerveld Creamelle, consigned by Lawson Holding Company, which sold for $3,200.

A conception of the extremely high range of prices is gained when it is learned that four head sold for more than $4,600 each, five others for $3,000 or more, one for $2,500, six between $2,000 and $2,500, nine between $1,500 and $2,000, twenty-seven between $1,000 and $1,500, fourteen between $700 and $1,000, twenty-two between $500 and $700, twenty-seven between $300 and $500, and ten under $300. None sold under $200. The above figures cover the first 125 sold, except the averages, which cover the total.

Probably never before was such a splendid bunch of individuals backed by such uniformly high records gotten together in one sales ring. There were an exceptionally large number of cows with butter records for seven days of thirty pounds or better. Several of the bulls came from dams with better than thirty-five-pound records; also splendid yearly records. Interest and enthusiasm were well maintained throughout the sale, bidding at times arousing a tense excitement typical of a football game.

Wisconsin, Minnesota and Iowa breeders were on hand, a number of choice individuals going to each state. To Iowa goes the credit of taking the highest-priced cow, she selling as noted for $4,600. Wisconsin breeders who secured stock were O. Babler and Pierce, of Monroe, who bought a sire at $1,325. Honselit and McNutt, of Oxford, purchased several head. Swoboda Bros., of Troy Center, secured a half sister to Findern Holingen Fayne, at one time world's champion butter cow.

Dr. David Roberts, Baird Bros., Will Wright and W. Mann, of Waukesha, purchased a $2,025 eighteen-months bull, out of King Segis Pontiac Columbo, dam Milanhurst Americo De Kol, with a four-year-old seven-day record of 34.08 pounds of butter and a yearly record of 1,231 pounds of butter from 26,433 pounds of milk.

Greatest satisfaction was expressed at the manner in which the sale was conducted. H. A. Moyer, of Syracuse, who acted as director, personally visited all the farms which consigned animals, and selected only such as he felt would be a credit to the breed. Every animal was sound and guaranteed all right in every way. All over six months were tuberculin tested. When it was found that time would not permit the selling of all the 183 listed Michigan breeders courteously withdrew many of their offerings.

New York, Michigan, Ohio and New Jersey breeders bought most liberally. Pennsylvania, Delaware, Massachusetts, Kansas, Washington and South Dakota, in addition to the state's previously mentioned also took some.

The auctioneers were B. V. Kelly, of Syracuse, N. Y.; J. E. Mack, of Fort Atkinson, Wis.; D. L. Perry, of Columbus, O., and R. E. Haeger, of Algonquin, Ill

A detailed list of sales with prices will be published in a later issue of this paper.

Sir Pietertje Ormsby Mercedes 7th. Owned by John Erickson, Waupaca, Wis. Bred by E. C. Schroeder, Moorehead, Minn.

DAIRY

Chilton Cow-Testing Report.

The following is a list furnished us by Edwin T. Weeks, secretary of the Chilton Co-operative Cow-Testing Association, of the official records of cows that produced more than forty pounds of butter fat during a period of thirty days ending May 13, 1916, as found by Oscar Kossmann, the official tester of the association:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
Walter Seefeld					
Gr. Hols...	6	11-16	1236	4.0	49.44
Gr. Hols...	5	4-4	1482	4.0	59.28
John Fuchs					
Gr. Hols...	7	1-15	960	4.6	46.08
Nick Bernard					
P. B. Hols.	7	3-13	1311	3.4	44.57
P. B. Hols.	7	2-15	1215	3.4	41.31
Gr. Hols...	7	2-15	1158	3.9	45.16
Gr. Hols...	6	3-27	1005	4.2	42.21
Alex O'Donnell					
Gr. Hols...	8	9-15	1002	4.0	40.08
Harry Merrill					
Gr. Jersey.	6	2-25	822	5.0	41.10
Gr. Hols...	4	2-19	1149	4.2	48.26
Gr. Hols..	4	2-12	1059	4.4	46.60
Louis McGrath					
P. B. Guern.	10	2-5	795	5.2	41.34
P. B. Guern.	6	12-31	1065	6.2	66.03
Gr. Guern..	8	2-2	1368	6.8	93.03
Gr. Guern..	5	1-1	1188	5.3	63.96
P. B. Guern.	3	11-5	798	5.1	40.70
Gr. Jersey.	5	2-22	792	6.4	50.69
Gr. Guern..	3	10-20	1029	5.0	51.45
Native	11	11-1	1071	5.2	55.69
Julius Bowe					
Gr. Dur....	10	12-20	1119	3.6	40.28
Gr. Hols...	4	1-1	1335	3.2	42.72
Gr. Hols...	6	2-15	1380	3.0	41.40
P. B. Hols.	3	3-1	1251	3.8	47.54
Gr. Hols...	5	3	1572	3.6	56.59
Frank Sontag					
Gr. Hols...	8	1-14	1194	4.0	47.76
Alex Pilling					
Gr. Hols...	8	2-15	1185	3.6	42.66
Gr. Dur...	10	3-23	1155	3.5	40.43
Gr. Hols...	8	3-16	1434	3.4	48.76
Gr. Guern..	5	2-16	1161	3.8	44.12
Gr. Guern..	6	1-7	1110	3.7	41.07
O. C. Pilling					
Gr. Hols...	6	2-20	1302	3.8	49.48
Gr. Hol....	7	3-27	1425	3.3	47.03
John Salm					
P. B. Hols.	6	12-20	1722	3.9	67.16
Gr. Jersey.	10	3-27	1383	4.0	55.32
P. B. Hols..	7	2-28	1230	4.2	51.66
Gr. Hols...	12	10-15	1071	3.8	40.70
Gr. Hols...	8	12-10	1197	4.2	50.27
Gr. Hols...	8	10-10	1377	4.2	57.83
Gr. Hols...	12	10-25	1047	4.2	43.97
Gr. Jersey.	12	12-5	915	4.6	42.09
Gr. Hols...	5	1-8	1032	4.2	43.34
Gr. Hols...	6	3-4	960	4.2	40.32
Gr. Hols...	8	3-27	1476	3.8	56.09
Gr. Hols...	5	4-4	1128	4.2	47.38
Gr. Hols...	5	3-15	1440	3.8	54.72
Gr. Hols...	12	11-7	1260	4.0	50.40
Gr. Hols...	12	12-3	1176	5.0	58.80
Frank Nennig					
Gr. Hols...	9	1-1	1128	4.0	45.12
Gr. Hols...	9	3-15	1248	4.0	49.92
Gr. Hols...	7	2-15	1146	3.6	41.26
Gr. Hols...	6	2-15	1197	3.8	45.49
P. B. Hols.	6	12-15	1056	4.0	42.24
P. B. Hols.	6	1-15	1116	3.8	42.41
Joe Wenninger					
P. B. Hols.	7	12-16	1311	4.0	52.44
Gr. Hols..	7	12-25	975	4.2	40.95
Mayer Bros.					
P. B. Guern.	8	3-9	1113	5.8	64.55
Gr. Guern..	11	12-12	1179	4.0	47.16
Gr. Dur. ..	6	3-6	1365	3.4	46.41
Gr. Dur. ..	8	3-12	1140	4.0	45.60
Gr. Dur. ..	8	3-16	1188	4.4	52.27
Gr. Guern..	7	4-10	910	4.6	41.86
Gr. Dur. ..	12	4-8	1053	4.0	42.12
J. P. Koehler					
Gr. Guern..	9	11-1	882	5.3	46.75
Gr. Guern..	5	11-15	855	5.0	42.75
Gr. Guern..	5	3-24	1197	5.0	59.85
Gr. Guern..	4	3-5	888	5.0	44.40
Gr. Guern..	3	4-15	806	5.0	40.30
Joseph Koehler					
Gr. Hols...	6	4-8	1242	3.8	47.20
Pol. Dur...	5	3-10	969	4.6	44.57
Gr. Hols...	7	3-1	1071	4.0	42.84
Gr. Guern..	6	3-5	1125	4.0	45.00

Note—Seventy-one cows as compared to seventy-three last month.

Stratford Association.

The April report of the Stratford Co-operative Cow-Testing Association (Marathon county) shows the following records:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Chrowser Bros.					
No. 3, R. H..	6	12-19-15	1394.4	3.9	54.4
No. 17, G. H.	3	3-7-16	1188.2	3.5	41.6
No. 8	4	12-14-15	1097.6	3.7	40.7
No. 41, R. H.	2	3-11-16	1011.2	3.7	37.4
No. 22, G. H.	2	11-6-15	863.5	3.9	33.7
Garrett Hughes					
Luna, R. H..	6	2-12-16	1588.6	3.0	47.7
Ed Hayes					
No. 28, G. H.	5	3-9-16	1278.0	3.5	44.7
Jacob Spindler					
Effiie, N.....	7	3-28-16	1164.0	3.6	41.9
Hart Bros.					
Ida M.	6	3-5-16	1121.6	3.4	41.3
Fenwood Lumber Co.					
No. 2	7	3-13-16	1210.6	3.6	41.2
Wm. Schneider					
Boss	10	3-8-16	1165.7	3.5	40.8
Flossy, G. J.		2-20-16	758.6	5.3	40.3
Molly, G. H..	8	3-22-16	1335.0	3.0	40.0
Mrs. G. Hein					
Douglas, R.H.	4	3-19-16	1230.0	3.3	40.6

Garrett Hughes, President.
James L. Chrowser, Secretary.
Francis J. Woodward, Official Tester.

Do Not Rob Your Cow.

We hear a lot these days about the "robber cow." There are a few such, of course, but very seldom do we find a well-bred cow a robber unless she has first been robbed. Many times one cow in a herd will lose out worse than the others by stinted feeding. This is not all; very often it is what under proper conditions would be the best cow of the lot. The excess nervous force may be used either for good or bad.

The testing associations are doing a great work; in fact, it is the only practical way for the farmer who keeps a few dairy cows as a sideline to get his milk tested. It is a long ways off, we suspect, the time when every farm will possess a tester of its own.

However, in testing a herd of cows, it should be done by computing the feed as a basis. While it is probably true that each individual cow possesses a fixed composition that is natural to her, in the matter of butter fat, just so surely as we ignore the most important of all factors, that of the feed to produce the milk, just so certain will our best cows be branded as "robbers."

A man who kept from six to ten cows, or an average of about eight, was shipping only a little more than a five-gallon can of cream each week. It was not nearly enough, but it helped out, and the heifer calves were all raised, which also helped out. Then, too, two bunches of pigs yearly were grown on the skim milk. All in all, the cows were not doing what they should, but it all helped.

It became necessary, fortunately, for a sale to be held at that farm to raise some ready money, and, of course, the dairy cows were the drawing card. People came from a distance, because they knew that the stock was well bred, and besides, although they could not know that the stuff had not been doing its best, it was a well-known fact that the cows had kept this family out of a hole every time. They sold from $70 to $85 per head, only three choice heifers being kept to build up another herd.

"How do you manage without that blessed old cream check," was asked the owner. "Oh, we ship cream, or did until just now, and one of the cows will soon be fresh." "How often do you ship?" was almost incredulously asked. "A can each week," was the cheerful reply. "You do not mean to say that you ship as much cream from three heifers as you did from eight cows?" "Just what I'm tellin' you!"

Then with a mischievous twinkle he said: "I almost found this out once before, that the feed all given to half as many cows, when you cannot afford to give what they actually need, will bring better returns, besides cutting the stabling and labor in two. But it seemed that there was no place to begin; we could not afford to part with this one and we could not part with that one and so they all stayed until money, fortunately, had to be raised, and now that I know to a certainty that the system was all wrong it will not be repeated."

Now, if those cows had been tested with no thought to the rations they were expected to manufacture butter fat from the greater part of them would have been condemned, when, in fact, it was one of the best dairy herds in this country. It had been built up little by little, buying a choice heifer where it was to be found, keeping the heifer calves and selling off the poorer individuals.

Sweet Cream For Butter Making.

To the Editor:—In general, the souring of cream is an indication of its age and condition under which it has been kept. Very sour cream, then, naturally indicates that the cream is very old or has been kept at too high a temperature. In the creamery it makes little difference whether the cream is very sour from old age or has been kept at too high a temperature, for in neither case can the cream be made into first-class butter. Therefore, the marget value of cream does not depend on the per cent of fat alone, but on the sourness or percentage of acid as well.

Sour cream generally results from the lack of immediate or thorough cooling after separation. Investigation shows that sweet cream of a good quality can be produced on the average farm with but little extra labor and expense. In fact, many dairymen are selling only sweet cream and are not delivering oftener than two or three times a week during the summer months. These farmers are not

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ine

vering sweet cream simply to comwith the wishes of the creamerymaı; they find it more profitable and rather a simple matter to keep it sweet. In some parts of the state farmers are advantageously making use of natural ice stored during the winter months for cooling the cream, while others are resorting to the use of running water, a tank, a cool spring or well, or a cool, well-ventilated cellar which greatly assist in maintaining a fairly low temperature. Special cabinets for cooling the cream with ice or running water can be constructed at little cost. Such a cabinet will aid in cooling the cream more rapidly as well as in saving ice. If a limited amount of ice or water under pressure is available the corrugated surface coolers can be advantageously used. One-half ton of ice per cow is probably sufficient for cooling the cream during the summer.

The farmers should bear in mind that the man who controls the quality and price of creamery butter is the one who produces the cream. The producer is responsible to a large degree for the low prices paid for cream and received for butter manufactured therefrom. Wholesale butter merchants are continually looking for high-grade butter and are willing to pay a special premium for it, but the poorer grades of butter roughly estimated at about 80 per cent, soon glut and dull the market because of the limited demand. In order to force this kind of butter on the market the price is dropped far below that of the higher grades of butter, and it is this price that regulates the price paid for the cream from which that butter was made.

Sweet cream is worth from 2 to 4 cents more than sour cream to the creamery purchasing it for buttermaking, and the dairymen should urge rather than discourage the grading of cream and the paying for same according to quality. This system is being used successfully by several creameries, and as a result the old sour cream received has gradually decreased until some are receiving only a few pounds each month. The cream grading system of paying according to quality must eventually be adopted by all creameries, as it is generally admitted to be the only method whereby the quality of cream and butter can be improved. O. W. Holmes.

Guernseys For Cheese.

[Editor's Note.—The following article was written for The Commonwealth by M. Michaels, well-known dairyman, of Fond du Lac, Wis.]

All markets constantly clamor for Guernsey milk, cream and butter because of their wonderful flavor and golden color. Yes, and even the cheesemakers are beginning to realize the importance and the necessity of Guernsey cattle among their patrons. A cheesemaker of experience, other things being equal, will pay more to own a cheese factory in a community where Guernseys are bred because of the higher percentage of fat contained in their milk. Guernsey milk is not only highest in butter fat, but is also highest in casein and milk sugar content, enabling the cheesemaker to make more cheese per 100 pounds of milk and also make a cheese of better quality.

Winter dairying dates back only twenty to twenty-five years—before this time practically all cows freshened in the spring, ending their period of lactation in the fall of the year, usually in November. How well do we remember the high quality of cheese made in September, October and November. How eager cheese-buyers were to contract fall-made cheese, usually this cheese brought twice the price that spring-made cheese did. We also remember the high yields of cheese per 100 pounds of milk in the fall when we could make one pound of cheese out of every eight pounds of milk delivered. In the spring the yield would be low, often taking as much as twelve to thirteen pounds of milk to produce one pound of cheese.

Why all this difference? Simply because at the end of the season the milk was just that much richer in fat and cheese-producing material due to the advanced period in lactation. High-testing milk is as much preferred to low-testing milk in the making of cheese as it is in buttermaking.

It is nothing more than a plain business proposition for a cheesemaker to seek Guernsey milk. It not only enables him to pay a higher price per 100 pounds of milk, but also to make a higher grade of cheese, hereby giving the best of satisfaction and getting a high standing among his patrons. The patron who receives $2 per 100 pounds of milk or 50 cents more than his neighbor, finds not only more pleasure in carrying on his farm operations but in getting more money out of his business.

From our own experience of owning and operating cheese factories, some that were supplied with low-testing, others with high-testing milk, we have always found the factories that were supplied with the high test yielded fully as high a proportion of cheese per 100 pounds of fat delivered as did the factories with low-testing milk. What little difference we have found has always been in favor of richer milk. In practice we find that on an average we obtain from 260 to 265 pounds of cheese per 100 pounds of fat regardless of the test of milk.

The New York Experiment Station has published data which demonstrate that the proportion of cheese to fat remains practically constant in all milk regardless of test. This is shown by the figures worked out in the following table:

Per cent fat in milk	Lbs. cheese per 100 lbs. milk	Value of milk per 100 lbs.
3.5	9.45	1.59
4.0	10.60	1.80
4.5	11.74	1.99
5.0	12.95	2.20

The figures in the above table show conclusively the high value of Guernsey milk which will average about 5.0 per cent or better for fat.

The price of cheese was figured at 17 cents net. The high price has been realized the past winter and no doubt cheese prices will be high for some time to come. This, I think, is due to the increased demands for market milk, both for the city trades and the condensing factories.

Warm Weather Care of Milk.

To the Editor:—The loss of a few messes of milk in the course of the season eats quite a hole in the profits, but there is a loss which comes from milk and butter that are not quite up to the standard because of lack of proper care far surpassing any that comes through having now and then a can of milk sour.

Just as soon as the weather gets warm our milk is at once taken out of the stable after it is taken from the cow and strained into a can. When we have as much in this can as we can cool conveniently we take another and set the first one into a tub of water right from the well. If we had a stream of running water we would use a trough for this purpose, lowering the temperature if need be by the use of ice. While the animal heat is escaping from the milk in the can we stir the contents once in a while. That helps to cool the milk as quickly as possible and releases the cow smell from it, which might otherwise affect the entire mess before morning.

Another good way to cool milk is by the use of the aerator. The use of this device is more and more coming into general use. Not all farmers, however, understand just what it is, so let me say that it is a tin vessel, not altogether unlike a big strainer top-side down through which the milk may be run, cooling it by exposing it to a cool surface on the way down. There are more expensive coolers, consisting of pipes running back and forth, with a tank at the top into which the milk may be poured, coming out below into a can. This ought to have running water, either artificial or natural.

But by simply pouring new milk back and forth from one pail or can into another we may do a very good job at cooling at no other expense than the outlay of a little time and strength. And certainly this is a great deal better than to have the milk sour or retain its bad flavor until it reaches the customer, for it is a fact that the natural animal smell of milk, while not altogether disagreeable in the beginning, if permitted to stand shut up begins to change very quickly if not let out in some way, thus setting up a process of decay.

The care of milk in warm weather includes keeping every pan, strainer, can, pail and cloth that is in any way connected with the business just as clean as possible. If the least bit of milk or cream or even creamy water be left on one of these things in a very little while heat starts the rotting process and that is disastrous to good milk, cream or butter.

The good care of milk also has a bearing on the way the stable work is done. Clean stables, clean cows and clean clothes for the milkers all have their part to bear in the production of first-class dairy products.

E. L. V.

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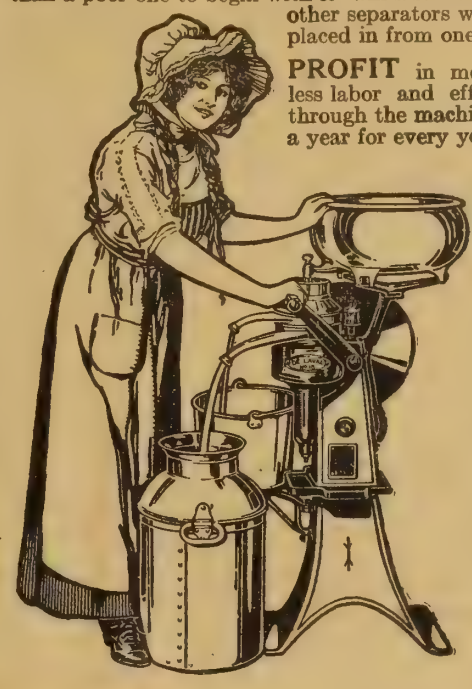

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LAW QUESTIONS.

Sheep-Tight Fences.

Mr. Fred Powers, Gillett, Wis.—My neighbor owns forty acres of timber land adjoining my farm, and intends to pasture sheep on it. (1) Can he compel me to built my half of the partition fence sheep tight? (2) What is a lawful fence in Wisconsin?

Answer.—(1) He can by having the fence viewers meet and view the premises and make an order requiring you to build such fence. (2) The law of Wisconsin describes several kinds of partition fences, all of which are declared lawful, and are practically sheep tight, but a detailed description of the same is too long for these columns. See chapter on fences in the Wisconsin laws of 1907, to be found in any justice's office.

Removal of Shanty from Land.

A Subscriber, Phelps, Wis.—I bought a piece of land in Wisconsin from a land company and made my first payment, and built a shanty on the land, and paid for the same. I cannot keep up my payments on the land and intend to let it go. The shanty is not built on a wall, or on posts set in the ground, but on loose block foundation. Can I lawfully remove or sell the shanty?

Answer.—This is a close question, but as the shanty was set upon a loose block foundation, and not on a permanent foundation, we are of the opinion that you have a right to sell the shanty or remove it.

Wisconsin stood second in May in the list of states securing transfers of cattle ownership issued by the Holstein-Friesian Association of America. During a two weeks' period in May 467 transfers were issued to Wisconsin stockmen.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

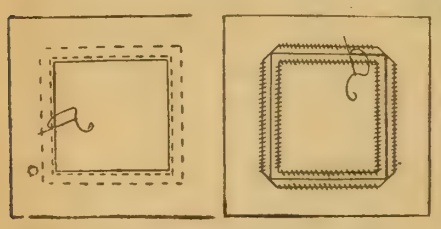
Patching and Darning.

Mending is very important from an economical standpoint, for if neatly done it makes a garment almost as good as new, though too much time spent on old garments is wasted. It is also important from an esthetic standpoint, since it is untidy to wear clothes that are torn, yet mending is one of the most difficult tasks for many girls and women.

There are two methods of repairing a hole or a torn place—patching and darning. Patching is re-enforcement of worn places or holes with cloth. Darning is re-enforcement by means of threads. The accompanying diagrams are those used by the Household Arts Department of the University of Missouri in teaching its students how to do neat patching and darning.

Patches are used when the hole is too large to darn, and should match the material in color and design. Where there is a figure it should be matched so the patch will be as inconspicuous as possible. Patches are much neater when made square or oblong, and less noticeable when the lines of stitches are put in on lines of the goods where it is least conspicuous. The size of the patch depends upon the size of the hole, the size of the worn place and the quality of the material. A new piece may be too strong or the garment may have faded. It is well to wash some pieces of colored material every time the dress is laudered, or a piece can be faded by boiling with soap and water to which soda has been added. All pieces to be used for patching articles which have been laundered should be washed at least once to allow for shrinkage. If a patch of the worn garment cannot be obtained, use a light-weight material especially if the garment is very old. Use white or colored cotton thread on wash materials, split silk or raveled threads of the material on silk or woolen goods.

To make a hemmed patch put pins in at the four corners, after creasing

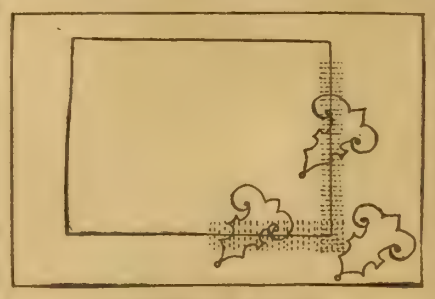


Hemmed patch. Overhand patch.

along the thread or stripe, equally distant from the center of the worn place on a direct line with each other, forming a perfect square or rectangle. Cut from the hole diagonally to the pins and turn back the edges, on a thread toward the wrong side, and baste in place. Then slip the piece underneath, placing the pins in the corners to match the figure and threads (the warp and woof must run in exactly the same direction as in the material), and baste carefully. Put in tiny hemming stitches on the right side. Cut edge of main piece one-eighth inch from the seam. Cut patch so its line of hemming will be on the line of contrast or one-fourth inch from the first hem. Then hem down on the wrong side, after turning the edge under evenly.

The overhand patch is less conspicuous than the hemmed patch though not so strong. The worn part is cut away and the edges turned and basted as before. The patch is creased to make it exactly the size of the hole, with the threads and pattern matching. It is then folded back onto the body cloth, basted and stitched on alternate edges, to keep it straight. The overhand stitch is used, and being a straight stitch is imbedded in the threads of the material on the right side. The edges of the wrong side are finished with the overcast stitch to prevent fraying. This patch may be used also on silk and on woolen materials.

For the darned-in patch cut the hole so that all weakened threads will be removed and it will be square or rectangular with the threads of the material. Cut the patch the same size as the hole, with threads and figures matching. Baste in with long anchoring stitches on alternate sides on the right side of the material to keep it straight. Use the darning stitch, back and forth on the wrong side, catching the edge by stitching over it. The darning stitch is a series of small run-

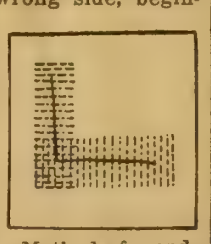


DARNED-IN PATCH.

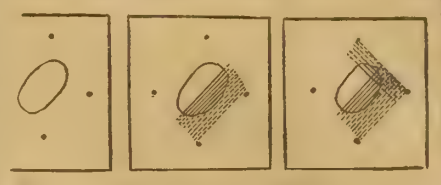
ning stitches (if any difference in length, be sure the short ones are on the right side), perpendicular to the edge of the hole. Go all the way to the end on each side, thus making it strong at the corners. Split silk is used to make the thread thinner so it will sink into the cloth. This is the proper patch to use on table linens and is sometimes called the damask patch.

The darning stitch is also used on the bias tear, with split silk or threads of the material. Often both warp and woof threads are used, the warp threads being inserted first. The edges are woven together by passing alternately over and under the edge. Stitches should always follow the weave of the material.

For the corner tear put in basting threads as for the darned-in patch on the right side. The darning stitches are put in on the wrong side, beginning away from the tear to re-enforce this part. At the corner the stitches are perpendicular to each other. Stocking darning is always a problem because it must not only be done neatly but also so that it will be comfortable to the foot. Trim away frayed portions from the hole—this part always causes unnecessary thickness. Place pins (dots in the figures represent the pins) in the shape of a diamond. They are used as a guide in keeping the correct shape. Then proceed as shown in the diagrams, being careful to make the stitch and space alternate. Use the



Method of mending a corner tear.



STOCKING DARNING.

same method in re-enforcing the worn portions. Always work on the wrong side and use a darning ball, as it is impossible to get good results without it.

Do Not Use Black Canning Rubbers.

Housewives are warned not to use the black rubber rings that are frequently given free with new jars for canning. These are made of a cheap grade of rubber and contain tar. The tar flavor may get into the fruit or vegetable and cause serious loss and disappointment. Use gray, white, or red rubbers of good grade. New rubbers should be obtained for vegetables and fruits, but old rubbers may be used for jellies and marmalades.

How to Use Aluminum Ware.

Many people who have used aluminum have found that, after a few weeks of use, such dishes show a number of small pits, undoubtedly due to the use of alkalies either occurring in the food by way of added soda or as applied in cleaning the utensil, or by use of very caustic soaps or washing powders.

Aluminum should never be cleaned with anything else than a very neutral soap. Ordinary yellow laundry soap and all forms of scouring and washing powders, so called, should be avoided. If an aluminum utensil becomes coated with a white film of lime, it may be readily removed by a very weak solution of nitric acid, which will not only remove the lime but will form a light coat of oxide of aluminum which will in turn protect the ware against further deposits. Stronger acids, or acids of other mineral types, such as muriatic, cannot be used for this purpose as they will dissolve the metal.

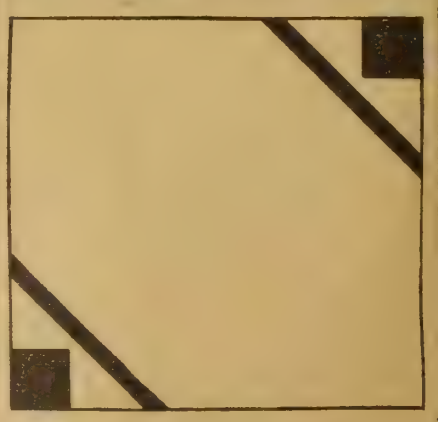
While the first cost of aluminum ware is very much greater than that of enamel ware, its lightness and cleanly appearance, together with its efficiency in conducting heat and its durability, if not abused, recommend it for general use in cooking.

As is generally known, utensils made from tin, tinplate, or from any material containing even a small amount of zinc, are dangerous, especially when used as containers of any food that is inclined to be acid. Aluminum ware is very little attacked by the weaker acids, such as are found in the common fruits and vegetables. Hence, such ware may be used with safety. On the contrary, alkaline solutions, such as are met with in cooking where soda is present, are very injurious to aluminum ware.

Porch Pillows.

To the Editor:—I was surprised when I was invited to visit the Home Department again. I will do the best I can, and hope it will benefit those who want to make porch pillows like mine.

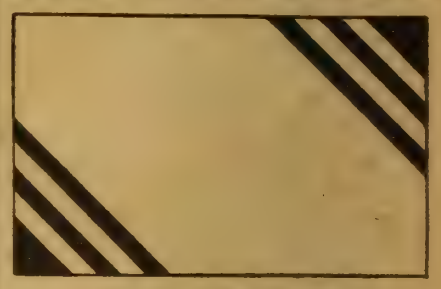
I made two sizes, one eighteen by eighteen inches square and one sixteen by twenty-two inches when finished. Most everyone has old material that will do for these pillows, as they are pretty roughly used, especially when the men and boys get hold of them.



PILLOW 18x18 INCHES.

I took a piece of heavy cloth (an old heavy comfort will do), cut it as big again as I wanted my pillow, put a layer of excelsior on one-half, folded the other half over it and sewed it around the edge. Then I covered the pillow with a piece of ticking. Of course, feathers make the nicest pillows but excelsior does very well for porch pillows. The porch pads you buy are often filled with it.

Now I am ready for the slip. I take nice gunny sacks, and if not clean I wash and iron them. When cutting allow for big seams. Cut the top and bottom separate, sew the trimming on and sew the two pieces together. I use plain colored gingham or Indianhead muslin for trimming so that they can be laundered occasionally. The diagram will show how I trimmed mine, but most any design could be



PILLOW 16x22 INCHES.

used. Some people cut out the flower designs from bright cretonne and use that for trimming and it launders well also. Mrs. F. E. T.

Home-Canned Soups.

A supply of canned soups is frequently of great convenience to the housewife, as such soup may be prepared ready for serving at almost a moment's notice. Many economical and palatable soups may be put up in the summer and early fall, and in this way the odds and ends of vegetables and cereals may be utilized as well as meat scraps, bones, and ligaments that are often wasted. "The canning of vegetable soups, purees, and consommes is thoroughly practical and should be a part of the canning work of every home as well as canning-club member," say the specialists in home canning instruction of the extension work, north and west, states relation service.

The following recipes, in which the soup stock is made from beef, are prepared for the use of home canning clubs, and the products are intended for home consumption. When these products are intended to be sold, those undertaking this work are cautioned to inform themselves as to the requirements of state and federal food laws and meat-inspection regulations:

Soup Stock.—Secure twenty-five pounds of beef hocks, joints and bones containing marrow. Strip off the fat and meat and crack the bones with a hatchet or cleaver. Put the broken bones in a thin cloth sack and place them in a large kettle containing five gallons of cold water. Simmer (do not boil) for six or seven hours. Do not salt while simmering. Skim off all fat. This should make about five gallons of stock. Pack hot in glass jars, bottles, or enamel or lacquered tin cans. Partially seal glass jars. (Cap and tip tin cans.) Sterilize forty minutes if using a hot-water bath outfit; thirty minutes if using a water-seal or five-pound steam-pressure outfit; twenty-five minutes if using a pressure-cooker outfit.

Vegetable Soup.—Soak one-fourth pound of lima beans and one pound of rice for twelve hours. Cook one-half pound of pearl barley for two hours. Blanch one pound of carrots, one pound of onions, one medium-sized potato, and one red pepper for three minutes and cold dip. Prepare the vegetables and cut into small cubes. Mix thoroughly lima beans, rice, barley, carrots, onions, potato, red pepper. Fill glass jars or the enameled tin ca s three-fourths full of the above mixture of vegetables and cereals. Make a smooth paste of one-half pound of wheat flour and blend in five gallons of soup stock. Boil three minutes and add four ounces of salt. Pour this stock over vegetables and fill cans. Partially seal glass jars. (Cap and tip tin cans.) Sterilize ninety minutes if using the hot-water bath outfit; seventy-five minutes if using a water-seal of five-pound steam-pressure outfit; forty-five minutes if using a pressure-cooker outfit.

Cream of Pea Soup.—Soak eight pounds of dry peas overnight. Cook until soft. Mash fine. Add the mashed peas to five and one-half gallons of soup stock and bring to boil. Pass the boiling liquid through a fine sieve. Make

a smooth paste of one-half pound of flour and add paste, ten ounces of sugar, and three ounces of salt to the soup stock. Cook until soup begins to thicken. Pack in glass jars or tin cans. Partially seal glass jars. (Cap and tip tin cans.) Sterilize ninety minutes if using a hot-water bath outfit; eighty minutes if using a water-seal outfit; seventy minutes if using a five-pound steam-pressure outfit; forty-five minutes if using a pressure-cooker outfit.

Cream of Potato Soup.—Boil one and one-half pounds of potatoes, sliced thin, and five gallons of soup stock for ten minutes. Add three ounces of salt, one-fourth teaspoonful of pepper, and one-half pound of butter and boil slowly for five minutes. Make three tablespoonfuls of flour into smooth paste and add to the above. Cook three minutes and pack in glass jars or tin cans while hot. Partially seal glass jars. (Cap and tip tin cans.) Sterilize ninety minutes if using a hot-water bath outfit; seventy-five minutes if using a water-seal outfit; sixty-five minutes if using a five-pound steam-pressure outfit; forty-five minutes if using a pressure-cooker outfit.

Bean Soup.—Soak three pounds of beans twelve hours in cold water. Cut two pounds of ham meat into one-fourth-inch cubes and place in a small sack. Place the beans, ham and four gallons of water in a kettle and boil slowly until the beans are very soft. Remove the ham and beans from the liquor and mash the beans fine. Return the ham and mashed beans to the liquor and add five gallons of soup stock and seasoning, and bring to boil. Fill into glass jars and tin cans while hot. Partially seal glass jars. (Cap and tip tin cans.) Sterilize two hours if using a hot-water bath outfit; ninety-minutes if using a water-seal outfit; seventy-five minutes if using a five-pound steam-pressure outfit; sixty minutes if using a pressure-cooker outfit.

Okra Soup.—Slice eight pounds of okra into thin disks. Blanch ten minutes and cold dip. Boil one and one-half pounds of rice for twenty-five minutes. Mix the okra and rice and fill the cans or jars half full. To five gallons of soup stock add five ounces of salt, one-fourth teaspoonful of coriander seed, and one-fourth teaspoonful of powdered cloves, and bring to a boil. Fill the remaining portion of the jars or cans. Partially seal the glass jars. (Cap and tip tin cans.) Sterilize two hours if using a hot-water bath outfit; ninety minutes if using a water-seal outfit; seventy-five minutes if using a five-pound steam-pressure outfit; sixty minutes if using a pressure-cooker outfit.

To the Housewife.

If a sugary coat is desired on lemon pies, sift powdered sugar over the top just before it is put into the oven.

The juice of a lemon added to a pan of water will freshen wilted vegetables if they are soaked in this an hour.

Strong ammonia water is excellent for removing iodine stains.

The best scheme for keeping centerpieces is to roll them over a pasteboard roll about twenty-seven inches in diameter, then wrap the whole in blue paper or blue cloth to keep them from turning yellow.

Do not put a bedspread through the wringer, after the last rinsing water, but hang it on the line dripping wet. It will dry without a crease, will not require ironing, and the fringe will be as fluffy as when new.

To dry a sweater run part of the clothes line or a strong cord through the sleeves, so they are extended full length. Pin the pockets in position. the weight of the sweater being evenly distributed, the air and sun can reach every part of it, drying it very quickly.

To clean a white straw hat brush the hat well, then dip into a solution of two quarts of boiling water and a tablespoonful of ammonia. When the hat is thoroughly soaked remove it and cover it with a thin layer of sulphur. Let stand until the hat is dry, then brush thoroughly with a stiff whisk broom.

The Buttercups.

There must be fairy miners
Just underneath the mold,
Such wondrous quaint designers
Who live in caves of gold.

They take the shining metals,
And beat them into shreds;
And mold them into petals,
To make the flowers' heads.

Sometimes they melt the flowers
To tiny seeds like pears,
And store them up in bowers
For little boys and girls.

And still a tiny fan turns
Above a forge of gold,
To keep, with fairy lanterns,
The world from growing old.

—Wilfrid Thorley in Kansas City Star.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Recipes.

Apple Puff.—Make one quart of thick apple sauce in the usual way. While still hot, sweeten with one-half cupful of sugar and one-half cupful of pure maple sirup. Fold into this the whites of two eggs beaten to a stiff froth. Place in a medium oven for fifteen minutes. This makes a dainty dessert and when served as a breakfast dish with hot muffins it is delicious.

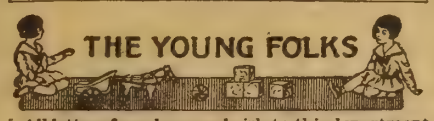
Rhubarb With Raisins.—Two pints of rhubarb cut in inch pieces, one cupful of raisins, three-fourths cupful of sugar. Put rhubarb in a saucepan over a very low fire until the juice runs freely. Do not let it at any time boil hard. Add the raisins and let this boil until the rhubarb is nearly reduced to a pulp; then add the sugar. Boil up, remove from fire, and put aside to cool. Serve cold with cream.

Scotch Broth.—Soak two pounds of lean mutton from the neck in two quarts for an hour. Simmer for an hour and a half, adding water to keep the bulk to about three pints. Now add a carrot, an onion and a turnip, chopped fine, and a tablespoonful of barley. Salt and pepper to taste. Cook three hours at the simmer point. Serve with chopped parsley and small sour pickles.

Corn Oysters.—Beat two eggs and add to a can of corn; sift a teaspoonful of baking powder with a half cupful of flour; soften a tablespoonful of butter. Mix all together and fry in deep fat or on a hot griddle.

Almond Cake.—One-half pound almonds (shelled and powdered), one cupful of sugar, seven eggs, one teaspoonful of baking powder. Beat yolks of eggs until thick and lemon colored. Add sugar and continue beating. Beat egg whites until stiff. Add powdered almond and baking powder to yolk mixture. Lastly add egg whites. Mix by lifting the wire egg beater straight up and down through the mixture. Turn at once into an ungreased pan. Bake in moderate oven.

Roll Jelly Cake.—Beat three eggs light, then add a cupful of sugar, two tablespoonfuls of cold water and a pinch of salt, and fold in gradually a cupful of flour that has been sifted with two tablespoonfuls of baking powder. Bake in a good-sized dripping pan, well greased. Turn out on a towel wrung out of cold water. Spread with jelly and roll up at once while warm. Sprinkle with powdered sugar.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Going to Buy Her Own Piano.

Dear Young Folks:—I live on a farm of 200 acres about one mile from town. I have a cat named Tommy, a calf named Princess Nancy, a colt named Jane and a Barred Plymouth Rock hen named Emma. Emma is seven years old and she is very tame. She will eat out of my hand.

I am very anxious to get a piano and, as my parents cannot buy one now, I am going to raise Triumph potatoes this summer and try to earn the piano myself. I think it would be much nicer to earn it than to have it given to me.

I enjoyed Angeline's letter very much and I think Lorna must be quite a farmer.

I am twelve years old and am in the seventh grade. I can tat, crochet and play on the organ. —Florence.

Read Twenty-seven Books This Year.

Dear Young Folks:—I certainly love to read the Young Folks' page and I want to join your circle. I live on a farm of 160 acres. My father owns four farms, each containing 160 acres. We have lots of fun out on the farm.

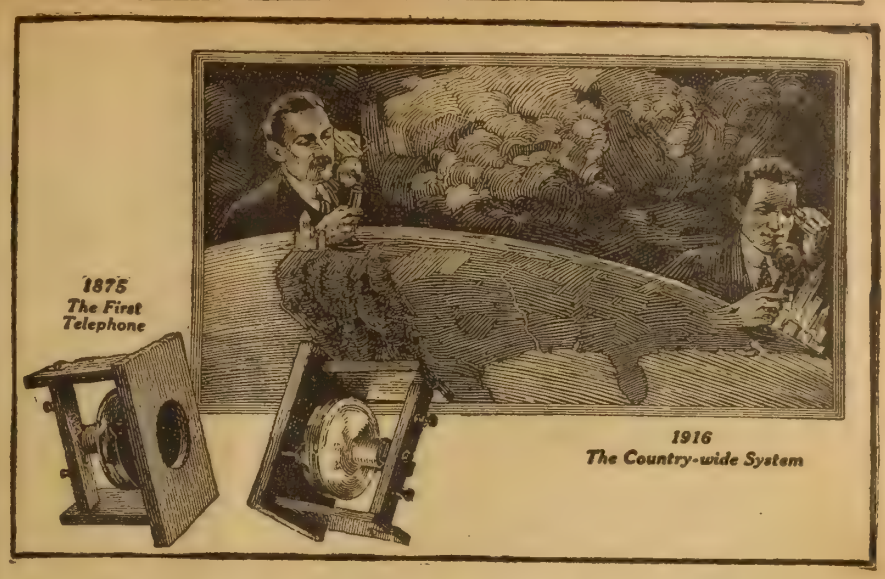
I have four brothers and three sisters. Two of my sisters are married. One of them has a pair of twins, a boy and a girl and the other one has a baby boy named Adolf. I love them very much.

We have four dogs, besides cattle and horses and chickens and ducks.

My little brothers and I go to school every day. It is a mile to our schoolhouse and we have to walk every morning, but I think that is good exercise. Don't you? There are thirty-nine pupils in our school, which is the largest one around here. We all like our teacher very much because she is good and kind to the children. At noon the big boys play baseball and we girls watch them or play some other game. We have quite a lot of pretty things in our schoolhouse, and we have some lilies which bloom nicely before school is out.

I have already read twenty-seven different library books this year.

—Matilda.



Forty-one Years of Telephone Progress

The faint musical sound of a plucked spring was electrically carried from one room to another and recognized on June 2, 1875. That sound was the birth-cry of the telephone.

The original instrument—the very first telephone in the world—is shown in the picture above.

From this now-historic instrument has been developed an art of profound importance in the world's civilization.

At this anniversary time, the Bell System looks back on forty-one years of scientific achievement and economic progress, and gives this account of its stewardship:

It has provided a system of communication adequate to public needs and sufficiently in advance of existing conditions to meet all private demands or national emergencies.

It has made the telephone the most economical servant of the people for social and commercial intercourse.

It has organized an operating staff loyal to public interests and ideals; and by its policy of service it has won the appreciation and good will of the people.

With these things in mind, the Bell System looks forward with confidence to a future of greater opportunity and greater achievement.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

An Industrious Boy.

Dear Young Folks:—I like to read your letters. I am eleven years old and am in the sixth grade. I have one mile and a half to go to school. We live about two miles from town.

I can do much work in the field. I can disk with four horses, harrow, plow, mow hay and rake it. I like best to disk and haul grain to town.

We farm 196 acres and have thirteen horses and colts. My brother and I do all the milking. We have four calves, and one of them plays with us just like a little dog. I have one colt and a cow all my own.

Perhaps I will write again sometime. —Frankie.

Tells How to Make Jam.

Dear Young Folks:—I live on a farm near town. I have one sister and six brothers. We go to town school and enjoy it very much. I am fourteen and expect to be in the second year of high school next year. I take domestic arts at school. We sew every Wednesday at school and I do lots of the home sewing and help with the housework.

I will tell you how I make strawberry and pineapple jam. Pare the pineapples and pick them into small pieces with a silver fork. Boil the pieces in a little water until tender. Make a heavy sirup and drop in the pineapple while it is boiling. Continue the boiling for ten minutes. Then drop in firm, slightly under-ripe strawberries that have been washed and stemmed. Continue the boiling very slowly for ten or fifteen minutes longer. Seal the jam in jars. —Mary.

A Motherly Hen.

Dear Young Folks:—I am a little girl seven years old and live with my mamma and papa in the country. I go to school in town and am in the second grade. I have never missed a day and have only been tardy once during the year.

We have a pet hen. She wanted to set very early, so mamma set her in the kitchen and she hatched eight chickens. Now she comes and lays every day in the same corner where she hatched her chickens. When she comes to the door she pecks at it for someone to let her in. Mamma has ninety-nine little incubator chickens, and one night she wanted to hover all the ninety-nine little chickens.

—Ruby.

June is a strenuous month for Wisconsin farmers. The heavy milk flow due at this time, the coming on of the hay harvest, corn cultivation and scores of other pressing tasks of early summer all combine to make the sixth month of the year one of the busiest in the rural calendar. But in addition to their everyday work many Wisconsin farmers have planned to attend special farmers' meetings and co-operative conferences at this, the rush season of the year.

International Sunday School Lesson.

Lesson for June 18, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

LESSON TEXT—Acts 16:16-40.

GOLDEN TEXT—Believe on the Lord Jesus and thou shalt be saved, thou and thy house.—Acts 16:31.

Dean Vaughn has said of this lesson that in it "we have an epitome of the whole history of the gospel." The time was A. D. 50 or 52 and the place was Philippi, an important city, as before suggested.

I. The Damsel Delivered of Demons (vv. 16-18). On their way to the praying place where they had met Lydia, the disciples met this maid who "had a spirit, a Python." Greek soothsayers were supposed to be inspired by Apollo, who killed a great snake at Mt. Parnassus and left it to rot. The girl was probably possessed of hysteria and thus spoke strange words, and her condition brought much profit to her masters, who professed to interpret her words. This evidence of evil possession awoke a sympathetic response in Paul's heart. "Her misery and degradation were a symbol of the degradation, as Lydia's sweet and benevolent Christian character was of the transfiguration of womanhood."—Stalker. Her cry after Paul was perhaps that they were the slaves of some god, even as she was the slave of Apollo. The Gadarene (Luke 8:28) used similar language. Paul did not at once stop her (v. 8), perhaps to avoid a controversy, but his deliberation made more profound the final deliverance wrought. Worn out at last with her cries, but taking no credit himself, Paul spoke the name of Power which had foretold just such acts (Mk. 16:17; Lk. 9:1; Lk. 10:17).

II. The Disciples in Prison (vv. 19-24.) Of no further commercial value, the slave drivers sought revenge by inciting a mob to attack Paul and his companions. So today the liquor interests would seek remuneration for the loss of their "business," and anathematize their opponents, while the underworld tries to overthrow all who seek to restrain them. Paul and Silas were accused of "troubling" the city, for the trade had been interfered with. It, indeed, went hard with them thus to be unjustly set upon and finally, through the connivance of the spineless authorities, to be incarcerated in a filthy dungeon. Still, though the majority were against them, yet the mob was not right (compare 17:5; 18:12; 10:28-29), and they had One on their side who was sufficient (Rom. 8:28).

III. Deliverance and Salvation (vv. 25-35). Christ before Pilate was accused of sedition, and these flogged disciples were likewise innocent sufferers. (1) Prayer and praise (25-26). Note the circumstances — darkness, torn and bleeding, aching backs and a morrow filled with blackness. There was no sleep for the disciples at that midnight hour, but often strength is better gained in prayer than sleep. "Praying, they sang hymns,"—in the midst of that heterogenious lot of prisoners they did not, could not, keep silent. The result was attentive listening by the other prisoners and by a loving Heavenly Father, who shook the place to evidence his interest (v. 26). (2) The jailed delivered. The place was so shaken that every barred door was opened and the staples of the stocks were so loosened as to liberate every prisoner. (3) The jailer saved. The brutal one is now the anxious inquirer, and becomes a good type for all to follow who are out of Christ. (a) He saw he was lost. He was subject to the same death as his escaped prisoners. "Supposing" (v. 27) has darkened many lives, and our greatest sorrows are often imagined. Face to face with death, the jailer would plunge into an eternity for which he was not prepared. Paul's clarion call brought the jailer to express his anxiety (v. 29), and it was not a trifling nor skeptically indifferent man who appealed to Paul. He was brought face to face with two holy men, with God and with eternity.

Those to whom he came knew the facts, had faith, and could meet the emergencies of life with confidence.

IV. The Humbled Magistrates (vv. 35-40). The jailer evidences joy, hospitality and a changed home, which news must have reached the magistrates. Their early command was to "let these fellows go," Paul here rises to his full dignity. Beaten openly, condemned without trial and verdict, does not allow them to cover their crime and blunder by stealth.

The magistrates were liable to loss of position, goods, and even life, and hence willingly did all that Paul required.

Thus the imprisonment turned out to the honor of the apostle and the glory of God. Nor did Paul hasten at all in leaving the city. After recovering strength to travel and encouraging the members of the infant church they departed, taking Timothy (17:14) with them.

Thus God gloriously delivered those who labored amidst sore trials, and there was established in Philippi a church which was dear to Paul and which was especially kind to Paul, and to which is directed one of his most tender epistles.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery.

CATALOG OF SPRING AND SUMMER FASHIONS.

Send 10 cents in silver or stamps for our up-to-date 1916 large spring and summer catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

9930—A splendid apron model. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 2⅛ yards of 27-inch material for a 6-year size.

1629—A popular "twenty-minute" apron. Just the thing to make "in a hurry" and to find convenient and comfortable ever after. The pattern is cut in 3 sizes: Small, medium and large. It requires 5½ yards of 27-inch material for a medium size.

1430—Girls' and misses' combination corset cover and petticoat. The pattern is cut in 5 sizes: 12, 14, 16, 18 and 20 years. It requires 3½ yards of 27-inch material for the skirt, and 1⅜ yards for the corset cover, with 3½ yards of 6-inch flouncing for the ruffle for a 14-year size.

1729—A simple, becoming dress for the little miss. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 3 yards of 40-inch material for a 6-year size.

1740—A smart little dress for mother's girl. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3 yards of 44-inch material for a 6-year size.

1745-1746—A charming gown for dinner or theater. For this development ladies' waist pattern 1745 and ladies' skirt pattern 1746 was used. The waist pattern 1745 is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt pattern 1746 is cut in 6 sizes; 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 8⅞ yards of 36-inch material with the drapery, without, it will require one yard less for a 36-inch size. Two separate patterns. Ten cents for each pattern.

1426—A simple and attractive tub dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6½ yards of 36-inch material for a 36-inch size.

1739—Ladies' dress in surplice style. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size.

1482—A new shirt waist model. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2½ yards of 36-inch material for a 36-inch size.

9909—Children's rompers with long or shorter sleeve. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2⅝ yards of 36-inch material for a 4-year size.

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Told in the Hills.

(Continued from page 9.)

e good care of her, and—and—
d heavens! If I could only speak
her once!"
If you do, I'll know it, and I'll kill
!" said the man at the door.
He was about to walk out when the
er arose bewilderedly.
Wait," he said, and his livid face
s convulsed pitifully. He was so
le more than a boy. "This that you
e told me has muddled my head. I
't think. I know the promises, and
keep them. If shooting myself
uld help her I'd do that; but you
you are leaving the country, and
nie is to live on at the old place,
l—and yet be respected? I can't
lerstand how, with—under the—
circumstances. I—"
No, I don't reckon you can,"
wled the other, altogether un-
ved by the despairing eyes and
oken, remorseful words. "It isn't
ural that you should understand a
n, or how a man feels; but Annie's
me shall be one you had a right to
e her four months ago—"
"What are you saying!" broke in the
er with feverish intensity; "tell
! tell me what it is you mean!"
"I mean that she shan't be cheated
of a name for herself and child by
r damned rascality! Her name for
rest of her life will be the same as
rs—just remember that when you
ward that transfer. She is my
e. We were married an hour be-
e I started."
Then the door closed, and the dark,
lignant looking fellow stalked out
o the morning sunlight, and through
scented walk where late lilies
ided as he passed. He seemed lit-
in keeping with their fragrant
iteness, for he looked not a whit
s scowling wicked than on his en-
nce; and of some men working on
lawn, one said to another:
"Looks like he got de berry debbel
dem snappin' eyes—see how dey
ne. Mighty rakish young genelman
walk out o' dat doah—look like he
en on a big spree."
And when the bride and her friends
ne chattering in, with their hands
l of roses, they found a strange, un-
ard-of thing had happened. The tall
ng husband, so strong, so long ac-
mated, had succumbed to the heat
the morning, or the fragrance of
tuberose beside him, and had
len in a fainting fit by the door.

ART 2d—"A Cultus Corrie."

CHAPTER I.

On Scot's Mountain.

THE de'il tak' them wi' their weeman folk, whose nerves are too delicate for a squaw man, or an Injun guide. I'd tak' no heed o' them if I was well, an' I'll do s now I'm plagued wi' this reminder that grizzly's hug. It gives me ny's the twinge whilst out lookin' to e traps."
"Where's your gallantry, Mac-ugall?" asked a deep, rather musi-l voice from the cabin door; "and ur national love for the 'winsome x,' as I've heard you call it? If lies are with them you can't re-se."
"Can I not? Well, I can that same w," said the first speaker, emphasiz-g his speech by the vim with which pitched a broken-handled skillet to the cupboard—a cupboard made a wooden box. "Mayhap you think haven't seen a white woman these x months, I'll be a breakin' my neck get to their camp across there. ell, I will not; they may be all very ne, no doubt—folk from the East; it ye well know a lot o' tenderfeet the bush are a sight worse to tak' e care of than the wild things they'll tryin' to hunt. 'A man's a fool who umbles over the same stone twice,' an old, true sayin', an' I know what m talkin' of. It's four years this utumn since I was down in the Walla alla country, an' there was a fine arty from the East, just as these are; o' they would go up into the Blue ountains, an' they would have me r a guide; an' if the Lord'll forgive e for associatin' with a pack o' luna-cs for that trip I'll never be caught i' the same bait again."
"What did they do to you?" asked e voice, with a tinge of amusement it.
"To me? They did naught to me but pester me wi' questions of insane devisin'. Scarce a man o' them could tether a beast or lasso one that was astray. They had a man servant, a sort o' flunky, to wait on them and he just sat around like a bump on a log and looked fearsomely for Injuns an' grizzlies. They would palaver until all hours in the night, about the scientific causes of all things we came across. Many a good laugh I might had, if I had na been disgusted wi' the pretenses o' the poor bodies. Why, they knew not a thing but the learnin' o' books. They were from the East—down East, they said; that is, the Southeast, I suppose they meant to say; and their flunky said they were well-to-do at home, and very learned, the poor fools! Well, I'll weary myself wi' none others o' the same ilk."
"You're getting cranky, Mac, from being too much alone;" and the owner of the voice lounged lazily up from the seat of the cabin door and stood looking in at the disgusted Scotchman, bending ever so slightly a dark, well-shaped head that was taller than the crosspiece above the door.
"Am I, now?" asked the old man, getting up stiffly from filling a pan of milk for the cat. "Well, then, I have a neighbor across on the Maple range that is subject o' late to the same complaint, but from a wide difference o' reason;" and he nodded his head significantly at the man in the door, adding: "An' there's a subject for a debate, Jack Genesee, whether loneliness is worse on the disposition than the influence o' wrong company."
Jack Genesee straightened out of his lounging attitude, and stepped back from the doorway with a decision that would impress a man as meaning business.
"None o' that, MacDougall," he said curtly, dropping his hand with a hillman's instinct to the belt where his revolvers rested. "I reckon you and I will be better friends through minding our own business and keeping to our own territory in future;" and whistling to a brown mare that was browsing close to the cabin, he turned to mount her, when the old man crossed the floor quickly and laid a sinewy, brown hand on his arm.
"Bide a bit, Genesee," he said, his native accent always creeping upward in any emotion. "Friends are rare and scarce in this Chinook land. You're a bit hasty in your way, and mayhaps I'm a bit curious in mine; but I'll no let ye leave Davy MacDougall's like that just for the want o' sayin' I'm regretful at havin said more than I should o' you and yours. I canna lose a friend o' four years for a trifle like that."
The frankness of the old man's words made the other man drop the bridle and turn back with outstretched hand.
"That's all right Mac," he said, heartily; "say no more about it. I am uglier than the devil to get along with sometimes, and you're about straight when you say I'm a crank; only—well, it's nobody's fault but my own."
"No, o' course not," said MacDougall in a conciliatory tone as he went back to his dish washing at the table—the dishes were tin pans and cups, and the dish pan was an iron pot—"to be sure not; but the half-breeds are pizen in a man's cabin, an' that Talapa, wi' the name that's got from a prairie wolf an' the Injin de'il, is well called—a full-blood Injun is easier to manage, my lad; an' then," he added, quizzically, "I'm but givin' ye the lay o' the land where I've fought myself, an' mayhaps got wounded."
The "lad," who was about thirty-five, laughed heartily at this characteristic confession. There was evidently some decided incongruity between the old Scotchman's statement and his quaint housewifery, as he wrapped a cloth reduced to strings around a fork and washed out a coffee pot with the improvised mop. Something there was in it that this man Genesee appreciated, and his continued laughter drew the beautiful mare again to his side, slipping her velvety nose close to his ear, and muzzling there like a familiar spirit that had a right to share her master's emotions.
"All right, Mowitza," he said in a promising tone; "we'll hit the bush by and by. But old sulky here is slinging poisoned arrows at our Kloocheman. We can't stand that, you know. We don't like cooking our own grub, do we, Mowitza? Shake your head and tell him 'halo'—that's right. Skookum Kiutan! Skookum, Mowitza!"
And the man caressed the silky brown head, and murmured to her the Indian jargon of endearment and praise, and the mare muzzled closer and whinnied an understanding of her master. MacDougall put away the last pan, threw a few knots of cedar on the bit of fire in the stone fireplace, and came to the door just as the sun, falling back of the western mountains, threw a flood of glory about the old cabin of the mountaineer. The hillgrass back of it changed from uncertain green to spears of amber as the soft September winds stole through it. Away below in the valley the purple gloom of dark spruces was burying itself in night's shadows. Here and there a poison vine flashed back defiance under its crimson banners, and again a white-limbed aspen shone like a shapely ghost from between lichen-covered bowlders. But slowly the gloaming crept upward until the shadow line fell at the cabin door, and then up, up, past spruce and cedar, past the scrub of the dwarf growths, past the invisible line that the snakes will not cross, on up to the splintered crest, where the snows glimmer in the sunshine, and about which the last rays of the sun linger and kiss and fondle, long after a good-by has been given to the world beneath.
Such was but one of the many recurring vistas of beauty which the dwellers of the northern hills are given to delight in—if they care to open their eyes and see the glorious smile with which the earth ever responds to the kiss of God.

(To be continued.)

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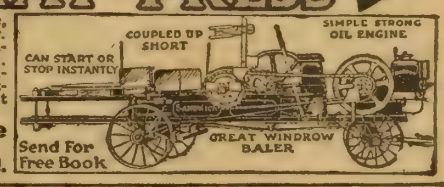

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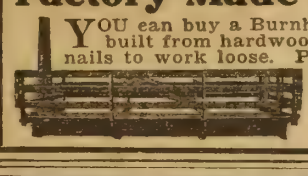

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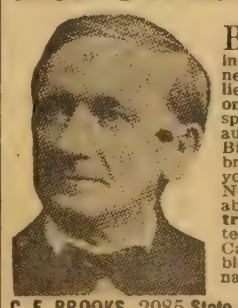

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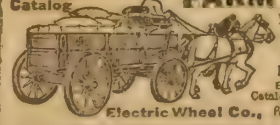

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AILING ANIMALS.

Moon Blindness.

I bought a couple of brood mares and afterward found that they were both moon-eyed. I have since been told that they inherited it. If they do inherit it, would it be the same result if bred to a jack?

It makes very little difference if susceptibility to this disease whether a mare is bred to a horse or jack. If the mare has had it there is a good chance for the colt in time to be affected in the same way.

Hand-Fed Colt.

I would like to ask through your columns how to feed and care for a colt by hand. I have a mare that would not own her colt last year and killed it. A few nights ago she gave birth to a large mare colt that is strong and drinks cow's milk from a pan. I feed it a cupful about every two hours with a teaspoonful of sugar. Is that the proper way to feed it?

You are doing very well feeding the colt, but remember cow's milk, if new, is pretty strong for a colt and should be weakened somewhat with water.

Cough in Horses.

Can you tell me what to do for my horses. They have been coughing nearly all winter and also they run at the nose.

This is quite a common complaint among horses this spring. Give your animals plenty of sun and good clean quarters and give the following tonic: Fowler's solution in half-ounce doses once daily to each horse. Give this with a half pint of water. See that the feed and water is pure and clean.

Supernumerary Teats.

I have a yearling heifer that I wish to keep for a milk cow, but find that she has five well-developed teats there being three on left side. The center one is somewhat smaller than the front and back ones. Do you think the small one could be cut off and the wound healed up successfully, to avoid its troublesome existence?

If the extra teat is not too large it may be cut off and the injured surface seared so as to cause heavy scab. This work should, however, be done by a competent veterinarian.

Nail Puncture.

I have a bay horse nine years old that ran a sixpenny nail in his right hind foot just at the side of the frog. The nail went in to the head. This occurred May 7th. He will hardly step on the foot. The last few days his leg has begun to swell. I have been syringing carbolic acid water into the hole and then use tincture of iodine. This does not seem to help him much.

There is probably a pus cavity present in this horse's foot, caused from the nail injury. You should have a veterinarian examine this immediately and take steps to relieve the existing condition. Such injuries as this should not be trifled with.

Cow Has Cough.

I have a two-year-old heifer that was fresh in March. She has a bad cough and pants badly with very little exercise. She has had this cough since she was fresh. I had her tested for tuberculosis last week and the veterinarian found no symptoms. I feed oats, corn and oil meal. She is a very heavy milker. What is the cause of the cough?

Since you have proven that tuberculosis is not present it may be your cow is affected with some parasite of the lung or has bronchitis, or ever digestive disturbances may cause the cough.

A Lame Mare.

I have a mare that became a little lame in her right hind foot last November. I took her to a blacksmith, but he could not find anything wrong. I was ready to move, so drove her 250 miles. When we arrived she did not seem much worse, but had a swelling on the inside of the leg, near the stifle joint. She is not much worse, but has favored that leg all winter until now her hip seems sweenied or shrunk away. About two months ago I took her to a blacksmith and he examined the foot and found gravel in it. He doctored it until it is seemingly well. We live so far from a veterinarian I cannot take her to one. She has just had a fine colt and got along well. I have worked her for two months. She eats grain well, but falls off in flesh. She does not eat hay very well.

It seems as though your mare has a multitude of troubles which need attention. It would be hard to say without an examination just what the swelling inside the stifle is. It might be any one of a number of troubles. It might be an abscess or enlargement of joint capsule, etc. The primary cause of the trouble is the one you should get to work on and if it can be improved then the sweeny should be treated. It seems to us that if you value your mare very highly you should have a veterinarian come and see her even if he is a considerable distance from you. Since she does not eat hay very well, tooth trouble should be suspected also.

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Beef Scraps Better Than Tankage.

The flock of "E. J." requires protein, and the tankage is, in a way, valuable to them. Tankage is not to be recommended though, as it is not the most wholesome of food to manufacture into eggs. High grade beef scraps is preferable, and the most dependable form of meat rations. Aside from the health of the fowl, we must consider the flavor that different food gives to eggs.

A flock of fowls a few years ago helped themselves to tankage without the aid of any middlemen. It was after the family butchering, and the eggs were so badly flavored that the odor was nauseating.

Many well-cared-for flocks disappoint their keeper, because they do not have the element absolutely required, viz., meat in a wholesome form. If it were given, about 10 per cent in bran, there would be no long wait for "the bugs to come."

Then, after the worms and insects that are available have mostly disappeared the egg yield would not fall off so badly if the layers were furnished with the material required to compose eggs. No matter what the breed, the care or what not, unless she has the where-with-all to manufacture the egg, she does not lay it. Farm people get careless about providing shell-making material, too, after the first few months in the spring and summer. Professional poultrymen never make such grave mistakes; cannot afford to. Unless the income goes on each and every day in the year the feed bill soon puts them out of business.

E. J.'s flock is very well fed, and cared for, only he confesses that there is not a very warm place for them. This condition admits of so many variations that it might, or it might not, be abominable. If three sides are tight, with ventilation on the other side, and the house is dry—so dry that the litter is crisp and dry, then, unless the inmates are really uncomfortable, it is O. K.

Egg-Eating Hens.

Don't you remember how it was the last cold, rainy day that the biddies could not be out of doors? You went out to gather the eggs, and there were not nearly so many as usual, and besides they were broken and dirty and sticky. "Crummy," the boys said.

Well, it is just such days as this that gets the hens to eating the eggs, just as it gets the boys "in bad" when the weather is so bad that they cannot get out of doors to run off the surplus energy. And the worst feature of the whole business is the fact that the most energetic hen, as well as the boy worth while, is the most incorrigible, and more often falls from grace.

About the only lore we hear about this case is that the hens have not been well fed, and one would be led to believe that he had fairly starved his poor chickens to death—nearly. In a few cases the fowls' appetites do crave something they have not access to, but in nine times out of ten, yes out of a hundred, it began on a day when they could not get out and inquisitively pecked at an egg, broke it, and more especially if there had not been enough lime in the shape of crushed shells and the egg shell was soft, and found that their appetites "craved" eggs forever after.

Gather the eggs several times each day. Once a hen begins to eat she becomes almost a fiend. Just watch them. Many times a hen has been found waiting for one of her mates to come from the nest, when she calmly devours the egg. If she sees you watching her, she acts as sneaking as a sheep-killing dog. All there is for it is to make a potpie for supper. The writer has been accused of faking about an egg-eating hen at this time of the year when one gets hungry for chicken, and can hardly afford to kill one, while it would be easier to steal a chicken this time of the season than to ask a neighbor to sell one.

Granting that the hens are well fed, watch the nests and remove the eggs as soon as laid. If a hen develops a taste do not spare her. As well try to break a great, big, hulking yearling calf from stealing the milk from the Jersey cow.

For White Diarrhea.

To the Editor:—Have seen many complaints of white diarrhea from time to time and find that in each instance they are steady users of mixed chick feed, which proves, with my own experience, that the steady use of it for little chicks is not the thing for them. If "Mrs. Wm. Z" will try coarse cracked corn, small wheat and dry, pressed sour milk curds for her little birds, leave out bran and use ginger or red pepper in a moist feed of curd and meal until her chicks are better of the disease, and, of course, change the coop to clean quarters, she will have better results. I use the feed very little and then only once or twice a week. This may help others. Mrs. M. F. T.
Dane Co., Wisconsin.

Bumper Grain Crops
Good Markets — High Prices
Prizes Awarded to Western Canada for Wheat, Oats, Barley, Alfalfa and Grasses

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Canada in proportion to population has a greater exportable surplus of wheat this year than any country in the world, and at present prices you can figure out the revenue for the producer.

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160 ACRE FARMS IN WESTERN CANADA FREE

Send for illustrated pamphlet and ask for reduced railway rates, information as to best locations, etc. Address

GEORGE A. HALL
123 SECOND STREET
MILWAUKEE, WIS.
Canadian Government Agent

No passport needed to enter Canada.

Wisconsin Farms

In the Clover Dairyland of the famous Chippewa Valley in Southern Sawyer County, Wisconsin.

Prices $15.00 to $28.00 per acre.

Liberal terms if desired.

Write for descriptive booklet and map to

O. O. WHITED COMPANY
RADISSON, WISCONSIN
IOWA OFFICE:
G. A. Moore, Mgr. Muscatine, Ia.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lar city property and stocks of goods advertised its columns from nearly every state, so that can find just what you're looking for in its umns. Established 19 years and reaches 76, readers. Send 25c for one year's subscription $1.00 for five years. Department F, Farm Real Estate Journal, Traer, Iowa.

STOCKMEN AND FARMERS 6,500 acres in Flor for sale in a body. $6 per acre, payable $1 per down, balance $1 per acre per year. 6% inter Fine grazing proposition. For particulars w
E. C. HOWE
723 Hartford Building CHICAGO, I

WHEN ARE YOU COMING TO LO at our Aitkin county lands, in this choice da ing district, where our company is selling, near great markets at such low prices and on such terms? ARNOLD, Land Agent, Rock Island R way, 151 Wolvin Bldg., Duluth, Minnesota.

DON'T postpone that trip to the cheap land tricts of upper Wisconsin—it is importa you want some of the best cheap land in Amer Write us for names of owners. Wisconsin vancement Ass'n, 1590 First National Bank B Milwaukee, Wis.

WANTED FARMS—Have 3,357 buyers; cribe your unsold property, give price, acre location. 769 Farmers' Exchange, Denver, C

FOR Minnesota improved farms and land gains, write or call on H. A. Hanson, 242 T ple Court, Minnea polis, Minnesota.

OUR BOOKLET FREE. 160 to 320 acre fa fine stock ranches. Western States Lan Dev. Co., Helena, Montana.

FREE ILLUSTRATED Catalog. Big barg on account of Leading breeds, blooded poultry, pigs, sheep breeds calves. 30 blooded Barred Plymouth R eggs, $1.00; 100 eggs $3.50. S. C. White Leg eggs, Tom Barron celebrated strain, 272 e year, **cheap.** Trained Shepherd, Collie and dogs. All kinds hounds. Wolf and fast hounds sent to try. Free dogs with orders. L co-operative plan.

WANTED 1,000 Red, Gray and F fox cubs and old ones. more alive than fur buyer, cash at express office. Get rid of them and raise f poultry and eggs. Captain Richard P. Mason P. National Stock Association. Bank refere Kirksville, Adair County, Missouri.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, price for balance of season. Won 9 rib on 15 birds at Wisconsin State Fair, 1915; pullet and 3d young pen at Chicago Colis 1915. Winnebago Poultry Yards, R. 23, Omro,

HATCHING EGGS: prize-winning S. C. I White Wyandottes, Buff Orpingtons, S White and Brown Leghorns, $1.50 per 15. L View Poultry Farms, Box W.F., Fond du Lac

HATCHING EGGS; S. C. Reds, prize-wi all leading shows. Eggs $1.50, 15; $8, Order from this ad. Address C. L. Pre-Font Box 600, Fond du Lac, Wisconsin.

S. Wyandottes. "The Aristocrats." Eggs grandest matings on earth. Free mating Write for it. Frank Faha, Jr., Bx. 620, Dyersv ill

S. C. W. Leghorns, Wyckoff strain, chicks, Prices right. Flock headed from 288-egg st Mrs. Mollie Wachendorf, Monroe, Wisconsin

PARTRIDGE and BARRED Plymouth R Eggs from choice pens of Partridge and Ba $2 per setting. Dr. O. R. Rice, Delavan, Wi

EGGS for hatching from Barred Rocks, I Thompson's Ringlets, $1.25 per 15, pre D. S. Thoreson, Shell Lake, Wisconsin.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

A 33.66-Pound Holstein Bull.

T IS the ambition of nearly every breeder of Holstein cattle to have a hirty-pound bull at the head of his erd, for every breeder realizes that a ull is half the herd. However, there re not thirty-pound bulls enough to ll the demand and it is very difficult o find many bulls of good type and onformation out of cows who have ade records over thirty pounds. Our eaders now have an opportunity to urchase such a bull in Sir Aaltje Salo Daisy Johanna 169801, that is adver-ised for sale on page 23. This bull is ow eighteen months old and is ready or immediate service. He was bred and s offered for sale by Arthur J. Rust, West Allis, Wis., of Rust Bros.' Stock Farms. This is one of the oldest breed-ng Holstein establishments in Wis-consin and many of the greatest fam-ilies of the breed originated on this farm. The bull offered for sale is out of Aaltje Salo Netherland Pontiac, a wonderfully high-producing cow. In seven days she gave 570.9 pounds of milk testing 4.72 per cent of fat and making 33.66 pounds of butter. In thirty days she made 134.86 pounds but-ter from 2,175.2 pounds of milk, testing 4.9 per cent fat. She is a daughter of Johanna Pontiac De Kol that has twen-ty-three A. R. O. daughters, five of which have records of 33.66, 29.74, 28.63, 27.99, 27.54, all but one of which were made as four year olds. He also has seven others with records above twenty pounds. This cow is a granddaughter of Johanna Rue 2d's Lad, that has for-ty-nine A. R. O. daughters, four with records from thirty to thirty-six pounds of butter, eight thirty-pound grand-daughters. She is also a granddaughter of Pontiac Echo De Kol, which was sired by Hengerveld De Kol. The bull offered for sale is a son of Daisy Johan-na 5th, whose first daughters are just coming into milk. He is a twenty-seven-pound bull which as a two year old won first at the Wisconsin State Fair. This bull, both individually and in breeding, is fit to head any herd, and those who are desirous of owning a thirty-pound bull are advised to write to the above address.—Adv.

Grove Bros.' Holsteins.

THE great records made by the cows in the Maplecrest herd have demon-strated that careful breeding along the right lines will produce cows of high-production ability. It is impossible to purchase these great cows from this herd and it is almost equally impos-sible for the average breeder to pay the price demanded for a bull from this herd. However, it is possible for any breeder to secure the same blood that produced such great cows as Bonostine Belle De Kol, which made 13,000 pounds butter in a year, Highlawn Hartog De Kol, which made 1,247 pounds butter, Daisy Grace De Kol, which made 1,203 pounds butter and five others with rec-ords from 1,000 to 1,200 pounds butter in a year. Grove Bros., Columbus, Wis., whose advertisement appears on page 22 are offering bulls of such breeding. Their senior herd sire is Maplecrest Hengerveld De Kol. He is a 29.50-pound son of Friend Hengerveld De Kol Butter Boy and out of a 29.50-pound daughter of Pontiac Aaggie Korndyke. These two bulls have eight daughters which have made from 1,000 to 1,300 pounds of butter in a year. At the pres-ent time Grove Bros. are offering two fine young bulls sired by Maplecrest Hengerveld De Kol. For extended pedigrees and further information write to the above address.—Adv.

Keep Flys Off the Cows.

FARMERS who desire to keep their cows and horses free from the wor-ry of fighting flies will be interested in the advertisement on page 14 of this issue of the Carpenter-Moore Co., 77 Sudbury street, Boston, Mass., manu-facturers of the well-known fly repel-lant, Cow-Ease. Every dairyman knows that his cows are better milkers when kept free of flies and Cow-Ease is per-fectly harmless. It does not blister the skin or gum the hair and one gallon will spray one cow 200 times which makes the cost trifling. M. Elton Vose, who originated Cow-Ease fifteen years ago personally guarantees that it will keep the flies away and agrees to send prepaid to any point east of the Mis-souri river a trial half gallon for $1.25 if the reader's regular dealer cannot supply him. This price also includes a sprayer for applying. Mention of this paper in writing will be appreciated.—Adv.

Cortte's Berkshires.

ATTENTION is called to the new ad-vertisement of A. P. Cortte, Lomira, Wis., on page 22. Mr. Cortte's herd of Berkshires is commanding the atten-tion of Berkshire breeders throughout the Northwest, as he has bred and de-veloped many of the animals which have been heavy prize winners at the state fair. At the present time he is offering February, March and April pigs of either sex at very reasonable prices. They will be sold in single, pairs or trios. These were sired by the boars, Pabst Rivaleer 3d and King of the Rivals, two exceptionally fine boars of good size and refined quality. Mr. Cortte's spring pigs are in fine condi-tion, being well grown and very active. The writer recently spent a very pleas-ant afternoon, going over this herd of Mr. Corte and we advise our Berkshire readers to get in correspondence with this breeder whenever in the market for breeding stock.—Adv.

E. J.'s Crimson Wonder.

YOU Duroc Jersey men that expect to show an aged boar at Minnesota this fall should keep E. J.'s Crimson Wonder in mind, for he will be a con-tender and unless we miss our guess he will be strong competition. This boar is owned jointly by John Swenson, Willmar, Minn., and M. Anderson, Cot-tonwood, Minn. He was bred by E. J. Wilson and is sired by R. J.'s Wonder he by Crimson Wonder Again out of H. A.'s Queen. Dam by Chief's Protec-tion by Ohio Chief. Mr. Swenson has been using this boar heavily of late and has just started to get him ready for the fall shows. He weighed right at 800 the day the writer was there and we feel confident he will be shown weighing between 950 and 1,000 pounds. He is a grand individual and a good sire. This is also the home of the Iowa champion, Big Wonder, the $1,000 boar. He is now five years old, but is just as smooth as he was when he won the purple ribbon. Big Wonder is not as large as some boars, but he is bred big and the stuff we saw sired by him have plenty of size. Mr. Swenson is a real hog man and without a doubt we saw the best spring pigs on this place that we have seen this spring, numbers con-sidered. He is fitting some futurity lit-ters that are real prospects. The sow herd is made up of some great breeding matrons and they carry the blood of the most noted boars of the breed. Daughters of such boars as Big Won-der, Burke's Good Enough, Lee's De-fender, Illustrator, Chief's Defender, King the Col., E. J.'s Crimson Wonder and Golden Model 2d. Those that fol-low the swine game know that it neces-sitates quite an outlay of money to get together a bunch of sows of this breed-ing, especially when the individuals are as good as they are in the Swenson herd. Mr. Swenson will have out a strong herd this fall and he will make someone go some. He also expects to show at Omaha. We are glad to rec-ommend this herd, for he has the goods and we know that the owner has a reputation for fair dealing. He will hold a bred sow sale January 5th.—Adv.

E. J. Wilson, Renville, Minn., Durocs.

E. J. WILSON, Renville, Minn., is one of the most popular Duroc breed-ers of the Northwest and has a herd of Durocs that ranks among the best. His herd number around 250 head and the feature of the herd is the good sows that we saw on the place. We like to see a good boar at the head of the herd, but we are equally well pleased when we find a lot of good breeding matrons. When Mr. Wilson gets a good brood sow she stays in the herd and we saw several sows from four to sev-en years old and in each instance these were the dams of the best pigs we saw on the farm. "When you get a good thing stick to it." We won't say much about the Wilson herd at this time, but a little later we will have some things to say about this good herd that will be "eye-openers." Keep this fact in mind. Mr. Wilson's winter sale date is January 4th.—Adv.

Offering Good Short-horns.

IF you are in the market for Short-horns do not overlook the Williams Brothers, at Bangor, Wis. They haven't the largest herd in the state, but they have some good individuals and have good bulls at the head of the herd. Their cows are good milkers, also pos-sess good beef qualities. The young stuff is sired by Nominee Cumberland, a good roan son of the good sire, Prince Cumberland. You can depend on this herd. If you write for infor-mation please mention The Wisconsin Farmer. See page 24.—Adv.

The 1,000-Pound "Chief Invincible."

WE continually read and hear about 1,000-pound Duroc boars, but we all know that it is only a few that make the half-ton figure, though we would like to see more of them. We advocate big boars—big with quality—though it may be necessary to give up for the time being some of the "fine" points to get the size needed. We all know that even though big boars are used we get more of the medium types than we do of the big ones. When you go to a swine show, the big ones are the ones that take your eye. When you go to a breeder's boar pen, don't you always pick the big ones, other points being equal? The writer recently made a trip to Lake Crystal, Minn., to see the F. M. Washburn herd and incidentally to see Chief Invincible. We saw this boar last year and liked him then and now, after seeing the pigs sired by him we continue to place him among the three or four outstanding boars of the Northwest. Chief Invincible is sure a thousand pounder and he has the oth-er good qualities to go with his size. He has one of the best backs we ever saw on a boar of any breed. He has an ideal head and his feet and bone are the best. To make a long story short he is "some boar" and several Wisconsin breeders would do well if they would get some of his get in their herds. His pigs show up well at this time, so he is no failure as a sire. For the benefit of those that are not acquainted with his breeding will say that he is sired by Invincible Chief by Cherry Chief, dam Van Patten Maid by Echo Top King by Echo Top, farrowed March 7, 1913. Mr. Washburn is making plans now to put up the greatest offering of Duroc sows ever seen in the Northwest. He will make a sow sale in January. Here is a good herd, keep it in mind.—Adv.

Hudson Super-Six Travels 1,819 Miles in Twenty-four Hours.

THE Hudson Super-Six Motor Car has set a new endurance mark by traveling 1,819 miles in twenty-four hours, a distance equal to that from New York to Denver. This remarkable performance was made at an average speed of 75.8 miles per hour and clearly demonstrates the endurance and power of the Hudson Super-Six. A stock Super-Six chassis was used which had already traveled more than 2,000 miles before the test, and, when officially ex-amined after the test, was found to show no very appreciable wear. Thus it has been proved that a motor can be built with such great flexibility, speed and power as the Super-Six, and still have the sturdiness to keep up under the most strenuous service. Thousands of Hudson Super-Sixes are now in use; they are found in every locality, and their owners are strong in their praise. The Hudson Motor Car Company, De-troit, Mich., has achieved great success in building into the Super-Six endur-ance, power, flexibility, beauty and comfort—these are the things to con-sider when you buy a car. See page 7. —Adv.

McChief Gaining Nicely.

WE have just received a letter from J. D. McDonald, North Bend, Wis., advising that his aged Poland China boar is coming along fine. He said that he weighed him on May 27th at which time he weighed 937 pounds. We saw this boar some time ago and think he is a wonderful hog. He was not fat at that time and if he gains accordingly as he has the past month, he will weigh 1,100 pounds by fair time. McDonald has the goods and when you want Po-lands, don't forget his herd. See page 24.—Adv.

Deadly Blackleg.

THE one disease that should especial-ly interest our readers at this time, so that they may save their calves, is blackleg. It is most prevalent in the spring; and unless a stock raiser knows how to control the disease, it may go through his whole herd and kill off many valuable calves. Blackleg de-velops so quickly that it may do a world of damage unless the animals are protected by vaccination. It is true that vaccination will not in every in-stance save calves from blackleg. But it is also true that this fatal disease can be controlled to a great extent by vac-cinating the animals with a reliable blackleg vaccine before they are ex-posed, thus immunizing them against it. This is proved by the fact that the per-centage of loss, which in the past was very high, has been, by the use of blackleg vaccine, reduced to a mini-mum. The safest and most economical method of vaccinating calves is to use Blacklegoids. They are small pills (made by Parke, Davis & Co., Detroit, Mich.,) and, as each is a measured dose of blackleg vaccine all you have to do is to inject them under the skin with a vaccine injector. When using this style of vaccine you do not have to stop to mix, measure or filter it, for each pill is an accurate and reliable dose. Leading stockmen all over the world use Black-legoids and highly commend their effi-ciency. If you wait until your calves become infected with blackleg it means certain loss. Vaccinate before the dead-ly disease shows in your herd. The cost of vaccination is little as compared with the loss which you are liable to have if you do not use a reliable vaccine. Give special attention to calves that were not vaccinated last fall, as they are now liable to contract the disease. If you will write Parke, Davis & Co., Depart-ment of Animal Industry, Detroit, Mich., they will be pleased to send you de-scriptive literature on blackleg and its prevention and tell you how to use Blacklegoids. Our readers should be interested in receiving this information. —Adv.

Studebaker and His Trip of '53.

THE flight of time—the passing of sixty-three years—has not dimmed the importance, in the mind of J. M. Studebaker, of that memorable pioneer-ing journey which he took across the continent to California in quest of gold. So dear is that trip of 1853 to the mem-ory of Mr. Studebaker, in fact, that he desires to hear from any of the pioneers who were in the party of sixty-five men, women and children—or, in fact, any of the descendants of those who pushed their way westward to the Pacific coast. Mr. Studebaker has a yearning for a renewal of the companionship and com-radeship of his fellow travelers. As examples of the perilous nature of the journey to the coast, there were moun-tains to climb, rivers to ford and In-dians to fight. The leader of the party died en route from the bite of a scor-pion and was buried in a lonely grave. After five months and eight days of travel, the party reached its destina-tion, poor in purse, worn with the hard-ships of their trip, but still hopeful of accomplishing the object in view. After trying mining for a time until con-vinced it held no large possibilities, Mr. Studebaker went to work at his trade on the advice of men he met soon after his arrival. He took a contract for making wheelbarrows for a man named H. L. Hines, who subsequently became associated with him in South Bend, Ind., in the business of the Studebaker Bros. Mfg. Co. Mr. Studebaker returned from California in 1857 with a few thousand dollars he had saved from his earnings and from good investments, and invest-ed the money with his brothers in the business which has grown from a small beginning to a position where Stude-bakers today are the largest producers of vehicles in the world. Anyone who happened to be on that memorable trip with Mr. Studebaker, or who is a de-scendant of such a person, or knows a descendant, can reach Mr. Studebaker by addressing him at South Bend, Ind., and will gain his gratitude by so doing. See page 19.—Adv.

An Easy, Economical Ditcher.

PROPER drainage is one of the big problems of the average farmer to-day, as the most expensive spot on the farm is the spot just dry enough to plow, but too wet to produce. The Pile riding ditcher-grader advertisement on page 15 of this issue by the Interna-tional Farm Implement Company, (Inc.) 141 West Third street, Owensboro, Ky., will make drainage work easy for the farmer. It cuts a V-shaped ditch any depth and the company has discovered by experiments that ditching twelve acres will pay for the machine and the rest is all profit. It does not waste land, as it is possible to drive a wagon across a Pile ditch without a bridge. It operates with two or three horses with changeable seats for the driver and be-hind each ditcher is a guarantee for one year against breakage on account of defective material or workmanship. If after ten days' trial a buyer is not satisfied the company will take the ditcher back and give the buyer his money. A special ditching book issued by this company is available free of

Nearly 90,000 Farmers Read These Live Stock Advertisements Each Week

IF your live stock is to bring the best market price it is up to you to see that the buying public is informed about your offering. Inserting a little reader or a small ad. in your local paper is good, but it is not enough. To get the best returns on your investment you must reach out farther. You must tell the farmers from your market radius —Wisconsin—what animals you have for sale and wherein they excel.

The larger the per cent of the home-state farmers your advertisement reaches, the more valuable does it become. And the greater the confidence the readers have in the paper you use, the greater the number of sales your advertisement will bring.

That's why The Wisconsin Farmer will prove the best medium for your advertisement. It has nearly 90,000 circulation, of which 75 per cent are in Wisconsin. It goes to 35 8-10 per cent of the Wisconsin farm homes, while the next largest farm weekly in Wisconsin reaches only 32 and 8-10 per cent of the farm homes in the state.

The Wisconsin Farmer has a force of efficient field men. They are there to be of service to you. Write the man in your territory and he will be glad to call on you and help you plan your advertising.

THE WISCONSIN FARMER **MADISON, WISCONSIN**

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a grandson of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

A. F. BARSTOW

RANDOLPH, WISCONSIN
BREEDER of Registered Holstein Cattle. When in need of Holsteins send me your wants.

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

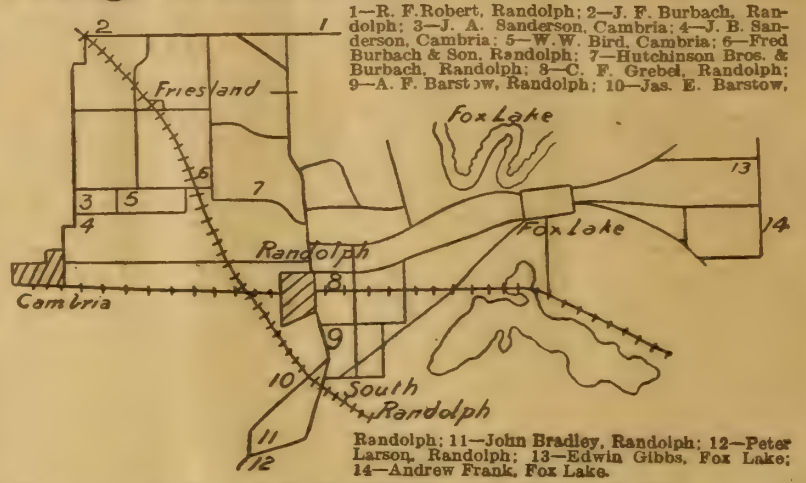
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

J. F. BURBACH

Cambria, Wis.

WE HAVE a large herd of choicely bred Holstein cattle. We can spare a few females at the present time.

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE
HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

charge and mention of this paper in requesting a copy will be greatly appreciated.—Adv.

Use Dynamite to Make Non-Producing Land Productive.

OWNERS of land rendered useless by stumps, water or stones or by all three combined will be interested in the book called "Progressive Cultivation" which is mentioned in the advertisement of Hercules dynamite on page 5 of this issue of The Wisconsin Farmer. This book may be secured free by addressing the Hercules Powder Co., 3 West 10th street, Wilmington, Del. It relates how easily and economically stumps, water or stones can be removed by the use of dynamite. Dynamite will do the work thoroughly and there is no reason why any person should pay taxes on land that is unproductive when, at small cost and labor, it can be made productive. This book also treats the questions of subsoiling; tree planting; ditching, etc., with dynamite, as well as land clearing and mention of The Wisconsin Farmer in writing will be appreciated.—Adv.

The Vanderhyde Durocs.

THE Duroc firm of F. S. Vanderhyde & Son, West Concord, Minn., may be strangers to some of The Wisconsin Farmer readers, but he is not a stranger to those that keep tab on the good herds of the Northwest. The attraction on this farm is the Minnesota grand champion, Van's Wonder, and he is a great boar. In the first place he is big, has a great back, is very smooth, in fact is a real show boar, as his winnings show. The nice thing about Vanderhyde's winnings and by the way he was the heaviest winner of the breed at the Minnesota Fair—he raises his own show stuff. This is the home of Van's Crimson, the boar that has produced the winners for several years and he still is getting the good ones. Van's Crimson is by Crimson Chief by Top Notcher Chief and his dam was by I. X. L. Advancer by Advancer. The grand champion is by Van's Crimson out of Roxy by Van's Duroc Wonder. This great brood sow is now six years old and for the past four years her produce has won at the various fairs. The best junior yearling sow that we have seen so far this year we saw on this farm, she is a full sister to the champion boar. She will be a great show sow by fall. He will also have a good aged sow. His futurity pigs will make some of the showmen go some at the Minnesota Fair. This is a good herd of Durocs and one of the best boars we have seen heads the herd. Keep this in mind. He will make a sow sale on January 2d.—Adv.

Prepare to Store Your Grain.

HARVESTING season will soon be at hand and the attention of our readers is called to the necessity of having a good grain bin ready by the advertisement on page 8 of this issue by the Bushnell Tank Works, Inc., Dept. D, Bushnell, Ill. They manufacture a bin built for a lifetime; guaranteed for five years that is fire, rat and weatherproof. It is easily erected and moved and a request will bring to your door one of their free catalogs illustrating their full line. Mention of this paper will be appreciated.—Adv.

Sources of Wisconsin Farm Profits

Many Interesting Disclosures From Study of Farms in State Contest Were Announced at Recent Meeting at Ft. Atkinson.

SOURCES of farm profits and their relative importance were discussed rather fully at the state meeting of the Wisconsin farm management contest at Ft. Atkinson on June 5th, the winners of which were announced in our issue last week. D. H. Otis and R. V. Gunn, of the college of agriculture, who have been directing the contest, discussed these matters and many interesting things were uncovered in the study of more than 800 farms which took part in the contest.

Among the interesting conclusions arrived at was the economic importance of alfalfa and silage in Wisconsin. Mr. Otis said that the study of the reports showed conclusively that alfalfa, silage and clover is the basis of feeding live stock under Wisconsin conditions and that the farms with these crops reported invariably the largest net profits

On a four-year average the conclusions relative to the importance of silage follow:

Six hundred and forty-four farms with silage made a net profit of $877 per farm.

One hundred and eighty-six farms without silage made a net profit of $534 per farm.

Relative to the value of alfalfa in Wisconsin, Mr. Otis' report showed the following:

Three hundred and seventy-seven farms growing alfalfa made a net profit of $1,200 per farm.

Five hundred and eleven farms with no alfalfa made a net profit of $728 per farm.

The farm contest work also served to disclose the most popular crops in Wisconsin, and the average cost per acre of producing such crops. The average cost of producing an acre of barley, it was found, was $14; corn, $18; oats, $13; peas, $20; rye, $10; wheat, $13; potatoes, $30; alfalfa, $13; clover, $10; clover and timothy, $9; silage, $25; pasture, $5.

Several present at the Ft. Atkinson meeting took issue over the costs of production, but it must be borne in mind that these are the average costs arrived at by the study of the farms entered in the contest and, of course, may vary under different conditions. However, being representative of all sections of the state, they serve as a basis for calculating such costs.

The cost of keeping live stock was also averaged in the same way and this was especially interesting in disclosing the difference in cost of keeping ordinary and pure-bred cows. The cost per animal for the general dairymen was estimated to be $75 per year; for the pure-bred breeder, $100, and for the market milk producers, where milk is produced under special conditions, $125. Seven sheep or fourteen lambs were considered as an animal unit and the cost per unit per year was $75. The cost of producing 1,500 pounds of pork (considered as an animal unit) was also $75 and of keeping 100 hens it was $75.

Table I, shown herewith, shows the relative profitableness of various crops as well as the popularity of crops. For compiling this table seventy-eight farms were studied, and it will be seen that on seventy-three of the seventy-eight oats were grown; on forty-six alfalfa and on sixty-five corn for silage, while on only thirty-four was corn grown for grain. This table also shows the profits per farm and acre as well as the acres of each per farm:

TABLE I.

Crop	Number of farms averaged	Acres per farm	Profits per farm	Profits per acre
Barley	41	8.7	67.58	7.74
Corn (grain)	34	12.3	28.18	2.28
Oats	72	18.4	114.45	6.21
Peas	2	18	370	20.55
Rye	13	7.7	43.54	5.64
Wheat	16	.62	13.44	3.70
Potatoes	10	8.5	186.80	21.88
Alfalfa	46	9.76	224.15	22.95
Clover	46	11.74	194.45	16.55
Mixed hay	58	17.14	152.53	9.37
Silage	65	19.43	—58.64	—3.02
Pasture	75	43.4	....	....

It has often been said that the best feeders get the best results, and this was borne out by the study of these farms. The farms entered were divided into three groups for comparison and convenience. Table II therefore discloses that although Group 3 spent 145 per cent more for feed than Group I, although feeding only 33 per cent more stock, that in the end it proved profitable to feed liberally. In this table the receipts and profits per animal unit are for all stock kept on the farm:

TABLE II.

	Group 1	Group II	Group III
Value of feed fed	$1,280.00	$1,424.00	$3,311.00
Returns per $1 of feed fed	1.17	.87	2.04
Receipts per cow, dairy products	58.00	62.00	114.00
Receipts per animal unit (all stock)	65.00	45.00	173.00
Profits per animal unit (all stock)	—16.00	—18.00	30.00

In connection with Table II was prepared Table III, which shows the total receipts and profits in these three groups. This table also bears out the contention that those who spend the most get the most in return:

TABLE III.

Receipts and profits per farm	Group I	Group II	Group III
Total Receipts	$3,265	$2,867	$9,741
Crops	1,619	1,359	2,658
Live stock	1,493	1,380	6,775
Miscellaneous	153	128	308
Net Profits	174	—405	2,086
Crops	399	42	617
Live stock	—378	—575	1,161
Miscellaneous	153	128	308

Mr. J. A. Craig, of Janesville, spoke on the subject of the farmer helping himself, in which he said the farmer was too much inclined to set back and wait when he should take the initiative, especially in matters of vital importance to himself. Responsibility makes men and women, he said, and if they are to succeed they must shoulder the responsibilities. He also urged co-operation and organization for the farmers, as success is far more difficult where each farmer works separately.

TOO LATE TO CLASSIFY.

2 Sons of the 29.50-lb. Bull MAPLECREST HENGERVELD DE KOL

WHOSE sire, Friend Hengerveld De Kol Butter Boy, and dam's sire, Pontiac Aaggie Korndyke, have more daughters with records over 1,200 lbs. of butter in one year than any other two bulls of any breed. Bull born Nov. 12, 1915. Dam, Vinnie De Kol Pauline 73561, A. R. O. record 22.28 lbs. butter in seven days. ½ white, straight, level type. Price $125. Bull born Oct. 20, 1915. Dam, an untested daughter of Homestead Fayne De Kol, ¾ white, straight wide rump, a mighty good individual. Price $75. Address
GROVE BROS., COLUMBUS, WISCONSIN.

21.25-POUND HOLSTEIN BULL

FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees.
Wm. Braatz & Sons Brandon, Wis.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE LOMIRA, WISCONSIN

O. I. C. Spring Pigs

SHIPPED at three months of age. $25 per pair, $15 each. Well grown, good type of L. B. Silver breeding. Address
E. E. Tjugum Sun Prairie, Wis.

CHESTER WHITE

SPRING pigs 3 months of age; sired by Sir Raleigh, litter brother to 2d prize boar at Wisconsin State Fair, $20 each.
Leonard Behrens Corliss, Wis.

CHESTER WHITE

BREEDING stock of all ages—spring pigs, fall boars, bred gilts and tried sows priced to sell.
Jos. Egelhof, Edmund, Wisconsin.

REGISTERED Duroc pigs, either sex, 9 weeks old, $10. Registered Holstein bulls, $40 up.
Paul McFarland, Route 7, Watertown, Wisconsin.

FOR SALE Pure-bred and high-grade Guernsey calves. Addres
Arthur Findlay, Whitewater, Wisconsin.

JOHN MANN
NEOSHO, WISCONSIN

BREEDER of registered and high-grade Holsteins. Heifers, springers and cows for sale.

A. G. HARTER
RUBICON, WISCONSIN
BREEDER OF REGISTERED
HOLSTEIN CATTLE

Bred for high production ability, good type and along popular blood lines.

John Gutschenritter & Sons
Neosho, Wisconsin

BREEDERS of registered Holsteins that are well marked and of good breeding. A large herd to select from. Two bull calves for sale at the present time that are from high producing dams. Good individuals and at reasonable prices.

FOR SALE

A FEW nicely marked young bulls sired by Canary Frisby Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead, and the 22.81-pound cow, Sadie Frisby Homestead, a daughter of Homestead Jr. De Kol. The dams are good producing cows.

HENRY HOSTERMAN
257 N. Main St. Hartford, Wisconsin

Registered Holstein Heifers

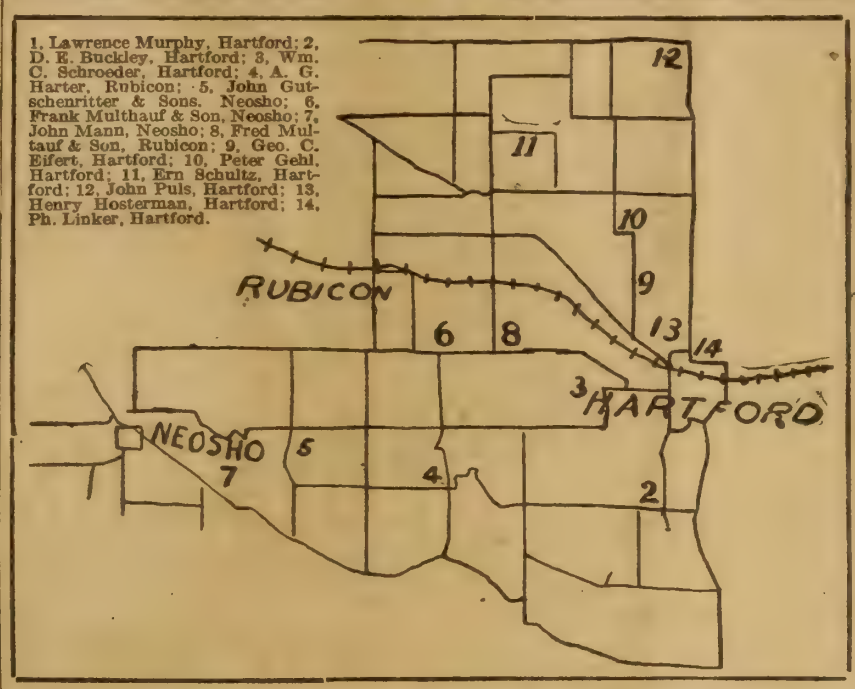
HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-lb. bull, Johanna King Segis, a son of the 40-lb. cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants. H. F. McNutt, Oxford, Wisconsin.

A. R. O. BRED

WE have a few bulls left sired by King average over 29 lbs. butter in 7 days ter in 7 days, and 21,834 lbs. milk and daughters has just made over 20 lbs. in out of Johanna, Korndyke and Pontiac butter records. Write for particulars
Wisconsin Star Stock Farms,

HOLSTEIN BULLS

Artis Pontiac, whose dam and sire's dam and whose sire's dam made 31.7 lbs. butter, 1,076 lbs. butter in one year. One of his 7 days at 2 years of age. These bulls are bred dams backed by large milk and and price. Address
E. M. Schultz, Hartford, Wisconsin



Johanna Colantha Sarcastic Lad

SOME BARGAINS IN YOUNG BULLS

FROM yearly record dams, sired by Johanna Colantha Sarcastic Lad. No. 1—Born June 10, 1915. A large, well-grown and slick youngster, ⅛ white. Dam, Springdale Clothilde Vale 2d. Record, 22.06 pounds of butter in seven days, 17.57 eight months after calving and better than 900 pounds of butter for the year as junior three year old. Price $400. No. 2—Born June 15, 1915. Dam, Lilith Susie Ingalls 2d. Record, 21.67 pounds of butter in seven days, will finish this month with some 730 pounds of butter for the year as a junior three year old. Good individual, slick and well grown, three-fifths white. Price $200. Address
JOHN PULS - - - HARTFORD, WISCONSIN

HOLSTEINS FOR SALE

10 HOLSTEIN HEIFERS, ranging in age from one to two years old. Address
Philip Linker Hartford, Wis.

FOR SALE

THREE registered Holstein bull calves sired by the world's champion, Cleveland Johanna Sir Piebe 132446, whose dam is Molly Johanna Korndyke 184885, the only two year old that made 30.62 pounds butter in seven days. Prices reasonable. Write, or better come and see them. Two miles southwest of Hartford.
Wm. C. Schroeder, R. 5, Hartford, Wisconsin

HOLSTEINS FOR SALE

FIFTY-FIVE growing cows and heifers for sale, due to freshen in April and during fall months. They are of good breeding and priced reasonably. Write or phone.
D. E. Buckley Hartford, Wis.

P. L. GEHL'S FARM

TWO fine bulls, born September 12th and September 15, 1915. Sire is a son of King Segis Pontiac Polkadot, one of the greatest sires living. Their dams are Molly Carema Melchior 2d 260244 and Novelty Belle Ormsby 229169. These bulls are large, thrifty youngsters. Straight and long bodied, handsomely marked. Write for prices.
P. L. Gehl Hartford, Wis.

BADGER STOCK FARM

OFFERS a car of extra choice grade yearlings, and a car or more of springing cows. Address
Lawrence F. Murphy, Hartford, Wisconsin

REGISTERED AND HIGH-GRADE HOLSTEINS

OF choice breeding, well marked, good type and high production ability. When in need of Holsteins write us. Address
Fred Multhauf & Son Rubicon, Wis.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.

The Percy W. Young Poland Herd.

THE Northwest needs more breeders like P. W. Young, Prosper, Minn. When it comes to big-type Poland China hogs most of you will have to take your hat off to this breeder, for he certainly has the good ones. We spent the first day of June at Prosper and if at any time some of you breeders want to see a herd of big ones that have the quality just take a trip to the above town. We have had some people tell us that the Poland China doesn't raise enough pigs, but we took the herd book and found that the average number of pigs raised on the Young farm was eight pigs to the litter. Isn't that good enough? The big noise in this good herd is the herd boars. With perhaps two exceptions, we don't know of another Poland China breeder that has two herd boars the equal of these. The senior boar is Master's Giant, a son of Mondamin Master he by Lyon Chief out of Gentle Jessie. His dam is Mable's Choice 2d, out of the noted sow, Mable's Choice. That's good enough for the most critical. Individually he is "some boar." In the yearling futurity at Iowa State Fair, 1913, he stood first. Last year he was taken out again, weighing 1,005 pounds and although being injured en route to Des Moines he was placed second in the aged class. Now, as a four year old, he is very smooth, has a wonderful back an ideal head, and I will say that I never saw a boar of his age of any breed that has a better foot. Orange Wonder is a two-year old and a boar of great scale combined with quality. He was shown at the Minnesota State Fair last year and was first in class as a senior yearling. He is by Brown's Big Orange by Big Orange and his dam, Ellerbroeck Lady A. was by A Wonder 143421. Very desirable breeding. As we said above, these are both great boars and it is barely possible that the latter boar will be shown again this year. Master's Giant has sired some wonderful large, smooth sows and by using Orange Wonder on the daughters of Master's Giant, we feel that Mr. Young will gain another notch in breed development.

LIVE STOCK AUCTIONEERS.

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Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

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HORSES.

LEFEBURE'S BELGIANS

A LARGE and choice collection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons Fairfax, Iowa
8 miles west of Cedas Rapids

FIVE ENGLISH SHIRE DRAFT COLTS

TWO 3 year olds, 1 mare and 1 horse colt. Two 2-year-old horse colts. One yearling horse colt. These colts are a promising lot. Free of wire cuts or other blemishes. Prices will be right. Address
Peter Thoni R. 2, Hollandale, Wisconsin

BERKSHIRE SWINE.

BERKSHIRE gilts bred for fall farrow, $25 to $50. April boars shipped at weaning time, $10 up. Address W. A. Freehoff, Waukesha, Wisconsin.

MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

WANTED FARMERS and BUTCHERS Do Not Throw Away
CALF RENNETS the Rennets if you kill over ten calves per month, but write us.
THE MARSCHALL DAIRY LABORATORY
Madison, Wis.

Notice the breeding of the sow herd. Daughters of Master's Giant, Big Knox by Big Orange, Pawnee Defender, Ike's Big Orange, B.'s Wonder by A Wonder 107353, Long Jumbo (Halford) Long Jumbo (Mouw), Farver's Goliath, Chief Big Bone and Grandmaster. Where would one go to get a more fashionable or better line of breeding? We will have more to say about this good herd of Poland Chinas, but bear in mind that this is without a doubt one of the best herds of the breed in the country.—Adv.

Every Holstein Breeder Wants 30-Lb. Bull

BUT there are few who are able to get them. You can be one—here is your opportunity. A 33.66 pound yearling ready for service, Sir Aaltje Salo Daisy Johanna, whose dam, Aaltje Salo Netherland Pontiac, as a 5 year old made 33.66 pounds butter in 7 days. She is a granddaughter of Johanna Rue 3d's Lad and great granddaughter of Hengerveld De Kol. Send for a picture and pedigree of this desirable bull. Address
ARTHUR J. RUST WEST ALLIS, WISCONSIN

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. BONNIE MEAD STOCK FARMS, Randolph, Wis.

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, - Kilbourn, Wisconsin.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse Monroe, Wisconsin

FOR SALE—2 registered Holstein bulls, 3 to 4 months old. Sire, 26.40 lbs. butter in 7 days. Dams, 25.81 and 20.45 lbs. butter. Hill View Stock Farm, C. Boven, R. 3, Holland, Michigan.

21.60-LB. HOLSTEIN BULL

BORN Dec. 30, 1914; ready for heavy service; well grown, good, straight type; sired by **Prince of Hillsboro** that has 5 A. R. O. daughters and is by a 27-lb. bull out of a dam testing 4.39% fat, dam of bull **Nig Alcartra Pearl Daisy**, A. R. O. record 21.60; her sire has 25 A. R. O. daughters; her dam is a daughter of **Pearl of the Dairy Joe De Kol**; she has 6 A.R.O. daughters and her dam has 6 A. R. O. daughters, an unusual combination. Send for pedigree.
Griem & Hipke - New Holstein, Wis.

YEARLING SON

READY for service of the 28-pound Holstein bull, Calumet Johanna Abberkerk Champion 105829, whose dam gave 623.70 pounds milk and made 28.71 pounds butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. The bull offered for sale is 3-4 white, good and straight and well grown.
A. G. Pingel Chilton, Wis.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

"EDGEWATER"
Holsteins and Guernseys

Now being offered for immediate sale.

450 Cows, Heifers and Service Bulls **450**

We are offering first-class stock only; some of Southern Wisconsin's best. Write for particulars.
Edgewater Stock Farm Fort Atkinson, Wis.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

REGISTERED HOLSTEIN BULLS $40-$50

SIRED by Billy Elgin De Kol and Korndyke De Kol Spoffard 6th, well marked and well grown.
Henry Feul Cedarburg, Wisconsin

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEY BULLS

OF good breeding, about 2 years old. Price $75 and $85, also some younger. Two from official record cows. Address
Jos. G. Greene **Bangor, Wis.**

Yearling Jersey Bull

OF choice breeding. Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Registered Jersey Bull

BORN November 18, 1915, of Double Time-King Sappho King-Olive Dunn lines of blood. A big, growthy calf of straight, level type—absolutely guaranteed. Price $50. Burn Brae Farm, Chas. A. Peterson, Rosendale, Wisconsin.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

SHORT-HORN CATTLE.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little **Evansville, Wisconsin**

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

Oak Lawn Farm SHORT-HORNS OF QUALITY

FOR sale at reasonable prices ten very good Scotch-top cows, either with calves by side or safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also one good roan bull coming one year old sired by Imported Raphael. Ten heifers coming 1 year old sired by Strathallan Ring, a very good grandson of Whitehall Sultan.
J. E. KENNEDY **JANESVILLE, WIS.**

BULLS

FROM MILKING STRAIN OF

SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

Bates Short-horns Fashionable Durocs

STOCK of both breeds for sale. Pigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us.
William Bros., Bangor, Wisconsin.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt **Rosendale, Wisconsin**

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Henkes, Kilbourne, Wis.

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov of the Chene. Address
Charles Schmidt **Wrightstown, Wisconsin**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

638-lb. Guernsey Bull

SIRED by a grandson of Glenwood Boy of Haddon (that has 30 A. R. O. daughters) and King Coral (that has 25 A. R. O. daughters). His dam made 638 lbs. fat and his 3 nearest dams average over 632 lbs. fat. A richly bred bull and an outstanding individual; dark fawn with a little white.
Grenwode Farm, E. R. Whitcomb, Prop.
Whitefish Bay, Wisconsin.

REGISTERED GUERNSEY HEIFERS

3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson **Rosendale, Wisconsin**

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman **Fort Atkinson, Wisconsin**

RED POLLED CATTLE.

UNDERWOOD

RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD **AVOCA, WIS.**

RED POLL Headquarters

BULLS all sold. Will sell a few choice heifers. Price is right. Address
J. W. SALTER & SONS **UNITY, WIS.**

RED POLLED HEIFERS

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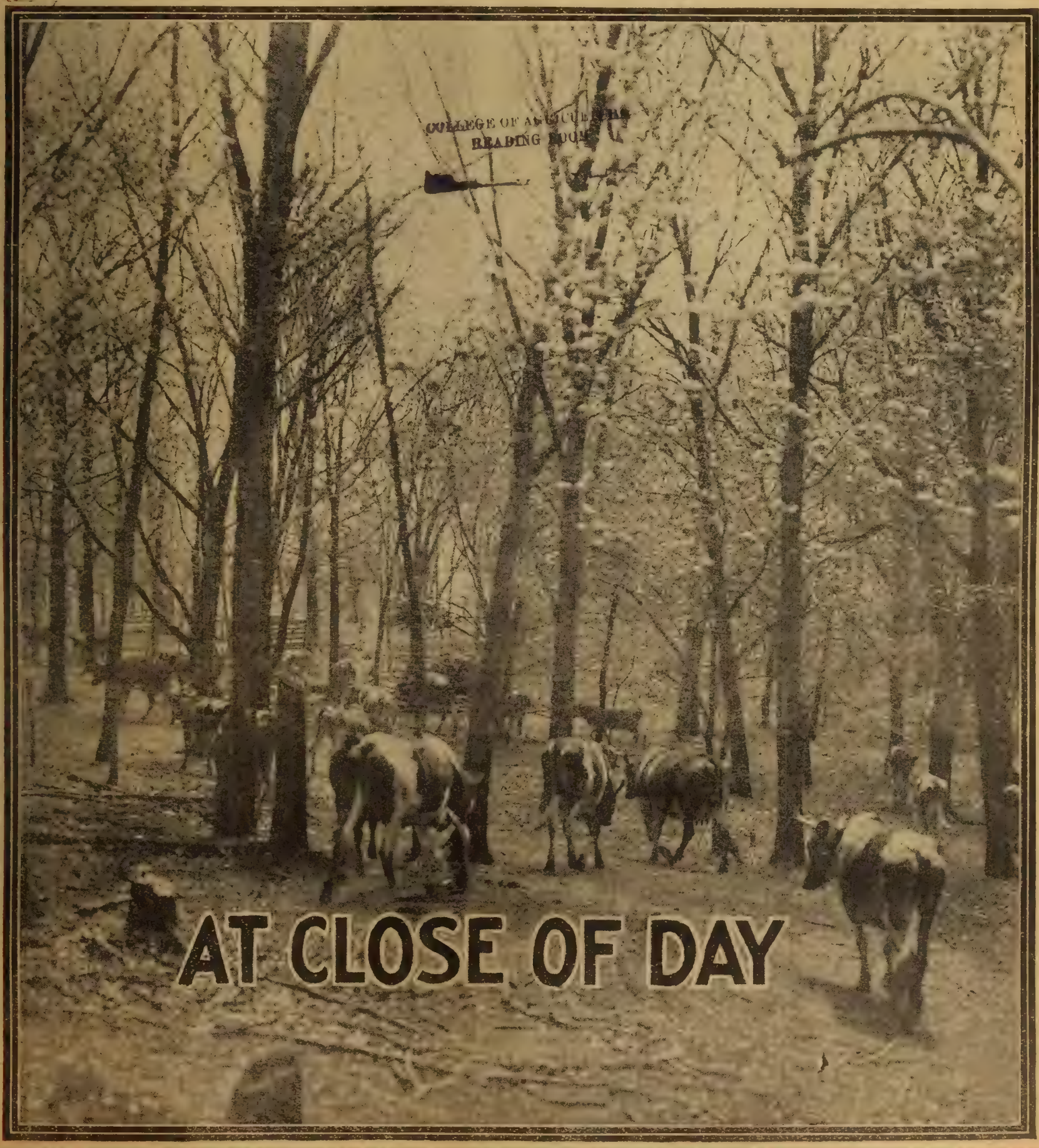
VOL. XLV. NO. 25. THURSDAY, JUNE 22, 1916. WHOLE NO. 1795



CURRENT EVENTS

WOODROW WILSON, of New Jersey, and Thomas R. Marshall, of Indiana, were renominated for the presidency and vice presidency at the democratic national convention in St. Louis last week. The convention was a sort of democratic love feast, with President Wilson held up continually as one of the greatest presidents in the history of the country. The main interest centered in the adoption of the platform, which was written in large part by the president himself, and in the selection of vice president, several incipient booms of favorite sons being started in opposition to Mr. Marshall. The keynote speech was delivered by the temporary chairman, Governor Martin Glynn, of New York, who declared that "the policy of the administration has been just as American as the American flag itself." Then he added: "This policy may not satisfy the fire-eater and the swashbuckler. But it does satisfy the mothers of the land at whose hearth and fireside no jingoistic war has placed an empty chair. It does satisfy the daughters of this land from whom bluster and brag have sent no loving brother to the dissolution of the grave. It does satisfy the fathers of this land and the sons of this land who will fight for our flag and die for our flag when reason primes the rifle; when honor draws the sword and when justice breathes a blessing on the standard they uphold." Before the platform was finally adopted President Wilson approved a plank on Americanism which arraigns individuals or alliances seeking to embarrass the government in negotiations with foreign nations and condemns any political party which modifies its policy for fear of political consequences. The plank accuses a small group of Americans of foreign extraction of attempting to "levy political blackmail" to gain their ends. It further states that the democratic party will not be influenced by such "blackmail," and in effect challenges the republican nominee to take a similar stand.

THE fiercest, most deadly fighting of the entire European war is said to be now in progress, the Russians bearing the brunt of the attack against the Germans and Austrians. The Russians have been making a terrific drive on Austria-Hungary, pushing the Austrians back relentlessly and working their way well toward the Carpathian mountains, the Teutonic allies being unable to hold them back very materially. This offensive was first thought to be for the purpose of relieving the pressure against the French at Verdun and against the Italians at Trent, but now it is believed to be a separate attempt to crush the Austrians and to turn the tide of the war. Other fortifications around Verdun continue to fall into the hands of the Germans, but the main fortress and town remain intact, although the Germans freely predict that they will fall by the 1st of July. A terrific toll of human lives is being exacted all along the battle line.

CHARLES E. HUGHES, republican nominee for president, has made it plain thus early in the campaign that he proposes to put up a good, hard fight for election. Within an hour after he had been nominated he resigned from the supreme court and issued a statement in which he declared positively for preparedness and unadulterated Americanism. During the week there have been numerous statements to the effect that Mr. Hughes' nomination was brought about by the German-Americans who opposed President Wilson on account of his stand on the submarine question and his consequent correspondence with the German government. A strong German-American political organization has issued a public statement declaring that it has worked for the past six months to secure the Hughes' nomination and that there are 3,000,000 German-American voters in the United States who will be swung, in a body, to Hughes. Largely to offset these reports and to maintain his undefiled Americanism Mr. Hughes issued a statement this week in the course of which he said: "My attitude is one of undiluted Americanism and anybody that supports me is supporting an out-and-out American and an out-and-out policy, absolutely nothing else." While the campaign plans have not been definitely announced, it is expected that Mr. Hughes will swing around the circle and give the people in all parts of the country an opportunity to see and hear him.

HOME rule for Ireland seems more imminent today than ever before. David Lloyd George has been studying the Irish problem first-hand and has definitely decided to recommend local self-government, separating the Protestant and the Catholic counties of Ireland so that there will not be any conflict over religion, as there has been heretofore. It is quite possible that home rule will be granted, on these terms, immediately, thus giving to the loyal Irishmen the self-government they have long struggled for. With the exception of the ill-timed and unfortunate outbreak in Dublin recently, the Irish have been proving their loyalty to Great Britain by recruiting in large number and helping the home government in every way possible. Lloyd George was selected as the man best fitted to bring the factions together, and home rule, separating the counties by religion, is his solution of the affair.

THE Italian cabinet resigned last week, confirming the frequent reports that things were far from being harmonious in that country. Widespread dissatisfaction seems to exist, not only with the way the war is being prosecuted but with many of the generals and even with King Victor Emanuel himself. The truth is that Italy went into the war, after it was well under way, in the belief that it would hardly last more than six months and that by turning against its former allies (Germany and Austria) and lining up with England, France and Russia it would secure a good part of the spoils of war without much cost to itself. But the war has dragged along and Italy has been obliged to pay a great price, both in money and in human lives. Recently the Austrians have been making a great drive against the Italians and have been quite successful, pushing the Italians out of the provinces they captured early in the war and back into their own territory. Things have been going from bad to worse and the people are thoroughly aroused. The socialist and peace parties have been growing tremendously since the Austrian offensive began and the movement for a radical reconstruction of the whole structure of the government promises to become general. Even if the country survives the present crisis it is feared by even the most optimistic statesmen that sooner or later the powerful movement that has been fermenting for many months will win the upper hand, and if it does, revolt is looked for as the inevitable climax.

TROUBLE continues to make itself manifest on the Mexican border, aggravated by the insulting tone of Carranza's latest demand for the withdrawal of the American troops from Mexico. With 1,500 additional regular troops ordered to the Mexican border and reports of the rapid spread of anti-American feeling continuing to pour in from consuls all over northern Mexico, officials made no attempt to disguise their uneasiness. It is officially admitted that there is a growing alarm over what the agitation may produce and the possibility of an attack on General Pershing's expedition. There is a general feeling that Carranza is not giving the United States the assistance that he should to restore a stable condition of affairs. There are continued rumors that the Carranza government itself is tottering, the general impression being that Obregon, Carranza's minister of war, is the strongest man in that country today and the only one who can be relied upon to bring any semblance of order out of the existing chaos. A sharp rejoinder is being prepared to the Carranza note. It will repeat the determination of President Wilson to keep American troops in Mexico until the Carranza forces have shown their ability and intention to properly police the border states. It is also to rebuke the Carranza government for questioning the good faith of the Washington administration.

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20 YEARS THE LEADER

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Cattle Congress in Marinette County.

To the Editor:—Success of the great Marinette County Cattle Congress, which will be held on August 17th of this year in connection with the annual new settlers' picnic was assured when Supt. R. M. Smith, of the Marinette County Farm at Peshtigo agreed to accept the entire management of the cattle show.

The appointment was made by a sub-committee of the Marinette county new settlers' picnic committee, the sub-committee consisting of A. F. Hose, of Intervale; W. B, Sanderson, of Loomis, and S. E. Bennett, of Waukesha, the latter being chairman of the general committee.

The great annual settlers' picnic will be held this year at Wausaukee on Thursday, August 17th. With satisfactory weather it is believed that from 5,000 to 6,000 people will attend the picnic this year. The picnic last year was attended by over 4,000.

Since the decision to make a cattle congress, particularly of dairy cattle, one of the big features of the picnic for this year, it has been recognized that the success of such an event would depend entirely upon the management. Satisfactory management meant not only the selection of a man who was an expert on dairy cattle, but who had exceptional organizing and managerial ability. Throughout the county the choice appeared to fall on Superintendent Smith.

According to tentative plans, about $400 will be offered in prizes in the various cattle classes. Considering the fact that only Marinette county cattle will be eligible to entrance, the amount of the prizes is considered large.

But Marinette county cattle owners will not exhibit for the prizes alone. They are enthusiastic in the dairy future of this locality and they realize the stimulating effect which a cattle congress will have on the further development of dairying in Marinette county.

No cattle from the county farm at Peshtigo will be entered in competition. At the request of the sub-committee Superintendent Smith will exhibit some of the asylum stock in non-competitive classes, but because of the fact that the county farm is a county institution, and not an individual institution, Mr. Smith stated at once that it would not be policy to enter the farm stock in competition. This decidedly generous attitude on the part of Superintendent Smith will be appreciated by stock owners throughout the county.

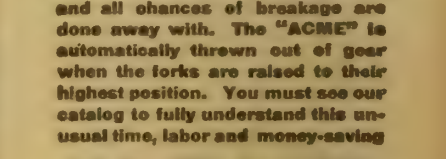
From now on until the day of the picnic preparations will be under way. Chairman Bennett, who is now serving as county farmers' agent, will have more opportunity this year than last year to devote time to picnic preparations, and he has a very strong committee to work with him.

Big features of last year's picnic will be carried out again this year, and in addition there will be new ones besides the cattle congress. There will be tractor, milking machine, silo filling and other machinery demonstrations, and special high-class entertainment features. There will be several speakers of great note, and no less than three bands. Special trains will be run to Wausaukee, and hundreds of autoists will make the trip in their cars. The roads will be placed in particularly good condition before the date of the picnic, so that an auto trip to Wausaukee to the picnic will be an easy run from any point in the lower part of the county, or points north of Wausaukee.

A new feature this year is a big exhibit hall, fitted with booths. These concessions will be sold to agricultural machinery exhibitors, and other business people, a very large number of applications for space already being on file.

H. I. Wood.

Marinette, Wis.



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The Wisconsin Farmer

THURSDAY, JUNE 22, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE DEMOCRATIC PLATFORM

NOTWITHSTANDING the fact that newspaper reports during the week have been predicting that the platform to be adopted at the democratic national convention would endorse the sweeping changes made in the R. F. D. service, the completed and adopted text of that document does not mention this subject. I am sincerely glad that this is the case. We should not allow our rural mail service to become a political issue, but there is no doubt in my mind but that the present administration has made a serious mistake in attempting to combine routes, in the so-called interests of economy, the main result being the serious impairment of the service. I called attention last week to the fact that the republican platform declares in favor of an extension of the rural free delivery system. Apparently the democratic platform is silent on this subject in which the farmers of the nation are so vitally interested, yet this silence is undoubtedly preferable, in my opinion, to an endorsement of a policy which gives the farmers mail infrequently rather than regularly and makes the carriers attempt the almost impossible task of covering fifty miles a day, rain or shine, storm or cold.

The main paragraphs of the democratic platform in which the farmers are interested are the following:

> The happiness, comfort and prosperity of rural life, and the development of the city, are alike conserved by the construction of public highways. We, therefore, favor national aid in the construction of post roads and roads for military purposes.
>
> We favor the vigorous prosecution of investigations and plans to render agriculture more profitable and country life more healthful, comfortable and attractive and we believe that this should be a dominant aim of the nation as well as of the states.

Now that the issues are duly joined and both parties have made their nominations and outlined their policies, we enter upon one of the most important national campaigns in all our history. I shall discuss the issues frequently in this department, but always with a view to the welfare of the farmer, rather than merely from a partisan standpoint. In this way we can have an interchange of ideas and opinions and find out what is for the best of the greatest number.

EUROPE'S SHORTAGE OF LIVE STOCK.

MR. EVANS' article, found on another page, confirms the impression I have received from many miscellaneous articles as to the live stock shortage in Germany and, to an almost equal degree, in the other belligerent countries of Europe. If you will turn to Mr. Evans' article you will find these words:

> Four times I crossed the empire from north to south and I did not see a hog or a sheep, and but two small herds of cattle. In Austria the only meat served in the hotels is goat meat. That there was no live stock in that part of Germany which I passed through was further proven by the fact that there was no fodder. I did not see a stack of hay or a shock of fodder and the pasture lands are being broken up and planted in cereals.

Last week, you may recall, in his first article, Mr. Evans declared that two days in each week no one in Germany, not even the kaiser, can buy any meat, and the amount he can buy on other days is limited by law. I do not want you to think I am arguing that because of this shortage of live stock Germany is necessarily in a fair way to lose out in the present titanic struggle; there is ample evidence that the other countries are in every bit as bad condition. Here, for instance, is a dispatch in today's newspapers stating that the Russian duma, or congress, has adopted a bill calling for the abstention from eating meat four days in each week, or two days more than the Germans are now prohibited from buying it. I have no doubt but that the situation is equally serious throughout France, where the devastated fields, harrowed back and forth by the terrific onslaught of millions of fighting men, must have given up their last animal many months ago.

There does not seem to be any question but that the live stock supply of Europe will be an almost negligible quantity by the time the war comes to an end. The situation will get worse rather than better. The fine breeding animals, so eagerly sought after by American stockmen before the outbreak of the war, are being commandeered by the various governments and made to do the most menial labor of war. In despair, the European farmer and stockman will turn to America for all manner of stock with which to replenish his depleted herds, once this awful war is over. Is there not, therefore, an opportunity here for the American farmer and stockman—and particularly of the grain belt, where nearly 40 per cent of the cattle, 50 per cent of the horses and 50 per cent of the hogs of the United States are to be found? In my opinion the opportunity was never surpassed in all our national history.

With the cessation of hostilities and the opening of the international lanes of trade to the commerce of the world I look for such a quickening of the live stock industry—such a boom for the farmer and stockman who has the supplies which the world demands—as was never witnessed before. Shall we prepare for this golden opportunity by building up our herds and devoting more and more attention to the advantages and the profits of live stock farming? That is certainly my advice. Let us see to it that our herds are built up and bred up to the very highest stage of efficiency, that we exercise our capabilities along this line to the very extreme and leave nothing undone which will enable us to take advantage of the opportunity—it is likewise, I feel, a duty—which bids fair to be ours in such unstinted measure in the near future?

THE CALL FOR HARVEST HANDS.

NOW that the harvest season is almost upon us and the insistent call for harvest hands is going up from thousands of farms, there is a pertinent timeliness in a warning article in one of the large city newspapers which I have just read. This article calls attention to the fact that the harvest fields demand more than mere brawn, that one of the saddest sights of the early summer is the work-hungry man struggling countryward from the city only to find that he is not fitted for the arduous toil of the harvest fields under the hot sun and cannot stand the strain. Around harvest season is the worst time of the year to answer the call "back to the land" if one knows absolutely nothing of farming.

One of the unexplainable things about the average city man is his inability to realize that farming requires a particular aptitude and a careful training as much as any other business or calling. So many city men seem to think that a person can "fall back" upon farming when other callings are impossible and that all it takes is a strong right arm and a back that does not ache too quickly under toil. I wish they could, and would, read the article which I have just read, in the large city newspaper, describing the army of disappointed and sometimes well-nigh heart-broken toilers who seek work in the harvest field, only to find disappointments where they had expected to mint the golden wheat heads into eagles and double eagles. Here is a portion of the article that appeals to me with particular force:

> Clerks, students, school-teachers and others not accustomed to manual labor join the army of would-be workers, only to find that they cannot measure up to the work. Foreigners who speak no English, reading the call in papers published in their own tongue, infer that a knowledge of English is not necessary. They go with the others, only to find, in many cases, that the farmer cannot use the non-English speaking men. Men who are accustomed to hard, manual labor, find upon arrival, that they cannot endure the direct rays of the burning sun. All of these are disappointed, disheartened, and frequently stranded in a country where there is no work suited to their experience and abilities.
>
> Then we hear from them: "Fraud! fraud!" There is no fraud. To the farmer a harvest hand is a man physically able and willing to do harvest work, just as to the blacksmith, a horseshoer is one who can shoe horses; to the automobile owner, a chauffeur is one who can handle a car; to the office man, a stenographer and typewriter who can do this work. So when the farmer calls for "harvest hands," he does not want clerks, tailors, barbers, and men of other callings, unless they are men who know his work and are able and willing to do it.

There are certain requisites for a successful harvest hand which might well be summed up in this manner: First: strength, robustness and endurance. Second: The ability to stand hard manual labor under the direct rays of the sun, to do without ordinary comforts for the time-being and to put up with long hours of labor. Third: A readiness and willingness to take chances as to weather, realizing that there must be ready funds to tide over when storms interfere with steady employment and to get the worker on to the next field and job when employment one place comes to an end. If the eager college students and city men who read the offers of $2.50 to $4 a day and board in the harvest fields would only realize that all these things are absolutely necessary and that, failing in any one of them, they are doomed to disappointment just as much in the harvest fields as though they tried to be locomotive engineers or automobile mechanics without a particle of preparation or aptness for the work, the situation would be relieved and many heartaches would be avoided. We are almost to the season when the Macedonian cry for men in the wheat fields and the oats fields will be heard on every hand, but the cry is for men who understand their work, just as much in farming as in any other business or profession.

THE VALUE OF A HITCH RACK.

A SUBSCRIBER gives me some interesting facts showing the value of the hitch rack. He is a farmer living near a prosperous grain-belt town with a population of about 3,500. This town has recently erected a fine $100,000 courthouse, and having some rather citified ideas concerning town beautification it decided to dispense with the hitch racks which surrounded the old courthouse, not stopping to think how this action might affect the farmers on whose trade the prosperity and progress of the town really depend.

Results were not long in coming and the merchants quickly found that farmers who do not feel themselves welcome in a town soon get out of the habit of going there to do their trading. A half dozen little towns in the neighborhood began to find trade picking up wonderfully, and the county seat found business declining proportionately. The merchants' faces became long, indeed, but it was several weeks before they definitely came to the conclusion that the courthouse hitch racks were to blame. Once they found out the trouble, I am delighted to be able to report, they lost no time in removing it.

According to the word which my subscriber friend sends me in his interesting letter, eighteen merchants of this county-seat town have subscribed $100 each for a hitch-rack fund. They have bought a lot near the center of the town and are paving and roofing it and providing hitching accommodations for more than 100 teams. They are confident that just as soon as the farmers learn what they are doing they will come back to them to do their trading, and so their investment of $1,800 for a municipal hitch rack will be money well expended, for without the farmers' trade this town knows it cannot progress or even maintain its recent prosperity.

It seems to me there is a decided lesson in this incident for all small towns. It is just this: There is no man whose interests and welfare should be more carefully considered than the farmer, nor one whose trade should be more eagerly sought. A hitch rack around the courthouse square may seem like a trivial thing to some townsfolk, but when a farmer is obliged to patronize a private feed yard for accommodations while he does his trading and spend the proceeds from a pound of butter for this accommodation he is going to look about, without undue waste of time, for some town which appreciates his trade a little more. I recall the statement which the late Senator George E. Scott, of Prairie Farm, Wisconsin, proprietor of what is undoubtedly the model country store of the world, once made. He was referring to the great stable to the rear of his store into which, in stormy weather, his farmer customers were wont to drive to shelter their animals. "The horses that bring customers to my store deserve better treatment than to be left outside," he said, and nothing could possibly have outlined the character of the man better. He was not only a lover of horses, but he knew full well that the country merchant who succeeds must cater to his farmer customers and give them every possible accommodation and convenience.

Perhaps it is too much to say that a hitch rack is worth $1,800 to every town, as it has been proved to be worth to the town of which my correspondent tells me, but it has its value, in dollars and cents, and that value is high. The merchant who makes the trading trips pleasant and profitable to the farmer is the one who is going to get ahead in the world, mark my words on that.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

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Coming Back to Wisconsin.

THE WISCONSIN FARMER is advised that no less than fifteen families, who were formerly residents of Marinette county but who thought they could better themselves elsewhere, have returned during the recent spring months and again commenced farming in Wisconsin. In practically every case they returned poorer than they were when they left. They also bring reports of other Wisconsin families, some of them, unfortunately, in such a bad way that they are not able to come back for lack of funds. Others would be glad to come back if they could dispose of their holdings in the new countries to which they were lured with such great expectations. We quote from a letter which we have received from a Marinette county man in whom we have every confidence. He writes:

A widely-known man who has just returned from Alabama, where he has been farming the past fifteen years, is William Ramsay, a brother of the late R. C. Ramsay, who was for many years superintendent of Marinette county schools and one of the best known educators of the state. Mr. Ramsay is moving to Dunbar, in the upper part of Marinette county, and will begin farming operations soon. He was raised on a farm in Marinette county, and after fifteen years of farming operations in the South he is convinced Upper Wisconsin today offers better opportunities than any other section in the country where cheap lands are to be had.

This same condition doubtless exists with reference to farmers in other sections of Wisconsin. Of course, not all lands outside of Wisconsin are poor lands. There are other portions of the Union in which a good living can be made and in which farmers become rich, but when it comes to picking out places where the opportunities are better than they are in Upper Wisconsin such places will be pretty hard to find. It takes work to build up a farm in Upper Wisconsin. It takes hard work. The fellow who is afraid of hard work might as well leave the country. In fact, Upper Wisconsin would be just as well off without him. The only way that a man can clear Upper Wisconsin land and make it valuable without hard work is to hire someone else to do the hard work. But we know of no place where the remuneration is greater or more certain than in Upper Wisconsin. Not long ago a farmer in one of the corn-belt states approached the writer and said he had a proposition to trade for 400 acres in Marinette county land, and he asked us whether it was worth while to go and look at it. We found that he had several good, healthy boys who did not have enough to do on the small farm he owned. We advised him to make a trip to Upper Wisconsin and see for himself. We advised him further that he would make no mistake on most of the land in Marinette county. We told him that if the boys were not afraid to work, the 400 acres would probably make the whole family independent. At last reports from this man we heard that he had a team and stump puller at work every day. He has cleared considerable land which will be in potatoes this year. He expects to establish a dairy farm, and we have not the slightest doubt but that he will succeed.

Farming in any new country is not an easy job. It means hardships. Upper Wisconsin has a tremendous advantage in that it is not far removed from civilization. It is close to markets, and this the settler will find to be greatly in his favor.

Don't move away from Upper Wisconsin, nor from any other part of Wisconsin, until you are pretty sure you are going to be better off.

Wisconsin Man on Dairy Characteristics.

A JOINT summer meeting of the Holstein, Guernsey and Jersey breeders of Monroe county and vicinity was announced to be held Saturday, June 17th, at the Indian school grounds, Tomah, Wisconsin. The Wisconsin Farmer goes to press too early this week to receive any report of this meeting. One of the prominent men connected with this meeting is Mr. E. E. Wyatt, of Tomah. Mr. Wyatt is well known to Wisconsin farmers, having been connected with the institute work for several years. Not long ago we heard him speak on the characteristics which stamp the dairy cow with the mark of efficiency. He said the relation between conformation and production of milk is clearly demonstrated by comparative results from different types of animals. We quote the following from Mr. Wyatt's remarks:

It is not the type that has developed the capacity to produce milk economically, but the intensified ability with its hereditary breeding powers that have produced the conformation of these animals and made it their universal formation, thus standardizing this type. Efficiency of dairy herds may, therefore, well be maintained on this basis.

Mr. Wyatt referred to May Rilma, grand champion Holstein, and Sophie 19th, champion Jersey cow, and others, to indicate features common in all, such as the clear-cut conformation, lack of superfluous meat, a strong, bony frame neatly put together, but in such a manner as to insure a capacity for consuming and assimilating a large amount of feed. Such an animal makes a good milk producer. Quoting again from Mr. Wyatt:

Viewing this type from the side view, one notices the wedge shape, starting with the chest, gradually deepening through the abdomen and udder. From the front one sees a wide chest with a gradual widening through the body to the paunch. This should show a well-filled and distended body conformation, and on the top line a close, clean, sharp shoulder, and viewing the top line, a gradual widening as the ribs spring from the back. The hip bones set out as a base of the wedge, which develops another wedge through the body, chest and abdomen. At the chest the body must indicate plenty of room for the heart and lungs, vital organs in the dairy cow, as in her work more blood and necessarily more air must be mixed in her lungs than in the lungs of any of the rest of our animals with size considered. This means plenty of depth and width. The back, too, must be strong, with large, well-shaped vertebrae indicating a strong nervous makeup and also making a good, roomy body. The ribs are so placed as to make a large "barrel," well spread, and having plenty of "give and take" in it. In this "barrel" the rough and concentrate feeds and water are manufactured into those elements which make the milk for the udder. The loins are broad and well supported; the hips wide apart, with plenty of width.

The udder is the real milk factory. Here is plenty of room to denote capacity and ability. Thin thighs and wide set limbs give room for the udder. The attachment should be firm and even, avoiding a loose and pendulous attachment with no fleshiness or meatiness beyond a necessary amount of frame to load up the supplies of the milk-making elements between periods of secretion. The lower parts form well-placed, well-shaped and easily operated teats. The texture of the udder should be very pliable, the skin loose and soft, indicating a good circulation; the hair soft, not long and wiry; the milk veins large, with plenty of carrying capacity for the blood from the udder.

The face and head of this type of dairy cow also should show to the trained eye a similar neat and outstanding nervous system. Their size should conform with the body set on a clean neck; the face broad between the eyes, indicating plenty of brain development; nostrils capacious with a clean-cut appearance. The eyes indicate a good deal also; they should be bright, alert and clean, but not staring nor wild.

All these individual features of the dairy cow must harmonize and mingle in a symmetrical conclusion which is not to be described and can be appreciated only by one who studies them in an entirety.

It is plain that Mr. Wyatt has been a student of the dairy cow, and his remarks, though uttered some months ago, are worthy of general publicity at any time.

Would Organize Wisconsin Hampshire Breeders.

MR. A. L. DAMON, of Dellbrook Farm, Richland Center, Richland county, asks The Wisconsin Farmer to join him in an appeal to breeders of Hampshire swine in Wisconsin to organize a state association. His letter, which is self-explanatory, follows:

To the Editor:—I want to organize a state Hampshire swine association in the near future, and I thought perhaps you might put a notice in your paper asking all Hampshire breeders to write me, as I do not know how many breeders there are in the state. I want to get Hampshire hogs on the experimental farm at Madison and I can't do it without organization. Any help you can give me in this matter will be greatly appreciated.

Yours truly, A. L. DAMON.

The Wisconsin Farmer is pleased that it can be of service to Mr. Damon in this respect. We realize, as Mr. Damon does, that nothing makes for success like organization and co-operation, and we would urge that every breeder of the belted hogs get into communication at once with Mr. Damon, who is prominent in Hampshire circles and well known throughout the state. His postoffice address is Richland Center.

The Poland China, Chester White, Duroc Jersey and Berkshire breeders of Wisconsin all have their state organizations, and there is no reason why the Hampshire breeders should lag behind in this respect. These organizations meet each winter when matters of vital importance to the breed and the breeders in Wisconsin are discussed, and there is no doubt but that all the organized swine associations are accomplishing good results. Mr. Damon hopes to induce the college of agriculture to add Hampshires to the university farm herd, and he is correct in assuming that his efforts along this line will receive more attention if backed by a strong state organization of the lovers of this breed. No doubt he has many other things in mind for such an association such as organizing a state fair futurity; increasing the entries of Hampshires at the state and county fairs, etc. There is no end of work which such an organization can undertake and bring to a successful end. Unless the Hampshire breeders get together as the other breeders have done they have little cause to find fault if they seem to be neglected. The Poland China breeders and the Duroc Jersey breeders have their association to thank for the state fair futurities this year. We are citing the work of the other breed lovers merely to arouse the enthusiasm of the Hampshire breeders and bring to their attention the functions of such an association as Mr. Damon desires to organize.

No organization can succeed without a leader or leaders. In Mr. Damon the Hampshire breeders have a voluntary leader who has the interests of the breed at heart, and The Wisconsin Farmer trusts his fellow breeders will join and support this movement.

Live Stock in Germany.

UNDER the title of "Live Stock Scarce in Germany" we print on page 10 the second of the series of articles written expressly for The Wisconsin Farmer by Mr. Harry C. Evans, a prominent member of the recent Ford peace party. Mr. Evans crossed the German empire, back and forth, four times in the course of his recent trip and had exceptional opportunities to witness the agricultural conditions and the herculean efforts which the people are making to maintain their ability to feed themselves. Mr. Evans was greatly impressed with the efficiency of the Germans in an agricultural way, finding it to be equal to their efficiency in a military way. His article is the most authoritative on the agricultural side of the war that has ever been printed.

Next week we will print the third of Mr. Evans' articles under the title of "When the War Is Over." This will set forth a very interesting interview with a young English lieutenant who predicts that when the war is over a great majority of the men now fighting in the trenches will demand a tract of land and will turn from city pursuits to farming for a living. We believe that the third article will be found fully as interesting and as entertaining as the first two. We sincerely hope that all of our readers are following Mr. Evans' articles and will not miss a word of the entire series.

A Summary of Wisconsin Feed Laws.

THE sale and analysis of concentrated feeding stuffs has been issued by the agricultural experiment station in the form of a bulletin by W. H. Strowd. The bulletin is entitled, "Facts for the Feed Buyer," and is identified as Bulletin 267.

The following feeding stuffs are subject to the provisions of Wisconsin laws: Linseed meal, cottonseed meal, cocoanut meal, oil meals of all kinds, gluten meal, gluten feeds, pea meal, maize feeds, starch feeds, sugar feeds, molasses feeds, hominy feed, cerealine feed, distillers' grains, dried brewers' grains, malt sprouts, alfalfa meal, dried beet pulp, corn bran, wheat bran, middlings or shorts, rye bran, middlings or shorts, buckwheat bran, middlings or shorts, rice meal, oat feed, barley feed, corn and oats feed, dried blood, tankage, ground beef, fish scrap, mixed feeds of all kinds, condimental stock food, patented and proprietary stock foods (claimed to possess nutritive as well as medicinal properties), and all other materials intended for feeding to domestic animals except hays and straws and the whole seeds and the unmixed meals made entirely from the whole grain of wheat, rye, barley, oats, Indian corn, buckwheat, sorghum, broom corn, and flaxseed.

Manufacturers who wish to sell concentrated commercial feed in Wisconsin should comply with the following conditions:

1. Secure application blanks for license from the director of the agricultural experiment station, feed inspection service, Madison, Wis.
2. Fill out blanks with names of feed sold, together with a guaranteed analysis of the same, distinguishing trade-mark, and giving the minimum percentage of protein and fat and the maximum percentage of fiber, return license with a $25 license fee and receive certificate entitling licensee to sell feeds covered by the application during the calendar year.
3. When feed is sold in bags the law is that there be printed on the bags, or on tags firmly attached thereto, the following information:
   (a) Name of person or firm under whose license feed is sold.
   (b) Net weight of the feed.
   (c) The registered name of the feed.
   (d) Minimum percentage of protein.
   (e) Minimum percentage of fat.
   (f) Maximum percentage of fiber.

When feed is sold in bulk a certified copy of statement including the above data should be supplied to the purchaser. Any manufacturer who desires to add to his line within the time limit of his license may do so by separate application, for which there is no additional charge.

Manufacturers or dealers who sell or expose for sale any concentrated feed without complying with the law are subject to a fine of not less than $25 or more than $100 for the first offense and a maximum fine of not to exceed $200 for each subsequent offense.

The inspector in charge of the state service advises us that it is not possible to comply with the request of the large number of private individuals who desire analysis of their feeds. However, an analysis is made each year of practically every feed sold in any considerable quantity in the state. Wherever analysis is of public interest the inspector expects to furnish it. When it is for personal information it cannot always be furnished. Any information or analysis in the hands of the inspector, whether published or otherwise, is avail-

able for any interested person in the state. We suggest that farmers of Wisconsin who are interested in more complete information on commercial feeding stuffs secure a copy of Bulletin 267. They will find there listed practically every concentrated feed which is offered for sale in Wisconsin and an analysis of the same.

An Active County Superintendent.

WAUKESHA county has become so largely known for its dairying activities that the outsider often loses sight of her farming operations. This is true particularly of the work among the boys and girls in the county as it affects their interest in other branches of farming aside from dairying. The county breed organizatons have kept up the interest of the coming generation in dairying through contests and activities of like nature in connection with their annual meetings. Sometimes it is an essay contest or more often a judging contest, but always with appropriate prizes, and with the result that the boys and girls are kept constantly reminded of the future of Waukesha county as a dairy center.

However, we should not lose sight of the splendid work which is going on among the girls and boys in other farming operations, such as corn growing, gardening, etc. In a county which is caring for so many dairy cows at Waukesha county, it is necessary to produce considerable feed, and the work in interesting the boys in this branch of the work has been left largely to County Superintendent of Schools Rose, who finds time while directing 118 school districts in that county to conduct a corn-growing contest among the boys and a tomato-canning contest for the girls. The writer had the pleasure of spending an hour recently with Mr. Rose and of learning how he is doing practical agricultural work in the rural schools. His idea is that a school superintendent should be interested in everything in which the rural children are interested. He believes the pupils should be educated along practical lines at the same time they are studying from books. The result is that wherever breeders and farmers and their families gather Mr. Rose may usually be found. He is always on the job and the fact that much of the success of the judging contest at the recent Guernsey picnic was due to his enlisting and coaching of the boys speaks well for his activity along these lines.

Mr. Rose has more than 400 school boys in the ten-acre corn contest this year and more than 300 girls in the tomato growing and canning contest. He furnishes the seed which comes through the college of agriculture at Madison and bankers and business men are co-operating by supplying the funds for prizes. In addition there are twenty boys engaged this year in acre corn-growing contests and about an equal number in the calf-raising contest, which are under the direction of the county Y. M. C. A.

There is more contest work among boys and girls in Wisconsin this year than ever before. This is a favorable sign and The Wisconsin Farmer would be pleased to see every county doing something along the lines carried out in Waukesha county to center the interest of the boy and girl on the farm. Mr. Rose says he finds the bankers in every town willing to help out with cash prizes. He is willing to supply the energy and assume the managerial role which bears out our belief that there is always opportunity for such co-operation where there is a leader who is willing to sacrifice a little of his own time for the common good.

Distribution of Guernseys.

THE splendid showing of Wisconsin as a Guernsey state is illustrated by a map recently published by the Guernsey Breeders' Journal. This map shows that Wisconsin has eighty-eight members of The American Guernsey Cattle Club, and fifty breeders who have a total of 215 cows on test. New York state has eighty-six members, and forty-four breeders who have a total of 174 cows on test. Pennsylvania has eighty-nine members, but only eighteen breeders with a total of eighty-five cows on test. Minnesota is coming to the front with Guernseys, having now twelve members of the club, and twelve breeders who have a total of fifty-nine cows on test. This is a better showing than is made by Iowa, which has five members with seven breeders owning forty-one cows on test. Other states in this part of the country have the following showing:

Michigan, 20 members, and 9 breeders with 71 cows on test.

Illinois, 26 members, and 9 breeders with a total of 47 cows on test.

Indiana, 3 members, and 3 breeders with a total of 16 cows on test.

Ohio, 24 members, 16 breeders with 57 cows on test.

The Guernsey is getting a foothold in the West. In California there are ten members of the Guernsey Cattle Club, and five breeders who have forty-four cows in advanced registry work. Washington and Oregon each have four members of the club and four breeders with cows on test. The Guernsey cow is popular in the East, but has not made much of a showing in the southern states. South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Oklahoma, New Mexico and Arizona have no members of the American Guernsey Cattle Club, while Texas, Louisiana, North Carolina, Kansas, Nebraska and Kentucky have only one each. The Guernsey, of course, makes its strongest showing in the great dairy centers of the country, and Wisconsin is at the head of the list on the Guernsey map. This is not only true in numbers but in quality of stock.

The Serial Well Started.

THE second installment of our new serial, "Told in the Hills," will be found on page 17. The principal characters are now introduced to the reader and the rapid action of the story gives promise of ample romance and heart interest. The scenes, however, shift from New Orleans, where the prologue was laid, to the Kootenai country in the Northwest. The author, Mrs. Ryan, has handled her material in a splendid manner and has written a thrilling and exciting story which we are confident will appeal to every reader. We sincerely hope that every reader of The Wisconsin Farmer will read every installment of this excellent story, which will be followed by still another high-grade novel.

Co-operative Electricity Societies.

MR. C. L. STEWART, of the department of economics, University of Illinois, has written an interesting article on co-operation among farmers as it may be applied to electricity. Societies for obtaining electricity in the rural districts have been developing in France and Germany for the past fifteen years. In 1910, according to Dr. Stewart, there were 257 such societies in Germany alone. In some sections of Germany grain dealers have paid a premium on grain which was threshed by electric power. Such a recognition of the value of electricity, of course, has brought this power into prominence and popularity. Dr. Stewart says that the farmers of Europe use electricity more for power than for light, and thus electricity becomes more of an economic proposition than a matter of convenience.

In regularity, dependableness, especially in cold weather, cleanliness and freedom from the necessity of supplying materials, the electric motor is characterized by Dr. Stewart, as superior to steam. Furthermore, it has great advantage over steam when applied to smaller implements, and when power is needed in out-of-the-way places such as the barn loft or the basement. It requires time and fuel to get up steam for power, and a steam engine runs at full blast regardless of the load. Shafts and belts are expensive and in the way. A steam engine has more parts to wear out than an electric motor.

That we may in time expect a general use of electricity on farms in the United States is suggested by Dr. Stewart, who says that conditions now in the country are about the same as they were in Germany when farmers' co-operative electricity societies were first suggested. In some places in our country there is water power where electricity may be easily developed. But it is necessary to put in a system and to run extensive wires, and this means an expense which one or two farmers cannot stand. Probably no state is better fixed for water power than Wisconsin. Farmers who live within 200 or 300 miles of the Keokuk dam, at Keokuk, Iowa, might be supplied with electricity for power and light if they would club together and agree to use the service so that a company could afford to install the systems. There is power enough along the Wisconsin river in Wisconsin to furnish light and power to thousands of farmers and eventually it will be utilized. The latest survey of Sauk county, Wisconsin, shows almost 100 farmers using electricity for light and a good many using it for power. Electricity is being used for milking machines in many counties throughout the grain belt. A large number of farmers have found it profitable to install individual plants, and if this expense is found worth while how much more certain is the use of electricity on farms to become general when by co-operation, the expense of current can be greatly reduced. The extension of interurban lines which usually have ample power and to spare, has been a boon to farmers in many sections.

Discussing experiences with co-operative societies, Dr. Stewart says:

Experience in Germany seems to support the argument that farmers' electricity societies should not attempt to own more than the conducting installation. The individual members have considerable expense to meet in tapping the society's wires, wiring and fitting their homes, outbuildings, and providing wire, motors and motor-driven machinery for operations in the house, field, barn and lots. Ordinarily, therefore, the expenses incurred by the organizations must be met by loans. The larger the investment the heavier the debt, and the greater the liability to which the members must subject themselves. German co-operative banks to which the farmers usually appeared wanted unlimited liability, and go no farther than to loan subject to tenfold liability on the part of the borrowers. In spite of the careful study made by German bankers many of the societies were ill conceived. Too frequently they failed to assure enough custom, having too small a membership. These societies were formed in most cases under the inspiration of agents representing the producers, or machinery companies. The agents, of course, wanted to interest enough farmers to get things started in a particular neighborhood and were then disposed to pass on to other neighborhoods. The result was the sale of more machinery for power plants, house, barn and field operations than might otherwise have occurred so quickly. On the other hand, many German societies found that interest, amortization and salaries for skilled electricians were entirely too heavy for the amount of current employed by the members. The result was well-nigh disastrous in a number of cases.

The conclusion reached by co-operative leaders is that the electricity societies should seldom build their own overland central stations. They should by all means be assured sufficient custom. The average membership in societies owning their power works is between 300 and 400, and it is best for the membership to go into four figures.

It is a dream of the future, perhaps at considerable distance, but we fully expect that some day the rural districts will be supplied with electric wires as they are now supplied with telephone wires, and that parctically every farmhouse and barn will have electric light and power. If we had predicted thirty years ago that farmers would nearly all be connected by rural telephones in 1916 almost everyone would have laughed at us.

Late Seeding of Buckwheat Advised.

IT IS NOT too late to sow buckwheat with reasonable expectations of obtaining a good crop. In a press bulletin recently published by the department of agriculture it is pointed out that buckwheat will give very good results even if seeded as late as the last week in June or the first week of July. Late seeding is advised and indeed it is almost absolutely essential if a good crop is obtained, because buckwheat "fills" better in cool weather. In any event, the crop will mature in about ten weeks. Under abnormal conditions, it seldom requires longer than twelve weeks.

It goes without saying that land should be well prepared for a crop of this kind. So much the better if the seed bed has been prepared for corn, but for some unaccountable reason corn has not been planted. In that case, the soil will be in fine condition for the reception of the seed.

Buckwheat when sown broadcast is generally seeded at the rate of from three to four pecks per acre. If a drill is used, however, one-half of this amount of seed will generally give good results. Those who use drills have found that two pecks per acre will result in a satisfactory stand. The advantage of the drill is that all the seed is covered to a sufficient depth so that germination is insured.

Buckwheat is recommended as a satisfactory crop to grow on infertile lands. It is well suited to light, well-drained soils such as sandy loam or silt loam soils. Even if the land is too strongly acid to produce legumes satisfactorily, it will not interfere with the growth of buckwheat. Of course, the richer the soil the larger will be the crop within certain limits, but let it be remembered that buckwheat has inordinate power to take plant foods from soils where the fertility supply has reached low ebb.

The harvesting of buckwheat is not a difficult task, as it may be cut with an ordinary binder and afterwards shocked in the same manner as one would shock a grain crop. In all probabilities there will be bloom on the plants even at the time of cutting. It matures well in the sheaf after being shocked and usually it is left in the field until it is dry enough to thresh. In other words threshing is done direct from the shock, as there is usually too much sap in the buckwheat stem to risk curing out in the stack or in the mow.

Buckwheat has the virtue of being an excellent smother crop and where there is a rank growth of such perennial weeds as quack grass, morning-glory or thistles, these may be weakened and in many cases completely killed out by thoroughly tilling the soil and sowing buckwheat rather thickly late in June or early in July. It is very important that all the leaves that are above the surface should be destroyed and so much the better if everything can be cut back to the depth of three or four inches. This end can be attained ideally by free use of the disk. Not only will buckwheat be most useful as a smother crop, but it brings the soil into a fine, mellow condition. Indeed, the seed bed following this crop will be very much in the same condition as will result from a thorough system of summer fallowing.

Time to Think About Furnaces.

PERHAPS our readers will think this is not an appropriate summer topic. However, we insist that it is. The time to think about the new furnaces or the new stoves is in the summer or early fall before such things are badly needed. Those who expect to put in new furnaces before next winter should give the matter attention now. Those who already have a furnace and want to avoid trouble with it next winter should give the furnace attention before it is time to make fire in it. Doubtless the smoke passages and the fire box need a thorough cleaning. One of the best times to do this is in the summer when it is certain there will be no need of fire. There is a certain amount of dust and soot which collects in the smoke passages of the best furnaces. This ought to be swept or scraped out. The housewife is fortunate who can get her husband to attend to this matter during housecleaning.

If there are any of our readers who did not assist in the housecleaning work to this extent they ought to finish up their part of the job at once. The smoke pipe should be taken out and cleaned of all soot. It is better to clean out the chimney and stop it up with paper than to leave the pipe in place all summer. One of the furnace companies recommends that a peck of unslaked lime be placed in a box in the fire-pot of the furnace to prevent rust. At one of our agricultural stations there is a school for janitors where the subject of caring for furnaces is given particular attention. The head of this department states that a furnace can wear out as rapidly in the summer as in the winter unless it is given proper care.

Western Wisconsin Dairy Picnic.

Dairymen to the number of about 400 with their families gathered at Tomah, Monroe county, on Saturday, June 17th, for the annual farmer-breeders' picnic. The gathering was one of the most successful ever held, despite adverse weather conditions. Towering clouds which threatened showers at any moment during the forenoon no doubt kept many breeders away, which, combined with muddy roads, made it impracticable for breeders who had planned to come from a distance by automobile to attend. However, the weather cleared during the afternoon, which made it possible to carry to completion a most interesting and instructive program.

The meeting was a joint gathering of the lovers of the three principal dairy breeds in that community and was under the auspices of the Western Wisconsin Holstein Breeders' Association, the Monroe County Guernsey Breeders' Association and the Monroe County Jersey Breeders' Association. It was held at the farm of the government's Indian school, two and one-half miles from Tomah, and a more suitable spot for holding such a meeting could hardly be desired. The Indian school farm consists of 340 acres worked by the students of the school and the breeders present had the special pleasure of viewing the splendid herd of about eighty Holsteins on this farm, all of which are registered. The buildings are all modern and the cow barns an especial delight to those who appreciate well-lighted, well-ventilated, sanitary cow homes. Mr. L. M. Compton, who has been superintendent of this farm for twenty years, was host on this occasion and he left no stone unturned to make it successful.

The school is maintained by the government and there are now 255 Indian boys and girls enrolled, coming from all parts of the northwest. The government pays all the expenses, including the transportation, and Mr. Compton told the writer that these Indian boys enjoyed the farm work immensely and took hold of the work with considerable enthusiasm. This farm also serves as a demonstrational farm for this territory and Mr. Compton has just seeded forty acres to alfalfa, which illustrates his faith in this crop. Thirteen acres of alfalfa completely killed out during the past winter because of the severe sleet storms, but this strengthened rather than destroyed his faith in alfalfa.

No attempt was made to hold business meetings, the day having been set aside for pleasure and the best things in agriculture. Breeders reported a steadily increasing demand for good stock and that the number of pure-bred females was rapidly increasing in this co unity. Mr. E. E. Wyatt, of Tomah, prominent Jersey breeder, presided at the afternoon's meeting, which was addressed by H. T. Russell, dean of the college of agriculture; C. P. Norgord, commissioner of agriculture, and Ford Allen, dairy commissioner for the Chicago North-Western Railroad.

During the day music was furnished by the student band of the Indian school and luncheon was served by the girl students under the direction of Mrs. Compton. A stock judging contest in which girls and boys, as well as men participated, concluded the day's festivities. For prizes the business men of Tomah subscribed about $60, which illustrates the co-operation there between merchants and farmers. Nothing was left undone to insure the visitors that they were heartily welcome in Tomah.

The afternoon program was held in the school auditorium because of the threatening weather. The hall was too small to accommodate the large crowd which overflowed into the lobby.

Dean Russell discussed most interestingly the tuberculosis situation, taking it up from the money standpoint, as the most sensitive spot about man is his pocketbook, and that when he realizes tuberculosis affects the pocketbook he realizes it is time to consider this disease. Dean Russell dealt in truths and pointed out what it means in dollars and cents to weed out the tubercular cows. Of the 50,000 cows tested in Wisconsin last year he said 1,716 reacted, which, although that might seem bad, 3,000 out of 41,200 tested in New York state reacted.

Dean Russell pleaded for clean herds and pointed out that Wisconsin's dairy development must come with such a reputation as a foundation. He read from a Wyoming state report criticizing Wisconsin because twenty-one of a purchase of 103 head developed the disease, declaring that it is just such occurrences that will undermine Wisconsin's standing. This is the situation, he said, that confronts every breeder of pure-bred and high-grade stock and that every breeder must realize that buyers are not only demanding quality now but also healthy animals. Aside from the economic phase of having clean herds, he said, there was a second phase—sanitary and health. He pointed out the danger of babies contracting tuberculosis through milk from infected cows and declared it a moral obligation of every dairyman to see that his herds were free of disease.

The spread of disease through whey from cheese factories, skim milk and buttermilk from creameries was also explained and Dean Russell declared a law requiring the pasteurization of by-products is badly needed and would do much to check the spread of the disease.

Mr. Norgord discussed the growing of alfalfa and farming from a business standpoint. He explained the need of liming acid soils for alfalfa as well as the necessity of inoculation and declared much of the soil, especially that along and below the ridges of Monroe county, was especially suited for this crop. He discussed the advantages of co-operation, the need of better marketing facilities and better rural credit. Some scheme, he said, must be worked out to extend more credit to the farmer who needs money in his business as well as the business man and said the co-operation of bankers could do much to ease the situation. Mr. Allen spoke briefly of the efforts of the railroads to encourage better dairying, the use of pure-bred sires and the elimination of "boarders" by cow testing.

Each of the three breeds were given a boost by representatives of the three associations. Mr. C. V. Vanderschaff, of Sparta, spoke for the Holsteins; Mr. Gothern Liddle, of Sparta, for the Guernseys, and Mr. Wyatt for the Jerseys.

In and Around Wisconsin.

Walworth county Holstein breeders are establishing a splendid reputation for that county through the admission of their cows to the advanced registry. Considerable official testing has been done this spring with the result that between April 25th to 27th a total of thirty-nine Walworth county Holsteins made the advanced registry. This was 14¾ per cent of all the cows which were admitted during that period.

Group 6 of the Wisconsin Bankers' Association, which met recently at Stevens Point, elected the following officers for the coming year: President, R. C. Ballstadt, Merrill; vice president, Harry Haslett, Loyal; secretary-treasurer, John V. Berens, Wild Rose. Executive committee, the above officers and E. C. Jost, of New London, and S. J. Flack, of Unity. As it is the custom to hold the annual convention in the home city of the president the 1917 gathering will undoubtedly be at Merrill.

Lawrence F. Murphy, proprietor of the Badger Stock Farms, Hartford, Wisconsin, recently shipped a carload of Holstein cattle to Alton Bros., River Falls, Wisconsin. The cattle were picked from the herds of John Mahar, Paul Kahlscheuer, John Monroe, Martin Monroe, Clarence Manning, John Buckley, and The Badger Stock Farm. Mr. Murphy also shipped a fine bull to Dan Ferguson, Escanaba, Michigan, the same week. These shipments indicate the success which farmers in the vicinity of Hartford are having with their Holstein cattle.

Holstein breeders of Polk county who are members of the county association enjoyed on June 13th an excursion into Minnesota which will no doubt turn out very profitably for them. They first went to Withrow, where they were met by members of the Washington County Holstein Breeders' Association and taken by automobile to the Wm. Jena and Brosious farms; then to Stillwater, where they visited the state prison; then to V. S. Culver's, W. S. Moscrip's, J. B. Irwin's and Arden farms, where they looked over fine dairy herds.

Kenneth Livingston won the judging contest held in connection with the meeting of the Southwestern Wisconsin and the Western Guernsey Breeders' Association at Ore Hill Farm, of Dale Rundell, on June 1st. First prize was a pure-bred Guernsey bull valued at $100, but as the winner did not have a herd in which to use him, it went to Elgar Nicholson, who won second honors. Stuart Watson and Henry Williams tied for third place and Charles Schaife won fifth prize. All the boys were from Livingston and had taken instruction in judging from Prof. Wiseman. There were eighteen entered.

Largely through the efforts of a Wisconsin stockman, Frank Harding, of Waukesha, the stock raisers of South American republics and this country have been brought into the most friendly of relationships. Two men from Buenos Aires have been chosen as judges at the International to be held in Chicago in December, and as a reciprocal compliment several American stockmen will attend and judge at the leading breeders' show to be held in the Argentine this summer. Among the number will be R. B. Ogilvie, a former resident of this state, who will judge the draft horses exhibited at this important exposition.

A second cow-testing association has just been organized in Barron county and started work on June 8th. The new association, formed by County Representative Cuff and State Supervisor Searles, has a membership of thirty-five farmers, representing about 400 cows. It has been so arranged that the tester may group certain herds and take care of three herds in one day so as to test all during the month. Mr. Cuff also announces that plans are forming for two more associations, one at Brill and one at Chetek.

Plans for "Wisconsin's Swine Week," to be held in mid-winter of next year, were developed at a meeting of the special committee held in Madison on June 3d. The members of the committee are G. C. Humphrey, representing the college of agriculture; James Fisher, Eastman, the Wisconsin Chester White Breeders' Association; H. C. Taylor, Orfordville, the Wisconsin Berkshire Breeders' Association; E. Parker, Janesville, the Wisconsin Duroc Jersey Breeders' Association; M. Madson, Syene, the Wisconsin Poland China Breeders' Association, and Andrew W. Hopkins, Madison, the Wisconsin Live Stock Breeders' Association.

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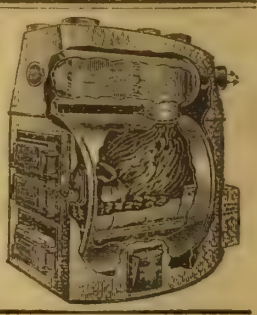

RIVER FALLS STOCK SHOW.

Co-operation and the "Get-Together" Spirit Have Made This Show, Started Four Years Ago, One of the Important Annual Events of Wisconsin—By W. S. Welles, Director Agriculture at State Normal School.

PARTIAL VIEW OF "COW ALLEY" WITH THE RIVER FALLS NORMAL SCHOOL IN THE BACKGROUND.

FOUR years ago June 12th the state normal school at River Falls, Wisconsin, through its school of educational agriculture, held the first community stock show in this part of the state. This movement began as an offset to the annual crop show and farmers' institute which was held regularly in the late fall. It was not quite enough to be showing corn and oats and clover in the fall. We needed an outlet of the same kind in the matter of stock and the spring was apparently the natural time for a stock show as against the crop show.

Two dozen or more cards were mailed to business men and farmers of the community calling a meeting at the town hall to plan a stock exhibit. A good number responded and a permanent organization known as the Crop and Stock Improvement Association of River Falls was formed. The same chairman has been re-elected each year, and it has been the writer's good fortune to be thus associated with it through the four years.

The exhibits have grown in size and in quality each year. This year there were more than 100 fine animals on the grounds. They were scattered among the classes as shown by the premium list. There were two or three animals that were not pure bred. The keenest interest is shown in these shows. Farmers bring in stock from points eleven miles distant, over all sorts of roads. The prizes have been ribbons only until this year, when cash prizes of $3, $2 and $1 were given.

The judges are the best that Wisconsin, Minnesota and Iowa can furnish. This year Prof. J. F. Tormey, of Wisconsin, and Mr. W. S. Moscrip, professors in the agricultural school. The judging of stock comes as a sort of finish to the stock work of the school year.

The expenses of the stock show are met by free will offering of the men of the community. We do not have a dollar the day before the stock is shown, but the evening of that day finds every dollar needed for expense in the hands of the treasurer of the association. The spirit of co-operation in town and country is fine. The judges are asked to explain the reasons for their placings and the illustrations show how keen the listeners are to get it all.

The students in the school of agriculture (a picture of the building and a part of the enrollment are shown here) take the hard work part in conducting the show. The general management of it is in the hands of the extend the show another day. It is held on the athletic field and farmstead of the normal farm.

This year we were exceedingly fortunate in having as our guest of honor Gov. Emanuel L. Philipp, of Wisconsin. Governor Philipp gave a short talk and a large number of farmers and townspeople had a chance to meet him during his all-day stay on the grounds. He spoke to the assembled normal school at the general exercises. The commercial club of River Falls invited the governor and leading men from surrounding towns to remain for a banquet in the evening. Over 200 plates were laid. Governor Philipp spoke at some length on state educational and political matters and somewhat upon national politics. He took us quite generously into his confidence and we enjoyed his intimate personal view of matters.

His remarks were largely reminiscent of the economic history of the state and in a happy vein. He reminded those present that in the seventies and eighties, although Wisconsin farmers were an industrious lot, they did not prosper, the prices of their products being low. Butter frequently sold as low as 5 cents a pound. It did not rise until one of the railroad companies provided special facilities for shipping it to eastern markets. This was the first step. Then the university developed the science of dairying. Co-operation, between capital, science and labor were required to bring dairying to its present successful stage in Wisconsin.

Governor Philipp on left and W. S. Welles, manager of show, on right.

The entry of draft horses was splendid, Norman Percherons largely predominating. Only one or two drivers and other roadsters were to be judge from every part of the grounds and in gratifying numbers and quality. It caused us to believe that the automobile hadn't as yet entirely eliminated the horse from our midst.

In the cattle divisions the sweepstakes were as follows:

SWEEPSTAKES, DAIRY BREEDS.

Best Cow, 3 Years or Older—H. A. Lowe (Holstein).

Best Heifer, 2 Years Old—1st D. E. Flower (Holstein).

Best Bull Calf, 4 to 8 Months Old—1st D. E. Flower (Holstein).

Best Heifer, 1 Year Old—1st F. D. Pierce & Son (Jersey).

Bull, 3 Years or Older—1st F. D. Pierce (Jersey).

Grand Champion Bull—1st John Chapman (Holstein).

SWEEPSTAKES, BEEF BREEDS.

Best Bull, 1 Year or Older—1st W. H. Scruton.

Best Cow, 1 Year or Older—1st W. H. Scruton.

Holstein, Jersey and Short-horn cattle were well represented. The Guernseys did not appear in numbers commensurate with the popularity of that breed in this locality.

Great credit is due our bankers, merchants, farmers, school men and students for the smooth running of the show. Farmers have said since that this was the most successful year so far and the quality of exhibits has steadily improved.

[Editor's Note.—It is gratifying to note that the state institutions are remembering the farmer and the importance of agriculture and live stock as industries of this great state. Every year the practical side of "learnin'" is being more fully emphasized and The Wisconsin Farmer wishes to congratulate the River Falls Normal on the success of the work herein outlined.]

HOLSTEINS IN THE JUDGING RING AT THE RIVER FALLS SHOW.

DOWN TO BUSINESS IN HORSE JUDGING AT THE STOCK SHOW.

GOVERNOR PHILIPP ADDRESSING THE CROWD OF 600 PERSONS.

Sweepstakes Short-horn bull, owned by W. H. Scruton, of Beldenville.

Young Jersey cow owned by F. D. Pierce, of River Falls.

First-prize Holstein bull owned by John Chapman, of River Falls.

Prize-winning stallion owned by Walter Glass, of River Falls.

SOME SPLENDID TYPES OF ANIMALS AT THE RIVER FALLS (PIERCE COUNTY) STOCK SHOW.

of Lake Elmo, Minnesota, were the judges. Great improvement has been shown in the stock of the community since these shows began, for they are total expense this year is about $300. The normal school bears part of it.

The show lasts for one day. This year a strong movement is on foot to seen at any time in the stalls. But when the call came for judging them matched teams and single buggy horses rallied in array before the

Address to Guernsey Breeders.

The Following Address Was Delivered by Pres. S. L. Dudley at La Crosse County Breeders' Meeting at West Salem, June 10

THE object of this association is to promote the breeding and improvement of high-grade and pure-bred Guernsey cattle in La Crosse county and to aid its members in buying and selling first-class animals.

Co-operation will do wonders for us in selling and buying cattle. We can all see why this is true, but I do not think we realize to a sufficiently great extent the need of good, constructive breeding. It is only by careful breeding that we will be able to improve our herds to such an extent that we can compete with other localities and bring up our profits to what they should be. This is the only way we can make this country a market place for high-class animals.

What is constructive breeding? Constructive breeding is the mating of animals whose offspring will be better than the parents mating, the result of which will be a progression and not a retrogression. We can't do this by using a scrub bull, a grade bull or an inferior pure-bred bull. Very few use scrub bulls now, but too many farmers are using grades or inferior pure breds. Why shouldn't we use a good grade bull or an inferior pure bred? Simply because they have no fixed traits, or, if they do happen to prove a benefit, are able to do so because they are exceptions. It takes generations to fix a trait in an animal. You may get some excellent animals from a grade bull, but at the same time you will get many very mediocre animals. There are many factors that enter into the background or ancestry of an animal. A grade cow may be a wonderful producer at the pail and yet not have a single heifer that approaches her ability of production simply because this milk yield factor was not fixed. Why should we expect a bull from such a cow to be prepotent? I am not saying he won't be, but the trouble is he may not be. Experiment stations tell us that milk yield is Mendelian, that is, high yielders produce offspring that become either high or medium yielders. Dams that are low yielders produce offspring that are high. Low and medium yielders and the proportion of each varies, dependent upon the number of crosses preceding whereby this trait has become more or less fixed.

We can easily see from this law of heredity that offspring from grades whose traits have not become fixed are pretty much of a gamble and offspring from pure breds would also be a gamble were it not for other factors, which I shall mention presently, which guide us in the choice of mates.

So I say it is up to us to use pure-bred sires and good pure-bred sires. How are we to choose a good sire? These are the factors that enter into our choice of mates which take away most of the gamble. First, by his ancestry. His dam should be a good producer—with an official record if possible—for they tell us the characteristics of the dam rather than those of the sire are stamped upon the son. Second, by the individual's temperament and constitution as shown by his wide muzzle, lean face and full jaw, his masculine neck and well-sprung ribs, a large and deep barrel and long, wide rump. His hide should be thin, loose and pliable and the hair fine. He should have good size for his age.

They say that the prepotency of a bull can be estimated from the work of his dam, grandam and sisters. I'm not so sure of this, but if the bull has offspring old enough to produce milk we have a sure proof of the worth of a bull and so the third factor is prepotency. This is the most important factor and should bear more weight in your selection.

We have an advanced registry for bulls and cows, but I believe that the requirements for entry for a bull should mean 50 per cent more to us than the milk record of a cow. If a bull has a female offspring that fulfills the requirements of the A. R., why he is eligible to A. R.? The difference is just this: The bull is selected for the quality of his offspring, while the selection of a cow is based upon the performance of the individual alone.

Dr. C. B. Davenport, of Long Island, says, "The adoption of the method of selecting sires on the basis of quality as breeders is the principal cause for the advance in milk productions." Such bulls cost money, of course, but how much is such a bull worth? "A bull is half the herd." Now it is our herds we wish to improve. Every individual in the herd has to be fed and cared for. Each animal either pays a profit or is a loss. We are more interested in having a herd that averages 350 to 400 pounds of butter fat than to have one cow produce 900 pounds of butter fat and the rest average 200 to 250 pounds butter fat.

Now, if you have a bull who, because of his dam's record, or the quality of his get, or because of his proven prepotency will increase the average yield of your herd of twenty cows from 300 to 320 pounds of butter fat, what is he worth? At the end of four years with reasonable luck, you will have replaced your twenty cows with heifers sired by this bull. At the end of ten years, after allowing for all risks, will have amounted to 2,800 pounds, which at 33 cents per pound is $124. Besides this, the stock sold would have been worth more, so that your increased income for ten years, figuring very conservatively, would be at least $1,200—all credited to this bull. Call this bull worth $500. You paid that for him. You used him two years and sold him at the yards for $70. Figure interest on your investment at 6 per cent for ten years and your total cost is $766, leaving a balance of $434 in favor of your $500 bull. Of course, this bull should not have been sold for beef and in that case your balance would be much larger.

The trouble is we are afraid to pay enough for our bulls. We must have good bulls and good bulls cost money. The man who will improve his herd, raise his average yield per cow from 300 to 350 pounds or 350 to 400, as the case might be, is a greater breeder than the man who has one record of 1,000 pounds of butter fat and the rest of the herd just fair. The man who stakes nothing makes little or no progress. The man who sees into the future and has as a goal a herd averaging 450 pounds of butter fat will soon be working for a 500-pound average.

"I have been using a pure-bred Guernsey bull in my herd for eleven years," writes L. E. Gordon, Jr., of Nelsonville, Wisconsin. He says further:

"The following is the average record of my cows in 1915, which were of no particular breed but just cows and of my grade Guernseys in the testing association in 1914 and 1915, which are descended from the cows whose records are from 1915:

	Lbs. milk	Per cent fat	Lbs. B. fat
"Just cows," 1915....	5,844	4.07	238
Their descendants grade Guernseys, 1914-1915	6,876	5.46	376

"Three of these grades (which are all the grades I have left in my herd) averaged last year 410 pounds of butter fat."

Let our slogan be "A pure-bred Guernsey bull on every farm in the county," but let's be sure that every one of these bulls is a rattling good one.

Annually the La Crosse County Guernsey Breeders get together for an exchange of ideas and a day of real enjoyment is always had. This year their annual picnic was held on the high school grounds at West Salem. While the rush of work caused by rainy weather kept some farmers and breeders at home, a good crowd was present. The West Salem Military Band furnished the music and it was a real treat, as this is the best band in western Wisconsin. After everyone had done justice to a good dinner the following program was listened to with interest:

"The Future of Our Association"—Pres. S. L. Dudley.
"Better Dairying"—Prof. G. C. Humphrey.
Impromptu talks from breeders and visitors.
Music—Band.
Address "Citizenship"—John F. Doherty.
Music—Band.

Mr. Doherty, speaking on "Citizenship," made a stirring appeal for patriotism and undivided loyalty to the nation.

Waukesha County Guernsey Breeders' Sale.

In spite of the heavy downpour on June 7th, which lasted practicallly all day, the attendance at the Guernsey sale was very gratifying. The sale too was a success, an average of $260 being obtained, but there is no doubt that had the weather been more pleasant that a higher average would have been made. The top price was $505, while several others sold from $400 to $495. Gustave Pabst was a liberal buyer, taking many of the nice animals in the sale. Connell Brothers, Colgate, Wis., made an addition to their herd. Barian Farms, Byron, Ill., owned by Medill McCormick, purchased several head. Dr. R. J. Palmer, Detroit, Mich., was a heavy buyer. Other buyers from Indiana, Illinois and Iowa took home a few head each, while Wisconsin buyers from all parts of the state enriched their herds with a few. A detailed list of the sales is given below:

FEMALES.

Empress of Riverdale, Aug. 25, 1914; Dr. R. J. Palmer, Detroit, Mich...$295
Princess Utopia, Aug. 8, 1913; Tom F. Bitts, Eagle, Wis. 225
McKerrow Raymond's Daughter, Jan. 21, 1915; Barian Farms, Byron, Ill. 200
Vera Cruz, Nov. 23, 1914; Sinnissippi Farms, Oregon, Ill. 240
Fantine of Sarnia, Sept. 19, 1915; W. H. Steele, Pewaukee, Wis. 165
Alecia, June 18, 1908; White Oak Stock Farm, Colgate, Wis. 225
Nancy Lee of Evergreen Place, June 12, 1915; Barian Farms 185
Goldy Guernsey Roberta, Aug. 8, 1910; A. W. Lawrence, Sturgeon Bay, Wis. 825
Dousman's Belle, Jully 15, 1915; Jno. M. Norvicki, Jr., Mauston, Wis... 125
Meridan's Daisy, Nov. 25, 1915; Hugo H. Grovert, Newhall, Ia.... 185
Fairfield Lady, July 20, 1914; Nels Nelson, Bloomer, Wis. 300
Francesca of Sarnia, May 2, 1915; Barian Farms 250
Queen Marie of Harriton, May 9, 1913; Dr. R. J. Palmer..... 300
Stella's Beauty of Maple Heights, Jan. 19, 1915; S. S. Telger, Ft. Atkinson, Wis. 255
Stella Beauty, Mar. 20, 1912; A. W. Lawrence 270
Jewel of Elder Lawn, July 17, 1914; Barian Farms 250
Hedge Lawn's Patricia, Oct. 18, 1914; Barian Farms 250
Lady Juliette, July 4, 1912; Gustave Pabst, Dousman, Wis. 305
Adeline of Sarnia, Nov. 10, 1910; W. E. Fisher, Wauwatosa, Wis. 315
Vera of Sunny Side, March 1, 1913; John Van Hesche, South Bend, Ind. 210
Buttercup's Beauty of Tillybardin, Sept. 13, 1914; H. R. Wisch & Son, Jefferson, Wis. 355
Substitute for No. 32..... 505
Village Highland Girl, March 26, 1913; Dr. R. J. Palmer..... 300
Sequel's Aurea of Denmark, Oct. 19,1912; Gustave Pabst 310
Kosher of Glyndwr, Aug. 3, 1910; Moulton B. Goff, Sturgeon Bay, Wis. 325
Bright Eyes of Sunny Side, Nov. 25, 1913; Geo. A. Stiviruis, Fennimore, Wis. 240
Lady Twinkle, Aug. 27, 1911; C. J. & W. A. Connell, Menomonee Falls, Wis. 305
Daisy Jones, Jan. 18, 1906; H. G. Maxham, Reedsburg, Wis. 290
Daisy of Willowdale, May 28, 1905; W. A. & R. E. Freehoff, Waukesha, Wis. 265
Alecia's Queen, Oct., 23, 1910; Gustave Pabst 240
Vega Talladeen of Iron Springs, July 25, 1912; Samuel Siewert, Colgate, Wis. 400
Cissy of Knollwood, Jan. 1, 1913; Dr. R. J. Palmer..... 265
Adelaide Walter May Rose of Walter Maple, Feb. 19, 1914; W. A. & R. E. Freehoff 285
Princess Mary of Maple Heights, Oct. 6, 1914; W. J. Heid, Ft. Atkinson, Wis. 200
Ellis Moline of Spring City, Sept. 10, 1910; Geo. A. Stivarins..... 215
Imp. Hartfield Rose of the Couture 3d, July 26, 1906; R. W. Lawrence 425
Simple Sue, March 31, 1910; Edw. A. Walter, Walworth, Wis. 290
Berceuse, Aug. 27, 1912; Gustave Pabst 350
Ellen of Evergreen Place, Oct. 15, 1914; Gustave Pabst 260
Imp. Albinia 6th, calved Nov. 29, 1908; Gustave Pabst 280
Carolina's Minnehaha, March 13, 1912; Nels Nelson 200
Glenwood's Minerva, calved Feb. 25, 1913; C. J. & W. A. Connell..... 800
Princess Dewdrop, Jan 6, 1914; Gustave Pabst 300
Imp. Westmoreland Pretty Maid, July 17, 1912; Ralph Tratt, Whitewater, Wis. 265
Tulita Martin, April 6, 1913; W. H. Jones, Lincoln, Ill. 300
Matin Belle 2d, Oct. 29, 1908; Hugo H. Grovert, Newhall, Ia..... 495
Pride of Pauline's Wood, May 29, 1911; Gustave Pabst 270
Yeka of Evergreen Place, June 12, 1915; John M. Norvicks, Jr..... 200
Victoria Jewel of Thorn Hill, Mar. 6, 1916; Edw. A. Walter 200
Tea Rose of Harriton, Aug. 20, 1912; Dr. R. J. Palmer 325
Matinee Girl 2d, June 26, 1913; F. W. Henderson, Whitewater, Wis. 300
Emma's Beauty, Nov. 7, 1914; Tom F. Bitts 200
Imp. Minnie of Sarnia, Feb. 21, 1910; W. A. & R. E. Freehoff..... 235
Golden Glow of Elderwood, Aug. 20, 1915; Barian Farms 165
Westmoreland Queen, April 9, 1913; C. R. Gilman, Waukesha, Wis... 220
Imp. Ballet of Sarnia, July 10, 1911; M. S. Kellogg, Janesville, Wis... 385
Dorinda Lily of Sunnyside, July 23, 1915; Owen W. Rowland, Waukesha, Wis. 165
Raymond's Juliana, Nov. 1, 1911; W. E. Fisher, Wauwatosa, Wis..... 290
Hero's Princess of Hawthorn, July 25, 1915; Albert Olson, Almond, Wis. 180
Isabinda's Ida, July 8, 1914; W. H. Erb & Sons, Centerdale, Iowa.... 250
Washington Lady, Feb. 22, 1914; W. M. Jones, Waukesha, Wis. 255
Castor's Valeria, Feb. 9, 1912; Wm. M. Jones 340

BULLS.

Masher's Boy of Sunnyside, July 20,1915; John M. Norvicki, Jr..... 140
Bud Elder of Elderwood, March 16, 1915; Geo. Pincock, Mukwonago, Wis. 85
Jewel's Royal Hero, Nov. 14, 1914; Oakland Guernsey Farm, Mukwonago, Wis. 100
Robiana's Glenwood, May 11, 1912; Sinnissippi Farm 105
Zenita's Harvest King, July 28, 1915; Geo. Mattis, Kiel, Wis..... 160
Sunny Jim of Maple Heights, Oct. 4, 1915; F. W. Henderson, Whitewater, Wis. 105
Nancy's King of the May, Nov. 23, 1913; Barian Farm 210
Sponsor of Pauline's Wood, June 12, 1915; Art A. Glacke, Weyauwega, Wis. 90
Imp. Prince of Sarnia, Jan. 28, 1907; Moulton Goff 275
Lassie's Patrick, June 1, 1915; Henry Freehoff, La Crosse, Wis. 85
William of Broad Ripple, Aug. 26, 1915; Key Windt, East Troy, Wis. 65
Park's Prince of Lima, Feb. 18, 1914; H. J. Duecker, Kiel, Wis..... 135
Pat of Maple Heights, July 20, 1915; Jno. Williams, Waukesha, Wis... 100

Ponies Given Free to Boys and Girls.

IN an advertisement on page 24, the Pony King has a message for every boy and girl. Several of the finest Shetland ponies obtainable will be given away to some of the boys and girls who send their names to the Pony King. A great many ponies have already been given away, and pictures of some of them are shown in the advertisement. Parents should show this offer to their children, so that they may have a chance to get one of these beautiful ponies. All that is necessary is to send the coupon, clipped from the advertisement and properly filled in, to The Pony King, Webb Building, St. Paul, Minn.—Adv.

The Beaver Storm-Proof Silo

STANDS like an oak. Our eight cross rod anchor system and double angle iron inner hoops, top and bottom, together with self-adjusting hoops, make our silo non-collapsible when not in use.

For the past ten years thousands of satisfied farmers have been using the Beaver Silo. Now why aren't you? Write for circular "F."

BEAVER SILO & BOX MFG. CO. Inc.,
BEAVER DAM, WISCONSIN

90 DAY HOT WEATHER OFFER
Combination Pumping Outfit $44.95

Save time—save money—save strength! Don't toil and sweat this hot weather pumping by hand. Don't depend on a windmill! Let this Galloway outfit keep your stock always supplied with fresh water. It's simple and easy to set up, and anyone can operate it. Outfit consists of 2 1-4 H. P. engine, heavy double geared pump-jack with tight and loose pulley and 16 ft. of belt.

WATER COOLED—WON'T HEAT—WON'T FREEZE

Will run all day in any weather. Economical on fuel. Can be used for running churn, washer, separators, saws, feed grinders and other job work.

Special 90-day price of complete outfit only $44.95. Regular price $47.19. Buy now and save $2.24 over our regular price and $10 to $15 over prices of other outfits. Installment price $52.50. Installment orders shipped on receipt of $5.25; balance $5.25 monthly.

This Low Cash Price For 90 Days Only—Order Today—We Take All Risk Order this outfit today and try it 30 days. We return your money and pay freight both ways if not satisfied. Quick shipments. Don't bother to write. Just clip this ad. and pin it to your check or money order and mail to us.

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SPECIFICATIONS
ENGINE SPEED 450 rev. per min. BORE 4 1-8 in. STROKE 5 in. DRIVE PULLEY 6 in. diameter, 4 in. face. Floor space 26x28 in. Wt. 525 lbs. Add $6 for engine mounted on trucks; $7 for Webstar Oscillating magneto.

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35 Galloway Station
Waterloo, Iowa.

Shipped from Waterloo, K. C., Co. Bluffs, St. P., Chicago

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TO get wider distribution for the most practical and economical Canning Outfits made and start 1000 people in a money-making business, we will, for a limited time only, sell any of our Canners—family, community or factory size—AT ONE HALF REGULAR PRICES.

Instantaneous sterilizer, self-heating can sealing device and other exclusive patented features INSURE SUCCESS. Endorsed by U. S. Govt. No experience needed. You make big profits—cut down family expenses. To get in on this special HALF PRICE OFFER, WRITE US QUICK.

Home Canner Co.,
F Street Alexandria, Minn.

Small Grains and Grasses Are Doing Well.

Meadows and Pastures Are Above Normal---Cereals Will Make Good Crop---Corn and Potatoes Are Below Average.

Barron County.—Wet weather has delayed corn and potato planting. Some potato planting must be done yet and some corn must be replanted. Winter grain is looking fine. Clover is the best it has been for years. Spring grain is backward—a little yellow, also, from too much rain. Field peas are looking very good, but they are later than usual. Sugar beets were late in being planted, but are coming up now. —Wm. Bartlett.

Bayfield County.—Weather has been quite cool until the last week, with plenty of rain. Small grain is doing fine. Corn was late in being planted, but will make good silage. Gardens are growing rapidly and the prospects for potatoes are good. Fruit crop looks exceptionally good. Danger of frost is past and trees are full of bloom and healthy. Strawberries will make a bumper crop, if dry weather does not cut them short.—W. R. Moore.

Burnett County.—Clover will make a big crop. Meadows are doing their best. Timothy is slow on account of heavy rains, but will make a fair crop. Small grain of all kinds are very slow, because of the wet, cold spring. The warm weather of the last week is making the pastures look fine. Potato planting is delayed by wet weather; the acreage promises to exceed that of any previous year. Vegetable crops are slow.—A. G. Peterson.

Chippewa County.—Crops are looking well, with the exception of corn. Warm weather is helping the corn along, and prospects are still hopeful. Grains, hay and peas are doing fine. Early potatoes are up and look fine; most of the late potatoes are planted. The recent cold, wet weather held the young pigs back and killed some that were exposed. Pastures are good and cattle are doing fine. About 65 per cent of the small colts are being saved.—Jas. A. Smith.

Crawford County.—Small grain is doing well; wheat and rye are in blossom; early oats are heading out, but the straw will be short, as too much wet weather checked its growth. Hay is going to be a good crop. It is rather short yet, but is thick and heavy. Pastures are in good shape and grass is more plentiful than cattle. A very heavy rain on June 1st damaged the cornfields considerably. On prairie land which is sandy, about one-third of the corn was covered up so deeply that it will have to be replanted; on low ground it is too wet for corn to grow, and there will be little replanting because the season is getting too late; on hilly land some fields were washed down to the depth of plowing. Early potatoes are in bloom and late potatoes are nearly all planted. Fruit looks well. Vegetables are growing well, but not many are raised here.—George Ashbacher.

Dodge County.—Small grain, especially barley, has suffered from the excessive amount of rain. Corn seems to be growing fairly well, but is rather late. Grass in pastures and meadows is in good condition. Eearly potatoes are up, and a few of the late ones have been planted.—E. R. F.

Dunn County.—Season has been cold and wet. All crops, except corn, are excellent. It is a little too wet to work corn, but the corn crop depends a good deal on future conditions, which may bring it out all right. Pastures are good. Potatoes are coming up and look fine. Fruit prospects are still promising.—E. A. Finley.

Eau Claire County.—Oats and barley are not doing well on account of the great amount of rain; in low ground much of these crops are drowned out, and the rest looks yellow. Dry, warm weather would help this condition. Corn is at a standstill; planting is just finished and the ground is very weedy in places. Early potatoes are doing well, but late potatoes are not up yet. Pastures are short, but with warmer weather will improve. On old meadows the hay crop will not be large; the new seeding will be fair. Peas are growing well. Strawberries look well, but need sunshine.—C. A. Koll.

Grant County.—Small grain in this section looks exceptionally well, because of the cool, wet weather. Pasture and hay are also good. Corn looks like a failure because of so much replanting due to poor seed and bad weather. Potatoes promise to make a splendid crop. Garden truck is looking well. From appearances fruit will be good.—V. A.

Green Lake County.—Small grains look fairly well. Early planted corn has been suffering some from the effects of wet, cold weather. Early potatoes are backward. Cherries are poor; early varieties of apples bloomed poorly but the late varieties are doing better. —G. B. W.

Iron County.—Weather conditions are fine. Clover and new meadows are doing well. Potato planting is nearly finished. Pastures are in fine condition. Live stock are healthy.—J. A. Becker.

Oznukee County.—The small grain prospects are much better this year Cold, wet weather has not hurt the small grain and grass, but it has delayed the corn crop. About two-thirds of the farmers had to replant corn. It has been too cold and wet for potatoes also, which are just coming up.—Nic J. Mueller

Juneau County.—Pastures, small grain and meadows are making good growth. Ground is wet and heavy from abundant rains. Corn is backward and weedy, with a poor stand. On low, flat ground corn is not planted yet. Many potatoes that were planted have rotted and will have to be replanted. A heavy rain on June 1st did considerable damage.—J. H. McNown.

Kewaunee County.—Rye, oats and barley look fine. Hay is backward, but in good condition. Nearly half the corn is planted and some of it is up, but appears to be in poor condition. Some will have to be replanted. Early potatoes on heavy ground have been injured by abundant rains. Pastures are looking splendid. All indications point to a good apple crop.—Fred Lutz.

Polk County.—Weather is warmer and everything is growing rapidly. Corn has a good color and some is ready for cultivation. Small grains, especially oats, looks fine. Oats have a good color and are stooling well. Clover is just coming into bloom, and in most cases will make a heavy crop. Old meadows are not very good. Potatoes are just coming up. Gardens are later than usual, but look well. Fruit promises to be good. Pastures are fine and cows are doing well. Creameries are paying from 33 to 35 cents for butter fat.—Wallace Fountain.

Price County.—Weather is turning warm. Grain is doing fine. Corn is up and doing well, but a lot of low land must be replanted. Potatoes are backward, and the ground has been too wet for them. Hay meadows and pastures are doing extra well. A big hay crop is expected. Good cows are in demand, but prices are lower than a month ago. Farmers of this county have held more sales in 1916 than ever before. Small fruits are doing fine.—J. W. F.

Richland County.—Small grains and grasses are doing well. Corn is small that has come up; some farmers have plowed through their corn twice. Pastures are fine. Late potatoes are nearly all planted. A terrible rainstorm damaged the cornfields badly. Live stock are doing well; many veal calves are being sold.—E. C. Stewart.

Sauk County.—The long-continued cold spell is apparently broken, but the corn crop is about two weeks late. Many farmers have had to replant whole fields of corn. Potato planting has just been completed. Small grains, as oats, wheat, rye and barley are showing up in great shape. Pastures could not be better and meadows promise a very heavy hay crop, although in some fields clover was badly winterkilled. There will be few cherries or plums, but a light apple crop.—Richard F. Klemm.

Shawano County.—Crops are backward and wet weather has injured small grain. Clover, timothy and alfalfa look well. Weeds are getting a bad start on corn and potatoes because

(Concluded on page 21.)

Clear out that Stump and Boulder patch

ON even the best of farms there are uncultivated "bald patches" caused by old stumps, rocks, or a bit of swampy ground. There may be some on yours.

Under the methods formerly employed the expense of clearing such a patch seemed more than the land was worth. But every foot of unproductive land is costly to you—is worth clearing if the clearing can be done cheaply enough. It can be by means of

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There is no comparison between the cost of removing stumps and rocks, or running drainage ditches, by hand and horse power and doing the same work with Hercules Dynamite. The dynamite wins every time. It makes it possible for you to cultivate land that you have never counted on before.

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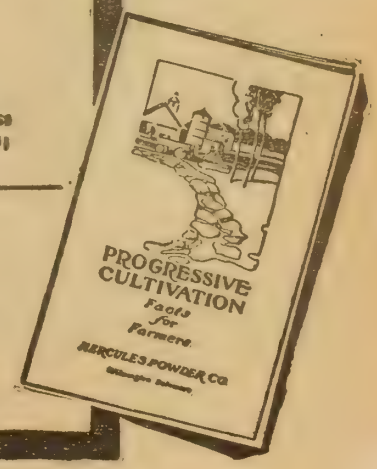


LIVE STOCK SCARCE IN GERMANY.

Second in the Series of War-Farming Articles Written Expressly For This Paper by Harry C. Evans, a Prominent Member of the Ford Peace Party.

THE manufacturing industries of Germany lie west of the Oder river; the richest agricultural districts are to the east of this river. One hundred years ago 80 per cent of the German population was engaged in farming. Now but 30 per cent is so engaged, and the annual decrease of the farming population the past few years has been about 50,000. The farmers are going into the industries and emigrating. There is a tremendous waste of labor occasioned by military service. Every able-bodied young man of Germany is compelled to serve in the army two years. Then he becomes a member of the reserve army, and must serve a short period each year in active military service for the next five years. The aggregated time lost by the German people in military service is of tremendous import, and this alone furnishes a substantial reason for manual labor on the part of the women. The German men do not seem to have a very high opinion of their women folk. I do not mean that they do not love them, or that they are not kind to them. They believe that woman's function is to bear children and to do manual labor. They believe that women have lost their true function if they are not "broad bosomed mothers of stalwart sons." I talked with four women who were at work in the fields with ox carts. They were about forty years old. Each of them had one or more sons in the army. Two of the women were unmarried.

There are long stretches of flat country. Many of the farmers are living in villages, where the low, red-roofed houses cluster together. Some of the farmhouses are of brick and some of timber, and many have thatched roofs. In the preparation of the soil for the crop in this flat land arrangements are made both against drouth and flood. The land is gridironed with numerous small ditches. The water drains into the ditches, and in wet seasons the sluiceways are opened and the water drains off. If it is a dry season the sluiceways are closed and what water falls is retained. In some places the ditches are used for irrigation.

The rolling ground on the hills is arranged to hold the water. A number of saucer-shaped holes are made in the hillsides, and these hold the water against drouth. This same arrangement maintains in reforestation. Ditches are dug through the newly-planted forests and holes are made in the side hills where young trees have been planted. Thus the rain that falls is held and the young roots are watered. The young trees are pruned and often the ground is cultivated. The Germans lead the world in reforestation and rapid growth of young forests.

So it is that by shaping the surface of the earth to meet every condition of weather, by careful selection of seed, by heavy fertilization, rotation of crops and chemical treatment, Germany is practically sure of a crop.

Live stock has become scarce in Germany since the war began. Four times I crossed the empire from north to south and I did not see a hog or a sheep, and but two small herds of cattle. In Austria the only meat served in the hotels is goat meat. The live stock of Germany, however, has been taken over by the government, and what is left of it is now herded in the low lands and in the neighborhood of the trenches to feed the soldiers. There was four times as much stock killed in the municipal abattoirs last year as in ordinary years. Much of it was canned or tinned for use by the soldiers. That there was no live stock in that part of Germany which I passed through was further proven by the fact that there was no fodder. I did not see a stack of hay or a shock of fodder, and the pasture lands are being broken up and planted in cereals.

I have never seen better looking farms than I saw in Germany. There are no fence corners or outlying places overgrown with weeds. Practically all swamp lands have been reclaimed. I saw but one swamp, in which reeds were growing, and these had been cut and shocked. There is no litter or fallen timber or brush lying about the farms, as there is on the farms in our country. If a tree is cut down every particle of it is saved. The wood is carefully corded, the chips are gathered and the twigs to the smallest tip are gathered and bound. The bottom lands do not overflow, for the creeks have been straightened, and in some places the rivers diked.

Women were in the fields with ox carts scattering fertilization. The fertilization from the cities and towns is gathered and moved out into the country. Every cow has a fixed valuation as a fertilizer. If a tenant or a laborer on a farm owns a cow he is given credit by the owner of the land for a stated sum for fertilization. Then there is much artificial manure. There is an abundant supply of potash in Germany. On the poorer lands of Prussia 1,000 pounds of potash is used annually for every acre. On the better lands of Bavaria 100 pounds is used annually per acre. The farmer has the constant assistance of the chemists and experts from the great German universities, and the farmer himself is taught to conserve his land, the relation of seed to soil, and all things else that tend to make the soil produce abundantly. The farmer gives more thought and more time to the conservation and care of his lands than he does to the rearing of his children.

There are many castes and classes in Germany. There is the official caste of the empire, and there are so many departments of public life and activity that the grades of officialdom are numerous. Many of the farmers and farmers' sons are found in this official class, for the officials of Germany are largely drawn from the Agrarians. The wealthy farm owners form a class all their own, and are ranked just below the official class. Then come the poorer landowners; that is, those who own small parcels, and below these the tenant and the farm laborer. The peasant loves his pipe and beer, and his chief pleasure is dancing. The peasant boys and girls will trudge for miles to the village, dressed in medieval costumes. The boys wear scarlet breeches, long black velvet coats and three-cornered hats. The girls are decked in gay-colored skirts and mushroomed hats. In the villages they meet their neighbors and hold high carnival in dancing, shooting and other sports.

The small farmers live, as a rule, in low houses, some of them thatched, some with straw and some with shingled roofs. The thatched roofs are darkened with age and have drooping eaves, outside staircases and balconies. The cattle are sheltered in the basement or ground floor, the family in the upper floor, and grain is stored in the attic. The thatched and straw-covered roofs are giving way to slate roofs on account of danger of fire. On large estates the laborers live in long barracks, where families herd like rabbits in a warren. The whole family has to sleep, eat, wash and cook in one room. The furnishings of most of the rooms are very meager. I was told of a woman sixty-five years old in a village in Bavaria, who was a milkmaid or stablemaid. Her "home" consisted of a wide plank in an upper story of a stable, swung by ropes from the roof. On this was a straw mattress, and here she had slept most of her life. Her small belongings were in a chest that stood in the garret. The family she had so faithfully served for so many years allowed her the actual necessities of life and paid her less than 50 cents a week.

In the country near the Vistula river, which is in the extreme eastern part of Prussia, corn is still ground with a stone hand mill, and they bake their bread in the open air in parish baking houses. The men fish on the river in canoes hollowed out of tree trunks. So we find that in parts of Germany there has been little progress, and the people still practice medieval habits and customs. The reader may be astonished to learn this, yet if I were to describe some of the things I have seen in the slums of Chicago and New York City, the picture would be much blacker than could be painted of Germany.

It must be remembered that the soil of much of Germany is ungenerous and the climate severe. People of the northeastern part of Prussia have ever had a hard fight for subsistence. They have to endure the extreme of heat and cold as bad as that of central Russia. There is no black soil. It is mostly sand, and life has ever been a hard battle. Here now, however, they are raising immense quantities of sugar beets. In the southern part of Germany, in Baden and Bavaria, the soil is very rich. Here the farm holdings are small and the products are largely grapes, fruit and tobacco. From Frankfort on the Main south to the Swiss line, some 200 miles, the earth is a veritable garden and grape vineyard. The fields are turned up into beds very much the same as we arrange our gardens. The bed will

In order to secure the necessary food supply, public parks in Germany are being cultivated as gardens by the school children. The above picture was brought back from Prussia by Mr. Evans, who was one of the leaders of the party taken to Europe by Henry Ford in the hope of restoring peace. Mr. Evans' first article appeared last week under the title "War-Time Farming in Germany." The third article of the series will appear next week and will deal with the English soldier's yearning for the land which he is fighting to save.

run clear across a field of forty acres, and will not be over thirty feet wide. As we neared the Swiss frontier we saw the wonderful terraced grape vineyards. We were traveling along the historic river Rhine, a river along whose banks men have fought for centuries. The valley of the Rhine is not wide here, but the hills are very high, and they have been so leveled and fashioned that practically every foot is utilized in the vineyards. One vineyard will rest ten or more feet above another, and the line between them is perpendicular. They look like great pyramids. There are thousands and thousands of acres here given over to grape growing. In these vineyards we saw women and boys clearing up the ground with baskets in their hands. They would pick up every leaf and stick, and were pruning all the dead limbs and resticking the vines.

The study of farm life in Germany just now when Germany has her back to the wall fighting the world is intensely interesting. The women are calm and self-possessed, and one had to look twice into their faces to understand the deep sorrow that is theirs. They go about everywhere in the same way they did when their husbands and sons were by their sides, except they feel that a greater responsibility than they have ever known before is upon them. Theirs it is to feed their loved ones who are on the fighting line, and with shoulders squared and with backs bent they go about the drudgery of the farm, demanding from the earth the very limit of its yield that their loved ones may be sustained. It is believed that this new responsibility which has come upon the German women, and which they have so splendidly met, will raise them a litle higher in the social sunlight, and that in the future they may take their place by the side of their men in social, civic and public life. They have too long held their places by the side of their men in manual labor only.

UPPER WISCONSIN

Successful Farm Once a Logging Camp.

There are many examples of how the thousands of acres of cut-over lands in Wisconsin can be turned into profitable farms, but there are few, if any, examples more striking than on Tamarack farm, a few miles from Rhinelander, Oneida county. This farm, once a logging camp and in the heart of the timber belt, is being developed by its owners, Brown Bros., of Rhinelander, with Charles Kugel as farm foreman.

CHAS. KUGEL WAIST HIGH IN OATS ON TAMARACK FARM.

Tamarack farm first sprung into prominence in Upper Wisconsin as the home of the high-producing Guernsey cow, Oneida Bess. It has often been said that the Babcock test discovered Oneida Bess and that her praises as one of the high-producing Guernseys would never have been sung except for a short course which Mr. Kugel attended and at which he was fired with the enthusiasm of seeing what the cows on Tamarack farm were doing for their owners. It was at this short course that Mr. Kugel first learned of the Babcock test and when he began the test to determine which cows were his "boarders" he found that one of his cows, since named Oneida Bess, produced 10,000 pounds of milk, testing 5.5, the equivalent of 550 pounds of butter fat. She had been a member of Tamarack herd for some time. All knew she was a good producer, but none realized her true value until the test was applied. The test has been continually in use on the farm since that time and Oneida Bess has continued her performance, at nine years old producing in excess of 700 pounds of fat. There are now on this farm thirty-six Guernseys, all grades. Twelve of these cows have a test record of more than 400 pounds of fat and Mr. Kugel informed the writer that there was not a mature cow on the farm last winter which could not make the advanced registry if she was pure bred.

A FEW OF THE HIGH-PRODUCING GUERNSEY GRADES ON TAMARACK FARM.

The writer visited Tamarack farm in company with Mr. W. D. Juday, county agricultural representative of Oneida county. It was a pleasure to stop at such a farm, located as it is ten miles from the county seat and in the heart of the timber section. Gradually the acreage is being enlarged by clearing operations each winter, from thirty to forty acres being made each year for the plow. The work is being carried on just as thousands of settlers are clearing land today in Upper Wisconsin. Mr. Kugel, after eight years of service as foreman, has reason to feel gratified at the results obtained and the success which the farm is making, especially in a country noted principally for years for lumbering and logging.

The farm started as a logging camp. Where the buildings now stand the lumberjacks once pitched their camps. As the timber was taken out the owners decided to turn to farming with the result that Tamarack farm became a reality. The country is very rolling with considerable timber remaining and on every hand there are charred stumps that must be cleared before the plow can follow. However, about these stumps cattle are pastured when the second growth timber has been removed. The farmhouse and barns are situated on the north shore of a beautiful lake which makes it an ideal location in the summer. In the logging days the lumberjacks cleared just enough land to grow timothy for the stock in the camps with the result that when it was decided to start the farm the soil was fertile and had not been cropped out.

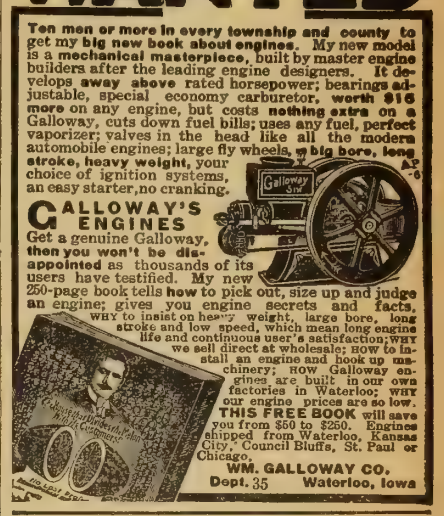
Mr. Kugel has had splendid success with his dairy herd, as noted above, despite the handicap of sending the milk ten miles to Rhinelander. But with grain crops he has also had good results, which proves the crop value of this cut-over soil when cleared and made ready for the plow. The 1915 corn failure, Mr. Kugel told the writer, was the first he had had in the seven summers that he has been at Tamarack, but what was lost in corn was more than made up in oats.

Oats yielded an average of sixty-four and one-half bushels per acre for a total of thirty-two acres, some of the manured fields yielding as high as eighty-five bushels of oats per acre. There are 140 acres under cultivation and in addition to thirty-two acres in oats Mr. Kugel had thirty acres in corn last season, seventeen acres in potatoes, twenty-three acres in clover and four acres in alfalfa. Potatoes are one of the principal cash crops of this county and the yield on Tamarack farm was up to the county's standard. Nothing but pedigree oats was grown last year with the result that when the writer visited the farm Mr. Kugel had 1,000 bushels of splendid seed.

The barn is 36x108 and has room for sixty head of cows and young stock. The loft will hold 150 tons of hay in addition to oats and other small grains, and, although not a rich man's barn, it is comfortable, well lighted and ventilated and typical of the good barns to be found in Upper Wisconsin.

Wisconsin Hemp Crop.

Hemp is becoming one of the favorite crops with farmers in Dodge and Green Lake counties. This year, according to observations made by a representative of the United States Department of Agriculture, about 1,200 acres have been planted to this crop and principally on farms near Waupun and Brandon. This is an appreciable increase over last year. Growers claim a larger acreage would have been planted this season had seed been obtainable in larger quantities at reasonable prices. Conditions in this state favor the growth of hemp, but it cannot be grown to advantage on poor soils. The Indo-China variety, grown in large quantities in Kentucky, is by far the most suitable. An association of hemp growers has been formed in Wisconsin, and they have purchased a new machine for the "breaking" of the crop. By combining the crop grown in central Wisconsin and offering it for sale in a solid block of guaranteed quality it has been possible to greatly increase the market price.



Demonstration at Indian Farm.

The Indian school farm located near Tomah is to be used officially this season in demonstrational and experimental work. Through co-operative relations with the University of Wisconsin, experiments dealing with local farm problems have been started and field demonstrations will be made this summer. To compare results in smut eradication, oats were sown this spring in both the treated and untreated form. Tested and untested corn was planted in special plots to be used for demonstration purposes. Special attention is also being given to the culture of alfalfa and pedigree grains. Everything possible will be done to accomplish a twofold purpose—that of educating the young Indians in modern farming and aiding other farmers in that section in the improvement of their soils.

LAW QUESTIONS.

Owner Liable for Taxes.

A Subscriber, New Richmond, Wis.—A hired a team of horses from B, to work from the spring work season until November 1st and then deliver the team back to B, the owner. Who is legally required to pay taxes on the team, A or B?

Answer.—B.

Borrowed Horse—Damages.

A Wisconsin Subscriber.—A bought a horse from B and gave B his note drawing 7 per cent interest for the price, and a mortgage to secure the note. He then allowed B to keep the horse and work it without charge against B for its work. While working the horse B lamed it and otherwise injured it. Can A recover damages from B for so injuring the horse?

Answer.—A can recover a judgment for damages against B for the injuries to the horse. The law requires the borrower of an animal for work to take extra care of it when he pays nothing for its work and he is liable for all damages caused by the lack of such care.

Silverize Your Silage

for Better Fat Stock and Dairy Profits

CORN cut by Silver's "Ohio" Silo Filler makes better silage according to the records of "Ohio" users.

There's a difference in silage just as there is a difference in the machines that cut it. Some silage goes into the silo with long shreds and leaves which form air pockets and spoil the silage. Other silage is cut in uneven lengths—the sugar does not get out to properly act in the fermenting process. Silverized silage is cut in *short, even lengths.* The sugar juices around the joints of the cornstalks are *released*—the silage packs down air-tight in a homogeneous mass. Makes the *right* kind of food to bring *maximum milk yield* from dairy cows—or to put *weight* on fat stock.

Silver's "Ohio"

The Logical Silo Filler

"Ohio" cut silage is cut finer and more uniform than ordinary silage. Shorter lengths. Not just in spots but all the way from bottom to the top of the silo. The reason is, the knives hold their position. For example, if you set them at half inch, they cut half inch right along. Pressure of the material cannot spring them out of place. They are of the sturdy cylinder type, with bearings at *both* ends. Have accurate, patented adjustments for a quick, short, clean, shearing cut. The material is cut to a mold-proof semi-pulp—fine and free from "air pockets" and uncut leaves.

And this is but one of the many big features on Silver's "Ohio." Write and let us tell you about the others. About the new beater self-feed that saves a man's work at the feed table; the direct drive—drive pulley, knife cylinder and blower fan all on one shaft, reducing friction and saving power; the low-speed, explosion-proof blower fan; single lever control; bull-dog grip feed rollers, friction reverse and others.

Books Free

One is our catalog—tells about Silver construction and why Silver's "Ohio"—the pioneer—is the logical silo filler for the custom man or the man who does only his own work. The other is a booklet that shows in dollars and cents why it pays to "*Silverize your silage.*" Write today.

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Silver's "Ohio" is made in seven sizes—fit any farm or purse. For 4 h.p. gas to big tractors. 40 to 300 tons a day. Special light draft models for 4 to 8 h.p. engine.

"Modern Silage Methods" 264 pages—sent for 10c—coin or stamps

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DAIRY

Better Butter in America.

To the Editor—Is the butter of the dairy farmer of this country going to be shut out of the market? If so, why and who is to blame for it? Have we come to a time when all the milk which is turned into butter in America must be manufactured in creameries, so that the individual farmer will no longer have a place as a producer as he has in the past?

Not long ago a farmer I know sent a tub of dairy butter to a big city for sale on commission. That butter came back almost as quickly as the express could get it there, with the statement that the market could not use it. Why? Was that butter off in any way? It happened that I saw the butter after it came back and smelled of it and tasted of it. And I know what good butter is, if I do say it. That was nice, sweet, beautiful butter. The young man who made it has a new separator and keeps it in excellent condition. The disks and other parts are washed carefully every time the machine is used. He has been to considerable expense to fit up a milk and churn room with gasoline engine and everything in first-class condition and is trying hard to work up a trade for his butter. Then to have this setback—why, it hurt some, that is all.

And since then I have taken some pains to ask dealers in a fair-sized city about their trade in butter. Some do not handle farm butter at all; others none made anywhere that is packed in tubs. And when I inquired into the reason I found that these men claim that farm butter is not marketable because it is not up to the standard of taste of the consumers. These people will pay 40 cents a pound for creamery print butter, when they will not take farm butter at 30 cents. So the dealers told me. And yet, not two days ago a woman asked me if I knew where she could get butter of a farmer, and I know of many who would be glad to do the same if they only could.

What is wrong here? I'll tell you, and it is a thing that ought to encourage every one of us. Many farmers may make a good deal better butter than they do. If everybody would think that the poor butter turned out on the farms of the country is what is hurting our trade and would do his level best to improve his own product it would not be long before dairy butter would hold the first place in the estimation of the consumer.

What are some of the little things we can do in this direction? We can be just as neat as a pin about milking, straining, cooling and keeping our milk. We can have a place for cream and milk that is free from any bad smells. We can wash our pails, cans, pans and churns thoroughly every time they are used. If we have no separator we can get one if we really set out about it and wash that perfectly clean every day. We can think and study and visit other dairies and read good papers and educate our taste and smell so that it will tell us when everything is right and we can use good water, good salt and good packages.

So little by little we may improve the quality and the demand for the dairy butter of America. Many are doing all this now and they are reaping their harvest every day.

Subscriber.

A Good Udder Important.

To the Editor:—A good udder is one of the most important items to consider in the selection of a profitable dairy cow. The size and shape of the udder will determine largely the quality of the cow, and whether or not she is capacitated to produce a large amount of milk. It should be rather square in shape, with plenty of depth, width and length. The lower portion of the udder should be level and broad. It should reach far upward on the under side of the cow and should extend well up between the legs.

Size is by no means the most important feature in considering a good udder. Good quality is far more essential. A good-quality udder can be judged by the skin being of fine texture, and very soft and pliable. The thick, coarse skin, that feels hard to the touch, should be avoided. Fleshiness and coarseness of the udder is an indication of inferior quality.

The good-quality udder that possesses a fine, pliable skin will shrink considerably after the milk has been drawn. The skin will lie in soft folds, that will fill out before the next milking time. With the fleshy udder there is not a great deal of difference before and after milking, but it seems to be full of milk all the time.

The good-quality udder can best be detected after milking. If one was only looking for size in udder he surely wouldn't pick on the one with the soft, pliable skin. But the man who is onto his job will avoid the fleshy udder, and will understand why size is not all we expect in a well-developed udder.

The udder should develop uniformly. Each quarter of both portions should be the same size, and the fore and hind part should hang on the same level. It means poor milking qualities to see one quarter of the udder smaller than the rest. The development of the udder depends a great deal on how the heifer is milked. Care should be taken when milking the heifer so that all parts will receive the same attention.

The teats should be wide apart on the udder. Improper milking will often cause the front teats to be wider apart than the back ones. Short teats are very difficult to milk. However, we frequently find heifers with short teats that attain quite a growth as they get older. Teats should be rather pointed at the end, instead of flat.

Subscriber.

Sour Milk—Its Uses and Food Value.

To the Editor:—The souring of milk is due to the action of a species of germs called lactic acid bacteria. Milk forms an ideal medium for germs to work in, as the favorable conditions for growth (food, heat and moisture) are all found there if milk is kept even slightly warm. This shows the necessity of keeping milk on ice, or in a cold place, if it is to be kept sweet.

However, if milk does sour, and it does, as we all know, some use must be made of it. In farm homes this is not so great a problem as in the cities where good milk is expensive. On the farm where there are usually multitudes of hungry chickens and ducks the sour milk problem can be quickly solved, as that offending article forms an ideal food for the feathered folk of our yards.

The culinary uses of sour milk are many and varied, although a number of housewives are ignorant of many of them. Most people know that the action of our milk with soda will lighten cake, muffins, biscuits, etc., but do they know why? The reason is simple. Any acid, as that contained in sour milk, combined with a carbonate, as soda, forms carbon dioxide gas and this gas, in its upward progress, lightens the whole mass in which it is placed.

A caution must be added in this connection regarding the amount of soda to use in proportion to the amount of sour milk. If too much soda is used the finished product has a greenish tinge and has a peculiar flavor and odor. On the contrary, if too little is used the finished products are not light enough. One-half level teaspoonful of soda to one-half pint of milk will usually prove sufficient, the amount of soda varying slightly with the degree of acidity in the milk. In some cases three-fourths level teaspoonful is necessary if the milk is very sour so it will neutralize the acid.

There are other important uses of sour milk in the home. It makes a very good silver polish and is used for this purpose by merely placing the tarnished silver in it a few hours. This

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saves much labor for the housewife. Cottage or Dutch cheese is a delicacy made from thick, clabbered milk and one that should be eaten abundantly, as it has a very high food value, containing all of the protein or casein of the milk. If one likes the flavor of thick, sour milk it may be served with "trimmings" for a Sunday evening lunch. Served in bowls with nutmeg or cinnamon sprinkled lightly over the top, with a sprig of parsley to garnish, it is relished by many people.

I quote here another use, which, while it may be surprising to some, is accounted very good by all who have eaten it. "Lacto," as it is popularly called, is composed of sour milk, fruit juice, preferably cherry or raspberry, and sugar. This is frozen as any ice cream and when ready to eat much resembles a sherbet. It has a high food value, but is not as rich as ice cream, therefore it can be partaken of more freely. It is one of the most easily digested of all frozen foods.

Sour milk has a very high food value, being similar to that of fresh milk except that in the sour milk the cream or fat globules have all been removed, thus taking away much of the heat and energy given by fat. Nevertheless, the soured skim milk gives heat and energy, this being due to the milk sugar, or lactose, found in it. When cottage cheese is made this carbohydrate is left in the whey, which may be used in bread making. The curd remaining contains the protein of the milk, the office of which is to build and repair bodily tissues.

H. M. Steen.

Essentials in Raising Calves.

An ill-kept cow cannot be made a profitable dairy cow. She cannot grow and produce the best of calves. Hence it is essential to begin early in the life of the dam and calf to look after every detail in breeding and feeding. Fred Stubley, of Black Earth, Dane county, of the Farmers' Institute staff, has given us some pointers along the line.

Some of Mr. Stubley's valuable suggestions on these points are: Pure, fresh water should be given to calves daily as soon as they have learned to drink.

Salt should be kept where they can have free access to it at all times.

All changes in feed should be made gradually.

Foam which forms on separator skim milk should never be fed, as it will cause indigestion and scours, bloat or other troubles which follow.

Calves should be separated or fastened in stanchions at the time they receive their milk and fed dry grain immediately after drinking the milk, which will tend to prevent the bad habit of sucking one another.

The stables should be cleaned regularly and kept dry.

If the stable is provided with a concrete floor it will be worth while to have an inch board overlaid to keep calves off the damp, cold concrete.

In winter time cold drafts of air in the stable should be avoided.

In summer it is well to darken the stable to give protection from flies and to keep it as cool as possible.

Young calves should never be exposed to a hot, scalding sun.

Watch calves and keep them free from lice. Thorough washing or dipping calves with a 5 per cent solution of some of the coal tar series of disinfectants like zenoleum, creolin, etc., and repeating the washing after ten days, is the most effective means of destroying lice.

Aim to do everything possible to keep calves gaining in live weight at the rate of one and a half to two pounds daily.

Avoid calf scours by keeping them in clean, well-lighted and well-ventilated quarters and feeding them regularly milk at the proper temperature from pails scrupulously clean. Treat any indications of scouring by reducing the feed. Give two to four tablespoonfuls of castor oil mixed with one-half pint of milk. Following this in four to six hours or immedaitely, if necessary, with one teaspoonful of a mixture of one part salol and two parts subnitrate of bismuth mixed with one-half pint of milk, has proved a good remedy for bad cases of scours. The salon and subnitrate of bismuth can be secured from any druggists mixed in the proper proportions, and thus be available for use at any time.

Wetting the navel of the new-born calf with a 1 to 500 solution of bichloride of mercury is considered a safeguard against contagious scours.

Mr. Stubley emphasizes the necessity of a clean, well-lighted box stall, well bedded and dry, for the dam, and of plenty of disinfectant in barn and stall at all times. Raising good heifer cows is more satisfactory and profitable than buying cows, in Mr. Stubley's opinion. It does away with the necessity of expending time and money in buying cows, safeguards the herd from such contagious diseases as tuberculosis and abortion; enables the dairyman to secure a herd of cows of uniform breeding, individuality and ability to produce profitably; makes it possible to keep a herd of comparatively young cows from which individuals may be sold from time to time at remunerative prices; and affords greater satisfaction than does the mere milking of cows and getting proceeds from the milk. By the time purchased cows adapt themselves to a strange herd and return over cost of feed an amount equal to their purchased price and losses when account is made of the result from dealing with cows of unknown breeding and character, the dairyman, writes Mr Stubley, realizes it is cheaper to raise calves than to buy cows.

Other essentials for growing calves, he notes, are good breeding, favorable environment, careful feeding, beginning before the calf is born and continuing through the first six weeks—the delicate age, and through the skim milk age, the oft-neglected age from six to twelve months after birth, and finally the breeding age.

Empire Cow-Testing Association.

Roy H. Monroe, official tester of the Empire Cow-Testing Association, Fond du Lac county, has made his first official report. For the first month a registered Holstein owned by C. W. Keys and a grade Holstein owned by Casper Bros. are tied for the high record. The monthly report is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
A. A. Briggs					
Diana Johanna Pietertje, H...		2-28-16	1085	8.8	41.2
Duchess Ormsby Jessie De Kol, H.		3-7-16	1236	3.4	42.0
C. E. Binning					
Fairhome Brownette, R. J.....	5	4-25-16	886	5.2	46.0
Albert Immel					
Darky, G. H...	5	3-10-16	1213	3.4	41.9
Mary, G. D....	7	4-23-16	1199	4.2	50.3
O. F. Miritz					
Johanna Jewell Clover Lawn, R. H.	5	3-13-16	1283	3.9	49.9
Blackie, G. H.	5	2-12-16	1075	3.8	40.8
H. Kirschenstein					
Lizzie, G. H...10		3-10-16	1094	4.0	43.7
Topsy, G. H...	6	3-1-16	1240	3.6	44.6
C. W. Keyes					
Queen Aaltze Jewell, R. H..	6	4-25-16	1615	4.0	64.6
Paul Immel					
No. 4, G. D....	6	4-25-16	1308	4.0	52.3
No. 6, G. D....	5	3-25-16	1267	3.6	45.6
No. 14, G. D...	7	3-10-16	1153	4.3	49.5
No. 17, G. D...	7	3-20-16	1174	3.5	41.1
Aug. Schultz					
No. 2, G. H....	6	2-10-16	1348	3.9	52.5
No. 5, G. H....	6	4-25-16	1336	3.7	49.4
No. 7, G. G....	6	4-10-16	1373	3.6	49.4
No. 13, G. G...	5	1-20-16	1094	4.3	47.0
No. 16, G. G...	6	3-1-16	1072	3.8	40.7
No. 18, G. D...	6	3-10-16	1004	4.2	42.1
No. 21, G. D...	7	4-10-16	1302	3.3	42.9
John Kirschenstein					
No. 5, G. H....	6	4-10-16	1159	3.6	41.7
No. 21, G. H...	5	12-12-15	1159	3.7	42.8
Wm. Kirschenstein					
No. 9, G. H....	6	4-20-16	1472	2.8	41.2
Casper Bros.					
No. 2, G. G....	5	3-1-16	691	6.5	44.9
No. 3, G. D...	4	3-7-16	954	4.3	41.0
No. 8, G. D....11		12-10-16	1181	3.8	44.8
No. 10, G. D...10		4-10-16	1162	4.2	48.9
No. 14, G. H...	8	3-27-16	1701	3.8	64.6
No. 15, G. D...10		4-25-16	1457	4.0	58.2
Venhaus & Son					
Rose, G. G....	4	11-10-15	1094	3.9	42.6
E. A. Quick					
No. 1, G. H....	8	3-20-16	1360	4.1	55.7
Guinivere, R. B. S.....	3	4-1-16	1023	4.5	46.0
No. 10, G .G...	7	12-25-15	1271	3.8	48.2
Fred M. Ingalls					
Emily D., G.G.	4	4-25-16	1003	4.6	47.5
Wendy, G. G..	3	5-3-16	1008	5.0	50.4
Shamrock,G.G.	5	2-23-16	891	5.4	58.1
Poynette, G.G.11		12-1-15	812	5.3	43.0
O. A. Busse					
Maggie, G. H.	5	4-25-16	1432	3.7	52.9
Spot, G. G....	9	3-18-16	1100	4.8	52.8
Molly, G. H...	5	2-2-16	864	4.9	42.3
Mully, G. H...	5	3-2-16	1109	3.8	42.1
White Stockings, G. H....	6	3-2-16	1221	3.4	41.5
B. F. Sheridan					
Nettie, G. G...	4	3-15-	1097	5.1	55.9
Minnie, G. G..	6	12-15-	1224	4.2	51.4
Zielke, G. G...	5	4-3-	1590	3.6	56.2
Little Miller, G. G.	9	2-10-	1190	4.2	49.9
Rather, G. G..	6	10-20-	790	6.4	50.5
Omro, G. G...	9	2-1-	874	6.2	54.1
John Reilly					
Wagner, G. D.	8	4-1-	1339	3.9	52.2
Brownie, G. G.12		1-1-	1326	3.9	51.7
Spottie, G. G..	4	1-15-	951	4.6	43.7
Black Heifer, G. G.	2	3-15-	1054	4.6	48.4
Martin Whalen					
Old Hal, G. H.	6	4-6-16	1184	3.8	44.9
Raany, G. D...	8	4-1-16	1190	3.6	42.8
Schroeder, G.J.	4	4-25-16	1178	3.5	41.2

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Hygiene of Breathing.

The development of a child's face and the determination of his facial appearance depend quite largely upon the way he breathes. Seventy-five per cent of the children with deformed bones of the face, as well as those considered dull and listless in school could be greatly improved by careful attention to their breathing, says the Nebraska College of Medicine.

To breathe properly the nose should be the principal entrance for air; very little should be taken in through the mouth. When the breathing is carried on properly through the nose, the bones of the face grow properly, the teeth come in properly, the character of the nose is maintained and the child will look as nature intended. When the breathing is carried on improperly through the mouth, the bones do not grow as was intended by nature, the teeth are misplaced, especially the upper front teeth which become prominent and project forward, the nose is flat, and the child is given a dull, unattractive appearance. Besides changing the facial appearance, improper breathing brings on a catarrhal condition in the nose and throat which retards normal growth, starts deafness, renders the child more liable to disease, and quite generally handicaps him in school and in life.

The first signs of bad breathing very often are—1st keeping the mouth open when sleeping; 2d, persistent loud breathing or snoring when asleep; 3d, tendency to frequent colds; 4th, persistent discharge from the nose.

If these signs are heeded and simple care started, the deformities and bad health which would later follow may, without doubt, be avoided.

Prepare to Keep Cool.

There is no better time of year to begin this intelligent campaign for "keeping cool and comfortable," externally and internally, bodily and mentally, than in the early summer. If there be any time in the year when one ought to be comfortable without an effort or a thought, it is on "a day in June." If by any chance you are not cool and comfortable, then there is something seriously wrong with your environment or habits or conscience. June time is the time of peace in which to prepare for war. Don't wait until you are sweating and gasping and heat prostrated and mosquito bitten; beat the enemy to it.

Of course, as a first step toward making yourself comfortable for the summer, it goes without saying that you will put screens over all the windows and doors of your house, and screen in at least one wide porch. Since we discovered that malaria is carried by mosquitoes and by no other means, and that flies carry typhoid, summer dysentery, and other infectious diseases, screens have been lifted out of the class of mere comforts and luxuries, and have become necessities of life and health. Also screens have been found to be not only life savers, but good investments in a commercial way, for even cows give more milk if they are kept in screened stables and cool sheds, and protected from the maddening attacks of flies.

The next step toward making yourself comfortable for the summer is to provide some sort of porch—screened in if flies and mosquitoes breed near you—large enough to be used as both sitting room and dining room, and capable of being turned into a general living room for the family during the summer.

Next to fresh air in the campaign for coolness and comfort, comes the necessity for abundant bathing and splashing and sponging with cool water. In hot weather the bathroom becomes one of the most important rooms in the house, and a refreshingly cool bath in the morning and another one at night should be as regular as sunrise and sunset.

For children free and frequent dabbling and splashing and paddling in water is even more important and health protecting than in the case of adults. Heat, just plain heat, seldom does any very serious harm to grown-ups who are in fair condition, but to children, with their translucent skins, and big brains, and delicate nervous systems, heat is a serious danger. Give the little ones a bath at least three times a day, and let them splash and rollick and play frog or fish in the tub as long as they wish.

Last and by no means least in the comfort code comes the admonition,

HARRY AND DALE RICHARDSON.
Sons of Mr. and Mrs. G. M. Richardson, age four and a half and three years.

"Be good to yourself in the matter of food in summer time." Fortunately, there is usually an abundance of wholesome, appetizing foods to be had at this time of the year—such things as fruits, fresh vegetables, milk, eggs, butter, ices and ice cream.

A high place in the summer diet should be given to ice cream, iced puddings and frozen custards. Their combination of sugar and fat gives them a high nutritive value, and they are readily digested by a healthy stomach, especially if eaten slowly, with plenty of good cake, homemade cookies or salted crackers. Every family should be equipped with a good ice cream freezer and should use it at least three times a week. A couple of nice sandwiches, a large saucer of ice cream (one pint) and a plate of good cookies make not only an attractive lunch but a full meal with a fuel value of over 1,000 calories.—[Woods Hutchinson in Good Housekeeping.

Do You Read the Pure Food Labels?

The national food law has accomplished much considering the conditions at the time of its enactment as compared with present conditions. Though the law has sometimes been used to protect manufacturers in attempted defraud, the aim of its authors is that securing pure and wholesome food products for the consumer. It is to be hoped that satisfactory amendments to the law enacted June 30, 1906, will eventually accomplish the original aim of the authors of the law. The pure food law has been an agent working to "clean up," and keep cleaned up, the production, storing, handling and distribution of foods.

The matter of food is one of the biggest questions before the public. Improper nourishment is responsible for much of the population in our institutions for the feeble minded, the penitentiary, and of over 80 per cent of the physical ailments humanity is suffering from today. The pure food law has taken out of the market a lot of stuff unfit for the human stomach.

The "food label" has a very interesting history. Until the passage of the "pure food law" the label upon a food product was, in many instances, a pretty and attractive covering to a package containing unfit food for the human being. It literally covered "a multitude of sins" beneath it, which were perpetrated upon the unsuspecting public. Such evil practices as the use of injurious preservatives, filthy adulterations of foods, harmful coloring matter, short weights, etc., were followed by food manufacturers and covered up by an attractive looking label.

The passing of the pure food laws in 1906 was a great step toward reform in the production of foods, and, though our federal laws are still believed to be weak, time and the progressive housewife will strengthen them, as needed. The label stands as the housewife's interpreter of food products today, and the wise housewife will read its message. The law has shut out most of the chemical and

JOHN JENNINGS RICHARDSON.
Five-months-old son of Mr. and Mrs. G. M. Richardson.

harmful preservatives, and the best food manufacturers no longer use them. The few that are allowed, and are used, must be stated upon the label so the purchaser may reject these if she reads the labels and wishes to. All states have such laws. For example, food laws and food departments now prohibit formaldehyde in milk; borax, boracic or sulphurous acid from meat; salicylic acid from catsup; salicylic, benzoic or sulphurous acid from cider; coal tar dyes from jams and jellies; borax, boracic acid, saccharine, salicylic and sulphurous acids from all canned fruits and vegetables, and so on. Since war sent benzoates up from 18 cents to $2 a pound, we are protected in a measure from its use.

The label also tells the housewife that there are different grades of goods. Jobbing houses grade their goods for the retailers by means of different labels. The housewife should visit her grocer and ask him to explain to her the grades of goods he carries, then she may make her purchases intelligently. Prices, of course, are determnied by the grade. Difference in grade does not necessarily mean undesirable or unwholesome goods; it usually just means that there are differences in selection and packing of materials, the more carefully selected and packed bringing the higher prices.

When a housewife learns all she can about grades of foods her grocer will see that she understands and he will not try to palm off a low grade at a high price.

These are some of the things a label upon food products will tell the housewife: (1) The quality or grade of food; (2) the manufacturer's or jobber's name and address; (3) the net weight, or measure; (4) the materials in the composition; (5) statements of preservatives used, if any.

Read your labels, housewives, and help in the great campaign afoot for the protective standards for food products. Learn to know the superior from the inferior brands of goods. In the majority of cases the grocer has the standard articles upon his shelves and is willing to give the housewife what she asks for. Carelessness upon the housekeeper's part may bring her undesirable goods. When she asks for a bottle of vanilla extract it should be sent, not an imitation vanilla substitute flavor. Let the practice of such ordering as "Send me up some like the last" give way to a more definite expression of what you know you want, and you will get it.—[Laura B. Breese.

Wheel Tray Saves Many Steps.

Some people forget "the shortest distance between two points is a straight line" and follow roundabout methods in the accomplishment of routine tasks. We still find many housewives taking the numerous trips to her kitchen in clearing her dining table when the wheel tray or the small table upon rollers or even a large hand tray would reduce the time and steps considerably each time this task is done. The wheel trays also save many steps in the kitchen, and if those in the market are found too expensive they can be made for little cost. Discarded baby carriage wheels may be used for the wheels, and odd pieces of lumber used for the shelves, then the tray may be painted or stained the color desired.

Easy Way to Clean Silver.

To the Editor:—I enjoy reading the Home page so much, and I have often thought I would write. I would like to tell my friends an easy way to clean silverware that has become tarnished. I put all the knives and forks in an aluminum pail or kettle, put two handfuls of salt in, then pour boiling water over them and let them stand until the water is cool enough to put your hands in. Then wash with soap and water, rinse and dry.

Mrs. E. Grosshuesch.

To Take Out Wagon Grease.

To the Editor:—Will some of the readers tell me what will take out wagon grease from a rubberized rain coat without taking out the color? The coat is tan and I do not know what to use on it so that it will not fade. I will be very thankful for any advice. Mrs. E. C. J.

The sealers of weights and measures of the Wausau, Wisconsin, district will attempt to have the legislature fix the standard weight for a loaf of bread at fifteen ounces and to obtain regulation of water content of cake. A proposal also has been considered for selling eggs by weight and not by the dozen.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Recipes.

Omelet With Macaroni.—Omelet—Four eggs, whites and yolks, beaten separately, four teaspoons milk, pinch of salt. Melt tablespoonful of butter in omelet pan or spider. Beat yolks of eggs thoroughly, add salt and milk, beat again, then cut in the stiffly beaten whites, turn into hot omelet pan, cover and cook one or two minutes, uncover and set in hot oven one minute to dry off. Place part of macaroni and sauce in center and fold, turn on platter and add remainder of sauce.

Fish Omelet.—This is a good way of using up the remains of cold fish left over from a meal. Free the fish from all skin and bones and break up into very small pieces or shreds. Put this into a saucepan with about half an ounce of butter, season with pepper and salt, and add enough white sauce or milk to moisten the fish. Stand aside and keep hot while you prepare the following mixture: Break three eggs into a basin, beat up lightly, add one tablespoonful of milk. Melt an ounce of butter in an omelet pan. Pour in the eggs, stir over a quick fire until the mixture begins to set, then shake well. Put the prepared dish into the middle of this, and fold over. Serve at once.

Grape Juice Pudding.—Mix a tablespoon of flour with one-half cup of sugar. Add two cups of water and boil five minutes. Remove from fire, add one-half pint of grape juice. Beat one egg and pour over it the hot grape-juice mixture. Chill thoroughly and serve with whipped cream.

Cucumbers With Sour Cream.—Slice cucumbers and let them stand a half hour in cold water, then serve with sour cream, salt, pepper and a little vinegar, with a teaspoonful of grated onion. Shredded cabbage well crisped in water and served with sweet cream, sugar, a dash of salt, and a little vinegar is another appetizing salad well liked.

String Bean Salad.—Cook the beans whole, drain and arrange in a ring of lemon peel five or six string beans to a serving; place on lettuce and serve with French dressing seasoned with chopped chives, salt and pepper.

Fig Custard.—Wash a pound of figs and cover them with water to cook an hour, add the juice of a lemon, a few bits of peel, which may be removed after the figs are tender. Make cup custards, using four eggs, a half cupful of sugar, a quart of milk and a pinch of salt. Cook the custards and on top of each place two spoonfuls of the fig mixture, cover with a meringue or whipped cream and serve cold.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Lives on a Hundred-Acre Farm.

Dear Young Folks:—I have been reading your letters and enjoy them very much. I can hardly wait till the paper comes. I am eleven years old, and in the fifth grade. I ride my pony half a mile to school and come home to dinner. Our school closed June 1st. We had a picnic dinner, and gave an entertainment in the afternoon. The teacher and pupils of another school came and spent the day with us. We children all had a dandy time. I liked by teacher very much. I am going to take music lessons this vacation; will soon be in the third grade.

I live on a hundred-acre farm; its name is Maple Leaf. I like my home very much. We have a number of different flowers. Mamma and I enjoy them very much. I go to Sunday school every Sunday unless someone is sick. I dearly love to go.

I saw in one of the Young Folks' letters a riddle which is, "What has eyes and cannot see?" and the answer is a potato. I will ask one too: House full, yard full; can't catch a thimbleful. —Inez.

The King and the Haymaker.

Dear Young Folks:—I enjoy the letters which so many boys and girls have written. There are so many boys and girls that go to our school we have lots of fun. I am in the eighth grade and like to go to school.

I will now tell a story of the king and the haymaker.

One day George III was visiting a small town in England, and being anxious to see something of the country took a solitary walk. He came to a hayfield in which there was only one woman at work. The king asked where the rest were. She said that they were all gone into town to see the king. "Why didn't you go, too?" asked his majesty. "Pooh!' she answered, "I wouldnt walk three yards to see him. Besides, they've lost a day's work by going and I am too poor to do that, with five little children to feed." The king slipped a sovereign into her hand and said, "When the rest come back tell them that while they were gone to see the king, the king came to see you and left you his portrait in gold to remember him by." When the rest came home they were disappointed because they didn't see the king after so long a journey.

I wish some of the Young Folks would write the story of the thief and the turtle. —Velma.

The Butcher Bird.

Dear Young Folks:—In answer to Dorothy's letter I want to say that she has seen the Loggerhead Shrike or Butcher Bird. This last name is given because it catches other song birds and hangs them on thorns to die. For this reason we kill all of the Butcher Birds we see. I, too, have read "Rebecca of Sunnybrook Farm," and enjoyed it very much.

I hope Dorothy will write again.
—"Tater."

Little Orphant Annie.

Little Orphant Annie's come to our house to stay,
An' wash the cups and saucers up, and brush the crumbs away,
An' shoo the chickens off the porch, an' dust the hearth, an' sweep,
An' make the fire, an' bake the bread, an' earn her board-an'-keep;
An' all us other children, when the supper things is done,
We set around the kitchen fire an' has the mostest fun
A-list'nin' to the witch tales 'at Annie tells about,
An' the gobble-uns 'at gits you
Ef you
Don't
Watch
Out!

Onc't they was a little boy wouldn't say his pray'rs—
An' when he went to bed at night, away upstairs,
His mammy heerd him holler, an' his daddy heerd him bawl,
An' when they turn't the kivvers down, he wasn't there at all!
An' they seeked him in the rafter-room, an' cubby-hole, an' press,
An' seeked him up the chimbly-flue, an' ever'wheres, I guess,
But all they ever found was thist his pants an' roundabout!
An' the gobble-uns'll git you
Ef you
Don't
Watch
Out!

An' one time little girl 'ud allus laugh an' grin,
An' make fun of ever'one an' all her blood-an'-kin,
An' onc't when they was "company," an' ole folks was there,
She mocked 'em an' shocked 'em, an' said she didn't care!
An' thist as she kicked her heels, an' turn'd to run an' hide,
They was two great big Black Things a-standin' by her side,
An' they snatched her through the ceilin' 'fore she know'd what she's about!
An' the gobble-uns'll git you
Ef you
Don't
Watch
Out!

An' little Orphant Annie says, when the blaze is blue,
An' the lampwick sputters, an' the wind goes woo-oo!
An' you hear the crickets quit, an' the moon is gray,
An' the lightnin'-bugs in dew is all squenched away—
You better mind yer parents, and yer teachers fond and dear,
An' churish 'em 'at loves you, an' dry the orphant's tear,
An' help the pore an' needy ones 'at clusters all about,
Er' the gobble-uns'll git you
Ef you
Don't
Watch
Out!
—James Whitcomb Riley.

Do you always have a tired feeling about this time of year? asks an Ohio College of Agriculture bulletin. Do you crave different diets and relish new dishes? Then provide plenty of garden produce for the table, for vegetables and fruits furnish a large part of the mineral salts that are necessary to the well-being of the human system. Vegetables in the diet are worth more than their food or money value. The need of tonics and other medicines in the spring is due largely to the lack of vegetables and fruit in the winter diet. If more succulent food were used less money would be spent in doctor's fees and for medicine.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery.

CATALOG OF SPRING AND SUMMER FASHIONS.

Send 10 cents in silver or stamps for our up-to-date 1916 large spring and summer catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1424—A simple but chic costume with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 44-inch material for a 36-inch size.

1751—A charming summer frock. The pattern is cut in 4 sizes: 14, 16, 18 and 20 years. It requires 4 yards of 44-inch material for the dress with ruffles, and 3 yards without ruffles, for a 14-year size.

1730-1744—A splendid dress in tailored style. The waist pattern 1730 is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt pattern 1744 is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 8⅛ yards of 36-inch material to make the entire dress for a medium size. Two separate patterns. Price 10 cents for each pattern.

1597—A unique and easily adjusted apron. The pattern is cut in 3 sizes: Small, medium and large. It requires for a medium size 5⅞ yards of 36-inch material.

1352—Girls' suspender skirt and guimpe. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3 yards of 36-inch material for 10-year size.

1600—Children's envelope night dress in high, round or square neck edge and with sleeve in either of two lengths. The pattern is cut in 5 sizes: 6 months, 1, 2, 4 and 6 years. Size 2 will require 2½ yards of 36-inch material.

1742—A comfortable and attractive jumper dress, with guimpe having long or short sleeves. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 1¾ yard of 27-inch material for the guimpe, and 2⅝ yards of 36-inch material for the dress, for an 8-year size.

1638—A simple practical house dress with sleeve in either of two lengths. This desirable model is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7¼ yards of 36-inch material for a 36-inch size.

1748—A dainty negligee. The pattern is cut in 3 sizes: Small, medium and large. It requires 3⅝ yards of 36-inch material for a medium size.

1673—A trim and becoming style middy dress with skirt attached to an underwaist and with sleeve in either of two lengths. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 4⅛ yards of 40-inch material for an 8-year size.

1747—Girls' dress, with or without belt at empire waistline, and with sleeve in either of two lengths. The pattern is cut in 4 sizes: 1, 2, 3 and 4 years. It requires 2 yards of 36-inch material for a 2-year size.

1735—Men's negligee or outing shirt, with sleeve in either of two lengths, and collar rolled high or low. The pattern is cut in 7 sizes: 38, 40, 42, 44, 46, 48 and 50 inches breast measure, neck measure to correspond in sizes 15, 15½, 16, 16½, 17, 17½ and 18. It requires 3½ yards of 36-inch material for a 17-inch neck size.

Ask your neighbor to subscribe for The Wisconsin Farmer.

International Sunday School Lesson.

Lesson for June 25, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

REVIEW, SECOND QUARTER.

READING LESSON—Philippians 1:1-11; 4:1-9.

GOLDEN TEXT—Finally, brethren, whatsoever things are honorable, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things.—Phil. 4:8.

The lessons for the past three months extend over a period of perhaps fifteen years, from A. D. 37 or 40 to A. D. 52 or 55. It is the history of an ever expanding church and the ever widening influence of the work which Jesus began and continued to do after His resurrection, through the Holy Spirit. No adequate or proper review can be conducted without the aid of a map. If none is available, take a large sheet of manila paper and let some of the scholars make an outline map showing the strategic centers, Jerusalem, Damascus, Antioch and as far west as Philippi, also the country involved, the coast line of the "Great Sea," etc. It is a good idea not to locate the chief cities, but have pupils attach to the map small, round, red and white stickers on which might be printed the name of each city. Then other pupils might trace on the map the course of Paul's journeys. If all of this work is done in the presence of the entire school it will aid greatly in holding attention as well as placing before the scholars a visible delineation of the lands involved in this portion of sacred history. The most outstanding incidents which have been studied during the past quarter, such as the conversion of Saul, the healing of Aeneas, the raising of Dorcas, Peter's visit to Cornelius, etc., could also be located geographically by means of thumb tacks with tags attached. A most interesting review would be to organize in the school a number of travel clubs. Let each club come prepared to give a "travelogue," or travel talk, describing some of the chief events, such as the Damascus journey, a journey to Joppa, to Cyprus, to Iconium, from Antioch to Jerusalem, etc. Let the pupils write out their accounts and as each is written have some scholar indicate on the map the places involved, and others hang up in plain sight of the entire school a piece of cardboard bearing a single sentence indicative of the leading lesson of the event described. This latter will mean to use a sentence or parts of sentences as: "We are men of like passions as you." The element of contest could be employed by having all the pupils in a given department bring such sentences relating to the lessons on cards, and let that scholar who can bring the greatest number of sentences be declared the winner. The teacher must, of course, help materially in such a contest by direct suggestion and by encouraging the pupils to undertake the task before them.

For the adult and older 'teen age classes it might be well to assign to different scholars a number of great problems which have been treated in the lessons of the quarter, and let each come to the class prepared to read a brief essay or to discuss the subject assigned, relating it, of course, to the work of the review. (Lesson I.). "How the Holy Spirit converts men today." (Lesson V) "How can the church be aroused to the great work of missions." (Lesson VIII) "The Perils of Popularity." (Lesson XI) "The conditions of salvation" and so on. Another interesting plan would be to have different members of the class prepare at home a brief synopsis of the chief characters of the quarter's lessons.

Such a use of charts is valuable in that it appeals to the eye, is a real test of knowledge and helps to systematize our information for future use.

The facts of the quarter are about as follows:

Lesson I. The risen Christ by His overwhelming glory conquers His bitter enemy, Saul.

Lesson II. Men are healed and the dead risen by the power of the risen Christ.

Lesson III. Peter, the Jew, is prepared and Cornelius, the Gentile, is called to a momentous conference.

Lesson IV. Jew and Gentile alike receive the gospel and are sealed by the Holy Spirit.

Lesson V. The risen Christ by His angel delivers His servant, Peter.

Lesson VI. The Holy Spirit calls Barnabas and Saul to a world ministry.

Lesson VII. The preaching of Christ causes separation.

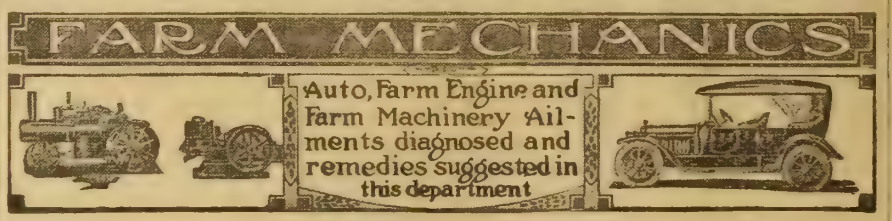
Lesson VIII. The power of the risen Christ heals the lame and revives Paul.

Lesson IX. Christ, Who fulfilled the Jewish law, removes its burden.

Lesson X. Lydia's open-hearted response to the gospel.

Lesson XI. The temperance lesson shows our relations to others in the Kingdom.

Lesson XII. The ever present Christ delivers His servants and convicts and saves the sin-hardened jailer



QUESTIONS AND ANSWERS.

Motor Knocks.

Would you please tell me what is the matter with my Ford car? When we bought the car in 1913 it had a knock, but not a bad one. After we had had it six months, we took it to a shop to have it fixed, but they could not find where the knock was. It is not caused by the spark, as it knocks at any position of the spark. It is a dull, loud knock.

Answer.—A knock such as you describe is usually caused by the crankshaft fitting the main bearings too loosely. The connecting rod bearings may also need adjustment.

Horse Power of Engine.

What is the horse power of my engine? It has a seven-inch bore and ten-inch stroke. It runs 300 R. P. M. What width and length of belt would you advise to get the best results? I want to use it for filling my silo.

Answer.—Your engine should develop ten-horse power. The size of belt required depends upon the diameter of the drive pulley as well as upon the horse power transmitted. Using a drive pulley twelve inches in diameter, a belt six inches wide could be used. The faster a belt runs the more horse power it will transmit. A belt this large should be at least eight feet between pulley centers, and would run better at fifteen or twenty feet.

Size of Pulleys.

I have a sixteen-horse-power steam engine, whose speed is 250 revolutions per minute. It has a forty-inch drive pulley. What size pulley will I have to use to drive a machine 1,200 R. P. M.; 800 R. P. M.? What is the rule for finding the diameter of the driven pulley when the diameter of the drive pulley and the speed of the two shafts are known?

Answer.—The rule is: Multiply the diameter of the driving pulley by the speed of the driving shaft, and divide by the speed of the driven shaft. In the above example the driven pulley for 1,200-horse-power motor should have a diameter of 40x250÷1,200=8.3 inches.

For 800-horse-power motor the diameter of the driven pulley should be 40x250÷800=12.5 inches.

What Is "Single Phase"?

Please inform me what is meant by "single phase," "two phase" and "three phase" currents.

Answer.—The above terms apply to alternating currents only. An alternating current flows first in one direction and then in the opposite direction. In a "single phase" motor winding, there is a single current flowing backward and forward. If the motor has a "two phase" winding there are two sets of windings on the motor. At any instant the current is flowing in exactly opposite directions in the two windings. A "three-phase" motor has three separate windings, the current in each winding flowing in a different direction at any instant. Windings of more than one phase are often called "polyphase" windings.

A Jump Spark Coil.

Please inform me how a jump spark coil can be constructed at very little expense. I have a buzzer from an old coil which is in good working order. Can I use it to make a new coil?

Answer.—You can use your buzzer on a new coil. Instructions for making a jump spark coil were given in these columns in the issue of April 22, 1915. Space will not at present permit us to republish these instructions. If you have access to a library you can find a description of these coils in some electrical or automobile book. Briefly, about 200 turns of No. 16 single cotton-covered copper wire are wound upon a soft iron core made of a bundle of wires, the core being about three-quarters of an inch in diameter. One end of the copper wire is attached to the ground terminal of the coil, and the other end is attached to the vibrator plate of the buzzer. The end of the iron core forms a magnet to operate the buzzer. Around the first coils are wound 2,000 turns of No. 36 double cotton-covered copper wire, one end being fastened to the ground terminal of the coil, and the other end to the spark plug terminal. A condenser, made of alternate layers of tin foil and paraffine paper, is connected between the contact points of the buzzer.

Taking Off Ceiling Lights.

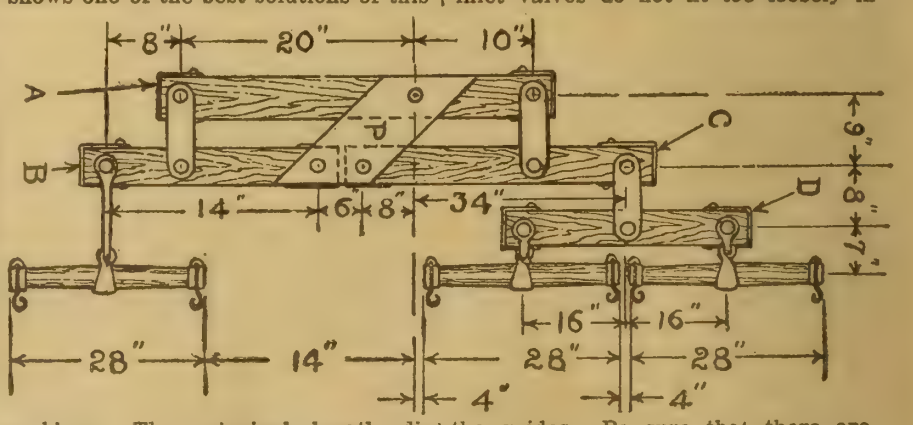
How may I take ceiling lights from the circuit above, when the wires are running parallel with the beams? Also when they are running crosswise through the beams?

Answer.—Remove about one and one-half inches of the insulation from each of the two lead wires near the outlet. Remove about two inches of insulation from the ends of the two outlet wires. Having scraped all wires bright, wrap the outlet wires several times around the lead wires and solder the joints, using a soldering paste to make the solder stick. Then wrap each joint with sheet rubber and cement it in place. Then wrap with insulating tape. Install two porcelain knobs on the beams near the outlet. Bring the two outlet wires to these knobs, and give the wires a hitch around them. Then run the wires to the outlet box. A piece of circular loom must be placed on each outlet wire, extending from the knob into the outlet box.

A Three-Horse Evener.

Please explain to me how to make a three-horse evener for a wagon. I want it for my manure spreader. I want to have two horses on one side of the tongue, and one on the other.

Answer.—We have had several requests for information as to how to construct an evener of this kind. It is not an easy matter to hitch two horses on one side and one on the other and avoid side draft without placing the single horse quite a distance from the tongue. The figure shows one of the best solutions of this problem. The principal length dimensions are shown, the figures being inches. The sketch is not to scale. The singletrees should be twenty-eight inches long. They should be about two and three-eighths inches diameter at the middle, and taper down to one and three-fourths inches at the ends. Hickory is the best material for homemade trees, but pressed steel makes a lighter and stronger tree. The doubletree D should be thirty-six inches long over all; one and three-eighths inches thick, and three and three-fourths inches wide. C should be the same width and thickness, and forty-six inches long over all. B should be the same width and thickness, and eighteen inches long over all. A should be one and three-fourths inches thick and four and one-half inches wide. It should be thirty-five inches long over all.



The singletrees should have ferrules and hooks as shown, the hooks being made of three-eights-inch-diameter steel rod. The ends of the doubletrees should be bound with strap iron, about three-thirty-seconds of an inch thick, to prevent splitting. The straps connecting the doubletrees should be made of strap iron, one-fourth inch thick and two inches wide. Place these straps both below and above the doubletrees, so as to avoid a twisting strain. Use five-eighths diameter machine bolts for pins. The plates P should be one-fourth of an inch thick, ten inches wide, and long enough to cut off as shown. All joints must work freely.

Auto Runs Poorly.

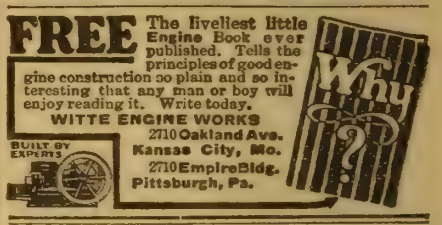
I have a number 79 Overland car. It seems to run all right except on a hard pull. If the speed slows up a little, it knocks and clicks. The car will make about thirty-five mils per hour on the road. I have had the magneto repaired, and it seems to run all right. Would a Bosch magneto give more speed?

Answer.—A new magneto would probably help your car, but it evidently needs a general overhauling by a competent mechanic. See that you have good compression, and that the inlet valves do not fit too loosely in the guides. Be sure that there are no air leaks at the intake manifold gaskets. The motor bearings should be adjusted, and the worn parts of the clutch and transmission replaced.

Dynamo Does Not Generate.

I have an Apple dynamo, ten volts, 1,300 R. P. M. Some time ago this dynamo stopped generating. I put in new brushes without results. I cleaned it up and rewired it, but still it will not give any current. I use it to run a fifteen-horse-power gasoline engine. What is my trouble?

Answer.—There is probably a break in the field wires, or a loose connection. If you cannot easily locate it you better send the generator to the maker for repairs.



TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The prologue, or Part First, is laid in New Orleans and concerns two brothers, one of whom has proved faithless to the girl who trusted him, the other one marrying the girl and giving her the name and home which the faithless brother had well-nigh robbed her of. The scene then shifts to the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold and "bunking" with an old Scotchman, named MacDougall, his only companion, save his beloved horse, Mowitza. He was talking to the horse, preparatory to a ride through the hills, when the last installment closed.

CHAPTER I—Continued.

MacDougall had seen many of the grand panoramas which day and night on Scot's mountain give one, and he stood in the door unheeding this one. His keen eyes, under their shaggy brows, were directed to the younger man's bronzed face.

"There ye go!" he said, half peevishly; "ye jabber Chinook to that Talapa and to the mare until it's a wonder ye know any English at all; an' when ye be goin' back where ye belong, it'll be fine, queer times ye'll have with your ways of speech."

Genesee only laughed shortly—an Indian laugh, in which there is no melody.

"I don't reckon I belong anywhere, by this time, except in this Chinook region; consequently," he added, looking up in the old man's interested face, "I'm not likely to be moving anywhere, if that's what you're trying to find out."

MacDougall made a half-dissenting murmur against trying to find out anything, but Genesee cut him short without ceremony.

"The fact is, Mac," he continued; "You are a precious old galoot—a regular nervous old numskull. You've been as restless as a newly caught grizzly ever since I went down to Coeur d'Alene two weeks ago—afraid I was going to cut loose from Tamanous Peak and pack my traps and go back to the diggin's; is that it? Don't lie about it. The whole trip wasn't worth a good lie, and all it panned out for me was empty pockets."

"Lad! ye canna mean to say ye lost—"

"Every damned red," finished Mr. Genesee complacently.

"An' how—"

"Cards and mixed drinks," he said laconically. "Angels in the wine rooms and a slick individual at the table who had a better poker hand than I had. How's that as a trade for six months' work? How does it pan out in the balance with half-breeds?"

Evidently it staggered MacDougall. "It is no much like ye to dissipate, Genesee," he said, doubtfully. "O' course, a man likes to try his chance on the chips once in a way, and to the kelpies o' the drinkin' places one must leave a few dollars, but the mixin' o' drinks or the muddlin' o' brains is no natural to ye; it may be a diversion after the hill life, but there's many a kind that's healthier."

"You're a confounded old humbug," said Genesee coolly; "you preach temperance to me and get drunk as a fiddler all alone by yourself—not much Scotch in that way of drinking, I can tell you. Hello! who's that?"

MacDougall leaned forward and peered down the path where the sound of a horse's feet were heard coming around the bend.

"It's that man o' Hardy's comin' again about a guide, I have na doubt. I'll send him across Seven-mile Creek to Tyee-Kamooks. They can get a Siwash guide from him, or they can lose themsel's for all me," he said, grumpily, incited thereto, no doubt, by Genesee's criticism of his habits. He often grumbled that his friend from the Maple range was mighty "techy" about his own faults and mighty cool in his opinions of others.

A dark, well-built horse came at an easy, swinging pace out of the gloom of the spruce boughs and over the green sward toward the cabin; his rider, a fair, fine-looking fellow in a ranchman's buckskin suit, touched his hat ever so lightly in a salute, a courtesy the others returned, Genesee adding the Chinook word that is either salutation or farewell, "Klahowya, stranger," and the old man giving the more English speech of "Good evening; won't ye light, stranger?"

"No; obliged to you, but haven't time. I suppose I'm speaking to Mr. MacDougall," and he took his eyes from the tall, dark form of Genesee to address his speech to the old trapper.

"Yes, I'm Davy MacDougall, an' I give a guess you're from the new sheep ranch that's located down Kootenai Park; you're one of Hardy's men."

"No; I'm Hardy."

"Are ye, now?" queried the old fellow in surprise. "I expected to see an older man—only by the cause of hearin' you were married, I suppose. Well, now, I'm right glad to meet wi' a new neighbor—to think of a ranch but a bit of ten miles from Scot's Mountain, an' a white family on it, too! Will ye no light an' have a crack at a pipe an' a glass?"

Hardy himself was evidently making a much better impression on MacDougall than the messenger who had come to the cabin in the morning.

"No, partner, not any for me," answered the young ranchman, but with so pleasant a negative that even a Westerner could not but accept graciously such a refusal. "I just rode up from camp myself to see you about a guide for a small party over into the west branch of the Rockies. Ivans, who came to see you this morning, tells me that you are disabled yourself—"

"Yes; that is, I had a hug of a grizzly two weeks back that left the ribs o' my right side a bit sore; but—"

The old man hesitated; evidently his reluctance to act as guide to the poor fools was weakening. This specimen of an Eastern man was not at all the style of the tourists who had disgusted him so.

"An' so I told your man I thought I could na guide you," he continued in a debatable way, at which Hardy's blonde mustache twitched suspiciously and Genesee stooped to fasten a spur that had not needed attention before; for the fact was Mac had felt "ower cranky" that morning, and the messenger had been a stupid fellow who irritated him until he swore by all the carpenter's outfit of a certain workman in Nazareth that he would be no guide for "weemen folk and tenderfeet" in the hills. His vehemence had caused the refusal of Ivans to make a return trip, and Hardy, remembering Ivan's account, was amused, and had an idea that the dark, quiet fellow with the musical voice was amused as well.

"Yes," agreed the stranger, "I understood you could not come, but I wanted to ask you if you could recommend an Indian guide. I had Jim Kale engaged—he's the only white man I know in this region; the men on my place are all from south of the Flathead country. He sent me word yesterday he couldn't come for a week—confound these squaw men! He's gone to hunt caribou with his squaw's people, so I brought my party so far myself, but am doubtful of the trail ahead. One of the ladies is rather nervous about Indians, and that prevented me from getting a guide from them at first; but if we continue she must accustom herself to Montana surroundings."

"That's the worst o' the weemen folk when it comes to the hills," broke in MacDougall, "they're over easy to be frightened at shadows; a roof an' four walls is the best stoppin' place for a' o' them."

The young ranchman laughed easily. "I don't believe you have known many of our Kentucky women, Mr. MacDougall; they are not hothouse plants, by any means."

Genesee pushed a wide-brimmed light hat back from his face a little, and for the first time joined the conversation.

"A Kentucky party, did you say, sir?" he queried, with half-careless interest.

"Yes," said Harding, turning toward him; "relatives of mine from back East, and I wanted to give them a taste of Montana hill life and a little hunting. But I can't go any farther into the hills alone, especially as there are three ladies in the party; and a man can't take many risks when he has them to consider."

"That's so," said Genesee, with brief sympathy; "big gang?"

"No—only six of us. My sister and her husband, and a cousin, a young lady, are the strangers. Then one of the men off my ranch who came to look after the pack mules, and my wife and self. I have an extra horse for a guide if I can pick one up."

"I shouldn't be surprised if you could," said Genesee reflectively; "the woods are full of them, if you want Indian guides, and if you don't—well, it doesn't seem the right thing to let visitors leave the country disappointed, especially ladies, and I reckon I might take charge of your outfit for a week or so."

MacDougall nearly dropped his pipe in his surprise at the offer.

"Well, I'll be—" he began; but Genesee turned on him.

"What's the matter with that?" he asked, looking at Mac levelly, with a glance that said: "Keep your mouth shut." "If I want to turn guide and drop digging in that hill back there, why shouldn't I? It'll be the 'divarsion' you were suggesting a little while back; and if Mr. Hardy wants a guide, give me a recommend, can't you?"

"Do you know the country northwest of here?" asked Hardy eagerly. It was plain to be seen he was pleased at his "find." "Do you live here in the Chinook country? You may be a neighbor of mine, but I haven't the pleasure of knowing your name."

"That's Mac's fault," said the other fellow coolly; "he's master of ceremonies in these diggin's, and has forgotten his business. They call me Genesee Jack mostly, and I know the Kootenai hills a little."

"Indeed, then, he does, Mr. Hardy," said MacDougall, finding his voice. "Ye'll find no Siwash born on the hills who knows them better than does Genesee, only he's been bewitched like, by picks and shovels an' a gulch in the Maple range; but you're a lucky man to be gettin' him, Mr. Hardy, I'll tell ye that much."

"I am willing to believe it," said Hardy frankly. "Could you start at once with us, in the morning?"

"I reckon so."

"I will furnish you a good horse," began the ranchman; but Genesee interrupted, shaking his head with a gesture of dissent.

"No, I think not," he said in the careless, musical voice that yet could be so decided in its softness; and he whistled softly, as a cricket chirrups, and the brown mare came to him with long, catlike movements of the slender limbs, dropping her head to his shoulder.

"This bit of horseflesh is good enough for me," he said, slipping a long, well-shaped hand over the silky cheek; "an' where I go, Mowitza goes—eh, pet?"

The mare whinnied softly as acknowledgment of the address, and Hardy noticed with admiration the fine points in her sinewy, supple frame.

"Mowitza," he repeated. "That in Chinook means the deer, does it not—or the elk; which is it? I haven't been here long enough to pick up much of the jargon."

"Well, then, ye'll be hearin' enough of it from Genesee," broke in MacDougall. "He'll be forgettin' his native language in it if he lives here five years longer; an'—"

"There, you've said enough," sug-

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gested Genesee. "After giving a fellow a recommend for solid work, don't spoil it by an account of his fancy accomplishments. You're likely to overdo it. Yes, Mowitza means a deer, and this one has earned her name. We'll both be down at your camp by sun-up tomorrow; will that do?"

"It certainly will," answered Hardy in a tone of satisfaction. "And the folks below will be mighty glad to know a white man is to go with us. Jim Kale rather made them doubtful of squaw men, and my sister is timid about Indians as steady company through the hills. I must get back and give them the good news. At sun-up tomorrow, Mr. Genesee?"

"At sun-up tomorrow."

CHAPTER II.

As the Sun Rose.

DO YOU know the region of the Kootenai that lies in the northwest corner of a most northwestern state—where the "bunch-grass" of the grazing levels bends even now under a chance wild stallion and his harem of silken-coated mates; where fair upland "parks" spread back from the cool rush of the rivers; where the glittering peaks of the mountains glow at the rise and fall of night like the lances of a guard invincible, that lift their grand silence as a barrier against the puny strife of the outside world?

Do you know what it is to absorb the elastic breath of the mountains at the awakening of day? To stand far above the levels and watch the faint amethystine peaks catch one by one their cap of gold flung to them from an invisible sun? To feel the blood thrill with the fever of an infinite possession as the eyes look out alone over a seemingly creatureless scene of vastness, of indefiniteness of all vague promise, in the growing light of day? To feel the cool crispness of the heights, tempered by the soft "Chinook" winds? To feel the fresh wet dews of the morning on your hands and on your face, and to know them in a dim way odorus—odorus with the virginity of the hills—of the day dawn, with all the sweet things of form or feeling that the new day brings into new life?

A girl on Scot's Mountain seemed to breathe in all that intoxication of the hill country, as she stood on a little level, far above the smoke of the camp fire, and watched the glowing, growing lights on the far peaks. A long time she had stood there, her riding dress gathered up above the damp grass, her cap in her hand, and her brown hair tossing in a bath of the winds. Twice a shrill whistle had called her to the camp hidden by the spruce boughs, but she had only glanced down toward the valley, shook her head mutinously, and returned to the study of her panorama; for it seemed so entirely her own—displaying its beauties for her sole surprisal—that it seemed discourteous to ignore it or descend to lower levels during that changing carnival of color. So she just nodded a negative to her unseen whistler below, determined not to leave, even at the risk of getting the leavings of the breakfast—not a small item to a young woman with a healthy, twenty-year-old appetite.

Something at last distracted that wrapt attention. What was it? She heard no sound, had noticed no movement but the stir of the wind in the leaves and the grasses, yet she shrugged her shoulders with a twitchy movement of being disturbed and not knowing by what. Then she gathered her skirts a little closer in her hand and took a step or so backward in an uncertain way, and a moment later clapped the cap on her tumbled hair and turned around, looking squarely into the face of a stranger not a dozen steps from her, who was watching her with rather sombre, curious eyes. Their steady gaze accounted for the mesmeric disturbance, but her quick turn gave her revenge, for he flushed to the roots of his dark hair as she caught him watching her like that, and he did not speak at first. He lifted his wide-brimmed hat, evidently with the intention of greeting her, but his tongue was a little unruly, and he only looked at her, and she at him.

They stood so in reality only a flash of seconds, though it seemed a continuous stare of minutes to both; then the humorous side of the situation appealed to the girl, and her lips twitched ever so slightly as she recovered her speech first and said demurely:

"Good morning, sir."

"How are you?" he returned; and having regained the use of his tongue, he added, in an easier way: "You'll excuse me, lady, if I sort of scared you?"

"Oh, no, I was not at all startled," she answered hastily, "only a little surprised."

"Yes," he agreed, "so was I. That's why I stood there a-staring at you—couldn't just make out if you were real or a ghost, though I never saw even the ghost of a white woman in this region."

"And you were watching to see if I would vanish into thin air like a Macbeth witch, were you?" she asked quizzically.

He might be on his native heath and she an interloper, but she was much the most at her ease—evidently a young lady of adaptability and considerable self-possession. His eyes had grown wavering and uncertain in their glances, and that flush made him still look awkward, and she wondered if Macbeth's witches were not unheard-of individuals to him, and she noticed with those direct, comprehensive eyes that a suit of buckskin can be wonderfully becoming to tall, lazy-looking men, and that wide, light sombreros have quite an artistic effect as a frame for dark hair and eyes; and through that decision she heard him say:

"No. I wasn't watching you for anything special, only if you were a real woman, I reckoned you were prospecting around looking for the trail, and—and so I just waited to see, knowing you were a stranger."

"And is that all you know about me?" she asked mischievously. "I know much more than that about you."

"How much?"

"Oh, I know you're just coming from Davy MacDougall's, and you are going to Hardy's camp to act as commander-in-chief of the eastern tramps in it, and your name is Mr. Jack Genesee—and—and—that is all."

"Yes, I reckon it is," he agreed, looking at her in astonishment. "It's a good deal, considering you never saw me before, and I don't know—"

"And you don't know who I am," she rejoined easily. "Well, I can tell you that, too. I'm a wanderer from Kentucky, prospecting, as you would call it, for something new in this Kootenai country of yours, and my name is Rachel Hardy."

"That's a good, square statement," he smiled, put at his ease by the girl's frankness. "So you're one of the party I'm to look after on this cultus corrie?"

"Yes. I'm one of them—Cousin Hardy says the most troublesome of the lot, because I always want to be doing just the things I've no business to;" then she looked at him and laughed a little. "I tell you this at once," she added, "so you will know what a task you have undertaken, and if you're timid you might back out before it's too late—are you timid?"

"Do I look it?"

"N—no;" but she didn't give him the scrutiny she had at first—only a swift glance and a little hurry to her next question: "What was that queer term you used when speaking of our trip—cul—cultus?"

"Oh, cultus corrie! That's Chinook for pleasure ride."

"Is it? What queer words they have. Cousin Harry was telling me it was a mongrel language, made up of Indian, French, English, and any stray words from other tongues that were adjustable to it. Is it hard to learn?"

"I think not—I learned it."

"What becoming modesty in that statement!" she laughed quizzically. "Come, Mr. Jack Genesee, suppose we begin our cultus corrie by eating breakfast together; they've been calling me for the past half hour."

He whistled for Mowitza, and Miss Rachel Hardy recognized at once the excellence of his silken-coated favorite.

"Mowitza; what a musical name!" she remarked as she followed the new guide to the trail leading down the mountain. "It sounds Russian—is it?"

"No; another Chinook word—look out there; these stones are bad ones to balance on, they're too round and that gully is too deep below to make it safe."

"I'm all right," she announced in answer to the warning as she amused herself by hopping birdlike from one round, insecure bowlder to another, and sending several bounding and crashing into the gully that cut deep into the heart of the mountain. "I can manage to keep my feet on your hills, even if I can't speak their language. By the way, I suppose you don't care to add Professor of Languages to your other titles, do you, Mr. Jack Genesee?"

"I reckon I'm in the dark now, Miss, sort of blindfold—can't catch onto what you mean."

"Oh, I was just thinking I might take up the study of Chinook while out here, and go back home overwhelming the natives by my novel accomplishment." And she laughed so merrily at the idea and looked so quizzically at Genesee Jack's dark, serious face that he smiled in sympathy.

They had only covered half the trail leading down to the camp, but already, through the slightly strange and altogether unconventional meeting, she found herself making remarks to him with the freedom of a long-known chum, and rather enjoying the curious, puzzled look with which he regarded her when she was quick enough to catch him looking at her at all.

"Stop a moment," she said, just as the trail plunged from the open face of the mountain into the shadow of spruce and cedar. "You see this every morning, I suppose, but it is a grand treat to me. See how the light has crept clear down to the level land now. I came up here long before there was a sign of the sun, for I knew the picture would be worth it. Isn't it beautiful?"

Her eyes, alight with youth and enthusiasm, were turned for a last look at the sun-kissed country below, to which she directed his attention with one bare, outstretched hand.

"Yes, it is," he agreed; but his eyes were not on the valley of the Kootenai, but on the girl's face.

(To be continued.)

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AILING ANIMALS.

Heaves.

I have a bay mare, ten years old, which seems to be developing the heaves. She has always been perfectly healthy and normal until this spring.

There is no reliable cure for heaves after it is well established. One can often improve the animal's condition by feeding lightly of hay and watering often and in smaller quantities than usual and by administering Fowler's solution of arsenic in half-ounce doses daily.

Broken Tail.

I have a seven-year-old mare that had its tail broken when a colt. Since then the hair has been rather short. Can you tell me what to do to make the hair grow?

This trouble has probably been brought about through the injury, doing damage to the blood and nerve supply in this region. It is rather a hard proposition to do any good here. You might get some results by applying a mild blistering agent to the affected parts.

A Bad Habit in Cow.

I have a cow that sucks herself once in a while. I have tried several kinds of muzzles, but without good results.

Very little can be done for a cow that sucks herself unless some mechanical means can be devised. Try using a side-stick. Put a halter on the cow, then take a long stick and fasten one end to the halter, the other end to be fastened to a strap which is made to encircle the body. This will keep her from turning her head very far to either side.

Too Free Flow of Saliva.

I have a gray mare that slobbers when eating grain. I had her teeth attended to last week, but she is just the same.

This trouble might have been brought on from any one of a number of causes, such as bad teeth, foreign bodies in the mouth, irritating foods, etc. The mouth should be thoroughly examined for unsound teeth, foreign bodies, etc. If the flow of saliva persists you may get some results by syringing the mouth out once daily with an alum solution.

Burying Cholera Hogs.

About three yeas ago I had hog cholera on my place, losing about seventy-five head. Part of them were buried about two feet under ground, while the rest were burned. Recently I turned my sows and pigs out and before I knew it the sows were rooting into the graves.

It is not known exactly how long the germ of hog cholera lasts. The climate, soil, etc., have an influence on the length of life of the germ. It has been known to remain virulent for two years, if not longer. Hogs dead of cholera should not be buried, but should be burned.

Fistula Wound.

I have an eleven-year-old mare that had a fistula last fall. She was operated on for the fistula by a veterinarian and I think it is killed, but the wound will not heal up. I have used healing powder and wool fat, but they fail to heal it up. We have been using her this spring and since the flies have come they bother her some.

It would seem that if the fistula you speak of was killed, as you say, that it would heal. You might try the application once or twice daily of the following wash: Zinc sulphate, one-half ounce; sugar of lead, one-half ounce, and powdered alum, one-half ounce, with water enough to make one quart. Shake well before using and apply freely.

Abnormal Growth on Jaw.

I have a red Short-horn heifer calf seven months old that was born with a bunch on its neck just below the jaw bone and it is growing larger as the calf grows older. The bunch is soft as if it was fleshy and not as if there was any matter. I have not done anything for it, as I thought it would go away. Please let me know if it is dangerous to the calf or not. It eats and drinks all right.

It would be very hard to say just what the nature of the growth is, since the animal had it present when born. Something might be found out by an examination by a competent man, but it is doubtful even then.

Heaves.

I have a seven-year-old mare which contracted a cold last spring and has had a slight cough until last September when she got a bad spell of choking and I had to call a veterinarian. She has been coughing nearly all the time since and when she has to pull hard her throat begins to rattle and she chokes down and has a hard time to get her breath. She sweats very easily and passes a little urine every time she coughs. Her collar is large enough so that the choking is not caused from that. The main trouble seems to be in her throat. She also has signs of heaves.

Your mare probably is the victim of heaves which has been brought about through some other trouble. The exercise and hard pulling cause her to choke down. Feed this mare sparingly of hay and water in small quantities, but often. Give daily one-half ounce of Fowler's solution of arsenic. Mix this with small amount of water and give with a syringe.

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Editor knows from experience Shoo-Fly is O. K.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Raises 200 June Chicks.

To the Editor:—I find June chicks just as easy to raise as those hatched at any other season if one will prepare for them before they are hatched. I have always used a covered coop and yard for them and have raised from 150 to 200 in a yard 20x40 feet until almost frying size.

There are more deaths caused among small chicks by vermin and the eating of sour, damp food than anything else. There will always be some lost and many more stunted if they are not properly cared for. On cool, dewy mornings we keep our baby chicks in their coops until the sun is well up and the ground is warm. They should never be allowed to run in the wet grass and weeds. Neither should they be fed heavy, damp food in the early morning, for they then are hungry and it will be easy for them to eat to excess, not ceasing until their little crops are distended to such an extent that they must suffer pain. Then after this they are sure to be lazy and will not exercise, which is necessary for them in the early morning.

For the first few days after the chicks are hatched I feed them sparingly on wheat bread soaked in sweet milk, with a small amount of black pepper. This will prevent bowel disease in hot weather. Then they may be fed on dry food, bread crumbs, meal and bran. They should be made to scratch for this food in straw, so as to get plenty of exercise.

June chicks should have but little water in the early part of the day and the watering vessels should be arranged so that they cannot get into them with their feet.

When they are old enough to go up on the roost they should be placed on the low roosts, not higher than twenty inches from the floor of the chicken house. The house should be high and well drained. Gravel or cinders may be used on the floor and on top of this an inch or more of good, clean, dry straw, which should be changed at least twice a week.

If lice make their appearance I use olive oil and kerosene, equal parts, applying it with a brush or sponge, just enough to wet the feathers to the skin on the head and neck only. One application of this kind is generally enough for the head louse, but for the body lice I use any kind of good insect powder, which I dust well all over the body every eight or ten days so as to catch the second brood that hatches from the nits the powder failed to kill. If this plan is followed there will be but little trouble in raising a fine flock of June chicks. O. F. L.

Hereditary Weakness in Chicks.

To the Editor:—The best advice to be given to Mrs. Kirstein who writes in the issue of May 18th, in this paper, is to have a wholesale clearance and start all over with stock from a flock that she is reasonably certain is full of vigor.

Little complaint can be made in regard to the number hatched; 125 chicks from 200 eggs is very good. Not equal to "fifteen chickens from fifteen eggs," but a very good average. The most experienced poultry people will tell you that one chick from each two eggs, and one live fowl at maturity from each chick is the rule, and the other reports are exceptions, or phenomena.

The chicks are dying; they died last season. Not all of them died last season, presumably, and the survivors are being used for parent stock, and there it is. A lack of good red blood corpuscles, resulting in weak, anemic young chickens, that, if they survive will be trying to reproduce themselves again next season—and don't you let 'em. Clean house in more ways than one.

Your feeding is fairly good. Bran and chick feed from the start is used at this place, with the result that no chickens are lost from that source, at least. To this ration is added broken bits of charcoal that we made when the yards were being cleaned by pouring water over the half-burned limbs. Until the small biddies are permitted to run on the range they are supplied clover.

A teaspoonful of tincture of iron to a pint of water will help the blood, and possibly help to raise some of your youngsters to maturity, though if the writer supposed they would be used for breeders next season it is doughnuts to dollars that this would not be written.

Go out amongst your flock of hens and critically, mercilessly size them up. Honestly, do they look the part?
M. G. S.

Millet Seed Valuable For Chickens.

To the Editor:—In a recent issue of your paper one of your subscribers calls attention to the fact that he has 800 bushels of millet seed on hand that is absolutely worthless for seed. There is no market for it, therefore, and he asks for information concerning the use that he can make of this millet.

I have found millet seed to be one of the very best foods for young chickens. I should think, at the same price per bushel as oats, this party could dispose of the seed for this purpose. It could be sold to the large companies who prepare chick feed, or by a little advertising might be sold to individuals in smaller amounts.
Henry Co., Ill. Mrs. E. E. Yocum.

Cramps in Geese.

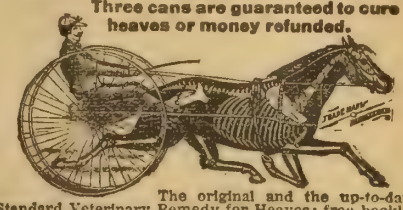
To the Editor:—Last year I raised twenty-six geese and never lost a goose until one day they all went up the road about a mile, eating grass. When they came back they were all very hot. I set out a pan of cold water. Two of them jumped into the pan. They stayed in about two minutes, then they jumped out, threw their heads back and went around in a circle, then fell back on their backs. This happened every time these geese got in the water and was caused from the geese being hot and cooling off too quickly, causing cramps.
T. C. S.

Ask your neighbor to subscribe for The Wisconsin Farmer.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

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Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.
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OWNERS HAVE OPENED

A TRACT of 25,000 acres of land, cut over by themselves, all near Ladysmith, in Wisconsin's best dairy district, and will give buyers their choice at low prices and on easiest terms. Send for literature. Flambeau River Lumber Company, Station D, Ladysmith, Wisconsin.

STOCKMEN AND FARMERS. 6,500 acres in Florida for sale in a body. $6 per acre, payable $1 per acre down, balance $1 per acre per year. 6% interest. Fine grazing proposition. For particulars write E. C. HOWE
723 Hartford Building CHICAGO, ILL.

JOIN the prosperous dairy farmers who are locating on our company's lands in Aitkin county, the dairyman's paradise. Country with rich grasses, abundant water. Near new steel plant. Write ARNOLD, Land Agent Rock Island Railway, 151 Wolvin Bldg., Duluth, Minn.

YOU want cheap upper Wisconsin land. Why hesitate and allow others to make the first selections? Write us for state map and list of owners. Wisconsin Advancement Association, 1590 First National Bank Bldg., Milwaukee, Wis.

POSITION WANTED Reliable man past fifty wants position on farm where he can get home for his family. Experienced in creamery work. Write G. E. H., care of this paper for information.

PATENTS Watson E. Coleman, Patent Lawyer, Washington, D. C. Advice and books free. Rates reasonable. Highest references. Best services.

SHELTERED, partly timbered dairy country, St. Louis county. Rapid growing seasons. Low priced lands. Easy terms. Write Arnold, Land Com'r, 513 Wolvin Bldg., Duluth, Minn.

WANTED FARMS—Have 3,357 buyers; describe your unsold property, give price, acreage, location. 769 Farmers' Exchange, Denver, Colo.

HEAVES cured or money back. Baird's Heave Remedy is guaranteed. Write Baird Mfg. Co., Box 618, Purcell, Okla., for particulars.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minnea polis, Minnesota.

BIG 4 POULTRY JOURNAL
Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Farm Sanitation.

IN the profitable raising of live stock and poultry there are conditions outside of proper feeding that determine success or failure. The most important of these is health. Every owner knows that live stock annoyed by lice, flies and other parasites worry, scratch and work off flesh so that they do not get the full benefit of their feed. This in time results in loss of strength and leaves them susceptible to disease. To correct these conditions should be the duty of every live stock owner, as it means money in his pocket. The systematic use of a reliable stock dip and disinfectant will kill the parasites, help cure mange, ringworm and other skin troubles, and, as a sanitary protection, prevent hog cholera and other contagious diseases. The most widely used product of this kind—and one which is manufactured by a firm of the highest scientific and commercial reputation—is Kreso Dip No. 1. This dip is a dependable product because it is standardized. This means that every lot has been tested to uniform strength—an important precaution not always taken in the manufacture of such products. It is very easy to use—simply needs the addition of water. In the dilution recommended for all live stock and poultry it is very economical and may be used freely. Used as directed, it is not caustic, irritating or unpleasant to handle. It will kill lice, mites, fleas and sheep ticks and put the skin of the animal in good condition. A 2½ per cent dilution will kill virulent hog cholera virus in five minutes by contact. The manufacturers, Parke, Davis & Co., of Detroit, Mich., will mail (free) interesting booklets on the care of all live stock and poultry to anyone writing for them. Kreso Dip No. 1 is sold in original packages by all druggists.—Adv.

The Grand Champion Jumbo Hadley For Sale.

A GRAND champion boar at the head of a herd adds prestige. It is impossible for every breeder to have a champion herd boar. However, here is a chance for some Poland China breeder to place a grand champion boar at the head of their herd. Jumbo Hadley, the grand champion of the Wisconsin State Fair, 1915, and owned by Dobson & Eastman, Lancaster, Wis., is being offered for sale. The owners meant to show this boar again this fall, but inasmuch as the rest of their show herd is of their own breeding and as Jumbo Hadley is not, they have decided to sell him and let someone else show him if they so desire. Jumbo Hadley was farrowed February 11, 1913. Sire, Major Hadley by Big Hadley, dam, Jumbo Belle by Victor. His breeding is the best and the fact that he won first and championship at Milwaukee last year speaks well for his individuality. He is now in fine breeding condition, weighing right at 700 pounds. They will guarantee him as a breeder. He needs no guarantee in that respect for the first-prize futurity litter at Milwaukee last year was sired by this good boar. By having a champion boar at the head of your herd you have something to make a noise about and you can't go out and buy a prospect, fit him, take him to the fairs—maybe win—for the money with which you can buy this boar. He will only be offered for a short time and the first check for $125 gets him. He is a bargain at that price—get busy. When writing kindly say you saw the advertisement in The Wisconsin Farmer. See page 23.—Adv.

Here's Your Chance.

IF you are interested in Poland Chinas you have heard of J. C. Hendricks, Hazel, Green, Wis., for he is the fellow that produces the Polands that "make the hit." He is offering forty spring boars and when J. C. has anything to sell the inquiries come in fast and furious for the Hendricks kind are scarce. We consider Repeater one of the best boars in the state and now that he is dead this will be your last chance to get the boars sired by him. Smooth Price, his senior yearling, is the best boar of his age we have seen. We have never seen High Wonder or North Side Wonder, but if they were good enough for J. C. Hendricks they no doubt were good boars. The spring boars being offered are sired by these boars, as well as four or five other boars that have reputations as sires. Get busy at once if you want spring boars. When writing will you please mention The Wisconsin Farmer. See page 23.—Adv.

Poland China Sows All Sold.

WE have just had a letter from E. W. Hendricks, Hazel Green, Wis., advising that he has sold all the bred sows he has been advertising in The Wisconsin Farmer. Mr. Hendricks has one of the very best herds of Poland Chinas in the state, and, as is always the case, the man that has the goods can always find an outlet. In Black Jumbo, E. W. has one of the good herd boars of the state. He is producing the right kind. Sired by Heavy Bone, he is o grandson of the noted Big Bone. His dam, Big Mollie was by Chief Nelson he by Chief Price 2d. Whenever one finds a Big Bone-Chief Price 2d cross he generally finds an individual that is a producer. When September 28th comes you will be invited to attend a boar sale and when you see the boars in this sale sired by Black Jumbo, you will agree with us that he is some sire. See page 23.—Adv.

Who Wants Short-horn Cows and Heifers.

IF you have room for a few more registered cattle or if you want to get started with pure-bred cattle, we know no better herd to refer you to than the one owned by J. E. Kennedy, Janesville, Wis. We recently spent the day with Mr. Kennedy at his Oak Lawn Farm and he has a grand lot of "working" Short-horns. It is his desire to have an all-Scotch herd of cattle and for that reason he is offering to sell his Scotch-topped cows and heifers. There are many breeders in this state and adjoining states that don't want the strictly beef-bred cattle, but prefer them with some Bates breeding in their pedigree and if you are one of them, here is your chance. These cows and heifers are reds and roans, are in nice condition and several of them have calves at foot, others are well along in calf to Denmark 8th, a grandson of the noted Villager. He will sell eight or ten young cows and about the same number of heifers around a year old. No doubt many of our readers have more pasture than they can stock properly, if so buy some of these Short-horns and let them run on grass until fall, raise their calves and we feel confident you can turn them at a profit. Short-horns are good property—get some, J. E. Kennedy, Janesville, Wis., has them. Mention The Wisconsin Farmer when writing. See page 23.—Adv.

Duroc Gold Bonds.

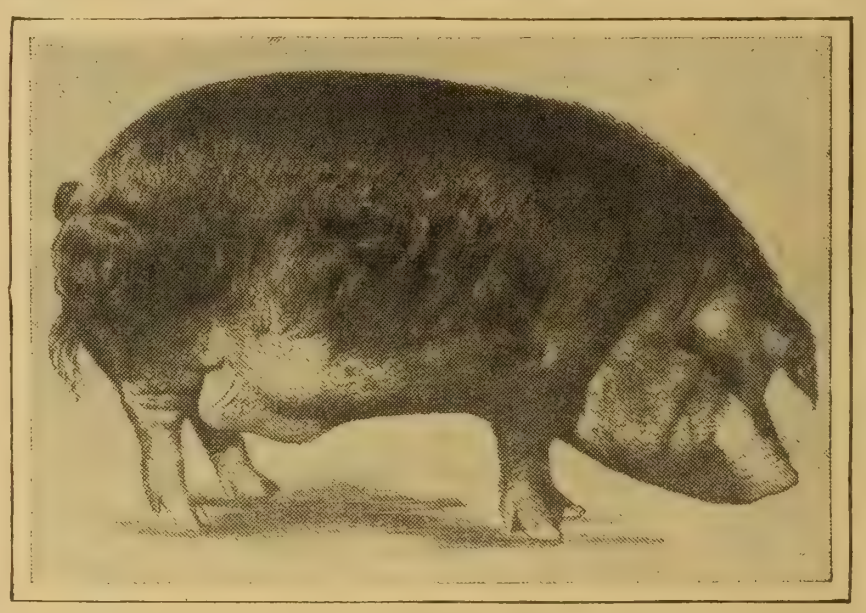
DO you want some Duroc Jersey sows due to farrow in August and September? They are bred to Gold Bond, the first-prize senior yearling boar at the Wisconsin State Fair, 1915. This Gold Bond is a good boar, having plenty of size and right in every way, and as Mr. John L. Fisher, Janesville, Wis., the owner, has some fancy bred sows the buyer of these bred sows should have some valuable litters this fall. If you are interested write and mention The Wisconsin Farmer. See page 23.—Adv.

A Low-Priced, Reliable Corn Harvester.

ON the chance that some of our readers have not heard of the Perfect corn harvester, made by the Love Mfg. Co., Lincoln, Ill., we take this occasion to call their attention to it. This machine is not expensive and with one horse and one man it will cut from five to six acres of corn in a day and cut it well. The reduction in labor is almost as great as the amount saved in the initial cost as compared with the more common higher priced machines. From all we can learn it gives excellent results, and is very highly prized by those who have them, as a machine of great economy and efficiency. Write Love Mfg. Co., Lincoln, Ill., for copy of their catalog. Kindly mention this paper.—Adv.

Bargains in Angus Bulls.

BEEF cattle are good property this year and when talking about beef cattle one must consider the Aberdeen Angus. We recently called on Harry Young, Bridgeport, Wis., and found him with a small, but good herd of Angus cattle. He has been breeding the "doddies" for some five years and has had good success with this breed. Most of his success has been due to the fact that he bought good breeding cows when he laid the foundation and he is a good caretaker and we all know that is a combination that is hard to beat. Every cow on his place of breeding age has a calf at foot and a man going there will find a working herd of Aberdeen Angus. At the present time Mr. Young has five bulls for sale and we might say that in the lot is some of the best young bulls we have seen for some time. One of the best is a yearling, two in July. He has a great frame, is an excellent top bull and very smooth. This bull is in nice condition for immediate service. One of the best of the lot is a May yearling. Here is a bull good enough to head any herd and if properly fitted he would make a creditable showing at the fall fairs. The other three bulls have just turned a year old. Anyone wanting an Angus bull to head a pure-bred herd, or anyone wanting a bull to grade up a grade herd can find suitable individuals in this herd. Since Mr. Young is a new man in the game he does not expect to get the prices that some of the older breeders get, but, as a matter of fact his bulls are being priced below their value. They are sired by Bob K. 167016 by Patna by imported Proteros, out of a dam that weighed over 2,000 pounds. The present herd bull was bred by McKevitt Brothers noted Angus breeder of Grant county, Wis., and is one of the best young bulls we have seen at the head of any herd in the state. Here is a chance to get one of more good herd bulls, don't overlook the opportunity if interested. These will only be offered for a short while. You will find Mr. Young absolutely on the square and if he writes you describing these bulls you will find them just as represented. Write for prices and description while you think about it. Kindly mention The Wisconsin Farmer.—Adv.



Prince Defender, the good two-year-old Duroc Jersey boar owned by McClurg Brothers, Viroqua, Wis. Here is a great boar.

Almeda Alcartra De Kol of East Side 131815 A. R. O. record (just made) 40.60 as a five year old. Owned by M. J. Smiley, Bellefourche, South Dakota.

Harford's Holsteins.

IN traveling through the state we meet many surprises in the way of good herds of Holstein cattle. Scarcely a week passes that we do not run across an exceptionally good herd of cattle of which we have never heard before. Many of these herds rank with the best of the breed and yet are scarcely known outside of their own immediate neighborhood. One such herd that we recently found and which is deserving of great praise is that of Fred Harford, Kaukaunee, Wis. The cows in the herd are large animals, of good, straigth type with large, square udders, well-developed milk veins, showing heavy production ability and great capacity. When one looks over the pedigrees of these animals he understands why the animals are of the fine type which he sees, for they are daughters of some of the best bred bulls of the breed. Many of them are daughters of the great bull, Hengerveld Sir De Kol, the sire of Pontiac Maid, that has a record of 30.21 pounds of butter in seven days and has an average test of 4.90. Hengerveld Sir De Kol is a son of Hengerveld De Kol that has 116 A. R. O. daughters, nine with records from thirty to thirty-six pounds of butter in seven days. The writer was recently on the Pontiac Asylum Farm, Pontiac, Mich., where Hengerveld De Kol and Pontiac Korndyke were bred. The entire herd on this farm is composed of granddaughters of Hengerveld De Kol and Pontiac Korndyke and it is of the same type as the animals found in Mr. Harford's herd. In his herd are also daughters of Pontiac Sadie Jewel, that has fourteen A. R. O. daughters, one with a record of 30.78 pounds of butter and 16 pounds of milk in seven days. He is by the same sire as King Segis and his dam is a sister of Sadie Vale Concordia 4th, that recently made forty-one pounds of butter in seven days. At the present time Mr. Harford is offering young bulls for sale out of the above cow and sired by King Colanthus De Kol Korndyke, a twenty-five-pound grandson of Pontiac Korndyke. For further information in regard to these animals write to the above address.—Adv.

Pingel's Holsteins.

ONE of the best Holstein bulls we have seen in our visits throughout the state is Calumet Johanna Abberkerk Champion 105829, owned by A. G. Pingel, Chilton, Wis. This bull combines the three great essentials for a good sire, namely large size, refined quality and high-producing ancestry. He is a massive fellow, weighing over a ton, of good, straight conformation with deep barrel, showing great capacity, a great heart girth, showing a strong constitution, wide through the hips and pin bones and a long, open jointed spine; he represents the most desirable type of Holstein conformation. His dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days. The sire of Calumet Johanna Abberkerk Champion is a son of the $10,000 bull, The Milk and Butter King. Mr. Pingel is getting a fine lot of daughters of this bull, but buyers have taken them away from him very rapidly. Mr. Martin, of Darlington, Wis., who had one of the finest herds of Holsteins in the state and is considered to be one of the leading judges of Holstein cattle recently purchased every daughter of this bull, which Mr. Pingel would sell. At the present time Mr. Pingel is offering a yearling bull ready for service, sired by the above bull. He is three-fourths white, good and straight and well grown. For extended pedigree and further information write to the above address. See page 22.—Adv.

Milking Short-horn Herd.

AS the demand increases the supply decreases—such are the conditions we find among the breeders of milking Short-horn cattle. If you have a few cows that are good milkers or if you have a herd of breeding cows that are good at the pail you should get a bull that comes from high-producing ancestry, if you wish to increase the milking production of your herd. R. W. Lamb & Son, Janesville, Wis., have the milking strain of Short-horns. They have several bulls of serviceable age that they wish to sell and at prices that any farmer can afford to pay. If you want something of this kind, don't wait until the last minute, but order now and get the choice of the lot. In writing please mention The Wisconsin Farmer. See page 23.—Adv.

Royal King 4th For Sale.

WE have just had a letter from McClurg Bros., Viroqua, Wis., the owners of that good two-year-old Duroc boar, Prince Defender, advising that they will sell Royal King 4th. These gentlemen only have a few sows and since they have Prince Defender they will not need another herd boar this year consequently Royal King 4th is for

sale. This boar is a junior yearling—March 25, 1915, and is one of great scale, has a wonderful back, heavy bone and he will put size in your herd. He is sired by the royal champion and $2,650 boar, Royal King, and his dam is by Progressor. Here is a boar that will do someone a lot of good. Write the McClurg Bros. about this hog, they will tell you just what he is and you can believe just what they tell you. They also have a few sows that are bred to Prince Defender for fall litters. They are being priced right and if you need a few brood sows write them. Don't forget to mention The Wisconsin Farmer. —Adv.

A Promising Young Holstein Breeder.

IT IS encouraging to occasionally run across a young man, who is making an unusual success in the breeding and developing of a herd of cattle. It demonstrates that perseverance and attention to details of the business will bring the desired results, which with Holsteins is high-production ability. Firstly, of course, you must have good cattle to work on, but too many breeders neglect to develop the good things they already own. The herd of Wm. Braatz & Sons, Brandon, Wis., is one that is capable of making good records. They have proven this by the records they have recently completed. The herd is in charge of one of the sons, who is proving himself a master herdsman. He has made several seven-day records from twenty to twenty-five pounds of butter. He has also made some very creditable records among which are Bonibel Netherland Pietertje, that gave 22,663 pounds of milk and made 988 pounds of butter in a year. Ovida De Kol 2d gave 20,000 pounds of milk and made 800 pounds of butter in a year. Inka Korndyke Lady, out of three-fourths of her udder as a junior four year old made 700 pounuds of butter in 313 days and carried a calf eight months. Inka Korndyke 2d made 600 pounds of butter in a year and had not been dry for three years. Virgo Canary 2d, as a junior two year old made 595 pounds of butter in a year. Mr. Braatz feels that with the experience he obtained in this last test that he can do much better next time, for he does not feel that the cows have produced to their full capacity as yet. At the present time he is offering his senior herd sire for sale. He is a richly bred bull tracing to forty pounds breeding on both sides. His sire is a grandson of the forty-pound-bull, Johanna McKinley Segis. His dam is a 21.25-pound sister to the forty-pound cow, Johanna De Kol Van Beers, both being daughters of Sir Johanna De Kol. For an extended pedigree and further information in regard to this bull write to the above address.—Adv.

Dynamite, an Economical Means of Land Clearing.

ON almost every farm there is a certain amount of waste land due to stumps, boulders, shallow hardpan or swampy ground. The common methods of clearing are too expensive for reclaiming this land and it has remained idle. But the increasing prices of farm produce and the rising prices of land make it unprofitable to hold idle land. Therefore, a great many farmers have welcomed the use of Hercules Dynamite as a means of fitting this land for cultivation. It does the work cheaply—breaks up the stumps or rocks so that they can be gathered up and hauled away and leaves the ground loose and mellow, ready for cultivation. Also for running ditches or digging holes for setting out trees, Hercules Dynamite has demonstrated its efficiency. Anyone not fully acquainted with the work of Hercules Dynamite, should send for the free farmers' book, "Progressive Cultivation." This book takes up the subjects of land clearing, tree planting, subsoiling, irrigating, etc., in an interesting and profitable way. Clip the coupon from the advertisement on page 9 and send it, properly filled, to the Hercules Powder Co., West 10th St., Wilmington, Del.—Adv.

Sharples Milkers Have Quality.

WHEN we consider that a milking machine has to be used twice a day for every day in the year, it is at once evident that the machine should be of the very best quality and make, in order to give such constant service. In milking machines, as well as in many other lines, the best is the most economical in the long run. Therefore, those who expect to buy a mechanical milker should carefully investigate the Sharples milker, known as the quality milking machine. It is especially durable and strong throughout—all exposed metal parts are non-rusting German silver, and the rubber parts are made of pure, lasting rubber. The Sharples milking catalog will be sent free to any reader of this paper on request to the Sharples Separator Company, West Chester, Pa. See the advertisement on page 13 and write for catalog today.—Adv.

Machines for Harvesting the Potato Crop.

JUST as the grain binder has proven many times more economical and satisfactory than the scythe and flail, so will the potato digger, when tried out, prove to be far better than the spading fork or hoe. Good harvesting machinery is a money and time saver—this statement applies to the potato crop as well as wheat, hay or corn. For greatest efficiency, the potato digger must be adapted to varying conditions. Through extensive study the A. B. Farquhar Co., has found that different soil conditions require different kinds of diggers, and, accordingly, it has built the Farquhar elevated digger in three sizes, supplying each size with attachments suitable for any soil. A new booklet by this company, "Harvesting the Potato Crop," gives full information regarding these machines and other interesting facts regarding the potato crop. A request to A. B. Farquhar Co., Ltd., York, Pa., will secure this book free if The Wisconsin Farmer is mentioned. The company can also supply engines, saw mills, threshers, hydraulic cider presses and similar machines; ask them for information on the line you are interested in. See page 2.—Adv.

A New Big-Type Convert.

BIG-TYPE Poland Chinas have become so in demand by both purebred breeders and by farmers who breed for pork production that W. H. Esterly, Whitewater, Wis., has joined the big-type ranks. He has long been recognized as one of the leading Poland China breeders of the state, and realizing how the demand was turning is ready to supply what is wanted. As has been his custom in the past he has selected his breeding stock very carefully in order to furnish nothing but the best to his customers. He started by purchasing a cracking good sow from Dobson & Eastman, Lancaster, Wis. She is a daughter of thei. grand champion boar, Jumbo Hadley. She farrowed eleven fine pigs and raised ten, which is certainly proof of her ability as a mother. Burlie Dobson would not sell any more gilts last winter, as he was short himself, so Mr. Esterly had Chas. Marher, the genial judge, select two for him at the publlic sales. He sure picked him two good ones. Toppers as individuals and bred in the purple. One is a daughter of Gritters' famous, A Wonder, and one is of Henry Don's breeding. Mr. Esterly also has some boar in Jumbo Wonder. He was born September 21, 1915. When he arrived in Whitewater, February 3, 1916, he weighed eighty-six pounds. On February 27th he weighed 151 pounds; March 12th he had made 174 pounds, and on June 1st he weighed 327 pounds, or a gain of 241 pounds in 117 days, an average of over two pounds a day. If any of our other readers can beat this let us hear from you. These are the kind we like to hear about.—Adv.

UNDER date of May 25th, J. Le Roy Larson, of Iola, Wis., writes as follows: "Please change the reading in my advertisement, as I am sold out of spring boars and have but a few gilts left. The Wisconsin Farmer is doing the work for me. I have one yearling boar by Wisconsin Jumbo at $40 and a bred gilt for fall farrow at $35 bred to Fairview Jumbo, he by Wisconsin Jumbo. Also booking orders for July, August and September pigs at farmers' prices. When you see an extra good gilt or sow bred for August or first of September farrow from a well-advertised and first-class big-type stock please let me hear from you." Mr. Larson is a continuous advertiser in The Wisconsin Farmer, carrying his advertisement the year around. It will be equally profitable for other breeders of pure-bred live stock to do the same.—Adv.

IN a letter recently received from James Derivan, Fox Lake, Wis., he writes as follows: "In the last two weeks sold pigs to Charles Metcalf, of Antigo; Geo. Broman, of Grand View; Rice Lake Lumber Company and State Senator Bichler, of Belgium, Zaunkee county, came over this week and bought one of my good ones." This is an indication of the demand for breeding stock at what many breeders consider a quiet time of year. Mr. Derivan is a continuous advertiser in The Wisconsin Farmer and that it is a paying proposition is shown by the above. If you keep your herd continuously before the breeders, it will be second nature for them to think of your herd when in the market for breeding stock.—Adv.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.

Grains and Grasses Doing Well.

(Continued from page 9.)

of wet weather, especially on low land. On high land corn is coming up well.—S. C.

Sheboygan County.—Recent heavy rains have delayed field work. The outlook for the corn crop is poor—much worse than last year. The earliest corn is ready to cultivate; the plants that have started are yellow and weak. Some corn is to be planted yet. Grain is not making much headway because of late planting and cold weather. New seeding of clover is making a good growth, and pastures are very good.—M. J. Hoppert.

Taylor County.—General crop conditions are good. Pastures, timothy and clover are fine. Oats and barley are good, except on low ground. Weather is fine now, and crops are growing nicely, but the season is about two weeks late. Potatoes and corn are planted and coming up fine. Gardens are late. Fruit will hardly make half a crop.—John E. Miller.

Walworth County.—Pasture and hay crop are very good; this year's seeding shows up fine. Oats seeding was late; the stand is good, but the acreage is less than usual. Barley looks fair, but the sowing was rather late. About 15 per cent of the corn is to be replanted yet. Most of the corn is up and shows a good stand and color in spite of the recent heavy rains. Potatoes are a little backward and bugs are plentiful. Fruit, except apples, promises well.—Ora P. Taylor.

Wisconsin Jersey Meetings.

Programs for the two state meetings of the Wisconsin Jersey Breeders' Association, one to be held at Waupaca June 29th and the other at Wauwatosa, June 30th, have been sent out. At Waupaca the speakers will be Prof. A. C. Oosterhuis, of Madison; F. R. Constance, secretary of the Waupaca County Association; E. E. Wyatt, of Tomah; C. P. Norgord, Wisconsin secretary of agriculture; and M. D. Dunn, president of American Jersey Cattle Club. Practically the same program will be carried out at Wauwatosa. The Waupaca meeting is to be held at Red Oak Stock Farm, and the Wauwatosa meeting at Fewacres, owned by Frederick W. Underwood. Additional speakers at Wauwatosa, will be W. H. Clark, of Rice Lake; J. Q Emery, of Edgerton; Mr. Harry Jenkins, of Chicago; Mr Underwood, and Julian Reis, secretary of the Waukesha County Guernsey Breeders' Association.

Eau Claire County Guernsey Breeders.

About 250 breeders and their friends gathered last week at the A. F. Bennett farm, town of Washington Eau Claire county, Wisconsin, and participated in the annual summer meeting of the Eau Claire county Guernsey Breeders' Association meeting. Speakers were L. E. Gerde, and L. E. Scott, the latter on live stock preparedness. There was a fine program of music and a big basket dinner.

HOLSTEIN-FRIESIAN CATTLE.

2 Sons of the 29.50-lb. Bull MAPLECREST HENGERVELD DE KOL.

WHOSE sire, Friend Hengerveld De Kol Butter Boy, and dam's sire, Pontiac Aaggie Korndyke, have more daughters with records over 1,200 lbs. of butter in one year than any other two bulls of any breed. Bull born Nov. 12, 1915. Dam, Vinnie De Kol Pauline 73561, A. R. O. record 22.28 lbs. butter in seven days, ½ white, straight, level type. Price $125. Bull born Oct. 20, 1915. Dam, an untested daughter of Homestead Fayne De Kol, ¾ white, straight wide rump, a mighty good individual. Price $75. Address GROVE BROS., COLUMBUS, WISCONSIN.

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. BONNIE MEAD STOCK FARMS, Randolph, Wis.

Purebred Registered
HOLSTEIN CATTLE

Remarkable Holstein productiveness. In 1915, from April 22 to April 28, the records of 670 cows were accepted to entry in the Holstein-Friesian Advanced Registry. As evidence of the high efficiency of pure-bred Holsteins these 670 cows, of which over one-half were heifers with first or second calves, produced in seven days, 279,121 pounds of milk containing 10,067 pounds of butterfat, an average per cent of 3.61 butterfat. Average production for each animal was 23 quarts of milk per day and 17 pounds of commercial butter per week. This is just a random showing of the wonderful things of which the big "Black-and-White" is capable.

Send for FREE Illustrated Descriptive Booklet.
The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

21.25-POUND HOLSTEIN BULL

FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees. Wm. Braatz & Sons Brandon, Wis.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

"EDGEWATER"
Holsteins and Guernseys
Now being offered for immediate sale.
450 Cows, Heifers and Service Bulls 450
We are offering first-class stock only; some of Southern Wisconsin's best. Write for particulars.
Edgewater Stock Farm Fort Atkinson, Wis.

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, Kilbourn, Wisconsin.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

HILLSIDE STOCK FARM

BULLS of serviceable age sold, but we have a few young bulls, mostly white, from a grandson of King of the Pontiacs, that has 13 30-lb. daughters. From A.R.O. cows up to 600 lbs. milk; 24.06 butter. Also 2 heifers, 5 cows. Farm 1½ mi. S. Reedsburg. Kirkpatrick Bros., Sauk Co., Reedsburg, Wis.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Henger veld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse Monroe, Wisconsin

REGISTERED HOLSTEIN BULLS $40-$50

SIRED by Billy Elgin De Kol and Korndyke De Kol Spoffard 6th, well marked and well grown.
Henry Peul Cedarburg, Wisconsin

AYRSHIRE CATTLE.

THIS hardy breed makes record production on scanty feed under unfavorable conditions. Unequaled on good pasture and high feed. Milk passes all state and city requirements.

AYRSHIRES pay big profits everywhere. Send for interesting information and names of nearest breeders.

AYRSHIRE BREEDERS' ASS'N
C.M.Winslow, Sec'y, 29 Park St., Brandon, Vt.

SEVERAL YOUNG AYRSHIRE BULLS FOR SALE

LIKE picture here shown. One born August 3, 2915. Sire, imported Craigbrae Lord Rosebery 15001. Dam, Bonny Miss Casanet of So. Farm out of 480 pound three year old. He is more white than red and is guaranteed in every way. If you see him you'll buy him if you know Ayrshires. Your inspection and correspondence are invited. Write Jas. Van Etta, Lima Center, Rock county, Wisconsin.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE LOMIRA, WISCONSIN

BERKSHIRE gilts bred for fall farrow. $35 to $50. April boars shipped at weaning time, $10 up. Address W. A. Freehoff, Waukesha, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,050 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Tunker, Kilbourn, Wis.

G. A. SCHULZ
Adell, Wisconsin
BREEDER OF HOLSTEIN CATTLE

For Sale

PEARL Longfield De Kol 147825. Seven day record 27.29; yearly record 28050.6 milk, 972.08 pounds fat, and her daughter, Pearl Longfield Spofford 159164. Seven day record at three years 23.06; yearly record at four years 22316 milk; 730 fat. Both cows safe in calf.
Harry Keach **Glenbeulah, Wis.**

GREENBUSH STOCK FARM

TO increase your profits buy a bull sired by Princess Mercedes Piebe Champion 98024, whose dam has a record of 26.39 pounds butter in seven days as a four year old, and 667.4 pounds in one year as a two year old. Write for description and price.
R. B. Melvin, Prop. **Glenbeulah, Wis.**

KING Segis Alcartra Beauty Herd Sire 136938. Sire, King Segis Pontiac Alcartra 76602, the $50,000 bull, a grandson of King Segis, and dam a 23½ pound two year old daughter of Johanna McKinley Segis, the $25,000 son of King Segis and Johanna De Kol Van Beers, the 40 pound $7,000 cow with butter record as follows: 7 days, 40.07; 30 days, 151.39; 60 days, 288.45; 90 days, 416.71; 120 days, 541.35. He is a beautiful individual with all the dairy qualities we like. He will weigh 2000 pounds at two years old. A few choice bull calves nicely marked. Price and description mailed on application. Jas. Doyle, R. 23, Waldo, Wis.

ONE bull five months old, a grandson of Pontiac Apollo 38544 that has 38 A.R.O. daughters, one with a record of 35.43 pounds butter in seven days at five years of age. This bull is ⅞ white, nicely marked, straight over the back and broad across the hips. A real good individual, wt. 400 pounds. His dam has an A.R.O. record as a three-yr.-old of 14.65 pounds butter and 365.20 pounds milk. This bull has a sister with a semi-official record of nearly 800 pounds butter in one year and was recently sold for $500 at four years of age.
Mountain Ash Stock Farm, J. B. Cain, Owner
Glenbeulah - - - Wisconsin

CARLOAD YEARLING HOLSTEIN
HEIFERS

AND a few two-year-olds for sale. Will sell them separately or as a whole.
August Meyer - Plymouth, Wisconsin

Registered Holstein Heifer

AND bull calves sired by **Pabst Canary Pontiac Champion 142885,** a grandson of King of the Pontiacs, that has 165 A. R. O. daughters. Write for pedigrees, description and prices.
Wm. Fenner - Sheboygan Falls, Wis.

For Sale

KING Piebe Champion, three years old. 1 bull from dam, A. R. O. 22,093 pounds, 16 mos. old. 3 bull calves, six weeks old for sale cheap if taken at once.
Fred Dankwert - Sheboygan, Wis.

FOR SALE

A FEW yearling heifers to freshen in the fall. well bred
J. P. Brill, Jr., R. 5, Sheboygan, Wis.

FOR SALE
6 REGISTERED Holstein heifer calves, ranging in age from Dec. 12, 1915, to April 10, 1916; nicely marked, more white than black, from heavy producing dams some with A. R. O. records. Also a few registered Holstein cows.
P. J. Liebenstein, R. 19, Adell, Wisconsin

GERRIT J. WIEBERDINK
OOSTBURG, WISCONSIN
Breeder of pure-bred Holstein-Friesian cattle. Stock for sale at all times.

JOHN MELIUS
ADELL **WISCONSIN**
Breeder of registered Holstein cattle. Herd headed by the 28.65-pound bull,
KING OF SCOTT VALLEY 98813

REGISTERED HOLSTEIN

HEIFER calves, about two months old, sired by Piebe Champion 16th, a richly bred bull backed by high seven day and yearly records.
Ernst Markwardt - Sheboygan Falls, Wis

Bates Stock Farm

75 HEAD Registered Holsteins to select from —herd headed by Walker Prilly Ormsby Wayne, whose dam and sire's dam average over 30 pounds of butter in seven days.
G. W. Bates, Prop. - Waldo, Wisconsin

MAPLEHURST
Dairy and Stock Farm

REGISTERED HOLSTEINS. Herd headed by a grandson of Johanna McKinley Segis. Stock for sale at all times. Address
T. H. THACKRAY, Proprietor
Route 30 Glenbeulah, Wisconsin

2 Well-Marked Bulls

1-2 to ⅞ white; 11 to 12 months old. Straight rumps, ready for service. Also heifer and bull calves for sale. All the young stock is sired by Piebe Champion 2d 91262, a richly bred bull backed by high seven-day and yearly records. Stock is priced for quick sale. Address
Henry W. Breher, R. 7, Sheboygan Falls, Wis.

2 WELL-MARKED BULLS

FOR SALE. Lake View Model Pontiac Aaggie, born January 2, 1914. One bull calf born November 24, 1915.
W. F. Liebenstein - Cascade, Wisconsin

FOR SALE—Several registered heifer calves, well marked.
WM. LAUX
RANDOM LAKE WIS.

There are 40,000 Dairy Cows in

SHEBOYGAN COUNTY, WISCONSIN

The greater part of which are Holsteins. No matter how many you want or of what type, it will pay you to come to Sheboygan county. Thirty-six of the best pure-bred breeders are offering cattle for sale at the present time, and a great many high-grade springers and heifers are available.

1, Harry Keech, Glenbeulah, Wis.; 2, J. B. Cain, Glenbeulah, Wis.; 3, R. B. Melvin, Glenbeulah, Wis.; 4, T. H. Thackray, Glenbeulah, Wis.; 5, J. M. Rock, Plymouth, Wis.; 6, Emil Titel, Plymouth, Wis.; 7, Aug. Meyer, Plymouth, Wis.; 8, Struve Bros., Plymouth, Wis.; 9, C. J. Nehrling, Plymouth, Wis.; 10, G. W. Ubbelohde & Sons, Sheboygan, Falls, Wis.; 11, Truttschel Bros., Sheboygan Falls, Wis.; 12, Wm. Fenner, Sheboygan Falls, Wis.; 13, Pinehurst Dairy, Sheboygan Falls, Wis.; 14, Henry Walsh, Sheboygan Falls, Wis.; 15, Fred Dankwert, Sheboygan Falls, Wis.; 16, Adam Lorenz, Sheboygan Falls, Wis.; 17, D. E. Vanderhoff, Waldo, Wis.; 18, W. F. Liebenstein, Cascade, Wis.; 19, John Melius, Adell, Wis.; 20, G. A. Schultz, Adell, Wis.; 21, P. J. Liebenstein, Adell, Wis.; 22, Wm. Laux, Random Lake, Wis.; 23, O. C. Baum, Random Lake, Wis.; 24, R. C. Stolper, Random Lake, Wis.; 25, G. W. Bates, Waldo, Wis.; 26, J. Doyle, Waldo, Wis.; 27, B. C. Hicken, Adell, Wis.; 28, Walter Hammen, Adell, Wis.; 29, James Mulvey, Cascade, Wis.; 30, John Fellenz, Kewaskum, Wis.; 31, John Liezen, Oostburg, Wis.; 32, G. W. Weiberdink, Oostburg, Wis.; 33, J. P. Brill, Sheboygan Falls, Wis.; 34, Ernst Markwardt, Sheboygan Falls, Wis.; 35, Henry Breher, Sheboygan Falls, Wis.; 36, H. R. Weiskopf, Cleveland, Wis.

Registered Holstein

CALVES of both sexes for sale. Bulls $40 and up; heifers $85 and up. Sired by Sir Ormsby Pontiac Merc des
B. C. Hicken **Adell, Wisconsin**

JAMES MULVEY
CASCADE, WISCONSIN
Breede of Registered Holstein Cattle
Stock for sale at all times.

D. E. VANDERHOFF
WALDO WISCONSIN
Breeder of Registered Holstein Cattle
Stock for sale at all times.

Holstein Calves for Sale

REGISTERED heifer and bull calves for sale sired by Dr. Johanna Sarcastic 74862.
Walter P. Hammen **Adell, Wis.**

Sire, Sir Pinehurst Champion, for Sale

A BULL calf from Vickery Vale Beechwood, that made 1,225 pounds butter in one year, and his four nearest dams average over 900 lbs. in a year. A bull from Vickery Vale 2d, that made 900 lbs. in a year, and is a full sister to Vickery Vale Beechwood. Address
EMIL TITEL, R. 27, PLYMOUTH, WIS.

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls **Wisconsin**

HOLSTEIN CALVES

WRITE us for descriptions and prices of our bull calves from good A. R. O. cows and sired by a son of the 37-pound bull, King Segis De Kol Korndyke.
Pinehurst Dairy **Sheboygan Falls, Wis.**

CLOVER MEAD FARMS
HERD SIRE
Dutchland Creamelle Ascalon Lad

FIVE dams average: 7 day, butter 28.97; milk 631.20; 30 days, butter 118.46, milk 2,565.20; 1 year, butter 995.00, milk 24,100.00. One yearling bull ready for service. Write for information.
C. J. Nehrling, Prop. - Plymouth, Wis.

HEIFER and BULL CALVES

FOR SALE sired by the 28-pound bull, King Johanna Abberkerk 149412, whose dam made 28.71 pounds of butter in seven days; 677.45 pounds butter in a year; 109 pounds of milk in one day. When in need of registered Holsteins write us.
STRUVE BROS. PLYMOUTH, WIS.

J. M. ROCK
PLYMOUTH, WIS.
Breeder of Registered Holstein Cattle
Stock for sale at all times.

EAGLE HERD OF HOLSTEINS

HERD has A. R. O. 7-day records up to 30.2 pounds butter; entire herd averages 24.18 pounds, ¾ tested under full age. We offer choice bull calves at $75 each from dams with records from 21 to 24 pounds. Write for pedigree and description.
Truttschel Bros. **Sheboygan Falls, Wis.**

For Sale

BULL calves, sire Johanna Segis Pontiac Polkadot; grandsire, King Segis Pontiac Polkadot, that is a full brother in blood to King Segis Pontiac Alcartra.
R. C. Stolper - Random Lake, Wis.

Registered Holsteins

FOR SALE—Cows from five to nine years old, price $125.00 to $200.00. Bull calves from $35.00 and up. Visitors welcome.
John J. Fellenz **Kewaskum, Wis.**

BULL CALF FOR SALE

MARKED over ½ white. Dam 23.70 pounds butter from 520 pounds milk. Sired by a 29.50 pound bull. Calf is very large and a fine individual. Price $150. Address
H. R. WEISKOPF - CLEVELAND WIS.

SPRUCE LAWN STOCK FARM
OFFERS two registered Holstein bull calves, one from 19.60 pound 2-year-old dam. Price $100. The other from 18.56 pound dam. Price $65. Also several grade yearlings for sale. Write you wants. Address **G. W. Ubbelohde & Sons, Sheboygan Falls, Wis.**

FOR SALE

THREE grandaughters of Sir Johanna De Kol. One grandaughter of Sir Veeman Hengerveld. Bred to Cedar Lawn Sir Johanna De Kol. Also four of his sons.
John H. Liezen - Oosterburg, Wis.

Holstein Calves For Sale
KING Segis Pontiac Beauty 112516, at head of herd, three years old, ten A. R. O. sisters. All bulls one year old sold. A few bull calves for sale, two heifers, one one-year-old, one three months, dark in color. Address Henry Walsh, Sheboygan Falls, Wisconsin.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt **Oxford, Wisconsin**

YEARLING SON

READY for service of the 28-pound Holstein bull, Calumet Johanna Abberkerk Champion 105829, whose dam gave 623.70 pounds milk and made 28.71 pounds butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. The bull offered for sale is 3-4 white, good and straight and well grown.
A. G. Pingel **Chilton, Wis.**

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rictie Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer **Kaukauna, Wisconsin**

RUST BROS.' STOCK FARMS
The Kind That Will Improve Your Herd.
29.74 lb. HOLSTEIN BULL

SIR Ida Lottie Cornucopia. His dam made 29.74 lbs. butter in 7 days, 816.91 lbs. butter in a year. She has 3 sisters with records of 27.54, 27.99, 28.63, 33.65. Her dam made 27.11. Here is a bull fit to head any herd. Send for picture and pedigree. Address
Arthur Rust **West Allis, Wisconsin**

POLAND CHINA SWINE.

POLAND CHINA FOR SALE BOAR

Grand Champion, Jumbo Hadley

HAVING decided to show only hogs of our own breeding, we will sell JUMBO HADLEY, grand champion of Wisconsin, 1915, and sire of the 1st prize futurity litter. A sure breeder and weighs now in ordinary condition 700 pounds. The first check for $125 gets him. This boar will put you on the map. Write, mentioning The Wisconsin Farmer, to
DOBSON & EASTMAN **LANCASTER, WISCONSIN**

DUROC JERSEY SWINE.

Duroc Gold Bonds

TRIED brood sows and fall gilts being bred to Gold Bond, 1st prize senior yearling boar Wisconsin State Fair, 1915. Due to farrow in August and September. All kinds of Durocs. Prices reasonable. Address
JOHN L. FISHER **JANESVILLE, WIS.**

Cook's Defender

IF you want DUROCS with size buy a son of COOK'S DEFENDER. Priced right. Address
Emmett Cook & Son, Richland Center, Wis.

GRAND MODEL 21 CORRECTOR 2d

KEEP these Durocs in mind. Few pigs for sale by Lincoln Model, Salem Model and Regulator 2d. Write.
Geo. D. Sprain & Sons, West Salem, Wis.

ROYAL KING 4TH

FOR SALE. March 25, 1915, by the champion, ROYAL KING. A good yearling Duroc boar. Few bred sows for sale. Write
McClurg Bros. **Viroqua, Wisconsin**

SPRING DUROCS

READY to ship spring boars by Col.'s Choice by King the Col., Wonder Chief by Cherry Chief, Pal's Defender by Lee's Defender. Order early.
Dennis Shea **Melvina, Wsconsin**

LINCOLN MODEL

THOSE that see him like him. Offering a few boar pigs and some sows bred to him for fall litters. Correspondence solicited. Address
Albert L. Hyzer **West Salem, Wis.**

GANT'S FARM DUROCS

THIRTY March pigs, all Wisconsin Futurity Entries, selected from 100 head. Cherry Chief, Illustrator, Prince Illustrator, Lee's Defender breeding. Present prices $25 to $35. Address
GANT'S FARM **DELAVAN, WISCONSIN**

MODEL DUROCS

OFFERING five sows bred for fall litters. Also choice spring pigs—boars or gilts. Only the best shipped. Address
J. W. Higgins **Gotham, Wisconsin**
(Futurity Herd)

Parker, of Janesville

OUR specialty is DUROCS. The breeding is the best and we don't have to make excuses about the individuals. When you want Durocs, remember
E. H. Parker & Son **Janesville, Wisconsin**

DUROCS

WHEN you think of **DUROCS** remember the champion of champions, **LEE'S DEFENDER.**
L. F. ATWATER **BANGOR, WIS.**

DUROC JERSEYS

CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)
HAVE the best spring pig I ever raised. They are wonderful sires. Write.
Geo. H. Willsie **Prosper, Minn.**

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

REGISTERED Duroc pigs, either sex, 9 weeks old, $10. Registered Holstein bulls, $40 up. Paul McFarland, Route 7, Watertown, Wisconsin.

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A LARGE and choice collection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons **Fairfax, Iowa**
8 miles west of Cedas Rapids

MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

POLAND CHINAS

40 BOARS of March farrow, sired by Repeater, Smooth Price, High Wonder, North Side Wonder, and six other boars, all of a National reputation, out of big, 600 and 800-lb. sows. We hold the state record for high average on brood sow sale. Will sell these boars at farmers' prices for July 1st delivery. Write at once.
J. C. Hendricks **Box F, Hazel Green, Wis.**

POLANDS

HAVE some fine fall **BOARS** to be sold at **BARGAIN PRICES** during the next month. Write. Everything guaranteed.
R. MEINKING - - BANGOR, WIS.

BLACK JUMBO 221231

BOAR SALE SEPTEMBER 28, 1916
E. W. Hendricks **Hazel Green, Wisconsin**

Martiny's Poland Chinas

100 HEAD spring pigs of Wis., Minn., Iowa and Neb. championship breeding for sale, also sows bred for fall litters. Address
L. P. Martiny **Chippewa Falls, Wis.**

BIG-TYPE POLANDS

SPRING pigs of either sex, sired by several noted boars. Best breeding and individuality. Buy while they come cheap. Address
Wm. Smiley & Son **Albany, Wisconsin**

McDONALD

HAS some good Poland China fall boars that must be sold at once. From my best sows and show boars. Write, mentioning The Wisconsin Farmer. J. D. McDonald, North Bend, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE Poland China yearling boar $40.00. Gilts bred for fall farrow to Fairview Jumbo, $35. Booking orders for July, August and September pigs. J. Le Roy Larson, Iola, Wis.

CHESTER WHITE SWINE.

O. I. C. Spring Pigs

SHIPPED at three months of age. $25 per pair, $15 each. Well grown, good type of L. B. Silver breeding. Address
E. E. Tjugum **Sun Prairie, Wis.**

CHESTER WHITE

SPRING pigs 3 months of age; sired by Sir Raleigh, litter brother to 2d prize boar at Wisconsin State Fair, $20 each.
Leonard Behrens **Corliss, Wis.**

CHESTER WHITE

BREEDING stock of all ages—spring pigs, fall boars, bred gilts and tried sows priced to sell. Jos. Egelhof, Edmund, Wisconsin.

CHESTER WHITES

AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

CHESTERS

OFFER spring pigs, February and March farrow, singly, pairs or trios. Sired by JOY BOY. Satisfaction or no pay. Addr ss
Adolph Nuttleman, West Salem, Wisconsin

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address
W. F. Miller **West Salem, Wis.**

CHESTER WHITE Spring pigs of either sex, singles, pairs or trios. Tried sows bred for fall litters. Buy your breeding stock now, prices right.
Wm. F. Belda **De Forest, Wis.**

HAMPSHIRE SWINE.

LAIRD'S FAMOUS... HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

BROWN SWISS CATTLE.

Yearling Brown Swiss Bull

READY for heavy service. Well grow, of good, level type; sired by Casper L. and out of a heavy producing, show type cow. Allyn's breeding on both sides. Address
Chas. F. Lau **Thiensville, Wis.**

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address
FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEY BULLS

OF good breeding, about 2 years old. Price $75 and $85, also some younger. Two from official record cows. Address
Jos. G. Greene **Bangor, Wis.**

Yearling Jersey Bull

OF choice breeding, Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Registered Jersey Bull

BORN November 18, 1915, of Double Time-King Sappho King-Olive Dunn lines of blood. A big, growthy calf of straight, level type—absolutely guaranteed. Price $50. Burn Brae Farm, Chas. A. Peterson, Rosendale, Wisconsin.

ABERDEEN ANGUS CATTLE.

ANGUS (PRIDE) BULLS

AROUND a year old, sired by Patna by Imp. Proteros, dam Pride McHenry 28th. Dams of the Pride, Erica, Heatherbloom and Dutchess families. A show bull in the offering. Prices right.
HAUK BROS. **CASSVILLE, WIS.**
30 miles up river from Dubuque

BULLS! BULLS! BULLS!

AM offering **ABERDEEN ANGUS** bulls from 12 to 18 months old. They are well grown, in nice condition and they are priced to sell. First come gets pick. Write or, better yet, come.
HARRY YOUNG **BRIDGEPORT, WISCONSIN**

SHORT-HORN CATTLE.

A GREAT RECORD

AT the world's three largest beef cattle shows in 1915, all breeds, grades and cross-breds competing, Short-horns were grand champions. The champion carlot at Denver, Colorado, 1916, were two-year-old Short-horns. Twenty-eight Short-horn cows were added to the honor roll of the British Dairy Short-horn Society with milk records from 10,006 lbs. to 13,000 lbs. 104,954 Short-horns were recorded from March 1, 1915, to March 1, 1916, in the American Short-horn Herd Book. If you are in the market for Short-horns, our free service bureau is yours. Address
AMERICAN SHORT-HORN BREEDERS' ASS'N, 13 Dexter Park Ave., CHICAGO, ILLINOIS

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little **Evansville, Wisconsin**

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff C 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

Oak Lawn Farm SHORT-HORNS OF QUALITY

FOR sale at reasonable prices ten very good Scotch-top cows, either with calves by side or safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also one good roan bull coming one year old sired by Imported Raphael. Ten heifers coming 1 year old sired by Strathallan Ring, a very good grandson of Whitehall Sultan.
J. E. KENNEDY **JANESVILLE, WIS.**

BULLS

FROM MILKING STRAIN OF

SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

Bates Short-horns Fashionable Durocs

STOCK of both breeds for sale. Pigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest of Guernsey breeding. Yearling bull ready for service. Sired by the richly bred bull,

GOODWILL HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of a 526 imported daughter of Gov. of Chene. Dam of bull for sale is Imp. Sundari XXXI, a daughter of Galaxy's Sequel, out of a daughter of Gov of the Chene. Address
Charles Schmidt **Wrightstown, Wisconsin**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett **Sparta, Wisconsin**

REGISTERED GUERNSEY HEIFERS

3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson **Rosendale, Wsconsin**

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman **Fort Atkinson, Wisconsin**

RED POLLED CATTLE.

UNDERWOOD

RED POLLS

COWS, HEIFERS, BULLS Not culls. If you want good cattle write
L. C. UNDERWOOD **AVOCA, WIS.**

RED POLL Headquarters

BULLS all sold. Will sell a few choice heifers. Price is right. Address
J. W. SALTER & SONS **UNITY, WIS.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE
FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C. S. Hechtner, Charlton, Iowa.

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

"Spot" Given to Ina Zoe

Little Ina Zoe Pruett, of Richland County, N. D., was looking through a farm paper one day and saw my free offer. She sent her name and I gave her "Spot." Ina Zoe says she wouldn't take any amount for "Spot."

"Fritzie" given to Marie and Margie

This is Marie and Margie Cole, of Knox County, Illinois, who also sent in their names. They are twins and 6 years old. They take turn about riding in front on the beautiful little Pony, "Fritzie," that I sent them.

"Sportsman" Given to Harold

Everybody told Harold Pierce that "Sportsman" would not come, but Harold said he would try and see. He did and I sent him "Sportsman." His father made him this cutter. Harold lives in Waushara County, Wisconsin.

All These Ponies Given Free

to Boys and Girls

READ about these beautiful Shetland Ponies I have given away to boys and girls, right in your own state or near by. Besides these eight shown here, I have given away 375 others. Now, I am going to give away several **more Ponies**—some of the finest Shetland Ponies I could buy—and I want every family that reads this paper to have an equal chance. If you are a boy or girl, send in your name, and if you are the father or mother of a boy or girl be sure to send in your child's name. Remember, no charges of any kind and nothing to buy. Just send in your name.

Every Boy and Girl Has the Same Chance to Get a Free Pony

"Mogul" Given to Roy

This is Roy and "Mogul" at work. "Mogul" isn't as big as his name, but he is quite a pony after all—so Roy thinks. Roy Podewells of Rock County, Wisconsin, is another boy to get one of my free ponies.

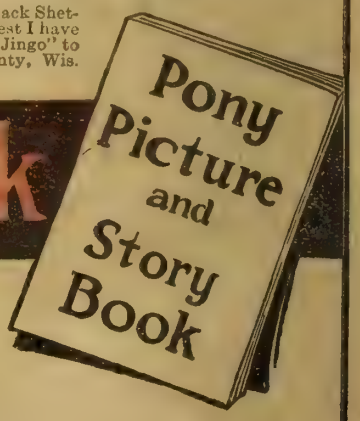
"Polly" Given to Alfred

Here is another Wisconsin boy with the Pony and Buggy that he received from The Pony King. The Pony is "Polly" and the boy who owns him is named Alfred Hokenstad. Alfred lives in Dane County.

"Jingo" Given to Pearl

"Jingo" is a beautiful black Shetland Pony—one of the nicest I have ever given away. I sent "Jingo" to Pearl Kerr, of Grant County, Wis.

Send Your Name For This Free Book



Children Don't put off this chance. Don't wait. Write your name and address in the corner below, cut if off and send it to me. I will then send you the beautiful **free Pony Picture Book** and you will have an equal chance to receive one of the Real Live Ponies that I am going to give away soon. You stand just the same chance as any other child, and it doesn't cost you a cent. Get a pencil and write your name now.

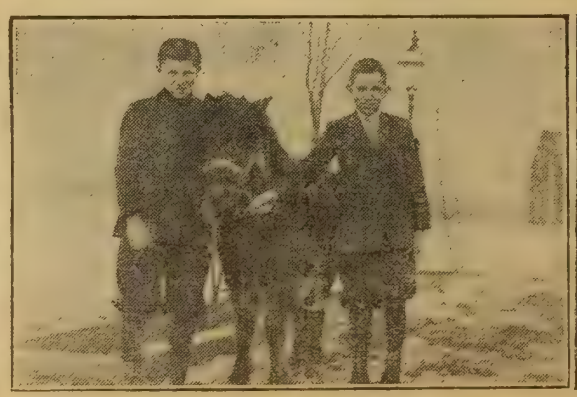
Parents Please show this offer to your child and send in the Coupon. You will be interested in the free Pony Book I send and your child will enjoy it immensely and profit by it. I receive many letters from children telling me how they enjoyed reading the book. Besides, **your child may win** one of the Shetland Ponies I am **actually giving away** this season. Your child stands the same equal chance as any other child, no matter where you live.

Address Your Letter to

The Pony King
307 Webb Bldg.
St. Paul, Minn.

"Jay" Given to Victor

On Christmas Day Victor Harris brought "Jay" into the house and introduced him to all the company. "Jay" reached Victor's home on Dec. 22nd. Victor lives in Ashland Co., Wis. and was one of the boys who sent me their names.



"Tramp" Given to Keith

Keith Walker of Juneau County, Wisconsin, and his Pony, "Tramp." When the roads are good Keith drives "Tramp" to school every day. Keith is certainly glad that he read my advertisement in the paper and sent me his name.

FREE PONY COUPON

THE PONY KING,
307 Webb Bldg., St. Paul, Minn.

Please send me the **free Pony Picture Book,** and enter my name in your Pony Club so I will have the same chance. I want one of the Shetland Ponies you are giving away.

My Name is .....

Post Office .....

State ..... R. F. D. .....

COLLEGE ... READING ROOM

THE WISCONSIN FARMER

UNIVERSITY OF ILLINOIS
URBANA
Reading Room
Urbana Ill.

VOL. XLV. NO. 26. THURSDAY, JUNE 29, 1916. WHOLE NO. 1796

"Oh, say, does that star-spangled banner yet wave
O'er the land of the free and the home of the brave?"

CURRENT EVENTS

GOV. EMANUEL L. PHILIPP, propped up on pillows in his hospital bed in Milwaukee, a few days ago signed a call for mobilization of the Wisconsin national guard at Camp Douglas. The governor acted in conformity with a call from the president of the United States for mobilization of all the militia of all the states, numbering in round figures 100,000 men. About 3,800 Wisconsin men are included under the call and these have been in camp several days awaiting orders to go to the Mexican border. Throughout the entire state there has been an atmosphere of patriotism attending the departure of the troops for Camp Douglas. At La Crosse, for instance, by special proclamation of Mayor Bentley, citizens gathered by the thousand at 6 o'clock in the morning to see the guardsmen off on the train for the state capital. At the time this is written the order had not been received for the Wisconsin troops to start for the border, but such an order has been hourly expected. Owing to the splendid war footing of Wisconsin troops and the high character of guard drill work in this state it has been anticipated that Wisconsin guardsmen will be among the first ordered to the front. General Funston has already asked for state troops to help defend the border, and, by the time this issue of The Wisconsin Farmer is distributed, Wisconsin troops may already be near the firing line. Our state troops will be used for patrol service and the regulars who are now engaged in such work will be sent to the fighting line wherever that may be. State troops will re-enlist as federal troops before they will be asked to cross the boundary. Wisconsin troops mobilized at Camp Randall, in Madison, in 1861, and gave a splendid account of themselves in the Mississippi river campaigns. Wisconsin troops in 1916 will be just as loyal as they were in '61 and far better equipped. In many sections of the state relief societies for the purpose of looking after the families of those who go to the front have already been formed. There has also been activity in the organization of the Red Cross work.

WAR with Mexico seems inevitable as a result of events which transpired below the border last week in rapid succession. One of General Carranza's leading officers issued a warning to General Pershing and the United States troops of the punitive expedition (sent into Mexico to arrest and punish the Villa bandits) that any movement of troops other than toward the boundary in retirement would be considered a hostile act and would be met by force. About the same time Carranza issued an impudent, even insolent, demand for the immediate withdrawal of all the American soldiers from Mexican soil. President Wilson sent a 6,000-word note in reply declaring that the troops were in Mexico to punish bandits and to restore the order which the Carranza government seemed unable or unwilling to restore and they would stay there until they had concluded their mission. Within a few hours after this note had been received in Mexico City a battle occurred between American and Mexican troops, with the reported loss of forty Americans killed, seventeen captured and several wounded, the Mexican casualties not reported. The Americans are said to have been led into ambush, the Mexicans having dug a trench across their path several hundred feet long and covered it with brush so that the on-riding troops could not see it, falling pellmell into the trap, where they were shot down by Mexican machine guns. That General Pershing would immediately pursue the treacherous Mexicans and give battle to them, with the extreme probability that war between the two countries would shortly result, was the outlook at the close of last week.

PRESIDENT WILSON has issued a call for the national guard organizations of every state in the Union for service on the Mexican border and the troops are mobilizing in every state, awaiting the call to start southward and patrol the boundary line between the two countries. According to the last reports of the division of militia affairs of the war department, the paper strength of the entire national guard, exclusive of coast artillery, was something like 117,000 enlisted men. The total number of enlisted men called for in the president's summons, exclusive of signal corps and medical corps, is 93,518, divided as follows : Infantry, 76,115; cavalry, 6,435; field artillery, 9,928, and engineers, 1,040. Mobilization of the national guard to support General Funston's line will pave the way for releasing some 30,000 regulars for immediate service in Mexico in the event of open hostilities with the Carranza government. The guardsmen themselves could not be used beyond the line without authority of congress and until they had volunteered for that duty, as they are called out under the old militia law. The new law, which would make them available for any duty under the federal government, goes into effect July 1st. Although the purpose of the action as set forth in the formal call is for the protection of the American frontier from invasion, the opinion prevailing throughout Washington is that it marks the first step of intervention in Mexico. The action is understood to have been precipitated by a dispatch from General Funston predicting trouble all along the Rio Grande, in an effort on the part of the Mexicans to force the Americans to withdraw from Mexican soil.

EVIDENCES multiply that Theodore Roosevelt will support Charles E. Hughes, republican nominee for the presidency, and that the breach between the republicans and progressives, of four years' standing, will be healed. Last week George W. Perkins, progressive leader, after a series of conferences with Colonel Roosevelt and with Gov. Charles S. Whitman, the chief Hughes boomer at the Chicago convention, announced that negotiations were under way looking to a restoration of the good feeling between the progressives and republicans. One of the leading eastern newspapers says that inasmuch as there is no longer any doubt that Colonel Roosevelt will support Justice Hughes, the question about which the most speculation now revolves is whether or not Roosevelt will support the republican nominee actively. The answer to this question is believed to be in Mr. Hughes' own hands and if the republican nominee requests Colonel Roosevelt to make campaign speeches this fall it is expected the colonel will take the stump to that extent. The former president is taking the position that he would not feel free to go into the campaign without being invited to do so. A meeting between Roosevelt and Hughes is expected to be arranged as soon as the progressive national committee gets its business over in Chicago.

NEW shells of a terrific explosive power are now being used by the Russians and are proving of great assistance in the giant drive against the Austro-Hungarians. These shells were manufactured in Japan and are said to be more terrible than any yet devised by the Germans. The formula used in the manufacture of the shells is being closely guarded and, according to some, is not even known to the other allied governments. Prisoners taken by the Russians since the drive began tell of the frightful destruction caused by the new shells. The Austrians say they are the worst shells they have faced anywhere, the effect of the explosions being felt over a greater area than by any other used by the warring nations. The Russian drive has been so successful that the city of Czernowitz has once more fallen into their hands, having been in their possession when they made their other big drive a year and a half ago, only to be lost later on. The Austrians are said to be losing much territory, but far more serious is the loss of many thousands of men, made prisoners by the Russians.

WRITE FOR PRICE LIST AND FULL INFORMATION
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Rusk County Dairy Meeting.

Rusk county dairy farmers met recently at the court house, seventy-five in number, and had an interesting discussion. Prof. G. C. Humphrey, of the college of agriculture, talked on calf raising.

He urged every dairy man in the county to raise each heifer calf and to feed it well from the time it was born until it comes into milk. Mr. Humphrey advised farmers who are patronizing cheese factories to substitute one tablespoonful of oil meal mixed with a pint of boiling water for one pint of whole milk. After the calf was six weeks old this substitution should be continued until the calf received one-half milk and one-half oil meal gruel. The Ladysmith Creamery supplied Mr. Charles Lyman, of Rhinelander, as their part of the program. Mr Lyman gave a very interesting and instructive account of his recent investigations in Ireland about the methods used by Irish farmers and dairymen in the manufacture and sale of their dairy products. He urged the farmers to be loyal to their co-operative creamery and to strive in every possible way to deliver a first-class product to the buttermaker. Mr. Lyman's talk was very interesting and instructive and his arguments were absolutely sound.

After the general dairy meeting was over the Holstein breeders of the county organized a Rusk County Holstein Breeders' Association and elected I. M. Bergstrom, of Glen Flora, president; Nate Hand, of Ladysmith, vice president for Ladysmith; Mae Stevens as vice president for Bruce; C. A. Lindquist as vice president from Tony; W. B. Arnold as vice president from Ingram; W. E. Fond as vice president from Hawkins, and J. A. Schmidt as secretary; Philip Christman, of Tony, treasurer. The executive board will be made up of Iver Bergstrom, Philip Christman, J. A. Schmidt, C. A. Lindquist and Emil Johnson.

These facts are furnished The Wisconsin Farmer by G. M. Householder, Rusk county agricultural agent.

The Pennsylvania Agricultural Experiment Station, after a seven years' trial with a number of select varieties of corn, has recommended Wisconsin No. 7, or Silver King, for trial to farmers in the central and southern parts of the Keystone state. The officials of that station regard this as a high-yielding variety. During the period of the test Wisconsin No. 7 made an average yield of 56.9 bushels of grain and 3,286 pounds of stover an acre, a record only slightly excelled by White Cap, the favorite variety of the Pennsylvania State College.

The Wisconsin Farmer

THURSDAY, JUNE 29, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

INDEPENDENCE DAY.

AS I WRITE these words war seems imminent for our beloved nation. Patience has ceased to be a virtue below the Rio Grande and the Mexican, skulking across the border line to murder innocent women and children, must be taught a lesson, just as the man who commits murder in cold blood here in the grain belt must be hunted down by the sheriff's posse, arrested and made to suffer the consequences of his deed. I feel confident there is not a farmer in all this broad land who really wants war; all he craves is a continuation of our peaceful prosperity, with the security that he shall reap where he has sown. Yet there are insults to our national honor which make swift and decisive action sometimes necessary. I decry war; I abhor war; yet if peace is to be restored to our troubled border I firmly believe we must deal with ruffians in such a manner as to strike terror to their hearts.

The war scare, with the consequent mobilizing of our state troops—boys from the farm and boys from the city gathering together in state camps, with bugles blowing and flags fluttering—gives to Fourth of July this year stronger significance than it has known for the last eighteen years, since last "our boys" were summoned to the colors, not for conquest but to free a prostrate nation from the grasp of the tyrant. Just as we went down into Cuba to overthrow Spanish rule, so (if we go into Mexico in a warlike mood at all) we must go to restore law and order and to advance the cause of sound and stable government, which shall protect the rights of all impartially.

Fourth of July—or Independence Day, as I rather prefer to think of it—will always be one of the red letter days in our calendar, no matter what our occupation: Whether we follow the furrow across the field or toil at an office desk. It is one of the world's big days as well, for it marks the successful efforts of an ambitious, sturdy people to give to the world a government founded on right rather than might, a government "of the people, by the people and for the people." We of the farm have to thank our brave forefathers for what they wrote and did on July 4, 1776, for much of our present prosperity; for, as I have frequently pointed out, our fields would not produce so abundantly, nor would we profit thereby so materially, were it not that the stars and stripes stand for a stable government which gives to every man the right and the opportunity to work and to reap the full rewards of that work. There is an old poem which the young folks of a former day were wont to recite and which I hope will never be forgotten. It tells of the old bellman stationed aloft in the old State House at Philadelphia, waiting for the signal to be given him by his grandson that the Declaration of Independence had been signed, and this is the concluding stanza:

> The old State House bell is silent,
> Hushed is now its clamorous tongue;
> But the spirit it awakened
> Still is living—ever young;
> And when we greet the smiling sunlight
> On the fourth of each July,
> We will ne'er forget the bellman
> Who, betwixt the earth and sky,
> Rung out, loudly, "Independence;"
> Which, please God, shall never die.

Whether or not our boys are still with us, on the farm and in the office, next Tuesday—Independence Day—let us join in heartiest supplication that even though war shall come to mar our peace and perhaps shatter our prosperity, whatever may be the fate which Providence has in store for us, now or in the future, we shall never forget the bellman or the brave deed his clangor commemorated, nor the ringing words of the poet:

> "Independence;"
> Which, please God, shall never die.

AGRICULTURE AFTER THE WAR.

I ASKED Mr. Harry C. Evans (whose series of articles on war-time conditions in Europe, particularly in regard to agriculture, ends with the one entitled "After the War—What?" found on another page) to give me his answer, briefly, to this question: "Will agriculture be so retarded by the war that it will take many years for Europe to recover, or will there be a great agricultural awakening once the war is over?" I have already explained that Mr. Evans had exceptional opportunities to get at the heart of the subject. For instance, he crossed the German empire, back and forth, four times. He visited belligerent and neutral countries alike, he is a trained newspaper man, he interviewed public men on the vital issues of the day. This is how Mr. Evans answered my question:

> That a tremendous impetus in agriculture will follow the European war is certain. The warring nations have learned that the defensive power of a nation is strengthened by its capacity to feed its own people. Without this capacity, and with the markets of the world closed to her, Germany would have been crushed in the early months of the war. The nation that depends on foreign sources for food supply, in times of war or peace, is in hard lines.
>
> Another thing the warring nations have learned is that the stability and physical strength of a nation depend largely on those classes who have either been born and brought up in the country or have had the advantages of country life. The recruiting returns show a much larger proportion of men rejected for physical reasons in the large towns than in the country districts. There will be an effort, therefore, to encourage as large a proportion of people as possible to live on the land.
>
> The demobilization of the navy and army will afford a unique opportunity of developing agriculture. A large number of the men were employed in agriculture prior to the war and it is urgent that as many as possible of these should be induced to resume agricultural life at home. In addition, there may be many others, formerly engaged in urban industry, who will be reluctant to return to the life of the factory, the shop, or the office, and who will seek opportunities for an open-air occupation. If no such opportunities are open to them in their own country they will emigrate, and the warring nations will exert every effort to keep their men at home. Never before in the world's history will men be needed so much as in Europe after the war.
>
> Already, I am advised, Great Britain is taking the preliminary steps in a great "back to the land" movement, having two purposes: First, to maintain agricultural production, so as to make her independent; second, and more important, to keep her men at home and occupied in healthful, productive, satisfying labor. She is already considering land settlements for sailors and soldiers, with a government appropriation of $10,000,000 to start with. The details of the plan are interesting. An official report has been made for a comprehensive scheme of land colonization for ex-service men, to be undertaken partly by the state and partly by local authorities, and in recommending its adoption the parliamentary committee records the unanimous conviction that the attraction of a large population to the land is urgent, not only on account of the obligation of the country to its defenders, but in the highest interests of the nation as a whole. The first step is to acquire and equip land for three pioneer colonies, comprising 5,000 acres in all, with additional land for other colonies to be acquired later on. It is contemplated that the three pioneer colonies would each accommodate about 100 families. The preliminary appropriation of $10,000,000 should, it is thought, be sufficient to provide for at least 4,000 or 5,000 families, including a proportion of unmarried men. The main details of the plan, as they are now agreed upon, are as follows: No men should be allowed to take up holdings of their own unless they have the necessary experience; men without such experience should in the first instance be offered employment at wages. Any small holdings established should be on a basis of tenancy rather than ownership. The colonies should be laid out so that more land can be added to each holding in due course. For housing purposes the war office should hand over, free of cost, any of the military tents and quarters not required after the war. Expert guidance should be provided for the settlers in each colony by the appointment of a resident director and an agricultural or horticultural instructor, and one or more demonstration farms should be established. Co-operation in all directions should be encouraged. A depot should be established in each colony for the collection and disposal of produce, and a store for the sale of requirements. Part of each colony should be retained as a central farm, from which horses, implements, etc., can be let out on hire to the settlers. A co-operative credit society should be established in connection with each colony, and the state should take up share capital in such societies. All possible social amenities should be provided in the colonies, and women's institutes or clubs should be established for the settlers' wives.
>
> This work interests me immensely, for it points to two important things: First, that agriculture will have a great awakening after the war. Second, that there are some statesmen who can already foresee the end of this titanic and horrible struggle and are already planning for the return of peace. Personally, I have long held to the opinion that the war will end this fall or early winter. I have no reason for this belief other than an intuitive belief, maybe it would be better to call it a hope. Once the war is over—hasten the day—nothing is more certain than that the men who are fighting will demand a portion of the land they fought to save and that the nation which makes it possible for them to obtain and operate this land on the best conditions will make the most rapid recovery. It is not only "the defensive power of a nation," as Mr. Evans says, but the productive, creative power likewise that is strengthened by a capacity to feed its own people. We are proving this, here in the United States, with an agricultural productiveness never surpassed in the history of the world.

FARM BOY VS. CITY BOY.

I HAVE no desire or intention to assist anyone in luring young men away from the farm, yet I cannot refrain from quoting a portion of the remarks made by one of the recruiting officers, as set forth in a Milwaukee newspaper recently. He was comparing the young men of the country and of the city in regard to their ability to take orders and eventually to rise in the world and said:

> The best type of men in the United States navy come from the farm or the village. The rawest kind of a country boy will make the best kind of material when properly handled. He is willing to accept the commands of a superior officer. The navy department wants lads from the country. The navy is not particularly a calling for the sailor, but it is a place for a man who will take his place in the working out of a great system. The whole navy proposition is handled upon a very strict system plan and it is found that it is the boy who is the "gawk" that gets to the front in the end. The fellow from New York "knows it all," while the farm boy admits that he doesn't, but he is willing to learn.

Whatever may be our individual beliefs on preparedness, military service, a larger navy, and so on, here is some food for thought, to say the least. No man can rise to become a captain of men, whether it be in the army or in the most peaceful of all professions, farming, until he has himself learned to take orders. The boy's dream of war are of a captain far in advance of his command, with his sword flashing in the sun, shouting orders in a stentorian tone, which his men must obey at the peril of their lives. How vastly different from this is the real article, the millions who are engaged in war upon its gigantic scale in Europe today will testify. But whether the captain charges across the shot-riddled field far in advance of his men, or crouches in a trench and gives his order to far-distant battalions through the telephone, he cannot order until he has first learned to obey. And the boy who comes from the farm and the village obeys better than the boy who comes from the city; we have the recruiting officer's word for this.

One of the best things written in recent years, in my opinion, was the late Elbert Hubbard's "Message to Garcia." It tells of an army officer given instructions to find Garcia in Cuba and deliver a message; the man who sent him did not know where Garcia was, how he could be reached, what dangers might beset the messenger. Yet because he was a good soldier and knew better than to ask foolish questions, the officer set forth without a word—and found Garcia, though the way was tortuous and beset by hourly dangers. I like to think of our farm boys as carrying messages to Garcia, whether they ever wear uniform or not. They are sent forth by the mother who bore them, to make the fields yield abundantly and to feed and clothe the world. They do not ask why they are so sent, what their reward shall be, why some other boy does not do it so they may rest at ease in town; they carry the message to Garcia—and the fields produce abundantly. They are sent forth by their father into the waiting world, to battle with temptation and disease and sin and a million insidious foes and back they come, in their old age, to the farm from which they set forth in their youth, to gladden the hearts of those who never lost sight of them while they carried their message to Garcia in the business or the professional world.

Yes, it is the "gawk" who succeeds over the city boy, whether it be on shipboard, in the army, or in the marts of commerce the wide world over. He knows how to take orders and, because of this, he comes, in time, to know how to give orders. The recruiting officer spoke wisely when he paid his tribute to the farm boy, only it is a tribute due him whether he enlists to fight in army or navy or enlists to fight in the still bigger, broader campaign to make the world a better place in which to live, and all folks happier because of what he has done.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

The New Wisconsin Institute.

THE WISCONSIN FARMER is advised that Supt. E. L. Luther, of the farmers' institute staff, has some new ideas which he expects to put into execution in the near future. Mr. Luther has learned that the world is devoting a great deal of attention to specializing, and this feature of life has not entirely escaped farming operations. While the farmer may have "more irons in the fire" than the business man or the professional man, the time is coming on when the most successful farmer is the man who finds out what branch of farming will be most profitable under the conditions which exist on his particular farm.

The old-fashioned farmers' institute has done a great deal of good for Wisconsin. But in some respects, no doubt, it can be improved upon. Under the old system about every conceivable subject related to farming was touched upon during the three-day institute. An instance was related the writer a few days ago where a call was made at an institute for a talk on ventilation. The workers conferred and decided that a certain man, an expert on hogs, should deliver the talk on ventilation the following afternoon. Now it is not often possible for many men to be expert on a number of subjects. A man might be an expert on hogs and know nothing about ventilation of barns. Under the old system of conducting institutes the farmers were simply glutted with information, much of which did not apply to their immediate conditions, and considerable of which might better be left unsaid. Under the more modern plan the effort is to get at the needs of the community in which the institute is to be held. Better still an effort will be made to concentrate attention on some one subject which is more important in that community. Along this line The Wisconsin Farmer believes great good will result from the sheep institutes which are being conducted in the Kickapoo valley this week. These institutes attract a definite class—men who are interested in sheep raising. They provide definite information on the subject and the farmer may retire from the institute with some tangible idea along a given line. Fruit institutes would be appropriate in certain sections. In cases where there are two or three principal lines of agriculture in a community, and two or three subjects ought to be covered, it might be better to have a one or two-day institute for one subject and another day at another time for the discussion of another important subject. At any rate, the old-fashioned hopper system of opening up the farmers' brains and literally flooding them with every sort of information is out of date. The institute of the future is going to be a sort of school for the accomplishment of a given object, and Superintendent Luther will increase his success and the value of his institutes in so far as he is able to carry out his plans to make each session accomplish a definite purpose in its community.

A Wisconsin Man's Views.

MR. GEORGE T. VORLAND delivered an interesting address at the first annual picnic given by the Colfax, Wisconsin, Creamery Company. Among other things, Mr. Vorland discussed the relation between the farmer and the merchant. Mr. Vorland is of the opinion that the average merchant sizes up the average farmer incorrectly. The merchant forms the opinion that the farmer is always concerned with the "all-absorbing question of buying his goods cheaply." This is an error, in the opinion of Mr. Vorland, who says that the farmer has a great many other things on his mind. In many cases, according to the speaker, the real trouble lies with the merchant and not with the farmer. Too often the merchant does not show enough interest in the farmer. If the farmer may be accused of always thinking of buying cheaply is it not possible that the merchant may be thinking too much about selling. In many cases the merchant's mind is narrowed down to the "one idea of selling, selling, selling to the farmer." We quote the following from Mr. Vorland's address:

There are a great number of questions which are to the interest of both the people of the villages, and the people on the farms—the good roads movement, school and social improvements, guide boards, and marketing. These are problems which are and should be of mutual interest to both. The farmer has no reason to believe that it is to the interest of the merchant to get the farmers' products at a less price than they are really worth. The merchant's interest must be to co-operate with the farmer and open facilities that will bring these products to the large markets and bring the best price. This will enable the farmer to buy more goods from the merchant and become a more valuable customer.

It is equally as important that the farmer earns the benefit accruing to himself from buying his goods of his local merchant—as long as he has to buy them anyway. To own a farm in the vicinity of a so-called "dead town" means the ownership of a low-priced land. When such a farmer wishes to retire he finds that in the sale of his farm he pays, or he receives, his reward in proportion to his former attitude with respect to the development of his town. If he has helped to build up his farm and village at the same time he will be amply repaid; if he has distributed his patronage elsewhere, the money saved in this way, will be taken from him in the decrease value of his land.

Let us, therefore, be wise men and women. Let us not try to spite one at the expense of another. Let us not give attention to one thing and neglect some other. Let us work in perfect harmony—in business as well as socially.

Trade is not all in life. Cheap buying and dear selling should not be our chief aim. We must have more of love, more of sympathy, more of cheer, and more of affection. Let us live and labor in harmony, for mutual benefit and general advancement. And remember that the more one tries to serve his neighbor, the more this neighbor will endeavor to return the service. A transaction which does not benefit both parties to the transaction is unjust, and, anyone who insists getting all the benefits in his dealings with his neighbors, be he farmer, merchant, or banker, is imbued with the selfish spirit. No matter what our vocation in life is our aim should always be to do our work well and to the benefit and welfare of our fellowmen.

Experience has proved that merchants who are fully awake to the value of the farmer trade, and to the importance of the farmer in the community, usually get their share of trade.

Increased Cost of Producing Implements.

AN INTERESTING investigation has recently been made of the wages paid at the Chicago factory of the International Harvester Company. The matter came up in connection with a dispute with employes over a proposed advance. The company felt that it was doing considerable for its employes, and went to the trouble to make an investigation of increase in labor cost in its factory since 1902. The investigation, to be fair and impartial, was left to non-interested certified public accountants. The company granted an increase to its employes amounting to something over 11 per cent before the report of the accountants was received. The accounts reported that since 1902 the International Harvester Company had increased wages of employes 50.34 per cent on the average hourly rate. This did not include superintendents and general foremen, the purpose being to get at the increase to men working by the day, week or piece in the factory. Including the increase which has recently been granted the International Harvester Company in its Chicago factory has increased wages 67.03 per cent since 1902, or more than two-thirds.

At about the same time that the report was issued on the International Harvester Company Chicago factory, a similar report was gotten out by the same certified public accountants on the payroll situation at the Deering and McCormick twine mills, of the International Harvester Company of New Jersey. This showed an increase of wages for female employes, exclusive of superintendents, of 58.89 per cent; male employes, 51.47 per cent; all employes, 55.91 per cent. But a new scale had gone into effect at these mills at the time the books were being checked over, and this brought the per cent of wage increases since 1902 up to 76.84 per cent for male workers, and 96.58 per cent for female workers, or an average per cent increase for all workers in the twine mills of 86.46 per cent. This is an increase of the hourly wage rate in the twine mills of more than four-fifths since 1902.

Considering the big per cent increase in wages in these factories it is remarkable that the farmer has not yet felt a big increase in cost of implements. That he has not has been due to improved methods of manufacture and increased outputs. Just at this time the material market offers a greater bugbear to the implement manufacturer than the labor market, and the increase of cost of the two combined bid fair to force an increased cost in agricultural implements which the manufacturer will not be able to avoid. The Wisconsin Farmer gives these figures on labor costs in this great company's mills, so that our readers may have a glimpse at the truth of the situation in case he is called upon to pay a little more for implements than he has formerly paid.

Soldiers Back to the Land.

THE third and concluding article in the series written by Mr. Harry C. Evans expressly for The Wisconsin Farmer will be found on page 10. This last article deals with the sentiment of the English soldier in the present struggle and his conviction that he is entitled to a share of the land which he is fighting to save. Mr. Evans sets forth the results of a very interesting interview with an English officer, who told him how the English soldiers are looking forward to getting back to the land and to increasing British agricultural production rather than being content to return to the factory and the office. Mr. Evans' articles have been extremely interesting and give the most accurate and vivid picture of agricultural conditions in the belligerent countries that we have yet had the pleasure to see. We advise all of our readers to turn to page 10 and read Mr. Evans' concluding article.

Effect of Drainage on Physical Character of Soil.

A RECENTLY-PUBLISHED volume on land drainage by Jos. A. Jeffery gives considerable attention to the practical effect of tile drainage on the mechanical nature or character of the soil. According to this author, when the ground water is permanently lowered to three or four feet below the surface where previously it stood almost at or near the surface, one of the first effects is to cause cleavages or cracks in the soil. Photographs of cross sections of soil made to considerable depth show most plainly large crevices produced by the shrinking of the soil as a result of removing the water from it by drainage. It follows naturally that when soil is thoroughly wetted, as it will be following heavy rains, every particle is pressed tightly against its neighbor particle. One may easily imagine that there is within the soil considerable lateral pressure as the granules become distended by taking up a maximum proportion of water. On the other hand, when land is drained there is a uniform contraction of the particles and the effect of this is to make the soil more or less friable to the depth of the tile drain. A rain will again close the crack and the alternate drying of the soil will open them, with the practical result that channels are formed so that more ideal conditions are created for roots to penetrate soils to enormous depth.

Of course, in those instances where the soils are dried out by evaporation from the surface larger cracks will be formed, but in that case the soil does not break up into small divisions but rather into enormous clods or chunks. Every man who has observed this matter closely knows full well that undrained lands during a dry season will show large cracks on the surface, whereas the soil that is tiled will dry out in an entirely different way, and in that case the cracks will be small and much more numerous.

Breaking up of the soil in this way through alternate processes of wetting and drying means that millions of air passages are formed and these afford an opportunity for soil ventilation and for the penetration of roots. The main reason why tiled land will stand drouths better than the land that is not tiled is that the former is more friable and admits air more freely. When the air penetrates the lower subsoil moisture is extracted therefrom and this continues day and night. It means, literally, that moisture is squeezed out of the air, thereby increasing the supply for the use of growing crops. The movement of air into little crevices of soil means that there will be much more chemical reaction than would be the case if air were excluded. The mere fact that roots penetrate drained soil better than they would the undrained land means that the soil tends to become more or less filled with vegetable matter upon the decay of roots, even to the depth of three or four feet. The roots of farm crops ordinarily will not go beyond the surface of the saturated soil, but will creep along in the dry areas where all rootlets are bathed with moist particles rather than with free water.

A friable soil becomes congenial for certain forms of insect life that take possession of fertile lands. Among these are earthworms and ants. These creatures, where conditions are favorable, work diligently creating passageways from the subsoil to the surface, and the millions of openings that they make become "passageways for both drainage and ventilation." These little creatures also bring large quantities of organic matter to the surface, obtaining these from decayed rootlets that have penetrated far below. This material is rich in plant food and it quickly becomes mixed with the surface soil where it will supply plant food to surface-feeding rootlets.

The drainage of land changes the condition of its organic matter which comes from the decomposition of roots, so that this material more readily combines with mineral elements and becomes compounded into products that the delicate roots can use. It simply means that you have a sweet rather than a sour content, and for most economical plants a sweet soil is just as necessary and just as important as sweet, wholesome food is to man and animals.

Reports of Wisconsin Summer Meetings.

THE WISCONSIN FARMER has been giving considerable space to reports of summer live stock breeders' meetings, and a number of these reports will be found in this issue. For the kindly hospitality extended to our editors at these meetings The Wisconsin Farmer takes this method of extending special thanks and also for the help which secretaries and other officers have given us in getting up reports, securing pictures, etc. Despite the rainy days and in some cases the bad roads, the attendance at the live stock meetings this June has been above the average and the interest has been the most enthusiastic ever shown. These facts are decidedly encouraging.

IN AND AROUND WISCONSIN.

Mr. Roy D. Hunter, a Wisconsin College of Agriculture short course student, 1912, has recently been appointed a trustee of the New Hampshire Agricultural College.

R. H. Cameron, instructor at West Green Bay, has charge of eighteen acres of gardens and is furnishing valuable instruction as well as employment to many city children. R. H. Rahmlo, of Bayfield, is doing similar work on a less extensive scale.

Another record of Wisconsin land at $200 per acre was made near Hartford recently when the Henry Pesch farm, two and a half miles west of that city was sold to Otto Pribenow. The farm consists of 100 acres and good improvements and was sold for $20,000. The farm is now rented, but possession will be given to Mr. Pribenow in the fall. This transaction is fairly representative of the increase in value of farm land in the vicinity of Hartford.

Detailed soil surveys are being made in Rock and Waupaca counties by the soils department of the college of agriculture, co-operating with the state geological and natural history survey and the United States Department of Agriculture. Maps of the counties will be made showing the variations in soil types and topography as the principal factors, with other things of value included incidentally. Reports of the surveys will be issued by the bureau of soils, United States Department of Agriculture, and the state soils survey.

According to the report of the state feed inspection department, 921 samples of licensed commercial feeding stuffs were analyzed in Wisconsin during 1915. These include 685 different brands. The inspection service continues to enjoy the support of manufacturers and dealers doing business within the state and through their co-operation nearly all differences have been adjusted without recourse to legal action. Only one manufacturer was fined for failure to brand his feeds with the information required by law. The shipment into the state of unbranded feed has been the chief cause of complaint. To control this situation the state feed inspection service now reports violation to the United States Department of Agriculture for the enforcement of the pure food and drug act, as it relates to feeding stuffs.

Directions for the culture of potatoes and control methods used against blight and beetle attacks have been sent by the college of agriculture to a number of county school superintendents for distribution among young people intending to enter potato-growing contests this year. Rules governing the contests and the selection of potatoes for exhibition purposes are also being prepared for the same purpose. High grade seed stock, mostly from "certified" fields, is being used in the work. Organized contests have been started in Chippewa, Adams, Sauk, Polk and Washburn counties. Several of the other counties in Wisconsin's potato belt are also holding growing contests under local leaders. Opportunities for exhibiting potatoes at state shows this fall will be given at the state fair, West Allis, in September and at the state potato growers' convention at Eau Claire in November.

A large number of the students who completed the courses at the College of Agriculture this month have accepted positions as teachers of agriculture in high schools and county agricultural schools. A few of these are: Earl Cooper, Marshall High School; E. T. Cusick, Sparta High School; Julius L. Jordan, Stanley High School; Glenn Lycan, Plymouth High School; R. F. Blecker, Peshtigo High School; J. A. McCutcheon, Wild Rose High School; A. A. Trojahn, Laona High School; S. G. Corey, Wood County Agricultural School; Arthur C. Murphy, Marshfield High School. Three other men have secured good positions as teachers of agriculture in colleges outside of the state. They are John T. Wheeler, College of Agriculture, Amherst, Mass.; W. O. Lockhart, Iowa State Teachers' College, Cedar Falls, Iowa; H. S. Murphy, director of agriculture, Colored Agricultural and Normal University, Langston, Oklahoma; R. O. Helland, Stuart, Minnesota Agricultural School.

A cow-testing association has been organized in the vicinity of Fairchild, Eau Claire county. First samples from cows in herds of the members were recently submitted to the high school agricultural department at Fairchild for testing. The test showed a wide variation, ranging from 2.5 per cent to 6.5 per cent. There are about 150 cows under test

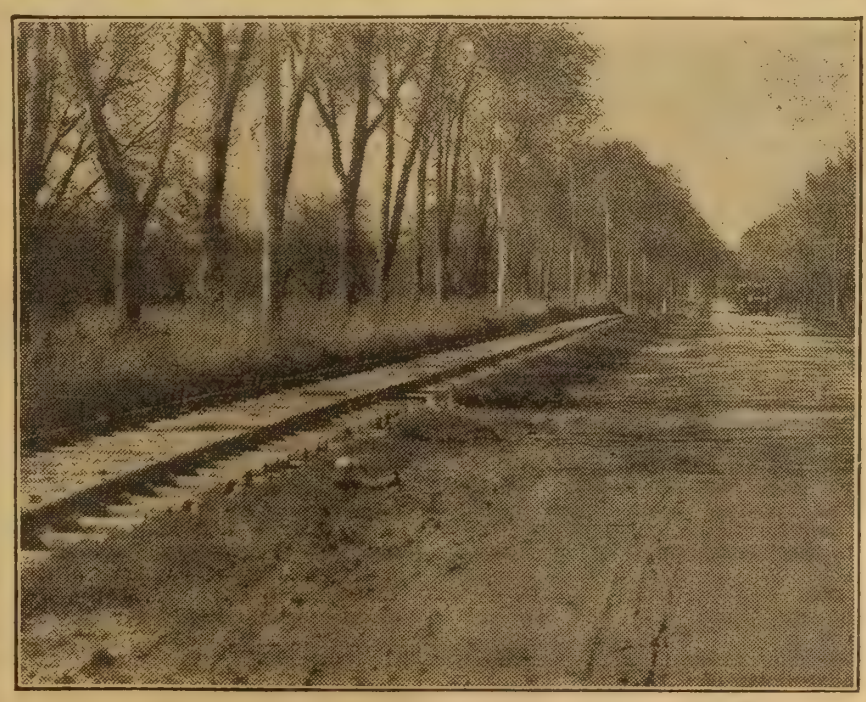
Polk county, Wisconsin, farmers recently made an excursion tour into Minnesota and visited six dairy farms in the vicinity of Stillwater and St. Paul. There were about thirty-five in the party, which was headed by J. S. Klinka, Polk county agricultural representative. The receiving delegations were headed by H. R. Leonard, county agent of Washington county, Minnesota. Those who made the trip from Wisconsin were members of the Polk County Holstein-Friesian Association.

Waukesha county Guernsey breeders gathered on the lawn of the Roy Burton farm, at Eagle, the occasion being the annual picnic, on June 3d.

A $2,000 building, size 32x100, is being erected on the grounds of the Walworth County Agricultural Society at Elkhorn, for the accommodation of the poultry exhibit. This building will have a capacity of 500 coops.

Between twenty and thirty young men will spend six weeks this summer studying the methods followed by successful farmers living in some of Wisconsin's leading dairy regions. This field course is a part of the regular summer school schedule of the college of agriculture at the University of Wisconsin. Those enrolled in this course are especially interested in farm accounting, dairy production and live stock management. The camps will be made successively at Rosendale, Fond du Lac county; Bethesda Crossing, Waukesha county, and on the Beloit College campus, Beloit. From these field headquarters the students will make "reconnaissance" surveys of about twenty-five farms in all. They will pay particular attention to the equipment, machinery, live stock and production records, crop rotations and feeding systems of the farms. The course, which opens June 26th and closes August 5th, will be given under the direction of D. H. Otis, supervisor of Wisconsin farm management contests.

Some interesting facts have been brought out at the meetings of the cow-testing associations this summer. Mr. Archibald House, of Omro, gave a report at a recent meeting of the association. This report showed forty cows in the association which had been sent to the slaughterhouse after it had been fully demonstrated that they did not pay for their keep. Attention to separating added $14 to one farmer's monthly milk check and $5 to another's. A properly balanced ration, made possible by the purchase of clover hay, added 3,500 pounds of milk to a month's output, which added $54 more money to another farmer's income. Mr. Roy T. Harris, state tester, announced recently that there are now forty-nine cow-testing associations in Wisconsin testing 22,000 cows each month.



ROADWAY AND CAR LINE TO MADISON TRACTOR GROUNDS.

Farmers who plan to grow certified potatoes for seed purposes this year should make their applications before July 1st. This applies throughout the entire state and indications are that a greater number than ever before will grow such seed. R. L. Cuff, agricultural representative of Barron county, in calling for applications points out the value to farmers in that county who last year grew certified seed. Only six or seven farmers took the trouble to raise certified potatoes. The number of bushels of potatoes grown by these six or seven farmers amount to a little better than two carloads, or about 2,400 bushels of seed potatoes that have been sold so far this year. Had there been twice as many bushels raised, yes, several times as many, by our farmers it is safe to say that all of the seed could have been sold this year at the same price that the 2,400 bushels were sold, that is, 50 to 75 cents above the market price. There are some who have questioned whether it paid to take the trouble of inspection and certification. The cost of this certified seed amounted to $30 to $35, divided among six or seven farmers who raised the seed. The increase in price to these same farmers amounted to about $1,500.

Considerable progress has been made by the Holstein-Friesian Breeders' Association of Wisconsin, on the Wisconsin Holstein booklet. This booklet was decided upon recently at a special meeting of the association. Advertising orders and memberships have been received up to date amounting to a total of $762.50. This includes orders for thirteen full-page advertisements, fifteen half-page advertisements and nineteen smaller advertisements. The secretary, Mr. C. J. Schroeder, expects to receive orders for twenty-five full-page advertisements.

Students with special training in farming and home making, numbering 139 in all, graduated last week from the College of Agriculture. Of the total number eighty-seven are graduates of the regular four-year course in agriculture, and thirty-nine young women completed the four-year course in home economics. Certificates of graduation were also granted to thirteen men who have satisfactorily finished two years' study in the middle course. The College of Agriculture was represented in the commencement exercises by Walter B. Krueck, of South Milwaukee, who delivered the class oration, and Irving V. Bullis, of Eau Claire, planting the class ivy.

Dairymen in Walworth county, Wisconsin, and Henry county, Illinois, to the number of 200 met recently at Woodstock to discuss the organization of a co-operative marketing company for the milk producers. All were members of the Milk Producers' Association. Briefly the object of the selling company would be to take charge of the entire milk supply, the city distributors and bottling plants contracting with this company for their supply. A commission would be charged the producer for selling and handling sufficient to cover expenses. Under such an arrangement the producer would have to deal only with his co-operative selling agency and it is believed that in this way a better price for milk for the farmer can be secured. It is expected that from $250,000 to $500,000 will be required to establish this distributing company and it is proposed to have each producer take at least one share of the stock, which will be sold for $25 or $50, as the case may be. If he should move away so that his milk was no longer handled by this company they would buy back his stock at not less than he had paid for it. It is the aim of the officers of the association to have the distributing company all ready for operation by the next contract period, and the plans will be considered at the next meeting of the directors.

Delbert Kingston, who by placing ten of twelve cows correctly, won the Waukesha County Guernsey Association's judging contest on June 3d.

LIVE STOCK SUMMER MEETINGS

Wisconsin Farmer Representatives Report Most Enthusiastic Summer Meetings of Breeders in Many Wisconsin Counties Within the Past Few Weeks.

Waukesha Holstein Meeting.

Waukesha county Holstein breeders held at Dousman on Wednesday, June 21st, what was undoubtedly the largest and best meeting ever held by the Waukesha County Holstein-Friesian Breeders' Association. That is a very broad statement as this organization has held some splendid meetings in the past but none that were so well attended as the summer picnic last week when between 650 and 700 persons were in attendance. The writer counted 147 automobiles in the road and about the grounds at one time in addition to sixteen buggies, and more than 500 persons were fed in addition to the scores who brought their own lunch or arrived after the dinner hour.

The meeting was held at the Wisconsin Home and Farm School a few miles from Dousman. It gave Waukeshe county breeders as well as those from afar an opportunity to learn of the splendid work which this school is doing under the superintendency of Mr. R. W. Bradford. The school farm consists of 220 acres and the entire institution is supported entirely by the free-will offerings of prominent Wisconsin men who are providing in this school a place for training orphan boys or those who are without the adequate home support and surroundings that boys between the ages of eight and sixteen years require. There are now thirty-five boys at the home and farm and all are being trained for a farming career in addition to being given a regular eighth grade education. There is a nice herd of Holsteins on the farm in addition to other live stock, and it proved a most enjoyable place for the holding of this gathering.

The weather was ideal for the occasion. The Waukesha county breeders seem to have a faculty of knowing which days of the year are going to be good picnic days and then choosing them. Out of a week of rainy, cold weather they were fortunate to pick one that was sunshiny and warm and with the roads in splendid condition the breeders and their families poured in from every corner of the county. It must be said of the Waukesha county meetings that they always arrange for an interesting program of speaking and music to follow a bounteous dinner, and that the meetings are planned to be just as interesting and as pleasing to the wife and the children as to the men. Dinner was served by the ladies of the Congregational Church at Dousman, who found themselves almost swamped when the crowd began to pour in, but there was plenty for all.

Mr. John B. Irwin, of Minnesota, owner and developer of the champion Holstein cow, Duchess Skylark Ormsby, was the principal speaker of the day. This was one of a series of five addresses Mr. Irwin made last week to Wisconsin Holstein breeders, and he divided honors with Mr. F. G. Swoboda, county agricultural representative of Langlade county, and Mr. S. S. Cramer, of Milwaukee. Music was supplied during the dinner hour by an orchestra from Waukesha, and during the afternoon by the Dousman quartet and by the boys in the Wisconsin Home and Farm School

Mr. Irwin followed somewhat closely the advice which he gave to the breeders in Walworth county on the previous day and which is mentioned elsewhere in this issue. He commanded the closest attention, as Waukesha county breeders who themselves are developing some pretty high-producing black and white cows were much interested in the developer of a cow who could almost give in a year her weight in butter. He gave Waukesha county the highest kind of praise for the co-operative effort which has been going on in that county for the last few years and said that while they were producing high producers in Minnesota that they also had their eyes on Wisconsin as one could not tell when, at any minute, some Wisconsin breeder might come forward with a better producer.

Mr. Irwin likes the type of dairyman who makes partnership with his cows; who takes them right into the business with him and studies them and knows them like a book. He likes the dairyman who knows his herd like the boy knows his multiplication tables after they have been thoroughly memorized, and he told the Waukesha breeders that in his mind one of the great elements of success in the pure-bred live stock business is the knowledge of what every cow can do; what her ancestors have done; what her family connections are and what the future may hold forth. For that reason he uses the term of "take your cows in as your partners," so that the dairyman may know their history, their families, their ability and their prospects as money-makers. To make progress he believes a man must go thoroughly into the question of pedigrees and to always remember that it is the little things in dairying that always count.

Although Duchess Skylark Ormsby has reached the high mark of 1,205 pounds of fat in a year, Mr. Irwin does not believe that the limit of production for a cow has been reached. He would not be surprised any day to hear of her record being broken and, although he has developed her to this point, he is not content but anxious to make even better records. "And it would not make me feel badly in the least," he said, "for Duchess will gladly take a back seat, and I am certain the limit has not been reached, as there appears to be no limit to the ability of the Holstein cow."

Mr. Irwin dwelt on the value of constructive breeding along definite lines, as this, in his mind, is of prime importance in building up good herds of fine producers. He referred to the many Wisconsin breeders who have been building up herds along definite blood lines for years as indications of what can be accomplished with this kind of breeding, and said that in this state the other breeders certainly should profit by the experience of their neighbors.

Mr. Swoboda took as his text, "Uniting for Progress," in which he outlined the great value of co-operation; showed what it had done and what it meant for Waukesha county. Mr. Swoboda was, until he became an agricultural representative, in charge of the work at the Wisconsin Home and Farm School, and it was like meeting homefolks to address the Waukesha gathering. His knowledge of conditions there years ago afforded him the opportunity to show by comparisons the great progress made through co-operative effort in dairying in Waukesha county during the past ten years. He remembered well when there was not a pure-bred herd in the county; less than a half dozen pure-bred sires and less than a half dozen silos. Today there is a silo to almost every dairy farm; a scrub sire is an exception and the reputation of the county today as a breeding center speaks for the pure-bred herds. Since January 1st there have been fifty carloads of high-grade Holsteins shipped from Waukesha county.

Co-operation, Mr. Swoboda pointed out, means progress, for the owner of scrub sires feels that he can't afford to belong to breeders' associations, and the man without silos looks at it the same way, as a rule. Wherever the breeders have gotten together, wherever dairymen have united in cow-testing associations, etc., Mr. Swoboda said that one could look for progress.

Mr. Swoboda went into the matter of advertising and called attention to the fame of Waukesha county as a breeding center, all obtained through advertising and the work of the breeders' associations. "There is nothing like printers' ink," he told them. Look into every line of endeavor and you find business men spending millions to advertise, and the same proposition confronts the dairyman with pure-bred stock to sell. He can't hide his light under a basket and succeed. He also discussed the future of the dairy business, praised the efforts of the National Dairy Council to increase the use of dairy products and pointed out the benefits to the farmers of a greater use of cheese, butter and milk. This will require greater production and this is one of the problems he believes that is facing the country, although not a critical one at this time. Not only get more milk from the cows but also make the land produce more. and Mr. Swoboda said he expected to see the day when the farmer with 160 acres and eighty of it lying idle will be considered a public nuisance. More intensified farming must come, he believes, and with it will come greater production from the soil, a living on forty acres and contentment on the farm.

Mr. Cramer spoke briefly of the recent national Holstein convention at Detroit, and Mr. A. J. Framer, president of the First National Bank of Waukesha, took occasion to praise Waukesha county, having just returned from a long eastern trip.

A judging contest conducted by Mr. Chris Schroeder developed considerable interest. Fifteen took part and the prize winners under fifteen years of age were: 1, Charles Pierce; 2, Frank Swartz; 3, Ivor Hopkins; 4, Harold Carr. Winners above fifteen years of age were: 1, Roderic Rice; 2, Edwin Hall; 3, William Kollath; 4, Emery Bade.

Fond du Lac County Jersey Meeting.

The Fond du Lac Jersey Breeders' Association held its third annual meeting June 15th at the home of E. Bruins. The meeting was a great success. The association was organized June 12, 1914, with twenty-seven charter members and now has a membership of fifty-one. F. H. Scribner, who was the first president of the association and re-elected last year, asked to be relieved at this time, and E. Bruins, of Fairweather, Wis., one of the veteran breeders of the state, and one of the most progressive of Jersey men, was elected president. A. S. Crooker, of Ripon, another of the stanch Jersey men of this county was elected vice president; Charles A. Peterson, of Rosendale, secretary-treasurer; Parker Bussey, of Omro, director; C. E. Pinning, of Fond du Lac, director and F. W. Page, of Princeton, director. F. H. Scribner, of Rosendale, gave an interesting talk on the Jersey cow, her feeding, breeding and care also mentioning some of the essential points to be taken into consideration in selecting Jerseys. At the annual meeting in 1914 several members were delegated to push the organization of cow-testing associations in their respective communities, and as a result of their efforts and the co-operation of H. C. Searles, of the state dairymen's association five cow-testing associations have been organized in this and contiguous territory of neighboring counties, giving Fond du Lac county the largest number of cow-testing associations in the state. Thus encouraged, effort is to be made to organize one or more associations in every township in the county. It was decided at this meeting to hold a public sale of pure-bred Jerseys probably at the time of the county fair next fall. These cattle will be consigned by members of the association, and a committee is to be appointed to pass upon any cattle offered for the sale to see that none but sound, absolutely first-class and guaranteed stock is consigned. The secretary was instructed to get out a directory of the members and see that the association is properly advertised. Some pure-bred bull calves were offered as premiums for the best exhibit of grade Jerseys at fairs in the newer sections of the state last year and this work is to be resumed on a larger scale this year. Quite a nice exhibit of Jerseys was made at the county fair, last fall, and it is expected that much larger showing will be made at the fair this year. An appeal was made to the members to join and support the State Jersey Breeders' Association, and also the Wisconsin Live Stock Breeders' Association, and effort will be made to co-operate as far as possible with other local Jersey breeders' associations in the state. In informal discussions much emphasis was placed on the value of official testing and the necessity of real constructive breeding on the part of members of the association. A cow-judging contest was staged for the boys and young men in attendance, with John Dixon, of Brandon, as final judge. This feature is to be made a part of the future meetings and prizes awarded to the winners in the contest.

Walworth County Holstein Meeting.

Walworth county Holstein breeders, with their families, gathered at Lake Lawn, near Delavan, that county, on Tuesday, June 20th, for their annual picnic and summer gathering. About fifty breeders were in attendance when the meeting was called to order by Mr. E. B. Watrous, of Troy Center, the president. Mr. John B. Irwin, of Minnesota, owner and developer of the champion cow, Duchess Skylark Ormsby, was the principal speaker, this being a series of five meetings which he attended and addressed last week.

The Walworth county association was unfortunate in choosing a cold, bad day for their gathering which kept many away. The day opened auspiciously, but before noon a cold east wind set in, followed by rain throughout the afternoon. The meeting was held in the pavilion at the lake and with warm weather the gathering should have been largely attended, as Lake Lawn, a part of the farm of Dan LeBar, is one of the show places of Walworth county and an ideal place for such an outing.

Walworth county is the home of many splendid Holstein herds. Crop conditions are very good, excepting corn. However, corn is considerably ahead of last year and the breeders and farmers are very optimistic. Breeders also report a good demand for pure-bred stock and every indication points to a good summer for the dairymen.

Mr. Irwin spoke very interestingly of the work of his champion cow and praised the part the women had taken in the Lake Lawn meeting, as he does not believe any dairyman can succeed without the help and inspiration of his wife. As a result, he always likes to see them at the meetings, for there is much they wish to learn about dairying and at the same time enjoy such outings.

Mr. Irwin believes the primary consideration in successful breeding to be constitution. Without a strong constitution, without ability to digest and take care of the 35,000 pounds of feed and roughage she consumed during her first year's test, he does not believe Duchess Skylark Ormsby could ever have made the record of 1,205 pounds of fat which she established. Her record was 27,700 pounds of milk at a cost of $190 for feed, leaving her owner a net profit for the year of $210.

Production, he realizes, is the basis of the dairyman's business, but Mr. Irwin doesn't care to lose sight of type and individuality in getting good producers. The scale of points, he says, is based on types with the ability to produce and he considers that when one is establishing a herd according to this scale that he is pretty certain to get good producers. He cited as an instance that when he bought the John B. Young herd, of Iowa, in which herd was Duchess Skylark Ormsby, that he asked W. S. Moscrip to pick out what he considered the best five cows, according to the scale of points. This record cow was among the five and the other four chosen by Mr. Moscrip were all good producers. "Nothing helped me so much," he told the breeders, "as studying the scale of points."

Mr. Irwin's theory is that it is best

(Continued on page 21.)

Cattle Grazing In Wisconsin

by J. L. Tormey

IN THE past few years considerable interest in the cut-over sections of northern Wisconsin, Michigan and Minnesota has been manifested. This interest has grown out of the wonderful agricultural development that has taken place in those sections within the past five or ten years. Men with an eye to the possibilities of the future have, in some cases, bought quite extensive tracts of land to hold for advancement in price. Others, showing a broader-minded spirit, are opening up large tracts for colonization and by studying the conditions and helping the settler have assisted ably in increasing the nation's wealth.

The settler without much capital occupies a small tract and by energy, thrift and ambition manages by the labor of his and his family's hands to clear the land and in the end own a home. He cannot be expected to pasture extensively and what pasture he has will be utilized for pasturing dairy cows. The regular income from the dairy cow makes her the animal that can best carry the settler. She pays for the labor and time put upon her and the settler has more time and labor than anything else.

Those who own large tracts of land are especially interested in the possibilities of grazing beef cattle or sheep to pay them something while they are holding the land awaiting the settler and also to help subdue the land. There is not much data at hand concerning the grazing possibilities of raw cut-over land. One can be sure, though, that the ideal conditions under which the ranchman grazed are not always present. While tame grasses flourish in the northern sections and there is an abundance of rainfall, there still exists in many places too much brush and too many water holes and low, marshy places to which the sun has no access. Good grass for grazing and brush cannot flourish in the same place and water holes are excellent places for breeding insect pests, such as flies and mosquitoes. It takes especially good feed to support both the flies and the cattle. The flies generally prosper, while the cattle do not. However, there seems to be fascination and romance in the grazing of cattle. There may also be profit, although in the past two or three years the latter has, in many cases, been absent. In spite of the reverses some men have met and in spite of the fact that many went on record as promising to themselves that they would never again pay upward of 8 cents for cattle to graze, the markets this spring are witnessing higher prices than usual for thin cattle of quality to be grazed or fed through the summer. I remember when men said anyone who paid more than 4 cents for feeders could not make money.

With few exceptions, cattle are higher in the spring than in the fall. There are reasons for this. Summer gains are considered cheap and cattle can be grazed with the minimum of labor, care and with practically no overhead charges. The building and care of fences, losses not to exceed 1 per cent by disease, accident or lightning, salt and frequent visits are about all the necessary expenses connected with the industry in Wisconsin. On the other hand, considerable expense is connected with keeping cattle over winter, whether they be fattened, kept growing or allowed to get thin by trying to maintain them at a constant, or nearly constant, weight. Wintering cattle demands equipment such as barns or sheds, the providing of feed the summer previous and the labor incident to feeding and caring for the cattle during the winter. Cattle may be maintained over winter on roughages alone and may be made to gain on good clover or alfalfa hay and corn silage, but the growing and preserving of such crops involves considerable expense not met with in summer grazing. Consequently there is always a demand in the spring for cattle to fill pastures and buyers are plentiful; in the fall, when pastures are empty, there are more sellers than buyers.

A system of handling this problem that seems rational and has been recommended for men who have considerable pasture and are equipped to winter is to buy in the fall and winter cheaply. The usual spread in price per 100 pounds between thin cattle in the fall and thin cattle in the spring is about $1.50. At the Pennsylvania station beef cows were maintained through a period of 140 days on an average daily ration of about sixty pounds of silage and one pound of cottonseed meal. With silage reckoned at $3.50 per ton and cottonseed meal at $32 per ton the cost of feeding one cow for 140 days was $16.84. For a period of five months the cost would approximate $18. These cows made an average daily gain of 1.17 pounds. If feeders weighing 900 pounds and costing 7 cents the 1st of December could be wintered as cheaply and advantageously they would weigh 1,075 pounds the 1st of May. Their total cost to that time would stand the owner $7.53 per hundredweight. The spread necessary in this case would be about $1 less than the great demand for cattle in the spring usually allows. Tasker Bros., of Turtle Lake, Wisconsin, have been very successful cattle grazers in northern Wisconsin. They watch the markets and generally buy in the fall when cattle are cheap. They co-operate with canning factories and winter the cattle cheaply on pea vine silage, straw and corn fodder and generally sell the cattle off grass in late summer or early fall the following season.

YOUNGSTERS SPELL ECONOMY IN CONVERTING GRASS INTO BEEF.

Wisconsin is not considered a beef state. In fact, men on the Chicago market rather smile when Wisconsin cattle are mentioned. However, many good cattle are grazed in southwestern Wisconsin and a glance at the successful grazers' work may be helpful in solving the situation for the man who contemplates grazing in the new country to the north. Mineral Point is the principal shipping point for good grass cattle from southwestern Wisconsin and "Mineral Pointers," as these cattle are termed on the Chicago market, are considered among the best grass fat cattle that appear at Chicago. The men who turn out good fat grass cattle are good judges of cattle and know their worth on the market. It takes good cattle and mature cattle to fatten well on grass and bring up to 10 and 11 cents on the open market, as some of the cattle from that section of the state have done. Men who turn out such cattle as those mentioned above feel that they can afford to graze only good ones and often spend considerable time and exercise great care to get the right kinds. There are others who prefer cattle of medium quality with good gaining possibilities. It takes more experience and greater knowledge of cattle prices on the market to successfully handle cattle of medium quality. Well finished, heavy cattle generally sell well. It takes skill to accurately estimate from reading reports of sales what common cattle will bring on the market. Again there are men who prefer to graze cows and heifers, and if these can be bought at a reasonable figure they usually return a profit. Grazers of cattle, however, generally have a specialty, like other successful people. Cows and heifers fatten well on grass and for the past few years fat heifers have brought good prices. The profit in cows lies in their ability to make a good increase in weight and fatten well on grass.

The men who graze young steers must be content to make a profit—if there is any—by the increase in weight on grass. For the past few years cattle weighing around 600 or 700 pounds have, on the average, been higher priced per pound in May than they were at the end of the grazing season. Many grazers feel they can "graze down" the initial cost and many reports state that cattle can be carried through the grazing season at a cost of $6 or $7 per head. Still others estimate the cost of keep at $1 per head per month. Let us assume that good 700-pound steers can be delivered to the pasture at 8 cents per pound and gain 275 pounds through the grazing season of five and one-half months in Wisconsin. The initial cost of the steer is $56 and the cost of grazing at

SUCH CARE MUST BE GIVEN TO STEERS SO THAT EVEN THE "BASHFUL" INDIVIDUALS WILL GIVE A GOOD ACCOUNT OF THE FEED CONSUMED.

these figures is $5.50. Not considering the probable losses, interest on capital, taxes, repairing or building fences, time of owner, salt and other expenses, the 975-pound steer at the end of the season would have cost $61.50. To get back the original price paid and the cost of pasturage the steer would have to sell for $6.31 per hundredweight, or $1.69 per hundredweight less than the spring price. We know that no one would figure this way, but the example serves to show what enthusiasts mean when they speak of "grazing down the cost," and in actual grazing operations "grazing down the cost" is about as fictitious as the above example.

Let us estimate where the grazer does actually get off or arrive with his 700-pound steer. The grazers of southwestern Wisconsin estimate one 1,000-pound steer to each two and one-half acres of land. Of course, there are boosters who claim an acre of land ought to support one head of cattle. So it ought, but that land cannot be bought at $75 to $100 per acre. The grazer has to fence and pay taxes on hillsides, creek and creek bottoms that are not tillable and his land receives no manure except what the cattle return. Eight per cent is little enough to allow for interest on investment and charges such as salt and fencing. This puts the grazing charge for the summer on the two and one-half acres of land at from $15 to $20 for the 1,000-pound steer and at least $10.50 to $14 for the 700-pound steer. To this expense must be added a six months' interest charge on the initial cost of the steer; and if the steer is shipped to market all costs of marketing, which include freight, commission, shrinkage and other incidental charges. Shipping 130 miles to Chicago is reckoned at about 40 cents per hundred. At the end of the grazing season our account with the steer would stand something like this:

Original cost	$56.00
Interest at 6 per cent—six months	1.68
Pasture (average)	12.00
Marketing expenses on 975 lbs. less 4% shrink @ 40 cents	3.74
Liability of loss 1% on average sale for season	.67
Total cost	$74.09
Price per cwt. at market to break even on 936-pound steer	$7.92

The above estimate shows the cost of the steer has been "grazed down" 8 cents per hundredweight or 1 per cent of the initial cost. The past few years the market has marked summer grazed cattle down quite severely in the fall and many cattle that cost 8 cents in the pasture May 15th to June 1st have gone begging for from $7.25 to $7.75 per hundredweight in Chicago in the fall. This may have been due in large measure to quarantine restrictions, but it is also due in part to the heavy marketing in the fall.

Not long ago I answered an inquiry from a person who owns 20,000 acres of cut-over land in northern Michigan. The writer of the inquiry stated there was plenty of government literature on how to raise skunks, but nothing on profitable grazing on cut-over land. The value of cut-over land for grazing is variable. Good gains are sometimes hard to get on good grazing land where conditions as to shade, water, good blue grass, high ground and freedom from flies are ideal. It is hard to promise success to a novice in the cattle game, when men who have made a life work of the cattle business in good grazing sections are scratching their heads to see their way out. Gains and costs can be estimated because there is an abundance of information and experience to call on, but market fluctuations cannot be foreseen. Who can foresee tight money or hard times?

The grazer of heavy cattle that fatten well on account of their age would do well to consider marketing on the usual midsummer swell in the market if the cattle are fat. Late August and up to October have been best times the past few seasons for marketing heavy grass fat cattle. Grazers hesitate to sell at this time of the year. They dislike to sell the cattle when pastures are good and cattle are gaining, but often the cattle would bring more actual dollars if sold early. If the grazer is prepared to winter—and many are—the pastures could be used later in the fall to carry younger stuff bought when the flood goes to market.

Packers appear to be concerned—and well they might—over the attitude shown by cattlemen throughout the country toward the condition of markets. One authority says the packer states that cattlemen are paying too much for stockers and feeders. That is no news to cattlemen. What is the cure for this? Can anyone answer? Apparently the cattlemen have the choice of paying the established price or not getting cattle. Many are not getting them. There is a limit to the amount of money one can lose, no matter how optimistic or foolhardy he may be. One authority states, though, that the packer bids on feeders, because he would like to get them for butcher stock. Some go even further and say that the packer will now pay butcher prices for stock that was drawing only canner and cutter prices during quarantine times. At least one of the big packing concerns of Chicago is now starting a survey of cattle producing conditions. It is a movement worth while.

In the meantime, the producer of stockers and feeders feels quite well satisfied. Whether they would continue to produce at lower prices is a question. High price is the best-known stimulant to production.

Studying Extension Work.

The demand for capable extension workers in agriculture is steadily increasing throughout the country. To aid in meeting this need the college of agriculture is offering special work in its summer session (June 26th-August 4th) which is designed to help in fitting teachers, farmers and other workers for these important posts. The program as already arranged will afford a splendid chance to study at close range the methods used by some of this country's most successful agricultural extension workers.

Some of the speakers listed: E, L. Luther, state leader of county agricultural representatives for Wisconsin; A. J. Curtis, Portland Cement Manufacturing Association; E. F. Murray and F. R. Crane, agricultural extension agents, Great Northern Railroad; W. A. Lloyd, United States Department of Agriculture; H. G. Bell, National Fertilizer Association, Chicago; J. R. Wheeler, agricultural committee, American Bankers' Association; Dr. H. E. Horton, agricultural commissioner, American Steel and Wire Company; Perry G. Holden, director of agricultural extension, International Harvester Company, and Ford Allen, dairy agent, Chicago & North-Western Railroad.

A Few Suggestions.

Le Roy Cady, horticulturist, University Farm, St. Paul, gives the following helpful suggestions for the week ending June 30th:

Keep the cultivator going. Weeds are unsightly as well as injurious to the crop.

Take a day off and visit someone else engaged in your line of work. Perhaps you can learn something from their methods.

Do not allow too many suckers to grow about the raspberry hill. Some varieties sucker very badly.

The old-fashioned bleeding heart makes one of the best perennials for planting about the home.

Keep the green aphis off sweet peas and roses by frequent spraying with some tobacco preparation.

Strawberries should be at their best now. If you do not have at least a small patch, it is your misfortune.

If the strawberry bed is to be fruited again, mow it close to the ground as soon as picking is done. Thin the plants to at least a foot apart and cultivate thoroughly.

Proper advertising should give just as good results to the farmer and gardener as to the merchant. Now is a good time to give it a trial.

Is the home well supplied with flowers now? Shrubs, perennials and annuals have given a magnificent showing about the city homes and parks this year.

Caladium and cannas need an abundance of heat, water and plant food. It is often a good plan to mulch the plants with rotted manure on the approach of dry weather about the middle of July.

Late cabbage may be set on the land that the old strawberry plants grew on, if the ground is plowed at once. Turnips or rutabagas also often make a good crop on a piece of land of this sort.

Look well after the early chicks. They will pay well if given good treatment, otherwise it is best not to have any at all.

Corn Crop Needs Warm Weather.

Pastures and Meadows Are Growing Well--Small Grain Prospects Are Good--Too Cold and Wet For Corn.

Barron County.—Small grains and canning peas look good. Clover and timothy are very heavy and sugar beets have a good stand on account of the continued wet weather. Corn and potatoes were planted late. Pastures are good and creameries and cheese factories are getting all the milk they can handle. Small fruits and apples promise well.—F. J. K.

Brown County.—Excessive rains and cold weather have held crops back. On high lands oats and barley are looking well, but on low, flat lands they are poor. Corn which has come up is at a standstill. The white grub is bothering corn and sugar beets. Hay has improved some, but will be a light crop. The cow is making the best crop, if we can produce enough to feed her through the winter we will pull through.—J. D. McAllister.

Burnett County.—Heavy daily rains have soaked the ground to the surface. Pastures and hay fields are in splendid shape. Small grains look fine. Corn is late and doing poorly. Potato fields are too wet for cultivation. Gardens on high ground are fine. Roads are almost impassable with automobiles and horses are getting back onto the job.—E. H. Johnson.

Clark County.—Not all the corn has been planted on account of heavy rains, and that which is planted has been retarded in growth. Conditions are more favorable at present; corn is growing more rapidly, but very little cultivating has been done. Some replanting is necessary. Meadows and small grains are growing rapidly on fairly high ground. Grain on the lower land is suffering from too much moisture. Pastures are not doing as well as expected and many farmers are increasing their acreage of pasture. Small fruits promise an abundance. The potato acreage is about normal.—Louis Buddenhagen.

Crawford County.—During the last two weeks, unusual rains and storms have done considerable damage to crops. Corn planting was delayed and some farmers are still planting. All small grains are doing well. Pastures are unusually good and the dairyman is in his glory; cream and milk prices are very good. A few hot days and nights are needed to push the corn along.—A. M. Laird.

Dunn County.—Cold, rainy weather has prevailed for some time. Small grains have made a wonderful growth. The hay crop will be tremendous. Corn is not growing well; prospects for it are not good. Much hay was lost in curing. The first crop of alfalfa has been cut, but the conditions for curing it are very poor.—J. D. Millar.

Fond du Lac County.—Weather continues cold and wet for this time of year. Small grains look well. Pastures are good. The acreage of hay is small, but the crop will be good. Corn is backward and considerable is to be planted yet. The apple crop promises to be far above the average.—A. L. Williams.

Iowa County.—Oats, barley and other small grains look well. Barley is beginning to head. Corn is up and it is difficult to keep the weeds down with so much rainfall. Weather is too cold for corn to grow rapidly. Corn and corn land suffered much from a very heavy rain in this community, which came about two weeks ago. Water was higher than it has ever been known to be, and the lowlands were washed over, and fences carried away. Pastures are very good and cows are producing well. Cheese factories are handling more milk than they have ever done before. Fruit will not be plentiful. Strawberries are ripening.—J. M. Blotz.

Juneau County.—Weather is cool. Small grains are doing well. Corn is backward on account of too much rain and cold weather; some will have to be replanted. Hay is making a light crop. Pastures are not very heavy. Potatoes which were planted the last of May are just coming up; most of the acreage, however, is just being planted. Apples will make about one-third of a crop. Gooseberries and currants are fair crops. Strawberries are very good where the wind and rains did not damage them.—C. E. Haskins.

La Crosse County. -Small grains look good. Corn is backward on account of wet, cool weather. Much replanting has been done. Clover badly witerkilled on tame hay lands. Early potatoes are looking fine. Small fruit crops will be short.—S. J. Dawson.

Lafayette County.—Corn is late, but doing well; second and third cultivations are now in progress. The first crop of alfalfa has been cut—it was not as heavy as last year. All hay looks good. Small grain is very rank. Pastures were never better and all live stock are doing fine. Strawberry crop was a disappointment, averaging only about 50 per cent normal. There are no cherries or plums to speak of. Garden truck is doing exceptionallly well.—W. J. Martin.

Lincoln County.—Crops are about two weeks behind because of cool weather and too much rain. Pastures are very good. Hay prospects are good; the new seeding came through in fine shape. Grain does not promise more than half a crop, with some pieces of oats entirely ruined. Potatoes which were planted early are just coming up; some planting has not been done yet. There is no fruit to speak of.—G. A. Patterson.

Manitowoc County.—Barley and peas are turning yellow on account of excessive moisture. Rye and winter wheat look fair, and oats are coming on in fine shape. Corn planting is late on account of wet weather, and many farmers are still planting. Grass is short because of late, cool season. Clover which did not winterkill is in good shape. Live stock that wintered well are now in fine shape in spite of short pastures and unfavorable weather. Potato planting is nearly completed; acreage will be about the same as last year's. Truck crops had a late start, but look thrifty.—Edward E. Straka.

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IF you want your silo filled with silage which will produce good, rich milk and plenty of it; also silage which will produce fat rapidly, fill it, or have it filled, with a **Tornado**, on account of the fact that the **Tornado** reduces it to a very fine condition.

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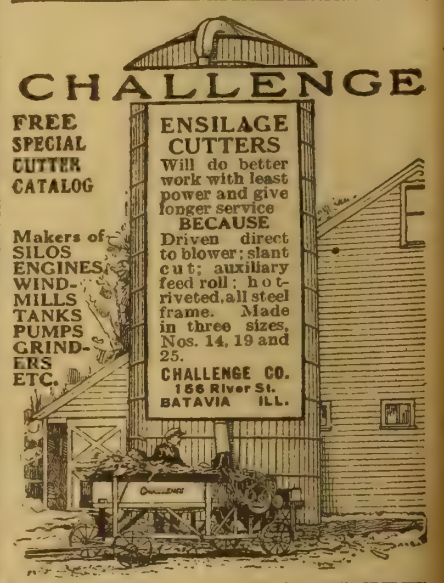

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Holstein Meeting at Manitowoc.

The annual picnic and summer meeting of the Manitowoc County Holstein-Friesian Breeders' Association, which was held on Sunday, June 18th, proved to be one of the most successful ever held by this growing association. The day was cold and the meeting followed a period of rainy weather that left the roads in bad shape which kept many breeders from attending, especially from Brown county, which had been invited with the Kewaunee county breeders to join in the festivities.

Crop conditions in Manitowoc county, aside from corn, are very favorable. The grain and hay crops promise to be as large as last year, when records were broken, and with warm weather during the next sixty days, it is thought the corn will pull through nicely, although some of it has not yet been planted. Conditions in the dairy field are very good. Manitowoc county is rapidly waking to the value of dairying and considerable official testing is now being done in that county in addition to the testing being done by three county associations so that the dairymen will know which are their good and their poor producers. H. R. Brewster, supervisor of dairy tests for the county, informed the writer, who had the pleasure to be the guest of the association on this occasion, that some splendid work is being done by the herds in the county and that Manitowoc will bear watching in the future. There is a growing demand there for pure-bred females, while the use of pure-bred sires is now general.

The picnic was held on the Lakeside Farm of Mr. Julius Lindstedt, a few miles from the city of Manitowoc. Mr. Lindstedt's farm overlooks Lake Michigan and a more ideal spot for such a gathering could not have been chosen. Mr. Lindstedt recently moved his Holstein herd to this farm from Michigan and it was a delight to look over his herd of about thirty-five pure breds, including his young stock, in which are some very distinguished individuals. Mr. Lindstedt plans to make this farm eventually one of the show spots of Wisconsin as well as the home of some of the best Holstein stock, to which end he is gradually working.

The meeting brought out during the day about 500 breeders and their families, who enjoyed a picnic lunch on the Lindstedt lawn and afterwards heard a splendid talk by Mr. F. B. Fries, the well-known Holstein breeder of Richland Center. There was a good number of breeders from Kewaunee county, headed by Mr. W. C. Katel, secretary of the Kewaunee county association, which will hold its annual picnic the first Sunday in July. Mr. Katel announced that the meeting, which was originally set for June 25th, had been postponed until the first Sunday in July and extended an invitation to all Manitowoc county breeders as well as those from other counties to attend. Music was furnished by a band from Manitowoc and a milking contest and a cow-scoring contest served to increase the interest in the gathering.

Mr. Adolph Otto, of Valders, president, presided at the meeting, assisted by Mr. Charles Hampke, of Manitowoc, secretary, to whom great credit is due for the success of the picnic and the growing popularity of the association. Mr. Hampke announced that the association now has about 100 members and that it is hoped before the winter meeting to enroll every Holstein breeder in the county.

Mr. Fries gave the breeders a typical, enthusiastic Holstein talk. He is a breeder of the black and white; is convinced that it is the best cow for the dairyman and is not backward about boosting for the breed. He touched on many essential points, such as breeding, selling, etc. Mr. Otto spoke briefly on the advantages of the association and urged every Holstein breeder in Manitowoc county to put his shoulder to the wheel and boost the organization.

Mr. Fries is a strong believer in advertising and considers publicity one of the essentials of a pure-bred live stock business. But when the buyers are attracted and visit the farm his advice is to have the stock in tip-top condition. Too many sales have been lost, he told the breeders, because stock was not in good condition when the buyers came and he said that no matter how good a cow's production record she must look good to the eye or the buyer will want to slash the prices. Mr. Fries considers that there are three ways of advertising. First, it is through the medium of the press; then at the county or state fairs and then through official testing and advanced registry work. He contends that nothing so well establishes a herd at home than to show it at the county fair, while the newspaper advertising will take care of it abroad. Mr. Fries has done considerable official testing and is in a position to speak relative to the merits of this class of advertising and he declared that the cost of an A. R. O. record is much more than taken care of in the sale of such a cow, as buyers will invariably pay more for A. R. O. cows than those that have been tested privately.

Support of the county fair was urged by Mr. Fries and he gave the breeders some pointers in getting their stock into the show ring. By all means get them out in good condition. Too many breeders, he said, are willing to run their stock into the fair without any previous attention and the result is that they look bad and that such is a poor advertiser for the herd. He also urged the breeders to interest every neighbor breeder in showing at the fair, as the more the merrier, and the better the advertisement for the breed in the county.

Mr. Fries also touched on the value of the pure-bred sire and the selection of females for foundation herds. He is a believer in sticking to blood lines, but would never sacrifice individuality. This is especially true of the sire, as he says many a breeder is judged by the sire he owns and that he should be true to the Holstein type. He favors picking a particular line of breeding and staying with it.

Fairness and honesty in dealing with buyers was also discussed and Mr. Fries said that nothing made so much for the success of a breeder than to let it be known that he stands unqualifiedly behind every animal he sells. If a buyer asks the owner's opinion of a bull calf he believes in giving it to him straight, for a good bull in the buyer's herd is always a walking advertisement for the seller's herd.

Ask your neighbor to subscribe for The Wisconsin Farmer.

1819 Miles in 24 Hours

As far as from New York to Denver

With a Hudson Super-Six

The Supreme Endurance Test

The Hudson Super-Six, in many a test, has proved itself the greatest car that's built.

No car has ever matched it in hill-climbing. No other stock car ever went so fast. None ever went so far at top speed. And no motor of its size ever showed such reserve power.

But here is a record which perhaps means most to farmers who buy cars.

Best Record by 52%

A Hudson Super-Six with stock chassis was driven 1819 miles in 24 hours on the Sheepshead Bay track on May 2nd. The average speed was 75.8 miles per hour.

That car, in a single round of the sun, went the distance from New York to Denver. It went 52 per cent farther than any other stock car had ever gone in that time.

One man drove it all the way. No man could do that in a car which was not vibrationless.

That man went farther in 24 hours than a man ever traveled before.

50 Miles in One

Some engineers figure that one mile at racing speed equals 50 miles of ordinary driving, in wear and strain on motor.

This car had run 2,000 miles before that test, at average speed of 80 miles per hour. So this 24-hour run made 3,800 miles which the car had been run at top speed—as high as 102 miles per hour.

Yet no part or bearing, when the engine was inspected, showed any appreciable wear.

The Thing You Want

What you want in a car above all else is reliability. And that's what these tests are proving.

It would take ten years of road work, perhaps, to show what we prove in a few days of speed work.

In all our tests we use a stock chassis.

The motor is exactly the same as in every Hudson Super-Six. So every man who buys a Super-Six gets the same super-endurance.

A Patented Motor

The Super-Six motor is a Hudson invention, controlled by Hudson patents. The principle which gives its utter smoothness is entirely new.

That is why it out-performs any other car that's built. Or any car that can be built.

It develops 76 horsepower from a small, light Six. That is 80 per cent more than old types.

You rarely use that power. In ordinary driving you run at half its capacity, so the motor is never strained.

But the owner of a Super-Six knows that he has the power. He knows that his car is a master. He knows that in speed, in hill-climbing, in quick pick-up, no car can do what his does.

He takes pride in those facts. But his chief satisfaction lies in the car's endurance. He knows that his car will last. That another car at half the price might cost more in the long run.

Don't buy a fine car until you know the Super-Six. You would surely face years of regret.

HUDSON SUPER SIX

7-Passenger Phaeton, $1475 at Detroit

Seven other styles of Bodies

Hudson Motor Car Company

Detroit, Michigan

WHEN THE WAR IS OVER, WHAT?

Harry C. Evans, a Prominent Member of the Recent Ford Peace Party, Writes His Third Article on the European War Situation, Describing the Hunger For the Land.

WHEN this battering shock of doom has ended—what then? What of the 20,000,000 young men of Europe now under arms, and in the reserve—what will they do, what will they think, how will they be changed?

Will they be content to go back to measuring ribbon, to typewriting, to clerking—these bomb-throwers and trench fighters who have found their strength, and discovered their bodies are fine and fit and strong, these men who have been engaged in heroics—will they be content to go back to the gentle and feminine pursuits they were hitherto engaged in?

I asked that question of a young English lieutenant. He had gone with the small English army across the channel in those first days of the war, had met the Germans before they reached the southern frontier of Belgium, and with his command had fought every inch of the renowned retreat to within eight miles of Paris, where he stopped a bullet that clipped his left lung.

His recovery was not sufficient to enable him to return to the front, so he went to Stockholm as the representative of an English newspaper, and I saw him there.

"Many of our boys look forward to that time," he replied, "with definite fear, and many with unquenchable hope. Not many can be found who hope to go back to life as they knew and left it."

There was tremendous import in this answer, and during my hospitality at a dinner the young Briton expounded on the future hopes and fears of the English soldier.

"When the boys have time," said he, "that is between fights and preparation for fights, they are wondering what they shall do when the war is over. But there isn't much time for anything but the fights. You know over there in France our lines are often but a hundred feet from the enemy. There are no waste spaces between the lines. Each force is as greedy to possess every possible square foot of those old fields as a Jew is to possess the most valuable square feet on the Strand—in fact, more so, for the Jew only pays money, while the soldiers pay with their lives. So there isn't much time to think of anything but your immediate surroundings in the trench, and the German lads in front of you. You see you are always wondering what they will do next."

"But when there is time?" I persisted, for I wanted to know about the "definite fear" and the "unquenchable hope" in which the British soldier holds the future. The speaker was a collateral descendant of a well-known British family of nobility and a graduate of Eton college.

"You say the boys do not want to go back to the old life. What was the old life?"

"Loafing, much of it," he replied, "and light work that women might do. There's plenty of hard work, of course, but the harder the work the poorer the pay. To be more definite, I would say the 'old life' of the laboring man to which he does not propose to return is the old fear of unemployment, and the old fear of meager wages when he is employed. Life in England for the poor man is not very attractive. There is probably a larger per cent of our people unemployed than in any other nation. There is little peace, little real happiness for the laboring man with a family, because his future is so desperately uncertain. In fact, there's but one thing certain about it, and that's its uncertainty.

"These thousands of laboring men have had regular employment during the war. They are sure of their job as long as the war lasts, or so long as they last, and their famliies are sure of a comfortable living, for the government is taking care of them while the bread winners fight. And they are wondering what they will do when they return home."

"But many of them will never return," I suggested, "and perhaps the relation of men to jobs will be in better proportion than in the past."

"True, tens of thousands have need of nothing further than the peace of the grave—but there are left those dependent on them. Thousands more will be broken; many of these bodies of ours are already practically worthless—but we must live. True, there will not be so many men to work, but every man will have larger responsibilities, more people dependent on him, therefore, his job must be certain and his wage higher.

"There are two big thoughts the boys in the trenches have. One of them is about the land. They never thought much about the land before. They have learned now how necessary it is to life. On the battle line the trench is the soldier's refuge, his haven. With all its stench and filth he loves it as the peasant loves his home, for in the trench only is there anything like safety. So the soldier has concluded that if on the battle front the land may be utilized to conserve his life, it can be used for the same purpose in time of peace. So he is going to want the land."

My soldier philosopher was well started now; further suggestive questions were unnecessary.

"You have told me," he continued, "how intensively the soil in Germany is cultivated. It is not so in England. I do not know what per cent of our soil is under cultivation, but I do know there are thousands and tens of thousands of idle acres. The boys will want these. There are miles and miles of fields where years ago wheat and corn were raised that now grow nothing but grass which fails to keep the sheep that wander over it. We think it cheaper to buy our wheat in Canada than to raise it in Kent, so our Kent fields are idle. Our great idle spaces must be made into rich gardens and orchards. The boys now in the trenches will want to do this, and the government must give them the land. Just how the soldier is to get the land I do not know. They have been brave enough to save the land to the owners, perhaps the owners will be brave enough to share the land with the soldiers. It is time now for those who are looking after affairs at home, while the boys are doing the fighting and saving the land, to think of this. They ought to begin to get things ready for the return of the boys. Perhaps, other methods failing, the principle of compulsion might be applied. It is used against the soldier to compel him to fight. If used against life, why cannot it be used against property—against the thousands of idle acres of game preserves, for instance, owned by the landlords?

"The boys could occupy England's waste acres immediately. They are even now planning to do it if those who make war and peace and industrial conditions will permit. The fact that there are few or no houses on the land will not matter. The boys have learned to laugh at the weather, to sleep on the bare ground under the stars, to have fellowship with the wind and the sun and the rain and the storm. Houses! If military campaigns lasting for months can be fought without shelter, fields can be tilled without shelter.

"It will not be the same world when the war is over. Doubtless we will nearly all be very poor, and there will be much hardship. Our nation imports many of the necessities of life, very much of our foodstuffs. Out of the land comes food, clothing, all necessities. We must stop buying these things of other nations, and produce them ourselves. We must till our land, all of it, the fence corner and the dooryards, as you tell me they do in Germany. There are none to do this except the soldier boys when they return home.

"When the soldiers go on the land there must be government experts to teach them how. We must not waste years, as you did in America, learning how to make the earth produce. Intensive farming must begin immediately.

"And then when the boys get the land the question of transportation must be solved, or rather the solution occasioned by the war must be maintained. The government found it necessary, in the transportation of armies and munitions, to take over the railroads. This to prevent exorbitant rates. If it is necessary to transport fighting men and guns and other forces of death cheaply in times of war, why is it not just as necessary to transport foodstuffs and other forces of life cheaply in times of peace? At the end of the war the government will have on its hands

Soldiers marching through a vineyard where the peasants—women and old men mainly—are picking grapes, showing the contrast of peace and war. Mr. Evans contributes his third war article to this week's paper. The first appeared two weeks ago and was entitled "War-Time Farming in Germany." The second appeared last week, and was entitled "Live Stock Scarce in Germany." This article concludes the series. Mr. Evans was a member of the peace party which Henry Ford took to Europe in a well-intended effort to end the war and restore international peace. He had exceptional opportunities to observe conditions.

the thousands of splendid vehicles of the motor transport section of the army service. What is to be done with them? Are they to be 'scrapped'? Why not turn them over to the civil authorities, with the trained men who now drive them, to collect the food and farm products all over the country and hurry these to the waiting markets in the hungry towns, thus affording ready and cheap transportation of the necessities of life between producer and consumer?

"And this brings me to the second great question the boys in the trenches are thinking about—when the German lads fronting them give them time to think. The government may find it convenient and necessary to keep the railroads and the factories after the war.

"There is another reason why the government may keep them. The war has increased our national debt to $10,000,000,000. It's costing us now $25,000,000 a day! The interest at 4 per cent on our war debt amounts to $400,000,000 annually. To pay the interest alone will consume the yearly wage of 1,000,000 men each earning $400 a year. How are we to pay the interest, to say nothing of the principal?

"It can be done, in my judgment, only in one way, and that by the government retaining the vast industries now in its hands and applying the profits to pay off the debt. Of course, there are serious objections to this plan. You say it would make us a nation of wage earners. Well, that's just what the great majority of the people of every nation are. The world has never faced such conditions as will prevail at the close of the war, and therefore the world will find it necessary to meet these conditions by doing things in a different way. It is among the possibilities that the few men who in the past have been enjoying the profits of business and labor, must yield those profits to all the people—in short, to the government.

"But the one big dominating thought," he concluded, "that is likely to end in a demand, is that when the boys get home they will want the land."

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

More Sheep Needed on Our Farms.

To the Editor:—Although the use of mutton is increasing rapidly and the demand for wool growing stronger there are 35 per cent less sheep on Wisconsin farms today than ten years ago.

What has become of the former flocks? Do we not need them now?

Yes, and much more than ever before.

A county that formerly shipped from fifty to sixty carloads of lambs to market each fall now seldom ships over twenty-five. In this same county where 200,000 pounds of wool were annually marketed, about 50,000 pounds are now produced.

This sharp decline may be explained as follows: (1) Roaming dogs have done untold damage and driven many good flockowners out of the business; (2) several years ago the prices of mutton and wool were low; (3) in late years dairying has been the sole interest of many Wisconsin farmers; and (4) lack of knowledge and improper care and management have caused many failures in sheep raising.

The legislature of 1915 enacted a law permitting the farmer to shoot any dog found roaming about his farm and chasing or annoying his live stock. In addition, a fine or jail sentence may be inflicted on the owner of the dog. This was not possible with the old law, and hence ought to encourage many farmers. Of course, where there are good fences the dog evil is eliminated to a great extent.

Instead of the low prices paid for mutton and wool several years ago, a premium is now paid for both products. Recently, last year's lambs were sold for 12 cents per pound (live weight) on the Chicago market. Spring lambs have been selling for from 14 to 17 cents a pound (live weight). Wool is selling at this time for 32 to 34 cents a pound, the highest price paid since the civil war. These certainly are good prices and there is promise that these products will continue to remain high on account of the shortage of both. Meat packers are forced to pay high prices for live mutton and lamb because of its scarcity. Woolen manufacturers, likewise, are paying high prices for wool because of the shortage. "Shoddy" has partly taken the place of wool, but this cheaper material does not make the kind of goods that suit all classes of buyers. Wool is a necessity.

All feel proud of the fact that Wisconsin is considered the greatest dairy state in the Union, and due credit and honor is given to the dairymen. This great industry undoubtedly is very profitable where the farmer can conduct it with his own family help. This business, however, often requires much hired help.

Are there not many farmers in this state whose boys and girls, once faithful workers on the farm, have now left the farm and started for themselves? These farmers are not in shape to do many chores, but would not a flock of sheep lighten their burden?

A prominent sheepman in addressing a large farmer audience recently made the statement that sheep need a little more intelligent care than some of the other classes of live stock, but when farmers in Wisconsin and other states have familiarized themselves with the proper care of sheep, just as the man with the dairy cow, and the woman with the chickens have done, then sheep husbandry can be carried on, not only more extensively, but also with much greater success and profit.

Sheep should again be raised on our Wisconsin farms. One of the directors of a county farm in this state says that last year they realized a net profit of a little over $2,000 on 150 breeding ewes. The land on which these sheep were grazed was rough and had been purchased for $20 an acre. This man, who is absolutely trustworthy, after figuring the cost of establishing the flock, and of the feed and labor, stated that they had derived from the sheep a much higher net profit than from any other class of live stock kept on that farm. Another farmer who lives in a section of high-priced land in southwestern Wisconsin purchased twenty-four grade ewes in the fall of 1914. These ewes netted him $234 in a year for lambs and wool. He stated that their entire feed had been good pasture during the grass season and good clover hay in winter. No grain or other feed was used. He was out trying to buy more sheep and said that he was deriving far more profit from his sheep than from his cattle and hogs.

Although sheep have greatly advanced in price in the lest few years, still a man can start a flock with a reasonable amount of money. In the fall perhaps is the best time to purchase. At this time the western range men dispose of their surplus breeding ewes, and one can secure a small flock of from fifteen to twenty-five head without making a large investment. Sheep multiply fast, and by the use of a good, pure-bred ram of any of the leading mutton breeds, a fine flock will soon be established. A ram in many cases can be used by two farmers on small flocks in one or two breeding seasons, thereby lowering the cost of the ram.

Farmers, it will pay you to think this matter over carefully and make plans for next fall. You will find profit in sheep raising providing you handle your flock properly. If you need assistance call upon your agricultural experiment station.

Frank Kleinheinz,
University Shepherd, Madison, Wis.

Sugar Beets and Weather.

To the Editor:—Notwithstanding the excessive rains this season and the abundant moisture now in the soil, crops that have been and are grown on well-drained lands and sandy soils have not shown signs of distress to any large degree. Although sugar beets, barley, peas, corn and potatoes have more moisture now than is required even in high and dry places, as is known, sugar beets will endure more moisture in the soil than many other farm crops. But the beet, too, in the end will suffer if there is too much moisture in the soil and when all the pore spaces in the immediate vicinity of the root are occupied by water instead of air. Plants need to breathe as well as do animals in order that they might live right. It will be noted that the foliage of many plants has turned to a yellowish color and this is a sign that the plants are suffering from too much moisture in the soil.

Too much moisture in the soil will have a tendency to retard the growth of the sugar beet. Finally the beet roots and rootlets will spread out near the surface and the beet will have many short roots and the tap root will be a short one also. The best beet is the one that has a clean, long tap root with only fine rootlets with which it feeds. In order that a beet sugar of good quality may be harvested this fall, it will be necessary that the beets grow under dried conditions together with more sunlight and warmer weather.

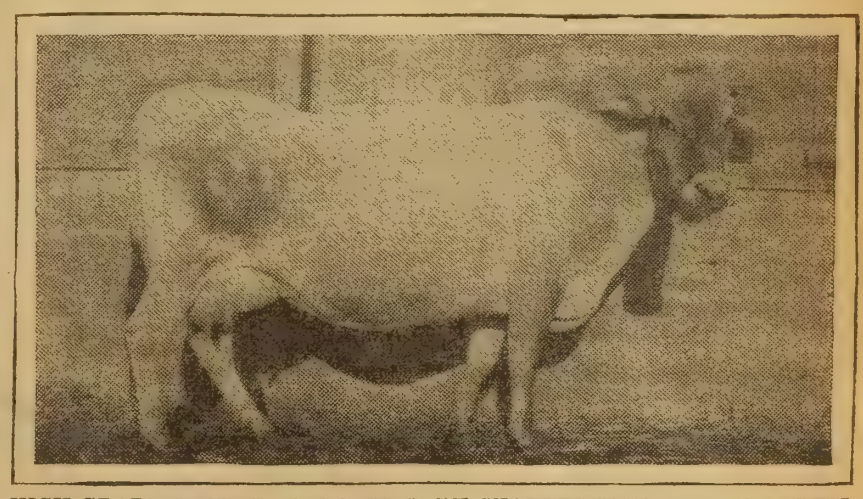
Quite frequently a season of wet weather followed by a season of dry weather operates to the detriment of a root crop. Because of abundant moisture in the soil the rootlets of crops have grown near the surface and later when the plant was in need of moisture the rootlets were not sufficiently deep in the soil so as to take up the moisture from lower depths. This condition will result in a much reduced crop. What is true of sugar beets will, in a large measure, be true of other root crops having tap roots.

Dane Co., Wis. J. F. Wotja.

Upper Wisconsin

Upper Wisconsin Dairyman's Experience.

The champion cow of the Langlade County Cow-Testing Association for the past year was the high-grade Jersey whose picture is shown herewith. She produced during the twelve months 8,424 pounds of milk and 4,663 pounds of butter fat. Her gross returns for butter fat were $131.40. Deducting $38.68 for cost of feed she has to her credit the neat sum of $92.34 as a net profit.



HIGH-GRADE JERSEY COW OWNED BY CHARLES SCHOTTE, VICE PRESIDENT LANGLADE COUNTY COW-TESTING ASSOCIATION.

Mr. Schotte's cow is not an accident, either as to breeding or production. For a period of years Mr. Schotte has maintained a pure-bred Jersey bull on his farm. He now has practically a full grade Jersey herd. Mr. Schotte admits that, like many other farmers, he fell down woefully at the feeding end of the dairy business until membership in the cow-testing association put him on the right track. He appreciated that his prize cow, like other members of his herd, was a good cow, but she never got a chance. When he found that she stood a show at topping the list in the testing association he got after the feeding business right. In one month he got the cow to produce twenty pounds of butter fat more than she could have under his previous system of care and feeding. Needless to say this was reflected in better care and feeding of his whole herd.

Experiences like Mr. Schotte's are doing much to open the eyes of farmers generally throughout the county to the importance of better care and feeding. An incident in Mr. Schotte's experience illustrates the value of cow-testing when it comes to selling cows. Early in April he found he had two cows to sell. Naturally those with the lowest record were the ones booked to go. His first thought was to sell them to the butcher. It was suggested to him that it was a mistake to sell them to the butcher as long as there were so many cows in the county so much poorer than his poorest. He was advised to put the following small advertisement in the local daily paper:

For sale, two high-grade Jersey cows with two years' cow-testing records.

Before he had completed his chores the following morning a buyer drove into the yard. He led away the two cows. That same day and the two following fully a dozen buyers called at the farm to buy the two cows. "I could have sold my whole herd without any trouble," declared Mr. Schotte. "Does it pay to belong to a testing association?" you ask. "I got enough more for the two cows to pay my testing association dues for two years."

Comparisons Help Upper Wisconsin.

To the Editor:—It has always seemed to me that every article which appears in a magazine or paper, whether editorial or not, is a medium through which people are either stimulated to accomplish things or are more or less discouraged.

Everyone enjoys a human story and when they read of a success it has a tendency to make one feel more buoyant, more ambitious to resolve to do a little better. Now, I believe one of the greatest stimulants to northern Wisconsin would be to print as many stories as one could secure of the phenomenal successes which have been made throughout Upper Wisconsin by men who started on practically nothing. Every village, town and community in Upper Wisconsin have citizens who are the worst enemies of that portion of the state and if they could read of the many successes that have been made there and would see or hear comparisons of crops grown in Upper Wisconsin to the crops grown in other sections of the United States it would convince in time such people of the many advantages of Upper Wisconsin. Men who are most harmful to the development of Upper Wisconsin have been those who lacked the energy, the intelligence or are too busy doing something else to recognize the tremendous advantages in their own yards. To such people I believe there is only one way to awaken them and that is through comparisons. If they can see that their yard will grow more than the same ground in Illinois, Minnesota and other states they are going to wake up. I read your paper with a great deal of interest and appreciate its value for the farmer.

S. A. Loveland.
Minneapolis, Minnesota.

Figures compiled by the Italian government show that the world produced 4,000,000,000 bushels of wheat last year, an increase of 800,000,000 bushels over the year before.

Ask your neighbor to subscribe for The Wisconsin Farmer.

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Horse Power of Motor.

What is the horse power of a four-cylinder automobile motor having a two and seven-eighths inch bore and four and one-half inch stroke, when running at 1,500 R. P. M.?

Answer.—Your motor should develop ten to twelve horse power.

Defective Carburetor.

My four-cylinder car runs well, and there is no gasoline leakage that I can detect, either from the line pipe or from the carburetor. However, there is a strong odor of gasoline while the car is running. The car is also a little extravagant of gasoline, so there are two indications that there is a waste of gasoline. I have examined my spark plugs and find that they are in good condition; the metal points being clean as if there is good ignition. How would you go about it to find out the cause of the waste of gasoline indicated by the strong odor?

Answer.—The most probable cause, if your motor fires regularly, is that the float of your carburetor is gasoline soaked so that too high a gasoline level is maintained in the bowl of the carburetor. This brings the gasoline too near the top of the spraying nozzle and when the motor starts a part of the gasoline is not vaporized, but runs down the spraying nozzle and out into the mud pan of your car. After running your motor until the odor becomes noticeable look and see if this is not the case.

Motor Lacks Power.

I have a Model C 25 Buick car. It does not have the power that it should have. I think that it takes too much gas. Please tell me what is wrong with it.

Answer.—The first thing necessary for power is good compression. If the compression is not good grind the valves. If the compression is still poor it may be necessary to use new piston rings.

After attending to the compression see to the spark. Remove the spark plugs and clean them with kerosene, removing all the carbon from the porcelain. Lay the plugs on top of the cylinders, with wires connected, and switch on battery. Crank the motor over slowly and see that each plug gives a good, fat spark. See that the spark occurs just after the piston passes dead center at the end of the compression stroke when the spark is fully retarded. This is very important.

If compression and spark are O. K. the carburetor or carburetor adjustment is probably at fault. Write to the makers of the carburetor for their circular describing the proper way to adjust it. Test the motor for air leaks at the inlet valve stems and at the intake manifold gaskets. It is impossible to adjust a carburetor for all speeds if there are air leaks in the intake.

A considerable amount of carbon in the cylinders lessens the power of a motor.

Charging Storage Batteries.

I have a little problem that I would like for you to answer. I have a forty-volt, twelve-ampere generator that I use to charge a thirty-two-volt, one hundred ampere hour storage battery. I would like to use it to charge a three-cell battery of almost the same ampere hour capacity. I have tried connecting them all in series, which way seemed to work successfully, but, while charging, the volt meter on the switch board would register forty-five to fifty-two volts. Was this an overload for the generator and if so, would it be enough overload to injure it? I have two more plans in mind, but have never tried them. One is to connect the three extra cells in parallel with three cells of the other battery. With this arrangement I would not have any more voltage, but would I get the same number of amperes through all the cells? The other plan is to disconnect the large battery entirely and connect the extra battery in series with a bank of lamps in parallel. I have thought that perhaps with this plan, the lamps in series with the battery would take care of the excess voltage of the generator. I could regulate the rate of charging by the number of lamps turned on. I might mention that the rate of charging my outfit is regulated by the field rheostat to a certain extent.

Answer.—Using a bank of lamps as you suggest is a common method of charging a low voltage battery with a high voltage generator. It is quite practical, though not economical in use of current.

Connecting the three extra cells parallel with three cells of the main battery would not be advisable, as the three cells would only obtain half a charge.

Connecting all the cells in series and regulating the generator to produce about fifty volts will overload your generator to some extent, but should not do any damage. This is the most practical thing for you to do. Protect your generator by using a fifteen-ampere fuse. If the generator heats badly the load is too great.

A Reversing Switch.

I have a small electric motor, for which I would like to make a reversing switch. I can reverse the motor by using two two-way switches. Is it possible to do it with one? If so, how should the switch be wired to the motor?

Answer.—Figure 1 shows a reversing switch and the way to connect it in the field circuit. It is a two-pole, double-throw switch with the outside

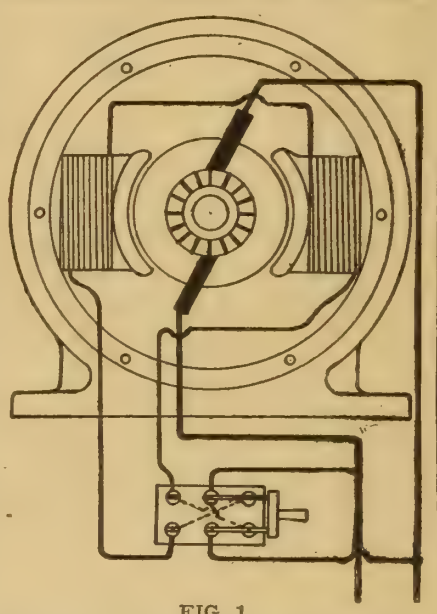


FIG. 1.

terminals connected by cross wires, as shown by the dotted lines.

A Tire Question.

Does an automobile tire weigh more inflated than when deflated? If so, why?

Answer.—Air has weight. The volume of an inflated and deflated tire is nearly the same, as all the air is seldom expelled. Since the inflated tire contains about six times the volume of air occupied by itself it will weigh more than when deflated, the difference in weight being the weight of about five times its volume of air under atmospheric pressure.

Lightning Rods.

The lightning rod man has placed lighting rods on my house and wired them as illustrated. (Fig. 2.) He has no ground to rod A, but has ground wires on rods C and D. Now, if lightning strikes rod A, will it follow the wire up the roof, or will it follow the wood to the ground?

Answer.—If lightning should strike rod A it might follow the wood to the

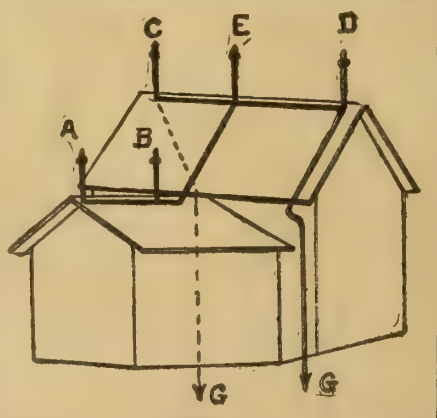


FIG. 2.

ground. Electricity flows up hill as well as down, but an electric current from lightning is an alternating current of extremely rapid alternations. When the current attempts to flow up the wire from A to E the alternations would induce an opposing current in the ground wire GD. This opposing current might be strong enough to cause the current from the lightning to follow the wood. A ground wire from A would remedy the trouble.

Coil Trouble.

We have an engine equipped with a jump spark coil operated by four dry cells. The cells and connections are in good condition, but the spark is very weak, and sometimes fails entirely. I opened the coil, and one place in the black cement it looks like a hole has been burned in it. Can a coil burn out? Could it be repaired?

Answer.—A coil may burn out, but this very seldom happens. When a coil does burn out it is generally cheaper to get a new coil than to have the old one repaired. See that the vibrator points are in good condition and properly adjusted. Your trouble might be due to a loose wire on the timer, or a poor contact at the timer.

Making a Dynamo.

I am making a dynamo out of an old cog wheel. Will this do for an armature core? It is eight inches in diameter and two inches thick. It has sixteen slots about three-fourths of an inch deep. What size wire shall I use? Will the white metal boxing interfere with it? How much will it generate? How should I wire the coils? Could I lay copper bars around two wooden wheels for a commutator?

Answer.—The cog wheel might be used on an experimental machine, but the core of a practical armature is always made up from thin disks of soft sheet iron. When the armature core revolves in the electric field currents are produced in the core, flowing lengthwise of the core. These are called "eddy currents." If the core is solid these eddy currents would make the armature very hot. If the core is made of thin pieces of sheet iron, however, the scale on the sheet iron acts as an insulator and prevents the eddy currents from flowing and heating the core. The windings on the core must be of insulated wire. The white metal boxes would not affect the armature. For your motor wind the armature with No. 8 double cotton-covered copper wire. Use sixteen commutator bars. You may mount them on wood. Wind the slots of the core about full of wire, passing the wire around and around the core through opposite slots. Then solder the two ends of the coil to two opposite commutator segments. Then wind the next two slots full and solder the wires to the segments next to those for the first coil. When completely wound the slots will all be full and each commutator bar will have a wire soldered to it.

Make the field cores out of soft iron about two inches in diameter. Wind about two pounds of No. 28 wire on each core. Connect the armature brushes and field coils as shown in Figure 1, omitting the switch. The coils on the two field cores must run in opposite directions. It would be difficult to estimate the output; it would probably be about ten amperes at forty volts when the generator is running at 1,000 R. P. M.

Alexander Galbraith, formerly of Janesville, who is the superintendent of fairs and institutes for the Alberta Department of Agriculture, has selected two former Wisconsin stockmen, R. B. Ogilvie and R. P. Stericker, to officiate as judges at the summer fair to be held at Edmonton early in July.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Those Copper Gaskets Are Asbestos-Cushioned To Save the Porcelain

If your porcelain insulator breaks, your spark plug is out of business.

There's nothing for it but a new insulator or a new plug.

The rapid succession of explosions in your cylinders beat with full force on the shoulders of the insulators of your spark plugs.

Champion plugs are made with two asbestos-cushioned copper gaskets, (*patented by us April 25, 1916*) to protect the porcelain and prevent loss of compression.

That is one big, exclusive feature which accounts for the greater dependability of Champion Spark Plugs.

And their greater dependability accounts for the fact that more plugs of this type are in use today than any other plug ever designed.

And this same condition has existed for years.

Champion Dependability and the reasons for it should be remembered when you replace the plugs in your motor.

There is a Champion Plug designed especially to serve the particular kind of motor you have in your car.

Your dealer knows which Champion you need.

Be sure the name "Champion" is on the porcelain—not merely on the box.

Champion Spark Plug Co., 510 Avondale Avenue, Toledo, Ohio

Pure Fresh Water Instantly

Own a modern water system furnishing water straight from well to any part of your house or barn when you turn the faucet. No slimy storage tanks.

PFAU COMPRESSED AIR MOTOR PUMP

Operates in well with but 3 inches water. All working parts protected – no freezing. Protects you against fire – gives you modern bathroom, laundry and toilet facilities – cuts down your cows' feed bills and increase their milk yield. Write for Free Literature and Special Offer.

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MILWAUKEE, WISCONSIN

BINDER TWINE $9.62 Per 100 Lbs.
Best standard quality guaranteed. Send for free sample.
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PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send for three free books: inventions wanted, etc. I market your invention without charge. Richard B. Owen, 37 Owen Bldg., Washington, D. C.

DAIRY

Chilton Association.

The following table gives the names of cow owners, breed of cows and other information concerning the records of the cows in the Chilton Co-operative Cow-Testing Association which have produced more than forty-five pounds of butter fat during the thirty-day period ending June 13th:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
Arthur Peik					
G. Jersey...	8	3-13	943	5.2	49.04
Walter Seefeld					
R. Hols.....	9	3-22	1628	3.3	53.72
Gr. Hols....	6	11-16	1404	3.8	53.35
Gr. Hols....	5	3-4	1584	3.6	53.86
Gr. Guern...	8	4-2	1296	3.6	46.06
John Fuchs					
Gr. Hols....	7	1-15	1002	4.9	49.10
Gr. Hols....	9	4-10	1333	3.7	49.32
Gr. Hols....	8	4-9	1395	4.6	63.17
Nick Bernard					
R. Hols.....	7	3-13	1600	3.5	56.00
Gr. Hols....	7	2-9	1287	4.4	56.63
Gr. Hols....	7	2-1	1333	3.7	49.32
Gr. Hols....	7	12-27	1367	4.0	54.68
Gr. Hols....	6	3-27	1178	4.2	49.48
Alex O'Donnell					
Gr. Hols....	8	4-14	1311	4.0	52.44
Harry Merrill					
Gr. Hols....	4	1-6	1414	4.0	56.56
P. B. Hols...	10	12-19	1349	3.4	46.87
Gr. Jersey..	6	2-25	1067	4.6	49.03
Gr. Hols....	4	2-19	1442	4.0	57.68
Gr. Hols....	4	2-12	1153	4.4	50.73
Louis McGrath					
R. Guern....	6	12-31	1051	5.8	60.96
G. Guern....	8	2-2	1184	6.2	73.41
G. Guern....	5	1-1	1184	5.0	59.20
Jersey	5	2-22	825	5.8	47.85
G. Guern. ..	3	10-20	952	5.2	49.50
G. Guern....	3	4-20	1101	4.6	50.65
Gr. Jersey	1-10	2-25	946	5.0	47.30
Julius Bowe					
Gr. Durham	10	12-1	1234	3.7	45.66
Gr. Hols. ..	4	2-15	1287	3.5	45.05
Gr. Hols....	6	2-15	1519	3.0	45.57
Gr. Hols....	5	3-1	1488	3.6	53.57
Frank Sontag					
Native	6	1-14	1001	4.5	45.05
Gr. Hols....	8	1-14	1364	3.4	46.38
Gr. Hols....	7	2-7	1163	4.0	46.52
Gr. Guern...	7	4-28	1288	4.6	59.27
Alex Pilling					
Gr. Guern...	5	4-1	1231	4.1	50.47
Gr. Hols....	8	2-15	1513	4.0	60.50
Native	7	4-7	1432	3.7	52.98
Gr. Durham	10	3-28	1212	3.8	46.06
Gr. Hols....	8	3-16	1618	3.6	58.25
Gr. Guern...	5	2-16	1339	3.4	45.53
Gr. Guern...	6	1-7	1246	4.0	49.84
Oscar C. Pilling					
Gr. Hols....	6	2-20	1383	4.2	58.09
Gr. Hols....	7	4-82	1600	4.2	67.20
Gr. Hols....	7	3-27	1594	4.2	66.95
John Salm					
P. B. Hols...	6	12-20	2151	3.4	73.13
Gr. Jersey..	10	3-10	1435	3.8	54.53
P. B. Hols...	7	2-28	1333	4.3	57.32
Gr. Hols....	8	12-10	1339	3.8	50.88
Gr. Hols....	8	10-10	1352	3.4	45.97
Gr. Hols....	8	3 27	1590	3.8	60.42
Gr. Hols....	5	4-1	1572	4.8	75.46
Gr. Hols....	5	3-15	1470	4.0	58.80
Gr. Hols....	12	11-17	1315	3.6	47.34
Gr. Hols....	12	12-3	1070	4.4	47.08
Frank Nennig					
Gr. Hols....	12	5-3	1232	3.8	46.82
Gr. Hols....	9	2-15	1256	3.6	45.22
Gr. Hols....	5	3-28	1476	3.2	47.23
Gr. Hols....	9	1-1	1321	4.2	55.48
Gr. Hols....	12	3-23	1358	3.4	46.17
Gr. Hols....	6	2-20	1178	3.9	45.94
Gr. Hols....	9	3-15	1458	3.8	55.40
Gr. Hols....	6	4-12	1507	3.2	48.22
Gr. Hols....	6	1-15	1380	3.6	49.68
Gr. Hols....	7	4-12	1606	3.2	51.39
Gr. Hols....	6	2-15	1414	3.4	48.08
Gr. Hols....	6	12-15	1364	3.8	51.83
Gr. Hols....	6	1-15	1259	3.6	45.32
Gr. Hols....	7	2-12	130-	3.8	49.48
John Bittner					
Gr. Hols....	8	4-9	1364	3.4	46.38
Mayer Bros.					
R. Guern....	8	3-9	1076	4.8	51.65
Gr. Guern...	11	12-12	1085	4.4	47.74
Gr. Hols....	4	1-16	1147	4.0	45.88
Gr. Durham	8	3-12	1209	4.5	54.90
Gr. Durham	8	3-16	1225	4.2	51.45
Gr. Durham	5	4-13	1473	3.6	53.03
Gr. Durham	8	4-16	1318	4.3	56.46
Gr. Durham	12	4-8	1147	4.4	50.47
Gr. Durham	8	5-4	1256	3.9	48.98
John P. Koehler					
Gr. Guern...	9	11-1	930	5.0	46.50
Gr. Guern...	5	11-15	899	5.4	48.55
Gr. Guern...	5	3-24	1240	4.8	59.52
Gr. Guern...	3	4-15	1302	4.0	52.08
Gr. Hols....	6	4-8	1349	3.4	45.87
Gr. Hols....	6	5-7	1426	3.4	48.48
P. Durham.	5	3-10	1186	5.0	59.30
Gr. Durham	5	2-6	1141	4.2	47.92
Gr. Guern...	6	3-5	1277	3.7	47.25

Oscar F. Kossman, Official Tester
Edwin T. Weeks, Secretary

Eau Claire County Cow-Testing Association No. 2.

The following is the monthly report of the association ending June 10th of cows producing over forty-five pounds of butter fat:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
B. M. Arries					
R. Hols...	3	4-16	1479	3.4	50.3
Otto Stelter					
Native ...	5	3-16	1078	4.4	47.4
D. B. Strader					
R. Jersey.	6	1-16	946	4.8	45.4
Henry Kohnke					
Native ...	9	3-16	976	4.7	45.9
A. P. Shong					
Native ...	5	4-16	1242	4.1	50.9
R. A. Strader					
G. Hols...	7	2-16	1195	4.5	49.3
Chrysler & Son					
Native ...	7	1-16	969	4.8	46.5
Fred Gerike					
Native ...	7	10-15	917	5.8	53.2
Native ...	6	3-16	1014	5.0	50.7
Native ...	4	2-16	902	5.3	47.0
T. J. Horton & Son					
G. Jersey.	10	2-16	939	4.8	45.1
E. S. Rickard					
G. Jersey.	4	4-16	964	4.8	46.3
F. F. Langworthy					
R. Jersey.	7	4-16	900	5.5	49.5
C. L. Craker					
G. Jersey.	7	4-16	1352	3.6	48.7

E. G. Sutton, Tester.

Alban and New Hope Cow-Testing Association.

To the Editor:—Does it pay to test cows? I think all the members of this association can answer this question in the affirmative, from the results they have obtained. Some of the "boarder" cows are being eliminated from the herds and some pure-bred sires are being bought to replace the scrub sire.

M. J. Wrolstad had the largest producer for pounds of butter fat. She is a grade Guernsey twelve years old, producing 1,237 pounds of milk testing 5.1, which gives 63.0 pounds of butter fat.

Henry Wogsland's herd gave an average production of 891.2 pounds of milk per cow and 39.1 pounds of butter fat per cow, which was the best average for this period. His herd consists of nine cows, being grade Guernseys and natives.

The following table gives the names and records of the cows in the association which have produced more than forty-five pounds of butter fat during the period of thirty days ending June 10, 1916:

Owner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
G. J. Olstad					
Native	8	3-17-16	1442	3.4	49.0
C. E. Ericksen					
Gr. Guern. ...	8	3-26-16	1209	4.6	55.6
Anton Brekke					
Gr. Hol.	6	3-3-16	1417	3.4	48.2
Alfred Brekke					
Gr. Hol.	9	12-19-15	1116	4.2	46.9
Henry Wogsland					
Native	7	3-6-16	1512	3.9	59.0
Gr. Guern. ...	2	4-3-16	980	5.6	54.9
E. O. Hellum					
Gr. Guern. ...	7	10-15-15	908	5.0	45.4
A. Weinmann, Jr.					
Josie, G. H....	9	4-10-16	1725	3.3	56.9
M. J. Wrolstad					
Gr. Guern. ...	12	1-27-16	1237	5.1	63.1
Gr. Guern. ...	9	11-25-15	977	5.2	50.8
C. O. Wogsland					
Daisy, P. B. G.	8	9-12-15	821	6.0	49.3

M. E. Smith, Official Tester.

Geneva Co-operative Cow-Testing Association.

Although more cows and two year olds qualified in the Geneva Co-operative Cow-Testing Association during the month of May than in the previous month, there was a dropping of test in many instances. Cows seem to be testing low this spring, lower than is usual even for the month of May. Dairymen are at a loss to explain it, the weather, the pasture or cow receiving the blame. In some cases the cause is known. The May report shows that, generally speaking, records were lower on an average than for several months, but in spite of this there were many good records made.

The following table gives the names and records of the cows in the association which have produced more than forty-five pounds of butter fat during the period of thirty days ending May 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
H. D. Dunbar					
Ormsby, H....	3	3-9-16	2266	3.1	70.2
Pietertji, H. ..	4	4-11-16	1882	3.6	67.8
Queen, H.....	6	9-29-15	1311	3.5	45.9
M. Flack & Son					
Guernsey, G.G.	5	3-29-16	1187	5.7	67.7
Jumbo, G. H...	3	4-29-16	1392	3.8	52.9
Winnie, G. D..	6	4-20-16	1376	4.1	56.4
C. L. Turner					
Boon, H.	5	3-28-16	1673	3.7	61.9
J. W. Finnell					
Carnie, G. H..	6	3-2-16	1637	3.5	57.3
O. P. Taylor					
Doubleteat, J.	3	4-17-16	967	5.9	57.1
Emil Papenfus					
No. 5, G. H....	6	1-11-16	1364	4.0	54.6
No. 6, G. G....	6	3-6-16	1292	4.1	53.0
MacLean Bros.					
Kickers 1st, G. D.	6	9-15-15	1333	4.0	53.3
Weaver 2d, G. D.	6	9-27-15	1057	4.5	47.6
Weaver, G. D.	8	4-20-16	1156	4.1	47.4
Percy Harrington					
No. 9, G. G....	6	3-9-16	967	5.5	53.2
Liddle, G. G...	5	2-25-16	1066	4.3	45.8
Moss Bros.					
Esther, G. D..	7	3-25-16	1209	4.3	52.0
Vevie, H. 10		12-27-15	1339	3.5	46.9
W. E. Palmer					
Lady, H.....	5	11-29-15	1609	3.2	51.5
Queen, H.....	3	11-22-15	1308	3.7	48.4
O. P. Taylor, Eleven %, J...	3	2-15-16	667	7.5	50.0
Lucien Curtis					
White Face, G. H.	4	4-6-16	1342	3.7	49.7
Harry Ames					
Lily, G. H.....	5	12-27-15	1097	4.5	49.4
Rockwell Bros.					
Evelyn, G. H..	5	3-2-16	1389	3.5	48.6
Johanna, H...	8	2-26-16	1318	3.5	46.1
Coalie, G. H...	6	10-8-15	1060	4.3	45.6
Vevie, H.	8	3-21-16	1426	3.2	45.6
Emma, G. H...	7	1-8-16	1082	4.2	45.4
J. H. Henderson					
Mechthilde, H.	6	1-8-16	1510	3.2	48.3
Baby D., H....	7	3-28-16	1293	3.7	47.8
Edith, H.	6	1-11-16	1283	3.7	47.5
Wm. Rouse					
Horns, G. G...	4	3-5-16	1203	4.0	48.1
Loyd Ames					
Sam, G. D.....10		4-11-16	1237	3.8	47.0
Ralph Flack					
Bella, J. ...	6	3-4-16	899	5.2	46.7
A. G. Palmer & Sons					
Sadie, H.	8	3-15-16	1550	3.0	46.5
Beauty, H. ...	8	11-26-15	1541	3.0	46.2

Frank Drake, Tester.

You need a new
DE LAVAL SEPARATOR NOW

1st If you are still using some gravity or setting process of creaming—

BECAUSE YOUR WASTE IS greatest and quality of product poorest in mid-summer when the milk supply is heaviest.

BECAUSE TIME IS OF GREATEST value on the farm at this season and the time and labor saving of the good separator counts for most.

BECAUSE THE SKIM-MILK IS poorest without a separator in hot weather and often more harmful than helpful to calves.

BECAUSE THE WORK OF AN improved De Laval Cream Separator is as perfect and its product as superior with one kind of weather as with another.

2nd If you have a very old De Laval or an inferior separator of any kind—

BECAUSE THE LOSSES OF THE poor separator from incomplete skimming and the tainted product of the hard-to-clean and insanitary separator are greatest at this season.

BECAUSE OF THE GREAT economy of time at this season in having a separator of ample capacity to do the work so much more quickly.

BECAUSE AN IMPROVED DE Laval is so much simpler and more easily handled and cared for than any other, and you cannot afford to waste time these busy days "fussing," with a machine that ought to have been thrown on the junk-pile long ago.

BECAUSE THE DE LAVAL SEPARATOR of today is just as superior to other separators as the best of other separators to gravity setting, and every feature of De Laval superiority counts for most during the hot summer months.

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval agency simply write the nearest main office, as below.

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165 Broadway, New York 29 E. Madison St., Chicago
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Want an easy running Silo Filler?--just read this

Yes, the Blizzard is easy running.
Mr. Geo. All, of Spencer, Iowa, couldn't get a 10 or 12 H.P. engine, ordinarily used for a No. 15 Blizzard, and filled his 14x36 silo in 3 days with his 6 H.P. engine, and says "it worked fine."

"My 4 H. P. gasolene engine furnished sufficient power to run the No. 9 Blizzard to perfection." E. J. MONROE, Burlington Flats, N. Y.

"The Blizzard No. 11 filled our 12x35 ft. silo with ease, using 6 H.P. gasolene engine. We were told before starting that we did not have power enough, but actual work demonstrated that we had a great plenty." J. C. MILHAM, Waukesha, Wis.

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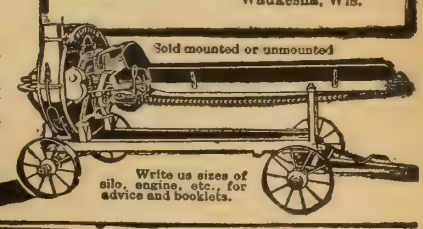
Ensilage Cutter

Herman Eppler, of Oconomowoc, Wis., writes: "I run the No. 13 Blizzard with my 8 H.P. engine, and have all the power I want. My silo is 40 feet high.

In addition to light running, you will find the Blizzard has *unlimited elevating ability*; is simple, safe and dependable: a glutton for work; makes even-cut silage; costs very little for repairs; stays in the harness for years. WRITE for catalog and full information.



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are positively air-tight—doors and all—made of anti-corrosive NO-CO-RO METAL, the great rust-resistant.

You get a handsome silo that stands solid as a monument and lasts a life-time—windproof, fireproof, crackproof, weatherproof, collapse proof, repair proof.

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ZYRO Metal Silos are easy to erect. The sectional sheets are easily fastened in place by two men.

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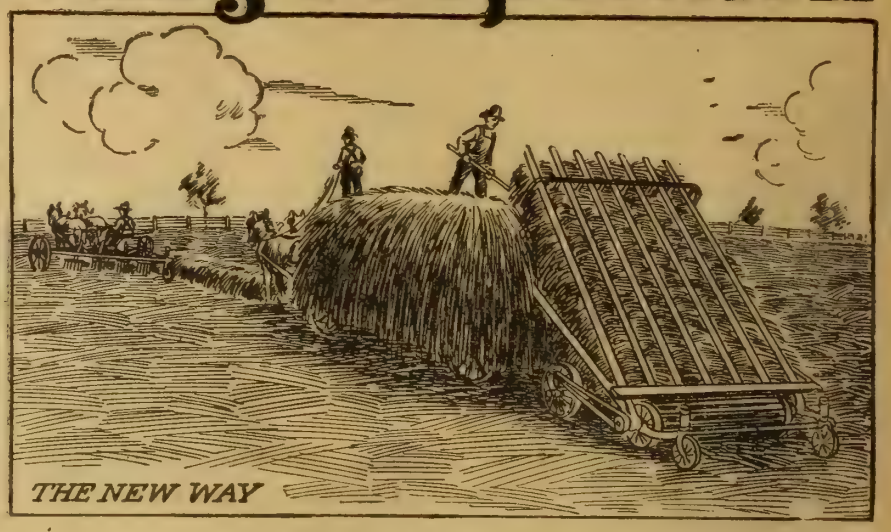
Makers of ZYRO Corn Cribs and Grain Bins
NO-CO-RO METAL Anti-Corrosive

Hay Making A Hustling Proposition

THE OLD WAY


THE NEW WAY

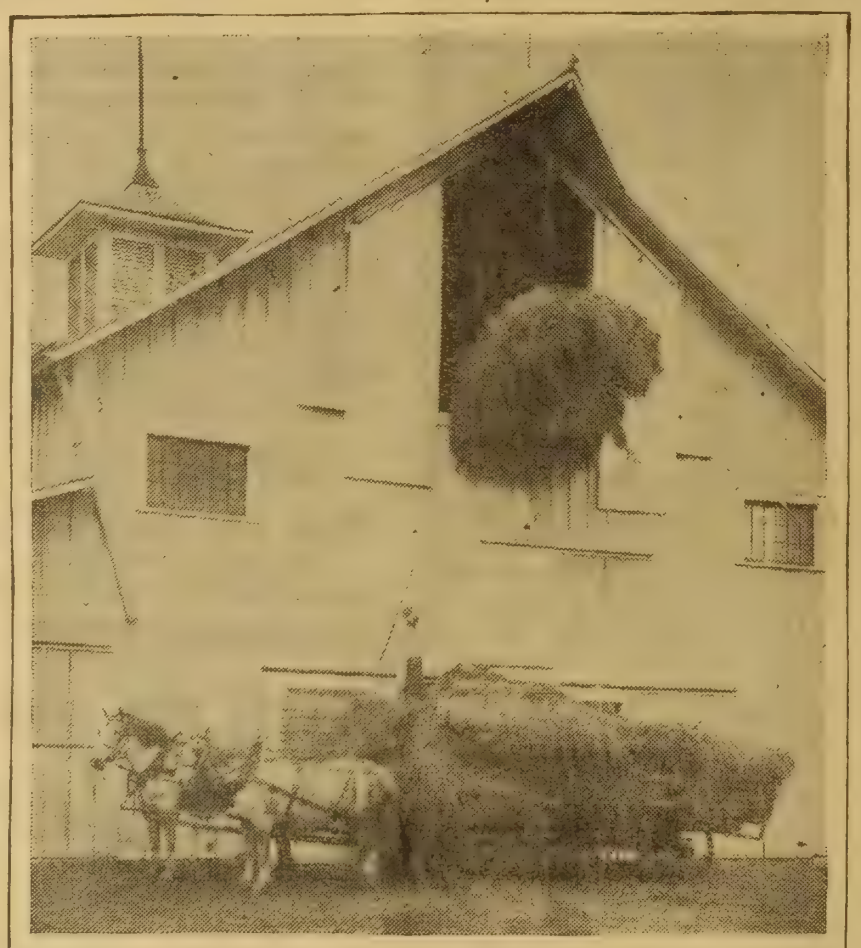
NO OPERATION on the farm requires so much hustling in the performance of labor attending it as the saving of the hay crop. In the first place, it comes at a time when there is still some corn to cultivate and usually before haying is finished, the harvest fields are ready for the reaper.

The introduction of modern haying machinery has contributed immensely to the rapidity with which the crop can be handled and it is not worth while for this paper or any other paper to spend time in recounting old-fashioned methods and out-of-date systems of making hay. The tedder, the side-delivery rake and the loader —these have changed the whole situation and now it is simply a question of headwork and horse power.

If we turn to those individuals who have a large quantity of hay to save we will find that their emphasis is placed on the importance of having good haying implements. Six and seven-foot mowers are rapidly supplanting those with a five-foot cutter bar. One extensive hay producer calls attention to the fact that he starts his mowers in the morning, but does not touch the hay afterwards until it is free from all outside moisture as he says, "haying machinery is intended to handle hay, not wet grass, and when farmers recognize this fact they will save themselves a great deal of trouble in handling the hay crop."

In most cases nowadays no attempt is made to cure out the crop in the fields save only such curing as takes place in the swath after cutting or in the windrow. An exception to this will be those instances where the hay is mostly clover and stirring will be required in order to hasten the drying. Therefore, when the hay runs from two to three tons per acre drying will be a slow proposition, as a general rule, unless some attempt is made to stir it and thereby expose the tough green hay to the rays of the sun. The only alternative will be to allow the hay crop to reach a fair state of maturity. This cannot always be done where a large acreage must be harvested because in that case part of the crop must be cured early and part of it late.

By the use of the side-delivery rake and hay loader it is sometimes possible for a force of four or five men to clear as much as thirty-five or even forty acres in three days. The rake is usually operated only a few acres ahead of the loader. Of course, all haymaking rules must be set aside in bad weather, but when the atmosphere is clear and the temperature high one can usually cut down a considerable acreage when haying operations are started. If as much as ten or fifteen acres are in the swath, when the hay rake starts this will mean that the gang working the rake and the loaders can keep out of the way of the mowers. At no task on the farm does the low-wheel wagon serve a better purpose than it does during the haying season. Even where the loader takes the place of the pitch-fork in the field, a low wagon will be found exceedingly convenient and one man with a boy as a driver can put on all that a sturdy two or even three-horse team can handle in ten or fifteen minutes.


THE HAY FORK WILL REMOVE A LOAD IN FIVE OR SIX "BITES" WHILE THE SLINGS WILL DO THE WORK IN TWO.

An enormous quantity of hay is put up quickly in the central West by using the bull-rake and overshot stacker. In unloading hay, slings are highly recommended by some, while others persist in using the time-honored hay fork. One advantage of the sling is that by this system one can take off an ordinary load in two lifts. This means that you will have to put one set of slings on the bare rack and put the other set in place when the wagon is half loaded.

While there is some risk attending the baling of hay directly from the swath, it is nevertheless true that many men have been very successful in operating in accordance with this plan. One of our subscribers who sells considerable hay points out that the stacking system will involve the loss of from one-eighth to one-fourth of the entire crop. He began baling in the field two years ago and has not lost a forkful of hay since. Not only is this method applicable to those cases where hay is marketed, but it is recommended where there is limited barn room because one can store five times as much baled hay in a given space as can be put in the same space when the hay is not baled.

The average man will hesitate about baling his hay direct from the swath, fearing that it will spoil if it contains too much moisture when compacted in this way. It is pointed out, however, by those who have tried this plan that if hay is sufficiently dry to go in the mow, it will be dry enough to bale. It will heat and go through the sweat just as it will in the barn, no matter how dry it is at the time of baling. It will even get so hot that you can scarcely bear your hand on the surface of the bale, but even at that it has been found from practical experience that it will not spoil. The thing to be avoided above all else, if hay is baled directly from the field, is to have it free from exterior moisture at the time of baling. This means such moisture as may come from rain or from dew. Where it is the intention to bale hay in the field it is advisable to allow the crop to get fairly mature, and it will always be a great mistake to try to carry out this plan in the case of green clover. Clover that is in full bloom contains an enormous amount of moisture and it is better to get rid of part of this moisture before cutting rather than after cutting.

While this paper strongly recommends the use of good, heavy haying machinery in order that hand work may be eliminated as far as possible, we recognize and adapt ourselves to the great variety of conditions. Those, for example, who have a comparatively small acreage of alfalfa to cure will find it to their advantage if they undertake to have the crop go through the sweat in the field, and this means

THE SIDE-DELIVERY RAKE HAS PROVEN TO BE A GREAT BOON TO THOSE WHO HAVE LARGE HAY AREAS TO HANDLE.

ONE MAN WITH LOADER WITH A USEFUL BOY AS DRIVER CAN PUT ON A LOAD IN TEN OR FIFTEEN MINUTES.

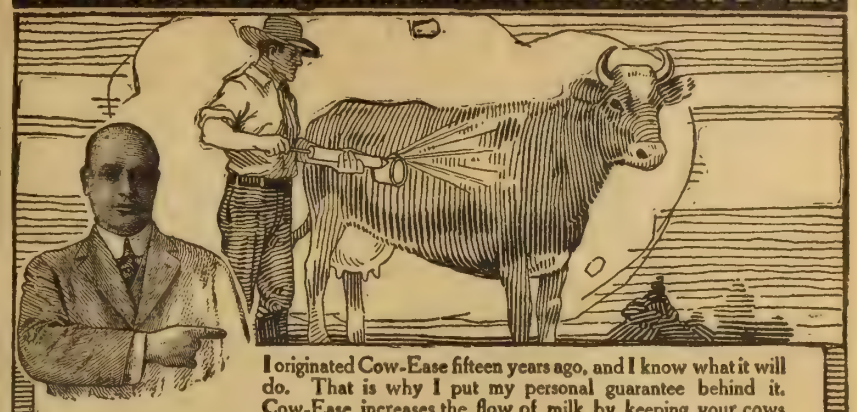
that it will have to be put up in the shock and in this condition allowed to cure out for two or three days. A ton of good alfalfa hay is so much more valuable than hay that has been bleached and shattered that one can easily afford to put a little extra labor on the crop.

In handling alfalfa, the thing above all else to be kept in mind is that the leaves constitute the nutritious part of the crop, and these are easily shattered off and left on the ground. By cutting alfalfa in the forenoon and putting it in the shock the following day there will be little loss from the shattering of the leaves, and if it is cured out in the shock it will be green, palatable and rich when put in the mow or stack. If it seems that this involves too much labor it should be remembered that alfalfa is of practically the same feeding value when used for dairy cows or even fattening cattle, as wheat bran. One is therefore dealing with a precious product and the labor spent on the crop will usually bring as large returns as can be obtained in the performance of any other task during the whole year.

Where the area of alfalfa is too large to handle in this way a very good product may be made by getting the hay into a windrow the day following cutting. It will cure out in that condition quite well, and drying may be hastened by turning the windrow over by a side-delivery rake the following day. It may be necessary to turn the windrow the second time with the rake, but after that, if weather conditions are at all favorable, the hay will in all probability be dry enough to stack or put in the mow. With this plan, hand labor is cut out and the leaves will not shatter out anything like the same extent as will be the case if the crop is allowed to dry before being raked.

THE SIX AND SEVEN-FOOT MOWER CONTRIBUTES TO THE "HUSTLE" OF HAYING OPERATIONS.

COW-EASE Guaranteed to Make Good or I Will!



I originated Cow-Ease fifteen years ago, and I know what it will do. That is why I put my personal guarantee behind it. Cow-Ease increases the flow of milk by keeping your cows quiet and contented.

COW-EASE Keeps Flies off Cattle and Horses

It is a liquid applied with a sprayer which we furnish. Flies cannot come near it. It is harmless, does not gum the hair or blister the skin. Flies not only irritate your cows, reducing their yield of milk, but they are deadly germ-carriers, and dangerous to health. Get rid of them! Spray your cows with Cow-Ease before each milking—they will stand quietly—and feed in peace throughout the day. One gallon is enough to spray a cow 200 times. Remember that I personally guarantee to return your money if you are not satisfied. Thousands of dairymen and farmers are using it. Do you? Sold by Reliable Dealers Evverwhere.

M. Elton Voce Assistant Treasurer.

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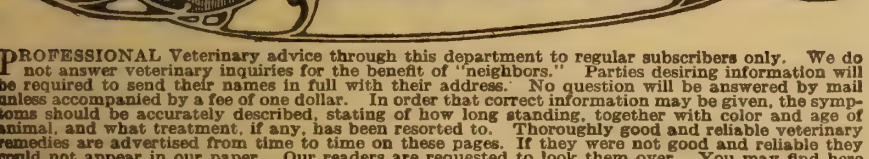
If your dealer cannot supply you, send me his name and $1.25, and I will deliver prepaid to your address a half-gallon can of COW-EASE and SPRAYER for applying. For west of Missouri River and for Canada, above Trial Offer, $1.50.



PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Bad Habit.

I have a two-year-old colt that has a habit of eating my horses' and colts' manes and tails off. Would like to hear through your paper if any of the readers have had experience of this kind and if there is any cure for same.

This is probably more of a bad habit than anything and will probably be hard, if not impossible, to overcome. Mechanical means may be resorted to, such as a muzzle, but will probably not overcome the tendency to chew the mane and tail.

Wind Sucking.

I have a valuable horse five years old that has a habit of cribbing, which he started this spring. He cribs in the stall and when I hitch him in the wagon every chance he gets he cribs on the neck yoke. I shall greatly appreciate advice from you what to do to break him of it.

This is a vicious habit which is not easily overcome. The use of a muzzle or spiked strap about the larynx may sometimes prevent wind sucking. Avoid any articles which can be bitten; feed off the ground or remove manger after feeding.

Lame Cow.

I have a Holstein cow supposed to be seven years old. I bought her at a sale two years ago and she was lame at the time in one hind leg. They said she had got hurt in the barn. Her lameness is rather worse. Both hind legs seem a little stiff and lame, but the right one is quite lame. When she walks her stifle joint sounds like it was slipping out of place. She is thin in flesh, hair looks pretty good, has no cough, has a good appetite, was fresh a week ago and gives a good flow of milk. Some think she has tuberculosis. Is there any home method by which I can ascertain the fact, as I live so far from a veterinary. If she has tuberculosis should I kill and bury her?

The test for tuberculosis should be carried out by one who has had training along this line. If you should have the cow tested by a veterinarian he will advise you as to the proper method of handling her if she proves to have tuberculosis.

Tumor in Nostril.

I have a three-year-old colt that has a pus pocket about the size of a walnut three or four inches above the right nostril. This has been there since he was six months old. I opened it a number of times a year ago and syringed with peroxide, but this did not help any.

It is probable that the growth is a tumor of the false nostril. However, it may be purely an abscess which fails to heal when opened. You had best have a veterinarian to examine this and find what is causing the trouble so a more rational line of treatment can be carried on.

Lymphangitis.

I bought a mare last fall, seven years old, bay of color, weighs 1,150 pounds. I fed her ground oats, six quarts a day and clover and timothy hay; and had her out about an hour every day for exercise. One morning about two months ago when I came over to the stable I noticed her hind leg was swollen and the mare was shivering. I got the doctor for her in the afternoon and he said she had been overfed and had had too little exercise. He called it the Monday morning disease, or water farcy. I got some medicine to give her and some liniment to apply and bathed her leg with warm salt water three times a day, half an hour each time. Next day the doctor came back and gave me some powder to give her in the feed, but the mare wouldn't eat it and was getting worse. The doctor told me to feed her only bran and that was the only feed she had for two or three days. Afterward the doctor came back and had another doctor with him who claimed that it was blood poison that had started. The mare didn't have any sores of any kind. They gave me some powders to give her in her feed and told me to bathe the leg with warm salt water. The mare wouldn't eat her feed with the powders in, so she stood there for two days and still she wouldn't eat it. I thought something had to be done, as I knew if she had blood poison and she didn't get any medicine she would die soon, so I thought I would try another doctor, who is supposed to be pretty good. When he came he said it was not blood poison, but that she had been overfed. He called it the Monday morning disease. I got some medicine from him to give her. I kept on with them for about two weeks and her leg swelled up very big in the knee on her hind leg and pus started to come out of the skin. I had the doctor look at it and he opened it up. Only blood water came out of it and it healed up in about a week's time, but the swelling didn't go down very much and it started to swell up more in about a week's time and broke open the same place it had been opened and a whole lot of pus came out of it. I had some medicine which I injected in the sore and it healed up after a while, but now it keeps on that way. It heals up and opens and has done that three times, and she can scarcely step on her leg now. I am poulticing it with linseed, but it doesn't seem to help. Please advise me what to do with her.

It would seem from your history that your animal has been the victim of an attack of lmyphangitis. You fed your animal well and gave too little exercise. Since the case is of such long standing it will need different treatment than at first. Take oil of turpentine and sweet oil equal parts and rub well into affected leg once daliy, avoiding application to the open sore. Give internally in watery solution, two drams of potassium iodide daily for six or eight days. You may get some results from above treatment.

Sweeny.

I have a four-year-old gelding weighing about 1,500 pounds that has a bad sweeny on the right shoulder. Have often seen remedies in your veterinary columns for sweeny to be blistered on the outside, but I would like to know of a remedy to blister under the skin, using a hypodermic needle. Have used pure iodine with good success, but think it is too strong. Would like to know what to dilute with or of something else that will do the work.

There is no agent that is better than tincture of iodine if used in the right manner. It should be injected in seven or eight places over the sweeny, using about one cubic centimeter in each place. Turpentine and alcohol may be used in the same manner.

Rock County Guernsey Meeting.

The first annual picnic of the Rock County Guernsey Breeders' Association was held June 20th. This association is only two months old, having been organized largely through the efforts of W. A. Munn, of Janesville, and Theodore A. Clarke, of Edgerton. The picnic was held at the M. S. Kellogg farm, two miles east of the city of Janesville. The program included a history of the Rock County Guernsey Breeders' Association, by Prof. H. C. Buell, of the Janesville city schools. W. J. Dougan, of Rock county, a producer of certified milk, gave a talk on "Breeding of the Dairy Herd" He told what may be accomplished with a pure-bred sire. He has bred up his own milk cows from grades, and thinks that this is the way for the dairymen to make a success. Each female he has kept in his herd has been better at the pail than her dam. Prof. A. B. West, of the agricultural department of the Janesville city schools, spoke on "Opportunity of the Boy on the Farm." He said that statistics prove that a large percentage of great men come from the farm. Ninety per cent of Chicago's most successful business men were reared on a farm. Charles Hill gave a very interesting and instructive talk on the "Island of Guernsey."

When the association was first organized it had seventeen members. Twenty-two were added at the recent meeting. It is the intention to pick a show herd from the herds of members and to make an exhibit at several of the county fairs for the purpose of advertising. Another meeting will be held in the fall at the D. L. Babcock farm near Albion.

The officers of the association are: Dr. W. A. Munn, Janesville, president; Theodore A. Clarke, Edgerton, vice president; J. A. McComb, Milton, treasurer; E. M. Erickson, Janesville, secretary

There were 214 present at the summer meeting, notwihtstanding the fact that the weather was rainy.

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

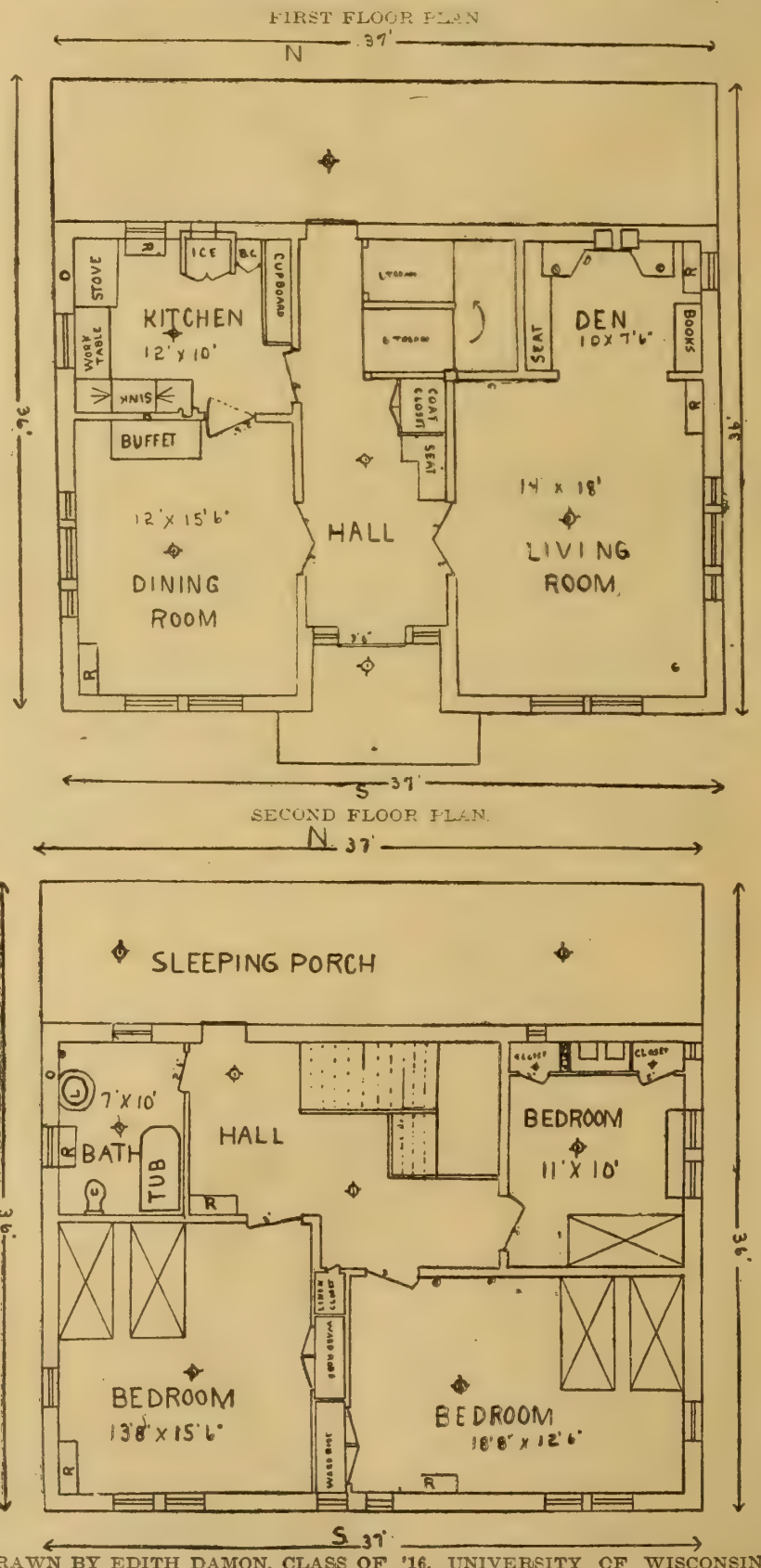
Furnishing a Home.

[Editor's Note.—Our farm girls are taking a great interest in the home economics departments of the schools and colleges, and the agricultural schools in the grain belt, especially, have been improving courses of study along this line. Home economics offers a splendid field for the girls who are planning to teach. Miss Edith Damon, of the University of Wisconsin, class of '16, gives some valuable pointers on this work and some interesting information in general for the housewife.]

A welcoming doorway—who can resist the invitation if we find a hall that is equally as welcoming, in color and in furnishing? It should be cheerful, but yet should have the feeling of formality. In order to obtain these things, it must be well lighted, well arranged and simple in furnishings. We must remember that the hall is the waiting room and also the introduction to the other rooms, therefore it must be attractive. The furniture placed in such a hall will be determined by the size of the hall and the way it opens into the other rooms. In every hall our guests will need a mirror, placed where the light is good. Where gas or electricity is available bracket lights on either side the mirror will be decoratively and usefully effective. A seat of some kind, either a hall chair or a built-in settle, in which there is a place for storage under a hinged seat, may be the other furniture in a small hall. The combination hall tree, seat, mirror, cloak rack and umbrella stand, which in our inexperience the furniture dealer sold us, we have learned to recognize as a catch-all for dust and dirt, therefore, to say the least, is in bad taste. Rugs and pictures are not necessary in the hall, although a small rug of good design and color would not be out of place. The furniture of the larger hall might consist of a small side table, with a drawer for pads, pencils, etc., and one or two straight-back chairs placed against the wall. This is quite enough furniture for any hall. If the hall is a very large one, a carefully selected hall clock and possibly a willow settle would be good additions to make.

The dining room; one may think this a very easy room to furnish, but the opposite is quite the case. To one entering the dining room the impression should be that of cheerfulness and freshness. Remember that it is the place where food is to be served and, when one thinks of the part psychic secretions play in the digestion of food it is quite essential to have the dining room restful in color and in furniture. This is the place where the family comes together at least once a day. Simplicity in this room should be the keynote. The decorative details are the things to watch closely in the dining room. The furniture which is necessary in this room is the dining room table, six chairs, a buffet and a serving table. A tea cart is really a labor-saving device and should find its place in every dining room. The buffet or side table must be selected with care. In the use of this piece of furniture avoid a grand display of china, silver and cut glass unless you want your dining room to be a show room. Sometimes it is a good idea to line the glass doors of the buffet with some soft material which will harmonize with the color scheme of the room. If you have been invited to a home to dine and have had the pleasure of watching yourself eat, because of a mirror which was placed so conveniently in front of you, you will in your own home avoid having a mirror above the buffet, substituting for it a well-selected picture, the subject of which does not suggest food. The lighting of the dining room is very important. The wall lights are much to be preferred, for they do not cast shadows as the central lights would, causing your guests to have a ghastly appearance.

How many women say, "I hate to go into the kitchen to work." If this is the attitude is not there something wrong with the kitchen? Let us see what things would be desirable in the kitchen. The motto of this room is cleanliness and convenience. A white kitchen is very pleasing, but more difficult to keep clean than slightly grayed or buff walls. Seeing that our aim is convenience, our kitchen should be arranged so that in doing the work we pass in sequence so as to save our steps; in other words, our kitchen is routed; first, storage; then preparation table, cooking surface, sink, garbage and shelves. Group small utensils near the work of which they form a part. Much of the time which housekeepers spend in the kitchen is unnecessary because they do not know the value of convenient arrangement. The furnishings of the kitchen should be simple. Much of the furniture of today is built in. Plenty of cupboard room is very essential. There should be places to accommodate all of the necessary utensils. Our motto should be, "a place for everything and everything in its place." The kitchen should be well ventilated and lighted. Too often the kitchen has but one light. If it is necessary to have curtains have those which will launder easily. It is a good idea to run a rod through both top and bottom of the curtains, so that they will not fly into things, for the work table is often in front of the window. If the view is good it should not be obstructed. The kitchen must be sanitary, therefore do not have rugs unless they are washable. Avoid pictures for the same reason. Today the great expense of equipping a kitchen comes in buying a great many so-called labor-saving devices, which prove to be otherwise. There should be a good refrigerator in the kitchen. The stove need not be so expensive, but there should be a hood over it to prevent the disagreeable odors from getting into the room. A high stool is necessary in the kitchen. There are so many times a housekeeper could sit down and do her work, thus lightening her labor. The utensils for the kitchen should be simple. Miss Marlatt says, "The more things you learn to do with one piece of apparatus the more you save in time and money." If you are doing your own work it may pay to equip your kitchen with aluminum, but this is rather expensive, and other materials are very satisfactory and durable.



DRAWN BY EDITH DAMON, CLASS OF '16, UNIVERSITY OF WISCONSIN HOME ECONOMICS DEPARTMENT.

We have glanced into the workroom of the house, now let us look into the room which represents restfulness as well as cheerfulness, the living room. "It is the place where work is to be done; it is the haven of rest for the workers; it is the place where children grow up and thrive and gain their first impression of life and the world." This room has so many needs to fill that it is difficult to keep the furnishings simple and at the same time have the necessary furniture. One writer said, "Its charm and individuality spring from the fitness to meet the needs of its occupants as simply and directly as possible, to express honestly the life that goes on in the house and the character of the people who live in it." In selecting the furniture an important thing to consider is stability. "A cheap article gives satisfaction but once, when you pay the bill. It extorts compound interest whenever afterwards it enters into consciousness." The chairs in the living room should be especially comfortable. To me, a rug of good design seems to have a place in the living room. It tends to give the room a more homelike appearance. The hangings should be simple and should harmonize with the color scheme of the room. Some of the pieces of furniture which might rightfully find a place in the living room are a library table, davenport, several comfortable rockers, foot stools, a small wall table, a writing desk and a couple of straight-back chairs. Plants are a great help in making the living room successful. One should be very careful about the lighting. With electricity there should be plenty of places to plug in the light so that everyone can have a good light by which to work or read.

Freshness and daintiness is the motto of the sleeping rooms. The furniture should be simple, light and airy. The important thing in the bedroom is the bed. The frame is not so important, but there should be a good pair of springs and a good mattress. White furniture is very good for the sleeping rooms. Use dainty hangings and small, washable rugs. The other necessary pieces of furniture for the bedroom are a rocker, one straight-back chair, a dressing table and chiffonier or a dresser, and a small table beside the bed for a reading lamp.

We might consider the guest room separately. The same principles should be followed in the furnishing of this room, but there are some additional points to consider. This room should show the individuality of the owner, but should not contain too personal things. It should contain things which will please the guest and stimulate the desire to return. One might add to the above list of furnishings a writing table, a footstool and books.

Control of House Ants.

Most of the common house ants are spoken of as large or small black ants, reddish brown ants, and tiny yellowish ants. All these kinds of species of ants usually come from outdoors and, according to A. C. Burrill, assistant entomologist, University of Wisconsin, must be killed in one of three ways: (1) By mechanical de-

struction which is rather tedious and not always practical; (2) by poisoning, which takes the most time and may not always prove successful; (3) by fumigation with carbon and bi-sulphide where the nest can be reached. This treatment is not always dependable if the nest runs under the cement walk, a house wall or a stump.

Mechanical measures consist of laying greasy bones or sugared sponges in the ant trails, and when the ants have gathered in numbers plunging the bone or sponge into hot water; or digging up their nests and widely scattering them among the chickens. Ant-proof cupboards, food safes, or the removing of attractive food from the reach of the ants will usually cause the ants to not work in the house. Where the nest is not easily found, poison sweets may be set along the trails so that the ants will carry the poison to the hidden nest and feed it to the laying queen and brood before they are themselves destroyed by the poison. This method will in time completely do way with the ants, as they are attracted to the bait.

Use tartar emetic, one part to ten of sugar dissolved in 100 parts of water. Spread this on chips of wood or glass and place on ants' trails out of the way of pet animals. It may be also combined with cold lard or a similar grease so that it will not evaporate rapidly. In case tartar emetic cannot be secured, an equally effective poison can be made by using three grams of sodium arsenate (soluble) in a spoonful of water, added to two pounds of sugar dissolved in three-fourths pint hot water. The poison sirup may be soaked on bits of sponge and placed along the ant trails.

Where the trail of ants is easily followed to a nest in the soil, carbon bi-sulphide may be applied, preferably towards dusk, when most of the workers are at home. With a stick make three holes from three directions on the edge of the next towards the center. As quickly as the stick is withdrawn each time, pour in an ounce of the carbon bi-sulphide and immediately close with damp earth so that neither ants nor gas can come out. One or more wet sacks laid over the nest will help to hold the fumes.

Have Plenty of Sunlight.

Sunlight is a safeguard to health and this is a fact that many housewives fail to recognize when they pull down the shades or hang heavy curtains at the windows. Houses that are constantly purified by the free admittance of light and air will not long harbor disease germs.

The curtains should be transparent in texture and hung so that they may be easily moved aside.

Monument For "City Mother."

In Twin Falls, Idaho, a monument has been erected to the memory of the woman who saved the town. The monument is a tall shaft of gray granite and it bears a small bronze plate with an inscription which tells the story. The woman was Mrs. Alice Rozeille McCollum, foster mother of the "homeless twenty," by whom the monument was erected. The story shows what a factor one woman can be when she bends her energies in the right direction—home making.

Twelve years ago Twin Falls comprised some thirty shacks and tents which peeped from a dusty sagebrush desert. The water was not then in the canals and a scorching wind blew unceasingly.

Practically all the inhabitants of the village were pioneer business men who had left their families "back home." Reverses, together with the soul-trying environment, created a wave of homesickness that was more demoralizing to the embryo city than a raid by a band of Comanche Indians. It steadily grew worse until depopulation stared the town in its dusty little face.

Mrs. McCollum saved the day.

"It's a home they want," she told her husband. "We must throw our home open to them and save the city."

The McCollum home, the first real home in Twin Falls, was rushed to completion and the homeless men invited to a big house warming. That was the beginning. Once each week thereafter until all had established homes the homeless assembled at the McCollum home, enjoyed music, home cooking and true home spirit. Twenty homeless men were present at the house warming when the Homeless Twenty was organized. Its membership grew to twenty-seven.

From the first meeting the homeless men gained more interest in life and started ahead with new vigor to make fortunes and build a city. The town was saved and it prospered. The members of the Homeless Twenty are scattered from ocean to ocean, but they recognize the debt they owe to the foster mother of Twin Falls and the Homeless Twenty.

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.—Adv.

Household Hints.

In making quilts first take some sheeting or similar kind of cloth and make a regular quilt out of the sheeting and cotton batting. Having this made, make a cover to fit over quilt, the cloth being of the desired color or design. The cover, when dirty, may easily be washed without washing cotton batting.

When making egg custard pies, always heat the milk to the boiling point before mixing it with the eggs. If this rule is followed the undercrust will always be crisp.

When you have no one to hold the yarn while you wind it, place two flatirons the proper distance apart, on the table, stretch the yarn to them and wind it conveniently.

An excellent way to finish arm-holes in a fine lingerie waist is to sew the sleeves in by machine; then buttonhole around the edges with either a coarse thread or soft floss.

Before washing lace collars baste them closely on a piece of white cloth. They will not be stretched nor torn. If no starch is put in them they will look like new.

The next time your fire has almost gone out try throwing a little granulated sugar on it, which will have the same effect as kerosene, but is not at all dangerous.

To steam velvet, instead of using a flatiron, try your soapstone and see how much better and smoother the velvet will be.

Recipes.

Stuffed Tomatoes.—Cut a thin slice from the smooth end of the tomatoes. Scoop out the pulp, mix with an equal quantity of cold cooked rice, macaroni or a few fine bread crumbs and mince of cold roast beef or mutton. Add salt, pepper, butter and a few drops of onion juice. Refill tomato shells, cover with top and bake one-half hour.

Macaroni and Cheese.—Break macaroni into uniform pieces (one cup of macaroni). Drop into boiling water, boil until tender. Drain and rinse in cold water. Place in a buttered baking dish. Make a cream sauce using two tablespoons flour, two tablespoons butter, one cup of milk, salt and pepper. Melt one cup of grated cheese in the cream sauce. Pour over the macaroni. Sprinkle with bread crumbs and bake.

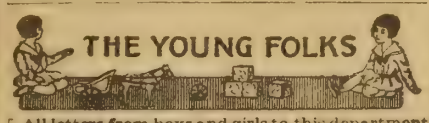
Pecan Nut Loaf.—Mix together one cup of bread crumbs, one cup of pecans, one cup of milk, one cup of boiled rice, two eggs, two tablespoons of butter. Season with salt and paprika and bake in a buttered baking dish. Serve with a cream sauce.

Stuffed Round Steak.—Two pounds round steak; make a dressing of stale bread seasoned with salt, a little onion pepper and butter; spread on the steak and roll and tie; put in a pan with a pint of water and let bake for thirty minutes before putting in the potatoes; when potatoes and meat are done make a gravy.

Strawberry Shortcake.—Make a soft dough of two cups sifted flour, three full teaspoons baking powder, one-third cup butter, one egg, three-fourths cup sweet milk, one-half teaspoon salt, small; make two layers, butter, put one on top of other and put on berries and whipped cream on the top.

Cucumber Sandwiches.—Cut slices of Boston brown bread in rounds one-quarter of an inch thick, spread lightly with creamed butter and put between each two slices a thin slice of crisp cucumber dipped in French dressing. Serve as soon as prepared.

Baked Herring.—Place herring in a baking dish, sprinkle with salt, pepper and chopped parsley, cover with bread crumbs and bits of butter and pour over it one cupful of cream. Bake twenty minutes, or until well browned.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

A Letter From a South African Friend.

Dear Young Folks:—I am a subscriber to this good paper and, therefore, have an opportunity to read your interesting and "homey" little stories. In fact, I look forward with more pleasure to your stories than I do to any other articles which might be contained in the paper. I guess if you could see me when I receive my copy of the paper you would notice that I open it right in the middle, just where your stories are. I have an idea that I would like to write something for the little folks' department today. Before beginning my subject I must first tell you where my home is. My home is in South Africa. Yes, no doubt you think I am a negro, but I am not. I am a white man. It is a year ago this month (June) since I left home. Things over in this country are very different to what they are there. For instance, we do not use horses down here to plow with. We would be laughed at if we did. We use oxen. We yoke up from four to six of them, two in front of the others. We do not use lines, but we shout at them to keep in the furrow and when we want them to turn around we tell them to come back. The word we use down there is "Woya."

My home was between thirty and

LOTS OF FUN WITH A FAMILY PET.

forty miles from the railroad. Therefore we had to freight all goods by ox wagon. Then we would hitch up, or yoke up, as we would say, fourteen of these animals in the same way as I have just explained. Sometimes we would be a week on the road; sometimes longer than that, for often the rivers would rise between us and home and we would have to camp along the bank until the river went down. Sometimes there would be about twenty or more wagons camped together. Of course, the wagons are a great deal larger than the wagons here. One would make a dozen of the wagons you see here. We get free range for grazing our oxen. There is no such thing as a fence hemming you in within ten feet of you wherever you go.

—J. Miller.

Likes Out-of-Door Work Best.

Dear Young Folks:—I have been reading your letters and I am quite interested. I am twelve years old and in the seventh grade. I have two sisters and three brothers.

We have a big garden and lots of chickens. I like to feed the chickens and gather the eggs. We have three incubators. One is 120-egg size and the other two are 400-egg size. We have no cows or horses—all we have is chickens.

I like to hoe in the garden and weed onions. I bake cakes and do a little cooking. Our teacher teaches us cooking and sewing. I like to go to school in winter and early spring, but I don't fancy it in hot weather. I don't like housework very well, but I can stand it if I have to.

There is a wren's nest in our barn. It has six eggs in it.

My little sister, Mildred, is a great girl to go out in the pasture or in the blackberries or some place like that and sit down and talk to herself. She is four years old. She is the next to the youngest.

I am pasting all the cake recipes in a little book I have, so if any of you have any good recipes just send them to the Young Folks' department.

—Helen.

A New Riddle.

Dear Young Folks:—I have been reading the Young Folks' department and enjoy it very much, so thought I would write, too.

I live on a 120-acre farm, four miles from town. We have seven horses and one mule. His name is Jerry. Whenever an automobile goes along by the pasture where he is he will run to the fence to see what it is.

I crochet and embroider. I can make jelly cake also. I am nearly eleven years old and am in the fifth grade at school. I have three-quarters of a mile to go to school. I have two pet cats and three little kittens.

I think that giving riddles in our letters and guessing is lots of fun. I will give a riddle. What shows that a clock is bashful? I think the answer to Florence's riddle is a river, because it has no legs or eyes, but has a mouth and goes on forever.

—Esther.

International Sunday School Lesson.

Lesson for July 2, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

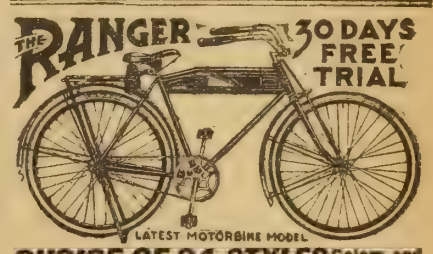
Paul at Thessalonica and Berea.

LESSON TEXT—Acts 17:1-15 (cf. I Thess. 2:1-12).

GOLDEN TEXT—Him did God exalt with His right hand to be a prince and a Savior.—Acts 5:31.

To place a modern war map by the side of the ancient one will help to make the places Paul visited more real. In both of the events of this lesson reference is made to the reading and use of the Scriptures, and teachers should use that to emphasize the reading of the Bible by both old and young. There is real patriotism as well as safety and a liberal education in Bible study. Paul reached Thessalonica about twenty years after the establishment of the Christian church, remained perhaps five or six months and then went on to Berea. Modern Saloniki has been since the Roman days of Thessalonica an important center, thriving and prosperous of later years till the recent Balkan-Turkish war.

I. At Thessalonica (vv. 1-9) (1) Rea-



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soning (vv. 1-5) (a) The place. On this second journey Silas and Timothy (v. 14) were Paul's companions. Recently driven from Philippi (I Thess. 2:1-2) they at once repaired to the synagogue upon reaching the city, knowing that there they could gain a foothold with both Jew and Gentile. It was Paul's usual means (v. 2 Am. R. V.). Doubtless during the two weeks the disciples used every opportunity for discussion. Paul made use of the Sabbath day of assembly, although Christians met on the first day of the week for their own distinctive service (Acts. 20:7). He also reasoned from the Scriptures which the Jews so highly revered. The best agent for doing personal work is the word of God (Eph. 6:17; Jer. 23:29; Jas. 1:18; I Pet. 1:23). (2) The method. Paul employed three. (a) He reasoned that Christ must suffer. Why? (See Isa. 53:6; Math. 26:28; Heb. 9:22; John 19:36). Paul had only the Old Testament. We have also the New to bring to our aid. (b) That "Christ must rise from the dead"—like Peter at Pentecost. Paul proved this from the Old Testament. If we will allow the Holy Spirit to "open the Scriptures" to us we will find things new and old and exclaim that whereas "once I was blind now I see." (c) He "alleged and affirmed" (set forth), e. g., gave testimony that "this Jesus whom I proclaim unto you is the Christ." Paul knew that the historical Jesus was the glorified Christ, for he had met him "in the way" to Damascus. Paul's manner of life in the city as he lived and preached Jesus was such that it contributed greatly to his success. His "manner of life was blameless" (Acts 26:4); he supported himself (I Thes. 2:9; II Thes. 3:8). (2) Reception (v. 6-10). At first these men were received as from God by large numbers (v. 4. See I Thess. 1:6-10). But the gospel then, as now, causes divisions. Not all professed followers of God know or accept the gospel. Paul's success aroused the envy of the Jews just as every successful servant is envied by those of lesser light. The charge brought against Paul and Silas (v. 6) was in large measure true, and it was a good testimony and tribute to their effectiveness. It was also in accord with Christ's prophecy. (Math. 10:34; Luke 12:53). It is the business of the gospel to accomplish just such results. We need more of such as shall turn the wrong side down and the right side up. These men were accused of "saying that there is another King, one Jesus."

II. **At Berea.** (v. 10-15). The disciples' departure by night was an act of prudence (Math. 10:23), and Paul continued his great interest in the converts he had left. See the two letters addressed to that church. Reaching Berea Paul began as usual to preach Jesus first of all to the Jews. The citizens of Berea were "more noble" and have continued to this day as a great inspiration to Bible students (witness the Berean series of lesson helps). (1) They "received the word with readiness of mind." There was a hunger for spiritual food and they partook of it with a relish. Some receive truth under compulsion, while others hunger for it. (See I Thess. 1:7; 3:10). (2) "Searched" (examined) the Scriptures daily. (2) Each day they sought the mind of God.

Much of our present-day Bible study is interesting and enlightening, but is not energizing nor evangelistic because it looks upon the Bible merely as literature.

We need to study the Bible as did the Bereans to know, love and obey Jesus as our Savior and king.

We need to study it as our guide and counsel through life.

Those who "believed" as the result of such preaching and study were well grounded (I Thess. 3:10).

After several weeks of such blessed ministry the Thessalonian Jews interfered, "stirring up and troubling the multitude" (v. 14 Am. R. V.), and Paul again moved on, this time to Athens in Greece, while Silas and Timothy remained for a further ministry in Berea.

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1752—A good style for a school or play dress. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3¾ yards of 44-inch material for a 10-year size.

1645—A dainty night dress. The pattern is cut in 3 sizes; Small, medium and large. It requires 5½ yards of 36-inch material for a medium size.

1323—"Junior" dress with underwaist, and with two styles of sleeve. (In high or low neck outline.) The pattern is cut in 3 sizes: 12, 14 and 16 years. A 16-year size will require 2¼ yards of 27-inch material for the guimpe or underwaist, and 4½ yards of 44-inch material for the dress.

1434—Ladies' kimono or lounging robe. The pattern is cut in 3 sizes: Small, medium and large. It requires 6 yards of 36-inch material for a medium size.

1630—A jaunty Russian blouse suit. The pattern is cut in 4 sizes: 2, 3, 4 and 5 years. It requires 2½ yards of 44-inch material for a 5-year size.

1733—A simple gown for home or porch wear with sleeve in either of two lengths. The pattern is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7½ yards of 36-inch material for a 36-inch size.

1643—A simple but pleasing dress for the growing girl. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 2¾ yards of 44-inch material for an 8-year size.

1723—A neat and practical model. The pattern is cut in 3 sizes: Small, medium and large. The medium size will require 5⅛ yards of 36-inch material.

1379—A comfortable and practical dress with bloomers and with sleeve in either of two lengths. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It will require 2⅜ yards of 44-inch material for the dress, and 1¼ yards for the bloomers, for a 6-year size.

1749-1750—A pretty afternoon or calling gown. Comprising ladies' waist pattern 1749 and ladies' skirt pattern 1750. The waist pattern 1749 is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt pattern 1750 is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. To make entire dress of one material will require 9 yards of 36-inch material. Two separate patterns, 10 cents for each pattern.

1734-1737—A smart suit for outing or sport, for misses and young women. The waist pattern 1734 and the skirt pattern 1737 are cut in 3 sizes: 16, 18 and 20 years. It will require 7¾ yards of 27-inch material to make the entire dress for an 18-year size. Two separate patterns, 10 cents for each pattern.

1738—A new and comfortable bathing suit for girls. The pattern is cut in 6 sizes: 4, 6, 8, 10, 12 and 14 years. It requires 4¾ yards of 27-inch material for an 8-year size, for the suit with bloomers; without bloomers 3½ yards are required.

OUR LEGAL DEPARTMENT

Landlord and Tenant—Repairs.

It is a general rule of law that a landlord is under no obligations to a tenant to make repairs on the leased premises, unless he expressly agreed to do so. If there be no contract between the landlord and tenant concerning repairs, the tenant is nevertheless bound by law to make fair and reasonable repairs during the term of his tenancy, so as to prevent waste and decay of the premises—such as putting up fences when they are torn down by wind, water, or other causes—repairing doors and windows broken during his occupancy, and other things of a similar nature, but he is not required to replace buildings which are destroyed by fire, flood or other accidental causes, nor to make general or permanent repairs. He is not required to replace an old floor by a new one, nor a worthless fence by a new one, nor rebuild a fallen chimney, nor put a new roof on a building. He is not bound to do anything on the premises which is merely ornamental, such as papering, whitewashing, or painting the buildings, but he is bound to use the premises in a good, tenant-like manner, and not permit them to fall into decay more than would be caused by ordinary wear and tear. In the leasing of farming land, the law implies that it shall be used for that purpose, and that the tenant will not commit waste, and that he will cultivate the same in a good husbandmanlike manner, and will not exhaust the soil by negligent and improper tillage, and will keep the premises in a reasonable state of repair, and surrender the same to the owner at the end of the term, in as good condition as they were when he received them, natural wear and tear, and unavoidable accidents excepted. The foregoing principles are applicable to cases where there is no express agreement between the parties concerning repairs. Of course, either party may bind himself in the leasing contract to make repairs. A general agreement on the part of the tenant to make repairs is construed by law to have reference to the condition of the premises at the time the tenant takes possession. For instance, if the premises are old when the tenant enters he is not liable for such dilapidation as results from time and the elements. Under such an agreement if there be an old house on the premises the tenant is not required to restore it to an improved state or condition, but it is his duty to keep such house in as good condition as it was when he took possession. Decrease in value resulting from the operation of time and the elements falls upon the landlord, but the tenant must see to it that the premises do not suffer more injury than the operation of these causes would make.

LAW QUESTIONS.

Children Have No Right to Property.

An Old Farmer, Friendship, Wis.—I am an old man and two years ago I bought a farm in Adams county, Wis. Last fall my wife died and two of my boys who are more than twenty-one years old boarded in my house all winter and never paid a cent for their support. I am so crippled with rheumatism that I can hardly walk and the boys refused to do a stroke of work about the place. If I should sell my place, or keep it, are the boys entitled to any of the property by the laws of Wisconsin?

Answer.—They are not while you live and you can make a will giving your property at your death to whom you please, so that the boys will get none of it when you die.

Inherited Money Garnisheed.

A Subscriber, Iowa, Minn.—A died in June, 1915, in Minnesota, leaving a will which provided that each of his sons was to get certain land in case they should pay off the other heirs within a year from A's death—one of A's sons was to pay B a certain amount of money, and in January, 1916, garnishee papers were served on A's son for said money, upon a contract made by B for the purchase of a piano on the installment plan. B gave up the piano, but the company holds the contract, compelling B to pay on it. (1) Can money which one gets by inheritance be garnisheed? (2) What can B do about the matter?

Answer.—(1) Such money can be garnisheed. (2) It would likely be best and cheapest for B to settle the claim of the piano company.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The prologue, or Part First, is laid in New Orleans and concerns two brothers, one of whom has proved faithless to the girl who trusted him, the other one marrying the girl and giving her the name and home which the faithless brother had well-nigh robbed her of. The scene then shifts to the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold and "bunking" with an old Scotchman, named MacDougall, his only companion, save his beloved horse, Mowitza. A neighbor, named Hardy, comes to their camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. Enroute to Hardy's he meets Rachel Hardy, with whom he rides to the camp.

CHAPTER III.

What is a Squaw Man?

"RACHE, I want you to stop it." The voice had an insinuating tone, as if it would express "will you stop it?" The speaker was a chubby, matronly figure, enthroned on a hassock of spruce boughs, while the girl stretched beside her was drawing the fragrant spikes of green, bit by bit, over closed eyes and smiling; only the mouth and chin could be seen under the green veil, but the corners of the mouth were widening ever so little. Smiles should engender content; they are supposed to be a voucher of sweet thoughts, but at times they have a tendency to bring out all that is irritable in human nature, and the chubby little woman noted that growing smile with rising impatience.

"I am not jesting," she continued, as if there might be a doubt on that question; "and I wish you would stop it."

"You haven't given it a name yet. Say, Clara, that sounds like an invitation to drink, doesn't it?—a western invitation."

But her faultfinder was not going to let her escape the subject like that.

"I am not sure it has a name," she said curtly. "No one seems to know whether it is Genesee Jack or Jack Genesee, or whether both are not aliases—in fact, the most equivocal sort of companion for a young girl over these hills."

"What a tempest you raise about nothing, Clara," said the girl good humoredly; "one would think that I was in hourly danger of being kidnaped by Mr. Genesee Jack—the name is picturesque in sound and suits him, don't you think so? But I am sure the poor man is quite harmless and stands much more in awe of me than I do of him."

"I believe you," assented her cousin tartly. "I never knew you to stand in awe of anything masculine, from your babyhood. You are a born flirt, for all your straightforward, independent ways. Oh, I know you."

"So I hear you say," answered Miss Hardy, peering through the screen of cedar sprays, her eyes shining a little wickedly from their shadows. "You have a hard time of it with me, haven't you, dear? By the way, Clara, who prompted you to this lecture—Hen?"

"No, Hen did not; neither he nor Alec seem to have eyes or ears for anything but deer and caribou; they are constantly airing their new-found knowledge of the country. I had to beg Alec to come to sleep last night, or I believe they would have gossiped until morning. The one redeeming point in your Genesee Jack is that he doesn't talk."

"He isn't my Genesee Jack," returned the girl; "but he does talk, and talk well, I think. You do not know him, that is all, and you never will, with those starchy manners of yours. Not talk!—why, he has taught me a lot of Chinook, and told me all about a miner's life and a hunter's. Not talk!—I've only known him a little over a week and he has told me his life for ten years back."

"Yes, with no little encouragement from you, I'll wager."

"Well, my bump of curiosity was enlarged somewhat as to his life," acknowledged the girl. "You see he has such an unusual personality, unusually interesting, I mean. I never knew any man like him in the East. Why, he only needs a helmet instead of the sombrero and armor instead of the hunting suit, and he would make an ideal Launcelot."

"Good gracious, Rache! do stop raving over the man or I shall certainly have Hen discharge him and take you back to civilization at once."

"But perhaps I won't go back—what then; and perhaps Hen could not be able to see your reason for getting rid of a good guide," said the girl coolly, knowing she had the upper hand of the controversy; "and as to the raving, you know I never said a word about him until you began to find fault with everything, from the cut of his clothes to the name he gives, and then—well, a fellow must stand up for his friends, you know."

"Of course a fellow must," agreed someone back of them, and the young ranchman from the East came down under the branches from the camp fire just kindled; "that is a manly decision, Rache, and does you credit. But what's the argument?"

"Oh, Clara thinks I am taking root too quickly in the soil of loose customs out here," explained the girl, covering the question, yet telling nothing.

"She doesn't approve of our savage mode of life, does she?" he queried, sympathetically; "and she hasn't seen but a suggestion of its horrors yet. Too bad Jim Kale did not come; she could have made the acquaintance of a specimen that would no doubt be of interest to her—a squaw man with all his native charms intact."

"Hen," said the girl, rising on her elbow. "I wish you would tell me just what you mean by a 'squaw man;' is it a man who buys squaws or sells them, or eats them, or—well, what does he do?"

"He marries them—sometimes," was the laconic reply, as if willing to drop the question. But Miss Rache, when interested, was not to be thrust aside until satisfied.

"Is that all?" she persisted; "is he a sort of Mormon, then—an Indian Mormon? And how many do they marry?"

"I never knew them to marry more than one," hazarded Mr. Hardy. "But, to tell the truth, I know very little about their customs; I understand they are generally a worthless class of men, and the term 'squaw man' is a stigma, in a way—the most of them are rather ashamed of it, I believe."

"I don't see why," began Rache.

"No, I don't suppose you do," broke in her cousin Hardy with a relative's freedom, "and it is not necessary that you should; just confine your curiosity to other phases of Missoula county that are open for inspection and drop the squaw men."

"I haven't picked up any of them yet," returned the girl, rising to her feet, "but I will the first chance I get; and I give you fair warning, you might as well tell me all I want to know, for I will find out."

"I'll wager she will," sighed Clara, as the girl walked away to where their traps and sachels were stacked under a birch tree, and while she turned things topsy-turvy looking for something, she nodded her head sagaciously over her shoulder at the two left behind; "to be sure she will—she is one of the girls who are always stumbling on just the sort of knowledge that should be kept from them; and this question of your horrid social system out here—well, she will know all about it if she has to interview Ivans or your guide to find out; and I suppose it is an altogether objectionable topic?"

The intonation of the last words showed quite as much curiosity as the girl had declared, only it was more carefully veiled.

"Oh, I don't know as it is," returned her brother; "except under—well—circumstances. But, some way, a white man is mightily ashamed to have it known that he has a squaw wife. Ivans told me that many of them would as soon be shot as to have it known back East where they came from."

"Yes," remarked a gentleman who joined them during this speech, and whose brand new hunting suit bespoke the "got-up-regardless" tourist; "it is strange, don't you think so? Why, back East we would hear of such a marriage and think it most romantic; but out here—well, it seems hard to convince a Westerner that there is any romance about an Indian."

"And I don't wonder, Alec, do you?" asked Mrs. Houghton, turning to her husband as if sure of sympathy from him; "all the squaws we have seen are horribly slouchy, dirty creatures. I have yet to see the Indian maiden of romance."

"In their original state they may have possessed all the picturesque dignities and chivalrous character ascribed to them," answered Mr. Houghton, doubtfully; "but if so, their contact with the white race has caused a vast degeneration."

"Which it undoubtedly has," returned Hardy, decidedly. "Mixing of races always has that effect, and in the Indian country it takes a most decided turn. The Siwash or Indian men of this territory may be a thieving, whisky-drinking lot, but the chances are that nine-tenths of the white men who marry among them become more worthless and degraded than the Indian."

"There are, I suppose, exceptions," remarked Houghton.

"Well, there may be," answered Hardy, "but they are not taken into consideration, and that is why a man dislikes to be classed among them. There is something of the same feeling about it that there is back home about a white man marrying a negro."

"Then why do they do it, if they are ashamed of it?" queried Mrs. Houghton with logical directness.

"Well, I suppose because there are no white women here for them to marry," answered her brother, "and Indians or half-breeds are always to be found."

"If ministers are not," added Houghton.

"Exactly!"

"Oh, good gracious!" ejaculated the little matron in a tone of disgust; "no wonder they are ashamed—even the would-be honest ones are likely to incur suspicion, because, as you say, the exceptions are too few for consideration. A truly delightful spot you have chosen; the moral atmosphere would be a good field for a missionary, I should say—yet you would come here."

"Yes, and I am going to stay, too," said Hardy, in answer to this sisterly tirade. "We see or know but little of those poor devils or their useless lives—only we know by hearing that such a state of things exists. But as for quitting the country because of that—well, no, I could not be bought back to the East after knowing this glorious climate. Why, Tillie and I have picked out a tree to be buried under—a magnificent fellow that grows on the plateau above our house—just high enough to view the Four-mile Park. She is as much in love with the freedom of these hills as I am."

"Poor child!" said his sister, commiseratingly; "to think of her being exiled in that park, twenty miles from a white woman!—didn't you say it was twenty?"

"Yes," and her brother leaned his back against the tree and smiled down at her; "it's twenty and a half and the white woman whom you see at the end of the trip keeps a tavern—runs it herself, and sells the whisky that crosses the bar with an insinuating manner that is all her own. I've heard that she can sling an ugly fist in a scrimmage. She is a great favorite with

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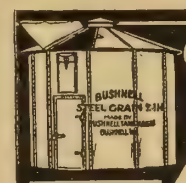

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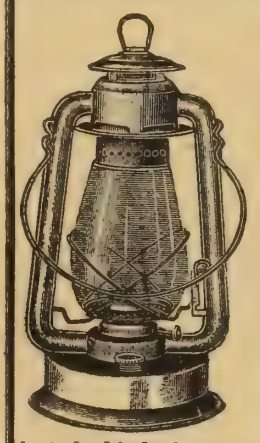

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the boys; the pet name they have for her is Holland Jin."

"Ugh! Horrible! And she—she allows them to call her so?"

"Certainly; you see it is a trademark for the house; her real name is Jane Holland."

"Holland Jin!" repeated his sister with a shudder. "Tillie, come here! Have you heard this? Hen has been telling me of your neighbor, Holland Jin. How do you expect to live always in this out-of-the-way place?"

Out from under the branches where their camp had just been located came Tillie, a charmingly plain little wife of less than a year—just her childishly curved red lips and her soft dark eyes to give attractiveness to her tanned face.

"Yes, I have heard of her," she said in a slow, half-shy way; "she can't be very—very—nice; but one of the stockmen said she was good-hearted if anyone was sick or needed help, so she can't be quite bad."

"You dear little soul," said her sister-in-law fondly; "you would have a good word to say for anyone; but you must allow it will be awfully dismal out here without any lady friends."

"You are here, and Rache."

"Yes, but when Rache and I have gone back to civilization?"

The dark eyes glanced at the speaker and then at the tall young ranchman. "Hen will be here always."

"Oh, you insinuating little Quaker!" laughed the older woman; "one would think you were married yesterday and the honeymoon only begun, would you not, Alec? I wonder if these Chinook winds have a tendency to softening the brain—have they, Hen? If so, you and Tillie are in a dangerous country. What was it you shot this time, Alec—a polecat or a flying squirrel? Yes, I'll go and see for myself."

And she followed her husband across the open space of the plateau to where Ivans was cutting slices of venison from the latest addition to their larder; while Hardy stood smiling down, half amusedly, at the flushed face of the little wife.

"Are you afraid of softening of the brain?" he asked in a tone of concern. She shook her head, but did not look up. She was easily teased, as much so about her husband as if he was still a wooer. And to have shown her fondness in his sister's eyes! What sister could ever yet see the reason for a sister-in-law's adoration?

"Are you going to look on yourself as a martyr after the rest have left you here in solitary confinement with me as a jailer?"

Another shake of the head, and the dropped eyes were raised for one swift glance.

"Because I was thinking," continued her tormentor—"I was thinking that if the exile, as Clara calls it, would be too severe on you, I might, if it was for your own good—I might send you back with the rest to Kentucky."

Then there was a raising of the head quick enough and a tempestuous flight across the space that separated them, and a flood of remonstrances that ended in happy laughter, a close clasp of arms, and—yes, in spite of the girl who was standing not very far away—a kiss; and Hardy circled his wife's shoulders with his long arms, and, with a glance of laughing defiance at his cousin, drew her closer and followed in the wake of the Houghtons.

The girl had deliberately stood watching that little scene with a curious smile in her eyes, a semi-cynical gaze at the lingering fondness of voice and touch. There was no envy in her face, only a sort of good-natured disbelief. Her cousin Clara always averred that Rachel was too masculine in spirit to ever understand the little tendernesses that burnish other women's lives.

(To be continued.)

The publicity committee of the Wisconsin Tractor Demonstration met recently in Madison to further plans for the state demonstration which is to be held at Madison September 4th-8th. Representatives of the Madison committees, of the College of Agriculture, the state farm papers, trade papers and others attended the meeting which was an enthusiastic one. Plans are being made to make this tractor show one of the biggest farmers' meetings ever held in the state.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Poultry in Midsummer.

To the Editor:—Through the hot months poultry requires as much care, only in a different way, as poultry in wintertime. Laying hens, frying chicks and the tiny ones, too, require lots of cool, fresh water often through the day just the same as people. The drinking vessels should be cleaned every morning before the poultry are turned out and they should be filled with pure water. This should be repeated again at noon or sooner. The drinking troughs should be kept in a shady place all through the day. There should be plenty of shade for fowls through the hot summertime and they must be provided with it if natural shade is not available for any degree of success. Hens will not lay that are kept out in the broiling sun from sun up until sun down. Little chicks cannot thrive without shade, although they require a moderate amount of sunshine to be healthy and strong. They must be sheltered from the hot noonday sun through the hot months. We find that hens must have a grain feed at least once a day even if they have free range if eggs are to be expected through the hottest months. Of course, we do not feed them near so much of any kind of feed in summer as in winter, but a small amount of grain fed twice a day will promote the egg yield. Milk may be fed in abundance through the summer season if it is to be had. Milk in any stage is good for the chicks as well as the laying hens.

Keeping things clean is another item not to be neglected through the hot days if the health of the flock be regarded. Sulphur should be sprinkled in the nests of the laying hens and in the coops of the little ones to keep lice and mites away. Lice thrive in filthy nests and brood coops and strong measures must be employed to keep them down if successful with poultry in summertime. Pulverized tobacco mixed with sulphur half and half, to be used as a powder upon lousy fowls, we have found to be excellent. We have also found that black oak bark kept in the drinking water, adding a few drops of carbolic acid once or twice a week, works wonders in keeping down bowel trouble among the chicks and is good for the hens also. A pile of charcoal kept by the drinking vessels will help to keep fowls in a healthy condition in hot weather as well as cold and is really necessary, as the young chicks are more apt, as well as the old ones, to have an acid condition of the system in summer than in winter. Pure coal oil poured upon the perches in the henhouse will rout the lice and mites, and the cleaning out of the manure every few days with a liberal sprinkling of lime in and around the henhouse will keep down all bad odors, which is detrimental to the health of any kind of poultry.

Mrs. S. E. McCoy.

Johnson Co., Illinois.

First Year With Geese Experiment.

To the Editor:—It generally takes two or three years to learn how to raise geese successfully. Therefore if you do not have success the first year you should not get discouraged or blame the one you bought the eggs or goslings from. Even when grown birds are purchased the beginner does not usually have success the first year. The birds, immediately after being removed from one farm to another, or even from one yard to another, do not breed or lay well.

The breeder should remember or realize that the first year is to be a period of experimenting. Geese should have free range from the time the goslings are hatched out of the shell till they are ready for the market. While it is possible to raise geese without water, it is much easier to raise them where they have a pool to take a swim in whenever they desire. The breed is a matter of choice. Some breeders have found the Toulouse the most profitable, while others have found the Embden to be producers. The African goose is coming into favor with many farmers, and we do not doubt that in a few years they will be as common with us as either of the other breeds named.

It is essential that the geese whose eggs are used for setting should have plenty of green feed. By testing the eggs of those confined we have found that they do not show 50 per cent fertility, while those on free range will test as high as 80 to 90 per cent. After the goslings are hatched off they should have plenty of shade. We have learned that hot sun frequently kills those tender birds. If there are not trees in the field or lots, a shed should be built. Four posts set in the ground with a few boards nailed over the top will prove sufficient. Goslings are very little trouble if given plenty of water, green feed and plenty of range.

The little fellows will make rapid growth on grass, water and a small amount of cracked corn. But the first few days we feed nothing but grass and clear water. I think it is a good plan to spray the sheds where the birds roost with some good disinfectant each evening before they go to roost. The spraying kills the disease germs and makes the place more healthful.

F. O. L.

Weaning the Chicks.

The best time to wean the chicks from the brooder will depend on the season of the year and also the coops used. In cold weather of early spring the chicks must be left in the brooder longer than during warmer weather. The first weeks after weaning the chicks require close watching, as there may be changes in the weather and sudden showers.

The colony house is the most satisfactory for developing the young stock. They should be constructed so as to provide an abundance of fresh air in warm weather. About fifty chicks is a large enough number to place in a single colony house. A house 6x6 feet, if properly ventilated, will accommodate forty to fifty growing birds, while a coop 6x3 will accommodate about twenty-five growing birds. Make these small coops about thirty-six inches high in front and twenty-four inches high at the back. The upper half of the front should be left open for ventilation. A muslin door should be used over this opening in cold and stormy weather. An adjustable hook can be made that will let this muslin door lie flat on top of the roof when not in use. Care should be taken to place the colony house on high, dry ground.

Chicks of different ages should not be placed in the same coops. Old birds should not be allowed to run with the chicks. For best results the young stock should have a run by themselves and they should never be placed in the same houses with the old birds.

Roosts should not be used until the birds are about four months old. If allowed to roost too early crooked breast bones may be the results. The floor should be covered with sand, loam or dry litter.

Shade of some kind is necessary for the growing stock. When no trees are present some kind of shade must be provided. A cornfield makes a splendid shade; sunflowers will serve the purpose or some shelter of boards, canvas or straw may be provided.

The more range the birds get the better. Free range not only means more strong, vigorous chicks, but it also helps to reduce the feed bill. Much feed can be secured from grasshoppers, worms and insects, which means more vigor and better growth.

—[North Dakota Bulletin.

Engine "Why" Book.

ONE of the cleverest little books on engines that has ever been published, has just been printed by Ed H. Witte, a Kansas City engine expert. Mr. Witte says that while the supply of books lasts, he will be glad to send a copy to anyone interested. The book is called "Why." Just write "Why," with your name and address on a postal or scrap of paper and address Mr. Witte, 271S Oakland Ave., Kansas City, Mo. Every reader of this paper who is interested in economical farm power, should send for this book.—Adv.

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The heavy crops in Western Canada have caused new records to be made in the handling of grains by railroads. For while the movement of these heavy shipments has been wonderfully rapid, the resources of the different roads, despite enlarged equipments and increased facilities, have been strained as never before, and previous records have thus been broken in all directions. The largest Canadian wheat shipments through New York ever known are reported for the period up to October 15th, upwards of four and a quarter million bushels being exported in less than six weeks, and this was but the overflow of shipments to Montreal, through which point shipments were much larger than to New York.

Yields as high as 60 bushels of wheat per acre are reported from all parts of the country; while yields of 45 bushels per acre are common.

Thousands of American farmers have taken part in this wonderful production. Land prices are still low and free homestead lands are easily secured in good localities, convenient to churches, schools, markets, railways, etc.

There is no war tax on land and no conscription.

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123 2d St., Milwaukee, Wis.
Canadian Government Agent.

No passport needed to enter Canada.

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In the Clover Dairyland of the famous Chippewa Valley in **Southern Sawyer County, Wisconsin.**

Prices $15.00 to $28.00 per acre.

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Write for descriptive booklet and map to

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RADISSON, WISCONSIN
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ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

THE number of fine farms in the partially settled upper Wisconsin counties will surprise you. It is a country of success, and land there will not long be cheap. State map and crop figures free. Wisconsin Advancement Association, 1590 First National Bank Bldg., Milwaukee, Wis.

WANTED FARMS—Have 3,357 buyers; describe your unsold property, give price, acreage, location. 769 Farmers' Exchange, Denver, Colo.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum; 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

SCOTCH COLLIE PUPS FOR SALE. Price: males $5 each, females $3 each. Address Peter Franzen, R. 1, Almena, Wisconsin.

Live Stock Summer Meetings.

(Continued from page 6.)

for a beginner to follow the blood lines established by other breeders. He believes that one can advance more rapidly by following this plan than by starting out for himself. Therefore, he followed the lines already developed and took advantage of the experience of successful breeders before him. In this respect, he said, Wisconsin is fortunate, as in this state there are many herds built up by studious breeding along definite lines.

Mr. Irwin is a great believer in starting the boy and the girl on the farm into the breeding game as early as possible. "My idea is that if we just move about our live stock that we are not getting very far," he said. "Our greatest crop is our children and our work will be for naught if we do not train them to take up the work where we leave off." Mr. Irwin believes it a good plan to give the boys and girls a calf or some other animal to develop.

Mr. Irwin spoke on the following day to the Waukesha county breeders at Dousman, on Thursday to the breeders at Kenosha, on Friday to the breeders at Randolph, and on Saturday at the Ozaukee county meeting at Port Washington.

St. Croix Guernsey Picnic.

The annual picnic of the St. Croix Guernsey Breeders' Association, held June 16th on George Graham's farm, one-fourth mile south of Roberts, was attended by over 500. Picnic dinner was served on the grounds and the Roberts Military Band furnished excellent music for the occasion. A very able address was given by Dr. Wood, of Mankato, Minn., who talked on the improvement of dairy cattle and gave an interesting account of his visit to Guernsey Island. A number of Guernsey cattle, representing a number of the noted herds in the county, were exhibited and these subjects of much admiration.

The stock-judging contests for high school and grade boys attracted a great deal of attention. The New Richmond high school team carried away a silver cup trophy for the best team judging. The Ellsworth high school team won second honors and the Union high school at Roberts was a close third. The best individual judging was done by James Walker, of Roberts, who placed three classes of animals correctly. One of the interesting features of the program was the judging of the weight of Clara's Sequel, the noted sire owned by Rundell Bros. Prof. J. M. May, of the agricultural department of the River Falls Normal, carried away a $5 bill for judging the sire's correct weight, 1,610 pounds.

Breed Days at Southwestern Dairy Show.

The Southwestern Dairy Show Association have designated Monday, September 18th as Brown Swiss Day; Tuesday, September 19th, Ayrshire Day; Wednesday, September 20th, Guernsey Day; Thursday, September 21st, Jersey Day; Friday, September 22d, as Holstein Day, at their first annual exhibition of Dairy Stock, Dairy Products and Dairy Machinery and Equipment to be held in Convention Hall, Kansas City, Missouri, September 18th to 23d, inclusive.

On these particular days the Local and State Breeders' Associations will hold their meetings. The Southwest Jersey Cattle Breeders' Association, Mid-West Guernsey Breeders' Association, State Holstein Breeders' Association and the State Ayrshire Breeders' Association are planning special programs for their respective days.

Special breed trophies have been donated by the Holstein-Freisian Association, American Jersey Cattle Club, Ayrshire Breeders' Association, Southwest Jersey Cattle Breeders' Association, State Holstein Breeders' Association, the J. R. Mercer Jewelry Company, of Kansas City, and J. G. Watson, of Kansas City.

Special mention is made of trophies presented by the American Jersey Cattle Club. These trophies are replicas of the famous Warwick vase. The design is famous and the cups are valued at $100.00 each. The trophies are presented for the Grand Champion Jersey Bull and the Grand Champion Jersey Cow at the Southwestern Dairy Show.

Not Always the Cow's Fault.

It is not altogether the fault of the cows that there are so many poor producers scattered over the country. Too many of them never had any training which would bring out their more or less latent milking qualities. They have been "broken" to milk, but not "trained" to milk. Too often the "breaking" process has not been such as to increase their tendency to milk or their confidence in the good intentions of mankind.

This condition cannot continue. Land is too high priced, labor too valuable and feed too expensive to permit the dairyman to keep unprofitable cows. He will have to inquire more carefully into the qualifications of the cows which apply for employment with him. He will give them a physical examination like that required before you get your life insurance policy, for he must have a healthy and durable herd. He is already beginning to insist on good breeding. The mongrel dog may persist years without number. He doesn't have to work for his living. But the mongrel cow has hard sledding before her and will have to make room for her more reliable rivals, the grade or the pure bred. Besides, Mr. Dairyman is asking disquieting questions about ability at the pail. Previous training and experience counts with cows as with men. The demand is for specialists in the fine art of making milk at a profit and there are wonderful opportunities for highly educated cows in this line.

This is the cow with the "sheepskin," the diploma, the card showing that she has passed certain tests and demonstrated her ability to produce. In effect she has graduated from a "cow college" and has her sheepskin to show for it. It may have been a secondary school like a testing association or a short course like the seven-day test or a full course for a year; in any event she has done something, has shown what she can do and has usually increased her capacity at the same time. She has added to her own reputation and her progeny inherit some of it also along with other qualities which may descend to them.

It is true that sometimes her "college training" does not make her any better. We must remember that human beings sometimes pass through college without acquiring much more than a few expensive tastes, but we don't condemn college courses on that score. It is the fault of the individual or his early training and cows are more or less like other animals.

Be that as it may, the Babcock test and the scales compel cows to be honest and it is hoped that they will also lead men to be more honest with their cows. The cow is so constituted that she can be made to consume a great deal more food than she needs to support her body. It is certain that man is greatly at fault if he does not educate her to use this capacity for his benefit. No experienced driver expects a horse to make rapid time on the road unless it is trained, nor a team to draw a heavy load unless they are taught to pull together and hardened for the work.

Advanced registry records show that training is just as necessary with dairy cows. A really great record is seldom, if ever, made without preliminary work of some kind with the definite purpose of increasing the ability to produce. The results secured show something of what can be done. The need for better returns will enforce the lessons and urge adoption of better methods in handling cows.—[In Black and White Record, June 1, 1916.

Test Shows Fall Pigs Yield Profit.

Fifty-seven fall pigs fed at University Farm, St. Paul, last winter and marketed recently left a margin of $4.56 a head to cover cost of labor, risk, interest, profit, etc.

R. C. Ashby, of the animal husbandry division at University Farm, began a series of tests two years ago to determine whether raising fall pigs is profitable in Minnesota. The margin of nearly $5 a head is the result of the test.

Eleven sows farrowed fall litters for the tests and the pigs were weaned December 16th. They were put on feeding tests two days later. The records kept cover all feeds consumed by sows and litters from farrowing to weaning and from the time the actual feeding test was begun until it was finished.

The total cost of feed for the sows and pigs up to weaning time was $186.81. From weaning time to the time of marketing the feed cost $577.88, making a total cost of $13.42 a head. The feed was counted at these prices: Shelled corn, 75 cents a bushel; ground barley, 65 cents a bushel; shorts, $26 a ton; tankage, $55 a ton.

The pigs averaged 191¼ pounds when sold May 6th. They were sold at $9.65 in South St. Paul, a price equivalent to $9.40 at home. The selling price of $17.98 left a balance of $4.56 each. No account of manure is taken in these figures.

The pigs were fed in five lots, three lots from self-feeders and two lots fed by hand. Those in the lots in which the self-feeders were used did better than those in the other lots. The corn-fed lots required about seven bushels of corn, forty pounds of tankage and from thirty to forty pounds of shorts for each pig from weaning time to the close of the test.

The pigs were fed grain alone. They were given no milk and did not have access to the cattle yards. Mr. Ashby thinks that when milk is available or when the pigs can pick up after cattle the margin will be correspondingly increased.

The horse that is compelled to fight flies continually cannot get in a full day's work, or at least if it does there is loss in stamina which eventually tells on the life work of the animal. Neither can do its best with an ill-fitting harness. The horse that is comfortable and in good spirits is the one which makes the record.

A submerged oak forest covering several square miles, from which logs more than 100 feet in length have been taken, was discovered by Russian engineers while dredging a river.

Shoo Fly Plant

KEEPS FLIES OUT OF THE HOUSE

Flies will not stay in a room where it is grown. Very mysterious, but tests show such to be the case. Blooms in a short time (60 days from planting). Flowers both summer and winter. Package of seed by mail with catalogue, 10 Cents.

JAPAN SEED CO., Desk V, South Norwalk, Conn.

GALLOWAY

SECOND EDITION NOW READY

Ask for your copy today. A postal gets it. The first edition of this big, 250-page book of Galloway bargains was exhausted. Second edition just off the press. It describes the famous Galloway line of Sanitary Cream Separators, the Galloway gasoline and kerosene Engines, the new, modern Galloway Manure Spreaders, our new 12-20 h. p. Farmobile; Galloway Farm Trucks, all kinds of farm machinery, hay tools, ensilage cutters, power house accessories, grinders, buggies, wagons, harness, fencing, roofing, saddles, Galloway automobiles, stock tanks, corn tools, automobile accessories, sewing machines, household goods, carpets and rugs, furniture, and a complete line of clothing for every member of the family.

I WANT YOU TO HAVE YOUR COPY OF THIS BOOK

You can get it for a postal. If it guides your summer and fall buying it will save you from $200 to $600. It tells the the truth about cream separators, it gives engine secrets and facts, it tells how and why the Galloway manure spreaders made Galloway famous, fully describes my new 12-20 h. p. Farmobile or tractor. A copy of this book should be in your hands even if you are not now in the market for a single one of our bargains. Printed in four colors, handsomely illustrated. Ask for your free copy today. Address

Four low prices and four good sizes of Galloway Separators

Gasoline or kerosene engines from 1 3-4 to 16h.p.

D-32

WM. GALLOWAY COMPANY, Mfg. Specialists
37 Galloway Sta. Waterloo, Iowa

Galloway's new 12-20 Farmobile. Low price.

Seven Styles: Farm trucks from 750 lbs. to 3 ton capacity

Equal to 3 men and 3 teams

These Manure Spreaders made Galloway famous. Big, free book gives details of size and style.

MONEY-SAVING CLUBS.

HERE is an opportunity for subscribers to The Wisconsin Farmer to buy all of their papers and magazines at one time at a big reduction in price. By ordering all your papers and magazines through The Wisconsin Farmer you are assured of prompt service and low prices. Pick out your club and send your order today. (We do not guarantee these prices longer that ten days beyond the date of issue in which these offers appear.)

CLUB NO. 1.

St. Louis Twice-a-Week Republic	$ .50
Metropolitan	1.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 2.

Kansas City Weekly Star	$ .25
People's Home Journal	.50
Wisconsin Farmer	1.00
Regular price per year	$1.75

Our Price For All Three **$1.10** You Save 65c

CLUB NO. 3.

Hearst's Magazine	$1.50
Kansas City Weekly Star	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Three **$1.50** You Save $1.25

CLUB NO. 4.

Ladies' World	$1.00
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.50** You Save $1.50

CLUB NO. 5.

Modern Priscilla	$1.00
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$2.35

Our Price For All Three **$1.45** You Save 90c

CLUB. NO. 6.

Mother's Magazine	$1.50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.50

Our Price For All Three **$1.75** You Save $1.75

CLUB NO. 7.

Good Housekeeping	$1.50
People's Home Journal	.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 8.

People's Popular Monthly	$ .25
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$1.60

Our Price For All Three **$1.05** You Save 55c

CLUB NO. 9.

St. Louis Twice-a-Week Republic	$ .50
Mother's Magazine	1.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 10.

McCall's Magazine	$ .50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.50

Our Price For All Three **$1.45** You Save $1.05

CLUB NO. 11.

Metropolitan	$1.50
McCall's Magazine	.50
Ladies' World	1.00
Wisconsin Farmer	1.00
Regular price per year	$4.00

Our Price For All Four **$2.25** You Save $1.75

CLUB NO. 12.

Today's Magazine	$ .50
Every Week	1.00
People's Popular Monthly	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Four **$1.40** You Save $1.35

CLUB NO. 13.

Kansas City Weekly Star	$ .25
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.25

Our Price For All Three **$1.15** You Save $1.10

CLUB NO. 14.

Every Week	$1.00
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.50** You Save $1.50

If none of the above combinations suit you, you can make your own club of papers in the following way: First select The Wisconsin Farmer and figure it at $1.00 per year. Then select any of the papers or magazines listed above and figure them at half their regular subscription price as indicated above, choosing whatever papers or magazines that appeal to you. As an example, suppose you should want The Wisconsin Farmer, Kansas City Weekly Star, Woman's World and People's Home Journal. You would figure The Wisconsin Farmer in the combination at $1.00; then you would add up the regular subscription price of the other three papers, which amounts to $1.10. Half of that amount equals 55 cents. Add this to the regular price of The Wisconsin Farmer, which is $1.00, and you would have a total of $1.55, which would be the rate for The Wisconsin Farmer, Kansas City Weekly Star, Woman's World, and People's Home Journal.

If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wisconsin.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Keep Your Eye on This Poland Herd.

THE herd to which we above refer is owned by C. S. Flesch, post-office, Mt. Ida, and shipping point Fennimore, Wisconsin. Poland men of the state want to keep their eyes on this man Flesch, for, while he is just "warming up" now, he is going to "finish strong" for he has the right kind of stuff. In the first place, Jumbo's Equal 2d the herd sire is some boar—he has it all. Look at his breeding. Sired by Big Jumbo 2d by Big Jumbo, dam Big Lady by Mastodon Chief. He traces twice to Big Bone, once to old A Wonder 107353 and once to the original Longfellow. Pretty good combination isn't it? He is of June 12, 1913, farrow and we would class him as a 900-pound boar and for quality you can't beat him. He has the back that we like to rave about, deep, smooth sides, deep hams and just as wide at the ham as he is at the shoulder. We will class him among the five best Poland China boars that we have seen in the state. Mr. Flesch has only been in the pure-bred game for two years, and, as with all starters, he bought a few "lemons" that didn't turn out well, but he has some sows that are real producers. One of the good sows is of A Wonder 107353 breeding and she has a great litter of eight by Jumbo's Equal 2d, she is also the dam of the best two-year-old sows on the place. Miss Big Bone by Big Bone 2d is another one that any breeder could tie to with success. Another three-year-old sow by Keeffer's A Wonder out of a dam that traces to Chief Price 2d is worth the long price Mr. Flesch paid for her. She has a litter of eight by the herd boar. There are eight matured brood sows on the farm and they are good ones. If you are in need of a good fall boar, they are in this herd. Two out of Miss Big Bone, mentioned above, one out of a daughter of Mastodon Chief and one out of Miss Wonder by Oakland's Equal—all sired by Jumbo's Equal 2d. Take your pick, they'll do. Don't overlook this herd boar. Spring pigs number fifty and there are going to be some boars of this lot that are herd headers. No spring pigs to offer at this time, but the fall boars are ready to go any time. A herd worthy of recommendation. Write. See page 23.—Adv.

Lindauer's Holsteins.

DURING a recent visit to the farm of L. Lindauer, Kaukauna, Wis., we had the pleasure of looking over his herd of Holstein cattle. During the inspection we were impressed by the uniformity and fine conformation of the animals in the herd. It is evident that Mr. Lindauer has selected this herd with care and discrimination. He not only has purchased animals of good type and high production ability, but has also combined with this blood lines of proven merit. At the present time he is offering for sale a bull born September 20, 1915. This young bull was sired by King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. King Segis Pontiac Polkadot was sired by King Segis Pontiac one of the greatest bulls of the breed, that was a thirty-seven-pound son of King Segis. His dam was K. P. Polkadot, a daughter of King of the Pontiacs, that now has 180 A. R. O. daughters, two with records of forty and forty-four pounds of butter respectively, and thirteen others with records above thirty pounds. The dam of K. P. Polkadot was Alcartra Piebe Burke, making her a sister of Sadie Vale Concordia 4th, that has a forty-one-pound record. At the recent National Holstein Meeting in Detroit we met Mr. J. Le Roy Pelletier, who purchased a large number of cows bred to King Segis Pontiac Polkadot. He says that he is getting such wonderfully fine calves from this bull that he intends to ship several cows from Detroit, Mich., to Wisconsin, to be bred to this bull. For further information in regard to the young bull offered for sale write to the above address. See page 24.—Adv.

Van Etta Offers Great Values.

THOSE of our readers that are interested in the Ayrshire cattle will be interested in the herd owned by Jas. Van Etta, Lima Center (Rock county) Wis., for he has, without a doubt, one of the very best herds of Ayrshires to be found in the Northwest. Most of his breeding herd has good A. R. records and this alone demonstrates the fact that his cattle are producers. At this time he has several young bulls that he is offering at prices far below their value. They range in age and breeding. They are from A. R. dams. We are glad to recommend this herd for Mr. Van Etta has the goods. Write him for particulars and in so doing kindly mention The Wisconsin Farmer. See page 24.—Adv.

Nuttleman's Chesters Are Great.

IF you are a Chester White breeder Adolph Nuttleman, West Salem, Wis., has some spring boars that look like they will make real herd boars if properly cared for. If you are a farmer and want to cross your sows with a Chester White boar, he has boar pigs that will put size and quality in your herd. The writer has seen thousands of spring pigs since March and with the exception of pigs pushed for show he hasn't seen any with the growth that Nuttleman has on his pigs. It is true that he has some February pigs, and, of course, they are big, but not taking age into consideration he has it "on" many of the breeders and the only secret is that he has good sows and is a care taker from the word go. You will be pleased with your pig if you order from this breeder. Don't forget to mention The Wisconsin Farmer when you write. See page 23.—Adv.

One Man Drives Hudson Super-Six 1,819 Miles in Twenty-four Hours.

BY traveling 1,819 miles in twenty-four hours, a distance equal to that from New York to Denver, the Hudson Super-Six has made another demonstration of its marvelous speed and endurance. This new record was made with an average speed of 75.8 miles per hour and one man drove the car all the way. No man could have accomplished this feat in a car which was not vibrationless, and a very significant fact in regard to the car used is that, upon inspection after the trip, no part or bearing showed any appreciable wear. Speed work of this kind is a tremendous strain on a car—many years of road work will not equal a few days of speeding. A stock chassis was used in this race and every purchaser of a Hudson Super-Six gets exactly the same motor and the same super-endurance. The Super-Six motor is a Hudson invention, develops seventy-six horse power, runs with utter smoothness, is never strained in hill climbing, in quick pick-up or in speeding, and possesses durability and strength that is marvelous. Absolute satisfaction is the experience of Super-Six owners. The seven-passenger Phaeton sells for $1,475 at Detroit; a choice may be made from seven other styles of bodies. The Hudson Motor Car Company, Detroit, Mich., will gladly furnish complete information about these cars, as will any Hudson dealer. See the advertisement on page 9.—Adv.

A Modern Water System Without Storage Tanks.

A MODERN water system with a Pfau compressed air motor pump will furnish running water for any farm home or barn. It is connected directly with the well and no inconvenient storage tanks are necessary; the pump will operate with but three inches of water in the well. All working parts are protected and there is no danger of freezing and bursting the pipes. The system will provide facilities for a modern bathroom and toilet and furnish running water in the kitchen, which is a great saving of time and labor. In addition, the live stock may be furnished with an abundance of pure water with very little trouble—this is an important item, since pure water is absolutely essential in order to realize the greatest profit from stock raising. Anyone interested in this water system should read the advertisement on page 12 and write for free literature and special offer. Address Otto R. Pfau, Enterprise Bldg., Milwaukee, Wis., and kindly mention The Wisconsin Farmer.—Adv.

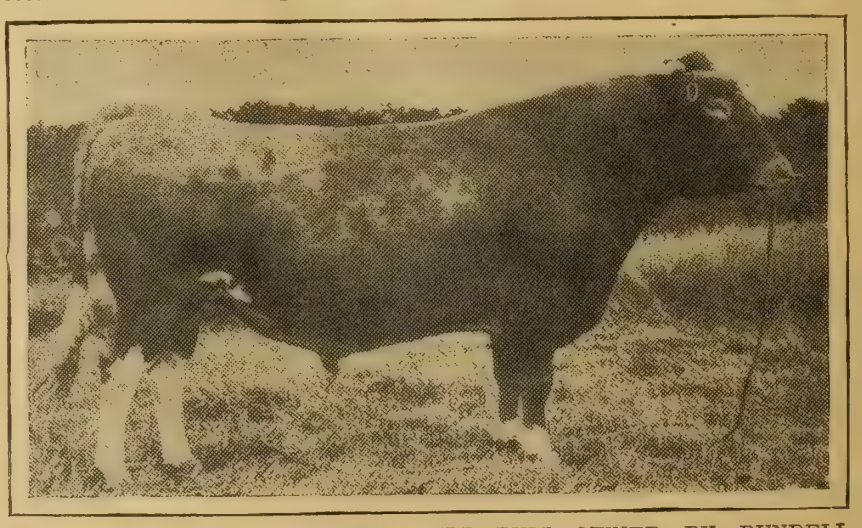
Auctioneering a Profitable Profession.

NO profession offers more lucrative opportunities than auctioneering. The services of the competent and efficiently equipped auctioneer are constantly in demand, but a thorough knowledge of every angle of the business is necessary. There is one place where this information can be secured and that is Jones' National School of Auctioneering, Chicago, Ill. The oldest established, the best equipped and the most efficient administration make this the logical school for those desiring to enter the ranks of the auctioneer. It is conducted in a practical manner by practical and experienced auctioneers. The president, Col. Carey M. Jones, is one of the best auctioneers the country has ever produced, and every detail of the school is carried on under his personal direction, with the aid of competent and experienced instructors in every department. Graduates of this school are successfully practicing their profession in every section of the country. A handsomely illustrated catalog giving full particulars will be sent to any person upon application. Address Jones' National School of Auctioneering, 40 North Sacramento boulevard, Chicago, Ill. The advertisement appears on page 23.—Adv.

Floss, a Chester White sow, that has forty-nine pigs in three litters. Owned by Leonard Behrens, whose advertisement appears on page 23.

A Prolific Chester White Sow.

IT IS the aim of every breeder of swine to produce prolific strains. Too many sows are and always have been prone to farrow small litters of pigs. One of The Wisconsin Farmer readers, however, has developed a strain that is very prolific. When we were recently inspecting the herd of Leonard Behrens, at Corliss, Wis., we asked him what lines of breeding he was following. He said, "Every animal you see traces to that big show sow, Floss." We said that she looked good enough for a foundation sow and he replied, "Yes and she delivers the goods. She has had four litters as follows; fifteen pigs, sixteen pigs twice in four litters." Her daughters are not quite so prolific, but four sows in the herd farrowed fifty-one pigs, an average of almost thirteen pigs to the litter. The spring pigs are growing in fine shape and are thrifty. He has several sows due to farrow soon and is offering pigs for sale to be shipped at three months of age. These are sired by Sir Raleigh, a litter brother to the second-prize boar at the 1915 Wisconsin State Fair. See page 23.—Adv.



IMP. CLARA'S SEQUEL, GUERNSEY HERD BULL OWNED BY RUNDELL BROTHERS, GRANT COUNTY, WISCONSIN.

Gray Chester Whites.

TO BE consistent with the name—A. L. Gray—Chester Whites predominate on the farm owned by the above breeder located near Mt. Hope, Grant county, Wis. Mr. Gray has been breeding Chesters for over a dozen years and is another one of the many that have made money out of pure-bred swine. He has a good herd of this breed and they carry excellent blood lines. The best thing on the farm is the junior herd boar, Paddy. He is a two-year-old son of the noted Schoolmaster, a boar that Harry Crandall, Cass City, Mich., paid $800 for. Here is a good Chester White boar having good size with a nice arched back and a boar of great quality. The senior herd boar is C. Evans, a son of the noted Combination 2d and out of Perfection Lady by Triumph. C. Evans is a litter mate to the well-known boar, Prince Triumph. We saw an outstanding two-year-old sow on this place, she being a granddaughter of old Combination 2d and she is raising a nice litter of eight by Paddy. There are some fine boars in this litter. Mr. Gray has a yearling boar for sale sired by Hiawatha he by Young America that might do someone some good. He is a fair sort of a boar and it does not take very much money to get him. If interested write for particulars. The spring pigs are doing fine, a very uniform lot and they are now ready to ship. The first come, first served. You can buy one, a pair or trio, unrelated. Keep this herd in mind and if you order from Mr. Gray and you are not satisfied when you get the pigs home you can send them back and get your money, but there isn't any likelihood of your doing that, for the owner won't ship anything that isn't right. His advertisement appears in this issue and when writing for breeding and prices please mention The Wisconsin Farmer. See page 23.—Adv.

Parker & Son Offer Duroc Boars.

WE recently spent the day with those good Duroc breeders of Janesville, Wis.—E. H. Parker & Son—and their spring pigs have made a wonderful growth since last we saw them, some six weeks ago. When you talk about the good Duroc herds of the state the Parkers must be classed among the head-liners. Ed does most of the feeding and he knows how to handle the slop pail so as to get the best results. His pigs are now in nice condition to ship and if you are going to want a boar or some gilts now is a good time to buy and Parkers is a good place. They come cheaper now than they will in September or October, besides the best ones will be gone by that time. Just now they have forty boars to pick from and naturally the first ones get the pick. As for breeding, they haven't any "cold blood" in the herd. The pigs are out of daughters of such boars as Orion Chief, Volunteer, Illustrator, Marion's Wonder, Lee's Defender, Lincoln Model, Pal's Col. The pigs are sired by a son of the champion, Lee's Defender, a son of the Royal champion, Royal King, and a son of Cherry King's Rival, the Prof. Mulford boar. Now, if you can find any fancier, more popular breeding than this, you can do better than we have done—it is as good as is known to the breed. As for individuality, we will leave that to you. If you don't think the pig or pigs are up to standard when they arrive at your station, send them back and we'll guarantee you'll get your money back. The Wisconsin Farmer is glad to recommend the Parkers, of Janesville, Wis. We kindly ask that you mention The Wisconsin Farmer when you send in your order. See page 23.—Adv.

Some Angus Cattle that Please.

WE recently spent some time on the Hauk farm near Cassville, Wis., and saw a grand herd of Aberdeen Angus cattle. The owners, Hauk Brothers, haven't the largest herd, some twenty breeding cows, but they have without exception one of the best herds of this breed that we have seen in the Northwest and one of the best bulls in the state stands at the head. His name is Patna and is sired by the imported Proteros out of Pride McHenry 28th. This bull is above the average for size and when in show shape he weighed over 2,150 pounds. The young bulls being offered are dandies and if you need an Angus bull most any one of these will please you. They are priced to sell—get busy. See page 24.—Adv.

Meinking Polands.

WITH this issue of The Wisconsin Farmer, R. Meinking, Bangor, Wis., changes his advertisement and he is now offering spring pigs of both sexes for sale. He has a large number to select from, and, as some of them are of early farrow, they look fine at this time. Write the above for particulars and mention this publication. See page 23.—Adv.

Send for This Special Cutter Catalog.

THE free, special ensilage cutter catalog of the Challenge Co., Batavia, Ill., should be in the hands of every

farmer planning on purchasing an ensilage cutter. Several distinctive features of the Challenge machines add greatly to their durability, economy and efficiency; among these are the direct drive to blower, slant cut, auxiliary feed roll and hot-riveted all-steel frame. The Challenge Co., also makes silos, engines, windmills, tanks, pumps and grinders. Every farmer should have one of their catalogs for reference; write for your copy today. See page 8.—Adv.

Hay Demands Protection From a Wet Season.

WET weather again this year will compel farmers to put stack covers on their hay, if they want to save it. One heavy rain can cause more damage than the cost of the cover. And besides, the cover will pay for itself many times over in ordinary seasons, because dew and showers destroy much of the hay that is annually exposed to the elements. The Des Moines Tent & Awning Co., Des Moines, Iowa, have been making an extra good quality of canvas stack cover for thirty years, and their product is well-known throughout the middle West. They will be glad to mail a catalog and price list, on any size cover readers of this paper may be interested in. When writing them please mention this paper. See page 2.—Adv.

H. A. Martin's Red Polls.

WHEN you read, talk or hear about Red Polls you naturally link the name of Martin with that breed, for no men in the country have done more for the Red Polls than the Martins, of Gotham, Wis. H. A. Martin has a large herd of select animals and can generally supply the demand for either males or females. If you are in the market for a few females, bred or open you will find cows and heifers that will please you, in this herd. If yon want a bull just a little better than the one your neighbor has, get prices on the bulls H. A. Martin has. When you see a Red Poll think of Martin. Write your wants and please mention The Wisconsin Farmer.—Adv.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 13, Grant County.
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.

Need One Collar Per Horse.

Letting old Bill wear Dobbin's collar when Dobbin isn't working may save the price of an extra collar, but it's mighty likely to put both horses on the "sore shoulder" list when work is most rushing, says the animal husbandry department at Iowa State College.

It's poor economy to use one collar on several horses. This is a common practice among farmers and the cause of more shoulder trouble than any other one thing.

In buying a collar be sure to get one that fits the horse. Poorly fitted collars result in sore shoulders, viciousness and balkiness. A properly fitted collar should rest snugly when drawn against the shoulders on all places of bearing surface, but should cramp at no point. It should be long enough when buckled to allow the open hand to be slipped between it and the windpipe.

It is necessary to properly adjust a new collar. To do this, place it in about three inches of water and let it remain overnight to take out the factory stiffness. By working it thoroughly it will become soft and adjust itself to every inequality of the shoulder.

SHORT-HORN CATTLE.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little **Evansville, Wisconsin**

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

Oak Lawn Farm SHORT-HORNS OF QUALITY

FOR sale at reasonable prices ten very good Scotch-top cows, either with calves by side or safe in calf to Denmark 8th, that is one of Villager's best grandsons. Also one good roan bull coming one year old sired by Imported Raphael. Ten heifers coming 1 year old sired by Strathallan Ring, a very good grandson of Whitehall Sultan.
J. E. KENNEDY **JANESVILLE, WIS.**

BULLS FROM MILKING STRAIN OF SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

Bates Short-horns Fashionable Durocs

STOCK of both breeds for sale. Pigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE **LOMIRA, WISCONSIN**

BERKSHIRE gilts bred for fall farrow, $35 to $50. April boars shipped at weaning time, $10 up. Address W. A. Freehoff, Waukesha, Wisconsin.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS... HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

GALLOWAY CATTLE.

30 GALLOWAY BULLS FOR SALE

FROM 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams. C S. Hechtner, Chariton, Iowa.

MULE-FOOTED SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.
HOMESTEAD COMPANY
Engraving Dept. **Des Moines, Iowa**

POLAND CHINA SWINE.

JUMBO'S EQUAL 2d

ONLY a few Poland boars like him. He has the size, quality and breeding. Big Bone, A Wonder 107353 (twice) and Longfellow in pedigree. Am using him on outstanding sows of choice breeding. He will be heard from. Four fall boars for sale, two out of Big Bone 2d dam, one from Mastodon Chief dam, one from Oakland's Equal dam, all by Jumbo's Equal 2d. Guaranteed to please. You are invited to inspect my herd. Correspondence solicited. Address
C. S. FLESCH (Shipping point, Fennimore) **MT. IDA, WISCONSIN**

POLAND GRAND CHAMPION FOR SALE BOAR JUMBO HADLEY

HAVING decided to show only hogs of our own breeding, we will sell Jumbo Hadley, grand champion of Wisconsin, 1915, and sire of first-prize futurity litter. A sure breeder and weighs now, in ordinary condition, 700 lbs. The first check for $125 gets him. This boar will put you on the map. Write and mention Wisconsin Farmer. Dobson & Eastman, Lancaster, Wisconsin.

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING **BANGOR, WIS.**

POLAND CHINAS

40 BOARS of March farrow, sired by Repeater, Smooth Price, High Wonder, North Side Wonder, and six other boars, all of a National reputation, out of big, 600 and 800-lb, sows. We hold the state record for high average on brood sow sale. Will sell these boars at farmers' prices for July 1st delivery. Write at once.
J. C. Hendricks **Box F, Hazel Green, Wis.**

McDonald Polands

BUY where you get the best, my winnings prove that. Offer spring pigs of either sex. Order now and save money. J. D. McDonald, North Bend, Wisconsin.

BLACK JUMBO 221231
BOAR SALE SEPTEMBER 28, 1916
E. W. Hendricks **Hazel Green, Wisconsin**

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

BIG-TYPE POLANDS

SPRING pigs of either sex, sired by several noted boars. Best breeding and individuality. Buy whi e they come cheap. Address
Wm. Smiley & Son **Albany, Wisconsin**

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE Poland China yearling boar $40.00. Gilts bred for fall farrow to Fairview Jumbo, $35. Booking orders for July, August and September pigs. J. Le Roy Larson, Iola, Wis.

BIG, growthy Poland China February and March boars ready to ship. Write Sol Anderson, R. 8, Green Bay, Wisconsin.

CHESTER WHITE SWINE.

CHESTERS

MR. Shreve says I have the biggest Chester pigs he has seen. Why not order where you get the best? No pay if not satisfied. Order now.
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

PADDY by SCHOOLMASTER CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. J. Gray, Mt. Hope, Grant Co., Wis.

O. I. C. Spring Pigs

SHIPPED at three months of age. $25 per pair, $15 each. Well grown, good type of L. B. Silver breeding. Address
E. E. Tjugum **Sun Prairie, Wis.**

CHESTER WHITE

SPRING pigs 3 months of age; sired by Sir Raleigh, litter brother to 2d prize boar at Wisconsin State Fair, $20 each.
Leonard Behrens **Corliss, Wis.**

CHESTER WHITE

BREEDING stock of all ages—spring pigs, fall boars, bred gilts and tried sows priced to sell. Jos. Egelhof, Edmund, Wisconsin.

CHESTER WHITES

AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

Chester Whites

HAVE 50 March pigs—booking orders now. Write early. Address
W. F. Miller **West Salem, Wis.**

CHESTER WHITE Spring pigs of either sex, singles, pairs or trios. Tried sows bred for fall litters. Buy your breeding stock now, prices right.
Wm. F. Belda **De Forest, Wis.**

DUROC JERSEY SWINE.

Duroc Gold Bonds

TRIED brood sows and fall gilts being bred to Gold Bond, 1st prize senior yearling boar Wisconsin State Fair, 1915. Due to farrow in August and September. All kinds of Durocs. Prices reasonable. Address
JOHN L. FISHER **JANESVILLE, WIS.**

40 DUROCS

BOARS and gilts of the best breeding known, and we guarantee them individually. Single, pairs or trios. E. H. Parker & Son, Janesville, Wis.

Cook's Defender

IF you want DUROCS with size buy a son of COOK'S DEFENDER. Priced right. Address
Emmett Cook & Son, Richland Center, Wis.

GRAND MODEL 21 CORRECTOR 2d

KEEP these Durocs in mind. Few pigs for sale by Lincoln Model, Salem Model and Regulator 2d. Write.
Geo. D. Sprain & Sons, **West Salem, Wis.**

ROYAL KING 4TH

FOR SALE. March 25, 1915, by the champion, ROYAL KING. A good yearling Duroc boar. Few bred sows for sale. Write
McClurg Bros. **Viroqua, Wisconsin**

SPRING DUROCS

READY to ship spring boars by Col.'s Choice by King the Col., Wonder Chief by Cherry Chief, Pal's Defender by Lee's Defender. Order early.
Dennis Shea **Melvina, Wsconsin**

LINCOLN MODEL

THOSE that see him like him. Offering a few boar pigs and some sows bred to him for fall litters. Correspondence solicited. Address
Albert L. Hyzer **West Salem, Wis.**

GANT'S FARM DUROCS

THIRTY March pigs, all Wisconsin Futurity Entries, selected from 100 head. Cherry Chief, Illustrator, Prince Illustrator, Lee's Defender breeding. Present prices $25 to $35. Address
GANT'S FARM **DELAVAN, WISCONSIN**

MODEL DUROCS

OFFERING five sows bred for fall litters. Also choice spring pigs—boars or gilts. Only the best shipped. Address
J. W. Higgins **Gotham, Wisconsin**
(Futurity Herd)

DUROCS

WHEN you think of **DUROCS** remember the champion of champions, **LEE'S DEFENDER.**
L. F. ATWATER **BANGOR, WIS.**

DUROC JERSEYS

CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)
HAVE the best spring pig. I ever raised. They are wonderful sires. Write.
Geo. H. Willsie - - Prosper, Minn.

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER EARN $15 TO $100 PER DAY
Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones' Nat'l School of Auctioneering, 40 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, President.

HORSES.

LEFEBURE'S BELGIANS

A LARGE and choice ollection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons **Fairfax, Iowa**
8 miles west of Cedas Rapids

WANTED CALF RENNETS FARMERS and BUTCHERS Do Not Throw Away the Rennets if you kill over ten calves per month, but write us. THE MARSCHALL DAIRY LABORATORY Madison, Wis.

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

A. F. BARSTOW

RANDOLPH, WISCONSIN
BREEDER of Registered Holstein Cattle. When in need of Holsteins send me your wants.

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

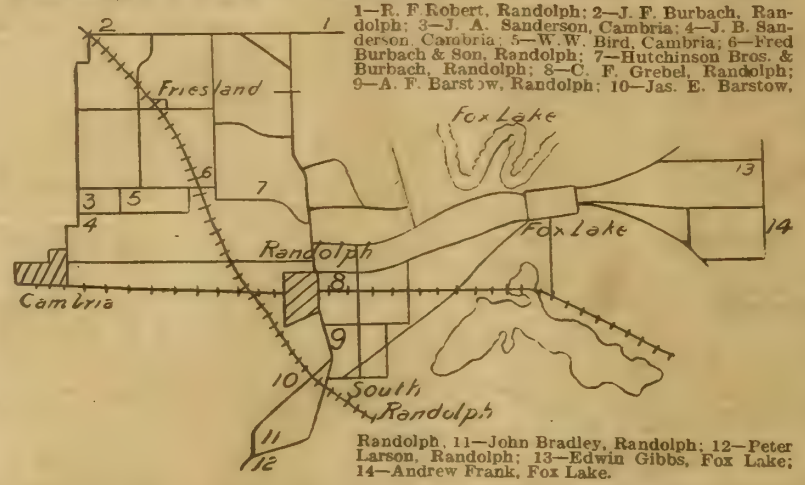
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE
HEADS our herd. His dam made 33.08 lbs as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - - Cambria, Wisconsin

2 Sons of the 29.50-lb. Bull MAPLECREST HENGERVELD DE KOL

WHOSE sire, Friend Hengerveld De Kol Butter Boy, and dam's sire, Pontiac Aaggie Korndyke, have more daughters with records over 1,200 lbs. of butter in one year than any other two bulls of any breed. Bull born Nov. 12, 1915. Dam, Vinnie De Kol Pauline 73561, A. R. O. record 22.28 lbs. butter in seven days. ½ white, straight, level type. Price $125. Bull born Oct. 20, 1915. Dam, an untested daughter of Homestead Fayne De Kol, ¾ white, straight wide rump, a mighty good individual. Price $75. Address
GROVE BROS., COLUMBUS, WISCONSIN.

21.25-POUND HOLSTEIN BULL

FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees.
Wm. Braatz & Sons Brandon, Wis.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A.R.O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

YEARLING SON

READY for service of the 28-pound Holstein bull, Calumet Johanna Abberkerk Champion 105829, whose dam gave 623.70 pounds milk and made 28.71 pounds butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. The bull offered for sale is 3-4 white, good and straight and well grown.
A. G. Pingel Chilton, Wis.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

HILLSIDE STOCK FARM
OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

YEARLING HOLSTEIN BULLS
READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

Sons of the 37-lb. Holstein Bull

SIR Canary Belle De Kol, out of heavy producing dams. Will price a few females. Write me your wants in Registered Holsteins
John Hasse Monroe, Wisconsin

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
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10 REG. HOLSTEIN HEIFERS

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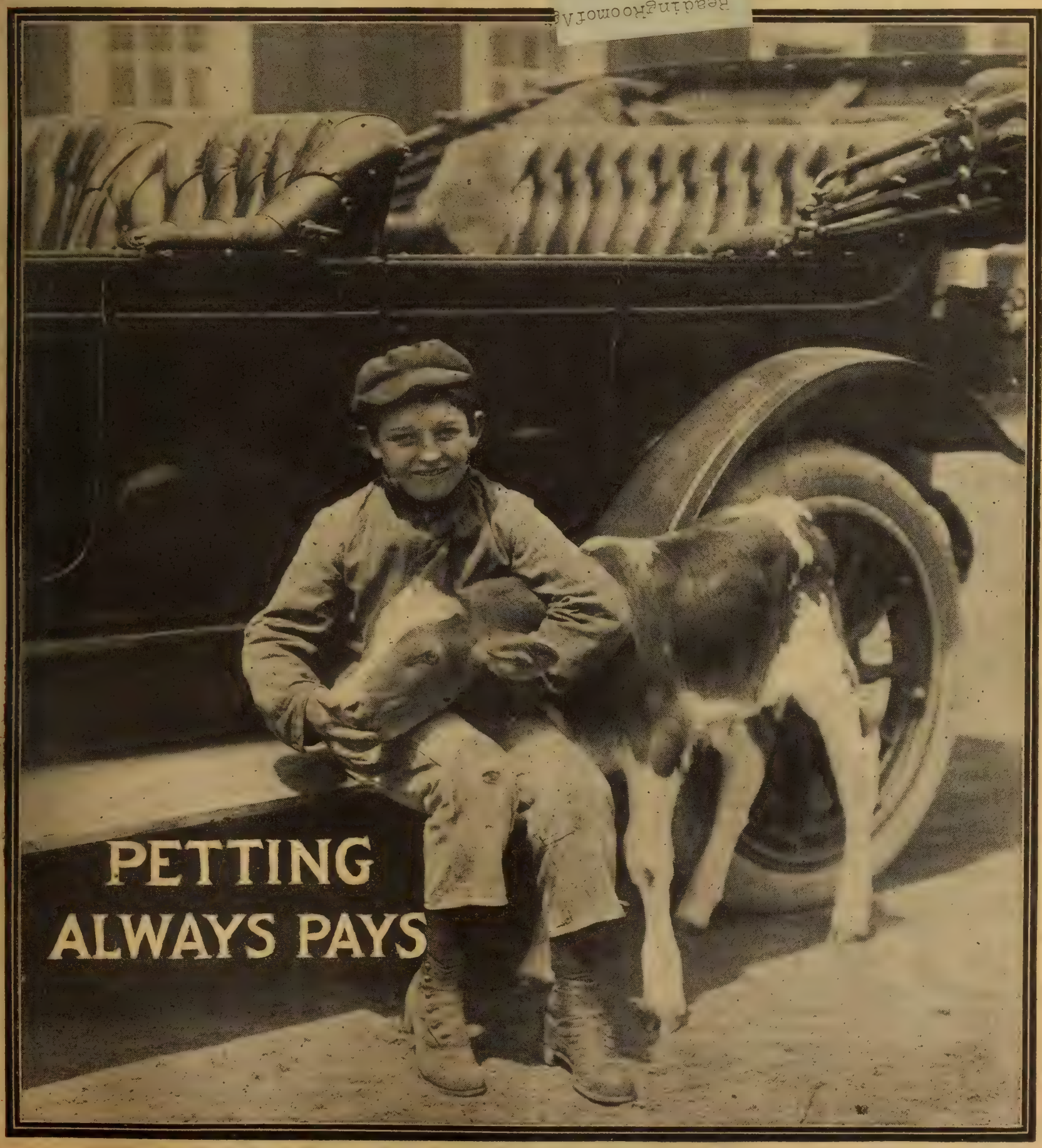

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CURRENT EVENTS

JUST as war with Mexico seemed a matter of only a few hours and President Wilson was preparing to go before congress to ask authority to send a big body of troops to rescue the imprisoned soldiers at Chihuahua (which would have been a virtual declaration of war) the situation was relieved somewhat by General Carranza's action in freeing the twenty-three colored soldiers who have been imprisoned ever since their capture at the battle of Carrizal. The troopers reached the American boundary the latter part of last week, right glad to get back to "God's country." Whether a state of war has been prevented or merely postponed no one in Washington would attempt to say. Official information as to the attitude of General Carranza was lacking. Until his response to Secretary Lansing's note, dispatched Sunday, making two peremptory and distinct demands is received there will be no declaration whether President Wilson shall lay the crisis before congress. In the meantime General Pershing is retaining his troops at their base about 250 miles below the United States border and the state troops are being mobilized and rushed to the border as rapidly as possible. Last week fully 15,000 state troops left their home camps and started south, while by the middle of this week this number will be increased to fully 50,000. The troops are being equipped and armed and will patrol the border, at first, allowing the regular soldiers to bear the brunt of the fighting.

CHARLES E. HUGHES and Theodore Roosevelt will, in all likelihood, be working together, hand in hand, against Woodrow Wilson and the democrats long before the presidential campaign is ended. Mr. Hughes and Roosevelt lunched together last week, when the breach between the progressives and republicans was completely healed. Mr. Hughes has informed Colonel Roosevelt that he wants the latter "to feel that I wish to have all the aid you are able and willing to give." In this friendly spirit of co-operation Roosevelt promises to be a big and perhaps a dominating figure in the forthcoming campaign. In accepting the progressives' support Mr. Hughes issued a public statement in which he said: "The most serious difficulties the present administration has encountered have been due to its own weakness and incertitude. I am profoundly convinced that by prompt and decisive action, which existing conditions manifestly called for, the Lusitania tragedy would have been prevented. We strongly denounce the use of our soil as a base for alien intrigues, for conspiracies and the fomenting of disorders in the interests of any foreign nation, but the responsibility lies at the door of the administration. The moment notice is admitted, responsibility is fixed. For that sort of thing could not continue if the administration took proper measures to stop it. That responsibility the administration cannot evade by condemning others. The government has and must have most emphatically the unstinted and patriotic support of every citizen in the existing exigency. But unquestioning, loyal and patriotic support of the government is one thing, approval of the fatuous course which the administration has followed, is quite another." The campaign has thus become a straight out-and-out fight between two parties, with the progressives, as an organization, completely eliminated.

IF WAR with Mexico eventuates, Theodore Roosevelt will ask the government for permission to raise a division of volunteer soldiers. He will attempt to duplicate the success of the Rough Riders, which he commanded, with Leonard Wood, in 1898. Colonel Roosevelt has made his plans after consultation with high military authorities and they call for a special division of 12,000 men, consisting of four brigades—one of infantry, two of cavalry, one of field artillery, supplemented by troops including engineers, signal corps and hospital corps. For months the colonel has had these plans in his head, for weeks he has been working them out to the smallest details against just such an emergency as existed across the border, and for ten days quiet recruiting has been going on in all parts of the country by men to whom the former president has entrusted this task. Such of the bigger arrangements as providing horses have been looked after already and a declaration of war with Mexico and a call for volunteers will be the signal for an office to be opened in or around New York City for recruiting and clerical work and for division headquarters to be established, probably in Texas, where the troops would be assembled.

THERE will be no third party presidential ticket in the field this year. That much was definitely decided at the meeting of the national committee of the progressives held last week. By a vote of thirty-two to six the committee indorsed Charles E. Hughes, the republican nominee, for president and the bull moose party practically went out of existence as a national political organization. This action was taken after a letter had been read from Theodore Roosevelt positively declining the progressive nomination and urging the party to support Hughes. It was not taken, however, until after a fight, the name of Victor Murdock, of Kansas, being presented as a substitute for Roosevelt to head the ticket. In his letter of final declination Colonel Roosevelt indorsed Mr. Hughes in this manner: "Mr. Hughes' character and his whole course of conduct in public affairs justify us in the assured conviction that the fact that these men have for their own purposes supported him will, in no shape or way, affect his public actions before or after election. I wish very solemnly to ask the representatives of the progressive party to consider at this time only the welfare of the people of the United States. We shall prove false to our ideals and our professions if, in this grave crisis of the nation's life, we permit ourselves to be swerved from the one prime duty of serving with cool judgment and single-minded devotion the nation's needs. Our own political fortunes, individually and collectively, are of no consequence whatever, when compared with the honor and welfare of the people of the United States. Such things do not count when weighed in the balance against our duty to serve well the country in which, after we are dead, our children and our children's children are to live. We have the alternative of continuing in office an administration which has proved a lamentable failure, or of putting into office an administration which we have every reason to believe will function with efficiency for the interest and honor of all our people. I earnestly bespeak from my fellow progressives their ungrudging support of Mr. Hughes."

THE plan of campaign which the United States army will pursue in case of war with Mexico is understood to call for 250,000 volunteers in addition to the regular army and the state troops. It is said that the president will issue the call for volunteers within a short time after the outbreak of hostilities. The campaign in a general way will then be carried on in two distinct phases. First will come the establishment of an effective defensive, destined particularly to police the border while the state troops and volunteers are being brought into shape. Second will be what army officers describe as the clean-up phase of the campaign, when all is ready for the clock-like advance calculated to speedily subjugate the country. This latter phase, it is explained, would probably not start in earnest until the fall. "The big idea of the army's plan," said one ranking officer, "will be the domination of Mexico at a minimum price in American lives."

The Wisconsin Farmer

THURSDAY, JULY 6, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

SHIPS FOR AMERICAN FARM PRODUCTS.

I HAVE always maintained that there is no public question today in which the farmer is not directly and vitally interested. He may seem, at times, to be aloof from the rest of the world and even to be independent of his fellowmen, but this is far from being the case. Farming has ceased to be a one-line occupation, just as it has ceased to be a one-man occupation. The successful farmer must know something of mechanics, something of chemistry, something of weather probabilities, something of marketing conditions, and so on and on through an interminable list of subjects. Farming does not begin and end in dropping the seed into the ground, by any means.

It is because farming is such a complicated process, dependent on so many things in addition to seed, sun and soil, that I have been urging my readers to insist they be represented by a member on the proposed non-partisan tariff commission. The tariff may seem far removed from corn planting and sheep shearing, but that it is very closely related to all operations of farming we all of us learned—almost to our sorrow—when one-sided Canadian reciprocity was in a fair way to be foisted upon us. Nor can we drop the matter with the tariff either. I defy you to mention any great national problem or issue which does not affect the farmer's welfare, whether it be war with Mexico, equal suffrage, ship subsidies, tariff or what not. Take the question of American ships in which to send American farm products around the world, for instance. I have just finished reading a very interesting article by Wm. G. McAdoo, the present secretary of the treasury, in which he points out how important this matter is to the farmer, particularly here in the middle West where the bulk of the nation's wheat is raised. Secretary McAdoo makes his point in this manner:

No classes of our people are more vitally concerned in adequate steamship lines to deliver our products to foreign markets than our farmers and laboring men.

Our farmers have always produced more than they could sell in our home markets. This is notably true of grain and cotton. We depend absolutely upon foreign markets for the disposition of our farm surplus. To show the magnitude and importance of our foreign trade in farm products, I need only call attention to the fact that for the fiscal year 1915 our total exports were $2,716,178,465, of which the total crude and manufactured farm products represented $1,616,687,466, or more than 59 per cent of our total exports.

If steamship facilities are inadequate, the farmer has added difficulty if he is not to a large extent actually prevented from getting his surplus products to foreign markets. Moreover, he is a great sufferer from exorbitant freight rates.

Because of the lack of American ships and the scarcity of ocean tonnage generally ocean freight rates in the Atlantic have been extortionately high. The normal rate of 4 cents per bushel for grain from New York to Liverpool has been increased to 40 cents per bushel. I do not have to argue with any intelligent farmer that he gets less for his grain on the farm when it costs 40 cents per bushel to ship it from New York to Liverpool than when it costs only 4 cents per bushel for the same service. The cotton producer in the South has suffered to a greater degree. Ocean freight rates on cotton have gone as high as $15 per bale from Galveston to Europe, as against $2.50 per bale prior to the war.

Our farmers, because they produce the bulk of our wealth as well as the bulk of our exports, ought to be protected against extortionate freight rates, and ought to have the assurance of sufficient steamship service and reasonable rates to secure fair treatment and enable them at all times to compete in the open markets with their rivals in the other great farm producing regions of the world.

If there is any one great and glaring mistake we American citizens make it is in allowing big questions like this to be so entangled by and obscured in politics that the real meat and the rights of the matter are lost sight of. We have been going along for years making the tariff a political issue, while the farmer paid most of the bill, and it has been only in the last year or two that we awoke to the fact that tariff tinkering was a mighty expensive amusement and that the problem should and could be settled in a businesslike manner. The ship subsidy has never seemed to most grain-belt farmers so awfully important to them, but Secretary McAdoo makes out a pretty clear case. I am not going to say that we should grant government subsidies to ship builders and ship owners, or in any paternal way make this business different from most commercial enterprises, but this much I will say: Here is a subject which we should study and discuss together, to the end that we may arrive at a solution which will conserve our interests and advance our welfare. Do not let any political bugaboo scare you from attacking any question now before the public or reaching any conclusion which will be to the greatest good of farmers as a body, regardless of which political party it may hurt or help. It is your duty and mine to make farming more pleasant and profitable and farm life more satisfying and ennobling; nothing else is half so important.

FARM BOYS AND WAR.

WHETHER our boys who are mobilizing these days in the various national guard camps are ever sent into Mexico or not, whether they ever see actual fighting or not, we cannot but be proud of the way they are responding to their country's call. To me, it is a sad sight to see the young boys, many of them not more than eighteen or nineteen years old, standing before the mustering officer and with right hand upraised taking the oath of service under which they can be sent outside the country, if necessary. Some of these boys are known to me personally; they are the sons of my subscribers and I know how the hearts of their fathers and mothers ache, even while pride quickens the heartbeat at the eagerness and heroism with which the boys answer the call to the colors. I have always contended that when war shall come the farm boy and the farmer will be found quickest to respond and bravest to dash ahead. I cannot refrain from printing a little item which I find in one of the big daily newspapers of the grain belt, in reference to one of the state camps. It tells how many of one of the companies of militiamen are farm boys and how they emulated the example of brave old Israel Putnam—who, you may recall, was plowing on his farm in Connecticut when the news came of the battle of Lexington; he unharnessed the team, left the plow in the furrow and mounting his plow horse started for the front, without even stopping to change his clothes. Does not what I am about to set out here recall his heroism as recorded in history?

"Israel Putnam has nothing on Stephen Shelangouski, a Polander in my company," Captain Smith said, "or Ray Rainer and Phillip Kaler.

"These men are farmers. They have their all invested in farms with their crops just now in critical condition and needing their attention. Yet they did not hesitate for a moment. Others of the company are farmers who rent their property. They left their plows and answered the call, some of them leaving young brides. There are sixteen or eighteen farmers in all.

"One man had hay to cut, but he left it and came in through the mud, reaching us five hours after he received the summons," the captain said.

It is sad, indeed, to think that some of the boys who are leaving the farm, the factory and the office to answer this call to uphold our national dignity and honor below the Rio Grande may never come back to us. They are in the very flower of young manhood; straight and strong and good to look upon, the boys we were counting on to keep up the old home place after we were gone. And yet, for all that, how proud we are of them as they march forth to whatever fate may await them. It carries us older folks back to the sixties and the middle-aged ones back to 1898, when the bugle call of war last sounded throughout the country. As I write these words—Friday afternoon—there is some prospect that war with Mexico may be averted. I sincerely hope so—I earnestly pray so. And yet if the war comes we will know that the boys from the farm are fighting shoulder to shoulder with the boys from town and city and that our great nation is united as never before. It may be that the war clouds will be dispelled, that the rainbow of peace with national dignity and honor may yet be visible in the now darkened skies. Let us hope that this will be the case, yet let us be prepared for the worst, leaving it all to Him who, watching over Israel, slumbers not nor sleeps.

WHERE DOES THE WEST BEGIN?

WHO can tell where the West begins? We of the grain belt proudly assert we are westerners, yet when I get out beyond the Rockies the people there call me an easterner. Is there any one place where we can truthfully say the East ends and the West begins?

I have frequently heard of people living in New York and New England who thought that the Indians roamed wild practically every place west of Buffalo, which they considered on the frontier. When I was a lad back in Ohio we considered ourselves western to quite an extent. In fact, one of Ohio's leading institutions of learning is called the Western Reserve College, having been established ninety years ago. But when I was nineteen years old I decided I was not a real, genuine westerner after all, so I took Horace Greeley's advice and "went west," as far as Missouri. Back in 1867 that was the West, indeed, and I have done most of the things which we usually associate with pioneer life in the far West. For instance, I have, with my own hands, held the plow and broken out the first furrows around 160 acres of raw prairie. I have cut down the forked saplings from which the corner posts were made for the original "pole" or "prairie" barns. I have cut the brush and mowed the slough grass with which the roofs were thatched. I have been up all hours of the night to fight the oncoming prairie fires, so common and so much dreaded by the pioneer settlers of fifty years ago. I have helped to market hogs and cattle by driving them over the broad prairies and through timber adjacent to creeks and rivers, a distance of fifty miles, to reach the nearest railroad shipping station. To a boy of nineteen or twenty all this seemed like real pioneering, and I fondly imagined I had come to the West, indeed. But who of northern Missouri today would be considered a westerner once they got out into Washington or Oregon or Nevada or California? We are all of us from "back East" in the eyes of the people across the Rockies.

So, it seems to me, it is next to impossible to draw any imaginary line east of the Pacific ocean where we can rightly say the East ends and the West begins. It may not be highly important to do so, for so long as our fields yield abundantly and we are prosperous, peaceful and happy, it may not matter whether we of the grain belt are classified as easterners or as westerners. Yet there is some importance to it, after all, for man is a sociable sort of animal and likes to clique with congenial companions. Nothing gives us more pleasure when we are away from home than to run across some person who comes from the same state or town or neighborhood as we do. So, whether we are easterners or westerners, we want to know it so we can "gang together."

Perhaps the best answer to the question is the one which a Denver newspaper man made when he wrote the poem entitled, "Out Where the West Begins." It is one of my favorites and I am going to print it here, for your entertainment and pleasure:

Out where the handclasp's a little stronger,
Out where the smile dwells a little longer,
That's where the West begins.
Out where the sun is a little brighter,
Where the snows that fall are a trifle whiter,
Where the bonds of home are a wee bit tighter,
That's where the West begins.

Out where the skies are a trifle bluer,
Out where friendship's a little truer,
That's where the West begins.
Out where a fresher breeze is blowing,
Where there's laughter in every streamlet flowing,
Where there's more of reaping and less of sowing,
That's where the West begins.

Out where the world is in the making,
Where fewer hearts in despair are aching,
That's where the West begins.
Where there's more of singing and less of sighing,
Where there's more of giving and less of buying,
And a man makes friends without half trying,
That's where the West begins.

Why not make the dividing line a mental, rather than a geographical one; a spiritual, rather than a political one? Measured by this standard we are westerners, not easterners; for where in all this broad, fertile land do you find heartier handclasps, more true and abiding friendships, fresher breezes and brighter suns than right here in the grain belt? Take any line of this poem and see if we who live here in the garden spot and granary of the nation cannot look about us and find our community measuring up to the test. If it does we are living "out where the West begins," no matter what river forms the eastern boundary of the territory in which we live or what township, county or state lies just above or below ours. The West—as they used to say, in levity, of Boston—is not a place, it is a state of mind, and we of Wisconsin, Iowa, Illinois, Missouri, Kansas and our neighboring states are of the West, where "a man makes friends without half trying."

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Milk Situation at Milwaukee.

WISCONSIN dairymen who ship their whole milk to the Milwaukee market, have placed themselves in position, through the organization of the Milwaukee Milk and Cream Shippers' Association, to demand and receive a fair and equitable price for their product. Organization appears to be the salvation of the farmers who must depend upon the large cities to take care of their product and this association, incorporated only a few weeks ago, is already displaying its power with a demand on the Milwaukee distributors and retailers for an increase, beginning July 1st, of substantially 1 cent a quart. Indications at the time this editorial was written were that this increase would be granted and would be in effect before this issue of The Wisconsin Farmer reaches its readers. This increase, of course, will be passed on to the consumer.

For many years the dairymen supplying Milwaukee with its milk have been playing the part of philanthropists to the poor. Milk, bottled and delivered to the door, has been selling in Milwaukee for 6 cents a quart, a price enjoyed by no city of its size in this country, and from 2 to 3 cents below the prevailing prices in most cities of equal size. During June the Milwaukee shippers netted 85 cents for an eight-gallon can of milk or little more than 10 cents a gallon, and The Wisconsin Farmer does not believe that milk can be produced on any farm at a profit at that price, not taking into consideration the stringent health department regulations these shippers must obey. This price was for milk averaging 3.7 per cent in butter fat, according to the health department figures, and the prevailing sentiment among dealers that Milwaukee is buying its milk too cheaply and that the farmers are not being paid sufficiently for their labor leads to the belief that the increase the shippers ask will be granted and that milk will be boosted to 7 cents a quart in Milwaukee. At 7 cents Milwaukee will still be getting milk at a price far below other cities of its class.

The Milwaukee shippers have appreciated the situation for many years but have been without effective organization to back up any demands which they might make. The present association, which was fathered by the old Milk Producers' Association, which passed out of existence with the new organization, now controls about 2,200 cans of the 5,000 cans of milk used daily by Milwaukee. It controls also about one-third of the shippers, which number include the larger shippers, and with a rapidly-growing membership it felt that it was in position to ask of the Milwaukee retailer and the public a fair price for the milk of its members.

The result was that the dealers were asked to pay 1.30 cents during July for an eight-gallon can which will net the farmer about $1.15 as the freight into the city amounts to an average of 15 cents a can. As an eight-gallon can weighs 68.8 pounds, this is substantially the price granted the Chicago shippers after their fight this spring, and the price is based on the value of the fat content, the health department's figures of 3.7 per cent being taken as the average fat content of the milk shipped into the Milwaukee market. During May and June the dealers paid $1 for an eight-gallon can or about 85 cents net, so that the increase asked is 30 cents a can or about 2 cent a quart.

Since last January the Milwaukee shippers have been receiving from 15 to 25 cents a hundred less for their milk than they could have received from the cheese factories; condenseries or creameries in this district. The price of milk to the retail trade in Milwaukee has been so low that the farmers could not expect much higher prices as, until recently, they were without organization; were without other avenues for disposing of the milk and were at the mercy of Milwaukee, in which city it can be said that the distributors have the overhead expense at so low a mark that they are doing business on a closer margin than similar concerns in other cities. For many years it has been a wonder to outsiders how these distributors, although paying a low price to the farmer, could sell milk so cheaply, considering for example that where the difference in farmers' prices in Milwaukee and Chicago were only a fraction of a cent per quart the difference in the price to the city trade until the Chicago strike was 2 cents a quart.

The situation has now changed and the association believes it can divert, if necessary, sufficient milk from the Milwaukee market to force an increase if such ever becomes necessary. Dealers are agreed that Milwaukee is getting milk too cheaply; that the farmers are underpaid for their product, and it is not thought there will be any great protest from Milwaukee if the price is advanced a cent per quart. At least there should not be any protest, as The Wisconsin Farmer knows of no city of Milwaukee's size which is buying 3.7 per cent milk, bottled and delivered to the door for 7 cents, let alone 6 cents.

The new association which is incorporated for $10,000 has opened offices in the First National Bank building, Milwaukee, with Mr. G. R. Rice as secretary, treasurer and general manager. Mr. Rice is a dairyman, thoroughly conversant with the milk situation. About $7,000 worth of stock has been paid in, and the remainder is being subscribed for by shippers, the plan being to have 1,000 members at $10 each. As there are 3,000 shippers to Milwaukee this will give the association a third of the shippers as members, which will include the larger shippers, thus enabling it to control almost half of Milwaukee's milk supply. A half cent a can is charged each member as running expenses for the organization.

Interest in Land Clearing in Wisconsin.

THE interest that exists in the problem of opening up to cultivation the thousands of acres of fertile land in Upper Wisconsin, now covered with stumps, was never better shown than by the success which attended the land clearing demonstrations which have just ended. Our readers are familiar with the work of these demonstrations which were planned entirely to show the owners of stump land the ways and means by which they could be made ready for the plow.

During the seven weeks the special train carrying the equipment used in the demonstrations was on the road more than 8,200 persons attended, according to an accurate count kept by Mr. Carl Livingston, of the engineering department, college of agriculture, who was in charge of the work. The demonstrations proved successful far beyond the hopes of the originators, and the Soo line has now asked that it be permitted to co-operate in sending a similar demonstration train over its lines in Upper Wisconsin. The other train was conducted over the Northwestern and the Omaha lines, and it is possible that a number of demonstrations will be held along the Soo line this fall, although nothing definite has been decided upon at this writing.

Mr. Livingston is greatly pleased with the results of the trip, and he is entitled to much credit for carrying it to its successful conclusion. At some of the stops it was discovered that farmers had driven as far as fifteen and twenty miles to attend, and it was not uncommon to find those who had come as far as seventy-five to 100 miles by auto, and some who had even walked eight or ten miles. This denotes the interest that is being shown in the machinery and explosives used in clearing land as well as a desire to open up the great stretches of fertile lands covered with stumps in this state that are now lying idle. The co-operators who supplied the machinery and explosives found the interest keener than they had anticipated and it is probable they will be glad to assist in future demonstrations. Nothing will do so much to increase Wisconsin's prosperity as turning the great stretches of stump land to cultivation, and it is just such demonstrations as the land clearing special gave that will lead to the utilization of these now waste lands. In other words, it is only the stumps that are keeping hundreds of thousands of acres from producing bumper crops, and with men willing to take hold, once they realize the clearing operations are as simple as they are, Wisconsin can be expected to take further strides in an agricultural way.

Fly Time Warning to Wisconsin Farmers.

MR. H. F. WILSON, of the Wisconsin College of Agriculture, is author of the July bulletin of the Wisconsin Bankers' Association. This is the thirty-sixth bulletin issued by the association. Mr. Wilson gives us some interesting facts about the common fly. He says that, innocent as they may seem, flies annually bring us untold suffering, unbelievable loss and a heavy toll of human life, and cites these facts about the fly:

The fly is the filthiest creature on the face of the earth.

Flies breed in filth, live on filth, and distribute filth.

Flies distribute typhoid fever, summer complaint, and possibly other common diseases, including tuberculosis.

The flies you remove from the cream and sirup may have just come from the vault of your neighbor who is sick with typhoid fever or tuberculosis.

The fly on the baby's bread and butter may have just come from the spittoon or garbage can.

Flies caused the death of more American soldiers during the war with Spain than did Spanish bullets.

You can prevent the fly with a little extra cost and effort.

Although we seldom see flies during the winter months, Mr. Wilson tells us that they never entirely disappear. They are hidden in cracks and crevices waiting for warm weather. While only the female survives the winter she has been fertilized by the male the previous fall. Each female may lay several hundred eggs, laying them in batches of 120 or more. The time required for hatching these eggs varies from eight hours to three or four days—depending upon the temperature. From the beginning of summer until the middle of September usually about ten generations of flies are raised.

All good methods should be employed to get rid of flies. Swatting is not enough. Trapping and poisoning should be employed as well, and, more important still, complete doing away with their breeding places. Mr. Wilson says that one ounce (two tablespoonfuls) of formalin (40 per cent formaldehyde) in sixteen ounces (one pint) of a mixture of equal parts of milk and water in shallow dishes, with a piece of bread in the center for the flies to light upon, proves very attractive and destructive to flies. The front and back porches are good places for this solution. Of course, this must be kept away from the children. Other strong points brought out by Mr. Wilson in his bulletin are as follows:

Keep garbage in fly-tight receptacles.

Have garbage removed at least twice a week.

Remove all manure and waste promptly.

In removing manure if possible put it directly in the wagon to haul to the fields. In case this is impractical treat manure with borax or insect powder. Either of these substances injure the fertilizing value of the manure.

To keep flies out of the stable, put removable screens in the windows and hang burlap in the doors so that it will strike the backs of stock when entering.

To prevent flies in the house use screens, fly traps, fly poison, fly paper and swatters.

A good fly trap may be made from two nail keg hoops and two pieces of wire screening. Small hooks hold the two cones together. The opening at the top of the inside cone is about the size of a lead pencil. Four nails are partly driven into the bottom to serve as legs to raise the trap from the floor. A saucer of some sweet substance such as sugar serves as bait.

Mr. Irwin's Visit to Wisconsin.

WISCONSIN dairy interests were fortunate in having so distinguished a visitor to the state as Mr. John B. Irwin, of Minnesota, who during the third week of June made a circle of the southwestern part of the state to talk better dairying and bigger profits from the dairy farm. Mr. Irwin is the owner and developer of the champion cow, Duchess Skylark Ormsby, and his remarks were consequently received with great regard at the various places which he spoke. During the week he spoke to Holstein gatherings in Walworth, Kenosha, Waukesha, Ozaukee and Columbia counties and the 2,000 dairymen or more who heard him during that week certainly have new inspirations and new ideals to work towards now, as Mr. Irwin endeavored to instill into his listeners that spirit which has dominated him in the building up of his herd and the developing of the champion Holstein cow.

Co-operation he considers the great asset on the farm, and he never missed an opportunity to touch upon the need of this one thing which he said was essential if the farmer is to succeed. Not only co-operation as we sometimes think of it in relation to the business interests and the breeders of the community but co-operation of the entire family, the husband, the wife, the children, and the hired men. There was never a time when so much interest has been shown by business men, the bankers, railroads and other commercial interests in the farmers as is shown today. This is due largely to the realization that farming is the basis of the nation's wealth and that when crops are poor business is poor; when cream checks are low the dairy farmer begins to retrench, and when the farmer's profits dwindle the other interests suffer. These matters Mr. Irwin called particular attention to and as the developer of a great herd of Holsteins he says he has found that co-operation is essential to success and by co-operation he means co-operation in every sense of the word. The writer, who was with Mr. Irwin most of his week in Wisconsin, is calling particular attention to this phase of his addresses to emphasize the contention that the most successful men and the most noted communities are those who work shoulder to shoulder for the common good as well as for the welfare of the individual.

Of course, there was much interest in Mr. Irwin's story of the development of Duchess Skylark Ormsby, how she was fed, etc., for every dairyman has the ambition some day to produce a world-record cow. She was among the herd he bought from John B. Young, of Iowa, and at that time he had little idea she could produce 1,205 pounds of fat in a year. But feeding with Mr. Irwin is not everything, and without the aid of Mrs. Irwin he says that the Irwin herd could never have been brought up to the high standard it is today. He believes that the co-operation of the wife and the family must be secured to develop a fine herd, and he regards the children as the greatest help of all. He believes in taking every child into the partnership by giving him something to develop; something to interest him in the work that is going on so that the years of constructive breeding a parent puts in will not be lost by the herd being distributed widely at his death but will be conserved and carried forward by the children. The breeder, Mr. Irwin be-

lieves, must have the inspiration and love of his work to carry it out successfully, and nothing promotes this so much as taking the family and even the cows into the partnership. He speaks of making the cows his partners because he believes every dairyman should study every cow just as he would study a partner. He would know her disposition; her likes and her dislikes; her blood lines; her family connections; her breeding qualities and, in fact, everything about her. Mr. Irwin has followed this in his own work, for he doubtless could not have built up so strong a herd without such knowledge. Care of the cows he regards as very important, and if she is a partner, as he speaks of it, he feels she will get the proper care. Mr. Irwin brought to Wisconsin some splendid messages to dairymen, and it is unfortunate that he could not remain longer or talk to more while he was in the state.

Interest in Sheep in Wisconsin.

INTEREST in sheep raising in Wisconsin, because of the present conditions of the wool and mutton market, were never greater than now, according to Frank Kleinheinz, shepherd of the college of agriculture flock at Madison and an authority on sheep in Wisconsin. Mr. Kleinheinz, in talking with the writer recently, said that he had not encountered so many inquirers about sheep in many months as he has encountered this year and says that it is because of the growing knowledge that sheep raising is very profitable in Wisconsin, especially with prevailing prices for mutton and wool and prospects of higher prices.

Mr. Kleinheinz draws these conclusions after being out in the field for several weeks attending sheep institutes which have been directed by the Wisconsin Live Stock Breeders' Association. The second week of these institutes, which will continue all summer in various parts of the state, was concluded last Saturday at Readstown, following institutes earlier in the week at Gay's Mills, Viola, La Farge and Soldiers' Grove, all in the Kickapoo valley. The meetings were all well attended and showed a growing desire of farmers in the valley to take hold of this branch of live stock farming.

Mr. Kleinheinz is much pleased with the manner in which the farmers have turned out to the institutes. In past years sheep have been given attention on the live stock special which was run by the Wisconsin Live Stock Breeders' Association. Along with the sheep breeders came the dairymen; the swine breeders, the horse men and the beef producers, and it was difficult to give the time required to the sheep division of the train. So this year it was decided to hold separate sheep institutes in different parts of the state which would appeal only to the breeder of sheep or the farmer who is considering adding a flock to his farm. This plan, Mr. Kleinheinz says, works out to splendid advantage and he expects big results to come from the institutes already held and those to be held during the next few weeks.

Deceiving Consumers of Meat Products.

ANY system of distribution that has for its purpose the enabling of producers to find a good market for their products must take into account the welfare of the consumer. In the past the latter has, in too many instances, been called upon to pay exorbitant prices for food products, whereas these same products were sold at a ridiculously low price by the producer. Those who are favoring co-operative methods of buying and selling are more and more consulting both parties of the transaction and in time it may be expected that the middleman will not be allowed so large a margin as his part in the transaction.

A typical instance of unfairness to producer and consumer alike has recently been furnished by the great state of New York. In that state a commission firm was found guilty of loading the "crops" of poultry. The firm has made a record of selling as many as 100,000 fowls per week, and it seems that it has been the practice to keep the fowls hungry after receiving them from the producer and after feeding a liberal supply of red pepper upon their arrival at the central market, these fowls then had access to heavy mixtures composed of such products as gravel, cement, sand, quartz, water and shorts.

A meal of these products sometimes adds as much as one pound to the weight of the fowl. Prompt killing was made necessary by this system of gorging, and no matter how the slaughter was expedited many of the fowls were sick when killed. It is estimated that this thieving policy cost the people of New York City $7,000,000 annually, all paid out because of this vile practice of feeding heavy products to hungry birds. A four-pound hen that would ordinarily sell for $1.00 on the basis of her weight would bring $1.25 after passing through the hands of these rogues. This has meant a very serious discrimination against those who are honest in their practice because rightly speaking the hen was only worth $1 to the consumer. It is not contended that the producer should get any part of the additional 25 cents, but rather that the effect of this high price is to cut down consumption and in that way the legitimate producer is injured.

A case of this kind would almost shatter one's faith in humanity, but our feelings are relieved by the promise that these scalawags are likely to have suitable punishment meted out to them. The westerner whose large apples worked to the top of the barrel is merely an infant in arms in dishonesty compared with the rascals who compound these heavy mixtures and handle poultry in such a way that much is consumed before the poultry is weighed out to the individual who buys it for consumption.

Improved Method of Producing Serum.

HERETOFORE it has been impossible to produce a sterile serum and in one instance at least, according to government reports, foot-and-mouth disease has been spread through the agency of the anti-hog-cholera serum. Besides, it is not uncommon for serum to produce boils on hogs after vaccination, due to its having become contaminated.

The United States Department of Agriculture has recently perfected a new method for treating serum to eliminate from it the red blood corpuscles and thus make it practicable to sterilize it. This, according to Drs. M. Dorset and R. R. Henley, of the Bureau of Animal Industry, is done by adding a small amount of bean extract to the serum after it has been produced in the ordinary way. After the addition of this extract, the serum is centrifugalized and the red corpuscles separated, leaving a clear, nearly transparent liquid that can be heated to 150 degrees F. without injuring the anti-bodies it contains and which make it valuable as a cholera preventive. After having been heated to the temperature mentioned for a period of thirty minutes, it is perfectly sterile, and even if the serum had been drawn from a hog harboring germs of foot-and-mouth disease, it would be incapable of conveying that disease to any animal inoculated with it.

This new method of production is considered by the department of agriculture as a distinct step in advance in serum production and will undoubtedly be adopted by the commercial serum producers as rapidly as possible. Many attempts have heretofore been made to sterilize anti-hog-cholera serum but without satisfactory results.

Farming With Live Stock.

WE HEAR much nowadays about the increase of farm tenancy. Some claim that this is due to the small profits that farming yields, while others consider it to be the result of the phenomenal increase in the value of land, which has made it possible for a large percentage of the farmers to retire and live on the rent from their land. We do not intend to analyze either of these theories, but simply accept the facts as they are: That tenancy is rapidly increasing; that rents are gradually becoming higher just like land values are advancing; and that it is becoming increasingly difficult for young men without means to become landowners.

These young men, if they wish to make farming their life work, must necessarily rent for a term of years until they accumulate enough money to enable them to make a substantial payment on a piece of land and equip the farm with the necessary machinery and live stock to begin business on their own hook.

We believe that in the majority of instances young men as renters or owners are still too much imbued with the idea of extensive rather than intensive farming, and that they do not, as a rule, realize how much more profitable live stock really is than grain farming. Neither do they realize that by feeding a relatively large amount of the crops produced and returning the manure to the land that they can readily raise at least 50 per cent more on a given acreage than when the products of the land are sold in the raw form.

Suppose we compare wheat-and-corn farming and the selling of these products on the market with dairy-and-hog farming and selling the bulk of the farm-produced grains to cows and swine instead of at the elevator. Under the grain-farming system, for example, if average yields of eighteen bushels of wheat and forty bushels of corn are obtained and wheat is sold at an average of 85 cents a bushel and corn at 55 cents, the gross income would be $2,984 for eighty acres of corn and eighty of wheat. The cost of growing these crops, according to reliable statistics, is about $12 per acre for wheat and $14.50 per acre for corn. If we deduct these cost figures, which would amount to a total of $2,120, from the gross income per acre mentioned above, there would be a net balance of $864 or $5.40 per acre.

Suppose instead of farming 160 acres to grain and selling the products at the elevator eighty acres were devoted to live stock farming, making dairying and hog raising the principal lines of work. Such a farm could easily support a herd of twenty cows capable, say, of producing 250 pounds of butter fat per head per year. By purchasing some concentrates, thirty-five acres would support twenty cows and a year's crop of calves, provided a silo were employed and the cows were fed the year round instead of running on pasture during the summer season. That this can easily be done may be seen from the following: The cows would require about 120 tons of silage; sixty tons of alfalfa, 650 bushels of corn, six tons of bran and three tons of oil meal. The silage could be produced on ten acres, the alfalfa on ten acres, and the corn on fifteen acres—a total of thirty-five acres.

The income from the cow, valuing butter fat at 30 cents a pound and skim milk at 20 cents per hundredweight would be $90 per head, or a total of $1,800 Assuming a man's time to care for these twenty cows to be worth $480, and the cost of needed concentrates $240, we have a net income from the thirty-five acres devoted to feeding the cows of $1,080, or an average of $30.89 per acre, as compared with $5.85 in the case of small grain crops.

There would still be forty-five acres left on which to raise hog and horse feed. By keeping ten good brood sows and breeding them twice a year, 100 shoats could be marketed each year weighing 225 pounds per head, or a total of 22,500 pounds worth, at $7 per hundredweight, $1,575. Two men could easily do the work on a farm of that size. Suppose the rent to be $6 per acre or $480, and that $175 were spent for hog concentrates, there would be a net labor income from cows and hogs of $2,000 for the owner or tenant.

Thus we see that a much greater net profit can be obtained from eighty acres devoted to intensive dairying and pork production than from 160 acres devoted to grain production. The lesson is that the young man with limited means stands a much better show in case he buys a farm, by carrying on live stock farming on a small scale than by attempting the growing of grain on a farm three or four times larger.

Discovery Important to Agriculture

FOR many years Dr. Cyril G. Hopkins, of the Illinois Experiment Station, has been advocating the use of finely-ground raw rock phosphate in connection with organic matter as the more economical source of phosphorus for crop production as compared with the use of acid phosphate. Raw rock phosphate is technically known as tri-calcium phosphate or commonly as insoluble phosphate. Acid phosphate is technically known as mono-calcium phosphate and di-calcium phosphate or in common terms as soluble phosphate. The manufacture of acid phosphate consists in treating raw rock phosphate with sulphuric acid. The action of the sulphuric acid upon the insoluble rock phosphate changes it into the soluble forms referred to above. All acids act upon insoluble rock phosphate changing it to one or both soluble forms, hence the theory of Dr. Hopkins that the acids formed when organic matter decays would also act upon the insoluble rock phosphate and gradually make it soluble or put it in condition to serve as food for plants. While no one has disputed that such a change may take place, most investigators have held that the change is so slow that the use of raw rock phosphate is not a practical proposition when immediate results are desired.

Dr. Hopkins, however, has shown in a great many field tests that whenever ground phosphate rock is applied to soil and is turned under with a large amount of organic matter that most gratifying returns are obtained, and at a much lower cost than when so-called acid phosphate is employed.

Recently Dr. Hopkins and Prof. A. D. Whiting, the latter also of the Illinois Experiment Station, set to work to ascertain in what manner decaying organic matter acts upon insoluble phosphate in the soil to render it soluble, the results of which investigation have just been published in Bulletin No. 90, under the title of "Soil Bacteria and Phosphates." This bulletin is necessarily very technical and does not lend itself well for a detailed review, yet the discoveries made are extremely important and exceedingly valuable from the standpoint of the practical farmer.

Briefly, when organic matter, such as clover, rye, millet or other green crops are plowed under it begins at once to decay, provided there is enough moisture present in the soil and the temperature is favorable, which every farmer knows from experience. This decay is brought about by bacteria —a great many different kinds. A certain class, known as hay and potato bacteria, act upon the nitrogenous organic compounds, such as the proteins, and change them to ammonia, which, when dissolved in the soil water, becomes identical with the ordinary ammonia used for household purposes. When this change has been completed or while it is still in progress, another class, known as nitrate bacteria, act upon the ammonia changing it into nitrous acid. This nitrous acid, in turn, as these investigations have conclusively demonstrated, acts upon insoluble phosphate and changes it to soluble forms. Not only have these men shown that this change actually takes place in soils, but they have demonstrated that each pound of nitrogen in organic combination, upon decay, may change about one pound of phosphorus from the insoluble to the soluble form and at the same time also make two pounds of calcium soluble.

Translated into common terms this means: If your soil is in need of a phosphate fertilizer, begin by plowing under organic matter, and just before turning it under add ground rock phosphate, make the physical condition of the soil as favorable for bacterial life as possible, and then, through the action of certain species of soil bacteria, the fertilizer will be converted into soluble plant food. Employ this system in preference to applying acid phosphate without turning under organic matter.

When this principle of rendering insoluble phosphates soluble through the action of nitrate bacteria is thoroughly understood and appreciated, the farmer will be in a position to save millions of dollars on present fertilizer bills.

In and Around Wisconsin

Eben A. Jones, of La Crosse county (Wisconsin), has made nominations in the Clydesdale division of the Draft Horse Futurities which will be a feature of this year's Iowa State Fair.

H. C. Taylor and C. V. McCollum, of Wisconsin, have been chosen as members of the staff of the seventh session of the graduate school of agriculture, which is being held at Amherst, Massachusetts, July 3d to 28th, under the auspices of the Association of American Agricultural Colleges and Experiment Stations.

Wisconsin's plan of co-operative grain breeding, particularly the co-operative system followed by the State Agricultural Experiment Association, will be described to farmers of the Panhandle next month by R. A. Moore, College of Agriculture, in an address at Austin, Texas, on July 17th. At this meeting of the Texas Farmers' Congress Mr. Moore will also tell what experience Wisconsin farmers have had with alfalfa and other legumes in restoring soil fertility.

About $100,000 is being spent on improvements at the state fair grounds, getting ready for the exposition September 11th-16th. An addition of 123 feet to the concrete grand stand is being made, at a cost of about $50,000. This will give the stand a seating capacity of 6,000. There will be temporary stands seating 5,000 more, and bleacher seats for 2,500. Swine and sheep pavilions, accommodating 2,600 animals, are being erected at a cost of $50,000. All buildings will be completed by September 1st.

Small, green bugs about one-eighth of an inch in length, known scientifically as the pea aphis, have for some time been suspected of doing much harm to Wisconsin's annual crop of peas, which is one of the many things to which Badger boosters point with pride. Wintering on clover land, these pests migrate in the spring to the nearest planting of pea vines, and there complete their existence at the expense of the farmer and the packer. To find ways of controlling this annual pest, L. G. Gentner, of the Agricultural Experimental Station staff, has been assigned to studying ways of fighting the aphis. He will also seek for control methods against another harmful insect—the pea weevil, which together with the aphis and the disease known as blight, are standing in the way of progress in Wisconsin pea culture.

On July 1, 1915, Wisconsin had thirty-seven active cow-testing associations. Since then a campaign has been waged jointly by the United States Department of Agriculture, the Wisconsin Dairymen's Association and the University of Wisconsin, with the result that there have been organized and put into operation exactly twenty-three new associations. The total added membership of these new clubs amounts to about 620, with more than 10,000 cows on test. The membership of all these associations now totals 1,500 with nearly 25,000 cows. Cow-testing associations are working in thirty-three different counties of the state with a number of others about to organize. Wisconsin still leads all other states in the number of these modern dairy business organizations. New York is a close second, with about forty-seven at the latest report. The work in Wisconsin is in charge of N. A. Negley, of the dairy division, United States Department of Agriculture, Madison; and H. C. Searles, Wisconsin Dairymen's Association, Fond du Lac. New associations formed within the past nine months include the following: Baraboo Association (Sauk county), Door Association, Eau Claire No. 3 Association, Kenosha County Association, Lynn Association (Walworth county), Ozaukee County Association, Lone Rock Association (Richland county), Shawano County Association, Wood County No. 3 Association, Empire Association, Alto Association, Rosendale & Eldorado Association, and East Fond du Lac Association (Fond du Lac county), Brillion & Wrightstown Association (Brown and Calumet counties), Winchester Association (Calumet county), Happy Valley Association (St. Croix county), Mishicot Association (Manitowoc county), Chilton Association (Calumet county), Alban & New Hope Association (Portage county).

Many maple trees in the state are affected this year with gall mites. These appear as reddish-colored galls or blisters on the leaves, and are about the size of a pin head. Each gall contains scores of the tiny mites, which winter at the base of the buds and then crawl to the leaves when they unfold in the spring. These galls are nests for the mites, where eggs are laid for another brood. H. F. Wilson, of the College of Agriculture, declares nothing can be done at present to control the gall mites, but that a lime sulphur and nicotine sulphate spray in the spring will destroy them, if applied properly. Owners of maple groves may get complete directions for spraying by applying to the experiment station, Madison.

The city of Ripon, Fond du Lac county, has become famous throughout the country in a rather unusual way. Through the influence of Senator Husting and Representative Reilly, an appropriation of $75,000 was secured to build a postoffice in Ripon. It was expected that ground would be broken soon for the new building. When the news was received that the president had ordered a mobilization of the national guards, and when it appeared that war with Mexico was almost certain, the patriotic people of Ripon conceived the idea that they could get along without the new $75,000 postoffice building. They have been getting their mail in a perfectly good place for some time. A meeting of the citizens of the town was called by the commercial club and it was unanimously voted to telegraph the representative in congress, and the United States senator to call off the new postoffice building at Ripon. The patriotic citizens of Ripon suggested that the $75,000 be used for equipping our troops. At last report the representative in congress and the United States senator had advised the citizens of Ripon that their wishes will be complied with. So far as anyone knows, this is the first case on record where any city or town has voluntarily relinquished a government appropriation. The city of Ripon has given a splendid lesson, which provides food for thought for our people in many other parts of the country.

Alfalfa on Columbia County Farm.

At the Columbia county asylum farm, Wyocena, tests with alfalfa have been conducted for several years, and Supt. S. C. Cushman has obtained data regarding this valuable legume which is of state-wide interest and usefulness, especially in relation to raising alfalfa on light soils.

Mr. Cushman began the alfalfa work in one of the series of county farm demonstrations, which were arranged under the direction of Commissioner of Agriculture C. P. Norgord, who at that time was field representative of the agricultural experiment station.

There are now more than twenty acres of alfalfa growing on the Columbia county farm, and Mr. Cushman has seeded eight acres more this year. An average of three cuttings a year have been obtained—making in all, an average of four tons an acre.

Summarize the actual facts derived from the experiments, it is evident that a number of essentials to successful alfalfa culture on sandy soils have been determined beyond speculation. These, as taken from the notebook of Mr. Cushman's alfalfa plot tests carried on for the past two years, are indicated in the following paragraphs. Whether these experiments are to be practical help to other Columbia county farmers depends upon circumstances and their individual application.

At least some of the soil on the Columbia county farm was found to be acid in character. In order to overcome this condition and put the soil in shape for alfalfa, different kinds of lime were applied in varying amounts. The conclusions reached were to the effect that applications of from two to four tons of ground limestone, preferably three tons to the acre, gave best results. Further, it was learned that the coarser the limestone the larger the amount necessary, but that the finer limestone seemed more beneficial in its direct results.

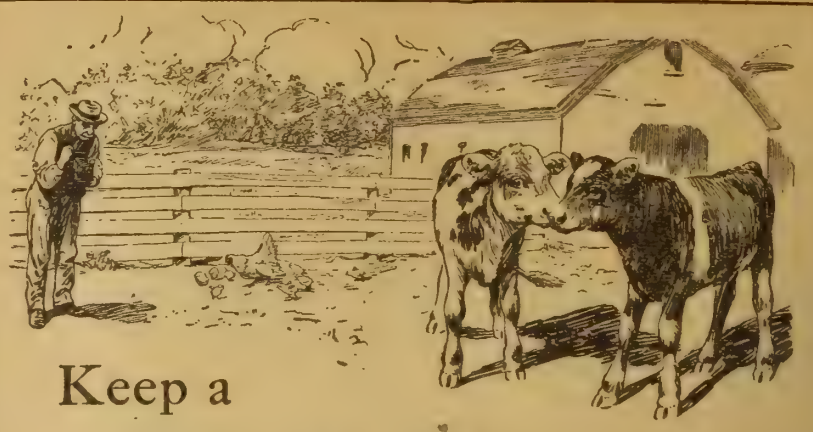
After preliminary trials, which proved conclusively that land had been inoculated or "treated" with the right bacteria was much more productive, the question arose as to which method of inoculation was most advisable. Artificial cultures, soil from an old alfalfa field, and soil from a field upon which sweet clover was growing in abundance were all tried with good results. Of late, however, Mr. Cushman has been using sweet clover or alfalfa soil rather than artificial cultures in treating the new land. He has also practiced seeding five or six pounds of alfalfa with each acre of clover, which is highly recommended as a means of gradually putting the entire farm in shape for alfalfa culture.

A nurse crop with alfalfa has no place on sandy soils, according to careful tests made at the Columbia county farm. The nurse crop takes far more than its share of the scant supply of moisture and fertility available, leaving small amounts for the alfalfa. Rye, oats and barley were tried as nurse crops, and the latter gave best results. However, where nurse crops are not used, thorough cultivation of the seed bed with disk and spring tooth harrow to clean out the weeds is absolutely essential.

Where land is fairly free from weeds the experiments at Wyocena have shown that seeding prior to May 1st is usually conducive to the best results. Twenty pounds of alfalfa seed to the acre gave highest yields. In the tests seedlings were made from early in April to the last week in July over a period of several years. In these tests the late seedings did not make a good showing, while the early seedings gave as good and in many instances far better results than the intermediate.

Sturdy growth and vitality to withstand freezing make the Grimm alfalfa decidedly acceptable for use here, but its higher price makes it somewhat prohibitive as a variety with which to begin alfalfa culture. All the larger fields on the Columbia county farm are seeded with the common varieties of alfalfa, there being practically no difference noted in these tests between seed grown in the north and that derived from southern states. Montana common, Southern common, Turkestan and Grimm have all been given careful trials at Wyocena, with the above conclusions.

Farmers of this vicinity who wish to look over the alfalfa fields at Wyocena will be given a chance to meet for this purpose some time in August or early September at the county farm picnic and field demonstration meeting, in charge of the county board and the college of agriculture, acting jointly. A. H. Wright, successor to Mr. Norgord in the county farm demonstrations, will work with Mr. Cushman in preparing the test plots for inspection. Further notices of the exact date and program for the conference will be given soon.



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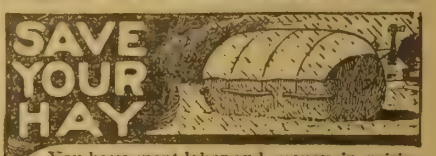

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Chippewa County.—Crops here are a little behind time on account of the wet spring. Heavy rains have been a little hard on corn and potatoes and although small grain is good, it is a little behind time on account of the cool weather. The weeds have gotten quite a start in some of our fields, but the farmers are very persistent in their efforts to get ahead of them. While hay will be a little later than usual, the crop is good. We will need plenty of warm weather, if the corn matures. Live stock is all in a thrifty condition on account of having access to splendid pastures.—Gustave E. Rheingans.

Clark County.—We have had one week of excellent weather here although this was followed by a heavy rain last Sunday night. All grain is looking well excepting corn, which is very small and thin. A few farmers have plowed up their corn and have seeded millet. Meadows are rather light. The apple crop will not be as large as expected as the setting of the fruit was interfered with by cold rains.—Fred W. Ackerman.

Dodge County.—Small grain is looking well excepting in low places where it has been drowned. Corn is a little backward, but the stand is good and with satisfactory weather from this time on we will raise a normal crop. Early potatoes are looking well and meadows and pastures are fair. We have had too much rain for the best interest of all our crops.—Fred Houston.

Grant County.—Oats and barley are looking well here and the same may be said of meadows and pastures. We only raise vegetables for home use and these are looking quite well. The corn crop is far behind the average and conditions will have to be very favorable, if we raise a crop at all. The weather is too wet and cold.—P. R. Stoffel.

Iowa County.—Crops are looking fairly well here, particularly the hay, clover being now ready to cut. Small grain is showing up exceedingly well and although corn is a little backward on account of the cool weather, it promises reasonably well. A few fields of corn have been plowed up and sown to millet. In most instances the plowing up was due to the use of poor seed. All gardens look well and the berry crop is abundant. Strawberries are yielding well, but have been slightly hurt by the heavy rains.—Will Dowling.

Kewaunee County.—Small grain is looking well here, excepting on the low ground where it has been wholly or partially drowned out. Pastures are a little short for this time of year on account of too much rain and the weather being too cool. Clover is rather poor and timothy is short and easily two weeks behind time. Rye will make an average crop.—W. C. Katel.

La Crosse County.—Small grain is coming on in fine shape and early planted corn is looking as well as could be expected. We have not had quite enough steady, warm weather and most of the replanted corn is just receiving the first cultivation. Strawberries are almost a failure here and prospects are just fair for the apple crop. As pastues are good, live stock are doing well. We are now in the midst of haying and the crop is light, due to the clover and alfalfa being winterkilled. Quite a good many farms changing hands.—R. R. French.

La Fayette County.—Weather is somewhat warmer now and we are having plenty of rain so that all crops are growing well. Corn is looking fine excepting few fields. Oats and barley are thrifty. At the present time, we are in the midst of haying operations and the crop is quite satisfactory, although the old meadows are a little light because clover was partly killed during the winter. Quite a good many horses have been sold out of this locality at good prices. Strawberries are ripening and the crop is up to normal in both yield and quality. Apples will be scarce. Early potatoes promise well.—Floyd Scott.

Marinette County.—Excepting on low land clover and timothy is showing up exceedingly well. Corn is not quite a full stand and is really not very promising, but if we have the right kind of weather from now on and should have a late frost, a good outcome may be expected. Nearly all the fields have been cultivated once and most of it has been gone through the second time. The season is possibly two weeks late. Pastures were never better and potatoes seldom looked as well as they do at the present time. The oat crop is very fine and there is every indication of a heavy fruit crop. Many Holstein cattle are being shipped into this locality and this is getting to be a fine dairying county.—W. B. Sanderson.

Oconto County.—Crops are not looking quite normal this year and this applies particularly to the hay crop, as it is quite light. Small grain is a little below the average. Considerable corn has been planted the second time and a considerable number of potato fields. Cattle are in fine shape because pastures have made a good growth. We have a fine crop of apples and considerable small fruit. Roads are in splendid shape here and a large mileage of "State Highway" will be completed this summer.—Mrs. H. J. Hricker.

Oneida County.—Meadows and pastures are in fine shape and clover is just now beginning to blossom. Small grain crops are doing well and alfalfa is ready to cut. Corn is a little backward on account of cool weather, but the cultivators are started and we are anticipating a normal crop. Early potatoes are exceptionally good and even late potatoes are large enough now to cultivate. We had frost here on the 19th of June and that did a little damage to some corn and potato fields.—Art Blumenstein.

Outagamie County.—Excessive rains and cool weather has delayed all farm work and crops are about three weeks behind time. Even pastures have been injured by too much rain. Crops on bottom lands have in a few instances been drowned out and some farmers have been obliged to sell their stock. There is even a little corn to plant yet. The best part of the early planting is none too good, although it is showing up fairly well on drained land. Dairying is our sure source of revenue and the milk supply is holding up well. All live stock is in a healthy condition. There has been an unusually heavy loss of young colts here and some abortion among cows. Fruit crop looks well and strawberries are just coming in bearing.—Peter Tubbs.

Ozaukee County.—Cold rains have done a great deal of damage in this county since June 1st. Planting has been retarded by the wet weather and even yet some of our corn land will be replanted. Oats and barley are fairly good excepting on very low land. We will raise quite a satisfactory hay crop and alfalfa is showing up well, but haying is slow on account of damp weather. Early corn and potatoes are doing well excepting on clay and low bottom lands. Every prospect pleases in the apple crop.—C. F. Dineen.

Racine County.—Hay and small grain are in an excellent condition here and the barley crop is now heading and promises to be very heavy. The cool weather has retarded corn and the heavy rains have given the weeds a good start, but a few more days will bring everything in a normal condition. Cabbage transplanting is in progress, but the crop will be considerable shorter this year than last. The cabbage maggot has done considerable damage and possibly we will not raise more than one-half a crop on this account. Small fruits will be light, but pastures are in fine condition.—Chas. Jeffrey.

Sauk County.—Although the weather has been cool here, conditions have been very favorable for the small grain crop and oats particularly are looking well. Corn is making good progress, although planted late and the potato crop is thrifty. Considerable buckwheat is being sown in this locality. Small fruit is doing well.—A. H. Buehler.

Taylor County.—The condition of crops has greatly improved during the last two weeks, as the weather has cleared up nicely. Old and even newly seeded meadows look rather thin and the hay crop will, therefore, be light. Small grain is doing fairly well and garden crops are in a thrifty condition. Stock never looked better and some sales are being made at high prices. Horses are plentiful here and they are selling at reasonable prices. The roads are good, but the price of gasoline affects joy-riding in this locality.—E. H. Dehue.

Walworth County.—Weather here during the last month has been cold and wet, but in spite of this fact, small grain, meadows and pastures are looking well. Corn is a little small for the time of year and somewhat weedy, but the stand is fairly good and we are optimistic over the outcome.—Arthur Ewing.

Washburn County.—Corn is a poor stand here and it is not quite as good as it was last year at this time. Considerable buckwheat and millet is being seeded on corn ground that was plowed up. We have had too much cold, wet, cloudy weather, but in spite of that, meadows and pastures are good and live stock are looking well.—James W. McCulloch.

MINNESOTA.

Mower County.—We will have a fair crop of small grain on high ground here, but oats and barley are not doing well on the low ground. Much poor seed corn was used in this locality and, therefore, we do not average more than a half stand. Worms have been working in the apple trees and some of them have been completely defoliated. Strawberries are producing abundantly and potatoes are looking well. Much clover was winterkilled and because of this, meadows are a little thin.—W. H. Martin.

To Enlarge Barron Creamery.

The Barron Creamery, which is recognized as right at the top of the list of Wisconsin creameries on total production, received 445,304 pounds of cream in May. The butter fat yielded from this cream amounted to 120,689.5 pounds, and the average price paid for this butter fat was thirty-two cents per pound. This creamery had a total of 152 patrons during the month. Mr. Charles Becker received checks amounting to $213.38 and was first in the amount of cash received for the month. William Halverson was second, with $186.24. There were forty-two patrons who received more than $100 cash during the month.

It has been decided to enlarge the Barron Creamery by an addition, 10x40 feet. This will provide office room and a cold storage room sufficiently large to hold two carloads of butter. During the second week of June this creamery made 750 tubs of butter. In May the creamery paid a total of over $40,000 to farmers for cream. The Barron Creamery is right at the top among co-operative creameries of the world.

Hauling Cream in Automobiles.

Mr. C. E. Lee, of the state dairy and food department, spoke recently at a Wisconsin cow-testing association meeting. Prior to his speech he had looked over samples of butter. Some of these he said were not fit for table use. Mr. Lee called attention to the fact that some of the butter which comes into this country, and which arrives in good condition, has been shipped 7,000 to 15,000 miles.

Every dairy farm should have a sanitary milk house, says Mr. Lee. This should not be in connection with the cow barn. We want to keep every foreign odor away from the milk house. This milk house should be heated in the winter time so as to make it a comfortable place in which to work. Every milker should have his sleeves rolled up to his elbows and should milk with clean and dry hands. "Cleanliness is next to godliness" in the dairy business. An old farmer told his boy that he kept pigs to eat up the swill, but that isn't what Wisconsin farmers keep their cows for. The purpose of keeping cows is to swell the bank account. Some creameries in Upper Wisconsin are receiving a better grade of cream than Chicago receives for coffee cream. Farmers should not complain if the creamery man is particular.

As indicating the prosperity of the dairy farmer in Wisconsin and the progress which the industry is making, Mr. Lee called attention to the fact that 42 per cent of the cream delivered to one station in Polk county was hauled around in automobiles. An even higher per cent than this has been found in some southern Wisconsin counties.

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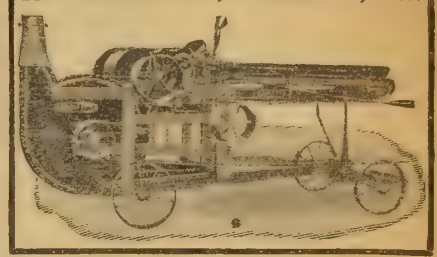

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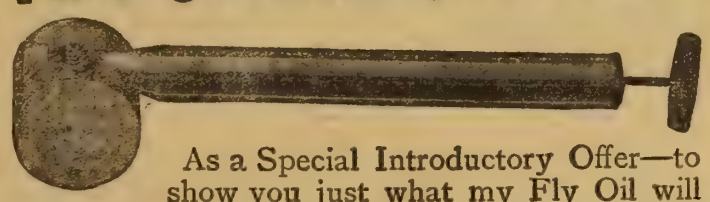

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I simply want to prove to you that **Wilbur's Fly Oil will positively keep all flies away from your cows**—that it will make them more contented—that they will **give more milk** and be far easier for you to milk them. You know yourself that there is nothing meaner to milk than a cow fighting flies. I'll guarantee you that with my Fly Oil **there'll be no kicking, stamping or tail slashing**—that the cow will stand quiet and easy and not hold back any milk. I will show you that **you can absolutely keep all flies away and get more milk** by simply spraying them with my Fly Oil before milking. I will prove this to you at my own risk and **as a special inducement I will send you—extra and free—one of the Special Sprayers shown above.**

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Just mail me the coupon. I'll send you the can of Fly Oil and the Sprayer at once with full directions for their use. **If it doesn't do all I claim just say so and I will cancel the charge. You can't possibly lose anything by this trial.** Isn't it worth a postage stamp? **Do it now—at my risk. Fill out the coupon and mail it to me today.**

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FARMERS in the grain belt are carried millions of miles every year on pneumatic tires. If we should undertake to give the figures as to the number of tire miles made in the grain-belt states each year they would be so large as to be unbelievable. One of the grain-belt states has about 125,000 automobiles owned by farmers. Each automobile has four tires. It has been estimated that the automobile mileage in this stage is close to 500,000,000 miles a year. Most of these miles are made on country roads. They are made in comfort because of good rubber tires. Without good tires, speed and comfort would be incompatible. Imagine making forty to fifty miles an hour over a country road with a wide-tired wagon and you will get some conception of the convenience and luxury of pneumatic tires. The farmer is such a tremendous consumer of tires that we feel sure he must have great interest in how they are made. If we should undertake to acquaint our readers with the bigness of the tire industry, with the immense capital invested, the large force of men employed, the wonderful buildings used, they would be almost as much astonished as at the figures on tire mileage. Manufacturing tires is one of the greatest industrial occupations of the age.

Rubber is the foundation stock for tires and tubes. Tires are not all rubber. If they were we would not be able to pay for them. Neither would they give the splendid wearing value that they do under the present system of manufacture. Rubber is imported from Brazil, and the highest quality comes from the native trees and is usually spoken of as Para rubber. Para is a seaport of Brazil. The rubber country is many miles distant from Para, up the Amazon valley. Rubber is a sap, or juice, from a forest tree, and is taken out in much the same manner as sugar sap. There is a supply of natural rubber in parts of Africa and Mexico, but these do not come up to the upper Amazon valley standard. The lower Amazon valley rubber is also a cheaper grade. The more difficult it is to get the rubber trees the better the supply seems to be. Even before the world began to take note of the fact that tires would eventually create a scarcity of rubber an effort to supply the market was started and rubber tree plantations were set out. This makes two classes of rubber, commonly spoken of as the native rubber and plantation rubber. There are large rubber plantations in Ceylon and the Malay states. The quality of plantation rubber depends largely upon the source from which the trees were imported. Rubber comes to America in varied grades. It comes usually in what is called a biscuit. This biscuit is formed by rolling up the rubber on a stick, so that a native can grab both ends of the stick and carry the rubber out of the forest. When the stick is removed the chunk or lump of raw rubber is left. The rubber coming from plantations is not in the biscuit form. It usually comes in square chunks, such as may be conveniently packed in barrels or boxes. Any large tire factory has thousands upon thousands of pounds of this raw rubber on hand. Fig. 1 of the accompanying illustra-

FIG. 1—GATHERING RUBBER IN NATIVE FORESTS ON UPPER AMAZON RIVER IN SOUTH AMERICA.

FIG. 2—RUBBER BISCUITS AS THEY COME TO THE TIRE FACTORY.

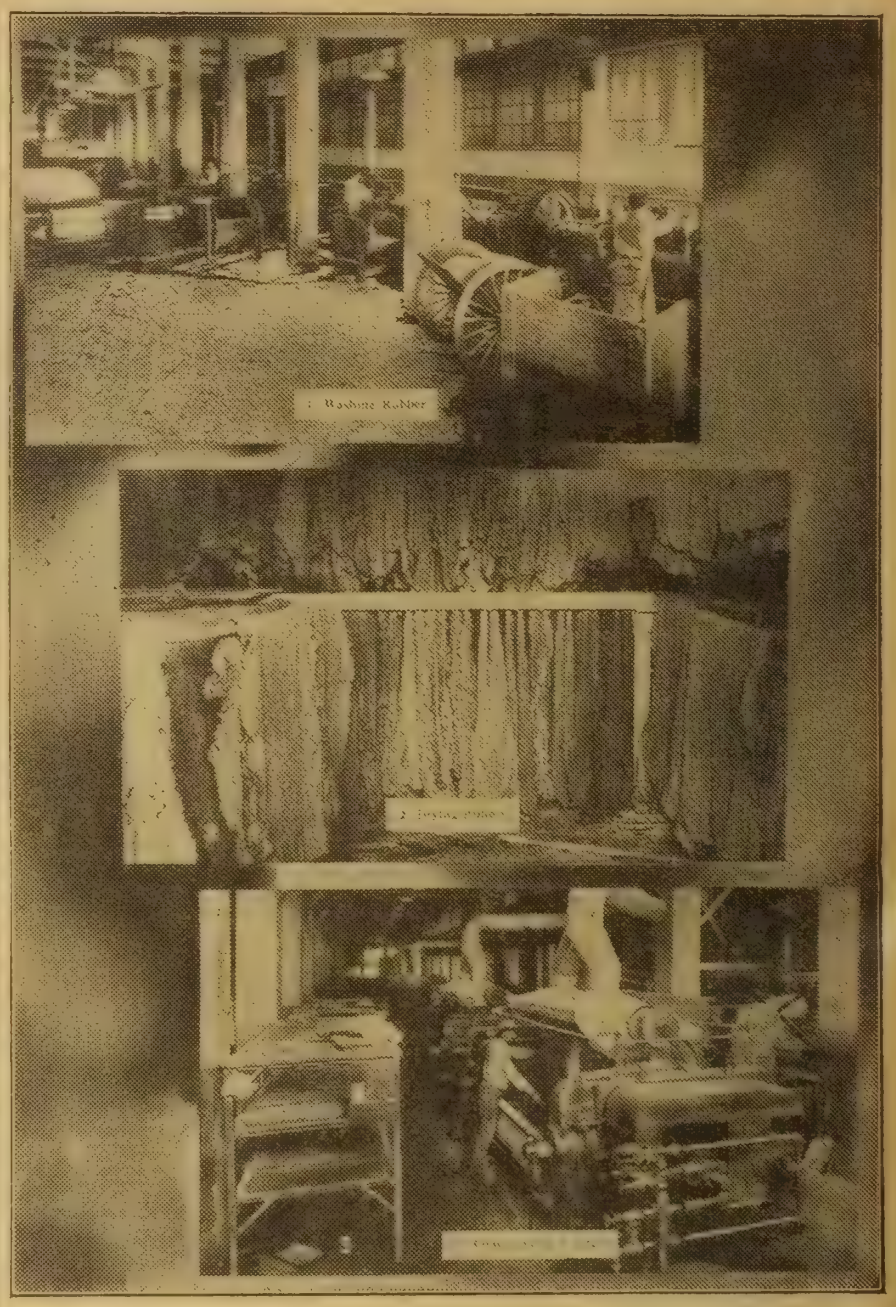


FIG. 3—WASHING, DRYING AND ROLLING OF PURE RUBBER.

FIG. 5—HEATERS WHERE THE COMPLETED TIRE IS VULCANIZED.

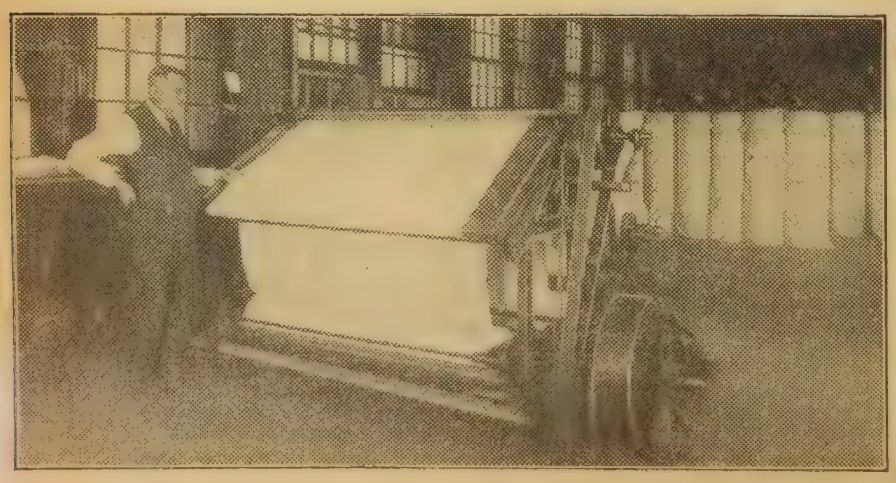


FIG. 4—INSPECTING THE FABRIC WHICH GOES IN CASINGS.

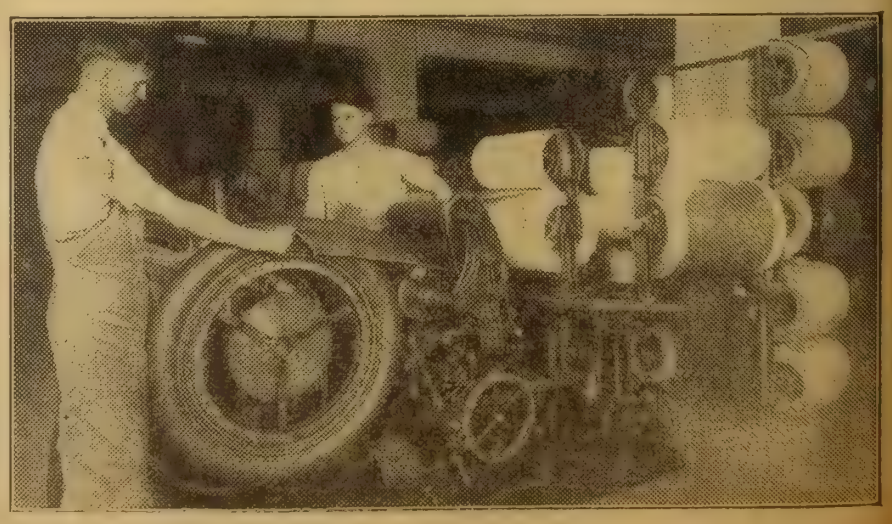


FIG. 6—BUILDING UP THE TIRE ON STEEL MOLD. MANY WRAPPINGS OF THE STOUT FIBER INCREASE THE STRENGTH OF THE CASINGS.

tions gives an idea of the gathering of the rubber. Fig. 2 shows the biscuits in the stock room of a tire factory.

Until the writer visited a tire factory he had a hazy sort of notion that the crude rubber was dumped into a large melting pot and boiled. But he was entirely wrong. Crude rubber, as it is received at the tire factory, contains more or less dirt, usually in the shape of sand, dried leaves and twigs. These foreign substances are removed by washing the gum, which is soaked in warm water and taken into a machine called a cracker. In this machine the crude rubber is masticated and subjected to a continual flow of water, washing away most of the foreign substances. The work of completing the removal of foreign matter is carried on in a washer. The pure gum is finally run through a rolling machine and spread out in sheets on linen. These sheets must be dried three or four weeks. The next step is mixing the crude rubber with compounding ingredients. Herein lie some of the secrets of the tire factory. The chemist in the mixing room weighs out the ingredients to the fractional part of an ounce. In the work rooms the entire mass is worked up upon rollers until it becomes a plastic whole.

Rubberizing the cloth which goes into tires is done by means of a frictioning machine, which grinds the plastic rubber into the fabric at high pressure and impregnates it thoroughly with the gum. The fabric for the breaker strips and canvas plies is first held at great heat, in order to be thoroughly dry. Then it is ready to be wound into the calenders, which "friction" the rubber into the fabric.

There are three huge rolls on this frictioning machine, the middle revolving at high speed and the lower at low speed. By the difference in the speed of the rolls the rubber is thoroughly worked into the cloth, which winds on one roll as the rubber revolves on the drum opposite. Casings for automomile tires are built up around molds formed like a wheel. Strips of the heavily rubberized canvas of varying lengths, according to the circumference of the tire to be built, form the first layer in the building up of a shoe. These layers have been sewed so that they form a continuous piece and then are worked around the mold. Around this inner layer go the various plies of canvas, until the breaker strip is inserted. Plies of rubber are added for the tread until the whole is built up in the form that it is designed to take.

This tire, mold and all, is carried away to be weighed, because it must come up to a certain standard. This process so briefly described is one of the most important of all in tire building. In the curing room, to which the tire and mold go for the final step in the process, there is a part of the work in the factory which is its own special device. It applies to the way in which the casing is held in the shell before it goes into the vulcanizer. Those tires which are designed to have a wrapped tread go under a spiral machine, which winds a narrow strip of canvas all around the tread. Then the casings are placed in the shells and put into the curing ovens, where they remain until the process is completed. In the mold the raised letters of the trade-mark and the figures of the sizes are embossed on them.

The upper picture in Fig. 4, shown herewith, shows where the big rubber biscuits are crushed, washed and rolled into sheets. The center picture of this group gives a view of the drying room where the air is constantly changed by huge electric fans. While the space shown herewith does not appear to be large, the pure gum hung up to dry represents a small fortune. In the lower picture of this group expert workmen are compounding various kinds of rubber in big calender machines.

The most careful system of inspection must be used in a tire factory. This is especially true of the fabric, and Fig. 3 shows an inspector looking for broken threads, grease spots, cotton hulls and other defects. The best tires contain the finest grade of Sea Island cotton. Fabric as shown in Fig. 3 has not yet been treated with gum. It is important that this fabric be carefully dried and this drying is so carefully timed that no moisture remains to interfere with the perfect union of fabric and rubber, while the fabrics retain their natural oil for long life and tensile strength. In the calender rollers the pure gum is forced into every thread of the fabric and here again the watchful inspector is ever on the job.

While the casing of a tire is a combination of pure rubber chemically treated and fabric, the inner tube is pure rubber alone. Tubes are made up of sheet rubber of the very finest quality, rolled very thin and built up in layers. It would be much easier and cheaper to roll out one sheet the required thickness, but this would not have the strength of five or six thin plies. The greatest care is taken by expert workmen in the inserting of the valve and in the uniting of the ends of the tubes.

The trade now demands the safety tread, at least for the back tires, and many careful drivers use safety treads for all four. The safety tread gives an added wearing surface which adds to the life of the tire. If one wants to go to the expense of buying the cord tires they will get added value in additional miles. Tire making is a definite system and workmen in the manufactories are expert and competent. The tire may be slighted by a poor quality of rubber or fabric, by incompetent inspection in any department, by cutting down the number of layers of fabric, by improper treatment of the rubber compound, etc. It is true in tire buying, as in almost every other line, that the purchaser must look to the good name which a manufacturer has established. Tires cannot be bought on looks or feel or weight. It is on account of these facts that manufacturers offer a guarantee to protect the purchaser against imperfections in manufacture. Tire makers admit their responsibility does not end with the sale of a tire and they are united in trying to make good their product even after it leaves their hands. To get the best possible mileage out of a tire the user must cooperate by the observance of simple, though important, regulations. The writer is indebted to the Motor Age for the following excellent advice to car drivers who wish to lengthen the life of their tires:

Careful Driving. First—Avoid ruts as much as possible. They affect the side walls of the tire, since the rubber at this place is considerably thinner and less wear-resisting than on the tread, it will soon be worn through to the fabric. After this happens, the fabric is exposed and is likely to deteriorate very rapidly.

Second—When brakes are applied too suddenly and the wheels locked, the car will often continue in motion with the result that either one or both of the rear wheels slide. Since rubber is considerably softer and more yielding than the road surface, the result of this sliding will be noticed on the tread of the tire, because the sliding along the ground will generally scrape off part of the tread rubber.

Third—Car-track riding shortens the life of the tires because of the constant chafing that takes place between the upper part of the rail and the tire. It should be avoided at all times.

Fourth—If you notice one of the front tires beginning to wear down exceedingly fast, it is well to have the wheels measured up for alignment immediately.

If the two front wheels do not run exactly parallel, one of them is always subject to a drag or a diagonal grind which soon wears down the tread excessively.

The Care of Tubes—The principal thing to watch about tubes is the application. Whenever you insert a tube in a casing be sure that there are no wrinkles in it. The best way to do this is to inflate the tube slightly so that all the wrinkles will be taken up before it is applied into the casing.

There is always a certain amount of heat generated between the casing and the tube. To take care of this heat it is customary to apply a light coat of talc to the tube before it is inserted into the tire. This coating of talc, however, should be light. Whenever it becomes too thick, it has a detrimental effect on the tube.

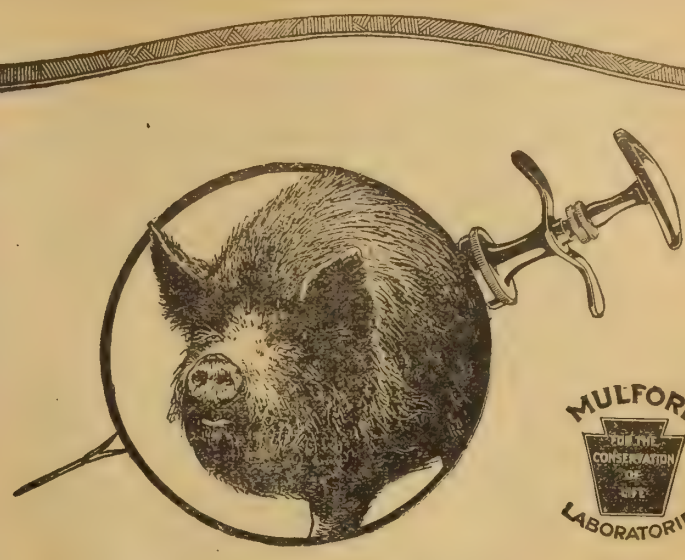
The Care of Rims.—It is a good idea to keep the rims of the tires as free as possible from all rust because rust will affect the tube. To do this, it is only necessary once in about every six months to remove the tires and tubes and to clean the rims with a wire brush. After that has been done, it is a good plan to coat the rims with graphite. Of course, this means considerable work. However, it is bound to help prolong the life of the tire.

Careful selection of tires and careful treatment of tires means lower cost of mileage.

Wisconsin Fairs, 1916.

Amherst—Aug. 29-Sept. 1, John Keener.
Appleton—Sept. 5-8, John M. Balliet.
Ashland—Sept. 20-22, Otto D. Premo.
Athens—Sept. 15-16, F. H. Eisold.
Baraboo—Sept. 19-22, S. A. Pelton.
Beaver Dam—Sept. 25-29, C. W. Harvey.
Berlin—Sept. 12-15, C. W. Hitchcock.
Black River Falls—Sept. 26-29, James Dimmick.
Bloomington—Aug. 16-18, Oscar Knapp.
Boscobel—Aug. 9-11, J. T. Ruka.
Cedarburg—Oct. 5-7, A. W. Horn.
Chippewa Falls—Sept. 18-22, C. E. Johnson.
Crandon—Sept. 26-28, Ray M. Ritter.
Darlington—Aug. 22-25, Thos. Kirwan.
DePere—Aug. 28-31, Herb. J. Smith.
Durand—Sept. 6-8, Henry Pattison.
Elkhorn—Sept. 19-22, Samuel Mitchell.
Elroy—Sept. 12-14, D. F. Conway.
Evansville—Aug. 16-19, F. W. Gillman.
Fond du Lac—Sept. 19-22, E. R. Zamzow.
Friendship—Sept. 19-22, G. W. Bingham.
Galesville—Aug. 23-24, Ben W. Davis.
Gays Mills—Oct. 9-12, E. G. Briggs.
Hayward—Sept. 26-28, J. A. Ballard.
Hortonville—Sept. 11-13, L. A. Carroll.
Iron River—Sept. 26-28, E. F. Daniels.
Janesville—Aug. 8-11, Harry O. Nowlan.
Jefferson—Aug. 29-Sept. 1, R. B. Hellen.
Kilbourn—Sept. 26-29, W. G. Gillespie.
La Crosse—Sept. 26-29, C. S. Van Auken.
Ladysmith—Sept. 26-29, V. V. Miller.
Lancaster—Sept. 5-8, L. A. Clark.
Lodi—Sept. 5-8, W. M. Richards.
Madison—Aug. 29-Sept. 1, M. M. Parkinson.
Manitowoc—Aug. 29-31, F. C. Borcherdt, Jr.
Marshfield—Aug. 29-Sept. 1, R. R. Williams.
Mauston—Sept. 5-8, W. F. Winsor.
Menomonie—Sept. 12-15, J. D. Millar.
Merrill—Sept. 20-22, A. H. Smith.
Mineral Point—Aug. 15-18, W. J. Penhallegon.
Mondovi—Oct. 3-6, J. U. Luetscher.
Monroe—Sept. 5-9, Leland C. White.
Neillsville—Aug. 30-Sept. 1, Myron E. Wilding.
Oconto—Sept. 5-8, J. B. Chase.
Oconto Falls—Sept. 19-21, A. J. Peterson.
Oshkosh—Sept. 19-22, Fred Badger.
Plattesville—Aug. 29-Sept. 1, C. H. Gribble.
Plymouth—Sept. 6-9, Otto Gaffron.
Portage—Sept. 14-17, F. A. Rhyme.
Reedsburg—Aug. 1-4, W. H. Hahn.
Rhinelander—Sept. 5-7, Arthur Taylor.
Rice Lake—Sept. 12-15, J. G. Rude.
Richland Center—Sept. 26-29, W. F. J. Togo.
Seymour—Sept. 14-16, Geo. F. Fiedler.
Shawano—Sept. 26-29, J. C. Schweers.
Sparta—July 25-28, Sid N. Smith.
Spooner—Sept. 6-8, W. C. Crocker.
Spring Green—Aug. 22-25, J. E. Barnard.
Stanley—Sept. 12-15, Frank S. Grubb.
St. Croix Falls—Sept. 19-22, E. J. Iverson.
Stevens Point—Sept. 12-15, J. M. Pfiffner.
Sturgeon Bay—Sept. 19-22, A. C. Greaves.
Superior—Sept. 12-15, I. P. Lord.
Tomah—Aug. 15-18, F. J. Rehberg.
Viola—Oct. 4-6, W. B. VanWinter.
Viroqua—Sept. 13-16, F. W. Alexander.
Watertown—Sept. 5-8, C. W. Harte.
Wausau—Sept. 5-8, J. D. Christie.
Wautoma—Sept. 27-29, Charles T. Taylor.
West Bend—Oct. 2-4, Joseph F. Huber.
Westfield—Sept. 6-8, W. P. Fuller, Jr.
Weyauwega—Sept. 5-8, A. M. Rieck.
Wisconsin State Fair, Milwaukee, Wis.—Sept. 11-16, Oliver E. Remey.
Galena, Ill.—Aug. 8-11, G. C. Blish.
Warren, Ill.—Sept. 12-15, J. W. Richardson.

Ask your neighbor to subscribe for The Wisconsin Farmer.



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DAIRY

Waupaca Cow-Testing Meeting.

The annual picnic of the Waupaca and Butternnut Ridge Cow-Testing Association was held at the H. C. Frihart farm, June 14th. There was a fine program of local talent, and music by the Baldwin Mills Band. Prof. C. E. Lee, of the Dairy and Food Commission, delivered an address on "What makes Wisconsin the best dairy state in the Union?" The question was answered in part by Mr. Lee as follows:

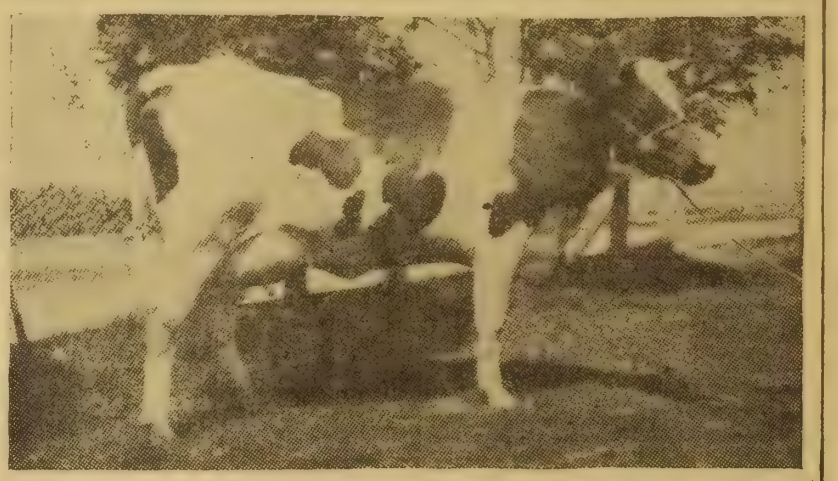
Because every man, woman and child has pulled together for the past forty years. How are we going to keep Wisconsin at the top in dairying? By putting a product of high standard on the market. How are we going to get the milk, butter and cheese of a high standard? By every farmer and every member of the family co-operating with the creamery man. The farmer must deliver a better grade of cream and milk and the creamery man must run his creamery in a more sanitary way. It will benefit the farmers and the creamery men to clean up, for the consumers will learn where they can get good butter and they will demand it and will pay a higher price for it. I have received letters asking where to get good butter and I can recommend a creamery that is making good butter. They can demand the top prices. The fellow who will not clean up has got to take a back seat and take what he can get. It is up to the farmers to put on the market a clean product and see that your creamery is clean. Don't sell your cream for the same price as the fellow who is putting a dirty product on the market. If the women and children could do all the milking we would get a better grade of milk, butter, and cheese than we have now and in ten years we would have a better grade of cows and calves. There is only one-twenty-fifth of a pound of cheese and one-twelfth of butter and about one-half glass of milk consumed per day per capita in this country. If we could guarantee cleanliness and double this amount it would mean thousands of dollars to the farmers of Wisconsin. Why the annual per capita consumption of beer in the United States is estimated at more than double that of milk, butter and cheese combined. If you can change this around what will it mean to the people of this country? The New York market bought a ship load of butter from Denmark and paid 24 cents per pound more than they could buy Wisconsin butter for. I asked them why they paid more for Danish butter when Wisconsin butter was better. They told me they knew more about Wisconsin butter than I did and when Wisconsin could put on the market a grade of butter as good as can be bought from Denmark they would buy all of Wisconsin's butter. It is time we woke up and cleaned up and not only have the name of the largest dairy state, but the most sanitary dairy state in the world. We have it in our own hands if we will just co-operate and condemn the cream of the fellow who could clean up, but won't.

Manitowoc County Association.

To the Editor:—I herewith submit the first monthly report of the Manitowoc County Cow-Testing Association No. 1. The best cow in the association for the month was a registered cow owned by Julius Linstedt, of the Lakeside Farm, Manitowoc. We have forty-eight cows which made forty pounds of butter fat or over. I anticipate that this number will be greatly increased next month. We have some fine cows, both pure bred and grades. I am sending The Wisconsin Farmer a picture of Idyl Korndyke Ormsby 260962, owned by Adolph Otto, a member of our association. Mr. Otto resides at Valders. He is president of our association and did his first A. R. O. work this spring with the result that his young cow above named, aged two years and one month, produced 428.5 pounds of milk testing 3.6 per cent, or 19.27 pounds of butter fat in seven days. Mr. Otto also has one cow, Lady Oak Homestead Mutual De Kol, 112,140, an aged cow, which produced twenty-one pounds of butter fat in seven days. The following is the record of cows in the new association which produced forty-five pounds of butter fot or over the first month ending May 17, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Julius Linstedt					
De Kol, R. H..	3	3-25-16	2184.0	3.8	83.0
Torris Geraldson					
Artasia, R. H.	4	3-16-16	1728.0	4.0	69.1
Martha, R. H.	4	2-1-16	1599.0	3.8	60.8
Pauline, R. H.	4	2-16-16	1512.0	3.5	52.9
Canary, R. H.	4	1-21-16	1104.0	4.5	49.7
Piebe H., R.H.	4	3-14-16	1512.0	3.3	49.9
Labriga, R. H.	4	2-19-16	1452.0	3.2	46.5
Geo. Thompson					
Longfield, R.H.	9	2-1-16	1535.0	3.2	49.1
Ormsby, R. H.	3	4-27-16	1232.0	4.4	54.2
Besse, R. H..	2	4-19-16	1493.0	3.2	47.8
Nels Johnston					
Empire, R. H.	8	2-20-16	1425.8	3.7	52.8
Lady, R. H...	6	2-28-16	1215.9	4.2	51.1
Johanna, R.H	10	4-12-16	1437.1	3.6	51.7
Johanna 2d, R. H.....	4	4-22-16	1265.0	3.7	46.8
Desdemona, R. H.	11	4-24-16	1518.6	3.6	54.7
Ruth 2d, R.H.	4	4-20-16	1563.2	3.5	54.7
Adolph Otto					
Idyl K., R. H.	2	4-21-16	1727.0	3.4	58.7
Idyl De Kol, R. H.	8	3-4-16	1717.0	2.9	49.7
Estata, R. H..	7	3-21-16	1329.0	4.3	57.1
Elmer Thompston					
Queen, G. H..	8	4-15-16	1182.5	4.2	49.7
Rose, R. H...	6	3-20-16	1687.7	3.8	64.2
M. H. O'Dea					
Big Four, G.H.	7	4-28-16	1401.2	3.8	53.2
Mully, G. H...	2	4-27-16	1031.6	4.8	49.5
Star, G. H....	5	1-20-16	1146.6	4.0	45.9
Blacky, G. H.	8	1-15-16	1096.7	4.8	52.6
Fred Lemberger					
Lillie, G. H.	5	5-20-16	1178.2	4.2	49.5
Jessie, G. H...	9	4-20-16	1161.4	4.1	47.6
Chas McCully					
Beauty, G. H.	4	3-5-16	1297.3	3.8	49.3
Pat Cahill					
No. 12, G. H...	5	2-21-16	1518.0	3.6	54.6
M. H. O'Connell & Son					
Daisy, G. H...	7	2-27-16	1350.0	2.8	47.8
Walte Behm					
Rose, G. G....	6	1-28-16	1040.0	4.5	46.8

H. R. Brewster, Official Tester.



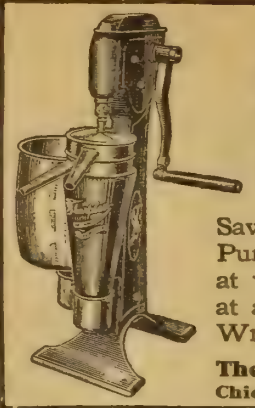
IDYL KORNDYKE ORMSBY, OWNED BY ADOLPH OTTO, VALDERS, MANITOWOC COUNTY, WIS.

Twin County Cow-Testing Report.

The following is a report of cows in the Twin County Cow-Testing Association (Barron and Dunn counties) for the month ending June 15th:

Owner, name and breed	Lbs. milk	Test	Lbs. B. fat
Otto Kahl			
Reddy, G. Guern.....	1344	4.1	55.1
Beauty, G. Guern.....	1329	3.5	46.5
Chas. Bilse			
Pearl, G. H.....	1464	3.5	51.2
Bell, G. H.	1641	3.0	49.2
Wm. Rassbach			
Queen, G. J.....	678	6.7	45.4
Martin Schlough			
Pet, G. Galloway.....	1200	3.8	45.6
Swen Anderson			
Spot One, G. H.....	1005	5.5	55.2
Frank Roemhild			
White, P. B. J.....	1074	4.6	49.4
Blue, P. B. J.....	1086	4.9	52.2
Humpy, G. J.....	1017	4.6	46.7
Bobby, G. J.....	780	5.9	46.0
Bell, G. J.	861	6.1	52.5
Pet, G. J.....	1032	4.4	45.4
Henry Roemhild			
Old Black G. J.....	1104	4.9	54.1
J. M. Rassbach			
Nanney G. J.	903	5.1	46.0
Peter Miller			
Plym, G. J.	1182	7.2	85.1
Nellie, G. J.	957	4.9	46.8
Broky, G. J.	936	5.5	51.2
Pinky, G. J.....	780	7.0	54.6
Lady, G. J.....	1050	4.8	50.4
Ed Kahl			
Mag G. Guern.	945	5.0	47.20
Spot, G. Guern.	945	5.0	47.20
Margaret, G. Guern...	1098	4.5	49.4
G. Wirth			
No. 7, N.	1035	4.8	49.7
John Neck			
No. 22, G. H.....	1701	3.8	64.6

Geo. W. Ehlert, Tester.



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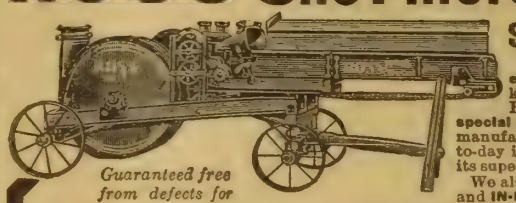

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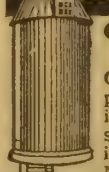

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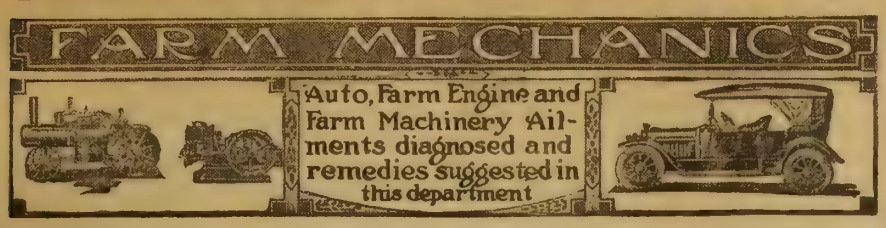


QUESTIONS AND ANSWERS.

Power for an Electric Fan.

What size fan can I use that will take about as much current as a forty-watt electric lamp?

Answer.—An eight-inch fan requires about twenty watts; a ten-inch fan about forty watts; and a twelve-inch fan about sixty watts.

Running Wires Under Ground.

Is it all right to put electric wires underground in galvanized or black iron pipe? Why is lead the best?

Answer.—It is all right to use iron pipe, either black or galvanized. Black pipe should be painted with asphaltum paint to prevent rusting. Lead pipe is better, because it does not rust.

A Wiring Question.

Please show how to wire a Type H Atwater-Kent system to a Ford flywheel magneto, if this can be done.

Answer. — Install a three-point switch on the dash. Wire from the magneto to the switch, and from the battery to the switch; then from the switch to the battery terminal of the Atwater-Kent coil; then from the coil to the center post of the sparker. Put the switch on battery when starting or running slowly. The Atwater-Kent Company do not recommend the use of the magneto.

Poor Compression.

I have a 1912 Ford car that has very poor compression. The cylinders are not scored. Would it be advisable to put in pistons .025 inch oversize without reboring the cylinders? The car runs well, but takes too much oil and gasoline.

Answer.—We doubt that you would be able to get pistons .025 inch oversize into your cylinders without reboring the cylinders. A new set of rings would probably remedy your trouble, if correctly fitted to the cylinders and pistons. New rings seldom give good results when first put in; they must be run several days to wear themselves in. Pistons about .002 inch or .004 inch oversize might be used in your motor; and these pistons might stop the oil from working up.

Strength of Electrolyte.

I have an Alamo light plant, sixteen cells, thirty volts. The electrolyte in some of the cells does not register 1.250 on the hydrometer. When the battery is used about a week, the strongest ones drop from 1.260 to 1.240. The weak ones will drop down to 1.160 or lower. The weak ones will not rise higher than 1.200 to 1.220. Would it be all right to take out some of the electrolyte, and replace it with acid in the weak cells and rain water in the strong cells?

Answer.—The strength of the electrolyte increases as the battery becomes changed, and decreases as the battery discharges. It is not necessary that it be exactly the same in all the cells. When the battery is fully charged the specific gravity should be 1.200 to 1.240. When the battery is discharged the electrolyte should test not less than 1.150. If it tests less than 1.150 remove it and add enough sulphuric acid to make it test about 1.190. Pour it back at once into the cell. Remove some of the electrolyte from the cells testing over 1.240 when fully charged, and add rain water.

Setting Valves With Wolf Reverse.

How do you set the valves on an engine having a Wolf reverse gear? How much lead should be given the valve? Could one get more lead by setting the reverse lever forward one or two notches on the quadrant?

Answer.—Adjust the length of the reach rod between the reverse lever and the block guide so that the valve travels equally at each end of the stroke as the engine is turned over. Then turn the flywheel in the direction the engine runs until the piston is exactly on head end dead center. Move the reverse lever from one end of the quadrant to the other, and measure the "slip" of the valve on its seat. Do likewise with the piston on crank end dead center. The slip of the valve should be the same in both cases. If not shift the eccentric to make it so. The "slip" or movement of the valve on its seat should be in the same direction as the direction in which the reverse lever is moved. The slip should be about one-sixteenth of an inch. If there is no slip or if the slip is in the wrong direction, the pedestal is too low.

Various leads are used. About one-thirty-second of an inch on the head end should give good results. The lead may be changed by adjusting the length of the valve rod.

Running Lights from a Motor.

Can a set of lights be run from a small motor operated by dry cells?

Answer.—No. A generator is used to furnish current for lights. A motor receives current and delivers power at the belt pulley; a generator receives power at the belt pulley and delivers current. Direct current machines usually may be used as either motor or generator. Your motor is probably too small to use as a generator. It would not do for lighting.

Connecting a "Trouble Light."

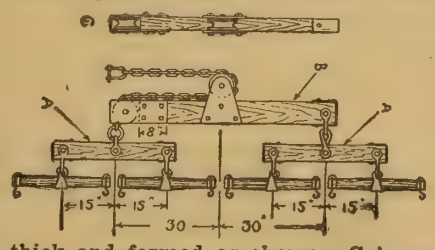
I have a Metz car with Gray and Davis lighting and starting system. I want to connect a light in the dash, and have it so that I can take it out and use it as a trouble light. How can I connect it? What size light shall I use?

Answer.—The following instructions apply to any car: If one terminal of your battery is grounded connect a light wire to the wire running from the dash switch to the headlights, and run the light wire to the socket on the dash for the trouble lamp. From the other terminal of the lamp socket, run a wire to the frame of the auto, and ground it on the frame. If there is no ground wire on the battery run the wire from the lamp socket to the return battery wire. If the socket is fixed on the dash you can have an extension made of flexible drop cord with a plug at one end and a socket at the other. About ten feet long is a convenient length. Use a two-candle power, six-volt lamp.

A Four-Horse Evener.

Please show me how to make a four-horse hitch for a sixteen-inch sulky plow. I wish to work my horses abreast, but bo not want to put one of them on the plowed ground.

Answer.—The figure shows how such an evener may be made. It consists of four single trees, two double trees, AA, and a heavy double tree, B, connected as shown. The chain pulleys—about four inches diameter—are supported by pieces of strap iron or boiler plate about one-fourth inch



thick and formed as shown. C is an edge view of B with the chain removed. Hickory is the best material for the wooden parts. The single-trees should be about two and three-eighths inches diameter at the middle, and taper to about one and three-fourths inches at the ends. Make the doubletrees AA about three and three-fourths inches wide and one and three-fourths inches thick. Make doubletree B nearly six inches wide, one and three-fourths inches thick; its over all length being about sixty inches.

Motor Heats.

I would like your advice on my Ford car. It heats and the water boils after every trip. The engine runs and pulls all right. I have h .d the valves ground and the radiator flushed out. Have drained the oil from the crank case, and washed it out with kerosene. The spark plugs and the fan are all right, but it keeps on heating just the same.

Answer.—The first thing to look for is a loose fan belt. If the belt is loose it will not drive the fan at the proper speed to keep the motor cool. Test the timing of the spark. It should occur just after the compression dead center—about one-half inch past center on the flywheel, measured on the rim—when the spark lever is in fully retarded position. If the spark occurs too late the motor will heat. This is probably not your trouble, as you have plenty of power, and a motor usually lacks power when the spark is too late. Your trouble may be due to an accumulation of carbon in the top part of the cylinder. Remove the cylinder head and scrape all the carbon out of the combustion chamber. This is one of the most common causes of heating of Ford motors. The carbon is caused by too much oil working up above the pistons, or too much gasoline being used. Running with too much gasoline will also cause overheating. To stop the oil from working up do not carry too high an oil level in the crank case. If the motor is old, new pistons or new rings may be required.

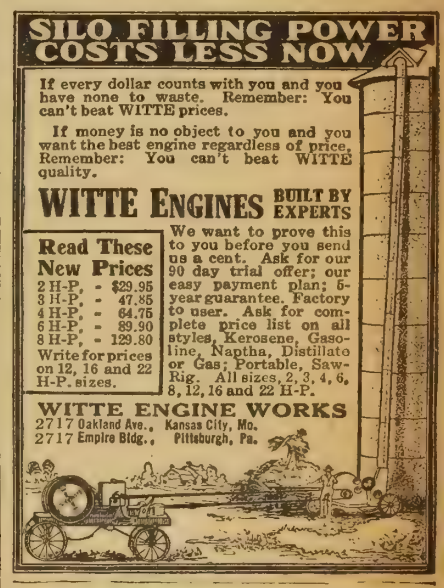
Wireless Telegraph.

I would like to have the following questions answered about making a wireless telegraph. How high should the aerial be, and what size wire should be used to make it? Instead of telephone receivers, could I use a buzzer? Should I use a jump spark coil, or a make-and-break coil? How many batteries should I use to send messages about 150 miles? Where can I get the wireless code?

Answer.—The higher the aerial the better it works. The aerials on ships are usually 100 feet high, while land stations usually have aerials 150 feet high. Aerials forty feet high will work, but not as efficiently.

The size of wire does not make much difference. Number 6 B. S. G. copper wire, either insulated or bare, is generally used, though for a small system Number 10 might be used. Use telephone receivers. The buzzer might not be sensitive enough. Use a jump spark coil that will give a spark several inches long. You could not send messages 150 miles by battery current. It would take a fifteen-horse-power generator to supply the current necessary to send a message that distance. Two to four cells should operate a receiving set, however. "Wireless Telegraph," written by A. E. Kennelly and published by Moffatt, Yard and Company, of New York City, is a good book for amateurs and contains the code. You can probably obtain it from your book dealer, or direct from the publishers.

In fifteen principal producing states watermelon acreage is 100,965, compared with 96,508 acres last year, and cantaloupe acreage is 41,273, compared with 41,981 acres last year, the agricultural department reports. Georgia, with 27,663 acres, leads the states in watermelon growing and California, with 14,935 acres, leads in cantaloupe culture. Other states with big watermelon areas are: Florida, 20,626 acres; Texas, 17,406, and Oklahoma, 6,195. Largest acreages in cantaloupes were: Georgia, 5,987; Colorado, 3,687; Arkansas, 2,675; Arizona, 2,000, and Texas, 1,107.



Group Picture Taken at the Annual Meeting of the M

LIVE STOCK SUMMER MEETINGS

Wisconsin Farmer Representatives Report Most Enthusiastic Summer Meetings of Breeders in Many Wisconsin Counties Within the Past Few Weeks.

Breeders of Three Counties Meet.

To the Editor:—The 14th of June, 1916, was certainly a beautiful day, and we Holstein breeders of Green Lake, Winnebago and Waushara counties celebrated it with our annual picnic at the farm of I. Noveau, seven miles southeast of Berlin. There were about 100 present, and many more would have been there had their cornfields not demanded their immediate attention. After spending a pleasant hour at the dinner table, which was spread upon the lawn, the president's wife, Mrs. Betry, gave the address of welcome, followed by a paper from Professor Humphrey on dairying, read by the secretary. Many have heard Mr. Humphrey several times and were glad to listen to a paper prepared by him. Doctor Kutchin, of Green Lake, then entertained the crowd with an excellent talk on things of much interest to the live dairyman, and laid particular stress on the important part the Holstein cow played in dairying in Wisconsin. It was voted to have Doctor Kutchin address the meeting again next year.

B. F. Brewer, W. Michaels, J. Root & Son, H. Betry & Son, and I. Noveau, members of the Tri-County Holstein Breeders' Association, recently sold to California buyers a carload of good registered Holstein cattle, and there are buyers in two or three times a week shipping out grades, and the Holstein business seems very active in this part of Wisconsin.

I will be pleased to answer any inquiries about Holsteins in this locality.

W. Michaels, Secretary.

BOYS' JUDGING CONTEST COMMON AT WISCONSIN SUMMER PICNICS.

Waupaca and Portage Guernsey Breeders' Meeting.

The annual picnic of the Waupaca and Portage Guernsey Breeders' Association was held recently at the L. E. Gordon farm near Nelsonville. It was reported that about 1,000 people were present. More than 150 automobiles were counted.

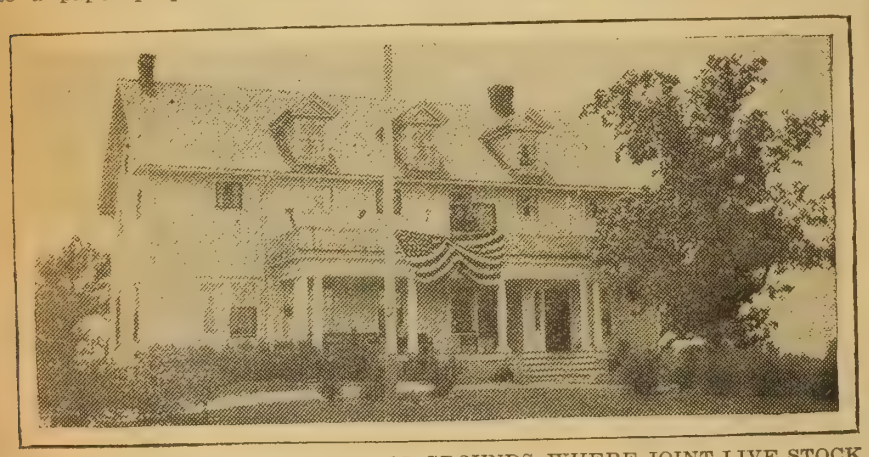
A cattle-judging contest was held in the forenoon, under the direction of J. M. Coyner, agricultural agent of Portage county, assisted by Arthur Peterson, of Nelsonville. The condition of the cattle and the rapidity and orderliness with which the contest was run off under Mr. Coyner's supervision compared favorably with similar contests often seen at state fairs.

The winners of the senior contest, men eighteen to thirty years of age, and the prizes were as follows: First prize, veterinarian's douche syringe, donated by Dr. Swan, St. Point, Donald R. Burnham, Waupaca; second prize, sprayer and one gallon fly dip, Guy Gilman, Plover; third prize, barn cleaner, Wm. Tesh, Plover. The junior prizes were awarded as follows: First, milk scale, Walter Waller; second, saw, Irving Peterson; third, hammer, Royal Gordon.

After a picnic dinner the afternoon program was opened with several selections by the Nelsonville band. Mr. Gordon, president of the association, then introduced Prof. J. L. Tormey, of the University of Wisconsin. Prof. Tormey spoke of the advantages of stock and dairy farming over grain farming. He referred to the great work done by Prof. Babcock, in perfecting a simple and accurate test for determining the per cent of butter fat in milk. He said: "The Babcock test made dairying a business instead of an occupation." The speaker also mentioned the co-operative testing associations and the farmers' institute corps as being important factors in increasing the dairy industry in this state, until at the present time the dairy products produced annually are worth over $100,000,000. After his address, Prof. Tormey took the afternoon train for Madison, in order to attend commencement Wednesday.

Dr. Eliasen, state veterinarian, then spoke upon the diseases cattle are subject to. He gave special emphasis

GATHERING TO TALK OVER THE FINE POINTS IN PURE-BRED STOCK.



ON THE WISCONSIN FARM SCHOOL GROUNDS, WHERE JOINT LIVE STOCK MEETING WAS HELD.

WAUKESHA COUNTY BOYS WHO ARE LEARNING EARLY TO DISCRIMINATE BETWEEN DAIRY COWS.

c County Holstein-Friesian Breeders' Association.

to the fact that Wisconsin dairy cattle are, as a rule, free from tuberculosis. The number of animals responding positively to the test in this state is so low that Wisconsin ranks as one of the cleanest and freest from disease. Dr. Eliasen called attention to the fact that the hoof-and-mouth disease was much less serious in this state than in the states to the east and south.

A Nelsonville sextet of young people, assisted by the audience, sang "America."

Mr. H. D. Griswold, of West Salem, one of the best known Guernsey breeders of the state, and a prominent Farmers' Institute conductor, then spoke. His talk was largely a comparison between the early days of Wisconsin dairying and the newer, better conditions of today. Mr. Griswold is a man who, through thirty-five years of dairying, has kept the enthusiasm and optimism of youth.

THE FLAG WAS VERY MUCH IN EVIDENCE AT A NUMBER OF THE SUMMER MEETINGS THIS YEAR.

Ozaukee County Holstein Meeting.

Another interesting, but not so largely attended, meeting was the gathering of the Ozaukee county Holstein breeders at Port Washington on Saturday, June 24th. Mr. Irwin spoke here on cooperation, and was preceded by Mr. A. J. Glover, of Hoard's Dairyman, who pointed out that all the great advances made in dairying in Wisconsin may be traced back to the organization of the Wisconsin Dairymen's Association in 1872.

The Ozaukee county meeting fell on a warm, sunshiny day, which kept the members away, instead of inducing them to attend, as it was a splendid day to be at work in the fields and one which could hardly be well spent otherwise. Spring has been late; corn was weedy; some had to be replanted, and as Mr. Glover said: It was a healthy sign to see the farmers at work in the field. The Ozaukee County Association is increasing its membership rapidly and Mr. C. F. Dineen, secretary, reports great interest in the Cow-Testing Association, which was started a few months ago in the Cedarburg neighborhood.

Portage-Prairie Holstein Meeting.

The Portage-Prairie Holstein-Friesian Association, held on Friday, June 23d, was the most successful breeders' picnic ever held in the eastern part of Columbia county. It was held at the Bonnie Mead Stock Farm of Mr. J. W. Hutchinson, president of the association, a few miles from Randolph, and the success which attended the meeting speaks volumes for the activity of breeders in this community and the increased interest in better dairying. Between 300 and 400 persons were in attendance and listened to addresses by Mr. Hutchinson, Mr. John B. Irwin, of Minnesota, and Mr. E. L. Aderhold, of the state dairy and food commission.

The Portage-Prairie Association only recently sprung into the limelight, but by the success of this meeting, it has taken a place alongside the best community associations in the state. Mr. Hutchinson is a very active, enthusiastic president, and is leaving nothing undone to make this association a representative of all the Holstein breeders in that territory, and also to put this district on the map through advertising and publicity. Mr. Hutchinson is regarded as a pioneer in the community, having brought in the highest-priced bull in that section.

THE FATHERS LOOK ON WITH INTEREST WHILE BOYS JUDGE LIVE STOCK.

As one breeder expressed it, when farmers are found paying $25 service fees, as they are doing in that community to use a good bull, it is a sure sign they are working towards the best in dairying, and will be heard from in the future.

Plans for the picnic were all carried out very nicely. Every breeder brought his own lunch, which was augmented with hot coffee served on the farm, and following the afternoon meeting there was a baseball game. The Holland band from Friesland supplied the music, and Mr. Irwin talked along the lines of constructive breeding and co-operation while Mr. Aderhold, in his interesting way, pointed out the benefits to Wisconsin's dairy interests from the licensing of cheese and butter factories.

AUTOMOBILES FILLED THE BARN YARDS AT THE SUMMER MEETING PLACES.

Langlade Jersey Meeting.

The Langlade county Jersey breeders' picnic, held at Chas. Schotte's farm, brought out a good crowd of farmers and their families. Better than two hundred people were present in spite of the heavy rain, which set in right after dinner and continued throughout the afternoon.

Addresses were given by J. E. Showers, of Delavan, on the Jersey, and C. H. Everett on agricultural possibilities. The East Ackley mixed quartet, Messrs. Walsh and Duenk, and Mrs. Walsh and Miss Helmbrecht sang. Mary and Donald O'Conner gave recitations. Because of the rain, the program was adjourned from the attractive grove on the Eau Claire river bank, which Mr. Schotte had gone to a great deal of trouble to fix up, to his large barn.

Farmers came from a considerable distance to attend the picnic, Peck, Ackley, Polar, Rolling, Antigo, Aniwa, Embarrass, and Harrison being represented. The fact that Rolling Grange co-operated helped materially to swell the attendance. It was the first picnic of the kind to be held in the community, and farmers showed their interest by turning out most generously. To those who did not bring their dinner the ladies provided lunch at a normal charge. The day's program was concluded by a barn dance in the evening. A large crowd of young folks turned out for this.

ON C. C. BOYCE FARM, WAUPACA COUNTY—THIS FARM SUPPLIES MILK FOR WISCONSIN VETERANS' HOME.

(Concluded on page 19.)

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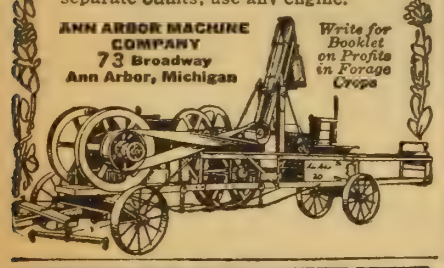

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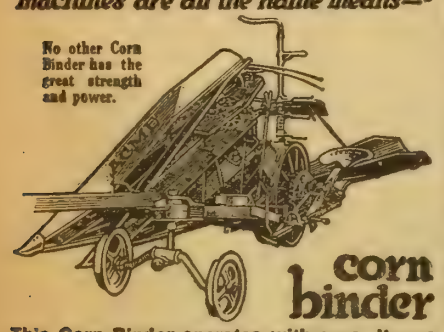

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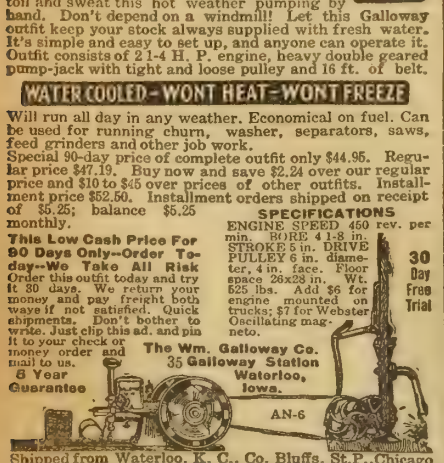

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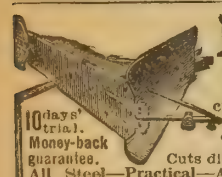

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The prologue, or Part First, is laid in New Orleans and concerns two brothers, one of whom has proved faithless to the girl who trusted him, the other one marrying the girl and giving her the name and home which the faithless brother had well-nigh robbed her of. The scene then shifts to the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold and "bunking" with an old Scotchman, named MacDougall, his only companion, save his beloved horse, Mowitza. A neighbor, named Hardy, comes to their camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company, although she is warned by her friends that his name is probably an assumed one and that he may, indeed, be a squaw man, with an Indian wife living somewhere, as nothing is known of him.

CHAPTER IV.

Banked Fires.

SHE did not look masculine, however, as she stood there, slender and brown from the tan of the winds; the unruly, fluffy hair clustering around a face and caressing a neck that was essentially womanly in every curve; only, slight as the form seemed, one could find strong points in the depth of chest and solid look of the shoulders; a veteran of the roads would say those same points in a bit of horse flesh would denote capacity for endurance, and, added to the strong-looking hand and the mockery latent in the level eyes, they completed a personality that she had all her life heard called queer. And with a smile that reflected that term she watched those two married lovers stroll arm in arm to where the freshly killed deer lay. Glancing at the group, she missed the face of their guide, a face she had seen much of since that sunrise in the Kootenai. Across the sward a little way the horses were picketed, and Mowitza's graceful head was bent in search for the most luscious clusters of the bunch grass; but Mowitza's master was not to be seen. She had heard him speak, the night before, of signs of grizzlies around the shank of the mountain, and wondered if he had started on a lone hunt for them. She was conscious of a half-resentful feeling that he had not given her a chance of going along, when he knew she wanted to see everything possible in this out-of-door life in the hills.

So, in some ill humor, she walked aimlessly across the grass where Clara's lecture on the conventionalities had been delivered; and pushing ahead under the close-knit boughs, she was walking away from the rest, led by that spirit of exploration that comes naturally to one in a wilderness, and parting a wide-spreading clump of laurel, was about to wedge her way through it, when directly on the other side of that green wall she saw Genesee, whom she had supposed was alone after a grizzly. Was he asleep? He was lying face downward under the woven green roof that makes twilight in the cedars. The girl stopped, about to retrace her steps quietly, when a sudden thought made her look at him more closely, with a devout prayer in her heart that he was asleep, and asleep soundly; for her quick eyes had measured the short distance between that resting place and the scene of the conversation of a few minutes ago. She tried wildly to remember what Clara had said about him, and, most of all, what answers Clara had received. She had no doubt said things altogether idiotic, just from a spirit of controversy, and here the man had been within a few feet of them all the time! She felt like saying something desperately, expressively masculine; but instead of easing her feelings in that manner she was forced to complete silence and a stealthy retreat.

Was he asleep or only resting? The uncertainty was aggravating. And a veritable Psyche, she could not resist the temptation of taking a last, sharp look. She leaned forward ever so little to ascertain, and thus lost her chance of retreating unseen; for among the low-hanging branches was one on which there were no needles of green—a bare, straggling limb with twigs like the fingers of black skeletons. In bending forward she felt one of them fasten itself in her hair; tugging blindly and wildly, at last she loosened their impish clutches, and left as trophy to the tree some erratic, light-brown hair and—she gave up in despair as she saw it—her cap, that swung backward and forward, just out of reach.

If it only staid there for the present she would not care so much; but it was so tantalizingly insecure, hanging by a mere thread, and almost directly above the man. Fascinated by the uncertainty she stood still. Would it stay where it was? Would it fall?

The silent query was soon answered—it fell, dropped lightly down on the man's shoulders, and he, raising his head from the folded arms, showed a face from which the girl took a step back in astonishment. He had not been asleep; but to the girl's eyes he looked like a man who had been either fighting or weeping. She had never seen a face so changed, telling so surely of some war of the emotions. He lay in the shadow, one hand involuntarily lifting itself as a shade for his eyes while he looked up at her.

"Well!" The tone was gruff, almost hoarse; it was as unlike him as his face at that moment, and Rachel Hardy wondered, blankly, if he was drunk—it was about the only reasonable explanation she could give herself. But even with that she could not be satisfied; there was too much quick anger at the thought—not anger alone, but a decided feeling of disappointment in the man. To be sure, she had been influenced by no one to have faith in him; still—someway—

"Are you—are you ill, Mr. Genesee?" she asked at last.

"Not that I know of."

What a bear the man was! she thought; what need was there to answer a civil question in that tone. It made her just antagonistic enough not to care so much if his feelings had been hurt by Clara's remarks, and she asked bluntly:

"Have you been here long?"

"Some time."

"Awake?"

"Well, yes," and he made a queer sound in his throat, half grunt, half laugh; "I reckon I—was—awake."

The slow, half bitter words impelled her to continue:

"Then you—you heard the—the conversation over there?"

He looked at her, and she thought his eyes were pretty steady for a drunken man's.

"Well, yes," he repeated, "I reckon—I—heard it."

All her temper blazed up at the deliberate confession. If he had seemed embarrassed or wounded she would have felt sorry; but this stoicism angered her, as the idea of drunkenness had done—perhaps because each set herself and her feelings aside—I do not know, but that may have been the reason; she was a woman.

"And you deliberately lay there and listened," she burst out wrathfully, "and let us say all sorts of things, no doubt, when it was your place as a gentleman to let us know you were here? I—I would not have taken you for an eavesdropper, Mr. Jack Genesee!" And with this tirade she turned to make her way back through the laurel.

"Here!"

She obeyed the command in his voice, thinking as she did so, how quick the man was to get on his feet. In a stride he was beside her, his hand outstretched to stop her; but it was not necessary, his tone had done that, and he thrust both hands into the pockets of his hunting coat.

"Stop just where you are for a minute, Miss," he said, looking down at her; "and don't be so infernally quick about making a judge and jury of yourself—and you look just now as if you'd like to be sheriff, too. I make no pretense of being a gentleman of culture, so you can save yourself the trouble of telling me the duty of one. What little polish I ever had has been knocked off in ten years of hill life out here. I'm not used to talking to ladies and my ways may seem mighty rough to you; but I want you to know I wasn't listening—I would have got away if I could, but I—was paralyzed."

"What?" Her tone was coldly unbelieving.

His manner was collected enough now. He was talking soberly, if rather brusquely; but—that strange look in his face at first? and the eyes that burned as if for the lack of tears?—those were things not yet understood.

"Yes," he continued, "that's what I was, I reckon. I heard what she said; she is right, too, when she says I'm no fit company for a lady. I hadn't thought of it before, and it started me to thinking—thinking fast—and I just lay still there and forgot everything only those words; and then I heard the things you said—mighty kind they were, too, but I wasn't thinking of them much—only trying to see myself as people of your sort would see me if they knew me as I do, and I concluded I would pan out pretty small; then I heard something else that was good for me, but bitter to take. And then—" His voice grew uncertain; he was not looking at the girl, but straight ahead of him, his features softened, his eyes half closed at some memory.

"And then what, Genesee?" She felt a little sorry for him as he was speaking—a little kinder since he had owned his own unworthiness. A touch of remorse even led her to lay a couple of fingers on the sleeve of his coat, to remind him of her presence as she repeated: "And then?"

He glanced down at the fingers—the glance made the hand drop to her side very quickly—and then he coolly brushed his sleeve carefully with the other hand.

"Then for a little bit I was let get a glimpse of what heaven on earth might mean to a man, if he hadn't locked the door against himself and dropped into hell instead. This is a blind trail I'm leading on, is it, Miss?—all tso-lo. Well, it doesn't matter; you would have to drop into a pretty deep gulch yourself before you could understand, and you'll never do that—the Almighty forbid!" he added, energetically. "You belong to the mountains and the high places, and you're too sure-footed not to stay there. You can go now. I only stopped you to say that my listening mightn't have been in as mean a spirit as you judged. Judging things you don't understand is bad business anyway—let it alone."

With that admonition he turned away, striding through the laurel growth and spruce and on down the mountain, leaving Miss Hardy feeling more lectured and astonished than she had often been in her life.

"Well, upon my word!"

It is not an original exclamation—she was not equal to any original thought just then; but for some time after his disappearance that was all she could find to say, and she said it standing still there, bareheaded and puzzled; then, gathering up her faculties and her skirts, she made her way back through the low growth and sat down where Clara and herself had sat only a little while before.

"And Clara says he doesn't talk!" she soliloquized, with a faint smile about her lips. "Not talk!"—he did not give me a chance to say a word, even if I had wanted to. I feel decidedly 'sat upon,' as Hen would say, and I suppose I deserved it."

Then she missed her cap and went to look for it; but it was gone. She remembered seeing it in his hand; he

must have forgotten and taken it with him. Then she sat down again, and all the time his words, and the way he had said them, kept ringing in her head—"Judging things you don't understand is bad business."

Of course, he was right; but it seemed strange for her to be taken to task by a man like that on such a subject—an uncouth miner and hunter in the Indian hills. But was he quite uncouth? While he made her stop and listen, his earnestness had overleaped that slurred manner of speech that belongs to the ignorant of culture. His words had been clearer cut. There had been the ring of finished steel in his voice, not the thud of iron in the ore, and it had cut clear a path of revelations. The man, then, could do more than ride magnificently, and look a Launcelot in buckskin—he could think—how deeply and wildly had been shown by the haggard face she had seen. But the cause of it? Even his disjointed explanation had given her no clue.

"Tso-lo," she thought, repeating the Chinook word he had used; "that means to lose one's way—to wander in the dark. Well, he was right. That is what I am doing;" and then she laughed half mockingly at herself as she added: "And Mr. Jack Genesee has started me on the path—and started me bareheaded. Oh, dear, what a muddle! I wonder where my cap is, and I wonder where the man went to, and I wonder—I wonder what he meant by a glimpse of heaven. I haven't seen any signs of it."

But she had seen it—seen it and laughed mockingly, unbelievingly, while the man had by sight been touched into a great heartache of desolation. And yet it was a commonplace thing they had seen; only two lives bound together by the wish of their hearts and a wedding ring—an affection so honest that its fondness could be frankly shown to the world.

* * * * * *

That evening Genesee came back to camp looking tired and told Ivans there was a grizzly waiting to be skinned in a gully not far off. He had a hard tussle after it and was too tired to see to the pelt; and then he turned to Miss Hardy and drew her cap from his pocket.

"I picked it up back there in the brush and forgot to give it to you before going out," he said.

That was all—no look or manner that showed any remembrance of their conversation. And for the next two days the girl saw very little of their guide; no more long gallops ahead of the party. Mr. Genesee had taken a sedate turn and remained close to the rest and if any of the ladies received more of his attention than another it was Mrs. Hardy.

He had for her something approaching veneration. In her tender, half-shy love of her husband she seemed to him as the Madonna to those of the Roman church—a symbol of something holy—of a purity of affection unknown to the rough man of the hills. Unpretentious little Tillie would have been amazed if she had suspected the pedestal she occupied in the imagination of this dark-faced fellow, whose only affection seemed to be lavished on Mowitza. Clara always looked at him somewhat askance; and in passing a party of Indians who were berry hunting in the mountains she noted suspiciously his ready speech in their own language, and the decided deference paid him by them; the stare of the squaws filled her with forebodings of covetousness for her raiment—of which several of them rather stood in need, though the weather was warm—and that night was passed by her waking dreams of an Indian massacre, with their guide as a leader of the enemy.

"Do you know them very well?" asked Miss Hardy, riding up to Genesee. "Is it entirely Chinook they are talking? Let me try my knowledge of it. I should like to speak to them in their jargon. Can I?"

"You can try. Here's a Siwash, a friend of mine, who is as near a Boston (American) man as any of them—try him."

And, under Genesee's tuition, she asked several questions about the berry yield in the hills and the distance to markets where belts could be sold; and the Indian answered briefly, expressing distance as much by the sweep of his hand toward the West as by the adjective "siah-si-ah;" and Miss Hardy, well satisfied with her knowledge, would have liked to add to her possessions the necklace of bear's claws that adorned the bronze throat of the gentleman who answered her questions.

The squaws slouched around the camp, curious and dirty, here and there a half-breed showing the paler blood through olive skin. The younger women or girls were a shade less repulsive than their mothers, but none showed material for a romance of Indian life. They were as spiritless as ill-kept cattle.

Back of some tethered ponies Miss Hardy noticed a dark form dodging as if to avoid being seen. A squaw possessed of shyness was such a direct contradiction of those she had seen that the white girl found herself watching the Indian one with a sort of curiosity—in fact, she rode her horse over in the direction of the ponies, thinking the form she had a glimpse of was only a child; but it was not, for back of the ponies it lay flat to the ground as a snake, only the head raised the eyes meeting those of Miss Hardy with a half scowl, and the bright-headed dress outlining the form of a girl perhaps twenty years old, and dressed much neater than any she had seen in the camp. By the light tinge of color she was evidently a half-breed, and the white girl was about to turn her horse's head, when, with a low exclamation, the other seized a blanket that had slipped from a pony, and quick as a flash had rolled her plump form in it, head and heels, and dropped like one asleep, face downward, in the trampled grass.

Wondering at the sudden hiding and its cause Miss Hardy turned away and met Genesee, who was riding toward her.

"Shaky-looking stock," he commented, supposing she was looking at the ponies. "The rest are going on, Miss; we have to do some traveling to reach our last camp by nightfall."

As they rode away Miss Hardy turned for a last look at that mummy-looking form by the ponies. It apparently had not moved. She wondered if it was Genesee the girl was hiding from, and if so, why? Was their guide one of those heroes of the border whose face is a thing of terror to Indian foe? And was the half-breed girl one of the few timid ones? She could not answer her own questions and something kept her from speaking to Genesee of it; in fact, she did not speak to him of anything with the same freedom since that conversation by the laurel bushes.

Sometimes she would laugh a little to herself as she thought of how he had brushed off that coat sleeve; it had angered her, amused her and puzzled her. That entire scene seemed a perplexing, unreal sort of an affair to her sometimes, especially when looking at their guide as he went about the commonplace duties in the camp or on the trail. An undemonstrative, prosaic individual she knew he appeared to the rest; laconic and decided when he did speak, but not a cheery companion. To her always, after that day, he was a suggestion of a crater in which the fires were banked.

(To be continued.)

LAW QUESTIONS.

Keeping Bees.

A Subscriber, Milwaukee, Wis.—I keep bees on my place and I wish to know if the law requires me to keep my hives a certain distance from the line between my land and the lands of others, and whether owners of adjoining land can prevent me by law from keeping bees on my place?

Answer.—The law does not require you to keep your bees at any specified distance from the lands of other people. Owners of adjoining lands cannot prevent you from keeping bees on your place.

Private Road in Wisconsin.

A Subcriber, Pound, Wis.—A bought seventy acres of land in onto county, Wis. This land is just inside of the line between Oconto county and Marinette county. The nearest public road to the land is a quarter of a mile distant in Oconto county. A public road in Marinette county is half a mile distant. A wants an outlet to the Marinette county road. He is at present traveling across B's land to the public road and B wants to collect damages from him for doing so. Can A compel Marinette county or Oconto county to open a road from his land to the public road, and if so how must he proceed?

Answer.—A cannot compel either county to open a road for him at public expense. To get a road from his place to the public road, he must present to the supervisors of the town in which his land is located, a sworn statement setting forth its description and stating that it is entirely surrounded by the lands of others, and hearing and notify the parties, and assess the damages to be paid by A for such road, and when A pays the amount so assessed, the road may be opened.

As an antidote for fungous diseases as well as scalicide, lime mixed with a little sulphur and stirred into the soil about plants is excellent. This should be used frequently, and when the soil is rather dry.

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Metropolitan	1.50	
Wisconsin Farmer	1.00	**$1.60**
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Every Week	1.00	
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CLUB NO. 13.

Kansas City Weekly Star	$ .25	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.15**
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CLUB NO. 14.

Every Week	$1.00	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.50**
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If none of the above combinations suit you, you can make your own club of papers in the following way: First select The Wisconsin Farmer and figure it at $1.00 per year. Then select any of the papers or magazines listed above and figure them at half their regular subscription price as indicated above, choosing whatever papers or magazines that appeal to you. As an example, suppose you should want The Wisconsin Farmer, Kansas City Weekly Star, Woman's World and People's Home Journal. You would figure The Wisconsin Farmer in the combination at $1.00; then you would add up the regular subscription price of the other three papers, which amounts to $1.10. Half of that amount equals 55 cents. Add this to the regular price of The Wisconsin Farmer, which is $1.00, and you would have a total of $1.55, which would be the rate for The Wisconsin Farmer, Kansas City Weekly Star, Woman's World, and People's Home Journal.

If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wisconsin.

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Proper Food For Young Children.

Simple bills of fare, helpful recipes and practical directions for the preparations of foods for children between three and six years of age are contained in Farmers' Bulletin 717, "Food for Young Children," issued by the United States Department of Agriculture, Washington, D. C. The bulletin, which was written by Caroline L. Hunt, under the direction of Dr. C. F. Langworthy, chief of the office of home economics, is easy to understand and should be helpful to mothers who are trying so to care for their children that they will grow up into stalwart and efficient men and women.

The author has carefully avoided the use of all technical dietary terms or systems of grouping and has so classified foods that any mother can meet the following definition of a satisfactory diet for a little child:

"A little child three to six years of age who is carefully fed in accordance with his bodily needs (as these are now understood) receives every day at least one food from each of the following groups:

1. Milk and dishes made chiefly of milk (most important of the group as regards children's diet), meat, fish, poultry, eggs and meat substitutes.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets."

The relation of food to the condition of the bowels is also an important matter. Grains, particularly those containing the outer or branny layers or coats, are laxative; so, too, are such mildly acid fruits as apples, oranges and grape fruit. So far, therefore, as the important matter of preventing constipation is concerned, coarse grains and mildly acid fruits serve the same purpose. When fruits are to be obtained in abundance the kind of cereal served is not of great importance. When they are not the coarser cereals should be used.

The basis of a child's diet should be clean, whole milk—at least a quart a day. Such milk, in addition to water, contains about half a cupful of the very best food substances—butter fat, milk, sugar, lime and other materials needed by the child to make muscle, bones and teeth. In addition, milk contains a substance thought to promote growth by helping the body make good use of other foods. Where good, whole milk is not obtainable, clean, fresh skim milk supplies these substances with the exception of the butter fat, and is, of course, preferable to dirty or questionable whole milk. Milk, however, contains very little iron and therefore spinach and other green vegetables and egg yolks, which are rich in iron, combine well with milk.

The child should drink the milk with the chill taken off, or should consume his full quart a day with cereals and in milk toast, cocoa, milk soups and stews, in cereal puddings, egg-and-milk puddings, custards, junkets, or simple ice creams. Milk stews may be made with vegetables or fish, or to vary the diet these things can be combined with cream sauce and served on milk toast. The bulletin therefore gives a large number of recipes for the preparation of various milk dishes which will help children consume the requisite amount of milk without growing tired of this valuable food. Those for milk soups will be found particularly useful, as they give the mother an easy means of preparing many vegetables which are essential in the child's diet.

Well-baked bread and thoroughly-cooked breakfast cereals are both good for children, and with milk should make up a large part of the diet. Bread and cereal mushes are to a certain extent interchangeable, but neither can take the place of milk, meat, eggs, fruits and vegetables. An ordinary slice of bread is equal in food value to about half a cupful of boiled or steamed cereals and about a cupful of flaked or puffed cereal. Different kinds of bread may be used for variety.

The yeast-raised bread given to young children should be at least a day old and should be toasted or twice baked. Hot breads are likely to be swallowed in large pieces and are therefore not desirable. Hot breads which are almost all crust, like thin tea biscuits or crisp rolls, are best of the hot varieties.

Under the heading, "Meat, Fish, Poultry, Eggs and Meat Substitutes" the author of this bulletin states that in some families children do not get enough meat and eggs; in others they get too much. A good general rule commonly followed is to give a child two years old or over an egg every other day and about the same amount (two ounces) of meat, fish or poultry on the intervening days. Where meat is omitted, care must be taken to see that other suitable foods take its place—preferably an extra amount of milk and eggs.

Fried meats should not be given to a child, because they are likely to be overcooked and tough and also because the fat may be scorched and thus changed in composition. Scorched fat is almost certain to be hurtful to children.

Meat is best given as broiled chop meat or in simple meat stews combined with vegetables. Poultry may be boiled and served with rice. When roasted only the tender portions should be fed. Highly seasoned stuffing or rich gravy should not be given to a young child.

Dried and other fish and oysters may be used in milk stews. Well-boiled fish is good for variety. Eggs must not be overcooked or they are likely to cause indigestion. The best way to cook eggs is to poach or coddle them. Scrambled eggs may be served occasionally, provided care is taken not to scorch the fat or to overcook the eggs.

Fat is an important part of the food of children. There is more than an ounce of fat (at least two and one-half level tablespoonfuls) in a quart of whole milk. If the healthy child is given a quart of milk, has butter on his bread, and meat or an egg once a day, he gets enough fat, and that which he received is in wholesome form. It is well, therefore, not to give such fatty foods as pastry, fried meats and vegetables, and doughnuts or rich cakes. If the child is constipated, the occasional use of cream or salad oil is desirable, for fat in abundance is laxative.

Bacon or salt pork, cut very thin and carefully cooked, may be given occasionally. It is very important not to burn the fat.

Vegetables and fruits are grouped together because they are similar in that both supply iron, lime and other mineral matters, and also mild acids. Vegetables are an important but often a neglected part of the child's diet. They should be served at least once a day, as they help to keep the bowels in good condition. Fruits are important for their flavoring, for their laxative effects and doubtless for other reasons, and should be served in some form at least once a day. Fruit juices and the pulp of cooked fruit, baked apples and pears, and stewed prunes are the safest. The child should not be allowed to eat the skins unless they have been made very tender by cooking.

Sugar is a desirable part of the diet provided it is given in simple sweets and not allowed to take the place of other foods and spoil the child's appetite. Simple sweets are such things as lump sugar, maple sugar, sirups, honey and plain candy, and those foods in which sugar is combined in simple forms with fruit juices (in lemonade, water ice, jelly, etc.), with flour or starch, as in plain cakes (cup cake, sponge cake, cookies), and with fruit, as in jams, marmalades, and similar things.

Questions Every Mother Should Ask Herself.

AT THE END of the bulletin, as a review, the author suggests that at the close of the day every mother might ask herself the following questions, to be sure that she has considered the important things in feeding her children:

Did each child take about a quart of milk in one form or another?

Have I taken pains to see that the milk that comes to my house has been handled in a clean way?

If I was obliged to serve skim milk for the sake of cleanness or economy, did I supply a little extra fat in some other way?

Were the fats which I gave the child of the wholesome kind found in milk, cream, butter, and salad oils, or of the unwholesome kind found in doughnuts and other fried foods?

Did I make good use of all skim milk by using it in the preparation of cereal mushes, puddings, or otherwise?

Were all cereal foods thoroughly cooked?

Was the bread soggy? If so, was it because the loaves were too large, or because they were not cooked long enough?

Did I take pains to get a variety of foods from the cereal group by serving a cereal mush once during the day?

Did I keep in mind that while cereals are good foods in themselves, they do not take the place of meat, milk, eggs, fruit, and vegetables?

Did I keep in mind that children who do not have plenty of fruit and vegetables need wholesome bread and whole grains served in other ways?

Did each child have an egg or an equivalent amount of meat, fish, or poultry?

Did any child have more than this of flesh foods or eggs? If so, might the money not have been better spent for fruits or vegetables?

If I was unable to get milk, meat, fish, poultry, or eggs, did I serve dried beans, or other legumes thoroughly cooked and carefully seasoned?

Were vegetables and fruits both on the child's bill of fare once during the day? If not, was it because we have not taken pains to raise them in our home garden?

Did either the fruit or the vegetable disagree with the child? If so, ought I to have cooked it more thoroughly, chopped it more finely, or have removed the skins or seeds?

Was the child given sweets between meals, or anything that tempted him to eat when he was not hungry?

Was he allowed to eat sweets when he should have been drinking milk or eating cereals, meat, eggs, fruit, or vegetables?

Were the sweets given to the child simple, i. e., unmixed with much fat or with hard substances difficult to chew, and not highly flavored?

Was the food served in a neat and orderly way and did the child take time to chew his food properly?

Wants Quilt and Cross-Stitch Designs.

To the Editor:—Will some of the readers of the sewing department send in some quilt and cross-stitch designs? I am a reader of your paper and enjoy it very much.

Miss G. L.

Asks For Rug Patterns.

To the Editor:—Will some reader kindly send in a pattern or two of rugs where one may use up men's coats and trousers? I would like a pattern of an oval rug, although another will be appreciated.

Miss E. E. A.

Ink Stains.

To the Editor:—I have been reading your department for a long time and have found many interesting and helpful things in it. I would like to ask if any of the readers can tell me how to get ink and indelible pencil stains out of white clothes. I am asking you because I want to be sure I am doing the right thing before I begin.

Miss M. J. D.

Clearing Out the Corners.

The corners and out-of-the-way places in the house always will be a constant source of annoyance to even the best housekeeper. For as the years pass a greater accumulation of those things "too good to throw away" is stored in these places until the housewife finds some day that every cranny is filled to the utmost with a lot of worthless "junk." Then she begins to consider a means of distribution which usually ends in wholesale burning and hauling to the dump heap.

Look into your closet. Just peep back into that dark corner. How many old gowns and antiquated pairs of trousers hang there? Some of the clothing may be useless and some just out of style. At any rate it no longer furnishes any part of your family's attire. The useless garments may as well be consigned to the ash heap, but those having perfectly good material in them should be given a chance to help out some needy person. There are any number of people in every community actually suffering for clothing. Why not pass some of your comforts along to those who have less? And do it before the clothing has hung around so long that it is a musty, moth-eaten piece of ancient history which has caused you no small amount of annoyance by being continually in the way. At the end of a season one should know perfectly well whether a garment is to be worn the next year.

But the closet is only one place where the housewife is confronted with the accumulation of years. Look, good housewife, on the top shelf of your kitchen cupboard. How many antiquated and even chipped pieces of pottery have you there, preserved for no special purpose, but simply because they still have their original shape of dish? How many times in one year have you had them down for any utilitarian purpose? Not once. Have you enjoyed moving them and washing their checked surfaces every time the cupboards are cleaned? You have pondered many times over their uselessness, but that frugal spirit handed down from your New England ancestors has stayed the wasteful hand which said "discard them." But when you take into consideration the energy you expend upon them, moving them and washing them, you are outraging the word saving. Shut your eyes if necessary, but after the first innova-

tion you will find enjoyment in the discarding process.

Again, look in your bags of pieces, your stocking bags, your dresser drawers and your desks. You will find rolls of cloth which belong to the dresses you had when you were first married. There will be stockings which it would take more time to mend than to earn a new pair. Your desk may contain old letters which have no possible value.

The magazines and papers have furnished no small problem. Here again is an opportunity for sharing luxuries with those less favored ones. Save your magazines, but every year or even semiannually give them to someone who has none. Many families are hungry for good stories and good solid reading. You may think when you placed that stack of Ladies' Home Journals, Literary Digests, Harper's, Century, Review of Reviews or what not in the attic that you are going to enjoy them on the rainy afternoons of the future. But you will not.

So, good housewife, have a clearing. Bring some of your eighteenth century gowns or suits of your husband to light from the dark recesses of your closet. Don't mind if hubby discovers some day and inquires where his wedding suit has disappeared to. There are some things a man doesn't need to know. Relieve your cupboard shelves of the burden which shames them. Dig a deep hole in the ground and bury their burdens along with the tin cans that clutter your yard or are hauled away to make some roadside an eyesore to the passer-by. Do not have an attic full of old magazines that someone would love to read. Relieve your house, your mind, your conscience. Make your home brighter and cheerier and at the same time add to the comfort of your less fortunate neighbor.—[Louise Overbaugh in Iowa Agriculturist.

Recipes.

Creamed Fish in Rice Cases.—Line a buttered mold about a quarter of an inch thick with boiled rice. Fill with chopped or boned salmon or other fish to which thick white sauce has been added. Brown slightly in the oven, turn from the mold, and serve.

Potato Salad.—Slice cold potatoes, a small onion and one cold, hard-boiled egg into a dish and sprinkle a little pepper and salt over this. Take three tablespoonfuls of vinegar, one of butter, one-quarter teaspoonful of mustard and heat it over boiling water. Let it get cold and pour over potatoes. Prepare in the morning and serve at night.

Turnips With Brown Sauce.—Peel the turnips and cut them in pieces like orange quarters. Boil in salted water till done and drain well. Have ready your pork steak or chops for dinner and when done lift out and pour off most of the fat, being careful to save the brown crumbs. Into this hot fat put one pint of milk into which has been stirred one tablespoon of flour smooth and creamy. Shake and stir until the brown sauce is rich and savory and then pour over the turnips. Serve at once.

Baked Turnips.—Peel and boil the turnips in salted water till tender. Put them into a bowl and hack with a knife until they are fine. Place in a baking dish with one cup of sweet milk to each quart of turnip and two tablespoons of butter. Mix well and add pepper. Smooth over the top and bake in a moderate oven until the top looks brown.

Spice Cookies.—Cream together two and one-half cups of sugar, one-half cup of butter; add to this two eggs, one cup seeded raisins chopped fine, one-half teaspoon soda, one teaspoon ginger, one teaspoon allspice, one teaspoon cinnamon, two cups flour. Bake in moderate oven.

Chile.—Slice and fry out one-half pound of fresh suet in a large skillet and add one sliced onion and one pound of round steak that has been ground in the food chopper. After cooking a few minutes in the suet add one small can of tomatoes and let cook together a few minutes before adding three cups of kidney beans, which have been well cooked. Salt to taste, then put in a tablespoon of chile powder and cook slowly all together twenty minutes.

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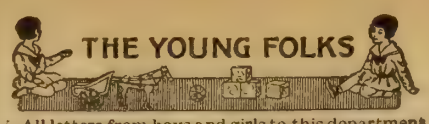


All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Friends With Baby Robins.

Dear Young Folks:—I have been reading almost all of the nice letters you have written, and I think it is my turn to write to you.

I am twelve years old and am in the eighth grade at school. I live on a 120-acre farm, but my papa does not farm all of the land; he rents some of it to our neighbor. We have four head of horses and thirteen head of cattle, but we only milk two cows. Sometimes I help milk. We have forty-seven little pigs. We also raise Buff Orpington chickens. I have one cat, which is twelve years old. I have fourteen little chickens which I am going to raise this summer and sell in the fall.

This spring a pair of robins built their nest in a tree close to our house; there were four blue eggs, but only three eggs hatched. In about two more weeks I looked in the nest and there was only one little robin in it, and when he heard me coming, he jumped out of the nest. I put him in it two times, but he jumped out every time, so I put him in the nest the third time, and he stayed. The next morning I saw him sitting on the edge of the nest. I guess he will be ready to fly after a little bit if he doesn't jump down again, for the old cat might get him.

I can crochet and play on the piano.

I will ask you a riddle: What would make more noise than a pig under a gate? Can you guess it? Perhaps I will write again some other time.

—Mae.

A Good Speller.

Dear Young Folks:—I enjoy your letters very much. I am ten years old and in the sixth grade at school.

I live on a farm of eighty acres. We have twenty-one or twenty-two sheep, one cow, seven head of horses, and lots of hogs.

I go to Sunday school almost every Sunday.

Last year I went to school eight months, and did not miss a single word in my spelling class. I can crochet, embroider, play on the organ and piano, and cook.

I have two cats and one dog. My dog is named Ring. She was named that because she has a white ring around her neck. She is yellow.

I will ask you a riddle: What has four fingers and a thumb, but is neither flesh, fish, nor bone?

—Marguerite.

This Boy Likes to Read.

Dear Young Folks:—I like to read the letters in the Young Folks' department every week, and would like to join your circle.

I am fourteen years old and in the eighth grade. I go a quarter of a mile to school in an independent district. My school was out the 5th of May.

I live on a 220-acre farm, seven miles from town. We have five work horses and my pony (Cricket), and I have a calf.

I read thirty-six books last year, and have read ten this year. I have fifteen books of my own, and I have an album, too.

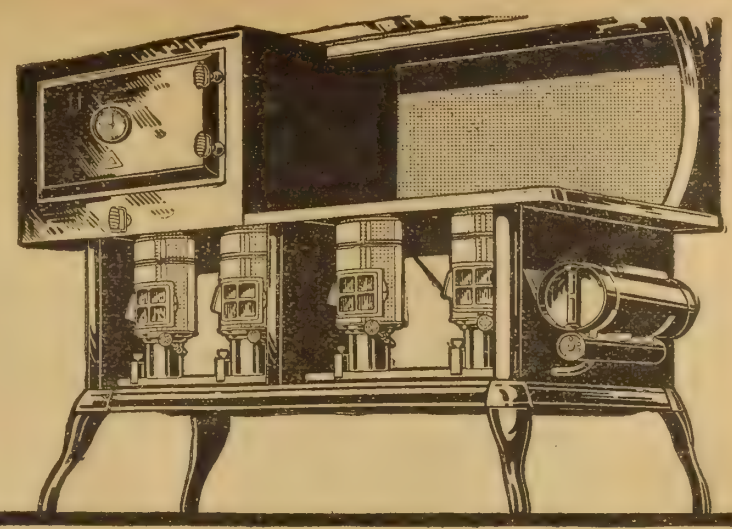
I go fishing lots of times. There are two rivers, two or three ponds that have fish in, and three creeks.

—Raymond.

Likes to Help Mother.

Dear Young Folks:—I certainly enjoy reading the Young Folks' page, and I want to join your circle. I live on a farm of 400 acres. I have one sister and three brothers. I am nine years old, and in the third grade at school. I live a mile from school and walk it every morning and night. I enjoy going very much.

We have one dog named Rover, a cat named Tom, and a Shetland pony that I can ride. His name is Dandy. Mamma has 200 incubator chickens. I like to help feed them, and I help do other little things for her. I love to live on a farm. Perhaps I will write again sometime. —Earl.



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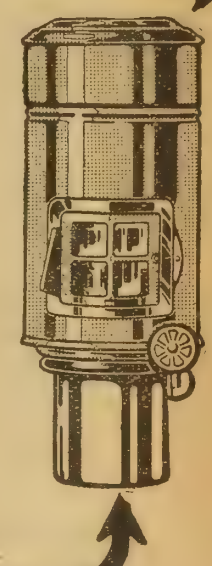

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International Sunday School Lesson.

Lesson for July 9, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

The Thessalonian Christians.

LESSON TEXT—I Thess. 2:17-20; 4:13-18; 5:14-24.

GOLDEN TEXT—If we believe that Jesus died and rose again, even so them also that are fallen asleep in Jesus will God bring with him.—I Thess. 4:14 R. V.

This epistle is probably one of the earliest of Paul's letters (A. D. 50-53?). It links itself closely with the seventeenth chapter of the Book of Acts. Driven from Berea, Paul goes to Athens and later to Corinth, while Timothy returns to Thessalonica and carries a report to Paul at Corinth. Whereupon, perhaps within six months, Paul writes his epistle. A study of the two letters addressed to this church teaches us how Paul advised and instructed his Gentile converts. The first is a particularly cheerful, positive and helpful exhortation.

I. Thanksgiving and Testimony (1: 1-90; 2:17-20). (1) **Salutation** (1:1) The phrase, "the church of the Thessalonians, which is in God" is nowhere else used. Some think it to be unique because Paul had so little to condemn or to criticize. The deity of Jesus Christ and that grace and peace proceed from God is clearly set forth. (2) **Thanksgiving** (vv. 2 and 3) (a) For works of faith; (b) for their "labor of love," and (c) their "patience" (endurance). That these works were "in the sight of God" is evidence of their genuineness, and such spiritual fruitage awakened (3) **Knowledge** in Paul's mind (v. 4). They were "elected" to salvation, holiness and likeness to Jesus (vv. 5-9; I Pet 1:2; Eph. 1:4, 5; Rom. 8:29). (4) **Testimony** (vv. 6-10). Paul could appeal to the known conduct of himself and his friends to substantiate, to prove, the standing of those candidates for holiness who had been "elected." His words had not come to them in mere exhortation and eloquence but "also in power," which governed their conduct. This was not to win applause, but in his own case he labored for their sakes (v. 5) and in their case they had received the word "with joy" in the midst of affliction to the end that they became examples (patterns or types; literally, like the far-echoing notes of a trumpet) (v. 7) to all that dwelt in the regions thereabout. Their obedience, consistency and missionary spirit (vv. 8-10) sounded forth everywhere, and all that

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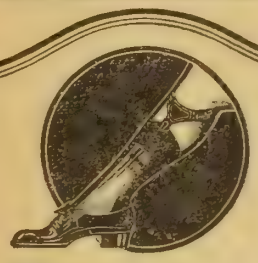

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needed to be done was to say, "Behold, the Church of Thessalonica!" (5) **Paul's glory and joy** (2:17-20). Paul sets forth his character as a Christian worker (2:1-16). (a) His physical boldness (vv. 1-2); (b) his faithful, impartial teaching (vv. 3-6), affectionately kind (7-8), unselfish, working for his own support (v. 9), holy and consistent (13-16). No one "had anything on him," and such a life dares to be bold, though it is not free from persecution (v. 15). (6) **Paul's desire** (2:17-20). He here sets forth why this letter was written. Separated from them by persecution, he desires to return and supply the things they were yet lacking, and to see face to face those whom he loved. Satan prevented (v. 18) doubtless using the bitter persecution stirred up against him. He had, therefore, sent Timothy from Berea to comfort them (3:15), who had made such a good report (3:1-10) that it urged Paul to greater prayer (vv. 11-13) on their behalf.

II. **Ignorance Illumined** (4:13-18). Paul rebukes certain sins (4:1-12), exhorting them to godliness and to love one another. He then touches upon a doctrine which was one of his strongest reasons for writing to these Thessalonians. The imminent return of Christ had been strongly emphasized, but in the months of Paul's absence some of their number had died; died without seeing Christ's promised glory. Would those who remained have any advantage over the dead saints when Christ should come? It is to set their thinking aright that Paul writes. This he does by outlining the great and blessed hope of the church in its "rapture" at Christ's coming. This is more clearly set forth here than anywhere else in the New Testament. Those who mourned over departed loved ones are not to "sorrow as those who had no hope." Jesus, the risen, everlasting Saviour and king, is certainly coming again in his kingdom of glory, "with a shout, with the voice of the archangel." Their sorrow is not that of the world, for those departed are but "sleeping" and will come back with Jesus when he comes. Together, they who sleep and we who are alive shall be caught up "to meet the Lord in the air," all to dwell together forevermore with the Lord.

Paul's description of the events of this second coming, this rapture of the church, has not yet been fulfilled, but he and the disciples were not mistaken as to its nearness, its imminence.

III. **The Hope of Church and State** (5:14-24). The letter closes with moral exhortations with reference to spiritual leaders, care of one another, the spirit of prayer; and he exhorts them not to "quench the Spirit" by despising prophesying, that preaching and testifying, which can be exercised by the weakest, feeblest member of the church if he be Spirit-endued.

Persons with a meat hunger who have been expecting that the grass-fed cattle would be in off the range this month or the next and would reduce the price of beef will be disappointed, says J. C. Lonergan, a Portland stockman. Mr. Lonergan has just made a circuit through the range country of Nevada, Idaho, Montana and Colorado, finding that everywhere the season is delayed. "Stockmen tell me they experienced the hardest winter in twenty years," he said. "The cattle on the range are in poor condition and it will be September before they will come in to the markets in any quantity. Beef will remain high in price until September, at the earliest."

While attempting to drive away a bumblebee which had settled on his knee, Sydney Brewster, of the fashionable colony at Glen Cove, L. I., wrecked his motor car against a tree. One of the six occupants, Miss Katherine Hall, of New York, was thrown to the ground and sustained a fractured leg. Brewster was taking his week-end guests for a short spin. When he took his hand from the wheel to brush the bee away he lost control of the car, which jumped the gutter, plowed through a picket fence and lodged in an apple orchard.

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1780—A popular and comfortable breakfast sack and cap. The pattern is cut in 3 sizes: Small, medium and large and requires 3⅜ yards of 36-inch material for the sack and ⅞ yard for the cap for a medium size.

1267—A dainty infants' set, comprising, bonnet, coat, dress and wrapper. The pattern is cut in one size and requires: For the dress, 2¾ yards of 36-inch material. For the coat, 4¼ yards of 27-inch material. For the wrapper, 2⅝ yards of 27-inch material. For the cap, ½ yard of 24-inch material.

1768—Girls' dress with strapped plaits and with sleeve in either of two styles. The pattern is cut in 3 sizes: 2, 4 and 6 years. It requires 2⅝ yards of 44-inch material for a 4-year size.

1405—A new trim apron model. The pattern is cut in 3 sizes: Small, medium and large. It requires 5 yards of 36-inch material for a medium size.

1609—A pretty dress for the little miss, with or without bolero, with sleeve in either of two lengths, and with high or square neck edge. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3⅜ yards of 44-inch material for a 6-year size.

1781—A stylish summer gown. The pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 5 yards of 36-inch material for a 16-year size.

1767—A stylish dress for the little miss. Plaid gingham, striped seersucker or figured percale are nice for this style. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 4⅛ yards of 36-inch material for an 8-year size.

1760—An attactive negligee. This smart style is lovely for any of the pretty inexpensive crepes, lawns, organdies or voiles. The pattern is cut in 3 sizes: Small, medium and large. It requires 6¼ yards of 44-inch material for a medium size.

9716—Girls' underwaist and drawers. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires ¾ yard of 36-inch material for the waist and 1 yard for the drawers for a 6-year size.

Waist 1763-Skirt 1757—A chic summer frock. The waist pattern 1763 is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. The skirt pattern 1757 is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 7⅞ yards of 36-inch material for a 36-inch size. Two separate patterns, 10 cents for each pattern.

1772—A simple, attractive dress for home and porch. The pattern is cut in 6 sizes: 34, 36, 38, 40 42 and 44 inches bust measure. It requires 5½ yards of 44-inch material for a 36-inch size.

1779—A dainty dress for "party" or other occasions. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 3¼ yards of 44-inch material for the dress without fichu and flounces and 5¾ yards with fichu and flounces, for a 14-year size.

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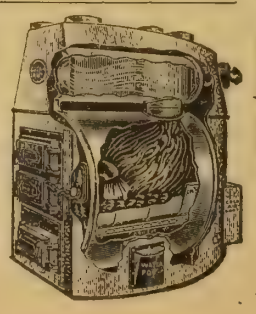

Live Stock Summer Meetings.

(Continued from page 13.)

In his address on the Jersey, Mr. Showers urged strongly the value of pure-bred sires in building up a herd. He gave a demonstration talk on the points of a good sire with Mr. Schotte's prize cow in the ring. "Such cows as this," he declared, "cannot be bred, save by the use of a pure-bred sire." The value of the Jersey, not only as a producer of a product rich in butter fat, but also as an economical producer were strongly emphasized. Despite severe weather conditions the Jersey will produce profitably if given a chance. Good feed and good care are necessary, of course.

Wisconsin Jersey Meeting.

The annual summer meeting and picnic of the Wisconsin Jersey Breeders' Association was held last week, this meeting proving to be one of the best ever held by the Jersey breeders of Wisconsin, and one which marks new enthusiasm for the Jersey cow in this state.

The meeting was held in two divisions this year, in order that breeders for all parts of the state might attend at the least expense and loss of time. The initial gathering was on Thursday, June 29th, at the Red Oak farm of Mr. F. R. Constance at Waupaca, and the second-day gathering was at the Fewacres farm of Mr. Frederic Underwood, at Wauwautosa, Milwaukee county. Both meetings were very successful, were well attended, and the greatest interest and enthusiasm prevailed.

Elaborate preparation had been made by both Mr. Constance and Mr. Underwood, but the weather was threatening at Waupaca, which, no doubt, cut down the attendance. A hard rain early that morning put the roads in bad condition, despite which many breeders drove in their cars from points seventy-five to 100 miles away. This is the spirit that prevailed at the meetings, and with new life in the American Jersey Cattle Club and an increased interest in the state association, the breeders feel that the Jersey is coming into her own again.

The writer has seldom attended a gathering where every visitor was made to feel more at home. The Commercial Club co-operated with the Waupaca County Jersey Breeders' Association and no stone was left unturned to make it an enjoyable and long-to-be-remembered occasion. The women who prepared the bounteous picnic lunch, which was spread at noon under the spreading elms of the Constance lawn, are entitled to credit for the large part they played in the success of the gathering, and the general verdict was that the Waupaca county breeders had more than covered themselves with honor.

Mr. F. F. Showers, of Delavan, state president, presided and ran off the interesting afternoon program with good speed. Music was supplied by an orchestra from the city and soloists from the neighboring farms, and the splendid speaking program was augmented by readings, etc., from Waupaca county girls and boys. Following the meeting the guests were taken by the Commercial Club for an auto trip over the city, and a ride on the "Chain of Lakes," Waupaca's summer resort. As this issue of The Wisconsin Farmer goes to press early, because of the July Fourth holiday, a more detailed report of both meetings will appear in next week's issue.

Dr. M. D. Munn, president of the American Jersey Cattle Club, was unable to attend because of pressure of other business in connection with boosting the Jersey cow, and in his place came Wallace MacMonnies, extension manager of the club, who gave a very enthusiastic talk on the Jersey cow as the most economical producer of butter fat, and the aims and purposes of the cattle club for the next year.

Mr. F. H. Scribner, of Rosendale, the well-known Jersey breeder, spoke on the virtues of the Jersey and discussed what he terms the three essentials in successful dairying—feeding, breeding and care. Mr. C. P. Norgord, commissioner of agriculture, discussed the plans for an accredited tuberculin test, a test with which our readers are more or less familiar. Mr. Harry Jenkins, of the Jersey Bulletin, talked on the value and need of publicity if the Jersey breed is to hold its supremacy. Prof. A. C. Oosterhuis, of the college of agriculture, gave a very interesting demonstration of the desirable and undesirable qualities in the dairy cow.

Mr. Constance gave the address of welcome, to which Mr. E. E. Wyatt, of Tomah, secretary of the state association, responded. Mr. H. C. Frihart, president of the Waupaca county association, spoke of the work in that county, and Mr. A. J. Peterson, of Eland, secretary of the Marathon & Shawano County Jersey Association, brought a word of enthusiasm from the breeders of those counties.

On the second day at Fewacres Farm, where the visitors were the guests of Mr. Underwood, Mr. Norgord, Mr. Oosterhuis, Mr. MacMonnies and Mr. Jenkins repeated their addresses of the first day. The program was made even more interesting by an added address from Mr. J. O. Emery, former dairy and food commissioner. Mr. Julius Ries, secretary of the Waukesha County Jersey Breeders' Association, gave the address of welcome, and the response was by Mr. W. H. Clark, of Rice Lake.

Washington County Holstein Meeting.

About 500 people attended the annual summer meeting of the Washington County Holstein Breeders' Association at Cedar Lawn Farm, near West Bend. Most of the visitors came in automobiles and about 150 machines were on the ground. At noon a basket picnic dinner was held. The Schroeders served coffee and cream to complete the meal.

After dinner Prof. G. C. Humphrey, of the University of Wisconsin, conducted a demonstration of the true type of dairy cow, and also gave a very interesting address. Superintendent George T. Carlin arranged a cow-judging contest, at which score cards were distributed among those breeders that desired to join in applying their judgment to the animals presented. Short talks were given by prominent breeders present, among them being Lawrence Murphy, of the Badger Stock Farm of Hartford, who gave valuable information on the marketing of stock, J. E. Riordan, of the Harvest Farms at Mayville, and W. C. Schroeder.

It was a fair day; this circumstance in the first place accounts for the tremendous success of the gathering. Everybody appeared to enjoy it thoroughly to associate with genial people of common interests, to listen to helpful advice, and to take in the hospitality of the Schroeders. The success of the picnic as an annual affair is assured, and the association surely can feel elated over the first of its kind ever held in this county.

Rock County Holstein Breeders.

To the Editor:—A meeting of the Holstein breeders of Rock county was held in the city of Janesville on June 24th, and a temporary organization effected.

At this meeting it was decided to hold a regular meeting sometime during the month of August, to perfect a permanent organization; notice of the time and place will be published in the papers and also mailed to the different breeders.

Mr. K. J. Bemis, who had recently attended the National Association meeting at Detroit, gave an interesting talk on the subjects brought up at the meeting, and Mr. C. J. Schroeder, of Racine, secretary of the State Holstein Breeders' Association, was present and also gave the breeders an interesting talk on the value of organization and co-operation. The meeting was a very enthusiastic one, and all the breeders present promised their loyal assistance in organizing a big association in Rock county.

Mr. K. J. Bemis, of Hanover, was elected chairman of the temporary organization, Wallace Noey, of Milton Jct., treasurer, John W. Jones, of Milton Jct., vice chairman, and John L. Fisher of Janesville, secretary. The following breeders were present at the meeting: J. J. Sheehan, Hanover; J. L. Fisher, Janesville; Wallace Noey, Milton Jct.; Geo. Williams, Orfordville; J. W. Richardson, Edgerton; B. Hollenbeck, Clinton; D. D. Purnell, Janesville; C. J. Schroeder, Racine; Jacob Wiggins, Hanover; O. P. Gaarder, Orfordville; W. C. Huginnin, Janesville; J. H. Green & Son, Clinton; J. W. Jones, Milton Jct.; K. J. Bemis, Hanover.

John L. Fisher.

Grant County Meeting.

Bad weather kept down the attendance at the third annual meeting of the Grant county Holstein breeders at Lancaster, June 15th. Mr. F. B. Fries, of Richland Center, gave an address on "Building up the Holstein herd." Another meeting will be held sometime in the fall.

The following officers were elected for the coming year: Jay F. Morse, Mt. Hope, president; Lee Brookens, Bloomington, vice president; Frank Horton, Fennimore, secretary; L. B. Roesch, Lancaster, treasurer; Wm. Weinbrenner, Stitzer, and Clyde Farris, Fennimore, members of the executive committee, together with the officers.

Jersey Breeders' Meeting.

Jersey breeders of Eau Claire county met at the C. C. Smith farm, June 21st, there being about 250 present. The following officers for the ensuing year were elected: C. L. Craker, Augusta, president; Eugene Herrell, Augusta, vice president; Rex McCauley, Osseo, secretary; A. W. Balliet, A. C. Bradford and C. C. Smith, directors.

Rusk County Holstein Breeders.

The Rusk County Holstein Breeders' Association was recently organized with twenty-five members, and a campaign is being carried on to increase the number to fifty, J. A. Schmidt, Ladysmith, is secretary.

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CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

THE NEWTON REMEDY CO., Toledo, Ohio

Shoo-Fly THE ANIMALS' FRIEND

For keeping flies and many other insects off of animals—in barn or pasture—longer than any imitation. Used and endorsed since 1885 by leading dairymen.

$1 WORTH SAVES $20.00 in milk and flesh on each cow in a single season. Excellent for galls. Allays itching. Aids in keeping animals from irritating sores by rubbing or stamping. Excellent for lice and mites in poultry houses.

$1.25 ($1.50 west of Mississippi River) will bring you enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. EXPRESS PREPAID. Money back if not satisfactory. Name Express Office. Booklet FREE. Special terms to agents.

Shoo-Fly Mfg. Co., Dept. 21, 1310 N. 10th St., Phila. Editor knows from experience Shoo-Fly is O. K.

BIG 4 POULTRY JOURNAL

Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thoreson, Shell Lake, Wisconsin.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

John L. Fisher Sells Hershey Farm's Foundation Stock.

JOHN L. FISHER, the well-known breeder of Duroc Jerseys, of Janesville, Wis., reports the sale of ten sows and a boar to the famous Hershey Industrial School, which is a part of the Hershey Farms, Hershey, Pa. The superintendent has advised Mr. Fisher that the consignment arrived in good shape and that he was well pleased with them. He also stated that he had corresponded with several of the leading breeders, but selected the Fisher stock because they wanted animals with plenty of size, bone and lots of stretch, also animals that were well bred. The Hershey Farms consist of 8,000 acres, on which 1,000 cows are kept to produce the milk for the famous Hershey chocolates. It is some honor for a breeder to sell foundation stock to such a corporation and we are indeed glad to know that they were selected from a Wisconsin breeder. The sows that made up the consignment were daughters of King the Col., Chief's Col., Fisher, Illustrator Jr., and Defender 3d, their dams were daughters of Joe Orion 2d, Critic B., Marion's Wonder and other noted boars—they certainly cannot find fault with this line of breeding. At this time Mr. Fisher is offering four fall boars sired by the great King the Col., and three by Chief's Col. Fisher, besides fifty spring boars. We cannot talk about this herd without saying something about Gold Bond, the good boar that heads this herd. We class this boar as one of the very best in the state. He is a two year old and a boar of great scale. Has a wonderful back, heavy bone, deep, smooth sides and a good head, eye and ear. No boar of the breed has a better pedigree, he being sired by Disturber he by Defender out of Lucy Wonder 112th by Chief's Col. Dam, Tattletale 2d by Defender out of old Tattletale by Educator by Ohio Chief. The greatest boars, as well as sows the breed has produced are found in the pedigree of Gold Bond. As mentioned above, there are few boars any better than Gold Bond. Mr. Fisher has recently decided to show this boar, but at this late date he may not be able to get him in condition to show to the best advantage. Here is a great boar, keep him in mind. When writing Mr. Fisher about his herd please mention The Wisconsin Farmer. See page 22.—Adv.

Small Angus Herd For Sale.

THERE are several Aberdeen Angus bulls for sale over the state, but few cows and heifers, for there has been such a brisk demand for breeding stock, the various breeders are sold low. Here is a chance for someone to get a few cows and heifers at a very reasonable figure. F. C. Lewis, Bridgeport, Wisconsin, expects to go into the dairy business and for that reason he is offering to close out the Aberdeen Angus cattle that he has. His herd isn't large but there are some good animals among the offering. Of the lot there are five cows and four of these have calves at foot—two bull and two cow calves—and are bred back. Three of the cows are sired by Abby's Duke 112094 and two of them by Pine Lawn Hero 93055. These cows are in the prime of life, are sure and regular breeders, as the calves at foot show and are good individuals. There are two very typey coming two-year-old heifers. There is one yearling bull that is quality from end to end, sired by Tom June 170794 and out of a Miss Copeland dam. He was dropped May 30, 1915, and is old enough for light service. The herd bull, Doddie Kin, was dropped May 21, 1913, making him a short three year old. He is sired by Black Gaylawn 91941, and his dam is Liberty Grange Orah 2d 121097. You will have an opportunity to see his get in the herd which will show that he is a sire of merit. Mr. Lewis prefers to sell the entire bunch to one man if possible and if someone can use the lot he will make a price on them that certainly should be attractive to you if you are interested in this breed. Here is a chance for the breeder or a scalper can make money on them and need not keep them long either. Of course, he will sell them individually if you want to buy them that way. If you visit the herd you will be pleased with the cattle. His advertisement appears in this issue and we would suggest that you write for particulars at once, for there is a strong demand for Angus cattle and no doubt these will be sold within a short time. Kindly mention The Wisconsin Farmer when writing. Bridgeport is the first station east of Prairie du Chien on the Milwaukee. See page 23.—Adv.

The Short-horn Works Improvement.

WHERE Short-horn blood is applied, regardless of the foundation on which it is applied, there is improvement. The beef producer may safely use a Short-horn bull, because increased scale, bone and economic gains are assured. The dairy man need not hesitate to use a Short-horn bull, because he avoids the risk of reducing the milk supply and at the same time will produce calves that will sell much more readily and at advanced prices. The average farmer has long since found the Short-horn adapted to his varied needs, and, as a result, the Short-horn bull finds favor among this class. The extent to which Short-horn blood has improved the cattle stock in America can never be estimated. The Short-horn seems equally well adapted to all prevailing conditions. The American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill., will be glad to furnish information to all inquiries in reference to Short-horn breeding stock. Note the association's announcement on page 23.—Adv.

Kartman's Poland Chinas.

CHRIS KARTMAN, Cassville, Wis., has a bunch of Polands that are bred in the purple. First the herd boar, Monster Big Bone, is sired by Black Big Bone and anyone posted on Poland China pedigrees knows the record of the famous Black Big Bone. Others in the herd are sired by King Joseph, a son of Big Joe, the boar that Mr. Fesenmeyer considers the best hog he ever owned. The get of Big Crusader 2d by Philip's Big Crusader, is quite prominent in this herd. The sows in this herd are by such boars as Mammoth Wonder, a son of A Wonder 107353, Black Big Bone, Monroe's Jumbo by Big Jumbo (Mouw), Big King Equal by Lawson's Long King Equal, Big Miller 2d by Big Miller and Columbus, one of the greatest boars ever owned in Nebraska. We doubt if there is another herd in the state that has a line of breeding that is more popular than that found in the Kartman herd. The spring pigs on this place are a little late, but some of them weighed, two weeks ago, between ninety and 100 pounds and that is better than many that we have seen. At a later date we will have more to say about this herd of Polands. Mr. Kartman has claimed February 16th for his bred sow sale and we will say now that there will be some attractions offered in this sale.—Adv.

Pigs Have Done Fine.

IN sending in change of copy for his Poland China advertisement, L. P. Martiny, Chippewa Falls, Wis., writes as follows: "I would like to have you see my pigs now, they have certainly done well since you were here. There are some real herd boars in those litters that you liked, they are good enough to go any place in the United States on approval. It looks like we were going to have a good year for the hog business." Mr. Martiny has some good Polands and he is a good caretaker. The pigs mentioned above are out of some of his best sows and come from championship breeding. This is another one of the Poland herds that we are glad to stand back of, for we are confident that you will be pleased with what you buy. If you are going to need a Poland China boar write Mr. Martiny for particulars and in so doing kindly mention The Wisconsin Farmer. See page 22.—Adv.

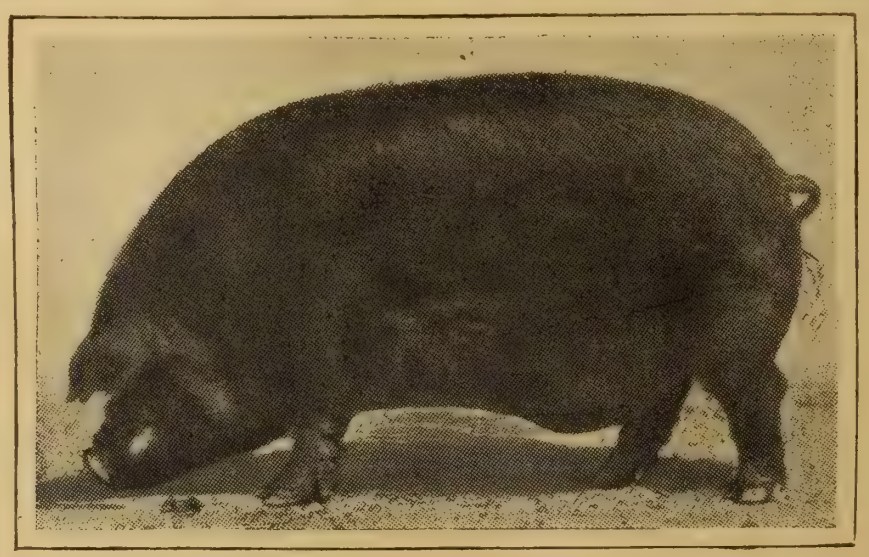
Parker & Son, the Latest Short-horn Converts.

MOST all of the Duroc Jersey breeders know the congenial Ed Parker, of Janesville, Wis., and it is with pleasure that we announce the fact that he has purchased a foundation herd of Short-horns. Ed is strong for the Durocs while his son, Phillip, leans toward the cattle game, so in all probability the care of the stock will be divided in that manner, but that is immaterial, we are glad to see them get into the pure-bred cattle game. The eight head of females that go to make up the foundation are of straight Scotch and Scotch topped breeding, but the bull purchased is of the very best Scotch breeding. He is sired by the imported bull, Rapheal, and his dam is by imported Bandsman, two herd bulls of note. This bull was purchased of J. E. Kennedy, Janesville, Wis. The Parker Short-horns will be heard from later.—Adv.

CHIEF INVINCIBLE, the biggest and smoothest Duroc boar in the Northwest. Owned by F. W. Washburn, Lake Crystal, Minn.

Cloverdale Ayrshires.

WE recently spent the day with James Van Etta, the congenial owner of beautiful Cloverdale Farm, Lima Center, Wis. When it comes to Ayrshire cattle and Clydesdale horses, Jimmie has the goods. No small amount of capital was required to establish this herd of Ayrshires and while he has only been in this game for a short time he has the satisfaction of knowing that he has some of the best that the breed affords. In Holehouse Wanderer, Mr. Van Etta has one of the greatest Ayrshire bulls that ever headed a herd. His breeding is the very best and he has been junior champion at the Chicago and Waterloo Dairy Shows. A full herd of Ayrshires will represent Cloverdale Farm at the various fairs this fall and at that time some of the older breeders will know that Mr. Van Etta is "on the job." Besides the Ayrshires, he will also have out his usual string of Clydes, and in some of the classes he will have very strong entries. If you are interested in Ayrshires write for general particulars, he has some choice young bulls for sale out of A. R. cows and he will also sell a few females, they will suit you. Please mention The Wisconsin Farmer. See page 23.—Adv.



E. J.'s CRIMSON WONDER, owned by Jno. Swenson, Willmar, Minn., and the kind to pattern after. A 1,000-pound boar, but the illustration doesn't show his size.

W. F. Ackerman's A.'s Big Orange.

WE had been told that W. F. Ackerman, Glen Haven, Wis., was the owner of a good Poland China boar and it was our pleasure to visit this herd a short time ago and the fellow that gave us the tip on this boar knew what he was talking about. However, the herd boar is not the whole show on the farm. A.'s Big Orange is a spring two year old, sired by Long Orange through Ott's Big Orange to the noted Big Orange. His dam is by Klever's Giant he by Giant Leader. Now this boar is right. In the first place he has size, has a wonderful back that will never go down, has deep, smooth sides, without a wrinkle, stands on the best of feet and bone and has a good head and ear. Perhaps the best senior yearling boar we have se n we found on this farm and he is by A.'s Big Orange and his dam goes back to Blue Valley Quality, the boar that put Thos. Walker, of Nebraska, on the map. This fall yearling will be sold in the Grant county boar scale, October 10th, and we doubt if there will be a larger or better boar in the sale. We also saw three other fall boars, that are not common by any means, sired by the same boar and out of a Longfellow bred dam. Anyone wanting fall boars that have the size and smoothness will be pleased with these. The price is right. Sixty pigs make up the spring crop and most of them are by A.'s Big Orange, or a son of his and they are out of good, big, well-bred sows. The pigs will be ready to ship July 1st and if you want to get in right a boar or gilt sired by A.'s Big Orange. There are several good boars of the Poland China breed in this state and A.'s Big Orange is one of the head-liners. Keep him in mind. Mr. Ackerman's advertisement will appear regularly in The Wisconsin Farmer from now on and we are glad to recommend this Poland herd. Write him for particulars, but please mention this publication when so doing. See page 22.—Adv.

A Great Chester White Prospect.

WE have called attention to several outstanding Duroc and Poland China boars that we have seen in this state, but we havn't said much about Chester White boars simply because there are only a few real good herds of this breed in the state and most of them could improve their herds by using a better boar, but then what herd is there that couldn't be improved upon in various manners. We have recently seen a junior yearling Chester White boar that appeals to us more than any boar of his age, of the breed, that we have had the pleasure of seeing. He is owned by Wm. Butts, Evansville, Wis., and is sired by the noted Henshaw and his dam is by Callaway's Choice. Now this boar has size and that is what most of you Chester White men need, more size. The little kind with the fancy head and ear, light bone and about as wide as they are long look nice and have been winning in some of the shows, but only because the small-type man has been judging. The ultimate end of the hog is the pork barrel and when you ship or sell a load of hogs you get paid for the weight, and not by the looks. The Poland men had to come to it and the Duroc men are trying as fast as possible to get them big and the Chester men must eventually "follow suit" and those that get in on the ground floor will reap the harvest. Getting back to our subject, the Butts boar is good, we never saw a boar stand up better on his feet, he has the best of bone, a wonderful back and a real boar in every respect. As we say, he has the most size for his age of any Chester we have seen, but he can still be bigger. Mr. Butts is a good caretaker and we feel sure this hog will "look like the money" when he goes to the fairs this fall.—Adv.

Interesting Short-horn Notes.

IN view of the fact that many of our readers are dairymen it is not likely that they pay much attention to what is going on in the beef cattle circles. However, there has been some Short-horn history made during the past month and this should be of interest to all breeders of pure-bred stock and with that point in view we list below some of the record-breaking sales of Short-horn cattle that have taken place since June 1st. C. A. Saunders, Manilla, Iowa, sold forty-nine head at an average of $1,068. Carpenter & Ross, Mansfield, Ohio, sold ten bulls at an average of $1,370, selling a son of Avondale to an Oklahoma buyer for $7,000. Forty-five females in the same sale averaged $933. Thomas Stanton, Wheaton, Ill., sold twenty-five head for $1,160 average. Frank R. Edwards, Tiffin, Ohio, made an average on forty-one head of $638. C. J. McMaster, at Altona, Ill., averaged $584. Bellows Brothers, Maryville, Mo., leads the list by selling forty head at an average of $1,100. The Rees-Kane combination sale at South Omaha, resulted in an average of $535 on forty-six head. Never before in the history of the Short-horn breed has there been so many high-class sales commanding these high prices. It only

goes to show that there is a growing demand for well-bred cattle and the man that will raise this kind will get his reward. Col. Carey M. Jones had the honor of officiating at these record-breaking sales.—Adv.

Marquart Brothers Have Excellent Milking Short-horns.

THOSE interested in milking Short-horns should not overlook the herd owned by Marquart Bros., of Milton Junction, Wis., for they have a herd that ranks among the best. Now this is not an ordinary herd of milking Short-horns. We have known men to advertise "milking Short-horns" just because they have a few cows that give a little milk, but such is not the case with the Marquart herd. Their herd has been bred for milk and beef, sires have been used that are out of record cows and from ancestors that have been great producers. One of the things that impressed us was the size of the individuals in the herd. Great, big, broad-hipped cows with great digestive capacity with neat head and necks and the breeding cows all have calves or were heavy with calf. They are offering seven young bulls for sale at this time and they are "dandies." They are in nice condition, very smooth, good colors and of the best of breeding. Most of them are sired by Queenston Duke, a white bull that weighed 2,300 pounds as a four year old. He is sired by Duke of Edgewood whose five closest dams averaged over 10792 pounds of milk. The dam of Queenston Duke is Queenston Ruby, an Ohio bred cow that produced 8,685 pounds milk in 261 days. So much for the sire of the young bulls being offered. Perhaps the best of the bulls is a dark roan whose grandam has a record of 8,000 pounds and a 4 per cent test. His dam is by Kinsella 6th, the former herd bull whose dam holds the world's three-year-old record for the breed, producing 11,062 pounds milk. There is another good roan bull whose dam is in yearly test now and is coming fine. We won't mention all of the bulls, most any one of them will make a creditable herd header. The cows in this herd give from 6,000 to 10,000 pounds milk in a year. The owners keep records of their cows and belong to the testing association, so you get records when you buy from this herd. These gentlemen sold some twenty bulls in about six weeks last fall through The Wisconsin Farmer. Their breeding is in demand and if you need something in the bull line, don't hesitate. See page 22.—Adv.

Smiley & Son Claim February 22d.

THOSE that contemplate making bred sow sales the coming winter should claim their dates as soon as possible, for in that manner you will not conflict with other sale dates. The best dates are being taken and if you expect to make a sale you should pick your date at once and if you will advise this office your date will be claimed in the "Sale Dates" column of The Wisconsin Farmer. We have just had a letter from Wm. Smiley & Son, the popular Poland China breeders of Albany, Wis., advising that they have claimed Thursday, February 22d, for their annual bred sow sale. In sending in change of copy for their advertisement they say, "We do not care to sell any of our early gilts, as we wish to hold them for our sale which will be February 22d. We have some of the best pigs we ever raised and we want to keep the best ones for this sale. The pigs are coming fine and they sure have size. We will sell some of the later gilts. Have only two fall boars left and have many inquiries since our advertisement appeared two weeks ago. We look for a good business this year." The Messrs. Smiley have the right idea about their gilts. If you expect to make a sow sale, do not sell off the best ones privately and save the "tail ends" for your sale. We have seen this done often, then after the sale is over the owners wonder why they didn't have a better sale. There is always a demand for the good ones and the more of them you can put in the sale, the sooner you will get your reputation as a breeder. The Smileys have one of the good herds of big-type Polands in the state and they have succeeded in raising about 200 pigs, so if you need a boar you will have a large number to pick from. They have the very best breeding. Get busy, and please mention The Wisconsin Farmer when writing for particulars. See page 22.—Adv.

Harvey Little's Bull Offering.

WE recently visited the Harvey Little herd of milking Short-horns, Evansville, Wis., and every time we see this herd we like it better. Mr. Little has a wonderful herd of Short-horns that combine the milking qualities with the beef qualities. The young bulls that he is offering are of outstanding quality and come from the best breeding. He can suit you in color, as well, for he has them red, white and roans. Get his prices on these bulls and better yet if you can visit his herd, you will be better off by having made the trip and seen his breeding herd. Kindly mention this publication when writing for particulars. See page 22.—Adv.

A New Wisconsin Farmer Hampshire Breeder.

THE attention of our readers is called to the advertisement of the Dane Stock Farm, Oshkosh, Wis., which appears on page 22. This farm specializes in the breeding of Hampshire swine and sheep. We did not get to see the sheep this trip, as they were on another farm about a mile away, but we did see the Hampshire pigs, and were impressed with the type. W. J. Dane, who has charge of the farm is a believer in a farmers' hog and breeds the type that farmers in Wisconsin can most profitably raise. He aims to breed a wider, deeper type with a slightly shorter head than many of the southern breeders who aim at the bacon type, and in our judgment is an improvement on the narrower type, for Wisconsin conditions. However, he is a stickler for good "belts" and all breed characteristics. He has a fine lot of spring boars and a limited number of fall boars ready for service.—Adv.

Don't Overlook These Bulls.

THERE are two Holstein bulls advertised for sale on page 23 by Grove Bros., Columbus, Wis., that you do not want to overlook if you are going to need a bull for the coming season. They are both sired by the 29.50-pound bull, Maplecrest Hengerveld De Kol and are out of dams with A. R. O. records of 22.29 and 15.55 pounds respectively. The sire is one which needs little comment if you were to see his pedigree, as he combines in the closest possible degree the blood of Friend Hengerveld De Kol and Pontiac aggie Korndyke. These two bulls have a total of eighty-two A. R. O. daughters, eight of which have made yearly records of from 1018 to 1322 pounds of butter, and seventeen that have made records from thirty to thirty-five pounds of butter in seven days. No two other bulls of the breed can equal these two for 1,000-pound daughters. One of the bulls offered for sale is out of the 22.29-pound cow, Vinnie De Kol Pauline. She is not only a heavy producer herself, but has transmitted this ability to her daughters. Her daughters, Vinnie Change, as a four year old made 24.11 pounds butter and Vinnie Changeling, as a three year old made 23.87 pounds butter in seven days. She is a granddaughter of the great bull, Paul De Kol, and her dam and both grandams have creditable A. R. O. records. There is surely a good pedigree back of this young bull and our readers cannot afford to overlook him. The other bull offered for sale is out of the cow, Johontas Hengerveld Paul De Kol, which made 15.55 pounds butter in seven days as a three year old. She is a granddaughter of Gem Pietertje Hengerveld Paul De Kol, sire of thirteen A. R. O. daughters and May Overton Mechthilde the sire of Madrigal of Belmont, one of the finest show cows of the breed. These bulls are well marked, being more white than black, are well grown and of good, straight, level type. Up-to-date extended pedigrees are ready and will be mailed on application.—Adv.

JOHN L. FISHER, Janesville, Wis., and the foundation herd of pure-bred Duroc Jersey swine which had been sold to the famous Hershey (Chocolate) Farm, of Hershey, Pa. The famous Hershey farm consists of 8,000 acres, and the foundation herd of Durocs as shown in this illustration consists of ten sows and gilts and a herd boar, Volunteer Defender. They were purchased after corresponding with leading breeders throughout the country, and the Hershey people bought this herd from Mr. Fisher for the reason that they wanted the big, rugged Durocs with heavy bone, good backs, and lots of stretch, and Mr. Fisher had this kind.

Safety in Using Hog Cholera Serum.

THE use of hog cholera serum has meant millions of dollars to the hog raisers of this country. But vaccinating hogs is a very particular practice and if impure serum is used the results may prove disastrous. The safe way is to use refined hog cholera serum, which is absolutely free from all germs or foreign matter. Mulford Refined hog cholera serum meets the most rigid requirements in this respect; it is a potent, sterile, filtered serum that will protect from cholera, but will not infect the hogs or cause cysts or abscesses on them. This absolutely safe serum costs but 2 cents per c. c., and may be obtained from the H. K. Mulford Co., Philadelphia, Pa. See advertisement on page 9.—Adv.

Protects Cows From Flies.

WILBUR'S fly oil will positively keep all flies away from your cows. This statement is made by E. B. Marshall, president of Wilbur Stock Food Co., and in proof of this he offers to send a can of the oil for a thirty days' trial, together with a special sprayer in which to use the oil. The offer is given on page 7 and those who wish to get rid of the nuisance of flies, which is one of the hindrances of profitable dairying or cattle raising, should fill out the coupon attached to the advertisement and send to E. B. Marshall, president, Wilbur Stock Food Co., Milwaukee, Wis.—Adv.

Guernsey Yearling Heifers.

EIGHT high-grade yearling Guernsey heifers are advertised for sale on page 23 by Findlay Bros., Whitewater, Wis. These are all sired by an exceptionally good registered Guernsey bull and they are standard marked and good individuals. They are bred to a registered bull to freshen this fall and winter. Write for description and prices.—Adv.

Stub-Cutter Attachment for Corn Harvesters.

COMFORT in the Cornfield" is the title of a booklet sent out by the Corn Harvester Attachment Co., as per advertisement on page 6. We rest assured that after reading its contents, the corn-belt farmer will agree with us when we say that the advent of the stub-cutter attachment for corn harvesters is, in reality, a producer of more comfort for both man and beast. The real value of the stub-cutter attachment lies in its time and labor-saving qualities subsequent to the cutting of the corn, and in the fact that it does its work at the same time the corn is being cut. Planking down these stubs does not separate them from the root-mass and besides they "come back" so that does little good and is very slow work. There is very little increase in draft. This stub cutter has been tested in, and perfected from actual work in the cornfield and is guaranteed to do and be all that is claimed for it. In dealing with the corn Harvester Attachment Co., you are doing business with a reliable, well-established concern, with the highest reputation for fair dealing.—Adv.

Low Cost of Upkeep on Hay Balers.

THE Ann Arbor Machine Co., Ann Arbor, Mich., have a new booklet, "Profits in Forage Crops," which contains much practical information of interest to farmers. The booklet will be sent to anyone who will write to the company for it. The Ann Arbor baler is made by this company and is famous for its low cost of upkeep and long service. The average upkeep expense for all Ann Arbor balers last year was only $2.95 and there are many of these machines that were built thirty years ago and are still giving good service. They are adapted for baling any kind of hay into neat, even bales and will work efficiently with a small crew of men. Either power presses in combination or separate outfits, using any engine, are obtainable. See advertisement on page 14.—Adv.

Special Low Prices on Split Hickory Vehicles.

A GENUINE, split-hickory buggy, guaranteed for two years, may be purchased for $39.25. The price is remarkably low for this kind of a vehicle and deserves the attention of every prospective buggy buyer. Split Hickory vehicles are in wide use throughout this country and have proven highly satisfactory. The new fall buggy book of the Ohio Carriage Co., describes and illustrates more than 150 styles of these vehicles, and contains many money-saving offers. It will be sent to anyone writing for it to H. C. Phelps, Pres., the Ohio Carriage Mfg. Co., Station 185, Columbus, Ohio. See page 6 and mention The Wisconsin Farmer when writing.—Adv.

HAMPSHIRE sow and litter bred by Dane Stock Farm, Oshkosh, Wis., whose advertisement appears on page 22.

Self Feeders as Money Makers.

THE labor problem of hog feeding is solved by the Star self-feeder, which is advertised on page 7 by the Star Self-Feeder Company, LaFayette, Ind. Not only labor is saved, but also feed and money. Pige are made to mature earlier and cheaper by using this feeder. Three compartments are made for keeping the corn, mineral and tankage separate, and the feed control is adjustable so that the right amount is fed for most rapid growth of the hogs. Those who write soon can get a special introductory offer on the Star feeder and a free booklet, "Self-Feeders as Money-Makers." Kindly mention this paper when writing.—Adv.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

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JUMBO'S EQUAL 2d

ONLY a few Poland boars like him. He has the size, quality and breeding. Big Bone, A Wonder 107353 (twice) and Longfellow in pedigree. Am using him on outstanding sows of choice breeding. He will be heard from. Four fall boars for sale, two out of Big Bone 2d dam, one from Mastodon Chief dam, one from Oakland's Equal dam, all by Jumbo's Equal 2d. Guaranteed to please. You are invited to inspect my herd. Correspondence solicited. Address
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HAS some good Poland China spring pigs for sale out of his 800-poundshow sows and 1,000-pound boars. Write, mentioning The Wisconsin Farmer. **J. D. McDonald, West Bend, Wis.**

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SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
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BREEDING stock of all ages—spring pigs, fall boars, bred gilts and tried sows priced to sell. Jos. Egelhof, Edmund, Wisconsin.

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100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

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KEEP these Durocs in mind. Few pigs for sale by Lincoln Model, Salem Model and Regulator 2d. Write.
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CHIEF DEFENDER (by Defender) **BIG. COL.** (by King the Col.)
HAVE the best spring pig I ever raised. They are wonderful sires. Write.
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200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

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YEARLING bulls are all sold, have only young calves up to four and five months old. One A. R. O. cow 8 years old, due to freshen June 3, 1916, bred to Finderne Hengerveld Jewell Pontiac; a 31.37 pound bull for sale. Address
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REGISTERED bull calves, great grandsons of Belle Korndyke; also high-grade heifers, two years old for sale.
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Holstein Bull

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SIRED by the richly-bred bull, Sir Ormsby Johanna De Kol, that is strong in the blood of the world's record cow, Duchess Skylark Ormsby, that made 1205 lbs. of butter fat in one year. Address
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THE place where show winners and large record makers are bred. Several bull calves from dams with A. R. O. records, some with good yearly records. Sired by bulls, 5 of whose 7 nearest dams have records of over 30 pounds of butter in seven days. Address
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BULL from 26.41-pound dam, 9 months old; one from 19.60-pound dam, 7 months old. Also two yearlings from dams that will soon be tested. They are straight nice individuals, light color, all sired by Sir Pontiac Korndyke Count 82741, a 28.80-pound bull. Bull calf, one month old, from 22.31-pound dam sired by a 34-pound bull. Can spare a few young cows. For further information address
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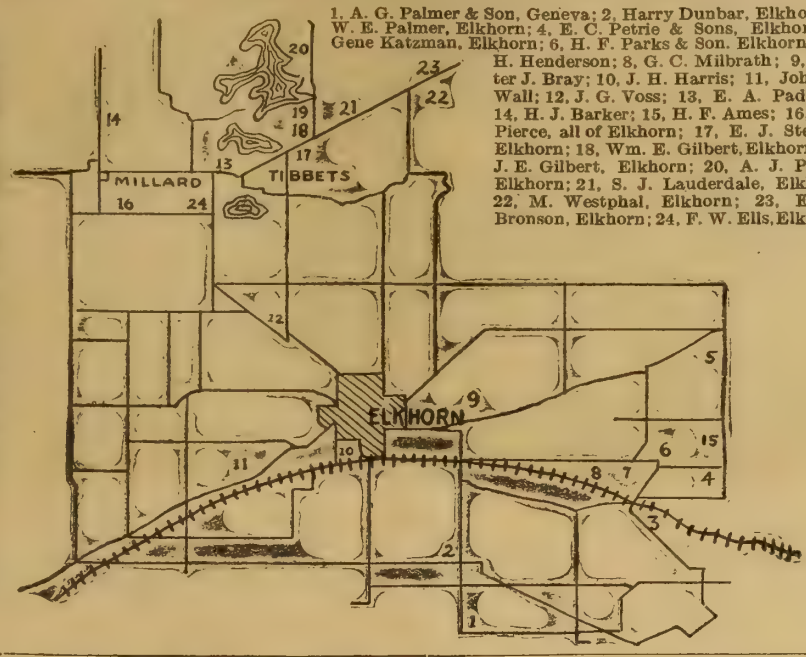
WESTSIDE LADOGA PRINCE 77130, practically perfect individual, proven sire, splendid breeder, 4 yrs. old, will be sold due to fact that he cannot be used longer in herd. Pedigree has no weak spots. His dam is a 27.38-lb. junior 3 year old, his nearest three dams average 27 lbs. and his nearest seven dams average 22 lbs. His paternal ancestors are likewise strong, the nearest three in particular have large number of A. R. O. daughters. Two Holstein bulls sired by Westside Ladoga Prince are also offered for sale. J.H.Harris, Holstein Dairy Farm, Elkhorn, Wis.



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Elkhorn, Wis.

REGISTERED Holstein-Friesian cattle backed by high-production records. Several fine young bulls for sale at the present time.

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BOTH from Advanced Registry dams. One just past two years old. Kind, sure and O. K. in all respects. More white than dark. Gets nice calves. Price $100. One about thirteen months. Dam's record over 17 pounds as a two year old. Nice individual, more dark than light. Big enough for heavy service. Price $100. For extended pedigree and complete description write me. Address
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19.95-LB. YEARLING SON

of the 31.18 pound bull

PABST BURKE DE KOL KING 89769

THAT is by King Pontiac Champion, the 31.30 pound son of King of the Pontiacs, and out of a 31.18 pound daughter of De Kol 2d Butter Boy 3d. Four bulls from 5 to 7 months of age—well marked—well grown for sale.
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Two Bulls Left

OUT of my 822 pound herd sire, that has 30 A. R. O. daughters. No. 1, born March 16, 1915, a splendid show bull, ready for service, weight about 800 pounds, out of a 15.36 pound, two year old; price $100. No. 2, born October 8, 1915, well grown and evenly marked. Satisfaction guaranteed. Address
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MEADOW SPRING FARM HERD

now consists of 70 head of Holstein

COWS AND HEIFERS

BULLS all sold except a few calves. When in want of cattle COME to the Meadow Spring Farm or write
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COWS and heifers bred to the 27.82-pound proven sire, Knight Errant 39566. Also bull calves from one to five months old sired by Champion Johanna Colantha 70478. Address
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Breeder of registered cattle. Stock for sale at all times.

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TWO horses and a few White Leghorn roosters for sale. Addrers E. H. BRONSON, breeder of high-grade and pure-bred Holsteins, Elkhorn, Wisconsin.

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For price and pedigree address
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7-8 WHITE, yearling bulls ready for service; will weigh close to 900 pounds; straight rumps; Sired by Sir Battles Homestead. Priced to sell. Address
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BREEDER of pure-bred Holstein-Friesian Cattle and Duroc Jersey Swine.

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CALVES sired by a 30.51 pound bull and out of A. R. O. daughters of a 30.18 pound bull. Write me for further particulars. Address
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A 22.29 POUND SON OF THE 29 POUND BULL

MAPLECREST HENGERVELD DE KOL 94154

THAT combines in the closest possible degree the blood of Friend Hengerveld De Kol Butter Boy and Pontiac Aaggie Korndyke, that combined have eight daughters with records from 1,000 to 22 pounds of butter in a year. Price $125. Also for sale a bull born October 30, 1915, whose dam, a daughter of Gem Pietertje Paul De Kol, made 15.35 pounds butter in seven days as a three year old.
GROVE BROTHERS **COLUMBUS, WISCONSIN**

DUCHESS ORMSBY and ALCARTRA COWS

SOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. **BONNIE MEAD STOCK FARMS, Randolph, Wis.**

Purebred Registered
HOLSTEIN CATTLE

If your present dairy herd is not quite up to standard get a good purebred registered Holstein bull, and he will transform the poorest herd into a profitable one within four or five years. The purebred sire will always demonstrate his right to be called "The foundation of the dairy industry." There's a vast difference between keeping Holsteins, and just keeping cows. One purebred Registered Holstein will do the work of two and possibly three ordinary cows. You realize a saving in feed, housing, risk and labor. And moreover, Holstein cows milk longer, more per year, and more per life than any other breed. Investigate the big "Black-and-Whites."

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
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21.25-POUND HOLSTEIN BULL

FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees.
Wm. Braatz & Sons **Brandon, Wis.**

FOR SALE

TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Johanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address
A. G. PINGEL **CHILTON, WISCONSIN**

"EDGEWATER"

HOLSTEINS and GUERNSEYS now being offered for immediate sale

450 COWS, HEIFERS AND SERVICE BULLS 450

15-16 pure Holstein calves crated for shipment $18 each. We are offering first-class stock only; some of Southern Wisconsin's best. Write for particulars. Address
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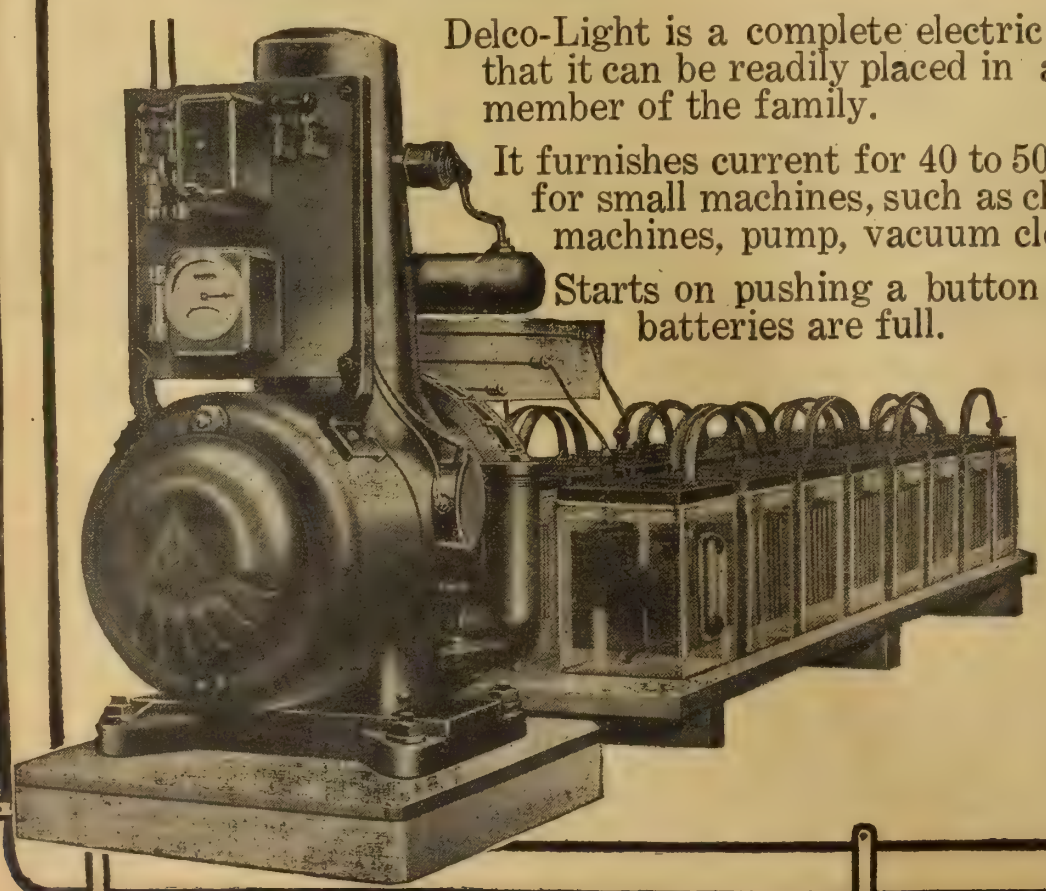

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THE WISCONSIN FARMER

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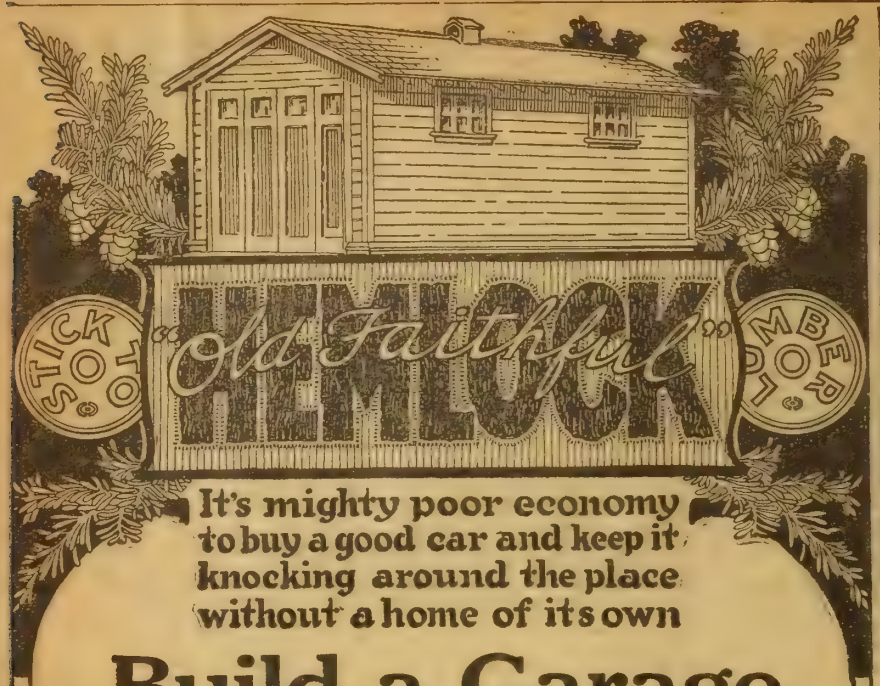

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CURRENT EVENTS

DANGER of war with Mexico seems well-nigh dispelled, as a direct result of the friendly note which the Carranza government has sent to Washington, after two impudent notes had made matters most serious. This latest note offers to mediate difficulties and in the meantime to use every effort to avoid any new clashes or to make the situation more serious. About the time this note was received President Wilson moved General Pershing's expeditionary force back to within 100 or 150 miles of the border so as to minimize trouble. The state troops which have been mobilizing for the past fortnight are most of them in their state camps, although some regiments have been rushed to the south to assist in patrolling the border. President Wilson is doing everything in his power to prevent war and will probably accept the latest Carranza note as an evidence of good faith and continue his policy of watchful waiting. In a speech delivered in New York a few days ago the president made it plain that he will not countenance a war with Mexico unless there is no other alternative for settling the border troubles. Again he declared that he was ready to sacrifice his own political fortunes to carry out his convictions as to what would be the just course to pursue in the situation. The president's audience, composed of newspaper men, state and municipal political leaders and others prominent in public life, signified their indorsement of his position by repeated outbursts of applause. When he asked if the glory of America would be enhanced by a war or conquest in Mexico shouts of "no" came from all parts of the banquet hall. A similar response was made to his query whether it is America's duty to carry self-defense to the point of dictation into the affairs of another people. The president is known to be strong for peace, and there is good reason to believe that the present crisis may adjust itself so that the force of arms may not be necessary.

THE great, long-promised drive of the English and the French against the Germans is now in progress and is regaining ground for the allies, according to the press dispatches. It is estimated that the German losses thus far are approximately 60,000. The capture of guns has been comparatively small, because the Germans, in anticipation, withdrew their big artillery. According to aerial observations by the French in the direction of Peronne there are now only three trench systems between the French and open country, and, if a break can be made in the German lines here, it would be extremely serious for the Germans, who are doubtless hurrying up reinforcements to the threatened point. The Germans are sending reinforcements from as far as Verdun and Lens. The continued heavy German attacks on the Meuse may be intended to conceal important transfers of troops behind the lines. The Italians also are said to be making headway. For the first time since the war broke out the allies are on the offensive all along the line and appear to be winning victories, forcing the Germans back, step by step, from the captured territory which they have long occupied.

A SUMMER campaign that will take him through the grain belt and probably on to the Pacific coast is on the program now tentatively shaping itself in the mind of Charles E. Hughes, republican candidate for president. It is Mr. Hughes' idea that this tour should be not at all of the "whirlwind campaign swing" variety, involving special trains, with frequent halts and speeches from the rear platform. He believes the whirlwind tours may have their place later, but that they may be employed to better advantage at a time when developments have made it clear in just which of the debatable states and close districts such expenditure of concentrated ammunition may be employed most effectively. In the tour beginning before mid-August his inclination would be to use only regular trains and to speak only in such centers of population as, for illustration, Chicago, Kansas City, St. Paul and Minneapolis, St. Louis, Portland, Seattle, San Francisco, and, perhaps, Los Angeles. At each point his purpose would be to deliver, probably from written manuscripts, and certainly after mature and careful deliberation and preparation, a dignified, educational speech, dealing comprehensively with campaign issues and the paramount national problems of the time. Mr. Hughes rightly believes that the people of the grain belt and West are anxious to see and to hear him, hence the proposed trip.

HETTY GREEN, the richest woman in the world, died last week at her home in New York. She left a fortune estimated at $125,000,000, her only son, Col. E. H. Green, of Texas, and her daughter, Mrs. Matthew Astor Wilkes, sharing the bulk of the large estate. She did not make any provision for charity. Because of her wealth and eccentricities Mrs. Green was one of the notable women of the country, living in almost penury at times, notwithstanding her great wealth. Hetty Green's investments were largely in mortgages, and whenever she invested in anything it was only after she had made the most minute personal examination of the properties. She never disclosed in detail the secrets of her success, but she admitted it was mainly in buying when things were cheap and never selling until they were high. If asked for advice as to what would be good to invest in her epigrammatic answer was usually, "The other world." While never intensely religious, she was a frequent attendant at Quaker meetings, and only a few years ago she, like her daughter, was baptized in the Episcopal church. She emphatically denied that her disposition was miserly. During the panic of 1907-08 she made loans which tided over many wealthy New Yorkers. Two years before the panic, it was said, she had gathered in a large portion of her money and was prepared when the storm broke to lend a helping hand, at a good rate of interest.

WITH war orders from European countries beginning to fall off Japan is stepping to the front as the biggest foreign buyer in the United States steel markets. Orders approximating $28,000,000 have been placed already by J. Inouyie, T. Yamada, J. Kamimura and others. Westinghouse, Cambria and allied concerns have secured the majority of the contracts. Mills and factories at Pittsburgh and at Wheeling, Youngstown and Dayton will be rushed for months. Most of the steel will be used in construction of the Imperial Iron Works at Yawata, Japan. The government has appropriated $20,000,000 for construction of the plant.

LAW QUESTIONS.

License for Nurses.

A Subscriber, Franksville, Wis.—(1) Is a nurse required to be a graduate or have a license in order to practice in Wisconsin or Illinois? (2) If a doctor should employ a nurse who has no license, to attend a patient what would be the penalty?

Answer.—(1) In Wisconsin a nurse is required by law to have a license in order to practice. In Illinois a nurse may lawfully practice without a license, but must not assume to be a registered nurse. (2) In Wisconsin the penalty for a nurse practicing is a fine not less than $100 nor more than $500. In Illinois there is no penalty unless the nurse assumes to be a registered nurse.

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The Wisconsin Farmer

THURSDAY, JULY 13, 1916

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE AUTO TRUCK ON THE FARM.

I FIND a most interesting story told in one of our grain-belt newspapers of the manner in which a stockman had the value of the automobile truck impressed upon him. Here is the story:

Frank Skipton, garage man, went to the home of a farmer three miles out of the city recently with a motor truck for the purpose of transporting to market a load of fat hogs. The rear wheels of the truck were lowered in hog-loading fashion and a little alfalfa scattered from the pen up into the truck bottom. The porkers walked into the trap and laid down. Forty minutes later they were weighed and pushed out into the stock pens in South Omaha, ten miles distant from their former place of abode.

The auto truck as an accessory to the farm is just beginning to make its worth appreciated. This trip was the harbinger of as big a change in the method of marketing farm produce as the auto has worked in other fields. A ten-mile trip with a load of hogs in a wagon is slavish business. It is a heavy task for a man as well as for his team and for the hogs. With the roads in their present condition today in Iowa a ten-mile trip with a truck is little more than a before-breakfast chore. A farmer might, if he were so disposed, leave his home at five o'clock in the morning after feeding his teams and be back from such a journey and ready to go to work in the field by seven o'clock.

The day is not far distant, in my opinion, when the truck and the tractor will be as popular and as prevalent in the country as the automobile is today. I can easily recall—and so, doubtless, can most of my readers—when the automobile was considered either a "devil wagon" or a rich man's plaything, the practical usefulness of which was seriously questioned by the hard-headed farmer. It was not more than ten or twelve years ago at most, when, as I was strolling through one of our state fair grounds, I saw a good farm wife standing literally open-mouthed at the unwonted sight of a two-cylinder automobile chugging along, hauling sightseers about the grounds for 25 cents each. Finally she rallied her wits enough to exclaim: "I'd as lieve sit on a gasoline stove as ride one of those things." I have no way of telling, but I'm almost willing to bet that that good farm wife goes riding with her liege lord nowadays in their own four-cylinder, six-cylinder or eight-cylinder car and is as enthusiastic as most farmers over the use of the automobile.

The automobile fills a long-felt want in farm life, relieving the work horses of much of their drudgery, giving the entire family more pleasure and enabling the farm product to be marketed to the best advantage. The day is almost here when the auto truck and the tractor will be as generally used and as highly appreciated. Successful farming, as I have frequently pointed out, depends upon taking advantage of the market fluctuations so as to get the best possible price. When live stock—or any other produce, for that matter—can be marketed by truck in one-fourth of the time that it can be marketed by team, and in such manner as to get the market's highest price, the truck will become indispensable to the farmer. In my opinion that day is rapidly approaching; if, in fact, it has not already actually dawned.

AN INSURANCE POSTSCRIPT.

ALTHOUGH I fully intended my "last word on insurance" to be the last word, indeed, I find myself obliged to add a postscript to what I have already written on this important subject. The heavy mail which my articles have brought convinces me that farmers generally are greatly interested in this matter of protecting their loved ones after they are gone. The surprise to me is that such a large number of my correspondents should be so strenuously opposed to life insurance. Let me quote from a letter received from Mr. Delano Sanford, of Hopkinton, Iowa, as follows:

You mention the case of the young man insuring his life for twenty years at $26 annual premium on $1,000 and receiving $500 in final settlement. This annual premium placed in the bank at 4 per cent compound interest in twenty years would amount to $892.48, so you see his protection cost the difference between $500 and $892.48, or $19.62 a year, instead of the $1 you gave as the figure. Please do not connect as important and vital a matter as thrift with anything like life insurance.

Mr. Sanford goes on to tell of how he turned down an insurance agent, but how a neighbor was less firm and was induced to take out a policy, which he allowed to lapse in a few years, losing the money he had already invested. He argues from this that the whole insurance matter is a fraud and fake, when the whole trouble lies in the kind of a policy which is taken, and in allowing the policy to lapse once it is taken. A policy maturing in a certain number of years has loan and "cash-surrender" values, which are guaranteed under the various state laws. These amounts are not as large as the premiums which have been paid in, but they become proportionately larger each year, so that the longer a man stays in the company, the greater percentage of his money he ultimately receives in return. If he pulls out in a few years he gets little; if he stays in a number of years he gets back practically all that he paid in, and is, therefore, not out a cent.

My friend and correspondent is absolutely correct when he says that the annual premium on a life insurance policy, deposited in a bank at 4 per cent compound interest, will return more than a life insurance policy, but he overlooks or ignores three important factors: First, the stability of the bank in which the money is deposited, as compared with the soundness of our big insurance companies; second, the fact that many men—most men, I fear—will not keep up their deposits year after year, for twenty or thirty years, as they will their insurance premiums, because they realize that once they let their bank deposits lapse, they will get back their other deposits just the same, while once they let their insurance premiums lapse, they will get back a smaller percentage of what they have already paid in than if they were to keep up the payments the full, allotted time; third, the fact that the insurance company is bound to pay the full value of the policy—$1,000 or $10,000, or whatever it may be—whenever death comes, which might be in the first year after the policy was written, thus giving the estate of the insured $1,000 for $26 invested. In my opinion the money which the insurance companies make is not much too large in view of the risk they assume of the early death of the insured.

Another correspondent, Mr. Charles A. Babbitt, of Willis, Kansas, feels still more strongly on the subject, and writes me as follows:

Life insurance costs the average man a half more than his family gets back, thus they are being robbed of about one-third of the premiums he pays. I have seen so many men skimp their families to keep up insurance that I have sometimes wondered if the family did not feel relieved when the man or policy lapsed. A thrifty man should not encourage such extravagance. Thrift is desirable when it is used to educate the children and provide a home and business for old age, but if it will not help deserving neighbors or the community it is nearly as bad as robbing the family to pay some corporation to promise to care for us or our loved ones when we are gone. We had better be thrifty enough to manage our own business so our families may enjoy life with us instead of after us.

These letters interest me, even if they do not convince me, and I am glad to receive them. What Mr. Babbitt overlooks is that my young friend, while he paid in $26 a year, was protected up to $1,000 every year of the twenty. Had he died the first year—after only one premium of $26 had been paid—his estate would have received $1,000, or $974 more than he had paid; the second year it would have received $948 more, and so on and on. I do not see how he figures that a family receives only about half what a man pays, for in my young friend's case, even in the last year of the policy, his estate would have received $1,000 on an investment of $520 (twenty times $26) or almost double the amount paid. What my young friend did was to pay off the debt on his home and take out a new policy for $1,000, which, at his present age, costs him around $35 a year. I still think it was a wise thing to do. He could have borrowed almost the full "cash-surrender" value of the policy from the company at 6 per cent interest, or by using the paid-up policy as collateral he could have borrowed even more from a bank or an individual. But he does not like to borrow unduly, and the interest would be almost as much as the premium on his new policy, so, in my opinion, he did the wise thing. I continue to be a firm believer in life insurance, despite the protests of some of my readers, whose letters are enjoyed, even though they do not convince me of the error of my views.

THE TRACTOR IN WAR.

I FIND an interesting little item in a daily newspaper, proving that the tractor is the machine of the hour in both peace and war. Here is the item:

Stockton, Cal., July 4.—Three caterpillar tractors manufactured here for the American army were being rushed by express today to an unannounced destination on the border. The expressage on the three machines will be $3,600. They were sent in a special car attached to a passenger train.

The European war is a war of machinery even more than of men, notwithstanding the fact that never before in the world's history were so many men under arms at one time. If war with Mexico eventuates, machinery will be fully as important as men. And the tractor will be found heading the list of machines absolutely essential in the arts of war, just as it is heading them in the arts of peace.

AN HOUR MORE OF SUNLIGHT

THE FARMER is not as vitally affected by the movement to advance the clock an hour as is the city man, for the farmer works by the sun rather than by the clock, whereas the city man reverses the process. Still, should the movement ever gain ground nationally, the farmer would quickly become interested, for it would affect his intercourse and business dealings in town and city. Therefore, we might well consider this subject together for a few minutes.

So far as I am able to ascertain, the movement started in Europe, and is undoubtedly an outgrowth of the great war. As though there were not enough time in the day in which to engage in the brutal art of killing one another, the belligerent nations have almost all turned the clock ahead an hour so as to get the workmen into the factories that much sooner and begin the day's task of turning out shells with which to slay human beings. Because there must be some sort of system in the world's work, this has affected those who follow the arts of peace fully as much as those who follow the arts of war; the stream of men and women starts officeward, storeward and factoryward an hour earlier than it formerly did, and, accordingly, bedtime comes an hour sooner. An hour of daylight is gained and no one is the worse off, so far as I can see.

After all, no matter what occasioned the movement or how much ground it may or may not gain, there is no excuse for so many people lying abed so late in the morning, when the sun is high in the sky, the birds are calling merrily, and there is much work to be done. We would far better go to bed an hour earlier at night, get our full six or eight hours' sleep (as our system demands) and then get up and out to work an hour earlier in the morning than to sit up late at night, sleep too late in the morning, and feel stupid all day long. I am indebted to a London newspaper for some interesting facts bearing out my contention in this manner:

Doctors and physiologists say that both for men and for animals the light of the sun means life. In the darkness plants remain a sickly white and do not develop their green color, and in the darkness the human complexion tends to lose its natural red. In the sunlight, too, there is health and greater freedom from disease.

Even more important is the matter of sleep. For reasons which are a part of popular wisdom—always worth attention—it is believed that "one hour of sleep before midnight is worth three hours after it." Even the scientific works on medicine uphold that doctrine, and most people know from experience that it deserves to be upheld. The early sleep, the "beauty sleep," is the best sleep.

And here is a measure which at a stroke gives to the world's workers six whole days more of this boon, and to the women of the world six whole days more "beauty sleep" each year. Also to the children is given what certainly amounts to a new charter of health. For if early night sleep is vital to man's work and woman's looks, it is a matter almost of supreme importance to the child. Children in these days are permitted to sit up much too late in a great many cases. But no matter what hour may happen to be "bedtime," that same hour is now separated from midnight—in the old Greenwich sense—by an additional sixty minutes.

The farmer is not dependent upon an alarm clock, there are many noises of the early morn to waken him, even if his conscience and the knowledge that haste is necessary if the crops are to be gotten in and harvested betimes were not likewise at work. He is at his tasks a couple of hours before the average city man gets through his breakfast and begins to think of work. So there will be little gnashing of teeth in the country if the United States follows the lead of Europe and gives us an hour more of daylight, though many a city man, I imagine, will hate to think of being routed out that much earlier in the morning. When there is so much important and necessary work to do, let us get at it the earliest possible moment; that is my opinion on a subject which is occupying the minds of many men and many nations nowadays.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Advance Granted Milk Shippers to Milwaukee Market.

AN INCREASE in the price to be paid during July for milk shipped into the Milwaukee market by the farmer-dairymen in that territory has been granted by the Milwaukee dealers and distributors as predicted in these columns last week. This increase, which became effective on July 1st, amounts to fifteen cents per eight-gallon can over the July price a year ago in addition to an agreement by the dealers to take and care for all the milk which the shippers produce. This, everything considered, is a very satisfactory outcome and means an added revenue of about $25,000 during July, as compared with July last year, to the farmers in Ozaukee, Milwaukee, Waukesha and Washington counties who ship to the city of Milwaukee. Most of the shippers are residents of these four counties.

The farmers, through their organization, the Milwaukee Milk and Cream Shippers' Association, asked a July price of $1.30 for an eight-gallon can, the average fat content of which is 3.7 per cent, according to the statistics of the Milwaukee health department. The price finally agreed upon was $1.25 per eight-gallon can, which is not all, in dollars and cents, the farmers asked, but the additional five cents lost in the compromise is more than made up by the agreement of the dealers to take and care for all the milk produced by the shippers. This is quite an advance, it is seen, as previously the dealers reserved the right to "shut-off" the shipper at any time, compelling him to withhold his milk from the market one or two or three days, as the case might be. This often proved a serious loss to the farmer who did not have some other avenue into which to divert this milk. Now the dealer must stand the loss, if there be any because of an over-abundance of milk on the market.

The price of $1.25 per eight-gallon can, compared with $1.10 last July, is an increase of a half cent per quart and an increase of twenty-five cents per can over the May and June price. This price stands for July only and a new rate schedule will be arranged, beginning August 1st, when the farmer-shippers expect to be in better shape as regards oversupply. The $1.25 price is on the cars at Milwaukee and as the average cost for transportation per can is about fifteen cents, this means $1.10 net for the farmer, compared with ninety-five cents net a year ago. Based on a daily consumption of 5,000 cans daily by Milwaukee, this means an added revenue of $1,250 per day over May and June and $750 per day over July last year. As a can weighs about sixty-eight pounds, the July price to Milwaukee shippers in the terms of 100 pounds is approximately $1.65 per 100 pounds net.

The milk flow has been unusually heavy in the Milwaukee territory this season, and the agreement with the dealers to take care of all milk produced is regarded as a nice victory. In speaking of the advance, Mr. G. R. Rice, secretary and manager of the Milwaukee Milk and Cream Producers' Association, writes The Wisconsin Farmer as follows:

> We have gained half a cent a quart or fifteen cents a can over last year's July price. In view of the fact that the oversupply this year is something very unusual, we think we have done well. The milk flow, due to abundance of grass and cool weather, is much heavier this year than any year we remember of at this date.
>
> We expect, however, by the first of August to be in far better shape as regards oversupply and we also expect to have our wholesale distributing plant in operation and in that way better control the situation.

The association will soon have 1,000 of the 3,000 shippers to Milwaukee as members. It now controls 2,200 cans of the 5,000 shipped into Milwaukee, as the larger shippers are members. With its own distributing plant to take care of the surplus and an increasing control of the city's supply, which it might divert to other channels in case of necessity, the association should be able to ask and receive other advances in the near future.

The increase granted the shippers will no doubt be passed on to the consumer in Milwaukee, who, at six cents, has been buying milk, delivered at his door, cheaper than any other city of similar size in the country. We understand the larger dairies in the city have already raised the price to seven cents, and that the smaller companies are expected to fall in line shortly. The Gridley Dairy Company, which handles most of the supply, has also increased the pay of drivers $5 a month, and it is beginning to look as if the farmers in the Milwaukee district will not have to remain philanthropists much longer as they had been in past years.

Keeping Skin and Hair of Hogs Healthy.

IT IS remarkable how successful some swine breeders are, even though they follow a hit-and-miss program in their swine-breeding operations. Invariably, however, those who succeed, in spite of the fact that they do not give any special care to their hogs, are able to attain their kind of success largely because they allow their hogs plenty of range. Generally speaking, you will find the hogs roving in the yards and pastures 365 days in the year, and as a result they are hardy and show a remarkable degree of immunity against disease. Usually in such cases hog raising is merely a side issue to beef production, and the profits realized on hogs are regarded as just so much to the good.

It is a little different when swine raising is the main issue on smaller farms. Many an individual stakes his all on a bunch of 100 hogs. He may plan to feed practically all the grain that he raises to his hogs, so that his year's work depends upon his ability to take through a bunch and get them ready for the market with the least possible loss. In such instances every detail must be given attention, and during the summer months some care must be given to the matter of keeping the skin and hair of the hogs in good condition. Abundance of shade is a great aid in this respect, but it is not always available and the situation must be met squarely whether there is shade or not.

An exceeding good practice is to use coal-tar dip or crude oil in all wallowing places. Let it be remembered that a hog wallows not because he is filthy in his habits, but because it is absolutely necessary to his welfare. He is a non-sweating creature and this is the only means at his disposal for cooling off. A quart or two of dip or oil thrown into these pools of filth at intervals will accomplish two purposes. In the first place, it will tend to destroy lice, if there should be any at hand, and in the second place, the skin is kept pliable and the hair soft. Those who adopt the plan of using the rubbing posts with oil are meeting the situation ideally. No louse can live amid oily surroundings, but it is a wise precaution to give some attention to the wallows as well. A good disinfectant will destroy disease germs in these culture centers, and it is entirely within the bounds of reason to expect that an outbreak of disease may be prevented by the use of a few gallons of coal-tar dip during the summer season.

Bear in mind that we are not advocating the hog wallow, but we are well aware of the fact that these wallows will continue to exist whether we want them or not. In some cases a concrete wallow is constructed and kept well supplied with water and this, in turn, is disinfected with coal-tar dip. This beats the mud wallow and it is the only means available of preventing hogs from creating these unsightly centers of filth.

Value of Advertising By the Farmer.

ATTENTION to the value of advertising is called by E. L. Luther, supervisor of Wisconsin agricultural representatives. Mr. Luther says:

> Farmers must take more of a hand in marketing their crops. They have the same rights as other producers and, having the same rights, must assume the same responsibilities. They should not think that other people should assume the responsibility of marketing their products.
>
> Most men who market their own wares, no matter what line of production, advertise.
>
> How few farmers advertise!
>
> Is it any wonder that their markets are poor? What if an automobile concern or patent medicine concern advertised as little as the average farmer? But what if the average Wisconsin farmer did take a notion to advertise? What would he say of his products that would cause people to travel long distances to secure them?
>
> This brings us to the point of production. We find that some Wisconsin farmers do advertise and that when they do advertise we find them advertising standard stuff, pure-bred cattle, Wisconsin pedigreed grains, Wisconsin varieties of pure-bred, disease-free, certified potatoes, etc.
>
> The Wisconsin farmer who advertises is up to date, he is producing something besides scrub and common stuff and is awake to the value of advertising. He knows the name of his stuff. How many, many farmers when asked the kind of oats they are growing have to confess that they do not know, or if they do know give you some uncommon name not known to the best Wisconsin pedigree grain growers.
>
> So the problem of marketing farm crops begins back on the farm with growing something which the world wants, with producing standard stuff.
>
> Wisconsin's agricultural products can go around the world. Wisconsin pedigree grains are conquering the seed grain markets of the world, Wisconsin potatoes are conquering the seed potato markets of the United States. Wisconsin live stock is conquering the live stock market. But these things must be standardized and kept standardized.

The farmer is just beginning to learn the value of advertising. In this respect he is somewhat behind other people who have things to sell. The farmer who has nothing of any value to sell cannot afford to advertise. The better his product the more money he is justified in expending to make it known. If something exceptionally good is raised on the farm its value is enhanced by wide publicity. This is simply extending the market. The right kind of advertising should cause more people to want the farmer's products. It is only when there are a large number of buyers in sight that he may expect values to increase.

Weeds Cut Down Corn Yield.

THERE are two reasons why it is worth while for corn growers to put up a stiff fight in opposition to weed growth. In the first place, weeds use an enormous amount of water, and, secondly, they are greedy in the consumption of plant food. Only when a soil is abundantly supplied with moisture and lavishly impregnated with fertility can it be said that weeds will do little harm or not materially cut down the yield of the corn crop.

An interesting experiment was conducted at one of the experiment stations a few years ago for the purpose of showing the effect of weed growth on crop yields. Two fields of corn were treated alike and given good cultivation up to a certain date. After that the weeds were kept in check on one field by hand hoeing, and the yield of fodder per acre on this field was 11,843 pounds. The same field produced 81.6 bushels per acre. On the other hand, the corn which received no treatment whatever and was, therefore, allowed to meet the opposition of weeds and grasses, the yield of fodder was 9,188 pounds and it produced 61.4 bushels per acre.

While it is not here intimated that hand work is practicable, this experiment, nevertheless, illustrates the principle involved when weeds are kept down. There was an increase in this instance of twenty bushels of shelled corn per acre; this being the direct result of keeping weeds in check. It is fair to state that a cultivator, if rightly used, will be just as effective for weed destruction as the hand hoe, and the same good results from sensible surface tillage may be expected.

From this time on the chief concern should be to keep the weeds in check without destroying the feeding rootlets of the corn. It is a shortsighted and dangerous practice to run the cultivator shovels close to the corn row and at the same time deeply into the soil. Many men can be found who claim that they like the music furnished by the cracking of the corn rootlets, but we have no hesitation in saying that this is costly music, as no man can tell in advance what the character of the weather will be, and as we are particularly helpless to predict when there will be a shortage in the moisture supply it goes without saying that most of the work done after the second cultivation should be done without penetrating the soil deeper than three inches. Indeed, if the last plowing can be done so that only a two-inch mulch is created this will answer all practical purposes. If the work has been done carefully, weeds may be checked just as effectively in this way as they can by going down four or five inches deep.

Facts on Farm Management.

A GREAT deal of valuable information is being gathered in the counties of the state in which a number of farmers are interested in the recent farm-management contests. In Winnebago county there were eighty-two farms studied, and the average managerial income of all these farms in 1915 was $405. The average for the past four years was $531.84. The average managerial income of the five highest of all studied was $1,316.39. An interesting sidelight on the farm management study in Winnebago county is shown in the records on farms with silos. Out of the eighty-two farms studied nineteen had no silos and the average income of these was $322 per year. There were sixty-three farms which had silos and which showed an average income of $522. Out of the eighty-two farms studied only twenty-three raised five acres of alfalfa, or more. Those who raised alfalfa had an average managerial income of $706 and on the balance of the farms where less than five acres, or no alfalfa, was raised the average income was $387. In Barron county there were 104 farms studied during the past four years. Fifteen of these farms had no silos and these fifteen had an average income of $355, while the eighty-five farms which had silos had an average income of $746. Only three farmers in Barron county raised five acres or more of alfalfa during the past four years. These farmers averaged a manager's income of $1,480. The income statement in connection with all these farms means the amount of money which the farmer has left for his year's work after paying running expenses and 5 per cent on his investment. In addition to the manager's income the farmer has a house in which to live and farm products for home consumption. Dairy receipts per cow on the five best farms in Barron county averaged $52 each. In Waukesha county on the five best farms, where the cattle are all pure bred the dairy receipts per cow averaged $160. These Waukesha county farms had an average number of 57 each, while on the Barron county farms there

was an average of only 17. In crops, Waukesha county's five best farms earned $5,446 each, while in Barron county the five best farms earned $1,074 each on crops. Of course the investment in Waukesha county is about two and a half times as much as in Barron county farms. But the figures are a strong indication of the value of pure-bred live stock and of farming in all its departments.

Temperature in a Silo.

MR. F. M. WHITE, of the Wisconsin College of Agriculture, has made an exhaustive study of the factors which determine the temperature on the inside of a silo. He says that this temperature is determined to a certain extent by materials used in the wall construction. In Wisconsin it is practically impossible in any type of construction, according to Mr. White, to prevent some freezing around the edge of a silo. However, he calls attention to the fact that freezing does not hurt ensilage, although, of course, freezing makes it difficult to handle. We quote from a recent statement by Mr. White:

Some statements have been made that freezing causes losses of 40 to 60 per cent of the value of the silage. If freezing resulted in the loss of nutriment it would be serious indeed, but practically the only result of freezing is that it makes the ensilage difficult to handle and cattle naturally prefer warmer food. A statement commonly made against silage produced in masonry silos is that it has no life and this is charged up to the influence of the cold walls. So far as I am able to learn no one can state specificially just what is meant by "no life," and there is no foundation for such a statement. Some statistics, however, have been cited which seem to prove that cold walls influence the quality of ensilage produced. This claim is made against masonry construction of all kinds, the statement being that these walls are cold and prevent the proper fermentation processes occurring in the making of the silage. However, as practically all silage is made during warm weather, or at least sometime before there is any freezing, the wall of a silo is not cold enough to have any effect on fermentation. As a matter of fact there are many instances where masonry silo walls are found to be as warm as any type of construction.

Mr. White cites the results of an experiment at the Iowa station where the following conclusions have been offered:

Results of investigations on three silos during the period of experimentation indicate that no importance can be attached to the superiority of any one type of silo over another in regard to the conductivity of heat through the walls. The results show that no difference which could be attributed to the effect of different types of building materials upon the processes of silage formation were noted in the chemical changes of the silage in the three silos. Hence it is fair to presume that a high temperature is not an essential factor in the production of good silage.

Similar experiments have been carried on at the Wisconsin station with results as given by Mr. White, who has had charge of the work, practically the same as in Iowa. As good quality of silage has been found at the wall in either of the four types as at the center.

Save the Heifer Calves.

FAT cattle are bringing high prices. The average in this country for the past four years has been higher than for any like period that we have any record of. Stock cattle have been abnormally high; in fact, have been getting higher from year to year. These high prices are the result of two principal causes: Scarcity of cattle and high cost of feeding stuffs.

Cattle finishers, in spite of getting high prices, have frequently lost money, and as a general proposition have made only a small legitimate profit. Cattle raisers have not been getting rich either. Some, it is true, have done exceedingly well; but everything considered, the cattle raiser has perhaps, not fared much better than the finisher.

The question naturally arises as to where the trouble lies. Surely somebody ought to make a profit out of 8 and 10-cent beef. We believe that one of the faults with the beef-producing business as it is managed at present is that the cattle are kept too long before they are finished for the block. True, the marketing of baby beef is increasing quite rapidly, especially in the corn belt, where it is impossible to raise a steer till three years old and then sell him fat. But the practice should be more general. A well-bred range calf will bring from $35 to $40 after weaning, which represents a profit of from $20 to $25 per head—a larger profit than that calf will ever return in any subsequent year.

Logically, the bulk of our cattle should be raised in the range sections; first, because they can be raised cheaper there than in the corn belt, and second, because the range land is better adapted for grazing and live stock production than for the growing of grain crops.

To bring about such a change in the time of marketing range-bred cattle on a large scale will take time, because more cows will be required. The grass that is now being consumed by yearlings and two year olds would have to all be consumed by breeding cows, but a better time could not be found than now to do that very thing. While the change is being made, there will apparently be more beef produced than our present breeding herds can supply because half of each year's calves—the steers—in addition to a crop of yearlings or two year olds would be marketed in a single year on a given ranch making such a change, but with the present demand for stockers and feeders the market would easily take care of this extra supply.

Such a system would enable us not only to produce a great deal more beef from a given amount of feed, but also a much larger total quantity of beef. For example, the man who now runs 500 cows and sells his increase as two year olds to be finished in the corn belt on a three or four months' feed and reach the market at an average weight of say 1,350 pounds, could easily run 1,000 cows on the same acreage if his calves were sold at weaning time.

These 1,000 cows would produce about 800 marketable calves, which would be finished in the corn belt in six or seven months, weighing about 900 pounds each. Thus, from the 1,000 cows, 720,000 pounds of beef would be produced. By the other plan, from the 500 cows, there would be about 385 two year olds to sell each year. Finished in the corn belt on a three to four months' feed, they would probably average about 1,350 pounds per head and produce a total of about 520,000 pounds of beef. Thus, from the same amount of feed, by finishing all calves at from twelve to fourteen months old, we could produce 720,000 pounds of beef as compared with 520,000 pounds by finishing them at about thirty months old.

In view of the fact that there is a scarcity of cattle at the present time in this country, that Europe has almost exhausted her cattle supply, that there are approximately 25,000,000 men under arms at present who are consuming more than double the quantity of beef they consume in normal times, keeping the heifers with a view of increasing the breeding herds throughout the country and finishing more calves for the block, would appear to us, to be a sensible policy.

Alfalfa Hay as a Substitute For Grain.

AN INTERESTING experiment has been conducted at the North Dakota station, with the object in view of ascertaining the extent to which grain can be saved by feeding hogs liberally with alfalfa hay. The recent test at that station included fifty sows; forty of these were fed alfalfa hay with a limited grain ration, while ten of them were fed the same grain ration without alfalfa.

During this trial the hay was fed whole in cheap racks provided for the purpose. These racks were made with upright slats about eight inches apart or just close enough so that the sows could get their heads completely into the racks. In this way a comparatively small amount of the hay was wasted. The racks were placed along a fence, in protected places out of doors.

The grain was fed in troughs as a thick mash, warm water being used in mixing the mash. The grain used was composed of two parts crushed barley and one part bran by weight. The alfalfa feeding was begun December 27, 1915, at which time the sows were all weighed and found to average 310 pounds. The average weight of the sows not receiving alfalfa being within a couple of pounds of the average weight of those that received the hay. Due to the fact that some sows were sold and had to be shipped March 1st and others were due to farrow soon, the trial was closed at that time so far as keeping a record of the amount of alfalfa fed was concerned.

In feeding the alfalfa hay the principal object in view was to determine to what extent the hay could be made to take the place of grain and to study the effect of the hay feeding on both the sows and litters at and following farrowing time. Therefore, the sows were not weighed at the close of the trial, though judging from appearance all had gained as much through the winter as was consistent with proper condition of brood sows through the gestation period.

The feed record showed that during the sixty-five days of the trial the sows receiving grain only had eaten 1.8 pounds of grain per 100 pounds live weight per day. The sows receiving alfalfa hay had eaten 5,030 pounds of alfalfa hay and 9,672 pounds of grain. Using the initial weight this figures out on the basis of 1.2 pounds of grain per 100 pounds live weight per day, and 1.95 pounds of alfalfa hay per sow per day or .63 of a pound of hay for each 100 pounds live weight of sows per day.

According to these figures it was possible to replace .6 of a pound of grain with .63 of a pound of alfalfa hay. Another way of looking at it is that the sows getting the alfalfa required only two-thirds as much grain as those not getting it in order to keep them in equally as good condition. As it was the forty sows ate 9,752 pounds of grain and 5,030 pounds of alfalfa in the sixty-five-day period. On the basis of the amount of grain required by the sows not getting hay these sows would have eaten 14,508 pounds of grain. At a cost of 1 cent per pound, which was the actual cost of the feed, the total cost on grain alone would have been $145.08. By feeding the alfalfa a saving of 4,836 pounds of grain was effected, thus reducing the grain cost to $96.72. To replace the 4,836 pounds of grain, however, there was fed 5,030 pounds of alfalfa which at $10 per ton cost $25.15. Adding this to the $96.72 gives a total of $121.87, which still shows an actual saving of $23.21 in the feed bill for the forty sows, for the sixty-five-day feeding period brought about by the feeding of alfalfa.

Washing Wool Before Shearing.

IN SOME localities it is common practice to wash sheep quite thoroughly a few days before shearing on the theory that washed wool makes a better appearance and therefore brings a higher price on the market. There is, however, considerable labor attached to washing and some danger to the sheep, and the question as to whether it pays from a financial point of view was quite fully investigated by the Ohio Experiment Station during the years of 1912 and 1913. Four lots of Delaine Merino sheep, twenty-five to the lot, were used for the test. Two lots were sheared about the middle of April, of which one was washed before shearing and the other not; the other two lots were sheared June 1st, each year of which one was washed before shearing and the other not.

It was found that the washed sheep sheared in April produced on the average 10.33 pounds of wool, while the unwashed produced 11.82 pounds per head. In other words, the washing caused a shrinkage of about 1.5 pounds per head. The sheep sheared in June produced, for the washed lot, an average of 9.89 pounds of wool per head while those in the unwashed lot produced 12.53 pounds, showing a loss due to washing, in this case, amounting to 2.6 pounds per head.

These differences in the weight of the fleeces, of course, were due to the removal of a certain amount of dirt by the washing. While it is true that washed wool brings a somewhat higher price on the market than the unwashed product, the difference in market value was in no case large enough to leave any pay for the labor of washing; in fact, in some cases there was an actual loss in the gross income from the washed fleeces as compared with the unwashed, by not counting the cost of labor incident to washing. In other words, in some cases the washed fleeces at 35 cents a pound brought less money than the unwashed at 30 cents, and the difference in price is seldom greater than 5 cents a pound.

The conclusion reached therefore was that washing sheep before shearing does not pay. The reason for this is that the wool has to be scoured anyway whether the sheep are washed before shearing or not, and all wool prices are based upon probable scoured weights. The weight of the scoured wool was the same in all lots in the tests referred to, which extended through a period of two years.

The washing of the sheep had no effect upon the rate of gain or upon their general health, so no reason could be found to justify washing, no matter how conveniently the sheep man may be located for washing his flock.

The Morning-glory Pest.

STUBBORNNESS in plant form is well typified in the morning-glory or, as it is generally called, bindweed. One reason for its persistence is that the root lives over year after year, and when once an area becomes infested it is practically impossible to clean the land and at the same time produce intertillage crops like corn. A sufficient number of plants usually escape each year under that system so that the roots are nourished and these, in turn, produce new vines and thereby keep up a continuous performance. Bindweed is disagreeable to handle because of its trailing character, winding itself as it does, around cultivator shovels and thereby retarding the work.

Where these pests establish themselves in a given field a special program will have to be mapped out with their destruction as the chief object. It can be accomplished in some cases by obtaining a good stand of grass where clover is the dominating crop. Of course, morning-glories are a nuisance and a pest in thin meadows, and it is doubtful if it pays to allow a thin meadow that is infested to stand more than one season. If it can be plowed after removing the first hay crop and kept cultivated during the late summer and fall, such a field will be in good condition for corn the following season and the morning-glories will be so weakened that they will not put up much opposition. However, where meadows are thick the weeds will be partly smothered out and their destruction can be more easily wrought by using the grass land for pasture purposes during one or two seasons. Let the hogs have their liberty wherever morning-glories make their appearance and one may rest assured that their end will be in sight. Hogs find the roots of morning-glories palatable and they are willing, as a rule, to uproot them for the nourishment they obtain from the luscious roots.

It goes without saying that sheep will very quickly clean a field of morning-glories, because these weeds are included among the list of plants that are palatable to sheep. As a rule, those farms on which a few sheep are kept are always free from plants of this character and there are those who claim sheep to be highly profitable even if there is no cash income from the flock, because of their ability to keep such weeds as this in check.

Those who are troubled with bindweed and have to fight the matter out to the bitter end while they are producing such crops as corn and oats should bear in mind that good work can sometimes be accomplished with cultivators while the ground is sticky and wet. Ordinarily, it never pays to go into a field with cultivators while the soil is in that condition, but in dealing with bindweed this rule may be modified to advantage. We have in mind a number of instances where this plan has been followed persistently with excellent results by men whose method of farming compels them to emphasize the growing of corn and small grain. Such individuals have frequently claimed that they are able to keep the bindweed in check by following this plan.

In And Around Wisconsin.

Sauk County Country Life Picnic at Devil's Lake on July 27th—Other Items of Interest to Our Readers.

Wisconsin stood second in May in the list of states securing transfers of cattle ownership issued by the Holstein-Friesian Association of America. During a two weeks' period in May 467 transfers were issued to Wisconsin stockmen.

J. A. Newsome, Waupaca county, is a firm believer in alfalfa as the best forage crop for that locality and during the third week in June he had a field of alfalfa that yielded cuttings ranging from thirty-six to forty inches in length. This field was sown during the last of May a year ago.

The sixth annual picnic of the Sauk County Country Life Association will be held at the Kirkland shore of Devil's Lake on Thursday, July 27th. Committees have been chosen to make the necessary arrangements and as these meetings are always well attended a successful gathering this year is anticipated.

To determine the extent of co-operative enterprises in Wisconsin the college of agriculture has begun a careful study of these factors in twentieth century farming. B. H. Hibbard and Asher Hobson are in charge and the line of study mapped out has been divided into four main groups—general co-operation organizations, producers' organizations, buying and selling agencies and co-operative public service organizations. Besides the three national farmers' societies doing business in Wisconsin data will be collected regarding the various co-operative cow-testing associations and community breeding clubs, special cash crop and dairy produce clearing houses operated by farmers on the co-operative basis and such service organizations as packing plants, insurance, telephone and laundry companies.

A. J. Pierce, well known as a Holstein breeder, has sold his farm at Lauderdale Lake, Walworth county, to L. W. Swan, cashier of the State Bank of Elkhorn, who will continue to operate it. There are 117 acres in this farm, which is one of the best equipped in the county. Mr. Pierce recently disposed of his Holstein herd, but Mr. Swan plans to install a herd of his own this fall.

The "profitable and unprofitable" live stock exhibit which was given at several district fairs last year by the Wisconsin Stock Breeders' Association will be repeated this year at the following fairs: Baraboo Valley Agricultural Society, Reedsburg, August 1st-4th; Boscobel Agricultural Society, Boscobel, August 9th-11th; Rock County Fair Association, Evansville, August 16th-19th; Inter-County Fair Association, Marshfield, August 9th-September 1st; Marathon County Agricultural Society, Wausau, September 5th-8th; Langlade County Agricultural Society, Antigo, September 19th-22d; Dodge County Fair Association, Beaver Dam, September 25th-29th; Wisconsin State Fair, West Allis, September 11th-16th. The exhibit will be shown under a separate large tent at each of the fairs. It will be taken from place to place. Actual conditions, and no unfair comparisons, will be shown. Meat animals will be bought from the local markets and dairy cattle will be loaned to the exhibit by cow-testing associations throughout the state.

State Senator George Staudenmayer, a well-known farmer of Columbia county, has announced his candidacy for the democratic nomination for governor of Wisconsin. Senator Staudenmayer represented the counties of Sauk and Columbia in the upper house of the 1915 legislature. He was born in the town of Caledonia, Columbia county, and until elected to the senate he never held a public office.

J. W. Dunegan, cashier of the First National Bank, of Stevens Point, and the owner of Springbrook Farm in Stockton and Oak Grove Farm at Plover, believes in beautification of the farm and has employed a landscape architect to lay out plans for his two farms. Mr. Dunegan intends to locate windbreaks on his two farms and maps are now being drawn with this idea in view and next planting season the work will be carried out.

Farmers in the neighborhood of Stratford, Marathon county, are considering reorganizing a cow-testing association and the recent testing picnic there was addressed by H. C. Searles, state organizer, who brought out the fact that Wisconsin now has fifty-five associations operating. The latest to begin work were the Rosendale, Eldorado & Ladogac Association, with Frank Flynn as tester and the Empire association, with Roy Monroe as tester. Both are in Fond du Lac county.

The Dunn County School of Agriculture at Menomonie is carrying out its extension work among the farmers this summer and recently made tests of soil for forty-five farmers in that county. These tests were made in order that the farmers might determine in what respects their soil was lacking. Forty-two of the forty-five tests showed acid in varying amounts. Twenty-two of the acid samples did not contain sufficient acid to prevent the raising of successful crops of corn, oats or clover and on five of these slightly acid soils alfalfa is being grown successfully without the use of limestone to neutralize the soil acids.

Premiums aggregating $84,604.25 have been offered for the Minnesota State Fair, September 4th-9th. The greater share of the prizes offered are for horses, cattle, swine, sheep, wool, poultry and dairy products, the total sum amounting to $36,386. This amount is divided as follows: Horses, $12,000; cattle, $13,280; swine, $3,734; sheep, $3,672; poultry, $1,900; dairy products, $1,550; wool, $250. Including the $20,900 offered for the speed program, $57,286 is offered for the encouragement of better live stock. Nearly $15,000 are presented by the horticultural and agricultural departments. Agricultural exhibits, including the county exhibits, are given $9,343. In the horticultural department the prizes are as follows: Fruit, $1,800; flowers, $1,975; vegetables, $1,325. The dairy department is to give away $1,170.

New Richmond, St. Croix county, is becoming one of the large cheese centers of the state and there are now twenty-nine factories shipping their product into that city for distribution. Shipments have been very heavy during the past few weeks, which indicate the healthy condition of the trade and the big checks which are being paid to the farmers by the factories for their product.

Interest in boys' and girls' judging contests has become so pronounced that many of the district fairs this year have added judging classes. Among these fairs is the Fond du Lac County Fair, which will stage such a contest in co-operation with the breed organizations of the county. The Guernsey, Holstein and Jersey associations have each offered a pure-bred bull calf to the winner in each class and in addition the fair has added cash prizes for individual and team judging. Entries may be made with E. R. Zamzow, secretary.

The reliability of the factory tests of milk and cream is borne out by a recent experiment at New Richmond. Prof. H. M. Stephens, of the agricultural department of the high school, sells the cream from his cows to the New Richmond Cheese & Dairy Co. He made a composite test of the product from his cows, entirely unbeknown to Manager Olson, of course, and in a seven-day test Professor Stephens' test and that of the New Richmond Cheese & Dairy Co. varied but eighteen one-hundredths of a pound of butter fat on 140 pounds of cream.

GROUP OF WISCONSIN FARM BOYS WHO ATTENDED THE SHORT COURSE AT THE COLLEGE OF AGRICULTURE IN JUNE.

Permanent Hay Shed.

Drawings for a hay shed which is to be part of the permanent farm equipment have been prepared by the office of public roads and rural engineering of the department of agriculture, Washington, D. C., and working drawings, with a bill of materials, may be had upon application to that office.

The construction of this shed is such that it may be built in as many sections each sixteen feet long, as are needed to meet the different requirements of individual farms. The width is twenty-eight feet and the height to the eaves is twenty feet, with a quarter-pitch gable roof. If the building is more than three sections, or forty-eight feet long, there should be a hay door in each end. Each section, it calculated, has a capacity of about twenty tons of average hay, the exact capacity varying, of course, with the kind of hay and its condition when put in. With good alfalfa it may be possible to put as much as twenty-five tons into each section. In case the building is used for alfalfa a lean-to for storing baled hay may be built on one or both sides.

As planned, the shed is of the maximum width consistent with ease in mowing away the hay, and the interior has been left clear of braces in order that the hay may be gotten in and out without interference. In the drawing prepared by the department the top seven feet at the sides are covered, but if desirable the whole building may be inclosed.

Since this hay shed is to be permanent it should be located on well-drained ground and in a situation as convenient to as many fields as possible. The plans call for concrete piers in order to avoid the rotting of timbers from contact with the ground. The frame is strongly braced and intended to withstand any storm except a cyclone. As fire is the chief danger to a building of this kind, lightning rods should be installed. This will lessen the danger from this source.

The cost of such a structure will vary, of course, with the situation and local conditions. With lumber at $30 a thousand, however, it is estimated that the materials in a three-section shed, twenty-eight feet by forty-eight feet, should cost little more than $300. A shed of this size may be expected to hold about sixty tons of hay. Including the cost of labor, the shed should be built complete, with hay carrier and lightning rods, for approximately $450.

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Weeds—Their Length of Life.

Nature of Pests Must Be Well Understood if Success Is Attained in Fighting Them, as They Vary in Their Root Habits.

IN fighting weeds it is extremely important to know how long they naturally live and their habits of reproduction. Weeds are divided into three classes according to their duration or length of life: (1) Annuals, (2) biennials, (3) perennials.

Annual weeds live only one year maturing their seeds and then dying. Ragweed, smartweed and crab-grass are examples of annual weeds. Some annuals germinate in the fall, live through the winter, and mature their seeds in the spring. These are called winter annuals. Examples of winter annuals are shepherd's-purse, peppergrass and fleabane.

Biennial weeds live two years. During the first year they grow rather slowly, producing usually a taproot and a rosette of leaves close to the ground, but the second year they send up flower stems that produce seed, and then die. Examples of biennial weeds are blueweed, bull thistle and wild carrot.

Perennial weeds produce each year underground parts which live over to the next year and produce top growth. These underground parts may be of various kinds. They may consist of long, more or less horizontal roots, as in the case of the bull nettle, milkweed and Canada thistle, or the underground parts may consist of rootstocks or underground stems, as in the case of quack-grass, Johnson grass and perennial sow thistle. Again, the underground parts may consist of bulbs that split up, as in the case of wild onion; or they may be more or less in the form of a taproot.

Far more important than to kill weeds is to avoid having weeds to kill. In other words, the farmer should aim to prevent rather than cure the evil. A farm can be made free of weeds by strictly observing the following principles: (1) Prevent weeds from going to seed on the farm; (2) prevent weed seeds being brought to the farm; and (3) in the case of perennial weeds, prevent them from making top growth and thus finally starve out the underground parts.

The application of the three preventive methods outlined here is fully discussed in the following paragraphs.

The annuals and biennials propagate themselves by seeds alone. In dealing with them it is necessary to observe only the first two of the above principles.

Most perennials propagate themselves by their underground parts as well as by their seeds; hence, even if prevented from going to seed they still keep on growing. In dealing with them, therefore, it is necessary to observe all three of the above principles.

The thorough preparation of the seed bed for every crop is an important part in the control of weeds. After plowing nearly all farmers use a disk or spike-tooth harrow to reduce the soil to a good seed-bed condition. Each of these harrowings destroys hosts of young weed seedlings. As it is only the weed seeds within a few inches of the surface of the soil that germinate and, as the harrowings encourage the rapid germination of the weed seeds, thorough harrowing at this period may be relied upon to kill a large portion of the weeds that will appear during the season. In fact, it sometimes happens that the seed bed has been so well prepared that after planting a cultivated crop, such as corn, cotton or potatoes, but little cultivation is required.

After planting the cultivated crop the same object, that of attacking the weeds when young, should be kept in mind. To this end a drag harrow or a spike-tooth harrow is frequently used, both before and after the crop comes up. More weeds will be killed by one dragging at this time than by several cultivations when the plants have become larger. The weeder is also a valuable implement for use at this stage. By removing some of the teeth of this tool it can be used in corn until the crop is nearly waist high. Indeed, some excellent crops of corn have been grown by the use of the weeder only. Some soils are too stony or otherwise not suited to the use of this implement, but where it can be used the weeder is one of the most valuable tools on the farm. The drag harrow and weeder may also be used to advantage with potatoes, cotton and other cultivated crops. After the crops have become so large that these implements can no longer be used, the tillage is performed with cultivators. Cultivators that destroy weeds most effectively should be used. The best tools for this purpose vary with the kind of crop and the type and condition of the soil, so that it is difficult to lay down exact rules as to the choice of cultivators. Intercultural tillage is especially effective in controlling weeds if the crop has been planted in checkrows so as to permit the implement to work in two directions.

Cultivated crops, therefore, offer abundant opportunity to rid a farm of weeds. If properly handled, they are rightly termed "cleaning crops." On the other hand, where these crops are not well cultivated, weeds are actually stimulated to vigorous growth and prolific seeding. Such crops are consequently a boon or a menace, depending upon how they are handled.

If the work of preparation and after tillage has been thorough, few weeds will come up and go to seed after cultivation stops. This is especially true where a winter cover crop, such as wheat, crimson clover or vetch follows the cultivated crop.

Besides the usual cultivated crops, small grain crops can also sometimes be cultivated to advantage in the spring with a spiketooth harrow or weeder. This does not permanently injure the young crop, and it kills hosts of small seedlings which would otherwise make trouble. Farmers in the upper Columbia River basin are able to control wild mustard by repeatedly harrowing fall-sown wheat in the spring; without this harrowing the mustard would be very troublesome.—[Bulletin.

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Good Growing Weather Is General

Winter Grains Are Turning---Oats Headed Out Well---Good Hay Crop Is Being Harvested---Corn Shows Improvement.

WISCONSIN.

Adams County—Rye and grasses are looking well and tame hay cutting is well advanced. Potatoes are coming on nicely. Corn is very backward. Cutworms are at work on high, light soils. —C. T. Leonard.

Bayfield County—Weather has been too wet for corn, oats and potatoes. Fields have been too wet to cultivate. Meadows look well. Clover is about ready to cut. Pastures are good. Live stock are doing well.—E. C. Stevens.

Buffalo County.—Small grains of all kinds promise to make fair crops. Corn is backward, but the last few days and nights of hot weather have pushed it along in fine shape. Potatoes are doing well and have bloomed heavily. Apple and plum trees will yield well. Farmers have been unsuccessful with young colts this spring. Young pigs are doing fairly well.—James G. Bates.

Chippewa County—All crops look well, except corn. For the last week, more favorable weather has caused an improvement in corn. The large acreage of potatoes planted is coming on fine and bugs are not troublesome. The hay crop is good and harvesting has commenced. Clover has an excellent stand; very little winterkilled. Pastures are in good shape, with plenty of young grass. Several cars of live stock were shipped last week.—Ernest Neitzel.

Crawford County—Crops look fine. Rye is beginning to turn; oats are headed out, with prospects of a good crop, although some smut is reported in them. Corn is behind, but is coming on fine since the warm weather began. Meadows are good and haying will commence in about a week. Pastures are good. Potatoes are growing nicely. Fruit and berry crops look well.—H. H. Stuckey.

Douglas County—Crops are backward. Too much rain and cold weather has caused corn and potatoes to rot in the ground. Pastures are good and hay promises to come up to average. Small grains have a good color but need warmer weather. With drier weather, the fruit promises fair, especially strawberries.—B. N. Stone.

Eau Claire County.—Grain crops look well, except on wet land, where they suffered from cold and rain. Potatoes are doing well on warm soil; on wet soil they are backward. Hay is a bumper crop and nearly ready to cut. Corn is about two weeks late, but is coming fine since the warm weather set in.—S. S. W.

Jackson County—Small grains are doing fine. Corn is backward, but the warm weather is bringing it along fine. Pastures are getting short, because the clover was killed out. Potatoes are looking well. Apples and plums are fair. The strawberry crop is small. Garden truck is doing exceptionally well.—C. G. Ristow.

Juneau County—Seasonable weather for the last week has helped corn. However, much of the corn is just up. Potatoes are looking well. There are more bugs this year than for several years. Small grain is good on high ground; on low ground it was damaged by the early rains and wet weather. A considerable amount of buckwheat is being sown. Hog crop is below average.—C. W. Hale.

La Fayette County.—Good, hot weather has improved the condition of all crops. Corn is doing well; some fields are normal, but others are small. Oats and barley look good; oats are heading and prospects are for a heavy yield. Potatoes are doing well, except there is some blight in the early ones. Farmers are putting up hay; the first crop of alfalfa is in; clover will make a heavy crop. Pastures are excellent and there is an abundance of white clover coming on in them.—W. F. Pease.

Langlade County—For the last few days crops have been growing rapidly. Winter wheat and rye are in blossom. Clover cutting has begun. Grass is heavy. Corn shows good color in hilly sections, but is poor on low land. Potatoes are looking well except in wet places. Strawberries are good.—Chas. Parsons.

Manitowoc County—Warm weather for the last few days has made a big improvement in the hay crop. Grain crops are an average. Corn is poor, especially that planted before the heavy rains. Some of it has just been planted. Peas look poor because they are bleached.—Otto G. Berge.

Marinette County—Decidedly warm weather during the last week has caused all crops to make a rapid growth. Cold, wet weather had retarded the corn and caused some replanting. Potatoes are in good condition at present. Small grains promise good crops. In the north part of the county clover and other hay crops are normal or above. If weather conditions allow good curing, hay will make a heavy crop everywhere in the county. Pastures are excellent. Fruits are doing well. The seventh load of grade and registered dairy cattle was brought in last week. These animals are bought upon a co-operative system which allows the farmer three years in which to pay for them.—W. E. Morton.

Marquette County—Weather is fine for corn, which has good stand and color, but is late. Oats look well. Rye is good, but thin on account of winterkilling. Pastures and marsh lands are good, but tame meadows are very light. Potatoes are all planted, some have come up nicely and others have rotted in the ground. A larger acreage of beans has been planted this year than usual. Cutworms are working hard on beans and corn so there is much replanting. The white grub is damaging strawberries and other crops. Live stock are in good health.—John M. Williams.

Pierce County.—We have had only a few hot days. Corn is about three weeks late. Rye has improved and the prospects are for a fair crop. All small grain looks fine, but is somewhat late. Clover cutting has begun and the crop is heavy. Pastures were never better and live stock are doing well.—G. K. Moore.

Portage County—Recent warm days have put new life into the corn, which was stunted and pale in color. Oats have had a light color, but are now doing nicely. About 75 per cent of the potato planting is up and growing well. Meadows were never better. Pastures are excellent. Creameries are doing a good business.—Arthur H. Peterson.

Price County—Weather is wet. Haying has begun and the crop will be heavy. Oats look well, except on flat lands, where it was damaged by excessive rains. Winter grain is a fair crop. Potatoes are late, but promise well. Pastures are excellent and live stock look fine.—C. F. Glissendorf.

Rusk County—Most fields of small grain look well. Corn is backward on account of heavy rains. Timothy and clover will make abundant crops. A few farmers have commenced haying and with favorable weather a good crop is assured. Potatoes look well, but the acreage planted is not large. Pastures continue to furnish ample feed and dairy cows are giving an exceptional flow of milk. Beef herds are improving rapidly.—T. M. Thomas.

Taylor County—Rye will be about half a crop; oats look fair; barley is poor. Corn is very poor and much of it had to be replanted because of cold, wet weather. There is little chance to have ripe corn this year. Potatoes are fair on high, rolling land, but on low lands there will hardly be half a crop. Hay is short and about two weeks late. Pastures are fair.—J. C. Hoffman.

Washburn County—Heavy rains delayed cutting of the clover hay crop, which is the largest raised in this county for several years. Timothy is heavy. Pastures are excellent. Oats, barley and rye promise well. Corn is backward, especially on heavy soils. Strawberry crop was large; other small fruits will yield average crops. A hail storm on June 25th did some damage to crops in the south part of the county.—L. D. Garnhart.

Washington County—Oats and barley are doing well on high land. Winter wheat and rye are fair. Peas look poor in this locality because the weather has been too wet and cold. Alsike clover is making good seed, and red clover hay is about an average. Timothy is short, but the stand is good. Corn and potatoes are backward due to cool, wet weather in June. Much replanting was necessary on account of the seed rotting. Pastures are somewhat bare in places. Strawberries were a good crop. Other fruits will be short in this section.—Milo P. Salter.

Waukesha County—Crops have improved. Barley and oats are a little thin, but well headed. Corn is growing very rapidly. The new seeding of alfalfa is one of the best ever raised in this country, and the first cutting was put in the barns in fair condition. The next crop is well started. Potatoes are in advance of last year's crop; early ones are in blossom.—W. J. Mann.

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Blocking Sugar Beets.

To the Editor:—When the sugar beets have put out the fourth leaf, it is time then to thin them in the row. At first the beets are blocked. This work is done with a hoe, leaving about a half dozen plants in a block every eight or ten inches apart. The next work must be done by hand, and this is usually done with cheaper labor—frequently it is done by children and women. The best plant in the block is singled out, and that one is allowed to stand and grow to become the desired beet plant. All the superfluous beets and weeds are pulled out by hand. The dirt is then pressed around the one selected. When the work is done properly, each row contains only single plants standing from eight to ten inches apart in a row.

Quite frequently, the following day, the beets in the field wilt, particularly when the weather is very warm. But in a few days' time the plants recover and erect themselves. Next in order will be cultivation, and it should be repeated several times or whenever necessary until the leaves grow so large that they might become damaged. The time to stop cultivation is when the leaves touch each other in the row. It is well to cultivate after rain, so as to conserve all the moisture possible. Sugar beets, so that they may grow best, need a large amount of moisture.

It is a good policy to have the sugar beets make their best growth early in the season. Let the leaves make their largest growth. It is in the leaves where the sugar is elaborated during the warm, sunshiny days of fall. It may increase the sugar 1 per cent a day, or two in times of favorable weather. When the leaves have turned a brownish color, and have lost their bright green, their work is done and no more sugar is elaborated.

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QUESTIONS AND ANSWERS.

One Light Only on Ford Car.

I own a 1913 Ford car. I wish to run only one headlight with current from the magneto. How shall I arrange the switch and wires? What size light shall I use?

Answer.—Run a wire from the magneto wire terminal on the coil box to the light switch. From the other terminal of the switch, run a wire to the light. From the other terminal of the light, run a wire to the frame, and ground it. Use a sixteen-volt tungsten light of eight-candle power. Should you have any trouble with the light burning out, use an eighteen-volt light.

Engine Throttles Too Low.

I have a "Krit" car whose motor will not run as smoothly as I think it should. Sometimes it will stop when running slowly. It runs fine on the road. I have a Stromberg carburetor and set spark. What is wrong?

Answer.—The stop screw of the butterfly valve of the carburetor is adjusted so as to shut off too much of the gas when the motor is throttled clear down. Adjust the screw so that the motor will not slow down quite so much. It may be that you have air leaks at the intake manifold gasket, or around the intake valve stems. This would cause your trouble.

Gear-Shifting Trouble.

We have a 1915 Buick car. The gears may be shifted from low to intermediate and from intermediate to high, but cannot be shifted from high to intermediate. What is the trouble and the remedy?

Answer.—If your gears may be shifted when the engine is not running, your trouble is a "spinning" clutch; that is, your clutch does not come to nearly a standstill when released, as it should. The surest remedy is to locate a small leather disk in such a position that it acts as a brake on the rim of the clutch when the clutch is released. If it is impossible to shift gears under any condition, you better take the transmission apart, look for burrs on the clutch gear, broken gear teeth and burrs on the locating device.

Some Tractor Questions.

I have a ten-horse-power gasoline engine. At two miles per hour what would be its actual pull at the draw-bar? I intend to use a belt from the crank shaft to the jackshaft. What size pulleys should I use? I shall use five-foot drive wheels. What size sprockets must I use on the jackshaft and on the drivers?

Answer.—It may be of interest to our readers to know how to figure the draw-bar pull they can expect from an engine of given horse power. A part of the engine power—usually about one-third—is used up in driving the tractor. We will therefore say that the above ten-horse-power engine exerts seven horse power at the draw bar. Now, one horse power will exert a force of one pound through a distance of 33,000 feet in one minute. In other words, a horse power is equal to 33,000 foot pounds of work per minute. A "foot pound" is the product of the force exerted by the distance through which it is exerted, force being measured in pounds and distance in feet. If I am pulling with a force of five pounds and thereby move an object six feet I have done thirty foot pounds of work.

Now, if one horse power is equal to 33,000 foot pounds per minute; seven horse power equals 7x33,000 foot pounds=231,000 foot pounds per minute. In one hour this would amount to 60x231,000 foot pounds=13,860,000 foot pounds. The above tractor at two miles per hour will travel 2x5,280 feet=10,560 feet in one hour. To find the pull, divide the foot pounds by the distance moved. Therefore, for the above tractor the draw-bar pull equals 13,860,000÷10,560 =1,322 pounds. The weight of the tractor should be about double this amount, say 2,500 pounds.

You did not give the speed of your engine. We will assume that it is 250 R. P. M. In that case, use a pulley six-inch diameter and six-inch face on the engine; twenty-four-inch diameter and six-inch face on the jack-shaft. Use fifteen-tooth sprockets on the jack-shaft and seventy-five-tooth sprockets on the drivers, the sprockets being about inch and a half pitch.

Engine Will Not Run.

I have a three-horse-power Fairbanks-Morse engine that I cannot start. Apparently it has plenty of spark and the gasoline gets into the chamber. Do you think that it needs timing? How would you time it? New points were recently put on the make-and-break sparker. These are apparently very large. Would this be sufficient cause for failure to start?

Answer.—Any engine in good working order will start if it is timed correctly and has good compression, a good spark and the proper gas mixture. If you are doubtful about your timing notice your timing gears and see that the center punch marks or other marks come in line with each other when the engine is turned over. The exhaust valve should close soon after the piston passes dead center at the beginning of the intake stroke. The spark should occur at the end of the compression stroke, the spark control lever being in starting position.

See that you have a good spark by removing the igniter, running the ground wire to it and connecting the other wire to the terminal. Then work the igniter rapidly and the spark should show at the points. The size of the points should not matter. Keep the points clean. A defective spark is usually due to poor connections, defective wiring or weak batteries. Poor compression is usually due to leaky valves on new engines and worn-out rings on old engines.

Ford Motor Heats.

My Ford car has run 1,800 miles. The water boils in the radiator even if I only run five or six miles on good roads. It boils more now than it did when it had run only 1,000 miles. What is the cause?

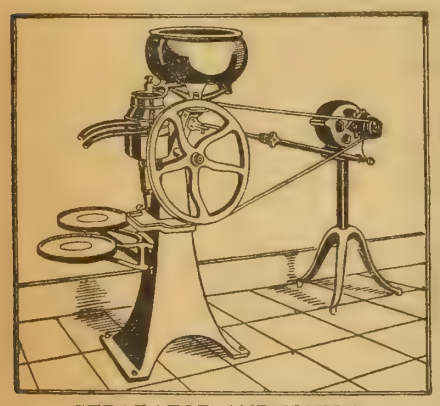
Answer.—Too much carbon has accumulated in your cylinders. Remove the cylinder head and scrape out the carbon. A loose fan belt, running with the spark retarded or stopped up water passages will also cause a motor to heat.

Electricity in the Farm Home

WHAT farm woman has not sighed a hundred times, as she lit the old kerosene lamp, or went out to pump a bucket of water? What farm woman has not longed for the luxury of electric lights and running water, such as her town friends enjoy? And now it is possible. Her wish may come true. For conveniences which long have been regarded as solely within the reach of the city dweller may now be had at a reasonable price for the farm home. Individual electric plants, which make possible, not only electric lights for house and barn, but running water, and a multitude of labor-saving devices for the housewife are being manufactured at as low a price as $250.

Think of having a farm house completely equipped with all modern lighting and labor-saving devices, at no greater expense than the city man must pay for his electricity! These individual plants are easy to handle—a child of ten or eleven can do it. Danger? There is none. The voltage is so low that anyone can handle the switchboard freely and not get a shock. All that is necessary to start the engine which generates the power is to press down a lever. The little plants include the engine, generator, switchboard and batteries.

The busy farm wife can put the little power plant to a greater variety of uses than she ever dreamed of. But first comes lighting. The little plant will run thirty-two 16-candle-power lamps at any time. Sixty or seventy lamps may be connected up, and if it should be necessary to run them all at once, the reserve electricity stored in the batteries may be drawn upon. In the average farm home only

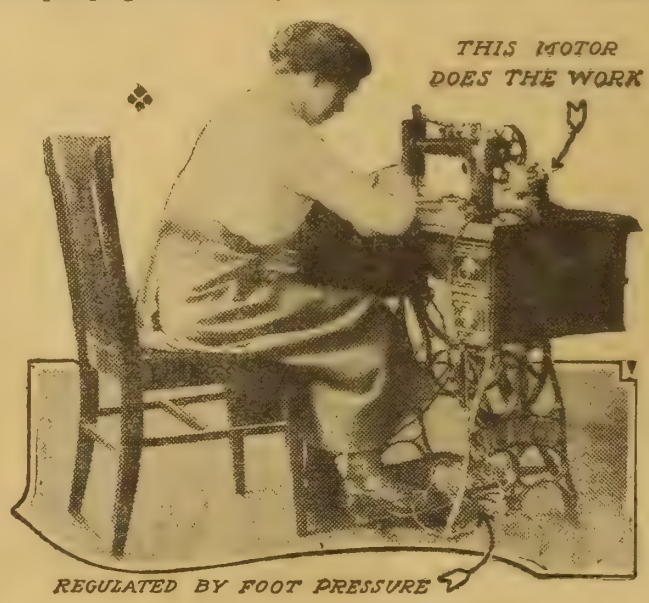


SEPARATOR AND MOTOR.

a few lights are burned at a time, leaving most of the power free to pull some of the many labor-saving devices with which the farm home may be equipped.

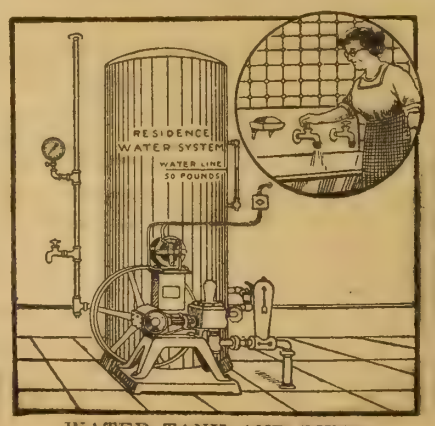
When it is not running this plant costs nothing. The city business men pay about the same amount for the electric light or power they use in the business district as the farmer can get them for with one of these home plants. In the residence districts of the city the charge is usually 10 cents and in the smaller towns it is frequently 15 cents for the same lighting service that can be had on the farm for around 7 cents.

Next to lighting, the water service is the most useful of the conveniences made possible by the little farm electrical plant. By its use, running water may be provided in the kitchen sink, in any room in the house, and in the basement or the barn. The water pump, tank, automatic controller and motor, shown in the picture, can be bought for $110. Or if there is a tank already in the farm house, the rest of the equipment may be attached to it, reducing the cost. The pump is operated by a one-eighth horse-power motor, which can be attached to any electric light socket. It will lift the water twenty-two feet; that is, from a well, where the surface of the water is twenty-two feet below the pump. It will bring it from a lake or a well 125 feet away. It pumps 160 gallons of water an hour. The automatic controller regulates the pump. When enough water has been used from the tank so that the water pressure goes below a certain point, then the pump begins to work and continues until the pressure is up again. It starts and stops automatically, requiring no more attention than city folks give to the pumping of their city water into the standpipe at their waterworks. The pump and equipment can be installed by the plumber who pipes the house for the water service.



MOTOR DRIVEN SEWING MACHINE.

The labor-saving devices which may be operated by this small plant seem almost endless. Electric washing machines are commonly used. These can be bought, already equipped with motor, for from $35 to $105. The average price is about $60. The washing and wringing machine, illustrated on this page, is one of the $105 machines. It has a copper tank, in which the drum of the washer is located. The drum is a big cylinder, perforated with small holes. The clothes are placed in the drum, and when the lever is pressed which starts the washer, the drum revolves, washing the clothes. The drum reverses automatically, turning first in one direction and then in the other. Turning on the wringer at the back, the clothes may be wrung in or out of the tub. The wringer is turned on by the lever on which the woman in the picture below is resting her left hand. Her right hand holds the cord which connects the one-sixth horse-power motor with the electric-light socket. The wringer and washer will operate at the same time, or either may be used alone. The machine will do an eight-hour washing for a cost of about 12 cents. The machine is comparatively light weight, and may easily be dragged around and attached to any convenient electric-light socket. Since it requires so little attention, the housewife may do her baking, cook dinner, or read The Wisconsin Farmer while her clothes are being washed. The same kind of a machine, with a galvanized instead of a copper tank, costs $85.



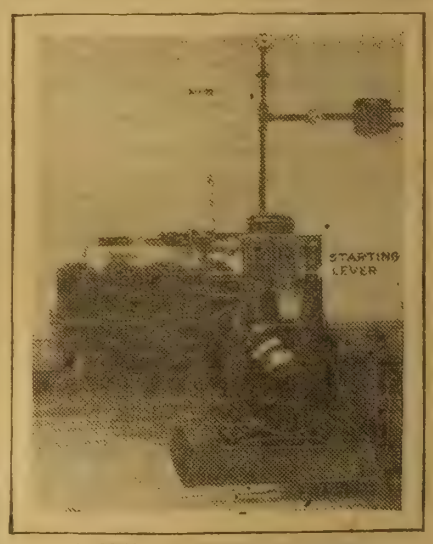
WATER TANK AND PUMP.

Another picture shows the housewife running an electric sewing machine. This motor, which costs about $15, can be attached to any machine. It is one-fourth horse power and costs only 1½ or 2 cents an hour to operate. The motor has varying speeds, which are regulated by pressing down on the foot pedal. To speed up the machine you press very lightly. The motor does not have to be clamped or screwed onto the machine. It is mounted on little legs with rubber tips, and sets on top of the sewing machine as shown in the accompanying illustration. There is a tiny wheel covered with cork, which fits tightly under the wheel of the machine when the spring is pressed down. The cork friction grips the wheel of the sewing machine and runs it. When the machine is not in use, the motor may be instantly released with one hand and set out of the children's reach. The sewing machine may be moved wherever convenient, and the motor attached to the nearest electric-light socket.

A motor can be attached to the cream separator, and to the churn, operating these for a few cents an hour, and relieving the housewife of much dreary, back-breaking toil. A general utility motor is now manufactured, one-fourth horse power, mounted on a stout tripod base, which may be connected with the cream separator, the churn, the washing machine, or any of half a dozen other labor-saving devices.

The housewife may equip herself with all sorts of electrical cooking utensils, which may be attached at any electric-light socket. El Boillo, an ordinary-looking metal bar, dropped in a basin, and with the current turned on, quickly heats the water to a boiling point. All sorts of utensils for toasting bread, making coffee, grilling meat, etc., can be used right on the dining-room table without ever going near the kitchen. The farm housewife can sweep with an electric vacuum cleaner, do her ironing with an electric iron, curl her hair on an electric curler. On hot days electric fans will keep a cool breeze circulating through the house.

Conveniences on the farm? No town house can beat that, and the farm housewife no longer has cause



A $250 ELECTRIC PLANT.

to envy the luxuries of her town friends.

The envy is now far more often directed the other way. The city woman, coming to visit her country friend, finds not drudgery, but comfort and luxury—all the conveniences to which she is accustomed at home, plus those provided by nature for the exclusive use of the country folk. The daughter in the modern, improved country home does not seek to escape it—she is proud of it; she knows there are none better.

Electrical systems for the farm home are following the automobile and the tractor into the modern farmer's equipment. Their part in making farm life more pleasant and the farm home more convenient and comfortable and in increasing the hours of pleasure is worthy of investigation and appreciation.

ELECTRIC WASHER AND WRINGER.

JERSEY INTEREST RUNS HIGH.

Great Enthusiasm For the Breed in Wisconsin Shown Since the State Gathering at Waupaca and Wauwatosa—Watchful Waiting Policy to Be Succeeded by One of Co-operation and Publicity.

JERSEY enthusiasm in Wisconsin was never greater than it is this summer and the breeders are determined that the watchful waiting policy that has been in vogue for so many years shall come to an end. The Jersey cow has been permitted to stand on her own merits too long and the activity of the Wisconsin Jersey Breeders' Association in behalf of the breed this year indicates that in the future Wisconsin breeders intend to see that the Jersey breed gets its just praise and recognition and that this breed pushes ahead with the co-operation of the breeders rather than in spite of the breeders.

This was the sentiment expressed this year at the two annual meetings of the state association, which were held on succeeding days, first on June 29th at the Red Oak Farm of Mr. F. R. Constance at Waupaca, and again on June 30th at the Fewacres Farm of Mr. Frederic Underwood at Wauwatosa. There was never more interest shown in the state gatherings and approximately 500 breeders were in attendance at one or the other or both of the meetings. Two meetings were held, one in the central part of the state and one in the southeastern part, in order that the greatest number of breeders might attend at the least expense in time and money and the plan worked out very successfully. The same speakers spoke at each meeting, so that those who attended one meeting were as fortunate in this respect as those who attended the other. The meeting at Waupaca was under the auspices of the Waupaca County Jersey Breeders' Association and the meeting at Wauwatosa in connection with the Waukesha County Jersey Breeders' Association.

DAIRY BARN ON THE FREDERIC UNDERWOOD FARM AT WAUWATOSA.

There are about 730 breeders of pure-bred Jerseys in Wisconsin, according to the records of the American Jersey Cattle Club, of which about 100 are members of the state association. With new blood in the American Jersey Cattle Club, interest has also increased in the state organization and the breeder who attended the state meeting this year went home convinced that he owns the most economical producers of dairy products and happy that he is a Jersey breeder, as every speaker, an enthusiast through and through, cited instance after instance of the merits of the breed. For breed enthusiasm the writer has never attended more enthusiastic gatherings and in the minds of the breeders present there is only one kind of a dairy cow and she is a Jersey. The thought every breeder wished to convey to the consumer is that there is only one kind of milk and that is Jersey milk.

For many years the Jersey breed has been permitted in Wisconsin to stand on its own merits. The same policy has prevailed in the American Jersey Cattle Club, the theory being that the Jersey is good enough to stand alone. With a more progressive policy in the national organization the Wisconsin breeders have come to realize that they must co-operate in advancing the interests of the breed and the new life that has been supplied to the state organization this year should net splendid results. The number of breeders has increased, interest in the county organizations has become more tense and an era of greater prosperity is in sight, the breeders believe. As one speaker expressed it, "The Jersey has for years succeeded in this country despite the breeders; now she is going to take the lead with the aid of the breeders." The policy of sitting idly by, contented with present conditions, several speakers pointed out, has been a costly one for the breed when with an economical producer of milk as a basis of their business the breeders of Jerseys could be creating the same market by constructive co-operative effort and publicity that the lovers of other breeds have created for their cattle.

Unfortunately Dr. M. D. Munn, president of the American Jersey Cattle Club, was unable to attend the state meetings as he had planned. He was attending a milk standardization meeting in Chicago. Mr. Wallace McMonnies, representing the national club, took his place on the program. Mr. McMonnies pointed out that the standardization of milk products will be of inestimable value to the Jersey breed and that with new interest and new blood among the 26,000 Jersey breeders in the United States that the fight for recognition now begun will bear the most wonderful results.

"With the country demanding milk containing a higher percentage of fat, more of the other solids and greater nutrition the Jersey breed cannot but advance by leaps and bounds, provided the breeders get behind and push and pull together," Mr. McMonnies said. "We have the breed that for economy, long life and early maturity is not equaled and with an abandonment of the 'good enough for me' policy the Jersey breed should go forward as it has never gone forward, although there are now more pure-bred Jersey breeders in this country than of any other breed."

Publicity and co-operation were the big topics for discussion. Wisconsin Jersey breeders have had this brought home to them very forcibly by the success which breeders of rival breeds have obtained in this state. Health departments in many cities, it was explained, are demanding milk containing not less than 8.5 per cent of solids, not fat, and a bulletin issued by the government shows the average composition of Jersey milk as 9.16 per cent of solids, not fat, and 4.956 per cent fat, making 14.11 per cent total solids. These are matters, speakers explained, which must be brought to the attention of the consuming public and that it can only be done through advertising and publicity. Once the demand has been increased for Jersey products the demand for Jerseys will increase accordingly.

Mr. McMonnies explained the new policy that has been inaugurated in the American Jersey Cattle Club under the administration of President Munn. The progressive element is now in control and it is a fight to win; a fight to show the conservatives that publicity and co-operation will do much to advance the breed. An extension department has been started by the club with organizers in each state and Mr. F. F. Showers, of Delavan, president of the Wisconsin association, has been chosen organizer for this state. As Mr. McMonnies explained, the policy now is to induce the farmer that the Jersey is the best cow for him and break down the old belief that she is a rich man's pet or a show cow. "Once, when persons spoke of milk they thought of only two kinds—Jersey milk and just milk," he said, "and it is our plan to get that idea back into the minds of every consumer of milk and butter in this country today."

The association was fortunate this year in choosing Waupaca and Wauwatosa for its meetings. Here the two contrasts were offered. On Mr. Constance's farm at Waupaca the Jerseys for years have been the mainstays; they have provided the living, the luxuries and the enjoyment on that farm. On the farm of Mr. Underwood, who is president of the Erie Railroad, experimental breeding has been carried on and cows have been fitted for the show ring. Mr. Underwood's farm and his Jerseys are his hobby. So it was evident to those who attended both meetings that the Jersey can be fitted into all conditions. Mr. Constance has a splendid herd, is now milking about twenty-six head, and it was indeed a pleasure to see them grazing and resting in the pasture just across the road from where the meet-

(Concluded on page 21.)

Group of breeders and their families listening to the speakers at the state Jersey meeting at Red Oak Stock Farm, Waupaca.

The welcome sign was prominently in evidence at Waupaca, indicating the new spirit among Jersey breeders.

Two year old in Underwood herd, now under test. She gave 550 pounds of fat in seven months ending June 1st.

THE JERSEY HERD OF MR. F. R. CONSTANCE, AT WAUPACA.

Good light and fresh air add to the comfort of the Jerseys at Fewacres Farm of Mr. Underwood.

Waupaca and Butternut Ridge.

Out of the 410 cows under test in the Waupaca and Butternut Ridge Co-operative Cow-Testing Association ninety-two produced over forty pounds of butter fat. The cow that produced the most butter fat was a grade Holstein, owned by Fred T. Jorgensen. Her record for the month was sixty-five pounds of butter fat, yielding 1,624 pounds of 4-per-cent milk. Mr. Herman Becker had twelve grade Jerseys that averaged 50.83 pounds of butter fat, and Mr. Ira Farley had twelve grade Holsteins that averaged 50.04 pounds of butter fat.

The following report includes cows that have produced more than forty-five pounds of butter fat.

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. C. Boyce					
Crook, G. H.	10	4-7-16	1770	2.7	47.8
Dora, G. H.	5	4-2-16	1580	2.9	45.8
Julia, G. H.	3	4-21-16	1296	3.5	45.4
Crawler, G. H.	10	1-14-16	1107	4.2	46.5
Alice, G. H.	5	4-19-16	1699	2.8	47.6
Ida, G. H.	7	4-25-16	1293	3.6	46.5
Fred T. Jorgensen					
Jessie, G. H.	10	4-17-16	1624	4.0	65.0
Ciff, G. H.	10	11-17-15	1085	4.0	43.4
Mercedes, G.H.	8	1-18-16	1637	3.4	55.7
Beauty, G. H.	10	5-29-16	1686	3.5	59.0
E. O. Frihart					
Brownie, G. J.	6	3-28-16	1215	5.2	63.2
Esther, G. H.	7	3-1-16	1491	3.7	55.2
Herman Becker					
Spot, G. J.	8	1-18-16	1060	5.1	54.1
May, G. J.	8	1-8-16	911	5.2	47.4
Nigger, G. J.	10	10-6-15	772	6.4	49.4
Bessie, G. J.	8	12-27-15	818	5.9	48.3
Nellie, G. J.	8	3-18-16	1122	5.5	61.7
Greese Box,					
G. J.	9	10-16-15	914	5.3	48.4
Schoolmaam's					
Sister, G. J.	5	5-18-16	964	4.8	46.3
Belle Min, G.J.	7	3-11-16	1069	5.3	56.7
Silvey, G. J.	8	2-10-16	945	5.6	52.9
Harness, G. J.	8	4-1-16	1119	5.4	60.4
Frank Bauer					
Laura, N.	6	5-1-16	1590	3.2	51.3
John Jensen					
Montgomery, N.	8	11-11-15	1011	4.5	45.5
Rose, N.	9	2-14-16	1203	4.0	48.1
M. J. House					
Susie, G. H.	6	11-23-15	952	4.7	44.7
Eva, N.	7	2-22-16	1423	3.6	51.2
John C. Backes					
Pauline, G. G.	12	1-27-16	1029	4.5	46.3
Curlie Head,					
G. G.	8	10-20-15	949	5.3	50.3
Buttercup, G.G.	6	11-6-15	859	5.7	49.0
Spot, G. G.	6	10-6-15	983	4.9	48.2
Rocksie, G. G.	6	1-16-15	949	5.1	48.4
E. E. Haire					
Laura, G. H.	5	4-2-16	1029	4.7	48.4
Amy, G. H.	8	5-23-16	1333	3.8	50.7
Ira Farley					
Belle, G. H.	5	11-1-15	1454	4.3	62.5
Brownie, N.	11	10-9-15	865	6.0	51.9
Bessie, G. H.	7	1-2-16	1144	4.4	50.3
Lilly, G. H.	7	3-28-16	1407	3.7	52.1
Jewel, G. H.	6	11-18-15	1131	4.4	49.8
Jessie, G. H.	7	11-23-15	1311	4.1	54.0
Daisy, G. H.	5	1-11-16	1528	3.4	52.0
Eva, G. H.	3	1-13-16	1333	3.8	50.7
Niguel, G. H.	6	10-31-15	852	5.3	45.2
Wm. Kneip					
Hurt & Black,					
N.	9	4-23-16	945	4.8	45.4
Wm. Rossy					
Dandy, G. G.	6	2-12-16	1073	5.1	54.7
C. A. Peterson &					
G. R. Miller					
Maid, G. G.	3	4-25-16	904	5.4	48.8
Marnie's Queen of					
Norway, R.G.	8	1-15-16	998	6.4	63.9
M. E. Lewis & Sons					
Harriet, G. G.	9	2-12-16	794	5.8	46.1
C. A. Stinchfield					
No. 2, G. G.	10	4-9-16	1153	4.1	47.3
No. 4, G. G.	10	4-15-16	1271	3.9	49.6
No. 6, G. G.	9	4-8-16	1023	5.0	51.1
No. 11, G. H.	5	5-23-16	1417	3.5	49.6
No. 22, G. H.	5	4-30-16	1330	3.7	49.2
John Hanson					
Jess, N.	5	5-9-16	1466	3.6	52.8
Clara, N.	8	3-19-16	1290	3.5	45.1
Blanche, N.	6	5-24-16	1516	3.1	47.0

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

Winnebago County Picnic.

To the Editor:—On account of the rain our association picnic which was planned to be held at the W. P. Bussey farm was held in Masonic Hall in Omro, June 10th. A large crowd was present, all the members and their friends being on hand for the basket dinner at noon. Ice cream and coffee was served by the association. Contests of various kinds were arranged. Everyone enjoyed the women's spike-driving contest. Among the speakers were R. T Harris, Charles Hill, Miss Nellie Maxwell, C. H. Everett, Prof. Emil Ranchenstein and A. R. House. The meeting was a rouser from the standpoint of creating interest in cow testing in Winnebago county. The following is the forty-five-pound list for May, with sixty-five cows in the list:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
H. R. Mosely					
Bessie, G. G.	7	4-20-16	1165	4.3	50.1
Goldie, G. G.	5	5-11-16	1206	5.0	60.3
Carrie, G. G.		3-17-16	1382	4.2	58.0
Oren Miller					
No. 5, G. J.	3	5-17-16	1029	5.0	51.5
Jerry Shea					
Tillie, G. G.	10	4-15-16	1116	4.6	51.3
C. H. Slayton					
Fin Dell, G. G.	6	12-6-15	784	5.4	46.3
Dolly, G. G.	5	3-12-15	1156	4.0	46.2
Lizette, P.B.G.	4	4-9-16	924	5.3	49.0
Chas. Ruelke					
Jennie, P. B.G.	4	4-26-16	1128	4.4	49.6
Milton Mackie					
Betsy, G. D.	10	12-17-15	995	5.4	53.7
N. A. Rasmussen					
Maybe, G. G.	4	4-4-16	1166	5.2	60.6
G. E. Washburn					
Rosalinda,					
P. B. J.	8	3-22-16	961	4.8	46.1
Nubbs, G. J.	6	10-15-15	713	6.4	45.6
Rose 2d, P.B.J.	5	12-25-15	877	5.5	48.2
M. L. De Voin					
Daisy, P. B. H.	7	12-31-15	1627	2.8	45.6
Babe, P. B. H.	5	3-21-16	1605	3.2	51.4
Neta, P. B. H.	5	3-26-16	2067	2.5	51.7
Tenant Bros.					
Ruth Gaynor,					
P. B. J.	6	2-9-16	949	6.0	56.9
G. W. Searles					
Rilla, G. J.	5	3-29-16	871	5.5	47.9
Levi Brunson					
Blue Bell,					
P. B. J.	4	3-6-16	1116	4.7	52.5
Laura, G. J.	5	3-21-16	1184	5.0	59.2
W. C. Bussey					
Hattie, G. J.	4	2-29-16	809	5.9	47.7
No. 1, G. J.	5	3-28-16	1096	4.6	50.4

A. R. House, Official Tester.

River Falls Report.

Forty cows in the River Falls & Roberts Cow-Testing Association made better than forty pounds of fat during May, of which number all except twenty-three did better than forty-five pounds. The report of the forty-five pounders follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Lbs. butter fat
Neal Taylor					
Minnie, G. H.	3	4-15-16	1206	4.0	48.2
W. N. Benedict					
Brownie, G. J.	5	2-29-16	1020	4.7	47.9
John Chapman					
Maggie, G. H.	7	3-28-16	1917	3.4	65.2
Buttercup, G. G.	8	3-7-16	1650	4.7	77.5
Susie, G. H.	6	4-23-16	1833	4.9	89.8
Belle 2d, R. H.	4	1-22-16	1707	3.2	54.6
Dora, G. H.	7	3-13-16	2280	3.2	73.0
June, G. S. H.	3	1-3-16	1440	3.7	53.3
Pete, G. S. H.	7	12-5-15	1158	3.9	45.2
S. E. Batten					
No. 1, G. H.	10	4-13-16	1449	3.8	55.1
L. W. Ash					
Polly, R. J.	7	3-15-16	1080	4.6	49.7
Cream of Gold,					
R. J.	5	3-25-16	1020	4.8	48.9
Massassia, R. J.	5	3-23-16	843	5.4	45.5
H. A. Rundell					
Buttercup, G.G.	7	4-14-16	1053	5.4	56.9
Geo. Graham					
JerseyLillie, G.J.	7	4-21-16	1071	4.8	51.4
Shamrock, G.G.	5	5-4-16	969	4.7	45.5
Frank Bliss					
Snow Ball, G.H.	5	5-2-16	1431	3.3	47.2
Blanche, G. H.	6	5-1-16	1437	3.2	45.9
D. E. Flower					
Trilby, R. H.	4	3-1-16	1458	3.2	46.6

C. G. Carlson, Tester.
J. M. May, Secretary.

Rock County Testing.

Excellent records have been made by a few of the cows in this association for the month ending May 31st. The grade Guernsey that held first place for four consecutive months was beaten this month by a grade Holstein owned by A. Templeton, of Lima Center. This cow produced 1,349 pounds of 4.5 per cent milk, yielding 60.7 pounds of butter fat.

H. H. Little is the owner of a pure-bred Short-horn which was a close second, giving 1,428 pounds of 4.3 per cent milk and 60.4 pounds of butter fat. A good record was made by cows owned by J. B. Palmer, of Milton, for the month of May. Out of eight cows milked five produced over 45 pounds of butter fat. The report of Joseph Z. Feinberg, official tester, follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Lbs. butter fat
E. Balis					
Pet, G. H.	6	4-25-16	1361	3.4	46.2
C. F. Berger					
Grace, G. H.	7	11-30-15	930	5.0	46.5
A. Templeton					
Daisy, G. H.	4	12-25-15	1349	4.5	60.7
H. H. Little					
Ida Freemon					
No. 71, S. H.	4	4-10-16	1243	3.7	45.9
Janesville Rose					
No. 44, S. H.	9	4-18-16	1428	4.3	60.4
Auston Bros.					
Bess, G. A.	6	1-12-16	939	4.8	45.0
F. O. Wehling					
Marguerite, G.G.	7	12-29-15	1145	4.9	56.1

Joseph Z. Feinberg, Official Tester.
H. M. Burdick, Secretary.

The Dairy Calf in Summer.

To the Editor:—The unusual shortage of hay during the past spring is showing its evil effect on the season's crop of calves.

As one drives through the country, one is impressed with the unusual number of calves in pasture. Everywhere the calves have been "turned to grass." We see them in orchards, in paddocks, staked out, even in the brush. This is not as it should be. Ten dollars more spent on hay would have gone a long ways toward producing a better cream check for the farmer. It has long been demonstrated that pasture during the first season invariably ruins the dairy calf. The loosening effect on the bowels produces the characteristic, "big middle," arched-back and runted-appearing dairy calf.

We need to take better care of our calves. The dairy calf of today is the cow in the future. It is a safe assertion that the weakest point in the average Taylor county dairyman is in his calf rearing.

In the summer feed the dairy calf in the barn. If you think it prevents them from becoming "tough," remember we are not raising our dairy cows to be "tough." We want them to produce milk. There is no substitute for

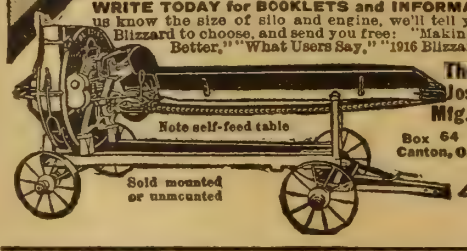
Cut Corn when right for the Silo

Professor G. C. Humphrey of Wisconsin College of Agriculture, says: "Corn makes the best silage when the majority of the ears are dented or just beginning to glaze. If corn less mature is put into the silo, the silage becomes too acid or sour. If the corn is allowed to get ripe or dry out, it does not pack well, and is apt to produce moldy silage." MORAL: Own a

BLIZZARD Ensilage Cutter

—be *ready* this fall to hustle the corn into the silo when at its BEST. Your regular farm engine will furnish plenty of power. 100 foot silos are filled as readily as 20 footers. Enormous capacity—even cut silage—small repair cost—long life—are other Blizzard features.

WRITE TODAY for BOOKLETS and INFORMATION. Let us know the size of silo and engine, we'll tell you the size Blizzard to choose, and send you free: "Making Silage Pay Better," "What Users Say," "1916 Blizzard Catalog."



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90 ft. Silos in Wisconsin

These silos on the Pabst Farm, Oconomowoc, Wis., are filled with the Blizzard. Fred Pabst says: "We used your Blizzard Cutter last fall in filling 3 silos, and are glad to say it gave satisfaction."

APPLETON Silo Filler

Actual records prove that Appleton Silo Fillers cost the least

per ton of silage put up or per year of life. Tremendously strong construction makes an Appleton practically proof against breakdown. Solid oak and steel frame, mortised, braced and bolted; impossible to pull out of line. Many exclusive power and labor saving features, such as independent belt driven blower allowing speed to be adjusted for minimum use of power for any height silo; frictionless feed table running on chilled iron rollers; knives spiraled to give clean shearing cut, requiring least use of power. (10 lengths of cut, 5-16 to 2½ inches.) Both feed rolls and table controlled by single lever. Positive self-working safety device.

Guaranteed to do more and better work with less power than any other silo filler.

Two Books Free: One on silo building and silage crops; the other a complete catalog of Appleton Silo Fillers in four sizes for 4 h. p. gasoline engines and up. Write

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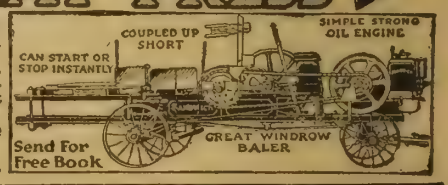
Bigger Profits Better Bales and More of 'Em

There's money in baling hay—big money if you use the famous fast working Sandwich Hay Press (motor power). Bale your own hay—hold it for the top-notch market—make a nice, fat income baling hay for your neighbors—$10—$15—$20 a day clear profit is common with our outfits.

SANDWICH HAY PRESS

Solid steel construction. Sandwich Gas and Oil Engine, with magneto, mounted on same truck furnishes power. Complete outfit built in our plant, superior to assembled machines. Heavy steel chain transmission (no belt to slip). Simple self-feeder and block dropper. Turns out a continuous stream of solid, salable bales. Starts or stops instantly. Best press for alfalfa. We also make horse and belt power presses.



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Send For Free Book

The TORNADO SILO FILLER

IF you want your silo filled with silage which will produce good, rich milk and plenty of it; also silage which will produce fat rapidly, fill it, or have it filled, with a **Tornado**, on account of the fact that the **Tornado** reduces it to a very fine condition.

By having it cut fine you get much more in the silo. It will settle closer, eliminating mould pockets, thus resulting in a much sweeter and better feed. Another reason why you should have it cut fine is that the cattle eat every particle, thus eliminating any waste.

By cutting it fine the cattle eat that part which contains the largest percentage of food qualities, which is the stalk.

The **Tornado** will be the means of bringing about these results.

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FILL SILOS QUICK

Three sizes, 6 to 18 H. P., direct drive to main cutterhead shaft, 2⅝ in. in diameter, powerful 6-blade fan on same shaft. Emery wheel attached.

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skim milk as a calf feed. Supplement it with a mixture of grain, whole oats, corn meal and oil meal. Give them all the clover hay they will eat. Allow free access to fresh water and salt. Such treatment will produce cows.

R. A. Kolb,
Agr'l Rep., Taylor county.

Piping For Creameries and Cheese Factories.

To the Editor:—Will you please publish in your paper the following notice relating to the rules and regulations for the operation of cheese factories and butter factories prescribed, as provided by law, by the dairy and food commissioner:

That part of Rule No. 11 relating to factory utensils and apparatus (found on page 25 of the leaflet of Dairy Laws of Wisconsin, issued November, 1915) which reads as follows:

"Common iron piping, common galvanized iron piping and rubber hose shall not be used" is so modified that galvanized iron piping may be used when so constructed and installed that it can be kept clean and is kept clean. The connections should be used instead of the common round elbows, as well as proper union connections.

This modification has been made owing to abnormal market conditions which make it almost impossible to obtain the more expensive kinds of piping, and the greatly increased prices of the same, and to the further fact that it is found that galvanized iron piping, properly constructed installed and cared for, can be kept clean.

Inspectors of this department are instructed to act in accordance with the above modification of rule No. 11.

Geo. J. Weigle,
Dairy and Food Commissioner.

Rennet Will Cure Scours.

To the Editor:—In a recent issue of your good paper I see that there are two different men wanting to know what to do for the scours in young calves. I had a great deal of experience with that very same trouble when I was on the farm. My father was a subscriber to the old Western Rural (and I believe) American Stockman and he had clipped out a recipe from it which we have both used and always kept on hand and if it ever failed in any case that wasn't too far gone I don't remember it.

And here it is. Just go to the drug store and get a bottle of liquid rennet and if the calf isn't able to stand and suck take a long-necked bottle and put about one tablespoonful of the rennet in it and then milk about a pint of warm milk into it and give to the calf as a drench. He will like it. Repeat in from three to five hours with a little smaller dose. An ordinary dose is one teaspoonful given every three to five hours as directed above.

You must be careful, however, not to let the calf have too much milk at once for some time afterwards and give the rennet as directed just before letting them suck. Ira A. Merritt.

Pasteurize Skim Milk.

In the operation of creameries and cheese factories it is customary to return to the patrons the by-products (skim milk, buttermilk, and whey) to be used for feeding calves and pigs. The material that each man receives is necessary from the mixed milk of many herds, some of which may be diseased. For this reason, unless precautions are taken, the creamery and the cheese factory, through their by-products, may become disseminators of such animal diseases as tuberculosis, foot-and-mouth disease, and contagious abortion, should these diseases exist in the community.

Pasteurization of by-products has been advised as a preventive measure and has been practiced to a limited extent; at least two states have enacted laws requiring the pasteurization of all skim milk and whey returned to patrons for feeding purposes. In Denmark a law of this kind has been enforced for several years.

The advisability of pasteurization was illustrated during the recent outbreak of foot-and-mouth disease in the United States. At a certain creamery in New York state raw skim milk was being returned to seven patrons. Later five of these patrons were found to have foot-and-mouth disease in their herds. Of the other two, one boiled the milk before he fed and the other threw it away for fear of possible infection. It appears very probable that the disease was spread by feeding raw skim milk from a diseased herd.

At another creamery in the same state skim milk was being returned to thirty patrons, but in this case the milk was pasteurized properly before being returned. Foot-and-mouth disease was discovered in the herd of one of these patrons, and in the judgment of the inspectors the disease had then been present for at last five days. During this time the milk had been taken to the creamery and pasteurized skim milk returned to the thirty patrons. The disease, however, did not appear on any of the other farms. Had the skim milk not been pasteurized at this creamery it is possible that the disease would have been carried, by way of the creamery, from the one infected farm to all the rest of the thirty farms.

Skim milk, buttermilk, and whey may be pasteurized at a fuel cost of about 2½ cents for every 1,000 pounds—a cost that is negligible when compared to the financial loss that may result from feeding the products raw.

Skim milk, buttermilk and whey may be heated by the use of steam jets while being elevated into a tank. This practice, however, causes the milk solids to "cook" onto the interior of the pipe and cleaning is difficult. If cleaning is properly done each day, however, this method is not objectionable.

The simplest method of pasteurization may be to turn steam directly into the liquid in the tank until the desired temperature is reached. In this case a temperature of not less than 145 degrees F. should be maintained for a half hour. When, however, it is desirable to draw milk or whey from the tank as it is running in, it becomes necessary to complete the pasteurization before the product reaches the tank. This can readily be done by running a steam pipe into the skim milk, buttermilk, or whey pipe near the tank. A device of this kind is on the market and is known as a skim-milk pasteurizer. When this method is used the skim milk or whey should be heated to a temperature of 180 degrees F.

As creamery and cheese-factory by-products may, under certain conditions, be agencies in spreading live-stock diseases, and as pasteurization of these products is a preventive measure that is easily and cheaply effected, the adoption of this practice by all creameries and cheese factories is earnestly recommended by the Federal Department of Agriculture.

Stock Feeders

See how thousands of farmers cut feeding cost in half, save 1-5 to 1-4 power cost, and 1-2 labor cost of silo-filling and put better feed and greater tonnage in their silos in less time than ever before possible.

Smalley Silo Filler

Patented re-cutting attachment makes dandy Alfalfa Chop for fattening cattle, sheep, hogs and poultry. *Handles leaves, stems and all without waste or injuring color of the hay.* Sell your No. 1 hay and mill the *off-grades* for feeding. Make combination feeds from clover, rice straw, bean straw, pea vines, oats and rye, or dried cornstalks. Capacities 1200 to 2700 lbs. per hour. Re-cutting attachment on Junior Mill makes 500 to 800 pounds of meal per hour with 6 to 8 H. P. engines.

Powerful, whirling, bevel-edge blades slice like a lawn mower, fine even and uniform. Better silage and greater tonnage in the silo. Grip Hook Feed Table feeds automatically, saving expense of two or three men depending on size. Blower built independent of cutter so you increase or decrease fan speed without changing speed of knife shaft. Patented low-speed, one-pulley, chain drive saves 1-5 to 1-4 power cost, cuts out unnecessary wear on belt. Extension table on hopper makes faster, cleaner job.

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Junior Mill—Capacity, 500 to 800 lbs. meal per hour. 6 to 8 H.P. Engine.

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Makers of SILOS ENGINES WIND-MILLS TANKS PUMPS GRIND-ERS ETC.

ENSILAGE CUTTERS
Will do better work with least power and give longer service
BECAUSE
Driven direct to blower; slant cut; auxiliary feed roll; hot-riveted, all steel frame. Made in three sizes, Nos. 14, 19 and 25.
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THE FREEMAN ENSILAGE CUTTER

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Costs less to buy—less to operate—less for upkeep. The Freeman combines the limit of quality and economy.

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Runs easiest—on least power. Cuts clean and fast. Traveling force feed table—handles big bundles easily. Has extra strong frame, large feed rolls, adjustable knives, safety fly wheel, safety stop lever.

Steel Enclosed Carrier reduces running expense, prevents feed blowing away.

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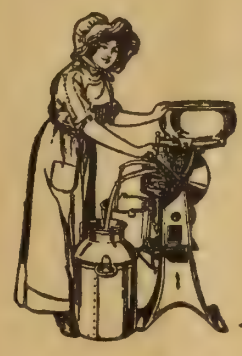
We can furnish Blower or Enclosed Steel Carrier as desired.

HOT WEATHER



the season a

DE LAVAL SEPARATOR

saves most over any other separator or skimming system

IT'S A GREAT MISTAKE FOR any dairy farmer without a separator or using an inferior machine to put off the purchase of a De Laval Cream Separator in the summer months.

GREAT AS ARE THE ADvantages of the De Laval over all other separators, as well as over any gravity setting system, at every season of the year, they are even greater during the midsummer season than at any other time.

THIS IS BECAUSE HOT weather conditions occasion greatest butter-fat losses with gravity setting and render it most difficult to maintain quality of product with any gravity system or unsanitary separator, while, moreover, the quantity of milk is usually greatest, and any loss in either quantity or quality of product means more.

THEN THERE IS THE GREAT saving in time and labor with the simple, easy running, easily cleaned, large capacity De Laval machines over all other methods or separators, which naturally counts for most at this time of the year.

HENCE THE GREAT MISTake of putting off the purchase of a De Laval Cream Separator in summer, whether you already have a poor machine or none at all, and every dairy farmer should keep in mind not only that a De Laval will pay for itself by next spring but may, if desired, be bought on such liberal terms as to actually save its own cost while being paid for.

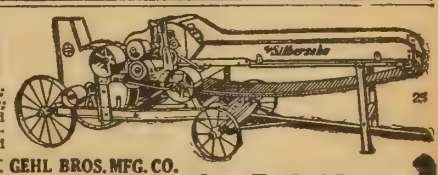
EVERY CLAIM THUS MADE is subjet to easy demonstration, and every De Laval local agent is glad of the opportunity to prove these claims to you, in your own dairy, without cost or obligation on your part.

IF YOU DON'T KNOW THE nearest De Laval agent please simply write the nearest main office as below.

The De Laval Separator Co., 165 Broadway, New York, 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Light Running Silberzahn



The new 1916 models are "wonders." *All steel frame;* low feed table; positive safety device; *automatic feeding;* 6-arm blower that simply *can't* clog and can be regulated to height of silo; malleable knife heads; best knife adjustment. Holds record for simplicity, safety, clean cutting and great capacity. *Write for catalog* showing ten sizes. Gives full details and explains *how* and *why* the Silberzahn is *better.* Write today.

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No repairing, no painting, no rebuilding, no attention of any kind required by the

B. V. T. Silo

It will outlive your children's children. Built of vitrified Brazil fire clay tile, it stands like a rock against wind and weather, fire and decay. Reinforced with steel rods embedded in dovetail mortar groove. The strongest silo made. Triple air spaces in tile and tongue-and-groove mortar joint make it absolutely air tight. You build permanently, therefore economically, with the B. V. T. If interested in silos, you will profit by getting free Silo Book E.

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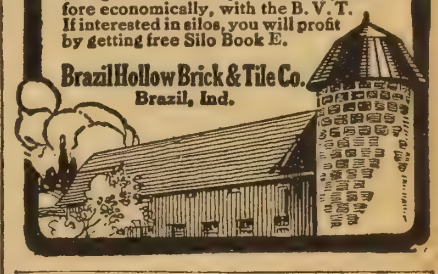

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The best in the world. Oil-filled staves make it rot-proof. Interlocking anchoring system makes it wind-proof. Low prices make it biggest value. Buy now. Save money. Write for 4-color picture, 26x30, showing Champion Silo on Model Farm. Address

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DES MOINES - IOWA

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Benefits of Boys' and Girls' Club Work.

There is a steadily growing interest in the work of the boys' and girls' club work as organized by the United States Department of Agriculture in co-operation with the state colleges of agriculture. The department reports that during the year 1915 in the northern and western states 290,178 boys and girls made application for membership in the club work.

The members participating in this club work are divided into two classes, the profit-making and the nonprofit-making, according to the nature and outlined plans of the work undertaken by the members. Sewing clubs, bread clubs, farm and home handicraft clubs are called nonprofit-making because the things produced are not sold, but used in the home for the comfort and convenience of the entire family, while the profit-making projects provide for a business marketing or selling with a view to a net profit on investment as a result of the effort of the club member. Canning clubs, poultry clubs, corn clubs, sugar beet clubs and others of similar nature are profit-making clubs.

One hundred and twenty-seven thousand eight hundred and eighty-two young people who made application for the work actually undertook and carried on a part or all of it during the season. The balance of those enrolling, for lack of land, time and opportunity, were limited to study of the subjects and meeting with the club groups in their regular meetings and were not in a position to handle the work of the home project.

The young people engaged in the profit-making work sold their products at a total value of $509,324.24, thus giving an average of $20.96 for each club member engaged in the work. The per capita cost of the club work for the past season in the northern and western states was eighty cents on the total enrollment, while the per capita cost of the work based upon members engaged in profit-making enterprises only was $2.02.

The results indicate that the benefits of boys and girls' club work cannot be entirely measured by the results in dollars and cents, or net profit. Account must be taken, for example, of the influence of the club members' work upon parents and neighbors in increased crop production, as well as in the influence upon the club member in not only conserving him for rural life but in making him more efficient and contented.

One definite illustration of how the club activities influenced adults may be shown by the fact that demonstrations in home canning and exhibits of the canning club work by boys and girls aroused such interest that 26,534 adults wrote to the department and asked for children's canning instructions for use in their home work.

State co-operative leaders in charge of the work and their assistants secured 11,478 local people to assist and co-operate with them in the conduct of the boys' and girls' work, all of these without salary or reimbursements for supervision expenses. The regular state and assistant leaders conducted 1,670 canning demonstrations with a total attendance of 156,580 during the canning season. Three thousand eight hundred and twenty-nine field meetings were held. One group of 3,015 adults who requested the boys' and girls' canning instructions canned 275,856 quarts of fruits and 270,659 quarts of vegetables.

Remedies For "Chiggers."

If a bath in hot water, or in water containing salt or strong soap, is taken within a few hours after exposure in shrubbery and weeds infested with "chiggers" or "red bugs" no ill effects will be experienced. After a long exposure, however, a bath has practically no effect and direct remedies are necessary.

After irritation has begun and small red spots appear the application of a moderately strong solution of ammonia to the affected parts will be found beneficial. A strong solution of bicarbonate of soda or common cooking soda will also afford relief. Frequent applications should be made until the irritation subsides. If the suffering is severe a dilute tincture of iodine or collodion should be lightly applied.

To Make Cockroach Powder

The cockroach is a hard insect to destroy and success usually results only from long, careful, persistent

JESSIE AND VERNON HUNTRODS.

treatment with either one of the better powders sold on the market for that purpose or with a mixture of three parts of flour with one part of plaster of Paris. Set this dry mixture in a low flat dish where the roaches can reach it and put a saucer of water beside it. Any roach that eats and drinks at these two dishes will cease to be troublesome. Powdered sweet chocolate mixed with equal parts of borax and scattered about cracks and crevices will also help to reduce cockroaches.—[L. Haseman, Missouri College of Agriculture.

Salad Suggestions.

In making salad observe the following points: Cut pieces large enough so that they are distinct. Have all ingredients cooled. Have salad dressing well seasoned. Combine flavors that blend well. Mix just before serving. Serve attractively.

Care of Fern.

To the Editor:—I have a sword-leaf fern which is sending out a multitude of runners from the roots of the plant and I wonder if some of your readers can tell me what to do. Should these runners be allowed to grow or should they be removed? What causes them to grow? Does one start new roots from them, and, if so, how? I should be glad if someone would write to the Home page and give some advice on this subject. Inquirer.

To Remove Grease Spots.

To the Editor:—I think if Mrs. E. C. J. will use turpentine she can get the grease spots out of her rain coat. Turpentine will not injure the color of the material. Take a piece of cloth, wet it with turpentine and rub the spot well. The spot will disappear and leave the garment as good as new. Mrs. M. D.

How do You Clean Braid Hats?

To the Editor:—Will some reader please tell me how to clean a hemp braid hat? I have been trying to clean one, but have not had very good luck and I would not only be glad to have some advice but think likely there are others who would also.

Miss S. Z.

Easy Way to Make Lemonade.

Do you relish good lemonade during the hot weather? Then make it the following way: Buy a number of lemons, extract the juice, strain and add to a rich boiled sirup made of plain sugar and water. Place the solution in self-sealing fruit jars and place on ice or in a cool place. When you want a cool, refreshing drink add a spoonful of this mixture to a glass of water.

Buying in Dozen or in Quantity.

How to buy effectively is the housewife's most important need in her problem of high cost of living.

In so far as she practices economy in the use of her husband's income, so

DONNA VERA HUNTRODS.
Daughter of Mr. and Mrs. Huntrods, at age of five weeks.

far does she become a producer as well as the biggest consumer of the income. The thrifty housewife has learned the secret of careful buying. It is necessary that a purchaser of foods know food values and know the different grades of foods in order to buy with good judgment.

How many women know the simplest commercial food terms, the different grades of canned or package goods and even in many instances how much a pound they are paying retail for their foods? How many learn the wholesale prices by watching quotations? To be the most efficient buyer the housewife must know the market prices of the things she uses in her home just as the efficient buyer for a factory or store must know the market prices of his materials used.

There are some wholesale markets which will sell direct to the consumer, giving wholesale prices. Also foods may be purchased from retail dealers at much lower prices when purchased in quantities. A storeroom in a home is a great money saver, especially in homes where there are large families. This permits the buying of materials in large quantities which reduces their cost. When the family is small or the housewife has insufficient storage room for large quantity purchases she may join with some neighbors and all get the benefit of reduced prices by purchasing in large quantities.

Following are some suggestions for buying: (1) If you do not can your own vegetables and fruits buy in dozens to get discount offered; one dozen cans of each of the staples such as corn, peas, beans, tomatoes, etc., is not too many. (2) Dry groceries—one dozen or half a dozen packages of cornstarch, gelatine, tapioca, macaroni, raisins, currants, rice, etc. (3) Buy sugar, flour and apples by the bag or barrel. (4) Buy soap by the box, cleaning powders by the dozen packages. Starch, bluing, stove blacking, etc., may be purchased in large quantities and at a great saving of money thereby. Buy meats by the quarter or side and either freeze or put in cold storage or cure to keep it.—[Laura Breese.

Household Hints.

Before washing ebony-backed hair brushes rub a little vaseline over the backs. This prevents the ammonia in the water from injuring the ebony. The vaseline should afterwards be rubbed off and the backs polished with a dry cloth.

Always thoroughly wash figs, prunes, dates and other dried fruits before using them. The sugary stickiness readily collects dust, making this precaution a very necessary one.

In preparing a lunch for a journey bake the bread in empty baking powder cans. After slicing and spreading replace it in the cans, put on the cover and the bread will be as fresh at the end of the trip (although it may be several days) as when it was first packed.

The pulley clothesline makes the work of hanging out the clothes much easier, as one may stand upon the porch and pin the clothes on the line which can be extended as needed by means of the pulley.

For sprinkling clothes use large bottles with "cork sprinklers" and the work is accomplished in much less time. These sprinklers sell for 5 and 10 cents.

Recipes.

Buttered Parsnips.—Peel and slice thinly enough parsnips for the meal, cook in boiling salted water until tender, drain and season with butter and salt, mashing coarsely with a wire potato masher. Serve very hot. Parsnips are also most appetizing cooked without peeling, then cut in halves after removing the skin and brown in butter.

Tomatoes With Cheese.—Tomato sliced, placed on buttered toast, sprinkled with grated cheese, then placed in the oven long enough to melt the cheese, is an appetizing dish to serve for lunch or supper.

Rice Pudding.—Boil a cupful of rice in a double boiler with a pint of boiling water until dry. Add a quart of rich milk, and cook until it is all absorbed. Stir in the yolks of three eggs well beaten, and add six tablespoonfuls of sugar with the rind of a lemon grated. Cook ten minutes and cover the rice placed in a baking dish with the whites of the eggs beaten stiff and mixed with six tablespoonfuls of sugar and the juice of the lemon. Brown in the over. Serve cold or hot.

Pineapple Rice Pudding.—Two cupfuls steamed rice, one-half cupful sugar, three eggs, one-half cupful milk, one-half can grated pineapple. Beat the yolks of the eggs well and mix with the rice. Add sugar, milk, and pineapple. Fold in the stiffly beaten egg whites. Pour into a buttered baking dish and bake one-half hour. Serve with whipped cream.

Cocoanut Puffs.—One egg, half cup sugar, one tablespoon melted butter, half teaspoon salt, one-fourth cup flour,

two-thirds cup rolled oats, one-third cup shredded cocoanut, one-fourth teaspoon vanilla. Beat egg, add sugar, then butter and salt, then flour, rolled oats, cocoanut and vanilla. As you add the ingredients stir briskly. Drop by teaspoonful on buttered baking sheet; bake in moderate oven. This recipe will make about twenty-five puffs. They are fine for lunches or parties.

Salmon Cutlets.—Flake a can of salmon into bits. Fry a slice of onion in a tablespoonful of butter, then remove onion and rub in tablespoon of flour. Add slowly a cup of milk and stir until smooth; then beat in the salmon, season with chopped parsley, pepper and salt. Take mixture from fire and add beaten yolks of two eggs. Put on ice until quite stiff, then mold into cutlets. Dip cutlets into crushed cracker crumbs, into egg and again into cracker crumbs, and fry in hot fat until golden brown. This will serve five.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Likes to Hoe in the Garden.

Dear Young Folks:—I have been reading your letters and am interested in them.

I am eleven years old and in the sixth grade. I go to school every day. I like my teacher very much and hope she will come back when school starts again this fall.

I am spending my vacation with my grandparents who live in the country. They have 160 acres of land. They have fifteen young geese, thirty ducks and 100 chickens. I like to feed them every day. We get about four dozen eggs every day and I like to look for them. Grandfather has eighteen head of cattle and four horses.

They have a big garden, too, and I like to work in it. My aunt and I hoed the mangels and the rest of the garden vegetables for three days.

I saw a letter that a girl named Helen wrote and she said she would like to know some cake recipes. I know one and I will send it for Helen. It is a cream cake. We take four eggs, one cupful of cream, one and one-half cupfuls of sugar, three level teaspoonfuls of baking powder, a little vanilla and three cupfuls of flour. I hope Helen will like this recipe.

I think the answer to Inez's riddle —A houseful, a yardful, can't catch a thimbleful—is smoke. I will ask a riddle, too. What big cat do you keep in the library? I know so many riddles I can't think of them all.

—Hilda.

Wants to Buy a Piano.

Dear Young Folks:—I am a little girl nearly five years old and I want to send a letter to the Young Folks page. I enjoy reading your letters so much. I have mama read them to me every week.

I want to send an answer to Esther's riddle. I think a clock is bashful because it keeps its hands over its face all the time.

I have one cow and two calves. I want to sell my calves and save the money until I have enough to buy a piano. Papa will sell the calves for me and when I get the piano I will take music lessons.

I live four miles from town. I go to town every time I can when the wagon goes. I would go every time if I could.

I have one little brother and I think lots of him. He is a year old. I take lots of care of him and help mama out. We call him Earle. He has a calf, too, all his very own. He is just beginning to talk a little. We like to play out of doors together.

—Velva Belle.

Watched Canary Build Her Nest.

Dear Young Folks:—I want to join your circle because I enjoy reading your letters so much. I am eleven years old and am in the sixth grade at school.

I am going to tell you a story about a canary that mother and my brothers and I saw build its nest in a bush. My brother laid some sticks and straw on the bushes and she started to build her nest. Before she laid her eggs he would come to the porch and mother would give her some bread crumbs and she would eat them and then fly up into a large tree and sing. When she was through singing she would go to her nest. She laid four eggs, but she only hatched one, and the blue jays killed it. After that the little canary mother went away. This is a true story. —Samuel.

Dear Young Folks:—As I enjoy the letters so much from the boys and girls in this department I thought I would write, too. I am a little girl eight years old. I go to school and am in the fourth grade. I have one sister and one brother. I live on a farm of 160 acres.

My mama has lots of chickens, turkeys and guineas. I help my mama care for them.

My brother has a pony that I can ride. I have three little pet rabbits. I wish you all could see them, they are so cute and playful.

I liked the "Endless Tale" very much. —Opal.

International Sunday School Lesson.

Lesson for July 16, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Paul at Athens.

LESSON TEXT—Acts 17:16-34.
GOLDEN TEXT—In him we live, and move and have our being.—Act. 17:28.

Athens! What a name to conjure with. Athens has always epitomized the acme of intellectualism, culture, art, and esthetic accomplishment. Driven from Berea, and alone, Paul fled to the coast, and taking ship, crossed over to the Thessalonian peninsula. Entering the city—he beholds its statuary, meets its philosophers and views its moral degradation, and its myriad manifestations of heathenism. Outwardly cultured, molding the thought of the world, yet it passed from its pinnacle of power, because it knew not God. Paul saw the pantheism of the cultured Stoics and the Epicureans, who, because of their distant and but little concerned gods, enjoyed the pleasure of wealth and ease.

I. Paul Brought to Trial (vv. 16-21). Such sights stirred the spirit of Paul. The marvel is how indifferent we may become in the presence of the great spiritual poverty of our time. His spirit stirred within him, when he saw the city crowded with idols. As Paul followed his custom and began his preaching in the synagogue, he also took advantage of the opportunity to do open-air work in the market place. Here a small group and there another. This he did daily until the teachers (v. 18) began to take knowledge of his presence in their city. Some in contempt called him a "babbler," while others concluded that he represented some new religion, though he set before them the same message of salvation in Jesus Christ which had caused such remarkable results elsewhere. That they might hear him more fully, and without the interruption of the mart of trade, Paul is taken to the Areopagus, or Mars Hill, where from time immemorial the greatest criminals had been sentenced and the most solemn questions of religion settled.

II. The Unknown Made Known, (vv. 22-29). Such idle speculation (v. 21) was of no value to the Athenians. This Paul knew, yet he began his address in a most conciliatory manner (v. 22 R. V.). He would win their favorable attention before he called them to repentance. Keenly observant, Paul had seen among the many inscriptions one "to the unknown God," and this one whom in ignorance they worshipped, he would set forth. Many today are in blindness, seeking to know God when he has already been made manifest (to be seen). (John 1:18; John 5:20; John 14:19, II Cor. 4:6.) It is man's own fault if he does not know God (Rom. 1:20-22, 28; II Cor. 4:4), and no knowledge is more important (John 17:3). Paul's opening words in verse 24 were but to seize a well-known object of their street decoration and discussions, and with it to lead on to the great truth he yearned to have them comprehend. This caught the philosophers as well as the idle curious. God is not a philosophic conception of the mind. He cannot be confined to temples made with hands, nor does he need the services of our hands, seeing he created all things and giveth to all things life. Paul's next point was that "He hath made of one every nation of men." As yet, how little men really believe that truth—witness the Euro-

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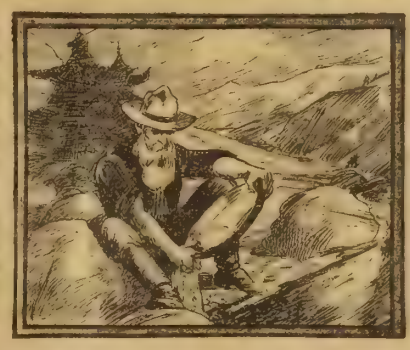

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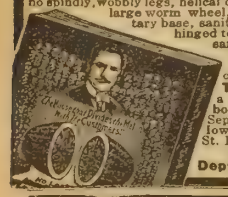

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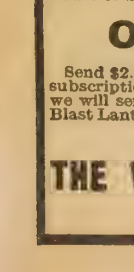

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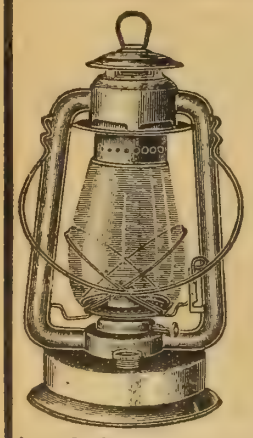

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pean conflict and the economic, racial and social differences of this land. Negro segregation and Asiatic exclusion are but illustrations of our separation from the teaching of the brotherhood of man. But this brotherhood is not alone for altruistic service, but "that they should seek God." This was his great and glorious purpose in creating the nations of the earth, in setting the seasons in motion, to minister to their needs, and in appointing the bounds of their habitations; yet, how far man has departed from that ideal (Rom. 1:28). It is of the highest importance that men should seek God, and he is not difficult to find for those who seek him (Jer. 29:13).

III. **What the Athenians Lacked** (vv. 30-34). Thus far Paul's auditors must have followed him keenly, and it was the goal toward which he had been driving so relentlessly. Such sublime conceptions, keen logic and quotations from their writers won their attention. He then delivered a keen thrust at this, the "psychological moment," by calling upon them to "repent." The Athenians lacked a realizing sense of the personality of God—that man could have personal and intimate relations with God, or that a man could or had risen from the dead.

Any candid seeker after truth, who will examine the evidence, will be convinced of the truth that Jesus of Nazareth, crucified upon a Roman cross, rose from the dead.

These Athenians also lacked the ability to accept this fact, and to yield their lives in obedience to it, and so some tried to sneer away the truth, but that did not alter it.

Some were amused, and some evidenced a curious interest, saying, "We will hear this again," but certain men, Dionysius and Damaris, "believed." Such has ever been the manner of the reception of glad tidings.

Wisconsin Good Enough.

August Kluender, a Sauk county farmer, who recently returned to this state after leaving it for a few years, has decided Wisconsin is good enough for him and recently penned the following lines, which we clip from the Baraboo News:

They talk of California,
They say the climate's grand.
They sing of old New Hampshire,
Also of "Dixie land."
They sing of Dear Old Georgia,
And Sunny Tennessee.
I'll sing of Old Wisconsin,
It's good enough for me.

In Nebraska there's a cyclone;
In Kansas there's a flood;
While down in Old Missouri
They wade knee-deep in mud.
In Texas there's the terror of
Submersion by the sea.
In Wisconsin we have neither,
It's good enough for me.

The east coast has its hurricanes,
The west coast has its fogs,
The north is full of snow and ice,
The south is full of bogs.
I've traveled Uncle Sam's domain,
And some across the sea;
But life in old Wisconsin,
It's good enough for me.

Wisconsin, where the farmers' crop
Was never known to fail,
When fruits all miss in other states
We've plenty here for sale.
But for living in Wisconsin
My reasons first are three:
There's sunshine, health and happiness,
It's good enough for me.

According to the census publications, the United States produced $13,764,357 worth of barbed wire during the year 1914. This would be a little over $2 worth of barbed wire for each farmer in the United States. It is interesting to note that we produced about $6,000,000 worth more of woven wire and poultry netting than of barbed wire. During the five years prior to 1914 the wire industry in the United States had been practically stationary. Figures since that date are not available, but will probably show a greatly increased production of barbed wire, on account of the large use being made of it on the battle-tanglement as a protection to the fields of Europe. In trench warfare when there is time for doing this, barbed wire is used to form an entanglement as a protection to the trenches. It is loosely strung on posts but it has been found almost equally as effective when simply unrolled, fastened at both ends, and pegged down to the ground occasionally.

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Blouse 1766-Skirt 1765—A splendid suit for sport wear. Pattern 1766 supplies the blouse, and 1765 the skirt. Both are cut in 4 sizes: 14, 16, 18 and 20 years. To make the suit of one material will require 8⅛ yards of 36-inch material for a 16-year size. Two separate patterns, 10 cents for each pattern.

9306—A comfortable play suit. The pattern is cut in 3 sizes: 2, 4 and 6 years. It requires 2¾ yards of 36-inch material for the 4-year size.

1777—A set of smart dress accessories. These chemisettes are practical and easy to develop. The pattern including all styles is cut in 3 sizes: Small, medium and large. It requires for No. 1, 1¼ yards; for No. 2, ⅞ yard; for No. 3, ¾ yard of 27-inch material for a medium size.

Waist 1770-Skirt 1769—A picturesque model. The waist pattern 1770 is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. The skirt pattern 1769, is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 7¾ yards of 36-inch material for a medium size, without folds. Two separate patterns, 10 cents for each pattern.

1306—Ladies' "Middy apron" to be slipped over the head, or closed at the back. The pattern is cut in three sizes: Small, medium and large. It requires 5 yards of 36-inch material for a medium size.

1784—A neat blouse dress for mother's girl. The pattern is cut in 4 sizes: 6,8, 10 and 12 years. It requires 3¼ yards of 44-inch material for a 10-year size.

9503—Two practical simple ideas, for lingerie, a one-piece corset cover and one-piece drawers. The pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 2⅝ yards of 36-inch material for the medium size.

1773—A smart party or best dress, with sleeve in wrist or elbow length. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires, with double skirt, 4⅛ yards of 44-inch material for an 8-year size; with single skirt, it requires 3⅝ yards.

1278—Ladies' house dress with sleeve in either of two lengths, with regulation or reversible closing, and normal or raised waistline. The pattern is cut in 6 sizes: 34, 36, 38, 40,42 and 44 inches bust measure. It requires 6⅜ yards of 44-inch material for a 36-inch size.

1517—Ladies' waist with or without jabot trimming. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2¾ yards of 36-inch material for a 36-inch size, with ⅝ yard of 27-inch material for jabot.

1764—Boys' Middy suit. This design is a popular style, good for wash and woolen goods. The pattern is cut in 5 sizes: 3, 4, 5, 6 and 8 years. It requires 3¾ yards of 27-inch material for a 4-year size.

1649—Girls' one-piece dress, with or without added pointed sections, with shield and with sleeve in either of two styles. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. Size 4 years requires 2½ yards of 44-inch material for the dress without yoke sections and 3⅛ yards with yoke sections.

1682—Ladies' seven gore skirt, with or without yoke and pockets, in raised waistline. The pattern is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 4¾ yards of 44-inch material for a 24-inch size.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The prologue, or Part First, is laid in New Orleans and concerns two brothers, one of whom has proved faithless to the girl who trusted him, the other one marrying the girl and giving her the name and home which the faithless brother had well-nigh robbed her of. The scene then shifts to the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold and "bunking" with an old Scotchman, named MacDougall, his only companion, save his beloved horse, Mowitza. A neighbor, named Hardy, comes to their camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company, although she is warned by her friends that his name is probably an assumed one and that he may, indeed, be a squaw man, with an Indian wife living somewhere, as nothing is known of him. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which he learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide are not quite cordial.

CHAPTER V.

At Last Camp.

AFTER their stop at the Indian camp, which Genesee explained was a berrying crowd from the Kootenai tribe, there was, of course, comment among the visitors as to the mixed specimens of humanity they had seen there.

"I don't wonder a white man is ashamed of an Indian wife," said Mrs. Houghton. "What slouchy creatures!"

"All the more reason for a white man to act the part of missionary, and marry them," remarked Rachel Hardy, "and teach them what the domestic life of a woman should be."

Genesee turned square around to look at the speaker—perhaps she did not strike him as being a domestic woman herself. Whatever the cause of that quick attention, she noticed it, and added: "Well, Mr. Genesse, don't you think so? You must have seen considerable of that sort of life."

"I have—some," he answered concisely, but showing no disposition to discuss it, while Mrs. Houghton was making vain efforts to engage Miss Hardy's attention by the splendid spread of the country below them; but it was ineffectual.

"Yes, Clara, I see the levels along that river—I've been seeing them for the past two hours—but just now I am studying the social system of those hills;" and then she turned again to their guide. "You did not answer my question, Mr. Genesee," she said, ignoring Mrs. Houghton's admonishing glances. "Do you not agree with my idea of marriages between whites and Indians?"

"No!" he said bluntly; "most of the white men I know among the Indians need themselves to be taught how people should live; they need white women to teach them. It's uphill work showing an Indian how to live decently when a man has forgotten how himself. Missionary work! Squaw men are about as fit for that as—as hell's fit for a powder-house."

And under this emphatic statement and the shocked expression of Clara's face, Miss Hardy collapsed, with the conviction that there must be lights and shades of life in the Indian country that were not apparent to the casual visitor. She wondered sometimes that Genesee had lived there so long with no family ties, and she seldom heard him speak of any white friend in Montana—only of old Davy MacDougall sometimes. Most of his friends had Indian names. Altogether, it seemed a purposeless sort of existence.

"Do you expect to live your life out here, like this?" she asked him once. "Don't you ever expect to go back home?"

"Hardly! There is nothing to take me back now."

"And only a horse and a gun to keep you here?" she smiled.

"N—no; something besides, Miss. I've got a right smart of a ranch on the other side of the Maple range. It's running wild—no stock on it; but in Tamahnous Hill there's a hole I've been digging at for the past four years. MacDougall reckons I'm 'witched' by it, but it may pan out all right some of these days."

"Gold hunting?"

"No, Miss, silver; and it's there. I've got tired more than once and given it the klatawa (the go-by); but I'd always come back, and I reckon I always will until I strike it."

"And then?"

"Well, I haven't got that far yet."

And thus any curiosity about the man's life or future was generally silenced. He had told her many things of the past; his life in the mines of Colorado and Idaho, with now and then the diversion of a government scout's work along the border. All of that he would speak of without reserve, but of the actual present or of the future he would say nothing.

"I have read somewhere in a book of a man without a past," remarked the girl to Mrs. Hardy; "but our guide seems a man utterly without a future."

"Perhaps he does not like to think of it here alone," suggested Tillie thoughtfully; "he must be very lonely sometimes. Just see how he loves that horse!"

"Not a horse, Tillie—a klootchman kiuatan," corrected the student of Chinook. "If you are going to live out here, you must learn the language of the hills."

"You are likely to know it first;" and then, after a little, she added: "But noticing that man's love for his Mowitza, I have often thought how kind he would be to a wife. I think he has a naturally affectionate nature, though he does swear—I heard him; and to grow old and wild here among the Indians and squaw men seems too bad. He is intelligent—a man who might accomplish a great deal yet. You know he is comparatively young—thirty-five, I heard Hen say."

"Yes," said Mrs. Houghton sarcastically; "a good age at which to adopt a child. You had better take him back as one of the fixtures on the ranch, Tillie; of course, he may need some training in the little courtesies of life, but no doubt Rachel would postpone her return East and offer her services as tutor;" and with this statement Mistress Houghton showed her disgust of the entire subject.

"She is 'riled,'" said the girl, looking quizzically after the plump retreating form.

"Why, what in the world—"

"Nothing in the world, Tillie, and that 's what's the matter with Clara. Her ideas of the world are, and always will be, bounded by the rules and regulations of Willow Centre, Kentucky. Of course, it isn't to be found on a map of the United States, but it's a big place to Clara; and she doesn't approve of Mr. Genesee because he lives outside its knowledge. She intimated yesterday that he might be a horse-thief for any actual acquaintance we had with his resources or manner of living."

"Ridiculous!" laughed Tillie. "That man!"

The girl slipped her arm around the little wife's waist and gave her a hug like a young bear. She had been in a way lectured and snubbed by that man, but she bore no malice.

The end of their cultus corrie was reached as they went into camp for a two-days' stay, on the shoulder of a mountain from which one could look over into the Idaho hills, north into British Columbia, and through the fair Kootenai valleys to the east, where the home-ranch lay.

Houghton and Hardy each had killed enough big game to become inoculated with the taste for wild life, and the ladies were delighted with the idea of having the spoils of the hunt for the adornment of their homes; and altogether the trip was voted a big success.

Is there anything more appetizing, after a long ride through the mountains, than to rest under the cedars at sunset and hear the sizzle of broiled meat on the red coals, and have the aroma of coffee borne to you on the breeze that would lull you to sleep if you were not so hungry?

"I could have eaten five meals during every twenty-four hours since we started," acknowledged Rachel, as she watched with flattering attention the crisping slices of venison that were accumulating on a platter by the fire.

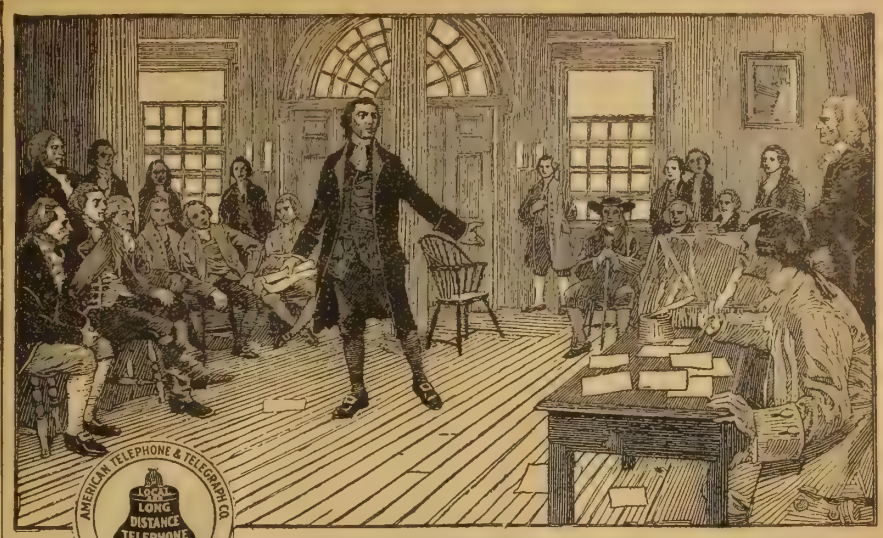
And she looked as if both the appetite and the wild living had agreed with her. Clara complained that Rachel really seemed to pride herself on the amount of tan she had been able to gather from the wind and the sun, while Hardy decided that only her light hair would keep her from being taken for an Indian.

But for all the looks that were gaining a tinge of wildness, and the appetites that would persist in growing ravenous, it was none the less a jolly, pleasant circle that gathered about the evening meal, sometimes eaten on a large, flat stone, if any were handy, and again on the grass, where the knives and small articles of tableware would lose themselves in the tall spears; but, whatever was used as a table, the meal in the evening was the domestic event of the day. At midday there was often but a hasty lunch; breakfast was simply a preparation for travel; but in the evening all were prepared for rest and the enjoyment of either eatables or society. And until the darkness fell there was the review of the day's hunt by the men—Hardy and Houghton vying with each other in their recitals—or, as Ivans expressed it, "swappin' lies"—around the fire. Sometimes there would be singing, and blended with the notes of nightbirds in the forest would sound the call of human throats echoing upward in old hymns that all had known sometime, in the East. And again Tillie would sing them a ballad or a love-song in a sweet, fresh voice; or, with Clara, Hardy, and Houghton, a quartette would add volume to some favorite, their scout a silent listener. Rachel never sang with the rest; she preferred whistling, herself. And many a time when out of sight of her on the trail, she was located by that boyish habit she had of echoing the songs of many of the birds that were new to her, learning their notes, and imitating them so well as to bring many a decoyed answer from the woods.

Between herself and the guide there was no more their former comaraderie. They had never regained their old, easy, friendly manner. Still, she asked him that night at "last camp" of the music of the Indians. Had they any? Could he sing? Had there ever been any of their music published? etc.

And he told them of the airs that were more like chants, like the echoes of whispering or moaning forests, set to human words; of the dusky throats that, without training, yet sang together with never a discord; of the love-songs that had in them the minor cadences of sadness. Only their war-songs seemed to carry brightness, and they only when echoes of victory.

In the low, glowing light of the fire, when the group around it faded in the darkness, he seemed to forget his many listeners, and talked on as if to only one. To the rest it was as if they had met a stranger there that



Patrick Henry Addressing the First Continental Congress, Philadelphia, 1774

One Nation; One People

WHEN Patrick Henry declared that oppression had effaced the boundaries of the several colonies, he voiced the spirit of the First Continental Congress.

In the crisis, the colonies were willing to unite for their common safety, but at that time the people could not immediately act as a whole because it took so long for news to travel from colony to colony.

The early handicaps of distance and delay were greatly reduced and direct communication was established between communities with the coming of the railroads and the telegraph. They connected places. The telephone connects persons irrespective of place. The telephone system has provided the means of individual communication which brings into one national family, so to speak, the whole people.

Country wide in its scope, the Bell system carries the spoken word from person to person anywhere, annihilating both time and distance.

The people have become so absolutely unified by means of the facilities for transportation and communication that in any crisis they can decide as a united people and act simultaneously, wherever the location of the seat of government.

In the early days, the capital was moved from place to place because of sectional rivalry, but today Independence Hall is a symbol of union, revered alike in Philadelphia and the most distant American city.

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evening for the first time, and found him entertaining. Even Mrs. Houghton dropped her slightly supercilious manner toward him, a change to which he was as indifferent as to her coolness. It may have been Tillie's home-songs in the evening that unlocked his lips; or it may have been the realization that the pleasure-trip was ended—that in a short time he would know these people no more, who had brought him home-memories in their talk of home-lives. It may have been a dash of recklessness that urged him to enjoy it for a little only—this association that suggested so much to which he had long been a stranger. Whatever the impulse was, it showed a side of his nature that only Rachel had gained any knowledge of through those first bright, eager days of their cultus corrie.

At Tillie's request he repeated some remembered fragments of Indian songs that had been translated into the Red's language, and of which he gave them the English version or meaning as well as he could. A couple of them he knew entire, and to Tillie's delight he hummed the plaintive airs until she caught the notes. And even after the rest had quietly withdrawn and rolled themselves in blankets for the night's rest, Hardy and his wife and Genesee still sat there with old legends of Tsiatko, the demon of the night, for company, and with strange songs in which the music would yet sound familiar to any ears used to the shrilling of the winds through the timber, or the muffled moans of the wood-dove.

And in the sweet dusk of the night, Rachel, the first to leave the fire, lay among the odorous, spicy branches of the cedar and watched the picture of the group about the fire. All was in darkness. save when a bit of reflected red would outline form or feature, and they looked rather uncanny in the red-and-black coloring. An Indian council or the grouping of witches and warlocks it might have been, had one judged the scene only from sight. But the voices of the final three, dropped low though they were for the sake of the supposed sleepers, yet had a tone of pleasant converse that belied their impish appearance.

Those voices came to Rachel dreamily, merging their music with the drowsy odors of a spruce pillow. And through them all she heard Tillie and Genesee singing a song of some unlettered Indian poet:

Lemolo mika tsolo siah polaklie,
Towagh tsee chil-chil siah saghallie.
Mika na chakko?—me sika chil-chil,
Opitsah! mika winapia,
Tsolo—Tso-lo!

Wild do I wander, far in the darkness,
Shines bright a sweet star far up above,
Will you not come to me? you are the star,
Sweetheart! I wait,
Lost!—in the dark!

And the white girl's mouth curled dubiously in that smile that always vanquished the tender curves of her lips, and then dropped asleep whispering the refrain, "Tsolo—tso-lo!"

(To be continued.)

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VETERINARY

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

A Bad Habit.

I have a two-year-old colt that has got to chewing the manes and tails of my horses and colts. He will trim the hair off clean to the stub. Is there anything I can do to stop him?

This is simply a bad habit and will probably be hard to overcome. Some mechanical means might be devised, such as a muzzle, but even that would be very clumsy.

Supernumerary Teats.

I have a cow with a little teat grown on the side of one of her teats. It is a nuisance when the cow is milked, as it leaks milk when the teat is squeezed. I have burned it with carbolic acid, but it did no good, as it leaked as badly as ever as soon as the scab was gone. How can it be stopped permanently?

It is possible for a skilled man to remove this teat and sear it, thereby causing it to heal over, closing the duct. This is best done while the cow is dry.

Castration of Young Bulls.

Can you inform me of some remedy where young bulls can be castrated and not be bothered with flies and swelling?

There is usually very little trouble following the castration of young bulls if the job is done in a clean as well as professional way. We have very little trouble of this kind to contend with in our practice. The use of 2 per cent creolin solution applied to the wound, two or three times daily, will serve to keep flies away.

Bloat in Cow.

I have a young red heifer a year old last March and during this last week her sides have bloated up three different times. Will you please tell me what is the cause of it and what I could do for her? Last night I gave her about three tablespoons of saleratus and this morning a dose of salts. After pressing on her sides and rubbing her it seems to pass away. She isn't pastured in and has free range here to run. There is an abundance of clover here and, of course, here in the woods a great many other things growing also.

This is caused from some substance which the cow gets, which brings on indigestion and consequent bloating. Clover may be the causitive agent. Give your animal one-half ounce of carbonate of ammonia, dissolved in pint of water. Repeat every half hour until relieved. If she suffers a bad attack give from one to one and one-half pounds epsom salts. Change of pasture is in order.

Blindness or Corneal Opacities.

I have a buckskin horse about eight years old which is nearly blind. No treatment has been given. About one year ago a white substance that glistens has formed over his right eye. There is a small white substance forming in the center of his left eye. What treatment is there for this, if any?

The one eye is in all probability beyond repair. You may be able to do some good for the other eye by using a 1 per cent solution of silver nitrate in it once daily. This should be applied with a soft feather.

Bone Spavin.

I have a horse with a bone spavin. Can it be killed by blistering and after it is killed will he ever go lame in it? What would you advise to put on it?

Sometimes the growth and lameness of a spavin can be overcome by blistering, but there are some which blistering will have no effect on. If a spavin is completely "killed" it may not come on again, although we have known where the trouble was seemingly overcome and yet came back in a year's time. The use of a veterinary blistering ointment, which can be obtained at your local drug store, may be of benefit. The horse should have rest and the blister applied every two or three weeks.

Sore Navel.

I have a colt six weeks old that is doing well, but its navel does not heal up. It looks sore, but it does not leak. Please give me a treatment for it. About the middle of April I had a colt and I ordered a 1-500 solution of corrosive sublimate and I put it on the colt's navel and about three inches aound it, and it ate the skin and the navel in and about an inch deep and it killed the colt, so I was afraid to use any more of it. Is there anything I could do about it? The bottle is labeled 1-500 solution corrosive sublimate, but I am certain that it is stronger than that because I have used it other years with good results, and what I got this year is water color, and other times it was blue.

Apply iodine to the navel once daily for a while and this will possibly dry it up. In regard to the use of the corrosive sublimate solution, will say that possibly this colt upon which you used it may have been more susceptible to the effects of this drug than the usual colt, hence the caustic action. A 1-1,000 solution is a better strength for this purpose.

Contracted Tendons.

I have a two-year-old mare that had h r right leg hurt in a mower about four months ago. The leg seems to be doing nicely, but she puts weight on toes of left foot whenever she trots. There is no sign of hip sweeny whatever, but cords of leg seem to be shortened.

The tendons are probably shortened following the injury and may permanently lame the mare unless some radical means is resorted to. Have some competent veterinarian examine this mare and find out positively if the above-mentioned trouble is existing, and then he had best apply treatment.

Enlargements on Hind Legs.

I have a colt that will be three years old the 24th of this month. It has lumps on its hind knees. They might be shoe boils. Does a horse get shoe boils if it is not shod. What would you recommend for this?

Your description is not clear enough for us to be able to tell the exact location of the growths or the character of them, therefore, a positive diagnosis is not to be made. It will cost you very little, if anything, to have a veternarian look at this animal, if you take it to him, and he can tell you what is causing the growth.

Inflammation of Bowels.

I had a young colt three weeks old out in the pasture with its mother. Am not working the mare at all. The colt was doing well, but one day I went to the pasture to look at my stock and noticed the colt strained as though he were trying to make his water. Otherwise he seemed all right. The next morning I went back to look and he was a very sick colt. He was standing with his head down and back arched up. He had a bad case of scours. His bowels were as thin as water, blue, slimy stuff, it would keep running out of him and I could not get him to walk at all. He would just stand with his head down all the time and panting and breathing hard all the time. He seemed to be too sore to move. I got a doctor at noon. He didn't say what was the matter with the colt, but gave me some medicine to give the colt two doses, one at noon and one at night. The colt seemed a whole lot better at night and his bowels stopped. The next morning he was worse and died with inflammation of the bowels. Now in all this time I did not see the colt make water. Would not being able to make water cause a disturbance of the bowels or would too sudden a stoppage of the bowels cause inflammation? What is good for a colt when it can't make water.

Your colt has probably been troubled with severe indigestion which was followed by scouring and later inflammation of the bowels. This condition is met with quite often and is many times hard to overcome, the animal dying quite often in the course of a few hours after inflammation has begun. We could not advise you what to do in case a colt can't urinate, as there are so many conditions that might cause that trouble. The cause would have to be ascertained before treatment was begun.

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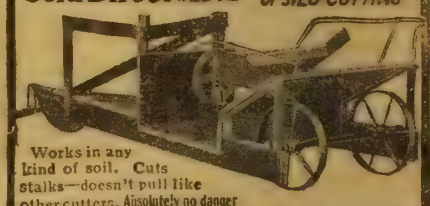

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UPPER WISCONSIN

Value of Good Potatoes.

To the Editor:—In June, 1915, a Texas buyer and grower of Triumph seed potatoes came to Oneida county, looked over our potatoes and then contracted for four carloads of the Triumph seed, later including two more cars in his order. The man was so well pleased with his seed that a few days ago he came again to the county and this year contracted for twenty-five cars and took an option on fifteen more cars of common stock and ten cars of certified stock. He pronounced Oneida county seed the best received in his district last year. This means that Oneida county's reputation as a center for the production of pure-bred seed potatoes is still growing. It should mean, too, that every grower in the county will take great pride in keeping his stock up to standard. Minnesota and Maine have heretofore furnished practically all of the southern seed, but the growers in these states have not kept their varieties pure, and have made no extra effort to eradicate the common diseases. If we will but look to these two things, orders for our seed will increase each year.

The two diseases the southern growers guard against are common scab and rhizoctonia, or black scurf. We are not troubled to any extent with the scab, but the black scurf is really getting serious. So far no reliable information concerning the control of the scurf disease has been published, but by next spring we hope to have the matter thoroughly worked out, as R. E. Hartman, of the State Experiment Association, has 400 ex-

DEDICATION OF NEW CREAMERY AT EUREKA CENTER, POLK COUNTY, WHICH WAS BUILT WHEN THE OLD CREAMERY BURNED.

periments he is conducting at the farm of Chas. Lyman, near Rhinelander, all dealing with the control of this disease. Each grower should be anxious to gain this information and do all he can towards the prevention of this disease. Its control will mean a bigger yield of better potatoes.

It should be our aim to grow the best potato in Oneida county that is grown anywhere in the country today. Keep the crop up to standard, and at all times let other people know the quality of seed stock produced. Then there will be no trouble in selling our product at prices far above the average, and potato growing will be profitable even in season of low prices. W. D. Juday.

Oneida Co.

Potato Growers Organize.

Recently, potato growers of Waushara county have met at important shipping points and have organized local associations for the special purpose of growing standard stock for both seed purposes and for commercial table stock. The last association organized was at Wautoma on June 28th. A call was signed by thirty growers to meet at the courthouse. J. G. Milward, secretary of the State Potato Growers' Association, met with the growers and discussed plans for the coming state convention at Eau Claire in November. Another very important matter taken up by this association was the work of seed potato inspection and certification. Several of the growers have made application for inspection this year. The association of growers passed motion unanimously favoring the employment of a county agricultural agent by Waushara county at the very first opportunity presented under the law authorizing the employment of county representatives. Preceding the convention of the state association at Eau Claire, in November, the potato growers of Waushara county will meet at an annual county meeting and exhibit to organize and arrange for a Waushara county exhibit to the state show.

Oconto County Records.

Adolph P. Lehner, of Oconto Falls, secretary of the Oconto County Holstein Breeders' Association, organized about a month ago, is compiling records of various cows owned by members of the association. All of these records were made on ordinary feeding, without any attempt being made to crowd the animals. In fact, they were not fed during the late spring and summer months, but were out in the pasture the same as the other stock.

Resthaven Princess, owned by Thos. Staszak & Sons, during the last nine months gave 10,025.6 pounds of milk. She will, by the time she is dried up, have given over 11,000 pounds of milk.

Princess De Kol Posh 2d gave 15.093 pounds of butter fat in seven days. Her two nearest dams gave 21.07 pounds and 19.54 pounds of butter fat in seven days. Pet von De Kol gave 16.075 pounds of butter fat in seven days, while her two nearest dams gave 18.097 pounds and 20.40 pounds of butter fat in seven days. Pet Maid De Kol gave 15.795 pounds of butter fat in seven days while her two nearest dams gave 17.89 pounds and 15.15 pounds of butter fat in seven days. These three cows are owned by E. B. Dutton, of Abrams, president of the local association. Mr. Dutton is one of the country's pioneer Holstein breeders.

Belle Paul Mechthilde Johanna gave 11,401 pounds of milk in 243 days. This is at an average of 46.9 pounds of milk per day. On her best day, being one day late in October, she gave somewhat over fifty pounds of milk. Johanna Susie Netherland produced 13,313 pounds of milk in 304 days. She gave 1,742 pounds for the month of January, being an average of 56.19 plus per day. Her average for the entire time is 43.79 pounds per day. These two cows are owned by L. Fields, who has been in the business the last nine years.

Barron Dairymen Meet.

More than two hundred breeders attended the meeting of the Barron County Guernsey Breeders' Association at Barron on June 29th, while the Holstein sale and picnic, on June 21st, was attended by about 800. J. W. Hicks, president of the State Potato Growers' Association, gave the address of the day at the Holstein gathering and G. R. Ingalls, of Eau Claire, told the Guernsey breeders how the farmers of his county bought a carload of pure-bred Guernseys. Before this meeting was over the Barron county breeders organized and are in position now to buy a car or two of pure-bred Guernsey heifers. These two picnics were successful in every way and indicate the great advancement being made along dairying lines in Barron county.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

White Diarrhea in Chicks.

"Mrs. J. W. G." is so unfortunate as to have a fine lot of young chickens become infected with white diarrhea after they had reached the age that they should be safe from infant mortality. She writes:

I have 160 chickens that are nearly feathered, but they are beginning to die. They stand around with their heads under their wings, and "cheep" in a dismal way. Each morning I find several dead. The droppings are a whitish looking slime. They were hatched under hens, and the hen has left them. They have a warm, comfortable place at night, and are fed wheat, ground oats mash, and a poultry compound. The medicine does not, I think, help them a bit. They seem to get worse after taking it. Is there any help for the white diarrhea? I fear that is the trouble, and do not know what to do for it.

There is no certain cure for white diarrhea, though sour milk fed from birth is thought to be a preventive. Prevention is the only thing to be recommended in this awful disease, which causes more mortality than any other one thing in chickendom.

The chickens are hen hatched, which would lead one to suppose that either the trouble was carried to the place or else the hens were affected, causing the chicks to be born with it. If so, all that is possible to do is to dispose of your flock and start over with fresh fowls from the flocks of someone whom you know to a certainty has never had it. Vigorous measures are very necessary to clear the premises of it.

In a few cases chickens recover from this trouble only to cause more trouble next season. A cured chick, kept for a breeder, will transmit the trouble to its offspring another year, and so there you are.

If kept for market purposes they never pull together and do any good either for themselves or their keeper. In fact, a chick with white diarrhea is worse than a dead chick and the sooner it succumbs and is burned the better. Regret to be so positive about the matter, but it is a hard fact.

More than 150 granges have been organized during the last quarter. Ohio leads in the number of new granges, Kansas second and Colorado third. This movement is fast spreading throughout the country.

PILLING Easy to use CAPON TOOLS

MORE THAN DOUBLE YOUR COCKEREL PROFITS

Capons grow twice as large on the same amount of feed and bring twice the price per pound.

Capons bring 30c per lb. Roosters 15c

Complete set of reliable, practical, easy-to-use Capon Tools . . $2.50 —full, illustrated instructions included. Parcel Post prepaid.

G. P. PILLING & SON CO., Phila., Pa.

Send for FREE Capon Book

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

The Blue Bird Brings Happiness

according to Maeterlink's story and this is proved true by the delight of the woman who receives our Blue Bird China Ware.

Special July Offer

A set of six fruit or sauce dishes will be sent prepaid to any one who will send a club of only 5 one-year subscriptions to The People's Popular Monthly, at 25c each.

This is just the season of the year when fruit dishes are needed most and this beautiful Blue Bird pattern can be used on any occasion.

Remember All that is necessary for you to do is secure the subscriptions of only 5 friends for The People's Popular Monthly, at 25c each, and the six Blue Bird pattern fruit dishes will be sent you prepaid.

A subscription for two years at 50c counts the same as 2 one-year subscriptions at 25c each

This is a special offer for July only and you are urged to be prompt in sending your club list to secure these fruit dishes. Address all mail to

The People's Popular Monthly, Dept. H
Des Moines, Iowa

The Blue Bird Club
Isabelle Best, Secretary

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Atwater Buys Great Boars.

WE RECENTLY spent the day at the home of L. F. Atwater, Bangor, Wisconsin, and incidentally to see the herd boars recently purchased by Mr. Atwater. Knowing about what he was looking for, we felt sure that when he found the boar or boars to his liking, some more of the breeders would have to take off their hats to the "Atwater Durocs." The writer never saw Marion's Wonder, but he has seen a good many of the famous sons of Crimson Wonder Again and H. A.'s Queen and the get of the various boars, but I will say with all due credit to the other good boars of this cross, that I have seen more good Durocs sired by Marion's Wonder than any of the others. The best sows in Wisconsin are sired by Marion's Wonder and the sows that have been winning at the Wisconsin State Fair have been strong in Marion's Wonder blood—this line of breeding is no experiment, it has made good. We know of a couple of good boars in Iowa sired by Marion's Wonder, but we don't consider him a boar sire, but as a sire of smooth, big sows, he is one of the best that ever lived. We simply mention Marion's Wonder so that you will appreciate the breeding of one of the boars Mr. Atwater recently purchased. Realizing what he had in Marion's Wonder, Mr. Atwater decided he would get a boar bred along the same lines, but it has taken him some time to find one that could be bought. The boar purchased is sired by the immortal Crimson Wonder Again out of H. A.'s Queen and he is six months older than Marion's Wonder would be if he was living. This boar will be seven years old in September and it is useless to say that he is right, for if he wasn't Atwater wouldn't have purchased him. Of all the boars of advanced age that we have seen, we never saw a better boar than this one. We firmly believe that he could be made to weigh 1,000 pounds. He hasn't a wrinkle on him, has a wonderfully strong back, and the way he stands on his feet is remarkable considering his age and the hard usage he has had. Mr. Atwater doesn't expect to show this hog, but at that he would cause no little attention in the show ring. We have seen some gilts sired by this boar and these "samples" were outstanding in every respect. The second boar purchased by Mr. Atwater is a three-year-old son of the grand champion, Illustrator. Here is the boar that is going to cause some trouble at the fairs this fall. When he arrived at the Atwater farm he weighed 865, in ordinary condition, for the former owner did not intend to show him. We feel safe in saying that this boar will be shown weighing between 950 and 1,000 pounds. Here is a real boar and the Duroc boar that beats him this fall will have to be an outstanding hog. The day the writer was there, the fall boar—senior pig—arrived and although he had been in the crate for three days he is the biggest boar of his age that we have seen this year. In the first place he is long, has a good back with an excellent spring of rib, a nice head and ear, the best of feet and bone, in fact, a typical show boar. He is sired by Cherry Chief out of a Proud Col. dam, and all students of pedigree know that it would be hard to improve on that breeding. Mr. Atwater is one of the best swine feeders we have ever met and it is needless to say that when he brings his show herd out this fall they will be in show condition. He will have a herd of sows at the fairs that are going to be hard to beat. His spring pigs are doing fine and he has raised around 160 of them, so the buyers this fall will have a large number to pick from. No spring boars will be sold, as the tops are being retained for the boar sale to be held this fall. The only thing he has for sale is a few sows that are bred for fall farrow—there are some good buys among these sows. If interested, write.—Adv.

A Popular Remedy for Horses.

ABSORBINE is a popular remedy for horse ailments. For many years it has held the favor of horsemen because it heals sores, sprains, cuts, bruises and similar afflictions of horses. J. L. Huye, Lancaster, Pa., writes, "I have been using 'Absorbine' for some time and have removed many bunches on sore legs of horses and mules. A mule on my farm had a bunch on his front ankle as large as a hen's egg, and the neighbors laughed at me when I told them I would take it away in four weeks with Young's 'Absorbine.' In four weeks the bunch had entirely disappeared and I sold the mule for $300." "Absorbine" is sold by leading druggists at $2 a bottle, or sent direct, charges prepaid, upon receipt of the price. A free pamphlet, telling what this remedy will do for horses, will be sent on request to W. F. Young, P. D. F., 101 Temple St., Springfield, Mass. See page 18.—Adv.

The "Perfect" Corn Harvester.

ONE of the most valuable machines for use on the farm that has come to our attention, is the "Perfect" corn harvester, made by the Love Mfg. Co., of Lincoln, Ill. Five or six acres of corn can be cut in a day without unusual effort and the stalks will be cut off smoothly and evenly. The danger of the operator of being thrown in front of the knife has been entirely eliminated by a guard rail. The cost of the machine is far less than the ordinary corn binder, and the fact that one horse and a man can run it brings down the operating cost to a minimum. The Love machine is well worth anyone's careful consideration if he is a corn raiser. Write the company today for their illustrated folder. The advertisement appears on pgae 18.—Adv.

A Rich Duchess Ormsby Herd.

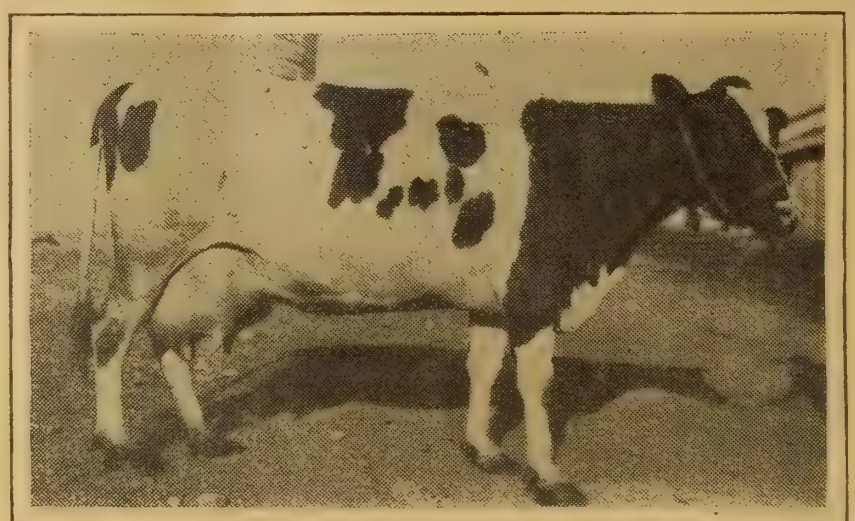
A RICHLY bred Duchess Ormsby bull is advertised for sale on page 22 by E. E. Rosenkrans, LaBelle View Farm, Oconomowoc, Wis. There is a good bunch of heifers growing up on this farm that are bound to make good when come into milk. They are sired by Hillvale Champion 98112, a young Ormsby bull, whose six nearest dams have a 4 per cent test, one over 5 per cent. He is also a grandson of Sir Ormsby Hengerveld De Kol, that is the grandsire of the great cow, Duchess Skylark Ormsby, the dairy queen of the world, whose record is over 1,500 pounds of butter in one year. Mr. Rosenkrans intends to let the good work go on, for he has just purchased a half interest in Hillvale Dandy 80730, an Ormsby bred bull. His dam has a record of thirty pounds butter and over 700 pounds of milk in seven days. He is a half brother to the sire of Ormsby Jane Segis Aggie with a record of 44.42 pounds of butter fom 721.40 pounds of milk in seven days (a world's record). Hillvale Dandy will be mated to the Ormsby heifers at Labelle View Farm and in time there should be a combination of Ormsby blood that will be hard to excel, as this last cross of Duchess Ormsby blood will intensify this breeding to a greater extent than in any other herd in the state, that the writer knows of at the present time.—Adv.

Endurance of Super-Six Cars Shown by Speed Tests.

AT the great Metropolitan Race on the speedway in New York, a regular Hudson Super-Six won third place and $2,000 against the world's best racing cars. It was the only car that traveled a distance of 150 miles without stopping. The explanation lies in the wonderful endurance and reliability of the Super-Six motor. The Hudson Super-Six is not a racing car, but speed tests are frequently made to show the dependable qualities of its motor. The owner of a Super-Six feels that he is master of the road; all the advantages of flexibility, durability, power and speed are at his command, and the beautiful lines of his car give him just cause for pride wherever he goes. For a great car at a medium price, the prospective buyer should consider the Hudson Super-Six. See advertisement on page 7.—Adv.

Tile Silos That Last and Give Service.

SILOS built of Brazil Vitrified Clay Tile are permanent; they stand like rock against the strongest winds and are proof against fire and decay. No attention is necessary because painting, repairing or rebuilding are not required by B. V. T. silos. Steel rods, embedded in dovetail mortar grooves, re-enforce the tile and produce one of the strongest silos on the market. Ensilage keeps perfectly in these silos. No air can attack it, because triple air spaces in the tile and tongue-and-groove mortar joints make the walls absolutely air tight. It interested in silos, you will surely profit by getting the free Silo Book E. of the Brazil Hollow Brick & Tile Co., Brazil, Ind. Write for it today, mentioning The Wisconsin Farmer in your letter. See page 13.—Adv.



DINAH JOHANNA ABBERKERK 2d, A. R. O. record 28.71 pounds butter in seven days. She is the dam of Calumet Johanna Abberkerk Champion, the sire of the calves advertised for sale on page 22 by A. G. Pingel, Chilton, Wis.

McDonald's Quality Big Types.

WE WISH it were possible for all hog men to visit the different herds as a field man does, for many of them could learn a great deal by visiting their fellow breeders, and see how "they do it." Most anyone could get some pointers about feeding and care of young stuff from J. D. McDonald, North Bend, Wisconsin. He is another one of the Wisconsin swine feeders that gets results. We have said a good deal and perhaps "raved" a little about J. D.'s herd boar, Mac's Chief, but it is because he is the type that we feel is needed in Wisconsin. We like to "rave" about a good boar when we see one, whether Tom, Dick or Harry owns him, for this Northwest needs more good boars, and as we find the good ones from time to time we are going to let our readers know about them. Two months ago in "writing up" the McDonald herd we said that Mac's Chief would easily weigh 1,050 pounds by fair time—we were informed that on the 28th of June he weighed 1,035 pounds, so we won't have to back up on this boar. We don't say that this hog can win, but if the judge will look at the big ones this boar will cause trouble. As all our readers know, the McDonald herd is full of good hogs, sows that have been champions many times and others that have been first prize winners. Big, smooth sows predominate on this farm, the kind that weigh 700 and 800 pounds, and if you want a boar that will put some size in your herd—and you must have it—McDonald can ship you a spring boar pig that will please you. He has the breeding and individuality and he prices them at what they are worth. Get particulars, and don't forget to mention The Wisconsin Farmer. —Adv.

D. & E.'S JUMBO, A JUNIOR YEARLING BELONGING TO DOBSON & EASTMAN, LANCASTER, WIS. A GOOD YEARLING.

Build With "Old Faithful" Hemlock.

FOR the car owner who needs a garage, the farmer who must have a new barn, the head of a household who wants a new dwelling, and for anyone else who expects to build for permanence, the Hemlock Manufacturers, Oshkosh, Wis., have an important message. They want to advise you to build with "Old Faithful" hemlock lumber, the wood that costs mighty little, but gives excellent service and will last almost forever. Those who write for this message will receive a new booklet, just off the press, which shows pictures of garages, barns, houses and other buildings, for which free plans and complete specifications for building may be obtained. The book contains a coupon which is good for any two sets of plans desired, when presented to a local number dealer. If he does not have the plans on hand, he can get them from the manufacturers. Anyone wanting the new booklet should write to the Hemlock Manufacturers, Oshkosh, Wis. See page 2.—Adv.

Booklet for Motorists on Starting and Lighting Systems.

THE Willard Storage Battery Company, Cleveland, Ohio, has issued a booklet on starting and lighting systems for motor cars. The relations of the starting motor, engine, charging generator and batteries are clearly set forth and the troubles which frequently arise in these parts are discussed. Since a knowledge of these parts is essential to the best car management, this little booklet will prove of great value to motorists. It will help in keeping all parts of the starting and lighting system of working together. This means elimination of trouble. The booklet is free and we suggest that all of our readers who own or drive cars write for a copy of it; simply ask for booklet F-67 and address one of the houses named in the advertisement on page 9. —Adv.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

The French government is still buying American horses, having within the the last two weeks placed contracts for 10,000 head, the order to be filled by July 15th. Omaha is the concentration point for this shipment. One hundred and sixty-five dollars a head is the price under the contract, making the total expenditure for this shipment $1,650,000. Most of this money will go to horse raisers in Nebraska, though some horses will be taken from Kansas, Iowa and South Dakota.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

A. F. BARSTOW

RANDOLPH, WISCONSIN
BREEDER of Registered Holstein Cattle. When in need of Holsteins send me your wants.

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

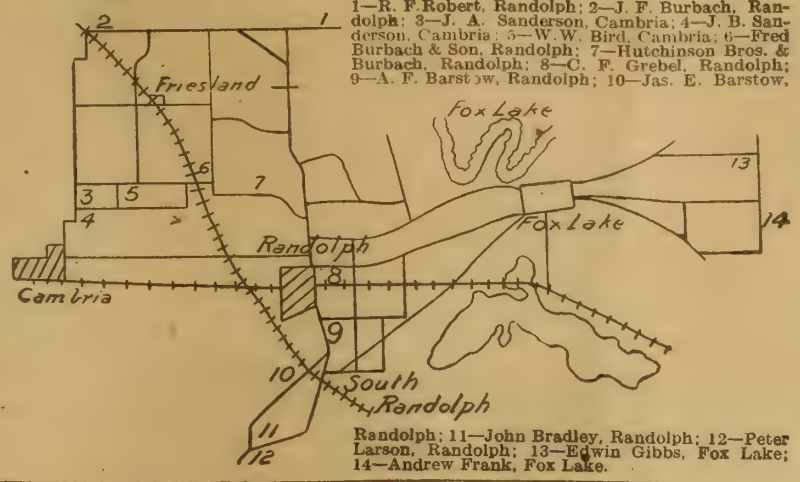
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE.
HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

Good For Sour Soils.

"Slaked lime, if it can be had at less cost than ground limestone, and if in condition to spread well, is entirely satisfactory for correcting acidity in sour soils." This is the reply of the soils department at the experiment station to numerous inquiries as to which of the two is the better. Outside of the cost, the relative value and merits of these two forms of lime depends on their dryness or fineness, for these factors influence the readiness with which the lime can be spread on the land.

Chemically, slaked lime is practically the same as the limestone unless it is slaked enough to make it unfit for mason's use. In such case, it may still be quite caustic and have many lumps. Caustic lime is nearly twice as effective as the ground limestone in neutralizing acidity pound for pound, but it costs more and is much harder to distribute because the lumps, at least, must be water slaked. For these reasons the ground limestone is usually preferable when it can be had at a reasonable price.

In regard to the crops for which lime is applied, one caution especially must be observed, and that is not to put caustic lime on land that is to be planted to potatoes the first year.

Jersey Interest Runs High.

(Continued from page 11.)

ing was held on the Constance lawn. Mr. Underwood has a herd of about fifty-five head, headed by the bulls, Brookhill's Financial Count, Primrose Raleigh Lad and Frederic Pogis, a grandson of Sophia 19th. One of the interesting sights at the Underwood farm is the milk house and small creamery where all the cream from this herd is turned into butter that finds its market in New York and on Baltimore & Ohio Railroad dining cars. This butter brings Mr. Underwood an average of about 60 cents a pound. The breeders were all guests of Mr. Underwood at luncheon at his farm, while at Waupaca they were guests of the wives of the Jersey breeders who provided a picnic lunch which was spread under the big elms on the Constance lawn. Too much credit cannot be given Mr. and Mrs. Constance, the Waupaca county breeders and to Mr. Underwood and the Waukesha county breeders for the success of the gatherings, the memory of which will remain for many months with those so fortunate to attend.

Mr. F. F. Showers, of Delavan, is president of the state association and is giving freely of his time this year to increase the membership and the scope of work of the organization. Mr. W. H. Clark, of Rice Lake, is vice president and Mr. E. E. Wyatt, of Tomah, secretary and treasurer.

Mr. Underwood now has six cows under official test and Irenis Cherry 285828 promises to acquit herself with honors at the end of her year. During the first seven months, ending June 1st, she had given 550 pounds of fat and during the fifth month of her test she gave 76.5 pounds of fat. She is a two year old.

The state association was fortunate in securing the speakers this year, and among others who spoke at the two meetings were Mr. F. H. Scribner, of Rosendale; Prof. A. C. Oosterhuis, of the College of Agriculture, who gave demonstration talks; Mr. Harry Jenkins, of the Jersey Bulletin; Mr. C. P. Norgord, commissioner of agriculture. These were in addition to addresses of welcome and responses by the members of the local and state organizations.

SIR NONESUCH ORMSBY, of La Belle View, a sample of the Ormsby calves raised by E. E. Rosencranz, Oconomowoc, Wisconsin, whose advertisement appears on page 22.

A machine which plants from 10,000 to 15,000 forest tree seedlings a day is now being used at the Letchworth Park Forest ad Arboretum, in Wyoming county, N. Y., according to officials of the forest service, who are acting as advisers in the work. Previously the planting has been done by hand at the rate of 1,200 to 1,500 trees each day per man. The machine was designed to set out cabbage and tomato plants, but works equally well with trees. It is about the size of an ordinary mowing machine and is operated by three men and two horses. One man drives the team while the other two handle the seedlings.

MONEY-SAVING CLUBS.

HERE is an opportunity for subscribers to The Wisconsin Farmer to buy all of their papers and magazines at one time at a big reduction in price. By ordering all your papers and magazines through The Wisconsin Farmer you are assured of prompt service and low prices. Pick out your club and send your order today. (We do not guarantee these prices longer that ten days beyond the date of issue in which these offers appear.)

CLUB NO. 1.

St. Louis Twice-a-Week Republic	$ .50	Our Price For All Three
Metropolitan	1.50	
Wisconsin Farmer	1.00	**$1.60**
Regular price per year	$3.00	You Save $1.40

CLUB NO. 2.

Kansas City Weekly Star	$ .25	Our Price For All Three
Home Life	.25	
Wisconsin Farmer	1.00	**$1.10**
Regular price per year	$1.50	You Save 40c

CLUB NO. 3.

Hearst's Magazine	$1.50	Our Price For All Three
Kansas City Weekly Star	.25	
Wisconsin Farmer	1.00	**$1.50**
Regular price per year	$2.75	You Save $1.25

CLUB NO. 4.

Ladies' World	$1.00	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.50**
Regular price per year	$3.00	You Save $1.50

CLUB NO. 5.

Modern Priscilla	$1.00	Our Price For All Three
Woman's World	.35	
Wisconsin Farmer	1.00	**$1.45**
Regular price per year	$2.35	You Save 90c

CLUB NO. 6.

Mother's Magazine	$1.50	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.75**
Regular price per year	$3.50	You Save $1.75

CLUB NO. 7.

Good Housekeeping	$1.50	Our Price For All Three
Woman's World	.35	
Wisconin Farmer	1.00	**$1.60**
Regular price per year	$2.85	You Save $1.25

CLUB NO. 8.

People's Popular Monthly	$ .25	Our Price For All Three
Woman's World	.35	
Wisconsin Farmer	1.00	**$1.05**
Regular price per year	$1.60	You Save 55c

CLUB NO. 9.

St. Louis Twice-a-Week Republic	$ .50	Our Price For All Three
Mother's Magazine	1.50	
Wisconsin Farmer	1.00	**$1.60**
Regular price per year	$3.00	You Save $1.40

CLUB NO. 10.

McCall's Magazine	$ .50	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.45**
Regular price per year	$2.50	You Save $1.05

CLUB NO. 11.

Metropolitan	$1.50	Our Price For All Four
McCall's Magazine	.50	
Ladies' World	1.00	
Wisconsin Farmer	1.00	**$2.25**
Regular price per year	$4.00	You Save $1.75

CLUB NO. 12.

Today's Magazine	$ .50	Our Price For All Four
Every Week	1.00	
People's Popular Monthly	.25	
Wisconsin Farmer	1.00	**$1.40**
Regular price per year	$2.75	You Save $1.35

CLUB NO. 13.

Kansas City Weekly Star	$ .25	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.15**
Regular price per year	$2.25	You Save $1.10

CLUB NO. 14.

Every Week	$1.00	Our Price For All Three
Boy's Magazine	1.00	
Wisconsin Farmer	1.00	**$1.50**
Regular price per year	$3.00	You Save $1.50

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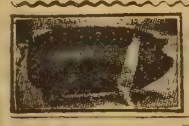

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Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
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BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
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BOAR SALE SEPTEMBER 28, 1916
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—in the automobile industry

THE automobile has come into your life permanently—or it soon will—to serve you day in and day out, on down through the years.

Its appeal is irresistible.

It is a fundamental factor in the affairs of modern, everyday life.

In the car you now select you are casting your lot with the fortunes of some one producer—or should be—for it entails needless expense to switch from one make of car to another.

It's time to "get right" on the automobile question.

So it is important to know what's going on in the automobile industry—more important than ever before.

Automobile producers have settled down into three fairly clearly defined groups.

Whether you own and drive your car on an extravagant or an economical basis depends first upon which group you cast your lot with.

You can drift into extravagance by following either of two groups, both of which make a strong appeal to the unwary.

✣ ✣ ✣

To follow one of these groups is to fall into the extravagance of cheapness—the appeal, of course, is price.

The extravagantly cheap cars are necessarily undersized—too small for comfort and as a rule lack equipment.

You begin by buying at retail prices the needed equipment.

Before you are through you have spent the price of a better car.

And in the end you sell out or trade in, take your loss and charge it up to experience.

✣ ✣ ✣

In casting your lot with the other of these two groups you fall into the other extreme of extravagance.

The appeal is individuality—exclusiveness.

This group embraces the great majority of producers but their output is small so they do not provide the machinery and facilities for large production

They must perform laboriously and expensively by hand many operations which could be done better, quicker, more uniformly, accurately and economically by great machines.

The price of these cars must cover extravagant manufacturing and selling costs.

And upkeep is correspondingly expensive for garage men are unfamiliar with these cars and service charges run high because mechanics must spend as much time learning what to do and how to do it as in actually doing the work.

✣ ✣ ✣

The third group comprises the large producers of quality cars.

The Willys-Overland Company is by far the largest producer in this group.

Season after season, for many years, the Overland output has far exceeded that of any other producer in this class.

As the Overland output has been greater, Overland material cost, manufacturing cost advertising and selling costs have been correspondingly lower, per car, than that of any other producer in this class.

And we have always given buyers the benefit of our lower costs.

Certain it is that we have led the way in all the great price reductions which have finally placed quality cars within the reach of the many.

Certain it is that those who have followed the Overland fortunes from the beginning have owned and driven their cars on a more economical basis than those who have followed any other producer. ✣ ✣ ✣

Past performance is the best promise of future performance, and several very great advantages of the present point to future advantage for those who cast their lot permanently with Overland.

Between the small, light Overland Roadster and the Willys-Knight Limousine at prices ranging between approximately six and eighteen hundred dollars, you have the most complete opportunity for selection within the entire "economy range"—excluding both the extravagant ranges of the cheap and of the fanciful, which fall outside any true idea of economy.

From season to season you may switch from one car to another as fancy or expediency may dictate, and without the needless loss entailed by changing from one make of car to another.

Whether you buy the small four cylinder Overland or a larger Overland Four, the big Overland Six or a Willys-Knight, you get the lowest possible first cost for a car of its class—the result of the greatest production attained in quality automobiles.

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And just as standardized manufacturing methods applied to the largest output have resulted in lowest possible first costs—

So also have standardized service methods applied to the largest number of running cars resulted in minimum upkeep costs.

Not only are Overland service stations everywhere, but garage men and mechanics everywhere have twice the experience and knowledge of Overlands as they have of any other car because there are about twice as many Overlands running as there are of any other make of cars of the same class.

And the inevitable result is economy, for everywhere men know Overlands and the quickest and shortest way to render almost any service in connection with them.

✣ ✣ ✣

So, if true values sway you—true values in every phase and all phases wherein the automobile touches your life—then consider these things and reach your decision and with your purchase this season cast your lot permanently with those who have established and are continuing to establish these very real and true values which determine true automobile economy.

See the Overland dealer now. Talk matters over with him frankly. He will help you from his rich experience, to decide which Overland or Willys-Knight will serve your particular needs with greatest economy.

Get right on the automobile question.

Catalogues on request. Please address Dept. 700

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THE WISCONSIN FARMER

VOL. XLV. NO. 29. THURSDAY, JULY 20, 1916. WHOLE NO. 1799

Reading Room of Agriculture
Urbana Ill
Ad

A BREATH OF SUMMER

CURRENT EVENTS

THE arrival of a submarine freighter, the Deutschland, from Germany, bearing a million-dollar cargo of German dyes and drugs, was the talk of the United States the past week. Practically ever since the European war began, now almost two years ago, Great Britain has maintained domination of the seas and German commerce has been driven therefrom. With the powerful navies of the allies patrolling the oceans it was next to impossible for any German freighters to slip by this cordon of steel and shell and continue the foreign trade which Germany had well-nigh monopolized prior to the war. But last week there arrived at Baltimore a 300-foot submarine, bearing a cargo, which had slipped by or under all the patrolling boats and made a new epoch in marine commerce. The new submarine is capable of diving to a depth of 300 feet and remaining under water for four days. In fact, traversing the British channel it did dive under water and remain there for more than ten hours, being almost directly underneath the warships which were on the lookout for it. The Deutschland's captain asserts that he and his crew celebrated their strategy by drinking French wine and singing good American songs, all unknown to the watchers in the battleships above them. When the coast was clear the submarine continued on its way, being obliged to submerge but ninety miles out of the 3,800 traversed in crossing the ocean. It is announced that this is merely the first of a fleet of submarine freighters which will attempt to open up German commerce with the outside world. The Deutschland will attempt to evade the battleships waiting for it off the United States coast and return to Germany with a cargo of much-needed rubber and nickel.

DANGER of war with Mexico becomes more and more remote day by day, President Wilson intending to accept Carranza's latest friendly note as evidence of his intention to restore order below the Rio Grande and punish the bandits whom the United States troops went in search of. Strife within the ranks of Carranza commanders is indicated in a report that General Jacinto B. Trevino, commander-in-chief in northern Mexico, has been deposed by order of Minister of War Obregon, and General Ignacio Enriquez, former civil governor of Chihuahua, appointed in his place. It was General Trevino who ordered the attack on General Pershing's troops, resulting in the battle of Carrizal. While this is going on, the United States troops have been withdrawn until they are now but sixty or seventy miles below the border. There has been but little movement of state troops during the past week, although it is still expected they will be used to patrol the international border until peace and order have been completely restored.

THE terrific drive of the Russians, British and French against the German lines, in the great war, continues and to an onlooker at this distance it would appear as though the allies had at last succeeded in turning the tide of battle against the Teutons. However, a Washington newspaper dispatch which purports to set forth what army experts in this country believe to be the situation, has this to say: "The situation in a general way, therefore, is generally regarded as favorable to Germany so far as any attempt to wear down the Teuton forces is concerned, but dangerous to the Teuton forces if the present concentrated drive unveils sufficient weakness at any one point to let the allied forces through en masse. The difficulty in breaking through the Teuton lines in decisive fashion is described here as due to the problem of taking advantage of the drives which pave the way. In several instances of the present fighting the French have opened up gaps, but have been unable to send troops through in cohesive form. This was the case in the French drive in September, it was explained. Only a thread separated the French forces from the Rhine, but the exhaustion of the effort in smashing through had been so great that there was no adequate force left to take advantage of the situation." The allies are now said to be plentifully supplied with guns and ammunition and probably have more men to fall back upon than have the hard-pressed Germans and Austrians. Some of the fiercest fighting of the two years of the war is now in progress, the allies attempting to relieve the pressure on Verdun, which the Germans are still attacking.

THE democratic majority in the United States senate has finally agreed upon a government shipping bill to upbuild the American merchant marine. The bill has already passed the house, but the senate proposes the following amendments: The government shall not purchase any ship which flies the flag of a European nation at war nor any ship already engaged in American trade unless it is about to be withdrawn from that trade. No ship shall be acquired by the government which is below 75 per cent of its original efficiency. The government shall not undertake to operate merchant ships unless all efforts fail to negotiate satisfactory leases or sales to private corporations for that purpose, the government reserving the right, however, to prescribe conditions under which ships shall be operated and in what service they shall engage. With these amendments it is proposed to push the bill through the senate as rapidly as possible so as to restore the Stars and Stripes to the high seas without undue delay. For a time it appeared as though a serious difference of opinion among the democrats would retard legislation along this line, but this difference now seems to have disappeared.

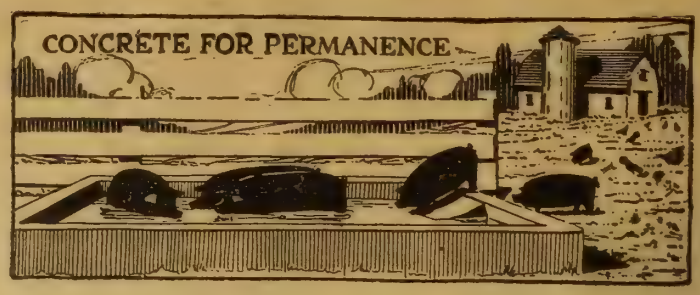
A BIG slump is looked for in the business of making munitions for the allied European powers and, in fact, has already set in. Thousands of men have been dismissed by firms who have closed plants created for the purpose of putting out arms, ammunition and war material for England, France and Russia. Most of the early contracts have been filled. In many cases there were no renewals. One reason is the fact that some of the output has proved inferior in quality. The main cause for the let-up, however, is that the allied countries have now sufficiently mobilized their industries to turn out their own arms, ammunition and material. For about two months the slump will not be very noticeable, experts predict, but after October it is asserted that the many factories will either have to return to their original lines or close down. Raw materials will still be furnished to the allies. There is a great need for metals and castings. This business is expected to offset somewhat the drop in the shipment of ammunition.

If Men Bring Mud in House.

Every comfortable farm could afford to have a small room in the rear of the house where those who do the farm chores or who come from the fields with muddy boots or wet clothing may leave their working garments and wash before entering the dining room. Every one of the plans which won prizes in the recent contest conducted by the agricultural engineering department of Iowa State College to secure ideas for a model Iowa farm house had this feature in them and it was taken into consideration by the judges who made the awards.

This wash room could be provided with hooks upon which clothing may be hung and space provided where the men folks may leave their field shoes when they enter the house, or their house slippers when they go to the field. The best plans provide for an entrance directly from this room to the dining room or kitchen. The kitchen should be protected though from interference with the work of preparing meals. Properly arranged kitchens today are small and are not used as a living room.

It is important that some place other than the kitchen should be provided where the men coming from the barn or fields can clean up before entering the house proper. When placed adjacent to the kitchen, this wash room can be used as an improvised laundry for small work, thus saving many trips to the basement. It should be well ventilated and lighted so that wet clothing hung in it will have a chance to dry. In summertime wet clothing, if not dried, will blue-mold and give off odors.



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Kansas City Weekly Star	$ .25
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If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wisconsin.

The Wisconsin Farmer

THURSDAY, JULY 20, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

INCOME TAX DOUBLED.

FARMERS who have been obliged to pay an income tax the past two years—and judging from the fact that the annual revenue per farm in the grain belt is $4,584 in North Dakota, $3,814 in South Dakota, $3,498 in Iowa, $2,836 in Wisconsin and so on, with an average for the ten states of $3,040, thousands have done so—will be obliged to pay just double the amount next year, provided, of course, that their 1916 income is as large as their 1915. This is no discrimination against the farmer, but applies equally to the city man. Congress has been obliged to double the rate in order to make up the immense amount needed for the preparedness program. Heretofore, the man or woman, whose income has been under $20,000 a year, has paid 1 per cent of the amount in excess of $3,000, if single, or $4,000, if married. After this, the percentage to be paid will be two instead of one. By doubling the income tax in this manner, congress proposes to raise $100,000,000, to devote to the manufacture —I sincerely hope not to the use—of arms and ammunition.

The income tax was not placed upon the statute books of the nation until a majority of the states had declared in favor thereof, so we cannot argue that it is a ruling of the minority. When the law went into effect, I urged upon all my readers that they comply with its requirements strictly, for it is the law of the land, and all good farmers are punctilious law obeyers. I cannot but regret, however, that we should be obliged to wring such a heavy toll from our fertile fields for no better purpose than to enrich the manufacturer of arms and ammunition, and those who will profit by the present hysterical craze for larger armament. Many a wagonload of corn and oats and many a fat steer will be wasted to no better purpose than to gratify the wishes of the jingoes and add to the already plethoric fortunes of the war lords of our fair land.

Speaking of farm revenues, I wonder how many of my readers know that the annual income per farm here in the grain belt is more than double what it is in the other states? I made thorough investigation of this matter when the United States Department of Agriculture issued its final crop estimates for last year and found, on careful figuring, that the annual income per farm here in the grain belt is $3,040, while in the balance of the United States it was but $1,310. In 1915 the farmers of the grain belt made an average of almost $400 more than they did the year before. If we have another good crop season this year—and it looks as if we would—the farmer will be a still heavier income taxpayer.

FROM OX TEAM TO AUTO.

WITH almost a million automobiles dashing back and forth along the city streets and country roads of the grain belt, it is difficult to remember that there are men still among us who came here behind a yoke of oxen "when wilderness was king." Yet, such is the case, as is proved anew by this interesting clipping from a grain-belt newspaper:

Sixty years ago J. M. Kimball, of Manhattan, Kan., was one among the founders of that now thriving city. He is eighty years of age. He has prospered along with the country and retains his vigor and vitality as well as his interest in men and affairs.

Recently Mr. Kimball purchased an automobile which he very soon learned to drive. As a result of his purchase he attracts considerable attention among people who know him and have knowledge of the period of history through which he has passed.

When Mr. Kimball went west from Goffstown, N. H., sixty years ago the railroads ended at St. Louis. From that point he came up the Missouri river to Kansas City and from there he went on west with an ox team. Little did he dream that sixty years later he would be driving a gasoline propelled car over the paved streets of a modern city where he was then whanging oxen over the grass grown roads of a straggling frontier village.

I had the pleasure of meeting an old subscriber a year or two ago, who had taken this paper almost ever since it was established, and who remembers, as plainly as though it were yesterday, when the Indians were frequent visitors to his farm home, although he now rides to and from town in a six-cylinder automobile and has as many neighbors now in a square mile as there were in the whole county forty years ago. We are making history rapidly in the grain belt nowadays; nothing proves this better than the fact that there are men who can recall the ox yoke and the ox goad, and who now interest themselves in gears and clutches and other evidences of our mechanical and commercial progress.

It is interesting to stop and conjecture if the next sixty years will bring forth as many changes as the last sixty have brought, and will the automobile be supplanted by some new method of communication, just as it has supplanted the ox team and the prairie schooner, or have we reached the last stage in the transformation? Who among us is hardy enough to venture a prediction, in view of the many wonders of the present time?

It seems to me that the stories of such men as Mr. Kimball should be secured without delay and preserved carefully, for they are the record of the development of a wonderful empire, than which there is none richer or fairer under the sun. I am proud to be a part of a country which can develop so rapidly, and I am indeed glad that Mr. Kimball has been spared to enjoy his share of the prosperity and the progress which is the result of the splendid manner in which he and his fellow pioneers laid the foundations of this great nation of ours.

THE SOLDIER VOTE.

I WONDER how many of my readers recall the manner in which the soldier vote was collected and recorded in the civil war, and have stopped to think that if our soldier boys are sent down to Mexico, or even to do border duty, that history will repeat itself this year and 100,000 soldiers will demand the right to say whether the next president shall be Wilson or Hughes. I was quite interested, in my reading last night, to find this matter discussed in one of our national weeklies. It turned time back a half century for me to find these facts set forth:

Before the war between the states began provision had been made in some of the states for taking the votes of soldiers absent with the army. Other states adopted such provisions during the war. The army votes for president in 1864, which were counted in canvassing the returns for electors, were as follows: Maine, 4,174 for Lincoln and 741 for McClellan; New Hampshire, 2,066 for Lincoln and 690 for McClellan; Vermont, 243 for Lincoln and 49 for McClellan; Pennsylvania, 26,712 for Lincoln and 12,349 for McClellan; Maryland, 2,800 for Lincoln and 321 for McClellan; Kentucky, 1,194 for Lincoln and 2,823 for McClellan; Ohio, 41,146 for Lincoln and 9,757 for McClellan; Michigan, 9,402 for Lincoln and 2,959 for McClellan; Iowa, 15,178 for Lincoln and 1,364 for McClellan; Wisconsin, 11,372 for Lincoln and 2,458 for McClellan; California, 2,600 for Lincoln and 237 for McClellan. The total vote counted as a result of that compaign, including both the home and the army votes, was 4,166,537, and Mr. Lincoln's plurality was 494,567. The army votes of Vermont, Kansas and Minnesota, which arrived too late to be counted, and certain votes rejected for informality in Wisconsin, would have brought up the total to about 4,175,000, and Mr. Lincoln's majority to a number in excess of half a million.

Most of our states have "absent voters" laws, or otherwise provide for the vote of the soldier boys being taken and recorded. One thing is certain, the farm boy and the city boy, who rally to the flag and go forth in defense of their country or at the call of Uncle Sam, are entitled to vote, and every consideration should be paid to them when it comes to determining who shall sit in authority at Washington the next four years. I yield to no one in honoring our brave soldier boys, even while decrying the spirit which sends them to war and regretting that jingoism should be so rampant in our beloved country. But our soldier boys are the pick of the land—boys from the furrow and feed lot and boys from the office and factory—and we must not forget or ignore them if it turns out that they are still away from home when November election day comes.

FARM MOTHERS AND WAR.

WAR WITH Mexico seems now remote, yet our boys of the state guard are being sent down to the Rio Grande and many must fall, if not before the bullets of the Mexicans, then before the darts and arrows of disease and pestilence, for climatic and sanitary conditions are vastly different along the Rio Grande from what they are here in the grain belt. Many a boy, who threw down the plow lines and the pitchfork when the summons came to the colors, will come back wan and wasted, for seldom, if ever, has there been a war when the ravages of disease were not as heavy as the toll of the leaden bullets.

I have had many letters the past few days from farm mothers and farm fathers, whose hearts are heavy because their boys have been taken from them. It set me to thinking of the days when my own mother's eyes were filled with tears, back in the sixties, and of how I, too, following in my father's footsteps, left the old home rooftree and enlisted for Old Glory, with a boy's enthusiasm and patriotism, not thinking of the heartaches it must of necessity bring my already-suffering mother. When war's alarms sweep across the land, who suffers more than the mother who kisses her boy good-by and sends him away to possible death, holding back the tears until he is out of her sight, smiling bravely in order that he may not know the pain which tugs at her heartstrings? I may have printed this before, but I cannot refrain from passing on to you again the words which our own grain-belt philosopher, the dearly beloved "Bob" Burdette, wrote in his tribute to the mothers of our soldier boys, a tribute which brings the tears to my eyes every time I read it. Here it is:

When has woman ever shrunk from going to war? "She risked her life when the soldier was born." She wound her arms around him through all the years of his helplessness. Night after night, when fell disease fought for the little soldier's tender life, she robbed her aching eyes of sleep, a faithful sentinel over his cradle. She nourished him on her own life, a fountain drawn from her mother-breasts. She stood guard over him, keeping all the house quiet when he would sleep in the noisy daytime. She stood on the firing line, battling with the foes of uncleanness, contagion, sudden heat and biting cold, protecting her little soldier in the clean sweet fortress of his home. She taught him his first cooing words that some day he might have a mighty voice and brave words of defiance to shout against his enemy's foes. She taught him his first step—such a wavering, uncertain little step—that some day he could keep step to the drum beat and march with the men—a free swinging stride—as they followed the flag. She trained him up to be a manly man, to hate a lie and despise a mean action, to be noble and chivalrous. She builded a strong man out of her woman's soul.

And then one day, when the bugles shrilled and the drum beat, she kissed him and sent him forth at the wheels of the guns—her beautiful boy—to be food for the fire-breathing maw of black-lipped cannon! Her boy! Heart of her heart! Life of her life! Love of her soul!

The exultant news flashes over the wires, "Glorious victory," shout the papers in crimson headlines, "ten thousand killed!"

And in the long list there is only one name she can read. It stands out black as a pall upon the white paper—characters of night against the morning sunshine—the name she gave her first-born.

And that is the end of it all. All the years of tender nursing; of tireless care; of patient training; of loving teaching; of sweet companionship; and of all the little walks and talks; the tender confidences of mother and son; the budding days; the blossoming years—this is the harvest. This is war.

When was there a generation since boys were born that women did not go to war? Never a bayonet lunged into the breast of the soldier that had not already cooled its hot wrath in the heart of a mother. While the soldier has fought through one battle, the mother has wandered over a score of slaughter fields, looking for his mangled body. He sings and plays the rough games of out-of-door men, in camp for a month, and then goes out to fight one skirmish. But every day and night of the thirty the mother has waked through a hundred alarms that never were. She has watched on the lonely picket post. She has paced the sentry beat before his tent. She has prayed beside him while he slept. The throbs of her heart have been the beads of her rosary.

I have never seen a more powerful arraignment of war or a more splendid tribute to the motherhood which furnishes the soldiers, unless, perhaps, it is this little poem, entitled "Motherhood—1916," which I found in one of our magazines just last night:

The night comes down and the wind is chill,
(Are both of my boys asleep?)
Daylight tinges the distant hill,
(Why is it I cannot weep?)

A passing lad and a whistled tune,
(France is so far away!)
Roses bloom and the month is June,
(The heat is the worst, they say.)

The list was long in the morning's news,
(They are so young to die!)
Which strong heart will the bullet choose—
Where will his body lie?

Boys go clattering down the street,
(Which will come back to me?)
I hear the tramp of the soldiers' feet,
(Dear God! That such things be!)

What will they buy with the blood of men?
(Hearts break, but they do not die),
Victory, Honor—and War again!
(Dead faces turned to the sky).

How can anyone of us read this poem and these words of "Bob" Burdette and be in favor of any war which is not the last resort to maintain unsullied our national honor or preserve undying some great principle? Before the sacrifices of motherhood, the jingoes should bow and bare their heads in most miserable shame.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

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ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Farmers' Bank Deposits Grow.

MR. C. P. HINN, president of the First National Bank of Fennimore, Grant county, Wisconsin, has been giving some serious thought recently to the relation of the farming interests to the banking business. Although Grant county is not so exclusively devoted to dairying as many others in Wisconsin, Mr. Hinn attributes the great growth of the banking business there, during the last quarter of a century, to dairying and place farming, as it should be placed, as the foundation of the banking interests of that county. Mr. Hinn recently, at a meeting of the Grant County Bankers' Association, summed up for those present the importance of both the farming and banking business, and it is so interesting in showing the increased prosperity of the farmer and his more modern ways of doing business that we are pleased to quote the following from his remarks:

Twenty-five years ago there were only a few banks in Grant county, with limited deposits and still more limited capital. Few farmers then had money on deposit in the banks. Few of them really had any ready money at all, and those who did have a little bought United States bonds or other securities they thought were absolutely safe investments, for the banks at that time did not enjoy the confidence placed in them today. Not a single farmer paid out money by the check method. Business men were the only ones to allow themselves this luxury. The banking business in Grant county played only an inferior part in its affairs twenty-five years ago. But what do we find today? Nearly all the financial business of Grant county, not only that of merchants and other business men, but also the farmers and the working man, is done through the banks. There is now a bank in every town in Grant county of any size, and the larger places each support two, three and as many as four banks. The deposits are something enormous and reach the almost unbelievable sum of about $9,000,000. This proves to the world what a strong and wealthy country we have—a leader in everything, and absolutely unsurpassed in its rich productiveness.

Where does this huge sum of money on deposit in the banks come from? The greater part of it comes from the farmers. And how does it come that they have money to put in the banks, and in such large amounts, when only twenty-five years ago they had to do their store trading on credit, run an account for the whole year and pay it in the fall when they sold their hogs or other stock—and, if they couldn't pay all would have to give their notes, before starting the next year's account? Well, for one thing, the big increase in the price of land made some of them rich, and the others have become well-to-do through the large returns of late years from stock raising, and their labors, and again more improved methods have helped very materially, but above all else, the development of the dairy industry is what I would ascribe Grant county's wonderful prosperity to.

No other line of business in Grant county has made such strides and such wonderful advancement in the past quarter century as has the banking business. You can all remember when farmers made their own butter and sold it for 5 to 10 cents a pound. It was all good in their eyes, even if wrapped in a turkey-red handkerchief, as some women used to bring it to our store. The low price they received hardly compensated them for their work, and they got no money either, they took it out in trade. Now the average farmer can pay his entire grocery bill for the year with one month's cream check.

The establishment of creameries and cheese factories in our county keeps him in ready money—all the year round. And he can put the proceeds of other sales in the bank, start a savings deposit account, and soon be independent. So, when it is simmered down, the phenomenal development of the banking industry in Grant county is due directly and primarily to the farmers, who now have the cash to support the banks, keep them going, and, as the farmers get most of their cash through their cows, so the flourishing condition of the banks of Grant county are in must be laid to the cow, and at our bankers' banquet everyone ought to drink milk to her honor as our great benefactor.

The history of Grant county in this respect, as outlined by Mr. Hinn, is the history of scores of other Wisconsin counties. It has been only a few short years since the farmer traded his produce for merchandise and visited his banker only to get a loan. It can equally be said that it has only been in recent years that the banker came to recognize the importance of the farmer in his business and that co-operation between banker and farmer is as essential as co-operation between banker and merchant. The new era is here—the era in which the banker seeks the aid and counsel of the farmer and how important this is from either the banker's or the farmer's standpoint is well indicated by the statistics cited by Mr. Hinn to the Grant county financiers.

Seeding Alfalfa in Wisconsin.

CONSIDERABLE seeding of alfalfa will be done during the coming three weeks in Wisconsin and it is important to bear in mind at this time that experiments have shown that seeding of this crop after August 15th is almost always likely to result in failure. Many farmers are increasing their alfalfa acreage, realizing how essential this roughage is to feed in conjunction with corn silage for large and economic milk and butter-fat production, while others are reseeding plats which winterkilled last spring. Reports indicate that many are undertaking alfalfa for the first time, in which case it is well to select a desirable plat, which lies well and is well drained, and then observe all the precautions such as liming of acid soils and inoculation that are essential to success.

There is no more certain method of securing a stand of alfalfa in Wisconsin than to seed during July and early August without a nurse crop. For the beginner, Mr. L. F. Graber, secretary of the state alfalfa order, says that seeding the alfalfa alone gives the best results, and experiments conducted by the order bear out this contention, as in 323 tests in 1913 there were twice as many failures when seeded with a nurse crop as seeded alone. This disposes of the fear of the beginner that failure may mark his efforts if he tries seeding alone at this particular season, and in this connection it is interesting to note experiments carried on last year by the state order to determine the best rate of seeding.

This test is running for two and three years, and the results, reported in the fall of 1915, on the seeding of ten and twenty pounds to the acre, as announced by Mr. Graber, are as follows:

Questions asked members who conducted the test	Replies	Started 1912 No.	%	Started 1913 No.	%	Average 1912-1913 No.	%
Did weeds and blue grass cause greater trouble with 10-lb. rate?	Yes	20	69	30	91	50	81
	No	9	31	3	9	12	19
Which alfalfa gave best quality of hay?	No diff.	5	19	4	13	9	16
	10 lbs.			2	6	2	3
	20 lbs.	22	81	25	81	47	81
Which gave the thickest and best stand?	No diff.	4	14	2	6	6	10
	10 lbs.						
	20 lbs.	25	86	32	94	57	90
Which gave the best yield?	No diff.	4	13	1	3	5	8
	10 lbs.						
	20 lbs.	26	87	32	97	57	92
Which is best rate of seeding on weed-free not acid, inoculated and carefully prepared soil?	No diff.	1	4	1	3	2	3
	10 lbs.	2	8	6	19	8	14
	15 lbs.	9	34	12	38	21	36
	20 lbs.	14	54	13	40	27	47
Which is the best rate of seeding where alfalfa is seeded for the first time on soil fairly well prepared but somewhat weedy?	10 lbs.			1	3	1	2
	15 lbs.	2	7	2	6	4	7
	20 lbs.	22	82	29	88	51	84
	25 lbs.	3	11	1	3	4	7
	30 lbs.						

The matter is best summed up by the showing that the best yields and quality of hay is secured by seeding twenty pounds to the acre and that where only ten pounds was used, blue grass and weeds gave considerable trouble. Naturally, the farmer would prefer the lighter rate of seeding if it would give him the best results, because it would lower the seed cost; but these experiments bear out the belief that twenty pounds is the better, especially where alfalfa is seeded the first time. Elsewhere in this issue Mr. Graber gives the results of experiments with different kinds of seed, and it will be worth the time of any farmer, interested in alfalfa, to read of these experiments.

Seeding with a nurse crop, Mr. Graber points out, always gives good results on fields where alfalfa has been grown successfully before, but where the land has been put in condition and the weeds eliminated during the early summer, seeding alone between now and August 15th is almost certain to result in success, provided, of course, that other precautions are observed, such as the need of overcoming the acidity in the soil, if any exists, inoculation, etc. In many sections where canning peas were grown this year and are harvested in June or early July, alfalfa is being sown, which Mr. Graber says is usually followed with success. Many farmers, who had winterkilled plats, turned them to early potatoes and seeding alfalfa after the potatoes are harvested, provided not later than August 15th, is also generally successful. So valuable is alfalfa, as a source of roughage and for soiling purposes, that some should be grown on nearly every farm, and the success farmers are having with it in Wisconsin accounts for the great amount of new seeding being done this season.

Wisconsin Boys' Corn Contests.

CULTIVATION, which is occupying the particular attention just now of the thousands of Wisconsin boys engaged in the various county and district corn contests, will soon be followed by the problem of selection for exhibitions. As interest in these contests was never greater than this year, the field-crops department of the college of agriculture has issued some timely tips for the boys, so that they may secure the best results from their contest acres. There is a contest in almost every county this year, and the entry of boys has been large despite the discouraging results last year. However, with indications for a ripe crop this year, the boys are going at the work with much enthusiasm and vigor and some surprising yields are anticipated. The following hints from the field-crops division will also be of considerable service to older corn growers, containing, as they do, some very practical advice:

Keep up the cultivation whatever comes. Never let the soil become caked and hardened after rains. Always have a loose blanket of pulverized soil between the hot summer air above and the moisture at the corn roots. It prevents evaporation, which turns corn yellow and saps its vitality.

Remember that corn more than a foot high should seldom be stirred around its roots deeper than two inches. After the corn gets well along and begins to tickle one's ears, hitch a horse to the single cultivator and go after the weeds again.

Hand pull all weeds growing close to the hills, especially after rainy weather. Weeds grow faster than corn and will rob the maise amazingly if not attended to at once.

When the ears get well formed, select the plants having the best developed grain. Do this before it is ripe. At cutting time, pick the best ears and put them in a good drying room.

Save more seed than you think necessary for your own needs. It gives a larger selection, and perhaps someone else will be looking for just the kind of corn you have grown—after you win that county or state prize, anyway.

In making selections for exhibition, always take uniform ears, true to the variety grown. Uniformity means ears that are as nearly alike as possible in size, shape and color.

Off-color ears are too common faults in corn shows. This may take the form of Silver King corn tinged with yellow here and there, and with pinkish cobs, or the Golden Glow samples may have white tipped kernels and white cobs. Watch for these errors and never place such corn in line for prizes.

Tiling Land Is Scientific Proposition.

WE HAVE the utmost respect for men who have mastered the practical details of land drainage. The old-time ditcher, in many cases, develops a sixth sense, as it were, when it comes to the matter of running a line of tile, and he will obtain a marvelous degree of accuracy without the use of scientific instruments or levels of any kind. On the other hand, in every community where the draining of land has become a large industry, there can be found individuals who follow the calling and who do their work unscientifically and, indeed, bunglingly. These individuals usually belittle the effort of those who pin their faith to transits and levels, and they give themselves over to the solution of drainage problems by guesswork, when, as a matter of fact, the problems are, in many cases, only solved by instruments of great accuracy. These men, in many cases, are actual pests to the community, and it would not be putting the matter too strong to say that they have cost farmers of the corn belt millions of dollars because of their bungling work.

In a bulletin published by the Wisconsin Station attention is called to the fact that tile may be laid, in some instances, without the use of the level where there is sufficient water and soil to indicate the amount of fall. Beginning at the outlet and starting the ditch at the desired depth at that point, the experienced man can run a line of tile accurately, the depth at any point being determined by the flow of the water. It would not be expected, however, that a "greenhorn" or inexperienced man can accomplish this feat. He will have too many depressions in his line, and this means that the tendency will be to partially fill up the tile with silt so that sooner or later the line will be stopped up. In every case where the fall is light, it will pay to have the line surveyed and staked. This applies to the main as well as to the laterals.

After it has been staked, it is a simple matter to run a grade line at a given height above the line of tile, thus affording an opportunity to make measurements every few feet and thereby keep the grade uniform. On the question of marking and determining the grade, the author of the Wisconsin bulletin, above referred to, says:

After the type of system desired has been decided upon, the laterals, sub-mains, and main should be staked out. One hundred feet is a convenient interval for guide stakes in the proposed line of tile. Then the final levels should be taken. Elevations should be taken at each guide stake. If a small drainage level is used, then it had better be set up midway between two stations so that the difference in elevation may be computed by a reading taken upon each at fifty feet. Where a larger level is used, the elevation of a number of stations may be ascertained from a single position of the level. It is almost impossible to make the ditch straight without the use of a string. The width of the ditch at the top will be determined by the cut, and strings should be stretched at each side of the ditch twelve or sixteen inches apart, as circumstances may require. The strings can be removed as soon as the sod is cut or marked with a spade. In tough sod, time is saved by cutting it with a spade or hay knife to the depth of four or six inches. When the laterals are curved, either to make a better juncture with the main or for other reasons, the strings must be laid on the ground in the form of a curve without being pulled taut. If this method is followed, a much more uniform curve can be laid out than if it is marked with a spade at random.

The next step is the determination of the grade line, or ditch bottom, upon which the tile is to be laid. If it is desired to lay the tile three feet deep at the outlet and only two and a half feet at the head of the lateral, 600 feet away, and the surface of the ground at the head is one foot higher than that at the outlet, a total fall of one and a half feet is available. Dividing this by six, the number of stations, gives the fall per one hundred feet, or three inches. A greater fall could be obtained by laying the tile deeper at the outlet and shallower at the head.

With the grade line determined and the ditch

marked out, "grade stakes" are driven in at each station, whose tops are to be a known distance, as five feet above the grade line. If a string is stretched tightly from top to top, every part of which, except for a slight sag, will be five feet above grade. The ditch should be dug until a five foot stake can be just held vertically between the grade string and the ditch bottom. To eliminate the error which is almost inevitable, due to sagging, the sighting method may be used. In case, the grade stake consists of a vertical stake, driven at the side of the ditch, with an arm at right angles, which extends over the ditch. The stake should be driven down until the target rod properly set and held upon the horizontal arm is exactly hit by the horizontal crosshair in the level. The ditch may be completed without disturbing the stakes. Even though a level be used, a little water facilitates the finishing of the ditch.

Care must be taken not to dig the ditch too deep in any place. If the soil is clay, the depressions can be filled and firmly tamped so that tile may rest upon a firm foundation. With a peat soil, this is impossible, for the peat put back to fill the depressions cannot be tamped to its former firmness. It is always best to leave the ditch a little too shallow, rather than too deep, as it is easier to remove some earth in the ditch bottom at the time of laying the tile than to fill in.

It is not expected that the average man is going to survey and lay out his own drains, as this is actually the work of a specialist. It adds something to the cost of the system of drainage to be sure, but the percentage of cost is so small that it will always pay to assume this extra expense in those cases where the services of an experienced tiling man cannot be obtained, and also in those instances where the fall is very light. On lands that are nearly level, running an inch to two inches of fall to 100 hundred feet no man ought to be trusted to do the tiling without his having a competent man lay out the entire system.

Sheep Can Utilize Practically Any Kind of Feed.

CONSIDERABLE experimental work has been done at the Illinois station for the purpose of demonstrating the practicability or impracticability of converting farm foodstuffs into mutton and wool. So far the evidence tends to show strongly in favor of the practicability of increasing the number of sheep raised in the corn belt. The work at this station is in charge of Prof. W. C. Coffey, and recently Professor Coffey prepared the following interview for the press:

In the corn belt we must realize that conditions have changed and that raising sheep successfully by the methods of a decade ago is impossible. Expansive pastures, once common, are disappearing and sheep need range. Flock owners do not know how to meet new conditions, for when they ripped up their pastures sheep went to the stockyards. Others are keeping flocks almost the year around on five to ten-acre blue grass patches along with cattle, hogs and horses. On these overpastured, worm-infested spots, successful sheep husbandry cannot be carried on. In most cases the flock would fare better if no such pasture existed on the farm. The problem we have to wrestle with in the farming area is how to provide feed and proper range for the flock, with extensive pastoral areas a thing of the past.

Few animals excel sheep in handling various kinds of feed; in other words, sheep can utilize practically any feed the farm produces. It is amazing what methods of fattening, and I use the term advisedly, may be prosecuted with success. For example, the ration may be very carbonaceous in nature and still yield fair results. We have fattened lambs on corn silage with a small quantity of clover hay and secured excellent gains. Corn, silage and oats straw fed to yearling wethers was little behind corn and alfalfa in putting on weight. On the other hand, I know of a concern in Nebraska that starts western lambs on prairie hay and linseed oil meal in self-feeder, later substituting half of the oil meal with corn. Satisfactory gains are secured by this method and the feeders have the utmost confidence in a ration decidedly overbalanced with protein. Any of the grasses or legumes are acceptable forages to sheep. The public is tired of hearing of their fondness for weeds, but several years ago the Minnesota experiment station made a test in which sheep ate with relish 576 out of 600 varieties of weeds. On western ranges most weeds are considered as valuable as grasses for sheep feed. The lesson of all this is that sheep can be utilized to harvest almost any crop and nearly every acre on the farm ought to be gleaned over some time during the year by them.

Such gleaning cannot be done, however, without sheep tight fences, and a farmer with a determination to raise wool and mutton should consider this a preliminary necessity. It is true that this involves expense, but so does any other scheme of stock farming. A successful sheep man once said: "My neighbors say they cannot afford to fence their sheep; I cannot afford not to fence them." Sheep growing cannot be made successful, however, merely by fencing the farm and giving the flock the waste and residue from cash crops. Such a system would be preordained to failure. Some crops, or part of them, must be designed for the flock. If the farm is without permanent pasture, there should be a field or fields in rotation growing legumes on which the sheep may graze. If I were located in Indiana, Iowa or Illinois, I would prefer a field of clover and timothy in rotation for my flock than an equal area of blue grass. Clover alone is good forage and sweet clover is receiving attention as a grazing plant for sheep, promising to be an excellent forage. Alfalfa causes bloat, otherwise it is an excellent field feed. Rape has an established reputation as a fattening forage with considerable carrying power on fertile areas. Soy beans and cowpeas are also worth reckoning with. Rye is valuable early in the spring before other green feeds are ready for pasturing.

Such fencing as is required to restrain sheep will answer the purpose of restraining hogs in an ideal way. More and more we are coming to believe that cheap pork making necessitates the hogs having access to the entire farm, and, even to a greater extent, this applies to sheep raising. The ability of sheep to consume an almost endless variety of roughage gives them a place in the economy of production that is not equaled by any other farm animal. The genuine Simon-pure sheep breeder does not relish the idea that sheep should be kept as scavengers. Nevertheless, the fact that sheep have been known to consume between 500 and 600 different weeds indicates that advantage should be taken of this normal or abnormal appetite so that farms may be freed from weeds and, in addition, the income from live stock augmented through the sale of wool and mutton.

Wisconsin Beautiful.

SOME months ago, or some weeks ago, we were privileged to hear a paper read before the Wisconsin State Horticultural Society by Mr. William Toole, of Sauk county, on "Wisconsin Beautiful." Mr. Toole took occasion to point out a few of the beauty spots in Wisconsin, and traveling about the state the last month we have been forcibly reminded of his remarks. We quote from Mr. Toole's address, in which he calls attention to some of the scenic portions of our state:

Nature has blessed Wisconsin with not only many beauty spots, but also large expanses of picturesque scenery. In southeastern Wisconsin, the people appreciate their lake surroundings, and have improved their opportunities for enjoying them. About Lake Geneva one sees fine examples of what the wealthy can do with natural opportunities, and we may take from them some lessons of landscape art and the value of shrubbery in beautifying home surroundings. Just across the state to the west in Crawford and Richland counties, instead of the rolling prairies we see a variety of rugged hills and narrow valleys with much of nature still in its primitive grandeur. Now that people have found their opportunities for combined fruit growing and dairying, we hope such touches will be given to the landscape here and there as may be had by leaving a natural grove, planting evergreens and birches on prominent points, and other little helps to nature which individuals can often give. Between these extremes we have the rolling country about Madison—beautiful lakes with many a vista of lovely scenes, when looking across the country which is to be seen between the highest points. Along our western borders in the St. Croix region, we see another type of scenery.

For beautiful drives and picturesque scenery, we think Sauk county compares favorably with the best. With our little touch of combined lake and mountain-like scenery, rocky river canons, ferny dells, picturesque water falls, long distance views of river valley, native evergreens, trees and shrubs, distant and near-by hills, prairie and woodland, we have a country to charm the artist and the lover of nature. From where we live I can see in the distance bare rocks where not long ago and for many years, grew a beautiful clump of white pines which was a picturesque feature of the landscape. A change of ownership of land led to utilizing the beautiful trees for part of a barn frame. The trees were not ours, yet we feel their loss. In another direction, miles away, we can see on a bluff a farm home where about fifty years ago were planted some young white pines from the woods near by. Now they are large trees and help to make the landscape effect more pleasing. Would that someone with wealth might feel the impulse of desire to save for all time some of the little beauty spots where grow the native ferns and other plants which are becoming rare.

When our cut-over lands have become covered with farm homes, we can imagine the pictures possible in the future. There will be varied degrees of taste in home surroundings. Some neighborhoods will care nothing for comfort or beauty, and will be content merely to exist. Others will make homes, which will be pleasing pictures to travelers. One sees a great future for the city of Superior and the country tributary to it.

So too we see great possibilities for the country extending eastward from Superior to Ashland and north over the Bayfield peninsula. Of course, there will be a long time ahead before human beings will have availed themselves of all the chances which nature offers them to help make Wisconsin more beautiful. Viewing the country near Bayfield we marvel at the mixture of natural beauty, with subjugation of the wilderness in the rough, the sudden transition going on from the old-time lumberjack conditions to the present-day influence of landscape art. Now we flit to Door county, and here again the scenery is different and we enjoy the blending of water views, and wooded hills, adorned with evergreens and a great variety of other native sylva. Again we shift the scene and take time to admire the surroundings of Milwaukee and the lakes near Waukesha and Oconomowoc.

Mr. Toole has done a great deal toward educating the farmers of his county and state along the line of beautifying farm properties. If every neighborhood in Wisconsin had a man with such tastes as Mr. Toole has and with such influence, we would see a wonderful change in the appearance of Wisconsin farms.

Favorable Season in Wisconsin.

NATURE always seems to do her part, and this has been generally true in Wisconsin this summer. When it has been too wet for the corn or the tobacco, it has been splendid for pastures, the alfalfa and the clover, and when the warm weather came and started the corn to grow, it helped the harvesting. Wisconsin, we believe, with its great diversified farming interests and its enjoyable climate, is unbeatable, and we must not lose sight of the great part nature plays in the farming life of this state.

This has been a remarkably favorable milk-producing season in Wisconsin, and when the cows are giving a heavy flow and the dairy-products prices are staying up, it means a great deal to a state which is producing a sixth of the butter and more than half of the nation's cheese. Dairymen tell us that they have never known a season when the milk flow was heavier than during May and June, although the hot weather of early July intended to deplete pastures to a small extent. But this was welcome as it started the corn to grow; it has assured in most parts of the state a ripe corn crop this year, as our crop reports in another column of this issue indicate, the small grains are all doing nicely, taking the state as a whole, and all because nature is doing her share in providing the right kind of weather at the right time. The heavy milk flow has brought about a condition that is unusual, but, as our readers know, the Milwaukee shippers have solved this by their new contract with the Milwaukee dealers, by which they take all the milk produced by the shippers and the matter of disposing of the surplus, is up to the dealers. Cheese prices are higher than at this season last year, with all the factories working to capacity and the creameries and condenseries are breaking old records for the amount of milk handled.

On every hand, as the writer travels through the state, new dairy barns are to be seen in the course of erection; new silos and additional silos are being built to provide the rich, winter feed so essential to economical milk production; many new farm homes are going up and everywhere there is the evidence of the prosperity indicated by the fine crops and fields. When we sum it all up—when we think of Wisconsin and its fine farms and its fine herds and flocks—is it any wonder that Wisconsin is buying automobiles faster than ever before, and that the 100,000 mark will be passed this year? Prosperity and optimism prevail everywhere.

What Is a Good Bull Worth?

DID YOU ever ask yourself that question? Those who have given it the most attention find it one of the most difficult questions to answer. The average man is apt to compare the price asked for a good bull with the cost of a scrub or a grade that can be bought at a trifle above beef value, notwithstanding the fact that from a money-making standpoint such a bull is usually by far the most expensive for anyone to buy.

Too much cannot be said on this bull question, because its importance is very imperfectly understood. Let us for a moment look at some bull experience by the Ohio Experiment Station. The value of a dairy-bred bull is determined by the increase in production of milk and butter fat by his daughters as compared with the yield of their dams. Some years ago the Ohio station purchased a bull from one of the best dairy herds in its own state, but the ancestors of that bull had no official milk and butter-fat records; hence, the general appearance of the bull himself was the only thing the station authorities had to go by in making their selection. The cows this bull were bred to have an average production record of 5,275 pounds of milk and 287 pounds of fat. The daughters of these cows by the bull mentioned now have an average record of 4,588 pounds of milk and 248 pounds of fat per head per year. In other words, the daughters are inferior to their dams to the extent of 687 pounds of milk and thirty-nine pounds of fat.

This first bull was finally disposed of and a second purchased. The latter has given a better account of himself. His heifers have, on the average, produced 752 pounds of milk and thirty-two pounds of fat more than the daughters of the first bull, still most of the daughters of the second bull have had only one calf, indicating that they will develop into reasonably good cows as they reach maturity. The net result of the use of these two bulls for ten years is that the herd of cows, including the young ones that have been added, is still on the same production plane it was when the first bull was purchased. In other words, there has been no improvement in that ten-year period. What were those bulls worth? The first diminished the net income of the heifers, figuring milk at $1.50 per cwt., to the extent of $10.30 per year. He was, therefore, very expensive even as a gift.

Now, let us contrast with this experience the work of another bull used in another herd. The average production of the cows in this herd was 7,392 pounds of milk and 273 pounds of fat per year, while the daughters from these cows by this bull averaged 11,599 pounds of milk and 384 pounds of fat. In other words, they showed an increase in production of 4,207 pounds of milk and 153 pounds of fat. Again, what is a bull worth?

This last-mentioned bull came from high-producing ancestors, and, of course, cost considerably more than either of the other two, but had two such bulls been used in the first herd, instead of making no progress in ten years, production would have been doubled. The income from the daughters of the bull in the second herd, figuring milk at $1.50 per cwt., was $63.10 more per year than from their dams. Of course, the feed cost would also be greater, but it is evident that the net profit, due to improved blood, was very much enhanced in this case.

The point is that one cannot be too careful in selecting bulls for one's herd. A person is justified in paying almost any reasonable price for a sire that comes from high-producing ancestors. Of course, not all bulls prove to be valuable breeders, even though bred in the purple, but the chances of getting a good sire is multiplied many times when one with good breeding back of him is selected.

While these illustrations are taken from dairy cattle, they apply with equal force to beef cattle, and illustrate very forcibly the difference in a good and a poor sire, and that it is poor economy to buy a bull just because he is cheap. It is difficult to express the value of a sire in dollars and cents, but a first-class bull, barring accident, is invariably the cheapest in the end.

SHEEP BOUGHT HIS FARM.

Polk County, Wisconsin, Farmer Who Started With an Old White-Faced Ewe Has Earned For Himself a Fine 320-Acre Farm Through Intelligent Breeding and the Use of Pure-Bred Rams.

Mr. Clark's foundation ewe, a white face with no breeding. She sheared only three pounds of wool a year.

MUCH has been said in favor of the pure-bred ram, but there remains no greater testimonial to his value in building up the flock than the experience of a Polk county, Wisconsin, farmer, J. E. Clark, of Dresser Junction. Starting with an old white-faced ewe without any breeding back of her and three grades given him by his brother, Mr. Clark in twenty-four years has earned for himself a well-equipped farm of 360 acres, and has 250 head of sheep in addition to rearing a fine family of eight children. To use his own expression, "Sheep have been the backbone of it all."

The old saying that the ram is half the flock has more than proven true in Mr. Clark's case. In fact, his success has been due entirely to the use of pure-bred rams, without which he would doubtless have failed in this branch of live stock farming, as no inferior ram ever helped in the improvement and upbuilding of a flock. A good ram is not only necessary to the farmer who wishes to produce good mutton but he is also necessary to the farmer who wishes wool production, as Mr. Clark has found in his experience that it costs just as much to keep a sheep that will shear three pounds of fleece annually as it does to keep one that will shear twelve pounds.

Sheep raising is still in its infancy in Wisconsin, but the success of Mr. Clark indicates its possibilities and should prove an encouragement to Wisconsin farmers and especially settlers who are so situated as to give a flock plenty of pasturage and shelter. His flock, it must always be borne in mind, is the result of breeding up from the original four ewes with which he started twenty-four years ago and what improvement has been made in his flock in that time has been transmitted by pure-bred sires. It is true that he took up sheep raising as a mainstay and not a side line as many farmers do today, but what is true in flock improvement in one case is equally true in the other case.

Mr. Clark started to make his farm in Polk county in 1891 when that section of Upper Wisconsin was little known and when lumbering was in its prime. He bought eighty acres, all in timber. The land was fertile and it was only necessary to clear it, but in those days modern stump pullers and present-day methods of cleaning up the land were not known. So it was slow, tedious work and Mr. Clark soon realized that sheep would prove an aid to him in brushing down the land covered with small growth while he carved out his farm in the timber. That was the thought that drew him into the business which he now admits was the backbone of his success and his experience will be interesting to thousands of Upper Wisconsin farmers who today are facing the same situation in neighboring counties.

The first cross ewe by a pure-bred sire. At one year she sheared twelve pounds of wool.

THIS EWE, FOUR YEARS OLD, AND HER LAMB REPRESENT THE FOURTH GENERATION. SHE YIELDS TWELVE POUNDS OF WOOL ANNUALLY.

One white-faced ewe of no breeding whatsoever and a yoke of oxen made up the live stock inventory at the beginning. He realized that he could not long continue in the sheep business with ewes which yielded only three pounds of wool, as this original white face sheared. He also realized that the use of a scrub ram like the ewes he owned would degenerate his flock as a scrub will degenerate any flock. So he immediately began using a pure-bred ram which has more than paid him for the few dollars originally spent, as the following season he began having a better crop of lambs and this improvement in the flock has continued ever since.

THE FLOCK WHICH MR. CLARK BUILT UP FROM A START WITH FOUR INFERIOR EWES AND BY THE USE OF A PURE-BRED RAM.

The illustrations on this page illustrate very forcibly the improvement made in the Clark flock. They show the process of building up, stage by stage, starting with the original white-faced ewe which when she was first served by a pure-bred sire sheared less than three pounds of wool a year and cost as much to keep as a sheep that would shear four times that much wool. The improvement was noticeable in the first cross, as the first ewe by this service sheared at one year old twelve and one-half pounds of wool and was fifty pounds heavier than the mother. The second and third cross showed improvement as well as the fourth cross. The fourth generation, represented in the illustrations, shows a ewe with her lamb. This ewe, an offspring of the original white faced, was four years old when this picture was taken and not long continue in the sheep business with ewes which yielded only three pounds of wool, as this original white face sheared. He also realized that the use of a scrub ram like the ewes he owned would degenerate his flock as a scrub will degenerate any flock. So he immediately began using a pure-bred ram which has more than paid him for the few dollars originally spent, as the following season he began having a better crop of lambs and this improvement in the flock has continued ever since.

MR. CLARK'S FAMILY OF CHILDREN.

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The yoke of oxen with which Mr. Clark started have given way to horses and in their place he has eight well-bred animals. His original eighty acres has grown to be 360 acres and the twenty-four years that he has been enjoying this constructive farming he has been surrounded with a family of growing children, as indicated in their group photograph on this page. So Mr. Clark has reason to look back over his residence in Polk county with pride and contend that sheep are responsible for what he has accumulated in a financial way and that the pure-bred ram is particularly to blame for his success.

THIS EWE AND HER LAMB ARE THE THIRD CROSS FROM THE ORIGINAL WHITE FACE. THE RESULTS OF GOOD BREEDING.

Mr. Clark's experience bears out the advice given by experienced flock owners that it is possible to start with a small flock and make a success of it. The settler, especially, with only a few cleared acres, should begin with a small flock, for it is not wise to buy in large numbers and then find it necessary to dispose of some of them. It is far better to start with a small flock and then let the flock grow in size as the settler's knowledge of the sheep grows. This was Mr. Clark's plan when he settled his eighty and by consistent breeding with good sires he won out. As sheep multiply rapidly, a large flock can be secured from a small beginning in a comparatively short time.

That a good start can be made from inexpensive females is also borne out by Mr. Clark's experience. The improvement in the offspring can be secured just as Mr. Clark secured it—by the use of pure-bred sires. In the fall young breeding ewes of the Merino type can be bought from western ranches for from $5 to $8 a head. These will afford the settler of today a good start. As a rule, western ewes are good mothers and producers and by breeding to pure-bred rams of some good mutton type a good-sized flock is the result in a few years. One of Mr. Clark's cautions to the settler is to start with a small flock, just as he did, and not to endeavor to get into sheep raising on too large a scale at the beginning. Too often the mistake is made, especially by settlers, in getting more sheep than they have pasturage or shelter for and the result naturally is some losses.

Weather Favorable For Harvest.

Good Hay Crops Were Put Up in Fine Shape---Small Grains Are Ripening Well---Corn Continues to Improve.

WISCONSIN.

Barron County.—All small grain looks well. Barley is heading out with good long heads. The hay crop, especially the new seeding, is better than for several years. Since the beginning of warm weather, corn has done nicely. Potatoes are looking fine; peas for canning are good and the factory has started canning. Small fruits are good.—Wm. Bartlett.

Chippewa County.—Haying is in full swing and the average yield is good. Barley is headed out and looks well, except on low spots and sandy places. Oats are fair, but poorer than expected. They are heading out now. If this weather continues without getting too hot, we will have some good oats this year. Corn is doing very well and will make enough fodder to fill silos and, perhaps, some mature corn also. Potatoes are good, but the bugs are at work. Pastures are showing the effects of a dry spell, but cattle are still doing well. Hogs are healthy and growing. Cattle around here have been tested for tuberculosis and herds are free from this plague. Small fruits are fair.—Jas. A. Smith.

Crawford County.—Weather has been very warm for the last two weeks, with very little rain. Moisture is needed badly at present. Corn is doing very well. Small grain, especially oats, need rain or they will ripen too fast and the grain will be light. Winter wheat and rye are good crops and will be harvested this week. Barley is also good. Hay and pastures are fine. Early potatoes are an edible size and the crop is fair. Garden truck looks well, but shows need of rain. Fruit crops promise fair yields.—George Ashbacher.

Dodge County.—Extreme heat of the last week has burned the barley some. Late oats look rather slim. Corn and potatoes are fairly good, but in general crops are suffering from lack of rain.—E. R. F.

Dunn County.—All crops are excellent, except corn, but the weather since July 1st has been ideal for corn—warm nights and days make corn prospects good.—E. A. Finley.

Eau Claire County.—Early oats are heading out, but the crop will not be good because it is so uneven. Barley, also, is uneven, but is heading and filling out well. Corn is growing rapidly and indicates a fair crop. We are having good haying weather and good crops of clover and timothy are being cut. Pastures are short. Rye is well filled and starting to ripen. Both early and late potatoes are good, but bugs are troublesome. Live stock look well.—C. A. Koll.

Florence County.—All hay and grain crops are in good condition. Pastures look well. Potatoes are good. Fruit crops, especially apples, are light.—Phill Kelmes.

Forest County.—Hay is above the average and will make a fine crop. Oats, barley and wheat are normal. Corn is only fair, with a condition of about 75 per cent normal at this time. Potatoes are good. Too much hot weather will cause a deterioration in some of the crops.—H. A. Kamm.

Grant County.—Crops look fine with the exception o corn, and it is improving rapidly since the warm weather began. However, it needs a lot of good weather yet. Hay is a tremendous crop and pastures are excellent. Small grain looks fine and will soon be ready for harvest. Early potatoes will make a very good crop.—Al Vesperman.

Green Lake County.—Small grains are light on hillsides where leaching, due to heavy rains, was great. Barley is better than oats. Corn has done very well since the warm weather began. In general tame hay is light, because there is little clover. Pastures are suffering from hot weather.—G. B. W.

Iron County.—Weather is quite warm. Potatoes, oats and meadows are in fine condition. Haying has just started. Pastures are good because of plenty of rain in June.—J. A. Becker.

Juneau County.—Recent hot weather has pushed corn wonderfully, but it is not up to average yet. Haying is progressing and the yield and quality are good. Small grain crops are uneven—they are poor on low, undrained land. Considerable buckwheat was sown this season.—J. H. McNown.

Kewaunee County.—Oats, barley and peas are splendid. Rye is filling out nicely. Corn has picked up wonderfully the last week. Meadows appear good, but the red clover is missing in most of the fields. Pastures are getting short. Potatoes and garden truck are good. Crops are later than usual, but doing well.—Fred Lutz.

Marinette County.—Warm weather for the last two weeks has improved the outlook for small grains and corn wonderfully. Too much rain during May and June damaged the corn and potato crops by rotting the seed, thus causing replanting. Good weather is pushing these crops at present. Haying has begun and the crop runs from fair to good. New meadows are excellent. Pastures are very good and the dairy business is developing rapidly.—H. B. Pederson.

Ozaukee County.—Dry weather is damaging barley on high and sandy lands and will cause the oats to be short in straw. Much smut is in the grains, especially barley. Corn and potatoes are growing slowly. Hay crop will be less than last year on account of wet weather in early June.—Nic J. Mueller.

Oneida County.—No rain has fallen for about eight days and the weather is very hot. Corn is growing about an inch a day. Haying has begun and the cutting is exceptionally heavy. Potatoes are very good and the acreage planted mostly to the Triumph variety, is larger than ever before. Oats do not look as well as last year due probably to hot weather and lack of moisture.—Clyde Burkhart.

Polk County.—Weather is hot and dry. Corn is growing rapidly and stands nearly hip high. A heavy crop of clover is being cut. Timothy also is heavy and will be ready to cut soon. Wheat, barley and oats are headed and look well. The new seedings of clovers and grasses are good. Prospects for a crop of ripe corn are very favorable at this time. Potatoes promise a big crop. Hot, dry weather, if it continues, will reduce the berry crop. Milk cows and other live stock are doing well. Beef is worth 6 cents on the local market. Butter fat brings 28 to 30 cents at the creamery and the run is heavy.—Wallace Fountain.

Price County.—Hay making has started; big crops are in sight; and weather is fine for curing. Corn is in good condition. Small grains are booming because of the warm weather. Pasture is pleniful and doing fine. All garden truck is doing well, especially early potatoes. Prospects for good crops of apples and small fruits are favorable. Berries will soon be ready to pick.—J. W. F.

Richland County.—Corn is improving, but needs rain. It is knee high on the average. Oats are nearly all headed out and doing fine. Some farmers are making hay; the new seeding is good, but old meadows are light. Pastures need rain. Bugs are injuring the early potatoes some. Gardens are looking well, but lack moisture.—E. C. Stewart.

La Crosse County.—Two weeks of warm, dry weather have helped along the corn crop. Some rye fields are ready to harvest and a good crop is looked for. Early potatoes are yielding well and selling for $1.20 to $1.40 a bushel. Late potatoes are slightly bothered with bugs. Pastures on low lands are still flooded, while on high ground they need rain. Raspberries are yielding better than was expected.—S. J. D.

Sauk County.—Ideal weather conditions prevail and the hay crop is being rapidly harvested. The yield will average about two-thirds that of the 1915 crop. Hot weather has benefited corn immensely. Many fields show places injured by grub worms. Oats, barley, wheat and rye continue to show up well. Pastures are gradually drying up. Strawberries were light; there were no cherries; apple trees are not heavily loaded.—Richard F. Klemm.

Shawano County.—We have had fine growing weather. Corn is picking up fine. Potatoes look well. Insects are not as bad as usual. The hay crop is immense; much of it was put up without a drop of rain on it. Rye is good. Small spring grains are doing well. Pastures are fine. First crop of alfalfa is cut and in barns; the stand is good and the second crop is doing well. The only backward crop is corn and, if present weather continues, there may still be a fair crop of corn—at least plenty for silage.—M. J. Wallrich.

Sheboygan County.—Recent warm weather has been boosting the corn, which is not very good and should have favorable conditions to make silage. New seedings of clover have yielded heavy crops of hay. Barley looks very well and promises a heavy yield. Early planted oats also look well. Potatoes are only fair; in wet soil, some replanting was necessary. Recent warm, dry weather has cut down the strawberry crop about one-half. Rain is needed for pastures.—W. J. Hoppert.

Taylor County.—We have had fine growing weather for three weeks and all crops look fine, except barley. Hay harvest is at hand and the prospects are for a fine crop. Oats and potatoes are good. Corn is small, but doing well. Garden stuff is late and not very good.—John E. Miller.

Walworth County.—Pastures and corn are fair. Potatoes are poor. Grain looks well. An abundance of fine hay is being put up in excellent condition.—Ora P. Taylor.

Winnebago County.—Hay has improved wonderfully since the weather settled and the harvest is well under way. Corn is starting up well; it was nearly all planted in June and is small at present. Potatoes were planted late and the main part of the crop will be poor, although there are some good patches. Apples are very promising and crop conditions, in general, have improved since the warm weather began.—Seymour L. Smith.

MINNESOTA.

Goodhue County.—All grains are looking fair, but are about three weeks late because of the wet spring. Corn is so far behind that there is little chance for it to mature. Potatoes are late, but still have plenty of time to grow. Hay bids fair to be a bumper crop. Clover is rank in growth. Pastures have been very good, except in the river bottoms where the land was covered with water. Gardens are fair, but cucumbers, melons, etc., are too late to mature. Apples and raspberries will make medium sized crops.—Otto W. Kolshorn.

Wisconsin Crop Condition.

Wisconsin's corn crop will yield 10,000,000 more bushels this year than in 1915, according to the July 1st estimate of the United States Department of Agriculture. The predicted corn production for the state is 51,000,000 bushels. The forecast for the country as a whole is 2,870,000,000 bushels against last year's yield of 3,054,535,000 bushels.

The state's wheat crop will be less this year than in 1915 the estimate for winter wheat being 1,470,000 bushels as compared with a total production of 2,300,000 a year ago. Spring wheat is slated for 2,040,000 bushels this year against 2,362,000 produced in 1915.

Indications point to a much smaller Wisconsin oat crop this season, the forecast being for 78,500,000 bushels, while last year produced 99,750,000 bushels. Barley production in the state will be less this year by nearly 3,000,000 bushels, the estimate being 20,500,000 bushels. Rye production is placed at 6,000,000 for this year as compared with 7,700,000 a year ago.

Indications are that the tobacco crop will be considerably better this year with 50,100,000 pounds predicted for Wisconsin, compared with a production of 36,900,000 pounds in 1915.

Hay condition in the state is placed at 90, three points ahead of the eight-year average. Pasture condition is 98, while the ten-year average is 89.

Wisconsin's apple crop will approximate 1,130,000 barrels as compared with 1,473,000 a year ago. For the country as a whole there will not be a perceptible apple shortage, the production being estimated at 72,500,000 barrels, as against 76,670,000 in 1915.

The price conditions of staple articles for state and nation is given as follows, the first figure being the average on July 1st and the second the average on July 1st a year ago:

State—Wheat, 100 and 115 cents per bushel. Corn, 77 and 36. Hay, $12.90 and $11.20 per ton. Eggs, 20 and 17 cents per dozen.

United States—Wheat, 92.9 and 102.8 cents per bushel. Corn, 75.4 and 77.7 cents. Oats, 40.5 and 46.7 cents. Potatoes, 102 and 52.1 cents. Hay $12.10 and $11.70 per ton. Cotton, 12.5 and 86 cents per pound. Eggs, 19.7 and 16.8 cents per dozen.

A Fly Decalogue.

Three years ago the health department of Asheville, N. C., issued what it termed "The Good Citizen's Decalogue," dealing with the fly as sanitary problems as follows:

1. Remember thy garbage can to keep it covered, lest thy garbage become a stench in the nostrils of the people and breed flies.
2. Thou shalt cut the weeds in thy vacant lot, lest it become a hiding place for old tin cans, which catch water and breed mosquitoes; papers and divers sort of trash.
3. Thou shalt bear witness against thy neighbor's rubbish heap, likewise his dirty back yard.
4. Thou shalt clean out the habitation of thy horse and thy cow frequently, lest the stable fly flourisheth and spread infantile paralysis, and the house fly breed by the thousands and millions, and annoy thee and thy beast and produce much sickness in thy family.
5. Thou shalt prevent the breeding of the fly in the springtime, that thy children unto the third and fourth generation need not swat it later.
6. Remember thy back yard and alley to keep them clean. Six days shalt thou labor to keep thy premises clean, and if yet the task is not accomplished thou couldst do worse than continue on the seventh.
7. Thou shalt covet all the air and sunshine thou canst obtain.
8. Look not upon the milk when it cometh from the unclean dairy; for the doctor will not hold thee guiltless if thy infant sickeneth therefrom and die.
9. Remember thy cleaning up day and keep it wholly.
10. If thou dost hearken unto these sayings, to do them, thou shalt live long in the land.

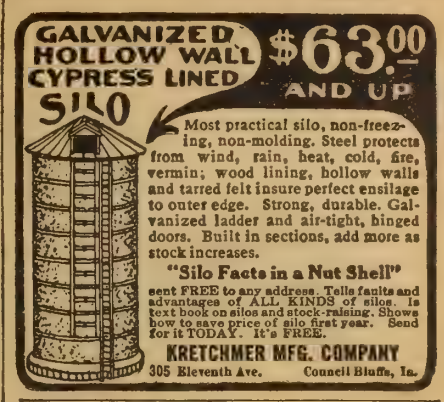
Determine Acid Soil.

Sooner or later the problems of soil acidity will have to be met on nearly every farm in the state.

Farmers are often surprised to find that fertile soils become acid after being cropped for some time.

The reason is evident when we consider that soils are composed largely of acids and bases like lime and magnesia which in the proper proportion form a neutral or alkaline soil. The bases are, however, removed by crops and by leaching much more rapidly than the acids. For this reason, as they are cultivated, upland soils gradually become acid. Marsh soils may become acid through the accumulation of acids formed in the decay of the vegetable matter in the soil. When soil acidity becomes marked the growth of such lime-loving plants as alfalfa and red clover is affected and the availability of the phosphorus in the soil is lessened.

A bulletin, "Soil, Acidity and Liming," has just been published for the benefit of Wisconsin farmers who may obtain copies by applying to the agricultural experiment station, Madison.



Explosives For Land Clearing.

Last year one manufacturer of explosives sold in Wisconsin over 3,000,000 pounds of explosives, a large quantity of which was used for land clearing purposes. Most of that used in this way was 40 per cent product. The recent demonstrations showed that beyond all doubt on the loams and clays, 20 per cent would do the same work as 40 per cent, making a saving of 3 cents a pound and that on the lighter soils 30 per cent would do equally as good work as the 40 per cent at a saving of 1½ cents a pound. This means that by using these lower grades a saving of 12½ to 25 per cent may be effected in the dynamite bill.

The value of the combined use of dynamite and stump pullers was pounded home until there is not much room for argument that it is the cheapest and quickest way of getting rid, especially, of the old pine stumps.

Neatly Packed Butter.

Co-operating with the office of markets of the United States Department of Agriculture, B. H. Hibbard and Asher Hobson, of the University of Wisconsin, have carried on a study of marketing conditions which obtain with reference to Wisconsin butter. This includes not only the marketing of farm butter but the organization of creameries, methods of fixing the prices for butter after purchased, and the shrinkage of butter in transit to the wholesale markets. The results already secured would indicate that the quality does not result in a material difference in price. The uniformity in product adherent to the package and advertising given to the product appear to be factors of no small moment in the determination of price.

If all the urban population of the United States were supplied with filtered water, or water of equal purity, the urban typhoid fever death rate would be fourteen per 100,000. A reduction of 67 per cent in the typhoid rate immediately following filtration has been amply demonstrated. The average typhoid fever death rate among the urban population of the United States in 1913 was twenty per 100,000. By reducing the rate to fourteen about 3,000 lives would be saved annually.

In and Around Wisconsin

Highest Price Ever Paid For Fat Cattle on St. Paul Market Is Paid Pierce County Feeders---Other Items of Interest.

The Barron co-operative creamery is now receiving milk from 871 farms. The new addition for cold storage is now ready to be occupied.

The state has begun stocking the lakes of Waukesha county with fish and 5,000 black bass from the hatchery at Delafield were recently placed in LaBelle and Fowler lakes at Oconomowoc.

The Brown County Fair at De Pere has set aside $100 for a "better babies" contest at the fair this fall. This will not be a baby show, but a contest to determine the physically fit children of the county and a large entry of country children is anticipated.

Cottony maple scale has been discovered on about 1,000 shade trees in Madison. This disease is controlled by the use of kerosene emulsion and a movement is on foot to start a general spraying clean-up such as has been done in Milwaukee, Kenosha and Racine.

The sheep meetings held recently in the Kickapoo valley by Frank Kleinheinz, shepherd at university farm, under the direction of the Wisconsin Live Stock Breeders' Association, were all that could be desired. Great interest was shown and in all nine meetings were held on farms in the valley at Viola, La Farge, Gays Mills, Reedstown and Soldiers Grove.

Most of the eighty odd pea canneries in Wisconsin began operations this month with prospects for a good canning season. Reports indicate that the pea crop has been generally up to normal, although low-lying fields suffered from the wet, cold weather, indicating the need of good drainage, as peas can withstand almost anything except wet "feet." In most sections the crop is normal, although a little late and the canneries will be in full operation during the next few weeks.

Washington county farmers are planning a demonstration meeting late this summer at the county farm at West Bend. Alfalfa, grains and forage crops will be discussed. The date and speakers will be announced later.

The highest price ever obtained for fat cattle from Wisconsin at South St. Paul was received by Will Guiser, of Martell, twenty-one steers averaging 1,340 pounds sold at $10.25 per hundredweight, which is also the highest price ever paid for cattle in carload lots on the South St. Paul market. He had a load of fat cattle on the market the week before that brought $9.85. Mr. Guiser and his brothers are among the largest live stock feeders in Wisconsin. This is a big boost for Wisconsin, particularly for Pierce county.

A monster exhibition of how reduced prices on foodstuffs and farm products can be obtained by co-operation of producer and consumer will be held in the form of a two-day conference and picnic at State Fair Park, Milwaukee, on August 26th and 27th, under the auspices of the American Society of Equity and the Federated Trades Council. This festival, it is thought, will demonstrate clearly the necessity of a co-operative distributing agency which has already been organized by farmers and incorporated for $50,000.

The new Wisconsin capitol, which has been in process of erection for ten years, will be completed by January 1, 1917, Sec. Lew F. Porter, of the capitol building commission, said on Tuesday. The total cost of the building so far has been $6,655,917.66.

What looked like a serious situation for the farmers supplying the condensery at Delavan, Walworth county, was averted recently by a compromise by which the farmers are receiving $1.60 per hundred for their milk. This price went into effect July 1st, although last spring the condensery agreed to pay $1.70. When July 1st came the condensery insisted on paying the old price of $1.50 for July, but the producers cut off the supply and the condensery closed until an agreement for $1.60 was made a few days later. The farmers were not in position to take care of their oversupply, as the neighboring creameries could not care for so large an additional surplus.

One thousand dollars for a six-year-old ram shows that American breeders are beginning to appreciate the true value of a sire. The Geo. McKerrow & Sons Co. have just sold a half interest in the great Shropshire breeding ram, Senator Bibby, to T. F. Jones, of Everly, Iowa, who paid $500 for a half interest. This sale is a great tribute to the tried sire. Senator Bibby is an American-bred product, raised under American farm conditions and this is especially interesting because the majority of the high-priced rams have been imported from England. He is a son of Blatherwick (256115) who has sired eighty-nine first prize winners at state and world fairs. His progeny won the get of sire prize at the world's fair at Seattle and three times at the Wisconsin State Fair. Senator Bibby's dam is Bibby's 133, champion ewe at the 1908 International show and also at the Wisconsin state fairs. She was also the dam of the noted prize-winning ram, Bibby Champion.

Under the Wisconsin state aid highway law, which became operative in 1911, 4,000 miles approximately of state aid highways have been constructed. These 4,000 miles, however, are scattered in 3,000 pieces of roads of various types and today in Wisconsin there is not a stretch of continuous highway, constructed under the state aid law, more than twenty miles in length. The Good Roads Association of Wisconsin, which was recently organized and has opened up its headquarters at Madison, has for its main purpose the solution of the problem presented—the development of legislation which will result in joining the scattered pieces together or securing continuous highways. The officers of the association are as follows: Chas. C. Jacobus, Wauwatosa, president; Elmer S. Hall, Green Bay, vice president; Ernest J. Perry, Fond du Lac, treasurer; William H. Reese, Milwaukee, secretary; E. A. Cannon, executive secretary, Madison, and R. W. Davis, Bangor; A. R. Hirst, Madison; Charles Liehe, Chippewa Falls; Walter H. Reed, Racine; A. H. Zimmerman, Wausau, directors. There are seventy-one vice presidents, one for each county in the state, taken from men in all walks of life.

Railroads carrying wool from Chicago to points in Wisconsin, Minnesota and Iowa have been ordered by the interstate commerce commission to establish lower rates for car lot shipments.

Clarence Sheridan, of Fond du Lac, son of B. F. Sheridan, of the Certified Milk Farm, won first place in the judging contest at the county Guernsey picnic recently. Paul Bonnell, of Ripon, was second; Carl Kolb, of Berlin, third.

Interest is running high in the pig feeding contests being conducted this summer in several Wisconsin counties for the boys, and in Rock county about twenty-five boys have pigs entered. This number is being increased weekly and the following advice from the Wisconsin Live Stock Breeders' Association, which is co-operating in the contests, will be of interest to every boy and every swine breeder:

Your profits as a pig raiser depend largely on the brood sow that you select. The successful live stockman has to be a good judge of live stock, and so we want to tell you boys some of the things that will help you to pick out a good brood sow.

If you are raising pigs for market only, the sow need not necessarily be pure bred. But see to it that she resembles the breed that you have chosen to raise, and then if you use a pure-bred boar of the breed you can get most rapid improvement. Select your brood sows from your own herd as much as possible and each time get a better one than you had before.

In picking out a sow the first consideration should be its size. When we sell the pigs we are paid by the pound and, of course, the more pounds the better. Don't select a sow that is undersized for her age.

In order to get good size the first thing you want to look for is length of body. You must have length in order to have a good frame upon which to put lots of weight. No one ever grew a big hog out of a short-bodied, chunky pig.

EIGHTEEN PROGENY OF "SENATOR BIBBY," HIGHEST PRICED SHROPSHIRE EVER SOLD IN AMERICA. FOR A HALF INTEREST AN IOWA BREEDER PAYS A WISCONSIN BREEDER $500, AS OUTLINED ELSEWHERE ON THIS PAGE.

IMPORTANT ANNOUNCEMENT

Readers of The Wisconsin Farmer

We, the Federal Land Company, have just acquired the celebrated Hillsdale Ranch "in the heart of the Golden Prairie District" of Wyoming.

Sixteen thousand acres—one-half deeded—one-half state leased in alternating sections.

We will at once place the deeded land on sale in tracts of 160 acres and up, and with each farm sold will transfer, free, a five-year lease on equal acreage of adjoining state land.

Surrounded by improved farms, fertile soil, 2 to 7 miles from railroad town. Prices low; terms easy.

Please fill out and mail us the following coupon. It will bring you valuable information:

FEDERAL LAND COMPANY,
Burns, Wyo.
Gentlemen: Please mail me at once particulars of the Hillsdale Ranch which you are now offering for sale in farm tracts. Also Certificate of Guaranty, booklet on "Wheat Growing and General Farming," sectional plat and full particulars of the Golden Prairie District of Wyoming.
Name .....
Address .....

PROSPERITY IN CANADA

$900,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated lands from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privilege of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready made farms for sale. Special easy terms. Loans for live stock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interest are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

MAKE MORE MONEY

WITH less aggravation by attaching an adjustable stubble cutter to your corn harvester. Cuts the "stubs" while you cut the corn. Easily attached to machines of the Acme, McCormick, and Milwaukee type. Interesting book, "Comfort In the Cornfield," free. Give make of corn harvester when writing. Address CORN HARVESTER ATTACHMENT CO., 524 S. Dickinson Street, Madison, Wisconsin.

GOOD CLAY LAND

FROM owners direct, in Wisconsin's Clover Belt, where it's a pleasure to live, where little money will buy and locate you. Near markets, schools churches. Good roads. Big crops of everything. Ideal for stock. Write or come. Flambeau River Lumber Co., Station D, Ladysmith, Wisconsin.

FARMS for sale. Wonderful bargains in five states with crops and stock. Send for catalog. D. B. Cornell Co., Gt. Barrington, Mass.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

Advertiser Enjoys Good Business.

IT gives us pleasure to advise our readers that the Munson Manufacturing Company, of Winterset, Iowa, manufacturers of the Daisy cultivator shield, a device that fits any cultivator and prevents the covering and destroying of the young corn when cultivating, report that their sales of these shields the past season far exceeded their expectations. In fact, the demand was so great that long before the end of the season they were entirely sold out. This concern was a regular advertiser in our paper the past season and they wish to thank our readers for their excellent response to their advertising and to advise you one and all that they will again be an advertising patron of this paper next season and will be prepared with sufficient supply of their product to take care of all orders.—Adv.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Soil in Its Relation to Dairying.

This Topic Was Discussed Exhaustively at a Recent Wisconsin Dairy Meeting by Mr. A. R. Whitson, of the Wisconsin Station.

TO PREPARE ourselves to understand the relation of the soil to dairy farming we must first form an idea of the probable future of dairying. Let us consider:

A FEW FIGURES.

During the decade of 1900 to 1910 the population of the United State increased 21 per cent.

The number of dairy cows increased 20 per cent.

The number of other cows increased 4 per cent.

The number of steers and bulls decreased 21 per cent.

From these figures we can draw some conclusions:

1. Dairy products are not increasing more rapidly than population.
2. Dairy breeds must furnish an increasing per cent of our beef.
3. Dairy farming will continue to expand for many years.

With these conclusions in mind, let us consider the relation of dairy farming to our soils and climate. Dairy farming is good for Wisconsin soil and climate because

1. It makes the maintenance of fertility easy.
2. It occupies the farmer's winter profitably.
3. It gives largest average returns per acre.
4. It makes best use of new land being cleared.

Dairy farming should, therefore, be followed on most land in the state which is well adapted to the chief crops needed as feed.

The most important crops for the dairy farm are: (1) corn, (2) clover or alfalfa, (3) pasture grass.

This means that soils of intermediate texture, such as silt and clay loams which are adapted to all of these crops and having good topography have first value for intensive dairying and should be used for dairy farming almost exclusively. Other soils having adaptations to other special crops should be used for mixed farming, including dairying and the raising of those special crops to which the soil is best adapted.

The right way to maintain and increase the fertility on any farm depends on the kind of soil and the system of farming and products sold. On good upland silt loam soils such as predominate in southern and north-central Wisconsin dairy farming will be followed almost exclusively. Here practically all crops are fed and in addition some grain is purchased. The chief products sold are milk or cream, and live stock such as hogs, veal calves and old cows.

On these farms the chief problems in regard to fertility are the maintenance of organic matter, phosphorus and freedom from acidity by the use of lime for clover and alfalfa. It is quite generally assumed that the use of stable manure on the stock farm is entirely sufficient to maintain or even increase the organic matter of the soil. It must be remembered, however, that only a third, or at most a half, of the total organic matter in the feed is returned to the soil in the manure and that this organic matter is in such a condition as to decompose with rapidity and it does so rather than accumulate in the soil. It is this very process of decomposition which gives manure its value as a fertilizer. But when an increase in the total amount of organic matter is necessary the use of some form of green manuring crop supplementing stable manure should be practiced.

The element phosphorus is the only one of the essential elements of plant food liable to considerable loss on the dairy farm. The supply of nitrogen on these farms can be maintained and largely increased through the growth of clover or alfalfa which are needed for feed. The element phosphorus, however, is lost to some extent in the milk sold and to a considerable extent in the bones of hogs and old cattle necessarily sold from the dairy farm. It is also lost by leaching from the manure and undoubtedly to some extent even from the soil itself. Since the supply of this element in even virgin soil is small, it must be maintained and should frequently be considerably increased so that the use of some form of phosphorus fertilizer on the dairy farm, no matter what the character of the soil, is important. Untreated ground rock phosphate is by all means the cheapest form of this element and when properly used, being thoroughly incorporated with the manure or with fresh organic matter in the field, will be one of the most satisfactory forms in which to secure this element. Ground steamed bone meal, a product of the stockyards, is another very desirable form and simply returns to the soil what was previously taken from it.

Lime, to fit ground for clover and alfalfa, is also an important item on the dairy farm. New land seldom fails to produce good clover even when quite acid, but later on difficulty with clover is encountered and even on new soils which are acid alfalfa does not thrive. The use of some form of lime, of which ground limestone is available in largest amount and has many advantages, is necessary on a large part of even the best soils of the state. Even the soils of the southeastern part, which contain large quantities of limestone ground up by glacial ice, are becoming acid in patches and liming will be necessary, especially for alfalfa. Alfalfa can undoubtedly be grown successfully on nearly all farms of the region underlaid by limestone forming the eastern, southern and western part of the state.

Whether alfalfa will replace clover in the large area of silt or clay loam soils in the northern part of the state remains to be seen. The soils of this area are acid and for alfalfa will probably require an initial application of from three to five tons of ground limestone per acre followed by two tons each time it is reseeded to alfalfa. Under these conditions it will be best to grow alfalfa on but one field. Let that be one having good drainage. See that it is well limed and inoculated when first seeded. Then keep the whole field in alfalfa two years and beginning on the third year break up one-fifth each year, plant to corn and reseed to alfalfa the following year. In this way one-fifth of the field will be in corn, one-fifth will be new seeding and three-fifths will be in alfalfa each year. This field thus becomes a nitrogen mine for the farm. The remainder of the farm will then be in a rotation of corn, grain, clover or clover and timothy, and for the present at least without lime. It may later prove profitable to lime all acid soils. Alfalfa, lime, phosphorus and care of manure are the chief items in the maintenance of fertility on the dairy farm on silt or clay loam soils.

There is probably no important factor in dairy farming to which less attention is given in proportion to its merits than that of pasturage. The farmers of European countries appreciate the fact that much of their most profitable land is in pasture. No labor is involved in the harvest and the product is of the very best character. In this country almost no attention is given to pasture, and, as a rule, only a fraction of its possible value is realized.

In many cases a comparatively little expense for the cutting of brush and weeds will increase the growth of grass materially. But the need of fertilization is by far the most important. It seems to be the general impression among farmers that pasture grass should continue to grow indefinitely without the use of fertilizers, although they recognize clearly that other crops on adjoining land will not do so. It is almost the universal practice on the best pastures of Europe to use fertilizers regularly. On land which has become acid the use of ground limestone or other form of lime will encourage the growth of blue grass and other grasses of the best sorts. The element phosphorus is being constantly exhausted and also nitrogen. Unless the pasture is rotated so as to include a legume for the accumulation of nitrogen some form of nitrogen fertilizer should be used. There is probably no better fertilizer than well-rotted manure and the regular practice of applying manure to a portion of the pasture each year in rotation will produce surprising results. The manure not only fertilizes the ground, but temporarily prevents the cattle from cropping the grass closely, giving it a better chance to become established and more deeply rooted and so greatly lessen its tendency to suffer from drouth during the dry periods of the summer and fall.

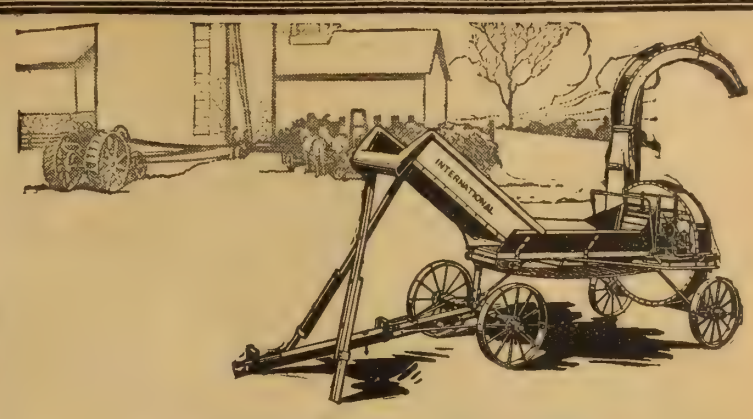
Good blue grass pastures on silt and clay loam soils should support a dairy cow on from one to one and a half acres, while the average is three or four acres per cow. When the saving in expense in tillage, harvesting of crop and feed is considered it is evident that there is probably no other crop on the dairy farm which gives so high a net return per acre as good pasture.

Sandy soils cover approximately 8,000,000 acres in Wisconsin. A considerable part of the area having these soils is especially adapted to potatoes and other truck crops, provided they are maintained at a high state of fertility. But the profitable employment of the farmer's time during the winter requires that even on such land some class of stock be kept. Mixed farming in which rotation is so planned as to include one year for the special crop and a proper balance of the other crops grown for feed should be followed on such land. In very few cases will it be found profitable to use more than one-fourth or one-fifth of the land for the growing of crops to be sold. Under these conditions on sandy soils the use of larger amounts of phosphorus fertilizers and also of fertilizers containing potassium as well as of sufficient lime to keep the land in prime condition for clover or alfalfa are the essential points. The maintenance of organic matter is more difficult than on the heavier soils used entirely for dairying and the plowing under of a second crop of clover or even the use of the land one year in the rotation entirely for the plowing of a legume crop to be plowed under as green manure to increase the organic matter and nitrogen is necessary at least on the lighter soils.

It is undoubtedly true that there are thousands of sandy farms in the central part of the state on which more potatoes could be grown than are now produced if a less acreage were planted and more attention given to the conditions for the growth of clover and other legumes to be used for stock feed. The use of lime and some commercial fertilizers and proper care in seeding, avoiding the use of a nurse crop on the lighter sands, would make it possible to maintain twice as much stock and at the same time very materially increase the yield of potatoes, thus greatly increasing the net profit.

Marsh soils occur widely scattered over most sections of the state and amount altogether to approximately 2,500,000 acres. Their possibilities and value have been the subject of much discussion throughout the state during the past few years. A considerable part of the development of these lands where they occur in large blocks has been due to the activities of the land promoter, who has considered this an opportunity to make large profits through the purchase of the raw land at a very low figure and the expenditure of a small amount for drainage and then advertising it as first-class agricultural land, already fit for farming. The sad experience of large numbers who have been thus misled has had a very discouraging effect on the development of this class of lands in the state. Many of these purchasers have been misled, first in regard to the degree of drainage which the original plans would give, and second in regard to the fertility of such soil after reclamation. It is probably true that not 10 per cent of the land now in drainage districts in the state, amounting to approximately 750,000 acres, has adequate drainage and the installation of proper drainage systems will involve a further expense of from $10 to $25 per acre. It is, of course, true that the final cost of the land, even at this figure, will still compare favorably with that of equally productive upland soils. But the difficulty is that people who have purchased it under the impression that they were getting thoroughly drained and productive land have been misled and are not in position to make the further improvement necessary.

Furthermore, it must be recognized that marsh soils are very unbalanced in their chemical composition. They have enormous amounts of organic matter and nitrogen, but are relatively low in phosphorus and potassium. Under these conditions barnyard manure is not the most satisfactory fertilizer, since nitrogen is one of its essential constituents and it is not relatively high in phosphorus or potassium. Better results can be secured through



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AN **International** ensilage cutter, Type A, filled a Pennsylvania silo 110 feet high and 27 feet in diameter, said to be the highest silo in the world. This machine has tremendous capacity. It pours a stream of ensilage into the silo at the rate of 16 to 25 tons an hour, cutting as fine or as coarse as may be desired. This is our largest cutter. Type B cuts 12 to 16 tons; Type E, 10 to 12 tons; and type F, 3 to 6 tons per hour. On all models knives and blower are attached to the flywheel, the simplest arrangement and the one that uses the least power. The knives can be adjusted to absolute accuracy, and, once set, are held firmly in place. Their clean shear cut begins at the outer edge, throwing most of the work close to the center, where the power is greatest. No power is wasted.

International ensilage cutters are safe. All working parts are carefully housed. The lever that starts, stops, and reverses the machine is so placed that a man cannot reach his hand as far forward as the knives without stopping the machine.

The power cost is low. The machine will fill any silo. The operators are carefully protected from injury. Here are three good reasons for seeing the machine at the local dealer's place of business, or writing to us for full information.

International Harvester Company of America
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the use of commercial fertilizers containing these essential elements.

The best muck lands are adapted to special crops, such as cabbage, sugar beets, celery, etc., and when used for that purpose should be heavily fertilized with commercial fertilizers of the right composition. But by all means the most important crops for lands of this character, especially in the northern part of the state, are the grasses for pasture and hay. Even when used for these crops it will be found highly profitable to make reasonable application of the proper commercial fertilizers rather than to use stable manure, at least after a first light application of stable manure has been made. In the central and southern part of the state corn and potatoes are among the most important crops for these soils and the use of fertilizers will be very profitable and should be greatly increased.

Many experiments have shown that the yields can be doubled or trebled by the use of potash and phosphorus fertilizers in moderate amounts. In experiments at Marinette the yield of potatoes was increased from eighty-six bushels on untreated land to 196 bushels on land receiving a ton of ashes and 300 pounds of acid phosphate and from sixty-seven bushels per acre to 164 bushels by the use of fifty pounds of potash and 400 pounds of acid phosphate. At Phillips the yield of timothy and alsike clover hay in 1905 was increased from 2,700 pounds on untreated land to 4,800 pounds by the use of 100 pounds of sulphate of potash and 275 pounds of acid phosphate per acre. In Rock county the yield of corn silage was increased from two tons per acre to fourteen and one-half tons per acre by the use of a mixture of 200 pounds of potash and 400 pounds of acid phosphate. The cost of this treatment was $7.75 per acre, but unquestionably an important part of the fertilizer was left in the soil to be used by the crop the next year. Many similar results have been secured in various parts of the state as well as in other states and in the northern part of Europe where the management of marsh soils is much more highly developed.

In looking forward to the development of marsh land in Wisconsin much more emphasis should be put on the importance of the development of the small areas of marsh land on farms otherwise already well developed than on the drainage and improvement of the large areas of marsh land. The character of the soil on the small marshes is ordinarily much better than that of the large areas and small fields of marsh soils can be used to greater advantage on farms the remainder of which are upland soils than is possible where the entire farm consists of marsh land.

While we thus recognize the great possibilities of dairying in Wisconsin and the fact that this system of farming makes the maintenance of fertility comparatively easy, we must not fail to recognize that there is still a large place for the profitable use of commercial fertilizers in the state. During the first period of development of new land their use is relatively unimportant, but as the further improvement of our soils progresses the proper use of fertilizers will become more and more important. While it is true that fair yields are now being produced and can be maintained without their use, it is undoubtedly equally true that these yields can be greatly increased and in many cases doubled by a more thorough system of cultivation and soil management involving better tillage and the use of green manure, lime and other fertilizers as demanded by each type of soil. To rest satisfied with present yields and production would be to neglect the greatest opportunity we have for the advancement of not only dairy farming in Wisconsin but of agricultural production as a whole. Wisconsin now has approximately 3,000,000 cows. There are about 30,000,000 acres of arable land in the state. Assuming that on 15,000,000 acres of the heavier soils three acres will support a cow and on the other 15,000,000 acres of soils partly used for other cash crops five acres will support a cow we have an estimate of 8,000,000 cows as the easy possibility of Wisconsin's dairy herd.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Which Kind of Alfalfa Seed?

Experiments by Wisconsin Growers Show Nebraska and Kansas Seed Will Be Adapted to Our Conditions—By L. F. Graber.

JUST what effect the kind of seed has on the winterkilling of alfalfa stands is an exceedingly important problem which is now being worked out by the members of the Wisconsin Alfalfa Association. Southwestern-grown alfalfa seed has generally been considered less hardy than that produced in the more northern states where winters are more rigorous. While sufficient work has not been carried on to definitely determine this matter, reports and experiments conducted so far seem to indicate that Kansas and Nebraska and other southern seeds may be adapted to our conditions. Excellent seed can be secured from the southwest and in dry years when there is a big crop it sells for from $2 to $4 less than the northern-grown strains. If southwestern-grown seeds are hardy here in Wisconsin it is of great importance that our alfalfa growers should know it. In view of this three years ago two pounds of Oklahoma-grown seed were sent to a number of members, for growing and comparison with northern-grown alfalfa seed. Thirty-eight reports on this test which has now been running two years are summarized as follows:

Questions	Answers	Numbers	Per cent
Has southwestern alfalfa seed winterkilled?	Slightly	1	3
	Yes	7	19
	No	29	78
Has northern-grown alfalfa along beside it winterkilled?	Slightly	3	8
	Yes	4	11
	No	30	81
Which gave the best stand and yield?	No difference	24	70
	Southwestern better	5	15
	Northern better	5	15
From your experience with this test what do you think of southwestern-grown alfalfa seed for your vicinity?	O. K.	20	72
	Superior	2	7
	Slightly inferior	4	14
	Noticeably inferior	2	7

In analyzing this data it is clear that for the second year there was little difference in the winterkilling of the southwestern and northern-grown alfalfa seed. At least it can be said that the southwestern-grown alfalfa has proven itself practically as hardy and productive as the seed from more northern states.

A more comprehensive state-wide test was begun in 1914 when approximately 116 members were supplied with Nebraska-grown seed, ninety-six with Kansas, 111 with Dakota and ten with Grimm alfalfa seed for comparison with two kinds of Montana-grown seed. There was little difference in the growth and stand of the two kinds of Montana alfalfa seed No. 1 and No. 2. No. 1 seed came from a very old field in Montana and No. 2 from newer fields. Of the 453 reports 99 per cent could see no difference and about 1 per cent declared that No. 1 produced little better than No. 2.

Those trying Dakota seed found it to be very satisfactory in this first year's trial. Out of forty-nine reports received to date 82 per cent declared it equal to, and in every way as good as Montana and 9 per cent thought it was better than Montana and 9 per cent thought the Montana better than the Dakota.

Seventy-two reports from members trying out Kansas and Nebraska alfalfa seed indicate that at least for one winter the Kansas and Nebraska alfalfa seeds have proven to be as hardy and productive as the northern-grown alfalfa seed. Sixty-three per cent of these reports declare that the Kansas and Nebraska alfalfa seed are equal to Montana and Dakota seed; 14 per cent thought Kansas and Nebraska seed better than Montana and Dakota seed, while 23 per cent felt that these seeds were inferior to Montana and Dakota-grown strains.

One hundred and seventy-six of the members who were not conducting this test gave their opinions and experience as to the value of Kansas and Nebraska alfalfa seed for Wisconsin conditions.

Of these 80 per cent reported favorably, while only 20 per cent felt Kansas and Nebraska alfalfa seed were not as hardy as the Montana-grown strains. It would seem that the results of these tests indicate that on the whole Kansas and Nebraska-grown alfalfa seed will prove to be adapted to Wisconsin conditions.

[Editor's Note.—This report on the seed experiments was compiled by Mr. Graber, who is secretary of the alfalfa order, for the annual meeting at Madison last February.]

Farmers' Open Forum

Suggests Wisconsin Cheese Prize.

To the Editor:—On my travels through Wisconsin this summer I was impressed by the number of cheese factories in the state, also by the fact that, while many of the factories made excellent cheese, the product of other factories might be much improved. It occurred to me that offering a prize, say $1,000, for the best cheese made in the state might improve the quality of cheese put out by some of the factories. The recipe by which the cheese was made, together with the time for each detail, should accompany each sample, then the recipe for the cheese that took the premium should be copied and sent to every cheesemaker in the state.

This same plan, offering a prize for the best butter made, might also improve the quality of butter produced by the buttermakers of the state.

Martinius Larsen.

Trempealeau Co., Wisconsin.

Finds Inspiration in Reports of Others.

The article in the July 6th issue of The Wisconsin Farmer concerning the Barron Creamery is of unusual interest to us, as we had heard before that the Barron Co-operative Creamery was the largest creamery in the state, and it was through the reports of this and other creameries that the farmers of Seymour were induced to organize a co-operative creamery. Accordingly, on the 1st of June, 1915, the Seymour Co-operative Creamery, Dairy & Produce Company started in business after buying out the local creamery. A partial statement for May, 1916, being the last month of the first fiscal year, follows:

Total number pounds of milk received	50,514
Average test of milk	3.601%
Total number pounds cream from all sources	130,447
Average test of cream	25.6785%
Pounds of butter fat received	35,266.5
Pounds of butter made	42,847
Gain of churn over test	21.942%
Pounds of butter fat received from home stockholders	17,806.5
Pounds of butter fat received from home non-stockholders	5,954.2
Pounds of butter fat received from route stockholders	6,723.9
Pounds of butter fat received from route non-stockholders	4,781.9
Price paid for butter fat to home stockholders	32¾c
Price paid for butter fat to home non-stockholders	31¼c
Price paid for butter fat to route stockholders	31¾c
Price paid for butter fat to route non-stockholders	30¼c
Average Elgin price	29 2-3c

In this statement 245 patrons are represented. My individual check for the month was $258.03 and for June will be about $325. There are fifteen other creameries and cheese factories in the radius from which we draw our supplies.

We are now entering upon a new enterprise, that of manufacturing casein from the surplus skim milk. This product is sold to the paper mill industry. In this way we hold our patrons who wish to sell their skim milk instead of feeding it to pigs and calves. Our factory is growing in popularity and patronage and is the leading industry of the city of Seymour. Our butter always scores high, brings the top market price and is in great demand. Monthly statements are issued which keep the patrons fully informed. We appreciate the efficiency of our secretary and of all the employes. Our officers are: Wm. M. Hurst, secretary; Peter Tubbs, Chas. Wussow, S. G. Knox, Emil Mueller and Edward Witte, directors; H. Recknagel, buttermaker; R. M. Simpson, Jr., assistant buttermaker; A. Ohlrogge, tester.

We write this hoping to bring out statements from other factories.

Peter Tubbs, Pres.

Outagamie Co., Wisconsin.

LAW QUESTIONS.

Official Malfeasance.

A Subscriber, Franksville, Wis.—Has a town board in Wisconsin a lawful right to furnish steel culverts for private driveways leading onto a state highway, and to furnish crushed stone for leveling up said driveways?

Answer.—A town board has no right to do such a thing. It amounts to an unlawful diversion of public money to a private purpose. The members of the board would be civilly liable therefor and could be prosecuted for malfeasance in office.

Renter Entitled to Apples.

Mr. Wm. Montreal, Bayfield, Wis.—On May 1, 1916, a certain man leased to me for six months from that date, by a written contract, forty acres of land for cash rent, $35.00 paid in advance, and balance to be paid in monthly installments. He said nothing at the time about the apples on the land. A few weeks ago he wrote me saying that he wanted part of the apples on the place. Can he take them without my consent?

Answer.—He cannot. You are entitled to all the apples that become mature before the 1st day of November, 1916.

Private Road in South Dakota.

A Subscriber, Imlay, S. D.—The accompanying diagram represents the adjoining lands, belonging to A, B and C with section lines, road, creek, etc. In order to go from his house to town, A has to cross the lands of B and C and go through gates. The eastern portion

of the lands of A and B is too rough and hilly for a road. (1) Can A compel B or C, or both, to sell to him a private road or lane through their lands, and if so, how? A would also like to have a road from his house running west or northwest through C's land. How can he get it?

Answer.—(1) The law of South Dakota provides that any person may have a private road laid out upon presenting to the board of county commissioners a petition for that purpose. When the commissioners make an order for such road the petitioner must open it and keep it in repair at his own expense.

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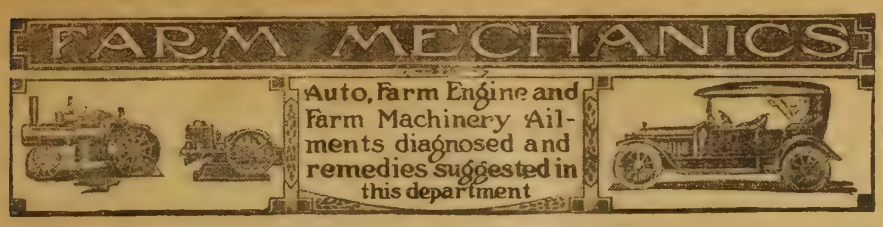


QUESTIONS AND ANSWERS.

A High-Tension Magneto.

Is the "Dixie 40" a high-tension magneto?

Answer.—It is.

Power of Engine—Effect of Flywheel.

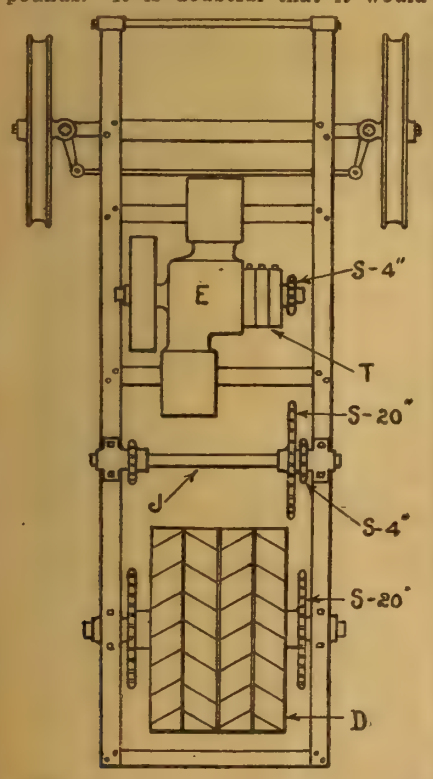
I have a steam engine with a seven and one-half-inch bore and six-inch stroke. The flywheel is forty-eight inches diameter. What is the horse power? Would it be all right to use a forty-two-inch flywheel if properly balanced? How much more horse power would I then have?

Answer.—Your engine should develop twenty horse power at a boiler pressure of 100 pounds and a speed of 300 revolutions per minute. You could use the smaller flywheel, which should weigh somewhat more than the larger one. The power of the engine would not be affected very much.

A Home-Made Tractor.

As I find in your paper questions and answers about farm machinery, such as tractors and plows, I will send you a diagram of a homemade tractor, and I would like to know how it would work and if it is strong enough to plow with. Is the frame strong enough to stand the pull? Will the front wheels stand the work without rubber tires on them? Will the engine have power enough to pull three plows? Will the twenty-inch chain wheel on the jack shaft have to be a differential or a solid wheel shaft ande and one-half inches in diameter be large enough? The engine has a five and one-half inch bore, six inch stroke. What is its power, and how fast will the tractor run?

Answer.—The figure shows the general arrangement of this tractor, E being the engine, T the transmission, J the jack shaft, D the drive wheel, and S the sprockets, the diameter of each sprocket being given in inches. The frame is strong enough. The front wheels should be fairly durable without tires, but it would be better to insert wood blocks in the rims to protect the rims. Your engine should develop twenty horse power, and should pull two fourteen-inch plows nicely if the tractor weighs not less than 3,000 pounds and not over 4,000 pounds. It is doubtful that it would



work well with three plows. The large chain wheel on the jack shaft should be solid unless the drive wheel is divided in half, each half driven independently on a stationary axle. No differential would be required unless the drive wheel is over twenty inches wide. The wider the drive wheel, the harder the tractor will steer unless a differential is used. The drive-wheel shaft should be two inches diameter, though you might "get by" with a one and one-half-inch shaft if the drive wheels come close to the bearings. A two-inch shaft would be much better. With drive wheels thirty inches diameter, the tractor would make three miles per hour when the engine is running at 800 R. P. M.

Notice The Exhaust.

How can one tell by the exhaust of an auto engine whether it is burning too much or too little gasoline? How about the oil?

Answer.—Too much gasoline causes a sooty smoke or a red flame; too much oil a white smoke. The flame is blue and irregular for too little gas; blue and regular for a correct mixture.

Series and Multiple.

What is meant by connecting batteries in series and in multiple? What is the difference in results?

Answer.—To connect cells in series, connect the carbon of the first to the zinc of the next. To connect in multiple, connect all carbons to one wire and all zincs to another wire. For low voltage and strong current, connect in multiple. For high voltage and weak current, connect in series.

Effect of Poor Compression.

We have a 1911 Reo touring car that we cannot make hit. The magneto, plugs and wiring are all good. It has a new Holly carburetor. Does poor compression have anything to do with it? How large is the automobile race track at Indianapolis?

Answer.—Poor compression causes a motor to lack power and may also prevent it from firing regularly. In an old motor, one of the most common causes of misfiring is air leaks around the intake valve stems. It may be that the carburetor you are using has not been regulated to fit your motor. If you still have trouble after obtaining good compression and stopping the air leaks, write to the Holly people, giving them the size of your engine and the number of your carburetor, and obtain their advice.

One lap on the Indianapolis speedway is two and one-half miles.

Auto Used to Fill Silo.

How may I equip an automobile so as to run a silo filler? How much power is required to run an eighteen-inch cutter?

Answer.—The easiest way is to block the auto so that it cannot move; jack up one rear wheel and put a belt pulley on it. However, this brings the driving strain on the differential gears, which is not very good for the gears. A better way is to block the auto and install a shaft under the rear wheels, allowing the rear wheels to run on two wide-faced pulleys on the shaft. The cutter may be driven from a belt pulley on the shaft.

You better write direct to the manufacturer of your cutter to find out how much power is required, as there is a large variation of power with different machines and different conditions. About twenty horse power is usually required where an air lift is used, and even thirty may be used to advantage if the ensilage is very wet. For short and medium lifts, the mechanical elevator requires less power than the air lift.

Igniting by Dynamo.

We are talking of buying a two and one-half horse-power engine, jump spark ignition from a battery. Would it be possible to buy a dynamo and wire it to the engine like a magneto? I want some small electric lights in the milk house, cellar, etc., and if the dynamo will work like a magneto I would save buying a magneto. Dry cells are too expensive to operate both engine and lights. The engine pulley is ten inches diameter and runs at 400 R. P. M. I think it would be better to run the dynamo from a line shaft. The dynamo should be large enough to light six six-candle-power lights. What size pulley should I use on the line shaft?

Answer.—You can ignite your engine from the generator, but you will require a battery for starting. Your engine must run smoothly if you run your lights direct from the generator. A throttle-governed engine is preferable for generating a lighting current. You require an eight-volt, ten-ampere generator. You could use a generator of higher voltage if you connect a sixteen-candle-power lamp in series with the coil in order to protect the coil. If your generator runs 1,800 R. P. M., drive the line shaft by a ten-inch pulley, and place a fourteen-inch pulley on the line shaft to drive the generator, which should have a three-inch pulley. A two-inch belt would be large enough to drive the generator.

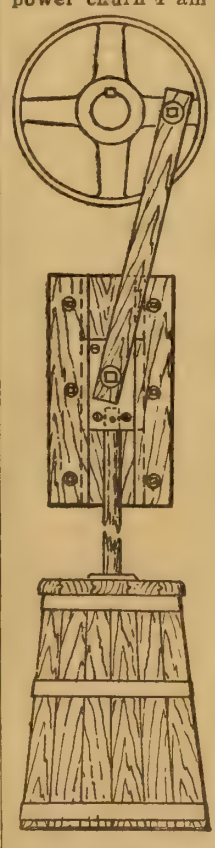
Pumping From Two Cisterns.

Will a three-inch houshold force pump draw water from a cistern ninety feet away, with a ten-foot lift? Would having a drop of one foot from the cistern to the pump—making the lift eleven feet—be of any advantage? Would not one-inch suction pipe do as well as one and one-quarter inch? I would like to install a three-way cock so as to draw water from a cistern ten feet from the pump as well as from the cistern ninety feet from it. Would this be practical?

Answer.—Any pump in good condition should draw water up a ten-foot lift, the distance lengthwise—within reasonable limits—making but little difference. It would be easier to prime your pump, or keep it primed, if you have a drop of one or two feet; otherwise there would be no advantage in having a drop. Your pump will work easier if you use the one and one-quarter-inch pipe. It is practical to pump from two cisterns by using a three way cock, but trouble will result if the cock is not air tight.

Running a Churn by Power.

I am sending you a diagram of a power churn I am thinking of making.



The pulley, shown at the top of the diagram, is at the end of my line shaft, and has a pin in one spoke to act as a crank to drive a cross head, working in a slide above the churn. There is a six-inch pulley on the other end of the line shaft, driven from a gas engine. What size pulley should be used on the engine and at what speed should the engine run? I have a two and one-half inch rubber belt that I use with the other machinery. Would this belt be all right? How far should the crank pin be from the rim of the pulley, which is five inches in diameter? How would I lubricate the slide? Would I have to use iron for the slide, or would this belt be all right? Is this outfit practical? Would a one and three-fourths horse power engine pull it?

Answer.—We are publishing an end view of your outfit. It is entirely practical. It might be possible to do away with the slide altogether. The slide could be made of wood. Use soap for a lubricant. The dash handle should be held in the cross head, or slide, by a nail that can be easily withdrawn. The crank pin should be located about two inches from the center of the shaft. The shaft should make about 100 revolutions per minute. Use a pulley two inches in diameter on your engine if it runs 300 revolutions per minute. Your belt is all right. Your engine has plenty of power.

Horse Power of Steam Engine.

What is the horse power of a two-cylinder steam engine, the cylinders being two and one-half inches diameter and the stroke four inches?

Answer.—With a boiler pressure of 100 pounds per square inch, and a speed of 480 R. P. M., the above engine should develop two and one-half horse power if it is double acting; that is, if steam is used on both sides of the piston. If it is single acting, it would have only half as much power. It should have only half as much power at a speed of 240 R. P. M. It would have more than twice as much power at a boiler pressure of 200 pounds per square inch.

A Heavy Tractor Engine.

We have a twelve-horse-power gasoline engine that weighs about 2,800 pounds. We are thinking of making a tractor out of it, but some people think that it won't pull itself. Now, I want your opinion. If it will pull itself, how much weight will it pull on the road? How many fourteen-inch plows will it pull? It has a speed of 300 R. P. M. How fast will it travel?

Answer.—If your engine is in good condition it should pull two fourteen-inch plows under favorable conditions, or two twelve-inch plows under any reasonable condition. The tractor should be geared to two and one-half miles per hour. It should pull a weight of one ton, mounted on a wagon or truck. It should have a drawbar pull of 1,000 pounds.

Ask your neighbor to subscribe for The Wisconsin Farmer.

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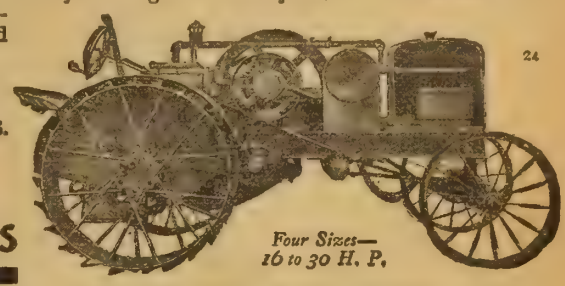

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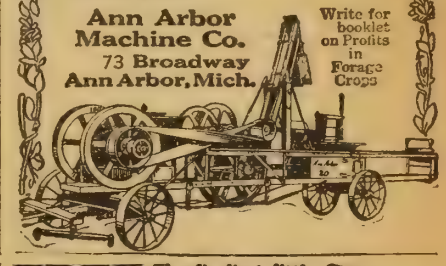

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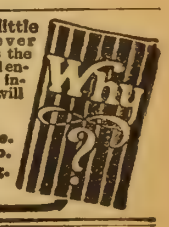

DAIRY

The Milk House on High Ground.

The building in which the milk is handled should be convenient to the barn, but so placed as to be free from dust and stable odors. The ideal place for it is in a well-drained spot, somewhat higher than the barn. It should not be near the barnyard, pig pen, privy, or other source of contamination. In cold climates it may be connected with the stable by a covered but well-ventilated passageway with self-closing doors at each end to prevent odors passing from the stable to the milk house. With proper precautions, the milk house may be in the same building as the stable, but it should be provided with a separate entrance, and the walls between should be tight and without a communicating door or window.

The principal purpose in building a milk house, is to provide a place where dairy products may be handled apart from all other operations. To carry out this idea, it is necessary to divide the interior of the building into two or more rooms, in order to wash the utensils and handle the milk in separate rooms. The milk house and all its equipment should be so planned that unnecessary steps will be avoided and labor economized to the greatest extent.

Thorough cleanliness must always be kept in mind, therefore, there should be no unnecessary ledges or rough surfaces inside the building, so that it can be quickly and thoroughly cleaned. Milk-house floors should be of concrete and pitched to drain through bell traps. Round edges at the walls will prevent the collection of dust and dirt. The walls and ceilings may be made of matched boards, but cement plaster or painted metal lathing is better. Ventilators are necessary to keep the air in the milk room fresh and free from musty and other undesirable odors, and to carry off steam from the wash room. Windows are of prime importance, as they let in fresh air and sunlight and facilitate work. In summer the doors and windows should be screened to keep out flies and other insects.

It is imperative that there be a plentiful supply of cold, running water at the dairy house. If it is not possible to have a gravity system, the supply may be piped from an elevated tank, fed by a hydraulic ram, engine, windmill, or hand pump. The dairyman can ill afford to spend his time in carrying water in a pail to cool his milk and wash his utensils. Provision must also be made for supplying an abundance of hot water to clean and wash utensils. The water supply should be clean and abundant as well as convenient; otherwise the cleaning will not be thorough. Impure water is a source of contamination that under no circumstances should be allowed on a dairy farm. Outbreaks of typhoid fever in cities have been traced to dairy farms where the wash water was impure. Water which comes from shallow wells receiving surface drainage, or seepage from barnyard or house wastes or from pastures, is impure and should not be used.

Eight Dollars Each Day From Cows.

Fourteen cows is a rather unimportant sideline, but that is exactly what a farmer, who has fourteen good grade Guernseys, calls it. He has enlisted the interest and help of his family, and the work lasts only a hour and a half twice each day, when the milk is all drawn and separated, ready to go to the creamery.

This man has exploded the theory that it is not advisable for a renter to run a dairy. He rents 200 acres of grain land, and twenty-five acres of pasture. The former for half; the latter for cash rent. Primarily, he is a grain farmer in the grain belt. Secondarily, he runs a farm dairy; and viewed from a financial basis, the latter is in reality the money mint.

Being a grain belt farmer is not necessary to his success. Indeed, he brought his ideas and training from a dairy state, where selling grain from the farm is practically unknown, only via the stock. While his farm dairy is bringing him close to the $3,000 mark each year, by proper rotation, legumes and silos, he is selling grain as well as the other farmers of his community.

The silo question was made possible only by the advantage of a long lease on the land. Five years ago he installed a silo himself; the landlords of that part of the country are not interested in the future of their farms. To get everything possible to keep up running expenses in the nearby towns, they prefer keeping about three-fourths of the land in corn, and a tenant must, first of all, sell grain. Even clover is considered a luxury by these landowners. One field, that has had no clover on it for eighteen years, has since been alternated with oats and corn, and the yield is growing smaller each year. This up-to-date young man was also compelled to buy a silage cutter himself; not enough of his neighbors could be interested to do anything of this sort, and they thought he was on a straight road to become poverty stricken when he began installing such questionable "nonsense."

This renter uses limestone, and both alfalfa and sweet clover seed lavishly. His landlord came across with $100, to help defray the expenses of these, but the rest was all borne by him. The alfalfa is for hay, and the sweet clover to be plowed under in the spring. This tenant plans to have twenty acres each of alfalfa and sweet clover. Thirty acres are in pasture.

The cows are fed a little alfalfa on pasture, and a little grain. By a careful estimate, it was found that the winter feed, extending through six months, is not more than sixteen cents each day per head. The feed is ground corn, bran, alfalfa hay, and silage.

The average cream supply from the fourteen cows is nine gallons per day, which is sold at eighty-five cents per gallon. There is 400 pounds of skim-milk to be fed to the fourteen calves and a lot of pigs. It is the aim to later raise and feed a carload of hogs, and as soon as possible to feed all the tenant's grain to stock.

This man is an advocate of good roads, legumes, giving the soil whatever it is starving for, all modern methods that are practical, farm advisers, good gardens and fruit raised at home for family use, and "living and letting live."

An up-to-date, hustling working farmer, such as this is, is of untold value in a community. It is a matter of regret that the owners of the farms in that community cannot, or will not, do such things themselves. If a renter, who must break even with his landlord on the grain question, can afford to use modern methods, then is it up to the kickers to stop the "No farmer can afford to use the university methods in common, everyday life!"

Tuberculosis-Free Herds.

There is a movement on foot in Minnesota to establish tuberculosis-free herds of pure-bred cattle, for which there seems to be more or less favorable sentiment. Minnesota has for many years been weeding out and slaughtering all registered cattle reacting to the tuberculin test, and it is claimed that the percentage of reactors is now reduced to about 1 per cent the state over. In view of this the advocates of tuberculosis-free herds claim that the establishment of such herds would be taking a step in advance that would do no one any serious harm, and would greatly benefit those whose herds are able to measure up to such requirements as might be established for herds to be classed as tuberculosis free.

Dr. M. H. Reynolds, of the Minnesota Experiment Station, contributed an article for a recent issue of Hoard's Dairyman, in which he makes the following recommendations as to requirements that might be made to place a herd on the state accredited list:

SPECIFICATIONS.

The regular temperature test, according to existing standards, of the sanitary board is to be the standard for admission and continuance in this list, but when thought advisable, a simultaneous test may be directed by the board.

RECOGNITION.

(1) Herds which have passed two negative annual or three negative semi-annual tests on all animals over six months of age.

(2) Herds having not more than two reactions, and these of cattle not of the owner's breeding and which have not been in the herd over ninety days.

CONTINUANCE.

(3) Continuance on the specially ac-

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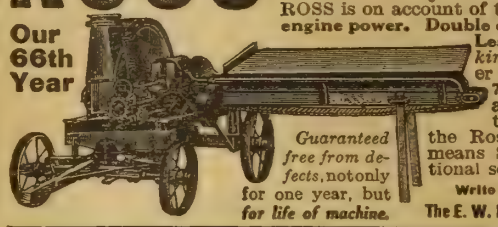
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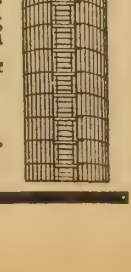
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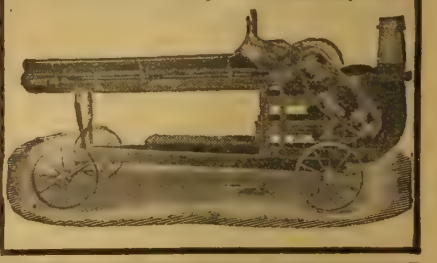

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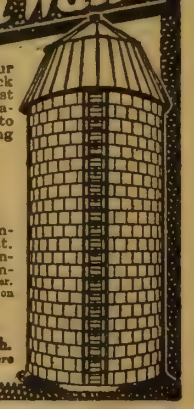

The Beaver Storm-Proof Silo

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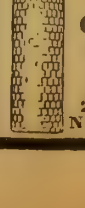
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credited list shall be permitted to herds under the following conditions:

(a) Satisfactory, regular official test once a year.

(b) So long as there are not more than two reactions in one test and these only in case of purchased animals which have not been allowed to mingle with the healthy animals during that time.

(c) So long as all cattle over six months old including nurse cows, show steers, etc., introduced into the herd have been officially tested.

(d) Reactors must be at once removed from herd and may not be subsequently readmitted to the herd even though subsequent tests are negative.

(e) There must be prompt and thorough disinfection of infected premises according to regulation.

(f) Cattle coming from without the state must conform to the statutes covering certificate of tuberculin test.

(g) The sanitary board shall have a special blank form certificate for such herds. Such certificates must be renewed annually.

RECOMMENDATIONS.

(1) We recommend that cattle over six months of age for addition to these accredited herds should come from tuberculosis-free herds.

(2) Cattle over six months of age intended for addition to the herd, e. g., by purchase or otherwise, should be kept in isolation until after a home test, made in not less than ninety days, can be made and such animals have passed clear. It is rarely safe to risk infection of a valuable herd solely on certificate of tuberculin test made in another herd and perhaps in another state.

If a law were passed, embodying the above suggestions, it would, of course, be optional with any breeder as to whether he might wish to have his herd qualify or not. If such a law were rigidly enforced and no one allowed to obtain a tuberculosis-free certificate for his herd unless every condition were complied with, undoubtedly a strong effort would be made by a great many breeders to completely get rid of tuberculosis. Whether it is possible to completely eradicate this disease from the bovine race may indeed well be questioned, but there is no doubt but that ideal conditions can be much more nearly approached than is the case at present.

Fond du Lac County.

The fifteen high producers in the Rosendale, Eldorado and Ladoga Cow-Testing Association for the thirty days ending June 30th follow:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. butter fat
C. A. Peterson					
Guern.	5	2-16	992	5.6	56
Native	10	4-16	1230	4.5	55
W. A. Lawson					
Guern.	9	5-16	1455	3.8	55
Guern.	9	5-16	1230	4.3	53
H. D. Morgan					
Hols.	3	3-16	1575	3.2	50
E. H. Bratz					
Hols.	2	2-16	1260	4.2	53
Hols.	9	10-15	1320	3.8	50
Robt. Pinkerton					
Hols.	6	4-16	1680	4.0	67
Chas. Bratz					
R. Hols.	5	1-16	1590	3.4	54
A. Backhaus					
Hols.	8	12-15	960	4.4	42
J. A. Warbin					
R. Hols.	6	5-16	1515	3.4	52
Wis. Prison Farm					
Hols.	7	4-16	1365	3.7	51
Fletcher Bros.					
R. Hols.	7	5-16	1935	4.5	87
P. Vellima					
Guern.	6	3-16	1410	3.6	51
Vellima Bros.					
Guern.	5	4-16	1500	4.4	66

Frank Lynn, Official Tester.
Chas. A. Peterson, Secretary.

Chilton Co-operative Cow-Testing Association.

The following table gives the cows in the association which have produced more than fifty pounds of butter fat during the period of thirty days ending June 13, 1916.

A grade Holstein owned by John Salm made the highest record, producing 1,572 pounds of milk, testing 75.46 pounds of butter fat. A grade Guernsey owned by Louis McGrath was a close second, producing 1,184 pounds of milk, testing 73.41 pounds of butter fat:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
Walter Seefeld					
R. Hols.	9	3-22	1628	3.3	53.72
G. Hols.	6	11-16	1404	3.8	53.35
G. Hols.	5	3-4	1584	3.6	53.86
John Fuchs					
G. Hols.	8	4-9	1395	4.6	63.17
Nick Bernard					
R. Hols.	7	3-13	1600	3.5	56.00
G. Hols.	7	2-9	1287	4.4	56.63
G. Hols.	7	12-27	1367	4.0	54.68
Alex O'Donnell					
G. Hols.	8	4-14	1311	4.0	52.44
Harry Merrill					
G. Hols.	4	1-6	1414	4.0	56.56
G. Hols.	4	2-19	1442	4.0	57.68
G. Hols.	4	2-12	1153	4.4	50.73
Louis McGrath					
R. Guern.	6	12-31	1051	5.8	60.96
G. Guern.	3	4-20	1101	4.6	50.65
G. Guern.	8	2-2	1148	6.2	73.41
G. Guern.	5	1-1	1184	5.0	59.20
Julius Bowe					
G. Hols.	5	3-1	1488	3.6	53.57
Frank Sontag					
G. Guern.	7	4-28	1288	4.6	59.27
Alex Pilling					
G. Guern.	5	4-1	1231	4.1	50.47
G. Hols.	8	2-15	1513	4.0	60.50
Native	7	4-7	1432	3.7	52.98
G. Hols.	8	3-16	1618	3.6	58.25
Oscar C. Pilling					
G. Hols.	6	2-20	1383	4.2	58.09
G. Hols.	7	4-28	1600	4.2	67.20
G. Hols.	7	3-27	1594	4.2	66.95
John Salm					
P. B. Hols.	6	12-20	2151	3.4	73.13
G. Hols.	8	12-10	1339	3.8	50.88
G. Jersey	10	3-27	1435	3.8	54.53
P. B. Hols.	7	2-28	1333	4.3	57.32
G. Hols.	8	3-27	1590	3.8	60.42
G. Hols.	5	4-1	1572	4.8	75.46
G. Hols.	5	3-15	1470	4.0	58.80
Frank Nennig					
G. Hols.	9	1-1	1321	4.2	55.48
G. Hols.	9	3-15	1458	3.8	55.40
G. Hols.	7	4-12	1606	3.2	51.39
G. Hols.	6	12-15	1364	3.8	51.83
Mayer Bros.					
R. Guern.	8	3-9	1079	4.8	51.65
G. Durham	8	3-12	1209	4.5	54.90
G. Durham	8	3-16	1225	4.2	51.45
G. Durham	5	4-13	1473	3.6	53.03
G. Durham	8	4-16	1318	4.3	56.46
G. Durham	12	4-8	1147	4.4	50.47
John P. Koehler					
G. Guern.	5	3-24	1240	4.8	59.52
G. Guern.	3	4-15	1302	4.0	52.08
Joseph Koehler					
P. Durham	5	3-10	1186	5.0	59.30

Oscar F. Kossman, Official Tester.
Edwin T. Weeks, Secretary.

Stratford Cow-Testing Association.

The following report gives the cows in this association which have produced forty-five or more pounds of butter fat during the month ending May 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Lbs. butter fat
Chrowser Bros.					
No. 3, R. H.	6	12-19-16	1378.1	4.8	66.1
No. 8, G. H.	4	12-14-16	1169.0	4.1	48.8
No. 17, G. H.	3	3-7-16	1203.1	3.7	44.5
No. 15, G. H.	4	11-24-16	979.3	4.3	42.1
Fenwood Lumber Co.					
No. 7, G. H.	5	4-30-16	1275.4	3.9	49.8
No. 2, G. H.	7	3-13-16	1090.0	3.7	40.3
Henry Aschenbrenner					
No. 5, N.	5	4-16-16	1273.9	3.5	44.6
Jacob Spindler					
Effie, N.	7	3-28-16	1238.4	3.6	44.6
Nellie, N.	8	11-20-15	991.2	4.3	42.6
Ed Hayes					
No. 4, G. H.	5	5-11-16	1171.1	3.6	42.2
No. 7, G. H.	5	5-15-16	1178.0	3.4	40.0
Mrs. G. Hein					
Douglas, R.H	4	3-19-16	1266.0	3.3	41.8
Wm. Schneider					
Flossie, G. J.	9	2-20-16	688.1	5.9	40.6
Philip Harter					
No. 7, N.	10	4-8-16	1064.1	3.8	40.4

Francis Woodward, Official Tester.
Garrett T. Hughes, President.
James L. Chrowser, Secretary.

Columbus Dairy Improvement Association.

The following gives the names and records of the cows in the association that have produced forty-five pounds or over of butter fat the past month:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Lbs. butter fat
John Swarthout					
Bridget, P.B.H.	10	5-16-16	1482	3.2	47.4
H. H. Huggett					
No. 6, G. H.	7	5-12-16	1731	3.0	51.9
A. L. Leffingwell					
Jennie, G. J.	6	3-8-16	963	6.6	63.6
Eddy, G. J.	5	11-24-15	771	6.9	53.2
R. C. Webster					
Flossy, P. B.G.	4	5-7-16	1074	4.4	47.3
Ruby, P. B. J.	5	3-26-16	951	5.4	51.4
John R. Jones					
Lucy, G. H.	4	3-7-16	1266	3.6	45.6

Credit must be given Rheinold Kalkhorst for having three cows that would have made forty pounds of butter fat if they had not been tested immediately after three days' cold rain.

Comparisons Between Herds.

Owner of herd	Highest average milk produced	Highest average fat produced	Highest returns per $1 feed
H. H. Huggett	993.0		
John R. Jones	992.1	36.2	8.01

These figures are not entirely true comparisons between the two herds, because some may be partially or about wholly dry and others may be entirely fresh. But to a certain extent this is an interesting basis for comparison. C. F. Wehweins, Tester.

Sentence of six years' imprisonment with hard labor has been passed on an Austrian dairyman by a court-martial sitting at Graz for supplying watered milk to military hospitals.

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Note the records given here. The secret of mixing Silverized silage is in the construction of Silver's "Ohio"—the logical silo filler. You can set the length of cut just where you want it, *and you'll get what you want.*

World's Champion Four-Year-Old
Daisy Grace Dekol
21718.3 lbs. milk; 1203.49 lbs. butter in 365 days
Owner writes: "We feed silage to all of our stock—could not get along without it. The ('Ohio') Cutter has given perfect satisfaction."—THE MAPLECREST STOCK FARM COMPANY, Kalamazoo, Michigan.

Garclaugh May Mischief
25328 lbs. Milk; 1056 lbs. butter in 365 days
Owner writes: "We have fed these cows all the silage they would eat. Have used an 'Ohio' cutter for past eight years."
PENSHURST FARM, Narberth, Pa.

Knives are of the sturdy cylinder type, with accurate, patented adjustments. Let us send you our catalog and let us tell you about the big "Ohio" features. For example, the beater self-feed—saves the work of a man at the feed table—beats the cornstalks down into position to be carried forward onto the knives. Largest bundles of corn go through the machine without attention. *Explosion-proof blower fan. Direct drive*—power pulley, knife cylinder and blower fan are all on one shaft, thus reducing friction in the machine—saving power and lessening chances for breakages. The single lever control and friction reverse

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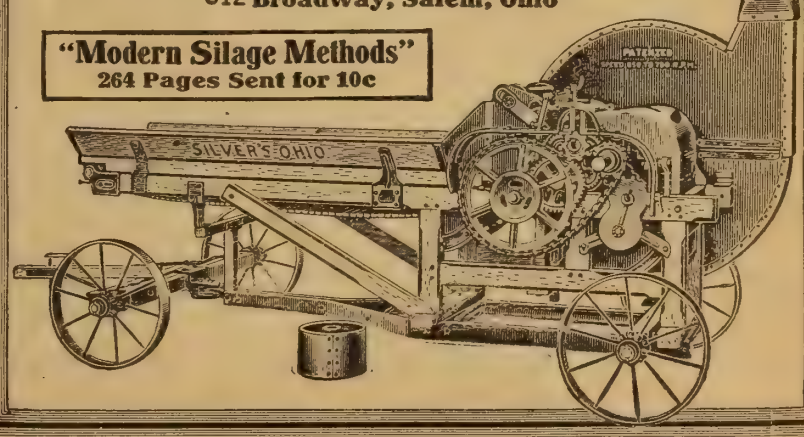

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MADISON, WIS.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The prologue, or Part First, is laid in New Orleans and concerns two brothers, one of whom has proved faithless to the girl who trusted him, the other one marrying the girl and giving her the name and home which the faithless brother had well-nigh robbed her of. The scene then shifts to the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold and "bunking" with an old Scotchman, named MacDougall, his only companion, save his beloved horse, Mowitza. A neighbor, named Hardy, comes to their camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company, although she is warned by her friends that his name is probably an assumed one and that he may, indeed, be a squaw man, with an Indian wife living somewhere, as nothing is known of him. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which he learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide are not quite cordial. However, Jack continues to act as a guide for the party, entertaining them with stories of Indians and wild life, although the formerly friendly relations between him and the girl are never resumed.

CHAPTER VI.

Tsolo—Tso-lo!

The retracing of steps, either figuratively or literally, is always provocative of thought to the individual who walks again over the old paths; the waning of a moon never finds the same state of feelings in the heart that had throbbed through it under the gold sickle. Back over how many a road do we walk with a sigh, remembering the laughter that had once echoed along it! Something has been gained, something has been lost, since; and a human sigh is as likely to be called forth by one cause as the other.

Miss Rachel Hardy, who usually laughed at sighs of sentiment, did not indulge in them as one by one the landmarks of the past three weeks rose in sight. But different natures find different vents for feeling, and she may have got rid of hers by the long gallops she took alone over the now known trail, priding herself on her ability to find her way miles ahead of the slower-moving party; and resting herself and horse in some remembered retreat, would await their coming.

Through these solitary rides she began to understand the fascination such a free, untrammeled existence would have for a man. One must feel a very Adam in the midst of this virginity of soil and life of the hills. She had not Tillie's domestic ideas of life, else the thought of an Eve might also have occurred to her. But though she wasted no breath in sighs over the retraced cultus corrie, neither did she in the mockery that had tantalized Clara in the beginning. That lady did not find her self-imposed duty of chaperon nearly so arduous as at first, since, from the time the other ladies awakened to the fact that their guide had a good baritone voice and could be interesting, the girl forgot her role of champion; also the study of mongrel languages; for she dropped that ready use of Chinook of which she had been proud, especially in her conversation with him, and only used it if chance threw her in the way of Indians hunting or gathering olallie (berries) in the hills.

Genesee never noticed by word or action the changed manner that dropped him out of her knowledge. Once or twice, in crossing a bit of country that was in any way dangerous to a stranger, he had said no one must leave the party or go out of hearing distance; and though the order was a general one, they all knew he meant Rachel, and the ladies wondered a little if that generally headstrong damsel would heed it, or if she would want willfully to take the bit in her teeth and go as she pleased—a habit of hers; but she did not; she rode demurely with the rest, showing the respect of a soldier to the orders of a commander. Along the last bit of bad country he spoke to her of the enforced care through the jungle of underbrush, where the chetwoot (black bear) was likely to be met and prove a dangerous enemy, at places where the trail led along the edge of ravines, and where a fright to a horse was a risky thing.

"It's hard on you, Miss to be kept back here with the rest of us," he said, half apologetically; "you're too used to riding free for this to be any pleasure, but—"

Don't distress yourself about me." she answered easily, but without looking at him. "I have felt a little lazy today, so has Betty, and have been satisfied to loaf; but now we are at the edge of this bad strip, and just down over this bend ahead is a long stretch of level, and I think—yes, I am quite sure—I am ready now for a run."

And without waiting to hear either assent or dissent to h r intention, she t uched Betty with the whip, and Mowitza and her master were left behind, much to Mowitza's dissatisfaction. She gave one plunge ahead as if to follow, but Genesee's hand on the bridle had a quick, cruel grip for a moment, and in slow silence they made their way down the timbered slope to the lower levels. The girl, free from companionship save her own thoughts, galloped through the odorous, shadowy table lands, catching here and there a glimpse of glistening water in a river, ahead as it trailed its length far below the plateau, and shone like linked diamonds away toward the east.

She remembered the river; it was a branch of the Kootenai. To be near it meant but a short journey home; two days more, perhaps, and then—well, their outing would be over. She would go back East, and say good-by to Betty; and then she began to think of that man who belonged to these hills and who never need leave them—never need go a mile without his horse, if he did not choose; and she envied him as she could not have thought it possible to do six months before—to envy a man such a primitive existence, such simple possessions! But most human wants are so much a matter of association, and Rachel Hardy, though all unconscious of it, was most impressionable to surroundings. Back of her coolness and carelessness was a sensitive temperament in which the pulses were never stilled. It thrilled her with quick sympathies for which she was vexed with herself, and which she hid as well as she could. She had more than likely never tried to analyze her emotions; they were seldom satisfactory enough for her to grant them so much patience; but had she done so, she would have found her desires molded as much by association and sentiment as most other human nature of her age.

Once or twice she looked back as she left the timber, but could see nothing of the others, and Betty seemed to scent the trail home, and long for the ranch and the white-coated flocks of the pastures, for she struck out over the table lands, where her hoofs fell so softly in the grass that the wild things of the ground-homes and the birds that rest on the warm earth scampered and flew from under the enemy's feet that were shod with iron. A small herd of elk with uncouth heads and monstrous antlers were startled from the shelter of a knoll around which she cantered; for a moment the natives and the stranger gazed at each other with equal interest, and then a great buck plunged away over the rolling land to the south, and the others followed as if they had been given a word of command.

The girl watched them out of sight, finding them, like the most of Montana natives, strange and interesting—not only the natives, but the very atmosphere of existence, with its tinges of wildness and coloring of the earth; even the rising and setting of the sun had a distinct character of its own, in the rarefied air of this land that seemed so far off from all else in the world. For in the valley of the Kootenai, where the light breaks over the mountains of the east and vanishes again over the mountains of the west, it is hard at times to realize that its glory is for any land but the mellow, sun-kissed "park" whose only gates open to the south.

The late afternoon was coming on; only an hour or so of sun, and then the long flush twilight.

Remembering the camping spot they were making for, she gave Betty rein, thinking to reach it and have a fire built on their arrival, and her hard ride gave her a longing for the sight of the pack mules with the eatables.

Another of those ugly, jolting bits of scrub timber had to be crossed before the haven of rest was reached. Betty had almost picked her way through it, when a huge black something came scrambling down through the brush almost in front of them. The little mare shied in terror, and the girl tried to make a circuit of the animal, which she could see was an enormous black bear. It did not seem to notice her, but was rolling and pitching downward as if on a trail—no doubt that of honey in a tree. Managing Betty was not an easy matter, and it took all of the girl's strength to do so until the black stranger passed, and then, on loosening the bridle, the terrified beast gave a leap forward. There was a crash, a growl from under her feet, and an answering one from the huge beast that had just gone by them; she had been followed by two cubs that had escaped Rachel's notice in the thick brush, as all her attention had been given to the mother; but Betty's feet coming down on one of the cubs had brought forth a call that the girl knew might mean a war of extermination. With a sharp cut of the whip, Betty, wild from the clawing thing at her feet, sprang forward over it with a snort of terror, just as the mother with fierce growls broke through the brush.

Once clear of them, the little mare ran like mad through the rough trail over which she had picked her way so carefully but a little before. Stones and loose earth clattered down the gully, loosened by her flying feet, and dashed ominously in the mountain stream far below. The girl was almost torn from the saddle by the low branches of the trees under which she was borne. In vain she tried to check or moderate the mare's gait. She could do little but drop low on the saddle and hang there, wondering if she should be able to keep her seat until they got clear of the timber. The swish of some twigs across her eyes half blinded her, and it seemed like an hour went by with Betty crashing through the brush, guiding herself, and seeming to lose none of her fright. Her ears were deaf to the girl's voice, and at last, stumbling in her headlong run, her rider was thrown against a tree, knowing nothing after the sickening jar, and seeing nothing of Betty, who, freed from her burden, recovered her footing, and, triumphant, dashed away on a cultus "coolie" (run) of her own.

When Rachel recovered her powers of reasoning, she felt too lazy, too tired to use them. She ached all over from the force of the fall, and though realizing that the sun was almost down, and that she was alone there in the timber, all she felt like doing was to drag herself into a more comfortable position and go to sleep; but real sleep did not come easily—only a drowsy stupor, through which she realized she was hungry, and wondered if the rest were eating supper by that

time, and if they had found Betty, and if—no, rather, when would they find her?

She had no doubt just yet that they would find her; she could half imagine how carefully and quickly Mowitza would cover the ground after they missed her. Of course there were other horses in the party, but Mowitza was the only one she happened to think of. She did not know where she was; the mare had struck into a new trail for herself, and had dropped her rider on a timbered slope of one of the foot-hills, where there were no remembered landmarks, and the closeness of night would prevent her from seeking them.

Twice she roused herself and tried to walk, but she was dizzily sick from the wild ride and the fall that had stunned her, and both times she was compelled to drop back on her couch of grass. The stars began to creep out in the clear, warm sky, and up through the timber the shadows grew black, and it all seemed very peaceful and very lovely. She thought she would not mind sleeping there if she only had a blanket, and—yes, some hot coffee—for through the shadows of the lower hills the dew falls quickly and already the coolness made itself felt with a little shiver. She searched her pocket for some matches—not a match, therefore no fire.

A sound in the distance diverted her thoughts from disappointment, and she strained her ears for a repetition of it. Surely it was a shot, but too far off for any call of hers to answer it. She could do nothing but listen and wait, and the waiting grew long, so long that she concluded it could be no one on her trail—perhaps some of the Indians in the hills. She would be glad to see even them, she thought, for all she met had seemed kindly disposed.

Then she fell to wondering about that half-breed girl who had hid back of the ponies; was it Genesee she was afraid of, and if so, why?

Suddenly a light gleamed through the woods above her; a bent figure was coming down the hill carrying a torch, and back of it a horse was following slowly.

"Genesee!" called a glad voice through the dusk. "Genesee!"

There was no word in answer; only the form straightened, and with the torch held high above his head he plunged down through the trees, straight as an arrow, in answer to her voice.

She had risen to her feet, but swayed unsteadily as she went to meet him.

"I am so glad—it—is—you," she said, her hands outstretched as he came close. And then that returning dizziness sent her staggering forward, half on her knees and half in his arms, as he threw the torch from him and caught her.

She did not faint, though the only thing she was still conscious of was that she was held in strong arms, and held very closely, and the beat of a heart that was not her own throbbed against her rather nerveless form. He had not yet spoken a word, but his breath coming quickly, brokenly, told of great exhaustion, or it may be excitement.

Opening her eyes, she looked up into the face that had a strange expression in the red light from the torch—his eyes seemed searching her own so curiously.

"I—I'm all right," she half smiled in answer to what she thought an unspoken query, "only"—and a wave of forgetfulness crept over the estrangement of the late days—and she added —"only—Hyas till nika" (I am very tired).

Her eyes were half closed in the content of being found, and the safety of his presence. She had not changed her position or noticed that he had not spoken. His hat had fallen to the ground, and something almost boyish was in the bend of his bared head and the softness of his features as his face drooped low over her own. Death brings back the curves of youth to aged faces sometimes—is it the only change that does so?

She felt the hand on her shoulder trembling; was it with her weight—and he so strong? A muttered sentence came to her ears, through which she could only distinguish a word that in its suppressed force might belong to either a curse or a prayer—an intense "Christ!"

That aroused her to a realization of what she had been too contented to remember. She opened her eyes and raised her head from his arm, brushing his lips with her hair as she did so.

"Were you so much alarmed?" she asked in a clearer, more matter-of-fact way, as she propped herself up on his outstretched arm; "and did you come alone to find me?"

He drew back from her with a long, indrawn breath, and reached for his hat.

"Yes," he said.

It was the first time he had spoken to her, and he did so with his eyes still on her face and that curious expression in them. He was half kneeling, his body drawn back and away from her, but his eyes unchanging in their steadiness. As the girl lay there full length on the mountain grass, only her head raised and turned toward him, she might have been a Lamia from their attitudes and his expression.

"It seemed long to wait," she continued, turning her eyes toward Mowitza, who had quietly come near them; "but I was not afraid. I knew you would find me. I would have walked back to meet you if the fall had not made me so dizzy. I am decidedly wake kloshe" (no good); and she smiled as she reached out her hand to him, and he helped her rise to her feet. "I feel all jolted to pieces," she said, taking a few steps toward a tree against which she leaned. "And even now that you have come, I don't know how I am to get to camp."

"I will get you there," he answered briefly. "Did the mare throw you?"

"I am not sure what she did," answered the girl. "She fell, I think, and I fell with her, and when I could see trees instead of stars she had recovered and disappeared. Oh! Did you see the bear?"

"Yes, and shot her. She might have killed you when her temper was up over that cub. How did it happen?"

Each of them was a little easier in speech than at first, and she told him as well as she could of the episode, and her own inability to check Betty. And he told her of the fright of the others, and their anxiety, and that he had sent them straight ahead to camp, while he struck into the timber where Betty had left the old trail.

"I promised them to have word of you soon," he added; "and I reckon they'll be mighty glad you can take the word yourself—it's more than they expected. She might have killed you."

His tone and repetition of the words showed the fear that had been uppermost in his thoughts.

"Yes—she might," agreed the girl. "That is a lesson to me for my willfulness;" and then she smiled mockingly with a gleam of her old humor, adding: "And so in the future, for the sake of my neck and the safety of my bones, I will be most obedient to orders, Mr. Genesee Jack."

He only looked at her across the flickering circle of light from the torch. It must have dazzled his eyes, for in putting on his hat he pulled it rather low over his forehead, and turning his back abruptly on her he walked over for Mowitza.

But he did not bring her at once. He stood with his elbows on her shoulders and his head bent over his clasped hands, like a man who is thinking—or else very tired.

Rachel had again slipped down beside the tree; her head still seemed to spin around a little if she stood long; and from that point of vantage she could easily distinguish the immovable form in the shifting lights and shadows.

"What is the matter with the man?" she asked herself as he stood there. "He was glad to find me—I know it; and why he should deliberately turn his back and walk away like that, I can't see. But he shan't be cool or sulky with me ever again; I won't let him."

And with this determination she said:

"Genesee!"

"Yes," he answered, but did not move.

"Now that you have found me, are you going to leave me here all night?" she asked demurely.

"No, Miss," he answered, and laid his hand on the bridle. "Come, Mowitza, we must take her to camp;" and striding back with quick, decided movements that were rather foreign to his manner, he said:

"Here she is, Miss; can you ride on that saddle?"

"I don't know, I'm sure. I—I—suppose so; but how are you to get there?"

"Walk," he answered concisely.

"Why, how far is it?"

"About five miles—straight across."

"Can we go straight across?"

"No."

She looked up at him and laughed, half vexed.

"Mr. Genesee Jack," she remarked, "you can be one of the most aggravatingly non-committal men I ever met. It has grown as dark as a stack of black cats, and I know we must have an ugly trip to make with only one horse between us. Do you suppose I have no natural curiosity as to how we are to get there, and when? Don't be such a lock-and-key individual. I can't believe it is natural to you. It is an acquired habit, and hides your real self often."

"And a good thing it does, I reckon," he returned; "locks and keys are good things to have, Miss; don't quarrel with mine or my ways tonight; wait till I leave you safe with your folks, then you can find fault or laugh, whichever you please. It won't matter then."

His queer tone kept her from answering at once, and she sat still, watching him adjust the stirrup, and then make a new torch of pine splits and knots.

"What do you call a torch in Chinook?" she asked after a little, venturing on the supposed safe ground of jargon.

"La gome towagh," he answered, splitting a withe to bind them together, and using a murderous looking hunting knife on which the light glimmered and fretted.

"And a knife?" she added.

"Opitsah."

She looked up at him quickly. "Opitsah means sweetheart," she returned; "I know that much myself. Are you not getting a little mixed, Professor?"

"I think not," he said, glancing across at her; "the same word is used for both; and," he added, thrusting the knife in its sheath and rising to his feet, "I reckon the men who started the jargon knew what they were talking about, too. Come, are you ready?"

Assuredly, though he had hunted for her, and been glad to find her alive, yet now that he had found her he had no fancy for conversation, and he showed a decided inclination to put a damper on her attempts at it. He lifted her to the saddle, and walking at Mowitza's head, they started on their home journey through the night.

"The moon will be up soon," he remarked, glancing up at the sky. "We only need a torch for the gulch down below there."

She did not answer; the movement of the saddle brought back the dizziness to her head—all the glare of the torch was a blur before her. She closed her eyes, thinking it would pass away, but it did not, and she wondered why he stalked on like that, just as if he did not care, never once looking toward her or noticing how she was dropping forward almost on Mowitza's neck. Then, as they descended a steep bit of hill, she became too much lost to her surroundings for even that speculation, and could only say slowly:

"Tsolo, Genesee?"

"No," he answered grimly, "not now."

But she knew or heard nothing of the tone that implied more than it expressed. She could only reach gropingly toward him with one hand, as if to save herself from falling from the saddle. Only her finger tips touched his shoulder—it might have been a drooping branch out of the many under which they went, for all the weight of it; but grim and unresponsive as he was in some ways, he turned, through some quick sympathy at the touch of her hand, and caught her arm as she was about to fall forward. In an instant she was lifted from the saddle to her feet, and his face was as white as hers as he looked at her.

"Dead!" he said, in a quiet sort of way, as her hand dropped nerveless from his own, and he lifted her in his arms, watching for some show of life in the closed lids and parted lips. And then with a great shivering breath, he drew the still face to his own, and in a half-motherly way smoothed back the fair hair as if she had been a child, whispering over and over: "Not dead, my pretty! not you, my girl! Here, open your eyes; listen to me; don't leave me like this until I tell you—tell you—God! I wish I was dead beside you! Ah, my girl! my girl!"

(To be continued.)

The condition of the cotton crop as of average date of June 22d is 78.8 per cent of normal, according to the reports of correspondents. This compares with the government condition of 77.5 per cent on May 25th of this year, 80.3 per cent on June 25th last year and the ten-year average for this date of 80.2 per cent. Boll weevil are numerous in almost all previously infested areas and some damage is already reported as having been done, although this is small to date. Farmers are making a stiff fight against the pest, but the latter seem to be gaining headway in most districts.

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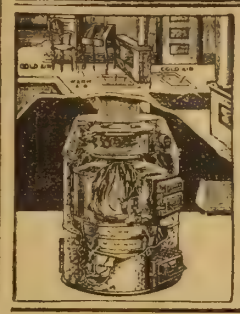

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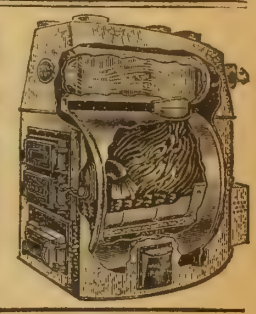

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THE HOME

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Frozen Desserts For Hot Weather.

During the hot summer months frozen desserts are much more appetizing than pastry, they are better for the system and they save the housewife much hot work over the stove. It does not take any longer to make a frozen pudding or a freezerful of sherbet or ice cream than it does to make a pie or a cake and when properly packed they may be kept for many hours before use.

In freezing puddings or creams chop the ice very fine and use it in the proportion of three parts of ice to one of coarse salt. Do not put anything in the freezer can until it is thoroughly cold. Usually from five to ten minutes is long enough to turn the freezer. Then remove the dasher, pour off the water, repack, and your dessert is ready whenever you choose to use it. Do not think you are being extravagant with ice and salt, for you will find that they pretty evenly balance the cost of fuel used in baking.

One may tire of plain ice cream, but there is such a variety of puddings and fruits that may be used as frozen desserts that there is no need of repetition and a dainty and appetizing dish may be placed before your family each time you bring the freezer into use in preparing a meal.

A Dainty Frozen Pudding.—One quart of very ripe blackberries, two cupfuls of water, one and one-half cupfuls of sugar, a pinch of salt, one tablespoonful of lemon juice, one-fourth cupful granulated tapioca, one cupful of whipped cream. Cook and mash the blackberries through a very fine strainer. Add the sugar and salt. Boil the tapioca in the two cupfuls of water until clear. When cold add the blackberry and lemon juice, and freeze. Serve in ice cream glasses.

Frozen Currant and Raspberry Punch.—Two cupfuls of very ripe currants, two cupfuls of very ripe raspberries, two cupfuls of sugar, two cupfuls of water, one-half cupful of orange juice. After crushing the currants put them into an agate saucepan with one cupful of water. Boil for three minutes and mash through a fine strainer. Mash the raspberries, cover with one cupful of cold water for ten minutes. Boil the sugar and water for three minutes and cool. Put all in the freezer and freeze.

Frozen Tapioca Pudding.—One quart of milk, one-fourth cupful of granulated tapioca, one cupful of sugar, two eggs, one-half teaspoonful of salt, one-half teaspoonful of vanilla. First put the milk on in the top of a double boiler; add the tapioca, and cook until clear. Beat the eggs and sugar together until light, and add them to the boiling tapioca; remove from the fire (the heat of the boiling tapioca cooks the eggs), add the salt and flavoring. Cool and freeze.

Frozen Banana Pudding.—Three cupfuls of milk, one-fourth cupful of cornstarch, one-half teaspoonful of salt, two cupfuls of mashed bananas, one cupful of sugar, one teaspoonful of lemon juice. Put the milk on in a double boiler; when hot, add the cornstarch, sugar and salt, mixed with cold milk until smooth. Cook for twenty minutes. When cold, add the bananas, which have been skinned, scraped and mashed through a wire strainer. The lemon juice is added just before closing the freezer. Freeze.

Frozen Tapioca Fruit Pudding.—Two cupfuls of grape or other fruit juice, two cupfuls of water, one-fourth cupful of granulated tapioca, one cupful of sugar, one-half teaspoonful of salt. The tapioca should be put on in the two cupfuls of water and boiled until clear. Add the fruit juice, sugar and salt, and boil for five minues. When cold, freeze. If you are using a fruit juice that is very sweet add only enough sugar to suit your taste. A teaspoonful of lemon juice will help to bring out the flavor.

Frozen Caramel Custard.—One quart of milk, two cupfuls of sugar, one-half teaspoonful of salt, one teaspoonful of maple flavoring, two eggs, four tablespoonfuls of cornstarch. Heat the milk in a double boiler. Mix the cornstarch with a little cold milk, two eggs, well beaten, and one cupful of sugar. Add salt. Cook for ten minutes. One cupful of sugar is melted and slightly burned. To it add half a cupful of cold milk and add to the custard. When cold add the flavoring, and freeze.

Pretty Lace Edge.

The edging here illustrated is a pretty pattern to use on towels or even on petticoats, and we have seen it made of rather coarse ecru thread and used on table runners and scarfs. Following are the directions:

Chain 20.

First Row—One treble in 5th stitch from hook, chain 2, skip 2 stitches in chain, 1 treble in 3d stitch, repeat twice; skip 2 stitches, 2 trebles, chain 3, 2 trebles in same stitch, forming shell, chain 2, 1 treble in last stitch of chain, turn.

Second Row—Chain 4, 1 treble in last stitch of shell, chain 2, shell into shell, 1 treble in top of treble before shell, 1 space, 4 trebles in next space, 2 spaces, turn.

Third Row—Chain 4, 4 spaces, shell into shell, chain 2, 1 treble in last stitch of 2d shell, chain 2, 1 treble, repeat to end, making 3 spaces from shell, turn.

Fourth Row—Chain 4, 4 spaces, shell into shell, 1 space, chain 2, 4 trebles in 2d space, chain 2, 1 treble, repeat to end, turn.

Fifth Row—Chain 4, 4 spaces to shell, shell into shell, chain 2, 4 spaces to end, turn.

Sixth Row—Chain 4, 6 spaces to shell, shell into shell, proceed as in 4th row, turn.

Seventh Row—Proceed same as in 5th

row to shell, shell into shell, 3 double crochet into each space to point, 6 double crochet in space at point, 3 double crochet in remaining spaces, to beginning of chain, turn.

Eighth Row—Chain 4, 1 treble in 3d stitch of double crochet, chain 2, 1 treble in next 3d, repeat to shell, shell into shell, repeat 6th row, turn.

Ninth Row—Proceed same as in 7th row to end of shell, 1 treble in top of last treble before shell on 8th row, chain 5, 1 double crochet in center of 1st space, repeat around whole point, turn.

Tenth Row—Chain 6, 1 picot, chain 2, 1 double crochet in center of last 5 chain, repeat to shell, shell into shell and repeat 8th row.

This finishes one point and you now proceed as in first row to form succeeding points.

To Remove Wagon Grease.

To the Editor:—In a recent issue of your paper I read of someone who wanted to know how to remove wagon grease from clothing. If she will pour a little clear kerosene on the grease spot and rub it briskly with the hands, repeating as often as necessary, then wash in suds the usual way the grease will all disappear. I seldom have to repeat it more than twice and I have used kerosene on most everything.

Scouring powder is fine to remove grease from the hands or from overalls. Use a good scrub brush on the overalls and they can be cleaned quickly and easily in this way. I hope some of the readers will try this.

Will someone please tell me how to make ripe tomato catsup? I have received much help through the Home page and hope someone will send in a good recipe. A Reader.

Butter Color Stain.

To the Editor:—I am coming to the Home department readers for a little advice. Can anyone tell me how to remove butter color stain from percale? I spilled some on a new dress, black and white check, and want to know how to get it out. Can anyone help me? M. R. B.

Good Way to Clean Silver.

To the Editor:—I saw an article on the Home page giving an easy way to clean silverware by leaving it in hot salty water for a few minutes. If one will put a small piece of zinc, about four or five inches square, into the water it is still easier. I have done this for the last three years. It will not polish them, but removes the tarnish and it then takes only a few minutes to polish them with a good silver polish. It is not nearly as hard on the silver as using the polish alone.

Now I wish some of the Home Department readers would tell me how to make chocolate cake look red.

Mrs. G. B.

Cucumber Pickles.

To the Editor:—I have taken your paper for a year and have gott n quite a few helps from it. Would like to know if anyone can give the recipe for cucumber pickles like you buy from the grocery store. My cucumber pickles are soft and mushy instead of being firm. Mrs. O. L.

Tests For Jars For Canning.

The following tests are suggested by the Office of Extension Work, North and West, States Relations Service, to determine if jars are defective for canning purposes:

Screw-top jars.—(1) Place top on jar without the rubber. Turn down tight. If the thumb nail can be inserted between top and glass, the top is usually defective. (2) Place rubber and cap in position and screw down lightly. Pull rubber from position; release. If the rubber returns to position between top and jar, the top is defective.

Glass-top jars.—(1) Place glass top on jar without rubber. Tap with finger around the outer edge of the top. If the top rocks it is defective. (2) Wire bail placed over the top of cover should go in with a snap, even when tightening lever or clamp spring is up. If it does not, remove bail from tightening lever and bend to make tight. This tightening of bail should be done every year.

Suggested Bills of Fare For the Children's Home Lunch.

1. Eggs, boiled, coddled, poached or scrambled; bread and butter; spinach or other greens; cake.

2. Beef stew with vegetables; milk; crisp, thin tea biscuits; honey.

3. Dried bean or pea puree; toast; baked apple; cookies.

4. Vegetable-milk soup; swieback; rice with maple sugar and butter or with milk or cream.

5. Potato chowder; crackers; jelly sandwiches.

6. Cold meat; creamed potatoes; peas; bread and butter; frozen custard or plain ice cream and plain cake.

7. Lamb chip; baked potatoes; bread and butter; sliced mixed fruits; cookies.

8. Baked omelet with spinach, kale or other greens; bread and butter; apple sauce; cake.

9. Milk toast; string beans; stewed fruit; cake.

10. Boiled potatoes; codfish gravy; bread and butter; lettuce; custard.

How to Press.

Good pressing is not only an important part of dressmaking and tailoring but it is also one of the most important features in the care of clothing.

Skirts should be pressed over an ironing board.

The board should not be too heavily padded. The covering should be drawn tightly and should be of a firm, smooth material that will not leave the imprint of the texture or weave.

Darts and curved seams should be pressed over a curved surface such as a tightly padded cushion.

Sleeve seams may be pressed over the handle of a broom after covering it smoothly with cloth.

Use the curved edge or side of the ironing board when pressing open seams. This prevents the edge of the seam being pressed into the garment.

Nearly all pressing is done on the wrong side of the garment.

The seams may be dampened if the material permits. For surface pressing lay over the material a damp cloth and press dry. When pressing on the right side a firm dry cloth is first placed over the garment.

Use a rather heavy iron for pressing.

Press slowly. Lift and place the iron bearing down heavily.

Always avoid a sliding motion, as it is apt to stretch the material.

White Baby Dress Must Go.

There is danger in dressing the baby in white. The continual glare of light reflected from a white surface is likely to injure the child's nerves and eyesight, say the home economics authorities at Iowa State College.

Clothing a baby in a white dress, placing him in a crib with white coverlets underneath, above and on all sides with perhaps a white ceiling to gaze at, is as hard on the eyesight of the child as squinting at glaring white snow is on that of a grownup.

To change the custom, centuries old, of dressing the baby in white will be a hard task, but the really sensible mother will realize that baby will be loved just as much and be just as pretty dressed in pale shades of pink, green, yellow and blue as in white and is much more likely to grow up with better eyesight.

Feathers Bring Good Money.

There is a ready market for prime feathers that have had proper care, according to N. L. Harris, superintendent of the poultry farm at the Kansas State Agricultural College, and the farmer's wife who is anxious to make extra money should look after this side line. Feathers bring in good money as a by-product. Feathers of ducks and geese bring approximately 50 cents a pound, depending on the kind.

The feathers should be picked when ripe, says Mr. Harris. In other words, all the animal matter should be out of the quill. At this stage they are easily plucked without damage or inconvenience and will not spoil or become moth eaten. It is advisable to separate the body feathers from those of the tail and wing and assort them according to color. White feathers are particularly valuable.

They should be kept in a cool airy room either in jute sacks, which allow the free circulation of air among the feathers, or in open bins where they can be frequently forked over to keep them from matting.

Recipes

Apple Sponge.—Half cup sugar, half cup milk, two eggs, one and one-half cups flour, two teaspoons baking powder, half teaspoon salt, five sliced apples. Beat eggs, add sugar, flour in which baking powder has been sifted, and milk. Beat well, add apples, pour into buttered baking dish, bake in moderate oven one hour, serve with sugar and cream.

Marshmallow Dainty.—Cut half pound marshallows into small pieces. Add to them one cup whipped cream, one and one-half tablespoons sugar, stiffly beaten whites of two eggs, one cup sliced bananas, one cup chopped nut meats; flavor to taste. Set in a very cool place one and one-half hours and serve in sherbet glasses.

String Bean Salad.—String the beans and boil whole; when tender and cold, slice each lengthwise and place them carefully crosswise on a platter. Season them an hour or two before serving, with a marinade of a little pepper, salt and three spoonfuls vinegar and one spoonful of olive oil. Just before serving drain off and mix with salad dressing.

Strawberry Cream.—To two cups boiling water, two cups sugar and juice of one lemon add half box plain gelatin

dissolved in a little cold water. When it begins to congeal whip thoroughly, add one pint whipped cream, add one cup mashed strawberries and one cup walnuts. Whip all until very light. Harden in molds, or it can be frozen.

Ripe Gooseberry Catsup.—Cook the gooseberries in a little water until soft. Press through a colander to remove skins and then through a sieve to remove seeds. Add two-thirds as much sugar as fruit, and cinnamon and cloves to taste. Cook slowly one-half hour and bottle hot.

Cherry Olives.—Do not remove stems from cherries used for pickling. Wash the cherries and pack lightly into sterile jars. Pour the following mixture over one quart of cherries: One tablespoonful salt, three-fourths cup vinegar. Fill up the remaining space in the jar with cold water. Place on rubber and cover and seal. Jars with glass covers are best to use with vinegar, since they will not corrode.

Dill Pickles.—Take medium sized cucumbers. Let them stand in water overnight or twenty-four hours. Remove, wash and dry. Put grape leaves on the botto ı of a stone jar, then pack in a layer of cucumbers very solid and cover with dill and cherry leaves. Repeat this process, being sure that the cucumbers are packed in solid and that plenty of dill is used. When the jar is full, cover with dill, cherry leaves and grape leaves; some horseradish may be added. For a two-gallon jar mix one-half cup coarse salt, one cup vinegar, and one gallon of water until the salt is dissolved. Pour over the cucumbers, place a plate on top and a weight on top of the plate. It is essential that cucumbers be held down solid. Do not put into a cool cellar for ten or twelve days. Remove pickles as needed, replacing weight each time.

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1754—A dainty lingerie style ladies' envelope chemise. The pattern is cut in 3 sizes: Small, medium and large. It requires 3¼ yards of 36-inch material for a medium size.

1776—A pretty frock for mother's girl. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3 yards of 44-inch material for a 6-year size.

1684—A charmingly comfortable and unique sleeveless dress, with guimpe, having sleeve in either of two lengths. The pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 1½ yard for the guimpe, and 4½ yards for the dress of 27-inch material for a 12-year size.

1277—A simple serviceable apron model. The pattern in cut in 3 sizes: Small, medium and large. It requires 5½ yards of 36-inch material for a medium size.

1782—A simple frock for the little miss. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3 yards of 44-inch material for an 8-year size.

1759—A practical house dress. Percale, gingham, chambray, serge, challie and fiannelette are popular materials for this style. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size.

1316—A chic and practical dress. Dress for misses and small women. The pattern is cut in 4 sizes: 14, 16, 17 and 18 years. It requires 4⅜ yards of 44-inch material for a 16-year size.

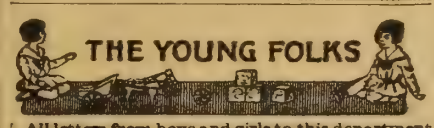
1775—A pretty dress for many occasions. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8 yards of 36-inch material for a 36-inch size.

Waist 1603-Skirt 1602—A style with newest lines. Comprising ladies' waist pattern 1603 and ladies' skirt pattern 1602. The waist pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. The skirt in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. To make the dress will require 5⅞ yards of 44-inch material for a 36-inch size. Two separate patterns, 10 cents for each pattern.

1756—A new skirt model. The pattern is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires for a 26-inch size, 3⅝ yards of 44-inch material.

1201—A practical "short clothes" outfit, comprising dress, petticoat and drawers. The pattern for this excellent trio of garments is cut in 4 sizes: 1, 2, 3 and 4 years. It requires 2¾ yards of 27-inch material for the dress, 2⅜ yards for the petticoat and ¾ yard for the drawers for a 3-year size.

1761—A popular model. Tub silk or taffeta, washable satin or linen would be nice for this. The pattern is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3¼ yards of 44-inch material for a 36-inch size.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Likes the Riddles.

Dear Young Folks:—I read the young folks' letters every week and enjoy them very much. I live on a 160-acre farm with my parents and my sisters. We have horses, cows, pigs, chickens and geese on the farm. We milk nine cows and I help nearly every morning and night.

I thought that the cover on the paper of the 29th was so pretty that I cut it out and mounted it upon cardboard and I am going to hang it up in my room. I think the song, "The Star Spangled Banner," is very pretty.

We live one mile from school. My two sisters and I went all last term without being absent. We all liked our teacher very much. She taught us sewing and handiwork. On the last day of school we had some of our work on exhibition. We had a program and then we served ice cream and cake. We then played games and everybody had a good time.

DADDY'S HELPER.

I enjoyed Mr. Miller's letter and am sure that all the young folks did. I wish he would write more about his South African home. It must be very different from our homes here in the United States.

I think giving riddles in our letters is lots of fun. I will give one. What can go up a stovepipe down, but can't go down a stovepipe up? This is a very common riddle and perhaps many know what the answer is without guessing.

—Carrie.

Will Mr. Miller Write Again?

Dear Young Folks:—It has been nearly three years since I first wrote to this dear page of ours and now I want to come again.

Before I say anything about myself I want to urge Mr. Miller to write again and tell us more about his faraway home, and I know all the other young folks are with me. Are you not?

I am a farm girl, of course, or I wouldn't be such an interested reader of this good old paper. There isn't a thing in it from cover to cover that isn't worth the reading.

I am mother's housekeeper. My father passed away to his beautiful home above in April and now while mother manages the farm I keep house. I have blue-gray eyes, brown hair, am five feet six inches tall and seventeen years young.

I am sending a recipe for jelly roll for Helen to put in her book. Four eggs, one cupful of sugar, one cupful of flour, pinch of salt; flavor to taste, two level teaspoonfuls baking powder. Mix well; spread thin in a square pan and bake in a quick oven. When done turn out on a wet cloth, spread quickly with jelly and roll while hot.

Here's to The Wisconsin Farmer,
The best farm paper yet,
For every week it comes around
And you know what you will get.

There's something for each kiddie,
And always for father and mother;
To beat this dear old paper, friends,
I don't think you will find another.

—Patty.

Belongs to a Bird Club.

Dear Young Folks:—I am interested in the Young Folks page, so I thought I would write to you. I joined a bird club last spring and I put up two houses for them. There are now two pairs of wrens in each house.

I am fourteen years old and am in the seventh grade. I live on a farm of 200 acres. I can crochet and tat.

I think the answer to Marguerite's riddle, "What has four fingers and a thumb, but is neither flesh, fish nor bone," is a glove. I will give a riddle, too. Which hen lays the longest?

—Bertha.

Can't Wait Till the Mail Comes.

Dear Young Folks:—I can hardly wait till the mail comes, so I can read the Young Folks department. I live on a 160-acre farm. I have a cat about four years old. She has two kittens named Buttercup and Snowball. The old cat's name is Flossy. I also have a dog named Dewey and a Shetland pony that I ride to school. Our school was out the 26th of May, and we had a picnic and program. I am nine years old and am in the fifth grade.

I think the answer to Mae's riddle, "What makes more noise than a pig under a gate?" is two pigs. Here is another riddle for you: Up and down, up and down, touching neither sky nor ground.

—Hazel.

The poem by James Whitcomb Riley, Little Orphant Annie, which was published in our issue of June 22d, omitted the following copyright credit:

"From the Biographical Edition of the Complete Works of James Whitcomb Riley, Copyright 1913, The Bobbs-Merrill Company, Indianapolis." [The Editor.]

International Sunday School Lesson.

Lesson for July 23, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Paul at Corinth.

LESSON TEXT—Acts 18:1-22.

GOLDEN TEXT—Be not afraid, but speak, and hold not thy peace.—Acts 18:9.

I. Paul's Companions. (vv. 1-6). Paul's coming to this city after his experiences in Athens is significant when we read I Cor. 2:1, 2. He found a home as usual at first among his Jewish countrymen. Aquila and Priscilla were not only fellow Christians, but fellow craftsmen (v. 3). Paul supported himself, as Jesus did for thirty years, as a carpenter. This gave opportunity to reach the people naturally as one of them. At the same time he set them the example of doing good (I Cor. 10:31; I Cor. 9:6-12; II Thess. 2-9). Paul did not think it a lack of faith to do manual labor or secular work for his own support because God had called him to preach. In the midst of his labors (v. 5) Silas and Timothy came to him from Philippi and Berea. The Philippians had sent him aid and brought news of the abundant harvest of faith and love in that church. Paul was weak and sick and dejected in spirit (II Cor. 2:3), probably bodily sickness. He was also in want (II Cor. 11:9). As he meditated on the word, it had so got hold on him that he could not keep still. It overpowered him with the thought that Jesus was the Christ and that he must

tell it out, but the Jews were not willing to receive his testimony. "They opposed themselves and blasphemed" (v. 6). The good news these helpers brought encouraged him in his conflict (v. 6).

II. **Paul's Compulsion.** (vv. 7-11). The opposition of the Jews did not prove his testimony to be untrue or that it had been unwisely presented, but rather it revealed the iniquity of the hearts of the men who were the religious leaders. To their faces Paul could exclaim, "I am clean" (v. 6). It is a great thing for any man to be able to say this, and it is the privilege of every believer (Acts 20:26). Then we can say with Paul: "I shrank not from declaring unto you the whole counsel of God." (R. V.) If we do not declare unto men the way of life, then their blood is upon us (Ezekiel 33:4, 8, 9), but are we indeed clean of the blood of all in our own homes, in our churches, in our Sunday School classes, in our communities and in the lands beyond the sea? This compulsion disconnected Paul from the false religionists of his day. "From henceforth I will go unto the Gentiles." The advantage of the house of Justus was (a) that the owner was a proselyte, not a born Jew. (b) The place was close to the synagogue so that his preaching would be a standing invitation to the Jews, and (c) Justus was evidently a Roman citizen, and Paul would gain access through him to the more educated people of the city. Moreover he would have greater advantage of the Romans than of the Jews for protection of the Christian converts. We do not infer that he left his lodgings in the home of Aquila and Priscilla nor ceased his work of tent making.

Paul's testimony after Athens was based only on the cross (I Cor. 2:1, 2) and it was that which turned "impure, sinful souls into pure brides whom he conducted to Christ" (see I Cor. 6:9-11). This vision kept Paul in the city where he founded one of his strongest classes (vv. 11, 18).

III. **Paul's Contest,** (vv. 12-17). Gallio, the brother of Seneca, listened to the charges, but threw the accusations out of court (vv. 14, 15). Sir William Ramsey calls this decision the "charter of Christian freedom." Freedom of religious speech was granted over the entire Roman empire so far as Roman authorities were concerned, and the door was open for Paul to make his way throughout the civilized world. Thus we have further evidence that all of Corinth was no match for Christ. The Lord had people there who must be called by the spoken word, and Paul was the one to speak the word. The Lord only allows us to be hurt when both we and the work can be helped thereby. He never really allows us to be hurt (Rom. 8:13; Isaiah 54:17). Christian workers in this land are confronting the same Corinthian evils in every great city; intemperance, crime, graft, dishonesty, white slavery, oppression of the poor and other works of the flesh.

It is the business of every preacher and Christian to pray and teach and work and live to save men from these evils and to convert them to righteousness.

There are also Corinthian evils in the heart, and in order to overcome them we must put on the whole armor of God, and be filled with the Spirit of Christ.

Summary: At Corinth Paul worked at his trade, converted his fellow workmen, preached to Jews and Gentiles, founded a strong church, wrote letters to the Thessalonians, had two helpers, Silas and Timothy, accepted aid from the Philippians, received a vision in the night from God, was delivered by the Roman governor, stayed nearly two years and used the city as a strategic center.

The Blue Bird Brings Happiness

according to Maeterlink's story and this is proved true by the delight of the woman who receives our **Blue Bird China Ware.**

Special July Offer

A set of six fruit or sauce dishes will be sent prepaid to any one who will send a club of only 5 one-year subscriptions to The People's Popular Monthly, at 25c each.

This is just the season of the year when fruit dishes are needed most and this beautiful Blue Bird pattern can be used on any occasion.

Remember All that is necessary for you to do is secure the subscriptions of only 5 friends for The People's Popular Monthly, at 25c each, and the six Blue Bird pattern fruit dishes will be sent you prepaid.

A subscription for two years at 50c counts the same as 2 one-year subscriptions at 25c each

This is a special offer for July only and you are urged to be prompt in sending your club list to secure these fruit dishes. Address all mail to

The People's Popular Monthly, Dept. H

The Blue Bird Club
Isabelle Best, Secretary

Des Moines, Iowa

New Creamery Grows.

The new creamery at Superior, which was opened last fall by the farmers' co-operative company, is growing rapidly, as indicated by the June statement of business. This was the record month and approximately ten tons of butter was churned, which is a splendid showing for a creamery in a county so new as Douglas county.

The record churning for one day was made recently when the creamery force turned out 2,000 pounds of butter. The daily average churning is now 1,000 pounds a day. All of the product is disposed of right in the Twin Ports. No trouble is experienced during the warm weather in keeping either the cream or the butter cool and fresh, for the collection of cream is done by means of refrigerating cans and the refrigerating room at the creamery is large enough to accommodate all the output.

Sheep For Finishing.

Carlson Bros., of Iron River, Wisconsin, are planning to ship into Upper Wisconsin about 3,000 western sheep the latter part of July to be finished for the Chicago market on the cut-over lands of Douglas and Bayfield counties. This experiment will be watched with interest, although Carlson Bros. have been shipping in and pasturing western sheep for several years. Mr. H. A. Johnson, of Superior, is also enthusiastic over buying Montana sheep and shipping them into Upper Wisconsin for finishing. These sheep are bought in Montana and other points and billed to Chicago on a through bill of lading, with a stop-over feeding privilege which enables them to turn the sheep out on the cut-over lands in Bayfield county in the vicinity of Iron river where they are fattened in a period varying from thirty to ninety days. They are then reshipped for the small charge of $5 per car. "Without doubt, every farmer in Douglas county ought to have a few sheep," said Mr. Johnson, "as a nucleus of a larger flock. Wool is high and mutton is high and have every prospect of remaining so. Sheep are very useful in clearing the land, as they eat a great variety of stuff—shrubs, weeds and grass. Last year Carlson Bros. made the mistake of bringing in the sheep too late—some time in October. They ought to be here now. They should be kept on the grass here from 60 to 90 days. Farmers who have tried sheep farming are not willing to go back to cattle raising or mixed farming."

Cow-Testing Circuit.

Mr. G. M. Householder, the new agricultural representative of Rusk county, is organizing cow-testing circuits so that each member of a circuit may have his individual cows tested for milk and fat production. Circuits have been formed at Hawkins, Glen Flora, Tony, Conrath, Ladysmith, Atlanta, Weyerhauser, Town of Rusk and Murry. In urging every farmer to join a cow-testing circuit Mr. Householder points out the following practical reasons:

1—Because the test not only points out the poor cows, but the good ones also. Many cows are considered only average and are found to be the best in the herd when the real records take the place of the "guess system." Sentiment is a strong factor in selecting the cows worthy of being retained in the herd. The cows' disposition and temper enters seriously into the matter. With records such minor things are overlooked in the real producer.

2—Because persistency of milk flow is the one qualification that outranks all others in worthy cows, is very hard to estimate under the "guess system," but is easily brought to the owner's attention through the test.

3—Because the test develops better feeders, deeper thinkers, better dairy men, and better methods of caring for dairy stock. It checks overfeeding and insures greater net profits.

4—Because the monthly visit of the tester and the conversation held with him, and the tendency it creates to increased discussions with the neighbors, help to broaden the mind, induce reading and studying, in fact, make better dairymen and better citizens.

5—Because cows from regularly tested herds will sell for more money, and so do their offspring.

6—Because the herdsman takes greater interest in the herd that is tested than in the untested herd.

7—Most important of all is the fact that no other factor so interests the boys and girls and attaches them to the farm and the dairy as that of accurate records. If you do not believe that records of dairy cows are interesting to children, try it on your youngsters and you will soon be convinced.

Good Alfalfa Yield.

That Upper Wisconsin is well suited to alfalfa is well illustrated by the experience of one Barron county farmer, Mr. F. J. Fuller, who at the first cutting this year secured 840 pounds of hay from a plot measuring twenty-four rods square. This would be equal to two and three-quarters tons to the acre for one cutting. It was cut and allowed to cure in the field for nine days.

Dairy herd of John Jolman, near Mellen, Ashland county, grazing in a pasture which fifteen years ago was heavily covered with native timber.

Leaves Marinette County.

Prof. D. S. Bullock, well known in Upper Wisconsin especially because of his connection with the agricultural department of the Marinette County School of Agriculture, has joined the faculty of the state college of agriculture. He will be in the field extension work of the animal husbandry department and will organize breeders' associations, judging contests, etc.

FARMERS' CONGRESS.

Annual Session to be Held in Indianapolis in October.

That the farmers of the United States are taking more than a passing interest in the next session of the Farmers' National Congress, U. S. A., to be held in Indianapolis, Indiana, October 17, 18, 19 and 20, 1916, is evidenced by the numerous inquiries which are being received daily by Dr. J. F. Griffin secretary of the organization.

Prof. Henry G. Bell, an agronomist of national reputation, has accepted an invitation to address the congress and has chosen a subject of vital interest to every farmer, "Managing Soil for Profit." As the title implies, it has to do with the use of fertilizers and in order to more forcibly impress his audience Professor Bell will use an illustrative apparatus. He has given this lecture a number of times, and everywhere his hearers have been loud in their commendations.

A large bacteriological laboratory in the vicinity of Indianapolis has invited the delegates to spend a morning during the session going through their plant. This ought to prove very instructive, as the different processes of serum production for the cure of hog cholera will be shown, and the farmers will also be given an insight into the various elements of sanitation, feeding and general care necessary to prevent losses from this and other diseases affecting swine.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Force the Pullets Along.

The increase in egg prices will begin about October 15th and will continue to soar for a couple of months at least. This is due to the fact that old hens are molting and the majority of the pullets are still immature. Between these dates the market is practically dependent on eggs that have been previously stored.

Pullets that have properly matured should commence laying at the age of six months. Some of the smaller breeds will lay sooner than this. Many fail to comprehend just how important it is that the pullets should reach maturity at an early age. Where one has a flock of several hundred fowls it will mean a considerable profit in the business to have them begin laying early.

The principal reason why pullets do not mature sooner is lack of food. To short change them on their ration will check their growth, consequently delay the laying period. Then it may be that they have been well fed, but have been overcrowded in their quarters. This is a very serious mistake. It means a lot of stunted pullets that will seldom make good layers. The pullets should be separated from the old hens by the time they are two to three months of age. They will get their growth much sooner than if they were continually being pecked at by the older hens. Then it is very seldom that they get enough to eat where they run with the hens.

The young pullets should have all the green stuff they will consume. If they are on limited range green-cut clover should be fed them and they will consume large quantities of it every day. They must have a liberal amount of grain and fed some form of meat, as they will not find enough bugs to supply their demands. Beef scrap is probably the best animal feed for poultry. Plenty of sweet milk will largely take the place of meat. It is hardly necessary to add that they must have pure drinking water.

The pullets should be separated from the roosters at an early age. In fact, I think it best to separate them as soon as the sex can be distinguished. Where they are allowed to run together the cockerels will invariably get the largest end of the feed, causing the pullets to be "runty."

It is a good plan to sell off a large number of the old hens in the fall and make more room for the pullets. They should be habituated to their winter quarters early—at least a month before they begin to lay. Often birds are changed abruptly from free range to yarded houses, and do not get enough green food. This should be carefully looked after, as it will retard the egg production quite a while.

The house should have a thorough cleaning before the pullets are put in them. The house does not need to be tight, but must be warm with sufficient ventilation to keep the fowls healthy. If the house is not well ventilated, saw out some windows and tack screen wire over the holes. In real cold weather, and on cold, damp nights, a muslin curtain can be tacked over these. The house should be sprayed and cleaned from top to bottom, the roosts and nest boxes included. When it has been given a liberal coat of whitewash, it will be ready for the reception of the fowls, provided it has been properly repaired, and I think the pullets will be perfectly content in a clean, comfortable house, if they are given plenty of the right kind of feed.

It is claimed that it is a good idea to force the pullets slightly about a month before they mature. At this time the pullets will take on a glossy appearance, with a bright red comb. It is almost a sure indication that she is getting ready to begin laying. A dry mash should be fed, of wheat, bran, and corn meal in equal parts, and about the same amount of beef scrap. This should be kept before them. A scratching feed of cracked corn, wheat and oats should be fed in a litter at night and morning.

One of the most certain methods of increasing the production of your flock, is to mark the early layers and breed from them. Each pullet can be leg-banded when it begins to lay, making a record of it. Unless something is done to determine the early layers, one is likely to breed from a fowl that began laying two or three months later than others. If you have pullets on hand that have not matured as they should, it is a good plan to dispose of them, as it is hardly probable that they will make profitable keepers.

Confining Poultry.

To the Editor:—On the farm it sometimes becomes necessary to confine the poultry for a short time. In case small fruits such as blackberries, raspberries, etc., are grown near the house, or when other products of the farm are just coming through the ground (such as corn, beans and peas) a large flock of poultry will do a lot of damage by eating every berry that shows signs of ripening, and pecking up every hill of corn and peas as fast as they peep through the ground.

We have an inclosure around the henhouse, of chicken wire, in which there are shade trees under which our flock may seek shelter from the hot sun when thus confined. One of the most important things to consider when the flock is in confinement is to furnish them with a certain amount of vegetable and animal food to make up for the loss of that that the fowls secure for themselves when out on free range. To supply this deficiency we feed our poultry an abundance of lettuce, onion tops, red and white clover, green grass, cut up fine.

We have found nothing better than sweet milk as a substitute for the animal food for fowls kept in confinement when fed liberally. We feed whole and cracked corn, wheat screenings, sunflower seed, wheat bran and all table scraps to make a variety which is essential for fowls at any time and needed more especially when thus confined. We also keep the hens with young chicks inside the enclosure at this time, but allow the chicks to go in and out through the wire at will, as they will not wander far from the mother hen and will do but little damage anyhow. We provide fresh water for the fowls when kept up, twice daily and keep the drinking vessels in a shady place. We see no difference in the egg production when the hens are thus confined, and we are sure that this is owing to the good treatment given them.

A Subscriber.

Good Words For Horticulturist Patten.

To the Editor:—I have just spent four days with Hon. C. G. Patten at Charles City, Iowa, who is doing more for the horticulture of the northwest than Burbank is doing for California. Mr. Patten has been working for the improvement of fruits for forty-eight years and for twenty-eight years he has been experimenting on the Chinese Sand pear as a stock to produce a strain of pears blight proof, perfectly hardy, good bearers and excellent quality. He has already produced two kinds that fill this bill and has hundreds of trees of hundreds of crosses just coming into bearing in his seventeen acres of trial orchard besides 5,000 choice seedlings three feet high of many choice crosses that must be transplanted into orchard rows next spring to fruit.

Beside the work on the pears Mr. Patten has hundreds of crosses on the 7,000 trees of apples in the trial orchard that are just coming into bearing. He has produced several seedlings that stand high in the apple lists for size, quality and productiveness. Among these are "Patten's Greening," hrady enough to go to the northern limit of apple growing. "Brilliant," "Silas Wilson" and others are choice new varieties that will take a wide range. Beside the pear and apple experiments he has hundreds of crosses of plums. He has already produced two kinds better than any of our American kinds that are now full of fruit, showing a hardy type of bloom that escaped the killing weather that came in blossom time destroying nearly all the fruit of our standard hardy varieties. If the hardiness of the bloom of these new kinds prove they can stand bad weather conditions, that one item will be worth millions of dollars in plum growing.

Mr. Patten is breeding "form" to the trees of apple, pear and plum, putting on the branches at right angle to the central trunk so that, no matter how much weight, those branches will never split down. This is a point, I believe, no other trial station in the world has even attempted.

The state of Iowa and the horticultural department at Washington are slow to appreciate the work of Mr. Patten. He is receiving some little help, but he needs more money, more land and a number of experts to aid him while Mr. Patten can furnish the brains to contrive these experiments. Mr. Patten was born in 1832 and he needs the help now that will be able to carry on this work for twenty-five years to complete the crosses already under way. Silas Wilson, of Nappa, Idaho, says, "Mr. Patten is a greater man than Burbank, of California."

We know he is doing a great work and the department of horticulture ought to sustain and complete the good work under way.

The prospect in this part of the state is poor for a crop of tree fruits.

Geo. J. Kellogg.

AILING ANIMALS.

Injury to Carpus or Knee.

I have a dark bay horse about eighteen years old weighing about 1,100 pounds. His left knee has a lump on it which was caused by being cut by a plow about a year ago and he walks stiff with this leg, dragging it slightly, which makes him stumble at times on the road. While plowing with him this spring the cut opened up once and a drop or two of blood came out but did not fester. Would like to know what to do for him to draw the swelling out and take the stiffness out.

Probably the joint was injured when the accident happened. This may always leave the joint stiff. The old wound broke open from slight injury. You did not say what the character of the lump was. It will be hard to get results here. Try the use of some such agent as caustic balsam and it may be of some benefit.

Bloody Milk.

I have a young cow that gives bloody milk. She gives a lot of milk. What can I do for her? She was fresh about two months ago.

Blood may escape with the milk when the udder has been injured by blows, also when it is congested or inflamed when the circulation through it has been suddenly increased by richer and more abundant food or when the cow is under the excitement of heat. It may also come about from the eating of acrid or irritant plants. Deposits of tubercle or tumors in the udder or induration of the gland may be sufficient causes, the irritation caused by milking contributing to draw the blood. The treatment will vary with the cause. In congested glands give one pound epsom salts and daily thereafter one-half ounce saltpeter, with a dram of chlorate of potash; bathe the bag with hot or cold water and rub with camphorated lard. If the food is too rich or abundant it must be reduced. If from acrid plants these must be removed from feed. Careful milking is imperative.

Nervousness.

I have a gray horse about twenty years old. Whenever he is hitched up double he insists upon going at a gallop all the way, not stopping for hills or anything. He is driven seventeen miles every day, which is hard on him and the other horse to go all the way at such a gait. I can't hold him down with any kind of sharp bits, although they cut his mouth until the blood drips from it. It only makes him all the worse. He started to act that way a year ago and seems to be getting worse. Before then he was gentle as any horse. Can you tell me what the cause is and what I can do to control him?

It seems your animal has some nervous trouble, the nature of which would be hard to tell without a thorough examination of the animal. In cases of this kind severe bits only tend to make a sore mouth and do not correct the condition. Why not have your local veterinarian look him over and see if he can find the cause of the trouble?

Mare Losing Colts.

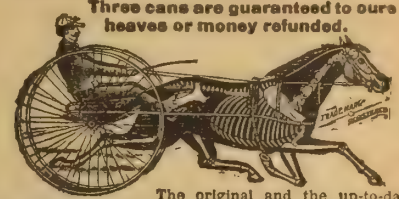
I have a black mare fourteen years old that has lost her colt two years now. They come and live a few days or a week. Their eye ball and the lids and also the lips on the inside are yellow. The bowels were all right in both cases, but the urine was quite yellow. I asked a veterinarian about it and he said he didn't think it could be jaundice in such a young colt. The mare is fat and healthy all the time, has raised six colts. Would you breed her again or would you breed her to a jack? I have a cow that gives bloody milk in one teat. Great clots come out at first. She was all right when she was first fresh.

If this mare has raised several colts previous to these two I would breed her again, but I would try another horse or a jack. In regard to your cow giving bloody milk you will find this answered in answer to another party inquiring about this condition in his cow.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

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For keeping flies and many other insects off of animals—in barn or pasture—longer than any imitation. Used and endorsed since 1885 by leading dairymen.

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$1.25 ($1.50 west of Mississippi River) will bring you enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. EXPRESS PREPAID. Money back if not satisfactory. Name Express Office. Booklet FREE. Special terms to agents.

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Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

POULTRY.

S. C. R. I. REDS

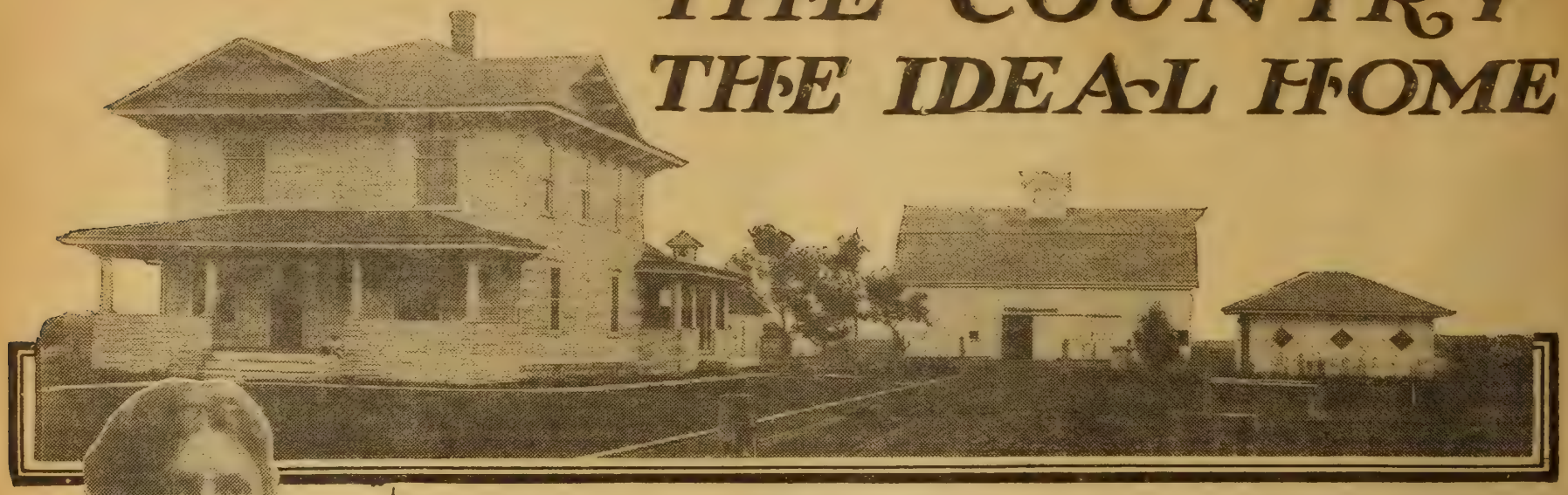
FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Collseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

THE COUNTRY THE IDEAL HOME



Miss Margaret Dolliver

MISS MARGARET DOLLIVER, the sixteen-year-old daughter of the late United States Senator J. P. Dolliver, of Iowa, represented the Fort Dodge High School recently in a discussion contest, the other competitors being eight boys, representing as many other high schools. Five subjects were announced prior to the debate, the one to be actually debated being announced but a few hours in advance of the contest. Miss Dolliver won the decision over the eight boy contestants, setting fourth the advantages of the country over the city. That she has inherited her gifted father's eloquence and debating ability is thus conclusively proved. Miss Dolliver has written this article especially for this paper, following the lines of her prize-winning debate effort.

IT HAS always been the ambition of our whole family to go back to the country. So it was a great pleasure to me to find the favorite topic of our family discussions heading the list of questions of the day which were proposed for discussion. After I found that I was to represent my school in the first annual discussion contest I read over the list of questions more thoroughly. They were as follows:

Resolved, That the rural home having consolidated school advantages is better than the town or city home for boys and girls under college age.

Resolved, That athletics calculated to bring out champions will encourage a wider student interest and participation than athletics restricted to the requirements of the student.

Resolved, That since over one-half of the words in the English language are derived from the Latin, it ought to be a required study in the grade schools.

Resolved, That military discipline destroys individual initiative and should not be introduced in the public schools.

Resolved, That unusual opportunity had more to do with the fame of Lincoln than unusual talent.

These were surely fine questions for a discussion, but after reading them all over I came back to the first one.

The more I studied it the more I wished that it might be decided upon for the final contest. The day came, all the competitors were gathered ready to hear which one of the five questions they would discuss. When the news came that the first one had been decided upon no one was more pleased than I. I spent the few remaining hours perfecting what I was to say, hoping against hope that when the time came I might be able to say what I really thought about country life. I am giving you what I found words to say on that memorable night, but I still believe that the best arguments for the free life of the open country lie hidden in the minds of those who have had the good fortune to get into closer contact with it.

The question of the rural home against the city home is one that vitally interests all of us, for the boys and girls of today are to be the men and women of tomorrow. And on their education and development depends the future of our whole nation. It is not a question as to the advisability of the country for life, but as to whether or not the foundation of the child's character ought not to be laid in the rural districts. Of course, comparisons must be made on the basis of relative merit. Rural slums must be compared with city slums and the city avenues with the prosperous districts of the country. Then the contrasts will not be so lurid and we will be able to see the facts in their fair perspective.

I believe that the rural home with consolidated school advantages has just as fine school advantages as the home in the small towns or cities, for boys and girls under college age. The consolidated schools all over the country are new, have fine scientific equipment and good teachers. They also provide a social center in no way inferior to that enjoyed by the children in the small towns and cities. Consolidation has proved a decided success in thirty states of the Union, as successful in Oregon as in Massachusetts, Wyoming, Indiana, Illinois, Wisconsin and Ohio. In our own state of Iowa, as we find in the report of the board of education, there are one hundred and twenty-seven consolidated schools which are no longer an experiment but a success. In short, the consolidated school has revolutionized the life in the country, as we see by visiting the rural districts in Orange township. Robert J. Aley says, "Consolidated schools are built to make the opportunity of the children in the country equal to that of those in the city." And he further adds that wherever they have been tried they have surely accomplished their purpose.

Having proved that the educational advantages are equal it only remains to establish the proposition that the rural home is superior to that in the small town or city.

First the physical development is far superior to that in the city, for the boys and girls have fresh air and pure food. In the Patterson (New Jersey) Guardian there was a cartoon that shows the true condition clearly. Mr. Ruralite is shown standing at the cross roads between the city and the country life. The smoke of a city factory in the istance takes the form of outstretched hands pointing back to the country. On one hand is written in flaming letters "poor health" and on the other "bad food." It will not be long till the whole country can read those flaming letters and the cry will arise, "Back to the country to bring up our boys and girls."

Too, the child in the country comes in contact for the first time with real work. This thing in itself builds physical prowess. It puts iron in the blood and prepares him to meet life squarely. Let us look at the city boy in this respect. Compare the two; the country bred boy in overalls, rough, rugged and ready, always whistling at his work, and the city chap with his curled ringlets, Lord Fauntleroy suit and mammoth white collar deep in some tale of adventure and always "too tired." This last life dulls the fighting edge and takes away all thought of the climbing life. Ask yourselves the question, which of these two would you rather have your child like? The answer, if recognized, would drive every parent back to the country. In fact it has been truly said that the city is the graveyard of the national physique.

Next the mental vigor is far higher in the rural districts. There the boys and girls mold their constructive instincts into a lasting initiative. William James in his "Talks to Teachers" says that before a child is nine years old he either knocks down or builds up. In the country the child cannot tear down, for all about him the upbuilding of nature is going on. The child is bound to create something and thus we see the first mark of individual initiative, the thing which is to make the man. A child, as we all know, performs in his later life just as he has been taught in his early youth. What a world it would be if every person in it would use his initiative and construct instead of tear down. The more things a child comes in contact with the more he feels himself a part of the world in which he lives. Every nail he pounds into the wagon box he is building is a nail driven into his character to strengthen him so that he may successfully fight the battle of life. Also the child learns concentration of mind and energy. He learns how to utilize the twenty-four hours in the day to the best advantage. Nature demands her duties and on time, the grain must be sowed, cultivated and reaped all in season. Thus the child in the country has one of life's greatest lessons instilled in his very character, while the city child does not learn until he has had many long lessons in the hard school of experience.

Again, the quiet life of the country encourages study. There you do not feel the "pull of the world" away from study to diversions. Here is no evidence of the city pace, the pace that kills. Washington Irving says, "There is nothing mean and debasing about life in the open country. It leads you on to heights of grandeur and beauty and leaves you there to the workings of your own mind, operated upon by the most elevating of external influences." Is there anything that proves these statements? We find in Prof. Fisk's "Challenge of the Country" these interesting facts. At a meeting of the successful business men of New York in New York City out of five hundred present over ninety per cent had been reared in the country. Do not these facts prove what we have long believed to be true?

Lastly, no one can deny that contact with nature is far more ennobling than contact with the vice and corruption of the city. Bryant says, "To him who in the love of nature holds communion with her visible forms she speaks a various language." This is indeed true. This inspiring language comes to the ear of the country lad in place of the rattle and bang of the streets. The child in the country has no moving picture show, but he has the ever moving panorama of human life. He has no bowling alley, but he has the broad sweep of the prairie. He has no pool room where he spends his time and skill with the cue, but he has the farm and some instrument of husbandry with which to do something worth while. He has the inspiration of the budding spring, the icy winter, the full blown summer and the fruit-laden fall, while in the city these things are dulled and hidden by the veneer of civilization. Mother nature is recommended by all who know and love her as the best one to teach high ideals and aspirations. Also it is in the rural districts that you meet and learn to love real folk, friends that are good and true. The glare of the city does not hide their real character and we find once more that the boy or girl in the country is ahead of his brother in the city, for he is equipped with the greatest necessity of life: true friends. There is above all a close relationship between parent and child. Here the father and mother stand on their proper pedestal of honor and trust. The boys and girls in the city, as we all have to admit, leave their home in the early morning and do not return till late at night, leaving the home. the greatest of our American institutions, an empty shell.

In short, the modern, progressive farmer, with his automobile and telephone, has brought the very best in city life to his very door, leaving behind those corrupting and degenerating influences which pervade the city. There will soon be little or no argument on the negative, for the farmer will have taken the best from the city and the best from the country to make an ideal environment in which to develop the physical, mental and moral life of his children. Above the Union Depot in Washington is a classic inscription which embodies the whole idea. We can see it from some distance and as we reread it we realize its significance. It says, "The farm; the best home of the family; the foundation of civilized society."

Early Day Pupils Were Polite.

The idea of William McAndrew, associate superintendent of the New York City schools, that "the greatest need in the public schools is a thorough course in good manners," is interesting, but it is hardly new. Some pioneer rural school teachers of Missouri made regular daily instruction in good manners an important part of the course.

Dr. J. F. Cross, of Macon, Mo., says he went to school to a professor from Hoop Pole county, Indiana, long before the civil war. The school was of logs and had oiled paper for window lights. Good English and good manners were a hobby with the teacher. If a boy forgot to take off his hat on entering the school, and neglected to bow to the teacher, there was a black mark in his deportment report. It was a misdemeanor for a boy to address a girl by her first name. She was always "Miss Sallie Jones;" never Sallie.

On Friday afternoon the old stickler for etiquette would divide the school, the boys on one side and the girls on the other, the biggest boy at the head of the line on his side and the biggest girl at the head of the line on her side. Then, at a signal, the head boy would take the head girl and introduce her to all the other scholars, one at a time, and also to the visitors, if any happened to be present. Then the next boy would take the next girl and proceed in the same way until everybody had been formally and correctly introduced. If a mistake was made anywhere along the line, the delinquent would have to go back and do it all over again, or else take his seat in disgrace.

Burnett County Jersey Breeders.

Farmers Awaken to Dairy Possibilities---More Than 100 New Silos Put up There Last Year---Association Growing

THE Burnett County Jersey Breeders held two picnics in succession, one on June 22d at the A. J. Dufty farm three miles north of Webster, and the other at Hertel on June 23d. Owing to the unfavorable weather conditions the attendance was small, but the interest displayed made up for the lack of numbers. The beginning of the program for the 22d was the introduction of County Agricultural Agent George Briggs, who in his few remarks assured those present he would assist to the best of his ability in bettering the dairy, agricultural and social conditions of Burnett county. His remarks won for him a host of friends who unanimously agreed to stand back of "George" and push. Professor Oosterhuis, of the college of agriculture, followed with an address on the developing and judging of the dairy cow. It is hardly necessary to say his talk was thoroughly appreciated and that he is a young man of rare ability. A. J. Dufty, secretary and treasurer, gave a brief history of the association. Hugh Jefferies gave an address on Hansen's Siberian alfalfa, its origin, development and culture, citing its adaptability to our lighter soils with samples as proof that no farmer need fear to risk the expense of either seeding or setting out this wonderful plant. Mr. Jefferies has five acres set in drills at the rate of 5,000 plants to the acre and about eight acres seeded this year, all of which is making a wonderful showing.

There were thirteen head of registered females, two registered bulls and twelve head of grade Jerseys on the grounds. Following the program Professor Oosterhuis, upon request, went over each head, pointing out the good and bad points of the individual.

Owing to the rain the amusements had to be dispensed with.

On the following day the program

ROAD GRADING DEMONSTRATION AT THE BURNETT COUNTY JERSEY BREEDERS' MEETING.

was practically a repetition of the day before with the exception of a talk by Mr. Briggs on establishing a co-operative creamery and by Mr. Jefferies on the subject of better roads. Mr. Jefferies gave a demonstration by grading half a mile of road with a grader, supplementing horse power with tractor power.

The Webster band furnished music and on the whole the picnics were a success and without doubt will be made an annual occurrence.

That the farmers of Burnett county are awake to the possibilities of developing their county into one of the leading dairy centers is found in the fact that last year over 100 silos were erected and an even larger number are going up this year, also large and commodious barns with late methods of ventilation. Brush and stumps are disappearing and in their wake appear the mammoth clover crops that only this northern country can produce, also corn for silage.

On August 28, 1915, the Burnett County Jersey Breeders' Association was organized with only eight members, but has now grown to a membership of twenty-seven and they have been instrumental in bringing in seven registered bulls and sixteen registered females and expect to greatly increase this number before the association is a year old. The Guernsey, Red Polled, Brown Swiss, Roan Durham and Holstein are also represented in the county by registered sires and dams.

Pedigree Rye.

For fourteen years the experiment station has had under test pedigree strains of rye which have been developed with special reference to their adaptability to Wisconsin conditions. In many situations rye is equal or superior to wheat as a money crop.

On the lighter sandy soils, it is the most profitable cereal and the experimental work has resulted in a material improvement of the original strain, developed from the Schlansted variety. This improved variety, known as Pedigree No. 1, has an exceedingly stiff straw, enabling it to stand up well even on rich soils. That the milling qualities are also excellent is attested by the fact that a Toledo firm offered 5 cents a bushel above the market price for all the crop they could procure this year.

This rye has now been tried out by the Wisconsin Agricultural Experiment Association with marked success. Last year on a Rock county farm it yielded under field trials forty-six and one-half bushels an acre, or fourteen and one-half bushels an acre more than common varieties grown under the same conditions.

The "Best" Potato Digger

Must Satisfy You or Money Back.

Here is a time-saver and money-saving Potato Digger so successful in its work that we can safely ship it on a "money-back" guarantee. Try it at our risk. If not perfectly satisfied, the test of the "BEST" POTATO DIGGER costs you nothing. The "BEST" POTATO DIGGER is the result of many years of experiment. Hundreds of tests were made in all kinds of soil before the machine was perfected. It is perfectly balanced. Lift ing device enables one man to lift 500 lbs. on the shovel with ease. Adjustable seat to suit height of operator. Positively no injury to the crop. no cutting or bruising as with hoe or fork.

Wabers Mfg. Co.
1719 Seventeenth St.
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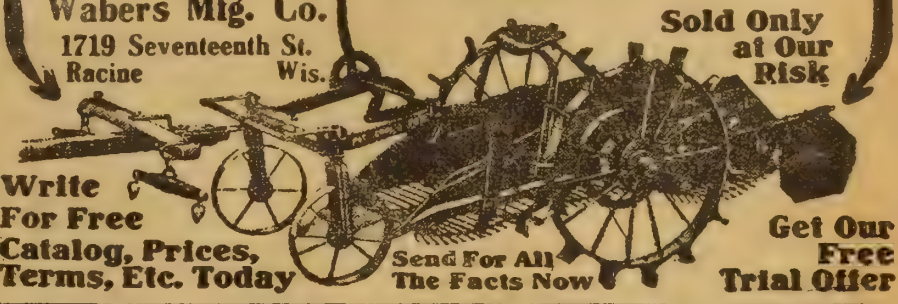

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Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

Fifty Galloway Cows for Sale.

ON this page C. S. Hechtner, Chariton, Iowa advertises to sell fifty head of high-class registered Galloway cows and heifers, and here is a great opportunity for some man who wants to start a Galloway herd. Among these are some imported cows, and the most of them are sired by imported bulls and are out of imported cows. Among these are quite a number of daughters of Standard Favorite, probably one of the most noted Galloway show and breeding bulls that ever was exhibited in this country. The Hechtner herd is one of the most noted herds in the United States. He wants to reduce his herd, and, therefore, is making this special offer. He also offers fourteen splendid young Galloway bulls for sale. When writing Mr. Hechtner about these cattle, kindly mention this paper. —Adv.

Short-horn Herd Books.

A FEW shares of stock and herd books are in the hands of the American Short-horn Breeders' Association and for sale. There are three complete sets and incomplete sets, ranging from Volumes 40, 45, 50 and 70 on, and three shares without volumes. The association has followed the practice of furnishing the volumes free, as issued, to shareholders. Those desiring to become members of the association will find it to their interest to acquire a share of stock and a set of books while this limited supply lasts. The announcement appears on page 23.—Adv.

Velie Six for 1917 Just Out.

THE new Velie Six for 1917 is out and thousands of motorists are calling on the Velie dealers to see it. It is a wonderful car, offering greater value than the 1916 Velie, which has attained such widespread popularity. On the new car the body has ben lengthened four inches, thus giving greater room, and the construction of the body has been strengthened—the rigid oak framework and heavy steel supports mean unusual durability. The lines of the body are smooth and symmetrical, giving the car extreme beauty in appearance. The special features of the 1917 Velie are listed on page 24, which anyone interested in new cars should look over. In spite of the increased cost of automobile materials, there has been no reduction in Velie quality; in fact, the new car is larger and better than ever. The buyer who chooses a Velie has eight body styles to choose from. These are also listed on the page mentioned above. The Velie Motor Vehicle Co., Velie Place, Moline, Ill., invites those interested to call on any Velie dealer and see the new car, of which all Velie men are justly proud.—Adv.

A Reliable Potato Digger Saves Time and Money.

THE farmer who will soon have a crop of potatoes to dig should have a good potato digger, because they greatly reduce the time and labor required for harvesting this crop and the potatoes are not cut or bruised as with a hoe or fork. A good potato digger is the result of many tests and years of experience—it must be tried out in all kinds of soil, under all conditions, must be perfectly balanced and sound in construction. The Wabers Mfg. Co., Racine, Wis., are confident that their machine meets all requirements and, therefore, they guarantee satisfaction to the buyer. They have spent much time and effort in perfecting the digger they now have on the market and potato raisers will do well to write them for free catalog, terms and prices before the crop is ready to be harvester. See this page.—Adv.

Guernsey Bulls for Service.

SOME choice Guernsey bulls are being offered for sale on page 22 by S. A. Merriman, Ft. Atkinson, Wis. Two of these are ready for service and two others will be early in the fall. They are all well marked, being fawn and white in color. They are well grown for their age and of good, straight, level type. In breeding they are in the purple, being backed by heavy producing ancestry. They were sired by the bull, John of Riverside, an outstanding individual of excellent dairy type. He is a son of Mayflower Castrilius by the noted bull, Castrilius, which has fifteen A. R. O. daughters. Castrilius is an A. R. bull and was by Derilius by Filius by Springer, all of which are Advance Registry sires. Mayflower Castrilius was out of Mayflower Eagle, which made 406.22 pounds of fat and gave 8,518 pounds of milk. She was by Dido's Standard by Standard by Springer, all of which are A. R. sires. The dam of Joker of Riverside was a daughter of the great sire, Starlight's Excelsior, that has many A. R. daughters and stood at the head of Ex-Governor Hoard's herd for many years. His dam, Starlight of Geneva, made 570.32 pounds of fat in a year. The dams of the bulls offered for sale are heavy producing cows, one is now giving fifty-four pounds of milk per day. Send for pedigree and price on these bulls.—Adv.

Some Good Holstein Sales.

RUST BROTHERS' STOCK FARMS, West Allis, Wis., where there is established one of the oldest and best Holstein herds in Wisconsin, have been consistent advertisers in The Wisconsin Farmer. They have been breeding Holstein cattle since the early 80's and have bred and developed many noted animals. The noted cow, Duchess Ormsby, was bred on this farm and her offspring have made the name of Duchess Ormsby a by-word to every Holstein breeder. Rust Brothers report the following sales during the past few weeks: A 33.65-pound bull to B. F. Winckler & Sons, Medina, Wis.; a 29.50-pound bull to H. F. Wittig, Denmark, Wis.; a 27.50-pound bull and an eighteen-pound bull to the Arixonia Holstein-Friesian Farm, Phoenix, Ariz.; a 27.50-pound bull to Daggett Holstein-Friesian Association, Daggett, Mich.; a 27.54-pound bull to H. V. Greethurst, Lewiston, Minn.; a bull and heifers to C. W. Conkling, Tekamah, Neb. Rust Brothers feel highly satisfied with the results obtained through their advertisement in The Wisconsin Farmer and have increased their space for the coming year. See their advertisement on page 22.—Adv.

TOO LATE TO CLASSIFY.

50 HEAD OF REGISTERED GALLOWAY cows and heifers for sale; all bred. Some are imported cows and out of imported dams. Also 14 bulls. C. S. Hechtner, Chariton, Iowa.

Machinery for Making Good Silage.

IN order to have sweet, juicy ensilage of high feeding value, the corn should be cut fine—in half-inch lengths—and packed air-tight in the silo. Then it will go through the right fermenting process and becomes a soft, nutritious pulp, which will promote maximum flow or put weight on feeding stock. Silver's Ohio silo fillers will fill the silo with this kind of silage. It cuts fine with its sturdy, cylinder-type knives having accurate, patented adjustments. It fills the silo without delay from breakage and with small amount of labor; the explosion-proof blower fan, attached to main shaft, operates consistently and efficiently. And it may be depended upon to give service year after year because of its unusual durability. The beater self-feed beats the cornstalks down so that they are delivered to the knives properly and no attention is required, even for the largest bundles. Thus the work of one man at the feed table is eliminated. Many other features of Ohio cutters and fillers make them very desirable machines. These points are discussed in the catalog and booklet, "Silverized Silage," issued by the Silver Mfg. Co., Salem, Ohio. Their advertisement appears on page 13, and we suggest that anyone who has a silo to fill this season write to the company for full information regarding Silverized Silage. —Adv.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

HOLSTEIN-FRIESIAN CATTLE.

JOHN MANN
NEOSHO, WISCONSIN

BREEDER of registered and high-grade Holsteins. Heifers, springers and cows for sale.

A. G. HARTER
RUBICON, WISCONSIN
BREEDER OF REGISTERED
HOLSTEIN CATTLE

Bred for high production ability, good type and along popular blood lines.

John Gutschenritter & Sons
Neosho, Wisconsin

BREEDERS of registered Holsteins that are well marked and of good breeding. A large herd to select from. Two bull calves for sale at the present time that are from high producing dams. Good individuals and at reasonable prices.

FOR SALE

A FEW nicely marked young bulls sired by Canary Frisby Fobes Homestead, a son of the 35-pound bull, Canary Paul Fobes Homestead, and the 22.81-pound cow, Sadie Frisby Homestead, a daughter of Homestead Jr. De Kol. The dams are good producing cows.

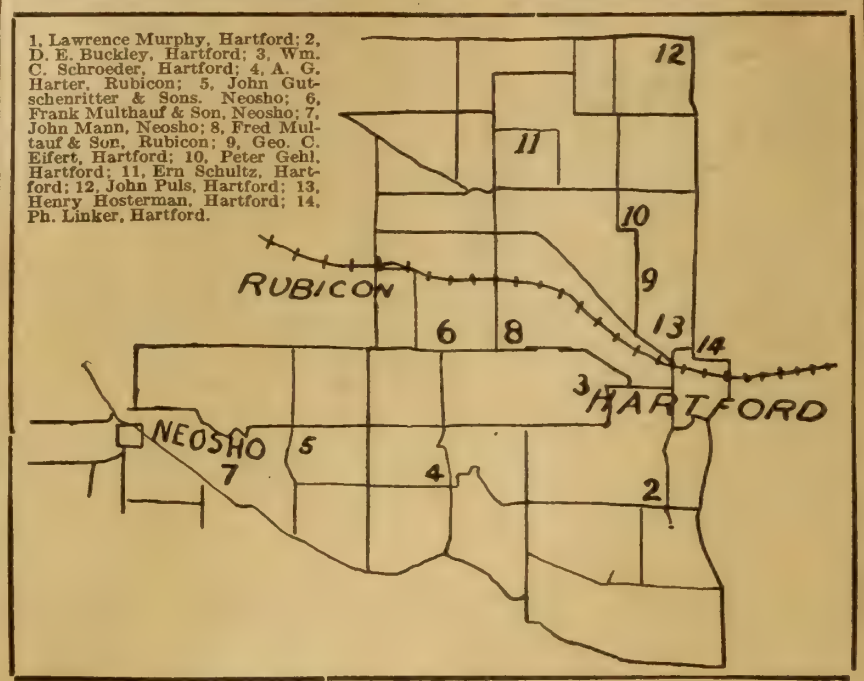
HENRY HOSTERMAN
257 N. Main St. Hartford, Wisconsin

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-lb. bull, Johanna King Segis, a son of the 40-lb. cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants. H. F. McNutt, Oxford, Wisconsin.

A. R. O. BRED HOLSTEIN BULLS

WE have a few bulls left sired by King Artis Pontiac, whose dam and sire's dam average over 29 lbs. butter in 7 days and made 31.7 lbs. butter in 7 days, and 21,834 lbs. milk and 1,076 lbs. butter in one year. One of his daughters has just made over 20 lbs. in 7 days at 2 years of age. These bulls are out of Johanna, Korndyke and Pontiac bred dams backed by large milk and butter records. Write for particulars and price. Address
Wisconsin Star Stock Farms, E. M. Schultz, Hartford, Wisconsin



Johanna Colantha Sarcastic Lad

SOME BARGAINS IN YOUNG BULLS

FROM yearly record dams, sired by Johanna Colantha Sascastic Lad. No. 1—Born June 10, 1915. A large, well-grown and slick youngster, ⅛ white. Dam, Springdale Clothilde Vale 2d. Record, 22.06 pounds of butter in seven days, 17.57 eight months after calving and better than 900 pounds of butter for the year as junior three year old. Price $400. No. 2—Born June 15, 1915. Dam, Lilith Susie Ingalls 2d. Record, 21.67 pounds of butter in seven days, will finish this month with some 730 pounds of butter for the year as a junior three year old. Good individual, slick and well grown, three-fifths white. Price $200. Address
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TWO fine bulls, born September 12th and September 15, 1915. Sire is a son of King Segis Pontiac Polkadot, one of the greatest sires living. Their dams are Molly Carema Melchior 2d 260244 and Novelty Belle Ormsby 229169. These bulls are large, thrifty youngsters. Straight and long bodied, handsomely marked. Write for prices.
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MAPLECREST HENGERVELD DE KOL 94154

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Model 28, five-passenger Touring, $1085; four-passenger Companionable Roadster (original and exceptionally smart type), $1085; two-passenger Roadster, $1065.

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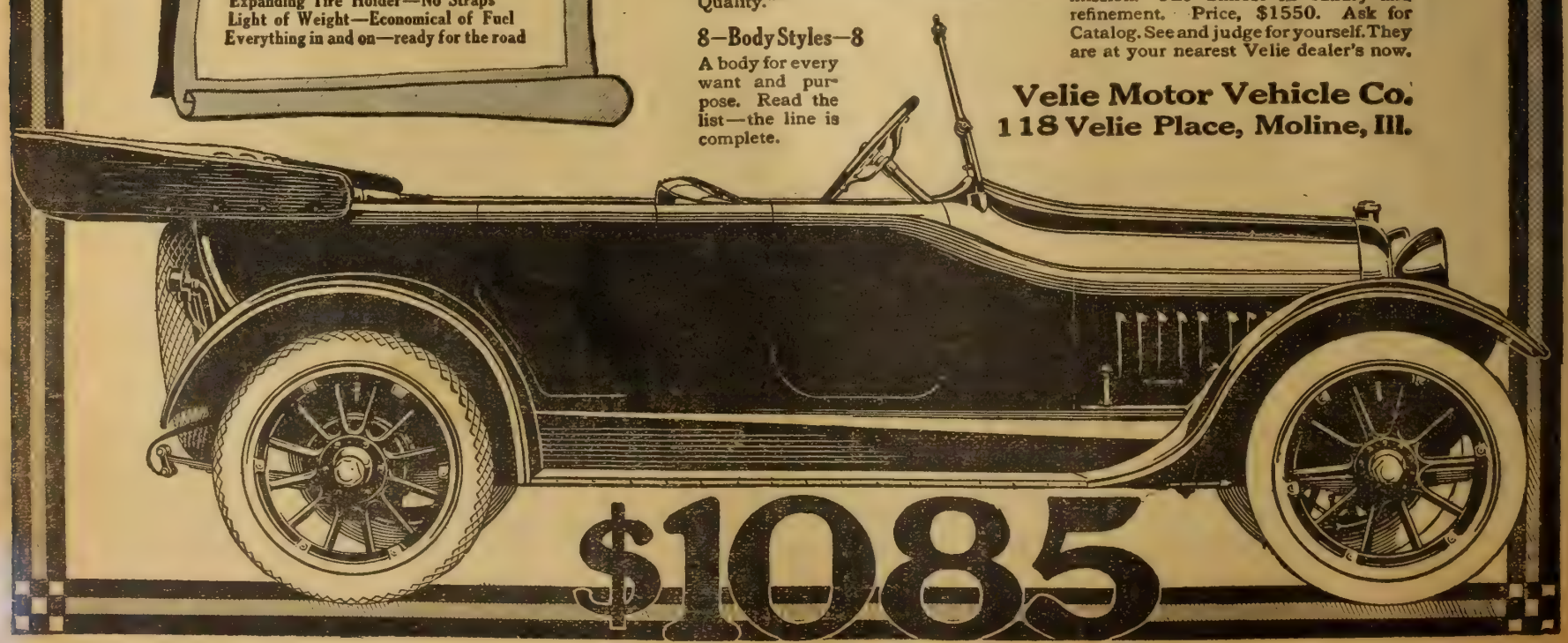

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THE WISCONSIN FARMER

VOL. XLV. NO. 30. THURSDAY, JULY 27, 1916. WHOLE NO. 1800

CURRENT EVENTS

THE English, French and Russians continued to make serious inroads on the Teutonic forces, in some of the fiercest fighting of the European war, last week. Not only have the French succeeded in standing off the Germans at Verdun, which has been under attack for almost six months, but they won several miles of first and second line trenches elsewhere from the Germans and even pushed them back in places to their third line of defense. These victories were not won without great sacrifice of life, but they show that, for practically the first time since the war began, now two years ago, the allies have the men and the munitions to carry on a vigorous offensive campaign. While this is in progress in France, the Russian invasion of Hungary is on. Detachments of Russian cavalry were well over into Hungary last week, closely followed by the infantry. General Letchisky, whose successful drive cleared the Austrians out of Bukowina, is said to be threatening the Austrian rear. Capture of large numbers of Austrians is reported daily from this section of the front. The Russian forces ready to be poured into Hungary are said to number nearly 1,000,000 men, and are declared to be the pick of the Russian armies. Heavy Russian reinforcements are being sent to the northern part of the eastern front, and an attack in mass against Marshal von Hindenburg's forces is believed to be the next step. One dispatch states that the Germans are amazed at the strength of the English army, which they thought existed on paper only.

HAVING been frequently reported as seriously wounded and even as being dead, Villa has apparently returned to life and to his bandit career. He was reported as being on the raid again last week, attacking Mexican federal forces and even planning other raids on the United States. In order to take no chances of another Columbus affair—in which a score of American lives were taken by the Mexican bandits—the national guard of the various states is continuing to patrol the border. Minnesota and Iowa soldiers were sent to the South last week and joined hands with the others who had preceded them in order to hold the bandits back in their own country. A party of mounted Mexicans exchanged fire with Company L of the Ninth Massachusetts infantry near El Paso, Texas. According to reports, the guardsmen were doing outpost duty when the Mexicans rode up on the opposite bank of the Rio Grande and opened fire. The guardsmen suffered no casualties, but reported they believed they had killed one Mexican.

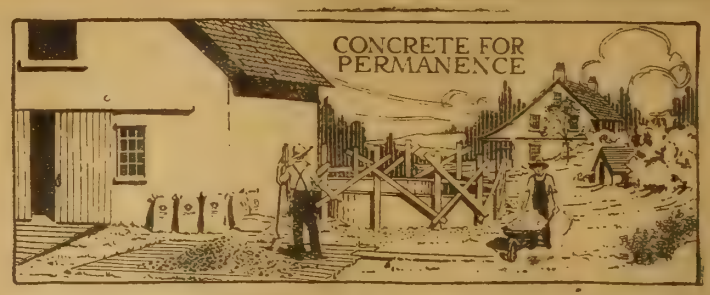
NOTWITHSTANDING the success of the German submarine freighter, Deutschland, in crossing the ocean and safely landing a million-dollar cargo at Baltimore, American naval experts declare that the value of the new ocean service, in the present international crisis, is but slight and this despite the fact that another submarine is promised in a few days and many more are being built. The navy department experts are said to have reached the following conclusions: One—A line of submersible freighters between the United States and Germany can have no appreciable benefits to Germany except sentimentally. Two—While technically they might be considered as rendering the alleged British blockade of Germany's North sea ports ineffective, they cannot possibly conduct operations on a scale sufficiently large to relieve Germany of the allies' suffocating policy. Three—The chief service the undersea liners can render will be to carry terror to British hearts and they will accomplish this in part. While it was not considered impossible for submarines to cross the Atlantic, it was considered impracticable and the feat has demonstrated to Great Britain the possibility of a submarine warfare not heretofore attempted by Germany. Four—Submarine merchant ships will never be used extensively in the ocean carrying trade. In extraordinary war times such as the present they pay for themselves and on a very small scale do valuable service, but it would be impossible for fleets of submarines to feed a country the size of Germany or to carry to Germany war supplies in quantities large enough to constitute a material aid. These expert findings do not lessen the importance of the Deutschland's exploit in the public mind, however, or minimize in the least the praise which is being heaped on the captain and crew who brought this first submarine freighter safely through all its many perils.

A STATEMENT and call to "the patriotic men and women of America" to hold a new national convention of the progressive party in Chicago August 5th and nominate candidates for president and vice president and continue the party's existence as a distinct political organization has been issued by John M. Parker, of Louisiana, vice presidential nominee of the progressive convention held in Chicago in June. He urges the progressives to eternally bury the bull moose, which he asserts led "his loyal followers into the wilderness" and to adopt in its place the American eagle as the emblem of the party. Mr. Parker does not mention Colonel Roosevelt or any other progressive leaders or any candidates by name. He declares, however, that the progressives ha ' as supposed leaders "red-blooded Americans, who promised with their 'lifeblood' to stay with the party to the finish," but that party had been deserted by a large part of its officers who could not stand the acid test. He charged the leaders, for "steam roller reasons, have elected to be steam rolled," and that the time has come when every party working for human welfare and the future of America, should unite against both dominant parties. In citing the republican party the statement indirectly refers to Charles E. Hughes, republican candidate for president, as "a splendid man," selected by the republicans "as the mask behind which they hope again to secure control of state and nation."

PLANS for the presidential campaign are now well under way. For the republicans, the campaign will open with the official notification of Mr. Hughes on July 31st. Soon after being notified the republican nominee will make a trip across the country to the Pacific coast, delivering a number of addresses, the first at Detroit and subsequent ones at St. Paul or Minneapolis and Chicago. No one doubts that Mr. Hughes will make a vigorous campaign which will cause plenty of talk and discussion. Men who have been to see him and talked to him recently have no doubt that he is eager to get on the stump and is prepared to make things hum. That he will get big crowds is expected. As for President Wilson, while he would prefer not to do a great deal of speechmaking, it is likely he will be drawn into plenty of it before November comes. All over the country the democratic political managers want him to appear. Maine, of course, is calling for him and it is expected he will go there before the election September 11th, provided the congress situation does not make it impracticable.

PRESIDENT WILSON made a personal visit to the capitol last week to emphasize his desire that a child labor law be put on the statute books at the present session of congress, which will come to an end about August 20th. To senate leaders, whom he summoned to a series of conferences in the president's room adjoining the senate chamber, he insisted that the child labor bill passed by the house should be made a part of the legislative plan to be put through the senate. Whether the president's visit accomplished anything more than to bring his own position in the matter emphatically to the front was not apparent tonight. So far as could be learned the democratic steering committee contemplated no change in the caucus program and no call has been issued for another caucus to consider Mr. Wilson's request.

China's new department of agriculture and forestry is being conducted by graduates of American colleges.



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Once you get started it doesn't take long to build a concrete silo—and after it is finished you know it is there for good. Medusa silos last forever and are everlastingly good looking.

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mixed with the cement makes the concrete watertight. It prevents the juices—so necessary in keeping the fodder green—from leaking out. It keeps outside moisture from coming in. A Medusa Waterproofed silo practically pays for itself in savings in a year's time. It is the weather-proof, frost-proof silo that never wears out.

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(Gray or White)

has the Medusa Waterproofing already mixed with the cement. It not only makes concrete watertight but prevents cracks, discolorations, etc. The Medusa Waterproofed Cements are superior to a simple mixture of concrete and waterproofing, because they are ground together in the proper proportions to insure perfect results.

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The Blue Bird Brings Happiness

according to Maeterlink's story and this is proved true by the delight of the woman who receives our **Blue Bird China Ware.**

Special July Offer

A set of six fruit or sauce dishes will be sent prepaid to any one who will send a club of only 5 one-year subscriptions to The People's Popular Monthly, at 25c each.

This is just the season of the year when fruit dishes are needed most and this beautiful Blue Bird pattern can be used on any occasion.

Remember All that is necessary for you to do is secure the subscriptions of only 5 friends for The People's Popular Monthly, at 25c each, and the six Blue Bird pattern fruit dishes will be sent you prepaid.

A subscription for two years at 50c counts the same as 2 one-year subscriptions at 25c each

This is a special offer for July only and you are urged to be prompt in sending your club list to secure these fruit dishes. Address all mail to

The People's Popular Monthly, Dept. H
Des Moines, Iowa

The Blue Bird Club
Isabelle Best, Secretary

The Wisconsin Farmer

THURSDAY, JULY 27, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

FARM CREDIT BILL SIGNED.

RURAL credit legislation is now an accomplished fact. Last week—in the presence of representatives of the National Grange, the Farmers' Education and Co-operation Union, the Farmers' National Congress and the National Council of Farmers' Co-operative Associations—President Wilson signed the compromise measure which had been agreed upon by both houses of congress a few days before. I recall hearing Senator Norris, of Nebraska, deliver a very exhaustive address on this subject at the last session of the Farmers' National Congress, which subsequently declared in favor of such legislation, so I can readily imagine with what pleasure the representatives of this particular organization watched the president sign the bill.

I agree with President Wilson that the occasion was a memorable one. Surrounded by the men who had engineered the measure through congress and by the representatives of the farm societies which had worked for it, the president took the occasion to express himself in this manner:

> I cannot go through the simple ceremony of signing this bill without expressing the feeling that I have in signing it. It is a feeling not only of profound satisfaction, but of real gratitude that we have completed this piece of legislation which I hope will be immensely beneficial to the farmers of the country.
>
> The farmers, it seems to me, have occupied hitherto a singular position of disadvantage. They have not had the same freedom to get credit on their real estate that others have had who were in manufacturing and commercial enterprises and while they have sustained our life they did not in the same degree with some others share in the benefits of that life.
>
> Therefore, this bill along with the very liberal provisions of the federal reserve act puts them upon an equality with all others who have genuine assets and makes the great credit of the country available to them.
>
> I look forward to the benefits of this bill not with extravagant expectations, but with confident expectation that it will be of very wide-reaching benefit and, incidentally, it will be of advantage to the investing community, for I can imagine no more satisfactory and solid investment than this system will afford those who have money to use.

I am not going to say that the bill, as finally passed, solves the entire financial problem of the farmer or is going to bring about the agricultural millennium. This much is sure, however. With the possible exceptions of the bills creating the postal savings bank and establishing the federal reserve, no bill has been passed by congress within the last half dozen years for which greater promise is made or higher hopes held out. Both of the big political parties seem imbued with a sincere desire to assist the farmer to take advantage of every possible opportunity. The new farm credit bill will not help the farmer who is undeserving of help under the present financial system, for the personal equation will always determine success, but it may be of great help in assisting the worthy to get a foothold and in enabling the deserving to enlarge their field of activities so that our agricultural production will be increased.

Let me explain the main details of the bill, as finally passed and signed. It creates a nonpartisan federal farm loan board, consisting of the secretary of the treasury and four members, to be appointed by the president. They will have charge of twelve federal farm land banks, which are to loan money to farmers at not more than 5 per cent interest. These land banks will take farm mortgages from actual farmers and issue bonds, bearing 4 per cent interest, with the mortgages as security for the bonds. The loans are to be for not more than 50 per cent of the value of the farms and are to run from a minimum of five years to a maximum of forty years. They are to be paid back on the amortization plan; that is, a part of the principal is to be paid with the interest at each interest-paying date, so that the debt is paid on the installment plan rather than on one stipulated date. On any interest date $25 or any multiple thereof may be added to the amount being paid on the principal, so as to reduce the debt.

These, in briefest outline, are the main details of the bill. How it will actually work out remains to be seen. I notice that Representative Shouse, of Kansas, declares that it will reduce the annual interest charge of Kansas farmers from $4,886,561—the amount they paid last year—to $2,241,281, a saving of $2,645,280. Other students of the bill caution against expecting too much from the relief measure until it has been in effect for some time. I agree with the president that the plan—and especially the soundness of the securities—should appeal to the investor. I hope that the promises of its sponsors will be more than fulfilled, but only time can positively tell. We should all unite in working to make the measure a splendid success, for if any man is entitled to a credit which will enable him to borrow under the most favorable conditions and to every possible aid in increasing his efficiency and in enhancing the results of his arduous toil, it is the farmer—the real basis of all our national wealth and advancement.

THE DEBT DUE FARM MACHINERY.

I WONDER how many of my readers ever stop to think of the great debt we owe the implement men of the country, the men who invent and the men who sell the machinery which reduces the time necessary to produce a bushel of wheat, of oats or of corn to one-tenth the time formerly required for the operation. Not a debt in dollars and cents, covered by a personal note, or anything as sordid and practical as that. What I mean is the debt we owe these men as factors in increasing agricultural production and advancing civilization.

I have often thought of this phase of the general subject, but seldom have I seen the matter more convincingly or strikingly set forth than in an article in one of our large grain-belt newspapers, anent the big wheat crop this year. The writer of that article quotes a man (motoring along a prairie road in Kansas last week and pointing toward a reaper at work in a wheat field) as saying: "That machine made possible the settlement of these plains. If the reaper had never been invented, all of western Kansas, Oklahoma, Nebraska and a large part of the other plains states might be today only vast cattle ranges, without towns, without cities, without farms, without wheat fields." Is there not truth in what that man said; is not the debt which we owe the reaper, the tractor, the gang plow and all the other farm machinery of today so vast and so far-reaching that it cannot be measured in dollars and cents?

I spent a very pleasant evening once reading a book called "The Romance of the Reaper." I have frequently quoted from it in this page of mine. The author was undoubtedly brimful of enthusiasm, but he was well within the facts when he asserted that the reaper "changed the face of the world. It moved the civilized nations out of the bread line. It made prosperity possible. It made bread so cheap that even the hobo at the back door scorns it unless it is spread with jam and sandwiched with meat; it is thrown in with a meal free of charge, like a pinch of salt or a glass of water." Think back on the old days and then consider the achievements of today. From waving grain nodding in the bright, western sun to light, delicious biscuits, fairly melting in the mouth, in the incredible short time of twenty-two minutes, a record achieved by western wheat growers and flour millers; has not a great, a transforming revolution been wrought when this is possible, thanks to marvelous machinery of almost human intelligence and more than human efficiency? Is it to be wondered at that the newspaper writer to whom I referred should write these enthusiastic words:

> The reaper vanquished famine, that ancient foe of mankind, and every harvester that cuts a swath through a golden wheat field means not only more bread, but more comforts, more luxuries, more progress, more civilization.
>
> The grain belt might have for its coat of arms a tractor, a gang plow, a reaper and a steam thresher grouped, with a farmer standing atop of them waving his hat, no longer "brother to the ox," no longer "bowed with the weight of centuries," but a free man, who has more luxuries and lives in greater comfort in his own farm home today than the king of England lived in his palace a few centuries ago.
>
> Now the farmer hitches his gang plow to a tractor, climbs aboard, pulls a lever, toots the whistle and plows more land in one day than the farmer of fifty years ago would plow in two weeks. The farmer's wife or daughter today sits in the springy seat of a reaper, as easy riding as a buggy or a motor car, or drives a "header," and reaps more grain in one day than the man with a sickle could in a whole season. A threshing machine will clean more wheat in one day than a man with a jointed flail could if he worked all winter.

Do we not do well to consider these things, along with the yield per acre and the price per bushel, as we contemplate our crops and cast up accounts for another year? Farm machinery has emancipated not only the farmer, but every member of his family. Gone are the days of "the man with the hoe."

> Bowed by the weight of centuries he leans
> Upon his hoe and gazes on the ground,
> The emptiness of ages in his face,
> And on his back the burden of the world.

In his place is the man with the reaper and the tractor, the man who lets machinery do the work which formerly aged him before his time, doing it in such a manner as to double his production, treble his profits and quadruple his enjoyments in life. That this use of machinery is destined to increase in the next few years is a foregone conclusion, for never were implement sales so heavy as this year; never was the farmer's interest so great. The inventive genius of man is devoting itself to perfecting machinery that increases production and minimizes human labor, a combination of results which promises to work a complete revolution in our farming methods as the years go by.

NO CAR SHORTAGE.

I AM in receipt of reassuring advices from men high in the railroad business. They are positive there will be no freight-car shortage at the height of the grain season this year, as there has been for so many years past. They claim to have the situation well in hand, and this despite the fact that our wheat crop this year promises to be a bumper one and possibly to set a new record.

According to the railroad men, the shortage in grain-carrying freight cars in former years was due, in a great measure, to the fact that so much equipment was loaded with wheat for export, carried to the seaboard and the gulf ports and there held for weeks and months on sidings. The export demand was so great there were not enough ocean-going vessels to handle the trade and not enough elevators along the coast for the storage of the grain. As a consequence, it was held in the cars, which were shunted back into sidings, sometimes fifty and even 100 miles from the ports. This resulted in many thousands of cars of the grain-belt roads being held out of service, preventing the later movement of grain to the domestic market. According to railroad authorities, the railroads have entered into a "gentlemen's agreement," which will obviate this. They have solemnly pledged themselves to see to it that no grain for export will be loaded into a car until the export agent furnishes a receipt showing that he has secured space on the vessel on which it is proposed to make the export shipment. This receipt must designate the port from which the shipment will be made, the name of the vessel and date of sailing. Until this data is furnished no order for a car will be accepted, nor will any bill of lading be issued. The results are forecasted by one of the railroad men in this manner:

> Under the new order of things, a car of grain can be loaded out of Omaha, for instance, for Atlantic or gulf ports, reach its designation and the empty car be back in the territory inside of four weeks, whereas, under the workings of the old rule, cars frequently did not get back into home territory inside of six months, and in many instances they have been away for more than a year.

All this is certainly reassuring news to us of the grain belt, where former car shortages have materially affected the movement of the crop and the profit naturally to be expected therefrom. If the railroads will live up to their agreement the situation will be much better than in former years, there will be less grain spoiled by being left exposed to the ravages of the elements and the farmers will reap a better profit for their season's work. That this year's wheat crop is going to be a splendid one and bring good prices is evident from a report which reached me this week from Pawnee county, Kansas. A friend sends me this word:

> It is the best wheat ever grown in this county. The stalk is short, but the berry is large, plump and solid, and in different parts of the county where it has been threshed it weighs as high as sixty-three pounds to the bushel. Fifty-nine is considered very high. So, the crop this year will bring an extra good price, say an average of $1 a bushel. With the crop as estimated now this means $3,250,000 coming in this year to a county with a population of only 9,000, which is a trifle over $361 for every man, woman and child in the county from wheat alone, not counting alfalfa, oats, cattle, sheep and other farm products.

If we can safely harvest a bumper crop of grain and get the cars in which to transport it to market when prices are the best, it looks to me as though we were in for another year of agricultural prosperity and would confront a winter of content and cheer and good times.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Wisconsin Farmer, the Live Stock Paper of Wisconsin.

THIS issue of The Wisconsin Farmer announces a guaranteed circulation of 90,000. This announcement is important to live stock interests of the state. The purpose of The Wisconsin Farmer management has been to give the breeders of Wisconsin a farm paper which would have a state-wide circulation and which would adequately cover this rich live stock field. While The Wisconsin Farmer has led the farm papers of this state in circulation for some time, the present announcement carries with it the thought of still more commanding leadership. The circulation of The Wisconsin Farmer in Wisconsin is several thousand greater than the circulation of the second farm paper in the state.

The publisher of The Wisconsin Farmer is much pleased to note the increased popularity of this paper as shown by the increased circulation and the increased advertising patronage. The Wisconsin Farmer publishes more Wisconsin live stock advertising than any Wisconsin paper. Inasmuch as this condition exists week in and week out, practically all the time throughout the year, we must be convinced that live stock advertising in The Wisconsin Farmer pays the breeders well. In this connection, we are pleased to quote from a letter received from Mr. A. M. Laird, proprietor Goldfield Stock Farm, Prairie du Chien, Wisconsin, under date of July 10, 1916. Mr. Laird writes:

Economical and satisfactory advertising is not always obtained by pure-bred stockmen. But The Wisconsin Farmer has put me in touch with a host of substantial farmers, who are interested in Hampshire swine, enabling me to make sales at a very moderate cost per animal.

Another thing. The interest your field men take in the breeder and his stock advertised helps a lot to establish confidence between buyer and seller. You have not only sold my Hampshires, but have also treated me fairly and generously, enabling me to establish my herd.

Business has been more than good so far this year. I want you to know that your most excellent service to me as an advertiser is appreciated. The increasing popularity of the Hampshire hog together with the advertising ability of The Wisconsin Farmer makes it easy to sell all the "belted beauties" that I can raise.

The Goldfield Stock Farm comprises 600 acres, devoted to corn, alfalfa, dairying and Hampshire swine. Mr. Laird is generally known throughout the state as an excellent breeder.

Breeders of the state who are striving earnestly and honestly to promote live stock business cannot afford to overlook such an excellent advertising medium as The Wisconsin Farmer.

Tractor Information For Wisconsin Farmers.

NO DEPARTMENT of The Wisconsin Farmer has rendered service to our readers which has called forth more letters of appreciation than the Farm Mechanics Department. This department, as those who read it will well understand, is written every week by an expert mechanic and engineer, who understands the engine and machinery problems which are presented to him, and has the happy faculty of presenting the replies in a practical and understandable way.

Problems concerning the operation and care of the tractor rightly come under this department, and our readers are invited to submit their inquiries along this line. Address editor Farm Mechanics Department, Wisconsin Farmer, Madison, Wisconsin. Watch the columns of the paper for the answer. It may occur that there are so many inquiries that it will not be possible to publish all the answers in the paper, and in this event a personal answer will be given. It is the policy of The Wisconsin Farmer, however, to publish the replies in the columns of the department, for the reason that there are doubtless other readers who will be interested in just the same problems.

Occasionally the editor finds that several questions of the same nature come in the same week, and in such cases we cannot afford space to give separate answers to each letter. In this event one of the letters will be answered, so each reader should read through the department each week. Our readers will find it profitable to read all the farm mechanics letters, as the editor of that department is taking special pains to get at the practical information which will be of greatest benefit to the farmer. Just as the man who raises cattle and hogs will be interested in all of the veterinary answers each week, so will the man who keeps farm machinery, who operates an automobile or a tractor, be interested in our Farm Mechanics Department. These questions and answers, published each week, bring out the knotty little problems which come up on the farm, and it is this sort of service which we believe makes a farm paper valuable.

Tractor owners should not fail to take advantage of our free service in the Farm Mechanics Department.

Co-operative Shipping of Live Stock

CO-OPERATIVE shipping of live stock, in order that farmers with a few animals may secure advantages of car lot freight rates and also dictate the time of shipping is working out successfully in many Wisconsin communities. Whatever movement tends to increase the farmers' profits, if successfully managed, is bound to grow, and the fact that there are now something more than 500 of these co-operative shipping associations among farmers in the United States bespeaks popularity. Elsewhere in this issue we are describing in detail the operations of the Co-operative Association at Muscoda, which has now been running long enough to have passed the experimental stage. Muscoda has furnished the inspiration and the ideal for quite a number of similar organizations in other communities, and every farmer who ships to market should read this article with care, and if not now enjoying the benefits of such an association as that at Muscoda, he should immediately take the matter under consideration.

The Muscoda Association grew out of a fight among local buyers, in which the farmers took the short end of the prices, but after two years of shipping the association is now in a strong position and members are well pleased with results. This movement started originally in Minnesota where there are more than 200 shipping associations. As conditions are very similar in Wisconsin, there will be many organized in this state in the future. Recently we had the pleasure to go through the new Farmers' Co-operative Packing Plant at Wausau, where the plant is regulating the shipment of stock for slaughter through the organization of some thirty odd local associations on the order of the Muscoda Association. Otherwise, the plant might have a heavy run today and nothing tomorrow, and the officials believe this will solve one of the big problems of the farmers' co-operative packing plants.

Naturally, to organize these associations, there must be a leader in a community and a reason, for unless the farmers can benefit therefrom, there is no cause for its existence. Often local buyers will forstall such organizations by temporary high prices. There is no doubt but that the farmer with a few steers or a few hogs or other stock to ship at a time can benefit from shipping in this manner. This is the situation in a state like Wisconsin, where few of our breeders have enough to ship at one time to make up a car. The U. S. Department of Agriculture, realizing the increasing interest in these organizations, recently issued Bulletin No. 718 on how to organize, the benefits, etc., which may be had on request. It points out that the main purpose of these associations is to enable their members to ship in carload lots to the central markets instead of being more or less at the mercy of local buyers in disposing of a few animals from time to time. The fact that no capital is required for the organization of such an association makes these associations possible in communities in which more complicated forms of co-operation would not succeed. The bulletin, however, points out that such associations are scracely practicable in regions where there is so much live stock that it is generally marketed in carload lots under any circumstances, or where there is so little that the association has practically nothing with which to work.

To organize such an association it is necessary only for the farmers of the community to meet together, adopt a simple constitution and by-laws, a sample of which is given in the bulletin already mentioned, to elect officers, and, in turn, for them to appoint a manager. It is recommended, although it is not absolutely necessary, that the organization incorporate. This can be done at a nominal cost—usually not more than $10. For this small expenditure of trouble and money, the association usually enables the farmer to market his stock when it is ready instead of compelling him to wait until the local shipper is ready to buy it. He obtains for himself the benefits of the cheaper carload transportation, and the shipments of the association realize for the owner the market price of his stock less the actual cost of marketing. In particular, it has been found that when thin stock, calves, or lambs are sold in small numbers, the local price is usually very low. It is on this class of stock that the associations have been able to save their members the most money.

In order to avoid misunderstanding, it is important that all stock be marked at the shipping point. This precaution prevents disputes in regard to shrinkage and dockage and assists in making adjustments in case of loss or damage in transit. There are three common methods of marking. Numbers or other characters may be clipped in some conspicuous part of the animal, paint may be employed, or numbered ear tags used. The last method is the least frequent, because it is somewhat difficult at the stockyards to get close enough to the animal to see the number on the tag. If the second method is adopted, ordinary paint is undesirable, especially for hogs, as it does not dry readily enough to prevent smearing. This difficulty may be overcome by using paint containing about one-fourth varnish. In the case of sheep, however, painting is objectionable because the marks will not scour out and wool manufacturers object to them, and branding fluid, therefore, is preferable. Whatever system of marking is adopted, the important features are that it should be uniform for all shipments and that the marks should be plain and conspicuous. In many cases hogs are not marked, but are graded by the manager at the shipping point. A record of those subject to dockage is kept in such cases. Marking is advised, however, as a precaution against mistakes.

Since no payments are made for stock shipped until returns from the central market are obtained, these co-operative associations may be formed without capital. All that is necessary is for the farmers to comply with their engagement to furnish the stock to the manager when, where, and in such quantities as they say they will. In some associations a fixed sum of money is expected from a shipper for failure to deliver stock to the manager as agreed. In every case the amount to be exacted should be reasonable and should fairly represent the actual loss which it is estimated the association will suffer as the result of non-delivery. The provision for liquidated damage is proper, because the manager must arrange for a certain amount of car space, and if all of it is not used, the expense to those who do ship is proportionately greater.

The Clover "Crank" Wins Out.

IN THE following communication an Illinois subscriber gives the result of observing conditions on two adjoining farms. On one of these the soil was sufficiently productive to produce seventy bushels of corn per acre, while on the other it was so impoverished that a thirty-five-bushel crop was the limit. His letter follows:

Last fall when I was away from home for a spell I was in a couple of cornfields. They were on adjoining farms. One man was gathering seventy bushels of corn from each acre in a ten-acre tract. To make sure that the figures were correct measurements of the field were made and the corn weighed as it was brought in from the field, so there was no guesswork about the matter.

The other farmer on adjoining land was also gathering corn and when asked how it was turning out he said he had just been figuring the matter himself and he thought a fair estimate would be thirty-five bushels to the acre, and he coupled this suggestion with the statement that it had been unusually dry in that section. I asked him when he planted his corn and he told, and then I asked him about his methods of preparing the ground and he told that also. He then volunteered the information that his ground had been overtaxed, as he had been raising nothing but corn and oats on it for a score or more of years. He had given the corn good cultivation, had a fairly good stand and seemed to have prepared his ground well before planting. But the soil simply lacked something.

The farmer who got the big yield is what the neighbors termed "a clover crank," whatever that may mean. He always had some clover growing on some part of his farm. If he did not get a good stand by sowing it in the spring with a nurse crop, he would resow it after harvest and trust to the late summer rains to bring it up. He always had clover, some way or other. He provided against winterkilling of his late crop by sowing oats with the clover. This came up and afforded much protection during the winter even though it did die down when the frost struck it. It prevented the wind from blowing the dirt away from the clover roots and it also prevented thawing and freezing from doing its deadly work. This farmer never had to raise but two crops of corn and one of oats or wheat on the same ground. By the time he got around he had clover sod ready for the next crop and thus by a system of rotation he kept his ground in excellent condition. It paid him big money. He worked no harder in raising seventy bushels than his neighbor did in raising half that much. The drouth that hit his neighbor hit him also, but he had fortified against it and his soil had something in it that enabled him to meet the drouth without great loss.

The story of these two men is but a sample of conserving the soil.

While this particular man used clover others may use other members of the legume family to equal advantage. Sweet clover, alfalfa, vetch, alsike clover, cowpeas and a long list of different peas and beans might be mentioned as doing the same work that red clover was doing for this man.

A little experience I have been having with one kind of peas might not be out of line here. For several years I have been raising quite an area of white peas, the kind you all like for dried peas in winter. They are a very rank grower, making lots of foliage. They grow well right in the corn rows, and to tell just what a five-acre field has been doing for five years straight along would sound like a fairy tale almost.

I have one five-acre plot that had been cropped in previous years badly. Commenced planting those peas and corn, and picking corn and peas and then working vines and stalks into the soil. Have increased the corn yield ten bushels to the acre every year (was very low, however, at first) and have sold

an average of $100 worth of peas each year, besides my hogs get a lot every fall after frost. The land is working very much better, and I believe I can bring it to the 100-bushel mark steadily.

It would not be difficult to find scores of instances in every township of the corn belt that would provide a match for this one. Those who emphasize the growing of clover are, without exception, successful corn growers, while the continuous grain croppers cannot fail to go down hill in the matter of production. Legume crops always benefit the soil, because their growth means that the surface and lower soil will be filled with rich roots and these, upon their decay, furnish plant-food materials for succeeding crops.

Wisconsin Boys and Girls at the State Fair.

INCREASED interest is being manifested in the Wisconsin State Fair, to be held at Milwaukee, September 11th-16th, on the part of boys and girls of this state. Some idea of the special attention which the Wisconsin fair will pay to farm young people may be had by glancing over the list of special premiums offered for 1916.

Here are the leading commercial awards which some ambitious and energetic Wisconsin young people will win before snow flies.

Three pure-bred Guernsey bull calves as first, second and third prizes in the state live stock judging contest, open to students in agricultural schools. These will be given by George Browne, Waukesha.

A Holstein bull calf valued at $125 goes to the school winning the state sweepstakes in all contests. This animal will be the gift of the Pabst Stock Farm, Oconomowoc.

One hundred dollars in gold will be presented to the state champion in the agricultural contests and likewise to the state champion in domestic science work. The money is offered by Fred Underwood, president of the Erie railroad, and owner of the Fewacres Farm, Wauwatosa. The donor stipulates that the recipients must use the funds for educational purposes or good business investments.

The winning club in the state contest will be presented with $100 in gold by the State Bankers' Association, the sum to be used in the purchase of pure-bred seed or pure-bred live stock.

The Merchants' and Manufacturers' Association of Milwaukee will offer six $50 agricultural short-course scholarships to contestants.

Valuable cash prizes have been offered in restricted classes by the Wisconsin Berkshire Breeders' Association, the American Poland China Record Association, the National Duroc Jersey Record Association, the American Berkshire Record Association, and the Chester White Swine Record Association.

A $4,000 club-house to the highest scoring boys' and girls' agricultural club in the United States.

All details for these contests have been placed in charge of a committee consisting of T. L. Bewick, College of Agriculture, Madison; H. N. Goddard, State Department of Education, Madison; J. M. Gahagan, superintendent of schools, Milton; W. W. Clark, Wood County Agricultural School, Grand Rapids; and J. M. Coyner, county representative of Portage county, Stevens Point.

Secret of Success of Hog Raising.

THERE is no denying the fact that the advice or counsel of men, who have been successful in any branch of production, carry more weight with those engaged along the same line than the fine-spun theories of individuals who lack practical experience. At this time our attention is called to an address delivered by Mr. A. J. Lovejoy, a well-known Berkshire breeder. Mr. Lovejoy has attained such a marked degree of success in the breeding of pure-bred hogs that it is quite worth while to sit at his feet and learn words of wisdom. In referring to some of the essentials to success in hog raising, Mr. Lovejoy said:

A man to make a success with hogs must like hogs and be willing to do any kind of work at any time of the day or night, and he must stick to it. As far as breeds are concerned, I have no preference. I never speak of my breed, and I do not intend to now. I say to the young man, select the breed that looks the best to you, whether it is white or black or spotted—it doesn't make any difference. Select a good one and stay with it. Then he must be a man of good character if he is going into the pure-bred business. It is easier to raise for the Kansas City or Chicago markets than it is for the breeder of pure breds. If I were raising hogs for the market it would be fun for me. I would raise alfalfa, and put their corn into the self-feeders, and have the water handy, and let them go to it. It has got so the hog knows more about balancing his rations than the man who feeds him—more than the professors in the colleges.

If you raise hogs for the market the proper thing is to raise good hogs and take good care of them while they are young. Provide them with alfalfa and and by the time they are three months old you can feed them through the full-feeder, and they are not much trouble to take care of. Sometimes one gets the cholera in his herd, but he had better lose them once in a while than to give up the business. I had a man say to me when I had lost 210 head, "Why don't you quit the business?" I said, "I would, but I don't know anything else. I would be a fool to give up the business after forty years of good trade all over America and in the foreign countries." I have never had the cholera since that time. We use a wagon load or two of slaked lime every few days—air-slaked lime. We disinfect every few days with a good disinfectant; we run the hogs through the dipping tank. We have a new thing that is good to keep vermin off of them; that is, to build a cement wallow. Dig out about fifteen feet square and about a foot and a half deep, sloping at the ends, so the hogs can walk in and out. Put posts up and put shelter over it that they may go in there and lie during the hot weather. A pig will not perspire. We let the porcines go into the water and we put in Kreso dip, and on top of that we put in a few gallons of crude oil, and they come out shining. The dipping tank is all right. The first time it is easy to get them in and the next time you have to shove every one of them in. One of the principal things in raising hogs is to be a good feeder. I would rather sell an ordinary pig to a good feeder than I would to sell a show pig to a poor feeder.

Now regarding the feeding of hogs, things are changing from what they used to be. It used to be a continual slop-pail business. I suppose that I have hauled out thousands of dollars' worth of middlings and bran, and we have now got to the place where we are feeding dry feed. We find that the hogs can balance their rations better than we can. When they want any water they go and get it. We have quit the slop-pail system. There are things the hog man will run up against—cholera and worms—and he must know how to handle matters of that kind. We cannot keep free from them.

While feeding hogs for the market use a variety of feed. I might have said, while talking about feeding, that the cheapest way to husk your corn is to hog it down in the field. Corn is par excellence to fatten the hog; it makes nothing but white meat; it doesn't make any of the red meat. If you want to feed hogs and grow them at the same time, use tankage or some other feed to balance the corn. The hog must have mineral matter also. If he does not have it he will root; if he has it he will not root. We try to keep a supply on hand all the time.

Exercise is another thing. I prefer that a hog should have to walk forty rods for water and feed than to have it right at hand. We want the hogs to have lots of exercise, and the pigs come strong and are up and fighting in a minute after they are born. If the brood sows are fat from an all-corn diet they will eat up the pigs when they are born, and you won't have any. I had a man ask me what was the matter with his sows. He said he had about sixty pigs and the sows ate them all up. I asked him if he gave them plenty of corn, and he said, "Yes, they have it before them all the time." I told him that the hogs were craving for something they did not get, and if he had put tankage into the feed they would not have eaten their pigs.

Another trouble is that of thumps. A sow has a litter of pigs, and the first thing a man does is to mix up a nice pail of milk feed for her, to start the flow of milk; the result is that the little pigs stunt and die. We never feed a sow under forty-eight hours. Give her a drink of water and let her alone. She will come out all right. If the milk flow is too great at first it will not be all taken and the result will be bad.

As to the mineral food, if you have wood ashes they are good; charcoal is all right, also. Sometimes we buy phosphate and limestone for them. Slaked coal is also good. I do not think there is much mineral in it, but there is sulphur, and they like it and will eat it. We have a charcoal pit and we burn charcoal for them.

These are matters that will bear a second reading, because they come from the lips of a man who knows what he is talking about. When Mr. Lovejoy advises the use of a disinfectant, he means just what he says, because fighting diseases is one of the most important problems that a swine breeder has to deal with. Do not fail to note that Mr. Lovejoy has found it practicable to dispense with the old-fashioned slop-pail method of feeding, thereby cutting out an enormous amount of labor and is attaining just as good results by the use of dry feed.

Making Gains on Beef Cattle With Cheap Foods.

THE SCOOP SHOVEL is being retired to the background and the ensilage fork coming to the front in feeding operations. That this is true is indicated by the results that are being attained by practical stockmen and by the investigations that are being carried on at our experiment stations. The day has passed when a steer can be fed half a bushel of corn a day with the expectation of getting full market price out of the corn, unless there is an enormous spread between the price paid for the steer as a feeder and the value of this same steer when he is marketed in finished form.

An interesting experiment conducted at the Iowa station, involved the feeding out of a bunch of steers weighing practically 1,000 pounds at the beginning of the feeding period. The purpose of this experiment was to test out the plan of feeding liberally on ensilage and lightly on corn, as compared with that of feeding heavily on corn and lightly on ensilage. One lot of steers was fed as much as seventeen pounds of corn daily along with thirty pounds of ensilage, and they made an average daily gain of 2.98 pounds. It should be said that they were fed in addition 1.7 pounds of alfalfa hay and two pounds of oil meal daily. The two feeds last mentioned were fed in this quantity to all steers in this experiment. Bear in mind that the first lot of steers were fed seventeen pounds of grain, which is a relatively expensive ration. Another lot was fed only twelve pounds of grain and these steers consumed an average of forty pounds of ensilage daily. Their average daily gain throughout the feeding period was 2.80 pounds. It will be noted that their gains were slightly less than were those made by steers in Lot 1, but in this case nine pounds of ensilage were substituted in the place of practically five pounds of corn.

Turning now to the third lot, we find that these steers were fed only 8.6 pounds of corn daily and 51.4 pounds of ensilage, and from this ration they made an average daily gain of 3.02 pounds. These are most surprising results and they indicate that it is possible to cut the grain ration squarely in two when a good quality of ensilage is liberally supplied. In this case the cost of making 100 pounds of gain was $7.67, whereas the gains on steers, fed seventeen pounds of corn daily, cost $9.49. There was a clear profit of $21.04 on each steer that consumed a ration composed of 8.6 pounds of corn, whereas the profit was only $15.25 per head where the steers consumed 17.1 pounds of corn.

There was another lot of steers in this experiment and these were fed an even lighter ration of corn, consuming, as they did, an average of 4.3 pounds daily, together with 53.8 pounds of ensilage. Let it be understood that each lot, as before stated, was fed 1.59 pounds of alfalfa and two pounds of oil meal per head daily. The steers fed the lightest ration of corn, namely 4.3 pounds, made an average daily gain of 2.56 pounds, and the cost of 100 pounds of grain in this case was $7.45. The profit per steer at the end of the feeding period was, in this case, $23.14. This is the largest net profit that was realized on any lot of these steers. These cattle sold for $9.45 per 100 pounds when marketed, whereas the steers fed seventeen pounds of corn daily, sold for $9.35 per 100 pounds. In other words, the steers carried through on a heavy ration of ensilage and a light ration of corn outsold the steers fed a heavy ration of corn and a light ration of ensilage.

This experiment lasted 120 days, so that it may be considered as fairly typical of those instances where a fairly good bunch of steers is brought to a reasonably high finish in a four months' period. So far as we understand the matter there was nothing special about the conditions surrounding this experiment, and there is no question but what any good feeder can obtain just as good results as these on steers of similar character. The main thing to be remembered is that exceedingly good gains, averaging more than two and a half pounds per head daily for a period of 120 days, were made from a daily ration composed of 4.3 pounds of grain, 53.8 pounds of ensilage, 1.59 pounds of alfalfa and two pounds of oil meal.

Speaks Well of Linseed Oil as a Cattle Remedy.

A VETERINARIAN writing in a foreign exchange pays a high compliment to a comparatively inexpensive medicinal product—a product that is available on practically every stock farm. Reference is made to linseed oil. As the writer in this case has had years of experience in actual practice, his advice unquestionably is well worth heeding. Referring specifically to the ailments for which linseed oil is a good remedy, he says:

In any acute form of indigestion, in stoppage, impaction of the rumen, choking, distressful breathing, or febrile attacks which the owner may not be able to diagnose, he can hardly by any possibility do wrong in giving a dose of linseed oil, but will, on the contrary, in 99 per cent of cases, prepare the way for the professional veterinarian. The observant stockman will often make a good guess as to the nature of an illness, where such prominent and unmistakable symptoms as hoven are not present.

The veterinary surgeon will be glad to hear all that he has to say as to the history and symptoms observed, without accepting his statements as a diagnosis. If a message, telegraphic or verbal, is to be sent—and one would like to say here that a written one is always preferable—it should contain the leading symptoms, as noted by the attendant or owner, and not a mere assertion as to what may be the matter.

The opposite error is the more frequent, however, and a message saying, "Cow very bad; come at once," is typical of the summonses one gets to attend at some hill farm miles away, where nothing is procurable that the practitioner does not carry with him. How often has the writer been burdened with a heavy kit for calving, and a battery with which to cope with milk fever, only to find them all useless in the presence of a case of garget, of red water, or perhaps a broken leg! Messengers arrive with no knowledge whatever of the case about which they are sent; the least intelligent person is selected as a messenger, because his time is of least value.

When an animal is observed to be ill, the owner should always have in his mind the possibility of infection, and, while waiting for professional guidance, remove it if practicable to a building or yard where isolation is possible, cleansing and disinfecting the manger and stall after removing the food. Such a precaution may arrest the spread of disease and disaster, while the time lost, if subsequently proved unnecessary, is the merest trifle.

A sick animal should not be worried by everyone about the place examining it in order to offer his "opinion" and advice, but kept quiet when the owner or responsible person has decided upon what course to pursue. There are certain things to be noted and mentioned, when sending for a veterinary surgeon, which may enable him to select from his armamentarium instruments or medicines likely to be required. The stock-keeper should know that the normal temperature of the ox only varies slightly between 99.5 and 102.5 Fahrenheit; being affected by digestion, pregnancy, parturition, and lactation, and occasionally registering another full degree without any departure from health.

Whatever the temperature proves to be should be stated in the message sent, as negative evidence is often valuable in diagnosis. Hurried, distressed, or irregular breathing should be mentioned.

When one considers the present value of cattle, even beef cattle, it will be conceded that it is quite worth while to have in mind certain precautions to be taken immediately in a case of sudden illness of individuals in the herd. The suggestion made here is unquestionably a valuable one, as no harm can be done by giving a dose of linseed oil, while on the other hand, it may be all the aid that an ailing animal will require.

Lice on melons, cucumbers, turnips, cabbage or on sweet peas, golden glow or other flowers may be killed readily by the use of tobacco extract. This is made by boiling tobacco stems up in soft water or by using "black leaf forty," which can be bought at the drug store. This applied with a blowgun will kill every louse. It must touch every one, however, because the louse sucks its food and does not eat any poison on the surface of the leaf. For plant lice, paris green and arsenate of lead are of no use whatever.

The census bureau has received reports from 1,279 slaughtering and meat-packing concerns, whose product in 1914 was valued at $1,652,000,000, 21.8 per cent more than in 1909. The increase is more in value than in quantity. The number of animals slaughtered in 1914 was 59,561,819, an increase of 4.8 per cent.

SHIPPING STOCK TO MARKET.

Muscoda, Wisconsin, Farmers Have Discovered That Through Co-operative Shipping They Have Received the Best Prices Obtainable and Have Not Had to "Cut" Rates.

FOR many years the majority of stockmen and farmers of southwestern Wisconsin have been shipping their stock through the local buyers. This is the great pork and beef-producing section of the state and from one county there is shipped annually to the Chicago market more hogs than from any other county in the United States. From this section much beef finds its way to market and grass-fed steers from southwestern Wisconsin counties have frequently topped the Chicago markets and consequently have a splendid reputation.

Shipping conditions in this pork and beef belt of the state are somewhat different than in the states devoted principally to swine and steers, as the farmers, as a general rule, are not able to ship in car lots at one time without the co-operation of neighbor stockmen. The result has been that the farmer with a few hogs and a few steers has had to depend upon the local buyer, whereas had he enough to make a carload he could ship direct to the market. Under this condition of affairs the Wisconsin pork and beef producer has had to take the local buyer's prices unless he could join with another in making up a car, and this was not at all times satisfactory or possible.

Every stockman who has shipped through local buyers knows that there are fair and unfair buyers. Some pay the best prices and prices which net the farmer more than he could receive by shipping direct, while others place the farmer at their mercy and "squeeze" him when the opportunity affords. Competition among these buyers is, as a rule, a good thing for the farmers, but this is not always possible in the smaller shipping centers and in these cases the farmers have to either take the buyer's quotations or make other arrangements. If unable to make up a car with some other farmer; if there is no co-operative shipping association and the stock is fitted for market other arrangements are often out of the question and the shipper must take the buyer's price and let him make the profit.

This was the situation that confronted the farmers and stockmen in Grant and Richland counties when they organized the Muscoda Farmers' Shipping Association two years ago last fall. These farmers made Muscoda their shipping point and were dissatisfied with local prices. Buyers at other points were paying better prices and stock was being driven and shipped right through the streets of Muscoda to other points. Business men soon realized that this condition existed to their loss; that other towns were getting the business that belonged to Muscoda. When they saw shipment after shipment of hogs driven down the main street of Muscoda and through to Blue River, the first station west, they became aroused and under the leadership of R. M. Orvhard, cashier of the Muscoda State Bank, started the ball rolling that resulted in forming the present co-operative shipping association at Muscoda. The business men and farmers got together, decided that the farmers could get more for their stock by shipping co-operatively than through the Muscoda buyer, and the association was organized. That was in November, 1913, so that the association has been shipping stock for more than two full years.

Muscoda Farmers' Shipping Association

Shipped to Mc Causland, Hoag & Vaughn

Chicago, Ill. Muscoda, Wis., Jan 4

NAME	Hogs	Cattle	WEIGHT Home	WEIGHT Chicago	Chicago Price	Brought in Chicago	Freight and all Chicago Expenses	HOME EXPENSES Bed	HOME EXPENSES Corn	HOME EXPENSES Com	NET
Joe Inhoff	6	R.S.	1230	1215	7 25	88 08	3 75		30	37	83 66
John Kox	8	R.B.	1570	1550	7 25	112 37	4 78		40	47	106 72
Benford Briggs	4	R.H.	920	905	7 25	65 61	2 80		20	27	62 34
Joe Colwell	20	B.S.	2550	2518	7 15	180 41	7 75		1 00	76	170 90
Will Thiede	19	B.B.	4320	4266	7 25	309 28	13 14		95	1 30	293 89
Albert Hardy	3	B.H.	910	900	7 25	65 25	2 76		15	27	62 07
John Howrel	12	G.S.	3040	3003	7 25	217 71	9 24		60	91	206 96
Aug Rux	5	G.B.	1110	1097	7 25	79 53	3 37		25	33	75 58
Tom Seifert	5	G.H.	930	920	7 25	66 70	2 83		25	28	63 34
Jacob Muller	1	Y.B.	350	346	7 25	19 28	1 06		05	10	18 07
	83		16930	16720		1204 22	51 48		4 15	5 06	1143 53

Record of one co-operative shipment of hogs which netted the farmers five cents more than the local buyers' quotations—this statement, made up after the commission firm reports, shows every expense in detail and is on file at all times for the inspection of the shippers.

Statement No.

Muscoda Farmers' Shipping Association

For shipment of 8 Hogs Muscoda, Wis., Jan 4 1915

Name of patron John Kox

Total home weight of car	16930	Your share of Chicago expense	4 78
Total Chicago weight of car	16720	Your home expense—Corn	0 40
Your home weight	1570	Commission	0 47
Your Chicago weight	1550		
Chicago price	7 25	Drawn by you	
Your total in Chicago	112 37	Balance due you	106 72
Total Chicago expense	51 48		

Muscoda, Wis., Jan 6 1915 No.

Muscoda State Bank

Pay to the order of John Kox $106 72

One Hundred Six + 72 /100 Dollars

Copy By R.M. Orchard Manager

This check, with the attached statement, shows at a glance what the shipper receives for his hogs; his shrinkage; Chicago expenses, etc.

During 1915 the association shipped for 155 farmers and stockmen a total of fifty-six carloads of stock compared with forty-three cars during 1914, the first year. One man last year shipped nine different times and the fact that the operations of the association are increasing each year indicates that the farmers are satisfied and that much of the old trouble has been eliminated. Last year's shipments totaled about $70,000 and twelve cars was the largest single shipment.

An editor of The Wisconsin Farmer had the pleasure recently to spend a half day with Mr. Orchard at Muscoda and learn the details of the operations of this association. Mr. Orchard was chosen manager at the organization meeting and has continued in that position ever since. Willis Briggs is president; John Hornish, vice president; Will Thied, C. B. Hackl, Tom Seifert, James M. Lewis, Frank Pospichal and Gottlieb Muller, directors. Officers are chosen each January, the manager serving also in the capacity of secretary.

Mr. Orchard said that it was the belief of every farmer in the association who shipped last year that he fared better than he would have fared by depending on local buyers. These farmers watch the local quotations carefully and Mr. Orchard estimates that during the year the association shippers averaged from 5 cents to 25 cents per hundred more than the local published quotations. He had been told by one shipper that one shipment netted him $25 above the price offered locally. On one particular shipment of calves the local quotation was $9.50 when the market was $10.75. The association shipped on this market and after deducting all expenses netted $9.75 for the shippers.

It is not necessary to be a member to ship with the association. Any non-member may ship, but he is charged an additional commission and last year about thirty farmers who were not members took advantage of this opportunity to get market prices. In addition to getting a market price for the members and shippers Mr. Orchard pointed out that the association aids non-members by keeping up the local prices. During the year one non-member was offered $6 for a shipment by a buyer who cut to $5.50 as the market fell. This farmer refused to ship and consulted Mr. Orchard. He advised holding until the association had a car ready, which he did. The result was this non-member held them a week and netted $6.10 on the shipment.

The success of the Muscoda association has brought about the organization of one along similar lines at Richland Center. Farmers at Mazomanie are considering such a step and for the benefit of communities considering such action The Wisconsin Farmer is outlining in detail the organization of the Muscoda association.

The association was organized with a president, vice president, manager and board of directors. The great amount of work falls on the manager as he must list the stock and be a close student of the market, as a 25 cent drop might mean a big loss.

When a member has some hogs or cattle to ship he telephones the manager, who lists the number, approximate weight, etc. As soon as enough is listed to fill a car the manager notifies the consigner to have his stock in Muscoda at a certain time. He has the car ready and as soon as the stock is weighed and marked it is shipped.

When the shipment reaches Chicago or whatever central market it goes to the cattle are sorted according to the owners. The painted mark put on them before leaving Muscoda identifies them. Hogs are sorted according to grade. It has been found possible also to sort hogs according to owners, but the shrinkage has been found too great that way and it is better to grade them.

This stock goes to the central yard where the commission firm makes up the record and returns it to the manager at Muscoda. This record shows what the shipment brought and also the expense for freight, yardage, commission, insurance and feed at the central yard. These expenses are deducted from the gross receipts and when the record is returned the manager makes up his statements, a facsimile of one being shown in connection with this article. This statement shows the name of the shipper, number of animals shipped, home weight, Chicago weight, the difference representing shrinkage, Chicago price, total brought in Chicago, freight and Chicago expenses, home expenses and the net to the shipper.

Some farmers inquire, "How do I know I get my share when I'm shipping in the same car with eight or ten others?" This is adjusted by the plan whereby each man's cattle are weighed separately and the hogs are all marked so that the commission firm from the markings know whose hogs top the shipment, etc. The man with one or two animals gets in on the same basis as the man with twenty or thirty or more. The record of the commission firm shows all expenses, shrinkage, etc., and it is an easy matter for the manager to make up a complete record for every shipper, which is given him with his check. It has been found that commission firms like this business and solicit it and the banks which handle the funds at the Chicago end are interested and keep an eye on the shipments.

When the stock is sold the commission firm, after deducting the expenses, deposits in the Chicago bank the amount due the association. Pay-

(Concluded on page 19.)

Dan Patch and His Owner.

Remarkable Career of World's Fastest Pacer and the Man Who Owned Him, Who Died Last Week.

THE Minneapolis millionaire, M. W. Savage, was in Hillcrest Hospital in the Minnesota city, recuperating after a minor operation. Out at his country home, at Savage, Minn., was his favorite and famous race horse, Dan Patch, the world's greatest pacer and the foundation of Savage's big fortune, says a writer in the Kansas City Star.

One day last week Mr. Savage was told that Dan Patch was dead. The horse had succumbed to enlargement of the heart the night before. A few hours later Mr. Savage was dead. The hospital physicians said heart disease was the cause. The horseman's friends, however, believe that the shock of learning of his favorite animal's end was too much for him. And since Mr. Savage's condition at no time had been regarded as even serious, and he not only had stood the minor operation remarkably well, but had gained in strength every day and soon would have been discharged as entirely well, this theory seems supported by the facts of the case.

There was an unusual sympathy between the horse and the man. Dan Patch, with the almost human intelligence which individual animals, notably dogs and horses, sometimes display, had understood his master's moods. He had seemed to understand, in the days when he was the sensation of every race meeting in which he appeared, that he paced for the financial gain and the renown of Mr. Savage. The owner, on the other hand, had as deep an affection for the wonderful horse as if he had been a human being. The two were chums. Mr. Savage never went into Dan Patch's paddock without receiving a whinny of joyous recognition from the horse, and Mr. Savage, on his part, never failed to respond with a friendly pat and a word of greeting. It was, "Old boy, how are you today?" and Dan Patch's eyes would fairly shine as he gently nosed the horseman in reply.

Doubtless Mr. Savage went back over the days when the winnings of Dan Patch afforded him the ready money for investments and for expanding his business, and traced the building of his fortune to the almost uncanny victories of the big pacing horse on the tracks of the country. Probably he remembered that the long friendship of man and dumb animal was one which had never been marred by quarrel or misunderstanding or conflict of interests, as might have been the case if Dan Patch had been a human being.

That it was genuine sorrow which the news of the horse's death brought to the master—sorrow as deep as the affection had been strong—cannot be questioned. None will know if the man shed tears, but it would have been no reflection upon him if he did. What is known is that he turned his face toward the wall in the hospital ward, and that Mrs. Savage, who had left him with the assurance that he soon would be home again as she started in her motor car for their country estate, found a message awaiting her on her arrival there that her husband was worse. She did not leave the car, but turned and sped back to Minneapolis as fast as her chauffeur could drive the machine. But it did not avail. Mr. Savage was dead when she reached the hospital.

In recent years Minneapolis and the country generally had known M. W. Savage as the head of big manufacturing interests with branch plants in Memphis, Tennessee, and Toronto, Ontario, as a real estate operator who achieved spectacular successes and as an electric traction magnate. The building of an interurban trolley road out of Minneapolis, called the "Dan Patch Line," opened a wide-trade territory to the city and resulted in the building up of an extensive suburban district.

But the older residents remembered when Mr. Savage obtained his modest start in life. Born in Marlborough, Ohio, March 26, 1859, he went to Iowa where, in the town of West Branch, he married Miss Marietta Bean, in 1881, and tried his hand at farming. He failed and went with his wife to Minneapolis, in 1886. There he began making a stock food. Good fortune attended the venture and in 1902 Mr. Savage bought Dan Patch for $60,000. It took about all the money he had made but he had faith in the horse, which even then showed remarkable speed and staying powers. The sporting world gasped a little at the amount Mr. Savage invested in the animal, but it proved the best advertisement possible. Dan Patch repaid his owner many times over, winning $60,000 in the first two years, so it was no wonder that later Mr. Savage calmly refused an offer of $180,000 for the animal. The remark so often made at the time of the purchase, that "another good church member has gone crazy over fast horses," was refuted.

Meanwhile, Mr. Savage's business interests prospered, he reared two sons, Harold and E. B. Savage, and he was a leader in all the commercial and social interests of Minneapolis. A member of Fowler Methodist Episcopal Church, he was a generous contributor to religious movements, and because of his varied activities became the most widely known citizen of his home city.

Dan Patch's career was as interesting as his owner's. Sired by Joe Patchen, a famous horse in his day, he was foaled in April, 1896, so he was twenty years old at his death. His dam was Zelica, by Wilkesberry. His owner was A. Messner, Jr., of Oxford, Indiana, who found that he showed promise as a three year old. He won his maiden race at Boswell, Indiana, as a four year old.

Dan Patch never lost a race in his long career on the turf and lowered world records no less than fourteen times. His record of one mile in 1:55 has never been equaled. For the last four years he had been in retirement on the "Dan Patch Farm," as Mr. Savage named it, and as the sire of many good horses added to his well-earned fame. He remained the central figure in the Savage stables, which included Minor Heir, Gano Boy, Hedgewood Boy, Lady C., Directum and other track stars. Cresceus was the only

An Announcement of Hudson Policy

35,000 More Hudson Super-Sixes

Detroit, Mich., July 1, 1916

We have today to announce—

That more than ten thousand Hudson Super-Sixes have now been delivered to owners.

That we have in four months, by tremendous exertion, quadrupled our daily output.

That we have parts and materials, on hand and in process, for 20,000 more of the present Super-Six. Constantly increasing demand has just forced us to place contracts on materials for an additional 15,000.

Thus it is settled that at least 35,000 more of the Hudson Super-Six will be built like the present model. Our production is now 3,500 monthly.

No Change in Sight

Our opinion is that a like announcement will be made in a year from now. The Super-Six invention in one bound, increased motor efficiency by 80 per cent. From a small light Six, which delivered 42 horsepower, it created a 76-horsepower motor. And simply by ending vibration.

Stock Super-Sixes, in a hundred tests, have out-rivaled all other stock-car performance. In speed, in hill-climbing, in quick acceleration and endurance, they have done what was never done before.

No man can doubt that the Super-Six holds the pinnacle place among motors. And there is no higher place in sight.

After eight months of experience, with 10,000 cars, not one important improvement in design suggests itself to our engineering corps.

So the Super-Six will remain as it is. And, because of our patents, it will maintain its supremacy.

Watch the 10,000

Watch the 10,000 Super-Sixes now running, and judge if you want a car like them.

Each owner feels himself master of the road. He knows that in every sort of performance his car has out-matched all rivals.

He knows that he has the smoothest-running motor ever built. The most powerful of its size.

He knows that in ordinary driving he never taxes half its capacity. That means long life and economy.

He knows that his motor has shown boundless endurance—such as never before was shown. And that he can look forward to many years of its perfect present service.

Watch some of those cars. Talk to the men who own them. Then ask yourself if there is any fine car equal to it.

Now 135 Per Day

Thousands of men in the past few months have been forced to take second choice. Most of them, we think, now regret it, and will always regret that they did not wait.

Those times are over. We are now sending out 135 Super-Sixes per day.

Go ask our local dealer.

HUDSON SUPER SIX

Hudson Motor Car Company

Detroit, Michigan

horse Mr. Savage owned which never made money for him.

The story of the winning of the race in which Dan Patch lowered the world's pacing record to its present notch, on the Minnesota State Fair Grounds track, September 8, 1906, was graphically told by the Chicago horseman as follows:

This will go down in history as a red letter day in the annals of racing, for Dan Patch, the peerless, the nonpareil of all harness horses, and the most marvelous one which ever lived, smashed his own world's record of 1:54¼, made last fall at Lexington, Ky., by pacing today in 1:55. The Hamline track was at its best, as was also the weather, but still Hamline is not Readville, Lexington or Memphis. However, the son of old Joe has been pacing so well and improving so fast that an air of expectancy pervaded the immense crowd which filled the spacious grand stand and thronged about the track, seeking in vain a place of vantage from which the assault upon the record could be viewed. Each time that champion appeared upon the course cheer upon cheer greeted him.

In the warming up miles the great pacer moved with precision. It was late in the afternoon when he appeared for the word. He was accompanied by two pacemakers, one in front and one by his side, while a third pacemaker was stationed at half to carry him home. Mr. Savage had given positive instructions to drive Dan the first half near his limit, as he was confident the brown horse could come home as fast as he went away, no matter how fast the clip. In accordance with his plan, when word was given by Dr. F. E. Stone, the champion stepped off at a terrific rate. Dan kept the front pacemaker out of his way and was over to the quarter in twenty-eight and one-half seconds.

On to the half he flew, reaching it in fifty-seven seconds, a 1:54 clip. Here the third pacemaker joined him and he began his journey on the third quarter, which is a little upgrade and where the wind retarded him most. As a consequence, this quarter was paced in somewhat slower time, twenty-nine seconds.

As he swept past the three-quarters Dan began to gather himself for the final effort. And right well did he respond, finishing strong and true amid the loud applause of the assembled multitude.

When the time was announced the crowd simply went mad. It was with difficulty that Dan could be taken off the track. His driver was carried to the judges' stand on the shoulders of enthusiastic admirers. The crowd continued to cheer as Mr. Savage was introduced. It was an occasion which will live long in the minds of those who were fortunate enough to witness it.

EAGLE Safety and Service

Buy an EAGLE Ensilage Cutter first because the perfect control and EAGLE Safety Knife Head make it safe. **No danger of long delays and serious accidents** at silo filling time when hours lost mean dollars lost.

Buy an EAGLE because its non-winding, powerful-gripping feed rolls give far greater feeding capacity. Its positive roller-chain-driven blower does not clog and the whole machine is built to stand the work. In a word

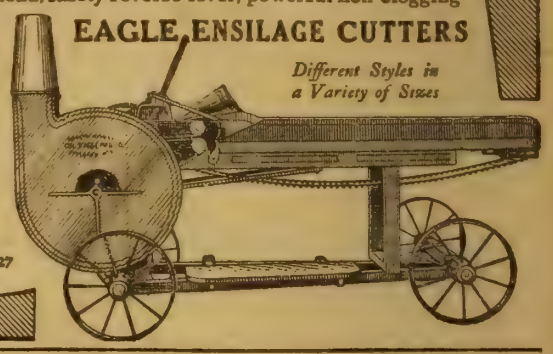
EAGLE means SERVICE

Long Feed Table, large feed opening, four knives, four edged cutting bar, safety cylinder head, safety reverse lever, powerful non-clogging blower and easy adjustment for different length cuts. No belt slippage.

You will find many other special features in these clean built, clean cutting, compact EAGLE Cutters.

EAGLE ENSILAGE CUTTERS

Different Styles in a Variety of Sizes



Write Today for Catalog.

EAGLE MFG. CO.
700 WINNEBAGO STREET 27
APPLETON, WIS.

In and Around Wisconsin

Plans are being made to have an alfalfa demonstration at the Tomah, Wisconsin, Indian School some time later in the summer.

By producing 15,749 pounds of milk, 548.44 pounds of fat and 640 pounds of butter an Ohio Ayrshire has broken the three-year-old record of Elizabeth, of Juneau (Wisconsin).

Outagamie county, Wisconsin, is to have an alfalfa demonstration in August, the dates to be announced later. These will be carried on at the county farm under the general direction of John Flannagan, superintendent.

Wisconsin's corn crop was estimated July 10th at 10,000,000 bushels in excess of that of 1915. This would bring the total over 60,000,000 bushels. But the weather has not been very favorable since the early part of the month and it would not be surprising to see these figures revised upward.

A farmers' picnic has been announced to be held at the Wisconsin State Fair grounds, West Allis, August 26th and 27th. There will also be a cattle sale at the same time according to announcement made by A. A. Fuller, of North Lake. The promoters of the picnic are prominent members of the American Society of Equity and they are planning the organization eventually of a distributing company on a large scale. These matters will be discussed at the picnic.

The Richland County Holstein-Friesian Breeders' Association will hold its annual summer meeting and picnic at the C. B. Keys farm, south of Richland Center, August 9th. A suitable program has been arranged, including the address of C. H. Hampke, of Manitowoc. A milking contest for the ladies will be held and a judging contest for boys under twenty-one years. In addition, there will be foot races, baseball games, etc. The Keys farm is one of the show places of Richland county.

The Walworth county farmers' picnic will be held this year August 16th. This picnic will be under the auspices of the Linn, Bloomfield, Como and Lyons country clubs and the commercial club, of Lake Geneva.

Volume 88 of the American Shorthorn Breeders' Association is now ready for distribution and may be had by non-members for $2, charges paid. Address the offices of the association, 13 Dexter Park Ave., Chicago. This book contains 20,000 pedigrees, of which 8,000 are for bulls, numbered from 429,001 to 437,000, and 12,000 for cows, numbered from 205,001 to 217,000.

State dairy and food commissioner, George Weigle, estimates that muddy roads this season have cost the farmer-dairymen of the state $200,000. His figures cover the months of May and June alone. The loss was due to slow and infrequent deliveries of cream. A lower test in the quality of butter was found in these two months and Mr. Weigle attributes it to churning on the roads and infrequent deliveries of cream.

Farmers in the vicinity of Delavan indulged in a milk strike recently and increased the price paid for milk at the Delavan condensery to $1.60. It was the understanding of most of the patrons that they were to receive $1.70 per hundred after July 1st, and when that date arrived the company did not seem disposed to grant the advance. The farmers absolutely discontinued the sale of milk and pickets were established, according to reports, to see that none of those interested in the strike broke over the agreement. Business men of Delavan suffered considerably by the milk war and were in a fair way to sustain much greater losses. They were instrumental in getting the compromise which was finally agreed upon and which seems to satisfy all for the present at least.

A delegation of Louisiana farmers will visit Wisconsin about the last week of August to make farm observations. The delegation will leave Louisiana August 22d and stop off for a short time in Illinois. It has been arranged for the farmers from the South to spend two days in Waukesha county and probably a day or two at Madison.

J. W. Fitch, writing in Wisconsin Horticulturist, states that conditions are favorable for a big cranberry crop in Wisconsin this year. Cranberry sales oganizations have caught the spirit of the times and have decided to set aside 10 cents per barrel for advertising. This is expected to stimulate sales and keep the market good. Good crops are in prospect in the Jersey bogs and also in the Cape Cod district in Massachusetts.

There will be plenty of things just as interesting for the housewife as for the farmer at the Wisconsin tractor demonstration, to be held at Madison September 4th to 8th. Of course, there will be tractors galore, but in the big accessory tent small implements of all kinds and machinery that depend for operation upon some other source of power will be on exhibition. Then there will be an exhibit put on by the college of agriculture showing modern arrangements of the farm home, conveniences for the kitchen and milk house that will save the farm wife much time and hard work, model sewage disposal plants that make farm life less subject to disease, practical water systems that make provision for running water in the kitchen as well as in the barn and barnyard, heating systems that do away with the work and waste of wood and coal stoves, and lighting systems that put the farmhouse beyond the reach of the danger and dirt of lamps.

ONE OF THE TYPICAL SCENES IN THE BEAUTIFUL KICKAPOO VALLEY OF WISCONSIN.
(Barn of Mr. D. S. Simmons, near Viola.)

Don't Wear a Truss

BROOKS' APPLIANCE, the modern scientific invention, the wonderful new discovery that relieves rupture will be sent on trial. No obnoxious springs or pads. Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. **Sent on trial to prove it.** Protected by U. S. patents. Catalogue and measure blanks mailed free. Send name and address today.

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MAKE MORE MONEY

WITH less aggravation by attaching an adjustable stubble cutter to your corn harvester. Cuts the "stubs" while you cut the corn. Easily attached to machines of the Acme, McCormick, and Milwaukee type. Interesting book, "Comfort in the Cornfield," free. Give make of corn harvester when writing. Address CORN HARVESTER ATTACHMENT CO., 524 S. Dickinson Street, Madison, Wisconsin.

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LET US TAN YOUR HIDE: COW, HORSE, or calf skins for coat or robe. Catalogue on request. The Crosby Frisian Fur Co., Rochester, N. Y.

The Helvetia Milk Condensing Co., of Monroe county, announces a raise in its milk prices for July, August and September. July prices have been raised from $1.35 to $1.40, August from $1.35 to $1.45 and September from $1.45 to $1.55. Test regulations are to remain the same as before.

LAW QUESTIONS.

Sale of Farm—Fixtures.

A Subscriber, Otter Tail Co., Minn.—A certain man owned a farm in Iowa, on which there were portable hog houses, feed bunks, hog troughs and a feed rack with runners under it. He sold the farm, but nothing was said in the contract of sale about the things above mentioned. Before he gave possession of the farm, he sold said things at public auction. Had he a lawful right to do so?

Answer.—The things mentioned were not fixtures, but personal property which the seller of the farm had a right to keep, or sell.

White Salmon, Wash.—A record cherry yield of 1,071 pounds of Royal Anns from one tree, which brought $48.19 at the local cannery, and 916 pounds of Governor Woods from another, bringing $27.50; a total of $75.69 from two trees, is reported by George Thomas, of this place.

Marketing Wood-Lot Timber.

Study the Amount Which May Be Offered For Sale and the Purpose to Which Your Timber Is Best Adapted at the Factory.

TO SECURE a fair price for his timber the owner of a woodlot should know how much material he has and for what purposes it is best adapted. The first thing for him to do, therefore, says an article in the yearbook of the department of agriculture, "Pointers on Marketing Woodlot Products," is to find out how much timber of each kind the woodlot contains, what products it will yield and what is its general condition and quality. If the woodlot is small it will be best to measure each tree separately. The diameter should be measured at about four and one-half feet above the ground with calipers made for the purpose. Heights should be carefully estimated, or measured with some sort of height instrument, to the first large limbs. When the entire woodlot has been gone over it will be possible to divide the trees into diameter classes; for example, eight to twelve inches, twelve to eighteen inches and eighteen inches and over. As a general rule, trees from eight to twelve inches in diameter will make ties; those from twelve to eighteen inches, poles or piling, and those eighteen inches and over, lumber or veneer. Knowing the diameter and height, the amount of timber in board feet in each tree can be found by the use of volume tables, which are included in Farmers' Bulletin 715, "Measuring and Marketing Woodlot Products." The quantity of cordwood a tract will yield can hardly be estimated by an inexperienced person. Sales of such material will usually have to be made on the basis of actual cut.

If the woodlot is large it will, of course, seldom be possible to measure each tree separately. In such cases every tree may be measured on parallel strips sixty-six feet wide running through the tract. Every 660 feet in length of such strips comprises an acre. Averaging all the acres comprised in the strips and multiplying by the total acreage of the tract gives the total stand. The strips should include at least 10 per cent of the woodlot. Proper allowance must also be made for defective timber. Dead trees, except those killed by fire or other outside agencies, are apt to be very defective and should be culled. When the tract is exceptionally large it may pay to employ a professional "cruiser" to estimate the timber.

Once a woodlot owner knows the kind, amount and quality of his timber the next step is to find someone who will buy what he has to sell. If the owner depends altogether upon local industries to buy his product he is likely to find his market extremely limited. Some products, such as crossties and fuel wood, have to be sold locally; it would not pay to transport them far. But other products, among them tan bark, can be shipped 150 miles, and still others, like walnut timber for gunstocks, can be shipped almost any distance.

Railroads are the largest purchasers of crossties. Any station agent will furnish information concerning specifications and the prices paid by his company. Electric railways in cities and towns also use ties, but unless the distance to town is short it will not pay to ship them. Electric interurban lines offer the same opportunity for disposing of ties as do the steam roads. Telegraph and telephone lines are always on the market for poles. Most of them have branch offices in towns and cities where prices and specifications can be obtained. Electric power and electric street railway companies also use poles. Pole specifications usually classify the materials in five-foot lengths, beginning at twenty feet and running up to sixty feet, with a diameter at the top end of seven inches in the smallest poles and correspondingly larger diameters for the longer ones. The market for piling is not very extensive, but railroads, large construction firms and docking companies purchase considerable quantities. Piling timbers, which must be straight and long, bring good prices. Lists of users can be obtained from the forest service. Mines are large users of timber and, if the woodlot is in a mining district, it would be well to look into this market. Sawmills, veneer mills and fruit and vegetable package factories offer a market for the particular kinds and qualities of the woods they handle. These industries buy all their material in log form and the woodlot owner does not have to engage in any manufacturing operation himself. All he need do is to cut and deliver his timber in the rough at the mill. Veneer logs must be of good quality and size, but selected stock brings a high price.

The forest service has prepared bulletins on the wood-using industries of a number of states which tell the uses to which various woods are put and the quantity used annually for each purpose. They also contain directories of wood-using firms arranged according to the products that they manufacture. A list of these bulletins and information as to how to procure them may be had upon application to the forest service.

The way in which woodlot products are sold may have a good deal to do with the profit an owner gets from his tract. There are four ways of selling: (1) by scale measurement of rough products; (2) by the piece, for such products as ties and poles; (3) by the boundary, for a lump sum; and (4) by lumber scale of sawed products.

Selling by the log or piece is the simplest method. Ties, poles, piling, etc., are always sold by the piece. The important things to know are the different grades of each product and their relative value. Fire wood, pulp wood and excelsior wood are sold either by the cord or rick. This, too, is a comparatively simple method of marketing. To be sure of selling profitably by boundary for a lump sum the owner must make a very careful estimate of the amount and value of his timber.

In the majority of cases the best time to cut timber is in the winter months. Winter-cut timber seasons slowly and evenly and by the time the warm weather comes is thoroughly air-dried. Products which must be peeled, however, such as ties, poles and tan bark, should be cut in spring when the bark peels most easily. Veneer logs which must be delivered at the mill in a green condition can be cut in any season of the year, provided they are delivered as soon as cut. This is true also of pulpwood and tannin-extract wood.

The really necessary steps, then, in the profitable marketing of woodlot products are to find out what the woodlot contains and then, through the medium of a list of wood-using industries within shipping distance, to find a purchaser for the various classes of timber on the tract, delivering the material in the forms called for. If the woodlot owner will devote the same thought and care to marketing his timber that he does to marketing other farm crops he will be more than likely to find that this necessary part of the farm, which now too often brings in no revenue at all, can be put upon a sound paying basis.

The national and state agricultural departments are at "outs" again on the Kansas wheat prospects. There is a difference of 20,000,000 bushels in the estimated yields of the two. The national government gives Kansas credit for a probable yield of 110,000,000 bushels from 7,440,000 acres, an average of sixteen bushels to the acre. The state board of agriculture's estimate is 90,000,000 bushels on 7,754,000 acres, an average of slightly less than twelve bushels to the acre. The acreage for Kansas is based by the state board of agriculture on the actual sowings reported by the assessors, who asked each farmer March 1st of this year the amount of wheat sown and the amount plowed up. The government figures are based on the estimates of farmers as to the amount of wheat sown, compared with other years and not on the actual sowings.

10,850 MILES

WITHOUT STOPPING THE MOTOR

KING EIGHT CYLINDER

A registered STOCK car (everything stock—gear ratio, ignition, tires, wheels, etc.) made this unparalleled record in a Car Owners' Service Test conducted under OFFICIAL A. A. A. sanction and supervision.

Sheepshead Bay Speedway and Long Island, New York roads were the scenes of this sensational trial which began at 12:14 P. M. June 15th and finished at 12:14 P. M. June 29th. Officials of the American Automobile Association maintained a daily 24 hour vigil during the entire two weeks. Many newspaper and motor journal representatives and parts manufacturers were in constant attendance.

The sturdy KING ran day and night through rain, fog and boiling sun without requiring a *single* replacement or adjustment.

10,850 miles equals about two years' travel in the hands of the average owner, yet in this entire mileage the car was stopped (with the motor running) for a total of but 15 hours, 25 min. 41 sec. On this basis the test demonstrated that a KING EIGHT, even with the motor running continuously for two years, requires only *nine minutes per week* of an owner's attention for *all* service—gasoline, water and oil fillings, tire changes, battery care, etc.

And most astounding of all, the KING made this 10,850 miles with a total *labor* expense of considerably *less* than *ten dollars*.

During the entire 10,850 miles a weight equal to five passengers was carried and the car maintained an average speed of 34 miles per hour, excluding stops.

An examination made after the test proved the car to be in perfect running condition and ready for another trial of the same or greater length.

This great KING achievement tops off the series of remarkable road tests recently conducted on the Pacific and Atlantic seaboards. Climbing tortuous Mt. Wilson in Southern California sealed in high gear; traveling 987 miles in high gear from Los Angeles to San Francisco and return, and driving 544 miles in high gear from Providence to Providence via Albany and New York City, are three remarkable accomplishments of the eight cylinder KING all within a fortnight.

The accuracy of every statement in this advertisement can be proved by impartial, official documents. These gruelling trials have raised still higher the proud estate of KING ownership, and to prospective car purchasers this *pioneer* eight cylinder car now offers a record which can mean nothing less than ABSOLUTE SATISFACTION IN PERFORMANCE, SERVICE and OPERATION ECONOMY.

7-passenger, 60 Horse Power Touring Car $1350
Roadster, $1350. Sedan, $1900 Prices F. O. B. Detroit

KING MOTOR CAR COMPANY DETROIT

SUCCESS IN UPPER WISCONSIN.

Dairying Promises to Be as Important an Industry in Douglas County as in the Southern Counties of the State—An Idea of the Progress Which Is Being Made.

BARN AND SILO ON P. A. GLASS FARM AT BENNETT.

MODERN EQUIPPED BARNS WHICH HOUSE THE FINE HOLSTEIN HERD OF L. K. LUSE, SOUTH RANGE, DOUGLAS COUNTY.

WITH the passing of the lumber jacks from Douglas county, Wisconsin, has come the settlers who are adopting the most advanced ideas of farming, and within a few years this Upper Wisconsin county should prove as great an agricultural county as it has, in the past, proven a gold mine for the lumber kings. Although the fifth county in area in the state with a total of 1,337 square miles, less than a seventh of this area is in farms and under the plow.

The writer had the pleasure recently to spend a day with J. M. Walz, county agricultural representative, and learn at first hand what is being done along agricultural lines in this county. Hundreds of settlers are going into this country now to farm the fertile soil, much of which is still covered with stumps left by the lumber gangs, and second growth timber. Many come from the southern part of the state and many from Iowa and Illinois, bringing with them the experience of farming in other sections. Many farms that have sprung up in this once timbered county would do justice to older sections of the state. It has only been a few short years since lumbering on a large scale ceased, and there are still a few stretches of native timber, so our readers can calculate for themselves that what has been done has been done in a short time. Superior is the only large city in the county, and many of the towns are still inland and far from the railroads. This probably accounts for the good roads that are being built through the brush and past the settlers' farms, and despite the fact that less than 7 per cent of its available farming area is in farms, Douglas county is doing as much permanent road work as most of the counties in the state.

The county agricultural representative began his work in the fall of 1914, which time marked the beginning of a systematic endeavor to improve agricultural conditions. Like every county there were many problems to face, such as drainage of the heavy clays; the addition of humus to the soils; correction of the acidity on the lower lands, the need of more pure-bred live stock; better seed, etc. These problems the representative is helping the farmers to solve, and the work that has been done is the best evidence of success. Farming is still carried on on a small scale, as the farms or rather the amount of cleared lands in the farms is small. This is brought about by the fact that settlers have taken slashings and are clearing year by year, so that in the end they will have good-sized farms under the plow, paid for as they go. This makes it hard for the farmers to work together, the farms being widely separated, but all these conditions are gradually being overcome with the influx of more settlers the clearing of more land and the increasing size of the cleared area on farms already laid out.

VIEW OF THE HOME AND BARNS OF T. J. ANDERSON AT REDHAM.

Considerable emphasis has been placed on drainage and much has been done by surface ditches if not with tile; the soy bean has been introduced as an improver of the sandy lands; pure-bred seed has been distributed in order to encourage the growing of pedigreed grains as wheat, oats, barley and even corn do well in Douglas county as indicated by the heavy yields. Potatoes should be one of the most important cash crops, and particular attention is being given, with good results, to the growing of standard market varieties, and to further this work a contest was held among 100 school children last year to whom pure Green Mountain seed was furnished.

Dairying promises to be the big farming operation as it is in other sections of the state. The new creamery at South Superior which was completed recently affords an outlet for much of the milk and cream, but as yet the farmers are not well enough organized to buy and sell stock.

The importance of picking out one thing and sticking to it is being impressed upon the settlers, and with this has been spread the need of better dairy cattle and better sires. The Rotary club of Superior brought in about a year ago a hundred grades and sold them under the Ashland plan, which indicates the kind of operation the farmer receives from the business men. Many pure-bred sires are now being bought and the representative is encouraging communities to club together and buy pure-bred sires where none are available in the neighborhood. The result will be the breeding up of the native stock. Farmers' clubs have been organized in several villages so that the social as well as educational side has not been neglected and in one district, Poplar, nine silos were erected last year through the work of the farmers' club and the institute. During the year 1915 the number of silos in the county was doubled and many more will be built this year. Quite a number of farmers are raising sheep which are good for brushing down the land while several feeders are experimenting with shipping to western sheep and feeding them on the cut-over lands.

The substantial farm homes and farm buildings which are to be seen on every hand in the county testify to the prosperity of their owners and indicate what may be expected along farming lines in this county in the future. One of the best herds in the county is that on the farm of George C. Cooper, at South Range, where he has forty-five head of pure-bred Guernseys. This herd is supplying much stock as foundation stock for neighboring farmers. The same is true on the L. K. Luse farm at South Range, where about thirty-five head of Holsteins are kept, many pure breds, in addition to pure-bred Percherons. Mr. Luse uses a milking machine and finds it gives him splendid service.

D. M. Merrill and E. Stonge, of Ancona Falls, are having splendid success with fruit. Although lying along Lake Superior, this has been found a good, dependable fruit section, and the state horticultural society has an experimental orchard on the farm of P. A. Peterson at Poplar where the society is determining the right variety of apples for this section. The first of the nine new silos in this vi-

MANY DOUGLAS COUNTY FARMERS HAVE SUCCESS WITH HOGS. SCENE ON THE SHERIDAN FARM.

WHEAT AND CLOVER THRIVE SIDE BY SIDE, IN THIS COUNTY. FIELD OF WILLIAM HALLUM, ITASCO STATION.

cinity was built on the Peterson place. Edward Vaughn, at Poplar, is an Iowa settler, who has Guernseys and pure-bred Chester White hogs. He farms about eighty acres out of 500 which he owns, 420 not being cleared. He had the champion calf at the last fair and is developing some nice stock. Theodore Lawlor at Gordon has specialized in grains and was the first to show the use of the light, sandy soils. A. N. Young, of South Range, is going in for pure-bred Holsteins, and N. A. Thompson, of Noscot, is giving his attention to grains and horses.

Foxboro is the center of some very nice farms, among which is that of Signor Hadecher, who has forty-five grades and furnishes milk to Superior. His barn is all modern with running water and his herd is one of the largest in the county. John Finlayson and Otto Schmidt each have nice grade herds, and Schmidt has had splendid success with pure-bred seed grains. E. J. Roth, of South Superior, has a herd of fifty-five cows. He uses a pure-bred sire and is also having good luck with Poland China hogs. George Seldon is another who has found pure-bred seed grains profitable in addition to a herd of grade Holsteins. Christianson Bros. at Wentworth have a new barn and silo for their herd of sixty cows, and these improvements are all modern.

These are only a few instances of successful farming in this Upper Wisconsin county and serve to indicate what may be expected in the future.

GOOD HARVEST WEATHER.

Hay Makes Good Yield--Cutting Small Grain Has Started--Corn and Potatoes Doing Well--Some Sections Need Rain.

WISCONSIN.

Adams County.—Weather for the last three weeks has been hot and dry, which has hurt to some extent all crops in this region. Rye appears to be well filled, and harvesting will begin soon. Tame hay has been put up; the crop was light. Pastures are drying up on the upland. Early potatoes need rain; late potatoes have a good stand and look well. Corn has a good, healthy color, but is undersized. Oats are suffering from heat and drouth. Marsh hay will make a heavy crop.—W. B. Barnes.

Barron County.—We have had first-class haying weather for two weeks. Corn has made a good growth. Potatoes are looking well, but bugs are working overtime on them. The hot weather has held back the pea crop, but a rain on the 14th and 15th helped it. With favorable weather from now until harvest, oats and barley will make good crops.—J. K.

Burnette County.—Small grains are heading out satisfactorily, but rust is on the oats. Corn and potatoes have advanced considerably during the last two weeks of hot, dry weather. Potato bugs are plentiful and Paris green high priced. Pastures are drying up on high ground. Haying has started, but the stalks dry slowly, being somewhat immature on level land. Berries and fruits promise well. So far this season, prosperity seems assured.—E. H. Johnson.

Fond du Lac County.—Weather is extremely hot and dry. Corn, as well as pastures and gardens, is much in need of rain. Haying is well along, and the hay is of very good quality; conditions fur curing were favorable. Barley is nearly ripe and promises to be a good crop. Oats are doing well, but are not as promising as last year.—A. L. Williams.

Jackson County.—Because of extreme heat and two good rains during the last two weeks, the corn crop is in much better shape than at this time last year. Weather is very favorable for haying, and those who sowed timothy are cutting more hay than they expected. Grain harvest will be late. Small grains lodged considerably due to storms on the 15th and 16th. No complaint of rust has been made. Oats and barley will probably yield heavily.—P. W. Jones.

Juneau County.—Grains are coming on in fair condition. Some barley is cut and winter rye is almost ready to cut. Oats look well. Haying is well under way, and a fair crop of fine quality is expected. Weather has been good for curing hay. Corn, potatoes and pastures need rain. Some pieces of buckwheat are up and look well.—C. E. Haskins.

Lafayette County.—Weather is hot with no rain for three weeks. Everything is growing well and corn is much better than last year. Small grain is very heavy and a rain would lodge many fields. Hay is being harvested in the best possible condition and the yield is better than was expected. Pastures are suffering from dry weather, so are potatoes and garden truck. Some barley is ready to cut.—W. J. Martin.

Langlade County.—Oats are heading out and have fairly good size. Rye is good, barley fair. Peas are in bloom and look fine. Corn was backward, but has improved very much in the last two weeks. Potatoes are much better than last year at this time. Alfalfa is a light crop because much of it winterkilled and is now running to June grass. Clover is making about two and one-half tons per acre of good quality hay; timothy about two tons. Strawberries were a bumper crop. Apples promise fairly well and vegetables are growing fine. Weather is hot and dry.—Chas. Lade.

Lincoln County.—Small grains of all kinds are backward. The hay crop is very good and pastures are in fine condition. Potatoes and corn are coming on well, considering the cold, wet spring. Fruit is scarce.—G. A. Patterson.

Manitowoc County.—Haymaking is now in full swing, and the crop is almost up to average in spite of the unfavorable spring. Corn is three or four weeks late, but the warm weather is bringing it along fine. Peas and barley look poor because the weather was too wet and cold in May and June. Oats and rye are coming along in fine shape and will make good crops. Pastures are getting short on account of dry weather. A good rain is needed for all crops. Dairy cows have been giving an exceptional flow of milk, and cheese factories are doing a good business.—Edward E. Straka.

Marquette County.—No rain has fallen for a month and crops are suffering. Pastures are burning up. Young clover looks sick on account of drouth. Rust is in the rye. Corn has a fairly good stand. Potatoes look well. Meadows are good this year.—Emil Hein.

Racine County.—The hay crop is unusually good; timothy made one and one-half tons per acre on the average and the new seeding made about two tons. Corn is backward and the stand uneven. Oats look fine and promise a full crop. Barley shows large, well-filled heads and will yield well. Pastures are not growing because of need of rain. Early blight affected the potato some, but those not affected are unusually good.—J. Frand Bradley.

Sawyer County.—Crops are doing well. Hay is especially good, and clover is being cut which averages from two to three tons per acre. Early sown oats are doing well, but the later oats show signs of rust. The stand of potatoes is unusually good in the early-planted fields. The later planting is more uneven. Weather has been very warm and dry for the last two weeks except for a few local showers.—Jens Uhrenholdt.

St. Croix County.—The hay is exceptionally good and it has been harvested under very favorable conditions. Pastures are fine and cattle are in better shape than usual for this time of year. Rye is being harvested on light, sandy soils and the crop is turning out well. Barley never looked better and is now maturing rapidly. The oats crop is not as heavy as last year and the quality will not be as good. The wheat stand is normal, but many fear that rust and warm weather will injure the crop. Early potatoes are good, but the dry, hot weather has hastened their maturity and they will, therefore, not be large. Potato bugs are troublesome.—Stephen Everson.

Trempealeau County.—In general crops look fine, although they are a little behind normal. Most of the haying is finished. Farmers sow timothy and clover in their meadows, and since the clover winterkilled, the crop is either thin timothy or a mixture including self-sown red top. Early grains are growing nicely and turning some. The last few days have been too hot for the grain, which will suffer if the heat continues too long. All grain has a good strong growth of straw. Corn is uneven; the best is about four feet tall and looks well. Weather has been too dry for pastures, which are getting short. Potatoes and gardens are growing nicely.—John Lowe.

Wood County.—We had cold, rainy weather until the last week in June and now the weather is dry and hot. Pastures and meadows are in fine shape. Corn and potatoes promise well. Some of the corn is not very high yet, but the season in general has been late. Some damage to corn was done by cutworms. Hay harvest has just begun. Oats will make 80 per cent of a normal crop. Barley is very good. Dairy cows are doing well; other cattle and swine are in good condition and prices high.—P. B.

Colt Needs Grain and Grass.

To make an 1,800-pound horse at maturity, the colt should weigh from 600 to 700 pounds at weaning time and 1,000 pounds at one year. To make the usual standard of 60 per cent mature weight at twelve months, the growing colt needs more food than the milk given him by his mother.

Some oats, fed in a separate box so his mother cannot get it, is better for growth than corn because it is a more balanced feed, says Prof. M. G. Thornburg, of the department of animal husbandry at Iowa State College. A little bran and corn will do if the oats is not available. Even if the colt is on pasture he needs a little grain.

If the mare is working the colt should not follow her, wearing himself out in the hot sun. He should have a clean, well-ventilated box stall or lot to run in where he can get his feed while his mother is working. A little clover hay and water will keep him contented. The fences and sides of the stall need to be in good shape, else he is likely to get tangled up and hurt himself.

If he has the run of the lot he will get more exercise, which is essential in developing a strong colt. If the mother and colt are out on grass on idle days and nights the grass will increase the mother's milk flow and the colt will soon learn to nibble at the grass. If the colt eats grass and hay when he is weaned he will not notice the change and keep right on growing.

Sawdust Poor For Concrete.

Sawdust does not mix well with concrete to make a good cement floor. The engineering authorities at Iowa State College are looking for the man who says that it does. In some manner, the report has gone over the state that some department of the college had recommended such a mixture. Prof. M. F. P. Costelloe, head of the department of agricultural engineering, has issued an authoritative denial of this.

"There is no department of Iowa State College that would recommend cement floor made from a mixture of sawdust and concrete," he stated in a recent letter in answer to one of the numerous inquiries that have come to him. "We would thank you very much if you would tell us where you read these statements."

The wearing qualities of any concrete work would depend upon the hardness of the materials mixed with the cement. For this reason quartz sand is always considered the most desirable. Where a floor less firm than concrete is desired, paving blocks of some form of asphalt construction is sometimes used.

Two months after the cow-testing associations had been formed at Rowland and Independence, Iowa, reports from the official tester showed that thirty-three better records were made as the direct result of better feeding. Herds in these associations showed an increased profit of from $10 to $20 and individual cows increased their earnings to their owners from $3 to $6.50. The last report of Howard C. Barker, of Iowa State College, state agent for the cow-testing associations, shows that there are now twenty-three testing associations in the state, all of them prosperous.

Live stock and soil fertility go hand in hand. Rich soils and big crops make another loving couple.

Game Farming Pays

THE time is not far distant when the demand for game birds in this country will be far more universal than it is today. And today the demand is much greater than the supply. A short time ago we received a letter which said, "Had we them to sell we could have disposed of over 5,000 pheasant eggs last spring". This is only one of many similar instances that could be cited.

When you consider that pheasant eggs sell at from $20 to $25 a hundred you will realize that raising of game birds is by no means a mere labor of love. There is profit in it as well as pleasure.

A game farm run as an adjunct to your present poultry work, or independent of it and on a larger scale if you prefer, will pay you well in many ways.

In addition to the sale of birds and eggs for the market or breeding purposes it is possible to derive both profit and pleasure from the good hunting which the birds will afford. Furthermore, it has been proved that game birds destroy in large quantities insects such as tomato worms, squash bugs, cut worms, apple maggots, tent caterpillars, cherry lice, etc., that are harmful to the market garden or to fruit trees.

In our booklet, "Game Farming for Profit and Pleasure", you will find much interesting and valuable information on the entire subject of game breeding. It is sent free to those who ask for it. Write for your copy today. Please use the coupon below.

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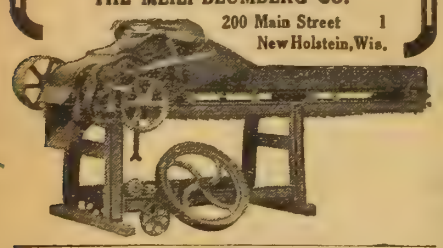

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Rules of National Swine Show.

Entries Will Close on September 20th, and Certificate of Registration Must Accompany Every Entry Application.

ACCORDING to regulations of the National Swine Show all exhibitors will be required to purchase an exhibitor's ticket at the price of $1. Helpers to care for the exhibit will be furnished free tickets by the general superintendent.

Charges for pens will be as follows: All pens 5x9, $1; pen 10x9, $2. All applications for pens and space must be made to E. Z. Russell, general superintendent, 103 Bee Building, Omaha, Neb. Fees for pens must be paid at the time application is made. Pens must be secured at any time upon application to the general superintendent.

Entries shall be made with the secretary and must be addressed to James J. Doty, secretary, Bee Building, Omaha, Neb.

Entries close Wednesday, September 20th. No entry accepted unless mailed on or before closing date.

An entry will not be accepted for any animal for which the exhibitor does not furnish a certificate of registry at the time of sending the entry. The certificate of registry for each animal must be sent with entries, so as to have the necessary information from which to print the official catalog of the show.

In case an animal entered dies or is injured so that it cannot be exhibited, another may be substituted by a proper showing.

No person will be allowed to see the entries or have access to the entry books until after the entries have closed. No entries are necessary for championships.

Competition open to the world except that no institution will be permitted to compete that is supported wholly or in part by state aid or taxation.

All animals shown must have been the property of the exhibitor thirty days prior to the opening of the show. Firms or co-partnerships entering animals for exhibition must have been in existence at least thirty days prior to the opening of the show, and in all cases must be bona fide as shown by the certificates of registration. If it be ascertained that any exhibitor has made or caused to be made any false statement in regard to any animal exhibited or the ownership of the same, or if any exhibitor shall attempt to interfere with the judge in the performance of his duty in any manner or shall refuse to accept the awards made, he shall be disqualified from further competition and shall forfeit any premiums already awarded.

Animals on exhibition must remain in the space assigned them on the grounds until the close of the show, except by permission of the president of the association upon the recommendation of the general superintendent.

All possible diligence and care will be used to prevent the loss or injury to animals on exhibition, but it is hereby expressly stipulated that the National Swine Growers' Association or anyone of the management of the show, will in no wise be responsible for a loss or injury of any kind to any animal.

All hogs for exhibition must be in place by 10 a. m. Monday, October 2, 1916, ready to be driven into the show ring at 1:30 p. m. Monday, if called.

An exhibitor will be permitted to show three animals in each class, but cannot be awarded more than two prizes in any class.

Sows two years old or over to be eligible to show must have produced living pigs within twelve months preceding September 1, 1916, and all boars of like age must have sired pigs farrowed within the same time.

All swine exhibited at the national swine show must be accompanied by the certificate of a qualified veterinarian, stating that they have been immunized or the sworn statement of the owner may be sent instead of the veterinarian's certificate, saying the animals have been immunized by either the double or single method. If by the double method it must have been done more than twenty-one days prior to date of shipment; if the single method was used, it must have been less than twenty-one days prior to date of shipment.

In case of dispute as to the age of an animal, its certificate of registry will be evidence of the age and the owner will be required to file with the general superintendent an affidavit that it is the identical animal therein described.

Protests designed to affect the awards must be made by an interested party. This protest must be in the form of a written statement, verified by affidavit, setting forth the reasons for protesting, and must be filed with the secretary of the National Swine Growers' Association on the day the awarding is made, with a forfeit deposit of $10 in case the protest is not maintained, provided that protest will be entered any time before Friday, October 6th, at six p. m., if the protesting party will state under oath that the facts upon which the protest is made were not in his possession at the time the award was made. The show committee of the National Swine Growers' Association shall determine all protests.

Awards of premiums will be made by one expert judge, who may have a consulting judge, the decision of the regular judge, however, must be final.

Pigs farrowed the property of the exhibitor may be shown as bred by exhibitor.

The general superintendent shall have authority to require each attendant showing animals to dress neatly and in a manner that shall meet with his approval. The general superintendent shall have authority to prevent any attendant who does not comply with his orders from exhibiting an animal.

Exhibitors may have the mail addressed in care of the secretary of the National Swine Growers' Association, Omaha, Neb.

Moneys paid for pens will be refunded by the general superintendent if application is made for such refund by September 1, 1916.

Carload shipments for exhibitors should be consigned to the owner at the National Swine Show, Union Stockyards, South Omaha, Neb.

Animals for exhibition sent by express must have express prepaid and consigned to care National Swine Show, New Horse Barns, Union Stockyards, South Omaha, Neb.

The right is reserved by the National Swine Show committee appointed by the National Swine Growers' Association to revise, correct, add to or interpret these rules as the interests of the National Swine Show may require, and all entries are to be understood as being made or exhibited only upon this basis.

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At Shell Lake, Wis., A. J. Hanson's Blizzard filled a 100-ton silo with a 6 H. P. engine in 2 days using 16 gallons of gasoline. Mr. Hanson says, "It's easiest running and will do the most work of any machine of its size I ever used." The

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Dynamite For Clearing Land.

A. H. Anderson, of Walworth county, Wisconsin, has had considerable experience clearing land with the use of dynamite, according to the Independent, which recites the case as follows:

He broke up six and one-half acres of timber land this spring, on which he had used seventy pounds of dynamite in getting the stumps out. The job of cleaning cost him about $100.

The wood lot contained quite a number of trees and a lot of old stumps which, though rather old were solid in the ground. The trees were grubbed out in the fall by digging down and cutting off all the spread roots, then pulling them over with a team and block and tackle.

There were fifty-four of the stumps that had to be blown out, and some of them were in so solid that it required two pounds of dynamite to get them out. Seventy pounds of dynamite were used on the fifty-four stumps. Besides blowing out the stumps, the explosion of the dynamite loosened up the soil, though soil on Heart Prairie never packs as it does in some other localities, due to the excellent drainage.

Besides the cost of the dynamite, there was the expense of burning the brush, clearing off the stumps after they were blown out, and clearing off the wood. Two men spent two days clearing up the brush and burning it. It took two and one-half days for one man to blow out the stumps, and two men spent a day and a half clearing up the stumps after they were out. Then there was the cost of the team work which, added to the cost of clearing the lot, though this work was done during the winter when the team would otherwise be idle. Considering all the expense, time, labor and all, Mr. Anderson figures that it cost him just about $100 to clear the six and one-half acres or about $16 per acre, which amount will easily be paid back by a few good crops from this new land.

On just what kind of nest egg does Her Highness, Mrs. Hen, prefer to sit while depositing her egg? We'll know pretty soon, according to G. M. Turpin, head of the poultry husbandry department at Iowa State College, who is conducting experiments along that line. Indications are that a hen prefers a real to a china egg as a nest adornment. In one four-test experiment in which a real and a china egg were placed in different nests each day, of sixty-five eggs laid, one-half were deposited in the nest holding the real egg, one-fourth in the china egg nest and the remainder in the other two nests. "We will make no definite statements until further tests are made," says Mr. Turpin.

MONEY-SAVING CLUBS.

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Mother's Magazine	$1.50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
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People's Popular Monthly	$ .25
Woman's World	.35
Wisconsin Farmer	1.00
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CLUB NO. 9.

St. Louis Twice-a-Week Republic	$ .50
Mother's Magazine	1.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 10.

McCall's Magazine	$ .50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.50

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Size of Pulley.

I have a feed grinder run by horse power; also a six-horse-power gasoline engine, rated at 340 R. P. M. and equipped with a fourteen-inch belt pulley. The jack shaft of the horse power makes twenty-two revolutions to one round of the team. Can I put a pulley on the jack shaft to run it from the engine; if so, what size pulley?

Answer.—Assuming that your horses make ten rounds per minute, which is probably their approximate rate, you could use a twenty-inch or twenty-two-inch pulley on the jackshaft.

Setting Auto Engine Valves.

Enclosed please find a diagram that I received from the factory for timing a 1913 Model R Velie auto engine. Please tell me how to set the valves by the marks on the flywheel. There is no pointer to point to the marks on the flywheel. Please explain all about setting the valves. How can I tell when the valves are not set right?

Answer.—The diagram, which we do not publish, shows the intake open 5 degrees before center and the exhaust close 13 degrees after center. In timing a motor it is customary to set the cams so that the intake valve opens and the exhaust valve closes correctly, disregarding the intake closing and exhaust opening points. The above timing varies from the usual practice in that the intake is generally set to open slightly after center rather than before.

To find what 1 degree on the flywheel measures, find the circumference of the flywheel by passing a tape line around it and divide the circumference by 360. For instance, if it is sixty inches around the rim of a flywheel, 1 degree on the rim will measure sixty inches divided by 360, which is one-sixth of an inch. Twelve degrees would be twelve times one-sixth inches, or two inches.

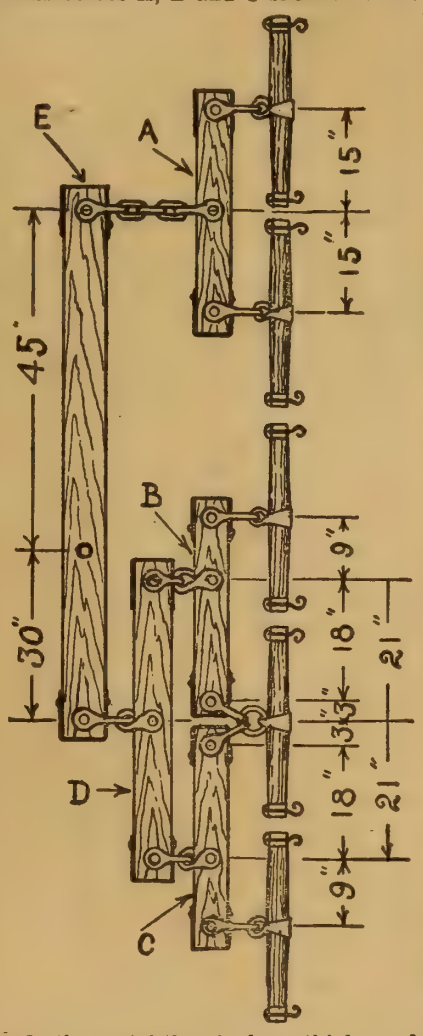
To time a motor it is necessary to know when the piston is on head dead center—"top" center, as it is usually called. For practical purposes this point may usually be found by removing a valve cover and watching the head of the piston as the motor is slowly cranked. Sometimes a rod may be inserted through a priming cup hole, the travel of the piston up and down being shown by the movement of the rod. The first step in timing a motor is to place the motor so that the piston in number one cylinder is at top dead center. If number one cylinder is timed correctly the other cylinders will also be correct. If, as in the above case, the top center and opening and closing points are marked, but there is no pointer, set the motor on top dead center by observing the piston movement and then make a tin pointer and bolt it to the engine so that it points to the top center line on the flywheel. If the flywheel is not marked make a tin pointer and bolt it on the rear cylinder studs. Place the piston on top center and scratch a line on the flywheel at the end of the pointer, marking it "T C." Rotate the flywheel about 5 degrees in the direction it runs and mark it "IN OP"—intake open. Rotate it 7 degrees more and mark it "EX CL"—exhaust close. Manufacturers each have their timing diagram, but the above timing should give good results with any automobile motor.

Adjust the push rods so that a piece of newspaper slips freely between the push rods and the end of the valve stems when the valves are closed. Then rotate the flywheel in the direction it is to run until the push rod raises enough to tighten on the newspaper under the exhaust valve stem. Keep on turning the motor until the intake push rod tightens on the paper. The pointer should then point to "IN OP" on the flywheel. Then, if the motor has two cam shafts, turn the flywheel a few inches further until the [illegible] is released under the exhaust [illegible]. The points should then [illegible] to "EX CL." If the motor has only one cam shaft it will not be necessary to time the exhaust. If the [illegible] does not come right slip the cam shaft timing gear out of mesh with the crankshaft gear and rotate the cam shaft enough to bring the timing right.

A Five-Horse Evener.

Please advise me how to make a five horse evener for a gang plow. Please give the measurements for the doubletrees and all the strap irons.

Answer.—We are publishing a sketch showing one way of making a five-horse evener. The principal length dimensions are shown, the figures being inches. The singletrees should be twenty-eight inches long. They should be two and three-eighths inches in diameter at the middle and tapered to one and three-fourths inches at the ends. Hickory is the best material for a homemade evener. Doubletrees A, B and C should be one



and three-eighths inches thick and three and three-fourths inches wide. D should be the same thickness and four and one-half inches wide. E should be about five and one-half inches wide and one and three-fourths inches thick. The singletree hooks should be made of steel rods three-eighths of an inch in diameter. The drawing shows ordinary clevises used for the connections, the small clevises being one-half inch round, the middle ones five-eighths of an inch round and the large one three-fourths inch round stock.

Another Evener.

Please publish a sketch of a five horse evener that will work without side draft on a "J. I. C." gang plow; the five horses being abreast and only one horse in the furrow.

Answer.—We doubt that such an evener would work without some side draft. You might make a chain evener, similar to the four-horse evener, the diagram of which we recently published.

Power of Falling Water.

How much power could be obtained from water falling straight down fifty feet through a two inch pipe from a supply tank above? How much if the tank were one hundred feet high?

Answer.—Two horse power should be developed from the tank fifty feet high and twice as much from the tank 100 feet high.

Pumping Water From Distant Well.

I would like to know if I can pump water out of my well, which is twenty-five feet deep, and have my engine in my shop, which is 600 feet from the well. The shop is twenty feet higher than the top of the well. I wish to use a two-inch pipe, and force the water into a tank fifteen feet high at the shop. Would I need any check valves in the line? What kind of a pump should I use? Would a four horse power engine be too small?

Answer.—The distance from the well would not prevent the pump from working, but some more power would be required than would be if the tank were over the well. The four-horse-power engine is large enough, however. The pipe should be laid about three feet under ground and the cylinder placed as low as possible, though the pump would probably work with the pipe on top of the ground. There must be no leaks in the suction pipe. A check valve just above the sucker would be advisable, but not absolutely necessary. Use a "force pump."

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Weight 2300 pounds.
Gives 20 miles on a gallon of gasoline.

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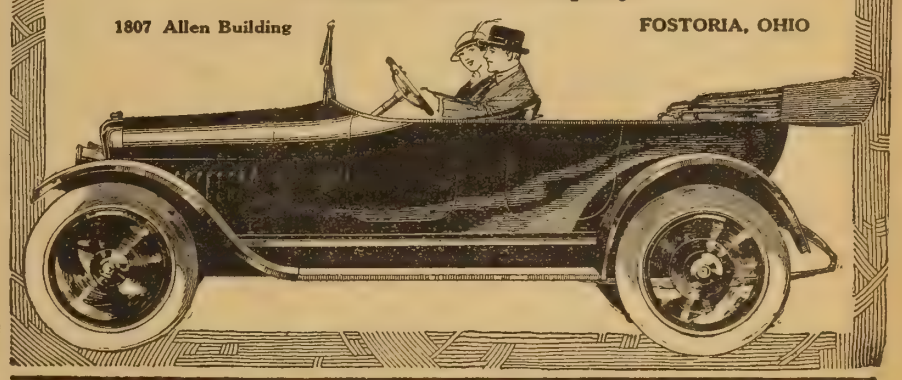

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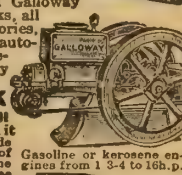

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These Manure Spreaders made Galloway famous. Big, free book gives details of size and style.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Removing the Spurs From Yearling Cocks.

At one experiment station fifty-eight roosters were deprived of their spurs on the day that is recognized as "Swat the Rooster." These birds are to be kept for next season's pens, and as it was necessary to remove them from the yards after the breeding season was over, their spurs were removed. From all this number only one bird was lost. Whether from the removal of the spurs or through handling we did not learn.

Just as cows use their horns, so do cocks use their spurs. Primarily for protection, and since they have become domesticated and do not need them for this, they use them anyhow through pure aggressiveness, and many times a valuable male is lost. Twice we have had valuable fowls lost by a diminutive bantam flying over their heads, striking deep in the vital part, killing them instantly.

Instances could be recounted where the spurs of males have been responsible for the loss of hens. The bruises and raw sores we often find are the result of the spurs of their mates. At certain seasons of the year cocks fight, and on the range it is not always the choice one of the lot that heads too many of the flock after the others have become so badly cowed as to leave with perhaps only a remnant of their rightful number of mates. At the close of the breeding season, when it is desirable to place the males in a yard, it is not safe, unless their spurs are removed.

The spur of a cock is not unlike the horn of a cow. There is the same hard, horny substance around a more porous, bony structure, and consequently, the manner of despurring cocks is somewhat like that of dehorning cows. It is safer to cut close to the shank than to leave a stub. The spurs may be removed with a fine saw, a pruning knife or a pair of pruning shears; preferably the saw.

We once heard a man say that he wished he could remove the spurs from old roosters and sell them for young fowls. Such an ignoble wish prejudiced us about the whole affair, but it is being done now for a better purpose, and so we pass it on.

Much Fatality Amongst Late Hatched Chicks.

In the case of incubator hatched chicks, the losses are always heavy late in the season, after the weather becomes warm. One lot, perhaps, will look all right, while the next clutch, with exactly the same feed and care, after a few days begin to mope and die. What to do, or what not to do, to avoid a repetition is the question.

If we look about us with enough persistence, sooner or later the trouble can be located. Few times there are, especially through the warm weather, that the machine does not become too hot. It is a strenuous problem at the close of a hatch when the animal heat becomes so much in evidence, to keep the temperature from running ruinously high. Many times we have had to extinguish the blaze for a time, and that is no joke either. To permit the temperature to become too low causes weak chickens.

Unless the temperature ran high for a long time, the chicks are pretty sure to hatch. The chick is not killed outright, but the yolk which is absorbed just before they emerge into the outer world, is hardened and cannot become assimilated. Then it is that the little fellows soon die, and, discouraged, we wonder—and wonder.

Late hatched chicks, whether with machine or hen, have no place on a farm, only as the hen steals her nest, takes her brood to the fields and comes up in the fall with a lot of fine fries. One woman not long since had read where a man had hatched late chickens, and was so enthusiastic about it that the late chicks were given the credit of being the money-makers.

The woman, who had only just begun to raise poultry on limited space, asked if she could hatch yet more chickens, or turn all her attention to caring for the 200 she already had. She was emphatically warned against hatching another bunch of small chicks to be trampled by the large ones. Then, too, all her feed must be purchased, and if large lots of late summer chicks do not pan out on the farm, where there is feed to be gleaned in the fields, then would a town dweller have a hard row.

Do Not Crowd the Chicks.

To the Editor:—If the brood coops of the early hatches are not of sufficient size to allow perfect growth and development the growing chicks should now be removed to more roomy quarters. Plenty of pure air and a roomy roosting place make comfortable and contented chicks—then they will mature much earlier than if allowed to remain in close, crowded coops.

I find that by scattering their food along at intervals between their old and new roosting places at night that the brood follows quickly, picking up the food until the new coops are reached, then by throwing some of the food inside, the entire bunch usually enters without further trouble. Once in a great while there will be one or two that cannot be persuaded to go in. I fasten those up that are in and allow these to go to their old roosting place and transfer them to their new home after dark. I then remove the old coop to a different place. Then if any of the chicks return to their old roosting place the next night they will find it gone and usually go quickly to their new home.

I make the roosts about three feet high, of plank six inches wide, which enables them to sit comfortably. I allow a sufficient distance between the perches so that the chicks will not be crowded. I place a wide plank, one end resting upon the floor and the other end on the first roost near the door, which makes a convenient way for them to walk up to their new roosts. I always close the door of the new home for the first night or two after the chicks are persuaded in and then leave it open on hot nights. The pullets from these early hatches are the ones which make the winter layers and should be made to mature as rapidly as possible, and this they cannot do if crowded in their roosting quarters. A Subscriber.

A Mite Remedy.

To the Editor:—One hears so much complaint during the months of July and August about the loss of hens from mites and lice and I would like to give my experience for the benefit of others.

Scalding with water is a waste of time and labor, for scald today and tomorrow you have legions, as I know from experience. I have found that a good remedy is kerosene and lard, about one pint of lard (or any kind of grease) to one gallon of kerosene. Paint it on the roosts and nest boxes and all crevices where the mites hide. After a few applications you can say goodby to the mites. I know this remedy to be effective, for I rid my chick house of mites when I thought they would carry it away. That was fifteen years ago and you cannot find a mite today in either of my houses. After you are once rid of them an occasional clean-up will keep the houses so. This will keep the lice off your hens and cure their scaly legs.

Ida Seerley.

By means of a new apparatus the stumps of trees left after logging operations in long leaf pine timber land have been converted from a source of expense into an asset. The device is in the shape of a hood that sets over the stump and distills as much as seventeen gallons of heavy pine oil from it. The process converts the stump itself into a fine grade of charcoal and destroys it far enough underground to permit plowing.

AILING ANIMALS.

Cocked Ankles.

I have a brown saddle mare, four years old, that is starting to get cock ankled on her two hind feet. Please give me a treatment for her.

You should have a veterinarian examine the cock-ankled horse before treatment is advised.

Suspected Tuberculosis.

We have a three-year-old Jersey cow that has a bad cough. She coughed some six or eight months ago but lately her cough has become worse. We have her on good pasture.

We would advise you to have this cow tested for tuberculosis, as it would be unsafe to have her in your herd if she is affected.

Bone Spavin.

I have a bay gelding, two years old, that has a bone spavin starting and he limps a little. Please give me a treatment.

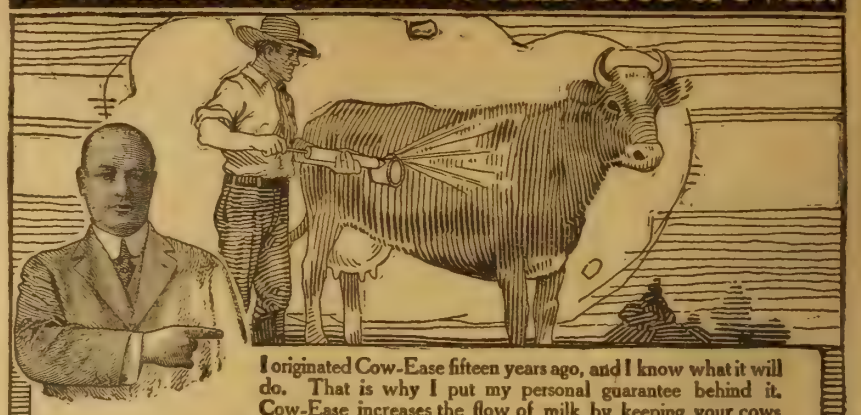
Give the spavin a good blistering with some good veterinary blistering ointment which can be obtained at your local drug store. Grease the blistered parts in thirty-six to forty-eight hours. Give the animal complete rest during treatment. Blister again if necessary.

Clover Bloat.

We have had trouble this spring with clover bloat. Have lost three head of cattle. I would like to hear through your paper how long this danger of bloat would last and if after the clover has dried up it would still be unsafe to turn cattle into this pasture.

Cattle should not be put on clover when it is wet with dew or rain, as it is very liable to bloat them. There is not much danger of bloating if the clover is dry. When a cow becomes bloated she should be given half-ounce doses of carbonate of ammonia dissolved in a pint of water. This should be repeated every half hour until relieved. If the bloating is very bad tapping the rumen should be resorted to.

COW-EASE Guaranteed to Make Good or I Will!



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M. Elton Vose Assistant Treasurer.

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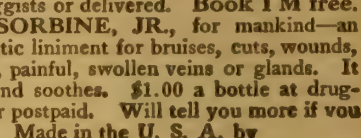

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HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

Kindly mention this paper when writing

Mishicot Cow-Testing Association.

The following table gives the names and records of the cows in the association which have produced forty-five pounds of butter fat or more during the period of thirty days ending June 28, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Ira Beyer					
Molly, G. S. H.	5	3-27-16	1137	4.2	47.75
Daisy, G. S. H.	5	5-13-16	1200	4.9	60.27
Wm. Bruenig					
Jersey, N....	5	12-15-16	1005	4.5	45.22
Flory, N.....	5	1-1-16	1134	4.0	45.36
Harvey Eisenmann					
Shorty, N....	9	4-4-16	1317	3.7	48.73
Colantha, G. H.	3	3-11-16	1512	3.3	49.89
Oscar Lanz					
Gahling, N...	8	11-27-15	864	5.5	47.52
Mishicot Pet G.	5	5-12-16	1107	4.9	54.24
Ed Palzer					
Baby, G. H...	4	12-10-15	1086	4.3	46.69
Hobby, N.....	8	12-5-15	957	4.8	45.93
George Wuellner					
Star, N.....	7	2-25-16	1326	3.9	51.71
Niggar, G. H..	6	2-18-16	1440	3.7	50.31
Polly, G. H...	6	3-16-16	1581	3.5	55.63
Topsie, G. H..	6	4-12-16	1398	3.4	47.53
Bloomy, G. H.	6	4-30-16	1389	3.7	51.39
Guernsey, N.	8	3-31-16	1266	3.8	48.10
Jersey, G. J..	11	4-13-16	1110	4.2	46.62
Brownie, G. S. H.	8	5-27-16	1320	3.6	47.52
Wm. Bertolaet					
Polly, N.....	5	5-23-16	1056	5.0	52.80
Baby, N.....	7	4-5-16	1282	3.8	48.79
R. E. Harrison					
Modock, N...	4	3-8-16	984	5.2	49.16
Wm. H. Spencer					
Frisky, N....	4	6-7-16	1146	4.0	45.84
Frank Bergel					
Molly, N.....	6	4-22-16	1035	4.8	49.67
Chas. Kornely					
Lady, G. H...	4	5-6-16	1419	3.9	55.24
Beauty, G. H.	4	4-11-16	1545	3.2	49.44
Chas Hessel					
Daisy, G. H..	8	3-31-16	1152	4.8	55.29
Robert Hessel					
Black, G. S. H.	7	2-22-16	1056	4.6	48.57
Red, N.....	4	6-2-16	1407	4.4	61.91
Spot, G. H....	4	2-15-16	1233	3.7	45.62
Beauty. G. H.	4	2-22-16	1245	3.9	48.55
Niggar, G. H.	4	4-14-16	1425	3.3	47.02
Fred Kappelmann					
Blackie, N...	6	5-7-16	939	4.9	46.01
Albert E. Beaun					
Marabell, G..	5	6-3-16	966	5.3	51.20
Peter Fliegel					
Pet, N.....	8	6-14-16	1125	4.0	45.00
Albert Johannes					
Queen Palmer Clothilde, H.	3	3-24-16	1491	3.1	46.22
Daisy, G. H..	6	3-6-16	1389	3.8	52.78
Anna, G. H..	9	11-12-15	1458	3.4	49.57
Niggar, G. H.	2	5-18-16	1131	4.2	47.50
Henry W. Schmidt					
Pearl, N.....	8	3-12-16	1263	3.6	45.47
Herman Anneman					
Brindle, N...	13	5-10-16	1380	4.2	57.96
Emil Retzlaff					
Mully, N.....	9	5-10-16	1209	3.9	47.15
Schmidt, N...	7	12-23-15	1134	4.2	47.63
Honey, G. H..	7	3-15-16	1191	3.9	46.45
Fred Witte					
Princess, G. H.	11	3-16-16	1419	3.6	51.08
Rebecca, G. H.	3	5-19-16	1512	3.2	48.38
Bell, G. H....	9	3-12-16	1536	3.0	46.08
Fred Eisenmann					
Queen, G. H.	4	3-20-16	1350	3.7	49.95
Bobbie, G. H.	3	3-15-16	1344	3.5	47.04
Belle, G. H..	8	5-26-16	1560	3.0	46.80

Empire Cow-Testing Association.

The following table gives the names and records of cows in the association which have produced forty-five pounds of butter fat or more for the month ending June 30, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Geo. Seibel					
No. 8, G. H....	7	3-1-16	1419	3.4	48.2
No. 11, G. H...	8	4-21-16	1170	4.2	49.1
L. P. Rosenbaum					
No. 1, G. H....	6	4-25-16	1278	3.9	49.8
Albert Immel					
Blue Bird,G.H.	5	2-15-16	1119	4.8	53.7
Mary, G. D....	7	4-23-16	1353	4.3	58.1
Ralph Binning					
Beauty, G. G.	9	12-15-15	1062	5.4	57.3
C. E. Binning					
Fayhome Brownette, R. J.	5	4-23-16	963	5.8	55.8
No. 7, G. G....	7	2-1-16	1074	4.2	48.1
No. 14, G. J....	5	5-20-16	1089	4.6	50.0
No. 17, G. J...	5	12-15-15	927	6.5	60.2
O. F. Miritz					
Johanna Jewel Clover Lawn, H.	5	3-13-16	1584	3.4	53.8
Oakfield, G. H.	8	1-2-16	1272	3.8	48.3
Springdale Johanna Jewel, R. H...	6	12-31-15	1194	4.0	47.7
N. Schneider					
No. 7, G. H...	7	3-15-16	1347	3.6	48.4
J. W. Keyes					
Queen Aaltje Jewel, R. H...	6	4-25-16	1569	3.7	58.0
Paul Immel					
No. 4, G. D...	6	4-25-16	1197	3.8	45.4
No. 14, G. D...	7	3-10-16	1167	4.0	46.6
No. 17, G. D...	7	3-20-16	1329	3.6	47.9
Aug. Schultz					
No. 1, G. G....	6	5-20-16	1539	3.5	53.8
No. 2, G. H...	6	2-10-16	1293	4.0	51.7
No. 16 G. G...	6	3-1-16	1182	3.9	46.1
No. 21, G. D...	7	4-10-16	1266	3.6	45.5
Casper Bros.					
No. 1, G. J....	9	12-15-15	906	5.0	45.3
No. 14, G. H...	8	3-27-16	1608	3.7	59.4
No. 15, G. D...	10	4-25-16	1380	4.3	59.3
Johy Foy					
Ell, G. D.....	6	2-15-16	966	4.9	47.3
E. A. Quick					
No. 1, G. H....	8	3-20-16	1365	3.8	51.8
Fred M. Ingalls					
Emily D. G.G.	4	4-25-16	1032	4.8	49.5
Wendy, G. G..	3	5-3-16	860	6.2	53.3
John Reilly					
Wagner, G. G.	8	4-15-16	1140	4.1	46.7
John Keilly					
Flat Back,G.G.	14	5-20-16	1593	4.1	65.3

R. H. Monroe, Official Tester.

Door County Cow-Testing Association.

The second report of this association, including cows which have produced over forty-five pounds of butter fat for the month ending June 30, 1916, follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Wm. Voeks					
No. 3, G. H..	8	3-17-16	1170	4.1	47.97
No. 8, N.....	8	3-3-16	1125	4.4	49.50
Lavy Delcrops					
Hollie, G. H.	6	4-21-16	1305	3.5	45.67
Pat Hogan					
Daisy, G. H..	7	4-11-16	1425	3.4	48.45
William Schaefer					
Jennie, N. ..	7	3-14-16	948	5.5	52.14
Nick Theil					
Bessie, G. H.	6	2-14-16	1068	4.6	49.12
Big Spot,G.H.	5	5-26-16	1602	3.8	60.87
E. Delschame					
Helen, G. H..	8	3-30-16	1398	3.7	51.73
Carry, G. H..	7	5-24-16	1605	3.0	48.15
Freh Ash					
L. Jane, G. J.	5	5-5-16	1131	5.3	59.94
Daisy, N.....	4	4-23-16	909	5.5	49.95
Flora, N.....	6	5-3-16	1044	5.6	58.46
Ed Fhel					
Lucy, G. G...	9	4-20-16	1110	5.5	61.05
H. L. Klenke					
Mollie, G. S.	6	4-11-16	1518	4.0	60.72
Starr, G. B. S.	5	2-17-16	1026	4.8	49.25
H. L. Klenke					
Ester, N.....	12	2-19-16	1032	4.5	46.44
Henry Newville					
Lottie, N.....	10	3-1-16	1224	4.0	48.96
Pansey, G. H.	4	1-23-16	1275	4.1	52.27
Dixie, G. H...	4	11-28-15	1223	3.8	46.36
Albert Zittel					
Kicker, G. H.	5	1-30-16	1245	3.8	47.31
Krenke, N...	8	2-15-16	939	5.2	48.83

Geo. E. Thull, Official Tester.

Geneva Co-operative Cow-Testing Association.

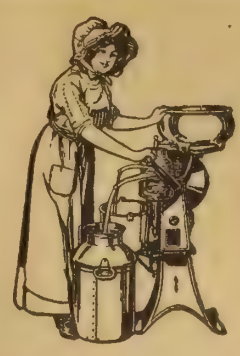
Twenty-four less cows qualified in the Geneva Co-operative Testing Association during the month of June than in the month of May. The most interesting thing noticed is the rise in the average test. The average test for the 113 cows tested in May was 3.964 per cent, while in June the eighty-nine cows that qualified tested on an average 4.045 per cent. The highest was made by Ora Taylor's Jersey, a three year old, who produced 585 pounds of milk, testing 7.2 per cent, making 42.1 pounds of butter fat. Tests varied from this figure down to 2.8 per cent. The list is falling off, due largely to many of the cows drying up, as they will freshen early this fall. The records are not quite as high as usual.

The following table gives the names and records of the cows in the association which have produced forty-five pounds of butter fat or more during the period of thirty days ending June 30, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
H. D. Dunbar					
Ormsby, H....	3	3-9-16	2124	3.2	68.0
Queen, H.....	6	9-29-15	1266	4.0	50.6
Ora Taylor					
Milk F., J....	3	5-13-16	996	6.8	67.7
D. Pansy, J..	3	12-20-15	1011	6.4	64.7
Double T., J...	3	4-17-16	966	6.2	59.9
D. Knight,G.J.	5	11-24-15	741	6.3	46.7
Chas. L. Turner					
Boon, H.....	5	3-28-16	1680	3.6	60.5
Dorothy, H...	3	3-5-16	1479	3.6	53.2
M. Flack & Son					
Guernsey, G.G.	5	3-29-16	1158	4.5	52.1
Nigger, G. H..	3	4-10-16	1236	4.2	51.9
Jennie, G. D..	7	5-5-16	979	4.6	46.0
Rockwell Bros.					
Coalie, G. H..	6	10-8-15	1089	4.2	45.7
Skylark, G. H.	5	11-18-15	1221	3.8	46.4
Johanna, H...	8	2-12-16	1326	3.5	46.4
Emma, G. H..	7	1-8-16	1266	4.2	53.2
Jolly, G. H...	7	1-25-16	1263	4.3	54.3
Fay, G. H....	6	12-8-15	1230	4.0	49.2
Evelyn, G. H.	5	3-2-16	1401	3.5	47.6
Floyd Lean					
Alvina, G. H..	3	6-1-16	1044	4.5	47.0
W. E. Palmer					
Leila, H.....	3	6-1-16	1287	4.3	55.3
A. G. Palmer & Sons					
Daisy, H.....	5	12-3-15	1218	4.1	49.9
Loyd Ames					
Sam, G. D.....	10	4-11-16	1221	4.0	48.8
Moss Bros.					
Esther, G. D.	7	3-25-16	1356	3.6	48.7
Nig, G. H.....	5	4-26-16	1365	3.3	45.0
Norton & Randall					
Myrtle, G. H.	6	9-21-15	762	5.9	45.0
J. W. Finnell					
Carnie, G. H..	6	3-2-16	1308	3.7	48.4
Jas. Henderson					
Guernsey, G.G.	7	12-26-15	1065	4.5	47.9
Lucien Curtis					
No. 20, G. G..	7	9-15-15	975	4.9	47.8
Whiteface,G.H.	4	4-6-16	1194	4.0	47.8
Wm. Rouse					
Horns, G. G...	4	3-5-16	1140	4.6	52.4
S. B. Fish					
Maud, G. H...	4	5-30-16	1143	4.7	53.7

Farnk Drake, Tester.
Chas. L. Turner, Secretary.

A horse can trot for all he's old, and some men never get tired of the race track nor cease to play important roles. F. C. Garner, who rode a runner to victory at Trenton (Missouri) last week, rode a winner there at the Grundy County Fair thirty-nine years ago. For good measure the Trenton Times adds that there are few older fairs in Missouri than the one in Grundy county, which was organized in 1859.



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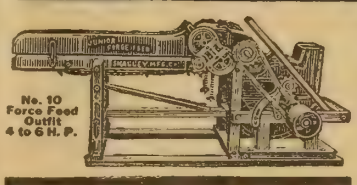

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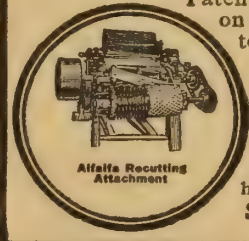
Blower built independent of cutter. Fan speed can be increased or decreased without changing speed of knife shaft.



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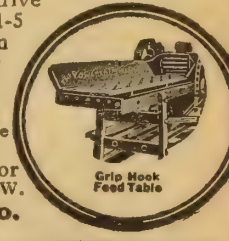

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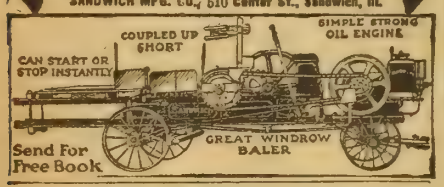

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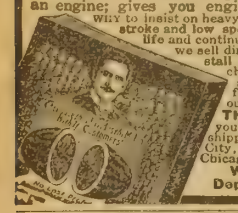

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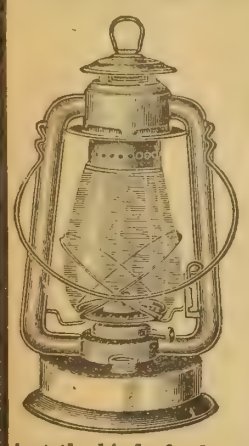

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The scene is laid in the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold. A neighbor, named Hardy, comes to his camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which she learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide become strained. Disobeying his strict orders to stay with the party, Rachel Hardy rides ahead, her horse throwing her as it scares at a bear cub. She is severely hurt, but Genesee Jack finally finds her, only to think she has died from her exertion and suffering.

CHAPTER VII.

Under the Chinook Moon.

Ikt polaklie konaway moxt.

OVER the crowns of the far hills the moon wheeled slowly up into the sky, giving the shadows a cloak of blue mist, and vying with the forgotten torch in lighting up the group in the gulch. The night winds rustled through the leaves and sighed through the cedars; and the girl's voice, scarcely louder than the whispers of the wood, said: "Genesee! Tillie!"

"Yes, Miss," the man answered, as he lowered her head from his shoulder to the sward, making a pillow for her of his hat. With returning life and consciousness she again slipped out of his reach or possession, and himself and his emotions were put aside, to be hidden from her eyes.

Through the blessing of death, infinite possession comes to so many souls that life leaves beggared; and in those hurried moments of uncertainty, she belonged to him more fully than he could hope for while she lived.

"Is it you, Genesee?" she said, after looking at him drowsily for a little. "I—I thought Tillie was here, crying, and kissing me."

"No, Miss, you fainted, I reckon, and just dreamed that part of it," he answered, but avoiding the eyes that, though drowsy, looked so directly at him.

"I suppose so," she agreed. "I tried to reach you when I felt myself going; but you wouldn't look around. Did you catch me?"

"Yes; and I don't think you were quite square with me back there; you told me you were all right; but you must have got hurt more than you owned up to. Why didn't you tell me?"

"But I am not—indeed I am not!" she persisted. "I was not at all injured except for the jar of the fall; it leaves me dizzy and sick when I sit upright in the saddle—that is all."

"And it is enough," he returned decidedly; "do you 'spose, if you'd told me just how you felt, I should have set you there to ride through these hills and hollows?"

"What else could you do?" she asked; "you couldn't bring a carriage for me."

"May be not, but I could have ridden Mowitza myself and carried you."

"That would be funny," she smiled. "Poor Mowitza! could she carry double?"

"Yes," he answered curtly; perhaps the situation did not strike him in a humorous light. "Yes, she can, and that's what she will have to do. Let me know when you feel able to start."

"I think I do now," she said, raising herself from the ground; "I am a little shaky, but if I do not have to sit upright I can keep my wits about me?" I believe. Will you help me, please?"

He lifted her into the saddle without a word, and then mounting himself, he took her in front of him, circling her with one arm and guiding Mowitza with the other, with as much unconcern as if he had carried damsels in like cavalier fashion all his life.

They rode on in silence for a little through the shadows of the valley, where the moon's light only fell in patches. His eyes were straight ahead, on the alert for gullies and pitfalls along the blind trail. He seemed to have no glances for the girl whose head was on his shoulder, but whom he held most carefully. Once he asked how she felt, and if she was comfortable; and she said, "Yes, thank you," very demurely, with that mocking smile about her lips. She felt like laughing at the whole situation—all the more so because he looked so solemn, almost grim. She always had an insane desire to laugh when in circumstances where any conventional woman would be gathering up her dignity. It had got her into scrapes often, and she felt as if it was likely to do so now. The movement of the horse no longer made her ill, since she did not have to sit upright; she was only a little dizzy at times, as if from the rocking of a swing, and lazily comfortable with that strong arm and shoulder for support.

"I am afraid I am getting heavy," she remarked after a while; "if I could get my arm around back of you and hold either the saddle or reach up to your shoulder, I might not be such a dead weight on your arm."

"Just as you like," was the brief reply that again aroused her desire to laugh. It did seem ridiculous to be forced into a man's arms like that, and the humorous part of it was heightened, in her eyes, by his apparent sulkiness over the turn affairs had taken.

She slipped her arm across his back, however, and up to his shoulder, thus lightening her weight on the arm that circled her, an attempt to which he appeared indifferent. And so they rode on out of the valley into the level land at the foot of the hills, and then into the old trail where the route was more familiar and not so much care needed.

The girl raised her head drowsily as she noted some old landmarks in the misty light.

"Poor Mowitza!" she said; "she did not have such a load when she came over this road before; it was the day after you joined us, do you remember?"

"Yes."

Remember! It had been the gateway through which he had gained a glimpse into a new world—those days that were tinged with the delightful suggestions of dawn. He smiled rather grimly at the question, but she could not see his face very well, under the shadow of his wide hat.

"Has Mowitza ever before had to carry double?"

There was a little wait after her question—perhaps he was trying to remember; then he said:

"Yes."

She wanted to ask who, and under what circumstances, but some way was deterred by his lock-and-key manner, as she called it. She rather commended herself for her good humor under its influence, and wondered that she only felt like laughing at his gruffness. With any other person she would have felt like retaliating, and she lay there looking up into the shadowy face with a mocking self-query as to why he was made an exception of.

"Genesee!" she began, after one of those long spells of silence; and then the utterance of the name suggested a new train of thought—"by the way, is your name Genesee?"

He did not answer at once—was he trying to remember that also?

"I wish you would tell me," she continued, more gently than was usual with her. "I am going away soon; I should like to know by what real name I am to remember you when I am back in Kentucky. Is your name Jack Genesee?"

"No," he said at last; "Genesee is a name that stuck to me from some mines where I worked south of this. If I went back to them I would be called Kootenai Jack, perhaps, because I came from here. Plenty of men are known by names out here that would not be recognized at home, if they have a home."

"But your name is Jack," she persisted.

"Yes, my name is Jack."

But he did not seem inclined to give any further information on the subject that just then was of interest to her, and she did not like to question further, but contented herself with observing:

"I shan't call you Genesee any more."

"Just as you like, Miss."

Again came that crazy desire of hers to laugh, and although she kept silent, it was a convulsive silence—one of heaving bosom and quivering shoulders. To hide it, she moved restlessly, changing her position somewhat, and glancing about her.

"Not much farther to go," she remarked; "won't they be surprised to find you carrying me into camp like this? I wonder if Betty came this way, or if they found her—the little vixen! There is only one more hill to cross until we reach camp—is there not?"

"Only one more."

"And both Mowitza and yourself will need a good rest when we get there," she remarked. "Your arm must feel paralyzed. Do you know I was just thinking if you had found me dead in that gulch, you would have had to carry me back over this trail, just like this. Ugh! What a dismal ride, carrying a dead woman!"

His arm closed around her quickly, and he drew a deep breath as he looked at her.

"I don't know," he said in a terse way, as if through shut teeth; "perhaps it wouldn't have been so dismal, for I might never have come back. I might have stayed there—with you."

She could see his eyes plainly enough when he looked at her like that; even the shadows could not cover their warmth; they left little to be expressed in words, and neither attempted any. Her face turned away from him a little, but her hand slipped into the clasp of his fingers, and so they rode on in silence.

The brow of the last hill was reached. Down below them could be seen the faint light from the campfire, and for an instant Mowitza was halted for a breathing spell ere she began the descent. The girl glanced down toward the fire-light, and then up to his face.

"You can rest now," she said, with the old quizzical smile about her lips, even while her fingers closed on his own. "There is the camp; alta nika wake tsolo" (now you no longer wander in the dark).

But there was no answering smile on his face—not even at the pleasure of the language that at times had seemed a tacit bond between them. He only looked at her in the curious way she had grown accustomed to in him, and said:

"The light down there is for you; I don't belong to it. Just try and remember that after—after you are safe with your folks."

"I shall remember a great deal," returned the girl in her independent tone; "among other things, the man who brought me back to them. Now, why don't you say, 'Just as you like, Miss?' You ought to—to be natural."

(To be continued.)

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Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Stains.

Call after call has come to the Home Department for advice on the removal of various kinds of stains. All the little folks in the country seem to have upset their cocoa or spilled the ink or ruined their best frocks on the grass; the men folks have been careless with the machine oil or the wagon grease; even mother herself has had trouble with fruit juice or iron rust or stove polish. The editor has decided to make a list of all the various kinds of stain troubles and come to the rescue.

It should be remembered that stains should always be removed before the clothing is washed, because the action of soap and water may set them and then your task will be that much harder. The secret of removing a stain is to find some substance in which it is soluble. If acid is used, stretch the stained portion over a bowl of boiling water and with a medicine dropper or old tooth brush apply the acid (diluted), occasionally dipping the stain into the boiling water. It is well to add a little ammonia to the water in the bowl, as ammonia overcomes the bad effects which the acid might have on the fabric. If boiling water is prescribed, pour through the stain, pouring from some height so as to strike the stain with force. If alkali is recommended for removing the stain, dilute ammonia is preferable and the method of procedure is the same as where acid is used.

Here is the list of stains with methods of removal, prepared in convenient form to be clipped out and pasted in the back of your kitchen scrap book for future use.

Blood.—Wash with cold water until stain turns brown, then rub with naphtha soap and soak in warm water.

Chocolate.—(1) Wash with soap and tepid water. (2) Sprinkle with borax and soak in cold water.

Coffee and Indigo.—(1) Spread the stained article over a bowl and pour boiling water through it until the stain disappears. (2) Soak for a short time in Javelle water or in a weak solution of oxalic acid. Rinse thoroughly with boiling water containing a little dilute ammonia water. Repeat if necessary.

Cocoa.—Wash in cold water first, then rinse and pour boiling water through the stain. If the stain still persists try a bleaching agent.

Grass Stain.—(1) Wash with naphtha soap and warm water. (2) For colored fabrics apply molasses or a paste of soap and cooking soda. Let stand over night and wash in tepid water.

Grease Spots.—(1) Wash with soap and water. Turpentine, oil or lard are often used to soften old spots before washing. (2) Grease is soluble in benzine, chloroform, ether and benzol. In order to keep diluted grease from spreading, spread stain over a piece of blotting paper and rub toward center with a piece of clean cheesecloth. For delicate material chloroform and ether are the best solvents. (3) Apply powdered French chalk made into a paste with turpentine and water. Let stand several days and then brush off.

Ink.—(1) Ink stain is often difficult to remove, as ink varies greatly in composition. Neither cold water nor milk will set a stain, so these are always safe to use to remove a greater part of the ink. If the ink is spilled on an article that can be put in a basin of water, do this at once, then rinse until no more ink will wash out. If the ink is spilled on the floor or carpet, cover the spot with some absorbent, remove, continuing until no more ink can be taken up. Then apply the cut end of a lemon, trimming off the end as it becomes soiled. Rinse with cold water. (2) Wet stain with cold water and then apply a 10 per cent solution of oxalic acid. Let stand a few minutes and rinse in water to which a little ammonia has been added. Repeat until the stain has disappeared. (3) Wet the stain with a paste made of lemon juice, salt, starch and soap, then expose to the sunlight.

Iron Rust.—(1) Wet the stain with borax and water or ammonia and spread over a bowl of boiling water. Apply a 10 per cent solution of hydrochloric acid a drop at a time until the stain begins to brighten. Then dip at once into water. Repeat if necessary. After the stain is removed, rinse at once very thoroughly, using either borax or ammonia in the rinse water. (2) Proceed as above, using a 10 per cent solution of oxalic acid instead of hydrochloric acid. Oxalic acid is not so detrimental to fabrics as hydrochloric acid, but it is poisonous. (3) Try method No. 3 under ink.

All these methods destroy color and unless care is taken will greatly weaken the fabric.

Iodine.—Soak in chloroform, or ether.

Lampblack or Tar.—Saturate spot with kerosene. Wash with naphtha soap and water. If lampblack is on carpet, rub spot with starch, cornmeal, flour or salt.

Machine Oil.—(1) Wash with cold water and soap, rubbing from the outside toward the center of the spot, using care not to allow the spot to spread. (2) Wet spot with turpentine or benzine and let it stand a few minutes. Wet again and sponge with a clean cloth. Continue until stain disappears.

Milk or Cream.—Wash in cold water, then with soap and water.

Mildew.—(1) Light and recent stains may often be removed by wetting them, rubbing with soap, then covering spot with wet starch and spread in sun. Renew application frequently. (2) Put on lemon juice and expose to direct sunlight. (3) Chloride of lime and Javelle water are both effective agents in removing mildew stains from white fabrics. Soak until stain disappears and rinse well.

Mucus.—Soak in ammonia water or in salt and water, then wash with cold water and soap.

Paint and Varnish.—(1) Same as method 2 for machine oil. (2) Soak fabrics with delicate colors in chloroform. (3) If paint is old it may take some time to soften, but equal parts of ammonia and turpentine will soften old paint stains, after which they may be removed by method 1 or 2.

Perspiration.—(1) Wash in soap suds and place in sunshine. (2) Soak in Javelle water a few minutes, then wash. Repeat until stain disappears. (3) Use oxalic acid as for iron rust.

Tea.—(1) Spread the stained article over a bowl and pour boiling water through it until stain disappears. (2) Sprinkle with borax and soak in cold water. (3) Soak spot in glycerine, then wash.

Wine and Fruit Stains.—(1) Use method 1 under tea. (2) Soak stain in equal parts of Javelle water and boiling water. Rinse well in boiling water to which a little ammonia has been added.

Wagon Grease.—Soften in cold water, then wash with soap and water.

Vaseline—Wash a fresh stain with turpentine. Boiling sets the stain.

Stove Polish.—(1) If fresh, a stove polish stain is easily removed by washing with naphtha soap and cold water. (2) If the stain is an old one use method for lampblack and tar.

Scorch.—(1) Wet the scorched area and expose to action of sun. Repeat several times. (2) Wet and rub with soap. Cover the spot with thin mixture of starch and water, and spread in sun.

Rice a Nutritous Cereal.

The experts of the office of home economics of the United States Department of Agriculture have been studying the uses of rice, a food which can be served in many palatable ways all the year, but which seems particularly appetizing in summer.

Boiled rice prepared in southern fashion, so that all of the grains are kept separate, is sufficiently attractive in appearance to justify its slight wastefulness, except, of course, where strictest economy is necessary. Slowly add a cupful of boiling water, which contains two level teaspoonfuls of salt. If carefully done, the boiling (which should continue all of the time the rice is cooking) will not be stopped. Stirring is not permitted, as this will break the rice grains. About twenty minutes is sufficient to cook the rice, which can be tried from time to time by taking one or two grains between the fingers. Pour off all the water from the cooked rice, cover with a cloth and place in a warm part of the stove, so that the grains will swell. To remove the starchy material from the outside of the grains, cooks sometimes turn the cooked rice into a strainer and pour one quart of hot water over it before covering with a cloth and allowing to steam and swell. A cupful of raw rice cooked in this way will give over four cupfuls of very white and light, boiled rice. The water drained off from the rice can be used in soup making to save the starch and mineral matter which it contains.

If one wishes to use a fireless cooker add a cupful of well-washed rice to three cupfuls of boiling water, in which two level teaspoonfuls of salt are dissolved. Cook for five minutes and then put in a fireless cooker. In two hours the rice should be done. If any water remains unabsorbed it can be drained off. Rice varies somewhat in the amount of water it absorbs and the housekeeper accordingly should vary the amount of water used.

Rice cooked as described above is excellent when served as a vegetable with meats, as in the well-known "chicken and rice." Such uses of rice are particularly welcome in the period when "old potatoes" are not very palatable and "new potatoes" have not yet appeared in the locality or are high in price in market.

Another dish which has almost as good an appearance may be prepared by cooking rice in a double boiler, without stirring, and using about three cupfuls of water and a level teaspoonful of salt to each cupful of rice. If a more savory dish is desired, skim milk, whole milk, meat broth, strained tomato juice or vegetable broth may be used in place of water. Rice may also be combined with protein-rich foods, such as milk, cheese and eggs for use in place of meat, or with small amounts of vegetables to make the latter "go further." Of course, such a dish does not contain as much tissue-building protein as if it were made entirely of meat, but when the meat provided ordinarily is generous and the aim is to reduce the cost without lessening the attractiveness of the food, such combinations are well worth trying.

The following recipe for an economical dish made with rice and left-over mutton may prove useful:

Four cups cooked rice, two cups cooked mutton cut into small pieces, one teaspoonful salt, few drops onion juice, one tablespoonful chopped parsley, one-fourth cup bread crumbs, one egg and one-fourth teaspoonful pepper. Stock or water as needed. Grease a mold or a bowl of about one and one-half quarts' capacity and line with cooked rice. Heat the meat with the other ingredients, using enough stock to make a mixture that is moist, but will hold its shape. Pack the meat in the center of the mold and cover with the remaining rice, grease the cover of the mold (if a bowl is used, a plate will serve for a cover), steam or cook in water enough partly to cover the mold until the contents are thoroughly heated through. Turn on a hot platter and serve with tomato sauce.

The above recipe, it will be noted, suggests the use of bread crumbs instead of flour for thickening, which is often a way of saving bread which might otherwise be wasted, and which is also one way of securing variety, as a different texture results from that when flour is used.

If one finds it convenient, cold lamb, veal or chicken may be used in place of mutton in preparing this dish.

As the basis of a sweet dessert, rice is always useful, especially so for invalids and little children. If combined with milk and eggs it makes a very nutritious dish as well as one easily digested. Plain boiled rice, cooked either in water or in milk, and served with a little stewed fruit, maple sirup, honey or other simple flavor, makes a more wholesome dessert for children than rich puddings or pies because it is less likely to upset the digestion or to destroy the appetite for simple foods.

Cold rice, particularly that which is cooked so that the grains are separate, is a good addition to vegetable salads, combining well with celery, string beans, and tart apple. If one wishes, some chicken cut in small pieces also can be added.

It is well to remember that when rice is used abundantly in the diet it is particularly desirable to include generous amounts of green vegetables and fruits also, in order that a supply of mineral substance adequate in kind and quantity may be provided.

Something For the Women at Tractor Show.

There will be plenty of things just as interesting for the housewife as for the farmer at the Wisconsin tractor demonstration, to be held at Madison, September 4th to 8th.

Of course, there will be tractors galore, but in the big accessory tent small implements of all kinds and machinery that depend for operation upon some other source of power will be on exhibition.

Then there will be an exhibit put on by the college of agriculture showing modern arrangements of the farm home, conveniences for the kitchen and milk house that will save the farm wife much time and hard work, model sewage disposal plants that make farm life less subject to disease, practical water systems that make provision for running water in the kitchen as well as in the barn and barnyard, heating systems that do away with the work and waste of wood and coal stoves, and lighting systems that put the farmhouse beyond the reach of the danger and dirt of lamps.

Sends Directions For Making Rug.

To the Editor:—In answer to Miss E. E. A.'s inquiry for a rug pattern I thought I would tell her how I make mine and perhaps it will interest others.

One rug I have is made of patchwork on a foundation of canvas covered with red calico. The patches are rounds of cloth from old trousers cut the size of a teacup. Sewed on this with a cross-stitch is a round or cloth of a different color and a half inch smaller in diameter. Then a third small circle of bright colored flannelette or any other material one wants to use is sewed on top, also with a cross-stitch. Use a silk finished spool cotton for the cross-stitch.

One can make the rugs most any shape. Mine had three oval pieces in the center arranged with four patches. Around this oval piece were three rows of patches. Or the rug could be made in the shape of a hexagon. My rugs have been admired by all who have seen them.

I love to read the Home page and I hope my letter will be of some benefit to Miss E. E. A. and others.

H. L.

Sweet Corn and Tomatoes Together.

To the Editor:—I have been reading the Home page for a long time and I have found many interesting and helpful things in it. I would like to ask if any of the readers have ever canned peas and what success they had, also sweet corn and tomatoes together. I never canned any that way, but I have heard of others canning them.

Mrs. M. D. E.

Recipes

Peach Marmalade.—Pare the peaches and remove the stones. Place in a kettle, adding just enough water to prevent burning. Cook slowly and stir frequently until the peaches are reduced to a pulp. Measure, and to each pint of fruit add one-half pint of sugar. Boil for twenty minutes, stirring constantly. Pour into jars and seal.

Peach Butter.—Prepare the peaches as for marmalade, but add to each pint of pulp one-fourth pint of sugar and one-fourth teaspoonful of ground cinnamon. Cook slowly, stirring constantly, until the mixture becomes very thick and glossy. Pour into jars and seal.

Peach Ice Cream.—Peel and stone as many ripe, soft peaches as will fill a half gallon measure, rub through a colander, add a pint of sugar, and set in a cool place, on ice if possible. Beat two eggs with a cup of sugar until

very light, add one teaspoon vanilla and one pint sour cream, into which has been whipped one scant teaspoon soda. Stir into peach pulp and add enough milk to make a gallon of cream when frozen.

Peach Dumplings.—Sift an even quart of flour twice with one and a half teaspoonfuls of baking powder and half a teaspoonful of salt. Chop into this a tablespoonful shortening (butter and lard mixed). Mix into a soft dough. Roll the pastry lightly and cut into squares. Take the stones from nice ripe peaches which have been pared, fill the cavity with sugar and wrap each peach neatly in a square piece of the dough. Bake in a moderate oven a nice brown. Eat while fresh, with cream or clear sauce.

Peach Imperial.—Soak a tablespoonful of granulated gelatine in a quarter cupful of cold water for a quarter of an hour and dissolve in a third cupful of scalded milk. Add a teaspoonful of vanilla or almond extract and a third cupful of powdered sugar. Allow it to set over cold water, stirring constantly until it begins to jelly slightly; then cut and fold lightly into three cupfuls of cream, well whipped. Serve in long stemmed glasses with quarters of freshpared peaches arranged point upward around the glass and filled with a dab of stiffly beaten whipped cream and a yellow or deep crimson nasturtium.

Baked Peaches.—Wash the peaches and cut the skin away from the stem end. Put a small lump of butter on top of each peach and sprinkle generously with sugar. Pour a little water in the pan and bake as you do apples, until they are tender. The sugar and the juice from the peaches will make a thick sirup.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Croquet Great Fun.

Dear Young Folks:—We are two sisters who enjoy reading the Young Folks' page very much. We live in the country and have good times together. We go to school in town. We take music lessons and like to play very much. We also do fancywork, but the thing we seem to stick to the longest is playing croquet. We think it great sport to see who can win the most games.

We enjoyed Ruby's letter very much. We think her pet hen must resemble our pet dog in manners, as he scratches on the door when he wishes to enter. He also jumps upon a chair with his front feet on the back and barks for his food as if he says, "Please." Then when he gets it he will shake hands with us in a way that seems to mean thanks.

We also have a Buff Orpington hen with fourteen little white chicks. They look so cute running about the yard.

—The Two Sisters.

What Is This Bird?

Dear Young Folks:—I would like to know the name of a bird that built its nest in a hollow stump in our yard. It has a red spot on top of its head. Its back and breast are barred. At the base of its tail there is a little white spot. There is a semicircle of black on its breast. Its head and bill are shaped like a sniper's. Its tail is gray. It is about the size of a blackbird and it lays eggs a little larger than a sparrow's egg. The eggs are white. Can some of the Young Folks tell me what this bird is?

—Willie.

Sparrow Steals Jenny Wren's Home.

Dear Young Folks:—I have been reading almost all of your letters and now I think it is my turn.

I am twelve years old. We live on a forty-acre farm. We milk two cows and sometimes I help do the milking.

I have five little kittens and I think a great deal of them.

This spring we put up a tin box for some Jenny wrens to build in, but the hole was too big and some sparrows came along and built in it before the wrens had a chance. One day when I was out doors I saw a little wren trying to tear down the sparrow's nest. Then soon it brought a lot of sticks and put them in the doorway so no other bird could get it and then built its nest. Now it has some little baby wrens.

Now I will give you folks a riddle. What is there on a wagon that is of no use?

My two brothers and I have a berry patch. We pick the berries and sell them. I have made $3.50 this spring from the berries. —Blanche.

A Lonely Little Girl.

Dear Young Folks:—I have been reading your letters and like to read them just fine, but the story I have to tell is not at all cheerful. I am eight years old and I live on a farm and try to enjoy myself, but it is hard because my father was killed in the shaft of a mine. I suppose most of the writers

WOODROW WILSON LOWREY AND HIS PETS.

are enjoying the presence of their fathers, but my dear papa is not here. I have a kind mother and a little sister and brother, but they do not fill the place of my father. Always love your father and do not think that you wouldn't miss him if he were gone.

—Gladys.

Answer to Hilda's Riddle.

Dear Young Folks:—I enjoy your letters so much I want to write, too. My father owns two farms, one of 160 acres, where we live, and another of 100 acres. We have thirty-one head of cattle and seven horses. I like to live on the farm. I can do lots of housework and cooking and also help with the out-of-doors work.

I think the answer to Hilda's riddle —what big cat do you keep in the library—is catalog. I will ask a riddle, too. What is the strongest key?

—Ella.

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9532—A simple, but attractive negligee, or house sack, with long or shorter sleeve. The pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 3½ yards of 36-inch material for a 38-inch size.

1057—A new suit for the "little man." The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. It requires 2⅞ yards of 44-inch material for a 4-year size.

9821—Ladies' one-piece corset cover, in round, square, or "V" neck edge. The pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 1⅜ yards of 36-inch material for a medium size.

1310—Ladies' dressing or lounging robe. The pattern is cut in 3 sizes: Small, medium and large, and requires 6⅜ yards of 24-inch material for a medium size.

1758—A comfortable, serviceable ladies' apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 6¼ yards of 36-inch material for a medium size.

1296—A charming summer gown, with or without bolero for misses and small women, with sleeve in either of two lengths. The pattern is cut in 4 sizes: 14, 16, 17 and 18 years. It requires 7 yards of 36-inch material for a 14-year size.

1762—A practical comfortable garment. One could wear this model as a morning dress. The pattern is cut in 3 sizes: Small, medium and large. It requires 6¾ yards of 36-inch material for a medium size.

1783—Girls' dress with jacket blouse, and skirt attached to an underwaist. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 4½ yards of 36-inch material for a 10-year size. For separate jacket blouse it will require 2 yards of 36-inch material.

1774—A smart but simple gown. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7¼ yards of 36-inch material for a 36-inch size.

1312—A simple one-piece dress, with sleeve in either of two lengths. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3½ yards of 36-inch material for an 8-year size.

1778—A simple, popular model. This is a pretty style, easy to develop and nice for all kinds of wash materials. The patfern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 4¾ yards of 44-inch material for a 12-year size.

Waist 1771-Skirt 1755—A good style for afternoon or sport wear. Ladies' waist pattern 1771 and ladies' skirt pattern 1755 comprise this attractive dress. The waist pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It will require 3 yards of 36-inch material for a 36-inch size. The skirt pattern is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure, and requires 4⅛ yards of 44-inch material. Two separate patterns, 10 cents for each pattern.

International Sunday School Lesson.

Lesson for July 30, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

"The Word of the Cross."

LESSON TEXT—I Cor. 1:1; 2:5

GOLDEN TEXT—Far be it from me to glory, save in the cross of our Lord Jesus Christ.—Gal. 6:14.

Paul's letter to the church at Corinth was written from the city of Ephesus some four or five years after Paul had left Corinth. We have seen some of the difficulties which surrounded this church. It was a small body of believers in a great city of 400,000. It was surrounded by all kinds of licentiousness and excess so that to maintain a Christian moral ideal was difficult in the extreme. That is why this first epistle has so much to do with church government and such questions as the marriage relation, the conduct of public assemblies, spiritual gifts, the resurrection from the dead, different factions, the love feasts of the rich and the poor, eating meat offered to idols, lawsuits conducted before the heathen, the Lord's supper and church discipline are discussed. Paul did not himself write the letter. Sosthenes acted as his amanuensis. In this letter is the wonderful and immortal love chapter (Ch. 13), and the magnificent resurrection chapter (Ch. 15).

The only unity desirable or possible is that which Christ prayed for (John 17:21). This is not a unity of opinion or of organization, but a unity of purpose and power, the working together of believers in harmony to attain the great purposes of Christianity.

I. The Power and Wisdom of God. (vv. 18-25). To a sin-blinded mind the preaching of the cross is foolishness. Even some professed Christians reject the doctrine of substitution which is found everywhere in the Bible. (Isa. 53:6; Gal. 3:13; I Cor. 5:21). If the doctrine of the cross is foolishness to anyone it is to "them that perish." The Jews require a sign (v. 22), but the cross puts them to shame (v. 27). God is made unto us wisdom, not the wisdom of men, but the wisdom of the Spirit. It is such preaching as this that is "the power of God." It has proven itself the power of God in our lives. It will "destroy the wisdom of the wise" and "bring to nothing the understanding of the prudent" (Isa. 29:14 cf. Jer. 8:9). God is constantly making foolish the power and wisdom of this world. Philosophic research after the unknowable "tries to make a God of its own pattern, but does not satisfy the longings of the human heart," and God through the foolishness of the thing preached is pleased to "save them which believe." The performing of a miracle (Math. 12:38), and the Greeks seeking after wisdom, or philosophical reasoning, is no match for the Christ crucified whom Paul preached.

II. The Preaching and Power of Paul (vv. 26 to Ch. 2:2). Taking the Bible as a whole, we see in it God's plan and purpose with regard to the goal of mankind. The problem was by what means this purpose could be performed. The whole of the Old Testament is a story of God working to this end. Then at the best time in all history came Jesus, the son of God, into the world, and, by his death on the cross and his resurrection, we are all bound together in one, summed up in the cross as the power and the wisdom of God for salvation. The symbol of the cross is a common sight, yet the great truth which it symbolizes is often obscured by scholars, and fails to be lived by disciples. God chooses those whom the world rejects, "the foolish," and "the weak." These are the ones that were called even in Paul's day. The purpose of this call is to confound (or to put to shame) the wisdom of men. The most powerful motive in existence is the motive of the cross. (1) The cross is the highest proof and the strongest expression of the love of God for man. (2) The cross was the agent whereby atonement was made for sin. (3) The cross shows us the terrible evils of sin and the demand of such a sacrifice as God's son in order to save us from it. (4) It shows us that God wants us to come to him and to be saved, and that there is joy in heaven over every repentant sinner. (5) It shows the supreme value of right and duty in that Christ went to the cross at the terrible cost of his life. (6) It shows the value of the human soul. (7) From the cross, through the resurrection and the ever-living Saviour, God has given us the fullness of the Spirit to inspire and transform.

We are nothing in ourselves, and God has made Christ unto us "wisdom and righteousness," that is, God's righteousness is provided for us in Christ (I Cor. 5:21; Rom. 5:1; Phil. 3:9 R. V.); also sanctification and redemption, that is, we are separated from the world unto God and in him we are redeemed from sin and its consequences.

There is left no room for glorying in ourselves.

This was the preaching upon which Paul depended, not upon rhetoric nor philosophy nor argument with which to convict and convert men.

Shipping Stock to Market

(Continued from page 6.)

ment is seldom delayed longer than four days and where a shipper needs cash he can borrow without interest from his local banks, as they know the stock has been shipped and that the note will be taken up in four or five days. This cements the friendship between bankers and business men and takes care of those farmers who wish some money when they deliver the stock to Muscoda.

The expense of handling is nominal. The total expense averages about 40 cents per hundred for cattle and 50 cents for hogs, so that the shipper gets the Chicago price less this expense. Bedding and corn is furnished by the association and the home expenses are covered by charging each member 3 cents per hundred on cattle and hogs and 15 cents per head on calves. Non-members are charged 5 cents per hundred and 25 cents for calves. This revenue pays the manager, yard man, etc., and creates a fund to cover losses due to deaths of animals en route to the central market or the lessened value due to animals being crippled en route. These losses, after two years, have been found to be exceedingly small and the manner of paying the loss is so distributed among all shippers that it is not a burden for anyone. The markings denote whose animal is killed or crippled, so that the owner can be repaid. The charges for feed are based on the number of head in a car and the amount of corn put in the car. On hogs this expense is usually from 5 to 8 cents per hog. The only other expense is the annual dues of $1, which helps pay for printing, etc., and the association ended the year 1915 with a balance of $118 in the treasury. There are now 125 members and the yard man is paid $1 per car and the manager $1.50 per car for their labors. This is paid from the 3 cents per hundred charge on stock shipped.

When the manager gets the statement from the commission firm of the sale he pro rates the freight expense, by taking the carload rate per hundred and multiplying by the total local weights of each shipper. The shrinkage is pro rated likewise, but as all members are urged to feed only dry feed the two days before shipment this shrinkage is greatly reduced. One car of hogs actually gained 320 pounds between Muscoda and Chicago. Of course, this was to the benefit of the farmers who shipped in that car.

After pro rating the freight expense and shrinkage, deducting the Chicago and home expenses, the manager knows what each shipper is to receive and then draws a check to the farmer's credit for the amount. This is a special check and contains thereon all the facts relative to the shipment so that every farmer knows what it cost him to sell his stock in this way.

Another advantage is that the farmer has no capital invested and can wait until carloads are arranged which enables him to take advantage of a rising market or avoid a declining market. Much of the success of such an organization depends on the officers, the manager and the members and failure is very likely if there is not the right kind of sentiment behind such an association.

The first consignment of Italian queens has been sent out from the apiaries of the Wisconsin College of Agriculture to beekeepers in the state who had ordered them. If the weather conditions are favorable it is expected that from half a dozen to twenty-five queens a day will be shipped throughout the summer. The work has been made possible through the co-operation of the state beekeepers' association.

Alfalfa flour is now mixed with wheat flour and made into bread. It costs less and has greater food value than ordinary wheat flour. Most people don't like it, but perhaps we can get used to it just as we force our stock to eat sweet clover.

Drainage improves alkali soils.

Coal $2.90 per ton!

Read this sensational price offer on Tip-Top, A-No. 1, **GUARANTEED** coal.

GENUINE Pocahontas Lump, $2.90 per ton
The genuine—from the genuine Pocahontas veins, Pocahontas district, W. Va.—see sworn statement)
Hercules Selected - - - - - - $2.70 per ton
(Clean extra hard coal—general use—extra high grade)
Master Hocking - - - - - - - - $2.60 per ton
These wholesale direct prices are for those who can afford to pay for 4 or 5 or 6 tons at a time.

Ever heard anything like this? Hardly. Well *look it up—find out* what high-quality coal *does* cost when bought and sold right. Find out——and then you'll be *posted*——and no one can hand you talk about coal prices.

Reference: Write State Bank of Chicago, or any one you know and find out our standing.

Shipped direct from the mines. All prices f. o. b. mines. **Prices all smashed.** Write today for booklet and price list.

You Send No Money
with your order. You see the coal first—take it only if satisfactory—quality absolutely guaranteed—weight absolutely guaranteed, right at the mines.

Write for Booklet and free photographs of coal—and complete price list on direct-from-mine shipments. No obligations.

Hercules Coal Company
168 N. Michigan Avenue, Dept. D 448, Chicago

Meet me at the Tuller

For Value, Service, Home Comforts

HOTEL TULLER
Detroit, Michigan

Center of business on Grand Circus Park. Take Woodward Car, get off at Adams Avenue

ABSOLUTELY FIREPROOF

200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double
200 " " " 2.00 " 3.00 " "
100 " " " 2.50 " 4.00 " "
100 " " "3.00 to 5.00" 4.50 " "

Total 600 Outside Rooms

ALL ABSOLUTELY QUIET

Two Floors—Agents' Sample Rooms

New Unique Cafes and Cabaret Excellente

Bumper Grain Crops
Good Markets — High Prices
Prizes Awarded to Western Canada for Wheat, Oats, Barley, Alfalfa and Grasses

The winnings of Western Canada at the Soil Products Exposition at Denver were easily made. The list comprised Wheat, Oats, Barley and Grasses, the most important being the prizes for Wheat and Oats and sweep stake on Alfalfa.

No less important than the splendid quality of Western Canada's wheat and other grains, is the excellence of the cattle fed and fattened on the grasses of that country. A recent shipment of cattle to Chicago topped the market in that city for quality and price.

Western Canada produced in 1915 one-third as much wheat as all of the United States, or over 300,000,000 bushels.

Canada in proportion to population has a greater exportable surplus of wheat this year than any country in the world, and at present prices you can figure out the revenue for the producer. In Western Canada you will find good markets, splendid schools, exceptional social conditions, perfect climate, and other great attractions. **There is no war tax on land and no conscription.**

Send for illustrated pamphlet and ask for reduced railway rates, information as to best locations, etc. Address

GEO. A. HALL
123 2d St., Milwaukee, Wis.
Canadian Government Agent

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

FOR fine farm lands at low prices and easy terms in Wisconsin's greatest dairy district, send for our free list, map and photographs of choice dairy, stock and grain farm bargains. Write Graham's Land Office, Marshfield, Wisconsin.

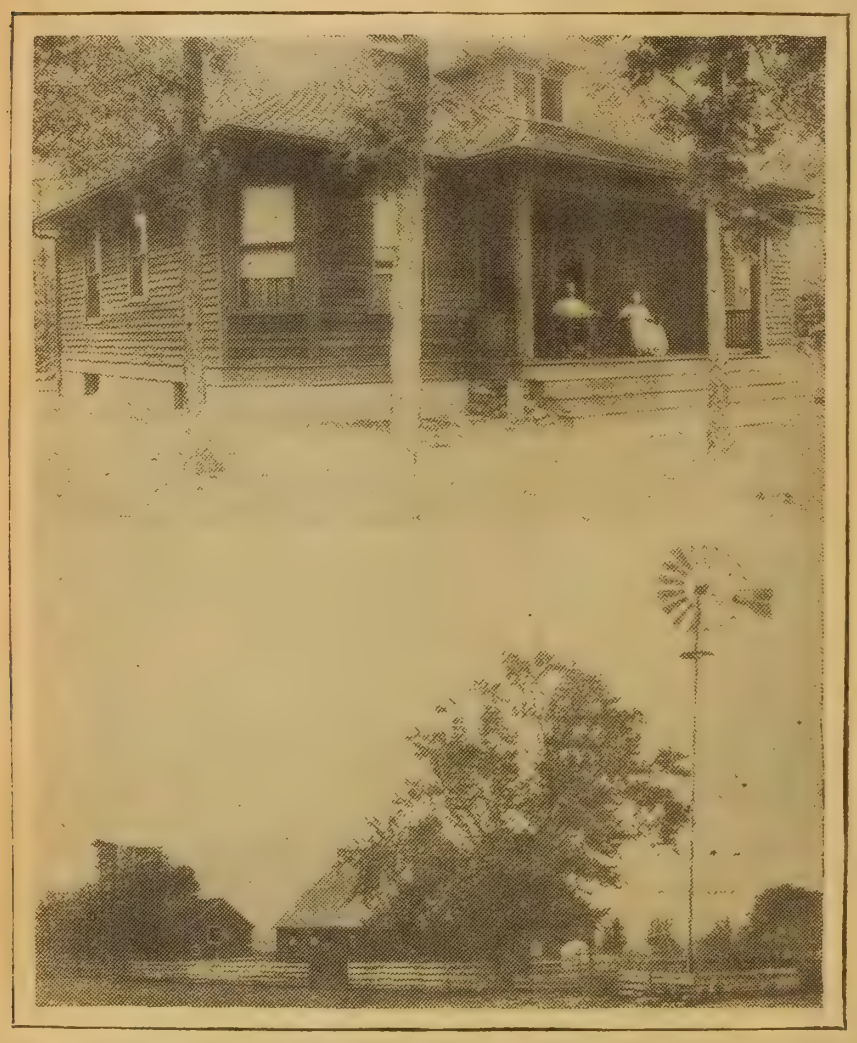
FARMS for sale. Wonderful bargains in five states with crops and stock. Send for catalog. D. B. Cornell Co., Gt. Barrington, Mass.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

Enter Now the Country Plumber.

Rural Field Offers Best Opening For the Plumber Nowadays, in the Remodeling of Farmhouses, According to Experts at State Convention.

A NEW occupation has come into existence, that of "country plumber." So wide is his field of operations, so limitless his possibilities, that nothing else was considered half so important at the annual convention of the Iowa Master Plumbers' Association.



THE WINDMILL WHICH FURNISHES THE POWER FOR THE "WATER-UNDER-PRESSURE" SYSTEM OF THE HOUSE SHOWN ABOVE.

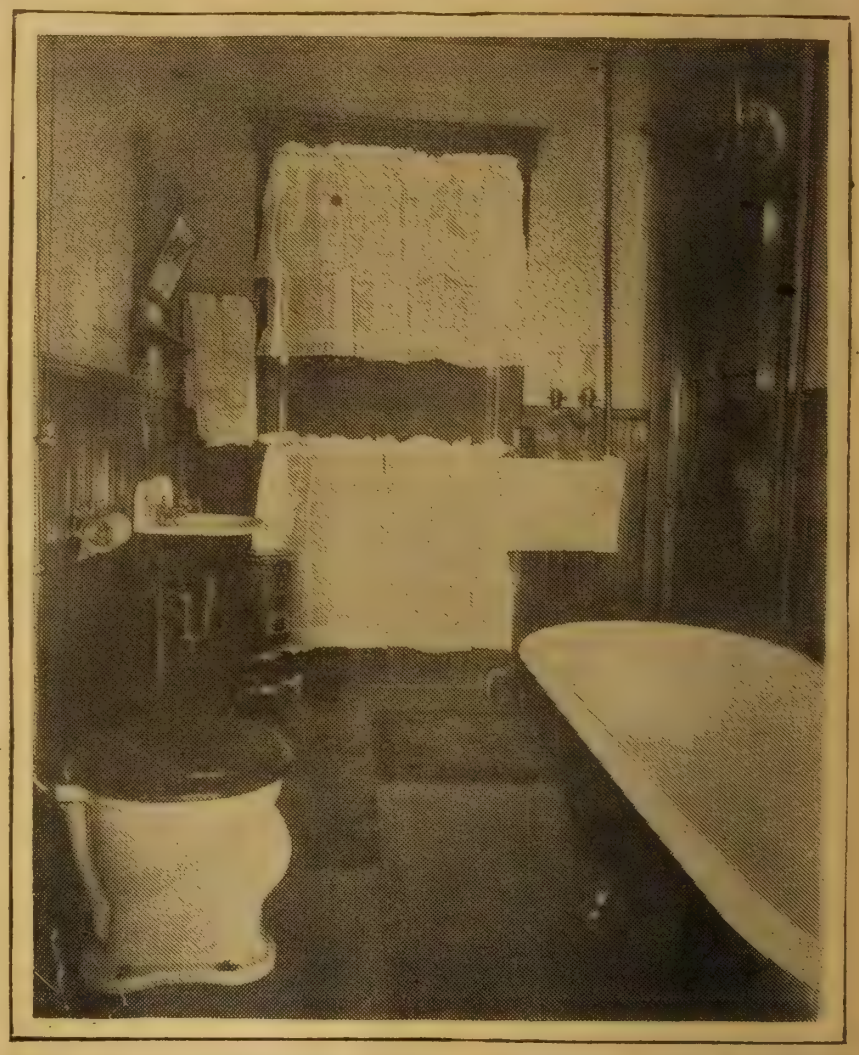
The term applies to the plumber who makes as his specialty the installation and care of sanitary fixtures in the farm homes. In the belief of a majority of the delegates attending the last Iowa convention of plumbers the greatest field which will be opened up for this trade during the coming years will be that of caring for country plumbing work.

"The farmers are the people who are making the large percentage of the money in the middle West today," said one of the representatives. "We plumbers realize this as well as anyone. As the rural districts become more prosperous they naturally demand more luxuries and along with this demand comes a request for plumbers who can install modern sanitary fixtures in the farm homes. This will be the paying line before another year."

There are ample incidents and statistics to verify the confident prediction. The farmers of America spent $2,768,812,032 for new buildings in the ten years between 1900 and 1910, an average of $27,688,120 a year for the nation, or $576,836 for each of the forty-eight states. The showing in the grain belt, where the farming body predominates, was still better. In the ten states of the grain belt, in which is to be found one-half of all the improved acreage of the United States, the value of farm buildings increased at the rate of $118,690,634 a year for each of the ten years between 1900 and 1910, an average of $11,869,063 a year for each of the ten states. It is safe to say that one-half of this immense increase was for remodeled farm homes and altogether new buildings, with all modern conveniences, supplanting the old structures.

The experience of a Missouri community with the country plumber is typical. The community is adjacent to Houstonia, in Pettis county. A prosperous farmer, buying a 710-acre farm, soon came to the conclusion that the ten-room farmhouse, without any of the modern or urban conveniences, was not in keeping with the productivity of the fertile soil or the housing of his blooded stock. Accordingly, he consulted a plumber in the country town and the two set to work to modernize the old farm home.

A large windmill was erected to pump water in the basement of the home and air pressure was used to force the water into all the rooms and to give fire protection. Then a furnace was installed and to this furnace and to the range in the kitchen hot water appliances were attached to furnish hot water to all the bedrooms and the bathroom. Sewers were constructed and the home piped for gas. An acetylene gas system was installed to complete the family lighting system. The farmer learned by experience that all this work could be done at a cost ranging from $500 to $1,000, according to the moderate or extravagant ideas of the home owner.



MANY AN OLD FARMHOUSE IS BEING REMODELED WITH BATHROOM CONVENIENCES SUCH AS ARE SHOWN HERE.

The example set by this man was quickly followed, until today there are more than thirty farm homes within

(Concluded on page 22.)

A FINE NEW MODERN FARMHOUSE SUPPLANTS THE OLD, TO THE RIGHT REAR—A FURNACE HEATS THE HOUSE AND DRIES OUT THE SEED CORN.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Germs the Source of Most Stock Diseases.

IT IS now well known that most of the diseases which affect stock and poultry are of germ or parasitic origin. Drains, troughs, cesspools, sinks, closets, hog wallows, stables and many other similar farm accessories are natural breeding centers for germs and parasites. As the sources cannot be removed, the only thing to do is to render them harmless by using an effective germicide and disinfectant and for the animals already infected, a powerful, non-irritating antiseptic dip. Dr. Hess dip and disinfectant seems to be very popular, one of the arguments in its favor being that it is always and absolutely uniform in quality and strength—an important feature when one considers how often it is necessary for animals to be treated locally. There is no question but that if there were a more general use of this excellent dip and disinfectant by live stock owners, contagious diseases among animals would be much less prevalent. Dr. Hess, the compounder, is a widely known veterinarian of practical experience, and his dip and disinfectant is the result of his scientific study of the the many requirements such a preparation must fulfill. Like all Dr. Hess preparations it is guaranteed to do all that is claimed for it, or the dealers will refund your money. An excellent feature of the work Dr. Gilbert Hess is rendering stock owners is the free veterinary advice. If you have a sick animal, you have but to write him personally at Ashland, Ohio, giving particulars, and he will send you a prescription free.—Adv.

E. W. Hendricks to Have Good Boar Offering.

WHEN you attend the sale of Poland China boars to be made by E. W. Hendricks, Hazel Green, Wisconsin, September 28th, you will find an offering that will please you. We recently visited this herd to see what the owner had picked for this sale and we will say that he has thirty-five spring boars that are going to look great by sale time. E. W. is bringing them along in nice shape, they are not fat but they are growing nicely and by September 28th they will be rounded out in nice shape and will have great size. In Black Jumbo, Mr. Hendricks has one of the good breeding boars of the state. We haven't seen a hog with more length and the important feature is that he transmits this quality in his offspring. Fatted, Black Jumbo could be made to weigh right at 1,100 pounds. Don't forget this coming sale, it will be one of importance. See page 23.—Adv.

A Car for the Needs of the Farmer.

THE automobile that has power, room, strength and modern construction has about all the essential features that the farmer demands in a car. The Allen at $795 is such a car and is, therefore, being offered to the farmer as meeting his needs. The specifications of this car are found in the advertisement on page 13. It will be noted that the Allen is a light car and will travel twenty miles on a gallon of gasoline. This is an important consideration in these days of high-prices for gasoline and every farmer wants his machine to run as economically as possible. The Allen autolog contains complete information regarding this car and may be had free by writing to the Allen Motor Company, Allen Building, Fostoria, Ohio. If you are interested in a new car, send for this catalog and also visit the Allen dealer the next time you have an opportunity.—Adv.

McClurg Bros.' Offering.

DO you want some good spring pigs, if so, you can buy them of McClurg Brothers, Viroqua, Wisconsin. You will remember that this is the home of that good two-year-old Duroc Jersey boar, Prince Defender, and they are now offering spring pigs sired by him—gilts or boars. They have some good ones and they are being priced worth the money. They also have a litter by Lee's Defender that is nominated in the Duroc futurity, but they don't think they will make the fairs this fall consequently this litter is also for sale. Now there are some good boar pigs on this farm and we will stand back of this herd for we know the McClurg brothers will give you a square deal. Write them and tell them about what you want and they will try hard to fill the bill. Please mention this paper when writing. See page 23.—Adv.

Do You Need an Angus Bull?

HARRY YOUNG, Bridgeport, Wisconsin, has bulls of this breed that will suit the most critical and as he needs the room he is pricing them where they should sell very readily. They are big, being well grown, are in nice condition and some of them are suitable to head a pure-bred herd of Angus cows. Don't hesitate if you want a bull for there are some good buys in this lot. See page 23.—Adv.

Aberdeen Angus Bulls and Cows for Sale.

IF you want to start right with a few Angus cows or heifers write F. C. Lewis, Bridgeport, Wisconsin, for prices on his Angus cattle. He has several females, a few with calves at foot and a couple of bulls and he will sell one or all. If these are not sold within a short time they will be taken off the market. Get busy at once. See page 23.—Adv.

Build a Concrete Silo.

IT doesn't take long to build a concrete silo when once started and the cost is not excessive—then, after it is finished you know that it is there to stay and the danger of an immature corn crop and feed shortage has no terrors. With a substantial silo the problem of stock feeding is much simplified and there is less need of selling off the cattle because of a lack of feed. Good ensilage demands a waterproof, air-tight silo in order that the nutritious silage juices cannot escape and bacteria and molds cannot cause decay. Medusa waterproofed Portland cement is an ideal material for silo construction. It consists of Medusa cement mixed with the proper proportions of Medusa Waterproofing (which may also be purchased separately) and will resist weather, storms and frost. Every farmer is advised to send for the booklets of the Sandusky Portland Cement Company, Engineers' Building, Cleveland, Ohio, which tell the advantage to the farmer of using Medusa products. See advertisement on page 2 and write for them today.—Adv.

J. C. Hendricks Making Good Sales.

J. C. HENDRICKS, Hazel Green, Wisconsin, has been doing a rushing business the past six weeks. He advised the writer that he has never had so many inquiries for spring boars and the way he has been shipping his Polands he is not going to be able to fill all orders. The interesting part is the fact that the demand is better than ever for he better boars, this shows that the pure-bred hog business is on the incline and shows that there is more interest being manifested for better breeding stock. J. C. has around twenty good boars left and don't think that all of these are tailenders, for the tailenders go to the feed lot, if you order you will get a good pig or none at all. See page 23.—Adv.

A Live Auctioneer.

MANY of The Wisconsin Farmer readers will be holding live stock and farm sales during the coming fall and winter and are interested in securing the services of a capable and pleasing auctioneer. The writer recently had the pleasure of hearing Col. R. B. Hellen, Jefferson, Wis., in the Waukesha Holstein sale and was impressed with the good work he did. We were so favorably impressed that we do not hesitate to recommend him to the readers of The Wisconsin Farmer. Colonel Hellen has had twenty years of experience in the auctioneering field, and has developed a knowledge of human nature that is the most valuable asset an auctioneer can possess. He has a clear, distinct voice that carries well and is understood by all. His manner is pleasing and he keeps up the interest from start to finish. As he said "I don't care whether I see the animal in the ring or not if I can only see the faces in the crowd." He is a live, vigorous worker, full of "punch" yet no coarse work. We feel positive that he will prove a valuable man to employ at your farm sale or live stock sale. See page 23.—Adv.

Short-horns That Will Please.

WE are glad to refer you to the Williams Brothers, Bangor, Wisconsin, if you are interested in Short-horns. The young bulls and heifers that they are offering will please you, in fact if the calves are not good prospects they go for veal, only the best ones are kept for breeders. The dams are good milkers and the sire is an excellent bull. If interested write at once and mention this publication. See page 23.—Adv.

King Eight-Cylinder Makes New Record.

A REMARKABLE endurance record was made on the Sheepshead Bay and Long Island, New York, roads last month by the King eight-cylinder motor car, which traveled 10,350 miles without stopping. The test was made with a registered stock car under the official A. A. A. supervision, and a constant watch was kept over the performance both day and night. The entire distance was covered at an average rate of thirty-four miles an hour, and, while the car was stopped for necessary supplies, tire changes, etc., the motor was not stopped once. An examination of the car after the test showed it to be in perfect running condition, ready for another test. Several other remarkable tests have been carried out with the King car and in every case it has made good. Among them are the climbing of Mt. Wilson in Southern California sealed in high gear, 987 miles in high gear from Los Angeles to San Francisco and return and driving in high gear from Providence to Providence via Albany and New York City. From these accomplishments motoristts have learned the great reliability of the King and prospective purchasers may have no fear in choosing this car. See the King at your dealers and write for further information to the King Motor Car Company, Detroit, Mich., who are advertising on page 9 of this issue. —Adv.

Galloway Cows for Sale.

IF any of our readers want to purchase some good Galloway cows they should write or go and see C. S. Hechtner, Chariton, Iowa, who offers to sell fifty head of registered cows and heifers on page 23. Some of these are imported cows, while the most of them are sired by imported bulls and are out of imported cows. He is offering some rare bargains in these cows and heifers. He also has fourteen good young Galloway bulls that he is offering for sale. When you write him kindly mention this paper.—Adv.

Self-Filling Ensilage Cutter.

THE Meili-Blumberg Co., 200 Main St., New Holstein, Wis., are advertising on page 12 an ensilage cuttter which feeds automatically and saves the labor of one man. This is accomplished by a safety head which adjusts itself to the amount of material fed. With this machine there is no danger of foreign substances getting into the machine and causing damage. As soon as the cutting head stops, the flywheel and pulley run free. There are other advantages to this machine which you should know about. For full information write to the company named above and mention The Wisconsin Farmer.—Adv.

Game Farming Pays.

THE demand for game birds in this country is daily growing much greater than the supply. This means that good prices will rule for them in the future, and those who have the ability and equipment for raising these birds can make good profits. Pheasants are not difficult to raise on the farm and their eggs sell at from $20 to $25 a hundred. Game farming can be conducted as a side line to poultrying, and a handsome profit realized thereby. An interesting discussion on the subject is found in the booklet, "Game Breeding for Profit and Pleasure," which is issued by the Game Breeding Dept., of the Hercules Powder Co., Wilmington, Del. This booklet will be sent free on request to the address just given, and will prove to be worth anyone's reading. See page 11.—Adv.

SELLS $4,000 WORTH OF STOCK

J. H. TRAVIS, manager of the Upland Farm, Walworth, Wis., comes back for another advertisement in The Wisconsin Farmer. He knows it pays because he tried it last spring with most satisfactory results. Read his letter:

Upland Farm, Walworth, Wis., July 6, 1916. The Wisconsin Farmer:—Enclosed please find copy for our advertisement of Holstein cattle and Duroc Jersey swine to run for one year. We had excellent results from the advertisement we ran last spring. During the three months the advertisement ran we sold over $4,000 worth at an average price of about $250 per head, including young male calves.

Yours truly,

J. H. Travis.

The Wisconsin Farmer is disposing of stock at profitable prices for many Wisconsin live stock men. It can do so for many others.

If you have stock to sell write

The Wisconsin Farmer, Madison, Wisconsin

THE LIVE STOCK PAPER OF WISCONSIN

GUARANTEED CIRCULATION 90,000

SALE DATES.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

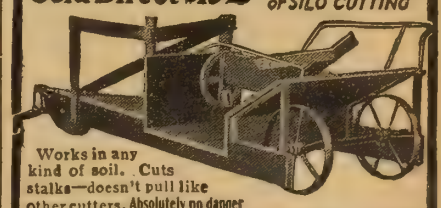
Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Federalsburg, Maryland.—Twiford Williams, a farmer living near here, had a thrilling experience with an infuriated bull. Williams ran his motor car into a field to look over the bull, which he was contemplating buying. The bull became frightened at the machine and made a dash for it. Williams quickly turned on all the power the car contained and the machine shot away at a fifty-mile-an-hour clip, but when it reached the gate leading out of the field Williams could not make the turn at such high speed. The bull chased him around the field repeatedly, and made desperate attempts to head off the car, but Williams, by carefully manipulating the steering wheel, managed to elude the beast, which finally became tired and gave the frightened man a chance to escape through the gate.

The biggest word in the live stock business is cleanliness. Most animal diseases are filth diseases.

The PERFECT CORN HARVESTER

Sold Direct $19.50 JUST the THING for SHOCK or SILO CUTTING



Works in any kind of soil. Cuts stalks—doesn't pull like other cutters. Absolutely no danger

Cuts Four to Seven Acres a Day

with one man and one horse. Here is what one farmer says: West Burlington, Ia., Feb. 1, '15 Love Mfg. Co.: Dear Sirs: We have used your corn harvester with good success. It worked perfectly every way just as you described. One man can cut from 100 to 125 shocks a day. Henry J. Luecking

SOLD DIRECT TO THE FARMER

Send for booklet and circulars telling all about this labor-saving machine; also containing testimonials of many users. Send for this circular matter today.

LOVE MANUFACTURING COMPANY

Dept. 29 Lincoln, Illinois

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

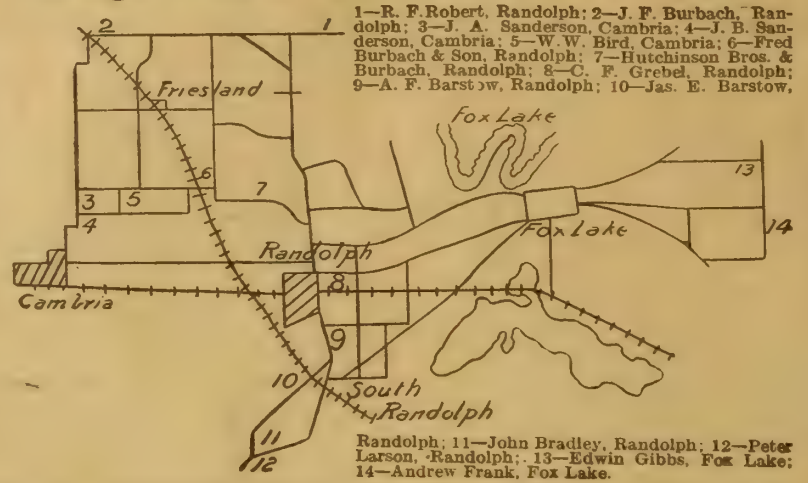
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE.

HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

Enter Now the Country Plumber.

(Continued from page 20.)

a short radius of this town which are completely modern in every respect. In every instance these houses contain hot-air furnaces. Complete water systems are in every home, a tank in the basement supplying the water, which, in most cases, is pumped by a windmill, gasoline engines being used in one or two houses. There are boilers attached to the kitchen range, which furnish an abundance of hot water, both for the kitchen sink and the bathroom. The bathrooms are fitted up as well as any city house, containing porcelain lavatory and toilet. Each farmer has his own sewer, which is drained to some distant point on the farm. A convenient feature of several of the homes is a room opening off the kitchen and back porch, containing a lavatory, and here the men come on their return from the fields. It contains hooks for coats and places for overshoes and takes out of the other part of the house much of the mud-tracking in bad weather. The basements of all the houses are of concrete. Nearly all contain three large, airy rooms, in one of which is the furnace, the plant for the acetylene gas is in the second, the boiler for the water is in the third. In some cases this last room is fitted with tubs for laundry purposes.

So popular has the movement become that the agricultural extension departments of most of the state colleges of agriculture are issuing practical bulletins on the subject. In many instances these bulletins tell how the plumbing work can be done by the farmer himself, at low cost. But even this information does not discourage the country plumber, for he is learning that the farmer finds himself plenty busy planting, cultivating and harvesting, without taking to plumbing as a side line. Moreover, with his farm earnings passing ten and one-half billion dollars last year, for the first time in history, the farmer feels able to stand the expense and to have the work done right, by an expert. Hence the high hopes of the country plumber.

Storing Butter For Future Use.

To the Editor:—Butter can be packed away in salt and kept fresh and sweet, just the same as meat, pickles, kraut, etc. This may seem impossible to some that are prejudiced against "old butter," but it can be done with perfectly satisfactory results, provided the butter is of first-class quality to start with.

A great many farmers have their cows freshen in the spring, having a surplus of nice butter during the summer months, but when the cows begin to drop off in the latter part of winter and early spring their butter supply runs short.

Packing the butter away should begin at once, if there is a suitable place for storage. Of course, a cellar is best for storage, but not at all a necessity.

To start with, the butter should be churned from cream that has been properly handled, and the butter should be handled by a good buttermaker. Clean, sweet jars are best to use in packing. One large jar can be used, or several smaller ones, which is usually more satisfactory, as all the butter will not have to be opened at once. See that the jars are perfectly clean before beginning. Scald well with hot water; then rinse with cold water, and be sure it is odorless.

Pack the butter away as soon after churning as possible. It can be made into molds, or packed down in the jar, using a layer of salt and a layer of butter. However, it is much handier to have the butter already molded. Each mold should be wrapped in parchment paper, and a small space left between the molds and this space filled with fine salt. A layer of salt should have been put in the bottom of jar before the butter was placed in. Then about one-half inch layer of salt is put on top of the first layer, and a second layer added. As much of the water should be gotten out of the butter as possible before it is packed away. Only a small amount of salt will be needed when working the butter, as it will be packed away in salt. If there is only one pound a day, or a few pounds a week to pack away, it will be a great help when the cows are dry.

When the jar is full, or the last layer of butter has been added, about two inches of fine salt should be placed on top, and the jar covered with a cloth to exclude dust. Subscriber.

Drainage, the application of straw and manure, and deep plowing will cure those alkali spots.

Last year 6,000,000 frogs were placed on the markets of St. Paul and Minneapolis.

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

A 22.29 POUND SON OF THE 29 POUND BULL
MAPLECREST HENGERVELD DE KOL 94154

THAT combines in the closest possible degree the blood of Friend Hengerveld De Kol Butter Boy and Pontiac Aaggie Korndyke, that combined have eight daughters with records from 1,000 to 1,322 pounds of butter in a year. Price $125. Also for sale a bull born October 30, 1915, whose dam, a daughter of Gem Pietertje Paul De Kol, made 15.35 pounds butter in seven days as a three year old.
GROVE BROTHERS COLUMBUS, WISCONSIN

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

Heavy Producing Blood

A 23.35-LB. yearling Holstein bull for sale. His dam made 23.35 pounds of butter as a 5 year old. She has 3 A. R. O. daughters, 2 with records of 28.63-24.50. His dam's dam at 1 year 11 months made 11.98 and was sold to parties in Japan. His great grandam has 8 A. R. O. daughters, holding the world's record for over 5 years. His sire, a 27.02-lb. bull, was 1st prize 2 year old at 1915 Wisconsin State Fair.
Arthur Rust West Allis, Wisconsin

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

REGISTERED HOLSTEIN HEIFERS

AND bull calves from one to 15 months old. Some sired by Jewel Aaggie Alcartra 143023, whose four nearest dams average over 25 pounds of butter in seven days. A few choice registered cows also for sale. Address
JOHN NORTH, Kilbourn, Wisconsin.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65.to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address
JOHN HASSE MONROE, WISCONSIN

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest Guernsey breeding. Four months of age. Sired by the richly-bred bull,

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant view. Also a deep, rich breeding of the Governor of the Chene line. Address
Charles Schmidt Wrightstown, Wisconsin

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett Sparta, Wisconsin

REG. GUERNSEY BULL

BORN October, 1915. Sired by Glenwood's Noble Secret 23999 and out of a heavy-producing cow. He is well marked, fawn and white, well grown, good type. Address
E. H. Kiesling Jefferson, Wisconsin

REGISTERED GUERNSEY HEIFERS

9 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson Rosendale, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

8 HIGH-GRADE GUERNSEY

YEARLING heifers, bred to freshen this fall and winter. All sired by a registered bull and bred to a registered bull. Well marked and well grown. Write for description and prices. Address
Findlay Bros. Whitewater, Wisconsin

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

HORSES.

LEFEBURE'S BELGIANS

A LARGE and choice collection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
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200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

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Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . **JERSEYS**

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Yearling Jersey Bull

OF choice breeding, Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write FRED STUBLEY BLACK EARTH, WIS.

ABERDEEN ANGUS CATTLE.

BULLS! BULLS! BULLS!

AM offering **ABERDEEN ANGUS** bulls from 12 to 18 months old. They are well grown, in nice condition and they are priced to sell. First come gets pick. Write or, better yet, come.
HARRY YOUNG **BRIDGEPORT, ISCONSIN**

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. **Cassville, Wisconsin**
(30 miles up river from Dubuque)

RED POLLED CATTLE.

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD **AVOCA, WIS.**

RED POLL Headquarters

BULLS all sold. Will sell a few choice heifers. Price is right. Address
J. W. SALTER & SONS **UNITY, WIS.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt **Rosendale, Wisconsin**

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

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50 **HEAD OF REGISTERED GALLOWAY** cows and heifers for sale; all bred. Some are imported cows and out of imported dams. Also 14 bulls. C. S. Hechtner, Chariton, Iowa.

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He can make you money in your live stock or farm sale. Rates reasonable.

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FOR SALE 30 full blood Shropshire ewes and 20 spring lambs. If you want the right start in the sheep business you should buy the entire flock.
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DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff C 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
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FROM MILKING STRAIN OF
SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
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SEVEN bulls ready to go, sired by Qeenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
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Short-horns of Quality

FOR sale at a very reasonable price, 22 head of registered Short-horn females, ranging in age from 16 months to 6 years. Address
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HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
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SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin

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YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

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STOCK of both breeds for sale. Pigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

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E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

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ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
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YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

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FOUR fall boars sired by KING THE COL. Three fall boars sired by CHIEF'S COL. FISHER. Fifty spring boar pigs, the best lot I ever owned. The home of GOLD BOND. Write.
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Boars reserved for sale, October 19th.
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IF you want DUROCS with size buy a son of COOK'S DEFENDER. Priced right. Address
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GRAND MODEL 21 CORRECTOR 2d

KEEP these Durocs in mind. Few pigs for sale by Lincoln Model, Salem Model and Regulator 2d. Write.
Geo. D. Sprain & Sons, West Salem, Wis.

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READY to ship spring boars by Col.'s Choice by King the Col., Wonder Chief by Cherry Chief, Pal's Defender by Lee's Defender. Order early.
Dennis Shea **Melvina, Wisconsin**

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THOSE that see him like him. Offering a few boar pigs and some sows bred to him for fall litters. Correspondence solicited. Address
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OFFERS a few Duroc sows bred for fall farrow. Boars retained for **BOAR SALE OCT. 18.**
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BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

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HAMPSHIRE

SPRING pigs of both sexes and fall boars for sale.
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101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
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ON actual test—Garclaugh May Mischief in one year gave 25,329 lbs. milk, 11,780 quarts, at 6 cents a quart $706.80, less $177.46 food for 1 year—a profit of $529.34. If you want hardy, prolific, profitable cows, write for information and names of nearest breeders.

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C.M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

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FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

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JUMBO'S EQUAL 2D
Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
C. S. FLESCH **MT. IDA, WISCONSIN**
(Shipping point, Fennimore.)

POLANDS

A'S BIG ORANGE, HERD BOAR

OFFER three outstanding fall boars. Spring pigs now ready to ship, sired by A's Big Orange, one of the good boars of the state. Guarantee to please. Write for particulars. Address
W. F. Ackerman **Glen Haven, Wis.**

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING **BANGOR, WIS.**

POLAND CHINAS

40 BOARS of March farrow, sired by Repeater, Smooth Price, High Wonder, North Side Wonder, and six other boars, all of a National reputation, out of big, 600 and 800-lb. sows. We hold the state record for high average on brood sow sale. Will sell these boars at farmers' prices for July 1st delivery. Write at once.
J. C. Hendricks **Box F, Hazel Green, Wis.**

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L.P. Martiny, Box F, Chippewa Falls, Wis.

McDONALD

HAS some good Poland China spring pigs for sale out of his 800-poundshow sows and 1,000-pound boars. Write, mentioning The Wisconsin Farmer. **J. D. McDonald, West Bend, Wis.**

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SPRING boars for sale—bred big and individually big. Gilts reserved for winter sale. Order boars early. Address
Wm. Smiley & Son **Albany, Wisconsin**

BLACK JUMBO 221231
BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks **Hazel Green, Wisconsin**

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SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
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BIG-TYPE Poland China yearling boar $40.00. Gilts bred for fall farrow to Fairview Jumbo, $35. Booking orders for July, August and September pigs. J. Le Roy Larson, Iola, Wis.

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CHESTERS

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Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller **West Salem, Wis.**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. J. Gray, Mt. Hope, Grant Co., Wis.

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SHIPPED at three months of age. $25 per pair, $15 each. Well grown, good type of L. B. Silver breeding. Address
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AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

CHESTER WHITE Spring pigs of either sex, singles, pairs or trios. Tried sows bred for fall litters. Buy your breeding stock now, prices right.
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CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE **LOMIRA, WISCONSIN**

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1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
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TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Jonanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address
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FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees.
Wm. Braatz & Sons **Brandon, Wis.**

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THE WISCONSIN FARMER

VOL. XLV. NO. 31. THURSDAY, AUGUST 3, 1916. WHOLE NO. 1801

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The Wisconsin Farmer

THURSDAY, AUGUST 3, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

"JIM" RILEY'S GONE.

I DO not think any American poet ever got nearer to the heart of childhood, or more feelingly depicted the beauties of country life, than James Whitcomb Riley, who died last week. Who among us has not enjoyed going with him out to old Aunt Mary's, or rollicking through the clover knee deep in June, or feasting on the luscious heart of the "wortermelon," or diving down deep into the old swimmin' hole? Riley had a knack of writing things so that everybody could understand what he meant. And he was cheery and philosophically optimistic all the time. Witness his "Thoughts fer the Discouraged Farmer:"

Does the medder-lark complane, as he swims high and dry
Through the waves of the wind and the blue of the sky?
Does the quail set up and whissel in a disappinted way,
Er hang his head in silunce, and sorrow all the day?
Is the chipmuck's health a-failin'?—Does he walk er does he run?
Don't the buzzards ooze around up thare jest like they've allus done?
Is they anything the matter with the rooster's lungs er voice?
Ort a mortul be complanin' when dumb animals rejoice?

Then let us, one and all, be contented with our lot;
The June is here this morning, and the sun is shining hot.
Oh! let us fill our harts up with the glory of the day,
And banish ev'ry doubt and care and sorrow fur away!
Whatever be our station, with Providence fer guide,
Sich fine circumstances ort to make us satisfied;
Fer the world is full of roses, and the roses full of dew,
And the dew is full of heavenly love that drips fer me and you.

Could any man—be he farmer or city dweller—remain discouraged and disgruntled long, in the face of such cheery optimism and wholesome philosophy? And then, to make matters still better, Riley would go ahead singing some song about the most common things of farm and country life, until time stood still and we were all young again, back on the old home place; some such thing, for instance, as "Wortermelon Time," with Riley frankly acknowledging

Old wortermelon time is a-comin' round ag'in,
And they aint no man a'livin' any tickleder'n me,
For the way I hanker after wortermelons is a sin.

and then making the whole world kin by such a homely illustration as this:

I joy in my hart to hear that rippin' sound
When you split one down the back and jolt the halves in two,
And the friends you love the best is gethered all around—
And you says unto your sweetheart "Oh, here's the core fer you."

Boys take to it natchurl, and I like to see 'em eat—
A slice of wortermelon's like a frenchharp in theyr hands,
And when they "saw" it through theyr mouth sich music can't be beat—
'Cause its music both the sperit and the stummick understands.

It is a far cry from "wortermelons" to poetry, but surely Riley's poetry was the kind that was music to the spirit, the brain and the heart.

Among all of the splendid, youth-renewing poems that Riley wrote it would be difficult, if not impossible, for me to pick out my favorites, but surely all of us enjoy "The Old Swimmin' Hole" and "Out to Old Aunt Mary's." No matter what our age or condition in life today, does it not renew our youth and turn time back to our boyhood, to read:

Oh! the old swimmin'-hole! whare the crick so still and deep
Looked like a baby river that was layin' half asleep,
And the gurgle of the worter round the drift jest below
Sounded like the laugh of something we onc't ust to know,
Before we could remember anything but the eyes
Of the angels lookin' out as we left Paradise;
But the merry days of youth is beyond our control,
And it's hard to part forever with the old swimmin' hole.

Oh! the old swimmin'-hole! When I last saw the place,
The scenes was all changed, like the change in my face;
The bridge of the railroad now crosses the spot
Where the divin'-log lays sunk and fergot.
And I stray down the banks whare the trees ust to be—
But never again will theyr shade shelter me!
And I wish in my sorrow I could strip to the soul,
And dive off in my grave like the old swimmin'-hole.

The sorrowful mood did not last long with Riley and I turn to another page of my well-thumbed copy and I read of how he and his brother used to go out to old Aunt Mary's:

Wasn't it pleasant, O brother mine,
In those old days of the lost sunshine
Of youth—when the Saturday's chores were through
And the "Sunday wood" in the kitchen, too,
And we went visiting, "me and you,"
Out to Old Aunt Mary's?

It all comes back so clear today
Though I am as bald as you are gray—
Out by the barn lot, and down the lane
We patter along in the dust again,
As light as the tips of the drops of rain,
Out to Old Aunt Mary's!

I must not take up too much space setting forth these snatches of Riley's verses, but I cannot quit without printing a few lines from one of those splendidly uplifting poems for which he was famous. It is entitled "Wet Weather Talk:"

It hain't no use to grumble and complane;
It's jest as cheap and easy to rejoice,—
When God sorts out the weather and sends rain,
W'y, rains my choice.

In this existunce, dry and wet
Will overtake the best of men—
Some little skift o' clouds'll shet
The sun off now and then,—
And mayby, whilse you're wunderin' who
You've fool-like lent your umbrell' to,
And want it—out'll pop the sun,
And you'll be glad you hain't got none!

Surely we will all miss blithesome, joysome, carefree "Jim" Riley, he who could see further into the heart of a boy and farther along a country lane than any poet who ever sang the joys of country life.

SHALL SHE GO TO TOWN SCHOOL?

I AM in receipt of a letter from a Wisconsin farm mother which interests me greatly. Her problem is shared by many another farm mother and I am going to print her letter in full:

I have seen so much good advice from you in your paper that I venture to come to you with a problem of my own. I have lived all my life on a farm, but am sorry to say not in a rich farming country, and do as best we know how we are only able to "get along," which doesn't mean many luxuries and not always the solid comforts of life. But the problem is this: Our sixteen-year-old daughter finished the country school a year ago. She is only a fair student, but a splendid farm girl, interested in everything on the farm. She is five years older than the other children and to send her to high school will mean a great sacrifice, not only to meet the expenses, but to give up her help and the comfort of having her with us. I wonder if it pays? So many parents seem to see so little of their children after they once start to the town school. I hoped you might tell me of some reading course or good correspondence school that would keep her in touch with school work for a year or two, until she might be able to go to the county training school or a normal. Am I asking too much of you?

This problem must be looked at from three viewpoints: The best interests of the daughter, the best interests of the mother, the best interests of society in general. If the girl alone were to be considered, she is certainly entitled to the best schooling possible. If the mother alone were to be considered, she is entitled to the companionship and aid of her daughter until she is of age, at least. Now, along comes society, a third party, but not a disinterested one, and sides with the daughter rather than with the mother, for upon education and well-rounded lives depend our future advancement and welfare. An individual mother, here and there, may be obliged to suffer, but society (and by this I mean whole states and nations) demands that we advance steadily and never be satisfied with what we have already achieved. There is no factor greater than education in making a people have higher ideals, lead better lives and do better, more useful work. Therefore, everyone should have the best possible education, no matter at what personal cost or sacrifice.

But I am not going to arbitrarily decide that this particular farm girl should be sent away to town school, compelling the family to do without some of the solid comforts of life. Her mother assures me that she is "a splendid farm girl, interested in everything on the farm." If she is the sort of a girl I gather from this description she is, she will be content to stay on the farm, for a time at least, helping her parents, saving the pennies one by one, keeping her mind occupied in the meantime, until perhaps in another year or two she will be able to gratify her desire to go to the town school. She will be none too old when she is seventeen or eighteen, and waiting and saving will develop her character. In the meantime there is much that she can do and will do, if she is the right sort. She can obtain the best books published through the medium of her state library commission, the circulating libraries of which are a wonderful boon to rural communities. She can follow her natural bent through the courses offered by some good correspondence school (I shall give her the names of two, in a personal letter) and the extension department of her state agricultural college. If she will send me a list of the papers or periodicals in which she is particularly interested, or which best cover the field of her favorite study, I will get her cut rates on them, so she will save money and gratify her desire to obtain the best possible reading matter.

Thus, by working with the town school in sight as a reward, filling in the spare moments with good reading and receiving directions either from the authorities at the state agricultural college or of the correspondence school, she should be able to put in the next year or two profitably and even pleasantly. Two years from now may find better times on the farm where she lives and eighteen is none too old for a bright country girl to go away to town school. Loving education as she does, she will prove a ready and an apt pupil and will never regret having given her mother the companionship which she craves and which will undoubtedly do her so much good.

RACING FOR HOMESTEADS.

I CANNOT vouch for the truth of this story, but it is so interesting and so apt in showing our progress of recent years that I propose to print it anyway. I found it in the columns of one of our large grain-belt newspapers.

A race of seventy-five miles by motor car, the stake a government irrigated farm worth $16,000, was run across Nebraska prairies recently by Ray Crume and Darwin E. Taylor. Taylor won, with the aid of a freight train which stood across the motor road a few miles outside the city of Alliance, Neb.

The irrigated farms of western Nebraska are worth not less than $100 an acre. This particular farm was open to entry recently. Water filings were to be made at Mitchell and the land filing afterwards at Alliance. From Mitchell to Alliance is seventy-five miles.

Taylor and Crume were waiting at Mitchell when the water office opened. Each had a motor car ready. Their water filings were made at the same time and the man who first reached Alliance would get the prize.

Nip and tuck they raced, keeping practically together. Five miles from Alliance a freight train was stalled across the road. Both machines stopped.

On the opposite side of the freight was another motor car waiting for the road to be cleared. Taylor crawled under the freight, made a dicker with the driver of the other machine and got the start of Crume several minutes, Crume being forced to wait until the freight cleared the road. Taylor got to the land office in Alliance two minutes ahead of his rival, won the race and got the farm.

Winning a farm by motor car race is certainly a new chapter in the romantic story of our western homesteads. It was not so very many years ago that we, who stood back and looked on, were thrilled by the stories of the lucky adventurers, who went down into Indian Territory and our other new lands and secured homesteads by winning races on foot and on horseback as they tore for the lands and the entry offices. There is one story which appeals to me in particular. It goes on to narrate how an enterprising young Kentucky girl—she must have been pretty, too—cajoled a locomotive engineer into allowing her to ride on the cowcatcher of the engine pulling the train of men and women who were racing to file on a particularly attractive parcel of land which the Indians, in what is now Oklahoma, had formerly owned. At a prearranged signal from the girl on the cowcatcher, the engineer slowed down and she leaped from the engine, scrambled over the right of way and fastening her white petticoat to a stick preempted the finest farm in the region, beating every man competitor by her shrewd plan and daring. Perhaps this story is on a par, so far as veracity is concerned, with the one I found in the grain-belt newspaper this week. True or not, they thrill us with their daring and rouse us out of the rut in which we are a little too prone to allow ourselves to get every little while.

The public lands of the country are rapidly disappearing; it will not be so many more years that we can have these races for homes in the new lands. Let us make the most of them while they are fresh in our minds, for the deeds of the venturesome have always inspired even the stay-at-homes and made us all take a fresh grip on life and work.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Guaranteed Circulation of Wisconsin Farmer Increased to 90,000.

THE guaranteed circulation of The Wisconsin Farmer is now increased from 80,000 to 90,000, at which figure it will stand until further notice. Of this aggregate, the circulation in Wisconsin alone is over 70,000, which is over 10,000 more than the Wisconsin circulation of the second farm paper in the state.

We announce this increase in our guaranteed circulation with the greatest pleasure, for it testifies, more eloquently and convincingly than any words possibly could, to the steadily growing popularity of The Wisconsin Farmer, easily the first farm paper in the state. This wonderful circulation supremacy has been brought about by a consistent policy of practical usefulness to the farmers of Wisconsin and Minnesota, no Wisconsin farm paper approaching The Wisconsin Farmer in the number and the variety of its departments and special articles, or in the practical efficiency and thoroughness with which these departments are edited and these articles prepared.

An accurate comparison of The Wisconsin Farmer with the second farm paper in the state discloses the reason for our marked supremacy. In the first twenty-six issues of this year The Wisconsin Farmer aggregated 872 pages, or 3,488 columns, while the second farm paper aggregated but 748 pages, or 3,152 columns. The Wisconsin Farmer treated 264 subjects editorially, while the second farm paper treated but 151. The Wisconsin Farmer printed 735 illustrations (farm scenes, pictures of prize-winning or notable animals and photographs of farm leaders), while the second farm paper printed but 367, exactly one-half. The Wisconsin Farmer printed 2,874 live stock display advertisements, totaling 52,787 agate lines, while the second farm paper printed but 2,289 such advertisements, totaling only 39,510 agate lines.

This supremacy in all departments has been maintained in subsequent issues. Thus the week of July 13th found The Wisconsin Farmer covering ten live farm subjects editorially, while the second farm paper covered but five; The Wisconsin Farmer with sixteen important and well-edited departments, the second farm paper with only thirteen; The Wisconsin Farmer with twenty-one illustrations, the second farm paper with only fourteen; The Wisconsin Farmer with 129 live stock display advertisements, totaling nine and three-fourths columns, the second farm paper with only fifty-nine such advertisements, totaling only four columns, or less than one-half.

It is this continued supremacy, this constant leadership in all practical farm matters, which has resulted in the wonderful popularity of The Wisconsin Farmer with the prosperous and progressive farmers of Wisconsin and Minnesota and has made possible the present increased circulation. We propose to maintain and to increase this supremacy. Editorial representatives of The Wisconsin Farmer attend every important live stock and general farm meeting held in Wisconsin and report them accurately and in detail, enlivening their reports with a wealth of illustrations. Every live and timely editorial subject is treated by experts, with an eye single to the best interests of our subscribers. With an editorial staff unsurpassed by any other agricultural publication in the country and devoting itself to the Wisconsin field most assiduously, The Wisconsin Farmer has succeeded in so far distancing all would-be competitors as to be in a class by itself. The proof of this is found in our increased guaranteed circulation.

Practically Free From Hog Cholera.

WISCONSIN and Minnesota continue to be comparatively free of hog cholera, as shown by reports to the state departments. In Minnesota the number of outbreaks thus far reported is only a small percentage of the number reported in 1915. This is the statement of Dr. H. Preston Hoskins, assistant veterinary at the University farm, St. Paul. A similar condition exists in Wisconsin. Neither Wisconsin nor Minnesota had the losses from hog cholera that have been incident to hog raising in some other states. Encouraging to the raisers is the fact that there has been little tendency for the disease to spread even where outbreaks have been reported. Prompt diagnosis and treatment with careful application of sanitary measures have prevented the infection of herds even on adjoining farms.

Dr. Hoskins advises that sickness among hogs should not be permitted to go unnoticed on the assumption that it is "probably not hog cholera." The longer treatment is delayed the smaller the percentage of hogs which may be saved by the administration of serum. Dr. Hoskins says this has been amply demonstrated in the past few years. He makes this further statement:

The prompt quarantining of a farm where cholera is only suspected will frequently prevent unnecessary spread of the disease. If the trouble turns out to be something besides hog cholera, no particular harm has been done. A far greater loss might result from allowing a farm to go unquarantined, because the presence of the disease had not been proved. In many cases some obscure disease has turned out to be hog cholera not discovered until infection near by has become general.

This section of the country has been particularly fortunate in escaping the damages of hog cholera. If our breeders could see the losses in some other territories, they would better appreciate the fortunate conditions here.

Showing That Alfalfa Pays.

A MINNESOTA experiment station writer has the following to say relative to the value of alfalfa as a crop, which information will be of interest in this section:

It costs about $12 to cultivate it.
At least 60 per cent of the fertilizer value is returned to the soil when the crop is fed.
A yield of three tons will return $41.30 if fed to pigs as pasture when the pigs sell for 7 cents a pound.
A similar yield if fed to steers at 6 cents a pound will bring $42.60.
The same yield fed to cows giving 210 pounds of butter fat at 30 cents a pound will bring $44.

This seems to bear out our repeated statement that a large majority of the farms in this section of the country should have some alfalfa.

When Wisconsin Pastures Are Short.

ROY T. HARRIS, supervisor of Wisconsin Dairy Tests, is author of a Wisconsin farm bulletin. His subject is, "When Pastures Are Short." From this bulletin we quote the following:

Pasturage is a farm crop just as much as corn, oats, hay or potatoes. Of course, it is not always a profitable crop, but neither would these be if neglected in the way many pastures are.

It is true that much land is given over to pasturage because it is not fit for much of anything else, but that is no reason why it should be neglected instead of yielding the best possible return. On an efficient farm, each field must do its share according to its ability and the efficient farmer will see to it that pastures do not become short if this can be prevented.

To be durable, pastures must be large enough to provide for the number of animals to be kept and still allow a margin for safety. Overstocking is a frequent cause of shortage and also makes pastures short-lived. Turning on too early in the spring is another bad practice which brings similar results. We often see herds out on "grass" almost before the grass has started. Animals must then do an extra amount of walking in order to get enough to eat and this tramping of the soft ground puts it in poor condition to withstand dry weather, besides injuring the grass and reducing the yield.

It works well to divide pastures and turn the herd in on alternate days, or other periods, giving the grass a fresh start. This system can also be made to furnish more variety to the herd. Pastures should not be allowed to become stale or unproductive, but should be broken up and reseeded as often as necessary. Rotation applies to pasturage as well as to other crops.

Pastures will stand fertilizing and permanent pastures, especially, require regular top-dressing, and liming if the soil becomes acid. Brush, weeds and stones occupy space which more profitably could produce grass. Briars and thistles are especially objectionable since they interfere with the use of grass which surrounds them.

All grasses sown should be perennial or such as will certainly renew themselves and as far as possible should form a succession so as to have pasturage throughout the season. June grass alone will not make a good pasture, for it becomes tough too early.

However, after all has been said and done, pastures will sometimes be short. There may not be enough land which can be given over to this purpose for the number of animals which must be carried on the place. There are also limitations as to soil and climate, and, especially, long and severe drouth may get the better of even the best pasture land. Preventive measures are helpful and may answer in most years, though in states like Wisconsin, August is a month which tries pastures to the limit.

If we knew that at certain times our property would be especially liable to damage by fire or tornado, we would think it only the part of wisdom to carry insurance against such loss. This would not prevent the damage, mind you, but would only distribute the loss, so it would not bear so heavily on one individual. Against pasture troubles we have a better form of insurance, for by its use we both escape loss at the time and if it is not needed can use it profitably later on or even another season.

A silo is a good insurance policy for any time of the year, but its value for summer feeding has not been fully appreciated. Silage is better than soiling crops (crops like corn cut green and fed to stock) for several reasons: (1) It provides cheaper succulent feed. Comparisons show that soiling is more costly in labor even when fairly satisfactory in other respects. (2) It is more convenient to use. Bad weather does not interfere with feeding of silage as is the case with soilage. (3) If the anticipated emergency does not come to pass, the silage will not be wasted, as it is ready for use later, while soilage cannot always be preserved for future use without considerable loss and extra labor.

Summer silos should be well made of good material. Some thought may well be given to the location as regards convenience in feeding and protection from extreme heat of summer. The diameter should be less than that of a winter silo of similar capacity, as the exposed surface will deteriorate more rapidly in warm weather and to a greater depth. Particular care should be taken in filling and the litter, straw or other material used for covering left undisturbed until silage is needed.

If plenty of good silage is available with hay, and grain fed according to production, we can be quite independent of pasture.

Evidences of Wisconsin Prosperity.

WISCONSIN is evidently participating to a large degree in her share of the prosperity that prevails today throughout the nation. This statement is borne out by the fact that the resources of Wisconsin state banks are increasing by leaps and bounds over a year ago, and at the same time the residents of this state are buying automobiles at a rate never before known in Wisconsin.

On June 30th the total resources of the 720 state banks, according to the report of Commissioner Kuolt, reached the magnificent sum of $276,000,000. This amount, it must be borne in mind, does not include the resources of the national banks. The most significant part of Mr. Kuolt's report, however, is that compared with June 30th, a year ago; the resources are now $32,000,000 greater, as on that date they totaled only $244,000,000. This increase of $32,000,000 in the last year in total resources is eight times as great as the increase during the preceding year—between June 30, 1914, and June 30, 1915—when it was $4,000,000. Individual deposits, subject to check on June 30th this year, totaled $73,500,000; time certificates of deposit, $80,600,000; savings deposits, $56,100,000; and demand certificates of deposit, $19,700,000.

The ability to buy and own an automobile has long been regarded as an evidence of prosperity. Coupled with the announcement of the banking department of the great increase in resources comes that of the Wisconsin Good Roads Association, that today Wisconsin has approximately $80,000,000 invested in automobiles. On July 20th the association reports there were 103,560 automobiles in the state with the possibility of 115,000 before January 1st, as compared with about 80,000 last January 1st. New cars are now being licensed at the rate of about 300 daily, and the association predicts that about $58,000,000 will be spent for new cars and upkeep in 1916 in Wisconsin.

The tremendous growth of the automobile industry during the last decade is astonishing. Secretary Cooley, of the Minnesota Highway Commission, in a recent report, showed that there were 48,000 motor cars in the United States in 1905 and 2,445,664 in 1915. This is an increase of 5,000 per cent. In Wisconsin, according to the report of the good-road association, the increase in the number of Wisconsin cars has been more than 1,300 per cent in five years, which is in keeping with the national average. In Wisconsin there is a car now to every twenty persons, and the per capita investment in automobiles is about $30 in this state.

These statistics on automobiles and bank resources in Wisconsin can indicate only one thing and that is that our people have the money to pay for any agency which will serve them. As a large percentage of Wisconsin automobiles are farm owned, it indicates prosperity on the farm, for the automobile has been a great boon to country life. It has made the farm less lonely for the woman. It has made it more attractive to the boys and girls. It has become a necessity as well as a luxury, and it is no wonder that Wisconsin farmers are buying their share of them.

Wisconsin County Fairs Should Recognize Farmers' Clubs.

THE county fair is one of the best places to emphasize the importance of rural centers and farmers' clubs, and organizations which bring the country folks together for a day or evening of pleasure and enlightenment. Public recognition of the work of these clubs or societies is an idea that is growing rapidly in Wisconsin, and we should like to see every county fair in Wisconsin recognize these social-center organizations as the Walworth county fair at Elkhorn will recognize them next month. An exhibition and rally day for the thirteen clubs in that county, all strictly rural organizations, and social in nature, has been arranged for by the fair association, and it is needless to say that it will mean a boost for the fair as well as a stimulus to club work.

There are something like 300 of these social farmers' clubs in Wisconsin, as outlined elsewhere in this issue. This is a splendid time of year to begin talking of the winter festivities and an excellent time to start the formation of new clubs. That is one reason why the county fair should give them recognition. It would aid those already in existence and send hundreds of farmers and their wives home in the mood to organize. The organization of such a club must be preceded by what we might call the "talking stage"—that time when neighbors are just getting into the humor and are beginning to realize that such a club would do much to encourage co-operation in the neighborhood. Unless there is a real demand, a

club will soon die, if organized, so it is that during this "talking-stage" sentiment is sounded out and an opportunity is presented to actually determine the need for a club. If the sentiment is favorable the organization may be proceeded with along the lines set forth elsewhere in this issue. So it is important to the clubs to gain recognition at the fairs, and important to the country-life work that they be so recognized. Realizing this, the country life workers in the extension department of the University of Wisconsin have worked out suggestions for exhibits, etc., by these clubs at the fairs, a few of which follow:

Hold farmers' club parades, with decorated floats prepared by the various organizations. A country trophy or some useful gift for the club gathering place might be offered by the fair officials or local merchants, to the club making the best appearance in the parade, to the club registering the largest number of active members, or to the club making the best exhibit.

Provide an exhibit space in a tent or booth large enough to serve as an auditorium for programs, or a resting place for tired people.

Include a program of addresses, songs, instrumental music, dialogues, recitations or even home talent plays, all intended to typify the usual social gatherings of the clubs.

One day might be set aside for field events of an athletic nature, each club having representatives in the contests.

The standing exhibit of the various clubs might include school work, providing there is no special county school exhibit on the grounds to detract from it.

Give space in the exhibits for samples of special crops raised by club members, with brief description of the methods by which they attained their results. An amateur kodak gallery of well-planned farm buildings, home conveniences, good roads, pure-bred live stock, and the club house or other meeting place of the respective societies, might well be included in the list of possibilities.

Lastly, arrange models of farmsteads, maps of community surveys with numerous pointed placards giving country clubs in relation to membership, number of silos, amount of pure-bred live stock, and the extent to which improved farm machinery, automobiles, and home conveniences are in use.

The Wisconsin Farmer writes to emphasize its suggestion to county fair managers and boards that recognition should be given club work.

What Is Meant by "Character" in Cattle.

MEN HAVE struggled, and sometimes hopelessly, to convey to the minds of others the real significance of the term "character" in its application to live stock. It is described by Marshall as "the appearance of strong individualism contributed to by three things, namely, style, high development of the appearances associated with sex, and that robustness and vigor of expression that can only be present where perfect health and spirits are co-existent."

A writer in the London Live Stock Journal undertakes the task of describing what is meant by character with special reference to its application to Short-horn cattle. On this subject he says:

Skillful breeders know full well the value of "character" and what the word means, but it is perhaps somewhat difficult to define to the uninitiated. The word "character" as applied to pure-bred animals in reality means "individuality," and thus when we speak of an animal as having "true Short-horn character," for example, it is meant that the animal possesses in a marked degree those characteristics or traits peculiar to the Short-horn breed.

The word is equally applicable to all pure breeds of live stock, and this "individuality" or "true character" is a trait that should be made a point of the highest importance in the breeding of pedigree stock. The true Short-horn, for example, has a high-bred appearance. The head, the prominent round eye, the fine, stately carriage, all proclaim noble ancestry and many years of good breeding, and it is this high-bred appearance, coupled with other characteristics, which have made the Short-horn famous throughout the world, that is generally summed up in the word "character."

The old Short-horn tribes of the Bates, Booth, and Mason blood were all more or less full of "character." They had their faults, which in some cases were many and bad, but there was no denying their high-bred appearance, and no one could ever dream of them as being other than pure-bred Short-horns of high lineage.

Then the Scotch cross came in, and although the remark does not apply so much today, at any rate as regards the best Scotch herds, the Scotch Short-horns of twenty years ago were sadly lacking in "character." They had the thick, even flesh, short legs, and symmetrical form, but they had withal a "common" look about them. They had no carriage, their heads bespoke no pride of birth, and their stock inherited to a great extent this lack of "character."

It is nothing but breed character which raises a pedigree animal above the level of its common-bred neighbor, and unless a pedigree animal possesses this trait what is the value of his pedigree? Very little; for if a pure-bred animal when mated with common-bred stock is to work improvement on that stock in the offspring he must have "character" or "individuality" to transmit to that offspring to raise them a degree above the common herd. Nowadays it is too often possible to visit pure-bred herds sadly lacking in "character," having nothing to distinguish them from just ordinary commercial cattle, cows, perhaps, with good pedigrees looking as common as any animal usually seen in any local fair or market. What is the reason for this? Simply that the breeder has not paid sufficient attention to the value of "character," or that he has not the eye for a highly bred appearance.

The writer maintains that unless a pure-bred animal can be picked out from amongst a lot of ordinary-bred cattle simply by its appearance then there has been something wrong in its breeding, and, whatever the cause may be, at any rate the animal's breeding cannot be of any value. Unless pedigree animals are bred so that they can easily be spotted among others there is little value in their pedigree, for, after all, the chief aim in the breeding of pedigree animals is to improve and raise the standard of the ordinary cattle of the country, and unless a pedigree animal is superior in every respect to a common-bred one he is not likely to do much good.

It is therefore of great importance to study "character" and to breed only from animals that are possessed of true breed character. As mentioned above, every pure breed has its peculiar traits or characteristics, which should be closely studied. Thus we often hear of true Short-horn character, true Hereford character, and so forth, and the man who has the breeder's eye can detect at a glance a well-bred animal by its look, carriage, and general appearance.

So much for breed character, but the word has a similar meaning when we speak of the individuality of the sexes. For instance, we like to see a bull with strong "masculine character," or a cow with true "feminine character." Both these descriptions have a deep and very important meaning, and no breeder ever disregards them. What, then, does masculine character mean? It means that the animal should have a virile male appearance, with no trace of femininity about him. The head should not be of the negative order, as seen in steers, for weak heads and countenances never indicate prepotency.

A sire must possess "breed character" and "masculine character" if he is to stamp his progeny with his own individuality. Then, again, the cow should possess "feminine" character in contradistinction to the male. She should be distinctly feminine in her appearance, more particularly about the head and neck, with a look of refinement about her. Some cows have "steery" heads lacking in character and breediness, just as some bulls do, and, needless to say, they are never good breeders. There is no doubt the old-time breeders paid more attention to "character" and attached more importance to it than is done in these days.

It has been said that Bates saw the head of Belvedere looking over a door, and that was enough for him. He determined to obtain him, and no doubt what strongly impressed him was the bull's "character." Some of the old prints and paintings of bygone Short-horns are very probably greatly exaggerated, but the animals depicted bear a look of refinement, high breeding, and "character" that it would be well for modern breeders to try to emulate. The dull eye, neutral head, and unrefined appearance that characterize far too many of our modern Short-horns have brought them down to the level of ordinary-bred cattle so far as outward appearance goes. We want to be able to detect a pure-bred animal at a glance, not have to wait for it to be pointed out to us. "Character" and pedigree combined will go far, but pedigree without "character" leaves us where we are.

To those who have some insight into the nature of pure-bred animals and some knowledge of their dominant characteristics the above characterization will tend to clear up certain matters that are more or less murky when an attempt is made to give expression to those qualities or essentials in animal life that go to make up what we call character. While in this case the Short-horn is used as an example, it requires but little transposition of thought to make it apply to all breeds of cattle. While each individual breeder will read into it his own interpretation, the result cannot fail to be a better understanding of what is meant by this illustrative term so frequently referred to in describing animal form.

Investigation Results Favorably to Live Stock Farming.

DURING the year 1914-15 the United States Department of Agriculture investigated the records of 596 stock farms located in Indiana, Illinois, Minnesota, Iowa, Missouri, South Dakota, Nebraska and Kansas. The cattle on these 596 farms were made up of 14,634 cows, 621 bulls, and 12,591 calves were produced from this foundation stock.

On some of these farms beef raising was carried on as a specialized type of live stock production, there being no sale of milk and butter. In other instances the farms were devoted to the production of baby beef, these being sold at from twelve to eighteen months of age. Dual-purpose cattle were handled in other cases—the cows being milked and the calves weaned at birth and raised on skim milk. In some cases the best cows were milked, their calves being weaned at birth, while calves from other cows were allowed to run with their dams, this being a combination of beef and dual-purpose stock raising.

As a result of the investigation made on all these farms, it has been concluded that while the direct profit from stock raising may not seem to be large, yet, there are advantages connected with the system that do not appear at first sight. Live stock provides a home market and a means of utilizing farm roughage, some of which would be wasted if not fed. Furthermore, the use of pastures could not be profitably employed in any other way than by the keeping of live stock. Certain crops would have to be hauled a considerable distance to market at a large labor cost if live stock were not kept to consume it. Furthermore, it is pointed out by those who made this investigation that the presence of live stock on the farm gives productive employment throughout the year through labor which at certain seasons might otherwise be idle. Then, there is the fertilizing value of manure, which is an important factor in crop production. Certain forms of farm equipment are necessary in any event, but where live stock is kept this equipment can be used more or less at all seasons of the year, thus making the buildings not only pay for themselves, but also return good dividends on the investment. All things considered, it was concluded that the farm income is greater where cattle are kept to consume all the roughage and a greater part of the grain raised than in those cases where straight grain farming is practiced.

In an investigation of this kind, one important factor is not taken into account, namely, the natural ability of the individual as a stockman. To be sure, live stock knowledge can be acquired by men who will presevere, but those who are not by instinct stockmen are not urged to take up this branch of farming, simply because the expert realizes a greater profit from it than could be obtained from a system of grain farming.

Those who will investigate this matter for themselves will find that in almost every instance the good stock farms of a given community are the most productive. It will be found that while direct profits, as before stated, may not seem to be large, yet, on the other hand, these will increase year by year as the land becomes more productive. It is not uncommon to find instances where stock farmers are able to raise seventy-five and even as high as ninety bushels of corn per acre, whereas a grain farmer is doing well when even in a good year he averages a fifty-bushel yield. It is from his big yields that the stockman reaps his reward, and even though he receives no more per bushel for the grain he feeds to his live stock than his neighbor who sells direct, it is the twenty or thirty bushels per acre extra grain that swells the gross income of the individual who pins his faith to the right kind of live stock.

Essentials of an Ideal Hog House.

THERE is a very clearly-defined difference of opinion among swine breeders regarding the merit of the different kinds of housing. In some instances we find exceedingly successful results reported by those who have used the so-called individual hog house, while in other cases men show an equal degree of enthusiasm regarding the central hog house. Experiment stations have given considerable attention to both types, and numerous bulletins have been published, giving plans and specifications for many kinds of houses and cots, the latest being one from the Iowa station, dealing with the so-called community hog house. According to the authors of this bulletin, a successful and satisfactory hog house should in a general way fill the following requirements:

Warmth.—Reasonably warm shelter, in season, with smallest ranges of temperature, is demanded by swine, if best returns in health and profits are to be counted upon.

Dryness.—A dry, well-drained floor and dry, tight roof and walls are quite essential. Masonry construction which provides for hollow air space commends itself.

Abundance of Light and Direct Sunlight.—Direct sunlight should sometime strike every part of the interior of the house daily, especially the floors of the pens in the special farrowing months of February, March and April.

Shade.—Shade is most essential in the hot and dry days of midsummer, although highly desirable and effective at other times.

Ventilation.—An abundance of fresh, pure air of satisfactory humidity, provided without draft, is demanded.

Sanitation.—The cleaning and disinfecting of the hog house is imperative; clean, dustless floors encourage healthfulness, especially inasmuch as the hog always breathes, eats and drinks close to the ground.

Safety and Comfort.—Provide low door sills; even, smooth, but not slippery, floors; wide and relatively high doorways; life-saving pig fenders; closed drains; comfortable, roomy pens; and suitable doors, to avoid unfavorable consequences.

Convenience.—The lessening of time and labor should be secured by convenient arrangement of alleyways, doors and windows; abundant water supply and storage bins; adjustable ventilators and shade devices; handy litter carriers; feeding troughs; successful floor and tile drainage; accessible feeding floors; general supply room, and other details of construction and minor equipment.

Serviceability.—To be useful every day in the year; to be suitable for sheltering other animals than swine, such as sheep, cattle, horses, chickens and others; and to provide space for a successful sales pavilion when necessary, all help to extend the general utility of the hog house.

Sufficient Size to Shelter Advantageously.—The capacity should be consistent with the demands for housing space.

Durability.—In general, that building giving the longest continuous service is the most valuable.

Reasonably Low First Cost.—Consistent with the service rendered, the initial cost per pen should be kept low.

Minimum Cost of Maintenance.—A maximum of satisfactory service for the lowest possible upkeep charges is the ideal.

Pleasing Appearance.—To harmonize with the general agricultural surroundings; to be neat in architectural design; and to be sensible in construction—are the three leading considerations in planning for the attractiveness of the community or other hog houses.

These essentials are supposed to be embodied in the community house designed by the Agricultural Engineering Department of the Iowa Station, and Bulletin No. 166 gives detailed instruction in regard to this type of hog house. A distinctive feature of this house is that it provides ample lighting facilities, because as much as one-third of the roof may be of glass. Furthermore the windows extend in a continuous row from one end of the house to the other, making it possible for absolutely all of the floor, not merely a portion of it, to come under the influence of direct sunlight sometime during the day.

Every stockman knows that disease germs cannot exist in the presence of the direct rays of the sun, and in designing this house special emphasis has been placed upon this factor. It is a form of construction designed specifically to prevent disease.

The recent spell of dry weather that has prevailed over a considerable part of Wisconsin has shown up in a favorable light the wisdom of men who believe in not grazing their pastures bare. When grass is picked down to the very ground there is nothing to go on if the dry, hot weather begins, but, on the other hand, there is a valuable supply of nutrients even in dry grass. It is hoped that the experience of this year will be a lesson to many individuals so that they will not make the mistake of overstocking their pastures in the future.

In and Around Wisconsin

The officers of the Tomah, Monroe county, fair, which will be held August 22d-25th, will this year, for the first time, attempt a night and day fair and every indication points to this being the best fair ever held.

The calf-feeding contest which has been running for some months in Rock county closes this week and the results which will soon be announced will be awaited with much interest. Thirty-six boys and girls have been feeding in this contest.

Fifty farmers in the neighborhood of Glenwood City, St. Croix county, met recently and organized a new creamery company with a capital stock of $1,000 or $25 a share. The company has been named the Glenwood Dairy Union of Glenwood City and Julius Kamm, Charles Jacobson, Sam Tiegen, John Knops and John Ryan were chosen directors.

Cheese shipments from Green county have been very heavy during the past month and the one station of Brodhead averaged about two carloads a day during the fore part of July. There is a great demand for the domestic Swiss made in that county, owing to the cutting off of importations from abroad, and several heavy shipments have already been made.

Wisconsin is remarkably free of live stock epidemics at the present time, according to Dr. W. R. Claussen, of the veterinary department of the state board of agriculture. Aside from slight outbreaks of hog cholera at Rhinelander and Beloit and the occasional appearance of a case of tuberculosis among the dairy herds of the state, there is nothing in the way of disease among horses, cattle, sheep and swine.

The Portage county institute and potato show will be held this fall on November 2d and 3d and indications are it will be the biggest show in the history of the county. Appropriate prizes will be offered and it is hoped to get together a fine selection to be sent to the state show later at Eau Claire. Rural New Yorkers, Green Mountains, Early Ohios, Gold Mines, Early Triumphs and probably the Peerless will be recognized as the chief varieties.

August 16th has been chosen as the date for the general round-up and picnic of the farmers' clubs of Walworth county, in which county these rural organizations have assumed an important role. The gathering will be under the direction of the clubs of the towns of Linn, Como, Bloomfield and Lyons and the commercial club of Lake Geneva. Paul Gavin is chairman of the refreshment committee and F. M. Higgins will secure the amusements and a great day is anticipated. Music, baseball and other sports, together with talks on agricultural subjects will make up the day's festivities.

From now on Wisconsin farmers working in fields near crossroads will be surprised to see autos unhesitatingly steer down either fork, where formerly he would have to leave his work every five minutes in response to questions as to which was the right road. The reason for this pleasant change for the farmer will be in the hundred thousand new road maps which the state highway commission has had made and which are now ready for distribution at a nominal cost of 5 cents apiece. The map is twenty-one by twenty-eight inches and folds into a durable cover. Heavy red lines indicate the best roads, while lighter ones show the secondary ones.

The beet sugar crop in Wisconsin is looking well. There is every prospect for a good yield. With sugar prices firm and prospects of small imports from Europe, this will probably be a good year for the Wisconsin sugar companies. The statement is made that the plant at Chippewa Falls expects to wipe out its indebtedness this year. The conditions of the sugar beet crop in the West are not so good as in Wisconsin. Even in the irrigated districts the yield will probably not be heavy. This is due to the fact that there was not sufficient rain to give the plants a start. Water from the irrigated district is not turned on until the plants are well rooted.

At least 500 bankers and 200 women guests are expected to attend the state bankers' meeting in Madison on August 8th and 9th. In addition to talking finances the bankers will visit the university farms and see a demonstration of tubercular dairy cattle in the stock pavilion on the afternoon of August 8th.

Construction work is being rushed on the new plant of the Farmers' Co-operative Packing Company at Madison and it is expected to have it in operation this fall as planned. Contracts will soon be let for the equipment and an ice plant will also be built. The plant, completed, will represent a cost of about $250,000.

An effort to reclaim a large area of land through drainage that now lies useless under the shallow waters of Big Muskego lake in Waukesha county has been met by a petition signed by 2,000 persons protesting that such action will cause all game to leave that vicinity. The state rate commission will decide the matter this month.

Plans are being made for a combination sale of Short-horn cattle to be held at Madison, November 3d, at the live stock pavilion of the college of agriculture. The officers of the Wisconsin Short-horn Breeders' Association are: E. E. Jones, Rockman, president; Geo. Carpenter, Baraboo, vice president; John L. Tormey, Madison, secretary.

Five farmers, Harry E. Biddick, Homer Rundell, R. A. Wilkins, F. B. Rundell and O. S. Laughton, all in the vicinity of Livingston, Grant county, are having tests made of their soils to determine if it is acid, if deficient in any of the plant elements, etc. The work is being done by the soils department of the college of agriculture and any farmer can avail himself of this service by paying the small testing fee.

Cow testing is a part of the summer work of the Livingston, Grant county, high school and C. R. Wiseman makes the following report for the first week in July with production for the past month:

Cows tested	100
Cows with 30 lbs. B. F. or above	61
Cows with 40 lbs. B. F. or above	25
Cows with 50 lbs. B. F. or above	9
Cows with 60 lbs. B. F. or above	5
Cows with 70 lbs. B. F. or above	0

Highest producing cow, 66.15 pounds butter fat. Owned by L. Bushnell. Average of ten highest cows, 58.03 pounds butter fat. Average of ten lowest cows, 18.17 pounds butter fat.

Insurance companies writing policies protecting tobacco growers against losses by hail are limiting the amount of tobacco hail insurance in Wisconsin to a risk of $25,000 in any one township. This policy follows an unusual number of small losses this year to date and this means that protection for not to exceed 500 acres can be secured in any one township. The result is that in many townships, where two and three times that acreage is grown, many growers will not be able to secure insurance and should govern themselves accordingly as the first orders will be first filled.

Wisconsin farmers will be interested in a campaign begun by the game protective associations and organizations of hunters for the preservation of the partridge in this state. These organizations are pledging their members not to shoot or kill any partridges this year. It is believed that such steps will save the partridges in this state and the need of such action is emphasized in the resolutions being sent out which recite that the wet and cold spring of 1915 practically prevented the hatching of any chicks; that the past winter was equally hard on the birds; that the spring of 1916 was a repetition of the unfavorable weather a year ago, and that the partridge is in imminent danger of extermination.

The following is a list and dates of crop demonstrations, live stock and home economic conferences to be held at the county farms in Wisconsin during August and September:

Wyocena, Columbus County Farm, **August 10th.**
Waukesha, State Industrial School, August 16th.
West Bend, Washington County Farm, August 17th.
Sheboygan, Sheboygan County Farm, August 19th.
Shawano, Shawano County Farm, August 22d.
Appleton, Outagamie County Farm, August 23d.
Weyauwega, Waupaca County Farm, August 24th.
Richland Center, Richland County Farm, August 30th.
Reedsburg, Sauk County Farm, September 4th.
Tomah, Federal Indian School, September 6th.
Chippewa Falls, Chippewa County Farm, September 8th.
New Richmond, St. Croix County Farm, September 9th.

How to Get Rid of Ants.

As long as household conditions are such as to attract ants, measures for getting rid of the insects will be of little value. The first step in freeing a house from these pests is to clean up all food that may be scattered about and to keep food supplies, which may attract ants, in ant-proof metal containers, or in ice boxes. Cake, bread, sugar, meat and similar substances, especially, are likely to attract the insects.

The use of baits is not recommended because of the danger that these merely will serve to draw more insects into the house and thus actually to increase the nuisance. Where it can be safely used, however, a sirup, poisoned with arsenate of soda, has been found effective.

The formula for this sirup is one pound of sugar, dissolved in a quart of water, to which should be added 125 grains of arsenate of soda. This mixture is boiled and strained, and on cooling is used to moisten sponges, which are placed where they can be reached easily by the ants. The insects collect the sirup and convey it to their nests, so that the whole colony ultimately is poisoned. Although this method has been found effective, it should be remembered that the arsenate of soda is poisonous to human beings and to animals, and that its use must be safeguarded.

When the ants can be traced to their nests, and these are in accessible places, it is possible to destroy the colonies by injecting with an oil can or small syringe a little bisulphide of carbon, kerosene or gasoline into the nests. All these substances are inflammable and precautions must be taken against the danger of fire.

Though the common garden or lawn ants, which build their little crater nests around houses, are distinct species from the true house ants, they may find their way into the house. Their colonies may be destroyed by drenching the nests with boiling water, or injecting a small quantity of kerosene or coal oil into them. Where larger areas are affected it is sometimes advisable to spray the lawns with kerosene emulsion, or with a very strong soap wash, prepared by dissolving any common laundry soap in water at the rate of one-half pound to one pound of soap to a gallon of water.

Another method is to inject bisulphide of carbon into the nests, the quantity of the chemical depending upon the size of the nest. After the bisulphide of carbon has been injected, the entrance to the nest should be closed by the foot, in order to retain the chemical, which then will penetrate slowly through the underground channel and kill the ants. Although its fumes are disagreeable, they are not poisonous to man and the higher animals.—[Department of Agriculture.

FRUIT IS LARGELY WATER.

Proportion in Strawberries is 90 Per Cent, With 5 Per Cent Sugar.

For those who, in the summer fruit season, like to know what they are eating, it may be of interest to learn that you "eat" very little, for fruit is practically nothing but a lot of water and a little sugar.

Strawberries, for example, are 90 per cent water and between 5 and 6 per cent sugar. The small balance is accounted for by a little protein and acid. But strawberries are antiseptic—a valuable quality—and are deservedly favorites.

Grapes have twice the quantity of sugar compared with strawberries, and not so much water.

In currants we get a change—a fourth of the sugar and four times as much acid as strawberries.

Oranges have five times as much sugar as lemons and the same sort of acid, but only a sixth of the quantity.

Prunes (dried) have twenty-six parts of water, sixty-six of sugar, no acid and some protein. Their excellence is apparent. But for value as food the apple easily comes first.

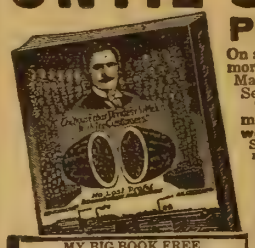
Now, when you eat fruit, you know that water, sugar and acid are what you are really eating.

More than 1,000 quarts of vegetables and fruits have been canned during the summer by fifty students at the summer session of the Kansas State Manual Training Normal under Prof. B. W. Scheib at Pittsburg. Most of the fruit has been canned in classes, but some of the students have practiced at home or at the homes of neighbors. The process indorsed by the federal government has been used by Professor Scheib and his students. The heating outfit by means of which the fruit and vegetables, after being blanched, are put through a heat bath, consists of a lard can with a false bottom made of wood. The outfit cost 15 cents.

Deep plowing increases the supply of water that the soil can carry without injuring the crop.

A hog-tight fence around your dooryard is the first step toward beautifying the farm home.

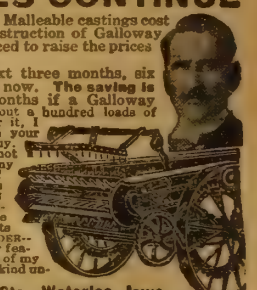
NOW IS THE TIME!!—
UNTIL SEPTEMBER FIRST
PRESENT LOW PRICES CONTINUE



MY BIG BOOK FREE
Ask for it today. A postal gets it. Your copy is ready. 260 pages illustrating and describing the great Galloway line of manure spreaders, cream separators, gasoline engines, farm tractors, vehicles, farm and household necessities. Just drop me a postal.

On and after that date spreader prices **must advance.** Malleable castings cost more, steel costs more, all materials entering into construction of Galloway Manure Spreaders have advanced and we are forced to raise the prices September 1st when new material contracts begin.

That's why I say if you need a spreader in the next three months, six months, twelve months or longer, you should buy now. **The saving is worth making!** Remember at the end of twelve months if a Galloway Spreader has not paid for itself, provided you have hauled out a hundred loads of manure or more, and has not proven everything I say for it, I AGREE TO TAKE IT BACK, pay freight both ways and return your money, no matter on which of my six selling plans you buy. Could I make this offer if the Galloway Spreader did not back up everything I said for it—if I were not sure that my spreader would please—would pay for itself on your farm? My new steel beater and wide spreading V-rake pulverizes and tears the manure to shreads—WORTH $15 EXTRA ON ANY SPREADER—costs you nothing on the Galloway. My invincible patented roller feed—an exclusive feature on the Galloway—makes it superior to all others, the secret of its light draft—A FEATURE WORTH $25 ALONE ON ANY SPREADER—costs you nothing extra on the Galloway. These and other features fully explained and illustrated in the second edition of my big free catalog. DON'T BUY A SPREADER of any make or kind until you have tried a Genuine Galloway AT OUR RISK.



THE WM. GALLOWAY CO., 39 Galloway Sta., Waterloo, Iowa

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co.
65 Elm St., Quincy, Ill.

A Home in the Dairy Belt!
SEND for circulars describing our Company's Cut over lands, direct to you, on the easiest terms. A little money does the work when you deal with us. Send for illustrated literature describing this favored section. Flambeau River Lumber Company, Station D, Ladysmith, Wis.

IF YOU WANT 40 acres or more rich, clay loam clover lands in our co-operative settlements near Crandon, county seat of Forest county, Wisconsin, write us and state **what terms you must have.** We will send you booklet written under supervision State Authorities. Agents wanted. Per-Ola Land Co., 21 Main, Crandon, Wis.

To Exchange Equity of $4,000
in Des Moines, Iowa, residence property for improved or unimproved, cleared or partially cleared level land free from stones in central or southern Wisconsin. Address H. E. Jones, Box 77, R.F.D. 2, Des Moines, Iowa.

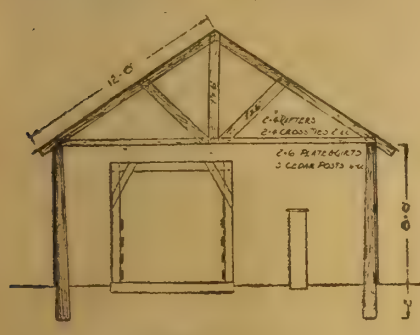
A GOOD SCALE HOUSE.

An Exposed Scale Never Gives the Satisfaction That Will Be Obtained From One That Is Covered.

A PAIR of live stock scales are considered as a standard equipment for the live stock farm. But it pays to cover them with some sort of a shed. It means less depreciation and better satisfaction all around. A scale house is shown here. It is built on a cedar pole frame, and is well placed to withstand the hard knocks that all steer-feeding equipment is subject to during the season. The shed is size sixteen by eighteen feet. That covers the common eight by fourteen foot scales used for weighing live stock on the farm. Use ten-foot cedar poles and set them in the ground two feet. The location of the poles are shown in the plan. Ten are required in all, if spaced six feet apart. Line the posts and set the nailing girts into the posts far enough so as to make the wall siding perpendicular. The plate that carries the rafters and the girts to which the siding is nailed are two by six inches and separating our readers from their money, but reasonable expense, designed to preserve and protect valuable property, is a permanent investment and is worth while. Garages are built because an automobile is too expensive a machine to leave out in the weather. On the same principle we need coverings for scale houses and machine sheds. Following is a statement of the lumber required for the scale house herewith recommended.

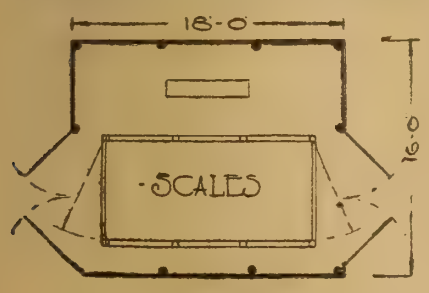
SCALE HOUSE.

10 cedar posts ten feet long
8 pcs. 2x6 18 ft. } plates and nailing
4 pcs. 2x6 16 ft. } girths
4 pcs. 2x6 7 ft. }
20 pcs. 2x4 12 ft. roof rafters
10 pcs. 2x4 16 ft. cross ties
14 pcs. 1x6 6 ft. braces for rafters
90 pcs 1x12 8 ft. siding boards
450 ft. roof sheathing lumber
4,500 cedar shingles



FRAME WORK.

are well spiked to the posts. Nail all the siding on first before starting the roof work. The rafters are of twelve-foot lumber and if spaced two feet apart will carry the roof in good shape. But the rafters must be trussed as shown in order to prevent the roof from sagging. Tie the building together from plate to plate at every rafter and use one by six-inch boards for the roof braces. These will brace only every other set of rafters. When the sheathing lumber is applied to the rafters a 1½-inch space can be left between each board when shingles are used. Oftentimes old scraps of lumber are used for sheathing, which is permissible in cases where the lumber is sound and free from old nails. Lay the cedar shingles so that four and a half inches of the butt will



FLOOR PLAN.

be exposed to the weather and that all will lap at least 1½ inches. Always use galvanized shingle nails if a long-lived roof is wanted.

Hang the doors on heavy iron hinges and build the stock rack for the scales out of two-inch lumber well bolted together so as to hold the stock. The 1,700 feet of lumber required and the 4,500 shingles together with the ten posts will cost about $65 to $75 in Wisconsin.

This estimate of cost was made up several months ago and we cannot vouch for its absolute accuracy at this time and under the present prices. However, the differences will not be great and certainly the expenditure is well worth while. The Wisconsin Farmer does not advise extraordinary expenditures just for the purpose of

State Cow-Testing Records.

That cows under test in most of the co-operative testing associations in Wisconsin are making good records is shown by the monthly reports sent to N. A. Negley, in charge of cow-test association work carried on jointly in the state by the Wisconsin Dairymen's Association, the college of agriculture and the dairy division of the United States Department of Agriculture, Washington, D. C.

Data for the month of June was obtained from twenty-two out of the total of fifty-one active cow-testing associations now doing business in the state. From these reports and others received each month, the state headquarters for dairy testing information, in charge of Mr. Negley at Madison and H. C. Searles at Fond du Lac, will be enabled to render distinct service in dairying in three important ways.

Buyers in the market for high-producing dairy cattle will be furnished direct information on where to find the animals they seek, based on the lists of live stock for sale contained in the regular reports of the testers.

An interchange of ideas among the associations and valuable "tips" on feeds and feeding problems will be made possible through these reports, providing they are carefully and accurately kept and forwarded at stated intervals.

Notices regarding the progress of the various associations will be published from time to time in local papers and in papers of state-wide circulation.

Summer picnics have been held by a few of the associations and others which are planning similar meetings during August are the Royalton and Welcome, Eastern Fond du Lac and the Shawano county associations. Leaders in dairy cattle breeding, cow-testing work and dairy sanitation will give short talks at these meetings.

The following is a list of association members whose cows took first place for June in their respective organizations, together with the amount of butter fat made by each of these leading producers. The figures indicate pounds of butter fat made in thirty days:

J. E. Schmitz, Lone Rock, 88.4; George Weisenberg, Stanley, 85.3; John Chapman, River Falls, 82; J. Keitel, Cedarburg, 81.5; August Tesch, Kewaunee, 79.5; Christenson Bros., Royalton, 72.7; Louis McGrath, Chilton, 69.6; James Lawrie, Marshfield, 69.1; H. A. Dunbar, Elkhorn, 68.4; Kirkpatrick Bros., Reedsburg, 67.1; Frank Dittman, Underhill, 66.7; Henry Wogsland, Northland, 64.8; A. L. Leffingwell, Columbus, 63.6; Robert Hessel, Manitowoc, 61.9; Ed Fehl, Sturgeon Bay, 61.1; A. Templeton, Lima Center, 60.7; C. L. Richardson, Eagle Point, 60.7; John Harness, Neenah, 60.3; F. B. Wieks, Silver Lake, 59.2; A. P. Shong, Augusta, 57.9; Henry Vrieze, Baldwin, 56.4; A. E. Cornue, Zenda, 54.4.

AMERICA'S MODEL EXPOSITION
OPEN TO THE WORLD
MARVELOUS ARRAY OF CATTLE, HORSES, SWINE, SHEEP, POULTRY, AND DAIRY, HORTICULTURAL AND AGRICULTURAL PRODUCTS.
SIXTY SIXTH YEAR OF THE
WISCONSIN STATE FAIR
MILWAUKEE
SEPT. 11. 12. 13. 14. 15. 16.
$65,000.00 in Premiums and Purses and Thousands of Dollars in Special Prizes.
OVER 30 COUNTY EXHIBITS
BIG DISPLAY OF WOMEN'S WORK
NIGHT FAIR SEPT. 12. AND 14.
MAMMOTH EXHIBITS AND CONTESTS of FARM BOYS & GIRLS of WISCONSIN
$1,550 in CASH PREMIUMS
OVER $6,000 in SPECIAL PRIZES
BIGGEST AUTO SHOW OF YEAR
4 DAYS OF HARNESS RACING, SEPT. 11, 12, 13, 14 AND
2 DAYS OF THRILLING AUTO RACES, SEPT. 15 AND 16
ITALIAN BAND OF 50 AND 6 SINGERS. 10 OTHER BANDS
RUTH LAW LOOPS-LOOP, FLIES UPSIDE DOWN DAY AND NIGHT
WILD WEST. 80 PEOPLE, 100 HORSES AND CATTLE, TWO COW-BOY BANDS
$20,000.00 FREE PAGEANT DOWN TOWN IN MILWAUKEE, NIGHTS, SEPTEMBER 11, 13, 15
Twenty-two free circus acts in continuous performances on three Platforms
SACRED CONCERT BY ITALIAN BAND AND SINGERS AND EXHIBITON BY RUTH LAW SEPT. 10. ADMISSION 25 CTS.
GENERAL ADMISSION 50 CENTS. NIGHTS, 25 CENTS.
S-P ENG. CO. MIL

Keep Milk Sweet.

To the Editor:—The approaching warm weather will make it necessary for dairymen and housewives to take extra precautions to prevent loss through souring of milk and cream. As milk is an ideal food for both babies and bacteria it frequently happens that in warm weather the bacteria are the first to enjoy this delicate food. Though the acid developed in the milk during souring is not harmful to the health of adults, it is injurious to infants and distasteful to many older people and will surely cause dairymen to lose money.

A successful dairyman near the Missouri College of Agriculture has solved this problem by removing the causes. Since dirt is loaded with bacteria he first keeps both dirt and bacteria out of his milk by using a small-top milk pail, by keeping his pails, cans, strainers and other milk utensils clean and by keeping his cows free from dirt and filth. This can be cheaply and efficiently done by thoroughly washing the utensils with hot water as soon after using as possible and setting them in a clean, protected place to drain until used, by brushing the cows daily and preventing them from becoming dirty, by using plenty of bedding and by keeping the barnyard clean.

Since bacteria will not sour milk unless they grow in it, he prevents their growth by cooling his milk as soon as produced and keeping it cool until delivered. The best of dairymen cannot furnish milk so free from bacteria that it will not sour if left for hours in a warm place. Both dairymen and housewives will do well to remember that cleanliness and low temperature (50 degrees Fahrenheit) will prevent this loss. P. Warner.

Neither the scrub nor the poorly fed animal can pay a profit on high-priced land.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Oliver Method for fighting the Hessian Fly

Agricultural experts tell us the best way of checking the Hessian fly evil is by deep plowing. Mr. McColloch of the Kansas Experimental Station believes the Oliver rolling coulter and jointer plays an important part in fighting the fly.

July 8, 1916.

OLIVER CHILLED PLOW WORKS,
Kansas City, Mo.

Dear Sir:

I have just seen the Oliver combined rolling coulter and jointer in operation on wheat stubble, and wish to say that I am certainly well pleased with it. The way it turns the stubble and trash under is a big advance in the thorough preparation of wheat land.

I was especially interested in this implement as a means of turning stubble and volunteer wheat under to destroy the Hessian fly. One of our recommendations for the control of this insect is that the ground should be plowed to a depth of at least six inches and all stubble and volunteer wheat buried under at least three inches of soil. The ground should then be worked into a good seed bed.

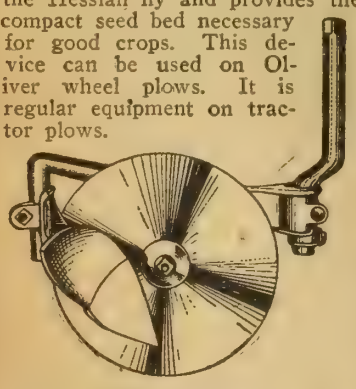
It is a difficult matter to thoroughly bury all the stubble and volunteer wheat with the ordinary plow and the subsequent working of the ground with a harrow pulls much of it out again. For this reason the farmer often becomes discouraged and gives up trying to control the fly.

The thoroughness with which the coulter and jointer buries the stubble on the bottom of the furrow overcomes this trouble and in my opinion solves one of the most serious difficulties in the control of the Hessian fly. The thorough preparation of the seed bed, together with the other methods advocated in the inclosed circular, will serve to control the fly in any community. If the coulter and jointer did nothing more than aid in the control of the fly it would be a valuable implement on any farm. Very truly yours,

J. W. MCCOLLOCH.

Ask us to send you a copy of the circular Mr. McColloch refers to. We also have a special circular on the Hessian fly.

The Oliver combined rolling coulter and jointer covers weeds, turns under green manure, checks the Hessian fly and provides the compact seed bed necessary for good crops. This device can be used on Oliver wheel plows. It is regular equipment on tractor plows.



The Oliver combined rolling coulter and jointer—the device for checking the Hessian fly.

Oliver Chilled Plow Works
Plowmakers for the World
South Bend, Ind.

SAFETY FIRST

BREAK your colts, your wild and vicious horses such as biters, kickers, runaways, etc., with **KOEPKE'S CONTROLLER BRIDLES**

Write for circulars and free booklet on horse training. Address

F. L. KOEPKE WHITEHALL, WIS.

...ly mention this paper when writing

CURRENT EVENTS

JAMES WHITCOMB RILEY, America's sweetest singer of the present generation, died suddenly last week at his home in Indianapolis, in his sixty-third year. On the order of the governor of Indiana, his remains were removed to the state house, where they were publicly viewed for several hours, Indiana recognizing that he was her most notable son. Death was due to paralysis, from which the gifted poet had been suffering for several years past. It would be difficult to name the most popular and best known of Riley's poems, but undoubtedly "An Old Sweetheart of Mine," "The Raggedy Man," "Knee Deep in June" and "Out to Old Aunt Mary's" are among the most popular. Riley was particularly the poet of childhood and of rural America. He was born in 1853, but was always reticent as to his exact age. An unique celebration in the country was held in his honor October 7, 1915, when "Riley Day" was observed by a banquet in Indianapolis and in schools, attended by more than 1,000,000 children. Men prominent in business and politics assembled to do the poet homage at the celebration, and many congratulatory messages were received from abroad on that occasion. The day in the public schools was observed by reading his poems. Riley never married, his sister in New York being his nearest relative.

THE naval appropriation bill, with a three-year building program, including the immediate construction of four dreadnaughts, four great battle cruisers and fifty-eight other craft, passed the senate last week by a vote of 71 to 8. It carries $315,826,843, or $45,857,588 more than the total voted by the lower house of congress. Thus the democratic senate goes on record favoring the most elaborate program of naval preparedness ever known in the history of the nation. Many proposals to curtail the enormous building increases written into the measure by the senate naval committee were defeated overwhelmingly, and as soon as final passage was announced the senate voted to insist on its amendments and send the bill at once to conference. The house is expected to insist on its building program and a long struggle is in prospect before an agreement is reached. Construction of 157 vessels, including sixteen capital fighting ships, within three years, at an estimated cost of $588,180,576, is contemplated in the senate program, the largest ever proposed in congress. Of the total appropriations in the bill, $110,726,160 is for the first year's building expenditures. Congress is planning to adjourn about August 20th, by which time it is hoped to have the differences between the two houses on this naval bill amicably settled, so that the building can go ahead without any undue delay.

A BOMB left in an innocent-looking suitcase on the sidewalk exploded while the preparedness parade was passing along the streets of San Francisco, with the result that seven persons were killed and nearly fifty injured. The bomb, concealed in a suitcase packed with cartridges, bullets, gaspipe, glass and scrapiron, blew a gap through the crowd, striking down men, women and children. The flying missiles sprayed the crowd with a rain of death more infernal than the shrapnel of a European battlefield. The holiday throng was cheering the First California Infantry, a Spanish-American war regiment, which was passing. The place became a shambles, the sidewalk strewn with dead and wounded and frightened men and women leaping in panic for safety. Injured and uninjured piled in a heap in the street and many were crushed. The police have arrested a number of suspects, but the real motive of the crime remains unknown. It is thought that some person whose mind had become inflamed by reading so much for and against preparedness committed the awful deed while suffering from an insane fit. It is difficult to explain such wholesale and awful murder on any other theory.

THE United States Steel Corporation reported the largest earnings in its history last week, due to the manufacture and sale of war munitions. An extra dividend was declared on the $58,000,000 worth of outstanding common stock. The net earnings of the corporation for the last three months were $81,126,048, exceeding by $20,'12,424 the highest previous record, made in the first quarter of the current year. The balance carried to surplus for the quarter was $47,964,535 as against $32,854,172 in the previous quarter and $8,267,645 in the corresponding three months of the previous year. On the basis of returns for the last quarter and with the orders already in hand Wall street estimates that the steel corporation's earnings for 1916 will go to unprecedented figures. A large part of the contracts filled heretofore were at the low scale of prices. Now the corporation will be able to reap the benefit of the present record prices.

THE battle of the Somme, as the fierce fighting of the present in northern France has come to be called, continued last week, with frightful carnage. General Haig, commander of the British forces, reported that 1,500,000 men were engaged, the main battle front being only a little more than twenty-five miles in length. The Germans are said to be rushing re-enforcements from Verdun and the eastern front in order to strengthen and hold their third line, the allies having pierced the first and second lines in a number of places. The allies are pushing the Teutons back slowly but surely, although only a small portion of the captured territory has been won back so far and that at awful cost in human lives.

Puffer-Hubbard Company Wins Suit.

For some time the Puffer-Hubbard Mfg. Company, of Minneapolis, makers of silos, have been having trouble with other companies who have been attempting to infringe upon their patents to copy their good points. The Puffer-Hubbard Mfg. Company brought suit in the United States District Court of Minnesota, fourth division. The company was sustained by the court in its efforts to keep other companies from copying points about its silo and one company, in particular, which was shown to have copied the Puffer-Hubbard silo in some particulars, was enjoined by the court from further infringement. Judge Wilbur F. Booth signed the decree June 6, 1916. Mr. Hubbard, according to proceedings in court, was shown to be the original, first and sole inventor of improvements on the Puffer-Hubbard silos set forth in Letters Patent. The contentions of the Puffer-Hubbard Company were fully sustained by the court, thus preserving for this company the extensive use of designs and construction covered by their patents.

The rapid decline of the horse from the streets of New York is shown by official records just issued. The report shows that nearly seven-tenths of all vehicular traffic, not including street cars and motorcycles, is self-propelled. Engineers of the department of public works take frequent counts of all kinds of traffic preparatory to widening and repaving the city streets. These records show that on Fifth avenue, at Forty-second, 91½ per cent of the traffic last month was motor vehicles and 8½ per cent horse drawn. In four years the average number of horse-drawn vehicles passing at three points in Fifth avenue during the busy hours in one day decreased from 2,577 to 1,670, or 35 per cent, while the average number of motor vehicles increased from 7,202 to 12,893, or 79 per cent.

Bigger Potato Profits

A modern Elevator Digger will add substantially to the value of your potato crop. More potatoes and in better marketable condition with less labor and power means many extra dollars in the grower's pocket at the end of the season.

The 1916 Farquhar Elevator Digger is built in three sizes, which can be equipped with various attachments suitable for different kinds of soil. This enables you to get the right digger for your particular conditions.

Our diggers are the result of many years' field experience, combining efficiency and durability. Illustrated catalogue describing the Farquhar Elevator, as well as our Success Junior and Gilt Edge Walking Diggers, free to growers. Send today for your copy.

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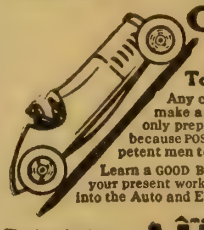

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Cutting Big Hay Crop.

Upper Wisconsin farmers are finishing up the hay harvest now and reports indicate a heavy yield with ideal conditions for getting it into the barns. The weather has been hot and dry and generally reports of small grain are encouraging with oats heading out well, but not so strong a growth of straw as last year. The clover and timothy crops in the Lake Superior counties has been very heavy and where clover was grown alone the crop was so thick that walking through a field was difficult. Douglas county farmers report a shortage in haying machinery this year, being unable to get enough to meet the demands and yields of two and one-half to four tons per acre are reported.

Douglas County Fair.

The support which the Douglas county board has given the county fair should serve as an incentive to older communities and nothing is being left undone to make the Douglas County Fair rank with the best, although it is only a few years old. The board recently set aside $3,000 for improvements on the grounds at Superior and when the fair opens this fall a new grand stand, agricultural hall and cattle building will be completed and ready for occupancy.

Growth of Dairying.

The success which the new farmers' co-operative packing plant at South Superior has had during the past few months indicates the growth of dairying in Douglas county. The creamery is now making more than a ton of butter daily and when it was first begun last fall it was hardly thought there would be enough cream to keep the creamery running. Several farmers this summer have averaged $10 per month per cow and one farmer who started shipping cream from four cows now has seven, paid for with creamery checks. This creamery should prove a great boost for the dairy interests in that county and the increasing output indicates it is succeeding along this line.

Record of Settler.

The Sawyer County Record of July 13th contains the following interesting experience of a settler in Upper Wisconsin which points out the possibilities that await the newcomer:

Mr. Wm. Gross who came here from Milwaukee on May 5th, onto an entirely new piece of land has at the present day new potatoes that he has raised this year. His peas have been bearing for several days. Cabbage on his farm measures fourteen inches across. Since Mr. Gross came here he has had to build his house and barn and clear the land before he could commence to plant. This shows what a new settler who is willing to work can do on the new land in this section of the country.

Fight Potato Beetle.

The general complaint from Upper Wisconsin counties where potatoes are a large crop is that the potato bugs are proving a great pest this year, due to the continued warm weather which has caused the potato beetle to hatch readily. Many growers, according to J. G. Milward, secretary of the state association, have been busy in the midst of haying and the bugs on many fields have gotten a good start because of failure to spray. Better methods are being used in Wisconsin this year. Many growers, however, who have waited too long are now using about five pounds of Paris green to fifty gallons of water and applying carelessly. The result is that the vines are not only chewed badly but they are badly injured by Paris green burning.

Several growers this year for the first time applied the poison in connection with Bordeaux mixture made at half strength. This mixture sticks well to the vines and prevents burning. When Paris green is used it is added at the rate of three pounds to fifty gallons. Dry arsenate of lead has been used at the rate of four pounds per fifty gallons of spray.

It has been noticed that several of the better class of machines have been purchased this year and satisfaction is invariably reported. It is desirable to have a machine which can be used both for the control of bugs and spraying at high pressure against blight.

Big Cream Check.

The Barron County News relates the experience of Hylekma Bros., of the county, who milked twenty-two cows during June and received a check at the creamery for $305.79 and adds that it is probably the largest cream check ever issued in Barron county to a single farm. These cows are Holsteins, pure bred and grades.

Dairy Maids' Contest.

To the Editor:—An old-fashioned dairy maids' milking contest will be one of the most interesting events at the Marinette County (Wisconsin) New Settlers' Picnic, which will take place this year at Wausaukee on August 17th.

From sixty to seventy daughters of Marinette county farmers and new settlers will be entered in this contest, and it is said that fully that many unmarried new settlers, who are engaged in dairy farming, will be on hand to get accurate information concerning the milking capabilities of the various contestants.

Prof. A. M. Olson, superintendent of the Marinette County Training and Agricultural School, will be in charge of the contest and will also act as chairman of the day.

Last year the new settlers' picnic was attended by 4,000 people, and arrangements are being made to accommodate 5,000 this year. There will be three special trains to the grounds.

Another big event will be demonstrations by three different sizes of tractors, including the demonstration of the utility of a 12-25 tractor in clearing and breaking new land. People from all parts of Upper Wisconsin who have land which they wish cleared will be present to witness this demonstration as guests of Marinette county settlers.

The first annual Marinette County Dairy Cattle Congress and sale will be held in connection with the picnic this year and prizes aggregating $400 will be awarded in this event.

Howard I. Wood.

Mr. Kellogg in Northern Iowa.

To the Editor:—I am in Iowa where they grow $80 worth of corn to the acre. No wonder they ignore fruit of all kinds. The soil is somewhat "gumbo" in places and hard to work unless taken at the right time. Experts who have analyzed this soil say it is the best in the United States. It certainly has produced wonderful crops for twenty-five years without manure or rotation of crops. I was on one field of forty acres that for twenty years has grown nothing but oats and the present crop in shock promises forty-five bushels to the acre.

Except along the bluffs of the rivers the soil is not the best for tree fruits. I have been in orchards where Pewaukee apple has done fairly well for twenty years, but on the open prairie there are few orchards and the trees were sent a rod apart. Never pruned, never sprayed and no wonder the fruit was no good. Yesterday I was out six miles to pick Cuthbert raspberries that were planted twenty-three years ago. There was no sign of rows. Just a tangled mass of brush and the soil so good that there were plenty of canes six to eight feet high, but the condition was such there was but little fruit. Still I could recognize the variety by some choice specimens. Nearly every farm has a grove of timber about twenty years planted, a very few a little orchard to grow up wild.

While this whole county and much of northern Iowa is wonderful in its production, it all goes to corn, oats, barley, hay and stock. Very few silos, poor dairy interests, no fruit worth naming. Farmers can raise $80 worth of corn on an acre and say they can buy their fruit, but the facts are their families usually go without.

Most of the landowners have retired to the cities and the renters don't care to plant or cultivate fruits. Some farms have not a tree or shrub. The owners want it all to grow corn and hogs. Crops are splendid; the hot weather since the 1st of July, 70 to 97 degrees, has boomed the corn, and grain is being harvested rapidly. Wages from $30 and $40 a month, $2 to $4 a day, and scarce at that. Farms are large. Every farm is tiled or needs it. Millions have been spent tiling and millions more will be spent. Tiling costs from $20 to $50 an acre and then the land is worth $150 to $200 an acre. Some say these farms will go up to $300 an acre. No fruit, no care, no cultivation, no help and no wonder this is neglected. Cornstalks all go to waste. No dairy breeds are visible, plenty of hogs, horses and cattle, occasionally a Hereford herd; old straw stacks in every field rotting down. All you need to say is northern Iowa.

Geo. J. Kellogg.
Rock Co., Wisconsin.

British scientists are experimenting with banana stalks as material for paper and as a possible source of potash.

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HERE is an opportunity for subscribers to The Wisconsin Farmer to buy all of their papers and magazines at one time at a big reduction in price. By ordering all your papers and magazines through The Wisconsin Farmer you are assured of prompt service and low prices. Pick out your club and send your order today. (We do not guarantee these prices longer that ten days beyond the date of issue in which these offers appear.)

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Home Life	.25
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Hearst's Magazine	$1.50
Kansas City Weekly Star	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Three **$1.50** You Save $1.25

CLUB NO. 4.

Ladies' World	$1.00
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.50** You Save $1.50

CLUB NO. 5.

Modern Priscilla	$1.00
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$2.35

Our Price For All Three **$1.45** You Save 90c

CLUB. NO. 6.

Mother's Magazine	$1.50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.50

Our Price For All Three **$1.75** You Save $1.75

CLUB NO. 7.

Good Housekeeping	$1.50
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$2.85

Our Price For All Three **$1.60** You Save $1.25

CLUB NO. 8.

People's Popular Monthly	$ .25
Woman's World	.35
Wisconsin Farmer	1.00
Regular price per year	$1.60

Our Price For All Three **$1.05** You Save 55c

CLUB NO. 9.

St. Louis Twice-a-Week Republic	$ .50
Mother's Magazine	1.50
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.60** You Save $1.40

CLUB NO. 10.

McCall's Magazine	$ .50
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.50

Our Price For All Three **$1.45** You Save $1.05

CLUB NO. 11.

Metropolitan	$1.50
McCall's Magazine	.50
Ladies' World	1.00
Wisconsin Farmer	1.00
Regular price per year	$4.00

Our Price For All Four **$2.25** You Save $1.75

CLUB NO. 12.

Today's Magazine	$ .50
Every Week	1.00
People's Popular Monthly	.25
Wisconsin Farmer	1.00
Regular price per year	$2.75

Our Price For All Four **$1.40** You Save $1.35

CLUB NO. 13.

Kansas City Weekly Star	$ .25
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$2.25

Our Price For All Three **$1.15** You Save $1.10

CLUB NO. 14.

Every Week	$1.00
Boy's Magazine	1.00
Wisconsin Farmer	1.00
Regular price per year	$3.00

Our Price For All Three **$1.50** You Save $1.50

If none of the above combinations suit you, you can make your own club of papers in the following way: First select The Wisconsin Farmer and figure it at $1.00 per year. Then select any of the papers or magazines listed above and figure them at half their regular subscription price as indicated above, choosing whatever papers or magazines that appeal to you. As an example, suppose you should want The Wisconsin Farmer, Kansas City Weekly Star, Woman's World and People's Home Journal. You would figure The Wisconsin Farmer in the combination at $1.00; then you would add up the regular subscription price of the other three papers, which amounts to $1.10. Half of that amount equals 55 cents. Add this to the regular price of The Wisconsin Farmer, which is $1.00, and you would have a total of $1.55, which would be the rate for The Wisconsin Farmer, Kansas City Weekly Star, Woman's World, and People's Home Journal.

If you wish to subscribe for any papers or magazines not listed in any of the above offers, write to us for special rates. Send all orders to Club Dept., The Wisconsin Farmer, Madison, Wisconsin.

FARMERS' CLUBS IN WISCONSIN.

Nothing Adds More Stimulus to Run-Down Communities Than Well-Organized Rural Societies Which Bring the Families Together in a Social and Business Way—Successful Wisconsin Clubs.

FOR run-down rural communities nothing seems to supply more stimulus than a well-organized, properly conducted farmers' or community club. Such an organization, backed by enthusiasm, seems to provide just the thing that such a community requires and the success the farmers' clubs in Wisconsin are attaining along these lines has brought about more interest than ever before in this phase of rural life and rural development.

Something like 200 farmers' clubs, strictly rural in every sense, are working in Wisconsin to improve rural life, to better farming conditions and make life more enjoyable and more pleasant. These clubs, properly conducted after successful organization, become important factors in a community, as they cement in a closer friendship the farmers and neighbors and make farm life not only more attractive to the boys and girls, but more enjoyable for the fathers and mothers. These clubs are conducted largely along social lines entirely, although considerable work is done by most of them in an educational and agricultural way. Counting the granges and the equity societies which combine the social advantages with business, Wisconsin probably has close to 1,000 rural organizations that are working for better rural conditions. C. J. Galpin, of Madison, who is devoting much time now to farmers' club work in connection with his country life work, believes that these organizations are doing an inestimable good in Wisconsin and that the number of strictly farmers' clubs will increase very fast in the next few years.

PECK'S STATION FARMERS' CLUB.

Sauk county still leads other counties in the number of farmers' clubs which are formed independently of any other organizations by the farmers in particular localities. Walworth county is rapidly forging ahead in this work and during the last year the clubs in that county have undertaken and carried to completion some projects which would do credit to much larger organizations. The Worthwhile Farmers' Club at the spring election induced the voters in the town of Geneva to vote $2,800 for a community or town hall which will be used as the meeting place for the club. The Bloomfield Farmers' Club only recently occupied their community house which was built by money voted at the town election. The Lakeview Farmers' Club at Linn, the oldest in the county, meets at the town community house which was built last year at a cost of $6,000. This money was voted at the town election after the club had taken the initiative. The club at Honey Creek also have their own community house.

TOWN HALL BUILT THROUGH THE EFFORTS OF THE BLOOMFIELD FARMERS' CLUB, WALWORTH COUNTY.

HOME OF LAKE VIEW FARMERS' CLUB IN THE TOWN OF ZENDA, WALWORTH COUNTY.

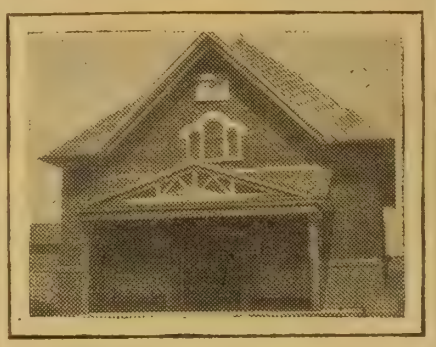
What the Sauk county and Walworth county clubs and those in other communities have done towards providing themselves with permanent club rooms is an accomplishment to which every smaller club can work. Such projects are not the work of new clubs, but the work of those already organized and successful and for a new club to undertake at the outset to build a community house might mean its failure. The important thing is to become successfully organized and succeed in the smaller things before undertaking so large a project as erecting a clubhouse or even asking the town to erect it. These things will all come after the club is well organized and the accomplishments of the Walworth county clubs is cited here as an illustration of what is being accomplished by the clubs. These clubs, it must be borne in mind, are strictly social and have no connection with the grange or the equity and this article, so far as suggestions for organization are concerned, applies entirely to the farmers' club which has been formed locally for social or educational purposes. Business projects which they might assume later are merely a part of the natural desires of the clubs to build up their communities.

The desire to form these farmers' clubs in so many parts of the state has brought many inquiries to The Wisconsin Farmer relative to organization. Hardly a week passes but that someone inquires how to start such a club, which shows the interest being taken by the farmers in rural development.

Nothing is more important or necessary to the success of a farmers' or community club than the organization. If it is not properly organized it is bound to die. If there is no demand for it; if only a few wish it, the chances are it cannot succeed. So that the important thing in organizing is to get everybody interested; get them to the meeting and arouse their enthusiasm. With this kind of spirit the club is likely to succeed. Every club must have a leader, it is true, but no club can succeed with the best leader in the community if he is not backed by those who should be members.

The "talking stage," as Mr. Galpin expresses it, is of great importance. This is the time when the farmers and their neighbors are beginning to talk about forming a club. Spring and summer are a good time to talk of such a club so that it can be organized in the fall ready for a winter's pleasure and work. Talking in advance of organization will tend to interest everyone who is later to become a member and when the time is ripe someone should call a meeting. To this meeting invite every person. Be careful not to slight anyone, as such an oversight might make an enemy that would in the end wreck the club. These clubs must be neighborhood affairs and everyone should take part and consider themselves personally responsible for the success of the club.

To this first meeting a good speaker who is familiar with farmers' club work should be invited. Someone from a successful club in the neighborhood would be preferable to an outsider and the cost would not be large. Many men would be only too glad to attend and help organize without pay. The schoolhouse would be a good place for such a gathering and the school directors should be interested during the "talking stage" in order that they would donate the use of the school. At this first meeting there should be music and singing by some of the organizers or those who would be expected to become members. The important factor is to make it informal and the more informal the better, for everyone should get acquainted and feel perfectly at home in order that there would be none of that reserve and holding back so often encountered in community gatherings. This meeting should serve to break the ice and at the second meeting permanent officers and committees could be selected and a constitution and by-laws adopted. Then the club could proceed with its business, but at every meeting there should be music and speeches and care should be taken that no one is overlooked. It might be well to have an outside speaker at the second meeting and someone known in the neighborhood or from a near-by club that has succeeded would instill more confidence and put the members at ease better than a stranger. This much of the organization work well done, the program committee could arrange for future gatherings.

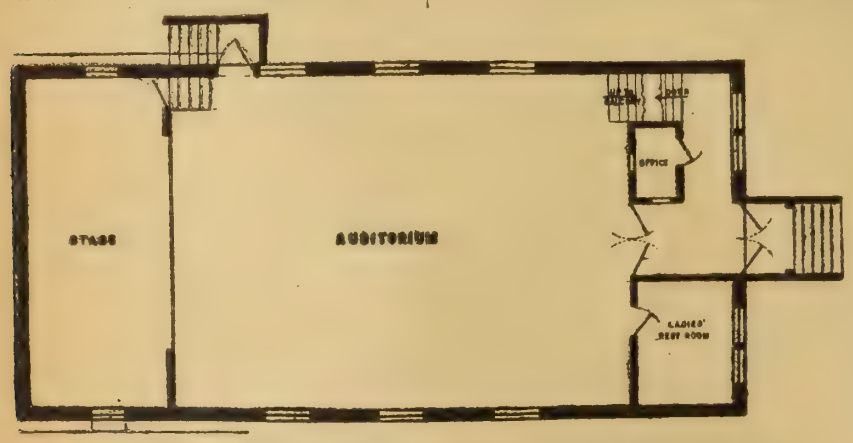


COMMUNITY HOUSE AT HONEY CREEK.

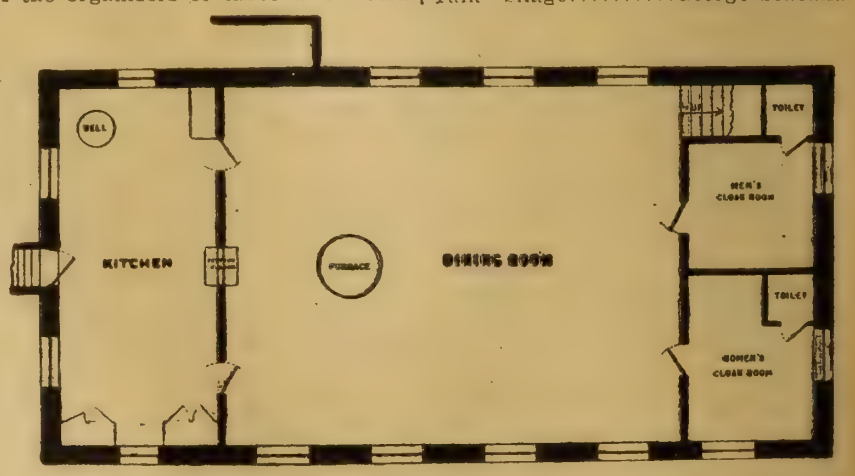
The matter of dues is one for each club to decide. They should be as small as possible and still raise enough revenue to conduct the club properly. Box socials, etc., can be arranged afterwards to raise funds when needed. After the organization is under way the success depends entirely upon the enthusiasm of the members and the activity of the officers. The program committee must have the co-operation of every member, as it is impossible to arrange programs when members decline to serve. After the work has gotten well started the club can take up such enterprises as holding club fairs, agricultural tours of their farms, corn and grain contests, etc. Many of the older clubs are doing splendid work along these lines, but the fact that these clubs are primarily social must not be lost sight of, as pleasure and business must be combined for the best results.

The following program at a recent meeting of the Narrows Prairie Hustlers in Sauk county shows the prominent part music and readings play at their meetings:

Meeting called to order by our president .....Mr. Rusch
Song—Juanita .....The Club
Minutes of the last meeting read by the secretary.
Talk—Corn .....Mr. Tibbits
Song—I Love My Herd of Holstein Cows.....School District No. 2
Progress of European War..Elsie Behn
Reading .....Mrs. King
Talk—Silage.....George Schenkat
Recitation—The Courtship of Larry O'Dean.....Mr. Thorne
Club News .....Mary Schenkat
Song—Keep on the Sunny Side..... .....School District No. 11
Dialog—A Lesson in Geography.... .....School District No. 2
Song—Jingle Bells.....The Club
Adjourned.
Lunch



MAIN FLOOR OF THE BLOOMFIELD TOWNSHIP HALL.



BASEMENT FLOOR OF THE BLOOMFIELD HALL.

The constitution and by-laws need not be complicated, but the simpler the better. The following constitution of the Better Farming Club, Columbia county, is a good sample:

Article 1. The name of the organization shall be Better Farming Club, of Caledonia.

Article 2. The object of this society

is to promote the agricultural interests, improve social conditions and better the general welfare of the community.

Article 3. The officers shall consist of a president, vice president, secretary and treasurer.

Article 4. This being a community meeting, membership is extended to anyone who will sign the membership list.

Article 5. The meetings shall be held monthly during April, May and June, discontinued during July and August, and semi-monthly during the balance of the year.

Article 6. The election of officers shall be held annually beginning the first meeting held in September.

Article 7. The president shall preside at all meetings or in his absence the vice president shall preside, or a temporary president shall be elected by a majority of the members present.

The president shall appoint a program committee composed of three members whose duties it shall be to arrange a program, and shall be appointed quarterly.

Article 8. The secretary shall record the minutes of each meeting and keep a record of the same.

Article 9. The treasurer shall have charge of all funds belonging to the society and shall be prepared at all times to give an accurate account of the same.

Article 10. The constitution may at any time be enlarged or amended by a two-thirds vote of all members present.

Persons interested in forming such clubs can secure copies of constitutions and by-laws as well as programs of other clubs by writing Mr. Galpin at Madison or to the editor of The Wisconsin Farmer.

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To meet the demand for a reliable tractor for small farms, we are building our famous EAGLE two-cylinder engine in tractor form. You get a perfectly-balanced, compact and *dependable* tractor that hits the hard places and goes through with power to spare—and still works smoothly. And when you put it at threshing, cutting silage or other belt work,

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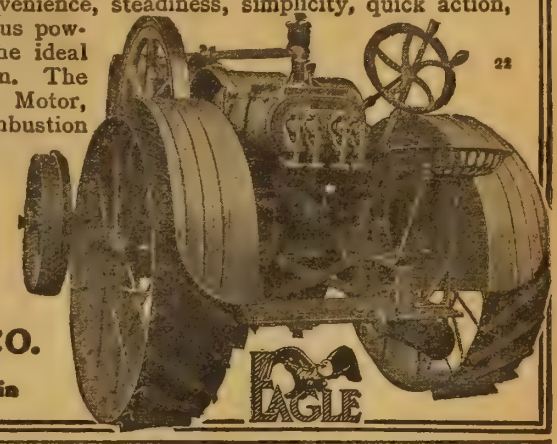
You want a tractor that will give you perfect service for *both* your belt and traction work—one that is built as much for the one purpose as for the other. Safety, convenience, steadiness, simplicity, quick action, perfect control and surplus power make the EAGLE the ideal tractor for the small farm. The EAGLE Valve-in-Head Motor, which gives cleaner combustion and more power than the ordinary type of engine, is one of the secrets of the success of EAGLE GAS TRACTORS.



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QUESTIONS AND ANSWERS.

Valve-in-Head Motor.

Please tell me whether a valve-in-head motor will produce any more power than an L head motor, the conditions being the same in both cases. What are "reversible headlights?"

Answer.—Under the same conditions the valve-in-head motor will produce the more power. Reversible headlights have their support so placed that either light may be placed on the right or left side of the car.

Winding an Armature.

How is an armature wound and how is the size and amount of wire figured? Please give the rule.

Answer.—The rule is very complicated and to understand it requires a technical knowledge of electricity. The following things enter into the calculation: Quality of iron used in armature and field cores; cross section of field core; number of ampere turns in field winding; number of poles; area of pole faces; air gap between pole faces and armature core; length and diameter of armature core; number and size of slots; speed of armature; type of winding. There are enough different types of windings to fill a good-sized book with diagrams. The International Correspondence Schools, of Scranton, Pa., publish a handbook on electricity that gives considerable information on armature winding, but some technical knowledge of electricity is necessary to understand it. The book sells at 50 cents.

Crossing a Power Line With a Telephone Line.

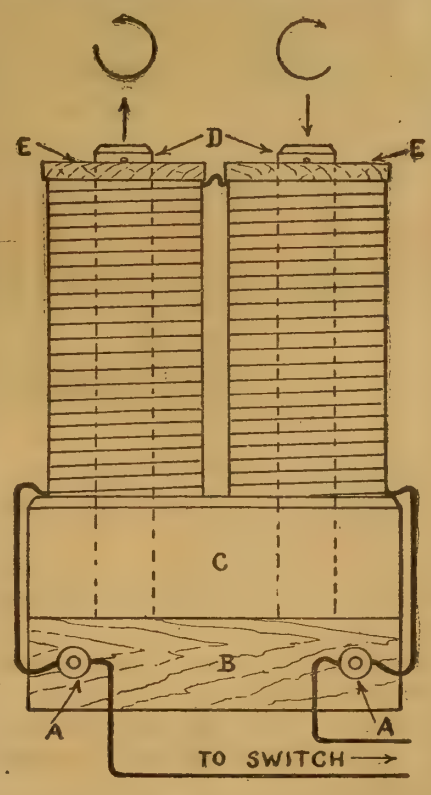
In a former issue you said that there had been many fatal accidents due to a short circuit between a high-voltage power line and a telephone line. Of course, in such cases the electric power line breaks and falls on the telephone line. Using 2,300 volts, how great would be the danger if the power line were insulated? To bring my power wires from town I would have to cross the phone wires overhead, but I can clear them eight or ten feet. I could place my power wires eight or twelve feet away from the telephone wires when running parallel to the wires. Would that be so close as to put the phones out of business? If I did use insulated wire, would it not be best to use number ten wire so that if it were covered with sleet it would not break? And in case some farmer wished to run a light wire to town I could let him hitch on at my house. How long is insulation supposed to last on electric wires? What size transformer must I have? What would be the best tool to use in taking hold of an insulated wire charged with 2,300 volts?

Answer.—A voltage of 2,300 is very dangerous to handle, as the slightest contact with a live wire carrying this voltage may result fatally. If it were absolutely necessary to handle a wire of this kind, even though insulated, one should wear dry rubber gloves and rubber boots. Insulation is not to be depended upon for such a high voltage. "Weather-proof" insulation should last a long time, fifteen to twenty years. You could run ten sixteen-candle-power carbon lights or twenty-five sixteen-candle-power tungsten lights from a one-half kilowatt step down transformer, 2,300 to 110 volts. Where your power line crosses the telephone lines enclose the telephone lines in a wooden box so that the power line cannot fall on them. Your power line will probably not carry enough current to affect the telephone lines. Insulated wire is always used for power lines. In your case number ten wire would be better than smaller wire.

Making a Magnet Charger.

How can I make a magnet charger to recharge telephone magnets, using dry cell batteries? Please give diagram.

Answer.—The figure shows how such a charger may be made. B is a wooden base to which the two binding posts, AA, are fastened. C is a soft iron block, the larger the better. It should be at least two inches thick, three inches wide and long enough to support the coils. DD are two soft iron rods, turned and pressed into two holes in C. The distance between these rods should be the same as the distance between the magnet poles. The size of the rod should be as large as possible and leave room enough for



the wire. About one and one-fourth inch is a good diameter for these rods. The rods should extend eight or ten inches above the iron base. Wind about three pounds of No. 32 single cotton-covered copper wire or enameled copper wire on each rod. The windings should be so that the current will flow left handed around one coil and right handed around the other as shown by the arrows. The vertical arrows show the diection of the magnetic flux. The drawing shows insulating tape wrapped around the coils and a wooden disk, E, at the end of each coil to hold it in place. A small hole is drilled through each rod, through which a wire is inserted to keep the wooden disks from slipping off.

To charge a magnet, set it so that the poles rest on top of the rods. Turn on the current. The magnet becomes charged immediately. Place a soft iron "keeper" across the poles of the magnet. Turn off the current and remove the magnet, leaving the keeper in place until the magnet is on the generator. If the keeper is removed for an instant the magnet will lose some of its charge.

Setting a Woolf Valve-Gear.

Please tell me how to set the eccentric 90 degrees ahead of the crank pin; and how to set the eccentric rod the right length on a Woolf reverse valve-gear. Can I get equal lead and equal cut off on both forward and backward motion?

Answer.—Place the crank on head end dead center and set the eccentric as nearly as possible at 90 degrees. That is, the eccentric throw will be straight up or down, depending upon the direction the engine runs. Move the reverse lever from one end of the quadrant to the other and note the "slip," that is, the amount the valve moves backward and forward due to the movement of the reverse lever. Then put the engine on crank end dead center and move the reverse lever backward and forward from one end of the quadrant to the other, and note the "slip" of the valve. When the eccentric is correctly set the "slip" will be the same at either dead center. The slip should be in the same direction that the lever is moved.

Adjust the eccentric rod so that for the threshing motion when the engine is on crank end dead center the valve has a lead of about three-thirty-seconds of an inch. The leads will not be equal at each end, but the cut offs should be nearly so. It is impossible to set a valve for both equal lead and equal cut off.

Noisy Gears.

Can you tell me what makes the transmission in my Ford car make a humming, grinding noise when it is in low gear? We have had the motor out, but could not find anything wrong except that the triple gears are a little loose on the bearing. What makes a cylinder miss at times?

Answer.—The noise is probably due to the gears being loose. Gears are often noisy without any apparent cause. The noise does not always indicate serious trouble. Be sure that there are no broken gear teeth and that the teeth are not bent out of shape.

A fouled spark plug is the most common cause of a cylinder missing, though burned or poorly adjusted contact points of the coil, or poor compression may cause the trouble. Another source of trouble with Ford cars is the "commutator," or timer. If the oil becomes gummy or if the roller or contacts become worn, misfiring will result.

The best way to clean a fouled spark plug is to remove the porcelain, soak it a few minutes in kerosene and wipe or scrape the carbon off, taking care not to injure the glaze of the porcelain. When replacing the porcelain do not screw the packing nut too tight. If too tight, the porcelain will crack when the motor becomes warm. After replacing the porcelain adjust the spark gap to the thickness of a smooth dime.

LAW QUESTIONS.

Trespassing Stock.

A Subscriber, Elk Point, S. Dak.—One of my neighbors lets his stock run at large on the public road. I own land on both sides of said road, and it is very inconvenient for me to shut my gates every time I go forth and back. Am I required to do so in order to keep his stock off my premises?

Answer.—It is probably best for you to keep your gates closed. However, you can recover damages from your neighbor by law when his stock trespass upon your premises.

Stallion Service Charges.

A Subscriber, Gleason, Wis.—A bred a mare to B's stallion, the service charge to be paid provided the mare became with foal,—in other words, B insured the mare to become with foal. About one month before foaling time A's mare died. Has B a right to collect the stallion service charges?

Answer.—If the mare became with foal from the service of the stallion B is entitled to the charges. The fact that the mare died before foaling the colt does not relieve A from payment.

Land Open to Road—Trespass.

A Subscriber, Marshfield, Wis.—I own a farm in Wisconsin. A public road runs along one side of my farm, and I have no fence along said road, and my land next to the road is a meadow. My neighbor drives fifteen cows along this road, morning and evening, and they get into my meadow nearly every time they are driven past. I have notified the owner of the cows to keep them off my land, and he says I ought to have a fence. Can I recover damages for the injury his cows cause to my meadow?

Answer.—You should fence your land from the public road. You cannot recover damages from your neighbor unless you can clearly prove that the cattle go upon your meadow because of his negligence or carelessness in driving them on the public road.

Fraud in Sale of Colt.

A Subscriber, Havana, N. Dak.—A man advertised for sale an outstanding yearling German coach stallion, from an imported mare that had taken several prizes, and I wrote to the man, asking the price, and asking if the colt was straight and all right. He answered that the colt was all right, and stated the price, and I bought the colt and sent him the money. When the colt arrived at my place, I found that it had only one testicle and that was small, also one of its hips was knocked down, and there was a hitch in the other hip. Must I keep the colt, or can I send it back to the seller, and recover from him the price I paid?

Answer.—You have a legal right to send the colt back and demand the price you paid and could recover judgment against the seller for the amount, but probably the seller lives in another state and you would have to sue him there and this would be expensive and at the end you might have neither colt nor price. Your only other remedy is to keep the colt and sue him for damages and such suit would have to be where he lives and a long distance suit is always expensive and sometimes impracticable.

What 1000 Cars

These two latest Overland developments again emphasize the enormous economy of enormous production.

No one has ever before made 1000 a day of cars of this size and class—nor half that many.

1,000 cars a day enable us to use materials of a much higher quality and not only permit but actually enforce an accuracy of workmanship which smaller productions of cars in the same price range *neither permit nor require.*

1,000 cars a day make possible better, larger, much more comfortable cars than have ever before been possible at anywhere near the price.

* * *

This newest Overland is the largest Four ever offered for so low a price.

In the first place, note the longer wheel base—112 inches.

The enbloc 35 horsepower motor which has made the Overland famous is continued.

True—it is perfected even more and now it is a fitting climax of the experience obtained from a quarter of a million of these Overland motors in daily use.

Shock absorbing cantilever rear springs are a big improvem

The gasoline tank placed in rear is another improvement. vacuum system insuring a ste even gasoline flow at all times is another improvement.

The famous and complete A Lite electric starting and ligh equipment is furnished.

All electric switches are on steering column—right within re

The artistically designed stre line body with one piece cowl ma this car one of America's most att tive models.

The New Four

Model 85-4

35 horsepower en bloc motor
112 inch wheelbase
32 x 4 inch tires
Cantilever rear springs
Auto-Lite Starting and Lighting
Vacuum tank fuel feed
Gasoline tank in rear with gauge
Electric control switches on steering column

Catalog on req

The Willys-Overla
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...ay Make Possible

...t the price of this, our greatest ...ylinder value, is less than any ... its size ever sold for before.

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...less a pace maker is the newest ...nd Six.

...re is the Six of Sixes! A snappy ...assenger long stroke 40 horse- ... model—easy to handle, light, ...nical, mighty comfortable, ... all the advantages of higher ... Sixes, yet it comes absolutely ...ete at a lower price than any ...six of its size.

Its smart body design is long and low—having lines of artistic simplicity.

And the motor! This will warm the heart of every six cylinder enthusiast in the country.

You've heard all about fast getaways—smoothness—crawling and climbing on high. This Six does all that and then some!

The wheel base is 116 inches. It has cantilever springs and even-flow vacuum system with the gas tank in rear.

The tires are four inch. It has the complete Auto-Lite electric starting and lighting equipment with all switches on the steering column.

* * *

Some Six! Yet the price is lower than any other Six of its size.

But go to the nearest Overland dealer and see these new models. Go over them—note all the very real and important improvements.

The Overland dealer is ready to make demonstrations of both models now.

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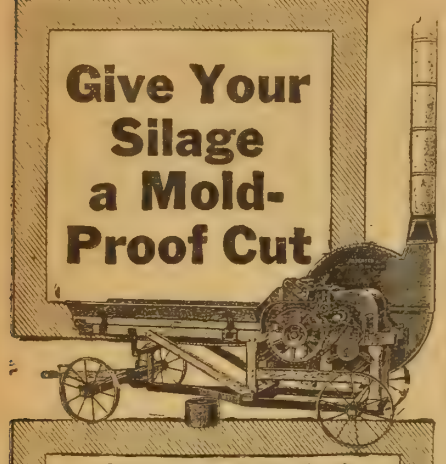
The New Six

Model 85-6

35-40 horsepower en bloc motor
116-inch wheelbase
32 x 4 inch tires
Cantilever rear springs
Auto-Lite starting and lighting
Vacuum tank fuel feed
Gasoline tank in rear with gauge
Electric control switches on steering column

Give Your Silage a Mold-Proof Cut



Silver's "Ohio"
The Logical Silo Filler

Makes clean-cut, uniform silage—releases all silage juices—packs solidly—ferments evenly—expels all air. "Silverized Silage" brings biggest milk yield from dairy cows—puts weight on fat stock. Write for booklet on "Silverized Silage," showing proof. Backed by 62 years' manufacturing experience. Unbeatable features—direct drive, friction reverse, automatic beater feed. Used by leading farmers and Experiment Stations everywhere. Let's refer you to owners. 'BOOKS FREE—Catalog and booklet on "Silverized Silage." Write today.

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TRIPLE WALL SILOS SAVE YOUR CORN

40% of the feeding value is in the corn stalk. Save it. BUILD A TRIPLE WALL SILO. No hoops to tighten. Three walls, regular silo staves, felt lining, patented ship lock Red Cypress siding, air tight. GUARANTEED AGAINST WIND-STORMS. The permanent silo. Thousands of satisfied owners. Send for free catalog and price list.

Prompt shipments.

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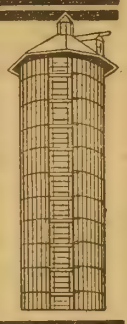
NO HOOPS TO TIGHTEN

TABER LINED SILO



Non-Shrinkable—Practically Everlasting, Rot-Proof, Worm-Proof, Storm-Proof, Acid-Proof.

The latest improved Silo. A wood stave Silo; choice of lumber. Entire Silo creosoted. Special paint for outside. Acid-Proof Lining for coating inside after erection. The finest door and door frame on the market. Special Galvanized Steel Octagon Roof—best manufactured.

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TABER LUMBER CO., KEOKUK, IA.
ESTABLISHED 1855
AGENTS WANTED IMMEDIATELY.

GALVANIZED HOLLOW WALL CYPRESS LINED SILO $63.00 AND UP

Most practical silo, non-freezing, non-molding. Steel protects from wind, rain, heat, cold, fire, vermin; wood lining, hollow walls and tarred felt insure perfect ensilage to outer edge. Strong, durable. Galvanized ladder and air-tight, hinged doors. Built in sections, add more as stock increases.

"Silo Facts in a Nut Shell"

sent FREE to any address. Tells faults and advantages of ALL KINDS of silos. Is text book on silos and stock-raising. Shows how to save price of silo first year. Send for it TODAY. It's FREE.

KRETCHMER MFG. COMPANY
305 Eleventh Ave. Council Bluffs, Ia.

FILL SILOS QUICK

Three sizes, 6 to 18 H. P., direct drive to main cutterhead shaft, 2⅜ in. in diameter, powerful 6-blade fan on same shaft. Emery wheel attached.

Sold on trial

FREE FARMERS ACCOUNT BOOK

ROSENTHAL SILO FILLERS

Backed by guarantee. Write for free Farmer's account and record book also catalog.

ROSENTHAL CORN HUSKER CO.
Box 15
Milwaukee, Wis.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

Report of Eau Claire No. 2.

The following is the report of the Eau Claire County Cow-Testing Association No. 2 for the month ending July 15th, showing cows that have produced forty-five pounds of butter fat or over:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
B. M. Arries					
R. Hols.	3	4-16	1563	3.4	53.1
A. C. Russell					
G. Guern.....	6	4-16	1322	4.5	57.5
S. W. Halbert					
Native	3	4-16	1171	4.6	53.9
Otto Stelter					
Native	7	3-16	1251	4.2	52.5
Native	5	3-16	1166	4.4	51.3
Native	7	11-15	1012	4.6	46.5
Native	5	2-16	909	5.2	47.3
D. B. Strader					
G. Jersey....	5	12-15	925	4.9	45.3
R. Jersey ...	6	1-16	964	5.2	50.1
Nat S. Logan					
G. Jersey ...	11	5-16	1069	4.6	49.2
G. Jersey ...	8	5-16	1290	4.3	55.5
John Logan					
G. Jersey ...	8	4-16	886	5.6	49.6
G. Jersey ...	5	5-16	883	5.1	45.0
G. Jersey ...	7	4-16	921	5.1	47.0
G. Jersey ...	8	5-16	918	5.3	48.6
Art Shoemaker					
Native	10	6-16	995	4.6	45.8
Victory & Zell					
G. Jersey ...	3	5-16	1134	4.9	55.6
A. P. Shong					
Native	6	4-16	1317	4.4	57.9
Henry Kohnke					
Native	9	3-16	1015	5.5	55.8
McCauley & Son					
G. Jersey ...	11	2-16	929	4.9	45.5
Elmer Chrysler					
Native	7	5-16	1051	4.6	48.3
Fred Gerike					
Native	6	3-16	948	4.8	45.5
Ed D. Horton					
G. Guern. ...	3	5-16	912	5.4	49.2
E. J. Horton & Son					
G. Jersey ..	8	2-16	939	4.8	45.1
F. F. Langworthy					
G. Jersey....	7	4-16	916	5.5	50.4
C. L. Craker					
G. Jersey ...	7	4-16	1352	3.6	48.7

Erwin Sutton, Official Tester.

Handling Cream For Market.

The first essentials in handling cream for market is absolute cleanliness. This must begin with the milking. The milker must be clean as well as the receptacles which are to receive the milk. It is quite a task for the men on the farm to come in from their day's labor in the fields and change their clothing before milking. An excellent plan, and one that is easily followed, is to provide the milkers with large, clean aprons that almost cover up their dirty clothes. These aprons will be little trouble to keep spotlessly clean and will last a long time for milking purposes. When the hands are washed and well dried and the aprons donned they indeed look clean enough to milk. Plenty of clean towels should be at hand in the dairy room.

The cow's udder should be washed down with warm water and dried off with a clean towel or cloth before the milking is begun. These cloths should be perfectly clean. This only takes a very little time and we feel that we will produce a better grade of market cream by so doing.

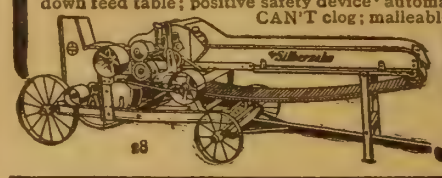
After the milk is drawn it is separated as soon as possible. We like to have the separator as near perfectly clean as we can get it. Many dairymen only wash their separators once a day, but we think it needs to be washed after each using to produce a sanitary grade of cream and milk. It is much easier to clean it immediately after using than it is to wait eight or ten hours.

The separated cream should be put into a clean, empty vessel. It is a poor practice to pour warm cream in with a batch of cold cream. The new cream should be thoroughly cooled before it is put with the old.

The quicker the separator and milk utensils are washed the more effectual it can be done. We wash the utensils first in moderately warm water, with a little washing powder or soda added. Then they are thoroughly scalded with boiling water, being sure that the boiling water comes in contact with all seams and crevices. This boiling water will remove all traces of the wash water and will kill all germs. The separator parts and milk vessels are dried in the sunshine, which is the best germicide known. If these directions are followed with every washing the separator and utensils will always be sanitary and the cream handled in this way will bring the highest market price. If the cream is churned, instead of sold, it is just as important that the utensils have the same care.

Light Running Silberzahn Ensilage Cutters

The Silberzahn is known as "the King of Ensilage Cutters" because of its simplicity, safety, convenience, clean cutting and great capacity. The new 1916 models are better than ever—the result of 25 years' experience in building ensilage cutters exclusively. All-steel frame; low-down feed table; positive safety device; automatic feeding device; six fan blower that simply CAN'T clog; malleable knife heads; best knife adjustment.



Write for Catalog showing 10 sizes. Gives full details and explains HOW and WHY the Silberzahn is BETTER. Get this catalog BEFORE you buy a cutter. Write today—a postal will do.

GEHL BROS. MFG. CO.
1013 S. Water Street West Bend, Wis.

Handling the Separator.

To get the greatest returns from the use of the separator a great deal of attention must be given to every little detail of the separating operation.

The machine must be properly located, the different parts rightly adjusted and kept in repair. The machine should be carried out to the letter. Nothing should be added or left off. It is very important that the separator be thoroughly cleaned after each operation, as any particles of milk or dirt left in some of the important parts may clog the cream or milk outlets, resulting in a loss of much butter fat. The separator is more easily cleaned immediately after using than at any other time. It is just as important to thoroughly clean the machine after each operation as it is to clean it after the second. The common practice of merely running hot water through the machine at nights is a poor practice indeed. The speed of the machine must be regulated and keep a steady supply of milk running into the machine. The milk should be run through the separator as quickly as possible after being drawn. With an ordinary herd of cows a separator will pay for itself in a year if it is rightly managed. A neighbor of mine was milking three cows and churning the cream. She had always considered the separator a needless extravagance. But one of her near neighbors owned a separator, so she decided she would give it a fair test. Four milkings were carefully handled and skimmed by hand. Four milkings were also separated and both batches of cream handled in exactly the same manner. She churned them separately and made a little more than twice the amount of butter from the separated cream. This convinced her. She made out an order for a separator in less than a week from that time.

Enthusiastic About Mechanical Milker.

To the Editor:—Last October following the state fair we installed a three unit milker. At that time, as at present, we were milking thirty cows. From the first time and until the present writing this milker has proven entirely satisfactory. It is reliable, efficient and gets all the milk.

On two occasions, when our engine was out of commission, we had to milk by hand, and each time we were short three to four gallons in our milk. We attribute this shortage to the fact that the milker is always uniform while the hand milkers differ in their application as well as in force, as their hands and arms get tired.

Before we bought our milker we were continually changing help, as they all balked at the drudgery of milking. Now the men who attend to the milking are always glad when it comes time to knock off from farm labor and go to the dairy barn because it means relaxation.

We have one cow, a good milker, that we named "Dynamite" because she was so vicious when being milked by hand. Since using the machine she is as docile and gentle as a lamb.

During the ten months that we have been using the milker we have spent $3.20 for repairs. We have planned to build an addition to our dairy barn to accommodate forty more cows. When this increase is made we will buy three or four more units. Breaking in the heifer is a thing of the past, as they all take to the gentle milker like a duck to water.

At this time we have the same hired men that we had when we put in the milker. They all say that they would quit if it were not for our machine, and I don't blame them.

If it was not for our dairy cows we would quit farming because it would be unprofitable, and if it was not for our milking outfit we would sell our cows. In fact, some of our folks are so enthusiastic about our milker that they say if they had to continue in the dairy business without a milker they would commit suicide.

W. W. McKim.

ROWELL SILO FILLERS "AUTOMATIC"

Designed for perfect efficiency and built for service by a pioneer organization of over fifty years' experience. Satisfied users all over America who claim the Rowell the perfect silo filler and urge its exclusive use. The Rowell is the most complete line in point of sizes and equipments in the United States. Complete stocks of machines and repair parts are carried at distributing points to insure quick delivery to all buyers. Send for our Free Catalog and see the features that have made "The Rowell Automatic" supreme.

The I. B. ROWELL CO.,
1112 Lincoln Ave., Waukesha, Wis.

For silo owners

DECIDE NOT to take the chance of depending on somebody else's cutter. **Get one**

If your dealer is sold out, he can get order by telegraph and get quick delivery of a **Quick**

BLIZZARD Ensilage Cutters

Fills Silos Quick absolutely dependable. Swift, safe and easy-running. Unlimited cutting and elevating capacity.

Write today giving size of silo and engine, for catalog and valuable information for you.

The Jos. Dick Mfg., Company
Box 64 Canton, Ohio

Stronger Silo Walls

with this superior lap-jointed block. Less mortar exposed inside; better looking silo outside.

Lansing Vitrified Tile Silo

Write and learn about this higher grade tile block. Reinforced with twisted steel. Superior, yet costs no more than others ask. Write for catalog.

J. M. Preston Co.
Dept. 333 Lansing, Mich.
Get our offer on Climax Silage Cutters and Bidwell Threshers

The Beaver Storm-Proof Silo

STANDS like an oak. Our eight cross rod anchor system and double angle iron inner hoops, top and bottom, together with self-adjusting hoops, make our silo non-collapsible when not in use.

For the past ten years thousands of satisfied farmers have been using the Beaver Silo. Now why aren't **you?** Write for circular "F."

BEAVER SILO & BOX MFG. CO. INC.
BEAVER DAM, WISCONSIN

A GOOD HARVEST.

Hay Has Made Satisfactory Yields--Small Grains Averaging Well Per Acre--Corn Continues to Push Forward.

WISCONSIN.

Bayfield County.—Hot, dry weather has been fine for the hay crop, which went into the barns in excellent condition. Oats are all headed out and look fine; the growth of straw is not as heavy as last year. Potatoes look well, but need rain. Corn is growing rapidly and if warm weather continues, will soon be up to normal. Some fine fields of peas are just blossoming. Apples are falling off and will not make a good crop. Strawberries were cut short by the hot weather. Flies have been troublesome in the last few weeks and have caused a decrease in the milk flow. —E. F. Stevens.

Burnett County.—Small grain is ripening too rapidly on account of the hot weather. But corn has made a wonderful growth and promises to be a fairly good crop. Potatoes are not doing very well because of the wet spring and present hot weather. The hay crop is good and the weather ideal for haying. Pastures are holding out well, and cattle are doing fine.—Fred Larson.

Clark County.—Corn has made rapid strides during the last few weeks of warm weather. Haying is well under way and the crop is good. Oats and barley have been damaged some by the heavy rains which followed the first week of hot weather. Potatoes are looking exceptionally well, the early planted fields showing little signs of blight. Some farmers have new potatoes ready for use. Pastures are holding out well. The cattle trade is active, many cows and heifers being shipped from the county each week.—Louis Buddenhagen.

Chippewa County.—The hay crop is good and the weather has been favorable for hay making. Grains are good, but need rain. Potatoes are growing well and will make a good crop if the bugs do not get them. Some fields have already been damaged by bugs. The corn is farther along than at this time last year. The fruit crop will not be as heavy as was expected. Vegetables are growing well.—Gustave E. Rheingans.

Dane County.—Corn seemed to be suffering some from drouth as it is topping out with rather short stalks. Barley is very good and promises a big yield. Wheat also will yield well. Oats will be a little light, but the yield per acre will be good. Both early and late potatoes have suffered from drouth and a good crop cannot be expected unless it rains soon. Pastures are short because of the drouth. Clover is very good and, in some places, yielded four loads per acre.—Erwin Roisum.

Douglas County.—Small grains are looking well. Clover is being cut and the crop is turning out well. Gardens look fine. Wild fruit is plentiful; strawberries did not turn out well. Live stock are not bothered with flies and, in general, are doing fine.—J. N. Ottum.

Grant County.—The weather is now hot and dry. This locality has not had a rain for thirty days. Pastures, corn and potatoes are suffering badly. South of this locality there have been several good rains.—P. R. Stoffel.

Iowa County.—Corn looks fine, although it is a little uneven. Several fields are tasseling out, and if there are no early frosts, the crop should be good. Rye, barley and fall wheat are being harvested. The rye and barley are good, but the wheat is thin. Dry weather is hastening the maturity of oats, which are apt to be a little light. Most of the hay is in and the yield averages well, even though clover winterkilled in some places. Vegetables and fruits are backward on account of dry weather.—Will Dowling.

Kewaunee County.—Weather conditions have favored hay making, which is now half finished. Along Lake Michigan the rains have been plentiful for corn and potatoes. The western and central parts of the country are quite dry; the barley, therefore, has ripened here while it is still green along the lake. Oats are doing fine. Pastures are very short, and the cows have been turned into the new meadows wherever the hay crop has been harvested. The hay crop is better than was expected a month ago. Cows are in good condition, but the milk flow has decreased because of short pastures. The weather has been very warm for the last two weeks.—W. C. Katel.

La Crosse County.—Pastures are getting short. Hay has been put up in good condition. Barley and early oats harvests are nearly finished; late oats are not quite ripe. The grain crops are light on account of hot, dry weather. Early potatoes are not turning out well because the soil is too dry. Corn will make a good crop if the frosts hold off long enough. In July, wool brought 34 cents.—R. R. French.

Marinette County.—The recent showers in this county have been local. Hot weather has prevailed, the temperature running from 90 to 98 degrees in the shade. This makes fine haying weather and the hay crop is good. Corn is growing nicely, but it is a little late. Pastures are falling off. Potatoes are doing well, but the bugs are numerous. Oats are well headed out, but the straw is short in many fields. Some new silos are going up.—W. B. Sanderson.

Monroe County.—Corn has grown rapidly during the last two weeks. Haying is nearly finished and the crop is good in both quantity and quality. Some oats are being cut and the yield promises to be good. Potatoes are doing well. Pastures are drying up and the cows must be fed to keep up the milk flow. It pays to do this since butter fat is worth 34 cents at the Sparta Co-operative Creamery.—D. F. Jones.

Mower County.—Since the beginning of warm weather, corn has done remarkably well. This weather is good for hay making. The new seeding of hay is good, but the old seeding is light. Early potatoes are good and there are no bugs to bother them. Some fields of early oats are being harvested. Pastures are good. The dairy business is developing rapidly.—Walter H. Martin.

Oconto County.—The yield of hay is good and about half of it has been cut. Oats look well at present. Some fields of corn are good. Potatoes are below average. Pastures are good. Small fruits have yielded well. Cattle are doing well. The weather is very hot at present.—W. J. Hinker.

Oneida County.—Crops have been growing rapidly for the last two weeks. Light rains have greatly benefited the small grains and corn. About 75 per cent of the haying has been done. Potatoes are looking fairly good. Barley will be ready to cut soon. Oats and wheat are well headed out. Pastures are getting short on account of lack of moisture.—C. Blumenstein.

Outagamie County.—Haying is well under way and the crop in general is good. The new seeding which was protected by stubble and not pastured too close is best. Crops on low, undrained lands have been affected by heavy rains. Corn, oats and barley have grown rapidly. The weather has been too hot for oats to fill well. Early planted corn on high ground is fine, but some late corn will scarcely make more than silage. Early potatoes rotted in the ground in many places, but the loss was not great, as this is no potato region. The fruit crops have been disappointing; cherries failed and only the Duchess and similar varieties of apples will amount to anything. Pastures are good and, therefore the main industry, will be sustained.—Pet " Tubbs.

Ozaukee County.—The hay crop has been put up in good shape. The yield was much better than was expected earlier in the season. Barley is ripe and will yield well, but the acreage is small. Oats will soon be ripe; the stand is good. Warm weather has improved the corn wonderfully. With frequent showers it will make a very fair crop. Potatoes do not look well. Too much wet weather early in June and hot, dry weather in July has made this crop uncertain. Potato bugs also have been a hindrance. Pastures are short and need rain. Clover is coming up slowly and the second crop of alfalfa is not up to normal.—C. F. Dineen.

Pierce County.—A fine crop of hay has been harvested. The second crop of alfalfa is ready to cut and will be a good crop. Hot, dry, weather has brought the barley harvest on with a rush; prospects are for a good crop. Oats are beginning to turn; the yield will be about an average. Rye is a poor crop and the yield is not apt to be more than eight or ten bushels per acre. Corn is doing fine; some fields are knee high, other in the silk. Potatoes need rain. Bugs injured the crop to some extent. Apples are falling off rapidly, as no spraying has been done in this section.—T. B. Eaton.

Racine County.—Haying is nearly finished. Conditions were very favorable for this harvest. The barley is good, having large, well-matured heads. Harvesting of this crop is now in progress. Late oats will be light on account of the hot, dry weather. Corn and cabbage are in good condition, but need rain. Pastures are getting short. Raspberries are doing well, but other fruits are poor.—Chas. Jeffery.

Sauk County.—Most of the rye is in the shock and the yield is very good. Oats are ripening rapidly, but show signs of injury from drouth. Favorable conditions have pushed corn along rapidly. Potatoes are growing well. Pastures are dried up considerably.—A. H. B.

Taylor County.—Warm weather for the last two weeks has brought crops forward in good shape. The new seedings of timothy and clover are making good crops. Old hay meadows are poor. Hay making is now in progress. Oats on high and rolling land are good, but poor on low land because of too much rain early in the season. The same is true of potatoes. Strawberries made about three-fourths of a normal crop. Garden truck is good. Corn is backward and has a poor stand. The apple crop is good. Pastures are fine and live stock are in good condition.—E. H. Dehne.

Walworth County.—Dry, warm weather for the last three weeks has been very good for hay making, but has shortened the grain yields on light soils. A good rain fell on July 19th. Corn is doing fine. Barley is almost ready to cut.—Arthur Ewing.

Washburn County.—July with its many clear days and warm nights has been an ideal month for corn. It was a little too dry for oats and pastures. The hay crop is heavy and most of it has been harvested. Potato bugs are unusually numerous. The blueberry crop is an average. Many new automobiles and silos have come into this country this summer. The local creamery is paying twenty-eight cents for butter fat.—John W. McCulloch.

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The New Agriculture.

"The present high cost of living would indicate that the production of food products is not keeping pace with consumption. Today there is but little new agricultural territory to be developed in the United States and the increase in farm products for the future must come, in a large measure, from land already under cultivation," said Prof. G. I. Christie, superintendent of agricultural extension work at Purdue University, before the National Fertilizer Association. "The New Agriculture" was the subject of his address.

"Agriculture is the great business and industry of the state and country, and the farms must be brought to a high state of productivity to meet the demands of the rapidly increasing population. It is a problem of industrial efficiency as well as that of social co-operation," continued Professor Christie. "Comfortable homes, the best of schools, community churches, community centers, good roads and a more permanent and satisfying social life must be provided for. This can only be done when the landowners and their families are willing to remain on the farm and expend their energy and money in the building up and maintaining of rural institutions.

"The large and rapidly increasing

PROF. G. I. CHRISTIE, OF PURDUE UNIVERSITY.

population makes an unprecedented demand upon the farmers for foodstuffs. A study of statistics shows that the population of the United States has practically doubled every twenty-five years. A few years ago new states and territories were being occupied and an increased supply of farm products placed upon the market. This acquiring and developing of new lands did much to keep production ahead of consumption and meet the needs of an increasing population," continued the speaker.

"The average yield of wheat in the United States for the past ten years was 14.8 bushels per acre. A few years ago the yield of wheat in New England and Germany was really lower than that found in the United States. Through fertilization and a better crop system these countries have been able to gradually increase the average yield of the wheat crop until at this time it ranges about thirty-six bushels per acre. On the farm of Purdue University, where conditions are similar to those of a large area of wheat lands, through a good rotation of crops and proper fertilization the average yield of wheat for the past thirty years has reached twenty-eight bushels per acre. These, with other examples, clearly demonstrate that it is possible to materially increase the yield of wheat throughout the country."

Professor Christie then told how 238 farmers in Indiana grew five acres of corn each last year, from which an average yield of 72.4 bushels per acre was obtained, or just about double the average yield of the state. The average cost of producing an acre of corn in Indiana is $19.16 or 37.1 cents a bushel. The 238 farmers who raised 72.4 bushels per acre did so at an average cost of $13.52 per acre or 18.6 cents per bushel, showing clearly that the high yields are not only profitable because of the total value, but because there is a greater net profit on each bushel produced. Professor Christie explained the importance and development of the county agent movement throughout the country at considerable length and pointed out how the county agent works in connection with other agencies to bring about better schools, better churches, better roads and recognition of the country's greatest business and industry—agriculture.

The Fourteen-Cow Dairy Farm.

One of our farm dairy women, seeing an article about the dairyman who is realizing $8 per day from fourteen cows, sends this inquiry:

Enclosed please find clipping about "Eight dollars per day from fourteen cows." We would appreciate the particulars. We do not live in Missouri, but we do live near the line and need to be "shown." How is it done? Feed? Care? We milk 126 cows and get about three and one-half gallons of cream per day. It brings 85 to 90 cents per gallon, and we thought we were doing pretty well. You see nine gallons from fourteen cows, as your dairyman is getting, would be better than one and one-half gallons per day from each cow.

You only got your figures twisted a trifle—nine gallons from fourteen cows would not be one and one-half gallons per cow, but a trifle over one-half gallon. The bulk is rather large, but this is probably controlled largely by the thumb screw of the separator. You see, this cream is being sold by the gallon, not by the daily test, which in a measure accounts for part of the gain. This however, is good, but nothing phenomenal. A couple of Jerseys furnished a five-gallon can of cream each week all of last winter, besides butter and cream for the table. This would be about three quarts each day from the two, or three pints from one. If fed and cared for, as the other farm dairyman cared for his Guernseys, these two small bossies would probably have won out over them. Generally speaking, Guernseys give more pounds of milk, but the test is not quite so high as the Jerseys. There would be practically little difference in the amount of cream, other things being equal.

The feed and care of the herd in question is undeniably good, but nothing that could not be given to any herd in the grain belt, or any other "belt," for that matter, where a reasonable amount of feed could be grown.

The cheapness of the ration is due to two things, viz., silage and alfalfa. No need to dwell on this, just one instance of what the silo and alfalfa is doing for another farmer in the same community as the dairy farmer in question.

This man is not a dairyman, but sells fatted cattle on the market. Without going into details the lots that were not fed silage realized 75 cents per bushel for the corn they ate. The lots fed silage brought their owner $1.07 per bushel for his corn. As one man aptly puts it, "The profits have been increased every year where silage has been used and in off years, when a loss has been sustained, the loss in silage-fed lots has been less than in the lots having only dry roughage." This latter including alfalfa.

The silo and the dairy cow are even a better combination. The few, comparatively speaking, can come out whole in fitting cattle for market. Anyone with ordinary intelligence can make good at the dairy in connection with the farm if he will, but not by pasturing on $200-an-acre land. By way of the silo a cow can and has been kept a year on an acre of land. At a test at the University of Illinois twenty cows were kept on twenty acres.

It takes as much fertility and moisture to raise weeds as for corn, and sometimes the corn is thus robbed of both.

Hogs on pasture need grain. "Cheap feeds for pork" is necessary, but quick growth is also important.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The scene is laid in the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold. A neighbor, named Hardy, comes to his camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which she learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide become strained. Disobeying his strict orders to stay with the party, Rachel Hardy rides ahead, her horse throwing her as it scares at a bear cub. She is severely hurt, but Genesee Jack finally finds her, and succeeds in getting her safely back to camp.

CHAPTER VII—Continued.

BUT her raillery brought no more words from him. His face had again its sombre, serious look, and in silence he guided Mowitza's feet down toward the glow-light. Once a puff of wind sent the girl's hair blowing across her face, and he smoothed it back carefully that he might see her eyes in the moonlight; but the half-caress in the movement was as if given to a child. All the quick warmth was gone from his eyes and speech after that one comprehensive outbreak, and the girl was puzzled at the change that had come in its stead. He was so gentle, but so guarded—the touch even of his fingers on her shoulder was tremulous, as if with the weight of resistance forced into them. She did not feel like laughing any longer, after they began the descent of the hill. His manner had impressed her too strongly with the feeling of some change to come with the end of that ride and the eventful moonlight night, but no words came to her; but her hand remained in his of its own accord, not because it was held there, and she lay very quiet, wondering if he would not speak—would say nothing more to her ere they joined the others, to whom they were moving nearer at every step.

He did not. Once his fingers closed convulsively over her own. His eyes straight ahead caused her to glance in that direction, and she saw Tillie and Hardy clearly, in the moonlight, walking together hand in hand down toward the glow of the campfire. On a ledge of rock that jutted out clear from the shadowy brush, they lingered for an instant. The soft blue light and the silence made them look a little ghostly—a tryst of spirits—as the tall shoulders drooped forward with circling arms into which Tillie crept reaching upward until their faces met. The eyes of those two on horseback turned involuntarily toward each other at the sight of those married lovers, but there was no echo of a caress in their own movements, unless it was the caress of a glance; and in a few moments more they were within speaking distance of the camp.

"We are here," he said slowly, as Hardy and his wife, hearing the steps of the horse, hurried toward them.

"Yes, I know," she whispered.

It was their good-bye to the night.

A neigh from the renegade Betty was answered by Mowitza, and in an instant all the group about the camp was alive to the fact of the return. But the eager questions received few answers, for Genesee handed Rachel into the arms of Hardy, and said to Tillie:

"Don't let them pester her with questions tonight, Mrs. Hardy. She has no injuries, I guess, only she's used up and needs rest badly. I found her ready to faint in a gulch back from the trail about three miles. She'll be all right tomorrow, I reckon; only see that she gets a good rest and isn't bothered tonight."

No need to tell them that. Their gladness at her safe return made them all consideration.

Genesee and Mowitza also came in for a share of their solicitude, and the former for a quantity of thanks that met with rather brusque response.

"That's nothing to thank a man for," he said a little impatiently, as the Houghtons were contributing their share. "I reckon you don't know much about the duties of a scout or guide in this country, or you would know it was my business to go for the lady—just as it would be to hunt up lost stock, if any had strayed off. There wasn't much of a trick in finding her—Betty left too clear a trail; and I reckon it's time we all turned in to sleep instead of talking about it."

In the morning Rachel awoke refreshed and expectant in a vague way. The incidents of the night before came crowding to her memory, sending the blood tingling through her veins as she thought of their meeting; of the ride; of those few significant words of his, and his face as he had spoken. She wondered at herself accepting it all so dreamily—as if in a lethargy. She was far from a stupor at the thought of it in the light of the early day, as she watched the blue mists rising up, up, from the valleys. Was he watching them, too? Was he thinking as she was of that ride and its revelations? Would he meet her again with that queer, distant manner of his? Would he—

Her ruminations were cut short by Tillie, who thought to awaken her with the proffer of a cup of hot coffee, and who was surprised to find her awake.

"Yes, I am awake, and hungry, too," she said briskly; "you did not give me nearly enough to eat last night. Is breakfast all ready? I wonder how poor Mowitza is this morning after her heavy load. Say, Tillie, did we look altogether ridiculous?"

"No, you did not," said Tillie stoutly. "It was wonderfully kind of him to bring you so carefully. I always said he had a great deal of heart in him; but he is gone, already."

"Gone!—where?" And the cup of coffee was set on the grass as if the hunger and thirst were forgotten. "Where?"

"We don't know," said Tillie helplessly. "Clara says back to his tribe; but she always has something like that to say of him. It's the queerest thing; even Hen is puzzled. He was wakened this morning about dawn by Genesee, who told him his time was up with the party; that we could follow the trail alone well enough now; and that he had to join some Indian hunters away north of this tonight, so had to make an early start. I guess he forgot to speak of it last night, or else was too tired. He left a good-bye for Hen to deliver for him to the rest of us, and a klahowya to you."

"Did he?" asked the girl with a queer little laugh. "That was thoughtful of him. May his hunting be prosperous and his findings be great."

"Dear me!" said Tillie weakly, "you are just as careless about it as Clara, and I did think you would be sorry to lose him. I am, and so is Hen; but evidently persuasions were of no avail. He said he could not even wait for breakfast; that he should have gone last night. And the queerest thing about it is that he utterly refused any money from Hen, on the plea that the whole affair had been a pleasure ride, not work at all; and so—he is gone."

"And so—he is gone," said the girl, mimicking her tone; "what a tragical manner over a very prosaic circumstance! Tillie, my child, don't be so impressible, or I shall have to tell Hen that our guide has taken your affections in lieu of greenbacks."

"Rachel!"

"Matilda!" said the other mildly, looking teasingly over the rim of the coffee cup she was slowly emptying. "Don't startle me with that tone before breakfast, and don't grieve over the exodus of Mr. Genesee Jack. I shall take on my own shoulders the duties of guide in his stead, so you need not worry about getting home safely; and in the meantime I am woefully hungry."

She was still a little dizzy as she rose to her feet, and very stiff and sore from her ride; but, joking over her rheumatic joints, she limped over to where the breakfast was spread on a flat rock.

"There is one way in which I may not be able to take Mr. Genesee Jack's place, in your estimation," she said lowly to Tillie as they were about to join the others. "I shall not be able to tell you stories of Indian conjurors or sing you Indian love songs. I can't do anything but whistle."

"Hen, she wasn't the least bit interested about him leaving like that!" said Tillie confidentially to her husband a few hours later. "She never does seem to have much feeling for anything; but after he brought her back so carefully, and after the chumminess there was between them for a while, one would naturally think—"

"Of course one would," agreed her husband laughingly, "especially if one was an affectionate, match-making little person like yourself, and altogether a woman. But Rache—" and his glance wandered ahead to where the slim figure of the girl was seen stubbornly upright on Betty— "well, Rache never was like the rest of the girls at home, and I fancy she will never understand much of the sentimental side of life. She is too level-headed and practical."

CHAPTER VIII.

The Storm—and After.

Olapitski yahka ships.

TWO weeks later storm clouds were flying low over the Kootenai hills and chasing shadows over the faces of two equestrians who looked at each other in comic dismay.

"Jim, we are lost!" stated the one briefly.

"I allow we are, Miss Hardy," answered the other, a boy of about fifteen, who gazed rather dubiously back over the way they had come and ahead where a half-blind trail led up along the mountain.

"Suppose we pitch pennies to see what direction to take," suggested the girl; but the boy only laughed.

"Haven't much time for that, Miss," he answered. "Look how them clouds is crowdin' us; we've got to hunt cover or get soaked. This trail goes somewhere; may be to an Injun village. I allow we'd better freeze to it."

"All right. We'll allow that we had," agreed Miss Hardy. "Betty, get around here, and get up this hill! I know every step is taking us farther from the ranch, but this seems the only direction in which a trail leads. Jim, how far do you suppose we are from home?"

"'Bout fifteen miles, I guess," said the boy, looking blue.

"And we haven't found the lost sheep?"

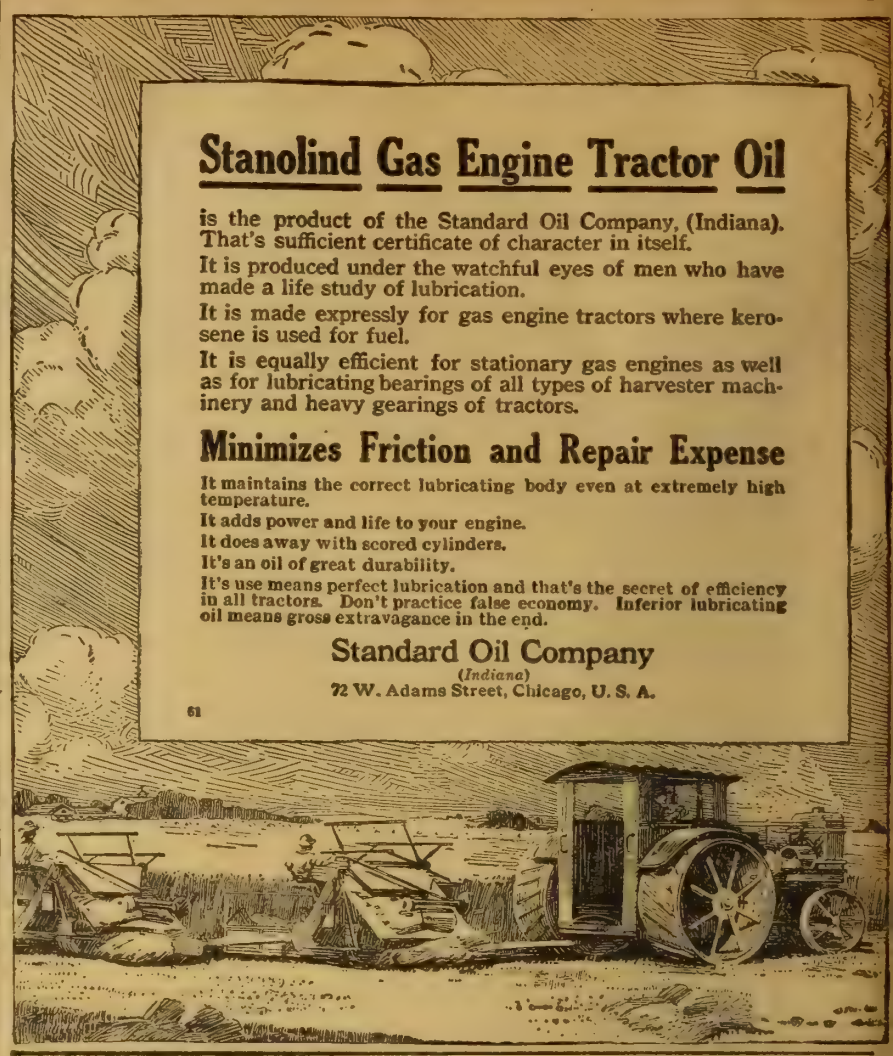
"No, we haven't."

"And we have got lost?"

"Yes."

"Jim, I don't believe we are a howling success as sheep farmers."

"I don't care about the sheep



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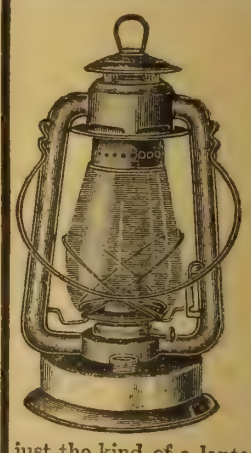

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just now," declared Jim. "What I want to know is where we are to sleep tonight."

"Oh, you want too much," she answered briskly; "I am content to sit up all night, if I only can find a dry place to stay in—do you hear that?" as the thunder that had grumbled in the distance now sounded its threats close above them.

"Yes, I hear it, and it means business, too. I wish we were at the end of this trail," he said, urging his horse up through the scrubby growth of laurel.

The darkness was falling so quickly that it was not an easy matter to keep the trail; and the wind hissing through the trees made an open space a thing to wish for. Jim, who was ahead, gave a shout as he reached the summit of the hill where the trail crossed it.

"We're right!" he yelled that she might hear his voice above the thunder and the wind; "there's some sort of a shanty across there by a big pond; it's half a mile away, an' the rain's a-comin'—come on!"

And on they went in a wild run to keep ahead of the rain cloud that was pelting its load at them with the force of hail. The girl had caught a glimpse of the white sheen of a lake or pond ahead of them; the shanty she did not wait to pick out from the gloom, but followed blindly after Jim, at a break-neck gait, until they both brought up short, in the shadow of a cabin in the edge of the timber above the lake.

"Jump off quick and in with you!" called Jim; and without the ceremony of knocking she pushed open the door and dived into the interior.

It was almost as dark as night. She stumbled around until she found a sort of bed in one corner, and sat down on it, breathless and wet. The rain was coming down in torrents, and directly Jim, with the saddles in his arms, came plunging in, shaking himself like a water spaniel.

"Great guns! But it's comin' down solid," he gasped; "where are you?"

"Here—I've found a bed, so somebody lives here. Have you any matches?"

"I allow I have," answered Jim, "if they only ain't wet—no, by George, they're all right."

The brief blaze of the match showed him the fireplace and a pile of wood beside it, and a great osier basket of broken bark. "Say, Miss Hardy, we've struck great luck," he announced while on his knees, quickly starting a fire and fanning it into a blaze with his hat; "I wonder who lives here and where they are. Stickin' to that old trail was a pay streak—hey?"

In the blaze of the fire the room assumed quite a respectable appearance. It was not a shanty, as Jim had at first supposed, but a substantial log cabin, furnished in a way to show constant and recent occupation.

A table made like a wide shelf jutted from the wall under the one square window; a bed and two chairs that bespoke home manufacture were covered by bear skins; on the floor beside the bed was a buffalo robe; and a large locked chest stood against the wall. Beside the fireplace was a cupboard with cooking and table utensils, and around the walls hung trophies of the hunt. A bow and quiver of arrows and a knotted silken sash hung on one wooden peg, and added to a pair of moccasins in the corner, gave an Indian suggestion to the occupancy of the cabin, but the furnishing in general was decidedly that of a white person; to the rafters were fastened some beaver paws and bear claws, and the skins of three rattlesnakes were pendent against the wall.

"Well, this is a queer go! ain't it?" remarked Jim as he walked around taking a survey of the room. "I'd like to know who it all belongs to. Did you ever hear folks about here speak of old Davy MacDougall?"

"Yes, I have," answered the girl, sitting down on the buffalo robe before the fire, to dry her shoulders at the blaze.

"Well, I believe this is his cabin, and we are about ten mile from home," decided the boy. "I didn't think we'd strayed as far north as Scot's Mountain, but I allow this is it."

"Well, I wish he would come home and get supper," said the girl, easily adapting herself to any groove into which she happened to fall; "but perhaps we should have sent him word of our visit. What did you do with the horses, Jim?"

"Put 'em in a shed at the end o' the house—a bang-up place, right on the other side o' this fireplace. Whoever lives here keeps either a horse or a cow."

"I hope it's a cow, and that there's some milk to be had. Jimmy, I wonder if there is anything to eat in that cupboard."

"I've been thinkin' o' that myself," said Jim in answer to that insinuating speech.

"Suppose you do something besides think—suppose you look," suggested the more unscrupulous of the foragers; "I'm hungry."

"So am I," acknowledged her confederate; "you an' me is most alike about our eatin', ain't we? Mrs. Houghton said yesterday I had a terrible appetite."

The boy at once began making an examination of the larder, wondering, as he did so, what the girl was laughing at.

The rain was coming down in torrents through the blackness of the night; now and then the lightning would vie with the fire in lighting up the room, while the thunder seemed at home in that valley of the mountain, for its volleys of sound and their echoes never ceased.

Small wonder that anyone's house would seem a home to the two, or that they would have no compunction in taking possession of it.

"There's coffee here somewhere. I can smell it," announced Jim; "an' here's rice an' crackers, an' cornmeal, an' dried raspberries, an' potatoes, an' —yes, here's the coffee! Say, Miss Hardy, we'll have a regular feast!"

"I should say so!" remarked that lady, eyeing Jim's "find" approvingly; "I think there is a bed of coals here at this side of the fireplace that will just fit about six of those potatoes—can you eat three, Jim?"

"Three will do if they're big enough," said Jim, looking dubiously at the potatoes; "but these ain't as good sized as some I've seen."

"Then give me two more; that makes five for you and three for me."

"Hadn't you better shove in a couple more?" asked Jim with a dash of liberality. "You know MacDougall may come back hungry, an' then we can spare him two—that makes ten to roast."

"Ten it is!" said the girl, burying two more in the ashes as the share of their host. "Jim, see if there is any water in here to make coffee with."

"Yes, a big jar full," reported the steward; "an' here is a little crock half full of eggs—prairie chicken, I guess—say, can you make a pone?"

"I think I can;" and the cook at once rolled up the sleeves of her riding dress, and Jimmy brought out the eggs and some bits of salt meat—evidently bear meat—that was hung from the ceiling of the cupboard; at once there began a great beating of eggs and stirring up of a corn pone; some berries were set on the coals to stew in a tincup, the water put to boil for the coffee, and an iron skillet with a lid utilized as an oven; and the fragrance of the preparing eatables filled the little room and prompted the hungry lifting of lids many times ere the fire had time to do its work.

"That pone's a 'dandy!'" said Jim, taking a peep at it; "it's getting' as brown as—as your hair; an' them berries is done, an' ain't it time to put in the coffee?"

Acting on this hint, the coffee, beaten into a froth with an egg, had the boiling water poured over it, and set bubbling and aromatic on the red coals.

"You mayn't be much use to find strayed-off stock," said Jim deliberately, with his head on one side, as he watched the apparent ease with which the girl managed her primitive cooking apparatus; "but I tell you—you ain't no slouch when it comes to gettin' grub ready, and gettin' it quick."

"Better keep your compliments until you have tried to eat some of the cooking," suggested Miss Hardy, on her knees before the fire. "I believe the pone is done."

"Then we'll dish-up in double-quick," said Jim, handing her two tin pans for the pone and potatoes. "We'll have to set the berries on in the tin —by George! what's that?"

"That" was the neigh of Betty in the shed by the chimney, and an answering one from somewhere out in the darkness. Through the thunder and the rain they had heard no steps, but Jim's eyes were big with suspense as he listened.

"My horse has broke loose from the shed," he said angrily, reaching for his hat; "and how the dickens I'm to find him in this storm I don't know."

"Don't be so quick to give yourself a shower bath," suggested the girl on the floor; "he won't stray far off, and may be glad to come back to the shed; and then again," she added, laughing, "it may be MacDougall."

Jim looked rather blankly at the supper on the hearth and the girl who seemed so much at home on the buffalo robe.

"By George! it might be," he said slowly; and for the first time the responsibility of their confiscations loomed up before him. "Say," he added uneasily, "have you any money?"

"Money?" she repeated inquiringly; and then seeing the drift of his thoughts, "Oh, no, I haven't a cent."

"They say MacDougall is an old crank," he insinuated, looking at her out of the corner of his eye, to see what effect the statement would have on her. But she only smiled in an indifferent way. "An'—an' ef he wants the money cash down for this lay-out" —and he glanced comprehensively over the hearth—"well, I don't know what to say."

"That's easily managed," said the girl coolly; "you can leave your horse in pawn."

"An' foot it home ten miles?—not if I know it!" burst out Jim; "an' besides it's Hardy's horse."

"Well, then, leave the saddle, and ride home bareback."

"I guess not!" protested Jim, with the same aggressive tone; "that's my own saddle."

After this unanswerable reason, there was an expectant silence in the room for a little while, that was finally broken by Jim saying ruefully:

"If that is MacDougall, he'll have to have them two potatoes."

Rachel's risible tendencies were not proof against this final fear of Jim's, and her laughter drowned his grumblings, and also footsteps without, of which neither heard a sound until the door was flung open and a man walked into the room.

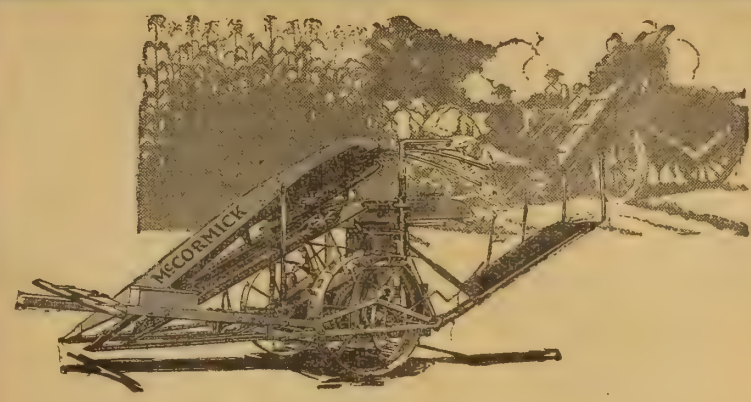
Jim looked at him with surprised eyes, and managed to stammer, "How are you?" for the man was so far from his idea of old Davy MacDougall that he was staggered.

But Miss Hardy only looked up, laughing, from her position by the fire, and drew the coffee pot from the coals with one hand, while she reached the other to the newcomer.

"Klahowya! Mr. Jack," she said easily; "got wet, didn't you? You are just in time for supper."

"You!" was all he said, and Jim thought they were both crazy, from the way the man crossed the room to her and took her one hand in both his as if he never intended letting it go or saying another word, content only to hold her hand and look at her. And Miss Rachel Hardy's eyes were not idle either.

(To be continued.)



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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Watch the Baby Closely.

At all times, and particularly through the hot summer months, a mother should learn to recognize any change from the normal in her baby, and, recognizing the change, she should find out what is the matter and the cause of the trouble. For instance, variation in temperature may tell a great deal to an observing mother. A thermometer, such as is used by physicians, should be a part of every baby's outfit and a mother should learn to rightly interpret its reading.

Slight digestive or respirative disturbances are sufficient to send a child's temperature up from 1 to 3 degrees, but this condition may be only temporary and the mother need not be greatly alarmed to find her baby cross and fretful and with a temperature of 103 degrees. She may worry, however, if three or four hours later the temperature is still high; and if the high temperature continues during the day for several days the doctor should be sent for.

To take a child's temperature shake down the mercury in the thermometer to about 90 degrees, by a short, sharp jerk of the wrist. Cover the bulb well with vaseline or cold cream. Lay the child across the knees or on a table face downward and insert the thermometer bulb gently into the rectum. Leave it there at least two minutes.

The rectal temperature is always ½ to 1 degree higher than the normal temperature for the mouth, which is ordinarily 98.6 degrees Fahrenheit. So this must be allowed for in calculating the degrees above the normal or the fever.

Even without a thermometer a mother can readily learn whether or not the baby is in proper condition, for the babies themselves have ways of telling us they are not comfortable and proper observance of many little points will lead to the truth of the baby's condition.

A normal, healthy child gains regularly in weight, has a warm, moist skin, breathes quietly, eats heartily, sleeps peacefully, has one or two regular bowel movements daily, and cries only when hungry, ill or in a fit of temper.

When a well child sleeps, he is quiet with limbs relaxed and no tossing about. The facial expression should be calm and peaceful. An occasional contraction of the features and clinching of the fists indicates that the baby is in pain.

The healthy baby breathes regularly, the breath being drawn easily and quietly through the nose and the mouth closed. Mouth breathing or habitually holding the mouth open usually indicates enlarged tonsils or some other obstruction to the breathing which needs the attention of a physician.

The skin of a well baby should be soft and smooth, the underlying muscles firm. Flabby muscles or eruptions on the skin indicate something wrong with the feeding.

Babies need a certain amount of crying to develop their lungs. When children cry for everything they want it is the result of faulty training. If baby is cross or fretful and cries a great deal of the time, there is something wrong with him. Learn what he is trying to tell you by crying.

A hunger cry is a low, whimpering cry, sometimes accompanied by sucking the fingers or the lips. It may change to a lusty scream if the meal is not forthcoming. Babies are as likely to cry from indigestion caused by overfeeding as from hunger.

A sleepy or uncomfortable baby cries fretfully. He may be too warm or tired of being laid in one position. A tepid sponge bath and gentle rub and a change of clothing, or taking him out of doors will prove very restful and comforting. If the crying continues consult your doctor. The child may be ill or ailing.

The cry of colic or abdominal pain is a lusty cry, sometimes mounting to a shriek with tears in the eyes. The knees are drawn up and the hands are clenched tightly. As said before, a tight clenching of the fist indicates pain. If the crying is severe or persistent apply warm cloths to the abdomen and lay the child on his stomach. Inject one-half ounce of warm olive oil or mild soapsuds into the rectum. This will usually cause the bowels to move and expel the gas. Look well to the diet and remove the cause for colic.

The very sick baby does not cry hard. There is a low moaning or a wail, with sometimes turning the head from side to side.

Unusual flushing or pallor of the face, sleeplessness, lack of energy, loss of appetite, profuse sweating, especially of the head, peevishness, frequent vomiting or diarrhea give warning something is wrong. A wise mother will give prompt heed to these warnings.

School Credit For Farm Tasks.

The idea that certain practical work done by boys and girls on the farm should count as credits in the agricultural courses of the rural elementary and high schools is growing rapidly

FOUR GENERATIONS.

The great grandmother is Mrs. N. A. Williams, the grandmother Mrs. Tom Brandt, the father Porter J. Barns and the granddaughter and great granddaughter little Grace Barns.

in popularity among educators. The basis for this idea is the belief that the farm may and should become the logical laboratory for testing out and putting into practice much that is taught in the schools, and that the schools by giving credit for home work can and should encourage boys and girls to make profits for themselves or to become more directly helpful to their families. Educators, however, find some difficulty in defining just what work that the boy does on the farm should receive an educational credit and how many credits should be allotted for the different kinds of work which really help the boy to master progressive methods.

To assist the superintendents of schools and teachers, the specialists in agricultural education in the states relations service have recently published United States Department of Agriculture Bulletin 385, School Credit for Home Practice in Agriculture. This bulletin, which may be had free by educators as long as the department's supply lasts, devotes a number of pages to tables and examples showing the nature of school credit projects and the amount of credit to be granted. It is recognized, however, that real co-operation on the part of the parent is essential and the author thus defines the part the parent must play in any plan for making school and farm work closer together in the interests of agricultural education.

The parent should agree: (1) To permit the pupil to use specified land, animals and equipment, either as a temporary owner or as a tenant so far as the needs of the project are concerned; (2) to grant the pupil the time needed for the work and to verify and vouch for the time record; (3) to instruct the pupil in the necessary manipulation so far as practicable; (4) to allow the pupil the profits derived from his own labor and management. The last point is not always feasible, particularly where the pupil takes up one phase of the main business of the farm, such as the weighing and testing of milk for a dairy herd.

The parent must at least give an unbiased voucher of the time and expense record and a statement that the project work was all done by the pupil. In the absence of an advisory committee or an inspector, the parent is the judge as to when the pupil has accomplished a task successfully.

Where the pupil's time is much needed by the parent in regular home duties it may be well to advise that the pupil take over some part of that home work as a project. This will insure the co-operation of the parents, although the "managerial" income may not come to the pupil.

The school should not only give credit for work for which the pupil receives pay, but should consider the relative income or profit as one important factor in determining the school rank given on the project.

To insure success, it will be very desirable to have a memorandum of agreement signed by all parties before the project begins; a report in full from the pupil, and a voucher from the parent at the end.

To Keep Pickles Solid.

To the Editor:—One of our Home page readers was complaining because her pickles got soft and wilted. If she will try this way I do not think she will have any more trouble.

If the pickles have been in brine a few days, or all winter, pour off the brine and cover the pickles with boiling water. Let this stand until it is cold, drain and add more hot water, until it is free from salt. Next cover the pickles with a weak solution of vinegar and water and let stand until cold. Then place them in clean jars, cover with equal parts of vinegar and sugar that has been heated boiling hot, use spice to suit taste and seal at once. Mrs. C. D.

Makes Threshing Time Easier.

To the Editor:—As I have found lots of help on this page I will try to be of some help to others. One lady asks for help in arranging her work when cooking for threshers, and, as I do this myself easily, I will try to tell her and others how I manage.

To begin with I do everything I possibly can the day before the threshers are to come. I bake bread, churn if necessary, bake cake and cookies that I am sure will keep nicely. If I expect to serve lemon or cream pies I also bake the crusts. If I expect the threshers for dinner and supper the same day I always serve the vegetables that are the hardest to prepare for dinner, then for supper, when one is tired, the easier vegetables may be cooked. You will find that all those little things help.

I also sort the potatoes and try to have them as near one size as possible so they will cook evenly. Jelly, jam and pickles may be brought from the cellar the day before, too.

Look over the dishes and see that they are all in the proper place and ready to use.

I believe men like plain food and I will tell you what I serve. For dinner I have hot roast beef, gravy, potatoes, two other vegetables, one kind of pie (large pieces), cookies, apple sauce, jam and pickles, with all the good bread, butter, ice tea and coffee they care for.

For supper I use some kind of cold meat, potatoes, gravy left from noon, two vegetables, cake, fruit, pickles and jelly, and bread and butter with ice tea and coffee.

I have often been complimented on my meals and I don't think it is the fancy cooking that always pleases. It is not how much, but how good.

Mrs P.

Ripe Tomato Catsup.

To the Editor:—I have received a great deal of help from the Home page and would like to send a recipe for ripe tomato catsup, which was asked for by one of the readers.

Slice one peck of ripe tomatoes and three large onions. Boil one hour. Strain through colander and add one and one-half cupfuls of cider vinegar, one cupful of sugar, three tablespoonfuls of salt and one tablespoonful each of mustard seed, whole cloves and black pepper and two sticks of cinnamon. Put the spices in a cloth and remove when the catsup is done. Boil three hours, then add one-third teaspoonful of cayenne pepper. Boil up and bottle. Mrs. C. L.

Dill Pickles.

To the Editor:—In a late issue of the paper I read of someone who wanted to know how to put up cucumbers like you buy at the store. I have a very good recipe which has never failed me and I would like to pass it on to this reader.

I wash the cucumbers thoroughly and fill a two-quart can full of them. Then I put in six tablespoonfuls of sugar and two of salt and a handful of dill. Then I cover with white wine vinegar (cold) and seal tight. If you think this is too strong you can add a little water. I am sure anyone who tries this recipe will find it a good one. Mrs. A. E. P.

Cooking of Fish.

Fish contains protein and so should not be cooked at an extremely high temperature. Because of the structure of fish it must be cooked quickly. The muscle fibers are held together with a sort of gelatinous connective tissue which softens and breaks away with prolonged cooking. Fish does not seem to be as hearty a food as meat. Its food value may be increased by the addition of butter or rich sauces when preparing for the table.

Mold on Canned Goods.

Mold may develop on canned goods—

(1) If the seal is defective.

(2) If, after sterilizing, tops are removed from jars to replace rubber ring. Jars should be returned to the canner for at least five minutes when this is done.

(3) If jars are kept in a damp place where the rubbers may decompose, mold may enter through these decomposed rubbers.

The women of the farms are economically important. They feed the men who till the farms; and until men can go to work without breakfast and to bed without supper, the women who feed them must be given credit for their share in the growing crops. The food they preserve is no small item in the national wealth.—[Saturday Evening Post.

Recipes.

Baked Corn.—One quart of sweet corn, one cupful of sweet milk, one tablespoonful of butter and one of sugar, one egg, salt and pepper to taste. Mix all together and bake until brown.

Fried Green Tomatoes.—Slice tomatoes and sprinkle with salt. Let stand a few minutes, then roll in flour, season with pepper and fry in hot butter. Brown on both sides.

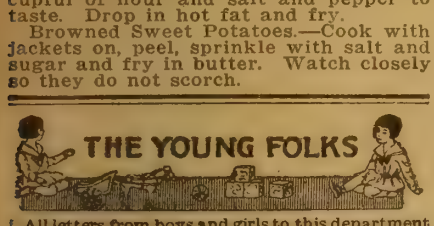
Escalloped Potatoes.—Pare the potatoes, slice thin, wash and drain. Put in a baking dish alternate layers of potatoes and cracker crumbs, seasoned with butter, salt and pepper. Put a few slices of onion on top, also a good-sized piece of butter, cover with milk and bake until tender.

Fried Cucumbers.—Large cucumbers too old to pickle are best. Slice, let stand in salt a few moments, roll in flour and fry a nice brown.

Baked Onions.—One-half dozen good-sized onions, sliced. Put in a baking dish a layer of onions, then a layer of bread crumbs, salt, pepper and butter until dish is full. The last layer should be bread crumbs. Cover with milk and bake.

Green Corn Fritters.—With a sharp knife clip off the grains of six large ears of corn, then scrape. Add one egg, one-half cupful of milk, one-half cupful of flour and salt and pepper to taste. Drop in hot fat and fry.

Browned Sweet Potatoes.—Cook with jackets on, peel, sprinkle with salt and sugar and fry in butter. Watch closely so they do not scorch.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Our Loved Riley Has Left Us.

A short while ago a little child wrote to James Whitcomb Riley, the children's poet, and said, "I tell you what, Mr. Riley, I was glad to learn that you were living, because I thought all poets were dead." And a few days ago Mr. Riley, too, laid down the pen that has written so many verses for the little folks and went to join those other poets who have gone before, and there is sorrow in the heart of many a little admirer who knew Mr. Riley through the pleasure he gave them with "The Raggedy Man," "Little Orphant Annie," "The Old Swimmin' Hole," and other verses that spoke the thoughts of childhood.

Mr. Riley's death was unexpected and there was no one at his side but his nurse. Perhaps some of you little folks did not know that for six years Mr. Riley had been paralyzed on the right side so that he could not use that hand at all. He had learned in that time to write with his left hand and some of the verses you like so well were so written.

Mr. Riley's father was a lawyer and wanted his boy to follow the same profession, but the law was not to his liking and he followed his natural desires in the fields of poetry and music, and the lives of all of us have been made the richer thereby.

Though some of his most delightful poems were for and of the children, there were no little folks in Mr. Riley's household, for he was a bachelor. The spirit of childhood must forever have lived in his heart and made him one of us.

Busy Bee Club Girl.

Dear Young Folks:—I have been reading your letters for a long time and enjoy them very much.

I am twelve years old and in the seventh grade. I live on a farm of 120 acres. We have seven goslings and about 150 little chickens. I have a cow and a calf of my own.

The girls of my school started a club that we call the Busy Bee Club. We keep busy with tatting and crocheting all the time. We meet every other Wednesday afternoon at two o'clock and keep busy until four. We have one new member.

I have a sister and a brother, both older than I. My sister and I both take music lessons on the piano. We have each taken four lessons this summer.

This is the first time I have ever written to the Young Folks and I hope you will like to read my letter.

I am going to ask you a riddle, too. Round as the moon, teeth like a cat; quess all your life and you can't guess that. —Lydia.

Won First Prize on Bread.

Dear Young Folks:—My father has taken the paper ever since I can remember, so I think it is time for me to write. Don't you?

I live on a 300-acre farm. I am twelve years old and I can crochet, tat and cook. Three years ago I took a loaf of bread to the farmers' institute and got first prize on it. The next year I took another loaf and got first prize again. Then last year I took a loaf and got second prize on it. I think I will take a loaf again this year. I went to school all last year without being absent or tardy and I was the only one in our school who was not. —Gladys.

Has a Fine Garden.

Dear Young Folks:—I am a Young Folks reader and think your letters are very interesting.

I am eleven years old and live on a farm of 160 acres. I help on the farm wherever I can. I can disk, harrow, cultivate, help in the harvest and do other little things that have to be done on the farm.

I have two brothers and one sister. We have eight cats and one dog. My brother and I made gardens this spring and they just look fine. We planted gourds, onions, beans, beets, red peppers, pop corn and other things. —Hubert.

Another Little Cook Sends Recipe.

Dear Young Folks:—I am twelve years old and in the eighth grade. I love to go to school. I live on a 200-acre farm. We have eight horses, twenty-five cows, ten hogs, 300 chickens, eighty geese and forty ducks. I enjoy farm life very much. I milk two cows every evening.

I have a few pets, a pony, a little goat, a dog and a cat. The pony's name is Bob. He is a trick pony and can do twenty-one different tricks. One is to kneel when he wants anything to eat and another is to shake his head when he doesn't want any more. I drive him to school every day. I call my goat Nanny. Whenever I come with anything to eat he will come to me and bleat. I love my pets and am very kind to them.

I am sending a recipe for the girls in the Young Folks department. It is for peanut cookies. Cream two tablespoonfuls of butter. Add one-quarter cupful of sugar and one egg, well beaten. Mix and sift one-half cupful of flour, one teaspoonful of baking powder and one-quarter teaspoonful of salt. Add to the first mixture, with two tablespoonfuls of milk, one cupful of finely chopped peanuts and one teaspoonful of vanilla. Drop from the spoon on buttered tin. Bake from ten to fifteen minutes in a slow oven. —Ruby.

International Sunday School Lesson.

Lesson for August 6, 1913.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Greatest Thing in the World.

(Temperance Lesson.)

True ministry is in the exercise of spiritual gifts (Eph. 4:7-15). Every believer is a member of the body of Christ, and, therefore, has a definite ministry. Though the gifts are diverse, all are equally honorable because they are bestowed, administered and energized by the Holy Spirit. Love alone gives value to the ministry of any gift.

I. Fill the Gift With Love (vv. 1-3). Just as the body is dead unless a living soul abides in and inspires it, so is the gift unless filled with the spirit of love. This is the "more excellent way" to which Paul makes reference at the conclusion of Chapter 12. In praising love Paul does not fall into the error of criticizing others, not even his followers, and suggests that even he may be wanting in this trait. The Corinthians were eager to attain excellence and to be prominent in wisdom and philosophy; to understand the world in which they lived; to be scholars and teachers and improve and correct society. Paul, therefore, shows how vain are such things unless filled with the motive of love. (1) The gift of tongues. The saints in the church of Corinth seem to have been particularly gifted in this direction, and to have been proud of it, (Ch. 14: 2-23) and eager to outstrip the others. Paul tells them that such boasting amounts to little. The grace of love is a far more excellent way. (2) The gift of prophecy. The New Testament prophet was a forth-teller, not a teller of the future. To be a forth-teller was a thing to be coveted and admired, but not unless accompanied by love. (3) Miracle working. A man can have this in the most wonderful form conceivable, and yet if he has not love, he is nothing.

II. Love Is Known by Its Manifestations (vv. 4-7). Having shown the absolute necessity of love Paul shows how we may recognize it. The behavior of love can be seen and known Paul set for us fifteen manifestations. (1) Love suffereth long. Love is no passing emotion, but a fixed thought. (2) It is kind. Kindness in action, love at work. (3) Love envieth not. It does not grow out of selfishness, for selfishness is the very opposite of love. (4) Love vaunteth not itself, does not climb to the housetops to proclaim its glory. (5) Is not puffed up. There is no inflation, like a soap bubble, to dazzle the eye. (6) Does not behave itself unseemly, that is without delicacy of feeling. Unseemly conduct grows from pride and selfishness, whereas love is the foundation of true courtesy. (7) Seeketh not her own. Is not looking out for self first of all. (8) Is not easily provoked; good tempered, not irritable. To lose one's temper is a dangerous evil. The evil is not so much in the temper, but in our failure to control it. (9) Thinketh no evil. Puts the best construction upon the acts of others, making all possible allowances. (10) Rejoiceth not in iniquity. (11) Rejoiceth in the truth, that is, is in sympathy with all that is true. (12) Beareth all things; endureth hardships and trials for the working out of the kingdom. (13) Believeth all things; not credulous, but putting the best construction upon the words of others, and having faith in the final outcome of every good cause. (14) Hopeth all things; is not discouraged in the dark and shadowy days. (15) Endureth all things; it goes on believing and hoping to the end; no obstacle can stop it. Surely such a catalog of the marks of love is enough to make us all pause and meditate.

III. The Permanence of Life (vv. 8-13). The word "faileth" here denotes failing in the sense of cessation, and love is contrasted with three typical but passing forms of Christian expression. (1) "Prophecies;" not the things prophesied, but the gift or act of prophesying (v. 3) which at best can only partially express God's word. Prophecy will pass away in the fuller vision and wider knowledge of God "Who is love." (2) "Tongues." The time will come when they will not be needed as a sign nor to enable us to express our varied emotions. The divinely inspired prophecies tell but a part of what is yet to be. (3) "Knowledge." It shall be done away in the fuller knowledge of the eternal world as the light of the stars vanish before the rising sun. When that which is perfect is come these lights will be seen to be only like the separate stones of a quarry which can only be fully understood when the whole building stands before us in its completion. Paul gives an illustration of this truth from the familiar case of the growing child (vv. 11, 12). In conclusion (v. 13) faith, hope, love abideth, three graces, imperishable and immortal. "Hope is a fountain; faith draws the water and drinks; love distributes the water to others," Dr. J. H. Jowett. But the greatest of these is love. (a) Love is greater in its nature. It brings us closer to God, making us partakers of his nature. It is the one thing without which faith and hope are of little avail. (b) It is powerful as an influence for good and the strongest motive for the upbuilding of character.

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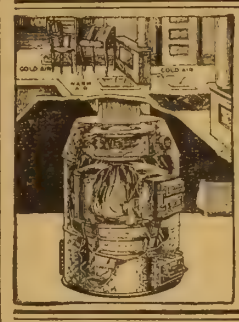

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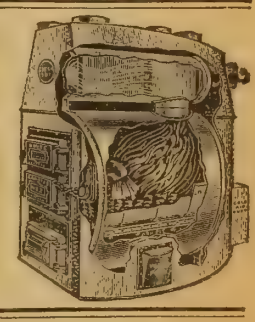

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OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery.

CATALOG OF FALL AND WINTER FASHIONS.

Send 10 cents in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1195—Boys' blouse suit with straight trousers and with or without shield and collar facing. The pattern is cut in 4 sizes; 3, 4, 5 and 6 years. It requires 3⅛ yards of 44-inch material for a 4-year size.

1491—A simple shirt waist in attractive tailored style. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3 yards of 36-inch material for a 36-inch size.

1285—A simple practical and attractive dress in over blouse style. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 1¾ yards of 27-inch material for the guimpe, and 3⅜ yards for the dress for a 6-year size.

1791—Ladies' house dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5½ yards of 44-inch material for a 36-inch size.

1690—A dainty summer frock. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8½ yards of 44-inch material for a 36-inch size.

1790—Ladies' one piece house gown. The pattern is cut in 3 sizes: Small, medium and large. It requires 7 yards of 36-inch material for a medium size.

1798—A comfortable and convenient garment. The model may also serve as an envelope chemise, and without the envelope extension it becomes a chemise in regulation style. The pattern is cut in 3 sizes: Small, medium and large. It requires 3½ yards of 36-inch material for a medium size.

1785—A smart dress in middy style. The skirt has five gores. The sleeve may be finished in wrist or elbow length. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 6 yards of 36-inch material for a 12-year size.

1794—A smart style for the growing girl. The skirt is a five-gore model, with plaits at the front panel. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 5⅛ yards of 44-inch material for a 14-year size.

1483—Costume for misses and small women, with body lining and chemisette. The pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 6½ yards of 44-inch material for an 18-year size.

1201—Child's set of dress, petticoat and drawers. The pattern for this excellent trio of garments is cut in 4 sizes: 1, 2, 3 and 4 years. It requires 2¾ yards of 27-inch material for the dress, 2⅜ yards for the petticoat and ¾ yard for the drawers for a 3-year size.

Waist 1810—Skirt 1811—Up-to-date and becoming costume. The waist pattern 1810 is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt pattern 1811 is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It will require 7 yards of 44-inch material for the entire dress for a medium size. Two separate patterns, 10 cents for each pattern.

Use the schoolhouse yard for the Saturday night social and get dividends on the community investment for the entire year.

Experiments have shown that the greatest gains in fattening are made by young stock when two to four months old.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Egg Substitutes Must Be Carefully Labeled.

"Powdered egg" is admissible, but "egg powder" must have a care to not masquerade as the real thing. So says our Uncle Sammy and it is another score in favor of the poultry industry.

All egg powders must contain powdered eggs or they are placed under the ban of misrepresenting their composition. And, again, no product shall be labeled "egg substitute" unless it possesses the properties of eggs. This of itself, if enforced, will serve the purpose of preventing spurious articles being sold for eggs in any form.

Several years ago there was quite an excitement about egg substitutes. When analyzed the compound was found to be composed mostly of corn starch, such as we can buy at 10 to 15 cents per pound. Like most things of the kind, the "manufacturers" soon went out of business.

Today manufacturers of any kind of egg substitutes must be their own judges in the matter of whether their label will conform to the food and drug act. No one has the authority to analyze and vouch for each manufacturer and he must take his chances on putting anything of a questionable nature on the public.

Learning to Crate, Feed and Dress Fowls.

It lightens the load wonderfully, the assurance that our boys and girls are learning to do real work at college right along with the cultural side of it. As compared with the old hazard method of "getting an education," for what we knew not, it is safe and sane.

The students at the Missouri College of Agriculture have actual practice by caring for twenty chickens each. One squad of the class does this every Saturday morning until all have learned.

The chickens are crate fattened before they are killed. The crates are built by the students. Each member of the class builds his own crate, starves his twenty chickens a day, and then places them into the crate and feeds them this ration: Seven parts corn meal, three parts middlings, and one part bran with buttermilk to mix it about as thin as pancake batter.

From ten days to two weeks is the right length of time to feed. A longer period would get them off their feed—and possibly feet—while a short time only tends to shrink them. During this time they make a gain of 15 to 25 per cent, and are much improved in flavor.

The Mite Foe of the Hen.

The poultry mite is no common enemy. It attacks young and old, weak and strong. It pursues with unrelenting vigor, spares none, shows no mercy. It surpasses the vampire in its thirst for blood. It attacks at night. When daylight comes, it retreats to its trenches, satiated with the blood of its prey, to await the return of another night to repeat its attack on the defenseless hen.

Mites will come. They soon appear, even in new poultry houses unless one uses the "ounce of prevention." They may multiply at the rate of a million a month. Then to rout them requires courage, determination and action.

Be prepared by making all furnishings of poultry houses movable, so that they may be taken out for a semiannual disinfection and cleansing. Then when the mite army arrives, take weapons and ammunition and get into action.

An old broom, a hoe, a shovel and an efficient sprayer will do the work; the broom for sweeping and whitewashing without limit, the hoe and shovel for cleaning dropping boards and floor and the sprayer for semimonthly use "in the good old summer time. Your ammunition should be:

Kerosene.

Kerosene and soapsuds (kerosene emulsion).

Kerosene and Creso (coal tar), 3 to 1.

Kerosene and crude carbolic acid, 16 to 1.

Air-slaked lime.

Wood or coal ashes.

Put the flock out early in the morning, or "any old time," and "get busy."

Hoe and shovel, sweep and spray—high and low, roosts, dropping boards, doors, partitions, nests and everything unmentioned. Repeat semimonthly through the hot weather.

The result will be peace in the hen house and profit and prosperity in your house.—[N. E. Chapman, University Farm, St. Paul.

CLEANS WITHOUT SCOURING

Makes soap without boiling. Turns well water into rain water. Makes cheapest, most efficient washing fluid — to be used without powders, chips, etc. Supreme as disinfector and vermin exterminator. Ask for booklet of other uses.

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IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

FOR fine farm lands at low prices and easy terms in Wisconsin's greatest dairy district, send for our free list, map and photographs of choice dairy, stock and grain farm bargains. Write Graham's Land Office, Marshfield, Wisconsin.

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WANTED to hear from owner of good farm for sale. State cash price and description. Address D. F. Bush, Minneapolis, Minnesota.

FARMS for sale. Wonderful bargains in five states with crops and stock. Send for catalog. D. B. Cornell Co., Gt. Barrington, Mass.

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Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

VETERINARY

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Lameness.

We have a horse which became lame the other day when we drove to town. We took him to the blacksmith's but he could not find anything wrong. That was two days ago; now he is swollen on both hind legs from the knee down. Can you tell what the disease is and give us a remedy?

Since there are so many conditions, any one of which might cause this lameness and swelling of the limbs, it would be hard for us to say just what the trouble is without an examination. You should have a veterinarian examine this animal and he will prescribe according to his findings.

Injured Knee.

In the spring I had an eight-year-old mare that got her knee cut in the disk. It got along fairly well and I was told to work her, so I put h r in the field. One day she got her leg in the bridge and broke the sore open. Then her knee swelled and has swollen ever since. It seems to pain her, as she does not stand on it much. Now the sore has healed up until it is about as large as a dollar and it seems hard. The hair does not grow on it. Please tell me what to do for this mare.

You should have your horse examined by a veterinarian and have him determine just what is causing the swelling and lameness. It may be the joint is affected, causing stiffness.

Thumps in Pigs.

We have a nice bunch of spring pigs that have some kind of ailment similar to thumps in small pigs. They are three months old. We have lost two and there are two or three more that are thumping around. We have been feeding ground oats, shorts and tankage and a small portion of soaked corn. What, in your opinion, is wrong with these pigs?

Thumps may be brought on through being troubled with indigestion. In fact, we think the majority of cases in young pigs is brought on from indigestion. However, there are other causes. Heat may be a factor. We would advise a little lighter feeding as well as a slight change of feed.

Overheat in Horse.

I have a four-year-old gelding that is short winded. He has been this way for the past four days. He weighs 1,400 pounds. He has been worked all spring and nothing like this has happened before. I had him on a road grader a few days but it was not hot then. In the corn field the last two days he has puffed but did not sweat much. He gets oats and corn to eat and he eats well but pants some in the barn.

Your horse has probably been slightly overheated. Give him rest and give a teaspoonful of tincture of arnica in a half pint of water three times daily for two or three days. Be sure to tell your druggist that you want to use the arnica internally.

Lumpy or Stringy Milk.

I have a cow which at times gives lumpy milk from one teat and, when affected in this way, the udder is swollen and feverish. It will continue in this condition for two or three milkings and then I will see no more sign of it for two or three weeks, then it comes lumpy again. Sometimes the milk comes in lumps and strings. Please tell me the cause and give me a remedy.

This may be caused by fungi developing in the liquid. Sometimes the contamination is due to water supply, but may be from other causes. Look well to the feed and water supply and give the cow two drams of bisulphite of soda daily.

A Vicious Habit.

I have a horse which is about four years old, gentle, and her only fault is that she is deadly afraid of automobiles. We have had several bad runaways so far and have tried everything we can think of to cure her. Can you suggest any plan by which we can break her of the habit? She is a very nervous and high spirited animal and will be very valuable if she is rid of this habit.

Your animal is troubled with rather a vicious habit, that of running when scared. Some animals never become accustomed to the sight of automobiles. A man needs to be an expert at training horses to overcome this trouble, as mechanical devices are only a nuisance. It would be hard to advise any means of handling that would prove beneficial.

Sequella of Distemper.

I wish you would please tell me what ails my colt. When it was nine days old it had distemper—that is, I suppose it had for the other colts had it and it acted just the same. It is now three months old and it still has a cough and a discharge running from the nose. Everything it eats comes back through its nose. It seems to feel real well and wants to eat salt all the time, which we let it do. It eats a little oats and runs with the mare in the pasture. It has grown very little since it was first sick.

Your colt is probably the victim of chronic pharyngitis following distemper. There may also be other complications present. Apply a light blister in the region of the pharynx and then get from your druggist some tablets of calcidine (human-sized tablets) and give ten grains dissolved in water three times daily. Give this for from five to seven days.

Spring Calf Unthrifty.

I have a spring calf that does not seem to do well. When it was running with its mother it did fine. I let it run with her for over a week, then took it away from her and it gradually grew poor until it is nothing but skin and bone. It would hardly drink milk at first, but does a little better now. When it eats grass there is a green juice all around its mouth and on the ground.

The calf probably has catarrh of the stomach and bowels, this having been brought about from indigestion. It probably is of chronic nature now and will be hard, if not impossible, to overcome. If the calf is constipated give one-half pound of Epsom salts or four ounces of castor oil to loosen bowels. See that the feed is of the very best and entirely of green food. See that the milk is warm and sweet and, above all, clean and do not overfeed. These rules, if followed out, will probably do as much good as medication.

The high meat prices that prevail throughout the world will continue indefinitely, according to the department of agriculture in Washington. The increased cost of production, the diminished purchasing power of the money unit and the failure of production to keep pace with the increase in population are assigned as the reasons. Disease and exposure cause enormous losses in live stock, the report says. Almost three and one-fourth million head of cattle have died of disease and exposure in the past sixteen years. In 1914 seven million hogs died of cholera. The United States is both the greatest meat-eating and meat-producing nation. In 1914 and 1915 it imported more beef than it exported.

A census of French farm animals up to July 1st, made by the agricultural department, shows that cattle generally have increased as compared with a year ago, while the number of sheep and hogs have diminished appreciably. A comparison of stock in 1916 and 1915 follows: Cattle, 12,724,000, against 12,287,000; sheep, 12,079,200, against 13,483,000; hogs, 4,448,000, against 5,491,000; horses, 2,317,000, against 2,227,000; mules, 479,500, against 484,500.

See that the entrance to the farm is neat and clean. Appearances may be improved by a group of shrubs at either side.

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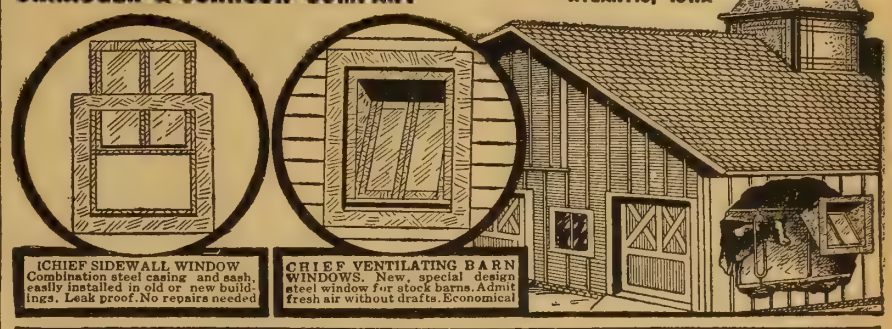

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Hundreds of thousands of farmers and stockmen figure that it really don't cost them a cent to feed SAL-VET. They have found from actual experience that this great worm destroyer and live stock conditioner adds much more to their profits than it takes from their pocket books. For example: it costs only 1/12 of a cent a day for enough SAL-VET to rid any sheep or hog of worms and only 1/4 of a cent a day for each horse or head of cattle. How else can you invest so little and receive so much in faster gains, fewer losses, feed saved and bigger stock profits? Read this—

"I enclose check for the SAL-VET you recently sent to me. Four times this sum would not begin to pay for the benefit I derived from feeding SAL-VET." — W. H. Wallace, Franktown, Va.

Remember, I don't ask you to risk a penny in advance. Just tell me how many head of stock you have; I'll see that you are supplied with enough SAL-VET to last them 60 days. You pay the freight when it arrives; feed it as directed, and if it fails to do what I claim and you make a specific report in 60 days, I'll cancel the charge. You won't owe me anything.

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Each 40 lb. package	$2.25
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Extra discount in larger quantities.
No order filled for less than 40 lbs.
Thousands of dealers sell SAL-VET at above prices.

In the far West and South the prices are a little higher on account of the extra freight charges. On this 60-day trial offer supply for a 60 days' trial is based on 1 lb. of SAL-VET for each sheep or hog and 4 lbs. for each horse or head of cattle. Beware of imitations known as *Sal-This*, *Sal-That* and *Sal-Something-Else*. This genuine, reliable, guaranteed preparation is SAL-VET.

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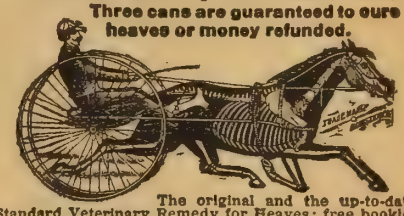
NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



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CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

THE NEWTON REMEDY CO., Toledo, Ohio

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

A Fine Holstein Herd.

THE Fox River Valley of Wisconsin is the home of many fine herds of Holstein and Guernsey cattle. Although not so widely known perhaps as some of the more settled sections of the state as a dairy center one needs but to drive through this section to realize that it is rapidly becoming a formidable rival for first place as a dairy cattle breeding center. One of the largest and most choicely bred Holstein herds in this section is that of B. F. Winckler & Sons, Medina, Wis. The herd consists of some seventy head of registered Holsteins of high quality. Official testing has been carried on for several years and many creditable records have been made. One of their foundation cows, Calumet Johanna Abbekerk, made 28.71 pounds of butter in seven days. Calumet Queen Johanna, at twenty-four months of age made 22.24 pounds of butter. These men have been very careful in their selection of breeding stock and have spared no expense in securing richly bred sires and females. They are now offering for sale two young bulls sired by Sir Johanna De Colantha De Kol, a 27.56-pound son of the great bull, Sir Fayne Concordia. The dam of Sir Johannah De Colantha De Kol has a record of 27.56 pounds of butter in seven days. She also has five A. R. O. daughters all of which have records ranging from twenty-one to 30.50 pounds butter in seven days. His sire, Sir Fayne Concordia, has twenty-one A. R. O. daughters, thirteen with records from twenty to 30.50 pounds. He is also a full brother to the former world's record cow, Grace Fayne's 2d's Homestead, that made 35.55 pounds butter. Sir Johanna De Colantha De Kol is himself a full brother to the 30.50-pound cow Johanna De Colantha 5th. Not only are the bulls offered for sale, well bred on their sire's side, but are equally well bred on their dam's side. They are both from A. R. O. daughters of Oakhurst Milk and Butter King, which has ten A. R. O. daughters, one a 22.24-pound two year old. He is a son of the $10,000 bull, The Milk and Butter King, whose daughters have recently been making some very high records. For further information in regard to these animals write to the above address. See page 23.—Adv.

Live Stock Breeders Should Show at Janesville.

JANESVILLE, Rock county, Wis., has one of the most up-to-date fair grounds the writer has ever seen, with exception, of course, to some of the state fairs and we can name several state fairs that would feel proud if they had the facilities for housing live stock that they have at Janesville. The buildings are new and modern in every respect. The cattle barn is 280 feet long with a sixteen-foot alleyway and has room to stall 288 head of cattle. The barn is light and cool and an excellent place to show cattle. Those that show hogs are in love with the pens they have at this fair—they are large, very cool, excellent wash stands, very light and roomy and a real place for show and sale hogs. There is room for 250 hogs. We hear many kind remarks about the fair officials, from the breeders that have shown there, so evidently the treatment accorded the showmen is faultless. This is one of the best fairs held in the state—the premiums paid are liberal and in making up your fair circuit don't overlook this fair. The date is August 8th to 11th and one of the best places to make a start. Prof. J. L. Tormey judges beef cattle, Van Pelt, of Iowa, is to pass on the dairy cattle, Mr. Hutton, of Madison, will tie the ribbons on the horses and "Uncle" Ed Baxter, of Illinois, will sort the hogs. These men are very competent judges and we can assure you that they will give satisfaction. If you can't come with stock attend the fair any way, for, as we say this is one of the "live" fairs of the state.—Adv.

Refined Cholera Serum Eliminates Risks.

BREEDERS of high-priced, prize-winning hogs use Mulford refined hog cholera serum because they do not wish to take chances with the dread cholera disease, nor do they want to run the risk of losing their hogs from other diseases, abscesses or cysts which an unrefined serum is apt to cause. The refined serum is just as potent in protecting from cholera as the unrefined, but it contains no germs or solid particles which may cause trouble in the hog's blood. Veterinarians recommend Mulford refined serum without hesitation. It costs no more than the better makes of unrefined serum—2 cents per cubic centimeter—even though it has been through the process of refining. The free booklet, No. 9, issued by H. K. Mulford Co., Philadelphia, Pa., takes up the subject of hog cholera serum in a way that will interest all hog raisers. Write for a copy today. See page 2.—Adv.

Galloways For Sale.

FIFTY head of good registered Galloway cows and heifers are advertised for sale by C. S. Hechtner, Charlton, Ia., on page 24. He also offers fourteen young bulls for sale. If you want anything in the Galloway line Mr. Hechtner has it. In fact, his is one of the most noted Galloway herds in the United States. Write him at once about these cows and heifers or young bulls and kindly mention this paper.—Adv.

We Like to Hear From Our Advertisers.

TOO many of the live stock advertisers expect a great deal from a live stock paper without giving any assistance. The agricultural papers want to make good for their advertisers and they are willing to do anything within reason for them, but the paper and field men cannot do it all, there must be co-operation. You must realize that a field man has a large territory to cover and that there are thousands of breeders that he is expected to call on, consequently it is impossible for him to visit each breeder individually as often as he would like. Now unless we are kept posted from time to time it is impossible for us to give you the service that we want to. Perhaps some special bull is being advertised and, after a few issues, he is sold, but if we are not notified that same "ad" will appear and be misleading to any prospective buyer. We like to keep the ads "alive", for "stale" ads gets tiresome, but unless we get information we might change the ads at the wrong time and make a misleading statement. Many of our advertisers co-operate with the field men and they are getting good results, while we never hear a word from others. We realize that you men are busy and some of you feel that you haven't the time to sit down and write a letter, but if you are in the pure-bred game, the publicity end of it deserves as much attention as any part of it. Write the office or the field men a letter as often as you can, keep them posted and we will all be pleased with the results.—Adv.

Greatly Pleased With Results From Wisconsin Farmer Advertisement.

THAT's the good word that comes from J. W. Hutchinson of the Bonnie Meade Stock Co., of Randolph, Wisconsin, who have been advertising Holstein cattle in The Wisconsin Farmer. He writes:

"We are greatly pleased with the results we have been getting from our advertisement in The Wisconsin Farmer and for the assistance you have given us.
"We have been having a great many inquiries and are now just getting bulls of serviceable age to supply the demand."

Wisconsin Farmer advertisements are result getters. Many breeders write enthusiastically of sales made through Wisconsin Farmer advertisements. This letter is just one example. The Wisconsin Farmer carried 500 more insertions of Wisconsin advertisements during the first six months of 1916 than any other farm paper in the state. The farmers know its value.

The Wisconsin Farmer, Madison, Wis.

GUARANTEED WEEKLY CIRCULATION 90,000

Laird's Famous Hampshires.

IN a recent letter from Mr. A. M. Laird, Prairie du Chien, Wisconsin, he says that he continues to have a big demand for his Hampshires. He was sold out last year and though he has raised over 100 spring pigs he advises that he will not have enough to supply the trade. This is certainly evidence that the Hampshire is gaining in the northwest as it has in the other states. Mr. Laird writes that he has sold three herds to Dane county men this year, the last one consisting of six gilts and a boar, went to Jos. C. Dunn, Riley, Wisconsin. He also advises that he has had many inquiries from northern and eastern Iowa and Minnesota, and that he has started many new breeders in those states. Mr. Laird has a good herd and if you place your order with him he will fill it to your satisfaction. His advertisement appears on page 24 Write him for particulars and please mention this journal.—Adv.

W. C. Jenkins, Bangor, Wisconsin.

THE above breeder of Duroc Jerseys attended several of the best sales in the country a couple of years ago and bought some of the best sows that were offered in the various sales. Some of them made good and others didn't, but that is the experience of all hog men. There is some good stuff on the place now and, as far as breeding goes, they are "bred in the purple." The herd boar is Rego Col., a son of the great champion and sire of champions, High Model. There are some fine pigs on the farm by this boar and an especially good litter of nine out of a Tattletale sow. On October 17th, Mr. Jenkins will hold his fall sale at which time he will sell boars and some sows. We feel sure that he will put up a good offering and they will be in nice condition. Keep this date in mind.—Adv.

McClurg Bros. Make Good Buy.

SOME time ago we mentioned the fact that the McClurg Brothers, of Viroqua, Wisconsin, expected to buy some of the best sows they could find to cross on their two-year-old boar, Prince Defender. They have just purchased a daughter of the Iowa champion, Big Wonder, the boar that cost John Swenson and E. J. Wilson $1,000. This gilt is an outstanding individual in every respect and we are certainly glad to know that these young breeders are headed in the right direction. Prince Defender is good enough to head any herd and, when they get a few of such sows as they have just purchased, this Duroc herd will be heard from. It would be a good idea to get a boar sired by Prince Defender, a few are being offered for sale. Write them and please mention The Wisconsin Farmer. See page 24.—Adv

A Generous Offer to Stock Raisers.

THOUSANDS of farmers find that the profits from feeding Sal Vet, the popular stock remedy, are many times greater than the cost. This worm killer and live stock conditioner costs only one-twelfth of a cent a day for enough to rid any sheep or hog of worms and only one-fourth of a cent a day to keep a horse or cow in good condition. It saves feed, makes the stock gain faster and causes larger profits. Any farmer can try Sal Vet without any expense except freight on shipment; all that is necessary is to send for it, stating the number of stock to be fed. If Sal Vet does not do what the company claims for it, no charge will be made. Those interested should write Sidney R. Feil, president, the Feil Manufacturing Co., Cleveland, Ohio. See page 21.—Adv.

Williams Brothers' Short-horns.

WHEN you get acquainted with the Williams Brothers, of Bangor, Wisconsin, they make you feel that they are on the square and if you buy anything of them you can rest assured that it is right. They have a good herd of Short-horn cattle bred along the milk lines, at the same time the good beef qualities. They have used good bulls for years and their herd has made a wonderful advancement in the past few years. They will sell a few heifers and some young bulls and it will pay you to investigate. See page 24.—Adv.

Poland China Pigs and Boars for Sale.

ANYONE wanting a good Poland China boar or some young stock should write or call on F. E. Purdy, Orfordville, Wisconsin. Mr. Purdy has several good boars, one of which is a yearling, and a lot of spring pigs of both sexes. This stock was sired by Oakland Giant, by Oakland Equal; Warrior, by Big Bone; and several other noted boars of Nebraska breeding. Those interested should write immediately concerning this stock, mentioning The Wisconsin Farmer in their letters. See page 24.—Adv.

The B. W. Little Herd.

MR. B. W. LITTLE, Janesville, Wisconsin, had some of the best spring pigs we had seen when we were there, the latter part of May. We have been advised that they have done well and are now in fine condition to ship. Mr. Little has a good sow herd and two good boars head the herd. His prices on boars or gilts is reasonable and your letters will be promptly answered. It is needless to say that he is a breeder of Bates Short-horns, this fact is well known throughout the state. Keep it in mind however and when in need of anything in his line, write him and mention The Wisconsin Farmer.—Adv.

A Coming Holstein Herd.

THE way that Stewart Reid has developed the herd of Holsteins of J. J. Reid & Son, Oconomowoc, Wis., during the past year, is proof of the assertion that the writer has made many times that it is some herd. Mr. J. J. Reid has been building up a herd for the past fifteen years, buying the best of breeding stock and developing the offspring into large, typey individuals. When his son, Stewart, finished the four years' course at the college of agriculture a year ago, he took active management of the herd, and has made a marked success. Official testing was started last winter and eighteen animals put into the advance registry, every animal entered qualified by a large margin. Among the records made were Ashburn Segis Dean Lass, 27.10; Ashburn Segis Pauline, 26.50, as a junior three year old; Ashburn Segis Linda, 23.70, as a two year old; Ashburn Segis Ruby Lass, 20.2; Ashburn Segis Hengerveld Grace, 19.3, as a two year old. These are all daughters of Butter Boy Segis, a son of the great bull, King Segis, that has eighty-four A. R. O. daughters, six with records above thirty pounds butter in seven days. The above records are proof of the high production ability of this herd, but as Mr. Reid says, he is confident that these same cows and a goodly portion of the others are capable of doing better than this, when they have the herd properly organized, and have made a longer study of the individual likes and characteristics of the animals in the herd. He has one or two very creditable candidates for thirty-pound records which the writer is confident will make this record provided they freshen right. Owing to the fact that there are forty cows bred to freshen this fall and winter they are offering ten head of attractive females for sale. Several of them have A. R. O. records or are from A. R. O. dams. The others are of equally good breeding and production ability, but as yet have not been given an opportunity. These are being priced reasonably, and will rapidly grow into more money. Two are daughters of Butter Boy Segis, three were sired by a twenty-eight-pound grandson of Hengerveld De Kol, two are eighteen months old heifers and four yearling heifers sired by Tritomia Ormsby. For further information write to the above address. See page 23.—Adv.

Shipped Red Polls to Seven States and Canada.

IF you think there isn't any demand for the Red Poll cattle, read the following report of recent sales made by Mr. H. A. Martin, Gotham, Wisconsin. Also notice that these sales were not made locally, but cover a wide range of territory, which also speaks well for Wisconsin-bred cattle. These sales date from April 1, 1916. One bull, Duke 28644, to E. G. Norton, Seville, Ohio. One car load, fifteen females and one bull, to H. W. Avery, Kings Ferry, New York. This was an excellent lot of breeding cows and heifers. One bull, Leslie 29491, to John G. Dudley, Brown City, Michigan. One bull calf to Fred Anderson, Kilbourn, Wisconsin. Two heifers to R. K. McBride, Covington, Tenn. Four bulls, two heifer calves and eleven cows and heifers to H. V. Clendenning, Harding, Manitoba, Canada. This is an old customer and he expects these cattle to be heard from later. One bull, Dandy 28850, to D. H. Ragles, Andover, South Dakota. One bull, Samson 28646, to Frank A. Stetzer, Mindoro, Wisconsin. For September delivery, one bull calf to G. H. Wadleigh, Tilton, N. H. This list of sales shows the popularity of the Martin Red Polls. His advertisemtnt appears regularly in this publication, and if you will write him he will gladly furnish you with any information you may want.—Adv.

The Meinking Polands.

WE recently saw the Poland China herd owned by R. Meinking, Bangor, Wisconsin, and we will say that he has his spring pigs "looking like the money." He has a large number and he has already made many sales of pigs of both sexes. We believe you will be satisfied if you buy a Meinking Poland. If not, send him back for Mr. Meinking don't want you to keep a pig that isn't satisfactory. He is one of the oldest breeders of the state, so evidently he has been treating his customers right in the past. Will you please mention The Wisconsin Farmer when writing for particulars. See page 24.—Adv.

An Efficient, Air-Tight Silo.

THE Triple Wall silo is advertised on page 14 of this issue by the Independent Silo Co., St. Paul, Minn. The important features of this silo are three walls, regular silo staves, felt lining, patented ship lock, red cypress siding and air-tight construction. There is no danger from windstorms with this silo and the company makes a liberal guarantee to insure the owner in this respect. The Triple Wall silo has no

hoops to tighten, but it holds strong and secure throughout. Free catalog and price list will be sent to anyone on request to the company. Write today. —Adv.

Overland Company Makes 1,000 Cars a Day.

THE announcement of the new Overland car, a four at $795 and a six at $925, which is found on pages 12 and 13 reveals the achievements of large scale production. Here are two cars of remarkably high quality and workmanship sold at prices which a small factory could not begin to maintain. The secret lies in turning out cars at the rate of 1,000 a day, in making a very small profit per car, but depending on a great volume of output to bring normal returns. The new four cylinder is claimed to be the largest car of its kind ever offered for so low a price. It has a wheel base of 112 inches and the famous Overland en-bloc 35-horsepower motor. Shock absorbing cantilever rear springs are part of the equipment. The gasoline tank is placed in the rear and the vacuum system insures a steady, even flow of gasoline at all times. A complete Auto-Lite electric starting and lighting system is furnished with each car, having connections so that all switches are on the steering column within easy reach. Without doubt this is a wonderful car for the money. The new six is no less a bargain for the price. It has a longer wheel base, 116 inches, a similar Auto-Lite system, cantilever springs like the four, and a snappy long-stroke forty-horsepower, six-cylinder motor that is a marvel in flexibility, speed and power. This car also has the gasoline tank in the rear and feeds by the vacuum system. No other six is in its class. Your nearest Overland dealer will be glad to show you these cars. Call on him at the next opportunity and write for catalog to The Willys-Overland Co., Dayton, Ohio.—Adv.

Guernsey Bull and Calves For Sale.

W. J. HEID, Fort Atkinson, Wis., is advertising for sale on this page a fine Guernsey bull of Langwater Starlight breeding and several bull calves from two to six months old. This stock is from A. R. dams and would make a valuable addition to any Guernsey breeder's herd. Those interested should write to Mr. Heid for descriptions and prices, mentioning ihs advertisement in The Wisconsin Farmer.—Adv.

SALE DATES.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

CUT YOUR CORN STUBS
when you cut your corn.
SUCCESS CORN STUB CUTTER
leaves your ground free from stubs and easy to work. It is easily attached to Acme, McCormick-Milwaukee, Adrian, Deere and Osborn corn harvesters.
COSTS $15 WORTH $500
in comfort and in condition of fields.
CORN HARVESTER ATTACHMENT CO., 524 South Dickenson St., MADISON, WIS.
Send for free booklet, "Comfort in the Cornfield."

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER
EARN $15 TO $100 PER DAY
Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

Have YOU Engaged
AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

VICTORIA SWINE.

Registered Victoria Swine
EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

SALE DATES.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sales Mgr.

How does $240 look for proceeds from a flock of 175 chickens from January 1st to June 8th? That's what Russell Kline, of the Orange Township Co-operative Egg Marketing Association in Blackhawk county, Iowa, received from his flock. Market eggs at 4 cents above the market price brought him $190 of this and hatching eggs sold brought $50. This was in addition to what his family ate and what he used in his own incubators. Since this Blackhawk association was organized about a year ago it has marketed 45,000 dozen eggs on the Waterloo market at 4 cents above the prevailing price. Its membership has increased from twelve to twenty-two. The high price for eggs is obtained because of the care with which the eggs are produced and because of the guarantee that goes with them. Every egg is stamped with an identification number and date, so that there can be no doubt as to where it came from in case of a poor egg.

OAKHURST MILK AND BUTTER KING 55045, a son of the $10,000 bull, Milk and Butter King. His daughters' bull calves are advertised for sale on this page by B. F. Winckler & Sons, Medina, Wis.

HOLSTEIN-FRIESIAN CATTLE.

Holstein Cows and Heifers For Sale
IN order to make room for our young stock we are offering 10 attractive Holstein cows and heifers. Two granddaughters of King Segis sired by Butter Boy Segis. We have tested a few of his daughters making 27.10—26.5 on a junior three year old—23.7 on a two-year-old daughter—and others almost equally creditable. The two for sale are 5 and 6 years old. Two 18 months old heifers sired by Tritomia Ormsby 85890. Four yearling heifers by the same sire. Two 3 year olds sired by a 28-lb. grandson of Hengerveld De Kol. We are pricing these at prices you can afford to pay. They have been bred and developed for production and show it in their conformation and udder development. Those of breeding age are bred to the 29-lb bull, Contest Colantha Bell Boy, a grandson of Colantha Johanna Lad. Come and see them or write
J. J. REID & SON, OCONOMOWOC, WIS.

A 22.29 POUND SON OF THE 29 POUND BULL
MAPLECREST HENGERVELD DE KOL 94154
THAT combines in the closest possible degree the blood of Friend Hengerveld De Kol Butter Boy and Pontiac Aaggie Korndyke, that combined have eight daughters with records from 1,000 to 1,322 pounds of butter in a year. Price $125. Also for sale a bull born October 30, 1915, whose dam a daughter of Gem Pietertje Paul De Kol, made 15.35 pounds butter in seven days as a three year old.
GROVE BROTHERS COLUMBUS, WISCONSIN

DUCHESS ORMSBY and ALCARTRA COWS
HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsb , that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. BONNIE MEAD STOCK FARMS, Randolph, Wis.

Purebred Registered
HOLSTEIN CATTLE
One reason of the fast growing popularity of the registered purebred Holstein-Friesian cattle is the almost universal recognition by medical authorities of the superior value of purebred Holstein cows' milk for direct consumption. This endorsement together with the proven ability of Holstein cows to produce much larger quantities of milk at less cost is sufficient for the dairyman who applies thought and business methods to his operations. Investigate the big "Black-and-Whites."
Send for FREE Illustrated Descriptive Booklet.
The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

21.25-POUND HOLSTEIN BULL
FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees.
Wm. Braatz & Sons Brandon, Wis.

FOR SALE
TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Jonanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address
A. G. PINGEL CHILTON, WISCONSIN

TWO SONS OF THE 27.56-POUND BULL
Sir Johanna De Colantha De Kol
THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
C. F. Winckler & Sons Medina, Wis.

"EDGEWATER"
HOLSTEINS and GUERNSEYS now being offered for immediate sale
450 COWS, HEIFERS AND SERVICE BULLS 450
15-16 pure Holstein calves crated for shipment $18 each. We are offering first-class stock only; some of Southern Wisconsin's best. Write for particulars. Address
Edgewater Stock Farm, Fort Atkinson, Wis.

10 REG. HOLSTEIN HEIFERS
1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

YEARLING HOLSTEIN BULLS
READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

Heavy Producing Blood
A 23.35-LB. yearling Holstein bull for sale. His dam made 23.35 pounds of butter as a 5 year old. She has 3 A. R. O. daughters, 2 with records of 28.63-24.50. His dam's dam at 1 year 11 months made 11.98 and was sold to parties in Japan. His great grandam has 8 A. R. O. daughters, holding the world's record for over 5 years. His sire, a 27.02-lb. bull, was 1st prize 2 year old at 1915 Wisconsin State Fair.
Arthur Rust West Allis, Wisconsin

Holstein Bull
KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

REG. HOLSTEIN BULLS
SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

Yearling HOLSTEIN BULL
SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

HILLSIDE STOCK FARM
OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

HOLSTEIN
BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

Registered Holstein Heifers
AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address
JOHN HASSE MONROE, WISCONSIN

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

GUERNSEY CATTLE.

GUERNSEY BULL
LANGWATER STARLIGHT Breeding. A. R. O. dam. Also bull calves from 2 to 6 months old from A. R. O. cows for sale. Address
W. J. HEID FORT ATKINSON, WIS.

Guernsey Bull For Sale
THE richest Guernsey breeding. Four months of age. Sired by the richly-bred bull,
GOODWILL'S HERO
a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant view. Also a deep, rich breeding of the Governor of the Chene line. Address
Charles Schmidt Wrightstown, Wisconsin

REG. GUERNSEY BULL
BY THE RICHLY BRED BULL
EGLANTINE OF SPARTA
A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett Sparta, Wisconsin

REG. GUERNSEY BULL
BORN October, 1915. Sired by Glenwood's Noble Secret 23999 and out of a heavy-producing cow. He is well marked, fawn and white, well grown, good type. Address
E. H. Kiesling Jefferson, Wisconsin

REGISTERED GUERNSEY HEIFERS
3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson Rosendale, Wisconsin

ATTENTION
PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

8 HIGH-GRADE GUERNSEY
YEARLING heifers, bred to freshen this fall and winter. All sired by a registered bull and bred to a registered bull. Well marked and well grown. Write for description and prices. Address
Findlay Bros. Whitewater, Wisconsin

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from; including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Yearling Jersey Bull

OF choice breeding, Pandora's King Sappho. Dam made 82.9 lbs. butter fat in 30 days in official test. She is a daughter of King Sappho King, the sire of many other Register of Merit cows. A fine individual and from a heavy-producing cow. Send for pedigree. Address
L. P. Wiegand & Son, Cleveland, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort **Tomah, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

SHORT-HORN CATTLE.

Short-horn Herd Books and Shares of Stock

WE have at this office several shares of Association stock and Herd Books for sale. Complete sets, including share of stock, $100. Incomplete sets, share of stock, $50, and Herd Books accompanying same, 50c each. A part of these begin with Volume 40, others with 45, 50 and 70. The latest volume issued is 87. Three shares without Herd Books are available at $50 each. Herd Books are furnished free, as issued, to all share-holders. Address, stating number of volumes desired, American Short-horn Breeders' Ass'n, 13 Dexter Park Ave., Chicago, Illinois.

DO YOU WANT Short-Horn

COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
Wm. Hickin, Lancaster, Grant County, Wis.

BULLS

FROM MILKING STRAIN OF

SHORTHORNS

OFFERING five of serviceable age of good Bates breeding and in nice condition. Priced to move. Write your wants. Address
R. W. Lamb & Son, Route 1, Janesville, Wis.

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THE WISCONSIN FARMER

VOL. XLV. NO. 32. THURSDAY, AUGUST 10, 1916. WHOLE NO. 1802

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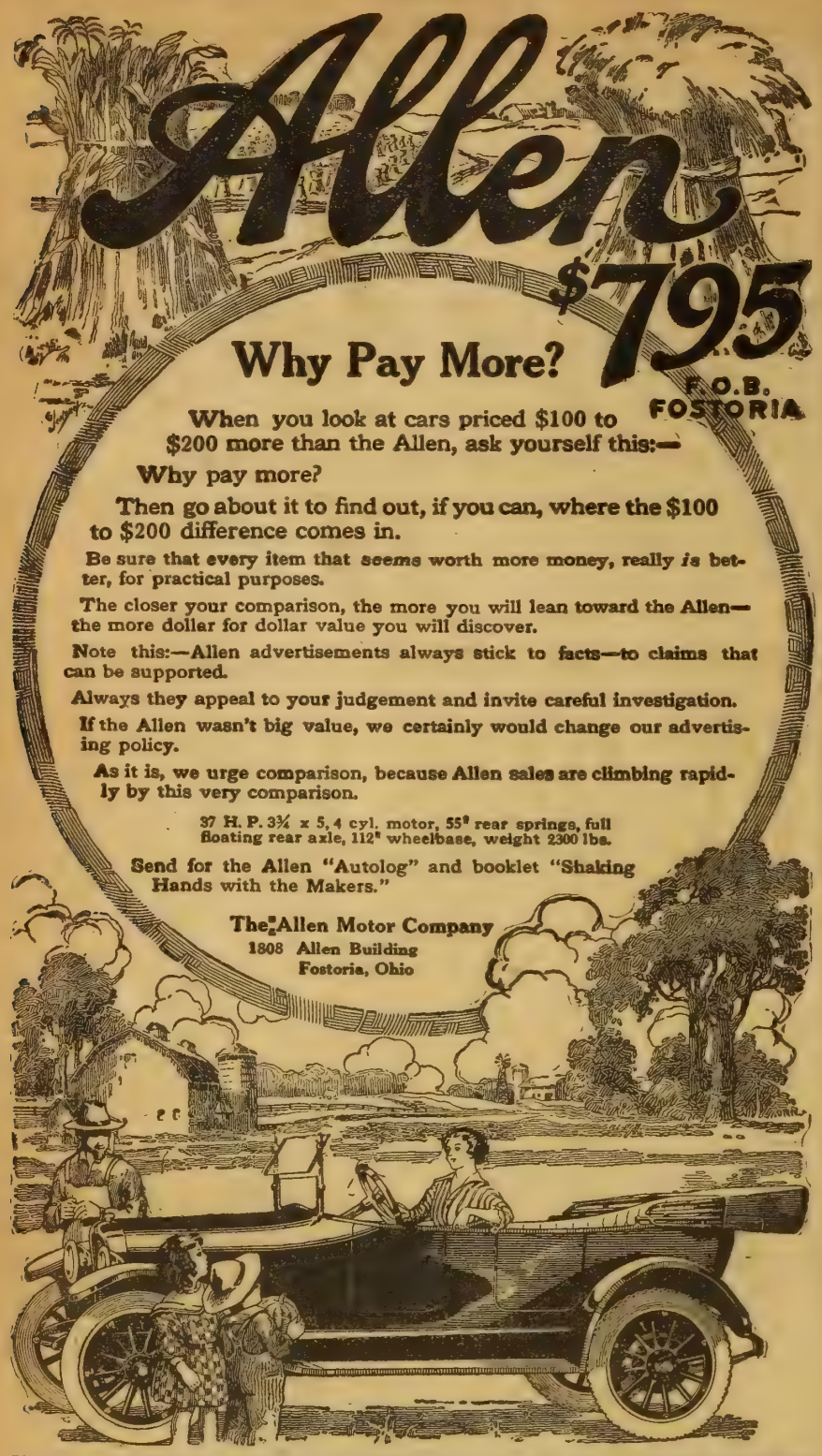

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CURRENT EVENTS

AUGUST 1st marked the end of a heated term which ranged in extent of time from 15 to 21 days and covered almost the entire country. It was the hottest spell for fifteen years and a great suffering resulted, especially in the cities, where there were many deaths from heat. Throughout the central states the heat wave was a blessing to the backward corn, and fortunately the hot spell abated before any considerable damage was done. Light rains last week in many parts of the west were a great benefit to corn which in most sections is looking better than for many years.

THE Deutschland, Germany's mammoth U-boat merchant vessel, put to sea August 2d, and at the time this is written reports indicate Captain Koenig had evaded the allied war vessels waiting to capture her. The Deutschland submerged a short distance outside the three-mile limit, making straight for the sea in the daylight of the early evening instead of waiting for darkness as was expected. At the time the Deutschland left American waters there was not an enemy warship in sight.

MANHATTAN Island and the Jersey coast were shaken July 30th by an explosion of war munitions which caused several fatalities and $25,000,000 damage. The explosion occurred on Long Tom Island, a small strip of land jutting into New York Bay from the Jersey shore. A long line of piers were burned and several barges laden with munitions were destroyed by the explosion and fire which followed. New York City was rocked by the blast and shells found their way to the statue of liberty in the harbor and did the statue considerable damage. Miles of streets in New York City were strewn with broken glass and fallen signs. An investigation is being made.

IN HIS address formally accepting the republican nomination for president of the United States, Charles E. Hughes, of New York, enlarged on his more brief statement issued following the nomination at Chicago. He went into detail in assailing the Wilson administration Mexican policies, starting out with the failure to recognize Huerta when other leading powers had extended recognitions, and winding up with the fruitless attempt to capture Villa, whom the administration had so recently befriended. A feature of Mr. Hughes' speech, and a rather unexpected one in the light of the republican platform at Chicago, was his stand in favor of suffrage for women, and a national amendment. Mr. Hughes later has said that the suffrage issue should be taken out of politics once and for all and decided on its merits as a national problem. He personally favors a suffrage amendment to the federal constitution, but was careful to state that as his personal views. Mr. Hughes was very outspoken in favor of America first, speaking frankly and openly for preparedness and a vigorous foreign policy which will command the respect of the world. He insisted upon protection for America everywhere and the restoration of a protective tariff, asserting that we would have felt many ill effects from the present tariff but for the prosperity which has come to us as a result of the war. Candidate Hughes expects to make a tour of the country, addressing the citizens on issues as he sees them.

THE third year of the great war in Europe has started with a general tightening of battle lines. On the eastern, western and Turkish fronts, Germany and her allies are on the defensive. The Russian offensive in Galicia threatens Kovel and Lemberg, which are expected to fall soon. Grand Duke Nicholas is pushing the Turks back toward Constantinople, which is still, however, 600 miles from his main body of troops. Several thousand Turkish troops have been transferred to Galicia to assist the Austrians in checking the Russian advance. Verdun holds out against the Crown Prince and the French claim slight gains. In the Somme region, the British and the French lines have been advanced from three to four miles at a cost of from 250,000 to 300,000 men. The German losses are reported considerably less. General Von Hindenberg has been appointed Commander in Chief of the eastern forces of the Teutonic allies and it is reported he will relieve a number of Austrian generals. The conflicting forces have been unable to agree upon any plan which will permit relief by the United States of suffering in Poland.

ROGER CASEMENT, former Irish leader, was hanged in the Pentonville prison, August 3d. He was convicted of high treason and the British government refused to consider appeals for clemency. Casement landed on the Irish coast from a German submarine just prior to the breaking out of the revolution in Dublin. He was convicted of aiding Germany to smuggle arms into Ireland.

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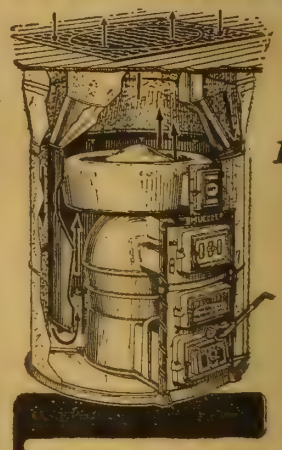

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Furnace Heat Without Pipes

No pipes—No waste heat—No need of tearing up—Can be installed in any cellar or pit at small cost. Big improvement over stove heating. Much better. Saves 25% fuel.

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Heats every room in the house comfortably from one register and keeps the air pure and wholesome. Keeps your house cleaner than stoves and requires less work to tend. Burns coal, wood or coke. Easily installed in any cellar no matter how small—can be used in houses originally built without cellar, by digging a pit.

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As we are makers of heating systems of all kinds since 1857--regular hot air pipe furnaces, steam or hot water boilers and vapor heating systems--we are in a position to give you honest advice on your heating requirements.

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in each town to ride and show a new 1916 model "RANGER" bicycle Write for our *special offer* on a sample to introduce.
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The Wisconsin Farmer

THURSDAY, AUGUST 10, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

HARVESTING THEN AND NOW.

IT WILL never do to live too much in the past or to hold up the "good old days" as being so much better than those of the present that the younger generation will become dissatisfied, yet I find the greatest pleasure imaginable in talking over old times with congenial friends and reading the reminiscences of some man who, like myself, finds his mind turning back, in the autumn of his life, to the springtime of youth. Times have certainly changed. From ox team to automobile, from the cradles in the wheatfields to the binders of today—surely here are such extremes as no other generation has ever witnessed.

I have already taken the occasion, in this page of mine, to tell the story of how the first reaper was received and of how Mr. McCormick's efforts almost proved futile because of the opposition of farm labor, in those early days, to this new-fangled contraption which bade fair, they thought then, to dispense with man labor altogether. I find a most interesting account, in one of the small-town newspapers printed in the grain belt, of the reception of those early reapers here in the middle West, where they were considered as much of a curiosity as the flying machine was ten years ago or the submarine freighter is today. The man who wrote these reminiscences in this grain-belt newspaper knows what he is talking about; he has followed the reaper as the grain was raked off the platform by hand, and has "done his bit" at the binding. That the memories are not unpleasant ones, merely of hot suns and aching back and that sort of thing, is evidenced when he writes:

The harvest days were not days of mere irksome toil. Farmers worked in groups, helping each other, taking the ripest fields first. What a beautiful sight, a half dozen cradlers in line with as many rakers, not infrequently the young women of the community, followed by stalwart young men as binders who vied with each other in each keeping up his part of the work.

Hard work, certainly it was, but this was lightened by the charm of social life. While the breezes played and moved over and through the ripened grain, frequently there were young hearts whose emotions, laughter and joy lit up love's dreams that ripened into the binding of two joys into one.

The older, with less romance, nevertheless made of it a real community interest, while men worked plans of community betterment were being discussed and brought into action which through process of evolution and advancement has given the gracious surroundings of the present.

It was not thought at all improper in those days to follow St. Paul's advise to Timothy, to take a little brandy for "Thy stomach's sake." All the old Hoosiers have distinct recollection of the old-fashioned distillery where pure peach brandy was made, and this was carried to the harvest field as a suitable tonic and preventative against chills and fever.

To the boyish heart there was no sweeter music than the clang of the old farm bell. It rang promptly at 11:30 and the cradles went quickly to a shady nook and all repaired to dinner. Neighborhood women had gathered in to help mother in preparing the dinner, which no evolution in the culinary has improved upon. This was harvest time fifty years ago.

I have always argued that a return to some of the sociable customs of the old days would be a good thing. In the midst of our present agricultural prosperity, we are apt to become a little too much self-centered and fail to avail ourselves of the congenial companionship which was one of the constant delights of the days that have passed. That is why I have urged in these columns that we have neighborhood clubs, to take the place of the barn raisings and corn shuckings of former days. Let us get together more and enjoy one another's companionship and bring back to farming the days when whole communities gathered together in frolics or to work communally, and townships were great, big family parties. We do not want to supplant the binder with the sickle or the automobile with the ox cart, but let us have our innocent farm pleasures and enjoy life and our friends as much as we can.

SUFFRAGE AND RACE SUICIDE

I AM in receipt of a letter from a good friend and subscriber, Mr. W. Reinicke, R. R. 1, Mitchell, Iowa, which interests me greatly. To be perfectly frank, I will admit that at first I thought Mr. Reinicke was prejudiced and had no real facts on which to base his assertions. Later on, when I looked the matter up in my books of reference, I found that he did, indeed, have some backing. Now I hardly know what to think. First, however, let us consider his letter:

The articles about Germany have interested me, for Germany is my old home country. Mr. Evans is a good observer. I have read so much nonsense in the last two years in American papers about Germany that I cannot help thanking Mr. Evans for his fine and unbiased lessons about the conditions in the rural districts of Germany.

But allow me to criticize his standpoint in regard to the German woman. Mr. Evans writes: "They (the German men) believe that women have lost their true function if they are not 'broad-bosomed mothers of stalwart sons.'" Some lines above he says: "The German men do not seem to have a very high opinion of their women folk."

Such statements are indeed remarkable and show to what a degree the unhealthy teachings of the suffragists have borne fruit. Does Mr. Evans not see that the stand the German farmer takes on this question is a natural, healthy and Christian stand, and that the stand of the woman-emancipator is unnatural, unhealthy and unchristian? As soon as women shrink from motherhood the race is doomed. Women suffrage and race suicide are companions. Both show decay, not progress. In the rural districts of Germany the mind and body of the people are still sound and healthful and that is good for Germany; it would be good for our country, too, if we had the same sound and natural conditions accepted by our people, instead of working them into a condition where women despise to become mothers and covet the business of men. If that kind of campaigning is going on, the doom of the white race is not very far off. As the views and teachings of the women-suffragists are in such fundamental questions contrary to the laws of nature and therefore a poison in the body of our great commonwealth, we should try to get rid of such disastrous views and instead of blaming we should enjoy conditions where women are still proud to be the mothers of many stalwart sons.

I am, indeed, delighted that Mr. Evans' articles should be so warmly commended. Personally, I thought them the fairest and most comprehensive articles on the subject I had ever read. I hope all my readers followed them from week to week and found them as entertaining as did Mr. Reinicke.

As to his connection of equal suffrage with race suicide, there is a matter we should all investigate, for it is most important. As I said in the beginning, I did not think there was any basis in fact for such an assertion when I first read the letter. However, I looked the matter up as best I could and here is what I found: According to the last census figures, the number of births in Colorado, in one year, was 12,164. Colorado is a suffrage state. Wisconsin and Missouri are not. With three times the population that Colorado has, Wisconsin had more than four times as many births in one year. With four times the population that Colorado has, Missouri had six times as many births. How are we to account for this discrepancy? I am in the dark and am seeking enlightenment. If any of my readers will take the pains to write me on this subject, giving facts, not prejudices or merely personal opinions, I will be most deeply indebted to them.

Does the fact that women have the right to vote in Colorado explain the birth ratio there being far below what it is in Wisconsin and Missouri, where they do not have the right to vote? Is Mr. Reinicke justified in what he argues? What facts can my readers give me on these important questions?

THE MOTOR CAR AND THE FARMER.

THAT the automobile not only speeds the farmer up until he becomes more efficient, but also that it makes him a better man is the interesting point raised by a motor-car dealer here in the grain belt. Granting that he has a selfish interest in what he says—for it is only human nature to want to succeed at one's own business—I cannot but believe there is much good, sound sense in it. Here is the way he reasons it out:

The auto is not eating when it is not working.

It does not require constant attention when it is not in service.

The farmer can go from his home to town in from one-half to one-tenth the time it takes him in horse-drawn vehicles. If the horse breaks a leg it is lost. If an automobile loses a wheel, it can be replaced.

You can use an automobile in the hottest and coldest weather without blunting your humanitarian impulses. You need not fear a humane officer when you abuse your machine.

A horse's pulling capacity is limited. A motor is built to propel from four to six times as much as a horse. Roads remain better when used by autos than when used by wagons. Rubber tires are easier on highways than steel bands.

Those in the country who have automobiles are within hailing distance of towns and cities. They can keep in touch with and enjoy city life.

To own an automobile makes the farmer a good roads enthusiast. He wants to go faster and smoother. He comes to realize that good roads are a profitable investment. He can decrease the cost of hauling by taking larger loads and using less power.

The psychological influence on the farmer is remarkable. It speeds him up. He becomes a better man. He becomes more alert and more broadminded. His interests are extended from the confined radius of five or six miles to hundreds of miles.

The value of the farm is increased from two to ten times because it has been brought nearer to markets and shipping points. Revenues for civic improvements have been increased by the auto.

The automobile keeps the children satisfied on the farm. They can enjoy both farm and city advantages.

The farmer who owns a motor car will almost always be found in the forefront of those who are endeavoring to improve their community along various lines of activity. They are the quickest to respond when it is proposed to organize a neighborhood club, for they can attend all the meetings and bring all their family, in comfort and without losing much time. They are the quickest to respond when the road problem is up for solution, for they know the close relationship existing between good roads and the enjoyment of farm life generally. They are the quickest to respond when anything which tends to knit the community more closely together and to quicken country life is suggested, for it takes a certain breadth of mind to see that the advantages of a motor car far more than offset the original investment and broad-minded men are what any community—urban or rural—needs.

I am not arguing that any man, be he city man or farmer, should buy an automobile until he has taken a careful inventory, and decided either that he can afford it or that it will so add to his earning capacity that it will soon pay for itself. But I am arguing that once a farmer buys a motor car he begins to see things in a broader and better light, and becomes more of a factor in country-life improvement. No man should go in debt for a motor car if he cannot afford it, but farming has become such an all-around industry, such a combination of industries nowadays, that there are few farmers who cannot afford a car if they use it to the pleasure of all the family and to increase their earning power by taking advantage of market fluctuations, quick trips to town with produce, and so on. What the motor salesman says has much truth in it, according to my way of thinking.

HELPING THE SOLDIER-FARMER.

INSTANCES have come to my attention frequently of kind-hearted farmers turning in to plow or to pick the corn of some neighbor who was sick abed, or had suffered troubles or bereavements which prevented him from carrying on his work. I have commented on such cases several times, always giving to the friendly helpers their well-deserved meed of praise. Now, I am delighted to be able to record another instance of a similar nature, where farmers turned in and plowed the corn of a neighbor who had enlisted and gone to the border to protect Uncle Sam's territory from the raids of Mexican bandits. Here is the story as a subscriber sends it to me:

The neighbors of Floyd McPherren, of Washington township, decided to do that young man a kind favor by plowing his thirty-five acres of corn, as he is a member of the national guard and is now on duty down on the Mexican border, and unable to give his crop the attention that it needs. So eleven men with their teams went over and slayed the weeds, having in mind the Mexicans which Floyd would probably exterminate.

That is what I call a good, neighborly deed, helping a man out when he really needs the help. The young farmer who responded to the call of duty and marched away did not stop to think what might happen to his crops; duty called him far from the field and he answered the call at once. Those who stayed behind heard duty calling them just as it called the soldiers; they were to continue the production and the prosperity of the grain belt and care for those who had been left behind. So, when the soldier's corn needed plowing, they went over and did it, simply and without any thought of being heroes. But heroes they are, in a quiet, modest way, for without them and their kind the sacrifices of the boys who went to the front are in vain. Behind all our martial heroism and sacrifice there must be a firm foundation of agricultural security. The men who are left behind are seeing to it that this is continued. There is an effective co-operation or partnership between the soldier along the Rio Grande and the corn plower and the wheat harvester along the upper Mississippi.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Better Health in the Country.

A SEASON of hot weather such as that which we recently passed through in Wisconsin emphasizes the better health conditions which prevail in the country. In Eastern cities there has been a great scare on account of infantile paralysis. At one time there were as high as 150 new cases a day and the deaths ran about 33 per cent of the cases reported. But we have had no reports of this disease in the rural districts.

Natural conditions make the country a much more healthful place in which to live. The air is not fouled by fumes from factories or rubbish piles. Where humanity is crowded the problem of sanitation is hardest to solve. But we must not get careless in the rural home just because it is favored by natural conditions. First of all be careful concerning the water supply. Shallow wells should be avoided. It is difficult to keep seepage from reaching the shallow well. This is especially true where there is no sewage disposal system. Impurities of every nature on the farm ought to be drained off in an opposite direction from the well. The human body demands a great deal of water and this is especially true in the summer time. Poor water may carry health-destroying bacteria into every part of the body. In a person at all susceptible to disease these bacteria will catch hold and cause great distress. Most of our typhoid comes from impure water.

Decayed matter of all kinds is a great source of disease. The garbage from the kitchen on a quarter section farm should be disposed of carefully either by feeding before it has become decayed or by burning. When we see how much is thrown out of the kitchen on the farm and think how many kitchens there are on a 160-acre tract in the city we get some idea of the better conditions which must prevail in the country. The country has an added advantage in that all vegetable matter intended for food is fresh when the housewife gets it. This is not always true in the city. The farmer and his family get clean, fresh food and this is a big advantage.

Eventually every farm should have a system of sewage disposal. There are various systems and they are getting down in price so that the average farmer can afford them. Modern plumbing means a great deal for better health on the farm. The septic tank, the chemical closet, and such systems are well worth investigating. The conveniences afforded by these modern systems is secondary to the insurance on the health of the family.

Above all things be clean. Cleanliness is the greatest enemy of infantile paralysis, as well as almost all other diseases. Sweepings from the house into the dooryard should be avoided. It is an easy matter to sweep dust and dirt out into the yard and let the wind blow it away; but it is slovenly housekeeping and no good housewife will do it. Those who sit out in the yard or on the porch in the evenings are very likely to breathe in a considerable quantity of this dust which is light and circulates through the air in particles so fine that they cannot be seen with the naked eye. It is far better to burn the sweepings either in the kitchen stove or by laying them on a newspaper and starting a fire. The best way to get rid of any refuse matter from the house or other buildings on the farm is to burn it.

The housewife may be very careful and have her trouble for her pains if there is no effort on the part of the men folks to keep the stables and feed lots clean. It is none of the housewife's business to do work around the stables, but it is some of her business to know that these places are not permitted to get rotten dirty. Her own health and the health of the family is at stake. We have learned to clean up the dairy barns pretty well, knowing that a good quality of milk cannot be delivered from unclean barns. The same interest should be taken where other animals than dairy cows are handled. Removal of the filth from the barns either direct to the fields or to some point distant from the house, is recommended most seriously.

We have said that the farmer and his family get good air, and this may be true on any farm. The screened-in porch is the rule rather than the exception in the country today. Keep the flies and mosquitoes out by all means. The Creator furnishes us good, fresh, clean air free. Don't keep the windows shut down and thus frustrate nature's plans for keeping you in good health.

Good water, plenty of fresh air, and keep everything clean, such are easy, simple rules which can be adopted without additional expense on any farm.

Providing Sinews of War For the Live Stock Rate Battle.

PROBABLY the most important hearing ever held before the Interstate Commerce Commission, so far as the live stock shippers of the country are concerned, is the one involved in the order of the commission directing a general investigation into the railroad rates on live stock and live stock products throughout the country. It is a foregone conclusion that the railroads will make this the occasion for seeking a general advance in rates on live stock all along the line, and thereby seek to obtain what was denied them in the western rate case last year.

It is essential that the great live stock interests of the country, and especially of the grain belt, should be prepared to meet the transportation interests on their own ground, and to defeat any effort toward a raise in rates or a decline in service. To do this properly, it is absolutely necessary that there should be adequate funds immediately available for preparing the evidence, for presenting it to the commission and for meeting the heavy expenses incidental to so important a battle for the common welfare.

One of the most discouraging things in connection with former fights by the shipping interests against the immense power and financial resources of the combined railroads of the country, has been the lack of sufficient funds. It is proverbial that what is everybody's business is nobody's business, and, as a result, the largest share of the burden has fallen on a few organizations and individuals who have been fighting the public's battles as best they could.

It is a tribute to such organizations that they have been able to accomplish so much in the face of the handicap under which they have labored, and it is a testimonial to the ability, industry and public spirit of such men as Judge J. H. Henderson, state commerce counsel of Iowa, and Mr. Clifford Thorne, chairman of Iowa's railroad commission, that the agricultural shipping interests of the central West have been so well represented as in the western rate case.

Mr. E. F. Keefer, secretary of the National Live Stock Shippers' Protective League, with headquarters at the Chicago Union Stockyards, has issued a timely word of warning and an appeal for financial support. The league's plan of raising funds for carrying on its work, with special reference to the big contest now looming up before the Interstate Commerce Commission, is for a voluntary assessment of 5 cents on each carload of live stock. The letter is as follows:

To Live Stock Producers, Feeders' and Shippers' Organizations, and to Live Stock Shippers generally:

The National Live Stock Shippers' Protective League, composed of live stock associations, shippers of live stock, live stock exchanges and slaughterers, also a number of state railroad commissioners, representing various western and central western states, is fully organized and its work begun.

The occasion for the organization is the necessity of united action of all who are interested, to secure just and reasonable rates, regulations, charges and efficient service, and to defend against any demands on the part of the carriers for unjust, unreasonable rates, charges, rules and regulations in matters of common interest pertaining to the subjects mentioned, and for such other purposes as may arise in that regard. It is a national transportation organization of shippers of live stock and its products, confined to that and excluding other matters.

The Interstate Commerce Commission has directed a general investigation into rates on live stock and products of live stock throughout the country, wherein the carriers will undoubtedly seek to increase their revenue by increased rates, and changes in various matters of the practices and rules of transportation. This must be met by the man who pays the freight, to the end of securing what is just, fair and reasonable. Many other matters like cleaning and disinfecting charges, live stock shipping contracts and limitation of liability are involved.

The executive committee has been selected by the respective interests to carry on the work. The membership of the executive committee affords ample assurance of the representative and high character of the organization and its efficiency. Every shipper of every car of live stock has this force for protection. The purposes are not to take the place of other organizations of shippers, but to combine the strength and efforts of all interested.

To carry out and to accomplish these ends, it is necessary to secure sufficient funds.

To do this we have adopted a plan of assessing 5c per car against the shipper, on every car of live stock shipped, to be deducted from the account sales of all live stock shipped to the market, and where shipped other than to market, the 5c per car to be paid by shippers direct to the treasurer of this organization.

In its very nature, this must be voluntary, but inasmuch as it so equitably distributes the expense of carrying on this work among the parties interested and who benefit thereby in direct portion to the interest which he has, it will receive the support of all who favor this great work.

It is necessary for the most part to proceed through the organizations of live stock producers, raisers, feeders and shippers as represented by their various officers, because it is impracticable to reach every shipper. If any shipper, accepting as he will the benefits of this work, which necessarily must apply to all alike, is not willing to pay 5c per car, the amount collected from his shipment will be refunded to him.

We appeal to you in your own interest and in the interest of the shippers of live stock generally, to heartily join in the work of this, your organization, and in the plan for financing the same on the basis above named. We feel sure that you will do this. The importance of preparing for it and fighting our battles by the joint work and at joint expense cannot be overestimated.

Expecting your hearty co-operation in the work of this organization and in the plan for financing same,

Respectfully submitted,
National Live Stock Shippers' Protective League.

With the certain knowledge that the railroads will be represented by the very best legal talent available, that they will have their case in the strongest form in which it can be presented, without regard to the expense, and that they will fight harder than ever before to make an apparent showing that will justify an increase in rates, it certainly behooves the live stock shipping interests of the country to get busy along such lines as those suggested by the National Live Stock Shippers' Protective League.

There is not a reader of this paper interested in live stock who could not well afford to contribute much more than the amount asked on each carload of stock, for the sake of helping protect himself from those who are seeking to exploit him, for the sake of rolling up larger dividends on vast capitalizations of watered stocks and bonds.

We trust and believe that the live stock raisers of the country will respond to the appeal which has been made with a will and that, as an expression of thankfulness for what has already been saved them by those who have borne the brunt of the fighting, as a protection of their own interests, and as a matter of public duty, they will see to it that sufficient funds are provided to enable their representatives to present their side, at this most important hearing, in an adequate manner, without the embarassing conditions that have too often handicapped them in their great work.

Tractor Does Not Scare Wisconsin Horseman.

A FEW days ago someone asked Ira Griswold, a Grant county breeder of Percheron horses, how he could reconcile his enthusiasm for both the horse and the tractor. On Mr. Griswold's 400-acre farm, he uses a 12-25 tractor. He practices spring plowing in order to have fall pasture as late as possible for his pure-bred stock. He states that his horses are never idle when the tractor is at work. Instead of displacing horses on his farm, Mr. Griswold says the tractor makes more work for horses, but the work for horses is lighter work. His tractor keeps ahead of his teams all spring and makes them hustle. In the fall he fills three silos with his tractor and does a lot of odd jobs such as grinding feed for 150 or more head of stock kept on his farm. Mr. Griswold says that the tractor has no trouble in turning over twenty acres of timothy and clover sod a day, and regards the cost of machine and its maintenance as paid for by the saving of horseflesh in spring work. This is the third season Mr. Griswold has used the tractor.

Mr. Fred Pabst, at Oconomowoc, bought his first tractor three years ago, and he liked it so well that he bought another this spring. He regards mechanical farming as practical, and expects to be present at the round-up and tractor demonstration at Madison, September 4th to 8th. Mr. Pabst recently made a statement that it would not have been possible for him to have harvested his enormous crop of hay this year and gotten it all in without the aid of truck and tractor. He used a hayloader attached to the rack, which would have been a very hard and heavy load for horses.

Wisconsin State Fair.

OUR readers should have well in mind the dates for the Wisconsin State Fair, at Milwaukee, September 11th, 12th, 13th, 14th, 15th and 16th. There will be distributed at this fair $65,000 in premiums and purses besides many thousands of dollars in special prizes. The Wisconsin Farmer is anxious that the farmers of the state support the fair, which is run largely for their benefit. The exhibits of dairy products and dairy cattle will be well worth seeing and will be an inspiration to those who give them attention. Plan to attend the Wisconsin State Fair.

Considerable effort has been made to make the amusement features of the 1916 fair the best ever staged in Milwaukee and the city of Milwaukee has arranged a $20,000 free festival which will no doubt add a great deal of interest. But we more especially urge our readers to visit the fair for the purpose of seeing the state's progress in live stock and general farming; to learn what your neighbor is doing and to profit by his success.

This has been a good hot summer, but by fair time the heat will long since have gone, and Milwaukee and the state fair offer a great opportunity to spend a few days in recreation and profitable study after the harvest.

This is the year of all years to bring the children and young people, as special contests and other forms of entertainment have been arranged for them, more particular mention of which has already been made in The Wisconsin Farmer.

Disking Alfalfa Ground.

THERE are many thin alfalfa fields in the corn belt this year as the result of partial winterkilling. Several instances have been brought to our attention where the crop amounted to not more than one-half a stand, and this condition always favors weed growth in an ideal way. One may rest assured on most corn-belt land, that if crops having an economic value are thin, the yield will be made up by worthless weeds, and this condition always raises the question as to whether or not it is advisable to bother with a thin hay crop.

However, those who have had a taste of alfalfa growing are not likely to yield easily to a little winterkilling, and numerous attempts have been made to revive and thicken the crop by giving the alfalfa a thorough disking after the second cutting. Many fields have been so thoroughly disked that scarcely a green vestige remained when the work was done, the thought in the minds of the grower being, no doubt, that he would either remedy the situation or kill the crop. There has been more disking of alfalfa fields this spring than ever before, and while the outcome of the practice is more or less questionable, under certain conditions, it is quite likely that the matter will be settled definitely this year.

In some instances the disking of alfalfa results in splitting the crowns, thereby admitting water and starting the rotting process. Some of our experiment station workers have denounced the practice of disking alfalfa fields because of the injury that is likely to be done in this way, though, on the other hand, men can be found who have repeatedly disked alfalfa fields without any unfavorable outcome. The disking generally brings about the destruction of a certain percentage of shallow-rooted annual weeds, though it is a mistaken notion to believe that blue grass or timothy, or crops of that kind, are in any way damaged by this kind of tillage.

In some instances those who have thin fields have used a little more seed before disking, and one case is called to our attention where ten pounds per acre was sown, after which the field was disked and cross-disked, the hope being that the fall rains would start the new seeding so that next year a full stand would show up. A little later we will appeal to our readers for the result of their efforts not only in those cases where disking has been practiced without seeding, but also in instances where the plan of both seeding and disking has been followed.

The Fight on Meat Consumption.

ONE of our subscribers, Mr. Geo. B. Smith, forwards a communication dealing with the meat boycott and urges the employment of more capital by farmers, in order that they may take up more and more the raising and feeding out of good cattle. Mr. Smith's letter follows:

A boycott on beef has been proposed by the city consumer as a means of lowering the price of beef. This is like "cutting off one's nose to spite the face." Better than a boycott on beef by the city man would be a co-operation with the farmer in raising more beef cattle. Many farmers would like to raise more beef cattle if they had the money.

Grain farming requires very little capital, and country money naturally drifts to the city. Banks in the country are required by law to deposit a large portion of their funds in central reserve cities. Bankers in these cities, naturally prefer to loan the funds thus accumulated at home under their close observation. Thus, the farmers own money gathered by the banking system in the cities is often used directly against him by the large market speculators.

There is a commendable effort on the part of money bankers to correct this and there is to be a banker-farmer meeting at Jackson, Mich., August 10th to discuss rural credits. The banker-farmer movement has been "aired" a good deal in the agricultural press and the writer has no doubt that many bankers are sincere in their offers to help the farmer. One city bank has employed a beef cattle expert at a large expense to assist in placing loans through its correspondent country banks for the purpose of enabling the farmer to keep more live stock.

The effort of the bank is certainly a concrete expression of its sincerity. We have no right to say that any bank is insincere, but there is a tendency even among banks that are foremost in the movement, when it comes to the practical, to do the thing that is easiest, i. e., make loans to city customers, who are near at hand instead of the farmer which latter loan must be handled through some outside connection. But others in the city must assist the farmer to keep more live stock as well as the city banker. People of wealth who are looking for safe and remunerative investment of idle funds, will do well to investigate farm loans. The writer personally knows of some good 5 per cent paper to be had from farmers who are practically out of debt and worth from $30,000 to $40.000. Small savers who wish something better than bank interest, could purchase this paper with perfect security and profit, and at the same time assist the farmer to keep more live stock. Like the man of wealth, the small saver will then have a country home where he will be always welcome in vacation time. Price conditions favor the farmer. He is as well fixed to pay interest as any man on earth, and he is honest.

Another powerful factor in increasing the number of beef cattle to come from the cities is in the newspapers. Nearly every farmer nowadays takes a daily paper and is influenced by its contents. When the newspaper talks about a boycott of beef no farmer cares to begin raising beef cattle, but when the newspaper tells him that the ranges in Montana are now wheat fields, and beef breeding offers an inviting opportunity for the small farmer everywhere, on account of the high prices for beef cattle, and the likelihood of further advances; tells him some of the principles of breeding, how a pure bred fixes the character of the calf so that by using a pure-bred beef bull he will get calves like the sire, even from thin cows of the dairy type, if the cows are grades, and not pure breds; tells him how he can raise beef calves with little expense at the farm on skim milk, it will have the effect of holding down the advance if it does not check it altogether, and is a plan that does not compel the city man to go without meat as does the plan of boycott, which some people have advocated.

Most of our readers are aware of the fact that the National Dairy Association proposes to expend hundreds of thousands of dollars in advertising dairy products. That plan is deemed practicable for the reason it is claimed that the average person does not realize the superior food value of dairy products. It is proposed to popularize milk as a beverage to the end that dairymen will have created for them a more stable market.

It has been suggested that a similar campaign be conducted for the purpose of popularizing meat as a part of the human diet. It is pointed out that the great nations of the world are meat eaters, and that the raising of live stock is the basis of the most substantial kind of prosperity in farm affairs. The workers of our cities need a constant supply of meat products, and as the productive capacity of our western ranges have been permanently reduced, we must look more and more to the great corn-belt region for our meat products. It is just possible that out of the movement designed to counteract the endeavors of the so-called vegetarians, there might come some unanimous action on the part of our various pure-bred live stock breeding associations. The cause in which they are engaged is a common cause, and questionably the use of part of the treasury surplus of some of these associations might be made to stimulate a demand for meat products, in order that the meat producer might find in the future a steadier market and a more constant demand.

Active in Fight Against Hog Cholera.

ALTHOUGH the loss of hogs from cholera during the last two years was materially less than it was three years ago, there is still sufficient loss to justify the most active kind of a campaign for stamping it out altogether. As Iowa is the leading state in the Union in hog production, it is most fitting that this state should lead the way in organized effort to stamp out this scourge. Recently some twenty-eight counties in that state have been organized into one district under Federal Inspector J. S. Koen. Dr. Koen has made an exceedingly good record in Dallas county in fighting hog cholera, and now the government proposes to enlarge the area that is placed under special supervision. One of the first undertakings of Dr. Koen in organizing this larger district is to standardize the prices charged by veterinarians for vaccination against hog cholera. In the past there has been considerable complaint about extortionate charges that were made in some instances, and one result of this has been to discourage stockmen in the use of serum. It has been decided in the twenty-eight counties that a charge of 10 cents per head will be made by the veterinarian for vaccination. In addition, he will be paid a traveling expense at the rate of 50 cents per mile. Added to this, of course, is the cost of the serum, and every effort will be made to reduce this to a point where swine breeders will give the most hearty kind of support to the movement for stamping out the disease.

Giving Two Sons the Right Start.

AN INSTANCE is called to our attention where a 280-acre farm, free from debt, is owned by a widow. Over 200 acres of this land may be used for farming purposes, the balance being pasture. There are two sons in the twenties, ready and willing to take over this land from their mother on some sort of share basis. One of the boys owns enough horses to operate the land, while the other has several hundred dollars in his bank account. The question comes up: What arrangement should be made so that the mother will receive returns from the land and the boys at the same time will be given a favorable start on their own account?

To begin with, it must be acknowledged that the arrangements to be carried out in this case will largely depend upon the mental and physical characteristics of the boys themselves. If they naturally like farm work and if they have always shown aptitude to learn from experience, then there is no reason why these two boys should not undertake to handle this 280-acre farm on a basis that will be profitable to them and satisfactory to their mother.

There are two theories of renting to be considered, namely, the cash system and the share division. As the chief lack of the boys in this case will be capital, presumably the share plan will be the wiser one to adopt. Implements will have to be purchased and enough feed for the work horses to carry them through the first season. If these boys are favorably known, they will have no difficulty in borrowing enough capital at their local bank to buy implements enough to handle this farm. Indeed, it would be quite in order, as this land is free from incumbrance for the mother to loan her sons enough capital so that they can purchase sufficient equipment to handle the first crop. To be sure there would be an interest charge for this capital, but if the land is productive it will be taken care of in due time.

One method of renting requires that each party shall receive half the returns from the land, while in other cases the owner of the land only receives two-fifths of the returns. On productive soils the half-and-half basis is the most common plan of renting, while on land that has been somewhat worn by cropping, the owner is fortunate to obtain a two-fifths return if at the same time the land is well farmed.

Then, of course, there is the pasture land, which usually rents for cash. As capital may be lacking to put in enough stock to graze the pasture the first year, it is quite likely that the boys will be able to get good returns from it by leasing to neighbors. Another plan would be for the owner to retain the pasture land and lease it directly to stockmen. Whatever plan is followed must be outlined in writing and signed by all parties. Remember that family matters are much more liable to be mixed up than are business affairs between strangers and for that reason a contract written in definite terms should be signed.

These young men are placed in a fortunate position and they can well afford to take their coats off and work shoulder to shoulder for a few years. Under normal conditions they will receive much better returns from this land than they can possibly command as wage earners, and it is only a question of buckling down together and working harmoniously not only for their own interests, but also for the best interests of their mother.

Too Much Grain Fed to Fattening Cattle.

IF THE RECORDS of our leading experiment stations are to be relied upon, certain old-fashioned methods employed in finishing beef cattle must be thrown into the discard. No station in the Central West can be credited with more reliable and more practical work in the interests of the farmer than the institution located at St. Anthony Park, Minnesota, and that station now proclaims the doctrine that the chief method of increasing profit in fattening cattle is to reduce the amount of grain nearly half and to increase the amount of roughage.

During the last few years eight different groups of cattle have been fed out at that station under varying conditions and in every case the 184 steers included in these experiments paid a profit over and above the value of the food consumed. In the case of steers that ran on pasture for two seasons this profit varied from $20 to $25 per head.

Prof. T. L. Haecker, who is in charge of the section of animal husbandry of the Minnesota station, says that nearly twice as much grain is fed under ordinary conditions of beef production as should be used in making the most economical gains. It is a well-known fact that many feeders use as much as fifteen, twenty and even twenty-five pounds of grain daily for a two-year-old steer, but Prof. Haecker in all his experiments never fed more than eleven pounds a day. He has been able to feed a steer from the time he weighs 100 pounds until he weighs 1,200 pounds on 3,288 pounds of grain, 2,899 pounds of hay and 3,240 pounds of silage. The grain used was made up of a variety composed of corn, barley, oats, bran, oil meal and middlings, these being fed in varying proportions. Practically one-fifth of the total grain ration was composed of oil meal. It was found that the grain cost for feeding the steers the first year amounted to $14.32 a head and for the second year $39.92, making a total cost of $54.24 for the grain consumed by the two-year-old steer up to the time he is finished for market. On this light grain ration a gain of approximately two pounds a day per head was made. The records show that the cost of feeding calves to a weight of 100 pounds amounted to practically ten cents per pound. From 200 to 300 pounds the feed cost 4.9 cents a pound. In the case of a steer weighing from 900 to 1,000 pounds the cost of a pound of gain was 9.3 cents, while for a steer weighing from 1,400 to 1,500 pounds the cost was 15.4 cents.

Prof. Haecker concludes, as the result of his somewhat extensive experiments in feeding cattle, that heavy grain feeding is wasteful and increases the cost of gains, correspondingly cutting down the profits. These results harmonize with those obtained from many successful breeders. One of the most progressive stockmen in the Central West, who feeds out hundreds of steers annually, has had exceedingly good results for a period extending over forty years in using a limited grain ration in conjuncton wth plenty of pasture. His claim is that he is not trying to see how much food his steers can destroy but, on the other hand, his constant aim is to get his steers ready for market at the least possible cost per pound.

Hampshire Breeders Are Pushers.

THE breeders of Hampshire swine are putting on a series of free public sales, to assist in raising a premium fund for the National Swine Show of America as well as for other large shows of national importance. The breeders are consigning several hundred head of their choicest individuals to these sales and will receive only 50 per cent of the selling price; the other 50 per cent will be retained for the premium fund. Various auctioneers will cry these sales free of charge, so there is no question but Hampshire breeders will soon get a large premium fund together and in that way stimulate interest in public exhibitions this year. The plan of these progressive breeders is worthy of emulation.

Milk Producers' Organization.

Brown County Farmer Tells Us How the New Association in His Neighborhood Was Organized and Gives Its Aims and Objects.

MR. Julius Van Calster, Brown county, Wisconsin, writes The Wisconsin Farmer, relating some facts incident to the organization of a milk producers' section of the Brown County Farm & Produce Association. This association had 70 charter members the fifteenth of July, and by this time it probably has 100. At the time Mr. Calster wrote The Wisconsin Farmer no move had been made for a higher price for milk, but this is one of the objects of the organization and the conditions which prevail, resulting in a milk shortage in the various portions of the state, will doubtless further the matter. The Brown County Association is endeavoring to enlist the support of at least one hundred fifty members before any concerted move is made looking toward an advance in prices. The price paid in July in Brown county was $1.30 per hundred. This same milk was retailed at 7 cents per quart with some talk of making it 8. Some of the buyers seemed to be very willing to cut the price of milk for the producer, but very unwilling to cut it to a corresponding ratio for the consumer.

A copy of the constitution and by-laws of the Brown County Farm and Produce Association has been forwarded to The Wisconsin Farmer. We publish it herewith for the benefit of producers in any other county who may have a thought of organization.

PREAMBLE.

We, the milk producers of Brown county, Wis., believing it to be to our mutual benefit, do hereby organize and agree to be bound by the following constitution.

ARTICLE I. NAME.

The name of this organization shall be the Brown County Farm and Produce Association.

ARTICLE II. OBJECTS.

The object of this association shall be to promote and safeguard the interests of the dairy producers, and to develop the dairy industry of this county, by keeping better cows, eliminating "boarders" and diseased animals, providing better sanitary conditions, improving the quality of the milk, increasing the output, decreasing the cost of production, including feeding, management of cows, and the handling of the milk, and by co-operating with the dealers to adopt a fair scale of prices for milk and cream, adjusted according to the percentage of butter fat, and the quality and sanitary conditions of the milk and dairy.

It is the purpose of this organization to conform with reasonable regulations as regards dairy inspection, and a committee shall be appointed to adjust differences between the dealer or dairy inspector and the milk producer. It shall be the duty of the adjustment committee to formulate reasonable regulations as regards equipment and management.

The testing of dairy herds is recommended by individual testing or by organizing a local testing class with the purpose of eliminating the unprofitable cows. An official milk tester may be appointed, who shall from time to time test the milk furnished by patrons at the several receiving plants. This official may act as an arbitrator to settle disputes between patrons and dealers on this point.

ARTICLE III. MEMBERSHIP.

Any dairy producer may become a member of this organization by paying the annual dues of $1 and agreeing to live up to the rules of this organization.

ARTICLE IV. OFFICERS.

The officers of this organization shall be a president, three vice presidents, and a secretary-treasurer; these five to constitute an executive committee who shall transact the business of this organization. These officers shall be elected at the regular annual meeting of the organization, which shall be held the second Monday in January of each year, and they shall serve one year, or until their successors are elected. These officers shall perform the usual duties of their several offices.

ARTICLE V. COMMITTEES.

The president shall appoint the following committees:

An adjustment committee of three to adjust differences between dealers and milk inspectors and members of this organization.

A program committee of three, including the secretary to arrange programs for meetings of this organization.

A working committee of three in each township to secure members for this organization, and to look after the interests of the organization in their several townships.

Such other committees as may be required to carry on the work of this organization.

ARTICLE VI. MEETINGS.

The regular annual meeting of this organization shall be held on the second Monday of January of each year, and other special meetings may be held from time to time on the call of the president.

ARTICLE VIII. AMENDMENTS.

This constitution may be amended at any annual meeting provided that two-thirds of all members present vote for such amendment. All amendments shall be submitted in writing.

BY-LAWS.

1.

Every member shall live up to the rules of this organization and shall assist in promoting the dairy interests of this county.

2.

Every member of this organization shall accept and abide by the decision of the adjustment committee.

3.

The secretary-treasurer shall receive reasonable compensation for actual time employed in the work of this organization. Other officers shall receive no compensation, but shall be paid for actual expenses incurred in carrying out the work of this organization.

4.

When special meetings are called the secretary shall publish notice of such meetings through the press of the county.

5.

The secretary-treasurer shall furnish a bond satisfactory to the executive committee.

Grade Jersey Banner Cow.

To the Editor:—The banner cow for the month ending July 20th, in the Waupaca and Butternut Ridge Cow-Testing Association, is a grade Jersey owned by E. O. Frihart, Weyauwega. She produced 65.5 pounds of butter fat, and 1,284 pounds of milk testing 5.1 per cent. This is a good record for a cow purchased last spring for $65. It is interesting to note that in five months this Jersey cow has produced almost as much butter fat under Mr. Frihart's care, as she did in the previous year, under another owner. This is certainly an illustration of how some cows will respond to good treatment and good feeding. This Jersey was an average cow under the former owner, treated in an average way, but she was made an exceptionally good cow under different treatment. Be sure that full duty is done toward the cow in care and feeding before she is condemned as of little worth. Mr. Ira Farley, of Butternut Ridge, Waupaca county, recently sold one of his good producing Holsteins to the Wisconsin Live Stock Breeders' Association at Madison, for demonstration work. We are proud to note that the officials of this association chose a cow of good merit from out of our association. This we regard as another good boost for Waupaca county cattle.

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. C. Boyce					
Ida G. H.....	7	4-25-16	1077	4.2	45.2
Fred T. Jorgensen					
Jessie, G. H...10		4-17-16	1605	3.7	59.4
Mercedes, G.H.	8	1-18-16	1599	3.0	48.0
Beauty, G. H..10		5-29-16	1452	3.2	46.5
E. F. Schroeder					
Beauty, G. J..10		5-24-16	996	5.4	53.8
E. O. Frihart					
Brownie, G. J.	6	3-28-16	1284	5.1	65.5
E. E. Howie					
Amy, G. J.....	8	5-23-16	1338	3.7	49.5
Fred Dunbar					
Guernsey, N...	5	6-10-16	1455	4.2	61.1
Peterson & G. R. Miller					
Marna's Queen of Norwood, R.G.	8	1-15-16	1028	4.6	47.3
Herman Becker					
Bessie, G. J...	7	12-27-15	681	7.6	51.8
Nellie, G. J...	8	3-18-16	897	5.2	46.6
Greese Box, G. J.	9	10-16-15	801	6.2	49.7
Belle Min, G. J.	7	3-11-16	966	5.8	56.0
Harness, G. J.	8	4-1-16	963	5.4	52.0
John Jensen					
Big Spot, G.H.	6	6-9-16	1470	3.4	50.0

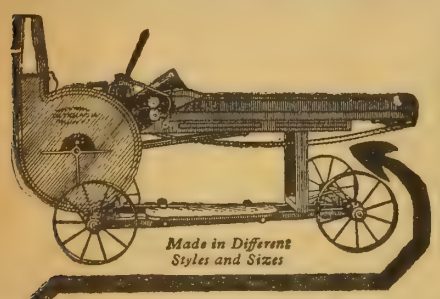
Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

River Falls and Roberts Report.

To the Editor:—There were eighty cows under test in July in the River Falls and Roberts Association, which produced 40 pounds of butter fat or better. July showed a big drop in the list as it was dry and hot and flies bothered the cows a great deal. We hope to send the Wisconsin Farmer a better list next time. The following list includes the cows which produced 45 pounds of butter fat or better in July:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Alton Bros.					
Maggie, G. H..		4-30-16	1416	3.4	48.1
Chas. Benedict					
No. 2, G. S. H...	7	12-6-15	765	6.0	45.9
W. N. Benedict					
Brownie, G. J..	5	2-29-16	1125	4.6	51.7
M. R. Pritchett					
Bessie, G. G...	5	6-4-16	1083	4.4	47.6
J. L. Chapman					
Daisy, G. H...	6	6-9-16	1641	3.2	52.5
Maggie, G. H...	7	3-28-16	1668	3.0	50.0
Butter Cup, G.G.	8	3-7-16	1383	3.4	47.0
Dora, G. H.....	7	3-13-16	1770	2.9	51.3
J. L. Chapman					
Susie, G. H....	6	4-23-16	1647	3.8	62.6
Roan, G. S. H..	4	5-25-16	1200	4.0	48.0
J. W. Budderman					
Old Butter Cup, G. G. 10		5-28-16	1383	3.3	45.6
S. W. Ash					
Cr. of Gold, R.J.	5	3-25-16	1038	5.1	53.9
J. E. Rundell					
No. 58, G. H....	6	4-20-16	1206	4.0	48.2

C. G. Carlson, Official Tester.
J. M. May, Secretary.



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COULD I MAKE IT STRONGER?

At the end of twelve months if a Galloway Spreader has not paid for itself, provided you have hauled out 100 loads of manure or more, and it has not proven everything I say for it, I agree to take it back, pay freight both ways and return your money no matter on which of my six plans you buy. Could I make this offer if I was not sure of my ground—that the spreader would please you—that it would pay for itself—that everything I have said about it would be backed up by the spreader itself? My new steel beater and wide-spreading V-rake pulverizes and tears the manure to shreds—worth $15 extra on any spreader, costs you nothing extra on the Galloway. INVINCIBLE PATENTED ROLLER FEED; this great exclusive feature on the Galloway Spreader makes it superior to all others—the secret of light draft—a feature worth $25 alone on any spreader—exclusive on the Galloway, but costs you nothing extra. NEW EVERLASTING PRESSED STEEL unbreakable tongue worth $5 more on any spreader—no extra charge on a Galloway. PATENTED AUTOMATIC STOP uniform clean out push-board, worth $10 on any spreader, exclusive on the Galloway, but costs you nothing extra. Those features have caused thousands of Galloway Spreader users to write us that the Galloway is the best spreader on earth. TOP DRESS CROPS NOW! Don't buy a spreader of any make or kind until you have tried a genuine Galloway at our risk.

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Guernsey Gets Month's Record.

To the Editor:—The following is the report of the Manitowac County Cow-Testing Association No. 1, for thirty days ending June 17, 1916: The best cow in the association this month is a registered Guernsey, owned by Joseph Brennan, Cato, Wis. This cow is nine years old and weighs approximately 1,400 pounds. She freshened May 12th. Received only pasture during the time of her record, which is milk, 1,695.5, testing 5.0 per cent—84.8. A registered Holstein cow owned by Adolp Otto, Valders, was a close second, with 1,881.0 pounds milk, testing 4.2 per cent—79.0 pounds fat. Out of 480 cows tested, 115 of them made 40 or more pounds of butter fat, with 56 cows making over 45 pounds of fat. The registered Holstein herd of Torris Geraldson, of Manitowoc, had the highest average of fat production. Herd average, milk, 1,324.4 pounds; fat, 49.1 pounds. The grade Holstein herd of Pat Cahill, Grimms, had the greatest returns for $1.00 expended in feed. Amount of return for $1.00, $7.11, twenty-five cow herd. Following is the list of cows which produced 45 pounds of butter fat:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Joseph Brennan					
Bell, R. G...	9	5-12-16	1695.5	5.0	84.8
Cream, R. G.	4	3-12-16	945.0	5.2	49.1
Miehan, R.G.	13	3-15-16	1017.0	4.8	48.8
Reddie, G. G.	10	3-25-16	1170.0	4.0	46.8
Christ Muth					
Francis, R.G.	5	3-10-16	1073.0	4.9	51.9
Aug. Voelker					
Laura, G. J.	6	4-7-16	952.2	5.1	48.6
Oscar Pederson					
Dolly, G. A.	8		1086.0	4.4	47.8
Pat Cahill					
No. 3, G. H..	5	3-1-16	1152.0	4.2	48.4
No. 9, G. H..	6	3-4-16	1127.2	4.2	47.3
No. 12, G. H.	7	2-21-16	1527.6	4.0	61.1
No. 13, G. H.	5	4-5-16	1577.4	3.4	53.6
No. 15, G. H.	7	2-22-16	1416.1	3.4	48.1
No. 16, G. H.	10	2-1-16	1284.1	3.8	48.8
No. 20, G. H.	9	3-12-16	1349.2	3.5	47.2
No. 21, G. H.	10	3-10-16	1421.7	3.8	54.1
Torris Geraldson					
Martha, R.H.	4	2-1-16	1559.3	3.8	59.3
Pauline, R.H.	4	2-16-16	1513.8	3.6	54.5
Artasia, R.H.	4	3-16-16	1562.4	3.8	59.4
Canary P., R. H.	4	4-12-16	1228.7	4.0	49.1
Canary M., R. H.	4	1-21-16	1134.6	4.8	54.5
Labriga 2d, R. H.	4	2-19-16	1345.4	3.6	48.4
Libriga 3d, R. H.	4	1-16-16	1250.1	3.8	47.5
Piebe H., R.H.	4	3-14-16	1348.5	3.5	47.2
Canary M. M., R. H.	4	2-7-14	1348.5	3.5	47.2
John Eisner & Son					
Rose, G. H..	4	4-15-16	1364.0	3.4	45.4
Chas. Achenbach					
Jennie, G. H.	3		1360.0	3.6	49.0
Walter Behm					
Nellie, G. G.	5	3-26-16	1239.0	3.8	47.1
Adolph Otto					
Lady, R. H..	8	5-5-16	1881.0	4.2	79.0
Estata, R.H.	7	3-21-16	1758.0	3.3	58.0
Idyl K., R.H.	2	4-24-16	1620.0	3.2	51.8
Nels Johnston					
Empsie, R.H.	8	2-20-16	1586.9	3.4	53.9
Lady, R. H..	6	2-28-16	1386.4	3.6	49.9
Pauline, R.H.	4	2-1-16	953.7	4.8	45.8
Johanna, R. H.	10	4-12-16	1512.2	3.4	51.4
Johanna 2d, R. H.	4	4-22-16	1392.7	3.5	48.7
Desdemona, R. H.	11	4-24-16	1702.8	3.4	57.9
Ruth 2d, R.H.	4	4-20-16	1509.8	3.2	48.3
A. C. Thompson					
Besse B., R.H.	7	6-2-16	1478.0	3.5	51.6
Elmer Thompson					
Bess, G. H..	7	1-5-16	1142.0	4.6	52.5
Rose, G. H..	6	3-28-16	1442.0	5.1	73.5
Bell, G. H...	2	4-11-16	890.0	5.4	48.1
Geo. Thompson					
Martha, R.H.	11	5-28-16	1478.0	3.2	47.3
Ormsby, R.H.	3	2-27-16	1285.0	4.2	54.0
M. H. O'Dea					
Big 4, G. H..	7	4-28-16	1522.3	3.6	55.3
Mully, G. H..	2	4-27-16	1100.7	4.1	45.1
M. H. O'Connell & Sons					
Blackey, G.H.	9		1223.5	4.4	53.8
Chas. McCuly					
Ruby, G. H..	6	1-14-16	1573.4	3.6	56.6
Beauty, G.H.	4	3-22-16	1462.1	3.2	46.8
Ferd Lemburger					
Lily, G. H...	9	4-16-16	1364.5	3.8	51.9
Jessie, G. H.	9	4-13-16	1324.3	4.5	59.6
Julius Lindstedt					
H. Parthenea, R. H.	11	3-1-16	1922.0	3.8	73.0
P. Thiea, R.H.	3	2-18-16	1515.0	3.3	49.9
De Kol Beets. R. H.	3	3-25-16	1518.0	3.7	56.2
Blase Readerer					
Queen, R. H.	5	12-15-16	1135.8	4.2	47.7
Birdie, R. H.	8	5-4-16	1387.3	3.6	49.8
Ormsby, R.H.	2	4-17-16	1261.6	3.6	45.4

H. R. Brewster, Official Tester.

Cow Testing Brings Results.

Some months ago The Wisconsin Farmer started to publish reports of Wisconsin cow-testing associations, and through the kindness of testers and secretaries we have been able to get hold of a good many of these reports. At the time these publications were started, The Wisconsin Farmer listed all cows showing forty pounds or better of butter fat in thirty days. The list became so long that we had to raise the standard and publish only those which show forty-five pounds on thirty-day test. Now the list of forty-five-pounders is swelling on us and testing the capacity of space, so that we expect soon to have to enumerate in the lists only the fifty-pound cows or better. This is best proof of the improvement which is going on among the herds of members of Wisconsin cow-testing associations.

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Suppose He Buys a Hudson Super-Six

One thing we can't forget in buying cars. That is pride of ownership. The car is a pleasure vehicle. And it spoils the fun to be hopelessly outrivaled in about the same-class car.

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With this patented motor—certified a stock motor—it has done what no other stock car ever did.

It has made faster speed. It has done better hill-climbing. It has shown quicker pick-up. It has gone 1819 miles in 24 hours, breaking the best former stock car record by 52 percent.

It has beaten race cars by the dozen—cars of a very costly type. It has shown much more power than this size motor ever before developed. It has proved matchless endurance.

Suppose your neighbor gets this car. And you, while paying as much or more, get something less efficient. How will you feel when the two cars meet?

What These Things Signify

You do not care for reckless speed. Such power is rarely needed. But the Super-Six has the capacity. You know it to be the master of the road. It will do what you want without taxing half its ability. And that means economy.

It will cover more ground than lesser cars, without going any faster. This because of its quick get-away when you slow down or stop.

Its greatest supremacy—that of endurance—means years of extra service. How would you feel to have a like-class car excel yours in these respects?

Means 80% More Efficiency

The Super-Six motor—a Hudson invention—adds 80% to motor efficiency. That is, from a small, light motor it gets 76 horsepower. The same size of motor heretofore yielded us 42 h. p.

This result comes through ending vibration, the cause of motor friction. It gives such smoothness as you never knew before. And it means a long-lived motor.

It comes in a car, evolved under Howard E. Coffin, which has long stood for the acme in fine engineering. And it comes in the handsomest, best-equipped model that Hudson has ever designed.

If your neighbor gets it, and you don't, it may mean to you years of regret. In looks and performance, in prestige and endurance, he will have the advantage of you. Your Hudson dealer can prove these things beyond any possible question. And you should know them before you buy any high-grade car.

Any Super-Six owner—there are now more than 10,000—can tell you what it means to own one.

7-Passenger Phaeton, $1475 at Detroit—*Seven Other Styles of Open and Closed Bodies*

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AILING ANIMALS.

Deed to Wife and Child—Wife's Property.

A Subscriber, Camp Bellspoint, Wis.—My mother died twelve years ago, leaving my father and four children, who are now of age and married. My father married again and has a son by his second wife. My father has money and land and has been sick for two years. He has given all his money and deeded his land to his second wife and said son. (1) Can the four children of his first wife get any of his property by law? (2) Can a wife claim the milk and calves from cows given to her by her parents?

Answer.—(1) The four children cannot get any of their father's property by law. (2) She can.

No Fence—No Damages.

A Subscriber, Alma, Wis.—A and B own adjoining farms with a public road between them. A uses his land for pasture, and has a lawful fence. B cultivates his land and has no fence. If A's cows should enter B's field, could B recover damages from A by law?

Answer.—On account of B having no fence he could not recover damages from A by law.

Not a Citizen.

Mr. Albin J. Johnson, Crivitz, Wis.—A child was born of foreign parents on board an American steamship coming from Europe to the United States. Is said child an American citizen?

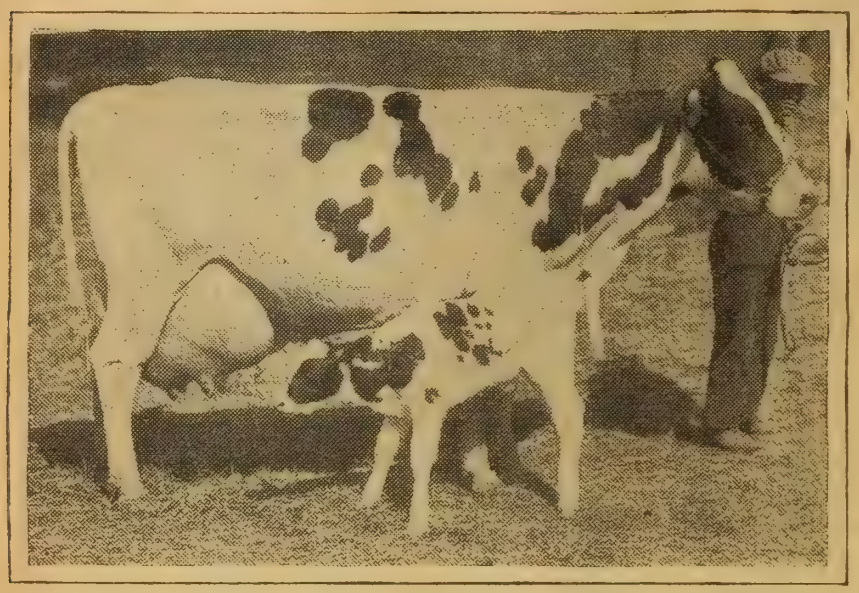
Answer.—Said child is not an American citizen.

That sweet clover will not grow on plowed ground is the claim made by farmers in some parts of Iowa. The Iowa Experiment Station men do not agree with this, however. A flourishing crop in Ringgold county that was sown on plowed ground has been called to their attention. The field is alongside the road from Mt. Ayr to Elliston.

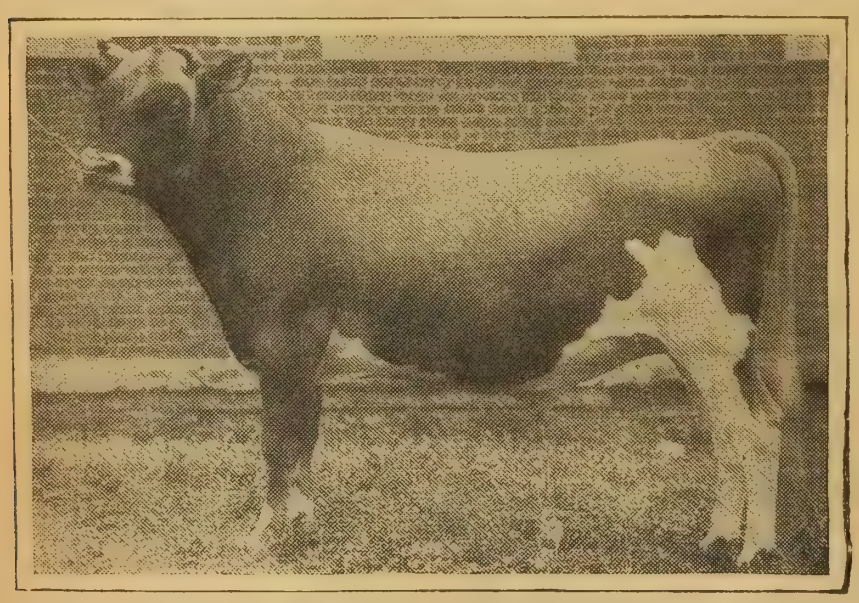
MANAGING THE DAIRY HERD.

Feed, Breed, Care and Selection the Fundamental Essentials or Principles in Building Up of a Dairy Herd—By F. H. Scribner, Fond Du Lac County, Wisconsin.

THERE are certain principles underlying all character of work, and the fundamental essentials or principles in the building up of a dairy herd I would like to divide into four classes, as follows: First, feed; second, breed; third, care; fourth, selection; and believe that the order given is their order of importance. Many breeders would say that breeding was of the most importance, but I have seen many a breeder that made a sad failure of the business because he ignored the feeding proposition, and made even worse than scrubs of his well-bred animals. Scant feeding means degeneracy, a weakening of all their constitutional and physical being, and not only incapacitates them for work, but making them, on account of their physical weakness, far more susceptible to disease. On the other hand, generous feeding of the right nature has a tendency to build up constitution and develop those tendencies that go to make up an animal that is worth while, in fact, feed is the only way that a dairy animal can be developed. The trotting horse can be developed by speeding a little each day, but the dairy cow is not built that way, and the man who is striving to improve his dairy herd must study this all-important question, so that a little later, when he begins to realize the necessity of better breeding, his time and money will not have been in vain. I find on looking over the long list of men, who have made a success in the dairy business, that they have followed along very closely to the lines of scientific investigation, or, if you please, good common-sense principles; that a cow, to do her best, must have about a balanced ration—that is, the right amount of protein to carbohydrates. Thanks to scientific research along this line—the chemist is able to tell us the composition of the different feeds. He tells us that protein is that element in foodstuffs that makes the muscle and growth, and that the carbohydrates furnish the heat and the energy. And, so, with this analysis, we are able to determine very closely a so-called balanced ration for our dairy cows. A cow to do her best must have her bodily condition kept right. This should be the thermometer which every feeder should go by. She must not be too poor—neither too fat, but in a good, healthy working condition. The cow's individuality should always be taken into consideration, and if she grows poor by feeding a so-called balanced ration, then this ration is not a balanced feed for her, and more of the carbohydrates or fat-making element should be fed. On the other hand, if a cow takes on flesh, then that is a sign that her ration is not balanced, and more of the muscle-making element—protein—should be fed. I visited a man the other day who had invested $200 in a pure-bred dairy sire, and in talking with him about feeding, he said: "Hay and corn fodder were good enough for his cattle," and we can imagine just about how much improvement he will make in the business. I also visited another man who was using his fourth pure-bred sire, and his cows graded up to thirty-one-thirty-seconds' pure-bred. They had all the markings of pure-bred animals, but were about as degenerated a lot of animals as I ever saw, simply through lack of feed.

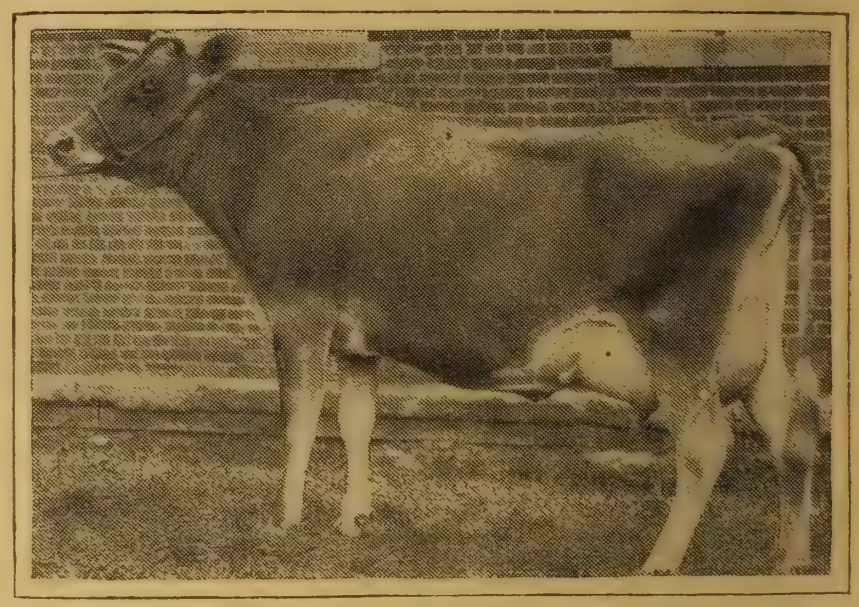


GENEROUS FEEDING OF THE RIGHT NATURE DEVELOPS THOSE TENDENCIES WHICH MAKE A DAIRY ANIMAL THAT IS WORTH WHILE.

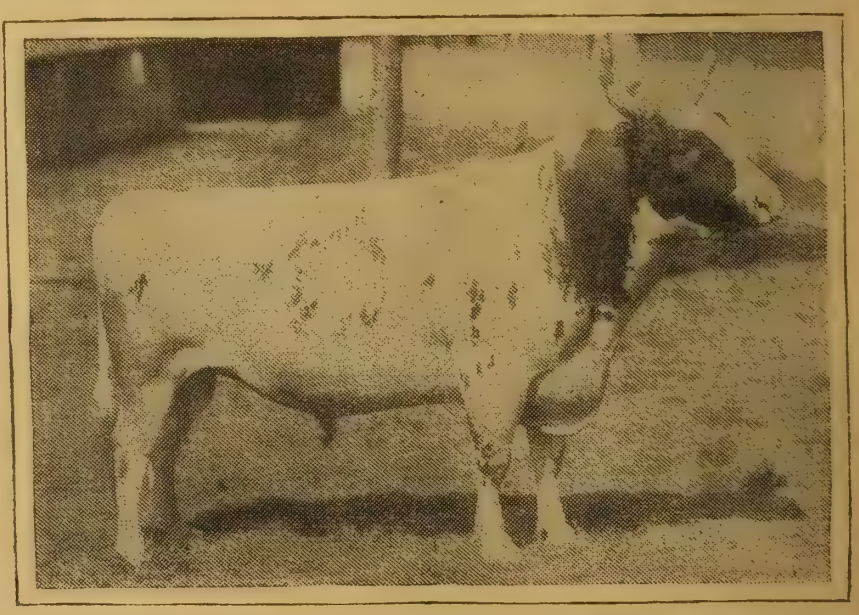


THE REAL VALUE OF THE SIRE IS BEST DETERMINED BY THE PRODUCING CAPACITY OF HIS MATERNAL AND PATERNAL ANCESTRY.

Class 2d. It is a fundamental rule in breeding that "like begets like." If we have an animal, whose ancestry for hundreds of years has been along dairy lines, is it not reasonable to expect that we shall get something of like characteristics. The dairy cow of today is more or less an artificial product. She has been brought up to this high point of milk production through scientific feeding and care. This seems to be an age of specialization, and I believe if dairymen would specialize more along this line, far better results would be obtained. Some seem to think they can get as good results from some of the dual purpose, or beef breeds, but it is about impossible to change the characteristics of these breeds that have been bred and trained so long for beef purposes. It is not my purpose to tell what breed of dairy cattle to use; our likes or dislikes may determine that, or local conditions may demand a breed that is better adapted to the work in that particular locality; but generally speaking, one will do best with what he likes best; he will usually take more interest, and get more enjoyment from his work. There are two things that are essential to success in any line of work, and they are "pleasure and profit." If there is no pleasure, a man does not dig into the secrets of the business, and does not learn the better and more economical way of doing things. Whatever breed is determined on, stick to it. Mixing of breeds is a positive failure in every sense of the word. Get the best there is in the particular breed you select and as a result of such work comes that uniformity of color, conformation and characteristics that brings enjoyment and pride.



A COW TO DO HER BEST MUST HAVE HER BODILY CONDITION KEPT RIGHT. THIS SHOULD BE THE THERMOMETER FOR EVERY FEEDER.



CARE GOES HAND IN HAND WITH FEEDING AND BREEDING AND IS ONE ESSENTIAL TO SUCCESSFUL DAIRYING.

Class 3d. Care cannot be separated from feeding and breeding; they go hand in hand, and if anyone of these is dropped out, the best success cannot be obtained. One drawback to the dairy business is that too many people try to make it a side issue; the work attended to whenever it is most convenient. If there is any branch of work about the farm that requires systematic care and attention, it is the care of dairy animals. The giving or making of milk is more or less of a nervous-energy process, and an animal so delicately constituted is very susceptible to changes in its feeding and care. Regularity in feeding and milking may mean the difference between profit and loss. There is probably no animal that appreciates or will respond to kind and gentle treatment, more than a dairy cow, and as this costs so little, I wonder that people do not use it more. A cow's comfort should always be considered, as any increased comfort means added remuneration to the business. In a recent cow census which I conducted, it was not an uncommon thing to find the water tank frozen solid, nor to find the cows turned out doors in the early winter morning, and compelled to stay out till night almost, regardless of the weather. It seemed to be the thought of many that a cow must be able to stand hardship; they did not want any of the so-called improved dairy stock because they were not tough enough to stand it, and I thought as I visited these farms, surely these men have reached the height of their ambition, for they certainly looked tough. It is an old saying that an animal well wintered is half summered—and well summered is half wintered. The cows that are brought through the winter in a poor condition, and when they come to freshen are still poorer, are indeed handicapped for work, as it will take half the summer to regain their physical condition, and all idea of profit

There are no hot winds in the Golden Prairie District—maximum temperature at Cheyenne, summer 1916 to August 1st, as shown by the U. S. Weather Bureau records, 88.5 degrees above zero on June 28th and July 2d.

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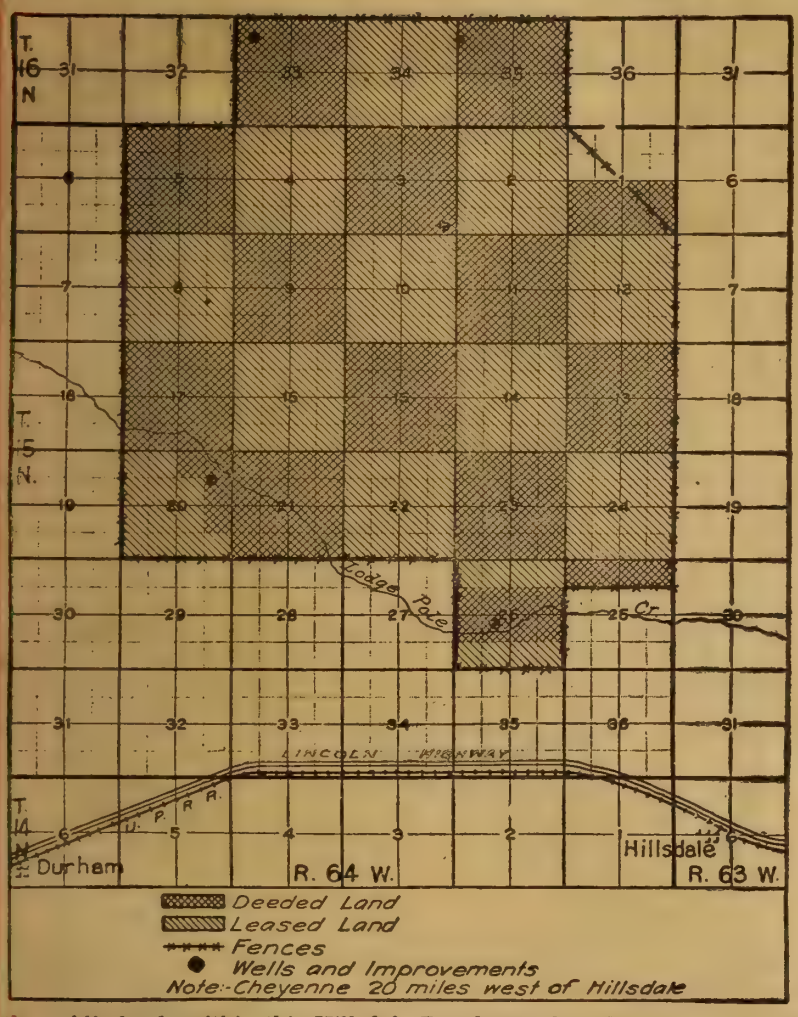

ON THIS page is found a sectional plat of the famous Hillsdale Ranch 16,000 acres in a solid body. It is the last tract to be converted into farms in a district famed for fertile soil and banner yields of grain grown without irrigation. It is equal to the very best of the district and we are now placing it on sale in farm units of 160, 320, 480 and 640 acres at prices less than

This picture is reproduced from photo taken July 20, 1916, on the Fred Lempke farm and shows in the foreground a corner of Mr. Lempke's potato field, bordered by rows of thriving poplar, box elder and other foliage trees. Immediately adjoining and just across fence in the background is our Hillsdale ranch, as pretty, fertile and well-located a tract of agricultural land as the sun shines on.

half its actual value, including with each purchase, free, a five-year lease on an equal acreage of adjoining land owned by the state of Wyoming.

"Why," you ask, "is each farm tract adjoined by leased state land?" When, ten years ago, all the other ranches in the district were broken up, owing to the odd-numbered sections being owned by the ranchmen and the even-numbered ones by the U. S. Government, the national administration compelled the rancher to remove all fences surrounding government land, the fence surrounding this Hillsdale Ranch was not molested **because all the even-numbered sections within its borders were owned by the state of Wyoming.**

Field of winter wheat in shock and binder at work on farm of Richard Spatz, adjoining the Hillsdale ranch. Photo taken July 20, 1916. This same field produced 50 bushels of oats per acre in 1915, the wheat shown being drilled into the oats stubble in September.

Prior to that time the national government had, by special act of Congress, donated land to the state for university purposes, with permission to select it from all the government land in the state. That the state authorities selected the public lands within this Hillsdale Ranch may be taken as an evidence of its superior quality.

These state lands are now held in five-year leases dated May 1, 1916, at an annual rental of only ten cents per acre. At the expiration of the present lease the land may be re-rented from the state, or, on request, the state will offer it for sale at public auction on terms of one-tenth cash, the balance of the purchase price running eighteen years with 4 per cent interest.

FARM VIEWS ADJOINING THE RANCH

On this page are shown reproductions of photos taken on farms adjoining this Hillsdale Ranch. They speak for themselves and bear eloquent testimony as to desirability of your securing one of these farms at the low prices and remarkable terms on which we are selling them. The soil is rich and well grassed. No sagebrush, no sand, no alkali. The surface is level to undulating and adapted to tractor farming. Its location and rich native grasses make it particularly attractive for combined stock raising, dairying and mixed farming. We guarantee an inexhaustible supply of pure water at reasonable depth under every farm tract sold.

This photo taken July 20, 1916, shows the modern improvements on the Richard Spatz farm adjoining the Hillsdale ranch. Mr. Spatz purchased his first 160 acres from us in 1908, moving here from Alberta, Canada, that spring. He now owns over 1,000 acres of Golden Prairie land and about 200 head of cattle and horses, and his modern, electric lighted home is the equal to the best in the older settled states.

Markets and Social Advantages

Hillsdale, within two to ten miles of any farm tract in the ranch, is a thriving railroad town on the main line of the Union Pacific Railroad and Lincoln Automobile Highway. It has a farmers' co-operative grain elevator, two general stores, one hardware and implement store, blacksmith and machine shop, bank, lumber yard, church, common and high school. Durham, where there is a general store, post office, church and school, is six miles west of Hillsdale and four miles from nearest portion of the ranch. Cheyenne, the state capital, an up-to-date city, with churches, colleges, modern flour mill, creamery and splendid market for farm produce, is 16 to 24 miles from any portion of the ranch, with splendid automobile roads all the way. The surrounding neighborhood is settled with a high class of people, principally American, with a number of families of Scandinavian and German descent.

Our prices for the deeded land are $17.50 to $22.50 per acre, on terms of $5.00 per acre down and balance in easy annual installments, with 6 per cent interest, or, where one-half cash is paid, five years' time on balance, the same interest. As stated above, with each purchase of deeded land is assigned to the purchaser, free of charge, the lease, running five years from May 1, 1916, on an equal acreage of adjoining state land.

Come now while you may see the crops growing and in shock or stack on adjoining or near-by farms. Fill out and mail us today the coupon on this page. It will secure for you, free of charge, descriptive literature and full particulars, including an illustrated pamphlet showing pictures of crops grown for past ten seasons and statements of farmers as to yields secured.

FEDERAL LAND COMPANY
BURNS, WYOMING

FEDERAL LAND COMPANY, BURNS, WYO.

Gentlemen: Please mail me at once full descriptive literature of your Hillsdale ranch and the Golden Prairie District of Wyoming.

Name.....

Address.....

You may, if you wish, also fill out the following: I expect to make a visit of inspection about ..... and if suited will want to purchase .....acres.

Remember this: That we are protected from hot winds and extreme heat by the snowcapped Rockies, always on clear days in plain view to the southwest. This is fully explained on page 3 of the booklet entitled "Wheat Growing and General Farming Without Irrigation in the Golden Prairie District" which will be sent to all who fill out and mail us the coupon on this page.

would be out of the question. The stable conditions are an important factor, as well; comfortable methods of tying, a comfortable place to lie down, with good ventilation and light, all come under this head of care.

Class 4th. Selection. If we would follow the same judicious care in the selection of our cows as we do in our other lines of farm work, much more would be accomplished. In the selection of seed corn for our next year's crop, we take special pains to secure the most uniform and typical ears, and with our small grains use similar care, and run them through the fanning mill, discarding the small and shrunken kernels. These things are selected by the eye; but no one can tell by the looks of a cow within 100 pounds of what their possibilities are in the production of butter in a year. Consequently we have to do this by weighing and testing the milk, and while this is a very simple method, yet very few, comparatively, are taking advantage of it. In the promiscuous way of saving the heifer calves to supply the herd without any knowledge of what the possibilities are of their dams, it is no wonder that the average production is so low. On the other hand, if one only knows which the best cows are, and saves their heifer calves, how much quicker a productive herd might be established. The selection of the sire to head the herd should receive very careful consideration. Some are influenced by pedigree alone, and think if an animal is only registered, that is about all that is necessary. The real value of an animal of this character should not be determined alone by this, but by the producing capacity of his maternal and paternal ancestry. Ten thousand dollars was offered for Colantha 4th, Johanna's last son; this value was put on him because of his dam's ability to produce, having produced 1,164 of butter in a year. We cannot all have cows like this. The average production of the cows of the country is below 200 pounds' butter a year. Yet, many are making 400 pounds, and there are some making over 600 pounds. What makes the difference? Simply the fact that their owners have followed these four fundamental principles: Feeding, breeding, care and selection.

In and Around Wisconsin.

"It is wonderful how the corn has grown the past three weeks," says a Chippewa county farmer. From a backward condition at the end of June, corn came up to better than normal, and in some cases extra good. The hay crop in Chippewa county is also reported fine.

Muskrat farming was profitable in the marshes near Lake Winnebago within the past year. Reports under the new state law show that 58,435 muskrats were captured in Winnebago county alone and that the hides were sold for $25,220.00. One farmer sold 12,125 hides for $5,303.60.

A fair cherry crop is the report along the lake front counties. The price has been about $1.50 per crate of sixteen boxes, and this will allow a good profit even on the average crop. The high price of sugar this year has had a tendency to hold down the prices of cherries, notwithstanding the light crop.

Editor Hull, in the Jackson County Journal, recently called attention to the fine stand of corn on the C. S. Ristow farm. Since then he has been receiving communications from other farmers, who assert that they have corn which is just as good. There seems to be great interest in the corn crop this year in Jackson county, and promise of a big yield of good quality.

Because of the limited number of entries, the proposed sale of pure-bred draft horses planned to be held at Madison in November, by the Wisconsin Horse Breeders' Association, has been abandoned. Breeders will be interested to know that for the first time this year there is to be an auction sale of pure-bred draft horses at the Wisconsin State Fair held on Friday. This sale is in charge of Fred Pabst, Oconomowoc, Wis., and should prove a splendid opportunity to sell good animals. Since the horse breeders' sale has been abandoned, breeders having animals for sale should correspond at once with Mr. Fred Pabst, Oconomowoc, Wis., manager of the state fair sale.

Farmers will assemble at Washington County's Farm, at the experiment station Thursday, August 17th, to review progress of the year. A study will be made of the possibilities of hemp and soy beans as a Washington county crop. Reasons for growing the latter crop have been summed up briefly by R. A. Moore and E. J. Delwiche, of the College of Agriculture, as follows:

They are more resistant to drouth than clover or alfalfa.

They may be substituted as a catch crop for clover when the latter kills out or is buried in sand drifts.

They rank with linseed and cottonseed meal as concentrated feed for live stock.

They gather nitrogen from the air and store it in their roots, thus improving the soil in which they grow.

They may be grown with good results on soil too acid for clover.

A conference and picnic will be held at West Allis, Wis., Saturday and Sunday, August 26th and 27th, at the State Fair Park, under the auspices of the American Society of Equity and the Federated Trades Council of Milwaukee. One feature will be a calf show, judging contest and sale in which the breeders of Waukesha county will have a conspicuous part. After the calves have been judged and prizes awarded they will be sold to the highest bidder. All it is necessary to do is to bring the calves and enter them with the secretary, Charles Will, Menomenee Falls or Gavin McKerrow, of Waukesha, or through the secretary's office direct. The committee in charge of arranging the live stock contests include Chas. J. Will, Frank E. Fox, H. E. Reddelein and Gavin McKerrow.

Save Money on Coal For This Winter.

FARMERS have a big opportunity to save money on their winter's fuel supply by laying in coal now at summer prices. From $2 to $4 a ton can be saved by buying Tecumseh coal direct from the mine before cold weather sets in. This coal is clean, free from clinkers and averages very high in heating units. By a club plan several farmers could take a carload of this coal and get special low rates on it. Many Tecumseh coal clubs have already been formed and have met with success. The advertisement on page 24 tells how this may be done. Those interested should cut out the coupon in the advertisement and send it, properly filled in, to Martin-Howe Coal Company, Chicago, Ill.—Adv.

Period of Molting Depends on Hen's Health.

THE molting season is quite some distance away, yet a few words in advance on this matter, so important to every farmer and poultryman, may not be amiss. Molting is hard on the hens, and it is because of the weakening influence of the process that they cease to lay. It is obvious, therefore, that any measure which tones up the general health of the fowl, will enable them to finish molting more quickly and resume their normal productiveness. What is needed is a medicine that is tonical in its effects, that improves digestion, regulates the bowels and supplies the necessary antiseptics to make and keep the blood pure. Among the many preparations for this purpose, Dr. Hess Poultry Pan-a-ce-a seems to be quite favorably regarded. It certainly fills the above-mentioned requirements and is conveniently easy to feed, as it can be mixed with the mash, either wet or dry. Dr. Hess, the compounder, is a widely known veterinarian, looked upon by many as an authority on all ailments and constitutional peculiarities of poultry and stock. Another advantageous feature of his preparations is that they are all covered by a broad guarantee whereby dealers are instructed to refund the customer's money if they fail to do all that is claimed for them. The fact that they are handled by over 28,000 dealers throughout the United States and Canada is in itself proof of the merit of the Dr. Hess & Clark preparations, as it is an evidence of their popularity.—Adv.

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Speed

Speed and big capacity give the Ann Arbor owner unbeatable advantages that mean extra profits, quick, money-saving work at lowest cost. Beat the weather man.

High speed with safety, true alignment of gears, extra long feed opening, quick "grasshopper" feeder arm.

Neat work, too—every bale smooth—free from "tails." Especially fitted for

Baling Hay, Alfalfa, Pea Vines, Soy Beans, Sudan Grass, Natal Grass and Lespedeza.

Power presses in separate or combination outfits. Use any engine. Hitch your tractor to the Ann Arbor.

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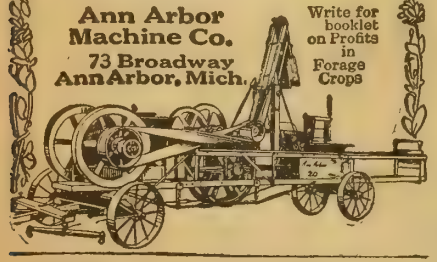
Write for booklet on Profits in Forage Crops



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SUCCESS CORN STUB CUTTER

leaves your ground free from stubs and easy to work. It is easily attached to Acme, McCormick-Milwaukee, Adrian, Deere and Osborn corn harvesters.

In comfort and in condition of fields.

Send for free booklet, "Comfort in the Cornfield."

CORN HARVESTER ATTACHMENT CO
524 South Dickenson St., MADISON, WIS.

LAKE FARM FOR SALE

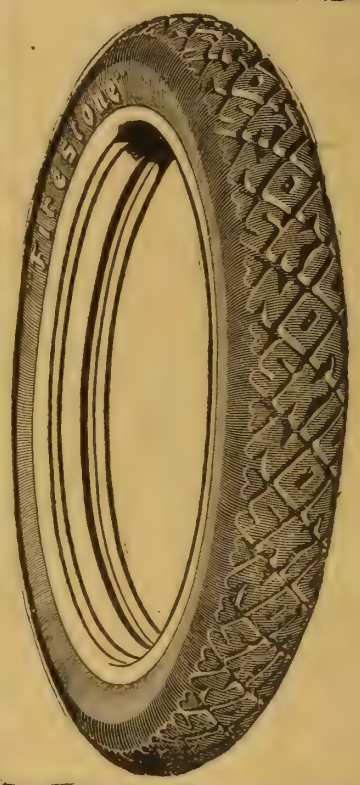
155 ACRES, Vilas county, 3 miles from Boulder Junction on the Milwaukee Railroad, good house, large barn, hog house, poultry house, machine shed, ice house, etc. 20 acres cleared. Home markets. Ten summer resorts within 7 miles. Good soil. Price $25 an acre. Write C. S. Aikin, 314 1st Ave. North, Minneapolis, Minnesota.

FARM WANTED. To hear from owner of farm or unimproved land for sale. Write at once C. X. Box 344, Olney, Illinois.

The Last Word "MILEAGE"

OPINIONS may differ on what constitutes a good tire until the mileage record speaks. Then Firestone mileage settles the argument. Firestone mileage talks convincingly. It has talked motorists into demanding twice as many Firestone Tires this year as last. It has talked many thousands of new dealers into joining the Firestone forces. It will talk you into insisting upon Firestones on every wheel and on the spare.

Firestone
Non-Skid Tires



now have Red Side Wall and Black Tread, a handsome color combination, the trademark of Firestone. It adds a touch of elegant "difference" to any car without showy effect.

The Firestone Non-Skid Tread means big economy of extra mileage while affording the greatest possible security against skid or slide.

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Let us send you a Firestone Cementless Patch Free—also copy of book, "Mileage Talks," No. 17 Write today. Meantime, see your dealer.

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service by "half-soling" them with Steel Studded Treads the same as European Motorists have been doing for over 3 years. 30,000 American Motorists have done this in the last 8 months and are saving $50.00 to $200 a year in tire expense.

5,000 Miles Without Puncture is the signed guarantee you get with every Durable Steel Studded Tread.

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Special Discount offered to motorists in new territory on first shipment direct from the factory.

Stop throwing away your worn tires—mail the coupon below for details—be sure and put in your tire sizes.

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The Colorado Tire & Leather Co.
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Without obligation send me free catalog, copy of guarantee, sample and booklet "10,000 Miles on One Set of Tires."

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New 1917 Model

FREIGHT PREPAID
If you live in the country or town under 10,000, you can become the owner of this new 1917 Overland without cost, as a reward for a few weeks' spare time work in your own community.
Write today. C. F. ALDRICH, Mgr. St. Paul, Minn.

Work of State Breeders' Ass'n.

Secretary Files With Governor Emanuel L. Philipp Report of Activities of Wisconsin Association For the Past Year.

AS SECRETARY of Wisconsin Live Stock Breeders' Association, Mr. A. W. Hopkins has filed with Gov. Emanuel L. Philipp, as required by law, a summary of the work done by the association for the fiscal year ending June 30, 1916. This summary emphasizes various branches of the association's work.

Through the co-operation of several railroad companies there has been carried on a series of live stock demonstrations from special trains. On these trains were shown good types of live stock adapted to Wisconsin conditions. With the exception of sires there were no pure-bred animals taken, the aim being to emphasize the value of the bred-for-production sires. Experienced stockmen accompanied the train and used the stock for demonstrating the value of proper breeding, feeding, management and care of live stock. In the past year special trains have made 47 stops and reached over 15,000 people.

In the fall of 1914 this association arranged with the managers of eight Wisconsin county fairs to present an exhibit of profitable and unprofitable farm animals. In this exhibit money-losing stock were shown in contrast to stock which insures the farmer a profit. These exhibits were discontinued in 1915 because of the foot-and-mouth disease. Nine more fairs will be visited with such exhibits this fall.

There are 128 community breeders' associations in Wisconsin. Within the past few years a large number of these have held summer conferences and demonstrations. The Wisconsin Live Stock Breeders' Association has undertaken to systematize this work and arrange conferences in circuits so that the speakers could be distributed to the best advantage and at low cost of money and effort.

In 1915 fifty-two state meetings were held in Wisconsin at an average expense of less than $6.00 a meeting. Forty such meetings have been held in Wisconsin this year up to June 30th at approximately the same cost. The association and the department of farmer's institutes have been holding live stock meetings on Wisconsin farms. Fifteen sheep meetings have been held in sections adapted to sheep raising.

Other activities of the association include boy's pig-growing clubs, baby beef contests in seven counties, live stock-judging contests, colt shows and campaigns for better live stock in the farm journals and state weeklies. Winners in the Wisconsin baby beef contest are to meet at Madison, November 22d-23d for the final show. Already forty-nine have filed entrance for this event.

The association has recommended a legislative enactment on the following subjects:

Dog law.
Misrepresentation of pedigree.
Interstate inspection of live stock.
Payment of one-half value of animals slaughtered on account of the foot-and-mouth disease.
Payment of one-half expenses of Wisconsin exhibitors at the National Dairy Show.

Several stockmen's conferences were held within the fiscal year and a great deal of information of value to Wisconsin live stock interest was furnished to outsiders. The Wisconsin Live Stock Breeders' Association, in order to encourage a greater use of milk record sheets, has printed and distributed among farmers, rural schools, high schools and county agricultural schools a supply of such records.

In June, 1913, the association arranged for a community exhibit of Wisconsin live stock at the Panama-Pacific International Exposition. Because its appropriation was cut down and because of the foot-and-mouth disease, but one carload of Wisconsin live stock was finally sent to San Francisco. That was a carload of Clydesdale horses, which made a splendid representation, capturing a majority of awards in its class. This exhibition cost the state $706.54. The breeders' association returned to the state treasury $4,000.00 cash which it was unable to use on account of inability to send its exhibit to San Francisco.

The association now has 1,500 active members.

Rock County Short-horn Breeders Organize.

Realizing the value of co-operation and organization, the breeders of Short-horn cattle in Rock county, Wisconsin, met at Janesville, Saturday, July 29th, and formed what will be known as the Rock County Short-horn Breeders' Association. There are more well-known Short-horn herds in Rock county than any other county in the state. By the following one can see the value of a county organization. Mr. D. B. Smith, of South Dakota, came to Wisconsin to buy a carload of dual-purpose Short-horns. In company with one of the field men of The Wisconsin Farmer they went to Janesville. Upon inquiry, they found it would be impossible to get a line on the cattle for sale unless each individual breeder was visited; consequently four days were spent in driving over that county and locating the cattle that were for sale. Had there been an association with a live secretary, he would have known who had stock for sale, and it would have been possible to have purchased this car of cattle in a day instead of taking five days for it, thereby saving the buyer a great deal of time and expense. This little incident served its purpose and the eighteen or twenty breeders that attended the meeting in Janesville were anxious to form a county association. Mr. D. B. Smith, of Mission Hill, S. D., gave a short talk on conditions in the Dakotas and said that there never was a time in his country when good Short-horns were in such demand as they are at this time. He says that the people in the West don't think there are any cattle in Wisconsin except Holsteins and Guernseys, this is due, of course, to the fact that these breeds have been widely advertised. Mr. T. P. Shreve, of The Wisconsin Farmer, talked on the value of co-operative advertising and mentioned several county organizations that had made a grand success by co-operation and consistent advertising. Mr. Markhem, secretary of the County Y. M. C. A. and one of the live wires of the county, deserves a great deal of credit for the success of this meeting. He acted as temporary chairman. The following officers were elected: D. P. Marquart, Milton Junction, president; Walter Little, Evansville, vice president; J. E. Kennedy, Janesville, secretary. The two officers, D. J. McLay, Janesville, and Jas. Campion, Milton Junction, were made directors. The next meeting will be held the first Saturday in September.

A Great Increase in Railroad Wages Means Higher Freight Rates and a Burden on Agricultural Prosperity

Do you think the railroads ought to increase the wages of their highly paid train employes $100,000,000 a year?

No great increase in railroad wages can be made without directly touching your pocketbook. Out of every dollar you pay the railroads 44 cents goes to the employes.

Compare the wages of these men (who have refused to arbitrate their demands for higher wages, and are threatening to tie up the country's commerce to enforce them) with those of other American workers--with yours.

On all the railroads in 1915 three-quarters of the train employes earned these wages:

	Passenger		Freight		Yard	
	Range	Average	Range	Average	Range	Average
Engineers . . .	$1641 3983	**$2067**	$1455 3505	**$1892**	$1005 2445	**$1526**
Conductors . . .	1543 3004	**$1850**	1353 2932	**$1719**	1055 2045	**$1310**
Firemen	943 2078	**$1203**	648 2059	**$1117**	406 1633	**$924**
Brakemen . . .	854 1736	**$1095**	755 1961	**$1013**	753 1821	**$1076**

You have a direct interest in these wages because the money to pay them comes out of your pocket.

Low freight rates have given American farmers command of the markets of the world.

With two-thirds of the cost of operating railroads the wages paid labor, any great increase in labor cost inevitably means higher freight rates.

A $100,000,000 increase in railroad wages is equal to a five per cent increase on all freight rates.

The railroads have urged that the justice of these demands be determined by the Interstate Commerce Commission (the body that fixes the rates you pay the carriers), or by a national arbitration board. The employes' representatives have refused this offer and have taken a vote on a national strike.

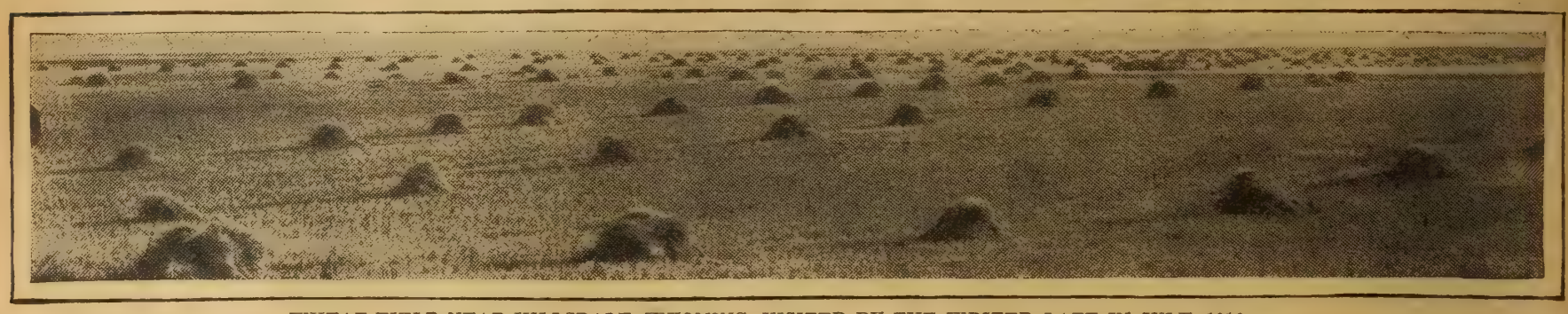
This problem is your problem. The railroad managers, as trustees for the public, have no right to place this burden on the cost of transportation to you without a clear mandate from a public tribunal.

National Conference Committee of the Railways

ELISHA LEE, *Chairman*
P. R. ALBRIGHT, *Gen'l Manager*, Atlantic Coast Line Railroad.
L. W. BALDWIN, *Gen'l Manager*, Central of Georgia Railway.
C. L. BARDO, *Gen'l Manager*, New York, New Haven & Hartford Railroad.
E. H. COAPMAN, *Vice-President*, Southern Railway.
S. E. COTTER, *Gen'l Manager*, Wabash Railway.
P. E. CROWLEY, *Asst. Vice-President*, New York Central Railroad.
G. H. EMERSON, *Gen'l Manager*. Great Northern Railway.
C. H. EWING, *Gen'l Manager*, Philadelphia & Reading Railway
E. W. GRICE, *Asst. to President*, Chesepeake & Ohio Railway.
A. S. GREIG, *Asst. to Receivers*, St. Louis & San Francisco Railroad.
C. W. KOUNS, *Gen'l Manager*, Atchison, Topeka & Sante Fe Railway.
H. W. McMASTER, *Gen'l Manager*, Wheeling & Lake Erie Railroad.
N. D. MAHER, *Vice-President*, Norfolk & Western Railway.
JAMES RUSSELL, *Gen'l Manager*, Denver & Rio Grande Railroad.
A. M. SCHOYER, *Resident Vice-President*, Pennsylvania Lines West.
W. L. SEDDON, *Vice-President*, Seaboard Air Line Railway.
A. J. STONE, *Vice-President*, Erie Railroad.
G. S. WAID, *Vice-Pres. & Gen'l Manager*, Sunset Central Lines.

Where Grain-Belt Farmers Win.

Golden Prairie District of Wyoming Is Scene of Fine Farms and Good, Modern Homes and Fine Live Stock—Settled Largely by Grain-Belt Folks.



WHEAT FIELD NEAR HILLSDALE, WYOMING, VISITED BY THE WRITER LATE IN JULY, 1916.

NOT one year of great crops or one lean year, may rightly be taken as the test of the success of a farming country. The Golden Prairie district of Wyoming has been opened for farming for about ten years and there are successful and happy farmers there who have spent several years in the district and have done well. Last season the writer visited this district and found crops so abundant as to be almost unbelievable to our friends back in the grain belt. This year the same section was visited at about the same time and despite a lack of rainfall, registering three inches less than normal to August 1st, the farmers of the district are doing well; the stock in southeastern Wyoming is fat and sleek; winter wheat and rye came out good and rains the first week in August insured good crops of late spring sowing. While the crops are not so large as in 1915, the general average is good and the high prices of grain and stock insure a good, fair profit to farmers of the Golden Prairie district for their year's work.

RICHARD SPATZ FARM NEAR HILLSDALE, WYOMING.

It was the writer's privilege and pleasure to attend a farmers' institute at Archer, which is only a short distance from Hillsdale and Burns and Carpenter. This institute was well attended, most of the farmers coming from the territory around Hillsdale and the district concerning which we wrote last year. These farmers were intensely interested in dairying and dairy feed crops, and also in the breeds of beef cattle. A large majority of those who attended the institute came in automobiles and they were not cheap-priced cars either. Almost as large a percentage of farmers in the Golden Prairie district have automobiles as have farmers in the rich farming districts of the grain belt. This was a surprise to the writer even after he had seen the wonderful crop of 1915, which crop, by the way, paid out on many farms of the Golden Prairie district and left the farmers money with which to build new homes or buy cars or make a pleasure trip back east to see the folks.

Pure-bred cattle, especially Shorthorns and Herefords, are being rapidly introduced into the Golden Prairie district, 185 fine Short-horns being unloaded at Hillsdale the day the writer visited that place. At the institute agricultural college men strongly urged Holstein cattle for the dairy farms of the district, but the men on the farms who want to go into dairying are more inclined to the dual-purpose or milking Short-horn. There is market close at hand for all milk or butter which can be produced. Cheyenne, Wyoming, has one of the finest creameries in the country. Natural grass on the prairies around Burns, Archer, Carpenter and Hillsdale, produces milk of 3.5 to 6 per cent test and in good quantities. Many of the farmers in this section do not feed their cows more than two or three weeks out of the year. The usual rule is to give no feed except when snow covers the range and makes it impossible to find feed easily. Steers for feeding are imported into the Golden Prairie district from further west in Wyoming and sometimes from Omaha and St. Joseph or Kansas City. Although steers in our blue grass and corn sections are fed six months of the year, they are frequently topped by the range-fed steers from Wyoming. It is because of the small expense of feeding on the range that steers may be bought at the Missouri river yards and shipped to Wyoming, fattened and returned and sold at a good profit. A few years ago the Wyoming cattle man figured on $1 a year for branding, feeding and salting a steer. This was in large droves, however, and the expense is somewhat greater in smaller lots. The Wyoming feeder doesn't hesitate to keep cattle over a winter, as the expense of winter-feeding is so small. If he can add $25 to the selling price and his expense is not to exceed $1 to $2.50, he has a wide margin of profit without additional investment.

FARMERS' CARS AT WYOMING SUMMER INSTITUTE, JULY, 1916.

A great many interesting first-hand stories from settlers in the Golden Prairie district were secured by the writer. On this page is shown the farm home of Richard Spatz, north of Hillsdale and just adjoining the Hillsdale ranch. This new home is just about to be occupied. It is modern in equipment. Mr. Spatz has his own electric light plant, can telephone to town any time, has regular daily mail delivery, enjoys healthful breezes every day, and has the best drinking water we have tasted in a long time. Mr. Spatz formerly farmed in Minnesota and did well. He has 480 acres in crop this year and owns now 3,000 acres of Golden Prairie land. The larger portion of this he purchased with profits made on his farm. He told the writer that he cleared $10,000 last year. He has 200 head of stock all in the finest condition, including horses, cows, and hogs. Last year he raised two tons of alfalfa to the acre, one ton at each cutting, but this year his alfalfa did not do so well. This alfalfa, by the way, is much richer in protein than that raised in the grain belt states where the yield is often greater. Mr. Spatz is raising trees, box elders to be specific, and a group of trees almost four years old and 90 per cent growing out of the original planting, may be seen in the illustration. He was cutting wheat the day the writer visited his farm and gave it as his opinion the cut would run twenty bushels to the acre. Not such a large crop as in 1915 but a good paying yield.

ON THE FRED LEMPKE PLACE, GOLDEN PRAIRIE DISTRICT OF WYOMING.

POTATOES NEAR ARCHER, WYO., TA KEN LAST WEEK IN JULY, 1916.

Mrs. Spatz advised us that her cows give good quantities of milk testing 3.6 per cent to 4 per cent and she sells the fat at 28 cents a pound. The cows are fed only on native grass, except possibly a week or ten days in the winter after a big snow. A big snow means a little cattle feeding, but it is fine for the winter wheat. Spatz owns a tractor and does some plowing for his neighbors. He also has a threshing outfit. His fields of grain were not different in quality or yield from the majority of fields in his neighborhood. Several good homes are going up in the same neighborhood. Oats ran 50 to 60 bushels in this neighborhood in 1915 and recent rains will bring a good fair crop this season.

Fred Lempke, formerly a resident of Chicago, is building up a fine farm in the Golden Prairie district. An illustration showing his house, garden and trees three years old will be seen on this page. He says 95 per cent of the trees he planted grew. Someone has said that where trees will grow crops will grow, and trees are certainly getting a start in the Golden Prairie district of Wyoming. Mr. Lempke is growing Norway poplar, box elder and jack pines.

Roads are always good in Wyoming. Markets are close and every product can be sold for cash as soon as it is marketable. Potatoes are a good crop, and corn will do well, especially such as is to be used for the silo for winter feeding. Not a great many silos have been erected as yet, as there has been little demand for winter feed. The cornstalks are short, but the yield and quality of both the flint and dent varieties are surprisingly good.

The Golden Prairie district of Wyoming has no hot winds. The nights are always cool. Around 88 degrees above zero is the maximum on the hottest days of the year. The rainfall is well distributed and the soil produces very rich feed. Alfalfa meal mills are anxious to get Wyoming product because it is so much richer in protein than alfalfa grown in Mississippi valley altitudes. Because of this richness grass and forage crops put fat on the cattle even though the yield looks small. Where winter wheat and rye is practically a sure crop, where spring sowed grains have made good years in succession and produced in great abundance in good years, where cattle can be fattened for market or fed for dairy production at such low expense, where hogs do fine, where markets and market conditions are like they are in the grain belt, and where farm comforts and conveniences may be enjoyed by all—this sums up the Golden Prairie district. The writer met many people with whom he had a personal acquaintance and they were all enthusiastic about the country. The year just closing will bring good profits considering the prices paid for the land.

Corn Shows Good Prospect.

Backward Crop Approaches Normal Condition--Rain Now Needed--Small Grains Making Fair Yield--Live Stock Thrifty.

WISCONSIN.

Adams County.—The drouth is having its effect on corn, oats, potatoes and clover seed. The damage is mostly on high land. Early potatoes are proving to be a light crop. Rye is satisfactory. Corn needs rain badly. Hay produced well and clover and timothy will make good seed. Gardens are suffering from dry weather.—C. T. Leonard.

Buffalo County.—Corn is growing very rapidly on account of the extreme hot weather and promises a good crop. Small grain was much damaged by floods, especially in the eastern part of the county. Nearly all grain is damaged more or less, and some fields will not be cut. Potatoes are looking well. Berries are quite plentiful. Gardens are looking well, although they are beginning to show the effects of dry, hot weather. Haying is nearly finished and the returns are very satisfactory.—James G. Bates.

Chippewa County.—Weather has been very hot for the last week, and corn is in normal condition—it is just tasseling. Some of the potatoes suffered from blight the last week, but in general they are good. Haying is nearly finished, and a good crop is going up. Barley and rye are cut; oats are now being harvested. Oats are somewhat rusty, but otherwise good. Pastures are good in spite of the hot weather, and live stock are fine. Threshing from the shock just commenced.—Ernest Weitzel.

Door County.—For the last ten days crops have been suffering from hot weather and drouth. Rye and barley have good, well-filled heads and are now being cut. Oats are ripening prematurely on account of drouth. Early potatoes are small. The milk supply is falling off since pastures are drying up and flies are very bad. The cherry season is now on and the United Fruit Growers are shipping cherries at the rate of five carloads a day. The Early Richmonds were only 25 per cent of a crop, but the Montmorencys were fine and brought the average up to about 60 per cent normal. Cherry prices are good.—L. E. Birmingham.

Douglas County.—Weather is dry and potatoes and corn crops need rain. The hay crop will be an average; most of it is up. Rastures are drying up. The harvest of small grains will begin about August 15th. Rain is needed.—B. N. Stone.

Iowa County.—Everything is suffering badly from the continued heat and drouth. Oats, barley and other small grains failed to fill out well, and what promised to be a bumper crop will be only medium. The straw on the small grains is heavy. Hay was put up in perfect condition. Corn is shriveling up and only good rains can save it. Potatoes are small and average few to the hill. Pastures are drying up and the milk production is falling off. Harvests are slow because of the great heat. Rain is the thing we are needing.—Art G. Hoskins.

Jackson County.—Corn is suffering from heat and drouth. Some fields of oats on sandy soil are practically ruined because of drouth. Potatoes look fair, but need rain badly. The new seeding of grass is suffering greatly.—C. S. Ristow.

Juneau County.—Harvest is nearly finished. Barley appears well. Oats are not an average crop. Meadows and pastures are brown in color since there has been no rain since the middle of June. Corn and potatoes need rain. Fruit also is suffering from lack of rain.—C. W. Hale.

La Fayette County.—Oats and barley are nearly all cut. Oats are a little light due to hot, dry weather when they were filling. Barley is good. Corn is doing well considering the dry weather, but will need rain soon. Pastures are dried up, and cows are producing less milk. At some factories the milk supply has fallen nearly one-half. Most of the hay is up. Some farmers harvested grain before finishing haying. A very large amount of first-class hay was put up this year. The new seeding looks fine since the oats have been cut, but must have rain soon. Early potatoes are poor and late ones will be light unless it rains soon.—W. F. Pease.

Langlade County.—Most of the haying is finished. Rye, winter wheat and barley are ready to be cut. Early sown spring wheat is in the dough stage. Apples are falling off badly. Potatoes look well and do not seem to suffer much from the heat. Homegrown potatoes are now on the market. Pastures are fair; a warm rain made the clover sprout up quickly. Corn shows silks now.—Chas. Parsons.

Marquette County.—Only one rain fell in this region from June 9th to July 23d. Therefore, upland pastures have dried up. Oats on light soils are short and poor. Corn has a dark color and is doing fine. Some late rye of good quality has been cut. Potatoes have a fair stand and bugs have not bothered them. A lot of marsh hay of good quality has been cut. Cucumbers are growing fine since the rain. Live stock are healthy, but many horses have been overcome by the heat.—J. M. Williams.

Pierce County.—Weather has been extremely hot and dry. Small grains were badly injured. Early potatoes are poor. Pastures are dry. Corn and late potatoes must have rain soon.—G. K. Moore.

Price County.—A heavy crop of hay is being harvested. Winter grains are getting ripe and promise a good crop. Oats look fair, but are suffering somewhat from drouth. Potatoes and other vegetables promise fair yields. Pastures are in good condition. Live stock look fine.—C. F. Glissendorf.

Polk County.—With temperatures ranging from 90 to 100 degrees in the shade and no rain since June 28th, all crops are suffering. Haying is nearly finished. Barley is being harvested and the crop is fair. Oats are nearly ready for cutting. Corn and potatoes look well, but must have rain soon. Pastures are drying up; so is the garden truck. There will be a good crop of cucumbers for pickling.—P. F. Amery.

Portage County.—The continuous warm weather and no rain has hurried the oats so that they are now ready to cut. Corn has been growing rapidly until the present. The hay crop is nearly all up and yielded much heavier than usual. Potatoes look well, but the bugs have done considerable damage in some places.—Arthur H. Peterson.

Taylor County.—Oats and barley have improved wonderfully in the last three weeks. Barley is commencing to ripen. Rye has also improved and will make a good crop. Hay is a bumper crop this season and not all of it has been put up. All crops are about two weeks late because of the cold, wet spring. Hot weather is making the corn grow, and if the fall is favorable, we will get a good crop in this county. Potatoes look well and all vegetables are good. Pastures are all right, but if the dry weather continues they will suffer later on.—J. C. Hoffman.

Rusk County.—Weather has been favorable for haying and a large crop was put up. A few farmers have finished haying. Oats are liable to blight, although the present indications are for a good crop. Corn is growing rapidly and prospects are good. Two or three showers during July have kept pastures green, and dairy and beef cattle continue to do well. The potato crop will be an average.—T. M. Thomas.

Washburn County.—The warm weather during July has greatly improved the outlook for corn. The ears are forming well. A heavy crop of hay has been secured in excellent condition. Oats on the lighter soils are somewhat short and damaged by blight, but on heavy soils they look well. Rye and barley harvests are under way. Average crops are expected. The second crop of clover is coming into bloom. Pastures are getting short and some stock is being shipped out.—L. D. Garnhart.

Washington County.—Most of the rye, winter wheat and barley has been cut, and the yields will be good in spite of unfavorable weather conditions. Some of the oats will be poor on light soils because of the hot, dry weather, and some of the late seeding of oats will be light. Alsike clover is making a poor yield here. Much of the crop was cut for hay earlier in the season. The alfalfa crop, which is light, has been cut. Early potatoes are small, due to drying up of the vines, and if it does not rain soon, late potatoes and corn will suffer. Corn has done well so far.—M. P. Salter.

Waukesha County.—Crops are drying up in this vicinity. Where they have had local showers, the oats and barley look very well. A heavy hay crop was put up in fine condition. The intense heat for the last few days has curled the corn leaves so badly that the corn will be light in some places. Early potatoes will make a very light yield but the late ones may do well if it rains. The second crop of alfalfa is light. The new seeding looks fine.—W. J. Mann.

Wood County.—Weather is hot and dry and all crops are suffering from lack of rain. Corn on the sandy land has been wilting for two weeks, but on the lowland and in the river bottoms it looks fair. It is tasseling and ears are forming, but the crop will not be much unless it rains soon. Rye and barley are cut and each will make about one-half a normal crop. Oats ripened too soon. Early potatoes are poor; with rain late potatoes should be good. Hay made a good crop. Pastures are poor.—Fred E. Weber.

AMERICA'S MODEL EXPOSITION
— OPEN TO THE WORLD —
MARVELOUS ARRAY OF CATTLE, HORSES, SWINE, SHEEP, POULTRY, AND DAIRY, HORTICULTURAL AND AGRICULTURAL PRODUCTS.
SIXTY SIXTH YEAR OF THE
WISCONSIN STATE FAIR
MILWAUKEE
SEPT. 11. 12. 13. 14. 15. 16.
$65,000.00 in Premiums and Purses and Thousands of Dollars in Special Prizes.
OVER 30 COUNTY EXHIBITS
BIG DISPLAY OF WOMEN'S WORK
NIGHT FAIR SEPT. 12. AND 14.
MAMMOTH EXHIBITS AND CONTESTS of FARM BOYS & GIRLS of WISCONSIN
$1,550 in CASH PREMIUMS
OVER $6,000 in SPECIAL PRIZES
BIGGEST AUTO SHOW OF YEAR
4 DAYS OF HARNESS RACING, SEPT. 11, 12, 13, 14 AND 2 DAYS OF THRILLING AUTO RACES, SEPT. 15 AND 16.
ITALIAN BAND OF 50 AND 6 SINGERS. 10 OTHER BANDS
RUTH LAW LOOPS-LOOP, FLIES UPSIDE DOWN DAY AND NIGHT
WILD WEST, 80 PEOPLE, 100 HORSES AND CATTLE, TWO COW-BOY BANDS
$20,000.00 FREE PAGEANT DOWN TOWN IN MILWAUKEE, NIGHTS, SEPTEMBER 11, 13, 15
Twenty-two free circus acts in continuous performances on three Platforms
SACRED CONCERT BY ITALIAN BAND AND SINGERS AND EXHIBITON BY RUTH LAW SEPT. 10. ADMISSION 25 CTS.
GENERAL ADMISSION 50 CENTS. NIGHTS, 25 CENTS.
S-P ENG. CO. MIL

Auto-Oiled Windmill
ALL WORKING PARTS INCLOSED
and flooded with oil from the supply in the gear case, which needs replenishing only once a year.
Put your old Aermotor wheel and vane on this self-oiled motor and have an up-to-date outfit at small cost.
DUPLICATE GEARS RUNNING IN OIL
Oil Annually
EVERY BEARING FLOODED WITH OIL
This helmet keeps out rain keeps out dust keeps in oil
Thousands of Auto-Oiled Aermotors have replaced other makes of windmills on their old towers. An Aermotor with a short stub tower can easily be put on "any old tower." It is worth the price to get rid of the continual climbing.
THEY NEED ATTENTION BUT ONCE A YEAR.
Write for Folder-Hanger. It tells all about Auto-Oiled Aermotors and Easy-To-Build-Up Towers.
AERMOTOR CO., 1143 S. Campbell Ave., CHICAGO
DUPLICATE GEARS

The PERFECT CORN HARVESTER
Sold Direct $19.50 JUST the THING for SHOCK or SILO CUTTING
Works in any kind of soil. Cuts stalks—doesn't pull like other cutters. Absolutely no danger
Cuts Four to Seven Acres a Day
with one man and one horse. Here is what one farmer says:
Frederick, Wis., Feb. 4, 1915
Love Mfg. Co.: Dear Sirs: Your machine will work where it is too soft for a binder. It cut my corn and did not pull any up. As nearly as I could figure it did the work of four men. Yours truly, F. J. Stoner
SOLD DIRECT TO THE FARMER
Send for booklet and circulars telling all about this labor-saving machine; also containing testimonials of many users. Send for this circular matter today.
LOVE MANUFACTURING COMPANY
Dept. 30 Lincoln, Illinois

Berry Crop in Marinette County.

To the Editor:—Estimates from express and railway station agents and other reliable sources indicate that the total of the wild berry crop shipped from Marinette county this season will be in excess of $50,000.

In late years the harvesting of the wild berry crop has become an industry of considerable importance, offering as it does an opportunity for farmers and new settlers to bring in a considerable sum of money with no investment. Last year the berries shipped from the one station of Ellis Junction brought over $15,000, and just as heavy shipments were made from other small stations.

One of the greatest blueberry and raspberry crops in the history of the county is being harvested at the present time. In places the ground is literally blue with the heavy crop of blueberries. The wild strawberry crop was also heavy, and indications are that the wild blackberry harvest will be bountiful. Howard I. Wood.

Arrange For Potato Convention.

To the Editor:—On Monday, July 31st, the executive committee of the Wisconsin Potato Growers' Association met at Eau Claire with the local Eau Claire Convention Committee. Convention plans are rounding into form.

George Wallace, general freight agent of the Omaha railroad, has nearly completed arrangements with Wisconsin railroads to route several cars to Eau Claire at the time of the convention. This will enable all Wisconsin potato growing counties to send in large-sized exhibits. It is evident now that about twenty counties in Wisconsin will desire to equip county booth exhibits.

Early convention announcements are calling special attention to Wisconsin seed potato trade and to sorting and grading on the farm and at loading stations. The association will give considerable attention to these two subjects at the coming convention at Eau Claire in November.

Southern seed potato buyers are looking over Wisconsin conditions and several seeds contracts for the Triumph variety have been let. Inquiries are coming from as far as Bermuda Island.

A special premium list on school contest exhibits and potato club exhibits is out and will be mailed to all contestants in Wisconsin upon application.

J. G. MILWARD,
Secretary Wisconsin Potato Growers' Association.

Shawano County No. 1.

The Shawano County Cow-Testing Association No. 1 has recently completed the second month of its existence, with 385 cows under test. I would be pleased to see mention of our association in The Wisconsin Farmer. The following is the list of cows in the association which have produced 50 pounds of butter fat or better during the period of thirty days, ending July 9th:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	B. fat Pounds
Alfred Issacson					
Topsy, G. G.	10	5-1	1347	4.8	64.6
Gus H. Rousseau					
Brownie, G. J.	4	5-5	1362	4.2	57.2
Hannah, G. S. H.	6	4-9	1281	4.5	57.6
Emily, G. S. H.	6	4-10	1308	4.6	60.1
Frank Dittman					
Lily, G. H.	4	5-31	1260	5.3	66.7
Effie, G. H.	5	4-22	1380	4.1	56.5
Lottie, G. H.	6	5-2	1377	4.6	63.6
Bet, G. H.	10	5-4	1359	4.0	54.3
Chris Hansen					
Masata, G. G.	6	4-12	1389	4.4	61.6
Paul Druckrey					
Star, G. D.	7	3-15	1398	3.9	54.5
Wm. Terck					
Bossie, G. H.	12	2-15	1065	5.0	53.2
Naber Farm Co.					
Madalene, G. H.	8	4-3	1218	4.4	53.5
Geo. Park					
Nancy, G. G.	4	3-12	945	5.6	52.9
Chas. Hansen					
Topsy, G. H.	10	5-4	1257	4.1	51.2

C. M. Rydberg, Official Tester.
Adolph Terck, Secretary.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Breeding Necessary For Winter Eggs.

Feeding for winter eggs is very necessary, but contrary to the popular opinion, it is not the whole thing. No amount of care and attention can get maximum results from a bird that is not provided by nature to produce eggs out of season.

Among all forms of animal life, hens included, reproduction is largely a matter of inheritance. Some families are more fertile than others, with exactly the same environment. In the matter of producing eggs, we have a vastly different problem than that of producing a heavy flow of milk. The latter is a matter of feed. The former is a matter of both feed and reproduction. While good care will bring out the best in a mongrel flock, the fact remains that better results will be realized from the flock that is carefully bred along its own particular line.

One enthusiast claims that with the exception of the molting period, a hen should produce an egg each day of her life. This is not reasonable. Neither have the laying contests brought out anything of the kind. That it is possible to build up a strain of 200-egg hens is true, because it has been tried, and not found wanting. This means that the flock must be bred that way and fed rightly.

A very choice White Wyandotte hen was sold a few years ago at the seemingly unreasonable price of $800.00. When we hear of a bird selling for such a price, the conclusion is at once drawn that it is for show purposes alone, and it tends to discourage rather than to encourage farm poultry people, who do not expect to ever do anything with poultry other than from a commercial standpoint. This hen was an exception, and purchased for exceptional purposes.

Her purchaser was a born poultryman, and had many years' experience as manager of large poultry plants. When he began operations for himself, he had a definite aim, and that was to build a plant that would excel in the production of eggs. With this aim in view, he began picking up breeding stock here and there that had a bona fide egg record. The White Wyandotte in question had produced the then almost unheard of number of 200 or more eggs in a year. Although the utility side was uppermost, the other side, the markings, was never neglected, though a bird was never purchased for its show record alone. It must have both breeding and prestige at the work-a-day business.

From that hen this poultryman has built up a flock of hundreds of 200-egg hens. Little by little he, in the same manner, added breed after breed to his plant, all with the idea of keeping nothing except hens that have reached the 200-mark, and it was highly successful. This is his business, of course, and not applicable only in a limited manner to the farm where poultry is mostly a side line.

Eggs are sold for hatching, as well as baby chicks, and the immense incubators are kept busy all through the hatching season, with hundreds of disappointed customers who did not speak in time. More and more farm people are considering the egg side of the question. The past spring, at a farm where they have always prided themselves on their splendid big Barred Rocks, we were asked for the name of a reliable breeder of Rocks, with the idea of cockerels being purchased. "We want a good laying strain," was the keynote of the inquiry.

Instantly our mind ran to this poultry farm, where the prime factor is to produce heavy egg yields, and the address was given. His heavy egg yields did not just happen. They are the result of selection, year after year, always mating for a definite result. And results are realized, too. It has become a matter of inheritance for this flock to be depended upon to produce winter eggs, else it could, by no manner of means, be able to produce the 200 eggs yearly.

This poultryman has never shown a bird, though the breeding is looked after from this standpoint so carefully that his customers have been very successful. He has accomplished along this line what few breeders do or can. Followed no particular line or strain. Whenever a hen lays 200 or more eggs, and her breeding is straight, he buys her.

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HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Atwater-Kent Lighting.

I want to know how a headlight can be run from an Atwater-Kent system, Type K.

Answer.—The above system is for ignition only, and cannot be used for lighting.

Gear Ratio on Motorcycle.

How is the gear ratio on a motorcycle having four sprockets figured?

Answer.—Divide the product of the number of teeth in the driven sprockets by the product of the number of teeth in the driving sprockets.

Lighting From Dynamo.

Could I successfully use a Knapp Type S dynamo motor for lighting a six-volt, fifteen-candle-power headlight on a motorcycle? The motor will generate six volts, four amperes at 1,500 R. P. M. Would the light be brighter than Prest-O-Lite? When geared fifty to one, how much power would the motor have?

Answer.—Your generator should supply the light, but might not be very durable under constant use. The light should be as bright as the Prest-O-Lite. Used as a motor, it should develop about one-thirtieth of a horse power.

Motor Bearing Trouble.

I have a 1912 Cadillac car that is causing me some trouble. It is equipped with a Delco starter and ignition. It has two timers, one for the storage batteries, and one for the dry cells. The motor runs all right when it stands in the shed, but when I run it three or four miles and stop, it misfires and stops when I try to start it again. The crank case and everything near the motor heat up so that one can hardly touch it. I had the car to a repair shop some time ago to have a knock taken out. Do you think they have done something to it to cause the trouble? What do you think is the matter?

Answer.—If your motor is hard to crank when hot, the repair man has adjusted the bearing a little too tight in order to take out the knock. When the motor becomes hot, the bearings tighten on the shaft, causing the motor to heat and lose power. Of course, there are other possibilities. An air leak in the intake could cause the trouble, the air leak being caused by a strain in the manifold, the strain being increased by the heat of the motor. Too much gasoline or too much oil might cause the trouble.

Ice Machines For the Farm.

In a recent issue you gave a description of a system for making ice on the farm. Can you tell me the number of feet required for the piping; how large the vat should be, how to mix the brine, and where to buy the ammonia? Perhaps you can give me the name of a firm making such a device. Does it require expert knowledge to run such a plant? We have a gas engine, and if we could make ice, it would be a fine thing to go hand and hand with the cream separator.

Answer.—The description given was of the common ammonia machine. Such a plant does not require much expert knowledge to run. It does require a fair knowledge of pipe fitting to install it, as the piping must be perfectly air tight, otherwise the ammonia would soon waste away. The brine is made by dissolving as much common salt as possible in water. For the brine tank, make a wooden box that just fits inside the icebox of your refrigerator, which should have a capacity of not less than 100 pounds of ice. Line this box with sheet lead one-eighth of an inch thick, soldering the joints. Make the brine tank coils of one-half-inch gas pipe, the pipes being about three inches apart or less. Two coils should be used, each just long enough and wide enough to fit up nicely against the side of the tank in the brine. The cooling water tank should be at least four times as large as the brine tank, and may be made of wood. Also about four times as much pipe must be used for the cooling water. It is possible that your hardware dealer could furnish you with a compressor and tanks. Or he might give you the address of some jobber that handles such goods. Write to the State University Chemistry Department of the state you live in for information as to where to obtain the ammonia. The ammonia is a gas, and comes in small steel tanks, highly compressed. The Johns-Manville Co., of Chicago, Ill., can furnish you with a complete outfit, ready to install. This outfit uses sulphur dioxide gas instead of ammonia.

Not Practical.

Please tell me how to make a battery tester which tests volts and amperes; also how to make a cheap storage battery.

Answer.—It is not practical to do either of these things on a farm. The tester may be purchased for about $1, and special tools and instruments are required to make it. It would cost as much or more to make the battery than to buy one, and unless properly constructed and charged, it would be a failure.

Tail Light on a Ford.

Please publish a wiring diagram for a tail light on a 1916 Ford auto. Would a six-volt, two-candle-power bulb burn out?

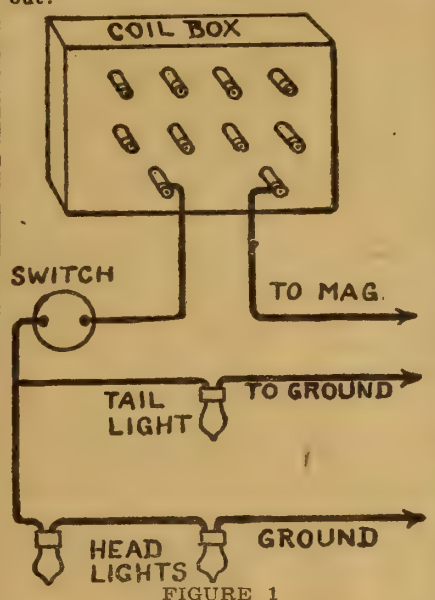

FIGURE 1

Answer.—Figure 1 shows how to wire the car. Use a two-candle-power tail light of double the voltage you are using for your headlights. The six-volt bulb would burn out.

Making Permanent Magnets.

Can you give me some information as to how to make permanent magnets? Also how to magnetize them?

Answer.—In our last issue we illustrated a coil suitable for magnetizing magnets. The magnets should be made of carbon steel, or a special grade of steel known as magnet steel. The magnet steel should be heated to a cherry red heat, bent to shape and allowed to cool slowly. The ends should then be dressed off square, and the ends hardened very hard. It is then ready to magnetize. When forging, the steel should not be heated hotter than a cherry red.

Jump Spark Coils to Charge Magnets.

Could two jump spark coils be used to charge magnets, by soldering two iron plates on the ends of the cores?

Answer.—The cores of a jump spark coil are not magnetized strongly enough to give a permanent magnet a complete charge. Make-and-break coils would work better, and might give a magnet a fair charge. Two coils would be required, placed so that the positive pole of the magnet would touch the negative pole of one core, and the negative pole of the magnet would touch the positive pole of the other core.

Design of Generator.

I have a motorcycle on which I would like to put a dynamo to light a headlight I want to run it on the belt. I have space enough for one about four and one-half inches diameter. Can you tell me what size wire and how many feet it will take to generate about six volts, and run a twelve-candle-power bulb? What kind of armature will supply the most current at the lowest speed?

Answer.—We could not say definitely what size wire or how much of it to use. However, we would suggest that you use about one-half pound of No. 14 wire on the armature, and one pound of No. 30 wire on each field coil. The slotted drum armature will give the best results, but the shuttle wound type is easier to make, and works well at a fairly high speed. You better buy a standard generator unless you wish to do some experimenting. An armature is wound with coarse wire for low voltage and comparatively high current; and with fine wire for high voltage and low current. Increasing the speed increases the voltage.

Diagram For Jump Spark Engine.

Please publish a sketch showing how to wire an I. H. C. upright gasoline engine.

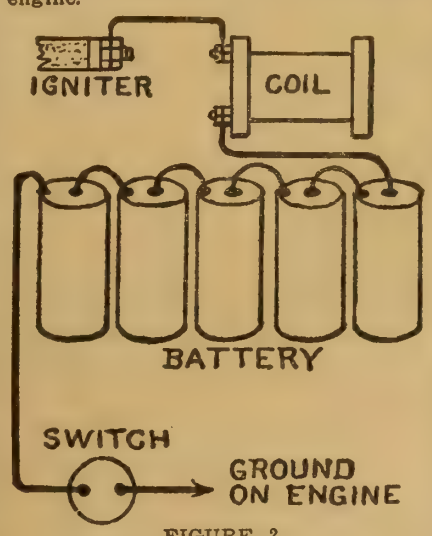

FIGURE 2

Answer.—We are publishing this diagram in Figure 2. This diagram applies to nearly all make-and-break engines.

Making Dry Cells.

How can I make a dry cell battery testing twenty to twenty-five amperes? Could the old carbons and zinc cups from an old cell be used? Where can I obtain the materials, and how much would it cost?

Answer.—The carbon could be used, also the zinc cup if not too badly eaten up. It should be scraped bright inside, and lined with wet cardboard. It should then be filled with a paste of manganese dioxide, moistened with weak sal-ammoniac water. The carbon should be placed in the middle. The end of the cardboard cup should be turned over the paste, a layer of dry sand put on it, and then a layer of tar to seal it. Your druggist can obtain the chemicals for you. It will cost you several times as much as to buy a cell.

Storage Battery Trouble.

We have a 1915 Studebaker touring car. We have trouble to start the engine after it stands still for an hour or two. In order to start it, we have to lift the air control valve on the carburetor. The lamps are also very dim. Please give us some information regarding our trouble.

Answer.—Your lights being dim indicates a run-down condition of your storage battery. The condition of your battery may be the cause of your trouble in starting. You should have your battery tested. The voltage of each cell when fully charged should be about 2.5. An overcharge would probably be good for your battery. When fully charged, the electrolyte should test about 1.3. Nearly all motors start easier with the air supply partly shut off.

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Infantile Paralysis.

Since the original outbreak of infantile paralysis in New York City the disease has spread so rapidly and resulted in so many deaths among children that we are of the opinion a little information on the disease, its treatment and its effect on the patient would not be amiss. Circulars and bulletins have been prepared by the various state boards of health, and anyone desiring more information on the subject should apply to that source.

Infantile paralysis is a contagious and infectious disease and must be handled as such. The degree of susceptibility to the disease is low, as only about 6 per cent of exposed persons develop the disease as compared to 17 per cent for diphtheria, 22 per cent for scarlet fever and nearly 90 per cent for measles. The serious aspect of the conditions which confronts us can be fully understood when it is stated that the mortality during the various previous epidemics has ranged from 8 to 20 per cent, the death rate being highest in very young children and in adults, and lowest in children from three to ten years of age. But worse even than the direct mortality is the permanent paralysis of one or both of the arms or legs, with consequent withering of the affected members and the crippling of the patient for life. This occurs in over 75 per cent of the cases.

Dry, dusty weather seems to be particularly favorable to the spread of infantile paralysis and the disease is most prevalent during the months of August and September. Study of various epidemics has proven the infectious, communicable nature of the disease, though the exact modes of transmission from person to person are not known. It is thought possible, however, that it is transmitted through the air in dust, fomites, food or drink, and possibly by insects or even by animals. Healthy persons, also, may carry infection from the patient to a third person. The germ of the disease has not been isolated, but experiments have shown that it is present not only in the spinal cord, but also in the nasal mucous membrane, salivary glands and lymphatic glands, and it is also suspected that the virus is present in the intestines. It is very important, therefore, that all secretions and discharges from the patient should be disinfected, and bichloride of mercury, carbolic acid or fresh chloride of lime are suggested as means to this end.

The following sanitary precautions should be observed in caring for cases of epidemic infantile paralysis:

Put the patient in a clean, bare, well-ventilated room, screened to keep out insects.

The rest of the family should stay at home as far as possible.

No person should be allowed to enter the sick room except the doctor and the nurse.

Disinfection should be thoroughly carried out under direction of attending physician.

When the nurse leaves the room she should wash her hands in a solution made by adding two teaspoonfuls of carbolic acid to one quart of water or by adding two teaspoonfuls of formalin to one quart of water. She should wear an overgarment and remove same on leaving the room.

All clothes and bedclothes before removing from sick room and all washable clothes before removing from premises should be soaked for one hour in either of the two above named solutions.

All eating utensils and remnants of food used by patients should be boiled before being taken from the sick room.

All other occupants of the house should take frequent baths and use hydrogen peroxide, one tablespoonful to a glass of water, as a gargle and nose spray.

The house should be kept as free from dust as possible by sprinkling floors before sweeping and by using damp cloths for dusting.

All dogs, cats and other pets should be kept from the sick room.

All instances of acute paralysis in domestic animals about the house or farm should be carefully investigated, and all such affected animals should be promptly killed and the quarters in which they had been kept carefully disinfected.

Surrounding premises should be sprinkled daily.

Patients should be kept isolated until quarantine period has passed and the house has been fumigated.

As to the symptoms of the disease, infantile paralysis may be described as beginning suddenly, usually with fever, with severe brain symptoms (deafness, a profound sleepy condition, delirium and general convulsions). There is very rapidly developed a complete paralysis with entire relaxation of the muscles, the paralysis being of invariable distribution over the trunk and extremities, but generally in the form which attacks both the lower limbs. There is no severe disturbance of sensation; no paralysis of the muscles which control the bowels. A rapid improvement sometimes takes place and the general condition of the patient becomes better if the paralysis proves not to be of a progressive character, although restoration of movement of the affected parts is not uniform and is never fully attained. In some of the muscles there is extreme and rapidly progressing diminution of the muscles affected, together with degeneration of tissue; the development of the bones is retarded; the extremities are cold and blue. As the disease progresses considerable deformity of the limbs and trunk result, causing club-foot, curvatures of spine, paralytic contractions, etc.

The disease may occur at all periods of life, though it is most frequent in children between the ages of one and four years. It is susceptible of an unusual number of grades of severity, attacking some mildly, while others are made almost completely helpless. This shows the seriousness of an attack entirely apart from the danger from a mortality standpoint. There is strong evidence that some cases of this disease show only warning symptoms, possibly sore throat and slight fever. These cases, however, are believed to be as dangerously contagious as the paralytic cases, and when infantile paralysis is prevalent all such suspicious cases should be reported and treated with the same precautions as the clearly defined cases.

One more note of caution. It is expected that the present outbreak of infantile paralysis will tempt unscrupulous persons to offer for sale so-called "cures" or remedies for this malady, and officials of the department of agriculture who have in charge the enforcement of the Food and Drugs Act warn the public that any preparation put on the market and offered for sale as being effective for the treatment of infantile paralysis should be looked upon with extreme suspicion, for up to the present time no medicinal cure has been discovered. Food and drug inspectors are doing all in their power to protect the public from such unprincipled persons and they have been instructed by the department to collect samples of all medicines in interstate commerce for which such claims are made. Makers of such fraudulent remedies will be vigorously prosecuted whenever the evidence warrants action. So-called remedies for infantile paralysis which are offered for import into the country will be denied entry.

The food and drugs officials are particularly watchful in this instance because it has been noted in the past that whenever a serious epidemic exists, unscrupulous dealers prey upon the fear or ignorance of the public by flooding the market with worthless, hastily prepared concoctions, for which they assert curative properties which have no foundation whatever in fact. In the present instance, inspectors already have discovered shipments of a few mixtures.

The department will do everything it can under federal law to protect the public which, in times of panic, is apt to grasp at anything which promises protection or relief. The sale of such products at this time, the officials point out, is particularly threatening to the public health because many persons, relying on the false statements of impostors, neglect to secure competent medical advice. As a result, not only is the safety of the patient endangered, but in the absence of proper sanitary precautions, the likelihood of contagion is greatly increased.

It must be understood, however, that the federal food and drugs act applies only to products which are shipped in interstate commerce, that is, from one state to another, or which are offered for import or export, or which are manufactured or sold within a territory or the District of Columbia. Products which are made and consumed wholly within a single state are subject only to such state laws as may apply and are under the control only of state health officials. The federal law does not apply, for instance, to patent medicines made within the state of New York and sold in New York City. Persons buying or using a "remedy" made in their own state, therefore, must rely on the protection accorded them by their local health authorities.

To Make Good Jelly.

Canning-club specialists recommend that the following points be observed to make certain that jelly will be of good quality:

After the fruit has been boiled and the texture broken down it should be poured into a jelly bag and permitted to drain for a considerable time. Forcing the juice from the pulp will cause cloudy jelly. When the juice has been collected, place two teaspoonfuls of cold, unsweetened fruit juice in two teaspoonfuls of grain alcohol and mix by shaking gently. Allow it to settle for one-half hour, preferably in a glass tumbler. If a jelly-like substance collects in the bottom of the mixture it is evidence that pectin is present and the juice is suitable for jelly making. When the test shows absence of pectin, the white portion of orange peel, apples, or green citron melon may be added to the juice to supply the necessary pectin. Twelve ounces of sugar added to a pint of juice will make a jelly of the proper firmness and texture. Jelly is ready to be poured into the glasses when two rows of drops form on the end of a paddle or on the edge of a spoon held sidewise.

Simple Recipe For Grape Juice.

Wouldn't a little grape juice taste good next winter when the juices of other fruits are not obtainable? Grapes are said to contain sugars which are especially nutritious and all the sugars are carried with the juice of the fruit. Many housewives find the following a satisfactory way of making the juice: To two and one-half pounds of grapes add one pint of water and cook until soft. Drain through a jelly bag and add one and one-half pound of sugar, bring the juice to boiling, boil for five minutes and bottle while hot. The juice may be kept indefinitely and diluted to taste when served.

Red Chocolate Cake.

To the Editor:—To the lady who wanted a red chocolate cake, I am sending the following recipe:

One-four cup of butter, one cup of sugar, two eggs (well beaten), one-half cup thick sour milk, one teaspoonful of soda, one-half teaspoonful of baking powder, one and one-fourth cups of flour, five heaping tablespoonfuls of cocoa or melted bitter chocolate. Bake from thirty to forty minutes in moderate oven.

This makes a medium-sized cake, and is the red color. Put the layers together with boiled icing.

Will someone kindly send the recipe for mock angel food cake? I think I saw one in the paper some time ago, but did not have an opportunity to clip it out and I would be glad if some of the readers would send in their recipes.

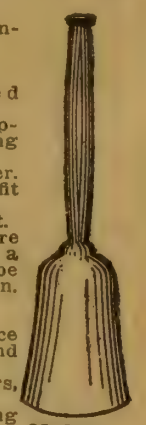
E. R.

Indispensable Canning Utensils.

To the Editor:—The following is a list of utensils that I have seen in my neighbor's kitchen and which I intend to add to my stock in hand. Some of them are indispensable to the art of canning, preserving and jelly making:

Wire sieve.

One set of paring knives, preferably plated.
Two preserving kettles.
One wire sieve or strainer.
One colander.
One ladle.
Three long-handled wooden spoons.
One large-mouthed, cup-shaped funnel for filling jars.
One flat bottomed boiler.
One wooden rack to fit the bottom of boiler.
One wire frying basket.
One seamless measure marked ¼, ½, ¾ and a full cup. This may be aluminum, porcelain or tin.
One wooden masher.
One pair scales.
One glass lemon juice extractor with handle and patent seed arrester.
Jars, rubbers, tumblers, covers for jelly glasses.
Paraffine wax for sealing preserves and jelly.
Straining bags.
Supply of tin cans and handy soldering set.
Supply of spices.



Modern vegetable masher.

The plated paring knives are to be preferred, because a steel knife will discolor the fruit as well as the finger. The quickest way to peel peaches is to fill the wire basket with peaches and plunge in boiling water. In less than five minutes lift the basket and immerse in cold water. Let them drain and peel. Tomatoes, plums, etc., may be peeled the same way.

Wire basket for blanching fruit.

Mrs. M. E. F.

Tomatoes and Corn.

To the Editor:—Mrs. M. D. E. asks about canning tomatoes and corn together. I can some every year and have very good success. Cut the corn from the cob, cook ten minutes, season with salt, pepper and a little sugar, then put the tomatoes in and let all boil up well and seal at once. I cut the tomatoes into inch pieces, so they take but a few minutes to cook.

Mrs. E. G.

Household Hints.

All bacon is improved by having boiling water poured over it before frying.

Always use very cold water (ice water if possible) when mixing pie crust.

Irons will retain their heat twice as long if you use a brick as an iron stand.

If you have occasion to wrap up a freshly iced cake, stick a few toothpicks into the cake, then wrap it up, and you will find that the toothpicks

keep the paper up very nicely and there is no danger of sticking.

When broiling chickens, lay them skin side up.

Vinegar and salt will remove lime from the inside of the teakettle. It will also clean aluminum cooking utensils, leaving them bright and clean without injuring the metal.

A small brush kept near the sink is fine for cleaning baking board, rolling pin, graters, etc. Use salt instead of soap for the bread board.

When baking oatmeal cookies calling for raw rolled oats, either with or without nuts or raisins, if the rolled oats are run through a meat grinder, (using the nut plate) the flavor of the cookies is greatly improved and they bake evenly. When using raisins and nuts mix with oats and then grind all together and put with your other ingredients.

Lace may be hemstitched to linen in the following way: Draw a thread about one-eighth of an inch from the edge of the linen and roll a hem to the drawn thread. Then baste the lace in place on the rolled hem and pull the desired number of threads. The hemstitching proceeds in the usual way, the stitches being taken through the rolled hem and lace. It requires a certain deftness to accomplish this means of applying lace to a straight edge, but when the knack has been acquired it is impossible to detect the stitches.

Pickle Recipes.

Chili Sauce.—Twelve large, ripe tomatoes, deprived of the skins but not the seeds. Slice or cut up small. Two large onions (sliced) two small green peppers (seeded and chopped fine), two tablespoonfuls of salt, four tablespoonfuls of sugar, one-half tablespoonful each of cloves, cinnamon and ginger, one nutmeg (grated) two (or more) cupfuls of vinegar. Stir gently until well done and as thick as desired. Bottle and seal.—Mrs. S. A. D.

Crab Apple Catsup.—Four pounds of apples chopped fine (Hyslop crab or any sour apple), one and one-half pounds of brown sugar, one pint of vinegar, one teaspoonful each of salt, cinnamon and cloves. Boil the apples and vinegar until nearly done, then put in sugar, spices and salt and finish cooking.—Mrs. A. S. D.

Cucumber Pickles.—Wash the cucumbers and pour over them a brine made of one gallon of vinegar, one cupful of salt, one cupful of sugar and one cupful of mustard. Keep the pickles under the vinegar.—Mrs. E. N. W.

Ripe Tomato Catsup.—Four quarts ripe tomatoes, two medium onions; boil and put through sieve. Then add three level tablespoonfuls of salt, one level tablespoonful of ground mustard, one-half tablespoonful of white pepper, one-fourth teaspoonful of cayenne pepper, twelve tablespoonfuls of granulated sugar, one quart of vinegar, one small green pepper, one bunch of celery, one teaspoonful of celery seed, one teaspoonful of allspice. Tie the spices in a bag. Stir often while cooking. Put through flour sieve.—F. M. Z.

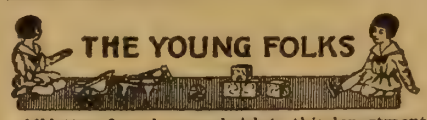
Good Cucumber Pickles.—Wash cucumbers and put in weak salt water for thirty-six hours. Pour off this water and replace it with boiling water and let stand until cold. To one quart of vinegar use three tablespoonfuls of sugar, a pinch of mustard and spices desired. Put cucumbers in the vinegar and let come to a boil. Seal while hot. —Mrs. E. R.

Dill Pickles.—Gather cucumbers in the morning when fresh and cool. Wash and place in jar. Sprinkle with salt and pour over them boiling water to cover. Do this three times. The third time, when cold, drain and pack in bottles or jars with spice and dill cut in small bits and pour over them sweetened vinegar and seal while hot.—I. F. T.

Pepper Sauce.—Ten large white onions, twelve red peppers, twelve green peppers, three tablespoonfuls of salt, three pints of vinegar, one and a half cupfuls of sugar. Chop peppers and onions fine and pour boiling water over them. Let stand five minutes, then drain and pour boiling water over them again. Let stand ten minutes, then drain well and boil fifteen minutes in vinegar, sugar and salt.

Green Corn Relish.—Part One.—Four large onions, one large cabbage, eight red peppers, twenty ears of corn, one and a half cups of sugar, one-half cup of salt, one quart of vinegar. Bring these to a boil. Part Two.—Three tablespoons of mustard, one tablespoon of turmeric, one-half cup of flour, one level tablespoon of celery seed, one scant quart of vinegar. Dissolve mustard, flour and turmeric in the vinegar until there are no lumps, add to the other ingredients, and cook all for thirty minutes. Makes six quarts.

Oil Pickles.—Slice 100 medium-sized cucumbers. Cover with strong brine and let soak three hours. Wash with cold water. Add three pints white onions (which have previously been soaked in water with a small piece of alum), three ounces white mustard seed, one ounce celery seed, two ounces white pepper, one pint olive oil. Mix and cover with cold vinegar. Seal in jars.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

This Boy Found a Way.

When a boy, or a girl either, for that matter, makes up his mind that he is going to do a thing, that thing will be done. A certain pig club boy has proved this statement in the manner in which he weighed his pig when all he had to weigh it with was a pair of small scales of a few pounds capacity, used by his mother in her household work. The example of this boy ought to stimulate other club boys and club girls who have similar problems to solve.

After taking stock, this boy found that he had a hog crate, a strong box, some chains, a high board fence, a long pole, and the small scales as material to be used in weighing his pig. He marked the middle point of the long pole and placed it over the fence. To one end he attached the crate and to the other end the box was fastened by means of the chains. Sand sufficient to balance the crate was placed in the box. The boy then gathered a quantity of small cobblestones, dropping them near the box. By placing a few grains of corn in the crate and using other grains of corn as bait, the pig was enticed into the crate. The door was closed and the pig was ready for the weighing. By putting the small cobblestones into the box until the box and crate balanced once more, the boy learned the weight of his pig in terms of stone. Now, these stones were small, as already stated, in order that no stone would be too heavy to weigh on the small scales. By means of the scales the stones were weighed and the total of the weighings gave the boy with fair accuracy the weight of his pig in pounds. His problem was solved in such a satisfactory manner that he used this arrangement during the whole contest. As a result he was able to determine not only the cost per pound of gain, but also the average daily gain of his pig by months and for the contest as a whole. Although his pig did not possess the merit to be a winner in the state contest, the boy received honorable mention for good work done.

From a Little Town Girl.

Dear Young Folks:—I am a little girl, eleven years old, and I am in the sixth grade at school.

I want to correct the impression given in one of the papers, for in Patty's letter she said, "I am a farm girl, of course, or I would not be such an interested reader of this good old paper." I am sure I am just as good a reader as Patty, even though I do live on two lots in town. I can hardly wait for the paper to come.

We have twenty-three little bantams, six ducks and 125 little chickens.

I have been taking music lessons for three years and I like my teacher fine. We have a garden and a good many flowers. —Geraldine.

Won Certificate and Silver Pin.

Dear Young Folks:—I have been reading your letters and I have enjoyed them very much. I am a little girl eight years old. I will be nine in November. I have one little sister and two brothers.

I like school very much. Brother Robert and I go together every day. This year we won certificates and silver pins for being neither absent nor tardy the whole nine months of school. Our papa likes us to go to school. We like our teacher and I am glad that we are going to have her again next year.

We are having a nice vacation. Robert and I spent one week with a little girl friend of ours. Now we are entertaining some little girls, one of them from Nebraska. We have lots of fun. —Roma.

Helps Make Hay.

Dear Young Folks:—I always read the letters that the little girls and boys write, so I thought I would write too. I am twelve years old, and I have two brothers and one sister. They are all married. I have one little niece.

My father owns 368 acres. We have chickens, ducks, geese, pigs, horses and cows. We milk eighteen cows. We have seven horses and one little colt. The colt is black with a little white dot in its face. Her name is Nellie.

I can bake, cook and wash, and I help do the milking every morning and evening. I have to help make hay, too.

I think it is a great lot of fun giving riddles. Mine is: Round as an apple, deep as a cup; all the king's horses can't pull it up. I think the answer to Carrie's riddle is an umbrella, because it will go up a stovepipe down, but can't go down a stovepipe up. —Elizabeth.

International Sunday School Lesson.

Lesson for August 13, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

The Grace of Living.

LESSON TEXT—II Cor. 9.

GOLDEN TEXT—In all things I gave you an example, that so laboring ye ought to help the weak, and to remember the words of the Lord Jesus, that he himself said, it is more blessed to give than to receive.—Acts 20:35.

Paul's letters to the church in Corinth are a divine commentary upon church government. A stricter adherence to the principles enunciated and a clearer interpretation of those principles to the church of Jesus Christ would save us from many errors and heartaches. In this rich and populous nation the lesson for consideration today is most vital, for it concerns one of the fundamental principles which underly the progress of mankind as well as the kingdom of God.

1. **Cheerful Giving** (vv. 1-7). One of the dangers assailing the early Christian church was that of division between the Jewish and Gentile believers. One party suggested that the Gentiles ought to have a closer union with the Jews; on the other hand, certain Gentiles could not see the necessity of the Jewish ceremonial, and in this Paul agreed with them, and, therefore, they refused to assume any unnecessary burden. The great feasts at Jerusalem were crowded with pilgrims, both Jews and Jewish Christians. The pilgrims were often very poor, and fatigue must have fostered diseases. Here then was a place where a work of ministry to the needy might be done with the money which had been systematically gathered through the weekly contributions of Christian believers. Note how skillfully Paul appealed to these Corinthians. He recognizes their forwardness of mind and their zeal (vv. 1 and 2, Am. R.). Most delicately does he compliment them upon their work, for, said he, "I glory in your behalf."

He desired their collections to be a matter of bounty, and not of covetousness or extortion. Paul's principle of giving is that it shall be a matter of free and beneficent gifts, not a matter of covetous greed; not a quid pro quo. He says that they who sow sparingly shall reap sparingly.

II. **The Results of Giving** (vv. 8-15). The law of reaping according to the seed we sow and of reaping in proportion to the quality and quantity of the seed sown is also to be supplemented by the law of the necessity of systematic giving (See I Cor. 16:2). One of the sweetest and most cheerful and inspiring promises of the Bible is found in verse 8 of this section, "God is able." He is able to make all grace abound, and he does this "to the bountiful giver." Nothing more surely limits the measure of grace that we receive than our penurious, niggardly giving (Phil. 4:19 and context). This giving of grace is "in order that ye always having all sufficiency in all things may abound unto every good work." God's abundant grace is bestowed upon us that we may work for others, and live abounding, sufficient lives in everything. How poor indeed our lives must appear when measured by the standard of this verse. Literally this is "hilarious giving." God loves the full-souled, hilarious giver who gives time and money. Such giving is like unto God's giving, who gave his only begotten son. If we sow as God provides, he will multiply the seed for sowing and increase the fruits of our righteousness. If we do not sow, he will cease to supply.

This liberality will work through us to others and thanksgiving to God on the part of those who receive (v. 11, R. V.). Such giving abounds to his honor and glory through the many thanksgivings which it will occasion (Heb. 13:15). The more we give, the more God will increase our power to give and in this way we will be enriched in everything unto all liberality. (Prov. 11:24-25). The church in Jerusalem, when the saints of Corinth had given proof by the ministration to their need, would glorify God for the obedience of the saints in Corinth and their confession of the gospel of Christ, and also for the liberality of their contribution unto them (v. 13, R. V.). They would repay their generosity with prayer (v. 14, R. V.) and they would long after them by reason of the grace of God which was in them.

Paul's words about our giving with thanksgiving to God for his unspeakable gift—(See Ch. 8:9) the unspeakable gift of God, Jesus Christ (John 3:16; Rom. 8:32)—is an exhortation to us. Nothing should so move us to give to others as the thought of what God has given of his very best and dearest for us.

The Sunday school, as the training school of the church, ought to give in-

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struction not alone in salvation truth and life teaching, but also in systematic giving. Train the children early to give to the church a portion of their substance, and they will learn to love it and support it in the years to come. Persistent practice is the secret of mastery here as in everything else. We say: "When a rich man dies he leaves all his wealth behind him."

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1809—A smart attractive gown. The skirt is a three-piece model. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7⅞ yards of 44-inch material for a 36-inch size.

1806—A simple natty suit for mother's boy. The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. It requires 2¾ yards of 44-inch material for a 4-year size.

1797—A simple dress for mother's girl. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 2¾ yards of 36-inch material for a 6-year size.

1540—A very becoming and comfortable lounging robe. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5⅝ yards of 44-inch material for a medium size.

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1349—Girls' dress with plaited skirt, attached to an underwaist, and with sleeve in either of two lengths. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 4 yards of 36-inch material for an 8-year size.

1788—A comfortable morning dress. The pattern is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5½ yards of 44-inch material for a 36-inch size.

1786—A neat and simple style. A wide box plait finishes the center front, and under this the closing is effected. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3¼ yards of 44-inch material for an 8-year size.

Waist 1420-Skirt 1421—A pleasing costume especially good for mature figures. The waist pattern 1420 is cut in 6 sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt 1421 is cut in 6 sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 3⅛ yards of 44-inch material for the skirt, and 2¾ yards for the waist for a medium size. Two separate patterns, 10 cents for each pattern.

1558—Three-piece skirt with or without hem cuff for misses and small women. The pattern is cut in 4 sizes: 14, 16, 18 and 20 years. A 16-year size will require 3½ yards of 36-inch material for the skirt and 1¼ yards for the cuff.

1808—Dress for misses and small women. The pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 6¼ yards of 36-inch material for an 18-year size.

1556—Middy blouse for misses and small women. The pattern is cut in 4 sizes: 14, 16, 18 and 20 years. It requires 2⅝ yards of 44-inch material for a 16-year size.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The scene is laid in the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold. A neighbor, named Hardy, comes to his camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which she learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide become strained. Disobeying his strict orders to stay with the party, Rachel Hardy rides ahead, her horse throwing her as it scares at a bear cub. She is severely hurt, but Genesee Jack finally finds her, and succeeds in getting her safely back to camp. Next morning Jack leaves the camp without a word of good-bye to the women folks. Two weeks later Rachel and Jim, while looking for lost sheep become lost and wander into MacDougall's shack and cook their supper, only to be surprised by Genesee walking in.

(CHAPTER VIII Continued)

"YES, of course it's I," she said, slipping her hand away after a little and dropping her face that had flushed pink in the firelight; "I don't look like a ghost, do I? You would not find a ghost at such prosaic work as getting supper."

"Getting supper?" he said, stepping back a bit and glancing around. For the first time he seemed to notice Jim, or have any remembrance of anything but the girl herself. "You mean that you two have been getting supper alone?"

"Yes, Jim and I. Mr. Jack, this is my friend Jim, from the ranch. We tried to guide each other after sheep and both got lost; and as you did not get here in time to cook supper, of course, we had to do it alone."

"But I mean was there no one else here?"—he still looked a bit dazed and perplexed, his eyes roving uneasily about the room—"I—a—a young Indian—"

"No!" interrupted the girl eagerly. "Do you mean the Indian boy who brought me that black bear's skin? I knew you had sent it, though he would not say a word—looked at me as if he did not understand Chinook when I spoke."

"Maybe he didn't understand yours," remarked Jimmy, edging past her to rake the potatoes out of the ashes.

"But he wasn't here when we came," continued Miss Hardy. "The house was deserted and in darkness when we found it, just as the storm came on in earnest."

"And the fire?" said Genesee.

"There was none," answered the boy. "The ashes were stone cold. I noticed it; so your Injun hadn't had any fire all day."

"All day!" repeated the man, going to the door and looking out. "That means a long tramp and tonight—"

"And tonight is a bad one for a tramp back," added Jim.

"Yes," agreed Genesee, "that's what I was thinking."

If there was a breath of relief in the words both were too occupied with the potatoes in the ashes to notice it. He shut the door directly as the wind sent a gust of rain inside, and then turned again to the pirates at the fireplace.

"What did you find to cook?" he asked, glancing at the "lay-out," as Jim called it. "I haven't been here since yesterday and am afraid you didn't find much—any fresh meat?"

Miss Hardy shook her head.

"Salt meat and eggs, that's all," she said.

"Not by a long shot it ain't, Mr.—Mr. Jack," said Jim, contradicting her flatly. "She's got a first-class supper; an' by George! she can make more out o' nothin' than any woman I ever seen." In his enthusiasm over Rachel he was unconscious of the slur on their hosts larder. "I never knowed she was such a rattlin' cook!"

"I know I have never been given credit for my everyday, wearing qualities," said the girl, without looking up from the eggs she was scrambling in the bake oven of a few minutes before. The words may have been to Jim, but by the man's eyes he evidently thought they were at Genesee—such a curious, pained look as that with which he watched her every movement, every curve of form and feature, that shone in the light of the fire. Once she saw the look, and her own eyes dropped under it for a moment, but that independence of hers would not let it be for long.

"Do you want a share of our supper?" she asked, looking up at him quizzically.

"Yes," he answered, but his steady, curious gaze at her showed that his thoughts were not of the question or answer.

Not so Jim. That young gentleman eyed dubiously first the lay-out and then Genesee's physique, trying to arrive at a mental estimate of his capacity and the probable division of the pone and potatoes.

"How about that saddle, now, Jim?" asked the girl. Whereupon Jim began a pantomime enjoining silence, back of the chair of the man, who appeared more like a guest than host—perhaps because it was so hard to realize that it was really his hearth where that girl sat at home. She noticed his preoccuption and remarked dryly:

"You really don't deserve a share of our cooking after the way you deserted us before!—not even a klahowya when you took the trail."

"You're right, I reckon; but don't you be the one to blame me for that," he answered, in a tone that made the command a sort of plea; and Miss Hardy industriously gave her attention to the supper.

"It's all ready," announced Jim, as he juggled a pan of hot pone from one hand to another on the way to the table. "Ouch! but it's hot! Say, wouldn't some fresh butter go great with this!"

"Didn't you find any?" asked Genesee, waking to the practical things of life at Jim's remark.

"Find any? No! Is there any?" asked that little gourmand, with hope and doubt chasing each other over his rather thin face.

"I don't know—there ought to be;" and lifting a loose board in the floor by the cupboard he drew forth a closely woven reed basket, and on a smooth stone in the bottom lay a large piece of yellow butter, around which Jim performed a sort of dance of adoration.

What a supper that was, in the light of the pitch-pine and the fierce accompaniment of the outside tempest! Jim vowed that never were there potatoes so near perfection, in their brown jackets and their steaming, powdery flakes; and the yellow pone, and the amber coffee and the cool slices of butter that Genesee told them was from an Indian village thirty miles north. And to the table were brought such tremendous appetites! at least by the cook and steward of the party. And above all, what a delicious atmosphere of unreality pervaded the whole thing. Again and again Genesee's eyes seemed to say, "Can it be you?" and grew warm as her quizzical glances told him it could be no one else.

As the night wore on and the storm continued he brought in armfuls of wood from the shed without and in the talk round the fire his manner grew more assured—more at home with the surroundings that were yet his own. Long they talked, until Jim, unable to think of any more questions to ask of silver mining and bear hunting, slipped down in the corner, with his head on a saddle, and went fast asleep.

"I'll sit up and keep the fire going," said Genesee, at this sign of the late hour; "but you had better get what rest you can on that bunk there—you'll need it for your ride in the morning."

"In the morning!" repeated the girl coolly; "that sounds as if you are determined our visit shall end as soon as possible, Mr. Genesee Jack."

"Don't talk like that!" he said, looking across at her; "you don't know anything about it." And getting up hastily, he walked back and forward across the room; once stopping sud-

denly, as if with some determination to speak, and then, as she looked up at him, his courage seemed to vanish, and he turned his face away from her and walked to the door.

The storm had stilled its shrieks and was dying away in misty moans down the dip in the hills, taking the rain with it. The darkness was intense as he held the door open and looked into the black vault, where not a glimmer of a star or even a gray cloud could be seen.

"It's much nicer indoors," decided Miss Hardy, moving her chair against the chimney piece and propping herself there to rest.

"Jim had better lie on the bed, he is so sleepy, and I am not at all so; this chair is good enough for me, if you don't mind."

He picked the sleeping boy up without a word and laid him on the couch of bear skins without waking him.

"There isn't much I do mind," he said, as he came back to the fireplace; "that is, if you are only comfortable."

"I am—very much so," she answered, and would be entirely so if you only seemed a little more at home. As it is, I have felt all evening as if we are upsetting your peace of mind in some way—not as if we are unwelcome, mind you, but just as if you are worried about us."

"That so?" he queried, not looking at her; "that's curious. I didn't know I was looking so, and I'm sure you and the boy are mighty welcome to my cabin or anything in the world I can do for you."

There was no mistaking the heartiness of the man's words, and she smiled her gratitude from the niche in the corner where, with her back toward the blaze, only one side of her face was outlined by the light.

"Very well," he said amicably; "you can do something for me just now—open the door for a little while; the room seems close with being shut up so tight from the rain—and then make yourself comfortable there on that buffalo robe before the fire. I remember your lounging habits in the camp and a chair doesn't seem to quite suit you. Yes, that looks much better, as if you were at home again."

Stretched on the robe, with her saddle on which to prop up his shoulders, he lay, looking in the red coals, as if forgetful of her speech or herself. But at last he repeated her words:

"At home again! Do you know there's a big lot of meaning in those words, Miss, especially to a man who hasn't known what home meant for years? And tonight, with white people in my cabin and a white woman to make things look natural, I tell you it makes me remember what home used to be, in a way I have not experienced for many a day."

"Then I'm glad I strayed off into the storm and your cabin," said the girl promptly; "because a man shouldn't forget his home and home folks, especially if the memories would be good ones. People need all the good memories they can keep with them in this world; they're a sort of steering apparatus in a life boat, and help a man make a straight journey toward his future."

"That's so," he said, and put his hand up over his eyes as if to shield them from the heat of the fire. He was lying full in the light, while she was in the shadow. He could scarcely see her features, with her head drawn back against the wall like that. And the very fact of knowing herself almost unseen—a voice, only, speaking to him—gave her courage to say things as she could not have said them at another time.

"Do you know," she said, as she sat there watching him with his eyes covered by his hand—"do you know that once or twice when we have been together I have wished I was a man, that I could say some things to you that a woman or a girl—that is, most girls—can't say very well? One of the things is that I should be glad to hear of you getting out of this life here; there is something wrong about it to you—something that doesn't suit you; I don't know what it is, but I can see you are not the man you might be—and ought to be. I've thought of it often since I saw you last, and sometimes—yes—I've been sorry for my ugly manner toward you. White people, when they meet in these out-of-way places in the world, ought to be as so many brothers and sisters to each other; and there were times, often, when I might have helped you to feel at home among us—when I might have been more kind."

"More kind!" whispered the man.

"And I made up my mind," continued the girl courageously, "that if I ever saw you again I was going to speak plainly to you about yourself and the dissatisfaction with yourself that you spoke of that day in the laurel thicket. I don't know what the cause of it is and I don't want to, but if it is any wrong that you've done in—in the past, a bad way to atone is by burying oneself alive, along with all energy and ambition. Now, you may think me presuming to say these things to you like this; but I've been wishing somebody would say them to you and there seems no one here to do it but me, and so—"

She stopped, not so much because she had finished as because she felt herself failing utterly in saying the things she had really intended to say. It all sounded very flat and commonplace in her own ears—not at all the words to carry any influence to anyone, and so she stopped helplessly and looked at him.

"I'm glad it is you that says them," he answered, still without looking at her, "because you've got the stuff in you for such a good, square friend to a man—the sort of woman a person could go to in trouble, even if they hadn't the passport of a saint to take with them; and I wish—I wish I could tell you tonight something of the things that you've started on. If I could—" he stopped a moment.

"I suppose any other girl—" she began in a deprecating tone; but he dropped his hand from his eyes and looked at her.

"You're not like other girls," he said with a great fondness in his eyes, "and that's just the reason I feel like telling you all. You're not like any girl I've ever known. I've often felt like speaking to you as if you were a boy—an almighty aggravatin' slip of a boy sometimes; and yet—"

He lay silent for a little while, so long that the girl wondered if he had forgotten what he was to try to tell her. The warmth after the rain had made them neglect the fire and its blaze had dropped low and lower, until she was entirely in the shadow—only across the hearth and his form did the light fall.

"And yet," he continued, as if there had been no break in his speech, "there's been many a night I've dreamed of seeing you sit here by this fireplace just as I've seen you tonight; just as bright and contented as if all the roughness and poorness of it was nothing to you, or else a big joke for you to make fun of; and then—well, at such times you didn't seem like a boy, but—"

Again he stopped.

"Never mind what I'm like," suggested the girl; "that doesn't matter. I guess everyone seems a different person with different people; but you wanted to tell me something of yourself, didn't you?"

"That's what I'm trying to get at," he answered, "but it isn't easy. I've got to start back so far to start at the beginning—back ten years, to reckon up mistakes. That's a big job, my girl—my girl."

The lingering repetition of those words opened the girl's eyes wide with a sudden memory of that moonlit night in the gulch. Then she had not fancied those whispered words! they had been uttered, and by his voice; and those fancied tears of Tillie's, and—the kisses!

So thick came those thronging memories that she did not notice his long, dreamy silence. She was thinking of that night, and all the sweet, vague suggestion in it that had vanished with the new day. She was comparing its brief charm with this meeting of tonight that was ignoring it so effectually; that was as the beginning of a new knowledge of each other, with the commonplace and practical as a basis.

Her reverie was broken by the sight of a form that suddenly, silently, appeared in the doorway. Her first impulse of movement or speech was checked as the faint, flickering light shifted across the visage of the newcomer, and she recognized the Indian girl who had hidden behind the ponies. A smile was on the dark face as she saw Genesee lying there, asleep he must have looked from the door, and utterly oblivious of her entrance. Her soft moccasins left no sound as she crossed the floor and dropped down beside him, laying one arm about his throat. He clasped the hand quickly and opened his half-shut eyes. Did he, for an instant, mistake it for another hand that had slipped into his that one night? Whatever he thought, his face was like that of death as he met the eyes of the Indian girl.

"Talapa!" he muttered, and his fingers closing on her wrist must have twisted it painfully, by the quick change in her half Indian, half French face. He seemed hardly conscious of it. Just then he looked at her as if she was in reality that Indian deity of the inferno from which her name was derived.

"Hyak nika kelapie!" (I returned quickly), she whined, as if puzzled at her reception, and darting furious sidelong glances from the black eyes that had the width between them that is given to serpents. "Nah!" she ejaculated angrily, as no answer was made to her; and freeing her hand she rose to her feet. She had not once seen the white girl in the shadow. Coming from the darkness into the light, her eyes were blinded to all but the one plainly seen figure. But as she rose to her feet, and Genesee with her, Rachel stooped to the pile of wood beside her, and throwing some bits of pine on the fire, sent the sparks flying upward, and a second later a blaze of light flooded the room.

The action was a natural, self-possessed one—it took a great deal to upset Miss Hardy's equanimity—and she coolly sat down again facing the astonished Indian girl and Genesee; but her face was very white, though she said not a word.

"There is no need for me to try to remember the beginning, is there," said Genesee bitterly, looking at her with sombre, moody eyes, "since the end has told its own story? That is—my—my—"

Did he say wife? She never could be quite sure of the word, but she knew he tried to say it.

His voice sounded smothered, unnatural, as it had that day in the laurel thicket when he had spoken of locking himself out from a heaven. She understood what he meant now.

"No, there is no need," she said, as quietly as she could, though her heart seemed choking her and her hands trembled. "I hope all will come right for you sometime, and—I understand, now."

Did she really understand, even then, or know the moral lie the man had told, the lie that, in his abasement, he felt was easier to have her believe than the truth?

Talapa stood drying her moccasins at the fire, as if not understanding their words; but the slow, cunning smile crept back to her lips as she recognized the white girl, and no doubt remembered that she and Genesee had ridden together that day at the camp.

He picked up his hat and walked to the door, after her kindly words, putting his hand out ahead of him in a blind sort of way and then stopped, saying to her gently:

"Get what rest you can—try to, anyway; you will need it." And then, with some words in Indian to Talapa, he went out into the night.

(To be continued.)

Engineering the Telephone

THE great Bell System, with its telephone highways connecting the farthest points of the country, is primarily a brain creation.

The telephone engineer is the genius of communication. Like the general of an army, he plans, projects and directs his campaigns far ahead. He deals with the seemingly impossible — transforming ideas and ideals into concrete facts.

His problems may involve doubling the capacity of a city's underground telephone system, or the building of a transcontinental line, or a serious war-shortage of supplies needed in telephone work.

Whatever the difficulties, they must be overcome so that the progress of the telephone shall continue equal to the ever-growing needs of the people.

It is not enough to provide only for the present—the future must be anticipated and discounted.

In the Bell System, more than two thousand highly efficient engineers and scientists are constantly working on the complex problems of the telephone business.

As a result, the service keeps step with present requirements and the assurance is given to every subscriber that the Bell System is prepared for whatever the future develops.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy *One System* *Universal Service*

PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send or three free books: inventions wanted, etc. I market your invention without charge. Richard B. Owen, 37 Owen Bldg., Washington, D. C.

NATIONAL TRACTOR FARMING DEMONSTRATIONS

Round-up Tractor Show at Madison

The closing or round-up Tractor Demonstration of the National Tractor Demonstration Circuit will be held at

MADISON, WISCONSIN, SEPT. 4-8

A practical Demonstration of field work with all sizes and many makes of tractors. Tractor shows of the national circuit this year have been a wonderful success and thousands of farmers who have attended the demonstrations have found them intensely interesting and profitable.

Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

H. A. Derenthal's Champion Chester White Herd.

SOME of the Wisconsin Chester White breeders would find it advantageous to visit East Side Stock Farm, Wykoff, Minn., owned by H. A. Derenthal. Chester White swine is the leading factor on this farm and to say that Mr. Derenthal has good hogs is putting it mildly. With all due respects to the other breeders of Chester Whites whom we have met in Wisconsin and Minnesota we will say that this breeder has the best lot of Chesters that it has been our pleasure to see. In the first place Mr. Derenthal is a caretaker and this is where so many breeders fall down. It would seem to us that if one is progressive enough to have registered stock it should be worth taking care of. The boar that appealed to us mostly was the senior yearling, Callaway's Kind. Here is a boar with good length, a strong back, excellent spring of rib and is above the average for size. He is sired by Callaway's Choice and his dam is by the $400 Triumph. This boar will be shown at a number of the state fairs. Ignatz is another senior yearling boar that Mr. Derenthal showed successfully at the Minnesota State Fair last year, winning junior championship in a strong class. He is sired by the many times champion, Wykoff Lad. This boar has been used heavily and it isn't likely he will be in condition to show this fall. There are some great spring pigs on the farm by this boar. S. M. Wonder is a good junior yearling prospect. He is sired by Jim's Wonder, a son of the noted Hoover boar, Wonder. This boar has the size and smoothness and should make a creditable showing. The most recent addition in a herd boar is Minnesota Wonder, a son of Wonder out of Modoc Maid 2d, considered by Mr. Hoover as being the best brood sow on his farm. This boar is of last fall farrow and while we would like to see him with a little more scale, one must consider him when it comes to quality and individuality. Mr. Derenthal will have a wonderful herd of sows at the fairs this fall and some of you men that talk about the little, short, fine-bone dumplings should make it a point to see the type that H. A. is trying to bring to the front. Coming down to the spring pigs, there are some real ones in this herd. Pigs with plenty of stretch, good bone, excellent strong arched backs and bred in the purple. Some of the best ones are sired by the good boar, Callaway's Kind. Others, that would appeal to many breeders are by Ignatz. There are also some by S. M. Wonder and Count Ben that are equally as good as those by the first mentioned boars. Most of the spring pigs are out of daughters of the champion, Wykoff Lad. If you are in need of some big, stretchy, early pigs there is an excellent litter by Chief Fillmore, a grandson of the Iowa champion, Frank. Take a tip from us and investigate the spring boars on this good Chester farm. We feel sure that they will please you. It isn't necessary to see them, unless you so desire, for we will stand back of H. A. Derenthal and guarantee that he will take care of your mail order to your satisfaction. Get his prices and breeding and when you write kindly mention The Wisconsin Farmer. See page 23.—Adv.

Fisher Sells Gold Bond For $700.

MR. D. B. SMITH, Mission Hill, S. D., owner of Elmwood Farm and one of the best herds of Duroc Jerseys in the West, recently came to Wisconsin to buy a carload of dual-purpose Shorthorns and incidentally to buy a herd boar if he found one that suited him. He bought his car of cattle and when he saw Gold Bond, the good boar owned by John L. Fisher, Janesville, it didn't take him long to close a deal for this boar. Gold Bond is without a doubt one of the most, if not the most fashionably bred boars in the United States and this is another illustration that breeding counts if backed up with individuality. We are sorry to have this good boar leave the state, for there are only a few real good boars in Wisconsin and they are badly needed to improve the swine in this state, but at the same time we are glad to know that Wisconsin can furnish herd boars good enough to head such a herd as the Elmwood Quality Durocs. To the writer's knowledge this makes the highest priced boar ever sold in Wisconsin. See page 23.—Adv.

Parker & Son Have Great Pigs.

WE have recently had a letter from E. H. Parker & Son, the Duroc breeders of Janesville, Wis., advising that their spring pigs are the best they ever raised. The last time we saw this herd they had some of the best prospects that we had seen and knowing that Parker is a good caretaker we are not surprised to learr that the pigs have come fast. This is a good place to investigate, for they have some Durocs that we are sure will appeal to you. As for breeding, they have the best. This herd will be represented at Milwaukee and if you don't know the congenial Parker be sure and make his acquaintance and incidentally look at his Durocs. See page 23.—Adv.

Carload of Short-horns Sold.

MR. D. B. SMITH, of Mission Hill, S. D., recently visited Rock county, Wis., and inspected a number of the milking Short-horn herds. After careful inspection of this stock, he bought a carload to be shipped to South Dakota and to be used as foundation stock for a milking Short-horn herd. Marquart Brothers, of Milton Junction, sold a two-year-old heifer and a herd bull for this shipment. This bunch of cattle was sold through the efforts of The Wisconsin Farmer.—Adv.

Dr. Roberts' Holstein.

A HOLSTEIN or in fact any dairy bred bull should be judged by the production records of his daughters rather than by the records of his dams. However, when both dams and daughters have produced good records we may feel sure that it is an established ability. King Hengerveld Pondyke owned by Dr. Roberts, Waukesha, Wis., is such a sire. He now has twenty A. R. O. daughters, two of which have made over thirty pounds butter in seven days. He is a son of King of the Pontiacs that has 175 A. R. O. daughters, two of which have records of forty and forty-four pounds butter in seven days. His dam was Pontiac Lunde, a twenty-five-pound daughter of the great bull, Hengerveld De Kol, that has 116 A. R. O. daughters, nine with records from thirty to 33.62 pounds butter in seven days. Two sons of King Hengerveld Pondyke are now being offered for sale. One is out of the cow, Kinsman Beauty, that has a record of 19.25 pounds butter in seven days and 675 pounds in a year with 16,032 pounds of milk. Her dam is also an A. R. O. cow and her sire is a son of Pontiac Aaggie Korndyke, that has forty-seven A. R. O. daughters, five with yearly records from 1,000 to 1,300 pounds butter. This young bull is a very fine individual, winning first at the great Iowa State Fair and second at Minnesota. The other young bull is out of the cow, Roberta Fearless Lassie, a show cow, that freshened on the show circuit last year, so was not tested. She will be tested this fall and is capable of making a creditable record. Her dam, Fearless Lassie, made 22.54 pounds butter in seven days and 757.33 pounds butter and 16,843.30 pounds milk in a year. Her grandam, Fearless Lassie, made 24.32 pounds butter in seven days, 78,403 pounds butter and 16,919.40 pounds of milk in a year. It will be seen that she inherits high production blood of the long time and persistent kind. These two bulls are three-fourths white, well marked and have wide, straight rumps. Send for extended pedigrees and prices. See page 22.—Adv.

Breeders Wanting 30-lb. Herd Sires

WE invite your attention to three young bulls. No. 151 calved March, 1916. Sir Korndyke Segis Johanna 127132, a 38 lb. son of the 40 lb. bull, Johanna McKinley Segis by King Segis, and whose dam Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68 lb. three-year-old by a 29 lb. grandson of Hengerveld De Kol. 2d dam, a 23 lb. three-year-old by King Pontiac Champion, a 31 lb. son of King of the Pontiacs, 3d dam, a 33.86 lb. daughter of De Kol Md's Butter Boy 3d. No. 156—Calved April, 1916. Sire, King Pontiac Champion, that has 41 A. R. O. daughters, the only one tested as a mature animal, made over 1,000 lbs. butter in a year. Dam a 31.51 daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O daughters, two above 30 pounds. Good A. R. O. breeding for several generations. No. 152—Calved April, 1916. Sire, King Pontiac Champion. A 30.38 pound daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68 pound cow. Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100.00 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

Wisconsin Farmer Advertisements Sell All Their Live Stock

KISER BROTHERS, Oregon, Wis., who recently advertised their Short-horns in The Wisconsin Farmer, are convinced that it is a splendid advertising medium for Wisconsin breeders. They say:

"We have been pleased with the results from the advertisements carried in your columns for us at different times. Our advertisements have brought inquiries from Minnesota, North Dakota, South Dakota, Michigan and Wisconsin, selling all stock offered for sale and more was wanted."

The Wisconsin Farmer advertisements are result-getters. Every week many breeders write enthusiastically of sales made through The Wisconsin Farmer advertisements. This letter is just one example. The Wisconsin Farmer carried 500 more insertions of Wisconsin display advertisements (not including classified) during the first six months of 1916 than any other farm paper in the state. The farmers know its value.

The Wisconsin Farmer, Madison, Wis.
GUARANTEED WEEKLY CIRCULATION 90,000

Kennedy Cattle to South Dakota.

INASMUCH as J. E. Kennedy, Janesville, Wis., is founding an all-Scotch herd of Short-horns, he sold most of his Scotch-topped and Bates cows to D. B. Smith, of South Dakota. With the exception of a dozen heifers, all of the Kennedy cattle are of the most fashionable Scotch breeding. He expects to add to his herd from time to time until he has one of the best herds in the country. He certainly has some wonderful cattle at this time. We haven't seen a bunch of heifers, that can be bought, that will compare with these being offered by Mr. Kennedy, and if he can close out the lot to someone, he will make a very attractive price. It will pay you to investigate this herd. Write for prices and description and mention this paper. See page 23.—Adv.

Marquart Bros. Make Satisfactory Sale.

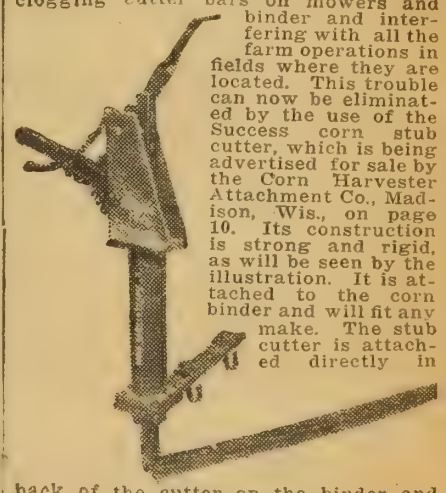
MARQUART BROS., Milton Junction, Wis., and owners of one of the best milking Short-horn herds in Wisconsin sold several head of cows and one bull to D. B. Smith, Mission Hill, S. D. Mr. Smith has visited several of the best herds in the East and he considers the Marquart herd one of the best producing herds he has ever seen. They could have sold a carload to this man, could they have spared that many. They still have some young bulls for sale. If you need one don't overlook this herd. See page 23.—Adv.

A Poland Herd With Few Equals.

MINNESOTA has several outstanding herds of Poland Chinas and one of the "headliners" is located at Prosper and is owned by that popular breeder, P. W. Young. Here is a big-type herd in every sense of the word, not "big-type" on paper alone, but the individuals that go to make up this herd impress one with their massiveness, as well as uniformity. Realizing the fact that the "herd boar is half the herd" Mr. Young maintains two of the best boars in any one herd that can be found. In Master's Giant we believe that P. W. has one of the greatest breeding boars of the present day, and he is no accident, for he comes from a line of breeding that has produced winners for several years. He is sired by Mondamin Master, a wonderful boar that the writer saw several times when owned by Zeke Barker, but who died while being fitted. The grandsire of Lyon Chief was one of the greatest sires in northwestern Iowa, being the sire of the Barker show herds that made such a cleaning in 1912 and 1913. The grandam, Gentle Jessie, was perhaps the greatest sow ever owned in northwestern Iowa. The dam of Master's Giant is Mabel's Choice 2d, a sow that the writer saw sell for $400. She is by the noted Smooth Price 2d by A Wonder 107353. Is it possible to write a better pedigree? Master's Giant was first prize winner in the yearling futurity at Iowa in 1913, and, as an aged boar was second in 1915, weighing 1,005 pounds. Mr. Young has a wonderful herd of sows sired by this boar and these great sows were bred to Orange Wonder, such is the cross of many of the best spring pigs we saw on this farm. There is difference of opinions on these two boars, but rest assured that either one of them are good enough to stand at the head of the best herd in the country. This boar was shown as a senior yearling at the Minnesota State Fair last year and won first in his class. His sire is Brown's Big Orange, said to be the best Big Orange boar in the country. His dam, Ellerbroeck's Lady A. by A Wonder 143421 was the top of the J. O. James sale in 1912. Orange Wonder is a boar of great scale, a high, arched back, excellent spring of rib, good head, eye and ear with good strong pasterns. Mr. Young made the right nick when he bred Master's Giant sows to Orange Wonder and if one could see the big, stretchy, quality boars that he is offering you would agree with us in this assertion. Of course, he has sows of other breeding, in fact his herd is full of the best bred sows money could buy. If you are going to buy a herd boar, investigate the Young Polands. His hobby is sending out boars to head pure-bred herds and he sure has the goods. His prices are consistent with breeding and individuality. We take pleasure in recommending this herd. Write for further particulars and in so doing kindly mention The Wisconsin Farmer. See page 23.—Adv.

Corn Stubs No Longer Necessary.

EVERY farmer is yearly confronted with the problem of planking down corn stubs when fitting his fields for grain. They are a source of great annoyance through the entire season, clogging cutter bars on mowers and binder and interfering with all the farm operations in fields where they are located. This trouble can now be eliminated by the use of the Success corn stub cutter, which is being advertised for sale by the Corn Harvester Attachment Co., Madison, Wis., on page 10. Its construction is strong and rigid, as will be seen by the illustration. It is attached to the corn binder and will fit any make. The stub cutter is attached directly in back of the cutter on the binder and the work is done at one operation. It cuts the stubs off close to the ground, which eliminates all the trouble. The cutter travels at an angle of 45 degrees and works like a razor, shearing off the stubs completely. The price of the cutter is $15, a small part of the real value. Every operation in an old cornfield will be made easier by cutting these stubs and the ground left in better shape for the next crop. Harrows clogged up with corn stubs do poor work and drag litter from one place to another. It is hard work lifting drags to free them from corn stubs and this has to be done many times a day. An interesting booklet entitled "Comfort in the Cornfield," has been written and will be mailed on application. It gives complete information in regard to the cutter and the work it does.—Adv.



Galloway Cattle For Sale.

IF any of our readers want to buy some good registered Galloway cows or heifers, or some good young bulls, they should write or go and see C. S. Hechtner, Chariton, Iowa, whose advertisement appears on page 23. He offers fifty cows and heifers and fourteen good young bulls for sale. Some of the cows are imported and most of them are sired by imported bulls and are out of imported dams. Write Mr. Hechtner about them and kindly mention this paper.—Adv.

Ask your neighbor to subscribe for The Wisconsin Farmer.

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

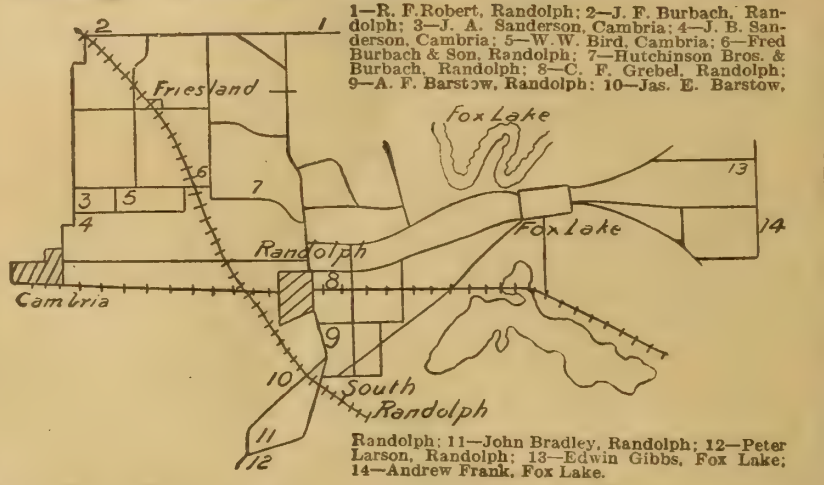
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE.

HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

Heavy Producing Blood

A 23.35-LB. yearling Holstein bull for sale. His dam made 23.35 pounds of butter as a 5 year old. She has 3 A. R. O. daughters, 2 with records of 28.63-24.50. His dam's dam at 1 year 11 months made 11.98 and was sold to parties in Japan. His great grandam has 8 A. R. O. daughters, holding the world's record for over 5 years. His sire, a 27.02-lb. bull, was 1st prize 2 year old at 1915 Wisconsin State Fair.
Arthur Rust West Allis, Wisconsin

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

SALE DATES.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sales Mgr.

Ask your neighbor to subscribe for The Wisconsin Farmer.

2 Yearling Sons of the Richly-Bred Holstein Bull
KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Robert's Fearless Lassie, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

Holstein Cows and Heifers For Sale

IN order to make room for our young stock we are offering 10 attractive Holstein cows and heifers. Two granddaughters of King Segis sired by Butter Boy Segis. We have tested a few of his daughters making 27.10—26.5 on a junior three year old—23.7 on a two-year-old daughter—and others almost equally creditable. The two for sale are 5 and 6 years old. Two 18 months old heifers sired by Tritomia Ormsby 85890. Four yearling heifers by the same sire. Two 3 year olds sired by a 28-lb. grandson of Hengerveld De Kol. We are pricing these at prices you can afford to pay. They have been bred and developed for production and show it in their conformation and udder development. Those of breeding age are bred to the 29-lb bull, Contest Colantha Bell Boy, a grandson of Colantha Johanna Lad. Come and see them or write **J. J. REID & SON, OCONOMOWOC, WIS.**

HERE IS AN OPPORTUNITY

We are offering a few choice registered Holstein cows and heifers bred to the 29.50 pound bull

MAPLECREST HENGERVELD DE KOL 94154

WE also offer a 22.29 pound son of his for sale at $125. Send for an extended pedigree. It is a very well bred bull and the price is very low. **GROVE BROS., COLUMBUS, WISCONSIN.**

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.
L. V. Garvens Brookfield, Wisconsin

FOR SALE

TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Jonanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address
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10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter: 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
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Sheboygan Falls Wisconsin

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PURE BRED and grade Holsteins and Guernseys from 2 weeks to 1 year old. Address Fair Vale Farm, F. A. Findlay, Whitewater, Wisconsin.

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TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
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FOR sale—Johanna Colantha Korndyke—Born Oct. 17, 1913, well marked. He comes of 40-pound breeding on both sides, his sire being out of a daughter of Johanna McKinley Segis, and his dam a sister of Johanna De Kol Van Beers. Price $150. We also have a 21-lb. and a 19-lb. yearling for sale. Send for extended pedigrees.
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REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
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READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Henger veld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
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BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address
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GUERNSEY BULL

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THE richest Guernsey breeding. Four months of age. Sired by the richly-bred bull,

GOODWILL'S HERO

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COWS, heifers or bulls? Will sell Champion Banff 277574, Red Crest 313373 Prince Henry 402052 and other bulls from 6 to 14 months. Can also spare females. Scotch or Scotch-topped. Don't delay writing. Address
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5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
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3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
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HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
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Meet me at Hamline, Milwaukee or La Crosse.

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40 BOARS of March farrow, sired by Repeater, Smooth Price, High Wonder, North Side Wonder, and six other boars, all of a National reputation, out of big, 600 and 800-lb. sows. We hold the state record for high average on brood sow sale. Will sell these boars at farmers' prices for July 1st delivery. Write at once.
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100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

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SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
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101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
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GET our wholesale coal prices. Direct to you from mines. Easily save $2 to $4 a ton. *Now* is the time when you can buy at *special summer* prices and cut your fuel bill this winter.

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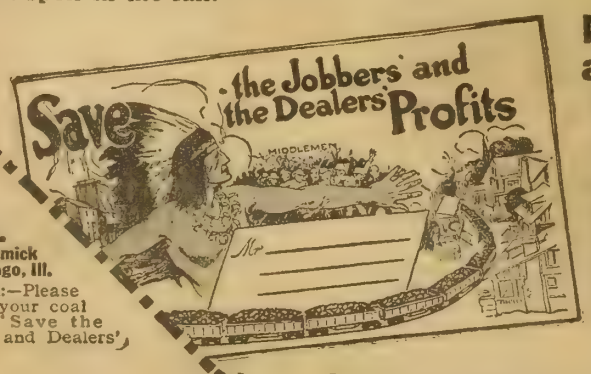

Martin-Howe Coal Co.
1937 McCormick Bldg., Chicago, Ill.
Gentlemen:—Please send me your coal circular, "Save the Jobbers' and Dealers' Profits."

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Mail the Coupon—or a Postal Today—Get This Big Circular and Special Summer Prices

Wise coal buyers everywhere know that *now* is the best coal-buying time. And here is your chance. Save the fat profits that others have been making on your coal bills heretofore. Deal direct with the mines.

If you cannot take a carload yourself, read about our club plan in the column to the right. But in any case, write today and get our summer prices. Now is the time. Write your name and address in the coupon—or on a postal—mail today—and cut your coal bill.

Martin-Howe Coal Company
1937 McCormick Bldg., Chicago, Ill.

Club Plan

Two or More Farmers Take a Carload—Each Saves BIG Money

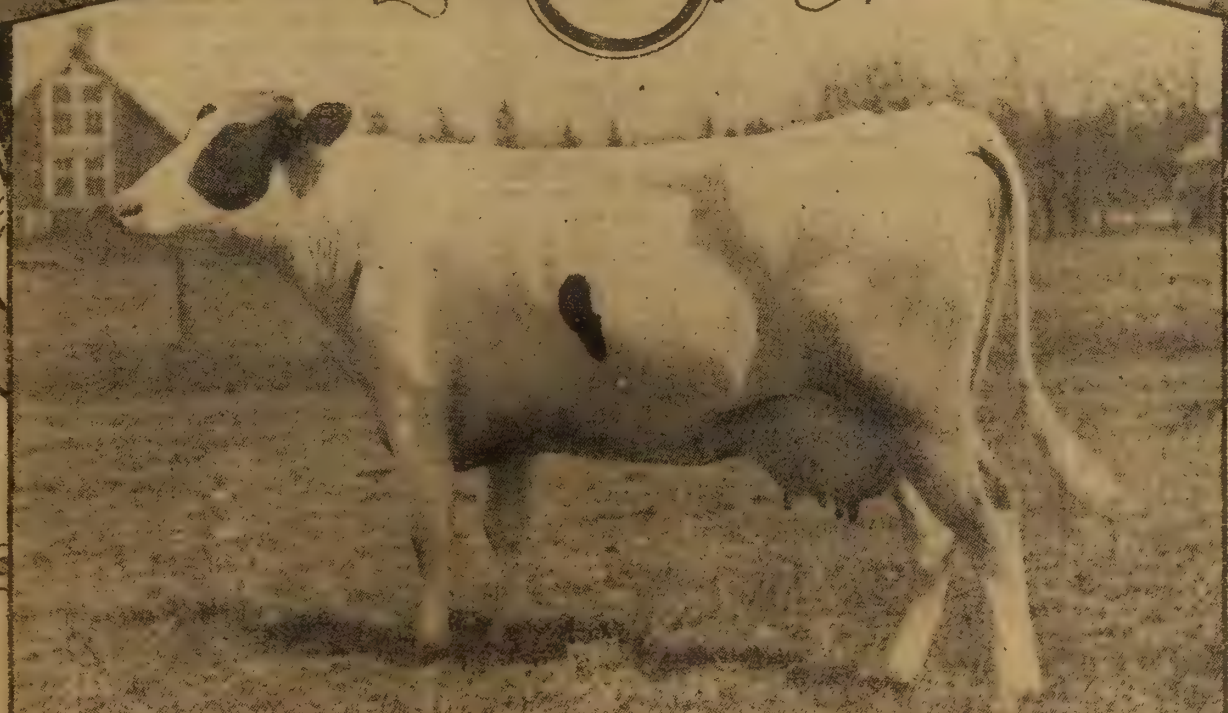
And it's a good plan—simple as A B C—where all concerned save money. Carloads run from 30 to 35 tons, the smallest, up to 50 tons, the largest. We will send you a small car and you and one or two or more neighbors can split it between you. Neighbors are glad of the chance; tell them about Tecumseh coal, show them the big circular we send you—let them read the letters from our customers and compare our prices with the prices coal dealers ask.

Thousands of Tecumseh Coal Clubs are working throughout the Middle West today. They are making big savings and are buying better coal. Get in on this, too—why pay outrageous coal prices? Get a neighbor or two to go in with you and split coal expenses in half—get better quality, heat-producing coal. **Fill out and mail the coupon today.**

THE WISCONSIN FARMER

VOL. XLV. NO. 33. THURSDAY, AUGUST 17, 1916. WHOLE NO. 1803

College of Agriculture
University of Illinois



SPELL PRIDE AND WEALTH

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Wanted—A Four-Horse Evener.

I would like to know if some reader has a rule for making a four-horse hitch for a sixteen-inch sulky plow. The evener being so arranged as to keep three horses on the unplowed ground, and one in the furrow?

Answer.—We would like to hear from any of our readers who have made an evener of this kind. When replying please send sketch and dimensions.

Power Required to Pull Plows.

I enclose a sketch of a homemade tractor. Is the frame strong enough? Will a four and one-half horse power gas engine furnish enough power to pull two plows?

Answer.—Space will not permit us to publish the sketch. The frame appears to be strong enough. A four and one-half horse power engine should not be expected to pull more than one twelve-inch plow.

Batteries Run Down Rapidly.

I own a 1914 Buick car equipped with the Delco starting and lighting system with which I am having considerable trouble. The storage battery, at times when I put the car in the shed is all right. The next time I want to use the car, the battery is dead. What do you think is the matter? Could I take the storage battery out, and use dry cells in its place?

Answer.—Possibly you are leaving your switch closed, which would cause your battery to run down. If not, there is a short circuit in your switch or in the wiring. You better have an electrician test it. You could not use dry cells in place of the storage battery.

Lighting From Wet Battery.

I would like to ask a few questions about wet batteries. Will batteries constructed on the principle of the one recently illustrated do for lighting small electric lights? Also, would Leclanche cells do for such work where used only a short time each day?

Answer.—Only storage batteries may be successfully used for house lighting. Wet and dry cells are too expensive for this purpose. Wet or dry cells may be used, however, when a small light is required for a short time only. Three cells of the type illustrated, connected in series, would supply a six-volt, two-candle-power light for some time. This type is one of the best for both lighting and ignition. The Leclanche cell is not suitable for lighting.

A Cycle Car.

I would like to know if I could build an auto, using a one and one-half horse power gasoline engine. Would that be power enough to run it? What size sprockets would I need? I want it to go fifteen miles per hour. Would wet batteries run the engine, and how many would I need? Would bicycle wheels hold the frame and two people?

Answer.—Motorcycle wheels could be used, but bicycle wheels would be too light unless the car is handled very carefully. It would load the engine quite heavily to run the car at fifteen miles per hour, but it might do so under favorable conditions. If your engine makes about 1,000 R. P. M. and you use twenty-eight-inch bicycle wheels, use a sprocket on the drive wheels having five times as many teeth as the sprocket on the engine. You should arrange a clutch of some kind for starting and stopping. You will also need a reverse. Wet batteries would not be practical. Use dry cells.

Pumping From a Well.

Under the heading "Pumping from a Distant Well" in a recent issue you state that it would be possible to draw water a distance of 600 feet with a rise of forty-five feet from the bottom of the well. I do not think this will work, as I have always understood that thirty-three feet was the limit.

Answer.—We appreciate the above correction. When answering the letter referred to we got the impression that the shop was twenty feet above the water level. Upon reading the letter again we find that this is not the case; that the water would have to be raised forty-five feet instead of twenty feet. It is impossible to raise water over thirty-four feet by suction. It is not practical to raise it by suction much over twenty-five feet with an ordinary pump; and it is better to place the pump cylinder within twenty feet of the water. To pump from a well twenty-five feet deep by an engine in a shop 600 feet away and twenty feet higher than the well it would be necessary to locate the cylinder twenty feet or more below the shop floor and pipe from there to the well. The lay of the ground would determine whether or not this would be practical. Of course, it would be possible to locate the pump at the well and drive it by windmill quadrants, or a rope drive. An electric plant is a good solution of a problem of this kind, as the pump may be located at the well and driven by a motor.

Automobile Patents.

What is meant by "vibration" in an automobile? Are automobile accessories registered in the United States Patent Office? Are there any companies buying such patents? What does it cost to register a patent?

Answer.—Vibration is a trembling movement, usually produced by an unbalanced condition of the engine. All United States patents are registered in the United States Patent Office. We know of no reliable firm making a business of buying patents. The cost of obtaining patents varies, usually being about $80. It is almost necessary to have a good patent lawyer to obtain the patent. For information as to how to obtain a patent write to the commissioner of patents, Washington, D. C.

A Reversing Switch.

I would like to know how to make a reversing switch for my electric motor. In Figure 1, with the battery wires attached to 3 and 4, the motor runs forward. When the connections are made as shown by B, Figure 1, the motor runs backward. Please illustrate a switch for reserving the motor without changing the wires. I run the motor with dry cells, but would like to run it from a Stromberg-Carlson generator. Please explain how to do this.

Answer.—In Fig. 1, sketch A shows the connections to run the motor forward and sketch B the connections to run the motor backward. Figure 2 shows the reversing switch and the connections to the motor. A reversing switch is a common double pole, two-throw switch, with the corner binding posts connected as shown by the dotted lines. With the switch handle up as shown the motor will run forward; as one blade of the switch

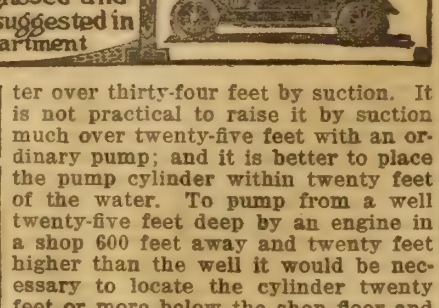


FIGURE 1.

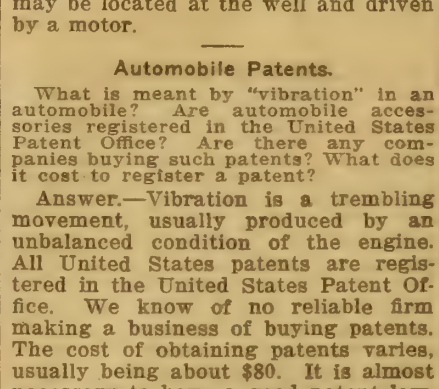


FIGURE 2.

connects one and two, while the other blade connects the negative wire with four through the diagonal wire from Y to four. With the switch handle down four is connected with two and one with the negative wire, which are the same connections as B, Figure 1. The usual way to connect in a reversing switch is to connect the two middle terminals of the switch to the armature lead wires and the two upper terminals of the switch to the field coils.

We are not familiar with the generator you mention. If not too large for the motor connect it to the motor just as you do the batteries. Battery motors may be run from a lighting circuit by passing the current through a small candle power light for resistance.

Ford Motor Overheats.

We have a Model T Ford car, equipped with an Atwater-Kent ignition system. After just a short trip, the water boils very badly, but not enough to interfere with the operation of the car. We recently had the engine thoroughly overhauled, but that did not stop the engine from getting hot. What could be the trouble?

Answer.—We are inclined to believe that your ignition is set so as to occur a little too late. To set the timer, loosen the screw that prevents it from turning. Place the piston in No. 1 cylinder at top dead center between the compression and power strokes. Then slowly turn the sparker backward until a click is heard. Then tighten the screw to hold the sparker in position at this point. Remove the distributor cap and note the position of the distributor block. The terminal to which it points should be connected to No. 1 cylinder. The other cylinders, in their proper firing order, are connected to the other terminals in rotation. The firing order of a Ford car is 1-2-4-3.

Other causes of overheating are: Loose fan belt, carbon in the cylinders, too much gasoline and clogged water pipes. Naturally, a motor does not cool as well in summer as in winter.

Our Cover Page.

Wisconsin Farmer readers will be interested in a little more definite description of the cover page this week than we were able to give on the first page. The cows shown on the front page are owned by Fred Pabst and are a part of the Holstein herd at the Pabst Stock Farm, Oconomowoc, Wisconsin. In the upper left hand corner will be found a picture of Pabst Hengerveld De Freule 135438. This cow has an A. R. O. record of 30.30 pounds of butter in seven days and her dam has a record of 29.50 pounds of butter for a similar period. The upper right hand picture shows Pabst Blackberry, the 31.68 pound three year old in the Pabst herd. The lower picture is Pabst Hengerveld Colanthus, another of the Pabst herd, with a record of 31.51 pounds of butter in seven days. These three celebrated Holsteins are a great credit to the dairy development of the state and stand high in Holstein circles in the Union. They are a fine dairy type.

EAGLE GAS Tractors

Built for Wisconsin Farms

Here's the EAGLE TRACTOR built especially for Wisconsin farms. It is the famous EAGLE two-cylinder engine in tractor form. Does all that is required of a tractor and delivers an abundance of smooth power for all belt work such as threshing, ensilage cutting, etc.

The EAGLE GAS TRACTOR will stand rough and ready usage. It is just the right weight to be practical on any medium-sized farm. All unnecessary weight has been cut out, yet nothing that would add to the strength, durability or *dependability* has been sacrificed.

This tractor is simple in construction, simple in operation and easily accessible. The average man can readily learn to work it or keep it in repair without help.

FOUR MODELS

8-16 Two Cyl. Weight 4850 lbs.
12-22 Two Cyl. Weight 5030 lbs.
16-30 Two Cyl. Weight 5700 lbs.
16-30 Four Cyl. Weight 5500 lbs.

All EAGLE GAS TRACTORS have four wheels with two drivers. They pick up a sudden load and get to normal speed quickly and smoothly. All have the famous EAGLE Valve-in-Head motor and use low grade fuel, giving low operating cost.

Every Wisconsin farmer should learn about EAGLE GAS TRACTORS. Write at once. 21

EAGLE MFG. CO., 683 Winnebago Street APPLETON, WIS.

NOW IS THE TIME!!—

UNTIL SEPTEMBER FIRST

PRESENT LOW PRICES CONTINUE

On and after that date spreader prices **must advance.** Malleable castings cost more, steel costs more, all materials entering into construction of Galloway Manure Spreaders have advanced and we are forced to raise the prices September 1st when new material contracts begin.

That's why I say if you need a spreader in the next three months, six months, **twelve months or longer, you should buy now. The saving is worth making!** Remember at the end of twelve months if a Galloway Spreader has not paid for itself, provided you have hauled out a hundred loads of manure or more, and has not proven everything I say for it, I AGREE TO TAKE IT BACK, pay freight both ways and return your money, no matter on which of my six selling plans you buy. Could I make this offer if the Galloway Spreader did not back up everything I said for it—if I were not sure that my spreader would please—would pay for itself on your farm? My new steel beater and wide spreading V-rake pulverizes and tears the manure to shreads—WORTH $15 EXTRA ON ANY SPREADER—costs you nothing on the Galloway. My Invincible patented roller feed—an exclusive feature on the Galloway—makes it superior to all others, the secret of its light draft—A FEATURE WORTH $25 ALONE ON ANY SPREADER—coste you nothing extra on the Galloway. These and other features fully explained and illustrated in the second edition of my big free catalog. DON'T BUY A SPREADER of any make or kind until you have tried a Genuine Galloway AT OUR RISK.

MY BIG BOOK FREE
Ask for it today. A postal gets it. Your copy is ready. 250 pages illustrating and describing the great Galloway line of manure spreaders, cream separators, gasoline engines, farm tractors, vehicles, farm and household necessities. Just drop me a postal.

THE WM. GALLOWAY CO., 39 Galloway Sta., Waterloo, Iowa

The Wisconsin Farmer

THURSDAY, AUGUST 17, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

BIG PROFITS IN LIVE STOCK.

I HAVE frequently taken the occasion, especially during the last year, to urge on my readers the advisability of building up and breeding up their herds to the highest point of efficiency, contending that never before were the returns from pure-bred live stock farming so good or so sure. I do not know that there remains much, if anything, which I can say, if what I have already said has not convinced my readers. Perhaps I might best set forth this story of a New York stockman, as I find it told in one of our big national magazines, as a good illustration—and conclusive proof, too—of what I have been arguing. Here is the story as it comes to me:

Frank M. Jones, of Oneida county, New York, a farmer boy, has become very wealthy through developing his hobby that fancy stock pays better than ordinary cattle. His father was a farmer of the old school who thought that cows were cows, and only after a bitter struggle was persuaded to sell his herd. For the price of thirty cows, young Jones purchased two young heifers of excellent lineage and fed and groomed them with his own hands until they reached maturity. One of the two had a calf that was christened Pontiac Lass. When Pontiac Lass first began to yield milk, it was plain that she was an extraordinary animal. Finally he asked a group of dairy experts to look her over. The result was three world's records for milk and butter. Frank Jones now has 140 animals valued at considerably more than $250,000, but Pontiac Lass still holds the championship. His cows are bovine aristocrats. Their lives are heavily insured and at the first sign of illness a veterinarian hastens to attend them. His experience is a practical demonstration of the most up-to-date dairying methods and profits to be won from fancy stock raising. It is particularly striking when we remember that the total initial capital for the venture was not more than $1,400.

With the opportunities what they are certain to be once the European war is over, I am firmly convinced in my own mind that the American stockman confronts a period of greater prosperity than he has ever known before, and that opportunities exist in the live stock field the like of which never before existed. We may not all make the phenomenal success that Frank M. Jones has made, but the opportunity to get in on the ground floor is ours if we will only take advantage of it in time.

BUYING A FARM.

IT IS somewhat like carrying coals to Newcastle to give a farmer advice on buying a farm, yet there is so much sound sense in something I read in one of our big national magazines last night on this very subject I cannot refrain from passing it on to you. Here are the six essential rules for farm buying as given there:

1. Be perfectly certain that your neighbors are congenial, for farming in an uncongenial neighborhood is impossible.
2. Locate near a school and a church—you can get labor easier even if you do not use them yourself.
3. Be sure the country is healthful—and the water pure.
4. Look well into the transportation facilities; roads, railroads and rates.
5. Find out where the markets are.
6. Then buy a good piece of farm land.

I greatly fear all too many of us put the sixth rule first and ignore one or all of the other five altogether. Yet the more I think it over the more convinced I am that the rules are arranged in the proper order of importance. The day when land was everything in successful farming is at an end, just as much as the day when brawn was everything and brain was nothing. We must have good soil in order to produce good crops, but we cannot remain making even good soil produce well and satisfy ourselves with our work if we do not have neighbors, school and church facilities, markets and good health. What would it benefit us if we had the most fertile oasis in the world, producing 100 or even 200 bushels of corn and sixty or even 100 bushels of wheat to the acre, if this fertile oasis were surrounded by an impassable desert, with no neighbors, markets, schools, churches or any of the things which go to make life worth the living? Yes, the farm we buy must be of fertile soil, but that is not all nor greatest in the making of a permanently prosperous and happy farm home.

Nor must we overlook the importance of the third rule; I am tempted to put it first, for what can be more important than the health of our loved ones? All too many farmers are careless of their water source, securing their household supply from shallow wells contaminated by stable refuse and worse. When it is so easy and inexpensive to have the state authorities make a chemical analysis of our drinking water, why do we neglect this all-important matter? At this season of the year our water supply is second to no other factor in determining the health of the entire family. Let us consider this most carefully when we come to look about for new quarters in which to build our future homes.

THE BLESSING OF THE RAIN.

SOME weeks ago I wrote a little article quoting Coates Kinney's poem entitled "Rain on the Roof," and another poem devoted to rainy-day topics, entitled "Loafin' in the Stable." A subscriber is so kind as to send me an extract from a recent magazine article written by a woman who has evidently homesteaded in Kansas in the early days and who recalls how the first drop of rain was a godsend to them all, breaking the drouth which bade fair to undo all the work of eager hands for many and many a weary day. I am going to quote rather liberally from this article, for I have no doubt but that it will awaken memories in the minds of many of my readers who, like the woman who wrote it, have cried, "Thank God, it's raining:"

Why, even now, after all these prosperous years, when the loss of an occasional corn crop is more than made up by the oat and wheat crops, and we have no cause for money anxieties—even now, sometimes when I waken in the night and hear the first patter of raindrops on the roof, I unconsciously send up a prayer of thanksgiving and cry, "Thank God! it's raining."

We knew what it meant to us, that soft, healing touch of the rain, like a flood of soothing tears after a long, deep grief. The rain whose coming would rouse the dry, parched, cracked, starving earth to placid fecundity once more; that would turn brown, dead grass soft and green again—what a blessing it was! We can never have too much rain, we who lived through those first years in Kansas. We would rouse in the hot nights when we heard those first pattering drops on the roof and make a quick sortie into the night to bring in the coops of young chickens to the dry safety of the kitchen. The rains were like the drouths, intense and concentrated. The wind would roar, thunder would boom about our heads, and the lightning would fizz and crackle ominously.

"Going to be a regular gully-washer," we would say to one another, and go to sleep again, resting in a pleasant sense of calm security—all our worries and anxieties washed away by the rain. For, somehow, the rain generally did come—just in time. Nearly always in time. Sometimes it didn't. Just often enough to make the fear that it wouldn't mark in a few lines and wrinkles that no amount of massage or cold cream can rub out now.

There is not much that I can, or need, add to the picture. It is perfect as it is. It is well for us all, young and old, to remember the days of tribulation which the pioneers suffered, for out of them has grown the sustained prosperity of today. "After all these prosperous years," began the woman who wrote the extract I have set forth above. I am glad that she has reaped so certain and so pleasant a reward, for having endured what she did nothing is too good for her and hers. The lesson she learned has been learned by thousands of others, and today a land of diversified farming rises superior to drouth or wet season or any other untowardness, for if one crop fails there is another to fall back upon, as Kansas and all the grain belt have learned so notably in the last few years. It is a good thing for us all if, having learned the lesson (sometimes by bitter experience), we can look back upon it and write of it so philosophically and so inspiringly as the woman whose words I have here set forth.

A WAR STORY.

I AM indebted to a subscriber for sending me a newspaper clipping which tells a most interesting war story. Here is the clipping as it was sent to me:

Thirty-eight years ago young Augustus Bliss, of Warwick, quit cutting brush on his father's farm, hung his scythe on a pine tree, and went off to war. The soldier boy never came back, and the scythe has never been taken down from the tree where he hung it, but has become embedded in the growing pine. This pathetic reminder of the great civil struggle is a familiar sight. The father of young Bliss was building a dam, and sent his son to cut some briers that grew about some stone that he needed. After cutting the briers the boy hung the scythe on a small pine tree standing near. A day or two later he enlisted and went to the front with the Thirty-sixth Massachusetts Infantry. He was only eighteen years old. He died of fever in an army hospital somewhere in Mississippi, and his name is on the roll of honor on the soldiers' monument at Orange.

Surely that young hero could hardly wish for a more fitting monument than the old tree with its rusted scythe, mute testimonial to his patriotism. There are a few stories in history (perhaps they are mere legends, but I hope they are true) which appeal to our emotions and arouse our patriotism far more than the tales of actual battles themselves. Such stories, for instance, as that of Israel Putnam plowing on his farm in Connecticut when the news came of the battle of Lexington. You may recall that he unharnessed his team, left the plow in the furrow, mounted his horse and started, without stopping to change his clothes. Such stories as center around the career of Captain John Stark, who swore to defeat the British "or Molly Stark would be a widow before night," and so on and on: stories of humble men—farmers for the most part—who have become our national heroes because they dared and did to the utmost of their ability.

The scythe hanging in the pine tree is a monument which stands to perpetuate the name and fame of a man who deserves as much from his country as any of the great generals who led battalions into battle, for he gave up all he had to give for his country: His life. It is a humble story, commemorating a humble man who might otherwise have lived and died naught but a farmer, yet it is a story of sacrifice and heroism which brings the tears to my eyes to contemplate.

I have always contended that some of our greatest national heroes are men entirely unknown to fame, men who have done their work well and set their families and their communities an example which have made the whole world better. Who among us shall say that these men are not heroes, even though they never smelled gunpowder? I remember some words I read once in one of the best books, in my opinion, ever written. The words were these:

For there are many great deeds done in the small struggles of life. There is a determined, though unseen, bravery which defends itself foot to foot in the darkness against the fatal invasion of necessity and of baseness. Noble and mysterious triumphs which no eye sees, which no renown rewards, which no flourish of trumpets salutes. Life, misfortune, isolation, abandonment, poverty, are battlefields which have their heroes, obscure heroes, sometimes greater even than the illustrious heroes.

The soldier who hung his scythe on the tree and went away from his farm, never to return, is a hero, in my mind, as great as any commander in any war. But shall we not go further and say that the man who does his work well, no matter how humble and prosaic it is, in peace as well as in war, is a hero, and furnishes an example which should thrill and inspire as fully as much as any man who falls in battle, clutching the blood-stained flag?

LIVE STOCK PRICES.

I AM indebted to a farmer friend for an interesting story showing how live stock has increased in value in the last generation. According to him, a chicken is worth more today than a turkey was a few years ago, a turkey more than a hog, a hog more than a cow, and a cow more than a horse. Here is an actual incident, as vouched for by my correspondent:

In March, 1879, I went down to Texas to look over 2,000 head of steers in Matagorda county, southern Texas. While I was down looking over the young cattle I was asked by the manager of the ranch if I cared to buy some older steers. The owner, I was told, had a number of six-year-old steers that he would sell, although he was not anxious. He was going to hold them until he got his price, he declared. The manager impressed upon me, however, that I need not hope to buy unless I was willing to pay the owner's price. I asked the price, and was told that he wanted $15 a head. Think of it—$15 a head for six year olds, and today calves are bringing $85.

Nothing could better prove my oft-made contention that there are bigger and surer profits in live-stock farming today than ever before. Of course, it may be argued that while six-year-old steers were only bringing $15 a head in the old days a dollar had bigger purchasing power then, and the farmer could get much more for his money at the town store than he can today. Granting this, there are few who will contend that a dollar would buy as much thirty years ago as a dime will today, and that is about the ratio involved in the story of the Texas steers. The good old days had their advantages, no one is more willing or ready to admit this than I am; but the future beckons with promises the like of which we have never known before. We must not make the mistake of living too much in the past, or envying the opportunities gone by. We should dedicate ourselves to making every possible use of the present and to preparing for the golden opportunities of the future.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

Either of which communications relating to subscription tising may be addressed.

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Another Silo Would Have Helped.

IT MAY be considered rushing things a little to advocate two silos on every farm when there are a good many farms in Wisconsin where the first silo has not been built.

But experience has shown the present season that summer silage will come in very handy in a dry year. One of our best authorities has said that we ought to farm every year just as though it were going to be a dry year. If this doctrine holds water, perhaps we ought to have summer silage every year in anticipation of short pastures. At any rate the extra silo is worth thinking about. Those who had it this year profited wonderfully at the milk pails and some of our dairymen who were not thus prepared suffered losses in the same direction.

The best information which we can get from those who have had summer silage is that they have saved considerable money by having it. Of course, we realize that a dry summer in Wisconsin is the exception. But for those who place great dependence for support in the sale of milk or cream, and who would suffer to some extent if the flow of milk were cut off, we think the question of a second silo for summer feeding is well worthy of consideration.

Wisconsin Stands Up Well in Dry Weather.

MR. D. S. BULLOCK, of the animal husbandry department, Wisconsin College of Agriculture, writes The Wisconsin Farmer some good ideas on how Wisconsin can stand a dry summer. He says:

"Dry spells" do not have in them the terror for Wisconsin stockmen that they do for the farmers in many sections of the grain-belt states. Wisconsin farmers are constantly fortifying themselves against such unavoidable handicaps by getting humus in their soil through the growing of legumes, the raising of live stock, and the feeding of as much coarse fodder as possible on the farm. By so doing they are increasing the humus content of the soil, and so its water holding capacity.

The use of summer silage as a substitute when natural feed becomes short makes the stockmen in many respects independent of the weather. The silo has been one of the greatest and most important factors in making Wisconsin the great live stock state that it is today. More and more the stockmen of the state are realizing that silage is absolutely essential not only for the dairy cow, but for other live stock as well. We now have 56,000 silos and the number is rapidly increasing. Several of our northern counties built more than 100 silos each last season. The backward season of a year ago was a lesson to many, and more silos are under construction than last year. Every farmer who keeps a large number of live stock realizes that he is insuring the future productivity of his farm. He realizes that by feeding out the coarse fodder grown on the farm and returning the manure to the soil, good crops are almost a certainty.

More than 80 per cent of the fertilizing elements in the feed eaten by stock is returned to the soil in the manure. These plant foods are in a form readily available for the growing plant. The stockman is thus building up his soil and laying a future foundation for the production of larger and better crops. Very many Wisconsin farmers are insuring themselves against dry spells by feeding both live stock and their fields.

Mr. Bullock recently came to the college of agriculture staff and is engaged in extension work which gives him an excellent opportunity to get first-hand information over the state.

Horses Are Not Losing Out in Wisconsin.

DESPITE the inroads supposed to be made in the horse industry by the automobile and the tractor, the horse is holding his own and gaining. This statement was made by Dr. A. S. Alexander, of the Wisconsin College of Agriculture, before the recent Wisconsin Bankers' Association meeting held in Madison. We quote from the address:

Horses, despite the automobile, are increasing in numbers. In 1914, Wisconsin horses increased 27,000 head and in 1915, 7,000 head. From 1906 they have increased 116,068 head worth $1,439,243 in Wisconsin. Valued at $124 each Wisconsin horses are worth today $88,288,000, to say nothing of the mule.

Wisconsin cows are worth $92,125,000; our sheep $3,519,000 and our swine $19,278,00, figuring the cows as worth $55 each and sheep at $5.30 and swine at $9 each.

The $200,000,000 or more now represented in our horses, cows, sheep and swine might be doubled by the general employment of pure-bred sires and the right kind of dams.

More than 50 per cent of all of the sires in use in Wisconsin are grades and scrubs.

Pure-bred sires are bank builders. Scrub sires are bank wreckers.

There are 1,814 pure-bred public service stallions in Wisconsin and their good work is being retarded and broken down by 1,239 grade and scrub stallions. The grade sires number 922; the scrub sires, 317. The place of every grade and scrub sire should as quickly as possible be taken by a pure-bred, sound, suitable and prepotent sire. Such sires would quickly revolutionize our live stock industry. We bespeak the earnest and enthusiastic co-operation of every banker in the elimination of all undesirable sires.

There are 1,111 pure-bred Percheron sires in Wisconsin. This is the favorite and predominating breed and it is doing wonders in the improvement of our horses; but almost a like number of grade Percherons —sired by these pure-bred horses—are also used in this state and they are preventing or antidoting the good work of their sires. They are a compliment to their pure-bred sires, of course; but they are a menace to the industry and should be suppressed.

That it is easily possible to improve the live stock of this state in a short period of years is shown by Dr. Alexander when he says:

Grading up can quickly and satisfactorily be done by the persistent, consecutive use of pure-bred sires of the same breed upon selected females. It would be quite possible in fifteen to twenty years in every developed district of Wisconsin to substitute for every animal therein a practically pure-bred, grade-up animal of specific sort and high efficiency. We ask you bankers to help in making such a possible and profitable change.

And let it not be understood that the pure-bred sire is the sole necessary factor in animal improvement. It is as necessary and important that the right sort of dam should be employed. Too often it is thought that when a mare is no longer good for anything else she may be profitably employed for the production of colts. Some men think it profitable to start breeding operations with a dozen cheap, footsore mares from the city, but I assure you, gentlemen, that it would be far better to start with one right mare, mated each time to the best available pure-bred sire. One right pure-bred mare has earned many thousands of dollars for her owner by the time she was nine years old and many a mare of that sort has gone on producing until twenty years old or over. A sound, well-formed, pure-bred mare that is a consistent breeder is a little fortune to any man. Bankers can well afford to loan money for the purchase of such mares, or sires and dams of the kind we have been describing, to take the place of grade and scrub sires and unsound, unfit or unsuitable dams throughout the state. We have nothing to say against the tractor, but as a stockman, I may be permitted to say in favor of the brood mare and the other suitable dams of the farm, that they produce stock to take their place when they are gone, pay for their living by work as well, whereas the tractor in time goes into the scrap pile and has never produced a little tractor pup, or foal, calf, lamb or pig to take its place.

We advocate live stock breeding for the reason, too, that animals concentrate farm crops into easily marketed commodities and also insure the fertilization of our farms. The banker should be interested in the production of milk, cream, butter, cheese, beef, pork, mutton, wool and the better horses we have described. These commodities mean cash in every district, prosperity for the farmer and business for the banker as a surplus will remain for depositing and interest earning.

All splendid advice from a thorough live stock student and practitioner who knows what he is talking about.

Shawano County Milk Record.

THE Wisconsin Farmer has a most encouraging letter from C. M. Reydberg, Shawano county, Wisconsin, tester in charge of Shawano County Cow-Testing Association No. 1. Report of this association will be published in the dairy columns of this paper next issue. One cow in this association produced 1,144 pounds of milk in thirty days ending July 31st, which is at the rate of 36.9 pounds daily. This production was made by a Guernsey and the test is shown by the record to be 5.6 per cent fat. The fat for the thirty-day period was sixty-four pounds. A Durham cow in the same association produced sixty pounds of fat in thirty days from 1,184 pounds of milk testing 5.1 per cent. There are fourteen cows in this Shawano county association which produced better than forty-five pounds of fat for the month. The Guernsey cow which held the record for the month in this association gave milk valued at $21.76 for the month, while the feed cost was, according to the statement of the tester, $1.75, netting $20.01. One Holstein cow in the herd came very close to the records above given. The record cow belongs to Chris Hansen, Underhill, Wisconsin.

A few good cows like these in any herd will soon begin to increase the farmer-dairyman's bank account.

The Fertilizer Situation.

AT A CONVENTION recently held by the manufacturers of commercial fertilizer, more enthusiasm was displayed than has been the case since the beginning of the European war. Every fertilizer user knows that owing to the fact that the German potash supply has been cut off since the war began, there has been a great scarcity of this constituent which has made itself felt in increased prices during the past year. Not only have fertilizers advanced, but their content of potassium has had to be greatly reduced. Naturally, this has interfered considerably with crop production in some localities. On the other hand, the scarcity of potassium has led to experimenting in this country for the purpose of producing this constituent at home. Some progress has been made along that line, and from now on a considerable amount of potash will be produced from kelp on the Pacific coast.

While prices will be high for the next crop year, the advance in price will not be so much as to make the use of fertilizers unprofitable. It was stated at the convention that, as a rule, the amount of fertilizer required for an acre of wheat will not cost more than the price of a bushel of wheat above former values. Perhaps some good will also accrue from this fertilizer scarcity. Possibly some means other than adding purchased plant food to the soil may be resorted to. If it should lead the great army of fertilizer users to sow more leguminous crops for fertilizing purposes, the extra price that will have to be paid for the commercial article will be a godsend to these men.

While there is much land that will not produce crops profitably without the addition of commercial fertilizer, there is no question but that the plowing under of legume crops on a large scale would make it possible to utilize commercial plant food to much better advantage than is now being done.

Co-operation With Young People of the Farm.

FARMING is becoming more and more an exclusive occupation, made so by high land values. On this account, possession of land by the younger generation must in the main be through inheritance. A few generations ago it was possible to buy land in the corn belt at a figure so that full payment could be made for it by two or three crops, but this situation has entirely changed. Attention is called to the fact by one of our subscribers who holds the opinion that land owners are remiss in their duty to children if some special provision is not made so that the younger generations get a fair start in farming affairs. The communication of this subscriber follows:

The increase in the value of land has brought about many new problems and conditions. Many an old tight-fisted farmer is a menace to the upbuilding of our state because he does not in any way encourage his sons or his daughters. He rather prefers to kill their ambition by the hard rule of trying to pocket their savings and keeping his grown-up children in subjection.

There are many young men with well-to-do parents who wish to establish homes of their own, who have labored long and hard at home, who are deserving enough to be trusted with a few thousand dollars of their parents' money, but instead the parents are hard and oppressive toward them and say that they had to make their own start, and contend that the children have the same opportunity as they. Now, any reasonable, thinking person knows that it was easier to get a start in life twenty years ago than it is today, and it is strange that so many men care nothing for the welfare of their own children.

I think a young man ought to receive a certain portion of his parents' property when he is twenty-one, and a daughter ought to be encouraged to remain on the farm by her parents' good will and kind support. What is the use of an old farmer trying to be a tyrant when he might take more interest in the social welfare of the younger generation and the upbuilding of the soil? So many retire and move to town. We, the younger generation, need the veteran farmer with us as we never needed him before. We need his co-operation and advice. We need his capital to make the farm more productive. We need more live interest in yeomanry and less interest in luxury and ease. Anyone who remembers the open undulating prairies of a few years ago can notice how rapidly changes have been brought about; how great cities have sprung up in the past forty or fifty years where no cities stood before, and a visit to any of the large cities will open one's eyes to the fact that whole blocks and new streets are opened every year, making the city larger year by year. A few years ago I was in the Twin Cities of Minnesota and it seems a marvel the way these cities are spreading their great arms in every direction and how new streets have been laid as far as the eye can see, and this within a period of four or five years.

On the other hand, as we look away over our farms we see how speculation and hard methods of greed and tyranny have almost ruined thousands of acres of fine land and one does not have to go far to find land that will not produce over twenty bushels of corn per acre under favorable conditions, and right here is a strong argument that we need the capital on the farm and in the hands of the ambitious young farmer where it belongs, rather than in the hands of the veteran who holds it dear from force of habit, lacking patriotism and love for the young man and the young woman who are trying to make things go without capital on a farm worth $20,000. We know that it takes equipment to run a farm nowadays; we know that land rents for more; why not give this problem due consideration in order that live stock and machinery and gress seed may not be lacking for those trying to meet the odds?

We are not sure but what there is some sound reasoning in the analysis here given. Where the taste of boys and girls is naturally favorable to farm life, there is no practical way for indulging that taste unless the landowner will make some special concessions in the form of loans in order that some may be given a start in life. In too many cases a father belittles the ability of his sons in business matters and this unquestionably is the basis for the conservatism referred to by this subscriber. We do not like the term "tight-fisted," and if a change is made in the general attitude of landowners toward the start in life which they propose to give their sons the matter will have to be approached in a different way.

In nine cases out of ten a hustling son will handle land better than a stranger tenant, because he has greater interest in its future and, that being the case, the father can well afford to extend privileges to his son that would ordinarily not be extended to the renter. The farmer's son who is not assisted financially in order to get a start must drift to the towns and cities, with the chances against him that he will make as marked success there as he would if he remained on the farm and thereby reap the advantage of the training received during his youth and his young manhood.

Our Poland China Silver Trophy.

Offered in the Futurity Classification at the Wisconsin State Fair at Milwaukee, September 11th to 16th, '16.

IN ORDER to stimulate interest in Wisconsin in the hog business The Wisconsin Farmer offers two silver trophies, one for the Poland China Futurity, shown herewith, and another for the Duroc Jersey Futurity, shown on this page. This is the third year The Wisconsin Farmer has offered a Poland China Futurity trophy. The cup will be presented to the breeder winning the largest number of points in the Wisconsin Poland China Futurity class. The Poland China Futurity is managed and guaranteed by the American Poland China Record Association, Union Stockyards, Chicago, to which all futurity payments are due. Rules governing the futurity classes will be furnished each year upon application to the secretary of the Wisconsin State Fair, Madison, or West Allis, Wisconsin. The trophy offered by The Wisconsin Farmer is a special prize in addition to the cash prizes offered. The Wisconsin Farmer trophy in 1914 was won by M. Madson, of Dane county, and in 1915 by J. D. McDonald, of North Bend. These gentlemen are among the best breeders of the state and they have been pleased to have opportunity to win and display this trophy which testifies to their success and the quality of their stock.

Wisconsin Tractor Demonstration.

OUR readers are asked to keep in mind the Wisconsin Tractor Demonstration, to be held at Madison, September 4th-8th. Last week the writer attended the great tractor at Fremont, Nebraska, and met there Mr. F. M. White, of Madison, who is manager of our Wisconsin show. Mr. White was lining up exhibits for Madison and getting pointers on how to make the greatest possible success of the round-up show here in Madison in September.

Tractor manufacturers are engaged in a far-reaching educational campaign for the purpose of demonstrating to the public just what may be accomplished in the field with a tractor, and just how useful a tractor may become in other farm operations. Special emphasis will be placed on the value of tractor power for silo-filling, threshing, for harvesting of hay and grains, etc.

Plowing has been the chief feature at the tractor shows in other states, and our Wisconsin farmers will certainly be interested in this important feature.

A great many people who are skeptical of tractor performance still admit "it is coming some day." To convince these people that the day of the tractor is really at hand is the purpose of these demonstrations.

The demonstration is well worth seeing. It offers a splendid opportunity for Wisconsin and northern Illinois farmers to visit the capital city of this great state. Madison is always an interesting place. Come out and see for yourself just what the tractor will do.

Horticultural Society Summer Meeting.

The summer meeting of the Wisconsin Horticultural Society will be held August 22d at Lake Geneva, as the guests of the Lake Geneva Gardeners' Association. J. G. Sanders, state entomologist, will speak on "Common Insects of Orchard and Garden;" R. A. Vaughn, of the college of agriculture, on "Fungous Diseases of Garden Plants;" R. H. Roberts, of the college, on "The Fruit Bud;" Axel Johnson, of Lake Geneva, on "Perennials;" W. J. Moyle, of Union Grove, on "Roses for City and Country;" and A. Martini, of Lake Geneva, on "Planting Home Grounds." There will be informal talks by members of the Milwaukee Florists' Club; a visit to the state trial orchard and considerable entertainment, ending with a lake trip and a visit to the Yerkes observatory.

Janesville Big Fair a Success.

The Janesville Fair Association held their most successful fair last week from August 8th to 11th. Owing to the fact that threshing was in full swing the attendance for the first two days was not large, but a rain Wednesday night stopped the threshing and the last two days of the fair were record breakers. A heavy rain during Thursday afternoon interfered with the racing program. The feature of this fair is the excellent show of live stock, and there was more stock on the grounds this year than at any previous fair. There were 360 head of cattle on display, dairy cattle predominating. There was an excellent showing of Short-horns, also Herefords. The Clydesdale exhibit was equal to that of the state fair. The swine show was also the best ever seen at this fair, numbering 223 head, Duroc Jerseys predominating. In Short-horns the prizes were fairly well divided among several good herds. Gerald Arnold, Galesville, Wisconsin, had the grand champion bull. Chas. Rogers & Sons, Union Center, Wisconsin, had the grand champion female, winning on a senior calf. J. C. Robinson, Evansville, Wisconsin, was the heaviest winner on Herefords, both championships going to this farm. The Jean du Luth Farms, Duluth, Minn., won all prizes on Red Polls. Boynton Bros., Avalon, Wisconsin, won both Polled Durham championships. Jas. VanEtta, Lima Center, Wisconsin, won sweepstakes on his Clydesdale stallion, and McLay Bros., Janesville, Wisconsin, won sweepstakes on their Clydesdale mare. The Duroc Jersey show was excellent and there was strong competition in all classes. John L. Fisher, Janesville, Wisconsin, won both championships of this breed. C. S. Flesch, Mt. Ida, Wisconsin, had the grand champion Poland China boar and L. P. Martiny, Chippewa Falls, Wisconsin, owned the grand champion sow of this breed. Geo. Clarke, Janesville, Wisconsin, had a nice exhibit of Berkshires, but no competition. There was a light showing of Chesters and Hampshires. Wm. Kirst, Tomah, Wisconsin, had the grand champion Chester White boar.

Mr. Wheeler Chosen President.

J. R. Wheeler, of Columbus, vice president of the Farmers & Merchants' Union Bank and probably one of the best-known bankers in the state among farmers, was chosen president of the Wisconsin Bankers' Association at its convention in Madison last week. Mr. Wheeler has been vice president the past year and has served many years on the agricultural committees. William M. Post, of Milwaukee, was chosen vice president; Lewis Larson, of Cumberland, treasurer; and Walter Kasten, of Milwaukee; C. M. Smith, of Shell Lake; G. A. Babcock, of Grand Rapids; and F. E. Woodward, of Watertown, members of the executive committee. The executive committee re-elected George D. Bartlett, of Milwaukee, as secretary, and were instructed to employ an assistant secretary.

Grand Rapids, Wood county, will have a new creamery in operation before September 1st, the machinery now being installed in the Mott & Wood cold storage plant.

Wisconsin Farmer Duroc Trophy.

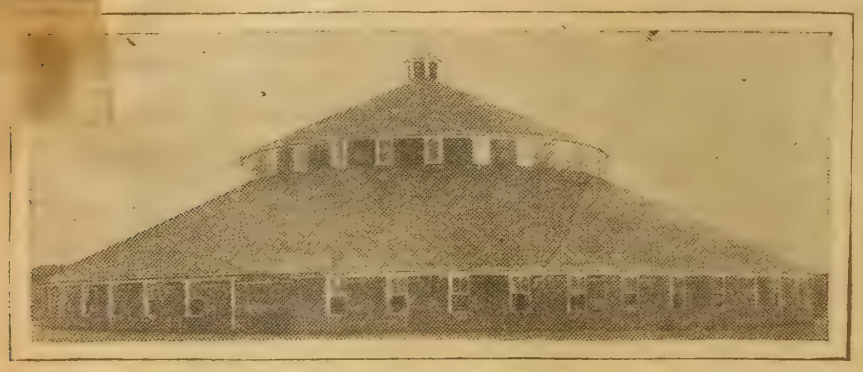
Offered in the Futurity Classification at the Wisconsin State Fair, Milwaukee, September 11th to 16th, '16.

MUCH interest has developed in the National Duroc Jersey Record Association Futurity for 1916, and The Wisconsin Farmer, in an effort to stimulate even greater interest, has added this year to its live stock trophies one for the Duroc Futurity at the Wisconsin State Fair. An appropriation for cash prizes has been made by the national association, which has charge of this classification and guarantees its conduct. The rules are generally understood by breeders who have nominated herds in this class, but each year the secretary of the Wisconsin State Fair will furnish the rules or they can be secured in advance from the National Record Association. An exhibitor can exhibit at only one futurity and that must be the futurity in his home state. The Wisconsin Farmer trophies, both in the Duroc and Poland China futurities, have been on exhibition in Milwaukee, and will be ready for delivery at the state fair grounds as soon as the awards are made. This is the first year that The Wisconsin Farmer has offered a trophy in the Duroc Futurity, but the interest already shown by breeders practically insures the award will be continued indefinitely. This paper will make announcement of the winners and next year we hope to see even a larger number of entries and a more spirited contest. Wisconsin has ideal conditions for hog raising and we should have many more good herds.

Marshfield's Sale and Show Barn

Combination Pavilion, Only One of Its Kind Known Completed, and Will Be Dedicated During the 1916 Fair.

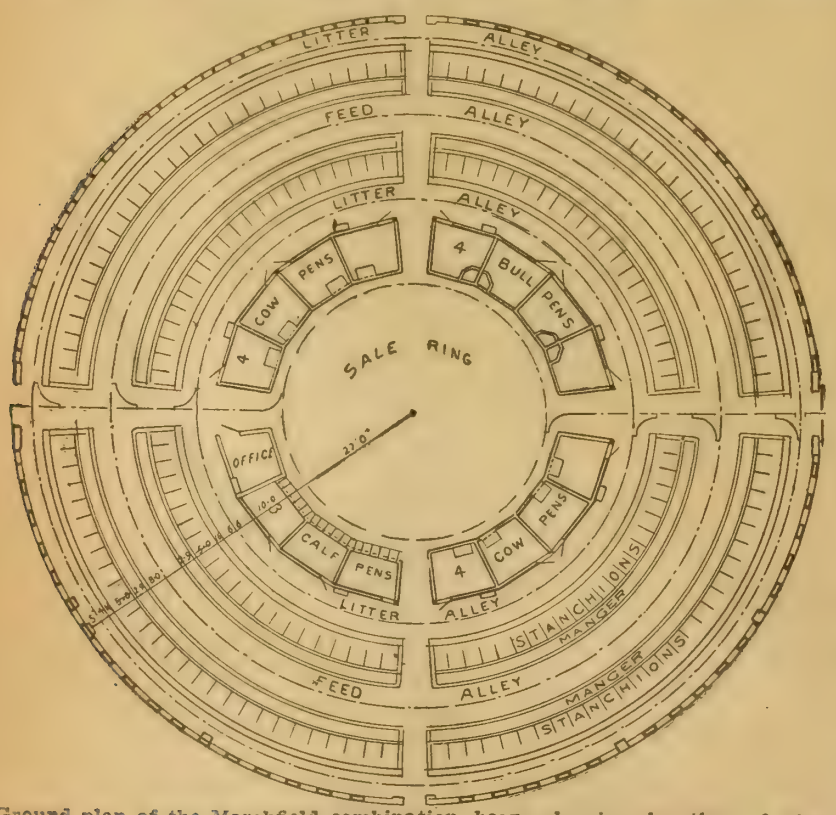
TO TAKE care of the increasing interest in live stock sales in Wisconsin, many communities are building or have built sale barns and pavilions to accomodate both the breeders and the buyers. The success of a sale is no doubt increased by the facilities for handling the stock just as a good show barn aids the proper showing of stock at a place to hold such sales. This combination of events, with the co-operate spirit that has always existed in that community between fair officials and breeders, led to conferences as to what could be done to relieve the situation, and the result is the modern, sanitary barn pictured on this page, which is ideal for both show purposes and sales. The fair last year had 197



Sanitary and fully equipped sale and show barn just completed on the fair grounds at Marshfield, Wood county.

fair. This latter realization has also brought about the erection of many show barns on county and district fair grounds in Wisconsin of late years, but it remained for the breeders of central Wisconsin, in co-operation with the business men of that vicinity, to erect at Marshfield, Wood county, a combination sale and show pavilion on the fair grounds there that is, so far as known, the only building of its kind in the entire country.

This new show and sales barn, as it has been termed, has just been completed and will be formally dedicated with the cattle exhibit at the Central Wisconsin Fair, at Marshfield, on August 29th-September 1st. It represents an expenditure of $6.500 and is the outgrowth of a co-operative spirit that is highly commendatory, and The Wisconsin Farmer wishes to congratulate the breeders and business men who united and brought about its erection. The spring sale last May of the central Wisconsin breeders was held in this barn, but at that time it was only partly completed and only a partial idea of its completeness could be secured then by those who attended.



Ground plan of the Marshfield combination barn, showing location of stanchions, sale and judging ring, entrances, etc.

The combination barn is the outgrowth of two factors. First, the cattle exhibit at the Marshfield fair has grown so rapidly of recent years that the fair officials were confronted with the problem of providing additional room. Second, the pure-bred dairy industry had grown to such a point that annual sales were in order and the breeders were without an adequate head of cattle entered, and despite the fact that a new show barn had been built that spring, it was necessary to use tents for the overflow. Now, with the new barn, it is expected to take care of this year's entries in the one building.

The barn is so constructed and arranged that 237 head can be accommodated in the stanchions in addition to the number which can be cared for in the eight cow pens, four bull pens and three calf pens. It is circular and 150 feet in diameter. It is fully equipped with steel stanchions and pens, and there are two rows of stanchions in addition to the row of pens. These are so arranged that it is possible to pass beside and in front of a cow standing in the stanchions, as a glance at the accompanying ground plan will indicate. The cattle in the outer row of stanchions face in and those in the second row face out, so that a person walking in the feed alley can see from the front all the stock shown. This feed alley is eight feet wide, while the outside litter alley is five feet four inches, permitting plenty of room to pass between the cows and the wall, and the center litter alley is six and a half feet wide. This arrangement of the stock at the fair, it is believed, will be especially pleasing to both exhibitors and visitors, and there has already been a heavy demand from other fairs and communities for plans of the Marshfield barn, which promises to serve as an ideal.

In the center is the sale ring, fifty-four feet in diameter, and during the fair this will be used also for judging. Above the cow, bull and calf pens there are seats accommodating a thousand persons, and, as particular attention has been paid to ventilation, as noted by the large number of windows and outlets, the air will always be fresh. There are four entrances, all leading into the sale ring. This ring will have the regulation tan bark, while the remainder of the barn is floored with concrete.

Funds for the erection of the barn were secured by popular subscription. The breeders, members of the Central Wisconsin Live Stock Breeders' Association, subscribed $3,000, the Wood county board gave $1,900 from the county funds, the bankers of Marshfield added $250, the business men of Marshfield subscribed $1,250, and the Central Wisconsin State Fair Association the balance.

To make the barn self-sustaining, the fair association, which controls the building, charges a fee of 50 cents a stall for show purposes and $2 for a box stall. The breeders will pay 1 per cent on the sales for its use at the annual stock sales.

In and Around Wisconsin.

Ray Baker, assistant secretary of the Wisconsin Live Stock Breeders' Association, spent several days at the Sauk County Fair held at Baraboo. Mr. Baker was in charge of an exhibit of "Profitable and Unprofitable Stock." This was quite a feature at the fair and the educational value to the farmers was considerable.

Joseph Egelhof, of Iowa county, writes The Wisconsin Farmer that everyone has been busy with harvest in his neighborhood. Help has been scarce and crops very heavy. His letter was written August 3d and he writes that he had just finished cutting oats. He used 145 pounds of standard twine on forty-seven acres and this gives some idea of the oats in his vicinity this year.

George L. Harrington, of Walworth county, has had some experience killing quack grass, which he relates in the Elkhorn Independent as follows:

Shallow plowing is one of the most important features of killing out quack in a pasture or on sod land.

After plowing our field was thoroughly pulverized, not once or twice, but until the sides cut down through the sod. This cut up the quack roots and brought them to the surface. Then at least once a week the field was gone over, sometimes with a pulverizer, or with a spring tooth harrow, or a common drag. All during this time the quack was never allowed to get started.

In the middle of the summer, after the roots all seemed to be dead, the piece of land was sowed to sugar cane. A grain drill was used to do the seeding and 150 pounds of seed to the acre used. A very heavy crop was the natural result. It was cut with the grain binder, the reel taken off on a windy day, so the wind blew the stalks over on to the apron of the binder. It was cut one way. There was no sign of quack grass at this time, and none has been seen on the field since.

I am satisfied that the quack was all killed before the crop was planted. The idea is to get the roots up to the surface where the sun will kill them. A dry season was in our favor, too. During a wet year I believe I could kill the quack, but it would require more attention. It is a mistake to plow deep, I think, because quack roots lie just below the surface, and if the ground is plowed deep the roots are buried deep enough to get a new start.

A few figures on the value of the silo will not come amiss at this time. The silo makes it often possible to save a corn crop which, owing to early frosts, might not mature. A well-known authority mentions the following to keep in mind when building a silo:

The walls must be air tight.
The walls must be smooth inside.
The best type of silo is round.
The roof should be waterproof.
The materials should be substantial to stand great pressure.
The cost should be from $2 to $5 for each ton capacity, if the total is to exceed 100 tons.
A silo should be placed as near as possible to the place where silage is to be fed.
A silo should be on the least exposed side of the barn.
One hundred tons of silage will feed twenty-five head of stock for 200 days.
A silo fourteen feet in diameter and thirty-five feet in height will hold 100 tons.
Any kind of a good silo is a valuable piece of property on a farm where live stock is kept.

A Heave Remedy.

HORSEMEN should send for the free booklet of the Newton Remedy Company, Toledo, Ohio, which discusses the standard veterinary remedy for heaves made by this company. Most horsemen have had more or less experience with this disease and will welcome an efficient remedy. The Newton remedy is a cure for heaves, a conditioner and worm expeller. It sells at $1 per can at all dealers or may be obtained at the same price from the company through parcel post. See advertisement on page 12.—Adv.

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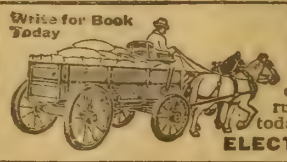

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High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in colors.

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BANKING BY MAIL

WHAT is it? It is a modern development in the banking business adopted by the Farmers & Merchants State Bank of Kewaunee, Wis., to enable its depositors to transact their banking business safely and conveniently by mail no matter where they live. You can open an account in this reliable bank with $1.00 or upwards and it will earn 4 per cent. Write for further information why the Farmers & Merchants State Bank is the safest.

FARMERS & MERCHANTS STATE BANK
Kewaunee Wisconsin

ONEIDA County Lands: I have four hundred acres in solid body on a main road, 4 miles from city with groves of timber and several small lakes, very desirable property, can divide if necessary into four pieces. Ask for map and prices. Also have an improved farm, 160 acres, good house and barn, full of clover and timothy hay, big field of fine oats, 70 acres of clover growing, pasture, running water, timber, only half mile from school and cheese factory. Ideal dairy farm. Want $3,000 cash, balance on time. Address C. P. Crosby, Rhinelander, Wisconsin.

FOR SALE Grocery store and business at Marinette, Wisconsin, in center of town. Did $14,000 sales in 1915, practically all cash. Will sell cheap, as I have other business which needs my attention. Write "B" Grocery, 1000 Wells St., Marinette, Wisconsin.

FOR sale—200 acre farm in Richland Co. Wis., 7 miles south of Viola, one of the best grain and dairy sections in the state. For particulars and prices call on or write to R. Gochenaur, Route 1, Viola, Wisconsin.

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Model Holstein Breeding Farm.

Herd of Three Hundred Registered Animals on Pabst Stock Farm Result of Careful Breeding and Selection.

WISCONSIN, during the past decade, has rapidly developed as a dairy state, until today, outstripping all rivals, she stands pre-eminent as the leading dairy state of the Union.

Not only does Wisconsin produce large quantities of butter and cheese of high quality but within her borders are produced large numbers of heavy producing, richly bred cattle. During the comparatively few years that official testing has been done it has proven that the dairy cattle of Wisconsin stand second to none in production ability. Large herds have been developed whose average yearly production is a revelation to those not acquainted with the progress of recent years.

KORNDYKE SEGIS JOHANNA,
The $12,500 son of the $25,000 bull, Johanna McKinley Segis. His two nearest dams averaged 39 pounds of butter in seven days.

One such Wisconsin herd is the herd of registered Holsteins maintained on the Pabst Stock Farm, Oconomowoc, Wisconsin. The herd consists of close to 300 registered animals of high production ability, good Holstein type and of proven lines of breeding. Great care has been taken in the selection of breeding stock, and no effort or means has been spared in securing the best obtainable.

Three sires are in service in the herd, viz: King Pontiac Champion 53418, Maplecrest King De Kol 91584 and Korndyke Segis Johanna 127132. They represent the highest producing families of the breed.

The senior herd sire, King Pontiac Champion, is an outstanding individual weighing well over a ton. He is not only a fine individual himself and backed by high production blood but he transmits these good qualities to his daughters. They are fine, straight, deep-bodied cows with well-developed milk organs. Although he is still a comparatively young bull, he already has forty-one A. R. O. daughters with creditable records both from seven days up to a year. These daughters are still young, only one being mature, and on semi-official work made over 1,000 pounds of butter in a year. His daughter, Champion Dora Korndyke, as a three year old made 26.74 pounds of butter in seven days and Pabst Lily of the Valley, as a two year old, made twenty-four pounds of butter in seven days. His daughter, Pabst Lulu Lady, at two years and three months of age gave 20,002.9 pounds of milk and made 849 pounds of butter. His daughters all show large, capacious, evenly balanced udders with smooth, long teats.

The bull, Maple Crest King De Kol, is an outstanding individual and royally bred. His sire, Friend Hengerveld De Kol Butter Boy, and his dam's sire, Pontiac Aaggie Korndyke, are the world's greatest sires for high yearly record daughters. His dam, Maplecrest Pontiac Hartog, as a two year old made twenty pounds of butter in seven days. She is a full sister to Maplecrest Pontiac Flora Hartog, that made 30.33 pounds of butter in seven days. His dam's dam and grandam have records of 30.91 and 30.14 pounds respectively. As yet he himself has no daughters in milk, but as individuals they cannot be surpassed and show promise of being heavy producers.

The junior herd sire, Korndyke Segis Johanna, is one of the most richly bred bulls in the Northwest. His sire is the $25,000 bull, Johanna McKinley Segis, a son of the forty-pound cow, Johanna De Kol Van Beers and King Segis. His dam is the thirty-eight-pound cow, Pontiac Lady Korndyke, the highest record daughter of Pontiac Korndyke. An entire volume could be written on the breeding back of this young bull and the records made by animals in his pedigree. His dam and sire's dam average 39.05 pounds of butter in seven days and 154.15 in thirty days.

It is impossible to go into detail in regard to the females in the herd, but they are of equally good breeding. Official and semi-official testing is continually being carried on, every female of milking age having a seven-day record working out the proper rations for producing a heavy flow of milk is shown by the records made during the past spring season. The heifer, Pabst Blackberry, as a three year old made 31.68 pounds of butter in seven days;

KING PONTIAC CHAMPION.
Daughters and granddaughters of this bull are making fine records in the Pabst herd.

and the majority yearly records. During the past four years experimental work has been conducted along the line of feeding for official test and much valuable data has been secured.

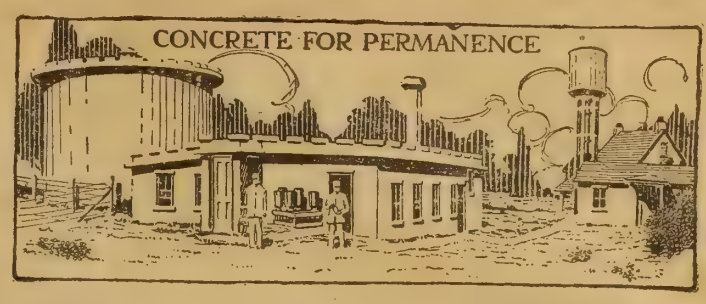
That they have been successful in Edith De Kol Burke Hengerveld made 33.86 pounds of butter; Pabst Hengerveld Colanthus made 31.51 and Pabst Hengerveld De Freule made 30.38 pounds of butter in seven days. Now that they have struck the thirty-pound gait they will in all probability produce a goodly number of thirty-pound records during the coming fall and winter.

THE HEIFERS RAISED IN OPEN SHEDS ON THE PABST STOCK FARM LOOK STRONG AND VIGOROUS AND ARE WELL GROWN.

However, Mr. Pabst is not alone satisfied with developing heavy-producing animals of good Holstein type, but he insists they also be strong and of the highest degree of health. An innovation in the way of rearing young cattle has been tried out for the past two years, viz: Raising of heifers in open sheds. This, of course, is the usual method with steers and beef cattle, but has been thought to be too severe for dairy cattle. Mr. Pabst has been thoroughly convinced that it not only preserves the health of his cattle and gives them greater vitality but that it also tends to higher production. A two-year-old heifer thus raised recently made twenty-four pounds of butter in seven days. The young stock looks strong, healthy and vigorous and are well grown.

From the foregoing it will be seen that every effort is being made to build up a herd of richly bred animals of high production ability, good type and strong constitution. The great breeds of New York will find a formidable rival in this herd, as we look for this herd to produce a number of world records in the near future.

The herd now numbers close to 300 animals; but as yet Mr. Pabst is offering no females for sale. He is virtually closing out both his draft and driving horse stud and hereafter will devote his entire farm of 1,400 acres to the breeding and development of Holstein cattle.



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Live Stock Conditions Are Good.

Dry Spell Caused Diminished Milk Flow in Some Localities in the State, But Stockmen Generally Look Upon Conditions as Good.

FROM letters sent to The Wisconsin Farmer we gather the following facts of interest to live stock breeders of the state. It is apparent that stock generally have stood up well under the dry weather of July and that fields and animals are greatly refreshed by the recent heavy rains. The chief damage done by the dry weather was upon pastures and a consequent diminishing effect on the milk flow. The short pastures made summer feeding necessary and those who were caught without any summer silage were forced in many instances to go to considerable trouble and expense for feed. In general live stock men are encouraged at the outlook and at the good prices which prevail in the state.

Live Stock Looking Fine.

(By George F. Clark, breeder of Shorthorn cattle and Berkshire swine, Rock county, Wis.)

Live stock in this community is looking fine considering the weather conditions. Pastures are pretty dry, but have stood the drouth remarkably well. Our rains have been confined to local showers. The corn and potatoes need a good rain at this time. We do not find much of a surplus of stock, due likely to the fact that feed has been so high and scarce that everyone is cutting down to a considerable extent. If we could get rains and a matured corn crop there will be a fair demand for stock feeders of both sheep and cattle. Barley is of fine quality and a fair yield. Oats are light and the later they are the lighter they seem to be.

Janesville, Wis., August 7th.

Never Knew Business Better.

(By H. W. Griswold, Guernsey breeder, La Crosse county, Wis.)

Stock has been doing very well here and I never knew business to be any better. I have sold on an average of ten bulls a month for the last three months and also sold a good many females. I never did any more business than at the present time and I think cattle in this neighborhood are in good condition.

West Salem, Wis., Aug. 8th.

Should Have Had Summer Silage.

(By Earl Roberts, Waukesha county, breeder of Guernsey cattle and a director in the Waukesha County Guernsey Breeders' Association.)

July has been a hard month. The hot weather, accompanied by the drouth, has dried the pastures as only a real dry spell can do. It is a lamentable fact that the provisions for such a state as now exist are lacking on the majority of farms. Only a small percentage of the farms have any silage for summer feeding. The corn has not been sufficiently far advanced to warrant feeding it. Under such conditions a marked falling off in the milk flow has been inevitable.

A few days ago we had a very fine rain and conditions will improve from now on, as corn has now reached a stage where it can be fed to supplement the pasture. I look for no ill effects except those arising from the decreased flow of milk. It will mean that many cows will have to be kept as boarders temporarily, or until they again freshen. The hay crop was good except that alfalfa winterkilled. Small grains are well up to average and corn is still an uncertain quality. For these reasons I believe that very few will sacrifice any good dairy stock.

Oconomowoc, Wis., August 8th.

Report From Grant County.

(By Dobson & Eastman, breeders of Poland Chinas, Grant county, Wis.)

We have had a bad drouth in Grant county and the weather very hot, for a long time registering from 90 to 110. In our immediate vicinity we have not had rain enough to settle the dust for forty-three days, which is the longest drouth for thirty years. However, the extreme north and south of our county have had some heavy rains. During the forty-three days lots of horses died cutting the grain which was finished cutting by August 1st and threshing has well begun. Oats are running from forty to sixty-five bushels per acre. Corn needs rain badly, but has stood the drouth bravely. The early corn is starting ears and the later corn will soon. The oats are fairly good quality, weighing ninety to ninety-five pounds per sack. Hay crop about 110 per cent and all made in fine shape. Pastures are getting dry and short. Pig crop is good, but are small and poorly fed, will be late to market. Milk production has decreased 40 per cent. Beef cattle will soon begin to move and are in very good condition.

Lancaster, Wis., August 7th.

Drouth Now Broken.

(By Wm. F. Belda, Dane county, Wis., breeder of Chester White hogs.)

The drouth is now broken and I also hope we will have a little cooler weather. Have noticed no ill effects on live stock except that they have lost some flesh, which I believe they will regain quickly after the grass freshens. The hog crop is small around here, as most farmers sold off most of the breeding stock last fall on account of poor corn. There was practically no corn matured here. Very few feeders to be had. Most all calves were vealed and most surplus stock sold.

DeForest, Wis., August 7th.

Cattle Looking Well as Usual.

(By Dr. David Roberts, breeder of Holstein and Ayrshire cattle, Waukesha county, Wis.)

A great many of live stock owners in this part of Wisconsin have been feeding such feed as green clover, green alfalfa and green oats in connection with their regular pasture which was very much affected by the dry weather, and for this reason the cattle are looking as well as usual. I do not know of any dairyman offering any of his cattle for sale on account of the shortage of feed, especially those who have pure breds, and it might be cheaper for him to sell his grades than to do so.

Waukesha, Wis., August 9th.

Stock Stood Up Under Hot Spell.

(By Wm. A. Connell, Waukesha county, breeder of Aberdeen Angus and Holstein cattle.)

The live stock situation in this vicinity seems to be prospering. The stock went through the hot spell in good shape, but the extreme hot weather has left behind it flies more numerous than I have ever seen them before, which will eventually cause a big loss to the live stock.

The surplus stock seems to be pretty well picked up, in this vicinity at least.

Farmers in this part of the state are going heavier into stock farming every year, and, therefore, create a local demand for a great deal of the surplus stock, especially good breeding stock.

The future for live stock farming looks good to me, as the farmers in general are beginning to learn that good high-grade or pure-bred stock are most profitable, and there seems to be a great demand for such at present in this locality.

Menomonee Falls, August 8th.

Summer Silage Helped.

(By F. E. Faranto, Holstein Breeder, Waupaca county.)

Live stock conditions in this section are good. Pastures are rather short owing to the dry weather, but most of the farmers have silage for summer. There is always plenty of good cattle for market in this locality, that is, of the grades and natives. There are also plenty of pure-bred Holstein bulls, young stock, at reasonable prices. So far as the hot weather is concerned it has no ill effect on cattle in this vicinity.

Manawa, Wis., August 8th.

Condition of Show Cattle.

(By Henry A. Eberhardt, Manitowoc county, Wis., breeder of Hereford cattle.)

Cattle came through the winter here in good shape. Mine were in show condition. I sold a lot that went to Montana, but we've had rather a disagreeable season so far; in the spring it practically rained all the time. I didn't turn the stock out until the 15th of June, as I had lots of silage and clover hay. This is practically a dairy district, about fifteen Hereford breeders and a few Short-horn breeders. I sell all my cattle for breeding purposes. The average hay crop was short in Manitowoc county. Grain is only about half a crop from what we had last year. The hot weather we have had for the last four weeks was not good for grain and stock. Pastures were almost burnt up. It was quite difficult to keep the cattle eating well during the hot weather, which we intend to show at the fairs this fall.

Manitowoc, Wis., August 6th.

Beef Cattle Look Fine.

(By Seth L. Crall, Rock county, breeder of Short-horn cattle, Shropshire, Cheviot and Dorset sheep, and Duroc and Poland China swine.)

In regard to live stock conditions in this section of Rock county the stock here is mostly dairy. Pastures on the high lands have been badly burned and some herds have fallen off in milk production. We have a few small herds of beef cattle which are in good flesh. Small grain in this neighborhood turned out fine. Corn is rather a poor stand and is hurt some by the hot weather. The pig crop is light and pigs small for their age. Very few sheep in this neighborhood, but they are all looking well.

Evansville, Wis., August 8th.

Scarcity of Feed.

(By M. H. O'Keefe, breeder of registered Holstein cattle and Duroc Jersey swine, Dane county, Wis.)

On account of the long dry spell, pastures are short and cattle are thin. Feed is very scarce in this section. Farmers have been buying their feed for some time back. Cows are yielding only a small quantity of milk on account of the shortage of feed. Flies have never been so bad. Many young pigs. Most of them farrowed late. Many horses have been overcome by heat the past two weeks and some of them died.

Rain, hail and wind storms of last week did much damage to the growing crops. Corn knocked down and hail spoiled many crops of tobacco. Corn is growing since the recent rains, but the crop is thin. Many misses. Oats and barley are good and are yielding many bushels to the acre. Some shock threshing done. The hay crop average is not very heavy. Potatoes are somewhat blighted, but on account of the recent heavy rains are setting a new growth. Many new silos are being put up in this section and by all indications feed will be somewhat scarce this winter owing to the fact that nothing has been left over from last year.

Waunakee, Wis., August 7th.

Hogs Doing Well But Not Large.

(By A. P. Cortte, Dodge county, Wis., breeder of Berkshire hogs.)

We have passed through the long hot spell and have had several rains. Some cattle had to be sold on account of dried-up pastures. Some farmers had silage to feed, which helped a great deal. Milk production shrunk from 30 to 40 per cent. Corn and potatoes suffered from drouth, but are picking up nicely now, and outlook is for a good corn crop. Hay crop was pretty good—all the hay is of good quality; no rain during the cutting time. Barley averages around thirty to thirty-five bushels per acre, oats around fifty to sixty—of good quality. Wheat is very good. Hogs are doing very good, but not as large in numbers as other years. There will be some cattle for market; not many, for this is a dairy section. In general, conditions look very favorable.

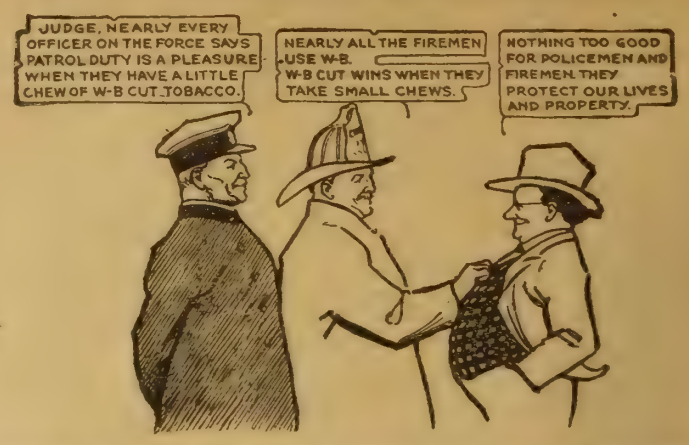
Lomira, Wis., August 10th.

Have Had Good Rains.

(By A. G. Austin, Rock county, vice president Wisconsin Ayrshire Breeders' Association.)

Live stock in this neighborhood are not seriously affected by the dry weather. We have just had a good rain, which will insure a partial corn crop if conditions are at all favorable. Prospects of an under-normal corn crop may cause some droves of hogs to be decreased, and short pastures have cut the milk flow. This is felt now by local dealers

There are fewer hogs in the county this summer than usual, owing to shortage and high price of corn. The feeding situation is favorable, especially for those having silos. Mixed hay



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yielded under favorable conditions two to two and one-half tons per acre, and grain is turning out well (except where it was late). Corn won't average much more than 70 per cent of normal. So as far as hog feeding goes, this will be done under a disadvantage. Janesville, Wis., August 11th.

Beef Cattle Doing Well.

(By Irving Jewell, Iowa county, breeder of Hereford cattle and Cotswold sheep.)

Cattle are doing well. We have also had a hot, dry spell, but we have had a couple of fine showers and it is cooler.

We cannot remember when pastures were as good as they were this spring and for that reason the beef cattle have plenty of grass, although it is dry. There are the usual number of cattle to be shipped out this year. Corn is poor in some sections and for that reason more cattle will be shipped from grass. Lots of rough feed for wintering stock cattle.

Mineral Point, Wis., August 10th.

Expect Great Butter Exhibit

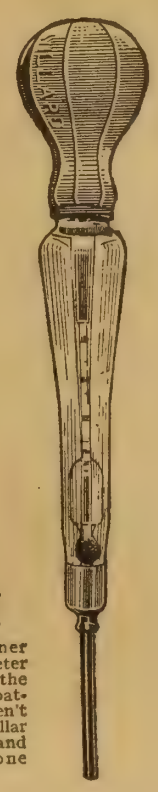
To the Editor:—Every one interested in the butter and cheese exhibit at the coming Wisconsin State Fair is looking for a large number of entries. A large exhibit of dairy products should be placed before the judges when they begin their work at the State Fair Park on September 5th. The three thousand makers in Wisconsin factories are this year going to show what good butter and cheese can be made in the state. All factory men are interested in quality, and in the part that Wisconsin must play in furnishing the nation's supply of good butter and good cheese.

The 1915 dairy exhibit was the largest in the history of the state fair, and another mark will be set this year if the factory men will do their part. The superintendent, Mr. Fred Marty, of the Wisconsin Dairy and Food Commissioner, has in his possession a complete list of all the butter and cheese makers that have applied for permit to make butter or cheese. Thus each one may be supplied with the necessary blanks and shipping instructions. It is his wish that all exhibits of butter and cheese reach the State Fair Park, West Allis, not later than Saturday, September 2d, in order that all entries may have an equal chance when placed before the judges.

A number of cheese makers have already stored away in a curing room the cheese that will represent their factories at the State Fair. A number of butter makers are already at work instructing the milk and cream producers how to care for their product in order that the best article can be made. A certain factory man in Wisconsin, receiving nothing but cream skimmed on the farm, who has been a regular exhibitor at the Wisconsin State Fair for years, is again ready to do his part. The good work that this man has done in his community to interest his patrons in good butter can best be illustrated by the copy of a letter the creamery company received from a commission firm. "Have sold the butter for the top price, as it was very fancy. There is no trouble in getting the top price if all the churnings run uniform as was the case with the last two shipments."

It pays to exhibit butter whenever a good chance offers itself. Remember September 2d—the day the butter should be delivered at State Fair Park, West Allis, Wisconsin. C. E. Lee.

Assistant Dairy Commissioner of Wisconsin.



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The Karkhoff Variety of Wheat.

To the Editor:—I am enclosing herewith a postal of a field of winter wheat, the seed of which I received two years ago from Prof. E. J. Delwiche, of the Ashland Branch Experiment Station. It is pedigree No. 208 of the Karkhoff variety. Last year our yield was forty-seven bushels per acre, and we have just threshed it this year, and our yield was forty-four bushels per acre, and I assure you it is all wheat, for I shipped a bushel to the International Wheat Show, Wichita, Kansas, October 4-14, 1915, and was awarded first premium in the winter wheat class. The wheat is a bearded variety and has a medium weight, stiff straw and stood the winter well, for last winter was a test. Our field was on a northern slope and was unprotected. Much winter wheat of other varieties in this vicinity killed out.

FORTY-FOUR BUSHELS OF WHEAT TO THE ACRE OF THE KARKHOFF PEDIGREE NO. 208. SCENE ON KRUEGER FARM, DODGE COUNTY, WIS.

I believe Mr. Delwiche has in this No. 208 a variety well adapted to Wisconsin conditions, and that can be depended upon to stand our winters. Much more winter wheat could be profitably grown by our Wisconsin farmers, but they have been heretofore unable to secure good, hardy varieties. This wheat is grown on several places in our state this year, and if the readers of The Wisconsin Farmer will write Prof. E. J. Delwiche, Ashland, Wisconsin, he can inform them where to get it. Growing winter wheat has several advantages: First, divides up the work of seeding; second, divides up the harvest; and third, it is excellent to seed down to clover and timothy, or alfalfa. Seeding should be done Sept. 5th to 20th.

Henry E. Krueger.

Dodge Co., Wisconsin.

OBLIGATION ON STOCKMEN.

From an Important Address by Dean H. L. Russell, of the Wisconsin College of Agriculture, Before Wisconsin State Bankers' Association at Madison Last Week.

THE magnitude of this industry with reference to the sales of live stock may be appreciated when one considers the number of cattle shipped out of the state for dairy purposes. By taking the records of the veterinary division of the department of agriculture as to tuberculin tests made on cattle exported in interstate shipments it is possible to make an estimate of the importance of this phase of agriculture. These records naturally do not include all of the cattle shipped outside, as only those animals are tested that are sold into states which require a tuberculin test certificate. In the year 1914, 18,443 cattle were tested for interstate shipments. These went to thirty-seven states and three foreign countries. The probable value of this stock was fully $100 a head, so that practically $2,000,000 was brought into Wisconsin as a result of this business. We have no definite figures as to the extent of the business within the state, but the best judgment obtainable places the home sales in excess of the outside sales.

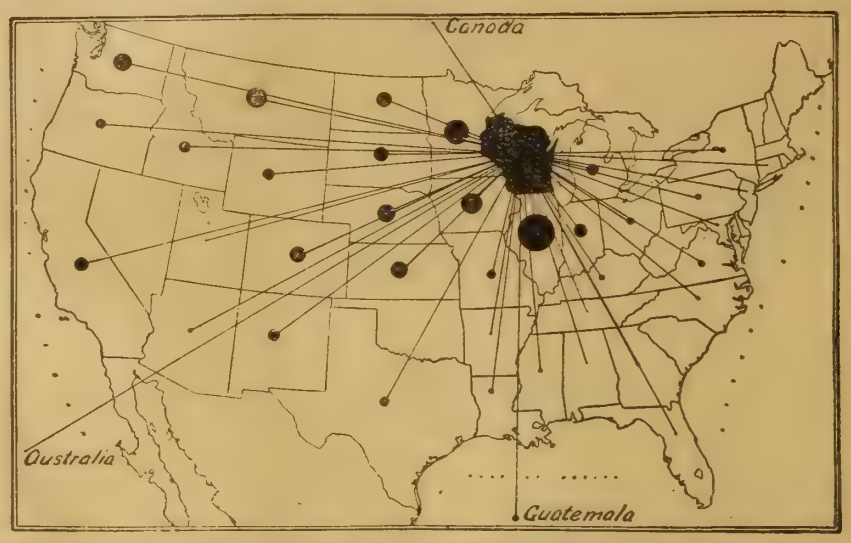
A moral obligation rests upon us as a state to see that the cattle supplied to this trade are free from any diseases that are of a transmissible nature, for it is now demonstrated beyond all doubt that the most fruitful source of spreading disease is, through the introduction of animals that are infected, but in which the disease has not yet advanced to a recognizable stage.

While this moral obligation should be sufficient to control our actions, the legal requirements of other states are constantly being increased. Recognizing that the disease is most commonly spread by transfer, practically all states now require cattle to be tested before being admitted to their borders. If a breeder is going to do interstate business, it is, therefore, imperative that he test his herd; otherwise no end of trouble and expense is in store for him if he tries to make outside sales.

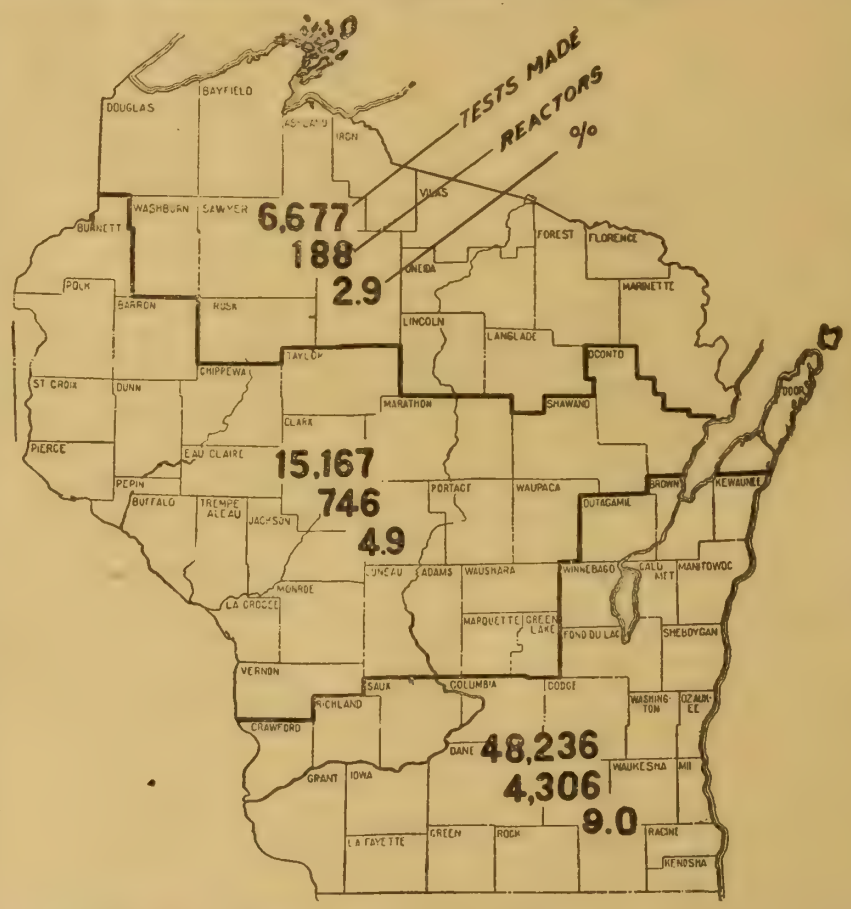
Good business policy would also dictate such a course of action, so that the buyer within the state would have the same assurance as a man outside.

Much has been done in this respect by the breeders in the state. The county breeders' organizations have in many cases adopted the tuberculin test as a feature of their plan of community effort with the result that such associations are able to advertise collectively their herds as free from tuberculosis.

While the necessity of perfectly healthy herds has been more prominently brought to the attention of the breeders by virtue of the financial advantage to them, there are, however,



MAP SHOWING DISTRIBUTION OF WISCONSIN CATTLE SALES IN 1914. ILLINOIS BOUGHT OVER 5,000 HEAD. MINNESOTA, IOWA, KANSAS, NEBRASKA AND FAR WEST BIG PURCHASERS.



UPPER WISCONSIN BREEDERS SHOULD BE URGED TO PURCHASE DISEASE-FREE CATTLE. THE PERCENTAGE OF DISEASED CATTLE IN UPPER WISCONSIN IS NOW ONLY 2.9.

oped with reference to its dairy possibilities. The most recent data indicate that there are now approximately 1,700,000 dairy cattle in the state and of these probably 55 per cent are found in twenty-seven southern and eastern counties where dairying has been prominent.

Gradually the situation with reference to the nature of dairy products produced is changing. Chicago is reaching out constantly for its supply of milk and cream. The dairy sections of southern Wisconsin offer the logical place to secure this supply and the consequence is that the milk trains for Chicago start in the vicinity of Madison and Fond du Lac and pick up a full load on the way to the city. More and more this condition will obtain, for the creamery and cheese factory can hardly afford to pay as much for their raw material as the city dealer who sells milk and cream for direct use. The result of this transformation inevitably means that the new northern counties which are now going into dairying with such rapidity will in the not distant future be much more important sources of production of the butter and cheese supply of the state.

By virtue of the natural advantages which many of these sections now possess the conditions for dairying are more favorable in upper than in southern Wisconsin. Nowhere in the state, and, in fact, but very few places in the United States, do the clovers and forage grasses grow as luxuriantly as in the north. The result is that summer fodder is produced in the greatest luxuriance. When this is supplemented with silage, which can be readily grown in nearly all parts of the state, the feed problem is solved. The heavy mantle of snow protects the perennial forage crops with the result that "winterkilling" rarely occurs. Abundant supplies of cool water, somewhat cooler climatic conditions, and a rapidly expanding population, who not only recognize the great value of dairying, but who are willing to perform the steady labor necessary to make it a success, are all factors which are exerting a profound influence on the rapid expansion of dairying in that region.

The ultimate result of this change in the character of the dairy business is likely to make the new North in time the leading dairy manufacturing section of the state. If this condition should obtain, it will mean more and more that the future supplies of live stock for sale will be grown in these sections. Shipment of whole milk to the city or condensery means increasing difficulty in raising calves, just as is now witnessed in the milk-supply-

MEMBERS OF WISCONSIN BANKERS' ASSOCIATION ATTENDING LIVE STOCK DEMONSTRATION AT COLLEGE OF AGRICULTURE, MADISON, AUGUST 8.

altogether too many individual sellers of pure bred as well as grade stock who have not yet taken the necessary step to safeguard the purchaser.

There is already in progress a movement with reference to the development of Wisconsin dairying that is designed to exert a profound effect on the future growth of this business in the state. While Wisconsin now stands preeminent as a dairy cattle state (having passed New York, its leading competitor, since the last census was taken), yet the state as a whole has only been partially developing sections of Illinois that are tributary to Chicago.

At the present time the amount of

(Concluded on page 12.)

UPPER WISCONSIN

Late Blight Feared.

R. L. Cuff, county agricultural agent for Barron county, had received reports up to August 1st, indicating danger to the potato crop from late blight. He recommended spraying with Bordeaux mixture as the surest preventive. Mr. Cuff has been busy the past two weeks examining fields and assisting farmers in preparing the proper mixture.

Bordeaux mixture consists of the following ingredients: Copper sulphate (blue vitriol), four pounds; quicklime, four pounds; water, fifty gallons, according to the Wisconsin experiment station.

Dissolve the copper sulphate by suspending it in a porous sack in twenty-five gallons of water. Carefully slack the lime until a smooth paste is obtained, which should then be added to a large amount of water. Strain this solution carefully and add water to make twenty-five gallons. Finally pour the limewater into the blue vitriol solution, stirring the mixture constantly. A good Bordeaux mixture should have a distinct blue color.

A stock solution of copper sulphate can be made by dissolving one pound to one gallon of water. Then, in making the spray mixture, one gallon of solution represents one gallon of copper sulphate. A thick lime milk solution may be made also of one pound to one gallon of water. If kept separately, stock solutions last indefinitely. To dilute, pour both solutions into the water at the same time, and through a strainer.

Paris green or lead arsenate for potato bugs may be added to Bordeaux mixture in the same quantity that it is added to water.

Growth in Ladysmith Creamery.

No better evidence of the growth of Upper Wisconsin along the lines of dairying could be had than the reports which are coming in from the creamery companies. The Ladysmith creamery, a farmers' co-operative concern, had ninety-six customers in June, 1915. In June, 1916, this had been increased to 156. For the first two weeks in July, 1915, this creamery paid out in cash to customers $1,772.36. In the first two weeks of July, 1916, this sum was increased to $2,509.75. For June, 1916, there were about forty customers who received $50 cash or better and several who received more than $100 cash. When one travels through the country in Rusk county and sees the fine fields of grass it is not surprising that this is growing to be a great dairy section. Ladysmith itself is only about a decade old and the agricultural development of the county has all come in the past ten years.

Inter-County Holstein Breeders' Picnic.

The Inter-County (Dodge and Jefferson) Holstein Breeders' Picnic was held at Juneau, Wisconsin, Tuesday, July 18th. The weather was bright, but the temperature was very high. Although the attendance was not as large as hoped for, due no doubt to the rush of work. The morning was occupied by several judging contests by boys and young men, which proved of interest to spectators as well as participants. After a very pleasant picnic dinner, all repaired to a large tent, belonging to the Lincoln Chautauqua Co., where an interesting program was held.

Prof. Garland, of the University of Wisconsin, spoke on "Alfalfa," which proved interesting and profitable. He brought out many new ideas, and reminded us of many old ones that are apt to be forgotten.

Mr. Glover, president of the Dairy Union, spoke on "Production Records Versus Show Ring Records." He handled the question very sensibly and fairly to both sides.

Maintaining that a cow's general type would tend to govern her ability as a producer of milk or beef and that our aim should be to breed cattle of the highest type, he, however, said that a heavy producing cow not of ideal type should not be discarded as a milker or as a breeding animal, but that care should be taken to mate her with a bull of good type.

Everyone present felt highly repaid for the time spent in attending the meeting, both in renewing old acquaintances and the new things learned.

Creamery Records Broken.

All creamery records for the big Barron Creamery, at Barron, Wisconsin, were broken in June, when 574,600 pounds of cream were received from 871 patrons. The butter fat record for June was 163,060.1 pounds and the cash paid out to farmers was $53,000. The average price per pound paid for butter fat was 30 cents. Charles Becker received $223.41 for cream for the month, being the high man from standpoint of receipts. Almost 100 patrons received more than $100 cash for cream from the Barron creamery in June. The total amount paid for cream this year was almost $6,000 more than in 1915.

Settlers Interested in Establishing Herds.

To the Editor:—Rusk county farmers are progressive and interested in up-to-date methods of farm management. This fact was verified by the number of farmers who left their hay fields to attend the annual farmers' meeting held on the state demonstration farm at Conrath August 3d. The attendance was not as large as the attendance of previous years due to the tremendous amount of hay that is yet to be made in Rusk county. The interest manifested in the meeting was never better, however.

Prof. E. J. Delwiche, superintendent of the state demonstration farm, placed emphasis on the crop rotation that would tend to overcome the "lodging" of oats on our fertile clay loam soil. Experience at the state demonstration farm has allowed Professor Delwiche to recommend the introduction of either winter wheat or winter rye into rotation for the clay loam soil, to replace the former rotation of small grain, clover and corn. Five tons of clover has been harvested from an acre on the demonstration farm at Conrath and the crop this year gives promise of exceeding this record. Winter wheat sown on new breaking promises a yield of about twenty bushels per acre, while twenty-eight bushels have been grown as a third crop on new land.

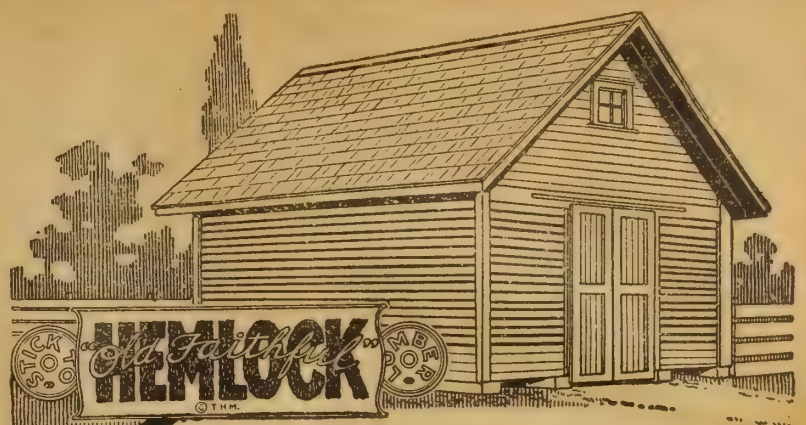
Prof. J. G. Milward, of the Wisconsin Potato Growers' Association urged the farmers to use greater precaution in spraying their potatoes against the potato beetle. He estimated that several thousand dollars' worth of damage done resulted from neglect in poisoning the beetle in an early age in this county.

Professor Bulock, of the extension department, conducted a judging demonstration and a judging contest. The new settlers in this region were very much interested in this part of the program and they find it necessary to purchase a large number of cows in order to establish herds. Most of these cows have no milk records and the settlers are forced to depend upon his own judgment in buying.

The county representative is testing eighteen herds in the vicinity of Conrath for milk and butter fat production each month. The milk is weighed from each individual cow five times per month and is tested for butter fat once each month.

G. M. Householder.
Rusk Co. Agl. Agt.

KING SUPERBA, THE GREAT YOUNG BULL THAT NOW HEADS THE HERD OF DR. DAVID ROBERTS, WAUKESHA, WIS.



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Why not build an

"Old Faithful" Hemlock

Granary or Corncrib?

You'll be surprised to see how little a fine granary will cost if you use "Old Faithful" HEMLOCK lumber, the farmer's standby. "It's been 200 years on the job."

Of course it IS hard to find time to give to building in this busy season—but just think of the profit in being able to hold your grain for the top price instead of being forced to sell it at any old price. Just figure up the profit you would have made last year if you could have stored at least part of your crop for the rise in prices.

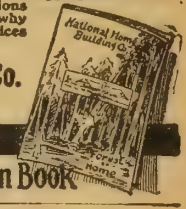
We will gladly help by furnishing two kinds of real practical working plans free—granary shown above or small crib.

PLANS FREE The plans are on sheets 2x3 ft. Send for the new HEMLOCK booklet and use the PLAN COUPON which is in it. All you have to do is to present the coupon to your LOCAL LUMBER DEALER and he will supply you FREE with any one or two plans in our book, which contains houses, barns, garages, and small farm buildings. All plans are new and original and are drawn by architects who know the farmer's needs. If your lumber dealer hasn't the plans he will get them from us.

The Hemlock Manufacturers
(of Wisconsin and Northern Michigan)
Headquarters
300 F.R.A. Bldg., Oshkosh, Wis.

Buy this Home for $713

WE furnish all lumber, hardware, millwork, etc. and you can build it from plan No. 64 in our Plan Book, which contains dozens of attractive plans and photos. We ship you Oregon Douglas Fir lumber, direct from the mill, CUT TO FIT, ready to erect. Pay in full when satisfied. We own our own forests, do our own logging, cut the lumber in our mills to exact specifications and ship to you direct. That's why we can sell at the extremely low prices shown in our Plan Book.



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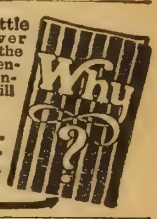

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THE ENGINE EASY TO RUN

Uses Kerosene, Gasoline, Distillate, Gas and other cheap fuels. Built to last and do hard work. Many sizes; Up-to-date design. Good Materials. Built by painstaking workmen. Sizes 1½ to 22 H-P. Pull ¼ to ½ over rated horse-power. 3 Months Trial. Sold direct. 10 Year Guarantee. Engine Book Free.

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6-8	$88.25
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THE OTTAWA MANUFACTURING CO.,
1190 King Street, OTTAWA, KANSAS.

When writing mention this paper.

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CUT YOUR CORN STUBS

when you cut your corn.

SUCCESS CORN STUB CUTTER

leaves your ground free from stubs and easy to work. It is easily attached to **Acme, McCormick-Milwaukee, Adrian, Deere and Osborn** corn harvesters.

In comfort and in condition of fields.

Send for free booklet, "Comfort in the Cornfield."

CORN HARVESTER ATTACHMENT CO
524 South Dickenson St., MADISON, WIS.

SANITATION

IS THE RELIABLE METHOD FOR PREVENTING

FOOT AND MOUTH DISEASE

HOG CHOLERA

ALL OTHER CONTAGIOUS DISEASES.

You can make all live-stock conditions sanitary by using

KRESO Dip No. 1

The Standardized, Reliable Dip and Disinfectant.

We will send you free a booklet on the treatment of mange, eczema or pitch mange, arthritis, sore mouth, etc.

We will send you free a booklet on how to build a hog wallow, which will keep hogs clean and healthy.

We will send you free a booklet on how to keep your hogs free from lice and parasites and disease.

Write for them—they are free.

KRESO DIP No. 1 has been used at the large state fairs in the United States for the last ten years to prevent the spread of contagious disease. It has done it, and KRESO DIP No. 1 will do the same for you on the farm.

KRESO DIP No. 1 is Easy to Use—Reliable—For Sale by All Druggists—Effective—Not Expensive.

PARKE, DAVIS & CO.

Dep't Animal Industry. DETROIT, MICH.

LANDS AND HOMES

PROSPERITY IN CANADA

$900,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated lands from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privilege of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready made farms for sale. Special easy terms. Loans for live stock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interest are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F. Farm and Real Estate Journal, Traer, Iowa.

IF YOU WANT 40 acres or more rich, clay loam clover lands in our co-operative settlements near Crandon, county seat of Forest county, Wisconsin, write us and state **what terms you must have.** We will send you booklet written under supervision State Authorities. Agents wanted. Per-Ola Land Co., 21 Main, Crandon, Wis.

125 ACRES Fine buildings, splendid soil, near town and school, $11,000. $3,000 cash, balance 5%. 80 acres, 30 under cultivation, no buildings, sandy loam, clay subsoil on good road, near school and two towns. $20 per acre. Other snaps. W. E. Webster, Hudson, Wis.

FOR fine farm lands at low prices and easy terms in Wisconsin's greatest dairy district, send for our free list, map and photographs of choice dairy, stock and grain farm bargains. Write Graham's Land Office, Marshfield, Wisconsin.

RICH RUSK COUNTY LANDS, owners direct, on easy terms. Ideal dairy creamery country. Write Flambeau RIVER LUMBER COMPANY, Station D, Ladysmith, Wisconsin.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

UPPER WISCONSIN FARM LANDS.

WE ARE selling a part of our 10,000 acre tract, located in Oneida County on beautiful lakes with the best known soil in upper Wisconsin, in the heart of the choicest dairy spot on earth. To see these lands is to buy them. Write or inquire Oneida Farms Co., E. M. McVicker, Prop., 1202 First National Bank Bldg., Milwaukee, Wis.

Obligation on Stockmen.

(Continued from page 10.)

tuberculosis in Upper Wisconsin is comparatively small, as is shown by data secured through the courtesy of Commissioner Norgord, of the department of agriculture.

Tuberculin Tests Reported to State Board of Agriculture for 1914 and 1915.

	No. Tests	No. Reactors	Percentage Affected
Old dairy section (27 southern and eastern counties)	48,238	4,306	9
Relatively new dairy section (29 central and western counties)	15,167	746	4.9
Relatively undeveloped section (15 northern counties)	6,677	188	2.9

Tests made by the various county agricultural representatives who are at work in most of the northern counties show that where reactors are found very frequently they have been purchased.

With the very rapid strides that are now being made in dairying in the still newer regions it is a matter of greatest moment that special efforts be made now to buy only perfectly healthy animals. If the foundation stock for the building up of these northern herds could be insured against tuberculosis it would mean the saving of large sums of money for the future.

No region has the opportunity that this new North now has. Will it recognize its advantage and profit thereby?

Wisconsin bankers occupy a most progressive position which they have assumed in aiding rational agricultural development. Bankers and commercial clubs are joining hands in helping to finance the needs of the settler with reference to introduction of live stock and other agricultural requirements. The rural credit problem in Wisconsin is being solved by home talent in a most sane and hopeful way.

Wisconsin Farmer Advertisements Bring Many Sales.

HERE are two typical letters from some of the live stock men who have recently advertised their stock in The Wisconsin Farmer and found it profitable:

George W. Smith & Sons, of Burnett, Wis., breeders of milking Short-horns and Poland China swine, write: "Our sales have been very satisfactory and we will continue with you as long as we have the goods to sell. You seem to send us the buyers."

H. B. Drake, of Beaver Dam, Wis., another successful Short-horn breeder, writes under date of July 15, 1916: "I have been an advertiser in The Wisconsin Farmer off and on for the past twenty-five years and am pleased to state that the results of my advertisements are better today than they have ever been before. You may continue my advertisement in The Wisconsin Farmer until I stop it."

Let The Wisconsin Farmer help you sell your stock. It's a result-getter.

THE WISCONSIN FARMER, MADISON, WIS.

Guaranteed Circulation, 90,000.

Potato Growers' Meeting.

At a recent meeting, for the purpose of making preliminary arrangements for the coming state potato growers' convention, to be held at Eau Claire in November, chairmen of all Eau Claire committees were present. These chairmen are as follows:

On Transportation—George Wallace, general freight agent of the Chicago, Minneapolis & Omaha Railroad.

On Arrangements—R. F. Kaiser, secretary Civic and Commerce Association, Eau Claire, Wisconsin.

On Publicity—W. L. Swift, Eau Claire Press Association.

Bankers' Agricultural Committee of Eau Claire, chairman, D. Woodruff.

The railr ads of Wisconsin will make special provision to provide facilities to handle county exhibits and other large exhibits shipped to the convention. Special cars will be routed from potato growing counties of Wisconsin to Eau Claire. Chairman George Wallace of the Omaha Railroad is making these arrangements for the State Association.

Early announcements will be made relative to the special school contest exhibit which will be a feature this year. Several thousand boys and girls in Wisconsin are growing potatoes under special contests and potato clubs. The State Association will offer attractive cash premiums, ribbons and banners in the school contest class. The special premium list and announcement is in the hands of the printer and will be furnished to the boys and girls in potato club work at a very early date.

Unusual interest is manifest in potato exhibits for the various potato growing counties. It is expected that at least twenty-five counties in Wisconsin will be represented at Eau Claire.

For information, address J. G. Milward, secretary Wisconsin Potato Growers' Association, Madison, Wisconsin.

For information on arrangements at Eau Claire, address Sec. R. F. Kaiser, Civic and Commerce Association, Eau Claire, Wis.

Wisconsin's seed inspection laboratory will be moved to Milwaukee in September. Farmers and dealers who are in the habit of sending what they suspect to be "dodderized alfalfa" or "quackerized alsike" to the state seed inspectors for analysis will have a chance to accompany their samples, watch the testers work and confer personally with the men who are spending their time striving to reduce the state's annual seed loss. Their headquarters will be at the state fair park, West Allis, during the week of the state fair, September 11th-16th. Here the complete equipment for testing all kinds of agricultural seeds under the state inspection service will be in regular operation for the entire week as a part of the exhibit of the college of agriculture. Purity tests of seeds intended for individual planting will be made free of charge and as far as possible all weeds brought in for identification will be given their respective places in the botanical "rogue's gallery." While it is not likely that many germination tests will be called for, such as come in will be made and the official reports returned later.

An increase of 1 cent a quart in the retail price of milk in the city of Fond du Lac has brought forth an argument between consumers, distributors and the dairymen as to the reason therefor. The farmers deny they are getting any more for their product than a year ago, despite the fact that during the hot, dry weather of this summer the flow was 50 per cent less. C. H. Brugger, a dairymen in that county, says the increase is one adopted by the distributors, and that the farmers on August 7th were getting the same for their milk as they were on that date last year.

The C. E. Blodgett Cheese, Butter and Egg Company has sold its plant at New Richmond to John E. Gallagher, who will continue in the flour and feed business while the Blodgett Company erects a new storage plant to take care of the rapidly-growing cheese and butter business in the St. Croix valley.

WITH OUR ADVERTISERS.

Galloway Cows for Sale.

ON page 22 C. S. Hechtner, Chariton, Iowa, advertises fifty head of imported and home-bred Galloway cows and heifers for sale and fourteen head of young bulls. He wants to reduce his herd and will make the price right to anybody that wants Galloway cattle. When writing Mr. Hechtner kindly mention this paper.—Adv.

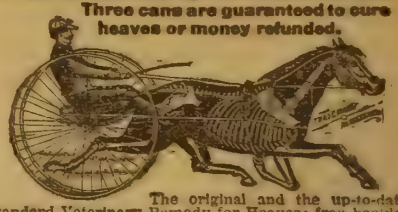
New Willard Battery Service Plan.

THE new Willard service plan provides a way for prolonging the life of your batteries. As part of this plan more than 750 free service stations are at the disposal of users of Willard batteries from which may be learned the best way to care for batteries in order to get the most satisfactory service from them. Those interested should read the advertisement on page 9 and write for information on the new plan. An offer is made to car owners of a hydrometer syringe for testing out batteries, which will be mailed postpaid on receipt of $1. Those who wish to send for it should fill in the coupon attached to the advertisement and mail it with $1 to the Willard Storage Battery Company, Cleveland, Ohio.—Adv.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.



The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

THE NEWTON REMEDY CO., Toledo, Ohio

A Silo Filler With Recruiting Attachment.

SMALLEY silo fillers reduce costs of filling the silo and eliminate the work of one or two men. They run at low speed and save power, but the fan speed can be increased or decreased, independent of the knife shaft. A grip hook table feeds the cutter automatically and thus does away with the work of from one to three men, depending on the size of the machine. In addition to filling silos, the Smalley machines will make alfalfa or hay chop simply by using the recutting attachment. Combination feeds can be made with this attachment—for instance, clover, cornstalks, pea vines, etc., can be chopped up together. The advertisement appears on page 14 and those interested will find it worth while to send for the free book issued by the Smalley Mfg. Co., Manitowoc, Wis.—Adv.

The Kirst Chesters.

IF you are in the market for a Chester White boar or sow pig of spring farrow, those being offered by Wm. C. Kirst, Tomah, Wis., will please you. He hasn't as many as some, but, as is often the case with the man that only has a few, they have had the care and will please when shipped. Most of them are sired by Rutter's Best, a son of Silver Coin out of a dam by Dixie Boy. This is a right good yearling boar and the pigs by him are showing up well. There is a very good three-year-old sow in this herd sired by Lyon Chief, out of a Best of All dam. This sow has the scale and the eight pigs she raised are among the best on the farm. A granddaughter of Combination 2d is a good sort of a yearling and raised a litter of six by Rutter's Best. Write Mr. Kirst what you want in the way of Chesters and he'll describe just what he has. See page 23.—Adv.

A Silo For the Farmer.

THE silo is a great money-saver for the feeder and dairyman. In lean years, or when there is danger that the corn crop will not mature, the silo owner can rest at ease, for he knows he will have feed enough for his stock during the winter. New silos are being built all the time, and those who have none should give the subject careful thought. It will pay to investigate the Taber Lined silo, manufactured by the Taber Lumber Co., Keokuk, Iowa. This silo is practically everlasting, rot-proof, worm-proof, storm-proof and acid-proof. The material used is wood staves, and the whole silo is thoroughly creosoted; then the oustide is painted and the inside coated with an acid-proof lining. Several desirable features of the Taber Lined Silo are given in the advertisement on page 14. Those interested should write to Dept. D of the company named above for complete catalog.—Adv.

Tried and Tested Motor Cars.

NOTHING radically new is ever offered to Reo motor car buyers. Everything has been thoroughly tried and carefully tested before it gets to the buyer. And this largely accounts for the success of the Reo car among motorists. New body types are offered from time to time, and improvements in details are constantly being made as fast as the increase in mechanical science permits; next season the Reo will have many of these improvements, but the price will not change, except in the case of two important reductions, and the new types will have the old stamp of Reo perfection. At present the Reo stands very high in the esteem of buyers, and the factories have on hands a greater number of orders than at any other time in Reo history. The enormous production and sale of Reo cars is proof of their popularity in the motor car world. Therefore, those who are looking for a new car, will make no mistake by investigating the Reo, made by the Reo Motor Car Company, Lansing, Mich., and advertised on page 24 of this paper.—Adv.

DAIRY

Would Exempt Pure-Bred Sires.

Langlade County Dairymen at August Picnic Urge Legislature to Cut Off the Taxes on Pure-Bred Sires in Wisconsin.

LANGLADE county dairymen assembled at their third annual cow-testing association picnic, at Antigo, early in August went on record as favoring the enactment of a law by the next legislature, exempting pure-bred registered sires used on the farms of Wisconsin, from taxation. The active support from the members of the legislature from the district shall be urged.

Despite the rush of a very busy harvest season, somewhat earlier than expected, because of the hot summer, dairymen and friends turned out in goodly numbers to the annual summer gathering. In addition to being the means of bringing some of the most prominent men in the agricultural field with their messages of importance and inspiration and uplift to the county, the cow-testing picnic performs a very important function as a social agency. The association membership is distributed over six townships, and these summer gatherings afford a splendid means of their getting together. The basket lunch always proves one of the attractive features of the Langdale county meeting. Farmers often invite their city friends to enjoy the dinner and the day with them.

Commissioner of Agriculture C. P. Norgord, guest of honor for the occasion, in his address emphasized the importance of building up good producing, clean, disease free; dairy herds on Wisconsin farms. He painted a bright and most hopeful picture of the possibilities of dairying in northern Wisconsin counties. The cow-testing association movement he characterized as one of the greatest agencies for dairy improvement yet inaugurated in the state. Recognizing this, the state fair management has made provision for prizes ranging from $30 to $80 per head for the best ten cows in the cow-testing associations of the state.

These honor cows will be given a prominent position at the coming state fair.

Mr. Norgord laid special emphasis on the importance of the tuberculin test in ridding our herds from tuberculosis, explaining his plan of the accredited herd list. Farmers were urged to avail themselves of the service of his department when considering the purchase of stock. If the herd from which purchase is to be made is on the accredited list, the buyer will have the assurance that the stock is right from the health standpoint. Better-fed, better-cared-for dairy cows, cleaner barns and stables, cleaner creameries and cheese factories were urged by E. L. Aderhold in his address. Dairymen, he pointed out, must co-operate with factory operators whether in private or co-operatively owned factories, and deliver only a first-class product. "Cream and milk should be bought and paid for by grade as it is now by test." "It is not fair to the careful farmer to dump his clean, wholesome cream into the same vat with the dirty, old, stale cream of the farmer who is careless and doesn't care a rap, and have both paid the same," said Mr. Aderhold. "I think that the farmer who delivers 200 pounds of butter fat in a year from a cow in a clean, sanitary condition is a better farmer than the one who gets 500 pounds per cow and brings that in a dirty, unwholesome condition.

Wonderful improvement has been made in many of our cheese factories and creameries between the first and second inspections made under the new creamery and cheese-factory license law, said Mr. Aderhold.

R. J. Schaefer advised the dairymen not to buy pure-bred animals just because of the name, or because of a low price. It takes too long to start and build up a good herd with the ordinary animal. Take advantage of what some honest breeder has been able to accomplish. Mr. Schaefer said by all means to get a good bull; one whose dam and grandams have made good records. When buying an animal which has no registered or cow-testing record, be sure to watch her milked. If it is a good sire, you are after watch the dam milked. Don't be in too big a hurry. A good deal of time can be saved in the long run by getting the right stock, even if it takes a little time to find it.

Following is a copy of the resolution adopted at the meeting:

Recognizing the importance of the live stock industry to our state and realizing that substantial improvement can only be brought about by the use of pure-bred sires, we, the members of the Langlade County Cow-Testing Association, and the Langlade County Holstein Association, recommend the enactment of a law by our next legislature exempting from taxation all pure-bred registered sires used on the farms in our state.

We further recommend that a copy of this resolution be sent to the senator and to the assemblyman from this district and that their active support for the enactment of the law be urged.

Sterilizing Dairy Utensils.

A government report of interest to Wisconsin dairymen says that ordinary washing of dairy utensils will not free them from bacteria. Farmers' Bulletin 748, which may be obtained from the U. S. Dept of Agriculture, Washington, D. C., describes a simple and homemade steam sterilizer which can be made at a cost of $5 to $10.

The sterilizer for cans and milk pails consists of (1) a roasting pan, (2) a specially prepared, insulated cover for it, and (3) a steam outlet pipe that runs through the cover. An ordinary roasting pan of standard size, about 20 inches long, 14 inches wide, top measurement, and 3 inches deep, will be satisfactory.

The insulated cover for the pan is in three layers, the lowest of which is a sheet of galvanized iron covering the roasting pan and lapping a little over the edges. On the bottom of the cover solder flanges to meet and fit the inside edges of the pan and make a tight cover.

For the steam pipe, cut a hole 1½ inches in diameter and around it solder securely a steam outlet pipe 4½ inches high and 1½ inches in diameter.

To make the second layer of the cover, use a piece of asbestos board five-sixteenths of an inch thick and slightly smaller than the metal sheet. In the center cut a hole which will fit tightly around the steam outlet pipe.

For the top layer of the cover make a shallow pan of galvanized iron 14 inches square, with sides five-eighths of an inch high, and cut a hole for the steam pipe. When the pan is pressed down tight on the asbestos, solder it firmly to the steam outlet pipe.

On the pan, solder, on edge, 4 strips of stiff, galvanized iron three-eighths of an inch wide. They should start 1 inch from each corner and should run to within 1 inch of the outlet pipe. These strips provide ridges which raise the milk can from the pan and permit free circulation of steam.

Paper may be used instead of asbestos for the middle layer of the cover. Pack papers tightly to a height of three-eighths of an inch over the galvanized iron bottom and on top place another galvanized-iron sheet of the same size. Solder these two sheets all around the edges so as to make a tight seam. This makes an insulated cover and pad about three-eighths of an inch thick, which will be found as satisfactory and even preferable to the asbestos insulation.

The sterilizer may be used on the kitchen stove, or other stove, or over any other heat that is sufficient to furnish steam at the end of the outlet pipe at least 205 degrees F., or preferably 210 to 211 degrees. A thermometer, if placed in the outlet pipe, will show whether the steam is hot enough.

Place the outfit, with 1 inch of water in the pan, on the stove, and see that the cover fits tightly. The first steam that comes from the apparatus will have a temperature of about 140 degrees F. Wait until a thermometer placed in the outlet pipe shows at least 205 degrees F. Then place the milk can—previously washed and rinsed—inverted over the steam outlet and resting on the ridges. Sterilize for five minutes; remove, shake out any water, and place the can upright on the floor. The can should be absolutely dry in one or two minutes. If not, it is an indication either that the steam was not hot enough or that the can was not washed clean. Remember that the steaming does not remove dirt, so that previous washing is essential.

Sterilize the milk-receiving tank and separator parts and all milk pails in the same way and for the same time.

Before strainer cloths, separator parts, can covers and small utensils can be sterilized, it is necessary to provide a bottomless, galvanized-iron box 15 by 15 by 11 inches high, to be used as a sterilizing chamber. The four sides of the box should fit tightly into the shallow pan and the box itself should be provided with a tightly fitting metal cover equipped with a handle.

To handle strainer cloths, string a wire across one side three-fourths of an inch from the top and one-half inch from the side. Before placing the box in position, hang the strainer cloth on the wire, folding it so that one edge may be reached easily without handling the entire cloth. Set the can covers upright along the sides of the box inside, with the tops of the covers against the box. The box should hold 3 covers at one time. After steaming, place covers on cans as soon as both are dry and do not remove until the cans are to be filled with milk. The pails, as well as the tank and separator parts, should be kept always in a clean place, out of reach of dust.

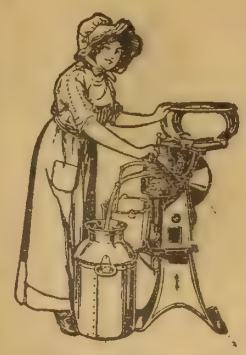
Wisconsin Ayrshires Win.

To the Editor:—Rusk county, Wisconsin, people are exceedingly proud of the record that is being made by the Ferndale farm herd of pure-bred Ayrshires, managed by Frank Stare, of Ladysmith, Wisconsin. Last week at the North Dakota State Fair the Ferndale herd won eleven firsts, five seconds, four thirds and one fourth on single entries.

The aged bull—Ferndale Victor—was champion of his class as was the junior bull—Ferndale Lessnessock Jem. In the aged cow class May of Hillcroft stood first, and Ferndale's Mode was champion junior heifer. Ferndale Victor and May of Hillcroft were awarded the grand championships. The following herd and group prizes were taken by Mr. Stare's herd: First and second on graded herd. First and second on breeder's young herd. First and second on breeder's calf herd. First and third on the get of a sire, and first and second on the product of a dam.

This herd was also awarded the Ayrshire Breeders' Association cup and the silver cup offered to the breeder winning the most money in individual classes on animals bred by himself and the trophy cup offered for the best young herd of dairy cattle.

These winnings are exceedingly gratifying when we consider that perhaps the most promising cows in the herd were left at home because Mr. Stare did not wish to interfere with the advanced registry testing, which is in progress at the Ferndale Farm. The herd will be shown at Grand



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DE LAVAL SEPARATOR

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IF YOU ARE SELLING CREAM or making butter and have no separator or are using an inferior machine, you are wasting cream every day you delay the purchase of a De Laval.

THERE CAN BE ONLY TWO real reasons for putting off buying a De Laval; either you do not really appreciate how great your loss in dollars and cents actually is or else you do not believe the De Laval Cream Separator will make the savings claimed for it.

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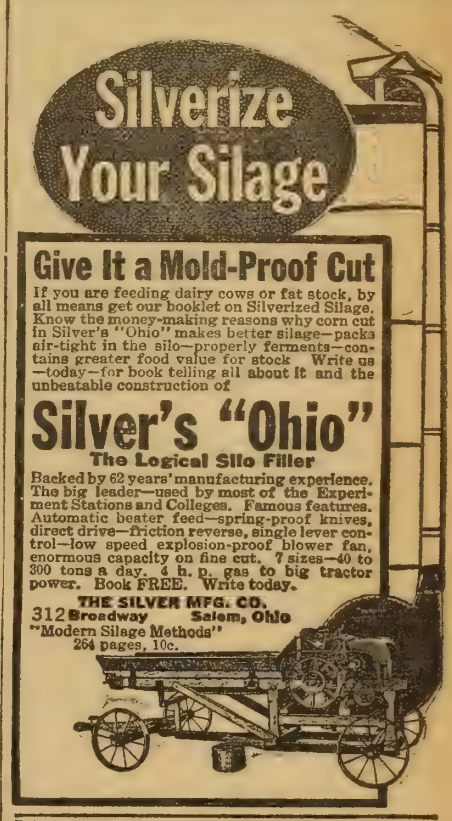

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Cut down your power cost 1-5 to 1-4, save the cost of one or two men and put more and better feed into your silo. Thousands of farmers are doing it every day with the powerful

Smalley Silo Filler

feeds cutter automatically, board of one to three men,

pendent of cutter. Fan speed decreased without changing it. Patented, low speed, one power saves 1-5 to 1-4 power cost and unnecessary wear on belt. Extension table on hopper prevents accumulation of litter.

Patented recutting attachment makes dandy Alfalfa Chop for fattening cattle, sheep, hogs and poultry. Handles leaves, stems and all without waste or injuring color of the hay. Sell your No. 1 hay and mill the off-grades for feeding. Make combination feeds from clover, rice straw, bean straw, pea vines, oats and rye, or dried cornstalks. Capacities 1200 to 2700 lbs. per hour. 600 to 800 pounds of meal per hour can be made with recutting attachment on Junior mill (operated with 6 to 8 H. P. engine.) Send QUICK for FREE Book.

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Designed for perfect efficiency and built for service by a pioneer organization of over fifty years' experience. Satisfied users all over America who claim the Rowell the perfect silo filler and urge its exclusive use. The Rowell is the most complete line in point of sizes and equipments in the United States. Complete stocks of machines and repair parts are carried at distributing points to insure quick delivery to all buyers. Send for our Free Catalog and see the features that have made "The Rowell Automatic" supreme.

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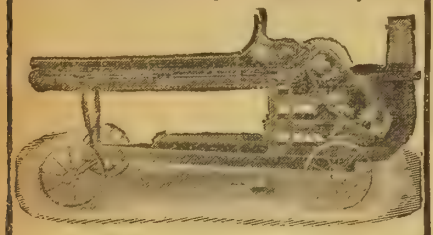

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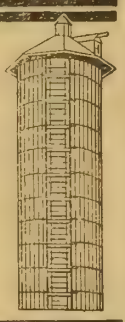

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Most practical silo, non-freezing, non-molding. Steel protects from wind, rain, heat, cold, fire, vermin; wood lining, hollow walls and tarred felt insure perfect ensilage to outer edge. Strong, durable. Galvanized ladder and air-tight, hinged doors. Built in sections, add more as stock increases.

"Silo Facts in a Nut Shell"
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THIS is easily done a year hence if you enroll this fall, Sept. 5th, and **why not take up your work in an old and reliable school?** 20 years of success and continual growth. LOWEST RATES. Courses: Commercial, Stenography, Preparatory, High School, Teachers', College, Civil Service, Auto, Steam, Gas, etc. Illustrated catalog on request. Address
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BIG 4
Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

Forks, Iowa City and points in Missouri and Minnesota before returning to Wisconsin.
G. M. Householder, Ladysmith, Wis.
Rusk County Agricultural Agent.

Wrightstown-Greenleaf-Brillion Association.

The following is a report of the Wrightstown-Greenleaf-Brillion Cow-Testing Association, Calumet county, showing the cows which produced forty-five pounds of butter fat or over for the thirty-day period ending July 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Pounds of fat	Per cent B. fat
Deny Bros.					
No. 8, N.....	7	5-17-16	1242	4.0	49.6
No. 14, G. A...	9	5-10-16	1323	3.7	48.9
No. 17, G. A....10		2-19-16	1368	3.6	49.2
Herman Horn					
R. H. Zempel					
Gr. Guern...	4	4-16	928	5.0	46.4
Otto Stelter					
Native	5	3-16	1332	3.8	50.6
Native	7	4-16	1165	4.3	50.1
Geo. A. Elbert					
Gr. Jersey...	6	6-16	1048	4.4	46.1
W. B. Strader					
Gr. Jersey...	5	12-15	1002	4.9	49.1
Gr. Jersey...	8	11-15	888	5.2	46.2
Reg. Jersey.	6	1-16	975	5.3	51.7
Nat S. Logan					
Native	8	6-16	1239	4.0	49.6
Gr. Jersey..	8	5-16	1101	4.2	46.2
John Logan					
Gr. Jersey...	7	6-16	936	4.9	45.9
McCauley & Son					
Gr. Jersey...11		2-16	1091	5.0	54.5
Will E. Ketchum					
Gr. Jersey..	3	6-16	831	5.6	46.5

Elmer G. Sutton, Tester.

Geneva Cow-Testing Association.

Following is the report of the Geneva Cow-Testing Association, showing cows which produce forty-five pounds

TEN months old Short-horn bull sold by Marquart Bros., Milton Junction, Wis., to D. B. Smith, Mission Hill, S. D. Marquart Bros. have one of the best herds of milking Short-horns in Wisconsin. They have other good bulls for sale.

Bobtail, G. G...	6	5 14-16	1182	5.0	59.1
Three Teat, N..	8	6-11-16	1278	3.9	48.9
Gus Bruss					
No. 6, G. H....	6	6-11-16	1503	3.2	48.0
John Kowrek					
No. 5, G. H....	6	5-15-16	1452	3.2	46.5
O. S. Stickert					
Dickie, G. H...	8	3-25-16	1545	3.8	58.7
Frank Kloehn					
Spottie, G. H...	6	5-21-16	1395	3.6	50.2
Aug. Hurburt					
Susa, G. G.....	8	6-21-16	990	4.6	45.5
John Kloehn					
Bossie, G. H...	6	5-30-16	1344	4.2	56.4
Jennie, G. H...	8	5-21-16	1407	3.4	47.8
Fred Harford					
No. 9, P. B. H..	4	3-25-16	1240	4.1	50.9
F. Van Lanen					
Betsy, G. H....	5	6-5-16	1320	3.8	50.1

Frank A. Gaiser, Official Tester.
Mowry Phillips, Secretary.

Eau Claire Association No. 2.

To the Editor:—The following is the report of the Eau Claire Cow-Testing Association No. 2, showing cows which produced forty-five pounds of butter fat or over for the thirty-day period ending August 10, 1917:

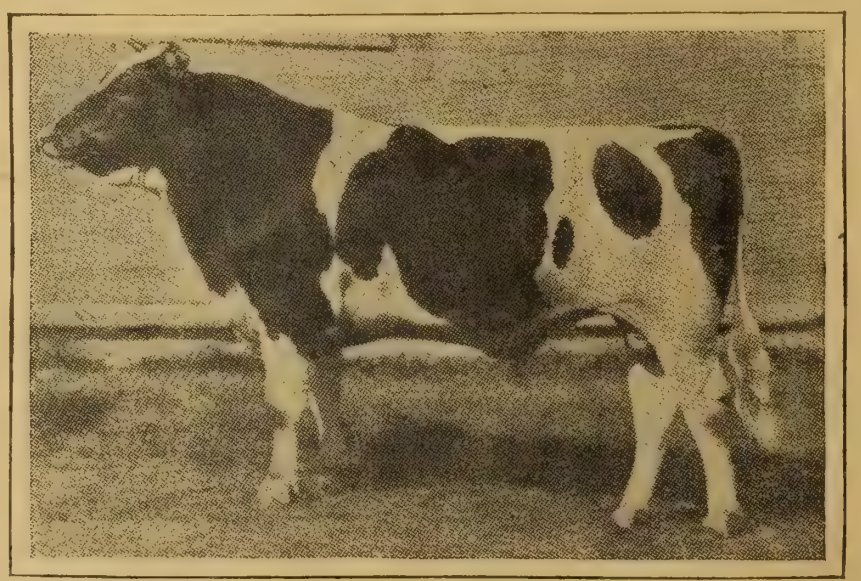
Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
A. C. Russell					
Gr. Guern...	6	4-16	1318	4.7	61.9
Gr. Guern...	7	4-16	917	5.3	48.6
B. F. Von Berg					
Gr. Guern...11		3-16	943	5.0	47.1

butter fat or over during the thirty-day period ending July 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Ora Taylor					
Milk F., J.....3		5-13-16	960	7.0	67.2
Harry Dunbar					
Ormsby, H.....3		3-9-16	1884	3.3	62.2
Queen, H.....6		9-29-15	1170	3.9	45.6
W. E. Palmer					
Leila, H.....3		6-1-16	1358	3.6	48.9
Rockwell Bros.					
Vevie, H.....8		3-21-16	1432	3.2	45.8
Harry Ames					
Bluebell, G. H...3		5-1-16	1039	4.4	45.7

The official tester, Mr. Frank Drake, also sends The Wisconsin Farmer the following record for the same period of two years olds producing thirty pounds of butter fat or better.

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Chas. L. Turner					
Fayne, H.....2		3-16-16	1249	3.1	38.7
Eula, H.....2		3-2-16	949	3.4	32.3
Harry Dunbar					
Lady, H. 2		12-4-15	1197	3.0	35.9
Adeline, H.....2		12-8-15	1026	3.6	33.9



DOWNING PONTIAC BUTTERMAN, the prize-winning bull, one of whose sons is advertised for sale on page 22 by M. W. Downing & Brother, Waukesha, Wis.

Burke, H.....2		10-27-15	1071	3.0	32.1
Ora Taylor					
Bromley, J.....2		2-15-15	543	6.6	35.8
Moss Bros.					
Edith, G. H....2		11-15-15	986	3.6	35.5

Mishicot Association.

The following table gives the names and records of the cows in the Mishicot Association, Manitowoc county, which have produced forty-five pounds of butter fat or more for the thirty-day period ending July 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
George Wellmer					
Brownie, N.	8	5-27	1377	3.6	49.57
Wm. Butaladt					
Darkie, N.....	9	6-26	1077	4.6	49.54
Albert Johannes					
Daisy, G. H.....	6	3-6	1239	3.9	48.32
Anna, G. H.....	9	11-12	1404	3.3	46.33
Henry W. Schmidt					
Pearl N.	8	3-12	1440	3.4	48.96
Herman Arnemann					
Brindle, N. 13		5-10	1395	4.0	55.80
Emil Retzlaff					
Daisy, G. H.....	7	5-25	1332	3.6	47.95
Chas. Koomely					
Lady, G. H.....	4	5-6	1272	3.7	47.06
Robert Hessel					
Reddie, N.	4	6-2	1233	3.7	45.60
Walter Zander					
Nellie, N.	5	7-11	1530	4.0	61.20

E. H. Meineke, Official Tester.
Albert Johannes, Secretary.

River Falls Testing.

The following shows the cows in the River Falls & Roberts Cow-Testing Association which gave more than forty-five pounds of fat during the thirty days ending July 31st:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Alton Bros.					
Maggie, G. H...		4-30-16	1416	3.4	48.1
Chas Benedict					
No. 2, G. S.....7		12-6-15	765	6.0	45.9
W. N. Benedict					
Brownie, G. J...5		2-29-16	1125	4.6	51.7
M. R. Pritchett					
Bessie, G. G.....5		6-4-16	1083	4.4	47.8
J. L. Chapman					
Daisy, G. H.....6		6-9-16	1641	3.2	52.5
Maggie, G. H....7		3-28-16	1668	3.0	50.0
Buttercup, G. G.8		3-7-16	1383	5.4	47.0
Dora, G. H.....7		3-13-16	1770	2.9	51.3
Susie, G. H.....6		4-23-16	1647	3.8	62.6
Roan, G. S.....4		5-25-16	1200	4.0	48.0
J. W. Budderman					
Old Bc., G. G...10		5-28-16	1383	3.3	45.6
L. W. Ash					
C. of Gold, R. J..5		3-25-16	1038	5.1	52.9
J. E. Rundell					
No. 58, G. H.....6		4-20-16	1206	4.0	48.2

Rosendale-Eldorado Report.

The July report of the Rosendale-Eldorado-Ladoga Cow-Testing Association, Fond du Lac county, shows the following cows produced more than forty-five pounds of fat during the thirty days ending July 31st:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
C. A. Peterson					
Jersey ...	8	5-16	1038	5.6	58
Jersey ...	4	5-16	1147	5.4	62
Guern. ...	5	2-16	837	5.6	47
W. A. Lawson					
R. Guern..10		3-16	930	5.0	47
R. Guern..	6	2-16	868	5.4	47
R. Guern..	3	3-16	945	5.0	47
Guern. ...	9	5-16	1595	3.8	61
Guern. ...	5	5-16	1178	4.0	47
Guern. ...	9	3-16	1178	4.0	47
P. Vellema					
Guern. ...	6	5-16	1178	4.5	53
R. Pinkerton					
Hols.	6	4-16	1333	4.0	53
Fletcher Bros.					
R. Hols...	7	5-16	1457	3.36	49
R. Hols...	5	6-16	1580	3.66	58
S. M. Randall					
R. Hols...	2	5-16	1300	3.5	46
Chas. Bratz					
R. Hols...	7	3-16	1457	3.6	52
R. Hols...	6	4-16	1425	3.3	47
R. Hols...	7	4-16	1178	4.0	47

The biggest butter and cheese exhibit ever brought together in Wisconsin was shown at the state fair in 1915. It is expected the exhibit will be even larger this year.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8. 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

Recent Rains Save Growing Crops

Drouth Is Broken in Most Parts of the State---Pastures, Corn and Potatoes Are Benefited---Grain Yields Fair, Hay Excellent.

WISCONSIN.

Barron County.—Oats have been affected by the hot weather during July and not more than 75 per cent of a crop is expected. They have lodged badly. Corn also suffered from dry, hot weather. Potato bugs have been troublesome in some fields, and together with adverse weather conditions, have cut down the yield. Pastures are getting short. Hay made the biggest yield in several years. No grain has been threshed yet. A good rain on August 4th helped all growing crops.—Wm. Bartlett.

Chippewa County.—A long, dry, hot season has made all crops look poor. A light rain on August 4th and 5th will improve them. Barley has done well, but oats were later and did not fill well. Threshing will begin soon. Potatoes are nearly a failure because of bugs and drouth. Corn looks well. Buckwheat will make a good crop if the weather is not too hot when it begins to fill. Gardens have been pretty badly damaged. Milk cows have fallen off in milk production.—James A. Smith.

Crawford County.—Corn is suffering from drouth, and as it is now tasseling out, there will be little corn if it does not rain in the next few days. In this part of the county, we have had only one shower since the first of June. Oats that were seeded early are good, but late oats are light because of hot, dry weather. Good crops of wheat and rye have been harvested. Threshing will begin soon. Potatoes will probably make a light crop. Pastures are drying up very fast. Fruit is poor because of drouth.—George Ashbacher.

Dodge County.—A heavy rain last week broke up the long dry spell which has caused considerable damage to the corn and pastures. The potato bugs have done much harm this year. Some of the barley has been threshed; it turned out poorer than last year. The average is about thirty bushels per acre. The oats also will be a little short this year.—E. R. F.

Dunn County.—Excessive heat and drouth in July damaged the grain and potato crops. A fine rain on August 4th will benefit the corn and parched pasture. A good corn crop is assured on heavy soils. Potato vines are turning brown and it is difficult to tell the effect the rain will have on this crop. Winter grain is good. Spring wheat is badly shrunken. Oats, especially early ones, are good. Barley is good. The second crop of clover hay is fine.—E. A. Finley.

Eau Claire County.—Harvesting of grain is nearly finished. Barley and oats will be light on account of the hot, dry weather in the latter part of July. Corn is doing well; a good rain on August 4th helped this crop very much. Rain helped the potatoes, which have not been doing well. Bugs have been troublesome and late potatoes have not set well. Pastures are dried up. No threshing has been done yet. Some grain has been stacked. Flies and gnats are bad. The grain crops will not be as good this year as last.—C. A. Koll.

Florence County.—The hay crop was heavy and weather conditions were favorable for putting it up. Oats and barley promise well. Rye will be a good crop, although not much of it is raised here. Potatoes are fair. About half a crop of fruit will be harvested. Pastures and meadows look fine. We have had sufficient rain.—Phill Kelms.

Forest County.—The largest hay crop known in the county has just been put up. Oats are being harvested; they were damaged by rust and tangled by storms to considerable extent. Other grains are good. Rain has been sufficient and potatoes promise a normal crop. Corn is doing splendidly and pastures were never better at this time of year.—H. A. Kamm.

Green Lake County.—All crops have suffered from hot, dry weather. Harvesting is nearly finished and some threshing has been done. The grain is reported light. Recent heavy rains have made the outlook for corn much more favorable. Early potatoes are very poor.—G. B. W.

Juneau County.—Threshing returns show a fair yield of grain. It is a little light on account of hot, dry weather in July. Pastures are dried up, which has caused stock to be sold that was unfit for market. Dry weather has affected the corn some. Potatoes and gardens also have suffered from drouth. A big rain on August 3d and 4th brought welcome relief. Alsike clover hulling shows a very poor yield.—J. H. McNown.

Kewaunee County.—Recent drouth and hot weather have ripened the barley at least one week too soon and shrunk it some. Oats, potatoes and garden truck all have suffered from the same causes. Rain on August 5th has refreshed the meadows and pastures. Most of the hay is harvested and an average crop of the finest quality is reported from all sections. Fruit is not abundant and some of the apples look poor. The unusual number of cattle are on pasture and all are doing well.—Fred Lutz.

La Crosse County.—Rains during the last week have partly overcome the harm done to the corn and potatoes by the drouth. Potato prices have advanced slightly. Some threshing has been done, and the reports say all grains are somewhat inferior in yield and quality than last year. The crop of timothy hay was never better and considerable wild hay is yet to be put up.—S. J. D.

Manitowoc County.—Hay crops are harvested and the yield averaged better than was expected. Grain harvest is under way and fair crops are reported. Corn is doing well. Potatoes have made a growth lately. Pastures are a little dry.—Otto Berge.

Marinette County.—A good crop of hay was secured in excellent condition. Grain harvest has begun. Barley and oats were driven a little too hard by the heat, and these crops will not be as heavy as last year; still, they will be fairly good. Corn is pushing ahead and will make a good crop if warm weather continues. Recent rains will insure a good crop of potatoes, although the bugs have bothered them a great deal. Rains have helped the pastures, which are holding out remarkably well; this is shown by the slight decrease in milk supply furnished to factories. Stock are in good condition and some are being sent to market.—H. B. Pederson.

Oneida County.—Harvesting has just begun. The grain is short and broken because of heavy rains. Indications are that the oats crop will fall about 35 per cent short of last year's crop. Considerable smut is in the grain. Corn is late and, although there will be little ripe corn, there will be plenty of silage. Potatoes look fine, but the dry weather in July prevented them from setting as well as they did last year. The second crop of clover hay is coming on in good shape. Rain has been plentiful during the last two weeks, and therefore, the pastures are holding out well. There are many more dairy cows this year than last.—Clyde Burkhart.

Ozaukee County.—The barley crop is in the barns. It turned out fair; straw is plentiful, but the heads are short and small. Oats are ready to cut; they look poor and in many places are very short in straw. A recent rain helped the corn and potatoes very much. Fruit and vegetables are pretty fair. Pastures are nearly dried out.—Nic J. Mueller.

Polk County.—A heavy crop of tame hay has been harvested, and practically all the grain is in the shock. Threshing has not commenced, but indications are that the grain will be light in many cases. Marquis wheat is doing very well; the estimated yield on several fields is from fifteen to twenty bushels per acre. Oats are very light, while barley is about an average crop. Corn is uncertain at present; the pollen may have been injured by protracted dry weather and intense heat. Potatoes will probably be below normal, but prices will be good. Pickle growers are now busy with their harvest, and the yield of this crop is good.—Wallace Fountain.

Price County.—The best hay crop ever cut in this county is now under cover. Warm weather is just what crops needed here. Good showers about once a week kept away the drouth. Corn is doing fine; early flint has been in silk for more than a week. Oats are about ready to cut. The average stand of oats is about 15 per cent less than last year. Potatoes, both early and late, are doing well and a good average yield is expected. Pastures are extra good. Berries of all kinds have yielded well.—J. W. Fox.

Sauk County.—One of the longest drouths ever known here has been broken at last. Much damage was done to the new seedings, young clover in many fields being literally burnt out, especially in barley and oats fields. The heavy rains of the last few days have improved the outlook for corn and potatoes, but the cornstalks will be short. Threshing of oats and barley has commenced; these crops are averaging about the same as last year, but the oats are a little light in weight.—Richard F. Klemm.

Sheboygan County.—Continued dry weather during the latter part of July gave ample opportunity to put up hay in fine shape and harvest rye and barley. Corn has grown very rapidly. We may not get much ripe corn, but the way it has been shooting up promises plenty silage. Pastures were very short, but soaking rains on August 3d and 4th will help them along. The new seedings of clover and alfalfa also were benefited by the rains. Late potatoes will improve also.—M. J. Hoppert.

Shawano County.—Rye and barley are good crops. Winter wheat is good, but spring wheat shows effects of hot weather. Oats also have been affected by hot weather. Potatoes are few in the hill. Bugs are causing trouble. Corn is growing fine, and if present weather continues, it will make more than an average crop. Pastures are good. We have had sufficient rain.—M. J. Wallrich.

Taylor County.—A splendid crop of hay was harvested in fine condition. Oats harvest is now on and the crop is fair. Barley and rye are poor, but corn and potatoes are above the average. Weather is fine and farmers are in good spirits.—John E. Miller.

Winnebago County.—Haying is finished and the cargo is much better than was expected. The late, wet spring followed by about six weeks of drouth has been unfavorable for grain and potatoes. The drouth has been broken by heavy showers and this will help the corn much of which is spotted because of failure of the seed to germinate. Threshing has begun. If showers continue, pastures will revive and this will be a great help in feeding stock since fodder is rather scarce.—Seymour L. Smith.

ALTJE SALO NETHERLAND MECHTHILDE A. R. O. record 23.35 pounds butter made thirty-eight days after calving, dam of the yearling bull advertised for sale on page 22 by Arthur Rust, West Allis, Wis.

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Life Most Enjoyable.

The question of what to do to interest the growing boys and girls in farm life and keep them on the land is one that confronts many a farm parent. We do not believe that any of our young people wish to leave the farm because of any aversion for the country itself; it is not because they do not love the broad acres, the live, growing things, the pure air; it is not because they do not want to work—they all expect to work when they go to the city; but it is the possibilities for entertainment and relaxation in the after-work hours that draw most of the young people cityward. The social life of the towns and cities as compared to that of the country is more to the liking of young men and women.

At a recent rural life conference Archbishop Ireland talked to the farmers in attendance along this line, and his remarks are of interest to every farmer and farmer's wife interested in keeping their children on the farm. The archbishop said:

We should promote sociability, assimilation, friendship and amusement. Were I again to establish a farm colony I would first place in the center of it a theater or a community hall, and a library. I would urge practical education. I would teach cooking because American cooking is the worst in the world.

I would have the farm home the pleasantest in the land, with flowers and growing things inside and out—a charming place to enter.

I would have the farm parlor open every night and have the neighbor young people to come in and sing and have the young people to go to the neighbors and amuse themselves.

It is also the opinion of Archbishop Ireland that in order to keep their sons and daughters around them on the farm parents must demonstrate that farming is profitable, and not only that, but share with them the profits they have gained. He believes that when the sons become of age they should get their share, and the daughter hers when she marries:

We must show the country young people, he says, that the farm life is the most enjoyable and most independent life, and we must help to make it more so. The farmer is his own master. He is king on his own ground, subject only to his own commands.

The Play of the Girl and Boy.

As the little children grow up their desires for recreation and play broaden. The boys want to go fishing and hunting and swimming. The country always holds some new phase of life or experience and, if rightly directed and understood, the child can gain untold riches from the nature lore that surrounds him. Here again the father and mother can be of inestimable value to him, encouraging and helping him in every tendency which he shows. Gain his confidence, cultivate and enjoy with him the things which interest him; and let him come to you with all his treasures and his great adventures.

So only can you give to your children and gain from them the great and happiest moments of life.

If your girls want the same experiences in the "great out-of-doors," let them have them, although at this older period, home and its possibilities attract a girl. Here the mother should gain her daughter's confidence and with the spirit of love teach her the things that will make her a womanly woman and a worthy future mother. The great tragedies in girls' lives have come from this lack of understanding between mother and daughter.

The household duties could all be primarily learned in the spirit of play—make each duty a game—and finally through the play side its real value will be seen and appreciated. This is not as foolish as it may sound, for it is the basis of the greatest girl movement in the country today, and thousands of young girls are gaining a greater, truer knowledge of life's work through first seeing it in the guise of play and pleasure.

No one is too old to play a game, so if you have, or will take, a few spare moments in your day's work—go out into the yard and play a set of tennis, or a game of tether-ball, volley-ball or quoits with your daughter, your work and hers will have a keener interest all the rest of the day, because you have played and played together. —Edwina Mary Layman.

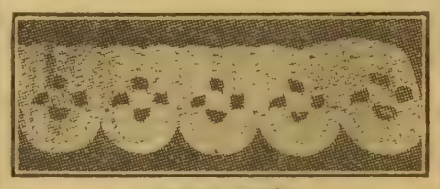
Narrow Crocheted Edging.

Chain 13.

First row—One treble in 4th stitch from hook, 5 trebles in next 5 stitches, chain 2, skip 2 stitches, 1 treble in next stitch, turn.

Second row—Chain 6, 3 trebles under 2 chain, chain 2, skip 2 trebles, 4 trebles in next 4 trebles, turn.

Third row—Chain 3, 1 treble in each 4 treble, 3 treble under 2 chain,



A NEAT EDGE.

2 chain, 15 trebles under 6 chain, 1 double in last stitch of foundation chain, turn.

Fourth row—One double in each of 15 trebles (back loops), chain 1, 2 trebles under 2 chain, 1 treble in each of 6 trebles, turn.

Fifth row—Chain 3, 1 treble in each of next 6 trebles, chain 2, 1 treble in 1 chain, space before scallop, turn, and repeat from second row, for length required, making the 1 double at end of 15 trebles in the chain space before, scallop.

Remedies for Ivy Poisoning.

Direct contact with the poison ivy plant is not always necessary to produce poisoning, as the poison may be transferred from clothing, gloves and implements, also from towels used by those who have been in contact with the plant. When there is reason to believe that there has been exposure to the poison repeated washing with warm water and strongly alkaline soap as soon as possible is advisable.

There is no one remedy that will cure all cases of ivy poisoning, and in severe cases a physician should be consulted. Specialists of the department have found the following methods and formulas useful in many cases: At the outset, removal of the cause of the irritation may be accomplished by cleansing the inflamed surface repeatedly with alcohol, or with a saturated solution of sugar of lead in alcohol, using a fresh bit of lint or absorbent cotton each time, to avoid spreading the irritant. The sugar of lead solution cannot be used over extensive areas because of risk of lead poisoning. Covering the inflamed parts with lint or absorbent cotton kept constantly moist with limewater or with a saturated solution of bicarbonate of soda will afford relief. When this cannot be used a simple ointment, such as zinc oxide ointment, is recommended. A solution containing one ounce of fluid extract of grindelia to one pint of water applied on cloths and allowed to evaporate may afford relief. Black wash, prepared by adding one dram of calomel to one pint of limewater, may be applied two or three times a day, allowed to dry, and followed by zinc oxide ointment. This treatment must be used with caution in extensive cases because of the possibility of mercury poisoning. The acute inflammation of ivy poisoning is sometimes followed by eczema and secondary infections of the skin, which, in mild cases, will yield readily to treatment with bland antiseptic ointments. A formula highly recommended for ivy poisoning and often especially helpful at this stage is the following:

Carbolic acid	2 grams.
Resorcin	2 grams.
Bismuth subgallate	4 grams.
Equal parts water and lime-water to make	250 c. c.

This solution may be dabbed on the affected parts several times a day.

Recipe for Dill Pickles.

Take medium-sized cucumbers. Let them stand in water overnight or twenty-four hours. Remove, wash and dry. Put grape leaves on the bottom of a stone jar, then pack in a layer of cucumbers very solid and cover with dill and cherry leaves. Repeat this process, being sure that the cucumbers are packed in solid and that plenty of dill is used. When the jar is full, cover with dill, cherry leaves and grape leaves; some horseradish may be added. For a two-gallon jar mix half cup coarse salt, one cup vinegar and one gallon of water until the salt is dissolved. Pour over the cucumbers, place a plate on top and a weight on top of the plate. It is essential that cucumbers be held down solid. Do not put into a cool cellar for ten or twelve days. Remove pickles as needed, replacing weight each time.

Sweet Gherkins.

Fill a tub with salt water strong enough to bear an egg. Put gherkins not over a finger long in this and let them stand nine days. Take them out and harden them by letting them stand in fresh cold water for several hours; then spread them out on a folded tablecloth to free them of moisture. Pack them in glass quart jars, fill with cold vinegar and set them aside for three weeks in a cool place. Then open the jars, drain off the vinegar and to that of each jar add one cupful of sugar, one-half teaspoonful of extract of mace and the same of extract of cloves and cinnamon and cayenne pepper to taste. Stir until the sugar is dissolved, pour the liquid over the pickles, close the jars and set in a cool place.

Mustard Pickles.

One quart chopped onions, one quart chopped cucumbers, two quarts chopped green tomatoes, one head chopped cabbage or cauliflower, six chopped green peppers. Salt and let stand overnight; then boil until tender. Make a dressing of three quarts good vinegar, six cups sugar, one-fourth ounce tumeric, four teaspoonfuls celery seed, one-half pound ground mustard, one cup flour. Rub dry ingredients together, stir till smooth in vinegar and boil till it thickens (two or three minutes). When cold pour over the cold vegetables and seal in warm jars. The mixture will thicken somewhat after standing a few days.

Dressing the Broiler.

In preparing a spring chicken for broiling, remove the backbone, neck, and keel bone. The backbone and neck may readily and easily be removed at one time. Hold the bird, breast down, and with the use of a sharp knife, insert the same through the back and cut each side of the vertebral column. Remove the neck in like manner and leave the viscera plainly exposed for immediate removal. The keel bone should be removed by first cutting around the outline of same from the inside. Then gradually scrape the flesh away leaving the skin underneath unbroken. The bird can then be laid perfectly flat for broiling, and when perfectly prepared there should be no incision to show.

A Serviceable Rug.

To the Editor:—I would like to tell Miss E. E. A. how I made some rugs from old coats and trousers. I cut and sewed them into carpet rags, making them about an inch wide. I then crocheted them into an oval rug, using a hook made by my husband from a broken pitchford tine. They are quite heavy to handle, but when completed make a good looking, serviceable rug. I have one that I have used continually for four years and it is still in good shape. I used gray and brown for the center and cut up a heavy red skirt for the border.

This is the season when we are troubled with ants and I will tell how I solved the problem. I placed a tin coffee can lid under each cupboard leg and kept them filled with water. I then have a safe place to keep all the things which attract ants. I also keep a sponge soaked in sweetened water and laid in their path. As soon as it is full of the little insects I dip it in hot water to kill them. Whenever I find their nests I drench them well with boiling water.

Have any of the readers ever used flowering bulbs as Christmas gifts? If so, what kind of bulbs do you use and when do you start them so as to have them blooming at Christmas time? I would be glad to receive this information. Mrs. H. B. C.

Another Canning Recipe.

To the Editor:—I want to tell Mrs. M. D. E., in answer to her inquiry, how I can corn and tomatoes together.

Use one-third as much corn as tomatoes. Salt to taste and boil until both are thoroughly heated through. Seal at once in sterilized glass jars or cans. If jars are used, wrap in paper and keep in a cool, dark place.

Mrs. F. F. S.

Household Hints.

If the meat grinder or egg beater works hard, put glycerin in the bearings. It is a lubricant which will not taste in the food and it is not at all harmful.

Use paper on the table when preparing fruit, vegetables, cracking nuts, etc., then simply roll the refuse up in it and your table is clean.

Olives and English walnuts ground together and moistened with mayonnaise make an appetizing luncheon sandwich.

Have your plumber fit a zinc top to your kitchen cabinet. It costs but $1, is perfectly sanitary and is fine for rolling out cookies, pastry, kneading bread, etc.

If the basket of an old baby buggy is removed and several boards or slats nailed across, a great deal of time and weariness is saved on wash day. You may place your basket of clothes on this and wheel it along with you and your clothes are hung up much more easily and quickly.

Buttonholes in stiff material like serge often fray badly before they are worked. To avoid this mark the position of the buttonholes by a piece of thread, stitch around it on the machine before cutting and the edge will hold firm until it is worked.

There is no better food in the hot summertime than green vegetables. They furnish the necessary mineral matter to the body and they are low in fuel value, so that they do not tend to make the body hotter. They fill up quickly and give a feeling of fullness, thus preventing overeating and consequent disorders.

Recipes.

Fried Chicken With Olive Sauce.—Cut up well-dressed chicken, dip in seasoned flour and brown in butter. Then cook slowly until thoroughly done. Serve with olive sauce.

Olive Sauce.—Brown two tablespoonfuls each of onion and carrot cut fine in a tablespoonful of butter; add a tablespoonful of flour and brown. Stir in a cupful of stock (beef extract will do if you have no stock at hand) and cook until smooth, add one dozen stuffed olives and let stand until the olives are well heated through.

Spanish Rice.—Chop one large tomato, one green pepper, one onion. Sprinkle one teaspoonful of salt over the mixture. Melt one tablespoonful of lard in a spider and when hot pour one cupful of dry rice over it, and keep it moving until the rice is thoroughly heated, but not discolored. Add six cupfuls of boiling water and the chopped vegetables. Cook all together until the rice is tender, adding more water as it becomes necessary.

Stuffed Sweet Peppers.—Six large peppers; remove seeds and white membranes. Scald peppers, allowing them to remain in water five minutes; drain and stuff with a filling made of two cupfuls of stale bread crumbs, one cupful of cold cooked chicken, one-half cupful of tiny mushrooms and one-half cupful of peas. To this add one-half teaspoonful of minced onion. Mix altogether with one cupful of white sauce. Season with salt and pepper. When peppers are filled, place in a pan and add enough water to keep them from burning. Bake from twenty to thirty minutes.

Stuffed Tomatoes.—Select large tomatoes of even size and scoop out a small place in the top and fill with a stuffing made as follows: Fry one small onion, chopped fine, in a tablespoonful of butter. When nearly done add some bread crumbs moistened with a little milk or water, and season with salt and pepper. Put a bit of butter on top of each and bake. Or the tomatoes may be filled with the following dressing: Chop very fine any kind of cold meat or fowl, with a very small piece of bacon; fry an onion, chopped fine, in a tablespoonful of butter and when nearly done add the meat, some bread crumbs, pepper and salt, cook a minute, mix well, add the yolk of an egg and fill the tomatoes. Place in a baking dish and sprinkle bread crumbs over the top, with small bits of butter on each tomato, and bake.

Hickory Nut Ice Cream.—Shell enough hickory nuts to give a pound of meats. Put them through a vegetable chopper and make a paste of them by moistening with a little water and sugar sirup. Melt two tablespoonfuls of sugar and when it begins to brown add water to dissolve it and a quart of cream or rich milk, two cupfuls of sugar and the nut paste. Mix and freeze.

French Omelet.—Beat four eggs slightly, just enough to blend yolks and whites. Add to this four tablespoonfuls of milk, one-half teaspoonful of salt and one-eighth teaspoonful of pepper. Put two tablespoonfuls of butter in a hot omelet pan and when it is melted add the mixture prepared. As it cooks, prick and pick up with a fork until the whole is of creamy consistency and firm enough to fold. Place on a hotter part of the range so that it may brown quickly underneath. Fold and turn on a hot platter. Before folding, grated cheese, jelly or chopped meat may be added.

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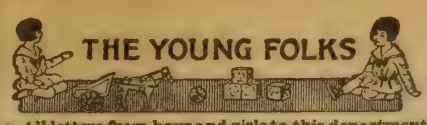

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Breakfast in the Sky.

The little moon puts on a bib
Made out of misty cloud,
And, if she spills her share of rain,
It's just what she's allowed.

The very hungry baby stars
Arise before the day
To fill their shiny mugs with cream
From off the milky way.

The little dipper feeds the moon;
The big one feeds the sun;
But he is never satisfied,
For when his meal is done

He drinks the dewdrops off the grass,
And in a single hour
He empties all the breakfast cups
Held by each thirsty flower.
—Garnet Noel Wiley in the Mother's Magazine.

Enjoys Her Camera.

Dear Young Folks:—I am fourteen years old and I live on a farm of 130 acres. We have another farm of sixty acres. I have one sister and three brothers. We have several horses and cattle and a few sheep.

I spend much of my time with the camera and I like it very much. I finish my own pictures and also finish them for other people for 3 cents apiece.

I feel very sorry for Gladys, as I know I would miss my father if he were gone.

I will be in high school next year and I think I will enjoy it very much.
—Laura.

Takes Music Lessons of Sister.

Dear Young Folks:—I have always enjoyed your letters very much. I am a girl nine years of age and in the fourth grade. I love to go to school.

I have two sisters and one brother. My oldest sister goes to high school and I take music lessons of her. We can play duets.

We live on a farm of 160 acres four and one-half miles from town. We have six horses and two colts and five head of cattle.

I liked the story of The Endless Tale.

I think the answer to Hazel's riddle—up and down, up and down, touching neither sky nor ground—is a pump handle.
—Jessie.

Has Written Often.

Dear Young Folks:—I am thirteen years old and am in the eighth grade. We got a new piano this summer and I am taking music lessons. I like music very much.

We live on a farm of 160 acres. We have an incubator and all kinds of chickens. We also raise turkeys and geese. We live in a big house close by the timber and the creek. Papa is cutting timothy now and we will thresh soon.

I hope I will see my letter in the paper, for I have written often before, but I guess there has never been room for my letter.

Ella asked the riddle: What is the strongest key? I think the answer to it is don-key. Here is another one: What goes round the house and round the house, but makes only one track?
—Mayme.

Has Nine Bird Houses.

Dear Young Folks:—I read your letters every time the paper comes and enjoy them very much. I live on an eighty-acre farm. I have two sisters and one brother. My sister has ten chickens and I have thirty-nine little ducks.

We belong to the Rochester Liberty Bell Bird Club. We have put up nine bird houses and the wrens have built in all of them.

We have three horses, five cows, one dog, two cats and one kitten.

I will give you a riddle. What is in Rome but not in Italy? It is twice in a moment, but not in a second; it is in timber, but not in the trees.

Knows Bird Willie Describes.

Dear Young Folks:—I think I have found out what the bird is that Willie has described. It is a flicker. It is also known as a golden-winged woodpecker or high-holes. The northern flicker is found in North America east of the Rockies. I received a bird guide for my birthday and that is where I found the flicker.

I read all of the letters from the boys and girls and enjoy them very much.
—Ruth.

OUR FASHION DEPARTMENT.

ALL PATTERNS, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want and inclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery.

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Send 10 cents in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses' and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to THE WISCONSIN FARMER, MADISON, WISCONSIN.

1351—A dainty summer frock for misses and small women. The pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 7½ yards of 27-inch material for an 18-year size, with 1 yard for bolero.

1795—A practical and easily developed outfit. The pattern includes all three garments. It is cut in 5 sizes: 2, 3, 4, 5 and 6 years. It requires ⅞ yard for the drawers, 1½ yards for the underskirt and 2⅛ yards for the dress, of 36-inch material, for a 4-year size.

1805—A simple practical ladies' apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 3¼ yards of 36-inch material for a medium size.

Waist 1807-Skirt 1815—An attractive expression of good style. The waist pattern 1807 is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt 1815 is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. For the entire dress 6⅞ yards of 36-inch material will be required for a medium size. Two separate patterns, 10 cents for each pattern.

1796—Ladies' dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 44-inch material for a 36-inch size.

1588—Girls' dress in one-piece style with sleeve in wrist or elbow length. Cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 3 yards of 44-inch material for a 6-year size.

1295—A simple set of underwear for girls. Drawers, petticoat and underwaist. Cut in 6 sizes: 2, 4, 6, 8, 10 and 12 years. The drawers require 1½ yards of 36-inch material, the petticoat requires 2 yards and the underwaist 1⅛ yards for a 10-year size.

1787—Girls' dress, with two styles of sleeves. Pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3½ yards of 44-inch material for an 8-year size.

1792—A stylish skirt model. Cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 4¼ yards of 44-inch material for a 24-inch size.

1642—A splendid style for morning or home wear, with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40 42 and 44 inches bust measure. It requires 7½ yards of 36-inch material for a 36-inch size.

1339—A dainty and becoming negligee. The pattern is cut in 3 sizes: Small medium and large. It will require 4½ yards of 44-inch material for the full length style, and 2¾ yards for sack length, for a medium size.

1803—A simple but attractive design. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 2½ yards of 44-inch material for a 38-inch size.

International Sunday School Lesson.

Lesson for August 20, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Riot at Ephesus.

LESSON TEXT—Acts 19:23-41.

GOLDEN TEXT—The love of money is the root of all kinds of evil.—I Tim. 6-10.

Teachers ought to have good maps and keep before the minds of their classes both the ancient and modern [illegible] the places Paul visited. Paul [illegible] Ephesus nearly three [illegible]3 to 56. The events of [illegible] lesson occurred about three years [illegible] lesson in Acts.

[illegible]ssionary Work of Paul (vv. 1-10). How long Paul remained at Antioch after his second journey we do not know, but having passed through the "upper coast" he came to this city of Ephesus, which was an important city and a great mission field. In Revelations 2 and 3 is a list of the churches which he evangelized from this center. It was a great and effectual door for him (I Cor. 6:9; read also Acts 20:17; 2:35). In this city Paul found a religious guild of 12 members (see vv. 2-7), whose religious experience needed the enrichment of the Holy Spirit; a like need is ever before the Christian church.

II. The Miracles Wrought by Paul (vv. 11-20). Ephesus was a center of magic and witchcraft, and special power was given Paul to work miracles which confounded the magicians in this, their stronghold. The Gospel proves its power most and best by transforming the characters of men. Deeds of love and service are the best proofs of Christianity, and these are the things which awaken heathen nations to seek after the Christian religion. But such deeds are often imitated as in this case. (See v. 13.) However, only the real spirit of Christ can work the true workings of the Gospel, and thus the name of the Lord Jesus was magnified in Ephesus. Imitation is often the sincerest form of flattery.

III. The Mob's Attack Upon Paul's Work (vv. 21-41). The first result of Paul's work was the burning of the books of magic (vv. 18-20). Many who had been dupes of the magicians ceased their secret practices and declared their wrongdoings in this public manner. Literally, book after book was thrown into the fire, much the same as in Florence Savonarola had his "bonfire of vanities." Paul's wonderful success had to have its testing before he left. The Gospel "way," the way of salvation, of true living, is sure to create a stir sooner or later. Preach the Gospel faithfully and fully, and it will stir up any community. It is not necessarily a bad sign when things begin to be disturbed. It may simply indicate that the fire is getting hot. The good results of revivals do not hurt business, but they do hurt the devil. So that "big business" was intensely stirred up in the city of Ephesus. Demetrius, their leader, uttered a striking and truthful commendation of Paul (v. 26), although it was entirely unintentional. (See I Thess. 1:9-10). Demetrius does not seem to seek to controvert the preaching of Paul, or that it did not square with the word of God, but rather that it would interfere with financial considerations. The modern world is full of descendants of the Ephesian silversmiths—politicians and business interests which defend the saloon, and fairly respectable citizens who receive rents from such business, or from immoral or unsanitary properties, and who cry out against any reform which interferes with trade and money making. There are many today who are very enthusiastic religionists if they can coin money out of it or get into an office.

At this theater meeting (Paul was not present, vv. 29, 31) Demetrius appealed (1) to wealth, (2) to religion, (3) to the honor and fame of the city, and (4) he also made an esthetic appeal, (vv. 25, 26, 27). The Jews put forward one of their number, Alexander, to make a defense unto the people, and to show that they were not in sympathy with Paul and his companions in their preaching against the worship of Diana or that as Jewish Christians they did not maliciously hope to destroy the worship of Diana and the business interests of that city. Their effort, however, only stirred the mob to a larger shout, "Great is Diana of the Ephesians," which lasted for two hours.

Those who yell the loudest think they are sure to prove their point, though in such a way the point does not stay proved. Paul combines fearless courage and humble common sense, and, while he fain would appeal to the mob (v. 30), he refrained. The mob must soon awaken to the manliness and spirit of Paul's soul. It was the town clerk who interfered (v. 35-41) and by skillful management quelled the excited mob. He was the temple keeper and showed that the worship of Diana was so settled in Ephesus that no company of Jews could overthrow it, and that they did not have any real cause for violence.

He also emphasizes the fact that the image of Diana, their chief god, had been miraculously sent to them by Jupiter. He called attention to the fact that Paul had not committed the wrong of which he was charged.

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The scene is laid in the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold. A neighbor, named Hardy, comes to his camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which she learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide become strained. Disobeying his strict orders to stay with the party, Rachel Hardy rides ahead, her horse throwing her as it scares at a bear cub. She is severely hurt, but Genesee Jack finally finds her, and succeeds in getting her safely back to camp. Next morning Jack leaves the camp without a word of good-bye to the women folks. Two weeks later Rachel and Jim, while looking for lost sheep become lost and wander into MacDougall's shack and cook their supper, only to be surprised by Genesee walking in. Later they were again surprised by the appearance of an Indian maid whom Rachel thought Genesee introduced as his wife.

(CHAPTER VIII Continued)

HIS words to Talapa were in regard to their guests' comfort, for that silent individual at once began preparations for bed making on her behalf, until Rachel told her in Chincok that she would sleep in her chair where she was. And there she sat through the night, feeling that the eyes of the Indian girl were never taken from her as the motionless form lay rolled in a blanket on the floor, much as it had rolled itself up on the grass that other day.

Jim was throned in royal state, for he had the bed all to himself, and in the morning opened his eyes in amazement as he smelled the coffee and saw the Indian girl moving about as if at home.

"Yes, we've got a new cook, Jim," said Miss Hardy, from the window; "so we are out of work, you and I. Sleep well?"

"Great!" said Jim, yawning widely. "Where's Mr. Jack?"

"Out, somewhere," returned the girl comprehensively. She did not add that he had been out all night, and Jim was too much interested with the prospect of breakfast to be very curious.

He had it, as he had the bed—all to himself. Miss Hardy was not hungry, for a wonder, and Talapa disappeared after it was placed on the table. The girl asked Jim if that was Indian etiquette, but Jim didn't know what etiquette was, so he couldn't tell.

Through that long vigil of the night there had returned to the girl much of her light, ironical manner; but the mockery was more of herself and her own emotions than aught else, for when Genesee brought the horses to the door and she looked in his face, any thought of jesting with him was impossible; the signs of a storm were on him as they were on the mountains in the morning light.

"I will guide you back to the home trail," he said as he held Betty at the door for her to mount.

"Go in and get some breakfast," was all the answer she made him. But he shook his head and reached his hand to help her.

"What's the matter with everyone this morning?" asked Jim. "There hasn't been a bite of breakfast eaten only what I got away with myself."

Genesee glanced in at the table. "Would you eat nothing because it was mine?" he asked in a low tone.

"I did not because I could not," she said in the same tone; and then added, good-humoredly: "Despite Jim's belief in my appetite it does go back on me sometimes—and this is one of the times. It's too early in the morning for breakfast. Are you going with us on foot?" as she noticed Mowitza, unsaddled, grazing about the green turf at the edge of the timber.

"Yes," he answered, "I have not far to go."

She slipped past him, and gathering her dress up from the wet grass walked over to where Mowitza browsed. The beautiful mare raised her head and came over the grass with long, light steps, as if recognizing the low call of her visitor; and resting her head on the girl's shoulder, there seemed to be a conversation between them perfectly satisfactory to each; while Mowitza's owner stood looking at them with a world of conflicting emotions in his face.

"I have been saying good-by to Mowitza," she remarked, as she joined them and mounted Betty, "and we are both disconsolate. She carried me out of danger once, and I am slow to forget a favor."

It was a very matter-of-fact statement; she was a matter-of-fact young woman that morning. Genesee felt that she was trying to let him know her memory would keep only the best of her knowledge of him. It was an added debt to that which he already owed her and he walked in silence at her horse's head, finding no words to express his thoughts, and not daring to use them if he had.

The valleys were wrapped in the whitest of mists as they got a glimpse of them from the heights. The sun was struggling through one veil only to be plunged into another, and all the cedar wood was in the drip, drip of tears that follow tempests. Where was all that glory of the east at sunrise which those two had once watched from a mountain not far from this? In the east, as they looked now, there was only faint streaks of lavender across the sky—of lavender the color of mourning.

He directed Jim the way of the trail, and then turned to her.

"I don't know what to say to you—or just how low you will think me," he said in a miserable sort of way. "When I think of—of some things, I wonder that you even speak to me this morning—I'm ashamed to look you in the face!"

And he looked it. All the cool assurance that had been a prominent phase of his personality that evening when Hardy met him first was gone. His handsome, careless face and the independent head were drooped before hers as his broad-brimmed hat was pulled a little lower over his eyes.

Some women are curious, and this one, whom he had thought unlike all others, rather justified his belief, as she bent over in the saddle and lifted the cover from his dark hair.

"Don't be!" she said gently—and as he looked up at her she held out her hand—"nika tillikum" (my friend); and the sweetness possible in the words had never been known by him until she uttered them so. "My friend, don't feel like that, and don't think me quite a fool. I've seen enough of life to know that few men under the same circumstances would try as hard to be honest as you did, and if you failed in

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some ways the fault was as much mine as yours."

"Rachel!" It was the first time he had ever called her that.

"Yes, I had some time to think about it last night," she said, with a little ironical smile about her lips; "and the conclusion I've come to is that we should afford to be honest this morning, and not—not so very much ashamed;" and then she hurried on in her speech, stumbling a little as the clasp of his hand made her unsteady through all her determination. "I will not see you again, perhaps ever. But I want you to know that I have faith in your making a great deal of your life if you try; you have the right foundations—strong will and a good principle. Mentally, you have been asleep here in the hills—don't find fault with your awakening. And don't feel so—so remorseful about—that night. There are some things people do and think that they can't help—we couldn't help that night; and so—good-by—Jack."

"God bless you, girl!" were the heartfelt, earnest words that answered her good-by, and with a last firm clasp of hands she turned Betty's head toward the trail Jim had taken and rode away under the cedar boughs.

Genesee stood bareheaded, with a new light in his eyes as he watched her—the dawn of some growing determination.

Once she looked back, and seeing him still there, touched her cap in military fashion, and with a smile disappeared in the wet woods. As he turned away there crept from the shrubbery at the junction of the trails Talapa, who, with that slow, knowing smile about her full lips, stole after him—in her dusky silence a very shadow of a man's past that grows heavy and wide after the noon is dead, and bars out lives from sunny doors where happiness might be found. His was bent low, thinking—thinking as he walked back to the cabin that had once held at least a sort of content—a content based on one side of his nature. Had the other died, or was it only asleep? And she had told him not to find fault with his awakening—she! He had never before realized the wealth or loss one woman could make to the world.

"Ashamed to look her in the face!" His own words echoed in his ears as he walked under the wet leaves, with the shadow of the shame skulking unseen after him; and then, little by little, the sense of her farewell came back to him, and running through it, that strong thread of faith in him yet, making his life more worth living.

"Not much in my present outfit for her to build any foundation for hope on," he muttered grimly as he saddled and bridled Mowitza, as if in hot haste to be gone somewhere, and then sat down on the doorstep as if forgetful of the intention.

Talapa slipped past him with an armful of bark for the fire. Not a word had passed between them since the night before, and the girl watched him covertly from under drooped lids. Was she trying to fathom his meditations, or determine how far they were to affect her own future? For as the birds foretell by the signs in the air the change of the summer, so Talapa, through the atmosphere of the cabin that morning, felt approach the end of a season that had been to her luxurious with comforts new to her; and though the Indian blood in her veins may have disdained the adjuncts of civilization, yet the French tide that crossed it carried to her the Gallic yearning for the dainties and delicacies of life. To be sure, one would not find many of those in a backwoodsman's cabin; but all content is comparative, and Talapa's basis of comparison was the earthen floor of a thronged "tepee," or wigwam, where blows had been more frequent than square meals; and being a thing feminine, her affections turned to this white man of the woods who could give her a floor of boards and a dinner-pot never empty, and moreover, being of the feminine, those bonds of affection were no doubt securely fastened—bonds welded in a circle—endless.

At least those attributes, vaguely remembered, are usually conceded to be the more gentle half of humanity, and I give Talapa the benefit of the belief, as her portrait has been of necessity set in the shadows, and has need of all the high lights that can be found for it. Whatever she may have lacked from a high-church point of view, she had at least enviable self-possession. Whatever tumult of wounded feeling there may have been in this daughter of the forest, she moved around sedately, with an air that in a white woman would be called martyrlike, and said nothing.

It was as well, perhaps, that she had the rare gift of silence, for the man at the door, with his chin resting grimly on his fists, did not seem at all sympathetic, or in the humor to fit himself to anyone's moods. The tones of that girl's voice were still vibrating over chords in his nature that disturbed him. He did not even notice Talapa's movements until she ceased them by squatting down with native grace by the fireplace, and then—

"Get up off that!" he roared, in a voice that hastened Talapa's rising considerably.

"That" was the buffalo robe on which the other girl had throned herself the night before; and what a picture she had made in the firelight!

Genesee in two strides crossed the floor, and grabbing the robe, flung it over his shoulder. No, it was not courteous to unseat a lady with so little ceremony—it may not even have been natural to him, so many things are not natural to us human things that are yet so true.

"And why so?" asked Talapa sullenly, her back against the wall as if in a position to show fight; that is, she said "Pe-kah-ta?" but, for the benefit of the civilized reader, the ordinary English is given—"And why so?"

Genesee looked at her a moment from head to foot, but the scrutiny resulted in silence—no remark. At length he walked back to the chest against the wall, and unlocking it, drew out an account book, between the leaves of which were some money orders; two of them he took out, putting the rest in his pocket. Then writing a signature on those two—not the name of Jack Genesee, by the way—he turned to Mistress Talapa, who had slid from the wall down on the floor minus the buffalo robe.

"Here!" he said tersely. "I am going away. Klatawah si-ah—do you understand?" And then, fishing some silver out of his pocket, he handed it to her with the notes. "Take these to the settlement—to the bank store. They'll give you money—money to live all winter. Live in the cabin if you want; only get out in the spring—do you hear? I will want it myself then—and—I want it alone."

Without comment Talapa reached up and took the money, looking curiously at the notes, as if to decipher the meaning in the pictured paper, and then:

"Nika wake tikegh Talapa?" she queried, but with nothing in her tone to tell if she cared whether he wanted her or not.

"Not by a—" he began energetically, and then, "you are your own boss now," he added, more quietly. "Go where you please, only you'd better keep clear of the old gang, for I won't buy you from them again—kumtuks?"

Talapa nodded that she understood, her eyes roving about the cabin, possibly taking note of the wealth that she had until spring to revel in or filch from.

Genesee noticed that mental reckoning.

"Leave these things alone," he said shortly. "Use them, but leave them here. If any of them are gone when I get back—well, I'll go after them."

And throwing the robe over his arm again, he strode out through the door, mounted Mowitza, and rode away.

It was not a sentimental finale to an idyl of the wood, but by the time the finale is reached the average human specimen has no sentiment to waste. Had they possessed any to begin with?

It was hard to tell whether Talapa was crushed by the cold cruelty of that leave taking, or whether she was indifferent; that very uncertainty is a charm exerted over us by those conservative natures that lock within themselves wrath or joy where we ordinary mortals give expression to ours with all the language possessed by us, and occasionally borrow some adjectives that would puzzle us to give a translation of.

Talapa sat where he left her, not moving except once to shy a pine knot at a rat by the cupboard—and hit it, too, though she did belong to the sex divine. So she sat, pensively dribbling the silver coin from hand to hand, until the morning crept away and the sun shone through the mists.

What was it that at last awakened her from an apparent dreamland—the note of that bird whistling in the forest in very gladness that the sun shone again? Evidently so, and the Indian blood in her veins had taught her the secret of sympathy with the wild things, for she gave an answering call, half voice, half whistle. Silence for a little, and then again from the timber came that quavering note, with the rising inflection at the finish that was so near an interrogation.

It brought Talapa to her feet, and going to the door, she sent a short, impatient call that a little later was answered by the appearance of a comely buck—one of the order of red men—who lounged down the little incline with his head thrust forward as if to scent danger if any was about; but a few words from the girl assuring him that the coast was clear—the fort unguarded—gave him more an air of assurance, as he stepped across the threshhold and squatted down on the side of the bed.

"Genesee gone?" he queried in the musical melody of consonants.

Talapa grunted an assent, with love in her eyes for the noble specimen on the bed.

"Gone far—gone all time—till spring," she communicated, as if sure of being the giver of welcome news. "House all mine—everything mine—all winter."

"Ugh!" was all the sound given in answer to the information; but the wide mouth curved upward ever so slightly at the corners, and coupled with the interrogative grunt, expressed, no doubt, as much content as generally falls to the lot of individual humanity. One of his boots hurt him, or rather the moccasins which he wore with leggings, and above them old blue pantaloons and a red shirt; the moccasin was ripped, and without ceremony he loosened it and kicked it toward Talapa.

"Mamook tipshin," he remarked briefly; and by that laconic order to sew his moccasin, Skulking Brave virtually took possession of Genesee's cabin and Genesee's squaw.

Through the gray shadows of that morning Rachel and Jim rode almost in silence down the mountain trail. The memory of the girl was too busy for speech, and the frequent yawns of Jim showed that a longer sleep would have been appreciated by him.

"Say," he remarked at last, as the trail grew wide enough for them to ride abreast, "everything was jolly back there at Mr. Jack's last night, but I'm blest if it was this morning. The breakfast wasn't anything to brag of, an' the fire was no good, an' the fog made the cabin as damp as rain when the door was open, an' he was glum an' quiet, an' you wasn't much better. Say, was it that Injun cook o' his you was afeared to eat after?"

"Not exactly," she answered with a little laugh; "what an observer you are, Jim! I suppose the atmosphere of the cabin was the effect of the storm last night."

"What? Well, the storm wasn't much worse to plow through last night than the wet timber this morning," he answered morosely; "but say, here's the sun coming out at last—by George! How the wind lifts the fog when it gets started. Look at it!" And then, as the sunlight really crept in a great shimmer through the pines, he added: "It might just as well have come earlier, or else kept away altogether, for we're as wet now as we can get."

"Be thankful that it shines at all, Jim."

"Oh, the shine's all right, but it shines too late."

"Yes," agreed the girl, with a memory of shamed, despairing eyes flitting through her brain. "Yes, it always shines too late—for someone."

"It's for two of us this time," replied grumbling Jim, taking her speech literally. "We've had a Nick of a time anyway this trip. Why that storm had to wait until just the day we got lost, so we'd get wet, an' straggle home dead beat—an' without the sheep—I can't see.'

"No, we can't see," said Rachel, with a queer little smile. "Perhaps—perhaps it's all because this is the end instead of the beginning of a cultus corrie." (To be continued.)

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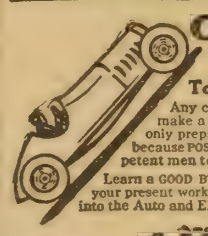

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Ceylon Court Farm Durocs.

THE writer recently had the pleasure of spending the day at Ceylon Court Farm, Lake Geneva, Wis., and while there inspected the herds of swine and cattle; the stud of Percheron, Shire, Belgian and Hackney horses and in fact was royally entertained by the manager, C. W. Gilbert, who is maintaining one of the highest-class breeding establishments in Wisconsin. An interesting feature article could be written about this farm and the breeding work being done that would be of interest to every reader of The Wisconsin Farmer. We will, however, in this article confine ourselves to the herd of Durocs maintained here, as there is enough of interest in regard to this one herd for one issue. The Duroc herd numbers about seventy head at the present time. Great care has been used in the selection of breeding stock, and no money or labor has been spared to secure the best to be had. A daughter of the great boar, Superba, was recently purchased. He was by the Professor by Ohio Chief. There are also several daughters of the great boar, Defender, in the herd. He, it will be remembered, is the only boar of the breed to be twice grand champion at the International. There are also daughters of Orion's Pal, a grandson of Orion's Chief; Model Cherry, bred by McKee Brothers and several daughters of Chief Defender. In a letter recently received from H. E. Browning he states that Chief Defender was a litter mate to the great boar, Disturber (which weighed 1,120 pounds). His dam's sire was the Illinois grand champion boar, Chief Col., which sold for $2,100. She was one of the biggest Duroc sows in America and the most noted brood sow of the breed. These sows are out of daughters of such boars as Proud Advancer, Geer's Climas, Advance 2d and Chief Col. I do not think I ever saw a stronger lot of sow pedigrees in any one herd. The sires in service have been even better. During the past year three boars have been in service, viz: Upland Defender 8th, a grandson of Defender; Chancellor 42649 by Instructor by The Professor and out of Lulu's Queen and Ceylon Court Defender by Lee's Defender and out of a daughter by Marion's Wonder. Many of our readers for the past two or three years have been anxious to get some Cherry Chief, Defender, Professor and Advance blood, and this gives them an exceptional opportunity to secure it without going outside of the state. When writing kindly mention that you saw their advertisement in The Wisconsin Farmer which appears on page 23.—Adv.

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ED PATTERSON, JR., Bloomington, Wis., is one of the younger breeders of Duroc Jersey swine in Wisconsin. He realizes that he cannot compete with the older breeders at the start, but he does realize that he can "grow" if he ships good stock. He has sorted his boars and has picked fifteen that he feels will give satisfaction wherever they go. These he expects to fill his mail orders with and when these are sold he says he will not ship any more. A poor pig, even though you sell him at a cheap figure hurts the breeder. Perhaps your buyer doesn't care what he gets just so he is a boar, there are many farmers of that caliber, but perhaps his neighbor has good hogs and buys good boars, but if he should visit the first farmer and should learn where he bought the boar, it is a certainty that he would not be impressed with the herd from which the boar came—so we say a poor boar had better be castrated than shipped or sold for breeding purposes. We feel that Mr. Patterson will treat you fairly and sell you a good boar at a resonable figure. He also has a small herd of Shorthorn cattle and he will have a few bulls to sell at a later date. Notice the advertisement in this issue and if interested write Mr. Patterson and mention this publication. See page 23.—Adv.

Erwin's Durocs.

SOME time ago while in Grant county we heard of the Jake Erwin Durocs at Bloomington, Wis., so we, of course, investigated. He hasn't as large a herd as some breeders in the state, but he has some good individuals and that is what most of us are after, the good ones. Many of the spring crop are sired by Bob Col. 2d by Bob Col., and the pigs by this boar are showing up well. Mr. Erwin shows at some of the county fairs and you will no doubt have a chance to meet him at some of these shows. If you don't get to meet him it would be well to write him for description and prices or if you can, visit his herd. His advertisement appears in this issue and when you write please mention The Wisconsin Farmer. See page 23.—Adv.

Heid's Guernseys.

A CHOICELY bred young bull of Limewater Starlight breeding is advertised for sale on page 22 by W. J. Heid, of Fort Atkinson, Wis. His sire is one of the best berd bulls in Jefferson county and is an excellent individual. He is very long bodied with a good, straight, level back and rump, great spring of rib and heart girth and a pliable, loose skin. The bull offered for sale is an equally good individual and will make an excellent header for a pure-bred herd. For pedigree and further information write to the above address.—Adv.

Henderson's Holsteins.

A FINE young bull sired by the 33.86-pound bull, Pabst Burke De Kol King, is advertised for sale on page 22 by J. H. Henderson, Elkhorn, Wis. This bull is one of exceptionally fine breeding. His dam, Edith De Kol Burke Hengerveld, made 33.86 pounds of butter in seven days from 644.10 pounds of milk. In thirty days she made 125 pounds of butter and in 365 days made 845.10 pounds of butter from 20,106.10 pounds milk. She is a daughter of De Kol 2d Butterboy 3d, which has 118 A. R. O. daughters. The sire of Pabst Burke De Kol King was King Pontiac Champion, which has forty-one A. R. O. daughters, twenty-one of which have records above twenty pounds, none of them being matured cows. The only daughter tested as a matured animal made 1,024 pounds of butter in a year. King Pontiac Champion in turn is a son of King of the Pontiac, that has 186 A. R. O. daughters, two with records above forty pounds. The dam of the bull offered for sale by Mr. Henderson is a 17.93-pound daughter of Sir Piebe Netherland Gem and a granddaughter of Paul Beech De Kol, that has 105 A. R. O. daughters, fifty with records from twenty to thirty pounds of butter in seven days. This young bull shows an exceptionally fine pedigree on both sides and we advise our readers to get in touch with Mr. Henderson when in the market for a head sire.—Adv.

MASTER'S GIANT 190781 owned by P. W. Young, Prosper, Minn., and without a doubt one of the greatest breeding boars in the Northwest today. This is an untouched photograph. See field note and advertisement in this issue.

Bulls From Milking Short-horns.

WE recently saw the bulls being offered for sale by R. W. Lamb & Son, Janesville, Wis., and if any of our readers are in need of a bull of serviceable age one of these bulls will suit. They are out of big, well-bred dams, that are good producers at the pail and these bulls are being priced well worth the money. They are red in color and are in nice condition for immediate service. Get their prices at once and mention The Wisconsin Farmer when writing.—Adv.

E. E. Jones Short-horns.

THE Jones Short-horn herd will be represented at several of the state fairs and some of the leading county fairs and if you are interested in Short-horns you will be interested in the cattle owned by E. E. Jones, Rockland, Wis. He will have out some heifers and a few young bulls that are outstanding individuals. Also take a look at a white bull he will show sired by Collynie Sultan. Mr. Jones is president of the state Short-horn association and if there is any information you want relative to the Short-horn sale to be held in Madison, November 3d, Mr. Jones would be a good man for you to see. See page 23.—Adv.

The Atwater Show Herd.

WHEN L. F. Atwater, Bangor, Wis., drives some of his Durocs into the show ring this fall there will be "something doing." We have never seen his former show herds, but if they were any better than the herd that will face the judges this year, it is no wonder that he carried off the bulk of the ribbons. He is coming out with a herd of sows that are going to be hard to beat and we don't believe there will be another herd at the shows that will have more size and uniformity of type than the Atwater herd. We want you to see this herd of big Durocs. Pay special attention to his senior and junior yearling sows as well as his under-year stuff, see if you don't think they are models to pattern after. Take a look at his new herd boars, Illustrator King and the fall boar by Cherry Chief. He will have no boars to sell at the fairs this year, for they are being reserved for the boar sale to be held October 18th, but he will have some with him to show the kind that will go to make up this sale. From the present outlook he will have forty of the best spring boars the writer ever saw listed for public sale. Notice the picture in this issue of some of the boars that will be in the sale. This picture was taken in June. Don't forget to visit the Atwater pens at the state fairs and La Crosse. See page 23.—Adv.

Garvens' Holsteins.

YOUNG Holstein bulls sired by Julip Segis Korndyke, a grandson of King Segis, are advertised for sale on page 22, by L. B. Garvens, Brookfield, Wisconsin. King Segis is held by many to have been the greatest bull of his generation, for though he lived to be just six years of age, he has eighty A. R. O. daughters, ten with records above thirty pounds. The young bulls offered for sale are out of equally well-bred cows with good A. R. O. records. In the herd are several daughters of King Hengerveld Pondyke, that has thirty A. R. O. daughters, two with records over thirty pounds. In the herd is also Aaltje Salo Cornucopia Netherland, a full sister to the 33.60-pound cow owned by Arthur Rust. There are also several daughters of Johanna Pontiac De Kol, that has twenty-five daughters, five with records from twenty-five to thirty-three pounds of butter. The young bulls offered for sale cannot be faulted as individuals, having good, straight rumps, wide, deep barrels and of excellent type throughout. See advertisement on page 22.—Adv.

CHESTER WHITE under a year old herd that won wherever shown, including the Wisconsin State Fair. Owned by W. C. Scheibe, Burlington, Wis., whose advertisement appears on page 23.

Guernseys Sell Well.

GUERNSEY cattle are in demand by Wisconsin Farmer readers, according to S. A. Merriman, Ft. Atkinson, Wis., whose advertisement appears on page 22. Among the sales recently made he reports the following: Dew Drop King of Riverside, to Roy Morical, Phillips, Wis.; Irna's Casterillins, to John Linny, Brooklin, Wis.; Hazel of Riverview, to G. F. Sanborn, Eagle River, Wis.; Corinnes Wonder, to Wm. A. Stark, Jefferson, Wis.; Callote of Riverside and Meadow Lark of Riverside 2d to C. E. Bodette, Marshfield, Wis.; Joker of Fairview, to Fred Junior, Jacksonport, Wis.; Orvilas Duke of Riversiew, to Alfred Heitz, Jefferson, Wis.; Joiner's Queen, and Peter of Riverview, to Peter Koehler, Jocksoncreek, Wis.; grade bull to Philip Baumgartner, Waubeno, Wis.; grade bull to Evert Henken, Waupun, Wis., grade bull to Ira Garfoot, Cross Plains, Wis. In a letter received July 17th he says: "I wish you to continue my advertisement on Guernsey cattle in The Wisconsin Farmer for the balance of the year. I have been having very satisfactory results during the time which it has been running and have sold all of my yearling bulls and all of the heifers that I can spare. I am now offering some very fine bull calves two of which are now ready for service. I find that it pays to carry my advertisement continuously, as I am able to get better prices when I am not overstocked than when I have a surplus on hand at one time and I am convinced that the service given by The Wisconsin Farmer helped to dispose of all my surplus cattle. Respectfully yours, S. A. Merriman."—Adv.

Smiley's Good Poland Boars.

WM. SMILEY & SON, Albany, Wis., have what is considered by men that know, one of the good herds of big-type Poland China in Wisconsin. They also have one of the largest herds that we have seen. The spring crop numbers over 200 head and it is needless to say that after these pigs have been sorted there will be some great prospects. The Smileys have used some outstanding boars and they have proven to be breeders of merit. Major Hadley is too well known to need any introduction in Wisconsin. We will say that there are some great sows on th place sired by him. Wisconsin Jumbo 2d is a boar of great scale and some of the best pigs on the place are sired by him. He is sired by Longfellow Jr. and his dam was by Big Jumbo—where can you find better big-type breeding? In Monarch and Major Miller, Messrs. Miller have in our estimation, two excellent boars and we liked the pigs by these two boars a little better than anything we saw on the farm. The Smiley's enjoy a reputation for fair dealings and if you are going to want a boar this fall don't overlook this good herd. This is an old established herd and it is a pleasure for The Wisconsin Farmer to recommend it to their readers. In writing for particulars please mention The Wisconsin Farmer. See page 23.—Adv.

Rober's Holsteins.

SIR WAYNE JOHANNA DE KOL is the sire at the head of the herd of Lawrence Rober, Lyons, Wisconsin. He is one of the best bulls in southern Wisconsin, being both an excellent individual and cholcely bred. His dam, Portage Pauline 2d, made 31.17 pounds of butter in seven days, giving 663 pounds of milk. In thirty days she made 125 pounds of butter, 2,727 pounds of milk. His sire, Jewel Paul 16th, is out of a twenty-four pound sister of the forty-pound cow, Johanna De Kol Van Beers. At the present time Mr. Robers is advertising thirteen daughters of this bull for sale, five of these are heifer calves from four to ten months old, eight of them are yearling heifers, which will be bred if desired. Mr. Robers is also offering two fine, young bulls for sale sired by Sir Wayne Johanna De Kol. These are both out of A. R. O. daughters of Sir Aaggie De Kol Acma and both are backed by several generations of A. R. O. breeding. For extended pedigrees and further information in regard to the animals offered for sale, write to the above address. See page 22.—Adv.

Kiesling's Guernseys.

ATTENTION is called to the change of advertisement of E. H. Kiesling, Jefferson, Wis., which appears on page 22. In a letter just received he says: "Change advertisement from calf born October to one born in March, 1916." This bull was sired by Glenwood's Noble Sequel 23999, and is out of a heavy producing cow. For further information in regard to breeding, etc., write to the above address.—Adv.

Holt's Jerseys.

REGISTERED Jersey bulls are advertised for sale on page 22 by H. Holt & Son, of Oconomowoc, Wis. These range in age from nine to sixteen months and are from heavy producing cows of choice type and breeding. They were sired by Inex Rosaries Oxford, an

excellent individual bull of choice breeding. For further information in regard to breeding and prices write to the above address.—Adv.

Menke's Polands and Short-horns.

THERE is no finer stretch of farm land in Wisconsin than that lying between Fox Lake and Green Lake, Wis. Here one sees thousands and thousands of acres of barley, oats, wheat, corn and hay, all in high, well-drained fields of good, black loam soil. On such land is being maintained the Poland China and Short-horn herds of A. Menke & Sons, Markesan, Wis., whose advertisement appears on page 23 They are breeding big-type Poland Chinas and have some seventy spring pigs. These were sired by Prairie Chief, a grandson of Martiny's noted boar, Climax, a winner at both the Minnesota and Wisconsin State Fairs. The sows in the herd are daughters of Wonder by Smooth Wonder 2d of Peter Mouw breeding; Big Orange Chief by Big Orange of Peter Mouw breeding; Matchless Sunbeam of L. P. Martiny's breeding; and others equally good. The litters this year ran from eight to twelve in the litter. The Short-horn herd is one of great promise. The present herd sire is Collynie Victor 387634, one of the finest type bulls we have seen. He was first-prize bull at the North Dakota State Fair and the Interstate Fairs at Kankakee and La Crosse, Wis. He was sired by Scottish Favorite of I. M. Forbes breeding. The cows in the herd are fine type animals of Imp. Young Mary, Imp. White Rose, Imp. Duchess Bertha and Marie Donna breeding. At the present time two young bulls are offered for sale sired by Roan Stanford he by Lord Stanford and out of a daughter of Young Hamilton. The dam of the bull offered for sale is Rosy 98349 by Ringmaster and traces to Imp. Arabella. She is a fine milking cow and a good individual. For further information in regard to the animals offered for sale write to the above address.—Adv.

Wehmhoff's Short-horns.

WHEN motoring through Racine county some time ago, we stopped at the farm of Henry Wehmhoff, Burlington, Wisconsin, and had the pleasure of inspecting his fine herd of Short-horn cattle. The herd consists of 125 registered animals of choice breeding. They are straight Scotch and Scotch Top strains, many of them being heavy milkers. This herd has been built up by the careful selection of good breeding stock. The pure Scotch females in the herd trace to the cow, Clarinda, a daughter of Imp. Cecelia of Cruickshank breeding. Among the bulls used at the head of this herd were Corsair bred by C. C. Norton and sired by Bapton Admiral. There are also several daughters in the herd of Victor 323863 bred by the Elmendorf Farm, Lexington, Kentucky. He was by Marion's Champion by Lovat Champion. There are also several daughters of Royal Standard bred by J. & W. B. Watt and sired by Judge by Royal Sailor. At the present time Mr. Wehmhoff is offering a few yearling heifers and bulls. These were sired by Orange Clipper by May's Clipper, a son of Imp. May Blossom. The heifers are bred to Clipper Sultan by Sultan Royal by Whitehall Sultan. For further information in regard to the animals now offered for sale, write to the above address. See advertisement on page 23. —Adv.

Keep Your Eye on McDonald Polands.

THE J. D. McDonald big-type Poland Chinas will start for the fairs next week. We recently saw this show herd and all we have to say is that someone must have some phenomenal Polands if they take it all away from McDonald. This herd will be shown at Iowa State Fair, Minnesota, Wisconsin, perhaps Chippewa Falls and La Crosse and from there some of the herd will go to the National Swine Show at Omaha. Besides the regular show herd Mr. McDonald will have a number of choice sale boars and gilts. He is very anxious to meet his old as well as new friends and customers at these various fairs! It will pay you to see his Polands, for it will give you a mark to shoot at and he can convince you that one can raise big-type Polands and still retain that quality that is so desirable. His post office is North Bend, Wis., but you will find J. D. with the Polands for the next six weeks. Don't forget to see this herd. See page 23.—Adv.

Rhoda's Holsteins.

THE Holstein herd of W. H. S. Rhoda, Watertown, Wis., is one of the best in Jefferson county. They have made a large number of very creditable records during the past five years. Great care has been used in the selection of breeding stock not only as to A. R. O. backing, but also as to individuality and production ability. Mr. Rhoda is a careful, discriminating judge of Holstein conformation and his herd shows the result of careful selection. At the present time he has several young bulls ready for service or nearly so from high producing dams. Whatever your wants may be in the way of Holstein cattle he can supply it. See advertisement on page 22.—Adv.

Rosencranz's Holsteins.

WHEN you talk about Duchess Ormsby breeding you will find no better example of it than in the bull, Hillvale Champion, that heads the herd of E. E. Rosencranz, Oconomowoc, Wis. This is the most richly bred Duchess Ormsby bull in the state of Wisconsin. He traces six times to the noted cow, Duchess Ormsby, and his six nearest dams test over 4 per cent of fat. At the present time Mr. Rosencranz is offering a son of this bull out of a cow sired by a grandson of Pontiac Korndyke. Send for an extended pedigree of this young bull when looking for a herd sire. See page 22.—Adv.

A Leading Brown Swiss Herd.

ONE of the best, as well as one of the oldest herds of Brown Swiss cattle to be found in the state of Wisconsin is owned by Andrew Martin, of West Salem. This herd was established twenty years ago. The foundation, numbering four richly bred heifers, was purchased from that prominent breeder, Thos. Inman. A few females have been added from time to time, but practically the entire herd of some sixty head has been bred by Mr. Martin. During recent years this Brown Swiss herd has been prominent in the show yards and in this issue of The Wisconsin Farmer we reproduce a picture of Jennie Martin, a cow that was first wherever shown in 1915. Many of the cows in the herd have advanced registry records and twelve more are in test at this writing. An important feature is the fact that there has never been a re-actor in this herd. Mr. Martin has tested regularly with excellent results. Many of the younger cows are sired by Collier, he a son of the great producing cow, Cinderilla 2d, A. R. over 12,000 pounds of milk. The present herd bull is one of great scale and also traces to Cinderilla 2d. His dam is on test at this time. Mr. Martin is an excellent caretaker and if you visit his farm you will find his cattle in good condition. At this time a number of young bulls are being offered for sale. They are right in every respect, well bred, well grown and are being priced well within their value. Anyone interested in this breed of cattle will certainly enjoy a visit with Mr. Martin and looking up the herd. Get particulars, but better yet visit the farm. In writing please mention this publication. See page 23.—Adv.

Downing's Holsteins.

AN exceptionally fine, young bull is advertised for sale on page 22 by Dr. W. M. Downing & Brother, Waukesha, Wisconsin. He is a son of their noted sire, Downing Pontiac Butterman, that has been shown very extensively in the leading fairs during the past three years. He is an excellent individual, weighing over a ton, has a long, wide, straight rump, great spring of rib, and deep barrel. His dam, May Netherland Pauline 2d, in seven days made 24.56 pounds of butter. The dam of the young bull for sale is Downing Pontiac Dairymaid, A. R. O. record 21.37 pounds of butter in seven days. She is a daughter of King Hengerveld Pondyke, that has twenty-five A. R. O. daughters, two with records above thirty pounds. King Hengerveld Pondyke is a son of King of the Pontiacs, that now has 180 A. R. O. daughters, two with records above forty pounds, and seven others with records above thirty pounds. The dam of Downing Pontiac Dairymaid is also May Netherland Pauline 2d, making the sire and dam of the bull for sale half brother and sister, both being out of the same cow. His sire and dam were shown at the Wisconsin State Fair in 1913-14-15 and each time won first as produce of cow. The young bull himself is a fine individual, well-grown and well marked. Send for his extended pedigree and picture to the above address.—Adv.

The Ackerman Poland Herd.

IT IS about time to begin thinking about that Poland China boar and when going over the advertisements in The Wisconsin Farmer don't overlook the "ad" of W. F. Ackerman, Glen Haven, Wis. There are some good sows in this herd and one of the good boars of the state stands at the head. This is A.'s Big Orange by Long Orange, a grandson of the noted Big Orange. His dam is by Klever's Giant. This boar has one of the best backs we ever saw on a boar of any breed, he has an excellent spring of rib, good, deep sides and has good feet and bone. We consider A.'s Big Orange one of the four or five best Poland boars in Wisconsin. Not only is he a good individual, but he is a good sire, for the best fall boars we have seen, other than show stuff, we saw on the Ackerman farm. The spring pigs are equally as good. Here is a herd that should be considered and if you want a boar or some gilts write Mr. Ackerman for prices. We feel confident you will get your money's worth. Please mention The Wisconsin Farmer when wriing. See page 23.—Adv.

Dopp Brothers' Holsteins.

A 19.80-pound son of Beauty Pietertje Prince Ormsby, is advertised for sale on page 22 by Dopp Brothers, Ixonia, Wis. Beauty Pietertje Prince Ormsby is an exceptionally well-bred sire, being a son of the thirty-two-pound bull, Beauty Pietertje Prince, and out of a twenty-two-pound sister of Pietertje Maid Ormsby, that made 35.56 pounds of butter in seven days. He is of intense Ormsby breeding, tracing on one side to Duchess Ormsby through her daughter, Duchess Ormsby 2d and to Queen Ormsby on the other side. For further information in regard to the bull offered for sale write to the above address.—Adv.

Kitty Clay Durhams.

J. WARREN HOYT, Rosendale, Wis. has a fine herd of Durham cattle of milking strain. At the present time he is offering a fine yearling bull, ready for immediate service. This bull was sired by Badger Boy 46th, a deeply bred Polled bull. The dam of the bull offered for sale was Champion Rose 4th, that is now giving 1,000 pounds of milk a month. Mr. Hoyt has several younger bulls from heavy milking cows, that he is pricing very reasonably. For further information in regard to these animals write to the above address. See page 22.—Adv.

Rust's Holsteins.

THE writer recently spent a very pleasant evening at the home of Arthur Rust, West Allis, Wisconsin, and learned many interesting facts while there in regard to their herd of Holstein cattle. This is one of the oldest herds of cattle in the state, having been established nearly forty years ago. Official testing has been carried on for a number of years and many fine records have been made. The Rusts have long been known as careful, discriminating judges and the great herd which they now own is the result of many years of careful selection and development. The Aaltje Salo family, on which they have developed their present herd, is one of wonderful production ability. One of their foundation cows, Aaltje Salo 5th Netherland, has eight A. R. O. daughters and has held the world's record for the past five years for a number of A. R. O. daughters. One of her granddaughters recently made a record of 33.60 pounds of butter in seven days. Another of her granddaughters, Aaltje Salo Netherland Mechtilde, is the dam of the young bull now advertised for sale on page 22. This cow made 23.35 pounds of butter in seven days, thirty-eight days after calving. She also has three A. R. O. daughters, one of which at four and a half years of age made 28.63 pounds of butter in seven days. The sire of the bull offered for sale is Daisy Johanna 5th, first prize two-year-old at the 1915 Wisconsin State Fair. His dam, Marlo 2d, made 27.02 pounds of butter in seven days. For an extended pedigree and further information in regard to these animals, write to the above address.—Adv.

Scheibe's Chester Whites.

WE dropped in a few days ago at the farm of W. C. Scheibe, Burlington, Wis., to look over his crop of spring pigs. We were greatly pleased to note the fine condition and the good size of his spring boars and gilts. Mr. Scheibe's Chesters have won very heavily at the state fair during the past three years and we predict that he will be high up in the money at the state fair this fall. His present crop of pigs were sired by Eagle Chief and Highland Joker. Eagle Chief has always been a leading winner at the Wisconsin and Minnesota State Fairs, as well as at several of the major county fairs in the state. Highland Joker won second as under a year boar at both the Minnesota and Wisconsin State Fairs. His sows had a clean sweep at the 1915 Wisconsin State Fair with the exception of the aged class. While at the farm we saw Mr. Scheibe's new herd boar, Perfect Prince, that we predict will make one of the best boars in the state. He was by Model Prince and out of a daughter of Chief Keokuk. See advertisement on page 23.—Adv.

Bruins' Jerseys.

ONE of the best herds of Jersey cattle in the state of Wisconsin judged from a production or show ring standpoint is that of Ed Bruins, Fairwater Wis., whose advertisement appears on page 22. Mr. Bruins has been one of the leading show men of the breed for the past several years, taking in many of the state fairs and dairy shows. His herd has won a great many honors in all classes. During the past two years he has been doing register of merit testing and has made many very creditable records. He has made several importations from the Island of Jersey and has a large herd of imported and American bred animals. At the present time he is offering a few heifers and two yearling bulls for sale. These bulls are from dams having over 500 pounds of butter in a year. For extended pedigrees and further information in regard to these animals write to the above address.—Adv.

Wenham's Bates Milking Short-horns.

THE Bates milking Short-horn herd of George Wenham & Sons, Ft. Atkinson, Wisconsin, is one of the best and oldest in the state. It is one of the few Bates herds still in existence, and we advise our readers who aim to breed milking Short-horns to get in touch with this firm. At the present time they are advertising several choice yearling bulls ready for immediate service. These come from a long line of heavy producing cows, many of them testing over 6 per cent fat. They are of a well-known and popular Bates families, viz., the Wildeye and Clay Buttercup families. When at the farm a few weeks ago we saw these young bulls and were impressed with the uniformly good backs, long, straight, wide rumps and typical dairy conformation of these young bulls. See advertisement on page 23 of the animals now offered for sale.—Adv.

Prepare For Winter.

WINTER time will be upon us before very long with its cold blasts and heating problems and it is not too early to decide on how to heat the home during the coming winter. Therefore, the advertisement on page 17 of King-Bee heaters is timely, and it is worthy of attention since these heaters are economical, efficient and highly desirable in the home. A complete catalog will be sent on request to Cutler & Proctor Stove Company, Dept. 40, Peoria, Ill.—Adv.

SALE DATES.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

ABERDEEN ANGUS CATTLE.

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. Cassville, Wisconsin
(30 miles up river from Dubuque)

AYRSHIRE CATTLE.

AYRSHIRE BULLS

FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

HORSES.

LEFEBURE'S BELGIANS

A LARGE and choice ollection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons Fairfax, Iowa
8 miles west of Cedas Rapids

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R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

SALE DATES.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Younug, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sale Mgr.

HOLSTEIN-FRIESIAN CATTLE.

Breeders Wanting 30-lb. Herd Sires

WE invite your attention to three young bulls. No. 151 calved March, 1916. Sir Korndyke Segis Johanna 127132, a 38 lb. son of the 40 lb. bull, Johanna McKinley Segis by King Segis, and whose dam Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68 lb. three-year-old by a 29 lb. grandson of Hengerveld De Kol. 2d dam, a 23 lb. three-year-old by Pontiac Champion, a 31 lb. son of King of the Pontiacs, 3d dam, a 33.86 lb. daughter of De Kol Md's Butter Boy 3d. No. 156—Calved April, 1916. Sire, King Pontiac Champion, that has 41 A. R. O. daughters, the only one tested as a mature animal, made over 1,000 lbs. butter in a year. Dam a 31.51 daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O. daughters, two above 30 pounds. Good A. R. O. breeding for several generations. No. 152—Calved April, 1916. Sire, King Pontiac Champion. A 30.38 pound daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68 pound cow. Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100.00 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

2 Yearling Sons of the Richly-Bred Holstein Bull
KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Robert's Fearless Lassie, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST — WEST ALLIS, WISCONSIN

HERE IS AN OPPORTUNITY

We are offering a few choice registered Holstein cows and heifers bred to the 29.50 pound bull

MAPLECREST HENGERVELD DE KOL 94154

WE also offer a 22.29 pound son of his for sale at $125. Send for an extended pedigree. It is a very well bred bull and the price is very low. **GROVE BROS., COLUMBUS, WISCONSIN.**

HOLSTEINS and GUERNSEYS

We are offering for immediate sale 400 head of registered and high-grade cows and heifers; also registered service bulls. Nothing but the best. Will make extra low price on 55 registered Guernsey heifers. Call at our farms or write.

EDGEWATER STOCK FARM — FT. ATKINSON, WIS.

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows. **BONNIE MEAD STOCK FARMS, Randolph, Wis.**

Purebred Registered
HOLSTEIN CATTLE

Half a million purebred Holsteins. There are in the United States nearly half a million purebred Holstein-Friesian cattle and this number is being increased at the average of sixty thousand annually. To the man who considers dairy farming as a business proposition, the fact that these figures represent the actual growth of the "Black-and-White" breed in this country since 1871 is a powerful testimony that the profits which breeders and owners of Holsteins enjoy are most satisfactory. Investigate the big "Black-and Whites."

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

A RICHLY BRED JOHANNA BULL

SIRED by the 26-pound bull **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Jchanna Alcartra family. Bull for sale born December 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.**

Geo. Gibson — Nashota, Wisconsin

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the **year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson — Elkhorn, Wisconsin

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE — MONROE, WISCONSIN

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. **8 yearling heifers** will be bred if desired. Sired by the **31.17 pound bull Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pounds daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.

Lawrence Rober — Lyons, Wisconsin

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer — Kaukauna, Wisconsin

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32 % pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen — Cedarburg, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda — Watertown, Wis.

WHEN you want either high-grade or registered Holstein cattle of any age or either sex, write D. E. Buckley, Hartford, Wisconsin.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM — Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. — A. M. SERSTED, Supt. Cattle.

HOLSTEIN-FRIESIAN CATTLE.

Yearling Son

READY for service, of the **30 pound bull Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers — Waukesha, Wis.

21.37 Pound Son of the 24.56 Pound Bull
DOWNING PONTIAC BUTTERMAN

OUR noted prize-winning sire. Dam of bull for sale, **Downing Pontiac Dairymaid,** a 21.37 pound daughter of **King Hengerveld Pondyke,** that has 2 30-pound daughters. Price $200.00. **19.40 pound bull,** a double great grandson of **King of the Pontiacs.** Price $100.00. Send for extended pedigrees and pictures.

M. W. Downing & Brother, Waukesha, Wis.

19.8-POUND YEARLING SON
Of the Richly Bred Ormsby Bull
BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull **Beauty Pieterje Prince** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.

Dopp Brothers — Ixonia, Wisconsin

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt — Oxford, Wisconsin

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.

L. V. Garvens — Brookfield, Wisconsin

FOR SALE

TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Jonanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address

A. G. PINGEL — CHILTON, WISCONSIN

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

ADAM LORENZ
Sheboygan Falls — Wisconsin

TWO SONS OF THE 27.56-POUND BULL
Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

C. F. Winckler & Sons — Medina, Wis.

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey — Grafton, Wisconsin

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service. from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65.to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford — Kaukauna, Wis.

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins — Fairwater, Wisconsin

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son — Oconomowoc, Wis.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address

Rollie Vandervort — Tomah, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY — BLACK EARTH, WIS.

GUERNSEY CATTLE.

GUERNSEY BULL

LANGWATER STARLIGHT Breeding. A. R. O. dam. Also bull calves from 2 to 6 months old from A. R. O. cows for sale. Address

W. J. HEID — FORT ATKINSON, WIS.

Guernsey Bull For Sale

THE richest Guernsey breeding. Four months of age. Sired by the richly-bred bull,

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant view. Also a deep, rich breeding of the Governor of the Chene line. Address

Charles Schmidt — Wrightstown, Wisconsin

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 35 days. Send for pedigree. Address

W. H. & B. L. Hanchett — Sparta, Wisconsin

A SON OF THE GUERNSEY BULL
GLENWOOD NOBLE SECRET 23999

BORN in March, 1916. Dam, a heavy producing cow. He is well marked and well grown.

E. H. KIESLING — JEFFERSON, WIS.

REGISTERED GUERNSEY HEIFERS

3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address

W. A. Lawson — Rosendale, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman — Fort Atkinson, Wisconsin

8 HIGH-GRADE GUERNSEY

YEARLING heifers, bred to freshen this fall and winter. All sired by a registered bull and bred to a registered bull. Well marked and well grown. Write for description and prices. Address

Findlay Bros. — Whitewater, Wisconsin

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

FOR SALE Pure-bred and high-grade Guernsey calves. Address ARTHUR FINDLAY, WHITEWATER, WIS.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address

J. Warren Hoyt — Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

GALLOWAY CATTLE.

50 **HEAD OF REGISTERED GALLOWAY** cows and heifers for sale; all bred. Some are imported cows and out of imported dams. Also 14 bulls. C. S. Hechtner, Chariton, Iowa.

HOLSTEIN-FRIESIAN CATTLE.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

POLAND CHINA SWINE.

MEET ME AT THE FAIRS

SEE MAC'S CHIEF (1,050 lbs.) Also sows that weigh 700 and 800 lbs. I will convince you that we can raise BIG POLANDS that have WORLDS OF QUALITY. Will have a fine assortment of SPRING BOARS FOR SALE. Will show at Iowa, Minnesota, Wisconsin, La Crosse and Omaha. Let's get acquainted.
J. D. McDONALD, NORTH BEND, WIS.

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.
M. MADSON & SONS **MADISON, WISCONSIN**

SMILEY POLANDS

BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address
WM. SMILEY & SON, ALBANY, WIS.
GILTS RESERVED FOR SALE, FEBRUARY 22

MASTER'S GIANT 190781
AND
ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address
P. W. YOUNG **PROSPER, WIS.**

JUMBO'S EQUAL 2D
Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
C. S. FLESCH **MT. IDA, WISCONSIN**
(Shipping point, Fennimore.)

BIG-TYPE POLAND BOARS

READY to ship boars that please. No better breeding and good individually. Sired by MONSTER BIG BONE by Black Big Bone and KING JOSEPH by Big Joe, also other noted boars. Write or come.
CHRIS KARTMAN **CASSVILLE, WIS.**

Polands

ORDER your spring boar now. Sired by noted boars. I hold the STATE RECORD for a bred sow sale. Enough said. The best are the cheapest in the end. Inspection invited. Address
J. C. Hendricks **Hazel Green, Wisconsin**

POLANDS
A'S BIG ORANGE, HERD BOAR

OFFER three outstanding fall boars. Spring pigs now ready to ship, sired by A's Big Orange, one of the good boars of the state. Guarantee to please. Write for particulars. Address
W. F. Ackerman **Glen Haven, Wis.**

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING **BANGOR, WIS.**

Big-Type POLAND CHINAS

SPRING boars and gilts of March and April farrow from large litters. **Registered Short-horn bulls** sired by **Roan Stanford.** Send for pedigrees and prices.
A. Menke & Sons - - Markesan, Wis.

BLACK JUMBO 221231
BOAR SALE SEPTEMBER 28, 1916

E. W. Hendricks **Hazel Green, Wisconsin**

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.
Phone 53 **F. E. Purdy, Orfordville, Wis.**

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE Poland China yearling boar $40.00. Gilts bred for fall farrow to Fairview Jumbo, $35. Booking orders for July, August and September pigs. J. Le Roy Larson, Iola, Wis.

CHESTER WHITE SWINE.

DERENTHAL
CHESTER WHITES

THE champion Chester herd of the Northwest. Offering spring pigs, BOARS and GILTS of outstanding individuality. Bred in the purple. If you want herd headers, write
H. A. DERENTHAL **WYKOFF, WIS.**
Meet me at Hamline, Milwaukee or La Crosse.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.
Wm. F. Belda - De Forest, Wisconsin

CHESTER WHITE spring boars sired by Eagle Chief and Highland John. Big, growthy boars with strong backs, wide, deep hams and heavy bone. I have been five years mating good sires and dams to produce this kind. Send for pedigrees and prices. Address W. C. Scheibe, Burlington, Wisconsin.

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write.
Wm. C. Kirst, Tomah, Wisconsin

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller **West Salem, Wis.**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. J. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

HAMPSHIRE SWINE.

HAMPSHIRE

SPRING pigs of both sexes and fall boars for sale.
DANE STOCK FARM
Oshkosh **Wisconsin**

LAIRD'S FAMOUS... HAMPSHIRES

101 MARCH and April pigs. Finest grown. Unrelated pairs and trios. Order now.
A. M. Laird **Prairie du Chien, Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE **LOMIRA, WISCONSIN**

THREE OAKS FARM BERKSHIRES

SERVICE boars and open fall gilts for sale. No more spring pigs left. Will hold brood sow sale March 2d. W. A. FREEHOFF, Waukesha, Wis.

RED POLLED CATTLE.

HEADQUARTERS FOR RED POLLS

IF you want cattle bred for beef and milk, buy RED POLLS. We can supply you. Write.
J. W. Salter & Sons **Unity, Wis.**

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD **AVOCA, WIS.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

DUROC JERSEY SWINE.

SEE ATWATER DUROCS

AT MINNESOTA, WISCONSIN, LA CROSSE and OMAHA. See my BIG SOWS of MARION WONDER breeding. Let me show you some young stuff by the CHAMPION LEE'S DEFENDER. Will have the best DUROC herd I ever showed. Visit my pens and see some of the boars I sell in my BOAR SALE, OCTOBER 18TH. I want to meet you; let's get acquainted.
L. F. ATWATER, BANGOR, WISCONSIN **"HOME OF BIG DUROCS"**

LINCOLN MODEL
DUROC HERD

My herd will be on exhibition at the
WISCONSIN STATE FAIR
and the leading county fairs. See **LINCOLN MODEL** and his get. Also the big boars by **S. & H.'s COL.**, the largest boar of his age in the state. Will have some good boars and gilts for sale.
SEE MY DUROCS BEFORE YOU BUY
ALBERT L. HYZER
WEST SALEM **WISCONSIN**

BOARS
DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
J. Erwin, Bloomington, Grant County, Wis.

CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

GRAND MODEL 21 CORRECTOR 2d

KEEP these Durocs in mind. Few pigs for sale by Lincoln Model, Salem Model and Regulator 2d. Write.
Geo. D. Sprain & Sons, **West Salem, Wis.**

SPRING DUROCS

READY to ship spring boars by Col.'s Choice by King the Col., Wonder Chief by Cherry Chief, Pal's Defender by Lee's Defender. Order early.
Dennis Shea **Melvina, Wisconsin**

Cook's Defender

IF you want DUROCS with size buy a son of COOK'S DEFENDER. Priced right. Address
Emmett Cook & Son, Richland Center, Wis.

Duroc Boars

FOUR fall boars sired by KING THE COL. Three fall boars sired by CHIEF'S COL. FISHER. Fifty spring boar pigs, the best lot I ever owned. The home of GOLD BOND. Write.
JOHN L. FISHER **JANESVILLE, WIS.**

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
Ed Patterson, Jr., **Bloomington, Wis.**

DUROC SPRING PIGS

AND a few sows bred for August and September farrow for sale. Write BURN BRAE FARM, CHAS. A. PETERSON, ROSENDALE, WIS.

PRINCE DEFENDER

SPRING and fall Duroc boars and gilts for sale by above boar. Also spring pigs by Royal King 4th and Lee's Defender. Order early, the best will go first. Address
McClurg Brothers **Viroqua, Wisconsin**

40 DUROCS

BOARS and gilts of the best breeding known, and we guarantee them individually. Single, pairs or trios. E. H. Parker & Son, Janesville, Wis.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
J. W. Higgins **Gotham, Wisconsin**

CHIEF DEFENDER — BIG COL.
THE BIG DUROCS

Boars reserved for sale, October 19th.
Geo. H. Willsie - - Prosper, Minn.

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

SHORT-HORN CATTLE.

USE A SHORT-HORN BULL

ARE you raising beef? A Short-horn bull will give you more scale and bone and more pounds of flesh for a given amount of feed than any other breed. **Are you a dairyman?** A Short-horn bull will not reduce your milk supply and he will get you calves that will be quickly salable at a much higher price than you can get from a dairy bred bull. **Are you a farmer?** The Short-horn is the ideal for your purpose, because it is adapted to all conditions, of quiet temperment, takes on flesh readily, and yields a liberal flow of milk. The Short-horn alway works improvement.
AMERICAN SHORT-HORN BREEDERS' ASS'N, 13 Dexter Park Ave., CHICAGO, ILLINOIS

RIVERSIDE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MARQUART'S
Milking Short-horns

SEVEN bulls ready to go, sired by Queenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
Marquart Bros. **Milton Junction, Wis.**

OAK LAWN FARM
Short-horns of Quality

FOR sale at a very reasonable price, 22 head of registered Short-horn females, ranging in age from 16 months to 6 years. Address
J. E. KENNEDY **JANESVILLE, WIS.**

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

Bates Short-horns
Fashionable Durocs

STOCK of both breeds for sale. Pigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

MILKING
SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little **Evansville, Wisconsin**

SHORT-HORN BULLS

SCOTCH and Scotch-topped. Extra good. Also cows and heifers for sale, bred for milk and beef. Herd headed by one of the best grandsons of Whitehall Sultan. Address H. B. Drake & Son, Route 2, Beaver Dam, Dodge County, Wisconsin

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

BROWN SWISS CATTLE.

Brown Swiss
60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.
ANDREW MARTIN, WEST SALEM, WIS.

Yearling Brown Swiss Bull

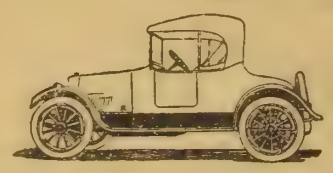
READY for heavy service. Well grow, of good, level type; sired by Casper L. and out of a heavy producing, show type cow. Allyn's breeding on both sides. Address
Chas. F. Lau **Thiensville, Wis.**

Reo

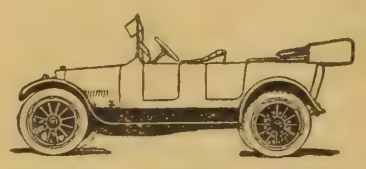
Announcing
The Reo Models and Prices

Two Important Price Reductions — Two Interesting New Models

Prefaced by a Few Pertinent Paragraphs Pertaining to the Reo Policy and Program

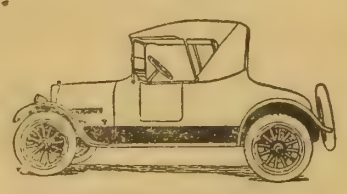


The New Four-Cylinder, 3-passenger Reo Roadster, $875



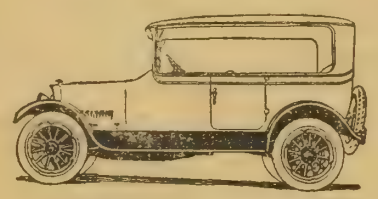
The New Reo the Fifth, "The Incomparable Four," $875

The New Four-Cylinder Reo Enclosed Car, $1025

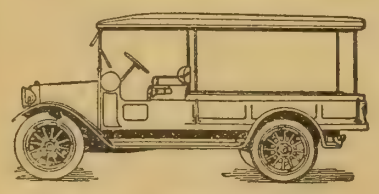


The New 4-passenger Reo Six Roadster, $1150

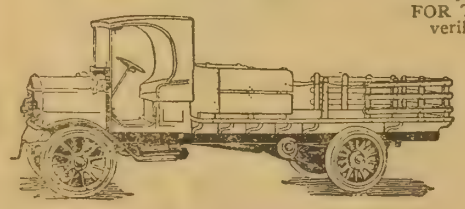
The New 7-passenger Reo Six Touring Car, $1150



The New Reo Six 7-passenger Sedan, $1750



1500-pound Reo "Speed Wagon," $1000



2-ton Reo Truck (Chassis only, with Driver's Seat and Cab), $1650

(All Prices are f. o. b. Lansing, Michigan)

FIRST LET US SAY, since it is relevant at this time, that Reo has not, is not now, and will not be concerned in, or a part of, any merger, combination or consolidation with other automobile concerns.

THE AIR HAS BEEN FULL of rumors of proposed plans for the uniting of several rival concerns for weeks past. The wildest rumors have gained currency and some credence.

ANY CONCERN THAT COULD by its financial standing lend strength; by its organization and experience lend confidence; or by its reputation lend respectability to such a plan, has been mentioned in the gossip.

AND SO REO, THE PIONEER—financially one of the strongest in the world—has been much discussed, much coveted by promoters.

THAT'S WHY WE SAY at this time—and we desire to make it as strong and clear as words can convey—Reo is not and will not be one of these.

REO WILL CONTINUE to do business at the old stand in the old Reo way, striving from day to day to give to Reo buyers just as much of value as our experience and facilities will permit—and that, as you already know, has always been just a little more than you could obtain elsewhere.

WE HAVE NOTHING TO SELL, we Reo folk. Nothing save the legitimate product of our factories.

WE ARE MANUFACTURERS—not promoters. Merchandisers—not stock manipulators.

THAT WHICH WE HAVE we prize so highly none other could see the value we'd put on it.

WE HAVE A PERMANENT business—of how many other automobile concerns can that be truly said? That asset—who can inventory—who appraise?

NO: WE HAVE NOTHING TO SAY against such combinations, nor against those who make or who join them. Undoubtedly they are good—for those on the inside.

AS TO THEIR INFLUENCE for good or ill on the trade—or the consumer—time alone can tell. Anyway that question has not been asked, nor that phase considered, apparently—so why should we try to answer it?

WE WILL SAY THIS THOUGH—that the spirit of "I've got mine, so I don't care," which is invariably preceded by "When I get mine, etc."—has, in our opinion, seriously retarded this great industry and lowered the general standard of the product.

TOO FEW HAVE BUILT for permanency—too many, alas, for the quick clean-up.

GROOMING A BUSINESS for such a coup involves forcing production to the limit to show paper profits—and the result is a product of mediocre quality at best.

FRANKLY WE DON'T KNOW—we Reo folk—where we could put the money (did we listen to the siren song of the promoter); we don't know where we could reinvest the money with equal safety and with as good prospects for, not larger, but as steady and certain returns permanently. We don't know.

THE REO POLICY IS SUCH; the Reo product is such; Reo reputation is such; that this business is as sound, as permanent, as sure as any other business in the world—in or out of the automobile industry—bar none. It is so regarded by bankers and business men the world over.

ASK YOUR OWN BANKER—he will tell you.

SO WHAT COULD WE GET in return for this business (honestly get, of course) that would be a fair exchange.

THIS BUSINESS WAS CONCEIVED IN PRIDE—and that pride of achievement is its greatest guarantee of quality in the product to you—and of its permanence to us.

THEN THERE'S THAT OTHER ANGLE that some might call foolish sentiment but which we, old fashioned Reo folk, regard most seriously—namely, the obligations we have assumed toward distributors and dealers and buyers of Reo Motor Cars and Trucks.

COULD WE, IN HONOR, entrust to any other the fulfillment of those obligations—and enjoy the money we had received?

WE REO FOLK HOLD that the sale of a car is not the consummation, but only the beginning of a transaction.

TO OUR WAY OF THINKING we assume, at the time we accept the check in payment, an obligation that shall endure so long as that car is in operation.

YOU SEE, WE ARE OLD FASHIONED—very old fashioned, we've been told.

BUT THIS IS AN AD and we should talk business—"hard cold business" in an ad. So we'll say no more on that subject! Leave it to those who are interested in such things—those who have a price.

YOU WANT TO KNOW—everybody always wants to know—what models Reo will make the coming year, and the price of each.

OF COURSE THERE ARE NO NEW MODELS—new chassis models we mean. You do not look for, do not expect, do not want new chassis models from Reo.

THAT ISN'T THE REO WAY. Refinements—of course. Detail improvements—wherever and whenever we can find a place or a way to make them.

NOTHING RADICALLY NEW is ever offered to Reo buyers. For it isn't new when it gets to you—it has been thoroughly tried and conclusively proven before we let it get into a Reo car.

NEW BODY TYPES—YES—and some that put Reo in the highest class of cars in looks as well as in performance and longevity. We'll treat of each in turn.

REO THE FIFTH COMES FIRST, of course. First not only among Reos, but among motor cars.

FOR THIS IS THE GREATEST automobile ever built, we verily believe.

THIS IS THE SEVENTH SEASON that Reo the Fifth has been standard in practically its present form.

NO: THE PRICE WILL NOT BE CHANGED this season. We will not increase—we cannot lower it.

ACTUAL COST OF MAKING is now more ($50 more) than when the present price, $875, was set a year ago. And we had made this model so long; had so refined and perfected manufacturing processes; had reached such an high state of efficiency in production; and cut dealers' discounts so low that we had, then, reached rock bottom.

IT WAS AN ACHIEVEMENT of the first magnitude to produce such a car and sell it at such a price—$875.

TODAY YOU SEE OTHERS increasing prices all along the line. They must do so. They have no choice.

ORDINARY BUSINESS RULES dictate that we also "tilt" the price of Reo the Fifth $50 at least.

BUT REO PRIDE PROMPTS that we absorb the extra cost, as we have for months past, and keep the price where it is until conditions will, happily, return to normal.

THE FOUR-CYLINDER ROADSTER—same wonderful chassis, same price, is the smartest thing on wheels—the most popular car in the world among physicians, and all professional and business men. Also $875.

TO SUPPLY A GROWING DEMAND for an enclosed body on Reo the Fifth chassis, we have planned to build a limited number. The quality will be Reo—which is to say, excellent. The top is rigidly supported at front and rear. Removable glass panels convert it into a veritable limousine for winter, and these discarded and with Jiffy curtains (which are also furnished) it is an ideal summer touring car. The price is $1025.

THE NEW REO SIX will continue in its present popular forms—the 7-passenger touring car and the classy 4-passenger roadster; and we will make a limited number with Sedan bodies to supply an insistent demand for this type of body on this splendid chassis.

THE PRICE IS REDUCED $100 on the 7-passenger and roadster models. Now $1150!

NOW YOU WONDER, and naturally, how we can reduce the price of the Reo Six models and not the Four—especially after what we have just told you about the increased cost of production.

SEEMS ILLOGICAL at first blush—doesn't it? But it isn't. For the truth is never illogical. And the truth is that despite the present higher prices of materials and labor still it costs us less to make this six-cylinder model than it did a year ago.

THIS POPULAR REO SIX is now in its third season. It has passed the same stages through which its great four-cylinder namesake went—initial costs have been absorbed, charged off. And in accordance with that unswerving Reo policy we give the buyer the benefit and set the price at $1150 f. o. b. Lansing.

WE WILL MAKE A LOT MORE of those 4-passenger Six Roadsters the coming season. We underestimated the appeal and the demand for this model. It proved one of the most popular Reos ever built.

THE SIX SEDAN speaks for itself, though, truth to tell, an illustration does it scant justice.

YOU MUST SEE IT where you can study its artistic lines and faultless finish to fully appreciate this latest Reo which we price at $1750.

NOW A WORD ABOUT THE TRUCKS since 90 per cent of all Reo automobile distributors also handle Reo motor trucks.

PRICE OF THE 1500-POUND REO "Speed Wagon" has been reduced to $1000.

SAME REASON—SAME POLICY—reduced cost of manufacture despite higher present cost of materials—as enunciated in speaking of the Reo Six.

AND THAT TWO-TON REO. What shall we say? What need we say? We submit, it is the greatest 2-Ton motor truck in existence. Has been standard for longer. Has given greater proof of its sturdiness and efficiency and low cost of upkeep.

IF WE ARE TO JUDGE by that over-demand, we may well assume that we could sell all that we could make were the price $2500, instead of $1650.

AND FINALLY A WORD about the big general plan—a brief reiteration of the Reo policy.

WE STILL ADHERE to our determination never to make more Reo cars or trucks than we can make and make every one good.

TEMPTATION IS GREAT of course. Dealers protesting, buyers begging for more Reos. But we know—we know—on what solid foundation this Reo success was built; and we'll jealously guard that policy to the last.

RIGHT NOW—AUGUST—there are more orders on hand at the factories than at any previous time in Reo history, orders hopelessly in excess of factory output—and that also is greater than ever before.

AND RIGHT NOW Reo stands higher in the esteem of buyers and of the trade than ever before.

$30,000,000 PER ANNUM is not small by any means. Reo is in fact one of the largest in point of production. We have no ambition, however, to be the largest. Don't want to make all the automobiles—only the best.

RATHER THAN INCREASE the quantity we shall strive always to improve the quality so that, as the art advances and cars generally improve, still Reo will continue to be known as—*"The Gold Standard of Values."*

REO MOTOR CAR COMPANY
REO MOTOR TRUCK COMPANY
Factories: Lansing, Mich.

"THE GOLD STANDARD OF VALUES"

THE WISCONSIN FARMER

VOL. XLV. NO. 34. THURSDAY, AUGUST [illegible] WHOLE NO. 1804

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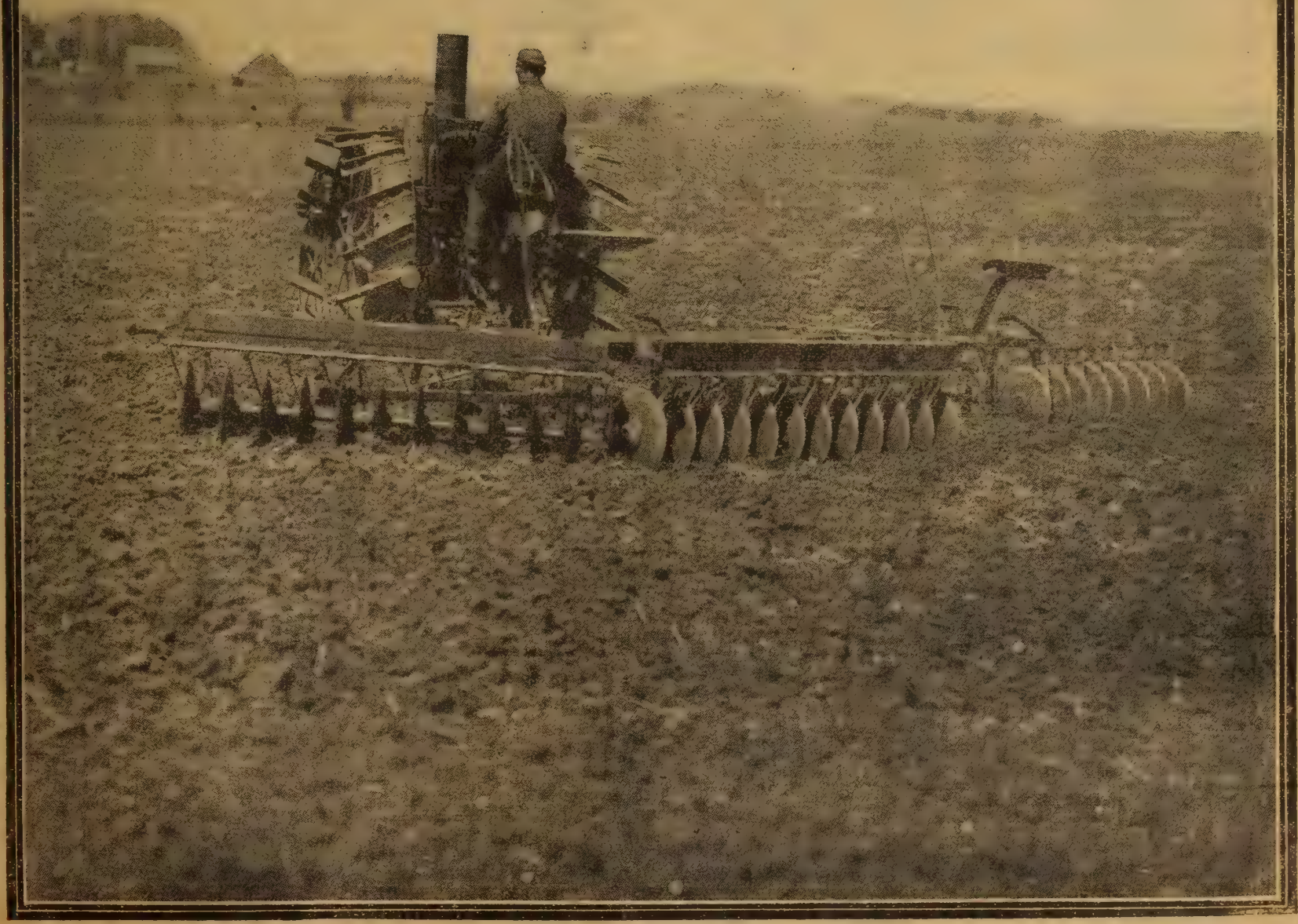
DAY OF THE TRACTOR AT HAND



Waterloo Boy KEROSENE Tractor

The Waterloo Boy Kerosene Tractor will be put through the severest of tests at the following Tractor Demonstrations. You are invited to be present.

Madison, Wis. - Sept. 4th to 8th
Bloomington, Ill. - Aug. 21st to 25th
Indianapolis, Ind. - Aug. 28th to Sept. 1st

$750 Farm With Fewer Horses and Fewer Men

This is the tractor you will choose if you see it work.

We cordially invite you to attend the great Tractor Demonstrations listed at the head of this advertisement, and see the Waterloo Boy Tractor put through some of the hardest working tests.

You can learn more about it in half an hour's demonstration than we can tell you in pages of printed matter.

Your time will be profitably spent because in choosing a tractor you cannot afford to make a mistake — you want the best your money can buy. You will be surprised and interested by

The Wonderful Performances of the Waterloo Boy Tractor

Its Low Price — **Great Power** — **Simple Design**
Low Operating Cost — **Strong Construction** — **Easy Management**

This tractor is the right size for profitable work on the farm, large or small. An all-year-round profit maker. Has power enough for two or three small farms.

One farmer writes us: "I plowed every foot of my land, have it in fine shape. Also did some custom plowing (raw prairie soil) for two of my neighbors. I have been running my power corn sheller all winter, with the tractor engine, shelling for the neighbors."

Pulls three 14" bottom plows 7" to 8" deep

Great Power Low Price — Cheap Fuel

A Three Plow tractor at only $250 per plow pulling capacity. Pulls three 14-inch plows with ease in heavy soil.

A successful kerosene burner—saves $175 to $195 a year in fuel cost over any gasoline tractor of same capacity.

Has working capacity of eight horses. Plows eight acres a day at fuel cost of 18 cents per acre.

Belt power for 17 inch silo filler or 28 inch thresher with self-feeder, self-weigher and wind stacker.

Fully Guaranteed

Long Life Reliable Power

Frame of heavy steel angle iron braced and rebraced; steel-cut, case-hardened gears; wide bearings; steel axles, sand caps on all wheels, automatic oiling. Powerful twin-cylinder moderate-speed motor is perfectly balanced, gives steady, even power. Removable inspection plate gives access to all working parts—makes adjustments easy.

Protect Yourself Permanently Against the Harvest Labor Problem

You can depend on the Waterloo Boy Kerosene Tractor to save you worry and expense during the rush season—it may save your crop. With it you can do the work of 8 horses in the field—pull the binder, mower, hay rake or loader; also operate thresher, silo filler and all belt machinery. When harvest is over pull the manure spreader, and do your fall or spring plowing, harrowing and seeding in record time.

The Tractor With An Established Reputation and a Strong Guarantee

That's an important point for you to consider when deciding on a tractor. The Waterloo Boy is not an experiment. It is a proven success. Its work at all the tractor demonstrations, on hundreds of farms, and the fact that it was one of the four Waterloo Boy Prize Winners at the Panama Pacific Exposition, attest its practical value.

This tractor is the latest and greatest addition to the Waterloo Boy Line—built to sustain the reputation which Waterloo Boy machines have held for 20 years. *We stand behind it with a strong guarantee.* We make prompt delivery and give you service on short notice when needed.

WATERLOO GASOLINE ENGINE CO., 3801 W. THIRD AVENUE WATERLOO, IOWA

P. J. DOWNES CO., Minneapolis, Minn.

The Wisconsin Farmer

THURSDAY, AUGUST 24, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

MORE ABOUT THE NEW RURAL CREDIT LAW.

IT IS QUITE apparent (judging from the large number of letters I have received within the last week or two) that farmers generally are interested in the new rural credit system. Whether they are simply curious as to its workings or are looking to it to solve many of their financial problems I am unable now to say, but they are eager for details, that is sure.

Here, for instance, is a typical inquiry from a grain-belt farmer:

Dear Mr. Pierce: I have just read your editorial on the farm credit bill, appearing in your July 27th issue and I wish to make inquiry concerning it. Can you tell me when this bill goes into effect, where the banks are to be located and how soon they will be ready to do business with farmers?

Perhaps, in view of numerous inquiries of a similar nature, it might not be amiss to give some more general information in regard to this matter here, supplementing what I set forth in the July 27th issue. The president has already appointed the members of the board: Herbert Quick, of West Virginia; W. S. A. Smith, of Iowa; Charles E. Lobdell, of Kansas, and George W. Norris, of Pennsylvania, making the last-named chairman. The board will devote the next three or four months to the selection of the twelve cities in which the new farm-credit banks are to be established. Naturally, there will be considerable rivalry among the cities and the board will be obliged to investigate many claims, just as was done before the federal reserve banks were established, a year or so ago. For this purpose, the board began a national tour this week, holding its first meeting in Portland, Maine. Sessions will be held in the grain belt this week and next at the following cities: Madison, Des Moines, Sioux Falls, Fargo and St. Paul. The hearings will be public and farmers and farmers' organizations are invited to appear before the board and submit information which they think will assist in solving the important problem of determining the boundaries of the districts and locating the federal land banks. There is every intention apparent to locate the banks where they are most needed, and, while some luckless cities will feel themselves slighted, we must believe that the board will make the best selection possible, for the president's appointees are honorable men.

I have seen it semi-officially stated that the new system will not be in working order for six months at least and I believe this is correct, for there is much preparatory work to be done. Some complaint has been made as to the red tape with which the new system is encumbered. Let us hope that this may be cut away in time. The same red tape encumbered the rural mail service, the parcel post and the postal savings banks, when they were first inaugurated, but they have survived these encumbrances and are now firmly established.

In our eagerness to do everything possible to increase farming productiveness and efficiency we must not make the mistake of assuming that any new legislation is going to change human nature or bring about the agricultural millennium. Farmers who are not entitled to loans under the existing financial system will not be entitled to them under any new system that might be created, for no law can make a dishonest man honest or increase the efficiency of the shiftless. I want to print here a little editorial I found in one of the big eastern papers. It is quite to the point:

Any farmer who is plowing rented land will make a mistake if he acts on the assumption that under the new rural credits law he will be able to raise money to buy land. Under the new law, any farmer who owns his own home may mortgage it. Probably he should feel grateful that the new law at least does not take from him any of the privileges he formerly enjoyed. The fact remains that his privileges are not increased. The primary purpose of the act, as explained by the Agricultural Department, is to permit agricultural prosperity by enabling farmers to borrow money on farm mortgage security at a reasonable rate of interest and for relatively long periods. There are to be twelve land banks. But the basis of these banks is the co-operative organizations of farmers which will pass upon the credit of those who seek loans. No farmer can borrow unless he is a shareholder, and for this reason many farmers will prefer to borrow without investing in bank shares. As a matter of fact, farmers are already well supplied with mortgages on reasonable terms. The insurance companies have $646,961,371 in farm mortgages at an average rate of 5.55 per cent. The new law says that the Federal banks shall not charge above 6 per cent. The farmer will have to give the same kind of security he formerly gave, and the new system will not make a good borrower out of a poor one.

Let us resolve to give the new financial system a thorough and a fair trial, awaiting the results with an open mind. Time alone will tell if the farmer is to reap the benefits which the sponsors of the new law so enthusiastically promise.

AUTOMOBILE ACCIDENTS.

THE charge was made in my hearing the other night that most of the automobile accidents which have been occurring in one of our large grain-belt cities were caused by out-of-town drivers, farmers mainly, who either did not know the ordinary traffic rules or did not observe them. I refuted the charge warmly, admitting that there might be some local regulations which the visiting automobilist would not know, and, therefore, could not observe until they were called to his attention, but that the ordinary rules were known to all and were observed by small-town drivers and farmers as much as anybody.

I firmly believe the man who made the charge was wrong and that I am right. The farmer is a careful operator of machinery, for he has learned—perhaps by experience, in his early days—that mishandling machinery results in broken castings—if not in more serious accidents—and these in turn bring costly delays, so that it pays to be careful and to look after a piece of machinery as one looks after a horse. There is no reason why farmers should be blamed for a majority of automobile accidents in any city. Yet, at the same time, we should all of us resolve to be such careful observers of the ordinary rules of the road that this serious charge will not be laid at our door any more.

Certain things are so fundamental in automobile driving they are known—and must certainly be practiced—by all farmers who drive to any town or city. In the first place, we all know to drive on the right side of the street or road, that is fundamental, whether we are behind Old Dobbin or a "twin six." In the second place, speeding is dangerous and is rightly prohibited. There is no excuse for any man traveling faster than twenty or twenty-five miles an hour and at this pace only on a clear, unobstructed highway, where there is no danger from intersecting streets or roads and pedestrians are conspicuous by their absence. In the third place, when driving in a crowd, we should not proceed on the assumption that those immediately behind us and in front of us are mind readers; they are entitled to know which way we propose to go. When turning, an outstretched hand, pointing in the direction we propose to go, may avert a serious accident; likewise, a gesture when we are obliged to stop suddenly, because of engine trouble or a stoppage of the cars in front, may save our rear fenders.

These are ordinary rules of the road which we should all remember and observe. In addition, it would be well when farmers drive into town to find out, at the first possible moment, the local regulations. Some towns and cities here in the grain belt do not allow motor cars to remain "parked" on down-town streets more than twenty or thirty minutes. If they are left longer, the driver is subject to a fine. Again, there are ordinances against turning a car around in the middle of the block, street intersections being the only place this is permitted. Again, there are ordinances against bright headlights, compelling the use of dimmers or lights which throw their rays down so as not to blind the driver of an oncoming vehicle or a pedestrian. Many farmer visitors who fail to acquaint themselves with these local regulations are indignant when they are arrested and fined for some violation. I believe they should be notified and not summarily arrested and made to pay a fine for violating some ordinance with which they could not possibly have been familiar. Notification cards thrown in every car or signs posted in conspicuous places would save many law infractions and many hard feelings.

Let the farmer who drives a car see to it that he is particularly careful in town, for his own protection and that of others. Accidents are so easy to occur and so numerous, we should all do what we can to lessen and avert them. The automobile is here to stay, it is wonderfully useful to the farmer and adds greatly to his enjoyment of life; let us see to it that it is used with the maximum of results and the minimum of accidents.

THE TRACTOR SHOWS.

IF ANYTHING more were needed to prove that the tractor is the farm machine of the hour, the attendance at the tractor demonstrations and the eagerness with which the thousands of farmer-visitors investigate the various makes provide it. The series of demonstrations here in the grain belt is well nigh at an end, the crowds being at Bloomington, Illinois, this week, and Madison closing the grain-belt circuit week after next, Indianapolis coming in between Bloomington and Madison next week.

I confidently anticipate that more tractors will be sold to farmers here in the grain belt in the next year than were ever sold before in twice the time, for never was interest so high. Those who have not already attended one of these demonstrations should plan to do so before the series is at an end. They are object lessons of practical farm efficiency and advancement second to nothing, not even our state fairs, splendid and educational as they have grown to be. A visit to any one of the demonstrations is worth any man's time. Plan to attend one this year if possible; next year, by all means.

A QUEST FOR HOMINY.

I WONDER how many, if any, of my readers can tell just where to get some of the old-fashioned hominy of former years. Not the product which masquerades under that name today, but the genuine, yellow-corn hominy which we older folks knew in our youth, of which the present generation apparently knows nothing.

This matter was first brought to my attention by an eastern man who declared, with emphasis and heartfelt regret, that "in all the cornfields, in all the grist mills, in all the kitchens, hominy is only a memory to the older members of mankind." He went on to admit that there is something nowadays which has taken the name, but not the place, of the old-time article, but it is not the hominy for which he is seeking. Nor has his search been conducted in any half-hearted manner, he is in deadly earnest, witness what he says:

I have been deluged with letters telling of innumerable places where one might obtain hominy, and into these places I have chased the fleeing will-o'-the-wisp, only to find something entirely different—what every New England boy knew half a century ago as hulled corn, or the monstrosity that any self-respecting New England boy would have been ashamed to know, a pale-faced, blanched, Japanese-like form of corn, known as hominy-grits. Now, it is neither hulled corn nor this so-called hominy-grits the loss of which I am deploring, but real hominy from yellow corn.

This eastern man, who begins to fear he must go hominy-less the rest of his days, has been prosecuting his search diligently, from one end of the land to the other. And with what result? Let him tell the story of one disappointment after another:

In the heart of the country, at an old homestead, I found a man that said, "I know just what you want," and, smacking his lips, continued, "My, but I can remember those hominy-pies even to this day." "That is it. You have got it right," I said. "Pies with luscious raisins and a custard, all made of the real old hominy." "Well," he continued, "I do not know as you can get it in stores nowadays. We have dis continued it in the North, but they are not quite up to us in the South, and they still have hominy." "You mean," I said, "they are far ahead of us if they still have hominy and we have not." "I will give you a few addresses," he said. I wrote to several, including a famous old grist-mill in Richmond, Virginia. One man was kind enough to write, "We have the real hominy," and to send me a liberal package. Imagine my disappointment when I found it was nothing but such as is sold at department stores.

John Greenleaf Whittier, why do you not come back and reprimand some of these grocers for using your classic "bowl of samp and milk" as a misuse of the name samp? It is about as near what you had in mind as huckleberries are to peas.

Went to visit a man in New Jersey. He said: "We have here an old-fashioned grist-mill. They have just what you want." Gleefully I alighted from the automobile and accosted the man at the desk: "Give me a peck of hominy, will you?" The man at the desk laughed and said: "I know what you want. We have not got it. I have heard my grandfather tell about it." Then I realized that I had grown beyond youthful years when a full-grown man like that had to refer to his grandfather!

Will some of my readers come to the rescue? Surely, somewhere, the hominy of yesteryears is to be found today. It cannot be that such a luscious, palatable, nourishing article of diet in my youth and the youth of my older readers (whose hair, like mine, is now silvered) has disappeared completely. Must the younger generation of today go without the genuine "white pudding" of crackly suet and the genuine hominy of yellow corn and perforce be content with nothing more than grape fruit and ripe olives? Let my readers who can give this easterner (hungering for his hominy) some tip that will end his quest write to me; I will forward the good word on to him most gladly.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

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ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Wisconsin Farmer as a Live Stock Paper.

OUR readers cannot help but notice the leadership of The Wisconsin Farmer as a Wisconsin live stock paper. It is our aim to strengthen this leadership and to continue in the future as in the past to give our readers valuable information and advice on live stock subjects. Recognizing the value of good stock on the farm and the good that a farm paper can do in creating interest in better live stock, The Wisconsin Farmer editors feel a keen responsibility along this line.

We feel that no general farm paper can properly serve its readers in a state like Wisconsin without giving considerable space to the live stock business. It follows as a matter of course that the interest which The Wisconsin Farmer arouses in better live stock, makes this paper a more profitable medium for those who wish to advertise their stock for sale. Hence the live stock advertising of The Wisconsin Farmer has grown and this paper carries a much larger volume of live stock advertising from Wisconsin breeders than any other agricultural weekly in the state. We believe it will pay those of our readers who are interested in improving their herds to look carefully each week through the live stock advertising and field note columns. Our field notes are written by men who visit the herds which they write up and who have practical knowledge of the live stock business covering a period of years. The services of these field men are available without charge for all breeders of the state who desire to give publicity to their live stock offerings. We have been trying to make it easy for the Wisconsin breeder to advertise and to help him with copy and with write-ups of his stock. The Wisconsin Farmer live stock policy is original and is not copied after any other periodical. Splendid letters have been coming to this office proving that advertising in the columns of this paper pays big returns.

More Wisconsin farmers advertise in the regular live stock columns of this paper than advertise in any other Wisconsin farm paper, and we feel this is a high compliment to the publication and to the service which The Wisconsin Farmer gives both to our readers and advertisers.

The season approaching promises to be a busy one in the live stock world and we hope to see our readers take every opportunity of the situation to make good profits. Suggestions which have been made to us by breeders of the state will be carried out during the year.

Where Hay Is Abundant.

CONDITIONS were exceedingly favorable for the production of a heavy crop of hay in 1916, and undoubtedly as large a supply of roughage is available this year as has been the case any time during the last decade. This situation is recognized by the Farm Improvement Association of Winnebago county, Illinois, and a special effort is being made to induce farmers of that locality to handle their hay land in the proper manner.

That association advises those who have more clover hay than they can feed, not to cut the second crop of red clover for hay but, rather, plow it under for fertilizer or cut it for seed if it promises a large yield. The second crop should be pastured in part if desired and the residue plowed under either late in the fall or early in the spring.

Spring plowing is preferred by many, and this allows for grazing in the fall, also the cover of clover holds the snow. It is not advisable, as a rule, to plow light soils in the fall. Heavy clayey soil may be benefited by late fall plowing, provided there is no danger of washing.

Every ton of clover hay contains 40 pounds of nitrogen. If nitrogen is purchased for fertilizer, it will cost about 20 cents a pound. A farmer who sells a ton of clover is, therefore, selling $10.00 worth of nitrogen. A ton of clover hay contains 5 pounds of phosphorus which, if purchased in any of the readily available forms for fertilizer, will cost 50 cents per pound. A ton of clover hay also contains 30 pounds of potassium which cannot be purchased as a fertilizer now, but at the regular price before the war would have been worth $1.80. This makes a total fertilizing value per ton of clover of $12.30 simply for the elements of plant food contained in the clover. Besides this, the plowing under of 1,900 pounds of organic matter has a very great value to the soil, which is hard to estimate.

Much land is worn and deficient in organic matter, and the plowing under of a good crop of clover hay may double the yield of the succeeding corn crop. The deficiency of nitrogen and organic matter is often the limiting factor in the yields of corn and grain in many of our fields. It will not pay the farmer who cannot feed the hay on his own farm to put up much of the second crop, since its value as a fertilizer will be greater than he will be able to realize for it if he sells the hay. Another suggestion is to get more live stock and feed the hay on the farm, and return the manure to the soil and thus get a double use and value out of the crop.

Small Tractor Receiving Special Attention.

SEVERAL tractor demonstrations have already been held this year, and thousands and tens of thousands of farmers have made first-hand investigations of these machines in operation. They have had the opportunity to see the tractor pulling plows, disks, harrows, drills, grain binders and even manure spreaders, and in nearly every case these tasks have been performed with ease and dispatch.

So far the main interest has centered around the smaller types of tractors, and those running from five to ten-horse power on the drawbar have been made the subject of special investigation by the majority of those attending the demonstrations. A tractor large enough to pull two plows, means that from five to six acres a day may be turned and the same power will disk fifteen or twenty acres a day or harrow fifty acres in ten hours. In other words, a machine of this weight would mean, under ordinary circumstances, the displacement of four horses. Assuming that the fuel consumption of such a tractor would equal the value of the food consumed while the horses are at work, it becomes apparent at once that the saving effected by such a form of power will be the value of the food consumed by horses while they are idle. The average work horse is in the harness approximately 150 days in the year and he is loafing the balance of the time. He has to be fed whether at labor or not, whereas the expense on the tractor stops just as soon as the throttle valve is closed.

Where the tractor has power enough to pull three plows, it is safe to say that it will displace as many as six horses. On stubble land it will turn nine or ten acres a day and disk thirty-five or forty acres. Many cases have been called to our attention where such a tractor has been used in harrowing as much as eighty acres in ten hours, and every man of practical experience knows it would require six horses and two men to do the same amount of labor in the same time. The tractor never gets tired, neither does it sweat, and no collar galls are produced, calling for the special care and attention of the driver. The tractor never gets sick, and even though there is an occasional breakage, all parts of machines that are made by reliable companies are forthcoming at short notice, whereas the horse does not always get better. Even the critics of the tractor will have to concede that from the standpoint of reliability, it measures up well when compared with the horse.

Those who are holding back because they regard the tractor as an experimental proposition, must remember that manufacturers are taking advantage of all the mechanical skill that has been developed in perfecting carburetors, clutches, transmissions, differentials, etc., these having been brought to perfection in automobile construction. These are the vital parts and they are used in tractor construction in the highest possible state of perfection. Our most substantial manufacturing concerns are therefore placing upon the market a machine of known durability and of tested efficiency. In most cases hundreds of records of field service are available, so that data is accumulated on cost of operation, as well as upon general serviceability.

The Wisconsin Farmer views the tractor conservatively, believing as it does, that the horse will still remain, but nevertheless it sees an important place for the tractor on Wisconsin farms. The soil can be stirred deeper with the steel horse, and in the case of short seasons, the tractor can be put through much more strenuous paces than the horse. Under certain conditions its use means the multiplication of man's efficiency in addition to the economy that it spells in the cutting down of horse power.

Wisconsin Live Stock Situation Promising.

THAT the future for the Wisconsin farmer looks very bright, is the opinion of Mr. J. Fisher, of Eastman, Wisconsin, breeder of Chester White swine. He writes to The Wisconsin Farmer under date of August 14th, as follows:

The live stock in this part of the state looks very promising. Prices on cattle, hogs and horses are very high. Pastures are getting pretty dry, but most farmers will have their meadows to turn into and when the fall rains come on grass always grows up very quickly when we pass through a dry spell. Threshing is now in full swing and small grain of all kinds are turning out very well and corn now promises a good crop. The future for the farmer certainly looks very bright. There will not be as many hogs to sell this fall as usual. On account of scarcity of feed last fall there was not the usual amount of brood sows kept over, but hogs are healthy and a very fair size for their age. The demand for breeding stock of all kinds will be great this fall. All the breeder will have to do will be to let it be known that he has them for sale. A good many young colts are being raised this year. The great demand for horses has brought this about. The quality of horses has improved greatly in the last few years. A good many young cattle are in the country and are changing hands at good prices. I want to take the opportunity now of saying to The Wisconsin Farmer that I am pleased to see the great interest that is taken in the development of the live stock in Wisconsin and it justly merits the great support the farmers are giving it. J. FISHER.
Crawford county, Wisconsin.

The future of the general farmer, especially the farmer who has a good sprinkling of live stock, has never looked brighter than now. We are peculiarly fortunate on account of the general good health of live stock in this state and the improvement of herds due to breeding. The Wisconsin Farmer does continually harp on the value of good stock. Experience has proved that practically every farmer who makes a success with his stock, makes good money. And the great aim of this paper is to point the way to bigger profits for the farmers of our state.

Horticultural Exhibit at State Fair.

ALTHOUGH the Wisconsin fruit crop does not come up to the standard of former seasons this year, Mr. Frederic Cranefield, secretary of the Wisconsin Horticultural Society, assures us that this fact will not interfere to any degree with the fruit exhibit at the Wisconsin State Fair the second week in September. Wisconsin, in the worst fruit years, always produces much good fruit and Mr. Cranefield, who has now begun collecting the apples for the state societies' exhibit, is sure he will find good fruit for his display. The society will use the same space in the horticultural building that it occupied last year, and indications are that there will be an especially large showing by individual fruit growers.

Mr. Cranefield reports that the apple crop is less than half a crop this year with considerable scab. The season has been against the fruit men throughout, although the season opened with great prospects, the trees being heavy in bloom. In certain sections a better crop is assured than in other sections, but as a whole, the yield promises to be far below the average. However, there is no tendency to discouragement by the fruit men, as they realize they must take their lean years with the fat years, and it must be remembered that in 1915 the Wisconsin apple crop was bumper. The cherry crop turned out well for the growers, although the earlies yielded very little and the late cherries only normal. Prices were good, though, so that the growers in the end got about as much money out of the crop as they would have gotten with a heavy yield. This will, no doubt, be true with the apple growers who have good, clean fruit, as the small yield and the scabby condition prevailing in many orchards will cause a tendency towards higher prices.

Success of Walworth County Picnic.

WHAT a well-organized federation of farmers' clubs means to the social and rural life of a county was indicated on Wednesday, August 16th, when between 2,000 and 2,500 persons gathered at Lake Geneva, Walworth county, for the first annual joint farmers' club picnic in that county. More than 300 automobiles were counted at one time and, despite the fact that it was during the busy threshing season, farmers and their families poured in from every part of the county, a general invitation having been extended to all. The day was just suited for such an occasion; the weather was ideal and the Otto Young farm, on the shores of Lake Geneva, was all that could be desired as a place for holding such an affair.

Walworth county now ranks second in Wisconsin in the number of farmers' clubs, Sauk county still leading. However, in Walworth county the clubs are still in their infancy and the growth they have made the last year is remarkable. The clubs of Lyons, Linn, Bloomfield and Como acted as hosts on this occasion, assisted by the Commercial Club of Lake Geneva where the business men have splendid co-operation.

The affair was an outing in every sense of the word—an occasion on which neighbor meets neighbor around the picnic basket, and was so successful that it will undoubtedly be made an annual event. There was all kinds of sports that go with a picnic of this kind; plenty of fine music and just enough speaking. Most of the crowd came from the towns of Linn, Bloomfield, Geneva and Lyons, but large delegations were also present from Elkhorn, Darien, Troy Lakes and Delavan.

T. L. Bewick, state leader in the boys' and girls' club work, and Prof. G. C. Humphrey, of Madison, were the speakers. Mr. Humphrey spoke on "The Dairy Cow" and told of the great increase in dairying in Walworth county and how it is forging ahead in dairying. He pointed to the breeders' associa-

tions; the cow-testing association; the large amount of semi-official testing as evidence that the county is pushing ahead in this line. He also called attention to the necessity of paying more attention to the use of pure-bred sires; of dams from high butter-producing cows. Mr. Bewick explained the boys' and girls' club work in Wisconsin which has gained impetus until it is now state wide, and told of the state round-up which will be held during the state fair. This work includes the corn-growing, tomato-growing, calf-raising contests, etc.

The music was supplied by an orchestra from Lyons and by the members of the entertaining clubs. The boys' and girls' club of the Linn club, gave a song "On Boys' and Girls' clubs" to the tune of "On Wisconsin," which was one of the big hits of the day. Miss Edith Hatch and Mrs. L. Buell, of the Linn club, gave a vocal duet; Mrs. H. D. Bannister and Miss Rice, of the Bloomfield club a piano duet; and Mr. and Mrs. Doane gave the music for the Como club. The sports included foot races, sack races, jumping and all other kinds of contests and afforded much amusement.

Too much credit cannot be given the committees in charge for the success of the picnic and The Wisconsin Farmer wishes to congratulate the Walworth county clubs on the great part they are playing in the rural life of that community.

Rye as Profitable as Oats in Wisconsin.

THE STUDY and comparison of crop reports and statistics, if one will take the necessary time, usually results in the discovery of some very interesting things, and among them t e fact that the rye crop in Wisconsin was last year almost as profitable per acre as oats. According to the government report on Wisconsin's farm crops for last year, the rye crop based on December prices at the markets, was rated as worth $16.10 per acre, while the oats crop was rated as worth $16.74 per acre, thus showing that rye was almost as profitable a crop as the bumper oats crop of 1915. An average of the values for the past three years from government reports shows that oats were worth only $13.95 per acre, and rye worth $13.70. With a difference of only 25 cents an acre, the farmer raising oats will not have much to brag over the man who has been raising rye.

These figures have been compiled by Mr. R. A. Moore, secretary of the Wisconsin Agricultural Experiment Association, who wishes to draw to the attention of the farmers the above facts. If a large yield of oats is not secured, Mr. Moore points out that the oats crop comes very near being unprofitable, a fact which perhaps few realize. A yield of winter rye or wheat would need to be about one-third that of oats to bring the same amount of money and the harvesting and marketing of one-third less grain is much cheaper and easier than a bulky crop, although the feeding value of rye on the farm, it must be conceded, is not equal to that of oats. However, these figures are based on the market prices of the crops.

Mr. Moore expects a larger acreage of the winter grains than ever before this fall. Since the pedigree winter rye and wheat with their high yields have been disseminated by the experiment station, there has been a growing interest in the winter grains. Each extra bushel's increase in yield coming from the improved grains means a clear profit and most every farmer can use the extra profit.

Reports indicate that the small grain crop in Wisconsin this year will be good, although the oats are not up to the yield of the bumper crop of last year. Oats yielded well, but are light; barley is coming along nicely, but will also be light and the hay crop has been splendid, while corn is doing nicely, and with frost holding off until the normal date, considerable mature corn will be picked. Grain men who have visited some of the early county fairs report a good showing of corn at this time. Of course, it is in a very immature state, but these displays speak well for the crop.

Harvesting Crops With Live Stock

STOCKMEN are more and more being convinced that more economical gains can be made from the grazing of live stock than from heavy grain feeding in the dry lot. One of our Minnesota subscribers, Mr. Guy S. Ellis, sends a communication dealing with this subject in which the results of experimental work at several stations are given. Mr. Ellis writes:

Several crops can be harvested more cheaply with live stock than in the usual way, when they are fed to stock for the production of meat. Among the number are grass, Dwarf Essex rape, peas and corn.

Grass in the green form is virtually in itself a balanced ration. In the dry form it lacks succulence, hence the better gains from grazing as compared with feeding grass in the cured form. Assuming a pasture charge of 75 cents per head per month for yearlings, Waters, of Missouri, finds their gains costing $1.60 per 100 pounds, while the two-year-old steers at $1 per month per head cost $1.90 per 100 pounds gain. When we consider this cost that of the cost of gains in winter feeding which are three to four times as great, the importance of wisely utilizing the pasture in summer whenever and wherever possible is self-evident.

To be sold on the market to the best advantage, however, it is desirable to feed some grain or concentrates as, while the gains on grass alone are cheaply made, the cattle do not usually get fat enough for market and must either be turned into the feed lot in the fall or sold as feeders to someone else at a figure which will give him a profit to further fit them for market.

At the Iowa Experiment Station, ten pigs were allowed the run of a clover pasture for sixteen weeks and they were fed corn in connection with the clover, consuming 416 pounds of corn to 100 pounds gain. An acre pasture of clover under these conditions produced 400 pounds pork, a good argument in favor of clover. Timothy under similar conditions produced 278 pounds of pork. Ten pigs on this pasture consumed 451 pounds of corn per 100 pounds' gain. Hogs on clover made 87 per cent more rapid gains than those fed expensive concentrates in connection with corn in the dry lot, 30 per cent more rapid gains than the lot on timothy pasture and fed corn as a grain ration.

Rape may be harvested with live stock by grazing it off where it is grown. Cattle, sheep and swine may all be used, but sheep have the highest adaptation for it, as when they graze upon it there is practically no waste. When swine graze on rape they should get a supplement of other food. Sheep may or not be given such a supplement according to the object of the owner. Sheep will fatten in good shape on rape without grain, but if fed a substantial grain ration when thus grazed, they will add just as much fertility to the soil. An acre of rape should furnish from 200 to 300 pounds of mutton, and should also increase the value materially of the sheep and lambs grazing upon it, because of the improvement made in their condition.

Rape is practically equal to clover as a forage crop for hogs. It should be used more as a catch crop than as one to be depended upon exclusively for green feed. Sowing rape in the cornfield is becoming quite common, especially where the corn crop is to be harvested by sheep or hogs, a practice that is coming more and more into use and one which is proving to be very profitable in these times of scarcity of labor.

The mistake must not be made, however, to rely altogether on green forage crops, as this will not give satisfactory results. Some grain must be fed in connection with it. Healthier and more vigorous stock will thus be obtained. The pigs should be fed grain twice a day and not more than they will clean up quickly. They will not eat more than about two-thirds as much grain as though they were fed no green feed at all. These facts should convince any hog man that it pays to provide pasture of some kind for swine.

The field pea, may also be harvested with swine in the field after the crop is matured, and with decided profit where the autumns are dry, but the straw is, of course, sacrificed. Peas may be harvested with more profit by sheep because of the relatively large consumption of vines, as well as of grain along with the pods.

In regard to "hogging down corn" it may be said that the returns are equally as good in pork produced where hogs gather their own feed as where they are hand fed in the usual way. The hogs develop good constitution and considerable strength and are in the best of condition for quick fattening feeds after coming out of the field. When properly handled the hogs harvest the crop without waste, even cleaning up many of the weeds in the field. All in all the green forage crops furnish the most feasible way of obtaining very rapid and profitable gains with all classes of live stock and should be used much more than they are being used at present.

The stockman who does not emphasize the value of succulence in the ration and who does not utilize to the fullest extent rich pastures and forage crops creates for himself a tremendous handicap as compared with the individual who understands the value of these crops. It will surprise many of our readers to be told that 100 pounds of gain could be made at a cost of $1.60 on yearling steers running in pasture, and that even two-year-old steers gained 100 pounds at a cost approximating $2. per 100 pounds.

Tractor Show at Madison.

THE WISCONSIN FARMER again calls especial attention to the tractor demonstration at Madison, September 4th to 8th. In this issue will be found information concerning this show, and also interesting and valuable facts concerning several makes of tractors and accessories.

The writer was privileged to visit the tractor demonstration at Cedar Rapids last week. President J. B. Bartholomew and General Manager A. E. Hildebrand of the National Tractor Circuit Association were present at Cedar Rapids and expressed great interest in the show to be held in Madison. Cedar Rapids had its first tractor demonstration this week and it was a good one, and if the Iowa demonstration is any sample of what we may expect to see at Madison, certainly our readers will not want to miss it.

The plowing demonstrations given daily are certainly an inspiration and no one can understand just how interesting this sight is unless he is present to see it.

The Wisconsin Farmer will have a tent on the tractor grounds and our readers are invited to call and make themselves at home.

Why Fence Posts Decay.

THE annual cost of replacing decayed fence posts in this country runs into many millions of dollars. In fact, the cost is so great that every farmer knows from experience that it is a constant drain on his income. With the exception of two or three kinds of wood, which are scarce and practically impossible to obtain in a few sections, fence posts do not last to exceed from four to eight years, and during part of that time they are so poor that the staples pull out very easily, as a result of which constant attention must be given to fences around pastures and other fields enclosing live stock of all kinds. Thus, it is plain to be seen that not only must fence posts be replaced with new ones every few years, but repairs must be made almost constantly.

The cause of the short life of fence posts is decay of the wood, brought about by two classes of low plants—bacteria and fungi. Both classes are microscopic in size and cannot be seen with the naked eye. In their life processes they do not differ essentially from higher plants. For their growth and development they need heat, air and moisture. Remove any one or more of these essentials from wood and decay is impossible. Place a fence post under water so that practically all the air is excluded from the wood and it will remain undecayed for centuries, as has been demonstrated many times.

Similarly, if wood is kept perfectly dry, decay is also greatly retarded. If bacteria and fungi, the agents of decay, cannot get moisture they cannot grow and multiply. In a similar manner, if the temperature can be kept below that at which these plants are capable of living, decay is again arrested, even if the other agencies—air and moisture—are present. This is known from the fact that posts decay but slowly in cold latitudes.

We all know that it is impossible to control temperature, moisture, and air in the soil, but we have called attention to these things to impress upon the minds of our readers what it is that causes our fence posts to decay, so they may more clearly understand how certain wood preservatives that may be forced into the wood greatly retard decay.

The reason why fence posts decay most rapidly at the surface of the ground is because at that point the right amounts of moisture and air are nearly always present during the summer season when the weather is warm. Below the surface, especially in some soils, too much air is replaced in the posts by water for decay to proceed very rapidly, and above the ground there is usually not enough moisture for fungi and bacteria to grow. When these low plants grow, they use the cells of the wood as food and thereby destroy them, the same as the tree itself uses the minerals in the soil and certain elements in the air as food, building them into wood cells and other products. We designate this change, which these lower plants bring about in wood, by the term "decay."

Viewing decay or rot in this light, one can readily understand why seasoning or drying out the posts before setting is beneficial, expelling, as it does, a large amount of moisture from the wood; and also why charring, whitewashing, painting, and creosoting, when done under proper conditions, tend to prevent decay; or, in other words, to preserve the wood.

Why Use Grade Bulls?

ONE OF THE puzzling things to comprehend is the reason why so many farmers use grade bulls. Most intelligent farmers nowadays use the best registered sire they can find to breed their mares; very many of them are also quite particular about the selection of their boars, but when it comes to cattle, anything that will get a calf seems to be the rule. This is true of breeders of beef as well as of dairy cattle. Now why is the grade bull used on cattle when the best pure-bred sires that can be obtained are used on mares and sows? Surely cattle are of as great importance in the economical management of the farm as are hogs and horses. If pure-bred sires are better than grades, and no intelligent man will dispute it, why not use a pure-bred on your cows?

Take steers for example: Suppose a man raises one carload each year and has twenty-five cows from which to raise them. The difference in price between the better class of cattle and the ordinary lot is from seventy-five cents to $1.50 per hundred pounds. Suppose your cattle weigh 900 pounds, at $1 advance over an ordinary load, this means $9 per head or, on twenty-two head, about $200. We believe we are conservative when we say that a load of twenty-two steers sired by a good, pure-bred beef bull will sell for $10 per head more than a load sired by a grade bull. This means $220 a load in additional profit due to the service of a registered sire. A good, pure-bred sire may cost you $150 to $250, but you can use him for several years, and you will get more than the additional money invested in him, as compared with the cost of a grade or scrub bull, back every year. Furthermore, by using registered sires, you can develop a uniform herd and, other things being equal, this uniformity will bring you more money, too.

Take a dairy cow and there is a vast difference in the returns of the herds of pure-breds or high-grades produced by pure-bred bulls, and the herds produced by grade bulls. The extra profits in one year will much more than pay the cost of the pure-bred sire. It is not too much to say that a good dairy sire, with heavy producing dams back of him, will give you daughters that will average 100 pounds of butter fat per year over and above the offspring of a grade sire. His heifers will also sell at a big advance over the heifers produced by a grade bull. They will easily bring from $25 to $50 more than those from a grade bull.

With twenty-five cows you can count on eleven heifers per year, which would mean an additional profit of $275 over and above what heifers from a grade bull would bring. You can buy a good pure-bred bull of one of the dairy breeds at $150 to $200, and if that is true, which it certainly is, you will be making a nice profit each year from the registered sire. In fact, you cannot afford to use grade bulls even if somebody would supply them free of cost. The grade bull is a mighty expensive animal to keep on any farm, no matter whether you raise beef or dairy cattle. The increased yield in butter fat alone from the first cross can be safely estimated at 100 pounds, or $25 per year on the same feed. Surely no farmer can afford to use a grade bull no matter how rich he may be. Think this over and see if it is not to your advantage to use only pure-bred bulls in the future.

Alfalfa Tests in Monroe County.

Report on Experimental Work Taken Up by Commissioner of Agriculture C. P. Norgord Six Years Ago in Wisconsin.

SIX years ago while with the agricultural experiment station, Commissioner Norgord took up the matter of carrying on field experimental work with the Indian school at Tomah. Superintendent Compton kindly agreed to co-operate in carrying out this work and Levi Hancock, superintendent of the farm work, took direct charge. The field tests with alfalfa have been conducted each year. Much valuable information has been obtained and this information has been demonstrated to be of value by continuing the work under actual field conditions and on a large scale.

The methods to be followed in growing alfalfa will vary to some extent according to local conditions of soil and climate. The soils at the Indian school farm at Tomah are the natural sandy loam, fairly fertile and well drained. In the beginning test plots were run in order to test the need of lime and inoculation. Plots without either lime or inoculators; plots with lime, but no inoculation; plots with inoculation, but no lime, and plots with both inoculation and lime were seeded. The results were that the alfalfa was a failure on the plots which received neither lime nor inoculation and a failure also on the plots which received lime, but no inoculation, indicating that inoculation was essential. Inoculation gave material increases in yield, although the alfalfa grew to some extent without it. Several kinds of lime were used, but Mr. Hancock prefers the finely ground limestone and thinks it ought to be applied at from two to four tons to the acre, depending upon the degree of acidity and the fineness of the stone. From the plots for testing inoculation Mr. Hancock obtained the following data:

	Lbs.
First cutting, inoculated plot	2,400
First cutting, uninoculated plot	1,600
Second cutting, inoculated plot	1,600
Second cutting, uninoculated plot	600
Third cutting, inoculated plot	800
Third cutting, uninoculated plot	400

These results convinced Mr. Hancock that inoculation was absolutely necessary for the successful production of alfalfa, and, since liming is essential to maintain thorough inoculation, that it is necessary to apply plenty of lime to correct any acidity.

Many varieties of alfalfa were tested. Montana seed, Kansas and Colorado seed, common and Grimm alfalfa were sown. All of these varieties gave practically the same results with the exception of the Grimm. The southern or southwestern-grown seed gave equally as good growth and production as did the seed from the northwest. The Grimm showed up better than any other variety. Last year Mr. Hancock had about fifteen acres of alfalfa, a splendid stand and free from weeds. This was common alfalfa. In one corner of the field he had about a rod plot of Grimm alfalfa. The severe winter, accompanied with the ice sheet, completely killed out all of the alfalfa with the exception of the small plot of Grimm. This was very good evidence that the Grimm was more resistant to winterkilling than any other variety thus far grown. The chief difficulty with growing the Grimm seems to be that the seed supply is very limited; this last year it was quoted as high as 90 cents a pound, which made it practically prohibitive. Another thing is that it is very difficult to tell the Grimm seed from the ordinary alfalfa seed and unscrupulous dealers are likely to sell common alfalfa seed for Grimm. For the present it seems that we shall be obliged to depend upon the common alfalfa until we have a sufficient supply of genuine Grimm from which we can obtain reliable seed at a more reasonable price.

Mr. Hancock emphasizes the importance of getting the land in proper shape for alfalfa. He thinks that the preparation of the land and the method of seeding it are perhaps the most vital points in producing the crop. He sums up the important steps in preparing the seed bed in this way: Get the land to be seeded to alfalfa as free from weeds as possible. To do this grow to some cultivated crop and keep all weeds down thoroughly, or, if necessary, summer fallow; get the land in a state of high fertility by applying plenty of farmyard manure, plowing under a clover crop or a rye crop. Prepare the seed bed by plowing in the fall and if necessary replow early in the spring. Get the soil thoroughly compact by rolling, harrowing, dragging, or any method that will do the work. Often the spring rains will sufficiently compact the soil that it need not be rolled and thorough harrowing is sufficient, but if the spring rains do not compact the soil it is necessary to roll and a corrugated roller has given the best results at Tomah. This roller not only compacts the soil but it leaves this sandy soil somewhat rough, which will materially assist in preventing blowing and will also provide a better covering for the alfalfa seed.

In sowing the seeder attachment has given the best results. This attachment sows the seed just ahead of the hoes of the drill (a hoe drill is used at Tomah); the hoe covers the seed. No claims or press wheels or other apparatus for covering the seed is used. The land is harrowed ahead of the seeder, but no harrowing is done after the seeder. If the seed bed is rather loose and dry when seeding is done it may be necessary to roll just after seeding. In such cases the corrugated roller is the best implement to use. If necessary to roll after seeding in order to properly cover the seed, the corrugated roller is the best implement to use. Mr. Hancock has used a hay rake to good advantage for this purpose. Never harrow after the seeder, for this tears out more seed than it covers. If the seed is broadcasted instead of drilled in with a seeder attachment the land should be harrowed thoroughly before planting and harrowed at least once after planting. Use the corrugated roller if necessary. Never seed the alfalfa when the soil is wet. The tests at Tomah indicate the best time to seed on soils there is from the 10th to 25th of June and seed without a nurse crop. A fine stand has been obtained when seeded the 18th and 19th of July, but it should never be seeded later and earlier seeding is ordinarily to be preferred, as the later the seeding the greater the chances. Dry weather may occur which will prevent the germination of the seed, as is the case this year, and when the seed does not come up the crop will get such a late start that it will not be able to go through the winter. For these reasons it is important that the seeding be done in June. Late seedings have been tried—from the 10th to 20th of August. Failure has resulted in each case, as the plants are too small to withstand the winter. The reason alfalfa is seeded in June rather than early in the spring is in order that the land may be thoroughly freed from weeds and put in good physical condition so that the alfalfa may have full opportunity to make a rapid growth. Mr. Hancock has tried several ways of handling the soil preceding alfalfa. As a result of his wide experience he prefers to precede the alfalfa with a rye crop, plow the rye under early and deep, roll thoroughly, disk and harrow, and keep the land disked and harrowed until seeding time. By doing this the weed seeds which are turned up in the spring sprout and are killed by the disking and harrowing. The continued disking and harrowing until seeding time will keep all additional weeds killed which germinate before seeding is done. The soil should be kept moist by surface cultivation in order to insure immediate germination. If the soil is allowed to dry out to a depth of several inches the seed may lie in the soil for several weeks after it is planted and sprout so late that the crop will not be able to withstand the winter. After the alfalfa is up it should be carefully observed from time to time and if weeds appear in considerable numbers they should be cut back with a mower before they have made an advanced growth. These weeds can be cut back with very little injury to the alfalfa by setting the sickle bar high. Some alfalfa will be clipped off. The weeds are likely to be troublesome if the weather is dry. Under favorable conditions a crop of one-half ton per acre should be obtained the first year. If the weeds are very numerous in the young alfalfa, so that it has to be cut early, it is better to leave this material on the land than to remove it. Do not mow late in the fall during any year.

If the soil is not naturally very fertile it should be top dressed with manure the first year. Apply from six to eight spreader loads per acre of good manure that does not contain much litter. No crop will return as much profit from the application of manure as will alfalfa and the best time to manure alfalfa is to top dress in the fall or early winter.

The stage at which alfalfa should be cut is of great importance. Cut when the new shoots appear at the base of the plant and pay no attention to the bloom—cut whether it blooms or not. If cutting is delayed until the young shoots have made considerable growth these young shoots will be put back and the crop will be delayed at least two weeks and the yield may be decreased by half. The crop may be clipped as close to the surface as the height of the young shoots will permit. The important thing to learn is to keep a lookout for the young shoots and to let this be a guide for cutting. When the young shoots have made their appearance and before they are very far advanced the crop should be harvested.

Mr. Hancock has given special attention to handling the hay after the crop is harvested and as a result of his experiments he has adopted the following method. Leave the alfalfa in the swath just long enough for it to thoroughly wilt and not until the leaves are dry, then rake and put in cocks. The cocks should contain from seventy-five to 100 pounds of hay. The cocks should have a small base and be built fairly high. Cover these with hay caps. These hay caps are made by the Indian boys at the school and cost for material from 17 cents to 18 cents each. Good, heavy, unbleached muslin has given better results than the canvas. The caps are forty to forty-eight inches square and will last for many years when properly cared for. The caps should be taken from the cocks when the hay is loaded and after they are thoroughly dry stored in sugar barrels. Cover these barrels thoroughly so that the mice and rats will not be able to get in.

After the hay is placed in cocks it should be left in the field from two to three days if the weather is good. If rains occur it may be necessary to leave in the field longer and to turn the cocks over occasionally. In turning over the cocks two men or two boys can do much better work and accomplish much more than one man or one boy, as by standing on either side of the cock it may be turned over completely at one simple operation. After the hay is left in the cocks until well cured it should be taken to the barns. Curing should be done in the field and then it will not spoil when placed in the barn. Green hay which has heated after storage does in no wise compare with hay that is well cured in the cock before storage.

Many farmers have undertaken to grow alfalfa on the sandy soils around Tomah. Some of them have succeeded, many of them have become discouraged. The unquestionable success that Mr. Hancock has had with growing this crop indicates that alfalfa can be grown and grown profitably and that good stands and good yields can be obtained practically every year. But due attention must be given to certain details. These details are not difficult and can be thoroughly attended to by any grower. It is hoped that Mr. Hancock's experience of many years may be made of material practical value to the people in Monroe county who are interested in growing alfalfa on the more sandy types of soils.

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The Caloric way is Nature's way—most sensible, economical and healthful. No unsightly, expensive pipes and flues to cause fire danger, waste heat and clutter the cellar. The absence of pipes prevents overheating the cellar, hence produce is not spoiled. Its great heat radiation will save you at least 35% of your fuel.

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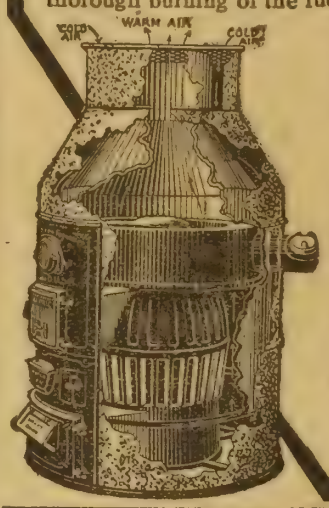
The Original Patented Pipeless Furnace

There are three reasons for this big saving. 1st, The warm air reaches your rooms by nature's direct method of circulation and there are no pipes to absorb or resist the heat. 2nd, Our double ribbed firepot and specially patented combustion chamber produce perfect combustion, thus insuring thorough burning of the fuel and a much greater heating surface. 3rd, Our specially patented triple casing, insulated with two air spaces, prevents any heat from radiating into the basement. This is the only successful, patented, one-register furnace and no other furnace can claim these three big features.



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Put the Caloric Pipeless Furnace in your house and give it a fair trial. Its successful operation is guaranteed and we'll make right any defect in material or workmanship. Our firepot is guaranteed for five years.

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Good Word For the Morgan Horse.

To the Editor:—Please allow me just a little space in your most excellent paper. There are so many good things to write about that I wish to add my mite, and it will be in praise of the Morgan horse. I have raised them for twenty years and have known of them for a considerably longer time, so I speak from experience as well as gathered knowledge.

A horse like the Morgan with so many good qualities is badly neglected for something larger or faster, but not better. The first thing asked about a draft horse is: How big is he and, if of road blood, how fast is he? We have them big enough and fast enough, but if you want the genuine horse it is found in the Morgan.

I know of a man who had a very large horse and he got hold of a Morgan colt. When the colt was four years old he would not put the harness on it on account of its being so small. Finally he concluded to try plowing corn a half day at a time and to his surprise the colt went into the field, did the work required and came in playing and ready for the balance of the day and for the days following. I was called to this same place, and found this same Morgan on the evener with horses that looked twice as large and when they went to the barn the Morgan was saddled and sent to round up a bunch of cattle, while the others stood at a manger of hay. When we were through with the work there was a trip to be made to town and the Morgan made the trip. The owner told me that when a trip was made to town under the saddle he had known his boy to go across lots and jump the fences just for amusement. I afterward wanted to buy this horse for a banker and the owner would not so much as put a price on her, but said, "Bailey, do you want me to be kicked out, for that is what I would get if I sold the Morgan."

This is only one out of many I could tell of their good qualities and add to that the saying, "Behold, how he loved him." And these are only grade Morgan crossed on common stock. It matters but little whether you cross a draft or road or fancy horse, the Morgan always predominates, or, if you please, the finishing touch is always from the Morgan side, as they possess the greatest store of prepotency of any horse ever sired in America. And when you come to an old-time Morgan possessing a large store of old Justin's blood, and the more the better, you have beauty and style and finish and a horse, too, that will be a good one at twenty-five or thirty.

How would you like, kind reader, to own a horse that you could throw off his everyday work harness, throw on the saddle and go twelve and a half miles and back in 1:40 and then be an extra good one at twenty years old? Suppose you cross a thoroughbred with an 1-800-pound drafter, would you be afraid to road him or pull him all day? And if the roads were so bad that the Ford could not go, he would be the horse to make the trip. If the farmers in some locality would combine and cross their largest and best dams with a Morgan you would in a few years have the best horse center in the country, for I have known just such to sell as high as $750 a team. Then you would get a large per cent of vitality that the big horse is shy of.

But, says someone, the tractor for the farm and the car for the road; we don't have so much need for the horse. But we need a better horse. I know the cry is, get them big and fat and sell them. I knew a man going to a market sale with a horse and as he passed his neighbor he called to him and asked what he thought the horse would bring. The answer came back, "$200." "But," says the owner (for well he knew what he had) "what is he really worth?" "Ten dollars," was the neighbor's reply. I have seen many such cases, but is it to be wondered at when there is so much cry about imported stock? Why, bless you, America does not have to take off her hat to any nation when it comes to horses, and with the over-water nations at war now is the time for hitting the iron and hitting it while it is hot. Go at it with an understanding and produce a better horse. Pour oil on the troubled waters and produce a horse with better vitality and endurance.

There are scores of veterinarians turned out every year to look after and care for sick and ailing horses and every year you find more dead ones than in the past. If the real truth was brought out it would be largely traced to a loss of vitality and in my estimation it is growing less in the common horse every year. Then why not go back and get a fusion of the good old Morgan and put some of that genuine old-fashioned horse into the breeding and do away with a multitude of ills? I know it can be done. Quit breeding ills and ailments and get some genuine horses that the old New Englanders are so proud of and have held to these many, many years. Long may the Morgan live, until the younger generations and the present and future generations may know him. His starting point was shortly after the revolutionary war and he, being endowed with that true American spirit, I sometimes think that every barn that contains a pure-bred, old-fashioned Morgan ought to be decorated with the Stars and Stripes.

If more interest was taken in the betterment of our best friend in order to get more of that good quality, style and vitality it would be far better in the time to come, for we will always have plenty of use for him. Why not have the best first, last and always?

J. E. Bailey.

Andrew Boss, University Farm, St. Paul, urges early plowing to increase yields. He says repeated trials have shown that early fall plowing gives much better conditions for a crop of grain the following year than late plowing gives. While August is a dry, hot month and other farm work presses, it is advisable to do as much plowing as possible. On clean land no further treatment is needed. On weedy land the August plowing should be followed by occasional disking or harrowing, or by replowing in October. Such treatment destroys many of the weeds and pulverizes the soil, so that good supplies of plant food are available during the next season. In addition, it gives a longer plowing season and a chance to do better work. Early plowing and good plowing are important steps in getting better than the average yield.

Twice What You Require in the Hudson Super-Six

Records Prove Power and Endurance

What Power is Wanted?

THE HUDSON SUPER-SIX is a light car, as a modern fine car must be. In ordinary driving 40 horsepower would be ample. That's what motors of this size heretofore developed.

But the Super-Six—our patented motor—delivers 76 h. p. Yet we add no size, no cylinders. We don't increase fuel consumption. We have simply lessened vibration, reducing friction to almost nil. And we thus save the power that was wasted.

That extra reserve power means much on hills. It means much in flexibility and in quick response. It saves much changing of gears. Would you want an engine of equal size which lacked it?

What Speed is Wanted?

The Super-Six speed records—quoted below—have never been matched by a stock car. You perhaps don't want such speed. We made those records to prove the motor's supremacy. Also to prove its endurance.

But they mean that in ordinary driving you will run the Super-Six at half load. And that means a long-lived motor.

What Endurance is Wanted?

Nobody knows how long a high-grade modern car will last. All we can do is to compare the endurance by extreme and prodigious tests.

A Super-Six stock chassis was driven 1819 miles in 24 hours, at an average speed of 75.8 miles per hour. The same car previously had been driven 2000 miles at average speed exceeding 80 miles an hour. No other car ever has matched that endurance test. It would take five years of pretty hard driving to equal those top-pace strains.

But this Super-Six motor, after all those tests, showed no appreciable wear whatever. So the Super-Six is likely to last years longer than any man expects.

What Luxury is Wanted?

You find in the Super-Six all the beauty and luxury that we know how to put in a car. You find a luxury of motion—due to lack of vibration—which you never before have experienced.

You will find fine engineering, with all the satisfaction that comes of it. For this is the crowning effort of our great engineering staff, headed by Howard E. Coffin.

You will find pride of ownership which comes from owning a car of the Hudson repute. A car which outrivals other cars in performance. A motor which by every test holds unquestioned supremacy.

Where else can you find what you find in the Super-Six? Or anywhere near what you find here?

You will find fine cars and great cars, according to former standards. But the Super-Six invention has set some new standards. And Hudson controls that by patent.

Think of these things when you buy a new car. Prove up the differences by road comparison. If you are buying a fine car, and buying to keep, you don't want a second-place car.

Some Hudson Records

All made under American Automobile Association supervision by a certified stock car or stock chassis, and excelling all former stock cars in these tests.

100 miles in 80 min., 21.4 sec., averaging *74.67 miles per hour* for a 7-passenger touring car with driver and passenger.

75.69 miles in one hour with driver and passenger in a 7-passenger touring car.

Standing start to *50 miles* an hour in *16.2 sec.*

One mile at the rate of *102.53 miles* per hour.

1819 miles in 24 hours at average speed of *75.8 miles* per hour.

Phaeton, 7-passenger	$1475	Limousine	$2750
Roadster, 2-passenger	1475	Limousine Landaulet	2850
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HUDSON SUPER SIX

HUDSON MOTOR CAR COMPANY
DETROIT, MICHIGAN

MANY USES FOR TRACTOR.

Dane County, Wisconsin, Farmer Finds It Increases Efficiency and at the Small Operating Cost of 25 Cents an Acre, Based on 10 Cent Gasoline—Experience on a Small Farm.

EFFICIENCY is the cry on the modern farm today. Increasing costs of production have turned the eyes of the farmers to the more economic methods with the result that there is scarcely a farmer in Wisconsin today who has not had his interest more or less aroused in the farm tractor. This is true not only with operators of the large farms where there is much heavy work to do during the whole crop season but it is also true with the dairy farmers with small acreage who see in the tractor a machine that can be put to many uses aside from plowing, disking and harrowing in order to increase the farm efficiency and reduce the production costs. What can the farm tractor do for me; how will it increase farm profits in anything like an appreciable degree; what is it doing in farm affairs and how will it lessen my work are the questions usually asked. The dairy farmer who has only an eighty under cultivation is especially anxious to know how the tractor will benefit him while the large farm operator who is thinking of substituting motor for horse power desires to see where the saving in horse labor is to come in. Prediction, therefore, makes scant appeal to these men, so it is necessary to look to the men in Wisconsin who are handling farm tractors day in and day out, under ordinary conditions and upon ordinary, everyday farms, for the answers.

MR. BICKLEY FOUND THE TRACTOR SERVICEABLE FOR PULLING THE BINDER, THE SPREADER, ETC.

The experience of J. C. Bickley with a 5-12 tractor on the farm of his father, J. J. Bickley, near Stoughton, in Dane county, answers the questions of many in Wisconsin whose interest has been aroused. After operating a tractor three seasons Mr. Bickley has found that it has given him splendid service and a more enthusiastic tractor operator could hardly be found. As Mr. Bickley expresses it, "I could hardly get along now without this tractor," which he says works better this spring than it has ever worked. The expense for repairs has been practically nothing and he feels certain that its cost of operation has been much less than horse labor would have cost him, in addition to saving him much time that every reader knows is required each morning to get horses ready for the day's work.

The situation that confronted Mr. Bickley three years ago was to get his crops in and his tobacco land prepared with the least delay and without additional horse labor. Four horses were kept permanently on the farm at that time, but to do the work laid out it would have been necessary to either buy more horses or depend upon neighbors to help him out. So he decided on the farm tractor. These four horses are still on the farm today, as there is considerable light work for which they are needed, but the saving in horse labor he figures results from not having to buy additional horses or pay a high cost per day for extra teams and men.

One of the first tasks was the preparation of his corn land and he soon found that he could break old ground seven inches deep, using a gang with two fourteen-inch bottoms, at the rate of about six acres in eight hours. On several occasions he has plowed six and a half acres to the depth of seven inches in eight and a half hours and our readers may calculate for themselves how much horse labor would have been required to do a similar amount of work. Every man will concede that it would have taken at least two five-horse teams drawing two-bottom gangs each and to do this the horses would have had to step right along all day. In other words, ten horses would have been required to do what this tractor did and it would have been a hard, steady pull on the horses. In hot weather the horses could not cover nearly so much area and the saving on the horses by the tractor relieving them of such heavy work is one of its pleasing features to Mr. Bickley, who, like every horse lover, has his feelings hurt when he is obliged to push them hard.

MR. BICKLEY'S TRACTOR, DRAWING TWO FOURTEEN-INCH BOTTOMS, DOES THE WORK OF TEN HORSES IN PLOWING SEVEN INCHES DEEP.

After the plowing Mr. Bickley turns his attention to disking and harrowing old ground and has discovered that with two eight-foot disk harrows he can do splendid work and do it rapidly. This cuts a strip sixteen feet wide every trip across the field and our readers can see at a glance the saving in horse labor here. On medium work Mr. Bickley has operated this tractor for an average of 25 cents an acre for gasoline, it requiring about two and a half gallons of fuel for each acre. This cost he estimates on the basis of 10-cent gasoline, but, of course, the cost would increase proportionately per acre as the price of gasoline increased. The cost of lubricating oil is very small; in fact, so small that Mr. Bickley has kept little data along this line, having figured out for himself long ago that the tractor was an inexpensive machine for his purposes. When it came to plowing Mr. Bickley found that on the 5-12 two bottoms were far more practicable than the three, although he has used three bottoms to good advantage in preparing his ground for oats. He has never broken any native sod with this tractor, but during the 1915 season he experimented with a 7-20 on several occasions and found it did splendid work in sod ground with two bottoms. He believes this type would be far more practicable on a farm more rolling than his or where the soil was heavier, making it necessary to use three bottoms and possibly under-cutting disks. The Bickley farm is typical of thousands of acres in Wisconsin and his experience answers many of the queries of the small farm owner who fears he has not enough land under the plow to warrant the purchase of a tractor, but who would like to have one as an efficiency proposition. There are only 100 acres in this farm, eighty of which is under cultivation and twenty in pasture. Ten acres are usually in tobacco and the remaining seventy in small grains, corn and hay. The soil is a black loam top with a clay subsoil, typical of thousands of acres in the state, and an occasional "niggerhead" that sticks its nose in the way has not interfered to any extent with tractor operations. There is a slope through the center which makes it necessary to plow crosswise and the longest stretch in plowing without a turn is forty-three rods. There is a dairy herd of eleven cows on the farm.

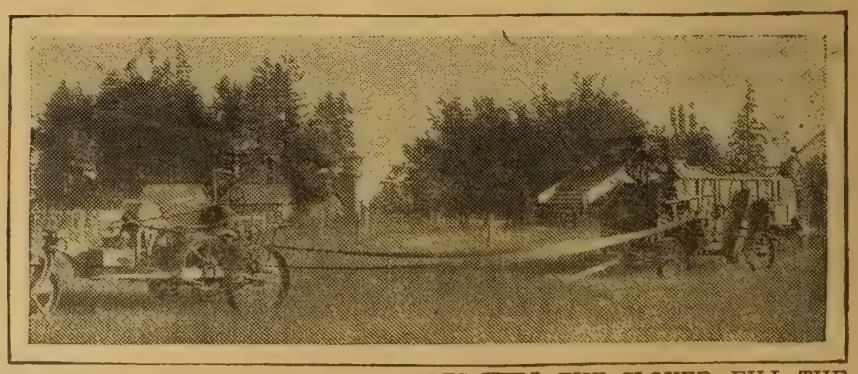
The greatest difficulty seems to be in adapting the tractor to the needs of the small farm, but this Mr. Bickley accomplishes by using it in other operations aside from the field work. Success with small tractors he feels depends to a great extent upon the owner and operator and his experience with gas engines prior to his owning a tractor enabled him to handle his machine, no doubt, a little better than the man who has to learn all these things after buying his tractor. However, his success with it has aroused an interest in his own neighborhood that will probably result in tractors going onto several neighboring farms this season.

One objection heard from the farmer with short fields is the frequency of turns, but Bickley has found that he can turn wherever a four-horse team with two bottoms can turn and he guarantees to make any turn that a three-horse team with a sulky makes. It has been an easy matter for him to get within ten feet of the fence.

Plowing and spring operations concluded, Mr. Bickley turns his tractor to other uses, among which is dragging with a split-log drag the road between his farm and town. For this purpose he finds it gives good service at low cost.

The horses have also been relieved of pulling the corn binder which work has been transferred to the tractor. Nothing is prettier working than a tractor drawing a binder when all is working well and Mr. Bickley has helped neighbors out with their binders when their horses had given out. One of his neighbors last year had a binder which the horses couldn't pull. The discharge arms bound tight. With that steady pull the tractor affords it worked perfectly all day. The binder not only run hard but when the bundles were ready to be thrown out it choked and the horses would naturally halt. But not so with the tractor which kept grinding right away all day

PLOWING AND HARROWING IN THE SAME OPERATION WITH THE TRACTOR.



FOR BELT WORK THE TRACTOR HELPS HULL THE CLOVER, FILL THE SILO, ETC.

without any rest and with only an occasional filling of the oil cup.

Filled with a wet, heavy manure Mr. Bickley hauled his spreader, hitched to the tractor, over a harrowed, well-pulverized field that had been plowed five inches deep. Our readers who have had such experience with horses can realize what a pull this would have been on the horses, but the tractor went through easily and the spreader was an old one and hard running at the best. At silo time it is used in filling the silo and has given good results in all forms of belt work. It is not surprising that he is pleased.

Madison Ready For Tractor Show

Demonstration September 4th-8th Winds Up 1916 Tractor Show Season---Plans For Entertaining Those Who Visit Madison.

PLANS have been completed in practically every detail for the Wisconsin Farm Tractor Demonstration at Madison the first week in September, beginning Monday, September 4th, and indications are that this, the last of the eight national shows this year, will be among the best from the point of interest and attendance. There will be a total of about eighty-five exhibitors of farm tractors and accessories. No effort has been spared locally to make the demonstration a decided success.

Every type and kind of tractor will be on exhibit and will be seen in actual operation at field work and the farmer who has had his interest aroused in the least in this kind of motive power for the farm can hardly afford to miss this event. It will afford the opportunity to see the various types of tractors in actual use; in the service to which they would be subjected daily on the farm and the plowing grounds arranged by the Madison Rotary Club, under the auspices of which the demonstration will be held, are all that might be desired. There are approximately 800 acres of plow land and the headquarters and exhibit tents will be just across the road from a good part of it. This is important to the visitor, as it is possible to keep close tab on the exhibits and the field work at the same time and the farthest piece of plow land is less than a mile and a half from headquarters grounds. There is one field of 175 acres of gently rolling land seeded to oats and barley; eighty acres of very heavy alsike clover sod also gently rolling, and other fields that range between sod and heavy quack grass sod. There are also 200 acres recently drained which will require a breaking plow to turn and, as there is some 7,000,000 acres of this type of soil in Wisconsin, it will be interesting to the visitors to see it plowed. The selection of these different types of land followed the desire to make this a Wisconsin event and it will, therefore, be of more benefit to the farmer than if the tractors were working under one condition. As it will be at this demonstration, they will be working under conditions at one time or another that exist on the farms of the state and thousands of farmers are expected during the week.

The official program has just been announced by Mr. F. M. White, manager of the show, and in brief is as follows:

Monday, Sept. 4—Opening Day.
Tuesday, Sept. 5—Merchants' Day.
Wednesday, Sept. 6—Implement and Vehicle Dealers' Day.
Thursday, Sept. 7—Road Builders' Day.
Friday, Sept. 8—Wisconsin Drainage Association Day.

The forenoon of each day from 8:00 to 11:30 o'clock will be devoted to private demonstrations by the exhibitors and on each afternoon from 1:00 to 3:00 o'clock there will be the public plowing demonstrations. The remainder of the days will be devoted to inspection of the tractors and accessories on exhibit and all these will be grouped about the headquarters grounds on the shore of Lake Monona, just across from the city and accessible by either boat, street car or auto busses and jitneys. The grounds are ideally located and boats accommodating 1,200 persons an hour will be operated continually across the lake at a fare of 15 cents per person. The street car company expects to have its extension to the corner of the grounds completed and arrangements have been made for 300 jitneys and automobile busses at a fare of 25 cents per person.

Madison is leaving no stone unturned to entertain the great crowds that are expected and on each night at 8 o'clock there will be free band concerts on the lawn of capitol square, surrounding the new state capitol which is now almost completed. On Wednesday night, which has been set aside as "Venetian night," there will be a monster pageant on the lakes with fireworks and music, all free of cost. Lake boats, sail boats, yachts, etc., will be lighted with colored lights and lanterns and drawn through the lakes in true Venetian style and this entertainment in itself should attract thousands to the city on that evening. Free rest rooms have been arranged for the women and children and the committee on hotels assures rooms for everyone, as the entire city has opened their homes to the visitors with rooms at nominal charges. These rooms will be assigned from headquarters of the committee at the Park hotel in the city or at demonstration headquarters on the grounds and visitors are invited to call on this committee on arrival and arrange for their accommodations. There will be accommodations on the grounds for those who wish their meals there.

Another free entertainment for the visitors will be the free motion pictures every forenoon at the Fuller, Grand and Majestic theaters. They will be started early and those who do not wish to go to the grounds in the morning may see these pictures free by dropping in at any time before noon. The committees have also arranged for special guides to conduct visitors at all hours through the new state capitol, one of the finest in America and just being completed at a cost of $7,000,000. Capitol square will be especially decorated at night and the building will be aglow with light in addition to the lighting effect on the big dome, produced by powerful searchlights.

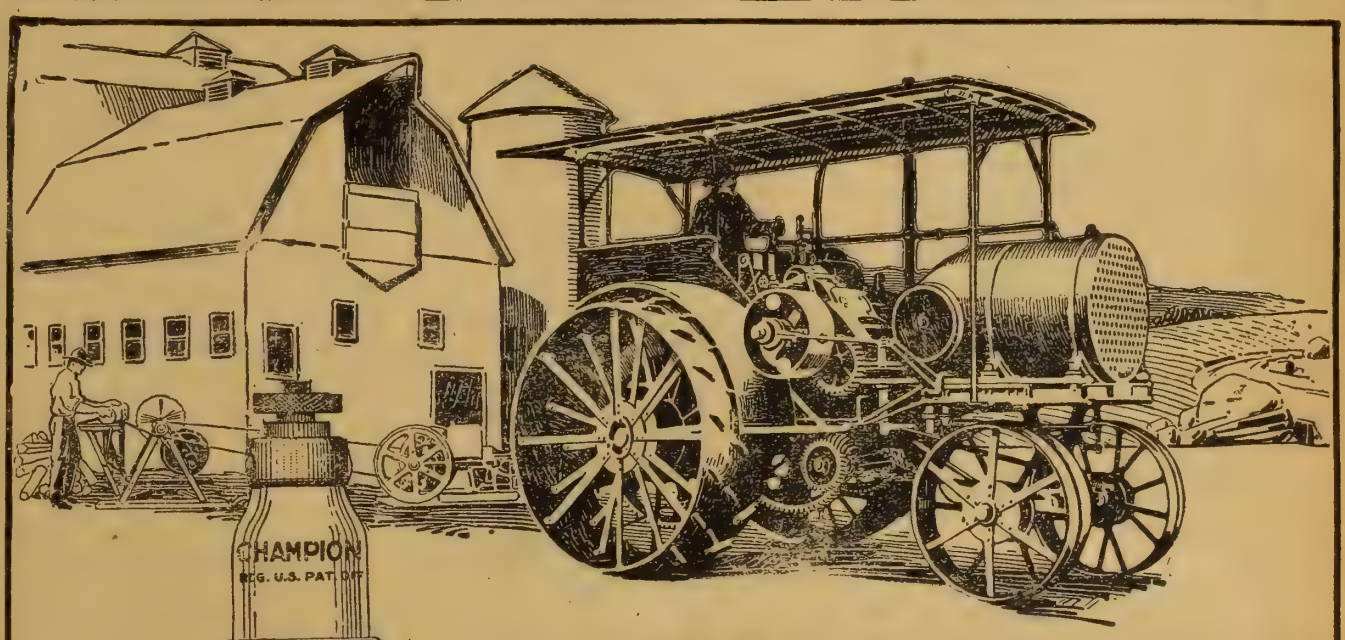
On the demonstration grounds there will be many interesting exhibits aside from tractors. For instance, the farmer interested in lighting and water supply systems will find these on exhibit; on road builders' day the state highway commission will construct a stretch of road; on drainage day special attention will be given to the tractor on drained lands; the use of explosives in stumping land will be explained and shown, and the accessory exhibit will occupy a huge tent at the head of the exhibit grounds.

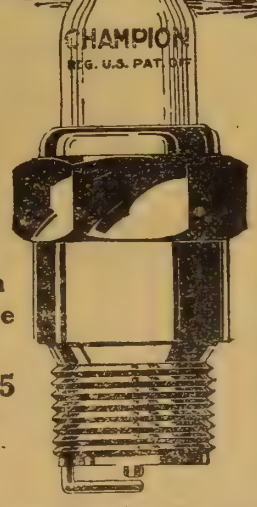
Thousands are expected to attend in their automobiles and special parking space has been arranged for and set aside on the demonstration grounds so that cars may be cared for safely. Everything points to a very successful and well-attended demonstration.

The Wisconsin Live Stock Breeders' Association has an exhibit at the various county fairs showing the value of raising blooded stock. The exhibit contains, in adjoining stalls, fine specimens of pedigreed stock with all the fine points that delight the breeder and spindle-legged scrubs which serve as horrible examples. Beef and dairy cattle and hogs are shown.

Wisconsin crop reports showing combined condition of all crops August 1st, shows this state to be in the 100 per cent of the ten-year average class. The only other states of the grain belt which make a 100 per cent showing are Iowa and Nebraska when splendid improvement was made in July in the corn.

Mow the tall weeds and summer grasses in the orchard, allowing them to lie as a mulch under the trees.





Champion Heavy Stone 7/8-18 Price $1.25

The following Manufacturers Are Equiping their Tractors with Champions.

Allis Chalmers Co.	Milwaukee, Wis.
Aultman & Taylor Mchy. Co.	Mansfield, Ohio
Bates Machine Co.	Joliet, Ill.
Buckeye Mfg. Co.	Anderson, Ind.
Buckeye Traction Ditcher Co.	Findlay, Ohio
Bull Tractor Co.	Minneapolis, Minn.
Bulkley-Rider Tractor Corp.	Los Angeles, Calif.
J. I. Case Tractor Mfg. Co.	Racine, Wisconsin
Central Locomotive Car Wks.	Chicago, Ill.
Common Sense Gas Tract. Co.	Minneapolis, Minn.
Denning Tractor Co.	Cedar Rapids, Ia.
Dill Tractor Mfg. Co.	Harrisburg, Ark.
Eagle Mfg. Co.	Appleton, Wisc.
Electric Wheel Co.	Quincy, Ill.
Emerson-Brantingham Co.	Minneapolis, Minn.
Fairbanks, Morse & Co.	Chicago, Ill.
Fairmont Machine Co.	Fairmont, Minn.
Federal Bridge & Struct. Co.	Waukesha, Wisc.
Gray Tractor Co.	Minneapolis, Minn.
Happy Farmer Tractor Co.	Minneapolis, Minn.
Holt Mfg. Co.	Peoria, Ill.
International Harv. Co.	Chicago, Ill.
Kinnard-Haines Co	Minneapolis, Minn.
Lawter Tractor Co.	St. Marys, Ohio
Lion Tractor Co.	Minneapolis, Minn.
Minneapolis Steel & Mchy. Co.	Minneapolis, Minn.
Peoria Tractor Co.	Peoria, Ill.
Red Wing Motor Co.	Red Wing, Minn.
Finley P. Mount, Rec'r M. Rumley Co.	LaPorte, Ind.
Toro Motor Co.	Minneapolis, Minn.
Wallis Tractor Co.	Racine, Wisc.
Waterloo Gas. Engine Co.	Waterloo, Iowa
Wilcox Motor Car Co.	Minneapolis, Minn.

Champion
"TOLEDO MADE FOR THE WHOLE WORLD'S TRADE"
Dependable Spark Plugs

Give Your Machinery a Chance to Make Good

Farm tractors and Stationary Engines must stand up under a taxing grind from dawn till darkness—day after day.

Farm machinery that stalls or is only partly efficient is always annoying and frequently causes a serious money loss. Investigation shows that faulty spark plugs are often at the bottom of such trouble.

Champion Spark Plugs *can't* go wrong. They bring out the best your engine has—and put an extra "punch" and "go" into it.

And the countless explosions to which they are exposed do not crack or weaken Champions. They "stand the pace" unflinchingly—and never fail to deliver their sparks.

It is such reliability—such super-endurance—such all round ability to "produce" that has made Champions stand out supreme.

Four out of five of the stationary engines and tractors built in this country are now equipped by their makers with Champion Spark Plugs—a striking testimonial to Champion efficiency.

Be sure and get Champions when you replace *your* spark plugs.

Champion Spark Plug Company

511 Avondale Avenue — Toledo, Ohio

Make Your Farm Pay Larger Dividends

By means of a well conducted game farm you can greatly increase the cash return from your land.

Game farming is profitable for many reasons—the chief of them being that the demand for game birds and for eggs is much greater than the supply.

A game farm may be made to pay not only by the sale of birds and eggs but also, if you wish, by leasing the right to hunt over your land to sportsmen who will be glad to pay for the privilege.

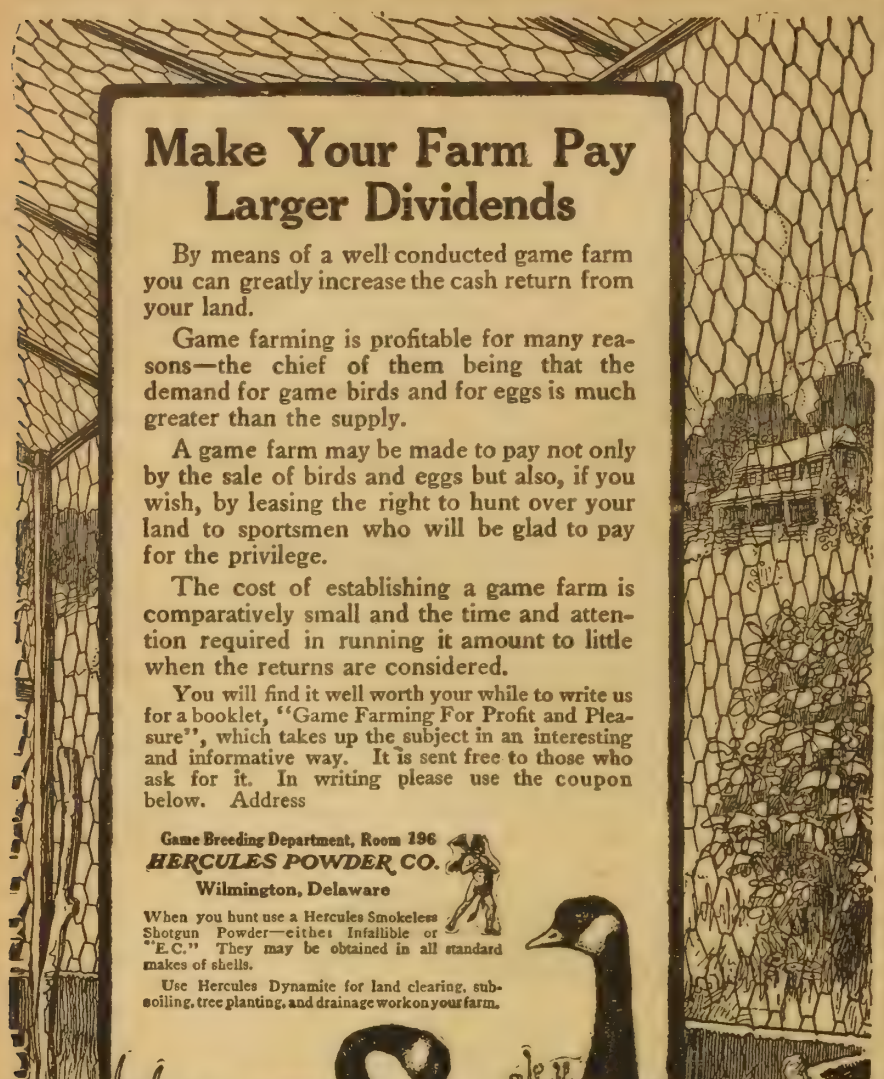
The cost of establishing a game farm is comparatively small and the time and attention required in running it amount to little when the returns are considered.

You will find it well worth your while to write us for a booklet, "Game Farming For Profit and Pleasure", which takes up the subject in an interesting and informative way. It is sent free to those who ask for it. In writing please use the coupon below. Address

Game Breeding Department, Room 196
HERCULES POWDER CO.
Wilmington, Delaware

When you hunt use a Hercules Smokeless Shotgun Powder—either Infallible or "E.C." They may be obtained in all standard makes of shells.

Use Hercules Dynamite for land clearing, subsoiling, tree planting, and drainage work on your farm.



Game Breeding Dep't., Room 196
Hercules Powder Co., Wilmington, Del.

Gentlemen:—Please send me a copy of "Game Farming for Profit and Pleasure". I am interested in game breeding from the standpoint of

---

Name ---

Address ---

EAGLE Safety and Service

Buy an EAGLE Ensilage Cutter first because the perfect control and EAGLE Safety Knife Head make it safe. **No danger of long delays and serious accidents** at silo filling time when hours lost mean dollars lost.

Buy an EAGLE because its non-winding, powerful-gripping feed rolls give far greater feeding capacity. Its positive roller-chain-driven blower does not clog and the whole machine is built to stand the work. In a word

EAGLE means SERVICE

Long Feed Table, large feed opening, four knives, four edged cutting bar, safety cylinder head, safety reverse lever, powerful non-clogging blower and easy adjustment for different length cuts. No belt slippage.

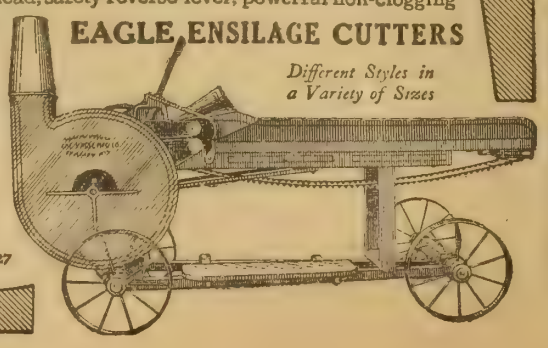
You will find many other special features in these clean built, clean cutting, compact EAGLE Cutters.

Write Today for Catalog.

EAGLE MFG. CO.
702 WINNEBAGO STREET
APPLETON, WIS.

EAGLE ENSILAGE CUTTERS

Different Styles in a Variety of Sizes



CURRENT EVENTS

PRESIDENT WILSON was making every possible effort the first of the week to avert the threatened rail strike which, for a time, bade fair to tie up every train on 1,285 railroad lines of the country, affecting 400,000 men. Frequent conferences are being held at Washington between the president and members of the railroad brotherhoods and railroad directors and managers, the president trying to arbitrate the differences. The men threatened to strike for an eight-hour day and "time and a half" for overtime. The railroad employers were willing to make some concessions, but not all, and for a few days it appeared as though practically every line in the country would be tied up, crippling industry more seriously than anything else, short of war, could possibly do, just at the time of the year when big crops are to be moved and the railroads play a most important part in our national prosperity. It is expected that congressional action will be taken shortly to protect the public's rights in such an emergency and to prevent a repetition of the situation, which is serious in the extreme.

CHARLES E. HUGHES, republican nominee for the presidency, continued his western tour last week, having passed out of the grain belt and traveled into the Pacific Northwest. He made a very favorable impression here in the central West, exerting himself in particular in North Dakota, where it is rumored that he is hopeful of securing the support of the Farmers' Nonpartisan League, recently organized. He delivered notable speeches last week in Spokane, Portland, Seattle and Tacoma. His views on war in general and American preparedness in particular were expressed in this manner: "A nation must be ready for every emergency. We are not militarists. I cannot but be amused at some of the bogies my good friends conjure up when we speak on that subject. There is no reason why we should not be prepared. There is no reason why we should invite disrespect and contempt. Reasonable preparedness is simply national common sense. I confess I do not like the way the present administration has dealt with this matter. It learned its own mind too late, and even then wasn't sure of it."

THE anti-Teutonic allies continued to make good progress last week, the Russians harrying the Austrians in Galicia and the British and French making big dents in the German lines in northern France. King George, of England, President Poincare, of France, and the German kaiser visiting their respective battle fronts during the week and exhorted their men to renewed efforts. The allies' bombardment of the German trenches continues to be fearful, as many as 90,000 British shells being dropped on the German lines in an hour, the average for one twenty-four-hour period being more than 1,000,000 shells. Naturally, the resultant loss of life is terrific, although the gains are measured in yards and feet. The allies appear to be slowly, but surely, pushing the Germans back, having the advantage of men and munitions for the first time in recent weeks.

A BOND issue of $130,000,000 to meet extraordinary government expenses during the Mexican crisis has been recommended to congress by democratic leaders of the senate finance committee. In addition to this enormous amount it is stated that $86,000,000 more will be required if the state troops are kept in service until January, 1917. This bond issue will be in addition to the immense sum anticipated from the internal revenue bill and the tax on various luxuries. It has been definitely decided not to reduce the income tax exemption to $3,000 for married folks and $2,000 for single, but to increase the levy to 2 per cent on all incomes above $3,000 for single and $4,000 for married folks, up to $20,000.

A Plow for the Tractor.

WHAT plow shall I buy to use with my tractor? is a question that many farmers will be asking between this time and fall or spring plowing. They can answer the question for themselves if they attend a tractor demonstration and see the Grand Detour plows turning over the sod in clean, deep furrows as they smoothly follow the tractors to which they are attached. These plows fit any tractor. Whether you go to the demonstrations or not, it will pay to send for particulars about these wonderful plows. Write to the Grand Detour Plow Co., 2645 Depot Ave., Dixon, Ill., who will gladly furnish complete information. See page 17.—Adv.

Oliver

We all know that ability to do good work is the most important consideration in the purchase of a tractor plow. When attending a tractor plow demonstration, ask Oliver representatives to fully explain why:

Oliver tractor plows scour under the most trying conditions

The bottoms raise or lower in a short space of travel and so enable the plows to do even plowing at the ends of the field

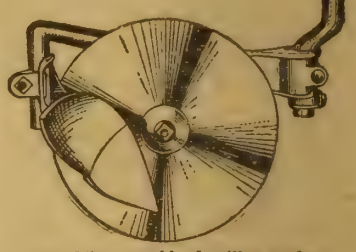
Wide range of adjustment assures even depth plowing

Trash and weed seeds are buried on the bottom of the furrow by the combined rolling coulter and jointer and why this is an important part in the preparation of the seed bed

Time and labor is saved by means of the quick detachable share that permits share changes without the use of a wrench

The bail construction of the No. 62 tractor plow eliminates hitch adjustments

The lifting mechanism of the No. 78 power lift operates instantly at the pull of the trip rope



The Oliver combined rolling coulter and jointer plays an important part in good plowing.

Whether you can attend a tractor plow demonstration or not, write us for circulars on the Oliver No. 62, two and three bottom plow and the power lift, No. 78, two or three bases. We will give you the name of the nearest Oliver dealer where you can see these plows.

Oliver Chilled Plow Works
Plowmakers for the World
South Bend, Ind.

What Shall We Expect of Tractor?

Wisconsin Farmers Give Some Pointers on Their Notion of Tractor Performance on the Wisconsin Farm.

THE Wisconsin Farmer has asked a few readers what they think of the value of a tractor on a Wisconsin farm and what in their judgment a tractor may be expected to do. The answers to these inquiries indicate considerable interest in the subject in the state and suggests some things which our readers might have in mind when they visit the Wisconsin demonstration at Madison, September 4th-8th.

Mr. T. H. Campion writes us from La Crosse county that the 8-16 and the 12-25 are in most general use in that locality. Of course, La Crosse county has a good many hillside farms where the use of the tractor is not practical at all. Mr. Campion says that the popular tractor in La Crosse county is one which may be used for both belt and draw-bar service and one which has sufficient power for silo filling and threshing. Mr. Campion has watched a number of machines at work and says there is no question about the tractor being a success on a Wisconsin farm. Weight and cost are uppermost in the minds of the farmers of La Crosse county, according to Mr. Campion, who says that his section of the state needs lighter machinery.

Ernest D. Wheeler, of Rock county, writes as follows:

My farm is only forty acres and three horses will do my work. If I had use for five or more horses I would say keep three of them and a tractor of capacity to pull three fourteen inch plows and a belt which would have power enough to run almost any machine which I would use on the farm except, of course, the large thresher.

W. F. Whitbeck, La Crosse county, writes:

I have had no experience with tractors. I could use a tractor on my place very handily for drawbar pull, but not much for belt work. A neighbor of mine bought a tractor last spring, but had only partial success with it, as the soil on his place is sandy and loose.

Otis D. Gooch, of Rock county, writes:

I believe that a tractor of sixteen to twenty horse power is the best for the farmer. I have seen them pull five plows with a tractor of this size. You can also use such an engine to run the threshing machine, silo filler, feed mill and cut up your corn fodder. It might be a good plan for two or three farmers in a neighborhood to go in together and get a machine. I think it would be less expensive to all concerned. As the place I work is small, I do not think I could economically use a tractor, but they are a fine thing for larger farms or where several farmers can club together and use the same machine.

J. H. Greene & Son, Clinton Stock Farm, Portage county, writes:

We have two small farms and have not found use for a tractor. We think in our case that a small, light tractor would be the most suitable. We would want one that would plow and at the same time fill silo and grind feed. This sort of a combination would about suit us if we had any at all. We have seen tractors at work and consider them a success where one had good, long fields and not too much turning.

C. P. West, Sawyer county, writes:

For some sections of Wisconsin I think the tractor will be a big help in general farming. In Sawyer county one man is using a tractor for breaking cut-over lands after the stumps have been removed. He uses a twenty-four-inch breaking plow and does far better work than could possibly be done with a team. Generally speaking I think tractor farming produces better crops than the old method and I consider it a progressive step in agriculture.

L. H. Davis, a truck farmer in Monroe county, writes that he could not use a tractor on his place, but that he has talked with his neighbors about tractors and believes a light, medium-priced machine will be the most popular in his vicinity. He believes the heavy tractor would not find much sale in Monroe county. He thinks that the machine which does the work of five horses in the field and will fill the silo is the one in which the majority of farmers will be interested.

We quote the following from a letter received by The Wisconsin Farmer from Ira L. Peterson, Walworth county, Wisconsin:

I am sorry to tell you that I have not had any experience with a farm tractor to any extent. Inquiring into the matter I find that a few farmers around Whitewater own tractors and are very well pleased with them. A few others are contemplating buying. I consider the farm tractor a very useful machine to have on the farm and the only objection the farmers seem to have is the cost. Of course, all the farmers around here could not use the farm tractor if they had it, there is some land so hilly that the machine would use more fuel than the work would be worth and again there is some land too low that can only be worked during the driest seasons. Some farms are too small to pay to have a farm tractor. Our farm consists of 140 acres and is on the low order, but if we had a light tractor, we could make use of it in both drawbar and belt service. I have not any idea of the saving it would be, but I have heard others say that it saves a great deal in time and labor.

Oscar W. Hafs, of Maplewall Stock Farm, Walworth county, writes:

I am very much interested in farm tractors. My ideas are rather unsettled however. I have seen only one tractor in actual use outside of the exhibits at the fairs. It was an 8-16. I think that a tractor of that size or perhaps a little larger would be of the most use on a farm of 160 acres. I have never been interested in the larger farm machinery such as shredders, threshing machines, etc. If I had them I am sure that the most economical way to operate them would be with a tractor and less horseflesh. I hope to be present at the tractor meet at Madison. Just at present I am of the opinion that tractors are too expensive for the tractor service in fields exclusively, and think that to be an economical machine they should have other uses.

R. H. Ells, Walworth county, Wisconsin, writes as follows:

I think a tractor should not weigh to exceed 5,000 pounds. It should be of the three-wheel type with a caterpillar drive and the operator should sit on the machine he is using, and drive the tractor from the seat. The farm where a tractor is used, in my judgment should be about 160 acres or larger. There is no doubt that a tractor could be used for both drawbar and belt work on most farms, as they almost all have a silo. The price doesn't matter so much just so the buyer gets his money's worth. I am inclined to think that the farmer will demand a high speed motor, that is if gasoline doesn't soar too high. I have a tractor myself, but don't consider them a very great success on a small place, but mine brings me in about $100 a year for outside work, mostly silo filling. I expect to attend the demonstration at Madison.

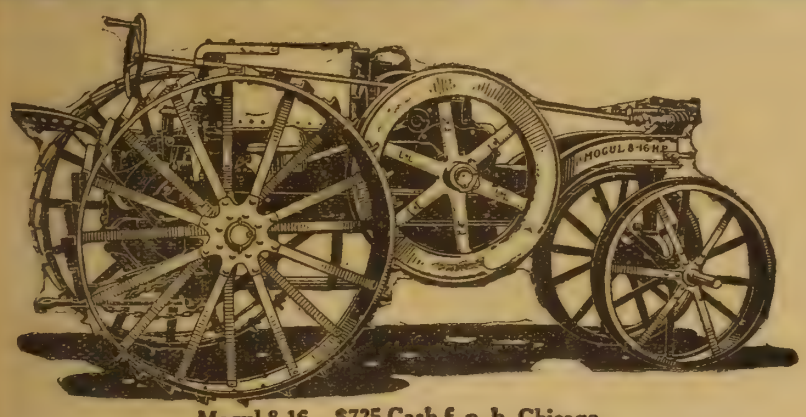
Hugh H. Brereton, of Chippewa county, gives the following opinions:

I think that the tractor for the Wisconsin farmer is the three or four-plow rig running around two tons in weight and costing about what three or four horses would cost. It would be used chiefly for plowing in the rush of spring work and after the grain was off the land when it was too dry and hot for horses. The gain would not be all in getting the work done on time. It would also be in getting better and deeper plowing and a better looking crop the next year. The tractor ought also to be able to stand up under a lot of belt work such as threshing, filling the silo, feed grinding, etc. It cannot be a general-purpose machine, as the light and irregular work will have to be done by horses. The horseless farm may be here, but not every farmer can make it produce. Not a great deal of hauling will be done with the tractor, as most farmers do not haul in large enough quantities to make it profitable. The Wisconsin tractor should be a one-man affair, preferably with a close coupled machine with plows detachable and hung right in the tractor frame. They should be in front of and in sight of the operator all the time. A self-steering machine ought to help out a great deal. Here's hoping the September demonstration brings out something new and practical and will be a big success.

Irwin C. Brown, Columbia county, Wisconsin, writes:

I look for a tractor on every 160-acre farm of good, fairly level land and maybe on some smaller farms inside of ten years. That is provided the price of fuel stays within reason. If we had a tractor we would want to use it for belt work. I do not feel that the tractor would save so very much in labor, but think it would enable the farmer to do more and better work, as all good machinery has done. I have watched the tractor at work and feel it should be a success on a farm such as

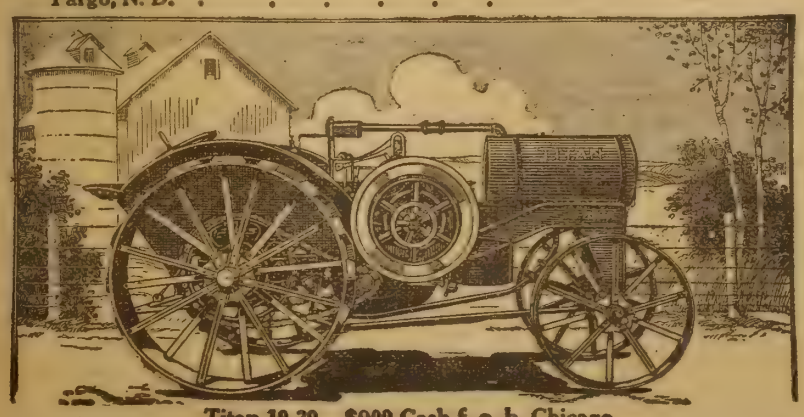
(Concluded on page 13.)



Mogul 8-16. $725 Cash f. o. b. Chicago

Tractor Demonstrations—1916

Dallas, Texas.	July 18 to 21
Hutchinson, Kansas	" 25 " 28
St. Louis, Mo.	Aug. 1 " 4
Fremont, Nebr.	" 8 " 11
Cedar Rapids, Ia.	" 15 " 18
Bloomington, Ill.	" 22 " 25
Indianapolis, Ind.	" 29 " Sept. 1
Madison, Wis.	Sept. 5 " " 8
Aberdeen, S. D.	Dates not announced
Fargo, N. D.	" " "



Titan 10-20. $900 Cash f. o. b. Chicago

See the Real Kerosene Tractors

Of course you are going to attend one of the tractor demonstrations this year.

Before you go, get the local prices of gasoline and kerosene, so that you will have the difference clearly in mind, because, at any demonstration you will be shown two kinds of tractors—those that operate on gasoline and those that operate on kerosene.

The kerosene tractors can be divided into two classes. One class consists of engines originally designed for gasoline. To these, special attachments have been added, and, under favorable circumstances they will operate on kerosene, or gasoline mixed with kerosene, but they require so much kerosene that there is no economy over gasoline.

The other class are the real kerosene tractors. They are designed throughout to operate on kerosene without special attachments, and do operate on the cheaper fuel so successfully that they pay for themselves with the fuel they save.

Moguls and Titans Are Real Kerosene Tractors

Remember the difference in the prices of the two fuels. Remember that a tractor uses two or more gallons of fuel every hour it works. **See the kind of work Mogul and Titan tractors do on the cheaper fuel.** Compare their work with that of any tractor, either for quantity or quality. **Compare the amounts of fuel consumed in doing equal work.** Then decide which of all the tractors you see will give you the most value for your money.

In preparation for your visit to the demonstration, let us send you our horse and tractor book, "Farm Power." It contains almost a hundred pages of closely packed, verified information about power on the farm.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(INCORPORATED)
CHICAGO U S A

Studying Tractor and Automobile.

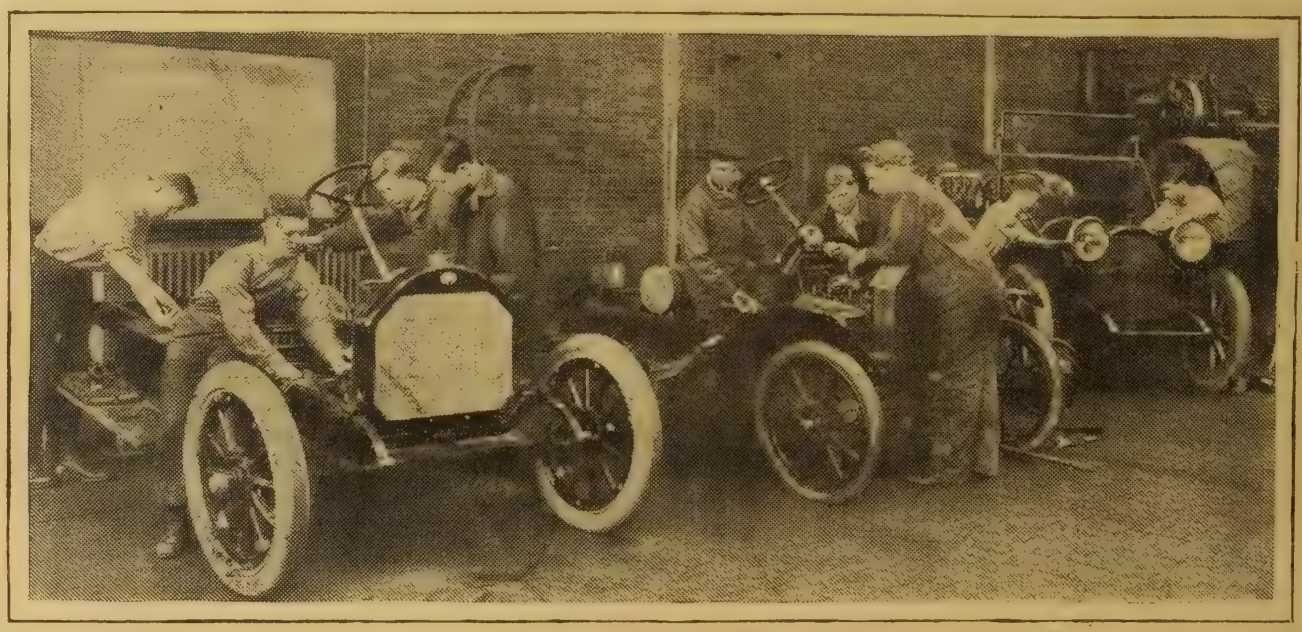
Minnesota and Wisconsin Farm Boys Take Great Interest in Farm Power Courses and Demonstrations at University Farm, St. Paul—Power For Farm Work a Live Topic.

MAY CLASSES TAKE A GREAT DEAL OF INTEREST IN THE STUDY OF STEAM THRESHING OUTFITS.

INTEREST in farm power is reflected by the attitude of our agricultural experiment stations in endeavoring to provide special courses on this subject. A few days ago the writer visited the University Farm, St. Paul, Minnesota, and found a large class under the direction of J. L. Mowry, studying tractor problems. A special course in gasoline engines and a short course for tractor engineers is given under the direction of the division of agricultural engineering of the University of Minnesota. The May class in previous years has been confined largely to farmers who have wanted instruction in steam engineering. The proportion of those who were anxious to have instruction in gas-engine operation was considerably increased this year. Mr. Mowry states that there is an exceptional increase in interest in the small gas tractor, from ten to fifteen horse power. The winter course in farm power subjects attracted an unusual number the past season. Most of the young men from the farms who attended these courses were from Minnesota. There was a good attendance, however, from North Dakota and Northwestern Wisconsin.

The instruction given is extremely practical. For the May course this year at least one year's experience in the use of tractors was required for all who entered. The state provided a dozen different engines, covering the most commonly used makes and models. Manufacturers were glad to co-operate in this respect and to assist in demonstrating the uses to which their machines may be put.

Interest in the farm power division of agricultural schools is increasing rapidly. A good many farmer boys attended the automobile course at St. Paul last winter. It was surprising to know the technical knowledge which farm boys, as a rule, have of all kinds of machinery. A few of those who attended these mechanical courses expect to become machinists by trade and either work in garages or as engineers for gas tractor outfits or for steam tractor outfits in threshing in the Northwest. The majority of those who attend the winter courses are interested in the gasoline power of machinery and the majority of those who attend the May courses are interested in preparing themselves for working with steam threshing outfits.



AUTOMOBILES, GAS TRACTORS AND STATIONARY GAS ENGINES ARE STUDIED INDOORS IN THE WINTER CLASSES.

Most of the new courses which are established at the agricultural stations are the result of some special demand on the part of farm boys. This is especially true in the machinery line. The automobile has given the farmer boy a keen interest in machinery propelled by gasoline power.

These efforts to cultivate the interest which it has been found the farm young man has in machinery are the beginnings of more elaborate plans which will be worked out in the future. The primary object of this school work is to instruct in mechanical operation, but there are many other points of value which come up in this work. The student is taught the location and purpose of bearings in machinery. He is shown the difference between the old type machinery with no ball or roller bearings and made acquainted with the value of bearings both as to the effect of operation of machinery and length of service. Another matter which is given attention is the fuel consumption and the most practical methods of reducing fuel cost to the minimum. Above all things the young farmers are instructed that machinery, though ordinarily fool-proof, demands some attention by other than the "common tinker." A great deal of farm machinery has lost considerable of its efficiency by neglect and tinkering. Modern machines are built for service and are readily responsive to good treatment.

The farmer and his sons are compelled by virtue of their varied occupation to know a good many things. It is only in recent years that a mechanical knowledge has become a necessary accomplishment on the farm. On the modern farm of today the young man grows up with a knowledge of gasoline engines, shafts, and drawbars, pulleys and belts, magnetos and self-starters, batteries, etc. These things come as a part of his experience in farm life and are getting to be just as natural as it is to learn how and what to feed the live stock or how and when the corn should be cultivated. For the first few years the automobile on the farm seemed to create a desire in the young men to become automobile mechanicians, and this led to a good many seeking employment in garages. Of course, most of these soon found that a job as machinist in a garage in a small town, or even in a city, was not nearly so good a business proposition as a part ownership in a profitable farm, so many of the boys who have had their experiences in garages have gone back home. They know how to look after the family car and they are proud of it. This means a big saving to the farmer on garage bills.

GAS, OIL AND STEAM TRACTORS ARE DEMONSTRATED TO INTERESTED STUDENTS AT THE UNIVERSITY FARM, ST. PAUL, MINNESOTA.

In and Around Wisconsin.

Under the state aid law passed by the last legislature, 2,540 teachers in Wisconsin will receive bonuses from the state, ranging from $2 to $8 per month, depending upon the time the teacher has been in the same district. This aid is being distributed this month and totals $69,963.33. It is paid from the 7-10 mill tax.

Reports on the cabbage crop of Wisconsin to July 1, 1916, indicate 76 per cent of a crop and this fell off to 73 per cent of a crop August 1st. Condition of cucumbers which is quite an important crop in Wisconsin improved from 80 to 83 per cent during the month of July. Peas July 1st indicated an 80 per cent of normal crop and fell off to 76 per cent August 1st.

Tobacco growers in Dane and Rock counties have been pleased at the raise in price which has come down almost out of a clear sky. It seems that big sales have been made by the tobacco manufacturers for foreign shipment, and at rather fancy prices and bidding on the late crop has been lively. Farmers who didn't think much of tobacco growing last year are pleased at the present bids of 12 to 16 cents and they expect to make a good profit this year.

The annual summer meeting of the Walworth County Jersey Breeders' Association will be held on Saturday, August 26th, at the farm of Sec. F. F. Showers near Delavan. There will be a cow-judging contest at 10:30 and Prof. A. C. Oosterhuis, of Madison, will give his famous cow demonstration and place the stock and make the awards. It will be a picnic affair and every breeder is invited to bring his basket and enjoy a day with the Walworth county breeders.

Danger of the spread of white pine blister rust in Wisconsin has caused the placing of a strict prohibition on the importation into this state of all pine nursery stock. This disease, prevalent in the white pine forests of the East, has been found in Wisconsin, and this action was taken as a precautionary measure by J. G. Sanders, state entomologist. Mr. Sanders says if this disease spreads to the native timber in Wisconsin, it would in a few years make the growing of white pine hopeless.

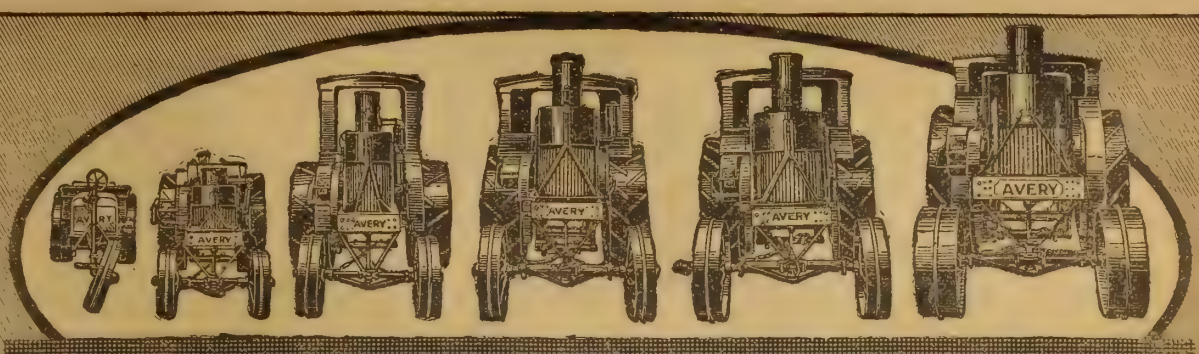
The threshing season is in full swing in the southern part of the state and some splendid yields are reported. In Walworth county oats are yielding from sixty to seventy bushels to the acre and in some instances more and barley is running from thirty-five to fifty bushels. Twenty acres of oats on the A. D. Smith farm yielded 1,400 bushels and barley yielded fifty bushels to the acre at fifty-two pounds per bushel machine measure. On the Frank E. Fox farm, Waukesha county, oats went eighty-five bushels to the acre because the land was well fertilized and cared for. With a large herd of dairy cattle this was done at minimum cost.

The Wisconsin Tobacco Reporter, at Edgerton, in speaking of conditions in the tobacco belt, says:

Once more tobacco has proven itself able to withstand more trying weather conditions than any other crop produced from the soil. The withering effects of four weeks of hot July sun which shortened the grain crops and fired the corn on light soil and withered the gardens, pastures and lawns, has caused less damage to the tobacco fields than anything else about the farm. The tobacco plant sent its root still deeper into the soil and simply held on waiting for the drouth to pass. Only the more forward fields which prematurely budded have suffered any serious injury from the hot, dry spell, and it is yet to be shown whether after topping such fields do not reach a fair spread of top leaves. A wonderfully recuperative plant is tobacco and the fact is so well recognized that we scarcely need call attention to it.

The Rock county calf-feeding contest, which began February 1st and closed August 1st, turned out even more successfully than the originators even anticipated. Thirty-six boys and girls were entered and the awards have just been announced for the various districts, there being district as well as county prizes. The county winners will be announced later. Each boy or girl took a calf at birth and fed it through the contest, the final awards being based upon the gain, cost of the gain, profits, etc. The district winners were announced as follows, with their respective markings, 100 being considered perfect:

Rock Prairie—George Arnold, 95; Erma Hall, 86; Gladys Morton, 83. Clinton—Frank More, 81; Frank Stoney, 87; Wesley Stoney, 86. Milton Junction—Leman Rood, 90; James Wixom, 89; Glen Cary, 88. Janesville—Lucy Kellogg, 89; Elmer Gestland, 88; John Whinger, 86.



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What Shall We Expect of Tractor?

(Continued from page 11.)

mine. I hope to be able to attend the demonstration and shall be interested in both drawbar and belt work and the construction of the machines.

W. H. Cooper, of Walworth county, writes:

The use of a tractor in this state is hardly continual enough to justify too great an investment in an outfit, especially as an equal amount will need to be spent for other equipment to make use of the power at various times. I should want a tractor for belt as well as drawbar service, especially for silo filling, etc. I think that for drawbar service plowing would be most important. We have a number of brood mares, and plowing often comes at times when they are unfit for continual heavy work. Last fall the ground was so hard that four 1,600-pound horses could do little with a gang plow. At such times a tractor should be valuable, although a tractor supposed to pull three bottoms had hard work to pull two. Last spring our bottom lands, black loam and our best soil, were so sticky that plowing was difficult, but I doubt whether a tractor could obtain sufficient footing to be serviceable. I believe that a large saving could be made by getting plowing done on time, if the tractor could operate, that is, in a wet season. Another large saving would be in being able to fill silos when the corn was fit and not when a filler was available. I do not see why a tractor should not be a success on a farm like ours (160). We have four fields of twenty to twenty-five acres each, and others from ten to fifteen acres. Provided that the tractor could operate successfully on black soil during wet weather. Personally I lean toward the light, multiple cylinder tractor, of about 10-20 or 12-24 horse power, as I think that such a tractor is best for both belt and drawbar service under Wisconsin conditions.

Charles Solveson, of Linden Home Farms, Waukesha county, writes:

I can give you a little of our experience that should be of some value to real farmers. We have had a 12-25 tractor for two seasons. We have 230 acres and keep about seventy head of cattle and but five horses, yet it is comparatively easy to get in the crops in good season. The tractor is practical. We pull but three plows and this is desirable dry or wet. On the level we pull this on high gear—a fast walk, then when we get to a grade we pull up on slow gear and go right along. Do not attempt, however, to work a tractor on a hilly farm. There is much talk nowadays of getting light tractors. We have just turned over fifteen acres of alfalfa; our tractor weighs about 7,500 pounds, and the drivers are twenty inches wide with large lugs, yet we had to use a 2x4 piece of oak to put under the wheels occasionally to pull out, that too on heavy soil. We also make good use of the tractor pulling two large disks and a large harrow and in one operation prepare a seed bed better than any we have ever by working horses. We do all our seeding with horses. We filled eight large silos last fall and so far it has cost us nothing for repairs, but a farmer must be able to make nice adjustments, grind valves, etc., or do the work with horses.

An Economical Furnace for the Home.

THE Mueller pipeless furnace can be installed very cheaply in houses that are already built or it can be installed for small cost in houses that are now being built. It does not require cutting holes in the walls and floors and putting in a large number of pipes, for the Mueller furnace is pipeless. One large register built in the floor directly above the furnace furnishes heat for the whole house. The warm air from the rigister forces the cold air downward, so that it passes into the furnace, through an outer chamber, becomes warmed, and then passes up through the warm air register into the house. Large houses may be heated by this furnace with complete satisfaction and the fuel required is said to be less than stoves would burn to furnish the same amount of heat. A free book on heating, which takes up the subject of heating homes and the different systems in use, will be sent free to those who write for it to L. J. Mueller Furnace Co., Milwaukee, Wis. Get a copy because it will help solve next winter's heating problem. See page 15. —Adv.

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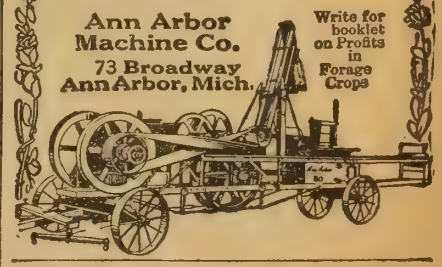

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FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Cause of Engine Noise.

Please give me some information in regard to autos. I have a 1915 Buick car. When the engine is running idle, you can hear a "chung, chung, chung," noise. It seems to me that this noise is in many Buicks. Is it the natural sound of the motor? If not, could it be fixed? What causes a car to pound when pulling hard, and also when speeding up quickly? I have been thinking that maybe the bearing in the connecting rod, or one of the crankshaft bearings may have worked loose.

Answer.—The "chung, chung" noise is probably only the exhaust in the muffler. The working of the valve springs will sometimes produce a noise of this kind. A dull, heavy pound on a hard pull indicates that a rod or crankshaft bearing fits the crankshaft too loosely. A crankshaft bearing will pound if only 3-1,000 of an inch larger than the shaft. In this case there is no serious trouble. The bearing should be adjusted, however, as soon as the pound becomes decided enough to be bothersome. A loose connecting rod bearing also produces a rather dull pound. This is a sign of coming trouble. If a rod bearing becomes very loose the hammering action is likely to break the rod bolts. Then the cap comes off and the rod plunges through the side of the crank case.

Clutch and Gear-Shift Trouble.

Should Buick gears be harder to shift than others? We cannot give our car very much speed before shifting, or the gears will grind. What causes a clutch to "grab"? Do all multiple disk clutches grab? When the clutch is released to shift the gears, should the clutch come to a standstill right away? Should there be a brake to stop it as soon as it is released? How many years will a storage battery last?

Answer.—Buick gears are no harder to shift than others, though the clutch on some of the earlier cars has a tendency to spin. Of course, the gears on these cars were hard to shift, as the clutch should be nearly stationary when the gears are shifted. Many cars are fitted with a brake to slow down the clutch as soon as it is released. The brake is usually nothing but a leather-faced disk so placed as to bear against the outside edge of the cone when the clutch is released. If you have a cone clutch it might be well for you to install such a device. If you have a disk clutch, running in oil, it may be that the oil is too heavy or that the disks are adjusted so that they are too close together in released position.

Both cone and disk clutches must be "cushioned" to prevent grabbing. In a cone clutch the cushion consists of a set of springs under the leather or asbestos facing. These springs push the facing out somewhat and allow the clutch to take hold gradually. Disk clutches have bowed disks, or disks with projecting parts that act as springs. If these springs become worn the clutch will grab. A disk clutch should not grab.

Many owners are getting only one year of service from their automobile storage batteries. This kind of service is very hard on the battery. The battery on a house lighting system should last three to five years or even longer if it has the proper care.

Setting Traction Engine Valve.

Please tell me how to set a valve with Marsh reverse on an Advance traction engine.

Answer.—The following instructions are taken from the Rumely Co.'s instruction book for operating Advance engines:

First, locate the two dead centers exactly. To do this, make a mark with a sharp prick punch on the side of the engine frame between the crank disk and the cross-head and about six inches from the disk. Place the crank pin about three inches above the center line. With one point of a pair of compasses in the center punch mark make a mark on the edge of the disk with the free end of the compass. Make a mark on the guides at the end of the cross-head. Then turn the crank pin below the center line until the cross-head returns to the line on the guides, and make a mark on the disk with the compass as before. Then make a point on the disk half way between the two marks. With one point of the compass in the mark on the frame turn the crank pin toward the center line until the free end of the compass will just enter the half-way mark on the disk. The crank pin will then be on dead center. Locate the opposite dead center in the same manner.

Having found the dead centers, place the crank pin on the center nearest the cylinder. Place the reverse lever in the center notch. Turn the reverse gear on the crankshaft until the crank pin of the reverse gear shaft is on its center nearest the crankshaft. This position you estimate by eye. Then tighten the screws in the reverse gear on the crankshaft slightly and temporarily. Then set the screws that are in the top and bottom of the stop plate so that they will project inward about one-half inch from the lugs on the stop plate. Then move the reverse lever down until the reverse box strikes the screw in the bottom of the stop plate. Fasten the reverse lever in this position. Now, with the engine on the center nearest the cylinder, set the valve on the valve stem with the edge of the valve even with the edge of the port in the valve seat, or so that the valve just covers the port. Then tighten the screws slightly that hold the valve to the valve stem. Then move the reverse lever in the opposite direction until the reverse box strikes the screw in the top of the stop plate. Fasten the lever in this position. If the edge of the valve does not return to the edge of the port, or if it overlaps the edge, make a mark on the valve seat even with the edge of the valve. Make another mark half way between the edge of the port and the first mark. Then loosen the screws in the reverse gear on the crankshaft and turn the gear until the edge of the valve at the middle mark just made. Now tighten securely the screws in the reverse gear on the crankshaft.

Next, loosen the valve on the stem and set it so that there will be about one-thirty-second of an inch opening. This opening is called "lead." Fasten the valve securely on the stem in this position.

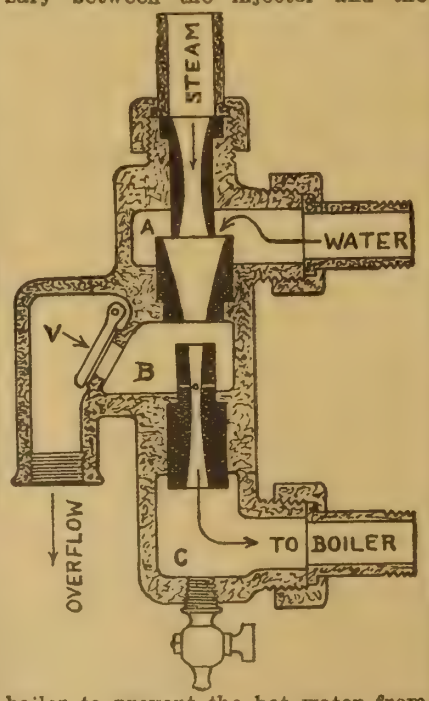
Place the engine on the opposite dead center. When doing this turn the engine "over," with the reverse lever in the top notch. If the lead on this end is more than one-thirty-second of an inch turn the setscrew into the lug at the top of the stop plate until the proper lead is secured. Turn the setscrew out if the lead is too small. Lock the setscrew securely with the jam nut.

Put the reverse lever in the bottom notch and turn the crank pin a few inches below center; then return it to the center. This is done to avoid lost motion. Make the lead one-thirty-second of an inch by moving the set screw in the bottom of the stop plate. The valve is then properly set. If wear occurs in time take up the wear by adjusting the dogs and catches on the quadrant; do not change the screw in the stop plate.

Principle of an Injector.

Please explain high and low pressure injectors.

Answer.—The figure shows the principle of a high-pressure injector. In practice the parts are proportioned somewhat different from the illustration, so that they may be made more easily. The illustration shows an injector cut open so that the internal construction may be easily seen. The nozzles are shown in black. The steam enters at the upper nozzle. As the steam blows into the middle nozzle it creates a partial vacuum in chamber A, thereby drawing the water through the water pipe and carrying it into chamber B. The first steam that blows through has no cold water to condense it. It then raises valve V and escapes through the overflow into the air. As soon as the steam mixes with enough cold water to condense it the water begins flowing through the lower nozzle into the boiled and valve V closes, as the rapidly flowing water produces a partial vacuum in chamber B. A check valve is necessary between the injector and the



boiler to prevent the hot water from flowing backward into the injector. This check valve must work perfectly. The injector is often blamed when the check valve is at fault. As a rule an injector will not work well if the boiler pressure is less than forty pounds. The feed water temperature should not be over 100 degrees Fahrenheit. In order to keep the steam flowing the water must be cold enough to condense it. Steam flows at an enormous velocity, and, therefore, has a large amount of inertia. This inertia is sufficient to drag a large amount of water into the boiler along with the condensed steam.

In the figure the middle nozzle is the lifting nozzle and the lower nozzle is the forcing nozzle. A low pressure injector has one or more lifting nozzles, but no forcing nozzle.

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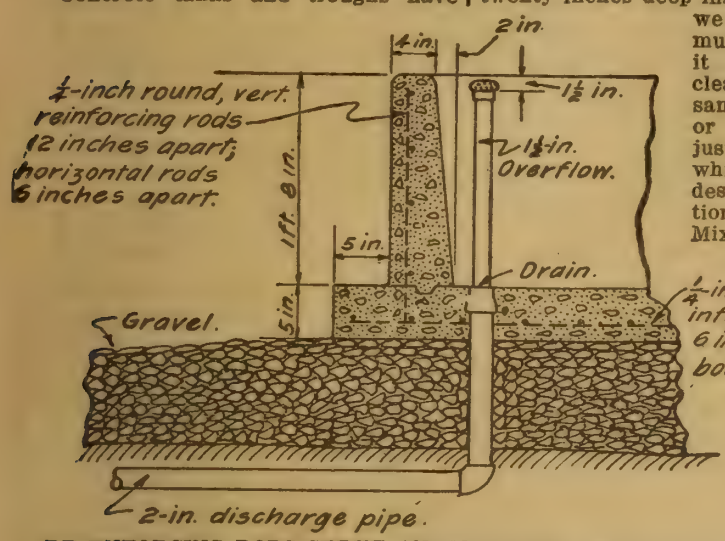
Concrete Troughs and Tanks.

Some of the Details of Constructing Various Types Which Mean Permanency in Improvements---By H. Colin Campbell.

PROBABLY most farmers who have been looking to concrete as a material to aid them in some of their farm building problems have thought of making their first attempt with its use in constructing a concrete tank or watering trough.

Nothing will build a better watering trough or tank than concrete, but there is a possibility of failure in the use of this material unless one follows certain principles that have been proved necessary to success. However, this is true of all building materials and the precautions that one should take in using concrete are simple. Anyone can observe them and if they are observed success is certain.

Concrete tanks and troughs have many advantages over those built of other materials. They may readily be kept clean, and, unlike those built of wood, do not require painting to keep them in condition fit for use, do not require tightening of hoops, will not rot, and if left empty will not go to pieces in the sun and wind as will wood construction. Concrete is rotproof and rustproof, always ready for use, easily kept clean and permanent. Most of the necessary materials required to build concrete troughs or tanks may be found on the farm or near by. The soil where the structure is to rest must be firm, so as to provide a good support or foundation.

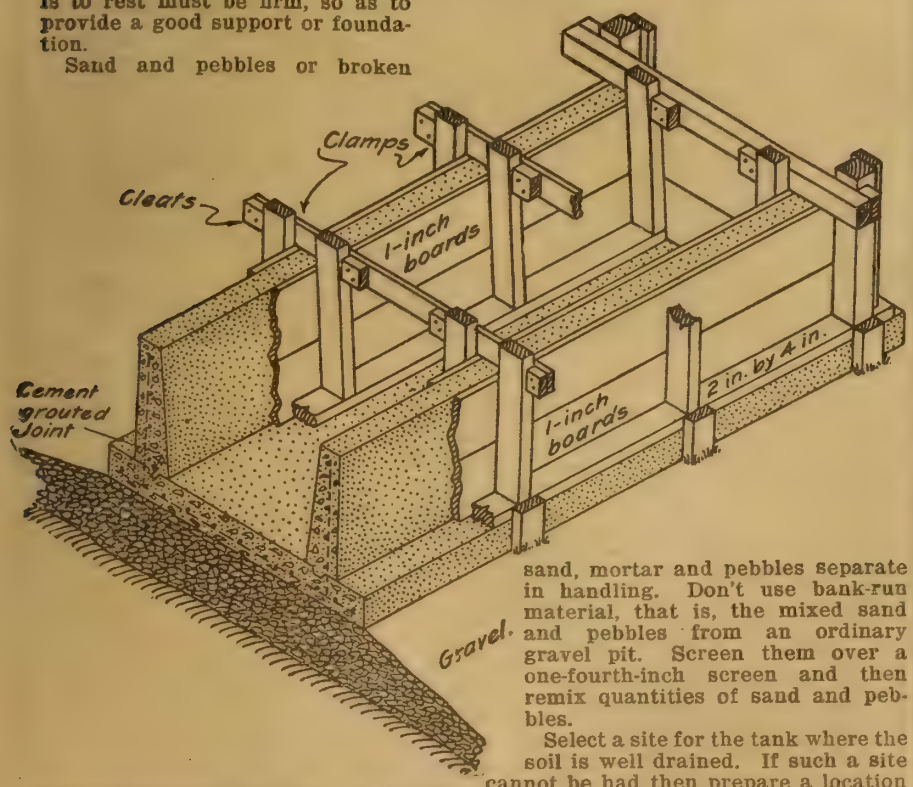


RE-ENFORCING RODS SERVE AN IMPORTANT FUNCTION IN CONCRETE CONSTRUCTION.

Sand and pebbles or broken stone must be clean and properly graded. Re-enforcing in the form of steel rods or wire mesh fabric must be properly embedded in the concrete to prevent cracks due to temperature changes and from pressure due to expansion if water in the tank should freeze. After concreting has been finished the work must be protected against too rapid drying out.

Tanks must be watertight. Therefore, a 1-2-3 concrete mixture should be used. This means one sack of Portland cement, two cubic feet of clean, well-graded sand and three cubic feet of well-graded pebbles or broken stone. The sand should range in size from one-fourth-inch particles down to the finest permissible, excluding dust. Pebbles or broken stone should range from one-fourth to three-fourths or one and one-quarter inches, depending upon the wall thickness or section in which the concrete is to be used. For most tank construction pebbles no larger than one inch are best.

Take, for example, a watering trough or tank such as would be used in the pasture lot. Let us suppose this is 5x12 feet outside dimensions and twenty inches deep inside. How shall we build it? How much material will it take? Select clean, well-graded sand and pebbles or broken stone just like those which have been described. Proportion them 1-2-3. Mix the measured quantities of cement and sand on a watertight platform until the mass is of uniform color. Wet the measured pebbles or broken stone, then add it to the combined sand and cement. Add water and keep turning the materials together and over, using square-pointed shovels until all the materials have been thoroughly mixed together and the consistency of the mixture is jellylike, that is, just wet enough so that when the mixed concrete is placed in a pile it will gradually flatten of its own weight. Be sure not to use so much water that the cement,



CROSS SECTION OF BOTH TANK AND MOLD.

sand, mortar and pebbles separate in handling. Don't use bank-run material, that is, the mixed sand and pebbles from an ordinary gravel pit. Screen them over a one-fourth-inch screen and then remix quantities of sand and pebbles.

Select a site for the tank where the soil is well drained. If such a site cannot be had then prepare a location by digging out eight to twelve inches of the soil and refilling the excavation with clean, well-tamped gravel. Have the forms built before starting the work. The accompanying illustration, although for a tank of slightly different proportions illustrates the method of form construction. Concreting should be carried on continuously to prevent a construction seam or joint, yet sometimes continuous work is impossible. If this is the case build the floor of the tank first in the form of a slab on which the side walls will afterward rest and when building the slab or floor insert beveled strips all around the slab along a line where the center of the side and end walls will come.

After the concrete has hardened these strips may be removed and will leave a groove that will assist in forming a watertight joint between floor and walls when the latter are concreted. Set up forms for the side walls. Then before placing concrete mix a paint of pure cement and water to the consistency of cream and apply it in and along both sides of the groove formed in the floor slab by the strips. At once place concrete for the walls before this cement paint has commenced to harden. This will thoroughly seal this joint and prevent leakage Concrete must be well spaded in the forms while placing for the purpose of settling it to proper density and particularly must this spading be done against form faces so that the surface after forms have been removed will be smooth, dense and watertight. Re-enforcing in the shape of one-fourth-inch round steel rods, spaced six inches center to center should have been placed at the center of the floor slab when this was concreted. Similar re-enforcing six inches center to center horizontally and twelve inches center to center vertically should be placed in the ends and side walls when these portions of the tank are built.

It will be noticed that the illustration shows tank walls thicker at the bottom than at the top. This slope or battering of the sides will prevent the bursting pressure of ice from cracking the tank walls if re-enforcement has been placed as described. In forming, ice will tend to slide up against this sloping face and relieve the walls from pressure.

Do not remove forms until the concrete is at least twenty-four hours old; then do so carefully and if there are any pebble pockets or holes on the surface immediately fill them with a 1-2 sand-cement mortar, that is, a mortar mixed in the proportions of one sack Portland cement to two cubic feet of sand. Now cover the concrete with wet hay or straw or some other similar covering that will keep it from drying out too rapidly. Leave this covering in place for a week or ten days and keep it wet by frequent sprinkling. At the end of this time the tank may be filled with water and put to use.

When planning the construction it is necessary to arrange for inlet and outlet pipes so that the tank may be supplied with water and emptied when necessary to clean it. Another illustration shows how this work should be planned.

For a tank 5x12 outside dimensions and twenty inches deep inside, the walls to be six inches thick at the bottom and four inches thick at the top, the volume of concrete required is three and three-fourths cubic yards. This will take about twenty-seven sacks or approximately seven barrels cement. There will also be needed two cubic yards of sand and three cubic yards of pebbles or broken stone. Re-enforcing necessary will be about eighty-three pounds of one-fourth-inch round rods. The cost of the work may readily be figured from the above estimate when one knows the price of materials in his locality.

FROM THESE

Replace your stoves with a Mueller Pipeless Furnace

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THE MUELLER Pipeless Furnace was designed to improve the heating facilities in houses already built and to reduce the cost. This furnace can be installed without expensive alterations. No pipes or flues. Can be placed in any cellar, no matter how small, or used in houses without cellars, by digging a pit. A Mueller Pipeless in your home means more uniform heat than stoves, purer air, better health, less dirt and less work. An all-round better heating system than stoves at lower cost.

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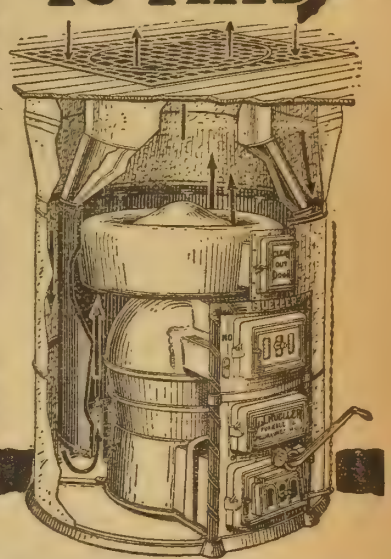

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Gives you all the facts about the Pipeless System of heating and the Mueller Pipeless Furnace. Gives full details of construction and shows pictures of installation. Tells how to apply it to your own home, old or new; how to tell the difference between good and poor furnaces—the things to look out for and the things to avoid. Booklet sent free on request.

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PATENTABLE IDEAS WANTED. Manufacturers want Owen Patents. Send or three free books: inventions wanted, etc. I market your invention without charge. Richard B. Owen, 37 Owen Bldg., Washington, D. C.

ON THE TRACTOR GROUNDS.

Some of the Interesting Sights Which We May Expect to See at the Great Tractor Demonstration to Be Held at Madison, Wisconsin, September 4th to 8th.

UPPER WISCONSIN

Value of the Record For the Dairy Cow.

County Representative G. M. Householder reports that over 500 cows are being tested in Rusk county, and the farmers are weighing the milk from each cow four times a month. Milk sheets are sent in at the close of each month and butter fat computed. Mr. Householder says that some farmers have had sad experiences in buying cows which have not been under test. Several cows brought into the county and then put under test showed only 2.4 per cent fat, which, as Mr. Householder truly states, is by no means a good record for a cow. It is mighty hard for a cow giving milk of such low test to give sufficient quantity to make her profitable. Mr. Householder says "better be safe than sorry" and see to it that you get a record with the cow you buy.

Activity in the Woods.

At a recent meeting of the Hemlock association, members reported stocks running low owing to the large demand created by prosperity in the country. Great activity was predicted for the woods country this winter and Upper Wisconsin will, of course, receive the good effect. There is little doubt that the settler who depends upon the woods to help him through the winter will have plenty of work this coming season.

Minnesota Man Secured.

H. H. Humphrey, who has served as field representative of Marathon county since August 1, 1915, has resigned and has been succeeded by his brother, Robert Humphrey, of Chatfield, Minnesota, who has been doing extension work in the schools at Chatfield. Mr. Humphrey leaves the work to take charge of the stock feeds department of the Dodge-Hooker Mills at Wausau.

JERSEYS COWS ATTEND BANQUET.

Sanitation and cleanliness are watchwords in the Thomas S. Griffith dairy barn, Glen Tara farm, Spokane, Wash. Recently this breeder gave a banquet to his friends and this scene in the cow barn shows the cows interested spectators at the feast.

Strawberries Profitable.

Strawberries are a profitable crop, according to T. D. Van Buren, of Ladysmith. He had a half acre in strawberries this year and shipped 200 sixteen-quart crates at an average rate of $2 a crate, making $400 from his half acre of strawberries. This does not include the berries used by his own family.

LAW QUESTIONS.

Parents' Custody of Minor.

A Subscriber, Butternut, Wis.—A boy fifteen years old was mistreated by his parents and his brothers, and a young lady coaxed him to leave home. (1) Can the boy's parents force him by law to come home? (2) Can the young lady be punished by law, and if so what is the penalty?

Answer.—The parents are entitled to the custody of their boy and can compel him to return home. (2) The young lady cannot be punished by law. Her act was not a criminal offense and there is no penalty.

Debt of Wife—Husband Not Liable.

A Subscriber, Wilmot, Wis.—A loaned B's wife a sum of money, and she gave her promissory note to A for the same, without her husband's knowledge. In case of her death would her husband be responsible for the debt to A?

Answer.—The husband would not be liable for the debt in case of his wife's death.

Bull in a Man's Own Pasture.

A Subscriber, Rubicon, Wis.—I have a young bull a year and a half old, He is very gentle and would not harm anything, and I allow him to run in pasture with my other cattle, The pasture is well fenced. My neighbor threatens to have me arrested and fined if I continue to allow my bull to run in the pasture. Have I a lawful right to do so?

Answer.—You have a lawful right to let your bull run in your own pasture and your neighbor has no right to object to it. He cannot have you arrested and his threats to do so is mere bluster and bluff.

Landlord and Tenant.

Mr. John Kenney, Basco, Wis.—I have a renter on my farm, and I own all the live stock on it. I have a contract with the renter, by which he agreed to work out the road tax, and each of us is to pay equally for the seeding, threshing, shredding, etc., and he is to pay me my share of any stock sold. He refused to work or pay the road tax, on the ground that he was not notified or called out to work, and I had to pay it. He sold two hogs and failed to turn over my share of the proceeds. He buys material for repairs, and expects me to pay for the same. Our contract calls for three months' notice to quit. (1) Has he so violated the contract so as to make it void, and give me the right to put him off the place?

Answer.—(1) The renter has not so violated the contract as to make it void unless there be in the contract a written stipulation to that effect. You have not stated the terms of the contract sufficiently to enable us to determine whether or not you could put the renter off the place. (2) You can sue the renter and recover judgment against him for the amount of the road taxes he failed to work out and also for the value of your share of the two hogs he sold.

Right to Grass on Streets.

A Subscriber, Ingram, Wis.—In an incorporated town of two or three hundred people, in Wisconsin, have property owners the right to mow grass in adjacent streets and use it for feed, or have the town authorities a right to take it and sell it, and use the proceeds for town purposes?

Answer.—If the title deeds of the property owners include land in the street they have a right to mow the grass thereon and use it for feed like the owner of a farm whose boundary line is in the center of a road, the public in each case having only an easement in the land. Otherwise, if the fee of the street is vested in the town.

Ask your neighbor to subscribe for The Wisconsin Farmer.

GRAND DETOUR PLOWS
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NATIONAL
TRACTOR FARMING
DEMONSTRATIONS

What Plow Shall I Buy?

You can answer that question most easily by going to the Tractor Demonstrations.

You can answer it *best* by following the Grand Detour Plows at the Demonstrations.

Watch them turn over the sod in clean, deep furrows—they'll do the same in your soil. Watch how perfectly they fit every tractor—they'll fit yours just as well.

Notice especially the Grand Detour "Junior." Lightest, strongest, best—it's the plow of the year for small tractors. Solve the plow question by buying a Grand Detour.

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QUALITY and PULL A PERFECT FIELD, ROAD AND POWER PLANT

NILSON FEATURES:
Surplus power, ample traction, steel construction.
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Light, compact, accessible and easily handled.

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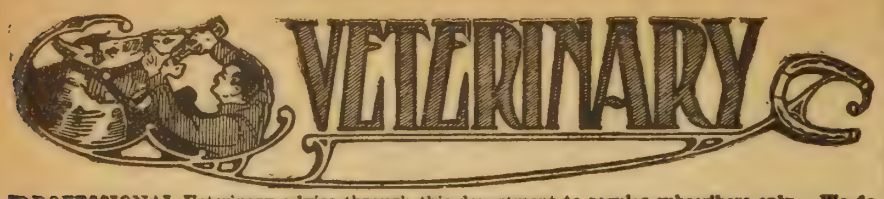

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

AILING ANIMALS.

Inflammation of the Bag.

I have a couple of cows with caked bags and I would like to have you tell me what to do for them.

Bathe the udder or bag twice daily with either hot or cold water and then apply camphorated oil over the entire udder. Also give two teaspoonfuls of fluid extract phytolacca in a pint of water every four hours for two or three days.

Indigestion in Pigs.

I have some pigs that are on full feed, but are still sucking. They seem to get poor and get the thumps.

These pigs are troubled with indigestion, which is probably brought about through feeding. You had better cut down the feed and better yet gradually change the feed and also give half a teaspoonful of baking soda to each pig in slop once daily for a few days.

Infected Milk.

I have a cow that gives a matter-like substance in her milk. She is to come fresh some time in September. Would like to know cause of this.

This trouble is probably the result of infection of the udder with some organism. These cases are sometimes not very responsive to treatment. The internal administration of two drams of bisulphite of soda once daily may be of some benefit.

Milk Fever.

We have a cow that had milk fever. We secured a veterinarian and he helped her some but her legs are swollen and she is unable to use them. She will not eat nor drink but just a little now. We would be glad to have your advice on this case.

Your cow as well as having had the milk fever may be bothered with paralysis of some kind. You had better just keep on with the treatment the veterinarian prescribed and, if necessary, have him see her again.

Navel Ill.

I had a mare a short time ago which had a fine, large colt. It was weak when born and had to be helped up for a few days, but seemed all right otherwise. The fifth day it began to be stiff in the fore parts, refused to help itself at all, and died the next day. It seemed in no pain whatever. A week later another mare had a colt. This one was quite strong and after the first day could get up alone and walked to pasture. The third day it was well when I left the barn at night, but the next morning it lay dead. Could you tell me what could have been the trouble?

Your description of the cases does not give one much to judge from. However, the first mentioned case may have been a case of navel ill which was of very acute nature, thereby causing death of the animal on short notice. We would be unable to say what caused the death of the colt in the second mentioned case.

Severed Tendons.

A short time ago my horse was cut with a mower. The neckyoke came down and the mower ran onto his hind leg, cutting him on the inside of the right leg about three or four inches above the ankle. The cords were cut, but I do not know whether or not they were cut entirely off. He puts some weight on that leg, but the foot from the ankle lies forward, so that he walks on his ankle. The cut is about two inches long. What can be done for this horse? Will he get better? Should he be tied up or left loose? Can these cords be held together in any way so they will knit? Should the leg be put in splints to hold it in shape?

This animal should have been treated intelligently immediately after injury. It being an old wound and somewhat infected now the treatment will have to be somewhat different. You should first know what structures are injured before treatment is begun. It may be this animal will need a shoe with a leg brace attached, but we would not advise treatment further without knowing the exact nature of the wound. Would it not be possible for you to have a competent veterinarian look this animal over?

Warts.

I have a mare about five years old that is bothered with warts around the mouth, lips and nose. You can find a hundred or more on a very small place. My neighbors tell me that they will go away, but she has had them a year or longer. Can you tell what makes this, or give me a remedy?

If you will take this animal to your local veterinarian and have him cut these off with the scissors and touch each one with caustic you will have little trouble with them returning.

Poll Evil.

I have a four-year-old iron gray gelding which has poll evil. He showed signs of something being wrong with hi head about the first of June. I began putting cold water packs on his head for about two weeks, then put liniment on for a week or two. Then it broke and in a few days formed a hole about the size of a lead pencil. The hole is about an inch below the mane on the right side and runs across toward the left side, slanting downward, and about an inch and a half deep. Since the hole formed, which is about three or four weeks, I have syringed it out twice a day with stock dip and liniment. For the last week I have been using salt. It does not discharge very much, but does not seem to get any better.

This should be examined by a veterinarian before treatment is begun, as he will be able to tell the extent of the trouble and advise intelligent treatment. However, if a veterinarian cannot be had you might try the injection of tincture of iodine in the opening once or twice a day for a few days. If this does no good try some caustic, such as chloride of zinc, one ounce to a half pint of water. Use two or three times in one week. The region below the opening should be greased or oiled when caustics are used. After caustic has acted use daily a solution of lysol 1 per cent.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Bacterial Enteritis.

One of our subscribers, Wisconsin, is losing her fowls, and writes this description of the trouble:

We are losing our fowls at an alarming rate, and do not know in the least what is the matter. They get listless, feverish, and after sitting around for a few days die. About the first symptom we notice is that they become lame in the right leg. Can you help us? Is the trouble contagious?

Bacterial enteritis is contagious, and that is about the size of your trouble—and certain it is that it is large enough.

Many times a similar question has come to this department, and in most instances the lameness was described as being in the right leg. This incident, of itself, differentiates the symptoms between bacterial enteritis and the other forms; there are several. The lameness is caused, not from any injury or disease in the leg, but from the soreness coming from ulceration of the pouch which corresponds to the appendix in the human race. Notice a patient troubled with attacks of appendicitis, and in almost every case he is slightly lame in the right side.

The trouble first starts through contagion, and develops rapidly in hot, damp weather. If a fowl were to be examined, there would probably be found ulcers in the intestines and liver. Indeed, this ailment more nearly represents in a chicken what blackhead does in turkeys.

In common with other germ diseases, everything that has been in touch with the flock should be burned and disinfected. Rake and burn everything burnable. Then spray with stock dip, until the houses and yards are reeking. Get after those "bugs" just as if it were something that you could see with the eye. Clear the boards from droppings each morning, then do some wholesale culling and destroying of the flock.

To destroy a chicken that does not look so very bad requires a good deal of nerve, but it pays in the long run. A bird in the first stages can transmit the trouble to any or all of the others, varying with the condition of the individual. At least, if you cannot bring yourself to make a wholesale clearance, then do place all that seem moping in a house where they cannot have access to the flock.

Give salad oil, which will remove the irritating matter, and feed only well-cooked rice, or milk. Stale bread dipped in sweet milk is a good diet, too. Scald all drinking and feeding vessels to prevent contagion in that quarter, and place permanganate potash in the drinking water. Try to study out the numberless ways in which the contagion may be spread, and then do your level best to "head it off."

Tractors With Quality and Pull.

THE Nilson tractors have quality and pull. They are light, compact, with steel construction and easily accessible parts and have plenty of power and ample traction. They are the product of careful, efficient work by the Nilson Farm Machine Company, Minneapolis, Minn., and good work can be expected of them. Two sizes are on the market-Nilson Senior made for four fourteen-inch plows and Nilson Junior for two or three fourteen-inch plows. Either of these sizes may be seen at work at any of the tractor demonstrations which will be held this year. If possible, see them at one of the demonstrations, also, write for complete catalog to the company named above. See page 17 and kindly mention this paper when you write.—Adv.

In Fuel Economy--Pulling Power And Easy Operation

The Rock Island Heider 10-20

Burns Kerosene and Gasoline

Will Open Your Eyes At The Demonstrations

This four-wheel, four-cylinder tractor is equipped with tanks for both kerosene and gasoline, and you can switch from one to the other without having to make a carburetor adjustment.

It will drive your smaller machines such as cream separator, washing machine, pump, and saw wood, and do it economically using no more fuel than is absolutely necessary for the work.

Here is a real all-purpose tractor that has proven by eight years of actual field work its ability to do all the power work on your farm easily and economically

It will furnish belt power for a grain separator, clover huller, ensilage cutter, feed mill, hay baler, road grader, etc. It will pull three 14-inch plows under normal conditions or four under favorable, plowing about an acre an hour.

Speeds Forward--Seven Reverse

Owing to the specially patented friction transmission this tractor has seven speeds forward and seven reverse. As a result of this style of transmission, the Rock Island Heider has less gears than other tractors which means less trouble, less complications and your repair expense cut to a minimum. Investigate the Rock Island Heider carefully for it will do your work the way you want it done and burn the least amount of fuel. Write for the catalog and SEE IT WORK AT ONE OF THE DEMONSTRATIONS

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If you are not going to attend any of these demonstrations—write us for free catalog—full of pictures and interesting facts.

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THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with

ABSORBINE

also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. $2 per bottle delivered. Book 3 M free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. $1 and $2 a bottle at dealers or delivered. Book "Evidence" free.
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POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis

HATCHING EGGS; prize-winning S. C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. U. S. Thorosen, Shell Lake, Wisconsin.

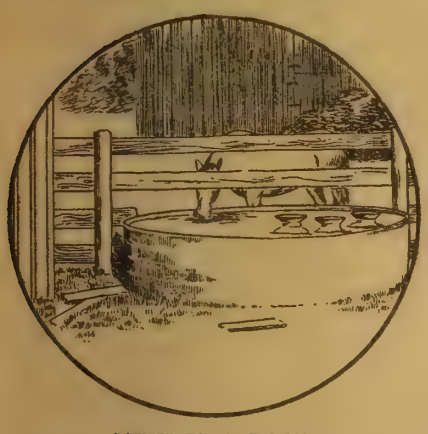
It Will Pay to Keep Milk and Cream Clean and Cold.

Wisconsin Agricultural Experiment Station.

PURE and wholesome milk fit for food can be produced only from well-cleaned, healthy cows. The milk must always be handled in clean pails, strainers and cans cooled quickly, kept cool and protected from dirt. The sooner milk is cleaned after it is drawn the better. The longer it is left in the stable the more odors it absorbs. Bacteria or germs grow rapidly in warm milk. A well-planned milk room lessens labor and helps greatly to improve the quality of the milk and cream produced. If a gasoline engine is used to furnish power it should be kept where the odor will not taint the cream. Germs thrive in dirty, moist places. A damp and greasy separator bowl makes one of the best bacteria breeding places. Improve the quality of your product by keeping the separator clean and dry.

Cleanliness and cold are the two most important requirements of a good dairy. Remove immediately the milk drawn from clean, healthy cows in a clean stable to a clean, cool milk room. Separate in a clean separator. Place the cream in a clean can in cold water. Deliver cream at least four times a week in summertime and three times a week in cold weather.

The Poor Way.



MILK IS A FOOD.

So no matter how clean the barn may be it is a poor place to keep milk. The stock tank or the watering trough, too, is a poor place to hold milk or cream. Therefore the cans should be removed to the milk room immediately after milking.

A POOR PLACE FOR IT.

When milk is separated in the stable it absorbs the odors of the barn and takes any dirt which may be in the air.

JUST RINSING WON'T DO.

Merely running even hot water through a separator will leave it dirty and unfit for use. It is well, of course, to flush the separator with milk or warm water when through using it for separating.

The Better Way.

COOL MILK QUICKLY.

On many farms the water for the stock passes through a small tank in which the cans are placed soon after milking. This tank can be covered or, at small expense, enclosed in a milk house.

IN ITS PROPER PLACE.

A well planned milk room should have a well-drained cement floor, so that it may be cleaned easily.

BE THOROUGH IN CLEANING SEPARATOR.

To produce clean cream, the parts of a separator should be carefully washed with warm water each time, use a brush and cleansing powder, then scald with boiling water and spread tinware to dry in the sun.

FILL SILOS QUICK

Three sizes, 6 to 18 H. P., direct drive to main cutterhead shaft, 2¾ in. in diameter, powerful 6-blade fan on same shaft. Emery wheel attached.

Sold on trial

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FREE FARMERS ACCOUNT BOOK

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dale. Look it over, it is a good one. Records of forty-five-pound cows follows:

Owner, name and breed	Age	When fresh	Lbs. B. fat
Chas. Tomfhorde			
Cherry, G. G.	5	2-16-16	48.4
Fred Boetcher			
Snookums, G. H.	1	2-24-16	47.0
Wm. Schultz			
Brindle, G. H.	7	4-30-16	69.0
Butter, G. H.	8	3-1-16	60.2
Bleenie, G. H.	4	3-14-16	65.5
Molly, G. H.	3	3-10-16	63.4
Baker, G. H.	2	4-20-16	52.9
Corneal Van Asten			
Lady, G. H.	2	5-12-16	56.1
Fred Zimmerman			
Polly, G. G.	9	4-1-16	59.8
Sally, G. G.	9	2-15-16	48.4
Christ Van Asten			
Flossie, G. H.		3-14-16	53.2
Joe Van den Berg			
No. 1, G. H.			47.6
J. C. Kieffer			
No. 1, R. H.		3-12-16	50.4
No. 7, R. H.		5-15-16	54.8
No. 8, R. H.		5-11-16	57.0
Wm. Behling			
Cole, N. H.	5	2-3-16	45.1
H. J. Bassuener			
Rosetta, R. H.	5	1-24-16	45.2
De Kol, R. H.	2	4-19-16	45.2

J. Williams, Tester.

Association No. 2 have been obliged to change testers several times. Reports from there have been delayed:

Owner, name and breed	Age	Lbs. B. fat
Edw. Caan, Star, N. H.	8	47.1
Thos. Thompson, No. 7, R. H.		58.4
Henry Johnson, Blackie, N.		45.3
F. A. Henbert, Francis, R. H.		45.3

Jessie Simmons, Tester.

The best showing for the month in association No. 3 was made by the herd of W. A. Zuehlke. The average lactation period in this herd was 160 days. The average butter fat production per cow was 28.04 pounds of fat. The average profit was $6.78 figuring butter fat at 30 cents per pound:

Owner, name and breed	Age	When fresh	Lbs. B. fat
W. A. Zuehlke			
No. 16, G. H.	5	4-10-16	46.2

L. Townsend, Tester.

Stanley Co-operative Cow-Testing Association.

The following table gives the names and records of the cows in the association which have produced more than forty-five pounds of butter fat during the period of thirty days ending June 30, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
William Cotter					
Lulu, N.	8	2-10-16	1094	4.6	50.3
Anton Foster					
Mable, G. S. H.	7	2-1-16	1485	3.3	49.0
Mike Eslinger					
Big Red, N.	7	1-1-16	1020	4.6	46.9
Geo. Weissenberg					
Queen, R. H.	5	4-17-16	1984	4.3	85.3
Beatrice, R. H.	5	3-4-16	1773	3.2	56.7
Johanna, R. H.	4	1-16-16	1417	3.2	45.3
G. W. Schmidt					
Juno, G. G.	2	4-6-16	794	6.1	48.4
Mike Larson					
Grey, G. H.	3	5-23-16	1221	3.8	46.4
Beauty, N.	8	3-23-16	964	5.2	50.1
Frank H. Schmidt					
Blue Cow, G. H.	5	3-25-16	1113	4.5	50.1
L. E. Scott					
Etta, G. G.	5	4-18-16	945	5.9	55.8
Sukie, G. G.	6	5-9-16	1029	6.0	61.7
Henry Stuttgen					
Jersey, N.	9	4-20-16	1224	4.5	55.1
W. and P. Stuttgen					
Suke, G. H.	5	4-27-16	1432	3.5	50.6
Star, G. H.	4	5-4-16	1429	3.3	47.1
Albert Birkholz					
Queen, G. H.	4	3-18-16	1457	3.7	53.9
Geo. Mason					
Wiles, N.	7	5-12-16	1091	4.6	50.2
Shorey, G. J.	6	5-17-16	1156	5.1	58.9
Louis Qualheim					
Mollie, G. H.	7	2-7-16	1389	3.7	51.4
Rose, G. H.	2	4-3-16	1119	4.4	49.2
John Birkholz					
Polly, N.	7	5-8-16	1287	4.6	59.2
Frank Smalley					
Yankee, R. H.	8	1-31-16	2037	3.1	63.1
Pinto, R. H.	10	2-4-16	1748	3.2	55.9
Rosetta, R. H.	5	9-17-15	1342	3.4	45.6
Dan Schunk					
Flossie, N.	4	5-13-16	1032	5.0	51.6
Geo. Schunk					
Frisk, N.	11	12-3-15	1373	3.9	53.5
Jennie, N.	3	1-1-16	1135	4.2	47.7
Nancy, G. H.	3	4-25-16	1367	3.5	47.8
Theo. Albert					
Pet. G. H.	5	4-1-16	1277	3.6	46.0

Wood County Cow-Testing Association.

Association No. 1 has fifty-nine cows in the accredited list for the month of June. The best showing is made by the herd of Wm. Schultz, of Auburn-

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No Man Needed To Feed This Machine

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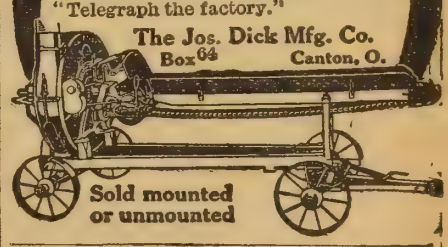

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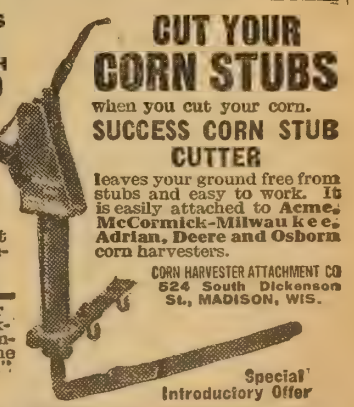

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Farmers' Open Forum

Bigger Profits on Beef Cattle.

To the Editor:—The hot weather has left its effect on live stock of this section. The pastures, while exceptionally good the fore part of the season, are now dry and hard, while the flies have also done their part. The number of market cattle I think is somewhat less than a year ago, but will probably be marketed in better condition, as our corn crop promises considerably better than a year ago, although it is hardly an average crop and needs more rain. We have had some showers lately, but everything is so dry that it has been only a partial help. Owing to the shortage of crops last year and the overstocked condition of this section I think less sales of pure-bred breeding stock were made and I am inclined to think more of these are for sale now than a year ago. A great change in the beef cattle industry has taken place here in the last ten years. At that time I think nearly three times as many breeders bred Short-horns as any other beef breed and now I believe the Aberdeen Angus breeders are most numerous. Conditions as compared with last year could be summed up like this: There are less market cattle, but probably better feeding conditions which means that they will be marketed in better condition and owing to better prices (which are in prospect at this time) will probably bring greater returns than last year. What applies to cattle will, I think, also apply to hogs only in fattening in a more pronounced degree.

Parke Gelbach, Breeder of Aberdeen Angus cattle, Grant county, Wis.

Never Such a Hay Crop.

To the Editor:—Never before have we had the hay crop that we have had this year. As to the condition of our stock the farmers were not carrying a lot of stock owing to the condition of corn last season. There will be a number of cattle marketed this fall. However, we are not going to be rushed any on account of the dry weather.

L. P. Martiny.

Chippewa Co., Wisconsin.

Kellogg Travels in Iowa and Minnesota.

To the Editor:—Fruits, apple and plums, are very scarce, probably owing to overbearing last year. Except two orchards at Pocahontas and a few trees at Algona I have scarcely seen an apple. Perhaps the cold, wet weather of May and June may have affected the bloom the same as strawberries. In this part of the county a severe hailstorm last Monday injured the trees and destroyed what little fruit there was. In Iowa, planters of fruit trees expect the trees will take care of themselves until they go to pick the fruit. It is all corn, hogs, oats, hay, a few horses and cows. I rode 200 miles and saw but one silo. There is very little dairying. The report is an automobile for every thirteen inhabitants; this doesn't say how many have mortgaged their homes for an auto. Drouth prevails over almost all this country, but still the corn crop is looking well and will be heavy if we can get rain in time.

Threshing from the shock is quite general and some oats are 100 bushels per acre, but sixty is about the general expectation.

As soon as I crossed the Minnesota line I wanted my coat on, as the weather was cool and there was a nice looking rain. I am visiting Clarence Wedge, of the Wedge Nursery Company. Their thousands of roses and Hydrangea and millions of evergreens are very fine. They had to import twenty-five men from Minneapolis last spring to help them through their busy season.

I am making my way to Minneapolis where I will write you later.

Mr. Wedge called in sixty of his horticultural friends for a picnic yesterday on the lawn. There we met in his new hall built to accommodate the friends and neighbors for social and prayer meetings and I had to tell them what I knew about horticulture and my trip over the plains and digging gold in California.

Geo. J. Kellogg.

Albert Lea, Minnesota.

A TEAM of Pabst Percheron stallions. Many of the stallions to be sold at the Wisconsin State Fair Horse Sale are broke to work. See advertisement on page 28.

Water For Cows.

All animals require plenty of good, pure water. This is especially true of the milking cow, as water constitutes more than three-fourths of the volume of milk. The water supply, therefore, demands the dairyman's most careful attention. Stale or impure water is distasteful to the cow and she will not drink enough for maximum milk production. Such water may also carry disease germs which might make the milk unsafe for human consumption or be dangerous to the cow herself. During the winter, when cows are stabled the greater part of the time, and unless arrangements have been made to keep water before them all the time, they should be watered two or three times a day. If possible, the water should be 15 or 20 degrees above the freezing point, and should be supplied at practically the same temperature every day. When water well above freezing temperature is stored in tanks and piped direct to the cow, there is probably little occasion for facilities to warm it; but when it stands in a tank on which ice often forms, it usually pays well to warm it slightly. This can be done by a tank heater, by live steam, or by hot water from a boiler. If a boiler is used for running a separator or for heating water to wash and sterilize utensils, steam from it can readily and cheaply be used to warm the water.—[Farmers' Bulletin 743.

UPPER WISCONSIN FARM LANDS.

ONEIDA County Lands: I have four hundred acres in solid body on a main road, 4 miles from city with groves of timber and several small lakes, very desirable property, can divide if necessary into four pieces. Ask for map and prices. Also have an improved farm, 160 acres, good house and barn, full of clover and timothy hay, big field of fine oats, 70 acres of clover growing, pasture, running water, timber, only half mile from school and cheese factory. Ideal dairy farm. Want $3,000 cash, balance on time. Address C. P. Crosby, Rhinelander, Wisconsin.

WE ARE selling a part of our 10,000 acre tract, located in Oneida County on beautiful lakes with the best known soil in upper Wisconsin, in the heart of the choicest dairy spot on earth. To see these lands is to buy them. Write or inquire Oneida Farms Co., E. M. McVicker, Prop., 120 First National Bank Bldg., Milwaukee, Wis.

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We teach you to handle any auto proposition. You graduate in from eight to twelve weeks. Our equipment is complete. Students actually build cars from start to finish, getting factory training in assembling, block-testing, road testing, everything. Special complete course in Oxy-Acetylene brazing, welding and cutting, separate from regular course. All leading types of starting, lighting and ignition systems in operation. Learn to time motors, adjust carburetors, magnetos, valves and bearings quickly and accurately. Six-cylinder Lozier and eight-cylinder King are used for road instruction. We have a new Chalmers "6-30" chassis with 3400-r. p. m. motor, the latest thing out, also a 1917 Detroiter-6, and an Overland. Just added Delco System as used in Buick, Hudson and Packard Twin "6." We have also installed a 1917 Willys-Knight complete chassis in the shop for students to work on.

Detroit Is the Place to Learn—Start Any Time

There are 44 auto factories in Detroit and 140 accessory and parts factories. Our students have the privilege of going thru any or all of them. We now operate Westinghouse Auto-Lite and Bijur Service Stations. After careful consideration the Westinghouse Electrical & Mfg. Co., the Auto-Lite Co., and the Bijur Co. decided that our school was the best place in Detroit to handle their service stations. This has added thousands of dollars' worth of equipment and makes our electrical department unequaled. These are special advantages offered **by no other school.** Students get actual experience and training in handling all kinds of electrical auto equipment and taking care of trouble. We have just installed a Sprague Electric Dynamometer for block-testing purposes for students' use. The Michigan State Auto School is the only Auto School having this equipment. Auto factories need Dynamometer men constantly. We have a greater demand for our graduates than we can meet. Factories and Garages are paying big salaries to men who know how to handle electrical equipment quickly and properly. Detroit is the automobile center. You get practical instruction. Come to our school and learn the auto business right. School open all the year. Enter classes any time, any day. Three classes daily: morning, afternoon, evening. You can work in the factory in the daytime and take course at night.

There is a great demand for Michigan State Auto School students. Garages throughout the country write us for men. Auto factories write and phone for men constantly to fill permanent places. Why not fit yourself for one of these good paying positions?

Follow the Crowd to the Michigan State Auto School. Come to Detroit.

THIS IS ONE OF THE 1916 CLASSES

Factory Co-Operation

We have completed arrangements with the Auto factories to put them in touch with men who intend going into business for themselves. Think of getting inside information as to the best territory and where the garages will make the most money. The factories are looking for trained men to represent them. Men who know the auto business from A to Z are in biggest demand. Come here and start right—get the information first-handed and don't wait.

Act Quickly - Now - Don't Wait

Fill in the coupon and mail it now; get full particulars; get "Auto School News" and New Catalog. They are both absolutely free. Or better still, jump on the train as hundreds have done, and come to Detroit, the "Heart of the Automobile Industry," and learn right. Remember you can enter classes any time, any day. The price of course is based on giving full value. Therefore we cannot give another course free. Graduates in the complete auto course are competent to handle farm tractors. Act quickly—now. We have no branches. Write or come direct to to this school.

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33,000 sq. ft. of additional floor space in our new building, thousands of dollars' worth of new equipment, plenty of room for students to work. This comes with our new building at 687-89-91 Woodward ave., which we will occupy about Sept. 1st. Our school has grown by leaps and bounds, students come from all over the world. Men have left after graduating and started in business for themselves; others have accepted good jobs both in Detroit and over the country. Their work has proven that we train them rightly. We are constantly adding new equipment. Our students get the best and latest things to work on. Our electrical department is thorough and complete. It is in charge of one of the most competent electrical instructors.

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Pastures Show Improvement---Prospects For Silage and Some Mature Grain Are Good---Threshing Is Beginning.

WISCONSIN.

Adams County.—August finds the ground well soaked with rain, with a continuation of heavy showers at short intervals, interfering greatly with the stacking of grain and practically putting a stop to the making of wild hay. Rye is mostly in the shock with very little stacked, as yet. Oats mostly are being harvested. Corn has improved greatly since the rains. Many fields of early corn have been practically ruined, the excessive heat killing the tassel. Late potatoes are looking good. Threshing is just beginning. The weather being unfavorable for it.—W. B. B.

Brown County.—Harvest is nearly over. Most of the grain is cut and in barn or stack. The returns will probably be light, oats about 65 per cent, barley 65 per cent, rye 60 per cent and potatoes 40 per cent of the normal crop. Corn has made a wonderful growth here and makes one of the best showings in the state. Several fields in this vicinity eight to eleven feet high are tasselled and silked. If the weather continues good there will be a great corn crop. Pastures are very poor, consequently the cream check is small. Threshing has not begun.—J. D. McAllister.

Buffalo County.—Small grains are good with corn exceptionally heavy. Pastures and meadows are good. Potatoes are backward, but fruits and vegetables are plentiful. Cattle and hogs are scarce although prices are high. Horses are plentiful, but there is no demand for them. Many automobiles are being sold in this locality. Gasoline sells for 22 cents a gallon. A large amount of cheese is shipped from this section. Roads are fine. Many new bridges were built this summer, most of them cement.—John Wald.

Burnett County.—Black rust on wheat diminished the crop outlook considerably. Drouth and scorching winds caused the oats to wither before mature. Winter wheat and rye were normal when cut. Late rains have redeemed the cornfields and pastures; potatoes show no inclination to thrive, but may, if frosts stay away till October 1st. Cattle, horses, sheep and hogs are in fair condition and healthy. Farmers are shipping already, and in spite of the bumper hay crop will reduce herds on account of the satisfactory prices prevailing.—Erick H. Johnson.

Clark County.—Several weeks of extremely warm weather hastened the maturity of oats and barley, as well as all small grains so that harvesting is now done and threshing has begun. Present indications are that the small grain crop will be inferior in quality to that of last year, oats especially filling too rapidly to be heavy. Corn has grown wonderfully and may mature, if frost holds off. Many cattle have been sold throughout the county. The northern part suffered severely from the late storms, corn and grain being completely destroyed in some sections and many barns were burned. Potatoes are good, but not producing as abundantly as was expected.—Louis Buddenhagen.

Crawford County.—A splendid hay crop was put up during the dry weather, and the grain was gathered in good condition. Threshing is now going on with fair yields. Pastures are very dry and milk production has fallen off greatly. Recent rains did much good, but missed some sections. Pastures need heavy rains in order to revive. Some of the corn was damaged beyond help, the rains coming too late. There will hardly be half a crop. Potatoes are very scarce. The tomato crop is badly injured also. Quite a good many cattle have been shipped from this county during the last two weeks. The great need is more rain.—A. M. Laird.

Door County.—The long dry spell cut down the oats crop about 10 per cent, as they did not fill out well. Since the rain corn and potatoes are doing well. The late potatoes will set much better on account of the rain. Corn is looking well and if frost stays off will be a bumper crop. The cherry crop was cut down at least 60 per cent because of blight. Spraying, properly done, will control the blight, but is not of much use if the blight is well started. Apple trees are well loaded, but scale is bad and will cut the crop 25 per cent.—John Aznoe.

Dunn County.—Threshing is under way in this locality. The yield is about 60 per cent of last year's. Corn needs rain badly. Potatoes are almost a complete failure. Pastures are drying up, and receipts at the creameries are falling off. Flies are very bad.—J. D. Millar.

Iowa County.—Corn is doing fine and ears are forming well, but the ground is getting dry. Most of the grain in the shock has been threshed. Oats are making forty bushels of fair quality grain. Barley is good. Late potatoes will be a failure if rain does not come soon. The meadows have not started to grow since the hay was cut. Pastures are dry.—John M. Blotz.

Iron County.—Haying is about completed, the crop running about 10 per cent ahead of last year. The weather has been hot and favorable for haying. Potatoes are looking well and should yield a heavy crop. Oats are about ready to harvest. The oats crop looks well. There has been plenty of rain and all pastures and meadows are in fine condition. Live stock are also in fine condition.—J. A. Becker.

Jackson County.—The extreme heat of July and early August has developed the corn beyond expectations and just about made up for the late start caused by the cold, wet spring. With fairly good conditions from now on, much corn will be ready to cut by September 15th. Harvest is over and threshing has begun. While oats and barley will not give the big yields of last year, they are fully up to average.—P. W. Jones.

Juneau County.—The rains of the last week have started the pastures. Fruit has been greatly damaged by the drouth and heat, and is poor in quality and quantity. Stacking has been done to some extent, but is going slow on account of rains. The wet weather has also held the threshing back. Hardly enough threshing has been done to get an estimate, but it is probable that rye and barley will prorve to be of as good quality as last year's, but oats will be of poorer quality, running only about one-third as good as last year. Stock has suffered some from heat and flies.—C. E. Haskins.

Langlade County.—Haying is done, a big crop having been put up without rain. Rye, oats and barley are light crops on account of hot weather and lack of rains. Corn looks very promising. Potatoes are looking well, but are few in a hill. Second crop clover and alfalfa are short on account of hot weather and lack of rain. Pastures are drying up. Apple crop is light and small in size. Harvesting will be about finished next week. Threshing has begun.—Charles Lade.

Lincoln County.—Small grains, oats and barley are being cut and are very poor as compared with last year. They will probably not yield over 60 per cent. Potatoes looked very well until about the middle of July, but after a month without rains the prospects are for a poor crop with not many salable potatoes. The meadows and pastures are good considering the long dry spell and cows are doing very well. Hay was a very good crop.—G. A. Patterson.

Manitowoc County.—Harvesting of small grain is now in progress. The local showers arrived too late to be of any benefit to oats, barley, spring wheat and peas, and, as a result they are poor both in quality and quantity. Peas will not be half a crop compared with last year. Due to the showers and warm weather corn generally is in fine condition and is making an immense growth daily. Potatoes also are doing well. Pastures are drying up and the milk production is rapidly falling off. Vegetables are growing fine since the rain. Live stock are doing well.—Edward E. Straka.

Outagamie County.—The wheat crop is very small in acreage and what is left will make only about one-half of last year's crop. Oats are about all cut, but are light in weight, about two-thirds of a crop compared with last year. Barley is very poor quality on account of the drouth. Rye is about one-half a crop, but is of fair quality. Corn is improving quite a little since the rains and looks more promising. No threshing has been done. Early potatoes are very poor. Late ones are doing fairly well under present conditions. Pastures have been dried up, but will probably improve from now on. The hay crop is light on old meadows. Grain crops will be very much below last year's average.—Harry Lepplu.

St. Croix County.—The grain has all been cut, some stacked and a little threshed. The wheat crop is so light and thin that it cannot be used for milling purposes. Rye is fairly good, but the quality is not so good as last year and a considerable portion of it will not grade No. 2. Early sown oats are a good crop on light, sandy loam soil, but almost a total failure on heavy clay land. All late sown oats are a failure. Early potatoes are half a crop and late potatoes do not promise much. The corn crop looks as well as could be expected. The stalks are not large, but seem to be eared out well. The hay crop was the best we have ever had and was cut and stacked in prime condition.—Stephen Everson.

Sawyer County.—Dry, hot weather has cut small grain probably 20 to 25 per cent according to the soil upon which it was grown. About 80 per cent of the harvesting is done and stacking is under way. No harvesting has been done. Corn has been doing fine during the recent hot period and has made up to some extent for the time lost during the fore part of the summer. The potato crop is an uncertain factor. The vines and top growth are good, but many complaints have been heard in regard to the setting, the general complaint being that there are too few set, indicating a comparatively light crop. Live stock are doing well, although some pastures are getting short. There is considerable increase in the number of cattle pastured in this vicinity this year.—Jens Uhrenholdt.

Walworth County.—Pastures, potatoes and late sown grain look very poor. Early sown grain is turning out good. Corn is very uneven, depending largely upon the number of local showers the section received. Corn is from two to twelve feet tall.—O. Taylor.

Wood County.—July was very dry and hot with only one shower during the month. Hay and grain were damaged by the drouth. Timothy and clover hay made about three-fourths of a normal crop. All was saved in good order. Marsh hay was a full crop. Pastures are drying up and the milk supply is about one-third less than it should be. There will be no second crop of hay this year. Oats are about 75 per cent of a normal crop. Rye is poor. Barley is very good. Corn is backward, but has been doing better the last two weeks on account of rain. The outlook is for a small yield. Early potatoes will be a small crop. Rains from now on will make late potatoes a fair crop. The acreage is about the same as last year. Threshing will begin this week. The grain is all harvested in good order. Cabbages are a failure because of insects and heat. Other garden vegetables are fair. A few horses died from heat, a great many were made useless for work. A number of chickens were killed by the heat. Cattle are scarce and high. There are no cattle on feed for the markets in this locality. Hogs are very scarce and high priced. All kinds of live stock are healthy.—P. B.

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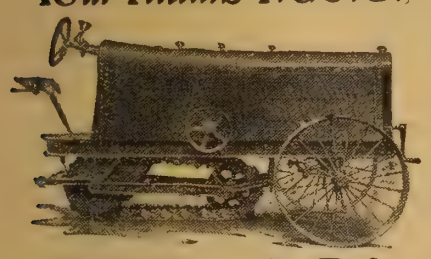

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Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Can Fruit Without Sugar.

Fruit for use in pies or salads or as stewed fruit can be put up or canned without the use of any sugar at all, according to canning specialists. They, therefore, advise those who, because of the high price of sugar, have been thinking of reducing the amount of fruit put up, to can as much of their surplus as possible by the use of boiling water when sugar sirup is beyond their means. Any fruit, they say, may be successfully sterilized and retained in the pack by simply adding boiling water instead of the hot sirup. The use of sugar, of course, is desirable in the canning of all kinds of fruits and makes a better and ready sweetened product. Moreover, most of the fruits when canned in water alone do not retain their natural flavor, texture and color as well as fruit put up in sirup. Fruit canned without sugar to be used for sauces or desserts must be sweetened.

Can the product the same day it is picked. Cull, stem or seed and clean the fruit by placing it in a strainer and pouring water over it until it is clean. Pack the product thoroughly in glass jars or tin cans until they are full; use the handle of a tablespoon, wooden ladle or table knife for packing purposes. Pour over the fruit boiling water from a kettle, place rubbers and caps in position, partially seal if using glass jars, seal completely if using tin cans. Place the containers in a sterilizing vat, such as a wash boiler with false bottom, or other receptacle improvised for the purpose. If using a hot-water bath outfit, sterilize for thirty minutes; count time after the water has reached the boiling point; the water must cover the highest jar in container. After sterilizing remove packs, seal glass jars, wrap in paper to prevent bleaching, and store in a dry, cool place.

If you are canning in tin cans it will improve the product to plunge the cans quickly into cold water immediately after sterilization. When using a steam pressure canner instead of the hot-water bath, sterilize for ten minutes with five pounds of steam pressure. Never allow the pressure to go over ten pounds.

Good Bread.

One of our readers, Mrs. E. B., writes to us for a recipe for good light bread. Let us begin with a definition of good light bread.

Bread should have a nutty and sweet odor. Bread with a sour taste or smell is decidedly not good bread.

It should be of fine, even texture with no large holes in it. If the finger is pressed against the bread it should dent easily, but the dent should spring back to the level surface. If it does not spring back it means that the bread has not been sufficiently baked, or if you cannot press it in easily it means that too much flour has been used.

The crust shuld be uniform in thickness on all sides of the loaf. Use a separate pan for each loaf of bread so that it will rise easily and so that there will be a crust on all sides. The crust should be rather thin and should not be hard or tough.

First in importance in making good bread is to have good flour. You cannot make good bread with an inferior grade of flour. Next in importance is the yeast. The yeast plant requires sugar for food. The growth of the plant on sugar produces a change called fermentation, breaking the sugar down into two new substances, alcohol and carbon-dioxide gas. This gas is the substance desired to make the bread light. The fermentation is arrested by baking the bread, the yeast plant being killed and the alcohol and gas driven off. Dry yeast cakes, compressed yeast or liquid yeast may be used. One cup of liquid yeast in a good lively state is equivalent to one cake of compressed or dry yeast. Salt is added to bread to improve the flavor. The sugar improves the flavor also. An excess of sugar affects the tenderness of the crust and crumbs and darkens the color of the crust. For shortening, either butter or lard may be used. Lard is said to produce the whiter loaf and butter to give the better flavor. The shortening tends to make the crumb more tender.

Now for the recipe. Here is one made with dry yeast that we know makes good bread. Set the sponge at night. When you start your evening meal put a yeast cake to soak in lukewarm water. Cook your potatoes without salt and save the water from them and two medium-sized potatoes. Run the potatoes through a fine sieve while they are still warm. When the evening's work is finished stir into the potato water about a quart of flour and the well-soaked yeast cake. There should be nearly a quart of water. If the sponge should be too thick, add a little water until it is the right consistency. It should be considerably thicker than cake batter. Beat thoroughly and set away until morning. If the weather is cool, put the sponge where it will keep reasonably warm. It should be light and bubbly.

In the morning add to the sponge a tablespoonful of lard, two tablespoonfuls of salt, two tablespoonfuls of sugar, and flour enough to make dough of proper consistency, which should be about a quart and a half. Knead until the dough is quite smooth and elastic. The dough should not be sticky. A difference in flour will make a difference in the amount to be used. Place the dough in a greased bowl, grease the top of the dough lightly to keep crust from forming, cover and let rise in a warm place.

When the dough has doubled in bulk, knead down. Do this three times, then make out into loaves. Let rise again and bake from forty-five minutes to one hour in an oven that will brown white paper in five minutes. The bread should be an even color and have a crust about one-eighth of an inch thick.

Small loaves can be more thoroughly baked than large ones. When several are baked in one pan, the inside loaves are rarely baked thoroughly, so it is best to bake each loaf in a pan by itself.

The Call of the Hour to the Farmer

Mrs. Cora G. Lewis Gives Reasons For Drift Away From the Farm in Talk at Country Life Conference.

THE call of the hour to the farmer is not a call to his pocketbook or to his material prosperity, although the most serious question before our American farmers today is the saving of the land. The preservation of the soil, that it may be a rich heritage to each succeeding generation, should be a part of the religion of every landowner.

The call, as I hear it, comes from the hearts of the women and children asking for a higher ministry to the spirit of those who live in rural neighborhoods. Until you answer it in terms that transform farm environment, so that it gives peace and happiness through more leisure and more color and expression to life, the drift from the farm will continue.

The farmers of your state and mine have been tremendously prosperous the past few years, and yet the drift away from the farm is increasing. It is because there are too many starved hearts in the homes. There is too little companionship in the neighborhood on the plane of spirit, with books and art and music and the joyous things of life; those things that recreate and vivify life through recreation. The answer is more leisure, more beautiful and convenient homes, more care for women and a brighter social life for the young people, a finer type of community life with more of an intellectual and artistic flavor to it and a new neighbor line which runs like a silver thread through the lives of all.

The farmer and his family need more playtime. Coming across the country this week, I enjoyed the beautiful scenery, the streams and wooded hills, and I wondered if anywhere there were bits of it set apart for playgrounds for the people, as cities buy and set apart valuable tracts of land for community use. Playgrounds are public utilities in municipalities today calling for big budgets to provide recreation and music for the people, but I know of no country community willing to do anything to promote play, although it would be a comparatively simple thing.

Every schoolhouse could have and should have a campus of forty acres, well planned, landscaped and cared for. This campus should house a teacherage—a home for the teacher—and should be, besides a playground for the neighborhood, a laboratory for the teaching of agriculture and other sciences. The best of the young life is leaving all of the country neighborhoods as soon as it can escape. The most precious possession, the jewels—the children—do not want to remain in the life made for them on the farms longer than is necessary. This is a tremendous indictment of the farmer that his young will not root beside him in the civilization he, as a citizen, makes. It is true that the cities need these vigorous, finely poised young people from the country, and that almost every city enterprise, banks, stores, railroads, newspapers—are run by this splendid brood which flows from country to city. But the country community should keep for its own future some of it at least. The solution is easy if you will turn aside, lay by a few Puritanic ideas as to recreation and do some planning for culture, happiness, social advancement and amusement.

Wherever possible the small town should be the community center for the country neighborhood, and if that is not possible, make the center the country schoolhouse. In that schoolhouse put a library—for the grown people and for the children—a moving picture machine, a standard to use standard films, and the Pathescope for films with lectures. Further promote visual education with the stereoscope and slides and constant exhibits.

One week there may be an exhibit of pictures by American artists, the next month or week English art. Reproductions of all the famous pictures of the world may be had for almost nothing. Have a pottery exhibit from some kiln, and another week exhibit jewelry and other fine handicrafts. Have an exhibit of rugs of all kinds, not omitting the beautiful rag ones, perhaps woven in the shadow of the community center.

Let the farmers get behind a movement for rural traveling libraries and supplement the one established in the community center. Have a home lecture course on subjects of local interest and given by the people in the neighborhood. Have a lyceum course with the current history and the world's development, and for special occasions choose as your speaker some person of state or nation-wide reputation. These things will make a community feel a part of the country, rather than a lonely country neighborhood.

Have literary societies and debates with neighboring societies, entertaining on formal occasions societies from other neighborhoods. Let these country organizations have pennants and banners and an identity. Make historic exhibits of family heirlooms and possessions, securing many things from societies which make loan exhibits. If it is ever possible to lay your hands upon a man or woman who has written a little for magazines, stand him up as "Exhibit A" that the people may be interested in better reading, especially if the writer has ever written anything of your community. Develop in every way the local color in a community; that tends to develop community pride—a thing that too many country neighbors lack. The growth of country clubs for women, of parent-teacher organizations, will bring much of value into the country.

Every neighborhood will be able to get help in arranging exhibits from their state university. Do not forget the handicrafts and industries of the neighborhood. Many children today have never seen a blanket for which the wool was carded and spun by hand and woven on a loom at home, or a bit of linen made by someone from the flax in the field. These things are good for the young people to see and will create a respect for the handicrafts, arts and industries that are yet an interesting part of farm life in so many countries.

I remember once, in a little art exhibit held in the small town where I live, we had a corner called "the development of light," beginning with the old whale-oil lamp, traveling the entire trade up through the candle, kerosene lamp, gas and to electricity. China exhibits may be held, showing the fine pieces of china belonging to the old neighborhood families, giving the young people a new reverence for home craftsmanship that used to exist, the historic background of the home. Athletic meets of all kinds, joined in by young and old, will do much to bring color and life and happiness to the young people on the farms.

Jane Addams has written of the spirit of youth in the city streets, and I beg of you to give heed at your rural life conferences to the spirit of youth on the country trail—that golden irresistible tide that is ebbing away from the land to the city. In a spirit of kindliness encourage every manifestation of that youth in music and in dramatics, in art and in works of all kinds; let it learn leadership at home.

I wonder how many country communities with beautiful scenery have interested their young people in out-of-door plays?

Some of you people who live in the midst of beautiful old woods would laugh if you could see the little out-of-doors theater in the town where I live. It consists of a few cottonwood trees growing on the bank of a muddy stream. That stream is not beautiful in daylight. It has no gravelly banks and the water is not clear. But when our young men build up a stage and screen it with transplanted trees and light it, and our young people gather there to put on a Shakespearean play, we think it the most beautiful place in the world.

It takes much time to supervise these plays and costs some money for effective dramatic training, but all the time the young people are tremendously interested in something that is intellectual. They are doing teamwork and they are coming in contact with fine literature.

A group of our young people hired a young man to come from a distant city to put on the finishing touches to a Shakespearean play which was given for the library. Besides giving the people a great deal of pleasure and an interesting summer it netted several

hundred dollars and was a financial success. I have seen Forbes-Robertson in Shakespearean plays and the Ben Greet and Coburn players out of doors, but I have never seen a Shakespearean performance as beautiful to me as that put on by the young peopl and children in my own community. Our ladies made costumes, one lady having a talent for designing doing all the planning, and our houses were full of scraps of cotton flannel, cheesecloth and paper flowers for weeks that of itself was a recompense.

You cannot interest young people after they are entirely grown and their minds are set. I do not know why, but there is something that will not change after we are grown!

Every state should have a censorship of moving pictures, but should be careful not to censor the entire life and interest of everything. The world really goes astray, loses spiritual tone during its leisure hours. Everyone must work, but when the day's work is done and the young person comes to his hours of leisure the forces that are devastating grip him and ruin him unless his soul is filled with something that keeps him alive to the things of the spirit.

It is most necessary to take care of the amusements and entertainments of the people, not only in the country but in the city. Commercialism in the city is taking care of these entertainments, and one of these days, with automobiles, trolley lines coming into the country, commercialism will step out and build little theaters all over the country, having in its grasp the entire sources of entertainment provided to our people. But the field in the country today is clear and we should build our schoolhouses with a stage, and arrange to develop the dramatic element in our own communities and give a chance for self-expression along artistic lines to those who have talent. Any sort of community gathering on some other plane than that of gossip or criticism will itself have made a start toward building a better environment and better atmosphere and make people more contented and happy.

Mock Angel Food Cake.

To the Editor:—I am sending my recipe for the lady who wanted to know how to make mock angel food cake. This recipe requires the whites of only two eggs, but it will make cake that will melt in your mouth. You cannot fail if you follow directions carefully.

Set one cupful of milk in a pan of boiling water and heat to the boiling point. Into a sifter put one cupful of flour, one cupful of sugar, three teaspoonfuls of baking powder, a pinch of salt and sift together four times. Into this pour the cup of boiling milk and stir smooth. Then put in the well-beaten whites of two eggs. Do not stir or beat the eggs into the mixture, but fold them in carefully, drawing the spoon through the mixture toward you, then shoving it back with the back of the spoon; next draw the spoon from right to left, folding in the eggs carefully.

Do not grease the tin nor flavor the cake. Bake in a moderate oven. Ice with frosting flavored with lemon or orange. Mrs. Stella S.

Three Good Recipes.

To the Editor:—In answer to Mrs. E. R.'s request for mock angel food cake I am sending two.

Mock Angel Food No. 1.—Cream one cupful of sugar and butter the size of an egg. Sift together three times one and one-half cupfuls of flour and one and one-half teaspoonfuls of baking powder. To the sugar and butter add alternately the flour and two-thirds of a cup of cold water. Then fold in the stiffly beaten whites of two eggs.

I bake this cake in a long, narrow loaf tin and frost with any desired frosting.

Mock Angel Food No. 2.—Mix and sift together one cupful of sugar, one and one-half cupfuls of flour, three teaspoonfuls of baking powder and one-third cupful of scalded milk. Fold in the beaten whites of two eggs. Flavor with one teaspoonful of vanilla and bake forty-five minutes. Use an angel food tin to bake in.

Here is a very good recipe for a cheap sponge cake. Beat until light one cupful of sugar and the yolks of four eggs. Add three tablespoonfuls of cold water. Put one and one-half tablespoonfuls of cornstarch in a cup and then fill cup rounding full of flour. Add one-half teaspoonful of baking powder and sift three times. Add to yolks and sugar. Flavor with one teaspoonful of vanilla. Fold in the whites of four eggs beaten stiff. Bake in very slow oven for one hour, having the oven a little hotter the last fifteen minutes. Bake in angel food tin.

Could some reader give me a recipe for pressed corned beef? I should like very much to know how to make it and I am sure some of the readers of the Home page can help me out.

Mrs. G. F. P.

Recipes.

Pickled Onions.—One peck silver skin onions, two tablespoonfuls mixed peppers, two tablespoonfuls sugar, two cupfuls salt, white wine vinegar. Peel onions and put in crock; cover with cold water, add salt and let stand four days in a cool place. Drain and wash well in cold water and put into bottles or jars, being careful to drain off all water. Estimate amount of vinegar necessary to fill bottles. To this add peppers and sugar and let boil ten minutes. Let it cool and when perfectly cold pour over the bottled onions, being careful not to allow too many peppers in any one bottle. It is very important to use white vinegar and to pour it on the onions cold if white, crisp onions are desired. They are ready for use in two weeks. It is not necessary to seal the bottles.

Raison Puff—Work one-half cupful of butter until creamy, and add two tablespoonfuls of sugar gradually, while beating constantly, and two eggs well beaten; then add one cupful of milk alternately with two cupfuls of flour, mixed and sifted with two teaspoonfuls of baking powder and one-fourth teaspoonful of salt. Seed and chop one cupful of raisins. Dredge with one-fourth cupful of flour, and add to mixture. Beat thoroughly, turn into a buttered mold, adjust cover, and steam one and one-half hours. Remove to hot serving dish, and serve with whipped cream sweetened, and flavored with grated nutmeg.

Grape Frappe.—Put two cupfuls of sugar and four cupfuls of water in saucepan, bring to the boiling point and let boil fifteen minutes. Remove from range and add two cupfuls of grape juice, two-thirds cupful of orange juice and one-fourth cupful of lemon juice. Cool, strain, and freeze to a mash, using equal parts of rock salt and finely crushed ice. Serve in frappe glasses and garnish with whipped cream sweetened, and flavored with vanilla.

Waffles.—Mix and sift one and three-fourths cupfuls of flour, three teaspoonfuls of baking powder and one-half teaspoonful of salt. Add one cupful of milk gradually, while stirring constantly. Then add the yolks of two eggs, beaten until thick, one tablespoonful of melted butter, and the whites of two eggs, beaten until stiff. Cook on a greased hot waffle iron. Serve with maple sirup.

Cherry Lacto.—Two and one-half quarts sour milk, three and one-half cupfuls sugar, two eggs, one cupful cherry juice, juice of two lemons. Freeze and pack this mixture as any ice cream. This recipe makes one gallon.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

A Wood Nymph.

Dear Young Folks:—I am going to write to the Young Folks for the first time. I certainly enjoy our page very much.

I have one more year in the rural school, then expect to go to high school.

We live on a farm where there is a great deal of timber. I always was a wood nymph. Sometimes when I ramble in the woods I almost think there are real fairies, there are so many beautiful things to see. My sister and I like to walk in the woods in the early spring. We gather flowers of all kinds and also mushrooms. The first flowers that bloom here in the spring are Easter lilies, then come the May flowers, blood roots, blue bells and many others. In the fall we gather nuts. The trees are all so beautiful and the different shades of the leaves look so pretty together. Really wouldn't you like to visit Forest Farm?

Guess my riddle, Young Folks. Which state is the merriest of all the Union? —Ruth.

Dexter Plays a Joke.

Dear Young Folks:—I am going to tell you of a joke that our old horse, Dexter, played on me.

Mamma wanted him to drive and I went to the pasture to catch him. As I approached him he just put back his ears and ran to the farther end of the pasture. When I caught him I put the halter on him. I took him to the water tank and watered him. Then he jerked the rope from my hand and ran as fast as he could down the lane. When he got some distance from me he turned around and just looked as though he was laughing at me. Papa had to go and catch him. Dexter is about twenty years old.

I think the answer to Blanche's riddle—what is there on a wagon that is of no use—is "nothing."

Can you answer my riddle? Round as an apple, flat as a chip; it has four eyes and can't see a bit.

—Another Gladys.

Thinks Willie's Bird a Woodchuck.

Dear Young Folks:—I am a boy eight years old. I live on an eighty-acre farm. We have a dog, eight cats, seven head of horses, nine sheep and two cows.

My sister and I have a tent we can play in. We each have our own room for our playthings. We can both milk.

I am a lover of flowers and I have a row in the garden that are in bloom now.

The name of the red-headed bird described by Willie is woodchuck.

Lydia asked the riddle, round as the moon, teeth like a cat; guess all your life and you can't guess that. But I can. The answer to it is a circle saw.

—Hunter.

Sorry For Gladys.

Dear Young Folks:—I enjoy the Young Folks' page very much. I have written before, but it was not in the paper and I am going to try again.

I am thirteen years old and I go to German school. Our school was out the Fourth of July and we had a school picnic and marched to the woods.

I live in a small town where no train runs through. It is away out in the country. I spent a two weeks' vacation at my grandfather's house and my two cousins were there, too, so we had lots of fun. I have two little brothers, but no sisters.

I feel very sorry for Gladys. I have my own dear papa and mamma and I am very glad. My papa is a cheesemaker.

We have an automobile, one horse and some chickens and pigs. I can tat, crochet and do fancywork.

—Loraine.

Sends Spice Cake Recipe.

Dear Young Folks:—I live on a 254-acre farm. We have twenty-one head of horses, thirty-four head of cattle. I help milk every morning. I like the country best because I like out-door work. I have a pet pig that I call Reddie.

I live a mile and a half from school. School begins again very soon. I am twelve years old and in the sixth grade. I enjoy my school very much.

I can crochet and I am keeping all the patterns in a book. Won't some of the girls send in some samples and tell how they make them so we can all get some new patterns?

I am going to give my spice cake recipe. Five eggs, two cupfuls of sugar, one cupful of butter or lard, one cupful of buttermilk, three cupfuls of flour, one teaspoonful of soda, two teaspoonfuls of cinnamon, two of cloves and two of spice, one of nutmeg and one of baking powder. Mix well and bake in a moderate oven. Put caramel icing on top.

The answer to Bertha's riddle—which hen lays the longest—is the one that died. —Vyrel.

International Sunday School Lesson.

Lesson for August 27, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Journeying to Jerusalem.

LESSON TEXT—Acts 20:16-38.

GOLDEN TEXT—I commend you to God and to the word of his grace.—Acts 20:32.

After his experience in Ephesus Paul went to Corinth, where, amidst much sickness and affliction, he cared for the churches, corrected their wrong conduct and probably wrote several of his letters and epistles (II Cor. 4:7-11; 11:28; 12:20). From Corinth he journeyed by way of Philipi to Troas where he preached his famous long sermon (v. 5-12), that sermon which had such a tragic result. It is recorded as a witness to the power of the prayer of faith and Paul's readiness to serve in time of need. In his haste to reach Jerusalem before the Day of Pentecost (A. D. 58) Paul did not return to Ephesus, but, in order to save time, he had the

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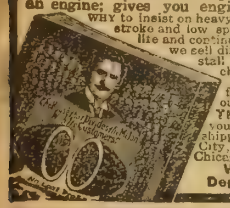

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elders of that church meet him at Miletus (See a good map).

1. A Great Review (vv. 17-28). Paul's statesmanship and genius for organization is nowhere more clearly set forth than here. He had plans for a great evangelistic campaign of Latin lands, (Ch. 19:21). Before pursuing his plan he decided to visit Jerusalem, carrying with him the collections which had been systematically taken up in the various churches on this tour (Rom. 15:26; I Cor. 16:1-5; Acts 24:17) and he was accompanied by a considerable number of pilgrims. (See v. 4.) It is a good thing to pause occasionally and to take stock, to review our lives and to see what progress we have made. This Paul did, and to this Ephesian delegation he enumerates (1) his character among them (vv. 18-19). They knew his manner of life, how that, as a bond servant, and "with all lowliness of mind," he had served their church. They also knew that with tears he had wept over their hard and impenitent hearts (v. 31) and all of this amidst many testings; (2) his method of work (v. 20). Paul not only worked at his trade of tent-making, but found time for the public proclamation of the gospel and also house to house visitation. He was after men, not notoriety. He was always and ever at it, amidst trials, self-denial and the "lying in wait," (Am. R. V.) of men; (3) his methods (v. 21). He had the same message for Jew and Gentile, "repentance toward God and faith toward our Lord Jesus Christ." Repentance is not for Jews alone. Paul shrank not from declaring all that was profitable for their encouragement, reproof, warning, help, training in service and hard study. He had taught them publicly in classes, and had visited them from house to house and had invited them to his own home. Paul's aim, as is the teacher's aim, was to make all people patriotic citizens of the kingdom of heaven while on earth, that they might fight the good fight of faith against all evils, even the principalities and powers of evil.

It was a great undertaking, and he knew not what might befall him, but he did know that bonds and affliction awaited him; however, none of these things could move him from his purpose.

He "counted not his life as dear unto himself" if so be he might hold out until the end and accomplish his course and ministry. This epoch-making journey, one of the greatest in history, suggests in many points our Savior's last journey towards that same city (Luke 9:51). Like his master, Paul knew that ahead of him were trials, but he also knew that God was leading him in obedience to the Spirit's guidance, though it was over the protests of his friends.

II. A Great Charge (vv. 28-38). It is a great experience when one can declare himself pure from the blood of all men (v. 26), and that he has not shrunk from declaring the whole counsel of God. Such conduct always brings an obligation upon those who know and hear such men, viz., that it should be emulated. These elders were to return to the church at Ephesus, not to be servants of themselves but to feed the church of God (v. 28). Paul knew, as a prophet, what would be in store for them (vv. 29-30). Therefore he exhorts them to watch, and warns them how by his own hands he had supported himself and had lived a righteous life among them (v. 34).

We have here rescued from oblivion a new saying of our Lord Jesus Christ, "It is more blessed to give than to receive," one not found in the gospels.

It is this giving which produces a higher quality of happiness and a more noble character.

It is the blessedness of Christ, of heaven, and of the Christian religion.

It is also the blessedness that endures.

Paul then poured forth his prayer on their behalf (vv. 36-39).

Blessed is the Sunday-school class and the church which has such a teacher and such a leader.

These friends sensed the significance of this final separation from Paul (v. 38), and their greater sorrow seemed to be to miss his personality than to lose the help of his teaching.

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1266—Set of baby's one-piece long clothes with front closing. It will require for the sack, ¾ yard of 27-inch material; for the slip, 2¼ yards of 36-inch material; for the wrapper, 2¾ yards of 27-inch material; for Barra coat, 1⅛ yards of 40-inch material.

1364—A simple and becoming dress, suitable for house, porch or business wear, with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size.

1812—A smart dress in Empire style. The pattern is cut in 4 sizes; 2, 4, 6 and 8 years. It requires 2½ yards of 36-inch material for a 4-year size, with ¾ yard for the bolero.

1799—A practical easily-made apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 4¾ yards of 36-inch material for a medium size.

Waist 1574-Skirt 1575—A new and very chic costume. It comprises ladies' waist pattern 1574, cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure, and ladies' skirt pattern 1575, cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. To make the dress of one material will require 6⅞ yards of 44-inch material. Two separate patterns, 10 cents for each pattern.

1652—Girls' dress, with sleeve in either of two lengths, and collar in either of two outlines. The skirt is a three-gore model. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 2¾ yards of 44-inch material for a 6-year size.

1789—Ladies' negligee or dressing sack. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3⅜ yards of 44-inch material for a 36-inch size.

1813—A quaint and attractive frock. The pattern is cut in 3 sizes: 16, 18, and 20 years. It requires 7⅞ yards of 36-inch material for an 18-year size.

1793—A neat dress for mother's girl, with sleeve in either of two lengths. The pockets may be omitted. The pattern is cut in 4 sizes; 8, 10, 12 and 14 years. It requires 3¾ yards of 44-inch material for a 12-year size.

1801—Girls' apron and cap. The pattern for this combination is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 2½ yards of 36-inch material for a 10-year size, for the apron, and ¾ yard for the cap.

Waist 1814-Skirt 1816—A charming gown for many occasions. The waist pattern 1814 is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt pattern 1816, is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 6⅛ yards of 44-inch material for the entire dress in a medium size. Two separate patterns 10 cents for each pattern.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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SYNOPSIS OF PRECEDING CHAPTERS

The scene is laid in the Kootenai country, in the Pacific Northwest, where Genesee Jack is prospecting for gold. A neighbor, named Hardy, comes to his camp looking for someone to guide a party of easterners through the country and Genesee Jack volunteers. He becomes well acquainted with his employer's sister, Rachel Hardy, who takes a great interest in him and is much in his company. Genesee Jack overhears a conversation between Miss Hardy and her aunt, from which she learns that he is not "fit company for a lady"—this is the aunt's view—and the relations between Rachel and the guide become strained. Disobeying his strict orders to stay with the party, Rachel Hardy rides ahead, her horse throwing her as it scares at a bear cub. She is severely hurt, but Genesee Jack finally finds her, and succeeds in getting her safely back to camp. Next morning Jack leaves the camp without a word of good-bye to the women folks. Two weeks later Rachel and Jim, while looking for lost sheep become lost and wander into MacDougall's shack and cook their supper, only to be surprised by Genesee walking in. Later they were again surprised by the appearance of an Indian maid whom Rachel thought Genesee introduced as his wife. Rachel and Jim return to the ranch and Jack leaves the cabin to Talapa, the Indian maid, until spring.

PART III. "Prince Charlie"

CHAPTER I.

In the Kootenai Springtime.

IN THE spring that followed, what a spirit of promise and enterprise was abroad on the Hardy ranch! What multitudes of white lambs, uncertain in the legs, staggered and tottered about the pasture lands! and what musical rills of joy in the mountain streams escaping through the sunshine from their prisons of ice! The flowers rose from the dead once more—such a fragrant resurrection! slipping from out their damp coffins and russet winding-sheets with dauntless heads erect, and eager lips open to the breath of promise. Some herald must bear to their earth-homes the tidings of how sweet the sun of May is—perhaps the snow sprites who are melted into tears at his glances and slip out of sight to send him a carpet of many colors instead of the spotless white his looks had banished. It may be so, though only the theory of an alien.

And then the winged choruses of the air! What matinees they held in the sylvan places among the white blossoms of the dogwood and the feathery tassels of the river willow, all nodding, swaying in the soft kisses sent by the Pacific from the southwest—soft relays of warmth and moisture that moderate those western valleys until they are affronted by the rocky wall that of old was called by the Indians the Chippewyan Mountains, but which in our own day, in the more poetical language of the usurper, has been improved upon and dubbed the "Rockies." But all the commonplaces of those aliens cannot deprive the inaccessible, conservative solitudes of their wild charms. And after those long months of repression, how warmly their smile bursts forth—and how contagious it is!

Laugh though the world may at the vibrations of poet hearts echoing the songs of the youngest of seasons, how can they help it? It is never the empty vessel that brims over, and with the spring a sort of inspiration is wakened in the most prosaic of us. The same spirit of change that thrills the saplings with fresh vitality sends through human veins a creeping ecstasy of new life. And all its insidious, penetrating charm seemed abroad there in the Northern-land escaped from under the white cloak of winter. The young grass, fresh from the valley rains, warmed into emerald velvet in the sunshine, bordered and braced with yellow buttons of dandelion; while the soil was turned over with the plows, and field and garden stocked with seed for the harvest.

Energetic, busy days those were after the long months of semi-inaction; even the horses were too mettlesome for farm drudgery—intoxicated, no doubt, by the bracing, free winds that whispered of the few scattered droves away off to the north that bore no harness and owned no master. All things were rebellious at the long restraint, and were breaking into new paths of life for the new season.

Even a hulking Siwash, with his squaw and children, came dragging down the valley in the wake of the freshets, going to the reservation south, content to go any place where they could get regular meals, with but the proviso to be "good Injun."

They loafed about the ranch two days, resting, and coming in for a share of rations from the Hardy table; and the little barefooted "hostiles" would stand about the gate and peer in around the posts of the porch, saying in insinuating tones:

"Pale papoose?"

Yes, the spirit of the hills and grazing lands had crept under the rafters and between the walls, and a new life had been given to the world, just as the first violets crept sunward.

And, of course, no other life was ever so sweet, so altogether priceless, as this little mite, who was already mistress of all she surveyed; and Aunty Luce—their one female servant—declared:

"Them eyes o' hers certainly do see everything in reach of 'em. She's a mighty peart chile, I'm tellin' ye."

Even Jim had taken to loafing around the house more than of old, and showing a good deal of nervous irritation if by any chance "she" was allowed to test her lungs in the slightest degree. The setter pups paled into insignificance, and a dozen times a day he would remark to Ivans that it was "the darndest, cutest, little customer he ever saw."

"Even you have become somewhat civilized, Rachel, since baby's arrival," remarked Tillie in commendation.

Yes, Rachel was still there. At the last moment, a few appealing glances from Tillie and some persuasive words from Hen had settled the question, and a rebellion was declared against taking the home trail, and all the words of the Houghtons fell on barren soil, for she would not—and she would not.

"They will never miss me back there in Kentucky," she argued; "there are so many girls there. But out here, femininity is at a premium. Let me alone, Clara; I may take the prize."

"And when am I to tell the folks you will come back?" asked Mrs. Houghton, with the purpose of settling on a fixed time and then holding her to it.

"Just tell them the truth, dear—say you don't know," answered the girl sweetly. "I may locate a claim out here yet, and develop into a stock-grower. Do not look so sulky. I may be of use here; no one needs me in Kentucky."

"What of Nard Stevens?" was a final query, at which Rachel no longer smiled—she laughed.

"Oh, you silly Clara!" she burst out derisively. "You think yourself so wise, and you never see an inch beyond that little nose of yours. Nard needs me no more than I need him—bless the boy! He's a good fellow, but you cannot use him as a trump card in this game, my dear. Yes, I know that speech is slangy. Give my love to Nard when you see him—well, then my kind regards and best wishes if the other term conflicts with your proper spirit, and tell him I have located out here to grow up with the country."

And through the months that followed she assuredly grew to the country at all events; the comparative mildness of the winters proving a complete surprise to her, as, hearing of the severe weather of the North, she had not known that its greatest intensity extends only to the eastern wall of the great mountain range, and once crossing the divide, the Chinook winds or currents from the Pacific give the valleys much the temperature of our middle states, or even more mild, since the snow-fall in the mountains is generally rain in the lowlands. Sometimes, of course, with the quick changes that only the wind knows, there would come a swoop downward of cold from the direct North, cutting through the basins, and driving the Pacific air back coastward in a fury, and those fitful gusts were to be guarded against by man and beast; and wise were growing those eastern prophets in their quickness to judge from the heavens whether storm or calm was to be with them.

But despite Clara's many predictions, the days did not grow dull to Rachel, and the ranch was not a prison in winter-time. She had too clearly developed the faculty of always making the best of her surroundings and generally drawing out the best points in the people about her.

It was that trait of hers that first awakened her interest in tha splendid animal, their guide from the Maple range.

He had disappeared—gone from the Kootenai country, so they told her. But where? or for what? That, none could answer.

Her memory sometimes brought her swift flushes of mortification when she thought of him—of their association so pregnant with some sympathy or subtle influence that had set the world so far beyond them at times. Now that he was gone, and their knowledge of each other perhaps all over, she tried to coolly reason it all out for herself, but found so much that contained no reason—that had existed only through impulses—impulses not easy to realize once outside the circle of their attending circumstances.

Those memories puzzled her—her own weakness when she lay in his arms, and her own gift of second-sight that gave her an understanding of him that morning when she turned champion for him against himself.

Was it really an understanding of him? or was it only that old habit of hers of discovering fine traits in characters voted worthless?—discoveries laughed at by her friends, until her "spectacles of imagination" were sometimes requested if some specimen of the genus homo without any redeeming points was under discussion.

Was it so in this case? She had asked herself the question more than once during the winter. And if she had been at all pliable in her opinions, she would long ere spring have dropped back to the original impres-

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sion that the man was a magnificent animal with an intellect, and with spirituality and morality sleeping.

But she was not. A certain stubbornness in her nature kept her from being influenced, as the others were, by the knowledge that after all they had had a veritable "squaw man" as a guide.

Hardy was surprised, and Tillie was inconsolable.

"I never will believe in an honest face again!" she protested.

"Nonsense!" laughed Rachel. "Pocahontas was an Indian, and Rolfe was not hustled out of society in consequence."

"N—no," assented Tillie, eyeing Rachel doubtfully, "but then, you see Rolfe married Pocahontas."

"Yes?"

"And—and Ivans told Hen he heard that the squaw you saw at Genesee's was only a sort of slave. Did he tell you and Jim that she was his wife?"

"I—I don't know;" and Rachel suddenly sat down on a chair near the window and looked rather hopelessly at the questioner. "No, I don't believe he said so, but the circumstances and all—well, I took it for granted; he looked so ashamed."

"And you thought it was because of a marriage ceremony, not for the lack of one?"

"Yes," acknowledged the girl, inwardly wondering why that view of the question had not presented itself to her. Had she after all imagined herself sighting an eagle, and was it on nearer acquaintance to develop into a vulture—or, worse still, a buzzard—a thing reveling only in carrion, and knowing itself too unclean to breathe the same air with the untainted! So it seemed; so Tillie was convinced; so she knew Clara would have thought. In fact, in all the range of her female acquaintances she could think of none whose opinion would not have been the same, and she had an impatient sort of wonder with herself for not agreeing with them. But the memory of the man's face that morning, and the echo of that "God bless you, girl!" always drifted her away from utter unbelief in him.

She heard considerable about him that winter; that he was thought rather eccentric, and belonged more to the Indians than the whites, sometimes living with a tribe of Kootenais for weeks, sometimes disappearing, no one knew where, for months, and then settling down in the cabin again and placidly digging away at that hole in the hill by the little lake—the hill itself called by the Indians "Tamahnous," meaning bewitched, or haunted. And his persistence in that work was one of the eccentric things that made some people say significantly:

"They allowed Genesee was a good man, but a little 'touched' on the silver question."

And for Tillie's benefit Hen had to explain that the term "good" had nothing whatever to do with the man's moral or spiritual worth; its use was in a purely physical sense.

After the snows fell in the mountains there were but few strangers found their way to the new ranch. Half locked in as it was by surrounding hills, the passes were likely to be dangerous except to the initiated, and there were not many who had business urgent enough to push them through the drifts, or run their chances with land-slides. But if a stray hunter did come their way, his call was not allowed to be a short one. They had already become too thoroughly Western in their hospitality to allow the quick departure of a guest, a trait of which they had carried the germs from old Kentucky.

What cheery evenings there were in the great sitting room, with the logs heaped high in the stone fireplace! An uncarpeted room, with long, cushioned settees along two sides of it—and mighty restful they were voted by the loungers after the day's work; a few pictures on the wall, mostly engravings; the only color given the furnishing was in the pink and maroon chintz curtains at the windows, or cushions to the oak chairs. There in the firelight of the long evenings were cards played, or stories told, or magazines read aloud, Rachel and Hen generally taking turn about as reader. And Tillie in the depths of the cushioned rocker, knitting soft-wool stuffs, was a chatelaine, the picture of serene content, with close beside her a foil in the form of black Aunty Luce, whom only devotion to her young miss would ever have tempted into those wilds; and after the work was over for the night, it was a usual thing to see her slipping in and snuggling down quietly to listen to the stories told or read, her big eyes glancing fearfully toward windows or doors if the Indian question was ever touched on; though occasionally, if approached with due ceremony and full faith shown in her knowledge, she would herself add her share to the stories told, her donation consisting principally of sure "hoodoos," and the doings of black witches and warlocks in the land of bayous; for Aunty Luce had originally come from the swamps of Louisiana, where the native religion and superstitions have still a good following. And old Aunty's reminiscences added to the variety of their evening's bill of entertainment.

A mail carrier unexpectedly sprang up for them in the winter in the person of a young half-breed called Kalitan, or the Arrow. He had another name, his father, an Englishman, and agent for a fur company, had happened to be around when his swarthy offspring was ushered into the world, and he promptly bestowed on him his own name of Thomas Alexander. But it was all he did bestow on him—and that only by courtesy, not legality; and Alexander Junior had not even the pleasure of remembering his father's face, as his mother was soon deserted. She went back to her tribe and reared her son as an Indian, even his name in time was forgotten, as by common consent the more characteristic one of Kalitan was given him because of the swiftness of foot that had placed him among the best "runners" or messengers in the Indian country—and the average speed of a runner will, on a long march, outdistance that of cavalry. At the military post at Fort Missoula, Kalitan's lines had first fallen among those of Genesee, and for some unexplained reason his adherence to that individual became as devoted as Mowitza's own. For a long time they had not ranged far apart, Genesee seldom leaving the Kootenai country that Kalitan did not disappear as well. This last trip his occupation was gone, for word had been left with MacDougall that the trail was not clear ahead, but if Kalitan was wanted he would be sent for, and that sinewy, bronze personage did not seem to think of doing other than wait—and the waiting promised to be long.

He took to hanging around Scot's Mountain more than of old, with the query, "Maybe Genesee send lettah—s'pose? I go see."

And go he would, over and over again, always with a philosophic "S'pose next time," when he returned empty-handed. Sometimes he stopped at the ranch, and Rachel at once recognized him as the youth who had brought her the black bear-skin months before, and pretended at the time utter ignorance of Chinook. He would speak Chinook fast enough to her now if there was any occasion, his white blood, and the idea that she was Genesee's friend, inclining him to sociability seldom known to the aristocratic conservatives of the Indian race.

The nearest mail station was twenty miles south, and it was quite an item to find a messenger as willing as was Kalitan; storm or calm, he would make the trip just the same, carrying his slip of paper on which all the names were written and which he presented as an order to the postmaster. A big mail was a cause of pride to him, especially magazines or packages. Letters he did not think of much account, because of their size.

To Aunty Luce he was a thing of dread, as were all of his race. She was firmly convinced that the dusky, well-featured face belonged to an imp of the evil one, and that he simply slid over the hills on the cold winds, without even the aid of a broomstick. The nights that he spent at the ranch found Aunty's ebony face closer than ever to the side of Mistress Tillie's chair.

Another member had been added to the visiting list at Hardy's, and that was the soverign of Scot's Mountain.

Along in midwinter, Kalitan brought a scrawled note from "Ole Man Mac," asking for some drugs of which he stood in need. The request brought to light the fact that Kalitan one day while paying visits had found "Ole Man Mac" sick in bed—"heap sick—crank—no swallow medicine but white man's."

The required white man's medicine was sent, and with it a basket with white bread, fresh butter, and various condiments of home manufacture that Tillie's kindly heart prompted her to send to the old trapper—one of their nearest neighbors.

The following day Rachel and her henchman, Jim, started on Kalitan's trail, with the idea of learning personally if any further aid that the ranch could give was needed at the cabin. A snow three days old covered the ground, in which Kalitan's trail was easily followed; and then Rachel had been over the same route before, starting light-hearted and eager, on that cultus corrie.

They reached Scot's Mountain a little after noon, and found its grizzled, unshaven owner much better than he had been the day before, and close beside him on the pillow lay his one companion, the cat.

"Well, well! to think o' this!" said the old man, reaching a brawny hand to her from the bunk. "You're the first white woman as ever passed that door-post, and it's rare and glad I am that it's your own self."

"Why myself more than another?" she asked, rather surprised at his words. "I would have come long ago if I had known I was wanted, or that you even knew of me."

"Have I not, then?" he queried, looking at her sharply from under his wrinkled, half-closed lids. "But sit ye down, lady. Kalitan, bring the chair. And is that a brother—the lad there? I thought I had na heard of one. Sit you down close that I can see ye—a sight good for sore een; an' I have no heard o' ye? Ah, but I have, though. Many's the hour the lad has lain lazy-like on the cot here, an' told me o' the gay folk frae the East. Ye know I'd be a bit curious o' my new neighbors, an' would be askin' many's the question, an' all the tales would end wi' something about the lass that was ay the blithe rider, an' ever the giver o' good judgment."

The girl felt her face grow hot under those sharp old eyes. She scarcely knew what to say, and yet could give no sensible reason for such embarrassment; and then—

"The lad—what lad?" she asked at last.

"Oh—ay. I clean forgot he is no lad to you. Kalitan, will ye be building up that fire a bit? When we have quality to visit, we must give them a warm welcome, if no more. An' the lad, as I was sayin'," he continued, "was but Genesee—no other; though he looked more the lad when I called him so first."

"You are such old friends, then?"

"No so old as so close, ye might say. It's a matter o' five year now since he come up in these hills wi' some men who were prospectin', an' one an' another got tired and dropped down the country again till only Genesee was left. He struck that haunted hill in the Maple range that they said was of no good, an' he would na leave it. There he stuck in very stubbornness, bewitched like by it; an' the day before his flittin' in the fall found him clear through the hill, helped a bit by striking into an old mine that nobody knew aught of. Think o' that!—dug into a mine that had been abandoned by the Indians generations ago, most like."

"I did not know that the Indians ever paid attention to mining. They seem to know no use for gold or silver until the white men teach them it."

"True enough; but there the old mine stands, as a clear showin' that some o' the heathen, at some time, did mine in that range; an' the stone mallets an' such like that he stumbled on there shows that the cave was no the result o' accident."

"And has he at last given it up as hopeless?"

"That's as time may happen to tell," answered the old man sagely; "an' old Daddy Time his ownself could na keep his teeth shut more tight than can Genesee if there's a bit secret to hold. But o' the old mine he said little when he was takin' the trail, only, 'It has kept these thousand o' years, Davy—it will most like keep until I get back.'"

From that speech Rachel gathered the first intimation that Genesee's absence from the Kootenai country was only a transient one. Was he then to come back and again drop his life into old lines? She did not like to think of it—or to question. But that winter visit to "Ole Man Mac," as Kalitan called him, was the beginning of an avowed friendship between the old hermit of the northern hills and the young girl from the southern ones.

(To be continued.)

15c each; 6 for 90c

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FITS EXTREMELY WELL AND GOES WITH THE PREVAILING STYLE IN BROAD END TIES AND FOUR-IN-HANDS.

ASHBY 2⅛ in.
LEXICON 2½ in.

CLUETT, PEABODY & CO., INC., *Makers*

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WHAT is it? It is a modern development in the banking business adopted by the Farmers & Merchants State Bank of Kewaunee, Wis., to enable its depositors to transact their banking business safely and conveniently by mail no matter where they live. You can open an account in this reliable bank with $1.00 or upwards and it will earn **4 per cent.** Write for further information why the Farmers & Merchants State Bank is the safest.
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THIS is easily done a year hence if you enroll this fall, Sept. 5th, and **why not take up your work in an old and reliable school?** 20 years of success and continual growth. LOWEST RATES. Courses: Commercial, Stenography, Preparatory, High School, Teachers', College, Civil Service, Auto, Steam, Gas, etc. Illustrated catalog on request. Address
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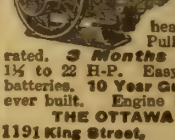

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THE OTTAWA MANUFACTURING CO.,
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North-Western Telegraph School, **Eau Claire, Wis.**

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Take Off Your Hats to Model Major 2d.

WE have often said that there are many good boars "in the woods" if we just knew where they were, but we think we have made another "find" in Model Major 2d. This boar is a short two year old, farrowed April 26, 1914, and with a little feed could be made the largest boar of his age in the state. When we saw this boar at the Janesville Fair he appealed to us the minute we saw him. This boar is thin, not even in good condition, for the owner just decided to show him and some of his get, the day before the fair started, but just as he was at that time he only lacked a few pounds of weighing 800 pounds. He has an ideal back, strong and well arched, it would be impossible to make him better on his feet and few boars have as much bone. We like to "rave" a little about a good boar and while this boar is thin, in our estimation, he is the best two-year-old Poland China boar we have seen in the state. He is owned by Chas. S. Maltby, Janesville, Wis., and was bred by Wm. Smiley & Sons, Albany, Wis. We have heard a great deal about Major Hadley as a sire and we have seen some excellent sows by this boar, but we have only seen a few boars by him and this is his best. His dam is Model Gem 10th by Chief M. by the noted High Mogul. Now, we are not advertising this boar for sale, but if you don't think he is a sire as well as an individual, visit Maltby's farm and see some of the long, good-backed, heavy-boned pigs sired by him. They are out of sows with the following blood lines. A yearling by Peerless Wonder by old A Wonder 107353. A three year old by Boyden Jumbo he a son of Big Jumbo. Daughters of Smiley's Wonder by Boyden's Jumbo, and some sows by A Wonder A. one of the best sons of A Wonder 107353. Other sows in the herd equally well bred. Mr. Maltby raised eighty-three pigs and most of them are by Model Major 2d. We might also mention that practically all of them are of March farrow. If you are looking for good Polands go see this herd and also see whether you agree with us on this boar. Mr. Maltby is advertising spring pigs for sale and they are being priced very reasonable considering what you get for the money. Please mention The Wisconsin Farmer when you write for particulars. See page 31.—Adv.

Madson's Poland Chinas.

AS WE have looked over the various herds of Poland Chinas in the state, we are more firmly convinced than ever that Mr. Madson & Sons, Madison, Wis., are among Wisconsin's best breeders. They are critical judges, careful breeders, and develop the young animals in a manner hard to "beat." Big-type animals of quality is their aim, and that they have achieved it is proven by their entire herd. Their senior herd sire was junior champion at the 1914 Minnesota and Illinois State Fairs. Their junior herd sire is a son of Hidestretcher, grand champion at the Wisconsin State Fair. Too many big-type breeders have aimed at large size only in their effort to outdo their rival breeders. This, however, is proving a detriment to the breeder and to these breeders. The ultimate end of all pork production is the pork barrel and the big, deep-bodied, well-hammed hogs that will make 225 pounds in seven or eight months are the most profitable kind. These are the type that Madsons are breeding. They convert all the feed into flesh—they are good rangers, yet not long legged or coarse. When you see their hogs at the fairs, or visit their herd on the farm you will agree that they are "master" breeders, and have developed their big types along the right lines. See page 31.—Adv.

An Old Established Poland Herd.

MR. FRED LATHROP, the senior member of the firm of Fred Lathrop & Sons, Wauzeka, Wis., has been a breeder for twenty-three years and no doubt many of our readers are acquainted with their herd of big-type Polands better than we are. At this time they are offering for sale, a choice lot of big-type pigs, of either sex, sired by some of the best boars in the state. They have a fine lot to pick from and are good judges of stock and if you could read the many letters they have from satisfied customers you could feel sure that you get your money's worth when buying from this firm. The sires of these spring pigs are mentioned in the advertisement. They are boars of great scale and smoothness and the young stuff by them will have plenty of size at maturity if properly cared for. The pigs have not been pampered, but as Mr. Lathrop says, "I have tried to feed them for future usefulness." We have recently visited this herd and the owner will take pleasure in showing you their herd of big-type Poland Chinas. Write them and please mention The Wisconsin Farmer. See page 31.—Adv.

Seitz Ayrshires to Be Exhibited.

ADAM SEITZ, Waukesha, Wis., one of the leading Ayrshire breeders of the middle West, will again exhibit at the leading fairs and dairy shows this fall. Among the shows he expects to make are the following: Iowa State Fairs, Des Moines, Iowa; Minnesota State Fair, Hamline, Minn.; Wisconsin State Fair, West Allis, Wis; Missouri State Fair, Kansas City, Mo.; Dairy Congress, Waterloo, Iowa, and the National Dairy Show, Chicago.—Adv.

Another Addition to the Duroc Jersey Ranks.

WITH this issue of The Wisconsin Farmer our readers should note the advertisement of Riley Martiny & Son, Baraboo, Wis. Pierce Martiny, the junior member of the firm, has been interested in Durocs for several years. He has been improving the herd from year to year and he has now reached the standard where he feels that his Duroc Jerseys are good enough to ship any place. He is so confident that his hogs will make good that he has offered to ship on approval, so you don't have to pay for your Duroc until you have seen him at your own station. This firm was represented at the Janesville Fair where they had a very creditable showing and won their share of the prizes. One of their good brood sows is by Wisconsin Chief and her dam is of the noted Advancer breeding. She raised a nice litter by Star Wonder he by Model's Wonder, a Hanks & Bishop bred boar. The herd boar, Fisher's Volunteer, is a richly bred boar coming from the noted champion, Volunteer. He has sired some good, uniform pigs for the Martinys. You take no chance in ordering from this firm. They can sell you gilts and a boar not related. Write early so as to get the pick. Guernsey cattle also play their part on this good farm. The herd is made up of some forty head, most of which are pure breds. Heading this herd is a three-year-old son of the well-known sire, George Washington, that has eleven A. R. daughters and was second-prize bull at the National Dairy Show, 1912. The dam of the herd bull is imported Fromes Facination, A. R. 311.99 as a two year old and 446.69 as three year old. She is sired by imported Galaxy's Equal, that has seven A. R. sons and twenty-eight A. R. daughters. Here is a good herd to keep in mind. Investigate their Durocs and Guernseys and in writing for particulars please mention The Wisconsin Farmer. See page 31.—Adv.

See the Mogul and Titan Tractors at the Tractor Shows.

EVERYONE who visits a tractor demonstration this year should be sure and see the Mogul and Titan tractors in operation. These are real kerosene tractors, designed especially for this cheap fuel, and their cost of operating and upkeep is very low. To appreciate their efficiency, one should see them at work and compare them with other sources of farm power. The Mogul 8-16 and Titan 10-20 will be shown at all the tractor demonstrations held this year, and everyone is invited by the International Harvester Co., Chicago, Ill., to give these tractors a close examination. The 100-page book, "Farm Power," issued by this company is a valuable source of information on tractors, horses and the applications of farm power to different kinds of work. This book will be sent free on request to the International Harvester Co., if you mention The Wisconsin Farmer. See page 11.—Adv.

The Vital Part of a Farm Tractor.

THE vital part of a tractor is its motor. This is the part which should have the closest scrutiny when a selection is made, for no matter what the design of the tractor, if it has insufficient power, it will never give satisfaction. It is reported that one out of every three tractor builders in the United States equips his machine with a Waukesha motor. This endorsement of the Waukesha motor by so many tractor manufacturers attests its popularity. When the manufacturers stake their success on this motor, the tractor buyer may wisely demand a Waukesha motor in the tractor he buys. The tractor demonstrations which will soon be held in different parts of this country will give opportunity for studying this motor and comparing it with others. Those who cannot visit the demonstrations should send for the free bulletin, "A Guide to Tractor Buying," which may be secured by writing the Waukesha Motor Co., Waukesha, Wis. See page 32.—Adv.

A 30.90-Pound Bull for Sale.

WHEN calling on Fred Albrecht, Watertown, Wis., last week and looking over his herd of Holsteins he stated that he would sell his senior herd sire. We have been watching this bull for several years, as we were greatly impressed by his type the first time we saw him. This bull is North Star Vera Sir Beets, a big, fine individual of ideal type and conformation. His sire is Moscrip's great show bull, Sir Beets Cornucopia Netherland, that has never been defeated in the show ring from a calf to a mature animal, even winning grand champion honors at the National Dairy Show. Not only is he a show animal himself, but his offspring have been equally successful in the show ring. His first daughters to be tested have made very creditable records, proving that he transmits the high production ability which he has inherited from his great sire, Aaggie Cornucopia Johanna Lad. The dam of North Star Vera Sir Beets is Happy Home Vera Ormsby, that has a record of 30.90 pounds butter in seven days. She is a daughter of Knight Errant whose daughters are making very creditable records. J. A. Henderson owns a large number of the daughters of Knight Errant, having purchased them a year and a half ago from Katzman. Last winter he did his first advance registry testing, but in spite of this the daughters of Knight Errant made fine records one I believe close to twenty-eight pounds. Knight Errant is out of the 27.82-pound cow, Lady Ormsby, that also made 813.30 pounds butter in a year. North Star Vera Sir Beets as an individual cannot be faulted. He has a quiet disposition, is gentle, and is a quick, sure server. Mr. Albrecht thinks so much of him as an individual and so much of his breeding that he has purchased a half brother to breed to his daughters. The only reason for selling is that he already has three crops of heifers by him and his cows bred again. See his advertisement on page 30 and send for his extended pedigree. When writing kindly mention The Wisconsin Farmer.—Adv.

F. E. Purdy, Orfordville, Wisconsin.

SEVERAL Poland China breeders have asked us if we had seen the Purdy Polands, so to satisfy our own curiosity we recently went to Orfordville to see this herd and we are glad to report that we were not at all disappointed with the Polands we found on Mr. Purdy's farm. We saw some very fine pigs on this place by Warrior, a son of Big Bone 2d whose dam was by Big Wonder. There are two yearling sows that have fine litters by Long Big Price 76667. Mr. Purdy bought these sows in Nebraska and they are of Sampson breeding, a well-known Nebraska boar. There are six boar pigs on this farm that are real prospects—strictly the big-type kind. They are of March 1st farrow sired by Black Jumbo, a yearling boar that Mr. Purdy owns and that is for sale. Their dam is Hadley Girl 8th, sired by Wonder B. This is the strain of sows that has done so much for the Smileys, of Albany. There is also an outstanding litter of eight by Warrior, out of a daughter of Smiley's Wonder. This yearling boar that we mentioned above is sired by Major Jumbo by Major Hadley out of a dam by Black Giant by Wisconsin Giant. There are also three fall boars on this place that are being offered worth the money. Mr. Purdy's advertisement appears in this paper. If you are in need of some big-type boars or gilts, you'll not be disappointed with the Purdy Polands. Write and mention this publication. See page 31.—Adv.

Wisconsin State Fair Horse Sale.

THE Wisconsin State Fair will have an innovation this year that will give added interest to the fair for all lovers of good horses. We refer to the sale of horses which will be held Friday, September 15th, the fifth day of the fair. Both draft horses and driving horses will be sold and many fine specimens of both classes have been consigned. Mr. Fred Pabst, the manager of the sale has consigned a number from both his Hackney & Percheron stables. The Edgewater Stock Farms, Ft. Atkinson, Wis., are consigning several head of big, roomy brood mares. E. E. Rosencranz, Oconomowoc, has consigned an excellent Percheron stallion that we had the pleasure of seeing recently and do not hesitate to recommend to our readers. Among the other consignors are Dopp Bros., Ixonia; Welsh, of Ripon, and other well-known Wisconsin breeders. Every farmer and breeder in Wisconsin and surrounding states should attend this sale, for here will be an opportunity to purchase some excellent individuals. Many of the Percheron stallions and mares are broke to work, so that they are desirable draft horses, as well as breeding animals. Every good farmer should have a driving horse, even though he has an automobile, as it costs no more to keep a good one than a poor one. The Hackneys consigned by Mr. Pabst, are second to none in the state, both in breeding individuality and in training. They will in all probability sell so that any farmer who appreciates good driving horses can afford to buy. So we advise you to attend the sale, and not have to say afterward that you would have attended the sale if you had thought they would sell for those prices. Mr. Pabst is also consigning four fine black Percheron stallions. Among these is "King Coco" a blocky two year old of heavy bone, a good, broad chest, good head and eye and a good back and rump. He was by Imp. Journal, that sold for over $2,000. His dam is the imported mare, Heroine. Look this stallion over before the sale. Another stallion sired by Journal is Dan Dandy, a growthy yearling carrying plenty of bone and a good middle. He will make over a ton horse when mature and he has what many Percherons lack, viz., good pasterns. He is an extra good mover and will make a most desirable sire. Another of the Pabst consignment is Baccarrat 2d a black yearling by Journal. He is not an oversized animal, but carries lots of quality. His dam was by Baccarrat, that sold for $5,000 to Kellog, of Green Bay. As was mentioned before E. E. Rosencranz, Oconomowoc, has consigned a most desirable stallion that you do not want to overlook in the barns. Many of the animals consigned will be exhibited in the show ring and several of them are creditable candidates for ribbons. Send for a catalog at once and look over the breeding and description of the horses to be sold. Catalogs may be obtained from Fred Pabst, R. F. D. 30, Oconomowoc, Wis. When writing kindly mention that you saw the advertisement in The Wisconsin Farmer. See page 28.—Adv.

The Importance of the Tractor Plow.

EXPERT plowmen say that good tractor plowing depends as much on the plow as the tractor. Certainly this is true; one is as important as the other. Therefore, the selection of the tractor plow deserves careful consideration. Economical plowing demands a plow that scours under the most trying conditions; that has wide range of adjustment, assuring even depth of plowing; that is easily controlled so that the bottoms may be raised or lowered in a short space of travel; and that buries trash and weeds so that they will be out of the way of the crops. Oliver tractor plows fill these requirements, and they do more—time and labor is saved by their improved construction. For instance, the quick detachable share permits changes without the use of a wrench; the bail construction on the No. 62 tractor plow eliminates hitch adjustments; and the lifting mechanism of the No. 78 power lift plow operates instantly at the pull of a trip rope. Farmers are urged to see the Olivers operate at any of the tractor demonstrations this year. Those who cannot attend are urged to send to the Oliver Chilled Plow Works, South Bend, Ind., for circulars and the name of the nearest Oliver dealer, who can show these plows. See page 10 for advertisement.—Adv.

Dependable Spark Plugs Necessary for Good Engine Service.

FAULTY spark plugs are the source of endless annoyance and trouble; they fail to give the spark; the engine stalls; and all work is delayed. Farm work cannot stand such delays. The chief reason for using tractors and engines in farm work is to save time and labor. Therefore, dependable spark plugs should be used on all farm oil and gas motors. Champion spark plugs have a high record of service. They seldom, if ever, go wrong and, besides, they give added "punch" and "go" to the engine. Long service and countless explosions

Another Breeder Finds The Wisconsin Farmer a Profitable Advertising Medium.

A. M. ANDERSON, of Whitewater, Wisconsin, found it an easy matter to sell all his Holstein-Friesian bulls after he inserted an advertisement in The Wisconsin Farmer. Read what he says about it:

"I wish you would discontinue my advertisement for a short time, as I am entirely sold out of bulls anywhere near ready for service. The Wisconsin Farmer is certainly a good paper to advertise in as I have found by experience. I sold a great many bulls, heifers and cows at very satisfactory prices."

The Wisconsin Farmer has a splendid record as a live stock sales producer.

Give it a chance to help you dispose of your stock.

THE WISCONSIN FARMER, MADISON, WIS.
Guaranteed Circulation, 90,000.

do not crack or weaken them. When replacing your spark plugs, remember Champions, made by the Champion Spark Plug Co., Toledo, Ohio. See page 9.—Adv.

The Drake Herd of Short-horns.

THE Millbrook herd of Short-horns, owned by H. B. Drake & Sons, Beaver Dam, Wis., is one of the oldest in the state. Mr. Drake has been advertising in The Wisconsin Farmer for twenty-five years, which is evidence that the herd is one of long establishment. The writer recently spent several hours inspecting the herd and looking over the pedigrees with an idea of getting a little history of the lines of breeding represented. We were impressed with the care which had been exercised in the selection of the breeding stock, both for the foundation herd and up to the animals now in the herd. The present herd sire is an outstanding individual. He is Prince Broadhooks, a bull weighing 2,500 pounds, very thick and deep with a fine, supple, loose hide. He is exceptionally well-bred, tracing on both sides of his pedigree to the famous cow, Lady in Waiting. His two nearest sires are sons of this great cow, which Frank Harding considers one of the six greatest cows in his herd. Her son, Anoka Sultan, is the sire of Prince Broadhooks, and her other son, Ceremonious Archer, is the sire of his dam, Sinnissippi Broadhooks. Anoka Sultan sold to Hanna for $4,000, while Ceremonious Archer sold for $5,000 to Frank Louden. Mr. Drake is offering yearling heifers and bulls sired by Prince Broadhooks and some sired by Victor Fashion. This bull is a son of the great prize-winning bull, Leader of Fashion, a son of Whitehall Sultan. He is also offering a few sired by Royal Coronet's Best by Royal Coronet. The dams of these animals offered for sale are of Stanford, Crimson Flower, Wimple, Victoria, Village Blossom and the best of the American families. Our readers who are in the market for a few females or a herd sire, cannot go wrong in inspecting this offering. See page 31.—Adv.

A Dependable Light Tractor.

THE "Allwork" light tractor advertised on page 21 is a simple, durable, powerful machine, capable of pulling three plows easily, and selling for a price well within the reach of the average farmer. The four-cylinder vertical engine will furnish twenty-five horse power at the belt and twelve at the drawbar. It is equipped with a two-speed transmission working in oil and all gears are self-oiling and thoroughly protected from dust and grit. The "Allwork" weighs 4,800 pounds. It is a light, practical tractor, built by a concern with an established reputation for manufacturing reliable machines. Those who attend the tractor demonstrations should be sure to see this tractor which is made by the Electric Wheel Co., Quincy, Ill. Any information desired will be promptly furnished by the company.—Adv.

BBROADHOOKS PRINCE, a 2,500-pound grandson of Whitehall Sultan. His sons and daughters are advertised for sale on page 31 by H. B. Drake & Son, Beaver Dam, Wis.

Blizzard Ensilage Cutters for Silo Filling.

SILO filling time will soon be here and if you do not have an ensilage cutter to do this work, you should consider the Blizzard cutter made by the Jos. Dick Mfg. Co., Canton, Ohio. These machines are rapid, reliable and durable. They are sold either mounted or unmounted. The advertisement appears on page 19. Further information will be gladly furnished by the company and the dealer's name in your locality will be sent on request.—Adv.

A Labor-Saving Corn Harvester.

THE time for the corn harvest is fast approaching. What provision have you made for harvseting it? This is an important question especially with farmers who have difficulty in getting reliable help. The Perfect corn harvester is a solution of this problem. With one man and one horse it will cut from four to seven acres of corn a day on any kind of soil. For shock or silo threshing it is an excellent machine. The booklet and circulars of the Love Manufacturing Co., Lincoln, Neb., explain this machine in detail and are well worth reading. See the advertisement on page 24 and send for this literature today.—Adv.

A Tractor at $250 Per Plow-Pulling Capacity.

THE Waterloo Boy kerosene tractor sells for $750. Here is a source of power which will do the work of eight horses; it will pull three fourteen-inch bottom plows and stir the ground to a depth of seven or eight inches, and the price is only $250 per plow pulling capacity. The tractor has the advantage over horses in doing the plowing more rapidly and thoroughly—the Waterloo Boy will plow eight acres a day at a fuel cost of 18 cents per acre. In addition to plowing, this tractor will pull the disk, harrow, mower or binder and will operate the thresher, silo filler and all other kinds of belt machinery used on the farm. Sturdy and stanch construction is a characteristic of the Waterloo Boy tractor, besides its working efficiency, so that a long period of service may be expected. A thorough examination of this tractor may be made at any of the tractor demonstrations which will be held this year, and anyone interested should see the Waterloo Boy in operation. A strong guarantee, made by the Waterloo Gasoline Engine Co., Waterloo, Iowa, goes with each tractor and protects the buyer. The high reputation of the company is another factor which makes the Waterloo Boy tractor a safe investment for the farmer. Those who cannot attend the tractor demonstrations and see this tractor under test may receive complete information concerning it by writing the company at either of the addresses given in the advertisement on page 2.—Adv.

Avery Company Makes Tractors in Six Sizes.

THE Avery Tractor Co., Peoria, Ill., has a tractor for every size of farm, from the smallest on which a tractor is practical to the largest. The Avery line includes six sizes of tractors, every one representative of Avery quality and efficiency. Durability is an important point with these machines and the slow speed motor, with replacable cylinder lining, is especially long lived. The Avery tractors have two speeds and a double transmission; their carburetors are adaptable to either kerosene or gasoline. They will operate at all the tractor shows this year, which will give farmers who attend these shows a good chance to study them. The company will gladly furnish any information regarding these tractors on request. Those who expect to buy a tractor should send for the Avery catalog, using the address given above. See page 13.—Adv.

A Booklet of Interest to Young and Old.

AN interesting booklet, "Game Farming for Profit and Pleasure," has been issued by the Hercules Powder Co., Wilmington, Del., which deals with an industry that may be made a profitable and interesting business on the farm. The booklet will be sent to anyone who fills in the coupon attached to the advertisement on page 10 and mail it to the company. Boys and girls on the farm will enjoy reading this booklet as will the older folks who are interested in making the farm pay better. Send in the coupon today.—Adv.

Illinois Breeder Gets Good Bull From Fred Pabst.

MR. JOY MORTON, proprietor of the Thorn Hill Stock Farm, of Lisle, Ill., called at the Pabst Stock Farm, Oconomowoc, Wis., several days ago, and was very much impressed with the junior sire, Maplecrest King De Kol 91584, sired by Friend Hengerveld De Kol Butter Boy 29303, and out of Maplecrest Pontiac Hartog 141157 by Pontiac Aaggie Korndyke 38291, and his visit terminated in the purchase of this young sire. Nothing could have induced Mr. Pabst to part with him short of the fact that he at the present time has several thirty-pound bull calves on hand of their own breeding, one of which will take the place of Maplecrest. Mr. Pabst has a good many of Maplecrest King De Kol's heifers on the farm, and quite a number due to freshen this fall and winter, and he is positive that they will make good. Mr. Morton has a herd of selected Holstein cows (about fifty in all); we understand they are all choice and high-bred individuals, and with Maplecrest King De Kol as a sire Mr. Morton will undoubtedly add much to the dairying interests of Illinois. See page 29.—Adv.

Jean Du Luth Showing at Janesville.

MR. GEORGE P. GROUT, managing owner of the Jean Du Luth Farms at Duluth, Minn., is more than pleased with the showing which his stock made at the Janesville, Wis., Fair. Mr. Grout speaks very highly of the management of the Janesville Fair in a letter to The Wisconsin Farmer, and says that the exhibit of stock was fine. There were nine herds of Guernseys exhibited and Mr. Grout asks us to say that he was well treated with both his herds. The Jean Du Luth Red Poll bull, Teddy's Best, was first-prize senior and grand champion. This is the fourteenth time that he has won this honor. A two-year-old heifer, Jean Du Luth Purity, was first prize, senior and grand champion cow. This heifer has made in the last ninety days, 158 pounds of butter fat. John L. Tormey was judge in these classes and he has something to work for within the Jean Du Luth herd. Starlight's Excelsior, a Jean Du Luth Guernsey bull, was first prize senior and grand champion at Janesville. He had previously won eight grand championships at the age of two years and ten days.—Adv.

Silo Fillers That Save Labor and Prevent Accidents.

THE silo fillers made by the Meill-Blumberg Co., New Holstein, Wis., are designed to eliminate the work of one man. These machines feed automatically, there is no risk of accident and the safety head prevents all danger of choking. Many other advantages of these fillers may be learned by writing to the company named above. When writing ask for the dealer's name in your locality. See page 19.—Adv.

Send for Free Account Book and Catalog.

ON page 19 of this issue appears the advertisement of Rosenthal silo fillers, which are made by the Rosenthal Corn Husker Co., Milwaukee, Wis. These fillers are made in three sizes, running from six to eighteen horse power and are backed by the company's guarantee. A complete catalog, together with a farmer's account and record

WISCONSIN STATE FAIR HORSE SALE

30 PERCHERONS, 15 HACKNEYS

Every farmer and breeder in Wisconsin and adjoining states should attend this sale. Here will be your opportunity to get an A No. 1 stallion or mare. Sale to be held

FRIDAY, SEPTEMBER 15TH, 1 P. M. AT THE STATE FAIR

Many of these horses will be exhibited in the show ring. Several of them are candidates for ribbons. The consignors are among Wisconsin's best breeders. Send for catalog giving breeding and description to

FRED PABST, SALES MANAGER, OCONOMOWOC, WIS.

$25 for a Name for this Pony

I will give **$25.00 Free** for the best name for this beautiful prize Shetland pony. Send the best name you can think of right away, for not only do you have a good chance to win the $25 prize but

You Can Win the Pony, Too

for I am going to give him to some boy or girl who will do a little easy work for me. I have already given "Dandy," and many other beautiful ponies, and now I am going to give away this pony. But first I want a name for him.

1500 Votes FREE Just as soon as you send me a name for the pony, I will tell you all about my great offer and I will also send you a special coupon good for 1500 free pony votes. Remember, I will give $25 for the best name for this pony, and I send you 1500 free pony votes and full particulars about the pony as soon as I hear from you. Write me today. In case of a tie a prize just like the one tied for will be given each contestant.

President THE PONY CLUB, 802 2nd St., Des Moines, Iowa

book will be sent free to anyone requesting them. If interested, don't fail to write to the company today.—Adv.

A Furnace for Every Home.

EVERY home can have the advantages of furnace heat with small cost by means of the Caloric pipeless furnace. There is no need of putting in a large number of pipes and of making extensive rearrangements in the house. With the Caloric pipeless only one hole need be cut directly above the furnace where the register is placed. Through this register the heated air passes to all parts of the house and forces the cold air downward through an outer channel to the firepot of the furnace, where it is heated and sent circulating through the house again. This method of heating means convenience, comfort and economy. Users of this furnace say that it is more economical of fuel than the number of stoves needed in the home to give the same amount of heat. Besides there is practically no danger from fire, no carrying of coal or wood through the home is necessary and there is no discomfort from dust and ashes circulating in the rooms or getting ground into the rugs and carpets. The letters printed in the advertisement on page 6 show what owners of Caloric pipeless furnaces think of them. Be sure and read these letters and also write to the Monitor Stove and Range Co., Gest St., Cincinnati, Ohio, for their new book, "Progress," which is a carefully written discussion of heating problems. —Adv.

Watch the Cow's Health.

IF the milk yield begins to show an unaccountable decrease, you can take it for granted that the general health of your cows is not what it should be. Don't wait for "Nature" to correct the difficulty, for Nature's very apt to put it up to you—and delay means continued and increasing losses. Digestive and intestinal troubles, and particularly worms, are at the bottom of nearly every malady that affects your stock and what they need is a medicine that is at once a tonic, laxative and worm destroyer. Among the many remedies on the market, Dr. Hess stock tonic seems to be held in high esteem by farmers and stock raisers throughout the country. The compounder, Dr. Hess, is both a doctor of medicine as well as veterinary science and this stock tonic is made according to his own formula—a scientific remedy for the many ailments peculiar to horses, cattle and hogs. One of the unique features of Dr. Hess stock tonic is the guarantee that goes with it—a guarantee of satisfactory results or your money back. A really reliable stock conditioner is certainly a boon to the farmer.—Adv.

Unique Feature in Tom Thumb Tractor.

THE Tom Thumb tractor has a unique mechanism by which it secures traction. It consists of a steel track adjusted so that it is laid and taken up as the tractor moves along. The illustration in the advertisement on page 21 shows its construction. In ground that is soft or where traction is difficult this machine will travel right along. The Tom Thumb will deliver twelve horsepower at the draw bar and twenty horse power at the belt. Everyone who attends one of the tractor demonstrations should be sure to see this tractor at work. An interesting descriptive catalog will be sent upon request to the Tom Thumb Tractor Co., 12 Thirtieth Ave., S. E., Minneapolis, Minn.—Adv.

Offers Holstein Calves.

W. C. KENYON & SONS, Elgin, Ill., advertise on this page that they are prepared to furnish Holstein calves, both male and female, 15-16 per cent pure bred, beautifully marked, one and two weeks old, at $15 each free on board the cars at Elgin. Write them if interested.—Adv.

SALE DATES.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sales Mgr.
Nov. 15, Hagermeister Stock Farm, Green Bay, Wis.

BROWN SWISS CATTLE.

Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.
ANDREW MARTIN, WEST SALEM, WIS.

Yearling Brown Swiss Bull

READY for heavy service. Well grown, of good, level type; sired by Casper L. and out of a heavy producing, show type cow. Allyn's breeding on both sides. Address
Chas. F. Lau — **Thiensville, Wis.**

ABERDEEN ANGUS CATTLE.

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. — **Cassville, Wisconsin**
(30 miles up river from Dubuque)

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER — EARN $15 TO $100 PER DAY
Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

Have YOU Engaged

AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

TOO LATE TO CLASSIFY.

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons — **Elgin, Illinois**

SALE DATES.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Rusted Straw For Feeding.

There has evidently not been much investigation on the effect of rust on straw as to its feeding value. Most of the analysis made show that rust increases the feeding value of the straw. The Dominion Experiment Station in Canada and the experiment stations in North Dakota and Minnesota, have found that the rusted straw has a larger feeding value than rust-free straw. The analysis made at the North Dakota Experiment Station one year, however, showed that the straw had a decreased feeding value. The reason for an increased feeding value is explained by the fact that the plant first produces the nourishment in the stem and leaves and later passes it up into the head to fill out the kernels. The rust interferes with this food passing up into the head. It has a little the same effect as cutting the grain for hay. The value of the rusted straw depends on a good many factors, among which are the time at which rust strikes the crop, how the straw is cured and whether it has any shriveled grain in it. Cases have been reported in which animals have been harmed by being fed rusted straw. One way to determine if it is harmful is to feed it to a few of the less valuable animals for a week or two and observe the effect that it has on them. Some other roughage should be fed with the rusted straw and do not make a sudden change from other feed to rusted straw. Shaking the straw to remove the dust as far as possible is also advisable. Observe the animals that are being fed rusted straw to see what effect it has on them.—[North Dakota Station.

Breeders Wanting 30-lb. Herd Sires

We Invite Your Attention to

Three Young Bulls

No. 151, calved March, 1916. Sire, Korndyke Segis Johanna 127132, a 38-lb. son of the 40-lb. bull, Johanna McKinley Segis by King Segis, and whose dam, Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68-lb. three year old by a 29-lb. grandson of Hengerveld De Kol. Second dam, a 23-lb. three-year-old by King Pontiac Champion, a 31-lb. son of King of the Pontiacs. Third dam, a 33.86-lb. daughter of De Kol 2d's Butter Boy 3d.

No. 156, calved April, 1916. Sire, King Pontiac Champion, has 41 A. R. O. daughters. The only one tested as a mature animal made over 1,000 lbs. butter in a year. Dam a 31.51-lb. daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O. daughters, two above 30 pounds. Good A. R. O. breeding for several generations.

No. 152, calved April, 1916. Sire, King Pontiac champion. A 30.38-lb. daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68-lb. cow.

Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address
FEWACRES FARM — **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. — A. M. SERSTED, Supt. Cattle.

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
Ed. Bruins — **Fairwater, Wisconsin**

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son — **Oconomowoc, Wis.**

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort — **Tomah, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY — **BLACK EARTH, WIS.**

AYRSHIRE CATTLE.

When AYRSHIRES are through milking they fatten easily for the butcher and make splendid beef. For veal, their calves bring highest prices. They are the nearest "dual purpose" cow there is. Milk passes all requirements—beef yield large. That means DOUBLE PROFIT. Send for information.
AYRSHIRE BREEDERS' ASS'N
C.M. Winslow, Sec'y, 21 Park St., Brandon, Vt.

AYRSHIRE BULLS

FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

RED POLLED CATTLE.

HEADQUARTERS FOR RED POLLS

IF you want cattle bred for beef and milk, buy RED POLLS. We can supply you. Write.
J. W. Salter & Sons — **Unity, Wis.**

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD — **AVOCA, WIS.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin — **Gotham, Wis.**

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

GUERNSEY CATTLE.

Guernsey Bull For Sale

THE richest Guernsey breeding. Born March 8, 1916. Sired by the richly-bred bull,

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant View. Also a deep, rich breeding of the Governor of the Chene line. Address
Charles Schmidt — **Wrightstown, Wisconsin**

GUERNSEY BULL

LANGWATER STARLIGHT Breeding. A. R. O. dam. Also bull calves from 2 to 6 months old from A. R. O. cows for sale. Address
W. J. HEID — **FORT ATKINSON, WIS.**

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett — **Sparta, Wisconsin**

A SON OF THE GUERNSEY BULL
GLENWOOD NOBLE SECRET 23999

BORN in March, 1916. Dam, a heavy producing cow. He is well marked and well grown.
E. H. KIESLING — **JEFFERSON, WIS.**

REGISTERED GUERNSEY HEIFERS

3 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address
W. A. Lawson — **Rosendale, Wsconsin**

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman — **Fort Atkinson, Wisconsin**

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

FOR SALE Pure-bred and high-grade Guernsey calves. Address
ARTHUR FINDLAY, WHITEWATER, WIS.

GALLOWAY CATTLE.

50 **HEAD OF REGISTERED GALLOWAY** cows and heifers for sale; all bred. Some are imported cows and out of imported dams. Also 14 bulls. C. S. Hechtner, Chariton, Iowa.

Please mention this paper when writing

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

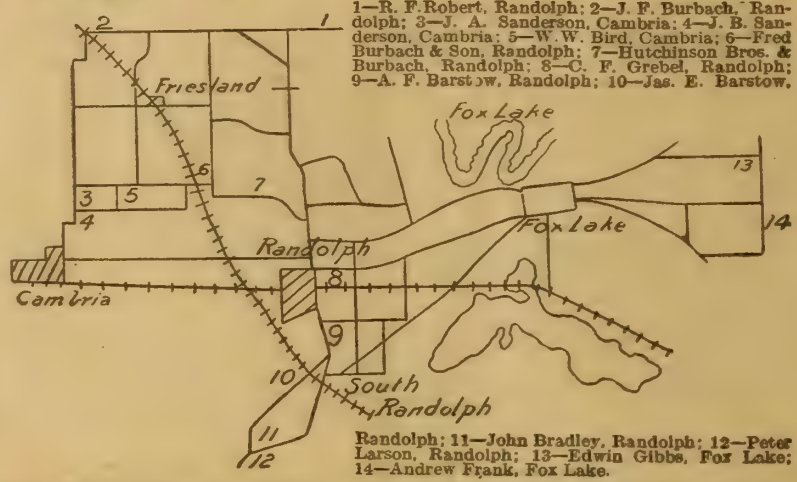
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE.

HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

Yearling Son

READY for service, of the **30 pound bull Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.
Schley Brothers - Waukesha, Wis.

21.37 Pound Son of the 24.56 Pound Bull

DOWNING PONTIAC BUTTERMAN

OUR noted prize-winning sire. Dam of bull for sale, **Downing Pontiac Dairymaid,** a 21.37 pound daughter of **King Hengerveld Pondyke,** that has 2 30-pound daughters. Price $200.00. **19.40 pound bull,** a double great grandson of **King of the Pontiacs.** Price $100.00. Send for extended pedigrees and pictures.
M. W. Downing & Brother, Waukesha, Wis.

19.8-POUND YEARLING SON
Of the Richly Bred Ormsby Bull

BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull **Beauty Pieterje Prince** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.
Dopp Brothers - Ixonia, Wisconsin

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white.) Prices $75 and $100.
L. V. Garvens Brookfield, Wisconsin

FOR SALE

TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Jonanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address
A. G. PINGEL CHILTON, WISCONSIN

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address
ADAM LORENZ
Sheboygan Falls Wisconsin

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

THE 30.90-LB. SHOW BULL
NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.
FRED ALBRECHT WATERTOWN, WISCONSIN

2 Yearling Sons of the Richly-Bred Holstein Bull
KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days." He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Robert's Fearless Lassie, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

10 Registered Holstein Heifers

14 TO 18 months old, well marked, of good, straight conformation, and ideal dairy type. They are mostly daughters of the richly bred Holstein bull, FOBES WATSON DE KOL 85682, a son of FOBES TRITOMIA MUTUAL DE KOL 2D, and out of untested daughters of ALCARTRA JOHANNA RUE DE KOL 47853, a maternal brother of ALCARTRA POLKADOT. Here is a rare combination of breeding. Will sell in one lot or singly. Prices $125 to $150. Act quickly. Address
MRS. OTTO VOLKMAN JUNEAU, WISCONSIN

HERE IS AN OPPORTUNITY

We are offering a few choice registered Holstein cows and heifers bred to the 29.50 pound bull

MAPLECREST HENGERVELD DE KOL 94154

WE also offer a 22.29 pound son of his for sale at $125. Send for an extended pedigree. It is a very well bred bull and the price is very low.
GROVE BROS., COLUMBUS, WISCONSIN.

HOLSTEINS and GUERNSEYS

We are offering for immediate sale 400 head of registered and high-grade cows and heifers; also registered service bulls. Nothing but the best. Will make extra low price on 55 registered Guernsey heifers. Call at our farms or write.
EDGEWATER STOCK FARM FT. ATKINSON, WIS.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

A RICHLY BRED

JOHANNA BULL

SIRED by the 26-pound bull **Korndyke Pontiac Plebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.**
Geo. Gibson - Nashota, Wisconsin

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
B. F. Winckler & Sons Medina, Wis.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter for the year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.
J. H. Henderson - Elkhorn, Wisconsin

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address
JOHN HASSE MONROE, WISCONSIN

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. **8 yearling heifers** will be bred if desired. Sired by the **31.17 pound bull Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pounds daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.
Lawrence Rober - Lyons, Wisconsin

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write
W. H. S. Rhoda Watertown, Wis.

Holsteins For Sale

REGISTERED Holstein heifer calves $75 each, high grades $18. If you want a good bull or some springers write us.
Findlay Bros. Whitewater, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Henger veld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

POLAND CHINA SWINE.

BIG POLANDS

WAIT FOR SEPTEMBER 28TH
THE DAY I SELL 40 BIG
POLAND CHINA BOARS AND GILTS

MOST of them by BLACK JUMBO 221231, the biggest and best breeding boar in Wisconsin. The best lot of boars ever offered in the state. Let me send you a catalog. I want your name and address. Mention The Wisconsin Farmer. Address
E. W. HENDRICKS **HAZEL GREEN, WISCONSIN**

MEET ME AT THE FAIRS

SEE MAC'S CHIEF (1,050 lbs.) Also sows that weigh 700 and 800 lbs. I will convince you that we can raise BIG POLANDS that have WORLDS OF QUALITY. Will have a fine assortment of SPRING BOARS FOR SALE. Will show at Iowa, Minnesota, Wisconsin, La Crosse and Omaha. Let's get acquainted. **J. D. McDONALD, NORTH BEND, WIS.**

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs. TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.
M. MADSON & SONS **MADISON, WISCONSIN**

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.
A. Menke & Sons, R. 1, Markesan, Wisconsin

6 APRIL BOARS

GOOD ones by North Side Wonder and out of 800-lb. sows, at farmer's prices. Address,
J. C. Hendricks, Box F, Hazel Green, Wis.

SHORT-HORN CATTLE.

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son, Beaver Dam, Wisconsin

RIVERSIDE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MARQUART'S
Milking Short-horns

SEVEN bulls ready to go, sired by Qeenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
Marquart Bros. **Milton Junction, Wis.**

OAK LAWN FARM
Short-horns of Quality

FOR sale at a very reasonable price, 22 head of registered Short-horn females, ranging in age from 16 months to 6 years. Address
J. E. KENNEDY **JANESVILLE, WIS.**

MILKING
SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little **Evansville, Wisconsin**

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son **Burnett, Wis.**

Bates Short-horns
Fashionable Durocs

STOCK of both breeds for sale. Pigs to be shipped at weaning time. Order now. Guarantee satisfaction. B. W. Little, Janesville, Wisconsin.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

SMILEY POLANDS

BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address
WM. SMILEY & SON, ALBANY, WIS.
GILTS RESERVED FOR SALE, FEBRUARY 22

BOARS **POLANDS** GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.
Chas. S. Maltby, **Janesville, Wisconsin**

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.
Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781
AND
ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address
P. W. YOUNG **PROSPER, Minn**

JUMBO'S EQUAL 2D
Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
C. S. FLESCH **MT. IDA, WISCONSIN**
(Shipping point, Fennimore.)

POLANDS

A'S BIG ORANGE, HERD BOAR

OFFER three outstanding fall boars. Spring pigs now ready to ship, sired by A's Big Orange, one of the good boars of the state. Guarantee to please. Write for particulars. Address
W. F. Ackerman **Glen Haven, Wis.**

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING **BANGOR, WIS.**

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.
Phone 53 **F. E. Purdy, Orfordville, Wis.**

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE Poland China yearling boar $40.00. Gilts bred for fall farrow to Fairview Jumbo, $35. Booking orders for July, August and September pigs. J. Le Roy Larson, Iola, Wis.

DUROC JERSEY SWINE.

SEE ATWATER DUROCS

AT MINNESOTA, WISCONSIN, LA CROSSE and OMAHA. See my BIG SOWS of MARION WONDER breeding. Let me show you some young stuff by the CHAMPION LEE'S DEFENDER. Will have the best DUROC herd I ever showed. Visit my pens and see some of the boars I sell in my BOAR SALE, OCTOBER 18TH. I want to meet you; let's get acquainted.
L. F. ATWATER, BANGOR, WISCONSIN **"HOME OF BIG DUROCS"**

WE SHIP on APPROVAL
Duroc Jersey
BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

BOARS
DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
J. Erwin, Bloomington, Grant County, Wis.

CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees
Ceylon Court Farm - Lake Geneva, Wis.

Duroc Boars

FOUR fall boars sired by KING THE COL. Three fall boars sired by CHIEF'S COL. FISHER. Fifty spring boar pigs, the best lot I ever owned. The home of GOLD BOND. Write.
JOHN L. FISHER **JANESVILLE, WIS.**

GRAND MODEL 21 CORRECTOR 2d

KEEP these Durocs in mind. Few pigs for sale by Lincoln Model, Salem Model and Regulator 2d. Write.
Geo. D. Sprain & Sons, **West Salem, Wis.**

SPRING DUROCS

READY to ship spring boars by Col.'s Choice by King the Col., Wonder Chief by Cherry Chief, Pal's Defender by Lee's Defender. Order early.
Dennis Shea **Melvina, Wsconsin**

Cook's Defender

IF you want DUROCS with size buy a son of COOK'S DEFENDER. Priced right. Address
Emmett Cook & Son, Richland Center, Wis.

CHIEF DEFENDER BIG COL.
THE BIG DUROCS

Boars reserved for sale, October 19th.
Geo. H. Willsie - - Prosper, Minn.

PRINCE DEFENDER

SPRING and fall Duroc boars and gilts for sale by above boar. Also spring pigs by Royal King 4th and Lee's Defender. Order early, the best will go first. Address
McClurg Brothers **Viroqua, Wisconsin**

40 DUROCS

BOARS and gilts of the best breeding known, and we guarantee them individually. Single, pairs or trios. E. H. Parker & Son, Janesville, Wis.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
J. W. Higgins **Gotham, Wisconsin**

DUROC SPRING PIGS

AND a few sows bred for August and September farrow for sale. Write BURN BRAE FARM, CHAS. A. PETERSON, ROSENDALE, WIS.

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST **RIPON, WISCONSIN**

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

HORSES.

LEFEBURE'S BELGIANS

A LARGE and choice collection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons **Fairfax, Iowa**
8 miles west of Cedas Rapids

LINCOLN MODEL
DUROC HERD

My herd will be on exhibition at the
WISCONSIN STATE FAIR
and the leading county fairs. See **LINCOLN MODEL** and his get. Also the big boars by **S. & H.'s COL.,** the largest boar of his age in the state. Will have some good boars and gilts for sale.
SEE MY DUROCS BEFORE YOU BUY
ALBERT L. HYZER
WEST SALEM **WISCONSIN**

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Short-horns. Address
Ed Patterson, Jr., **Bloomington, Wis.**

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

CHESTER WHITE SWINE.

DERENTHAL
CHESTER WHITES

THE champion Chester herd of the Northwest. Offering spring pigs, BOARS and GILTS of outstanding individuality. Bred in the purple. If you want herd headers, write
H. A. DERENTHAL **WYKOFF, Minn**
Meet me at Hamline, Milwaukee or La Crosse.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.
Wm. F. Belda - De Forest, Wisconsin

CHESTER WHITE spring boars sired by Eagle Chief and Highland John. Big, growthy boars with strong backs, wide, deep hams and heavy bone. I have been five years mating good sires and dams to produce this kind. Send for pedigrees and prices. Address W. C. Scheibe, Burlington, Wisconsin.

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. **Wm. C. Kirst, Tomah, Wisconsin**

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller **West Salem, Wis.**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. J. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

AM offering 60 March pigs of the lengthy and heavy-boned kind that are sure to please. Also 5 old sows bred to farrow in August. Reasonable prices. L. A. Schultz, R. 1, Poynette, Wisconsin.

HAMPSHIRE SWINE.

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.
A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

HAMPSHIRE

SPRING pigs of both sexes and fall boars for sale.
DANE STOCK FARM
Oshkosh **Wisconsin**

HAMPSHIRE SOWS

I CAN supply spring gilts, yearling and mature sows, either bred or open. Choicest breeding and good individual merit. Write me your wants.
R. L. CURRIE **VIOLA, WISCONSIN**

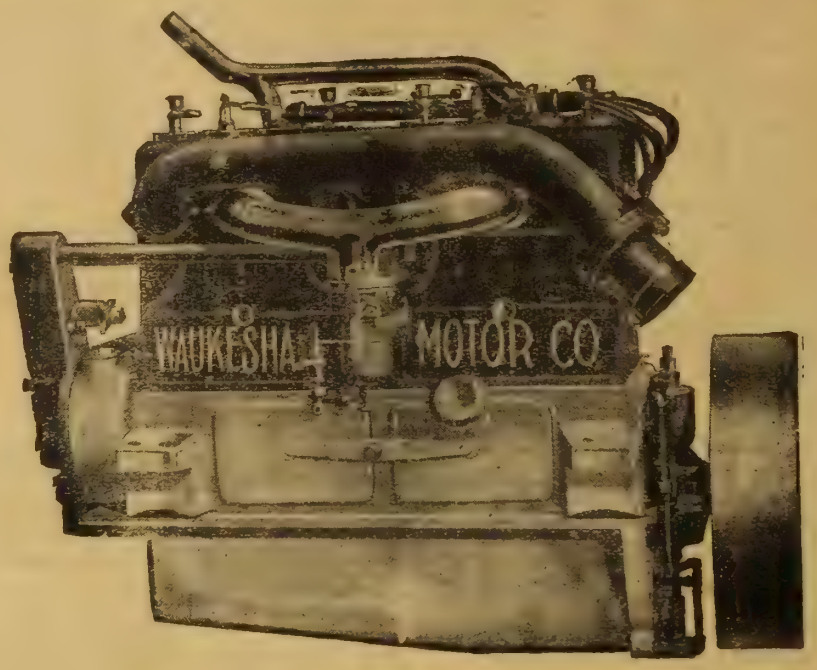
BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE **LOMIRA, WISCONSIN**

THREE OAKS FARM BERKSHIRES

SERVICE boars and open fall gilts for sale. No more spring pigs left. Will hold brood sow sale March 2d. W. A. FREEHOF, Waukesha, Wis.



A Message to Tractor Buyers

Visit the Tractor Demonstration at Madison. You will have an opportunity there to study the world's best tractors. Pay close attention to the question of tractor **power.** Keep in mind that the vital part of a tractor—the feature that determines its real value is the **motor**—the power plant. The tractor operator who **knows** would prefer to have a tractor of questionable design equipped with a **good motor** rather than a tractor of approved design equipped with a poor motor. The reason for this is obvious. In the first case, he **has the power** and with a little ingenuity can use it. In the second case, **not** having sufficient power, his tractor can accomplish little or nothing. Therefore, carefully consider the **motor** before you buy the tractor. More than a score of America's leading makes of tractors are equipped with Waukesha Motors. In fact, one out of every three tractor builders in the United States equips his product with the Waukesha Motor. This wholesale endorsement of the Waukesha Motor by so many successful tractor manufacturers should guide you in your tractor purchase.

Demand A

Waukesha MOTOR
TRADE MARK REG.

In The Tractor You Buy

To you, Mr. Tractor Buyer, this means much. The very fact that a tractor is equipped with a Waukesha Motor is your assurance of reliable tractor service. If you cannot visit the Tractor demonstrations, write for our free bulletin—"A Guide to Tractor Buying."

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World's Largest Exclusive Builders of Tractor Motors.

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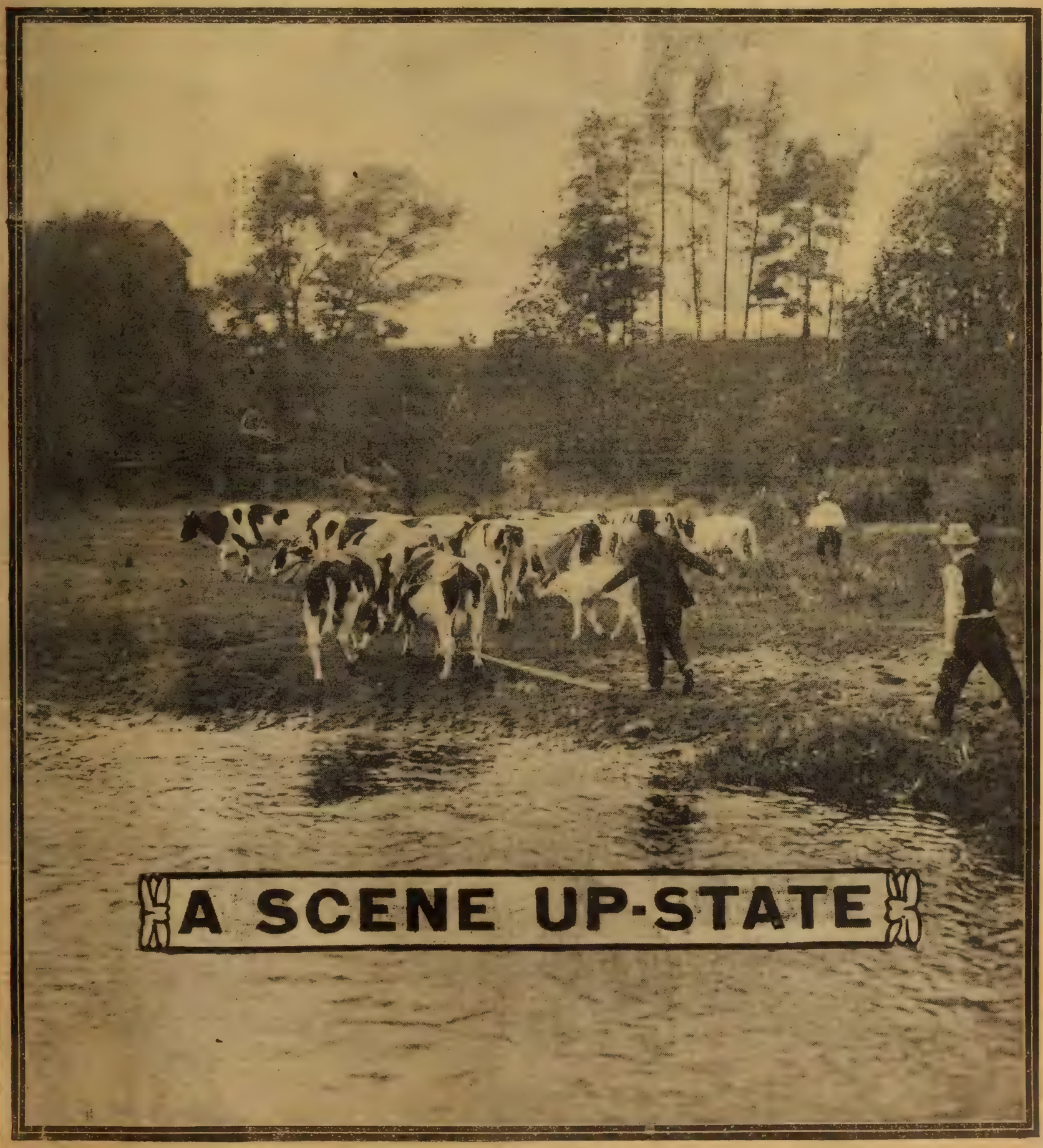

A SCENE UP-STATE

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

QUESTIONS AND ANSWERS.

Five-Horse Evener.

Please explain how to make a five-horse evener for a twelve-inch gang plow so that all the horses work abreast.

Answer.—Instructions for making such an evener were published in these columns in the number of July 27th.

Coldness of Natural and Artificial Ice

Which is the colder; natural or artificial ice? Which will melt the quicker in the sun?

Answer.—That all depends upon the ice. Natural ice put up in zero weather will last longer than artificial ice. Natural ice put up in thawing weather will not last as long as good artificial ice. In other words, the colder the ice when made or put up the longer it will last.

Power of Kerosene and Steam.

If a kerosene engine is equipped with a throttle governor, has it more power than a steam engine?

Answer.—We are not sure how you wish to compare the two. For the same size cylinder the steam engine would be the more powerful with the steam at eighty pounds or more. In plants of twenty horse power or less the kerosene would probably be the more economical. For higher horse power the steam engine might be the more economical, unless the Diesel type of oil engine were used.

Motor Loses Power When Hot.

Kindly explain why it is that the Ford motor will not give as much power when it is thoroughly warmed up as when it is cool. The engine turns over freely and has good compression.

Answer.—We doubt that this is a usual trait of the Ford motor. As a rule, a motor develops more power hot than cold, as the gasoline vaporizes better. It may be that your motor has carbon accumulations in the cylinder that cause preignition. You may be using a gas mixture a little too rich. The most common cause of a hot motor losing power is a too tightly adjusted bearing, which becomes tighter as the motor heats. Tight pistons have the same effect. Another possibility is loss of compression due to thinning of the oil as the motor becomes hot. If the push rods are adjusted too high the expansion of the valve stem may prevent the valve from seating when hot. This is not likely to happen with a Ford car, as the push rods are not adjustable.

The Self-Watering Tank.

Can you give me a few pointers on a self-watering tank? The one shown in the sketch (Figure 1) is two feet long and one foot wide. It is connected to

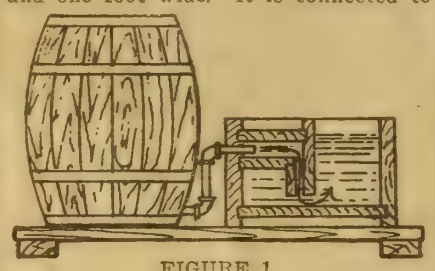

FIGURE 1.

the barrel by a one-half-inch pipe. The pipe empties into an L-shaped box in the tank, as shown in the sketch. The tank overflows. How can I prevent it from overflowing?

Answer.—The supply tank of a self-watering outfit must be air-tight; otherwise the trough will overflow. Lowering the water level in the watering trough must let air into the supply tank. Air will not flow downward through water. These are the fundamental facts to be remembered in making an outfit of this kind. The trough in Fig. 1 will overflow if there

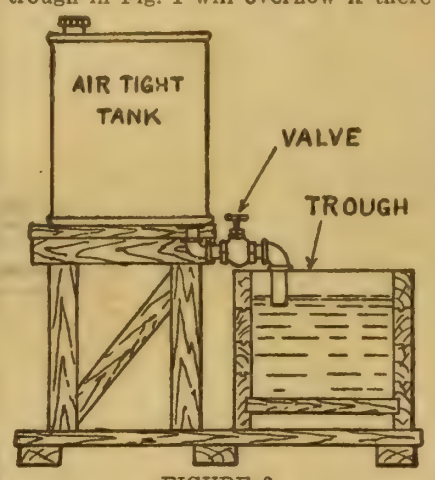

FIGURE 2.

is an air leak into the barrel. If the barrel were air tight the water would not flow out of it at all, as the air would not flow down the half-inch pipe, which would be filled with water.

Figure 2 shows the correct arrangement. Close the valve when filling the tank. Fill the tank full and screw down the air-tight cover. Then open the valve. As soon as the water covers the end of the pipe the water will stop flowing from the supply tank.

Using Motor as Generator.

I have a Crocker-Wheeler motor which consumes four amperes, fifty volts. Would this machine operate as a generator? What would be the output, and what speed should it run? It has sixteen commutator segments and only eight slots. Why has it more segments than slots? Would it have to be rewound if I use it for a generator? Would the same commutator do?

Answer.—Your machine should operate all right as a generator. It should deliver four amperes, fifty volts. It should be run somewhat faster when run as a generator than when run as a motor. The proper speed is usually stamped on the name plate of the machine. Your machine has two coils wound in each slot; therefore, there are twice as many segments as slots. You would not have to rewind it or put a new commutator to use the motor as a generator. You would have to change the position of the brushes in order to prevent sparking. The brushes should be moved about as much ahead of center as they are now back of it.

The first time you use the machine as a generator you may have to magnetize the fields by means of dry cells. The cells must be connected so that the magnetism will flow in the right direction. After the machine has built up once it should start all right without charging the field, provided the direction of rotation is not changed.

Repairing Ford Magneto.

The magneto on my Ford automobile has become very weak. Please explain how it can be recharged without taking the magnets out.

Answer.—It would be better for you to buy new coils for your magneto, as the trouble is probably in the coils. The coils come mounted on a plate, so that they are easy to install. You can also obtain a new set of magnets already charged. As a rule, recharging magnets is not very satisfactory, as the usual garage equipment will not give a Ford magnet much over 70 per cent of a full charge. The magnets seldom lose their magnetism, unless the magneto has been connected to a battery.

Ford Car Troubles.

I have a 1915 Ford car that has been run several thousand miles. It does not seem to take hold quick enough on low. At times, especially if the engine is speeding, the car will exhaust its pulling power when part way up a hill. Then, if I open the throttle, it kills the engine. To go into low, I have to put on the brake and slow the engine down very slow. Then, as the engine speeds up, it will carry the car. Is this the nature of the car, or is something wrong? Is there a way to tell when the magneto is not working without going over the whole engine? Does the magneto ever get short-circuited? How do lights get short-circuited? My car uses too much gasoline. Where should I look for the trouble?

Answer.—The lining on your low speed brake band is worn. Have a new one put on. If the magneto is not working properly the spark will be poor and you will have trouble with the engine missing. Poor connections or incorrect adjustment of the vibrator points would cause the same trouble, so see that these are right before blaming the magneto. Ford magneto trouble is generally due to the insulation becoming rotten, as the insulation is always more or less oil soaked. In this case it is best to buy new coils, mounted on a plate so that they are easy to install. Lights may be short circuited by the wires rubbing on the frame of the car. If the insulation gets rubbed off so that the metal wire comes in contact with the frame a short circuit is the result.

If your car uses too much gasoline remove the exhaust pipe from the engine so that you may see the exhaust. If the fire is blue and regular you have good combustion and the trouble is due to a leaky tank or pipe; or too poor compression; or to running with the spark retarded too much. These latter things cause loss of power and thereby increase the gasoline consumption for the same work. If the flame from the exhaust is red and sooty the needle valve is open too far and should be adjusted for less gasoline.

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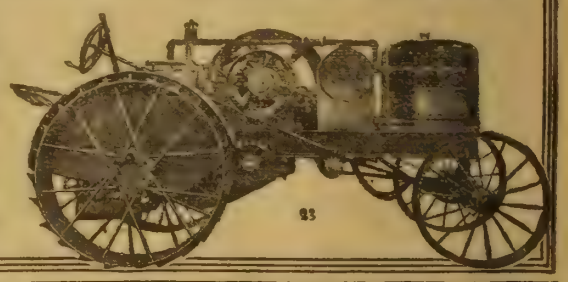

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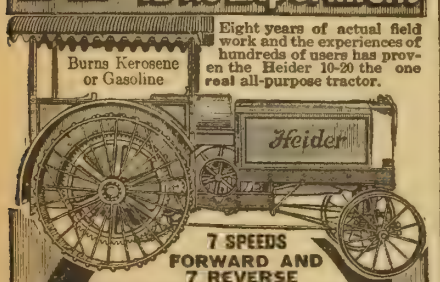

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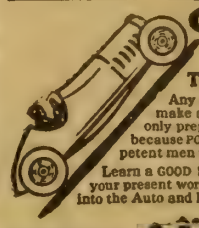

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The Wisconsin Farmer

THURSDAY, AUGUST 31, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE FARM A GYMNASIUM.

THE man or boy working in the harvest field, under the burning sun, may not desire to be told that the arduous labor he is performing at so much physical discomfort is the most beneficial work he could possibly do. He may not be thinking of the good this hard work is accomplishing to him physically; he may be thinking only of how many more hours there are until sundown, or until the job is finished. It may, in fact, seem like adding insult to injury to apply such unguent to the harvest wounds. Yet, when the years have passed on and the arduous work is at an end, how many there are who look back and bless the day when it was given to them to perform such body-building, soul-inspiring work!

I was quite interested the other evening in reading an article written by Champ Clark, speaker of the lower house of congress, in which he pays a remarkable tribute to the farm as the "greatest, grandest physique-building gymnasium in all the world," adding that "at least nine-tenths of my health today is due to the farm, where I did something of everything—breaking rock, splitting rails, digging post holes, hoeing corn, following the plow in new-turned earth, swinging the scythe and the cradle—for there were no reapers until I was quite a big lad." According to Mr. Clark's own testimony, he was a scrawny, puny lad, for whom an early death was freely predicted. His father, however, was wiser than his generation and apprenticed the boy to a farmer, who saw to it that there was no mollycoddling. With what result? Let the eminent speaker of the house of representatives answer for himself:

> The farm life worked wonders with my physical development, for let me tell you, the work of the average farm is the greatest, grandest, physique-building gymnasium in all the world. There isn't any form of exercise that compares with it. The farm furnishes every element necessary to build up the growing boy or to restore the health of the man broken down by sedentary work or business stress. There is present every element necessary to physical development and the attainment of health—elements which the best-equipped gymnasium never can provide.
>
> There is fresh air, a whole world full of it, with which the lungs are strengthened and the blood vitalized. There are the sun and the wind and the rain on the face and body to make the skin healthy and firm. There is the healthful, natural, normal exercise that brings that "sweat of the brow," which is far better than any doctor's medicines to eliminate the poisonous wastes of the blood and the body. There is the almost continuous play of the muscles in every part of the body in the performance of the many and varied tasks which develops the whole body and makes it pliable and elastic, yet firm and seasoned. There is the naturally created appetite, with a stomach properly receptive and fitted to digest an abundance of coarse, nourishing food, and there is the fatigue of normal labor to fit the body and brain for nights of sound, uninterrupted sleep in quiet and repose.
>
> Some of the healthiest and most rugged men in congress were reared on a farm. And more than that, most of the prominent men in our history have come from the farm, there being, of course, exceptions to prove this rule, as all others.
>
> The best exercise in the world for physical, and, therefore, mental development is to be found in the routine work on a farm. It means the uplift and the upkeep of the race.

It may not make the work easier, at the time, to have these consoling words from Missouri's eminent statesman, but surely, when the task is over and the heat has subsided and another crop has been harvested, we can all pluck courage from such testimony and remember that health is the greatest blessing, after all. Not every boy who swings the scythe, as Champ Clark did, or plows corn or feeds the stock, is going to turn out as well as did the eminent Missourian, for there are but few such high places and millions of farm boys in the world. But it is worth something—more than can be measured in dollars and cents—to have a constitution which withstands the attacks of approaching age and bears one through to the allotted three-score-years-and-ten without bodily ailments, and with a mind made clear by physical perfection. And the farm is the best of all gymnasiums for bringing this about, there is ample testimony as to that.

FARM CHILDREN AND TOWN SCHOOLS.

MY RECENT editorial telling of the Wisconsin farm mother who wrote to me for advice on whether or not to make all manner of self-denials in order to send her sixteen-year-old daughter away to town school has brought a greater number of letters to me than almost any other subject discussed in these columns in many weeks past. Most of the writers are kind enough to compliment me on my stand (you may recall that I earnestly endorsed the idea of getting the very best education possible, but suggested that the girl stay on the farm for another year or two, to help out with the family finances) but many of them came out flat-footed against the idea of a girl in such moderate circumstances attempting to gratify her ambition for a better education than the rural schools of her neighborhood afford. Among all the letters received, none interested me more than one from a worthy "mother in Israel" in Oklahoma. She started her letter by saying that the communication from the Wisconsin farm mother "appeals to me very strongly," and then went on to tell of her own experience. Her fourteen-year-old girl developed a thirst for knowledge and every effort was made to satisfy this thirst, her parents seeing her forge to the head of her classes with excusable pride. Let the Oklahoma mother tell the story of what happened after the farm girl passed the eighth-grade examination with flying colors:

> About this time a drouth of several years set in and we did not raise enough to live on. We had to make a store account every year and at the end of the year we did not have enough to get us out of debt. This so worried my husband that he hardly ate or slept and became almost a skeleton. Such a condition was a grief to me, for with the burden of the household on my shoulders and my little ones to look after, I felt powerless to help him.
>
> The normal that year was to be held closer to us than it had ever been. A neighbor boy and his sister were going to attend, so the girls could room together, with the young man near at hand to see that they were all right. This seemed to be just the chance she wanted, so she told her papa that if he would attend the school meeting and make the application for the primary grades for her she would teach the school and give him one hundred dollars of the money to help pay his debts. Here seemed a way out of the dilemma and he borrowed fifty dollars to pay her board and buy her clothes. The last of May she left for town. I was just barely able to sit up, having a little baby two weeks old, but I felt it might be her only chance, so through blinding tears I saw her go. Her sister four years younger had to take the burden of the household on her small shoulders, but she did it without a murmur, installing herself mother's nurse, mother's cook, mother's laundry girl, and the care of the smaller children and all the things that fill a woman's life fell to her lot. But she performed her tasks cheerfully, in order that mother might regain her health and strength and sister might have an opportunity to be somebody. We were all so proud of our oldest girl—she had grown so tall and stately. We did without her help during the crop and she came home at the end of eight weeks fully prepared to teach her school. We were almost wild over her success. She started to teaching and was to teach two months, but on account of the weather being so hot, the school board shortened the term to six weeks and, as she only got forty dollars a month, the summer term did not much more than pay back the fifty we had borrowed for her, but she had five months to teach in the winter, so we thought it was still all right, and I never dreamed of anything else but that she would do just what she said she would.
>
> Now try to imagine our grief and surprise, when in November she contracted a marriage with one who was in no respect her equal, and in spite of my tears and her father's entreaties, she went on and married him and he spent her money as fast as she earned it, hardly allowing her enough to buy decent clothes. Instead of giving her papa a penny of what she had made, he had to take what he and the other children had made and buy her wedding clothes.

Do you wonder, when I receive letters such as this, the tears come into my eyes and I regret the futility of my poor, faltering words to really express all I feel? What can I write to this poor, disappointed, well-nigh-discouraged farm mother that will cheer her up? But she is brave and out of the slough of her despondency sends some words of advice to other farm mothers who find themselves in a similar plight. Here is her advice:

> I say, by all means keep your daughter with you just as long as you can. I think the editor's advice is splendid and think, too, that there is nothing that helps or elevates us more than good reading. If it is so you possibly can, let your daughter have a room all her own. Let her have a flock of laying hens all her own and sell the eggs, or if you can't do that, let her have the proceeds from the poultry for a month or two. Give her a pig and let her raise hogs. There is good money in turkeys; let her have some if she likes them. If she loves music, let her have an organ, by all means, even if you have to sell something to get it. By doing this, I believe she will stay on the farm, satisfied. Let her buy curtains and rugs for her room with what she makes. Help her to have some aim in life and she will be all right. If I had a fortune I would give it all if we had done some of these things for our daughter, for she might have stayed with us longer, but it is too late now. It is not too late to keep them while you can, and I wish I could tell all American mothers just what I feel on this subject. To me it is one of vital importance. I wish I could tell all I feel about it, but I hope that this letter may help some parents and keep them from making the mistake we did. Never let your daughter go the first time with any man you wouldn't be willing for her to marry.

Shall we leave the matter here, with the moral so obvious it does not need to be pointed out by me? Every case must be decided on its own individual merits, yet the vastness of the debt which children owe their parents who have made sacrifices for them (such as this Wisconsin farm mother and this Oklahoma farm mother have made) can hardly be overestimated. I can only hope that out of all this discussion some good may result to both parents and children who find themselves confronted by similar crises. There is no bigger problem facing country folks today.

SOME THOUGHTS AT THE TRACTOR SHOW.

THERE is no more convincing proof, in my opinion, of the farmer's eagerness to increase his efficiency and to make every acre yield to its utmost—bringing farming up to a higher plane than it has ever before occupied—than is to be found in the attendance and the interest manifest at the series of tractor demonstrations which comes to an end at Madison next week. It is positively inspiring to watch several thousand farmers following the tractors as they chug across a field, leaving a string of freshly turned furrows in their wake, or pulverizing the ground in wholesale fashion. The eagerness with which they measure the furrow's depth, to see that the tractor is indeed doing everything claimed for it; the good, sound common sense they manifest in comparing the various makes, not only as to the work performed, but as to the cost of fuel and of upkeep; and the manner in which they go about determining what size tractor to buy, how many horses or mules it will displace, and so on; all this convinces me that never before was farming being done on so scientific and businesslike a basis. If the tractor demonstrations had done nothing else but show the farmer that every operation of farming should have at least a mental "cost system" (ascertaining which animals are proving worth their board, whether tractor plowing or horse plowing is the most economical, what crops are productive of the best results in the long run, and so on) they would be worth their immense cost. But tractor demonstrators assure me that the shows are having far more tangible results; the farmers are not "shopping" after the fashion of a woman in town; they are actually buying. I look for such a season of tractor usefulness and popularity within the next five years as has never been witnessed before in any land.

I had the pleasure to watch a battery of tractors start across a field the other day at one of these tractor shows, and a friend who stood by me declared that even after having watched a flock of army aeroplanes maneuvering on French soil, preparatory to ascending and winging their way to the battle front, he found the sounds and the sights on the tractor field fully as inspiring as those on the aeroplane field across the seas. Why should this not be so? Is there not fully as much that is inspiring and pulse-quickening in those things which make us fight for a living as in those things which make us fight to take away the living? Are there not victories of peace, in which the tractor is playing an important part, fully as worth winning as the victories of devastating, life-sacrificing war? Why should not the man who invents and who uses a tractor be a national hero just as much as the man who invents and who uses a siege gun or the 42-centimeter "Jack Johnsons" with which the artillerists of Europe have been tearing up golden wheat fields and slaughtering their victims by the hundreds of thousands?

I hope there is not one among all my thousands of readers who will not visit at least one of these tractor demonstrations next year, if a series is held as was done this summer. Farming is no longer a matter of the individual toiling alone in the field, a mere "man with the hoe;" it is now a scientific pursuit, in which the best energies of men are expended. The tractor is going to play a most important part in increasing our productiveness and our efficiency in the years that are to come. And just to the extent that we make our fields yield more surely and more abundantly, to that extent do we become better men and women, for thereby are we realizing our duty to the limit and doing our full share of the real, necessary work of the world.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Attend the Wisconsin State Fair.

THE WISCONSIN FARMER has been a constant supporter of the Wisconsin State Fair. This support has been given because we believe such an exhibit encourages better farming.

It would be a grand thing if many thousands of our farmers could look over the live stock exhibit at the state fair at Milwaukee, September 11th-16th, this year. While the state fair offers splendid amusement and entertainment, the interest of this publication centers in the live stock, agricultural, horticultural, dairy, poultry and educational exhibits. It is worth while for the farmer and his family to visit the state fair because of the recreation and change which such a visit affords. But we look upon this feature as the smaller part of the benefit which any farmer and his family ought to get out of the fair. We would like to see the readers spending a considerable part of their time in the cattle, hog and sheep barns and in the judging pavilions. We would recommend further that the farmers who visit the fair, take time to talk with the breeders who have fine stock on display. Surely, every farmer and his boys will be interested in the grain and grass exhibits and in making a mental comparison between the products exhibited at the fair and those which he raises on his own farm. There is a great deal of talk nowadays about the county agent and his work and also about Upper Wisconsin. The farmer who visits the state fair and inspects the county exhibits will get a great deal of information on these subjects which will be of value to him.

We are particularly fortunate in Wisconsin in having the best display of dairy products at the fair which are exhibited in any state in the Union. It will certainly pay to look them over. No one can carefully inspect the horticultural exhibit arranged under the direction of the Wisconsin State Horticultural Society and fail to be benefited thereby. The farmer and his family who are interested in poultry cannot afford to miss the poultry exhibit at the fair. If there are farmers who do not take sufficient interest in poultry they ought to get new enthusiasm at Milwaukee. It will pay to study the educational exhibits and the exhibit of the University of Wisconsin, to make a careful inspection of the school exhibits, to have the young folks take special interest in the contests which are provided, to attend the state spelling match, etc.

It is not possible for us to enumerate in a short article all of the good things which may be seen at the fair. We must take into consideration that these exhibits are arranged by the most successful men in their lines in Wisconsin. Those who desire to keep pace with progress in agricultural implements will have this opportunity afforded them at the fair. The automobile show is well worthy of attendance. It is well staged and the exhibitors are as interesting as one could see at the Chicago or New York shows. Those who missed the automobile show last year missed a treat.

Keep in mind the dates of the Wisconsin State Fair at Milwaukee, September 11th-16th. The Wisconsin Farmer will have a booth near the secretary's office. Our readers are invited to call and make themselves at home.

Moving Pictures For Farmers.

SOME effort has been made by the University of Wisconsin to introduce the motion picture into rural communities. Of course, these things all have to start in a small way, but the farmer and his family should have the advantage of the moving picture in a much larger way. We do not suggest that it is the duty of the state to take charge of the matter. Someone, however, is overlooking the majority of rural communities. Except where there are well-organized farmers' clubs, there are not many regular motion picture exhibitions in the country. Small towns supply something along this line, but too frequently the character of the pictures displayed is mediocre. We believe some well-organized plan of weekly motion picture shows in well-populated rural districts could be put on a paying basis. Farmers have supported the Chautauquas until Chautauquas may be found almost in every village and hamlet. But the Chautauqua is only one week in the year. The lyceum affords some additional educational instruction and amusement in the wintertime. The day is not far distant, in our judgment, when the farmer will have just as ready access to good moving pictures as residents of the city. It remains for some force to work out the details.

Getting Full Value From a Wisconsin Farmer Subscription.

WE HAVE often said that a subscriber to The Wisconsin Farmer receives more for his money than simply the weekly visit of his paper. The personal services of the entire editorial staff, comprising many departments, are at his disposal.

The publication of a journal like The Wisconsin Farmer requires a large organization of men who have made a special study along various agricultural lines. These men endeavor to keep in constant touch with the farmer and his problems, and while it may be true that "there is nothing new under the sun," it is also true that there are always new angles from which to view old problems.

The editors of The Wisconsin Farmer do not pretend to "know it all," but such information as they have is offered freely and gladly to our readers. We are pleased to answer inquiries addressed to the editors along special lines, and it is for this very purpose that we maintain such departments as the farm mechanics, live stock, veterinary, home, legal, and other departments. Not all the inquiries received can be answered in print, but we are always glad to reply to communications of this kind by letter, if not in the columns of the paper.

In this connection we are especially glad to receive letters from the wives and daughters of our subscribers on such subjects as club work, cooking, canning, home, school and church decorations, sanitation, home conveniences and the like.

Subscribers and their families are invited to avail themselves of the services of our organization and to send us their inquiries or personal experiences on problems relating to farm mechanics, live stock, marketing, home building, barn construction, and, in fact, on all the varied interests and activities of farm life.

Preventing Spread of Hog Cholera.

WISCONSIN is to be congratulated upon the zeal shown by its stockmen in preventing the spread of contagious diseases. In none of the twenty-two states where foot-and-mouth disease appeared was a better record made than in Wisconsin, and the same determination which was shown at that time will most assuredly be placed behind the movement to free the state from cholera. In such a movement co-operative effort is an absolute essential. Of course, there are duties for each individual to perform on his own premises, by way of cleaning up yards and feed lots and by disinfecting pens, troughs and sleeping quarters. By giving attention to these matters, one may prevent disease from getting a foothold, though, of course, it must be borne in mind that no herd is safe where real hog cholera infection makes its appearance in a locality.

Sensible co-operation in the stamping out of cholera means that every individual who becomes suspicious that the disease is in his herd should at once make the fact known to his neighbors, in order that precautions may be taken against the spread of the disease. Too often in the past preventable losses have been sustained because attempts have been made to keep the presence of the disease a secret. In the meantime there would be traffic back and forth in visiting and in the exchanging of work, thereby making conditions ideal for increasing the infected area.

Every swine breeder should regard it as a solemn duty to notify the proper authorities just as soon as he becomes suspicious of his herd. Where there is a county agricultural representative, his services should be enlisted at once in order that he may put into force proper quarantine regulations. Through his instrumentality well hogs will be immediately given the serum treatment, and in that way infected premises will soon be surrounded by immune herds. Just as prairie fires were stopped in an early day by plowing around the danger areas, so does it hold in fighting cholera that the sensible use of serum will immediately check the spread of infection.

Where there is no county agricultural representative, but a county agricultural school, the authorities in charge should at once be informed of the fact when cholera makes its appearance, in order that the same precautions may be taken as referred to above. Those counties in which there is no agricultural school and no county representative must look for aid to State Vetenarian Dr. E. H. Eliason, at Madison. Information in any event should be sent to headquarters by phone, because a single day's delay may cost thousands of dollars of loss because of spread of the disease. Every individual should be concerned not only in saving his own hogs, but he should have enough interest in the welfare of his community to assist his neighbors, and this can be done most effectively by getting in touch at once with the authorities that we have referred to.

Farmer a Valuable Asset to Village Business.

FREQUENTLY while traveling about the state the writer has noticed great signs in bold letters on billboards, fences and elsewhere, announcing that some particular village is offering free sites, freedom from taxation and other alluring inducements to secure the location of factories. But can any reader recall seeing any sign offering inducements to farmers and breeders to settle in the trade territory of any particular village? We are referring to the small cities, villages and hamlets where farming is the backbone of business, and not to the large cities which depend upon industries.

All of which brings us to wonder why these small cities should pay so much attention to getting factories? True, a factory is an asset, if successfully operated, but can it compare to a good farming country settled by prosperous farmers? We do not believe enough villages and small cities or rather the business men in such places appreciate the importance of farming. There is a disposition to conclude that a city, to grow, must have factories and shops, while the fact remains that some of the fastest-growing and prosperous cities in Wisconsin today are dependent entirely upon the farms thereabout.

Only recently a ruling of the railroad commission brought to light in an application for depot facilities at Bethesda Crossing, in Waukesha county, the real importance of farming and dairying. Within a mile and a half of this crossing there are twenty-five families, twenty of which are breeders of dairy cattle and shippers of milk. These residents have invested something like $400,000 and operate herds ranging from twenty-five to 184 head. Shipping facilities were poor, and upon proper showing the railroad commission has ordered the railroad to provide a station, adequate platforms and team tracks.

Most significant, though, in showing the importance of intensive dairying and the benefit to a small village of encouraging the farmers, are the figures on business produced before the commission. It was shown that at this little crossing, with only a loading station, that the milk shipments averaged 810 gallon cans of milk and 2,545 twelve-quart cans of milk daily, which is equivalent to a carload. In the minds of the commission this little farming community had grown to such importance from a shipping standpoint that the farmers were entitled to better railroad facilities.

The Waukesha county incident we cite merely to illustrate the importance of a broader co-operation between merchants and bankers and farmers. While they are offering free factory sites, they should not lose sight of the fact that the greatest development may come through better farming. The farmer does not ask for free farms or other inducements. He does not seek to avoid his taxes. Co-operation is all he asks, and can anyone suggest a factory employing the heads of twenty-five families that, from a trade and buying-power standpoint, compare with an equal number of farmers living near any village?

Good Advice For the Wisconsin High School Boy.

THE following is from the pen of H. L. Russell, dean of the College of Agriculture, University of Wisconsin:

Many a young man who has finished high school is now considering the question whether he will spend additional time in educational training to fit him better for his life work. Perhaps the boy has not yet fully made up his mind just what line he expects to follow. In fact most of us who are already engrossed with the problems of life did not consciously prepare in the most advantageous way for the particular niche we may now be filling.

While the opportunity to learn is always before us, no matter how old we are or the conditions under which we may labor, yet the years of conscious training and preparation come to the great majority during youth. If we do not take advantage of the opportunity then, the chance slips by and too frequently the regrets of after years are unavailing.

In the field of agriculture the opportunity for useful efforts is unrivaled, for there is no limit to the chance which the well-trained young man has in this field. In the earlier years naturally a large majority of the graduates of our agricultural colleges were needed to fill the professional positions which were then open, but competition is now much keener for these positions, as in all other branches of the teaching field.

In the practical field, however, there is no need for the trained man to fear competition. The business side of agriculture like any other business, is held down and encumbered with the multitude who are unwilling to apply the results of modern science or indifferent to its value. Just so long as they are content to move along in the same rut, to ignore the findings of modern science and the tested experience of others, to let well enough alone and drift rather than to push, just so long will the returns of the average farm be absurdly low.

Why do the cornfields year after year of the members of the Wisconsin Experiment Association run from ten to twenty bushels above the average yield of the state? Why is the average yield of corn in Wisconsin from thirty-six to forty bushels per acre, while that of the entire United States runs about twenty-six? Simply because Wisconsin farmers are more progressive than the average. They have learned the lesson of good seed and good culture and reap the profits thereby. The man who is able to apply these lessons certainly is able to compete advantageously with the average.

No good farmer should keep a herd of milking cows and not know to a certainty whether the

labor and feed he expends on each animal returns an actual profit, or not. The average yield of many a Wisconsin herd is 300 pounds per year, while the average of the state is only 175 pounds of butter, just about enough to pay the cost of keep.

Food products are on the rise in value and will continue to increase so long as consumers multiply more rapidly than production. For this reason the product of the farm, as well as the land itself, is very unlikely to bring less returns than the average values now received. Neither does the farmer have to write off large sums for depreciation on his farm like the manufacturer on his factory or plant.

These facts are worth careful consideration by the boy who stands at the threshold of his opportunity and now has a chance to train his mind to think straight, as well as to learn how to handle effectively and efficiently his time and his talents.

As usual, Dean Russell makes a very clear and logical statement, and we believe it worth while for readers of The Wisconsin Farmer to call the attention of boys and young men in the family to it.

Improving a Wisconsin Herd.

MR. ROY H. MONROE, official tester for the Empire Cow Testing Association, gives the following advice to members relative to improvement of dairy herds:

(a) Use well-bred dairy cows; (b) Keep cows comfortable and contented; (c) Follow the practice of most successful dairymen; (d) Ask your field man to calculate you a ration suitable for the weight of cow and the production of milk and butter fat. This may mean dollars in your pocket; (e) Use a variety of feeds in the ration; (f) Take into consideration the cost of the ration; (g) Eliminate the unprofitable cows.

We quote further from Mr. Monroe, the following:

It is a hard and difficult proposition to feed a herd of dairy cows without some way of knowing the exact production of each individual. In fact it is merely guesswork on the part of the feeder. By testing the herd once each month by an official tester, the farmer obtains the required information, and hence can proceed on the right track to profitable feeding. At the close of each year the owner of the dairy herd will be able to tell exactly which cows are the money-makers and which cows are the star boarders. He will also be able to tell you just what it cost each individual cow, to produce 100 pounds of milk or one pound of butter fat, and how much he made for every dollar invested in feed.

Without the aid of the cow-testing association these facts would be hard to secure, and yet it is very essential that a producer should know the cost of the article before placing it on the market.

There are a large number of advantages which can be appreciated by the members of the association, such as: feeding a balanced ration; saving the heifers from the best cows; selling star boarders; showing the association record of cow to the purchaser. A man who desires to buy a cow would like to know of her production and would pay a larger sum for the same animal if she had a good record down in black and white, such as is furnished by the cow-testing association.

Did you ever stop to think that each and every cow in your herd is a market. You may sell your oats to one and receive 80 cents a bushel in return, while another will pay you 25 cents and it may be that you are getting as low a figure as 5 cents. It's a mighty good idea to know what markets pay the best prices for your feeds.

These pointers are certainly worthy of the careful consideration of Wisconsin farmer-dairymen.

Summer Silage Helps Out in a Dry Season.

IF THERE were ever any arguments for two silos on a farm, they have been presented, and, very forcibly so, by the drying up of the pastures in Wisconsin this summer. In a state where dairying is so largely followed as in this state, good, abundant pastures are necessary to a heavy flow of milk, and when these are gone and there is no good substitute, such as silage, the cows are sure to decrease in production. Where silage has been fed this summer, it has been found that the milk flow has been kept considerably above that in herds which had no silage, and there will undoubtedly be two silos on many farms next season where there is only one silo today.

The hot weather not only seriously cut down the milk production, but it interfered greatly with the semi-official work in Wisconsin herds. Mr. Roy T. Harris, supervisor of dairy tests, advises the Wisconsin Farmer that the seven-day work stopped absolutely and, of course, there was no incentive for a dairyman to start his cows on a long test when the weather was hot, the flies bad, and the pastures short. Poor pastures have also interfered with many cows on long tests, and, where the owners of such animals were without substitutes for pasturage, the records show the effect. However, one notable record was completed during the summer by Yeksa's Tops of Gold's Fannie 22362, owned by Mr. William Jones, of Waukesha county, which places her at the head of Wisconsin Guernseys with a yearly milk production of 19,792.2 pounds of milk and 982 pounds fat at nine years, six months. This record places her third in the list of world's Guernseys, and she has five records exceeding 700 pounds of fat. This record could not have been produced without good care and proper feeding, regardless of her breeding.

Mr. Harris who is in very close touch with dairying conditions in Wisconsin believes that the pasturage has been shorter this year than for several decades. The year opened with an especially heavy flow of milk in May and June and gradually began to drop off in July as the hot weather began. In some instances the decrease in milk production ran as high as 50 per cent, and in the university herd the decrease averaged a pound of fat a week during the hot days of late July. The writer recently visited a farm in Eau Claire county where the same conditions prevailed, the flow falling from thirty-five pounds of milk daily in June to twenty-eight in July, and this dairyman is certain that the use of summer silage is all that kept his herd up as well as it held up. It is certain that conditions have been very unusual in this state this summer, and such drying up of pastures may not come again soon, but the dairyman who wishes to be on the safe side is preparing now to feed silage in summer as well as in winter.

This Week's Cover Page.

THE cover page of this issue is a scene photographed August 17th, in Marinette county, Wisconsin, for The Wisconsin Farmer. It offers a suggestion which will be of special interest to the southern Wisconsin breeders. The cattle shown in the scene comprise a carload shipment from a southern Wisconsin county to Upper Wisconsin. These cattle were shipped in by a Marinette county association of farmers. The directors of the association took the responsibility of ordering the shipment with the understanding that if the cattle could not be sold at the annual county new settlers' picnic the directors would personally take them over. It happens that the cattle were not only all sold, but another carload could easily have been sold at the same time. This is not only suggestive of the future of dairying in Upper Wisconsin, but also suggestive of the possibility of increased sale of good live stock here in our own state. We are developing a country in Upper Wisconsin which is making a heavy demand on our southern Wisconsin herds. This demand will increase as the country is developed. The far-seeing breeder in the older counties will not worry about a market for good stock with so good and rapidly developing a market close at hand.

Lime Should Be Worked Into the Soil.

TEN years of experimental work at the Missouri station in applying lime to soils has led to the conclusion that lime may be applied either in the spring or fall, but in any case it is advisable to apply it before the seed bed is prepared in order that it may be worked in by tillable implements. Although lime is sometimes applied and plowed under, the Missouri station does not recommend this plan, claiming that better results will follow the mixing of the lime with the surface soil.

The results of ten-year experiments on about twenty-five fields scattered through Missouri show an average return of $5.80 from applying about a ton of ground limestone once in a corn, oats, wheat, clover rotation. The largest return was secured on clover, second on corn and lowest of all on wheat. These tests seem to show that about $3 a ton is about the highest price that a man can usually afford to pay for ground limestone for this purpose. Of course, on a sour soil where lime is absolutely necessary and makes the difference between a clover failure and a good stand, the lime has a still higher money value.

About 1,200 pounds of lump lime or 1,500 pounds of water-slaked lime furnish the equivalent of 2,000 pounds of ground limestone for this purpose, but the ground limestone is usually so much more economical to use. It should be applied at the rate of about two tons per acre under average conditions, but, of course, this depends very largely on the sourness of the land.

Tractor Demonstration at Madison.

WISCONSIN'S first tractor demonstration of state-wide importance will be held at Madison, September 4th-8th. Great preparations have been made for this show and it should be largely attended. A statement received this week from F. M. White, manager of the demonstration, shows that a large number of the big companies have signed up for the demonstration, and there is no doubt there will be a fine representation of every size and type of tractor. This is the round-up show of the National Tractor Circuit, and the shows held on this circuit this season have been very successful. As the tractor is a coming force in farm operation in this country, no farmer can keep pace with the progress of the day unless he gives the tractor some study. Certainly no better opportunity could be had to see the tractor, and ascertain what it will do, than will be afforded at the tractor demonstration at Madison. Having visited a number of these demonstrations, the editor feels no hesitancy in saying that the farmers who attend will be well repaid for their time and effort.

Earnings on Farm Greater Than in Industrial Occupations.

AN INTERESTING study has been made by the farm demonstration service of the department of agriculture for the purpose of ascertaining the comparative income of farmers and those engaged in industrial pursuits. This study was made in the case of 4,400 farms, a number sufficiently large to obtain a somewhat accurate average.

It seems that the average farm family makes approximately as much for its labor as the average industrial family, but owing to the lower cost of living on the farm and to the interest earned by the farm investment, the average farm family occupies a much more secure economic position than does the average city family. This statement refers to averages, and it should be remembered that a great many farmers fall far below those averages, while others rise far above them.

The most successful fifth of the farmers made about four times as much as the next to the least successful fifth, while the poorest fifth made considerably less than the interest on their farm investments. While it is doubtless true that the distance separating the richest from the poorest farmer is not as great as that separating the men at the lowest and at the topmost rung of the ladder in the industrial world, nevertheless there is a wide range of variation in prosperity even among farmers.

In order to compare the wages earned by the farmer himself with those earned by the worker in other industries, the value of the unpaid labor of the farmer's family should be subtracted. This item amounts to approximately one-tenth of the net earnings of the whole farm family. The farmer's wages, based on an average for the entire country, are approximately $360 a year, including food, fuel and lodging furnished by the farm, while based on the farms included in farm management surveys they are $852 a year. If the real wages earned by the representative farmer of the United States were midway between these two extremes his earnings would be about $600. This figure is below the average obtained by the study of the 4,400 farms referred to. This average was $387 in cash, to which should be added about $400 in home supplies and rent, bringing the total up to about $800. Thus, $600 is a conservative figure for the farmer's wages and may be compared with $518 earned by the average wage workers on full time in factories. When allowance is made for unemployment the factory workers average only $460 a year, and, while this includes women and children employed in manufactures, as well as the men, wage earners even in such occupations as iron and steel works and rolling mills report average earnings, allowing for time off, of only about $610.

While the farmer's earnings are higher than those of most industrial wage earners, the salaried employes of factories, clerks, etc., who average $1,188 a year, have cash incomes above those earned by farmers. The farmer's earnings may be further compared with the $1,052 earned by the average patrolman on the police force in cities of at least 30,000 inhabitants, with the $948 earned by the average employe of the United States government, and with the $663 earned by the average clergyman.

The limitations of averages and the difficulties of comparison apply with the same force to the farmer's wages as to the earnings of the farm family, but in view of all the available evidence the conclusion seems justified that the farmer's earnings, all things considered, are greater than those of the average wage earner engaged in other occupations.

Neatness Counts Just the Same.

IT IS NOT always an easy matter to keep the surroundings of the farm home and the outbuildings in apple-pie order. During the strenuous days of seeding and harvesting there will be certain evidences of neglect and in a measure this neglect may be excused. It is not excusable, however, if it gets to be a habit to allow everything to have a run-down appearance. It will mean the loss of pride in one's manner of living and where there are growing boys and girls slovenliness in the home or outside of the home may tend to fix habits that will never be uprooted.

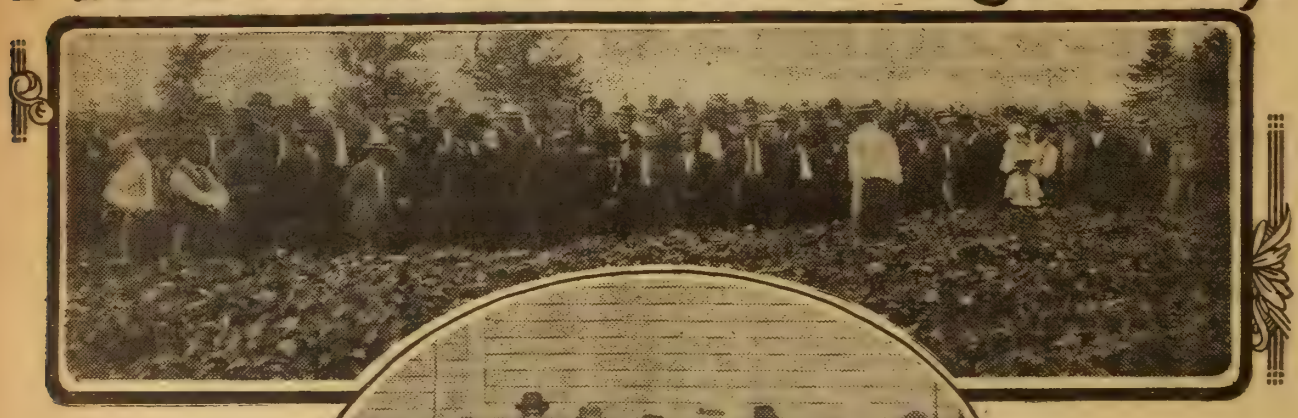
Those who fail to find the time to keep things in order around the front yard, and the back yard, too, for that matter, would do well to study the habits of those who are ahead with the work of every season. Such individuals generally find the time to make the "living" part of the farm harmonize with the fields. Instead of dragging along behind each season and, therefore, being continually in a grind, they put snap into their actions and they are usually finished ahead of schedule. These men literally have time to live and, having time to live, home surroundings are generally in condition to be a source of enjoyment to every member of the family.

The individual who loses pride in his own personal appearance is slipping back toward the blanket stage. He goes, we believe, in the same direction when he loses ambition to keep up to the same standard the appearance of his home.

This is not equivalent to advocating the expenditure of a lot of labor in carrying out the program. A neat little lawn and a few shrubs every home may have and, having them, their care at the proper time should become a pleasing necessity and not an irksome duty. The family that does not enjoy the pleasure of having an attractive front yard in which to while away leisure moments during the spring, summer and fall months misses one of the deep joys of farm life. If weeds must grow, let them be found in the fields and fence sides, but never in the front yard enclosure. We are not criticizing those who labor under difficulties because of an insufficient supply of help, but even of such we would say that more emphasis might be placed on the little everyday joys of living in the future than has been in the past. Some of the keen pleasures of farm life may be obtained practically without money and without price and may be enjoyed entirely apart from consideration of revenues or anything of the kind.

No home surrounded to the very doorstep with cockleburs and rag weed will ever put tender regard for that home into the hearts of growing boys and girls.

Marshfield Farmers' Roundup



Upper Scene—Studying field crops at the experiment farm near Marshfield. This work will be kept up each year and farmers brought in just before fields are ready for harvest. Practical talks on condition of crops are of great interest.

Center Scene—Young men and boys' classes. Lower Scene—Group of the company of farmers and their families gathered at the Marshfield station August 18th. This station is in charge of F. L. Musbach.

MR. F. L. MUSBACH, in charge of the Marshfield Experiment Station, Wood county, writes The Wisconsin Farmer enclosing an account of the Farmers' Round-up held at the farm August 18th. Although farmers were caught in a busy season, they turned out in large numbers to attend the meeting. Meetings of this kind will be held each year before harvest, a program being provided which will appeal to farmers, their wives and daughters and also the boys and young men. Mr. Musbach writes that the introduction of games has created great interest in the annual round-up. Crops are inspected in the field and lectures given to show why the crops are good or poor, as the case may be. Tillage methods are discussed, varieties of grains, drainage and other matters. Questions were brought up, answered and discussed. There were about 400 present, several coming as far as forty miles. Farm drainage was the chief topic emphasized this year.

Throughout a large section of central Wisconsin there is a soil type mapped as the Colby silt loam which is in need of drainage over a large area. The soil is retentive of moisture and in many places the land lies nearly level or only gently rolling, so that surface drainage is always necessary and in many cases tiling will be found profitable.

From the time that the first farm automobile reached the experimental farm southeast of Marshfield, Wood county, to the time that the third break in the tug-of-war rope occurred late in the afternoon the fourth annual Farmers' Round-up, August 18th, contained one successful feature after another. Over 400 farmers and their families were in attendance during the day, listening to the instructive talks of Mr. L. E. Scott on the "Most Important Crop on the Farm" and Mr. Jones on "Farm Drainage," as well as many others.

The program was a complete "balanced ration" of the educational and the entertaining sort. Every event was one of deep interest. While the morning was spent in a union meeting to discuss farm drainage and other topics, the afternoon was divided between a canning demonstration, under the direction of Miss Elizabeth Amery, of the home economics department of the university; stock judging, conducted by Mr. G. R. Ingalls and Mr. W. W. Clark; field crop inspection, under the direction of Supt. F. L. Musbach, of the experimental farm in this district, and Mr. E. J. Delwiche; a pie-eating contest for the boys; a nail-driving contest for the girls, and many games and races of various sorts.

The address by Mr. Scott on the "Greatest Crop on the Farm," directed to the value of farm children, was very interesting. Mr. Scott said:

Northern or what is popularly known as Upper Wisconsin is noted for three things, clover, cows and children. Clover is rightly named first being grown to feed the cows to produce the milk for the babies.

I have traveled a good deal and stood before a great many people and noted the bright appearance of the many farm children in this part of the state. Why shouldn't they be bright? They are brought up under the most favorable conditions, with the purest of air, best of water, and attention. Are they not then the best crop we can grow on the farm? Perhaps you have wondered sometimes when you have toiled early and late day after day what it is all for. Why are we laboring to grow corn and clover and to milk cows? It is for the one object—the perpetuity of our families. We are working solely for our children.

When we raise our crops, feeding them to our cattle and selling our milk, butter and cheese, we perhaps often ask what is the raw material? Why, all of these things are raw material to the farmers, and the finished products are the young men and young women that go from our homes to take up their life work. We have had our farm homes criticized from a great many and there is no doubt a great chance for improvement as there is for improvement of city homes. But the farm homes, I am sure, compare most favorably with any others.

A few years ago, I heard a speaker tell how many professional men and women were raised in farm homes. He found out of 100 leading doctors, seventy-eight were reared in farm homes; 100 lawyers, seventy-four were reared in farm homes; 111 engineers, sixty-eight were reared in farm homes; 112 preachers, all came from farm homes; 100 leading reformers, ninety were reared in farm homes; 100 teachers, eighty-two were reared in farm homes; 80 per cent of Chicago's leading professionals came from country homes.

C. P. Cary, Wisconsin Superintendent of Public Instruction, has stated that from statistics of the state it is in marked evidence that the country-bred boy and girl progress more rapidly in our city schools than those coming up through the grades in the city. It is the influence of the country homes and the tasks these people are required to perform that is responsible.

I believe that a child capable of loving can be ruled and governed by loving. We must make companions of them and for them make our homes pleasant with good conversation and music. While our country schools have been much criticized, personally I have a high regard for them. They are very good as far as they go, but they do not go far enough in the curriculum to help the child on the farm. Surely we ca..not keep them all at home for what would happen to the city, neither do we want to educate all our children for the city. Let us make our schools what they ought to be. After the completion of the eighth grade there is further education and they go to the city. We must try to avoid this by widening our township high school courses. When they come back from the city, if they do that, they would not manifest the interest they once had. After graduation we can feel that we have lost them. They take up their work in the city.

There is a county superintendent in the state who has made the broad statement that the city high school is not a fit place in which to educate our farmer boys and girls. What we can do to counteract this is to make our country schools better and larger. I have always viewed the township high school centrally located where the young people may be educated in the atmosphere of the country, driving to and from school and living at home to help their fathers and mothers in the farm work.

The talk by Mr. E. R. Jones on soil drainage was followed by considerable discussion, participated in by interested farmers. Many practical points of great value were brought out.

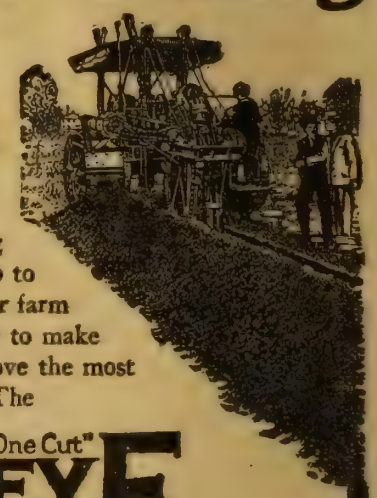
Mr. F. L. Musbach in presenting Mr. Jones said:

The Colby silt loam which embraces a large section in central Wisconsin is similar to the soil on the local experimental station farm. This soil is the result of weathered granite in some sections while in others sand rock contributed to a considerable extent, forming a sandy subsoil. The state soil survey has mapped a large area in central Wisconsin comprising over 6,500 square miles including Wood county on which is indicated all the various types found. This map together with report will be available for distribution within the next year. The drainage conditions are effected to a considerable extent by the subsoil conditions; whether of sandstone origin or granite. The surface soil without reference to the subsoil, however, in both cases is a compact silty loam that contains a large amount of fine earth particles so that water does not escape rapidly, yet not a sufficient amount of fine earth to cause the soil to check and crack when once dried out. As a result, this Colby silt loam does not permit water to pass through it rapidly. In fact, is the most difficult soil to drain of any in the state.

Mr. Jones emphasized the importance of having sufficient surface drainage. This should be the first step in improving drainage conditions. He referred to the open surface flood ditch on the experimental farm which was later inspected by the farmers. This flood ditch is about ten feet wide at the top and a foot deep at the deepest point, sloping gradually from the center to the sides. The slopes are seeded so that no surface erosion occurs. The land should be plowed in

(Concluded on page 11.)

The First Thing To See at Your State Fair



is this ditcher under actual working conditions, proving that it can cut 100 to 150 rods of perfect ditch a day. If your farm needs drainage or you think you'd like to make a little spare-time money this will prove the most profitable exhibit on the lot for you. The

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Kansas, Hutchinson,	Sept. 16 to Sept. 23
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DEATH OF JOHN M. ROBERTS

Pioneer Breeder and Farmer of Racine County, Wis., Passes Away at a Ripe Old Age After Life of Splendid Achievements.

JOHN M. ROBERTS, pioneer farmer and live stock breeder, died at his home in Racine county, Wisconsin, August 20th, after an illness of thirty-six hours. He was eighty-seven years and three months old, a man of high standing and splendid family, and his connection with farming and especially with the live stock industry had won him an enviable reputation.

Mr. Roberts was born in Towyn Meirionethshire, North Wales, May 22, 1829.

He came to America in 1850 and settled with his father in Racine county, where he has lived ever since. He married Mary Davis, of Wales, and settled down on a tract of 250 acres seven miles west of Racine, where later the little town of Franksville was built.

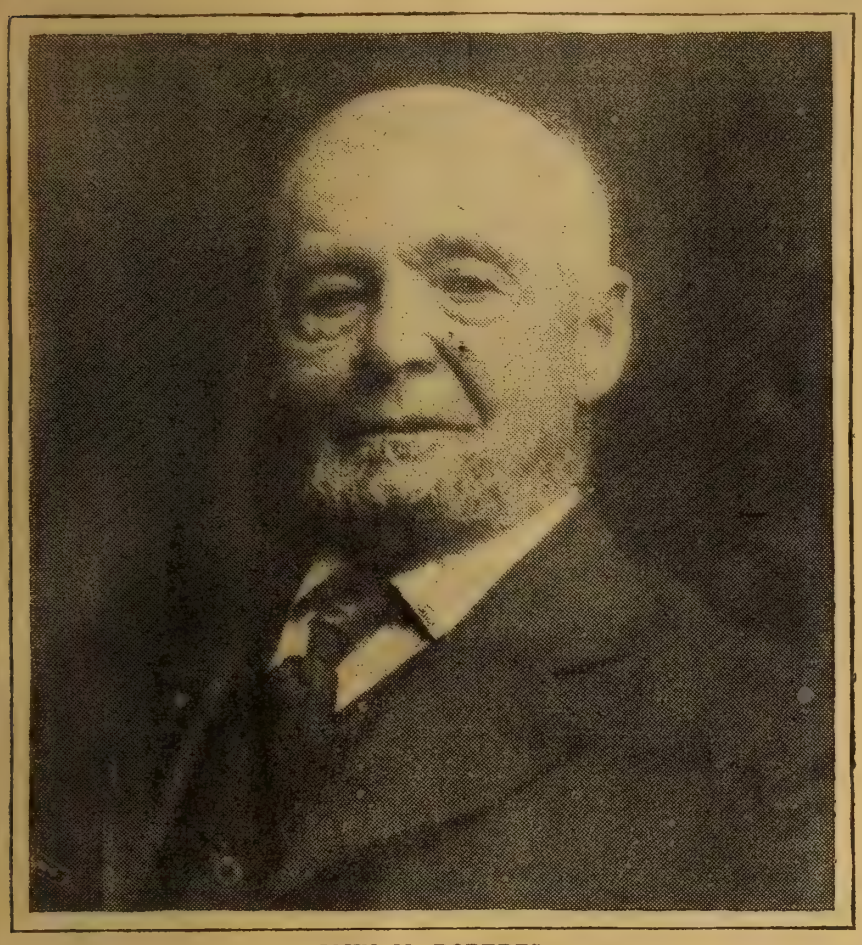
There was born to this union five sons and two daughters, those surviving being Mrs. James Baker, of Edmore, North Dakota; Mrs. Mary Ellis, of Racine, Wisconsin, and Lewis Roberts and Dr. David Roberts, of Waukesha, Wisconsin, all being present at his bedside at the time of his death excepting Mrs. Baker. The late Dr. E. D. Roberts, of Janesville, Wisconsin, formerly state veterinarian of Wisconsin, was one of the sons.

John M. Roberts was a very active live stock breeder and had engaged in many agricultural enterprises such as operating a large dairy and milk supply company in Milwaukee some thirty years ago. He at one time was engaged in the breeding of pure-bred sheep and Percheron horses as well as devoting much of his time and attention to the hop industry.

He retired from his farm some ten years ago and has made his home at Racine, Wisconsin, where he died.

The funeral services were held Wednesday, August 23d, at 2 p. m., from the Racine Welsh Church on Grand avenue, where he attended.

Mrs. John M. Roberts died last November at the age of ninety-two years.



JOHN M. ROBERTS.

Late of Racine county, Wis. A farmer and breeder in this state for fifty years.

Filling the Silo.

No rule can be laid down for filling the silo during a year of short rainfall, says C. H. Eckles, of the Missouri College of Agriculture. When the corn matures normally the time to put it in the silo is when the kernels are dented and glazed, but the kernel still soft enough so it may be broken with the thumb nail. At this time the husks will generally be turning yellow at the end of the ear. Corn may be put in after it is almost dry if enough water is added.

Where corn is injured by the drouth it should be allowed to stand as long as there is any hope at all of its getting rain to complete its growth. If it begins to die it should be put in the silo, as by this means what feed value it contains will be saved. If it cannot be put into the silo just then it may be shocked and put in later, as tests at the Missouri Agricultural Experiment Station have shown that shock corn makes good silage. Of course, it is not as good as that made at the usual time.

When filling the silo remember that silage spoils if too dry or the air is not expelled by thorough tramping. The tendency of late years has been to put corn in the silo too dry. It should be moist enough to wet the feet of the men who tramp it. If too dry add water by running it into the blower. At least two men are needed to tramp the silage at filling.

Special attention should be given to packing well around the edges. If the walls of the silo are not in good condition repairs should be made to keep out the air. If the doors do not fit well a good plan is to place a piece of tarred paper over the door on the inside allowing it to extend about two feet on each side.

Examine Wisconsin Potato Fields.

Dean Wortley, of the Bermuda Experiment Station; Dr. B. M. Barrus, of Cornell University, and other experiment station workers are now making a tour of the potato sections of Wisconsin for the special purpose of examining Wisconsin potato fields in reference to disease conditions.

The southern potato growers have had serious difficulty with certain types of potato diseases. Some of the seed stock secured in the past has come from unknown sources in the east and north.

Through the plan of seed inspection in practice in Wisconsin the Wisconsin Experiment Station was enabled to show Dr. Wortley and his party a large number of fields in excellent condition. The state potato growers' association and the Wisconsin Experiment Station is using every possible means to develop the seed industry of the state among growers who are in position to grow good seed stock. The trip of Dr. Wortley and others represents the recognition which is now given Wisconsin through the attention the state has given to pure seed work.

Federal Farm Credit Board.

A meeting of the federal farm credit board was held last Saturday in Madison to hear the claims of Wisconsin representatives for one of the twelve new farm loan banks to be established. Several prominent Wisconsin people appeared before the board and urged Wisconsin as a location for one of the banks. It was proposed by R. A. Moore that the county organizations in Wisconsin be utilized to assist in the operation of the farm credit law. There are now such organizations in fifty-one counties and the officers could aid the federal bank in securing information concerning those who request loans. Walter L. Houser, of Mondovi, former president of the Wisconsin Live Stock Breeders' Association, urged a portion of monies borrowed under the new act should be directed toward the purchase of live stock. On a $5,000 loan he said $4,000 might be applied on the land and $1,000 on good stock, and before very long the $1,000 invested in stock would pay off the larger part of the loan. It was pointed out to the board that the upper portion of Wisconsin is held back because of lack of funds for development, and that this loss is a loss to the consumer as well, because production is limited when there is plenty of good land which should be made to produce.

Complying With License Law.

To the Editor:—The license law has been the means of placing some 3,000 men under state recognition. It has given to these men a new idea of the position they hold and the responsibility that has been placed upon them as community leaders in an industry of national reputation. One must admit that there are a few men who have not fallen into line, but the number in this class is diminishing.

Only a short time ago the writer unexpectedly visited a factory where a license was granted to both the farmers' company as the operator and to the maker on the first inspection. The maker's license was framed and placed where it could be seen by everyone. His first remark was: "I would not take $1,000.00 for my license if it could not be replaced." One inspector writes: "I have just finished reinspection of ——— county and all but three have complied with the license law rules and regulations since my inspection in May." This is remarkable considering that this county has a large number of factories and makers.

In a large measure the license law has been the means of finding out where the best makers are located, and the time may come when they will be officially so rated. All men obtaining a license this year will be in one class under the law, but the record on file in this office is not the same for all. What is more to a maker's credit than to have an inspector's report attached to his application blank worded: "This is one of the best makers in my territory; I found his factory spotless. I recommend that a license be granted."

These splendid leaders of efficiency and standards of cleanliness may be found in every county of the state, and if it were possible for the men of every county to make a tour of inspection and get acquainted with their neighbors, one could not venture to predict what the result would be. All men have not had an equal chance in the past, but the changes that have been brought about this year in repairing old factories and the building of new ones is going to do away with the cause. "It is not my fault—look at the condition of my factory. Anything that I do is not appreciated."

The question is often asked, Is it worth while to do a little extra when time permits? The answer must be yes. No matter whether the factory is operated by the farmers or by an individual, the maker's efforts are, as a rule, productive of much good.

At a certain creamery meeting the stockholders of the factory voted an increased salary for the maker for the balance of the year covered by the contract, because the buttermaker was given credit for the new appearance of the interior of the building. A short time ago a certain factory with a past record that was not good as to cleanliness was inspected. A new man was found in charge and I venture to say that if the former maker should return to the place for a visit, he would not know the factory. The same farmers were supplying the milk. The officers had not been materially changed. What made the difference? Co-operation between the maker and the farmers. This factory was not a modern structure; it had been built years ago, but the use of paint and a close observance of the license rules and regulations made it a most creditable place.

Begin early to plan for that state fair exhibit. This is your opportunity to show what can be done in getting up a large exhibit of butter and cheese. Men have already written this office for suggestions and for assistance in bringing about best results. Bear in mind that all exhibits should be in the Dairy Building, State Fair Park, West Allis, Wis., Saturday, September 2, 1916.

C. E. LEE,
Asst. Commissioner and Dairy Specialist.

NEWS OF THE SALE RING

Anoka Farms' Sheep Sale.

The Anoka Farms' sale of imported sheep at Waukesha, Wis., on August 19th was a success. The attendance was from a wide territory as will be noted from the list of purchasers. Mail bids were also on hand from three or four states that were not represented personally. One hundred and thirty sheep were sold at an average of $95, total, $12,509. Twenty-nine Cotswolds averaged $92, total $2,680; forty-six Shropshires averaged $94, total $4,261; forty-eight Hampshires averaged $92, total $4,416; nine Lincoln rams averaged $128, total $1,152. About two-thirds of the offering were rams and ram lambs and the balance ewes and ewe lambs. Anoka Farms were congratulated on all sides for the uniform high quality of the importation which was bought by many of the leaders in the business in this country. A. W. Arnold paid top price for Cotswolds at $150 for ram and $100 each for three ewes. J. C. Andrew paid $190 for a Shropshire ram and $225 each for two ewes; W. S. Corsa also paid $190 for ram. Walnut Hall and Frank Brown each paid $250 for Hampshire rams. Harry Allen paid $160 for a Lincoln ram.

Cotswold purchasers were:
A. W. Arnold, Galesville, Wis.
Walnut Hall, Donerail, Ky.
O. W. Taylor & Son, Ames, Iowa.
J. R. Allen & Bros., Draper, Utah.
F. L. Hall, Crawford, Neb.
Harrison White, Marion, Ill.
Geo. Allen & Sons, Lexington, Neb.
C. R. Doty, Charleston, Ill.
Shropshire purchasers were:
H. D. Eddingfield, Mt. Pleasant, Iowa.
E. B. Walker, Memphis, Mo.
W. S. Corsa, White Hall, Ill.
W. R. Leland, Ann Arbor, Mich.
Hereford Farms, Versailles, Ky.
J. T. Kramer, Tulsa, Okla.
D. Bock, David City, Neb.
Frank Brown, Carlton, Ore.
C. D. Nichols Live Stock Co., Cresco, Iowa.
John Clay, Warrens, Wis.
J. C. Andrew, West Point, Ind.
Hawthorne Farms, Leithton, Ill.
Henry Klinger, Lebanon, Ind.
Arthur Broughton, Albany, Wis.
Zelora Green, Oakland, Ill.
W. S. Ellis, Bryn Mawr, Pa.
Geo. Allen & Sons, Lexington, Neb.
E. D. Cook, Plainview, Wis.
Hampshire purchasers were:
Walnut Hall, Donerail, Ky.
F. M. Rothrock, Spokane, Wash.
G. L. Mitchell, Lucas, Ohio.
Wisconsin Agricultural College, Madison, Wis.
Alex W. Arnold, Galesville, Wis.
Frank Brown, Carlton, Ore.
Iowa State College, Ames, Iowa.
Frank Sherwood, Shelbyville, Mo.
J. R. Allen & Bros., Draper, Utah.
Lincoln purchasers were:
John Gibson, Denfield, Ontario
E. Robson, London, Ontario.
Geo. Allen & Bros., Lexington, Neb.
A. W. Arnold, Galesville, Wis.

From the other end of the globe comes striking instance of the Jersey's ability to produce heavily and profitably wherever grass and grain will grow. Lady of Collingwood, a registered Jersey owned by T. E. Hellyer, of Northeast Harbor, Dunedin, New Zealand, has just finished a three years' cumulative test of 29,909.35 pounds of milk and 1,863.4 pounds of fat begun at one year, eleven months.

In and Around Wisconsin

The Sauk County Agricultural Society has begun the erection of a wire sheep barn on the Sauk County Fair grounds at Baraboo, to be completed in time for the fair in September. It will be 24x96 feet with an eight-foot alleyway and will be a very substantial addition to the fair ground buildings.

Farmers of Outagamie county are being urged to assist in making the county exhibit at the state fair one that will be representative of the county. This will be the first time Outagamie county has exhibited and William F. Wolf, county clerk, and P. W. Silverwood, chairman of the exhibit committee, have begun work in getting together the necessary products.

Wisconsin tobacco growers who stuck with tobacco despite the losses of the last two seasons are fortunate this year and there is promise that they will recover some of the previous year's losses. The buying movement in the southern part of the state is in full force now and many fields are being contracted for at 16 cents. Thousands of acres sold last year at 5 and 6 cents, but this year the packers are anxious for the stock and prices have been known to jump 2 cents a pound overnight. It is estimated half of the acreage in the southern counties has already been contracted for, while most of the buying has been completed in the northern sections, some going at 18 cents. Scarcely any of the crop has been harvested, so that the buying by the packers has been largely on prospects.

The annual meeting of the state drainage association will be held at Racine September 4th-5th. On the morning of September 5th delegates will be taken on an automobile ride to Racine and Kenosha counties. The program includes addresses by Senator Everett, of Racine; James L. English, of Waterford; E. J. Meyers, of Racine, and P. J. Hurtgen, of Burlington. The program says, "If it rains, so much the better. We shall see the drains in operation."

Following the drainage association's meeting the delegates will go to Madison to attend the tractor show September 6th, 7th and 8th. At this demonstration plows and ditching machines will be seen in operation on marsh land.

Mr. A. M. TenEyck, agricultural agent of Winnebago county, Illinois, writes that he has been called to visit several farms where pigs were not thriving. He reports that in each instance the trouble was worms, but in a few cases this was aggravated by indigestion, caused by feeding too much oats, either whole or ground. He says oats should be mixed and ground with other ground feed and fed in slop and then it is advisable to sift the hulls out or skim them off the barrel after mixing the slop.

Mr. TenEyck recommends the following remedies for worms in hogs:

1. Turpentine—One teaspoonful to each 100 pounds' weight of pig. Feed with milk or in slop after keeping the pigs without feed for some twelve to eighteen hours.

2. Lewis Lye—About one-half teaspoonful to 100 pounds of weight of pig.

3. Oil of American Wormseed—A drop to the pound, or a tablespoonful to large hogs. When pigs are badly affected each pig should be dosed separately or the medicine may be given in slop or with milk. With each of the above remedies it is advisable to give a purgative with the medicine or at the next feed. Two ounces of Glauber salts to 100 pounds' weight is a dose. Pigs on pasture need less physic. It is advisable to repeat the treatment in ten days.

4. Copperas is usually given in combination with other ingredients which mixture should be kept before the hogs in a box or self-feeder. The regular government formula is given as follows:

Charcoal	1 Bu.
Wood ashes	1 Bu.
Salt	8 Lbs.
Slaked lime	4 Lbs.
Sulphur	4 Lbs.
Pulverized copperas	2 Lbs.

Mix the salt and sulphur thoroughly and then mix with the charcoal and ashes. Dissolve the copperas in a quart of hot water and sprinkle over the whole mass mixing it thoroughly. Hogs will eat this material freely, and the mixture acts as a tonic, appetizer, and bone builder as well as a vermifuge. In place of charcoal, slack or soft coal may be used and if wood ashes are not available, use sifted coal ashes or else put in more lime. It is doubtful whether pigs which are badly infested with worms will be very quickly relieved by this remedy. It is a preventive rather than a cure.

The Waupaca and Portage County Holstein Breeders' Association will have a choice selection of pure-bred cattle on display at the Waupaca County Fair, September 5th, 6th, 7th and 8th, in the new barns erected by the fair association for pure-bred stock. This will be a fine opportunity to see some excellent animals.

The twenty-ninth annual summer meeting of the Wisconsin State Cranberry Growers' Association was held

J. A. ROBERTS, WAUKESHA COUNTY.

Mr. Roberts has exhibited stock at the Wisconsin fairs for many years and has a wide acquaintance among the exhibitors of various states. This year he has been invited to judge stock at the following county fairs: Waupaca, Sauk, Tomah, Sparta, Boscobel, Lincoln, Juneau and Jefferson.

at Cranmoor on the M. O. Potter bog, Tuesday, August 8th. The fine bog at the Potter place as well as the experiment station and other bogs near by were inspected by the visitors. The station was found to be in fine shape with prospect of a good crop. Mr. M. O. Potter has several sections where he has been seeding and which looked like a Cape Cod bog. After the dinner, which was a basket picnic, the meeting was called to order by President Searls, who explained new companies do not hesitate to spend as high as $900 to $1,000 per acre to make a good bog and he said he is sure it will pay them. Assistant Dean Morrison, of the agricultural college, was present to get the ideas from the grower as to the future of the station. It seemed to be the general opinion that the station should be enlarged so as to make it self-supporting and that it should remain at the present location if possible. In case it became necessary to move it several sites were offered at Cranmoor and Mather. Mr. Frederic Cranefield, secretary of the Wisconsin State Horticultural Society, spoke on the great possibility of the state fair as an advertising medium and it was decided to make quite an extensive display, consisting of fruit growing on the vines, samples of different varieties and a practical cooking demonstration with the free service of the cooked fruit. A committee consisting of Mr. C. M. Seeker, C. R. Treat, O. G. Malde, George Orpin and J. W. Fitch was named to have charge of the state fair exhibit. The sales company voted $250 to help pay expenses. The growers all reported better crops than last year.

DEMONSTRATING THE USE OF A 12-25 TRACTOR IN CHEAPENING COST OF LAND CLEARING AND BREAKING A FIELD OF BRUSH.

MODEL BARN AND SILO ON J. A. CRAIG FARM NEAR JANESVILLE, ROCK COUNTY, WISCONSIN.

The statement from G. B. Mortimer, of the Madison station, calls attention to mistakes which Wisconsin farmers have made in handling Sudan grass. Mortimer says that notwithstanding the fact Sudan grass should be planted in Wisconsin from May 15th to June 1st. A number of plantings were made much earlier and in most cases with poor results. Even the plantings which were made this year at the proper time are not the best for the reason that the season has been unfavorable.

MY 1917 MODELS NOW READY!

NO OTHER SPREADER COMPARES WITH IT

COSTS ONLY $87.50

JUST READ THESE 1917 IMPROVEMENTS!

They mean that every Galloway Spreader is **built stronger and better than before.** The beater bolts are 1-16 in. larger with lock nuts. Beater bar bolts increased in size and strength. Beater teeth longer and stronger than ever which means they now tear the toughest manure finer than ever and spread it easier. Heavier bolts hold the beater bars in the beater head. Rear shaft increased in strength—higher carbon steel used. Additional bolts strengthen (beyond actual necessity) the beater bracket. Larger drive sprockets, which mean **lighter draft than ever.** The fifth wheel castings are larger and increased in strength—spreader box **steadier in turning.** Rear conveyor shaft now made of No. 40 carbon steel. All steel tongue. All metal parts thoroughly coated with asphaltum weather-proof paint. Spreader box better finished and painted. Galloway WIDE SPREADING V-RAKE on every machine WORTH $15 on any spreader, COSTS YOU NOTHING EXTRA. INVINCIBLE, IRRESISTIBLE, PATENTED ROLLER FEED—an EXCLUSIVE GALLOWAY FEATURE, makes it SUPERIOR to all other feeds on all other machines—the SECRET OF OUR LIGHT DRAFT. The mechanical principle is the same as MOVING A HOUSE ON ROLLERS. THIS FEATURE ALONE WORTH $25 on any spreader, EXCLUSIVE AGAIN on the Galloway, costs you NOTHING EXTRA. PATENTED AUTOMATIC STOP, uniform clean out push board, WORTH $10 EXTRA on any spreader, EXCLUSIVE on the Galloway, costs you NOTHING EXTRA. These are a few of the features you will find on the Galloway, which are PROTECTED BY GALLOWAY PATENTS. Don't buy a spreader of any make or kind until you have tried a genuine GALLOWAY 1917 MODEL No. 5, No. 1A or No. 8 at our risk, without obligating yourself in any way. Thirty days' field trial and returnable to us within one year if not perfectly satisfactory. Remember, we manufacture this spreader in our own factories and sell it direct from factory to farm. Do not confuse the Galloway spreader with lower priced machines made to sell for a price, which are all cheap, worthless imitations. Over 60,000 Galloway Spreaders in use. These and other features make the Galloway Spreader more invincible than ever in actual field work. No big, cumbersome, four-horse team or three-horse team needed to handle a Galloway. Two average horses can spread with the Galloway anywhere.

Complete particulars and details of this 1917 model spreader now ready.

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Bloomington Tractor Show a Big Success.

Large Attendance and Great Interest Manifest—Exhibitors Report Good Sales, as the Crowds Were There For Business.

THAT the tractor is in favor with the Illinois farmer was amply evidenced at the National Tractor Demonstration at Bloomington last week. At no demonstration this year has the attendance been any larger or the interest more keen. Crowds ranging from 15,000 to 30,000 were present each day and every exhibition of plowing was closely followed by large and critical crowds. Every condition worked to the success of the affair. The weather was ideal, barring the heavy clouds of dust that arose, the ground was in excellent condition for plowing and the work was done with expedition and thoroughness that brought surprise to the thousands present who were not familiar with the tractor and its ability to work for the farmer.

It is an inspiring sight to see sixty tractors, large and small, making their way across a field, each one dragging from two to twenty plows and turning over the earth in glistening lines. Putting sixty acres of soil under the plow in a little less than two hours is certainly doing the work in a hurry, but that was the case at Bloomington, and when the job was completed each day it was conceded by the onlookers that it was satisfactorily performed in every particular.

In addition to the plowing demonstrations there were numerous private exhibitions showing the adaptability of the tractor for the hauling of binders, manure spreaders and other farm machinery, the doing of the belt work on the farm, hauling heavily loaded wagons filled with farm products to market, disking and harrowing the freshly plowed ground. In each case the work was thoroughly performed, to the full satisfaction of the onlooking thousands. There was also a demonstration of hedge grubbing by a specially constructed plow for this class of work, and the dynamiting of a low place on one farm in order to alter the course of a small running stream. It was surprising the ease with which these jobs were both completed and furnished another striking evidence as to the advance in farming methods.

In addition to the sixty tractor manufacturers that were exhibiting at Bloomington there were some two score accessory men on the ground with their exhibits, including rotary harrows, harvesting machines, oils, magnetos, motors, etc., as well as a number of labor-saving devices for the farm and the farm home that have no relation to the tractor question.

The crowd was a buying one. Not a manufacturer on the ground but reported a satisfactory number of sales, to say nothing of numerous prospects. The rapid advance that has been made in the past two or three years in the manufacture of medium-sized and medium-priced tractors has given a great impetus to the business and it was machines of this class that were universally in demand at Bloomington. The kerosene burning machines attracted a great deal of attention, owing to the high price of gasoline, and this fact was given great consideration by many of the buyers. In fact, there were as many, if not more, kerosene burning machines sold at Bloomington as the other kind.

Illinois did not furnish the total attendance at the show by any means. Indiana was well represented, and in addition there was present representatives of Uncle Sam who were giving careful consideration to the different machines. A delegation of Louisiana newspaper men and farmers, who are making a tour of the corn belt, spent a few hours at the demonstration, and there was also on hand representatives of business and farming interests in Mexico and the Argentine Republic. These latter men were very much impressed with the demonstration, and were very free in their expressions that their respective countries were bound to become in the very near future great fields for the operation of the tractor.

No one seemed to think that the advent of the tractor sounds the death knell of the horse on the American farm. As one farmer put it, "The tractor will supplement the work of the horse by taking off his shoulders the heavy work that the horse is really not fitted to do without rapidly wearing him out. But the tractor will not supplant him. We are going to do more intensive farming in this country than we have ever done before, and will need twice as much power as we have ever had. The additional power will be furnished by the tractor and the horse will find plenty to do on the farm in the easier tasks."

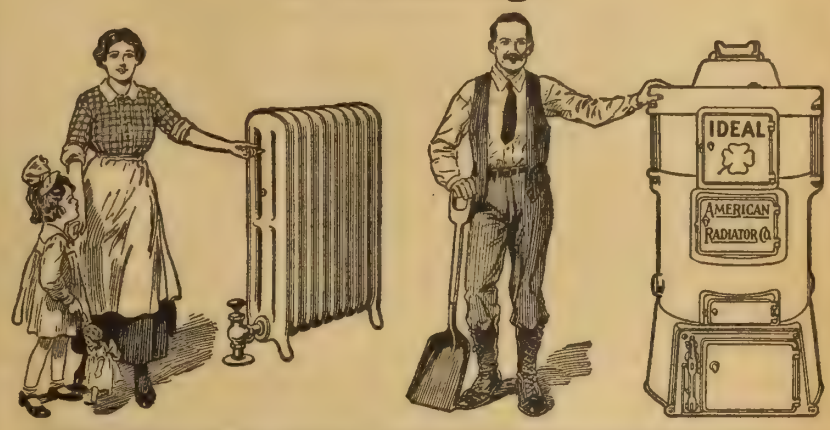
It was the consensus of opinion among the majority of the exhibitors that the tractor demonstrations have pretty well served their purpose, and that it is very doubtful whether another year will see anything of a general nature along the lines carried out this year. That there will be demonstrations next year is a foregone conclusion, but that there will be a national circuit such as this year seems very doubtful. The tractor is now an established fact on the American farm. A campaign of education on the part of the farm papers, backed up by the demonstrations that have been given for the past few years have furnished to the American farmer ample proof of what the machine will do. The expense connected with these demonstrations is very heavy, this series of shows costing some of the larger manufacturers over $20,000 and the smaller firms in like proportion. The tractors are now at work on farms in nearly every section of the country and the farmer who wants an actual demonstration can see one by going to some neighbor's farm.

There was a large attendance of county agents from all over Illinois at the Bloomington demonstration, and they were all enthusiastic tractor advocates. One of the most active men on the grounds was David Thompson, county agent for McLean county, affectionately called "Big Dave" by his many friends and admirers. Thompson characterizes the tractor as the "new plow horse for the farmer." "It is," he says, "many times more powerful than the horse and takes up scarcely any more room. You feed the new plow horse with a gasoline can and groom it with a handful of waste, a monkey wrench and a hammer. If you take good care of it you can have it work for you twenty-four hours a day if needed."

The Bloomington show was a decided success in every way, and no small part of this fact was due to the hearty support given it by the Bloomington Commercial Club, the most up-to-date bunch of live wires in central Illinois. No detail was overlooked by this organization and Secretary Hudson was on the job every minute. The city was filled to overflowing. Hotels were crowded to the limit, but there was plenty of accommodations for visitors in private homes and all were taken care of in a satisfactory way.

The Bloomington show was not a one-day affair. From the opening on Monday morning until the close Friday night the grounds were filled with farmers and their families, all intent upon watching the work of the iron plow horse. All the demonstrations were carefully watched by thousands of interested men and many women, who followed the machines from one end of the field to the other, all evidently determined that no single thing should escape their notice. The even depth of plowing, the straightness of the furrows, the ease and rapidity with which the task was accomplished, all were matters of deep interest to the onlookers, and it was apparent on all hands that the tractor has become a permanent fixture and a big factor in farming operations in the corn belt. The attendance at this year's demonstration was easily as large again as that at the Bloomington demonstration last year, and the manufacturers all stated there was a greatly increased interest and much more liberal buying.

Prepare! For old man winter is coming!



IDEAL Boilers are easier to run than a stove and the heat can be regulated to suit the weather—mild for chilly days or warmer to defeat the blizzard

Make up your mind to have this greatest of farm comforts and equipment right away. Don't put it off another day before finding out all about it and making arrangements for putting it in your house. Not necessary to have running water or a basement. The IDEAL Boiler can be placed in a side room or in a "lean-to;" even a well boarded up summer kitchen will answer the purpose.

AMERICAN RADIATORS & IDEAL BOILERS

But above all things, *have IDEAL - AMERICAN heat this winter.* A properly heated home is more important than automobiles or farm machinery.

Keep dampness and chill—(those half brothers of sickness) out of your house entirely. Give your family and yourself genuine comfort, pleasant health-giving warmth. IDEAL heating is the most successful and most profitable investment you can make—[illegible]ing big returns in comfortable living, health and happiness for the whole family.

Hot water supply for home and stock

Our little Hot Water Supply Boilers are fine for the home that has running water—domestic hot water always on tap for the use of the family or can be piped out to the water trough for tepid drinking water for the stock in winter.
Fuel: IDEAL Boilers will burn most anything—hard or soft coal, lignite, screenings, wood, and they produce the full heat to distribute to the AMERICAN Radiators placed to warm all parts of the house.

A No. 4-19-W IDEAL Boiler and 270 ft. of 38-in. AMERICAN Radiators, costing the owner $200, were used to heat this farm house. At this price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions.

Ideal heating best for farm house

Turn old Winter out and keep him out! Money spent in IDEAL-AMERICAN heating comes back in good living, health, happiness, savings in fuel and the big increased value that your property gets by this, the most important equipment of the farm home. Bankers and real estate men will almost invariably lend money for installing IDEAL-AMERICAN heating for they know that the security is sound and never less in value.

Write today for "Ideal Heating" and get this big book of information free. Investigate now before the winter rush and while prices are so attractive!

Sold by all dealers. No exclusive agents.

AMERICAN RADIATOR COMPANY

Write to Dept. F-39 Chicago

Prominent Seedman Killed

Mr. Henry A. Salzer, of La Crosse, Wisconsin, well-known in the grain-belt states through his connection with the John A. Salzer Seed Company, was instantly killed on Tuesday, August 22d, when an automobile in which he was riding plunged over a seventy-five-foot embankment in La Crosse county, near the village of Dresbach. Mr. Salzer was caught under the machine which turned over three times before it struck the bottom. News of his death will be received with deep regret by his many farmer friends in this state. Mrs. Salzer, Prof. and Mrs. Edward Kremers, of Madison, and Emil Bixson, the chauffeur, who were also in the machine, escaped injury. Prof. Kremers is Mrs. Salzer's brother. The driver, in turning out for a buggy, apparently lost control of the car.

Mr. Salzer was the second son of John A. Salzer, the founder of the big seed business at La Crosse which bears his name. He was born January 23, 1855, at Dutch Creek, Iowa, and went to La Crosse county with his father when sixteen years of age. At that time his father was a German Methodist preacher who, on retiring from the ministry in 1869, went into the floral and seed business, taking his sons into the business with him. After the death of John A. Salzer in 1892, Henry A. Salzer became president of the seed company and continued as its head until his death. Mr. Salzer also had other large business interests, including lumber, land and bank holdings. He was prominent in church work, being a trustee of the Methodist College at Charles City, Iowa. The widow and two children, Kenneth, twenty-two years old, and Gertrude, eleven years old, survive. Burial was from the La Crosse residence on Thursday, August 24th.

Invitation to Waukesha Motor Company Exhibit.

In our issue of August 24th appeared a page announcement of the Waukesha Motor Company, of Waukesha, Wisconsin. An invitation was extended to Wisconsin farmers to visit the tractor demonstration and especially the Waukesha Motor Company booth at Madison, September 4th to 8th. Unfortunately in a part of the edition the invitation read "St. Louis," instead of Madison. We make this correction and trust those readers who attend the Madison demonstration will visit the Waukesha Motor Company exhibit, which will be in a prominent place on the demonstration grounds. A great many tractors are equipped with Waukesha motors. Those who have had tractor experience understand the value of a powerful, smooth-running motor.

Remember the dates for the Wisconsin State Fair, September 11th-16th.

Ready For the 1916 State Fair.

Visitors at the West Allis Fair Ground, Milwaukee, This Year Will See Many Important Changes and a Splendid Exposition.

WISCONSIN's sixty-sixth state fair will open on Monday, September 11th, at Milwaukee, continuing through the week, and present indications are that it will be the greatest fair in the history of the state. Details for the fair have all been worked out; the improvements on the grounds are all under way and will be completed in good time; the entries in all departments have been very heavy and apparently all that is now needed to assure a successful exposition is good weather.

The visitor to the fair this year will see many things changed, many improvements for the better, and among these are the new sheep and swine pavilions and the addition to the grand stand. The new sheep and swine barns are drawing a large number of breeders who never exhibited at Wisconsin before and the capacity of 2,600 head in the new barns is expected to be taxed. The streets are being widened; a new fence has been erected on the east side, taking in the ten additional acres donated to the fair by Milwaukee county; paint is being used freely to freshen up the older buildings and with these improvements and good exhibits the fair is expected to establish new records for itself.

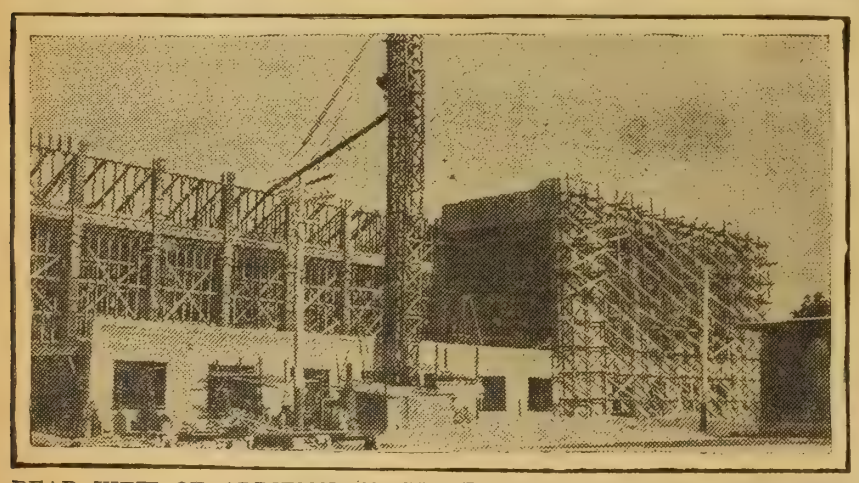
ENTRANCE TO THE SHEEP PAVILION WITH ACCOMMODATIONS FOR 1,300 HEAD.

The swine and sheep pavilion is modeled after those on other fair grounds, the good points of all being embodied in the plans. It will be a great pleasure for these breeders to show their stuff in these new barns this year after putting up with the old, crowded quarters for so many years. The barn is almost 1,000 feet long; of the open type with great judging pavilions in the center and cost in the neighborhood of $50,000. The swine are in the north half and the sheep in the south half and the barn located in the northwest corner of the grounds with the other stock buildings. Visitors will also have better facilities for looking over the prize winners and these facts, which are appreciated by the swine and sheep breeders, have brought forth a large entry.

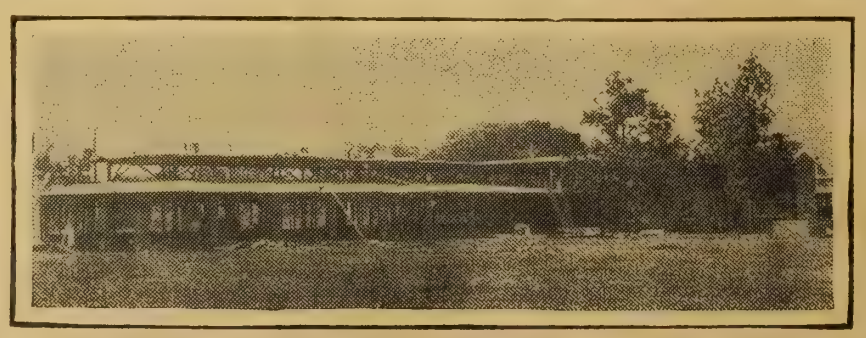
The addition to the grand stand gives the fair a seating capacity in the stands of 5,000, which will be increased to 12,000 by the erection of temporary bleachers. This improvement cost in the neighborhood of $50,000 and in addition to increasing the seating capacity has also added 40,000 square feet of exhibit space. This year the women's work, the Indian exhibit and the bees and honey exhibit will be found on the first floor under the grand stand, while the University of Wisconsin and the boys' and girls' club work exhibits will occupy the second floor. The third floor lecture room will be used also for the boys' and girls' club work and the spelling contest. These improvements are in line with the general policy of the fair board to gradually improve the grounds and are made possible by the appropriations of the last legislature. Next year a new poultry building, to cost $25,000, will be erected and will greatly stimulate this important department of the fair which is now hindered by insufficient quarters.

The fair this year will be more agricultural, in a sense, than ever before and the total amount in premiums and purses to be awarded will total about $65,000.

Most important, though, will be the live stock show, which undoubtedly will surpass anything of its kind ever held in Wisconsin. The competition is open to the world, while last year, owing to the prevalence of foot-and-mouth disease at that time, it was closed to all except Wisconsin breeders. To date this year there are herds entered from many other states, one herd coming from the state of Washington, and the fight for the prize money promises to be very strong. More money has been added for classes in all live stock and some minor changes have been made in classifications which are now known to the exhibitors, the entries having closed. There is an increase in Jersey and Guernsey money; a Wisconsin class has been added for Herefords; a Duroc Jersey futurity has been added, for which The Wisconsin Farmer is donating a cup on the same conditions as the Poland China futurity; and in the horse division there are new premiums for mare with foal at side. These additions have been made with the idea of strengthening the live stock part of the fair and indications at this time are that the quarters will be taxed to care for the stock to be shown. The dairy cattle entry list is especially large, Wisconsin being represented by some of its finest herds in competition with those of other states.



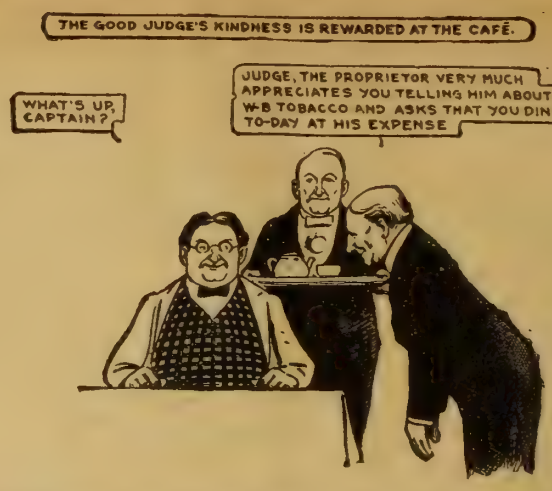
REAR VIEW OF ADDITION TO GRAND STAND, SHOWING INCREASED SPACE FOR EXHIBITS. WILL BE COMPLETED THIS WEEK.



THE SWINE PAVILION, ALMOST COMPLETED. IT WILL ACCOMMODATE 1,300 HEAD.

The cow-testing demonstration will be of intense interest to dairymen who are interested in this work and who are anxious to weed the boarders from their herds. There are fifty-one local associations in the state at the present time and this demonstration will show the profitable and the unprofitable cows, they having been brought from herds in local testing associations. Prizes have also been offered to the associations which show the greatest mileage of attendance, that is, according to the distance traveled by the residents served by any local association. This is a part of the live stock show and will work in with the display of baby beef, pigs, etc., in the boys' and girls' club work and the baby beef feeding contest of the Wisconsin Live Stock Breeders' Association.

New records are also expected to be established in the dairy exhibits, the entries of cheese and butter being very heavy. The cheese exhibit last year was pronounced by Fred Marty, superintendent, to be the finest and largest ever brought together in this country and it is expected to make a better showing this year. More stress has also been placed on the butter ex-



ONE good turn deserves another—one good chew of W-B CUT Chewing gives a man the tobacco satisfaction he's been seeking for years.

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Wanted 30,000 Men

For Harvest Work on Immense Crops of

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Wages $3.00 Per Day and Board

Cheap Railway Rates From Boundary Points

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PREPARE for NEXT YEAR'S CORN CROP

The thirty thousand farmers who used our mouse-proof Dryers and selected their seed corn carefully last fall had 100% good seed corn last spring.

Circular Dryer 3½ feet in diameter but has 300 feet drying space. Corn put on with double galvanized hooks. Each ear has complete circulation of air around it; thus curing every kernel. No moulding, heating or souring. Corn cured on the Dryer will increase the average farmer's corn crop from 10 to 25%.

The price of Dryers has not advanced, although built of steel. Dryers made in two styles and four sizes, ranging from 600 to 1500 ears.

Write now for particulars, prices, etc.

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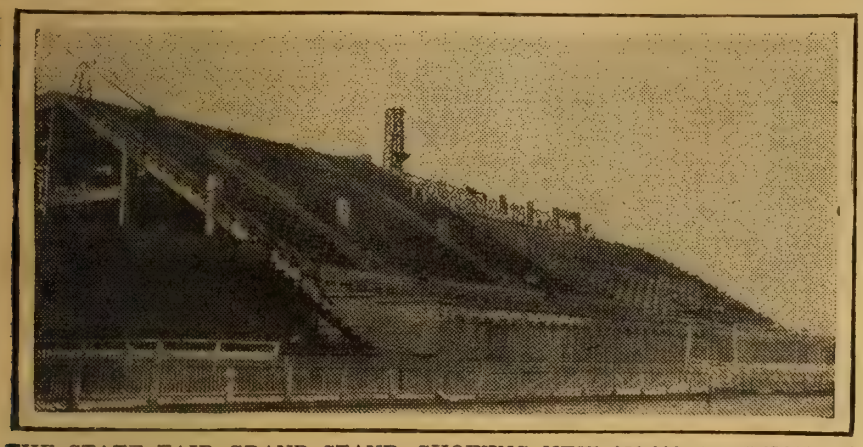
hibits and it is hoped to make this the best ever held.

The machinery show, which is always of interest to farmers, promises to break all records. The demand for space by the implement and machinery manufacturers has been very heavy and almost every kind of a machine from a farm tractor to a road building machine will be shown. In addition to tractors there will be farm implements, traction tile ditchers, farm engines, barn equipment, pulverizing machines, gates and fencing, ensilage cutters, silo fillers, silos and building materials, potato machinery, vehicles, road machinery, corn binders, separators and numerous other farm conveniences. The automobile show also promises to be of great interest, as it will be the first display of the 1917 cars and all of the 47,000 feet of floor space has been reserved for the show which will be under the direction of the Milwaukee Automobile Dealers' Association. Pleasure cars will be shown with commercial motor vehicles and accessories.

The county building will be taxed to take care of the county exhibits. There promises to be a very keen fight for honors this year and the older sections of the state will be well represented, in contrast to previous years when the newer counties were in the majority. To date Ashland, Clark, Dane, Forest, Iowa, Kenosha, Langlade, Marathon, Milwaukee, Oneida, Ozaukee, Polk, St. Croix, Sauk, Sawyer, Taylor, Washburn, Waupaca, Wood, Walworth, La Crosse, Chippewa, Dodge, Columbia, Outagamie and Lincoln counties have entered and several other counties are expected to follow suit. The agricultural products will also be shown in the county building. In potatoes some changes have been made in classifications, eliminating non-standard varieties, which will improve the potato showing. The state association will have its large, comprehensive exhibit as usual.

The boys' and girls' club work department has grown to be very important and is under the direction of Mr. T. L. Bewick. He expects about 1,200 boys and girls to show and the regular and special premiums offered total $7,722. All exhibits must be the results of the labor of the person exhibiting so that they will show definitely the work being carried out among the farm boys and girls of the state. For the convenience of these contestants a camp under the direction of the Y. M. C. A. will be conducted on the grounds. The school exhibits, women's work, etc., promises to be up to their former standard.

These are only a few of the features of direct interest to the farmers. They concern the educative value of the fair, while plenty of amusement will be provided. Ruth Law will thrill the crowds with her diving airship, there will be an abundance of free circus acts scattered about the ground and a wild west show will take the place of the old "pike." The racing program is said to be very fine and on two afternoons there will be automobile racing. Milwaukee has raised $20,000 for holding a night festival down town so that visitors may enjoy this entertainment after spending the day at the fair. There will also be two night shows at the fair this year and a Sunday afternoon program with Ruth Law as the headliner. Every effort, The Wisconsin Farmer believes, has been made to insure Wisconsin of a great fair September 11th-19th and the patronage of the people is all that is needed to make it a success.



THE STATE FAIR GRAND STAND, SHOWING NEW $50,000 ADDITION ON THE RIGHT WHICH WILL BE COMPLETED THIS WEEK.

AUTOMOBILE HALL WHERE THE 1917 MODELS WILL BE ON DISPLAY.

Marshfield Farmers' Roundup.

(Continued from page 6.)

the direction of the fall, and in narrow lands the dead furrows are to be connected up with a good outlet leading to an open flood ditch as previously described.

Tile have been laid at Stanley and also on the local experimental station four or five years ago. The results in both cases show that the tile worked effectively, but not to the same extent as they do in other soils of the state. Usually tile are laid about four rods apart and even on the heavy red clays of the state this is sufficient. On the Colby silt loam, however, it will be necessary to place them much closer together, since water does not escape rapidly enough to prevent damage during the early part of the growing season.

Four inches was considered the smallest sized tile that could be used effectively. The cost of these at the Vesper Company's plant is $18 a thousand wholesale. The cost of laying four-inch tile was estimated at about 80 cents a rod. This includes digging the trench and laying the tile and "blinding" them.

The discussion was led by Mr. John Gault, who spoke of his experiences on his farm north of Vesper. Mr. Gault has laid in the neighborhood of ten or twelve miles of tile. In his section of the county the subsoil is of a sandy nature and Mr. Gault is of the opinion that the tile need not be laid so closely together. Practically all of his laterals are laid twelve rods apart. Mr. Gault spoke of connecting up his tile with the sandy subsoil by means of setting on edge a five-inch tile, thus permitting the water to enter the tile from the underlying sand. This is being tried out on a large scale and the experiment will be watched closely by farmers in this section of the state. If successful it will reduce the cost of tiling very largely.

Mr. Vaughn, an attorney from Grand Rapids, followed Mr. Gault, speaking briefly on the township drainage law.

The program in the afternoon was divided into three sections. Miss Amery conducted a demonstration in canning for the women folks, while the boys were given instruction in judging stock and the naming of seeds under the directions of Mr. Ingalls, county representative of Eau Claire county, and Mr. W. W. Clark, director of the agricultural school at Grand Rapids. The farmers were conducted over the farm under the direction of Mr. F. L. Musbach and Mr. E. J. Delwiche.

Miss Amery emphasized the importance of planting in the spring sufficient amount of vegetables and fruits so that a sufficient amount may be preserved in the fall. It requires but little more time to can a large amount than a small amount. "Vegetables and fruits contain minerals which are needed for the body. Sickness known as spring fever in the spring is due to the fact that there is not enough mineral matter in the body. If more vegetables and fruits were included in the bill of fare we ought to feel just as good in the spring as in the fall."

Mr. Ingalls and Mr. Clark had a live bunch of boys in the station barn, pointing out to them the good and the poor points of the Holstein herd maintained on the farm. Vernon Hocker won first in the placing of the animals judged. The boys were then taken in hand to the tool house where trays containing large numbers of seeds were laid out, which they were to identify. Thorwald Johnson took first in this contest.

Women's canning institutes are announced by the superintendent of farmers' institutes in Wisconsin as follows: Tomah, August 31st; Phillips, September 5th; Prentice, September 6th; Bayfield, September 6th; Washburn, September 7th; Ogema, September 7th; Mellen, September 8th, Stetsonville, September 8th.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Correction

IN The Wisconsin Farmer issue of August 24th appeared the full page advertisement of the Waukesha Motor Company, a Wisconsin institution. Our readers were invited by this company to inspect the exhibit of motors at the Madison Tractor Demonstration, September 4th-8th. Through an unfortunate error the invitation in some copies of the paper read "St. Louis," instead of "Madison." As soon as the error was detected it was corrected. The Waukesha Motor Company has a very interesting exhibit already made up for the Madison demonstration and they are anxious to have every farmer interested in motors call at their booth. They will be pleased to show their engine and explain its good points. The Waukesha Motor is used in many of the tractors to be exhibited at Madison. This correction is made by The Wisconsin Farmer for the benefit of our readers who may have secured the copy last week which was incorrectly printed.

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UPPER WISCONSIN

Marinette County New Settlers' Picnic and Cattle Show.

Three special trains, 500 autos and hundreds of farmers' rigs brought 5,000 people to the fifth annual Marinette County New Settlers' Picnic, which was held at Wausaukee on Thursday, August 17th. With the settlers' picnic was combined the first annual dairy cattle show and sale. The great picnic now takes precedence as the largest new settlers' picnic ever held anywhere in America. Visitors were present from several states, besides the general outpouring from all parts of Marinette county. The special train from Marinette, which also picked up large numbers of people at all stations on the way to Wausaukee, carried eleven coaches. A special train running from Pembine south brought in 150 people and another special from Girard Junction, Athelstane and points on the Milwaukee road branch brought in 100 people.

PRIZE-WINNING STOCK AT MARINETTE COUNTY SUMMER CATTLE SHOW.

One of the new features of this year's picnic was a merchants' and manufacturers' exhibit, which was very well patronized, and there were also attractive exhibits by the Marinette County Training and Agricultural School, and by the rural schools of the county, Mrs. Gertrude Schwittay, county superintendent, being in charge of the latter exhibit. All school exhibits were based on agricultural work being carried on by the pupils.

Two tractors, a 10-20 and a 12-25, gave demonstrations throughout the day, and their work was followed with great interest by a large number of farmers. The smaller tractor gave demonstrations of plowing with three bottoms, while the 12-25 was used in clearing a field adjacent to the picnic grounds. A tractor, of course, cannot pull the larger stumps, but its use in pulling green trees and stumps of a diameter of six inches and under was well shown.

One of the greatest drawing cards from the farmers' standpoint was the carload of twenty-one heifers brought in by the Marinette County Co-operative Cattle Buyers' Association for exhibit and sale at the cattle show. No orders had been received from farmers for this shipment, but one of the trustees of the association offered to purchase any cattle not taken by farmers at the picnic, and on the strength of that order J. K. Kern, buyer for the association, made a hurry-up trip to southern Wisconsin and came back with one of the finest carloads of cattle which he has ever purchased for Marinette county farmers. The trustee who offered to buy all cattle left over from the carload after the picnic did not have much chance of getting any cattle from that carload. Two days before the picnic farmers from Wausaukee and near-by territory had put in applications for over half of the carload. Before the picnic was over not only had the entire carload been purchased but applications had been received for another carload, and about fifty settlers and farmers had made preliminary arrangements for several more carloads.

ARRIVING ON SPECIAL TRAIN.

All of the cattle brought in for the picnic by the association were heifers, with the exception of one grade Holstein cow, seven years of age. This animal showed such a huge udder, milk veins and other indications of a great milker that seven applications had been made for her at a price of $125 two days before the picnic. She was awarded to the first farmer who applied for her, a Mr. E. Fields, who is building up a dairy herd on his place east of Wausaukee. While the cattle show did not bring out as large a represetnation of the best dairy stock of Marinette county as might have been desired, it was nevertheless a very good start and it is believed the annual county show and sale will continue until it becomes one of the most valuable features of the picnic. Awards of $400 were made on the classes exhibited, all of which were Holsteins or native cattle. The classes and winners were:

Pure-Bred Holstein—Cows three years old or over—H. J. Christ, 1st; Augustine Brothers, 2d; M. Mortenson 3d.

Pure-Bred Holsteins—Two animals of either sex, the produce of one dam—Augustine Bros. won on two heifers.

Pure-Bred Holsteins—Heifers one year and under two, not in milk—Augustine Bros., 1st.

Pure-Bred Holsteins—Bulls under one year—Augustine Bros., 1st; H. J. Christ, 2d; Augustine Bros., 3d.

Pure-Bred Holsteins—Cows two years and under three, in milk—Augustine Bros., 1st.

Pure-Bred Holsteins—Bulls one year and under two—M. Mortenson, 1st; Frank Wood, 2d and 3d.

Pure-Bred Holsteins—Champion bull any age—H. J. Christ, 1st.

Pure-Bred Holsteins—Two-year-old heifer, not in milk—H. P. Christ, 1st.

Pure-Bred Holsteins—Bulls three years old or over—H. J. Christ, 1st.

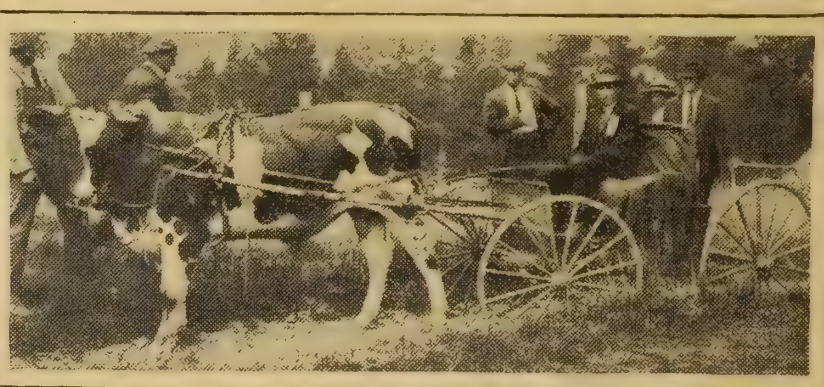
Grade Holsteins—Champion grade cow in milk—Grade cow, Fred Wartick, 1st; grade; calf, Fred Wartick, 1st.

Pure-Bred Holsteins—Bulls two years and under three—Frank Wittock, 1st; Augustine Bros., 2d.

Grade Holsteins—Cows three years old or over—Fred Wartick, 1st; J. N. Frankforth, 3d.

Pure-Bred Holsteins — Champion cow in milk—H. J. Christ, 1st.

Pure-Bred Holsteins — Champion heifer not in milk—Augustine Bros., 1st.



PURE-BRED HOLSTEIN BULL OWNED BY AUGUSTINE BROS., AT HEAD OF STOCK PARADE.

At 2 o'clock in the afternoon a stock parade took place. It was led by the pure-bred Holstein sire of the Augustine Bros.' herd, of Grover township, driven in harness in a single buggy. The animal was driven by Robert Augustine. This three-year-old sire has been broken to harness since he was a year old, and until recently was used to drive the children to and from school. During the past spring and summer he has been used part of each day plowing, cultivating, mowing and for all other uses for which the

MARINETTE COUNTY FARMERS CAME TO ANNUAL COUNTY PICNIC IN THEIR AUTOMOBILES.

Fills The Silo on Time

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SILVER'S "OHIO"
The Logical Silo Filler

and *dependability* is a big point at silo filling time. This is one of the reasons for the "Ohio" *unbeatable leadership*. It's *always* ready—built for *big capacity—fast work*—with least chances for breakage and delays. Backed by *62 years'* manufacturing experience—by the silo filler pioneers. Used by experiment stations and leading farmers everywhere. Big features: Automatic beater feed, power-saving direct drive, friction reverse, single lever control, "Bull-dog-grip" rollers, non-explosive blower. *Better cut silage—packs air tight—ferments better—better food for stock. Write for catalog, also book on Silverized Silage.*

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horses on the farm are kept. He minds the bit perfectly, and when driven through the picnic grove created no end of interest.

Prof. G. C. Humphrey, of the animal husbandry department of the college of agriculture, University of Wisconsin, presided as judge at the stock show. The judging was done in front of the main dairy barn and Professor Humphrey talked on the judging of dairy cattle while he did the official judging. This practical method of teaching farmers the points to seek in purchasing and breeding up cattle held the interest of at least 400 farmers through most of the forenoon.

Prof. A. M. Olson, superintendent of the Marinette County Training and Agricultural School, acted as chairman of the day and presided over the two main programs, which were held during the forenoon and afternoon in the main picnic grove. At the morning program S. E. Bennett, chairman of the new settlers' picnic committee since the picnic began five years ago with an attendance of eighteen people, announced that he would no longer be able to head the picnic organization, and that he was not a candidate for reelection. The two candidates for the office were H. E. Parsons, manager of the state experiment farm in Marinette county, and F. Hammes, a business man of Coleman. Mr. Hammes won the election, and in a short time will name the members of his committee to take charge of next year's picnic. The members of this year's picnic committee, all of whom are new settlers in Marinette county, were: A. W. Bennett, Amberg; T. W. Cherry, Porterfield; Thomas Edwards, Athelstane; L. N. Ferguson, Cedarville; Glenn E. Hart, Marek; Bert Hoffman, Crivitz; E. G. Holley, Beaver; A. F. Hose, Intervale; C. M. Jones, Dunbar; W. B. Sanderson, Loomis; J. L. Shanebrook, Middle Inlet; H. F. Steinbrecher, Wausaukee; F. J. Stevens, Pembine; M. C. Yeazel, Peshtigo.

F. G. Kraege, of Ft. Atkinson, Wisconsin, a dairy specialist, was the principal speaker at the morning program. Mr. Kraege's address was intensely practical and unanswerable from the standpoint of logic. He emphasized the importance of dairying, asserting that it was far ahead of grain or stock raising to maintain the soil fertility. For that reason in Marinette county, which he said could not be surpassed for grasses, water and climate, it was the ideal way of farming and would advance this county to high rank in Wisconsin, which is one of the leading dairy states of the Union. He predicted a great increase in the consumption of dairy products in the next few years and said that the National Dairy Association would spend in the next year or two, $750,000, to promote the popularity of milk, butter and cheese. Here was another reason, he said, why the Marinette county farmer should go in for dairying.

He next spoke on the vital necessity of the right kind of stock. Poor milk-producing cows were only boarders and netted a loss instead of a gain. One good producing bovine was worth forty poor ones. Then there should be care used in the rations, for the feed was important. Sanitary conditions were just as important as anything else in promoting milk production. Fresh air was just as necessary for the cow as human beings and means a stimulation of her product. It is important also that the farmer keep individual records of his cows so that he may be in better touch with the value of his herd and lastly there must be enthusiasm. Without enthusiasm no one could succeed at any business and it was surely needed in dairying. Without it he advised farmers to keep out of the business. The address was well illustrated by charts and was really a remarkable exposition of the virtues of dairying.

In the afternoon State Senator C. H. Everett, of Racine, spoke on agriculture in a general way.

A contest which called forth a great deal of interest was the milking competition between Marinette county farmers' daughters. Fifteen girls had been entered in this contest, but it was possible to get only seven cows of sufficiently quiet disposition to stand and be milked in the midst of a howling crowd of several thousand people. The girls were given five minutes in which to milk, the awards being made on the weight of the milk drawn by each.

A large number of Illinois, Iowa, Indiana and southern Wisconsin people who have purchased land in Marinette county, but have not settled on it as yet, were present at the picnic.

The intention of the picnic committee this year was to feature dairy farming as the plan to be followed by Marinette county farmers and there is no doubt but what dairying was given another great forward step by the picnic and cattle show.

A chicken and roast pork dinner was served in the main picnic grove in cafeteria style between the hours of 11 a. m. and 1:30 p. m., the arrangements having been made by the picnic committee. Several thousand people partook of the meal on the grounds.

Not only was the picnic a big success from an agricultural and social standpoint but it was a success financially. Not 1 cent was collected from business interests by the picnic committee, and yet it was possible to report a balance of about $100 after all expenses had been met. The money was raised by funds paid for the exhibition of farm machinery and merchandise and the refreshment stand concessions.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

Winnebago Association.

The following table gives the names and records of cows in the Winnebago County Cow-Testing Association which have produced forty-five pounds of butter fat or over during the period of thirty days ending July 31, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Tenant Bros.					
Leona, G. J....	6	3-7-16	777	5.8	45.1
Sall, P. B. J....	6	2-9-16	801	6.8	54.5
Hattie, G. J....	6	12-5-15	687	7.7	52.9
G. W. Searles					
Rella, G. J.....	5	3-29-16	915	5.5	50.3
H. P. Zellmar					
Lady Jay, P.B.J.	14	5-3-16	880	6.1	53.7
Levi Brunson					
Goldie, G. J....	5	6-5-16	986	5.1	50.3
Blue Bell, P.B.J.	4	3-6-16	902	5.3	47.8
Aug. Zimmerschied					
Heilo, P. B. H..	6	5-3-16	1181	4.0	47.2
Max Krondiger					
Lady, P. B. J..			853	5.7	48.6
H. R. Mosely					
Bessie, G. G...	7	4-20-16	1293	4.2	54.3
Goldie, G. G...	5	5-11-16	1102	4.2	40.3

Archibald R. House, Official Tester.

Alban and New Hope Association.

The following is a report of the Alban and New Hope Cow-Testing Association for the period of thirty days ending August 10, 1916. Among the leaders this month are the following men: C. E. Ericksen had the largest producing cow. This is a grade Guernsey eight years old. She gave 1,269 pounds of milk, testing 4.3, making 54.6 pounds of butter fat. Anton Brekke had the best average herd for this period, his eight grade and registered Holstein cows giving an average of 1,201 pounds of milk per cow and 41.4 pounds of butter fat.

There were twenty-six cows giving over forty pounds of butter fat per cow this month, which is not as many as we had last month, but this was caused by the continued hot, dry weather during July which caused the pasturage to be of a very poor quality.

The following list shows the cows that gave over forty-five pounds of butter fat:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. E. Ericksen					
Whiteface, G.G.	8	3-26-16	1269	4.3	54.6
Lady, N.....	10	2-28-16	1087	4.2	45.7
Anton Brekke					
Whiteban, G.H.	6	3-3-16	1360	3.5	47.6
Blacky, G. H..	7	6-14-16	1331	3.4	45.3
Gr. Hols.	7	6-20-16	1376	3.5	48.2
Selina, R. H..	6	5-23-16	1504	3.6	54.1
Gunder Dobie					
Gr. Hols.....	6	5-17-16	1348	3.4	45.8
Otto Halvorson					
Beauty, N....	7	5-19-16	1318	3.6	47.4
A. Weinmann, Jr.					
Wis. Lass Aggie, R. H.	8	6-8-16	1420	3.3	46.9
Josie, G. H....	9	4-11-16	1374	3.6	49.5
M. J. Wrolstad					
Gr. Guern.....	9	11-25-15	859	5.5	47.2

M. E. Smith, Official Tester.
M. J. Wrolstad, Secretary.

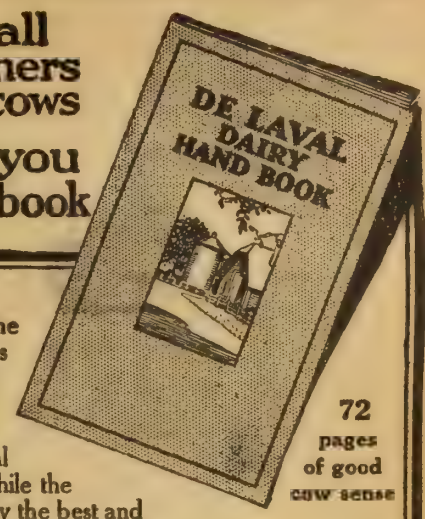
A scarcity of milk and cream is reported by dealers in dairy products near Antigo. The milk production has been gradually falling off since the pastures began to dry up.

The total value of all domestic animals in Wisconsin January 1, 1916, was $246,839,000.

More than 2,000,000 European women have been forced to take up men's work since the war started.

FREE to all owners of cows

If you keep cows you ought to write for this book



72 pages of good cow sense

THIS book was written for the man with only two cows just as much as for the man with twenty. In it has been gathered together a great fund of valuable information on subjects which are of vital interest to every cow owner. And while the various phases of dairying are treated by the best and highest authorities, it is not a technical treatise but is written in plain every-day language so that even the children can understand it.

Here are just a few topics that will give you an idea of the practical nature of its contents:

"How a Dairyman Made Good"—a real story of a real farmer, who starting with almost nothing, built up a fine dairy herd and made a big success.

"Year Around Feeding of Dairy Cows"—by an authority whose advice is well worth heeding. The importance of proper feeding deserves more attention from every cow owner.

"How to Judge a Dairy Cow."—shows by illustrations what points to look for in a dairy producer—explains the essential qualifications of a good dairy cow.

"Building Up a Dairy Herd"—a practical breeder gives some sound advice on this important subject.

"The Farm that Won't Wear Out"—shows that the farm where cows are kept, and the fertility returned to the soil, improves instead of deteriorates.

"The Care of Cream on the Farm"—quality is as important as quantity. It costs little and brings big returns.

"Silos and Silage"—one of the best chapters in the book. Full of silage facts that every farmer ought to know.

Then there are splendid articles on "Alfalfa," "Ventilation of Dairy Barns," "Breeds of Dairy Cattle," "Improving the Herd with a Good Bull," "Care of Freshening Cows," "How to Test Cows," etc. Numerous dairy rations, suitable for various sections of the country, are given, and various milk and dairy tables as well as tables of weights and measures, silo capacities, etc. that every farmer has occasion, at some time or other, to refer to.

Thousands of dollars have been spent in the preparation of this book, and if you keep cows you certainly ought to write for a copy and read it from cover to cover. The book is absolutely free. Just fill out the coupon or send the information requested on a post card, mentioning this paper.

The De Laval Separator Co., 165 Broadway, New York

Please mail me, postage free, a copy of your New Dairy Handbook. I keep_____cows I sell cream, make butter, sell milk (*cross out whichever you don't do*). The make of my Separator is_____, used_____years

Name_____

Town_____ State_____ RFD_____

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The "Man-Saver" Ensilage Cutter

The Holstein Ensilage Cutter is a man saver and a power saver. No man is needed to feed fodder into the knives. Just throw the stuff, dry or green, onto the conveyor—the machine does the rest. The "Safety Head" adjusts itself to the amount of material fed. Save the expense of a man. Also risk of accident. Three men working at top speed cannot choke the machine.

Foreign Substances Do No Damage

By means of safety devices, the fly wheel and pulley run free when cutting head suddenly stops.

These are only a few of the many points of superiority of the Holstein. Write for full particulars and the name of our dealer in your locality.

The Meili-Blumberg Co., 200 Main Street NEW HOLSTEIN, WIS.

See our exhibit at Wisconsin State Fair.

Clip out this ad, bring it with you and receive souvenir.

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Non-Shrinkable—Practically Everlasting, Rot-Proof, Worm-Proof, Storm-Proof, Acid-Proof.

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AGENTS WANTED IMMEDIATELY.

Recent Rains Start Fall Pastures.

Feed Sufficient For Live Stock—Corn Prospects Are Good —Threshing Well Advanced and Returns Generally Good.

WISCONSIN.

Baraboo County.—Threshing is in full swing; oats and barley are light, rye is an average. Potatoes are late in setting and some have been damaged by the recent drouth. Early potatoes are very scarce. Pastures are somewhat improved. The corn looks exceptionally well.—A. H. Buehler.

Bayfield County.—Most of the harvesting is finished, except a few fields of late oats. Late oats are rusty and have not filled as well as the early sowing. Corn is making a fine growth, as it has plenty of moisture and heat. Late potatoes have been benefited by the recent showers. The second crop of clover is fine and will make a crop nearly as heavy as the first cutting. Many farmers will put this clover in silos. Young stock on cut-over lands are getting fat.—E. C. Stevens.

Burnett County.—Grain is in the stack and threshing has commenced. The yield is less than half that of last year. Oats are averaging thirty-five bushels per acre, wheat fifteen bushels. Hot weather continues so a good crop of corn is looked for. Potatoes are poor, they are not forming well in the ground. Rain is plentiful. Pastures are getting old, but cattle still have plenty to eat. A good hay crop was harvested under excellent condition.—Fred Larson.

Chippewa County.—The grain crop is fair, but not equal to last year's mark. Oats are averaging about thirty-five or forty bushels an acre. Corn is good, but a little more rain would help it along considerably. The season has been too dry for potatoes this year. Although late, fruit is coming on well. Some stock in the wild pastures have died from eating poison grass or drinking impure water.—G. E. Rheingans.

Douglas County.—Oats and rye are harvested and wheat is nearly ready for cutting. The small grain crop is above the average. Potatoes will be light on account of lack of rain. Hay is nearly all cut and most of it has been put up in fine shape. Pastures are fine and cattle are doing well. A good deal of road work will be done in the next two months.—J. N. Ottun.

Grant County.—Corn is suffering badly from drouth and Grant county will not have more than one-half a crop. Oats are averaging about fifty-five bushels per acre, barley thirty-five bushels, fall wheat twenty bushels. Pastures are suffering from lack of rain and the cream checks are being cut down. Potatoes will be a failure. The usual number of cattle are on hand. The pig crop is about 10 per cent greater than usual.—P. R. Stoffel.

Iowa County.—Small grains are being threshed; they lack the yield and quality of last year. If there is plenty of rain soon there will be some corn, but the crop will not be heavy. Pastures are nearly all dried up, except along the creek bottoms, and cattle are being fed green corn and hay. Several carloads of live stock have been shipped from the community. The potato crop is almost a complete failure, only a few early ones being worth digging. This failure is due to dry weather.—Will Dowling.

Iron County.—Pastures and meadows are good. Vegetables are good and potatoes normal. The grain is good, but not much is grown here. Live stock are up to average.—Henry Peterson.

La Crosse County.—Early potatoes are not very good because of the hot weather in July. Threshing has begun and returns show that the oat crop is light. Barley will be fair. Pastures are being revived by the rains and live stock are doing well. The fruit crop is uneven—some orchards will have a good crop of apples.—R. R. French.

LaFayette County.—Weather continues warm and dry, with not rain since July 19th except a light shower August 10th. Pastures are getting short and some farmers are feeding green corn. The milk flow has fallen off about 60 per cent. Most of the shock threshing is finished and oats are running from forty to seventy-five bushels, with an average of about fifty-five bushels. Some fields of corn look well, but others show the lack of rain. Early fields are beginning to dent and appear normal. Late potatoes must have rain soon in order to make a crop.—Lloyd Scott.

Marinette County.—Pastures and new seedings are very much in need of rain. Temperatures for the last week have been between 96 and 100 degrees. Threshing has just commenced; much grain is being stacked. The second crop of clover will be short, but well filled with seed. The potato crop will be short on account of dry, hot weather. Late potatoes will suffer if rain does not come soon. Potato bugs are bad this year. Corn is weedy, but making good growth. Much interest is being taken in dairying. Hogs are not very plentiful.—W. B. Sanderson.

Oconto County.—Small grain is cut and threshing has started. Oats are generally light. Corn looks fine, but needs rain. Potatoes are doing well. Pastures in general are good. Cattle are in good condition. The shipments of cattle and hogs from this locality average about two cars a week.—W. J. Hinker.

Oneida County.—About 65 per cent of the harvesting is done. All small grain crops are lighter than last year and have considerable smut. The corn crop is looking fine; it will ripen by September 15th if frost does not strike it. Potatoes will be a short crop because of dry weather when they were setting. They are running from two to nine in a hill. The second crop of clover is ready to cut; it will be lighter than the first cutting. Rains during the last two weeks have helped potatoes.—Art Blumenstein.

Outagamie County.—Harvest is nearly finished and threshing has commenced. Oats are making about one-half the yield they did last year because of the very wet weather during seeding time and the excessive hot weather in July. Barley and wheat also show the effects of hot weather. Although planted late, corn has grown rapidly and with a favorable fall will yield a fair crop. Early potatoes are almost entirely a failure and home consumption will be supplied from other regions. Potatoes are selling at from $1.60 to $2 a bushel. The late planting of potatoes has had occasional showers and will, therefore, do fairly well. Fruit is not abundant; the Duchess apples promise a fair yield. Pastures are very good, especially the second growth of clover, and the milk flow has increased with better pastures and cooler weather. Some cases of abortion in cows have been reported. Hogs are on short rations.—Peter Tubbs.

Ozaukee County.—Threshing has begun and returns show oats are running from fifty to seventy bushels per acre; barley is good and farmers are hauling from the machines to the elevators, where they get from 95 cents to $1 for it. Corn is good and potatoes are fair. Although most farmers have good clover pasture, the milk yield is low on account of flies and hot weather. The number of cows kept in this county is increasing.—C. E. Dineen.

Racine County.—Good rains during the last few days, followed by cooler weather, is bringing the corn along in fine shape. Ears are forming now and prospects are for an unusually good crop. Cabbage is backward, but making a good growth at present. Threshing is in progress. Barley is yielding about thirty-five bushels per acre and oats fifty-five. Pastures are getting in fair condition again. Potatoes are poor. Apples are scarce and poor in quality. —Charles Jeffery.

Richland County.—The hay crop, which has been put up in fine shape, is good. Threshing is nearly all done and oats turned out from forty to fifty bushels per acre. Other grains yielded well also. The recent rains are helping to boost the corn crop. Late potatoes are growing slowly and the yield is not heavy. Fruit is scarce with the exception of blackberries. Cows are giving more milk since the rains revived the pastures. Farmers in this county have no cause to complain.—E. B. S.

Taylor County.—Haying is finished. The crop was late, but very good and conditions were favorable for harvesting. Oats threshing has begun. This crop is good only on high and rolling lands. Potatoes look well, but will be late with a light yield. Rye and peas have done well. The second cutting of clover is short. Clover seed seems good. Corn is coming along fine. Pastures are good and all live stock are doing fine. Garden truck, except cabbage, looks well. All roads are in fine shape.—E. H Dehne.

Walworth County.—Weather conditions are very favorable to crops. Threshing is well under way. The yield and quality of grain are good. Corn looks fine. Early potatoes are rather poor. Pastures have been much improved by recent rains.—Arthur Ewing.

Washburn County.—This month has been almost ideal for corn, which is beginning to dent. A light frost occurred on the 13th. Small grain is nearly all cut and stacked. Wheat and rye are fair and oats are good. Potatoes will be rather light. The second crop of clover for seed is unusually promising. Cattle buyers are very active; the top price for two-year-old grass steers is 6 cents. The local creamery is paying 29 cents for butter fat. A co-operative creamery, covering the eastern part of Burnett and the western part of Washburn counties, has been organized and building will begin soon on a location seven miles from Shell Lake.—John W McCulloch.

MINNESOTA.

Mower County.—Harvest is finished and threshing is in full blast. Oats are light because of the dry weather when they were filling. Corn is remarkably good. Early potatoes are good, but late potatoes are light. A large amount of first-class hay was put up this year. Pastures are getting dry and short, which causes a light flow of milk. The alfalfa crop is a failure. Live stock are healthy, but several horses were overcome by heat recently.—Walter H. Martin.

Beekeepers' Meeting.

To the Editor:—A representative number of Langlade county's most interested beekeepers turned out to the beekeepers' meet at Jas. Cherf's farm August 17th.

Beekeepers' wives provided a bountiful dinner at noon and as advertised a lunch of hot biscuits and honey at the conclusion of the day's program.

Mr. N. E. France, of Platteville, Wisconsin, was practically the whole program, but the oftener one hears him the more thoroughly they become convinced that he is a regular university on the subject of bees. Langlade county bee men who failed to hear him on either of his visits to Antigo missed a golden opportunity. During the meeting he explained a simple device for rendering beeswax, which if followed would save pounds of wax to every beekeeper annually. Mr. Chase, a beekeeper from Oneida county, explained how he had been successful in buying bees by the pound and having them shipped up from Louisiana for re-enforcing his weak colonies. He also explained a successful method of introducing queen bees into hives by the use of tobacco smoke in the smoker. The object of this method is to save time, always a valuable factor in beekeeping.

One of the outgrowths of the meeting is an organization of bee men to be known as the Northern Wisconsin Beekeepers' Association. Fourteen members joined to start. A second meeting will be held at Antigo on August 26th to elect officers and transact other business. Beekeepers from all the northern counties will be asked to attend. F. G. S.

LISTEN! OLD WISCONSIN IS CALLING YOU TO STATE FAIR!

Take a Week of Rest and Recreation Seeing the Good Old Badger State on Parade, and at the Same Time Be Entertained and Inspired at a Cost Next to Nothing. Don't Hesitate! Come!

By OLIVER E. REMEY, Secretary State Fair.

Milwaukee, Aug. 31.—You have been working mighty hard all summer.

Nothing would suit you better right now or do you more good than about one week of real relaxation.

Be fine, wouldn't it, if you could take a week off, rest up and at the same time be informed, entertained and inspired at a cost you would hardly notice?

Appeals to you, doesn't it?

You like this grand old Badger State, because it's your state, and a rattling good old state. Some states may be a little stronger on a resource or two, but, taken all in all, it requires SOME state to beat old Wisconsin, as a general proposition.

Now, wouldn't you like to see just what this good old Badger State can do in the way of raising things—horses, cattle, sheep, swine, agricultural, horticultural, dairy products—what the women of this state can make with their own hands; what the farmer boys and girls can raise?

And wouldn't you like to listen to the best Italian band in the world, see a wild west and frontier show worth seeing, enjoy over twenty circus acts second to none anywhere, see a woman perform more and greater stunts with a flying machine than the famous Beachey performed, see four days of high-class harness racing and two days of automobile racing, see the greatest display of 1917 automobiles shown this year, enjoy a $20,000 free pageant in a big city—in fact, see a thousand and one other interesting and entertaining things and at the same time be one of immense crowds out for days of profitable enjoyment, with music and laughter everywhere and the good old state of Wisconsin showing you every way you turn just what she can do?

Sounds like a dream, doesn't it?

But it can be done.

Just come down to the State Fair Sept. 11th-16th.

You'll go back home rested, better informed and full to the brim of enthusiasm for your grand old state.

It isn't going to cost much—not one-half what it would cost to take a week's trip out of the state.

Make up your mind right now and you'll never regret it.

Come on; the old Badger State is daring you to take a look at her on parade!

Send No Money

7 Months to Pay

We will send this big, upholstered Rocker to any responsible person without a cent of money in advance—just write us a letter or PostCard saying: "Send me Rocker 90174. I will pay freight charges and if I find it satisfactory—after ten days free trial in my home—I will send you $1 each month until I have paid the Bargain Introductory price of $7.95." If you don't want to keep it, don't pay a cent, send it back at our expense—you take no risk—send for this Rocker today.

$7.95

No. 90174 Solid oak frame; spring seat 21x20 ins. high back with roll headrest; luxuriously upholstered.

CROFTS & REED CO., Dept. C310, CHICAGO, ILL.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Cull Your Flocks Early.

It is amusing, the advice handed out in regard to the ways and means of culling one's flock. Now, just take notice of some of the lore that is going the rounds. In almost every case, the writer describes the kind of individual to be kept, as the one that answers his idea of what a chicken should look like, regardless of breed, color, environment or purpose.

In one instance a bird must have a combination of deep chest, long body, broad head, bright eye, curved beak, etc. Now, wholly unconsciously this man is describing his own flock which would not apply to any other breed, neither to another strain of his own breed. There is too much of self in much of the advice handed out.

And again, "The hen that bags down behind should be sold, because she is usually a poor producer." That she should be sold is certain, but what an excuse! She may have been the best of breeders, and should be sold because she is one of the heavier breeds and after the second season becomes too fat to be kept at a profit, but the very fact that she lays on fat after her laying period is practically over is in her favor. Such hens are today bringing very nearly a dollar each after two busy seasons.

After the older hens are disposed of, then what? It pays to dispose of them before the molt begins, because at that time they will shrink at least a pound with a combination of hot weather and depleted systems incident to the molt. When dressing a hen to cook lately, we were almost discouraged, when the sac was found to contain an egg, that so many like her had been culled out and sold. However, only four embryos showed any sign of developing soon, and that would be about the size of the egg package until after the molt, and possibly until next spring, depending on the keeper. After viewing the problem from every angle, we find it does not pay to hold the surplus too late.

With us, vigor is next in line. Unless beginning to get ragged, a hen has no business to be listless all day even though the weather is warm. Unless she hustles some time through the day, preferably in early morning or evening, her chances are slim. It is the red blooded people and hens, that are desired, and if there is a mingling of the blue, why so much the better.

A fine bone, for one of the American breeds, is not desirable. When we raise all-purpose chickens, we raise for meat as well as eggs, and to carry a goodly carcass, a hen must have the frame to do it. Any hotel keeper with an eye to business would tell you that there is almost as much waste in dressing a small chicken as a large one, and relatively much more meat in the latter. So if it is an all-purpose fowl we raise, each and every branch must be considered; all too often of late is the laying qualities alone being considered. If one wishes to produce eggs alone, why eggs it is, but do try to "stick to your bush," and keep laying varieties, instead of dwarfing the good, all-purpose breeds. Who ever heard of a successful cattle breeder stunting his splendid, big Short-horns for the sake of producing a greater flow of milk?

Examine the ear lobe, and if there should be no white in it for your own particular variety, do not under any consideration tolerate a trac of white. This defect brands a bird as being mixed with something alien to its kind. Try to keep birds of a single general type, and that type to be as nearly what, in your estimation, a chicken should look like as possible. Single out one bright, aggressive, hustling bird, and so far as possible require the others to measure up to her yard stick.

Other things being equal, the hen that molts late is the most productive. She will lay late, molt in a hurry and be on hands for business before the really cold weather of next winter.

AILING ANIMALS.

Inflammation of the Bag.

I have a couple of cows with caked bags and I would like to have you tell me what to do for them.

Bathe the udder or bag twice daily with either hot or cold water and then apply camphorated oil over the entire udder. Also give two teaspoonfuls of fluid extract phytolacca in a pint of water every four hours for two or three days.

Infected Milk.

I have a cow that gives a matter-like substance in her milk. She is to come fresh some time in September. Would like to know cause of this.

This trouble is probably the result of infection of the udder with some organism. These cases are sometimes not very responsive to treatment. The internal administration of two drams of bisulphite of soda once daily may be of some benefit.

Warts.

I have a mare about five years old that is bothered with warts around the mouth, lips and nose. You can find a hundred or more on a very small place. My neighbors tell me that they will go away, but she has had them a year or longer. Can you tell what makes this, or give me a remedy?

If you will take this animal to your local veterinarian and have him cut these off with the scissors and touch each one with caustic you will have little trouble with them returning.

Sterility in Cow.

I have a ten-year-old pure-bred Hereford cow that has not had a calf for two years and has not come in heat since last September. What can I do to make her come in heat?

We would not advise treatment in this case without first knowing the cause of the trouble. It might be from disease of generative organs, from overexercise, not enough exercise, lack of condition, or overfat. Your best course would be to have her examined by a veterinarian and he can then prescribe treatment if treatment is found advisable.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.

The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 36 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

THE NEWTON REMEDY CO., Toledo, Ohio

BIG 4

POULTRY JOURNAL

Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

Read This Without Fail

The Golden Prairie District of Wyoming is the Only Sure Crop Country of the West

We are now placing on the market in farm tracts our celebrated Hillsdale Ranch

This is the driest season since the settlement of the country, but we can show you, within three miles of Hillsdale in the neighborhood of this ranch and on no better land, fields of grain (some on sod breaking, too), that would more than pay for the land at our selling price.

DID YOU READ our full page announcement in The Wisconsin Farmer of August 10th? If not, please look up your file. It is on page 9, and invites you to come to the Golden Prairie right now where you can purchase at about what two years' rent will amount to in the Central states as choice a farm as the sun shines on and have included, free, the assignment of a five years' lease on an equal acreage of adjoining state land.

Field of winter wheat in shock and binder at work on farm of Richard Spatz, adjoining the Hillsdale ranch. Photo taken July 20, 1916. This same field produced 50 bushels of oats per acre in 1915, the wheat shown being drilled into the oats stubble in September.

And while you have the issue of August 10th in your hand you can easily turn to page 12, where you will see some pictures of farm scenes adjoining our Hillsdale ranch and read what the Editor thinks of the Golden Prairie District after his second annual visit.

Fill out and mail us at once the coupon found below. It will bring you, without cost, valuable information regarding a district where within a few years farm land values will be as high as they are in the most favored sections of the Central states.

FEDERAL LAND COMPANY

Burns, Wyoming

FEDERAL LAND COMPANY, BURNS, WYO.

Gentlemen: Please mail me at once full descriptive literature of your Hillsdale ranch and the Golden Prairie District of Wyoming.

Name.....

Address.....

Remember this: That we are protected from hot winds and extreme heat by the snowcapped Rockies, always on clear days in plain view to the southwest. This is fully explained on page 3 of the booklet entitled "Wheat Growing and General Farming Without Irrigation in the Golden Prairie District" which will be sent to all who fill out and mail us the above coupon.

PROSPERITY IN CANADA

$900,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated lands from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privilege of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready made farms for sale. Special easy terms. Loans for live stock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interests are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

IF YOU WANT 40 acres or more rich, clay loam clover lands in our co-operative settlements near Crandon, county seat of Forest county, Wisconsin, write us and state **what terms you must have.** We will send you booklet written under supervision State Authorities. Agents wanted. Per-Ola Land Co., 21 Main, Crandon, Wis.

WRITE to Bauer & Eiche, Marshfield, Wisconsin, for information and price list of farms in Wood, Marathon, Clark and Taylor counties, which counties are in the heart of the great dairy belt in central Wisconsin.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

LET US TAN YOUR HIDE: COW, HORSE, or calf skins for coat or robe. Catalogue on request. The Crosby Frisian Fur Co., Rochester, N. Y.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

125 ACRES Fine buildings, splendid soil, near town and school, $11,000. $3,000 cash, balance 5%. 80 acres, 30 under cultivation, no buildings, sandy loam, clay subsoil on good road, near school and two towns. $20 per acre. Other snaps. W. E. Webster, Hudson, Wis.

FOR sale—200 acre farm in Richland Co. Wis., 7 miles south of Viola, one of the best grain and dairy sections in the state. For particulars and prices call on or write to R. Gochenaur, Route 1, Viola, Wisconsin.

BARGAIN. Oneida county lands. 146 acres hardwood. Some timber. Thos. Leith, Monico, Wis.

UPPER WISCONSIN FARM LANDS.

ONEIDA County Lands: I have four hundred acres in solid body on a main road, 4 miles from city with groves of timber and several small lakes, very desirable property, can divide if necessary into four pieces. Ask for map and prices. Also have an improved farm, 160 acres, good house and barn, full of clover and timothy hay, big field of fine oats, 70 acres of clover growing, pasture, running water, timber, only half mile from school and cheese factory. Ideal dairy farm. Want $3,000 cash, balance on time. Address C. P. Crosby, Rhinelander, Wisconsin.

WE ARE selling a part of our 10,000 acre tract, located in Oneida County on beautiful lakes with the best known soil in upper Wisconsin, in the heart of the choicest dairy spot on earth. To see these lands is to buy them. Write or inquire Oneida Farms Co., E. M. McVicker, Prop., 1202 First National Bank Bldg., Milwaukee, Wis.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

What You Can Do to Help the Rural Teacher.

Rural schools everywhere are opening their doors for the new term and teachers and pupils alike are looking forward to the first day of school. Did it ever occur to you how important it is that that first day of school should be a success, and how much parents have to do with its success or failure? The teacher may be a new one and the day, at best, will be trying. Imagine, then, her feelings should she step into a schoolroom which has not known the feel of a broom or soap and water since its last going-over last spring, where the stove has stood to collect dust and rust all through the summer, and where she feels more like going in for a thorough housecleaning than making the acquaintance of the children and arranging classes. Not long ago a rural school-teacher, in speaking of the work in her school, touched upon this very subject, and what she had to say may give some of us a hint as to what we might be doing these days just before school opens. This is the way she described her first day in a new school:

The first morning I shall never forget, when I opened the schoolhouse door and went in. In the middle of the room and a little to the back stood an old, rusty stove. Passing around the stove, because I could not possibly have seen the rest of the room without, I saw in front a small platform, occupying the small open space in the front of the room, and the teacher each time she used the desk and chair must expend energy stepping up that platform to the chair and desk. To one side stood an old organ and on the other side stood a cupboard with glass doors, very dusty, and used for a library. But I must not forget to mention the teacher's chair. That was the only really nice piece of furniture in the room. It was a nice revolving chair. And as I looked about that morning, that dirty schoolhouse, nothing at all to appeal to the teacher, I thought, the temptation came to me, I will just sit down here, draw my wages and hear the classes for eight months and get up and leave.

How much do you think the children would learn in those eight months? But could you blame her? She was hired to teach the children of the community, yet the children's own parents had not thought enough about her coming to in any way prepare for it. No doubt many of them had put new machinery on their farms and new equipment in their homes with the sole object in view of being able thereby to do their work more easily and efficiently, and yet no time or thought had been given to the teacher's workshop where she was supposed to spend her time and give the best that she had to give in exchange for her wages.

Far be it from us to censure her for the temptation to "sit down, draw her wages and get up and leave." But that isn't what she did. Instead of yielding to the temptation, she says:

I am thankful today that a greater determination came to me at that same moment, and I decided to take things as they were in that community and in that schoolroom, and as far as it was within my power, if I had to go at the end of eight months, I would leave them as nearly as possible as they should be.

The walls had once been white. It was ceiled. But they were now very, very black from dirt—possibly had not been painted for years and years. On the walls were a few dirty pictures cut from the backs of magazines and calendars. There were six windows in the room, as usual, three on one side of the room and three on the other, and three or four blinds, none of which would roll, but we did have a good set of maps, a globe and a dictionary. That was about the only apparatus or equipment in the schoolroom. There were a number of books in the library, but none that would help us to carry out the course of study.

That first week of school, with the help of my children, we put on the wall some new pictures I had brought, we cleaned the windows, cleaned out the bookcase and rearranged our books, cleaned off the window blinds and adjusted them as much as we could. This added much to the appearance of our room. Along later in the fall I asked permission to give a box social. I didn't receive very much encouragement because those that had been given before hadn't been very successful, but there was no serious objection, so we had a box social and cleared something over $20. That night, I believe, was the turning point in the history of the community.

The patrons all gathered out of curiosity or something—it certainly wasn't with interest, I think. I had been there three or four months and I met many of my patrons for the first time that night. It was also the first time any of them had been inside the schoolhouse since I had been there.

Well, after we had counted the proceeds, the president of that board asked me what I intended to do with it. I said:

"Give the walls a fresh coat of paint, put in some new blackboards (we only had blackened walls) and also have some new window shades."

Of course he knew $30 wouldn't do this and he said at once:

"Let us help you by painting the walls for you."

Another member said: "Let us buy more blackboards."

And a kind mother standing near

A $2,800 hollow-tile schoolhouse which is furnished with a raised stage to be used for special programs. Beneath the windows on the stage is a ledge for flowers and plants, making a most attractive setting for school plays and the like.

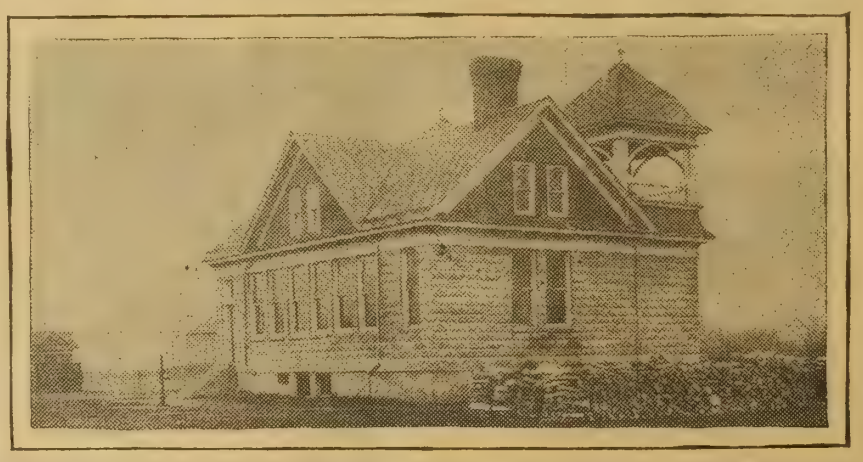
said: "You take the money and get you a new teacher's desk."

I made one of the pupil's desks into one for myself by removing the seat attachment. So right then and there began the good work. Never since that time have I ever asked for a thing that was within their possible reach that I havn't gotten it, just from that one little movement there that night

The next day I went to work and purchased new window shades and had them at the windows. By Christmas week the walls were painted as promised. At the beginning of the new year we had clean walls, new window shades, a new teacher's desk, new blackboards up, and you would not have known it was the same old schoolhouse. The board did not stop there. I said I needed some new library books. We had a set of over twenty new volumes in our library to help me carry out the course of study.

How different might have been the result had the teacher been as thoughtless as were the patrons, and how much easier it would have been had all these things been done beforehand. It is not so much that school patrons do not want to spend the time and money necessary, but rather because they have not been in the habit of interesting themselves in such matters and it is only when their attention is called to it in some such way as outlined above that they see that it is really their duty as members of the community and patrons of the school.

We wish every rural schoolhouse could be thoroughly gone over before school begins, swept, scrubbed, painted if necessary, aired and made ready for the housing of teacher and children during the greater part of the day. A dirty schoolroom is bad for the health of the children. Many communities have built splendid new rural school buildings like the accompanying illustrations and such are to be congratulated, but even the most old-fashioned building need not be unattractive. If everything is kept in repair, a fresh coat of paint applied when needed, everything made clean and in order, perhaps some inexpensive white curtains put at the windows, prints of the best pictures on the walls and blooming plants in a sunny window, the old-fashioned schoolhouse will be as dear to the hearts of the children and the teacher as the most modern, up-to-date building. And having once established the feeling of pride among patrons and children, the up-to-date building is sure to follow.



THERE IS NO LACK OF LIGHT OR AIR IN THIS SCHOOL BUILDING, AND AS FOR WINTER COMFORT—NOTE THE WOOD PILE.

Secret of Good Jelly Making.

Many housewives insist that the making of a good jelly depends upon luck, but any housewife may always have a perfect jelly if she knows the principles of jelly making and follows a few general rules.

The essential part of fruit juice that makes jelly set is a chemical substance called pectin. It is found in abundance in apples, currants, grapes, quince and the white rinds of oranges and lemons. Small quantities are found in cherries, raspberries, blackberries and pears. Since pectin is essential, the housewife should determine whether the fruit juice she expects to use contains any before she starts the jelly making process. To determine whether pectin is present, add two tablespoonfuls of grain alcohol to two tablespoonfuls of hot fruit juice. Cool, and if pectin is present, a lump of jelly will have formed. The size of the lump will indicate the amount of pectin present.

Fruit juice should also contain acid. By tasting it one can easily determine whether or not acid is present. If lacking, enough lemon juice or tartaric acid may be added to give the fruit a tart taste.

Points of a Good Cake.

A good butter cake is smooth on top and evenly browned. Bursting and cracking indicate too much flour or too rapid baking.

Inside of loaf should be slightly moist, but not sticky.

Cake should be fine grained and of uniform lightness.

Coarse-grained cakes indicate a lack of beating, too low an oven temperature or too much baking powder.

DIRECTIONS FOR BAKING CAKE.

Cake	Time	Temperature
Sponge	40-50 min.	212 F
Butter	40-50 min.	220 F
Small cakes and layer cakes	25-30 min.	220 F
Molasses drop cakes	25-30 min.	215 F

DIVISION OF TIME.

First quarter	Rise not brown.
Second quarter	Rise and begin to brown.
Third quarter	Brown not rise.
Fourth quarter	Neither rise nor brown, grow firm and shrink away from pan.

Save Time Now—Money Next Winter.

In canning time why not can a mixture of vegetables for use in vegetable soups? This will not only prove a saving of time but an economy as well, and a great convenience through the winter when we want vegetable soups frequently. The vegetables will be ready cooked and can be added to the meat stock whole or after they have been passed through the soup strainer.

Some New Vegetables.

To the Editor:—I have been a reader of this paper off and on for some time and after moving to the farm over a year ago I have felt that it was the only farm paper, so have been a subscriber ever since the first of the year. I have found the Home page especially helpful.

So many readers have come with their questions and received so many ready and helpful answers that I naturally turn to you for assistance.

This year I planted some vegetables that are new to me and I have been wondering if any of the readers could tell me how to prepare them for the table. They are kale, akra, egg plant and citron. I would like to know how to preserve the citron and also how to candy it. I will appreciate any information. Mrs. B. J. B.

Canning Kinks.

To the Editor:—We all read your paper with faith and have always got just about what we wanted out of it. The different departments are always helpful to beginners, and others, too. My two little girls enjoy every letter and poem that appears and I do also.

I have gotten so much help from the Home page that I want to help someone else now with my experience in canning, as this is the season to know all the "kinks" there are to learn.

I have canned corn, both sweet and young field corn last year and this. Last year I had thirty quarts. This year I have ten quarts of sweet corn and tomatoes canned together and expect to can more after a while. I have never lost a quart or had any mold. Last year was the first I ever canned corn and tomatoes together and we were all so fond of it that I wondered why I had not done the same years ago. I prepared the corn in the usual way for cooking, by cutting the grains

half off and scraping, using two parts corn and one part tomatoes. I do not use any water, as there is tomato juice enough to start the mass to boiling. Put it in granite kettles and cover tightly. Season with one-half teaspoonful of salt to one quart. Cook twenty or thirty minutes, stirring occasionally. Have jars ready and pack the hot mass in them to running over. Use new rubbers and seal at once.

Mrs. E. H. R.

Household Hints.

Washing walls and floors with powdered borax is hard on the roaches.

A delicious and economical dessert is stewed figs and boiled rice served together.

When baking lemon pies do not have your oven too hot, as the lemon will curdle and boil over your crust.

When preparing pickles a wooden spoon or fork should be used, never a metal one.

Old sheets and other pieces of linen should never be thrown away, but kept in a convenient place for use in case of cuts or burns or other accidents.

To clean cut glass satisfactorily use a stiff bristle nail brush and hot water to which a few drops of ammonia have been added.

Paste labels on the inside of glass jars used to hold food supplies, such as rice, tapioca, spices, etc. Thus labeled, the jar can be washed without soiling the label or pulling it off.

When making angel cake be sure to beat the whites of the eggs stiff, until you can turn the dish upside down and the whites of the eggs will not move. You will find your cake almost always will come out right and will be much lighter.

Recipes.

Corn Soup.—Cut enough corn from the cob to make one pint of the milky part of the kernels without the hulls; add one pint of hot water or plain white stock; let it cook for ten minutes; meanwhile have ready one quart of milk brought to the boiling point and season with a teaspoonful of onion juice; add this to the corn and thicken with a tablespoonful of flour mixed with a tablespoonful of butter; simmer gently for fifteen minutes, press through a puree sieve, add a little butter, and serve.

Orange Omelet.—Beat the yolks and whites of five eggs separately, combine and season; add five tablespoonfuls of cream, in which has been dissolved two tablespoonfuls of cornstarch. Pour into a buttered omelet pan and cook slowly on top of the stove until the egg is set, then place pan inside the oven to finish cooking. Spread one-half of the omelet with orange preserves and serve on a hot platter.

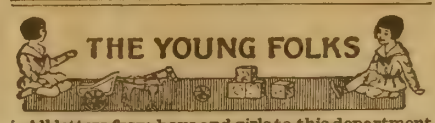
Fried Egg Plant.—Pare an egg plant and cut in slices one-fourth inch thick; sprinkle with salt; pile one slice on top of another, weight down with a plate and let stand for a couple of hours to press out the acid juice. Sprinkle with salt and pepper, dredge with flour and fry slowly in fat till crisp and brown.

Salmon Loaf.—Two cupfuls salmon, three eggs, one cupful stale bread crumbs, salt, one teaspoonful chopped parsley, pepper, one teaspoonful onion juice. Chop the salmon until fine, mix with crumbs, season and moisten with beaten egg. Put in buttered mold, steam for two hours or bake one hour. Serve hot.

Creamed Turnips.—Pare but do not cube young white turnips. Boil until tender and drain. Arrange in baking dish and pour over it a white sauce. Cover with buttered crumbs and brown in a quick oven.

Green Tomato Butter.—Two quarts of green tomatoes, two cupfuls of seeded raisins, one and one-half cupfuls of granulated sugar, one teaspoonful of salt, one large juicy lemon. Wash, dry and cut the stem ends and all spots from the tomatoes. Cut into halves; remove as many seeds as possible. Cut into small pieces; mix the sugar with the tomatoes, and put over a very slow fire. Boil slowly for two hours; add the raisins, which have been washed, dried and put through a food chopper. Add the salt, lemon juice, and boil for thirty minutes.

Creole Dish.—Take two cupfuls of cooked rice, a cupful of minced ham browned in butter, salt, cayenne and a tablespoonful of sugar; put into a buttered pan and cover with cracker crumbs; brown in the oven.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Not too Big For Us.

Dear Young Folks:—I am sixteen years old, but thought maybe I am not too big to write a letter to the Young Folks' page.

My sister and I are going to drive to high school this year. I will graduate next June. I live on a farm and like it ever so much better than living in town.

We have lots of pretty flowers in the garden and in the house. I think I like the old-fashioned marigolds best.

I think the answer to Elizabeth's riddle is a well. It is round as an apple, deep as a cup, and all the king's horses can't pull it up. —Florence.

A Trip to Colorado.

Dear Young Folks:—I have been reading your letters for some time and I enjoy them very much. I am nine years old. I live on a farm of 160 acres. We live just about 200 yards from our school.

We have a Ford car and last summer we made a trip out west in it. We went to Colorado Springs and camped in the park at Manitou. Papa went up Pike's Peak and I went up to what they call Half-way House. It is a station half way up the mountain. We went through the Garden of the Gods, too, while we were there. Then we went to Denver and camped. There we saw all the animals in the zoo. We sure saw some beautiful sights and I had a fine time. I want to go again some time. —Chlorus.

Loves Her Pets.

Dear Young Folks:—I want to join your circle because I enjoy your letters so much. I do not live in the country. I live in town and papa runs a restaurant.

I have four brothers and four sisters. I am twelve years old and in the sixth grade. We have to go a little over half a mile to school and we come home every noon for dinner.

My papa is a preacher and I like to go to Sunday school and church. I hardly ever miss a Sunday.

My pets are one old cat and four little kittens. They are sure fine, too. Papa has a lot of little pigs and mamma has almost a hundred chickens. I like to tame them and have them fly on my shoulders and in my lap. Every time my kittens see me coming they run to meet me and when I go away they follow me as far as the path goes. The other night when I woke up one of them that I call White Face was in bed with me. She had her head on my shoulder and she was asleep. I just love them because they are so cute. —Lola.

Makes Apple Sauce Cake.

Dear Young Folks:—I have been reading your letters and I have enjoyed them very much. I will be fifteen in December, but I hope you will let me be one of you on this page. I have two sisters and one brother.

I love to go to school and will be in my tenth year of school this fall. All four of us drive to school. We live in the country and have three miles to drive. I would rather live in the country than in town, for I like horses, cows, pigs and chickens. We live on a 120-acre farm. We have just built a new house and barn.

I like to cook and here is a cake I like. Apple Sauce Cake: One cupful of sugar creamed with one-half cupful of butter, add one cupful of apple sauce mixed with one teaspoonful of soda, one and three-fourths cupfuls of flour and one teaspoonful of cloves and nutmeg. Bake in a slow oven.

—Dorothy.

For Rainy Days.

Children love to engage in the game of "playing school." They will cut out boys and girls for pupils and a few men and women for teachers. With crayons and paints they will color these nicely and fasten them to empty spools with flat sticks so that they will stand upright. The picture is first pasted to the stick and the stick is wedged into the hole in the center of the spool. In this way the figures will stand or sit on the spool. Then the teacher figures are supposed to march the children around and to teach them. A single game of this kind will occupy all the children's spare time for a week.

Our Fashion Department.

All Patterns, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10c each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want, and inclose 10c for each number. We agree to fill all orders promptly and guarantee safe delivery.

Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1838—Ladies' combination corset cover and underskirt. Cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3⅞ yards of 36-inch material for a 36-inch size.

1556 Blouse-1558 Skirt—A jaunty trim middy suit. The patterns are cut in 4 sizes: 14, 16, 18 and 20 years. It requires 3½ yards of 36-inch material without the cuff. The cuff requires 1¼ yards for a 16-year size. The blouse requires 2⅝ yards of 44-inch material. Two separate patterns, 10 cents for each pattern.

1715—Ladies' apron with or without sleeve in either of two lengths and with collar, or with neck edge in square outline. The pattern is cut in 3 sizes: Small, medium and large. It requires 3½ yards of 36-inch material for a medium size with sleeves; without sleeves, 6 yards.

1821—Ladies' kimono. The pattern is cut in 3 sizes: Small, medium and large. It requires 7⅝ yards of 36-inch material for a medium size.

1520—Girls' dress with or without belt, and with sleeve in either of two lengths. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3¼ yards of 36-inch material for a 6-year size.

1660—Ladies' house or home dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7 yards of 36-inch material for a 36-inch size.

1846—Girls' dress with or without bolero. Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3½ yards of 36-inch or wider material, for an 8-year size.

1824—A stylish dress. The pattern for this model is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 7¾ yards of 44-inch material for a 36-inch size.

1725—A simple stylish skirt. The pattern is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 3⅞ yards of 44-inch material for a 24-inch size.

1840—A new jacket suit for mother's boy. Cut in 4 sizes: 4, 5, 6 and 8 years, and requires 3 yards of 44-inch material for a 5-year size.

1848—Girls' coat with raglan sleeve. Cut in 7 sizes: 2, 4, 6, 8, 10, 12 and 14 years. It requires 2⅝ yards of 44-inch material for a 6 year size.

1692—Ladies' shirt waist with sleeve in either of two lengths. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 3½ yards of 27-inch-material for a 36-inch size.

International Sunday School Lesson.

Lesson for September 3, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Paul, the Hero.

LESSON TEXT—II Cor. 11:21-12:10.

GOLDEN TEXT—My grace is sufficient for thee; for my power is made perfect in weakness.—II Cor. 12:9.

This letter raises interesting questions for research and discussion, such as:

1. What is the difference between Paul's heroism and that of a soldier? 2. Is war essential to the development of heroism? 3. Which courage is higher, moral or physical?

I. Paul, the Hero (11:21-22). To a man of a sensitive nature, craving perfection, sarcasm stirs up the deepest bitterness of the soul. We do not believe Paul primarily desired to refuse these false charges—they were unworthy of him—but the knowledge of his sufferings for the cause of Christ and the truth of the gospel would augment his power to serve the church. For the sake of those whom he had reclaimed from heathenism he was willing to seem to be boasting. Literally he says: "I speak by way of disparagement (of myself) as though we had been weak," yet he adds: "Whereinsoever any is bold, I am bold also." Paul had as much to boast of as any one of his Jewish opponents (v. 21). "Are they Hebrews? (Of the purest blood, of one nation and language?) So am I." Are they Israelites, worshiping only one God? Are they of the seed of Abraham, inheritors of the ministry of the promise and Messianic hope and the kingdom of God? Are they ministers of the Messiah, seeking to bring all men into his kingdom? "I speak as a fool. I speak as one beside himself. I am more." In labors he was more abundant; he had occupied a larger field with greater results. In stripes above measure—those inflicted by the heathen were not limited to forty blows—besides other beatings referred to in this list. In prisons oft (Acts 16:23). Frequently exposed to death and to the perils of robbers by land and see (v. 24). "Five times I received forty stripes, save one, from the Jews" (v. 25). "Thrice was I beaten with rods: once was I stoned" (Acts. 14:19). "Thrice I suffered shipwreck," evidently not recorded in Acts, for his shipwreck on the way to Rome was later. "A night and a day in the deep," this not otherwise recorded. "In journeyings often," suffering from the perils of hard travel, often on foot in uncivilized regions. "In perils of water," literally "in rivers." Bridges were rare and floods sudden and frequent. "In perils of robbers." Every road in Asia Minor then as now was infested with robbers. "In perils of his own countrymen;" "In perils by the Gentiles;" "In perils in the city;" "In perils in the wilderness;" "In perils in the sea" from storms, rocks, pirates; "In perils among false brethren"—Judaising teachers who were self-seeking instead of making the gospel first (Gal. 2:4; II Cor., 11:13). "In weariness and painfulness," literally in labor and travail; "In watchings often;" repeated night of sleeplessness due to anxiety or pain. "In hunger and thirst, in fastings often," hunger unsatisfied for a long time. "In cold and nakedness;" in the mountain passes badly shod and badly clothed. Besides these things which were without, innumerable other trials such as the care of or anxiety over the churches (vv. 32, 33).

II. God's Sustaining Grace (12:1-10). To Paul God gave one of the greatest tasks ever committed to man, viz., the planting of the gospel in heathen lands; founding churches; teaching them the gospel truths of the Lord Jesus. He wrote to these churches two-fifths of the New Testament, thirteen of its twenty-seven books, and this work was accomplished under the greatest difficulty, trials and suffering. To sustain and guide, the Lord gave him "visions and revelations" (v. 1). These revelations came to him from the very beginning of his Christian life and continued in every great crisis. The first was given at his conversion, twenty years before this letter was written, when he saw Jesus in His glory and received his marching orders. (Again (vv. 2-4), fourteen years before, or about A. D. 43, when he was in Antioch and first entered upon his foreign missionary work. He obtained his gospel directly from the Lord. Subsequently he had other visions to sustain and guide him.

Teachers ought to study this entire section, beginning at chapter 10. Paul says that as an apostle he did not labor in the fields of others (10:14-15).

He was not much concerned by what his enemies might say.

As to his opinion of them, read chapter 10. Ashamed to boast, yet for their sakes he meets their foolish charges by giving us this record.

Because of these sufferings (v. 10) he takes pleasure in infirmities, reproaches and persecutions; "For when I am weak" (in my own strength) then I am strong through Christ who strengthens me."

He may be a fool in glorying, compelled to as he had been, yet his work had been accompanied by the signs of an apostle, and he was not to be behind the very chiefest, although himself he was nothing.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

(Copyright Rand McNally & Co.)

PART III. "Prince Charlie"

CHAPTER I—Continued.

Her independent, curious spirit and youthful vitality were a sort of tonic to him, and as he grew better he accepted her invitation to visit the ranch, and from that time on the grizzled head and still athletic frame of the old fellow were not strange to the Hardy household. He was there as often as was consistent with the weather in the hills and almost seventy years of braving their hardships; for of late years MacDougall did not range widely. His traps could find too many nooks near home for mink, lynx and the black bear, and from the Kootenai tribes on the north he bought pelts, acting the trader as well as the trapper; and twice a year making a trip to a settlement to dispose of his wares, with horses from his Indian neighbors to transport them with.

Rachel learned that for forty years he had followed that isolated life—moving steadily farther west or farther north as the grip of civilization made itself felt behind him; and he felt himself crowded if a settler's prairie schooner was sighted within twenty-five miles of him. The girl wondered, often, the cause of that self-exile, but no word or sign gave her any clew. He had come from the eastern highlands of Scotland when less than thirty years old, and had struck out at once for the extreme borders of civilization in America; and there he had remained—always on the borders—never quite overtaken.

"It will be but a few more stands I can make," he would say to her sometimes. "Time is little content to be a laggard, and he is running me close in a race he has na a doubt of winning."

With advancing years, the barrier, whatever the foundation, that he had raised between himself and the world was evidently weakening somewhat; and first through Genesee, and now through this girl, had come a growing desire for intercourse with his own race once more. And much teasing did the girl get in consequence of the visits that by the family in general were conceded to belong to Rachel in particular, teasing, however, which she bore with indifference, openly claiming that the stronger interest was on her side, and if he forgot his visits, she would certainly go herself to Scot's Mountain to learn the why and wherefore. This she did more than once, through the season, when indoor life grew at all monotonous; sometimes with Jim as a companion, and sometimes with Kalitan trotting at her mare's head, and guiding very carefully Betty's feet over the dangerous places—Aunty Luce always watching such a departure with prophecies of "Miss Rache's sca'p a-hangin' round the neck o' that red nigger some o' these days, I'm a-tellin' yeh!"

Despite prophecies, Kalitan proved a most eager and careful guardian, seeming to feel rather proud when he was allowed to be her sole compan ion.

Sometimes he would say· "S'pose you hear where Genesee is—may be?" and at her negative he, like a philosopher of unlimited patience, would content himself with: "Sometime he sure come; s'pose waum illihie"—waum illihie meaning the summer time; and Rachel, noting his faithfulness to that one idea, wondered how many seasons his patience would endure.

At last, about the middle of April, he stalked into the ranch door one morning early, scaring Aunty Luce out of her seven senses, or as many extra ones as she laid claim to.

"Rashell Hardy?" was all he deigned to address to that personage, so inborn in the Indian is the scorn of a slave or those of slavish origin. And Kalitan, who lived almost entirely with his tribe, had many of the aristocratic ideas of race that so soon degenerate in the Indian of the settlements or haunts of the white man. Once Aunty Luce, not understanding his ideas of caste, thought to propitiate him with some kindly social inquiry as to the state of his health and well-being, and had beat an ignominious retreat to the floor above at the black look of indignation on his face at being questioned by a slave. When Rachel took him to task for such a ferocious manner he answered, with a sullen sort of pride: "I, Kalitan, am of a race of chiefs—not a dog to be ridden by black blood;" and she had noticed then, and at other times, that any strong emotion, especially anger, gave an elevated tone and manner of speech to him and his race, lifting it out of the slurred commonplaces of the mongrel jargon—a direct contradiction of their white brother, on whom anger generally has an effect exactly contrary. After that one venture of Aunty's at timorous friendliness, she might have been a dumb woman so far as Kalitan ever had further knowledge; for her conversations in his presence were from that date carried on entirely in pantomime, often to the annoyance, though always to the amusement, of the family.

Kalitan's abrupt entrance and query that April morning was answered by a comprehensive nod and wave of pudgy black hands toward the sitting room, into which he walked without knocking—that, also perhaps, being deemed a prerogative of his lordly race.

"Why, Kalitan, so early!" said Rachel in surprise. "Are you trying to outrun the sun? What is it?" For her eyes, accustomed to the usual calm of his countenance, recognized at once that some new current of emotion was struggling for supremacy in him that morning. He did not answer at once, but seated himself in impressive silence on the edge of one of the settees, and after a dramatic pause that he considered a fitting prelude to the importance of his communication, he addressed himself to Rachel—the only woman, by the way, whom he was ever known to meet or converse with on terms of equality, as Indian chivalry does not extend to their exaltation of the gentler sex.

"Rashell Hardy," he said, in a mingling of English and Chinook, "I, Kalitan, the Arrow, shoot to the south. Genesee has sent in the talking-paper to Ole Man Mac that the Reservation Indians south have dug up the hatchet. Genesee is taking the trail from the fort with rifle and many men, and he wants an arrow that can shoot out of sight of any other; so he wants Kalitan."

And having delivered himself of this modest encomium of his own worth, there was a stage-wait of about a minute, that might have been relieved by some words conceding his superiority, but wasn't. Rachel was looking out of the window as if in momentary forgetfulness of the honor done her in this statement of facts. Kalitan rose to his feet.

"Ole Man Mac come down valley, may be, in two days. I stop to tell you, and say like white man, klahowya."

And with the Indian word of farewell he turned to the door, when Rachel stopped him.

"Wait, Kalitan," she said, holding out her hand to stop him. "You are going south into the hostile country. Will the Arrow carry a message as it flies?"

"Let Rashell Hardy speak. Kalitan is swift. A message is not heavy from a friend."

"That is it, Kalitan; it is to your friend—Genesee."

"Rachel!" ejaculated Tillie, who had been a silent auditor to this queer little scene, with its ceremony and its ludicrous features—ludicrous to any not knowing the red man's weakness for forms and a certain pomposity that seems a childish love of display and praise. But Rachel never ridiculed it; instead, she simply let herself drop into his tone and thus enhanced very much his opinion of her. And at Tillie's voice she turned impatiently.

"Well, why not?" she asked; and her combative air at once reduced Tillie to withdrawing as easily as she could from the discussion.

"But, dear, the man's reputation! and really you know he is nothing we thought he was. He is scarcely fit for any lady to speak to. It is better to leave such characters alone. One never can tell how far they may presume on even recognition."

"Yes? After all, Tillie, I believe you are very much of the world worldly. Did he stop to ask if I was entirely a proper sort of person before he started to hunt for me that time in the Kootenai hills?"

"Nonsense! Of course not. But the cases are totally unlike."

"Naturally. He is a man; I am a woman. But if the cases were reversed, though I might preserve a better reputation, I doubt much if, in some respects, I should equal the stubborn strength of character I have seen that man show at times."

"Oh, I might have known better than to advise you, Rachel, if I wanted to influence you," remarked Tillie helplessly. "You are like an Irishman, always spoiling for a fight, and hunt up the most ridiculous, impossible theories to substantiate your views; but I am so disappointed in that man—he seemed such a fine fellow. But when we are assured of our mistake it is time, especially, Rachel, for a girl, to drop all acquaintance with him."

"I wish I was not a girl. Then I would not have to be hedged in forever. You would not think it so terrible if Hen or Ivans, or any of the men, were to meet him as usual or send word to him if they chose."

"But that is different."

"And I am sick of the differences. The more I see the narrowness of social views the less I wonder at old MacDougall and Genesee taking to the mountains, where at least the life, even the life's immoralities, are primitive."

"Primitive! Oh, good Lord!" ejaculated Tillie in serio-comic despair. "What would you suggest as an improvement on their simplicity?"

And then, both being rather good-natured women, the absurdity of their vehemence seemed to strike them, and looking at each other for a second, they both burst out laughing.

All this time Kalitan stood, showing his silent disdain of this squaw "wauwau" with the impassive gaze that went straight over their heads at the opposite wall, not seeing the debaters, as if it were beneath his dignity to open his ears to their words. In fact, his dignity had been enhanced several degrees since his visit to the ranch, some ten days before—all because of that "talking-paper," no doubt, that had come from the Fort, and his full Indian dress—for he would scorn to wear the garb of his father—was decked with several additional trinkets, borrowed or stolen from the tribe, that were likely to render his appearance more impressive.

And Rachel, glancing at him, was reminded by that manner of dignified toleration that she had kept him waiting no doubt five minutes—and five minutes in the flight of an arrow is a lifetime.

"Tell Jack Genesee," she said, turning to him in complete negligence of arguments just used, "that Rachel Hardy sends to him greetings—you understand? That she is glad to hear where he is; a soldier's life is a good one for him, and she will always have faith in his fighting well, and trying to fight on the right side. Is that message much to remember?"

Kalitan poetically answered in Chinook to the effect that his heart was in his ears when she spoke, and would be in his tongue when he met Genesee, and with that startling statement he made his exit, watched by Aunty Luce from the stairs on which she had taken refuge.

"You are a queer girl, Rache," said Tillie as Rachel stood watching the gaily-decked, sinewy form as it broke into a sort of steady trot, once outside the gate, and was so quickly out of sight down the valley.

"Am I? Try and say something more original," she suggested.

"I believe you would make a good missionary," continued Tillie debatably. "Your theory of civilizing people seems to be all right; but while it may work capitally with the savages born in heathendom, I fear its results when applied to enlightened mortals who have prefered dropping into degraded lives. Your laudable energy is likely to be wasted on that sort of material."

"What a learned diagnosis for you to make, my child," said Miss Hardy approvingly. "Aunty Luce confided to me she was going to make a 'batch' of sugar cookies this morning, and you shall have the very first one as a reward for delivering your little speech so nicely."

(To be continued.)

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Heavy Losses From Infectious Abortion.

Prompt Measures Must Be Adopted to Stamp Out This Dread Disease---Owners May Treat Their Own Stock---By R. C. Mills.

UNDER the term "infectious abortion" are included those cases which occur in otherwise healthy mothers, as a result of external infection producing inflammatory lesions of the uterine mucous membrane and of the fetal membrane. It usually occurs in an enzootic form.

Infectious abortion occurs most frequently in cattle breeding establishments, more seldom in studs and in the breeding of sheep and swine. The stable-fed, finer-bred animals are especially affected, but the infection may become widely spread in range animals. The introduction of the disease into large cattle herds causes heavy losses, because of the fact that a number of valuable calves perish and because of the decrease of the milk production; moreover, the cows conceive only with difficulty after abortion or not at all.

Natural infection may take place from the external genitals. Most frequently it is transmitted during copulation by males, who have previously covered infected females. On the other hand, the straw and floor of stables become contaminated with the vaginal discharge during and after abortion by the amniotic fluid and the fetal membranes, which contain enormous numbers of bacilli, whence the contagion may likewise penetrate the genital organs; at the same time, the infection may be introduced by various objects, such as sponges and other utensils and also by attendants.

The possibility of an intestinal infection in cows, goats and sheep by the indigestion of food and drinking water contaminated with amniotic fluid and afterbirth, was proven beyond a doubt by the successful experiments of certain scientific men and this mode of infection should be considered as the natural infection more often than has heretofore been the case. Especially does it play an important part where the malady spreads rapidly on a farm.

In cattle establishments free from the infection the virus is usually introduced by an already infected female, who during abortion infects the stable, and during copulation infects the male. The infection then spreads on this particular farm with every favorable opportunity, since the first cases of abortion or premature birth are given little attention, as they are followed by new cases only after a considerable period and consequently the necessary measures to eradicate the disease are omitted. The introduction of the disease can also be accomplished by means of animals that suffer from a chronic uterine catarrh subsequent to abortion, and also rarely by animals that in spite of their being infected carry the fetus the full term. More seldom is the disease introduced by males that have recently been covering animals on infected premises, and likewise also by new-born animals from such farms. The infection spreads, as a rule, only among animals of the same species. At times, however, animals of other species are attacked.

Cows are more likely to abort in the fifth or sixth month of pregnancy, mares in the fourth to eighth month, sheep in the fourth month and swine in the eighth to twelfth week. At times abortion takes place in an earlier or later period of pregnancy.

The abortion is usually preceded by a catarrh of the genital passages. With the moderate swelling of the lips of the vulva the vaginal mucous membrane becomes reddened and reddish nodules, like millet seed in size, appear on its surface. At the same time there appears from the vagina a mucous or muco-purulent, exceptionally bloody and always odorless discharge which in cows is reddish-gray or yellowish, in mares, and sows whitish-gray in color. The milk production becomes simultaneously diminished, the milk having a colostrumlike appearance and coagulating on boiling.

Two to three days after the appearance of the first catarrhal symptoms the abortion usually takes place with moderate pains and with mild general manifestations. Should the abortion occur in an early period of gestation the fetal membranes are expelled together with the fetus. On the other hand, in abortions taking place at a later stage of gestation the afterbirth is passed off subsequently to the fetus, and it is not a rare occurrence to have it retained for some time. Following the abortion a continuous vaginal discharge is always observed for one or two weeks. The secretion, which is then dirty brown or reddish-brown, odorless, or somewhat fetid, may accumulate in the uterus and from time to time be discharged under straining. Gradually the discharge becomes diminished and finally it disappears entirely. Still in spite of their otherwise healthy appearance the animals either do not conceive, or if they abort at an earlier or later stage of gestation, and in rare cases this may be repeated more than once. Abortion reappears, as a rule, in cases when copulation occurs shortly after the first abortion or when the vaginal discharge was still present, whereas in cases where copulation occurs several months after the abortion normal births are more likely to follow.

Fetuses aborted at early periods of gestation are usually dead. Those, however, that are expelled at a later period are not seldom born alive. Poorly developed fetuses mostly die within one or two days, with manifestations of intestinal catarrh.

Infectious abortion often persists for years in infected premises when proper means for its suppression are not taken. After the first case of abortion new cases appear, as a rule, only after several weeks, then, however, they follow each other in more rapid succession and finally normal births occur only exceptionally. After a time, however, the cases of abortion become more rare, as animals which have already aborted once or twice again give birth at the normal termination of pregnancy, and only the newly introduced young cows or newly purchased animals from healthy herds abort, until finally the disease dies out of its own accord.

For suppressing the disease after it has appeared in a herd, first of all change all the remaining apparently healthy female animals which have never aborted to a place away from the infected district. If this cannot be accomplished under existing conditions it is at least advisable to keep the already infected and suspected animals in another stable, or at least in an isolated part of the same stable and to supply special attendants for them. Subsequently it is necessary after removing the remnants of food and straw in these parts to disinfect the entire infected stable thoroughly and repeatedly, the floor and walls as well as the stable utensils, in addition to which the external sexual organs of the pregnant animals should be washed daily with a non-irritating antiseptic solution and their vaginas should also be irrigated. In the meantime these animals should be subjected to careful observation and those in which prodromal symptoms of abortion are noticed should be isolated immediately and their stalls disinfected. At the same time it must be taken into consideration that the vaginal discharge has possibly already contaminated the litter and food.

The expelled fetus, together with the fetal membranes and afterbirth, should be burned, or at least scalded and buried deeply. If remains of the fetal membranes were retained in the uterus it should be attempted to remove them soon, if possible in the course of two or three days.

Males which have covered affected females, or in which there is a suspicion in this direction, should be subjected to treatment by cutting the hair short at the opening of the sheath, the prepuce sack should be washed with a ½ to 1 per cent solution of lysol or 1 per cent soda solution, and following each covering the washing should be repeated with pure lukewarm water or with one of the fluids mentioned. In sheep and swine herds where this is accompanied with difficulties it is advisable to suspend breeding for a certain time.

The treatment of animals which have aborted consists in irrigation of the vagina and uterus with lukewarm antiseptic fluids, by means of an irragator, the soft rubber tube of which should be introduced deeply into the uterine cavity. For disinfecting fluids, which are also satisfactory for washing the surrounding parts of the vulva, freshly prepared corrosive sublimate in rain water, 1:8,000—10,000 (should not use stronger) 1-2 per cent creolin or lysol solution, 1-2,000 permanganate of potassium solution, may be used, of which large animals receive three-fourths of a quart, small animals one-half quart each.

This treatment should be continued at first one to two times daily, later every two or three days, until the discharge has ceased for several days. After the conclusion of the procedure it is advisable to keep the animals separated for several weeks and to breed them again, not earlier than two months after the abortion.

In order to prevent the introduction of the disease from outside, newly purchased pregnant animals should be observed carefully and should be kept isolated until calving; further, animals with symptoms of a uterine or vaginal catarrh should not be bred at least until completely recovered. The association with persons who are employed in infectious premises should also be limited as far as possible. In male animals which have served on these premises it is advisable to disinfect the prepuce and the penis before the act of covering. Furthermore, each case of abortion should be treated as if it were an infectious form of the disease and particularly does this appear to be necessary in those cases where the abortion occurs under the above described manifestations even in a herd which has been known to be free of the affection.

Females which have aborted one or more times should be disposed of only if they fail to conceive after a subsequent covering, provided that they have received suitable treatment. By keeping pregnant animals the disease will be brought to a standstill more quickly than if new susceptible material is continually added in their place.

This method carried out accurately invariably succeeds. It is doubtful if abortion in infected animals can be prevented, but infection of healthy animals can be prevented.

The use of an anti-abortion vaccine is claimed by some to get results, while others claim little, if any, good comes from its use. It might be worthy of a trial, however.

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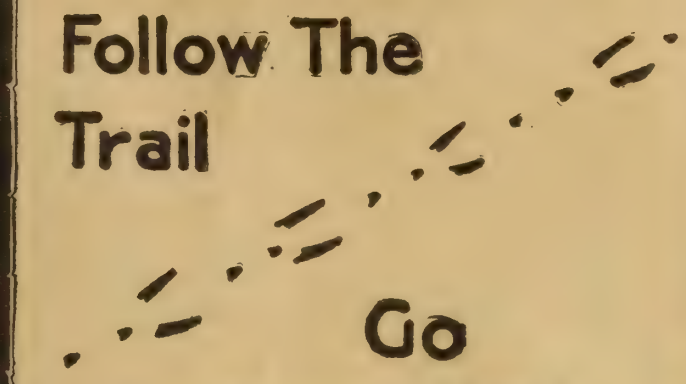

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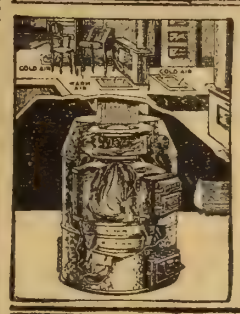

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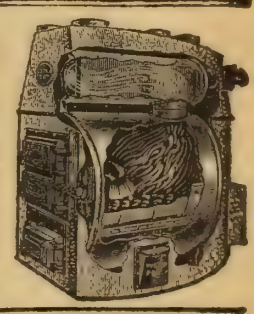

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Wisconsin State Fair Horse Sale.

THE offering of Percheron and Hackney horses to be sold at the Wisconsin State Fair horse sale on Friday, September 15th is attracting the attention of horse breeders and farmers in all parts of the state. Wherever the writer goes he is asked about the horses to be sold, and is pleased to be able to say that he has seen many of them. It is impossible to go into detail in regard to all of the horses, but in general we are able to state that it is a high-class offering. Fred Pabst, Oconomowoc, Wis., is consigning four Percheron stallions and fourteen Hackney stallions and mares. The Percheron stallions are all yearlings except one two year old and all black in color. The two year old named King Coco, is a blocky, heavy-boned horse with a close coupled back, good hips and good head and chest. He is by the imported stallion, Journal, that sold for $2,000, and his dam is the imported mare, Heroine. The yearling stallion, Dan Dandy, another son of Imported Journal, is a toppy individual. He has plenty of middle, heavy bone and has what many Percherons lack, a very good set of pasterns. He is an extra good mover. The other two yearlings are by Imported Journal and Royal. The Journal colt is out of a dam of Baccarrat breeding that sold for $5,000 to Kellog, of Green Bay. The Edgewater Stock Farms are consigning nine head, two Percheron stallions, eight Percheron mares and one trotting stallion. This is a really high-class lot of animals and seven of them are entered for the show ring at the state fair. Several other breeders are consigning some exceptionally good stallions and mares that our readers are advised to inspect. Among these are several head from the Welch Farm, Ripon Wis.; E. E. Rosencranz, Oconomowoc, Wis., is consigning an extra good imported stallion that you do not want to miss. Dopp Bros., Ixonia, are consigning a toppy stallion and several others are consigning a few. The Hackneys being consigned by Mr. Fred Pabst are high-class animals and no farmer or lover of a good driving horse should fail to be at the ring side when these horses are sold. Do not leave your check book home either, for you will have an opportunity to buy a fine driving horse at a price any lover of a good horse can afford to pay. No farmer should be without a good driving team, regardless of whether he has an automobile or not, as it costs no more to keep a good team than a poor one. Send for a catalog of the sale, which will give pedigrees, pictures and descriptions of the animals. Catalogs may be obtained by writing to Fred Pabst, Route 30, Oconomowoc, Wis., manager of the sale. See page 22.—Adv.

King Defender the Grand Champion.

THERE was a great showing of Duroc Jerseys at the Janesville big fair and King Defender, the 940-pound Duroc boar was an easy winner in the aged class and was made grand champion of the breed. This boar was recently sold to John L. Fisher, who showed him at this fair. This boar is a wonderful sire and it was for no fault of the boar that caused B. W. Little, Janesville, Wis., to sell him, but in view of the fact that he had so much of his get he thought it advisable to sell him when he was offered a good price. Mr. Little has some great Durocs on his farm, in fact he has some spring pigs as good as the writer has seen and as far as the breeding goes you need not be afraid of that. Many of the pigs are by King Defender he by Ohio King and his dam was by that great breeding son of Defender, Defiance. You'll like the pigs by this boar and it is worth something to have a boar at the head of your herd that is by a grand champion. If you can't use this breeding Mr. Little has some outstanding spring pigs by Critic Top Notcher. This boar comes from a line of breeding that is most popular in Nebraska. Sired by Dusty Critic 2d, that was the sire of Critic B., the Nebraska grand champion of 1914 that in turn was the sire of Critic D., the 1915 grand champion of the same state. This makes Mr. Little's boar a half brother to Critic B. This is new breeding for Wisconsin and is a good strain. Write this good breeder for his prices on gilts and boars. Don't fail to mention this publication. See page 24.—Adv.

Some Good Chester White Pigs.

AT Art G. Hoskins' (Dodgeville, Wis.) we found a few litters of as good Chester Whites as it has been our pleasure to see. This breeder has one litter of March 24th farrow that are "killers." They have great length, good bone and with proper care they will have plenty of scale at maturity, for they are larger now than many March 1st pigs we have seen. The second choice litter are equally as good, though not quite so large at this time, but Mr. Hoskins says that they will be just as large in six months, for he knows what the pigs from this certain sow have done for him before. He has other litters that came about the first of April that are coming fine and he will certainly have a grand lot of boars and gilts to offer the trade. Here is a good chance to get a herd boar, they look good to us and we think you will like them if you order one. Don't be afraid to order by mail from this breeder, he will handle it in an honorable manner. Mr. Hoskins also has a herd of milking Short-horns and at a later date he will have something of this breed to sell. Your mail will be promptly answered. Please mention The Wisconsin Farmer when writing for breeding and prices. See page 24.—Adv.

Excellent Short-horn Trade.

WE have just received the list of recent sales made by J. E. Kennedy, owner of the beautiful Oak Lawn Farm, Janesville, Wis., and the home of some of the best Short-horns in the country. He reports the following sales: One bull to Dan McCollouch, Winnebago, Ill.; one bull and two heifers to Russell Clark, Clinton, Wis.; six heifers to C. P. Coolridge, Winnebago, Ill.; one bull to B. W. Little, Janesville, Wis.; eight bulls to Gerauld D. Arnold, Galesville, Wis.; one heifer and one cow to James Guernsey, Elkhorn, Wis.; three bulls to E. D. Drake, Alexander, N. D.; one bull to Theo. N. Mathias, Greenland, Ark.; one cow and calf to Ernest Damann, Farmington, Minn.; one cow and calf to F. J. Damann, Farmington, Minn.; one bull to E. J. Parker & Son, Janesville, Wis.; six cows and ten yearling heifers to F. J. Derby, Ward, Ala.; eight cows to D. B. Smith, Mission Hill, S. D. If you want Short-horns you can find them on Oak Lawn Farm. He has a large assortment and the prices quoted are attractive. If interested, write for further information.—Adv.

Borchardt & Son, Duroc Jersey Breeders.

WE recently looked over the Duroc herd owned by John Borchardt & Son, Richland Center, Wis. This herd is not large, but they have a few extra good spring pigs both boars and gilts. The pigs have great length and we believe they will be large at maturity. They are sired by Richland Defender, a very well-bred yearling boar and a good individual. He is sired by Defiance and his dam was by that sire of big ones, Marion's Wonder. One couldn't ask for a better pedigree. Some of the dams trace to Cook's Defender and they are good brood sows. Boars and gilts of spring farrow are being offered and the prices asked are not high. Write the above mentioned firm for particulars and mention The Wisconsin Farmer. See page 24.—Adv.

Metzler's Jerseys.

WHEN we dropped in to see the Jersey herd of Lorenz Metzler, New Franken, Wis., last week we were very much pleased to see such a fine herd. He has been breeding for a number of years and has some forty head. The cows and heifers are of the large, roomy American type, with big, evenly-balanced udders and good teats. They are largely of the Scribner breeding, of the St. Lambert family. He is now offering a few heifers and yearling bulls for sale sired by Hutzeland King, a grandson of King of St. Lambert's King. The bulls are especially good individuals having good spring of rib and good depth. Mr. Metzler is also a breeder of Poland China swine and is offering spring pigs of both sexes for sale at reasonable prices. You will not be disappointed if you buy of this breeder. See page 22.—Adv.

Reports Activity in Holstein Sales.

E. E. ROSENCRANZ, Oconomowoc, Wis., whose advertisement appears on page 23, reports the following sales during the last few weeks: The young bull, Sir Nonesuch Ormsby, to Edward Kummrow, Oconomowoc, Wis.; Sir Ormsby De Kol to Davy & Son, Oconomowoc, Wis.; Champion Ormsby to Nordean Groth, Ixonia, Wis.; three cows, Colantha Nonesuch, Canary Pride De Kol and Oakside Johanna Fayne, to Frank J. Lehman, Watertown, Wis. Mr. Rosencranz has only two young bulls left which he is able to spare from his herd.—Adv.

Fond du Lac County Jersey Breeders' Sale.

THE first annual consignment sale of the Fond du Lac County Jersey Breeders' Association will he held Tuesday, September 26th, at Brandon, Wis. Fond du Lac county has long been known as the home of many of the best Jersey herds in the West, in fact among th best in the United States. Not only have these herds been known for their high production ability, but their winnings in the big Jersey show rings have proven that they rank second to none in type and conformation. The Jersey Breeders' Association has now become so strong and so large, that they are able to make a very creditable showing in this their first public consignment sale. Among the consignors are the following: Ed Bruins, Fairwater, whose show herd the past year, won very heavily at all the leading state fairs and dairy shows in the middle West. His herd is largely of imported and the best American strains. Register of merit work has been and now is being carried on and very creditable records made, combining in his animals high production ability and the best obtainable type and conformation. J. H. Dixon, Brandon, Wis., who is recognized all over the United States as a master breeder and judge of Jersey cattle. His herd represents the best in breeding, no expense or labor being spared in getting the best obtainable. The winnings of his herd during the past ten years are proof positive that his animals are of ideal Jersey type. C. A. Peterson, Rosendale, the well-known Duroc and Jersey breeder is consigning a few. There will also be a number from the Smith herd at Princetor, Wis., and several others of the smaller breeders of the county are consigning a few. Catalogs giving pedigrees, pictures and description are being issue and will be sent on application to the secretary of the association, C. A. Peterson, Rosendale, Wis. We advise our Jersey readers to send for a catalog and to plan to attend this sale, as it is an offering going a long way to see. When writing for catalogs kindly mention that you saw their advertisement and this write-up in The Wisconsin Farmer. See page 21.—Adv.

Berkshires in Demand.

THERE is an increasing demand for Berkshire swine, and breeders are reporting very favorable sales. W. A. Freehoff, Waukesha, Wis., reports a sale made recently through his advertisement in The Wisconsin Farmer of a fine young boar to Henry Stuttgen, Stanley, Wis. Mr. Stuttgen we understand is also a breeder of registered Berkshires, and we congratulate him on securing so good a herd header.—Adv.

Fisher Buys Giant Boar, King Defender.

JOHN L. FISHER, of Janesville, breeds big Durocs, and he simply cannot live without a big boar. Recently he sold his great boar, Gold Bond, to D. B. Smith, of Mission Hill, S. D., and immediately started on a hunt for another big boar to take his place. After looking around the country he came back home and purchased King Defender from his neighbor and fellow breeder, B. W. Little, of Janesville. King Defender is some big boar. He weighs 940 pounds and is going to be at the Wisconsin State Fair. If you want to see a real big Duroc, Fisher invites you to call around and see this boar when you are at the fair. He also will have some fine fall boars and spring boars on exhibit at the fair. If you want anything in the line of Durocs don't fail to see his exhibit or write him. See page 24.—Adv.

Big Col. a Wonderful Individual and Sire.

WHEN the writer saw Big Col., the great boar owned by Geo. H. Willsie, Prosper, Minn., in the spring, he was very thin, but at that time we considered him one of the best aged boars in the Northwest. We had occasion to be at Prosper again in August and now that the boar is in good condition we even like him better than ever. He is the best King the Col. boar in Wisconsin or Minnesota and the writer has only seen one boar of this breeding that can be considered his equal and he is owned in Nebraska. We tried to prevail on Mr. Willsie to show this boar at the state fairs, but at this late date he did not feel that he could get him in show condition by fair time. He will be shown at LaCrosse and unless we are mistaken he will cause trouble. Big Col. is big—he can be classed as a 1,000-pound boar, and he has the quality and other good points to go with it. Not only is he a good individual, but he is also siring a uniform lot of big, stretchy Durocs. The boars that Mr. Willsie will sell in his October 19th sale will please the most critical. There will also be some by Chief Defender, a litter brother to Disturber, being sired by old Defender, and out of the great brood sow, Lucy Wonder 112th. We still say that no breeder has two better boars than can be found in this herd. Don't forget that this will be a good place to buy boars in October. Send him your name and address so that when the time comes you will be sure to get one of the sale catalogs. It will contain some great pedigrees. Mention The Wisconsin Farmer when writing. See page 24.—Adv.

High-Production Holstein Blood.

THAT the ability to produce a large flow of milk and large butter records is transmitted from one generation to another has been demonstrated in the pedigree of a young bull advertised for sale on page 23 by Earl A. Paddock, Elkhorn, Wis. The dam of this bull is Flora Hesseltje. At seven years of age she made 25.73 pounds of butter in seven days. Her dam, Aaggie Hesseltje De Kol, made 25.23 pounds. Her sister from the same dam made 23.73. Her dam's sire, Prince Hesseltje De Kol, has seven tested daughters and all of them are heavy producers. Three of them have records of 26.93, 26.20 and 25.23 pounds and the other four all have records over twenty pounds. The sire of the bull for sale is Canary Paul Fobes Homestead whose dam made 34.96 pounds butter in seven days and recently topped the great sale in Detroit, Mich., selling for $4,600. The dam of Canary Homestead is a daughter of Homestead Jr. De Kol, that has seventy-one A. R. O. daughters, six with records from thirty to 35.55 pounds butter in seven days and thirty-one others from twenty to 29.55 pounds. It will be seen from this that the high-production has been consistently transmitted from generation to generation, and there is every indication that this bull will transmit it to his daughters, as it has been bred into him on both sides. For further information in regard to this bull write to the above address.—Adv.

Jumbo's Equal 2d Grand Champion at Janesville.

THE attraction in the Poland China division of the Janesville Big Fair was the Poland China boar, Jumbo's Equal 2d, owned and exhibited by C. S. Flesch, Mt. Ida, Wis. When it comes to a big-type boar, Jumbo's Equal 2d, is the real thing. If any of the "small type" men say they can show more quality than this boar possesses they will have to go some. We consider this boar one of the best in the state and we know that the owner has been offered a good price for him, but he thinks he is worth as much to him as any other Poland China breeder. This boar may be shown at the state fair, but as yet Mr. Flesch has not decided. Not only is he a show boar, but he is a sire as well and the pigs by him compare favorably with any we have seen in the state. Get in on the ground floor and get a son of Jumbo's Equal 2d. Mr. Flesch's post office is Mt. Ida and shipping point, Fennimore, Grant county, Wis. Don't fail to mention The Wisconsin Farmer. See page 24.—Adv.

Lawson Sells Many Guernseys.

GUERNSEY cattle have been selling very well during the last two months. In a letter dated July 16th, W. A. Lawson, Rosendale, Wis., reports the following sales: Elmway's Prince to Lawson Farm Company, Rosendale, Wis.; Elmway's Buoy to Levi Randall, Rosendale, Wis.; Elmway's Baron to F. Arenz, Fond du Lac, Wis.; Avis of Elmway to William Kurtz,

WILL ADVERTISE ALL YEAR.

IT DIDN'T take long to convince George Wenham & Sons, Fort Atkinson, Wisconsin, breeders of Short-horn cattle, that advertising space in The Wisconsin Farmer is a paying investment. They are now among the year-round advertisers in The Wisconsin Farmer. Read their letter:

We have decided to run an advertisement for the entire year in The Wisconsin Farmer, as we feel from the results obtained during the time our advertisement has been running that it will pay us very materially to have our name before the public at all times.

We are convinced that it pays to let people know what we have for sale and that The Wisconsin Farmer is the proper medium for us to use. We recently sold a carload of cows and heifers and a great many bulls at satisfactory prices through our advertisement in The Wisconsin Farmer.

The Wisconsin Farmer will carry Messrs. Wenham's message into more than 90,000 farm homes every week. Let it carry your message, too. Wisconsin Farmer advertisements are result getters.

THE WISCONSIN FARMER, Madison, Wis.
Guaranteed Circulation, 90,000.

Kewaskum, Wis.; Maud of Elmway's Pride to Clover Lawn Farm, Lewistown, Minn.; Belle of Elmway to Clover Lawn Farm, Lewistown, Minn. See Mr. Lawson's advertisement on page 23 for the animals he is now offering for sale.—Adv.

Lice and Disease Prevention.

EVERY farmer should see to it that his hogs are kept free of lice and that the hog buildings are clean and sanitary. Lice are blood-sucking parasites. They drain the vitality of hogs not only by sucking the blood, but by continual irritation which permits no rest. In their weakened condition, hogs are always susceptible to attacks of disease. To rid them of lice, hogs should be dipped two or three times, at intervals of about ten days. The hog buildings should be cleaned regularly and sprayed with a reliable dip and disinfectant to kill the parasites and disease germs. There are many reliable coal-tar dips and disinfectants which will give equally good results at a considerable saving in cost when compared with Cresol Compound. One of the most widely known and used product of this kind, and one which is manufactured by a firm of the highest scientific and commercial reputation, is Kreso Dip No. I. It is a standardized product. This means that every lot conforms to a uniform and dependable strength. Kreso Dip No. 1 has a carbolic acid coefficient of five. This coefficient denotes its relative value as a disinfectant when compared with pure carbolic acid by the method of testing advised by the United States Hygienic Laboratory. For dipping hogs, Kreso Dip No. 1 may be used in a dilution of one part dip to seventy-two parts water and will give as good results as a one to fifty dilution of Cresol Compound, and it costs about one-fourth as much. Used according to directions, it is not caustic, irritating or unpleasant to handle. It will kill lice, mites, fleas and sheep ticks and improve the appearance of the animal's skin. As far as is known, it is the only product of this kind which has been tested on live hogs to determine its value for killing virulent hog cholera virus. Experiments prove that its use in a 2½ per cent dilution will kill virulent hog cholera virus in five minutes by contact. The manufacturers, Parke, Davis & Co., Detroit, Mich., will mail (free) interesting booklets on hog cholera prevention and the care of hogs and other live stock to anyone writing for them. Kreso Dip No. 1, in original packages, may be procured from any drug store.—Adv.

Dobson & Eastman.

WHEN you visit the Wisconsin State Fair this year be sure and visit the Poland China section and see the Dobson & Eastman exhibit from Lancaster, Wis. We recently spent the day with Burlie Dobson and if this firm don't get a few of the blues we will be badly mistaken. They will have out some of the best "under six months" stuff that we have seen and those that know Burlie will, of course, expect to see them fitted to the minute. In a previous write-up we mentioned their junior yearling boar as being the best one of the age we had seen. Two weeks ago this boar became cast in a fence and was not able to get up for two days. Naturally that put him back considerable and injured his hind quarters some. He is improving each day and they are in hopes he will be all right by fair time. We will not take time to mention all the show animals. The writer didn't see their exhibit last year, but we have been told that they have the best show herd they ever exhibited, if that is true some of you Poland China men will have something to shoot at. They will also have a few boars that will be for sale and they are certainly good ones. Mr. Dobson is very anxious to have you visit the pens and get one of the boar sale catalogs. The Grant county Poland China breeders will hold a combination sale at Lancaster, October 10th. The catalogs will be ready at the time of the state fair and if you are interested in Polands you will be interested in this catalog. Watch out for the Dobson & Eastman Poland Chinas. This herd will also be shown at La Crosse. See page 24.—Adv.

Trapshooting.

ONE of the many delightful phases of trapshooting affiliation and one, by the way, which is comparatively new is the Farmers' Community Gun Club. For many years, with the exception of a few individuals in farm sections who would attend an occasional trapshooting tournament, the young men were content to do a little hunting in the fall and winter, feeling that time and distance precluded the possibility of their indulgence in this fascinating sport. Today, however, we see marked changes taking place in this respect. Regularly organized community trapshooting clubs are beginning to dot our farming sections and it is indeed a fine example of American independence; it was not convenient for the farmer to go to those distant traps, so he is bringing the traps to the farm. And what a get-together sport it is! Though they live miles apart they know one another intimately, the general store having been their meeting place for years and during those years each has studied the ability of the other as a rabbit, quail or duck shot, either through hearsay, observation or personal boasting. The gun club, however, leaves no room for argument for the scores stand out in mute judgment and in place of the one-time boasting, arguments and doubt, a wholesome friendly rivalry holds sway. An important part of a gun club is proper equipment. New clubs when selecting their equipment, should specify Winchester guns and ammunition as advertised on page19.—Adv.

Grand Model 21st.

THE only son of the many times grand champion, Grand Model, that we know of in Wisconsin. No family of Duroc Jersey swine has won as many premiums in the West as the Golden Models and practically every good breeder has some Golden Model blood in his herd. Geo. D. Sprain & Sons, West Salem, Wis., have only been breeding registered Durocs for a couple of years, but in that length of time they have made great improvement, and now have some outstanding hogs of this breed. Inasmuch as they bought Grand Model 21st late last fall, they haven't many pigs sired by him for sale, but they have some very choice pigs by other noted boars. They bought several Lee's Defender sows that raised them nice litters sired by Lincoln Model. They have some herd boars by Corrector 2d a son of Corrector, the boar that Atwater used successfully. We believe that you would be pleased with the boar that you would get from this firm. They expect to build up one of the best herds in the state and to enjoy a reputation as breeders of good Durocs, they realize that they must send out only the good ones. They have culled closely and if you place your order with them, you will get a good pig or none at all. They are reserving the best gilts for a bred sow sale to be held the first week in February. Get their prices and when writing please mention this publication. See page 24.—Adv.

Cook's Defender a Good Breeder.

WE recently spent the day at Richland Center, Wis., and while there looked over the Emmett Cook & Son herd of Durocs. When we were there the first time it was early in the spring and the pigs were very young at that time, and one could not tell very much about them. We will now say that we have seen no pigs that have come faster or done better than those sired by their good boar, Cook's Defender. Here is a good boar and in going over the good breeding boars of the state, Cook's Defender must be classed among the best. They have one litter of March pigs that are as good as any breeder has and there are some boars in this litter that should go to the head of some good, pure-bred herd. They have good backs, the best of bone and feet and are well bred. Many breeders that have more of a reputation would ask about $60 for boars of like quality, but these can be bought cheaper. Cook's Defender is sired by Defiance, he by old Defender. He weighs now right at 900 pounds. You'll not be disappointed with the Cook Durocs, if you are, when you get your boar or gilt home, send them back, that is the way they do business. They guarantee their Durocs to please. They also have a fall boar that might please you. He is being priced at $50 and has a world of quality. Get into communication at once. Order a boar or a gilt or two, they will please you. Mention The Wisconsin Farmer. See page 24.—Adv.

PABST PONTIAC DE FREULE 185994, the registered Holstein bull that has been given by Mr. Fred Pabst, Oconomowoc, Wis., as a special prize at The Wisconsin State Fair.

Col.'s Choice-Wonder Chief.

PROBABLY no boar of the breed has the distinction of being the sire of as many herd boars as King the Col., and the important part is that his get have great size. One of the best King the Col. boars in Wisconsin is owned by Dennis Shea, Melvina, Wis. Several good boars are represented in this herd, but the best pigs are by Col.'s Choice or out of sows by him. He has made good as a sire. Sows in the western sales sired by King the Col., sold for more money last winter than the get of any other boar. This shows that King the Col. breeding is in demand and hardly any breeder would think his Duroc herd complete without some of this blood. We know of no better place to get this blood than from Mr. Shea. He also has some good spring boars by Wonder Chief. He is sired by Cherry Chief the boar that put Hanks & Bishop on the map. The pigs by him are very uniform and those out of the Col.'s Choice sows are dandies. By buying a boar of this cross you would get away on the right foot, for you would have the breeding of two of the great boars of the breed. Mr. Shea is a mighty fine fellow with whom to do business. You can depend on what he tells you and can rest assured you will get just what you order. Try him with a boar order, he won't sell any gilts, they go in the sow sale this coming winter. Will you please mention The Wisconsin Farmer when writing? See page 24.—Adv.

Four Oaks Stock Farm Sale.

WHEN it comes to prolific Durocs I guess we will have to give the honors to the herd on the Four Oaks Stock Farm, Ft. Atkinson, Wis., owned by W. W. Goodrich. When visiting the farm a short time ago and looking over the herd of registered Holstein cattle and Duroc swine, we asked what the litters had averaged the past year. We were happilly surprised to learn that six sows farrowed ninety-six pigs an average of sixteen pigs to the litter. However, Mr. Goodrich like all other good breeders, weeded out the poorer ones, as he knew that the sows could not properly raise so many, so raised but fifty-six of these, however, this makes an average of over nine raised per litter. If anyone can beat this let us hear from them. These pigs were sired by Defender Major 2d 70335A a right good boar of choice breeding and type. These pigs are now being advertised for sale on page 24.—Adv.

Wulff's Red Polls Selling Well.

WILLIAM WULFF, Grafton, Wis., has recently sold three of his fine Red Polled bulls. He sold Bob 29542 V-11 to Otto Miller, West Bend, Wis.; New Year 28621 A-29 to Frank A. Miller, Markesan, Wis.; and Nelson 29391 A-29 to George H. Sollman and John H. Haselbrink, Fort Branch, Ind. See Mr. Wulff's advertisement on page 22.—Adv.

UNDER date of July 22d the Carnation Stock Farms, Oconomowoc, Wis., write as follows: "During the past few weeks we have made the following sale of young stock: To Mr. Robinson, of Berlin, Wis., we sold a son of Beauty Pietertje Prince, from a 24.58-pound daughter of Sir Ormsby Hengerveld De Kol. His dam is a great producer, and we believe when conditioned for test at next freshening will greatly increase her present record. To Chas. Reed, Oregon, Ill., we sold a son of King Ormsby, from a twenty-two-pound daughter of Colanthan 4th Lad. We also sold him three heifers with good A. R. O. records. With this stock as a foundation, Mr. Reed should soon have a herd of good producing pure breds. To Calvin Fulton, of Oregon, Ill., we sold a son of Korndyke Segis Johanna, from a daughter of Pontiac Korndyke. This is a very well-bred bull, having as his sire a bull from a thirty-eight-pound daughter of Pontiac Korndyke, and sired by our forty-pound bull, Johanna McKinley Segis. We still have a few sons of Johanna McKinley Segis and Beauty Pietertje Prince from well-bred A. R. O. cows. They are priced right, and we are not going to keep them long." Their advertisement appeared during the past six months with the Oconomowoc Holstein Breeders' advertisement in The Wisconsin Farmer.—Adv.

THE offering for the Short-horn sale at the American Royal at Kansas City the first week in October under the auspices of the American Short-horn Breeders' Association, has been selected with a view to securing a collection of show and breeding cattle of a high order. The most prominent herds of the corn belt are contributing, and, as a considerable number of the entries are members of show herds, the outstanding merit of the offering is assured. Considered both from the standpoint of individuality and blood lines, the Royal sale will be one of the most important sales of the year. It will afford the best opportunity to obtain herd bulls, as more than half of those consigned are heading show herds on the season's circuit. See page 22.—Adv.

SALE DATES.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.
Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.

Auction of Wisconsin Jerseys

Brandon, Wis., Tuesday, Sept. 26

At the farm of W. S. Dixon & Sons

SIXTY HEAD, prize winners and butter test cows, and the progeny of such, bred from the best island and American families. Consignors will include the well-known herd of E. Bruins, Fairwater, Wisconsin; several from the prize-winning herd of W. S. Dixon & Sons, Brandon, Wisconsin; some from the old established herd of F. W. Page, Princeton, Wisconsin; and a few from the herds of J. H. Dennhardt, Neenah, Wisconsin; Chas. A. Peterson, Rosendale, Wisconsin; and E. J. Ballard, Rosendale, Wisconsin. Col. D. L. Perry, auct. Catalogs, ready about Sept. 5th, sent on request to

John C. Dixon - Brandon, Wis.

LIVE STOCK AUCTIONEERS.

LEARN TO BE AN AUCTIONEER — EARN $15 TO $100 PER DAY
Study at home. Thoro, practical mail course. Endorsed by the peer Auctioneers of the world. Big 40-page catalogue Free. The National Auctioneering School of America, Dept. 103 Lincoln, Nebr., U. S. A.

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AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

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LEFEBURE'S BELGIANS

A LARGE and choice ollection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons Fairfax, Iowa
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HAMPSHIRE SWINE.

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.
A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

HAMPSHIRE
SPRING pigs of both sexes and fall boars for sale.
DANE STOCK FARM
Oshkosh Wisconsin

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE LOMIRA, WISCONSIN

THREE OAKS FARM BERKSHIRES
SERVICE boars and open fall gilts for sale. No more spring pigs left. Will hold brood sow sale March 2d. W. A. FREEHOFF, Waukesha, Wis.

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

SALE DATES.

Guernsey Cattle.

Sept. 26, Consignment sale of Fond du Lac county breeders. C. A. Peterson, Rosendale, Secretary.
Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sales Mgr.
Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

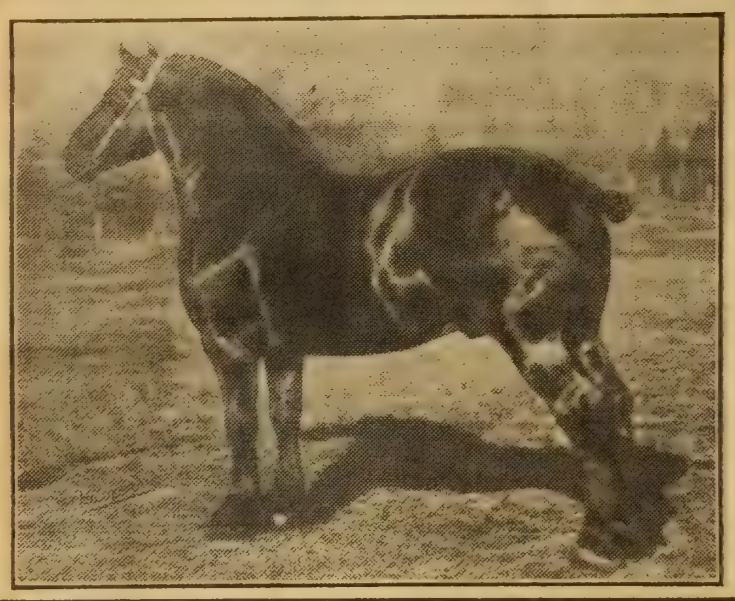
Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

WISCONSIN STATE FAIR HORSE SALE



30 PERCHERONS, 15 HACKNEYS

Every farmer and breeder in Wisconsin and adjoining states should attend this sale. Here will be your opportunity to get an A No. 1 stallion or mare. Sale to be held

FRIDAY, SEPTEMBER 15TH, 1 P. M. AT THE STATE FAIR

Many of these horses will be exhibited in the show ring. Several of them are candidates for ribbons. The consignors are among Wisconsin's best breeders. Send for catalog giving breeding and description to

FRED PABST, SALES MANAGER, OCONOMOWOC, WIS.

A Good Duroc Breeder.

THE writer recently called on B. M. Arries, Augusta, Wis., and saw some good Duroc Jerseys and Holstein cattle. Mr. Arries hasn't as many Durocs as some, but what he has are good, and we would rather see a breeder with a few good ones than have a big herd with all kinds. He started in the game a couple of years ago, buying one of his first sows from the Atwater herd, she being a Corrector-Marion's Wonder cross. She proved to be a good buy, and some of the best pigs on the farm trace to this sow. He also has some pigs out of a Lee's Defender sow, and they have great scale, as well as quality. He has a good yearling boar at the head of the herd, being by Great Wonder, out of a Lee's Defender dam. This is one of the good yearlings that we have seen, and Mr. Arries has some likely looking pigs by him. At the present time he is offering about a dozen boars and gilts. These are the tops of the spring crop, and if any of our readers should order from this breeder they will be pleased with the pig he receives. Mr. Arries is also getting nicely started with Holsteins and we will have more to say about them at a later date. Don't overlook this herd of Durocs. The owner is a good care-taker and he is going to make good with the "red hog." Mention this publication when writing for particulars. See advertisement on this page. —Adv.

Of Interest to Swine Men.

THOSE that show hogs at the Wisconsin State Fair will be pleased to learn that the new swine pavilion will be ready by fair time. The building will hold about 1,500 hogs, and each exhibitor will have ample room to show his hogs to advantage. Each breed will have its own division which will be a great improvement over the old arrangement. We hope that the swine show this year will be the "best ever," so that there will be an appropriate "opening" for the new swine building. —Adv.

THE MARKETS.

Union Stockyards, Chicago, August 26th:—A terrific break in the market for all classes of cattle save a few prime specialties, has been shown in the trade here the past few days, occasioned chiefly by the scarcity of labor, but to a considerable extent by liberal receipts at all markets. Labor is not to be had. Manufacturers all over the country are bidding frantically for it. Packers have not been able to kill live stock bought early in the week. At every packing point on the map similar congestion exists. The situation here has been aggravated by forwarding cattle from other receiving points for slaughter. Congestion is on the stockyard side of the killing floors. Whole pens of cattle are today awaiting an opportunity to get to the shambles and all the cattle available cannot be killed this week. Every plant is short of labor of all kinds. One big local house needs at least a thousand men, while others are not able to kill half their capacity. Light receipts early next week will help. The labor situation is serious and cannot be ignored. It is the sequence of stoppage of European emigration owing to the war and unprecedented activity in all spheres of production.

Plenty of medium to strictly good steers, which had to go at $7.85@9.00 the latter part of the week showed flat $1.00@1.25 decline from Wednesday of the week previous, and were 75c@$1.00 lower than Monday. A like decline was quotable for the right choice steers, such as went last week around $10.50. Only the right prime kinds were quotable at lesser decline, and had such kinds been here at the week end, it is probable they would have had to sell at least 25@50c lower than Monday. A drove of choice steers made $10.00, which would have commanded at least $10.75@10.85 a week ago, and cattle had bids around $9.50@9.75 which were also that much lower. Declines from last week's high spot measure from 75c@$1.25 per cwt., conservatively quoted, on the general run of decent to strictly good, fat beef cattle, both steers and she stock. Cannery and stockery stuff has lost less, not to exceed 25 to 50c.

While the cattle market has suffered such severe reverses, the hog trade has been doing a pyrotechnical stunt, though it, too, has been involved in vicissitude since midweek. On Tuesday and Wednesday, high days of the week, prime butcher and Canadian singeing hogs sold up to $11.30 per cwt., the highest price paid in the history of the Chicago Union Stockyards, which were opened late in December, 1865. Earlier in that year hogs sold as high as $13.25. With the bulk of the trading at high time this week at $10.50@11.20, the general average price was right at $4 per cwt. higher than the corresponding time a year ago. Since early Wednesday the top has been reduced 20c and the bulk of sales 25c, but the market still shows 25@35c advances over a week ago.

Ask your neighbor to subscribe for The Wisconsin Farmer.

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son Oconomowoc, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Yearling Jersey Heifers

AND bulls of serviceable age sired by Hutzeland King, a grandson of King of St. Lambert's King. **Big-Type Poland China** spring pigs of both sexes for sale. Prices reasonable.
Lorenz Metzler - - New Franken, Wis.

REGISTERED JERSEY COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
Ed. Bruins - - Fairwater, Wisconsin

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort Tomah, Wis.

GALLOWAY CATTLE.

50 **HEAD OF REGISTERED GALLOWAY** cows and heifers for sale; all bred. Some are imported cows and out of imported dams. Also 14 bulls. C. S. Hechtner, Chariton, Iowa.

SHORT-HORN CATTLE.

AT THE ROYAL

AT THE American Royal Show, Kansas City, Mo., Oct. 5th, 50 high-class Short-horns will be offered for sale—12 bulls and 38 females—selected from prominent herds of the corn belt and including many show cattle. As more than half of the bulls consigned are members of show herds and of the fashionable blood lines, high-class herd bull material is assured. This is one of the most important sales of the year. It will be an opportunity to select top breeding stock. Catalogs will be ready in due time. Address American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago.

OAK LAWN FARM
Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

MARQUART'S
Milking Short-horns

SEVEN bulls ready to go, sired by Queenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
Marquart Bros. Milton Junction, Wis.

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son. Beaver Dam, Wisconsin

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

RIVERDALE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

RED POLLED CATTLE.

HEADQUARTERS FOR RED POLLS

IF you want cattle bred for beef and milk, buy RED POLLS. We can supply you. Write.
J. W. Salter & Sons Unity, Wis.

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD AVOCA, WIS.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin Gotham, Wis.

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little Evansville, Wisconsin

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

ABERDEEN ANGUS CATTLE.

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. Cassville, Wisconsin
(30 miles up river from Dubuque)

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son Burnett, Wis.

AYRSHIRE CATTLE.

AYRSHIRE BULLS

FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

TOO LATE TO CLASSIFY.

DUROCS THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES AUGUSTA, WISCONSIN

POPULAR PROLIFIC
POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write
Olaf C. Olson, Strum, Buffalo County, Wis.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

HOLSTEIN-FRIESIAN CATTLE.

27-76-lb. Yearling HOLSTEIN BULL

BORN February 17, 1915; a show bull from a show type sire and dam; sire **Canary Homestead Oak DeKol,** the richly bred 29.55 lb. bull of Dr. Favilles; dam **Friend Lucile Bawn,** A. R. O. record 27.76, average per cent of fat 4.04. Send for extended pedigree and price.

Clovis Stock Farm - Menasha, Wis.

A 25.73-LB. HOLSTEIN BULL

BORN Dec. 27, 1915, well marked; **dam Flora D Hesseltje,** A.R.O. record 25.73; dam's dam Aaggie Hesseltje DeKol, A. R. O. record 25.23; sire **Canary Homestead Frisby,** a son of the 35-lb. bull **Canary Paul Fobes Homestead** and out of a daughter of **Homestead Jr. DeKol,** for sale. This breeding ought to interest you. Send for a full pedigree.

Earl A. Paddock - Elkhorn, Wisconsin

Yearling Son

READY for service, of the **30 pound bull Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers - Waukesha, Wis.

21.37 Pound Son of the 24.56 Pound Bull

DOWNING PONTIAC BUTTERMAN

OUR noted prize-winning sire. Dam of bull for sale, **Downing Pontiac Dairymaid,** a 21.37 pound daughter of **King Hengerveld Pondyke,** that has 2 30-pound daughters. Price $200.00. **18.40 pound bull,** a double great grandson of **King of the Pontiacs.** Price $100.00. Send for extended pedigrees and pictures.

M. W. Downing & Brother, Waukesha, Wis.

19.8-POUND YEARLING SON

Of the Richly Bred Ormsby Bull

BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull **Beauty Pieterje Prince** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.

Dopp Brothers - Ixonia, Wisconsin

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt Oxford, Wisconsin

FOR SALE

TWO Holstein calves born January 14th and 24th respectively. Sired by Calumet Jonanna Abbekerk Champion 105829, whose dam gave 623.70 pounds of milk and made 28.71 pounds of butter in seven days, and whose sire is a son of the $10,000 bull, The Milk and Butter King. These calves are very good individuals. Address

A G. PINGEL CHILTON, WISCONSIN

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.

L. V. Garvens Brookfield, Wisconsin

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen Cedarburg, Wisconsin

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons Elgin, Illinois

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service. from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Henger veld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford Kaukauna, Wis.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

Breeders Wanting 30-lb. Herd Sires

We Invite Your Attention to

Three Young Bulls

No. 151, calved March, 1916. Sire, Korndyke Segis Johanna 127132, a 38-lb. son of the 40-lb. bull, Johanna McKinley Segis by King Segis, and whose dam, Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68-lb. three year old by a 29-lb. grandson of Hengerveld De Kol. Second dam, a 23-lb. three-year-old by King Pontiac Champion, a 31-lb. son of King of the Pontiacs. Third dam, a 33.86-lb. daughter of De Kol 2d's Butter Boy 3d.

No. 156, calved April, 1916. Sire, King Pontiac Champion, has 41 A. R. O. daughters. The only one tested as a mature animal made over 1,000 lbs. butter in a year. Dam a 31.51-lb. daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O. daughters, two above 30 pounds. Good A. R. O. breeding for several generations.

No. 152, calved April, 1916. Sire, King Pontiac champion. A 30.38-lb. daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68-lb. cow.

Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

THE 30.90-LB. SHOW BULL NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.

FRED ALBRECHT WATERTOWN, WISCONSIN

2 Yearling Sons of the Richly-Bred Holstein Bull KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Robert's Fearless Lassie, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST WEST ALLIS, WISCONSIN

10 Registered Holstein Heifers

14 TO 18 months old, well marked, of good, straight conformation, and ideal dairy type. They are mostly daughters of the richly bred Holstein bull, FOBES WATSON DE KOL 85682, a son of FOBES TRITOMIA MUTUAL DE KOL 2D, and out of untested daughters of ALCARTRA JOHANNA RUE DE KOL 47853, a maternal brother of ALCARTRA POLKADOT. Here is a rare combination of breeding. Will sell in one lot or singly. Prices $125 to $150. Act quickly. Address

MRS. OTTO VOLKMAN JUNEAU, WISCONSIN

HERE IS AN OPPORTUNITY

We are offering a few choice registered Holstein cows and heifers bred to the 29.50 pound bull

MAPLECREST HENGERVELD DE KOL 94154

WE also offer a 22.29 pound son of his for sale at $125. Send for an extended pedigree. It is a very well bred bull and the price is very low.

GROVE BROS., COLUMBUS, WISCONSIN.

HOLSTEINS and GUERNSEYS

We are offering for immediate sale 400 head of registered and high-grade cows and heifers; also registered service bulls. Nothing but the best. Will make extra low price on 55 registered Guernsey heifers. Call at our farms or write.

EDGEWATER STOCK FARM FT. ATKINSON, WIS.

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby Several bulls are from Alcartra bred cows.

BONNIE MEAD STOCK FARMS, Randolph, Wis

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer Kaukauna, Wisconsin

A RICHLY BRED

JOHANNA BULL

SIRED by the 26-pound bull **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.**

Geo. Gibson - Nashota, Wisconsin

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

C. F. Winckler & Sons Medina, Wis.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the **year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson - Elkhorn, Wisconsin

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE MONROE, WISCONSIN

HOLSTEIN-FRIESIAN CATTLE.

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. 8 yearling heifers will be bred if desired. Sired by the 31.17 **pound bull Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pounds daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.

Lawrence Rober - Lyons, Wisconsin

10 REG. HOLSTEIN HEIFERS

1 TO 4 months old; 2 registered cows, both short one quarter; 4 high-grade cows, good producers. Yearling bulls ready for service. All are well bred and good type. Prices low for quick sale. Address

ADAM LORENZ

Sheboygan Falls Wisconsin

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

Holsteins For Sale

REGISTERED Holstein heifer calves $75 each, high grades $18. If you want a good bull or some springers write us.

Findlay Bros. Whitewater, Wis.

GUERNSEY CATTLE.

Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L'Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.

Geo. Lucia - Green Bay, Wisconsin

Guernsey Bull For Sale

THE richest Guernsey breeding. Born March 8, 1916. Sired by the richly-bred bull,

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant View. Also a deep, rich breeding of the Governor of the Chene line. Address

Charles Schmidt Wrightstown, Wisconsin

GUERNSEY BULL

LANGWATER STARLIGHT Breeding. A. R. O. dam. Also bull calves from 2 to 6 months old from A. R. O. cows for sale. Address

W. J. HEID FORT ATKINSON, WIS.

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address

W. H. & B. L. Hanchett Sparta, Wisconsin

A SON OF THE GUERNSEY BULL

GLENWOOD NOBLE SECRET 23999

BORN in March, 1916. Dam, a heavy producing cow. He is well marked and well grown.

E. H. KIESLING JEFFERSON, WIS.

REGISTERED GUERNSEY HEIFERS

2 MONTHS to 2 years of age, and yearling bulls ready for service from Advanced Registry dams with records up to 500 pounds of fat. Send for a sale list. Address

W. A. Lawson Rosendale, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman Fort Atkinson, Wisconsin

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By King the Col. **By Cherry Chief**
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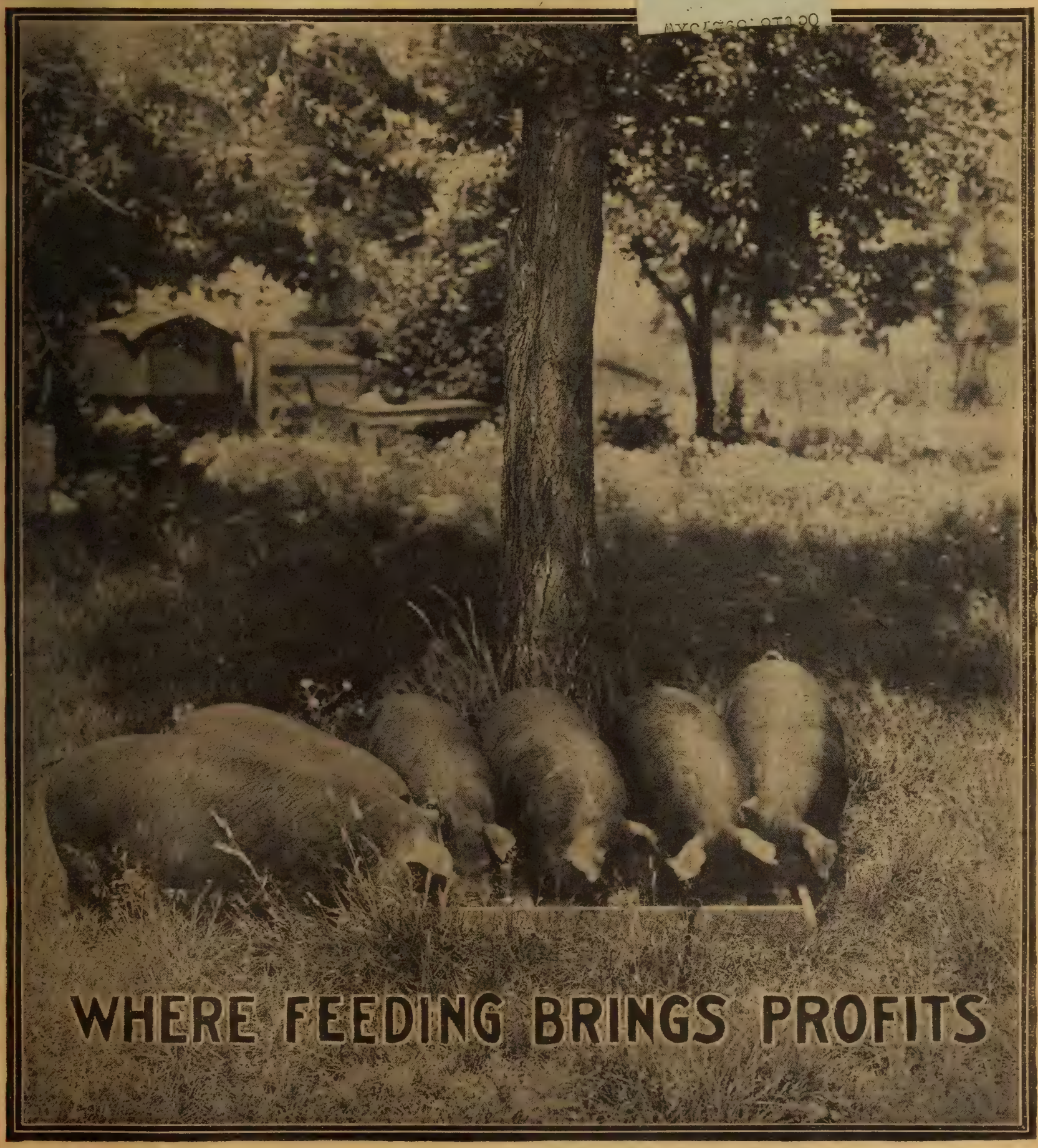
THE WISCONSIN FARMER

VOL. XLV. NO. 36. THURSDAY, SEPTEMBER 7, WHOLE NO. 1806



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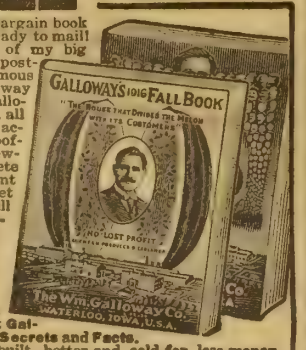

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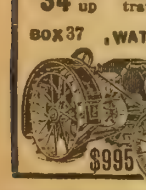

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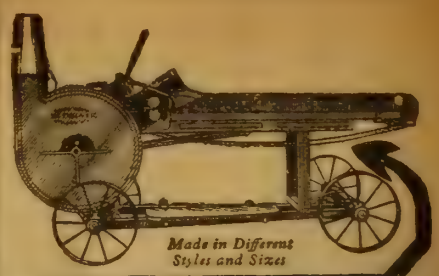
CURRENT EVENTS

CONFRONTED by a strike called by the four principal railroad unions to commence Monday morning of this week, President Wilson went before congress last week to plead for legislation designed, in his opinion, to prevent the walkout of 400,000 railroad men, or at least to postpone the crisis until the country would have time to see if an amicable settlement of the difficulty could not be had. The president proposed to congress that it establish an eight-hour day as the legal basis alike of work and of wages for all railroad men engaged in interstate commerce; that it enlarge the membership of the Interstate Commerce Commission so as to make it possible for the commission to divide its membership into investigating boards and look into the pressing problems now before it; that it sanction an increase in freight rates to offset the immense amount of money which the railroads will need to pay the increase in wages as soon as the eight-hour law goes into effect; and that it give to the president the power to take over and to operate the railroads of the country "in case of military necessity," which might be invoked now on the plea of moving supplies for the soldiers along the Mexican border. The president's plan met with the full support of neither the employes nor the employers, but congress set to work to make what progress it could in the emergency. In the meantime, practically all the railroads issued orders refusing to accept live stock or perishable freight which would not reach its destination by Sunday night. The situation remained critical throughout the entire week; business stagnation being inevitable if the strike succeeds in tieing up the railroads for any length of time.

RUMANIA finally entered the European war last week, on the side of the allies opposed to Germany and Austria, and lost no time in marching an army across the Hungarian boundary line, sweeping everything before it in the first stages of the march. Rumania was frank enough to admit that it entered the war with the allies because she believes they "can assist her most efficaciously in realizing her national aims," the latter being to grab more territory, particularly the southern part of Bukowina, Austrian crownland, and Bessarabia, the extreme southwestern province of Russia. She is willing to sacrifice her citizenry in order to obtain these long-coveted territories. Rumania brings to the allies an army of about 500,000 men, said to be exceedingly well officered, well drilled and well equipped. Even more important than the size of its army, however, is its geographical location, inasmuch as it gives Russia a clear field to march upon Hungary and to pour a horde of troops upon Bulgaria. Rumania, territorially, is the most important of all the Balkan states and her accession to their ranks is a great victory for the anti-Teutonic allies. With more men now under arms than the Teutonic powers have, at least an equal supply of munition and Rumania allied with them, the advantages are now almost all with Germany's enemies. Greece undoubtedly wants to engage in the war, against Germany, but the queen is a sister of the kaiser and German influence has thus far succeeded in keeping Greece out of the struggle.

PICKING of California fruits for eastern shipment was practically discontinued because of the threatened railroad strike. Shipping companies have decided to quit picking and to forward what now is in the packing houses. Upwards of 5,000 carloads of table grapes valued at about $6,000,000 remain on the vines and would be lost if the strike should continue for any length of time, according to dealers. Inability to move the small-grain crop and to get the usual amount of live stock to market here in the grain belt would be the most important immediate effects of such a widespread strike as is threatened.



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The Wisconsin Farmer

THURSDAY, SEPTEMBER 7, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE THREATENED STRIKE.

A RAILROAD strike, such as is now threatened, would cause far-reaching injury to the farmer, and I sincerely hope it may be averted. It could hardly come at a more inopportune time. With the labor unions threatening to call out 400,000 workmen, the railroads issued embargoes against all live stock shipments and perishable freight, in which is included poultry products, vegetables and fruits. The effect was immediately evident on market quotations, but being unable to get their produce through to market, the rise in price does the farmers no appreciable good.

With bumper small-grain crops awaiting shipment and with the demand for live stock continuing steady, at good prices, the farmer will be the heaviest sufferer if the strike is brought about, as seems almost inevitable at this writing (Friday afternoon). Stockmen already find themselves inconvenienced by the possibility of their fancy stock being held up in transit from one state fair to another and made to suffer incalculable loss. Thanks to the directors of the Iowa State Fair, the stock was released at Des Moines twenty-four hours sooner than usual and fast trains are even now rushing the fine animals there displayed to Lincoln and Minneapolis, for the Nebraska and Minnesota state fairs and back to the various homes of the exhibitors, many of whom do not care to take the risk of getting their stock from one fair to another under the circumstances.

It may be that congress will be able to avert the strike, by rushing through the legislation which the unions demand, and that the immediate danger will be over by the time these words of mine are read. The deadlock has been serious now for several days, with commercial activities along practically all lines at a standstill, awaiting developments. Just when we were being reassured that owing to the new export rules, and to more systematic planning than usual, there would be no freight-car shortage and that our grain crop would be promptly moved to market, this new situation arose, to make matters even worse than usual.

I am not going to enter into the merits of the controversy here, but this much I can and will say: It is a crying shame, and altogether wrong, that the welfare of an entire nation should be imperiled, and the shipment of food products with which to feed, not only our own people, but the people of much of the world, should be delayed and perhaps completely prevented, simply because of differences arising between two comparatively small groups of men. The interests of the nation are too big to be made thus subservient to the welfare of any one group and the only outcome that can result, no matter whether the strike occurs or not, is to increase the sentiment for government ownership of such public utilities as the people are completely dependent upon for their very existence.

THE FARM LOAN HEARINGS.

I AM CERTAIN that a better understanding of both the financial needs of the grain-belt farmer and the workings of the new federal farm loan law will result from the meetings held during the past week in Madison, Des Moines, Sioux City and elsewhere. While the actual, practical farmer who will want to take advantage of the new law was conspicuous by his absence at most of the hearings (the facts being given the federal farm loan board, for the most part, by commercial club boosters and town and city men, rather than farmers) a great deal of information was brought to light which can hardly fail to be of material assistance to the board in its first duty—the selection of the twelve cities in which the new federal land banks shall be established. I, for one, obtained a great deal of valuable information by listening to the board's sessions, information which I shall pass on to my readers, from time to time, in a discussion of the various phases of the new law and its probable workings.

I think the board was impressed by one thing, at least, as a result of its visit to Madison and Des Moines. That one fact is this: A mortgage indebtedness is a sign of prosperity, rather than of adversity; of progress, rather than of retrogression. If any of us were called upon to name the five principal agricultural states of the Union, we would unquestionably answer: Iowa, Wisconsin, Illinois, Missouri, and Kansas. Yet, these five states are likewise the largest farm-mortgage borrowers, ranking in the order I have given them here. Thus, Iowa now has over $200,000,000 borrowed on its farms, yet the value of its annual field-crop production is larger than that of any other state. This immense farm-mortgage debt of Iowa's is $60,000,000 more than the farm-mortgage debt of the second state in the list, Wisconsin, which in turn owes $30,000,000 more than the third state in the list, Illinois. I find, on examination, that the next state in the list is Missouri, with a farm-mortgage debt but $3,000,000 less than that of Illinois, while a few states further down the list comes Kansas, with a farm-mortgage debt of more than $70,000,000. Now, these are the richest agricultural states in the Union, yet they are the heaviest farm-mortgage borrowers. Is this not conclusive proof that the farmer who borrows money is not borrowing it because he cannot make both ends meet—because his annual production is not enough to offset his living expenses—but because he finds farming profitable and wants to enlarge the field of his activities so as to make still more money? If there are any states where agriculture is languishing today, it is in such southern states as Alabama and Mississippi, where the total farm-mortgage debt is only one-twentieth what it is in Iowa or one-fourteenth what it is in Wisconsin. Farmers are borrowing money in order to make money; to add to their land and live stock holdings, to install time-saving and labor-saving machinery, to improve farm-home conditions, and so on. I can remember when a mortgage was considered a sort of disgrace, a veritable "skeleton in the closet" of which the whole family stood in awe. Nowadays it is a legitimate, business-like transaction, which shows that the borrower is not content with the progress he is making, but seeks to enlarge his field and do still more work. It convinces me that the late J. Pierpont Morgan was right when he said that a millionaire is not the man who has a million dollars so much as it is the man who can raise a million dollars.

I think this thing is now firmly implanted in the minds of the members of the federal farm-loan board. Certainly the Wisconsin and Iowa boosters presented their facts clearly and convincingly. This being the case, anything which will enable the farmers of these and other states to borrow more money, on better terms, will add to our already flattering prosperity, for the law specifically provides that the money obtained is to be used for certain purposes, the main ones being to buy land, equipment, fertilizers and live stock, to erect buildings and to pay off existing indebtedness. All these things tend toward better farming, and money thus used can hardly fail to increase our agricultural production and to make our annual crop wealth still greater.

I believe there are certain phases of this new farm-loan law which the rank and file of the farmers do not understand. I know they were not clear in my mind before talking with the members of the federal farm-loan board on their visit to our part of the country. I propose to discuss these phases of the subject from week to week in these columns, in the belief that farmers generally are intensely interested and that this knowledge should be widely disseminated. Already dozens of farmers have come in to my office to ask various questions, as to when they could borrow under this new plan, the amount they could borrow, and so on. Scores have written to me. If you will follow this page of mine for the next few weeks, I believe you will get a clear understanding of the new law, its possibilities and even its limitations and defects. If I do not make myself perfectly clear, write to me; I will be only too glad to take the matter up in a personal letter, for it is of the utmost importance that we give the law a thorough trial and realize its every possibility.

SOME MORE ABOUT HOMINY.

IT IS VERY apparent to me (thus soon after the publication of my little article telling of the eastern man who was conducting a nation-wide search for the old-fashioned, genuine, yellow corn hominy) that this palatable and toothsome edible has not completely disappeared from our land. I am fairly deluged with recipes, offers to send recipes and interesting information on hominy in general and the kind that was such an important article in the daily diet of our farmer pioneers fifty or sixty years ago in particular. If my correspondents will have just a little patience, I am going to print a number of their letters and recipes in a week or two, when I can get around to picking out the best. In the meantime I cannot refrain from giving one of the letters almost in full. It is from a reader who remembers, as though it were but yesterday, when he was a boy back on the old York State farm, when hominy was a treat such as nothing of today can possibly equal, and when getting out the corn for the "samp and corn meal" took on many of the qualities of a solemn rite, so important and awesome was the occasion. Let me pass this letter along to you, that you may all enjoy it with me. It is written by Mr. S. E. Chandler, of Minneapolis:

I read with interest what you had to say about "hominy" and "samp." Those words take me back to 1854, or about that time, when, as a boy, I lived in Wayne county, New York. A couple of weeks or so after the corn was cut and "stooked" mother would say, "Boys, you go and husk a basket of corn, pick out the best ears, shell it and take it to the mill and have it ground half samp and the other half corn meal." When we would get it home mother would spread a sheet upstairs near where the stovepipe came through the floor and spread the samp and meal out to allow the air to come in contact with it so it would not get "het." We boys could hardly wait for mother to "hatch up" a Johnny cake made out of that yellow corn meal. My! but it was good. Then the next day she would cook a kettle of samp which we would eat in milk, not milkman's milk, but cow's milk.

The corn was ground in an old-fashioned "grist mill" which run two burr of stone (I guess that is the proper way of describing it). As a rule we would find "Uncle West," the miller, (a veteran of the War of 1812) sprawled out on two or three half-filled sacks "pecking" the working side of a burr.

Those old-fashioned custom grist mills of "befoh de wah" days took a grist of wheat, corn and oats, buckwheat or anything. It would be put in the hopper, then the miller would take a measure that held a tenth of a bushel and take his "toll," a measure for each bushel, and the customer take home the rest. Then mother used to make hulled corn. She knew just how much good beech and maple ashes to use to make a lye to remove the hulls. I tell you those yellow-corn products used to lie up alongside of a fellow's ribs in great shape. During those early days, owing to the war between the allied powers and Russia, wheat went up to $2.50 a bushel and the ordinary people had to live on corn meal. I acquired a fondness for corn bread at that time that has always stayed with me and when in the army if I could get hold of a little corn meal, hard-tack lost all its charms for me.

A letter like this turns time backward for me forty, even fifty, years to my own pioneering days, to my own war experiences. It seems to me that in these days of high living, when the young folks want their olives and their grape fruit and their fancy cheese and all manner of such things, unknown to the days when I was young, we could not hope for anything better than a return to the good old days of the simple life, when samp and corn meal were more common articles on our household menus than they are today. They were nourishing, they were palatable; as one of my correspondents aptly says: "They sure did stick to the ribs in those days." Is there such a thing as prosperity weaning us away from a simplicity of life which was better for us, physically as well as mentally? I fear so.

I started out with the intention of quoting only one letter, but while I was writing this another letter was laid on my desk, so interesting I am going to print it, too. It comes from Mr. S. L Johnson, cashier of the German-American Savings Bank, of Muscatine, Iowa, and is as follows:

In your paper of the 24th inst. you have an article headed "A Quest for Hominy," and this awakens memories of forty years ago when a boy on the farm in Cedar county, this state. Mother would take some wood ashes and make a leach to take the outer hull off the sound yellow corn that father brought in for her and, after hulling, she would commence boiling the corn to take the lye water out of it and also to make the corn soft. It usually took a whole day to prepare a kettle of hominy, as it required frequent changing of the water and when I came home from school in the evening I would slip up to the kettle, raise the lid and purloin a few kernels, blow them a little while and eat them. We have a man here at Muscatine that makes this same old-fashioned hominy and we invariably buy some of him when he calls. Fried hominy with good sausage gravy was a dish that would satisfy the hunger of most any boy.

Where is there a boy in all this broad, prosperous land today who is being brought up on anything which more nearly fills the bill or more surely makes the mouth water to think of than "fried hominy with good sausage gravy?" I may be a bit old-fashioned; in my elderly years I may find my mind turning back a little unduly, perhaps, to the good things of youth, but I, for one, crave some of those good, almost-forgotten things of my boyhood in preference to the highly-seasoned, French-named things of today, which we have to be taught how to eat and never can be made to enjoy as much as the simple foods of yesteryears.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Farm Labor Situation in Wisconsin.

THE labor situation, which has been more troublesome this summer with Wisconsin farmers than ever before, still proves a source of considerable worriment. From complaints received by The Wisconsin Farmer, it is apparent that farm laborers have demanded higher pay this year than ever before. In certain communities in Jefferson county, we are informed, ordinary labor about the farm has been raised to $3 per day as against the former rate of $1.90 to $2.25. The situation also became so critical in Polk and St. Croix counties that the farmers held a mass meeting at one time in an effort to form an agreement not to pay more than twenty cents per hour, when the men were demanding as high as $2.50 to $3 per day.

Just how much farm labor has advanced, it is impossible to say, but the situation appears to be one of supply and demand just as it is in other lines of business. When unskilled labor in the cities is receiving as high as thirty cents per hour, as has been the case in Milwaukee the past summer, and it is hard to obtain even at that price, it can be readily seen that prices of farm labor are sure to increase accordingly. Mr. A. J. Beckerle, superintendent of the Milwaukee office of the Milwaukee State Free Employment Bureau, advises us that his office has never had so great a demand for farm labor as this summer and that the prices paid by the farmer are on a higher level than ever before. The demand has been so heavy that it has been impossible to supply everyone with men, with the result that many farmers, especially during the harvest, were offering as high as $40 per month, including board and room and expenses to and from the farm, and were unable to secure labor at this price.

Mr. J. D. Black, of the agricultural economics department of the college of agriculture at Madison, has begun the gathering of statistics relative to the farm labor situation in Wisconsin, which will be used in issuing a bulletin on this subject some time during the coming winter. Mr. Black is endeavoring, with the assistance of farmers over the state, to gather reliable information along this line, and it should prove very interesting to the farmers who see the cost of their farm labor rising by leaps and bounds. There are no authentic statistics available just at this time to answer the inquiries of our many readers as to what this increase has amounted to in recent years, but it apparently is a matter to be decided entirely by the law of supply and demand and farm labor is bound to increase as the cost of unskilled labor increases in other lines.

Exhibiting at the Fairs.

WE BELIEVE that Superintendent E. L. Luther, in charge of county exhibits at the state fair has hit the nail on the head when he says that "farmers who exhibit at fairs, as a rule, grow good crops and are helped in marketing by exhibiting them."

Exhibits of grain and live stock have proved profitable to the buisness in the state because they have helped the farmer and stockman to advertise a higher quality of products than some of his buyers had known about. A first-class exhibit at a state or county fair is bound to arouse the interest and enthusiasm of someone, and to implant a desire for better things. This desire has a commercial value to every farmer in this state who is progressive enough to take advantage of it.

There may be some instances of poor farmers who exhibit at the county and state fairs, but they are scarce. As a general rule, the farmer who takes the pains to arrange an exhibit will exercise the same good judgment in other farm operations and make the same effort to excel in the products which he offers to sell. The difference between success and failure, between loss and profit is to "try" and try hard, and those who try intelligently must have some set aim or object or ambition. Those who exhibit at the fairs see their crops or their stock in competition with others, and in this manner learn their own weaknesses. To realize our mistakes is half the battle toward correcting them. The Wisconsin Farmer is always glad to see the young man starting out with ambition to succeed, exhibiting his stock and grain. It is an almost certain sign that this young man is going to make a success.

Guard Against Late Cutting of Alfalfa in Wisconsin

WISCONSIN farmers who are growing alfalfa should bear in mind that cutting alfalfa later than the first week in September has resulted in serious winterkilling where good stands have been maintained. The second cutting this year was light on account of the hot, dry weather and there will no doubt be a tendency with many farmers to cut late in the fall. Experiments conducted by the Wisconsin Alfalfa Association show that if cut late, sufficient growth is not made in the fall before freezing to withstand the winter weather and that if the first or second crop has not been cut at the proper stage, the third crop will not be ready for harvest the first week in September. Two or three weeks later, however, the alfalfa will begin to blossom and the farmer often cuts his tempting crop, late as it may be. This frequently results in a total or partial killing of the field as well as weakening of the plants which may survive. It is very important that these facts be borne in mind at this season, as Mr. L. F. Graber, secretary of the state order, advises against cutting later than September 5th.

The experiences of many farmers last winter who had fields which winterkilled will no doubt prompt them to take the necessary precautions this year. Our attention has just been called to the experience of Mr. H. R. Hatch, of Walworth county, who holds to the opinion that cutting for the third time, late in the fall of 1915, killed more alfalfa than all of the snow and ice received during the winter. Mr. Hatch has a field of alfalfa this year, part of which was cut late last fall. The entire field was covered with ice during the winter, but the alfalfa killed out only on the part from which a third crop was taken late in September. On the other part of this plat he left a third crop last fall that was fifteen inches or more in length, and that survived the winter successfully. Mr. Graver contends that, although the farmer is sometimes tempted to take his third cutting late in the fall, it is more profitable in the long run to let it stand, as the first cutting the following spring will be far heavier. This tends to keep the alfalfa thick and blue grass will not develop as rapidly as it would in a thin field with weakened plants the following spring.

Higher Priced Farm Machinery.

THE cost of producing farm products is bound to increase in the future, due, in the first place, to the higher wages of workmen and, secondly, to an increase in the investment in farm machinery. We are told that 55 per cent of the production of steel of the world comes from countries that are at war, and steel is the basic product used in farm machinery construction. Three-fourths of the world's production of steel during the last two years has been destroyed by the devastation of war, brought about by the wrecking of railroads, bridges, cities, rolling stock, to say nothing of the waste of steel in the projectiles used by the armies of Europe. In addition, incalculable losses have been sustained through the sinking of rich cargoes by battleships and subsea craft. These losses combined have depleted the available supply of steel to such an extent that it will require ten years to place production where it can keep pace with the demand in the same ratio as it did before the opening of hostilities.

Then there is the cost of labor in the production of farm machinery. This has continually advanced along with other trades and the effect on retail prices would have been felt long ago had it not been for the labor-saving devices put into use which enabled the manufacturer to increase the effectiveness of every man employed. It seems now, however, that the time has arrived when advances in the prices of everything entering into the manufacture of machinery has resulted in an advance in price of the finished product. This advance does not begin to be in proportion to the percentage of advances in the price of raw materials, because, as before stated, economies that have been attained in construction methods have largely offset the increased cost of raw materials.

Foreign countries that are at war already have agents in the larger cities of the United States contracting for materials and placing it in storage, waiting to be shipped the moment peace is declared. The effect of this is to reduce the supply of materials used in the construction of implements, thus tending to create a scarcity, with a corresponding effect in raising prices. The law of supply and demand operating freely, as it does in these products, can have no other effect than to increase values.

This increase comes at a time when we are placing greater reliance upon the use of improved machinery than ever before. Where formerly one man plowed with two horses and a fourteen-inch plow, we are now using gangs with four and even six horses, while in thousands of instances the tractor is being put into use, pulling anywhere from two to eight plows, and the same principle holds true all along the line. Five-foot binders are too slow in these days, their place being rapidly taken by the seven and eight-foot type. If prices of farm machinery are, therefore, to increase, as they inevitably must, the situation can only be met by putting into service on the farm such types of machinery as will increase the efficacy of man's labor. If one man can plow six acres a day, where formerly he plowed three, he is forthwith placed in a position to make his more costly machinery factors of real economy in production.

Possibly the new situation can be partially met by giving more attention to the care of farm machinery. There has been a tremendous waste in the past as the result of carelessness, and more machines have been rusted out in the corn belt than have been worn out from use. All in all, we have confidence enough in the producer to believe that he will meet the situation with fortitude so that production will be maintained at its present high point. Somewhere along the line economics may be practiced just as they are in the manufacturing industry by labor-saving devices, so that in the end the cost of living will not be materially increased. Improvement in crop-marketing facilities would help immensely in cutting out large wastes between producer and consumer, and it is urgently needed that industrial agencies combine with farmers and bring about this desired end.

Wisconsin Looks Good to Visitors.

BECAUSE of the high standing of the dairy herds of this state, Wisconsin is the mecca of many farmers who come here to learn how to better their own conditions. We have had visitors from the Dakotas and other states farther west, and delegations from South America and from a number of eastern states. Recently a company of fifty farmers from Louisiana visited this state to study dairying methods, and the gentlemen in this party were more than pleased with the reception they received and the knowledge they were able to pick up in their short stay here.

When a company of farmers starts out to see what is being accomplished in other states, and how other farmers have worked in order to succeed, it is a good omen. We have no doubt there is a good future for farming and for dairy farming in particular in Louisiana. It is a matter of special pride that Wisconsin looks so good to these parties of visitors who come here to learn from our successes.

This Week's Cover Page.

OUR cover page on this week's issue of The Wisconsin Farmer is from a picture taken on "Parkhurst Farm," owned by E. H. Parker & Son, Janesville, Wisconsin. The Messrs. Parker are well known throughout the Northwest as breeders of Duroc Jerseys, they having one of the best herds in Wisconsin. This picture shows six spring Durocs, farrowed in May and photographed in August, and though of late farrow they have size equal to many pigs of March farrow due to the fact that Mr. Parker believes in balanced rations and is an excellent caretaker.

Wisconsin Live Stock Breeders Exhibit.

SOME interesting comparisons for the live stock farmer are made at the exhibit which is being shown at a number of Wisconsin fairs by the Wisconsin Live Stock Breeders' Association.

One choice steer exhibited, aged sixteen months, weight 1,040 pounds, value $109.20 at $10.50 per hundredweight, is a fine sample of baby beef. Another steer alongside, a common rough, aged three years, weighs 920 pounds, and is valued at $59.80, being worth only about $6.50 per hundredweight.

Other exhibits are described as follows:

Dairy exhibit: one "dairy" cow with a yearly record of 461.8 pounds of butter fat, value of butter fat in one year, $150.75; total feed cost in one year, $60.92; total net profit, $89.83.

Another cow, "boarder" class, with an annual record 136.5 pounds of butter fat, value of butter fat in one year $49.14; total feed cost in one year, $45.24; total profit in cash, $3.90.

Sheep exhibit: three choice native lambs, average weight sixty-four pounds, value $6.40 at $10 a hundredweight.

Three common or cull lambs, average weight sixty-four pounds, value $5.44 at $8.50 a hundredweight.

Swine exhibit: two prime butcher hogs, average weight 250 pounds, average value $25.13 at $10.05 a hundredweight.

Two inferior "skips" average weight 125 pounds, worth $10 each at $8 a hundredweight.

Horse exhibit: two two-year-old Percheron fillies, bred and raised at the college of agriculture, weight, 1,650 and 1,550 pounds respectively, a type of animal within the reach of any careful and progressive farmer. The cost of feed and service fees to date on both these animals amounts to $247.08. No horses of inferior type are carried in the exhibit.

These figures are very significant and those of our readers who have seen the exhibits and who know anything about live stock will understand why they are possible. The Wisconsin Live Stock Breeders' Association is making a determined effort to raise the standard of live stock in this state, and this effort is a laudable one.

The exhibit referred to will be seen at the Wisconsin State Fair, September 11th-16th; Langlade County Fair, (a free gate by the way) Antigo, Sep-

tember 19th-22d; Dodge County Fair, Beaver Dam, September 26th-29th; Buffalo County Fair, Mondovi, October 3d-6th.

A Foothold in South America

BRITISH live stock breeders have made the admission that an important point has been scored by American breeders in furnishing stock judges to act at the Buenos Aires show this year. There is even discord in the ranks abroad regarding the failure of the Royal Agricultural Society of England to furnish the judges. It is claimed on the one hand that America's opportunity to perform this service to Argentine breeders came only after the society declined to nominate. The foreign breed associations were not consulted apparently and gloom hangs like a pall over the future prospects of the live stock interests of the entire British Isles.

British purses have been fattened during the last two decades by the splendid trade in pure-bred live stock carried on with the Argentine country and during this time American herds have been receiving some of the best blood of England and Scotland until the point has been reached where we can enter the South American market with full assurance that we can deliver the goods. British judges who have been acting at our great International show early have always been astounded at the high standard of excellence of the breeding classes at that show and visitors from the southland have ever been present to witness the splendid progress that is being made by American breeders. It is, therefore, fitting that there should be an interchange of judges between the two countries and unquestionably this will mean that the United States will in the future share in an important part of the pure-bred live stock trade with the great South American country.

Already some of our best herds have been drawn upon and with characteristic zeal our live stock associations are pushing the cause of the American stockman to the front. If Johnny Bull feels the effect of competition in the future he must remember that for half a century he has had a most excellent export trade in improved live stock with this country and the American breeder is not the man to weaken when he goes into the open to seek an outlet for his product. We have confidence enough in the hustling secretaries of our various pure-bred live stock breeders' associations to believe that in this contest for trade American breeders will hold their own against all comers.

Taking Better Care of the Cows.

MUCH is heard nowadays about high-producing dairy cows, and many farmers wonder how it is possible for cows to make such high records. Their own cows yielding around 150 pounds of butter fat a year, it is next to impossible to understand how a cow can be made to produce 700, 600, or even 400 pounds of fat a year. Much, of course, depends upon the individual cow and the way she has been bred, but more depends upon the kind and amount of feed she is given and the care and attention bestowed upon her than most farmers realize. The average farmer's milk cow is underfed and not given the right combination of feeding stuffs.

The more methods of feeding are studied the clearer it becomes that brains, applied to the management of the dairy cow, pay exceedingly well. We have just been studying the results obtained in feeding two cows by the Ohio Experiment Station, and comparing the yields obtained under high feeding with those previously secured under good feeding and ordinary care. Thus, one cow that for four years had averaged 8,194 pounds of milk and 239 pounds of fat, under heavy feeding and milking three times a day produced 14,722 pounds of milk and 400 pounds of fat. In other words, her milk yield was increased nearly 80 per cent and her fat yield a little over 67 per cent.

Another cow that for five years had averaged 8,195 pounds of milk and 280 pounds of fat, under high feeding and special care produced 15,318 pounds of milk and 505 pounds of fat in a year. Her milk yield was, therefore, increased 87 per cent and her fat yield 80 per cent.

Taking into consideration the cost of the extra feed and care given these cows, it was found that cow No. 1 produced milk at $1.23 per hundredweight on the heavy ration as compared with $1.57 for the ordinary feeding, and cow No. 2 produced milk at a cost of $1.28 per hundredweight under heavy feeding as compared with $1.55 under ordinary feeding. The heavier feeding, therefore, paid well, because the total profits per 100 pounds of milk were very much larger for the heavy than for the ordinary feeding.

Naturally, another profit would be selling the increase. A calf or a matured animal from a cow yielding 400 to 500 pounds of butter fat a year commands a much higher price on the market than one from a cow producing only 200 to 250 pounds a year.

It is time for the average farmer to realize that he must feed his cows more liberally and on a better balanced ration, so that the feed consumed may be more economically utilized. Silage is one of the best feeds to help out along this line. A cow that is fed liberally on silage, say thirty-five to forty pounds a day, has a much better appetite than one that is given dry feed throughout the winter months, and is, therefore, able to consume more grain and other roughage, and it is always the amount of feed consumed over and above that required for maintenance that produces the profit.

Grand championship honors will be much sought by the large breeders of dairy cattle of a dozen different states at the Southwest Dairy Show in Convention Hall, in Kansas City, September 18th to 23d. The Brown Swiss aged cow, Arlene, owned by J. Allyn, Delavan, Wis., was grand champion at the National Dairy Show, the Minnesota, Wisconsin, Illinois and Iowa State Fairs and the Iowa Dairy Congress in 1914 and 1915. She will contest for the same honor at the Southwest Dairy Show in Kansas City. She is the cow around which the breeders of Brown Swiss dairy cattle build their greatest hope.

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HUDSON MOTOR CAR COMPANY

DETROIT, MICHIGAN

WISCONSIN WINNERS AT IOWA

Dairy and Beef Herds From This State Show Up Well at State Fair atDe s Moines Last Week, Two Breeders Being Premier Exhibitors—Competition Strong in all Divisions.

FIRST-PRIZE GUERNSEY YOUNG HERD SHOWN AT THE IOWA FAIR BY THE JEAN DULUTH FARM, DULUTH, MINN.

WISCONSIN was well represented with stock at the Iowa State Fair at Des Moines last week and breeders from this state succeeded in bringing home their share of the ribbons. The Iowa stock show was one of the largest ever held there and the herds from this state came into competition with some of the best from Iowa, Minnesota, Illinois, Nebraska, Kansas, Missouri and the Northwest.

The largest showing from Wisconsin was in Short-horns, the herds of Frank Harding, of Anoka Farms, at Waukesha; Herr Bros. & Reynolds, at Lodi; Ebon E. Jones, of Rockland; MacMillan & MacMillan, of Lodi, and Carpenter & Carpenter, of Baraboo, being represented. The next largest showing was of Ayrshires from the herds of Adam Seitz, of Waukesha; Dr. David Roberts, of Waukesha, and Frank Stare's, of Ferndell Farm, at Ladysmith. H. W. Ayres, of Honey Creek, with his Brown Swiss, carried away a majority of the ribbons, while in Holsteins Wisconsin was represented by the herds of Baird Bros., of Waukesha; Charles Van Der Schaff, of Sparta, and a young bull from Dr. David Roberts' herd at Waukesha. The Wisconsin Guernsey showing was confined to the Wilcox & Stubbs and the Jean Duluth Farm herds. Frederick Underwood, of Wauwatosa, carried away many ribbons on his Jerseys. There were three sheep exhibitors, Alex W. Arnold, of Galesville; George McKerrow & Sons, of Pewaukee, and Geo. A. Frazer, of Lake Beulah. No Wisconsin swine breeders exhibited. In the horses E. A. Jones, of Bangor, was the only exhibitor, with Clydesdales.

Competition in Ayrshires was largely confined to Wisconsin breeders, three of four herds being from this state. They were the Ferndell Farms, of Frank Stare, of Ladysmith; Dr. David Roberts, of Waukesha, and Adam Seitz, of Waukesha.

The Wisconsin winners were as follows:

Bull 3 Years or Over (4 shown)—1st Seitz on Bargenrock Rising Star; 3d Roberts on Roberts' Cavalier; 4th Ferndell Farms on Victor of Ladysmith.

Bull 2 Years and Under 3 (4 shown)—1st Seitz on Cavalier's Kilnford Ringmaster; 2d Roberts on Roberts' Fairy Duke; 3d Ferndell Farms on Ferndell Victor.

Bull 1 Year and Under 2 (7 shown)—1st Seitz on Cavalier's Lord Rosberg; 3d Roberts on Roberts of Hamline; 4th Ferndell Farms on Ferndell's Lessnessock Gem; 5th Roberts on Roberts of Waukesha.

Senior Bull Calf (5 shown)—1st Roberts on Roberts' Pride Cavalier; 2d Seitz on Cavalier's Lord Stuart; 3d Ferndell Farms on Ferndell's Credit; 5th Ferndell Farms on Ferndell's Trust.

Junior Bull Calf (5 shown)—1st Seitz on Cavalier's Kilnford Gloster; 2d Ferndell Farms on Ferndell's Loyalty; 3d Ferndell Farms on Ferndell's Arrogance; 4th Roberts on Roberts of Dousman; 5th Seitz on Cavalier's Kilnford Marquis.

Cow 4 Years or Over (7 shown)—1st Seitz on Imp. Kilnford Bell 4th; 2d Ferndell Farms on May of Hillcroft; 3d Roberts on Value's Pride of Oak Valley; 4th Ferndell Farms on Silver Beauty of Bulrush Farm; 5th Seitz on Imp. Hillhouse Maud.

Cow 3 Years and Under 4 (8 shown)—1st Seitz on Bargenrock Carnation; 2d Roberts on Belle Roberta; 3d Seitz on Lady Margaret; 5th Seitz on Cavalier's Wild Rose.

Heifer 2 Years and Under 3 (7 shown)—1st Ferndell Farm on Silver Pet of Ferndell; 2d Roberts on Roberta Dehlia; 3d Roberts on Roberta of Scotland; 4th Seitz on Cavalier's Pet; 5th Galloway on Lessnessock Carlton.

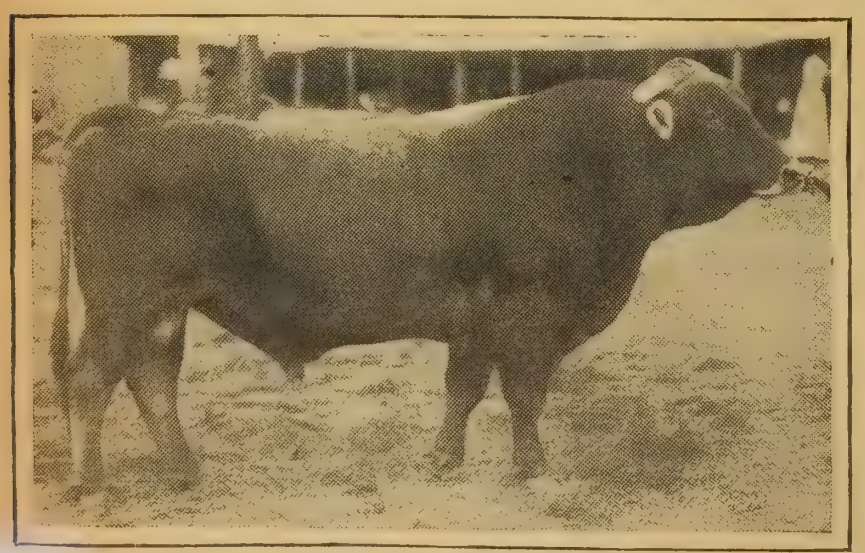
Senior Yearling Heifer (7 shown)—2d Roberts on Roberta Value's Pride Cavalier; 3d Seitz on Cavalier's Lark Spur; 4th Ferndell Farms on Snow Flake of Ferndell; 5th Seitz on Cavalier's Rose Wood.

Junior Yearling Heifer (5 shown)—1st Ferndell Farm on Ferndell's Felicity; 3d Seitz on Cavalier's Rose Leaf; 4th Roberts on Roberta Cavalier Belle; 5th Ferndell Farms on Ferndell's Innocence.

Senior Heifer Calf (11 shown)—1st

LADY BASHUA, JUNIOR CHAMPION JERSEY COW AT IOWA FAIR. OWNED BY FREDERICK D. UNDERWOOD, WAUWATOSA, WIS.

ROBERTS' ABBEKIRK PONTIAC, JUNIOR CHAMPION HOLSTEIN BULL AT IOWA FAIR. OWNED BY DR. DAVID ROBERTS, WAUKESHA, WIS.



URNEY'S 2D SON, GRAND CHAMPION BROWN SWISS BULL AT IOWA FAIR. OWNED BY H. W. AYRES, HONEY CREEK, WIS.

BARGENROCK RISING STAR, GRAND CHAMPION AYRSHIRE BULL, ANY AGE AT IOWA FAIR. OWNED BY ADAM SEITZ, WAUKESHA, WIS.

Seitz on Cavalier's Lavender; 2d Seitz on Cavalier's Kilnford Twinkle.

Senior Heifer Calf (11 shown)—1st Seitz on Cavalier's Lavender; 2d Seitz on Cavalier's Kilnford Twinkle; 5th Roberts on Roberta Southwick Cavalier.

Junior Heifer Calf (5 shown)—1st Seitz on Cavalier's Lady Bountiful; 2d Ferndell Farms on Ferndell's Mode; 3d Seitz; 4th Ferndell Farms on Ferndell's Fidelity.

Senior Champion Bull—Seitz on Bargenrock Rising Star.

Junior Champion Bull—Seitz on Cavalier's Lord Rosberg.

Senior Champion Cow—Seitz on Imp. Kilnford Bell 4th.

Grand Champion Bull—Seitz on Bargenrock Rising Star.

Grand Champion Cow—Seitz on Imp. Kilnford Bell 4th.

Graded Herd (6 shown)—1st Seitz on herd headed by Bargenrock Rising Star; 2d Ferndell Farms on herd headed by Ferndell Victor; 3d Roberts on herd headed by Roberts' Duke; 5th Seitz on herd headed by Cavalier's Kilnford Ringmaster.

Young Herd (5 shown)—2d Seitz; 3d Ferndell Farms; 4th Roberts; 5th Ferndell Farms.

Calf Herd (4 shown)—1st Seitz; 2d Roberts; 4th Ferndell Farms.

Get of Sire (6 shown)—1st Seitz on get of Imp. Bargenrock Gay Cavalier; 3d Seitz on get of Imp. Bargenrock Gay Cavalier; 4th Ferndell Farms on get of Lessnessock Gem's Good Gift; 5th Roberts on get of Roberts' Cavalier.

Produce of Cok (7 shown)—2d Seitz on produce of Imp. Chapel Hill; 3d Roberts on produce of W. Bell; 4th Seitz on Produce of Dewdrop; 5th Roberts on produce of Southwick Heath Flower 6th.

Premier Exhibitor—Seitz.

In the Holstein class there were approximately 150 head in which Wisconsin was represented by the herds of Baird Bros., of Waukesha; Chas. Van Der Schaff, of Sparta, and Dr. David Roberts, of Waukesha. The junior bull was Robert Abbekirk Pontiac, owned by Dr. Roberts. He is an excellent type of Holstein, possessing plenty of size and bone, yet not lacking in quality. The Wisconsin awards were:

Bull 3 Years or Over (4 shown)—4th Baird Bros. on Bairdland Segis Sir Prize.

Senior Bull Calf (22 shown)—1st Roberts on Roberts Abbekirk Pontiac; 5th Baird Bros. on Tarsee Sir Segis Hengervild.

Junior Bull Calf—3d Baird Bros. on Knockdair Segis Fobes Boy; 4th Baird Bros. on Knockdair Segis George.

Cow 3 Years and Under 4 (4 shown)—4th Baird Bros. on Knockdair Segis Prairie Flower.

Heifer 2 Years and Under 3 (11 shown)—3d Baird Bros. on Knockdair Segis Netherland Prize; 4th VanDer-Shaff on Queen of Enterprise Stock Farm.

Junior Yearling Heifer (5 shown)—4th Baird Bros. on Knockdair Segis Valentine; 5th Baird Bros. on Knockdair Segis Corndyke Lottie.

Senior Heifer Calf (23 shown)—3d Baird Bros. on Knockdair Segis Longfield Jim; 5th Baird Bros. on Knockdair Segis Goldbron.

Junior Heifer Calf—5th Baird Bros. on Knockdair Segis Gelsche.

Junior Champion Bull—Roberts on Roberts Abbekirk Pontiac.

Graded Herd (7 shown)—5th Van Der Shaff on herd headed by North Star Cornucopia Sir Beet.

Four exhibitors furnished the showing of fifty-two Jerseys. The only Wisconsin herd was that from Fewacres, of Frederick D. Underwood, at Wauwatosa, whose heifer, Lady Bashua, won the junior champion honors. Mr. Underwood's winnings were:

Bull 3 Years or Over (2 shown)—2d on Noble's Fawn Prince.

Bull 1 Year and Under 2 (4 shown)—3d on Frederick's Knight.

Senior Bull Calf (5 shown)—2d on Frederick's Jim Conners.

Junior Bull Calf (4 shown)—4th on Frederick's Lord of Fewacres.

Cow 4 Years or Over (7 shown)—5th on Distinction's Oxford Belle.

Cow 3 Years and Under (2 shown)—2d on Belvidere's Fairy.

Heifer 2 Years and Under 3 (5 shown)—3d on Iceland's Lady Eleanor; 4th on Noble's Lady Helene.

Senior Yearling Heifer—1st on Lady Bashua; 4th on Lady Dunlap.

Senior Heifer Calf (7 shown)—2d on Frederick's Lady Margaret.

Junior Heifer Calf (6 shown)—1st on Frederick's Lady Marjorie.

Junior Champion Heifer—On Lady Bashua.

Grade Herd (3 shown)—2d on herd headed by Noble's Fawn Prince.

Get of Sire (5 shown)—1st on get of Noble's Fawn Prince.

Produce of Cow (4 shown)—4th.

H. W. Ayers, of Honey Creek, won all but two blues and one purple and the diploma as premier exhibitor in the Brown Swiss class. His winnings follow:

Bull 3 Years or Over (2 shown)—1st on Merney's 2d Son.

Bull 1 Year and Under 2 (3 shown)—1st on Merney's Nephew.

Senior Bull Calf (3 shown)—1st on Toney; 2d on Columbus A.

Junior Bull Calf (2 shown)—1st on Bobbie.

Cow 4 Years or Over (3 shown)—1st on Brownie B.

Cow 3 Years and Under 4 (3 shown)—3d on Zelia.

Heifer 2 Years and Under 3 (4 shown)—1st on Linda Long; 4th on Zell's Merney.

Senior Yearling Heifer (2 shown)—1st on Masters' Alpha.

Junior Yearling Heifer (2 shown)—2d on Chris Rubel.

Senior Heifer Calf (3 shown)—1st on Jane C.; 2d on Columbus Bowney.

Junior Heifer Calf (3 shown)—1st on Queen of the Campus; 2d on Columbus Merney.

Senior Champion Bull—Ayers on Merney's 2d Son.

Junior Champion Bull—Ayers on Merney's Nephew.

Senior Champion Cow—Ayers on Browney B.

Grand Champion Bull—Ayers on Merney's 2d Son.

Grand Champion Cow—Ayers on Browney B.

Graded Herd (2 shown)—1st Ayers.

Young Herd (2 shown)—1st Ayers.

Calf Herd (1 shown)—Ayers.

Get of Sire (2 shown)—1st Ayers.

Produce of Cow (2 shown)—1st Ayers.

Premier Exhibitor—Ayers.

The herds of Jean Duluth Farm at Duluth and that of Wilcox & Stubbs, of Des Moines, who own a Guernsey farm at West Salem, were the only Guernsey herds from this section. The awards were:

Bull 3 Years or Over (4 shown)—3d Wilcox & Stubbs on Imp. Patritia's Son; 4th Wilcox & Stubbs on Penyn of Rosendal.

Bull 2 Years and Under 3 (2 shown)—2d Jean Duluth Farm on Starlight Excelsior J. D.

Bull 1 Year and Under 2 (3 shown)—1st Jean Duluth Farm on May Rose Yeksa Starlight; 2d Wilcox & Stubbs on Francis Holden of Fairview.

Senior Bull Calf (7 shown)—2d Jean Duluth Farm on Marathon Rose King; 3d Wilcox & Stubbs; 4th Wilcox & Stubbs.

Junior Bull Calf (3 shown)—1st Wilcox & Stubbs; 2d Jean Duluth Farm on May Rose Noble.

Cow 4 Years or Over (7 shown)—4th Wilcox & Stubbs on Francis Rose of Fairview.

Cow 3 Years and Under 4 (3 shown)—3d Jean Duluth Farm on J. D. Phyllis.

Heifer 2 Years and Under 3 (4 shown)—1st Jean Duluth Farm on J. D. Coronet; 3d Wilcox & Stubbs on Pride of Village View Farm; 4th Wilcox & Stubbs on Bob Rilma's Daisy Bell.

Senior Yearling Heifer (4 shown)—1st Jean Duluth Farm on Williams May Rose.

Junior Yearling Heifer (5 shown)—3d Jean Duluth Farm on Lyzette's May Rose; 4th Wilcox & Stubbs on Belle Black Sport.

Senior Heifer Calf (9 shown)—1st Jean Duluth Farm on Grees' May Rose 5th Wilcox & Stubbs on Holden's Hazel.

Junior Heifer Calf (9 shown)—3d Wilcox & Stubbs on Margaret Rilma; 5th Jean Duluth Farm on J. D. Roselight.

Junior Champion Heifer—Jean Duluth Farm on Grees' May Rose.

Graded Herd (4 shown)—2d Jean Duluth Farm on herd headed by Starlight Excelsion of J. D.; 3d Wilcox & Stubbs on herd headed by Imp. Patritia's Son; 4th Wilcox & Stubbs on herd headed by Penyn of Rosendale.

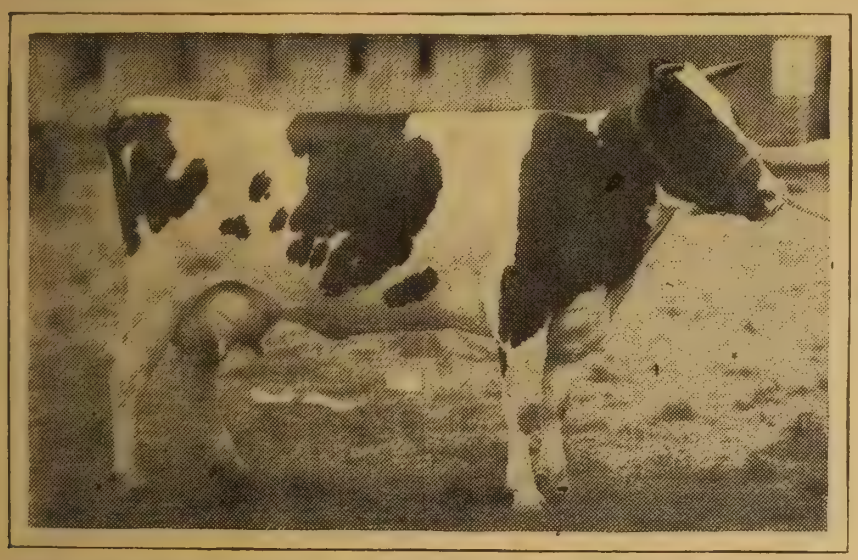
Young Herd (4 shown)—1st Jean Duluth Farm; 3d Wilcox & Stubbs.

Calf Herd (3 shown)—Wilcox & Stubbs.

Get of Sire (5 shown)—2d Jean Duluth Farm on get of May King of Lindavista; 3d Jean Duluth Farm; 5th Wilcox & Stubbs on get of Holden 4th.

Produce of Cow (6 shown)—2d Wilcox & Stubbs on produce of Hazel Tucker; 3d Jean Duluth Farm on prod-

(Concluded on page 9.)



JEWEL WALKER GERBEN OF CEDARSIDE, GRAND CHAMPION HOLSTEIN COW AT IOWA FAIR. OWNED BY WM. GALLOWAY, WATERLOO, IA.

CHOICE CUMBERLAND, FIRST PRIZE TWO-YEAR-OLD SHORT-HORN BULL AT THE IOWA FAIR. OWNED BY MILLER & SONS, GRANGER, MO.

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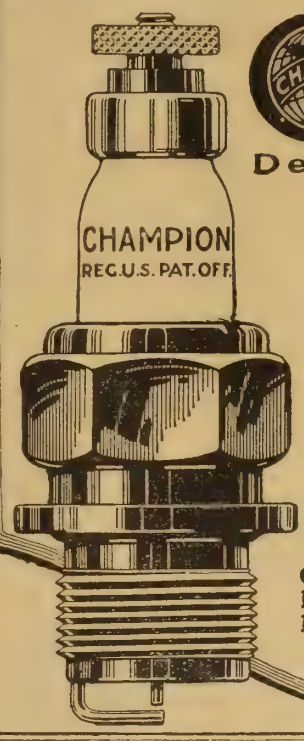

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In and Around Wisconsin

The field meeting of the Wisconsin Drainage Association, which was to have been held on September 4th and 5th, at Racine, has been postponed until October 10th and 11th, and the original program will be carried out. This includes a one-day session and the second day will be devoted to a tour of the drainage districts of Racine county.

Reports of heavy yields of grain are now being received, and Frank Bohinger, of Bloomington, Grant county, reports that his oats threshed eighty bushels to the acre of measure and ninety bushels by weight from a twenty-acre field. Other farmers in that county report heavy yields, among them 6,000 bushels from ninety-five acres, 5,100 bushels from ninety acres, 4,000 from sixty acres and 5,220 from eighty acres. John Bierman secured seventy-eight bushels of barley per acre and thirty-four bushels of wheat.

Walworth county farmers report that one of the best barley crops that the county has ever produced is now being marketed at the elevators. The quality of the grain is far above the average and the price at Elkhorn has reached $1 per bushel. Barley yielded all the way from thirty to fifty bushels per acre and, owing to the dry season, unusually large acreage was harvested and threshed without being rain-soaked which preserved the excellent color and helps bring a good price. Samples of the grain being received at the elevators test from forty-one to forty-nine pounds to the measured bushel with an average of forty-six to forty-seven.

Indications point to a heavy tobacco crop in Dane county this year. Unless there is a very heavy frost or hail many growers predict it will be the largest crop in the history of the county. The farmers are receiving from 12 to 16 cents a pound for their crop and it is estimated that about 80 per cent has already been contracted for. The yield in this county is estimated for this year at 22,000,000 pounds.

The Wisconsin State Fair has issued a special premium bulletin of the young people's department, which every child in Wisconsin ought to receive. In this bulletin is given a list of prizes to be given to the various clubs, agricultural schools and individuals to boys and girls not over nineteen years of age. Among the premiums to be given is a registered Holstein bull calf to the champion agricultural school. This bull calf will be given by the Pabst Stock Farm, Oconomowoc, Wisconsin, Fred Pabst, proprietor. This young bull is a son of King Pontiac Champion, that was sired by the noted bull, King of the Pontiacs, the only bull of the breed to have two daughters making over forty pounds of butter in seven days. The dam of the young bull to be given is Pabst's Cherry, that with her first calf made 12.80 pounds of butter in seven days and is out of the cow, Pabst Aaggie Model, that made 25.63 pounds of butter in seven days. The bull calf himself is an excellent individual, well marked, and the agricultural school that wins him will indeed be fortunate.

Owing to the continued dry weather during the late ripening period and to the satisfactory harvesting season, the condition of Wisconsin winter grain seed crop is excellent, according to Mr. R. A. Moore, of the Wisconsin Experiment Station. Mr. Moore says that many farmers have observed that the improved grains have been able to resist freezing much better than the common varieties and that yields of pedigreed grains have been very good this year, considering the extremely trying winter. This means much to the seed grain growers of pedigreed fall rye and wheat, which are in great demand for seed purposes by other states.

Winter rye can be seeded up to September 15th in Wisconsin and will make excellent fall pasture if sown at this time, according to the Wisconsin Experiment Station. Not only does rye furnish fall and winter pasture but its growth preserves the fertility of the soil by preventing the leaching and washing which occurs to soils left bare during the fall and early spring. If it is desired to leave the rye crop ripen for seed it can be turned under for corn and thus issue a good seed bed for this crop. Many Wisconsin farmers are using pedigreed ryes for this purpose, as it makes a quick, heavy growth in the fall and withstands winterkilling better than the common varieties.

WORTH TAKING TO THE FAIR.
Team of farm horses exhibited at a number of county fairs by the Wisconsin Live Stock Breeders' Association.

The Wisconsin Live Stock Breeders' Association have taken hold of the proposition to organize the Hampshire breeders into a state organization, and letters will be sent out to swine breeders to sound the sentiment in favor of such an organization. Mr. A. L. Damon, proprietor of Delbrook Farm, at Richland Center, is the father of the idea and believes it will be to the advantage of the Hampshire breeders to so organize. In speaking of the Hampshire breed, he says Wisconsin is particularly well adapted for this breed and that the Hampshire hog can be placed upon the live stock map of the state through a state organization similar to that of the Poland China, Duroc Jersey, Chester White and the Berkshire Associations.

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Wisconsin Winners at Iowa.

(Continued from page 7.)

uce of Coquette of Haddon; 6th Wilcox & Stubbs on produce of Peratitia of Sarina.

The showing of Wisconsin Shorthorns was especially good with five herds represented as follows:

Anoka Farms, Waukesha; Carpenter & Carpenter, Baraboo; Herr Brothers & Reynolds, Lodi; Ebon E. Jones, Rockland; McMillan & McMillan, Lodi.

Over 350 of this breed were shown and in the aged cow class Carpenter & Carpenter presented Maxwalton Queen, a stylish deep roan cow which carried off first prize. The classes were all especially strong and winnings of the Wisconsin exhibitors were:

Senior Yearling Bull (8 shown)—4th Carpenter & Carpenter on Sultan Mine 2d.

Senior Bull Calf (51 shown)—6th Anoka Farms on Lavender Stamp; 8th Anoka Farms on Good Stamp; 14th McMillan & McMillan on Dale's Star.

Junior Bull Calf (24 shown)—3d Anoka Farms on Augusta's Sultan 2d; 5th McMillan & McMillan on Meadow View Knight.

Cow 3 Years or Over (8 shown)—1st Carpenter & Carpenter on Maxwalton Queen.

Senior Yearling Heifer (21 shown)—4th McMillan & McMillan on Imperial Heiress; 7th Carpenter & Carpenter on Collynie's Best.

Senior Heifer Calf (45 shown)—1st Anoka Farms on Anoka Blossom 2d; 2d Anoka Farms on Anoka Clipper 3d; 11th Anoka Farms on Anoka Broadhooks; 18th Jones on Victoria Cumberland; 19th Carpenter & Carpenter on Collynie Sultan 2d.

Junior Heifer Calf (28 shown)—4th Anoka Farms on Augusta Anoka 3d; 6th Carpenter & Carpenter on Collynie Mint Drop 2d.

Junior Yearling Heifer (27 shown)—7th Carpenter & Carpenter on Collynie Mysie.

Young Herd (12 shown)—4th Carpenter & Carpenter.

Calf Herd (14 shown)—1st Anoka Farms.

Get of Sire (18 shown)—4th Anoka Farms on get of Imported Villager.

Produce of Cow (12 shown)—3d Carpenter & Carpenter on produce of Barmpton Leaflet.

GRAND NATIONAL SHORT-HORN BREEDERS' FUTURITY.

Senior Bull Calf—6th Anoka Farms on Lavender Stamp; 8th Anoka Farms on Good Stamp; 20th Carpenter & Carpenter on Collynie Cullen; 21st Herr Bros. & Reynolds on Confirmation.

Junior Bull Calf—3d Anoka Farms on Royal Stamp; 5th McMillan & McMillan on Meadowview Knight.

There were two Wisconsin exhibitors of Red Polled cattle: J. B. Ahlers, of West Bend, and the Jean Duluth Farms, at Duluth, Minn. The aged class brought out ten good cows and quite a few of the following favored the Jean Duluth cow, J. D. Brunhilde, but too much indication of dairy tendencies lost favor for her, which gave the blue to Constant, owned by W. S. Hill, Alexandria, S. D. The winnings of Mr. Ahlers and the Jean Duluth Farms in this division follow:

Bull 3 Years or Over (4 shown)—2d Jean Duluth Farm on Teddy's Best.

Bull 2 Years and Under 3 (4 shown)—3d Jean Duluth Farms on Imperial.

Senior Yearling Bull (4 shown)—2d Jean Duluth Farms on Proctor Knott II; 4th Ahlers on Norland.

Junior Yearling Bull (7 shown)—4th Jean Duluth Farms on Proctor Knott IV.

Senior Bull Calf (8 shown)—4th Jean Duluth Farms on Teddy Panama.

Junior Bull Calf (6 shown)—4th Ahlers on Unnamed Bull.

Cow 3 Years or Over (10 shown)—2d Jean Duluth Farm on J. D. Lady Watts; 5th Ahlers on Cora.

Heifer 2 Years and Under 3 (10 shown)—2d Jean Duluth Farm on J. D. Purity; 3d Jean Duluth Farm on Ringlet.

Senior Yearling Heifer (8 shown)—4th Ahlers on Maggie.

Junior Yearling Heifer (8 shown)—2d Jean Duluth Farm on J. D. Winona.

Senior Heifer Calf (10 shown)—3d Jean Duluth Farm on Teddy Dorothy.

Junior Heifer Calf (7 shown)—3d Jean Duluth Farm on J. D. Bomby; 5th Ahlers on unnamed calf.

Graded Herd (5 shown)—3d Jean Duluth on herd headed by Teddy's Best.

Young Herd (5 shown)—3d Jean Duluth Farms.

Calf Herd (6 shown)—4th Jean Duluth Farm; 5th Ahlers.

There were twenty-seven sheep exhibitors at Des Moines, three of which were Wisconsin breeders. Alex W. Arnold, of Galesville; George A. Fraser, of Lake Beulah, and George McKerrow & Sons' Co., of Kewaukee.

With Hampshire Downs the Arnold showing took 1st on get of sire, 1st on flock, champion ewe of any age, 1st and 2d on ewe under 1 year, 1st and 2d on ewe two years or over, 2d and 4th on ram under one year and 1st on ram one year old and under two. In Southdowns Mr. Arnold took 2d on flock, 2d on get of sire, 1st on ewe one year old and under two, 2d on ewe two years old and over, 2d on ram one year and under two and 3d on ram two years old and over. With Cheviots Mr. Arnold took 2d on flock, 2d on get of sire, 3d on ewe under one year, 2d on ewe one year old and under two, 2d on ewe two years old or over and 2d on ram two years old or over. With Shropshires Mr. Arnold took 2d on ewe under one year.

George McKerrow & Sons' Co., with Oxford Downs took champion ram of any age, 1st on ram two years old and over, 3d on ram one year old and under two, 1st on ewe one year old and under two, 4th on ewe under one year and 3d on flock.

E. A. Jones, of Bangor, appeared in the following winnings in Clydesdales:

Reserve Champion Mare on Sweet Marie.

Get of Sire (4 shown)—4th on get of Young Criterion.

Produce of Mare (7 shown)—2d on produce of Maud Trooper.

Yeld Mare 4 Years Old or Over (3 shown)—3d on Grove Girl.

Filly 3 Years and Under 4 (5 shown)—3d on Lady May.

Mare Foal (4 shown)—1st on Molly Darling.

On page 8 will be found a picture of the individual pens for sows and litters on the E. H. Parker & Son farm, known as Parkhurst Farm, and situated near Janesville, Wisconsin. Mr. Parker and son are among the state's most popular Duroc Jersey breeders and a great part of their success is due to the care they have taken of their pigs. Each sow and her pigs have a pen to themselves and if you could visit this farm in the spring or fall after the pigs are farrowed you would be convinced that this is the finest way to raise pigs. The Parkers raise a uniform lot of pigs with very few runts and this is due entirely to their methods of handling.

The New Way To Light Your Home

NOW, you can have and enjoy modern conveniences for lighting your home at a very small expense.

Good light adds to the comfort, beauty and cheerfulness of your home. Father can read his favorite papers in comfort, mother can sew or read in restful ease, and the children can play or study without eye-strain.

Solves the Lighting Problem for Farm Homes

Good light makes the evening hours the best time of the day. Makes everything bright, cheerful and attractive—a genuine satisfaction when company comes.

The American Lighting System gives you 400 candle power light in every room—a pure, white light, softened by beautiful Alba shades.

Ideal Lighting System

You get better and brighter light than electricity or acetylene gas. You get convenient light—nearly as easy to use as gas. You get economical light—costs less than kerosene lamps. And the price of installing an American Lighting System is less than one-tenth that of an electric light plant.

The American Lighting System is a time-tried, owner-proved system. It is the result of twenty years' experience in manufacturing lighting systems,

It is simple, easy to operate, and absolutely safe. Just light a common match—hold it to the burner for 5 seconds—turn a valve—and you get 400 candle power light. It does away with drudgery of filling and cleaning the kerosene lamps every day.

Cost of Operation

The American Lighting System costs very little to run. It is the most economical method of home lighting. Records kept by owners show that the average cost of operating a three light American System is 42 cents per month or $5.04 per year. The average cost of lighting the same homes with three round wick kerosene lamps, two hours per day, would be $10.50 per year. The American Lighting System pays for itself as well as gives you ten times more light than kerosene lamps.

If you want to make your home the best lighted home in the neighborhood—if you want good light with less work and with less expense, write today for complete information regarding the American Lighting System. Every wide-awake hardware dealer has the American Lighting System on hand or will get it for you.

AMERICAN GAS MACHINE COMPANY
632 Clark St., Albert Lea, Minn.

Dealers Wanted

AMERICAN LIGHTING SYSTEM

Write Today

Hogs Grind Grain

THE HOG MOTOR is both a grinder and feeder. With it your hogs will grind their own grain, saving you money and labor. This machine will care for 30 hogs on full feed at a saving of 25% of the grain, and a pig of 40 lbs. can operate the grinder. Grinds all kinds of grain, coarse or fine, separate or mixed. No waste—grain always dry, clean, fresh. We will keep the machine in repair one year Free, and refund money if not satisfied at the end of sixty days.

Send for Booklet -- *Agents Wanted*

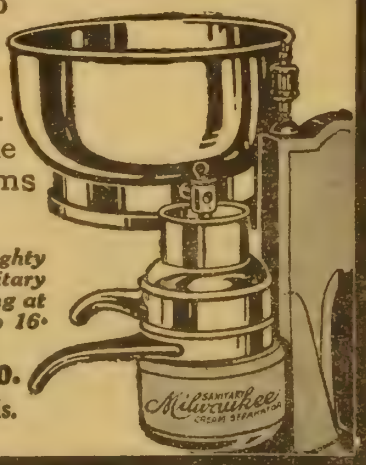
HOG MOTOR CO.
737 Andrus Bldg. Minneapolis

Aluminum Smooth As Glass-and Only 1/3 As Many To Wash

THAT'S the story in a nutshell about Sanitary Milwaukee discs—the reason why so many housewives prefer the

SANITARY Milwaukee CREAM SEPARATOR

The discs are as easy to wash as a coffee cup. No holes or raised bosses—simply a smooth surface that grease doesn't stick to. And besides there are only one-third as many discs—so few that it's quick work to wash them all thoroughly.



The discs are all interchangeable and with fewer discs the Sanitary Milwaukee skims quicker and cleaner.

Write today for the catalog—it's mighty interesting. And be sure to see the Sanitary Milwaukee exhibit in the Dairy Building at the Wisconsin State Fair, Sept. 11 to 16.

Milwaukee Separator Mfg. Co.
245 Madison Street Milwaukee, Wis.

SHARPLES
SUCTION-FEED
CREAM SEPARATOR

Will save you up to $100 a year *over any other separator.* For this reason: Every separator (except Sharples) will lose cream when turned below speed (as 19 out of 20 people do). Sharples skims clean at *any* speed—due to the wonderful "Suction-feed" invention. Write for our catalog.

The Sharples Separator Co. - West Chester, Pa.
Branches: Chicago San Francisco Portland Toronto

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Only $2 Down
One Year to Pay!

$24 Buys the New Butterfly Jr. No. 2. Lightrunning, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 95 quarts per hour. Made also in four larger sizes up to 51-2 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog, folder and "direct-from-factory" offer. Buy from the manufacturer and save money.

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4 Empire STEEL Wheels 75c

that's the cost per year on basis of service. They last 20 to 25 years. Average cost $13. Save labor, time, horses, roads, money. Put a set on your wagon at our risk. Write for catalog and prices.

Empire Mfg. Co., Box 987 Quincy, Ill.

AGENTS to sell men's Hats Direct from Factory. Send for catalog 29.
U. S. Hat Manufacturing Co. Morristown, N. J.

For rough chapped hands, and broken blisters; for piles and hemorrhoids; for burns, cuts and all irritations of the skin use

Trade **Vaseline** Mark
PETROLEUM JELLY

Put up in handy metal-capped glass bottles. At drug and general stores everywhere. Illustrated booklet describing all the "Vaseline" preparations mailed free on request.

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(Consolidated)
19 State Street New York City

DAIRY

Leasing the Bull.

One breeder of high-class dairy cattle has found it profitable to lease bulls from his herd. It happened that there had been a slight depression in the condition of his business. He found his farm too oversupplied with young bulls of very good quality. There was no sale for them at their actual value as breeders. He at first considered sending them to the butcher. Instead he offered to lease them free to a number of farmers who owned grade herds. The agreement was such that the bulls should be returned to the owner whenever the farmers should be through with them.

The results of this experiment were very satisfactory. The bulls were returned after one or two years very much larger and consequently worth more at the butcher's. The farmers had enjoyed the privilege of breeding their cows to a very high-class bull with no expense attached thereto except feeding and keeping the bull. The farmers appreciated this and most of them resolved to never again use anything except a pure bred. In some localities those bulls were the first pure breds to have been used. The whole neighborhoods were attracted and interested in pure-bred sires and pure-bred stock.

The owner of the bulls obtained a reputation for fair dealing when he took the bulls back without asking any payment, as many maintained until the last that he would. His sales of bulls and even of pure-bred heifers to those districts where he lent those bulls have increased markedly.

Doubtless there are men who individually or in co-operation with neighbors could lease some splendid bull for a season or two. In foreign countries leasing of sires is very commonly practiced and is said to be a strong factor in keeping the standard of excellence of all stock very high. The owner of a high-class bull will have his reputation enhanced by renting him out for a season. Some of the greatest improvers of live stock have followed a plan of leasing out all their promising males until they should prove their value as sires. Later the ones that had proven worthy would be recalled to the farm and used there for a series of years. To some extent the leasing of bulls is coming into practice in this country. It is a practice worthy of consideration and commendation.

The Dairy Picnic.

The dairy picnic is a day of profit and enjoyment to all who participate. The dairy picnic is not a summer institute where the main topic is the dairy and dairy interests. It has all the enjoyable and relaxing features of the old-fashioned picnic with a good bunch of dairy sense thrown in. This modern picnic is just as enjoyable, if not more enjoyable than the aimless kind of years past. The dairy picnic is to the dairyman what camp meeting is to religious workers in some localities. The main topic may be "shop talk" yet it is wholesome and refreshing. No one tires of it. The interest grows and an interest in better dairying is stimulated.

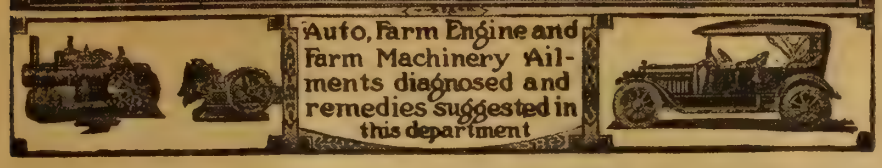
The informal talk with the neighbor and with the fellow dairyman who may have not been seen for months is of itself sufficient justification for the day. Each man learns the experience of others. He will be made to feel enthusiastic over his own work by being encouraged to tell of his success. New ideas will be discussed and accepted or discarded. Records and feeding problems ever present and ever important are live topics for informal discussion. Any dairyman will gather enough ideas at a picnic to well repay him for the time and effort required. It is to be doubted if ever a man left a live dairyman's picnic without feeling better toward his family, toward himself, and with more respect for his fellow men and a genuine appreciation of his cows.

Usually it is an easy matter to arrange a program. State extension workers are ever hungering for unsolicited invitations to visit localities and to speak at picnics or public meetings. The federal department of agriculture through the dairy division is often able to furnish speakers. The state dairy commission or the state food inspectors are usually very willing to partake of a picnic dinner and in return to assist in the formal and informal program. Successful men of the locality or from a distance may be called. This class of men is always listened to with more than usual interest. Programs, of course, may vary almost without limit. In localities where there is a tester's association there is nothing so absorbing as a comparison of cows and records. At one picnic three splendid cows were exhibited in the forenoon. They were criticized and compared critically by a very capable judge. Finally he summed his remarks by saying, "All are very good cows. I will give my opinion as to their value in the dairy as I can best determine by careful judgment. However, their records may show them to be quite different." In the afternoon the records of those cows were exhibited on charts. It was shown that the cow that the judge had placed first had produced the least butter fat during the year. A stronger lesson regarding the necessity of keeping records and testing could not have been produced.

The topic of greatest interest may be the silo or it may be cheesemaking versus buttermaking or the choosing of one breed as a community project. In many localities the matter of starting in the business is the one principal topic of interest. A series of subjects may be arranged. The interest in picnics grows from meeting to meeting. Any community that has a few dairymen can well start a plan to hold a picnic. Any community that does not have a few dairymen and an organization among them will find it advisable to get together and talk over the prospects of the business.

Although dairying predominates in Wisconsin, it is also the home of some splendid beef herds as indicated by the showing of Wisconsin Short-horns at the Iowa fair last week.

FARM MECHANICS



Questions and Answers.

Lighting From Telephone Magneto.

I have a Swedish-American 5-bar, 1,600-ohm telephone generator. Could I use it to charge an automobile storage battery, or light a miniature light?

Answer.—It could not be used to charge a battery. It might be used to light a miniature light of the correct voltage, which depends upon the construction of the machine.

Power to Operate Shredder.

I have a six-roller shredder and I would like to know what horse power is required to pull it on the belt. Would an 8-16 tractor pull it?

Answer.—The 8-16 tractor should pull it easily. As the horse power required to drive these machines varies considerably, it would be well for you to write to the manufacturer for his estimate on the required horse power.

Repair Magneto.

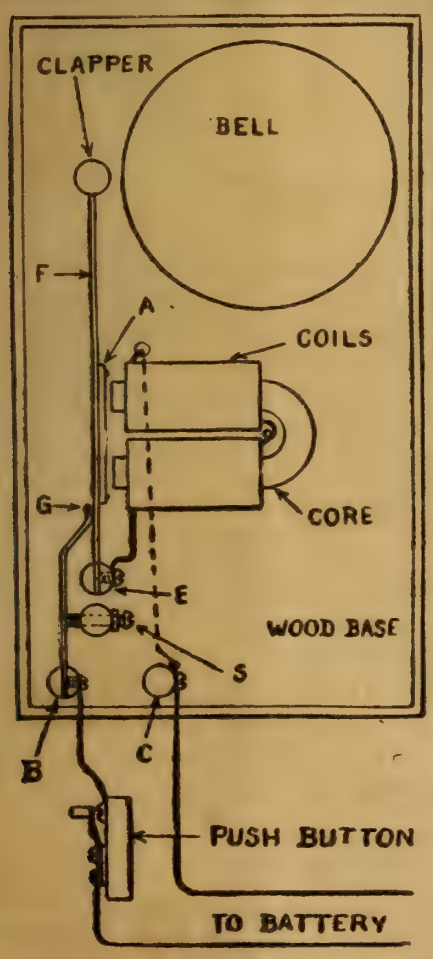
I have a single-cylinder Arrow motorcycle in good order except the magneto. Could I connect dry cells to the timer of the magneto so as to get a good spark?

Answer.—We are not sure what magneto you have on your machine. You probably could not attach a battery to the magneto successfully. Anyway, it would be better for you to have your magneto repaired, as a magneto in good order is better than a battery.

An Electric Bell.

Please show me how to make an electric bell; also how to make the connections. How many batteries will it take? How can I make electricity run a wheel? How can I reverse it? How can I make a storage battery?

Answer.—Space will not permit us to answer all these questions in the near future. Since you are so much interested in electricity, it would be well for you to get a book on elementary electricity and magnetism. There are several such books on the market that would give you the information you wish. Fans, wheels and such machines are run by a motor, the construction of which you can find in al-



most any book on electricity. A motor is reversed by means of a reversing switch, a sketch of which we recently published.

We illustrate an electric bell that a farmer boy should be able to make, and that should be serviceable as a door bell. A small bell is mounted at the upper corner of a wood base about four inches wide and six inches long. Below the bell is mounted a small electric horse shoe magnet. The core of the magnet is made of a wrought iron rod three-eighths of an inch diameter. The coils are made of very fine single cotton-covered copper wire. The coils must be wound so that the electricity flows in opposite directions in the two coils. Clapper spring F and contact spring G should be made of spring brass. A is a piece of iron riveted to F. F and G are fastened in wood posts glued in the wood base. The two terminal posts may also be wood. The binding screws in the posts must make contact with the springs. The screw S must be correctly adjusted so that the springs will vibrate just right. The push button or switch may be made from a wood block, three small screws and a strip of brass as shown. One or two dry cells will ring the bell, and when used as a door bell only, should last a year or more. The bell operates as follows: When the button is pressed, the current flows from the battery through the switch to spring G; from G to F; from F through screw E to the coils, and back to the battery through C. The current flowing through the coils magnetizes the core, which pulls F over so that the clapper strikes the bell. As soon as F is pulled over, the circuit is broken at G. The coils then lose their magnetism, and the clapper springs back. This again closes the circuit, and the process is repeated as long as the push button is held in contact.

Dim Lights on a Ford.

I own a 1915 Ford car that has electric lights run from the magneto. When I first bought the car, the lights were good; but now it is almost impossible to see any light in the road unless going fast. Can you suggest a remedy.

Answer.—See that all the connections are tight, and that the wiring is in good condition. If the trouble is not in the wiring, try new lights. If the trouble is not remedied by new lights of the same voltage you are now using, obtain lights of somewhat lower voltage. If the magneto does not work satisfactorily with the lights of lower voltage, you require a new magneto.

Building a Side-Car.

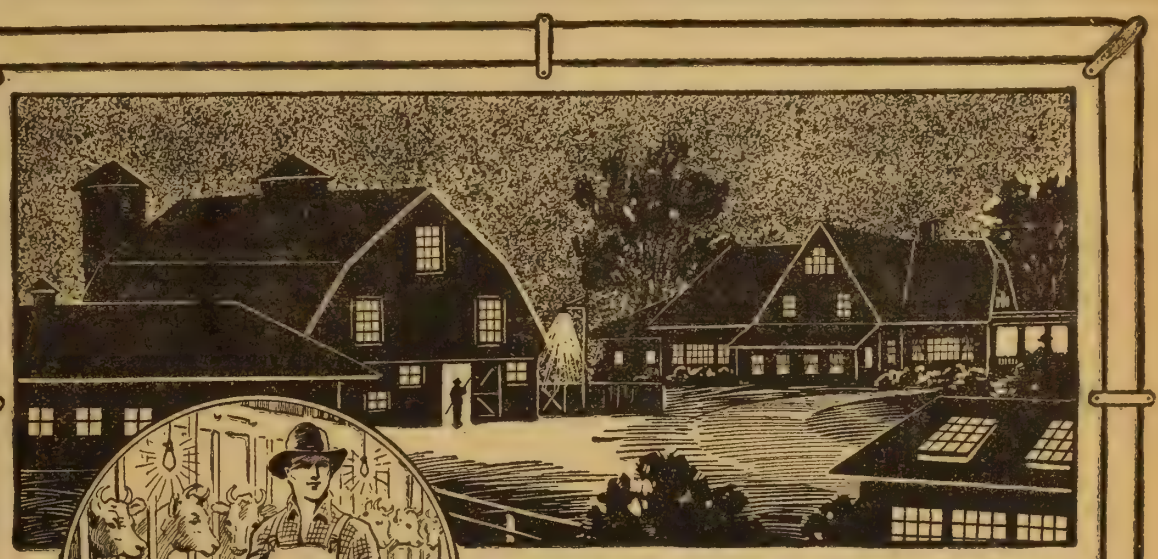
I have a 1914 Excelsior motorcycle. I would like to build a third wheel, or, if possible, a side car for carrying small packages. I want this third wheel mainly to keep the machine from skidding when riding through sand and dust. How can I go about it to build such an attachment? How can I attach it to the motorcycle?

Answer.—Obtain an old bicycle wheel, or motorcycle wheel. Mount the wheel on an axle made from a bar that may be clamped to the rear fork of the motorcycle on the right hand side. Make a rectangular frame the size you want for your side car. Mount the rear end of this frame on a semi-elliptical spring over the rear axle. Attach the forward end of the frame to the diagonal tube of the motorcycle. Steel tubing, flattened at the ends makes the best connection. Also run a brace from the center of the side car axle to the seat post of the motorcycle and another brace from the outer front end of the side car frame to a point well up on the diagonal tube of the motorcycle. The connections must be the right length, so that the two rear wheels line up parallel; otherwise the machine will be hard to steer.

Life And Cost of Storage Battery.

Please tell me which is the better battery, the rubber cell type or the enclosed glass jar type? What is the life of either of them? I would also like to know if we are paying a patent royalty on these batteries, as the price seems to be pretty high. Do you think they will be cheaper in a year or two? Why don't, or can't the manufacturers give a guarantee with the same?

Answer.—The rubber cell is somewhat less liable to breakage than the glass cell. The glass cell permits the plates to be examined without removing them from the battery. There is little choice between the two. Very little of the cost of a battery is due to patent royalty. Not only the materials, but also the labor is quite expensive at present, and the price is more likely to increase than decrease until the end of the European war. The materials for making the paste cost three times as much as formerly. For house lighting, a battery should last from three to five years. The life of a battery depends so much on the care it receives that it is impossible to say how long it will last, and on this account manufacturers hesitate to guarantee them. A high-grade battery may be ruined in a few weeks by improper care.



DELCO-LIGHT

ELECTRICITY FOR EVERY FARM

DELCO-LIGHT furnishes electricity for lighting the house and barn—

It also furnishes power to operate small machinery.

It pumps the water.

It does the washing.

It operates the cream separator.

It churns the butter.

It drives the sewing machine and the vacuum cleaner.

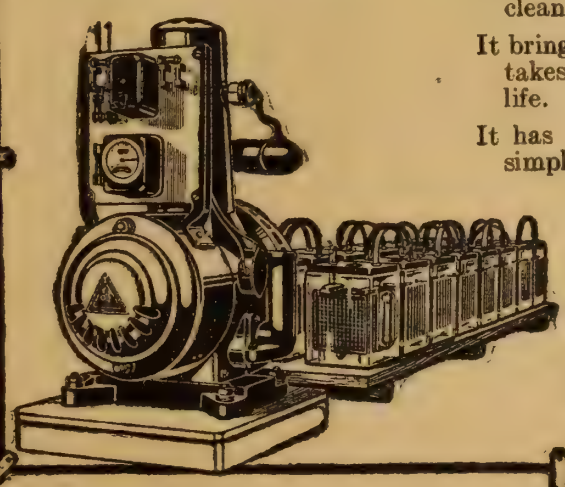
It brings city conveniences to the farm and takes much of the drudgery out of farm life.

It has a capacity 40 to 50 lights, and is so simple a child can operate it.

Price of Delco-Light, complete with batteries ready to run

$275

F. O. B. Dayton, Ohio



A thousand Delco-Light representatives and service men are in the field—there is one in your locality. Look for the Delco-Light Exhibit at the State Fair.

Write for Illustrated Book

The Domestic Engineering Company
Dayton, Ohio

Offices in all Principal Cities

Walter Cool, 204 West Randolph St., Chicago, Ill.
G. F. Schonek, 716 Second Ave. South, Minneapolis, Minnesota.

Threshing Returns Satisfactory.

Grain Crops Made Good Yields in Most Sections—Outlook For Mature Corn Favorable—Pastures Need More Rain.

WISCONSIN.

Adams County.—Corn is maturing but does not look thrifty. Potatoes are late in setting. Pastures on land which is not too high are satisfactory, although their growth is rather slow. Marshes are wet, but hay is being cut on them. Threshing has just begun; oats were lodged and difficult to cut, and threshing returns show them to be light. Clover seed is poor on high land, but good on low land.—C. T. Leonard.

Buffalo County.—Harvesting of small grain is finished and threshing has begun. Oats are turning out from twenty to forty bushels per acre. Barley is averaging about thirty bushels. The grain crops this year are making about 75 per cent of last year's yield. Corn is good on heavy soil, but on light, sandy soil it has been damaged by the long period of dry weather. Early potatoes are good, but late ones are not doing well. Several good steel and concrete bridges and culverts have been put in in this county and the roads are in fine shape.—James G. Bates.

Clark County.—Part of the threshing is done. The grain crops are light, having ripened too soon on account of the hot weather. Oats are running from twenty to thirty bushels per acre. Rain is badly needed for the hard grain crops.—Fred Ackermann.

Crawford County.—Threshing is under way and reports state that the grain is good. Oats are making from forty to sixty bushels per acre, rye twenty to twenty-five bushels, wheat thirty bushels and barley forty bushels. The corn and potato crops are poor because of the drouth. Corn will make about half a crop if the frost does not come too soon and potatoes will make almost nothing. Pastures are short, except on low lands. Fruit of all kinds have been damaged by the drouth, but not as badly as was expected. Rain is needed.—H. H. Stuckey.

Douglas County.—Late rains have saved the potato crop, but an average crop is not expected. Pastures are improving and live stock are doing well. The yield of small grain will be light, as compared with that of last year. Hay is about an average crop. There is little corn this year, and what there is stands a poor show of maturing.—B. N. Stone.

Iowa County.—When the small grain was threshed it proved a pleasant surprise to all, as the yield was very good and the quality just a little below that of last year. Corn looks better in the northern part of the county than in the southern, but it is suffering from drouth in both sections. Fall pastures will be very short unless rain comes soon. Potatoes are considered a failure, and the price has advanced to $2 a bushel. The fruit yield is below normal and there are no late gardens this year.—Art Hoskins.

Juneau County.—Crops are suffering from dry weather. Potatoes look like a failure and corn needs rain and hot weather in order to mature. Shock threshing is all done. Barley is normal and oats are about 75 per cent normal. The rye crop is an average. The new seedings of meadows are very spotted on account of the hot, dry weather.—C. W. Hale.

Kewaunee County.—Harvesting is half finished. Barley is an average crop and oats are fair, but somewhat lighter than last year. Pastures are poor on account of drouth and hot weather. Live stock are in fair condition, but the milk flow has decreased. Potatoes are in good shape, but need rain badly. Corn looks fine in most sections and is a week ahead of last year's crop.—W. C. Katel.

Langlade County.—Threshing has begun and small grains are fair. The weather is too dry for crops. Corn on heavy soil is doing well, and some flint varieties have started to ripen. Apples are making half a crop. Potatoes will average half a crop, but in some places they are not worth digging. There will be no second crop of clover for hay, but some will be cut for seed. Cattle are in fair condition in spite of dry pastures.—Chas. Parsons.

Marinette County.—The hot, dry weather has hurt pastures and made the second growth of grass much lighter than was expected. Clover and potatoes are better in the northern half of the county than in the southern, because the rains were more frequent there. Corn is in good shape and a good yield is promised; most fields are past the roasting-ear stage. Without good rains soon, potatoes in the southern half of the country will not make much of a crop. Vegetables are plentiful, and excellent in quality. The tenth carload of dairy cattle brought into the county by the Co-operative Cattle Buying Branch of the County Advancement Association, was delivered to farmers around Waukesha on August 18th, and another load will follow soon.—W. E. Morton.

Marquette County.—All small grain has been stacked and some has been threshed. Corn is doing fine and will make a good crop if frosts do not injure it. Beans will not make more than 25 per cent of a crop. Pastures are short on account of dry weather. Cucumbers are making about one-half a crop. Live stock are healthy. Hogs are bringing 10 cents a pound.—John M. Williams.

Monroe County.—Recent showers have helped the corn very much and it is now growing rapidly. Some fields are denting. A good rain is needed at present for corn and late potatoes, which will be a light crop at best. Two more weeks will be sufficient in which to finish threshing. The yields so far have been better than was expected; oats are making from forty to sixty bushels per acre, and rye from ten to twenty bushels. Pastures are still quite dry and short. We can soon turn the stock into the fields where they will do better.—D. F. J.

Pierce County.—We have had no good rain since the first of July. Pastures are dry and crisp and gardens are drying up. Potatoes are a failure. The new seeding of timothy is dead, but the clover seeding is alive. Apples are plentiful, but smaller than usual. Corn will yield about half a crop. It was injured by heat and drouth. Fields which will make fair corn are maturing rapidly, and farmers believe the seed supply will be ample for next year. Shock threshing is nearly completed. The yield of rye runs from fifteen to twenty-five bushels per acre, oats thirty-five to forty-five bushels, and barley twenty to thirty bushels.—G. K. Moore.

Price County.—Threshing has begun. Oats are averaging thirty bushels per acre of good grain. Potatoes promise a fair crop. Pastures are getting short. Live stock are in fair condition and no diseases are prevalent. Weather continues dry and warm.—C. F. Glissendorf.

Polk County.—In general the month of August has been hot and dry, but the weather is cooler now. The potato crop will be almost a failure. The corn crop is not good, but many fields will make about 75 per cent of a crop and it will be ready to harvest in about ten days. Some clover seed will be harvested this year. Threshing is in progress and the grain is light. Oats are running from twenty to thirty bushels per acre, barley is averaging about thirty bushels, wheat from ten to twenty bushels and rye from twenty to thirty bushels. Pastures are dry and the milk production has fallen off nearly one-half.—P. F. Amery.

Portage County.—The continued drouth has been very destructive to crops. Corn is drying up and potatoes will be a total failure unless it rains soon. The potato bugs are doing considerable damage. Pastures are poor and the milk supply has been reduced. The new seedings of grass and clover seem to stand the drouth quite well. The number of dairy cattle in the country is about 10 per cent greater than in any previous year.—Arthur H. Peterson.

Taylor County.—A big crop of hay has been put up without any rain. Harvesting is done and threshing is under way. Small grains are yielding fairly well, but are light in weight. Potatoes are very small on account of the drouth. Garden truck is good, except cabbage. Pastures are getting short, but live stock are doing well on them. Corn looks well; some of it is glazed already and promises a ripe crop. The second crop of clover is short on account of the dry weather. Peas are poor this year.—J. C. Hoffmann.

Sawyer County.—Rains during the last two weeks have been heavy. The grain crops will be light, especially oats and rye. Pastures are in fine condition. The second crop of clover is in full bloom and ready for cutting. Wild blackberries will be plentiful this fall and picking has already begun. The crop of cranberries will also be good. Cucumbers are yielding well and are keeping the pickling station very busy. Live stock are in fine condition. Several loads of beef cattle have been shipped to the St. Paul market.—F. O. Setter.

St. Croix County.—Most of the shock threshing is done and the grain crops, except wheat, are running about two-thirds normal. With about two more weeks of good weather, corn will yield well. Potatoes are almost a failure. Pastures are very dry and the ground is too hard and dry for fall plowing.—J. D.

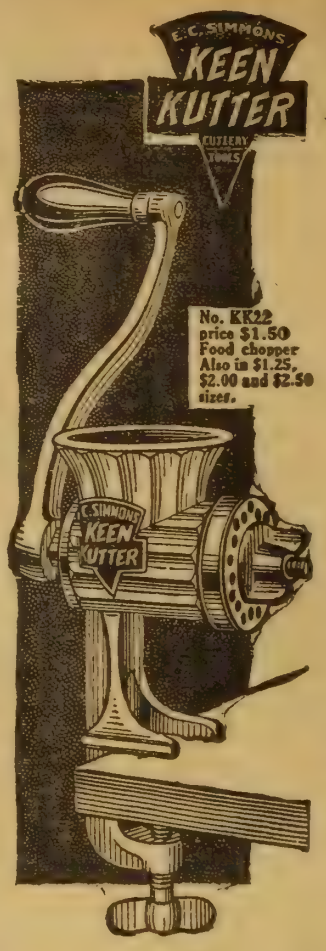
Rusk County.—Threshing is nearly one-half done. Small grain is not yielding as well as last year; oats are averaging from forty to sixty bushels per acre. Corn is developing rapidly and most of it is past the roasting ear stage. Potatoes will make an average crop. Frequent showers have kept the pastures green and cattle are in good condition.—T. M. Thomas.

Washburn County.—Weather has been warm and dry through August, which was ideal for corn, and many fields will mature by September 10th. Pastures are getting short. Some of the second crop of clover is being cut for hay, but a great deal of it will be hulled for seed since the seed is developing well and promises a good yield. The alsike clover which has been hulled, averaged about two and one-half bushels per acre. Little threshing has been done. Oats are not equal to the 1915 crop. Rye and barley are about normal.—L. D. Garnhart.

Washington County.—Harvesting has been completed and threshing is well under way. The average yields of grain will be less this year than last. Barley is making from eighteen to thirty bushels per acre. Oats are better than was expected earlier in the season. Corn has been doing fine for the last two months. Fodder will be plentiful and corn will ripen in about three weeks if weather is favorable. Early potatoes were poor and late ones have not set well so far, but may do so if the weather remains favorable. Red clover seed is yielding better than it has done for several years. Apples are small and the yield is poor. Vegetables are normal in production and very fine in quality. Frequent rains have kept pastures good and the number of stock on them is normal.—M. P. Salter.

Waukesha County.—Corn is doing fine and will make a good crop. It is ahead of last year's crop and is almost ripe. Potatoes are poor; bugs have been bothering them. The second crop of clover will be better for hay than for seed.—W. J. Mann.

Wood County.—Threshing is about two-thirds done. Results show that the rye crop is about normal, and oats are one-half normal and light in weight. Corn is coming on well, but will take two or three weeks more in which to mature. The second crop of timothy has started up well, but there will be no second crop of clover. Pastures are poor. Early potatoes were a failure and it has been too dry for late ones. A light frost on August 26th nipped the cucumbers and corn slightly. Cattle that are on feed look well, and all live stock are in good condition.—Fred E. Weber.



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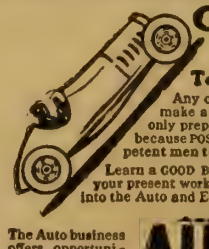

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Louisiana Farmers See Wisconsin

Large Party of Farmers From Southern State Show Special Interest in Wisconsin Dairy Herds and in Dairy Methods.

A PARTY of fifty Louisiana farmers, chiefly interested in the study of dairying, visited Wisconsin last week. They spent a day in Waukesha county and another day at Madison. Those who came in contact with the members of this party were given a new idea of the farmer from the south. The party traveled under the direction of Dr. W. R. Dodson, dean of the state college of agriculture, and Hon. H. D. Wilson, Louisiana commissioner of agriculture.

The purpose of the trip was not to boost Louisiana land, but to study agricultural and dairying methods. Mr. Dodson said that dairying in Louisiana has been hampered and discouraged for many years by federal quarantine against cattle on account of the cow tick. This tick is a very destructive pest and every effort is now being bent toward eliminating it. When this is accomplished it will be possible to build up many dairy herds in the South and there is no doubt that Wisconsin breeders will be called upon to supply good dairy stock for the demand which will be created. Already a very large number of counties in Louisiana have been entirely rid of the tick and this has been due to the dipping process. Recently the legislature of the state passed an act of compulsory dipping and it is believed that this will result in the elimination of the cow tick in a short time. When this occurs, dairying will be put on an extensive and paying basis. Louisiana is an ideal state for dairying and would have forged to the front in this line long ago but for the quarantine relations above referred to.

Many compliments were heard from many members of the party on dairy farms in Wisconsin. Although this party had traveled over other states, Mr. Dodson did not hesitate to say that they had seen no such dairy farms as the twenty-three farms which were visited in Waukesha county. He said that Wisconsin farms not only look prosperous but that they seem to be run on a more scientific basis. The farmers from Louisiana were entertained at the college of agriculture, being escorted about at Madison by Professor Humphrey, of the animal husbandry department. A special session was held for the party in Agricultural Hall and this was addressed by Dean H. L. Russell. Special talks for the benefit of the visitors were given by R. H. Roberts, R. A. Moore, Miss Elizabeth Kelley, Frank Kleinheinz, F. B. Morrison, G. C. Humphrey, D. C. Bullock and J. A. James.

The idea of the tour originated with Dr. Dodson and Mr Wilson. In the party are C. C. Gaspard, of Marksville, La., and W. E. Lawson, of Crowley, La., members of the agricultural committee of the Louisiana State Bankers' Association, and George Villere, manager of the Cloverland Dairy Company, of New Orleans, the largest milk dealers in the South. The others are all owners of large tracts of land and are actively interested in the development of the cattle and dairy interests in their own particular sections. Many members of the party are accompanied by their wives and children.

"We represent the farmers of Louisiana, who are vitally interested in live stock and diversified agriculture—with a dominant interest in dairying," said Doctor Dodson. "While it is our intention to make a thorough study of dairying while on this tour, we also are greatly interested in the beef type of cattle. We realize that in no place in the world may be found more thoroughly developed dairy farms than in northern Illinois and southern Wisconsin. The same is true concerning the beef cattle industry of Iowa. The Wisconsin Agricultural College, Madison, Wis., and Iowa Agricultural College, Ames, Iowa, two of the greatest educational institutions of the world and which have contributed many noteworthy scientific discoveries of inestimable value to the farmer, will be visited, and it is our intention also to make a complete study of agriculture before we return to our respective homes."

Doctor Dodson said that by personal observation the members of the party feel that they will be able to get the full educational value of these industries as pertaining to various branches of farming and the production of beef, milk and all dairy products.

Doctor Dodson added that the farmers of Louisiana are just beginning to take an active interest in live stock. "We are just beginning to realize," he said, "that our state is rich in undeveloped opportunities along this line, particularly in the development of our beef cattle, dairying industries, hog raising and of the construction of silos and barns. We are in search of knowledge and enlightenment."

In the party are six county advisers, who will make it their business upon their return home to arrange for a series of lectures, so that all may receive the benefits of the knowledge obtained.

The trip is of more than passing interest and importance because of the large number of northern farmers who are turning their attention to Louisiana for practically the first time, as a state wherein exceptional farming opportunities exist. Hundreds of grain-belt farmers have moved to Louisiana within the past two or three years, inaugurating a new farming era in that old southern state, which is already beginning to be evidenced in increased production, in intensive farming activities and in improved farm life conditions generally.

The northern farmer's preconceived ideas of Louisiana suffer a wonderful change once he enters this remarkably rich state. No state in the Union has a better school system than Louisiana. Few states are attacking their road problem with more vigor, the result being that the rural sections are traversed with good highways, bringing town and country into ready communication. The influx of the northerners is quickening the slow southern pulse, and conditions generally are improving at a wonderful rate. Louisiana is turning away from its old-style, one-crop manner of farming and is devoting former cotton fields to corn and oats, which yield well and return a good profit. Still more important, however, it is turning to live stock farming and bringing in herds of good, high-grade animals, to replace the scrubs which have held back the live stock industry throughout most of the South all too long. It is in live stock farming in particular that the greatest opportunities seem to exist in Louisiana today; hence, the visit of the Louisiana farmers to the fine stock farms of the grain belt, in order to obtain valuable pointers which will help in sending Louisiana ahead with leaps and bounds. Incidentally, the party visited the tractor show at Bloomington, studying the tractor with an eye to its usefulness in breaking the cutover lands and pulling the stumps, so that thousands upon thousands more acres may be made to yield crops to add to the wealth of the state.

The personnel of the Louisiana party, now in the North, the great ma-

(Concluded on page 18.)

LOUISIANA FARMERS AND THEIR FAMILIES ON THEIR RECENT VISIT TO MADISON.

IT'S EASY to say Foot-Schulze Footwear is better and it's easier still to prove it. Put on a pair of these unusual quality shoes—their comfort, durability and good looks are the proof. These qualities are built in by expert workmen, working in congenial surroundings with the best materials that anybody puts into shoes of equal grade. They are made to suit Northwestern conditions and are not sold anywhere else. They are the best for you to buy—a trial will prove that. Find a Foot-Schulze dealer—They're everywhere.

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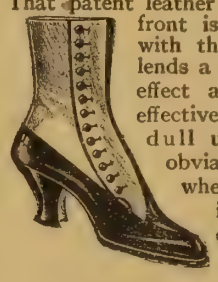
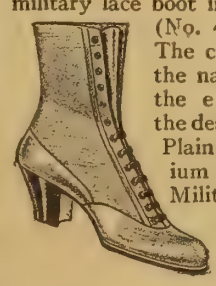
4239. The hit of the season. That patent leather stay up the front is one piece with the vamp. It lends a long, narrow effect and contrasts effectively with the dull uppers. Also obviates all strain where the seam is usually located. Try this shoe.

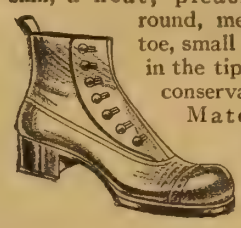


4605. Young woman's smart military lace boot in dull calf, or (No. 4213) patent. The cloth top with the narrow strip at the eyelets lends the desired "touch." Plain toe with medium narrow effect. Military heel. For style, (and wear too) select this shoe.

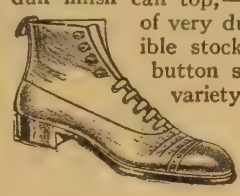


4027. Here's relief for sore, tender, aching feet—this vici kid blucher with cushion insole—it made the cushion insole for women popular. Also made in button and regular lace models. Neat, smart-looking lasts far more graceful than the typical cushion sole patterns.

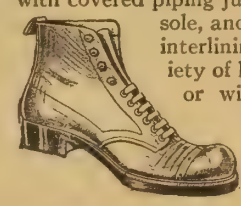
1216. (Button) and its running mate 1217 (Lace). Our best-selling men's style. Dull finished calfskin, a neat, pleasing style round, medium high toe, small perforation in the tip and quiet conservative lines. Material and workmanship "right up to snuff" of course.



1228. The stylish shoe for young men—and men who stay young. Receding toe—straight lines—plain effects—small perforations—dull finish calf top,—single sole of very durable, flexible stock. Lace or button style in a variety of numbers at various prices.



1410. Here's a **waterproof shoe** that's really dressy—just what so many business men want. Waterproofed by Web-Foot construction, with covered piping just above the sole, and damp-proof interlinings. A variety of lasts, medium or wider toes, to choose from, most any style you want.



Foot, Schulze & Company, Saint Paul

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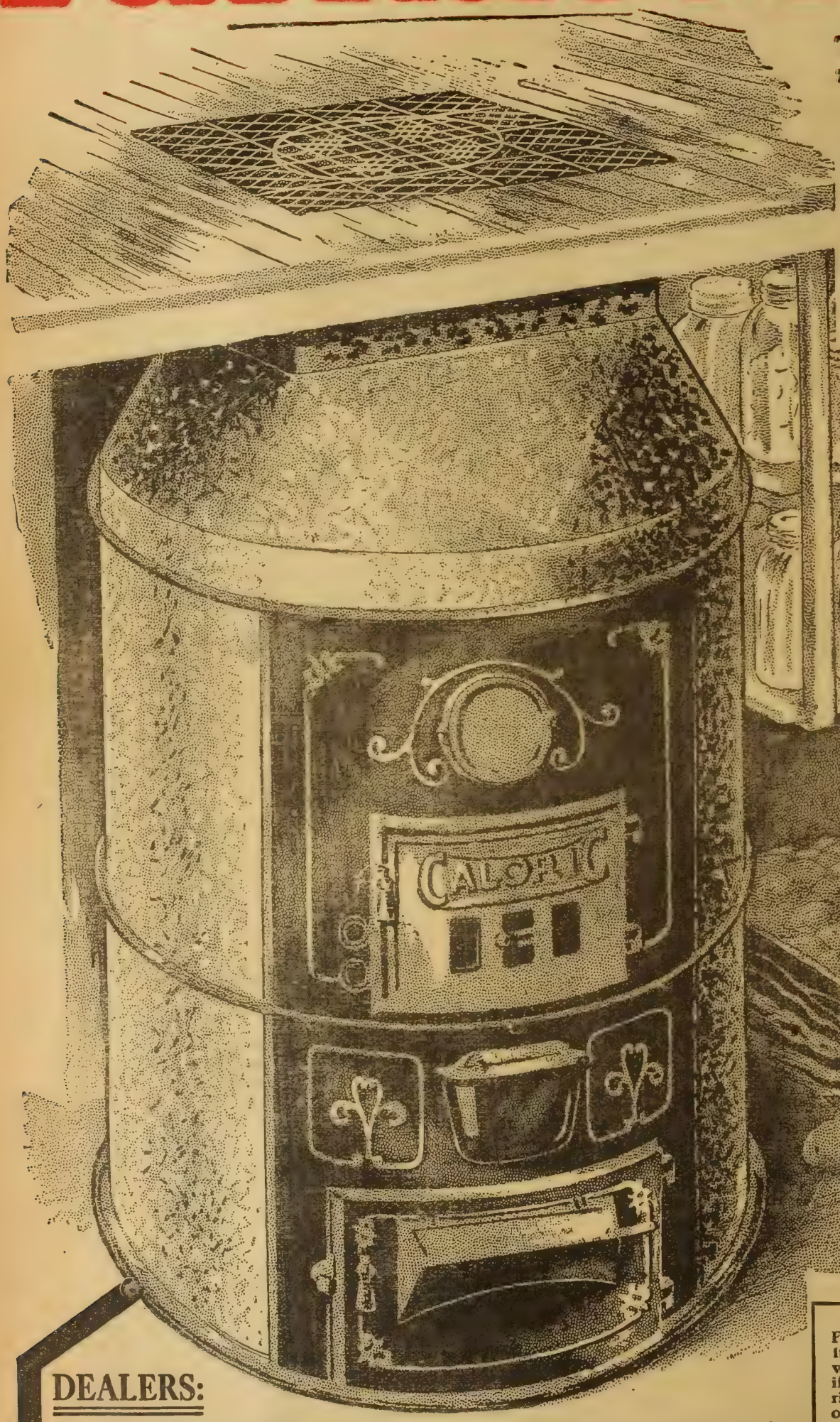

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and city homes. Actual use proves that it will heat houses of l cost than would be required with stoves.

se, new or old, because you do not have to cut any holes for pipes. This saves uttered with needless pipes. You can cut **one hole** for a register immediately irculate though the entire house.

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We have had a long cold winter and spring but have burned only five tons of soft coal in your Caloric furnace. The rooms have been well warmed and the coil furnishes an abundance of hot water all over the house. The cellar temperature stayed about 10 degrees above and none of the vegetables were spoiled or sprouted by an overheated celllar. The cellar being free from pipes afforded free movement and storage room. Our walls, paper, carpets, etc., are bright as new on account of furnace being dustless. I consider it the cheapest, most economical and easiest operated furnace on the market.—Claud Baker, Union City, Ind.

I bought a Caloric furnace in December, 1915, and am very well satisfied. I used about $12 worth of coal and kept my house comfortable even at 7 degrees below zero. I have seen lots of furnaces but none to equal the Caloric. — William Hanft, New Athens, Ill.

Have had the Caloric furnace since November, 1915. It produces more heat from less fuel and costs two-thirds less than any other kind. I have a large three story 11-room house and on different mornings before 7 o'clock showed 72 degrees in our third story rooms. This was true on March 17th when the temperature outside was 6 below.--Mahlon Fretz, Sellersville, Pa.

We consider the Caloric the coal nan's enemy as we have used approxmately three tons of hard coal per eason for house of seven rooms and ath. One of my neighbors has lready taken out his pipe furnace and nstalled a pipeless furnace, while two thers will take out their pipe furaces and install a Caloric this sumner. The Caloric does not heat the asement and takes very little room. —John Neumann, Sauk City, Wis.

I always heated with hard coal at $45 and $15 for cooking and laundry. I installed a Caloric Pipeless Furnace and heated 6 rooms and bath for $32, including cooking and laundry. I had no trouble keeping 70 degrees upstairs and downstairs, even on several days when the thermometer registered 10 and 20 degrees below. The Caloric makes good moist air and pleasant heat.—W. C. Kindig, Centerville, Ia.

bit at Your State Fair.

UPPER WISCONSIN

Getting Money to Buy Cattle.

The illustration shown herewith is of a part of a group of cattle bought in southern Wisconsin and shipped into an Upper Wisconsin county. The purchase of these cattle was made with the aid of the bank and business men in the town to which the cattle were shipped.

In the current Wisconsin Bankers' Farm Bulletin for September Mr. Raymond Baker, assistant secretary of the Wisconsin Live Stock Breeders' Association, discusses the matter of borrowing money to buy cattle. The Wisconsin Farmer has repeatedly called attention to the "Ashland plan," which Mr. Baker speaks of in particular in the bankers' bulletin. Inasmuch as there should be a good many more Upper Wisconsin communities interested in this plan of buying cattle, we publish Mr. Baker's statement of the Ashland plan as follows:

The Ashland Commercial Club made a survey of the country tributary to Ashland which showed the number of farmers who would buy cows if credit could be arranged. Each farmer was asked to sign an application showing the number of cows he then had, the number he wanted to buy, the breed preferred, whether pure-bred or grade animals were desired and the number of acres cleared. He agreed to raise all heifer calves, to accept the cows purchased and to pay actual cost at Ashland, paying within three years for the cows bought from his monthly cream check and at the rate of not less than $3.00 a month a cow. Payment was secured by chattel mortgage on the cows and their progeny and, if necessary, other personal property.

Two banks agreed to furnish the money to buy the cattle, with interest at 6 per cent, if the business men would guarantee them against loss—in other words, if the business men would lend their credit to the farmers. This was done. The bankers then appointed a committee to pass upon the applications. A competent committee was selected to buy the cows.

In 1913 five carloads of grade cows, representing an investment of $9,475, were purchased. By January 1, 1914, $2,613.74 was repaid. No guarantor was called upon to make good. Worthy farmers got their cows on three-year notes, interest at 6 per cent, secured by chattel mortgages and not by mortgages on their farms. There was a better understanding between farmer and business man, better conditions in the country, improved homes, more silos, better barns, intelligent feeding, and a general educational campaign. Live stock raising has become the leading industry in this community. Creameries and cheese factories have been built. Community breeding has been made effective and testing associations are flourishing.

Mr. Baker also calls attention to other neighborhoods where an effort is made to give special interest to live stock by helping out the farmer with money. The Bayfield County Bank loans to farmers or settlers actually living on a piece of land, money with which to buy cows. The banker insists that land shall be purchased, not rented, and that the farmer be a man of good habits, industrious and prepared to care for and feed the cows he buys and to deliver cream to a centrally located creamery. The bank takes the farmer's note and takes a mortgage on the cows and their increase. Arrangement is made for the creamery to deliver one-half of the cream check to the bank. As soon as the bank receives enough money to pay the note and interest the mortgage is discharged. The note is delivered to the farmer and the cows with their increase are his. The Lumbermen's Bank, of Shell Lake, prefers to pay for the cows from the increase rather than from the cream check. This bank, according to Mr. Baker, has placed $100,000 in live stock paper, taking a mortgage on the stock purchased and also a mortgage, sometimes even a second mortgage on the farm. In two or three years the increase will either pay back the loan entirely or make the security first class. Mr. Baker speaks of the Finnish Farmers' Credit Exchange in Vilas county. A group of farmers pool their credit and borrow money on the joint credit of their organization. From this fund they purchase cattle which they pay for by monthly installments taken from the cream checks. The membership in the association is limited. The association borrows its own capital, makes its own loans, buys its own cattle, provides insurance and furnishes sires. In Marinette county, Wisconsin, the Ashland plan, with some modification, has been operating successfully. Under this plan nine carloads of dairy cattle have been purchased. The business men who have guaranteed the loan have never been called upon to put up a dollar. Mr. Baker calls attention to a banker in Macoupin county, Illinois, who was interested in encouraging the young people. This banker visits Wisconsin once a year, buys pure-bred heifers and sells them to farmers' boys and girls, taking their notes signed by their parents for security. These notes run ten months and draw 6 per cent interest. At the end of a year the banker holds a public sale at which each boy may sell his heifer if he desires. The bank takes out what it has coming in loan and interest and gives the balance to the boy or girl for taking care of the heifer. If the animal is developing well and shows good value under the care of the boy or girl it may be purchased at any time for the money invested in it by the bank.

These plans reviewed by Mr. Baker should be adopted by many more Wisconsin neighborhoods. Mr. Baker makes the following suggestions to those who are buying cattle:

A few suggestions about buying:

1. In buying a bull get as good a one as you can afford. The sire, if a good pure bred, is more than half the herd.
2. If possible, buy from a breeder whom you know.
3. Be sure you get stock from disease-free herds.
4. Do not expect to buy good cows cheap. The poorest cows are those that are for sale in most herds.
5. Your best investment is to get heifers which have not freshened but which have been bred to a registered sire of the same breed.
6. Buy as near home as possible. You save expenses, and if animals are not satisfactory your chances for redress are much better.

BUSINESS MEN AND BANKERS HELPED PROVIDE MONEY TO BUY THESE CATTLE.

Potato Club Exhibits.

The Wisconsin Potato Growers' Association has secured Mr. T. L. Bewick as superintendent of school contest exhibits and potato club exhibits at the state convention. Mr. Bewick has full charge of boys' and girls' club work in Wisconsin and the boys and girls in the potato-growing counties will be pleased to know that Mr. Bewick will have charge of this work at the state convention.

Seed potatoes were distributed to several thousand boys and girls in Wisconsin this season. Special contests have been arranged under the direction of county agricultural representatives, county superintendents and others. The state association has provided that the entry list shall be open to all boys and girls who have grown potatoes individually or in potato club contests.

Mr. Bewick will have charge of this work on the program. A special effort will be made to bring delegations of boys' and girls' potato clubs to Eau Claire and special arrangement will be made for conferences with these delegations by Mr. Bewick.

The home economic department of the state university will have charge of potato cooking demonstrations and will co-operate with organized agencies at Eau Claire.

This work will also be represented on the program and during the forenoon session of the convention special lectures and demonstrations on cooking potatoes will be given.

This work gave unusual success at the last convention and special plans are under way to extend this phase of convention work.

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Law Questions.

Injury by Overflow—No Damages.

A Wisconsin Subscriber.—A and B own adjoining farms. A creek runs across both farms, first crossing B's farm. A allows the creek on his land to fill up with sand, gravel and earth, and this causes the water in the creek on B's land to overflow and injure his crops. Can B compel A by law to clear out the creek on his land, and pay B damages for the injury caused by such overflow?

Answer.—Under the circumstances stated B cannot compel A by law to clear out the creek on his land, nor can he recover damages from A on account of the overflow of the creek.

The Farmers' Co-operative Packing Company, at Madison, has increased its capital stock from $500,000 to $750,000. This action was taken at a recent meeting of 700 stockholders in Madison and the raise in the capital stock of the company comes as a result of the desire for entrance for membership in the association by many farmers who are not now stockholders. This will increase the territory represented by the packing association. The stockholders also looked over the new plant which is now under construction and which will be completed during the fall months.

With Our Advertisers.

Belda's Chester Whites.

NO matter what part of the state you go into we are continually being asked if we have seen the Chester White herd of Wm. F. Belda, De Forest, Wis. We, therefore, went out to see this herd a few weeks ago and are pleased to report a fine crop of March and April pigs that are in thrifty condition. These were sired by Mr. Belda's two good boars, W. B.'s Wonder and Modeler's Best. The boars are doing especially well and they are the kind that will go on and prove profitable in every way. If you are in the market for a herd header write to Mr. Belda at once. See page 28.—Adv.

Percheron Stallion for Sale.

SCHWERT BROS, Wauzeka, Wis., are offering for sale their black Percheron stallion, Creston Victor 80716, foaled 1905. This horse weighs 1,900 pounds, is sound and is an excellent sire and the colts by him will show. Inasmuch as he has been used in his territory so long the owners think it advisable to make a change, consequently they are offering to sell this horse very cheap if taken at once. Anyone interested should go and see this horse. They would also like to hear from someone that has a black purebred Percheron from five to eight years old for sale. Write the above gentlemen and mention The Wisconsin Farmer. See advertisement on page 25.—Adv.

Another Chester White Herd.

WITH this issue of The Wisconsin Farmer L. J. McBain, Bloom City, Wis., starts his advertisement offering Chester White boars for sale. This offering consists of fall and spring boars, well grown, well bred and good individuals. Two good boars stand at the head of this herd, namely, Iowa Boy and Ideal Combination. The first mentioned boar is a good individual and sire and is right and inasmuch as Mr. McBain has a good deal of stuff in the herd sired by him he is offering him for sale and here is a good buy for someone wanting a tried sire. He is by Iowa First out of a daughter of Col. Reese, is of 1913 farrow and if you could see the pigs by him you would be pleased with him as a sire. The other boar, Ideal Combination, is by the widely-known Combination 2d, out of Sophia by Inspector O. K. another well-known sire. He comes from a litter from which eight boars sold in the Evans sale at an average of $71. Mr. McBain has some good spring boars by this fellow and they have a world of quality. This herd will bear inspection and we suggest that our readers write the owner if interested in Chesters. Investigate this three-year-old boar, he'll do. Don't forget to mention this publication.—Adv.

Lau's Brown Swiss.

CHARLES F. LAU, Thiensville, Wis., has a yearling Brown Swiss bull ready for immediate service. This young bull was sired by Casper L., a bull of prize-winning breeding. His dam is a heavy-producing show-type cow and the young bull is of Allyn's breeding on both sides. Mr. Lau has a fine herd which it will pay any Brown Swiss breeder to visit.—Adv.

Have You Engaged an Auctioneer?

READERS of The Wisconsin Farmer, who contemplate holding a farm sale or a sale of pure-bred live stock will do well to secure the services of R. B. Hellen, Jefferson, Wisconsin. Mr. Hellen has had twenty years of experience in the auctioneering field and is a live, vigorous worker and keeps up interest from start to finish. He has a clear, distinct voice and a pleasing appearance on the block.—Adv.

Schultz's Chester Whites.

WITH hogs selling at $$11.40 a hundred in Chicago we advise our readers to buy the five Chester White sows advertised for sale on page 28 by L. A. Schultz, Poynette, Wis. He is also offering sixty March pigs at reasonable prices. These are the stretchy, heavy boned kind that will put on flesh rapidly and with the frame to carry it. For further information in regard to breeding write to the above address.—Adv.

Keeping Hogs Healthy.

EVERY farmer recognizes the importance of keeping his hogs in a healthy condition. The hog oiler is a big factor in this. The Wausau Foundry & Machine Company, 917 Plummer St., Wausau, Wis., is so sure that its Marathon hog oiler will satisfy the farmer and breeder, that they offer to ship it for thirty days' trial, the customer to pay if pleased, and return the oiler if not suited. A catalog explaining the value and use of the hog oiler will be sent you for the asking. See advertisement on page 19. Mention this paper when writing for catalog.—Adv.

HOG HOUSE EQUIPPED WITH CHIEF SUNSHINE WINDOWS. SEE FIELD NOTE ON THIS PAGE.

A Fence That Will Last.

THE progressive farmer sees to it that his fence is in good condition, firm and tight the year round. The Square Deal fence, manufactured by the Keystone Steel and Wire Company, Peoria, Ill., fills this need. It does not sag, but stays trim and neat. A catalog telling about Square Deal fence, and a Ropp's New Calculator, which will save the busy farmer much time by giving the answers to his business problems which may be settled by the arithmetic, may be had for the asking. See the advertisement on page 19 and when writing for these books, mention this paper.—Adv.

Building of Hemlock.

FARMERS who are thinking of building a house, barn, garage or other building, will find pictures, plans, and building suggestions in the "Old Faithful" hemlock book published by the Hemlock Manufacturers, Oshkosh, Wis. The booklet explains why hemlock lumber is the great stand-by of the American farmer. The book also contains coupon calling for any two sets of plans and specifications when presented to your local lumber dealer. See the advertisement on page 22. When you write for your copy of this free book mention that you saw it advertised in The Wisconsin Farmer.—Adv.

Sound Investments.

THE Iowa State Savings Bank, of Sioux City, Iowa, was organized February 28, 1906, since which time it has contributed its share toward the business prosperity of Sioux City. It is officered by men of experience and training and of financial authority in Sioux City and its territory. The funds of this bank are invested in bonds, first real estate mortgages, first mortgage cattle loans, and approved commercial paper. The president of this institution, Mr. W. L. Montgomery, has been engaged in the banking business and the handling of farm loans and cattle paper for the past twenty years, which has qualified him to pass on this class of securities. To those desiring safe investments, at liberal rates of interest, this bank offers an excellent opportunity and we suggest writing for more complete particulars in regard to these securities. We believe that any business transacted with the Iowa State Savings Bank, Sioux City, Iowa, will prove to be highly satisfactory. Their advertisement appears on page 8.—Adv.

Buy Prince Albert everywhere tobacco is sold in toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors, and that classy pound crystal-glass humidor with sponge-moistener top that keeps the tobacco in such fine condition.

You get quality when you buy P. A.

PRINCE ALBERT has a value that coupons or premiums can't produce—*quality!* Premiums or coupons have never been offered with P. A. State or national restrictions on their use make no difference to P. A. Men get what they pay for when they buy the national joy smoke—*quality!*

It is certain-sure you'll not know the joy and contentment of a friendly old jimmy pipe or a home made cigarette unless you get on talking-terms with Prince Albert! P. A. comes to you with a *real reason* for all the goodness and satisfaction it offers. It is made by a patented process that cuts out bite and parch! It affords the keenest tobacco enjoyment!

Introduction to Prince Albert is no harder than to walk into the nearest place that sells tobacco and ask for a "supply of P. A." You pay out a little change, to be sure, but it's the cheerfullest investment you ever made!

PRINCE ALBERT

the national joy smoke

R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Copyright 1916 by R. J. Reynolds Tobacco Company

This Separator Saves Labor.

CARING for the milk is one of the busy farm wife's important tasks. It is necessary to keep the separator and other equipment spotlessly clean and sanitary. When the Sanitary Milwaukee cream separator is used this task is made much easier, because the separator is made of aluminum, smooth as glass and there are only one-third as many of the disks to wash. The illustrated catalog explained all about it in an interesting way. Read the advertisement on page 10 and then write for the catalog, mentioning that you saw the advertisement in this paper.—Adv.

Mulford Serum of Highest Potency.

PROTECTION against cholera is of utmost importance to the breeder of fine hogs. He dares not risk losing any of his high-priced animals if it can be avoided. That's where the value of Mulford serum comes in. Mulford serum is subjected to government test before it is released from the laboratory. Potency is the first requirement placed upon Mulford serum. Sterility and freedom from all solid particles are additional features. Free Booklet No. 9, which any breeder may have for the asking, tells much about the use of Mulford refined hog cholera serum. See the advertisement on page 2 and mention this paper when writing.—Adv.

An Electrical Plant For the Farm.

ELECTRICITY, both for lighting and power, is now within reach of the farmer. The Delco lighting plant, completely equipped ready for operation, can be purchased for $275. What this plant will do, besides lighting the farm house and barn and pumping water into the house so as to provide running water, is listed in the Delco advertisement on page 11. A letter or post card will bring an illustrated book telling of the possibilities of these little electric plants for the farm. They are simple, too. A child can operate them without danger. The farmer and his wife no longer need envy the conveniences of city residences. When writing please mention this paper.—Adv.

Buying a Car to Keep.

THERE are a lot of things to be considered in selecting an automobile, especially one of the high-grade cars that are bought not for a season's use, but to last for years. How the Hudson Super Six meets these requirements is explained in the Hudson motor car advertisement on page 5. Some of the tests which the Hudson Super Six has successfully met are listed. It is the car ahead, with the reserve power and speed which makes it master of the road. When you write the company for more information about this splendid car, please mention that you saw the advertisement in this paper.—Adv.

Hog House Windows That Pay for Themselves.

THE owner of this hog house, Mr. Allen Huntington, of Cuba City, Wis., states that the three rows of Chief Sunshine windows paid for themselves the first season in saving the early pigs. These windows—manufactured by Shrauger & Johnson, Atlantic, Iowa—insure direct sunlight for the early pigs. They admit sunshine right on the floor of the pens during the winter months—just when it's needed. Meet all the requirements and are recommended by the most progressive hog raisers. Made of galvanized steel—practically indestructible. Frames hold two glasses with heavy wire mesh shield. Glass held in place by copper clips—no putty. Windows are absolutely leak proof—special center piece and four-inch grooved flashing carry off water. They cannot rot or warp, will not rust, need no paint or repairs. Nothing about them to wear out or get out of order. Chief windows are permanent, efficient, neat looking and easy to install in new hog houses or old. They solve the problem of sunshine for the pigs and their use means healthier, faster-growing hogs. See illustration on this page.—Adv.

Fruits and Garden

Picking and Packing Apples

One of the most interesting addresses at the last annual meeting of the Wisconsin State Horticultural Society was that of H. M. Dunlap, of Savoy, Illinois, on picking and packing apples. Mr. Dunlap brought forcibly to the attention of the members of the state society that it is easily possible to produce good fruit without profit unless the producer understands packing and marketing. We usually see the careful apple pickers using a basket lined with cloth, but Mr. Dunlap says he saw apples handled very roughly. It is a bad custom to hang the basket on the tree or on the rung of the ladder or set it on the ground and then proceed to shoot the apples at or toward it. Mr. Dunlap referred to the bottomless picking sack with broad straps across the shoulders. He thinks that either the basket or sack is a good method for picking, if rightly handled, although, personally, he prefers the use of the sack. The use of the sack leaves both hands free for picking. Mr. Dunlap says the sack should not be shifted about and the pickers should not be allowed to lean against the rungs of the ladder with the filled sack between. The sack should be lowered into the picking crate so that the apples have no drop in emptying the sack. We quote further from Mr. Dunlap as follows:

A packing house is essential if best results are to be obtained, but many growers use the canvas covered table in the orchard, picking and packing the product from sixteen to thirty-six trees at a sitting and then moving the table to the next center and in this way over the entire orchard. In good weather this is not so bad as might seem but at times the sun is very hot, or sudden showers saturate everything and in the late fall the weather is too cold and frosty for comfort. On the whole, therefore, a good sized packing house or shed built at a convenient place in or near the orchard is the more desirable method of handling the crop. This building must be large enough to give room for a sorting table three feet wide by sixteen or more feet in length, or better still, room for an apple grading machine of best pattern, which will occupy about three feet by twenty feet. There should be a space on one side or end of the building for unloading the bushel crates with which all well regulated orchards should be equipped, when they come from the orchard. These crates can be stacked up four or five feet deep and there should be adequate room for these based on necessities. There should be room for at least a day's supply of apple barrels and a place to cooper them up by driving the hoops and nailing same. There should be enough room to face and fill barrels and head them up, and to stack up enough for half a day's hauling ahead. The size of this building will depend upon whether you are barreling 100 barrels per day or 1,000 barrels. For the former a building 28x40 will answer very well. For the latter 60x100 feet would be none too large. The building should have skylights in the roof. I build these of ordinary greenhouse sash about 3x6 feet, usually putting two of these sash in each building on the north or east side of the roof according to the slope and directly over the sorting end of the table. This will give you light an average of thirty minutes later each day and prolong the day's work that much or at least make it possible to do better work on cloudy days and in the evenings. The building should be approachable on all four sides with the wagon, and doors, either sliding or hinged, should open at least ten feet wide for taking apples in and out. For example, I have my sheds arranged to take the fruit as it comes from the orchard into the house on one side of the building. The number one apples go out another door and in case I use a grader the number twos go out another side. The cider apples take their own route. The fourth side is used for supplying empty barrels as needed. Thus you see the necessity for getting to all four sides. On the side where the filled barrels are loaded onto the wagon there should be a raised platform so that the loading can be carefully and easily done. A bin for the cider or vinegar apples should be built with a roof over same. Low wheeled, platform wagons are needed to haul fruit from the orchard to the packing house.

The standard barrel of three bushels' capacity is used generally by the commercial orchardist in preference to the box. Good elm hoops are growing scarcer every year and some, including myself, are using two or four of the six hoops required of the twisted splice wire variety as being both safer and more economical. In transit or in storage they hold better and do not break and scatter the contents of the barrel over the car floor or storage warehouse.

The best floor for the apple house is concrete. The next best is to cover the ground with coal cinders and lay 2x4 flat on the cinders, filling between them with cinders to a level and nailing the floor boards to these 2x4. This gives a good solid floor at little expense.

The walls are of 4x4 uprights about eight feet apart, resting on 8x8x12 concrete blocks with a half-inch iron rod imbedded in the concrete and countersunk in lower end of upright 4x4 to keep the latter in place. Nail ties of 2x4 are used and to these are nailed common lumber surfaced. The roof consists of 2x4 or 2x6 rafters, usually three feet apart with 1x6 boards spaced about three feet apart as sheeting. The covering in this case is of galvanized, corrugated iron, suitable length of No. 26 gauge. The doors of this building should be on rollers and with two or more double doors on each of the four sides to give plenty of light and easy access to and from the building. The roof and dry floor are the important parts of such a building and you only need the walls as a support and occasionally to break off the wind when weather becomes chilly. What you should avoid in a packing house is narrow doors, dark interior and access from only one or two sides.

I have found it most satisfactory to pick by the bushel, keeping a foreman in the orchard to see that the crates are filled full, ladders and apples carefully handled. Each picker is provided with tickets of a certain number which corresponds to the one opposite his name on the sheet tacked to a small board or clip carried by the foreman. Each picker is assigned a tree and his empty boxes are distributed to him from the wagon. When filled the number is tabulated by the foreman and loaded onto the wagon and hauled to the packing shed. Here they are stacked up and afterwards emptied onto the sorting tables or machine grader and from thence into the barrels.

INDICATING CHIEF COMMERCIAL FRUIT GROWING SECTIONS OF WISCONSIN.

Louisiana Farmers See Wisconsin.

(Continued from page 13.)

jority of whom are farmers, is as follows:

O. Abshire, Crowley; C. A. Brewer, Oberlin; Wm. Bradshaw, Vinton; H. P. Cassell, Hammond; C. O. Carpenter, Little Rock, Ark.; Mrs. S. Craighead, Alexandria; W. R. Dodson, Baton Rouge; J. B. Foley, Crowley; J. H. Fullilove, Jr., Shreveport, La.; H. C. Fondren, Jennings; C. C. Gaspard, Marksville; E. P. Gueymard, New Orleans; W. Gibbons, Hope Villa; C. A. Grouchy, Baton Rouge; H. L. Gueydan, Gueydan; A. H. Henderson, Ruston; J. E. Howe, Shreveport; S. Q. Hollingsworth, Shreveport; W. L. Houlton, Unedus; W. A. Hood, Onvill; Joe Jordell, Morse; R. A. Kent, Fluker; Geo. M. King, Kinder; S. A. Kirkpatrick, Boyce; R. B. Knott, Ruston; G. C. Lewis, Covington; W. E. Lawson, Crowley; Sam McManus, Mowata; Ivy McNeeley, Colfax; Pat McGlynn, St. Louis; J. S. Mauboles, Mowata; R. G. Miller, New Orleans; T. H. Milliken, Baton Rouge; Cyrus Morgan, Crowley; H. D. Morris, Slaughter; W. E. Mount, Ponchatoula; Paul D. Perkins, Lake Charles; Martin Petitjean, Rayne; H. J. Seiferth, New Orleans; Mrs. H. J. Seiferth, New Orleans; Guy Shaw, Loreauville; R. D. Solomon, Alexandria; C. H. Staples, Baton Rouge; Jos. Sterk, Alexandria; Mrs. J. Sterk, Alexandria; Miss Webb Sterk, Alexandria; Miss Jennie Sterk, Alexandria; Miss Helen Sterk, Alexandria; S. W. Rhodes, Crowley; E. P. Stanton, New Orleans; Wyllys G. Stanton, New Orleans; W. H. Tupper, Elton; T. B. Trotter, Jackson; S. S. Vance, Tallulah; G. A. Villore, New Orleans; D. C. Welty, St. Louis; L. W. Wilkinson, Gretna; H. D. Wilson, Baton Rouge.

Read This Without Fail

The Golden Prairie District of Wyoming is the Only Sure Crop Country of the West

We are now placing on the market in farm tracts our celebrated Hillsdale Ranch

This is the driest season since the settlement of the country, but we can show you, within three miles of Hillsdale in the neighborhood of this ranch and on no better land, fields of grain (some on sod breaking, too), that would more than pay for the land at our selling price.

DID YOU READ our full page announcement in The Wisconsin Farmer of August 10th? If not, please look up your file. It is on page 9, and invites you to come to the Golden Prairie right now where you can purchase at about what two years' rent will amount to in the Central states as choice a farm as the sun shines on and have included, free, the assignment of a five years' lease on an equal acreage of adjoining state land.

Field of winter wheat in shock and binder at work on farm of Richard Spatz, adjoining the Hillsdale ranch. Photo taken July 20, 1916. This same field produced 50 bushels of oats per acre in 1915, the wheat shown being drilled into the oats stubble in September.

And while you have the issue of August 10th in your hand you can easily turn to page 12, where you will see some pictures of farm scenes adjoining our Hillsdale ranch and read what the Editor thinks of the Golden Prairie District after his second annual visit.

Fill out and mail us at once the coupon found below. It will bring you, without cost, valuable information regarding a district where within a few years farm land values will be as high as they are in the most favored sections of the Central states.

FEDERAL LAND COMPANY

Burns, Wyoming

FEDERAL LAND COMPANY, BURNS, WYO.

Gentlemen: Please mail me at once full descriptive literature of your Hillsdale ranch and the Golden Prairie District of Wyoming.

Name.....

Address.....

Remember this: That we are protected from hot winds and extreme heat by the snowcapped Rockies, always on clear days in plain view to the southwest. This is fully explained on page 3 of the booklet entitled "Wheat Growing and General Farming Without Irrigation in the Golden Prairie District" which will be sent to all who fill out and mail us the above coupon.

WANTED TO HEAR FROM OWNER OF good farm for sale. State cash price and description. D. F. Bush, Minneapolis, Minnesota.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

A Book on Barn Planning.

THE worry of planning the new barn may be saved if the farmer who is thinking of building one will send for the 112-page book "Louden Barn Plans," published by the Louden Machinery Co., Fairfield, Iowa. The book is free. It is prepared by the architectural department of the Louden Machinery Company and contains many valuable building ideas for the farmer who wants a complete and convenient, roomy, warm and yet well-ventilated barn at a moderate cost. See the advertisement on page 16 and then write for the book, mentioning that you saw the advertisement in this paper.—Adv.

Lighting the Farm Home.

FARMERS who have looked forward to the time when they could install a complete lighting plant in their homes will be interested in investigating the American Lighting System, manufactured by the American Gas Machine Company, Albert Lea, Minn. This system can be installed at low cost and is easy to operate. It lights with a match, and is absolutely safe. Read about it in the advertisement on page 9. When you write for information tell the company that you saw the advertisement in The Wisconsin Farmer.—Adv.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

FOR sale—200 acre farm in Richland Co. Wis., 7 miles south of Viola, one of the best grain and dairy sections in the state. For particulars and prices call on or write to R. Gochenaur, Route 1, Viola, Wisconsin.

BARGAIN. Oneida county lands. 146 acres hardwood. Some timber. Thos. Leith, Monico, Wis.

UPPER WISCONSIN FARM LANDS.

ONEIDA County Lands: I have four hundred acres in solid body on a main road, 4 miles from city with groves of timber and several small lakes, very desirable property, can divide if necessary into four pieces. Ask for map and prices. Also have an improved farm, 160 acres, good house and barn, full of clover and timothy hay, big field of fine oats, 70 acres of clover growing, pasture, running water, timber, only half mile from school and cheese factory. Ideal dairy farm. Want $3,000 cash, balance on time. Address C. P. Crosby, Rhinelander, Wisconsin.

WE ARE selling a part of our 10,000 acre tract, located in Oneida County on beautiful lakes with the best known soil in upper Wisconsin, in the heart of the choicest dairy spot on earth. To see these lands is to buy them. Write or inquire Oneida Farms Co., E. M. McVicker, Prop., 1202 First National Bank Bldg., Milwaukee, Wis.

A SHELTERED DAIRY COUNTRY. Low-priced cut-over lands. Fast developing section. 25,000 acres to select from. Come and see. Flambeau River Lumber Company, Station D, Ladysmith, Wisconsin.

It is natural for a hog to wallow. Provide a wallow close to the feeding grounds, to which add Dr. Hess Dip and Disinfectant occasionally. The hogs will constantly pass back and forth from the wallow to the feed trough; while the DIP will kill the lice and cleanse the skin, the DRIP will destroy the germs of disease and the worms that pollute the ground.

Dr. Hess Dip and Disinfectant

One gallon makes 70 to 100 gallons solution

is excellent for sheep dipping; it is a guaranteed remedy for sheep scab and ticks; it destroys germs and foul odors—in short, its use as a disinfectant around your farm will keep away disease. Invaluable for disinfecting sinks, drains, troughs, garbage cans, outhouses, etc. Good alike for home and stable. Sold in pint bottles, quart, half-gallon, gallon cans and barrels.

1 gallon can $1.00

Smaller pkgs. as low as 25c

Except in far West and Canada

Dr. Hess Fly Chaser

Does not gum, color or blister. Makes stock comfortable.

DR. HESS & CLARK
Ashland, Ohio

COSTS $15 WORTH $500

CUT YOUR CORN STUBS

when you cut your corn.

SUCCESS CORN STUB CUTTER

leaves your ground free from stubs and easy to work. It is easily attached to **Acme, McCormick-Milwaukee, Adrian, Deere and Osborn** corn harvesters.

CORN HARVESTER ATTACHMENT CO
524 South Dickenson St., MADISON, WIS.

Special Introductory Offer

in comfort and in condition of fields.

Send for free booklet, "Comfort in the Cornfield."

YOU CAN'T CUT OUT A

Bog Spavin or Thoroughpin

but you can clean them off promptly with

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

and you work the horse same time. Does not blister or remove the hair. $2.00 per bottle, delivered. Will tell you more if you write. Book 4 M free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Wens, Cysts. Allays pain quickly. Price $1 and $2 a bottle at druggists or delivered. Made in the U. S. A. by W. F. YOUNG, P.D.F., 101 Temple St., Springfield, Mass.

MY 1916 SPLIT HICKORY BUGGY BOOK

Just drop me a postal and I will send you a copy of my big, new, 1916 Buggy Book, Free and Postpaid. It shows more than a hundred stunning new styles which my big factory is turning out this season at prices as low as only $39.25 and up. Think of getting a genuine Split Hickory—guaranteed 2 years—at such prices. Send today and see how to save $20 to $40 on your new rig. Address

H. C. PHELPS, Pres.
THE OHIO CARRIAGE MFG. CO.
Station 181 Columbus, Ohio

POULTRY.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorsen, Shell Lake, Wisconsin.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Back-Yard Scoring Not Desirable.

This applies to the farm poultryman who keeps big, pure-bred stock to sell to other farm poultrymen, and not to the ones who are making a business of following the shows. The former desire stock, whose parents would score a fair showing, that have no disqualifications, and that are long on size, bone and vigor. The farmer who is awake to his business, shuns the high-scoring chicken that can be purchased for a minimum price. More and more understanding people pass by an egg advertisement that offers eggs from "prize winners" on both sides of the poultry house, for something like $1 a sitting. First, "prize winners" cannot be sold at the price of just ordinary stock, and secondly for the parti-colored birds there is a wholly different standard between what a bird scores, and what is required to produce either cockerels or pullets.

A cockerel that is expected to produce choice cockerels, should conform as nearly to the standard as possible, while the hens must be several shades darker, causing them to be away off on score. Then, to produce standard pullets, the cockerel should be very light—so light in fact, that he wouldn't score worth a cent. The pullets would need to be the color of the ones you would hope to raise. So, it is very plausible that "winners mated to winners" would produce fries. The point, we hope, is clear, as to the advisability of not trying to purchase silk at the price of good, dependable gingham; if so, you get a cheap quality of the former, and there is no good place for it, on the farm or elsewhere.

Then comes the question, "Are these advertisers not sincere?" They are for the most sincere in their offers. The trouble comes of not knowing the principles of breeding. They have tried to begin at the top, and in almost every case they work downward at a rapid rate. That is why so many promising plants for a short time, while they have the pens mated by one who knows, get along fairly well, and, after they begin to depend on themselves to mate the pens, go to pieces.

There is a great big opening for the farmer breeder, who will produce good all-purpose stock to head the yards, or more often the range of practical poultry people. Many such have the stock all right, but fail in the business end of it. They simply will not "fool" with it. Now, just try to imagine how inconsistent that expression, which we hear on every hand. The time, expense, and labor is the same for the flock, whether it is sold on the market or for people to raise from. And, say! honestly is it not worth a trifle of "fooling," to easily get $2 to $3 each for cockerels, that would only bring about fifty cents each on the market?

A crate that would carry two birds safely to their destination can be made at a cost of twelve cents each. Three lines in your favorite farm paper inform people what you have for sale, and the cost is a trifle, compared to the gain to be realized. Aside from the actual financial gain, it raises the work to the dignity of a business, and this is a certain keynote to success.

If there is someone of our poultry people, who desire to begin along the line of starting a pure-bred flock, or in the case of having choice birds and wishing to get their worth, just send in your problem to this department, and get help first hand from one who began from the ground. Didn't even have the bottom rung of a ladder to stand upon. Neither a building that would keep the chickens from freezing after they were raised.

One bitterly cold winter, a couple of dozen very choice birds were carried to the pet horse's stall, to keep them from getting their combs frozen. How the dear old fellow did resent it, too. One big cockerel that was named "Major," because he was always engineering things, would perch upon the horse's back early every morning and crow. It wasn't much, anyway, to do, but helped to save enough to build a house later.

There is nothing of the "fancier" about us, as it is usually understood. Just a big, vigorous farm flock, that never go half way around. Will be glad to tell you about the part that you care to know.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Barrenness in Twins.

Please inform me if a heifer that was born a twin will breed.

The heifer born as a twin with a bull is usually hermaphrodite and barren, but this is not always the case.

Defective Eye.

I have a pure-bred seven-year-old cow, good breeder, good shape, but one eye is covered with red skin. The eye waters some and is closed most of the time.

It is very probable that this eye is past any chance of recovery. However, it might pay you to have a veterinarian examine it.

Injured Leg.

I have a four-months-old heifer calf whose leg when turned in pasture seemed rather stiff, but not swollen. A month and a half later the leg swelled above the knee and now has a lump half as large as a man's fist behind the leg above the joint.

This calf probably has been injured and the injury caused the formation of an abcess. However, you can tell better the nature of the swelling after examination. If soft in nature and away from joint it is probably an abcess and should be opened after cleansing knife and affected parts.

Necrotic Rhinitis (Sniffles).

We have a bunch of March and April pigs that are troubled with some disease. One side of the nose swells up to a big bunch, seems to itch, then breaks and eats, leaving a large hole. We have had some on which the sores came out on other parts of the body. We have been using plenty of dip and stock food, also have used liniment on the sores both before and after breaking. The hogs get very poor and some of them die. We have killed several that were bad. We have been feeding them mostly oats with good slop and fresh water. They have plenty of pasture to run in.

This trouble is one of the conditions that constitute the disease called sniffles. It is not possible to efficiently treat such diseases because of the difficulty of applying medicaments to the lesion and further because of the destructive changes in the bones of the nose and face. It is advisable, however, to clean and disinfect sheds and sleeping places.

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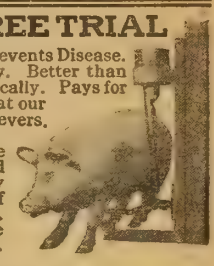

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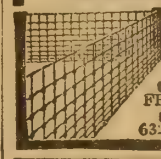

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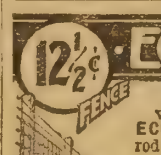

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Parents and Juvenile Club Work.

An illustration of the great importance of the attitude of parents toward the work of members of the boys' agricultural clubs which have been organized throughout the country by the department of agriculture is found by specialists in co-operative demonstration work in two cases reported from the same state. The incidents are accepted as showing the value of parental sympathy and consideration, particularly in the solution of the problem of keeping the members of the younger generation on the farm.

In one case it was found that the boy of the family was helped and encouraged from the time he first joined a corn club. His father permitted the use of one of the best acres on the farm, gave him barnyard manure and allowed the use of the necessary horses and machinery. The young club member produced more than 100 bushels of corn on his single acre the first year and has been consistently successful since. He has even established a reputation as a breeder of fine seed corn. During the four years of his membership in the corn, pig and other clubs he has won more than $400 in prizes, and, with his profits, has acquired ownership of seven head of pure-bred Duroc Jersey hogs, six head of well-bred cattle and a horse. The home is said to be ideal, the father and son being reported as "chummy as schoolboys." The boy has no thought of taking up life in the city, but is planning a constructive future on the farm.

In the second case the results have been wholly different. The young son of this family joined a kafir club, but when the crop was gathered the grain was placed in a general farm bin and he received no value from it. The following year he joined a pig club and when his father called attention to the lack of feed he hired himself to a neighboring farmer to secure funds. The money which he earned was, however, pocketed by the father. Wholly discouraged, the young boy shortly afterwards ran away from home and is now working in a city of a neighboring state.

The incidents have been used by the state demonstration agent of the state in which they occurred as the text for an urgent appeal to all parents to encourage their children in the constructive work they are undertaking in the clubs. One factor which will be helpful, it is pointed out, is permitting the young people to receive the full financial profits of their industry.

To Make Apple Jelly "Jell."

It is just about as easy to make jelly from apples, quinces, peaches or pears as from any other kind of fruit, if you know how, according to Miss Addie D. Root, of the Missouri College of Agriculture. All that is necessary is to add enough tartaric or citric acid to the juice to make it taste about as sour as a good sour apple. This usually means about a level teaspoonful to a quart of juice. It destroys the delicate flavor of peach and pear juice somewhat, but improves the flavor of sweet apple and quince juice.

Blackberries, blueberries, raspberries, partially ripe grapes, crab apples, sour apples and plums usually make good jelly because they have enough acid already and also contain a substance called pectin which must be present and must be brought out with the juice by heating if jelly is to be made. That is why jelly makers do not simply press out the juice from cold fruit. All apples and similar fruits have enough pectin for jelly-making purposes.

In making apple jelly, cover the fruit with water before cooking and boil twenty or thirty minutes. After boiling has continued ten or fifteen minutes add about three-quarters of a cup of sugar for every cup of juice. The sugar that will be required should have been measured into a pan and warmed in the oven for a while before it is added. It should be carefully stirred in to prevent burning.

As soon as the glasses are filled with the hot jelly they should be set in a cool place while jelling takes place. They should be sealed from the air, but if the jelly has been slightly overcooked it may be covered with panes of glass and allowed to harden in the sun. When it is well-set pour hot paraffin over the top and put clean tin covers on the glasses. Store them away in a dry, cool place where the jelly cannot mold.

Convenient Kitchen Arrangement.

In order to do good work in any line the workshop must be carefully planned, allowing the worker good light and plenty of fresh air, and the equipment used must be so arranged as to be convenient, thus saving time, steps and energy. The kitchen workshop is no exception.

Much of a woman's time is spent in her kitchen and it is necessary both for her health and for the accomplishment of good work that the windows be arranged so as to admit plenty of light and air. The finish of the room should be one that is easy to clean and keep clean and is bright and attractive. Have the woodwork plain so that there are no corners to catch dust and dirt. Food is stored and prepared in the kitchen and that room, therefore, should be kept most sanitary.

In arranging the kitchen the large equipment, stove, sink, table, etc., should be so placed that in the carrying out of a task retracing of steps in going from one fixture to another is done away with. The small equipment should be grouped around the fixture where they are used.

The accompanying illustration shows a convenient arrangement of table and shelves. The table is an ordinary table four feet long, two feet wide and three feet high, fitted with drawer for knives, etc. A pastry board is also fitted into it. Note the lower shelf of the table, where are kept bowls used often during the day, spices and such other articles as are in frequent demand.

Above the table is an excellent arrangement of shelf and hooks; everything is at hand and the worker does not have to leave her table for any materials needed. The shelves at the right hold flour, sugar, salt, cereal, etc. The lower shelf is wider than the upper one, allowing a bowl to be placed there and sugar, or whatever is needed, measured into it, and the jar does not have to be carried to the table and back again to the shelf.

The top of this particular table is covered with tin. Zinc also makes an excellent cover. Neither of these materials is injured by heat and they are easily kept clean and bright.

Eliminate everything from the kitchen that does not tend to lessen labor. It is not wise to have an overstock of implements to work with; they are often unnecessarily brought down, adding to the work of dishwashing and there are just that many more to handle and put away.

A KITCHEN WHERE THERE IS A PLACE FOR EVERYTHING AND EVERYTHING IN ITS PLACE.

Shrinking Cotton Materials.

Cotton naturally shrinks when wet. This property is greatly increased in the weaving as the warp threads are stretched to their full length and held in place by the sizing and starch used in finishing.

If the garment is to be laundered it is better to shrink the material before making it up, as it is not easy to make the proper allowance for shrinkage.

Fold the material smoothly and place flat in a tub or large receptacle, the bath tub is excellent. Pour in enough cold water to cover. When the material is thoroughly saturated, pour in hot water, gradually increasing the temperature until the water is as warm as the hand can stand. The hot water is needed to loosen the sizing.

The material should stand in the water overnight when possible, but at least two or three hours. Pour off the water and press as much out of the material as possible, but do not wring. Hang on a line in the open air, stretching out smooth and pinning along one selvage.

Before the material is thoroughly dry take it down and press.

One must be sure that the colors in the material are fast before attempting to shrink it.

How Do You Can Pimentoes?

To the Editor:—I have enjoyed reading the Home page for a long time and get much good from the answers to inquiries and the recipes.

Can any of the readers tell me how to can pimentoes for winter use? I am raising them this year for the first time and am told that they can be successfully canned. I will be grateful for any information regarding pimentoes and new ways of serving either before or after canning.

Mrs. C. R. D.

Braided Rugs.

Cut rags so, when bunched up, you have a strand about as thick as your little finger. If you wish smaller strands, make smaller braid, but it will take longer to sew.

Fasten three strands together and braid. Sew edges together with an over-and-over stitch.

Rugs can be sewed in several different shapes. As you sew the round ones you will have to continue to hold the braid a little full. Hold full only at the ends in oval-shaped ones.

Recipes.

Lemon Snow.—Two tablespoonfuls gelatine, one cupful cold water, three egg whites, two cupfuls boiling water, three-fourths cupful sugar, one-half cupful lemon juice. Soak gelatine in cold water five minutes, and dissolve in the boiling water. Add sugar and stir until dissolved; add lemon juice. Strain into a pan; set in a larger pan of ice water; cool slightly and then beat, using a wire whisk, until quite stiff. Add egg whites beaten until stiff, and continue the beating until mixture will hold its shape. Chill and serve with whipped cream.

Quince and Apple Butter.—Two quarts of pared quinces, two quarts of pared cooking apples, three cupfuls of granulated sugar, three cupfuls of water. Drop the pared quinces and apples into cold water containing a bit of salt, to keep them from turning dark; then put them through a coarse food chopper, or cut them very fine. Put into a preserving kettle with water and boil until tender, so they can be mashed. Add the sugar, and boil slowly for an hour and a half. This makes a very good, thick butter.

Yellow Tomato Butter.—Two quarts of yellow tomatoes, one large juicy lemon, one teaspoonful of salt, three cupfuls of granulated sugar. Do not skin, but wash and dry the tomatoes. Cut them into halves the long way and remove the seeds by pressing each half. Put on with the sugar and salt, and cook slowly for from an hour and a half to two hours, stirring frequently. Wash the lemon in hot water; cut into very thin slices, and add to the tomatoes and boil for ten minutes, stirring very carefully so as to keep the lemon slices whole. Put into sterilized glasses.

Tomato Sago Soup.—One pint tomatoes, three pints consomme stock, salt and pepper, two tablespoonfuls sago. Boil tomatoes and consomme in a saucepan for ten minutes, seasoning with salt and pepper. Then add sago and cook for fifteen minutes longer, stirring gently all the time. Serve at once.

Chocolate Cookies.—One-half cupful of butter, one-half cupful of sweet milk, one cupful chopped walnuts, one cupful of brown sugar, one egg, two teaspoonfuls of cocoa, one-half teaspoonful of soda, one cupful of seeded raisins, one and one-half cupfuls of flour. Cream sugar and shortening together; add milk, egg, walnuts, raisins and flour, which has been previously mixed and sifted with the soda and cocoa. Drop by spoonfuls on buttered tins and bake in a quick oven.

Buttered Rice with Peppers.—One cupful of rice, two quarts of boiling salted water, two sweet green peppers, one tablespoonful of butter. Cook the rice in the boiling salted water twenty minutes, or until tender but not broken. Drain in a colander and set in an open oven for five minutes to dry off. Seed the peppers and chop fine. Put butter in a frying pan over the fire and when it hisses add the minced peppers; toss and stir until smoking hot all the way through. Put the rice into a dish and pour the peppers all over it, loosening the mass with a fork to allow the sauce to penetrate.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Father Was a Soldier.

Dear Young Folks:—My papa takes this paper and I always read the letters and enjoy them so much that I will write, too. I am twelve years old and go to school at a small country school. I shall take up the sixth grade work this year.

My papa was a soldier in the Spanish-American war and was in the Philippines, China, Japan and the Hawaiian Islands. He has some curious things that he brought from those far-away lands. He often tells us about the people and their strange ways.

We live on a big farm and I can cook some, wash dishes, sweep and help mamma with the chickens. I can do tatting.

This is my favorite cake recipe. It is called Delicate cake: One and one-half cupfuls of sugar, one-half cupful of butter, one-half cupful of milk, two cupfuls of flour, one teaspoonful of baking powder, flavor with lemon or vanilla. Bake in two layers and put together with caramel, chocolate or white icing.

I raised a pet lamb this year, but it became so mischievous that we had to sell it.

I think it is fun to give riddles. Here is one: What goes up and down the hill and yet never moves?

—Eleanor.

Glad School Has Started.

Dear Young Folks:—I have always enjoyed your letters very much. I live on a 160-acre farm about nine miles from town. We have six horses and nine cows.

Our school started last Monday and I was glad because I like to go to school.

Mayme asked the riddle: What goes round the house and round the house, but makes only one track? I think the answer to it is a wheelbarrow. The answer to the other riddle: What is in Rome, but not in Italy; it is twice in a moment, but not in a second; it is in timber, but not in trees, is the letter "m."

—Glenna.

Weaves Beads To Sell.

Dear Young Folks:—I am twelve years old and have no mother. I read the letters in the paper every time it comes. I enjoy them very much.

I live on a 200-acre farm. We have eleven horses, forty hogs, seventy cattle, 350 chickens and three turkeys.

I have two sisters, one younger and one older than myself, and one brother.

I can tat, embroider, crochet and weave beads. I sell some of my bead work. My sister Lucile and I bought two calves and we expect to have quite a little sum when we sell them.

I see that the young folks are giving riddles so I will give one. What does the buffalo on the new nickels stand for?

—Bernice.

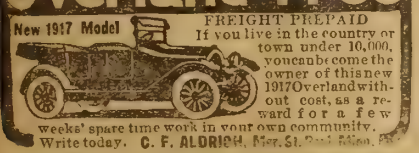
A Fine Pet.

Dear Young Folks:—I certainly love to read the letters in the Young Folks' department and I am always glad when the paper comes. The first thing I do is to look at the Young Folks' page.

I must tell you about our pet skunk. One day my brother went out to poison gophers and when he came home he brought us a little skunk. It was so tiny it could not see, so we put in into a box and kept it. One day I put it with an old cat and some kittens and the mother cat feeds it just like her own kittens and it follows her everywhere she goes. When we call "kitty, kitty" it comes just like the other kittens. We call it Tommy.

—Matilda.

Overland Free



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Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1477—Ladies' combination, corset cover and skirt. The pattern is cut in 3 sizes: Small, medium and large. It requires for cover, 1 yard and for skirt with ruffle 2⅜ yards of 36-inch material for medium size.

1639—A dainty dress for party or best wear. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. Size 6 requires 3⅛ yards of 44-inch material, with 1⅜ yards of 27-inch material for the bolero and collar.

1472—Girls' dress with sleeve in either of two lengths. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3 yards of 36-inch material for a 6-year size.

1522—A simple, but attractive style for home or business wear. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6¼ yards of 44-inch material for a 36-inch size.

1807 Waist-1844 Apron and Bag—A smart combination; Waist 1807 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3¼ yards of 27-inch material for a medium size. Apron and bag 1844 cut in one size, medium. It requires 2⅝ yards of 27-inch material for the apron with ⅞ yard for the bag. Two separate patterns, 10 cents for each pattern.

Blouse 1837-Skirt 1834—A popular suit in sport style. Blouse 1837 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1834 cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 7⅜ yards of 44-inch material for the entire suit in a 36-inch size. The skirt measures about 3½ yards at the foot. Two separate patterns, 10 cents for each pattern.

1830—A smart frock for mother's girl. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 5½ yards of 44-inch material for a 12-year size.

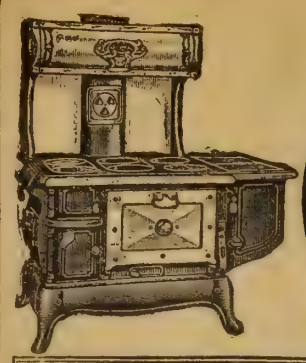
1831—A popular middy suit for juniors. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 5¼ yards of 44-inch material for a 14-year-old size.

1590—Ladies' costume with sleeve in wrist or elbow length. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 36 will require 6 yards of 44-inch material for a medium size.

1718—A chic waist style with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2¾ yards of 44-inch material for a 36-inch size.

1823—A dainty frock for mother's girl with sleeve in either of two lengths and with round or square neck outline. The pattern is cut in 4 sizes: 1, 2, 4 and 5 years. It requires 2⅝ yards of 44-inch material for a 4-year size.

1719—A stylish skirt. The pattern is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires for a 24-inch size 6 yards of 44-inch material.



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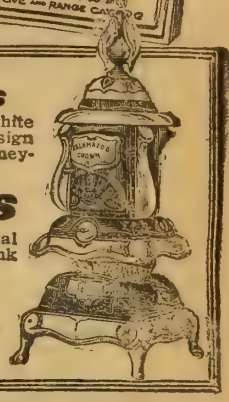

International Sunday School Lesson.

Lesson for September 10, 1916.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

The Arrest of Paul.

LESSON TEXT—Acts 21:17-40.

GOLDEN TEXT—Thou shalt be a witness for him unto all men of what thou hast seen and heard.—Acts 22:15.

No study of the book of Acts is complete unless the teacher impresses upon his pupils the opportunities for living the Christian life in the normal environment of the home or school, at work or play. Deep interest attaches to every detail leading up to Paul's visit to Rome. Therefore let the teacher trace Paul's journey from Mileta to Jerusalem, which occupied about four weeks, and took place in the early part of the year A. D. 57.

I. The Arrival (vv 17-26). The Spirit revealed to the disciples and to prophets that if Paul went to this city he would be in great danger, and the Spirit was not forbidding, but only teaching him, for he knew Paul had a great work to do in Jerusalem, and that he only could do it. Everywhere Paul went he "searched for" (v 7) disciples, with whom he tarried and whom he enlightened in the way of truth. Arriving in Jerusalem, he appears to have made his home with Mnason, outside of the crowded city, thus being less exposed to danger and finding a place of rest. At a public reception (v 18) Paul reports of his work, and no doubt he laid his strongest emphasis on what God had wrought through him, among the churches of Asia. The leaders of the Jerusalem church received the gifts Paul brought from the Gentile churches, glorified God for what he had accomplished, but saw clearly that, to accomplish his statesmanlike purpose, something must be done to make clear that the false reports as to Paul's teaching were discredited (vv 20-22). They therefore, resorted to diplomacy (vv 23-26). To the many thousands of Jews gathered on this festival occasion in the city, some of whom were zealous for the law, they declared first that Paul taught all Jews which were among the Gentiles not to forsake Moses; se ond, that he had not taught them not to walk after the customs of Moses. The facts were Paul obeyed the Jewish ceremonial laws personally, as a matter of race, not as a condition of Salvation.

II. The Arrest (vv 27-36). Paul's attempt at conciliation resulted not in peace but in more discord. Every true servant of God is sure to be misrepresented, and it will not do always to attempt to set straight all the lies that are told about him. God will take care of the lies and of our reputations. Most of the charges that men, even Christians, bring against one another are based upon "supposition" (v 29). It was not a new experience for Paul to be mobbed. As the maddened Jews dragged him out of the temple he must have recalled the treatment of Stephen in which he, himself, had had a hand (7:57, 58). How frequent it is that we, ourselves, are in due time treated in the same way in which we have treated others (Gal. 6:7). It was the intention of the Jews to kill Paul at once without a trial (26:9, 10). They fancied they were doing God's service (John 16:2). This lesson is a striking example of the utter folly and wickedness of mob law. Paul's time had not yet come, and all the mobs on earth could not kill him until God permitted it.

III. The Arraignment (vv. 37-40). Tidings of the riot came to the chief captain, equivalent to our colonel (Acts 23:26). Paul was bound with two chains, one from each of his arms to a soldier, secured, yet left free to walk with his guards, thus fulfilling the prophecy of Agabus (v. 21). Mobs usually have great respect for soldiers, for they are inwardly cowardly. No sooner was Paul on the stairs which led to the top of the fortress than the mob, afraid that they were about to be balked of their vengeance, made a mad rush at him, with cries of "Kill him; kill him!" and Paul, unable in his fettered condition to steady himself, was carried off his feet and hurried off in the same path his Master had trod (John 19:15) and he was again to hear that cry. (Ch. 22:22). During all this tumult Paul had but one thought, how he might witness for his master, and bring some of his blinded accusers to a saving knowledge of Christ. Thus it was that he asked for the privilege of speaking, and most courteously did he make his request. He spoke to the captain in the Greek tongue, not in Hebrew, and great was the surprise of the captain.

Practical Application. When we are attacked, no matter for what cause, if we confidently look for deliverance and exercise self-control, God will take care of us.

Such conduct is disconcerting to our enemies.

Diplomacy is often dangerous and misunderstood.

Circumstantial evidence is never of great value.

There is, however, a desirable form of diplomacy as when Paul addressed the soldiers in his native tongue.

Paul's principle was in essentials, firmness; in non-essentials, liberty.

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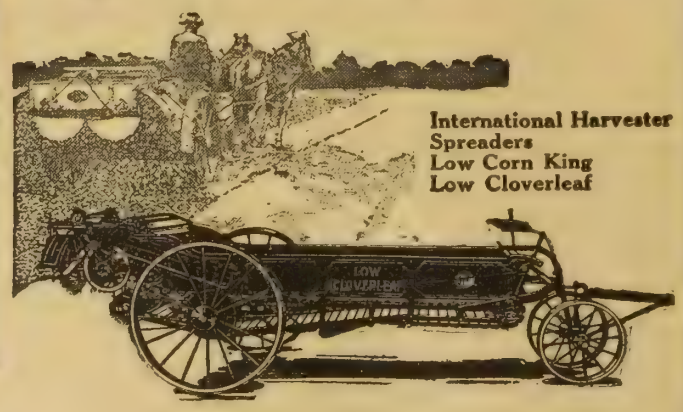

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Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER II.

A Recruit From the World.

"Oh, cam' ye here the fight to shun,
Or herd the sheep wi' me, man?"

SPRING, with its showers and promises, drifted into the dim perspective, as summer, with flaunting assumption, took possession of the foreground. All through the changing weeks rumors came from the south and east, telling of disaffection among the hereditary lords of the soil, and petty troubles in different localities, that, like low mutterings of far-off thunder, promised storms that might be remembered.

Some rust on the wheels of the slow-moving machinery of government had caused a delay in the dealings with the people on the reservations. Treaties ignored through generations, in both letter and spirit, are not calculated to beget faith in the hearts of the red nations, or teach them belief in the straightness of our tongues. Was it the fault of the Department of the Interior at Washington, or the dishonesty of their local agents?—the chicanery of the party in office or the scheme of some political ring that wanted to get in by bringing forward a cause for condemnation of the existing regime? Whatever one of the multitudinous excuses was finally given for neglect of duty—treaties, promises of government—Mr. Lo had now—as he has ever had—to bear the suffering in question, whether just or unjust.

Small wonder if, now and then, a spark of that old fire in the blood ignites, and even the most tamed spirits rise up ready to write pages of history in blood. The only wonder is that they ever pass by the house or the offspring of the white race without that call of the red heart for vengeance being too strong for the hand to resist.

Through the late winter, whether through storms or floods or the schemes of men, on one of the reservations to the south the rations had not been forthcoming; and from week to week excuses were given that were no longer listened to with credence by the Indians. In vain were visits made, first to the agency, next to the nearest fort, supplicating for their rights. One delegation after another turned back from those visits unsatisfied, told by the first that the rations would be distributed when they arrived, not before; told by the second that the War Department was not in any way responsible for deficiencies of the Department of the Interior, and could not interfere—at the same time advising them to be patient, as eventually their wants would be satisfied. Eventually! and in the meantime they could go back to their tribes and eat their horses, their dogs, and see their people grow weak as the children for the want of food.

Small wonder if one group after another of the younger braves, and even the older warriors, broke loose from the promise of peace and joined the hostile bands that thieved along the border, sweeping the outlying ranches of horses and cattle, and beating a retreat back into the hills with their booty.

Of course, the rations arrived eventually, and were distributed by those fair-minded personages whose honest dealing with the red man is proverbial along the border; but the provisions came too late to stem the tide of secession that had set in, and the War Department had found that, after all, it would be influenced by the actions of the Department of the Interior, and that its interference was demanded for the protection of the homes on the frontier. As the homes were the homes of white citizens, its action was, of course, one of promptness. White men's votes decide who shall continue to sit in the high places of the land, or who shall step down and out to make way for the new man of new promises.

But they found ordinary methods of war were of little avail against the scattered bands, who, like bees in the summer time, divided their swarms, and honey-combed the hills, knowing every retreat, and posted as to every movement by Indian runners and kindred left behind.

It was simply a war of skirmishing and one not likely soon to cease. Reinforcements came to the hostile tribes from all the worthless outlaws of the border—some of white, others of mixed blood; and from those mongrels resulted the more atrocious features of the outbreak. They fought and schemed with the Indian because they wanted his protection, and any proposed treaty for peace was argued against by them most vehemently. And while an Indian makes a good thief, a half-breed makes a better; but the white man, if his taste runs in that direction, is an artist, and to him his red brother is indebted for much teaching in the subtle art through many generations.

That, and like accomplishments, made them comrades to be desired by the tribes who depended for their subsistence on the country guarded by troops; and scientific methods of thievery were resorted to, methods that required the superior brain and the white face of the Caucasian.

Thus was the trouble fostered, and the contagion spread, until far-off tribes, hearing of it, missed now one, now another, of their more restless spirits; and the white authorities found it would not do to trust to the peace of any of the nations—the only surety was to guard it. This they tried to do, locating posts and stationing troops near even the most peaceable tribes—their presence suggesting the advisability of remaining so.

And, now through one, now another, and generally by MacDougall, the people at the ranch heard at times of the Arrow and of Genesee. They were with the troops, and were together; and the latter's knowledge of Indian tactics was counting much in his favor evidently, as his opinions were cited in the reports and prophecies of results, and his influence had decided more than one movement of the campaign that had won him the commendation of his superior officers—circumstances that were, of course, discussed pro and con by the people of the Kootenai. There was little of local news in so isolated a place, and Rachel declared they were all developing into gossips because of the avidity with which the slightest of events in their own region was talked over; and, of course, the Indian question was an all-absorbing topic, and to Aunty Luce was attended by a sort of paralysis of terror. In vain to point out the friendly listlessness of the Kootenais, their nearest neighbors of the red race, for the Kootenais were simple hunters or fishers, making war on none, unless now and then a detachment of thieving Blackfeet from east of the mountains would file through the old Flathead Pass and run off portions of their stock; in the time of the fishing, the greater part of the village would move for the season away from their pasture lands, in search of the fish that they smoke, dry, and pack in osier baskets for the winter. It was generally during that temporary flitting that a visit from those neighboring tribes would be made, and an assessment levied, to the extent of all loose cattle in reach, and an occasional squaw now and then. And so, though the Kootenais were on the most friendly terms with the few whites about them, their relations with their red brethren on the east, and across the line in the Northwest Territories were decidedly strained.

But it was useless to talk "good Indian" to Aunty, who was afraid to stay in the house or out of it; afraid to start back to Kentucky, yet sure that delay meant death. And all through the summer, let the rest have faith if they chose, yet the baby's wardrobe and her own were always packed ready for flight at the first sign of danger.

With this one exception the Indian question troubled the people at the ranch but little. They found too many duties in the new country to take up

their time and attention. The sheep-raising experiment showed signs of such thorough success that it would require more than the skirmishing of the races a couple of hundred miles away to disenchant Hardy with the country; and where he was content, Tillie was, of course; and Rachel—well, Rachel was deemed a sort of vagabond in regard to a settlement anywhere. She was satisfied with any place where the fences were not too high or the limits of her range too narrow.

She often wondered that the world in general knew so little of that beautiful corner of the earth. She knew that people flocked to "resorts" that possessed not at all the wealth of beauties that whimsical nature had scattered on those Indian hills.

In the fall, about a year after the cultus corrie, she began to think that, after all, they might meet with deserved appreciation some day, for one man rode up to them, not for stock, or to locate land, or for any of the few reasons that brought people to the Kootenai country, but simply and only for pleasure and rest—so he said.

It was late in September, and as he rode leisurely through the dusky shadows of the pines, and along the passionate restless path of some mountain stream, his expressive face showed a more casual interest in the prodigality of delightful vistas and the impressive grandeur of the mountains, as they loomed about him or slowly drifted beneath him.

All the beauty of autumn was around him, yet he himself looked like one of the people who belong only to summer, judging from his eager eyes and the boyish laugh that broke on the still air as he watched the pranks of some squirrels making holiday in their own domain.

Not that the stranger was so young. He was not a boy in years; but the spirit of youth, that remains so long with some natures, shone in his glance, and loitered about the sensitive mouth. In seeing him smile, one would forget the thread of premature silver that shone through the bronze of his hair. He was almost beautiful in face, yet his stature, which was much above the average, and his exceptionally complete proportions saved him from the beauty that is effeminate, but whatever beauty he possessed, however, was in every way refined.

It was noon when stragglers of sheep met his gaze, dotting with white the green and amber grasses of the great park, and showing, as he forded Missoula Creek, a picture before him, framed in the high wall of the hills, and restful with pastoral peace that was a striking contrast to the untamable wilds through which he had passed.

"Almost there," he whispered eagerly, as he rode along the corrals and was greeted by a tumbling lot of sheep dogs. "Will it be of use?"

Before he reached the gate he was met by Hardy, who, bareheaded, had left the dinner table to welcome a visitor whom, from the porch, all had decided was a stranger.

The host scattered the dogs. There were a few words, a shake of hands, and they could hear Hardy's hearty invitation to dismount.

Meanwhile, Aunty Luce was bustling about as fast as her stout, short form would allow her, arranging a place at the table for the late guest, and thanking her stars that a real gentleman was to be company for them once more—her opinion that he was a gentleman having foundation in the fact that he wore "store clothes" instead of the trappings of buckskin affected by the natives of the Kootenai.

They found he was possessed of more decided points due to the idea of a gentleman, both in breeding and education, and before many remarks were exchanged the rest of the family, as well as Aunty, were congratulating themselves on this acquisition from the world.

"Yes, I am altogether a stranger up here," he said pleasantly, in answer to a query; "and at Holland's they told me there was one of my statesmen up in this park; so I asked the way and started west, instead of north, as I had thought of doing."

"Doing a bit o' prospectin', then?" was MacDougall's query.

It was a visiting day of his, and he had been watching the newcomer's face with scrutinizing eyes ever since the first words of self-introduction, in which the visitor's name had been overlooked.

"Well—yes," answered the other slowly, as if he was not decided, or had not anticipated the question.

"I thought as much, since ye carry no hunting gear," remarked the trapper; "and in this country a man is likely to be the one thing or the other."

"And in this case it is the other," smiled the stranger, "as I have not as yet found any vocation; I have come out here to forget I ever had one—prospecting for a rest."

"Well, there is plenty of room here to rest in," said Hardy hospitably.

"Yes, or work in," added Rachel; "and a new country needs the workers."

Tillie threw an admonishing glance as payment for the uncivil speech, and the stranger turned his attention to the speaker. The contour of her face must have been pleasing, since he looked at it interestedly, as if forgetting in its contemplation the words uttered; and then—

"Indeed?" he said at last. "Well, who knows but that I may develop into a worker; is industry contagious here?"

And Rachel, whose tone had been more uncivil than her intention, felt herself put at a disadvantage by the suavity that was not a feature of Kootenai character.

"Indeed, then," said MacDougall, "it's gettin' to be a brisk, busy country these days, an' ye canna go a matter o' twenty miles without trippin' up on a settlement. An' ye come from Holland's without a guide? That's pretty good for a stranger in the parts, as I doubt na ye be, Mr.—" And he stopped suggestively.

The stranger laughed and drew a card from his pocket.

"I told Mr. Hardy my name at the gate," he observed, "but evidently it escaped his memory; he introduced me only as a stranger."

"It does not matter, however, what a man is called out here," returned Hardy. "It is the man that is valued in the West—not the name given him; now, back home they weighed about equal."

"And in my country," said MacDougall, looking up from the card, "here's a name that would carry ye many a mile, an' bespeak ye good will from many an old heart—Charles Stuart. It's a name to take unco' good care of, my man."

"I try to take good care of the owner of it, at all events," answered the stranger; "but it is not an uncommon name in America; there are few parts of the country in which I am not able to find a namesake."

"Indeed, then, an' I have run across none o' the name these seven odd year," said MacDougall; "an' then it was a man in the Bitter Root Mountains, who spelt it with the 'e-w' instead of the 'u,' an' had never e'en heard tell o' Prince Charlie."

"And you have known no one in this country by the name of Stuart?" through this country would set me on asked the stranger, his eyes seeming to watch at the same time both Hardy and the old man. Ivans and Jim had left the table and lounged out to the stables to smoke.

"No," answered Hardy; "we are comparatively newcomers here, but all the settlers within a radius of fifty miles are already known to us by name—it is not so difficult where white men are so scarce; and I have never heard of any Stuarts among them."

"Then I have dropped literally into a strange country," said Stuart, rising an' walking to the end of the porch; "and from what I have seen of it, a decidedly interesting one. Hunting good?"

"Excellent," returned Hardy. "We've been too busy to get to the hills so far this year, but now we have a little breathing spell, and if you would care to try your luck with game, I should take pleasure in showing you our hunting grounds."

"That is certainly kind of you," said Mr. Stuart heartily, "and I will accept the offer most gratefully. The fact is, I've been rather used up with a professional life and was in hopes a trip up through this country would set me on my feet again. Over there at Holland's they told me about your family, and—"

"Yes," completed Hardy, "a man with his family and household goods up in these hills is a marked individual; but my wife and cousin do not rebel at the exile; they are both philosophers, in their way."

(To be continued.)

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Guernsey Breeding Par Excellence.

THAT like produces like, and that there must be good breeding to produce good offspring is demonstrated in the two yearling bulls advertised for sale on page 28 by Geo. Lucia, Green Bay, Wis. These young bulls are pictures of ideal type and conformation. However, when you see their pedigrees you at once can see that it is an inherited quality, that has been bred into their ancestors for generations. They were sired by a son of the great bull, Imported Golden Hero of the L Etinary, that sired Stubbs' noted bull, Holden 4th. Imp. Golden Hero in turn was by Gov. of the Chene, that has sixty A. R. O. daughters, up to 684 pounds fat in a year, forty-six of which average 449 pounds and 111 of his granddaughters average 469 pounds fat, surely an impressive demonstration of the wonderful transmitting ability of this bull. The dam of these young bulls' sire is imported Goodwill II, of of the Grove, a 526-pound daughter of Gov. of the Chene. It will be seen, therefore, that they are sired by a line bred Gov. of the Chene bull. One of the young bulls for sale is out of a granddaughter of Imported Masher's

ONE of the Guernsey bulls advertised for sale on page 28 by Geo. Lucia, Green Bay, Wis.

Sequel and Gov. of the Chene, giving him three crosses of this wonderful sire. His dam, Imp. Sunlari, has milked forty pounds per day, testing 5 per cent fat. She is a daughter of Imp. Galaxy's Sequel, that was champion bull and won the King's silver cup. The other young bull for sale is out of the imported cow, Queenie of the Quevillette, that has an A. R. record of 427 pounds of fat. Mr. Lucia is also offering a few yearling and two-year-old heifers and young cows for sale. They are choicely bred and of good type. We advise our readers to send for the charted pedigrees of these animals.—Adv.

Heavy Producing Alcartra Blood.

A YEARLING bull advertised by George H. Gibson, Nashota, Wis., is one that our readers will do well to consider if in the market for a bull of serviceable age. He comes from the high producing Alcartra family on his dam's side and the Pontiac Rag Apple strain on his sire's side. His dam, Nig Johanna, is a sister Nig Alcartra 2d, that has six A. R. O. daughters, three with records of 25.49, 24.18 and 23.95. One of her daughters, Nig Alcartra Pearl, also has six A. R. O daughters, three with records of 27.54, 24.22 and 21.60. The dam of Nig Johanna is from a sister to the dam of Alcartra Polkadot, that has a record of 29.09 and whose granddaughter, Tilly Alcartra, that holds the world's record by giving 60,000 pounds of milk in two years. The sire of the young bull offered for sale is Korndyke Pontiac Piebe Burke, whose dam, Shewilldo Uneeda gave 26.36 pounds of butter in seven days. His sire, Dutchland Sir Pontiac Korndyke, is the son of Dutchland Sir Pontiac Rag Apple. An extended pedigree of this young bull shows him to be one of exceptional breeding and, although his dam as yet has no A. R. O. record his breeding and individuality make him worthy of heading a pure-bred herd. Breeders of high-grade cattle who are desirous of getting an exceptionally high-class bull from heavy, producing strain of blood should not overlook this opportunity. For extended pedigree and further information write to the above address.—Adv.

Dineen's Holsteins.

HIGH-GRADE Holstein cows, ranging from two to five years of age are advertised for sale on page 26 by C. F. Dineen, Cedarburg, Wis. These are 30-32 per cent pure blood, are of standard markings and good individuals throughout. They are now safe in calf to King Pontiac Mahomet 5th, a grandson of the King of the Pontiacs. His dam was Mechthilde Daisy Longfield, that has a record of 22.25 pounds of butter in seven days and has four A. R. O. daughters with very creditable records. Mr. Dineen is also offering a yearling bull ready for service. For further information write to the above address.—Adv.

A New Breeder.

DR. DAVID ROBERTS announces the sale of Roberts' De Kol Wayne, a bull twenty months old that weighed nearly 1,100 pounds, to S. P. Christiansen, of Iowa. The dam of this bull is Lynden Grove Betsy De Kol, that has a yearly record of 18,563 pounds of milk and a seven-day butter record of over twenty-two pounds. She averaged over eighty pounds of milk a day for the seven days she was on test. Mr. Christiansen is a young Holstein breeder and he is making a splendid start with this sort of stock. He will undoubtedly go far if he continues along the lines he has started. We advise our readers to call on Mr. Christiainsen and ask him if he is satisfied with his purchase.—Adv.

A 27.76-Pound Bull for Sale.

AN opportunity is given our readers to buy an exceptionally fine Holstein bull on page 26. This bull, Canary Homestead Oak De Kol 3d, was born February, 17 1915, so is ready for immediate service. We recently visited the Clovis Stock Farm at Menosha, where the bull was born and is now owned, and we do not hesitate to recommend him to our readers. He is a show bull in every sense of the word, being very well grown, with a good straight level back and rump, good tail setting and showing capacity and constitution. He was sired by Dr. Faville's noted bull, Canary Homestead Oak De Kol, whose three nearest dams average 32,20 pounds butter in seven days. His sire is the thirty-five-pound bull, Canary Paul Fobes Homestead. His dam is Oak De Kol 2d, a daughter of Homestead Jr. De Kol, that has seventy A. R. O. daughters, seven with records from thirty to 35.55 pounds butter in seven days. His dam, Oak De Kol 2d, is the daughter of the cow, Oak De Kol, one of the greatest cows ever owned in the S. B. Jones herd. She herself has a record of 31.54 pounds butter in seven days at ten years old and she has three A. R. O. daughters with records from twenty-five to 29.55 pounds. Her dam, Lady Oak 2d, has five A. R. O. daughters, three with records from thirty to 32.54 pounds butter. This is conclusive evidence of the high production ability of the Lady Oak family. The dam of the bull offered for sale is Friend Lucile Bawn, a big, fine cow weighing close to 1,700 pounds. She is of ideal dairy type and a heavy producer. She made 27.76 pounds butter in seven days, giving up to ninety pounds milk per day and had an average test of 4.04 per cent fat. Send for an extended pedigree and picture of this bull, for he is worth going a long way to get.—Adv.

Hampshire Swine and Shropshire Sheep.

THE Dane Stock Farm, Oshkosh, Wis., are breeding Hampshire swine, which they are advertising on page 27 and Shropshires which are being advertised on page 26. The Hampshire swine are of very desirable type, being stretchy and big, but not coarse. They are, in our opinion, of better type than those bred in the extreme south where they tend more to the razor back type. Mr. Dane has bred away from this char-

COLLYNIE VICTOR 387634, the prize-winning bull at the head of the herd of A. Menke & Sons, Markesan, Wis., whose advertisement appears on page 27.

acteristic and we believe he is developing a more desirable type of animal. At the present time he is offering spring pigs of both sexes and a few fall boars for sale. His Shropshires are the heavy, shearing strain of blocky type that feeders and breeders are finding most profitable. He has a fine lot of rams for sale at the present time. For further information in regard to the animals offered for sale kindly write to the above address.—Adv.

Ihde's Ayrshires.

THE Ayrshire herd of Herman Ihde, Neenah, Wis., whose advertisement appears on page 26 is one of which Wisconsin breeders may well be proud. The animals are not only well bred, but are of ideal Ayrshire conformation and are heavy producers. During the past year Mr. Ihde has been doing advanced registry testing and has completed some very creditable records, among them are the following cows: Nora of Neenah, gave 12,364 pounds of milk, making 443.16 pounds of butter fat; Fannie Dahlia, gave 12,057 pounds of milk and made 596.25 pounds of butter; Nora of Neenah's Beauty gave 10,801 pounds of milk, making 489.83 pounds of butter fat. The last-named cow won first prize in the Valentine contest of the National Association. At the present time Mr. Ihde is advertising a yearling bull ready for service out of the cow, Fannie Dahlia, that made 596.25 pounds of butter in a year. This young bull was sired by Netherton of Sand Hill, a son of Imported Netherton Saint Andrew. His dam, Bernice Clyde, has two advanced registry records made at three and four years of age of 587 and 623 pounds of butter. Her dam, Bessie Clyde, also has two advanced registry records and four advanced registry daughters. The sire of Bernice Clyde was Earl's Choice of Springhill, that has thirty-six A. R. daughters whose averaged test is 4.23 per cent fat. It will be seen that the young bull offered for sale is backed by high production blood. For pedigree and further information write to the above address.—Adv.

Kohlwey's Holsteins.

FRED KOHLWEY, Grafton, Wis., is offering a few registered Holstein bulls sired by Cedarlawn Champion 3d. This bull is out of the cow, Cedarlawn Bessie, that made 22.20 pounds of butter in seven days with her first calf. He was sired by Cedarlawn's Champion, the noted bull that heads the herd of C. A. Schroeder & Sons. One of the bulls offered for sale is out of a daughter of Sir Johanna De Kol, that has sixty-four A. R. O. daughters, twenty-four of which have records from twenty to forty pounds of butter in seven days. His daughters have held eight world records in the semiofficial eight months after calving classes and have taken the association prizes on fifty-five different records. For pedigrees and further information in regard to the animals offered for sale write to the above address. See page 26.—Adv.

Eighmy Buys Fine Holstein Bull.

MR. FRED PABST, Oconomowoc, Wis., reports the sale of a fine yearling bull through his advertisement in The Wisconsin Farmer to Robt. Eighmy, McFarland, Wis. He is a son of the thirty-one-pound bull, King Pontiac Champion, whose daughters are making such creditable records. His only daughters as yet of mature age recently made 1,024 pounds butter in a year. His young daughters are doing equally well and show indications of making great records as mature animals. The dam of this young bull has a record of 25.63 pounds butter in seven days, and is one of the "milkiest" things the writer has ever seen. Of almost ideal dairy conformation, she carries with it an exceptionally well-developed udder, long, smooth teats, and her belly is heavily covered with large and interlacing milk veins. She is a daughter of Hengerveld Model Johanna, that has thirty A. R. O. daughters, two of which made records this past spring of 30.50 and 31.51 pounds butter in seven days. Mr. Eighmy is to be congratulated on securing so good a bull to head his herd of pure-bred Holsteins.—Adv.

Heid's Guernseys.

A CHOICELY-BRED Guernsey bull is advertised for sale on page 28 by W. J. Heid, Ft. Atkinson, Wisconsin. He is of Langwater Skylark breeding and his dam has an A. R. O. record. The writer recently saw this bull and can recommend him to the readers of The Wisconsin Farmer. For pedigree and further information write to the above address.—Adv.

Kiesling's Guernseys.

A BULL calf born in March is advertised for sale on page 28 by E. H. Kiesling, Jefferson, Wis. He was sired by Glenwood Noble's Secret 23999 and

LISTEN! OLD WISCONSIN IS CALLING YOU TO STATE FAIR!

Take a Week of Rest and Recreation Seeing the Good Old Badger State on Parade, and at the Same Time Be Entertained and Inspired at a Cost Next to Nothing. Don't Hesitate! Come!

By OLIVER E. REMEY, Secretary State Fair.

Milwaukee, Sept. 5.—You have been working mighty hard all summer.

Nothing would suit you better right now or do you more good than about one week of real relaxation.

Be fine, wouldn't it, if you could take a week off, rest up and at the same time be informed, entertained and inspired at a cost you would hardly notice?

Appeals to you, doesn't it?

You like this grand old Badger State, because it's your state, and a rattling good old state. Some states may be a little stronger on a resource or two, but, taken all in all, it requires SOME state to beat old Wisconsin, as a general proposition.

Now, wouldn't you like to see just what this good old Badger State can do in the way of raising things—horses, cattle, sheep, swine, agricultural, horticultural, dairy products—what the women of this state can make with their own hands; what the farmer boys and girls can raise?

And wouldn't you like to listen to the best Italian band in the world, see a wild west and frontier show worth seeing, enjoy over twenty circus acts second to none anywhere, see a woman perform more and greater stunts with a flying machine than the famous Beachey performed, see four days of high-class harness racing and two days of automobile racing, see the greatest display of 1917 automobiles shown this year, enjoy a $20,000 free pageant in a big city—in fact, see a thousand and one other interesting and entertaining things and at the same time be one of immense crowds out for days of profitable enjoyment, with music and laughter everywhere and the good old state of Wisconsin showing you every way you turn just what she can do?

Sounds like a dream, doesn't it?

But it can be done.

Just come down to the State Fair Sept. 11th-16th.

You'll go back home rested, better informed and full to the brim of enthusiasm for your grand old state.

It isn't going to cost much—not one-half what it would cost to take a week's trip out of the state.

Make up your mind right now and you'll never regret it.

Come on; the old Badger State is daring you to take a look at her on parade!

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

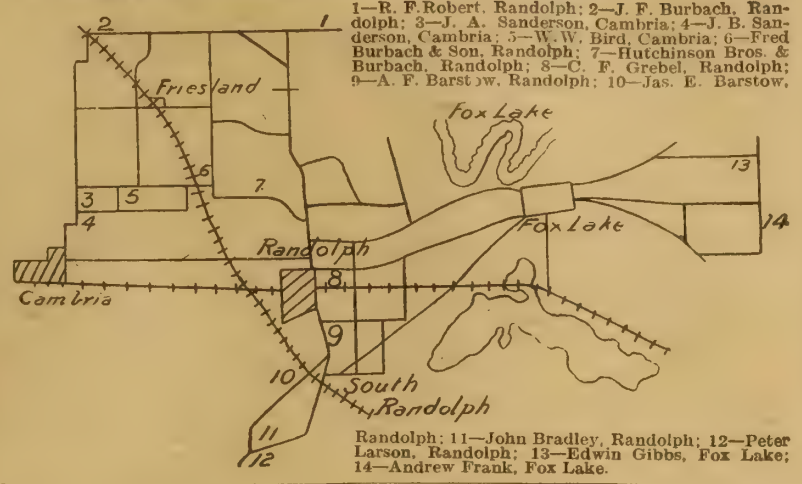
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE.
HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

he is out of a heavy producing dam of choice breeding. The young bull is well marked and well grown. For further information write to the above address. —Adv.

Some Alcartra-Bred Heifers.

SOME richly-bred registered Holstein heifers are advertised for sale on page 26 by Mrs. Otto Volkman, Juneau, Wis. Here is an opportunity for our readers to procure some really high-class individuals both in breeding and conformation. A number of them are daughters of Alcartra Johanna Rue De Kol, one of the most richly bred bulls ever owned in the state. He is a brother of Alcartra Polkadot, being out of the same dam, whose record is well-known to all Holstein breeders. She sold twice for $1,000 and was shipped from Wisconsin to California and then resold to a breeder in New York state. She has five A. R. O. daughters, two with records of 32.54 and 31.25 pounds of butter in seven days. Her thirty-one pound daughter also has five A. R. O. daughters, one with a record above thirty pounds. One of her granddaughters, viz.: Tilly Alcartra, gave 60,000 pounds of milk in two years, which in weight is equivalent to fifty two-year-old steers, weighing 1,200 pounds each. The $50,000 bull, King Segis Pontiac Alcartra, is out of a granddaughter of Alcartra Polkadot. The sire of Alcartra Johanna Rue De Kol was Sir Johanna De Kol Rue, that has twenty-nine A. R. O. daughters, fifteen of which have records ranging from twenty to 31.69 pounds of butter in seven days. A number of the heifers offered for sale by Mrs. Volkman were sired by Fobes Watson De Kol, that is a grandson of both Fobes Tritomia Mutual De Kol and Mooie Mutual De Kol. Fobes Tritomia Mutual De Kol has thirty-eight A. R. O. daughters, four with records from 30.51 to 36.44 pounds of butter in seven days. His thirty-six-pound daughter recently sold for $4,600 at the great Holstein sale in Detroit, Mich., topping the sales of females. The extended pedigrees of these two sires show them to possess exceptionally heavy producing blood on both sides. These heifers are now bred to Colantha Boy Pride, whose sire, Dutchland Colantha Bell Boy, is a 27.89-pounds son of Colantha Johanna Lad. We advise our readers to investigate this offering of heifers at once.—Adv.

Scribner Farm to be Sold.

W. A. LAWSON who purchased the F. H. Scribner farm near the edge of Rosendale, Wis., last spring, is advertising the farm for sale. The Lawsons are obliged to dispose of the farm on account of the poor health of the senior Mr. Lawson. This is one of the well-known Wisconsin farms, Mr. Scribner, the former owner, having been prominent as a Jersey breeder. A four-year rotation plan has been used on the farm, keeping the soil in good condition.—Adv.

Kirkpatrick Bros.' Hogs.

STOCKMEN have an opportunity to get some good registered hogs at a very reasonable price from the herd of Kirkpatrick Brothers, Reedsburg, Wis. The Kirkpatrick Brothers are offering their entire herd for sale. They have a number of bred sows and young sows or boars five months old. See their advertisement on this page.—Adv.

Merriman's Guernseys.

SOME choicely bred Guernsey bulls of serviceable age and younger are advertised for sale on page 28 by S. A. Merriman, Fort Atkinson, Wis. These young bulls are being offered at special prices and our readers have an opportunity of securing some of the best blood lines of the breed. For further information in regard to these animals write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

Wenham's Bates Milking Short-horns.

WE always enjoy a visit to the farm of George Wenham & Sons, Fort Atkinson, Wis., and never fail to look over their herd of milking Short-horns. This is one of the oldest herds of Bates Short-horns in the state of Wisconsin and is a herd of high production ability and choice breeding. When at the farm about three weeks ago we saw a fine bunch of young bulls, which we do not hesitate to recommend to the readers of The Wisconsin Farmer. Two of these bulls are ready for immediate service and, although a little thin at the time are of good, straight, level type and of strictly dairy conformation. In breeding they combine the Clay Buttercup and Wild Eyes families, two of the best

THE twenty-five-pound bull purchased by Mr. Robt. Eighmy, McFarland, Wis., from the Pabst Stock Farm, Oconomowoc, Wis. See page 26.

producing families of the Bates strain. Our readers who are in the market for a Short-horn bull of milking strain will do well to get in correspondence with these breeders at once. See page 28.—Adv.

An Old Established Chester Herd.

J. A. DOERR, Viroqua, Wis., didn't raise as many Chester Whites this year as in the past, but those that he has picked for the mail-order trade are good, the pick of the bunch. Mr. Doerr has been breeding Chesters for twenty years and in that length of time he has sent out some great animals. We know this to be a fact, for we have seen Doerr breeding in several of the prominent herds of the state. The spring pigs he is offering are sired by Elmo Chief, a grandson of St. Elmo and he is out of Sister First the noted show sow. Other pigs are by Prince I. X. L. a grandson of St. Elmo and Peacemaker. There is also a litter by S. M. Wonder, the good Derenthal boar. As above stated, Mr. Doerr hasn't as many boars for sale as he has had in previous years, but if you order you'll be pleased with the boar you receive. Write him and tell him what you want, you can depend on him when he says that he has a boar that will suit. Notice his advertisement in this paper. See this page.—Adv.

Edgewater's Holsteins and Guernseys.

THE Edgewater Stock Farm, Fort Atkinson, Wis., are offering for immediate sale 400 head of registered and high-grade Holstein and Guernsey cows and heifers. They have an exceptionally fine bunch of fifty registered Guernsey heifers on which they are making an extra low price. This is one of the leading dairy farms of Wisconsin and they handle close to a quarter of a million dollars' worth of cattle in a year. Our readers who are in the market for a carload of heifers, springers or young cows will do well to get in correspondence with this firm. See page 26.—Adv.

Some of the Winners at the Dane County Fair.

THE Dane County Fair held at Madison, Wis., August 29th to September 1st was the most successful ever staged by the association. The live stock display was grand in every respect, and there was strong competition in most every class. James Van Etta, Lima Center, Wis., had a wonderful showing of Clydesdale horses. His two-year-old stallion looks even better than he did last year. His following winnings of last year prove that he is a wonderful individual. He won first in class and grand champion at the following fairs: Cleveland, over all breeds at Columbus, Indiana State Fair, Illinois State Fair, first in class, junior and reserve champion at San Francisco. King's Emblem, his aged stallion, was grand champion over all breeds at Madison, showing against Percherons and Belgians. The Queen, an outstanding two-year-old filly, won the same honor in the mare division. There was an excellent showing of swine, Durocs predominating. E. H. Parker & Son, Janesville, won the most premiums. W. G. Bartholf, Burlington, had the grand champion sow and John L. Fisher, Janesville, won the purple ribbon on his great boar, King Defender. Madson & Sons, Madison had both champions in the Poland division. W. S. Scheibe, Burlington, cleaned the slate on his Chesters. This breeder has the best junior yearling boar we have seen.—Adv.

SALE DATES.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sales Mgr.
Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Duroc Jersey Swine.

Oct. 10, Columbia County Asylum, Wyocena, Wis. S. C. Cushman, Supt.
Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.

TOO LATE TO CLASSIFY.

CHESTERS
For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN BLOOM CITY, WIS.
(Shipping point Viola)

THE WAR
Hasn't affected the prices on
DUROC JERSEY BOARS

MY spring boars are sired by Professor C and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.
M. STOEHR - VIROQUA, WIS.

DOERR
Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address
J. A. DOERR VIROQUA, WIS.

Chester Whites

WE offer our entire herd of registered hogs at a very low price. Bred sows, young sows or boars 5 months old $15 each. Will ship C. O. D.
Kirkpatrick Bros. Reedsburg, Wis.

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

FOR sale—Thoroughbred young Yorkshire hogs andOxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

SALE DATES.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.
Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.
Feb. 22, William Smiley & Son, Albany, Wis.

Guernsey Cattle.

Sept. 26, Consignment sale of Fond du Lac county breeders. C. A. Peterson, Rosendale, Secretary.
Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

HOLSTEIN-FRIESIAN CATTLE.

Purebred Registered

HOLSTEIN CATTLE

The "Dairy Belt of the Northern States," so called in the past by various writers, has vanished. Holstein-Friesian cattle will thrive anywhere, and they are thriving and adding to the fortunes of mankind all over the nation, north, south, east and west. Big, hardy, healthy, consuming enormous quantities of feed and roughage, and transmuting it into large quantities of milk, Holsteins have proven to all the world that they are the dairy breed in all ways best suited to serve man, wherever he calls his home. There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

27-76-lb. Yearling HOLSTEIN BULL

BORN February 17, 1915; a show bull from a show type sire and dam; sire **Canary Homestead Oak DeKol,** the richly bred 29.55 lb. bull of Dr. Faville's; dam **Friend Lucile Bawn,** A.R.O. record 27.76, average per cent of fat 4.04. Send for extended pedigree and price.

Clovis Stock Farm - Menasha, Wis.

A 25.73-LB. HOLSTEIN BULL

BORN Dec. 27, 1915, well marked; **dam Flora Hesseltje,** A.R.O. record 25.73; dam's dam Aaggie Hesseltje DeKol, A. R. O. record 25.23; sire, **Canary Homestead Frisby,** a son of the 35-lb. bull, **Canary Paul Fobes Homestead** and out of a daughter of **Homestead Jr. DeKol,** for sale. This breeding ought to interest you. Send for a full pedigree.

Earl A. Paddock - Elkhorn, Wisconsin

Yearling Son

READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers - Waukesha, Wis.

19,8-POUND YEARLING SON

Of the Richly Bred Ormsby Bull

BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull, **Beauty Pieterje Prince,** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.

Dopp Brothers - Ixonia, Wisconsin

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.

L. V. Garvens Brookfield, Wisconsin

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen Cedarburg, Wisconsin

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons Elgin, Illinois

Smith's Short-horns.

GEORGE SMITH & SONS, Burnett, Wis., are offering a very nice lot of Short-horn bull calves bred along milking lines. These were sired by the bull, Milkman, whose dam gave over sixty pounds of milk per day testing 4.4 per cent fat. The Smith's Short-horns have been so in demand for the past years that at the present time they have not a bull of serviceable age on hand, but the calves they are offering are good enough so that you can afford to buy one at the present time and keep it until ready for service. For prices and description write to the above address. See advertisement on page 28.—Adv.

Timblin's Short-horns.

THE Short-horn herd of Timblin Bros., Eden, Wis., has become well known through the showing which has been done at many of the leading county fairs in the state. At the present time they are offering yearling bulls for sale sired by Clara's Prince. See advertisement on page 28.—Adv.

HOLSTEIN-FRIESIAN CATTLE.

Breeders Wanting 30-lb. Herd Sires

We Invite Your Attention to

Three Young Bulls

No. 151, calved March, 1916. Sire, Korndyke Segis Johanna 127132, a 38-lb. son of the 40-lb. bull, Johanna McKinley Segis by King Segis, and whose dam, Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68-lb. three year old by a 29-lb. grandson of Hengerveld De Kol. Second dam, a 23-lb. three-year-old by King Pontiac Champion, a 31-lb. son of King of the Pontiacs. Third dam, a 33.86-lb. daughter of De Kol 2d's Butter Boy 3d.

No. 156, calved April, 1916. Sire, King Pontiac Champion, has 41 A. R. O. daughters. The only one tested as a mature animal made over 1,000 lbs. butter in a year. Dam a 31.51-lb. daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O. daughters, two above 30 pounds. Good A. R. O. breeding for several generations.

No. 152, calved April, 1916. Sire, King Pontiac Champion. A 30.38-lb. daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68-lb. cow.

Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

THE 30.90-LB. SHOW BULL
NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.

FRED ALBRECHT WATERTOWN, WISCONSIN

2 Yearling Sons of the Richly-Bred Holstein Bull
KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Roberts' Fearless Lassie, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST WEST ALLIS, WISCONSIN

10 Registered Holstein Heifers

14 TO 18 months old, well marked, of good, straight conformation, and ideal dairy type. They are mostly daughters of the richly bred Holstein bull, FOBES WATSON DE KOL 85682, a son of FOBES TRITOMIA MUTUAL DE KOL 2D, and out of untested daughters of ALCARTRA JOHANNA RUE DE KOL 47853, a maternal brother of ALCARTRA POLKADOT. Here is a rare combination of breeding. Will sell in one lot or singly. Prices $125 to $150. Act quickly. Address

MRS. OTTO VOLKMAN JUNEAU, WISCONSIN

HERE IS AN OPPORTUNITY

We are offering a few choice registered Holstein cows and heifers bred to the 29.50 pound bull

MAPLECREST HENGERVELD DE KOL 94154

WE also offer a 22.29 pound son of his for sale at $125. Send for an extended pedigree. It is a very well bred bull and the price is very low.

GROVE BROS., COLUMBUS, WISCONSIN.

HOLSTEINS and GUERNSEYS

We are offering for immediate sale 400 head of registered and high-grade cows and heifers; also registered service bulls. Nothing but the best. Will make extra low price on 55 registered Guernsey heifers. Call at our farms or write.

EDGEWATER STOCK FARM FT. ATKINSON, WIS.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer Kaukauna, Wisconsin

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford Kaukauna, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE MONROE, WISCONSIN

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt Oxford, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

B. F. Winckler & Sons Medina, Wis.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the year. Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson - Elkhorn, Wisconsin

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

HOLSTEIN-FRIESIAN CATTLE.

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. **8 yearling heifers** will be bred if desired. Sired by the **31.17 pound bull, Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pound daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.

Lawrence Rober - Lyons, Wisconsin

21.37 Pound Son of the 24.56 Pound Bull

DOWNING PONTIAC BUTTERMAN

OUR noted prize-winning sire. Dam of bull for sale, **Downing Pontiac Dairymaid,** a 21.37 pound daughter of **King Hengerveld Pondyke,** that has 2 30-pound daughters. Price $200.00. **19.40 pound bull,** a double great grandson of **King of the Pontiacs.** Price $100.00. Send for extended pedigrees and pictures.

M. W. Downing & Brother, Waukesha, Wis.

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

Holsteins For Sale

REGISTERED Holstein heifer calves $75 each, high grades $18. If you want a good bull or some springers write us.

Findlay Bros. Whitewater, Wis.

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

AYRSHIRE CATTLE.

"THE POOR MAN'S COW"

Hardy, Productive, Prolific, Profitable.

AYRSHIRE

milk passes all state and city requirements, and there is lots of it. When through milking, cows fatten quickly for beef. Calves bring highest prices for veal. Send for interesting information and names of nearest breeders.

AYRSHIRE BREEDERS' ASS'N.
C. M. Winslow, Sec., 29 Park St., Brandon, Vt.

AYRSHIRE BULLS

FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

ADVANCE REGISTER AYRSHIRE

BULL ready for service. Dam, Fannie Dahlia, A. R. record 596.25 pounds butter, 12,057 pounds milk. Sire, the 529 pound bull, Netherton of Sand Hill. Price reasonable. Send for pedigree. Herman Ihde, Neenah, Wisconsin.

ABERDEEN ANGUS CATTLE.

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.

F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write

Hauk Bros. Cassville, Wisconsin
(30 miles up river from Dubuque)

BROWN SWISS CATTLE.

Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.

ANDREW MARTIN, WEST SALEM, WIS.

SHEEP.

Shropshire Rams

DANE has the heavy shearing strain of blocky ram lambs at farmers' prices. Place your order early before stock is picked over. Address

Dane Stock Farm Oshkosh, Wis.

POLAND CHINA SWINE.

BIG POLANDS

WAIT FOR SEPTEMBER 28TH

THE DAY I SELL 40 BIG

POLAND CHINA BOARS AND GILTS

MOST of them by BLACK JUMBO 221231, the biggest and best breeding boar in Wisconsin. The best lot of boars ever offered in the state. Let me send you a catalog. I want your name and address. Mention The Wisconsin Farmer. Address
E. W. HENDRICKS HAZEL GREEN, WISCONSIN

MEET ME AT THE FAIRS

SEE MAC'S CHIEF (1,050 lbs.) Also sows that weigh 700 and 800 lbs. I will convince you that we can raise BIG POLANDS that have WORLDS OF QUALITY. Will have a fine assortment of SPRING BOARS FOR SALE. Will show at Iowa, Minnesota, Wisconsin, La Crosse and Omaha. Let's get acquainted.
J. D. McDONALD, NORTH BEND, WIS.

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.
M. MADSON & SONS MADISON, WISCONSIN

SMILEY POLANDS

BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address
WM. SMILEY & SON, ALBANY, WIS.
GILTS RESERVED FOR SALE, FEBRUARY 22

DOBSON & EASTMAN

WILL be at the **Wisconsin State Fair** and **La Crosse** with the greatest lot of **Poland Chinas** we ever exhibited. See our spring boars that weigh 225 pounds and over—they are for sale. Visit our pens and get a catalog of the Grant Co. Boar Sale.

Dobson & Eastman, Lancaster, Wis.
"The Utmost in Polands"

BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.
Chas. S. Maltby. Janesville, Wisconsin

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.
Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781

AND

ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address
P. W. YOUNG PROSPER, MINN.

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Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
C. S. FLESCH MT. IDA, WISCONSIN
(Shipping point, Fennimore.)

POLANDS

A'S BIG ORANGE, HERD BOAR

OFFER three outstanding fall boars. Spring pigs now ready to ship, sired by A's Big Orange, one of the good boars of the state. Guarantee to please. Write for particulars. Address
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BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING BANGOR, WIS.

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L.P.Martiny, Box F, Chippewa Falls, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.
Phone 53 F. E. Purdy, Orfordville, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE POLAND CHINA July and August pigs sired by L.'s Big Orange and Fairview Jumbo for sale. Prices from $10 and up. Satisfaction guaranteed. J. Le Roy Larson, Iola, Wis.

SEE THE SPOTTED POLAND EXHIBIT
at Omaha National Swine Show, and State Fairs in Missouri, Illinois, Indiana, Michigan, Ohio

ASK for by-laws, list of members' names, and list of 1916 sales. Association Sale, Crawfordville, Indiana, October 19th. The National Spotted Poland China Record Association, Chas. E. Kurtz, Pres., North Salem, Ind.; Fred L. Obenchain, Sec.-Treas., Bainbridge, Ind.

POPULAR PROLIFIC

POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write
Olaf C. Olson, Strum, Buffalo County, Wis.

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.
A. Menke & Sons, R. 1, Markesan, Wisconsin

6 APRIL BOARS

GOOD ones by North Side Wonder and out of 800-lb. sows, at farmer's prices. Address,
J. C. Hendricks, Box F, Hazel Green, Wis.

HAMPSHIRE SWINE.

HAMPSHIRES

Spring Pigs of both sexes and Fall Boars for sale. Address
DANE STOCK FARM
Oshkosh - Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.
A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE LOMIRA, WISCONSIN

THREE OAKS FARM BERKSHIRES

SERVICE boars and open fall gilts for sale. No more spring pigs left. Will hold brood sow sale March 2d. W. A. FREEHOFF, Waukesha, Wis.

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

DUROC JERSEY SWINE.

OTTER CREEK FARM

BOOKING orders for March Durocs from large, mature sows. B. M. Arries, Augusta, Wis.

DUROC JERSEY SWINE.

Grand Champion Duroc Boar at Janesville Big Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
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COL.'S CHOICE --- WONDER CHIEF

By King the Col. By Cherry Chief

DUROCS THAT MADE GOOD

YOU have all heard about KING THE COL. and CHERRY CHIEF—your herd is not complete without some of that breeding. My brood sows are large. Let me ship you a spring boar. Guaranteed? Yes. Mention The Wisconsin Farmer and address
DENNIS SHEA - - - MELVINA, WISCONSIN

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUL Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer,
EMMETT COOK & SON - RICHLAND CENTER, WIS.

SEE ATWATER DUROCS

AT MINNESOTA, WISCONSIN, LA CROSSE and OMAHA. See my BIG SOWS of MARION WONDER breeding. Let me show you some young stuff by the CHAMPION LEE'S DEFENDER. Will have the best DUROC herd I ever showed. Visit my pens and see some of the boars I sell in my BOAR SALE, OCTOBER 18TH. I want to meet you; let's get acquainted.
L. F. ATWATER, BANGOR, WISCONSIN "HOME OF BIG DUROCS"

1,000-POUND

BIG COL.

THE HALF-TON BOAR

Chief Defender, litter brother to Disturber. No breeder has two better Duroc boars. On October 19th I will sell 40 boars by the above sires. Send a card with your address so I can mail you my catalog. It's worth having.

SEE BIG COL. AT LA CROSSE FAIR

GEO. H. WILLSIE
Prosper, Minn.

DUROCS THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES AUGUSTA, WISCONSIN

At Wisconsin State Fair
See John L. Fisher's giant Duroc

KING DEFENDER

He will weigh 1000 pounds by Fair time. Boars of all ages for sale.
JOHN L. FISHER JANESVILLE, WIS.

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DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

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SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write
John Borchardt & Son, Richland Center, Wis.

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OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
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AND a few sows bred for August and September farrow for sale. Write BURN BRAE FARM, CHAS. A. PETERSON, ROSENDALE, WIS.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
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SPRING boars by five **Noted Boars.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** a son of the many times **Champion Grand Model,** heads our herd. We sell "boars that please." Write

Geo. D. Sprain & Sons
West Salem, Wisconsin

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DUROC HERD

My herd will be on exhibition at the
WISCONSIN STATE FAIR
and the leading county fairs. See **LINCOLN MODEL** and his get. Also the big boars by **S. & H.'s COL.,** the largest boar of his age in the state. Will have some good boars and gilts for sale.

SEE MY DUROCS BEFORE YOU BUY
ALBERT L. HYZER
WEST SALEM WISCONSIN

WE SHIP on APPROVAL

Duroc Jersey

BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

BOARS

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IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
J. Erwin, Bloomington, Grant County, Wis.

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HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
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SPRING and fall Duroc boars and gilts for sale by above boar. Also spring pigs by Royal King 4th and Lee's Defender. Order early, the best will go first. Address
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40 DUROCS

BOARS and gilts of the best breeding known, and we guarantee them individually. Single, pairs or trios. E. H. Parker & Son, Janesville, Wis.

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25 PERCHERONS, 15 HACKNEYS 3 BELGIANS, 1 SHIRE

Every farmer and breeder in Wisconsin and adjoining states should attend this sale. Here will be your opportunity to get an A No. 1 stallion or mare. Sale to be held

FRIDAY, SEPTEMBER 15TH, 1 P. M. AT THE STATE FAIR

Many of these horses will be exhibited in the show ring. Several of them are candidates for ribbons. The consignors are among Wisconsin's best breeders. Send for catalog giving breeding and description to

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He can make you money in your live stock or farm sale. Rates reasonable.

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LEFEBURE'S BELGIANS

A LARGE and choice collection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address

H. Lefebure & Sons Fairfax, Iowa

8 miles west of Cedar Rapids

RED POLLED CATTLE.

HEADQUARTERS FOR RED POLLS

IF you want cattle bred for beef and milk, buy RED POLLS. We can supply you. Write.

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RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write

L. C. UNDERWOOD AVOCA, WIS.

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HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

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RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

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Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address

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Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.

Geo. Lucia - Green Bay, Wisconsin

Guernsey Bull For Sale

THE richest Guernsey breeding. Born March 8, 1916. Sired by the richly-bred bull,

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant View. Also a deep, rich breeding of the Governor of the Chene line. Address

Charles Schmidt Wrightstown, Wisconsin

GUERNSEY BULL

LANGWATER STARLIGHT Breeding. A. R. O. dam. Also bull calves from 2 to 6 months old from A. R. O. cows for sale. Address

W. J. HEID FORT ATKINSON, WIS.

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address

W. H. & B. L. Hanchett Sparta, Wisconsin

A SON OF THE GUERNSEY BULL

GLENWOOD NOBLE SECRET 23999

BORN in March, 1916. Dam, a heavy producing cow. He is well marked and well grown.

E. H. KIESLING JEFFERSON, WIS.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman Fort Atkinson, Wisconsin

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

FOR SALE Pure-bred and high-grade Guernsey calves. Address ARTHUR FINDLAY, WHITEWATER, WIS.

Auction of Wisconsin Jerseys

Brandon, Wis., Tuesday, Sept. 26

At the farm of W. S. Dixon & Sons

SIXTY HEAD, prize winners and butter test cows, and the progeny of such, bred from the best Island and American families. Consignors will include the well-known herd of E. Bruins, Fairwater, Wisconsin; several from the prize-winning herd of W. S. Dixon & Sons, Brandon, Wisconsin; some from the old established herd of F. W. Page, Princeton, Wisconsin; and a few from the herds of J. H. Dennhardt, Neenah, Wisconsin; Chas. A. Peterson, Rosendale, Wisconsin; and E. J. Ballard, Rosendale, Wisconsin. Col. D. L. Perry, auct. Catalogs sent on request to

John C. Dixon - Brandon, Wis.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.

FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son Oconomowoc, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS.

Yearling Jersey Heifers

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2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

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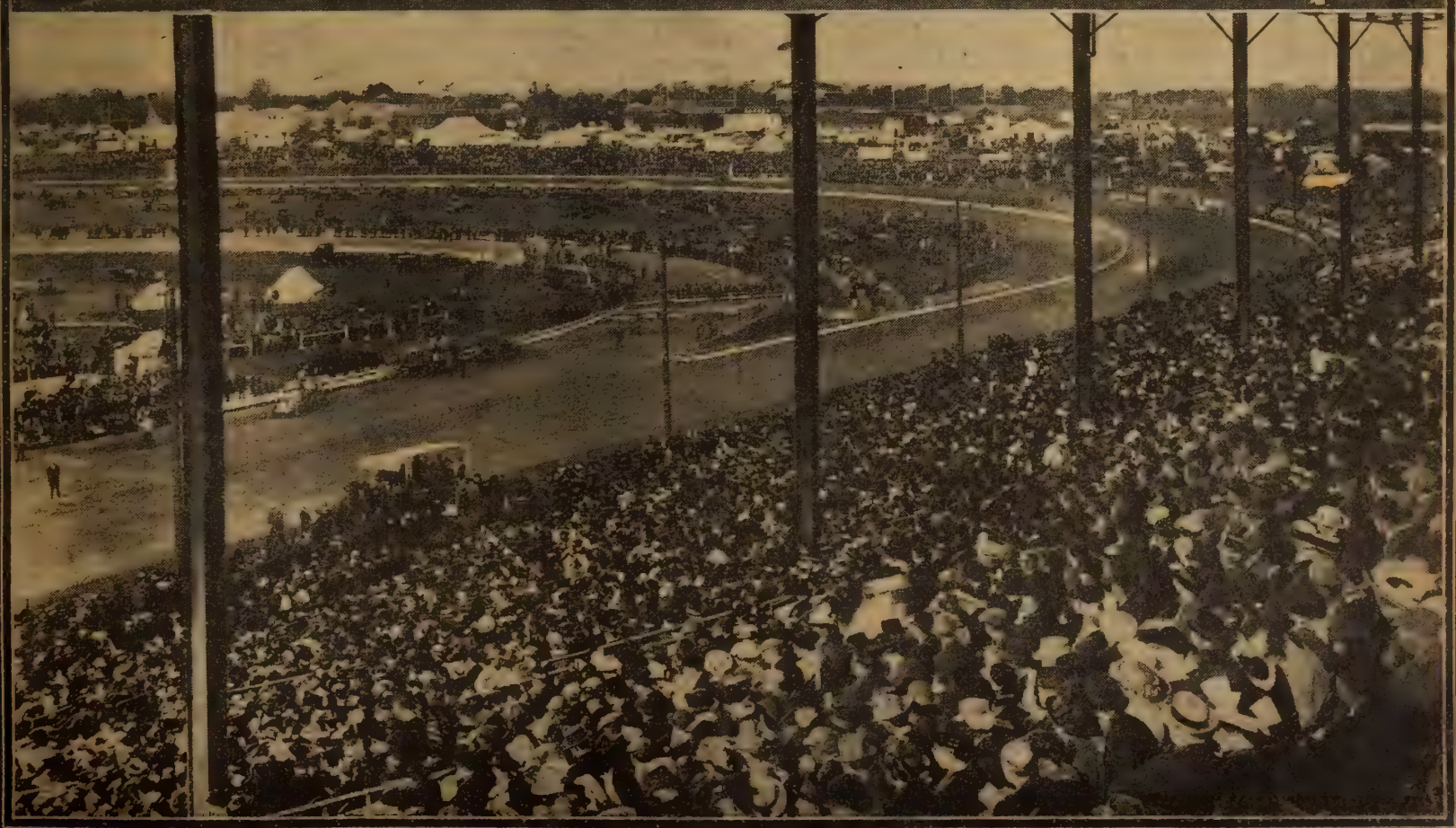
VOL. XLV. NO. 37. THURSDAY, SEPTEMBER 14, 1916. WHOLE NO. 1807



Reports of Grain Yields Are Good

Threshing Will Soon Be Finished—Silo Filling Has Begun—Corn Prospects Favorable—More Rain Is Needed.

WISCONSIN.

Barron County.—Threshing is done. Most of the small grain and corn is below normal. Oats are light, yielding from thirty to forty bushels per acre; barley is yielding a little better than oats, and rye is good, running from twenty to thirty bushels of grain of good quality. Corn has done well lately and its condition is about 85 per cent normal. A frost on September 2d hurt the corn and potatoes to some extent. Potatoes are poor and will not make more than 50 per cent of a crop. The yield of alsike clover is good.—Wm. Bartlett.

Chippewa County.—Threshing is practically all done. Barley and rye are fair, oats are light weight, and peas are good. Buckwheat has not been cut yet, but prospects are poor. The potato crop is a failure. Corn is coming [illegible] been harvested, and most of it threshed; the yields are good. Corn on heavy soil will make a fair crop if the frost holds off for a few weeks, but corn on light, sandy soil is practically dried up. We had a few showers during the last part of August, but they did not do much good. Most of the pastures are dried up. Potatoes will be light, and fruit and vegetables scarce.—Geo. Ashbacher.

Door County.—Threshing is in full blast, but the grains are turning out to be below the average. Oats are making about forty bushels per acre, barley thirty bushels and rye about thirty-five bushels. Peas are also below average, running about twenty bushels per acre. Corn is growing well, but needs rain. Potatoes are poor and also need rain. Beans are not filling out well, on account of drouth. Pastures are poor, and many cattle are being fed in the barn. The apple crop, especially fall apples, is very good.—L. E. Birmingham.

Dunn County.—The threshing returns show that oats and barley are fair crops, winter wheat is of good quality, but there is some cheat in it, and spring wheat is shrunken badly. Potatoes are very poor. Old pastures are dried up. The second crop of clover is fairly good and has plenty of seed in it. Plowing is almost impossible because the ground is too dry. Corn is well eared and nearly ready to cut. Rain is needed.—E. A. Finley.

Eau Claire County.—Corn is being put in the silo, but it is died out badly. The crop is not more than half normal. Oats that are threshed are light and making not more than from ten to thirty bushels per acre. Barley is also light, running from two to twenty-two bushels per acre. Buckwheat is making about one-third of a normal crop, having suffered from dry, hot weather. Some clover is being cut for seed. Pastures are dried up, and many live stock are being fed corn and hay. Except for a few early ones, the potato crop is a total failure. We have had no rain for more than six weeks and the ground is too dry for plowing.—C. A. Koll.

Florence County.—The principal crops, oats and barley, are running from thirty-five to forty-five bushels per acre in this locality. The potato crop is light. Fruit has not done well. Pastures are very good, and rain has been sufficient.—Phill Kelmes.

Forest County.—The extremely hot weather in August did some harm to oats and potatoes. Threshing has begun and, in general, the yields are good. Early potatoes promise well, but late ones did not set well. Corn has done well and the biggest hay crop in the history of the county has just been harvested. Pastures have plenty of good feed.—H. A. Kamm.

Grant County.—All crops are dried up, as we have had little rain for the last two months. Pastures are dry and cattle have to be given dry feed. Early potatoes are rotting and late ones will be a failure. Corn is looking well, considering the drouth it has gone through.—A. V.

Green Lake County.—Threshing is nearly finished; small grains are averaging about one-third less than last year's crops, and the quality is not so good. Rain is needed again for corn, pastures and late potatoes. The early corn is commencing to harden, and promises a fair crop.—G. B. W.

Iron County.—Weather conditions are fine. Oats are threshed and the yield has proven to be light. Meadows and pastures are in good condition. Garden truck and sweet corn are good. Early potatoes are fine in quality, but light in yield. Late potatoes are doing well. Live stock are in fine condition. —J. A. Becker.

Jackson County.—Small grains are nearly all threshed. The quality and yield are not as good as last year. Corn has been suffering from drouth in some parts of the county. The pastures and new seedings are suffering also. Late potatoes are practically a failure. Many silos are being filled now. A recent frost in the northeastern part of the county killed some of the corn, beans and buckwheat.—C. S. Ristow.

Jurneau County.—August was a dry month and pastures are short. Small grains are making fair yields of good quality. Corn is late and cannot make over two-thirds of a crop. We have a shortage of potatoes, although rain would probably make the late crop. At present, potatoes are selling at $1.60 a bushel.—J. H. McNown.

Kewaunee County.—Early potatoes are hardly worth digging. Late ones are fair. Garden truck and corn are very much in need of rain, and some of the corn is maturing too rapidly. Threshing is in full blast, and oats and rye are running above the average, while barley is running below. The ground is too hard to plow for fall seeding.—Fred Lutz.

La Crosse County.—Continued dry weather has hurt the potato crop, which will be very light. Corn is ripening fast and promises a good yield. Silo filling has begun and will have to be hurried, or corn will become too ripe. Lowland pastures are excellent, and [illegible] ing fine. Fewer [illegible] the market this [illegible] D.

[illegible] Corn is develop- [illegible], but will be a light crop. [illegible] are feeding corn to cows, in order to keep up the milk flow. Pastures are all burnt out. Much threshing is being done, and oats are yielding from forty-five to sixty bushels per acre. Late potatoes will be a complete failure unless rain comes soon. A large number of cattle are being sold on account of shortage of pastures. The cattle, sheep and hog exhibits at the Lafayette County Fair were excellent.—W. F. Pease.

Marinette County.—Threshing is about half done and grain crops are turning out lighter than last year. Oats are averaging from thirty-five to forty bushels per acre, while barley and rye are doing some better. Pastures are fair, but need rain. The potato crop will be very light. The second crop of clover was short in growth, but good in quality. Corn is doing fine, although rain is badly needed. Some fall plowing has been done, but the ground is too dry for good work. Cattle are doing well.—H. B. Pederson.

Price County.—Threshing is in full blast; all grain is light on account of late seeding last spring. Oats are running from twenty-five to fifty bushels per acre, which is about 35 per cent less than last year. Potatoes show large, long vines, but few tubers. Farmers claim this year's crop is about one-third less than last year's. Shippers are offering 90 cents per bushel for potatoes, as compared with 40 cents last year. Corn is doing fine and two weeks more of good weather will ripen the early corn. Pastures are in good shape and cattle doing well. From June 1st to September 1st this county averaged two rains a week.—J. W. F.

Sauk County.—Crop conditions, in general, are normal. The second cutting of clover was light. The new seeding, which seemed partly burnt out at the time the nurse crops were harvested, has been benefited by the recent rains, and now shows an excellent, even stand. Pastures also have revived noticeably. Corn is maturing rapidly and silo filling will soon begin. Corn is short in the stack, but has good ears. Potatoes look green and thrifty and prospects are much better than they were last year.—Richard F. Klemm.

Sheboygan County.—Continued fair weather has been pushing the corn crop along, so that there will be plenty of silage. The late potato crop will be light, blight having done considerable damage. Potatoes are now selling at $2.00 a bushel retail. Threshing has been in progress for several weeks. The yields are only fair; oats are averaging about fifty bushels per acre, and barley, forty bushels; rye is light and winter wheat is poor, due to winterkilling. The heaviest yield of oats reported here is seventy-five bushels per acre of Pedigree No. 1.—M. J. Hoppert.

Taylor County.—Threshing is in full blast. Oats are yielding fairly well, but barley and rye are poor. Hay and clover made splendid crops and were harvested in excellent condition. Pastures are getting better since the rains. Gardens are not up to average. Corn is doing well, but the potato crop will be short, especially the late planting.—John E. Miller.

Walworth County.—The season has not been good for milk production. Pastures are better now than they were a month ago. The early sowing of oats made about fifty bushels per acre, and barley went from thirty-five to forty bushels of grain of good quality. A large amount of grain has been sold. Corn is uneven and the greater part of it is short. Potatoes and garden truck have not done well this summer.—Ora P. Taylor.

Waushara County.—A light frost visited this county, but the damage done was slight. Winter rye is yielding far below the average. It is selling at $1.25 per bushel. Oats are not turning out well. Potatoes are scarce and the late planting needs rain. Cattle are in good condition. Corn is coming on well, and will make a crop if frost holds off a few weeks longer. The creameries have several motor trucks and teams to handle the cream in this section.—Lloyd H. Bovee.

MINNESOTA.

Goodhue County.—The prospects of bumper crops were ruined by the dry, hot wave, during which wheat and barley were injured in a few days' time. The hot wave is broken now, but the dry weather continues. A rain at this time might save the corn and potatoes. Corn is doing well, but potatoes are almost a failure. Pastures are very dry. Spring wheat is making from two to twelve bushels per acre only, but winter wheat averages better. Oats are fair, yielding from twenty-five to thirty-two bushels per acre. Apples are good, but storms have thrown many of them from the trees, thus making them unmarketable. Garden truck needs rain. —Otto W. Kolshorn.

BLIND MILTON DICTATING TO HIS DAUGHTER
From the original by Munkacsy, in New York Public Library

The Vision of the Blind

"Thousands at his bidding speed,
And post o'er land and ocean without rest;
They also serve who only stand and wait."

Was the spirit of prophecy upon John Milton when, more than two hundred and fifty years ago, he dictated those words to his daughter?

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The Wisconsin Farmer

THURSDAY, SEPTEMBER 14, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE MORTGAGE THAT NEVER COMES DUE.

THERE is one phase of the new farm loan law which I do not believe is clearly understood by the rank and file of farmers. This is in regard to the manner in which the loan is paid back. Farmers who borrow from the federal land banks will never have to repay the loan on a certain day; they will repay it gradually, on each interest-paying date. Let me explain, as best I can.

The average farm mortgage of today is made for five years, but I am advised by a life insurance official who has charge of the investments of his company (it is a well-known fact that most of our farm loans heretofore have been secured from life insurance companies) that the life of the average farm mortgage here in the grain belt is only three years. In that length of time it is either paid off, or the borrower cancels it and makes a new one, for either a larger or a smaller sum, dependent on whether he wishes to add more land to his holdings, increase his herds or otherwise widen or lessen his farm operations.

Under the new rural credit law, however, all this will be changed for the farmer who borrows from the federal land banks instead of from the present sources of capital. The law states that no loans shall be made by the new banks for less than five years nor more than forty years. And the principal is paid back on what is called the "amortization" plan. Now, this is quite a formidable sounding term, but in reality it is not nearly so formidable as it might appear at first. It simply means the progressive repayment of the loan's principal. When the federal land board was in the grain belt last week the chairman, Mr. George W. Norris, informed those of us who attended the public hearings that 1 per cent, added to the interest every year, would pay the loan off, in full, in thirty-three years. For instance—suppose I borrowed $1,000 and the rate of interest was 5 per cent, making my annual interest charge $50. If, instead of paying $50 a year, I paid $60 a year, in thirty-three years I would have the loan entirely paid off. Let me give you another instance. The figures are not original with me, nor have I had an opportunity to check them over, but I believe they are accurate. If I were to borrow $1,000 at 5 per cent interest and if, instead of merely paying the regular interest charge of $50 a year, I paid $80.24 a year, the loan would pay itself off in twenty years.

Now, let me show you the advantage of this new plan: The borrower is never confronted by any one certain (uncertain might be a better term, so far as the inability to pay is concerned) date when the principal comes due and the mortgage must be paid off, or it will be foreclosed. The borrower is constantly paying off the principal as he pays the interest, and in such small instalments as never to work a hardship upon him. The farmer who borrows $1,000 for thirty-three years and pays $60 a year instead of $50, or the farmer who borrows $1,000 for twenty years and pays $80.24 a year instead of $50, is never confronted with such an excessive payment that he cannot make it, nor has he the weight of a mortgage-foreclosure fear constantly hanging over him. Merely by paying $10 a year or $30.24 a year (as the case may be, in the two instances I have cited) he wipes out the entire mortgage principal in course of time. However, should he desire, he can reduce the principal in multiples of $25, or pay the mortgage off entirely on any interest-paying date, after it has run at least five years. It is not absolutely imperative that he continue the mortgage for the length of time assigned when the loan was made, but it must run at least five years, during which time payments must be made on the principal, proportionate to the length of time for which the mortgage was made.

I want this point clearly understood, if possible: The farmer who borrows under the new law never has to pay the debt back on one stipulated date; he pays it back gradually throughout the entire life of the mortgage. He cannot borrow from the federal land banks on any other terms. If he wants to borrow for merely three years and pay the debt off all at once, he must go to private capital or the insurance companies and banks, to whom he was in the habit of going before the new law was passed. But if he borrows from the federal land banks, even for the minimum length of time (five years), he pays the principal back, with the interest, in five annual instalments; he cannot borrow in any other manner. I hope I make myself clear on this point; it is most important.

As I told you last week, I am going to discuss the various phases of the new rural credit system, week by week, for the next month or two. Next week I shall attempt to show you how the farmer, who desires to borrow, must go about the first steps of the process, joining with at least nine other farmers in organizing a local farm-loan association. These phases of the new law all appear at first to be needlessly encumbered with red tape; perhaps a little discussion between us, before the banks are ready for business and while there is ample time to ask questions and to learn, may help us to give the new law the fair trial to which it is entitled.

TARIFF COMMISSION CREATED.

THE congress which adjourned Friday of last week did at least one good job, in my opinion. It created a non-partisan tariff commission, upon which devolves the duty of recommending proposed or desired changes in the tariff, with an eye to the needs of the various business interests of the country rather than of the political effect or the political capital which may be made thereof. My farmer friends who remember—and who of us can forget, with so much at stake?—how the administration before the present one attempted to betray the farmers of America in a lop-sided reciprocity arrangement with Canada will be especially jubilant, for the danger then to our farming interests was great and the escape a narrow one.

I do not know the full particulars of the bill as finally passed, at this writing, for in the closing hours of congress there are often many trades and perhaps some good features of the bill creating the commission were omitted at the last. But it will certainly be a relief to have the tariff on those things which the farmer produces and those things which he purchases established with an eye single to the farmers' needs and best interests, rather than to the effect which it will have upon the chances of victory of some political party at the next election, as has been the custom all too long. Just why so important a matter as the tariff should ever have been permitted to become a political issue, rather than one to be settled on business principles, is a mystery to me; but such has been the case for all too many years. We have had tariff revision after tariff revision, some upward and some downward, and practically all of them have simply resulted in disturbing the commercial balance and subjecting business to unnecessary uncertainties, in the interests of whichever political party happened to have the dominating hand. When the various schedules came up for final adjustment, the test was not the need of the nation or the welfare of the workers most directly affected so much as political exigencies and advancements. The welfare of the farmers of a certain section were traded off for the welfare of the miners of a section thousands of miles away, these trades enabling the party in power to entrench itself still more firmly and to punish those congressmen who stood in the way of the political preferment of those who held the whip hand for the time being.

Now, all this is to be changed. The president is to appoint a non-partisan commission, the duty of which shall be to investigate the tariff needs of the country, to determine the effect of tariff changes upon the workers directly affected and to report its findings to congress and the president. As the bill was originally drawn up, the very first industry to be represented on the commission was agriculture. A hard fight was made on this provision of the bill and it may have been stricken out at the last; I am not now advised. I sincerely hope that it was retained, for no industry has more at stake in tariff revisions than agriculture. This much I know: If the provision was stricken out, it was against the wish and will of the man who has been the head and front of this tariff commission fight for the past two years—my very good friend, Mr. H. H. Gross, to whom the farmers of America owe credit for the passage of the Smith-Lever bill, which brought the state agricultural colleges to their very door. Mr. Gross has championed the representation of agriculture on the commission ever since the first gun of the campaign was fired. I have talked with him on the subject several times and heard from him many times, and he has been determined throughout that the farmer should have a voice—and a loud one, too—in the determination of our future tariff schedules. When it comes to giving credit where it belongs for a good fight well conducted and valiantly won, Mr. Gross is the man. Readers of this paper will recall a splendid article he wrote a year or so ago, setting forth the value of the proposed non-partisan tariff commission to the farmer. I am telegraphing my congratulations to Mr. Gross today for the splendid fight he has won. I sincerely hope he was not obliged to surrender any of his principles at the last minute in order to insure the passage of the measure. Of this I shall have more to say later on, when full particulars are received by me.

AUTO, TRUCK AND TRACTOR

I AM INDEBTED to Mr. K. A. Kirkpatrick, agricultural agent for Hennepin county, Minnesota, for some splendid testimony on the question of the practical usefulness of the automobile to the farmer. Here is what Mr. Kirkpatrick has to say:

The automobile has revolutionized the marketing problem for the farmer who sells produce in the city. A farmer fifteen or twenty miles out of Minneapolis used to have to get up at 1 to 2 a. m. in order to get to market when it opened at 6 a. m. Now he sleeps until thirty or forty minutes of opening time. Then he gets back to the farm much earlier.

Many Hennepin county farmers own trucks to help them in marketing. About twenty-five trucks have been sold to Hennepin county farmers this summer. Especially the potato growers use them. One can carry a load to market and get the price allowed the farmer who ships, although this farmer must pay the shipping cost out of it. Then, he drives home with a load of manure. He can get this for nothing from the transfer barns, providing he can promise to haul regularly. With a team he can't contract for regular hauling.

The emergency value of the automobile is not to be lightly regarded. It endears the car to the farmer more than any other use, perhaps, because it is in the emergency that a car is appreciated. I know a farmer whose threshing rig broke down this fall, when an intricate piece, hard to duplicate, was ruined. It wasn't in the near-by town. It coldn't be described by telegraph with any certainty that the right piece would be returned. So the farmer drove to Minneapolis, 100 miles away, and got it with only the loss of one day's work. It would have taken from three days to a week any other way.

What he has to say interests me greatly, and, being in line with my own extensive observations and the testimony of farmers generally, I am convinced he is well within the truth in all his remarks. The automobile has revolutionized farm life and farming conditions as has no other factor in recent years. What Mr. Kirkpatrick has to say in regard to the increasing popularity of the motor truck among the farmers of his vicinity is right in line with information which comes to me from another portion of the grain belt: The territory adjacent to the Omaha stock market. Here is an item from a newspaper published in Council Bluffs, right across the river from Omaha:

Frank Skipton has broken all trucking records in this locality. Yesterday afternoon he left Council Bluffs with a big auto truck for the farm of W. D. Shaw, who lives near Briscoe, in Adams county, between sixty-five and seventy miles from Council Bluffs.

He loaded there thirty-one head of hogs, shoats weighing 100 to 125 pounds each. These were put on the truck on two decks and will be delivered today to W. P. Barnett at his farm near Weston. Mr. Skipton figures that he will be on the road with the shoats about four hours.

Many loads of hogs have been trucked to market from this locality to South Omaha, but this is the first time a bunch has been hauled such a distance. Mr. Skipton has been the pioneer in introducing the truck for the marketing of stock.

The custom of hauling hogs to the Omaha market in auto trucks is said to have become quite general, the eyes of many farmers having been opened to the advantages of this quick and easy transportation. What with the gasoline engine, the automobile, the truck and the tractor, the progressive and prosperous farmers of the grain belt are going about their work in a way of which their fathers never dreamed. Farming has certainly been revolutionized when we hitch the gasoline engine to the silage cutter and the feed grinder, plow and harrow our fields with a tractor, haul our hogs to market in an auto truck and take the whole family to town in an automobile for church, Chautauqua, institute, "movie" or other form of entertainment which rids the farm of its former loneliness and isolation and broadens the mind of every member of the family with the necessary contact with the outside world.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address THE WISCONSIN FARMER, MADISON, WISCONSIN

Better Service to Wisconsin Readers.

LAST week The Wisconsin Farmer published the first article on Wisconsin live stock winners at the Iowa State Fair and the first pictures taken of the Wisconsin stock which won best ribbons. No other agricultural publication in the state made any mention of this important information or published any pictures. The Iowa State Fair is the first of the great grain-belt fairs and it affords the first opportunity for stockmen to get a line upon the show herds of the year. For two years past Wisconsin has not sent out so many cattle or horses because of danger in shipping. Wisconsin did not get a chance to show off her fine dairy stock at the Panama-Pacific Exposition. Hence, there was a great deal of interest in the Iowa fair and especially among Wisconsin breeders, who were anxious to see what sort of a record our state breeders would make.

Following the Iowa fair is the Minnesota State Fair at Hamline. Wisconsin breeders were entered in almost every division and class of live stock at this fair. The Wisconsin Farmer was represented by experienced live stock men who have given us a report published in this issue. We venture to make the claim in advance that no agricultural paper, not even the Minnesota papers, will excel The Wisconsin Farmer in the report of this fair, and we feel confident that farm papers in this state will not give anywhere near so accurate or comprehensive a report as is contained in this issue. Our readers are invited to make a comparison of The Wisconsin Farmer reports and those of any other farm papers they may have at hand, and see for themselves whether we are right. This week our editorial staff is at Milwaukee, and the Wisconsin Farmer next week will publish as usual a complete report of our own state fair, covering not only the various divisions of live stock, but other departments and special interests as well. Our reports are written by our own editors, men who are busy in the state practically all of their time calling upon farmers and breeders. The Wisconsin Farmer uses no press reports, but its editors arrange and verify, just as closely as it is possible for them to do, every item covered.

The aim and policy of The Wisconsin Farmer is to do best those things which are worth doing. Our standards are governed by opinions of farmers and breeders as gathered by our own staff, who spend a very large share of their time on farms of this state.

Farm Management Is All Important.

ATTENTION of our readers has been called to the increased cost of farm implements, and the farmer has not only to meet this expense, but also increased cost of farm labor. It has been necessary for farmers to organize in some sections to try to meet the labor problem. These things lead to one important conclusion, and that is, that we must manage more carefully and by this plan bend every effort to increase farm profits. Every business in our country has found it necessary to manage more carefully in order to increase production and maintain profits. The farmer has never suffered from high prices. He occupies an ideal position in this regard.

Farm management is a matter of utmost importance to the farmer of today. There is nothing discouraging in the outlook to the man who understands the business of farming and who will look to the avenues of largest gain and profit by the markets which are best. Along with the high prices which have to be paid for labor and implements and the staple food products which the farmer must buy, comes high prices for grain and the highest prices for live stock which we have ever known. The last census report shows that there were 177,127 farms in Wisconsin, and the average value of products per farm was $1,507, divided as follows: A total of $838 for all crops and $669 for live stock enterprises. This census is about eight years old and it is fair to presume that on present prices the average production value of each farm in Wisconsin has increased and probably interest in live stock has increased the percentage of revenues from live stock enterprises. But the figures referred to are the only accurate ones we have at hand at this time.

Farm management as a study should teach us the crop and live stock enterprises which are most profitable. About one-seventh of the farm revenue in this state is derived from hay and forage crops and these crops are closely allied to live stock enterprises.

An insight into past experiences is afforded by reports of a number of farms to the government crop department. This shows that of the farms reporting from Wisconsin the average value of field crops was divided as follows: Corn, $199; wheat, $82; oats, $210; hay and forage crops, $253; barley, $145; rye, $79; and potatoes, $50. Conditions vary so on farms that it is not possible to advise definitely just what a man should raise to increase profits. But accurate records of costs will tell just as interesting a story on the management side as yields will tell concerning seed and cultivation. It is just as essential to know whether fields are profitable as it is to know whether cows give enough milk to pay for their keep. Fields which have failed to make sufficient profit with certain crops ought to be tried with something else, even if the scope of management extends to the use of additional stock to turn the crop into profits.

Farm management is not a high-sounding name nor a bugaboo to dodge away from. It is simply keeping cases on specific operations rather than lumping everything into one pot and in the end having no definite idea just where the profits were made.

Condemns Use of Grade Bulls.

THERE is an increasing interest on the part of breeders regarding the superior value of pure-bred live stock as compared with grades. At this time the subject is brought up by a Wisconsin subscriber, Mr. R. A. Kolb, who is special agricultural agent in Taylor county. Mr. Kolb writes:

In an editorial in a recent issue of your paper the question is asked, "Why use grade bulls?" and the article does not attempt to answer the question, but rather cites proof for not using a grade bull. Perhaps the question can be answered in part by another question, "Who is to blame for the use of grade bulls?" For every grade bull in use there have been two interested parties: (1) The man who bought the grade bull and is using him, and (2) the man who sold the calf and is using a pure-bred bull himself.

Who then is to blame? Surely not the first party, who has not used a pure-bred bull and does not appreciate the value. He uses a grade bull because he doesn't know any better and often is led to believe by the seller that the grade is just about as good as a pure bred. The blame rests with the owner of the pure-bred bull. The man knows better, for he wouldn't use one himself, but is willing to profit (?) by the ignorance of his neighbor. Surely no one would use grade bulls if no breeder sold them except to the butcher. Breeders of live stock are far too careless in this matter and in their hands lies the remedy. Less than two weeks ago the writer heard one of the foremost breeders of Wisconsin express his opinion on grade bulls. While he did not advocate the use of grade bulls, he countenanced and even attempted to justify their sale. There lies the danger.

What arguments can they offer in favor of this traffic?

(1) "If we do not sell this man a grade bull, someone else will, and we may as well take the money." While this is perhaps a good argument to take blood money, it little justifies the sale by a man who professes to be a breeder and who believes in building up good herds.

(2) "There are so many poor pure-bred bulls sold that a good grade is sometimes better than a poor pure bred." Since when have we advanced to such an extent in the question of moral ethics that we can say, "One wrong justifies another, or two wrongs make a right"? This argument might even hold water if all the grade bulls that are sold were good ones, when, in fact, but a very small per cent of them are. The average grade bull that is sold is only a trifle better than a scrub, for he is not the result of years of selective breeding, nor continued top crossing.

(3) "Pure-bred bulls are too expensive for some people." Are we who call ourselves live stock men going to use as flimsy an argument? When bulls fit to head any pure-bred herd (except where special mating is desired) can be bought for $100 and less, when bull calves of good breeding and from good herds though without official records can be bought for less than $50, when banks more than ever are willing to loan money for the purchase of good live stock, when federal and state departments of agriculture, the agricultural press and all other agencies combined are reaching out their arms to help the man in the purchase of better live stock, will we say farmers cannot afford the price of a pure-bred bull?

(4) "A grade bull is better than a scrub and it at least gives this man a start." This is good consolation for a blunt conscience. If a man sought to attain a high wall and besought our help and we gave him a ladder that reached half way up when we might as well have given him one to take him the entire distance, we would console ourselves and say, "At least we gave him a start."

The man who uses the grade bull is not to blame. He knows no better and he does not read of nor does he see the proofs to the contrary. As long as the men who own and use pure-bred bulls in their own herds are willing to sell them to their less informed neighbors and attempt to justify their act so long will men use grade bulls. The responsibility rests with men who know better. What we need is not proofs of the value of pure-bred bulls, but rather a sentiment among breeders that will condemn the sale of these counterfeits.

We take it for granted that Mr. Kolb has especially in mind the pure-bred dairy herd when he states that a young bull, fit to head a pure-bred herd, can be purchased at a figure as low as $50, because a well-bred, meritorious beef bull cannot be purchased for this price. However, the same principle applies in beef production as in dairying, and those who use the right type of pure-bred bulls are simply taking advantage of the law of inheritance to stamp improvement on the young stock. The individual who is content to use grade males in his herd year after year must make up his mind to lag behind the procession. If he is engaged in dairying he will find that his cows are not producing more than 200 pounds of butter fat a year while plenty of herds can be found that almost double this amount. While it is true that one may find individual grade cows that are good producers, it is likewise true that these cannot be expected to reproduce themselves unless prepotent pure-bred sires are used. Land is getting to be too high in price to trifle with the grade bull.

Picking and Storing Seed Corn.

E. C. DAVIS, of St. Peter, Minnesota, writes the following experience, indicating the care which is necessary in the selection and storage of corn for seed:

We aim to produce seed that will test close to 100 per cent without ear testing. To get such seed, we find it necessary to pick corn before any hard freeze, but not necessarily before the first hard frost. A severe freeze is apt to injure even the ripest corn, but the husks will protect the ears from light frosts.

We find that corn which is only dented will make good seed if properly cared for, but it is very difficult to handle without injury to the soft kernels, is difficult to cure without molding or loss of vitality, and lacks the weight, shelling percentage, and appearance of mature corn. The more mature the corn is the better, just as with other grain or with live stock.

In picking from the standing corn we go through the fields on foot, taking two rows at a time. Each man carries a grain bag with a strap over the right shoulder, the bag under the left arm with the opening to the front. This leaves both hands free. At convenient distances through the field we cut out a row or two of corn on which to empty the bags and to drive through with a wagon and load. The ordinary man can easily pick five to ten bushels a day of select ears in good corn. This would be enough for, say, at least forty acres.

The man who wants seed for eighty to 100 acres of corn can pick it in two days, exclusive of time required to hang the corn. The total cost of picking seed in this way and putting it on racks or hanging it by the husks or by twine is about fifty cents a bushel. Corn picked in this way is usually rather sappy and must be put on racks to dry at once. It must not be left in bags or piles over night, as it is liable to mold or heat and lose its vitality.

We cure all our seed on racks which hold each ear separate so that they cannot mold easily and also allows a free circulation of air. We find that artificial heat is not advisable in curing seed corn, as it is easy to get the heat too high and it also induces mold. Plenty of ventilation is the best method of removing the moisture from corn, as a good breeze will carry away more moisture than a large furnace will absorb. Ordinarily plenty of air is all that is needed to cure any seed corn. Of course, where there is a large bulk the ventilation must be very good. It is impossible to get too strong a circulation through the corn.

We are careful not to let our corn freeze before it is thoroughly dry, but after that we keep only enough fire to keep out the moisture and prevent extreme low temperatures.

We find that this method, which can be easily followed by any farmer, produces the very best grade of seed corn obtainable.

Those who expect to keep seed corn for sale will be interested in Mr. Davis' experiences, especially since his plans have met with great success in the years he has been working them out.

Forcing Hogs With Self-Feeder.

AN Illinois breeder, Mr. G. T. Hood, asks for information in regard to the best method of feeding pigs that now weigh about sixty pounds. He asks especially about the relative feeding value of a ration composed of barley and tankage fed in a self-feeder on the one hand and corn and tankage on the other.

In experiments conducted at the Wisconsin station in the feeding of barley meal and corn meal it required 435 pounds of corn meal to make 100 pounds of gain, and 471 pounds of barley. This is a difference of thirty-six pounds in favor of corn meal. In a second experiment where each lot of hogs was fed milk it required 330 pounds of barley and 398 pounds of milk to make 100 pounds of gain on the one hand and 306 pounds of corn and 371 pounds of milk on the other. Averaging both trials, it was found that it required 8 per cent more barley meal than corn meal to produce a given amount of gain. The result harmonizes with experiments conducted at other stations, indicating that barley is less valuable than corn for fattening swine, though it must be conceded that the difference is rather slight.

We can find no results of experiments in which tankage was fed in conjunction with barley and also with corn, but it is fair to assume that corn would hold the lead. In deciding whether an attempt should be made to feed barley or corn, the value of these grains locally would be the deciding factor. Where there is a supply of barley on hand it could be used to advantage and in that case a smaller proportion of tankage would be required than would be needed if corn constituted the bulk of the ration. There is this difference, however, between the two grains, that corn may be fed either on the ear or shelled without further preparation in the way of grinding or soaking, whereas barley is so hard that it must be prepared for feeding in advance. If a good grinding outfit is at hand it will pay to grind it, but, if not, very satisfactory results may be obtained by merely soaking it, and in that case it is not so well adapted for use in the self-feeder. Barley meal may be fed with a self-feeder with reasonable expectations of obtaining good results, but this is not the case with soaked barley.

WISCONSIN TRACTOR SHOW.

Demonstration at Madison Was Well Attended Considering the Weather and a Genuine Interest in Tractor Power for Farm Work Was Exhibited by the Visiting Farmers.

TENTED CITY IN WHICH TRACTORS AND ACCESSORIES WERE HOUSED AT MADISON DEMONSTRATION.

WISCONSIN farmers to the number of several thousand witnessed the successful performance of various makes of tractors at the closing demonstration of the season held in Madison last week. Though the weather was somewhat inclement for such a demonstration and the crowds were not so large as they would otherwise have been, the show was a success and those who did attend were well pleased. The manufacturers did their part and did it well. Manager F. M. White, head of the agricultural engineering division at the Wisconsin College of Agriculture, handled the show successfully and he wasn't responsible for the rain. The local committees, including the managers of the Madison branch, did exceptionally good work. The grounds selected included the old Allis farm across Lake Monona from Madison. Madison business men took special pains to entertain the visitors, providing band concerts, free picture shows, parades on the lake and other attractions. Transportation problems were handled satisfactorily and people were satisfied.

The question brought to the front by the Madison demonstration was whether the modern tractor is a practical machine for the Wisconsin farmer. Stripping the demonstration of its entertainment features, the real point for discussion was what a tractor will do and whether it is economy for a farmer in this territory to own one. A good many farmers were completely satisfied on this subject and others will give it more careful study.

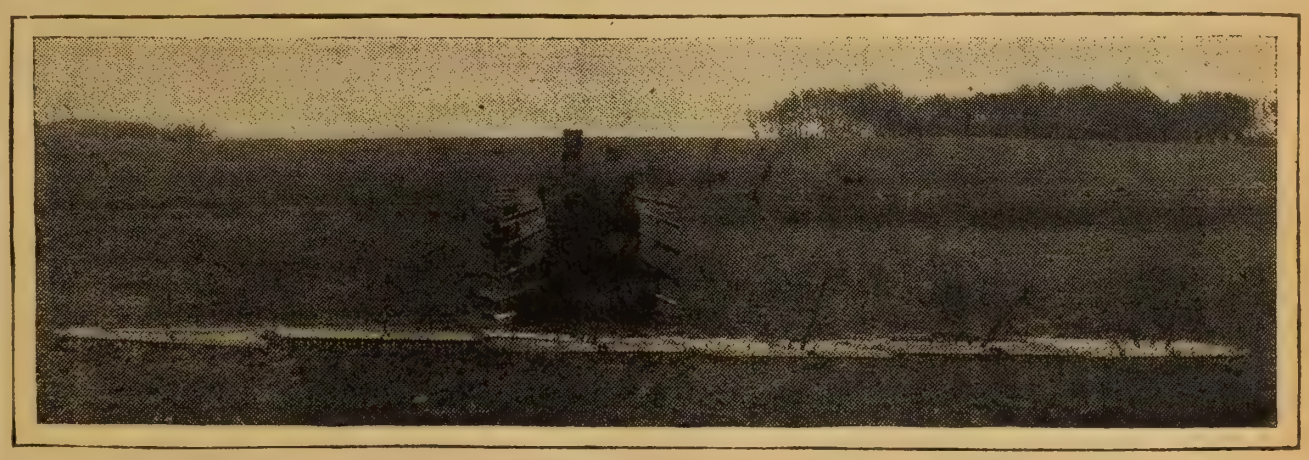
Conditions in Wisconsin are somewhat different than in other states where tractors have been used with great success. There are a good many small farms in the state and there is a good deal of rolling land. There is a large amount of land which can be handled with greatest profit as pastures for our hundreds of thousands of dairy cattle. We could not undertake to say the tractor has a place on the small truck farms of this state. Of course, it would be of no use in our cranberry marshes. But the man who has 160 acres of land devoted to general crops, and who is obliged to use six and ten horses or more, and, of course, the farmer who handles a larger tract and uses more horses, will be interested in what the tractor offers in the way of economy and increased efficiency. Even on farms of less than 100 acres the light tractor has proved an economical implement.

Time and experience will prove just where the tractor can be economically used. The demonstration was for the purpose of proving that the tractor will do the work which it is claimed it will do. For the purpose of establishing this point the Madison demonstration and the seven previous demonstrations held under the auspices of the associated manufacturers, afforded positive proof. No one could see the work done by the tractors in the fields on the Allis farm, and on other fields in the vicinity, and have a doubt about the efficiency of the tractor. This doubt about whether the tractor will deliver the goods has been removed by the great educational campaign which has just been closed. Tractors ranging in price from $400 to $2,500 and a few even higher in price, were used in practical field work at Madison. They plowed stubble ground, marsh land, sod which had not been turned in fifteen or twenty years, and stony ground and did it successfully and without any apparent damage to the machines. Plowing with a tractor and with the modern tractor plows with two to eight and even sixteen bottoms is an easy task. The machines handle the work without much grunting, and the operator can work much more rapidly than with horses. Not only can a much larger number of acres be plowed each day but plowing can be done better with a tractor. The power of the tractor is steady and even and in ordinary soil the plows can be set to turn a furrow six to eight inches with ease.

READY FOR A START AT ONE OF THE PLOWING DEMONSTRATIONS.

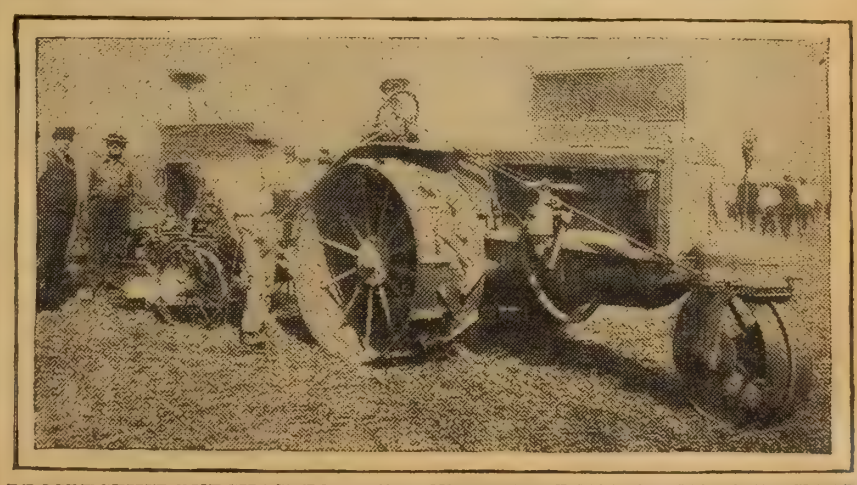
Most of the farmers who visited the Madison demonstration had never seen such an exhibition before. It was a wonderful sight to them. They spent the morning hours visiting the tents at headquarters grounds and examining the mechanism of the machines and the plows used. A great deal of interest was aroused in the cultivating machines. One firm exhibited a two-row cultivator which was operated in its small space in a tent and there was always a crowd about. Another firm kept a tractor engine running continuously with the working parts all exposed to view and this exhibit was interesting to everyone. Demonstrators were on the ground to explain the different principles involved in the several types of tractors shown. Plow companies were also

(Concluded on page 21.)



THIS LITTLE FELLOW FOLLOWED UP THE PLOWS AND DID THE WORK HANDILY.

BY THE USE OF THE BELT THE FEED GRINDER IS SOON SET GOING.



PROSPECTIVE PURCHASERS WERE INTERESTED IN THE VARIOUS TYPES

To Learn More About Clearing Land.

The Land Clearing Special through Upper Wisconsin last May and June was such a success that it has been decided to duplicate the performance again this fall. In co-operation with the Soo Line, the Wisconsin College of Agriculture, Agricultural Engineering division, will run a special train and give stump pulling and dynamite demonstrations beginning September 18th. The counties and towns which have been chosen for these demonstrations are as follows: Rhinelander, Oneida county; Philipps, Price county; Butternut and Marengo, Ashland county; Patzau, Douglas county; Birchwood, Washburn county; Taylor county, station not yet decided, and Owen, Clark county. Carl Livingston will be in charge of the demonstrations and his experience last spring and the success which attended his work indicates another very successful trip this fall.

A list of manufacturing firms co-operating in this effort has been supplied The Wisconsin Farmer and they are as follows: Hercules Manufacturing Co., Centerville, Iowa; Flynn Stump Puller Co., Superior, Wisconsin; A. J. Kirstin, Escanaba, Michigan; Zimmerman Steel Company, Bettendorf, Iowa, and the DuPont Powder Company, Wilmington, Delaware. The demonstrations will include practical work in stump pulling with hand, horse and steam power and also with blowing out stumps with dynamite. In addition there will be work in combining these two important forces in land clearing. The demonstrations last spring brought together about 8,000 farmers and settlers, about 90 per cent of whom were estimated to be directly interested in land-clearing problems.

Better Prices For Wisconsin Stock.

Mr. Andrew W. Hopkins, secretary of the Wisconsin Live Stock Breeders' Association, recently received a letter from Colorado asking for names and addresses of men who had good dairy stock for sale. The letter came from the state dairy commissioner and stated that such purchases as were made for shipment to Colorado would have to be in carload lots, a carload from each section. Mr. Hopkins wrote to Frank G. Swoboda, county agent in Langlade county, among others, and asked whether it would be possible to pick up a carload of Holsteins or Jerseys in that county. Mr. Swoboda replied as follows:

It is a matter of regret to us that Langlade county has no surplus dairy cows and heifers to offer at the present time. We would, most assuredly, like to participate in the generous profits resulting from the sale of high-grade dairy stock to western and southern buyers.

Many carloads of common stock are shipped monthly from this county, going mostly to Chicago and Milwaukee stockyards at a fair price, quality considered. Not a few farmers are getting visions of increased profits from well-bred dairy stock, and are using good pure breds. Their generous milk checks are proof of their wisdom. But far too many are still wasting their time and energy using low grades and scrubs.

The efforts of our cow-testing association and local cow-testing clubs, also several breeders' associations are doing much in stimulating the interest in better bred stock and better dairy methods. Almost every week sees new recruits to the ranks of pure-bred sires.

Within a very few years, Langlade county should be in a position to ship out good dairy grades in carloads. Keep us in mind for future inquiries.

Mr. Swoboda expresses in a nutshell the situation in a number of Wisconsin counties where there are not enough good surplus stock to fill such demands upon Wisconsin as the one from Colorado. It is fortunate that our breeders are beginning to see the possibilities in the pure-bred business.

In And Around Wisconsin

The report of the American Jersey Cattle Club for the week ending September 1, 1916, shows 276 bulls registered and 612 cows, making a total of 888. For the same week transfers recorded show 186 bulls and 438 cows, or a total of 624.

Dane county's tobacco crop is estimated at 22,000,000 pounds, which will probably break previous records. The crop will be worth about $3,000,000. Those who were discouraged with tobacco last year on account of the price and the weather missed it this year if they turned their attention to other crops. Of course, the unexpected high price has had a good deal to do with profits this year. While some contracted their fields at 11 and 12 cents, others have held back and are now offered as high as 18 cents for their product. The quality of tobacco in Wisconsin is unusually good, especially in sections which have shown it during the dry season.

There is something of a contest on in the vicinity of Bloomington, Wisconsin, and some rather interesting claims of yields of oats are being made in the Fennimore Times. M. V. Burris, superintendent of the Grant county farm, claimed seventy-five bushels to the acre and this was considered a pretty high mark for anyone else to measure up to. Now comes Frank Bohringer, who claims to have harvested eighty bushels to the acre and ninety bushels by weight from a twenty-acre field. Len Scott got 6,000 bushels of oats off ninety-five acres and Harry Tornowske, 5,100 bushels from ninety acres. Dave Baldwin threshed 4,000 bushels from sixty acres and Roy Bailie 5,220 bushels from eighty acres. Furthermore, the prospects for corn around Bloomington are good and the farmers say that a good many of them will be able to beat Mr. Burris' record on the county farm.

For the first time in the history of Kewaskum and vicinity, Washington county, Wisconsin, farm land recently changed hands at $200 per acre. The Rosenheimer and Day farm, better known as the Schield Stock Farm, is the property which brought this price. This is a fine stock farm and a splendid value, farmers say, at the price which was paid for it.

Mr. George Sterr, of Washington county, exhibited last week at the Hartford Times office some stalks of corn which, if they are an indication of the balance he has in his field, point to a bumper corn crop. There are about twenty acres in Mr. Sterr's field and ten acres of it is exceptionally good. Stalks taken from the better section of the field measured fourteen feet in height. The crop was planted May 22d. While the weather has been unfavorable for corn in Washington county, Mr. Sterr got a fine crop by the use of fertilizer which minimized the effect of the dry weather.

About 50 per cent of a crop is about all that we may expect from Wisconsin on potatoes this year. Last year the state produced 28,000,000 bushels and if the total is above 15,000,000 bushels this year the crop estimators will be surprised. The farmer who has good potatoes may expect to get a fancy price this year. In September potatoes sold as high as $2 to $2.50 per bushel in a number of the cities. This was the retail price. There is every indication of a small late yield in the leading potato centers. If we could have the crop two years ago and the present prices what a bonanza it would be for the potato grower.

An Automatic Silo Filler.

AN EFFICIENT silo filler is a necessity on the modern stock farm. One that will give good service for years and is operated easily and efficiently is the Rowell Automatic, manufactured by The I. B. Rowell Co., 1112 Lincoln Ave., Waukesha, Wis. The Rowell Company manufactures a complete line of sizes and repair parts can be easily obtained. The features in which the Rowell Automatic excels, are explained in the free catalog, which any farmer may have for the asking. When writing, mention that you saw the advertisement in this paper.—Adv.

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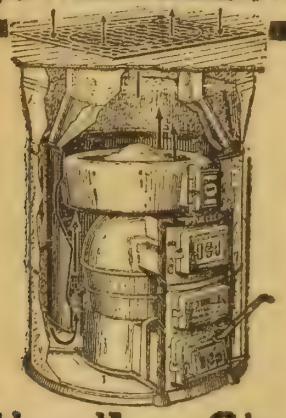

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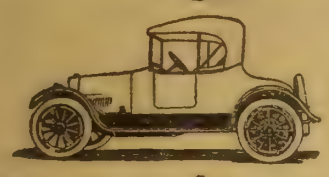

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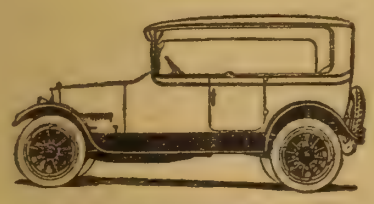
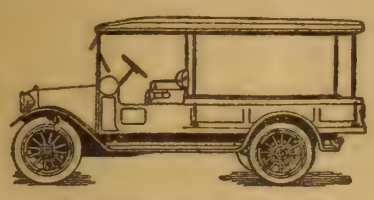
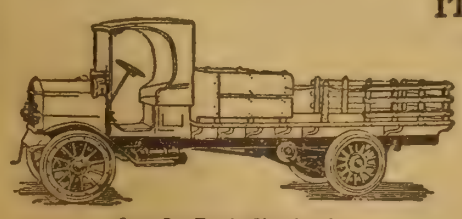


The New Reo Six 7-passenger Sedan, $1750



1500-pound Reo "Speed Wagon," $1060



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IT WOULD BE DIFFICULT to say just what is the "best thing" about Reo automobiles and Reo motor trucks.

ONE WOULD SAY "the service that goes with every Reo." Another would say "uniform excellence" is "the best thing" about Reos.

BUT WE WOULD say without a second's hesitation that one of the best things is the fact that every Reo model is, long has been, and long will be, standard.

FOR IT DOESN'T MATTER when you buy a Reo—in season or out—this year, last year or next year—you have a car that is standard and the depreciation of which is less than that of any other automobile of similar price or passenger capacity.

YOU'D SAY REO QUALITY was probably the "best thing" about Reos—and of course, there's no gainsaying that.

REO QUALITY at Reo prices is universally recognized as "The Gold Standard of Values."

THAT IS THE BASIS of Reo prosperity, Reo demand and Reo reputation, of course.

BUT OTHERS MAKE good cars—in spots. By fits and starts as it were. This year a good model; last year one they are not so proud of; and next year—who knows?

THERE'S SO LITTLE consistency in the past performances of most of them, none can predict the future with any degree of accuracy.

BUT REOS RUN TRUE TO FORM always. If it's a Reo then it's a good car—no matter what year it was made.

IF IT'S A REO there's always a fixed value for it in the new, or in the "used car" market.

IS IT A NEW REO—it will command a premium. "You were lucky to get a Reo," is an expression a new owner hears frequently.

FOR EVERYBODY KNOWS that the demand for Reos is always greater than the factory output—always has been.

IS IT A 1911 MODEL—any dealer will tell you its present value—and they won't differ five per cent in their estimates.

THAT'S THE REMARKABLE difference between Reos and other cars—with only one exception. And that isn't a competitor of Reo.

CONSIDER THIS most carefully in your selection of a car—this fact, that every Reo model is standard from season to season.

IT IS A STAPLE, not a novelty, you buy when you buy a Reo.

AND IF YOU DO have to wait a few days for a Reo, whereas you can get other makes right off the floor—remember there's a reason, and that reason is the best possible reason why you should select a Reo for yours.

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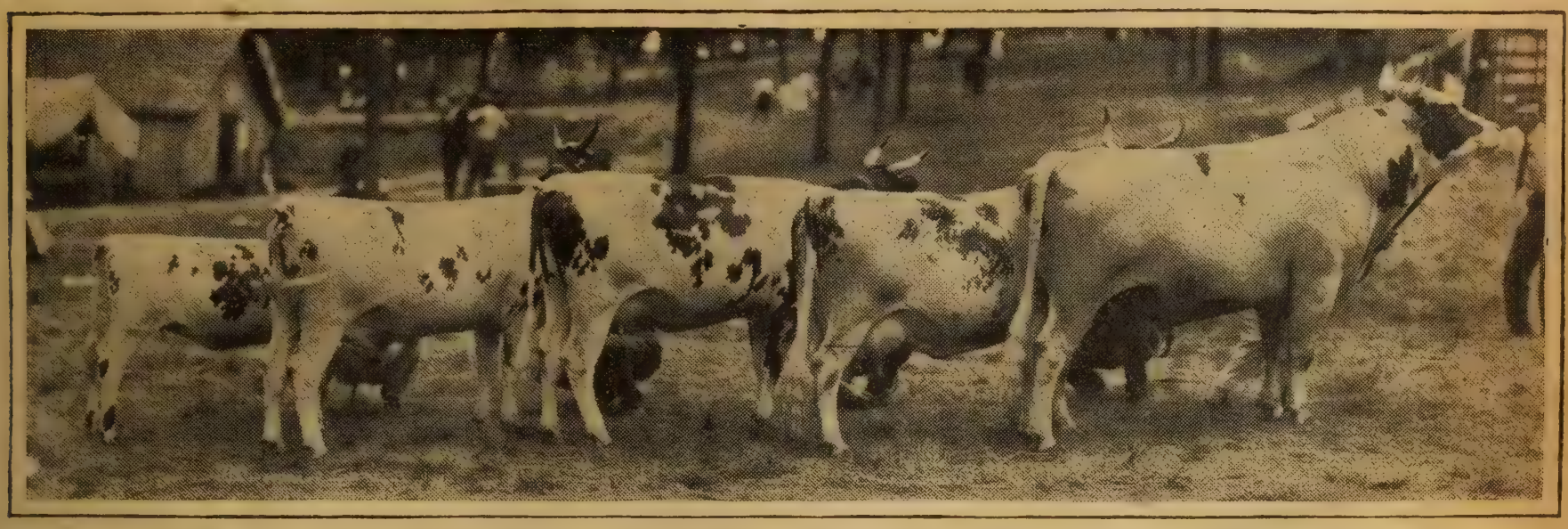
Most Important Factor in Agricultural Progress in the State This Season Has Been the Study of the Tractor and Its Practicability for Wisconsin Farms.

MINNESOTA'S GREATEST FAIR.

The 1916 Exposition at Hamline Breaks All Records For the Size, Number and Diversity of Its Exhibits—New Attendance Record Established For Opening Day of the Fair.

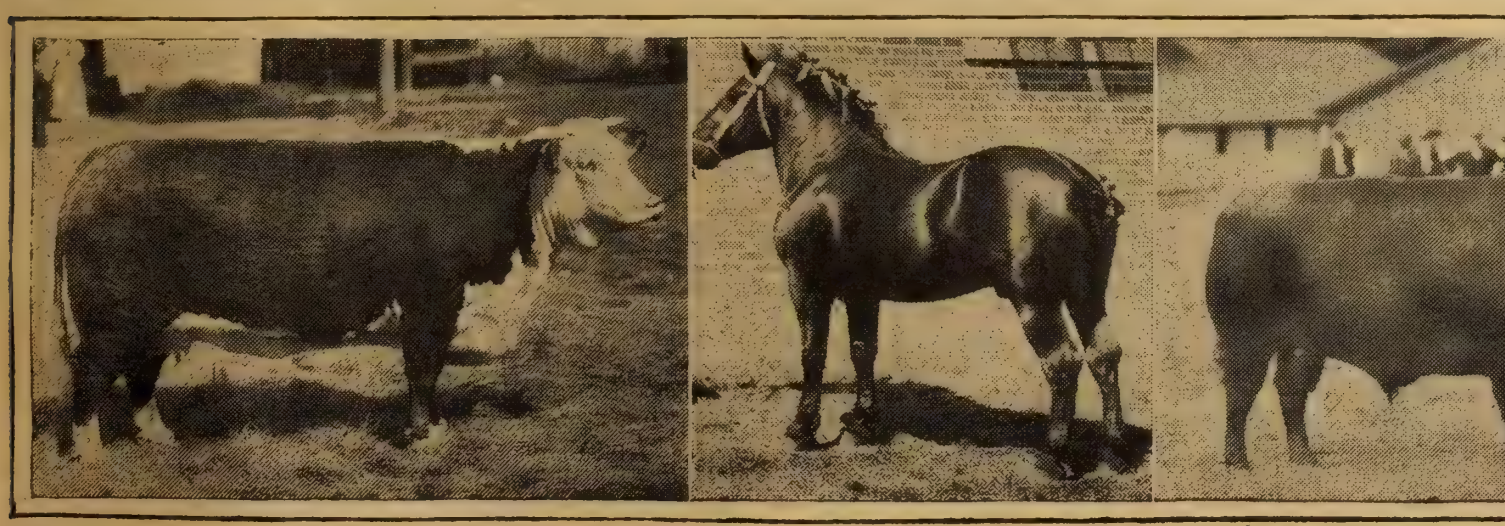


SECOND-PRIZE AGED AYRSHIRE HERD AT THE MINNESOTA STATE FAIR. OWNED BY FERNDELL FARM, LADYSMITH, WIS.

WITH exhibits more varied and excellent than ever before, live stock entries greatly increased over previous years, and many new and interesting features, the 1916 Minnesota State Fair and Exposition at Hamline last week passed into history as the most notable ever held by the state. Although outclassed at times by other states in the live stock and agricultural displays, Minnesota gives way to no other fair in the great diversity of exhibits which point out the great resources and capabilities of the state and the rapidly developing northwest from which it draws support. It is not a fair constructed entirely for farmers, as many others are planned, but it is also designed for the city folk, the office and the factory worker, as emphasis is laid on the manufacturing and industrial resources of the state as well as agriculture and live stock. So it remains that the Minnesota fair stands in a class by itself and is an exposition in every sense of the word. It may also be said without fear of contradiction that the exhibition last week was entirely in accord with the enviable reputation, won after a series of many successful fairs, that Hamline is the home of a fair and exposition that stands preeminent and second to none. Minnesota, a great state in herself, has the entire northwest to draw from and it naturally follows that the attendance records should exceed those of other western fairs and this year was no exception. The opening day (Labor Day, a holiday in St. Paul and Minneapolis) saw 93,454 persons pass through the turnstiles, as compared with 89,232 on the opening day last year, which is the record first-day attendance, excepting Labor Day in 1912, when Theodore Roosevelt's presence drew a crowd of 100,600. It was a great, seething crowd that thronged the spacious grounds on Labor Day and there are few fairs which could accommodate 93,000 persons. On Tuesday 30,437 persons filed through the gates, an increase of a few hundred over last year and a record second-day attendance, while an equal number braved the elements on Wednesday and trampled through the mud and rain all day to take advantage of the exceptional opportunity to see the splendid exhibit of live stock and other resources of the state on exhibit. The rain began early and fell continuously until night, but this did not deter the thousands who had come in from surrounding points for Live Stock Day.

GROUP OF BELGIANS SHOWN AT THE MINNESOTA FAIR BY WILLIAM CROWNOVER, HUDSON, IOWA.

Never was there a finer display of pure-bred live stock at the Minnesota Fair than was seen in the barns and the judging arena this year. The showing disclosed the rapid progress which Minnesota is making in live stock breeding and the fair officials are giving the breeders great encouragement through the offering of special prizes in what is known as the Minnesota classes, open only to breeders from that state. It is in live stock that some other fairs often excel Minnesota, but with the increased interest it is evident that in a few years Minnesota will always be in the front rank in this respect, as it must be borne in mind that the dairying possibilities of the state are being very rapidly developed and that Minnesota is bringing in many fine animals for foundation purposes from other states. Mr. John C. Simpson, secretary, who is in a splendid position to watch the increase in pure-bred live stock breeding, predicts that Minnesota and the northwest will make greater strides along this line during the next decade than any other section of the country and the fine quality of the Minnesota animals shown this year tends to bear out his predictions. The Minnesota herds came into competition this year with some of the best from Iowa, Wisconsin, Illinois and other states and the competition was very keen, as the departments were exceedingly well balanced, there being good showings in all classes. There was not the tendency often seen at some other fairs to have an especially strong showing of one breed and weak in another, as all classes were well filled, there being twenty-five to thirty animals each in the younger classes in the cattle departments and eighteen to twenty animals each in the older classes. Mr. T. G. Patterson, superintendent of cattle, reported about 850 head shown and that the quality was the finest he had ever seen at Minnesota. The entries ran into much higher figures, but many breeders became alarmed at the threats of a railroad strike and failed to show up when the fair opened. Minnesota can always be depended upon to hold a good horse show and this year's turnout was no exception, something like 600 horses being exhibited. As an indication of the diversity of interest at the Minnesota fair the evening light horse shows may be cited. At these society competes with their fashionable turnouts for the ribbons, while on the forenoons the coliseum was crowded with those who love the drafters and are interested in the judging. The sheep show was much larger than in 1915, there being thirty-two more pens and all classes were filled, Shropshires leading in breeds. Supt. F. S. Marshall was very highly pleased with the



VERNET QUEEN 8TH, SENIOR AND GRAND CHAMPION HEREFORD COW AT MINNESOTA FAIR. OWNED BY LA VERNET STOCK FARM, JACKSON, MISS.

SINGMASTERS' KEOTA INSIGHT, SECOND-PRIZE PERCHERON STALLION, 3 YEARS AND UNDER 4.

BLACKCAP STAR, FIRST-PRIZE AGED ANGUS BULL, OWNED BY C. D. & E. F. CALDWELL, BURLINGTON JUNCTION, MO.

showing of Minnesota stock in the state classes and the growing interest in sheep raising in the state is indicated by the large showings of Minnesota breeders. The swine show was the best ever held, there being a great increase in the number of swine from Minnesota farms and the entries from other states were especially large this year. The state in the boys' pig contests, which are being conducted in various counties, is doing a splendid work and the showing of pigs by these boys was excellent and the fair is to be complimented upon the part it has taken in this work. About forty herds competed in the Poland China and Duroc Jersey futurities, which are designed to increase interest in these breeds and the American Yorkshire Club held its first national show in connection with the fair. An extra hog barn was added this year and it is predicted it will be necessary to add at least two additional barns to take care of the swine exhibitors next year. The cattle entries were so large that there was not sufficient room in the barns for all and the Ayr- herds were quartered in tents, showing being the larg- years.

The ... standing features which ... attracted the attention of the visitor to Agricultural Hall was the large number of progressive counties which had sent exhibits and the splendid showing of forage crops and corn. No building on the fair grounds was of so much interest to the visitor concerned in the agricultural progress of the state and Supt. Frank B. Logan was highly pleased with the showing. Any doubt that Minnesota will not have mature corn this year was dispelled by the display of corn, which was not only large but high in quality, and Prof. J. G. Moore, of Madison, who judged the grains, complimented the grain display in the highest terms. The small grain was not up to the high standard of 1915 because of the hot weather, but the showing of threshed grains was very good, weather conditions considered. It was light and the color a trifle off, especially the barley and wheat. The showing of potatoes was good, although the Minnesota crop varies this year. Mr. Logan reported that the crops were good in the southern and northern parts of the state, while in the territory surrounding the Twin Cities it was almost a failure because of the dry weather. This bears out the statement that Minnesota is a state with many varieties of climate and soil. An interesting and added feature was the exhibit of Minnesota Indians, this display showing what the Indians on the reservations in that state are doing along agricultural lines. They displayed all kinds of vegetables and grains and the showing of corn, mostly of the flint varieties, was good. The exhibit was encouraging, as it proved that the Indians are contributing their share to the agricultural growth of Minnesota and those who neglected to spend a few minutes in the Indian booth missed a real treat. In connection with the corn exhibited by individual growers were the samples grown by the boys entered in the acre corn-growing contests conducted in various counties and the showing by these boys indicates the great value of the work and what it means to the future of the state. Twenty-one counties, as follows, exhibited: Aitkin, Becker, Beltrami, Cass, Cook, Crow Wing, Itasca, Kittson, Koochiching, Morrison, Todd, Wadena, Washington, Cottonwood, Dakota, McLeod, Nicollet, Olmsted, Pipestone, Renville and Sibley. The exhibits were a revelation of the agricultural resources of the state and the showings made by the far northern counties were a surprise. Notable among these was that of Cook county, which lies in the northeastern corner of the state, abutting the Canadian line and without a railroad in the county. The grasses and forage crops shown in this booth ranked with those of any other county and in these crops every booth was at its best. The county exhibits tend to bring out the best which can be produced in the respective counties and in this way there is assembled a display of grains, both sheaf and threshed; vegetables, fruits, grasses and forage crops that could hardly be assembled by the state in any other way at any price. So the fair in offering big prizes and cups to the winners in each of the three districts—southern, central and northern—brings together a great agricultural display. Cass county took first in the northern division, Wadena in the central and Sibley in the southern division. C. L. Blanchar, of Sherburne, won the corn contest, winning sweepstakes with the best ten-ear sample of both white and yellow dent corn and the best individual ear. With all these various sections contributing it is not to be wondered at that the agricultural display at Hamline last week set a new record.

The Minnesota fair has always been especially strong in its horticultural department and it is doubtful if a finer display of fruits, vegetables and flowers was ever brought together than was assembled in the horticulture building at Hamline last week. It was a treat to the eye to walk through this commodious, well-lighted and well-arranged building which the fair has provided for this department and with an apple display that ranks with the great national apple shows, it is not to be wondered at that Minnesota has won the reputation of a great fruit state. "Every Apple Shown Grown in Minnesota" read the big sign which greeted the visitor on entering the building, and it must have been hard for one not familiar with Minnesota's fruit-growing capabilities to realize that the large commercial showing of more than 500 boxes of apples was all Minnesota grown. This display stretched across one entire corner from the floor to the ceiling and was most pleasing, while beside it were more than 4,000 plates of fruit shown by individual growers. The "Home of the Wealthy Apple," as the Lake Minnetonka region has become known, was well represented. The Minnesota horticultural display stands second to none and few state fairs, if any, have given so liberally of prizes to encourage this department. In the center of the big building plays a bubbling fountain, spraying at its base a wonderful floral display, and a visit to the Minnesota fair is never complete without a few hours in this building. The showing of garden truck was very fine, and it was not thought possible to bring together this year so fine a display, considering the hot weather with which the gardeners had to contend.

The dairy building this year was the center of unusual interest with its splendid display of butter and cheese. The judges pronounced the 275 tubs of butter on display to be of the highest quality ever seen at the Minnesota fair, which illustrates the progress that state is making in dairying. Not only are new creameries springing up weekly, but the quality is being constantly improved and the prize-winning creamery butter received a score this year of 97. This tub was turned out by George Deeg, a buttermaker in the creamery at Owatonna, while Mrs. August Lundeen, of Forest Lake, took first on her tub of dairy butter with a score of 93. There were ten entries of dairy butter. There are now more than 900 creameries in the state, most of which are co-operative, and Supt. Andrew French, of the dairy department, was highly pleased with the display. The fair has provided a splendid building with refrigeration for the butter and cheese and the showing of creamery fixtures; separators, etc., this year was the largest in history, the building being taxed to take care of the exhibitors. Twenty-three cheeses were shown, one Swiss, five brick and seventeen cheddar. Minnesota is placing more emphasis on the creamery rather than the cheese factory, and this showing of cheese was highly satisfying. The dairy school of the University of Minnesota had an interesting exhibit showing the food value of milk, how to care for the milk from the farm to the creamery, and other important matters connected with modern, successful dairying. The food and dairy commission was also represented with a splendid exhibit, calling attention of the visitors to the magnitude of the dairy industry in Minnesota and the work the commission is carrying out. It was a notable dairy exhibit and one of which the state fair may well feel proud.

Poultry has always been a big show at Minnesota, and all previous records were broken this year, not only in number of fowls shown, but also in quality. One hundred and seven fanciers displayed a total of 2,500 birds with the Barred Rocks leading in number, and the decision of the fair a few years ago to confine the show so far as possible to the leading utility breeds is apparently working out to splendid advantage. The superintendent of this department is Mr. Leslie Parlin, of St. Paul, who has held this position for thirty years. For forty-three years he was a breeder of Buff Cochins, and it is with much pride than he has seen the Minnesota show grow from one of 245 birds thirty years ago to one with 2,500 birds in 1916 with only the foremost utility breeds entered. This was 400 more birds than were ever shown before and the big building, noted for its size, light and ventilation, was taxed to capacity, it being necessary to double up to take care of all the entries. When this building, with its 43,000 square feet of floor space, was built a few years ago, it was thought it would be large enough for years to come, but it now appears that an addition will be necessary. An especially interesting feature of the Minnesota poultry show is the arrangement for the display of flocks. Instead of cooping them in small pens the flocks are shown in wire enclosures in the center of the building, where the fowls are on the floor and have plenty of room to show themselves off to the best advantage. The Northern Orpington Club and the Minnesota branch of the Rhode Island Red Club both held their shows in connection with the state fair show, and the turn-

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"My net earnings with the Buckeye in 84 days were $1,902. The treatment and service your company has given me is all that any fair minded man could ask."—Ed Uvaas, Larsen, Wis.

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out of these breeds was very large and representative.

Mention of the agricultural features of this fair, without notice of the machinery exhibit, would be incomplete. All previous records were broken and every foot of exhibit space was in use for the first time in the history of the fair. The interest in farm machinery was never stronger and the exhibitors were kept busy throughout the week. Something like 3,000,000 square feet of space was used by the machinery people and more than a score of makes of tractors were to be seen daily in action in their tents and in actual operation on Friday afternoon on machinery hill.

The automobile show this year outranked all previous shows, and most of the 1917 models were on display. The show room in the great liberal arts building was far too small to accommodate all who wished to show, and additional buildings and tents had to be provided. The interest in the automobile show was manifest by the great crowds which constantly thronged the show rooms, and the exhibitors reported a very satisfactory week.

The woman's building was the center of great interest this year, many innovations being introduced. Probably no fair has the arrangements for taking care of the exhibits of this kind that Minnesota has, and the style show which was conducted there this year was attended by thousands of visitors.

The fair this year operated its own souvenir concession booths. This was a new venture and all novelties, such as canes, etc., were sold from booths conducted by the fair. The ruling off of the concession men cost the fair something like $1,500 in fees, but it was hoped to recover this amount by the sale of its own souvenirs and novelties from the fair's booths. This eliminated from the grounds the "barkers" and others which follow these concessions who have often made themselves objectionable, although no protest has been made against the merchandise they sell. The midway has been eliminated and in its place were high-class shows, and the fair is to be congratulated on this movement.

Breeding Cattle.

SHORT-HORNS.

As always, the Short-horn show drew the crowd at the ringside. This year seems to be the inning for young stuff in Short-horn circles, and perhaps the young stuff should always have an inning. The aged classes were small but good; the young classes were large and better. The show was furnished entirely by Wisconsin, Minnesota and Iowa exhibitors and was interesting on account of the general fitness, uniformity and absence of poor lots. Mr. Jas. Tomson, of Carbondale, Kan., made the awards carefully and with much deliberation, weighing differences before each decision. The aged bull class brought out Marr's Avon from the Oloff herd, which was made senior champion over Toyne's two-year-old bull, East Lawn's Champion. The senior bull calf class brought out the strongest array of young bulls in the show. Good Stamp, from the Anoka herd, led the bunch and was later made junior and grand champion bull of the show. The aged cow class was headed by Maxwalton Queen with white heifer at foot. Next to her stood Village Lassie 2d with the eighteen-hour-old heifer calf, Hamline Lassie, at foot. Maxwalton Queen was defeated for the senior purple ribbon by Simplicity 7th, a toppy heifer, lacking something in depth, from the Hill herd. Eliason's junior yearling heifer, Lady Crocus, was given the junior purple ribbon, but failed to get the premier honors, which went to Simplicity 7th. The blues were quite well distributed in group classes. Anoka Farms were strong in the younger groups.

The exhibitors: Anoka Farm, Waukesha, Wis.; Carpenter & Carpenter, Baraboo, Wis.; S. G. Eliason, Montevideo, Minn.; Herr Bros. & Reynolds, Lodi, Wis.; Walter J. Hill, Northcote, Minn.; Eben E. Jones, Rockland, Wis.; Ogle Bros., Minnesota Lake, Minn.; L. C. Oloff, Ireton, Iowa; Otis Herd, Willoughby, Ohio; Leslie Smith & Son, St. Cloud, Minn., and Frank Toyne & Son, Lanesboro, Iowa.

Judge, James G. Tomson, Carbondale, Kan.

The awards:

Bull 3 Years or Over (3 shown)—1st Oloff on Marr's Avon; 2d Hill on Royal Silver; 3d Eliason on Cornerstone.

Bull 2 Years and Under 3 (2 shown)—1st Toyne & Son on East Lawn's Champion; 2d Hill on Thaxton's Secret 2d.

Senior Yearling Bull (2 shown)—1st Carpenter & Carpenter on Sultan Mine 2d; 2d Eliason on Cumberland's Archer.

Junior Yearling Bull (3 shown)—1st Hill on Type's Model; 2d Herr Bros. & Reynolds on Royal Choice 2d; 3d Eliason on Silver King.

Senior Bull Calf (17 shown)—1st Anoka Farms on Good Stamp; 2d Smith & Son on Clansman; 3d Hill on Duke of Northcote; 4th and 8th Herr Bros. & Reynolds on Ruby's Knight and Future Sultan; 5th Oloff on Marr's Avon 2d; 6th Carpenter & Carpenter on Collynie Cullen 2d; 7th Anoka Farms on Lavender Stamp.

Junior Bull Calf (10 shown)—1st and 2d Anoka Farms on Kilblean Champion and Augusta's Sultan; 3d Herr Bros. & Reynolds on Royal Ruby; 4th Smith & Son on Lord Lavender; 5th Oloff on Pride of Avon; 6th Jones on Collynie Cumberland.

Cow 3 Years or Over (4 shown)—1st Carpenter & Carpenter on Maxwalton Queen; 2d Toyne & Sons on Village Lassie 2d; 3d Jones on Verbena of Oakdale; 4th Oloff on Lady Bell 6th.

Cow 2 Years and Under 3 (5 shown)—1st and 5th Hill on Simplicity 7th and Victoria Princess 8th; 2d Eliason on Daisy Lass 3d; 3d Toyne & Son on Bonnie Belle 14th; 4th Jones on Crescent Cumberland.

Senior Yearling Heifer (4 shown)—1st Carpenter & Carpenter on Collynie's Best; 2d Toyne & Son on Eastlawn's Lassie; 3d Herr Bros. & Reynolds on Lady Holly; 4th Hill on Northcote Beauty.

Junior Yearling Heifer (9 shown)—1st Eliason on Lady Crocus; 2d Herr Bros. & Reynolds on Duchess' Last; 3d Jones on Jubilee Cumberland; 4th Hill on Silver Blythsome; 5th Toyne & Son on Lovely Goods; 6th Carpenter & Carpenter on Collynie Mysie.

Senior Heifer Calf (19 shown)—1st and 2d Anoka Farms on Anoka Blossom 2d and Anoka Clipper 2d; 3d and 6th Smith & Sons on Maid of Orange and Mayflower; 4th Hill on Gipsy Maid of Northcote; 5th Eliason on Lady Clara 9th; 7th Herr Bros. & Reynolds on Rare Gift; 8th Jones on Victoria Cumberland.

Junior Heifer Calf (8 shown)—1st Oloff on Avon Aryess; 2d Eliason on Miss May 5th; 3d Anoka Farms on Augusta Anoka 3d; 4th Carpenter & Carpenter on Collynie Mint Drop 2d; 5th Hill on Blossom of Northcote; 6th Herr Bros. & Reynolds on Lancaster Maid 3d.

Senior Champion Bull—Oloff on Marr's Avon.

Junior and Grand Champion Bull—Anoka Farms on Good Stamp.

Senior and Grand Champion Female—Hill on Simplicity 7th.

Junior Champion Cow—Eliason on Lady Crocus.

Graded Herd (3 shown)—1st Hill on herd headed by Royal Silver; 2d Eliason on herd headed by Cornerstone; 3d Toyne & Son on herd headed by East Lawn's Champion.

Young Herd (4 shown)—1st Eliason; 2d Carpenter & Carpenter; 3d Herr Bros. & Reynolds; 4th Jones.

Calf Herd (7 shown)—1st Anoka Farms; 2d Smith & Sons; 3d Herr Bros. & Reynolds; 4th Eliason; 5th Carpenter & Carpenter.

Get of Bull (7 shown)—1st Anoka Farms on get of Sultan Stamp; 2d Smith & Sons on get of Sultan Mayflower; 3d Herr Bros. & Reynolds on get of Master Ruby; 4th Eliason on get of Archer Sultan; 5th Carpenter & Carpenter on get of Lord Cullen.

Produce of Cow (4 shown)—1st Carpenter & Carpenter on produce of Barmpton Leaflet; 2d Herr Bros. &

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HEREFORDS.

Herefords are coming to the front in Minnesota. One could not expect the showing at Hamline to equal that made at Des Moines either from the quantity or quality standpoint. However, many of the tops of last week appeared at Minnesota and bolstered up by four herds from the Gopher state, the white faces were as strongly represented as they have been in recent years. Some of the Minnesota cattle lacked fitting and appeared at a decided disadvantage in their pasture clothes; others of them were good enough to give an account of themselves in many of the classes. Mr. Thos. Mortimer, of Madison, Neb., worked carefully and selected the good ones with the eye of a master. Bonnie Brae 60th that was placed third in the aged class at Des Moines, took the blue over Gay Lad 16th, another Harris entry which took the blue in the class at Iowa. Bonnie Brae 16th won grand champion bull honors over the junior yearling bull, Gay Lad 40th from the Harris herd that was junior champion bull. Vernet Queen 8th, the aged cow from the La Vernet Stock Farm was grand champion female as at Iowa last week. Miss Gay Lad 32d, the Harris senior yearling heifer was junior champion[illegible]ong Minnesota exhibP. Sorenson made a good showPatter & Sons also deserve

[illegible]xhibitors: R. W. Christie, Wood [illegible]is, Harris, Mo.; La [illegible]ackson, Miss.; Geo. A. Miller, Faribault, Minn.; L. E. Potter & Son, Springfield, Minn.; C. P. Sorenson, Balaton, Minn.; Robert Waldron, Byron, Minn.

Judge, Thomas Mortimer, Madison, Neb.

The awards:

Bull 3 Years or Over (4 shown)—1st and 2d Harris on Bonnie Brae 60th and Gay Lad 16th; 3d Sorenson on Standard 13th; 4th La Vernet Stock Farm on Vernet King 4th.

Bull 2 Years and Under 3 (2 shown)—1st Sorenson on Cedar King 1st; 2d La Vernet Stock Farm on Vernet Prince 16th.

Senior Yearling Bull (3 shown)—1st Harris on Repeater 57th; 2d Potter & Son on Prime Donald 2d; 3d La Vernet Stock Farm on Vernet Prince 31st.

Junior Yearling Bull (8 shown)—1st and 2d Harris on Gay Lad 40th and Repeater's Model; 3d Christie on Warren Fairfax; 4th and 6th La Varnet Stock Farm on Vernet Prince 36th and Vernet Prince 42d; 5th Sorenson on Dispatcher; 7th Potter & Son on Morgan; 8th Miller on Mikey.

Senior Bull Calf (10 shown)—1st, 2d and 4th Harris on Repeater 86th, Repeater 89th and Repeater 83d; 3d and 5th La Vernet Stock Farm on Vernet Prince 46th and Vernet Prince 43d; 5th Potter & Son on Prince Favorite; 6th and 7th Sorenson on Standard Lad 6th and Beau Standard.

Junior Bull Calf (3 shown)—1st and 2d La Vernet Stock Farm on Real Comfort and Vernet Prince 50th; 3d Christie on Stephen Fairfax.

Minnesota Bull 3 Years or Over (1 shown)—1st Sorenson on Standard 13th.

Minnesota Bull 2 Years and Under 3 (1 shown)—1st Sorenson on Cedar King 1st.

Minnesota Senior Yearling Bull (1 shown)—1st Potter & Son on Prime Donald 2d.

Minnesota Junior Yearling Bull (4 shown)—1st Christie on Warren Fairfax; 2d Sorenson on Dispatcher; 3d Potter & Son on Morgan; 4th Miller on Mikey.

Minnesota Senior Bull Calf (1 shown)—1st Christie on Stephen Fairfax.

Cow 3 Years or Over (11 shown)—1st and 4th La Vernet Stock Farm on Vernet Queen 8th and Maple Lass 28th; 2d and 3d Harris on Fairview Bonnie 2d and Miss Gay Lad 15th; 5th Potter & Son on Disturbing Fancy; 6th Miller on Ruth; 7th Waldron on Emerald; 8th Sorenson on Dorrine.

Cow 2 Years and Under 3 (6 shown)—1st and 5th La Vernet Stock Farm on Vernet Princess 23d and Vernet Princess 15th; 2d and 3d Harris on Miss Perfection 9th and Miss Repeater 28th; 4th Sorenson on Ruby; 6th Waldron on Miss Bean 2d.

Minnesota Cow 3 Years or Over—1st Potter on Disturbing Fancy; 2d Miller on Ruth; 3d Waldron on Emerald; 4th Sorenson on Dorrine.

Minnesota Cow 2 Years and Under 3 (2 shown)—1st Sorenson on Ruby; 2d Waldron on Miss Bean 2d.

Senior Yearling Heifer (6 shown)—1st Harris on Miss Gay Lad 32d; 2d and 5th La Vernet Stock Farm on Vernet Princess 26th and Primrose; 3d Potter & Son on Lorelie; 4th Sorenson on Isabel; 6th Potter & Son on Fairy.

Junior Yearling Heifer (7 shown)—1st and 2d La Vernet Stock Farm on Vernet Pricess 33d and Vernet Princess 36th; 3d Harris on Miss Gay Lad 37th; 4th Robt. G. Waldron on Erma; 5th and 6th Sorenson on Standard's Lady 21st and Standard's Lady 22d.

Senior Heifer Calf (7 shown)—1st Harris on Miss Repeater 70th; 2d, 4th and 5th La Vernet Stock Farm on Vernet Princess 41st, Vernet Princess 38th and Vernet Princess 42d; 3d Potter on Princess Pearl; 6th Sorenson on Fancy; 7th Miller on Bonnie Belle.

Junior Heifer Calf (6 shown)—1st and 3d La Vernet Stock Farm on Vernet Princess 45th and Vernet Princess 46th; 2d Harris on Miss Repeater 75th; 4th Harris on Miss Repeater 74th; 5th Sorenson on Standard Lass 2d; 6th Potter & Son on Miss Promise.

Senior and Grand Champion Bull—Harris on Bonnie Brae 60th.

Junior Champion Bull—Harris on Gay Lad 40th.

Senior and Grand Champion Cow—La Vernet Stock Farm on Vernet Queen 8th.

Junior Champion Cow—Harris on Miss Gay Lad 32d.

Graded Herd (3 shown)—1st La Vernet Stock Farm on herd headed by Vernet King 4th; 2d Harris on herd headed by Bonnie Brae 60th; 3d Sorenson on herd headed by Standard 13th.

Young Herd (3 shown)—1st Harris; 2d La Vernet Stock Farm; 3d Potter & Son.

Calf Herd (3 shown)—1st Harris; 2d La Vernet Stock Farm; 3d Potter & Son.

Get of Bull (4 shown)—1st Harris on get of Gay Lad 6th; 2d La Vernet Stock Farm on get of Point Comfort 14th; 3d Potter & Son on get of Fairview Prince; 4th Waldron on get of Beaumont Jr.

Produce of Cow (3 shown)—1st La Vernet Stock Farm on produce of Indirect C.; 2d Potter & Son on produce of Winsome Queen; 3d Waldron on produse of Eunice.

ABERDEEN ANGUS.

The Aberdeen Angus show at Minnesota this year was the best Doddie show ever staged at Hamline. The show, of course, was not so large as that at Des Moines, but lacked in spiciness only by the absence of the Escher & Ryan herd. Caldwells and Congdon & Battles clashed again as last week and fought it out for the top places, with Caldwells capturing practically all of the blues and all but one of the purples. Two Iowa exhibitors, two from Minnesota and one from North Dakota furnished the rest of the showing, some of them coming in for an occasional first or second. The tops of the show were the best in the land. Some of the inferior lots were tail enders and it is to be hoped the exhibitors of the poor ones will be somewhat more liberal with the feed cross before again attempting to compete or even lead out against regular Angus Cattle. Mr. John Garden, of Wapello, Iowa, went over most of the classes quickly and found the good ones. Even this master of the science of judging beef cattle had his hard work to do in some of the classes as did Mr. Robbins last week at Des Moines. He studied some over the two-year-old bull class, but tied the blue on Blackcap Bertram over the low-set Knight of Rosemere. Blackcap Bertram later carried away the senior and grand championships, defeating his stable mate, Epistos, the junior champion here and junior and grand champion at Des Moines last week. Pride Pettie, Caldwell's aged cow again forged to the top, winning the blue in a strong class of ten with at least five excellent cows below her, and the purples as senior and grand champion female. Queen of Rosemere 5th, the blue ribbon junior heifer calf from the herd of Congdon & Battles was junior champion female.

The exhibitors: C. D. & E. F. Caldwell, Burlington Junction, Mo.; Congdon & Battles, North Yakima, Wash.; R. W. Frank, Renwick, Iowa; Hartley Stock Farm, Page, N. D.; Aug. Ohrman, Claremont, Minn.; J. F. Roberts, Atlantic, Iowa; John Stevenson, Delhi, Minn.

Judge, John Garden, Wapello, Iowa.

The awards:

Bull 3 Years or Over (5 shown)—1st Caldwell on Blackcap Star; 2d Congdon & Battles, on Barbarian of Rosemere; 3d Frank on Bromo; 4th Ohrmann on Prince Adam.

Bull 2 Years and Under 3 (6 shown)—1st Caldwell on Blackcap Bertram; 2d Congdon & Battles on Knight of Rosemere; 3d Hartley Stock Farm on Ensign of Glencarnock; 4th Roberts on Bullion of Quietdale.

Senior Yearling Bull (5 shown)—1st Caldwell on Blatant; 2d and 3d Congdon & Battles on Prizemore and Blackright; 4th Frank on Blackcap of Edenwold.

Junior Yearling Bull (6 shown)—1st Caldwell on Epistos; 2d and 3d Congdon & Battles on Cherokee and Ericmere 2d; 4th Stevenson on Glen of Campbell Park.

Senior Bull Calf (8 shown)—1st and 4th Roberts on Quo Vadis 5th and Eatoris; 2d Hartley Stock Farm on Best Bomano; 3d Caldwell on Eidart.

Junior Bull Calf (7 shown)—1st and 3d Congdon & Battles on Quality Lad of Rosemere 3d and Blackburr of Rosemere; 2d Caldwell on Unnamed; 4th Roberts on Erra's Lad.

Cow 3 years or Over (10 shown)—1st and 4th Caldwell on Pride Pettie and Esthonia 12th; 2d and 3d Congdon & Battles, on Quissy of Meadow Brook and Pride of Rosemere 5h.

Cow 2 Years and Under 3 (6 shown)—1st Congdon & Battles on Bell's Eclipser; 2d Hartley Stock Farm on Eulotta; 3d Caldwell on Pride of Autumn; 4th Frank on Pride McHenry 130th.

Senior Yearling Heifer (4 shown)—1st Caldwell on Blackbird Velvet; 2d Roberts on Erica Roberts 10th; 3d Frank on Mayetta F.; 4th Congdon & Battles on Blackbird of Rosemere 20th.

Junior Yearling Heifer (10 shown)—1st and 4th Caldwell on Eritus 2d and Blackcap 59th; 2d and 3d Congdon & Battles on Heather of Rosemere 4th and Pride of Rosemere 9th.

Senior Heifer Calf (6 shown)—1st and 2d Caldwell on Erica Eudora and Esthonia 15th; 3d and 4th Hartley Stock Farm on Elint• E. 3d of Page and Black Lassie of Glencarnock.

Junior Heifer Calf (7 shown)—1st Congdon & Battles on Queen of Rosemere 5th; 2d Caldwell on Blackcap Echo 3d; 3d Congdon & Battles on Frida 4th of Meadow Brook; 4th Roberts on Erica Roberts 11th.

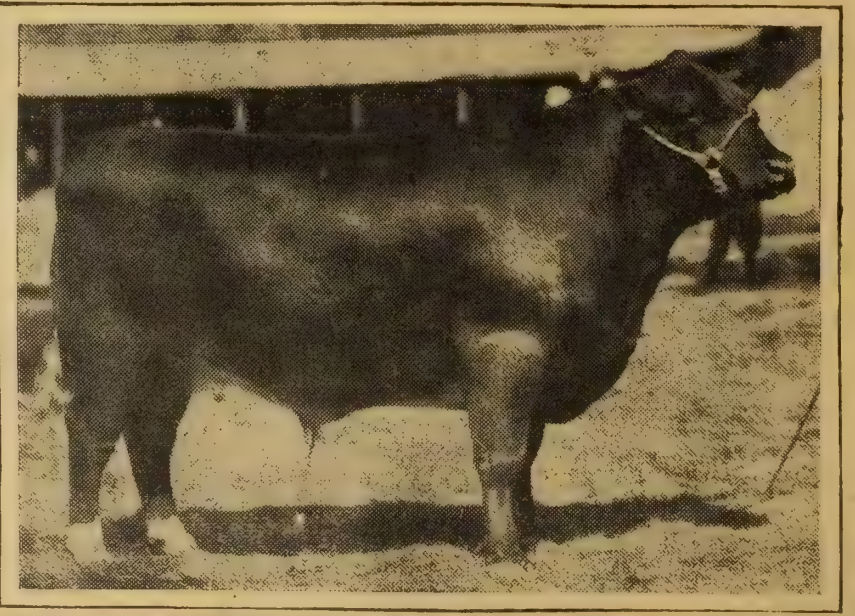
Senior and Grand Champion Bull—Caldwell on Blackcap Bertram.

Senior and Grand Champion Cow—Caldwell on Pride Pettie.

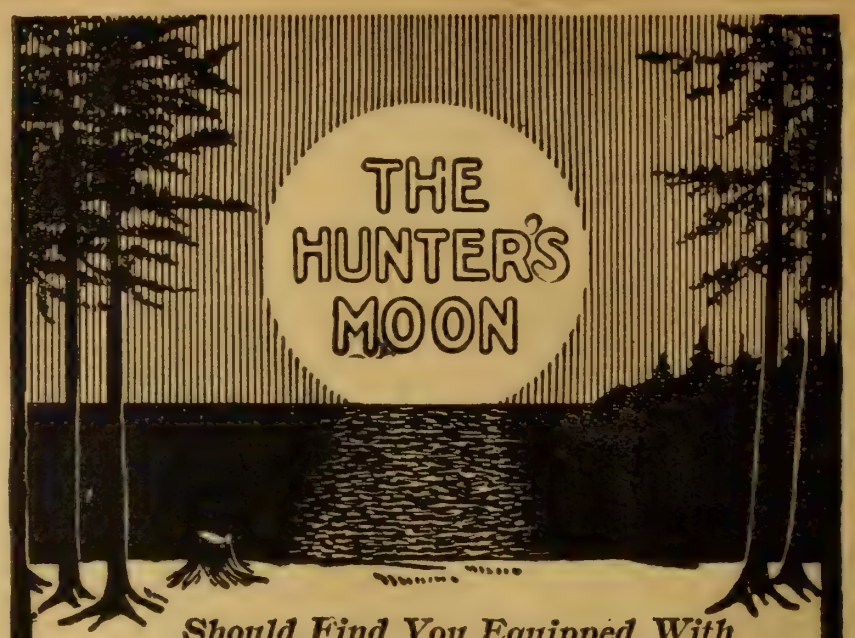
Junior Champion Cow—Congdon & Battles on Queen of Rosemere 5th.

Graded Herd (5 shown)—1st Caldwell on herd headed by Blackcap Bertram; 2d Congdon & Battles on herd headed by Barbarian of Rosemere; 3d Hartley Stock Farm on herd headed by Engine of Glencarnock; 4th Frank on herd headed by Bromo; 5th Ohrmann on herd headed by Prince Adam.

Young Herd (3 shown)—1st Caldwell; 2d Roberts; 3d Frank.



LOYAL OF MEADOW BROOK, FIRST-PRIZE ANGUS STEER, SPAYED OR MARTIN HEIFER AT MINNESOTA FAIR. OWNED BY CONGDON & BATTLES, NORTH YAKIMA, WASH.



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Calf Herd (3 shown)—1st Caldwell; 2d Roberts; 3d Frank.

Get of Bull (6 shown)—1st Caldwell on get of Undulata Blackcap Ito 2d; 2d Congdon & Battles on get of Oakville Quiet Lad; 3d Hartley Stock Farm on get of Earl Eric of Ballindalloch; 4th Ohrmann on get of Black Bishop.

Produce of Cow (4 shown)—1st Caldwell on produce of Erica 15th of Keillor Park; 2d Congdon & Battles on produce of Rita Pride; 3d Frank on produce of Pride's Fancy 2d; 4th Roberts on produce of Ellunda 3d.

GALLOWAYS.

The show of Galloways was small but creditable, the illy fitted ones, so common in many Galloway shows, being absent. Little Mary 2d of L. F. and Carlota of L. F., three-year-old cow and two-year-old heifer shown by Isaac Lincoln, Aberdeen, S. D., were brought out in especially good form, the aged cow being made grand champion female of the show. Mr. John Garden, who judged these classes, found his senior champion bull in Choicemaster Jr. and grand champion bull in Earl Black, a nicely turned senior bull calf.

The exhibitors: H. & G. Croft, Bluff City, Kan.; Isaac Lincoln, Aberdeen, S. D., and O. H. Swigart & Sons, Salisbury, Mo.

Judge, John Garden, Wapello, Iowa.

The awards:

Bull 3 Years or Over (3 shown)—1st Croft on Choicemaster; 2d Lincoln on Emperor of Drumlaurig; 3d Swigart & Sons on Stanley's Othello.

Bull 2 Years and Under 3 (1 shown)—1st Lincoln on Knault of L. F.

Senior Yearling Bull (1 shown)—1st Croft on Mintmaster.

Junior Yearling Bull (2 shown)—1st Lincoln on General; 2d Croft on Hannah's Laddie.

Senior Bull Calf (5 shown)—1st Lincoln on Earl Black; 2d Croft on Jerome D.; 3d Swigart & Sons on Stanley Baron.

Junior Bull Calf (2 shown)—1st Croft on Ralph of Greenbush; 2d Swigart & Sons on Clio's Othello 3d.

Cow 3 Years or Over (3 shown)—1st Lincoln on Little Mary 2d of L. F.; 2d Swigart & Sons on Nellie Melville; 3d Croft on Daisy Dimple.

Cow 2 Years and Under 3 (3 shown)—1st Lincoln on Carlota of L. F.; 2d Swigart & Sons on Othello's Nell; 3d Croft on Carrie S.

Senior Yearling Heifer (3 shown)—1st Croft on Lady 2d of Greenbush; 2d and 3d Lincoln on Meadow Queen and Mandy.

Junior Yearling Heifer (3 shown)—1st Croft on Floss 6th of Greenbush; 2d Swigart & Sons on Clio 3d of Avondale; 3d Lincoln on Little Mary 5th.

Senior Heifer Calf (4 shown)—1st Croft on Evelyn of Greenbush; 2d Swigart & Sons on Pride 16th; 3d and 4th Lincoln on Lady Florence 5th and Fatema 5th.

Junior Heifer Calf (3 shown)—1st Croft on Luella of Greenbush; 2d Swigart & Sons on Lucy 2d of Avondale; 3d Lincoln on Beatrice 6th of L. F.

Senior Champion Bull—Croft on Choicemaster.

Junior Champion Bull—Lincoln on Earl Black.

Senior Champion Cow—Lincoln on Little Mary 2d of L. F.

Junior Champion Cow—Croft on Luella of Greenbush.

Grand Champion Bull—Lincoln on Earl Black.

Grand Champion Female—Lincoln on Little Mary 2d of L. F.

Graded Herd (3 shown)—1st Lincoln on herd led by Knault of L. F.; 2d Croft on herd led by Choicemaster; 3d Swigart & Sons on herd led by Stanley's Othello.

Young Herd (2 shown)—1st Croft; 2d Lincoln.

Calf Herd (3 shown)—1st Croft; 2d Lincoln; 3d Swigart & Sons.

Get of Bull (3 shown)—1st Lincoln on get of Secretary of Crosslee; 2d Croft on get of Choicemaster; 3d Swigart & Sons on get of Othello of Avondale.

Produce of Cow (3 shown)—1st Lincoln on produce of Lockstay Little Mary; 2d Croft on produce of Floss 6th; 3d Swigart & Sons on produce of Clio 2d of Avondale.

RED POLLS.

The showing of Red Polls at Hamline was not so large as that made at Des Moines last week and on the whole places were not quite so strongly contested. However, the quality of the show was high, two of the strongest herds at Iowa taking practically all the blues and reds here. Prof. W. F. Handschin, of Urbana, Ill., upset some of the dope of last week. In making his awards he strove to pick out the working animal that carried quality, smoothness and fleshing tendencies. The blood of Teddy's Best was again much in evidence throughout the showing. Teddy's Best had no great difficulty in carrying away premier bull honors, contending for final honors with Leslie, a low-set, rather thick senior yearling bull from the Hill herd. In the aged cow class Jean Duluth Brunhill defeated Constant, the wearer of the blue at Iowa. This decision would have been popular at Des Moines last week. An upset also occurred in the two-year-old heifer class, Jean Duluth Purity getting the blue over Caroline, who drew the blue last week. Jean Duluth Brunhill was made senior champion female, but was defeated for premier honors by the senior calf, Brownie, which Professor Handschin designated as "some calf." Jean Duluth had first-prize aged herd, but Hill was first in all other group classes.

The exhibitors: J. H. Aultfather, Austin, Minn.; W. S. Hill, Alexandria, S. D.; Jean Duluth Farm, Duluth, Minn.

Judge, W. F. Handschin, Urbana, Ill.

The awards:

Bull 3 years or over (4 shown)—1st Jean Duluth Farm on Teddy's Best; 2d Hill on Teddy's Perfection; 3d and 4th Aultfather on Calender and Cremo Boy.

Bull 2 Years and Under 3 (2 shown)—1st Hill on Curtis; 2d Jean Duluth Farm on Earl.

Senior Yearling Bull (2 shown)—1st Hill on Leslie; 2d Jean Duluth Farm on Proctor Knot 2d.

Junior Yearling Bull (3 shown)—1st Hill on Bernie; 2d Jean Duluth Farm on Proctor Knot 4th; 3d Aultfather on Improver.

Senior Bull Calf (3 shown)—1st Jean Duluth Farm on Teddy's Panama; 2d Hill on Raber; 3d Aultfather on Le Roy Boy.

Junior Bull Calf (3 shown)—1st Aultfather on Crown Prince; 2d Hill on Red Joe; 3d Jean Duluth Farm on Pilot Lee.

Minnesota Bull 3 Years or Over (3 shown)—1st Jean Duluth on Teddy's Best; 2d and 3d Aultfather on Calender and Cremo Boy.

Minnesota Bull 2 Years and Under 3 (1 shown)—1st Jean Duluth Farm on Earl.

Minnesota Senior Yearling Bull (1 shown)—1st Jean Duluth Farm on Proctor Knot 2d.

Minnesota Junior Yearling Bull (2 shown)—1st Jean Duluth Farm on Proctor Knot 4th; 2d Aultfather on Improver.

Minnesota Senior Bull Calf (2 shown)—1st Jean Duluth Farm on Teddy's Panama; 2d Aultfather on Le Roy Boy.

Minnesota Junior Bull Calf (2 shown)—1st Aultfather on Crown Prince; 2d Jean Duluth Farm on Pilot Lee.

Cow 3 Years or Over (6 shown)—1st and 3d Jean Duluth Farm on Jean Duluth Brunhill and Jean Duluth Lady Watts; 2d and 5th Hill on Constant and Pearl; 4th Aultfather on Emerald.

Cow 2 Years and Under 3 (4 shown)—1st and 3d Jean Duluth Farm on Jean Duluth Purity and Ringlet; 2d Hill on Caroline; 4th Aultfather on Cherrie.

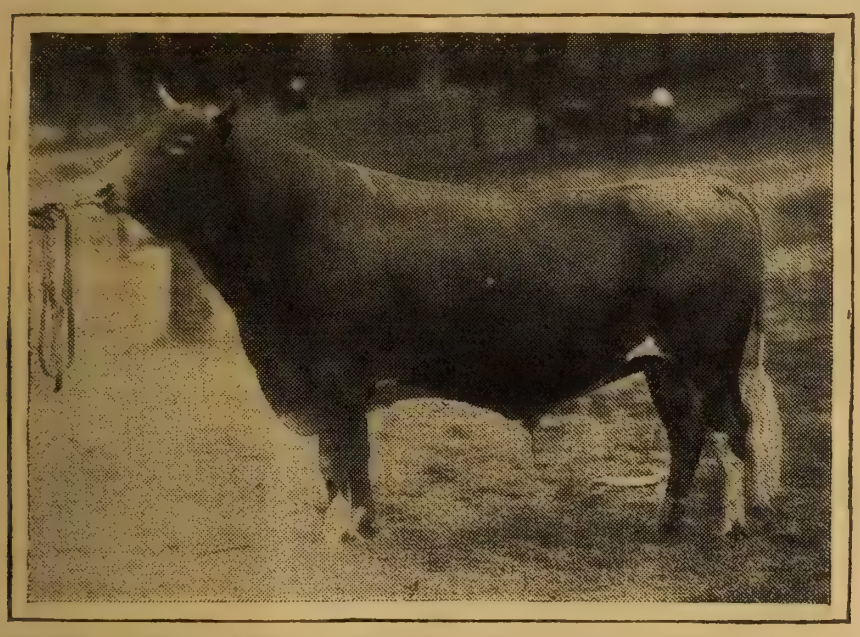
Senior Yearling Heifer (3 shown)—1st Hill on Fern; 2d Jean Duluth Farm on Liza Again; 3d Aultfather on Damsel.

Junior Yearling Heifer (5 shown)—1st Hill on Niobe; 2d and 3d Jean Duluth Farm on Jean Duluth Dimple and Jean Duluth Winona; 4th Aultfather on Milker.

Senior Heifer Calf (6 shown)—1st and 2d Hill on Brownie and Penelope; 3d Jean Duluth Farm on Teddy's Dorothy; 4th Aultfather on Dorcas.

Junior Heifer Calf (4 shown)—1st Hill on Clover; 2d and 3d Jean Duluth Farm on Jean Duluth Bamby and Jean Duluth Bonny Zita; 4th Aultfather on Carnation.

Minnesota Cow 3 Years or Over (3 shown)—1st and 2d Jean Duluth Farm on Jean Duluth Brunhill and Jean Duluth Lady Watts; 3d Aultfather on Emerald.



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MORE POWER

Minnesota Cow 2 Years and Under 3 (1 shown)—1st Aultfather on Cherrie.

Minnesota Senior Yearling Heifer (1 shown)—1st Aultfather on Damsel.

Minnesota Junior Yearling Heifer (3 shown)—1st and 2d Jean Duluth Farm on Jean Duluth Dimple and Jean Duluth Winona; 3d Aultfather on Milker.

Minnesota Senior Heifer Calf (3 shown)—1st Jean Duluth Farm on Teddy's Dorothy; 2d and 3d Aultfather on Dorcas and Duchess 2d.

Minnesota Junior Heifer Calf (3 shown)—1st and 2d Jean Duluth Farm on Jean Duluth Bamby and Jean Duluth Bonny Zita; 3d Aultfather on Carnation.

Senior Champion Bull—Jean Duluth Farm on Teddy's Best.

Junior Champion Bull—Hill on Leslie.

Grand Champion Bull—Jean Duluth Farm on Teddy's Best.

Senior Champion Cow—Jean Duluth Farm on Jean Duluth Brunhill.

Junior and Grand Champion Female—Hill on Brownie.

Graded Herd (3 shown)—1st Jean Duluth Farm on herd headed by Teddy's Best; 2d Hill on herd headed by Teddy's Perfection; 3d Aultfather on herd headed by Calender.

Young Herd (3 shown)—1st Hill; 2d Jean Duluth Farm; 3d Aultfather.

Calf Herd (3 shown)—1st Hill; 2d Jean Duluth Farm; 3d Aultfather.

Get of Bull (3 shown)—1st Hill on get of Meddler; 2d Jean Duluth Farm on get of Knot; 3d Aultfather on get of [illegible].

[illegible] shown)—1st Hill on [illegible]; 2d Jean Duluth [illegible] Jean Duluth Betta Longfield; 4th Culver on Buffalo Parthenia Skylark.

Cow 3 Years and Under 4 (3 shown)—1st Mayo on Mayowood Fernwood De Kol; 2d Baird Bros. on Nockdair Segis Prairie Flower; 3d Jeans on North Star Canary Beets.

Cow 2 Years and Under 3 (7 shown)—1st and 2d Baird Bros. on Nockdair Segis Netherland Prize and Nockdair Segis De Kol Violet; 3d Culver on Pride Merelle of Hollanden; 4th and 5th Vander Schaaf on Queen of Enterprise Stock Farm and Korndyke Enterprise De Kol Segis.

Senior Yearling Heifer, Dry (10 shown)—1st Mayo on Barnes Colantha Pietertje; 2d and 4th Culver on Miss Clissie Ormsby Rue and Far Oaks Royal Lady Ormsby; 3d Iowana Farms on Iowana Pauline; 5th Baird Bros. on Nockdair Segis Longfield Rose.

Junior Yearling Heifer (8 shown)—1st Culver on Far Oaks Violet Ormsby; 2d Iowana Farms on Iowana Fayne Julia; 3d Mayo on Canary Vanelle; 4th and 5th Baird Bros. on Nockdair Segis Korndyke Lottie and Nockdair Segis Valentine.

Senior Heifer Calf (14 shown)—1st Mayo on Johanna Ondine Soo; 2d Culver on Far Oaks Skylark Ormsby; 3d Jeans on Willow Ridge Pietertje Ormsby; 4th Iowana Farms on Iowana Prima Donna 2d; 5th Baird Bros on Nockdair Segis Goldbron.

Junior Heifer Calf (8 shown)—1st Culver on Nockdair Segis Cornucopia; 2d Jeans on Willow Ridge Mercedes Ormsby; 3d Baird Bros. on Nockdair Segis Gelsche; 4th Iowana Farms on Jessie Oak Fobes Mooie; 5th Mayo on Johanna Woodcrest Ruth.

Senior and Grand Champion Bull—Iowana Farms on Colantha Dutchland Snowdrop.

Junior Champion Bull—Baird Bros. on Nockdair King Segis Perfection.

Senior and Grand Champion Cow—Mayo on Mayowood Fernwood De Kol.

Junior Champion Cow—Mayo on Johanna Ondine Soo.

Graded Herd (4 shown)—1st Baird Bros. on herd headed by Bairdland Segis Sir Prize; 2d Culver on herd headed by Sir Ormsby Korndyke Mechthilde; 3d Jeans on herd headed by Willow Ridge Korndyke Skylark; 4th Van der Schaaf on herd headed by North Star Cornucopia Sir Beets.

Young Herd (5 shown)—1st Jeans; 2d Culver; 3d Baird Bros.; 4th Van der Schaaf; 5th Iowana Farms.

Calf Herd (5 shown)—1st Baird Bros.; 2d Jeans; 3d Culver; 4th Van der Schaaf; 5th Iowana Farms.

Get of Bull (5 shown)—1st Baird Bros. on get of Bairdland Segis Sir Prize; 2d Jeans on get of Sir Korndyke Heng De Kol 40th; 3d Culver on get of Sir Ormsby Korndyke Mechthilde; 4th Iowana Farms on get of Johanna Fayne; 5th Van der Schaaf on get of Sir Gelsche Walker Segis 8th.

Produce of Cow (5 shown)—1st Culver on produce of Fidgety Clissie 2d Rue; 2d Baird Bros. on produce of Rose Barbetta Longfield; 3d Iowana Farms on produce of Star Watson; 4th Jeans on produce of Sethje Uilkje Burke; 5th Van der Schaaf on produce of Queen of the Canarys De Kol.

Dairy Cattle.

HOLSTEINS.

The Gopher State has at least five of the best black and white herds in the country, and only a few short years back lovers of this most popular breed of real milk producers were wont to feast their eyes on real examples of the breeders' art. The "big men" of Minnesota were not out this year and the Holstein show lost much of its educational value because of their absence. It may be philanthropic for men like Moscrip, Irwin and Schroeder to stay at home and give the other fellow a chance, but the Minnesota State Fair is too great an exposition of the state's resources to justify the carrying out of this policy, and people want to and should be given the opportunity to see the best. Undoubtedly the big ones will be out next year. The Holstein show lacked its former greatness, both in numbers and in the character, quality and uniformity of exhibits. Mr. W. S. Moscrip, of Lake Elmo, Minnesota, made the awards and went through the classes with the precision and alertness of a past master of the art. In many of the classes it was a problem of awarding the least desirable animal. However, some excellent animals were brought out. Colantha Dutchland Snowdrop, the two-year-old bull shown by Iowana Farms, is a great bull—smooth, straight, with a great deal of Holstein character. He won easily in class and was senior and grand champion bull, defeating the junior champion bull, Nockdair King Segis Perfection, the junior yearling shown by Baird Bros. for final honors. The three-year-old cow class brought out a fine typy cow from the Dr. Mayo herd in Mayowood Fernwood De Kol. She is straight along the back, wide at the rear and shows lots of temperament; but she was too far advanced in milk to show as good an udder as possible. She defeated the senior heifer calf, Johanna Ondine Soo, an excellent heifer from the same herd, for final cow honors. Boost for a big Holstein show at Hamline next year.

The exhibitors: Baird Bros., Waukesha, Wis.; V. S. Culver, Stillwater, Minn.; H. L. Elliott, Hopkins, Minn.; G. G. Hartley, Floodwood, Minn.; Iowana Farms, Davenport, Iowa; Wm. Jeans, Withrow, Minn.; Kelly Bros., St. Paul, Minn.; Dr. C. H. Mayo, Rochester, Minn.; Dr. David Roberts, Waukesha, Wis., and Chas. Vander Schaaf, Sparta, Wis.

Judge, W. S. Moscrip, Lake Elmo, Minn.

The awards:

Bull 3 Years or Over (3 shown)—1st Mayo on Johanna Ondine Grahamholm Lad; 2d Culver on Sir Ormsby Korndyke Mechthilde; 3d Baird Bros. on Bairland Segis Sir Prize.

Bull 2 Years and Under 3 (6 shown)—1st and 3d Iowana Farms on Colantha Dutchland Snowdrop and Iowana De Cola Fayne; 2d Vander Schaaf on North Star Cornucopia Sir Beets; 4th and 5th Jeans on Willow Ridge Korndyke Skylark and King Pietertje Ormsby Korndyke.

Senior Yearling Bull (2 shown)—1st Iowana Farms on Iowana Mercedes Homestead; 2d Jeans on King Korndyke Colantha De Kol.

Junior Yearling Bull (2 shown)—1st Baird Bros. on Nockdair King Segis Perfection; 2d Jeans on Willow Ridge Korndyke Veeman.

Senior Bull Calf (12 shown)—1st Roberts on Roberts' Abbekerk Pontiac; 2d and 4th Baird Bros. on Farsee Sir Segis Hengerveld and Nockdair King Pontiac Segis; 3d Mayo on Mercedes De Kol Grahamholm Lad; 5th Jeans on Willow Ridge Skylark.

Junior Bull Calf (9 shown)—1st and 2d Baird Bros. on Nockdair Segis Fobes Boy and Nockdair Segis George; 3d Hartley on Count Paul Segis Pontiac; 4th Culver on Far Oaks Sir Ormsby Pauline; 5th Jeans on Willow Ridge Skylark Burke.

Cow 4 Years or Over (6 shown)—1st and 5th Vander Schaaf on Princess Inka Canary Dido and Queen of the Canary's De Kol; 2d Jeans on Lulu Pietertje Ormsby; 3d Baird Bros., on Rose Barbetta Longfield; 4th Culver on Buffalo Parthenia Skylark.

Cow 3 Years and Under 4 (3 shown)—1st Mayo on Mayowood Fernwood De Kol; 2d Baird Bros. on Nockdair Segis Prairie Flower; 3d Jeans on North Star Canary Beets.

Cow 2 Years and Under 3 (7 shown)—1st and 2d Baird Bros. on Nockdair Segis Netherland Prize and Nockdair Segis De Kol Violet; 3d Culver on Pride Merelle of Hollanden; 4th and 5th Vander Schaaf on Queen of Enterprise Stock Farm and Korndyke Enterprise De Kol Segis.

Senior Yearling Heifer, Dry (10 shown)—1st Mayo on Barnes Colantha Pietertje; 2d and 4th Culver on Miss Clissie Ormsby Rue and Far Oaks Royal Lady Ormsby; 3d Iowana Farms on Iowana Pauline; 5th Baird Bros. on Nockdair Segis Longfield Rose.

Junior Yearling Heifer (8 shown)—1st Culver on Far Oaks Violet Ormsby; 2d Iowana Farms on Iowana Fayne Julia; 3d Mayo on Canary Vanelle; 4th and 5th Baird Bros. on Nockdair Segis Korndyke Lottie and Nockdair Segis Valentine.

Senior Heifer Calf (14 shown)—1st Mayo on Johanna Ondine Soo; 2d Culver on Far Oaks Skylark Ormsby; 3d Jeans on Willow Ridge Pietertje Ormsby; 4th Iowana Farms on Iowana Prima Donna 2d; 5th Baird Bros on Nockdair Segis Goldbron.

Junior Heifer Calf (8 shown)—1st Culver on Nockdair Segis Cornucopia; 2d Jeans on Willow Ridge Mercedes Ormsby; 3d Baird Bros. on Nockdair Segis Gelsche; 4th Iowana Farms on Jessie Oak Fobes Mooie; 5th Mayo on Johanna Woodcrest Ruth.

Senior and Grand Champion Bull—Iowana Farms on Colantha Dutchland Snowdrop.

Junior Champion Bull—Baird Bros. on Nockdair King Segis Perfection.

Senior and Grand Champion Cow—Mayo on Mayowood Fernwood De Kol.

Junior Champion Cow—Mayo on Johanna Ondine Soo.

Graded Herd (4 shown)—1st Baird Bros. on herd headed by Bairdland Segis Sir Prize; 2d Culver on herd headed by Sir Ormsby Korndyke Mechthilde; 3d Jeans on herd headed by Willow Ridge Korndyke Skylark; 4th Van der Schaaf on herd headed by North Star Cornucopia Sir Beets.

Young Herd (5 shown)—1st Jeans; 2d Culver; 3d Baird Bros.; 4th Van der Schaaf; 5th Iowana Farms.

Calf Herd (5 shown)—1st Baird Bros.; 2d Jeans; 3d Culver; 4th Van der Schaaf; 5th Iowana Farms.

Get of Bull (5 shown)—1st Baird Bros. on get of Bairdland Segis Sir Prize; 2d Jeans on get of Sir Korndyke Heng De Kol 40th; 3d Culver on get of Sir Ormsby Korndyke Mechthilde; 4th Iowana Farms on get of Johanna Fayne; 5th Van der Schaaf on get of Sir Gelsche Walker Segis 8th.

Produce of Cow (5 shown)—1st Culver on produce of Fidgety Clissie 2d Rue; 2d Baird Bros. on produce of Rose Barbetta Longfield; 3d Iowana Farms on produce of Star Watson; 4th Jeans on produce of Sethje Uilkje Burke; 5th Van der Schaaf on produce of Queen of the Canarys De Kol.

JERSEYS.

Mr. Hugh Van Pelt, who placed the awards in Jersey classes, was well pleased with the showing of his favorite breed at Hamline. It was the best-balanced show among the dairy breeds, and was especially remarkable on account of the absence of poor ones. Lots of quality marked the show, and, as a whole, the cattle were in good shape. Had all the cattle been properly fitted, the show would have been strong. As it was, the island cattle made one of the best ever at Minnesota; and one of the strongest things in its favor was that it was largely a home state show, the bulk of the money staying with Gopher exhibitors. A feature was the ten cups offered as special prizes by business concerns of the twin cities.

The senior champion bull, Gamboge's Vellum's Majesty, came from the herd of M. D. Munn. He is a bull good enough to win in almost any Jersey company and had no difficulty in capturing the grand champion ribbon. Munn's junior yearling, Medora's Raleigh, was made junior champion bull. Munn won another purple on the aged cow, Combination Speckled Hip, a typy, deep-bodied cow. She was defeated for the premier ribbon by Brackett's junior yearling heifer, Mon Plaiser's Goldie 2d, the junior and grand champion heifer which Mr. Van Pelt considers a wonder. She is straight in all her lines and shows an abundance of dairy quality, character, capacity and breed type.

The exhibitors: Mrs. J. D. Anderson, Robbinsdale, Minn.; C. R. Brackett, Long Lake, Minn.; W. S. Dixon, Brandon, Wis.; Elmhurst Farm, Wayzata, Minn.; J. W. Love, Wayzata, Minn.; M. D. Munn, Forest Lake, Minn.; C. J. Morck; Kenyon, Minn.; M. E. Neprud, Westby, Wis.; A. M. Peterson, Coleraine, Minn.; F. D. Underwood, Wauwatosa, Wis., and Mrs. A. H. Williams, St. Paul, Minn.

Judge, H. G. Van Pelt, Waterloo, Iowa.

The awards:

Bull 3 Years or Over (5 shown)—1st and 4th Munn on Gamboge's Vellum's Majesty and Mermaid's Jersey King; 2d Elmhurst Farm on Viola's Elmhurst Jolly; 3d Underwood on Noble's Fawn Prince; 5th Neprud on Pogis of Mapleshade.

Bull 2 Years and Under 3 (1 shown)—1st Morck on Noble of New Leland.

Senior Yearling Bull (7 shown)—1st and 3d Munn on Viola's Combination Prince and Castor's Golden Jolly; 2d and 5th Love on Jolly's Eminent and Queen's Combination Lad; 4th Dixon on Oxford Ixia Majesty.

Junior Yearling Bull (7 shown)—1st Munn on Medora's Raleigh; 2d Love on Combination Majesty; 3d Underwood on Frederick's Knight; 4th Dixon on Cupid's Oxford Majesty; 5th Brackett on Carola's Noble Fox.

Senior Bull Calf (5 shown)—1st Underwood on Frederick's Jim Conners; 2d Dixon on Gauntlet's Oxford Majesty; 3d Brackett on Plymouth's Elmhurst Jolly; 4th Munn on Speckled Hips You'll Do; 5th Love on Dona's Cupid.

Junior Bull Calf (10 shown)—1st and 4th Brackett on Rose's Elmhurst Jolly and unnamed; 2d Dixon on Oxford King Togo; 3d Underwood on Frederick's Lord of Few Acres; 5th Elmhurst Farm on Combination Oxford Majesty.

Cow 4 Years or Over (3 shown)—1st Munn on Combination Speckled Hip; 2d Neprud on Golden King's Maid Fern; 3d and 4th Elmhurst Farm on Tucker's Sophia and Pansy's Emigrant Maid; 5th Underwood on Sultan's Emily.

Cow 3 Years and Under 4 (1 shown)—1st Underwood on Belvidere's Fairy.

Cow 2 Years and Under 3 (5 shown)—1st and 4th Underwood on Noble's Lady Halene and Iceland's Lady Eleanor; 2d Dixon on Jolly's Oxford Buttermilk; 3d Elmhurst Farm on Viola's Plus You'll Do; 5th Neprud on Fern's Royal Bess.

Senior Yearling Heifer, Dry (5 shown)—1st and 5th Underwood on Lady Bashua and Lady Dunlop; 2d Dixon on Majesty's Oxford Queenie; 3d Love on Cupid's Belle Forfarshire; 4th Elmhurst Farm on Sweet Myrtle 3d.

Junior Yearling Heifer (5 shown)—1st Brackett on Mon Plaiser's Goldie 2d; 2d and 4th Munn on Fern's Rioter's Queen and Burneb's Freida; 3d Dixon on Oxford Queenie Princess; 5th Neprud on Kitty May King.

Senior Heifer Calf (11 shown)—1st and 5th Munn on Golden Fern's Triumph and Jersey's King Maid; 2d and 3d Dixon on Oxford Majesty Maid and Double Oxford Queenie; 4th Underwood on Frederick's Lady Margaret.

Junior Heifer Calf (10 shown)—1st Dixon on Majesty Oxford May; 2d Neprud on Fern's Prudy Pogis; 3d Elmhurst Farm on Jolly Easter Belle Ona; 4th Underwood on Frederick's Lady Marjorie; 5th Love on Cupid's Countess.

Senior and Grand Champion Bull—Munn on Gamboge's Vellum's Majesty.

Junior Champion Bull—Munn on Medora's Raleigh.

Senior Champion Cow—Munn on Combination Speckled Hip.

Junior and Grand Champion Cow—Brackett on Mon Plaiser's Goldie 2d.

Graded Herd (4 shown)—1st Munn on herd headed by Gamboge's Vellum's Majesty; 2d Underwood on herd headed by Noble's Fawn Prince; 3d Elmhurst Farm on herd headed by Viola's Elmhurst Jolly; 4th Neprud on herd headed by Pogis of Mapleshade.

Young Herd (1 shown)—1st Dixon.

Calf Herd (3 shown)—1st Dixon; 2d Elmhurst Farm; 3d Neprud.

Get of Bull (3 shown)—1st Dixon; 2d Underwood; 3d Elmhurst Farm; 4th Neprud; 5th Love.

Produce of Cow (5 shown)—1st Brackett; 2d Dixon; 3d Underwood.

GUERNSEYS.

From many standpoints the Guernsey showing at Hamline was a disappointment. There were no extraordinarily sensational animals brought out according to Mr. Chas. L. Hill, who made the awards. At the tops there were some excellent animals, but there was too much difference between the two ends of almost every string shown. Some real culls were shown. They were not even fair county fair exhibits and were no credit to the breed, the exhibitors or the fair at Hamline. From the two-year-old heifer class two exhibits were rejected by Mr. Hill as not being anywhere near fit to show as Guernseys, and there were others shown that he wished taken out.

As usual, the showing made by W. W. Marsh was strong. All purple ribbons except that for junior champion cow, were won by Marsh—Hayes Cherub II, his aged bull, being made senior and grand champion bull, and his senior bull calf, Flora's Memento, capturing the purple for junior honors. His aged cow, Hayes Wena IV, a smooth, strong-bodied cow, with excellent head and neck, and carrying a well-balanced udder, won senior and grand champion female honors. Hartley won junior champion female honors on the junior heifer calf, Bella's Gold Lassie.

The exhibitors: Jens Arnbul, Albert Lea, Minn.; Albert W. Bragg, Albert Lea, Minn.; G. G. Hartley, Floodwood, Minn.; Jean Duluth Farm, Duluth, Minn.; G. H. Lammers, Le Sueur, Minn.; W. W. Marsh, Waterloo, Iowa; J. Cyrus Ott, Albert Lea, Minn.; Robt. L. Ott, Albert Lea, Minn.; Geo. C. Stone, Twig, Minn.; M. S. & C. A. Skaar, Hayward, Minn.; Chris Skaar, Hayward, Minn.; Victor Stiehl, Albert Lea, Minn.; W. R. Sweet, Albert Lea, Minn., and D. D. Tenney, Crystal Bay, Minn.

Judge, Chas. L. Hill, Rosendale, Wis.

The awards:

Bull 3 Years or Over (5 shown)—1st Marsh on Hayes Cherub II.; 2d Hartley on Gold Lassie's Julian; 3d Tenney on Blue Belle Sequel; 4th Bragg on Glenwood Sequel; 5th Lammers on Sir Henry Hubert.

Bull 2 Years and Under 3 (5 shown)—1st Marsh on Cherry's Memento of Iowa; 2d Jean Duluth Farm on Starlight's Excelsior of Jean Duluth; 3d Tenney on Duke Stanford's Glenwood of Shorewood; 4th Stone on Masher Rockingham; 5th Lammers on Royal Yeksa.

Senior Yearling Bull (1 shown)—1st Tenney on Charmante's May King.

Junior Yearling Bull (1 shown)—1st Jean Duluth Farm on May Rose Yeksa Starlight.

Senior Bull Calf (7 shown)—1st and 4th Marsh on Flora's Memento and Beauty Mar; 2d Jean Duluth Farm on Marathon Rose King; 3d M. S. & C. A. Skaar on Maisie's Marvel; 5th Stone on Caribou Rockingham.

Junior Bull Calf (5 shown)—1st Jean Duluth Farm on Lady Gree's May King of J. D.; 2d Marsh on Millie's Lord Mar; 3d Tenney on Sequel's Duke of Shorewood; 4th Ott on Eclipser of Wildwood; 5th Stone on Caribou Strong Anchor.

Cow 4 Years or Over (9 shown)—1st, 3d and 5th Marsh on Hayes Wena IV. Hayes Snowdrop III and Rose des Houards 52d; 2d and 4th Hartley on Bella II du Grand Fort and La Noce of Riverside Farm.

Cow 3 Years and Under 4 (4 shown)—1st and 2d Marsh on Hayes Express IX and Hayes Snowdrop 6th; 3d Stone on Neronic; 4th Jean Du Luth Farm on Jean Du Luth Phyllis.

Cow 2 Years and Under 3 (2 shown)—1st Marsh on Hayes Mabel; 2d Jean Du Luth on Jean Du Luth Coronet.

Senior Yearling Heifer dry (10 shown)—1st Sweet on Bony of Urban View; 2d and 5th Marsh on Cherub's Rose of the Pine and Belle of Prairie; 3d Jean Du Luth Farm on William's May Rose of Jean Du Luth; 4th Hartley on Island Farm's Home Lassie.

Junior Yearling Heifer (9 shown)—1st and 3d Marsh on Cardun of the Prairie and Cherub's Deanie of the Prairie; 2d Jean Du Luth Farm on Lysette's May Rose; 4th Tenny on Sequel's Deanie; 5th Hartley on Golden Chene Starlight.

Senior Heifer Calf (12 shown)—1st Jean Du Luth Farm on Gree's May Rose; 2d, 3d and 4th Marsh on Cherub's Lily La Pine, Cherub's Fluerie Mar and Memento's Snowdrop; 5th Stone on Caribou Berta.

Junior Heifer Calf (8 shown)—1st Hartley on Bella's Gold Lassie; 2d and 3d Marsh on Hayes Moss Rose and Hayes Golden Cherry 15th; 4th Jean Du Luth Farm on Jean Du Luth Roselight; 5th Stone on C Gold Pail.

Senior and Grand Champion Bull—1st Marsh on Hayes Cherub II.

Junior Champion Bull—Marsh on Flora's Memento.

Senior and Grand Champion Cow—Marsh on Hayes Wena IV.

Junior Champion Cow—Hartley on Bella's Gold Lassie.

Graded Herd (3 shown)—1st Marsh on herd headed by Hayes Cherub II; 2d Jean Du Luth Farm on herd headed by Starlight's Excelsior of Jean Du Luth; 3d Lammers on herd headed by Sir Henry Hubert.

Young Herd (3 shown)—1st Marsh; 2d Jean Du Luth; 3d Hartley.

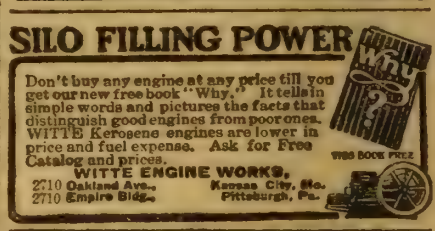
Calf Herd (3 shown)—1st Marsh; 2d Jean Du Luth and 3d Hartley.

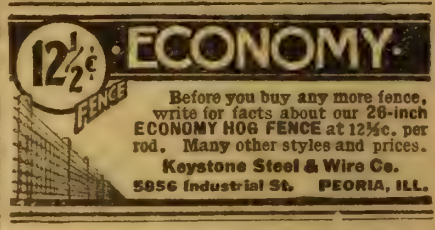
Get of Bull (4 shown)—1st Marsh on get of Hayes Cherub II; 2d Jean Du Luth on get May King of Linda Vista; 3d Tenney on get of Minnette's Sequel; 4th Hartley on get of Gold Lassie's Julian.

Produce of Cow (5 shown)—1st Marsh on produce of Hayes Golden Cherry II; 2d Hartley on produce of Bella II du Grand Fort; 3d Jean Du Luth on produce of Coquette of Haddon; 4th Tenney on produce of Duchess of Chateau a' Ietcoq; and 5th Skaar on produce of Lassie Baby.

AYRSHIRES.

The Scotch dairy breed made a strong showing at Hamline, seventy head being led before Mr. W. S. Moscrip, who passed judgment. The herd from the J. J. Hill Estate made a strong showing, as did also the herds of Ferndell Farms and Dr. David Roberts, of Wisconsin. In the aged bull class the Hill bull, Duchrae Success, a deep, strong, level bull with an abundance of Ayrshire type and character, had no difficulty in carrying away the blue. He later drew the purples for senior and grand champion bull honors of the show. Junior champion bull honors went to Roberts' Pride Cavalier, a senior bull calf shown by Roberts. The aged cow class was strong and brought out some good females. From this class came Barboigh Kate, shown by the Hill Estate. She is a well-lined cow with an abundance of tempera-





ment, deep, with a good mammary system, and carrying a good udder. Premier female honors were quite easily hers. Junior champion honors fell to Ferndell Farms on the junior yearling heifer, Ferndell's Felicity. The 1916 show of Ayrshires may be put down as one of the best ever at Minnesota.

Junior Yearling Heifer (8 shown)—1st Ferndell Farms on Ferndell's Felicity; 2d Roberts on Roberta Cavalier Belle; Hill Estate on Arrahwana of N. Oaks.

The exhibitors: Ferndell Farms, Ladysmith, Wis.; J. J. Hill Est., Gladstone, Minn.; R. E. Lynch, Zimmerman, Minn.; Dr. David Roberts, Waukesha, Wis.; Summit Park Farm, Wayzata, Minn; John F. Wilcox, Excelsior, Minn.

Judge, W. S. Moscript, Lake Elmo, Minn.

The awards:

Bull 3 Years or Over (4 shown)—1st Hill Est. on Duchrae Success; 2d Roberts on Roberts' Cavalier; 3d Ferndell Farms on Victor of Ladysmith; 4th Summit Park Farm on Oldhall Spicey John.

Bull 2 Years and Under 3 (2 shown)—1st Ferndell Farms on Ferndell Victor; 2d Roberts on Robert Fairy Duke.

Senior Yearling Bull (4 shown)—1st Hill Est. on North Oak Marshall; 2d Roberts on Roberts of Waukesha; 3d Ferndell's Lessnessock Gem.

Junior Yearling Bull (3 shown)—1st Ferndell Farms on Ferndell's Anticipation; 2d Roberts on Roberts of Hamline; 3d Lynch on Highland of Old Orchard.

Senior Bull Calf (4 shown)—1st Roberts on Roberts' Pride Cavalier; 2d and 3d Ferndell Farms on Ferndell's Credit and Ferndell's Trust; 4th Summit Park Farm on Oldhall White John.

Junior Bull Calf (9 shown)—1st Hill Est. on Royal Beau of North Oaks; 2d and 3d Ferndell Farms on Ferndell's Arrogance and Ferndell's Loyalty; 4th Roberts on Roberts' of Dousman; 5th and 6th Wilcox.

Minnesota Bull 3 Years or Over (2 shown)—1st Hill Est. on Duchrae Success; 2d Summit Park Farm on Oldhall Spicey John.

Minnesota Senior Yearling Bull (1 shown)—1st Hill Est. on North Oaks Marshall.

Minnesota Senior Bull Calf (1 shown)—1st Summit Park Farm on Oldhall White John.

Minnesota Junior Bull Calf—1st Hill Est. on Royal Beau of North Oaks; 2d Wilcox on Unnamed.

Cow 4 Years or Over (9 shown)—1st and 4th Hill Est. on Barboigh Kate and Lauriston Eileen; 2d Roberts on Value's Pride of Oak Valley; 3d Ferndell Farms on May of Hillcroft.

Cow 3 Years and Under 4 (2 shown)—1st and 3d Roberts on Belle Roberta and Queen Roberta.

Cow 2 Years and Under 3 (7 shown)—1st Ferndell Farms on Silver Pet of Ferndell; 2d and 4th Hill Est. on Howie's Beauty and Della's Dream of North Oaks; 3d Summit Park Farm on Lily Luce of Summit Park; 5th Wilcox on Jean of Old Orchard.

Senior Yearling Heifer, Dry (6 shown)—1st and 5th Roberts on Roberta Value's Pride Cavalier and Roberta of Hartland; 2d Hill Est. on Agnes of North Oaks; 3d and 4th Ferndell Farms on Snow Flake of Ferndell and Pearl of Ferndell.

Minnesota Cow 4 Years or Over—1st and 2d Hill Est. on Barboigh Kate and Lauriston Eileen.

Minnesota Cow 2 Years and Under 3—1st Hill Est. on Howie's Beauty; 2d Summit Park Farm on Lily Luce of Summit Park.

Minnesota Senior Yearling Heifer, Dry—1st Hill Est. on Agnes of North Oaks; 2d Wilcox on Blossom of Old Orchard.

Senior Heifer Calf (7 shown)—1st and 2d Roberts on Roberta Belle of Waukesha and Roberta Southwick Cavalier; 3d Ferndell Farms on Ferndell's Fashion.

Junior Heifer Calf (5 shown)—1st and 2d Ferndell Farms on Ferndell's Fidelity and Ferndell's Mode; 3d Wilcox on unnamed.

Senior and Grand Champion Bull—Hill Estate on Duchrae Success.

Junior Champion Bull—Roberts on Roberts' Pride Cavalier.

Senior and Grand Champion Cow—Hill Estate on Barboigh Kate.

Junior Champion Cow—Ferndell Farms on Ferndell's Felicity.

Graded Herd (4 shown)—1st Hill Estate on herd headed by Duchrae Success; 2d Ferndell Farms on herd headed by Ferndell Victor; 3d Roberts on herd headed by Roberts' Cavalier.

Young Herd (3 shown)—1st Ferndell Farms; 2d Roberts; 3d Hill Estate.

Calf Herd (4 shown)—1st Roberts; 2d Ferndell Farms; 3d Hill Estate.

Get of Bull (5 shown)—1st Ferndell Farms on get of Victor of Ladysmith; 2d Roberts on get of Duke of Waukesha; 3d Hill Estate on get of Howie's Flash Jim.

Produce of Cow (4 shown)—1st Roberts on produce of Waukesha Belle; 2d Ferndell Farms on produce of Rose Lotis; 3d Wilcox on produce of Nana of Old Orchard.

BROWN SWISS.

H. W. Ayers, of Honey Creek, Wis., was the sole exhibitor of Brown Swiss cattle, leading seventeen head before Mr. Hugh G. Van Pelt who judged these classes. While there was no competition, Mr. Ayers' exhibit was brought out in fit shape and would have stood up against strong competition. All classes and championship prizes went to Mr. Ayers.

MILKING SHORT-HORNS.

An exhibit of Short-horns from the herd of May & Otis, Willoughby, Ohio, was made at Hamline. Putting it briefly, they did not make much of a hit with the cattlemen present. We don't wish to be misunderstood. We are thoroughly in sympathy with the dual-purpose move, but can't see the wisdom of making another dairy breed, especially when some of the dairy breeds would undoubtedly produce better veal calves; and if steers resemble ancstry we would hope for better steers from dairy cows we have seen than from some of the cows shown as milking Short-horns. Neither of the two aged bulls shown looked like Short-horns. The first-prize winner looked like an ox and the other lacked the middle so necessary in a useful animal of any kind. Among the females were some good straight-lined animals, but some were decidedly poor in conformation, lacking in heart girth, middle and straightness of rump. We believe Short-horns will give milk, but let's get "Short-horns" first.

Judge, Andrew Boss.

The awards:

Bull 2 Years or Over (2 shown)—1st and 2d May & Otis on Knight of the Glen and Corporal Clay.

Bull 1 Year and Under 2 (1 shown)—1st May & Otis on British Prince.

Cow 3 Years or Over (6 shown)—1st, 2d, 3d and 4th May & Otis on Braemer Beauty, Atrosia, Rosebud and May Granville.

Cow Under 3 Years (2 shown)—1st and 2d May & Otis on Peach Blow and Roxie Darlington.

Fat Cattle.

The exhibitors C. D & E. F. Caldwell, Burlington Junction, Mo.; Congdon & Battles, North Yakima, Wash.; Herr Bros. & Reynolds, Lodi, Wis.; Walter J. Hill, Northcote, Minn.; August Ohrman, Claremont, Minn.; C. P. Sorenson, Balaton, Minn.; L. C. Oloff, Ireton, Iowa.

Judge, Andrew Boss.

Steer, Spayed or Martin Heifer 2 Years and Under 3 (3 shown)—1st Congdon & Battles on Loyal of Meadow Brook; 2d Hill on Benefactor; 3d Caldwell on Billie Berg.

Steer 1 Year and Under 2 (4 shown)—1st Caldwell on unnamed; 2d Oloff on Avon d'King; 3d Herr Bros. & Reynolds on White Velvet; 4th Ohrman on Claremont.

Steer Under 1 Year (3 shown)—1st Sorenson on Standard Lad 4th; 2d Caldwell on unnamed; 3d Oloff on Roan King.

Champion Steer—Caldwell on unnamed.

Herd, consisting of one steer 2 years and under 3, one 1 year and under 2, and one under 1 year (1 shown)—Caldwell.

Horses.

PERCHERONS.

Percherons again demonstrated their strength and popularity at Minnesota. The show was not so large as some former shows in the palmy days of the importing business, but it testified well to the steady growth of the Percheron business in the Gopher State, and showed remarkable improvement in the general quality of the class of material brought forward by home state exhibitors. Two of Des Moines' strongest exhibitors appeared at Hamline, where they met some strong competition from some of Minnesota's best showmen. Among Minnesota exhibitors Hurdcroft Farm made a strong showing, as did also Finch Bros. The Minnesota female classes made an attractive showing. Singmaster's aged stallion, Lagos, added another purple to his list at this show, without any question as to his right to bear it away. Fair Hope, the spanking two year old from the same stables, who was reserve Iowa champion at Des Moines, was made reserve champion. In the female classes the principal rub came in the placing of the champion mare. Malice, Singmaster's four-year-old mare, contended with the three-year-old Carnante from Gregory Farm. The Corsa mare is drafty, a big, toppy three year old with strong back and strong bone. Malice has splendid quality in bone, well turned pasterns and well furnished. Mr. Wm. Bell, who judged classes tied the purple on the three year old, which decision was well received. The get of Jalap won over that of Carnot in the group classes.

The exhibitors: C. G. Anderson, Hector, Minn.; Champlin Bros., Clinton, Iowa; Cloverdale Horse Farm, Harmony, Minn.; W. S. Corsa, White Hall, Ill.; Wm. Crownover, Hudson, Iowa; Finch Stock Farm, Moorehead, Minn.; B. C. Fick, Lake City, Minn.; Hurdcroft Farm, Monticello, Minn.; P. W. Jordan, Beardsley, Minn.; H. R. Lyon, Wayzata, Minn.; R. A. McHattie, Newport, Minn.; W. M. Olson, Hutchinson, Minn.; L. W. Orr, Hastings, Minn.; Jas. O'Hara, Harmony, Minn.; J. O. Singmaster & Son, Keota, Iowa, and University Farm, St. Paul, Minn.

Judge, William Bell, Wooster, Ohio.

The awards:

Stallion 4 Years or Over (14 shown)—1st and 2d Singmaster & Son on Lagos and Majorat; 3d Corsa on Carnoise; 4th Finch Stock Farm on Leonidas; 5th Champlin Bros. on Klermont.

Stallion 3 Years and Under 4 (7 shown)—1st, 2d and 5th Singmaster & Son on Mandou, Keota Insight and Nadir; 3d Finch Stock Farm on Marshall; 4th Crownover on Koda Besique.

Minnesota Stallion 3 Years or Over (6 shown)—1st Jordan on Kaporal; 2d Cloverhill Horse Co. on Sir Donald; 3d Orr on Colon; 4th University Farm on Ronsin.

Stallion 2 Years and Under 3 (13 shown)—1st, 2d and 4th Singmaster & Son on Hope, Eugene and Eustac; 3d Corsa on Carnorad; 5th Hurdcroft Farm on Herbert.

Stallion 1 Year and Under 2 (9 shown)—1st and 2d Singmaster & Son on Lagnot and Blackstone; 3d and 5th Corsa on Carvalentine and Carori; 4th Finch Stock Farm on Joffree.

Minnesota Stallion 1 Year and Under 3 (7 shown)—1st Hurdcroft Farm on Cocatia; 2d Anderson on Calor; 3d O'Hara on Brilliant; 4th Orr on Superior.

Stallion Foal (3 shown)—1st, 2d and 3d Lyon on foal of Lucian, foal of Liquette and foal of Lyne.

Mare 4 Years or Over (9 shown)—1st and 2d Singmaster & Son on Malice and Magicienne; 3d Hurdcroft Farm on Satinette; 4th Finch Stock Farm on Dollie D.

Mare 3 Years and Under 4 (9 shown)—1st Corsa on Carnante; 2d Singmaster & Son on Nains; 3d Jordan on Ninette; 4th Hurdcroft Farm on Keota Fair Maid.

Filly 2 Years and Under 3 (8 shown)—1st and 3d Singmaster & Son on Keota Kyrielle and Keota Ellinore; 2d Corsa on Carjante; 4th Hurdcroft Farm on Gazelda.

Filly 1 Year and Under 2 (14 shown)—1st and 2d Singmaster & Son on Keota Clarice and Maplegrove Snowball; 3d Crownover on Mayette; 4th Corsa on Carwinsome.

Mare and Foal (2 shown)—1st Hurdcroft Farm on Keota Fair Maid and foal; 2d H. R. Lyon on Lyne and foal.

Filly Foal (1 shown)—1st Hurdcroft Farm on foal of Keota Fair Maid.

Champion Stallion—Singmaster on Lagos.

Champion Mare—Corsa on Carnante.

Get of Stallion (4 shown)—1st Singmaster & Son on get of Jalap; 2d Corsa on get of Carnot; 3d Finch Stock Farm on get of Hamon; 4th Orr on get of Colon.

Produce of Mare (6 shown)—1st Corsa on produce of Jante; 2d Finch Stock Farm on produce of Manderene; 3d Hurdcroft Farm on produce of Cocotte; 4th Orr on produce of Rosette.

Breeders' Group (3 shown)—1st Singmaster & Son on group headed by Lagos; 2d Corsa on group headed by Carnoise; 3d Jordan on group headed by Kaporal.

BELGIANS.

The 1916 showing of Belgian horses at Minnesota was one of the best—both as to quantity and quality—ever seen at the Hamline grounds. The good ones at Des Moines appeared here and competition was as keen, if not keener, because of the appearance of the Finch string. Mr. Wm. Bell, of Wooster, Ohio, made the awards in all classes and placed the ribbons with much deliberation and precision. The aged stallion class of twelve head furnished plenty of competition at the top, with Alfred de Bree Eyck, from the Irvinedale stud, plainly at the top. "A draft horse" and he is described. Deep, stylish, strong, well furnished, with good feet, well-turned pasterns, clean, flinty bone and strong hocks, a good horse, he had no hard task to carry away the blue in class and the purple as champion stallion. The two-year-old stallion class was especially strong. Jupiter, the blue ribbon bearer in class, was a wonderful big Belgian for his age. Anna du Balcon was again first in a class of eight aged mares. The champion mare came from the yearling filly class. Crownover's filly, Paramount Lola, a beautiful roan with good body and underfurnishing, was made champion mare, an honor also won at Iowa last week. In the group classes Crownover took all the blues.

The exhibitors: Champlin Bros., Clinton, Iowa; Wm. Crownover, Hudson, Iowa; Finch Stock Farm, Moorhead, Minn.; C. G. Good, Ogden, Iowa; Chas. Irvine, Ankeny, Iowa; H. Lefebure & Sons, Fairfax, Iowa; R. A. McHattie, Newport, Minn.; A. F. Noltimier & Son, St. Paul Park, Minn., and W. M. Rich, Buffalo Lake, Minn.

Judge, William Bell.

The awards:

Stallion 4 Years or Over (12 shown)—1st Irvine on Alfred de Bree Eyck; 2d Champlin Bros. on Paul de Roosbeke; 3d and 4th Finch Stock Farm on Buffalo and Remi.

Stallion 3 Years and Under 4 (4 shown)—1st and 2d Irvine on Irvinedale Jean and Irvinedale Rowdy; 3d Finch Stock Farm on Harcourt; 4th Noltimier & Son on Belvedere.

Stallion 2 Years and Under 3 (10 shown)—1st and 3d Good on Jupiter and Mont De O. R.; 2d Lefebure & Sons on Indigine; 4th Crownover on Marquis.

Stallion 1 Year and Under 2 (11 shown)—1st Champlin Bros. on Julet de Roosbeke; 2d and 3d Crownover on Paramount Volner and Paramount Farceur; 4th Finch Stock Farm on Walker's Best.

Champion Stallion—Irvine on Alfred de Bree Eyck.

Stallion Foal (2 shown)—1st Lefebure & Sons on Clairon du Balcan; 2d McHattie on unnamed.

Mare and Foal (1 shown)—1st McHattie on Jupille and foal.

Mare 4 Years or Over (8 shown)—1st Lefebure & Sons on Anna du Balcan; 2d Crownover on Omerine; 3d Good on Margot; 4th Finch Stock Farm on Denise.

Mare 3 Years and Under 4 (7 shown)—1st Lefebure & Sons on Susan; 2d, 3d and 4th Noltimier & Son on Queen, Delia and Sarah.

Filly 2 Years and Under 3 (6 shown)—1st, 2d, 3d and 4th Crownover on Lisla, Salome, Dinette and Rosette.

Filly 1 Year and Under 2 (8 shown)—1st and 2d Crownover on Paramount Lola and Paramount Delsant; 3d Good on Oakdale Fushia; 4th Irvine on Jupiter's Belle.

Filly Foal (1 shown)—1st Lefebure & Sons on Reminette.

Champion Mare—Crownover on Paramount Lola.

Get of Stallion (4 shown)—1st Crownover on get of Farceur; 2d Finch Stock Farm on get of Bismarck; 3d Lefebure & Sons on get of Jules Remi; 4th Noltimier & Son on get of Cognac.

Produce of Mare (3 shown)—1st Crownover on produce of Civette; 2d Finch Stock Farm on produce of Turca; 3d McHattie on produce of Jupille.

Breeder's Group—1st Crownover on herd headed by Farceur; 2d Lefebure & Sons on herd headed by Jules Remi; 3d Noltimir & Son on herd headed by Belvidere.

SHIRES.

Alex. Galbraith had no trouble in making Shire awards at Hamline. The R. Connor Co. had practically the entire exhibit and brought out some very promising young Shires that could have stood more competition than they met. They showed breeding and quality, but could have stood more fitting.

Judge, Alexander Galbraith.

The exhibitors: R. Connor Co., Auburndale, Wis.; Wm. Crownover, Hudson, Iowa, and Finch Stock Farm, Moorhead, Minn.

Stallion 4 Years or Over (1 shown)—1st Connor Co. on Royal Patch.

Stallion 1 Year and Under 2 (2 shown)—1st Connor Co. on Lumberman's Dray King; 2d Finch Stock Farm on Hawkstone Drayman.

Mare 4 Years or Over (3 shown)—1st Crownover on Fuchia; 2d and 3d Connor Co. on Wigtofa Violet II and Wigtoft Violet.

Mare 3 Years and Under 4 (1 shown)—1st Connor Co. on Wigtoft Violet III.

Filly 2 Years and Under 3 (2 shown)—1st and 2d Connor Co. on Dray Queen Star and Dray King Fashion.

Filly 1 Year and Under 2 (1 shown)—1st Connor Co. on Queen of Fashion.

Champion Stallion—Connor Co. on Royal Patch.

Champion Mare—Connor Co. on Dray Queen Star.

Get of Stallion (1 shown)—1st Connor Co. on get of Saltfleet Dray King.

Produce of Mare (1 shown)—1st Connor Co. on produce of Wigtoft Violet.

Breeder's Group (1 shown)—1st Connor Co. on herd headed by Royal Patch.

DRAFT HORSES.

The exhibitors: Henry J. Bardin, Minneapolis, Minn.; Richard F. Jones & Sons, Lake Crystal, Minn.; R. A. McHattie, Newport, Minn.; T. B. Taylor, Mapleton, Minn.

Judge, Dr. Carl Gay.

The awards:

Gelding or Mare 4 Years or Over (4

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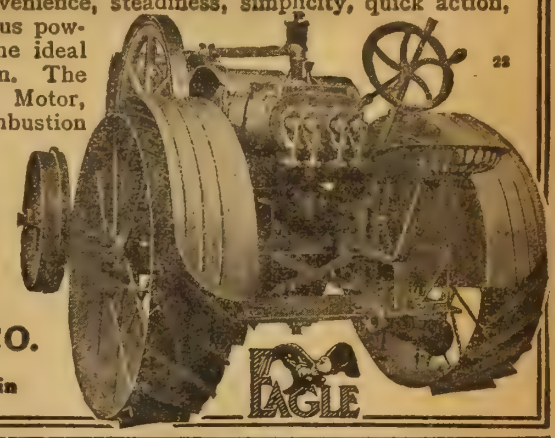

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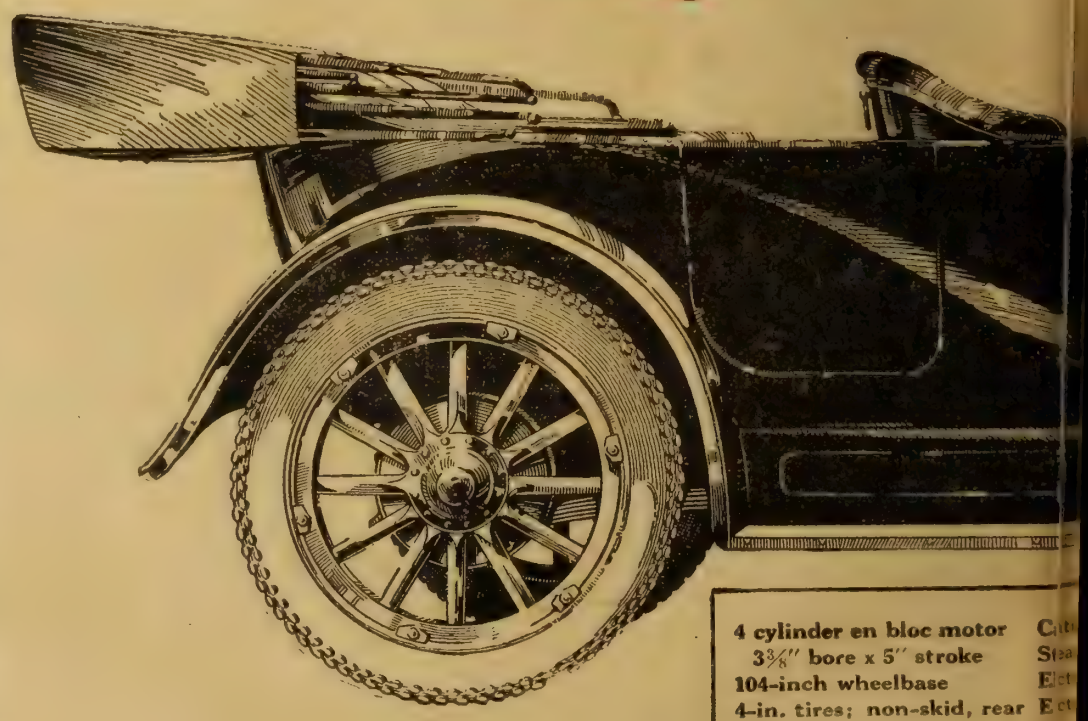

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shown)—1st and 2d Taylor; 3d and 4th Bardin.

Gelding or Mare 2 Years and Under 3 (2 shown)—1st Taylor; 2d McHattie.

Gelding or Mare 1 Year and Under 2 (2 shown)—1st Taylor; 2d Jones & Sons.

Champion Gelding or Mare—Taylor.

Single Mare or Gelding, Shown Hitched (3 shown)—1st Taylor; 2d and 3d Bardin.

Draft Team, Shown Hitched (3 shown)—1st Taylor; 2d and 3d Bardin.

Draft Four, Shown Hitched (1 shown)—1st Bardin.

Draft Six, Shown Hitched (1 shown)—1st Bardin.

MORGANS.

The exhibitors: A. W. Hacklander, Blue Earth, Minn.; Kelly Bros., St. Paul, Minn.; Wm. Lynes, Plainfield, Iowa; A. G. Maier, Atwater, Minn.; Miss Bertha Maier, Atwater, Minn., and Morgan Horse Farm, Plainfield, Iowa.

Judge, Carl W. Gay.

The awards:

Stallion 3 Years or Over (6 shown)—1st Lynes on Montgomery; 2d Morgan Horse Farm on Tommy Dean; 3d Bertha Maier on Allen Franklin.

Stallion 2 Years and Under 3 (2 shown)—1st Hacklander on Foxie J.; 2d Morgan Horse Farm on Archie L.

Stallion 1 Year and Under 2 (1 shown)—1st Morgan Horse Farm on Fred Dean.

Mare and Foal (2 shown)—1st A. G. Maier on Princess and foal; 2d A. G. Maier on Frances and foal.

Mare 3 Years or Over (10 shown)—1st and 2d A. G. Maier on Princess and Peggy Ross; 3d Hacklander on Brownie Girl.

Mare 2 Years and Under 3 (4 shown)—1st A. G. Maier on Fern Highland; 2d Morgan Horse Farm on Polly Taylor; 3d Bertha Maier on Florence.

Filly 1 Year and Under 2 (1 shown)—1st Morgan Horse Farm on Flossy Hudson.

Stallion or Filly Foal (2 shown)—1st and 2d A. G. Maier on Princess Fairy and Glen De Jarnette.

Champion Stallion—Lynes on Montgomery.

Champion Mare—A. G. Maier on Princess.

Get of Stallion (1 shown)—1st Morgan Horse Farm on get of Dart.

Produce of Mare (4 shown)—1st A. G. Maier on produce of Princess; 2d Morgan Horse Farm on produce of Minnie Dean; 3d Lynes on produce of Lady L.

Breeder's Group (1 shown)—1st Hacklander on group headed by Foxy J.

CLYDESDALES.

Hon. Alexander Galbraith, of Edmonton, Canada, passed upon the Clydesdales in his customary able manner. The showing was not up to the standard this breed of horses ought to set. There were a lot of good, useful sorts out, but many of them lacked fitting and there was not a real phenomenon in the bunch. Some of the horses hadn't been away from heavy farm work for more than two weeks. Such cannot be expected to be toppy. Barron Bros. brought out the best exhibit, winning both championships, their two-year-old stallion, Allworthy Baron, being made champion stallion, and Lady May, an excellent three-year-old mare, being made champion female as at Iowa last week. Eben A. Jones also made a very creditable showing. His two-year-old filly, Sweet Marie, carries a lot of Clyde character and an abundance of quality, but lacked the substance and was not so straight a mover as Lady May and was given reserve champion position. The University of Minnesota deserves mention on the three-year-old filly, Minnesota Princess, a very good Clyde mare that is a good mover and was brought out in good shape.

The exhibitors: Barron Bros., Elkton, S. D.; B. C. Fick, Lake City, Minn.; Eben A. Jones, Bangor, Wis.; Richard F. Jones & Sons, Lake Crystal, Minn.; James D. Slater, Winnebago, Minn.; T. B. Taylor, Mapleton, Minn., and University Farm, St. Paul, Minn.

Judge, Alexander Galbraith.

The awards:

Stallion 4 Years or Over (4 shown)—1st Fick on Scottish Mint 3d; 2d Barron Bros. on The Pinnacle; 3d Slater on Chief of Green Hill; 4th Taylor on Prince.

Stallion 3 Years and Under 4 (3 shown)—1st Barron Bros. on Baron Kilmarnock; 2d Eben A. Jones on W. J. Bryan; 3d Taylor on Captain Jinks.

Stallion 2 Years and Under 3 (4 shown)—1st Barron Bros. on Allworthy Baron; 2d University of Minnesota on Sir Rollo; 3d Jones & Sons on Forward Boy; 4th Taylor on Harry Lauder.

Stallion 1 Year and Under 2 (3 shown)—1st Eben A. Jones on Trooper's Barron; 2d and 3d Barron Bros. on Arcadia Prince and Donald Davidson.

Stallion Foal (3 shown)—1st Barron Bros. on Davidson's Heir; 2d Eben A. Jones on Royal George; 3d Taylor on Baron's Pride.

Mare and Foal (5 shown)—1st and 2d Barron Bros. on Mayflower and Fanny with foal; 3d Eben A. Jones on Maud Trooper and foal; 4th Jones & Sons on Rosebud of Cranna and foal.

Mare 4 Years or Over (5 shown)—1st Eben A. Jones on Grove Girl; 2d and 3d Barron Bros. on Fanny and Mayflower; 4th Jones & Sons on Lady Maud.

Mare 3 Years and Under 4 (5 shown)—1st Barron Bros. on Lady May; 2d University of Minnesota on Minnesota Princess; 3d Eben A. Jones on Lady May; 4th Taylor on Lady Attractive.

Filly 2 Years and Under 3 (1 shown)—1st Eben A. Jones on Sweet Marie.

Filly 1 Year and Under 2 (4 shown)—1st and 3d Barron Bros. on Arcadia Flower and Primrose; 2d Eben A. Jones on Silver Bell; 4th Jones & Snos on Princess Abella.

Filly Foal (4 shown)—1st Eben A. Jones on Mollie Darling; 2d Taylor on Merry's Queen; 3d Jones & Sons on unnamed; 4th Barron Bros. on Flower of Arcadia.

Champion Stallion—Barron Bros. on Allworthy Baron.

Champion Mare—Barron Bros. on Lady May.

Get of Stallion (2 shown)—1st Barron Bros. on get of The Pinnacle; 2d Eben A. Jones on get of Young Criterion.

Produce of Mare (4 shown)—1st Barron Bros. on produce of Mayflower; 2d Jones & Sons on produce of Maud Trooper; 3d Barron Bros. on produce of Lady Prentice

Breeder's Group (2 shown)—1st Barron Bros.; 2d Eben A. Jones.

SHETLAND PONIES.

The exhibitors: Chas. E. Bunn, Peoria, Ill., and Elizabeth Hoyt, St. Paul, Minn.

Judge, Alexander Galbraith, Edmonton, Canada.

The awards:

Stallion 4 Years or Over (1 shown)—1st Bunn on Prince Patton.

Stallion 3 Years and Under 4 (2 shown)—1st and 2d Bunn on Lord Go Bang and St. Valentine.

Stallion 2 Years and Under 3 (1 shown)—1st Bunn on The Best Of All.

Stallion 1 Year and Under 2 (1 shown)—1st Bunn on Unexcelled.

Mare 4 Years or Over (3 shown)—1st and 2d Bunn on Ovilta and Revelation; 3d Hoyt on June Steele.

Mare 3 Years and Under 4 (2 shown)—1st and 2d Bunn on Princess Isabelle and Nettie Cole.

Mare 2 Years and Under 3 (1 shown)—1st Bunn on Throlita.

Mare 1 Year and Under 2 (1 shown)—1st Bunn on Undine.

Stallion or Mare Foal (3 shown)—1st and 3d Bunn on Vesuvius and Vesta; 2d Hoyt on Pinto.

Champion Stallion—Bunn on Prince Patton.

Champion Mare—Bunn on Ovilta.

Four Ponies, Get of One Sire (1 shown)—1st Bunn on get of Prince of Wales.

Two Ponies, Produce of One Mare (2 shown)—1st and 2d Bunn on produce of Olita and Lolita.

Stallion and Four Mares, Bred by Exhibitor (1 shown)—1st Bunn.

WELSH PONIES.

The exhibitors: Chas. E. Bunn, Peoria, Ill.

Judge, Alexander Galbraith, Edmonton, Canada.

The awards:

Stallion 3 Years or Over (1 shown)—1st Bunn on Forest John Brown.

Stallion Under 3 Years (1 shown)—1st Bunn on Ten Pins.

Mare 3 Years or Over (3 shown)—1st, 2d and 3d Bunn on Bess, Keepsake and Miss Rocket.

Mare Under 3 Years (1 shown)—1st Bunn on Talar's Gift.

Foals, Stallion or Mare (1 shown)—1st Bunn on Velvet.

Champion Stallion—Bunn on Forest John Brown.

Champion Mare—Bunn on Bess.

Swine.

POLAND CHINAS.

As usual, the Poland Chinas predominated again this year; in fact, there was the greatest gathering of big Polands ever seen at the Minnesota State Fair. Judge Phillips had his hands full from start to finish, and while there was considerable complaint on his placings in the pig classes, in all his work was very satisfactory to the exhibitors. The futurity classes were very strong and the swine barn was packed while they were being judged. Several boars were shown that weigh right at 1,000 pounds and sows weighing from 700 to 800 were common. It was some show and any exhibitor who got a place has reason to feel proud. As with the other breeds, many Poland China boars are being sold at from $15 to $25 higher, which certainly shows that the swine "game" is on a solid footing. When it comes to Poland Chinas the Minnesota State Fair is second only to Iowa. There is only one serious drawback to the showing of swine at this fair, and that is the absence of a pavilion in which to show hogs. If a fair is to be an educational feature it should be so arranged that the people could see the hogs while they are being judged. The Poland Chinas were judged in the alleyway of the swine building and very few people could get to the ringside. We hope that in the near future a swine show pavilion will be erected consistent with the other good buildings on these fair grounds.

The exhibitors: Gerlick & Barker, Mankato, Minn.; H. O. Tellier, Farmington, Minn.; W. J. Graham, Howard Lake, Minn.; John Conzemius, Hasting, Minn.; G. Grabow, Renville, Minn.; J. D. McDonald, North Bend, Wis.; Wm. McCoy, Rochester, Minn.; Kritzick Bros., Howard Lake, Minn.; E. J. Cowles, West Concord, Minn.; A. E. Ribble & Son, Preston, Minn.; John Devaney, Montrose, Minn.; J. M. Glasier, St. James, Minn.; Geo. Schlitzgen, Lake Elmo, Minn.; H. W. Van Valken, Osakis, Minn.; C. F. Gummert, Renville, Minn.; E. Swanson, North Branch, Minn.; G. W. Wheeler & Son, Kasson, Minn.; A. Terril, Montrose, Minn.; Sherman Stacy, Montrose, Minn.

Judge, Chas. W. Phillips, New Sharon, Iowa.

The awards:

Boar 2 Years or Over—1st Graham on Big Price; 2d Glasier on G. Big Price; 3d McDonald on McChief; 4th Gummert on Orange Big Bone; 5th Gerlick & Barker on Choice Expansion.

Boar 18 Months and Under 24—1st McDonald on King James; 2d Gerlick & Barker on Big Expenses; 3d Stacy on Mouw's Choice; 4th Grabow on Big Bengant.

Boar 12 Months and Under 18—1st Cowles & Son on C.'s Choice; 2d Devaney & Son on Mouw's Orange 4th; 3d Wheeler & Son on Black Big Bone Jr.; 4th Graham on Big Price Jr.; 5th Devaney & Son on Big Chief.

Boar 6 Months and Under 12—1st Graham on Big Peter Jr.; 2d McDonald on Crow's Giant; 3d Kritzeck Bros. on Long Peter; 4th Riehl & Son on Riehl's Big Knox; 5th Tellier on King James.

Boar Under 6 Months—1st Graham on Big Peter 2d; 2d Kritzeck Bros. on Square Wonder; 3d Glasier on Jumbo's Grant; 4th McDonald; 5th Riehl & Son on Riehl's Orange Wonder.

Sow 2 Years or Over—1st McDonald on Miss Chief Price; 2d Graham no Square Mollie; 3d Gerlick & Barker on Prospect; 4th Glasier on Lady Kosguth; 5th Gerlick & Barker on Wonder Belle.

Sow 18 Months and Under 24—1st Cowles & Son on C.'s Wonder; 2d Graham on World's Beater; 3d Wheeler & Son on Mammoth Maid 3d; 4th Glasier on Longfellow's Lady; 5th Graham on Record Breaker 2d.

Sow 12 Months and Under 18—1st Graham on Miss Wonder; 2d Cowles & Son on Peerless Wonder; 3d Gerlick & Barker on Ideal Progress; 4th Gummert on Goe's Queen; 5th Cowles & Son on Queen's Wonder.

Sow 6 Months and Under 12—1st Graham on Peter's Best; 2d McDonald on Mc's Grantess; 3d Gummert on Lady Knox; 4th Graham on Graham's Best; 5th Grabow on Thickset Lady.

Sow Under 6 Months, Age Considered—1st and 2d Graham on Winning Queen and Futurity Queen; 3d Kritzeck Bros. on Lady Wonder; 4th Glasier on Jessie's Queen; 5th Grabow on Gentle Maid.

Senior Champion Boar—Graham on Big Price.

Junior Champion Boar—Graham on Big Peter Jr.

Senior Champion Sow—McDonald on Miss Chief Price.

Junior Champion Sow—Graham on Big Pete's Best.

Grand Champion Boar—Graham on Big Price.

Grand Champion Sow—McDonald on Miss Chief Price.

Aged Herd—1st Graham; 2d Cowles & Son; 3d Gerlick & Barker; 4th Wheeler & Son; 5th Gummert.

Breeder's Aged Herd—1st Cowles & Son.

Young Herd—1st Graham; 2d Kritzeck Bros.; 3d Gummert; 4th Wheeler & Son; 5th Grabow.

Breeder's Young Herd—1st Graham; 2d Kritzeck Bros.; 3d Wheeler & Son; 4th Grabow; 5th Glasier.

Get of Sire—1st Graham; 2d Kritzeck Bros.; 3d McDonald; 4th Cowles & Son; 5th Grabow.

Produce of Sow—1st Graham; 2d Kritzeck Bros.; 3d McDonald; 4th Cowles & Son; 5th Grabow.

POLAND CHINA FUTURITY.

Judge, C. W. Phillips, New Sharon, Iowa.

Fall Boar—1st Graham on Big Peter Jr.; 2d Kritzeck Bros. on Long Peter; 3d Richlander on Krehl's Big Knox; 4th Tellier on King James; 5th and 6th Wheeler & Son on Victor Gumbro and Grant's Equal.

Spring Boar—1st Graham on Big Peter 2d; 2d Kritzeck Bros. on Square Wonder; 3d Glasier on Jumbo's Grant; 4th Grabow on Long Orange 1st; 5th Riehl & Son on Riehl's Orange Wonder; 6th Glasier on Jumbo's Kind; 7th Grabow on Choice Orange; 8th Wheeler & Son on Big Bone.

Fall Sow—1st Graham on Big Peter's Best; 2d Gummert on Lady Knox; 3d Graham on Graham's Best; 4th Grabow on Thickset Lady; 5th and 6th Gerlick & Barker on Our Favorite and Favorite.

Spring Sow—1st and 2d Graham on Winning Green and Futurity Queen; 3d Kritzeck Bros. on Lady Wonder; 4th Glasier on Jessie's Queen; 5th and 6th Grabow on Orange Beauty and Gentle Maid; 7th Tellier on Exmoor Princess; 8th Devaney & Sons on Nollie 2d.

Spring Litter—1st Graham on Miller's Best; 2d Kritzeck Bros. on Mollie Jones; 3d Grabow on Long Jessie; 4th Conzemios on Lady Defender; 5th Wheeler & Sons on Ideal Queen; 6th Tellier on Pride of Farmington; 7th Devaney & Sons on Big Mollie; 8th Cowles & Son on Fairview Mollie.

DUROC JERSEYS.

Several new faces were seen in the Duroc Jersey department this year and the noticeable feature was the fact that these new men were the heaviest winners in the younger classes. In numbers the show of this breed was up to its usual standard and in several of the classes the competition was the strongest ever seen on the Minnesota State Fair grounds. The addition of the Duroc Futurity at this fair was the feature of the show and some great "under six months" pigs were shown—twenty-five gilts and twenty-seven boars. E. J.'s Crimson Wonder, the senior and grand champion boar is an excellent individual and was the favorite of the ringside, yet he had a close second in Van's Wonder. The sow classes were strong, especially the junior and senior yearlings and some great sows of these ages were shown. Judge Pearson did excellent work and no dissatisfaction was manifested by any of the exhibitors. Many sales are being made and better prices are being received than at any of the former shows.

Exhibitors: P. J. Fosse, St. Cloud, Minn.; B. W. Blanksma, West Concord, Minn.; Jno. Swenson, Willmar, Minn.; F. S. Vanderhyde, West Concord, Minn.; C. F. Johnson, North Branch, Minn.; E. H. Engle, West Concord, Minn.; Fred E. Johnson, North Branch, Minn.; J. J. Cain, Skyberg, Minn.; J. W. Cartwright, Burlington, Iowa; Spies Bros., Beaver Creek, Minn.; L. F. Atwater, Bangor, Wis.; J. W. Thomas, North Bend, Wis.; F. M. Washburn, Lake Crystal, Minn.

Judge, T. B. Pearson, Thornton, Ind.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

Some cases cured by 1st or 2nd $1 can. Three cans are guaranteed to cure heaves or money refunded.

The original and the up-to-date Standard Veterinary Remedy for Heaves; free booklet explains fully. 34 years sale and veterinary use.

CURES HEAVES BY CORRECTING CAUSE—INDIGESTION. IT'S A GRAND CONDITIONER AND WORM EXPELLER

Safe. Most economical. Excellent for Cattle and Hogs. $1.00 per can at dealers, at same price by parcel post.

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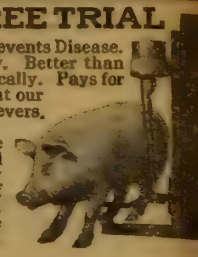


Kills Lice, cures Mange, prevents Disease. Keeps your hogs healthy. Better than dipping. Works automatically. Pays for itself quickly. Try one at our expense. No valves or levers. Cannot get out of order. SEND NO MONEY. We send you a machine filled with oil ready for use. Try it. Pay only if pleased. If not, return at our expense. Send order direct and save money. Price only $5.00. Catalog Free.

WAUSAU FOUNDRY & MACHINE CO.

917 PLUMMER ST. WAUSAU, WIS.

Boar 2 Years or Over—1st Swenson on E. J.'s Crimson Wonder; 2d Vanderhyde & Sons on Van's Wonder; 3d C. F. Johnson on Minnesota Orion; 4th Fosse on Minnesota Defender; 5th Atwater on Illustrator King.

Boar 18 Months and Under 24—1st Cain on J. C.'s Illustrator; 2d C. F. Johnson on Royal Chief; 3d Cartwright on Orion Improver; 4th Vaughn & Sons on Hard Luck.

Boar 12 Months and Under 18—1st Vanderhyde on Crimson Model; 2d Swenson on H. C. Wonder; 3d Cain on Kermet; 4th Fosse on Defender Crimson; 5th C. F. Johnson on Economy Col.

Boar 6 Months and Under 12—1st Atwater on Proud Chief; 2d C. F. Johnson on Big Royal; 3d and 4th Cartwright on Improver and Duchess Col.; 5th C. F. Johnson on Model Royal.

Boar Under 6 Months—1st Cain on Illustrator Chief; 2d and 3d Vanderhyde on Crimson Wonder and Crimson Lad; 4th Atwater on Marion's Illustrator; 5th Thomas on Big Cherry King.

Sow 2 Years or Over—1st Vanderhyde on Crimson Rose; 2d and 3d Atwater on Marion's Beauty and Miss Lucky; 4th Cartwright on J. W. Pride; 5th Thomas on Fancy Wonder.

Sow 18 Months and Under 24—1st and 2d Atwater on Defender Queen and Defender Lady; 3d Vanderhyde & Son on Salome; 4th Cartwright on Topy Queen; 5th Thomas on Tippy Queen.

Sow 12 Months and Under 18—1st and 2d Atwater on Corrector Maid and Marion 4th; 3d and 4th C. F. Johnson on Miss Corrector and King's Champion; 5th Cartwright on Burlington Girl.

Sow 6 Months and Under 12—1st Atwater on Velma; 2d Vanderhyde on Crimson Lulu; 3d C. F. Johnson on King's Best; 4th Atwater on Dixie Queen; 5th Fosse on I Am a Golden Lady.

Sow Under 6 Months—1st Cain on Zella; 2d and 3d Vanderhyde on Choice Crimson and Fancy Crimson; 4th Swenson on Gano's Echo; 5th C. F. Johnson on Miss Rose.

Senior Champion Boar—Swenson on E. J.'s Crimson Wonder.

Junior Champion Boar—Atwater on Proud Chief.

Senior Champion Sow—Atwater on Defender's Queen.

Junior Champion Sow—Atwater on Velma.

Grand Champion Boar—Swanson on E. J.'s Crimson Wonder.

Grand Champion Sow—Atwater on Defender's Queen.

Aged Herd—1st Atwater; 2d Vanderhyde; 3d C. F. Johnson; 4th Cartwright; 5th Fosse.

Breeders' Aged Herd—1st Vanderhyde; 2d C. F. Johnson; 3d Cartwright; 4th Fosse.

Young Herd—1st Atwater; 2d Cain; 3d Vanderhyde; 5th Fosse.

Breeders' Young Herd—1st Cain; 2d Vanderhyde; 3d C. F. Johnson; 4th Fosse; 5th Cartwright.

Get of Boar—1st Atwater; 2d Cain; 3d Vanderhyde; 4th C. F. Johnson; 5th Fosse.

Produce of Sow—1st Atwater; 2d Cain; 3d Vanderhyde; 4th C. F. Johnson; 5th Fosse.

DUROC JERSEY FUTURITIES.

Male Pig—1st Cain on J. C.'s Choice; 2d and 3d Vanderhyde on Crimson Wonder and Crimson Lad; 4th, 5th and 6th Cain on Chief Illustrator, Col. King and King Gano; 7th C. F. Johnson on Fancy Chief; 8th Engle on Chief Gano

Sow Pig—1st Cain on Geneva; 2d and 3d Vanderhyde on Choice Crimson and Fancy Crimson; 4th Cain on Hester; 5th Swenson on Gano's Defendress; 6th Fred Johnson on Prof. Queen; 7th C. F Johnson on Miss Rose; 8th Englo on Col. Lady 2d.

Litter of Four Pigs—1st Cain on

Cherry Illustrator, Chief Illustrator, J. C.'s Choice and Paulo, dam Proud Gano 2d; 2d Vanderhyde on Crimson Lad, Crimson Wonder, Choice Crimson and Fancy Crimson, dam Roxy; 3d Cain on Col. King, King Gain, Hester and Marie, dam Arabella; 4th Cain on Laddie, Geneva, Rena and Rhoda, dam Arabella; 5th C. F. Johnson on Miss Rose, Nina, Delea, Saucy Chief, dam Model Belle; 6th Engle on Chief Gano, Col. Lady 2d, Col Lady 3d, Col. Lady 4th, dam Col. Lady; 7th Swenson on Gano Defender, Gano's Defendress, Gano Blazer, Rose Defender, dam Defender's Echo 3d; 8th Fred Johnson on Prof. Queen, Prof. Maid, Prof. Lady, Junior Chief, dam Miss Orwin.

AMERICAN DUROC JERSEY SPECIAL.

Best Duroc Jersey Herd under 1 Year, Consisting of Boar and Three Sows, Bred and Owned by Exhibitor—1st Vanderhyde; 2d C. F. Johnson; 3d Fosse; 4th Swenson.

BERKSHIRES.

There was a good showing of Berkshire swine and some of the best herds in the country were on exhibition at Hamline. Whitmore Bros., of Wisconsin; Iowana Farms, of Iowa, and Brae Burn Farms, of Illinois, furnished the strong competition though some other breeders caused trouble for the judge in several of the classes. The Northwest never was much of a Berkshire country, but there seemed to be more interest manifested this year than ever before. Good sales are being reported.

Exhibitors: D. A. Gamintz, St. Paul, Minn.; Iowana Farms, Davenport, Iowa; Brae Burn Farms, Lake Forest, Ill.; Whitman Bros., Lyons, Wis.; C. L. McNelly, McIntosh, Minn.

The Awards:—

Boar 2 Years or Over—1st Iowana Farms on Rival's Iowana Baron; 2d Whitmore Bros. on Aldor's Climas; 3d Iowana Farms on Iowana Rival Champion; 4th McNelly on Reno's Duke.

Boar 18 Months and Under 24—1st and 2d Iowan Farms on Artful King 2d and Iowana Rival 2d; 3d Brae Burn Farm 4th Whitmore Bros. on Black Joe 17th; 6th McNelly on Dietrich's Choice.

Boar 12 Months and Under 18—1st and 2d Whitmore Bros. on Sallie's Artful Rival and Rival Berryton.

Boar 6 Months and Under 12—1st and 2d Brae Burn Farm; 3d and 4th Iowana Farms on Iowana Baron 14th and Iowana Royal 29th.

Boar Under 6 Months—1st and 2d Iowana Farms on Iowana Royal 25th and Iowana Royal 26th; 3d Whitmore Bros. on Aldora's Lad; 4th Brae Burn Farms.

Sow 2 Years or Over—1st Iowana Farms on Iowana Peaceful 2d; 2d Brae Burn Farm on Artful Belle 118th; 3d Whitmore Bros. on Rival's Fair Duchess; 4th Brae Burn Farms on Romford's Belle 1st.

Sow 18 Months and Under 24—1st Iowana Farms on Iowana Lady 32d; 2d Brae Burn Farms on Duke's Lady Lee; 3d Iowana Farms on Iowana Lady 16th; 4th Brae Burn Farms on Brae Burn's Schoolmaster.

Sow 12 Months and Under 18—1st and 2d Brae Burn Farms; 3d and 4th Whitmore Bros. on Artful Rival's Sollie and A. H. Sallie.

Sow 6 Months and Under 12—1st and 2d Brae Burn Farms; 3d McNelly on Attractive Miss; 4th Whitmore Bros. on Artful's Matchless Lass.

Sow Under 6 Months—1st McNelly; 2d Brae Burn Farms; 3d McNelly; 4th Iowana Farms on Iowana Rose 6th.

Senior Champion Boar—Iowana Farms on Rival's Iowana Baron.

Junior Champion Boar—Brae Burn Farms.

Senior Champion Sow—Iowana Farms on Iowana Lady 32d.

Junior Champion Sow—McNelly.

Grand Champion Boar—Iowana Farms on Rival's Iowana Baron.

Grand Champion Sow—Iowana Farms on Iowana Lady 32d.

Aged Herd—1st Iowana Farms; 2d Brae Burn Farm; 3d Whitmore Bros.; 4th McNelly.

Breeders' Aged Herd—1st Iowana Farms; 2d Brae Burn Farms.

Young Herd—1st Iowana Farms; 2d McNelly; 3d Iowana Farms; 4th Whitmore Bros.

Breeders' Young Herd—1st Brae Burns Farm; 2d McNelly; 3d Iowana Farms; 4th Whitmore Bros.

Get of Boar—1st Iowana Farms; 2d McNelly; 3d Whitmore Bros.

Produce of Sow—1st Iowana Farms; 2d McNelly; 3d Whitmore Bros.

CHESTER WHITES.

To use the phrase of some of the prominent showmen, they say that the showing of Chester Whites was the "best ever." Nearly all of the old "standbys" were on the job and several new breeders were represented. Men that have watched the showing of this breed for several years past say that there has been as many Chester White swine on the grounds, but never before has there been as many real outstanding animals. Size was quite noticeable among the Chesters this year and the big ones, other points being equal, were given the preference over the smaller type. One aged boar was advertised as weighing 1,100 pounds and he was a very good boar in every respect. A beautiful silver trophy was given for the best under six months herd and this was won by H. A. Derenthal. Several good sales of Chesters have been made.

Exhibitors: E. H. Kahl, Germania, Iowa; Henry Bless & Son, Wells, Minn.; Lewis Anderson, Jackson, Minn.; Fred Luchsinger, Lake Elmo, Minn.; W. R. Kieth, West Concord, Minn.; H. A. Derenthal, Wyckoff, Minn.; J. Johnson, Sleepy Eye, Minn.; W. F. Barr, Ames, Iowa; W. W. Vaughn, Lyons, Wis.

Judge, T. B. Pearson, Thornton, Ind.

The awards:

Bour 2 Years or Over—1st Barr on Wm. A.; 2d Kahl on Chickasaw Kossuth; 3d Bless & Son on Leader; 4th and 5th Vaughn & Sons on Onward and Great Wonder.

Boar 18 Months and Under 24—1st Derenthal on Calloway's Kind; 2d and 3d Anderson on Royal King and C. Wonder; 4th Barr on Wm. King; 5th Johnson on White Hall.

Boar 12 Months and Under 18—1st Kahl on Premium List; 2d Bless & Son on Wm. 2d; 3d Barr on Wm. A.'s Model; 4th Keith on Improver's 2d; 5th Johnson on Kingsley.

Boar 6 Months and Under 12—1st Barr on W. I Am; 2d Derenthal on Wonder; 3d Kahl on Chickasaw's Goods; 4th Barr on Wm. A.'s Pride; 5th Anderson on St. John.

Boar Under 6 Months—1st Derenthal; 2d and 3d Kahl on Highland's Greatest and Kahl's Masterpiece; 4th Derenthal; 5th Anderson.

Sow 2 Years or Over—1st Barr on Elmo Princess; 2d Derenthal on Wykoff Queen; 3d Kahl on Hawkeye Lady; 4th Johnson on Alice; 5th Vaughn & Sons on Miss A.

Sow 18 Months and Under 24—1st Derenthal on Minnesota Lady; 2d Barr on Highland Belle; 3d Derenthal on Miss Wyckoff; 4th Johnson on Cassy; 5th Anderson on Estella.

Sow 12 Months and Under 18—1st Barr on Better Goods 2d; 2d and 3d Kahl on Lady H. E. 2d and Lady H. E. 1st; 4th Bless & Son on Almeda; 5th Derenthal on Lone Girl.

Young Herd—1st Barr; 2d Derenthal; 3d Kahl; 4th Vaughn & Sons; 5th Anderson.

Breeders' Young Herd—1st Barr; 2d Derenthal; 3d Kahl; 4th Vaughn & Sons; 5th Anderson.

Get of Boar—1st Derenthal; 2d Barr; 3d Kahl; 4th Vaughn & Sons; 5th Johnson.

Produce of Sow—1st Barr; 2d Derenthal; 3d Kahl; 4th Vaughn & Sons; 5th Johnson.

MINNESOTA CHESTER WHITE BREEDERS' ASSN. SPECIAL.

A silver cup for the best under 6 months herd bred by Minnesota breeder—Won by Derenthal.

HAMPSHIRES.

Exhibitors: Clayton Messenger, Keswick, Iowa; Frank Dillworth, Spencer, S. D.; W. W. Vaughn, Lyons, Wis.; F. O. Tanner, Brownsdale, Minn.

Judge, D. A. Gamitz, St. Paul, Minn.

Boar 2 Years or Over—1st Messenger on Keswick Lad; 2d Dilworth on Scottish Lad; 3d Vaughn & Son on Good E Nough; 4th Messenger on Square Jim.

Boar 18 Months and Under 24—1st Vaughn & Son on Honest Boy; 2d Messenger on Scottish Boy 10th; 3d Tanner on May Boy; 4th Messenger on Pat Boy.

Boar 12 Months and Under 18—1st Tanner on Prince F.; 2d and 3d Messenger on Scottish Boy 6th and Sir Dawson; 4th Tanner on Clarice Boy; 5th Vaughn & Son on Maloy's You'll Do.

Boar 6 Months and Under 12—1st Messenger on Iowa Boy 5th; 2d Messenger; 3d Tanner on Tanner's Boy.

Boar Under 6 Months—1st Messenger on Banker Boy; 2d and 3d Tanner; 4th and 5th Vaughn.

Sow 2 Years or over—1st Tanner on Miss Edith; 2d Messenger on Mayflower 5th; 3d Vaughn & Son on Valley Queen; 4th Dilworth on Scottish Girl; 5th Messenger on Mayflower 3d.

Sow 18 Months and Under 24—1st Messenger on Scottish Girl; 2d Vaughn & Son on Caprice 11th; 3d Messenger on Scottish Girl; 4th Tanner on Daisy; 5th Dilworth on Miss Beauty.

Sow 12 Months and Under 18—1st and 2d Messenger on Scottish Girl 6th and Pansy; 3d and 4th Vaughn & Son on Esther and Peark; 5th Dilworth on Patsy Girl.

Sow 6 Months and Under 12—1st and 2d Messenger on Mayflower Lady 2d and Mayflower Lady 1st; 3d Tanner on Biddie Baby.

Sow Under 6 Months—1st Vaughn & Son; 2d and 3d Messenger on Ethel May and Daisy May; 4th Dilworth on Dilworth Queen; 5th Tanner.

Senior Champion Boar—Messenger on Keswick Lad.

Junior Champion Boar—Messenger on Iowa Boy 5th.

Senior Champion Sow—Tanner on Miss Edith.

Junior Champion Sow—Messenger on Scottish Girl 6th.

Grand Champion Boar—Messenger on Iowa Boy.

Grand Champion Sow—Tanner on Miss Edith.

Aged Herd—1st Messenger; 2d Vaughn & Son; 3d Tanner; 4th Dilworth.

Breeders' Aged Herd—1st Messenger; 2d Vaughn & Son; 3d Tanner; 4th Dilworth.

Breeders' Young Herd—1st Messenger; 2d Vaughn & Son; 3d Dilworth.

Get of Sire—1st Messenger; 2d Vaughn & Son; 3d Tanner; 4th Dilworth.

Produce of Sow—1st Messenger; 2d Vaughn & Son; 3d Tanner; 4th Dilworth.

IMPROVED YORKSHIRE.

Exhibitors: B. F. Davidson, Menlo, Iowa; Caribou Farms, Twig, Minn.; B. F. Kunkle, Redfield, Iowa; R. Conner, Auburndale, Wis.; Richards & Sherritt, Grand Forks, N. D.; W. B. Lawrence & Son, Doland, S. D.

Judge, D. A. Gamnitz, St. Paul, Minn.

The awards:

Boars 2 Years or Over—1st Davidson on Deer Creek Everton 3d; 2d Connor Co. on Lake Park Romeo 18th; 3d Davidson on Lake Park Fashion; 4th Richards & Sherritt on Lake Park Nogust; 5th Lawrence & Son on Lake Park Eversides; 6th Caribou Farms on Lake Park Nogust 27th; 7th Richards & Sherritt on Ravine's Pride 3d.

Boar 18 Months and Under 24—1st Lawrence & Son on White Duke 1st; 2d Davidson on Davidson Model 12th.

Boar 12 Months and Under 18—1st Davidson on Deer Creek High Class 8th; 2d Kunkle on Oakgrove Fancy 4th; 3d Lawrence & Son on B. P. Rex 2d; 4th Kunkle on Deer Creek Romeo 4th; 5th Caribou Farms on Satan; 6th Lawrence & Son on B. P. Long Lad; 7th Richards & Sherritt on Lassie Designer.

Boar 6 Months and Under 12—1st Kunkle on Oakgrove Eventor 1st; 2d Richards & Sherritt on Wild Rose Buster; 3d Davidson on Deer Creek Moddler 8th; 4th Lawrence & Son on Belle Plain Jack 1st; 5th Kunkle on Eventor 2d; 6th Richards & Sherritt on Summer Valley Progressive 17th; 7th Caribou Farms on Caribou Noduke; 8th Lawrence & Son on Belle Plain Jack 2d.

Boar Under 6 Months—1st Richards & Sherritt on Wild Rose Laddie; 2d Lawrence & Son on Belle Plaine Jack 6th; 3d Davidson on Eventor 10th; 4th Lawrence & Son; 5th Davidson on Deer Creek High Class 10th; 6th Richards & Sherritt on Wild Rosa Nokomis; 7th Kunkle on Oak Grove Eventor 3d; 8th Connor Co. on Susan's Admiral.

Sow 2 Years or Over—1st Davidson on Deer Creek Martha 5th; 2d Caribou Farms on Lake Park Lady Frost 269th; 3d Kunkle on Oak Grove Top Notch; 4th Davidson on Deer Creek Topsy Queen 1st; 5th Connor Co. on Carrie of Auburndale; 6th Kunkle on Oak Grove Peal 1st; 7th Connor Co. on Sarah of

(Concluded on page 27.)

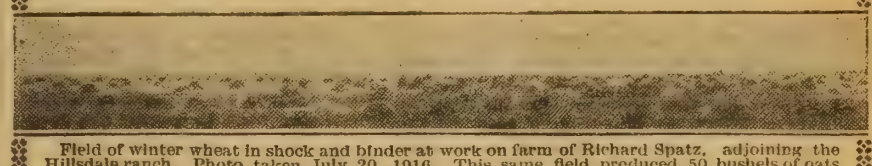
Read This Without Fail

The Golden Prairie District of Wyoming is the Only Sure Crop Country of the West

We are now placing on the market in farm tracts our celebrated Hillsdale Ranch

This is the driest season since the settlement of the country, but we can show you, within three miles of Hillsdale in the neighborhood of this ranch and on no better land, fields of grain (some on sod breaking, too), that would more than pay for the land at our selling price.

DID YOU READ our full page announcement in The Wisconsin Farmer of August 10th? If not, please look up your file. It is on page 9, and invites you to come to the Golden Prairie right now where you can purchase at about what two years' rent will amount to in the Central states as choice a farm as the sun shines on and have included, free, the assignment of a five years' lease on an equal acreage of adjoining state land.



Field of winter wheat in shock and binder at work on farm of Richard Spatz, adjoining the Hillsdale ranch. Photo taken July 20, 1916. This same field produced 50 bushels of oats per acre in 1915, the wheat shown being drilled into the oats stubble in September.

And while you have the issue of August 10th in your hand you can easily turn to page 12, where you will see some pictures of farm scenes adjoining our Hillsdale ranch and read what the Editor thinks of the Golden Prairie District after his second annual visit.

Fill out and mail us at once the coupon found below. It will bring you, without cost, valuable information regarding a district where within a few years farm land values will be as high as they are in the most favored sections of the Central states.

FEDERAL LAND COMPANY

Burns, Wyoming

FEDERAL LAND COMPANY, BURNS, WYO.

Gentlemen: Please mail me at once full descriptive literature of your Hillsdale ranch and the Golden Prairie District of Wyoming.

Name.....

Address.....

Remember this: That we are protected from hot winds and extreme heat by the snowcapped Rockies, always on clear days in plain view to the southwest. This is fully explained on page 3 of the booklet entitled "Wheat Growing and General Farming Without Irrigation in the Golden Prairie District" which will be sent to all who fill out and mail us the above coupon.

WISCONSIN FARMS

FINE land, black loam with clay subsoil, improved land, good buildings, near schools, churches, good roads, basement barns, silo, etc., 17 miles west of Green Bay, Wis. Average price per acre, $100. The garden spot of Wisconsin.
Kuehne & Fiedler Seymour, Wis.

FOR RENT—200 ACRE FARM IN WAUKESHA county, good buildings, excellent soil, would like tenant to purchase one-half interest in stock and work farm on shares, or if tenant has good stock would consider uniting herds. Must be practical farmer. Address Geo. W. Adams, 330 Caswell Block, Milwaukee, Wisconsin.

PROSPERITY IN CANADA

$90,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated lands from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6% privilege of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready made farms for sale. Special easy terms. Loans for live stock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interests are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

Improved Farms

AND cut over lands in the dairy belt of northern Wisconsin at bargain prices. If you intend to buy do not fail to write us asking for our list.
Hamilton & McClure, Westboro, Wisconsin

LAND in Dawson and Prairie Counties, Montana, on ten-year terms. On new line of Great Northern Railway, just building. The last chance for good farming land in Montana at low prices. Higler Loan and Realty Company, Lewiston, Montana.

FOR Minnesota improved farms and land bargains, write or call on H. A. Hanson, 242 Temple Court, Minneapolis, Minnesota.

DAIRY

Dunbar's Cow Leads Geneva Association.

The Geneva Cow-Testing Association had four cows during the month of August with forty-pound records of butter fat or better. The best producer for the month was a three-year-old Holstein owned by Harry Dunbar. Her record was 1,553 pounds of milk testing 3.3 per cent fat and making a total butter fat of 51.2 pounds. Mr. Harrington's Durham, aged six years, gave 1,156 pounds of milk testing 4 per cent and netting 46.2 pounds of fat. The other cows in the forty-pound class for the month were owned by William Schulz and J. W. Finnell and both were grade Holsteins.

A Factory That Runs Every Day.

The model dairy farm is a factory that runs every day of the year; its permanency and prosperity is assured. In proportion to the work it accomplished the plant which provides the power for this factory and houses various activities to which it may be applied, may well receive the same consideration that the power house of any factory receives.

The building used for a power plant at Elk Lake Farm (Wisconsin) is not a model, yet a presentation of its construction may serve to provoke a discussion of a more ideal and satisfactory plant.

It is centrally located and easy of access from the other buildings. It is well built and provided with storm doors and windows. The inside dimensions are fifteen by forty feet, with nine-foot ceiling. It could be eight or ten feet less in length and still accomplish its purpose.

The floor is of concrete, sloping to a drain near one end. The foundation extends above the floor at all points, so that water does not come in contact with the wood construction.

At one end of the building is the gasoline engine, the pump, the separator and the boiler. The engine is a four horse power and is sufficient for all purposes for which it is used, except grinding feed. It has been demonstrated that a six-horse-power engine can be used to develop one or more horse power with the same economy of fuel as a smaller engine, so it would be wise to install the larger size.

A door at the back of the building opens in front of the engine. Through this door a rope transmission is passed when grinding feed or shelling corn in the granary some seventy-five feet distant. The wood saw is also in line with the door and is run by a belt from the line shaft. This shaft is one and seven-sixteenths inches in size, extending lengthwise of the building and attached to the ceiling with drop hangers about eight feet apart. These hangers are so arranged that they are near the pulleys that bear the heaviest load. Split wood pulleys are used.

The separator is run from a governor pulley attached to the ceiling and belted to the line shaft.

A pump near the engine furnished water for a tank in the attic of the power plant. This tank supplies water to all parts of the building as well as to the barn and stock tank.

Water is pumped to a tank in the attic of the house by an elevated pump laid so it will drain. This method, however, is not recommended, for it will freeze in cold weather if care is not exercised.

A water tube boiler about twenty inches in diameter and six feet high furnished steam and hot water for all purposes and also heats the building. This form of boiler, while a little more expensive to install, is much cheaper in the end than the upright flue boiler. It fires quickly, steam being raised in ten minutes.

By connecting the steam pipe with the cold water pipe water can be drawn to any temperature.

The dairy utensils are washed and sterilized in the power plant building. The common creamery sink is used for washing. It is made of galvanized iron and is large enough to wash a ten-gallon can conveniently. Above the sink is a water pipe which supplies by a turn of a faucet water at any temperature desired. A faucet at the bottom of the sink drains it.

A wide shelf of convenient height and covered with galvanized iron is placed near the sink. A one-fourth-inch steam pipe extends upward through a hole in this shelf for the purpose of sterilizing the dairy utensils.

Near the separator is a small tank in which the cream is cooled. It is slightly elevated, so it will drain to the stock tank by the underground pipe which furnished the water from the storage tank above. A steam pipe is connected with the pipe supplying the barns so the water may be warmed for the stock in cold weather.

At the other end of the building stands a simple looking machine, guaranteed to keep the women of the household young, beautiful and sweet tempered. Incidentally it does the family washing. This piece of machinery should attract special attention, because it conserves the energy and vitality of the homemakers of the farm. Both the washing machine and wringer are run by the gasoline engine. The washing machine rests on an extension bench upon which the other tubs are placed that are used in the washing. The wringer is so attached to the bench that it can be moved from one tub to the other as needed without detaching it. It operates by a foot lever and may be instantly stopped by removing the foot, thus preventing any tearing of clothes or breaking of machinery by overcrowding.

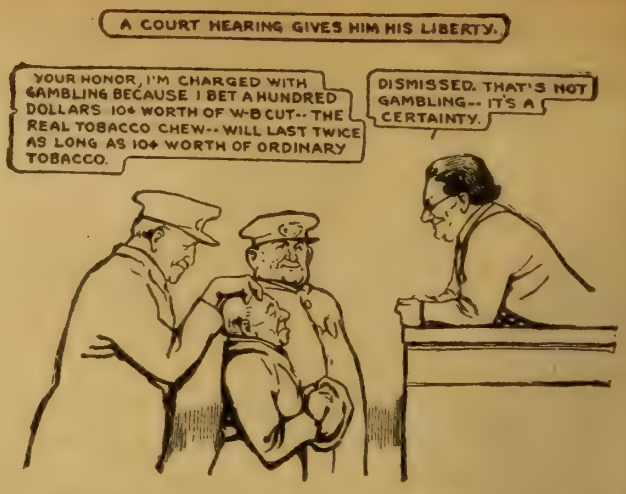
The tubs may be filled with either hot or cold water by a short hose attached to a water pipe near the machine. The clothes may be boiled if so desired by injecting steam into the tubs through the hose. There is no carrying of water. The pipes bring the supply to the points needing it, the drain conveys away the waste.

The housewife provided with this equipment for washing finds her work quickly and satisfactorily done with comparatively small effort on her part. Not only is labor saved but the kitchen is no longer on Monday morning a watery scene of soapsuds and confusion.—[Wisconsin Yearbook.

Try Baraboo.

Why not motor to Baraboo, Wis., and attend the Sauk County Fair from September 19th to 22d? Come on Wednesday, September 20th, "Ford Day," and win one of these prizes: Prizes of $10.00, $5.00, $2.00, and the next ten cars, $1.00 each to the parties who travel the greatest distance to the fair in a Ford car. Also $10.00, $5.00, $2.00 and $1.00 each to the next ten cars of any other make which travel the greatest distance to the fair on Wednesday (concession people barred). This is a bona fide offer, which will be judged by the committee in a fair and impartial manner. Free entry to the grounds made with the clerk on parking space before 2:00 p. m. Awards announced at 3:00 p. m. at grand stand. Look for automobile prizes, motorcycle races and horse races, free acts, baseball, music, lectures and demonstrations. No immoral shows—no gambling. Come and see the clean, up-to-date, popular fair that is always doing something new. Admission—Adults, 40c; children, ten to fourteen years old, 25c; under ten, free. Automobiles and teams, 25c, same as last season.—Adv.

Ask your neighbor to subscribe for The Wisconsin Farmer.



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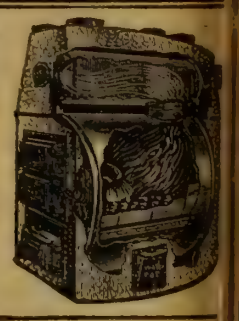

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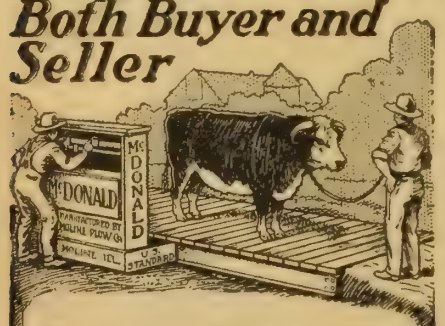

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The Jos. Dick Mfg., Company
Box 64 Canton, Ohio

Wisconsin Tractor Show.

(Continued from page 5.)

there in force and their names were familiar to farmers who have used their products for many years.

Great emphasis was placed at the demonstration upon the use of tractor power for plowing. The visitors learned that ten acres a day is not a record day's work with a good tractor and good plows. They compared this feat with the two or three acres which may be plowed in a day by using horse power. Naturally the tractor showed off to splendid advantage. The visitors were quick to notice the good corners which can be made with the modern tractor, and the deep tillage. On every tongue was the inquiry as to full cost. An average tractor pulling three bottoms and turning ten acres a day will consume from twenty to twenty-five gallons of fuel. It can easily be figured that the tractor fuel cost for the same acreage plowed will be less than the horse feed cost. Furthermore, the horse feed cost goes on just the same whether the animal is at work or not, while the tractor fuel cost is nothing when the machine is not in operation. The matter of investment must be taken into consideration and there are many Wisconsin farmers whose places are not large enough to warrant the purchase of a tractor outfit merely for the purpose of plowing. Even if they could save money on their plowing job, they would have the money tied up in an idle machine. Hence it has come to the sense of the tractor people that their machines must serve other purposes, and it was demonstrated at Madison that the tractor is by no means a machine which must remain idle on days when the plowing had been completed. The tractor may be used as a hauling force almost any day in the year. It can be hitched to the harrow or the seeder or the surface packer. It has been found practical to turn several furrows with a tractor of sufficient power and follow the plow with a packer or harrow, completing both jobs with one pull. This is indeed saving power cost as well as saving labor cost. It makes it possible for the operator to get his work done without being tired out and to accomplish other jobs about the farm when the tractor has completed its task. Furthermore, tractor power insures such speed that plowing can often be done at a season when horse-drawn implements could not accomplish the task in time. The tractor will pull the hay machinery just as well as horses and much more rapidly. The tractor runs the mower and the self-binder and we all know how important speed sometimes is in these operations. The tractor will pull the road grader, will haul heavy loads to town, is a splendid aid to land clearing, and, in fact, handles, when properly equipped, most of the big jobs about the farm which we have depended upon the horses to perform. Larger tractors will do more work than smaller ones, but their original expense, and the cost of operation must be taken into consideration, and the largest tractors exhibited at Madison would not be found practical for the average Wisconsin farm.

It is scarcely necessary to dwell upon the dependability of the tractor. The problem for the farmer is to determine the displacement of horses which a tractor would cause in his individual case and he can easily figure out what investment he can economically put in a tractor. One of the leading tractor makers advertises that his tractor will pull three fourteen-bottom plows at a depth of seven inches anywhere six horses can pull a gang plow six inches deep. This is stating the matter in an understandable way. Some such test as this must be applied by the purchaser of a tractor who wants to be satisfied with his purchase and operate on an economical basis. The tractor is not a toy. Neither is it a pleasure vehicle. It is a work machine, designed to take the place of the work horse, not to the extent of entirely eliminating the work horse, but to the extent the tractor can do work cheaper and quicker and better than it can be done by the horse. Few Wisconsin farmers would be interested in the tractor if it had the plow hitch only. Tractors are double-rated as to horse power; a tractor is spoken of as a 10-20 or a 12-25, or an 8-16, or a 20-40, etc. This means that the tractor has ten horse power on the draw bar and twenty horse power on the belt, taking the first instance for an example. In practically every machine the rated horse power at the draw bar is just 50 per cent of the rated horse power at the belt. Some very fine rigs for belt work were shown at Madison. One company operated a tractor at its branch house platform all day filling a silo. The same power could be hooked up to a corn sheller or feed grinder. This belt power is one that is needed upon thousands of Wisconsin farms. Belt power may be utilized on threshing outfits and in every line of work where engine power is utilized from the belt. Thus the tractor made a utility machine and not a plowman's power for a few days and an idler for the balance of the year.

SUCH A RIG WILL WIND UP THE DA Y'S WORK IN A HURRY.

There is one great reason why farmers, as a rule, have confidence in the working operation of a tractor. Farmers have become acquainted with the gasoline engine through the automobile. They also used engines burning oil on their farms. They can readily see that the same power could be hooked up for tractors, and they believe that this power is dependable. They know that great principles have been worked out for the automobile, which can be easily applied to the tractor. Because of the progress which has been made in the automobile, it has not been necessary to wait for years to get a tractor which would operate successfully.

The Wisconsin Farmer expects to see many tractors sold in this state within the next few years, and, furthermore, we expect to see the operation of these tractors uniformly successful. Farmers have learned to use good sense in buying machinery. They will take into consideration their land, the size and character of it. The farmer who has an enterprising boy, well adapted to mechanics, will not have to worry long about the labor problem if he has a good tractor. The tractor has come in at a time when farm labor is scarce, and it may be a great help for that reason. Our young men on the farm run automobiles and motorcycles with a minimum of trouble, and they will have a similar experience with the tractor. The tractor will help hurry up the tough jobs on the farm, and on this account it will become a factor in keeping the boy on the farm.

Interest in accessories was almost as keen as interest in the tractors exhibited. The makers of engines, bearings, carburetors, ignition systems, etc., had fine displays. Special displays were given at Madison by the College of Agriculture, the U. S. Government Forestry Division, and the Wisconsin Highway Commission. Makers of oils and greases had booths at the demonstrations and explained the value of oils in their varying constituencies. The tractor show might be called a day's short course in farm power. It was a splendid education for the farmer and his boys, who took the time and trouble to attend.

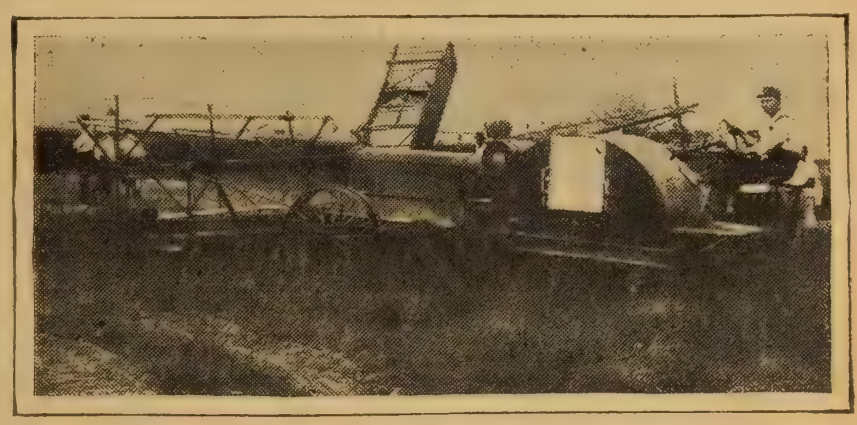
Arrangements for the final tractor demonstration of the season were in good hands. Locally the Rotary Club, Madison Commercial Association and the Board of Commerce boosted the demonstration. The Rotary Club took the lead. F. M. White, head of the agricultural engineering division of Wisconsin University, was local manager. Andrew B. Helstrom, president of the Rotary Club, represented that organization and Mr. Edward J. Samp, the Board of Commerce. Henry Fauerbach, Leo Porter, Charles Doring, and H. L. Brubaker were representative citizens who had charge of Venetian Night, the special lake attraction. Mr. L. L. Luneschloss, was an energetic worker, and it was through his labors that the excellent grounds were secured. Mr. John St. John was an active member of the executive committee and Lew Hirsig was financial secretary. Mr. M. W. Thompson, represented the Commercial Association and A. M. Frisk spent a considerable time and labor on general arrangements. More than a score of other citizens had places on the committees and performed their work faithfully.

The eight tractor demonstrations held this summer under the direction of the manufacturers from the greatest single force ever promoted for the education of farmers. The manufacturers spent more than $2,000,000 in exhibits, transportation and publicity. The expense of transporting the exhibits averaged $40,000 a week for eight weeks. The expense of individuals who accompanied the exhibits was enormous. Farmers and dealers were brought in for miles to see the demonstrations. The exhibits were carried more than 4,000 miles. There were 200 regular employes. About 1,000 special employes were engaged at each demonstration point.

Mr. J. B. Bartholemew, of Peoria, Illinois, is president of the National Tractor Demonstration Circuit Association and Mr. A. E. Hildebrand, of Bloomington, Illinois, is manager. Mr. Hildebrand managed the first tractor show at Fremont, Nebraska, five years ago. Weather was uniformly good at all the demonstration points, Madison having the least luck in this respect of any demonstration city. The demonstration was strictly a farm power and implement affair. No implements were exhibited except those drawn or propelled by tractor power. No horse plows were exhibited. There were no side shows at any of the demonstrations. There was no disorder and no strife among the exhibitors. Each tractor operator was given a space in which to plow and a depth to plow. No record was kept of the winners of the contests, but the honors were well divided. Throughout the entire trip, with several scores of tractors exhibiting two or three times daily only two tractors broke down in the field. The manufacturers got along together very amicably, and they enjoyed a social session at Madison at the wind-up of the demonstration.

The following is a list of exhibitors at the Madison demonstration:

Advance-Rumely Thresher Co., Inc., La Porte, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Avery Co., Peoria, Ill.
B. F. Avery & Sons, Louisville, Ky.
Balso Oil Co., Toledo, Ohio.
Beeman Garden Tractor Co., Minneapolis, Minn.
Bullock Tractor Co., Chicago, Ill.
Bull Tractor Co., Minneapolis, Minn.
Byrne, Kingston & Co, Kokomo, Ind.
J. I. Case Plow Work, Racine, Wis.
J. I. Case T. M. Co., Racine, Wis.
Champion Spark Plug Co., Toledo, O.
Deere & Co., Moline, Ill.
Delco Farm Lighting Co., Dayton, Ohio.
Eagle Mfg. Co., Appleton, Wis.
Electric Wheel Co., Quincy, Ill.
Emerson-Brantingham Imp. Co., Rockford, Ill.
French Battery Co., Madison, Wis.
Grand Detour Plow Co., Dixon, Ill.
Gray Tractor Mfg. Co., Minneapolis, Minn.
Happy Farmer Tractor Co., Minneapolis, Minn.
Hart-Parr Co., Charles City, Iowa.
Holt Mfg. Co., Peoria, Ill.
Huber Mfg. Co., Marion, Ohio.
Hyatt Roller Bearing Co., Chicago, Ill.
International Harvester Co. of America, Chicago, Ill.
Interstate Engine & Tractor Co., Waterloo, Iowa.
Janesville Machine Co., Janesville, Wis.
Joliet Oil Tractor Co., Joliet, Ill.
Killen-Strait Mfg. Co., Appleton, Wis.
Kokomo Electric Co., Kokomo, Ind.



TRACTOR POWER IS AVAILABLE IN THE HARVEST FIELDS.

(Concluded on page 23.)

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

How Much Is Your Garden Worth?

According to a bulletin entitled "Preservation of Food in the Home," issued by the extension department of the North Dakota Agricultural College, a garden of one-half to one-third acre will produce sufficient fresh vegetables for the average family's use during the summer and also a surplus to store or can. Such a garden, says this bulletin, will produce vegetables worth at wholesale $50 to $75, at retail approximately $125, and when canned over $300.

We should like to know what has been the experience of our Home page readers in utilizing the product of their gardens. Do you think the home canning of fruits and vegetables is profitable? Counting every item of cost in home canning, do you consider that you have made a good investment of time and materials, or do you think it is cheaper to buy the same canned products in town? There is a whole lot of work connected with canning and there are a good many items of cost outside the products themselves, such as cans, rubbers and all the necessary equipment, and we have been wondering if any of our readers have found their gardens as profitable as this bulletin would indicate a garden may be.

Let us hear from those who have made it a practice to store away in the family larder all the surplus of the garden and orchard. There may be those who have let good material go to waste because they did not know the value of the canned product. If you have tried putting up your winter's supply of fruits and vegetables from your own garden, and also buying the supply in town, tell us which you consider the cheapest and best. If possible, give actual figures so that our readers may know there is no guesswork about it.

Hot Dishes For Children in Country Schools.

In the belief that a hot dish at noon, if only a bowl of milk soup or a cup of good cocoa, is highly important to school children, many schools throughout the country are either supplying a regular hot luncheon to school children or are providing a single hot dish with which the children coming from a distance can supplement the cold food in their lunch baskets.

To assist schools wishing to undertake this desirable activity, either through teachers or groups of co-operating mothers, the home economics specialists of the United States Department of Agriculture, in Farmers' Bulletin No. 712, suggest the following economical and easily prepared bills of fare for the school lunch:

1. Vegetable-milk soup, crackers, nuts, fruit, plain cake.
2. Meat and vegetable stew, bread and butter, sweet chocolate.
3. Boiled custard, lettuce sandwiches, fruit, cookies.
4. Dried codfish chowder, crackers, fruit, maple-sugar sandwiches.
5. Bean soup, crackers, baked apples, sponge cake.

In addition the school can serve hot cocoa, cooked fruits, berries and liquid or other foods which it is difficult to carry in baskets. Almost any school by the use of paper cups can make good milk available to children at noon.

As the serving of an entire luncheon calls for considerable equipment and dish washing, many country schools will find it easier to supply simply one hot dish, a cup of cocoa or a glass of good milk. The milk could easily be provided through arrangements with parents or near-by farmers and is particularly useful to children in warm weather when it is impracticable for them to bring bottles of milk in their baskets.

It is in the small country schools with only one teacher that the midday meal presents the most difficult problems. Only a teacher with ingenuity and enthusiasm for her work can carry out the plan, and even with such a teacher the active co-operation of parents is highly important.

The donation of a few utensils and articles of food by some of the patrons may be the initial step which will later gain the support of the entire district.

The simplest equipment includes a large kettle, measuring cup and spoons, paring knife, mixing spoon, dish pans and towels. The pupils should be willing to bring plates, cups, bowls and spoons from home. The boys and girls can easily make curtained shelves for the utensils. A fireless cooker, which permits the preparation of meat stews, meat and bean soups and cereal mushes can easily be made by the pupils as a class exercise.

The older girls, taking turns in groups, commonly prepare the special dish for the day. In good weather the luncheon can be served out of doors, but at other times it may be necessary to serve it on the children's desks. This will not be objectionable if the desks are first cleaned and covered with clean paper or paper towels, and if the building is well ventilated and screened against flies. Safe water for drinking, washing hands, cooking and washing dishes is essential, and any water that is at all doubtful should first be boiled.

Is Making Braided Rug.

To the Editor:—I have begun to cut up rags for a braided rug, but do not quite know how to sew the braids together or what stitch to use. Will some reader of the Home department who has made these rugs be so kind as to give me the benefit of her experience? Do you let the braids overlap or do you join them together at the edges? What kind of stitch do you use? I imagine one would need to use a strong stitch. I shall be very grateful for this information.

I want to make several of these rugs. The colors I intend to use for the first rug are old rose or rose, yellow and gray, with a touch of green and light blue. Other color combinations I like are as follows: Old rose, cream, black and pale blue; lavender, gray, old rose and cream. I cut the strips from solid-colored rags and white ones dyed. M. C. O.

More Canning Experience.

To the Editor:—I saw in the issue of August 24th an article in regard to canning without sugar. I wish to add

MICHAEL JOSEPH HOGAN, JR.
At fourteen months this sturdy little chap weighed forty-three and one-half pounds, was three feet, four inches tall, measured twenty-eight inches around the chest and twenty-one inches around the head.

my mite after forty years' experience in cooking fruit in cans, also canning without sugar.

I will give directions, also length of time for cooking different fruits. The article referred to says to pour boiling water over the fruit after it is put in the can, and to cook thirty minutes after the water begins to boil. I wouldn't give much for the pears and peaches cooked that long. The fruit stays hot for a long time after the cans are taken from the water and pears and peaches would be cooked too much.

The rules and time for cooking that I am sending I have used for years with splendid success and I am sure anyone will have good ' k canning this way.

Fill the cans with fruit, shaking down thoroughly and filling clear to the top. Then pour cold water into the can until it is full to the neck. Put the covers on loosely and place the jars in your boiler with false bottom of wood underneath. I usually place a cloth over the bottom under the jars, letting it come well up on the sides. Now fill the boiler with cold water to the neck of the jars. Heat slowly at first.

LENGTH OF TIME TO BOIL.

Fruit	Time
Plums	10 minutes
Small sour pears—whole	30 "
Bartlett pears—halved	20 "
Peaches—halved	8 "
Peaches—whole	15 "
Sour apples—quartered	10 "
Tomatoes	20 "
Cherries	5 "
Blackberries	6 "
Raspberries	6 "
Strawberries	8 "
Wild grape	10 "

Let stand about five minutes after boiling is completed, then put on rubbers and cap and screw down gently with the hand. Let stand five minutes and screw down again. Then set away in a cool, dark place.

In using sirup in canning this way be sure it is thoroughly boiled and cold before pouring over fruit.

AMOUNT OF SUGAR TO QUART.

Plums	8 ounces
Cherries	6 "
Raspberries	4 "
Strawberries	8 "
Small sour pears—whole	8 "
Peaches	4 "
Bartlett pears	6 "
Wild grapes	8 "
Sour apples	6 "

I hope my experience in canning will be of some benefit to other readers of the Home page. Mrs. G. F.

Information About Cakes.

To the Editor:—I should like to give for the benefit of other readers some hints on cake making and baking that have been of value to me.

Cakes may be classified under two heads: Cakes without butter are called sponge cakes; those with butter are called cup cakes.

Use an earthenware bowl and a wooden spoon to mix cakes. Test the oven with a piece of white paper. If the paper turns a light yellow in five minutes it is ready for sponge cake; if dark yellow in five minutes it is ready for cup cake.

Cakes should not be moved in the oven until they have risen to their full height. During the first period the cake should rise, but not brown; during the second period it should still rise and brown in spots; during the third period it should get light brown all over, and during the fourth period get darker brown and shrink from the sides of the pan.

When done take out of the oven lightly and set on something level. Do not touch or move it until it is cold, as this causes the cake to fall.

To mix sponge cake beat the whites of the eggs until very stiff and the yolks until thick. Sift the sugar into the whites, beating all the time. Add the yolks and flavoring, still beating. Sift the flour and do not beat after the flour is added or the cake will be tough. N. N.

Keep Bowls From Splitting.

The wooden chopping bowl often splits, causing much dismay to the housekeeper and the expense of getting a new one. This can be obviated by a very small "ounce of precaution." When the bowl is new, before you use it at all, stand it in a pan of boiling water for a few minutes to open the pores of the wood. Now rub olive oil over it, part of which will be absorbed by the wood. It keeps the wood from splitting. Wooden kitchen utensils may be treated in the same way.

Child's Doll House.

A doll house which will please almost any child can be made with small expense by fastening together two orange crates. This will form a four-room house. Cover the outside with oatmeal paper, which will resemble the new cement houses. Paper the inside with wallpaper of a small pattern. Cover floors with denim. Furniture can be bought at a 10-cent store.

Household Hints.

Winter flowering bulbs will arrive this month. A good supply of daffodils, hyacinths and tulips should be potted for winter blooms.

In baking bread be sure when rising it forms a thin crust before putting into oven, and when taking it out of the oven listen and see that it does not "sing," because if it "sings" it is not done.

Pot off the best flowering plants you want in the house this winter and at the same time start some nasturtium plants for indoor use.

A variation of the patchwork quilt is one made from alternating squares of pink and white or blue and white or lavender and white sateen, one set of squares being worked in simple embroidery stitch with a wreath or other design.

An excellent contrivance for cleaning off muddy shoes can be made at home with little labor or expense. Get a large-sized scrub brush of a coarse variety and fasten it upside down on the porch step or floor, being careful to fasten it securely. This will clean off the shoes quickly, thus saving work, and to the busy housekeeper who has to keep the porches and floors clean it is invaluable as a time saver.

At house-cleaning time try placing the rugs and carpets over bed springs, and whipping them instead of hanging them on the clothes line and beating in the old way. Never shake a small rug—clean in the manner described above or lay flat on porch and sweep thoroughly.

When serving chicken in a small family cut up chicken the same as for frying and divide into two messes. The first day stew one-half, making noodles to go with the gravy. The next day smother the second half in the casserole with sweet or Irish potatoes.

Recipes.

Pear Honey—Four quarts of pears, four cupfuls of granulated sugar, four cupfuls of water, one-half cupful of lemon juice. After washing, pare and grate the pears into the water so they will not discolor. Put them into a preserving kettle over the fire, bring to a boil and add the sugar. Boil for from fifteen to twenty minutes and add the lemon juice. The pear honey must be clear and the thickness of strained honey. Put into glasses and cover with

paraffin and set on a cool shelf till wanted. Bartlett pears, when not too ripe, make the best pear honey.

Candied Sweet Potato.—Nine sweet potatoes, two cupfuls brown sugar, one-fourth cupful beef fat, one-half lemon (sliced thin), two cupfuls boiling water. Peel and cut up the sweet potatoes and put them into a pot with the beef fat. Add the water, brown sugar and sliced lemon. Cook over a very slow fire until soft. The sirup should be very thick and the potatoes soft and brown.

Grape Ketchup.—Three quarts stemmed grapes, two pounds brown sugar, two cupfuls vinegar, one teaspoonful cayenne, two tablespoonfuls each ground cinnamon, ground cloves and allspice, one tablespoonful salt. Cook grapes, run through colander to remove seeds, add sugar, vinegar and spices. Boil until it thickens and seal.

Mock Lemon Pie.—One cupful sugar, one tablespoonful cornstarch, yolks of two eggs (well beaten), a small lump of butter, one scant teaspoonful cream of tartar, one cupful of hot water, one teaspoonful lemon extract. Mix all well together and cook until you are sure it will set when poured into the crust, which has been previously baked. Beat the whites of the eggs, sweeten and spread on top of pie. Set in a hot oven until a light brown.—Mrs. J. E. B.

Drop Cookies.—One cupful sugar, one-half cupful butter, one-half cupful milk, two eggs (well beaten), two teaspoonfuls baking powder, two cupfuls flour, flavor to taste. Drop in pan with teaspoonful and bake in medium-hot oven.—Dorothy N.

Chopped Pickle.—Green tomatoes, one-fourth as much cabbage as tomato, onions to taste, whole cloves tied in bags, white or brown sugar, vinegar. Chop tomatoes with chopping knife, put in colander to drain. Chop cabbage, boil with tomatoes in small quantity of vinegar. Chop cabbage, boil with tomatoes in small quantity of vinegar. Boil carrots in salted water until well done, chop and add to cooked tomatoes and cabbage. Drain the whole and prepare fresh vinegar, sugar and spices. Bring to a boil and put in jars.

Our Fashion Department.

All Patterns, 10 Cents Each.

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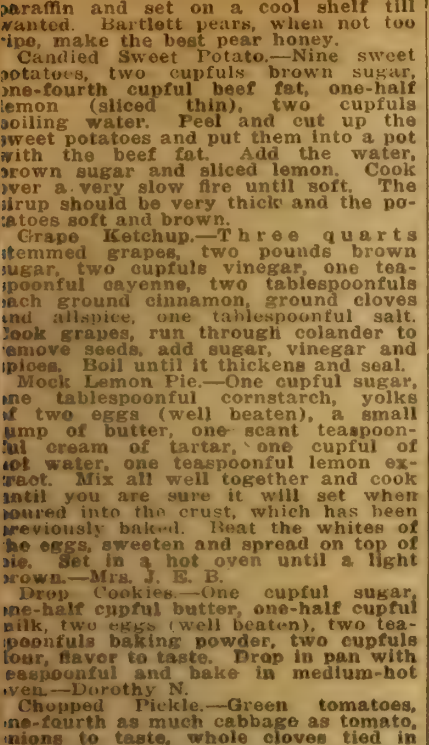

1513 Waist-1512 Skirt.—A trim and up-to-date costume. Waist 1513 cut in sizes: 34, 36, 40, 42 and 44 inches bust measure. The skirt 1512, is cut in sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 10 yards of 36-inch material for the entire costume for a medium size. Two separate patterns, 10 cents for each pattern.

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1836—Dress for misses and small women. Cut in 3 sizes; 16, 18 and 20 years. It requires 6½ yards of 44-inch material for an 18-year size. The skirt measures about 3½ yards at the foot.

1664—Ladies' empire night gown. The pattern is in 3 sizes: Small, medium and large. It requires 5½ yards of 36-inch material for a medium size.

Waist 1832-Skirt 1835—A smart combination. Waist 1832 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1835 cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 3¾ yards of 44-inch material for the skirt in a 24-inch size. The waist requires 3 yards of 44-inch material. The skirt measures about 3½ yards at the foot. Two separate patterns 10 cents for each pattern.

1502—Ladies' "overall" apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 4⅝ yards of 36-inch material for a medium size.

1328—Ladies' shirt waist with convertible collar. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. In size 36 the pattern will require 2⅜ yards of 44-inch material for a 36-inch size.

1563—Overblouse dress for juniors. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 2½ yards for the guimpe, and 5½ yards of 27-inch material for the dress for a 14-year size.

1528—Girls' dress with sleeve in either of two lengths. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 2½ yards of 44-inch material for an 8-year size.

1820—Ladies' house or home dress, with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7¼ yards of 36-inch material for a 36-inch size.

1538—Ladies' six-gore skirt with plaits. The pattern is cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 5 yards of 44-inch material for a medium size.

International Sunday School Lesson.

Lesson for September 17, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Prisoner in the Castle.

LESSON TEXT—Acts 22.
GOLDEN TEXT—He is my refuge and my fortress.—Ps. 91:2.

Paul was rescued from the mob by the prompt action of Lysias, and was saved from scourging by revealing his Roman citizenship (21:27-22:29). Every true life, real social service, patriotism and national righteousness rest upon the value of conversion to Christ. The fundamental message of the Christian church must always be regeneration. With this message Billy Sunday is gripping the large cities, and Dr. John R. Mott is reaching the student life of the world.

I. Paul's Account of His Early Life (v. 1-5). By his use of the Greek tongue he obtained permission to deliver this address, and by his wise use of the Jewish language he gained the attention of the excited crowd. Paul asserted his Jewish origin. (Acts 21-39). Tarsus, where he was born, had a university which rivaled those of Athens and Alexandria, and Paul had probably heard its great philosophers. Paul was an educated man; he was brought up in Jerusalem from his early boyhood at the feet of Gamaliel, its greatest teacher. Thus his religious training was according to the law of the fathers, and as "touching the righteousness which is of the law," he was blameless (Phil. 3:6). He was zealous for God, doing what he thought he would have him do even when "persecuted this way," the way of forgiveness, salvation and righteousness. Jesus said, "I am the way." Paul was at this time an instrument in the hands of the rulers, carrying out their plans, but he exceeded them in his zeal for "the traditions of our fathers (Gal. 1:14). He was not at all like those Pharisees whom Christ condemned as "white sepulchers." He was not what we would term today, "a bad man."

II. Paul's Turning Point (vv. 6-21). Paul seems to pick out three different crises in this rehearsal. (1) His interview with Christ, when he saw Jesus as he really was in his glory, a living risen Savior (Cor. 9:1; 15:8). He had positive proof of the resurrecion from the dead. This proof convicted him of sin. He had heard Jesus call. He had asked Jesus what he would have him to do. He was ready to obey, and something was given him to do. The light which he met on that journey arrested him in his mad course. The voice gave him his directions. In obedience to the command, "Arise and go," he gained knowledge and skill. (2) He lights upon his interview with Ananias (v. 14) where he received personal help from an experienced Christian. In the darkness and conflict of those three days of loneliness the questions must have been: Could he leave rank, honor, friends? Could he enter the service of the despised one and suffer reproach, danger and death? During this conflict he must have had before him the vision of what God would have him do, and the work for which he chose him (vv. 16-18). His vision and commission constituted a strong motive for right decision. During the vision he came into the light, and confessed his faith by his baptism. As a result of those three days and his interview with Ananias he came to know God's will more fully. The next step was of course (3) his public avowal (See Acts 2:38; Heb. 10:22; Rom. 10:13; I Cor. 6:11). The purpose of Paul's whole life and mission was changed.

III. Paul's Dangerous Position (vv. 20-30). The mob gave him audience until his words about the Gentiles. His declaration that God had commanded him to go upon a mission to the Gentiles was an offense to the Jews, and his words fell like a "spark upon an inflammable mass of fanaticism." They broke out into a frenzy of excitement, and made preparations to stone him. An oriental mob is hideous beyond degree, howling, yelling, cursing, gnashing their teeth, flinging their arms, casting off their garments (v. 23), throwing dust into the air to relieve their excitement and to express their execration. It was a manifestation of their uncontrollable rage. The opposition of a mob is no proof that the person it curses is wrong.

Immediately preparations stopped. The commander was called and, learning that Paul was a free-born Roman citizen, he had cause to be afraid that he had gone too far.

To assert Roman citizenship falsely was punishable with death.

The chief captain told Paul that with a great sum he had obtained his Roman citizenship, but Paul's reply was, "But I am Roman born."

Paul was well cared for after this, and, in order to find out why the Jews were so opposed to him, the captain summoned the Sanhedrin to meet the following day, thus unconsciously giving Paul another opportunity to proclaim the gospel of Jesus Christ.

Paul indeed was ready to be bound, and also to die at Jerusalem for the name of the Lord Jesus.

He knew how his Lord had been bound (John 18:12), and he rejoiced in the fellowship of his suffering (Phil. 3:10) yet he claims his right as a citizen for there is no need of morbidly seeking unnecessary disgrace or pain.

Land-Clearing Special Dates.

Dates set for land-clearing demonstrations on the Soo Line were announced last week as follows:

Birchwood, Monday, Sept. 18th, C. P. West, Hayward, in charge local arrangements.

Weyerhauser, Wednesday, Sept. 20th, G. Housholder, in charge local arrangements.

Patzau, Friday, Sept. 22d, J. M. Walz, Superior, in charge of local arrangements.

Exeland, Monday, Sept. 25th, C. P. West, Hayward, in charge local arrangements.

Gilman, Wednesday, Sept. 27th, R. A. Kolb, in charge local arrangements.

Owen, Friday, Sept. 29th, Gunder Gunderson, in charge local arrangements.

Medford, Monday, Oct. 2,, R. A. Kolb, in charge local arrangements.

Other stops as dates are, Philipps, Oct. 4th; Butternut, Oct. 6th; Marengo, Oct. 9th; Glen Flora, Oct. 11th; Rhinelander, Oct. 13th; North Crandon, Oct. 16th, and Armstrong Creek, Oct. 18th.

In case it is impossible to hold the demonstration on the day set it will be held on the following day.

Wisconsin Tractor Show.

(Continued from page 21.)

Kramer Rotary Harrow Co., Morton, Ill.
K-W Ignition Co., Cleveland, Ohio.
La Crosse Plow Co., La Crosse, Wis.
John Lauson Mfg. Co., New Holstein, Wis.
Madison Kepp Mfg. Co., Madison, Wis.
Minneapolis Steel & Mchy. Co., Minneapolis, Minn.
Moline Plow Co., Moline, Ill.
Nilson Farm Machine Co., Minneapolis, Minn.
Oliver Chilled Plow Works, South Bend, Ind.
Parlin & Orendorff Co., Canton, Ill.
Parrett Tractor Co., Chicago, Ill.
Peoria Drill & Seeder Co., Peoria, Ill.
Peoria Tractor Co., Peoria, Ill.
Pioneer Tractor Mfg. Co., Winona, Minn.
Rock Island Plow Co., Rock Island, Ill.
The Russell & Co., Massillon, Ohio.
Simplex Tractor Co., Minneapolis, Minn.
Sumter Electrical Co., Chicago, Ill.
Tom Thumb Tractor, Minneapolis, Minn.
Townsend Mfg. Co., Janesville, Wis.
Vacuum Oil Co., New York, N. Y.
Waite Tractor Sales Co., Chicago, Ill.
Waterloo Gasoline Engine Co., Waterloo, Iowa.
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TOLD IN THE HILLS

By Marah Ellis Ryan

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PART III. "Prince Charlie"

CHAPTER II—Continued.

YES?" and Stuart's agreement had the intonation of a man who hears, but ceases to grasp the sense of words. He glanced at Hardy, a swift, quickly withdrawn scrutiny, and then said: "Do you know, Mr. Hardy, I should like to propose myself for membership in your household for a few weeks; would it be deemed an impertinence? I can't stay at Holland Centre with any comfort, and this place of yours seems to be a haven of rest. Could you give me space to live in for a while, without my being a nuisance to the establishment?"

"Yes, and welcome," answered Hardy. "You don't seem to appreciate what a treat it is to have a visitor from civilization ride our way; and one from our old state is especially in demand. I was going to propose that you move your outfit up here and make the ranch your headquarters while in the country. A nuisance! No, sir."

And thus was the simple ceremony concluded that introduced this stranger to the Hardys, to the general satisfaction of all concerned. Rachel was the only member who did not seem especially delighted.

"Oh, yes, he is clever and entertaining," she agreed to Tillie, "and his manner is so charming and insinuating that I may end by falling in love with him; but I am beginning with an unreasonable desire to say snappy things to him."

"I should say it was unreasonable—a thorough gentleman, of fine family connections. He mentioned several Kentucky families that Hen might know what his standing was back home, and his profession is that of medicine—I noticed the M. D. on his card; and altogether I cannot see what ground you have for objecting."

"I am not objecting—bless the man! no," returned Rachel; "only, because a man has acquired a charming manner and possesses a handsome face is no reason for me devoting myself to admiration of him, like Aunty Luce. She is jubilant over having so fine a gentleman to wait on. You are discreetly elated over having so charming a person to entertain; even Miss Margaret (Miss Margaret was the baby)—everything feminine about the place has succumbed. And I suppose my reason for keeping on my own side of the fence is that I'm jealous. I am no longer first in the affections of anyone about the place. MacDougall is likely to swear allegiance at any time because his name is Stuart—and, above all, Charlie Stuart; even Jim is wavering in the balance, and shows a wonderful alacrity in anticipating the wishes of this tenderfoot. Is it any wonder I rebel?"

"Well, for the comfort of the rest of us do not begin a civil war," admonished Tillie, and was only reassured by a promise that there should be no active hostilities. "If you are more comfortable in war than in peace go south and fight with the skirmishing Indians," suggested the little woman.

"I will," said Rachel. "If you get any more civilized recruits up here to make the place tame and commonplace I will seek service under the standard of the Arrow, or Genesee." And at the mention of the last name Tillie discreetly subsided.

The girl found the raw recruit rapidly making himself a power in the social world of the ranch. There was something of charming grace in the man's personality; and that rare gift of a sympathetic nature that had also the faculty of expression, at once accorded him the trust of women and children.

It may be that a degree of physical beauty influenced them also, for his fine, well-shaped head was very good to look at; the poise of the erect, tall figure bespoke serene self-confidence; the curves of his lips, slightly hidden by a mustache, gave a sweetness of expression to the lower part of his face; while the wide brows and fine eyes gave an intellectual cast to a personality that did not lack attractive points.

"The lad has the old grace o' the Stuarts," MacDougall affirmed, sticking to his fancy of connecting the old blood royal with the slip of the name grown on alien ground. "And it is much the same free-handed manner o' the old stock—free o' their smiles, an' winning o' hearts by the clasp o' the hand; but there's a bit about this one that is a rare puzzle to me. I think like enough it's the eyes, they're main handsome ones; but I'm always a-rackin' o' my brains to tell where I've seen them before."

Rachel, to whom this speech was made, only laughed.

"He has never been West until now, so you cannot have seen them," she argued; but her tone made the old man regard her with attention.

"What do ye mean by that, lass?"

"Oh, nothing, only he says so;" and then she went into the house, leaving her guest sitting on the bench of the porch.

"The Stuart," as the others had already dropped into calling him, after MacDougall, had been at the ranch about a week. The proposed hunt was yet to be; and in the meantime he rode through the parks, and saw all that was near-about the ranch. He talked stock raising with Hardy, medicinal herbs with Aunty Luce, babies with Tillie, and with Rachel numerous worldly topics of interest, that, however, never seemed to change the nature of their acquaintance; which remained much as it was the first day—on her side, arms burnished and ready for action; on his, the serene gentleness of manner, almost a caress, a changeless good humor that spoke volumes for his disposition, and at times forced even her into a sort of admiration of him.

The health-recruiting trip he had come on, he was evidently taking advantage of, for he almost lived out-of-doors, and looked wonderfully healthy and athletic for an invalid. In the house, he wrote a great deal. But the morning Rachel left MacDougall on the porch, the Stuart came sauntering up the path, the picture of careless content with himself and the world. "Where has Mr. Hardy gone?" he inquired, seating himself on the porch. "I've been looking for him out at the pens, but the men have all disappeared."

"Gone up the range for the yearlin's that strayed off the last week; but they'll no go far."

"I wanted to ask Mr. Hardy about mail out here. How often is it brought to the ranch?"

"Well," said the old man; between the puffs of his pipe, "that depends a bit on how often it is sent for just whene'er they're a bit slack o' work, or if anybody o' them wants the trip made special; but Hardy will be sendin' Jimmy across for it, if it's any favor to you—be sure o' that."

"Oh, for that matter—I seem to be the most useless commodity about the ranch—I could make the trip myself. Is Jim the usual mail carrier?"

"Well, I canna say; Andrews, a new man here, goes sometimes, but it's no rare thing for him to come home carrying more weight in whisky than in the letters an' Hardy got a bit tired o' that."

"But haven't you a regular mail carrier for this part of the country?" persisted Stuart.

MacDougall laughed shortly at the idea. "Who'd be paying the post?" he asked, "with but the Hardy's an' myself, we might say, barring the Kootenais; an' I have na heard that they know the use of a postage stamp."

"But someone of their tribe does come to the Centre for mail," continued Stuart in half argument—"an Indian youth; have you never seen him?"

"From the Kootenais? Well, I have not, then. It may be, of late, there are white men among them, but canna say; I see little o' any o' them this long time."

"And know no other white people in this region?"

"No, lad, not for a long time," said the old man, with a half sigh.

The listener rose to his feet. "I think," he said, as if a prospect of new interest had suddenly been awakened in his mind—"I think I should like to make a trip up into the country of the Kootenais. It is not very far, I believe, and would be a new experience. Yes, if I could get a guide, I would go."

"Well," said MacDougall drily, "seeing I've lived next door to the Kootenais for some time, I might be able to take ye a trip that way myself."

Rachel, writing inside the window, heard the conversation, and smiled to herself.

"Strange that Kalitan should have slipped MacDougall's memory," she thought; "but then he may have been thinking only of the present, and the Stuart, of months back. So he does know some things of people in the Kootenai, for all his blind ignorance. And he would have learned more, if he had not been so clever and waited until the rest were gone, to question. I wonder what he is hunting for in this country; I don't believe it is four-footed game."

(To be continued.)

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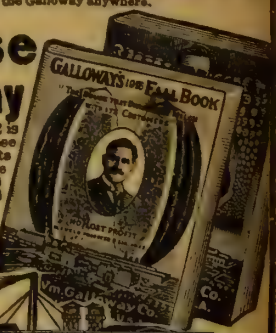

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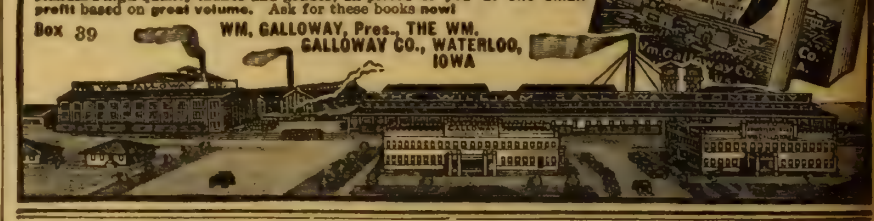

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Collected by Representatives of The Wisconsin Farmer

Wisconsin State Fair Horse Sale.

WE ARE just in receipt of a letter from Fred Pabst, manager of the Wisconsin State Fair Horse Sale, notifying us that there has been a number of additional horses consigned to the sale to be held at the state fair on Friday, September 15th. There has already been consigned twenty-five Percheron stallions and mares, fifteen Hackneys, three Belgians and one Shire. The offering is one of exceptional quality, and the readers of The Wisconsin Farmer are advised to attend this sale. The writer has personally inspected a large part of the offering and is highly pleased with the offering as a whole. The Edgewater Stock Farm, Fort Atkinson, are consigning nine head of Percherons—two Percheron stallions and seven mares. They are big, drafty animals of good type, and we advise our readers not to miss seeing these animals. Seven head will be entered in the show ring and are creditable candidates for ribbons. Fred Pabst, Oconomowoc, Wis., is consigning four Percheron stallions and fourteen Hackney stallions and mares. Three of the Percheron stallions are sired by Imp. Journal, and are creditable sons of this worthy sire. The two-year-old son, King Coco, is a blocky, heavy-boned horse with a close-coupled back, good hips, good head and chest and an extra good mover. The yearling son, Dan Dandy, is a toppy individual with plenty of middle, heavy bone and a very good set of pasterns. Another son of Journal is out of a dam of Baccerrat breeding, the stallion that sold for $5,000 to Kellogg, of Green Bay. E. E. Rosenkranz, of Oconomowoc, is consigning an extra good Imported stallion that we advise you to look up before the sale. The Welch Farm, Ripon, Wis., is consigning a number of high-class animals. Dopp Brothers, Ixonia, are consigning a toppy stallion, and several others are consigning some first-class animals. The Hackneys being consigned by Fred Pabst, are high-class animals, many of them having been exhibited at the leading horse shows throughout the Middle West. Every lover of good driving horses should plan to be at the ring side when these horses are sold, and do not fail to bring your check book with you, for there will, no doubt, be a number of opportunities to buy a fancy driving horse at a price that any lover of good driving horses can afford to pay. Every farmer should have a good driving horse or driving team, regardless of whether he has an automobile or not, and here will be an opportunity to get the best obtainable. Send for a catalog of the sale, which gives pedigrees, pictures and descriptions of the animals to be sold. Catalogs may be obtained by writing to Fred Pabst, R. No. 30, Oconomowoc, Wis.—Adv.

ONE of the Short-horn cows recently sold to George C. Sherman, Minneapolis, Minn., by H. B. Drake & Sons, Beaver Dam, Wis., whose advertisement appears on page 29.

A Foreword About the Grant County Sale.

SOME three weeks ago the writer spent a couple of days in Grant county, Wis., visiting the breeders that are going to consign boars to the Grant county Poland China boar sale to be held at Lancaster, October 10th. About forty head have been cataloged, two each from twenty herds. Stop to think what you might expect by picking the two best boars out of each one of twenty herds, wouldn't you expect to find forty boars about as good as could be produced? That is just what you will find in this sale. We have seen all the boars that will go in this sale and there won't be a poor boar in the offering. Burlie Dobson, Lancaster, Wis., is secretary and if you want a catalog, he will be glad to mail you one if you will send him your name. If you are going to be at the Wisconsin State Fair leave your name with him at the Dobson & Eastman pens, but whatever you do, don't overlook this sale.—Adv.

Milking Short-horns.

WHY not own a few good dual-purpose cattle and if the Short-horns as a breed please you, the William Bros.' cattle as individuals will please you. They have a small, but select herd of females and a few young bulls. The prices they ask are not out of reason for the class of cattle they breed and sell. Communicate with them, they have a good herd and are worthy of your patronage. In writing please mention The Wisconsin Farmer. See page 29.—Adv.

Hendricks' Poland China Boar Offering.

WE have been advised that the Poland boar sale to be made by E. W. Hendricks, Hazel Green, Wis., September 28th, will be the first one of the kind ever held in the state. All we have to say is that there will be a grand lot of spring boars sold on the above date and anyone wanting a boar to put at the head of a registered herd of sows or to grade up a plain herd, should not miss this sale. In the first place, Ed has the boars in fine shape—you will not find them loaded with fat or in show condition, but you will find boars that will appeal to you and the kind that makes good at maturity. Many Poland China herds in Wisconsin need more stretch in their herd boars, you can get that, with the other good essentials if you'll attend this sale. The bulk of the offering is sired by Black Jumbo, without a doubt the largest boar doing service in the state, and one that is siring a uniform lot of big Polands. Of course, you will want a catalog, for that will give you the details of the pedigrees. One of these boars is among the best, sired by Jumbo, out of Spring Valley Gold, going back to the great sire, Blue Valley Quality. Watch for this boar. Two more by Jumbo out of A Wonder 107353 dam, a good cross, and two choice boars. Four boars out of a half sister to Black Jumbo sired by Big Oakland. Three choice boars by Black Jumbo out of Wisconsin Giant dam. Three great prospects in some March boars by Black Jumbo out of A Long Expander dam. These are among the very best. Three line bred Big Bones appealed to us. This is a strain that has certainly made good, and a line-bred boar is the right kind. We could go on and write a couple of columns about these good boars, but you simply must see them to appreciate the offering. The catalog is very descriptive and you should be sure and get one. Simply send your name and address to E. W. Hendricks, Hazel Green, Wis. Plan to attend this sale. It will be to your interest, but if you can't attend in person, T. P. Shreve will represent The Wisconsin Farmer at this sale and handle your buying instructions to your satisfaction. Write him in care of Mr. Hendricks. See page 28.—Adv.

WAHATOMICA NELL CLOTHILDE, one of the Holstein cows in the herd of Cook Bros., Burlington, Wis. See advertisement on page 30.

The Stoehr Duroc Jerseys.

WHEN we visited M. Stoehr, Viroqua, Wis., we found him with about fifty pigs of March and April farrow and of the lot, we saw some that were outstanding. Mr. Stoehr has a right good boar in Professor C., he a son of Professor B, he in turn a grandson of the noted Professor. This is a junior yearling and a boar with size and quality and the pigs by him are as good as any on the farm. Prince Wilhelm is the senior herd boar, a two year old sired by Lucky Model by Minnesota Model out of a daughter of Marion's Wonder. This boar has done Mr. Stoehr a great deal of good and the boars sold sired by him have made good. Two of the best sows on the place are sired by Fancy Col. Again he by Fancy Col. out of a Defiance dam. These sows have plenty of scale and are the dams of some of the good pigs. One of them is the dam of the junior yearling herd boar. Mr. Stoehr is offering some good boars and gilts unrelated and they are being priced very reasonable. Get his prices and when writing mention The Wisconsin Farmer. See page 29.—Adv.

Hampshire Association Under Way.

SEVERAL of the Hampshire breeders of Wisconsin met at Madison, October 31sts for the purpose of forming a state Hampshire Association. This is an excellent move on the part of the breeders and there is no reason why it should not bring great results. No breed of swine has come to the front more rapidly than the Hampshire and this was brought about by the individual merit of the breed and not by any special advertising campaign or "boom." Messrs. Laird, of Prairie du Chien; Damon, of Richland Center, and Bush, of Fond du lac, prominent Hampshire breeders of the state, were instrumental in calling this meeting, and they were appointed as a committee to draw up a constitution and by-laws to be presented at the annual meeting to be held during the farmers' week next winter. We were surprised to learn that there are over 100 men in the state of Wisconsin breeding Hampshires and it is certainly high time that an association of this kind was formed. During the next few months an effort will be made to get as many charter members as possible. Mr. D. S. Bullock, of the Wisconsin Live Stock Breeders' Association was elected temporary secretary and if you are interested in this breed of swine you should write him at Madison and become a member of this association. There will be a combination sale of bred Hampshire sows held at Madison during farmers' week next winter. This will be a grand opportunity to advertise this breed and it is up to the breeders of the state whether this sale will be a success or not. If they will consign good sows, success is assured, but if this sale is to be used for the dumping grounds of inferior stuff, the future of the Hampshire in Wisconsin will not look very bright.—Adv.

SIR JOHANNA FAYNE MOOIE, whose daughters are advertised for sale on page 30 by Edward O. Mueller, Appleton, Wis.

Grove Bros.' Holsteins.

GROVE BROS., Columbus, Wis., whose advertisement appears on page 30 report the sale of a fine young bull to H. J. Willbrubs, Cashton, Wis. This is the 22.29-pound bull they were advertising for the past few weeks. His dam made 22.29 pounds butter in seven days. His sire was the 29.55-pound bull, Maplecrest Hengerveld De Kol, one of the most richly bred bulls in the state. He combines in the closest possible degree the great producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol, that together have more daughters making from 1,000 to 1,300 pounds butter in a year than any other two bulls of the breed. Another son of this bull is advertised for sale on page 30. His dam is Lady Johanna Pauline, whose A. R. O. record is 20.90.—Adv.

Fond du Lac County Jersey Breeders' Sale.

THE Fond du Lac Jersey Breeders' Association will hold their first annual consignment sale, Tuesday, November 26th, at Brandon, Wis. The Jersey breeders of Fond du Lac county have long been recognized as among the best in the state. Not only have the Jersey cattle in Fond du Lac county been known for their high production ability and for the register of merit records which they have made, but as individuals they stand second to none in the United States. For the past twenty years Jersey cattle from the herd in this county have been heavy winners in practically all the big show rings in the middle West. Among the consignors to this sale are J. H. Dixon, Brandon, Wis., who is recognized all over the United States as a master breeder and a judge of Jersey cattle. He is consigning a fine lot of individuals, many of which are fit to go into any show ring. Ed Bruins, of Fairwater, is also consigning a fine lot of animals. The winnings of his herd at the state fair last year is evidence that he is breeding the right type of animals. C. A. Peterson, of Rosendale, a well-known Duroc and Jersey breeder is consigning a few head. There will also be a number consigned from herds at Oshkosh and Princeton, Wis. Catalogs giving pedigrees, description and pictures will be sent on application to the secretary of the association, C. A. Peterson, Rosendale, Wis.—Adv.

McAllister's Guernseys.

THE oldest herd of Guernsey cattle in Brown county, Wis. is that of J. C. McAllister, of Green Bay. The females in the herd are of Benjamin and Fanzine lines of breeding. Many of the cows are granddaughters of Franzine 2d, a fine advanced registry cow. At the present time Mr. McAllister is advertising a number of yearling bulls for sale that are ready for service. These were sired by Dusk Glenwood 16207. He was by Selma Glenwood, that has fifteen A. R. daughters, one of which, Allenwood Primrose, as a two year old, made 589 pounds of fat in a year. Selma's Glenwood was by Glenwood Boy of Haddon and of the cow, Selma of Pinehurst that made 762 pounds of fat in a year. Glenwood Boy of Haddon has twenty-six A. R. daughters with records as high as 965 pounds of fat in a year. The dam of Dusk Glenwood is an advanced registry daughter of Corollet's son that has eleven A. R. daughters. The young bulls are of good, straight conformation and well marked. For further information in regard to breeding and prices write to the above address. See page 30.—Adv.

A 27.76-pound Holstein bull. Write-up on his breeding appeared on page 24, in the issue of September 7th. He is now being advertised for sale on page 31 by the Clovis Stock Farm, Menasha, Wis.—Adv.

Columbia County Poland China Sale.

THE Columbia County Asylum, Wyocena, Wis., will hold a sale of big-type Poland China boars and gilts at the county building on Thursday, October 19, 1916. They will sell forty boars and gilts sired by Columbia Pete 226375, the biggest boned hog in the country. He was sired by Wisconsin Orange, that was bred by the noted big-type Poland China breeder, J. O. James. Wisconsin Orange was by Peter Mouw's noted boar, Big Orange. There will also be spring pigs sired by Columbia Wonder, a grandson of Gritters' noted boar, A Wonder and Peter Mouw's noted boar, Big Bone 2d. There will also be several litters offered for sale sired by Big Bone Jumbo and E. W. Hendricks' noted boar, Black Jumbo. In a letter recently received from the superinten-

Will Increase Advertising Space

LIVE stock men who advertise in The Wisconsin Farmer come back year after year. They know that The Wisconsin Farmer brings results. Read what Arthur Rust, R. R. 4, West Allis, Wis., breeder of Holstein-Friesian cattle, says:

We have sold more than twenty bulls during the last year at very satisfactory prices. We have made so many good sales through The Wisconsin Farmer that we are going to increase our space for the coming year.

Let The Wisconsin Farmer help you sell your stock. Write our field man in your territory today.

The Wisconsin Farmer - Madison, Wisconsin

Guaranteed Circulation, 90,000.

dent, S. C. Cushman, he says, "This stuff is very well grown. I also expect to put in a few of our tried sows. This will make a very choice offering and I think will bring out more people than a straight boar sale." Catalogs are being issued showing the breeding of the animals to be offered and may be obtained by writing to S. C. Cushman, Wyocena, Wis.—Adv.

Mueller's Holsteins.

THE registered Holstein cows advertised for sale on page 30 by Edward O. Mueller, Appleton, Wis., are a fine lot of individuals. They are well bred, being daughters of Sir Johanna Fayne Mooie and Fobes Fayne De Kol. Sir Johanna Fayne Mooie is a son of the noted bull, Sir Johanna Fayne, that has twenty-five A. R. O. daughters with records up to 31.31 pounds of butter in seven days. Six of his first junior two-year-old daughters to be tested had records of better than twenty pounds of butter in seven days. One of his daughters recently completed a record of 23,549 pounds of milk and 941 pounds of butter in a year. Her full sister made nearly twenty-nine pounds of butter in seven days. Not only are the daughters of Sir Johanna Fayne heavy producers, but as a whole are fine individuals, many of them being almost perfect individuals. Sir Johanna Fayne Mooie, the sire of the cows offered for sale, was sired by Sir Johanna Fayne and his dam is a daughter of Sir Johanna Fayne. A number of the other cows offered for sale were sired by Fobes Fayne De Kol, a son of Fobes Tritomia Mutual De Kol and out of a thirty-pound daughter of Homestead Junior De Kol. These cows are now all safe in calf to Johanna Chief De Kol, a son of Sir Johanna De Kol, sire of the noted forty-pound cow, Johanna De Kol Van Beers. Sir Johanna De Kal has fifty-one A. R. O. daughters, that have been very heavy producers, several of them making world records. Our readers who are in the market for Holstein cows of milking age are advised to correspond with Mr. Mueller at once.—Adv.

A 28.71-Pound Holstein Bull for Sale.

A 28.71-pound Holstein bull is advertised for sale on this page by A. G. Pingel, Chilton, Wis. This bull is a fine individual and backed by high production blood. His dam, Dinah Johanna Abberkerk 2d, made 28.71 pounds of butter and 623.70 pounds of milk in seven days. In 300 days she gave 16,177.90 pounds of milk and made 677.45 pounds of butter. This bull was sired by Oakhurst Milk and Butter King, a son of the $10,000 bull, The Milk and Butter King, and out of the cow, Aaggie Duchess Oakhurst, that made 25.05 pounds of butter in seven days. An extended pedigree of the bull advertised for sale shows him to be richly bred. Mr. Pingel has a fine lot of daughters from this bull and recently sold a number of his two-year-old daughters to J. A. Martin, of Darlington, Wis., who is one of Wisconsin's best judges of cattle. For further information in regard to the bull offered for sale write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

Making Sure of Your Batteries.

WELL-CHARGED batteries are necessary to secure best results from your electric lighting plant, your automobile, or other power devices on the farm. The farmer who uses storage batteries can easily make sure that his batteries are in good condition by occasionally testing them with one of the dollar hydrometers, manufactured by the Willard Storage Battery Company, Cleveland, Ohio. The company has just announced a new ninety-day free service plan for Willard Battery buyers, too. Read the advertisement on page 11 and send for a hydrometer and information about the new service plan. When writing, mention that you saw the advertisement in The Wisconsin Farmer.—Adv.

The Hunter's Equipment.

THE man who likes to hunt will feel the call to the woods and fields soon, and then he'll want the best equipment obtainable, so as not to risk missing the game on account of faulty rifle or cartridges. Winchester rifles and cartridges are always reliable. The rifles are made in a variety of models, so that every hunter can get one to suit his ideas, and the cartridges come in all sizes. They can be bought of any dealer. See the advertisement on page 12. When purchasing your rifle or ammunition, be sure to mention that you saw the advertisement in this paper.—Adv.

Cutting Down the Fuel Bill.

MUCH money is wasted every year through buying expensive coals that do not give full value in heat per ton. Tecumseh Coal, mined by the Martin-Howe Coal Company, 1937 McCormick Building, Chicago, gives added heat with less actual waste than some other coals, and it costs less per ton. Users of Tecumseh coal have saved from $50 to $100 on a season's coal supply. Read about the Tecumseh mines and Tecumseh coal in the advertisement on page 23, and write to the company for more information. Tell them you saw the advertisement in this paper.—Adv.

A More Powerful Car.

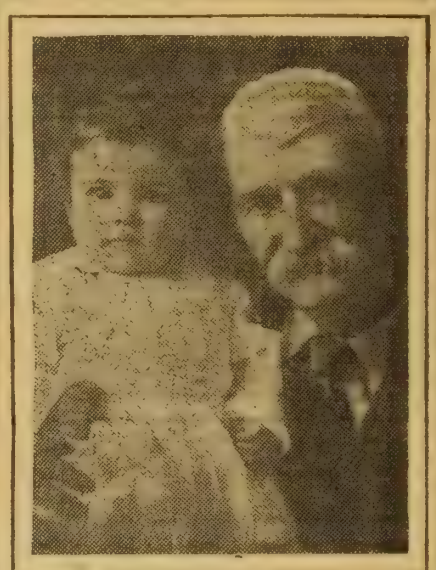
SETTING new standards of style and charm of design, comfort and power has become a habit with the Velie Motor Vehicle Co., 118 Velie Place, Moline, Ill. The new 1917 Velie Six adds to the length, and, therefore, to the comfortableness of the machine. Improvements in the engine make it more powerful, and at the same time, more economical than previous models, because it gives the greatest amount of energy from every drop of fuel. It surpasses all previous models in charm of design. Read about it in the advertisement on page 13 and write for catalog or see your nearest dealer. When writing, mention that you saw the advertisement in The Wisconsin Farmer.—Adv.

Buying Houses at Wholesale Prices.

MUCH of the worry of planning and superintending the building of the new home is eliminated when houses are built from Gordon-Van Tyne standard plans. Ready-cut material may be purchased to fit the plan you choose, or the house may be built from standard material in the usual way. Buying direct of Gordon-Van Tyne saves 25 to 50 per cent of your lumber bill. The Gordon-Van Tine Co., 6057 Gordon St., Davenport, Iowa, has five big books showing plans of their houses, barns, silos, garages and descriptions of building materials. The house plan book contains plans and interior views of 300 houses. Any of these books may be had for the asking. Read about them and about the Gordon-Van Tine ready-cut system of building, in the advertisement on page 32, then fill out the coupon telling which books you want and mail it to the company. And don't forget to tell them that you saw the advertisement in this paper.—Adv.

A Car That is Standard.

IT pays to buy a car that is standard from season to season. Cars that embody radical changes from season to season go out of style as quickly as the daughter's last year's hat. But a Reo car can be used several seasons without making the owner feel that he is behind the times. For that reason the Reo does not rapidly depreciate in value. There is always a market for the Reo because it is a good, standard car, no matter what year it was made. Read more about the Reo in the advertisement on page 7, and write the Reo Motor Car Company, Lansing, Mich., for further information, or consult local agent. Be sure to mention that you saw the advertisement in this paper.—Adv.



THE oldest and youngest Guernsey breeders in Brown county, Wis. J. McAllister and his grandson, Carrol J. Lucia, Green Bay, Wis. See advertisement on page 30.

Keeps House Warm Easily.

WELL-HEATED and comfortably ventilated rooms are necessary for the health and comfort of the farm women and the children who spend much of their time indoors during the winter months. The L. J. Mueller Furnace Co., 204 Reed St., Milwaukee, Wis., manufactures a one-register furnace which can be easily installed in any house without tearing up the floors or walls. It means pure air, well-distributed heat, and a clean house. The advertisement on page 6 tells more about the Mueller Pipeless Furnace. A free booklet will be sent for the asking. When writing the company say that you saw the advertisement in this paper.—Adv.

Lessen the Kitchen Labor.

ANY household equipment which will lessen the kitchen work of the busy farm women deserves investigation. The Severance Gas Machine, manufactured by the Severance Gas Machine Co., 62 S. Galena Ave., Freeport, Ill., not only enables the housewife to cook more efficiently, quicker, and with greater comfort, but it will light the house with a bright, white light. The machine makes a perfect gas for cooking and lighting. It is safe and practical. See the advertisement on page 1; and write to the company for illustrated folder. When writing mention that you saw the advertisement in this paper.—Adv.

Explosives for the Farmer.

THE use of explosives on the farm is increasing. They are not only essential in stump blasting, quarrying and ditch digging, but are now being used in tree planting. Experiment stations have proved that fruit trees planted in blasted holes develop deeper and stronger roots. The Atlas Powder Co., Wilmington, Del., has striven to meet the demand for explosives on the farm by manufacturing Atlas farm powder, the safest explosives for farm use. It is easy to handle, with the least amount of danger. See the advertisement on page 6 and send to the Atlas Company for their free book on "Better Farming." Tell them you saw the advertisement in The Wisconsin Farmer.—Adv.

The Husker a Good Investment.

IN order that the full value of the corn crop may be saved farmers are using husking machines and saving the leaves and stalks for fodder. A dependable husker, which is guaranteed to do more work with less power than other makes of the same size is the Appleton husker and shredder, made by the Appleton Manufacturing Co., 5122 Fargo St., Batavia, Ill. The fodder value saved from a small acreage pays the cost of the Appleton. See the illustrated advertisement on page 2. Write for the free husker book describing the machines. When writing mention that you saw the advertisement in this paper.—Adv.

Guaranteed Drain Tile.

A GOOD drainage system transforms the swampy field into fertile land. But when putting in a drainage system it pays to get the best drain tile on the market in order to insure good service. Haeger drain tile is guaranteed. The farmer runs no risk when he builds his drainage system of Haeger tile. The manufacturers, Haeger Brick & Tile Co., No. 1 State Bank Building, Dundee, Ill., have published a helpful book, "Farm Land Drainage," which will be sent free on request. Read their advertisement on page 24 and send for the book. Mention that you saw the advertisement in this paper.—Adv.

Scales a Paying Investment.

THE farmer who attempts to get along without good scales may cheat himself or others. Reliable scales are necessary to keep a check on farming operations and to insure a square deal in your business deals. The Moline Plow Company, Moline, Ill., manufactures an accurate scale, the McDonald pitless scale, which costs little, is easy to set up and gives a lifetime of reliable service. Write to Department 30 for illustrated literature, or see the McDonald pitless at your dealers. When writing mention that you saw the advertisement in this paper.—Adv.

Saving Money on the Furnace.

HEATING the farmhouse is a problem that deserves serious consideration. Forty per cent of the original cost of your heating plant, and one-third of the fuel bill can be saved by purchasing a Bovee Pipeless Furnace, manufactured by the Bovee Furnace Works, 204 W. 8th St., Waterloo, Iowa. Bovee furnaces are guaranteed, too. See the illustrations in the advertisement on page 20. Then send for the illustrated catalog telling more about these economical heating plants. When writing tell them that you saw the advertisement in this paper.—Adv.

Where to Stop in Chicago.

WHEN in Chicago you will want to stop at a comfortable, good hotel, within easy reach of the business district. You will want good service, and good food, at moderate prices. There is a hotel which just fits these requirements. It is the new Kaiserhof, on Clark, near Jackson Boulevard. Read about it in the advertisement on page 10 and send for circular 100, so that you will be familiar with the hotel when you go to Chicago. Mention that you saw the advertisement in this paper.—Adv.

Making Money on Furs.

FARMERS who hunt can now obtain higher prices for pelts. Becker Bros. Co., Dept. E3, 416 N. Dearborn St., Chicago and 129 W. 29th St., New York, are offering liberal payment for pelts, particularly for good specimens. They make a liberal grading with no deduction for commissions and transportation. See the advertisement on page 2 and write for information. Tell them that you saw the advertisement in this paper.—Adv.

RED POLL cattle are still in demand and if you contemplate buying a few females or a bull get into communication with J. W. Salter & Sons, Unity, Wis. They have a good herd of well-bred cattle and are fine gentlemen with whom to do business. Tell them what you want and they'll tell you whether they can fill your order or not. Mention The Wisconsin Farmer.—Adv.

WE realize that a prospective buyer often writes different advertisers at the same time, asking for prices and description of their stock. If you are going to want a Chester White boar, write Wm. Kirst, Tomah, Wis. He has some very choice boars and we feel sure they will suit you when they arrive at your station. Mention this paper.—Adv.

PADDY by the noted Schoolmaster and C. Evans by Combination 2d head the Chester White herd of A. J. Gray, Mt. Hope, Wis. If this breeding appeals to you let him describe what he has for sale in the spring boar line. He will sell boars and gilts and he don't ask a big price for them. Please mention this paper when writing.—Adv.

HAUK BROS., Cassville, Wis., advise that they have had many inquiries for females, but they didn't have any more to sell at this time. They have recently sold a good yearling bull and have a couple around a year old that they are pricing at this time. If you are interested in this breed, it will be worth your while to visit this herd, they have an excellent herd of cattle. Get their prices and descriptions, it will pay you.—Adv.

L. P. MARTINY, Chippewa Falls, Wis., needs no introduction in the Northwest, for no breeder of the state enjoys a larger acquaintance. Don't forget to visit his pens at the Wisconsin State Fair. We haven't seen his show herd recently, but from past experiences we feel sure that he will be out with a strong herd. He will have some choice boars for sale and you all know the Martiny guarantee.—Adv.

Family cider mills

are offered on page 1436 of our big new General Catalog. Our leader has larger capacity than usual and the price is only $7.15. We pay freight both ways if not O. K.

Sears, Roebuck and Co., Chicago.

S966

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

TOO LATE TO CLASSIFY.

28.71 POUND HOLSTEIN BULL

CALUMET JOHANNA ABBERKERK CHAMPION 105829, whose dam, Dinah Johanna Abberkerk, made 28.71 pounds of butter from 623.70 pounds of milk in seven days. In 300 days gave 16,177.90 pounds milk; 677.45 pounds butter. His sire is Oakhurst Milk and Butter King, a son of the $10,000 bull, Milk and Butter King. Send for pedigree. Price low for quick sale. Address

A. G. PINGEL - CHILTON, WISCONSIN

Hickory Dale

Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock flock headers. Address

Arthur Broughton & Sons **Albany, Wis.**

A 4 Per Cent Butter Man Holstein Bull

WE OFFER BULL, ¾ white, good individual, born March 30, 1915, for sale. Sire, Downing Pontiac Butter Man, three times a state fair champion. Dam a blue ribbon winner and a 21.37 pound junior three-year-old daughter of King Hengerveld Pondyke, 25 A. R. O. daughters, 2 above 30 pounds. Several other nicely marked bulls, 8 to 10 months old, with A. R. O. dams up to 25.67 pounds butter in 7 days. Address

M. W. Downing & Bro. - Waukesha, Wis.

Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address

W. J. Held **Ft. Atkinson, Wis.**

DUROCS AND GUERNSEYS

25 HEAVY-BONED fall and spring boars, Illustrator, Chief's Col., Defender and Crimson Wonder breeding. April pigs weigh over 150 pounds. Two-year-old bull for sale whose dam has three A. R. records averaging over 500 lbs. fat. His full sister made 415 pounds fat as a two year old. Have had 6 calves sired by him and 5 were nicely marked heifers. Reason for selling, owned his sire. Several fine bull calves.

Allie S. Knudson **R. 5, Brodhead, Wis.**

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most pre-eminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address

J. C. Hendricks **Box F, Hazel Green, Wis.**

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN BULLS AND HEIFERS

10 HIGH-GRADE Holstein heifers 2 yrs. old, bred to registered sire to freshen this fall and early winter. 3 registered bulls, one 22 months, evenly marked dandy; two 10 months, 3-4 white. Send for pedigree and price to S. Berry, Kilbourn, Wisconsin.

POULTRY JOURNAL

BIG 4

Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

A NICE yearling Sequel Guernsey bull for sale, whose 3-yr.-old dam, now on test, made 48.5 pounds fat last month. Write J. H. Laney & Son, Dousman, Wisconsin.

SALE DATES.

Percherons.

Sept. 15, Consignment sale state fair grounds, West Allis, Wis. Fred Pabst, Oconomowoc, Wis., Sales Mgr.
Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 6, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Oct. 19, Columbia County Asylum, Wyocena, Wis. S. C. Cushman, Supt.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.
Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.
Feb. 22, William Smiley & Son, Albany, Wis.

Jersey Cattle.

Sept. 26, Consignment sale of Fond du Lac county breeders. C. A. Peterson, Rosendale, Secretary.

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Minnesota's Greatest Fair.

(Continued from page 19.)

Auburndale; 8th Lawrence & Son on B. P. Lawrence 3d.

Sow 18 Months and Under 24—1st Connor Co. on Connor's Bob; 2d Davidson on Deer Creek Belle 40th; 3d Caribou Farms on Caribou Miss Hollingsworth; 4th Richards & Sherritt on Wild Rose Bessie 3d; 5th Kunkle on Oak Grove Choice 1st.

Sow 12 Months and Under 18—1st Davidson on Deer Creek Elena 3d; 2d Caribou Farms on Caribou Adverturers 16th; 3d Davidson on Deer Creek Classy Lass 5th; 4th Kunkle on Oakgrove Fancy 2d; 5th Connors Co. on Miss Ohio; 6th Connors Co. on Ohio Queen.

Sow 6 Months and Under 12—1st Davidson on Deer Creek Model Ann; 2d Richards & Sherritt on Wild Rose Virginia; 3d Richards & Sherritt on Wild Rose Lassie 2d; 4th Caribou Farms on Caribou Lady Frost 2d; 5th Connor Co. on Romeo Beauty; 6th Kunkle on Oakgrove Nemo 3d; 7th Caribou Farms on Caribou Lady Frost 3d; 8th Kunkle on Oak Grove Nemo 4th.

Sow Under 6 Months—1st Davidson on Deer Creek Elena 6th; 2d Caribou Farms on Caribou Holly 12th; 3d Caribou Farms on Caribou Holly 10th; 4th Kunkle; 5th Davidson on Classy Lass 6th; 6th Kunkle; 7th Richards & Sherritt on Wild Rose Daisy; 8th Lawrence & Sons.

Senior Champion Boar—Davidson on Lake Park Fashion.

Junior Champion Boar—Kunkle on Oak Grove Eventor 1st.

Senior Champion Sow—Davidson on Deer Creek Martha 5th.

Junior Champion Sow—Davidson on Deer Creek Model Ann.

Grand Champion Boar—Davidson on Lake Park Fashion.

Grand Champion Sow—Davidson on Deer Creek Martha 5th.

Aged Herd—1st Davidson; 2d Connor Co.; 3d Kunkle; 4th Caribou Farms; 5th Richards & Sherritt; 6th Lawrence & Son.

Breeders Aged Herd—1st Davidson; 2d Kunkle; 3d Lawrence & Son.

Young Herd—1st Davidson; 2d Richards & Sherritt; 3d Caribou Farms; 4th Kunkle; 5th Lawrence & Son; 6th Connor Co.

Breeders Young Herd—1st Davidson; 2d Richards & Sherritt; 3d Caribou Farms; 4th Kunkle; 5th Lawrence & Son; 6th Connors Co.

Get of Boar—1st Davidson; 2d Richards & Sherritt; 3d Caribou Farms; 4th Connor Co.; 5th Lawrence & Son.

Produce of Sow—1st Davidson; 2d Caribou Farms; 3d Richards & Sherritt; 4th Kunkle; 5th Lawrence & Son; 6th Connor Co.

Sheep.

The best showing of sheep ever seen at the Minnesota State Fair was on exhibition this year. Exhibitors that have shown at this fair for several years said that it was the best show, individually, that they had ever seen at this fair. Flocks from several states competed for the prize money and of the more popular breeds the competition was very strong. The Shropshires led in numbers and it was a wonderful showing on this breed. Mr. John Miller, Claremont, Ont., officiated as judge and gave general satisfaction.

SHROPSHIRES.

Exhibitors: Alex W. Arnold, Galesville, Wis.; J. H. Bobendrier, Rogers, Minn.; J. B. Conley, Verndale, Minn.; A. H. Gruenhagen, Norwood, Minn.; Geo. McKerrow & Sons, Pewaukee, Wis.; H. H. Pond, Minneapolis, Minn.; C. W. Poulter, Cumberland, Wis.; J. P. Ring, Sauk Rapids, Minn.; A. B. Sommerville, Rochester, Minn.; Clarence Willson, Minneapolis, Minn.; W. Woodward, Bloomer, Wis.

OPEN CLASS.

Ram 2 Years or Over (17 shown)—1st McKerrow & Sons; 2d Pond; 3d McKerrow & Sons; 4th Wilson; 5th Conley.

Ram 1 Year and Under 2 (23 shown)—1st Conley; 2d McKerrow & Sons; 3d Wilson; 4th Conley; 5th McKerrow & Sons.

Ram Lamb (22 shown)—1st McKerrow & Sons; 2d and 3d Conley; 4th McKerrow & Sons; 5th Wilson.

Ewe 2 Years or Over (12 shown)—1st Wilson; 2d and 3d McKerrow & Sons; 4th and 5th Conley.

Ewe 1 Year and Under 2 (16 shown)—1st Eddingfield; 2d and 3d McKerrow & Sons; 4th Conley; 5th Ring.

Ewe Lamb (15 shown)—1st Conley; 2d McKerrow & Sons; 3d and 4th Wilson; 5th McKerrow & Sons.

Ram Any Age Champion (3 shown)—McKerrow & Sons.

Champion Ewe Any Age (4 shown)—Eddingfield.

Reserve—McKerrow & Sons.

Get of sire, Four Lambs Any Age of Same Sire (28 shown)—1st McKerrow & Sons; 2d Wilson; 3d Conley; 4th Bodendrier; 5th Eddingfield.

Flock (1 ram any age, 1 ewe 2 years or over, 1 ewe 1 year and under 2 and 1 ewe lamb)—1st McKerrow & Sons; 2d Conley; 3d Wilson; 4th Pond; 5th Bobendrier.

Minnesota Breeders' Flock—1st Wilson; 2d Conley; 3d Ring; 4th Bobendrier; 5th Woodward.

COTSWOLDS.

Exhibitors: Alex W. Arnold, Galesville, Wis.

Judge, John Miller, Claremont, Ont.

Ram 2 Years or Over—1st Arnold Bros.; 2d Arnold.

Ram 12 Months and Under 24—1st and 2d Arnold;

Ram Lamb—1st and 2d Arnold.

Ewe 2 Years or Over—1st Alex W. Arnold; 2d Arnold Bros.

Ewe 12 Months and Under 24—1st Alex W. Arnold; 2d Arnold Bros.

Ewe Lamb—1st Alex W. Arnold; 2d Arnold Bros.

Champion Ram Any Age—Alex Arnold.

Ewe Any Age Champion—Alex Arnold.

Get of Sire—Alex Arnold.

Flock (open lot)—1st Alex W. Arnold; 2d Arnold Bros.

SOUTHDOWNS.

Exhibitors: Alex W. Arnold, Galesville, Wis.; J. C. Heideman, Montevideo, Minn.; J. P. Ring, Sauk Rapids, Minn.; Sherwood Bros., Shelbyville, Mo.; A. B. Sommerville, Rochester, Minn.; W. Woodward, Bloomer, Wis.

Judge, John Miller, Claremont, Ont.

Ram 2 Years or Over—1st Woodward; 2d Lovett; 3d Heideman.

Ram 12 Months and Under 24—Alex W. Arnold; 2d Sherwood Bros.; 3d Woodward.

Ram Lamb—1st and 2d Ring; 3d Heideman.

Ewe 2 Years or Over—1st Alex W. Arnold; 2d Sherwood Bros; 3d Ring.

Ewe 12 Months and Under 24—1st Ring; 2d Sherwood Bros; 3d Woodward.

Ewe Lamb—1st and 2d Ring; 3d Heideman.

Champion Ram Any Age—1st Woodward.

Champion Ewe Any Age—1st Alex W. Arnold.

Get of Sire—1st Alex W. Arnold; 2d Heideman; 3d Sherwood Bros.

Flock (open lot)—1st Ring; 2d Alex Arnold; 3d Heideman.

LEICESTERS.

Exhibitors: J. P. Ring, Sauk Rapids, Minn.; Wm. Young, Owatonna, Minn.

Judge, John Miller, Claremont, Ont.

Ram 2 Years or Over—1st Ring; 2d Young; 3d Scully.

Ram 12 Months and Under 24—1st Ring; 2d Young.

Ram Lamb—1st Ring; 2d and 3d Young.

Ewe 2 Years or Over—1st Young; 2d and 3d Ring.

Ewe 12 Months and Under 24—1st and 2d Ring; 3d Young.

Ewe Lamb—1st and 2d Ring; 3d Young.

Champion Ram Any Age—1st Ring.

Champion Ewe Any Age—Young.

Get of Sire—1st Ring; 2d Young.

Flock (open lot)—1st Ring; 2d Young.

Minn. Flock—1st Ring; 2d Young.

LINCOLNS.

Exhibitors: Alex W. Arnold, Galesville, Wis.; Clarence Willson, Minneapolis, Minn.

Ram 2 Years or Over—1st Arnold; 2d Wilson.

Ram 1 Year and Under 2—1st Arnold; 2d Wilson; 3d Arnold.

Ram Lamb—1st Wilson; 2d and 3d Arnold.

Ewe 2 Years or Over—1st and 2d Arnold; 3d Wilson.

Ewe 1 Year and Under 2—1st Arnold; 2d and 3d Wilson.

Ewe Lamb—1st Wilson; 2d and 3d Arnold.

Ram Any Age Champion—Arnold.

Ewe Any Age Champion—Arnold.

Get of Sire—1st Wilson; 2d Arnold.

Flock (Open Lot)—1st Arnold; 2d Wilson.

Minnesota Flock—1st Wilson.

DELAINES.

Exhibitors: A. Garner, Wakeman, Ohio; Watson Lovett, Zanesfield, Ohio; R. P. Smith, Zanesfield, Ohio.

Judge, F. G. Paterson, St. Paul, Minn.

Ram 2 Years or Over—1st Gamver; 2d Lovett; 3d Gamver.

Ram 1 Year and Under 2—1st Gamver; 2d and 3d Lovett.

Ram Lamb—1st and 2d Lovett; 3d Gamver.

Ewe 2 Years or Over—1st Smith; 2d and 3d Gamver.

Ewe 1 Year and Under 2—1st Gamver; 2d and 3d Smith.

Ewe Lamb—1st Gamver; 2d and 3d Lovett.

Champion Ram Any Age—Gamver.

Champion Ewe Any Age—Gamver.

Get of Sire—1st Lovett; 2d Gamver; 3d Smith.

Flock (Open Class)—1st Gamver; 2d Lovett; 3d Smith.

HAMPSHIRES.

Exhibitors: Alex W. Arnold, Galesville, Wis.; Sherwood Bros., Shelbyville, Mo.

Ram 2 Years or Over—1st and 2d Sherwood Bros.

Ram 1 Year and Under 2—1st Arnold; 2d and 3d Sherwood Bros.

Ram Lamb—1st Sherwood Bros.; 2d and 3d Arnold.

Ewe 2 Years and Over—1st and 2d Arnold; 3d Sherwood Bros.

Ewe 1 Year and Under 2—1st Sherwood Bros.; 2d and 3d Arnold.

Ewe Lamb—1st and 2d Arnold; 3d Sherwood Bros.

Champion Ram Any Age—Sherwood Bros.

Champion Ewe Any Age—Arnold.

Get of Sire—1st Arnold; 2d Sherwood Bros.

Flock—1st Arnold; 2d Sherwood Bros.

DORSETS.

Exhibitors: H. H. Cherry, Xenia, Ohio; Sherwood Bros., Shelbyville, Mo.

Judge, John Miller, Claremont, Ont.

Ram 2 Years or Over—1st Cherry; 2d Mohr & Sons.

Ram 12 Months and Under 24—1st and 2d Cherry; 3d Mohr & Sons.

Ram Lamb—1st Cherry; 2d Mohr; 3d Cherry.

Ewe 2 Years or Over—1st Cherry; 2d Sherwood Bros.; 3d Cherry.

Ewe 12 Months and Under 24—1st and 2d Cherry; 3d Sherwood Bros.

Ewe Lamb—1st and 2d Cherry; 3d Sherwood Bros.

Ram Any Age Champion—1st Cherry.

Champion Ewe Any Age—1st Cherry.

Get of Sire—1st Cherry; 2d Sherwood Bros.; 3d Mohr.

Flock (open lot)—1st Cherry; 2d Sherwood Bros.; 3d Mohr & Sons.

CHEVIOTS.

Exhibitor: Alex W. Arnold, Galesville, Wis.; W. C. Postle, Camp Chase, Ohio; Wm. Young, Owatonna, Minn.

Judge, John Miller, Claremont, Ont.

Ram 2 Years or Over—1st Postle; 2d Arnold; 3d Postle.

Ram 12 Months and Under 24—1st and 2d Postle; 3d Young.

Ram Lamb—1st Postle; 2d and 3d Arnold.

Ewe 2 Years or Over—Arnold; 2d and 3d Postle.

Ewe 12 Months and Under 24—1st Arnold; 2d Postle; 3d Young.

Ewe Lamb—1st Postle; 2d and 3d Arnold.

Champion Ram Any Age—Postle.

Champion Ewe Any Age—Arnold.

Get of Sire—1st Postle; 2d Arnold; 3d Young.

Flock—1st Arnold; 2d Postle; 3d Young.

Minn. Flock—Young.

OXFORDS.

Exhibitors: J. C. Heideman, Montevideo, Minn.; Geo. McKerrow Sons Co., Pewaukee, Wis.; A. J. Mohr & Son, Bloomer, Wis.

Judge, John Miller, Claremont, Ont.

Ram 2 Years or Over—1st McKerrow & Sons; 2d Crozen; 3d McKerrow & Sons.

Ram 1 Year and Under 2—1st McKerrow & Sons; 2d Crozen; 3d Mohr & Bros.

Ram Lamb—1st Crozen; 2d McKerrow & Sons; 3d Mohr & Sons.

Ewe 2 Years or Over—1st McKerrow & Sons; 2d Crozen; 3d Mohr & Sons.

Ewe 1 Year and Under 2—1st and 2d McKerrow & Sons; 3d Mohr & Sons.

Ewe Lamb—1st Crozen; 2d and 3d McKerrow & Sons.

Champion Ram Any Age—McKerrow & Sons.

Champion Ewe Any Age—McKerrow & Sons.

Get of Sire—1st Crozen; 2d McKerrow & Sons; 3d Mohr & Sons.

Flock Open Class—1st McKerrow & Sons; 2d Crozen; 3d Mohr & Sons.

AMERICAN OXFORD DOWN RECORD ASSOCIATION SPECIAL.

Best Yearling Ram—1st and 2d Heideman.

Best Yearling Ewe—1st Gruenhagen; 2d Heideman.

Best Pen of 4 Lambs, Either Sex—1st Gruenhagen; 2d Heideman.

RAMBOUILLETS.

Judge, T. G. Paterson.

F. S. King Bros. Co., Laramie, Wyo., were the only exhibitors of Rambouillets, therefore won all prizes.

ANGORA GOATS.

Judge, T. G. Paterson, University Farm, St. Paul, Minn.

A. B. Somerville, Rochester, Minn., was the only exhibitor of Angora Goats, therefore won all prizes.

Money in cider

but you have to do your own grinding and pressing if you want all the profit. See page 1436 of our big new General Catalog for prices on our full line of cider mills.

Sears, Roebuck and Co., Chicago.

CHESTER WHITE SWINE.

CHESTER WHITE FALL BOARS

AND spring pigs of both sexes, sired by Elder's B. R., a Wisconsin State Fair winner and from a prize-winning sire and dam. Pigs for sale are well grown and of show quality. Holstein bull for sale sired by King Pontiac Champion 8th, whose dam made 800 pounds of butter in a year. Prices reasonable.
A. H. & E. W. Kuhlman, Beaver Dam, Wis.

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For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN BLOOM CITY, WIS.
(Shipping point Viola)

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Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address
J. A. DOERR VIROQUA, WIS.

DERENTHAL

CHESTER WHITES

THE champion Chester herd of the Northwest. Offering spring pigs, BOARS and GILTS of outstanding individuality. Bred in the purple. If you want herd headers, write
H. A. DERENTHAL WYKOFF, MINN.
Meet me at Hamline, Milwaukee or La Crosse.

CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address
L. A. Schultz R. 1, Poynette, Wis.

Chester Whites

WE offer our entire herd of registered hogs at a very low price. Bred sows, young sows or boars 5 months old $15 each. Will ship C. O. D.
Kirkpatrick Bros. Reedsburg, Wis.

CHESTER WHITES

CHOICE spring pigs of March and April farrow for sale. Big bone, well bred and growthy. Correspondence solicited. Write
Art. G. Hoskins Dodgeville, Wisconsin
(Also breeder of Milk Strain Short-horns)

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.
Wm. F. Belda - De Forest, Wisconsin

CHESTER WHITE spring boars sired by Eagle Chief and Highland John. Big, growthy boars with strong backs, wide, deep hams and heavy bone. I have been five years mating good sires and dams to produce this kind. Send for pedigrees and prices. Address W. C. Scheibe, Burlington, Wisconsin.

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. **Wm. C. Kirst, Tomah, Wisconsin**

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller West Salem, Wis.

PADDY by SCHOOLMASTER

CHESTER WHITES

C. EVANS by COMBINATION 2d

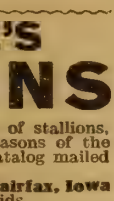
SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. J. Gray, Mt. Hope, Grant Co., Wis.

HORSES.

LEFEBURE'S

BELGIANS

A LARGE and choice collection of stallions, mares and colts for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application. Address
H. Lefebure & Sons Fairfax, Iowa
8 miles west of Cedar Rapids



REG. Percherons. 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds. Can spare 25 reg. mares., 24 reg. Belgian stallions. Priced worth the money. Fast trains. **FRED CHANDLER, R. 7, CHARITON, IOWA.**

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

HERE IT IS HENDRICKS' GREAT POLAND CHINA BOAR OFFERING

HAZEL GREEN, WIS., THURS., SEPT. 28, '16

40 HEAD---THE BEST I HAVE IN SPRING BOARS AND GILTS---40 HEAD

MANY sired by Black Jumbo 221231, the largest smooth boar in Wisconsin. He is a wonderful sire and the boars I am selling have great backs, good feet, nice depth and have that length that many breeders need in their herd.
This is my first boar sale and one of the first ever held in the state and for that reason I am giving you the best I could raise.
A few boars by North Side Wonder, Smooth Price and Long Joe. To sell five choice spring gilts by Black Jumbo out of A Wonder dam (143421).
Can't tell you all the good ones. Just remember it is the best lot of Poland China boars ever gotten together in the state. Come and see Model Major 2d, my latest addition and some boar. There is a catalog for you. Have you received it? Send your address and don't forget the date and place—

FEATURE
Will sell BIG OAKLAND, a senior yearling sired by the noted OAKLAND'S EQUAL and out of A WONDER BELLE by A WONDER 107353. Here's your chance.

HAZEL GREEN, WIS., THURSDAY, SEPTEMBER 28, 1916

NOTICE: If you can't attend in person send your mail bids to T. P. Shreve, Wisconsin Farmer representative. I'll guarantee he will please you. Address him in my care. W. B. Duncan, Auctioneer.

E. W. HENDRICKS HAZEL GREEN, WIS.

POLAND CHINA SWINE.

BIG POLANDS

WAIT FOR SEPTEMBER 28TH
THE DAY I SELL 40 BIG
POLAND CHINA BOARS AND GILTS

MOST of them by BLACK JUMBO 221231, the biggest and best breeding boar in Wisconsin. The best lot of boars ever offered in the state. Let me send you a catalog. I want your name and address. Mention The Wisconsin Farmer. Address
E. W. HENDRICKS HAZEL GREEN, WISCONSIN

MEET ME AT THE FAIRS

SEE MAC'S CHIEF (1,050 lbs.) Also sows that weigh 700 and 800 lbs. I will convince you that we can raise BIG POLANDS that have WORLDS OF QUALITY. Will have a fine assortment of SPRING BOARS FOR SALE. Will show at Iowa, Minnesota, Wisconsin, La Crosse and Omaha. Let's get acquainted.
J. D. McDONALD, NORTH BEND, WIS.

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.
M. MADSON & SONS MADISON, WISCONSIN

The Columbia County Asylum
Will Sell
40 BIG-TYPE POLAND CHINAS
Thursday, October 19, 1916

BOARS and gilts from Columbia Pete, the biggest boned hog in the country. Others from Columbia Wonder, Columbia Orange, Smiley's Big Jumbo and E. W. Hendricks' Black Jumbo. Nothing better ever offered in the state. For catalog write to SUPT. S. C. CUSHMAN, Wyocena, Wisconsin.

SMILEY POLANDS

BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address
WM. SMILEY & SON, ALBANY, WIS.
GILTS RESERVED FOR SALE, FEBRUARY 22

BOARS POLANDS GILTS
SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.
Chas. S. Maltby. Janesville, Wisconsin

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.
Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781
AND
ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address
P. W. YOUNG PROSPER, MINN.

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6 APRIL BOARS

GOOD ones by North Side Wonder and out of 800-lb. sows, at farmer's prices. Address,
J. C. Hendricks, Box F, Hazel Green, Wis.

POLAND CHINA SWINE.

JUMBO'S EQUAL 2D
Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
C. S. FLESCH MT. IDA, WISCONSIN
(Shipping point, Fennimore.)

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING BANGOR, WIS.

SEE THE SPOTTED POLAND EXHIBIT
at Omaha National Swine Show, and State Fairs in Missouri, Illinois, Indiana, Michigan, Ohio

ASK for by-laws, list of members' names, and list of 1916 sales. Association Sale, Crawfordville, Indiana, October 19th. The National Spotted Poland China Record Association, Chas. E. Kurtz, Pres., North Salem, Ind.; Fred L. Obenchain, Sec.-Treas., Bainbridge, Ind.

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.
A. Menke & Sons, R. 1, Markesan, Wisconsin

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L.P. Martiny, Box F, Chippewa Falls, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.
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BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE POLAND CHINA July and August pigs sired by L.'s Big Orange and Fairview Jumbo for sale. Prices from $10 and up. Satisfaction guaranteed. J. Le Roy Larson, Iola, Wis.

When writing to advertisers kindly mention The Wisconsin Farmer.

POLAND CHINA SWINE.

POPULAR PROLIFIC POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write
Olaf C. Olson, Strum, Buffalo County, Wis.

BIG-TYPE POLAND BOARS

READY to ship boars that please. No better breeding and good individuality. Sired by MONSTER BIG BONE by Black Big Bone and KING JOSEPH by Big Joe, also other noted boars. Write or come.
CHRIS KARTMAN - CASSVILLE, WIS.

HAMPSHIRE SWINE.

HAMPSHIRE

SPRING pigs of both sexes and fall boars for sale.
DANE STOCK FARM
Oshkosh Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.
A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE LOMIRA, WISCONSIN

THREE OAKS FARM BERKSHIRES

SERVICE boars and open fall gilts for sale. No more spring pigs left. Will hold brood sow sale March 2d. W. A. FREEHOFF, Waukesha, Wis.

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economica pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

DUROC JERSEY SWINE.

Grand Champion Duroc Boar at Janesville Big Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
B. W. LITTLE - - - JANESVILLE, WISCONSIN

COL.'S CHOICE --- WONDER CHIEF

By King the Col. By Cherry Chief

DUROCS THAT MADE GOOD

YOU have all heard about KING THE COL. and CHERRY CHIEF—your herd is not complete without some of that breeding. My brood sows are large. Let me ship you a spring boar. Guaranteed? Yes. Mention The Wisconsin Farmer and address
DENNIS SHEA - - - MELVINA, WISCONSIN

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUL Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer.
EMMETT COOK & SON - RICHLAND CENTER, WIS.

SEE ATWATER DUROCS

AT MINNESOTA, WISCONSIN, LA CROSSE and OMAHA. See my BIG SOWS of MARION WONDER breeding. Let me show you some young stuff by the CHAMPION LEE'S DEFENDER. Will have the best DUROC herd I ever showed. Visit my pens and see some of the boars I sell in my BOAR SALE, OCTOBER 16TH. I want to meet you; let's get acquainted.
L. F. ATWATER, BANGOR, WISCONSIN "HOME OF BIG DUROCS"

1,000-POUND

BIG COL.

THE HALF-TON BOAR

Chief Defender, litter brother to Disturber. No breeder has two better **Duroc boars.** On October 19th I will sell 40 boars by the above sires. Send a card with your address so I can mail you my catalog. It's worth having.

SEE BIG COL. AT LA CROSSE FAIR

GEO. H. WILLSIE
Prosper, Minn.

DUROCS

KING DEFENDER, 940 pound grand champion at Janesville. Offering fall boars by King the Col. and Chief's Col. Fisher. 50 spring boars, the best I ever owned. Write your wants. See King Defender at Milwaukee.
JOHN L. FISHER JANESVILLE, WIS.

THE WAR

Hasn't affected the prices on

DUROC JERSEY BOARS

MY spring boars are sired by Professor O and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.
M. STOEHR - VIROQUA, WIS.

CEYLON COURT FARM

DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

DUROCS

SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write
John Borchardt & Son, Richland Center, Wis.

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
W. W. Goodrich Ft. Atkinson, Wisconsin

DUROC SPRING PIGS

AND a few sows bred for August and September farrow for sale. Write BURN BRAE FARM, CHAS. A. PETERSON, ROSENDALE, WIS.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
E. W. Higgins Gotham, Wisconsin

DUROCS

SPRING boars by five **Noted Boars.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** a son of the many times **Champion Grand Model,** heads our herd. We sell "boars that please." Write

Geo. D. Sprain & Sons
West Salem, Wisconsin

LINCOLN MODEL

DUROC HERD

My herd will be on exhibition at the
WISCONSIN STATE FAIR
and the leading county fairs. See **LINCOLN MODEL** and his get. Also the big boars by **S. & H.'s COL.,** the largest boar of his age in the state. Will have some good boars and gilts for sale.
SEE MY DUROCS BEFORE YOU BUY
ALBERT L. HYZER
WEST SALEM WISCONSIN

WE SHIP on APPROVAL

Duroc Jersey

BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

BOARS

DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
J. Erwin, Bloomington, Grant County, Wis.

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
Ed Patterson, Jr., Bloomington, Wis.

PRINCE DEFENDER

SPRING and fall Duroc boars and gilts for sale by above boar. Also spring pigs by Royal King 4th and Lee's Defender. Order early, the best will go first. Address
McClurg Brothers Viroqua, Wisconsin

40 DUROCS

BOARS and gilts of the best breeding known, and we guarantee them individually. Single, pairs or trios. E. H. Parker & Son, Janesville, Wis.

SHORT-HORN CATTLE.

AT THE ROYAL

AT THE American Royal Show, Kansas City, Mo., Oct. 5th, 50 high-class Short-horns will be offered for sale—12 bulls and 38 females—selected from prominent herds of the corn belt and including many show cattle. As more than half of the bulls consigned are members of show herds and of the fashionable blood lines, high-class herd bull material is assured. This is one of the most important sales of the year. It will be an opportunity to select top breeding stock. Catalogs will be ready in due time. Address American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago.

RIVERDALE STOCK FARM

SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MILKING

SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little Evansville, Wisconsin

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son Burnett, Wis.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

OAK LAWN FARM

Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son, Beaver Dam, Wisconsin

MARQUART'S

Milking Short-horns

SEVEN bulls ready to go, sired by Quenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
Marquart Bros. Milton Junction, Wis.

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

REGISTERED JERSEY

COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
Ed. Bruins - - Fairwater, Wisconsin

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son Oconomowoc, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Yearling Jersey Heifers

AND bulls of serviceable age sired by Hutzeland King, a grandson of King of St. Lambert's King. **Big-Type Poland China** spring pigs of both sexes for sale. Prices reasonable.
Lorenz Metzler - - New Franken, Wis.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort Tomah, Wis.

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. C. S. Hechtner, Chariton, Iowa.

SHEEP.

Shropshire Rams

DANE has the heavy shearing strain of blocky ram lambs at farmers' prices. Place your order early before stock is picked over. Address
Dane Stock Farm Oshkosh, Wis.

DUROC JERSEY SWINE.

DUROCS THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES AUGUSTA, WISCONSIN

RED POLLED CATTLE.

HEADQUARTERS FOR RED POLLS

IF you want cattle bred for beef and milk, buy RED POLLS. We can supply you. Write.
J. W. Salter & Sons Unity, Wis.

UNDERWOOD

RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD AVOCA, WIS.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin Gotham, Wis.

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

ABERDEEN ANGUS CATTLE.

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. Cassville, Wisconsin
(30 miles up river from Dubuque)

LIVE STOCK AUCTIONEERS.

Have YOU Engaged

AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

HOLSTEIN-FRIESIAN CATTLE.

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. **8 yearling heifers** will be bred if desired. Sired by the **31.17 pound bull, Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pound daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.

Lawrence Rober - Lyons, Wisconsin

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.

GROVE BROS. COLUMBUS, WIS.

THREE REGISTERED HOLSTEIN BULLS FOR SALE

READY for service, sired by Johanna Spoffard Corona 71305. Also bull calves for sale sired by Butter Boy Mink Pontiac 133161 from A. R. O. dams. Chester White swine, both sexes, leading blood lines, for sale. Address

COOK BROS. BURLINGTON, WIS.

A RICHLY BRED JOHANNA BULL

SIRED by the 26-pound bull **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.**

Geo. Gibson - Nashota, Wisconsin

21.37 Pound Son of the 24.56 Pound Bull

DOWNING PONTIAC BUTTERMAN

OUR noted prize-winning sire. Dam of bull for sale, **Downing Pontiac Dairymaid,** a 21.37 pound daughter of **King Hengerveld Pondyke,** that has 2 30-pound daughters. Price $200.00. **19.40 pound bull,** a double great grandson of **King of the Pontiacs.** Price $100.00. Send for extended pedigrees and pictures.

M. W. Downing & Brother, Waukesha, Wis.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt Oxford, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

B. F. Winckler & Sons Medina, Wis.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16 and 33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the year. Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson - Elkhorn, Wisconsin

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen Cedarburg, Wisconsin

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

Breeders Wanting 30-lb. Herd Sires

We Invite Your Attention to

Three Young Bulls

No. 151, calved March, 1916. Sire, Korndyke Segis Johanna 127132, a 38-lb. son of the 40-lb. bull, Johanna McKinley Segis by King Segis, and whose dam, Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68-lb. three year old by a 29-lb. grandson of Hengerveld De Kol. Second dam, a 23-lb. three-year-old by King Pontiac Champion, a 31-lb. son of King of the Pontiacs. Third dam, a 33.86-lb. daughter of De Kol 2d's Butter Boy 3d.

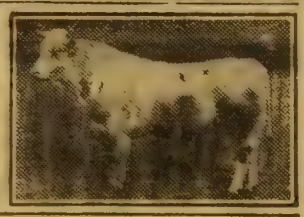
No. 156, calved April, 1916. Sire, King Pontiac Champion, has 41 A. R. O. daughters. The only one tested as a mature animal made over 1,000 lbs. butter in a year. Dam a 31.51-lb. daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O. daughters, two above 30 pounds. Good A. R. O. breeding for several generations.

No. 152, calved April, 1916. Sire, King Pontiac Champion. A 30.38-lb. daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68-lb. cow.

Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

THE 30.90-LB. SHOW BULL NORTH STAR VERA SIR BEETS 97406



AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.

FRED ALBRECHT WATERTOWN, WISCONSIN

2 Yearling Sons of the Richly-Bred Holstein Bull KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Roberts' Fearless Lassie, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-764 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. **Ready for immediate service.** His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.68 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST WEST ALLIS, WISCONSIN

10 Registered Holstein Heifers

14 TO 18 months old, well marked, of good, straight conformation, and ideal dairy type. They are mostly daughters of the richly bred Holstein bull, FOBES WATSON DE KOL 85682, a son of FOBES TRITOMIA MUTUAL DE KOL 2D, and out of untested daughters of ALCARTRA JOHANNA RUE DE KOL 47853, a maternal brother of ALCARTRA POLKADOT. Here is a rare combination of breeding. Will sell in one lot or singly. Prices $125 to $150. Act quickly. Address

MRS. OTTO VOLKMAN JUNEAU, WISCONSIN

450 HOLSTEINS AND GUERNSEYS COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.

EDGEWATER STOCK FARM FORT ATKINSON, WISCONSIN

10 REGISTERED HOLSTEIN COWS FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows.

BONNIE MEAD STOCK FARMS, Randolph, Wis

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.

L. V. Garvens Brookfield, Wisconsin

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons Elgin, Illinois

Holsteins For Sale

REGISTERED Holstein heifer calves $75 each, high grades $18. If you want a good bull or some springers write us.

Findlay Bros. Whitewater, Wis.

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer Kaukauna, Wisconsin

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford Kaukauna, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING SEGIS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE MONROE, WISCONSIN

GUERNSEY CATTLE.

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address

J. D. McAllister Green Bay, Wis.

Registered Guernsey Heifers

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Clovis Stock Farm - Menasha, Wis.

A 25.73-LB. HOLSTEIN BULL

BORN Dec. 27, 1915, well marked; **dam Flora Hesseltje,** A.R.O. record 25.73; dam's dam Aaggie Hesseltje DeKol, A. R. O. record 25.23; sire, **Canary Homestead Frisby,** a son of the 35-lb. bull, **Canary Paul Fobes Homestead,** and out of a daughter of **Homestead Jr. DeKol,** for sale. This breeding ought to interest you. Send for a full pedigree.
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BEAUTY PIETERTJE PRINCE ORMSBY

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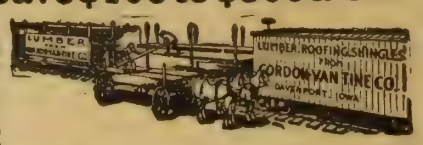

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Questions and Answers.

Valves Need Grinding.

I have a model 17 Chalmers. It has a Rayfield carburetor with high and low speed adjustments. Compression is poor on two cylinders. The motor runs smoothly on high speed, but misses considerably on low speed, and shoots a blue flame out of the air-valve of the carburetor. It is generally hard to start, and when running idle, it will speed up and then slow down, and then speed up again. Is the trouble on account of poor compression, or on account of defective carburetor adjustment?

Answer.—Your trouble appears to be largely due to poor compression and the poor compression is due to leaky inlet valves. Probably the exhaust valves also need grinding. Grinding the valves and cleaning out the carbon will probably remedy the trouble. Carbon accumulations in the cylinders could also cause the trouble by causing preignition.

Auto Will Not Run.

I have a 1912 Flanders 30. I have had it about a month. When I first got it, it ran fairly well; but never did hit on all cylinders. It was rather hard to start without priming. I ran it about a hundred miles and then ground the valves. The car ran well for ten miles. Then I stopped for about two hours, and the engine cooled off. Then I tried to start it. It would start all-right, but would soon stop. After several attempts, I got it running, and it pulled as it never did before all the way home. I let it stand about an hour, and then it acted as it did before. Now if I start it, I have to hitch a team to it and pull it around for an hour. I laid the trouble on the carburetor. The carburetor has no adjustment on the gas—just one on the air valve. Do you think I would get better results with another carburetor?

Answer.—Everything points to poor gasoline or a stoppage in the carburetor, probably by lint or dirt. Water in the gasoline might cause the same trouble. Disconnect the carburetor from the gasoline line and see that the gasoline runs through freely. Then remove the carburetor and clean it thoroughly. Obtain some really good gasoline if possible to try the car out. The ordinary grade of gasoline on the market at present is very poor and is the cause of much starting trouble. Your car being old, no doubt the intake valve stems are loose in the guides. This permits the air to leak into the intake and may cause starting trouble.

Carburetor Trouble.

I have a 1914 Maxwell car, equipped with a Zephyr carburetor. The motor is hard to start after standing awhile, even in warm weather. It runs best with hot air even in summer. Using cold air, the water heats quickly, so that it boils. When starting up the car, it lacks power and fires into the exhaust. It never works well on the first mile drive. It is slow to respond to the throttle. The carburetor works best with the smallest jet. The compression is good, and the ignition is good. How does a car act when there is an air leak in the intake or around the valve stems? Are the valves at fault?

Answer.—Nearly everything you have mentioned indicates that your carburetor is using too much gasoline. The heating of the motor, the backfiring in the muffler and the necessity of using hot air in summertime all indicate that the carburetor is adjusted for too much gas. Since you have already tried the smallest nozzle without sufficiently reducing the amount of gas you will have to lower the gasoline level in the bowl of the carburetor. The float of your carburetor is probably waterlogged. Put in a new float and your troubles may end. If the gasoline level is still too high change the levers so as to close the float valve sooner.

An air leak prevents the adjustment of the carburetor for smooth running at all speeds. Either the motor will run well on low and miss on high or miss on low and run well on high. As a rule, a motor with an air leak will not throttle down well on account of the uncertain mixture. A leak around the valve stems has the same effect as a leak at the manifold. An air leak is easily detected. Squirt a little gasoline around the valve stems and intake manifold joints while the motor is running. If there is a leak the motor will speed up or slow down. If the engine speeds up it is a sign that the mixture is lean.

Charging Magnets.

How much current is required to properly charge the magnets of an automobile magneto, using a six-volt battery and coil? What size wire should be used to make the coil, and how many pounds of wire is required?

Answer.—A great deal depends upon the size of the magnets. The greater the number of turns in the coil the less the current required. For all ordinary cases a coil wound from No. 28 B. S. G. enameled or single cotton-coverel wire should give good results, using about five pounds of wire.

Dynamo and Battery.

I have a private electric lighting plant using a twenty-six-volt, eighty-ampere storage battery. Could I install a thirty-two-volt, 200-ampere battery and charge it with my generator? The generator will produce thirty volts, fifteen amperes at 1,600 R. P. M. At what speed would it have to run to generate twenty amperes? What would the voltage be at this speed? Would the extra speed hurt the generator?

Answer.—Your generator is rather small to charge the thirty-two-volt battery. It could be used if care is taken not to let it become too hot. It would have to be run at a speed of about 2,000 R. P. M. At this speed it should generate about forty volts twenty amperes. The amperage depends upon the amount of resistance in the circuit. The more the resistance the less the amperage. If the generator heats badly put more resistance in the circuit so as to cut down the amperage. The heating is proportional to the square of the amperage. If your generator is well made it should stand a speed of 2,000 R. P. M.

Charging Storage Battery.

I have a Knapp dynamo motor that has a safe capacity of six volts, four amperes. When run at 3,000 R. P. M., it generates eight volts. I also have a six-volt, forty-ampere Thornward storage battery. How can I charge the storage battery with the dynamo? How can I tell which is the positive wire and which is the negative wire of the dynamo? The brushes are both alike. When my battery is partly exhausted, it works like an open-circuit battery. What causes this? How many six-volt, twenty-four-candle-power lights can I run with the battery? How long will the battery last with one charge?

Answer.—The dynamo is rather small to charge the battery. To give the battery a complete charge the dynamo would have to generate eight volts. It would have to run about twelve hours to give the battery a complete charge. The wiring is very simple. Connect the positive pole of the battery to the positive pole of the generator and the negative pole of the battery to the negative pole of the generator, placing a switch in the line to break the circuit. The current of the battery must not be allowed to flow back into the generator, as it might demagnetize the field. Keep the switch open when the generator is not running.

To determine the positive and negative wires of the generator dip the ends of the wires in a bucket of salt water. Bubbles will be given off most freely from the negative wire.

A storage battery stores and liberates electricity by chemical action. This action takes place more rapidly when the battery is fully charged. Your battery is probably somewhat sulphated, due to overdischarge or lack of electrolyte. This accounts for its slow action when partially discharged. Keep the plates well covered with the electrolyte. Your battery would not run more than one twenty-four-candle-power light. One charge might run the light eight hours, but it would not be advisable to run it more than four without recharging the battery.

Paper-white narcissus grows well when set in water in berry dishes with small stones to hold the bulbs in place. Have the bottom of the bulb at the surface of the water when the dish is filled. Keep in a cool, dark place until the roots have formed.

The Wisconsin Farmer

THURSDAY, SEPTEMBER 21, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE FARMER AND THE TARIFF COMMISSION.

I AM in receipt of a letter from my very good friend, Mr. H. H. Gross, the man to whom farmers are indebted (as I pointed out last week) for the passage by congress of the Smith-Lever act, bringing the state agricultural colleges to their doors, and the creation of a non-partisan tariff commission, removing the tariff from politics and insuring a businesslike adjustment of the schedules. Mr. Gross had telegraphed me a day or two before the final vote on the tariff commission was taken in the senate, asking me to wire Senator Cummins, of Iowa, (always an ardent champion of whatever benefits the farmer) and urge him to stand determinedly for the commission and the important provisions for the representation of agriculture, adequate salaries for the commissioners and so on. I complied with Mr. Gross' request, with the result as outlined in his letter to me, which I take the liberty to print herewith in full:

My dear Mr. Pierce: I wish to thank you for your good letter of September 8th and your telegram to Senator Cummins. The senator certainly put up a strong fight for us, he did everything that one could ask.

We have a tariff commission in which no political party will have majority control. It has the broadest powers that can be given it under the constitution. The compensation is less than it should have been. A very mean and unfair fight was made against this. The salaries ought to have been maintained at as high a figure as those on any other commission. However, the president told me he thought he could get the men he wanted at the present salary, and if he does and is fortunate in his selection, this legislation will make history and practically eliminate the tariff from the realm of politics.

I made a hard fight for the recognition of agriculture and labor. Many in the house and senate believed that these two great industries should be recognized. The administration did not approve it, and the ways and means committee were practically a unit against it. This was the line of argument: I discussed it for over an hour with the committee. Of course, you understand, without the approval of the committee, we would have had hard sledding. They said: "Well, who should represent agriculture; should it be the cotton farmer of the South, the stock grower of the West, a man from the corn belt, the wheat belt, etc.?" My reply was that the president had always been able to get a man as secretary of agriculture who represented the entire industry, and I thought there were men big enough in agriculture to take a broad view, who would not take the position simply for the purpose of seeing what they could do for their particular line of work, but what they could do for the whole field of agriculture and the country generally.

I asked the Farmers' National Congress to help along this line, also the National Grange. I was assured by a man who stands close to the president and is supposed to act for him, that the president preferred to have no restrictions of that kind; that he could get a better commission without these restrictions than with them, and that it was his purpose to be fair to all interests.

In arguing for labor, they asked what industry should have the honors, whether the iron workers, the wood workers, those in the textile industries, etc. They said: "Go a step further and the manufacturers should be represented, and what industries in that field should be selected?" You can understand that men who wish to find reasons for not doing a thing can always manage to bring up those that look to be sound on the surface.

It is now up to the president to make the appointments and I hope he will not kill the commission with scientists and school-teachers, but will have a commission broadly representative of all the people —men of affairs who have a grasp of world conditions.

I think Senator Cummins is entitled to a vote of thanks for the splendid fight he made for us.

With high regards, believe me,

Very truly yours H. H. GROSS.

I sincerely regret that the provision for the direct representation of agriculture on the commission was not retained in the bill, but there is nothing to prevent the president appointing such a representative and I earnestly hope this will be done. No man is more entitled to primary consideration when the tariff schedules are made than the farmer, who creates the bulk of our national wealth and who is our invariable anchor in time of financial stress. The president has it within his power to appoint a strong commission of highly representative men, big enough to look at this tariff question in a nonpartisan light and be actuated solely by a desire to bring about the greatest good to the greatest number.

In the meantime, farmers must not forget to whom they owe a debt of gratitude for this important legislation. I am going to ask Mr. Gross to write an article for this paper, giving credit where it is due, so we may all know just who have been our friends, and I can promise this article for an early issue. Mr. Gross is too modest to include himself in any such list, but, personally, I would put his name the very first, for he has devoted his entire time for more than a year to working on this matter. I do not know whether he would consider going upon the commission or not, but if he would accept, he is the very man to head the body. I shall have more to say on this subject later on.

HOW TO BORROW UNDER THE NEW LAW.

LAST week I set forth how the mortgages under the new federal farm loan act are to be paid back, a little bit each year, rather than the full amount on any one certain date. I promised to tell, this week, how farmers, who desire to borrow under the new law, must go about their borrowing. I shall try to make this as plain as possible. In the event there is any point that is not perfectly understood I will appreciate it if my readers will write to me. What we want, and need, is to get this new law thoroughly understood, so as to give it a fair and full trial.

To begin with, at least ten farmers must band together to borrow money under the new law. They need not be friends, acquaintances or even neighbors, although it would be preferable if they were. More can get together for the purpose if desired, but there must be at least ten. They are actuated by a common motive: To secure money on farm mortgages at a low rate of interest (4, 5 or 6 per cent—the law says not more than 6) and for a long time. Now, these farmers call a meeting. It may be held in a schoolhouse, a hall, a church or in one of their houses most convenient to them all. When they come together, they discuss the subject informally and decide to form themselves into an association to borrow money on mortgages. They appoint a committee to draw up the necessary articles of association. These may follow a prescribed form furnished by the federal land bank, or they may be written originally by some farmer present; it does not matter. Having proceeded thus far, the farmers who have joined the association say how much they want to borrow and what land they propose to mortgage as security for the loan. Any farmer who joins the association may borrow any amount ranging from $100 (the minimum) to $10,000 (the maximum). The total to be borrowed by the ten farmers who form the association must be at least $20,000. Having proceeded thus far, the farmer borrowers select three of their number to act as a sort of preliminary appraisement committee. They inspect the farms of all the proposed borrowers and put what they believe to be a fair and just valuation on the premises. Then the articles of association are signed by all the ten farmers forming the association and the appraisement is signed by all the three farmers forming the committee and these two documents are sent to the federal land bank of the district. Shortly thereafter, that federal land bank will send out an appraiser to see if the local appraisement is a correct one, and it will not be long—if everything is found satisfactory—until the money is received and the mortgages executed, to run at least five years and forty years if desired.

There remain a few intermediate steps, however. Each farmer who joins in with at least nine other farmers to form a local association of at least ten members must subscribe for stock in the association to the amount of 5 per cent of the loan he wants. That is, if he wants to borrow $100, he buys $5 worth of stock; if he wants to borrow $5,000, he buys $250 worth of stock, and so on. Thus he becomes a shareholder in the federal land bank from which he secures his loan. This money is not kept by the local association, but is sent on to the federal land bank of the district and stock is issued by that bank for the amount thus sent in. This stock is part security for the loan made by the farmers, but it may (and probably will) pay dividends, so that it will prove a good investment. If the farmer, who wants to make a loan, cannot pay in ready cash for the amount of the stock he must take, the amount will be deducted when the federal land bank sends the money to him on his mortgage. Thus, if he borrows $5,000 and must take $250 worth of stock and does not have the ready money for this, the bank will send him $4,750 ($5,000 less $250) and the transaction will be closed, except as he may receive dividends on his $250 worth of stock from time to time. When he pays off his loan in full, his stock is cancelled and the money returned to him. This stock is in no sense a tax or commission; it is simply so much deposited in the bank, to be returned in full when the loan is paid off.

I have heard the point raised against the new law that farmers cannot borrow unless they guarantee one another's debts. This is wrong. The most that any farmer in any local association can be made to pay, even should the association fail, is 10 per cent of his loan. He has already subscribed 5 per cent in stock, so he cannot be made to pay more than 5 per cent more, no matter what happens. Let me give a specific example. Suppose I borrow $1,000 on one of my farms. I am obliged to pay $50 for stock before I get the loan. Suppose the association to which I belong goes broke, because the farmers, to whom the money was loaned, fail to make their payments on account of drouth or wet weather or grasshoppers, or for any other reason. I can be obliged to pay another 5 per cent of my loan, or $50 more, making $100 altogether. But that is the limit under the law. I cannot be compelled, by any process, to pay another cent. So the risk of joining in with nine other farmers is not as great as might appear, especially in view of the fact that no farmer borrower can secure a loan which is more than 50 per cent of the appraised value of the land and 20 per cent of the improvements thereon.

If I have not made myself perfectly plain, I want to suggest two things: First—that you write to me and tell me what is not clear, so I may give you further details; second—that you write to the Federal Farm Loan Board, at Washington, and ask for their circular No. 2, which is designed to help farmers who want to borrow. And while it will not be possible to make any loan under the new law until the twelve federal banks are located and opened (which will hardly be for four months, at least) the local associations can be organized at once and the applications prepared for the desired loans. It will be a case of "first come, first served," and those who get the preliminaries attended to early will be the first to secure the loans, just as soon as the banks are actually opened for business.

BULLETINS ON HOME TOPICS.

I AM in receipt of a letter from a subscriber who is ambitious to become proficient in domestic science, but who does not know how to set about her task. She writes me as follows:

Dear Mr. Pierce: An article in your paper for August 6th, "Shall She Go to Town School?" interested me very much, especially what you said about the extension work. I am enclosing an envelope that you may send me the names to write to. I am so anxious to be a domestic science teacher. Fifteen years ago when I left school I was doing second-year work at the North Dakota Agricultural College. Since then I have been housekeeping at home. My youngest sister is now in Virginia finishing her school work and I am still at home. How can I continue my studies here?

I have written, giving what information I could and sending my correspondent a collection of bulletins which I happened to have on hand, covering a variety of domestic science topics, which can hardly fail to instruct and interest her. In this case, as in all others, I am only too glad to be of whatever service I can, for I hold this to be one of the duties of a publisher—to aid his readers in getting the best there is in life and in satisfying their laudable ambition to get ahead in the world.

I want to take this occasion to advise all my readers to get in touch with the extension department of their state agricultural colleges. Now, for example, in regard to this domestic science subject on which my correspondent writes me. I went through my files hurriedly, and I find that practically every state here in the grain belt has issued an assortment of bulletins covering a variety of subjects which can hardly fail to interest the women members of the farm household. Here, for instance, is Wisconsin, with many interesting bulletins. Here is North Dakota, with bulletins on "The Rural Hot Lunch" and "Preservation of Food in the Home." Here is Minnesota, with bulletins on "Bread Making" and "House Heating." Here is Iowa, with bulletins on "Prevention of Disease" and "Home Furnishing." Here is Nebraska, with bulletins on "Rural Clubs for Women" and "Lunches for the Rural School." Here is Missouri, with bulletins on "Country Hams and Bacon," "Home Making," "Canning in Glass by the Cold-Pack Method," and so on and on. Likewise, I found in my files a collection of bulletins from the United States Department of Agriculture on such subjects as these: "Beautifying the Home Grounds," "House Ants—Kinds and Methods of Control," "Canned Fruit, Preserves and Jellies—Household Methods of Preparation," "Canning Tomatoes at Home," "Food for Young Children," and so on. All these bulletins are to be had without cost. Would it not be well for every farm household to be well supplied with them? I think so.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

The 1916 Wisconsin State Fair.

WISCONSIN has made a long stride toward a real state fair and exposition. At the time this is written the detail figures of cost and receipts for the 1916 state fair are not available, but weather conditions may cause a financial loss. But this is not material. The state fair should be continued and improved even if it is run at a loss. It is an educational institution worth more than it has ever cost the state and if succeeding fairs are to be as great an improvement as the 1916 fair was over its predecessors, surely we can afford to make some investment for the great value which these expositions will be to the agricultural and live stock interests of Wisconsin.

The 1916 fair was a clean show of high quality in every department. The raucous, suggestive "Pike" attractions were missing. Wisconsin has accomplished something in getting rid of low-grade side shows which have had space on the ground for years until this fair. Still there was plenty of amusement of a better order, and sensational aeroplane flights, bolloon leaps, good racing, fireworks, etc.

The stock show was better than ever before, quality standing out as the prominent feature. There were larger stock shows on the fair circuit this season but none better. The dairy show especially was a strong indication of the improvement of breeding in this state. The beef show was not large but the individual animals would show up well and give keen competition for the best ribbons at any of the fairs. The hog show was larger than Wisconsin has even seen and hogmen taxed the capacity of the new barns the first year. Already there is need of more room. The sheep show was also housed in new quarters this year and splendid animals were shown. In the poultry division about 4,000 birds were exhibited, putting the Wisconsin show second only to New York. Wisconsin is a good state for poultry, the climate being ideal and markets the best. In the dairy products division the exhibits were cut short by recent dry weather, but the quality was above that of last year. The county exhibits, twenty-seven in all, were of an exceptionally high order, and the bee and honey department was much larger and better than in previous years. Although the horticulture department was given more room than formerly it did not have enough. The automobile show was much superior to that at the 1915 fair. The University of Wisconsin exhibit was the best that has been shown at any fair. The educational and boys' and girls' sections were inspirational, and the foundation has been laid in these departments for big things at future fairs. Special attention was paid to women's work, pure foods and health topics. The machinery exhibit was interesting and featured by many exhibits of Wisconsin manufacturers.

The fair ground was in fine condition. The new grand stand accommodates about double the number of people who could be seated last year. The grounds were well cared for and Secretary Remey had numerous signs directing visitors to various exhibits and departments. There was an abundance of good music and splendid order. Wider walks and more of them are badly needed at the grounds. It seems impossible to have a fair without some rain and this might as well be provided for. Large and permanent quarters for the main exhibits of the fair are necessary. The exposition grounds should be in such shape as to cause a minimum of discomfort in bad weather.

The success of the fair this year, and its superiority in practically every department over previous fairs, is due to the energetic work done by C. P. Norgord, commissioner of agriculture, and C. E. Remey, secretary. The fair board has been active in all this work and is entitled also to credit. The members of the fair board are as follows: Frank Johnson, Darien; C. W. Harvey, Beaver Dam; E. J. Roethe, Fennimore; Thomas Saxe, Milwaukee; R. J. White, Milwaukee; G. N. Mihils, Fond du Lac; H. D. Griswold, West Salem; B. F. Wilson, Wausau; Robert McDowell, Oconto; L. I. Roe, Stanley; W. M. Rowe, Sarona.

Back of the success of any large fair must be the work of the superintendents of the various departments. The men and women who had this work in charge in Wisconsin this year were capable and energetic and to their untiring efforts a great deal of the success is due. The superintendents in each department were as follows:

Administration Bldg.—Oliver E. Remey.
Admissions—A. H. Jenson, Edgerton.
Agriculture—E. L. Luther, Madison.
Amphitheater Arcade—D. W. Larkin, Sturgeon Bay.
Amusements—Thomas Saxe, Milwaukee.
Automobiles—B. J. Ruddle, Milwaukee.
Bees and Honey—N. E. France, Platteville.
Cattle—C. W. Claflin, Muskego.
County Exhibits—E. L. Luther, Madison.
Dairy—Fred Marty, Monroe.
Dept. of Health—F. W. Luening, Milwaukee.
Education—G. W. Davies, North Freedom.
Forage—E. T. Hayhurst, Watertown.
Grand Stand—J. S. Miller, Madison.
Grounds—M. J. Sweeney.
Horses—W. K. Caldwell, Morrisonville.
Horticulture—N. A. Rasmussen, Oshkosh.
Machinery—J. A. Chinnock, Hudson.
Physician—J. R. Newman, Madison.
Poultry-Pigeons—G. W. Hackett, North Freedom.
Privileges—C. W. Harte, Watertown.
Publicity—J. S. Smith, Milwaukee.
Public Safety—Capt. W. F. Mehl, Milwaukee.
Purchasing Agent—M. F. Blumenfeld, Madison.
Sheep—Ira M. J. Chryst, Hudson.
Speed—R. J. White, Milwaukee.
Swine—James Dillon, Mondovi.
Transportation—A. W. Kalbus.
Veterinarian—Dr. O. H. Eliason.
Women's Rest, Hospital—Mrs. H. E. Stadler, Waukesha.
Woman's Work—Mrs. V. W. James, Eau Claire.
Young People's Clubs—T. L. Bewick, Madison.

Wisconsin Farmer Cups Go to North Bend.

THE WISCONSIN FARMER has been making an effort to stimulate interest in the hog business in Wisconsin and this year we offered silver cups to the winners in the Poland China futurity class and the exhibitor of Durocs who showed the best litter of four pigs. These cups were awarded to J. D. McDonald, of North Bend, winner of The Wisconsin Farmer trophy last year, and J. W. Thomas, also of North Bend. Mr. McDonald is a Poland China breeder and Mr. Thomas prefers the Durocs. The Wisconsin Farmer is pleased to note that the exhibit of hogs this year was the largest in the history of the Wisconsin State Fair. There is every reason to believe that the show will be even larger and better next year.

Wisconsin Potato Growers' Convention.

THE 1916 state convention of the Wisconsin Potato Growers' Association will be held November 21st-24th at Eau Claire. Premium lists, rules on exhibits, score card, directions for selection of stock and for arrangements of county exhibits and exhibits in school classes were sent out by Sec. J. G. Milward, of Madison, last week. Copies of these announcements may be had by addressing Mr. Milward. Plans have been completed for the entertainment of the show. This has not been a very good potato season, and the recent frosts have done some damage, but it is a good season in which to make a study of the various problems which the potato grower has to go up against in all kinds of weather. Eau Claire is centrally located, and easily accessible on the leading roads of Wisconsin. The city is well supplied with good hotels and will be able to entertain the show and visitors in good shape. Because of the activity of the Wisconsin Potato Growers' Association, Wisconsin has come to the front as a potato growing state and the show at Eau Claire this year will without doubt be the largest potato show in the country. Wisconsin leads all states in the Union in community growing of standard market varieties, in official seed inspection and in organized field work. This work is supported in twenty-six counties. The potato is not only a good crop for the settler but also for the older farmer, provided he will interest himself in seed selection, proper cultivation, a determined fight on insects and diseases, and systems of marketing standard varieties by community societies. It is becoming possible under the direction of the Wisconsin Potato Growers' Association to take this crop out of the haphazard class and make it pay regularly substantial profits.

Increased Use of Concrete on Farms

A BULLETIN has been issued by the Iowa Experiment Station discussing in an interesting way some uses of concrete on farms, especially where permanent construction is desired. According to this bulletin, concrete offers a building material which is permanent, sanitary, reasonably low in first cost and very low in upkeep expense. Furthermore, concrete does not require expert workmen to handle it successfully, as the farmer can do his own concrete work at odd times and thus save considerable in labor cost. There are right and wrong ways of performing every farm task and the same is found true in the making of concrete.

A few precautions must be taken, according to this bulletin, if good concrete results. The proper proportions of sand, coarse stone and cement is of first importance, though it goes without saying that good products must be used at all times. Then there is the matter of mixing, which must be thorough, and the mixed concrete must be put in place properly re-enforced where necessary.

Good sand and cement and clean water are absolutely necessary in order to make good concrete. It is not practical for the farmer on the average job to test his cement. In most cases it would be unnecessary, because the cement which is made by the leading companies is reliable. He should see that the cement is stored in a dry place and that there are no lumps in it. A lump usually means that some moisture has reached the cement and it has started to set. The lumps should be thrown out or the cement discarded.

More often the sand is poor rather than the cement. The tendency is to use too much very fine sand. Fine sand requires more cement and is more apt to be dirty than coarse sand. The sand should be clean. Dirt prevents the bond between the sand and cement. The presence of dirt can sometimes be told by the appearance of the sand. Some of the sand may be rubbed between the hands and if it makes the hands dirty, it is probably too dirty to use. Another common test is to pour into a tall glass jar or tube five inches of sand and fill with water. After this is thoroughly shaken, the silt or clay settles on top of the sand. If there is more than one-fourth inch of clay, the sand is too dirty to use. Sometimes the gravel which is being used has stones which are nothing more than hardened clay, which may be broken under pressure of the hand. This would make poor concrete, because concrete cannot be any stronger than the weakest material put into it. Porous stone will absorb moisture and then when it freezes will swell and crack the concrete. A great many cracks in concrete are caused by the poor quality of stone which is used. Both the sand and the stone must be clean and hard if first-class concrete is to be expected.

Leaves, roots and other organic matter should be removed from the sand before mixing. Where the sand has been scooped up from the ground, care should be taken to see that no dirt is scooped up with the sand.

It is a rather hard job to wash sand unless specially prepared to do so. A little may be washed by the following method: Build a platform of boards, giving them a slope of about one foot in twelve. At the lower end and the side, nail six-inch boards on edge. Spread the sand evenly over the platform and wash with a hose. As the sand washes down to the lower end of the platform, the clay or silt is taken out and passes off with the water. It is better to get clean sand in the first place than to try to wash very much by this method.

Clean water is necessary for good concrete. The use of water full of green scum from a pond or stock tank is to be condemned. Water that is fit for drinking is fit for concrete work.

The correct proportion of sand, cement and stone to use is very important in the making of concrete. Proper proportioning increases the strength of the concrete and also effects a saving in cement, which is usually the most expensive material. The amount of cement to use is sometimes based upon the amount of voids or air spaces in the sand. Fine sand will have from 40 per cent to 50 per cent voids and, therefore, will require one-half cement or a 1:2 mixture. But a 1:2 mixture is too expensive for ordinary work, so we use coarse stone or gravel to cheapen the mixture. The sand and cement will fill in the air spaces of the gravel and make a solid concrete. A 1:2:4 mixture means one part cement, two parts fine sand and four parts gravel. The value of using gravel or coarse stone is that it strengthens the concrete and cuts down the cost.

The danger of using gravel just as it comes from the bank is twofold; first, there is not, as a rule, enough coarse material in it, and, second, the gravel is not uniform. Good results cannot, in general, be expected from bank gravel or fine sand. In screening out bank gravel, two screens are used. All that passes a one-fourth-inch mesh is called sand. The other screen is used to reject everything above a certain size. For line posts use nothing that will be caught on a three-fourths-inch mesh screen, while, for foundation, as large stones as three-inch may be used. These two screens separate the material into sand and gravel. It can then be mixed in the proper proportions. The following table gives the proportions recommended for the different classes of work:

A 1:2:3 mixture for—
- One-course barnyard pavements.
- One-course floors, walks and roofs.
- Fence posts, sills and lintels.
- Water troughs and tanks.

A 1:2:4 mixture for—
- Re-enforced concrete floors, beams and columns.
- Engine foundations and work subject to vibration.

A 1:2½:4 mixture for—
- Building walls above foundation.
- Silo walls.
- Base for two-course pavements.

A 1:3:5 mixture for—
- Basement walls and foundations.
- Base of two-course sidewalks and floors.
- Mass concrete footings.

There are fairly accurate methods of determining the voids in sand and coarse materials, but, as a rule, the farmer does not care to take the trouble to do this. He prefers to use the proportions which have been found to produce good results in practice.

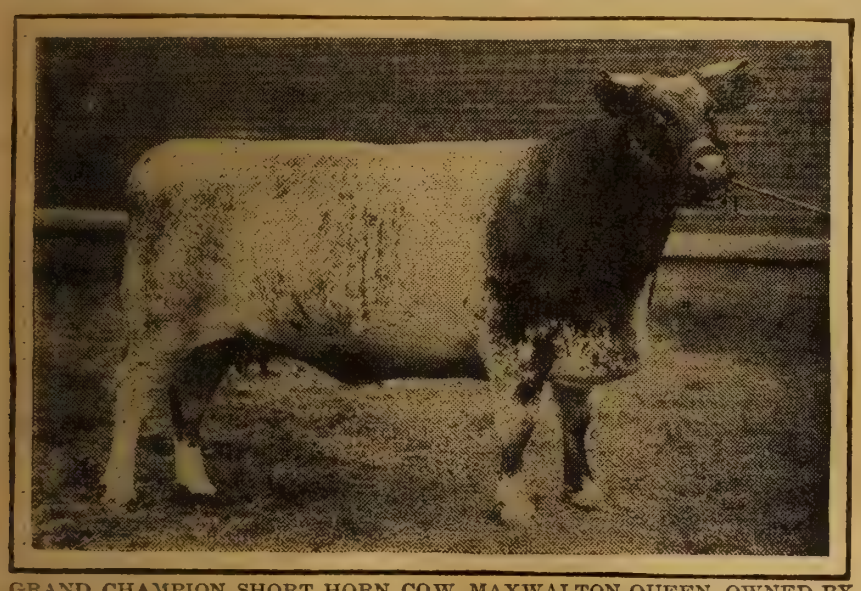
STATE FAIR SETS NEW RECORD

Best Fair in the History of Wisconsin and a Total of 175,000 People Passed Throug the Gates. The Fair Lacked About $12,000.00 of Making Expenses This Year.

MOST OF THE FARMERS WHO VISITED THE WISCONSIN FAIR CAME IN AUTOMOBILES.

THE Wisconsin 1916 State Fair passed into history last week. It was the best exposition of live stock and agricultural products the state has ever seen. The fair was featured by high quality of displays in every department, by an increased number of exhibits in every department except one, and by a clean, moral, educational atmosphere. For the first time in years and, best of all, a "pikeless" fair netted a larger return from the concessions than was received last year, with all the objectionable features included. The 1916 exposition was open to the world in the live stock departments. There were a few outside exhibitors, but Wisconsin stockmen took most of the money in premiums.

The fair cost approximately $120,000. The attendance was 175,800, as compared to 125,666 in 1915. This gain of 50,000 in attendance represents the difference between the fair last year and this year. The biggest day this year was Thursday, when 65,705 people passed through the gates. There were about 8,000 cars inside the grounds on Thursday. A large majority of people, both from city and country, came by automobiles. The railroad transportation to and from the fair is not nearly so important a matter as in former years. With good weather and plenty of gasoline, at reasonable rates, the fair could almost be made a success without railroads. This is not said to minimize the importance of the railroads, which gave fine service to and from Milwaukee. Of course, practically all the exhibits came by freight.



GRAND CHAMPION SHORT-HORN COW, MAXWALTON QUEEN, OWNED BY CARPENTER & CARPENTER, BARABOO, WIS.

SENIOR CHAMPION HEREFORD BULL, MAPLE'S LAD 56TH, OWNED BY J. C. ROBINSON & SON, EVANSVILLE, WIS.

there was no "pike." There were no attractions of any kind which might be called objectionable. It has previously been maintained that the lure of the "pike" was necessary to attract the crowds to the state fair. Secretary of agriculture, Mr. C. P. Norgord, and his associates and co-workers have proved that the contrary is true, for those who wanted to sit in the grand stand. There was really only one good day for a grand stand crowd, and on that day the race course was wet and very heavy. Because of these conditions the receipts in the grand stand were much less than they should have been. The fair will cost the state of Wisconsin between $10,000 and $12,000. This sum represents the

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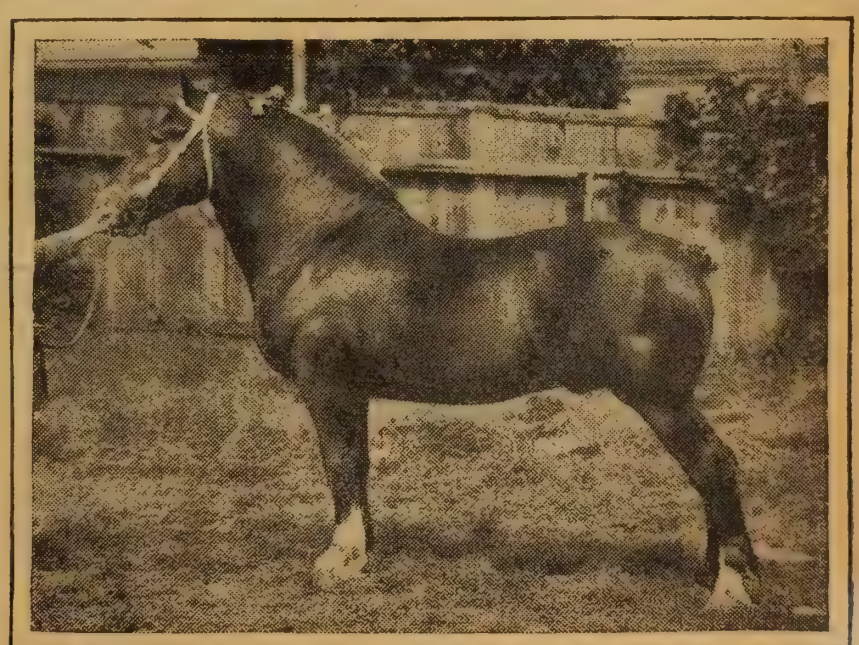
We have never known a state fair to have so many different varieties of weather. Monday was children's day and there were almost 43,000 people on the grounds. The weather conditions were favorable. Tuesday a light, drizzling rain fell throughout the entire day, and the attendance dropped to 11,003. Wednesday was a hot day, with rain threatening in the afternoon. The attendance was 28,071. The high mark of attendance was on Thursday, when 65,705 were registered at the turnstiles. The weather was partly cloudy. Late in the afternoon there was a brisk wind. The weather was decidedly cold on Friday and Saturday; so cold as to be uncomfortable

CHAMPION SHROPSHIRE RAM, OWNED BY ARTHUR BROUGHTON, ALBANY, WISCONSIN.



GRAND CHAMPION PERCHERON STALLION, CALCULATOR, OWNED BY HARVEST FARMS CO., MAYVILLE, WIS.

difference between the cost of the fair and the receipts. The receipts at the gate last year were $35,152.75. This was for five days. The receipts this year at the gate for seven days were $58,726.25. As usual, there is only one element to blame for the failure to make expenses and that is the weather. The fair was well worth seeing and it was clearly demonstrated that people were anxious to see it.

Everything considered, the fair has made splendid progress under the present management. It is now sufficiently established to warrant further improvements on the grounds and more buildings of a permanent character. It was something of a surprise to find this year that the new hog barns were not large enough to take care of the show. The hog exhibit has outgrown its quarters the first year. There were about 2,000 hogs exhibited at the fair. The sheep exhibit included about 700 head. There were 850 cattle in all departments and about 400 horses. The poultry show numbered 4,000 birds, and the county exhibits included more than one-third of the counties of the state. With such great interest in agriculture and live stock matters it is apparent that the fair must go on and be enlarged so that it may fairly represent the interests of a great state like Wisconsin. Sec. O. E. Remey advises us that $25,000 will be available the coming year for improvements about the grounds. One problem which demands attention is that of drainage. It having been demonstrated that we nearly always have rain during the Wisconsin State Fair, there remains but little to be done but to prepare for rain. It is very inconvenient to get about the grounds in wet weather, especially about the live stock barns. Permanent walks should be laid and these should be wide enough to accommodate large crowds. It may be advisable to have a covering over the walk connecting the judging pavilions and some of the stock barns. A large percentage of those who are directly interested in live stock will come to the fair whether it rains or not, and every effort should be made to accommodate them. The fencing about the grounds will be completed during the coming year and $25,000 will be expended on a poultry building.

The Wisconsin Farmer this week publishes detailed reports of the several departments of the fair, including the live stock awards, awards in the agricultural, horticultural, poultry, butter and cheese and educational departments. These matters are handled separately and need not be given further mention here.

Mr. C. P. Norgord, secretary of agriculture, said to a representative of The Wisconsin Farmer that he believes the workers in charge of this year's fair accomplished everything which could be expected with the funds which they had at their command. Another section has been added to the grand stand since the last fair, making the seating capacity now 12,000, and another is still to be added before the original plan is carried out. But the Wisconsin fair has been unfortunate in having bad weather and it has never been possible to cash in to any considerable extent on the grand stand. Good racing is always provided, but horses can't make much time in the mud and spectators will not pay extra for seats when rain is falling upon them.

We doubt if any company of men have ever given such conscientious personal attention to the details of the state fair as Mr. Norgord and his associates did this year. All members of the board and all superintendents and other helpers worked harmoniously with Mr. Norgord and the result was apparent in a better organized state fair in all departments.

The added room in the new grand stand made it possible to house the splendid exhibit of the University of Wisconsin, which was formerly placed in the dairy building. The University of Wisconsin did herself proud at this fair. The college of agriculture exhibit was in charge of L. F. Graber and included a large part of the exhibit shown last winter at the Panama-Pacific Exposition. Free moving pictures conducted by the university and other special attractions were of great interest, especially on the rainy days. Wireless telegraph instruments and exhibits of the federal forestry division were visited by many of the state fair crowd. The highway commission had a special exhibit on the grounds and the fishery exhibit was an object of special attention as usual.

Music and special attractions were almost always in full swing for the entertainment of the fair visitors. Mr. Thomas Saxe, of Milwaukee, was in charge of this department of the fair and as an amusement man of long experience he accomplished more than any other member of the board would have been able to do. One of the special musical attractions was Thaviu's Italian Band, of fifty musicians. This band opened and closed the Panama-Pacific Exposition. The Cuba City, Wisconsin, band also gave concerts on the grounds and a number of other smaller organizations and orchestras were used. The vaudeville show included about twenty acts, all of which were of a high order.

Mr. Joseph S. Smith, editor of the Wisconsin Motorist, was in charge of publicity for the Wisconsin Fair, and he got splendid value from the appropriation of $10,000, which was allowed his department. Mr. Smith was also very active in securing information for newspaper men who reported the fair. While The Wisconsin Farmer editors make up their own reports of awards in every department, we appreciate the service which a man of Mr. Smith's caliber can give to the newspapers which are obliged to get their reports out in a few hours.

The farm paper editor looks at the state fair as an educational institution and as a reflector of the live stock and agricultural conditions of the state. Thus, in the dairy divisions this year there was a falling off in exhibits because of the short pastures of the past few weeks. Last year we had a poor showing of corn at the fair, due to the wet and cold weather. This year there was some splendid 1916 corn on display. The corn was well matured. Last year stockmen were afraid of quarantine, and outside exhibitors were barred, but this year no such feeling existed and a splendid stock show in every department was the result. One of the surprising things in connection with the fair was the splendid exhibit of fruits in a year when fruits have not yielded as they did last season.

The city of Milwaukee has apparently awakened to the opportunity which is presented by a state fair and exposition. Had it not been for the loyalty of Milwaukee people, the state fair would have lost much more money this year than it did. Milwaukee people aided in attractions down town, including parades of decorated automobiles, fireworks, etc., and these were greatly appreciated by visitors.

A fair beginning was made this year in the department covering health and foods, under the direction of Fred W. Luening, deputy commissioner of the Public Health, in Milwaukee. Exhibits of bedroom, bathroom and kitchen furniture and arrangements were shown and literature given out on the subject of sanitation. Air, sunshine and better foods were emphasized. There is room for expansion in this department and The Wisconsin Farmer would like to see a woman's building erected, in which special quarters should be provided for health and food exhibits and for a baby welfare exhibit. The Wisconsin State Fair should have a baby show, in which our best along this line are exhibited and judged. We understand the management of the fair has had this up for consideration, but has been obliged to defer action, because of lack of a suitable place. In another year, or two years at most, we hope to see these matters given wider attention.

Wisconsin has long been a great timber state and our lumber interests are still very important in the commercial life of the state. Visitors at the fair were very much interested in the exhibit of the associated lumber companies. These people are prepared to furnish farmers with plans for almost any kind of a farm building, and they have statistics to prove the life of Wisconsin woods which have been used for building material. The exhibit of the lumbermen of the state was one of the most interesting on the grounds, and, we have no doubt, the literature handed out will result in a livelier trade in the state along these lines. It is claimed that wood, as a building material, has not advanced in price in several years, while the finish and quality of the product is being improved.

BEST DISPLAY BEEF CATTLE

Suggestion of Cover Over the Street From Cattle Barns to the Judging Pavilion Is Made by Wisconsin Farmer Writer.

LOVERS of beef cattle were greeted by the most pleasing sight they have ever seen in the big cattle pavilion at the Badger State Fair grounds this year. It has been the custom in the past few years for one to see nothing but the milk breeds when entering the main entrance, but this year things took on a new appearance. Instead of the beef cattle being crowded into one corner, or allowed to seek lodgings outside in improvised sheds, they this year filled about half the cattle barn, and a look in the main door revealed the beautiful White Faces from three of the good herds in the country. The writer remembers only three or four years ago, when a few Herefords were on show at Milwaukee, that some of the authorities said that the big barn would soon have to be turned over entirely to the dairy breeds. Dairy cattle, of course, predominated this year, but the showing of beef cattle looked like olden times, and never has the Wisconsin State Fair had as strong a showing of Herefords and Angus. The Short-horn show might have been stronger, but Wisconsin has at least four of the best showmen in the middle West circuit, and they were true to their home state and made an excellent showing. This is a young Short-horn year all the way through, and the showing of older cattle at Wisconsin was light, but the young stuff was excellent. A cover over the street from the cattle barn to the pavilion would add much to the convenience of the cattle men, especially when a general rain such as fell Tuesday is falling.

SHORT-HORNS.

The Short-horn exhibit was a Wisconsin show entirely. Last year the isolation caused by the fear of foot-and-mouth kept out some exhibits of Short-horns. This year no such barrier existed, but for some reason no outside exhibitors appeared. Wisconsin was once a Short-horn state. Wisconsin people still show a favorable attitude toward the cosmopolitan breed although it does not enjoy the great popularity it once did in the Badger state. The show was not large, but it was attractive. Fewer "fagenders" appeared this year than last. Practically all of these cattle found their places at Hamline last week and with few exceptions placings ran about the same as at last week's meeting. Very little aged stuff appeared at any of the shows this year. Young cattle had their inning. So it was at Wisconsin. Carpenter & Carpenter and Anoka Farms brought out their aged bulls in vigorous breeding condition. These two bulls along with Griswold Brothers' aged bull, constituted the aged bull class where Imp. Lord Cullen captured the blue and had no competition for senior purple rights. He was defeated, however, for grand champion honors by Good Stamp from the Anoka herd, the senior bull calf that was conceded premier honors at Hamline last week.

Grand champion female honors quite rightly went to Maxwalton's Queen, Carpenter & Carpenter's aged cow. She could very comfortably and without injustice have carried at least one purple ribbon before this week. Herr Brothers & Reynolds carried off junior female honors on the junior yearling heifer, Duchess' Last, a sweet heifer with true lines, an abundance of quality and beautifully balanced. She could have carried more flesh and weight and might well have stood higher a week ago.

The exhibitors: Anoka Farms, Waukesha, Wis.; Carpenter & Carpenter, Baraboo, Wis.; Griswold Bros., Livingston, Wis.; Herr Bros. & Reynolds, Lodi, Wis.; Eben E. Jones, Rockland, Wis.

Judge, W. A. Dryden, Brooklin, Ont., Can.

The awards:

Aged Bull (3 shown)—1st Carpenter & Carpenter on Imp. Lord Cullen; 2d Anoka Farms on Imp. Rusper Champion; 3d Griswold Bros. on Hopeful Sultan.

Senior Yearling Bull (2 shown)—1st Carpenter & Carpenter on Sultan Mine 2d; 2d Griswold Bros. on Kintore.

Junior Yearling Bull (4 shown)—1st and 4th Herr Bros. & Reynolds on Royal Choice 2d and Ruby's Archer; 2d Anoka Farms on Village Archer; 3d Griswold Bros. on Clifton Chief.

Senior Bull Calf (8 shown)—1st and 2d Anoka Farms on Good Stamp and Lavender Stamp; 3d and 5th Herr Bros. & Reynolds on Ruby's Knight and Conformation; 4th and 6th Carpenter & Carpenter on Collynie Cullen 2d and Collynie Cullen; 7th Jones on Viscount Cumberland.

Junior Bull Calf (6 shown)—1st and 2d Anoka Farms on Kilblean Champion and Augusta's Sultan 2d; 3d and 6th Jones on Collynie Cumberland and Admiral Cumberland; 4th Carpenter & Carpenter on Collynie Cullen 3d; 5th Herr Bros. & Reynolds on Royal Ruby.

Aged Cow (5 shown)—1st and 4th Carpenter & Carpenter on Maxwalton Queen and Royal Queen; 2d Griswold Bros., on Village Maid 2d; 3d Anoka Farms on Beatrice 8th; 5th Jones on Verbena of Oakdale.

Heifer 2 Years and Under 3 (2 shown)—1st Jones on Crescent Cumberland; 2d Anoka Farms on Brahk's Anoka.

Senior Yearling Heifer (3 shown)—1st Carpenter & Carpenter on Collynie's Best; 2d Herr Bros. & Reynolds on Lady Holly; 3d Griswold Bros. on Pearlette.

Junior Yearling Heifer (6 shown)—1st Herr Bros. & Reynolds; 2d and 6th Jones on Jubilee Cumberland and Crystal Cumberland; 3d Carpenter & Carpenter on Collynie Mysie; 4th Anoka Farms on Anoka Augusta 2d; 5th Griswold Bros. on Broadhooks Queen.

Senior Heifer Calf (11 shown)—1st, 2d and 3d Anoka Farms on Anoka Blossom, Anoka Clipper 3d and Anoka Brahks; 4th, 5th, 6th and 7th Herr Bros. & Reynolds on Goldie's Ruby, Rare Gift, Ruby's Garland and Village Princess 6th; 8th Carpenter & Carpenter on Collynie Sultana 2d.

Junior Heifer Calf (8 shown)—1st and 2d Anoka Farms on Lovely Anoka and August Anoka 3d; 3d Jones on Collynie Belle; 4th, 5th and 7th Carpenter & Carpenter on Collynie Mint Drop 2d, Sadie and Collynie Broadhooks; 6th Herr Bros. & Reynolds on Lancaster Maid 3d; 8th Griswold Bros. on Cumberland Rose.

Senior Champion Bull—Carpenter & Carpenter on Imp. Lord Cullen.

Junior and Grand Champion Bull—Anoka Farms on Good Stamp.

Senior and Grand Champion Cow—Carpenter & Carpenter on Maxwalton Queen.

Junior Champion Female—Herr Bros. & Reynolds on Duchess' Last.

Aged Herd (1 shown)—1st Anoka Farms on herd headed by Imp. Rusper Champion.

Young Herd (4 shown)—1st Herr Bros. & Reynolds; 2d Carpenter & Carpenter; 3d Jones; 4th Griswold Bros.

Calf Herd (4 shown)—1st Anoka Farms; 2d Herr Bros. & Reynolds; 3d Jones; 4th Carpenter & Carpenter.

Get of Sire (4 shown)—1st Anoka Farms on get of Sultan Stamp; 2d Herr Bros. & Reynolds on get of Master Ruby; 3d Jones on get of Prince Cumberland; 4th Carpenter & Carpenter on get of Imp. Lord Cullen.

Produce of Cow (4 shown)—1st Herr Bros. & Reynolds on produce of Village Princess 5th; 2d Anoka Farms on produce of Sinnissippi Broadhooks; 3d Carpenter & Carpenter on produce of Bampton Leaflet; 4th Jones on produce of Golddust Crescent.

HEREFORDS.

The 1916 showing of white faces at Milwaukee was undoubtedly the strongest turn out of this famous and popular beef breed ever seen at a Badger State Fair. The strong string from La Vernet Stock Farm fresh from the sharp conflicts in strong competition at Des Moines and Hamline was met here by the well-fitted and excellent turn out from the Maples herd of J. C. Robinson & Son, of Evansville, Wis. This is the first state fair at which the Maples herd was shown this fall and they up-

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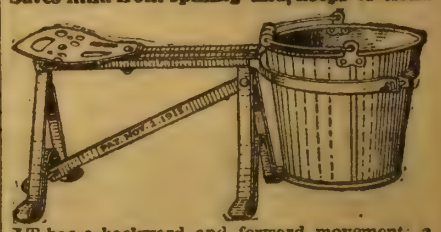

IT has a backward and forward movement; a sliding seat; and a swinging pailholder; adjustable to fit any ordanary sized milk pail. You can adjust the heighth of the pail up or down. It is built of steel and will last a lifetime. Big Seller. Every farmer wants it. PRICE $1.75. We want AGENTS. Write for our Special Proposition.
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held the honor of the home state by capturing both of the premier purple ribbons. The show was made better by the addition of the well-fitted string brought out by the veteran breeders, C. A. Watson of Illinois.

Mr. Dryden had no easy job on his hands in some of the classes which were close. He objected strongly to over ripeness, softness of flesh and gaudiness at the pin bones. Robinson's two-year-old bull, Maples Lad 56th, was quite easily first in class, but had more of a rub in defeating Vernet King 4th for senior champion honors. The junior bull honors went to the senior yearling, Vernet Prince 31st that was defeated by the senior champion for premier honors.

Some real dope was upset in the female classes. In the aged cow class Vernet Queen 8th, the up to then undefeated animal that had so far in 1916 taken two grand champion ribbons—at Des Moines and Hamline—was relegated to fourth place here and her stable companion, Maple Lass 28th, bore away the blue. Mr. Dryden called attention to the favorite's gaudiness and her softness of flesh. The senior and grand champion female of the show was uncovered in the two-year-old heifer class when Maple's Lass 38th, from the Maples herd was considered good enough to be placed above Vernet Princess 23d after much consideration on the part of the judge. Vernet Princess 23d took the blues in strong competition at both Des Moines and Hamline, but the Robinson heifer is some two-year-old Hereford heifer. It may be interesting to watch the future placings of these two classes. La Vernet's senior heifer calf, Vernet Princess 42d was made junior champion female.

The exhibitors: La Vernet Stock Farm, Jackson, Miss.; J. C. Robinson & Son, Evansville, Wis.; C. A. Watson, Apple River, Ill.

Judge, W. A. Dryden.

The awards:

Aged Bull (1 shown)—1st La Vernet Stock Farm on Vernet King 4th.

Bull 2 Years and Under 3 (4 shown)—1st and 2d Robinson & Son on Maple's Lad 56th and Maple's Lad 61st; 3d Watson on Gay Master.

Senior Yearling Bull (2 shown)—1st La Vernet Stock Farm on Vernet Prince 31st; 2d Watson on Masquerador 7th.

Junior Yearling Bull (4 shown)—1st Robinson & Son on Maple's Lad 76th; 2d and 3d La Vernet Stock Farm on Vernet Prince 36th and Vernet Prince 42d; 4th Watson on Perfection 12th.

Senior Bull Calf (6 shown)—1st and 2d Robinson & Sons on Maple's Lad 82d and Maple's Lad 83d; 3d La Vernet Stock Farm on Vernet Prince 46th.

Junior Bull Calf (5 shown)—1st Robinson & Son on Maple's Lad 93d; 2d and 3d La Vernet Stock Farm on Real Comfort and Vernet Prince 50th.

Aged Cow (5 shown)—1st La Vernet Stock Farm on Maple Lass 28th; 2d and 3d Robinson & Son on Bonnie Dee and Beauty.

Heifer 2 Years and Under 3 (4 shown)—1st Robinson & Son on Maple's Lass 38th; 2d and 3d La Vernet Stock Farm on Vernet Princess 23d and Vernet Princess 15th.

Senior Yearling Heifer (5 shown)—1st and 2d La Vernet Stock Farm on Vernet Princess 26th and Primrose; 3d Robinson & Son on Maple's Lass 56th.

Junior Yearling Heifer (5 shown)—1st and 2d La Vernet Stock Farm on Vernet Princess 33d and Vernet Princess 36th; 3d Robinson & Son on Maple's Lass 68th.

Senior Heifer Calf (6 shown)—1st and 2d La Vernet Stock Farm on Vernet Princess 42d and Vernet Princess 43d; 3d Robinson & Son on Maple's Lass 71st.

Junior Heifer Calf (6 shown)—1st and 3d La Vernet Stock Farm on Vernet Princess 45th and Vernet Princess 46th; 2d Robinson & Son on Maple's Lass 82d.

Senior and Grand Champion Bull—Robinson & Son on Maple's Lad 56th.

Junior Champion Bull—La Vernet Stock Farm on Vernet Prince 31st.

Senior and Grand Champion Cow—Robinson & Son on Maple's Lass 38th.

Junior Champion Female—La Vernet Stock Farm on Vernet Princess 42d.

Aged Herd (2 shown)—1st La Vernet Stock Farm on herd headed by Vernet King 4th; 2d Robinson & Son on herd headed by Maple's Lad 56th.

Young Herd (2 shown)—1st La Vernet Stock Farm; 2d Robinson & Son.

Calf Herd (2 shown)—1st Robinson & Son; 2d La Vernet Stock Farm.

Get of Sire (2 shown)—1st Robinson & Son on get of Bonnie Brae 8th; 2d La Vernet Stock Farm on get of Point Comfort 14th.

Produce of Dam (2 shown)—1st Robinson & Son on produce of Lady Wilton Incomparable; 2d La Vernet Stock Farmson produce of Indirect C.

ABERDEEN ANGUS.

This year saw the best showing of Doddies ever at the Badger State Fair grounds. Fortunate for Wisconsin that the Illinois State Fair has been arranged to follow Wisconsin. It makes an excellent arrangement for exhibitors to route from Minnesota to Illinois and Missouri. One can safely say that from the quality standpoint, the Angus showing at Wisconsin was the best that has appeared at any State Fair thus far this fall. Only the tops of Iowa and Minnesota appeared, the herds of C. D. & E. Caldwell, of Burlington Junction, and Congdon & Battles, of North Yakima, Wash., furnishing the entire exhibit. These two herds offered a treat to visitors to the fair, and gave many their first correct impressions of what real Angus cattle are. Practically the same ratings of the past three weeks were made, the Missouri herd winning most of the blues, and in this case, all of the purple ribbons. Blackcap Bertram was once more made senior champion bull, but was defeated for the premier honors by the junior yearling bull, Epistos, who attracted so much attention at Des Moines where he received the grand championship. Pride Petite added two more purple ribbons to her already long string. Mr. Dryden found the junior calf, Queen of Rosemere 5th in class, but tied the junior purple on the senior yearling heifer, Blackbird Velvet from the Caldwell herd.

The exhibitors: C. D. & E. Caldwell, Burlington Junction, Mo.; Congdon & Battles, North Yakima, Wash.

Judge, W. A. Dryden.

The awards:

Aged Bull (2 shown)—1st Congdon & Battles, on Barbarian of Rosemere; 2d Caldwell on Blackcap Star.

Bull 2 Years and Under 3 (3 shown)—1st Caldwell on Blackcap Bertram; 2d and 3d Congdon & Battles on Knight of Rosemere and Laddie of Rosemere.

Senior Yearling Bull (3 shown)—1st Caldwell on Blatant; 2d and 3d Congdon & Battles on Prizemere and Blackright.

Junior Yearling Bull (3 shown)—1st Caldwell on Epistos; 2d and 3d Congdon & Battles on Ericmere 2d and Cherokeer.

Senior Bull Calf (1 shown)—1st Caldwell on Eidert.

Junior Bull Calf (3 shown)—1st and 3d Congdon & Battles on Quality Lad of Rosemere 3d and Blackburr of Rosemere; 2d Caldwell on Ericaman.

Aged Cow (4 shown)—1st and 3d Caldwell on Pride Petite and Esthonia 12th; 2d and 4th Congdon & Battles on Quissy of Meadow Brook and Pride of Rosemere 5th.

Heifer 2 Years and Under 3 (3 shown)—1st and 3d Congdon & Battles on Myra of Rosemere 2d and Black Lola of Rosemere 3d; 2d Caldwell on Pride of Autumn.

Senior Yearling Heifer (2 shown)—1st Caldwell on Blackbird Velvet; 2d Congdon & Battles on Erica I of Rosemere.

Junior Yearling Heifer (4 shown)—1st and 3d Caldwell on Eritus 2d and Blackcap 59th; 2d Congdon & Battles on Pride of Rosemere 8th.

Senior Heifer Calf (2 shown)—1st and 2d Caldwell on Erica Eudora and Esthonia 15th.

Junior Heifer Calf (4 shown)—1st and 2d Congdon & Battles on Queen of Rosemere 5th and Freda 4th of Meadow Brook; 3d Caldwell on Blackcap Echo 3d.

Senior Champion Bull—Caldwell on Blackcap Bertram.

Junior and Grand Champion Bull—Caldwell on Epistos.

Senior and Grand Champion Cow—Caldwell on Pride Petite.

Junior Champion Heifer—Caldwell on Blackbird Velvet.

Aged Herd (2 shown)—1st Caldwell on herd headed by Blackcap Bertram; 2d Congdon & Battles on herd headed by Barbarian of Rosemere.

Young Herd (2 shown)—1st Caldwell; 2d Congdon & Battles.

Calf Herd (2 shown)—1st Congdon & Battles; 2d Caldwell.

Get of Sire (2 shown)—1st Caldwell on Get of Undalata Blackcap Ito 2d; 2d

Hudson Now Holds World's Greatest Hill-Climbing Record

Makes Fastest Time Up Pike's Peak

No hill-climb or mountain test in the world equals that imposed on motor cars that race to the summit of Pike's Peak. A Hudson Super-Six Special made the best time of more than 20 contestants to the top of America's most famous mountain, over the longest, steepest, highest travelable road in the world.

The start, at a mile and three-quarters above the sea, is higher by far than is the altitude of the finishing line in most hill-climbs.

The finishing point of Pike's Peak is almost two and three-quarters miles above sea level. In the twelve and a fraction miles of the course there are 60 turns, and the rise is almost one mile high. There is no place where the car is not climbing.

The high altitude affects the power efficiency of the motor and water boils at such low temperature that motors cannot be cooled as they are in lower levels.

Hudson Fastest Time

The Hudson climbed up this winding steep road to the "Top of the World" in 18 minutes, 24 seconds. Its time was 2½ minutes faster than the next fastest car.

This feat now gives to Hudson practically every worth-while record. In speed—when 102.3 miles an hour was attained at Daytona; in endurance—when 1819 miles were covered in 24 hours, with a stock Super-Six chassis we established marks not likely soon to be equalled.

Now we have added to these the greatest of all hill-climbing feats. In it we have shown the endurance of the Super-Six.

Others Failed

Motors of some of the most famous racing cars in the world were unable to withstand the strain of that climb and so did not get to the summit.

It is constant hard pulling all the way and more than three-quarters of the distance must be made in second speed, even with specially geared cars.

In addition to mere climbing, as is required in all hill-climbs, here is added the difficulties of carburetion and cooling.

The altitude that affects one's breathing so much that even the strongest man can stand only the least amount of physical exertion, has a similar effect in reducing the power of the motor.

We made that record in a contest in which were entered, as described by a Denver newspaper, ***"Fours—Sixes—Eights—Twelves and Super-Sixes."***

And, as in all tests in which they have been entered, the best performance was shown by the Super-Six.

Phaeton, 7-passenger	$1475	Touring Sedan	$2000	Town Car	$2750
Roadster, 2-passenger	1475	Limousine	2750	Town Car Landaulet	2850
Cabriolet, 3-passenger	1775	*(All Prices f. o. b. Detroit)*		Limousine Landaulet	2850

HUDSON SUPER SIX

HUDSON MOTOR CAR COMPANY, DETROIT, MICH.

Congdon & Battles on Get of Oakville Quiet Lad.

Produce of Cow (2 shown)—1st Caldwell on Produce of Erica 15th of Keillior Park; 2d Congdon & Battles on Produce of Rita's Pride.

RED POLLS.

The Red Polled show lacked the numbers and competition that marked the shows at Des Moines and Hamline. J. B. Ahlers, of Wisconsin, and Jean Duluth Farm, of Minnesota, had the boards to themselves with the division of the money largely in favor of the Minnesota herd,. Ahlers taking only two blues in the entire showing. The stock was all well fitted and was a fine demonstration of what good showings of Red Polls should be. This was probably Teddy's Best last appearance in a show ring—something to be regretted in Red Polled cattle circles. He added two more purples to his long list of conquests and his work for the breed lives after him. The junior yearling bull, Proctor Knott IV, received the junior purple. J. D. Brunhilde again defeated her two-year-old stable mate, J. D. Purity, for senior champion honors, and the junior champion calf, J. D. Bamby, for grand champion honors.

The exhibitors: J. B. Ahlers, West Bend, Wis.; Jean Duluth Farm, Duluth, Minn.

Judge, Andrew Boss, St. Paul, Minn.

The awards:

Bull 3 Years or Over (1 shown)—1st Jean Duluth Farm on Teddy's Best.

Bull 2 Years and Under 3 (1 shown)—1st Jean Duluth Farm on Earl.

Senior Yearling Bull (2 shown)—1st Ahlers on Norland; 2d Jean Duluth Farm on Proctor Knott II.

Junior Yearling Bull (3 shown)—1st Jean Duluth Farm on Proctor Knott IV; 2d and 3d Ahlers on Pine Grove Lad and Pine Grove Perfection.

Senior Bull Calf (3 shown)—1st Jean Duluth Farm on Teddy's Panama; 2d and 3d Ahlers on Pine Grove Major and Pine Grove Record.

Junior Bull Calf (2 shown)—1st Ahlers on unnamed; 2d Jean Duluth Farm on Pilot Lee.

Cow 3 Years or Over (4 shown)—1st and 2d Jean Duluth Farm on J. D. Brunhilde and Lady Watts; 3d and 4th Ahlers on Cora and Jane.

Heifer 2 Years and Under 3 (4 shown)—1st and 2d Jean Duluth Farm on J. D. Purity and Ringlet; 3d and 4th Ahlers on Joy and Norma.

Senior Yearling Heifer (3 shown)—1st Jean Duluth Farm on Liza Again; 2d and 3d Ahlers on Negress and Maggie.

Junior Yearling Heifer (2 shown)—1st and 2d Jean Duluth Farm on J. D. Winona and J. D. Dimple.

Senior Heifer Calf (3 shown)—1st and 3d Jean Duluth Farm on Teddy's Dorothy and Teddy's Patricia; 2d Ahlers on Pine Grove Jubilee.

Junior Heifer Calf (3 shown)—1st and 3d Jean Duluth Farm on J. D. Bamby and Bonny [illegible] 2d Ahlers on unnamed.

Senior and Grand Champion Bull—Jean Duluth Farm on Teddy's Best.

Junior Champion Bull—Jean Duluth Farm on Proctor Knott IV.

Senior and Grand Champion Female—Jean Duluth Farm on J. D. Brunhilde.

Junior Champion Female—Jean Duluth Farm on J. D. Bamby.

Aged Herd (1 shown)—1st Jean Duluth Farm on herd headed by Teddy's Best.

Young Herd (2 shown)—1st Jean Duluth Farm; 2d Ahlers.

Get of Sire (2 shown)—1st Jean Duluth Farm on get of Proctor Knott; 2d Ahlers on get of Norman.

Produce of Cow (2 shown)—1st Jean Duluth Farm on produce of Betty; 2d Ahlers on produce of Jane.

POLLED DURHAMS.

Boynton Bros., of Janesville, Wis., had the only Polled Durham exhibit at West Allis, leading eighteen head before Mr. Andrew Boss, who judged these classes. The entire showing might have been brought out in better shape—some of them being in especially thin condition for state fair cattle.

FAT CATTLE—PURE BREDS.

Steer 2 Years and Under 3 (2 shown)—1st Congdon & Battles on Loyal of Meadow Brook; 2d Caldwells on Berg.

Yearling Steer (3 shown)—1st Caldwells on unnamed; 2d and 3d Herr Bros. & Reynolds on Silver Velvet and Silver Lady.

Steer Calf (2 shown)—1st Caldwells on Luckaly; 2d N. M. Jewell & Son on unnamed.

Champion Steer—Congdon & Battles on Loyal of Meadow Brook.

Steer Herd (1 shown)—1st Caldwells.

FAT CATTLE—GRADE OR CROSS BRED.

Steer 2 Years and Under 3 (1 shown)—1st E. W. Graber, Mineral Point, Wis.

Yearling Steer (2 shown)—1st Herr Bros. & Reynolds on Pudge; 2d Graber.

Steer Calf (2 shown)—1st Graber; 2d Roland Donovan.

Champion Steer—Graber.

Herd of Steers—Graber.

WINNERS IN BOYS' BABY BEEF CONTEST.

1st—Lee Jewell, 7 years old.
2d—Robert Gray, 17 years old.
3d—A. C. Callin, 19 years old.
4th—Roland Donovan, 15 years old.
5th—Roland Donovan, 15 years old.
6th—Leslie Hatch, 15 years old.

HORSES SWINE, AND SHEEP

These Departments of Badger Stock Show Well Filled and Many Individuals of Great Merit Were Shown in Pens.

Horses.

SOME years ago automobile manufacturers thought there would be no buyers of automobiles among Wisconsin farmers. The Wisconsin farmer today is talking and buying automobiles and talking and buying tractors. Nevertheless, the horse business goes on and prospers better than ever. Motor-driven machinery simply renders it possible to do more on the farm and allows the horse to go into new fields and develop heretofore neglected possibilities. Mr. W. K. Caldwell, the superintendent of the horse department at West Allis, was well pleased with the show of horses made. While not large, the show was well balanced, and in the main was largely a Badger state show. Percherons, Shires and Clydesdales were practically all owned in Wisconsin, and all three shows were good. One of the principal Clydesdale exhibitors in Wisconsin failed to get his entries made in time and thus reduced the size of that show. The Belgian show was good, made up largely of outside of the state horses.

The management is looking forward to a new horse barn, which is badly needed. When the Wisconsin State Fair has a horse barn on a par with the cattle, swine and sheep barns it will have as good live stock equipment as any state fair on the circuit, and the men who make the horse show deserve good quarters for the horses. A covered roadway from the barn to the pavilion, as protection against inclement weather would be an innovation and easily a possibility on the Wisconsin grounds.

PERCHERONS.

The showing of Percherons at Milwaukee was practically a Badger State show—only two exhibitors from outside the state appearing with a few scattering exhibits. The show was indeed a credit to Wisconsin breeders. Better Percherons are out this year, we know; so are many by far worse ones than appeared at the Wisconsin State Fair. Harvest Farms and Lewellin & Sons furnished the bulk of the entries. Practically no high fitting was in evidence—most of the animals appearing in thrifty breeding condition. Competition from outside exhibitors would have added much interest and some of the good ones from Minnesota would undoubtedly have raised the standard. However, the 1916 showing speaks well for the energy and progressiveness of Wisconsin's Percheron breeders. The aged stallion class brought out Harvest Farms' Calculator, last year's champion. He was shown in good breeding form and will be fitted for Chicago. As he was, he had no great trouble in capturing the blue in class and the purple for champion stallion. The next strongest candidate for champion honors was the two-year-old Koko, a thick, blocky, black shown by Shekleton & Sons. The champion mare, Gravette, took the blue in the aged mare class and came from the Mitchell stables. She is a toppy, drafty gray—well fitted—and showing lots of style and quality. Pearl, a well-fitted, good going mare, shown by Lewellin & Sons, was champion mare bred and owned in Wisconsin. Harvest Farms won the blues in the get of sire and produce of dam classes and showed good, young stuff in most of the classes.

The exhibitors: N. Dickinson & Son, Lake Geneva, Wis.; Edgewater Stock Farm, Ft. Atkinson, Wis.; Finch Bros., Joliet, Ill.; Harvest Farms Co., Mayville, Wis.; Lewis Lewellin & Sons, Waterloo, Wis.; J. J. Mitchell, Lake Geneva, Wis.; Mont-Joy Stock Farm, Dane, Wis.; Murphy Bros., Waukesha, Wis.; Pabst Stock Farm, Oconomowoc, Wis.; Frank P. Shekleton & Sons, Lawler, Iowa.

Judge, Arthur Stericker, Manitowoc, Wis.

OPEN CLASS.

The awards:

Stallion 4 Years or Over (6 shown)—1st Harvest Farms Co. on Calculator; 2d Dickinson & Son on Melati Imp. Percheron; 3d Lewellin & Sons on Bonus; 4th Murphy Bros. on Richmond; 5th Edgewater Stock Farm on Francois of Edgewater.

Stallion 3 Years and Under 4 (1 shown)—1st Harvest Farms on Aramis.

Stallion 2 Years and Under 3 (6 shown)—1st Shekleton & Sons on Koko; 2d Harvest Farms on Martial; 3d Edgewater Stock Farm on Rexal of Edgewater; 4th and 5th Lewellin & Sons on Glen and Mocus.

Yearling Stallion (8 shown)—1st and 5th Harvest Farms Co. on Voltigieur and D'Artagnan; 2d Pabst Stock Farm on Faust; 3d Finch Bros. on Finch's Choice; 4th Lamb on Jess Willard.

Stallion Foal (4 shown)—1st and 2d Lewellin & Sons on Phillip and Hugo; 3d Harvest Farm on Unnamed; 4th Mont-Joy Stock Farm on Gabon I.

Brood Mare and Foal (5 shown)—1st, 4th and 5th Lewellin & Sons on Helen, Phillis and Gertrude; 2d and 3d Harvest Farm on Gypsy Maid and Davis.

Mare 4 Years or Over (5 shown)—1st Mitchell on Gravette; 2d, 3d, 4th and 5th Lewellin & Sons on Pearl, Helen, Gertrude and Phillis.

Two-year-old Filly (6 shown)—1st, 4th and 5th Harvest Farms on Grace, Winifred and Marion; 2d and 3d Edgewater Stock Farm and Rose II of Edgewater and Pansy of Edgewater.

Yearling Filly (5 shown)—1st and 3d Harvest Farms on Docile and Jeanette; 2d Mitchell on Conchrea; 4th Lewellin & Sons on Valentine.

Filly Foal (3 shown)—1st and 2d Harvest Farms on Eleanor and Eunice; 3d Lewellin & Sons on Unnamed.

Get of Sire (3 shown)—1st Harvest Farms on get of Brazilian; 2d Edgewater Stock Farm on get of Mattis; 3d Lewellin & Sons on get of Bonus.

Produce of Dam (2 shown)—1st Harvest Farms on produce of Pride; 2d Lewellin & Sons on produce of Gertrude.

PERCHERONS BRED AND OWNED IN WISCONSIN.

Aged Stallion (3 shown)—1st Harvest Farms on Calculator; 2d Lewellin & Sons on Mark; 3d Edgewater Stock Farm on Francois of Edgewater.

Stallion 3 Years and Under 4—(1 shown)—1st Harvest Farms on Aramis.

Stallion 2 Years and Under 3 (5 shown)—1st Harvest Farms on Martial; 2d Edgewater Stock Farm on Rexal of Edgewater; 3d, 4th and 5th Lewellin & Sons on Glen, Mocus and Kent.

Yearling Stallion (3 shown)—1st and 3d Harvest Farms on Voltigieur and D'Artagnan; 2d Lamb on Jess Willard.

Stallion Foal (4 shown)—1st and 2d Lewellin & Sons on Phillip and Hugo; 3d Harvest Farms on Unnamed; 4th Mont-Joy Stock Farm on Gabon I.

Brood Mare and Foal (4 shown)—1st and 2d Harvest Farms on Gypsy Maid and Doris and foals; 3d and 4th Lewellin & Sons on Phillis and Gertrude and foals.

Aged Mare (3 shown)—1st, 2d and 3d Lewellin & Sons on Pearl, Gertrude and Phillis.

Filly 2 Years and Under 3 (6 shown)—1st, 4th and 5th Harvest Farms on Grace, Winifred and Marion; 2d and 3d Edgewater Stock Farm on Rose II of Edgewater and Pansy of Edgewater.

Yearling Filly (7 shown)—1st Edgewater Stock Farm on Mene Carr; 2d and 4th Harvest Farms on Docile and Jeanette; 3d Mitchell on Conchrea; 5th Lewellin on Valentine.

Filly Foal (3 shown)—1st and 2d Harvest Farms on Eleanor and Eunice; 3d Lewellin & Sons on Unnamed.

Get of Sire (3 shown)—1st Harvest Farms on get of Brazilian; 2d Edgewater Stock Farm on get of Mattis; 3d Lewellin on get of Bonus.

Produce of Dam (2 shown)—1st Harvest Farms on produce of Pride; 2d Lewellin & Sons on produce of Gertrude.

Champion Stallion (Open Class)—Harvest Farms on Calculator.

Champion Mare (Open Class)—Mitchell on Gravette.

Champion Stallion (Wisconsin Bred and Owned)—Harvest Farms on Calculator.

Champion Mare (Wisconsin Bred and Owned)—Lewellin & Sons on Pearl.

PERCHERON FUTURITY.

Percheron Colt (8 shown)—1st and 4th Harvest Farms on Voltigrem and D'Artignan; 2d, 5th, 7th and 8th Pabst Stock Farm on Faustulus, Dan Dandy, Royal and Baccarat II; 3d Lamb on Jess Willard; 6th Lewellin & Sons on Grandee.

Percheron Filly (5 shown)—1st and 2d Harvest Farms on Docile and Jeanette; 3d Mitchell on Conchrea; 4th and 5th Lewellin & Sons on Valentine and Gertie.

BELGIANS.

A small but good show of Belgians appeared in the ring at West Allis, Finch Bros., of Joliet, Ill., bringing out the longest string and taking most of the best part of the prizes. Two Wisconsin exhibitors and one Iowa exhibitor also brought forward creditable exhibits. Belgians are popular in Wisconsin and larger showings would be appreciated, and would add much to the character of the horse show. The aged stallion class brought out the roan horse, Buffalo, a good mover, and a well-furnished horse. He was made the champion stallion of the Belgian show. Finch Bros. also had the champion mare, Gamine, a drafty, good moving mare, with lots of quality, that appeared at the head of the aged mare class, taking the purple. One or two rather plain animals appeared in the mare and foal class, but as a whole the quality of the show was up to state fair standard.

Judge—Arthur Stericker.

The exhibitors: Finch Bros., Joliet, Ill.; Mont-Joy Stock Farm, Dane, Wis.; J. J. Mitchell, Lake Geneva, Wis.; Frank P. Shekleton & Sons, Lawler, Iowa. The awards:

Stallion 4 Years or Over (4 shown)—1st and 4th Finch Bros. on Buffalo and Finch's Buster; 2d Mont-Joy Stock Farm on Forton; 3d Shekleton & Sons on Bizaire.

Stallion 3 Years and Under 4 (1 shown)—1st Finch Bros. on Mon Premier.

Stallion 2 Years and Under 3 (4 shown)—1st, 3d and 4th Finch Bros. on Jupiter, Martin and Robert; 2d Shekleton & Sons on Reavevore.

Yearling Stallion (3 shown)—1st, 2d and 3d Finch Bros. on Prince Ben, Royal Ben and His Majesty.

Stallion Foal (3 shown)—1st and 2d Mitchell on unnamed; 3d Mont-Joy Stock Farm on Bruce.

Brood Mare and Foal (4 shown)—1st and 2d Mitchell on Florette De Saint and Julia; 3d Mont-Joy Stock Farm on Dora.

Mare 4 Years or Over (6 shown)—1st and 2d Finch Bros. on Gamine and Nicotine; 3d and 4th Mitchell on Florette De Saint and Julia.

Mare 3 Years and Under 4 (3 shown)—1st Finch Bros. on Beatrice; 2d and 3d Mont-Joy Stock Farm on Sybil and Kathlyn.

Filly 2 Years and Under 3 (1 shown)—1st Finch Bros. on Izetta.

Yearling Filly (2 shown)—1st Mitchell on Lois; 2d Finch Bros. on Beauty.

Clean Sweep.

Filly Foal (1 shown)—1st Mont-Joy Stock Farm on Cosett.

Get of Sire (1 shown)—1st Finch Bros. on Get of Romeo.

Produce of Dam (2 shown)—1st Finch Bros. on Flora; 2d Mont-Joy Stock Farm on Brunette.

Champion Stallion—Finch Bros. on Buffalo.

Champion Mare—Finch Bros. on Gamine.

CLYDESDALES.

Three Wisconsin exhibitors led the entire Clydesdale showing before Geo. Hutton, of University Farm, Madison, Wis., for judgment. The show was small but classy, and brought out some of the best Clydes that have been led into a state fair show ring this fall. McLay Bros. brought out the best string and, as usual, picked off most of the blues and both championships. The Clydesdale show would have been the best out to date had not there been some difficulty about the entries of Mr. Van Natta, whose string would have added much to the show. Mr. Hutton stood for substance along with quality, but would have none of the rough ones or poor movers. The two-year-old stallion, King's Marshall, was made champion, and the aged mare, Buckleyvie Lady, a large, good going mare with lots of quality and style, was made champion mare. Sweet Marie, the two-year-old filly from the Jones string, that has been winning first thus far, went to second place in class when she met King's Baroness from McLay Bros.' string. Wisconsin is a state for good Clydesdales.

The exhibitors: Eben A. Jones, Ban-

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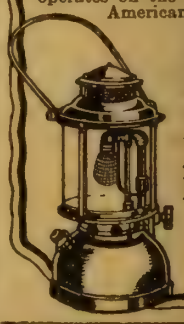

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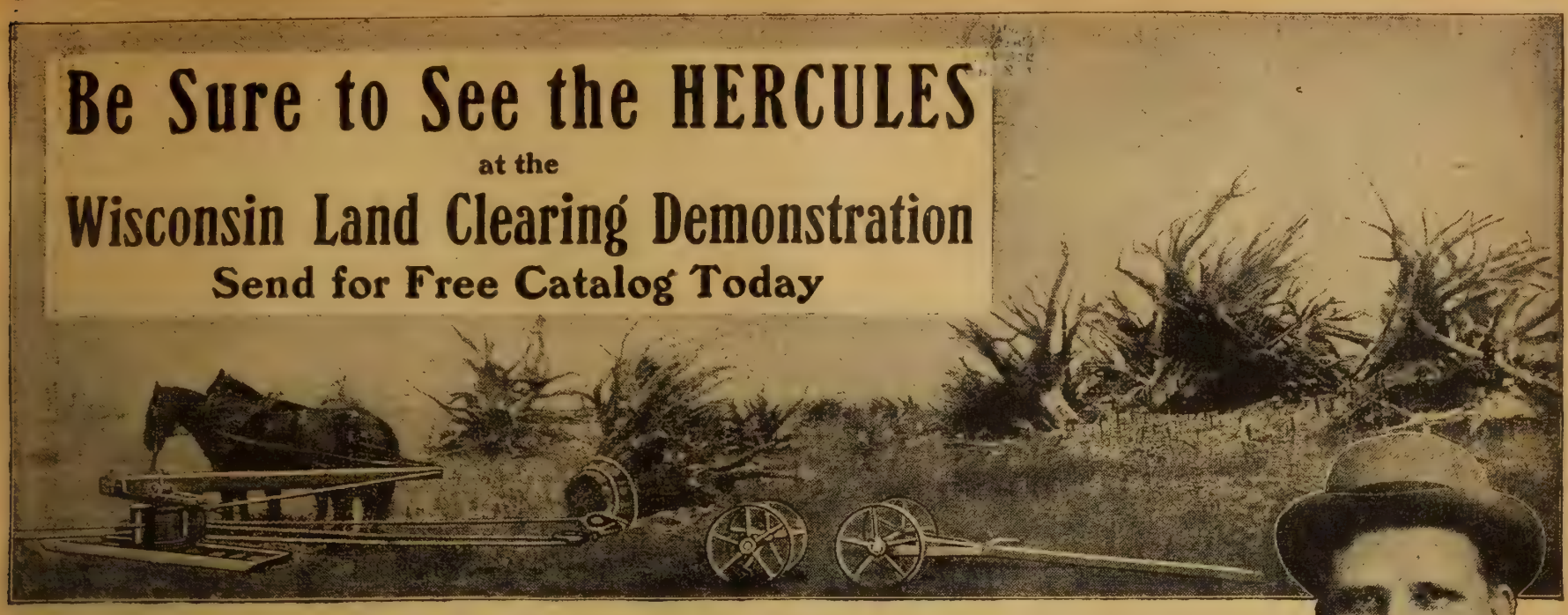

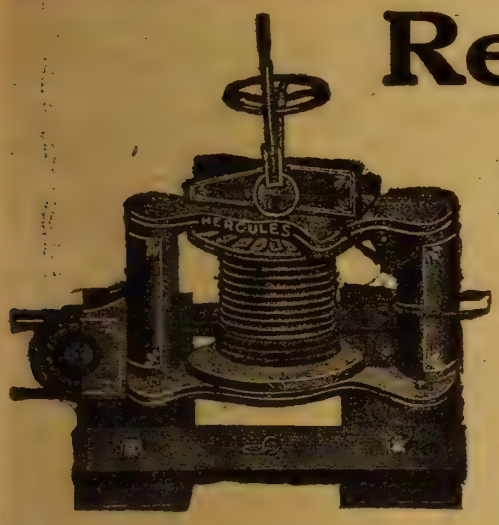

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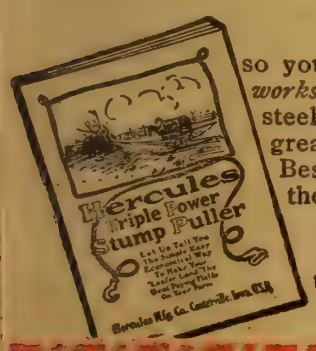

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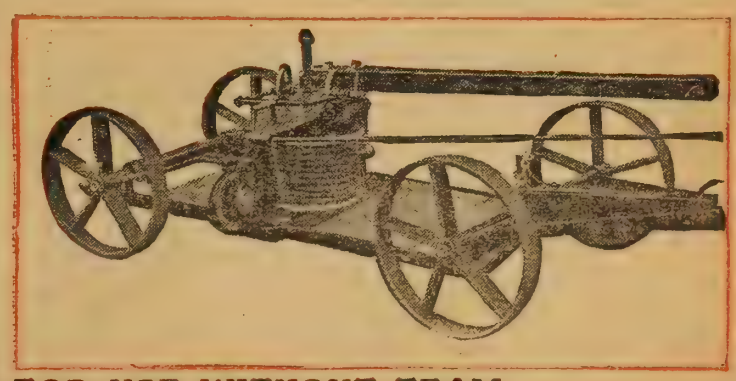

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gor, Wis.; McLay Bros., Janesville, Wis.; Alex. M. McLean, Avalon, Wis.
Judge, Geo. Hutton, Madison, Wis.
The awards:
Stallion 4 Years or Over (1 shown)—1st McLay Bros. on King's Buckler.
Stallion 3 Years and Under 4 (2 shown)—1st Jones on W. J. Bryan; 2d McLay Bros. on Prince of Rock Valley.
Stallion 2 Years and Under 3 (3 shown)—1st, 2d and 3d McLay Bros. on King's Marshall, King's Choice and King's Baron.
Yearling Stallion (4 shown)—1st and 4th McLay Bros. on El Ray and Silver King; 2d Jones on Troopers Baron; 3d McLean on Royal Oak.
Stallion Foal (2 shown)—1st McLean on Pride of Avalon; 2d Jones on Royal George.
Mare and Foal (3 shown)—1st McLay Bros. on Florentia and foal; 2d McLean on Pride of Avalon and foal; 3d Jones on Maud Trooper and foal.
Mare 4 Years or Over (6 shown)—1st, 2d and 3d McLay Bros. on Bucklyvie Lady, Lady Grandeur and Florentia; 4th McLean on Samuda Princess; 5th Jones on Grove Girl.
Mare 3 Years and Under 4 (2 shown)—1st and 2d Jones on Lady May and Flora.
Filly 2 Years and Under 3 (4 shown)—1st McLay Bros. on Kin's Baroness; 2d Jones on Sweet Marie; 3d and 4th McLean on Buckler Princess and May Blossom.
Yearling Filly (3 shown)—1st McLay Bros. on Jessamine; 2d Jones on Silver Bell; 3d McLean on Lady Sunshine.
Filly Foal (2 shown)—1st McLay Bros. on unnamed; 2d Jones on Mollie Darling.
Get of Sire (3 shown)—1st McLay Bros. on get of King Norman; 2d Jones on get of Young Criterion; 3d McLean on get of King Norman.
Produce of Dam (3 shown)—1st Jones on produce of Maud Trooper; 2d McLean on produce of May Blossom; 3d McLay Bros. on produce of Silver Lady.
Champion Stallion—McLay Bros. on King's Marshall.
Champion Mare—McLay Bros. on Bucklyvie Lady.
Wisconsin classes were the same as open, except that no aged and three-year-old stallions were shown.

CLYDESDALE FUTURITIES.

Colt (4 shown)—1st and 4th McLay Bros. on El Ray and King Edgar; 2d Jones on Trooper's Baron; 3d McLean on Royal Oak.
Filly (3 shown)—1st McLay Bros. on Jasmine; 2d Jones on Silver Bell; 3d McLean on Lady Sunshine.

SHIRES.

The showing of English cart horses at Milwaukee was not large, but was worthy of attention because of the real good ones that were brought out and the absence of the coarse, gummy ones sometimes seen in state fair Shire shows. The principal part of the show was made up by Mitchell, of Lake Geneva, and the Connor Co., of Auburndale. Royal Patch from the Connor stables was defeated in class by the clean-limbed, straight going Ceylon's Patcheon. Ceylon's Patcheon was defeated for championship honors by his three-year-old stable mate, Dan Patch's Herald, a toppy, strong-backed, big-boned, good-moving horse. In female classes, Fuchsia, the big, roomy, gray mare shown last week by Crownover, was first-prize aged mare and later bore away the purple ribbon for female honors. Connor's two-year-old filly, Dray Queen Star, the champion female at Hamline last week was placed third in class here.
The exhibitors: R. Connor Co., Auburndale, Wis.; Finch Bros., Joliet, Ill.; Robert Hardy, Waukesha, Wis.; J. J. Mitchell, Lake Geneva, Wis.
Judge, George Hutton.
The awards:
Aged Stallion (4 shown)—1st Mitchell on Ceylon's Patcheon; 2d Connor Co. on Royal Patch; 3d and 4th Hardy on West Mill Conquering Duke and Scipio.
Stallion 3 Years and Under 4 (1 shown)—1st Mitchell on Dan Patch's Herald.
Stallion 2 Years and Under 3 (2 shown)—1st and 2d Finch Bros. on Springdale Regent and Mona's Spark Jr.
Yearling Stallion (2 shown)—1st Connor Co. on Lumberman's Dray King; 2d Finch Bros. on Springdale Defender.
Brood Mare and Foal (1 shown)—1st Mitchell on Dan Patch's Queen.
Aged Mare (3 shown)—1st Connor on Fuchsia; 2d and 3d Mitchell on Billingsborough Belle and Bollam Lady.
Mare 3 Years and Under 4 (2 shown)—1st Mitchell on Dan Patch's Queen; 2d Connor Co. on Wigtoft Violet III.
Filly 2 Years and Under 3 (3 shown)—1st Finch Bros. on Prospect Gloaming II; 2d and 3d Connor Co. on Dray King Fashion and Dray Queen Star.
Yearling Filly (1 shown)—1st Connor Co. on Queen of Fashion.
Filly Foal (1 shown)—Mitchell on Unnamed.
Get of Sire (3 shown)—1st Connor on get of Saltfleet Dray King; 2d Finch Bros. on get of Fear Not.
Produce of Dam (3 shown)—1st Mitchell on produce of Widercroft's Janet; 2d Connor Co. on produce of Wigtoft Violet.
Champion Stallion—Mitchell on Dan Patch's Herald.
Champion Mare—Connor Co. on Fuchsia.

HACKNEY, ENGLISH, GERMAN AND FRENCH COACH HORSES.

The exhibitors: Chas. E. Bunn, Peoria, Ill.; Robert Hardy, Waukesha, Wis.; Pabst Stock Farm, Oconomowoc, Wis.
Judge, Walter Palmer, Ottawa, Ill.
The awards:
Aged Stallion (3 shown)—1st Pabst Stock Farm on Baythorpe Sultan; 2d and 3d Hardy on Scanton Electricity and Emery Rosador.
Stallion 2 Years and Under 3 (1 shown)—1st Pabst Stock Farm on Pasha.
Aged Mare (1 shown)—1st Pabst Stock Farm on Bellflower.
Mare 3 Years and Under 4 (1 shown)—1st Bunn on Florence.
Filly 2 Years and Under 3 (2 shown)—1st Bunn on Mermaid; 2d Pabst Stock Farm on Quaker Lady.
Yearling Filly (1 shown)—1st Bunn on Moon Beam.
Produce of Mare (1 shown)—1st Bunn on produce of Florence.
Champion Stallion—Baythorpe Sultan.
Champion Mare—Florence.

GRADE DRAFT.

Breed Mare and Foal (3 shown)—1st and 2d McLean on Letty and Rosey; 3d Hardy on unnamed.
Mare or Gelding 3 Years or Over (3 shown)—1st McLean on Flora; 2d Lewellin on Tommy; 3d Hardy on unnamed.
Mare or Gelding 2 Years and Under 3 (2 shown)—1st Lewellin & Sons on Mary; 2d Hardy on unnamed.
Yearling Mare or Gelding (1 shown)—1st Hardy on unnamed.
Foal (3 shown)—1st and 2d McLean; 3d Hardy.
Grade Draft Team, not less than 3,200 lbs. (1 shown)—McLean.
Team of Chunks, between 2,500 and 3,200 lbs. (1 shown)—Hardy.

HEAVY DRAFT TEAMS—PURE BRED.

Best Two Horse Team (1 shown)—1st Finch Bros. on Gamine and Nicotine; 2d McLean on Pride and Nettie; 3d Lewellin & Sons on Helen and Tom.

SHETLAND PONIES.

The exhibitors: Chas. E. Bunn, Peoria, Ill.; F. H. Divan & Sons, Browntown, Wis.; Geo. A. Heyl, Washington, Ill.; Adam Seitz, Waukesha, Wis.
The judge, Walter Palmer.
The awards:
Aged Stallion (3 shown)—1st and 3d Heyl on King Larigo and King Lear; 2d Bunn on Prince Patton.
Stallion 3 Years and Under 4 (4 shown)—1st and 3d Bunn on Lord Go Bang and St. Valentine; 2d Heyl on Trinket Larigo.
Stallion 2 Years and Under 3 (1 shown)—1st Bunn on Best of All.
Yearling Stallion (2 shown)—1st Heyl on Larigo's Prince; 2d Bunn on Unexcelled.
Stallion Under 1 Year (2 shown)—1st Heyl on Larigo's Lookout; 2d Bunn on Vesuvius.
Aged Mare (4 shown)—1st and 2d Bunn on Ovilta and Revelation; 3d Heyl on Phoebe.
Mare 3 Years and Under 4 (4 shown)—1st and 3d Heyl on Marigold Silver Tips and Phyllis Larigo; 2d Bunn on Lady Isabel.
Filly 2 Years and Under 3 (3 shown)—1st and 3d Heyl on Maple Leaf Larigo and Ola Larigo; 2d Bunn on Theoleta.
Yearling Filly (3 shown)—1st Heyl on Larigo's Primrose; 2d Divan & Sons on Doris; 3d Bunn on Undine.
Filly Foal (3 shown)—1st Divan & Sons on Iris; 2d Heyl on Queen Larigo; 3d Bunn on Vesta.
Champion Stallion—Heyl on King Larigo.
Champion Mare—Bunn on Ovilta.

WELSH AND HACKNEY PONIES.

The exhibitors: Chas. E. Bunn, Peoria, Ill.; Geo. A. Heyl, Washington, Ill.
The judge, Walter Palmer.
The awards:
Aged Stallion (5 shown)—1st and 3d Bunn on Fire Lad and John Brown; 2d Heyl on Gwindy Duke.
Stallion 3 Years and Under 4 (1 shown)—1st Heyl on Royal Gwindy.
Stallion 2 Years and Under 3 (1 shown)—1st Bunn on Ten Pins.
Stallion Foal (1 shown)—1st Heyl on unnamed.
Aged Mare (5 shown)—1st and 2d Heyl on Dinarth Gem and Dinarth Dot; 3d Bunn on Bess.
Mare 3 Years and Under 4 (4 shown)—1st Bunn on Florence; 2d and 3d Heyl on Dinarth Fancy and Trillo Magic.
Filly 2 Years and Under 3 (2 shown)—1st and 2d Bunn on Mermaid and Talar's Gift.
Yearling Filly (1 shown)—1st Bunn on Moon Beam.
Filly Foal (2 shown)—1st Bunn on Velvet; 2d Heyl on unnamed.
Champion Stallion—Bunn on Fire Lad.
Champion Mare—Bunn on Florence.

Swine.

Hog breeders were well pleased with the new pavilion and sheds occupied for the first time this year. It was a surprise to everyone to find the new quarters outgrown the first year. Wisconsin is rapidly forging to the front as a hog state and the show this year would be a credit to any state. The Poland China show has been well organized for several years and the Duroc Jersey show is also now attracting the attention of the leading breeders. The Hampshire breeders of the state have recently organized and plan to enter the state fair classes with larger and better exhibits and the Chester Whites of Wisconsin make a splendid showing. Under the separate breeds will be found the complete list of awards at the 1916 fair.

POLAND CHINAS.

Without a doubt there was the greatest showing of Poland China swine ever seen at the Wisconsin State Fair. Two hundred and twenty-three hogs of this breed were exhibited, and with the exception of the Iowa State Fair, no show of the year has offered better or stronger classes. In the "under year" and "under six months" boar classes the individuals were better straight through than those shown at the Iowa State Fair. Some great boars were brought out. Nine sows faced the judge in the "aged sow" class and it was a great lot of big, smooth sows. Miss Big Knox, the first-prize sow and which was later made grand champion, is no doubt the best champion sow ever seen at this fair. The grand champion boar, Mac's Chief, weighed over 1,000 pounds and is a fine example of a big-type boar. There was a great showing of big-type hogs and these were the favorites of the judge. The junior yearling sow class was great and many sows that were out of the money would have headed the class in many shows. Fifteen were shown in this class. There were fifteen boars in the fall futurity and twenty-two in the futurity for spring boars. Some great prospects were shown in these classes. J. D. McDonald, North Bend, Wis., won the silver trophy offered by The Wisconsin Farmer to the man winning the most points in the futurity classes. He won forty-six points, winning over Dobson & Eastman, Lancaster, Wis., by one point, the latter making a total of forty-five points. In all, this was the most satisfactory showing of this breed ever held at Milwaukee. Mr. Jas. Kemp, Kenney, Ill., tied the ribbons and gave excellent satisfaction. The Poland men certainly did their part toward the "grand opening" of the new swine barns and the great improvement over the old barns was greatly appreciated by exhibitors and visitors alike. We follow with a complete list of awards.
Exhibitors: Dobson & Eastman, Lancaster, Wis.; Chas. F. Flesch, Mt. Ida, Wis.; J. D. McDonald, North Bend, Wis.; E. J. Cowles & Sons, West Concord, Minn.; Madson & Son, Madison, Wis.; W. H. Esterly, Whitewater, Wis.; Wm. Smiley & Son, Albany, Wis.; Heck Bros., Lyons, Wis.; L. P. Martiny, Chippewa Falls, Wis.; J. F. Dilley, Rush Lake, Wis.; Mr. Kintz, Rush Lake, Wis.
Judge, Jas. Kemp, Kenney, Ill.
The awards:
Aged Boar (6 shown)—1st McDonald on Mac's Chief; 2d Smiley & Son on Monarch; 3d Madson & Son on Correct I Am; 4th Dobson & Eastman on Jumbo Hadley; 5th Flesch on Jumbo's Equal 2d.
Senior Yearling Boar (5 shown)—1st Martiny on Chief Price; 2d McDonald on King James; 3d Madson & Son on Triumph; 4th Dobson & Eastman on D. & E.'s Hadley; 5th Kintz on Prince I Know.
Junior Yearling Boar (6 shown)—1st Martiny on Select Major 2d; 2d Dobson & Eastman on D. & E.'s Jumbo; 3d Cowles & Sons on C.'s Choice; 4th Smiley & Son on Model King; 5th Martiny.
Boar Under 12 Months (15 shown)—1st McDonald on Mac's King; 2d Dobson & Eastman on Giant Wonder; 3d Madson & Son on Smooth Victor 2d; 4th McDonald on Crow's Giant 3d; 5th Dobson & Eastman on Giant Wonder 2d.
Boar Under 6 Months (22 shown)—1st Madson & Son; 2d and 3d McDonald; 4th Dobson & Eastman; 5th Esterly.
Aged Sow (9 shown)—1st and 2d McDonald on Miss Big Knox and Miss Price 4th; 3d and 4th Smiley & Son on Hadley Girl 16th and Hadley Girl 13th; 5th Madson & Son on Model Giantess.
Senior Yearling Sow (7 shown)—1st Cowles & Sons on C.'s Wonder; 2d McDonald on King's Lady 4th; 3d Dobson & Eastman on Giantess; 4th Martiny; 5th Kintz on Model N.
Junior Yearling Sow (15 shown)—1st and 3d McDonald on Mc's Princess Lady 2d and Mc's Choice; 2d Cowles & Sons on Peerless Wonder; 4th Madson & Son on Isabel; 5th Dobson & Eastman.
Sow Under 12 Months (19 shown)—1st Madson & Son on Victor Maid; 2d and 3d Dobson & Eastman on Miss Winsome 3d and Miss Winsome 2d; 4th Heck Bros. on Black Giantess 1st; 5th Dilley.
Sow Under 6 Months (21 shown)—1st McDonald on Big Bess; 2d Dobson & Eastman on Keep Me; 3d Madson & Son on Royal Gem; 4th Esterly on Jumbo Giantess; 5th McDonald on Big Bess 2d.
Senior Champion Boar—McDonald on Mac's Chief.
Junior Champion Boar—McDonald on Mac's King.
Senior Champion Sow—McDonald on Miss Big Knox.
Junior Champion Sow—Madson & Son on Victor Maid.
Grand Champion Boar—McDonald on Mac's Chief.
Grand Champion Sow—McDonald on Miss Big Knox.
Aged Herd (6 shown)—1st McDonald on herd headed by Mac's Chief; 2d Cowles & Sons on herd headed by C.'s Wonder; 3d Martiny on herd headed by Chief Price; 4th Madson & Son on herd headed by Triumph; 5th Smiley & Son on herd headed by Monarch.
Breeder's Aged Herd (6 shown)—1st McDonald on herd headed by Mac's Chief; 2d Cowles & Sons on herd headed by C.'s Wonder; 3d Martiny on herd headed by Chief Price; 4th Madson & Son on herd headed by Triumph; 5th Smiley & Son on herd headed by Monarch.
Young Herd (6 shown)—1st McDonald; 2d Madson & Son; 3d Dobson & Eastman; 4th Esterly; 5th Dilley.
Breeder's Young Herd (5 shown)—1st Madson & Son; 2d McDonald; 3d Dobson & Eastman; 4th Esterly; 5th Dilley.
Get of Sire (7 shown)—1st Madson & Son on get of Correct I Am; 2d McDonald on get of Jim Crow; 3d Dobson & Eastman on get of D. & E.'s Hadley; 4th Cowles & Sons on get of C.'s Wonder; 5th Esterly on get of D. & E.'s Jumbo.
Produce of Sow (10 shown)—1st McDonald; 2d Madson & Son; 3d Smiley & Son; 4th Cowles & Sons; 5th Dobson & Eastman.

FUTURITIES.

Fall Boar (14 shown)—1st and 4th Dobson & Eastman; 2d Madson & Son; 3d McDonald; 5th Martiny.
Fall Sow (19 shown)—1st Madson & Son; 2d and 3d Dobson & Eastman; 4th Heck Bros.; 5th Dilley; 6th Smiley & Son.
Spring Boar (22 shown)—1st and 6th Madson & Son; 2d and 3d McDonald; 4th Dobson & Eastman; 5th Esterly; 7th Heck Bros.; 8th Dilley.
Spring Sow (21 shown)—1st and 5th McDonald; 2d and 6th Dobson & Eastman; 3d Madson & Son; 4th and 7th Esterly; 8th Dilley.
Litter of Four Pigs (12 shown)—1st McDonald; 2d Madson & Son; 3d Dobson & Eastman; 4th Esterly; 5th Dilley; 6th Heck Bros.; 7th Martiny; 8th Smiley & Son.

DUROC JERSEYS.

Mr. James Dillon, superintendent of swine at the Wisconsin State Fair for the past fourteen years, made the statement that the Duroc Jersey show this year was the best he had ever seen at this fair. In numbers, this breed led by six head, having a total of 229. The feature of the showing of this breed was the great number of outstanding sows that entered the ring. In the aged sow class, ten head were shown. Any one of the first four sows could have headed the list, and there would have been no serious objections. The seniors, nine in number, were equally strong and each of the first three sows had favorites for first place. Nine boars made up the aged class, but King Defender was an easy winner in class and was later made grand champion boar. He is a boar of great scale, a good top line, deep, and stands on the best of feet and bone. There were three other good aged boars, but two of them lacked finish, though excellent individuals. The first Duroc Jersey futurity show was a success beyond all expectations. Fourteen of the twenty herds nominated, were represented, which shows the interest that was manifested in this futurity. In the boar futurity, thirty-five pigs faced the judge, and there was a great deal of sifting done before the awards were given. This was the only class where there was any disagreement with the judge, but it looked to some ringsiders as though there were better pigs in the money than the first prize boar. Of the gilts thirty-two were driven in the ring and a class that any state fair could feel proud of. Nearly all of the pigs were nicely fitted, and some great show prospects were seen in this class. Big Durocs with stretch consistent with quality, were the favorites of the judge. Many nice pigs were turned down because they didn't show that growthiness that is so desirable in young stuff. The big ones won throughout the show. The Silver Trophy given by The Wisconsin Farmer, for the best "litter of four pigs" owned in Wisconsin, was

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won by J. W. Thomas, North Bend. The Duroc Jersey Bulletin Trophy to be given to the breeder winning the most points in the futurity, was won by L. F. Atwater, Bangor, he having to his credit thirty-six points, winning over Brookwater Farm, Ann Arbor, Michigan, by only one point. It was a grand show in every respect. We follow with a complete list of awards:

Judge, Wm. Harris, Morganfield, Ky.

Exhibitors: W. C. Jenkins, Bangor, Wis.; Geo. D. Sprain & Sons, West Salem, Wis.; Albert Hyzer, West Salem, Wis.; L. F. Atwater, Bangor, Wis.; J. W. Thomas, North Bend, Wis.; John L. Fisher, Janesville, Wis.; E. H. Parker & Son, Janesville, Wis.; Ceylon Court Farm, Lake Geneva, Wis.; Brookwater Farm, Ann Arbor, Mich.; W. G. Bartholf, Burlington, Wis.; F. S. Vanderhyde, West Concord, Minn.

The awards:

Aged Boar (9 shown)—1st Fisher on King Defender; 2d Vanderhyde on Van's Crimson; 3d and 4th Brookwater Farm on Model Col. and Cherry King's Rival.

Senior Yearling Boar (3 shown)—1st Brookwater Farm on Panama Special; 2d Ceylon Court Farm on Ceylon Court Defender; 3d Vaughn.

Junior Yearling Boar (7 shown)—1st and 2d Brookwater Farm on Brookwater Much Col. and Brookwater Fashion; 3d Bartholf on Model Wonder; 4th Vanderhyde on Crimson Model.

Boar Under Year (10 shown)—1st Atwater on Proud Chief; 2d Parker; 3d Brookwater Farm on Brookwater Crimson Wonder; 4th Brookwater Farm.

Boar Under Six Months (35 shown)—1st Brookwater Farm; 2d Thomas; 3d and 4th Atwater.

Aged Sow (10 shown)—1st and 3d Atwater on Marion's Beauty and Miss Lucky; 2d Vanderhyde on Crimson Rose; 4th Brookwater Farm on Pal's Queen Daisy.

Senior Yearling Sow (9 shown)—1st Atwater on Defender's Queen; 2d Brookwater Farm on Brookwater Joann; 3d Vanderhyde on Salome; 4th Atwater.

Junior Yearling Sow (8 shown)—1st and 3d Brookwater Farm on Brookwater Jane 2d and Brookwater Jane 3d; 2d and 4th Atwater on Marion 4th and Corrector 3d.

Sow Under Year (8 shown)—1st Atwater; 2d and 3d Brookwater Farm; 4th Vanderhyde.

Sow Under Six Months (32 shown)—1st Vanderhyde; 2d Brookwater Farm; 3d Atwater; 4th Thomas.

Senior Champion Boar—Fisher on King Defender.

Junior Champion Boar—Atwater on Proud Chief.

Senior Champion Sow—Atwater on Defender Queen.

Junior Champion Sow—Atwater on Proud Helen 2d.

Grand Champion Boar—Fisher on King Defender.

Grand Champion Sow—Atwater on Defender's Queen.

Aged Herd (7 shown)—1st Atwater; 2d Brookwater Farm; 3d Vanderhyde; 4th Bartholf.

Breeder's Aged Herd (3 shown)—1st Brookwater Farm; 2d Vanderhyde; 3d Bartholf.

Young Herd (14 shown)—1st and 4th Atwater; 2d Brookwater Farm; 3d Thomas.

Breeder's Young Herd (8 shown)—1st Brookwater Farm; 2d Atwater; 3d Thomas; 4th Parker.

American Record Association Special—1st Thomas; 2d Atwater; 3d Bartholf; 4th Parker; 5th Jenkins.

Get of Sire (7 shown)—1st Atwater; 2d Vanderhyde; 3d Brookwater Farm; 4th Thomas.

Produce of Sow (7 shown)—1st Atwater; 2d Vanderhyde; 3d Brookwater Farm; 4th Thomas.

FUTURITY.

Spring Boar (35 shown)—1st and 5th Brookwater Farm; 2d and 6th Thomas; 3d, 4th and 7th Atwater; 8th Fisher.

Spring Sow (30 shown)—1st, 4th and 7th Brookwater Farm; 2d, 5th and 8th Atwater; 3d and 6th Thomas.

Best Litter Four Pigs (13 shown)—1st Brookwater; 2d and 6th Thomas; 3d and 4th Atwater; 5th and 7th Bartholf; 8th Jenkins.

Wisconsin Farmer Trophy given for the best litter owned in Wisconsin, won by J. W. Thomas.

Duroc Bulletin Trophy given to the premier winner, won by L. F. Atwater.

Explanation: In case a breeder lives in a state that does not have a futurity, he is allowed to show in the adjoining state that has one, consequently Brookwater Farm was eligible in Wisconsin, inasmuch as there was no futurity held in Michigan.

THE HAMPSHIRES.

The showing of Hampshires was not large this year, but what was lacking in numbers was made up in quality. The strong competition was between Iowa and Wisconsin breeders, and Wisconsin held her own in most of the classes. Both grand championships went to the Wisconsin herd. Never before was there the interest taken in the Hampshire that there was this year. In a measure, the Hampshire is a curiosity to many of the visitors that attended this fair. This breed has never had the publicity in the northwest that it deserves, and it is about due, and if the breeders of the state will show their goods, they can stimulate a demand in Wisconsin as has been done in the other states. No breed of swine has gained in popularity as fast as the Hampshires. It's up to the breeders of the state of Wisconsin to get busy. We follow with a complete list of awards:

Judge, Jas. Kemp, Kenney, Ill.

Exhibitors: W. W. Vaughn & Son, Lyons, Wis.; Clayton Messenger, Keswick, Iowa; J. F. Diley & Son, Rush Lake, Wis.; J. F. Wixen, Janesville, Wis.; Jas. Clemons, Kansasville, Wis.

The awards:

Aged Boar (3 shown)—1st Vaughn on Good Enough; 2d and 3d Messenger.

Senior Yearling Boar (5 shown)—1st and 3d Messenger; 2d Vaughn on Honest Boy.

Junior Yearling Boar (5 shown)—1st and 3d Messenger; 2d Vaughn Moloy Hoo Do.

Boar Under Year (3 shown)—1st and 2d Messenger; 3d Clemons.

Boar Under Six Months (7 shown)—1st Diley; 2d Vaughn; 3d Messenger.

Aged Sow (5 shown)—1st Vaughn; 2d Messenger; 3d Clemons.

Senior Yearling Sow (5 shown)—1st and 2d Messenger; 3d Vaughn.

Junior Yearling Sow (5 shown)—1st and 2d Messenger; 3d Vaughn.

Sow Under Year (4 shown)—1st and 2d Messenger; 3d Clemons.

Sow Under Six Months (8 shown)—1st Diley; 2d Messenger; 3d Vaughn.

Grand Champion Boar—Vaughn on Honest Boy.

Grand Champion Sow—Vaughn.

Aged Herd (3 shown)—1st Messenger; 2d Vaughn; 3d Clemons.

Breeders' Aged Herd (3 shown)—Same as above.

Young Herd (3 shown)—1st Messenger; 2d Vaughn; 3d Clemons.

Breeders' Young Herd (3 shown)—Same as above.

Get of Sire (3 shown)—1st Messenger; 2d Vaughn; 3d Clemons.

Produce of Sow (3 shown)—1st Messenger; 2d Vaughn; 3d Clemons.

Silver Trophy given for best litter owned in Wisconsin, won by W. W. Vaughn & Son.

CHESTER WHITES.

The showing of Chester Whites was good this year. Nearly all of the classes were well filled and there were no real plain animals in any of them. All exhibitors had their herds in show condition and several of the classes were as good as one would wish to see. The junior yearling boar class was very strong; every animal in the ring being a good one. Some outstanding "under year" sows were shown and this was the best of the sow classes. There were 140 head of Chester Whites in the swine barn and it was indeed a creditable showing. The exhibitors made some very satisfactory sales. We follow with the complete list of awards.

Judge, Wm. Harris, Morgansfield, Ky.

Exhibitors: Harry Crandell, Cass City, Mich.; W. W. Vaughn & Son, Lyons, Wis.; W. F. Barr, Ames, Iowa; B. P. Wescott, Barton, Wis.; T. Bartleson & Son, Springfield, Wis.; Wm. Schiebe, Burlington, Wis.; Ceylon Court Farm, Lake Geneva, Wis.; Wm. Butts, Evansville, Wis.

Aged Boar (5 shown)—1st Barr on Wm. A.; 2d Wescott on Col. Keokuk; 3d Vaughn on Onward; 4th Vaughn.

Senior Yearling Boar (5 shown)—1st and 3d Crandell; 2d Barr; 4th Ceylon Court Farm.

Junior Yearling Boar (6 shown)—1st Schiebe; 2d Butts; 3d and 4th Barr.

Under Year Boar (7 shown)—1st and 3d Barr; 2d Schiebe; 4th Crandell.

Under 6 Months Boar (2 shown)—1st and 2d Crandell; 3d Wescott; 4th Vaughn.

Aged Sow (7 shown)—1st Barr on Highland Princess; 2d and 3d Vaughn on Miss A. and Fancy 2d; 4th Crandell on Grace B.

Senior Yearling Sow (4 shown)—1st Barr; 2d and 3d Crandell; 4th Vaughn.

Junior Yearling Sow (8 shown)—1st Crandell ; 2d Barr; 3d Westcott; 4th Schiebe.

Under Year Sow (11 shown)—1st Barr; 2d and 3d Crandell; 4th Wescott.

Under 6 Months Sow (12 shown)—1st Barr; 2d Wescott; 3d and 4th Crandell.

Aged Herd (4 shown)—1st Barr; 2d Crandell; 3d Schiebe; 4th Wescott.

Aged Herd Bred by Exhibitor—1st Crandell; 2d Barr.

Young Herd (6 shown)—1st Barr; 2d Schiebe; 3d Crandell; 4th Vaughn.

Young Herd Bred by Exhibitor—1st Barr; 2d Schiebe; 3d Crandell; 4th Wescott.

Get of Sire (5 shown)—1st Barr; 2d Crandell; 3d Schiebe; 4th Wescott.

Produce of Sow (5 shown)—1st Barr; 2d Crandell; 3d Schiebe; 4th Wescott.

Senior Champion Boar—Barr on Wm. A.

Junior Champion Boar—Crandell on son of Schoolmaster.

Senior Champion Sow—Barr on Highland Bell.

Junior Champion Sow—Barr on Lenore 2d.

Grand Champion Boar—Barr on Wm. A.

Grand Champion Sow—Barr on Highland Bell.

BERKSHIRES.

The showing of Berkshires was up to the usual standard in numbers, but in quality it was better than last year. Some classes did not show as much finish as they should, but they did show that they had been working. The grand champion boar was an autstanding individual of the show. All the exhibitors were pleased with the placing of the awards and they were fairly well divided. We follow with a complete list of the awards:

The exhibitors: Brae Burn Farm, Lake Forest, Ill.; Wm. Kelley, Mineral Point, Wis.; Grant Clausing, Thiensville, Wis.; A. J. Lovejoy & Son, Roscoe, Ill.; Whitemore Bros., Lyons, Wis.; W. A. Freehoff, Waukesha, Wis.; H. P. West, Ripon, Wis.

Judge, Jas. Kemp, Kenney, Ill.

The awards:

Aged Boar—1st Lovejoy; 2d Whitemore; 3d Kelley; 4th Freehoff.

Senior Yearling Boar—1st Brae Burn Farm; 2d Whitemore.

Junior Yearling Boar—1st and 3d Whitemore; 2d and 4th Kelley.

Under Year Boar—1st and 3d Brae Burn Farm; 2d and 4th Whitemore.

Under 6 Months Boar—1st Brae Burn Farm; 2d Whitemore.

Under 6 Months Boar, Wisconsin Special—1st and 2d Whitemore; 3d and 4th Kelley.

Aged Sow—1st and 2d Kelley; 3d Whitemore; 4th Brae Burn Farm.

Senior Yearling Sow—1st and 2d Brae Burn Farm; 3d Whitemore; 4th West.

Junior Yearling Sow—1st and 2d Brae Burn Farm; 3d Kelley; 4th Whitemore.

Under Year Sow—1st and 2d Brae Burn Farm; 3d Whitemore; 4th Freehoff.

Under 6 Months Sow—1st and 2d Brae Burn Farm; 3d Kelley; 4th Whitemore.

Under 6 Months Sow, Wisconsin Special—1st and 3d Kelley; 2d and 4th Whitemore.

Aged Herd—1st Brae Burn Farm; 2d Kelley; 3d Whitemore.

Aged Herd Bred by Exhibitor—1st Brae Burn Farm; 2d Kelley.

Young Herd—1st Brae Burn Farm; 2d Whitemore; 3d Freehoff; 4th Kelley.

Young Herd Bred by Exhibitor—

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Starting with a large field of competitors, the "Fairfield" was the first car of the year to reach Government Camp, where it was awarded the Pridemore Silver Trophy. This is a gruelling climb in itself—the classic event of the northwest.

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Despite the earnest warnings of everyone at the Camp, that same Paige then turned its nose toward the clouds and battered its way to an elevation of 9,500 feet above the sea level—more than a quarter of a mile beyond the timber line—**three miles further** up Mount Hood than any motor car had ever climbed before.

There never was a more terrific battle in the annals of mountain climbing. At times, the "Fairfield" was completely sheathed in ice, and, when it finally came to a halt, that stout-hearted champion was resting on a **sixty per cent grade.**

Impossible, you say. Then, please consult the official records as published in every newspaper on the coast. And a little bit later, perhaps, you may have an opportunity to actually witness this thrilling climb on the screen at your favorite moving picture theatre.

But, best of all, make it a point to see this New Series Paige "Fairfield" at the sales room of the local dealer. One glance will convince you that it is a thoroughbred. A single demonstration will settle your particular automobile problem for all time.

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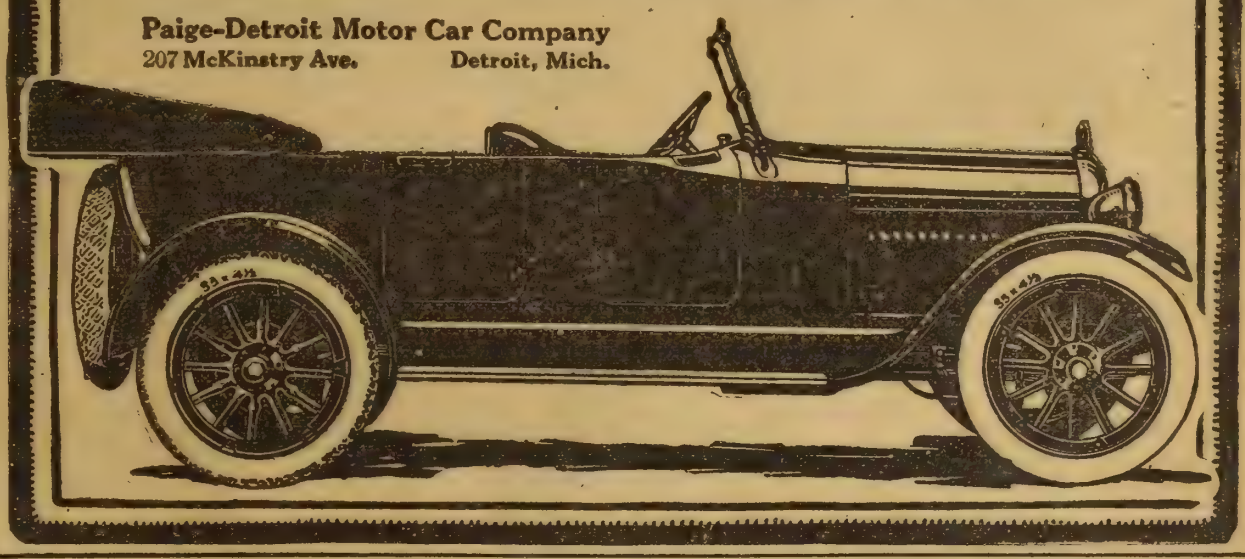
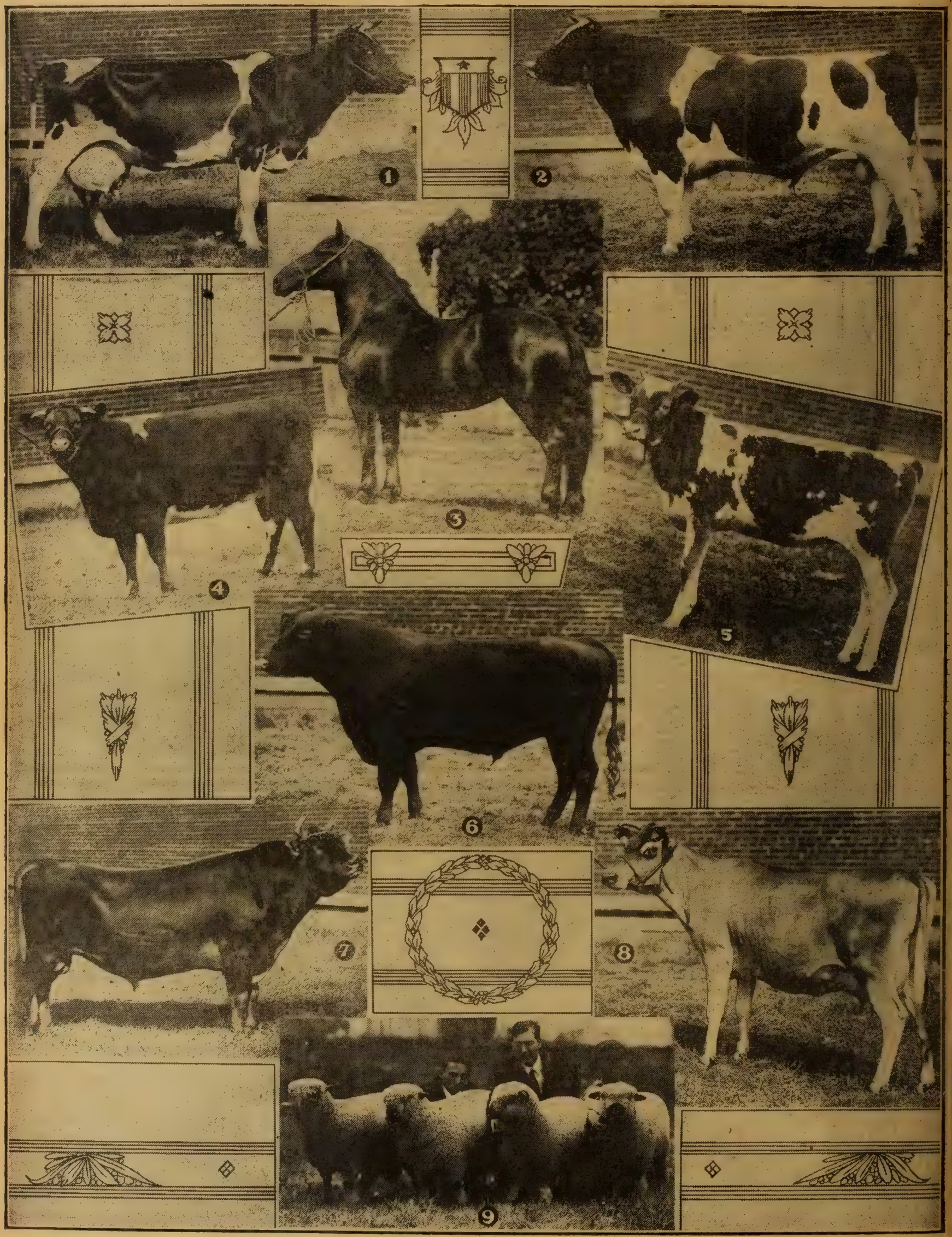


Prize Stock at the Wisconsin Fair



1—Prize-winning Holstein cow, Ida Lotta VI, owned by Rust Bros., West Allis, Wis. 2—Grand champion Holstein bull, Downing Pontiac Butterman, owned by M. W. Downing & Bro., Waukesha, Wis. 3—Senior and grand champion Percheron mare, Pearl, owned by Lewis Lewellin & Sons, Waterloo, Wis. 4—Junior champion Short-horn heifer, Duchess Lass, owned by Herr Bros. & Reynolds, Lodi, Wis. 5—Junior and grand champion Guernsey heifer, Imp. Governor's Ella, owned by McKerrow & Sons, Pewaukee, Wis. 6—First-prize senior yearling Red Polled bull, Norland, owned by J. B. Ahlers, West Bend, Wis. 7—Senior and grand champion Jersey bull, Noble Ruler, owned by W. S. Dixon & Son, Brandon, Wis. 8—Grand champion Jersey cow, Oxford Una's Lass, owned by W. S. Dixon & Son, Brandon, Wis. 9—First-prize get of sire, Shropshires, owned by McKerrow & Sons, Pewaukee, Wis.

1st Brae Burn Farm; 2d Whitemore; 3d Freehoff; 4th Kelley.
Get of Sire—1st Brae Burn Farm; 2d Whitemore; 3d Kelley; 4th Freehoff.
Produce of Sow—1st Brae Burn Farm; 2d Whitemore; 3d Kelley; 4th Freehoff.
Senior and Grand Champion Boar—Lovejoy.
Junior Champion Boar—Brae Burn Farm.
Senior and Grand Champion Sow—Kelley.
Junior Champion Sow—Brae Burn Farm.

YORKSHIRES.

Exhibitors: R. Connor Co., Auburndale, Wis.; B. F. Davidson, Menlo, Iowa; T. Bartleson & Son, Springfield, Wis.
Judge, Jas. Kemp, Kenney, Ill.
The awards:
Aged Boar—1st and 2d Davidson; 3d Conner.
Senior Yearling Boar—1st Davidson.
Junior Yearling Boar—1st Davidson; 2d Conner.
Under Year Boar—1st Davidson; 2d Bartleson.
Under 6 Months Boar—1st and 2d Davidson; 3d Conner.
Aged Sow—1st and 2d Davidson; 3d Conner.
Senior Yearling Sow—1st Conner; 2d Davidson.
Junior Yearling Sow—1st and 3d Conner; 2d Davidson.
Under Year Sow—1st and 3d Conner; 2d Davidson.
Under 6 Months Sow—1st and 2d Davidson; 3d Conner.
Aged Herd—1st Davidson; 2d Conner.
Young Herd—1st Davidson; 2d Conner.
Get of Sire—1st Conner; 2d Davidson.
Produce of Sow—1st Davidson; 2d Conner.
Champion Boar—Davidson.
Champion Sow—Davidson.

VICTORIAS.

Judge, Jas. Kemp, Kenney, Ill.
Exhibitors; H. P. West, Ripon, Wis.; Chas. Hill, Brookfield, Wis.
Aged Boar—1st West; 2d Hill.
Senior Yearling Boar—1st Hill; 2d West.
Junior Yearling Boar—1st and 2d West; 3d Hill.
Under Year Boar—1st and 2d West.
Under 6 Months Boar—1st and 2d Hill; 3d West.
Aged Sow—1st and 2d Hill; 3d West.
Senior Yearling Sow—1st and 2d Hill; 3d West.
Junior Yearling Sow—1st West; 2d Hill.
Under Year Sow—1st and 3d Hill; 2d West.
Under 6 Months Sow—1st and 3d Hill; 2d West.
Aged Herd—1st Hill; 2d West.
Young Herd—1st Hill; 2d West.
Get of Sire—1st Hill; 2d West.
Produce of Sow—1st Hill; 2d West.
Champion Boar—West.
Champion Sow—Hill.

Sheep.

It is conceded that there are more flocks of registered sheep in Wisconsin than in any other state and many of these good flocks graced the pens in the new sheep barns. Shropshires led in number and we hardly know how it would be possible to have a better showing of this popular breed. Mr. Alex Arnold, a well-known showman, said that they were the best lot of Shropshires he ever saw on exhibition. The strong competitors in the various classes came from the Broughton and McKerrow flocks. The Broughton sheep were American bred and defeated in several classes the best that could be imported. Such an honor is worth a great deal to an American breeder. Taking the entire sheep show into consideration there were not as many sheep in the barns as we have seen in previous years, but it was the opinion of all interested in the sheep exhibit that it was the best showing of sheep ever seen at the Wisconsin State Fair. There were very few but what would bear close inspection. We follow with a complete list of awards:

SHROPSHIRES.

Noel Gibson, Dundee, Ill., judged all breeds of sheep.
Exhibitors: Arthur Broughton & Sons, Albany, Wis.; Geo. McKerrow Sons Co., Pewaukee, Wis.; Wm. F. Renk, Sun Prairie, Wis.; W. G. Miles, Evansville, Wis.; W. Woodard, Bloomer, Wis.
The awards:
Aged Ram—1st Broughton; 2d and 4th McKerrow; 3d Renk; 5th Miles.
Yearling Ram—1st and 2d Broughton; 3d and 4th McKerrow.
Ram Lamb—1st and 3d McKerrow; 2d and 4th Broughton; 5th Woodard.
Aged Ewe—1st and 4th McKerrow; 2d Miles; 3d Woodard; 5th Renk.
Yearling Ewe—1st and 4th Broughton; 2d and 3d McKerrow; 5th Miles.
Ewe Lamb—1st and 4th McKerrow; 2d and 3d Broughton; 5th Miles.
Graded Flock—1st Broughton; 2d McKerrow; 3d Renk; 4th Miles; 5th Woodard.
Get of Ram—1st McKerrow; 2d Broughton; 3d Miles; 4th Woodard; 5th Renk.
Pair of Lambs—1st McKerrow 2d Broughton.
Champion Ram—Broughton.
Champion Ewe—Broughton.

OXFORDS.

Exhibitors: Geo. McKerrow Sons Co., Pewaukee, Wis.; A. J. Mohr, Bloomer, Wis.; Richards & Richards, Lodi, Wis.
The awards:
Aged Ram—1st and 2d McKerrow; 3d Mohr; 4th Richards.
Yearling Ram—1st and 2d McKerrow; 3d Richards; 4th Mohr.
Ram Lamb—1st and 2d McKerrow; 3d and 4th Mohr.
Aged Ewe—1st and 2d McKerrow; 3d Mohr; 4th Richards.
Yearling Ewe—1st and 2d McKerrow; 3d Richards; 4th Mohr.
Ewe Lamb—1st Richards; 2d Mohr; 3d and 4th McKerrow.
Graded Flock—1st McKerrow; 2d Mohr; 3d Richards.
Pair of Ram Lambs—1st McKerrow; 2d Mohr; 3d Richards.
Pair of Ewe Lambs—1st McKerrow; 2d Mohr.
Champion Ram—McKerrow.
Champion Ewe—McKerrow.

SOUTHDOWNS.

Exhibitors: W. Woodard, Bloomer, Wis.; Harry Crandell, Cass City, Mich.; G. A. Phillippi, Bear Creek, Wis.; Alex Arnold, Galesville, Wis.; W. G. Miles, Evansville, Wis.
The awards:
Aged Ram—1st Woodard; 2d Arnold; 3d Crandell; 4th Phillippi.
Yearling Ram—1st Arnold; 2d and 4th Woodard; 3d Crandell.
Ram Lambs—1st Woodard; 2d Miles; 3d Phillippi; 4th Arnold.
Aged Ewe—1st Arnold; 2d Woodard; 3d Miles; 4th Phillippi.
Yearling Ewe—1st and 2d Miles; 3d Woodard; 4th Crandell.
Ewe Lamb—1st and 3d Woodard; 2d and 4th Miles.
Graded Flock—1st Woodard; 2d Arnold; 3d Miles; 4th Crandell.
Get of Ram—1st Miles; 2d Arnold; 3d Phillippi.
Pair of Lambs—1st Woodard; 2d Miles.
Champion Ram—Woodard.
Champion Ewe—Arnold.

COTSWOLD.

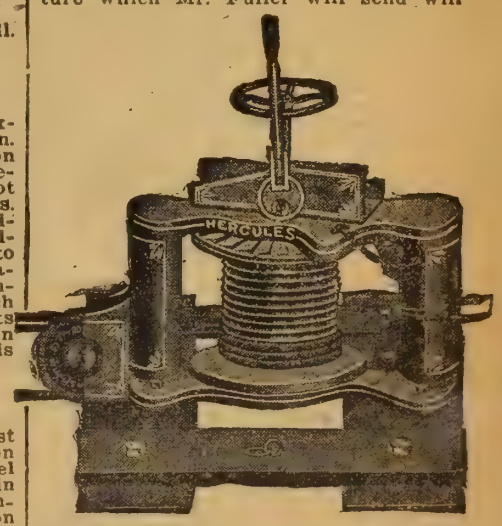
Exhibitors: Alex Arnold, Galesville, Wis.; M. Jewell, Mineral Point, Wis.; Harry Crandell, Cass City, Mich.; M. F. Hogan, Waunekee, Wis.; Richards & Richards, Lodi, Wis.
Aged Ram—1st Arnold; 2d and 3d Jewell; 4th Crandell.
Yearling Ram—1st Arnold; 2d Richards; 3d Hogan; 4th Crandell.
Ram Lambs—1st and 4th Arnold; 2d Hogan; 3d Crandell.
Aged Ewe—1st Arnold; 2d and 4th Crandell; 3d Hogan.
Yearling Ewe—1st and 2d Arnold; 3d and 4th Crandell.
Ewe Lamb—1st and 2d Arnold; 3d and 4th Jewell.
Graded Flock—1st Arnold; 2d Jewell; 3d Crandell; 4th Richards.
Get of Ram—1st Jewell; 2d Hogan.
Pair of Lambs—1st Hogan; 2d Jewell.
Champion Ram—Arnold.
Champion Ewe—Arnold.

Cow Comfort Important.

ON THE cow's comfort, to a great extent, depends her milk production. The Louden Tubular Steel Stanchion allows the cow an abundance of freedom and comfort, which she could not have in cramped, rigid, wooden stocks. These stanchions are strong and sanitary and inexpensive. Read the advertisement on page 18 and write to the manufacturers, The Louden Machinery Co., Fairfield, Iowa, for a complete barn equipment catalog, which tells about the Steel Stanchion and its relation to your milk profits. Mention that you read the advertisement in this paper.—Adv.

Interest in Stump Pulling.

IN connection with the great interest in land clearing which has been aroused in the state this fall we feel sure our readers will be interested in an advertisement of the Hercules Manufacturing Company, which appears on page 9. The Hercules machine was demonstrated in a number of Wisconsin counties when the land clearing special train visited towns on the Northwestern line in May and June. This same stump puller will be demonstrated this fall at the towns on the Soo line which are visited by the land-clearing special. A great many of our readers have already had an opportunity to witness the operation of Herculs in practical field tests and it is unnecessary to make any statement to them regarding the efficiency of the machine. Mr. B. A. Fuller, president of the Hercules Manufacturing Company, 841 24th street, Centerville, Iowa, is ambitious to place about 5,000 of his triple-power portable stump pullers in different parts of the country. To accomplish this end he is offering for a short period of time a special proposition which may be obtained by filling out the coupon which appears in his advertisement on page 9. The literature which Mr. Fuller will send will



also be of interest to anyone who has land to clear. The answering of this advertisement does not incur any obligation to purchase. There will doubtless be hundreds of new Hercules stump pullers in Wisconsin during the next two years. Those who take advantage of the offer made this week will get in on the new low price. Please mention The Wisconsin Farmer when you write answering this advertisement.—Adv.

Marathon County Is Winner.

County Exhibit Section of the Wisconsin State Fair Had Twenty-seven Entries and Keen Competition For the Prizes.

TWENTY-SEVEN of the seventy-one counties in Wisconsin, the largest number which ever sent exhibits to the state fair, competed this year for first honors in what was recognized as the best county exhibit display ever seen at the fair. This was one more county than exhibited last year and had Chippewa county, which entered, shown every booth in the county exhibits building would have been taken and it is already apparent that with interest in this department increasing each year that an addition to the building will soon be necessary.

The exhibits, as a whole, were much better this year than ever before, and the fact that the six ribbon counties were less than 200 points apart indicates that competition was keen and that it was not a walk away for the winning county. There were more top-notch booths, those in the front rank in the race for first honors, than ever before and visitors who have watched the county exhibit displays during the last few years could easily note the improvement that has been made. The displays this year were more varied and well balanced, on the whole, than heretofore, which shows the study the men in charge are putting into this work with the result that the county exhibits are bringing out the best agricultural products that are to be obtained in the competing counties. The county exhibits probably afford a better conception of the agricultural resources of the state than any other department of the fair, as each county gets together the best products obtainable and, when more than a third of those in the state show, there is brought together a display of field and garden crops that could hardly be obtained in any other way. Several southern counties which in the past have not exhibited were entered this year. Upper counties won the chief prizes, but the new exhibitors made good displays and only lacked the experience secured by the upper counties through more consistent work of this nature.

Grasses and grains featured all the booths this year. The hay crop throughout the state was probably the greatest, in every section, in the history of Wisconsin and this was reflected in the many sheafs of clover, alfalfa and timothy which were shown. Ripe corn was to be found in every booth, proving that every section of Wisconsin will this wall gather mature corn, and it was generally agreed the corn showing was the best in many years. The quality of grains was high, though the yields not so heavy, and it was only in potatoes that the exhibits did not come up to the standard of other years. Fruit and vegetable displays were exceptionally good, considering the weather.

Marathon county, which last year took first, stepped into first honors again this year with Wood county second. Langlade, St. Croix, Sauk and Ozaukee were the other ribbon counties in the order named and the scores of all the counties entered were as follows:

Marathon	2,317	Clark	1,801
Wood	2,265	Milwaukee	1,767
Langlade	2,234	Kenosha	1,721
St. Croix	2,224	Lincoln	1,674
Sauk	2,133	Iowa	1,615
Ozaukee	2,127	Walworth	1,550
Polk	2,090	Dodge	1,457
La Crosse	2,086	Washburn	1,372
Oneida	2,048	Vilas	1,307
Fond du Lac	2,003	Forest	1,238
Waupaca	1,908	Outagamie	1,227
Dane	1,876	Columbia	1,205
Taylor	1,857	Sawyer	1,177
Ashland	1,821		

The total number of possible points this year was 2,500, which, considering the score of the first half dozen counties, indicates the high quality of the exhibits. Mr. E. J. Delwiche, of Green Bay, placed the grains; Mr. J. G. Milward, of Madison, the vegetables and potatoes, and Sen. L. G. Kellogg, of Ripon, the fruits. Mr. E. L. Luther, superintendent of this department, was highly pleased with the showing made by the counties and, with the judges, pronounced the showing as a whole the best ever held.

The following details the exhibits by counties:

Marathon County.

Marathon, which county took first last year, can always be depended upon to present an exhibit which is not only representative of the crops grown in that county but which is also artistic to the eye. The booth this year was under the direction of J. D. Christie, of Wausau; George Cook, of Unity; Ardon Peronto, of Mosinee; Reno Zahn, L. H. Cook and Prof. A. S. Berg, all of Wausau. The apple display was regarded as one of the best in the county exhibits building and the showing of clovers and corn was especially good.

Wood County.

Wood, which county captured second honors, had its usual well-balanced display and the quality of its products and the artistic booth went a long way in the awarding of the prizes. Corn and threshed grain samples indicated a splendid crop and one bundle of silage corn, fourteen feet high and well-eared, was on display. The potatoes were good and the fruit display ranked with the best. The committee in charge consisted of O. J. Leu, of Grand Rapids; Christ Witt, of Marshfield; W. W. Clark, of Grand Rapids; G. W. Brown, of Pittsville, and J. A. Chapman, of Marshfield.

Langlade County.

Clover, grains, corn and potatoes were the big displays in the Langlade county booth, which was in charge of Leonard Freiburger, of Antigo; William Wagner, of Deerbrook; George Marshall, of Morley, and F. G. Swoboda, county agricultural representative. The quality of grain was fine this year and the yield good, and with good rains lately the fall potatoes promise to yield well. The display of both sheaf and threshed grain was very large and the vegetable and fruit showing very creditable.

St. Croix County.

St. Croix county, for the second year in succession, won fourth honors with an exhibit arranged by William Schwandt, of Deer Park; H. A. Aune, of Baldwin, county superintendent of schools, and George Rummele, of Hudson. The corn and hay crops were splendid and the small grains very good for 1916.

Sauk County.

Fruit, as usual, featured the Sauk county exhibit, which was in charge of Albert Wicher and Ernest Wicher, of Baraboo; Samuel Borch and Henry Eischenback, of North Freedom. The display of fruits was very strong as well as the showing of corn and this year's display in every way ranked with the one which won for this county the second prize last year.

Ozaukee County.

Ozaukee county was well represented with an exhibit in charge of William Nero, of Cedarburg. A pumpkin weighing 106 pounds occupied a very conspicuous position with a well-balanced display of grasses, potatoes and grains. The bundles of clover indicated the heavy crop that was harvested.

Polk County.

Polk county, in which dairying has made great progress during the last few years, featured a splendid crop of Golden Glow corn in its exhibit, which was in charge of A. J. McLennan, of Clear Lake; N. P. Swanson, of Balsam Lake; E. E. Playman, of St. Croix Falls; John Klinka, county agricultural representative, and E. J. Day, of St. Croix Falls. Polk county is in the Golden Glow belt and the crop there promises to be exceptionally good this year. The showing of grains and grasses was up to standard and attention was called to the fact that Polk county has more state graded schools than any other county in Wisconsin.

La Crosse County.

La Crosse county, with its exhibit in charge of T. H. Campion and William Moos, of Onalaska, featured corn and small grain. The showing of wheat and oats was especially fine, both in the threshed and sheaf displays, and particular emphasis was laid on the standard varieties of corn. An interesting feature was a map of Wisconsin showing La Crosse county by the use of an electric light, while above the booth was the name of the county in an electric sign that flashed on and off, attracting much attention.

Oneida County.

Oneida county had a splendid display in charge of W. D. Juday, county agricultural representative; Fred Coon, of Rhinelander, president of the county fair; Arthur Taylor, E. S. Sheperd and Will Gilligan, all of Rhinelander. The showing of grains and grasses as well as corn was an eye-opener to those from southern sections and Mr. Juday says that there are countless fields of corn of fifteen to twenty acres that will ripen despite the late spring. Alsike and timothy samples from fields that went four tons were shown and some clover samples measured more than five feet. The hay crop was the biggest in the history of the county and potatoes, in which this county excelled all last year, are yielding well, everything considered. Quality is good and Mr. Juday expects to have a good showing at the state show at Eau Claire.

Fond du Lac County.

Fond du Lac county was represented for the first time with an exhibit and for artistic arrangement many predicted this county would be among the first six in the awards. The showing of threshed and sheaf grains was especially strong, probably as good as any shown, and some splendid bundles of clover and alfalfa were shown.

Waupaca County.

Waupaca county can feel especially proud of its exhibit which was under the supervision of Fred Schoenick, of Weyauwega; William Anton, of Embarass, and Ed Glocke, of New London. The display of grains and grasses was large and representative of the crop harvested in that county, and the fruit display, considering the summer, was exceptional.

Dane County.

The Dane county exhibit, sponsored by the county order of the experiment association, was arranged by J. J. Garland, of Madison, and featured potatoes, threshed grains and tobacco. The potatoes ranked with any shown by southern counties and the threshed grains were especially good. There was also a showing of apples that attracted much attention and the samples of tobacco indicated the heavy yield and quality of this important crop in Dane county this year.

Taylor County.

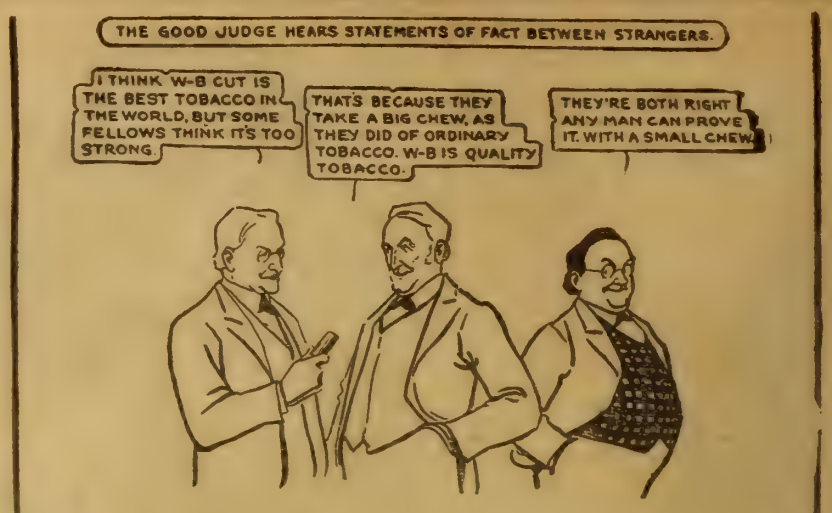
Emphasis was laid on timothy, clover and corn in the Taylor county booth, as these crops were especially good this year. The exhibit was arranged by Louis Ramm, Jacob Ackret, Antone Prost, all of Medford, and William Kohn, of Milwaukee, who owns a farm in that county, assisted by R. A. Kolb, county agricultural representative. This county also had a strong showing of fruits, although in the upper half of the state, as well as vegetables. A new era pumpkin attracted much attention, as it had the color of a watermelon.

Ashland County.

This was the first exhibit Ashland county has sent to the state fair and it was under the direction of C. P. Post, county agricultural representative; Alex Gingles, of Ashland; Eugene Pierellee, of Mellen, and Henry Hagstrom, of Ashland. Grasses and small grains were given prominence, while there was a splendid showing of fruits from Madeline Islands. The hay crop was a bumper and sheafs of alsike measuring five feet three inches were shown with corn that had begun to dent. Ashland county expects about an 80 per cent potato crop and the display of standard varieties was very good.

Clark County.

Clark county featured grains, grasses and fruits and with thirty-six varieties of sheaf and threshed grains had one of the largest showings in the



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KENTUCKY New country sorghum molasses, 6 one-gallon pails to case, $3.25 per case. Sample mailed for 5c. S. Rosenblatt, Hawesville, Ky.

contest. The quality was very fine and attention was called to the dairying resources of Clark county, which in the year ending last June turned out 8,000,000 pounds of cheese and 2,000,000 pounds of butter. John Beruilen, of Thorp, chairman of the county board, and M. W. Wilding, of Neillsville, county clerk, were in charge.

Milwaukee county.

Vegetables, as usual, were the big feature of the Milwaukee county exhibit, this being one of the principal crops of the county. Most of the grains were from the county agricultural school farm and the fruit shown was especially good. H. F. Schroeder, C. D. Adams and F. J. Seevers, all of Milwaukee, were in charge.

Kenosha County.

Vegetables and grains occupied the most prominent places in the exhibit of Kenosha county, in charge of William Luke, of the Town of Wheatland, and P. H. Tobin, of Kenosha. Some splendid cabbage was shown, although this crop is short this year. One grower recently sold the cabbage in the field on sixteen acres for $2,200 and during fair week growers were getting $30 to $32 a ton for this crop. The small grain crop is also good, oats yielding very high.

Lincoln County.

With the greatest hay crop in history, Lincoln county had an exceptionally fine showing of timothy, clover and alfalfa. Some samples of timothy measured five and a half feet and some of alsike five feet three inches and these were taken from large fields. The committee in charge was Hall L. Brooks, of Tomahawk; A. H. Kolb, county agricultural representative; Gustav Kraft and Robert Kleinschmidt, both of Merrill.

Iowa County.

Iowa county had its usual well-arranged, artistic booth in charge of J. A. Van Natta, county superintendent of schools; J. A. Brunker, of Ridgeway, and Otto Oimoen, of Barnaveld. Particular attention was called to the fact that the dairy products in this county bring the farmers $1,500,000 annually, and the display of grasses, grains and corn was especially strong. A lantern display showing Iowa county farm views, as well as several samples of minerals mined in that county, were of added interest to visitors.

Walworth County.

Walworth county was represented with a county exhibit for the first time. It was in charge of L. L. Oldham, county agricultural representative; Howard Peck and Will Foster, all of Elkhorn. The booth was very artistically arranged and one side was devoted to a list of the pure-bred cattle breeders and grain growers of the county. The corn shown was of splendid quality and the samples of grains and grasses indicated excellent crops.

Dodge County.

Grains, grasses and corn featured the Dodge county exhibit, which was in charge of H. E. Krueger, of Beaver Dam. No effort was made to show vegetables and fruits, Mr. Krueger preferring to place all emphasis on the grains in that county and the feeds that go to make dairying the big thing in the county.

Washburn County.

The Washburn county exhibit was in charge of Peter Brown and William Busch, of Spooner. Corn samples spoke for the good crop which will be gathered there this year or which is now going into the silos, and the grasses were the best ever brought from that county. Small grain samples were good, but potatoes were not up to the usual standard because of the dry weather this year. But as Mr. Brown said, "what hurt the potatoes made the corn."

Vilas County.

Grasses and potatoes were the principal exhibits in the Vilas county booth, in charge of Stanley F. Korpall, Hans Hanson, Roy Beebe, all of Eagle River; Dr. White, of Flambeau, and Oscar Gunderson, county agricultural representative. The potato crop this year is good and the hay crop the greatest in history. Corn is doing nicely and silos will be filled this year.

Forest County.

An especially well-balanced exhibit represented Forest county this year, the booth being in charge of John Swenehart, county agricultural representative; Joe Sherman, Grant Faulkner and Francis Shoemaker, all of Crandon; William Hubbard, of Wabena, and A. M. Rogers, of Newald. Crops have been good, Mr. Swenehart reported, and enough ripe corn has already been picked to insure good seed for several years. Late potatoes are doing well and the showing of grasses indicated the heavy hay crop. Many fields of medium red clover went as high as four tons to the acre and three cuttings of alfalfa was general.

Outagamie County.

Outagamie was represented for the first time by an exhibit and P. W. Silverwood and W. F. Wolf, of Appleton, who were in charge, are to be congratulated on the exhibit they got together without previous experience. Attention was drawn to the road work in that county which this year voted $700,000 for concrete roads. Twenty miles of these roads will be completed this year. A feature exhibit was a sample of hemp fourteen feet high.

Columbia County.

Columbia county for the first time sent an exhibit to the fair this year and its display was very creditable. The showing of Silver King, Murdock, Golden Glow and Clark's Yellow Dent corn was very strong and the grains were of splendid quality with the best barley crop in years. Cleve Tomlinson, of Poynette, and A. C. Ellickson, of Arlington, were in the committee in charge.

Sawyer County.

C. P. West, county agricultural representative, and Jens Jorgensen, chairman of the Town of Round Lake, were in charge of the Sawyer county booth. Potatoes were the feature exhibit, although the showing of grasses was splendid, Sawyer county having harvested the largest hay crop in history. The corn on exhibition showed that this upper county will have ripe corn and Mr. West says that many silos have already been filled. The potato crop is splendid and pasture has been excellent all summer. There was also a large display of root crops which Mr. West is encouraging settlers to raise for their feeding value on land not quite ready for corn and the vegetable display was very worthy.

Shawano County Association.

To the Editor:—I am sending you a brief summary of the report of the Shawano County Cow-Testing Association for the month of August and up to September 9th. There were only eleven cows in the forty-pound list this month, owing to the hot weather and short pastures. The highest cow in the association belongs to Mr. William Hansen. She is known as Little Cow and is a grade Durham thirteen years old. She produced 880 pounds of milk and 44.9 pounds of butter fat, with an average test of 5.1 per cent.

Feeding of green corn was started early in September and this has helped to keep up the flow of milk in some herds. There has been little grain fed during the dry period and this, doubtless, accounts for the decrease in flow of some of the herds where the pastures were short.

C. M. Rydberg, Official Tester.
Shawano Co., Wisconsin.

Improved Farms

AND cut over lands in the dairy belt of northern Wisconsin at bargain prices. If you intend to buy do not fail to write us asking for our list.
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A TRACT of 25,000 acres of land, cut over by themselves, all near Ladysmith, in Wisconsin's best dairy district, and will 've buyers their choice at low prices and on easies terms. Send for literature. Flambeau River Lumber Company, Station D, Ladysmith, Wisconsin.

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Kuehne & Fiedler **Seymour, Wis.**

LANDS AND HOMES

Did You Follow Our Advice In Last Week's Paper?

Then you have read the editor's story and our page announcement of the Hillsdale ranch in the issue of August 10th. And, anyway, we are pleased to have you read the following articles quoted from the August 31st issue of the Herald of Burns, Wyoming:

Conard Buys Four Section Farm.

Mr. E. C. Conard, of Rockwell City, Iowa, who purchased a farm from the Federal Land Co., last fall, which he expected to move onto with his family next spring, was in Burns Tuesday and Wednesday. His object here was to look over the Hillsdale ranch, now being colonized by the Federal people.

That he was pleased with it is shown by the fact that before starting for Iowa last night he closed a contract of purchase for Sec. 3-15-64 and Sec. 33-16-64, which corners Sec. 3 on the northwest. With the purchase Mr. Conard secures the state land leases on Secs. 34 and 4. This makes him a square farm of 2,560 acres.

Mr. Conard was more than pleased with crop conditions here. He says that having seen the grains grown in 1915 with normal rainfall, and this season of unprecedented drouth, he is satisfied that this is just as sure a crop country as in Calhoun county, Iowa, besides being much superior for cattle raising.

Mr. Conard will break and put into crop 640 acres next spring, and will stock his new ranch with several hundred head of cattle. He will move out with his family as soon as he has a public sale in December. Mrs. Conard was here with him last fall, and those who met her are delighted that this splendid family will soon be residents of the Golden Prairie District.

Increases Holdings by Additional Quarter.

G. W. Price, of Osceola, Neb., who came out to Burns last year and bought a quarter section of the Federal Land Co., returned this week and was so well pleased with the conditions, regardless of our dry-crop season, that he purchased another quarter section, which makes him a fine half section of property. He expects to move onto his place in the early spring and make his home on the Golden Prairie. Mr. Price subscribed to the Herald while here, as the best medium by which to keep track of the conditions in this vicinity. What the Golden Prairie needs more than anything else, is good farmers, and Mr. Price and his family will be a valuable addition to the community.

Also let us suggest that if you have not yet filled out and mailed us the coupon below, now is a splendid time to do so.

FEDERAL LAND COMPANY, Burns, Wyoming

Field of winter wheat in shock and binder at work on farm of Richard Spatz, adjoining the Hillsdale ranch. Photo taken July 20, 1916. This same field produced 50 bushels of oats per acre in 1915, the wheat shown being drilled into the oats stubble in September.

FEDERAL LAND COMPANY, BURNS, WYO.

Gentlemen: Please mail me at once full descriptive literature of your Hillsdale ranch and the Golden Prairie District of Wyoming.

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Address.....

Remember this: That we are protected from hot winds and extreme heat by the snowcapped Rockies, always on clear days in plain view to the southwest. This is fully explained on page 3 of the booklet entitled "Wheat Growing and General Farming Without Irrigation in the Golden Prairie District" which will be sent to all who fill out and mail us the above coupon.

PROSPERITY IN CANADA

$90,000,000 in new wealth added in 1915. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 28.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated lands from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privileges of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready-made farms for sale. Special easy terms. Loans for live stock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you; we can afford to help you. We own the land; we want the land cultivated. Our interests are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

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The Reading Club, 30 Irving Place, New York.

Another Great Show of Dairy Cattle.

Wisconsin 1916 Fair Brought Out a Large Number of Exhibitors and Splendid Individuals in Keen Competition For Honors in the Ring—List of the Awards.

THE showing of dairy cattle at the Wisconsin State Fair was away above the average and many judges spoke of it as the best that Wisconsin had ever seen. The classes were open to competition from inside and outside the state this year, while last year only Wisconsin exhibitors were eligible to any of the prizes. The show of dairy cattle was ahead of any at the other fairs in the western circuit this season, establishing more firmly Wisconsin's position as the greatest dairy state. Supt. H. W. Claflin expressed himself well pleased with both the quantity and quality shown. Judges Kiddee and Humphrey both pronounced the Wisconsin dairy cattle show as an outstanding exhibit. Nearly all the classes in all breeds but the Brown Swiss were well filled, one class of Holsteins having twenty-seven entries. The Holsteins lead in number exhibited, being 142 head. There were eighty-four Jerseys exhibited, seventy-eight Guernseys, seventy-two Ayrshires and sixteen Brown Swiss. While the show was open to the world, there were only three herds from outside the state exhibited.

HOLSTEINS.

The Holstein exhibit at the 1916 Wisconsin State Fair was probably the largest in the history of the fair. It is of added interest also that with one exception all of the exhibitors are Wisconsin breeders. The showing in all classes was very large, especially the female classes, and the male class under a year. Many new faces were seen among the exhibitors of Holstein cattle and it is an interesting fact to know that many of these who are showing for the first time this year have come away with a goodly number of creditable prizes. The herd of Rust Bros., West Allis, Wis., was awarded many of the leading prizes, Baird Bros., Waukesha, Wis., were heavy winners. M. W. Downing, Waukesha, Wis., were heavy winners in most of the classes shown and were awarded senior champion and grand champion on their noted sire, Downing Pontiac Butterman. N. Dickinson & Son, Lake Geneva, Wis., were heavy winners, and captured junior, senior and grand championship honors in the female classes. The showing was declared by many competent judges to be superior to that at the Minnesota or Iowa State Fairs this year, and the majority of the animals exhibited would be creditable candidates for the Waterloo Dairy Congress or the National Dairy Show.

The exhibitors: Baird Bros., Waukesha, Wis.; Charles Chapman, Waukesha, Wis.; C. M. Corcoran, Fond du Lac, Wis.; M. Dickinson & Son, Lake Geneva, Wis.; M. W. Downing & Brother, Waukesha, Wis.; John L. Fisher, Janesville, Wis.; Heck Bros., Lyons, Wis.; C. G. Keys, Richland Center, Wis.; Reuben Klofanda, Racine, Wis.; S. M. Randall, Waupun, Wis.; Dr. David Roberts, Waukesha, Wis.; Rust Bros., West Allis, Wis.; Vasas Bros., Cudahy, Wis.; V. S. Culver, Stillwater, Minn.; Harry D. Dunbar, Elkhorn, Wis.

The awards:

Bull 3 Years and Over (12 shown)—1st Downing & Brother on Downing Pontiac Butterman; 2d Culver on Sir Ormsby Korndyke Mechthilde; 3d Baird Bros. on Bairdland Segis Sir Prize; 4th Randall on Sir Alban Pontiac Korndyke; 5th Klofanda on North Star Parthenea Sir Beets.

Bull 2 Years and Under 3 (6 shown)—1st Chapman on Downing Pontiac Butterman Jr.; 2d Randall on Town View Pontiac; 3d Baird Bros. on North Star Beets King; 4th Vasas Bros. on Sir Aaggie De Kol Pontiac; 5th Keys on Sir Johanna Bonheur Ormsby.

Bull 1 Year and Under 2 (7 shown)—1st Klofanda on Racine Bessie Johanna Piebe; 2d Klofanda on Racine Walker Johanna; 3d Baird Bros. on Nockdair King Segis Perfection; 4th Downing & Brother on Downing Pontiac Dairy Show II; 5th Corcoran on Woodmont Butterboy Paladim.

Bull Under 1 Year (27 shown)—1st Roberts on Roberts' Abbekerk Pontiac; 2d Baird Bros. on Farsee Sir Segis Hengerveld; 3d Dickinson & Son on Sir Ollie Pontiac Inka; 4th Dunbar on Colantha Hamilton Pietertje II; 5th Baird Bros on Nockdair Segis George; 6th Baird Bros. on Nockdair Segis Foges Boy; 7th Rust Bros. on Sir Johanna Pontiac Beets.

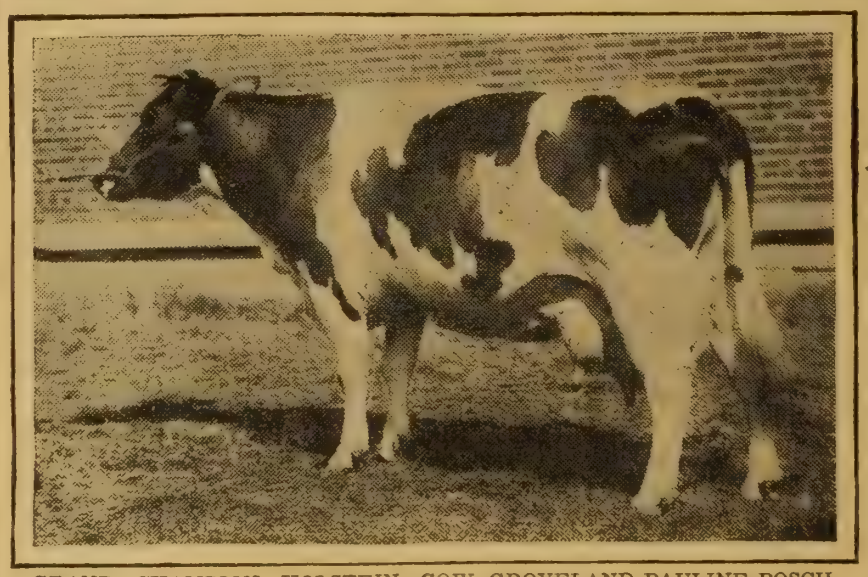
Cow 3 Years or Over (16 shown)—1st Dickinson & Son on Groveland Pontiac Hylaard; 2d Rust Bros. on Ida Lotta VI; 3d Klofanda on Racine Johanna Colantha Piebe; 4th Dickinson & Son on Groveland Pauline Posch; 5th Klofanda on Colantha Piebe of Elmcourt; 6th Culver on Buffalo Parthenea Skylark.

Heifer 2 Year and Under 3 (13 shown)—1st Dunbar on Oak Lodge Walker Lady; 2d Dickinson & Son on Groveland Pontiac De Kol Cheka; 3d Baird Bros. on Nockdair Segis Netherland Prize; 4th Fisher on Johanna Rue Duchess Fisher; 5th Culver on Pride Merrell of Hollanden.

Senior Yearling Heifer (13 shown)—1st Dickinson & Son on Groveland Ora Pontiac Hylaard; 2d Culver on Miss Clissy Ormsby Rue; 3d Baird Bros. on Nockdair Segis Longfield Rose; 4th Klofanda on Racine Johanna Colantha Aaggie; 5th and 6th Randall on Aaggie Pontiac Movie and Hazel Pontiac.

Junior Yearling Heifer (11 shown)—1st Dickinson & Son on Groveland Pontiac Netherland; 2d Culver on Far Oaks Violet Ormsby; 3d Baird Bros. on Nockdair Segis Valentine; 4th Fisher on Rue Sarcastic Fisher; 5th Baird Bros. on Nockdair Segis Korndyke Lottie; 6th Dickinson & Son on Groveland Pontiac Inka; 7th Downing & Brother on Downing Pontiac Combination.

Senior Heifer Calf (23 shown)—1st



GRAND CHAMPION HOLSTEIN COW, GROVELAND PAULINE POSCH, OWNED BY NATHAN DICKINSON & SON, LAKE GENEVA, WIS.

Dickinson & Son on Miss Walcovis Pontiac Netherland; 2d Dickinson & Son on Mercedes Jessie Anoca; 3d Baird Bros. on Nockdair Segis De Kol Blossom II; 4th Culver on Far Oaks Skylark Ormsby; 5th Baird Bros. on Nockdair Segis Goldbron; 6th Downing & Brother on Downing Pontiac Abbekerk Polly.

Junior Heifer Calf (12 shown)—1st Baird Bros. on Nockdair Segis Cornucopia; 2d Dickinson & Son on Princess Calamo Korndyke; 3d Baird Bros. on Nockdair Segis Gelsche; 4th Klofanda on Racine Bessie Piebe; 5th Dunbar on Unnamed; 6th Klofanda on Racine Piebe Johanna; 7th Culver on Far Oaks Jennie Ormsby.

Junior Champion Bull—Klofanda on Racine Bessie Johanna Piebe.

Senior and Grand Champion Bull—Downing & Brother on Downing Pontiac Butterman.

Junior Champion Female—Dickinson & Son on Groveland Ora Pontiac Hylaard.

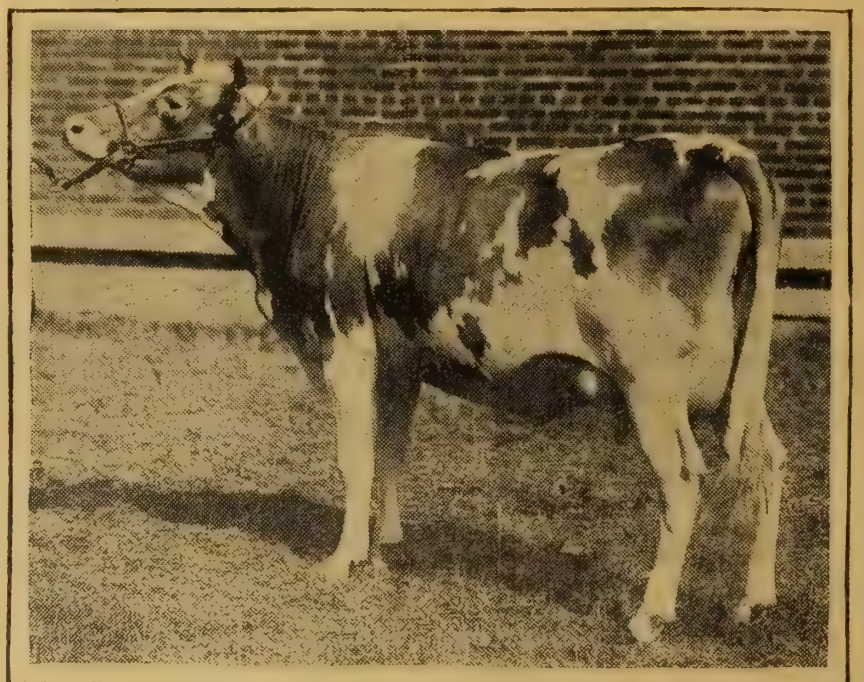
Senior and Grand Champion Female—Dickinson & Son on Groveland Ora Pontiac Hylaard.

Get of Sire (11 shown)—1st Dickinson & Son on get of Cornucopia Pontiac Johanna Lad; 2d Baird Bros. on get of Bairdland Segis Sir Prize; 3d Culver on get of Sir Ormsby Korndyke Mechthilde; 4th Klofanda on get of Johanna Sarcastic Lad 2d; 5th Dunbar on get of Beauty Walker Pietertje King.

Produce of Cow (10 shown)—1st Dickinson on produce of Lady Ora Hylaard; 3d Culver on produce of Fidigty Clissy 2d Rue; 3d Downing & Brother on produce of Downing Pontiac Butter Maid; 4th Klofanda on produce of Colantha Piebe of Elm Court; 5th Dunbar on produce of Errant Queen.

Aged Herd (7 shown)—1st Baird Bros. on herd headed by Bairdland Segis Sir Prize; 2d Culver on herd headed by Sir Ormsby Korndyke Metchthilde; 3d Baird Bros. on herd headed by Bairdland Segis Sir Prize; 4th Dickinson & Son on herd headed by Iowana Sir Ollie.

Young Herd (6 shown)—1st Baird Bros. on herd headed by Nockdair King Segis Perfection; 2d Culver on herd headed by Far Oaks Sir Ormsby Paul-



FIRST-PRIZE SENIOR YEARLING GUERNSEY COW, HERO'S RAMONA, OWNED BY J. R. LOVE & SON, WAUKESHA, WIS.

—Dickinson & Son on Groveland Pontiac Hylaard.

Junior Champion Bull—Klofanda on Racine Bessie Johanna Piebe; 2d Dickinson & Son on Groveland Pontiac Abbekerk Polly; 3d Downing & Brother on herd headed by Downing Pontiac Dairy Show II; 4th Klafanda on herd headed by Racine Bessie Johanna Piebe.

JERSEYS.

Wisconsin Jersey breeders well may feel proud of the showing of Jersey cattle at the 1916 Wisconsin State Fair. Both in number and in quality they exceeded anything in recent years. W. S. Dixon, Brandon, was out with his good cattle, as usual, and captured a goodly number of firsts and five out of the six championships. However, there were a number of new state fair exhibitors that were heavy winners. Among these were F. D. Underwood and The Hall Estate. Most of the classes were well filled and competition was keen and close. It is gratifying to see the beginners in the showing game take so many high honors, as it encourages others to start in.

Exhibitors: W. S. Dixon, Brandon, Wis.; W. O. Douglas, Janesville, Wis.; The Hall Estate, Knapp, Wis.; Charles A. Peterson, Rosendale, Wis.; Charles W. Peterson, Darlington, Wis.; F. D. Underwood, Wauwatosa, Wis.; P. G. Warmington, Honey Creek, Wis.

Bull 3 Years or Over (8 shown)—1st Dixon on Noble Ruler; 2d Charles A. Peterson on Ibsen's Glory; 3d Underwood on Noble's Fawn Prince; 4th Underwood on Brookhill Financial Count; 5th The Hall Estate on Fern's Eminent Reminder.

Bull 2 Years and Under 3 (4 shown)—1st Warmington on Pennithorpe's Knight; 2d Douglass on Merry Lad's You'll Do; 3d Underwood on Frederick's Pogis; 4th Charles W. Peterson on May Dooley's Emminent.

Bull 1 Year and Under 2 (8 shown)—1st Charles A. Peterson on Ibsen's Chief; Underwood on Frederick's Knight; 3d Dixon on Oxford Clxia Gamgory; 4th Dixon on Cupid Oxford Majesty; 5th Warmington on unnamed.

Bull Under 1 Year (7 shown)—1st Dixon on Gauntlett Oxford Majesty; 2d Underwood on Frederick Jim Connors; 3d Underwood on Frederick's Lord of Fewacres; 4th Douglas on unnamed; 5th Warmington on unnamed.

Cow 3 Years or Over (9 shown)—1st Dixon on Oxford Una's Lass; 2d Underwood on Sultan's Emily; 3d Underwood on Distinction's Ox Belle; 4th Warmington on Combination Countess 3d; 5th Charles W. Peterson on Raleigh's Avon Ruby; 6th Douglas on Betsy K.; 7th Charles A. Peterson on Silver's Lady J.

Heifer 2 Years and Under 3 (8 shown)—1st Underwood on Noble's Lady Helena; 2d Dixon on Jolly Oxford Buttermilk; 3d Warmington on Noble Lord's Pet; 4th Underwood on Iceland's Lady Elinor; 5th Douglas on Angeline May.

Senior Yearling Heifer (12 shown)—1st Underwood on Lady Bashua; 2d Dixon on Majesty Oxford Queenie; 3d Charles A. Peterson on Burn Brae's Coulisse; 4th Underwood on Lady Dunlop; 5th Charles A. Peterson on Burn Brae's Sultana; 6th Warmington on Noble Lord's Elda.

Junior Yearling Heifer (2 shown)—1st and 2d Dixon on Oxford Queenie's Princess and Oxford Majesty Mabel.

Senior Heifer Calf (13 shown)—1st Dixon on Oxford Majesty Maid; 2d Dixon on Double Oxford Queenie; 3d Warmington on unnamed; 4th Underwood on Frederick's Lady Margaret; 5th Underwood Frederick's Lady Sarah; 6th The Hall Estate on Superma's Noble Queen.

Junior Heifer Calf (9 shown)—1st Dixon on Toga's Oxford Mirandia; 2d Underwood on Frederick's Lady Marjorie; 3d Dixon on Majesty Oxford May; 4th Warmington on unnamed; 5th Underwood on Frederick's Lady Denny; 6th The Hall Estate on Edith's Best of Brookside 2d.

GUERNSEYS.

The Guernsey cattle exhibit was exceptionally good, both in quantity and quality. It is an interesting fact to note that the young animals bred by the exhibitor in many cases won over the older animals, proof that it is possible to improve the quality of animals by careful breeding. Competition was very strong in most of the classes. The McKerrow & Sons herd and Jean Duluth Farm herd fought hard for honors in all classes. L. P. Martiny's herd made a first-class showing and, considering the fact that they were right out of pasture and not fitted highly, surely came out well. The female classes were exceptionally good, showing good dairy type and refinement and very good udder development. The bull classes, though not as large as in some of the other breeds, were of superior quality as a whole.

The exhibitors: C. J. & W. A. Connell, Menomonee Falls, Wis.; Jean Duluth Farm, Duluth, Minn.; J. R. Love & Son, Waukesha, Wis.; L. P. Martiny, Chippewa Falls, Wis.; Geo. McKerrow & Sons, Pewaukee, Wis.; Goodhand Kingston, Waukesha, Wis.; J. Gilbert Hickcox, Whitefish Bay, Wis.; J. H. Harvey, Waukesha, Wis.; Geo. S. Love & Son, Waukesha, Wis.

The awards:

Bull 3 Years or Over—1st McKerrow & Sons on Imp. Gov. Winsome; 2d J. R. Love & Son on Dumont's Hero; 3d Martiny on Prince Romeo; 4th Connell on Cora's Sequel.

Bull 2 Years and Under 3 (6 shown)—1st Jean Duluth Farm on Starlight's Excelsior of J. D.; 2d Martiny on Dasher of Sarnia; 3d Geo. S. Love & Son on Noble Gov. of Walnut Ridge; 4th Kinkston on Moss Raider of Mushego; 5th Hickcox on May King of Starlight.

Bull 1 Year and Under 2 (5 shown)—1st Martiny on Dairydette; 2d Martiny on Romeo's Glenwood of Chippewa Falls; 3d Jean Duluth Farm on May Rose N. S.; 4th J. R. Love & Son on Sir June of Hewdale; 5th J. R. Love & Son on unnamed.

Bull Under 1 Year (11 shown)—1st Jean Duluth Farm on Marathon Rose King; 2d Kingston on Moss Maider's Gov. of Mushego; 3d McKerrow & Sons on McKerrow's Gov. Dearie; 4th J. R. Love & Son on College Hero; 5th Connell on Cora's Sequel of Sunny Slope.

Cow 3 Years or Over (10 shown)—of the Coartil Bree; 2d J. R. Love & Son on Raymond's Cora of Hawthorne; 3d Jean Duluth Farm on J. D. Phyllis; 4th Martiny on Robbie's Queen; 5th Kingston on Imp. Princess Du Braye II.

Heifer 2 Years and Under 3 (6 shown)—1st Jean Duluth Farm on J. D. Coronet; 2d McKerrow & Sons on McKerrow's Gov. Mythop; 3d McKerrow & Sons on Imp. May Rose of Urangue III; 4th Martiny on Jeanie of Cherry Hill Farm; 5th Hickcox on Imp. Dulce of Sarnia; 6th J. R. Love & Son on Alathusia.

Senior Yearling Heifer (6 shown)—1st J. R. Love & Sno on Hero's Ramona; 2d Jean Duluth Farm on Wm.'s May Rose; 3d Connell on Beauty of Sunny Slope; 4th Hickcox on Imp. Winnie of Bangor; 5th Martiny on Glenwood's Butter Queen of Chippewa; 6th Connell on Raymond's Beauty of Menomonie.

Senior Heifer Calf (10 shown)—1st Jean Duluth Farm on Gree's May Rose; 2d McKerrow & Sons on McKer-

row's Sunrise Governess; 3d J. R. Love & Son on Cora's Beauty of Hawthorne; 4th McKerrow & Sons on Julia Ann's Pride 2d; 5th Jean Duluth Farm on Julia's May Rose; 6th Jean Duluth Farm on Chene's May Rose.

Junior Heifer Calf (6 shown)—1st McKerrow & Sons on Imp. Governor's Ella of McKerrow Farms II; 2d Martiny on Stranford's Butter Queen of Chippewa; 3d Hickcox on May Rose of Clovernook; 4th Connell on Kate of Sunny Slope; 5th Hickcox on May Rose Louisetee of Clovernook.

Get of Sire (5 shown)—1st Jean Duluth Farm on get of May King of Linda Vista; 2d McKerrow & Sons on get of Gov. Winsome; 3d J. R. Love & Son on get of Dumont's Hero; 4th Martiny on get of Stanford Glenwood of Pinehurst 6th.

Produce of Cow (6 shown)—1st Jean Duluth Farm on produce of Coquette of Haddon; 2d J. R. Love & Son on produce of Raymond's Cora of Hawthorne; 3d Martiny on produce of Milens' Butter Queen; 4th Connell on produce of Leggs.

Aged Herd (5 shown)—1st McKerrow & Sons on herd headed by Gov. Winsome; 2d Jean Duluth Farm on herd headed by Starlight's Excelsior; 3d J. R. Love & Son on herd headed by Dumont's Hero; 4th Martiny on herd headed by Dasher of Sarnia.

Young Herd (2 shown)—1st Jean Duluth Farm on herd headed by Marathon Rose King; 2d J. R. Love & Son on herd headed by Sir Jesse of Hewdale.

Senior Champion Female—McKerrow & Sons on Imp. Bordeaux of the Coartil Bree.

Junior and Grand Champion Female—McKerrow & Sons on Imp. Governor's Ella of McKerrow Farms II.

Senior Champion Bull—McKerrow & Sons on Imp. Gov. Winsome.

Junior and Grand Champion Bull—Jean Duluth Farm on Marathon Rose King.

AYRSHIRES.

The Ayrshire show was not large, except the aged cow class, in which was shown ten animals. However, it made up in quality what it lacked in quantity. The exhibitors were Adam Seitz, Waukesha, Wis.; Dr. David Roberts, Waukesha, Wis.; The Ferndell Farms, Ladysmith, Wis.; Stephen Bull, Racine, Wis. The herd of Adam Seitz was up to its usual high standard and won four out of the six champion ribbons. Dr. Roberts' herd was particularly strong in the female classes. He also had the junior champion bull. The Ferndell Farms herd was well up in the money in every class.

Bull 3 Years or Over (3 shown)—1st Seitz on Bargenock Rising Star; 2d Roberts on Roberts' Cavalier; 3d Ferndell Farms on Victor of Ladysmith.

Bull 2 Years and Under 3—1st Bull on Aldebaran Findlayston; 2d Ferndell Farms on Ferndell Victor; 3d Seitz on Cavalier Kilnford Ringmaster; 4th Roberts on Roberts' Fairy Duke.

Bull 1 Year and Under 2—1st Seitz on Cavalier's Lord Roseberry; 2d Ferndell Farms on Ferndell's Lessnessock; 3d Roberts on Roberts of Waukesha.

Bull Under 1 Year (10 shown)—1st Roberts on Roberts' Pride Cavalier; 2d Seitz on Cavalier's Lord Stewart; 3d Ferndell Farms on Ferndell Arrogance; 4th Bull on Johnnie Reid of Aldebran; 5th Seitz on Tower Rising Star.

Cow 3 Years or Over (10 shown)—1st Seitz on Imp. Kilnford Bell IV.; 2d Ferndell Farms on May of Hillcroft; 3d Seitz on Imp. Hillhouse Maud II.; 4th Roberts on Value's Pride of Oak Valley; 5th Seitz on Bargenock Carnation.

Heifer 2 Years and Under 3 (8 shown)—1st Roberts on Roberta of Scotland; 2d Ferndell Farms on Silver Pet of Ferndell; 3d Seitz on Cavalier's Pet; 4th Ferndell Farms on Stately Lessnessock of Ferndell; 5th Roberts on Roberta Dahlia.

Senior Yearling Heifer (7 shown)—1st Roberts on Roberta Value's Pride Cavalier; 2d Ferndell Farms on Snowflake of Ferndell; 3d Seitz on Cavalier's Lack Spur; 4th Seitz on Cavalier's Rosewood; 5th Roberts on Roberta of Hartland.

Junior Yearling Heifer (5 shown)—1st Ferndell Farms on Ferndell's Felicity; 2d Seitz on Cavalier's Roseleaf; 3d Roberts on Roberta Cavalier Belle; 4th Bull on Annie Maky of Aldebaran; 5th Ferndell Farms on Ferndell's Innocence.

Senior Heifer Calf (8 shown)—1st Roberts on Roberta Southwick Cavalier; 2d Seitz on Cavalier Lavender; 3d Ferndell Farms on Ferndell's Fashion; 4th Seitz on Cavalier's May Flower.

Junior Heifer Calf (5 shown)—1st Seitz on Cavalier's Lady Bountiful; 2d Ferndell Farms on Ferndell's Mode; 3d Ferndell Farms on Ferndell's Fidelity; 4th Seitz on Cavalier's Twimble.

Get of Sire (4 shown)—1st Seitz on get of Bargenock Gay Cavalier; 2d Roberts on get of Roberts' Cavalier; 3d Ferndell Farms on get of Victor of Ladysmith; 4th Bull on get of Aldebaran Findlayston.

Produce of Cow (4 shown)—1st Roberts on produce of Southwich Heathflower 6th; 2d Seitz on produce of Vilo Pender; 3d Bull on produce of Chappelhill Lillian; 4th Ferndell Farms on produce of Rose Lotus.

Aged Herd (4 shown)—1st Seitz on herd headed by Bargenock Rising Star; 2d Roberts on herd headed by Roberta Cavalier; 3d Ferndell Farms on herd headed by Ferndell's Victor; 4th Bull on herd headed by Aldebaran Findlayston.

Young Herd (4 shown)—1st Ferndell Farms on herd headed by Ferndell Lessnessock; 2d Seitz on herd headed by Cavalier Lord Roseberry; 3d Roberts on herd headed by Roberts' Pride Cavalier; 4th Bull on herd headed by Golden Glow of Aldenbaran.

Junior Champion Bull—Roberts on Roberts' Pride Cavalier.

Senior and Grand Champion Bull—Seitz on Bargenock Gay Cavalier.

Junior Champion Female—Ferndell Farms on Ferndell's Felicity.

Senior and Grand Champion Female—Seitz on Imp. Kilnford Belle IV.

BROWN SWISS.

The Brown Swiss show included only one herd, that belonging to H. W. Ayers, of Honey Creek, Wis. Naturally, Mr. Ayers had smooth sailing. However, the individuals were good enough to stand keen competition and they would make a creditable showing in any company. Mr. Ayers' bull, Mermey's 2d son, was awarded the senior and grand championship, and the bull, Mermey's Nephew, junior championship. Brownie B. was awarded senior and grand championship in the aged cow class, and Columbus Mermey was awarded junior championship.

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SANITARY Milwaukee CREAM SEPARATOR

Means lighter work for the housewife. It's worth thinking about when you invest in a cream separator. And with one-third the discs the *Sanitary Milwaukee* skims *closer* and *quicker*. We'll prove that to you.

Sanitary Milwaukee aluminum discs are light, rust-proof and smooth as glass They are interchangeable—no bothersome wire holder to fuss with. Take them off—wash them in the dish pan, thoroly, as easily as the coffee cups—slip them on the bowl core in any order.

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Milwaukee Separator Mfg. Co., 245 Madison St., Milwaukee, Wis.

High Quality Dairy Products.

While the Number of Exhibits Was Not so Large as Last Year at State Fair, There Was a Noticeable Improvement in the Quality.

QUALITY was the outstanding feature of the dairy products display at the Wisconsin State Fair this year. The entries, in numbers, did not come up to the record established last year, but what was lost in numbers was more than made up in quality with the result that the display of butter and cheese proved to be the best ever seen at the state fair. There were 102 tubs of creamery butter and five exhibits of dairy butter with about 9,000 pounds of cheese, valued at $2,500, competing for honors, including the foreign types.

EXHIBITS OF BUTTER AT WISCONSIN FAIR.

Mr. Fred Marty, superintendent of the dairy department, was more than pleased with the showing made by the cheese and buttermakers, especially considering the hot summer which cut down the flow of milk fully 50 per cent in many sections. The cheese exhibit ranked in size next to the exhibit of last year, which was regarded as the largest ever brought together in this country and with the quality higher than ever before the scoring competition was very keen. The cheese display was better because more varieties were shown and, considering the dry weather, the judges pronounced the quality to be splendid. There was a good showing of foreign types and it was pointed out that never in the history of cheesemaking in the United States did a pound of cheese, so far as the foreign types were concerned, bring as much as a pound of butter fat was worth. This condition is due to the war and market conditions with the result that the makers of the foreign type cheeses have been realizing more for their product than ever before in the history of the industry.

Dairying being the big farming operation in Wisconsin, a visit to the state fair is not complete without a visit to the dairy building where the fair has provided great refrigerators for displaying cheese and butter. This state now produces 55 per cent of the nation's cheese and a sixth of the butter and no department of the fair is more worthy of support and attention than the dairy products display.

The butter showing this year was regarded by the judges as the best indication of the influence the buttermakers and cheesemakers are exercising over the farmers in providing them with a good, sweet milk or cream. The factorymen who have exhibited for years have learned that good raw materials are necessary if they are to turn out a product that will score high and that it is, therefore, to their interests to work with the patrons to this end. The factory

A CORNER OF THE CHEESE EXHIBIT.

ever gotten together at a state fair from a quality standpoint. The average scoring was about 93. One outstanding thing was that the winners were those who have been at the top in all state contests of recent years, realizing the demand for good butter and that only good butter can win. Mr. C. E. Lee, assistant dairy and food commissioner, who has scored butter at the state fair for eight years, told the writer that the quality was the best that he had ever seen and that the improvement made in the past few years was very striking. The hot weather had its effect on the butter exhibit just as it did on the cheese showing and many buttermakers who have shown in past years failed to turn up this year.

The improvement in butter was greatest, Mr. Lee said, in the flavor, thus indicating a better raw material for the buttermakers to work with. Good, well-flavored prize-winning butter cannot be churned from any but pure, sweet cream and this improvement in flavor speaks well for the work which is going on in Wisconsin among the farmers and creamerymen to get the cream from the farm to the buttermaker in first-class condition. The same held true with the cheese shown, Mr. Marty pointing out that the improvement in quality came largely from a better raw material and that this was especially noteworthy when the hot weather of the past summer was taken into consideration.

The fact that better raw materials were assigned as the reasons for the higher quality of both butter and cheese was taken by the judges as an that can turn out prize-winning products is the one that gets the best prices in the market and, therefore, it is essential to have good raw material.

Mr. Lee pronounced the butter as the equal of any he had scored and called attention to the necessity of Wisconsin creameries that are turning out high-grade butter to demand the best prices in the market. In this respect he says certain other creameries with a product no better than many Wisconsin creameries are getting a cent a pound for butter on the eastern markets than Wisconsin, merely because they demand it. "Wisconsin must be on the watch and demand the price," he said. "Our creameries are giving many of the dealers their biggest profits because they are selling a butter that equals that of any other state at a lower price while the retailer charges the consumer the same."

Mr. Lee, with N. W. Hepburn, of Urbana, Illinois; J. J. Ross, of New York, and G. H. Beckendorf, of Madison, scored the butter, while E. L. Aderhold, of Neenah; A. T. Bruhn, of Spring Green, and J. D. Cannon, of New London, scored the American cheese. G. Marty, of Madison, and J. Lehnherr, of Monroe, scored the foreign types of cheese. A feature of the cheese exhibit was an American mammoth, weighing 1,199 pounds. The scores above ninety as announced follow:

CREAMERY BUTTER.

Name	Address	Score
Anderson, Robt. S.,	Northland	92.87
Bolstead, L. L.,	Basco	95.75
Betthauser, J. A.,	Oakdale	91.50
Bolstead, Ed,	Stoughton	92.62
Bogert, J. H.,	Stoddard	93.12
Bartel, Jas. J.,	Peebles	95.62
Christensen, W.,	Kiev[illegible]ale	94.[illegible]

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Because my steels go direct to you from my big factories, I am able to share profits with you. Because ordinary shoe dealers can make only one profit a year on Steels, they will not sell them. That's why I want you to share profits with me.

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No more tired, blistered, chafed, swoll n, calloused, aching feet. No more corns or bunions. No more hard, cracked, warped, twisted, worn, leaky shoes. No more big shoe repair bills. No more rheumatism, lumbago, sciatica, neuralgia, bronchitis, colds, coughs and other "wet-foot" troubles. No more big doctor bills. No more heavy, clumsy, sweaty rubber boots, overshoes or "artics." **One pair of Steels outlasts 3 to 6 pairs best all-leather shoes.**

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Don't think of buying any shoes until you get my 1917 shoe book. Let me tell you all about my great money-saving, profit-sharing offer Send no money—Just sign the profit-sharing coupon. All information booklet, etc., absolutely **FREE.**

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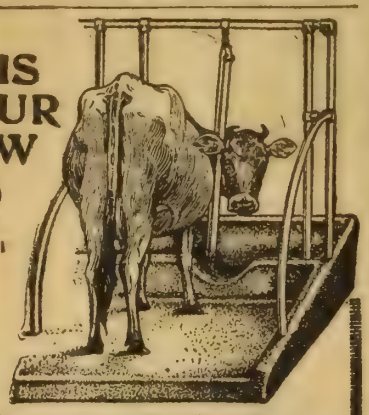
CITY .....

STATE.....R. F. D.....

IS THIS YOUR COW ?



Do your cows enjoy the comfort and freedom of flexibly hung, swinging steel stanchions, or are they cramped and miserable in rigid, insanitary wood "stocks"? The comfort of your cow is a vital factor in her milk production. The difference in results between a comfortable and uncomfortable tie represents

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Cross, M. R., Humbird	91.12
Clark, W. J., Lake Beulah	95.00
Christensen, Hans, Rose Lawn	94.62
Christensen, Christ, Neillsville	94.62
Cleaves, R. C., Iola	92.12
Cobb, B. B., Sun Prairie	92.75
Conner, Henry, Dayton	93.87
DeGolier, H. M., Cambridge	91.75
DeVoe, Merle, Fond du Lac	92.25
Erickson, Albert, Amery	95.00
Enockson, S. E., Grantsburg	92.00
Else, Rudolph J., Helenville	95.75
Engbretson, M., Scandinavia	95.12
Fostvedt, Clarence G., Wild Rose	93.37
Griffin, H. E., Mt. Horeb	96.00
Gilbertson, Joel, Medford	91.12
Gmur, Carl W., Amboy, Ill.	92.25
Garrell, Mrs. Lucius, Platteville	93.37
Holverson, Emil, Nye	94.25
Hansen, Lewis M., Iron River	90.62
Hoppe, L. F., Rio Creek	94.62
Hartwig, Herman, Deerfield	93.75
Jenson, Geo., Saxeville	92.50
Johnson, H. A., Westby	92.75
Jorgeson, Carl, Rose Lawn	96.00
Kubat, W. H., Marshall	94.00
Koller, Sylvester, Barronette	92.00
Koller, Fred W., Cumberland	91.37
Kritzschmar, Julius, New Lisbon	90.87
Kristensen, P., Cushing	94.62
Langer, Wm., Lyndon Sta.	91.75
Larson, Arel L., Nashotah	94.87
Larson Creamery Co., Steuben	91.75
Lee, Vinton D., Neillsville	91.62
Mickelson, M., Westby	93.87
Moyes, W. A., Ironton	92.62
Mogensen, John, Wyocena	94.37
Marvin, Nick, Black River Falls	91.87
Maso, Fred, Jr., Fennimore	94.50
Nichols, Harry, Elkhorn	93.62
Nelson, Alfred, Fennimore	91.12
Nielson, N. P., Deerfield	94.25
O'Hearn, Frank, Melrose	90.75
Olson, Louis C., Galesville	93.75
O'Keefe, R. J., De Pere	94.75
Olson, Lauritz, West De Pere	94.00
Peterson, P. E., Hersey	91.62
Paulson, Clarence, Big Falls	91.62
Peterson, Louis, Bonduel	92.25
Peterson, R. J., Prentice	90.25
Peterson, Elmer O., Poysippi	91.25
Quale, J. H., Platteville	92.12
Rasmussen, John, Leon	92.25
Ringger, Jacob W., Durand	91.25
Rupiper, Jos., Waterford	91.75
Rogers, Lloyd, Clear Lake	94.00
Root, F. S., Rudolph	93.12
Schwanberg, Andrew J., Trade Lake	95.37
Schiller, John, Fond du Lac	93.25
Sauer, G. P., Cedarburg	96.00
Streich, Gilbert H., Johnson Creek	94.75
Sorenson, C. E., Orfordville	93.75
Speich, A. G., Berlin	91.37
Sieger, Wm., Chaseburg	93.62
Siepert, C. G., Frankville	95.37
Tuoner, L. W., Montfort	93.87
Thompson, F. C., Mukwonago	94.50
Valton Co-op. Cry. Co., Valton	93.12
Walace, D. F., Alma Center	91.87
Warnke, J. A., Neshkoro	92.12
Warnke, Wm., Kingston	91.62
Will, Albert W., Ft. Atkinson	93.12
Wheeler, H. A., West De Pere	95.50
Warner, T. J., Rosholt	93.87
Wood, J. C., Ft. Atkinson	95.25
Werner, F. M., Waterloo	93.50
Yates, F. C., Gleason	93.00

DAIRY BUTTER.

Betry, H. W. & Son, Berlin	91.62
Danielson, Mrs. D., Black River Falls	90.62
Eckart, W. F., Rush Lake	92.12
Pilgrim, J. H., Milwaukee	90.75
Parsons, Mrs. Chas., Antigo	91.62
Wood, J. C. & Sons, Ft. Atkinson	93.37

[Editor's Note.—Owing to the length of the list of awards in the dairy products department the cheese scores are held over and will be published next week.]

Fine Fruits and Flowers.

Horticultural Exhibit at Wisconsin State Fair Taxed the Capacity of the Space Which Has Been Allotted This Department.

THE horticulture and floral display at the Wisconsin State Fair this year was a treat to both the eye and the nose. The casual visitor, in passing through the building banked with fruits and flowers of all kinds, would hardly realize that this has been an off year for fruits in Wisconsin, as the growers had gotten together for the fair an exhibit that ranked with the best ever held. The entire building was turned over to horticulture and floriculture this year and with added floor space the exhibit did not have that cramped appearance of other years and it was clearly evident that within a few years larger quarters will have to be provided for these departments. Heretofore several other departments have had to be taken care of in the building and when these were transferred to other quarters it was thought it would be a difficult task to fill all the space, considering that the fruit crop was below the standard in quality and yield. But such was not the case, as the exhibit of flowers by amateurs turned out to be the largest in history and with a fruit showing up to normal, so far as quantity was concerned, the entire building was put to use. The growth of this department has been steady and the building which, when built a few years ago was considered large enough for years to come, will soon have to be enlarged or other quarters provided.

Mr. N. A. Rasmussen, superintendent of horticulture, was well pleased with the exhibit. There were about 600 plates of apples shown by individuals in addition to some ninety-six individual pecks and twenty barrels. The display of pears and plums was small, but the grape display was the largest ever held, more than 150 plates being shown. The grape yield was good and this was reflected in the interest shown in this department of the fair. The Wisconsin State Horticultural Society had its usual exhibit of apples, which took up about half the east wall, and it is doubtful if for arrangement the state society ever had so interesting an exhibit. Fifty barrels and thirty boxes of apples were used in getting up this exhibit and the first impression that would come over the fair visitor was that Wisconsin is a great apple state and that the crop must be great. No doubt it required considerable effort to get together so large an exhibit in a year when the crop was not at its best and Mr. Frederic Cranefield, secretary, and his coworkers are entitled to much credit.

The most disappointing feature of the fruit show was the lack of color, due to the lateness of the season. It was in this off-color that the show failed to come up to the shows of other years and Mr. Rasmussen predicted that had the fair come two weeks later the fruits would have colored and the display would compare in all respects with other years. Of course, it required more work to get together the exhibits, as the yields were light and scab was frequent. The unfavorable weather in early spring during the spraying season showed up in the displays, as during the spring it was so rainy in many sections that spraying could not be done effectively if at all when it was necessary and in other sections it was almost impossible, because of the war and market conditions, to secure the necessary materials for spraying. Then the season was cold and wet, which held back the fruit, and two weeks makes a great amount of difference at this season in the ripening. Door county and several other principal fruit-growing counties were not represented, as the fruit crop was so late that it was not in condition for showing.

All in all, the horticulture and floriculture display was considered the best held, as the floral display was especially good and great interest was shown by amateurs, their displays banking the west wall for the entire length of the building. Superintendent Rasmussen is to be congratulated.

The counties of Sauk, Richland and the Kickapoo valley fruit regions were represented by separate exhibits and the Wisconsin Cranberry Sales Company had a splendid exhibit of cranberries and how they are grown. Wisconsin is now third in cranberry production and the crop is normal this year with prices good. This booth was well arranged and attracted considerable attention:

The exhibitors of fruits were:

Arpin Cranberry Co., Grand Rapids.
Baer, J. E., Baraboo.
Bennett, A. E., Grand Rapids.
Belle Lake Cranberry Co., Mather.
Bassett, A. K., Baraboo.
Brown, S. L. & Son, Gays Mills.
Barnes, A. D., Waupaca.
Gaynor Cranberry Co., Grand Rapids.
Blodhett, S., R. R. 6, Waukesha.
Bamford, L., R. F. D. 24, Plymouth.
Butter, Arthur C., 603 Mitchell St., Milwaukee.
Hays, J. A., Gays Mills.
Coolier, J. H., R. 14, Wauwatosa.
Fitch, J. W., Cranmoor.
Goelzer, Miss E. M., Oakwood.
Hauser, J. F., Bayfield.
Hauser, John E., La Crosse.
Hearding, J. H., Delafield.
Irish, L. B., Baraboo.
Kickapoo Development Co,. Gays Mills.
Lowe, E. C., R. F. D. 8, Box 363, Milwaukee.
Lewis Cranberry Co., Minong.
Meyer, A., Cascade.
Palmer, J. S., Route 2, Baraboo.
Platt, H. R., Route 3, Baraboo.
Richland County Com. Fruit Co., by John Reis, Twin Bluffs.
Reis, John, Twin Bluffs.
Rintelman, Wm., Cedarburg.
Learned, S. F., R. F. D. 2, Sturgeon Bay.
Severson, Elmer, R. F. D. 5, Oshkosh.
Secher, C. M., Mather.
Searles, A. & Son, Grand Rapids.
Townsend, G. H., 114 E. Mifflin St., Madison.
Toole, Wm. & Son, Baraboo.
Tans, Mrs. John, Mukwanago.
White, A. F., Brookfield.
Zillmer, H. J., Pewaukee.

Cow-Testing Exhibit.

The great interest which is now manifest in Wisconsin in the value of testing cows to determine their value to their owners was reflected in the interest taken in the cow-testing exhibit at the Wisconsin State Fair. This exhibit was arranged and held under the auspices of the Wisconsin Dairymen's Association, and the farmer who saw this exhibit of good and poor producing cows must have gone home with the determination to find out immediately what his cows are doing for him in the way of returning a profit for the labor and feed he is expending. Mr. H. C. Searles, state supervisor of cow-testing associations, and Mr. N. G. Negley, his assistant, were in charge. There are now fifty-three local testing associations in the state with 1,644 members and 25,131 cows on test.

Prizes were offered for the best producing cows in the local associations, and this brought to the fair some of the best in the state. Among these were Vickery Vale Beechwood, from the Sheboygan county association, a Holstein with a record in official test of 21,777 pounds of milk and 8,875 pounds of butter fat. She is owned by Emil Titel, of Plymouth, and in the judging contest she was awarded first place, although the judges did not know her production record. The awards were placed by Mr. S. E. Jones and Mr. A. W. Fox with Prof. G. C. Hunphrey, of Madison, as referee, according to strictly dairy type, and it was quite a coincident that they should pick the cow with the highest record, unaware of her record. She has many outstanding features as a great producer and another noteworthy result of the judging was that one high-producing pure bred was placed lower than a scrub cow, which puts emphasis on the motto of the dairymen's association that "beauty is only skin deep and that handsome is as handsome does." This scrub, to the eye, looked better to the judges than one of the high-producing Holsteins, but when records were kept, the scrub was found to be sadly lacking in the qualities desired by the successful dairyman. As the crowds filed through the barn where the cows were exhibited, it was interesting to hear them say they should like to have one like Vickery Vale Beechwood, whose gross returns for the year were $300.93, cost of feed $125.80 and net profit $175.33. She returned her owner $2.40 for every dollar feed cost.

Three scrub cows, two of which were pure bred, were bought by the association for the purpose of affording a contrast between good and poor producers. These three were taken from members in testing associations, and when a stock buyer, at the close of the fair, was sent for to see what he would pay for them for beef, he replied that the buyers had used very poor judgment and that for beefing they were of almost as little value as for dairying. Emphasis was drawn to the fact that many consider that because a cow is pure bred, she is a good producer. It was shown that such is not the case and that the scales and the test are the only known ways to know exactly what a cow is doing. This was the reason that the exhibit contained two pure-bred "scrubs" out of three and one of these pure breds, a Jersey, during the entire year gave only 1,802 pounds of milk and eighty-seven pounds of fat.

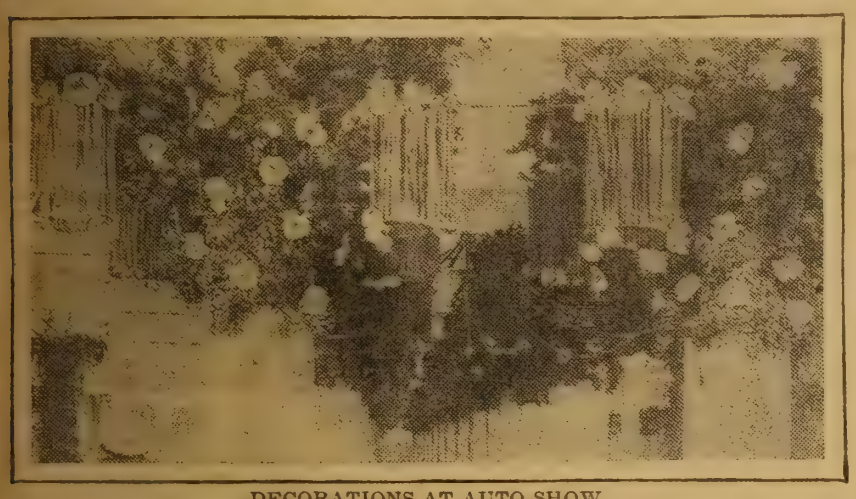
Among the good producing cows shown were a grade Jersey, Susie, owned by C. Shotte, of Anitgo, with a fat record of 463.8; a grade Guernsey, Blossom, owned by Theo. Voight, of Kiel—fat record, 517.3; a grade Guernsey, Trimmer, owned by Mart Molly of Ontario—fat record, 457.1; a Jersey-Holstein cross, Brinnie, owned by Henry Carr, of Waukesha—fat record 583.1; a native, Brownie, owned by Ira Farley of Weyauwega—fat record 549.4; a pure-bred Holstein, Rosetta Johanna DeKol, owned by Frank Smalle, of Stanley—fat record, 487.8; a native, Jessie, owned by Charles Peterson, of Kewaunee—fat record 557.8; a pure-bred Holstein, Knight Errant Queen, owned by H. D. Dunbar of Elkhorn—fat record, 758.5 (1 months); and a pure-bred Holstein Johanna Piebe Mercedes De Ko owned by Christenson Bros., of Royalton—fat record, 663.4.

Farmers See the Automobile Show

Interest Taken in New Cars, Tires, Fuels, Oils and Accessories. The Best Automobile Show at any State Fair.

AUTOMOBILE makers and dealers in Wisconsin seem to have a keen appreciation of the business they get from the farmer. This was reflected in the splendid exhibit of automobiles and accessories at the Wisconsin State Fair. The writer has seen several automobile shows at state fairs this year, but nothing compared with the Wisconsin show from the standpoint of number or character of exhibits. Milwaukee interests decided a year ago that the auto show was one way in which Milwaukee could help build up the fair. The show last year was a winner, but the show this year was much better in every way. There was a charge of 10 cents for the show—a most reasonable fee for such a splendid show. Winter shows which have no better exhibits have admission fees of 50 cents or $1.

The automobile show was put on especially for the farmers of the state who visit the fair. Farmers buy about 50 per cent of the automobiles sold in the state and the business in the counties where there are no large cities has increased in the past five years much more rapidly than it has in counties where a large part of the population is centered in some city.



DECORATIONS AT AUTO SHOW.
A sample of beautiful decorative effect at top of columns in show hall.

The enjoyable part of the show was its completeness. The visitors had an opportunity to see the cars which they drive and to see others with which they have become familiar through the columns of their farm paper. There were many new bodies displayed, but the change in cars from last year is not so much as might have been expected. The farmer is not especially attracted by freakishness in any sort of machinery or vehicle. His automobile is a utility chiefly, and, while it is used a great deal for pleasure driving, this is not always the thought uppermost in the minds of the farmer who is in the market for a car. The show gave farmers out over the state an opportunity to become acquainted with the distributors and factory representatives. It impressed the farmers that the automobile business has steadied down to a substantial basis where cars are sold strictly on their merits and the service which they will give. When new machines come on the market the farmer is not always the first to bite. When a machine becomes standardized so that it is not shifting in principle or policy with each season the farmer feels more like making an investment. The show brought out prominently the fact that automobiles for the coming year are not changed to any great extent from those on the market last year. There will always be slight changes and these are for the better, but cars in the main are now so good that the farmer may buy without fear of such radical changes as might make him regretful when he sees next season's models.

Fuels, oils, tires, repairs, construction materials and accessories of all kinds provide subjects in which the farmers show great interest. Manufacturers are making a careful study of operation costs on cars and many of these things enter directly into this cost. It is a well-known fact that two men may take care of the same model and run them for the same number of miles with a considerable difference in the cost of operation. One man will be able to get more miles out of a gallon of gasoline than another with the same kind of a car. One driver will be able to get greater mileage out of a tire than another who uses the same kind of tires. Inasmuch as the farmer must travel almost entirely on country roads under conditions which cannot be as favorable as car operation in the city on paved streets, it is interesting to make a study of the conditions which cause this variance of costs. It is often more important to get low operation cost after one owns a car, low mileage cost on tires and low repair costs, than it is to get low cost on the original purchase. All these ideas are brought out in the automobile shows and on this account it is worth while for the farmers to attend such shows. Among the new things shown at Milwaukee were the new dimmer lenses, which reflect light rays so as to avoid a glaring light and still give the driver plenty of protection, and the new gasoline tanks for use on farms. On account of our narrow country roads good lights are a necessity. But the farmer who drives a car well knows that the glaring light has caused many accidents. Cities have passed ordinances against its use and it is only a question of time until the state will investigate the glaring headlight. The storage of gasoline is another important problem. The farmer desires, as a rule, to buy gasoline in 100-gallon lots. It has been shown that gasoline will lose strength if placed in outside tanks and exposed to weather. A high-test gasoline may soon become a low-test gasoline if there is not some adequate method provided for taking care of it. The sunken tank with the pump attachment is regarded as a desirable method of taking care of gasoline, and such outfits may be bought at from $40 up, depending upon the capacity in gallons and the convenience of the pumping device.

Repair work on tires affords a subject of great interest to the farmer who by reason of his extended country travel must often do a good deal of his own repairing. There is not nearly so much of this work done by the farmer as formerly, as the spare tire usually makes it possible to get to the garage. Tire repairing is one of the cheapest charges at most garages.

That danger from fire may be minimized was shown at the auto show. An extinguisher on every car would cut the cost of insurance and almost eliminate danger to occupants of the car and serious loss on the vehicle.

Though there are to be few radical changes in the mechanism of motor cars for the coming years, there are some interesting changes in car bodies and car comforts. Makers are getting away from the "conventional black" and a few have dared to present rather gay colors. The shades of blue, green and gray, with maroon and an occasional red are most popular. For city use there are a number of gayer colors offered, but there seems to be little demand from the farm trade for anything sensational. The clover-leaf design promises to be popular. Good, substantial upholstery is demanded for the farm car which must stand up under the most trying road conditions.

The auto show at the state fair doubtless will help rather than hinder the Milwaukee automobile show which comes early in the year 1917. State fair visitors will have their interest in cars whetted up to the point that they will want to see the winter show and will be looking out for announcements concerning it.

Mr. Bart J. Ruddle, of the Milwaukee Automobile Dealers, Inc., was manager of the state fair auto show and is entitled to great credit. Others who aided in this work were N. E. Osmond, chairman; L. D. Frint and A. W. L. Gilpin, members of the committee in charge.

A feature of the show which was of great interest was the truck division While trucks are not in general use on farms, they are being given attention, especially the smaller vehicle. Several counties are investigating the use of trucks for oil sprinklers to be used in road work. An exhibit of armored trucks was seen at the show.

The following is a list of exhibitors at the state fair automobile show:

AUTOMOBILES.

Edwards Motor Co.
KisselKar Co.
Harry Newman, Inc.
Curtis Automobile Co.
Frint Motor Car Co.
Jesse A. Smith Auto Co.
Velie Motor Car Co.
Marion Sales Co.
Ford Motor Co.
Cole Motor Co.
Jonas Automobile Co.
Cadillac Auto Truck Co.
Sterling Motor Co.
R. D. Rockstead.
Winton Motor Car Co.
Schreiber-Boorse Motor Co.
Stegeman Motor Co.
Wells Garage Co.
Moon Company.
Edgar F. Sanger.
Osmond-Vogel Motor Car Co.
Mitchell Auto Co.
George W. Browne.
Fowler Motor Car Co.
Pullman Motor Co.
Diener-Nelson Co.
Regal Motor Co.
Saxon-Reynolds Co.
Buick Motor Co.
Lund & Roberts.
Diamond T Truck.
Sanger Automobile Co.
John G. Wollaeger Co.
Wisconsin-Oakland Co.
Auto Mart.
Hoppe-Hatter Motor Co.
Lauson-Salentine.
Holmes & Co.
Anderson-Electric Co.
Pathfinder Sales Company.
Bachman-Dieser Co.
Olson & Pauly.
Hughes Motor Car Co.
Emil Estberg.
Rademacher & Jaeger.
Yahr Motor Sales Co.
Stephens-Adams Co.
Milwaukee Auto Sales Co.
Packard Motor Car Co.
Motor Car Sales Co.
Chevrolet Motor Car Co.
First Avenue Garage.
Chicago Auto Sales Co.
Menomonee Truck.
F. J. Sickert, Jr., & Co.

ACCESSORIES.

Racine Auto Tire Co.
Babcock Automobile Spring Co.
O'Neil Oil & Paint Co.
Julius Andrae & Sons Co.
R. J. Grant & Sons Co.
Auto Service & Supply Co.
Inglis Mfg. Co.
Howard Eldred Co.
Schueler Bros.
Indian Refining Co.
Pyrene Mfg. Co.
H. W. Johns-Manville Co.
Vacuum Oil Co.
Auto Mart.
Jefferson Oil Co.
Holmes & Bostrom.
Auto Body & Trailer Co.
Holmes & Co.
J. J. Dougherty Co.
Bales Puncture Plugger.
Harley-Davidson Motor Co.
Pyrene Mfg. Co.

Greatest Poultry Show in West.

Wisconsin Poultry Exhibit This Year Comprised 4,000 Birds and Is Second Only to New York Show in Number in the Coops

THE 1916 Wisconsin State Fair established a new record in the poultry section with 4,000 birds on display. The largest exhibits were in the White Rock, Rhode Island Red, Leghorn and Barred Rock classes. Mr. H. W. Halbach, of Waterford, had a fine display of White Rocks and won a number of premiums. The Pabst Stock Farm, Oconomowoc, Wisconsin, won most of the ribbons in the Single Comb Rhode Island Red and Single Comb White Leghorn classes. In the Barred Rock Mr. E. G. Roberts, of Fort Atkinson, was the chief winner. Others who had fine displays were Geo. Stirdevant, of Sheboygan, and F. D. Tindall, of Waterford. In the Rose Comb Reds the main exhibitors and winners were C. A. Brown, of Lake Beulah; Mrs. J. H. Pierce, of Wauwatosa, and Kissel Bros., of Hartford. The chief exhibitor and heavy winner in Golden Wyandottes was Charles D. Love, of Waukesha. There was a fine exhibit of White Wyandottes, John Sleer, of La Crosse, and Charles Prei, of Waukesha, getting most of the premiums. The waterfowl classes afforded an exceptional exhibit and awards were about equally divided between W. A. Hoyt, of Whitewater; E. G. Roberts, of Fort Atkinson; Carl Dare, representing the Crescent Poultry Farms, of Des Moines, Iowa, and John Conrad, of Hale's Corners. The judge in this division was Charles McClave, of New London, Ohio. The show of fancy fowls, including pheasants and wild geese, was a good one. The pigeon show included about 1,500 birds.

The Wisconsin poultry show at the state fair of 1916 was second only to the New York show in the number and quality of birds shown. Last year the Wisconsin show had 2,500 birds. The Minnesota State Fair this year had about the same number. This is the last year that the poultry exhibit will be housed in the old dilapidated structure. A new $25,000 poultry building will be ready for occupancy in 1917. Supt. Geo. W. Hackett and the judges were put to a great deal of trouble this year to handle the show, and exhibitors were obliged to suffer considerable inconvenience.

The following is a list of poultry exhibitors:

Atchinson, Elwood, Milwaukee.
Bachman, William, Milwaukee.
Buth, A. V., Sullivan.
Bathel, Mac, Rockton, Ill.
Benedict, Mrs. R. E., Bristol.
Benedict, Roland, Bristol.
Belle, William, Arlington.
Blott, Ray, Mukwanago.
Brown, C. A., Lake Beulah.
Beckman, O. H., Cedarburg.
Boots, S. G., Sussex.
Clemmens, James, Kansasville.
Cook, George, Racine.
Conrad, John & Son, Hales Corners.
Cooper, A. R., Wauwatosa.
Cain, Robert, Wauwatosa.
Crescent Poultry Farm, Des Moines, Iowa.
Coman, Dan, Wauwatosa, Wis.
Dachs Bros., Milwaukee.
Dachs & Son, Milwaukee.
Bivan, F. H. & Son, Browntown.
Dance, Benj. D., Brookfield.
Evans, Charles S., De Pere.
Friese, William, La Crosse.
Fritschell, Roland, Milwaukee.
Flint, L. J., Stoughton.
Flad, John J., Madison.
Genrich, Walter A., Milwaukee.
Giese, Emil, Milwaukee.
Greifenhagen, Milwaukee.
Greenwald, J. E., Cedarburg.
Garbutt, Cora B., Darien, Wis.
Helinski, Frank, Milwaukee.
Halbach, H. W., Waterford.
Hoyt, Olive M., Whitewater.
Hoyt, W. A., Whitewater.
Heinlaben Bros., La Crosse.
Jevson, C. V., Wauwatosa.
Kissell Bros., Hartford.
Kuhtz, H. A., Milwaukee.
Kruse, A. F., Milwaukee.
Kinney, S. W., Wauwatosa.
Love, J. R. & Son, Waukesha.
Laux, Richard, Milwaukee.
Love, Charles D., Waukesha.
Livingston, James, Milwaukee.
Lang, C. F., La Crosse.
Love, J. R., Waukesha.
Mitchell, John J., Lake Geneva.
Marvin, John F., Milwaukee.
Murray, Mrs. J. M., Albany.
Mehl, Rudolph, Milwaukee.
MacKenzie, H. A., Sheboygan Falls.
Novak Poultry Yards, Racine.
Osborne, Gilmer A., Stoughton.
Pabst Stock Farm, Oconomowoc.
Pierce, Mrs. J. H., Wauwatosa.
Palmer, S. A., Brodhead.
Pasbrig, Tony, Wauwatosa.
Prei, Chas. W., Waukesha.
Prest, Geo. H., Wauwatosa.
Potter, Joseph V., Green Bay.
Philipp, Robert, West Allis.
Peer, W. R., Milwaukee.
Rex Bantam Yards, Milwaukee.
Roberts, E. G., Fort Atkinson.
Rogers, Mrs. H. C., Oshkosh.
Ricks Bros. & Hunt, Boscobel.
Schaeffer, William, Milwaukee.
Snyder, John F., Oshkosh.
Schwister, Walter, Milwaukee.
Sleer, John Alden, La Crosse.
Streng, Richard, Wauwatosa.
Stirdevant ,Geo., Sheboygan.
Steingrader, O. C., Jefferson.
Sussex Poultry Yards Co., Waterford.
Tindall, F. D., Waterford.
Thiele, Fred H., North Milwaukee.
Torslt, Al, Milwaukee.
Vanselow, Erwin and Martha, South Milwaukee.
Von Berg, W. A., Mosinee.
Wranch, J. H., West Allis.
Winnebago Bantam Yards, Omro.
Zacher, L. C., Wauwatosa.

EXHIBITS OF FIELD CROPS.

Good Showing of 1916 Corn at Wisconsin State Fair—List of Awards and Exhibitors in Agricultural Department.

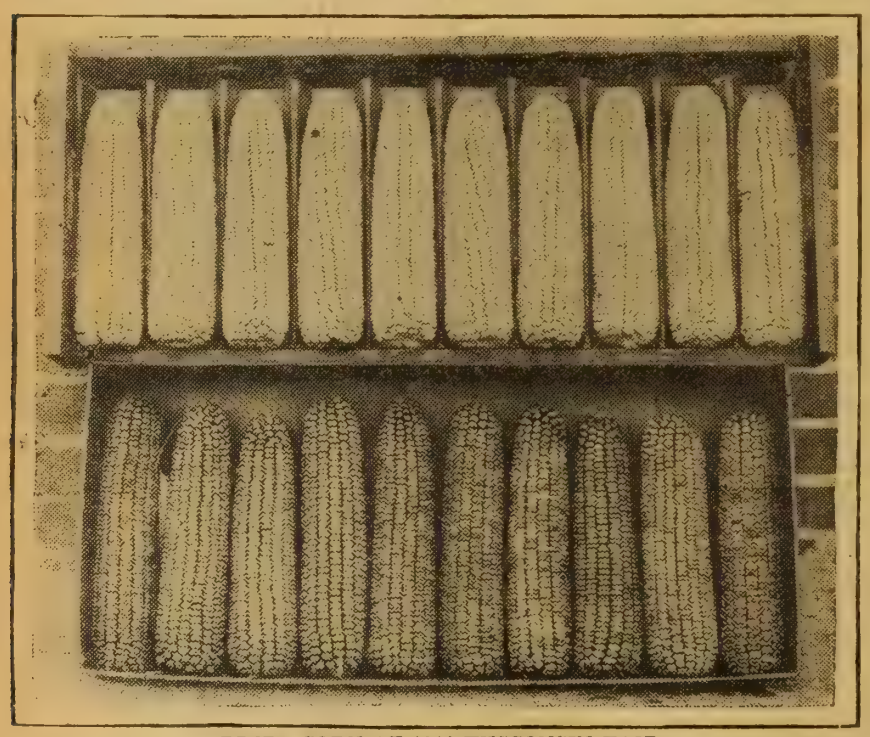
QUALTY stood out especially strong in the exhibits this year in the agricultural department of the Wisconsin State Fair. The display of sheaf and threshed grains, corn and vegetables was not only the largest ever held in connection with the fair but Mr. E. L. Luther, superintendent, and Mr. E. J. Delwiche, of Green Bay, who judged grains, and Mr. J. G. Milward, of Madison, who judged vegetables, are authority for the statement that the entries, taken as a whole, were of splendid quality.

The entire center of the county exhibits building was given over to this department this year and all of the available space was occupied by the products of the sixty-nine exhibitors. Last year this department was forced to share this space with the Indian exhibit and the bees and honey exhibit, which were transferred to the grand stand this year, and many growers would not exhibit under cramped conditions. With a growth of this department and the increasing interest in county exhibits those vitally interested in this work of the fair have already begun a campaign for an addition to the present building.

The corn show by individuals this year was exceptionally good and most of that shown was the 1916 crop, although old corn, was eligible. Some pronounced this showing 50 per cent portance. "Instead of a few samples of barley we should have a table running through this building loaded down with barley," he said. "We have the stuff and it is only a matter of getting the growers to exhibit and with better co-operation and increased premiums from the fair we can get them."

Interest was very keen in the corn exhibits and in Silver King S. P. Markle, of La Crosse county, won first both in ten and fifty ears. In Golden Glow Jippa Wielinga, of Midway, took first in both ten and fifty ears. Sweepstake awards for the best display of ripe vegetables went to Miss Rose Mayer, of Wauwatosa; second to N. A. Rasmussen, of Oshkosh; third to Henry J. Schulte, of Wauwatosa, and fourth to William E. Prish, of Mineral Point. Sweepstake awards for the best display of green vegetables went to N. A. Rasmussen, of Oshkosh; second to Charles Parsons, of Antigo; third to Herman Schoenck, of Enterprise, and fourth to Anton Follstad, of Elcho.

The Wisconsin Experiment Association and the Wisconsin Potato Growers' Association both had interesting exhibits in connection with this department and in this way grains and potatoes were both represented. Noyes Raessler, of Beloit, was in charge of the experiment association exhibit, and J. W. Hicks, president, and J. G.



PRIZE CORN AT 1916 WISCONSIN FAIR.

Upper Picture—Best ten ears white dent corn, Silver King variety grown by S. P. Markle, La Crosse. Lower Picture—Best ten ears yellow dent corn, Golden Glow variety, grown by Jippa Weilinga, Midway.

better than a year ago and the threshed and sheaf grains were of exceptional quality with competition among the growers very strong. The show was off only in potatoes, although those shown in this division were very good and much better than the selections seen in the county booths. The barley show, while not as large as it might be, was very good and the quality splendid and the display of vegetables and garden produce as well as grass seed was above the average.

One thing stood out prominently, especially in potatoes, and that was that the best products came from those sections where the farmers are working along educational lines in improving their grains and potatoes. The counties where the potato growers are using the most advanced methods sent, in almost every case, the best potatoes and the individual winning exhibitors came from such counties. The same held true in the grains and Mr. Luther believes that no better commendation of the educational work being done along these lines is necessary than this fact brought out by the fair exhibits.

Mr. Luther believes that this department can be made one of the largest of the fair and that the showing this year is a good start for an agricultural show that will be state-wide in im- Milward, secretary, of the potato growers' association exhibit.

The principal awards on corn, potatoes and small grains follow:

CORN—10 EARS HUSKED.

Silver King, No. 7—1st S. P. Markle, LaCrosse; 2d R. J. Brunker & Sons, Ridgeway; 3d H. P. West, Ripon; 4th W. E. Colladay, McFarland.

Golden Glow, No. 12—1st Jippa Wielinga, Midway; 2d E. J. Liebenthal, West Allis; 3d R. J. Brunker & Sons, Ridgway; 4th Roy McDonald, Menominee.

Clarke's Yellow Dent No. 1—1st John Hans, Jefferson; 2d Noyes Raessler, Beloit; 3d Frank J. Lindley, Fox Lake; 4th H. P. West, Ripon.

Murdock's Yellow Dent—1st W. E. Colladay, McFarland; 2d Chas. Fountaine, Elkhorn; 3d Frank J. Lindley, Fox Lake; 4th H. C. Bruechner, Jefferson.

Reid's Yellow Dent—1st H. E. Krueger, Beaver Dam; 2d Noyes Raessler, Beloit; 3d A. Austin, Janesville; 4th H. P. West, Ripon.

White Cap Yellow Dent—1st Charles Parsons, Antigo; 2d Frank J. Lindley, Fox Lake; 3d H. J. Schulte, Wauwatosa.

North Star Yellow Dent—1st Frank J. Lindley, Fox Lake; 2d Wm. Toole & Sons, Baraboo; 3d Noyes Raessler, Beloit; 4th J. S. Palmer, Baraboo.

Wisconsin No. 8—1st Frank J. Lindley, Fox Lake; 2d A. C. Ellickson, Arlington; 3d Noyes Raessler, Beloit; 4th W. E. Colladay, McFarland.

Yellow Flint—1st J. S. Palmer, Baraboo; 2d H. J. Schulte, Wauwatosa; 3d Arthur O. Popp, Jefferson; 4th J. E. Bennett, Waterford.

White Flint—1st J. H. Pilgrim, Milwaukee; 2d R. E. Pilgrim, Milwaukee; 3d J. E. Hasuer, La Crosse; 4th H. P. West, Ripon.

CORN—50 EARS HUSKED.

Silver King No. 7—1st S. P. Markle, Onalaska; 2d Frank J. Lindley, Fox Lake.

Golden Glow No. 12—1st Jippa Wielinga, Midway; 2d John VanLoon, LaCrosse; 3d Frank J. Lindley, Fox Lake.

Any Other Variety—1st A. Austin, Janesville; 2d H. C. Brueckner, Jefferson; 3d W. E. Colladay, McFarland; 4th Frank J. Lindley, Fox Lake.

POTATOES—PECK LOTS.

The awards in potatoes, peck lots, were as follows:

Rural New Yorker—1st John F. Hauser, Bayfield; 2d Charles Parsons, Antigo; 3d Herman Schoenck, Enterprise; 4th Anton Follstad, Elcho.

Green Mountains—1st Herman Schoenck, Enterprise; 2d John F. Hasuer, Bayfield.

Burbanks—1st Charles Parsons, Antigo; 2d John F. Hasuer, Bayfield.

Early Ohios—1st John F. Hasuer, Bayfield; 2d Herman Schoenck, Enterprise; 3d N. A. Rasmussen, Oshkosh.

Early Rose—1st Herman Schoenck, Enterprise.

Triumphs—1st Miss Florence Campbell, Three Lakes; 2d Herman Schoeneck, Enterprise; 3d Charles Parsons, Antigo; 4th John F. Hasuer, Bayfield.

Irish Cobblers—1st F. S. Campbell & Sons, Three Lakes; 2d Herman Schoeneck, Enterprise; 3d Oscar Nelson, Antigo.

Any Other Standard Variety—1st John F. Hasuer, Bayfield; 2d Herman Schoeneck, Enterprise; 3d Charles Parsons, Antigo.

SMALL GRAINS—PECK LOTS.

The awards in the generally grown small grains, in pecks, follow:

White Winter Wheat—1st A. Selle, Thiensville; 2d H. R. Krueger, Beaver Dam; 3d H. P. West, Ripon; 4th Charles Parsons, Antigo.

Red Winter Wheat—1st H. P. West, Ripon; 2d Noyes Raessler, Beloit; 3d William Moos, Onalaska.

Spring Wheat—1st H. E. Krueger, Beaver Dam; 2d H. P. West, Ripon; 3d H. J. Block, Burlington; 4th William Moos, Onalaska.

Wisconsin Pedigree No. 1 Oats—1st H. P. West, Ripon; 2d H. E. Krueger, Beaver Dam; 3d William Moos, Onalaska; 4th A. Ellickson, Arlington.

Pedigree No. 5 Oats—1st H. P. West, Ripon; 2d Clinton Skewes, Union Grove; 3d William Moos, Onalaska; 4th Noyes Raessler, Beloit.

Swedish Select Oats—1st Noyes Raessler, Beloit; 2d H. P. West, Ripon; 3d Herman Schoeneck, Enterprise; 4th A. Austin, Janesville.

60-Day or Kherson Oats—1st H. E. Krueger, Beaver Dam; 2d Noyes Raessler, Beloit; 3d J. L. Krause, Beaver Dam; 4th H. P. West, Ripon.

Silver Mine Oats—1st H. P. West, Ripon; 2d Noyes Raessler, Beloit.

Any Other Variety Oats—1st Herman Schoeneck, Enterprise; 2d H. P. West, Ripon; 3d A. Selle, Thiensville; 4th J. L. Krause, Beaver Dam.

BARLEY.

Wisconsin Pedigree Barley—1st A. C. Ellickson, Arlington; 2d A. Austin, Janesville; 3d Clinton Skewes, Union Grove; 4th William Moos, Onalaska.

Manchurian Barley—1st John Hans, Jefferson; 2d H. P. West, Ripon; 3d H. E. Krueger, Beaver Dam.

Oderbrucker Barley—1st John Hans, Jefferson; 2d William Clemmens, Kansasville; 3d H. E. Krueger, Beaver Dam; 4th H. P. West, Ripon.

Any Other Variety Barley—1st John Hans, Jefferson; 2d H. E. Krueger, Beaver Dam; 3d William Moos, Onalaska; 4th A. Selle, Thiensville.

RYE.

Spring Rye—1st H. E. Krueger, Beaver Dam; 2d H. P. West, Ripon; 3d Herman Schoeneck, Enterprise.

Pedigree Winter Rye—1st Noyes Raessler, Beloit; 2d Ernst Eberhardt, Cedarburg; 3d Jens Uhrenholdt, Hayward; 4th H. E. Krueger, Beaver Dam.

Any Other Variety of Rye—1st Noyes Raessler, Beloit; 2d H. P. West, Ripon; 3d H. E. Krueger, Beaver Dam; 4th Herman Schoeneck, Enterprise.

The exhibitors in the agricultural department were:

Austin, A., Janesville.
Block, Hierion J., Burlington.
Bookhant, Albert, Verona.
Brueckner, H. C., Jefferson.
Brunker, R. F. & Sons, Ridgway.
Barker, C. J., Brookfield.
Bennet, J. E., Waterford.
Blodgett, G., Waukesha.
Brooks, Hall L., Tomahawk.
Bamford, L., Plymouth.
Burhopp, Wm., Marshfield.
Clemmens, Wm., Kansasville.
Courtney, Mrs. Geo., Janesville.
Campion, T. H., Onalaska.
Colladay, W. E., McFarland.
Cook Bros., Burlington.
Campbell, F. S. & Sons, Three Lakes.
Campbell, Florence, Three Lakes.
Eberhardt, Ernst, Cedarburg.
Ellickson, A. C., Arlington.
Fountaine, Chas., Elkhorn.
Follstad, Anton, Elcho.
Hans, John, Jefferson.
Hauser, John F., Bayfield.
Hauser, John E., La Crosse.
Krause, J. L., Beaver Dam.
Krueger, H. E., Beaver Dam.
Kleeber, A. L., Reedsburg.
Landwehr, Mrs. G., West Allis.
Lindley, Frank J., Fox Lake.
Lange, Alex, Cedarburg.
Liebenthal, E. J., West Allis.
Ludden, Dr. H. L., Mineral Point.
Markle, S. P., La Crosse.
Moos, Wm., Onalaska.
Mayer, Miss Rose, Wauwatosa.
McDonald, Roy, Menominie.
Nelson, Oscar, Antigo.
Popp, Arthur O., Jefferson.
Parsons, Chas., Antigo, Wis.
Pilgrim, J. H., Milwaukee.
Palmer, J. S., Baraboo.
Prisk, Wm. E., Mineral Point.
Pilgrim, R. E., Milwaukee.
Pomeroy, W. T. & Co., Edgerton.
Paronto, Arden, Mosinee.
Raessler, Noyes R., Beloit.
Rasmussen, N. A., Oshkosh.
Rintelmann, Wm. H., Cedarburg.
Scheibe, Wm. C., Burlington.
Schoeneck, Herman, Enterprise.
Simonson, Ed E., Stoughton.
Schroeder, J. E., Platteville.
Schulte, Henry J., Wauwatosa.
Selle, A., Thiensville.
Hardie, Elwin, Waterford.
Skewes, Clinton, Union Grove.
Ruemmele, Geo. J., Hudson.
Tindall, F. B., Waterford.
Toole, Wm. & Sons, Baraboo.
Tomlinson, Clive, Poynette.
Uhrenholdt, Jens, Hayward.
Van Loon, John, La Crosse.
West, H. P., Ripon.
White, A. F., Brookfield.
Wielinga, Jippa, Midway.
Wittig, Bruno, Wauwatosa.
Ziemer, Herman, West Allis.
Zillmer, H. J., Pewaukee.

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RED CROSS FARM POWDER
The Original and Largest Selling Farm Explosive
Why use expensive high power dynamites when this slower, safer farm powder will save you from $3 to $5 per hundred pounds and in most farm uses do better work?
BIG BOOK FREE
As pioneers and leaders in developing farming with explosives our booklet gives the latest, most reliable and best illustrated instructions. Write for HAND BOOK OF EXPLOSIVES No. 35F
DEALERS WANTED
We want live dealers in towns still open. Get the orders resulting from our advertising. You need not carry nor handle stock. State jobber's name or bank reference when writing.
E. I. du Pont de Nemours & Company
Established 1802
World's largest makers of farm explosives
Wilmington, Delaware

COLORADO NEEDS HOG RAISERS
You can raise hogs cheaper, and produce better meat, in Colorado than in the "Corn-belt States." Why raise hogs where drouth or flood may ruin your corn crop. On Colorado Irrigated land you can raise a big crop of feed **every year**, (cheaper feed than corn) drouth or no drouth. Market unsurpassed. Colorado shipped in $5,000,000 worth of hogs last year to supply home markets. Mild dry climate summer and winter; no cholera. Pure water; good neighbors; best of schools; telephones; rural mail routes, etc. Write for Literature proving what we say about hog raising in Colorado. **State Board of Immigration**, Room 44, State House, Denver, Colo.

Have Capewell Nails Used
in shoeing your horse---it pays. Saves expense because The Capewell nail holds best.
THIS CHECKED HEAD OUR TRADE MARK
Saves time of horses and drivers---time often wasted when cheap, inferior nails are used.
In the leading shops of the country Capewell nails are used. They are considered the best--not the cheapest regardless of quality, but the best at a fair price.

An Explosive Without Danger.

MODERN farming methods require the use of an explosive for removing stumps and boulders, tree planting, ditch digging and other common operations. The Atlas Powder Company, Wilmington, Del., have manufactured an explosive, Atlas farm powder, which can he handled out on the farm easily by persons without experience and no risk is involved. Many women farmers use it. Read the advertisement on page 21 and write to the company for information about this safe farm powder. Tell them that you saw the advertisement in this paper.—Adv.

Engines for Hard Work.

A SERVICEABLE kerosene engine is a valuable addition to the farm equipment. The Ottawa engines, built by the Ottawa Manufacturing Co., 1191 King St., Ottawa, Kan., are built to last and to meet all sorts of hard requirements they may be put to on the farm. The Ottawa engines are easy to operate, and are exceedingly practical. See the advertisement on page 18 and write the company for their free engine book. Mention that you read the advertisement in this paper.—Adv.

Crop Conditions Are Satisfactory.

Pastures Are Improving---Prospects Good For Mature Corn and Plenty of Silage---New Seeding Doing Well.

WISCONSIN.

Brown County.—Threshing is over and the returns are rather poor. Oats and barley averaged from twenty-five to thirty bushels per acre each. Rye made from fifteen to twenty-five bushels. The yields were cut down by dry weather during July and August. Pastures are poor and recent rains have been very light, except one on September 12th. The potato crop has not improved much and some farmers are buying potatoes for their own use at $1.50 and $2 a bushel. Silo filling has commenced and several silos are already filled.—J. D. McAllister.

Buffalo County.—Most of the shock threshing is done, and returns show the grain crops to be below last year's average. Corn on heavy soil is good, while that on light, sandy soil is dry and backward. Silo filling has begun and some farmers have cut corn fodder. Continued drouth dried up the pastures and cut down the milk supply. Potatoes are not doing as well as they should, because the ground is too hard and dry. Pastures are very short and cattle are being shipped to market. Plowing has not commenced, because the ground is too hard and dry.—John Wald.

Burnett County.—Threshing is well under way and the yields are light. Wheat is making from six to eight bushels per acre, oats from twenty-six to forty bushels, rye from eighteen to twenty-five bushels, and barley about twenty-five bushels. The heavy rains of late have revived the pastures, assured us of a fair corn crop and gave the potatoes a better chance. Fall plowing is progressing, and some wheat and rye will soon be seeded. Many hogs and cattle are being shipped to the South St. Paul stockyards each week, as the prices are very good. On the whole, this year has been favorable to farmers.—E. H. Johnson.

Clark County.—Threshing is nearly finished. All grains are somewhat below the average of last year in yield and quality. The long dry spell was broken by gentle rains which are proving a great help to pastures, corn and potatoes. Frost has held off, so that few fields have been injured, and as a result, the outlook is splendid for an abundant ripe corn crop. Some farmers are filling silos. In general, the potato crop is poor, and potatoes are selling at $1.50 a bushel. The Neillsville condensery started September 1st and, although the milk supply has fallen off some on account of poor pastures, the condensery has a good patronage, as well as the butter and cheese factories.—Louis Buddengahen.

Door County.—On account of the long dry spell the oat yield is light. Potatoes will make about 50 per cent of a normal crop; there are plenty of vines, but the tubers have not set, as the ground has been too dry and ashy. The new seeding looks well. Corn is the best that has ever been known here; the silos will not take more than one-half of it. Apples are scaly and not nearly as good as usual. Cattle are selling at from $4.50 to $6 per 100 live weight.—John Aznoe.

Dunn County.—A much needed rain fell last week, which will help immature corn. It came too late to benefit the potatoes. Pastures revived quickly, almost like they do in the spring. Silo filling is in full swing. Hog cholera broke out in this county a few weeks ago and is causing much trouble.—J. D. Miller.

Fond du Lac County.—Because of frequent rains during the last few weeks, crops are in fine shape. Corn is maturing well and silo filling has begun. Prospects are fine for ripe corn and good seed. Potatoes are late, but may make an average crop yet. The new clover seeding is very promising. Pastures are exceptionally good, considering the dry summer.—C. A. Williams.

Jackson County.—Recent rains have helped the pastures somewhat, but more rain is needed. Silo filling is on in full blast and the silage seems to be of very good quality. The proportion of good ears of corn for seed is large and the quality is fine. Threshing returns are favorable, although the yields are not quite equal to last year's.—P. W. J.

Juneau County.—Drouth has affected the pastures so that the milk supply has fallen off about 50 per cent. Corn is coming on fairly well and if frost holds off will make a good crop. Some of it is ready to cut now. Apples will make one-half a crop and vegetables are fair. Cattle are in thin condition and number about as usual. A good acreage of buckwheat was sown and indications are for a good crop of this cereal.—C. E. Haskins.

Langlade County.—Threshing is nearly done. Rye yielded about fourteen bushels per acre, oats twenty-two bushels, barley twenty-six bushels, and peas fifteen bushels. Corn is good in some parts of the county, but in other parts it has been killed by frost. Long continued drouth has dried up the pastures and clover fields and damaged the grain crops. Potatoes are small and few in a hill. Apples are about one-half a crop. A good shower has fallen recently, which may help the fall pastures.—Chas. Lade.

Lincoln County.—Most of the grain has been threshed and the yields have turned out poor. Oats and barley were damaged by the hot weather, and in addition, the oats suffered from rust. The oats yield runs from twenty to forty bushels per acre. Potatoes will be about half a crop, with a small yield on the late vines. A killing frost visited this locality on August 25th. Pastures have been very good, considering the dry weather, and cattle look fine.—G. A. Patterson.

Marquette County.—On account of the drouth, all crops are about one-half normal. Two big rains have fallen lately. Some of the high pastures were all burnt out on account of the drouth. Fruit is about 75 per cent normal this year, but vegetables are very good. Early potatoes were good, but it is hard to tell yet what the late ones will make.—Emil Hein.

Oneida County.—Threshing of small grain has begun. The yield is good, but the grain is light and the straw short. A fair second crop of clover is being cut. Potatoes will make a fair yield. They were late in setting, and only a few fields set as well as they should. Corn looks well, and if frost holds off another week, there will be a good yield. Slight frosts recently damaged the corn to some extent in some parts of the county. Vegetables and garden truck are doing fine. Pastures are good and cows are holding up well in milk production.—Chas. H. Jewell.

Outagamie County.—The small amount of winter wheat that did not winterkill, made about eighteen bushels per acre, and rye which was of fair quality, made twenty bushels. The oats crop is between 75 and 80 per cent normal, and barley is about 70 per cent normal. We have had no frost yet. The drouth is partly broken by light showers, but pastures are still dry. The corn crop will be about 80 per cent normal if frost keeps away long enough. Early potatoes are almost a total failure, but late potatoes look fairly well. With favorable weather conditions, the outlook for late potatoes will improve. About the same number of cattle are on feed as usual, but this is mostly a dairy section. Live stock in good health.—Harry Lepplu.

Polk County.—Threshing is in full blast and the yields are variable. Wheat is making from ten to twenty-five bushels per acre and oats from twenty-five to fifty bushels. Wheat graded poor, but most of the oats is fair in weight. Corn is in good shape for silo filling and this work is progressing nicely. The second crop of clover is being cut for hay and seed. A good yield of seed is expected. Potatoes are poor because the hot, dry weather in July damaged them very much. Pastures are getting short.—Wallace Fountain.

Rusk County.—Corn is maturing rapidly. Potatoes are making about one-half a crop. Pastures are good. Frost is holding off well and only two weeks more is needed for the corn. The small grains made fair yields. Alsike clover seed averaged about two bushels per acre. Red clover seed is going as high as six bushels per acre.—V. V. Miller.

St. Croix County.—Weather has been hot and dry for the last two months and crops have suffered on this account. The grain crops have been harvested and a considerable part of them has been threshed. Wheat is practically a failure; some of the fields of Velvet Chaff are good, but Blue Stem is not making more than from two to ten bushels per acre. The oats yield is near the average, although the quality is uneven, the early sown being heavy and the late light. Corn is maturing rapidly and will be almost a normal crop. The ears are not so well filled on the sandy soils as on the richer, heavier soils. Barley averaged well, but is thin and lacking in weight. The potato crop will make about the smallest yield ever known here. The rains during the last week may benefit the late planting, but the early planting will not amount to much. Pastures are poor, and cattle thin.—Stephen Everson.

Sawyer County.—Weather continues fair and the corn is fast approaching maturity; many fields are ripe and the majority of them will be so in a week. Corn is very good, considering the conditions last spring. Silo filling is beginning. Late planted potatoes are doing fairly well now, and promise a fair crop, but early ones are not good. The light frosts on the 1st and 2d did very little damage. Threshing is well along. Oats were light, about 60 per cent of a crop, and rye was about 75 per cent normal. Considerable clover will be cut for seed, and indications are for a good seed crop. Since the recent abundant rainfall, pastures are doing well. Cattle are in good condition.—Jens Uhrenholdt.

Wood County.—Recent rains have improved the pastures, late potatoes and corn. On heavy land corn is getting in fine condition for ensilage, but on the lighter soils it has suffered from drouth. Threshing is nearly done and the yield is lighter than was expected. Oats on heavy land are making from ten to forty bushels per acre and on light soil from five to thirty bushels per acre. Barley was of very good quality and threshed out from fifteen to thirty-five bushels per acre. Rye made from five to thirty bushels on good land and on light soil from three to eighteen bushels. Very early planted potatoes are good, but the medium early planted were caught by the drouth and bugs. The late planting has a good appearance and should yield well if frost holds off for a while. Cattle buyers are shipping carloads of cattle nearly every week. Stock of all kinds are in fine condition.—Peter Brown.

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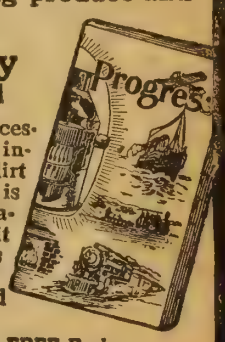

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Information From Headquarters.

More advice on how to keep the boys and girls on the farm has bobbed up and we are not so sure but what it comes from just about the right source—the farm boy himself. Who, after all, knows so well what they miss on the farm and what they go to town to seek as the boy and girl themselves? A certain farm lad who has had an opportunity both at home and at school to see ways of bettering country living gives the following advice to his elders, and there is no small amount of helpful common sense in his ideas. He says:

Get good books, magazines and farm papers for the young people to read.
Have some kind of a club for them to attend.
Arrange matters so they can have a party or entertainment once in a while.
Go with them to church every Sunday.
Arrange it so they can have one or more picnics every year.
Teach them to do all kinds of farm work by giving them a small tract of land for themselves and showing them how to raise their crops, and have them help you with your work.
Give them a horse which they can ride or drive when they haven't anything to do or when they want to go anywhere.
Teach them to love and be kind to animals.
After they finish their school send them to the state agricultural schools.
Take time to teach them the "hows" and "whys" of farm work.

There isn't anything difficult or expensive about the plan outlined by this boy and we rather fancy the old folks would enjoy the carrying out of this program just about as much as the young folks and thereby bring about an ideal condition in rural social life.

The Matter of Shoes.

Why do we endure aching, tired feet when a little care and properly fitted shoes will put those poor members into normal condition again and add so much to our bodily comfort? Needless to say the care of the feet should begin early in life and many feet have been ruined by being improperly clad in childhood. But even if this be true the adult need not continue his suffering if he is willing to give a little time and attention to the care of his feet and the selection of his shoes.

Being closely covered so many hours of the day, careful bathing, rubbing and dressing of the feet are necessary. If the feet are aching and inflamed a bath in water at body temperature will relieve them. A good cocoa butter or olive oil rub promotes circulation, causes the muscles to relax and the skin to be firm and well nourished. Keep the feet refreshed with many baths and an occasional massage and then turn your attention to the shoes.

The heel of the shoe should be low enough to throw the weight of the body upon the ball of the foot. This height will vary with different people. See, also, that the shoe fits snugly around the heel and instep. A shoe that slips up and down at the heel with every step is the most annoying thing one can imagine. It protects neither the heel nor the instep, and the instep particularly needs protection because of the weight it has to carry and because of the number of small bones which are bound together by ligaments.

The shoe, to insure freedom of motion, good circulation and proper nourishment of the foot, must be wide enough at the toes to allow the toes to move freely, and the widest part of the shoe should exactly coincide with the widest part of the foot, which is across the foot at the great toe joint. Many shoes are so shaped that the great toe lies in an oblique position, whereas it should lie in a vertical position.

The shoe should be made of firm, but porous leather. The porous condition allows the moisture to evaporate and prevents the feet from becoming tender. A stiff leather retards the free action of the joints and muscles and, therefore, weakens and tires the feet.

The sole of the street shoe should be thick enough to protect the foot from cold and dampness. The low shoe should not be worn except in warm weather. Too much attention cannot be given to this matter, for severe colds, weak throats and weak lungs are directly traceable to low shoes and to thin soles. Not long ago a successful banker, in winding up a bit of advice to a young man, said, "Live simply, don't stay up nights—and keep your feet dry."

Cooking Eggs Without Boiling.

Eggs cooked below the boiling point of water are more easily and quickly digested than are boiled eggs. Compared with other foods, eggs are easily and quickly digested. Eggs are a tissue-building food, being rich in protein and mineral matter. They, therefore, serve as a meat substitute and require the addition of carbohydrate material to form a balanced diet. Sweet potatoes, Irish potatoes or macaroni combined with hard-cooked eggs and a white sauce also form an excellent meat substitute.

Carbon Tetrachloride For Cleaning.

While gasoline is, as most of us know, a cheap and effective cleaning agent, it has one great disadvantage. It is extremely volatile, and its vapors form, with air, an explosive mixture. On no account, then, must it be used in a room containing a flame of any kind. There is, however, another cleaning agent, more expensive than gasoline, it is true, which is absolutely non-inflammable. This is carbon tetrachloride, a substance but little known as such, but often sold under such trade names as Aolval, Eradeline, Antiflammen, etc. This substance is, like gasoline, a fat solvent, and cleans by dissolving out the grease which mechanically holds dirt in the fabric. Carbon tetrachloride has another advantage over gasoline; it spreads less readily and for that reason is less liable to form a ring when grease spots are removed by sponging.

Provide Medicine Chest For Emergencies.

Every home needs a medicine closet, as there is likely to be many minor accidents and ailments in even a well-conducted home, says Miss L. E. Kennedy, assistant in domestic science in the Kansas State Agricultural College. In this chest Miss Kennedy recommends only the keeping of medicines that are needed in the common ills.

If the medicine is not kept in a definite place it is often hard to locate in case of an emergency. Then, if there are children, the desire to know what is inside a bottle will sometimes cause illness or even death.

A box measuring 10½x4½ inches will hold the necessary medicine and will keep the medicine away from childish hands. It is safe and wise to label every bottle.

Miss Kennedy believes that the following medicines should be found in every home medicine chest: Alcohol, used externally for strains, sprains and bruises; aromatic spirits of ammonia, a stimulant used in fainting when added to water; castor oil, a mild purge; powdered mustard, one teaspoonful in a glass of lukewarm water to cause vomiting, and in a plaster as a counter irritant; sirup of ginger, for cramps in the stomach; sirup of ipecac, used to cause vomiting and especially useful in cases of croup; carbolated vaseline; talcum powder, white castile soap; absorbent cotton (one-half pound); six gauze roller bandages; one roll adhesive plaster; collodion, for slight injuries of the skin; pair of scissors; teaspoon; two bent glass drinking tubes; fountain syringe with glass points; cold cream or hand lotion for chapped hands; lip salve, equal parts of lanolin and vaseline.

Easy Way to Mend Grain Sacks.

To the Editor:—As I have received so many good pointers from your paper and think each reader should send something to help make this paper one of the best I will add my little mite. As fall is here and we all have to get at that dreadful job, mending the grain sacks, I will tell the farmers' wives how I do it.

I choose a cool day, build up a good fire and put my flatirons on. Then I make a good paste with cold water and flour, cut my patches, spread the paste on them and lay them in place. Then I put the hot irons on the patches until they are as dry as can be made. Then I lay the sacks near the stove where they will dry still more. I have done this many times and find it much faster and more lasting than by sewing the patches on.

I will also send a recipe for cake—some call it Prince of Wales cake. One cupful of sugar, one-half cupful of shortening, two eggs, two teaspoonfuls of molasses, one cupful of sour milk with one level teaspoonful of soda, two cupfuls of flour with one-half teaspoonful of baking powder sifted in it, one cup of raisins, one-half teaspoonful each ginger and cinnamon, a pinch of salt. This can be made in layers with filling, or in a sheet. A Farmer's Wife.

Recipe For Canning Okra.

To the Editor:—I am sending my recipe for canning okra for the lady who wanted to know how to use this vegetable.

Wash, pare and chop two gallons of nice, tender okra. Put on to cook in a little water and let cook until tender. Then add one gallon of ripe tomatoes that have been peeled and chopped fine. Let boil for thirty minutes, add salt to taste and bottle for use. When opened, take a little shortening of any kind, put in stewer, add black pepper, pour the okra into this, cook for thirty minutes and serve.

Mrs. W. J. A.

Recipes.

Corn Fritters.—Stew one can of corn, strain off the juice and press the kernels through a colander. To this meat add one-half pint of milk, one level teaspoonful of salt and a saltspoonful of pepper. Add the yolks of three eggs and one pint of pastry flour sifted with a rounding teaspoonful of baking powder. Mix thoroughly and fold in the beaten whites of the eggs. Drop by spoonfuls into extremely hot fat and when sufficiently drained serve with maple sirup.

Stuffed Onions.—Use large onions, peel and parboil for ten minutes. Drain, cool and with a pointed knife remove the center of each onion. Fill the cavity with a mixture of chopped meat, using either beef, chicken or veal, buttered breadcrumbs, salt, paprika and a little finely-minced parsley. Put onions close together in baking dish and add just enough water to keep them from burning. Bake for twenty minutes and serve with hot corn bread.

Eggs a la Goldenrod.—Three hard-cooked eggs, three level tablespoonfuls butter, three level tablespoonfuls flour, one and one-half cupfuls milk, one-half level teaspoonful salt, one-eighth level teaspoonful pepper, six slices toast, a little parsley. Melt the butter, add the flour, salt and pepper. Mix well. Add the milk gradually. Cook until a white sauce consistency. Add chopped egg whites. Pour this mixture over slices of toast arranged on a platter. Force the yolks through a strainer on top of the sauce on the toast. Garnish with parsley and serve hot.

Jam Cake.—One cupful sugar, one-half cupful butter, three eggs, two-thirds cupful sour milk, one teaspoonful soda, two cupfuls flour, one teaspoonful baking powder, one teaspoonful cinnamon, one-half teaspoonful cloves, one teaspoonful allspice, one cupful jam, any kind preferred. Cream butter, add sugar and continue beating while adding beaten yolks of eggs, jam and sour milk. Mix and sift dry ingredients and add to mixture. Lastly fold in the stiffly beaten whites of eggs. Pour into a buttered pan and bake in a moderate oven until it shrinks from sides of pan.

Jam Puffs.—Roll plain paste one-eighth of an inch thick and cut in pieces three by four inches in size. Put one-half tablespoonful of jam on lower half of each. Moisten edges with water, press together and bake twenty minutes in hot oven. Mince meat may be used instead of jam.

Fudge.—One cupful of sugar, one-half cupful of cream, one square of chocolate, one teaspoonful of vanilla, one-half cupful of chopped nuts. Boil until it spins, take from the fire and beat until quite stiff.—Minda.

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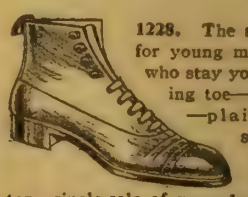

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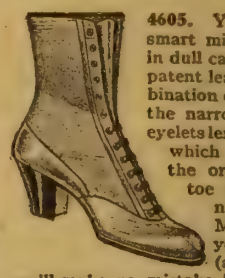

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PART III. "Prince Charlie"

CHAPTER III.

At Cross-Purposes.

"Their tricks and craft ha' put me daft,
They've taen me in, and a' that."

AND so you got back unharmed from the midst of the hostiles?" asked Rachel in mock surprise, when, a week later, Hardy, Stuart and MacDougall returned, bringing with them specimens of deer they had sighted on their return.

"Hostiles is about the last name to apply to them, I should imagine," remarked Stuart; "they are as peaceable as sheep."

"But they can fight, too," said MacDougall, "an' used to be reckoned hard customers to meet; but the Blackfeet ha' well nigh been the finish o' them. The last o' their war chiefs is an old, old man now, an' there's small chance that any other will ever walk in his moccasins."

"I've been told something of the man's character," said Rachel, "but have forgotten his name—Bald Eagle?"

"Grey Eagle. An' ther 's more character in him worth the tellin' of than you'll find in any Siwash in these parts. I doubt na Genesee told you tales o' him. He took a rare, strange liking to Genesee from the first—made him some presents, an' went through a bit o' ceremony by which they adopt a warrior."

"Was this Genesee of another tribe?" asked Stuart, who was always attentive to any information of the natives.

"Yes," said Rachel quickly, anticipating the others, "of a totally different tribe—one of the most extensive in America at present."

"A youth? A half-breed?"

"No," she replied; "an older man than you, and of pure blood. Hen, there is Miss Margaret pummeling the window for you to notice her. Davy MacDougall, did you bring me nothing at all as a relic of your trip? Well, I must say times are changing when you forget me for an entire week."

Both the men looked a little amused at Rachel's truthful yet misleading replies, and thinking it just one of her freaks, did not interfere, though it was curious to them both that Stuart, living among them so many days, had not heard Genesee mentioned before. But no late news, coming from the southern posts, had made the conversations of their troops flag somewhat; while Stuart, coming into their circle, brought new interests, new topics, that had for the while superseded the old, and Genesee's absence of a year had made them count him no longer as a neighbor. Then it may be that, ere this, Rachel had warded off attention from the subject. She scarcely could explain to herself why she did it—it was an instinctive impulse in the beginning; and sometimes she laughed at herself for the folly of it.

"Never mind," she would reassure herself by saying, "even if I am wrong, I harm no one with the fancy; and I have just enough curiosity to make me wonder what that man's real business is in these wilds, for he is not nearly so careless as his manner, and not nearly so light-hearted as his laugh."

"Well, did you find any white men among the Kootenais?" she asked him abruptly, the day of his return.

His head, bent that Miss Margaret could amuse herself with it, as a toy of immense interest, raised suddenly. Much in the girl's tone and manner to him was at times suggestive; this was one of the times. His usually pale face was flushed from his position, and his rumpled hair gave him a totally different appearance as he turned on her a look half compelling in its direct regard.

"What made you ask that?" he demanded, in a tone that matched the eyes.

She laughed; to see him throw off his guard of gracious suavity was victory enough for one day.

"My feminine curiosity prompted the question," she replied easily. "Did you?"

"No," he returned, after a rather steady look at her; "none that you could call men."

"A specimen, then?"

"Heaven help the race, if the one I saw was accepted as a specimen," he answered fervently; "a filthy, unkempt individual, living on the outskirts of the village, and much more degraded than any Indian I met; but he had a squaw wife."

"Yes, the most of them have—wives or slaves."

"Slaves?" he asked incredulously.

"Actually slaves, though they do not bring the high prices we used to ask for those of darker skin in the South. Emancipation has not made much progress up here. It is too much an unknown corner as yet."

"Is it those of inferior tribes that are bartered, or prisoners taken in battle?"

"No, I believe not, necessarily," she replied, "though I suppose such a windfall would be welcomed; but if there happens to be any superfluous members in a family, it is a profitable way to dispose of them, among some of the Columbia Basin Indians, anyway. Davy MacDougall can give you more information than I, as most of my knowledge is second hand. But I believe this tribe of the Kootenais is a grade above that sort of traffic—I mean bartering their own kindred."

"How long have you been out here, Miss Rachel?" he asked, as abruptly as she had questioned him of the white men.

"About a year—a little over."

"And you like it?"

"Yes; I like it."

In response to several demands, he had enthroned Miss Margaret on his lap by this time; and even there she was not contented. His head seemed to have a special fascination for her babyship; and she had such an insinuating way of snuggling upward that she was soon close in his arms, her hands in easy reach of his hair, which she did not pull in infantile fashion, but dallied with, and patted caressingly. There was no mistaking the fact that Stuart was prime favorite here at all events; and the affection was not one-sided by any means—unless the man was a thorough actor. His touch, his voice even, acquired a caressing way when Miss Margaret was to be pleased or appeased. Rachel, speaking to Tillie of it, wondered if his attraction was to children in general or to this one in particular; and holding the baby so that her soft, pink cheek was against his own, he seemed ruminating over the girl's replies, and after a little—

"Yes, you must, of course," he said thoughtfully; "else you could never make yourself seem so much a part of it as you do."

During the interval of silence, the girl's thoughts had been wandering. She had lost the slight thread of their former topic, and looked a little at sea.

"A part of what?" she asked.

"Why, the life here. You seem as if you had always belonged to it—a bit of local color in harmony with the scenes about us."

"How flattering!—charmingly expressed!" murmered Miss Hardy derisively. "A bit of local color? Then, according to Mr. Stuart's impressions I may look forward to finding myself catalogued among greasy squaws and picturesque squaw men."

"You seem to take a great deal of delight in turning all I say or do into ridicule," he observed. "You do it on the principle of the country that guys a 'tenderfoot'; and that is just one of the things that stamp you as belonging to the life here. I try to think of you as a Kentucky girl transplanted, but even the fancy eludes me. You impress one as belonging to this soil, and more than that, showing a disposition to freeze out newcomers."

"I haven't frozen you out."

"No—thanks to my temperament that refuses to congeal. I did not leave all my warmth in the South."

"Meaning that I did?"

"Meaning that you, for some reason, appear to have done so."

"Dear me, what a subtle personage you make of me! Come here, Margaret; this analyst is likely to prejudice you against your only auntie."

"Let her be with me," he said softly, as the baby's big blue eyes turned toward Rachel, and then were screened by heavy, white lids; "she is almost asleep—little darling. Is she not a picture? See how she clings to my finger—so tightly;" and then he dropped his face until his lips touched the soft cheek. "It is a child to thank God for," he said lovingly.

The girl looked at him, surprised at the thrill of feeling in his tones.

"You spoke like a woman just then," she said, her own voice changed slightly; "like a—a mother—a parent."

"Did I?" he asked, and arose with the child in his arms to deliver it to Aunty Luce. "Perhaps I felt so; is that weakness an added cause for trying to bar me out from the Kootenai hills?"

But he walked away without giving her a chance to reply.

(To be continued.)

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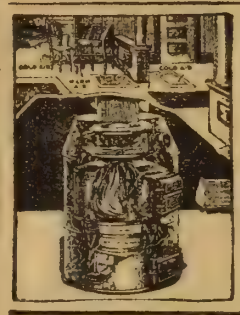

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WORK OF BOYS AND GIRLS

Young People of Wisconsin Have Prominent Place in the 1916 State Fair---Winners in Some of the Departments.

A FEATURE of the 1916 Wisconsin State Fair was the efforts to interest young people. Greater interest was shown in educational work than ever before, and in addition to premiums offered in this department, a total of $7,500 was offered in premiums in the boys' and girls' department, covering contest work, agricultural school exhibits, club work, etc. Herewith are shown group pictures taken at the boys' and girls' camp which occupied grounds east of the mile track. Three large tents, one for the boys and one for the girls, and another for dining room and assembly, were provided for the boys and girls from many counties of the state who camped at the fair. Thomas L. Bewick, of Madison, is state leader of the boys' and girls' department. The contest directors were as follows:

G. C. Humphrey, University of Wisconsin, in charge of calf club contest; Raymond Baker, Madison in charge of pig club contest; J. G. Moore, University of Wisconsin, in charge of horticultural contest; J. G. Fuller and J. A. James, University of Wisconsin, in charge of stock judging contests; Miss Elisabeth Amery, University of Wisconsin, in charge of girls' baking clubs; Miss Emma Conley, State Department of Public Instruction, in charge of girls' sewing contest; Miss Agnes Boeing, University of Wisconsin, in charge of girls' canning contest; J. A. James, University of Wisconsin, in charge of corn judging contest.

The camps were in charge of Y. M. and Y. W. C. A. workers. Exceptionally fine exhibits were shown at the fair by the Bayfield High School, West High School Farm, Green Bay, Sun Prairie High School and Sun Prairie Corn and Potato Clubs, Linn, Jr., Farmers' Club, Walworth, and the Irving High School, Milwaukee. Mr. Fred Pabst, of the Pabst Stock Farm, Oconomowoc, Wisconsin, offered a $125 bull calf from his Holstein herd for the school which made the best showing in agricultural products and display, and this fine prize was awarded to the Sun Prairie High School, Dane county. This is a pure-bred animal from one of the best herds of the West and the Sun Prairie school will have every reason to be very proud of it.

The Broad Ripple Farms, George W. Browne, Waukesha county, Wisconsin, offered three Guernsey calves for the best teams in the stock-judging contests. These bull calves were given as follows: Onalaska school, La Crosse county, first prize; Pewaukee school, Waukesha county, second; and Mukwanago school, Waukesha county, third.

Other contests conducted under the direction of Mr. Bewick and his helpers were spirited and interesting.

Upper Picture—Miss Norma Fewings, of Portage county, winner of 1916 spelling contest. Lower Picture—Miss Eleanor Kessler, winner of gold medal for best average in penmanship, spelling and arithmetic at state fair.

Boys and girls judged apples, corn, poultry, etc.

The girls' sewing and cooking contests were of great interest. These were conducted by Miss Elizabeth Amery and Miss Agnes Boeing. Eight model kitchens were used for the contests in baking and canning. It was an interesting sight to see the girls employed in sewing, and at the same time keeping an eagle eye on the oven where their bread was baking.

A number of persons and interests aided to make the boys' and girls' department at the fair a success. The Wisconsin Bankers' Association presented $100 in gold and the Machinists' and Manufacturers' Association, of Milwaukee, contributed six $15 agricultural short courses. Mr. Fred Underwood presented $100, with the stipulation that the money be used for educational purposes.

While the educational department was separate from the boys' and girls' work, and under the supervision of Mr. George W. Davies, of Sauk county, as usual, it helped to swell the interest of young people in the fair. Professor Davies had arranged a splendid exhibit. In the rural competition, Waukesha county won first with the best county school exhibit. All lines of domestic science work, manual training and school room work were exhibited. The Waukesha county exhibit was made up almost entirely from material furnished by the Sussex school, of which Miss Maude Mitchell is the teacher. Professor Rhodes is superintendent of schools in the county. Sauk county, of which Professor Davis is superintendent, won second in this competition between country schools of Wisconsin. Sauk county has had a high place in this contest for several years. In the contest for the best exhibit from any rural school, there were seven entries, with Miss Hanson, Iowa county, winning first; Ruth Peck, Sauk county, second; and Miss Convey, Iowa county, third. The teachers arranged exhibits of work done by the children under their direction.

The spelling contest, conducted under the educational department, had thirty entries this year and Miss Norma Fewings, aged sixteen, of Portage county, was the winner. The former plan of "spelling down" was done away with this year and 100 words were read to the entire class, the spelling being written. Out of 100 words, Miss Fewings misspelled the following, niece, hemorrhage and proficiency.

Eleanor Kessler, of Baraboo, Sauk county, won first in the general average on spelling, arithmetic and writing combined. She had an average of 85 per cent and was awarded a gold medal. Miss Dorothy Stangel, of Manitowoc county, won the writing contest. Miss Kessler, in all three contests averaged better than either Miss Fewings or Miss Stagel, and won the medal. There were thirty-four taking part in all the contests, of which four were boys, and the boys failed to win any of the contests.

BOYS' AND GIRLS' CAMP AT 1916 FAIR.

GROUP OF BOYS TAKEN AT CAMP.

Interest in Bees and Honey.

A great deal of interest was shown by Wisconsin State Fair visitors in the bee and honey section, in charge of N. E. France, of Platteville. The exhibitors were E. D. Ochsner, of Prairie du Chien; W. E. Prisk, of Mineral Point; A. E. Kleeber, of Reedsburg; Frank Kittinger, of Franksville; John Kneser, of Hale's Corners; H. H. Moe, Woodford and Monroe; A. Ericson, Rockton; B. J. Thompson, Spring Valley; E. Howard, Darlington, and George Shafer, of Menominie. The awards were distributed by the judges as follows:

Most attractive display of comb honey: Kleeber, first; Kittinger, second; Ochsner, third; Prisk, fourth.

Twelve-pound case white comb honey: Thompson, first; Howard, second; Ochsner, third; Shafer, fourth.

Case of amber comb honey, 12 pounds: Kleeber, first; Prisk, second; Ochsner, third; Moe, fourth.

Display extracted honey: Prisk, first; Moe, second; Howard, third; Kittinger, fourth.

Display, six extracting frames: Prisk, first; Kleeber, second; Ochsner, third; Kittinger, fourth.

Case extracted clover honey, 12 pounds: Howard, first; Kneser, second; Prisk, third; Thompson, fourth.

Case extracted basswood honey, 12 pounds: Ochsner, first; Howard, second; Kleeber, third; Prisk, fourth.

Case extracted amber honey, 12 pounds: Howard, first; Prisk, second; Kleeber, third; Ochsner, fourth.

Best display extracted granulated: Kleeber, first; Prisk, second; Ochsner, third.

Best beeswax, 10 pounds: Prisk, first; Howard, second; Kleeber, third; Ochsner, fourth.

Honey vinegar, one gallon: Kittinger, first; Ochsner, second; Kleeber, third; Kneser, fourth.

Design in comb honey: Ochsner, first; Moe, second; Kleeber, third.

Design in wax: Kittinger, first; Ochsner, second; Prisk, third; Kleeber, fourth.

Demonstration of honey in cooking: Kittinger.

Golden Italian bees: Kittinger, first; Ochsner, second; Kleeber, third; Prisk, fourth.

Leather-colored bees: Prisk, first; Ochsner, second; Howard, third; Kneser, fourth.

In demonstration Moe, Kittinger, Kleeber, Prisk and Ochsner were equal.

American foul brood, the most prevalent of bee diseases, was strikingly illustrated by exhibits. A determined effort is being made by the bee men of Wisconsin to advance their interests and to increase the sale of their products. They announced that one pound of honey equals in food value twenty-four ounces of beefsteak, thirty ounces of codfish, eleven ounces of cheese, two quarts of milk, sixteen oranges, nine bananas or twenty eggs.

The bee and honey exhibit was much more attractively displayed than ever before at the Wisconsin State Fair.

Trapping Time Draws Near

To the Editor:—With the first few cool days in October the men and boys on the farm begin to plan for that greatest of all fall and winter sport, the hunting and trapping of fur-bearing animals.

Guns must be carefully cleaned and oiled and the many traps must be gone over so that everything may be in readiness when the calendar shows the beginning of the game laws open season. Some states do not protect their game and fur-bearing animals and in these they may be hunted and trapped at any time, but it is a short-sighted sportsman, indeed, who will take an animal before its coat of fur becomes good.

It is really a crime to set out a trap before October 15th and in most sections it is best to wait until November 1st. The big fur houses report that trappers and hunters are realizing more and more the many advantages of waiting until the furs become prime and are doubling their profits by so doing. Early caught skins are worth very little, whereas the same skins taken after they become prime will command excellent prices.

Trapping is also extremely profitable and the farmer who has had an "off" season with his crops will find the skins of the fur bearers producing a source of revenue that will help materially toward the winter's expense. Fur prices are on a high basis and every man or boy who is willing to combine work with pleasure can make many extra dollars this winter by trapping the coon, mink, opossum, skunk, muskrat and other animals that abound on most farms.

Preparedness at this season of the year is the professional trapper's motto and the amateur will do well to follow his example. Time spent now in getting traps in shape and in replacing any that are broken will be paid for many times over when the active trapping season begins.

The trapper who has to buy traps, baits and other trapping supplies should be sure to get the best that can be had, for, while the first cost may seem higher, the best goods are much cheaper in the end.

Using cheap trapping equipment to save money is like stopping a watch to save time. N. R. Darrah.

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VETERINARY

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Indigestion in Pigs.

I have some pigs that are on full feed, but are still sucking. They seem to get poor and get the thumps.

These pigs are troubled with indigestion, which is probably brought about through feeding. You had better cut down the feed and better yet gradually change the feed and also give half a teaspoonful of baking soda to each pig in slop once daily for a few days.

Milk Fever.

We have a cow that had milk fever. We secured a veterinarian and he helped her some but her legs are swollen and she is unable to use them. She will not eat nor drink but just a little now. We would be glad to have your advice on this case.

Your cow as well as having had the milk fever may be bothered with paralysis of some kind. You had better just keep on with the treatment the veterinarian prescribed and, if necessary, have him see her again.

Navel Ill.

I had a mare a short time ago which had a fine, large colt. It was weak when born and had to be helped up for a few days. but seemed all right otherwise. The fifth day it began to be stiff in the fore parts, refused to help itself at all, and died the next day. It seemed in no pain whatever. A week later another mare had a colt. This one was quite streng and after the first day could get up alone and walked to pasture. The third day it was well when I left the barn at night, but the next morning it lay dead. Could you tell me what could have been the trouble?

Your description of the cases does not give one much to judge from. However, the first mentioned case may have been a case of navel ill which was of very acute nature, thereby causing death of the animal on short notice. We would be unable to say what caused the death of the colt in the second mentioned case.

Severed Tendons.

A short time ago my horse was cut with a mower. The neckyoke came down and the mower ran onto his hind leg, cutting him on the inside of the right leg about three or four inches above the ankle. The cords were cut, but I do not know whether or not they were cut entirely off. He puts some weight on that leg, but the foot from the ankle lies forward, so that he walks on his ankle. The cut is about two inches long. What can be done for this horse? Will he get better? Should he be tied up or left loose? Can these cords be held together in any way so they will knit? Should the leg be put in splints to hold it in shape?

This animal should have been treated intelligently immediately after injury. It being an old wound and somewhat infected now the treatment will have to be somewhat different. You should first know what structures are injured before treatment is begun. It may be this animal will need a shoe with a leg brace attached, but we would not advise treatment further without knowing the exact nature of the wound. Would it not be possible for you to have a competent veterinarian look this animal over?

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Eggs From Pullets.

To the Editor:—I have found by actual experience that it pays to select the pullets which you want for winter layers early, and provide them with the best of care from now on until fully matured, which should be about the 1st of November. The better feed and care they receive the sooner they will begin to lay. Eggs are going to be worth more this winter than any time in the past.

In a large flock of pullets I always find some that are not desirable to be kept as layers through the winter season. These I fatten and send to market, selecting only those with strong constitutions, which are well matured and developed. There is no reason why a flock of healthy, early-matured pullets should not produce an abundance of eggs during the winter season, especially when grown upon the farm where the grower has everything "coming his way." Without doubt, a flock of pullets that have free range where they may glean an endless variety of seeds, bugs, worms and grain, with plenty of sunshine and shade, fresh air and pure water will make very rapid development and mature much earlier than pullets kept in confinement where these natural surroundings are not to be had. But when surrounded with all these natural advantages, the flock should be fed a balanced ration to help them along to early maturity.

On most farms grains for poultry feeding are raised in abundance, wheat, corn, oats, millet, etc., being raised by nearly every farmer. I feed these grains in the proper proportion to my flock of selected pullets, but do not gorge them at any time on any one kind of grain. A mistake in this way sometimes may cause the loss of considerable profit. I separate the pullets to be kept for winter layers from the young roosters as soon as their sex can be distinguished, as I think they thrive and mature much faster than when allowed to run together. Select your pullets now which you want to keep for winter layers, and provide them with the best conditions obtainable. Remember there are no surroundings too good for them, and have a care that their winter quarters are clean and sanitary.

When the young fowls have been raised in several different coops and I wish to get them accustomed to their winter quarters, I go about the work quietly so as not to excite them. I take them at evening to their new place, and never undertake moving them during the daytime. I always have quiet fowls. I keep the pullets shut up in their new quarters, feed and water them well, and in a short time they get used to the place and will go in to roost of their own accord at evening.

When cold weather arrives I feed my flock plenty of green food such as the farm produces—cabbage, small potatoes, turnips and apples cut up, in fact, anything I happen to have of a green nature I give to them to make a variety. It is greatly relished and in winter is absolutely necessary for the flock besides their grain feed. I feed them milk in any form—sweet milk preferred—as this, when fed liberally, helps to suppl[y] the meat ration, which is also necessary for egg production in winter.

I owe much of my success in getting eggs from my pullets in autumn and winter to keeping the flock in a healthy, thriving condition from start to finish and by housing and keeping them warm during cold weather. With a variety of food fed three times daily, with warm water to drink when everything is frozen outside, with plenty of grit provided at all times, I get pay for all my attention by securing a full egg basket weekly.

Illinois. S. E. M.

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Many animals, especially hogs, are troubled with worms. When your hogs are unthrifty, you hear a little cough now and then, suspect worms.

Dr. Hess Stock Tonic

Keeps Hogs Healthy **Expels Worms**

So sure am I that Dr. Hess Stock Tonic will keep your hogs healthy and expel the worms, that I have authorized my dealer in your town to supply you with enough Tonic for your hogs and, if it does not do all I claim, just return the empty packages and get your money back.

My Stock Tonic is not a feed, but a true conditioner and tonic, highly concentrated, which contains blood purifiers, laxatives and drugs which are powerful worm expellers. Feed in small quantities, watch your hogs improve.

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28,000 reliable dealers in U. S. handle it. Why pay the peddler twice my price?

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Dr. Hess Poultry Pan-a-ce-a conditions fowls, makes hens lay and is a great help at moulting time. Valuable for chicks, for pullets starting to lay and for all grown fowls. Costs a penny for 30 fowls per day. 1¼ lbs., 25c; 6 lbs., 60c; 12 lbs., $1.25; 25-lb. pail, $2.50 (except in Canada and the far West). *Guaranteed.*

Dr. Hess Instant Louse Killer A reliable lice killer, very quick acting. For use on poultry and stock. Use by dusting and sprinkling. Destroys bugs on cucumber vines, cabbage worms, slugs on roses. In handy sifting-top cans. 1 lb., 25c; 3 lbs., 60c (except in Canada). *Guaranteed.*

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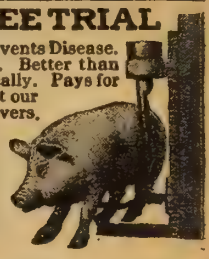

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FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum; 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

BEAGLE HOUNDS—I have some full-blooded Beagle pups for sale. One 7-months-old dog at $10. 6 that are 6 weeks old at $4 for females and $5 for males. Leonard Ess, Chaska, Minnesota.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

FULL BLOODED COLLIE PUPPIES FOR sale. Farmers' prices. J.V. Northrup, Waupun, Wis.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

C. C. Fries & Son Offer Some Great Heifers.

C. C. FRIES & SON, Richland Center, Wis., are one of the state's most constructive Holstein breeders. It is needless for us to give the records of the cows and heifers that this firm has developed. We only need mention Aaggie Texal Wayne 2d and followers of this breed think of her yearly record, 1,078 pounds of butter, and a seven-day record of 30.60 pounds of butter. This is not the only high-producing female brought out by the Fries. Their herd is made up of A. R. O. cows, with records up to twenty-seven pounds. In King Pontiac Portia, Messrs. Fries have what is considered one of the very best sons of the great King of the Pontiacs. Besides being a sire of high-producing

THE 28.71-pound bull, Calumet Johanna Abberkerk Champion, advertised for sale on page 29 by A. G. Pingel, Chilton, Wis.

females, he is a wonderful individual. One of his two-year-old daughters recently made a twenty-three-pound record in this herd. The owners wish to get the daughters of this bull in some of the good herds of the state, realizing that this is the best way to advertise their good herd, for that reason they are offering a limited number of heifers and heifer calves sired by King Pontiac Portia and all out of A. R. O. dams. Some heifer calves sired by Richland Sir Ormsby Korndyke, are also being offered for sale. This bull is out of Aaggie Texal Wayne 2d, and the dams of the heifers are sired by King Pontiac Portia, a very acceptable cross. If you want something just a little better than the other fellow has, buy the heifer being offered that is out of the same dam as Minnesota's first thirty-six-pound cow, owned by the state. They also have a few heifer calves by a son of King Johanna Korndyke Segis, he by Johanna McKinley Segis. The dam is Aaggie Texal Wayne 2d. To make a long story short, you will get the very best if you buy from Fries. Their Holsteins have made good and you get the blood of the greatest animals of the breed when you buy from this herd. Investigate these heifers at once for it isn't every day that you have an opportunity to buy females backed up as these are. Write these gentlemen for a description of some of these heifers, it will pay you. Kindly mention The Wisconsin Farmer when writing. See page 29.—Adv.

A Furnace at Stove Cost.

THE cost of living isn't all going up. There's furnaces. You can get a Kalamazoo pipeless furnace, suitable for the average farm home, for the usual price of a good stove. The furnace can be installed in a few hours' time, and without the bother and expense of tearing up floors and walls. Furnace comfort makes a big difference in the farm home. It insures even, healthful circulation of heat, and it is cleaner than stoves, and just as economical and easy to care for. The Kalamazoo furnace is shipped direct from the manufacturers, the Kalamazoo Stove Co., Kalamazoo, Mich., to the consumer. Read their advertisement on page 32 and send for one of the free catalogs. When writing mention that you saw the advertisement in this paper.—Adv.

Last Call for Hendricks' Boar Sale.

THIS is the last chance we will have to call your attention to the great sale of Poland China boars that E. W. Hendricks makes at his farm near Hazel Green, Wis., September 28th. If you will attend this sale you will not be disappointed with the offering. They are well grown, but not fat and there is no reason why they should not do their buyers a great deal of good. The breeding is the very best. If you haven't received your catalog write for one at once and try and attend the sale. If you can't attend send your buying instructions to T. P. Shreve, Wisconsin Farmer representative, in care of Mr. Hendricks and they will be properly handled. See page 31.—Adv.

Special Duroc Attractions.

EMMETT COOK & SON, Richland Center, Wis., have some boar pigs that should head some good herds, for they are bred in the purple and are good individuals. They are sired by Cherry Chief's Wonder (Van Meter), he by Cherry Chief out of Chief's Model by Wonder Model. The dam of the pigs is Dorothy, she by the champion Illustrator, out of a daughter of Dominant Col. As stated above, here is a good litter of pigs and any breeder in the state can use this breeding, and if you want something to make a noise about, get one from this litter. Get busy at once for they will not last long. They also have some good boars by Cook's Defender. Mention this paper when writing. See page 31. —Adv.

A Grand Assortment of Short-horns.

WE know that there are many farmers and small breeders that wish to buy a few Short-horn females, others are going to need a Short-horn bull in the near future and for the benefit of these prospective buyers we wish to call your attention to the cattle of this breed being offered for sale by William Ley, Jonesdale, Wis. Jonesdale is in Iowa county, the first station south of Dodgeville on the Illinois Central railroad. Mr. Ley has more cattle than he can conveniently handle and for that reason he will sell twenty females. The cows and heifers are sired by a grandson of Whitehall Sultan. Several of the cows have calves at foot and are bred again—here is a good investment for someone. The yearlings and calves are sired by a grandson of old Ceremonious Archer, namely, Proud Gift 389315. The families represented in this herd are Village Girl, Duchess of Gloster, Arabella, Favorite, Young Mary and others. Besides the twenty females Mr. Ley has ten bulls for sale nearly all of which are of serviceable age—red and roans. Buyers need not be afraid that they will not find suitable cattle if they call on Mr. Ley. You will have a large number to select from and the prices asked are certainly reasonable. It is to your own interest to investigate. Ten Duroc Jersey boars and gilts of spring farrow are offered at very low figures. Write the owner for particulars, you will get a prompt reply. When writing kindly mention The Wisconsin Farmer. See advertisement on page 30.—Adv.

Freehoff Bros.' Guernseys.

THOSE of our readers who are in the market for some pure-bred Guernsey heifers should write to W. A. & R. E. Freehoff, Waukesha, Wis. Freehoff Bros., are offering four very nice heifers that are nicely bred and of very fine dairy conformation. Two of them are not quite so well grown and will be sold for $160 each. The other two are $200 each. None are bred, but may be bred any time now. Freehoff Bros. are also offering four grade Guernsey heifers of about the same age which are bargains at $55 each. In case of the crates customers will be required to furnish their own crates or return those supplied them. The only reason these eight heifers are for sale is that Freehoff Bros. have about that many head too many for their barn accommodations. They are in no sense cully. See page 30.—Adv.

First Aid for Lame Horses.

EVERY farmer knows the annoyance, and oftentimes loss of time and money, that comes when a good horse is injured or goes lame. Prompt treatment with Absorbine, manufactured by W. F. Young, P. D. F., 101 Temple St., Sprinfield, Mass., will help very much by reducing the swelling and healing bruises and cuts. It is a safe germicide and is easy to apply. Read the advertisement on page 25 and send for free book and special instructions as to treatment. Mention that you saw the advertisement in The Wisconsin Farmer.—Adv.

Jerseys and Fred Stubley.

WHEN you see a Jersey, think of Fred Stubley, Black Earth, Wis., for he sure has the goods. With his good herd of over 100 head of imported and American bred Jerseys it stands to reason that a prospective buyer could certainly find something to his liking among this good lot. Bulls of the best breeding known have been used in this herd and at this time the Stubley herd compares with the best in the country. We have seen many Stubley bulls heading herds over the country and we have yet to meet a man that was not satisfied with his purchase and the treatment given him by Mr. Stubley. We are glad to recommend this herd to all men interested in Jerseys. Write for pictures and further description and in so doing kindly say you saw the advertisement in this publication. See page 30. —Adv.

An Angus Sale November 1st.

LOVERS of the Aberdeen Angus cattle should not overlook November 1st, for on that date there will be a combination sale held at Canton, Minn., the consignors being M. C. Willford, Canton, and Roy Miller, Prosper, Minn. To make a long story short the best cattle from these two good herds will go to make up this sale. One of the attractions of the sale will be a daughter of Earl Eric of Ballindalloch. She has been a champion at several of the better county fairs and is an outstanding individual. She is a Trojan Erica. There will also be two granddaughters of the above bull of the Pride family. The writer has recently seen these two herds and when the tops are picked for this sale it will be one of the best offerings ever listed for a sale in the Northwest. Keep this date in mind and in due time we will give you a detailed description of the sale cattle. It might be well to write one of the above men and have your name placed on their catalog mailing list. Do this while you think about it. Please mention The Wisconsin Farmer.—Adv.

Knudson's Guernseys and Durocs.

IF you are in need of a Guernsey bull you will be pleased with the two-year old being offered by Allic S. Knudson, Brodhead, Wis. His dam has three A. R. records made in succession, first year 363.46 fat, second year 561.22 fat, third year 585.45 fat all made standing in the stanchion with the rest of the herd. A full sister to the bull offered made 415 pounds fat as a two year old. This bull is right in every way, but in view of the fact that Mr. Knudson owned his sire he can not keep this bull to advantage. It will pay you to get the price and particulars about this bull. Mr. Knudson also maintains a herd of registered Duroc Jersey swine and if you are in need of a spring or fall boar of the most fashionable breeding you can find him in this herd. They represent the Illustrator, Chief's Col. and Defender line of breeding and the prices asked are very reasonable. Write him about the Guernseys or Durocs, he can please you with animals from either breed. Mention The Wisconsin Farmer when writing. See advertisement on page 31.—Adv.

Economical Automobile Supplies.

THE farmer wants safety, comfort and economy in his automobile tires and supplies. He can get them from the Firestone dealer. Firestone tires are built for durability, for long, hard service over country roads in all sorts of weather, making them especially practical for the farmer. They are economical, as it is claimed that they can be used for many more miles than ordinary tires. Read the advertisement on page 13 and send to the Firestone Tire and Rubber Co., Akron, Ohio, for one of the cementless tube patches and book, "Mileage Talks." Tell them you saw the advertisement in this paper.—Adv.

Laird's Hampshires.

NOTHING succeeds like success" and when it comes to the Hampshire swine business, A. M. Laird, of Prairie du Chien, Wis., is there. We recently saw a list of the sales made and Laird's Hampshires have been shipped into seven states during the past four months, and the letters that we read from his satisfied customers shows that the Hampshires which he sends out have made good. Mr. Baird sells more stock to Iowa buyers than to buyers from any other state. This no doubt is because Iowa appreciates Hampshires more than some of the other states. Prairie du Chien being located just across the Mississippi river from North McGregor, Iowa, makes it easy for northeastern Iowa men to visit the Laird farm. He has an ideal location for Iowa, Minnesota and Wisconsin buyers. At this time Mr. Laird has for sale spring boars and gilts. These are some that he has held back expecting to take them to the fairs, but he has decided that he will not make the

CHESTER WHITE sow and litter owned by Cook Bros., Burlington, Wis., whose advertisement appears on page 29.

fairs this year, consequently these show pigs are now offered for sale. The boars and gilts are in nice condition, have been well grown and should you order a pair or a trio from Mr. Laird we can assure you that you will be pleased with the Hampshires. Write him for his free booklet, telling about the Hampshires and also let him price you some of his pigs—they'll do. Don't forget to mention this publication when writing. See page 31.—Adv.

Manure Spreaders Increase Yields.

CROP yields can be very greatly increased by the use of a manure spreader in preparing your ground. A great deal of money is wasted every year because of poor handling of manure. This can be avoided by using a good spreader such as the Low Corn King or the Low Cloverleaf, manufactured by the International Harvester Co., Chicago. Read in the advertisement on page 24 how these spreaders save time and labor in handling manure and mean dollars to the farmer in increased crop yields. Write for a catalog and tell the company that you saw the advertisement in The Wisconsin Farmer.—Adv.

To Learn the Auto Business.

THE young man tired of the farm may be interested in machinery and would like to learn the automobile business. If so a splendid opportunity awaits him in the Michigan State Auto School, 1409 Auto Building, No. 11-19 Selden Ave., Detroit, Mich. Detroit, the automobile center, is the ideal place to learn this business and the Michigan auto school is well known to the leading western automobile manufacturers, so that the graduates have an exceptional opportunity to get good positions. Read the advertisement on page 2 and write for information. Be sure to say that you saw the advertisement in The Wisconsin Farmer.—Adv.

An Explosive Without Danger.

MODERN farming methods require the use of an explosive for removing stumps and boulders, tree planting, ditch digging and other common operations. The Atlas Powder Company, Wilmington, Del., have manufactured an explosive, Atlas farm powder, which can be handled out on the farm easily by persons without experience and no risk is involved. Many women farmers use it. Read the advertisement on page 21 and write to the company for information about this safe farm powder. Tell them that you saw the advertisement in this paper.—Adv.

Light Houses For Hogs.

HOGS cannot remain healthy and grow as they should if they do not have suitable quarters. They need sunshine. Chief Sunshine hog house windows, manufactured by Shrauger & Johnson Co., 300 Walnut St., Atlantic Iowa, can be put in your hog house roofs, letting the sun shine in direct on the pen floors. They are sanitary and durable. Read the advertisement on page 25 and write for information and blue prints of up-to-date hog houses Mention that you saw the advertisement in The Wisconsin Farmer.—Adv

Separator On Easy Terms.

A SEPARATOR the durability of which is guaranteed is the New Butterfly Jr. No. 2, made by the Al

WE MAY DO THE SAME FOR YOU.

J. LeROY LARSON, Iola, Wisconsin, proprietor of Fair View Stock Farm and breeder of Poland Chinas, advertised his hogs in The Wisconsin Farmer this summer. This is what he says about results:

> I am very much pleased with the results obtained from my advertisement of Poland Chinas through The Wisconsin Farmer. I will continue my advertisement, as it is a paying investment for me.

Advertisements in The Wisconsin Farmer are paying investments for other breeders and farmers. It is the Wisconsin live stock man's favorite advertising medium.

If you have surplus stock to sell, try an advertisement in The Wisconsin Farmer, the guaranteed weekly circulation of which is 90,000. Wisconsin Farmer field men are at your service.

THE WISCONSIN FARMER, Madison, Wis.

baugh-Dover Co., 2158 Marshall Boulevard, Chicago, Ill. It is light running, skims close and is easy to wash. It is offered on easy installment terms for the benefit of the farmer who prefers not to make the whole payment at once. See the advertisement on page 6 and write for free catalog today. Say that you saw the advertisement in this paper.—Adv.

Karlen's Holstein Dispersion.

ONE of the best Holstein herds in the middle West will be dispersed at public auction. This is the herd of Fred Karlen, Winslow, Ill. Breeders who have followed Superintendent Gardner's reports for the past five years realize what a wonderful producing herd this is. A number of records from thirty to thirty-seven pounds have been made by cows in this herd. The herd consists of 175 head, eleven of which have records above twenty pounds of butter in seven days, more than twenty of these are two and three-year-old heifers. There are four cows with records from 30.87 to 33.19 pounds, three twenty-nine-pounds cows, two twenty-eight-pound cows, three twenty-six-pounds cows, five over twenty-five pounds, five over twenty-four pounds. There will be many animals in the sale with the fifteen nearest dams in advanced registry. These are bred to King Alcartra De Kol Pontiac, the 36.59-pound son of the $50,000 bull, King Segis Pontiac Alcartra. There will be twenty-two daughters of this great young bull in the sale, and he himself will also be sold. Take special notice of their growth, quality and dairy conformation. He and his daughters would make a wonderful addition to any herd. There will also be fifty-eight daughters of King Pieter, that is from a thirty-three-pound dam and has thirty-two A. R. O. daughters, twenty over twenty pounds, seven at two years, eight at three years. Seventeen daughters of King Lyons Nudine, that is by King Lyons from a thirty-pound daughter of the great thirty-three-pound cow, Blanche Lyons De Kol. Thirteen daughters of Master Aaggie Pearl, that has sixteen out of eighteen A. R. O. daughters over twenty pounds, thirteen over twenty-four pounds. Eight daughters of King Lyon's Snowball, whose dam is a thirty-three-pound three year old that won first prize last year's association butter tests. A herd of uniform production, no better anywhere, go where you may. Tuberculin tested by Illinois and Wisconsin state approved veterinarians ready to be shipped anywhere in the United States. All certificates furnished tuberculin test, registry certificates and signed transfer applications will be on the settling desk and can be taken by the purchaser if desired. Among the fifteen young bulls to be sold are several from dams with records from 31.90 to thirty-three pounds butter in seven days. Others from good record heifers, daughters of thirty-pound cows. Send for catalog to the Holstein Sales Co., Elgin, Ill., or F. J. Karlen, Winslow, Ill. See this page.—Adv.

Is Best Hill Climber.

WHEN a Hudson Super-Six Special climbed to the top of Pike's Peak in eighteen minutes and twenty-four seconds, in contest with more than twenty other cars, it achieved the world's best hill-climbing record. Such records have become a habit with the Hudson cars. They are equal to the emergency, whatever it may be. That's why farm folks, who like the best there is, whether its automobiles or live stock, are so fond of the Super-Six. The Super-Six is manufactured by the Hudson Motor Car Co., Detroit, Mich. See the advertisement on page 7 and write the company for more information or see the dealer in your town. When writing, mention that you read the advertisement in this paper.—Adv.

Farm Wagons to Fit Any Need.

GOOD wagons are an essential part of the farm equipment. But for some purposes and some roads a low wheel is best, and for some a high, sometimes a wide and sometimes a narrow tire is best. The Electric Wheel Co., 65 Elm St., Quincy, Ill., manufacture wagons to meet all these different needs. Steel or wood wheels are made to fit any running gear. The farmer may select his wagon to meet his requirements, whatever they may be. A catalog, illustrated in colors, will be sent free on request. Read the advertisement on page 10. When writing for your catalog, say that you saw the advertisement in the Wisconsin Farmer.—Adv.

A Car With Wearing Qualities.

RUGGED strength and stamina is what the Paige-Detroit Motor Car Co., 205 McKinstry Ave., Detroit, Mich., manufacturers of the Paige automobile, have striven for. That they have achieved it is proved by the remarkable endurance tests the car has repeatedly undergone. It is the car with the staying power that the farmer needs, and that is why the Paige appeals to him. Read about the Paige cars in the advertisement on page 11, and write the company for further information. Tell them you read the advertisement in this paper.—Adv.

This Separator Easy to Wash.

THE cream separator should be easy to operate and easy to wash, as well as sanitary. The Sanitary Milwaukee cream separator, made by the Milwaukee Separator Manufacturing Co., 245 Madison St., Milwaukee, Wis., has only one-third the number of disks as the ordinary separator, hence is much easier to care for. It is simple to operate and light, saving work for the busy farm women. See the advertisement on page 17. Then write for catalog telling all about the Sanitary Milwaukee Separator. When writing mention that you saw the advertisement in this paper.—Adv.

Many Investigating Golden Prairie Farms.

MANY farmers of the grain belt states are investigating the farms offered in the Golden Prairie district of Wyoming by the Federal Land Company, Burns, Wyo. Their advertisement will be found on page 15 of this issue. This company has been selling land for a number of years. In the passed decade they have located a large number of farmers in the Golden Prairie district and scores of these farmers have made good and now have good homes and profitable acres. The passed season was dry in the Golden Prairie district the same as it was generally through the grain-belt states, but some good crops of wheat and oats were raised and cattle have fared well on the range through the summer. Many cattle shipped from Wyoming the present year have brought good prices and there are thousands of head ready for the winter markets which will bring good profits to their owners. Those who desire to have further particulars concerning this Golden Prairie farming land should address Federal Land Company, Burns, Wyoming. Please be kind enough to mention this paper in your letter.—Adv.

An Economical Furnace.

A FURNACE that is reasonable in price, easy to install, and heats the farm home comfortably and at the same time saves 35 per cent of the fuel is a combination which should appeal to every farm home owner. He will find this combination in the Caloric pipeless furnace, manufactured by The Monitor Stove and Range Co., Cincinnati, Ohio. The Caloric heats the house with one register, so that it is not necessary to tear up floors to put in pipes. It burns wood, coal or coke. Read about this furnace in the advertisement on page 21 and write for the free furnace book. Mention that you saw the advertisement in this paper.—Adv.

Keeping Hogs Healthy.

HEALTHY hogs are the only profitable kind for the farmer and live stock man. In order to keep them in this condition it is necessary to watch them closely to prevent worms and other disorders. Dr. Hess stock tonic is a blood purifier and if used sensibly will quickly bring hogs into condition. It is manufactured by Dr. Hess & Clark, Ashland, Ohio. It is guaranteed by the manufacturers. Read the advertisement on page 25 and write for information and for any advice you may wish about ailing live stock. When writing be sure to state that you saw the advertisement in this paper.—Adv.

Neat, Serviceable Shoes.

FARM folks want service as well as style in their foot wear, and for that reason they particularly like the Foot-Schulze shoes, manufactured by the Foot, Schulze Co., St. Paul, Minn., and sold by a Foot-Schulze dealer in every town. These shoes are made of extra good material, on good lines that are neat and pretty, but do not sacrifice durability to style. They're just the sort that are needed for serviceable, sensible wear. Read the advertisement on page 23 and hunt up the Foot-Schulze dealer the next time you go to town.—Adv.

A Handy Calculator.

LANDOWNERS will find Ropp's New Calculator, published by the Keystone Steel & Wire Co., 635 Industrial St., Peoria, Ill., who manufacture Square Deal fence, a very valuable help in solving their mathematical problems. The book is given free to all landowners who request it, in order to advertise their superior quality woven wire fence. See the advertisement on page 24 and write for the Calculator. Tell them you read the advertisement in The Wisconsin Farmer.—Adv.

Makes Housework Easier.

THE farm wife will find that a vacuum cleaner will lighten her work more than she ever dreamed. Here's a chance to get one that is guaranteed for five years, free. It is a new model, manufactured by the Warner Co., Muncie, Ind. See the advertisement on page 23 and write to Dept. D of the Warner Co. for information concerning their proposition and information about their vacuum cleaners. Mention that you saw the advertisement in this paper.—Adv.

Offers Overland Free.

HERE'S a chance for enterprising young men with a few weeks' spare time to get an Overland car, 1917 model, free. C. F. Aldrich, St. Paul, Minn., will explain his proposition to you. Read his advertisement on page 23 and write for particulars. Tell him that you saw the advertisement in this paper.—Adv.

Free Book for Trappers.

TRAPPERS can find a lot of valuable information in Hill Bros. Trappers' Guide, published by Hill Bros. Fur Co., 330 N. Main St., St. Louis, Mo. The book is free to trapners who write for it. Send in your requests today. Mention this paper when writing. See advertisement on page 23.—Adv.

Beautiful Flower Bulbs.

FARM women who love flowers will be interested in the offering of bulbs by John Lewis Childs, Inc., Floral Park, N. Y. Their 10 and 25-cent packages of bulbs will start a beautiful garden. Read the advertisement on page 23 and send for a package of bulbs and the free floral catalog. Tell them you read the advertisement in this paper.—Adv.

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DISPERSION SALE

OF THE GREAT BLUE LABEL HERD OF

HOLSTEINS

WINSLOW, ILLINOIS
OCTOBER, 4-5, 1916

One of the greatest herds ever sold at public sale.

FOUR Cows with official records of 30.87 pounds butter, 30.88 pounds butter, 31.93 pounds butter at four years and 33.19 pounds butter at three years old. Three 29-pound cows. Three cows over 28 pounds. Three over 26 pounds. Five 25 pounders. Five others above 24 pounds. Forty-one cows, including two dozen young heifers with official 20-pound or more seven-day butter records. Thirteen daughters of cows that made from 30 pounds to over 37 pounds butter in seven-day official test. Over 100 granddaughters of 30-pound cows.

175 HEAD

175 HEAD

FIFTEEN YOUNG BULLS

including the HERD SIRE, KING ALCARTRA DE KOL PONTIAC, that was by King Segis Pontiac Alcartra and from Lady Tobe De Kol, 36.59 pounds butter in seven days, 141.24 pounds butter in 30 days, WORLD'S RECORDS WHEN MADE. Her dam also made 31.66 pounds butter in a week. A three-year-old bull from a 31.9-pound dam. A six-months bull by the 36-pound sire from a three year old that made 33 pounds butter in seven days, A. R. O. Several young bulls by 33-pound or 36-pound sires from good record heifer daughters of 30-pound and 33-pound cows.

Tuberculin Tested by Wisconsin and Illinois State Approved Veterinarians ready for shipment anywhere in the U. S. A. Tuberculin Test, Registry Certificates and signed Transfer applications will be on the settling desk and YOU CAN HAVE THEM WHEN YOU PAY FOR THE CATTLE YOU BUY.

MANY OF THE ANIMALS WITH ALL FIFTEEN NEAREST DAMS WITH OFFICIAL RECORDS. Such a sale has never been heard of before in the history of the breed. Write today for catalog and mention The Wisconsin Farmer.

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175 HEAD

FRED J. KARLEN, Proprietor
WINSLOW, ILLINOIS

Holstein Sales Co., Catalog Compilers, Elgin, Ill.

Takes Place of Extra Hand.

DIFFICULTIES with hired huskers can be avoided by purchasing a corn husker and shredder such as the Rosenthal corn husker and shredder, manufactured by the Rosenthal Corn Husker Co., Box 15, Milwaukee, Wis. With this machine the farmer can handle his own corn crop in his spare time. The machine is made in two sizes suitable for the average farm, and is sold on trial. See the advertisement on page 25. When you write for the free illustrated catalog, mention that you saw the advertisement in this paper.—Adv.

Buggies of Style and Quality.

FARMERS will be interested in the fine line of new split hickory buggies manufactured by the Ohio Carriage Manufacturing Co., Station 185, Columbus, Ohio. These buggies are popular for their style, comfort and quality. Read the announcement of price reduction in the advertisement on page 8 and write to the company for their handsome new vehicle catalog. Tell them that you read the advertisement in this paper.—Adv.

Wagons and Buggies of Quality.

WAGONS, buggies and harness are still needed on the farm and their selection is a matter deserving of careful consideration. Studebaker vehicles and harness, adapted to every possible farm need, are manufactured by the Studebaker Company and can be seen at the Studebaker dealer's in your town. Studebaker has been making them since 1852. See the advertisement on page 24. Tell the dealer you saw the advertisement in this paper.—Adv.

SALE DATES.

Poland China Swine.

Sept. 28, E. W. Hendricks, Hazel Green, Wis.
Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Oct. 19, Columbia County Asylum, Wyocena, Wis. S. C. Cushman, Supt.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.

HORSES.

REG. Percherons. 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds. Can spare 25 reg. mares, 24 reg. Belgian stallions. Priced worth the money. Fast trains. FRED CHANDLER, R. 7, CHARITON, IOWA.

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

SALE DATES.

Aberdeen Angus Cattle.

Nov. 1, Combination Sale, Roy Miller, Prosper, Minn and M. C. Willford, Canton, Minn. (Sale at Canton, Minn.)

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Jersey Cattle.

Sept. 26, Consignment sale of Fond du Lac county breeders. C. A. Peterson, Rosendale, Secretary.

Short-horn Cattle.

Nov. 1, Anoka Farms, Waukesha, Wis.
Nov. 2, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Percherons.

Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Owatonna Com. Sale, Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 9, F. M. Washburn, Lake Crystal, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 26, George W. Pagel, Zumbrota, Minn.

Holstein-Friesian Cattle.

Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.
Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.
Feb. 22, William Smiley & Son, Albany, Wis.

Machinery Row at the Fair.

Machinery Exhibit at Wisconsin Fair Had About 100 Exhibitors Despite the Fact That Larger Implement Houses Took no Part.

WHILE some of the larger implement and vehicle houses which usually made up the machinery exhibits of fairs in Wisconsin in years past were not in evidence at Milwaukee this year, the show was an interesting one. There were about 100 exhibits and they followed pretty closely the line of machinery and labor-saving devices best calculated to improve conditions in the dairy and home. A majority of the exhibits were of such devices as will aid the dairyman. The milking machine, which is getting much more attention in Wisconsin this year than formerly owing to the improvement in the machines and the scarcity of labor, was represented by a number of the most reliable companies and these exhibits were the center of attention from visiting farmer-dairymen.

One fact which has increased interest in milking machines this year is that labor has been scarce. The writer talked with one man from Sheboygan county who says that the milking machine has been a blessing on his

SCENE ON MACHINERY ROW.

place the past summer. With thirty cows to milk and no labor obtainable he has found it possible to run through with one man and done very little of the work himself. Without the milking machine he says he never could have made it. Labor is not only scarce but high-priced, and there does not seem to be any chance for any immediate relief.

Visitors at the fair grounds demonstrated the fact that they are keenly interested in barn equipment, and the displays in this line were larger and better than ever. The demand for a clean milk means that dairy barns must have equipment which will make proper handling of cows a possibility. The old system of standing in a dirty stall and mussing food out of a manger is obsolete on the best dairy farms in Wisconsin. Dairymen are demanding a system of manure removal which makes a clean barn possible and gives largest opportunity for proper use of manure as a fertilizer on the farm. It has been proved in the cow-testing associations that the cows which are well housed in clean and sanitary surroundings have given the most milk and milk of the best test.

The silo is ever an important factor in farm and dairy and, while the number of silos exhibited was not so large as in former years, the interest taken in them was great. Barn ventilation is a matter which is being studied with much interest by the dairyman-farmer.

It was apparent that the farmer of Wisconsin is interested in farm power. The big tractor show at Madison brought this fact out very prominently. One tractor was exhibited at the state fair. Several gas and oil engine concerns had exhibits.

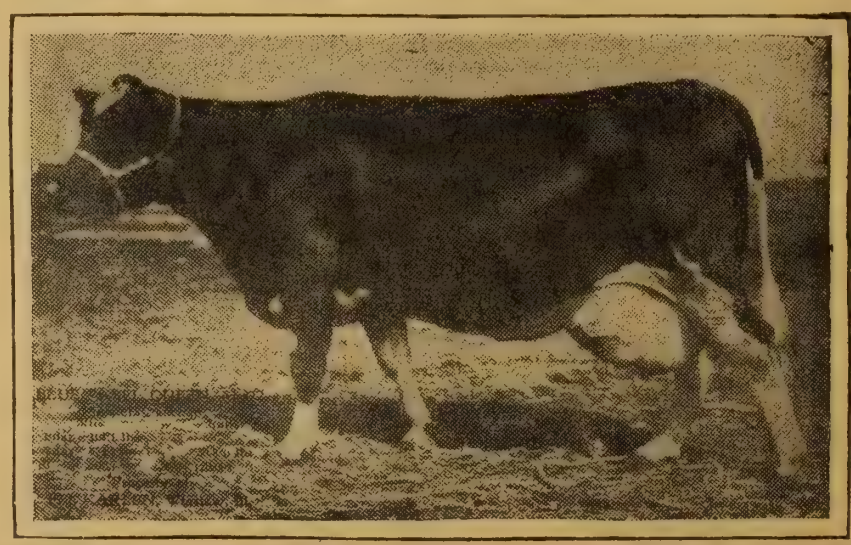
Machinery for making the home more comfortable and for saving the housewife steps are getting a prominent place on machinery row at the fair grounds. Lighting systems, both gas and electric, are studied by the farmers. The writer has known of a number of Wisconsin farmers who have put in electric plants this summer, one man at a total expense of $1,500. It is not necessary, however, to pay more than a fifth to a quarter of this sum to get a modern electric lighting plant; a plant which will also do considerable duty about the home, such as running the washing machine, the vacuum cleaner, the sewing machine and furnishing heat for the irons. Water supply apparatus is being studied by the farmer and the members of his family.

Silo fillers, grain elevators, farm fences and gates, automobile trailers, concrete mixers and a host of other equally important machines for helping the farmer with his work were on exhibition. The complete list of exhibitors was as follows:

Alcazar Range & Heater Co., Milwaukee.
Allis-Chalmers Mfg. Co., Milwaukee.
Apex Gate Co., Racine.
Appleton Mfg. Co., Batavia, Ill.
Austin-Western Road Machinery Co., Milwaukee.
Barrell Concrete Mixer Co., Madison.
W. J. Bentley, Milwaukee.
Brazil Hollow Brick & Tile Co., Brazil, Ind.
P. P. Brueckbauer, Wauwatosa.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Bull Tractor Co., Minneapolis, Minn.
Calf-Way Milker Co., Chicago, Ill.
Clemens & Gingrich Co., Grand Rapids, Mich.
Cyclone Fence Co., Waukegan, Ill.
Dallman & Cooper Sup. Co., Fond du Lac.
Davis Mfg. Co., Milwaukee.
Domestic Engineering Co., Dayton, Ohio.
John Dorsch & Sons, Milwaukee.
Drew Carrier Co., Waterloo.
F. P. Dunn, Milwaukee.
S. T. McCarthy, State Mgr. Field-Brundage Co., Waukesha.
S. Freeman & Sons Mfg. Co., Racine.
John Gallagher Co., Madison.
Gehl Bros. Mfg. Co. and West Bend Equipment Co., West Bend.
Jacob Haish Co., De Kalb, Ill.
Wm. Hardgrove, Madison.
The Heil Co., Milwaukee.
The Hercules Gas. Engine Co., Evansville, Ind.
Hinkston Bros., Milwaukee.
The Maytag Co., Newton, Iowa.
The Melli-Blumberg Co., Inc., New Holstein.
Milwaukee Air Power Pump Co., Milwaukee.
Milwaukee Reliance Boiler Works, Milwaukee.
Milwaukee Steel Post Co., Milwaukee.
Mitchell Mfg. Co., Milwaukee.
Moline Plow Co., Moline, Ill.
National Fire Proofing Co., Chicago, Ill.
New Idea Spreader Co., Coldwater, Ohio.
Milan Northrup, Beloit.
The Official Mfg. Co., Elkhorn.
Pawling & Harnischfeger Co., Milwaukee.
Hirsch Bros., Milwaukee.
Hist Potato Machinery Co., Alliance, Ohio.
Humane Stanchion Works, Baraboo.
James Mfg. Co., Ft. Atkinson.
Johnson & Field Mfg. Co., Racine.
M. A. Johnson Mfg. Co., Chicago, Ill.
John G. Kelley, Waukesha.
King Ventilating Co., Owatonna, Minn.
H. Laacke Co., Milwaukee.
The Lauson-Lawton Co., DePere.
Lindsay Bros., Milwaukee.

EDGEMONT CELOSIA, an excellent Guernsey cow owned by Allie S. Knudson, Brodhead, Wis. She has three yearling A. R. records averaging over 500 pounds fat. A two-year-old bull out of this cow is being offered for sale on page 31.

Pfau Compressed Air Motor Pump Co., Milwaukee.
Reineman Hardware Co., Burlington.
Rosenthal Corn Husker Co., West Allis.
The I. B. Rowell Co., Waukesha.
C. F. Sammond Co., Milwaukee.
Sandwich Mfg. Co., Sandwich, Ill.
Smalley Mfg. Co., Manitowoc.
South Bend Chilled Plow Co., Milwaukee.
The Standard Machinery Co., Schleisingerville.
J. P. Stanton, Waukesha.
Starch Bros., La Crosse.
The Tures Mfg. Co., Milwaukee.
Western Silo Co., Des Moines, Iowa.
Western Utilities Co., Milwaukee.
Wills Mfg. Co., Mendota, Ill.
Wisconsin Highway Commission, Madison.
Wisconsin Stable Equipment Co., Oconomowoc.
Wood Tire Silo Co., Sheboygan Falls.
Worthington Pump & Machinery Corporation, Cudahy.



THIS cow, three daughters and a number of granddaughters to be sold in the Karlan sale. She was the first calf dropped after the herd was started and the first thirty-pound cow developed in the Blue Label herd, the dispersion of which will occur at Winslow, Ill., on October 4th and 5th, as advertised on page 27 of this issue.

Auction of Wisconsin Jerseys

Brandon, Wis., Tuesday, Sept. 26

At the farm of W. S. Dixon & Sons

SIXTY HEAD, prize winners and butter test cows, and the progeny of such, bred from the best island and American families. Consignors will include the well-known herd of E. Bruins, Fairwater, Wisconsin; several from the prize-winning herd of W. S. Dixon & Sons, Brandon, Wisconsin; some from the old established herd of F. W. Page, Princeton, Wisconsin; and a few from the herds of J. H. Dennhardt, Neenah, Wisconsin; Chas. A. Peterson, Rosendale, Wisconsin; and E. J. Ballard, Rosendale, Wisconsin. Col. D. L. Perry, auct. Catalogs sent on request to

John C. Dixon - Brandon, Wis.

RED POLLED CATTLE.

HEADQUARTERS FOR RED POLLS

IF you want cattle bred for beef and milk, buy RED POLLS. We can supply you. Write.
J. W. Salter & Sons — Unity, Wis.

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD — AVOCA, WIS.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin — Gotham, Wis.

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

CHESTER WHITE SWINE.

CHESTER WHITE FALL BOARS

AND spring pigs of both sexes, sired by Elder's B. R., a Wisconsin State Fair winner and from a prize-winning sire and dam. Pigs for sale are well grown and of show quality. Holstein bull for sale sired by King Pontiac Champion 8th, whose dam made 800 pounds of butter in a year. Prices reasonable.
A. H. & E. W. Kuhlman, — Beaver Dam, Wis.

CHESTERS

For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN — BLOOM CITY, WIS.
(Shipping point Viola)

DOERR
Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address
J. A. DOERR — VIROQUA, WIS.

DERENTHAL
CHESTER WHITES

THE champion Chester herd of the Northwest. Offering spring pigs, BOARS and GILTS of outstanding individuality. Bred in the purple. If you want herd headers, write
H. A. DERENTHAL — WYKOFF, MINN.
Meet me at Hamline, Milwaukee or La Crosse.

CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address
L. A. Schultz — R. 1, Poynette, Wis.

CHESTER WHITES

CHOICE spring pigs of March and April farrow for sale. Big bone, well bred and growthy. Correspondence solicited. Write
Art. G. Hoskins — Dodgeville, Wisconsin
(Also breeder of Milk Strain Short-horns)

CHESTER WHITE spring boars sired by Eagle Chief and Highland John. Big, growthy boars with strong backs, wide, deep hams and heavy bone. I have been five years mating good sires and dams to produce this kind. Send for pedigrees and prices. Address W. C. Scheibe, Burlington, Wisconsin.

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller — West Salem, Wis.

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. J. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.
Wm. F. Belda — De Forest, Wisconsin

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. Wm. C. Kirst, Tomah, Wisconsin

TOO LATE TO CLASSIFY.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.
EARL NORWOOD, GAYS MILLS, WIS.

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.
HOMESTEAD COMPANY
Engraving Dept. — Des Moines, Iowa

HOLSTEIN-FRIESIAN CATTLE.

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. 8 yearling heifers will be bred if desired. Sired by the **31.17 pound bull, Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pound daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.

Lawrence Rober - Lyons, Wisconsin

28.71 POUND HOLSTEIN BULL

CALUMET JOHANNA ABBERKERK CHAMPION 105829, whose dam, Dianah Johanna Abberkerk, made 28.71 pounds of butter from 623.70 pounds of milk in seven days. In 300 days gave 16,177.90 pounds milk; 677.45 pounds butter. His sire is Oakhurst Milk and Butter King, a son of the $10,000 bull, Milk and Butter King. Send for pedigree. Price low for quick sale. Address

A. G. PINGEL - CHILTON, WISCONSIN

A 4 Per Cent Butter Man Holstein Bull

WE OFFER BULL, ¾ white, good individual, born March 30, 1915, for sale. Sire, Downing Pontiac Butter Man, three times a state fair champion. Dam a blue ribbon winner and a 21.37 pound junior three-year-old daughter of King Hengerveld Pondyke, 25 A. R. O. daughters, 2 above 30 pounds. Several other nicely marked bulls, 8 to 10 months old, with A. R. O. dams up to 25.67 pounds butter in 7 days. Address

M. W. Downing & Bro. Waukesha, Wis.

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.

GROVE BROS. COLUMBUS, WIS.

THREE REGISTERED HOLSTEIN BULLS FOR SALE

READY for service, sired by Johanna Spoffard Corona 71305. Also bull calves for sale sired by Butter Boy Mink Pontiac 133161 from A. R. O. dams. Chester White swine, both sexes, leading blood lines, for sale. Address

COOK BROS. BURLINGTON, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt Oxford, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

E. F. Winckler & Sons Medina, Wis.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the **year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson - Elkhorn, Wisconsin

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen Cedarburg, Wisconsin

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

Breeders Wanting 30-lb. Herd Sires

We Invite Your Attention to

Three Young Bulls

No. 151, calved March, 1916. Sire, Korndyke Segis Johanna 127132, a 38-lb. son of the 40-lb. bull, Johanna McKinley Segis by King Segis, and whose dam, Pontiac Lady Korndyke (A. R. O. record 38.03) is the highest record daughter of Pontiac Korndyke. Dam, Pabst Blackberry, a 31.68-lb. three year old by a 29-lb. grandson of Hengerveld De Kol. Second dam, a 23-lb. three-year-old by King Pontiac Champion, a 31-lb. son of King of the Pontiacs. Third dam, a 33.86-lb. daughter of De Kol 2d's Butter Boy 3d.

No. 156, calved April, 1916. Sire, King Pontiac Champion, has 41 A. R. O. daughters. The only one tested as a mature animal made over 1,000 lbs. butter in a year. Dam a 31.51-lb. daughter of Sir Hengerveld Model Johanna, that has twenty A. R. O. daughters, two above 30 pounds. Good A. R. O. breeding for several generations.

No. 152, calved April, 1916. Sire, King Pontiac Champion. A 30.38-lb. daughter of Hengerveld Model Johanna, a son of Hengerveld De Kol. Dam's dam, A. & G. De Freule De Kol 2d, a 29.68-lb. cow.

Several young bulls by the above sires, all out of A. R. O. cows, ranging in price from $100 up, depending on breeding and age. Be sure to address

PABST STOCK FARM, R. 30, OCONOMOWOC, WIS.

KING PONTIAC PORTIA and Richland Sir Ormsby Korndyke

(Out of Aaggie Texal Wayne 2d 1,078 pounds)

ARE the sires of the HEIFERS we are offering for sale. All from A. R. O. dams up to 27 pounds. One heifer, half sister to a 36 pound cow. A limited number will be sold. Write for pedigrees and records. Address

C. C. FRIES & SON RICHLAND CENTER, WIS.

2 Yearling Sons of the Richly-Bred Holstein Bull KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Roberta Fearless Johanna, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

THE 30.90-LB. SHOW BULL NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.

FRED ALBRECHT WATERTOWN, WISCONSIN

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST WEST ALLIS, WISCONSIN

10 Registered Holstein Heifers

14 TO 18 months old, well marked, of good, straight conformation, and ideal dairy type. They are mostly daughters of the richly bred Holstein bull, FOBES WATSON DE KOL 85682, a son of FOBES TRITOMIA MUTUAL DE KOL 2D, and out of untested daughters of ALCARTRA JOHANNA RUE DE KOL 47853, a maternal brother of ALCARTRA POLKADOT. Here is a rare combination of breeding. Will sell in one lot or singly. Prices $125 to $150. Act quickly. Address

MRS. OTTO VOLKMAN JUNEAU, WISCONSIN

450 HOLSTEINS AND GUERNSEYS COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.

EDGEWATER STOCK FARM FORT ATKINSON, WISCONSIN

10 REGISTERED HOLSTEIN COWS FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.

L. V. Garvens Brookfield, Wisconsin

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons Elgin, Illinois

Holsteins For Sale

REGISTERED Holstein heifer calves $75 each, high grades $18. If you want a good bull or some springers write us.

Findlay Bros. Whitewater, Wis.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer Kaukauna, Wisconsin

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford Kaukauna, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

Purebred Registered

HOLSTEIN CATTLE

The wonderful vitality which is characteristic of the purebred Holstein-Friesian breed is strikingly shown in the career of Jetske Roe's Aaggie's Artis, owned by F. M. Nichols of Lyndonville, Vt. She is nearly twenty years old and in April was carrying her sixteenth calf. For fifteen gestation periods she totaled 232,500 pounds of milk which, at 4 cents a quart, would be $4,620, at a cost for feed for fifteen years amounting to $1,980. She thus shows a profit of $2,640, in addition to which must be reckoned $6,000 worth of fine healthy calves. She has won many ribbons and prizes at fairs and has seven daughters with A. R. O. records. There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

19.8-POUND YEARLING SON

Of the Richly Bred Ormsby Bull

BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull, **Beauty Pieterje Prince,** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.

Dopp Brothers - Ixonia, Wisconsin

Yearling Son

READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers - Waukesha, Wis.

A 25.73-LB. HOLSTEIN BULL

BORN Dec. 27, 1915, well marked; **dam Flora Hesseltje,** A.R.O. record 25.73; dam's dam Aaggie Hesseltje DeKol, A. R. O. record 25.23; sire, **Canary Homestead Frisby,** a son of the 35-lb. bull, **Canary Paul Fobes Homestead** and out of a daughter of **Homestead Jr. DeKol,** for sale. This breeding ought to interest you. Send for a full pedigree.

Earl A. Paddock - Elkhorn, Wisconsin

27-76-lb. Yearling HOLSTEIN BULL

BORN February 17, 1915; a show bull from a show type sire and dam; sire **Canary Homestead Oak DeKol,** the richly bred 29.55 lb. bull of Dr. Faville's; dam **Friend Lucile Bawn,** A.R.O. record 27.76, average per cent of fat 4.04. Send for extended pedigree and price.

Clovis Stock Farm - Menasha, Wis.

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE MONROE, WISCONSIN

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN BULLS AND HEIFERS

10 HIGH-GRADE Holstein heifers 2 yrs. old, bred to registered sire to freshen this fall and early winter. 3 registered bulls, one 22 months, evenly marked, a dandy; two 10 months, 3-4 white. Send for pedigree and price to S. Berry, Kilbourn, Wisconsin.

AYRSHIRE CATTLE.

BEST all 'round Dairy Cow—hardy, prolific, PROFITABLE. Big producer of STANDARD milk, which passes all requirements everywhere. Our Association really co-operates with members in the sale of AYRSHIRE products—actually helps them make

PROFITS FROM AYRSHIRES

It will pay you to investigate. Address

AYRSHIRE BREEDERS' ASSOCIATION
C. M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

AYRSHIRE BULLS

FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

ADVANCE REGISTER AYRSHIRE

BULL ready for service. Dam, Fannie Dahlia, A. R. record 596.25 pounds butter, 12,057 pounds milk. Sire, the 529 pound bull, Netherton of Sand Hill. Price reasonable. Send for pedigree. Herman Ihde, Neenah, Wisconsin.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** 7/8 white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

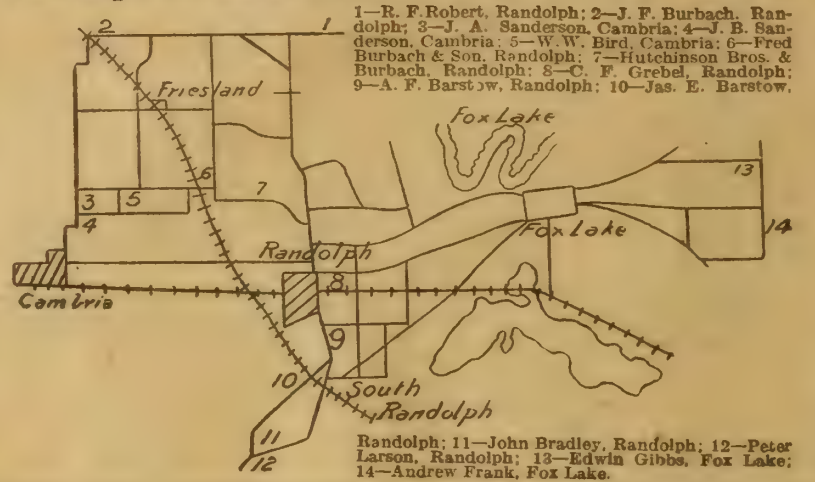
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
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HEADS our herd. His dam made 33.08 lbs. as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
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Cattle of choice breeding.
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SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
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FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
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BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
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Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

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REGISTERED JERSEY

COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
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REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
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JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Yearling Jersey Heifers

AND bulls of serviceable age sired by Hutzeland King, a grandson of King of St. Lambert's King. **Big-Type Poland China** spring pigs of both sexes for sale. Prices reasonable.
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READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
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RIVERDALE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
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HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
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MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
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YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

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OAK LAWN FARM

Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son, Beaver Dam, Wisconsin

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Milking Short-horns

SEVEN bulls ready to go, sired by Quenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
Marquart Bros. Milton Junction, Wis.

10 BULLS 20 FEMALES

Short-horns

OFFER 20 **cows** and **heifers,** red and roan, bred for milk and beef. Ten **bulls.** Also ten spring Duroc Jersey boars and sows. Priced reasonable. Write to
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2 YEARLING bulls ready for service from 2 heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
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SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
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President, Wisconsin Short-horn Association

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

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Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetillus Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address
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Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address
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Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.
Geo. Lucia - Green Bay, Wisconsin

Guernsey Bull For Sale

THE richest Guernsey breeding. Born March 8, 1916. Sired by the richly-bred bull,

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant View. Also a deep, rich breeding of the Governor of the Chene line. Address
Charles Schmidt Wrightstown, Wisconsin

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL

EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
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PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
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SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

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Angus Herd for Sale

COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. Cassville, Wisconsin
(30 miles up river from Dubuque)

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KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
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30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. O. S. Hechtner, Chariton, Iowa.

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DANE has the heavy shearing strain of blocky ram lambs at farmers' prices. Place your order early before stock is picked over. Address
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FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock flock headers. Address
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Have YOU Engaged

AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

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Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.
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Grand Champion Duroc Boar at Janesville Big Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
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COL.'S CHOICE --- WONDER CHIEF

By King the Col. By Cherry Chief

DUROCS THAT MADE GOOD

YOU have all heard about KING THE COL. and CHERRY CHIEF—your herd is not complete without some of that breeding. My brood sows are large. Let me ship you a spring boar. Guaranteed? Yes. Mention The Wisconsin Farmer and address
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950-POUND COOK'S DEFENDER

OUL Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer.
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AT MINNESOTA, WISCONSIN, LA CROSSE and OMAHA. See my BIG SOWS of MARION WONDER breeding. Let me show you some young stuff by the CHAMPION LEE'S DEFENDER. Will have the best DUROC herd I ever showed. Visit my pens and see some of the boars I sell in my BOAR SALE, OCTOBER 18TH. I want to meet you; let's get acquainted.
L. F. ATWATER, BANGOR, WISCONSIN **"HOME OF BIG DUROCS"**

1,000-POUND

BIG COL.

THE HALF-TON BOAR

Chief Defender, litter brother to Disturber. No breeder has two better Duroc boars. On October 19th I will sell 40 boars by the above sires. Send a card with your address so I can mail you my catalog. It's worth having.

SEE BIG COL. AT LA CROSSE FAIR

GEO. H. WILLSIE
Prosper, Minn.

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KING DEFENDER, 940 pound grand champion at Janesville. Offering fall boars by King the Col. and Chief's Col. Fisher. 50 spring boars, the best I ever owned. Write your wants. See King Defender at Milwaukee.
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Hasn't affected the prices on

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MY spring boars are sired by Professor C and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.
M. STOEHR - **VIROQUA, WIS.**

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DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

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SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write
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OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
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READY to fill your orders for spring boars. Order now and save express. Address
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SPRING boars by five **Noted Boars.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** a son of the many times **Champion Grand Model,** heads our herd. We sell "boars that please." Write

Geo. D. Sprain & Sons
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DUROC HERD

My herd will be on exhibition at the
WISCONSIN STATE FAIR
and the leading county fairs. See **LINCOLN MODEL** and his get. Also the big boars by **S. & H.'s COL.,** the largest boar of his age in the state. Will have some good boars and gilts for sale.
SEE MY DUROCS BEFORE YOU BUY
ALBERT L. HYZER
WEST SALEM **WISCONSIN**

WE SHIP on APPROVAL

Duroc Jersey

BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

BOARS

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IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
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HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
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SPRING and fall Duroc boars and gilts for sale by above boar. Also spring pigs by Royal King 4th and Lee's Defender. Order early, the best will go first. Address
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BOARS and gilts of the best breeding known, and we guarantee them individually. Single, pairs or trios. E. H. Parker & Son, Janesville, Wis.

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BIG POLANDS

WAIT FOR SEPTEMBER 28TH

THE DAY I SELL 40 BIG

POLAND CHINA BOARS AND GILTS

MOST of them by BLACK JUMBO 221231, the biggest and best breeding boar in Wisconsin. The best lot of boars ever offered in the state. Let me send you a catalog. I want your name and address. Mention The Wisconsin Farmer. Address
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SEE **MAC'S CHIEF** (1,050 lbs.) Also sows that weigh 700 and 800 lbs. I will convince you that we can raise BIG POLANDS that have WORLDS OF QUALITY. Will have a fine assortment of SPRING BOARS FOR SALE. Will show at Iowa, Minnesota, Wisconsin, La Crosse and Omaha. Let's get acquainted.
J. D. McDONALD, NORTH BEND, WIS.

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs.; sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.
M. MADSON & SONS **MADISON, WISCONSIN**

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Will Sell 40 BIG-TYPE POLAND CHINAS Thursday, October 19, 1916

BOARS and gilts from Columbia Pete, the biggest boned hog in the country. Others from Columbia Wonder, Columbia Orange, Smiley's Big Jumbo and E. W. Hendricks' Black Jumbo. Nothing better ever offered in the state. For catalog write to SUPT. S. C. CUSHMAN, Wyocena, Wisconsin.

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BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address
WM. SMILEY & SON, ALBANY, WIS.
GILTS RESERVED FOR SALE, FEBRUARY 22

POPULAR PROLIFIC

POLANDS

me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write
Olaf C. Olson, Strum, Buffalo County, Wis.

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POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most pre-eminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address
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BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.
Chas. S. Maltby, **Janesville, Wisconsin**

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BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.
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TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address
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FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

DUROC JERSEY SWINE.

DUROCS THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES **AUGUSTA, WISCONSIN**

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25 HEAVY-BONED fall and spring boars, Illustrator, Chief's Col., Defender and Crimson Wonder breeding. April pigs weigh over 150 pounds. Two-year-old bull for sale whose dam has three A. R. records averaging over 500 lbs. fat. His full sister made 415 pounds fat as a two year old. Have had 6 calves sired by him and 5 were nicely marked heifers. Reason for selling, owned his sire. Several fine bull calves.
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Heads My POLANDS

AMONG the best in the state. Few fall boars by him for sale of big-type breeding. Fifty spring pigs will be offered later. Satisfaction or not pay. Write
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BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
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SEE THE SPOTTED POLAND EXHIBIT

at Omaha National Swine Show, and State Fairs in Missouri, Illinois, Indiana, Michigan, Ohio

ASK for by-laws, list of members' names, and list of 1916 sales. Association Sale, Crawfordville, Indiana, October 19th. The National Spotted Poland China Record Association, Chas. E. Kurtz, Pres., North Salem, Ind.; Fred L. Obenchain, Sec.-Treas., Bainbridge, Ind.

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AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.
A. Menke & Sons, R. 1, Markesan, Wisconsin

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100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.
Phone 53 **F. E. Purdy, Orfordville, Wis.**

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SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN, - Fox Lake, Wisconsin.

BIG-TYPE POLAND CHINA July and August pigs sired by L.'s Big Orange and Fairview Jumbo for sale. Prices from $10 and up. Satisfaction guaranteed. J. Le Roy Larson, Iola, Wis.

HAMPSHIRE SWINE.

HAMPSHIRE

SPRING pigs of both sexes and fall boars for sale.
DANE STOCK FARM
Oshkosh **Wisconsin**

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.
A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE **LOMIRA, WISCONSIN**

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Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economica pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
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200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

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WRITE TODAY—Get the Wholesale Price on This Kalamazoo Pipeless One Register Furnace

HERE'S the answer to your heating problem. No longer need you shiver on one side or roast on the other. Here's the warm air—good, healthful circulation to every room—and it costs no more than you would pay at retail for a good stove.

Easy to install—one man should do it in a couple of hours' time. Economical of fuel—takes no more than you would burn in stoves to heat the same house. And low in price because of the big output of the Kalamazoo factory and because you deal direct with manufacturers and get the wholesale price. Write us at once—and let us tell you how little it costs to get this big comfort-creating furnace delivered complete, freight prepaid to your station.

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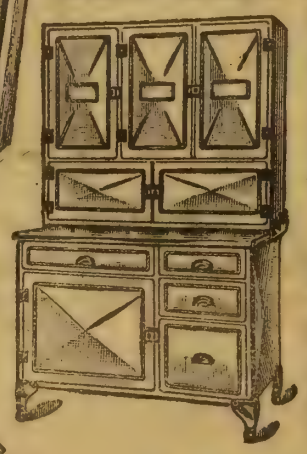

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Questions and Answers.

Pumping Water.

Please give me some information as to pumping water. I want to place my pump at my house, and draw the water a distance of 1,100 feet. I want to draw the water out of the bottom of a river. It is only about a ten-foot rise from the river to the place where I want to place my windmill, or engine. Then I want to build a tank about twenty feet high, and pump the water direct into the tank. I intend to put a sand point in the river, as the bottom of the river is quicksand. What is the right size pipe to use?

Answer.—Use inch and a quarter galvanized pipe. Your outfit would work all right if you can keep the suction line absolutely air tight. This would be rather hard to do if the line is 1,100 feet long. You should use the style pump known as a force pump. Place the pump cylinder as low as convenient.

It would be well for you to try a drive well near your engine before going to the expense of piping to the river. If your land is underlaid by sand you probably could place the point on the pipe and drive it down to water, using a cap on the end of the pipe to protect the threads. If the river has considerable fall you might use a hydraulic ram to raise the water.

A Homemade Forge.

I would like to know how to make a forge of material picked up about the farm.

Answer.—Figure 1 shows a side view of the forge and Figure 2 shows the top view of the blower. The blower, or bellows, is made of wood and leather, with a tin nozzle, N. The top plate is wood with a leather hinge at H. The lower plate is also wood, with a valve at V. The valve is made from a soft piece of leather with a

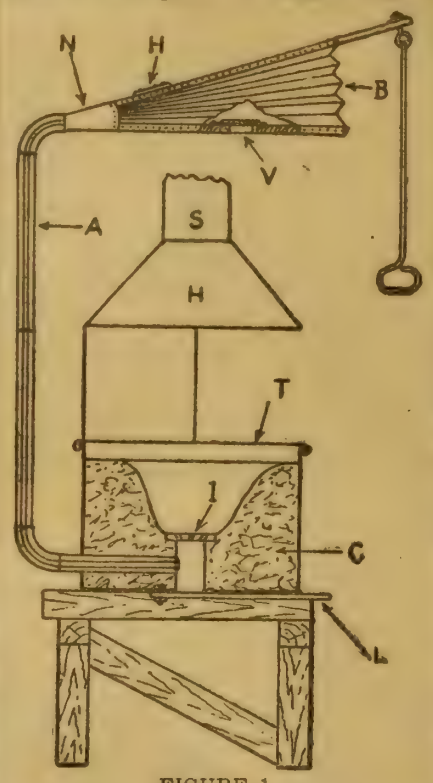


FIGURE 1.

wood block somewhat larger than the hole on top of the leather. A is ordinary eve trough piping. The joints should be soldered to make them air tight. An old wash tub will be all

FIGURE 2.

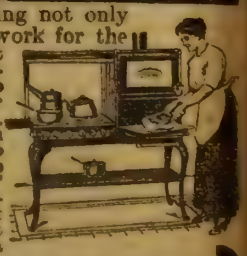
right for the body of the forge. A hole about four inches in diameter should be cut in the bottom. This hole is opened to clean out the forge. C is the lining of the forge. Ordinary yellow clay makes a fair lining. Fire clay is more durable. The forge may be mounted on a wooden frame. S is the smoke pipe and H the hood, which should extend down to the forge at the back.

Motor Heats.

I have a Moon six-passenger car. It ran all right for one year. The radiator does not get hot, but the engine gets so hot after running a few miles that it sticks and the water boils. The engine has become so hot that it has scorched the paint off the engine hood. Local garagemen are unable to locate the trouble. I am hoping that you can give me some information regarding the same.

Answer.—Trouble of this kind is generally due to carbon accumulations in the cylinders. As you have had your car to a garage the carbon has probably been removed. The fact that your radiator does not become hot indicates that some of the water passages are stopped up. It would be well to remove the radiator and remove as much of the scale as possible. It may be that the water jacket of the cylinders are "limed up." Other causes of a motor heating are: Running with the spark too much retarded, too rich a mixture and tight bearings.

Cook With Gas



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The Wisconsin Farmer

THURSDAY, SEPTEMBER 28, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

LOCATING THE LAND BANKS.

IN MY two former articles dealing with the new rural credit system, I endeavored to make plain how the federal farm mortgages never come due at any one specified time, but are paid off in installments over a period of years, and how farmers should set about to organize local associations in order to borrow money under the new system. There remains little more to be said, except as I am kept busy answering personal letters from my readers who want additional information on some point or other.

We are all of us interested, however, in the location of the twelve federal land banks provided for by the act. The farm-loan board passed through the grain belt a few weeks ago, en route west, and last week returned through our section, holding a public hearing at Topeka and another at Omaha. They are due back in Washington in a fortnight or so, and will then deliberate over the great mass of boosting facts given them by the various cities where meetings were held. I am advised that it will be several weeks before any official announcement is made of the location of the twelve banks, and the first of the year, at least, before they are ready for business. In the meantime, it might be interesting to conjecture just where the banks, which we of the grain belt will patronize, will be located.

I am firmly of the opinion that at least three of the twelve banks should be located here in the ten states of the grain belt. We should have four, but we must have three. The grain belt should be divided into districts which conform in the matter of production, interest rate, farm needs and farm conditions generally. Thus, we should not make a district so large and so varied that it includes cotton states with corn states, or cover a territory wherein part of the farmers, because of their prosperity, get their loans today for 5 or 5½ per cent and others, because of their shiftlessness and poor production generally, are obliged to pay 8, and even 10, per cent. If the banks are to reach the highest point of usefulness, they must cater to local associations formed of farmers whose interests, tastes and work are in common. This is a very important point, in my opinion.

If the task of dividing the grain belt into land bank districts were left to me, and I could have the placing of only three banks, I think I would make some such division as this: I would place Wisconsin, Minnesota, North Dakota and South Dakota in one district and locate the land bank at Madison. I would place Iowa, Illinois and Nebraska in another district and locate the bank either at Des Moines or Omaha. I would place Missouri, Kansas and Oklahoma in another district and locate the bank at Kansas City, Kansas. If I could have four banks in the grain belt altogether, instead of three, I would put Wisconsin and Illinois together, locating the bank at Madison; Minnesota, North Dakota and South Dakota together, locating the bank at St. Paul; Iowa and Nebraska together, locating the bank either at Des Moines or Omaha; and Missouri, Kansas and Oklahoma together, locating the bank at Kansas City, Kansas. I believe the farmers of the grain belt generally will approve either one of these divisions; we must have three of the land banks—we hope to have four. And why should we not have four, seeing that in the ten states which comprise the grain belt are to be found 50 per cent of the improved acreage of the entire United States, nearly 40 per cent of the cattle, nearly 50 per cent of the horses, nearly 50 per cent of the hogs and over 50 per cent of all the corn, wheat, oats and other field crops which, in 1915, plus the value of live stock sold and slaughtered, reached the immense and record-breaking total of $10,500,000,000? In view of such supremacy, we are entitled to every consideration at the hands of the federal land board.

While it may be argued—and with some reason—that the new rural credit system is not needed here in the grain belt as much as elsewhere—the south and the far west, for instance—there is no doubt in my mind that our farmers are going to patronize the new federal land banks quite extensively, particularly if they are able to get money at a lower rate of interest and without paying the commissions or bonuses now so generally demanded. Here, for example, is a letter in line with the scores which are coming to my desk these days. It is from a Wisconsin farmer:

> I have a place of twenty acres, which I think is too small for farming and keeping stock. There are forty acres which join me, which can be bought for $1,000, that I would like to buy and if I can get the money through this new farm loan law I will do so, as it would make me a farm of sixty acres; then I could keep stock and farm generally. Please let me know more about this, how and when I can borrow the money, and so on.

The law covers this case, as it plainly states that loans shall be made to those who are "the owners, or about to become the owners, of farm land qualified as security for a mortgage loan." This enables farmers to buy land in addition to that they already own and will assist this Wisconsin farmer, for instance, to get the farm which he really needs if he is to forge ahead in the world as he should.

MEN WHO ARE MAKING AMERICA.

ONE OF THE best of our national weeklies is publishing a series of articles on "Men Who Are Making America." It includes the fifty most prominent business and professional men of the country, men who are doing such big things in such a notable way as to set them apart from the crowd. Now, the thing that impresses me most of all in this series, so far as it has progressed, is the fact that four out of the first five men written up are products of the farm.

I want to pass on to you some of the facts which I learned from these articles, for they prove most convincingly that the farm is furnishing the really great men of America today. The first man to be written up in the series is Judge Elbert H. Gary, who occupies what is said to be "the biggest job in America," next to the presidency of the United States: the head of the United States Steel Corporation, greater in income, resources and property area than the average European nation. The income of this immense concern promises to reach $900,000,000 this year, almost equal to the revenue of the United States government or the Kingdom of Great Britain. It has an industrial army of 275,000 men, or more than the American army and navy combined, more than the entire regular and volunteer force engaged in the Spanish-American war. Yet the absolute head and front of this immense corporation was born on his father's farm here in the grain belt and began his career by teaching a country school.

But we must not stop here. What of the next man in the series? It is Theodore N. Vail, who has developed the telephone toy of forty years ago into a billion-dollar corporation, the president of the American Telegraph and Telephone Company, who was born in the country and spent his early manhood on farms here in the grain belt. Thanks to his genius the farmers of America today have more telephones in their farm homes than are to be found throughout all of England, France or Germany—cities, towns and country combined. Mr. Vail has put all Americans—north, south, east and west—on speaking terms and he is a product of the grain-belt farm.

The third man in the series is Minor C. Keith, who could have had a crown for the asking, "the uncrowned king of the tropics, the Cecil Rhodes of Central America, a demi-god in the eyes of half a dozen republics." He is president of the United Fruit Co., the biggest farmer and almost the biggest grocer on earth, owning upwards of 1,100,000 acres (equal to half the state of Delaware) with over 250,000 acres in actual cultivation, its live stock including 20,000 cattle and 6,000 horses and mules. I learn that Mr. Keith started his wonderful career as a live stock farmer. Let me quote from his biography:

> Before old enough to vote he was raising cattle and hogs on a bleak, uninhabited island called Padre Island (as long as Long Island) near the mouth of the Rio Grande. He had looked over the country after the civil war and decided to settle on this forsaken territory. Only one other family lived on the island.
>
> Here young Keith trained for the battle of life, under rough, nerve-trying circumstances, with two revolvers never unhitched from his belt and with cattle thieves and other care-free gentlemen all about him when he crossed to Texas and the Mexican border to buy cattle. He rose at four every morning, roughed it for sixteen hours daily, often slept outside—and prospered.
>
> He reared and bought cattle all over the surrounding territory to kill for their hides and tallow. The beef, not worth anything in Texas in those days, was fed to swine! He amassed a herd of 4,000 stock cattle and 2,000 pigs. Stock cattle were then worth $2.50 to $3.00 and steers brought $1.00 for each year of their age.

The fifth man in the series—and the fourth to be born on a farm—is Frank A. Vanderlip, president of the National City Bank of New York, where more financial business is transacted, it is said, than under any other roof in the world. The start of Mr. Vanderlip's career is so interesting I am going to quote somewhat at length from his biography:

> Of pioneer stock, he was born on a large farm not far from Aurora, Ill., fifty-two years ago. His father died when Frank, the eldest of three children, was only twelve. Duties and responsibilities early became his lot, for the farm yielded but a scanty livelihood. He had an intense thirst for knowledge and read every one of the few books he could lay his hands on. These included a complete edition of Shakespeare, the Arabian Nights and a few old-fashioned magazines.
>
> Since incidents illumine careers, it was significant how he spent the first money he earned.
>
> For faithfully acting as nursemaid to thirty-seven calves during a whole summer he was allowed to choose one of them, and he sold it for $12.00. In a near-by hamlet hung a poster announcing that $10.00 would bring the New York Weekly Tribune for five years and, as a premium, a "Webster's Unabridged Dictionary." The $10.00 bill was promptly dispatched, and for five years the country lad devoured every line appearing in the Tribune.
>
> At school he was a leader in mathematics, but a duffer at spelling. When he was sixteen the farm, heavily mortgaged, was sold and the family moved to Aurora. On Frank the duty of supporting the household mainly devolved, for the life insurance of his father was not touched by his prudent mother, not even to send him to college.
>
> He took a job in a machine shop, and for running a lathe ten hours he received seventy-five cents a day. "I took this job, not because it was the kind of work I wanted, but because it was the only job I could get," he has since said.

I do not know what other men are to be included in this series, but those already written up show that it is the farm, rather than the city, which is dominating the business and professional world today; that Champ Clark was right when he said recently: "Most of the prominent men in our history have come from the farm." We may not all be uncrowned kings of tropical countries, or heads of billion-dollar corporations, but we are engaged in the work which widens thought, cultivates character, creates initiative and brings greater results than any other work. Is there not consolation and comfort in that for us all?

A CHEERY EXAMPLE.

I HAVE frequently spoken, in these columns, of the pleasure I derive from the hundreds of letters which come to me, every week, from my readers. They are constantly giving me inspiration and encouragement and make many an otherwise hard day bright and easy. Here, for example, is a letter from my very good friend, Mr. J. H. Tedford, editor of the Mt. Ayr (Iowa) Record-News, a patriarch whom to know is an honor, indeed. Among all the letters received by me after telling of the unsuccessful quest of an eastern man for the genuine, old, yellow-corn hominy of former years (and I received hundreds of letters on this subject) none was more interesting than the one from Mr. Tedford, accompanied by a note in the course of which he said:

> When preaching I drew a large share of my illustrations from agricultural life. I caught the idea from Henry Ward Beecher. Sitting now in the pew I wish the habit was more common. The Bible is full of it. To be an editorial preacher, a good one, is now my ideal of the highest usefulness. It has been my habit when I see a very fine editorial or any interesting matter in a paper to write the editor a letter of encouragement. I am a firm believer in saying the good things of others as we pass along in life and not wait for the funeral exercises and obituary. So this is why I wrote you on the "hominy problem," one of the most interesting now on the stage of life. I am hopeful and even anxious that there will be a "renaissance" of the hominy habit. I wish good speed to all such "reformers."

Mr. Tedford has the right theory of life, indeed; to scatter sunshine while he may; to say the encouraging word while ears may yet hear it; and to smile while eyes may still see it. If we could all preserve our cheerful optimism as long as Mr. Tedford has (he is now past eighty years old) it would be a bright and happy world, to be sure. Let me urge upon all my readers that they give the closest attention to what Mr. Tedford has to say; there is a moral in it which even the most obtuse should plainly see. After all, age is not so much a matter of years as it is a matter of principles and habits. At a time when all too many men are simply doddering around the house, awaiting the end, Mr. Tedford is still in the journalistic harness and encouraging us young folks (I am almost fifteen years his junior, you see) to do still better work. He sets us all a splendid example.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Wisconsin's Best Farm Paper.

THIS has been a busy summer for the editors of The Wisconsin Farmer. It has been a case of traveling most of the time, the policy of The Wisconsin Farmer being to mingle with the various agricultural and live stock men of the state in the several sections which they represent. An editor may start out with a very good fund of information, but unless he will take the time to get out among the farmers and breeders of the state, it is not possible to keep pace with the development of a great state like Wisconsin. Some member of the staff of The Wisconsin Farmer may be found present at all of the important meetings of farmers and breeders of this state, and the policy of The Wisconsin Farmer is to devote enough space to important matters so that they may be fully told and not merely skimmed over.

The reports of the potato show at Marinette last fall, of the Farmers' Week programs at Madison in February, of the first land-clearing demonstrations, of the big summer meetings of breeders, of the first Wisconsin tractor show, of the Wisconsin live stock shows at Iowa and Minnesota fairs, and lastly of the great 1916 Wisconsin State Fair, all demonstrate the superiority of The Wisconsin Farmer. This paper has trained men for the various lines of work which are of greatest interest to Wisconsin farmers. This paper has a photographer whose work on out-of-door pictures of stock and farm scenes is not excelled in the country. The Wisconsin Farmer's printing plant and facilities for engravings and color work cannot be duplicated by any other Wisconsin farm paper. These facts all serve to assist our editors in presenting each week what we confidently believe the farmers of the state look upon as their favorite farm paper.

The Wisconsin Farmer is one of the few farm papers of the country which does not let up on its editorial work—summer or winter. The Wisconsin Farmer enjoys a liberal advertising patronage both from Wisconsin people and from the leading manufacturing concerns of the nation, and the revenues of the paper are sufficient to warrant increasing its size and the service which we are giving readers.

The popularity of the Wisconsin Farmer in its home state is shown by the preponderance of Wisconsin advertisers as well as Wisconsin readers. Many of our regular readers are regular advertisers, and this proves beyond a doubt that they have confidence in the fact that the paper is preferred by a majority of the farmers of the state. With a circulation of 90,000 and over, more than 70,000 of which is in the state of Wisconsin, The Wisconsin Farmer maintains a leadership from which it will not be dislodged.

Free Passes at Wisconsin Fair.

THE Wisconsin State Fair, we believe, is one of the most unfortunate fairs, year in and year out, in the way of weather that there is on the western circuit. It seems that every fair must have a few days spoiled by rain or cold, and this year was no exception, and, undoubtedly, had the weather been good, the 1916 fair would have shown a profit which would be something out of the ordinary. It is encouraging to note that the indebtedness is decreasing each year despite adverse weather conditions, and surely those who attended this year will agree that all that was needed this year to make the Wisconsin fair a success in every way was the crowd. The live stock show, the display of agricultural products, etc., was the best ever seen at Milwaukee and weather can be blamed for keeping the crowd away.

Great progress has been made during the last two years in building up this fair, but there seems one evil which has not been overcome yet as it should be overcome. That is the free-ticket evil. Too many persons are attending the Wisconsin State Fair on passes or complimentaries, many of whom should pay their 50 cents to support such an institution. This year a few more than 175,000 persons attended the fair. The total gate receipts were $58,726. In other words, at 50 cents per person, only 117,452 persons paid their way into the fair. This means that the turnstiles registered 58,000 visitors who did not pay. Of course, many of these were exhibitors, special officers, etc., and about 25,000 were children, who were admitted free on the opening day. Deducting these free admissions, some 20,000 persons passed the turnstiles without buying tickets.

We do not wish to be understood as scolding the fair officials for this condition. In fact, we know that Commissioner Norgord and Secretary Remey have done much towards eliminating the pass evil, and they would like to cut down the free list even further. But they must have support in such a movement, and, as it has been the custom of the Wisconsin fair for years and years to issue a large number of passes, a precedent has been set up which is hard to break down. The free list now does not compare with what it was a few years ago, and the day is dawning when it must be cut still closer to the bone if the fair is to succeed financially. As one of the officials from a neighboring fair, on a visit to Milwaukee, remarked to the writer: One of the big problems to be worked out is that of more money at the gates. This can be secured in only two ways—by a larger paid attendance and by requiring many of those who pass in free now to pay their admission. We realize it will take time to bring about such a condition, but eventually Wisconsin must take the steps taken by Minnesota and Iowa and not issue free tickets except to those who perform some specific service for the fair. Just because this man or that happens to be a friend of an official is not reason for giving him a free ticket. Exhibitors must be cared for, or they would not exhibit; the working newspaper men and others who perform a service of value to the fair must be taken into consideration. But this should be the only condition for issuing free tickets, and we know of nothing which might help the officials so much in their work to eliminate this evil, established by long precedent, than some action by the coming legislature. The legislature could well follow the example of the Iowa law, limiting the free pass to those who perform an actual service.

The state fair is a state institution and should receive the support of every citizen. By the same reasoning it seems that no citizen, who is not giving the fair some special service, should expect free admission. Certainly the fair is worth a half dollar to any citizen, and if the public will give the officials support in their efforts to cut down the number of free tickets, it will prove an easy matter. It is a problem too firmly established by precedent to be worked out single handed, and we can appreciate the difficulties confronting the officials in their effort to build up the fair. But all will agree that tighter reins on the free ticket will do much to increase receipts and place the fair on a firmer basis financially.

Wisconsin Land-Clearing Demonstration.

FOR many years the problem of disposing of the stumps, which are the only barrier to the cultivation of 7,500,000 acres in Wisconsin, has had little attention from organized bodies. Occasionally railroads or big land companies would, with high-priced machinery, clear a few hundred acres for their own purposes, and settlers have been working gradually to get their farms cleared with the machinery at hand, but nothing has been done that would serve as a concrete working basis for placing this immense area under the plow.

Realization of this situation brought about the first land-clearing demonstrations last spring and which are being further carried out by the "land-clearing special," mention of which is to be found in another column. Mr. Carl Livingston, who, previously to joining the college of agriculture, at Madison, had had experience on the Pacific coast, has proven himself a good leader, and the demonstrations have awakened more interest in clearing than has been aroused in many months prior to this summer. The demonstrations are meeting with great success, the farmers are showing intense interest, and so far as it all goes, it is well done. But with the demonstration over, something else must be done.

As land-clearing problems must be met as they arise, Mr. Livingston believes the state should be charted as to soil, character of stumps, etc. Stumps are more easily removed on one kind of soil than on another. The problem of the farmer with soft pine stumps is entirely different from that of the farmer with hard wood. The farmer with stumps on sand or red clay has a different proposition to deal with than the man with stumps on loams, and Mr. Livingston believes that the most effective work can be carried on only through charting of the state as to character of soil and stumps. Today there is no money for carrying out such work. The expenses of the demonstrations is being carried on by the railroads and the manufacturers who cannot pay for other extension work. As it is a state matter, the state should finance it, and Mr. Livingston believes $25,000 would be sufficient to inaugurate a comprehensive study of this problem that will mean something to the settlers and the owners of this 7,500,000 acres of land. The minute the stumps are disposed of, the land increases in value; its taxable value is greater and the state would be benefited to the extent of increased taxes. So it would seem that this is a matter for the next legislature to consider and provide some funds for carrying out the work so auspicously started by the land-clearing demonstrations. These demonstrations cannot reach everyone, but, with the right kind of follow-up work and bulletins showing how the stumps in each section can be disposed of, a permanent good will be accomplished. We can only urge every farmer who can possibly attend one to be present at his nearest demonstration, as they are very educative and certainly worth the little time and expense of attending.

Treatment of Wood For Silos.

THE Federal Forest Products Laboratory began experiments in 1910 in co-operation with the University of Wisconsin to determine the effect which preservative treatment has upon wood used in silos; also the effect of such treatment on the silage which is next to the wood. A report of this investigation shows that there is considerable danger of decay with silos built of untreated wood. While there are some woods that last much longer than others without decay, the forest products investigation shows very plainly that decay is only a matter of time. Deterioration occurs near the foundation of the silo, or in sappy wood at any portion of the structure. In 1913, 100,000,000 board feet of high-grade lumber were used in silo construction. While there are many other forms of silo construction competing with wood, a careful compilation of silo statistics shows that the consumption of wood for silo construction is steadily increasing. Manufacturers of wood stave silos are investigating the subject of preservative treatment. Coal tar creosote is one of the most satisfactory preservatives. The Federal laboratory report insists that applying with a brush, dipping or spraying, are not sufficient, but that a better method is to treat the wood staves under pressure. Silos built of wood so treated have the added advantage of reduction of swelling and shrinking of the staves. This means that they can be kept tight more easily. Furthermore, such silos do not need to be painted. Investigation has been made of silos erected in 1910, and after five years the treated wood had not commenced to decay. A test to determine the effect of the treated wood upon the silage was made by burying a piece of the wood in the silage. This gave the silage a strong odor. An effect to determine the quantity of creosote in the feed by analysis was unsuccessful, as there was not enough creosote to show in the analysis. Concerning this test the laboratory report reads as follows:

This silage when fed to cows was not relished and two of the animals were affected slightly by it. This was a very severe test, however, for the wood was given a heavier treatment than is now considered necessary. Moreover, had the contaminated portion been thoroughly mixed with the rest of the silage it is doubtful whether the effect would have been noticeable. This conclusion is borne out by the results obtained in practice.

During the several years in which it has been the practice to treat wood for silos, the Federal Dairy Division has not heard of a single case in which the health of the ainmals has been impaired by feeding silage from silos made of wood treated with creosote.

Interest in Better Seed.

THE showing made in the agricultural department at the state fair this year by those who are growing pure-bred grains and are following out the improved methods with potatoes served to illustrate, more than ever, the great value of this educational work being carried on along these lines in Wisconsin. Apparently the day is passing when barley is just barley or oats just oats and corn just corn. With an adverse season for potatoes and the small grains, it developed that in most every case the prize-winning samples were shown by the farmers who are studying improved methods and are growing the better and standard varieties.

Too much cannot be said in favor of growing only the best, of using only the best seed and in following the best cultural methods. Unfortunately there are still many who will sow just any kind of seed, so it is the variety they wish to grow. There are too many potato growers who are content to grow a lot of nondescript varieties and use, year after year, seed that was good enough for John and is good enough for them. The result was that in the showing of grains and potatoes the prizes went to the men who were using discretion in the selection of their seed and with whom the best is none too good.

This was especially true in potatoes. The Wisconsin crop is below normal because of the dry weather and late blight in some sections, but the display for show purposes was better than anticipated. These potatoes came from fields where certified seed has been used; where the best cultural methods have been employed, and it is these potato growers who this year will reap the big profits. The yield in many cases was light, but where the quality was kept up, the net profit per acre will be maintained. As one exhibitor said: He would rather have 100 bushels to the acre, worth $1, than 200 bushels worth 50 cents. Quality is what counts and quality comes only through careful selection and study. In grains the quality was pronounced splendid, although dry weather reduced the yields and the growers of the pedigree grains made splendid showings, all of which tends to show the great value of the educational work being carried on by the experiment association, and this work certainly bore good fruit this year.

Farm Trip in Racine and Kenosha Counties.

The results of another season's work with the disease-resistant variety of cabbage developed by representatives of the agricultural experiment station of the University of Wisconsin will be noted on September 30th in a farm to farm trip through the truck-growing districts of Racine and Kenosha counties.

Besides the large delegation of farmers from this district who are vitally interested in the success of this new variety (the Wisconsin Holander), which has once more placed the cabbage industry of this section on a sound basis, there will be visitors in the party from other parts of Wisconsin and adjoining states.

Acting as pilots will be W. J. Hansche, chairman of the growers' committee; Dr. L. R. Jones and R. E. Vaughan, plant disease specialists of the college of agriculture, who are directly responsible for the development of the new variety, and J. C. Walker, in charge of the field station of the college of agriculture located at Racine.

During the tour at least a dozen leading cabbage farms will be visited. The list includes those of William Braid, John Lichter and Henry Broesch, Kenosha, and A. J. Piper and W. J. Hansche, Racine. Fields where the new variety of cabbage have been used with good results will be seen.

The officials in charge of the distribution of this resistant cabbage seed state that about 400 pounds will be ready for planting next year. The seed is sent, where possible, to growers who will co-operate in the work to the fullest extent. A committee composed of W. J. Hansche, A. J. Piper, S. B. Swingle and S. B. Walker, Racine; Henry Broesch, Kenosha, and William Miller, Sommers, have charge of the seed distribution.

Some Autumnal Reflections.

To the Editor:—By the time The Wisconsin Farmer has placed this article in its columns the season of autumn for 1916 will have begun. Thus, at the final clearing of the land from the summer's crops, at the last gala excursions of the year, we are apt to sum up the results of our farming operations for the period which has just passed.

When we read the varied crop reports of Wisconsin we become convinced that this is truly a state great in area. If we reside in southern Wisconsin we have probably been centering our minds pretty closely on our own particular county. Then we read in a friendly agricultural paper such as The Wisconsin Farmer that the potato crop is going to be fairly good, and we are surprised, for in our locality this crop has been anything but promising. We are again surprised when a northern county sends word that its corn is far from being up to standard, for we, here in southern Wisconsin, have such universally good corn this year that it seems hard to believe that there is any poor corn in the entire state.

In other words, if we have not traveled much we become self-centered and narrow-minded. These two qualities, which few wish to possess, have in a certain measure been removed by the automobile. People are able to get around to their distant neighbors with the gasoline buggy; become acquainted, discover other's hopes and plans, and they themselves are thus taught to think in bigger circles. The man who owns an auto sees the world from a viewpoint different from that of his neighbor who does not own one. This is one of the desirable results which the motor car has brought alike to the farmer and his city brother. However, there are, despite all this talk about the desirability of owning a machine, some evil effects due to such possession which are detrimental to a degree.

In the first place, the pleasure, direct or indirect, derived from riding in a car is almost purely physical. It matters not how illiterate or gross he is, anyone feels an exhilaration from an auto ride, just as any healthy person derives pleasure from partaking of a hearty meal. In itself there is nothing wrong about this. So much for the direct pleasure from the auto. The indirect pleasure is derived when, while taking a ride after the chores are done, we stop at a drug store and eat ice cream or perhaps at a saloon where we drink beer. You will note that these jogs are also purely physical and it is my contention that if a person spends all his spare moments during the summer in such car riding and refreshments he is not building himself up into the kind of man or the kind of farmer that America needs. We must be careful that we do not become a highty-flighty sort of people without those much-to-be-desired deeper qualities of mind and thought.

Perhaps the Lord himself had this idea when He created the season of winter when we must put away our cars for a spell and find recreation through other means. And what better means can we find than good reading? Now, as the evenings grow longer and indoors becomes more attractive. let us unearth the books which we laid aside in the spring. Let us especially encourage the young people to take up this pursuit of good literature. The car has probably taken them to dances and places of amusement this summer where their associates cared little for mental refinements and this effect should be nullified at such times as the present by well-chosen reading.

The classics of Shakespeare, Burns, Bacon and Goldsmith are always worthy of our time, but we farmers want to balance up this sort of literature with writings which treat directly of our business. These we will find in our trade journals or agricultural papers. I like to think of a farmer as a student who studies hard all winter concerning his business and then in the spring goes out and puts into practice that which he has learned.

There is scarcely anyone in agriculture today who can truthfully say that he is unable to obtain good reading on farming because of the vast amount of such matter which is printed in the United States. With over a thousand farm papers whose subscription prices range from 25 cents to $1.50 few need be without at least one. In choosing such a paper it seems reasonable to select one which covers all phases of farming and one's own locality or state in particular, for we want the writers to understand our particular crop and weather conditions. We want a paper with experienced, not theoretical, writers and with a genuine respect for the truth so that we may be guided by actual farmers' knowledge and not by trumped up day dreams.

In conclusion, then, let us resolve first to read good literature this fall and winter; next to read up thoroughly on agricultural problems, and, finally, to assure ourselves that as medium for the latter information we are using a thoroughly reliable farm paper.

Joseph E. Ryan.

Waukesha Co., Wisconsin.

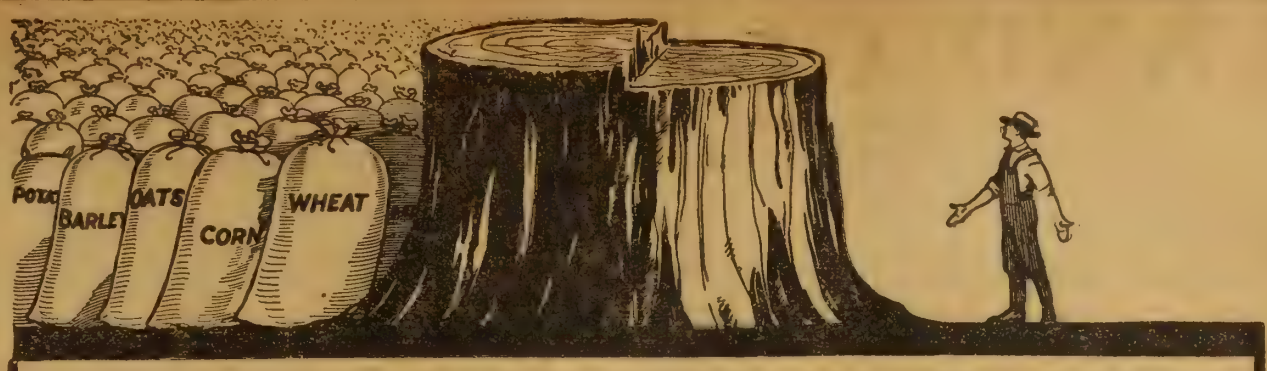
Good Stock For Rusk County.

To the Editor:—One hundred and fifty admirers of the Guernsey cow enjoyed the Rusk County Guernsey Breeders' Picnic held at the fair grounds last Saturday afternoon. Although the morning was rainy and the weather threatening until afternoon, a large number of people brought their picnic dinners. Mr. L. E. Scott, of Stanley, gave a very practical talk telling of the development of his Guernsey herd and pointing out the superiority of the Guernsey breed over other dairy breeds as economical butter fat producers. Mr. Scott quoted figures to prove that no other breed excels the Guernsey in cheapness and production. Mr. A. A. Hadden read an inspiring story entitled "When the Cows Come Home." The Guernsey heifers that had been purchased through the co-operation of the Rusk County Bank and the Rusk County Guernsey Breeders' Association were then sold at auction. As the old saying goes, "They went like hot cakes." The highest price was $105 for a two-year-old heifer to freshen next month. The average for the two year olds was $80. They were taken to several parts of the county. These heifers were bought in Portage county from some of the best herds there. Several farmers have expressed their desire to have another carload of these good heifers brought into Rusk county and sold at cost. If enough orders are received to justify the trip and the expense of selecting this carload they will be brought in soon. Those interested are asked to speak to Mr. Streater, of the Rusk County Bank, or to L. E. McGill.

A cow-judging contest for men and a cow-judging contest for boys was conducted by County Representative Householder. William Sorrels, of Sheldon, won first in the men's contest. W. Hein, of Tony, won first prize in the boys' contest. The association plans to hold several Guernsey meetings during the winter months.

L. E. McGill.

Secretary of the Rusk County Guernsey Breeders' Association.



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LAND CLEARING METHODS.

Use of the Stump Puller and Dynamite Shown in Practical Demonstrations Held Near Cities and Towns on the Main Line of the Soo Railroad.

THE land-clearing problem in Wisconsin, which was given its first organized recognition last spring when demonstrations of clearing land by explosives and mechanical power were given at various cities in the northern part of the state, is being given added impetus by the "land-clearing special" which is now being run over the lines of the Soo railroad, touching points not visited on the first trip. The tour opened on Monday, September 18th, at Birchwood, Washburn county, followed by successful demonstrations last week at Weyerhauser, Rusk county, and Patzua, Douglas county, and the attendance at these places served to indicate that the interest in this trip of the special will be even greater than that on the first trip which surpassed early anticipations.

When the demonstrations were first inaugurated last spring many were skeptical as to their success. Some were heard to remark that the stumps could not be removed to the satisfaction of the crowds and that the work would be long and tedious as well as tiresome. But all of this prejudice has been overcome. Farmers who have this problem to contend with have heard of the first demonstrations which they missed, and, knowing of their success, are now anxious to attend and learn first hand how the barriers to cultivation on their farms may be efficiently and economically disposed of. This is the aim of the "land-clearing demonstration" and the close attention given by visitors at the initial demonstrations showed that they came to learn and were anxious for information on how to meet this problem of the settler and the man with land that only needs stumping to make it productive. In this respect the present tour promises to be more successful than the first, as the knockers are absent and the manufacturers have demonstrated that the work can be done efficiently.

ROUTE OF LAND-CLEARING SPECIAL ON SOO LINE IN UPPER WISCONSIN.

The present tour is under the personal direction of Mr. Carl Livingston, of the agricultural engineering department of the Wisconsin College of Agriculture, and co-operating are the A. J. Kirstin Co., of Escanaba, Mich.; the Hercules Manufacturing Co., of Centerville, Iowa; the Soo Line, the Du Pont Powder Co., and the Wisconsin Advancement Association. Hand and horse stump pullers are being demonstrated together with the use of dynamite and the Conrad home-made piler, which the Wisconsin Advancement Association and the college of agriculture are urging. This was the only piler to be seen at the early demonstrations and its work attracted considerable attention, being the product of enterprising men of Rusk county. The pile used was made of native timbers taken from the woods a few days before the demonstration started and can be made by any farmer with a carpenter or blacksmith to supply the necessary bolts and braces.

THE ONE-MAN OUTFIT AT WORK ON DEMONSTRATION GROUNDS.

A HORSE-POWER PULLEY WHICH HAS PROVED ITS WORTH BY ACTUAL TEST.

DOING A CLEAN JOB WITH A HORSE-POWER STUMP PULLER.

GETTING READY TO RAISE STUMP WITH DYNAMITE.

The tour started off with a whoop at Birchwood where some 300 persons were present. This was considered especially good, considering the fact that the farmers were very busy putting an excellent crop of corn into their silos, following a heavy frost a few days previous, and also considering the condition of the roads following a big rain. At Weyerhauser the crowd numbered about 700 and Mr. Livingston told the writer that during the entire spring tour he had never seen a crowd more attentive or so bent on securing information. The farmers came to ask questions, and, as stumping is a very big problem in Rusk county, the demonstrators were where demonstrations have also been kept very busy giving out information. At Patzau, Exeland and Gilman, held, up to this time the attendance has been good and it will be well for our readers to keep in mind the dates for future demonstrations, which are, with the places, as follows:

September 29th at Owen.
October 2d at Medford.
October 4th at Phillips.
October 6th at Butternut.
October 9th at Marengo.
October 11th at Glen Flora.
October 13th at Rhinelander.
October 16th at North Crandon.
October 18th at Armstrong Creek.

Only one-day demonstrations are being given on this tour, as it was discovered in the spring trip that most of the crowd came on one day and the two-day plan was dropped. This permits a day between demonstrations, so that in case it rains or other causes prevent a demonstration on the day set it can be given on the day following. At each stop there will be a local chairman and much of the success, so far as the attendance is concerned, depends upon these local chairmen. Mr. C. P. West, county agricultural representative of Sawyer county, was in charge at Birchwood; Mr. Glenn Householder, county agricultural representative of Rusk county, Weyerhauser; Mr. J. M. Walz, county agricultural representative of Douglas county, at Patzau; Mr. West also at Exeland, and Mr. R. A. Kolb, county agricultural representative of Taylor county, at Gilman. Mr. Gunder Anderson will be in charge at Owen, Mr. Griffith Richards at Phillips, Mr. C. B. Post at Butternut and Marengo, Mr. Householder at Glen Flora, Mr. W. D. Juday, county agricultural representative, at Rhinelander; Mr. John Swenehart, county agricultural representative, at North Crandon and Armstrong Creek. These will complete the tour for this fall.

The interest which has been shown by the farmers in these demonstrations indicates that Wisconsin has been very backward in taking hold of this problem of clearing its 7,500,000 acres of tillable lands of stumps many years ago. Had something of this kind been undertaken ten years ago it is safe to say that Upper Wisconsin would today be farther advanced than now and that the results would have been startling. The purpose of these demonstrations is twofold. First, to convince the farmers that land can be cleared of stumps efficiently and at a comparatively small cost. Secondly, to arrive at some conclusions on the cost of clearing land. Many real estate promoters in past years have placed their estimates too low in order to sell their land, all to the discouragement of the settler. This has served to retard, rather than develop, and Mr. Livingston hopes to be able to arrive at some definite conclusions after this tour has been completed. The manufacturers are also keeping close figures and it will be a shame if something definite is not done to follow up the good work being done by the "land-clearing special." The next legislature should provide funds for carrying on this work so that it might be carried on effectively. It must be borne in mind that none of the expense of these tours is being borne by the state. The manufacturers are meeting the expense attendant to demonstrating their machines, the

DITCHING WITH EXPLOSIVES—THIRTY-TWO STICKS USED IN THIS DEMONSTRATION.

FACTS FOR MOTOR CAR BUYERS

When you buy your motor car today, the things that should concern you most are not mere claims or assertions, but absolute facts. Realizing this, we are pointing out to you in this advertisement absolute facts and figures which were obtained from a direct comparison of cars and specifications made by Motor, Motor Age and Automobile.

The following analysis of different cars, made in a purely unprejudiced way, from the data as published in the journals mentioned above, enables you to actually prove the relative merit of Studebaker cars in comparison with others; and for your own benefit, you should consider carefully the facts disclosed by this analysis before you decide on the car you will buy.

Price

Price is only one factor in making up the composite whole of "GREATEST VALUE." The average price, the standard with which to compare all automobile prices, is made up from 439 models of 1917 cars, and shows that the standard car would sell for $1600. This is just $515—47%—higher than the cost of a Series 17 Studebaker SIX. It is $315—almost 25%—above the average cost of the eight Studebaker models. Every Studebaker purchaser knows the benefit of the $300 to $500 saving.

But, understand us, a Studebaker owner does not get from $300 to $500 less value. Figures prove he gets greater value, point by point, not only in the average of all cars, but also in the average of all cars of the same and higher price classes.

Every important feature of Studebaker construction is used either by the largest number of makers—an endorsement in itself—or by those makers whose cars sell for a much higher price than Studebaker—a still higher endorsement.

Seating Capacity

Of the 109 models of all classes of Fours, Sixes and Eights selling for less than $1,000, the Studebaker FOUR is the only car which seats seven people. And there are only three models of all cars selling for less than $1100 which have a seven-passenger capacity.

The average price of all seven-passenger, four-cylinder models is $2738, three times the price of the Studebaker FOUR. The average price of all seven-passenger Sixes, Eights and Twelves is $3990, three and seven-tenths times the price of a Studebaker SIX.

Power

The farmer needs power in an automobile. The rough, heavy roads and steep hills of the country make power the basis on which most people living in the country are sold. From the very beginning Studebaker has demonstrated the superiority of the Series 17 in this respect. These figures clinch the argument.

The average price of all the 105 Six, Eight and Twelve cylinder cars manufactured is $1917, yet the Studebaker SIX at $1085 is 10.9% ahead of the average of these 105 cars in power. Of the few which equal or exceed the rating of the Studebaker SIX in power, the average price is $2900—almost three times as much as the Studebaker SIX. Why the additional $1800?

The average price of all of the 78 four-cylinder cars is $1278, yet the Studebaker FOUR at $875 is 7.8% ahead of the average of all of them in power. Out of the few 78 four-cylinder cars which exceed the horsepower rating of the Studebaker FOUR, the average price is $2022. Again nearly three times the price of the Studebaker. Why the additional $1147?

But not only in POWER, but in EVERY important feature of construction, regardless of cost, Studebaker uses design recognized by the majority as the BEST.

The styles in construction which have proven best in the opinion of the public and the automobile engineering profession, stand as the guide for Studebaker—and it has always been a Studebaker policy to continually improve its product and to merit the confidence and endorsement of the public.

And now, point by point, from the data as given by the motor car journals, we show you the proof that every important feature of Studebaker construction has been adopted by the majority of motor car builders.

Fours and Sixes

Popular demand has centered on cars of four and six cylinders, hence Studebaker confines itself to these two types. The wisdom of this policy is shown when the classification of all cars shows that Fours and Sixes together constitute 85.8% of all cars manufactured. The division is as follows:

Fours	44.7%
Sixes	41.1%
Eights	11.6%
Twelves	2.6%

L-Head Motor

Of the 439 models of 1917 cars, 71.1% use the L-Head type of motor exclusively. If the demand were for valve-in-head, T-head, or sleeve valve motors, the percentage of these types would be greater. The accompanying table shows the trend of public demand and it proves conclusively that Studebaker is building what the public wants:

L-Head	71.1%
Valve-in-Head	12.3%
T-Head	12.2%
Sleeve Valve	4.4%

Gasoline Feed System

In keeping with the demand for a better streamline design, horizontal body lines, greater gasoline capacity, and to insure a positive and even flow of fuel to the carburetor, 55% of manufacturers have adopted the vacuum feed. The division is as follows:

Vacuum Feed	55.0%
Gravity Feed	34.4%
Pressure Feed	10.6%

The average price of all Fours using Vacuum Feed system is $1570; of all Sixes using it, the average price is $1628—yet we find it in the Studebaker at much less money.

Ignition

The simplicity, the reliability, the durability and the freedom from all trouble of the generator-battery ignition system have proven that Studebaker was right in adopting it in preference to magneto ignition. Of the two types of ignition on the 439 models, the percentages are as follows:

Generator-Battery	56.4%
Magneto	43.6%

Cylinders En Bloc

Studebaker was the first to cast successfully six cylinders in one block. Advanced ideas in engineering and factory practice put Studebaker in the lead. Today 73.6% of all manufacturers are following Studebaker's example:

Block Cast Motors	73.6%
Cast in Pairs	10.4%
Cast Singly and in Threes	16.0%

Timing Gears

Smooth, quiet, positive-running timing gears are essential to the satisfaction of all car owners. Experience has shown that helical gears are the type best suited to accomplish this result. Studebaker, as usual, lines up with what is generally conceded to be the best type:

Helical Gear-Driven Timing Gears	70.0%
Silent Chain Drive	16.0%
Spur Gears	14.0%

Cooling System

To properly cool a motor the majority of engineers—and especially those who design the highest priced cars—have decided in favor of the pump system. This is the only system Studebaker ever used:

Circulating Pump	60.5%
Thermo-Syphon	38.8%
Air Cooled	.7%

Starting System

Studebaker was one of the first to use an electric starting and lighting system. Studebaker-Wagner two-unit system is now used instead of the less efficient single-unit system of the first year. And again Studebaker superiority is proved by the comparative percentages:

Two-Unit Systems	51.0%
Single-Unit Systems	49.0%

Still more convincing is the use in Studebaker cars of the six-volt system. There are other voltages used, but experience has shown that the six-volt is most efficient—and consequently it is used by Studebaker:

Six Volt System	69.2%
Twelve-Volt System	23.6%
Miscellaneous	7.2%

Springs

Studebaker has always held to the superiority of the three-quarter elliptic spring for rear suspension, and now, after three years' vigorous campaigning, the advantages of this type, in spite of its higher cost, make it the ruling favorite. And the three-quarter elliptic spring is used almost exclusively on all higher priced cars:

Three-Quarter Elliptic	46.5%
Cantilever	28.7%
Semi-Elliptic	10.9%
Platform	6.3%
Miscellaneous	7.6%

Rear Axle

Studebaker has from the beginning led the field in the simplicity, safety, lightness and efficiency of rear axle design, and in pursuance of this policy has adhered strictly to the full-floating rear axle. The preference is indicated as follows:

Full-Floating	51.1%
Three-Quarter Floating	27.1%
Semi-Floating	21.8%

Timken Bearings

Most manufacturers hesitate to equip their product completely with Timken bearings because of the cost, but Studebaker does not let this consideration stand in the way for a moment. And Studebaker is one of only fourteen manufacturers to offer full Timken equipment; the average price of the other manufacturers' cars is $1760.

This convincing evidence of Studebaker superiority has increased Studebaker production 100%. Studebaker has produced and sold 75,000 cars in the last fourteen months—more seven-passenger sixes and more seven-passenger fours than any other manufacturer ever produced in the same length of time.

In the Studebaker car the buyer finds the ONLY CAR which combines the consensus of the opinion of the engineering profession; which so completely satisfies the popular demands of the public who rule the fashions; which exceeds in power, comfort and size the "average" or standard car—at a price from $300 to $500 below the average. WHY? BECAUSE IT'S A STUDEBAKER!

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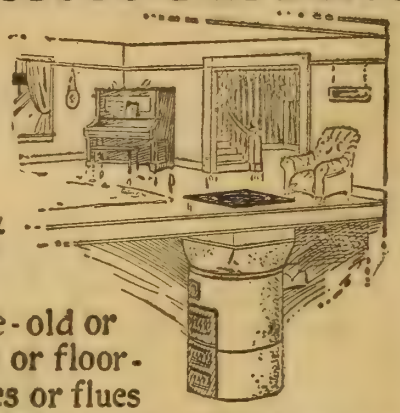
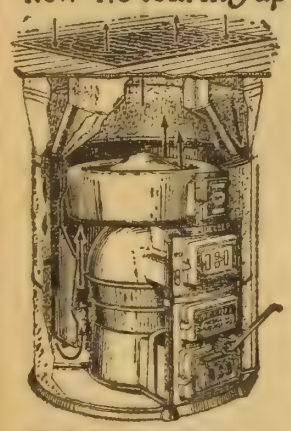


Easily installed in any home - old or new - No tearing up of walls or floor -



No pipes or flues
One register heats entire house - - -
Burns coal, wood or coke - - - -
Cuts fuel bills 25% - *No waste heat*

MUELLER PIPELESS FURNACE

Every home, no matter how long built or how small, can now enjoy the comfort of furnace heat without making expensive alterations for pipes and flues. The Mueller Pipeless Furnace will go into the smallest cellar easily. If you have no cellar, you can dig a pit under your house and place it there. You can install it yourself. Cut holes for the register in the floor and connect furnace with the chimney. That's all.

The Mueller Pipeless ventilates as well as heats by keeping air in constant circulation. Nearly 60 years of furnace making is back of the Mueller Pipeless. It is scientifically and substantially built of solid cast iron and will last a lifetime. Our free book explains why you should consider the Mueller above all others. Send for it.

Write for Free Booklet

Gives you all the facts about the Pipeless System of heating and the Mueller Pipeless Furnace. Gives full details of construction and shows pictures of installation. Tells how to apply it to your own home, old or new; how to tell the difference between good and poor furnaces — the things to look out for and to avoid. This Booklet sent free on request.

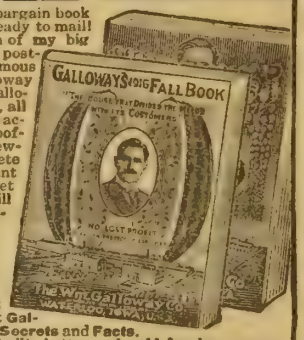
L. J. Mueller Furnace Co., 204 Reed Street **Milwaukee, Wis.**

As we are makers of heating systems of all kinds since 1857—regular hot air pipe furnaces, steam or hot water boilers and vapor heating systems — we are in a position to give you honest advice on your heating requirements.

GALLOWAY'S FREE FALL BOOKS

NOW READY

My new 100 page fall bargain book just off the press and ready to mail! Also the second edition of my big 250 page 1916 catalog. A postal gets your copies today. These books describe the famous Galloway line of Sanitary Cream Separators, the Galloway Gasoline and Kerosene Engines, the new 1917 models Galloway Manure Spreaders, our new 1917 12-20 h. p. Tractor, all kinds of farm machinery, ensilage cutters, power house accessories, grinders, buggies, wagons, harness, fencing, roofing, saddles, automobiles, stock tanks, auto accessories, sewing machines, household goods, carpets, furniture, complete line of clothing for every member of the family. I want you to have your copies! Drop a postal today. Let these two great books guide your fall buying and they will save you from $200 to $500. Remember Galloway is manufacturing headquarters for



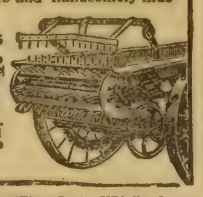
ENGINES---SEPARATORS
SPREADERS---TRACTORS

As well as many lines of general merchandise which are sold direct from factory to you at one small profit. These books tell truth about **Galloway Sanitary Cream Separators.** They give **Gasoline Engine Secrets** and **Facts.** They tell how and why the **Galloway Manure Spreaders** are built better and sold for less money. Fully describe my **new 12-20 h. p. tractor.** A copy of each book should be in your hands even if you are not now in the market for a single thing. Printed in four colors and handsomely illustrated. **Ask for your free copies today.**

Separators $34.50 up

WM. GALLOWAY, Pres., THE WM. GALLOWAY COMPANY
BOX 37 WATERLOO, IOWA, FARM IMPLEMENT MANUFACTURING SPECIALISTS

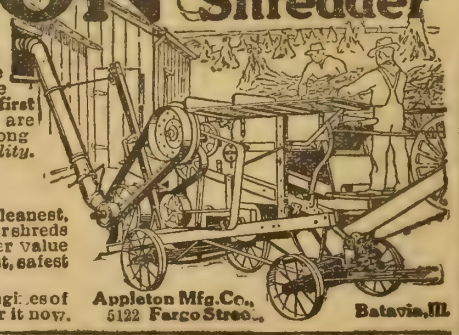
Engines of all sizes from 1 3-4 to 16 h. p. heavy duty moguls. Prices way down. Big engines lower than ever.



These two books fully describe the 1917 models of Galloway's famous spreaders. Don't buy a spreader of any kind until you have seen these books.

APPLETON Husker and Shredder

Every year hundreds more farmers buy huskers, as they find the most economical, efficient way to save all the *value* of a corn crop is to husk the ears and make fodder of leaves and stalks. Appleton was the first successful husker. Appletons made years ago are giving good service today. Few parts, extra strong mean long life, few repairs and sure *dependability.*



GUARANTEED TO DO MORE WORK WITH LESS POWER

than any husker of equal size. Appleton husks cleanest, shells least; has most efficient corn saver. Cuts or shreds leaves and stalks while husking ears. Fodder value saved from small acreage pays its cost. Easiest, safest to operate. Works in all conditions of corn.

Free Husker Book: describes 4 sizes for engines of 4 h.p and up. Write for it now.

Appleton Mfg. Co., 5122 Fargo Street, **Batavia, Ill.**

When writing to adverisers kindly mention The Wisconsin Farmer.

Soo Line is furnishing the train at its expense and the college is donating Mr. Livingston's time. So it is not a state proposition, but at the same time one of state-wide interest and should be encouraged by the state.

It is estimated, figuring fifty stumps to the acre, that there are 400,000,000 stumps in Wisconsin on land lying idle, but which is fertile and capable of producing splendid crops. It can be readily seen that this is a big problem for Wisconsin and if these demonstrations can result in reducing the cost of clearing 25 per cent it would mean a big item in dollars and cents to the state. Mr. Livingston places the cost of removing the average stump at conservatively 50 cents each. This means it will cost $200,000,000 to clear Wisconsin of stumps and a 25 per cent saving would be a saving of $50,000,000. This is the aim of every co-operator at these demonstrations—to show how economically this work can be done and the farmer with stumps who misses a demonstration is missing a great deal. We heard one man remark at Weyerhauser that he went by, but didn't see any reason to stop and watch the work. That is the wrong spirit and not the spirit being shown, as a whole, as a more attentive crowd we never saw anywhere than at Weyerhauser.

These demonstrations are conducted on the order of tractor shows. The fields are spaced off and each manufacturer allotted certain stumps and demonstrations on pulling; splitting and piling them continue all day. There is one handpower puller being shown, two horse power pullers and one piler in addition to the use of dynamite. Much interest is being shown in all and especially in the use of dynamite which is used in conjunction with pullers as well as separately. Competent men are on hand to explain everything in detail and as an indication of the efforts to bring about a saving in stumping the powder people are showing the great value of 20 per cent dynamite which is 3 cents a pound cheaper than 40 per cent, which has been generally used. The use of higher per cent explosives has come into northern Wisconsin because it was used and it was thought should be used on stumps. Of course, conditions vary and in sandy soil 40 per cent may be necessary, but at Weyerhauser it was shown that four pounds of 20 per cent lifted entirely a stump which farmers agreed should have four pounds of 40 per cent. The placing of charges was also demonstrated. Many farmers favor one charge under the center when it is desired to blast a stump completely. For cracking purposes in conjunction with a puller it is a different matter. But where the explosive was distributed about the roots it was shown that the hole was not so deep, not so much subsoil was brought up and the work just as effective. These were fired with electricity and we are calling attention to these particular demonstrations to show the reader what he may learn by attending one of these visits of the "land-clearing special." The manufacturers of mechanical pullers experiment on all kinds of stumps under all kind of conditions, from pulling them directly to splitting before pulling by using dynamite. It is a treat to anyone who has stumps to contend with to attend such a demonstration that is now to be seen in this state, and, as one onlooker remarked, it is a part of the evolution that is taking place in Upper Wisconsin. It is educative and of great value.

Demonstrations prove conclusively thus far that land can be cleared economically with either dynamite or stump pullers and that these two methods work well in combination. There are many stumps that can be taken out cheaper by the use of both than by either singly and some others can be disposed of cheaper without the use of pullers. Then there are many who wish to use dynamite exclusively and all of these problems are threshed out at the demonstrations. We are told that there was never so much interest in clearing as this fall and this campaign with the assistance of the manufacturers should eventually prove of great worth to them.

The Wisconsin Advancement Association is co-operating at this time to bring about more stumping. It has taken up a campaign in connection with the demonstrations to secure dynamite for the settlers or those who wish it in carload lots. In this way 20 per cent dynamite may be secured at 12 cents per pound. This would be a great saving to the farmers of the state and it is also proposed to organize co-operative land-clearing clubs, etc. All of this shows a tendency toward a greater development along these lines and the "land-clearing special," of which the college of agriculture was first sponsor, is certainly doing a splendid work in drawing these matters to public attention.

GET TRAPS IN ORDER.

Time to Prepare For Big Fur Season.

Dame Fashion has decreed that Milady shall wear furs this year despite the fact that prices will be high. For that is always the way—the higher prices go the more certain are furs to find favor with the careful dresser.

Last year was a heavy fur season. Styles demanded the use of fur on almost every kind of garment. From hats to boot tops, fur was the correct thing—proper practically everywhere. Yet, from present indications, this year threatens to excel it and already fur buyers are manifesting an active interest and making good demand for the raw furs which will soon be coming on the market.

The result should be most satisfactory to the tanner—for indications point to a year of steady demand at good prices. Every farmer should be able in the coming months to add several hundreds of dollars to his income through trapping.

All over the country farmers are getting their traps in order—overhauling them, scraping off the rust, oiling them up and adding a few new ones to their collections—laying supplies of animal bait and otherwise preparing to take advantage of the demand and make some extra money while the making is good.

How about your traps—have you gone over them? Better do it, don't you think?

Hog raisers know
the value of good tankage for quick growth, big frame and long profits. But do you know any other concern that makes a money-back guarantee on tankage? See page 1539, our General Catalog.
Sears, Roebuck and Co., Chicago.

To Make Room For More Crops
STEEL GIANT

Stump Pullers pull all the stumps at less cost and do away with the mean hard work usually connected with land clearing. Single, double, triple power. Develops 135 h.p. Free trial. Ironclad guarantee. Write today for catalogue No. 15 and special introductory offer.

La Plant-Choate Mfg. Co.
77 Eastlack Ct. Cedar Rapids, Ia.

FREE ENGINE BOOK

Before you buy any Engine—Read my Book, **"How to Judge Engines."** Tells how to distinguish a High Grade Engine by the difference in cylinders, pistons, valves, ignition, etc., with less cost for fuel, up-keep and repairs. Book Sent Free together with my LOW "Built by Experts" FACTORY PRICES and Easy Payment Plan. 90-day trial offer, etc. Address

Now Priced As Low As $15.00 Per H-P.

ED. H. WITTE,
WITTE ENGINE WORKS,
2717 Oakland Ave., KANSAS CITY, MO.
2717 Empire Bldg., Pittsburgh, Pa.

TRAPPERS WE BUY FOR CASH

And pay highest prices for **Coon, Mink, Skunk, Possum, Muskrat,** and all other **Furs, Hides** and **Ginseng.** Best facilities in America. Send for Free Price List and Shipping Tags. No commission charged.

ROGERS FUR COMPANY,
Dept. 190. St. Louis, Mo.

In and Around Wisconsin

The Stevens' Point Fair Association gathered a fine exhibit of agricultural products and a good live stock show this year, but the weather man was unkind and the weather was either bad or threatening all week. The receipts for the fair were $3,029.31. The fair lost about $700.

Pickling stations in Dunn county are being well filled this year. There are reports from a few stations which say that the run will not be so great as in some previous years. The minimum rate paid farmers is $1 per 100 pounds, though many have received much more than that for their product. Some have an average minimum of near $1.50 and fancy stock has brought fairly good prices.

The annual Green county cheese day celebration will be held in the city of Monroe, Tuesday, October 10th. This is the greatest cheese celebration held in the country; in fact, it is the original "cheese day." Free lunch and entertainment are provided and also a splendid parade. There were about 20,000 at the cheese day celebration last year. Green county makes more foreign cheese than any other county in the United States.

A stock sale is to be held at Delavan, October 30th and 31st. Those in charge are F. S. Showers, Delavan, for the Jersey breed; Charles Turner, of Spring Prairie, for the Holstein breed; C. W. Thompson, of Lake Geneva, for the Hereford breed. The Citizens' League and Stock Breeders' Association are working hand in hand for the benefit of the sale and the live stock interests of Walworth county.

Wisconsin, according to the latest figures, had 55,592 silos and this is just about one-third of the total number of farms. It is also about one-third the number of silos we ought to have in the state. Experience has proved this year that the average Wisconsin farm where a good many stock are kept not only needs a silo but it needs both a winter and a summer silo if the best results are to be obtained at the milk pail in a dry season.

Within another week or two the schedule for farmers' institutes in Wisconsin for the winter of 1916-17 will be announced. The Wisconsin Farmer is advised that a number of application blanks sent out have not been returned. Inasmuch as appointments are made only on applications signed by farmers of the community and returned to the office of the superintendent of farmers' institutes at Madison, it will be necessary for those who wish to be included in the list to get their applications in at once.

Wisconsin was splendidly represented at the Illinois State Fair, Springfield, with a display of grains, grasses and seeds. Mr. C. P. Norgord, secretary of agriculture, was in charge of the exhibits and he made a good boost for Wisconsin. A large number of names of people who are interested in Wisconsin lands were secured at the booth which was situated in the fine arts building. Literature was distributed. Visitors were surprised to learn that Wisconsin leads in production per acre of so many farm crops. While Illinois raises some good corn, Illinois has never been able to get the average production per acre that Wisconsin can show.

Dairy farmers of Winnebago county, Wisconsin, made an automobile trip recently through Green county, Wisconsin. They inspected a number of herds, including the Holsteins at the Albert Babler & Son farm and the Brown Swiss cattle at the Voegeli farm. Mr. Jacob Voegeli was host at luncheon to almost 200 people. There were thirty-five automobiles which made the entire trip from Winnebago county and return. Our neighbors on the south learned a great deal about dairying, as well they might expect when traveling over one of the very best dairy counties in the United States. Conditions are not so different in the Illinois county across the line that they might not also make a record in dairying.

S. E. Foster, proprietor of the Golden Glow Farm near New Richmond, St. Croix county, owns a Holstein grade cow which has made a record of 1,891 pounds of milk in thirty-one days and at 4.4 per cent test this milk produced 83.2 pounds of fat. This record was made under supervision of the Stillwater Cow-Testing Association, of Stillwater, Minn. Mr. Foster recently bought the cow from a Stillwater man.

Wisconsin farmers who bought good seed corn last year, even though they paid very high prices for it, are now beginning to see that they made a good investment. One farmer who paid $10 a bushel says that he is more than pleased at the result and that he has much better corn than neighbors who took a good deal more chances on their corn. It does not pay to get poor seed corn. If it is necessary to pay high for good seed better pay it than take the chance.

Representative growers of ginseng in Wisconsin met recently at Wausau. They visited the ginseng gardens there and discussed the question of forming a national organization. J. H. Kohler and W. J. Zohl were selected delegates to attend a meeting of state organizations to be held in Chicago in November. The Wisconsin growers selected officers as follows:

President—J. H. Koehler, Wausau.
First Vice President—Geo. Maxwell, Antigo.
Second Vice President—H. Loehr, Johnsburg.
Secretary and Treasurer—C. S. Leykon, Antigo.
Executive Committee—J. W. Schwartz, Spring Green; C. N. Ray, Sparta and C. W. Guern.

Fruit and Garden

Fruit Awards at State Fair.

The competition in fruit displays, and especially apples, at the state fair this year was more interesting than might have been expected in a dry season. The Kickapoo Development Company, Gays Mills, won first prize on display of apples not to exceed twenty varieties. The other prize winners were as follows:

Second, G. H. Townsend; third, J. H. Coolier, Wauwatosa; fourth, Wm. Toole & Son, Baraboo; fifth J. S. Palmer, Baraboo, and sixth, J. E. Baer, Baraboo.

The Kickapoo Development Company also won first in the display of ten varieties, and other premiums were awarded as follows:

Second, Wm. Toole & Son; third, A. Meyer, Cascade; fourth, G. H. Townsend; fifth J. H. Coolier, and sixth, S. L. Brown & Son, Gays Mills.

An interesting competition was in the display of five varieties; Northwestern Greening, Gano, Windsor, Golden Russet and Tolman. The awards were as follows:

First, A. K. Bassett, Baraboo; second, G. H. Townsend; third, A. D. Barnes, Waupaca; fourth, J. E. Baer.

J. H. Coolier was awarded first prize for the best winter seedling and Elmer Severson, of Oshkosh, received first prize for largest apple. First prizes for the best peck of apples were awarded as follows:

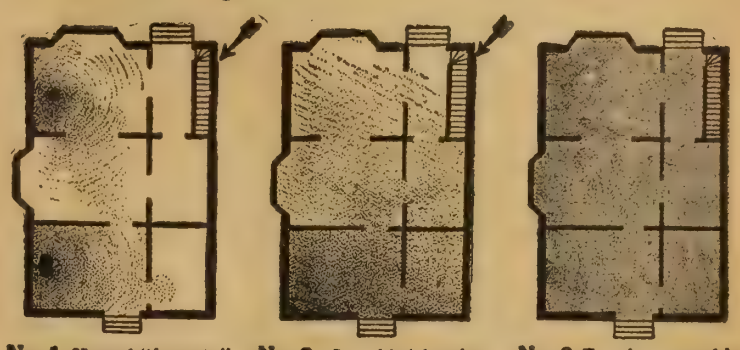
Fameuse—G. H. Townsend.
Golden Russet—J. E. Baer.
MacMahon—Kickapoo Development Company.
McIntosh—Kickapoo Development Company.
Newell—Kickapoo Development Company.
N. W. Greening—Kickapoo Development Company.
Patten Greening—S. L. Brown & Son.
Pewaukee—G. H. Townsend.
Plum Cider—Elmer Severson.
Salome—A. K. Bassett.
Westfield—A. Meyer.
Tolman—A. Meyer.
Utter—A. K. Bassett.
Wealthy—Wm. Toole & Son.
Windsor—A. K. Bassett.
Wolf River—J. E. Baer.

Miss E. M. Goelzer, of Oakwood, exhibited the best Hyslop crabs, the Kickapoo Development Company the best Transcendent crabs, and the Arpin Cranberry Company the best Whitney crabs. The best exhibit of pears was made by J. H. Coolier. The best collection of ten specimens, native varieties, of plums was exhibited by A. D. Barnes. In the exhibit of grapes, display not more than fifteen varieties, the awards were as follows:

First, John Reis, Twin Bluffs; second, H. R. Platt, Baraboo; third, A. K. Bassett, Baraboo.

The three $100 prizes awarded for the best commercial fruit exhibits were won by J. A. Hays, of Gays Mills, A. K. Bassett and John Reis.

Have this even, healthful *heat* in your home—



No. 1. Heated "in spots" by stoves
No. 2. One-sided heating by hot-air furnace
No. 3. Evenly warmed by an IDEAL Boiler

The shaded portions of the rooms above show how much a house is heated when a cold northeaster is blowing

Study the above diagram! It is one of the best explanations ever produced as to just what you can expect from different kinds of heating—and it tells you *why* Radiator Heating is the *best.*

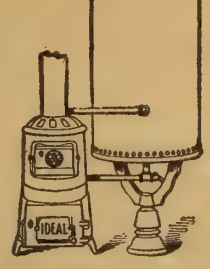
AMERICAN & IDEAL RADIATORS BOILERS

These diagrams show *results* and you will agree that the radiator warmed house (shown in No. 3) is the one way you want your house to be heated.

There is a direct rapid circulation of the heat from the fire to the Radiators—no matter how the wind blows! Then too, the IDEAL Boiler can be run with a *low* fire for chilly days or with a very bright, glowing fire for blizzard weather. Plenty of heat *all* over the house without coal-gas, ash-dust, lugging coal hods, or worry about the fire.

Basement or water pressure not necessary

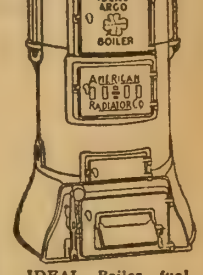
IDEAL Boiler is set in cellar, side-room or 'lean-to'; and same water is used for years. Put an IDEAL Boiler and AMERICAN Radiators in your house *this* year. Call up the nearest heating contractor and ask him to give you an estimate. Don't put off any longer, suffering the chills of old-fashioned heating methods during these severe winters.



Our IDEAL Hot Water Supply Boilers will supply plenty of warm water for home and stock at small cost of few dollars for fuel for season.

An IDEAL Heating outfit will protect and happify the whole family. It will keep away sickness due to chill spots and drafty floors. Less work than to run one stove. It will burn the cheapest fuel of your locality, screenings, lignite, wood, soft coal, etc.

A No. 5-19-W IDEAL Boiler and 450 ft. of 38-in. AMERICAN Radiators, costing the owner $200, were used to heat this farm house. At this price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions.



IDEAL Boiler fuel pots mix the air and coal gases as in a modern gas mantle, extracting ALL the heat from the fuel.

Write a postal now for "Ideal Heating" (free)

This booklet has full description and many illustrations—tells the whole heating story—send for your copy today

Sold by all dealers. No exclusive agents.

AMERICAN RADIATOR COMPANY

Write to Department F-39 Chicago

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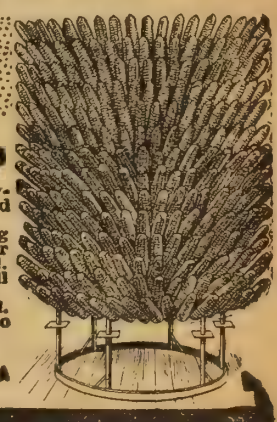
BAIN'S PEERLESS SEED CORN DRYER



PREPARE for NEXT YEAR'S CORN CROP

The thirty thousand farmers who used our mouse-proof Dryers and selected their seed corn carefully last fall had 100% good seed corn last spring.

Circular Dryer 3½ feet in diameter but has 300 feet drying space. Corn put on with double galvanized hooks. Each ear has complete circulation of air around it; thus curing every kernel. No moulding, heating or souring. Corn cured on the Dryer will increase the average farmer's corn crop from 10 to 25%.

The price of Dryers has not advanced, although built of steel. Dryers made in two styles and four sizes, ranging from 600 to 1500 ears.

Write now for particulars, prices, etc.

BAIN BROS. MFG. CO. Dept. E, CEDAR RAPIDS, IOWA

OTTAWA ENGINE EASY TO RUN

Uses Kerosene, Gasoline, Distillate, Gas and other cheap fuels. Built to last and do hard work. Many sizes; Up-to-date design. Good Materials. Built by painstaking workmen. Sizes 1½ to 22 H-P. Full ¼ to ⅓ over rated horse-power. 3 Months Trial. Sold direct. 10 Year Guarantee. Engine Book Free.

1½	24	75
2	26	75
3	37	90
4	61	75
6	88	90
8	114	75

THE OTTAWA MANUFACTURING CO.,
1190 King Street, OTTAWA, KANSAS.

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.
HOMESTEAD COMPANY
Engraving Dept. Des Moines, Iowa

Why Let That Stump "Stump" You?

How often have you wished it was removed? How often have you considered the profits you are losing from the land on which it stands? Every day you neglect the removal of stumps, boulders or other obstructions, *you are losing just that much more in profits.*

BURTON

"Good Luck" Dynamite

is an easier and quicker method of removing obstructions. It is convenient—and far more economical than axes or stump-pullers, for it *saves time and money as well as labor.* With Burton "Good Luck" Dynamite you simply drill and fill the hole, light the fuse—and the obstruction is lifted out, broken into pieces convenient to handle.

"Good Luck" Dynamite is equally effective for ditching, tree-planting or subsoiling. It is uniform, positive and safer in its action. It is cheaper than most grades because a smaller charge is required.

Our distribution facilities enable us to guarantee prompt deliveries

Ask your dealer for "Good Luck" Dynamite. If there is no Burton dealer in your locality, write us at once. If you have any farm clearing problems to solve, write us and we will advise you what to do and what it will cost.

BURTON BURTON

Burton Powder Co.,

712 Empire Bldg., Pittsburgh, Pa.
1618 Fisher Bldg., Chicago, Ill.

WATERLOO BOY KEROSENE TRACTOR

An 8-Horse Farm Worker at a 2-Horse Upkeep Cost

PLOWS EIGHT ACRES PER DAY

This tractor is one of the four Waterloo Boy farm machines which were awarded medals on superior merit at the Panama-Pacific Exposition.

Distinctively a cheap-fuel tractor, developing extraordinary power at a big saving in fuel cost. Its easy handling by one man or a boy, and its reliable, steady work at pulling or belt power, make it a favorite with careful farmer buyers.

$750

Pulls Three 14in. Plows. Only $250.00 per plow pulling capacity

BELT POWER FOR ALL NEEDS

Twenty Years of Engine Building Experience

is embodied in this tractor and it is guaranteed to the limit.

We can make prompt delivery. Write us for illustrated catalog and let us give you the name of our nearest agent.

Waterloo Gasoline Engine Company

3802 W. 3rd Avenue, Waterloo, Iowa

Heavy Frost Catches Late Potatoes

Corn, Mostly Matured, Not Much Damaged, and Promises Good Yield---Plowing and Silo Filling Rush Farmers.

WISCONSIN.

Burnett County.—Most of the threshing is done, with less than half a crop. Winter wheat is a good crop, yielding thirty bushels to an acre. Blue stem is poor and yielded three and four bushels. It can't be milled to flour. Marquis wheat yielded fifteen bushels to the acre, oats and barley twenty-five to thirty bushels. Corn is a good crop. Matured seed corn can be picked. A heavy frost between the 16th and 17th froze the potatoes and the corn somewhat, but has not done much damage. Silo filling is going on full blast. Cattle have had good pastures and have kept up the milk flow very well. There are no reports of disease. Potatoes will be a poor crop, but better than it looked three weeks ago.—Fred Larson.

Chippewa County.—Corn and potatoes are the main crops left in the fields. Potatoes are very poor and some people will not have enough for seed next spring. Corn is very good and lots of it is being put in silos now. The second crop of clover is being cut for seed and a lot of timothy was left and threshed for seed, too. The seed is good this year because it was dry a long time and filled out well. Vegetables and garden fruit are fairly good except cabbage, which is poor. Live stock is looking good this fall. Cows have dropped off in the flow of milk, because the pastures have not the nourishment for the cows that they had in the spring and summer.—Gustave E. Rheingans.

Clark County.—Threshing is all done in this locality, with a light crop. There has been sufficient rain for fall plowing and this will also help the late potatoes where the vines are green. Corn is nearly all cut. It will be a fair crop. There was a heavy frost on the 17th.—Fred Ackerman.

Grant County.—Threshing is finished and clover for seed has been cut. It will probably make from one to two bushels to the acre. Frost the 16th will make the corn on the lowlands soft and killed the potato vines so that there will be no late potatoes. The late rains have made the pastures look fine but the ground is still dry for fall plowing. Quite a few sheep and cattle have been shipped out on account of short feed.—P. R. Stoffel.

Iowa County.—Grain is almost all threshed and yielded good in spite of the dry weather. Some oats ran between fifty and sixty bushels to the acre. There has been enough frost to freeze the corn and there is a rush to get it into the silos. The corn crop is much better than last year and only that which was planted very late will be hurt much by the frost. Potatoes are very backward on account of the dry summer and will not amount to much now as the vines are frozen. The fruit crop is not of very good quality.—Will Dowling.

Iron County.—Small grain is about 90 per cent of a normal crop. Meadows and pastures are very good. Gardens are the best they have been for twenty-five years. No corn is raised except sweet corn. That crop was very good. There has been plenty of rain all through the season. Potatoes are good in quality but slightly below normal in yield. Live stock is in very fine condition.—H. P.

La Crosse County.—The corn crop is very good. Farmers are filling their silos. Threshing is finished in most parts, with grain a light crop. There is not much of a second crop of hay on high land, but a good harvest of wild hay. Owing to the dry weather potatoes will be a very light crop, recent rains being too late for much benefit. They were needed for fall plowing, which is just beginning. Stock of all kinds is doing well.—R. R. French.

La Fayette County.—The weather is somewhat cooler with plenty of moisture. Frost on the nights of September 15th, 16th and 17th killed the late potatoes and badly damaged late corn. Corn cutting and silo filling is in progress now. Quite a number of new silos have been built this fall. Some second crop clover is being cut for seed. Fall feed is getting a good start. Cows are milking some better lately and cheese prices are high, so the farmers are getting good returns from their cows. About the usual number of shoats are on feed and are looking well.—Lloyd Scott.

Marinette County.—Heavy frost on the 16th froze the potatoes, corn and garden vegetables. Since the rains commenced about two weeks ago potatoes have been growing nicely and will make perhaps one-third of a normal crop. Probably 75 per cent of the corn was matured before the frost. Silos are being filled now and in some instances soy beans are mixed with the corn. Threshing is about all done, with a fair yield of oats. There are more dairy cattle in the country now than for several years past. Some cows are dying from infection of the stomach. Pastures are better and probably will be good until snow flies. Several new silos are being built.—W. B. Sanderson.

Monroe County.—Threshing and silo filling were done in good weather and now the late rains will help the farmers to plow. The late potatoes look as if the rains will help them. Most of the corn that is not cut will be hurt by the hard frost of Sept. 17th. It will all be cut in a few days. Owing to the dry pastures the amount of cream for the last months has been short. The Sparta Co-operative Creamery has paid 36 cents for butter fat, so it is up to the farmers to take good care of their cows.—D. F. Jones.

Oconto County.—The oats crop was very light. It is nearly all threshed. Corn is about one-half cut. Some very good yields of corn, both fodder and grain, are reported. Potatoes are doing fine, although they will not be up to standard. There was a very heavy frost on the 16th, killing all small vines. Plowing is good, due to the heavy rain. Pastures are good and cattle are looking fine. There are plenty for sale. There are about 20 per cent more cattle than last year and 20 per cent less hogs.—William J. Hunter.

Ozaukee County.—Threshing is finished and silo filling is in full swing. A hard frost on September 15th froze the corn and some of the potatoes. Corn was mature on many farms and the frost did not damage that crop much as most of it will go into silos. Late potatoes were doing fine and promised a fair crop but the frost got the vines in many places. Pastures are green and most farmers have plenty of fall feed. The Ozaukee County Fair will be held at Cedarburg October 5th, 6th and 7th under the auspices of the Ozaukee County Agricultural Society—C. F. Dineen.

Pierce County.—Frost did considerable damage to corn and garden truck the night of the 16th. All except some late fields of corn are in the shock. Late potatoes were doing fine until frosted. Recent rains have revived the pastures to some extent and put the soil in fine shape for plowing. The second crop of clover is being saved for seed with promise of a good yield. The third cutting of alfalfa is light, owing to lack of rain. Apples are plentiful, but the high winds have probably taken half of them from the trees.—T. B. Eaton.

Racine County.—Threshing is finished in this locality and silo filling has begun. A frost on the night of the 16th damaged the corn quite badly, however, it is pretty well matured. The frost also killed all the melon and potato vines. Cabbage cutting has begun. The small crop is causing extremely high prices. Rains during the past few weeks have produced heavy pasturage both on old and new seeding. The number of cattle and the production of milk in this locality is increasing.—Charles Jeffery.

Rusk County.—The potato crop in general is light, but the potatoes are of good quality. Buyers are paying $1 a bushel for them delivered to the warehouse, and considerable quantities are being marketed. Many fields of corn were fully ripe before the frost on September 16th, and about half the farmers had their corn in the silo on that date, so that the frost did little damage. Threshing is practically done and clover hulling is now in progress with the seed yielding fairly well. Late rains have helped the field pastures and milk cows are doing well. Cheese factories report that for the month of September farmers will receive $2 per hundred for milk delivered. Fall plowing is about one-half finished and work in general is well advanced.—T. M. Thomas.

Taylor County.—The weather is cool with lots of rain. Most of the threshing is done and hay-baling has started. The hay crop is fairly good. Fall plowing is in full swing. Pastures are good and all live stock is in fine shape. The potato crop is poor. Corn is good. Most all garden truck is good except cabbage and peas, which are failures. The apple crop is good. Lots of stock is shipped every week. Pigs are scarce and sell from $5 to $6 a pair. A cold sleet and rain, followed by a frost the night of the 16th turned the leaves yellow in the northern Wisconsin woods.—E. H. Wehne.

Trempealeau County.—Threshing is well under way with the grain better than was expected. Silo filling is progressing nicely. There has been no serious frost yet and corn is mostly out of danger. It is generally a fair crop save on light soil, which for want of rain when the ears were setting, did not fill. Dry pastures have been helped by recent rains. Potatoes will be a light crop. There are apples and vegetables in abundance. Cattle and other stock are looking fine.—Carl G. Kremer.

Washburn County.—There was a very heavy frost the night of the 16th. Potatoes are a light crop. Corn is good, most of it being matured. Silos are being filled and threshing is in progress. Rye and wheat are fair, oats good. The abundant late rains have started the pastures and meadows and helped fall plowing.—John W. McCulloch.

MINNESOTA.

Mower County.—Threshing is about three-fourths done. Corn is a good crop; about 90 per cent is out of the way of frost. Potatoes will make less than one-half a crop. Fall feed has sprung up since the recent rains, which helps the pastures. Hogs are scarce and high, selling at sales for about 15 cents per pound. Cattle are doing well, but there will not be much cattle feeding in this county, as all kinds of feed are bound to be high. Hired help is scarce, some men getting $3 a day for common labor. There is a good stand of new seeding, timothy and clover.—Walter H. Martin.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answeced.

Few High Records Made.

Mr. George L. Moss, tester of the Waupaca and Butternut Ridge Co-operative Cow-Testing Association, of Waupaca county, Wisconsin, writes that of 386 cows under test for the past month only twenty-two made a record of forty pounds of butter fat or better. This is due in part to the fact that a large number of cows close their lactative period during the season to freshen late in the autumn. Mr. Moss regards this plan as about the best under present conditions. Such a plan insures a better income, as prices are higher in the fall and winter. Then where the dairyman has proper dairy barn equipment, which every man should have to make his dairy more successful, better care can be given the producers, whereas cows freshening in spring or summer are handicapped in many ways. They may do well until the heat and flies come, but if this period is long it interferes with production. Mr. Moss finds that calves from these spring and summer cows do poorly and it takes more time and feed to develop them fully. Calves from fall cows can be taken care of better and they will come through the winter strong and big enough to graze on the early pastures with the cows the following spring. During the months of August in Waupaca county many farmers were short of pasture and the forty-pound cows fell off in number. Mr. Moss suggests some good substitute for pastures to meet this emergency, such as silage, oats, peas or vetch. Cows will eat silage and do fairly well when they would not hold up on dry pasturage. The dairyman who fails to look out for just such seasons as the one we have just gone through with is not doing his utmost toward keeping up the profits. The cows in the association which made a record of forty pounds or better are as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. C. Boyce					
Dora, G. H.	5	4-2-16	1079	3.8	41.0
Alice, G. H.	5	4-19-16	1253	3.2	40.1
Fred L. Jorgensen					
Lizzie, G. H.	5	7-14-16	1243	3.4	42.3
E. O. Frihart					
Brownie, G. J.	6	3-28-16	1004	4.9	49.2
Esther, G. H.	7	3-1-16	1144	3.6	41.2
Alvin Faulks					
Jennie, G. H.	3	7-23-16	1069	4.2	44.9
John Jensen					
Big Spot, G. H.	6	6-9-16	1308	3.8	49.7
Chas. Rasmusson					
Jewel, G. J.	8	12-1-15	607	7.4	44.9
Ira Farley					
Eva, G. H.	3	1-13-16	933	4.3	40.1
Wm. Rossy					
Libby, G. G.	6	2-21-16	828	5.0	41.4
E. A. Peterson & G. R. Miller					
Agnes, N.	6	5-20-16	1019	4.4	44.8
Marna's Queen, R. G.	8	1-15-16	901	5.3	47.8
Golden Tidy, R. G.	9	6-7-16	1255	4.0	50.2
Fred Dunbar					
Guernsey, N.	5	6-10-16	1054	3.8	40.1
C. A. Struckfield					
No. 2, G. G.	10	4-9-16	984	4.4	43.3
No. 4, G. G.	10	4-15-16	1054	4.4	46.4
No. 6, G. G.	9	4-8-16	1007	5.2	52.4
No. 11, G. H.	5	5-23-16	1172	3.5	41.0
No. 22, G. H.	5	4-30-16	1243	3.9	48.5
John Hanson					
Jess, N.	5	5-9-16	1339	3.1	41.5
Clara, N.	8	3-19-16	1232	3.4	41.9
Blanche, N.	6	5-24-16	1553	2.9	45.0

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

Cheese Awards at Fair.

The following awards were made on cheese in the dairy division at the 1916 Wisconsin State Fair:

CHEESE—CHEDDAR, FLAT OR DAISY.

Arvolz, Ed., Cecil....93.66
Anderson, George, Mondovi....92.50
Ast Bros., Dodgeville....91.00
Boeing, Emil, Woodstock....92.00
Bogucki, Jos. F., Green Bay....93.33
Burt, G. E., Neenah....95.66
Burish, F. J., Lena....94.50
Barrett, R. W., Merrill....87.50
Bachman, J. F., Fremont....89.16
Bauer, Robt. P., Eden....92.83
Buss, Chas., Campbellsport....94.83
Bennett, Andrew, Gratiot....90.83
Beck, Henry, Spring Green....92.00
Behm, J. D., Tustin....94.00
Delain, Theophile, Casco....92.33
Darling, Theo., Ridgeway....93.00
Derring, W. A., Seymour....91.66
Engelbretson, C. M., South Wayne....92.00
Engel, Robert, Fremont....97.66
Ebert, Lawrence, Green Bay....93.00
Fischer, John, Boaz....94.00
Frank, Wm. J., Manitowoc....92.83
Fisher, John G., Stratford....94.83
Fergusen, Albert, Hub City....94.00
Grimm, Arnold, Marion....94.66
Goss, George L., Stitzer....94.00
Grimm, Louis, Marion....93.16
Gerber, Rudolph, Soldiers Grove....89.33
Grossenbach, A. Co., Milwaukee....94.50
Gibbs, John, Muscoda....95.16
Huggler, Andy, Fennimore....95.16
Hessel, Louis, Barneveld....94.16
Hinz, Albert R., Hilbert....91.66
Heberer, Adolph, Kewaskum....93.33
Henderson, Lee, Stanley....91.00
Hanwood, Clyde, Bridgeport....91.83
Hrabik, Otto, Luxemburg....92.00
Hensler, Jos., Marshfield....94.16
Jeske, John, Antigo....92.00
Jansen, August, Mineral Point....94.00
Kempen, A. H., Stitzer....92.16
Kono, William C., Rice Lake....92.33
Kohlmann, Louis B., St. Cloud....91.00
Knudson, P. W., Barneveld....92.83
Kalk, H. A., Sheboygan Falls....92.50
Kasper, P. H., Bear Creek....97.33
Kuschel, H. J., Coleman....95.33
Kliment, Anton, Maribel....91.50
Kalk, Reuben W., Sheboygan Falls....95.83
Kernke, J. A., Hilbert....91.33
Keuhl, W. M., Dorchester....92.66
Kuenzi, John, Fox Lake....90.00
Klessig, Aug., Woodford....89.83
Koller, Fred W., Cumberland....92.00
Kalles, Sylvester M., Barronette....92.83
Klinger, O. E., Marathon....92.83
Klonowski, Adam, Rudolph....93.50
Koopman, Albert, Jr., Grafton....85.66
Kraak, C. A., Avoca....92.16
Kielsmeier, O. A., Manitowoc....96.66
Lathrop, Chas., Seymour....91.00
Mellom, Frank, Richland Center....94.00
Marley, Austin, Yuba....97.16
Melolm, James, Richland Center....96.83
Meyer, Math, Stanley....94.66
Millen, C. R., Ridgeway....91.16
May, Ed, Readfield....92.83
Metzig, Henry, Fremont....92.16
McClone, P. J., Bear Creek....96.00
Nelson, Abe, Jonesdale....93.66
Noyes, H. L., Muscoda....91.66
Osborne, J. H., Neptune....93.00
Osky, Frank J., Cuba City....91.33
Peterson, Adolph, Barronett....90.83
Peterson, Andrew, Lone Rock....95.00
Pingel, E. W., Wittenberg....94.66
Peters, Emil H., Boyd....94.50
Peters, Carl R., Fond du Lac....95.00
Pierson, Wm., Barronette....92.83
Philps, Arthur, Mineral Point....89.33
Radtke, A. R., Tigerton....94.50
Reinke, Albert, Bear Creek....93.00
Ropp, N. L., Stevens Point....89.66
Running, Mark, Wheeler....88.00
Ryberg, M. A., Deer Park....90.16
Reutler, Arnold, Neenah....92.83
Roesler, L. F., Bear Creek....96.16
Shank, W. A., Lancaster....92.66
Schulte, A. W., Joel....91.83
Schwantes, O. R., Clintonville....97.75
Stock, Oscar H., Preston....90.50
Salversberg, Robert, Livingston....88.50
Seefeldt, John, Wausau....92.00
Schmitz, Rich M., Unity....93.83
Schneider, C. H., Hiller....93.83
Smiesters, Louis, Luxemburg....88.83
Schulte, A. J., Marshfield....95.33
Schmitt, Fred, Readfield....96.16
Schroeder, Art., Neenah....95.33
Spingler, Carl, Dale....91.00
Tappon, Oscar H., Hillsdale....91.83
Talbot, H. F., Mineral Point....93.16
Torphy, Wm. E., Barneveld....91.16
Vogt, Richard, Fremont....95.83
Vincent, Jake, Jonesdale....92.83
Werth, A. C., Appleton....95.50
Winder, Wm., Richland Center....94.83
Wagner, Louis C., Oconto Falls....92.66
Wooden, Lute, Livingston....91.16

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Donner, John, Dodgeville....93.33
Doyle, T. C., Stanley....91.33
Fenner, F. A., Rice Lake....93.83
Graskamp, Wm. H., Leopolis....94.16
Hernke, J. A., Hilbert....92.50
Kalk, Reuben W., Sheboygan Falls....94.66
Kalk, H. A., Sheboygan Falls....95.00
Koopman, Albert J., Grafton....90.16
Kielsmeir, O. A., Manitowoc....93.50
Meyer, Math., Stanley....95.00
Maedke, Ed., Stanley....91.16
Naumann, Robt., Two Rivers....95.00
Neilson, Hans, Withee....93.50
Popp, Walter, Zachow....93.00
Rach, Louis, Loyal....93.50
Schmitz, Peter, Lone Rock....95.16
Sindsinski, Stanney, Denmark....92.50
Schmelzer, A. J., Beaver, Ore....95.16
Schulte, A. J., Marshfield....95.50
Seveik, Jos., Kewaunee....94.66
Schulte, R. F., Plymouth....93.83
Talbot, J. F., Mineral Point....93.16
Voechting, O. H., Sheboygan....95.00
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Hefty, Adam, Darlington....95.00
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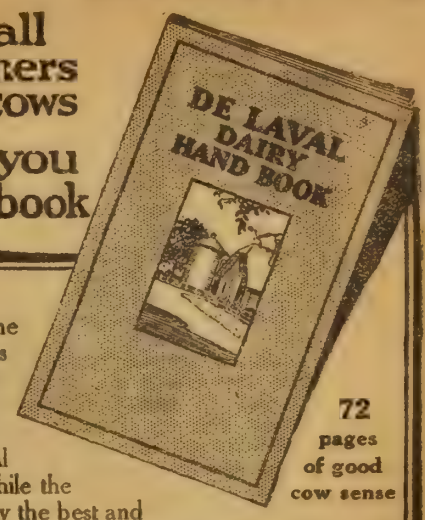

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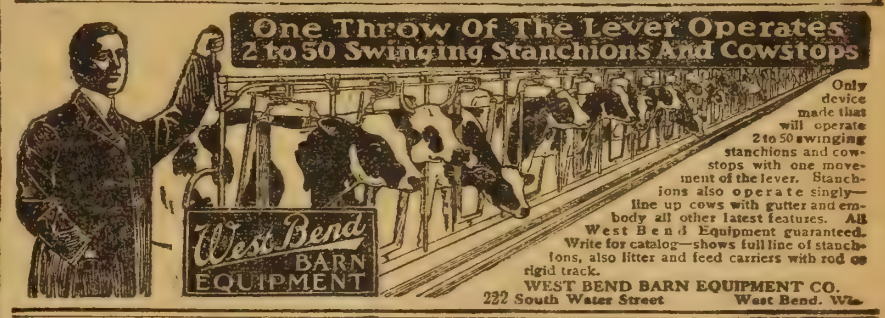

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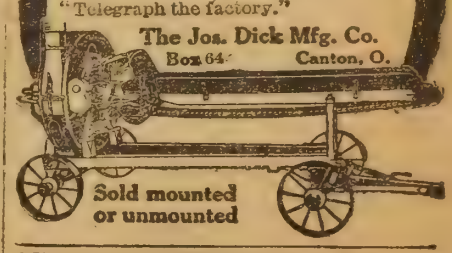

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Wisconsin Stock at Illinois Fair.

The Illinois State Fair, held at Springfield last week, attracted large crowds. From an agricultural and live stock standpoint, the fair was thinner than in years past. The Illinois fair is splendidly equipped and well managed, but it is unfortunate that too much politics has entered into the Illinois State Board of Agriculture. On every hand there was considerable talk as to who would be elected member of the board, and whether some old-timer could be dethroned. Such a situation makes it very difficult for the men who are doing the actual work of the fair to accomplish all that they would like to accomplish. There were only seven counties represented in the county exhibits. The corn display was fine and the live stock show good, though not so large as it should have been. The light harness show was exceptionally good. Hon. Charles E. Hughes, candidate for president, and Governor Dunne, candidate for re-election in Illinois, were speakers at the fair Tuesday and Wednesday respectively.

Wisconsin was represented in a few of the live stock divisions, and stock from this state showed well. In the Ayrshire class Ferndall Farms, of Ladysmith, Wisconsin, and James Van Etta, of Lima Center, Wisconsin, were the exhibitors. William McKerrow, of St. Paul, was the judge. The awards were placed as follows:

The Scotch dairy breed was represented at Springfield by a small, but worthy turnout of cattle, brought forward by two exhibitors from the Badger state. All three of the state fairs in this circuit had stronger Ayrshire shows; and also contained stronger animals of the breed. Still the average quality was good and the animals were brought out in shape that did the breed justice. Ferndell Farms got just a shade the better of the argument. They captured both grand champion purples, leaving the senior champion bull and the junior champion heifer honors to Van Natta.

The exhibitors: Ferndell Farms, Ladysmith, Wis.; Jas. Van Natta, Lima Center, Wis.

Judge, Wm. McKerrow, St. Paul, Minn.

The awards:

Bull 3 Years or Over (2 shown)—1st Van Natta on Holehouse Wanderer; 2d Ferndell Farms on Victor of Ladysmith.

Bull 2 Years and Under 3 (2 shown)—1st Van Natta on Cavaliers' Rising Tide; 2d Ferndell Farms on Ferndell Victor.

Yearling Bull (2 shown)—1st and 2d Ferndell Farms on Ferdell's Lessnessock Gem and Ferndell's Anticipation.

Senior Bull Calf (4 shown)—1st & 3d Ferndell Farms on Ferndell's Credit and Ferndell's Trust; 2d and 4th Van Natta on Unus of Cloverdale and Majesty of Cloverdale.

Junior Bull Calf (5 shown)—1st and 2d Ferndell Farms on Ferndell's Loyalty and Ferndell's Arrogance; 3d and 4th Van Natta on Rising Pionet and Expectation of Cloverdale.

Cow 5 Years or Over (4 shown)—1st and 3d Van Natta on White Lily of Meadow Brook and Mayflower of Rock Ridge; 2d and 4th Ferndell Farms on May of Hillcroft and Silver Beauty of Bulrush Farm.

Cow 3 Years and Under 4 (1 shown)—1st Van Natta on Winny Scotland of South Farm.

Heifer 2 Years and Under 3 (4 shown)—1st and 4th Ferndell Farms on Silver Pet of Ferndell and Stately Lessnessock of Ferndell; 2d and 3d Van Natta on Cavalier's Snowstorm and Rose Winny.

Yearling Heifer, Not in Milk (6 shown)—1st and 3d Ferndell Farms on Ferndell's Felicity and Pearl of Ferndell; 2d & 4th Van Natta on Aldebrain Rose Mary and Cavalier's Fashion Maid.

Senior Heifer Calf (3 shown)—1st Van Natta on Cavalier's Flukie; 2d and 3d Ferndell Farms on Ferndell's Fashion and Ferndell's Style.

Junior Heifer Calf (5 shown)—1st and 2d Ferndell Farms on Ferndell's Fidelity and Ferndell's Mode; 3d and 4th Van Natta on Cloverdale Gem and Cloverdale's Heiress.

Dairy Herd of Four Cows in Milk (1 shown)—1st Ferndell Farms.

Senior Champion Bull—Van Natta on Holehouse Wanderer.

Junior and Grand Champion Bull—Ferndell Farms on Ferdell's Loyalty.

Senior and Grand Champion Cow—Ferndell Farms on Silver Pet of Ferndell.

Junior Champion Heifer—Van Natta on Cavalier's Flukie.

Aged Herd (2 shown)—1st Ferndell Farms on herd headed by Ferndell Victor; 2d Van Natta on herd headed by Holehouse Wanderer.

Young Herd (3 shown)—1st and 3d Ferndell Farms; 2d Van Etta.

Calf Herd (2 shown)—1st Ferndell Farms; 2d Van Etta.

Get of Sire (3 shown)—1st and 3d Ferndell Farms on the get of Victor of Ladysmith and Lessnessock's Genis Good Gift; 2d Van Etta on the get of Gay Cavalier.

Produce of Cow (3 shown)—1st and 2d Ferndell Farms on the produce of Rose Lotus and Silver Beauty of Bullrush Farm; 3d Van Etta on the produce of Flukie.

The Jean Duluth Farm, Duluth, Minnesota, made a good showing in Guernseys, capturing the following awards:

Starlight's Excelsior of Jean Duluth, was first bull two years and under three.

May Rose Yeksa Starlight, was second-prize yearling bull.

Marathon Rose King, was senior bull calf.

Lady Grees May King of Jean Duluth, was second junior bull calf.

Jean Duluth Phillis, was second on cow three years and under four.

Jean Duluth Coronet, was first heifer two years and under three.

May Rose of Jean Duluth and Lyzette's May Rose were first and second respectively in yearling heifer class.

Grees' May Rose was senior heifer calf.

Marathon May Rose was junior champion bull.

James Van Etta, of Lima Center, Wisconsin, fared well in a good show of Clydesdale horses. He won the following awards:

Stallion three years and under four, third with King's Emblem.

Stallion two years and under three, first with Baron's Prince.

Stallion one year and under two, first and fourth with Fairview's Majesty and Hesitation.

Mare four years old or over, second on Lady Caliph.

Filly two years and under three, third on Honora.

Filly two years and under three, first on The Queen.

Filly one year and under two, fifth on Majesty's Lass.

Other exhibits with whom Mr. Van Etta's Clydesdales are in competition at the Illinios fair were A. G. Soderberg, G. W. Merna, South Bros., Eben A. Jones and Harry E. Piercell.

George McKerrow & Sons Co., Pewaukee, Wisconsin, exhibited in the sheep show, capturing practically all the awards on Oxfords. They met some keen competition in the Shropshires, where A. W. Arnold, of Galesville, Wisconsin, was also an exhibitor and W. F. Renk, of Sun Prairie, judge. The McKerrows carried off the championships and had a big majority of the firsts and seconds in the several classes shown.

Wisconsin at Dairy Show.

Wisconsin breeders were conspicuous at the Southwestern Dairy Show, held at Kansas City, Missouri, last week. Not only were firsts won in many of the classes, but Wisconsin cattle also carried away many of the purple ribbons. The exhibit was of especial importance to Wisconsin breeders because of the large amount of stock which is now being purchased in Wisconsin for southwestern territory.

The Brown Swiss awards were almost cleaned up by H. W. Ayers, of Honey Creek, Wisconsin. Ayers' Merney's Second Son was senior and grand champion bull, and Brownie B. was senior and grand champion cow. Mr. Ayers' cattle won first on every class shown, and were far superior in every respect to others shown.

In the Ayrshires, Adam Seitz, of Waukesha, Wisconsin, and Dr. David Roberts, of the same place, were in competition with herds exhibited by William Galloway, Waterloo, Iowa, and Dr. F. S. Schoenleber, Manhattan, Kansas. The awards in Ayrshires were as follows:

Judge, L. S. Gillette, Ames, Iowa.

Exhibitors: William Galloway, Waterloo, Iowa; Adam Seitz, Waukesha, Wis.; Dr. David Roberts, Waukesha, Wis.; Dr. F. S. Schoenleber, Manhattan, Kan.

Aged Bull—1st Seitz on Bargenoch Rising Star; 2d Galloway on Auchenbrain Good Gift; 3d Roberts on Roberts' Cavalier.

Bull 2 Years and Under 3—1st Seitz on Cavalier's Kilnford Ringmaster; 2d Galloway on Willowmoor Peter Pan 26th; 3d Roberts on Roberts' Fairy Duke.

Yearling Bull—1st and 3d Seitz on Cavalier's Lord Rosebery and Cavalier's Fond Stamp; 2d and 4th Roberts on Roberts of Hamline and Roberts of Waukesha; 5th Galloway on Cavalier's Merry Lad.

Senior Bull Calf—1st Seitz on Cavalier's Lord Stuart; 2d Roberts on Roberts' Pride Cavalier; 3d and 4th Galloway on Dalpedder Good Gift and Lessnessock Spencer; 5th Schoenleber on Queen's Actor.

Junior Bull Calf—1st and 2d Seitz on Cavalier's Kilnford Marquis and Cavalier's Kilnford Gloster; 3d Roberts on Roberts of Dousman.

Aged Cow—1st and 4th Seitz on Imp. Kilnford Bell 3d and Imp. Kilnford Bell 4th; 2d, 3d and 5th Roberts on Value's Pride of Oak Valley; Dalpeddar Lady Taylor and Kirkhouse Eddie 6th.

Cow 4 Years or Over—1st Seitz on Bargenoch Carnation.

Cow 3 Years or Over—1st Seitz on Lady Margaret; 2d and 4th Roberts on Belle Roberta and Queen Roberta; 3d Galloway on Princess.

Cow 2 Years and Under 3—1st and 4th Roberts on Roberta of Scotland and Roberta Dahlia; 2d Galloway on Lessnessock Carlton; 2d Seitz on Cavalier's Pet; 5th Schoenleber on Zella's Tulip.

Senior Yearling Heifer—1st and 2d Galloway on Nona Spencer and Cavalier's Ruby; 3d and 4th Roberts on Roberta Value's Pride Cavalier and Roberta of Hartland; 5th Seitz on Cavalier's Rosewood.

Junior Yearling Heifer—1st Galloway on Rose Good Gift; 2d Roberts on Roberta Cavalier Belle; 3d Seitz on Cavalier's Roseleaf.

Senior Heifer Calf—1st Seitz on Cavalier's Lavender; 2d and 3d Galloway on Good Gift's Nona and Sylva Good Gift; 4th and 5th Roberts on Roberta Southwich Cavalier and Roberta Belle of Waukesha.

Senior and Grand Champion Bull—Seitz on Bargenoch Rising Star.

Junior Champion Bull—Seitz on Cavalier's Lord Stuart.

Senior and Grand Champion Cow—Seitz on Kilnford Bell 3d.

Junior Champion Cow—Galloway on Nona Spencer.

Cow Having Official Yearly Record Begun at 4 Years or Over—1st and 2d Seitz on Kilnford Bell 4th and Hillhouse Maud 2d; 3d Roberts.

Aged Herd—1st Seitz; 2d Galloway; 3d and 4th Roberts.

Young Herd—1st Seitz; 2d Galloway; 3d Roberts.

Calf Herd—1st Seitz; 2d Galloway; 3d Roberts.

Dairy Herd—1st Seitz; 2d Roberts.

Advanced Registry Cow—1st Seitz; 2d Roberts.

Get of Sire—1st and 4th Seitz; 2d Schoenleber; 2d Galloway; 3d and 5th Roberts.

Produce of Cow—1st and 2d Seitz; 3d Galloway; 4th and 5th Roberts.

Baird Bros., of Waukesha, Wisconsin, competed with their Holstein herd for the awards at Kansas City. They won the following:

Bull three years or over, second on Bairdland Segis Sir Prize.

Bull one year and under two, first on Nockdair King Segis Perfection.

Senior bull calf, second on Farsee Sir Hengeveld Segis.

Junior bull calf, first and third on Nockdair Segis Forbes boy and Nockdair Segis George.

Cow two years and under three, first on Nockdair Segis De Kol Violet.

Senior yearling heifer, second on Nockdair Segis Longfield Rose.

Junior heifer calf, second on Nockdair Segis Valentine.

Senior heifer calf, third, fourth and fifth.

Junior heifer calf, first and third on Nockdair Segis Cornucopia and Nockdair Segis Gaische.

Cow having best official record begun at five years or over, second.

Aged herd, second.

Young herd, first.

Get of sire, second and fifth.

Produce of cow, third.

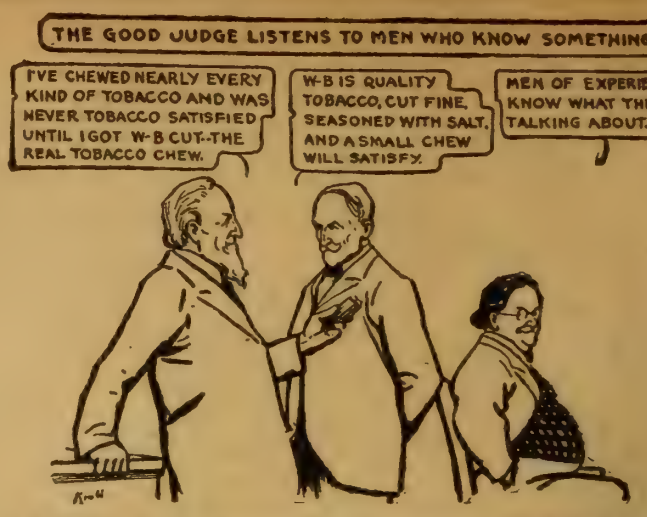
Junior champion bull on Nockdair King Segis Perfection.

The Stratford Association.

The Stratford Co-operative Cow-Testing Association has successfully closed its first year which ended August 1st. Mr. Francis J. Woodward, who was tester for the past year, has resigned in favor of Harry A. Johnson, who files the following as his first report:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Phillip Harter					
No. 2, G. H...	5	4-25-16	918	5.2	47.8
No. 7, N.....	8	4-2-16	951	4.8	44.5
Fenwood Lbr. Co.					
No. 47, R. H..	5	6-7-16	1161.9	3.2	45.3
G. H. Butzke					
No. 12, N.....	7	3-1-16	885	5.1	45.1
No. 15, N.....	4	7-1-16	954	4.5	42.9
No. 14, N.....	4	6-25-16	1008	4.0	40.3
No. 1, N.....11		6-12-16	1047	3.8	40.0
Andrew Kaiser					
No. 12, N.....10		4-1-16	891	5.0	44.5
H. H. Aschbrenner					
No. 14, N....	8	4-30-16	1024	4.2	43.0
Wm. Schmeider					
Boss, G. H...	9	3-8-16	817.8	5.1	41.7

Hary A. Johnson, Official Tester.
James L. Chrowser, Secretary.



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It is natural for a hog to wallow. Provide a wallow close to the feeding grounds, to which add Dr. Hess Dip and Disinfectant occasionally. The hogs will constantly pass back and forth from the wallow to the feed trough; while the DIP will kill the lice and cleanse the skin, the DRIP will destroy the germs of disease and the worms that pollute the ground.

Dr. Hess Dip and Disinfectant

One gallon makes 70 to 100 gallons solution

is excellent for sheep dipping; it is a guaranteed remedy for sheep scab and ticks; it destroys germs and foul odors—in short, its use as a disinfectant around your farm will keep away disease. Invaluable for disinfecting sinks, drains, troughs, garbage cans, outhouses, etc. Good alike for home and stable. Sold in pint bottles, quart, half-gallon, gallon cans and barrels.

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BEAGLE HOUNDS—I have some full-blooded Beagle pups for sale. One 7-months-old dog at $10. 6 that are 6 weeks old at $4 for females and $5 for males. Leonard Ess, Chaska, Minnesota.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

FULL BLOODED COLLIE PUPPIES FOR sale. Farmers' prices. J. V. Northrup, Waupun, Wis.

OUR LEGAL DEPARTMENT

THIS department is edited by a practicing lawyer, who has had years of experience at the bar. He will give accurate and reliable answers to all legal questions when they are of sufficient importance to be of practical interest to any considerable number of our readers. Subscribers who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delaying printed answers, those to whom it is important to receive an immediate reply by mail should remit $1.00, addressed as above.

Law Questions.

Cow Killed by Auto—No Damages.

A Subscriber, Minong, Wis.—A man in this vicinity picketed his cow in the public road, to graze. The cow crossed from the picket pin to the other side of the road stretching the rope about two feet above ground, and while in this position an auto car came along and caught the rope and killed the cow. Can the owner of the cow compel the driver of the auto car to pay for the cow by law?

Answer.—The owner of the cow cannot compel the driver of the auto to pay for the cow. The loss of the cow was caused, partly at least, by the owner's negligence.

Hogs at Large—Landlord and Tenant.

A Subscriber, Henry, S. Dak.—(1) Has a farmer in South Dakota a right to allow his hogs to run at large all over the neighborhood, in summer, and if not, what can persons who are damaged thereby do about it? (2) Has a landlord the right to compel his tenant to shut up his poultry or keep them from destroying the landlord's crops? (3) If I rent a piece of ground for cash rent, has the landlord a right to determine what I shall plant in the ground?

Answer.—(1) All persons damaged by hogs running at large may sue the owner of them and recover a judgment against him for the amount of such damages. (2) In such a case the owner of the poultry is liable to his landlord for damages which may be recovered by a suit before a justice of the peace, but there is no way by which the landlord can compel his renter to shut up his poultry. (3) The landlord has no such right.

Adverse Possession—Division Line.

A Subscriber, Brooten, Minn.—I own the southeast quarter of section thirty in a certain township in Minnesota. This land has been farmed for twenty-five years. I have had a fence on my west line for fifteen years. The quarter section adjoining my land on the west was sold, and the purchaser had a line surveyed between his land and mine which shows my fence to be six rods over his land and he has ordered me to move my fence and put up a new fence on said surveyed line. He took down my fence and came through and cut the hay on said six-rod strip without my knowledge or consent. (1) What can I do about it by law? (2) When said section was surveyed there was a fraction of seven rods over the usual measurement. Who is entitled to this extra land?

Answer.—(1) You have title by adverse possession for fifteen years, up to the line of your fence, even if said fence was not on the true line. You can bring suit against your neighbor for the land he has taken, and also for damages for taking down your fence, and for the hay he cut on the six rods of ground. (2) The surplus land should be equally divided between the two adjoining quarter sections.

Lawful Fence in Wisconsin.

A Subscriber, Arkansaw, Wis.—(1) What constitutes a lawful fence of posts and wire, in the state of Wisconsin. (2) How should a lawful fence be constructed across a creek or stream?

Answer.—(1) A lawful fence in Wisconsin may be all of woven wire or partly of woven wire and partly of barbed wire. The woven wire strands must be 12 wire and the cross wires or meshes of 16 wire; if cross wires they must be not more than twelve inches apart; if meshes not more than eight inches square. Posts must be not exceeding sixteen feet apart, distance of the bottom wire from the ground not exceeding four inches. Keeping in mind these facts and also that a lawful fence must be at least fifty inches high, twenty-six-inch woven wire, with three barbed wires on top is a lawful fence—or thirty-inch woven wire with two barbed wires on top—or forty-six-inch woven wire with one barbed wire on top—or fifty-inch woven wire alone. (2) In fencing across a creek if the parties cannot agree the question should be submitted to the fence viewers to determine what would be a sufficient fence.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Grease Heel.

What can be done for a bull that has grease heel on the left foot right up to his hoof? Have tried different things, but they did not help at all.

Try the application of tincture of iodine once or twice daily for a while. Each time before applying dry clean the parts by using a soft brush. Do not use any watery solutions. This may bring about a cure.

Bronchitis.

Can you inform me of some remedy for my young pigs? They have a bad cough and get scabby, but they eat well. They get so weak and dizzy that they cannot walk. They are not bothered much with lice or worms for I examined some of them after they died. I have dipped some of them twice a day and it did not seem to help much. This trouble started when the pigs were about three or four weeks old. I have them on clover and timothy pasture and fed ear corn twice a day until about two weeks ago, when I started feeding soaked wheat and shelled corn mixed. I have been feeding some of the larger ones shorts and tankage and some stock food and plenty of fresh water.

Your pigs are probably troubled with bronchitis. What the cause of this trouble is would be hard to say. It may, however, be brought about from irritation set up by lung worms. You had better have your veterinarian kill and autopsy one of those badly affected and see if he can ascertain the exact cause of the trouble.

Poll Evil.

I have a four-year-old iron gray gelding which has poll evil. He showed signs of something being wrong with his head about the first of June. I began putting cold water packs on his head for about two weeks, then put liniment on for a week or two. Then it broke and in a few days formed a hole about the size of a lead pencil. The hole is about an inch below the mane on the right side and runs across toward the left side, slanting downward, and about an inch and a half deep. Since the hole formed, which is about three or four weeks, I have syringed it out twice a day with stock dip and liniment. For the last week I have been using salt. It does not discharge very much, but does not seem to get any better.

This should be examined by a veterinarian before treatment is begun, as he will be able to tell the extent of the trouble and advise intelligent treatment. However, if a veterinarian cannot be had you might try the injection of tincture of iodine in the opening once or twice a day for a few days. If this does no good try some caustic, such as chloride of zinc, one ounce to a half pint of water. Use two or three times in one week. The region below the opening should be greased or oiled when caustics are used. After caustic has acted use daily a solution of lysol 1 per cent.

Waupaca and Portage Holstein Breeders.

To the Editor:—The Waupaca and Portage County Holstein Breeders' Association held its third annual picnic at the A. L. Rowe farm, near Waupaca, August 31st. The forenoon was spent in visiting and getting in touch with fellow breeders and in a cattle judging contest for boys under eighteen years of age. Mr. Rowe had a goodly number of his pure-bred stock in his barns and these were used in the contest. A picnic dinner was served. Hon. E. E. Browne, of Waupaca, gave the first address in the afternoon and this was followed by short talks by members of the association. The program was concluded by an address by R. J. Shaefer, of Appleton. Music was furnished by the Agdersberg Orchestra and the Rowe sisters. A stand on the ground was liberally patronized and helped to pay the expenses of the day. The association now has 100 members and a rapidly increasing interest in pure-bred stock is manifested.

A. W. Ritchie.
Secretary of the Association.

Automobile for the Youngsters.

THE boys and girls would like "awful much" to have a Culver racer, a five-horse-power real automobile made in children's sizes for the children's use, and now that they have an opportunity to get one free the proposition is worth investigating. The Farmer's Wife Auto Club, 307 Webb Building, St. Paul, Minn., is offering the racer, and all the boys and girls who would like to own it are invited to write to the company and find out how they can get the car free. See the advertisement on page 24. It gives a picture of the Culver racer and a coupon which will give you a start in the contest for the racer. When writing mention that you saw the advertisement in this paper.—Adv.

Ask your neighbor to subscribe for The Wisconsin Farmer.

The Real Estate Educator

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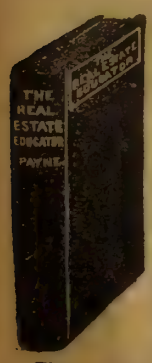

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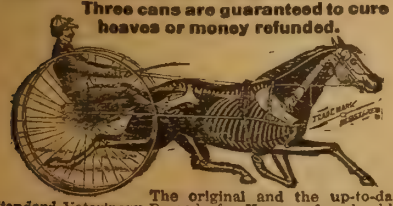

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Farm Home Should Have Wash Room.

The one thing that all farm women will agree upon is the desirability of having a wash room for the men and having it supplied with a concrete floor and a good drain so that it may easily be cleaned. If building a new home the plans should include this room and the home already built should yield up from somewhere the required space.

The expense of this improvement should not be large. A force pump can be purchased without too great an outlay; the cost of the remainder of the equipment, including tanks, sinks, pipes and drain tiles, depends, of course, on the distance of the water source from the house and the kind and amount of equipment which the owner wishes to install.

The University of Wisconsin is planning a model farm home to be built on the campus and the ideas of a number of farm women were sought by those in charge of the work in order that the practical suggestions of those most interested might be considered in making the plans. These housewives were unanimously of the opinion that a wash room was next to indispensable and they advised the building of such a room with a concrete floor so that it might be cleaned more easily and thoroughly. Since the wash room is to be used six days out of seven by men, it is plain that it should be substantial rather than dainty. The concrete floor may cost a little more than other material; still, the cost is reasonable when the advantages to be gained in the way of resistance to the ravages of water are considered.

The wash room should contain besides an ample supply of towels, soap, etc., rows of hooks where changes of garments, working coats and hats may be kept, shoe blacking outfits, clothes brushes and a suitable place for boots and shoes. The obvious usefulness of such a room cannot fail to recommend it to the men as well as the women.

Moreover, this may become a double-service room in that it may be used, also, as the laundry room. To fit it for such a purpose would necessitate very little additional expense, and the cost of an extra room, extra pipes and another tank and drain to make provision for a laundry room elsewhere would be obviated.

The location of the wash room, of course, would depend somewhat upon the arrangement of the rest of the house, good drainage facilities, etc. As a general proposition, however, the ground floor, rather than the basement, is the most practical location.

Potting Bulbs For Winter Blooming.

September is the month to pot bulbs for early indoor blooming. Hyacinths, tulips, narcissus and jonquils are best suited for this purpose. A good soil for potting bulbs is composed of one-half part well decomposed turfy loam, the remainder well-rotted stable manure, leaf mold and sand. These should be well mixed together.

The size of the pot depends on the size of the bulbs and upon the effects desired. As a general rule, for a single hyacinth a five-inch pot should be used. For tulips and narcissus a four-inch pot is large enough, the size increasing with the number of bulbs. In potting place a piece of broken pot or some coarse ashes over the hole in the bottom to secure drainage. Fill the pots half full of soil, set the bulbs so that the tops are at least one inch below the rim, cover them with soil and press it firmly around the bulbs, leaving at least one-half inch space at the top for water. After all have been potted and labeled they should be well watered and placed out of doors, with the pots close together. Nail a board frame around them and cover with six inches of ashes or sand. Leave them there for about six or eight weeks. Then make an examination to see if roots are well developed. If so, remove the pots to a cold frame, shed, attic or cool cellar in a temperature from 45 to 50 degrees and water them well.

The secret of success in bulb forcing is perfect root development. Therefore, be sure that the pots are full of roots before putting them into a higher temperature. By bringing in a few pots at from intervals of from eight to ten days and placing in a sunny window with a temperature from 60 degrees to 65 degrees a succession of flowers may be had for months.

Music of the Home.

Home is where character forms. Home is where we learn to live. Home individualizes, home is the center of all activity; the place from which we go forth to all our relationships. Then, let us form the habit of having music—good music in our homes, keeping it always before our children. Having acquired a knowledge and taste for good music in the school and church, they naturally bring its influence into the home. Parents who fail to cultivate the musical gifts of their children deprive them, and through them the coming generations, of that moral and intellectual legacy which is due them. And just as music is a power in the home, so it is in the world at large. So, whenever opportunity affords, give your children special instruction, not to fit them necessarily for the profession, unless they so desire, but as an accomplishment.

We are born with the power to acquire knowledge, not in possession of it. To learn we must toil—toil at the price we are in duty bound to pay for all we get, be it education, food, pleasure or material wealth. To toil for what is enobling to possess makes one love labor; it becomes sweet to spend the hours in well-directed activity, thereby we enjoy our gain.

Music is no El Dorado for the shiftless, unwilling worker, but to those who are not afraid of labor it offers an extensive field in which they may develop.

What music have we in the home? Are our pianos loaded down with the cheap music called "popular" music? Little, if any, of the so-called popular music survives and stands the test of years, but lives only for the particular period for which it was written. Much of it is as evanescent as thistle-down, wafted hither and yon by the gentle sephyr of sentiment, and then banished by the stronger undercurrent of popular opinion. As a rule, music involving home sentiments, domestic affections, emotions that play upon the heart-strings of the people, these are they which neither time nor constant repetition consign quickly to oblivion.

So let us make a stand for good, wholesome music in the school and home, because such music makes of us better men and women, and thus a better citizenship.—[Garnett Hedge, Dean of Music, South Dakota State College.

Crochet Rugs the Best.

To the Editor:—I noticed that one of our readers wanted to know how to make rugs from old material and I will tell her how I do it.

Sew your rags together either each color separately or as you would for hit-and-miss carpet. Wind them in balls, each color by itself. Buy a wooden crochet hook (which can be got for 5 or 10 cents) and start a chain the same as for crochet, any kind you wish; the oblong kind was what I made. After the chain is started just loop your rags and draw through your chain with the hook. You don't need to sew them and they wear better than the rugs that are braided and sewed together. I have made two and I like them fine.

You can use any sort of old material for these rugs. Tear the strips a little narrower than you would to make rag carpet, as it is easier to draw through with the hook. You can arrange the colors to suit yourself.

Mrs. G. E. M.

How to Repot a Plant.

In repotting a plant, slip the ball of earth out of the old pot without breaking it if possible. The aim should be to disturb the roots as little as possible. Scrape away as much of the old soil from the ball of earth as can be removed without interference with the roots in it. Then drop the plant into its new pot and fill in about it with fresh soil, making it firm by pressure of the fingers as you fill in. Of course, you will have seen that the pot is properly provided with drainage before this is done.

Pimentoes.

To the Editor:—I noticed a request in your paper for a recipe for canning pimentoes. Here is the way I have put them up for two years and they are fine.

Take pimentoes of equal size, remove the stem ends, seeds and inner white fibers. Cut in halves and pour boiling water over them. Let them stand three minutes, drain and drop in cold water and drain after three minutes. Repeat until they have been in cold water three times. Drain the last time and place in glass jars.

Take equal parts of good vinegar and water and to a pint of each add a cupful of sugar. Bring to a boil, then cool. When perfectly cold pour over the peppers and seal. Be sure the peppers are covered with vinegar.

Either green or ripe pimentoes may be used. Mrs. H. A. M.

Canned Pimento Peppers.

To the Editor:—In reply to Mrs. C. R. D.'s request for a recipe for canning pimentoes I am sending the following directions:

Use the peppers after they have turned red. Cut seeds out, wash thoroughly. Have ready some boiling water and drop the peppers into it. Let them become heated through, then carefully place in glass jars or cans that have been thoroughly scalded. Pour fresh boiling water over them to which has been added vinegar in the proportion of one tablespoonful to each quart of water. Let jars cool slowly. Keep in a dark place.

A Reader.

A Bleach For White Wool.

When you begin looking over the supply of winter clothing don't get discouraged if the white woolen garments have become yellow. A weak solution of hydrogen peroxide with borax added is a good bleaching agent for white wool. Make the solution as follows: Add one part hydrogen peroxide to ten parts water and use one tablespoonful of borax to each gallon of water.

Household Hints.

Homemade catsup, after the bottle has been opened, is apt to spoil very quickly. To prevent this, pour a little olive oil into the bottle immediately after use.

To save measuring each ingredient each time one wishes to make cocoa, sugar, cocoa and salt may be mixed together in the proportion desired for use and stored in a covered fruit jar.

Do not throw away the tops of celery. Wash them well, dry them thoroughly in an oven and keep them in a tightly closed jar or tin can, to be used as a flavoring for soups and stews.

White dresses, linens, etc., usually become yellow when put away for any length of time. To avoid this, rinse the clothes through water with enough bluing in it to give them a blue look when they are dry. When the articles are taken out to be used, wash in the usual way, and they will be snow white instead of yellow, as is often the case.

When light cream will not whip easily use viscogen in it, as viscogen is just limewater and sugar and is harmless. It may be made and bottled for use. Use one-fourth teaspoonful to three-fourths cupful of cream, and then cream may be whipped satisfactorily. To make the viscogen dissolve five ounces of sugar in ten ounces of water. Add six ounces of cold water to two ounces of quicklime. Let it slake and strain it. Combine the two liquids. Bottle and shake occasionally several times. Keep in a cool, dark place.

Recipes.

Chocolate Pie.—One cupful sugar, one tablespoonful butter, two tablespoonfuls chocolate (melted), two-thirds cupful sweet milk, two tablespoonfuls flour. Beat together the sugar, butter and yolks of eggs; add chocolate; heat the milk and add gradually except enough to mix the flour; add flour and milk paste and boil in double boiler. Bake crust and fill. Frost top with whites of eggs beaten to stiff froth and sweetened. Brown top in oven.—Rosa.

Egg Plant Fritters.—Add one tablespoonful of lemon juice or vinegar to salted boiling water, and put in the eggplant whole, boiling till tender. After draining, mash it and make the fritters in the following proportions: To every cup of eggplant use a quarter of a cupful of flour, one well-beaten egg, and salt and pepper to suit. Fry in small thin cakes, browning well.

Irish Toast.—Mix two cupfuls of flour with two teaspoonfuls of baking powder. Add one egg dropped into the flour. Use milk to wet. Roll out and fry as you would doughnuts. Serve with sauce made of two teaspoonfuls of flour and hot water enough to thicken. Flavor sauce with vanilla.

Delicious Apple Sauce.—Put in a shallow baking dish one cupful of water, four tablespoonfuls of sugar and a little grated orange peel. Set over fire on asbestos mat. Pare and quarter five apples. Cut quarters in half. When water is hot, put in the apples. Cover closely and cook until soft.

Stuffed Eggs.—Boil the eggs until hard, then cut in halves with a sharp knife, and remove the yolks. Mince these with some finely cut chicken, adding a little butter and a few grains of salt and pepper, with a grating of nutmeg. Refill the whites with this mixture, press the halves well together, using a little raw white of egg to make the joining smooth, and arrange on serving dish.

Sweet Pickle.—Take cucumbers too large to pickle whole, cut in slices about one-fourth inch thick, put in good, strong brine with a piece of alum the size of a hickory nut and let stand overnight. In the morning drain and put into boiling vinegar (I saved all the vinegar from my pickles the past winter and spring and use for this) and let stand on stove until they turn white. Then put in cans and fill with fresh, cold, well-sweetened white wine vinegar, spices to taste and seal tight. Use brown sugar for sweetening vinegar. —Mrs. Wm. S.

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All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Many Birds Make Music.

Dear Young Folks:—I have been reading your letters and think them very interesting.

I am a little girl eleven years old and I live in the city. There are nice shade trees on our lawn. Robins, orioles, bluejays, song sparrows, mocking birds, flickers, wild canaries, blue birds and lots of sparrows nest here and sometimes a pair of blackbirds visit us. You will see we have lots of bird music even though we are in town. We have lots of other music, too, because there are pianos and phonographs in all neighborhoods.

We have nice automobile drives in our city which lead us past beautiful homes and beautiful parks. One is the electric park. There is a very nice playground in this park and it is a wonderful sight at night.

We have two cats and about a hundred chickens.

I have three sisters and one brother. I am learning to play the piano. We have an automobile and I see beautiful places every Sunday when we go for a ride.

I have a riddle for the Young Folks to guess. Round as an apple, black as a bear; tell me quick or I'll pull your hair. —Myrtie.

How to Made Doll Dishes.

Dear Young Folks:—My papa has taken this paper for some time and I always read the letters and I enjoy them ever so much. I have written several times before and this time I am going to tell the girls how to make doll's dishes. Take two tablespoonfuls of salt, one tablespoonful of flour and stir together; add two tablespoonfuls of water. Put on the stove until thoroughly heated. Then shape dishes as wanted.

I am eleven years old. My school has begun and I am in the sixth grade. —Myrtle.

Prettiest Calf His Pet.

Dear Young Folks:—I am eight years old and I am in the second grade at school. I live on a forty-acre farm and we have ten cows, two dogs, three cats and three calves. The prettiest calf of all I call mine. It is the oldest of the three. I feed it both night and morning. It runs to meet me when it sees me coming.

I think it is fun to give riddles. Can you tell me the answer to Eleanor's riddle—what goes up and down the hill and yet never moves—is a road. —Nels.

Great Fun Camping Out.

Dear Young Folks:—I have wanted for a long time to write to you to tell you how much pleasure I find in reading your most interesting letters. I always look forward to Thursdays, as they bring the Young Folks' page.

I am thirteen years old and in the ninth grade at school. We had three months' vacation this summer. I love to go to school. My favorite study is grammar.

Did any of the Young Folks ever go out camping? About a month ago three of my companions, my sister Janet and Dorothy, and I went camping. We had a splendid time, especially in the evenings when we would sit around the campfire and toast marshmallows. We went swimming in the mornings.

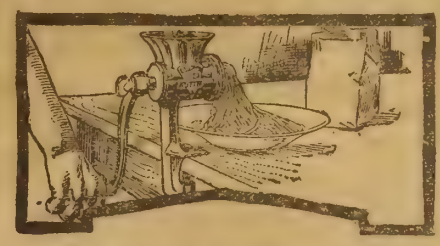
I like all kinds of housework, but above all I love to bake cakes. I wish some of the girls would send me a recipe for a good cake. —Emmeline.

A Magic String.

Procure a few pieces of cotton string, each about one and one-half feet long, and fill them well with soap. Prepare a brine by dissolving three tablespoonfuls of salt in a cup of water. Place the strings in the brine and allow them to soak for two hours or longer. It is necessary that they be thoroughly saturated with the brine.

When taken out of the brine and thoroughly dried suspend one of them from a nail on a ledge and hang a finger ring on its lower end. Apply a lighted match to the string and allow it to burn. The ring will not fall, but will hang by the ash.

PHOEBE PHILLIPS AND HER JERSEY CALF, TINY.



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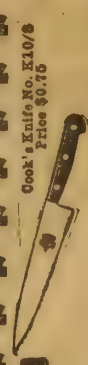
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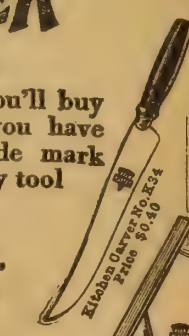
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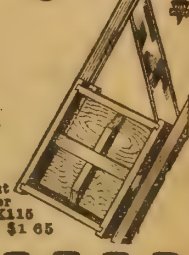
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1549—Girls' one-piece dress with or without yoke lacing and with sleeve in either of two lengths. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3½ yards of 36-inch material for an 8-year size.

1586—Ladies' dressing or house sack. The pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. Size 36 will require 3¼ yards of 44-inch material.

1864—Girls' dress, with sleeve in either of two lengths. The pattern is cut in 4 sizes; 8, 10, 12 and 14 years. It requires 3½ yards of 44-inch material for a 12-year size.

1863—Ladies' one-piece dress, with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6¼ yards of 44-inch material for a 36-inch size.

1579—A unique and easily adjusted apron. The pattern is cut in 3 sizes: Small, medium and large. It requires for a medium size 5⅝ yards of 36-inch material.

1612—A charming gown for the matron. The pattern is cut in 6 sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 5⅞ yards of 44-inch material for a 36-inch size.

1872—Dress for misses and small women. The pattern is in 3 sizes: 16, 18 and 20 years. It requires 6¾ yards of 36-inch material for a 16-year size.

1650—Girls' dress with or without overblouse, and with two styles of sleeve. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 3⅝ yards of 44-inch material for a 10-year size for the dress, with 1½ yards for the overblouse.

1873-1877—A fashionable gown comprising ladies' waist 1873 and ladies' skirt pattern 1877. Ladies' waist pattern 1873 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Ladies' skirt 1877 cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 8⅛ yards of 36-inch material to make this costume for a medium size. Two separate patterns, 10 cents for each pattern.

1860—Girls' dress with yoke and sleeve in either of two lengths. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2¾ yards of 44-inch material for a 6-year size.

1521—A trim and popular suit for mothers' boy. The pattern is cut in 4 sizes: 3, 4, 5 and 6 years. It requires 2⅜ yards of 36-inch material for a 4-year size.

1870—Ladies' coat for utility or general wear. The coat is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 54-inch material for a 36-inch size.

A quarter of a billion acres of public land remain in the United States to be taken over by homeseekers, Secretary Lane announced. In twenty-five states, from California to Michigan and Florida to Washington, public domains are scattered and ready to be opened. All but 2,290,000 acres lies in the far West. Nevada, with 55,375,077 acres, contains the largest area. A dozen of the western states contain more than 254,945,589 acres, Ninety-two million acres are unsurveyed. Of the twenty-five states containing public lands, Missouri has the least, 952 acres in sixteen counties. Kansas has 56,018 and Oklahoma 55,250 acres.

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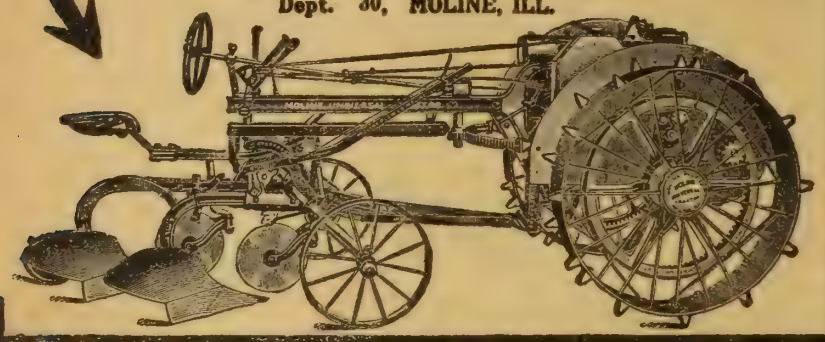

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International Sunday School Lesson.

Lesson for October 1, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

PLOT THAT FAILED.

LESSON TEXT—Acts 23.

GOLDEN TEXT—They shall fight against thee; but they shall not prevail against thee; for I am with thee, saith Jehovah, to deliver thee.—Jer. 1:19.

The stirring events of this lesson occurred in the Castle Antonia and the Sanhedrin hall, near the temple court of Jerusalem; also in Caesarea, the Roman capital of Judea, on the Mediterranean coast, in the year A. D. 57, just at the close of Paul's third missionary journey. The lesson pictures two successive days of strange adventures in which Paul was concerned, a narrow escape and the unexpected providences used in his deliverance. The day was inaugurated by Paul's magic words "I am a Roman citizen," which caused the commander, Lysias, to release him from the threatened scourging, and made him more than ordinarily careful in his treatment of Paul.

I. Before the Elders (vv. 1-12). By referring back to chapter 21, v. 13, we find the charge which really underlay all of Paul's trouble, his preaching in the name of the Lord Jesus. Paul's defense is interesting. He gives us a rehearsal of his Christian life, laying emphasis upon its blamelessness and the fact that he is not an apostate Jew. The high priest speaks to silence him, but not gently. Although Paul for a moment seems to give way to his justifiable indignation, he quickly reveals his reverence for the rulers of the people. He then divides the sanhedrin. Read carefully chapter 22:6-7, and compare with verses 17 and 18. The sanhedrin could not explain this testimony of Paul, and were seeking to put aside the whole question. An interesting discussion would be to consider the insult to Paul. Was his indignation right and rightly expressed? Another question, the matter of Paul's apology. Just for what did he apologize? Is it ever wrong to speak evil of rulers? These were indeed days of stress and storm. Was Paul justified in dividing the sanhedrin in order to conquer their opposition to him? Again, how God used these incidents in the furtherance of the gospel is a suggestive lesson for us all. It has been hinted that Ananias was not in his priestly garments, and, therefore, perhaps not readily recognized by Paul. Paul may never have seen him, as he was elected high priest after Paul had left the council. It is interesting to note that it is not said that anyone struck Paul or that Paul did not apologize for his words or deny them to be true, but only for their being spoken to the high priest. Read in this connection what Christ said to the Pharisees (Matt. 23:27). Paul apologized because he had broken the law found in Exodus 22:28. In the trial of Christ one of the officers struck Jesus with the palm of his hand, whereupon Jesus answered him, saying: "If I have spoken evil, bear witness of the evil, but if well, why smitest thou me?" On the other hand, when Jesus was ill-treated by the common soldiers, he opened not his mouth.

II. The Plot and Deliverance (vv. 12-35). Paul's prospect was not a pleasant one. In the darkness God appeared to his faithful servant to cheer him (v. 11). Perhaps Paul was tempted to think he had made a mistake in coming to Jerusalem over the protests of his friends, but evidently the Lord heartily approved of his testimony there. A dangerous conspiracy was forming against him, but God was, as he always is, beforehand with his comfort and preparation for the crisis. We have often speculated as to what became of the forty men who entered into it (see v. 12)—whether they actually lived up to their oath. If they did, they must have died of starvation. They were determined men, willing to go any length, and fancied they were doing the will of God. There is no more dangerous man than he who fancies that he must be the judge as to wl are God's friends and who are his foes, and that he is the appointed executioner of God's judgment. The plot was well laid, and seemed certain of success, but it failed miserably. (See Psalm 2:1-4; 64:1-10; Isaiah 41:10). The wicked, who leave God out of their plans, no matter how cunningly they plot, are doomed to failure (Rom. 8:31). These plotters co-operated with the priest. Ecclesiastics have often descended to the lowest villainy. Men are not murdered today, though their reputations are often blasted by unprincipled and hellishly impelled professed followers of the lowly Nazarene. Paul had friends in this city. His nephew's discovery and revelation, and the Gentile soldier, a colonel, effered his deliverance. In the boy's heart there must have been great admiration for the uncle. It would be well for teachers of boys to have them repeat in their own language this boy's story. Paul was not safe in Jerusalem. The Roman governor recognized the nature of the conspiracy, and the desperate character of the Jewish fanatics, and, therefore, sent him under a strong guard to Caesarea, which was reached after a journey on horseback, lasting through the night and the following day.

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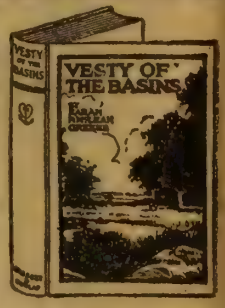

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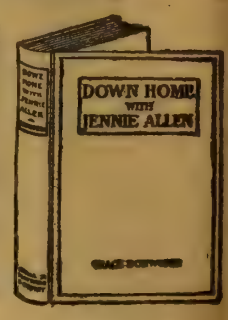

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By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER III—Continued.

SHE saw nothing more of him until evening, and then he was rather quiet, sitting beside Tillie and Miss Margaret, with occasional low-toned remarks to them, but not joining in the general conversation.

"What a queer remark that was for a man to make!" thought Rachel, looking at him across the room;—"a young man especially;" and that started her to thinking of his age, about which people would have widely different opinions. To see him sometimes, laughing and joking with the rest, he looked a boy of twenty. To hear him talking of scientific researches in his own profession and others, of the politics of the day, or literature of the age, one would imagine him at least forty. But sitting quietly, his face in repose, yet looking tired, his eyes so full of life, yet steeped in reveries, the rare mouth relaxed, unsmiling, then he looked what he probably was, thought the girl—about thirty; but it was seldom that he looked like that.

"Therefore," reasoned this feminine watcher, "it is seldom that we see him as he really is; query—why?"

"Perhaps I felt as a parent feels!" How frank his words had been, and how unlike most men he was, to give utterance to that thought with so much feeling, and how caressing to the child! Rachel had to acknowledge that he was original in many ways, and the ways were generally charming. His affections were so warm, so frankly bestowed; yet that gracious, tender manner of his, even when compared with the bluntness of the men around him, never made him seem effeminate.

Rachel, thinking of his words, wondered if he had a sweetheart somewhere, that made him think of a possible wife or children longingly—and if so, how that girl must love him!

So despite her semi-warlike attitude, and her delight in thwarting him, she had appreciation enough of his personality to understand how possible it was for him to be loved deeply.

Jim, under Miss Hardy's tuition, had been making an attempt to "rope in" an education, and that night was reading doubtfully the history of our glorious republic in its early days; garnishing the statements now and then with opinions of his own, especially the part relating to the character of the original lords of the soil.

"Say, Miss Rache, yer given' me a straight tip on this lay-out?" he said at last, shutting the book and eyeing her closely.

The question aroused her from the contemplation of the Hermes-like head opposite, though she had, like Hardy, been pretending to read.

"Do you mean, is it true?" she asked.

"Naw!" answered Jim with the intonation of supreme disgust; "I hain't no call to ask that; but what I'm curious about is whether the galoot as wrote the truck lied by accident—someone sort o' playin' it on him, ye see—er whether he thought the rest o' creation was chumps from away back, an' he just naturally laid himself out to sell them cheap—now say, which is it?"

In vain his monitor tried to impress on his mind the truth of the chronicles, and the fact that generations ago the Indian could be truly called a noble man, until his child-like faith in the straight tongue of the interloper had made a net for his feet, to escape which they had recourse only to treachery and the tomahawk, thus carving in history a character that in the beginning was not his, but one into which he was educated by the godly people who came with their churches and guns, their religion and whisky, to civilize the credulous people of the forests.

Jim listened, but in the supercilious disbelief in his eyes, Rachel read the truth. In trying to establish historical facts for his benefit, she was simply losing ground in his estimation at every statement made.

"An' you," he finally remarked, after listening in wonderful silence for him—"an' you've read it all, then?"

"Yes, most of it."

"An' swallowed it as gospel?"

"Well, not exactly such literal belief as that; but I have read not only this history, but others in support of those facts."

"Ye have, have yeh?" remarked her pupil, with a sarcastic contempt for her book learning. "Well, I allow this one will do me a lifetime, fer I've seen Flatheads, an' Diggers, an' Snakes!"

Thus ended the first lesson in history.

"Don't you think," said Tillie softly to Stuart, "that Rachel would win more glory as a missionary to the Indians than among her own race? She is always running against stumbling-blocks of past knowledge with the progressive white man."

Rachel cast one silencing glance at the speaker; Tillie laughed.

"Never mind," she said reassuringly; "I will say nothing about your other attempt, and I only hope you will be willing to confine yourself to the Indians near home, and not start out to see some Flatheads, and Diggers, and Snakes for yourself."

"Lawd bress yeh, honey!" spoke up Aunty Luce, whose ears were always open to anything concerning their red neighbors; "don yo' go to puttin' no sech thoughts in her haid. Miss Rache needs tamin' down, she do, 'stead o' 'couragement."

"Well, it's precious little encouragement I get here, except to grow rusty in everything," complained Rachel. "A crusade against even the Diggers would be a break in the monotony. I wish I had gone with you to the Kootenai village, Mr. Stuart; that would have been a diversion."

"But rather rough riding," he added; "and much of the life, and—well, there is a great deal one would not care to take a lady to see."

"You don't know how Rachel rides," said Tillie, with a note of praise in her voice; "she rides as hard as the men on the ranch. You must go together for a ride, some day. She knows the country very well already."

Rachel was thinking of the other part of his speech.

"I should not have asked to be taken," she said, "but would have gone on my own independence, as one of the party."

"Then your independence would have led you to several sights revolting to a refined nature," he said seriously, "and you would have wished yourself well out of it."

"Well, the Kootenais are several degrees superior to other tribes of the Columbia Basin; so you had better fight shy of Jim's knowledge. Why," she added, with a little burst of indignation that their good points were so neglected, "the Kootenais are a self-supporting people, asking nothing of the Government. They are independent traders."

"Say, Miss Rachel," broke in Jim, "was Kalitan a Kootenai Injun?"

"No, though he lived with them often. He was of the Gros Ventres, a race that belongs to the plains rather than the hills."

(To be continued.)

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Did You Follow Our Advice In Last Week's Paper?

Then you have read the editor's story and our page announcement of the Hillsdale ranch in the issue of August 10th. And, anyway, we are pleased to have you read the following articles quoted from the August 31st issue of the Herald of Burns, Wyoming:

Conard Buys Four Section Farm.

Mr. E. C. Conard, of Rockwell City, Iowa, who purchased a farm from the Federal Land Co., last fall, which he expected to move onto with his family next spring, was in Burns Tuesday and Wednesday. His object here was to look over the Hillsdale ranch, now being colonized by the Federal people.

That he was pleased with it is shown by the fact that before starting for Iowa last night he closed a contract of purchase for Sec. 3-15-64 and Sec. 33-16-64, which corners Sec. 3 on the northwest. With the purchase Mr. Conard secures the state land leases on Secs. 34 and 4. This makes him a square farm of 2,560 acres.

Mr. Conard was more than pleased with crop conditions here. He says that having seen the grains grown in 1915 with normal rainfall, and this season of unprecedented drouth, he is satisfied that this is just as sure a crop country as in Calhoun county, Iowa, besides being much superior for cattle raising.

Mr. Conard will break and put into crop 640 acres next spring, and will stock his new ranch with several hundred head of cattle. He will move out with his family as soon as he has a public sale in December. Mrs. Conard was here with him last fall, and those who met her are delighted that this splendid family will soon be residents of the Golden Prairie District.

Increases Holdings by Additional Quarter.

G. W. Price, of Osceola, Neb., who came out to Burns last year and bought a quarter section of the Federal Land Co., returned this week and was so well pleased with the conditions, regardless of our dry-crop season, that he purchased another quarter section, which makes him a fine half section of property. He expects to move onto his place in the early spring and make his home on the Golden Prairie. Mr. Price subscribed to the Herald while here, as the best medium by which to keep track of the conditions in this vicinity. What the Golden Prairie needs more than anything else, is good farmers, and Mr. Price and his family will be a valuable addition to the community.

Also let us suggest that if you have not yet filled out and mailed us the coupon below, now is a splendid time to do so.

FEDERAL LAND COMPANY, Burns, Wyoming

Field of winter wheat in shock and binder at work on farm of Richard Spatz, adjoining the Hillsdale ranch. Photo taken July 20, 1916. This same field produced 50 bushels of oats per acre in 1915, the wheat shown being drilled into the oats stubble in September.

FEDERAL LAND COMPANY, BURNS, WYO.

Gentlemen: Please mail me at once full descriptive literature of your Hillsdale ranch and the Golden Prairie District of Wyoming.

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Remember this: That we are protected from hot winds and extreme heat by the snowcapped Rockies, always on clear days in plain view to the southwest. This is fully explained on page 3 of the booklet entitled "Wheat Growing and General Farming Without Irrigation in the Golden Prairie District" which will be sent to all who fill out and mail us the above coupon.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

Wisconsin Farm Bargain

ONLY $1,800 takes good clay loam 80—50 acres in good fields, 10 more cleared, balance good pasture with stock water. Excellent frame buildings. Convenient location on main road, rural route, telephone line, one mile to school and church, and 2¼ from creamery and store in prosperous dairying country. Price $4,700, balance easy terms, 6% interest. W. M. Christensen, Cashier, Farmers and Merchants Savings Bank, Luck, Wisconsin.

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5,000 ACRES; best in Canadian West; 3,000 crop, 1,000 summer fallow, 1,000 grazing; fifty horses; three tractors; complete modern equipment and buildings; high state of cultivation; close to elevators; valid reason for selling. Will yield fine returns and double in five years. $100,000 will handle. Bruce Scott, Chamber of Commerce, Detroit, Mich.

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DAIRYING IN AITKIN COUNTY, MINN., will prove your royal road to fortune. Its soil, grasses, water, location, low prices and our easy terms, all are unequaled anywhere else. Write for literature. ARNOLD, Land Agent, 153 Wolvin Bldg., Duluth, Minnesota.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

The Grant County Poland China Breeders' Boar Sale.

SOMETHING a little out of the ordinary will happen at Lancaster, Grant county, Wis., Tuesday, October 10th. The Poland China breeders of this county are live ones and last winter they formed a county association and on the above date the association will hold its first sale. The success of the future sales depends on the individuals that will go in this sale, the breeders realize this and consequently the best boars from each herd have been consigned. There will not only be a few good boars, but every lot in the catalog are boars that the owners have reason to feel proud of. The writer has visited the various herds from which boars have been selected and we are glad to say that this is an extraordinary offering in every respect and we sincerely hope that the buying public will appreciate this high-class lot of boars. It stands to reason that by picking the tops from seventeen herds one should get together an offering of boars seldom seen in one sale. Prospective buyers couldn't attend a sale where they would have a chance to bid on a greater assortment of popular breeding. No matter what breeding you have in your herd you can find breeding in this sale that will not interfere with your present blood lines. Frank Renalde is selling some of the largest spring boars we have seen, they are real herd-boar prospects. Chris Kartman is selling sons of King Joseph, he by Big Joe out of a daughter of Big Orange. He is also selling a son of Monster Big Bone, he by the noted Black Big Bone, the sire of the Iowa champions. C. S. Flesch will sell some outstanding boars by his champion, Jumbo's Equal 2d. When Dobson & Eastman say they will sell the best they have, that is enough said. We might mention that their futurity boars go in this sale, you'll want one or more. Some of the best ones will be consigned by F. A. Morehouse, sired by Ideal Jumbo, the prize-winning boar purchased in Minnesota. Space won't permit us to mention the various individual boars that go in this sale, you must get a catalog to get the full information, and then you won't be able to appreciate the offering unless you see it. You can make good connections from the east and south and those coming from the north or south along the river, on the C. B. & Q. should stop off at Potosi where free transportation will be furnished to the sale. In case you can't attend this sale in person be represented with a bid, for if you are going to want a Poland China boar you will not be disappointed with anything in this sale offering. T. P. Shreve will represent The Wisconsin Farmer at this sale and handle all mail bids. Write him in care of Burlie Dobson, Lancaster, Wis., and your instructions will be carried out in an honorable manner. Get a catalog at once and mention The Wisconsin Farmer. See page 19.—Adv.

Report of Horse Sale at State Fair.

THE consignment sale of stallions and mares held during the Wisconsin State Fair was well attended, but the crowd did not want registered horses of any breed. These sales have been held at various state fairs, but as a rule they are not successful. In many instances the animals consigned are not desirable and such was the case with some of the consignments of this sale—they brought, however, about what they were worth, but some of the outstanding stallions and mares sold far below their value and it took nerve on the part of the owners to sacrifice them at the prices offered. The Pabst Stock Farm sold many of their Hackneys, geldings and mares that had been prize winners for the Pabst stud. These, too, sold far below their value. It was a good day for the buyers and those that took advantage of the low prices that prevailed will certainly make money on their investment. The sale was well managed by Mr. Fred Pabst and it was no fault of his that the offering did not bring more money.—Adv.

Eglehof Chester Whites.

JOS. EGLEHOF, Edmund, Wis., has succeeded in raising seventy-five pigs of August farrow and for the time being they will be offered at very conservative prices. They are all from matured dams and from four different herd boars. Mr. Eglehof is one of the pioneer Chester breeders of the state and we have seen a great deal of his breeding in the various herds over the state. He is a good caretaker and we believe that you will be satisfied with what he sends you on your order. He can ship you a pair not related and for a short time the price on the pair will be $25. If interested write at once so as to get the pick. Please mention The Wisconsin Farmer. See page 22.—Adv.

Boars by the Grand Champion King Defender.

B. W. LITTLE, Janesville, Wis., is the man that "grew out" and developed the Wisconsin State Fair grand champion, King Defender. If you want a spring boar or gilt sired by a grand champion, Little can fill the bill, for he has a lot of them and they are good ones. You can add prestige to your herd by having a son of a grand champion at the head. Get his prices and description at once. Don't delay, for they will be in demand now. Don't forget to mention The Wisconsin Farmer. See page 22.—Adv.

J. W. Thomas Wins Silver Trophy.

J. W. THOMAS, the popular Duroc Jersey breeder of North Bend, Wis., is the winner of the silver trophy given by The Wisconsin Farmer for the best litter of pigs shown in the Duroc Jersey futurity at the Wisconsin State Fair. Competing with the best herds in the state, Mr. Thomas deserves credit for being able to win this coveted prize. Mr. Thomas is one of the best feeders in the state and his pigs are in the best of condition at all times. His winnings this year were on the get of Prof. King and Grandmaster. The first mentioned boar is a son of Indiana King, a first-prize winner at the Minnesota State Fair in 1915 and Grandmaster was the junior champion boar at the Wisconsin State Fair the same year. This boar is a grandson of the noted Orion Chief. At this time Mr. Thomas is offering thirty boars of spring farrow and they are good ones, two spring yearlings, and forty spring gilts. Now we do not hesitate to recommend this lot of Durocs, for we feel that they will give satisfaction. Those that want gilts can order them now and they will be held and bred to a son of King the Col. This boar was the pick of the O. S. Larson herd and is an outstanding individual in every respect and with the care he will receive in Mr. Thomas' hands we feel sure that he will be heard from in the future. The advertisement of this herd appears on page 22 and it will pay you to get his prices and description at an early date. Mention this paper, please.—Adv.

The Olathe Holstein Herd.

WITHOUT a doubt, one of the best herds of producing Holsteins in western Wisconsin is located at Eau Claire and owned by the Silver Springs Farm Co., Geo. H. Comings, Pres., and W. S. Comings, vice president and manager. Practically the entire herd is made up of animals of their own breeding. A high standard of efficiency is set and the cattle must come up to this standard or they are not maintained in the herd. The herd numbers forty-five females of Ormsby and Piebe breeding. At the head of the herd stands Sir Bess Ormsby Mercedes, a son of the noted Sir Pietertje Ormsby Mercedes 37th and Daisy Queen De Kol, A. R. O. 871.7 pounds butter in one year, average fat 3.92. This cow was one of the "ten best cows" in the Wisconsin cow competition. Remember, this firm are breeders exclusively and offer for sale young stock of their own raising. Complete records are kept and if you are interested it will pay you to write for details relative to the stock they have for sale. Their advertisement will appear regularly in The Wisconsin Farmer. Kindly mention this publication when writing. See page 21.—Adv.

The Sprain Durocs.

IF you haven't purchased that spring or fall boar get the prices and description of the Sprain Durocs. They have boars sired by five noted sires and individually they will please you and the prices asked are very reasonable. Geo. D. Sprain & Sons, West Salem, Wis., want to get a reputation and they will guarantee to give you your money's worth. Try them and in writing please mention The Wisconsin Farmer. See page 22—Adv.

McDonald at the Fairs.

DID you see those big-type Poland Chinas exhibited by J. D. McDonald, of North Bend, Wis., if you didn't you certainly missed a show worth seeing. Such sows were never before seen on the Wisconsin State Fair grounds and to say that they were the attraction in the swine barn would be putting it mildly. We had predicted for some time that his herd boar, Mac's Chief, was the best champion prospect that we had seen and our predictions came true. Here is a great boar, weighing over 1,000 pounds, very smooth, good spring of rib, plenty of bone and stands on good feet and pasterns. He was the biggest champion ever seen at the Wisconsin State Fair. At the Minnesota Fair McDonald had the grand champion sow and had there not been a mistake made in the entries at that fair he would have had the first prize herd. At the Wisconsin Fair he won all championships with the exception of junior champion sow. He won more points in the Poland China futurity than any other exhibitor, therefore, winning the silver trophy offered by The Wisconsin Farmer. We will not go into details relative to the winning of the McDonald herd, for these appeared in full in our September 21st issue. The judge tied the ribbons on the big ones and McDonald had them. Boars from this herd are being offered for sale and it is worth something to have a herd boar that comes from such a good herd as J. D. McDonald owns. Get his prices, but don't stop for a few dollars if you get what you want. Mention this paper. See page 23.—Adv.

Holsteins for Indiana.

MR. S. EVERETT STUBBS, of Wilkinson, Ind., has recently purchased near Janesville, Rock county, Wis., a very fine load of Holstein cows. Many of them were pure breds and the balance high grades. They were selected from the herds of John L. Fisher, W. C. Hugunin and A. M. Easton. Mr. Stubbs represents a large creamery concern in Indiana and the cattle he purchased will be sold to farmers at a very reasonable figure and on easy terms. Mr. Stubbs is a very competent man for the position and the farmers of Indiana should be well pleased with the class of Holsteins he purchased.—Adv.

Gray's Chester Whites.

A. L. GRAY, Mt. Hope, Wis., has a fine lot of Chester Whites for sale this fall. He showed his hogs at three fairs during the last few weeks and took nineteen firsts and nine seconds. He has twenty spring boars, four yearlings, and twenty gilts which he offers at reasonable prices and the farmer who is interested in Chester Whites will be pretty sure to find what he wants in Mr. Gray's herd. See his advertisement on page 22 and write him for further particulars about his prize-winning Chester Whites.—Adv.

A Cheap-Fuel Tractor.

A TRACTOR that will do the work of eight horses at the upkeep cost of two is what the Waterloo Gasoline Engine Co., Waterloo, Iowa, are offering in their Waterloo Boy kerosene tractor. It is splendidly adapted to the needs of the small farm. Besides the saving in fuel cost, and its reliable, steady work, its simplicity commends it to careful farm buyers. It can easily be handled by one man or a boy. The Waterloo Boy tractor plows eight acres a day and pulls three fourteen-inch plows. See the advertisement on page 10 and write for their illustrated catalog, mentioning this paper.—Adv.

Atwater's Big Winnings.

WE doubt if the people of Wisconsin really appreciate the fact that L. F. Atwater, Bangor, Wis., has one of the best herds of Duroc Jerseys in the United States. If this herd was owned by some of the "noisy" fellows of Iowa, Indiana or Ohio, they would be known all over the United States, for very few of them have anything on the Atwater herd. L. F. continues to sell Durocs at satisfactory prices, so he doesn't see the wisdom of making a lot of noise. Some time ago Illustrator King "went back" on his feed which left the owner without an aged show boar, but he certainly made up for that on his sow herd. At the Minnesota Fair Atwater had the junior champion boar and both sow championships besides other class prizes. At the Wisconsin State Fair he turned the same trick besides being the heaviest winner in the futurity thereby winning the silver trophy offered by the Duroc Bulletin for the premier exhibitor. The noted Brookwater Farm show herd owned by Professor Mumford was a "runner up" on Atwater, but we are glad to report that the Wisconsin Durocs had it on the Michigan entries. The boars that made up his winning futurity herd will be sold in the boar sale which will be held at the farm near Bangor, Wis., October 18th. For this sale forty head have been cataloged, the like of which has never been seen in the Northwest before. Plan now to attend this sale. First get your catalog, it is ready for you and can be had for the asking. Write L. F. Atwater, Bangor, Wis., and mention The Wisconsin Farmer. See page 22.—Adv.

Burts' Duroc Jerseys.

F. H. BURT & SONS, Brodhead, Wis., are offering about 150 boars and gilts this year sired by Porfessor B. 148913, Model Wonder 182445, Col. S. Jr. 43869, Cherry King's Rival and Owan Cherry King Jr. 56375. This breeding is as good as anything that can be procured in Duroc circles. Burts' pigs have done exceptionally well this year and now weigh from 125 to 200 pounds. Four pigs of one litter were shown at the Janesville Fair, taking five prizes. The boars are all big, long fellows, and the sows are exceptionally roomy. Burts have a new method of selling. They not only ship on approval, but allow ten days' free trial after which the purchaser may return the pigs at their expense if not satisfactory. Read their advertisement on page 22 and write for their new guaranteed descriptions. Mention that you saw the advertisement in this paper.—Adv.

Two Red Poll Bulls for Sale.

WE have just had a letter from J. W. Salter & Son, Unity, Wis advising that they have two Red Poll bulls of serviceable age that they will sell. We saw these bulls as calves and at that time they looked like real herd bull prospects and Mr. Salter advises us that they have done fine since that time, consequently we do not hesitate to recommend these bulls to anyone interested in this breed. To anyone wishing to buy a few heifers for foundation stock, they will price some of their best females. The recent sales made by the above firm are as follows: One sixteen-months-old bull to E. Schoenich, Dousman, Wis.; one eight-month-old bull to L. T. Watson, Marshfield, Wis.; one two-year-old heifer, three cows and one eight-month-old calf to Wm. J. Brown, Gilman, Wis. The Salters have good cattle, investigate. See page 20.—Adv.

The Grand Champion King Defender.

THERE was nothing in the Duroc Jersey aged boar class at the Wisconsin State Fair that caused King Defender any trouble—he was the outstanding boar of the class, winning over such noted boars as Cherry King's Rival, an excellent boar, however. It was generally conceded that there was no boar on the grounds that could beat King Defender for the championship and such was the ultimate outcome. This boar is owned by John L. Fisher, Janesville, Wis., and at a later date sows bred to this boar will be offered for sale. At the present time spring and fall boars are being offered at reasonable prices. Write Mr. Fisher and don't forget that this is the home of the grand champion, King Defender. See page 22.—Adv.

The Parker Durocs.

E. H. PARKER & SON, of Janesville, Wis., had a nice lot of boar pigs at the Wisconsin State Fair and the visitors were greatly impressed with the type of Durocs this firm raises. They have just as good Duroc boars at home as they had at the fair, though not in show condition, but in the proper shape to give satisfaction in the herd. You take no chance when you

Live Stock Advertisement Paid Well.

So George Wenham & Sons, of Fort Atkinson, Wisconsin, decided to take a yearly contract in The Wisconsin Farmer.

IT WAS EASY to convince George Wenham & Sons, of Fort Atkinson, Wisconsin, that a live stock advertisement in The Wisconsin Farmer paid well. These breeders of Short-horn cattle are now advertisers on a regular yearly contract. Read their letter:

We have decided to run an advertisement for the entire year in The Wisconsin Farmer, as we feel from the results obtained during the short time our advertisement has been running, that it will pay us very materially to have our names before the public all the time. We are convinced that it pays to let the people know what we have for sale and that The Wisconsin Farmer is the proper medium for us to use. We recently sold a carload of cows and heifers to a party in Michigan and we sold a great many bulls at satisfactory prices through our advertisement in The Wisconsin Farmer.

Evidence like this to prove the pulling power of The Wisconsin Farmer live stock advertisements is piling up all the time. That's one big reason why The Wisconsin Farmer runs so many more live stock advertisements than any other Wisconsin farm paper. Guaranteed weekly circulation, 90,000.

For rates and further information, address

THE WISCONSIN FARMER, Madison, Wisconsin.

orden from the Parkers, they will send you a good boar or none at all and you will find the pig just as represented. If you are going to want a Durroc Jersey boar, write for prices and description of the Parkhurst Durocs. In so doing kindly say you saw the advertisement in The Wisconsin Farmer. See page 22.—Adv.

Harry Crandall and the Great Schoolmaster.

WISCONSIN needs more and better Chester White herd boars and The Wisconsin Farmer gives its readers the name of another Chester White breeder with whom it will pay to correspond. All men that follow the Chester White breed have heard of Harry Crandall, Cass City, Mich., the breeder that had that great herd of Chester Whites fitted for 'Frisco last year. On October 17th he will sell fifty head of boars and sows and this will be an extraordinary offering from start to finish. As an attraction the noted Schoolmaster will be offered; this is the boar for which Mr. Crandall paid $800. He is sired by Comet, the grand champion boar at Indiana this year, he by old Wonder. Schoolmaster was grand champion at Detroit this year. The junior champion boar at Ohio and Wisconsin was a pig sired by Schoolmaster. His sale offering will be made up of the get of Schoolmaster and Post 3d. The latter boar is the sire of some of the greatest sows in the United States. Such sows as Arcadia, Tena 8th, Cass City Bell, and the boar, Abo, every one a grand champion. Write Mr. Crandall for his catalog and if you can't attend the sale in person send your bids to Fred Moore. He will handle your bid in an honorable manner. Please mention The Wisconsin Farmer when writing. See page 22.—Adv.

C. S. Flesch and Jumbo's Equal 2d.

WE think that one of our best "finds" is the herd of Poland Chinas owned by C. S. Flesch, Mt. Ida, Wis. Not that he has the best herd in the state at the present time, but Charlie is one of those progressive breeders always looking for something with which to improve his herd. He has a number of choice gilts to sell, yet he purchased several at the Wisconsin State Fair, and they were good ones, that he thinks will cross well with Jumbo's Equal 2d. If you attend some of the winter brood sow sales we venture to say that Mr. Flesh will be at some of them bidding on the best ones that enter the ring. He has a good herd of big Polands at this time and the few boars that he is offering are good ones. Only the very tops will be shipped on order. He will not make a sow sale this winter consequently a limited number of gilts will be offered for sale. Jumbo's Equal made the circuit of the southwestern Wisconsin fairs and was undefeated. He is some boar. Get his blood. See page 23. —Adv.

Coming Events of Interest.

BE sure to pay special attention to the October 5th issue of The Wisconsin Farmer, for it will contain the advertisement of several sales that should be of interest to our readers. On October 17th W. C. Jenkins will sell twenty-five Duroc Jersey sows and twenty-five boars of the same breed. We have recently seen this offering and we do not hesitate in recommending it. Several of the outstanding individuals will be mentioned in the advertisement. This sale will take place at Bangor, Wis. The following day L. F. Atwater will sell forty head of Duroc boars, the tops of his herd of "big Durocs." This will be one of the important boar sales of the season. The next day Geo. H. Willsie will sell forty boars at Prosper, Minn. This will be a Big Col. and Chief Defender sale and our Wisconsin readers that attend this sale will have an opportunity to get some new blood into their herd. This sale will be worth attending. Good connection from each sale. A noted Poland China sale is advertised in this issue. T. P. Shreve will attend all of these sales and if you wish him to make a selection for you write him in care of the man making the sale.—Adv.

Don't Forget the Big Col. Duroc Sale.

MAKE arrangements to attend the sale of Duroc boars to be held at Prosper, Minn., October 19th. Geo. Willsie is the man that owns those two good boars, Big Col. and Chief Defender. You should have some of that breeding. Be sure to write for a catalog and watch for October 5th issue of The Wisconsin Farmer. Write Geo. Willsie, Prosper, Minn., and mention this paper. See page 22.—Adv.

GRANT COUNTY BREEDERS' SALE

POLAND CHINA BOARS

LANCASTER, WISCONSIN

TUESDAY, OCTOBER 10, 1916

40 HEAD The Pick From 17 Herds 40 HEAD

THIS is a breeders' sale and each man is offering the best he has. No Poland China sale of the season will contain a better lot of **spring and fall boars.** There will not be a cull in the entire offering. The spring boars are of March farrow and have been well grown. The fall boars are outstanding herd boars. **Get the breeding from the catalog.** The consignors, all from Grant county, guarantee every animal they sell. What would you expect to find if you picked 40 head from 17 herds? They will not disappoint you. By all means attend this sale, it will be a real "hog show." If you can't attend in person send a bid to T. P. Shreve, The Wisconsin Farmer representative, we'll guarantee that he will please you. Address him in our care. Write the secretary for a catalog. Dobson & Eastman will sell 10 registered Oxford Ewes. Auctioneer, Ira Cottingham.

GRANT COUNTY POLAND CHINA BREEDERS' ASS'N

BURLEY DOBSON, Sec'y, LANCASTER, WISCONSIN

THE type of Brown Swiss females found in the Andrew Martin herd, West Salem, Wis. A first-prize winner at Wisconsin State Fair, first and champion at Chippewa Falls and La Crosse, 1915. Some outstanding bulls are being offered by this breeder. His advertisement appears on page 23.

Keep Your Eye on This Breeder.

GEO. W. PAGEL, Zumbrota, Minn., is a new name to many of The Wisconsin Farmer readers, but he is a breeder of Duroc Jerseys that will be heard from in the future, for he has the goods. His brood sow herd is made up of big, smooth sows, many of them coming from old Marion's Wonder breeding and you know what that is. The sire of some of the younger stuff is one of the best sons of the champion, Lee's Defender, that we have seen. The most recent addition to his good herd is the yearling boar, H. C. Wonder, second in class at the Minnesota fair this year. He is a son of the Iowa champion, Big Wonder, and is a boar of great breed character. Mr. Pagel has claimed February 26th for his annual sale of bred sows and we predict now that this will be a sale worth attending, for we know the class of sows that will be listed. Remember Geo. Pagel. —Adv.

Karlen's Holstein Dispersion.

EVERY Holstein breeder or farmer interested in Holstein cattle in the middle West should attend the dispersion sale of the Holstein herd of F. J. Karlen, Winslow, Illinois, on October 4th and 5th. There is probably no finer herd of Holsteins in the middle West, either in conformation, size of individuals, breeding or production ability. The herd consists of 170 head ranging in age from calves to mature animals. Nearly every animal of milking age has an A. R. O. record. Two have records over thirty pounds butter in seven days and several others from twenty-five to twenty-nine pounds. There are a large number of two and three year olds with records from twenty to twenty-five pounds butter in seven days. There will be fifteen young bulls for sale from heavy-producing cows and heifers. Several are from dams with records above twenty-five pounds. There will be an opportunity to buy several daughters of one sire, as there will be fifty daughters of one bull and twenty daughters of another bull. The herd sire is one of the good bulls of the West, being out of a thirty-six-pound cow. He and eighteen of his daughters will be put in the sale and offers an exceptional opportunity to make a great foundation herd or addition to any established herd, no matter how good it may be. Catalogs giving pictures, description and breeding are now ready for mailing and may be obtained by writing to F. J. Karlen, Winslow, Ill. Send bids to H. S. Hoard, field man for this paper. See page 21.—Adv.

Many Investigating Golden Prairie Farms.

MANY farmers of the grain belt states are investigating the farms offered in the Golden Prairie district of Wyoming by the Federal Land Company, Burns, Wyo. Their advertisement will be found on page 17 of this issue. This company has been selling land for a number of years. In the passed decade they have located a large number of farmers in the Golden Prairie district and scores of these farmers have made good and now have good homes and profitable acres. The passed season was dry in the Golden Prairie district the same as it was generally through the grain-belt states, but some good crops of wheat and oats were raised and cattle have fared well on the range through the summer. Many cattle shipped from Wyoming the present year have brought good prices and there are thousands of head ready for the winter markets which will bring good profits to their owners.—Adv.

Studebaker Superiority.

MOTOR, Motor Age and Automobile, three leading magazines of the motorists, recently made an unprejudiced analysis of cars and specifications. The result was decidedly favorable to the Studebaker. The Studebaker rating on the various different phases of automobile manufacture and sale, from

THE $800 Schoolmaster owned by Harry Crandall, Cass City, Mich. Grand champion boar at Detroit and a pig by him junior champion at Ohio and Wisconsin. This boar and twenty-five spring boars, also twenty-five gilts will be sold at the above address October 17th. See advertisement on page 22 and field note on page 18.

THIS cow, three daughters and several granddaughters to be sold in the Karlen sale to be held at Winslow, Ill., on October 4th and 5th as advertised on page 21 of this issue.

price to Timken bearings, is given in the advertisement on page 7. Every automobile owner and every person who is thinking of buying a car, will be interested in reading this page and should consider the facts revealed there carefully before deciding on a new car. Write The Studebaker Co., Detroit, Mich., for further information, and be sure to mention that you saw the advertisement in this paper.—Adv.

Better Than Stoves.

THE farm home will be more comfortably heated, with less work, and at a cheaper fuel cost, if the Mueller pipeless furnace is used in place of stoves. It is easy to install, there being no need to tear up walls and floors. It burns coal, wood or coke and cuts fuel bills one-fourth. Besides that it is cleaner, and because it distributes the heat more evenly through the house it is much better for the health of the family. Read the illustrated advertisement on page 8 and write to the manufacturers, the L. J. Mueller Furnace Co., 204 Reed St., Milwaukee, Wis., for their free booklet. Tell them you saw the advertisement in this paper.—Adv.

Reclaim Your Swamp Land.

SWAMP land may be reclaimed and made to yield good profits if drained with a tile that is strong and durable. Haeger Quality Tile, manufactured by the Haeger Brick & Tile Co., 1 State Bank Bldg., Dundee, Ill., is guaranteed. It is strong, straight, well-burned and lasts a lifetime. Watch for the trade-mark Diamond H, on the tile you buy. That is the Haeger quality mark. Haeger tile are shipped anywhere in Illinois and Wisconsin. See the advertisement on page 2 and write for free booklet telling how to reclaim swampy land. Tell them you saw the advertisement in The Wisconsin Farmer.—Adv.

Pulling Stumps by Hand.

ONE man can easily do the work of clearing stump land if equipped with a hand power K Stump Puller, manufactured by Walter J. Fitzpatrick, Box B, 182 Fifth Street, San Francisco, Cal. It works by leverage and gives an enormous pull. It is made of Krupp steel and is guaranteed against breakage. The manufacturers have an attractive special offer on these stump pullers. See their advertisement on page 2 and write for information about their offer and for a copy of their free book on land clearing. Don't forget to mention that you saw the advertisement in this paper.—Adv.

An Aid to Bigger Crops.

STUMPS have no place on the up-to-date farm. They must be cleared away in order that the farmer may raise bigger crops. The Kirstin one-man stump puller will clear the fields easily and quickly. No horses are necessary. It gives to the operator a giant's power. The farmer or his hired man can clear an acre from a single setting. It is sold by the A. J. Kirstin Co., 100 Ludington St., Escanaba, Mich., on a ten-day money-back guarantee. See the advertisement on page 5 and send for the free book on land clearing. Tell them you read the advertisement in this paper.—Adv.

Will Trade Land for Cows.

HERE'S a chance for some farmer to exchange his surplus heifers for a good tract of timber land on the lake shore in Itaska county. M. J. Barney needs a carload of high-grade Holstein cows and heifers, and he is willing to pay for them with land. It is an attractive bargain for the man with the stock that fills Mr. Barney's requirements. See his advertisement on this page and write to him if you have the stock.—Adv.

60% protein in our
Blue Bag Brand Tankage. You never saw a cleaner, brighter grade of tankage than this. Ton lots priced at $46.15 on page 1539 of our new big General Catalog. Quality guaranteed as usual.
Sears, Roebuck and Co., Chicago.

2 FREE BOOKS!!
NOW READY!
My new 100-page fall bargain book just off the press and ready to mail! Also the second edition of my big 250-page 1916 catalog! A postal gets your copies today.
These books describe the famous Galloway Sanitary Cream Separators, the Galloway Gasoline and Kerosene Engines, the new modern Galloway Manure Spreaders, our New 1917, 12-20 H. P. Tractor, all kinds of farm machinery, ensilage cutters, power house accessories, grinders, buggies, wagons, harness, fencing, roofing, saddles, automobiles, stock tanks, auto accessories, sewing machines, household goods, carpets, furniture, complete line of clothing for every member of the family. Write now! Save $200 to $500 on fall buying!
WM. GALLOWAY COMPANY
37 Galloway Sta., Waterloo, Iowa

SALE DATES.

Holstein-Friesian Cattle.

Oct. 4-5, Dispersion Sale, F. J. Karlen, Winslow, Ill.
Oct. 23, Waukesha County Holstein-Friesian Assn. Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.
Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.

Holstein, Jersey and Hereford Cattle.

Oct. 30-31, F. P. Merrick, Delavan, Wis.

Aberdeen Angus Cattle.

Nov. 1, Combination Sale, Roy Miller, Prosper, Minn and M. C. Willford, Canton, Minn. (Sale at Canton, Minn.)

Guernsey Cattle.

Nov. 1-2, Waukesha County Guernsey Breeders' Assn., F. E. Fox, Sec., Waukesha, Wis.

Short-horn Cattle.

Nov. 2, Anoka Farms, Waukesha, Wis.
Nov. 3, Herr Bros. & Reynolds, Lodi, Wis.
Nov. 3, Wisconsin Short-horn Breeders' Association Sale, Madison, Wis. J. L. Tormey, Secy., Madison.

Percherons.

Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Poland China Swine.

Oct. 10, Grant County Poland China Breeders' Assn., Lancaster, Wis. Burlie Dobson, secretary.
Oct. 19, Columbia County Asylum, Wyocena, Wis. S. C. Cushman, Supt.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders' Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., D. H. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 26, George W. Pagel, Zumbrota, Minn.

Blanching Celery.

Proper blanching is half the battle of successful celery raising. Most markets refuse the unblanched article entirely and those of us who grow it for home use know that green celery is unwelcome on the table. The heart blanched by the plant itself is much better and proper blanched celery is all heart.

In the "new celery culture" the plants are set six inches apart each way in beds, so only the outer rows need shading, for blanching is really another name for shading. The plants are sometimes grown in double rows so as to reduce the labor and material to half of what is needed when single rows are used.

No matter which of the many methods of blanching is used the proper time is always the same—when cool fall weather has come to stay. Banking before hot, burning weather is over may induce rust, especially if earth is used.

Earth is the best and commonest blanching material, as it is usually the cheapest and imparts a nutty flavor not secured without it, but its use makes it necessary to set the rows or beds far enough apart so plenty of earth for banking can be secured.

Hilling may be done by hand with a small turning plow or with a celery hiller, but when horse tools are used it is usually necessary to finish the work with a hand hoe. A better job can always be done if tillage throughout the season has been so thorough and judicious that the soil is fine and easily handled.

The earth should cover the entire plant below the lower edges of the leaves in such a way as to drain the plants well, as too much moisture will result in dirty and perhaps rotten celery. Special care must be taken never to hill or handle the plants in any way while they are wet. As the plants grow and the soil settles a little more earth may be added to keep the mounds up to the leaves.

The greatest economy of garden space may be secured by using blanching boards, held together at the top by stiff, wire hooks and at the bottom by a little earth banked against them. The same boards can be used several years if carefully stored under cover, so the cost is not excessive.

Some less usual methods include the use of a drain tile carefully placed about each plant; building paper or even newspaper wrapped around the plants; and individual patented veneer sheets, similar to those sometimes used in protecting young trees from rabbits. These individual methods, however, require so much work, care and patience that they are unprofitable on any but very small plantings for home use. Earth blanching is best, especially for the late crop.—[J. S. Gardner, Missouri Experiment Station.

Ask your neighbor to subscribe for The Wisconsin Farmer.

WE KNOW YOU LIKE THIS BREEDING

CHARTED PEDIGREE
OF THE
Pure-Bred Holstein-Friesian Bull
Korndyke Segis Johanna

No. 127132 H.-F. H.-B.
Born November 17, 1913.
Owned by—
PABST STOCK FARM,
Oconomowoc, Wis.

The average of the records for his dam and sire's dam are as follows:

Milk	632.40
Butter	39.05
Per cent fat	4.94
30-day record:	
Milk	2,630.50
Butter	154.16
Per cent fat	4.69

Why not buy a bull calf by this sire and out of one of our A. R. O. cows with high 7-day and yearly records. Over 30 to select from at $100 and up.

SIRE—Johanna McKinley Segis
954 A. R. S. (44367) Sire of—

Uneeda Korndyke Abigail	33.02
Uneeda Korndyke Abigail, 30 days	124.00
Uneeda Korndyke Charlotte	29.35
Uneeda Korndyke Abbie	28.00
Winana Jennie 2d, 2 years	27.10
Uneeda Korndyke Beryl, 4 years	26.61
Oakfield Korndyke Segis	25.57
Oakfield Korndyke Segis, 30 days	104.91
Uneeda Korndyke Countess, 3 years	24.35
Uneeda Korndyke Beauty, 2½ years	23.57
Johanna Woodland Segis, 3 years	23.51
Paula McKinley, 3 years	22.78
Abbie Korndyke Segis, 3½ years	21.26
Uneeda Korndyke Bertina, 2 years	21.20
Uneeda Korndyke Abronia	20.63
Uneeda Korndyke Adeline, 3 years	20.42
Uneeda Korndyke Agnes, 4½ years	20.39

34 A. R. O. daughters, 1 above 30 lbs.
6 above 25 lbs., 15 above 20 lbs.
9 sons with 33 A. R. O. daughters.
6 daughters with 6 A. R. O. daughters.

DAM—Pontiac Lady Korndyke
11276 A. R. O. (92700)

Butter	38.03
Milk	601.40
Per cent fat	5.06
30-day record:	
Butter	156.93
Milk	2,496.70
Per cent fat	5.02
Dam of—	
Fairview Korndyke Rag Apple, 2 years	19.86

2 sons with 22 A. R. O. daughters.

Pabst Stock Farm DEPT. 30 Oconomowoc, Wis.

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write, Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

TOO LATE TO CLASSIFY.

A Few
Grade and Pure-Bred
GUERNSEY FEMALES
For Sale
W. H. & B. L. Hanchett Sparta, Wis.

HOLSTEINS WANTED

I WANT a carload of Holstein cows or heifers, high grades, for which I will exchange 80 or 160 acres of land, 3½ miles from Deep River, Itasca county, Minnesota, located on Chase Lake, good soil, has about $2,000 worth of timber, 160 rods of lake shore, at $25 per acre. If desired will give long time balance. This land is cheap but I need the cattle. For further particulars, address M. J. Barney, Owner, Lake Crystal, Minnesota.

Guernseys For Sale

NINE grade Guernsey yearling heifers and one pure-bred bull 7 months old, all good size and well marked, at $600. Address
E. H. Kiesling Jefferson, Wisconsin

Chester White Spring Gilts For Sale

BIG, growthy animals of good type, strong backs, heavy hams and big bone. Address
W. C. Schelbe Burlington, Wis.

HAMPSHIRE SWINE FOR SALE BY
James Clemmens Kansasville, Wisconsin

LEARN TELEGRAPHY

SHORT HOURS
GOOD PAY
POSITIONS FURNISHED
CATALOGUE FREE
NORTH-WESTERN
Telegraph School
EAU CLAIRE, WIS.

AYRSHIRE CATTLE.

If You Want
PROFITS
from Dairy Cattle—big yield of STANDARD milk even under unfavorable conditions—let us tell you about
THE AYRSHIRE
It will pay you to know how our Association co-operates with members in selling Dairy Products—actually helps them make PROFITS from AYRSHIRES. Address
AYRSHIRE BREEDERS' ASS'N
C. M. Winslow, Sec'y
29 Park Street Brandon, Vt.

AYRSHIRE BULLS

FROM A.R. dams. Offering several bulls from 1 to 12 mos. old, out of A.R. dams. Nicely marked and priced reasonable. Inspection invited, correspondence promptly answered. Jas. Van Etta, Lima Center, Wis. (Rock Co.)

ADVANCE REGISTER AYRSHIRE

BULL ready for service. Dam, Fannie Dahlia, A. R. record 596.25 pounds butter, 12,057 pounds milk. Sire, the 529 pound bull, Netherton of Sand Hill. Price reasonable. Send for pedigree. Herman Ibde, Neenah, Wisconsin.

RED POLLED CATTLE.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write J. W. Salter & Sons, Unity, Wis.

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD AVOCA, WIS.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin Gotham, Wis.

RED POLLS A few young bulls and heifers for sale. Wm. Wulff, R. 1, Box 14, Grafton, Wisconsin.

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. C. S. Hechtner, Chariton, Iowa.

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

HORSES.

REG. Percherons. 30 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds. Can spare 25 reg. mares, 24 reg. Belgian stallions. Priced worth the money. Fast trains. FRED CHANDLER, R. 7, CHARITON, IOWA.

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

HOLSTEIN-FRIESIAN CATTLE.

5 REGISTERED HOLSTEIN HEIFER CALVES

5 TO 7 MONTHS of age. **8 yearling heifers** will be bred if desired. Sired by the **31.17 pound bull, Sir Wayne Johanna De Kol,** whose dam, **Portage Pauline Paul 2d,** made 31.17 pounds butter and gave 668 pounds of milk in seven days; **125 pounds butter** and 2,727.60 pounds milk in 30 days. **2 bull calves for sale,** sired by the above bull and out of 17.22 and 20.13 pound daughters of **Sir Aaggie De Kol Acma,** whose daughters are making fine records. These animals are well grown, of good straight type and well bred. They are being priced reasonably.

Lawrence Rober - Lyons, Wisconsin

A RICHLY BRED JOHANNA BULL

SIRED by the 26-pound bull, **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.** Address

GEO. GIBSON NASHOTA, WIS.

28.71 POUND HOLSTEIN BULL

CALUMET JOHANNA ABBERKERK CHAMPION 105829, whose dam, Dianah Johanna Abberkerk, made **28.71** pounds of butter from 623.70 pounds of milk in seven days. In 300 days gave 16,177.90 pounds milk; 677.45 pounds butter. **His sire is Oakhurst Milk and Butter King,** a son of the $10,000 bull, Milk and Butter King. Send for pedigree. Price low for quick sale. Address

A. G. PINGEL - CHILTON, WISCONSIN

A 4 Per Cent Butter Man Holstein Bull

WE OFFER BULL, ¾ white, good individual, born March 30, 1915, for sale. Sire, Downing Pontiac Butter Man, three times a state fair champion. Dam a blue ribbon winner and a 21.37 pound junior three-year-old daughter of King Hengerveld Pondyke, 25 A. R. O. daughters, 2 above 30 pounds. Several other nicely marked bulls, 8 to 10 months old, with A. R. O. dams up to 25.67 pounds butter in 7 days. Address

M. W. Downing & Bro. Waukesha, Wis.

19,8-POUND YEARLING SON

Of the Richly Bred Ormsby Bull

BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull, **Beauty Pieterje Prince,** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.

Dopp Brothers - Ixonia, Wisconsin

Yearling Son

READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers - Waukesha, Wis.

A 25.73-LB. HOLSTEIN BULL

BORN Dec. 27, 1915, well marked; **dam Flora Hesseltje,** A.R.O. record 25.73; dam's dam Aaggie Hesseltje DeKol, A. R. O. record 25.23; sire, **Canary Homestead Frisby,** a son of the 35-lb. bull, **Canary Paul Fobes Homestead,** and out of a daughter of **Homestead Jr. DeKol,** for sale. This breeding ought to interest you. Send for a full pedigree.

Earl A. Paddock - Elkhorn, Wisconsin

27-76-lb. Yearling HOLSTEIN BULL

BORN February 17, 1915; a show bull from a show type sire and dam; sire **Canary Homestead Oak DeKol,** the richly bred 29.65 lb. bull of Dr. Faville's; dam **Friend Lucile Bawn,** A.R.O. record 27.76, average per cent of fat 4.04. Send for extended pedigree and price.

Clovis Stock Farm - Menasha, Wis.

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen Cedarburg, Wisconsin

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service, from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE MONROE, WISCONSIN

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons Elgin, Illinois

HOLSTEIN-FRIESIAN CATTLE.

175 HEAD

PURE-BRED A. R. O. HOLSTEINS ALL TO BE SOLD AT PUBLIC AUCTION. BREEDING, GROWTH AND INDIVIDUALITY COMBINED.

175 HEAD

BLUE LABEL HERD of A.R.O. HOLSTEINS

TO BE DISPERSED IN PUBLIC SALE AT WINSLOW, ILLINOIS OCTOBER 4 - 5, 1916

THE 175 head include 41 animals with records of better than 20 lbs. of butter made in seven-day official test, and in this number are two dozen or more two and three-year-old heifers. There are four cows with records of better than 30 lbs. butter, including a 33-lb. three year old, the best in her class in 1915 and winner of the Holstein-Friesian Association first prize for butter production. A son of hers is also to be sold, and fourteen other young bulls from good record dams. Several show every dam on the pedigree chart with seven-day official records ranging from 20 lbs. to over 36 lbs. butter. There are **thirteen** daughters of 30-lb. cows in this sale. In fact, no better bred herd has ever been sold. The individuality is equal to the breeding. Nearly every animal has been bred on the farm. It is the breaking up of a **breeder's herd,** bred for production. Tuberculin tested by Illinois and Wisconsin state approved veterinarians. All test certificates, registry certificates and signed transfer applications will be on the settling desk. No waiting for papers. You can take them when you pay for the cattle you buy.

Winslow is near the Illinois-Wisconsin boundary, is on the Illinois Central R. R. line from Freeport, Ill., to Dodgeville, Wis. Farm within quarter mile of depot. Conveyances provided. Inspection invited. Write for catalog and mention where you saw this advertisement.

FRED J. KARLEN, Proprietor
WINSLOW, ILLINOIS

Holstein Sales Co., Catalog Compilers, Elgin, Ill.

175 HEAD

PURE-BRED A. R. O. HOLSTEINS ALL TO BE SOLD AT PUBLIC AUCTION. BREEDING, GROWTH AND INDIVIDUALITY COMBINED.

175 HEAD

KING PONTIAC PORTIA and Richland Sir Ormsby Korndyke

(Out of Aaggie Texal Wayne 2d 1,078 pounds)

ARE the sires of the HEIFERS we are offering for sale. All from A. R. O. dams up to 27 pounds. One heifer, half sister to a 36 pound cow. A limited number will be sold. Write for pedigrees and records. Address

C. C. FRIES & SON RICHLAND CENTER, WIS.

2 Yearling Sons of the Richly-Bred Holstein Bull KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Roberta Fearless Johanna, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

THE 30.90-LB. SHOW BULL NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.

FRED ALBRECHT WATERTOWN, WISCONSIN

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST WEST ALLIS, WISCONSIN

450 HOLSTEINS AND GUERNSEYS COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.

EDGEWATER STOCK FARM FORT ATKINSON, WISCONSIN

DUCHESS ORMSBY and ALCARTRA COWS

HOLD the world's 7-day and year records for both butter and milk. They have startled the world by their achievements during the past year. We are offering a few young bulls sired by King Pietertje Hengerveld Ormsby, that is a full brother to the former world's record cow, Pietertje Maid Ormsby. Several bulls are from Alcartra bred cows.

BONNIE MEAD STOCK FARMS, Randolph, Wis

10 REGISTERED HOLSTEIN COWS FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

HOLSTEIN-FRIESIAN CATTLE.

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer **for sale** surplus stock of our own raising.

SILVER SPRINGS FARMS CO. - EAU CLAIRE, WISC.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.

EARL NORWOOD, GAYS MILLS, WIS.

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.

GROVE BROS. COLUMBUS, WIS.

THREE REGISTERED HOLSTEIN BULLS FOR SALE

READY for service, sired by Johanna Spoffard Corona 71305. Also bull calves for sale sired by Butter Boy Mink Pontiac 133161 from A. R. O. dams. Chester White swine, both sexes, leading blood lines, for sale. Address

COOK BROS. BURLINGTON, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt Oxford, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

B. F. Winckler & Sons Medina, Wis.

2 Holstein Bulls

OF serviceable age from Advance Registry dams with creditable records. Both sired by the richly bred bull, JULIP SEGIS KORNDYKE 80640, a grandson of King Segis out of a cow sired by a brother of King Segis. The bulls offered for sale have straight, wide rumps, good barrels, are well grown and are ¾ to ½ white. Prices $75 and $100.

L. V. Garvens Brookfield, Wisconsin

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer Kaukauna, Wisconsin

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the year. Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson - Elkhorn, Wisconsin

A RICHLY BRED HOLSTEIN BULL

BORN April, 1916, sired by Hillvale Champion, the most richly bred Duchess Ormsby sire in Wisconsin. He traces six times to the great cow, Duchess Ormsby. His six nearest dams average over four per cent. The dam of bull for sale is of Pontiac Korndyke breeding. Send for pedigree and prices. E. E. Rosencranz, Oconomowoc, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

Holsteins For Sale

REGISTERED Holstein heifer calves $75 each, high grades $18. If you want a good bull or some springers write us.

Findlay Bros. Whitewater, Wis.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford Kaukauna, Wis.

HOLSTEINS for sale. Pure bred and high grades from 2 weeks to 1 year old, both sexes. Fair Vale Farm, Fern A. Findlay, Whitewater, Wis.

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40 BOARS
Will be sold at the HOME OF BIG DUROCS
Bangor, Wis., October 18, 1916

THE greatest lot of Duroc boars ever offered in Wisconsin. My Minnesota and Wisconsin winnings were unequalled, giving me the preeminent herd of the Northwest. Write for my sale catalog at once. Address
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Grand Champion Duroc Boar at Wisconsin State Fair
KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
B. W. LITTLE - - - JANESVILLE, WISCONSIN

COL.'S CHOICE --- WONDER CHIEF
By King the Col. By Cherry Chief
DUROCS THAT MADE GOOD

YOU have all heard about KING THE COL. and CHERRY CHIEF—your herd is not complete without some of that breeding. My brood sows are large. Let me ship you a spring boar. Guaranteed? Yes. Mention The Wisconsin Farmer and address
DENNIS SHEA - - - MELVINA, WISCONSIN

Big-Boned Boars. The Best Is None Too Good
950-POUND COOK'S DEFENDER

OUL Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer,
EMMETT COOK & SON - RICHLAND CENTER, WIS.

1,000-POUND
BIG COL.
THE HALF-TON BOAR

Chief Defender, litter brother to Disturber. No breeder has two better Duroc boars. On October 19th I will sell 40 boars by the above sires. Send a card with your address so I can mail you my catalog. It's worth having.

SEE BIG COL. AT LA CROSSE FAIR

GEO. H. WILLSIE
Prosper, Minn.

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SPRING boars by **five noted sires.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** son of the many times champion, **Grand Model,** heads our herd. Also two fall boars for sale. We sell "boars that please." Write

Geo. D. Sprain & Sons
West Salem, Wisconsin

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address
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CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

DUROCS

SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write
John Borchardt & Son, Richland Center, Wis.

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OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
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I WON THE SILVER TROPHY
AT THE WISCONSIN STATE FAIR

ON the best litter of Duroc pigs. These and others of same breeding for sale. Thirty spring boars, 2 yearling boars and 40 spring gilts for sale. Sired by **Prof. King** by Indiana King and **Grandmaster,** junior champion Wisconsin, 1915. **Buy from a winning herd.** Write your wants.
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LINCOLN MODEL
DUROC HERD

My herd will be on exhibition at the
WISCONSIN STATE FAIR
and the leading county fairs. See **LINCOLN MODEL** and his get. Also the big boars by **S. & H.'s COL.,** the largest boar of his age in the state. Will have some good boars and gilts for sale.

SEE MY DUROCS BEFORE YOU BUY
ALBERT L. HYZER
WEST SALEM WISCONSIN

BOARS
DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
J. Erwin, Bloomington, Grant County, Wis.

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25 HEAVY-BONED fall and spring boars, Illustrator, Chief's Col., Defender and Crimson Wonder breeding. April pigs weigh over 150 pounds. Two-year-old bull for sale whose dam has three A. R. records averaging over 500 lbs. fat. His full sister made 415 pounds fat as a two year old. Have had 6 calves sired by him and 5 were nicely marked heifers. Reason for selling, owned his sire. Several fine bull calves.
Allie S. Knudson R. 5, Brodhead, Wis.

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Hasn't affected the prices on
DUROC JERSEY BOARS

MY spring boars are sired by Professor C and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.
M. STOEHR - VIROQUA, WIS.

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HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
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AND a few sows bred for August and September farrow for sale. Write BURN BRAE FARM, CHAS. A. PETERSON, ROSENDALE, WIS.

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Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address
FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
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REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son Oconomowoc, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

Yearling Jersey Heifers

AND bulls of serviceable age sired by Hutzeland King, a grandson of King of St. Lambert's King. **Big-Type Poland China** spring pigs of both sexes for sale. Prices reasonable.
Lorenz Metzler - - New Franken, Wis.

Reg. Jersey Bulls

READY for immediate service sired by Golden Fern's Don, and from well-bred, high-producing dams of good type. Priced to sell. Address
Rollie Vandervort Tomah, Wis.

DUROC JERSEY SWINE.

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DUROCS

LET us ship you a boar pig. They are well grown, of the most popular blood lines and we guarantee every boar. We welcome visitors and answer inquiries promptly. Try us.
E. H. PARKER & SON
Janesville Wisconsin

WE SHIP on APPROVAL
Duroc Jersey
BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

DUROCS
THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES AUGUSTA, WISCONSIN

I AM OFFERING FOR SALE

CHIEF'S DEFENDER 186363 and PROF. KING 2d 187655. Also spring pigs sired by these great Duroc herd boars. Address
M. T. CLARKE STEUBEN, WIS.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B, Model Wonder, Col. S. Jr., Orion, Cherry King Jr. ☞ **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
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SPRING and fall Duroc boars and gilts for sale by above boar. Also spring pigs by Royal King 4th and Lee's Defender. Order early, the best will go first. Address
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AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

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Let me help boost the hog sales in Wisconsin. Write for dates.

CHESTER WHITE SWINE.

EXTRAORDINARY
CHESTER WHITE SALE
CASS CITY, MICH.,
TUESDAY, OCT. 17, 1916

THE great **Schoolmaster** will be sold also his get and that of **Post 3d.** Fifty head of **boars** and **sows,** everyone a good one. Get a catalog and send your bids to Fred Moore. Mention The Wisconsin Farmer.
HARRY CRANDALL
CASS CITY MICHIGAN

CHESTER WHITE FALL BOARS

AND spring pigs of both sexes, sired by Elder's B. R., a Wisconsin State Fair winner and from a prize-winning sire and dam. Pigs for sale are well grown and of show quality. Holstein bull for sale sired by King Pontiac Champion 8th, whose dam made 800 pounds of butter in a year. Prices reasonable.
A. H. & E. W. Kuhlman, Beaver Dam, Wis.

CHESTERS
For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN BLOOM CITY, WIS.
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DOERR
Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address
J. A. DOERR VIROQUA, WIS.

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CHESTER WHITES

THE champion Chester herd of the Northwest. Offering spring pigs, BOARS and GILTS of outstanding individuality. Bred in the purple. If you want herd headers, write
H. A. DERENTHAL WYKOFF, MINN.
Meet me at Hamline, Milwaukee or La Crosse.

CHESTERS

75 AUGUST pigs from matured sows. Pairs not related, shipped at 3 months old, $25. We know the farmers' wants—no runts shipped. Quality assured. Correspondence solicited. Address
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CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address
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CHESTER WHITES

CHOICE spring pigs of March and April farrow for sale. Big bone, well bred and growthy. Correspondence solicited. Write
Art. G. Hoskins Dodgeville, Wisconsin
(Also breeder of Milk Strain Short-horns)

CHESTER WHITE spring boars sired by Eagle Chief and Highland John. Big, growthy boars with strong backs, wide, deep hams and heavy bone. I have been five years mating good sires and dams to produce this kind. Send for pedigrees and prices. Address W. C. Scheibe, Burlington, Wisconsin.

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address
ADOLPH NUTTELMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller West Salem, Wis.

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.
Wm. F. Belda - De Forest, Wisconsin

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. **Wm. C. Kirst, Tomah, Wisconsin**

SHORT-HORN CATTLE.

AT THE ROYAL

AT THE American Royal Show, Kansas City, Mo., Oct. 5th, 50 high-class Short-horns will be offered for sale—12 bulls and 38 females—selected from prominent herds of the corn belt and including many show cattle. As more than half of the bulls consigned are members of show herds and of the fashionable blood lines, high-class herd bull material is assured. This is one of the most important sales of the year. It will be an opportunity to select top breeding stock. Catalogs will be ready in due time. Address American Short-horn Breeders' Association, 13 Dexter Park Ave., Chicago.

RIVERDALE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 432897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MILKING
SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little Evansville, Wisconsin

OAK LAWN FARM
Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son, Beaver Dam, Wisconsin

MARQUART'S
Milking Short-horns

SEVEN bulls ready to go, sired by Quenston Duke (2,300 lbs.) by Duke of Edgewood out of Queenston Ruby, 8685 pounds milk in 261 days. Reds and roans out of record dams. Good ones. Write early if you want the best. Address
Marquart Bros. Milton Junction, Wis.

10 BULLS 20 FEMALES
Short-horns

OFFER 20 **cows** and **heifers**, red and roan, bred for milk and beef. Ten **bulls.** Also ten spring Duroc Jersey boars and sows. Priced reasonable. Write to
William Ley - Jonesdale, Wisconsin

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address
JOHN CLAY WARRENS, WIS.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

MILKING SHORT-HORN BULLS

ONE to four months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son Burnett, Wis.

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

HAMPSHIRE SWINE.

HAMPSHIRE

SPRING pigs of both sexes and fall boars for sale.
DANE STOCK FARM
Oshkosh Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.
A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

BROWN SWISS CATTLE.

Brown Swiss
60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.
ANDREW MARTIN, WEST SALEM, WIS.

ABERDEEN ANGUS CATTLE.

Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.
F. C. Lewis, Bridgeport, Grant County, Wis.

3 LEFT—ALL RIGHT

WE have 3 choice Aberdeen Angus bulls that we wish to dispose of at once; also a few bull calves. They are sired by a Pride bull and come from the most popular families. Write
Hauk Bros. Cassville, Wisconsin
(30 miles up river from Dubuque)

GUERNSEY CATTLE.

Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.
Geo. Lucia - Green Bay, Wisconsin

Guernsey Bull For Sale

THE richest Guernsey breeding. Born March 8, 1916. Sired by the richly-bred bull,
GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant View. Also a deep, rich breeding of the Governor of the Chene line. Address
Charles Schmidt Wrightstown, Wisconsin

Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address
W. J. Heid Ft. Atkinson, Wis.

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address
J. D. McAllister Green Bay, Wis.

REG. GUERNSEY BULL

BY THE RICHLY BRED BULL
EGLANTINE OF SPARTA

A SON of Glenwood's Reputation. Sweepstakes bull at Wisconsin State Fair. The dam of the bull for sale just made 45.9 pounds fat in 25 days. Send for pedigree. Address
W. H. & B. L. Hanchett Sparta, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

Guernsey Bull Calf For Sale

A GOOD reg. Guernsey bull calf born July 1st; well-marked and out of a nice large cow; crated; for only $65. Address E. H. Kiesling, Jefferson, Wisconsin.

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

THREE Oaks Guernseys. Four pure-bred heifers 12 to 15 mos. at $100 to $200. Four grade heifers same age, $55 each. W. A. and R. E. Freehoff, Waukesha, Wisconsin.

POLAND CHINA SWINE.

SIZE---QUALITY---BREEDING
Features Predominating in my Polands
JUMBO'S EQUAL 2d
CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.
C. S. FLESCH (Shipping Point Fennimore) MT. IDA, WISCONSIN

McDONALD CLEANS THE SLATE
WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin, Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address
J. D. McDONALD, NORTH BEND, WIS.

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs. TRIUMPH by Hildestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.
M. MADSON & SONS MADISON, WISCONSIN

The Columbia County Asylum
Will Sell
40 BIG-TYPE POLAND CHINAS
Thursday, October 19, 1916

BOARS and gilts from Columbia Pete, the biggest boned hog in the country. Others from Columbia Wonder, Columbia Orange, Smiley's Big Jumbo and E. W. Hendricks' Black Jumbo. Nothing better ever offered in the state. For catalog write to SUPT. S. O. CUSHMAN, Wyocena, Wisconsin.

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.
Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

BIG POLANDS

Black Jumbo
THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.
E. W. HENDRICKS
Hazel Green Wis.

BIG-TYPE POLAND BOARS

READY to ship boars that please. No better breeding and good individually. Sired by MONSTER BIG BONE by Black Big Bone and KING JOSEPH by Big Joe, also other noted boars. Write or come.
CHRIS KARTMAN - CASSVILLE, WIS

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
R. MEINKING BANGOR, WIS.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE, LOMIRA, WISCONSIN

SHEEP.

R. CONNER CO.
OFFER FOR SALE

CARLOAD feeding sheep, 30 ewes, balance lambs, mostly Shropshires. January Short-horn bull, $125. Poland boar pig, $14. Four Yorkshire boar pigs, $15 each. Would buy straight Scotch heifers of breeding age.
R. CONNER CO. AUBURNDALE, WIS.

Shropshire Rams

DANE has the heavy shearing strain of blocky ram lambs at farmers' prices. Place your order early before stock is picked over. Address
Dane Stock Farm Oshkosh, Wis.

Hickory Dale
Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock flock headers. Address
Arthur Broughton & Sons Albany, Wis.

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economica pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

SMILEY POLANDS

BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address
WM. SMILEY & SON, ALBANY, WIS.
GILTS RESERVED FOR SALE, FEBRUARY 22

MASTER'S GIANT 190781
AND
ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address
P. W. YOUNG PROSPER, MINN.

SEE THE SPOTTED POLAND EXHIBIT
at Omaha National Swine Show, and State Fairs in Missouri, Illinois, Indiana, Michigan, Ohio

ASK for by-laws, list of members' names, and list of 1916 sales. Association Sale, Crawfordville, Indiana, October 19th. The National Spotted Poland China Record Association, Chas. E. Kurtz, Pres., North Salem, Ind.; Fred L. Obenchain, Sec.-Treas., Bainbridge, Ind.

POPULAR PROLIFIC
POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write
Olaf C. Olson, Strum, Buffalo County, Wis.

HENDRICKS' BIG-TYPE
POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most pre-eminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address
J. C. Hendricks Box F, Hazel Green, Wis.

BOARS POLANDS GILTS
SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.
Chas. S. Maltby, Janesville, Wisconsin

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.
A. Menke & Sons, R. 1, Markesan, Wisconsin

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L. P. Martiny, Box F, Chippewa Falls, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.
Phone 53 F. E. Purdy, Orfordville, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address
JAMES DERIVAN. - Fox Lake, Wisconsin.

BIG-TYPE POLAND CHINA July and August pigs sired by L.'s Big Orange and Fairview Jumbo for sale. Prices from $10 and up. Satisfaction guaranteed. **J. Le Roy Larson, Iola, Wis.**

CULVER RACER FREE

—Swift
—Steady
—Safe

A Real Automobile for Boys and Girls

BE THE FIRST TO OWN ONE

Has a Real Engine
Looks Like a Real Auto
Runs Like a Real Auto

Will Climb Any Hill
Carries Two or Three

BOYS AND GIRLS! We are going to send this beautiful

Culver Racer, freight prepaid, right to the home of some ambitious child who joins our Auto Club. You have the same chance as any other boy or girl if you GET STARTED NOW. Just look at the picture and see what a wonderful machine the Culver Racer is. Notice the proud little boy at the steering wheel. He's getting ready to speed away with two of his friends for a glorious spin over the road. He knows that his Culver has a real gasoline engine that will speed up to 25 miles an hour and run over 60 miles on a gallon of gasoline; that it will go up hills and pull him through sand and ruts just as easily as a big car will. No wonder he is proud and happy.

A girl can run a Culver Racer as easily as a boy—don't forget that.

The Culver Racer is not for Sale but will be Given Free

to you or some other boy or girl, who joins our Auto Club and does the best work. The contest is just starting and no one has any advantage over you. Send your name at once for a large picture of the Culver Racer and a Certificate of Membership so you can get a flying start with 15,000 FREE VOTES. Don't delay, send in your name today. Fill out the coupon below.

MAIL THIS COUPON

THE FARMER'S WIFE AUTO CLUB
307 Webb Building
St. Paul, Minn.

Please send me pictures of your CULVER RACER and tell me how I can get it free.

*My Name*_____

*P.O*_____

*State*_____ *R.F.D.*_____

THIS COUPON IS GOOD FOR 15,000 FREE VOTES

Get Busy Now

Send Us Your Name Today

DESCRIPTION OF THE CULVER

FRAME made of Pressed Channel Steel and the body of 22 gauge body steel.
STEERING WHEEL is wood with metal spider.
WHEELS are interchangeable ball-bearing wire kind with 20x2 clincher rims and non-skid tires with inner tubes.
THE WHEEL BASE is 63 inches long and the tread or width of track is 36 inches. Note especially what a big fine car this is.
SPRINGS are easy riding cantilever type in back, semi-elliptic in front.
ENGINE—Five horsepower, air cooled, four cycle and specially designed for this car. Gives a speed up to 25 miles an hour on high gear and drives the car up steepest grades.
TRANSMISSION—Shaft drive, friction ball-bearing.
SPEEDS—Three forward—two reverse.
BRAKES—Foot and hand brake, expanding contracting 5-inch Raybestos.
IGNITION—Battery or set spark, high grade Heco magneto.
GAS TANK holds two gallons and the car runs 60 miles to the gallon. Think of it—120 miles to one filling of the tank.
EQUIPMENT—Tire pump and full kit of tools.
COLOR—Dark Red or Marine Blue.
GUARANTEE—Same as on any high grade automobile.

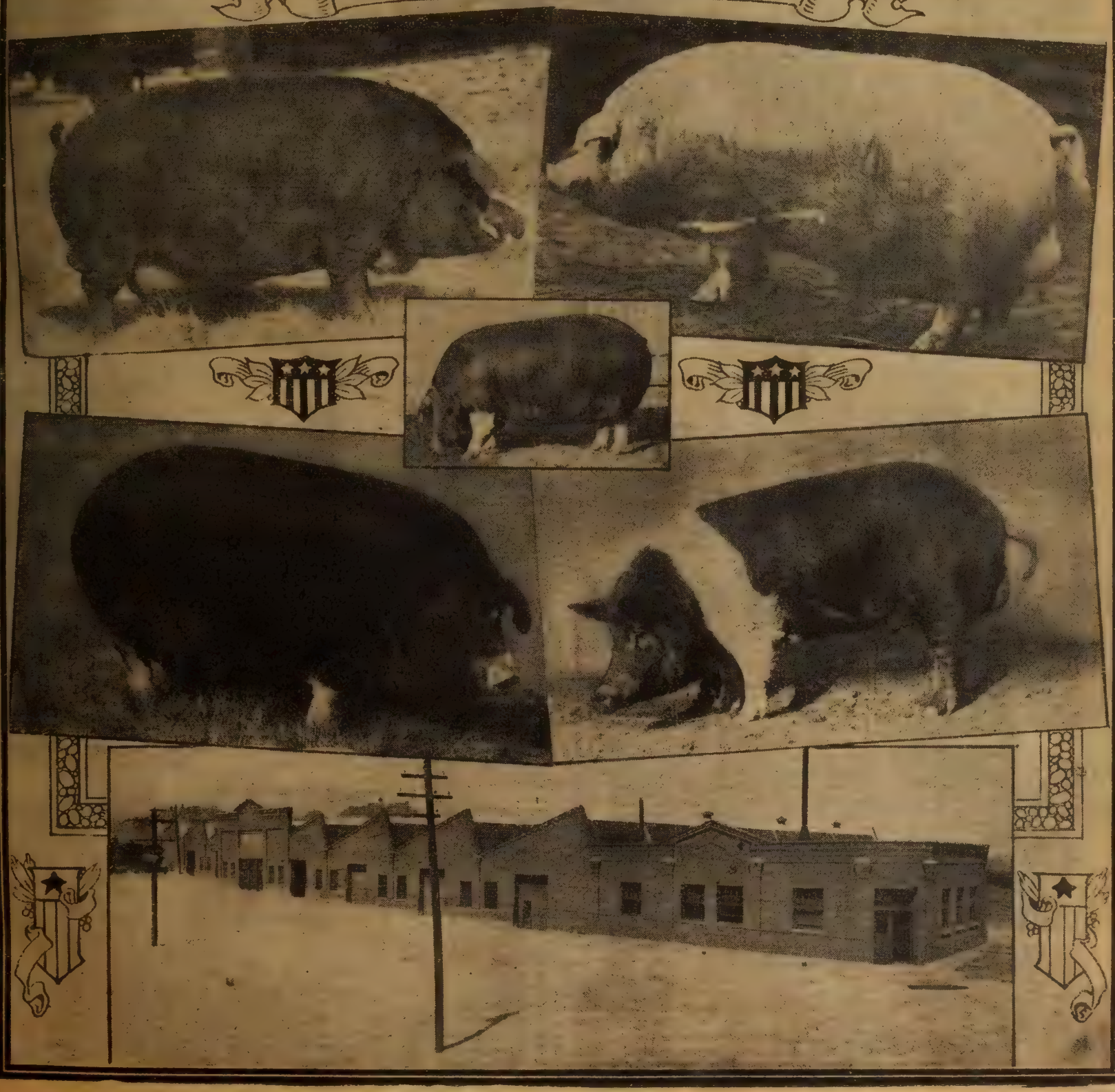
More Than 90,000 Circulation

THE WISCONSIN FARMER

VOL. XLV. NO. 41. THURSDAY, OCTOBER 12, 1916. WHOLE NO. 1811

NATIONAL SWINE SHOW

OCT. 2-7, 1916



FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

Arrangement of Evener.

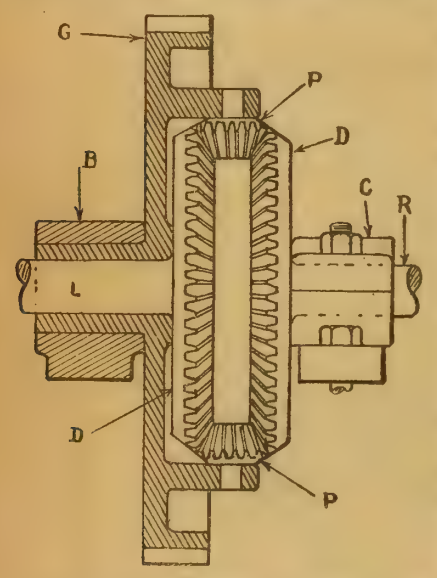
Would a three-horse evener arranged in the following way give each horse an equal load? The horses are hitched abreast, two to a doubletree and one to a singletree. The doubletree and singletree are hitched to the evener. From the doubletree hitch on the evener to the coupling pin is two feet. From the singletree hitch to the coupling pin is four feet.

Answer.—With the above arrangement, each horse will have an equal load. When an evener is proportioned so that the product of the number of horses times the distance from the hitch to the coupling pin on one end is equal to the product of the number of horses times the distance from the hitch to the coupling pin on the other end, each horse will have an equal load.

A Differential.

Please give a drawing showing how to make a differential for a tractor, or show how a differential is made.

Answer.—The figure shows a common method for the construction of a tractor differential. G is the large drive gear, supported in bearing B, or attached direct to the drive wheel; in which case the shaft L is not used. When constructed as shown, the bull pinions are placed on the ends of the



axles L and R. When G bolts to the drive wheel, the other drive wheel must be keyed to shaft R. The differential pinions PP have shanks bearing in lugs cast on the drive gear G. These bearing lugs have removable caps, so that the pinions may be removed. There are three or four of these pinions used. One of the differential gears, DD, is keyed to axle R. The other is keyed to axle L, or cast as a part of drive gear G.

Testing a Generator.

I have a 1914 Studebaker car. The generator does not charge the storage battery right. Can you tell me how to test the generator to find out whether the trouble is in the generator or somewhere else? The battery is new.

Answer.—It may be that you have connected your new battery wrong. The positive terminal of the battery must be connected to the positive terminal of the generator. The positive terminal of the battery is marked plus. To determine the positive terminal of the generator, dip the ends of the terminals in a glass of salt water while the generator is running, keeping the ends about an inch apart. Bubbles will be given off most freely from the negative end.

The generator itself may be tested by a volt meter, connected across the terminals; or an ammeter connected in the circuit.

Truing Up Wood Saw.

I have a 30-inch wood saw that has been put out of true, probably by pinching. One-half of the circumference is out one-sixteenth of an inch to the right, the other half one-sixteenth to the left of the true plane of rotation. Is there any remedy except to send the saw to the shop?

Answer.—You might be able to true up the saw yourself if you have a cold chisel, a hammer, and a smooth iron surface several inches square. An old flatiron might do. You should also have a straight edge of some kind to use in determining where the saw is bent. Lay the straight edge across the saw, holding it up to the light. Determine exactly where it is necessary to bend the saw in order to true it up. Mark these points. Then lay the saw on the smooth iron surface with the hollow side up. At the bottom of the hollow make several shallow marks with the cold chisel, which should be quite dull. The chisel marks spread the metal apart on the hollow side, bringing the saw back into line. This process is called "peening." Nearly all large saws are peened after hardening at the factory, in order to straighten them. Considerable care and judgment is required. Peening is often done with the ball end of a machinist's hammer.

Dodge County Fair.

The twenty-ninth annual Dodge County Fair brought together at Beaver Dam recently the greatest showing of sheep ever seen at this fair and a representative showing of horses, cattle and swine. While the last-named departments did not, from number of animals, come up to previous records, the live stock show was in keeping with the high standard set by this fair.

Dodge county has the reputation of holding one of the best county fairs in the country. Mr. C. W. Harvey, secretary for twenty-three years, seems to have hit on what the people want and the crowds come, rain or shine. This year was no exception. Rain on the opening day this year cut down the attendance, but, year in and year out, the Dodge County Fair has been well favored by weather and never in history, prior to this year, did it rain on the two big days.

Although considerable attention is given to amusements and races, the Dodge County Fair gives liberally to agricultural and live stock departments. The grain, vegetable and potato exhibits this year were very good and, although this is an off year in fruits, the horticulture display was up to standard. The poultry show brought out some of the best flocks in Dodge and adjoining counties and it was encouraging to look at the great tiers of mature corn and the many samples of fine barley, rye and oats grown in Dodge county this year.

The principal competition in cattle this year was in Short-horns with three herds, those of C. J. Schoenfeld & Son, of Fox Lake; H. B. Drake & Son, of Beaver Dam, and Maurer & Sons, of Fox Lake. W. O. Douglas, of Janesville, had everything practically his own way in Jerseys; Mrs. A. H. Clarke showed the only herd of Brown Swiss; Boynton Bros., of Janesville, had the only herd of Durhams and J. B. Ahlers, of West Bend, exhibited his Red Polls, which had just come off the state fair circuit. Unfortunately, no Guernseys were to be seen, while competition in Holsteins was confined to Edwin B. Gibbs, of Fox Lake, and S. T. White, of Beaver Dam.

The swine show brought out some good herds with these exhibitors of Poland Chinas: Charles W. Baker & Son, C. J. Schoenfeld & Son, James Derivan, of Fox Lake; W. J. Bartholf, of Burlington, and Emil Nitschke. The fight in Duroc Jerseys was between H. P. West, of Ripon, who also showed Berkshires, Cheshires and Victorias; Mr. Bartholf and P. F. Goodrich, of Burnett. A. H. & E. W. Kuhlman had the field alone in Chester Whites.

The sheep show was the largest in the history of the fair. All classes were well filled and among the exhibitors were: George A. Phillipi, of Bear Creek, with American Merinos, Oxfords, Cotswolds, Southdowns, Cheviots, Delaines, Shropshires and Rambouillets; Thomas Broyden, of Rusk Lake, with American Merinos, Hampshires, Oxfords, Dorset Horned, Cheviots, Rambouillets, Delanes and Lincolns; Smith Bros., of Union Center, with Lincolns, Cotswold, Hampshires, Oxfords, Cheviots, Delanes, Southdowns, Dorsets and Shropshires; Mike Hogan, of Waunakee, with Cotswolds and Oxfords; W. G. Miles, of Evansville, with Hampshires, Southdowns and Shropshires; Ed Boorman, of Mauston, with Hampshires, Oxfords, Southdowns, Cheviots and Shropshires; Clark Bros., of Union Center, with Hampshires, Oxfords, Cheviots and Shropshires, and J. C. Ellis & Sons, of Evansville, with Rambouillets.

In horses the principal showings were in Percherons, Morgans, Clydesdales and Belgians. Harvest Farms, of Mayville; Butler Babcock, of Beaver Dam; C. J. Schoenfeld & Sons, of Fox Lake, and O. Christianson, of Oshkosh, clashed in Percherons; F. E. Bird, of Beaver Dam, and George Madden, of Fox Lake, in Clydesdales; O. A. and J. Northrup, of Waupun, and Sam Indermuele, of Beaver Dam, in Morgans, and Stam Bushke, F. B. Waste, S. W. Flannigan and Louis Ganske, all of Beaver Dam, in Belgians.

Top-Notch Grain Yields.

Splendid yields of grain are reported from Lancaster. The following is clipped from the Fennimore Times:

Felix Wanazek threshed 1,416 bushels of oats off twenty-seven acres; Wessie Landon had 624 bushels of oats off ten acres; Ray Landon got 380 bushels of barley off eight and one-half acres; Gay Landon had 940 bushels of oats off fifteen acres. John Pollock's grain was 9,011 bushels of oats off eighteen acres, sixty-eight bushels of winter wheat, 135 bushels of barley off four acres; John Riemer got 430 bushels of oats from eight acres, 200 bushels of barley from six acres; Will Bruss got 873 bushels of oats from fifteen acres, thirty-five bushels of wheat off two acres; Otto Brendemuehl threshed 1,301 bushels of oats off nineteen acres, 194 bushels of barley off five acres.

My Big Factory Output Makes WITTE Prices Low

ED. H. WITTE

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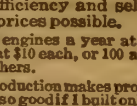

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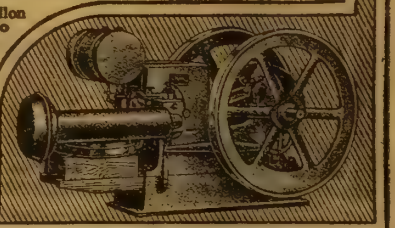

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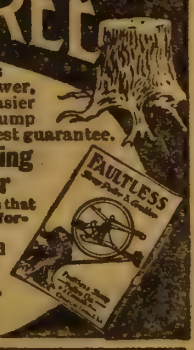

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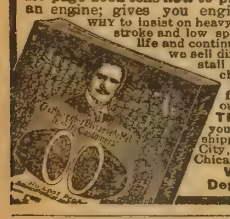

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The Wisconsin Farmer

THURSDAY, OCTOBER 12, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

UNCLE SAM DOESN'T PUT UP THE MONEY.

I FEAR that some of my readers have a wrong impression of the new federal farm-loan act, after all. Some of them seem to think that Uncle Sam regards the farmer as an applicant for charity, so he has devised some altogether new system of banking which grants alms to the farmer. This is far from being the case. Others seem to think that Uncle Sam has been imposed upon and that he will be obliged to go still more deeply into debt for the money with which to help farmers who cannot help themselves. This is likewise far from being the case. Let us all disabuse our minds of such ideas at once.

Perhaps I could not do better than to consider a letter written me last week by Mr. N. A. Sumner, of Brownsdale, Minn., as follows:

I have just been reading your version of the law, or the way for farmers to proceed to get money from Uncle Sam. Now, what I am interested in most is to know where our honest Uncle is to get the money to loan to a few million honest farmers. At last accounts the old gent was in debt a billion dollars, more or less, and with warships to build and the West India islands to pay for and congress to keep running and the Alaska railroad to build, with many other things to look after, our last congress used up quite a little over a billion dollars, and probably the next congress will not be much cheaper. Now, this loan business, if it was advertised by an individual or some company, would be set down as a gigantic swindle. This is the way it looks to me, to draw a few farmers' notes.

Let us see if there is any justification for Mr. Sumner's complaint. To begin with, Uncle Sam is not going to finance the federal land banks, except as a last resort. In the second place, Uncle Sam is not going to set aside any vast fortune to keep these banks going; he is merely going to supervise the issuance of bonds, which I predict will find such a ready market that enough private capital to keep the system running indefinitely will be available. Let me explain how the money which the farmers are to borrow is to be raised by the lenders.

The new federal farm-loan act provides for the establishment of twelve federal land banks, in as many different cities. Each of these banks is to start with a capital stock of at least $750,000. If, within thirty days after the opening of the books for subscription, there remains any part of the necessary capital stock unsubscribed, it shall be the duty of the secretary of the treasury to subscribe the balance on behalf of the United States. This is absolutely all the money that Uncle Sam is to put up permanently to carry the whole system through to successful fruition, and inasmuch as the bank stock is expected to pay dividends, it does not look like a bad investment for the "old gent," so far as I can see.

But this original capital stock of $750,000 for each of the twelve banks—a total of $9,000,000 for the nation—would not be sufficient to keep the banks running indefinitely, permitting them to loan to farmers year after year. So the law goes on to provide that when any one of these federal land banks deposits with the federal farm loan board first-class farm mortgages (upon which it has already loaned its money, under the law) or government bonds (always as good as gold) in amounts of at least $50,000, the board will issue farm-loan bonds, bearing not to exceed 5 per cent interest, in denominations of $25, $50, $100, $500 and $1,000, to run at least five years and as many more as may be determined upon in advance of issuance. Now, these bonds being backed by the capital stock of the banks, the farm mortgages and government bonds of an equal amount deposited as collateral, and having all the various farm-loan associations back of them, are bound to be looked upon as splendid investments. And as they are to be of low denominations, they will undoubtedly be snapped up by small investors—men and women who have $25 or $100 saved up and who can thus obtain government bonds at a good rate of interest.

In these two principal manners—by original private capital and by frequently issued bonds—the federal land banks will obtain the money which they in turn will loan to the farmers, on low rates of interest and for long periods of time. It is really an endless chain, for just as soon as any bank loans $50,000 to farmers it takes this $50,000 worth of farm mortgages to Uncle Sam and he keeps these mortgages and issues bonds for the amount, which the public—I am free to predict—will eagerly buy. Thus the available loaning fund is constantly replenished. But, should there ever come a time when any one or all of the land banks need money, the secretary of the treasury is authorized to make deposits, temporarily, with the land banks, to be secured by farm-loan bonds or other collateral, not to exceed the sum of $6,000,000 for all twelve banks. This is really the extent to which Uncle Sam is involved and, while it is a large sum, it is far from being the billion dollars which Mr. Sumner speaks about.

I am glad to have this opportunity to discuss this matter, for it is important that we understand the law thoroughly and that we do not get the altogether erroneous impression that Uncle Sam is making the farmer-borrower an object of charity. The whole affair is a business transaction, with the law establishing the farmer as a good business man, whose paper is as good as that of any other man living.

STOP, LOOK AND LISTEN.

I AM indebted to the general manager of one of the large railroads which traverses the grain belt (the Illinois Central) for some interesting statistics in regard to grade-crossing accidents. Taken in connection with the report issued this week by the department of agriculture to the effect that, proportionate to population, the grain belt has more automobiles than any other section of the country, the statistics should make us stop and consider this subject of accidents at railroad crossings most earnestly.

The statement made by the railroad official, which should impress itself upon the minds of all of us most firmly, is this: "All railway crossings are dangerous." What excuse can we possibly have for dashing across a grade crossing at a high speed, when it would be only a few seconds' delay to "stop look and listen," as caution and common sense should compel us to do? Nor is it the crossing, which is used the most often, which is the most dangerous, as a general rule, for the railroad official, whom I am quoting, says that "statistics prove that crossings which are used extensively, and, therefore, considered the most dangerous, are really the safest. The great majority of accidents occur at outlying crossings, which are the least used." The fact that, on this one line of railroad—among the many in the grain belt—eighteen persons have been killed and thirty-six injured in the last ninety days shows the seriousness of the situation as it exists today. Would we not all do well to heed most carefully the warning which this railroad system issues in this manner:

To those who drive or ride in automobiles: The constantly increasing number of automobile accidents at grade crossings prompts the issuance of this warning to all who own, drive or ride in automobiles to STOP, LOOK and LISTEN before passing over any railway grade crossing.

Crossing gates, automatic warning bells, electric headlights and engine signals, if not heeded by those for whose protection they are intended, are unavailing.

I will be glad to receive and consider suggestions intended to reduce automobile accidents at grade crossings, for the railroad is anxious to do its full part. However, if every person who owns, drives or rides in an automobile will STOP, LOOK and LISTEN at grade crossings, the danger will be entirely eliminated. T. J. FOLEY, General Manager.

A movement is on foot now to compel the railroads to dispense with the grade crossing and install either a viaduct or a subway, so that the road for automobiles and wagons will pass either over or under the railroad track. This is a splendid movement, but in view of the fact that this one railroad system alone (the Illinois Central) is said to have 8,000 grade crossings, and that to eliminate them in favor of the subway or viaduct would cost no less than $215,408,020 (to use the railroad's figures) or nearly twice as much as the capital stock of the company, it is doubtful if we will ever be able to eliminate the grade crossing altogether. But those of us who drive to town day after day, week after week, year after year, or even infrequently, shall we not resolve to be careful, in the interests of life and limb, to look both ways before we cross the track, to take no chances? "Stop, look and listen," rather than "Here lies the body."

THE DAYS OF OUR YOUTH.

AS A MAN grows older, he finds his mind turning back more frequently and more fondly to his childhood. He sees, in his mind's eye, persons and places "long lost to all save memory's aching sight." To an almost uncanny extent he hears voices whispering to him which he has not heard since he was a barefoot boy, knee deep in June, going "out to old Aunt Mary's." At least, this is my experience, and I believe it is not an uncommon one.

That is one reason why I never fail to appreciate letters from men and women whose hair, like mine, is silvering and whose years are approaching the three-score-and-ten of the prophets. It is not good to live too much in the past; on the other hand, I, for one, hope the day will never dawn when we will be ashamed, in our age, to revert to our youth and proudly assert that the times then were at least as good as they are today. For almost every convenience, comfort and communal pleasure that we have today, there was a recompense in the customs of yesterday. I have frequently lamented the passing of the corn husking, the barn raising and other "get-together" festivals of the days gone by; we must not forget them when the youth of today invoice their pleasures and assume that joy was unknown until the present generation was born. There were good times galore in the days of the pioneers, I know this, both from experience and hearsay.

A few weeks ago I printed a communication sent to me by a man who lived for ten years prior to 1862 upon a homesteaded farm on the Mississippi river, within sight of the side-wheel steamboats passing between St. Louis and St. Paul. The communication described the farm life of those early days. It pleased me very much, and I have had a number of letters, since then, in regard to it. One of the most interesting of these letters is from Mr. Joseph G. Waters, an attorney of Topeka, Kansas, who knows the author of the reminiscent article, Senator H. B. Kelly, of Kansas City, very well. Mr. Waters not only congratulates Senator Kelly on his article, but turns back the veil of years so that we may all look once more upon the scenes of our childhood. I want you all to enjoy his letter with me:

My father came to Iowa in 1838, when I was a puling infant. We settled near Fort Madison, at which place there was a garrison; and beyond the woods, the stream, the land and skies and Indians the territory was primeval. I remember a log cabin and a lean-to of sod that reached the roof. It was some time before we had a wood floor or glass in the windows. A rugged child needs but few accessories to make him happy. The little house may confine him nights and inclement days, but he has as a prime adjunct of such an humble place the whole world for a front door yard. The poverty of the frontier was a sort of richness that grows in value every year of one's life, and at the very end of his career, it brightens his entire sky.

I know Senator Kelly well; he was one of Kansas' great men until he went to Missouri. He is getting old and forgets things, but I do not blame him, it is not his fault. He forgot to say anything about Indian Summer along the Mississippi; October days; the bluffs of the big river swarded to its edge; the sun blood red, and through and through the great trees that crowned the sides and summits of the hills, the smoky air, in which you could almost tell what tribe had lit its campfires. The paths underneath the trees, in which the loosened leaves had flocked and fluttered and rustled as the boy's bare feet scuffled them out of his road. And here and there the call of the quail and partridge, the greatest things of boyhood, to hold him in the sturdy embrace of Nature and a lure to make him go back to the scene and live it over and over again in his last years.

The farm of my father was scanty in acres, little tilled, a poor house and the furniture limited. But the outlook belonged to it. I saw a steamboat for the first time, and the resounding whistle trembled the hills and ruffled the placid bosom of Skunk river. I thought the siren, hidden by the wooded hills, was the Angel Gabriel, and scared, I hid my face between my mother's knees. The Senator says nothing about wild honey, gathered from the trees, nor the pet shoats that, late in the fall, we murdered for food. Nor the flat boats and rafts that lazily came down that river; killed turkies hung on the poles of the rafts in process of ripening for food; nor the smell of the river; nor the leaping fish; nor through the brambles for berries. The picture has somewhat faded, but as I translate the glamored scene, I dub it the Garden of Iowa, instead of Eden. I wonder if anyone in all of rich and prosperous Iowa will remember its then poor relation, whose later years, spent in Kansas, atone for what he lost in giving up Iowa. I want to end this article by the prosaic statement that my memory of prices then is, hog meat anything a pound, wheat a little more, butter to give away, and mast and grasshopper-fed chickens, whose only market was the call of a neighbor or the welcome visit to us children, who waited for the second table, of

The circuit rider on his rounds,
Chock full of Bible lore and wearing jeans,
Who could, with might, the pulpit pound,
And sup pot licker with his pork and beans.

Do we not do well to recall these joys of the days long gone by, while those who experienced them are still among us, able to tell their tale and move us by their unstudied eloquence? We owe a debt, greater than many generations will be able to pay, to those hardy pioneers who grubbed a foothold in the virgin sod and from their homesteads developed the fertile farms and the teeming cities of today. To have their stories set forth as Senator Kelly and Mr. Waters have done is to me as refreshing as a cup of sparkling water from the old spring or a breath of rose-scented air in June.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of fifty or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Wisconsin Farmer Live Stock Reports.

IN this issue will be found reports of the Waterloo Dairy Cattle Congress, and the National Swine Show, each event of the utmost importance to dairymen and hog breeders of the Central Western States. The Wisconsin Farmer was represented by members of its staff at each one of these shows and also by special photographers who have gathered a fine group of good showy animals which are reproduced in this issue.

Wisconsin is forging to the front so rapidly as a live stock state that we feel these reports are of special interest to a very large number of our readers. Even those who are not raising pure-bred stock are engaged in improving their grades by the use of pure-bred sires, and they will be interested in studying the types which are generally accepted as best by the foremost breeders of the nation. We believe that no other Wisconsin farm paper will give such comprehensive reports of these two great stock shows or have so many pictures of the animals which carried away the ribbons. Wherever Wisconsin stock has been entered in these competitions the individuals have made an excellent showing. There are, however, many herds of dairy cattle in Wisconsin and many hogs, which were not exhibited at these shows, and which would have made a good showing had they been entered. The show business has been somewhat demoralized the past few years by the fear of foot-and-mouth disease, but now that this is dispelled, our breeders are getting back into the ring and competing for the honors. We hope to see more Wisconsin breeders represented at both of these shows next year.

Potato Crop Short, But Prices High.

POTATO growers in Wisconsin, who still follow the hit-and-miss method of growing this crop in the selection of seed and care of the fields, will find, this year, in the success of those who follow the most advanced methods, a lesson to be taken strictly to heart. This was one year when good cultural methods meant a great deal, and general observations over the state have brought about the conclusions that these growers, in most every instance, are being fully repaid for their additional trouble by better stock and better yields than would have been obtained under ordinary care.

Every grower knows what a good yield and a good crop means this fall. Those who were fortunate enough to have good crops will realize heavily on their investments, as the crop is below normal. Prices are high now and they will undoubtedly go higher before the next crop is harvested. We know of one instance in an Upper Wisconsin county where a settler, with this year's potato crop, is virtually getting his start. He not only used the best methods in selecting his seed and in caring for his crop, but he was probably a little more favored than some of his neighbors, as his potatoes received a little more rain. But good methods are showing up during the harvest, and it is estimated that his fifteen acres will net him close to $2,500. This will be his working capital with which he can clear more of his land, get some better stock, and improve his buildings. He has a crop that is highly desired for commercial purposes and he is having no trouble in disposing of it as fast as it is dug. This is an instance which cites the fact that some splendid returns are going to be made in potatoes this fall, but it is a stronger testimonial to the necessity, especially under conditions like those that existed this year, of adopting the most advanced methods, such as field selection of seed, treatment for scab, improved cultural methods, and spraying against the common diseases.

Mr. J. G. Milward, secretary of the Wisconsin Potato Growers' Association, who has been over the potato-growing sections recently, says that Wisconsin, despite the general impression, is harvesting some splendid potatoes, and he expects the showing at the state show, at Eau Claire, next month to be up to that of future years from a quality standpoint. Some sections have been a little more favored than others with rainfall, but conditions, as a whole, were very trying this summer and Mr. Milward believes that never before did good cultural methods show up so effectively as this season. General observations indicate that growers who cultivated properly and used care in choosing their seed are harvesting better crops than those just across the fence, who followed the hit-and-miss methods. Weather was not only a factor, but there was a fight on the diseases attendant to a dry season. Late blight was not encountered, because of the hot weather, but considerable damage was done by the beetles and from tip burn in those fields which lacked the necessary care. Arsenical injury was also quite general, due to carelessness in spraying. The second inspection of certified fields is now being made, and these growers anticipate good prices for seed stock the coming spring with table stock at the high prices now being paid. Quality always tells, and this was one season when the grower, who used the best methods, will reap the reward.

Care in Operating Corn Shredder.

IT SEEMS that it should be unnecessary to warn persons of danger when they realize that it lurks near by, but if they did not forget the railroads undoubtedly would not have to provide each crossing with a bell that rings on the approach of a train, or with a big sign, "Look out for the cars." Most accidents are undoubtedly due to forgetfulness or carelessness, and it is, therefore, quite appropriate at this time that the warning should be sent out to Wisconsin farmers who use corn shredders, of the dangers of this machine. Every year there are quite a number of arms and hands lost in shredders on Wisconsin farms, and occasionally a death is reported. In 1911, the Wisconsin Industrial Commission reports four farmers were killed with shredders, six arms were lost and twenty-one hands. It is pleasing to note, however, that the list of injuries is decreasing with the improved guards on the newer types; but there are a large number of old-type shredders in operation that are without guards, which the commission reports demand annually a sacrifice of flesh and bone and blood. So the commission has issued the following rules for operating shredders with the idea of safety in mind:

Never use the hands to unclog the rolls. Use a stick or stop the machine.

Every husker and shredder should be equipped with a self-feed so the operator will not have to stand within reach of the rolls.

Every husker and shredder on which it is possible for the operator to get caught in the rolls should be provided with a safety lever so attached that the feeder's body will strike it if his hands are caught in the rolls.

It is always dangerous for the feeder to cut bands while standing within reach of the snapping rolls, especially if the knife is tied to the wrist.

Every gear should be covered to make it impossible for fingers to get caught.

Although farming is considered a safe occupation, there are many dangers, and few manufacturing industries involve hazards more dangerous than the corn shredder. The fact is, if every Wisconsin boy, and man, too, for that matter, could be made to exercise caution while operating corn shredders, there would be fewer missing hands and arms in the rural communities.

Wisconsin Woman's View of the Farm Home.

THE problem of the farm woman, we believe, is one often neglected, although she is the essential partner on every well-kept farm. Too often is her recreation and her happiness overlooked, not intentionally probably, but in the rush of other matters. Then, too, many women belong to that type who can't rest or enjoy themselves as long as there is a corner to dust or a bit of work to be done. Life is largely what we make it, and Miss Nellie Maxwell, of the department of farmers' institute of the college of agriculture, in a recent contribution on "the recreation of the farm wife," touches very strongly the philosophy of life by calling attention to the little things that can often be left undone; to the improved methods of housekeeping that the wife may have more leisure, and the fact that the first duty of woman is to keep a home—not a house.

Miss Maxwell realizes the problem of the house mother to get away from her daily cares and how little they appreciate the value and necessity of a vacation, but this can be largely solved by teaching the children to help and be of some assistance from the tiny yearling to the grown daughter. Children are trained to help—not because their assistance is so valuable, but because it is essential to the development of the men and women who are to take up the world's work. Fresh air is free to everyone—a play or a walk in it is always enjoyable, especially at this season—and nothing dispels so quickly that tired, exhausted feeling as pure air. In speaking of consideration for mother, Miss Maxwell points out that, if she doesn't care to walk or go to town, or read or spend an afternoon sewing, or with her neighbors, she can have recreation in other ways. But, by all means, she should have her day of rest, as Miss Maxwell says:

If, instead of the best dinner of the week on Sunday, consideration is given the mother, letting her have her day of rest, there would be fewer breakdowns. She is entitled to her day of rest as well as any member of the family, but she is usually the last one to assert her right.

Let the housewife learn to take a vacation from some of the non-essentials, like ironing knitted underwear, hose and turkish towels. Sheets, when ironed well on the hems and folded, will look quite well in the drawer or on the bed. If sheets are well hung and dried, then folded when taken from the line, little ironing is needed to make them smooth. All these things, left out, will give many precious hours for rest and recreation.

The farm wife who "keeps her nose to the grindstone" is sacrificing health, "liberty and the pursuit of happiness." Get a wire dish drainer and remove the task of wiping dishes. Simply scald them, take a nap or read the paper, and in a few minutes they will be ready to put away upon the shelves with scarce a touch of the towel.

Teach the children to wait upon themselves and you. It is hard, but it pays. The mother who accepts attention from her family is usually the one who is loved and respected, while the woman who makes a doormat of herself may be treated like one and it more than often is her own fault.

Cultivate the sense of proportion and remember it is not necessary for the comfort and happiness of the family that everything should be turned over, dusted and scrubbed every week. It is far better that a few cobwebs go unbrushed, if by right living we can keep them out of our brains. This does not mean that work should be slighted, but that the first duty of a woman is to keep a home, not a house.

The essential thing is that mother play—that she do something each day that is restful. Community gatherings, such as rural clubs, etc., hold much to foster a community spirit, and by beginning with the children, their parents may be included. In these friendly gatherings the older ones may learn from the younger how to plan—how to do those things that mean good health and happiness.

Cost of Wisconsin Butter Production.

LITTLE things on the farm count for more than the average farmer realizes, and it is the stopping of small leaks that often result in a showing on the right side of the ledger at the end of the year. There was a time when it was thought a little thing to weigh a cow's milk and test it; or test corn or utilize the fertility that once went to waste. But today cow testing has become essential on every farm if the dairyman is to know, dollar for dollar, what his cows are doing for him. It is the aggregate that mounts up.

Few buttermakers or farmer-patrons of creameries probably realize what the shrinkage in butter churned each year in Wisconsin is costing them. It does not seem like a very large matter when a tub shrinks a pound, but this very problem alone is a loss to the dairymen of Wisconsin of 1,000,000 pounds of butter a year. It was such little things as these that Mr. C. E. Lee, assistant dairy commissioner and dairy specialist of Wisconsin, discussed at the dairy congress last week at Waterloo in an address on "The Buttermaker of Tomorrow." Mr. Lee went at his subject from both the farmer's and the buttermaker's standpoint for the creamery that gets the highest prices for its butter pays the most per pound for fat to its patrons and efficiency is the crying demand of today. In pointing out that little thiugs count, Mr. Lee said:

The farmer is often criticized because he overlooks the little things that count for much more than the things that he at times lays stress on. An example of this is the price received for 100 pounds of milk, butter fat or cheese, when his larger problem is the cost of production. This is likewise true with some of the creamery men when they consider the questions that may seem large and are of national importance. These problems need not all be mentioned. They all bear a relation to efficiency in factory operation. The water limit in butter or any legal standard and its enforcement must be considered, but the problem of making the butter of such high quality and uniformity that the consumer will buy five pounds in place of four is of far greater importance in dealing with the successful maker. Again, a great deal of stress is put forth by a few men to see how close they may scale the legal standard for water in butter and not pay the penalty. The larger problem should be the putting into every pound of butter such workmanship that 100 pounds may be shipped across the continent and be returned and still weigh 100 pounds. A maker may talk overrun and the factors that influence it or he may discuss the fat standard in butter, because to him it may seem a ponderous question, but at the same time he will pack sixty-four pounds of butter in a tub and accept payment for sixty-two or sixty-three and not question whether or not the actual difference was shrinkage or inaccuracy in weighing the butter. This problem alone is a loss to Wisconsin of 1,000,000 pounds of butter per year.

This is one of the little leaks that can be stopped by the treatment of tubs and liners in boiling water for a period of fifteen minutes and then in cold water before being placed in contact with the butter. These matters are of interest to so many farmers who re interested in the hundreds of cooperative creameries as stockholders as well as patrons. It is essential that every farmer take an interest in his creamery aside from the amount he gets for his butter fat or his milk, for the better the creamery's products the better the price it will bring, and a creamery which falls below standard is not giving its farmer-patrons the justice they deserve.

WATERLOO DAIRY CONGRESS.

Cattle of High Quality Compete For Dairy Honors—New Records Are Made in Attendance and the Cattle Congress Is in Every Respect a Success.

THE sixth annual Waterloo Dairy Congress, held last week at Waterloo, Iowa, was by far the most successful in the history of this institution. This has been a year of great progress for fairs and live stock shows, and new records have been made all along the line. The Waterloo Dairy Cattle Congress not only made new records but in many instances doubled records. The show was put on a firm financial footing the past winter by subscriptions of $50,000 stock in the managing company, practically all the stock being subscribed by enterprising business men and progressive manufacturers of Waterloo. There has been a doubt in the minds of some dairymen as to whether Waterloo could successfully maintain a dairy show, but the performance this year would seem to dispel that doubt entirely. As the center of the dairy world moves westward, and as Iowa begins to take up dairying on a larger scale, the Waterloo Dairy Congress will undoubtedly grow and rival other dairy shows in the world for number and quality of cattle and for attendance upon the show.

FIRST-PRIZE WINNERS OF THE HOLSTEIN-FRIESIAN FEMALE CLASSES.

It is not possible to attend the Waterloo Dairy Congress and fail to catch some of the buoyancy which saturates the business atmosphere of the city of Waterloo. In no city this year where a great fair or exposition of live stock has been held has the progressive spirit of the citizens been so apparent as at Waterloo. If Waterloo will continue to stand by this cattle congress as it has done in the past, and as it did with very special emphasis this year, Waterloo may become the dairy center of this western country. Waterloo is near the center of that section of Iowa where dairying has reached its highest stage of development. It is close to Wisconsin and Minnesota. The cattle congress offers a great educational advantage to Iowa, where dairying has in the past few years reached some prominence. Waterloo is a good point from which to conduct and continue the dairy educational campaign. More dairying in Iowa, more pure-bred animals of the dairy class, greater interest in quality production, etc., will all help the Waterloo show. And the Waterloo dairy show will be a great factor in bringing these things about. Waterloo is a manufacturing city from which we get many articles of importance to the dairy farmer. Waterloo knows how to extend the glad hand to a crowd and she knows how to entertain. Waterloo is a beautiful city situated on both banks of the Cedar, Iowa's most beautiful stream. The cattle congress is housed in a fine place, the transportation facilities are good and a larger crowd could have been handled with ease. Six years ago the Dairy Cattle Congress held its first show in two small tents at the Chautauqua grounds. It was an insignificant beginning, but this year's result warrants the effort which has been made.

The Dairy Cattle Congress was a show of quality. Jerseys predominated, there having been a very special effort made by the Jersey breeders to make a big showing. There were 138 Jerseys in the show herd, representing some of the highest class herds of the country and competition which taxed the keen eyes and expert knowledge of the judge. There were 104 Holsteins shown in the ring, several of highest quality, and a splendid average showing. The eighty-eight Guernseys were a fine lot of cattle and the seventy-three Ayrshires and fifty-eight Brown Swiss showed admirably the good characteristics of these two dairy breeds. In addition to the show stuff there were many cattle on the grounds consigned to sales and a number for exhibition purposes not entered in the show ring. It was a much better show of dairy cattle than has been seen at many of the state fairs this year. As to quality, we need only say that a considerable number of the winners go direct to the National Dairy Show at Springfield, Mass., for competition with the top notchers of the dairy world.

The Dairy Cattle Congress afforded a great opportunity for representatives of the breed to get together. The Holstein breeders of Iowa had a meeting and banquet on Tuesday, at which the national president, D. D. Aitken, of Flint, Mich., was present. Col. George W. French, proprietor of Iowana Farms, an exhibitor at the show, was also present and spoke at the banquet. Colonel French is a vice president of the Holstein-Friesian Association of America. M. H. Gardner, of Delavan, Wisconsin, secretary of the Holstein Advanced Registry Association, was present and spoke and W. B. Barney, state dairy and food commissioner, and other Iowa breeders were on the program. Each of the breed associations had a booth at the show. The Ayrshire booth was in charge of J. G. Watson, of Brandon, Vermont, a personal representative of the Ayrshire Breeders' Association. The American Guernsey Cattle Club booth was in charge of C. H. Hurlburt, editor of the Guernsey Breeders' Journal, and J. E. Stallard, Jr., both of Peterboro, New Hampshire. Mr. Charles L. Hill, of Rosendale, Wisconsin, secretary of the Western Guernsey Breeders' Association, was present and acted as judge in the Guernsey classes. The Jersey breeders of the country were there in force, as before indicated. On Friday evening they were tendered a banquet by George T. Slade, of St. Paul, son-in-law of the late James J. Hill, of the Great Northern road. Mr. Ed C. Lasater, of Falfurrias, Texas, won the American Jersey Cattle Club cup, awarded to the winner of grand champion cow at the show. The Jersey breeders left Sunday evening by special train in style, their cattle accommodated in almost as inviting a manner as their owners, for Springfield, Mass., to attend the National Dairy Show.

GRAND CHAMPION JERSEY COW.

Aldam's Golden Fern, owned by Ed C. Lasater, of Farfurrias, Texas.

HOLSTEINS.

The black and white cattle made a magnificent showing at the Dairy Cattle Congress. Eight exhibitors, having a total of 104 head, came into strong competition with one another, and the wonderful lot of quality displayed in every class made it a difficult task to pick the winners. "It was the best showing ever made at Waterloo," declared U. S. Moscrip, of Lake Elmo, Minn., who was judge of Holsteins, and several prominent breeders claimed that it was the greatest Holstein show ever held west of the Mississippi River. The classes of cows and heifers were especially strong. The first three cows in the aged class showed a wonderful lot of quality and type. Minerva Beets, the aged cow of R. E. Haeger, Algonquin, Ill., finally carried away the blue ribbon. She is an excellent animal, showing splendid quality and type, strong in the middle and carrying a wonderfully developed udder and large milk veins. One of the best classes in the show was that of senior heifer calves. The sixteen calves brought into the ring showed a remarkable lot of quality, and the rank of the winners was very close. Lady Calamo Hengerveld, owned by Mr. Haeger, was awarded first place in this class. All the group classes were well filled and made a strong showing. The aged herd bull, Oak De Kol Ollie Homestead, of the Iowana Farms, Davenport, Iowa, was made senior and grand champion bull of the show. He is a big, sturdy animal, strong in the middle and possessing good Holstein type. The junior champion, Nockdair Segis Fobes Boy, owned by Baird Bros., Waukesha, Wis., is a good bull calf with fine quality, straight lines and lots of promise, but lacking somewhat in scale. In the female championship classes, Minerva Beets was made senior and grand champion and Nellie Segis Pontiac Combination, owned by the Galloway-Messer Farms Co., of Waterloo, Iowa, was made junior champion. The Galloway-Messer heifer is remarkable because of her excellent type and quality combined with plenty of scale. Immediately after the judging, the champions and first prize winners in all single classes were lined up and led around the show ring. This parade was a pleasing sight to all Holstein lovers at the ringside and gave the visitors a chance to study the type of animal that breeders of the black and whites are striving to produce.

Exhibitors: Baird Bros., Waukesha, Wis.; Galloway-Messer Farms Co., Waterloo, Iowa; Iowana Farms, Davenport, Iowa; Cass Farm Co., Sumner, Iowa; McKay Bros., Waterloo, Iowa; R. E. Haeger, Algonquin, Ill.; H. O. Larsen, Dike, Iowa; Iowa State College, Ames, Iowa.

Judge, W. S. Moscrip, Lake Elmo, Minn.

Bull 3 Years or Over (6 shown)—1st Iowana Farms on Oak De Kol Ollie Homestead; 2d Haeger on Paul Calamo Korndyke; 3d Baird Bros. on Bairdland Segis Sir Prize; 4th Galloway-Messer Farms Co. on Hengerveld King; 5th Haeger on Paul Calamo Korndyke 14th.

Bull 2 Years and Under 3 (3 shown)—1st Galloway-Messer Farms Co. on King Segis Johanna Ormsby; 2d Haeger on Joe Calamo Hengerveld; 3d Iowana Farms on Iowana DeCola Fayne.

Bull 1 Year and Under 2 (7 shown)—1st Dairy Farm, Iowa State College on Iowana Homestead Watson; 2d Baird Bros. on Nockdair King Segis Perfection; 3d Galloway-Messer Farms Co. on Skylark Colantha; 4th Haeger on King Segis Arcady Posch; 5th Galloway-Messer Farms Co. on King Segis Pontiac Combination 5th.

Bull Calf 6 Months and Under 12 (8 shown)—1st Galloway-Messer Farms Co. on Korndyke Pontiac Ormsby; 2d Baird Bros. on Farsis Sir Segis Hengerveld; 3d Galloway-Messer Farms Co. on King Segis Johanna Ormsby; 4th Haeger on King Segis Pontiac Bonheur.

Bull Calf Under 6 Months (9 shown)—1st Baird Bros. on Nockdair Segis Fobes Boy; 2d Haeger on King Segis Pontiac Isaac; 3d Baird Bros. on Nockdair Segis George; 4th Iowana Farms on Iowana Cornucopia Fayne; 5th Galloway-Messer Farms Co. on Skylark Pontiac Bettina.

Cow 5 Years or Over (10 shown)—1st Haeger on Minerva Beets; 2d Cass Farm Co. on Jessie Fobes Bessie Homestead; 3d Iowana Farms on Johanna Rue Burke 3d; 4th Haeger on Netherland Clothilde Idyl Burke; 5th Iowana Farms on Spring Brook Cornucopia Julia.

Cow 4 Years and Under 5 (3 shown)—1st, 2d and 3d Haeger on Princess Hengerveld 4th, Beulah Shepard Empress and Fannie Vale Mercedes 2d.

Cow 3 Years and Under 4 (3 shown)—1st Galloway-Messer Farms Co. on Jewel Walker Gerben of Cedarside; 2d Haeger on Mahomet Osma Butter Girl; 3d Iowana Farms on Iowana Prima Donna.

Heifer 2 Years and Under 3 (9 shown)—1st Haeger on K. S. P. Spofford Beets; 2d Baird Bros. on Nockdair Segis Netherland Price; 3d Larsen on Bracelet Clothilde Korndyke; 4th Iowana Farms on Iowana Mink; 5th Haeger on Aconeth Lady Hengerveld.

Heifer 18 Months and Under 24 (8 shown)—1st Galloway-Messer Farms Co. on Nellie Segis Pontiac; 2d Baird Bros. on Nockdair Segis Longfield Rose; 3d Galloway-Messer Farms Co. on Lady Winters Segis; 4th Haeger on K. S. P. Idol Rose; 5th Larsen on Forum Gerben Duchess.

Heifer 12 Months and Under 18 (6 shown)—1st Haeger on Nancy Calamo Korndyke; 2d Iowana Farms on Iowana Fayne Julia; 3d Baird Bros. on Nockdair Segis Valentine; 4th Iowana Farms on Iowana Homestead Star; 5th Larsen on Keep On Johanna 4th.

Heifer Calf 6 Months and Under 12 (16 shown)—1st Haeger on Lady Calamo Hengerveld; 2d and 3d Galloway-Messer Farms Co. on Dorothy Segis Ormsby and Jewel Walker Segis Pontiac; 4th Baird Bros. on Nockdair Segis Longfield Gem; 5th Larsen on Forum Jessie Alcartra.

Heifer Calf Under 6 Months (13 shown)—1st Baird Bros. on Nockdair Segis Cornucopia; 2d Larsen on Forum Aaggie De Kol; 3d Haeger on Tantalus Calamo Korndyke; 4th and 5th Galloway-Messer Farms Co. on Ormsby Buffalo Mercedes 2d and Eudora Maid Pontiac Ormsby.

Cow Having Official Yearly Record Begun at 5 Years or Over (2 shown)—1st Cass Farm Co. on Jessie Fobes Bessie Homestead; 2d Galloway-Messer Farms Co. on Marie Hengerveld De Kol.

Cow Having Official Yearly Record Begun at 2 Years, Under 5 (4 shown)—1st and 2d Iowana Farms on Johanna Rue Burke 3d and Spring Brook Cornucopia Julia; 3d Galloway-Messer Farms Co.; 4th Baird Bros. Segis Senora De Kol Princess.

Exhibitor's Herd (5 shown)—1st and 5th Haeger; 2d Galloway-Messer Farms Co.; 3d Iowana Farms; 4th Baird Bros.

Breeder's Young Herd (5 shown)—1st Galloway-Messer Farms Co.; 2d Baird Bros.; 3d Haeger; 4th Larsen; 5th Iowana Farms.

Calf Herd (5 shown)—1st Baird Bros.;

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R. B. Young's Special—Baird Bros. won cup.

Get of Sire (5 shown)—1st Galloway-Messer Farms Co.; 2d Baird Bros.; 3d and 5th Haeger; 4th Iowana Farms.

Produce of Cow (5 shown)—1st Galloway-Messer Farms Co.; 2d and 5th Iowana Farms; 3d Haeger; 4th Baird Bros.

Dairy Herd (3 shown)—1st Haeger; 2d Iowana Farms; 3d Galloway-Messer Farms Co.

Senior Champion Bull—Iowana Farms on Oak De Kol Ollie Homestead.

Junior Champion Bull—Baird Bros. on Nockdair Segis Fobes Boy.

Senior Champion Cow—Haeger on Minerva Beets.

Junior Champion Cow—Galloway-Messer Farms Co. on Nellie Segis Pontiac.

Grand Champion Bull—Iowana Farms on Oak De Kol Ollie Homestead.

Grand Champion Cow—Haeger on Minerva Beets.

Grand Champion Cow With Official Record—Cass Farm Co. on Jessie Fobes Bessie Homestead.

JERSEYS.

A keen interest was taken in the Jersey show at the Dairy Cattle Congress. Large crowds gathered at the ringside and watched the placing of the ribbons, while the exhibitors and breeders, who sat at the border of the ring, studied every movement of the judge in an effort to anticipate his decisions. Ten exhibitors with 138 head of cattle competed for the prizes, which were awarded in all classes except one by John Lee, of Shelbyville, Ky. The aged bull class was judged by C. H. Staples, of Baton Rouge, La. Not only in number was the showing strong, providing a full representation in every class, but a wonderful lot of quality and type was exhibited. The aged cow class in particular was remarkable in this respect. Seldom have such choice Jerseys been brought together at one time.

The group classes of this popular dairy breed presented a beautiful sight, which brought forth much favorable comment from the ringside. In the championship classes, Noble Sultan's Golden Fern, owned by Mrs. Harry C. Galbraith, Knoxville, Tenn., was made senior and grand champion bull. He is a handsome animal of golden fawn color with white markings, possesses plenty of quality and a beautiful head, which is his most distinguishing characteristic. The junior champion bull, Noble Prince Jolly, owned by Geo. T. Slade, White Bear Lake, Minn., also is a stylish fellow and ranks high in quality and type; he gave the senior bull a close race for the grand championship, but was not quite good enough to be placed over the aged animal.

In the female championship classes, Aldan's Golden Fern, owned by Ed C. Lasater, Falfurrias, Texas, won the senior and grand champion ribbons. She is a beautiful, outstanding cow of wonderful conformation and type, with an excellent udder and splendid veining. The junior champion, Fern's Oxford Ever, owned by F. J. Bannister, Kansas City, Mo., is a stylish yearling heifer showing much promise. While the champions were outstanding in their respective classes, they were supported by winners of lesser prizes which would have made a remarkable showing by themselves. Without fear of contradiction, we may say that the Jersey show at Waterloo was crowned with success.

Exhibitors: F. J. Bannister, Kansas City, Mo.; Ed C. Lasater, Falfurrias, Texas; M. D. Munn, St. Paul, Minn.; N 'le Fabyan, Geneva, Ill.; Mrs Harry H. Galbraith, Knoxville, Tenn.; Kingston Bros., Avon, Ill.; Geo. T. Slade, White Bear Lake, Minn.; R. Y. Gibson, Jacksonville, Ill.; I. Robert Blackburn, Dayton, Ohio; Willow Lawn Farm, Inc., Waverly, Iowa.

Judges, C. H. Staples, Baton Rouge, La., and John Lee, Shelbyville, Ky.

Bull 3 Years or Over (8 shown)—1st Galbraith on Noble Sultan's Golden Fern; 2d Bannister on Noble's Handsome Prince; 3d Lasater on Noble's Eminent Lad; 4th Munn on Gamboge's Vellum Majesty; 5th Kington Bros. on Noble Rozel.

Bull 2 Years and Under 3 (9 shown)—1st Lasater on Windsor's Nobleman of F.; 2d Bannister on Flora's Queen's Raleigh; 3d Fabyan on Fern's Noble of Riverbank; 4th Lasater on Eminent's Nobleman of F.; 5th Fabyan on Riverbank's Oxford Noble.

Bull 1 Year and Under 2 (12 shown)—1st Slade on Noble Prince Jolly; 2d Munn on Castor's Golden Jolly; 3d Lasater on Aldan's Noble of Texas; 4th Bannister on Golden Fern's Pathfinder; 5th Galbraith on Sam Loates Warrior.

Bull Calf 6 Months and Under 12 (9 shown)—1st Lasater on Sultana's Eminent Lad; 2d Bannister on Society Lad; 3d Galbraith on Golden Fern's Figgis Fox; 4th Fabyan on Ocean Blue's Chieftain; 5th Kington Bros. on Majesty's Cora's Noble.

Bull Calf Under 6 Months (7 shown)—1st Galbraith on Champion Goddington; 2d Lasater on Miss Nora's Village Knight; 3d Fabyan on Golden Fern of Riverbank 4th; 4th Blackburn on Mabel's Noble Raleigh; 5th Blackburn on Sophie's Gamobe Premier.

Cow 5 Years or Over (16 shown)—1st Lasater on Aldan's Golden Fern; 2d Fabyan on Manor's Blossom; 3d Kington Bros. on Matilda's Mabel; 4th and 5th Bannister on Beechland's Champion Lily and Noble's Fair Nerissa.

Cow 4 Years and Under 5 (6 shown)—1st, 2d and 4th Bannister on Agatha's Maiden Fern, Warder's Fern Blossom and Golden Fern's Shy Lady; 3d Willow Lawn Farm on Countess Topsy; 5th Kington Bros. on Reinbou's Leda Raleigh.

Cow 3 Years and Under 4 (4 shown)—1st Kington Bros. on Fern's Pine Daisy; 2d Bannister on Golden Fern's Silver Thread; 3d Lasater on Majesty's Madame of Falf; 4th Blackburn on New Wave.

Heifer 2 Years and Under 3 (8 shown)—1st Bannister on Undulata Nena; 2d Munn on Burweb's Harriet; 3d Lasater on Constance of Falfurrias; 4th Kingston Bros. on Noble Rosina; 5th Galbraith on Cowslip's Maid.

Heifer 18 Months and Under 24 (11 shown)—1st Bannister on Fern's Oxford Ever; 2d Kington Bros. on Noble's Proud Beauty; 3d Lasater on Aldan's Mary of La Mota; 4th Bannister on Golden Fern's Jolly Beauty; 5th Blackburn on Minette's Sultana.

Heifer 12 Months and Under 18 (10 shown)—1st Bannister on Houpla's Panola; 2d Galbraith on Juda's Lilac; 3d Lasater on Eminent Lad's Brightness; 4th Galbraith on Golden Fern's Saucy Maid; 5th Blackburn on Lady Raleigh Noble.

Heifer Calf 6 Months and Under 12 (11 shown)—1st Bannister on Noble's Champion Gauntlet; 2d Lasater on Aldan's Noble Jessica; 3d Munn on Golden Fern's Triumph; 4th Fabyan on Ocean Blue's Cowslip; 5th Blackburn on Prue's Milk Maid.

Heifer Calf Under 6 Months (10 shown)—1st Lasater on Cowslip's Noble Queen of Falf; 2d Bannister on La Cima's Louise; 3d Galbraith on Golden Fern's Bright Jewel; 4th Slade on Panola's Oxford Rosabelle; 5th Blackburn on Lady Noble Raleigh.

Cow Having Official Yearly Record Begun at 5 Years or Over (2 shown)—1st Lasater on Aldan's Golden Fern; 2d Bannister on Beechland's Champion.

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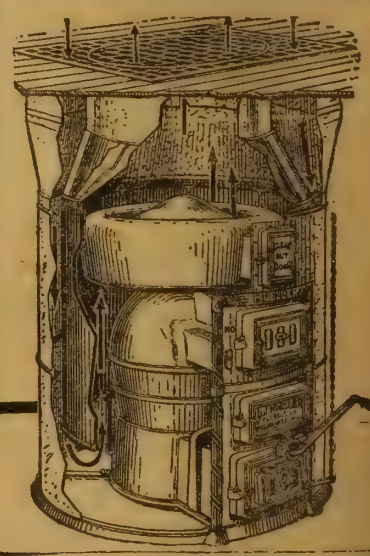

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Begun at 2 Years, Under 5 (3 shown)—1st Lasater on Majesty's Madame of Falf; 2d Willow Lawn Farm on Countess Topsy; 3d Blackburn on Raleigh's Dorothy.

Exhibitor's Herd (6 shown)—1st Bannister; 2d Galbraith; 3d Lasater; 4th Kington Bros.; 5th Munn.

Breeder's Young Herd (3 shown)—1st Lasater; 2d Slade; 3d Kington Bros.

Calf Herd (3 shown)—1st Lasater; 2d Blackburn; 3d Kington Bros.

Get of Sire (8 shown)—1st Bannister; 2d Galbraith; 3d Lasater; 4th Bannister; 5th Munn.

Produce of Cow (9 shown)—1st Bannister; 2d Munn; 3d Blackburn; 4th Lasater; 5th Galbraith.

Dairy Herd (5 shown)—1st Bannister; 2d Lasater; 3d Fabyan; 4th Kington Bros.; 5th Blackburn.

Senior Champion Bull—Galbraith on Noble Sultan's Golden Fern.

Junior Champion Bull—Slade on Noble Prince Jolly.

Senior Champion Cow—Lasater on Aldan's Golden Fern.

Junior Champion Cow—Bannister on Fern's Oxford Ever.

Grand Champion Bull—Galbraith on Noble Sultan's Golden Fern.

Grand Champion Cow—Lasater on Aldan's Golden Fern.

Grand Champion Cow With Official Record—Lasater on Aldan's Golden Fern.

GUERNSEYS.

A splendid lot of Guernseys were exhibited at the Dairy Cattle Congress this year. Eighty-eight head of cattle from the herds of six exhibitors made up the showing, which was pronounced by leading Guernsey men who saw it to be first class in every respect. Many visitors gathered at the ringside and watched the tying of the ribbons, a task which fell to Charles L. Hill, of Rosendale, Wis. The judging was difficult because all the classes were well filled, and much uniformity was displayed in practically every class. W. W. Marsh, of Waterloo, Iowa, entered the largest number of animals and won the largest number of ribbons; his representation consisted of twenty-six excellent animals, including some of the finest Guernseys in the country.

The awards for senior and grand champion bull went to Mr. Marsh on Ladysmith's Cherub. He is a strong, handsome bull, with great finish, an excellent head and remarkable quality. The junior champion bull award also went to the Waterloo breeder on Flora's Memento, an excellent senior bull calf of great promise. In the female classes, Hayes Wena 4th was made senior and grand champion cow, and Figtree of the Prairie junior champion heifer; both animals were from the Marsh herd.

Exhibitors: Hans J. Schmidt, Cedar Falls, Iowa; Jean Duluth Farm, Inc., Duluth, Minn.; Wilcox & Stubbs, Des Moines, Iowa; Village Farms, Inc., Grass Lake, Mich.; Nelle Fabyan, Geneva, Ill.; W. W. Marsh, Waterloo, Iowa.

Judge, Charles L. Hill, Rosendale, Wis.

Bull 3 Years or Over (5 shown)—1st Village Farms on Walbridge's Glenwood Boy; 2d Wilcox & Stubbs on Penwyn of Rosendale; 3d Wilcox & Stubbs on Imp. Patricia's Son; 4th Schmidt on College Pride; 5th Marsh on Nancy Mac's Son of Iowa Dairy.

Bull 2 years and Under 3 (3 shown)—1st Marsh on Ladysmith's Cherub; 2d Jean Duluth Farm on Starlight's Excelsior of J. D.; 3d Marsh on Alyssum Oliver.

Bull 1 Year and Under 2 (5 shown)—1st Jean Duluth Farm on May Rose Yeksa Starlight; 2d Marsh on Plato's Prince of the Prairie; 3d Village Farms on Pride's Hambro; 4th Wilcox & Stubbs on Frances Holden of Fairview; 5th Wilcox & Stubbs on Glenrock Quito.

Bull 6 Months and Under 12 (7 shown)—1st Marsh on Flora's Memento; 2d Jean Duluth Farm on Marathon Rose King; 3d Wilcox & Stubbs on King Bell 5th; 4th Village Farms on Village Chevalier; 5th Schmidt on Rosette's Glenwood Boy of Grand Home.

Bull Calf Under 6 Months (5 shown)—1st Jean Duluth Farm on Lady Gree's May King; 2d Wilcox & Stubbs on Holden's Duke; 3d Village Farms on Village Laddie; 4th Marsh on Nanpareil's Blossom; 5th Wilcox & Stubbs on Holden's Dairyman.

Cow 5 Years or Over (6 shown)—1st Marsh on Hayes Wena 4th; 2d Marsh on Snowdrop 3d; 3d Fabyan on Polly of Hillstead; 4th Wilcox & Stubbs on Frances Rose of Fairview; 5th Village Farms on Maggie Hall.

Cow 4 Years and Under 5 (4 shown)—1st Marsh on Polly of Briquet; 2d Village Farms on Grace Lake of Bide a Wee; 3d Wilcox & Stubbs on Daisy Bell of Fairview; 4th Marsh on Fleurie du Tertre.

Cow 3 Years and Under 4 (6 shown)—1st Marsh on Snowdrop 6th; 2d Village Farms on Clara Taylor; 3d Marsh on Lady Elizabeth; 4th Jean Duluth Farm on J. D. Phyllis; 5th Schmidt on Marcus Glenwood's Rosette.

Heifer 2 Years and Under 3 (8 shown)—1st Jean Duluth Farm on J. D. Coronet; 2d Marsh on Hayes Emerald; 3d Wilcox & Stubbs on Rob Rilma's Daisy Bell; 4th Marsh on Marie's Bopeep; 5th Schmidt on Victoria's Spotty.

W. W. Marsh Guernsey Special (1 shown)—1st Jean Duluth Farm on J. D. Coronet.

Heifer 18 Months and Under 24 (6 shown)—1st and 2d Marsh on Figtree of the Prairie and Mar's Blossom; 3d Jean Duluth Farm on William's May Rose; 4th Village Farms on Alice of Roseheath Orchard; 5th Schmidt on Victoria's Queen of Grand Home.

Heifer 12 Months and Under 18 (5 shown)—1st Marsh on Mack's Fernleaf; 2d Jean Duluth Farm on Lyzette's May Rose; 3d Marsh on Cherry of the Prairie; 4th Village Farms on Daisy of Roseheath Orchard; 5th Wilcox & Stubbs on Bell Blackspot.

Heifer Calf 6 Months and Under 12 (8 shown)—1st Jean Duluth Farm on Chene's May Rose; 2d Jean Duluth Farm on Gree's May Rose; 3d Marsh on Phoebe Snow of Iowa 2d; 4th Jean Duluth Farm on Julia's May Rose; 5th Marsh on Memento's Lady.

Heifer Calf Under 6 Months (6 shown)—1st Marsh on Hayes Snowdrop 10th; 2d Wilcox & Stubbs on Margaret Rilma; 3d Jean Duluth Farm on Rose Light of J. D.; 4th Village Farms on Village Venus; 5th Wilcox & Stubbs on Holden's Daisy.

Cow Having Official Record Begun at 5 Years or Over (1 shown)—1st Wilcox & Stubbs on Frances Rose of Fairview.

Cow Having Official Record Begun at 2 Years, Under 5 (5 shown)—1st Marsh on Polly of Briquet; 2d Jean Duluth Farm on May's Pride of Castel; 3d Marsh on Lady Elizabeth; 4th and 5th Wilcox & Stubbs on Frances Rose of Fairview and Daisy Bell of Fairview.

Exhibitor's Herd (4 shown)—1st Marsh; 2d Jean Duluth Farm; 3d Village Farms; 4th Wilcox & Stubbs.

Breeder's Young Herd (3 shown)—1st Marsh; 2d Jean Duluth Farm; 3d Wilcox & Stubbs.

Calf Herd (4 shown)—1st Jean Duluth Farm; 2d Marsh; 3d Village Farms; 4th Wilcox & Stubbs.

Get of Sire (5 shown)—1st Jean Duluth Farm; 2d Marsh; 3d Jean Duluth Farm; 4th Schmidt; 5th Village Farms.

Produce of Cow (5 shown)—1st and 3d Marsh; 2d Jean Duluth Farm; 4th and 5th Wilcox & Stubbs.

Dairy Herd (3 shown)—1st Marsh; 2d Wilcox & Stubbs; 3d Village Farms.

Senior Champion Bull—Marsh on Ladysmith's Cherub.

Junior Champion Bull—Marsh on Flora's Memento.

Grand Champion Bull—Marsh on Ladysmith's Cherub.

Senior Champion Cow—Marsh on Hayes Wena 4th.

Junior Champion Heifer—Marsh on Figtree of the Prairie.

Grand Champion Cow—Marsh on Hayes Wena 4th.

BROWN SWISS.

Although the Brown Swiss are not as prominent as many other breeds of dairy cattle, they made an excellent showing at the Dairy Cattle Congress this year. Fifty-eight head were exhibited from four complete herds; this number was sufficient to fill all classes and the quality of the animals made competition keen at all times. The heifer calf class was one of the largest and best shown. Jane C., owned by H. W. Ayers, won first in this class and later carried away the female junior champion honors. She was defeated in the grand champion class, however, by the senior champion cow, Swiss Valley Girl 7th, owned by Hull Brothers. The senior and grand champion bull was Merney's 2d Son, a big, rugged animal with good conformation, owned by H. W. Ayers. The junior champion bull ribbon also went to Mr. Ayers on Merney's Nephew. W. A. McKerrow, of Minneapolis, Minn., was judge, and his work met with complete approval.

Exhibitors: H. W. Ayers, Honey Creek, Wis.; Ira Inman, Beloit, Wis.; Hull Bros., Painesville, Ohio; Dahlem & Schmidt, Eldorado, Kan.

Judge, W. A. McKerrow, Minneapolis, Minn.

Bull 3 Years or Over (5 shown)—1st Ayers on Merney's 2d Son; 2d Hull Bros.

We Must Add *$175* to the HUDSON SUPER-SIX

Here is an issue which we can't evade. So we meet it fairly and frankly, but give you a full month's warning. Every Super-Six will be sold at present prices while they last. If you can get one, get it.

The Super-Six of the present series is built from materials contracted last year. There are only 3500 more to go out, including open cars and enclosed. And part of them are sold.

The next production—starting December 1—will be like the present models. The changes, if any, will be only minor refinements. But materials for that series were contracted this year, and at prices enormously advanced.

So the cars now in process are the only Super-Sixes we can deliver at the present Hudson prices. The advance will be *$175* per car.

No Way Out

Most people know that Hudson profits are amazingly low for our output. Here is the top-place car—the largest-selling fine car in the world with a price above $1100. Yet it sells way below some fine cars. Still our standards are so high that, despite our big output, profits are very small.

Now these high-grade materials, in one year, have enormously advanced. We must either adopt lower grades of materials, or add the advance to our price.

There is no other way out for fine-car makers whose profits have been fair. This enforced raise means no greater profit to us. So we frankly state the facts.

We shall continue the present-grade Hudson. Next year's models will be the same as this year's; save perhaps in some minor refinements. There will positively be no change in the Super-Six motor. So the added cost—and that alone—will be added to our price.

Good News for Owners

This will be good news for owners. About 25,000 have, or will get, Super-Sixes at present prices. With this patented motor, where wear and friction are almost eliminated, depreciation is a trifle. And like cars, of the next production, will cost a great deal more. *So a Super-Six can be bought now at a saving of $175.*

We have under way of the present production about 3500 cars. Part are open models, part enclosed. Many of them are sold.

But many Hudson dealers, suspecting the advance, have unsold Super-Sixes. If you get one now, you will save $175. For all Hudson dealers will advance the Super-Six when we start production of the next series.

If you can get one now, go get it.

Next Year's Ruling Car

Next year, as this year, the Hudson Super-Six is certain to hold its supremacy. The Super-Six is controlled by our patents—the motor which added 80 per cent to efficiency. So other cars can't use it.

The Super-Six now holds all the worthwhile records. All the world's stock car records up to 100 miles. It holds the 24-hour record of 1819 miles. It won the Pike's Peak hill-climb—the world's greatest event of its kind.

In September it won the ocean-to-ocean record. It went from San Francisco to New York in 14 hours 59 minutes less time than the next best record.

It won all these records because of endurance. Because this invention has so nearly eliminated all friction, vibration and wear.

So every man who knows the facts must concede the Super-Six supremacy. Every test has proved it. If you want such a car—even for next year—now is the time to get it, if you can.

Phaeton, 7-passenger	$1475	Touring Sedan	$2000	Town Car	$2750
Roadster, 2-passenger	1475	Limousine	2750	Town Car Landaulet	2850
Cabriolet, 3-passenger	1775	*(Prices f. o. b. Detroit)*		Limousine Landaulet	2850

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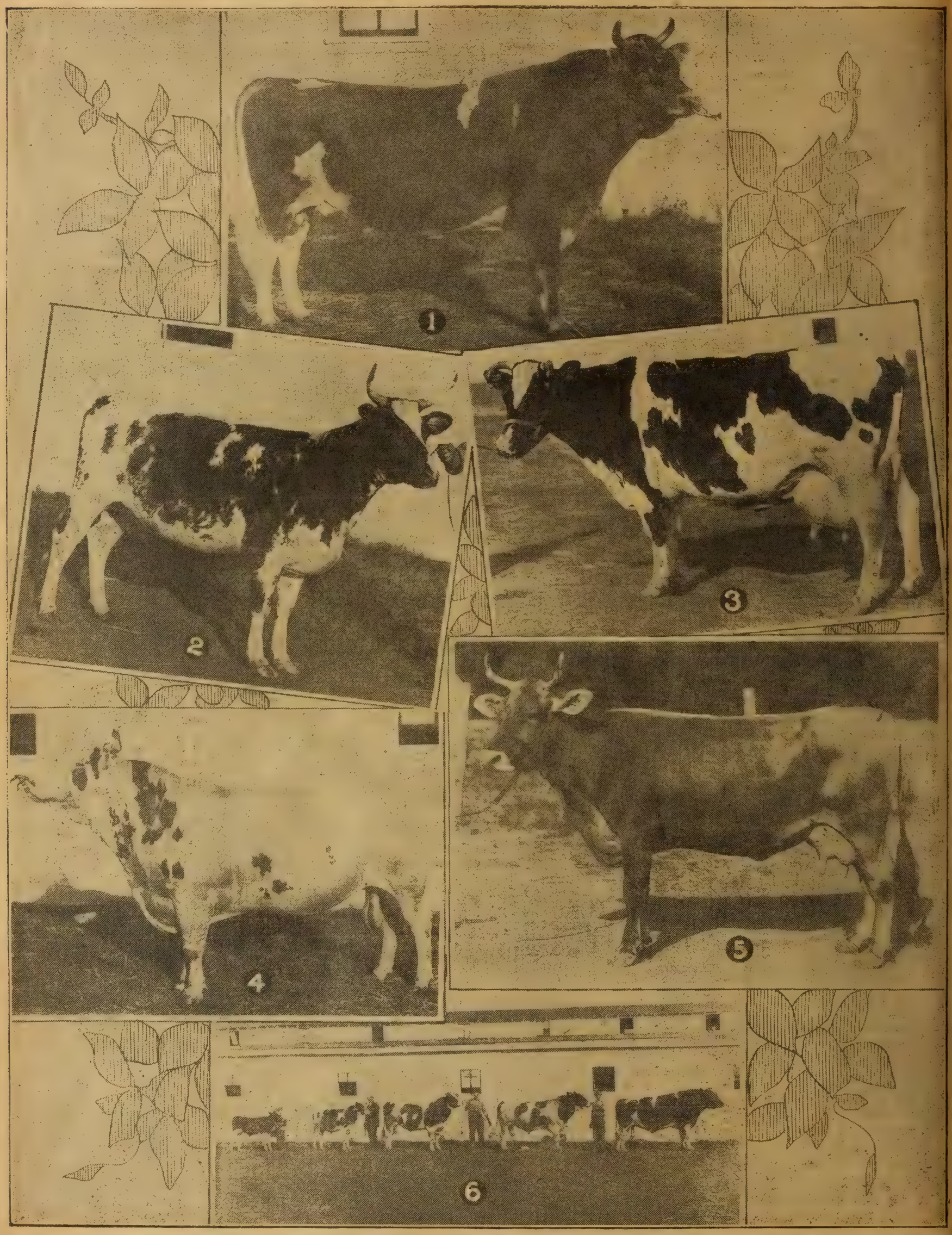

1—Grand champion Jersey bull, Noble Sultan's Golden Fern, owned by Mrs. Harry H. Galbraith, Knoxville. Tenn. 2—Junior and grand champion Ayrshire cow, Nona Spencer, owned by William Galloway, Waterloo, Iowa. 3—Cass Farm Company's grand champion official record cow, Jessie Fobes Bessie Homestead. 4—Grand champion Ayrshire bull, Bargenoch Rising Star, owned by Adam Seitz, Waukesha, Wis. 5—Grand champion Brown Swiss cow, Swiss Valley Girl 7th, owned by Hull Bros., Painesville, Ohio. 6—Prize winners in the Holstein-Friesian bull classes at Waterloo Dairy Cattle Congress.

on Mercedes De Kololo; 3d Dahlem & Schmidt on Royal Lad; 4th Inman on Lot of Lake View; 5th Dahlem & Schmidt on Glover.

Bull 2 Years and Under 3 (2 shown)—1st Hull Bros. on Tom of Walhalla; 2d Inman on Master 2d.

Bull 1 Year and Under 2 (5 shown)—1st Ayers an Merney's Nephew; 2d Hull Bros. on McAvoy H.; 3d Inman on Truman; 4th Inman on President Wilson of Blackrock; 5th Dahlem & Schmidt on Sunflower Boy.

Bull Calf Under 1 Year (6 shown)—1st Hull Bros. on Edgar H.; 2d Ayers on Foney; 3d Dahlem & Schmidt on Madaline Buster Brown; 4th Inman on Gold Coin; 5th Ayers on Bobbie.

Cow 4 Years or Over (6 shown)—1st Hull Bros. on Swiss Valley Girl; 2d Ayers on Browney B.; 3d Hull Bros. on Lottie G. D.; 4th Dahlem & Schmidt on Princess Velva's Pet; 5th Inman on Laurelly.

Cow 3 Years and Under 4 (4 shown)—1st Inman on Sara May; 2d Hull Bros. on Innis of Lake View; 3d Dahlem & Schmidt on Madaline; 4th Hull Bros. on Rhonie of Lake View.

Heifer 2 Years and Under 3 (5 shown)—1st Hull Bros. on Reuben's Ruth; 2d Hull Bros. on Ruth Wilson; 3d Inman on Miss Brown; 4th Inman on Cincey's Belle; 5th Dahlem & Schmidt on Pearl of Highland.

Heifer 1 Year and Under 2 (10 shown)—1st Hull Bros. on Swiss Valley Girl; 2d Ayers on Master's Alpha; 3d Ayers on Chris Rubel; 4th Inman on Alice Martin; 5th Hull Bros. on Georgia Maud.

Heifer Calf Under 1 Year (13 shown)—1st Ayers on Jane C.; 2d Ayers on Columbus Merney; 3d Hull Bros. on Vera of Lake View; 4th Inman on Rock River Girl; 5th Ayers on Queen of the Campus.

Cow Having Official Yearly Record Begun at 5 Years or Over (3 shown)—1st Hull Bros. on Swiss Valley Girl 7th; 2d Hull Bros. on Lottie G. D.; 3d Inman on Laurelly.

Cow Having Official Yearly Record Begun at 2 Years, Under 5 (4 shown)—1st Hull Bros. on Swiss Valley Girl 7th; 2d Inman on Sara May; 3d Hull Bros. on Innis of Lake View; 4th Hull Bros. on Rhonie of Lake View.

Exhibitor's Herd (5 shown)—1st Hull Bros.; 2d Ayers; 3d Inman; 4th Dahlem & Schmidt; 5th Hull Bros.

Breeder's Young Herd (4 shown)—1st Ayers; 2d Hull Bros.; 3d Inman; 4th Dahlem & Schmidt.

Calf Herd (3 shown)—1st Ayers; 2d Hull Bros.; 3d Dahlem & Schmidt.

Get of Sire (5 shown)—1st Hull Bros.; 2d Ayers; 3d Hull Bros.; 4th Dahlem & Schmidt; 5th Dahlem & Schmidt.

Produce of Cow (5 shown)—1st Hull Bros.; 2d Ayers; 3d Hull Bros.; 4th Inman; 5th Dahlem & Schmidt.

Dairy Herd (3 shown)—1st Hull Bros.; 2d Inman; 3d Dahlem & Schmidt.

Senior Champion Bull—Ayers on Merney's 2d Son.

Junior Champion Bull—Ayers on Merney's Nephew.

Senior Champion Cow—Hull Bros. on Swiss Valley Girl 7th.

Junior Champion Heifer—Ayers on Jane C.

Grand Champion Bull—Ayers on Merney's 2d Son.

Grand Champion Cow—Hull Bros. on Swiss Valley Girl 7th.

Grand Champion With Official Record—Hull Bros. on Swiss Valley Girl 7th.

AYRSHIRES.

The Ayrshires were especially well represented at the Dairy Cattle Congress this year. Six exhibitors showed seventy-three head, of which every animal was a credit to the breed. As may be expected, some of the animals were particularly outstanding, but those winning second and third places were good ones, also, and the judging required careful, painstaking work. Will Forbes, of Waterloo, Iowa, did this work in a manner satisfactory to all. The class of senior heifer calves deserves special mention because of the noticeable uniformity of this young stuff. They were a fine lot and the winners met some strong competition. The senior and grand champion bull was Bargenoch Rising Star, an outstanding dairy bull of good quality and type, owned by Adam Seitz, of Waukesha, Wis. The junior champion bull was Cavalier's Lord Roseburg, a big, sturdy yearling, also owned by Mr. Seitz. For female grand championship, the senior champion cow, Imp. Kilnford Bell, owned by Mr. Seitz, was defeated by the junior champion, Nona Spencer. This heifer, owned by William Galloway, of Waterloo, Iowa, is an outstanding animal of strong constitution and development, and gives promise of making an excellent cow. Ayrshire men were well pleased with the showing at Waterloo and received new enthusiasm over this breed which is making rapid progress in the dairy world.

Adam Seitz, Waukesha, Wis.; Ferndell Farms, Ladysmith, Wis.; William Galloway, Waterloo, Iowa; C. H. Peverill, Waterloo, Iowa; Dr. David Roberts, Waukesha, Wis.; Dairy Farm, Iowa State College, Ames, Iowa.

Judge, Will Forbes, Waterloo, Iowa.

Bull 3 Years or Over (5 shown)—1st Adam Seitz on Bargenock Rising Star; 2d Wm. Galloway on Auchenbrain Good Gift; 3d Dr. David Roberts on Roberts' Cavalier; 4th Peverill on Yankee Doodle; 5th Ferndell Farms on Victor of Ladysmith.

Bull 2 Years and Under 3 (4 shown)—1st Seitz on Cavalier's Kilnford Ringmaster; 2d Ferndell Farms on Ferndell Victor; 3d Galloway on Willowmoor Peter Pan; 4th Roberts on Roberts' Fairy Duke.

Bull 1 Year and Under 2 (5 shown)—1st Seitz on Cavalier's Lord Roseberg; 2d Galloway on Cavalier's Merry Lad; 3d Seitz on Cavalier's Fond Stamp; 4th Ferndell's Farms on Ferndell's Anticipation; 5th Ferndell Farms on Ferndell's Lessnessock Gem.

Bull Calf 6 Month and Under 12 Months (5 shown)—1st Ferndell Farms on Ferndell's Trust; 2d Roberts on Roberts' Pride Cavalier; 3d Seitz on Cavalier's Lord Stuart; 4th Galloway on Dalpeddar Good Gift; 5th Ferndell Farms on Ferndell's Credit.

Bull Calf Under 6 Months (4 shown)—1st Seitz on Cavalier's Kilnford Marquis; 2d Ferndell Farms on Ferndell's Loyalty; 3d Seitz on Cavalier's Kilnford Glosta; 4th Ferndell Farms on Ferndell's Arrogance.

Cow 5 Years or Over (7 shown)—1st Seitz on Imp. Kilnford Bell 4th; 2d Ferndell Farms on May of Hillcroft; 3d Roberts on Value's Pride of Oak Valley; 4th Galloway on Dalpeddar Lady Taylor; 5th Ferndell Farms on Silver Beauty of Bulrush Farm.

Cow 4 Years and Under 5 (2 shown)—1st Seitz on Bargenoch Carnation; 2d Seitz on Bargenoch Queen.

Cow 3 Years and Under 4 (4 shown)—1st Seitz on Lady Margaret; 2d Galloway on Princess; 3d Roberts on Belle Roberta; 4th Roberts on Queen Roberta.

Heifer 2 Years and Under 3 (4 shown)—1st Ferndell Farms on Silver Pet of Ferndell; 2d Galloway on Lessnessock Carlton; 3d Roberts on Roberta of Scotland; 4th Ferndell Farms on Stately Lessnessock of Ferndell.

Heifer 18 Months and Under 24 (7 shown)—1st Galloway on Nona Spencer; 2d Galloway on Cavalier's Ruby; 3d Seitz on Cavalier's Lark Spur; 4th Roberts on Roberta Value's Pride Cavalier; 5th Ferndell Farms on Pearl of Ferndell.

Heifer 12 Months and Under 18 (5 shown)—1st Galloway on Rose Good Gift; 2d Ferndell Farms on Ferndell's Felicity; 3d Roberts on Roberta Cavalier Belle; 4th Seitz on Cavalier's Roseleaf; 5th Ferndell Farms on Ferndell's Innocence.

Heifer Calf 6 Month and Under 12 (12 shown)—1st Seitz on Cavalier's Lavender; 2d Galloway on Good Gift's Nona; 3d Dairy Farm, Iowa State College on Robin Hood's Lily; 4th Seitz on Cava-

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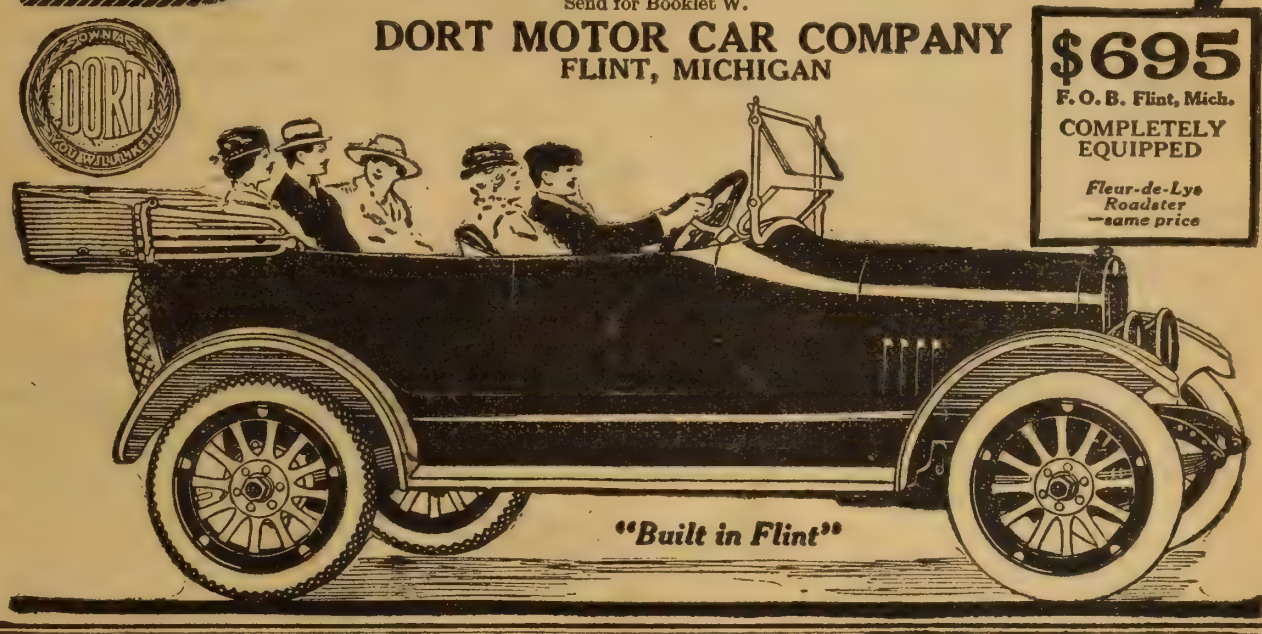

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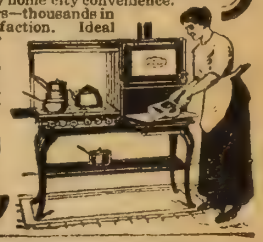

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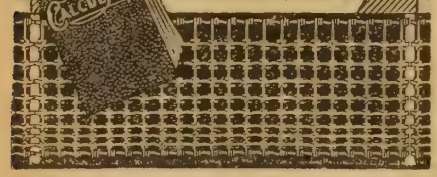

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lier's Twinkle; 5th Galloway on Sylva Good Gift.

Heifer Calf Under 6 Months (5 shown)—1st Seitz on Cavalier's May Flower; 2d Seitz on Cavalier's Lady Bountiful; 3d Ferndell Farms on Ferndell's Mode; 4th Ferndell Farms on Ferndell's Farms on Ferndell's Fidelity; 5th Galloway on Lady Margaret.

Cow Having Official Yearly Record Begun at 5 Years or Over (7 shown)—1st Roberts on Value's Pride of Oak Valley.

Cow Having Official Yearly Record Begun at 2 Years, Under 5 (4 shown)—1st Seitz on Imp. Kilnford Bell 4th; 2d Ferndell Farms on May of Hillcroft; 3d Seitz on Imp. Hillhouse Maud; 4th Roberts on Belle Roberta.

Exhibitor's Herd (4 shown)—1st Galloway; 2d Seitz; 3d Ferndell Farms; 4th Roberts.

Breeder's Young Herd (5 shown)—1st Galloway; 2d Seitz; 3d Ferndell Farms; 4th Roberts; 5th Ferndell Farms.

Ayrshire Breeders' Association Special—1st Galloway.

Calf Herd (4 shown)—1st Seitz; 2d Ferndell Farms; 3d Galloway; 4th Roberts.

Get of Sire (5 shown)—1st Seitz; 2d Galloway; 3d Seitz; 4th Roberts; 5th Ferndell Farms.

Produce of Cow (5 shown)—1st Seitz; 2d Galloway; 3d Ferndell Farms; 4th Roberts; 5th Roberts.

Advance Registry Cow (2 shown)—1st Seitz; 2d Roberts.

Dairy Herd (3 shown)—1st Seitz; 2d Ferndell Farms; 3d Roberts.

Senior Champion Bull—Seitz on Bargenock Rising Star.

Junior Champion Bull—Seitz on Cavalier's Lord Roseberg.

Senior Champion Cow—Seitz on Imp. Kilnford Bell 4th.

Junior Champion Heifer—Galloway on Nona Spencer.

Grand Champion Bull—Seitz on Bargenoch Rising Star.

Grand Champion Cow or Heifer—Galloway on Nona Spencer.

Grand Champion Cow With Official Record—Seitz on Imp. Kilnford Bell 4th.

Ailing Animals.

Too Fat for Breeding.

Can ewes on grass become so fat as to hinder them from becoming pregnant?

It is possible for any animal to become too fat to breed well, but it is not very probable they would become so on grass feeding alone.

Ailing Sow.

I have a sow pig, three months old, that holds her head sideways. She is not doing as well as the rest of the bunch. Has been this way for a week. One of the same litter died of the same thing when two weeks old. It seemed to be in great pain and slobbered a great deal before it died. Can you tell me what to do?

It would be impossible without stronger description of symptoms and lesions to diagnose this trouble. However, it may be from poisoning of some nature.

Cough in Calves.

I have some spring calves which I would like to ask about. They look to be in good health only that they cough and I would like to know if there is any cure for that cough.

As there are so many causes for cough and it is usually one symptom of some disease it would be impossible for us to say what is causing it. You will have to find out what the cause of the cough is before one can prescribe intelligently for it. Among the different causes of cough may be mentioned tuberculosis, verminous bronchitis, indigestion, etc.

Lack of Oestrual Period.

I have a four-year-old black cow that was fresh last November and has not come around to the bull yet, and also two heifers that have never been in heat yet. What treatment is there for this, if any?

Whether anything can be done for this condition will depend entirely upon the cause. You should have these animals examined by a competent veterinarian so you may find out, if possible, what the underlying cause is. He may advise the use of some aphrodisiac and he may advise some change of feed, etc. This will depend upon what he finds.

Sand Crack.

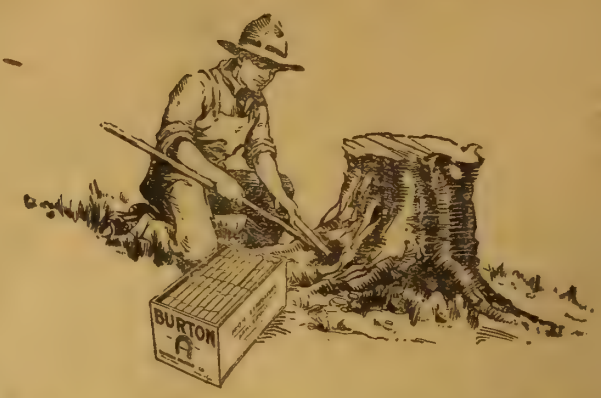
I have a three-year-old mare which has one front hoof cracked from the bottom and up about an inch and a half. It has been that way for some time. I keep her hoof quite well trimmed. I have not driven her very much. She sometimes limps a little. I have never had her shod. Her hoof is in medium shape.

In simple quarter crack recovery will often take place if the coronet is blistered, the foot shod with a "tip" and the patient turned to pasture. If the crack is bad it should be treated by the application of clasps which are applied after cleansing the crack thoroughly, and also a shoe put on. The coronet should also be blistered to hasten the growth of horn. The clasps should be put on under the direction of a veterinarian and farrier.

Fetlock Wound.

I have a two-year-old mule that got his foot cut on wire a week ago. The cut is between the hoof and the fetlock joint. It is about two inches long and an inch deep. I have used nothing except healing powder. Can it be cured without leaving a scar?

This wound should give you little cause for concern. Cleanse it thoroughly and apply tincture of iodine two or three times. Keep it clean after this and apply some good dressing powder and there should be very little, if any, scar left.



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Progressive farmers no longer use the antiquated, primitive methods formerly employed in removing farm obstructions. Instead they save time, labor and expense by using

BURTON

"Good Luck" Dynamite

Contrast this new money-saving way with the old-style procedure of chopping and pulling, hour after hour. Not only is Burton "Good Luck" Dynamite better than former methods, but it is infinitely better than most other grades of dynamite on the market. And it is *cheaper*, too, because a smaller amount is required for a charge.

Safer to use and uniform in quality, "Good Luck" Dynamite is equally successful for ditching, tree-planting or subsoiling.

Our distribution facilities enable us to guarantee prompt deliveries

Ask your dealer for Burton "Good Luck" Dynamite. If you can't locate a dealer in your community, write at once. If you have some difficult farm-clearing problems to solve, write us and we will help you.

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Operated Direct From the Tractor By One Man

Moline Power Lift Gang

A combination Two-Three and Three-Four bottom plow for light tractors. Easily changed from one form to the other.

Can be hitched to any style tractor—hitch is semi-rigid, so that plows may be backed even when in the deepest furrow.

By Pulling a Single Cable

driver raises or lowers plows while in operation—from extreme depth to clear out of the ground—or a little at a time in difficult plowing, to prevent stalling of motor.

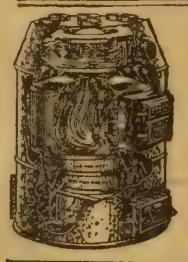
THE MOLINE LINE INCLUDES
Corn Planters, Cotton Planters, Cultivators, Corn Binders, Grain Binders, Grain Drills, Harrows, Hay Loaders, Hay Rakes, Lime Lowers, Listers, Manure Spreaders, Mowers, Plows (chilled and steel), Reapers, Scales, Seeders, Stalk Cutters, Tractors, Farm Trucks, Vehicles, Wagons.

Rear wheel locks automatically for plowing or backing, casters for turning or transporting.

Equipped with Moline Quick attachable shares.

See the Moline Power Lift Gang at your dealer's, or write us for free illustrated literature.

Moline Plow Co.,
Dept. 30, Moline, Ill.



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GET the benefit of our 21 years' experience in manufacturing and installing furnaces. Get our positive guarantee (and it's good). Get our free three-colored catalogue. Address

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Ask your neighbor to subscribe for The Wisconsin Farmer.

Two Dollar Milk Granted.

Following a strike and considerable excitement at Burlington, Racine county, Wisconsin, farmer-dairymen producing milk for the Wisconsin Condensed Milk Company, secured an advance in prices for their milk. The new price averages about $2.00 per hundredweight, and covers a six-months period. Milk testing 3.5 per cent is to be paid for at the following scale for fall and winter months: October, $1.90; November, $2.10; December, $2.10; January, $2.05; February, $2.00; March, $1.85. The prices agreed upon for February and March are subject to change, provided the market at the time does not warrant such prices. At a special meeting of the members of the local milk-producing associations, a demand was made of the manager of the condensery for a $2 average price for milk for the six months, beginning October 1st. The manager refused the demand and a strike was set for Sunday morning, October 1st. Pickets were stationed at all the chief roads leading to the city. Farmers were stopped and the situation explained to them in detail, and about 50,000 pounds of milk was carried back to the farm before the strike was finally settled. In some instances ropes are said to have been stretched across the roads so that the milk-wagon drivers had no alternative but to turn back. Only about 4,000 pounds of milk was received at the condensery the day the strike was ordered. On Monday morning the supply at the condensery decreased and farmers were riding all over the country explaining their position in the strike and enlisting the support of others. The fight was settled Monday afternoon. The Milk Producers' Association secured most of its demands and the members were apparently well pleased with the outcome of the strike. The Burlington local of the Milk Producers' Association is a member of the Chicago, Illinois, association. The manager of the condensery objected to the sale submitted to him, but was willing to pay the scale for 4 per cent milk. Thus the controversy revolved about both the price per hundredweight and the quality of the milk. The price of milk is a lively subject for discussion in a number of Wisconsin communities. There has been a scale of prices up for consideration in the Milwaukee district for some time, but no agreement as to an advance has been reached.

Rock County Contest Tour.

Two hundred farm boys interested in corn growing and road improvement in Rock county were the guests last Saturday on an automobile tour through southern Rock county and Winnebago county, Illinois. This was the second tour of its kind as a compliment to the boys engaged in this work, the trip last year including a visit to Madison.

The tour was sponsored by the Janesville Commercial Club, the Beloit Business Men's Association and Mr. T. H. Markham, superintendent of the county Y. M. C. A., who is also directing the agricultural contest work. The tour started at Janesville, continued through Beloit and south to Rockford, Illinois, where the party turned back after a picnic luncheon, an afternoon of amusement at Harlem Park and a tour of the city. About sixty machines were in the party, the use of which was donated by the business men interested, and more ideal weather conditions could not have prevailed.

The purpose of the trip was twofold; first, to give the boys entered in the contest work an outing, and, secondly, to foster the spirit of better roads and consolidated rural schools for Rock county. Quite a large number of farmers made the trip, affording a splendid opportunity for them to learn what Winnebago county, Illinois, is doing along these lines.

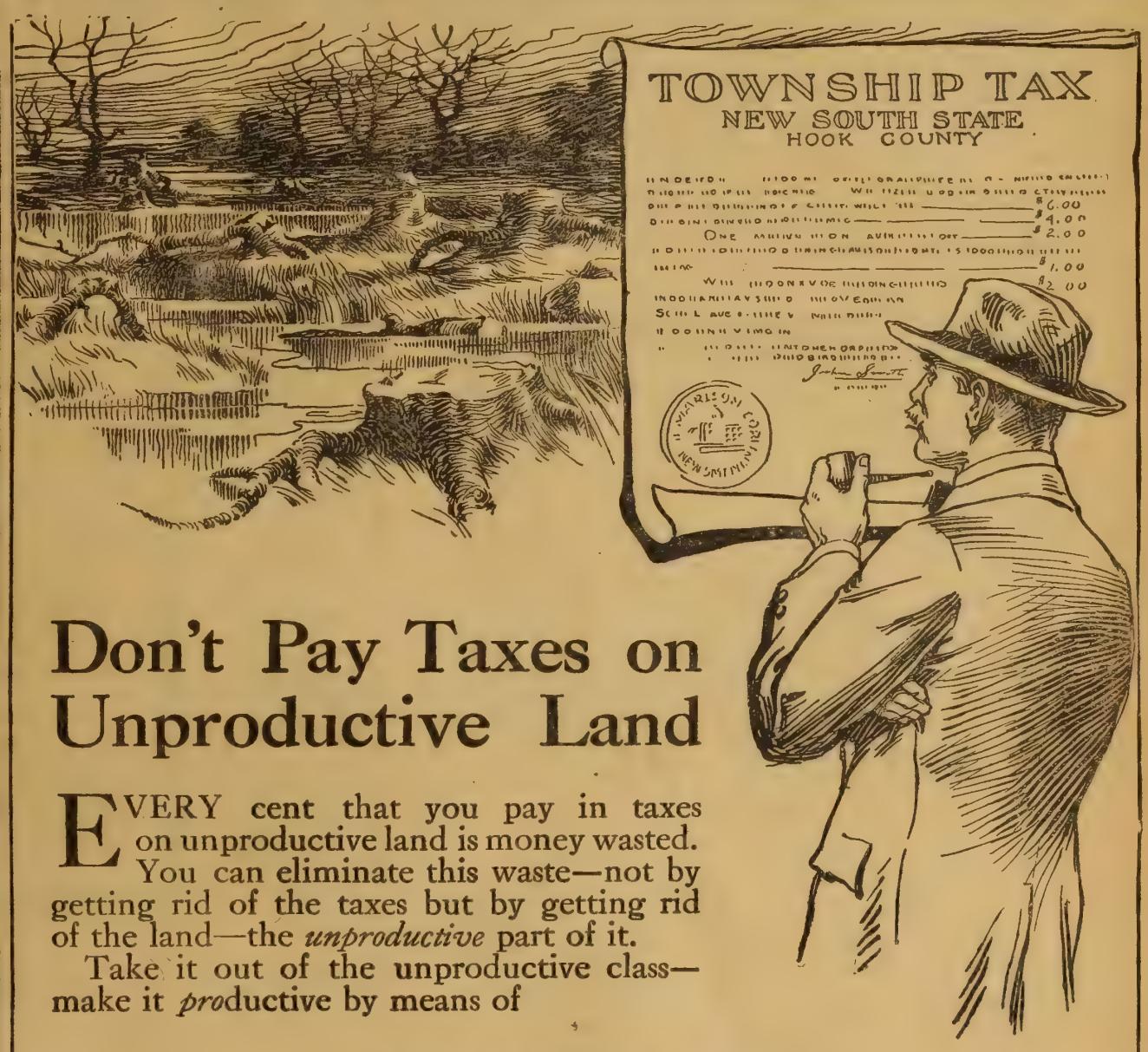
En route to Rockford an hour's stop was made at the Harlem consolidated school, which is one of the show places of the county. This school was built and opened six years ago, taking the place of four one-room country schools. The enrollment now is double the enrollment of the four schools it replaced and no visitor will doubt the value of the increased facilities. The school takes in a district comprising seventeen sections and all the 115 grade pupils either come in their own conveyances or on the interurban, which passes the door. Mr. E. M. Pallett, principal, and Mrs. A. J. Craig, county superintendent, spoke briefly of the work of this school and the three other consolidated schools in the county and in a future issue we will discuss it more fully than is possible at this time. Miss Catherine Magarr, of Madison, who has made an expert study of rural school work, spoke briefly of work being done along these lines in the East.

The road improvement has also kept pace with the school movement and past the Harlem school is now being built two miles of concrete roadway. As there is a proposal in Rock county to carry on some work of this nature, especially in building a twelve-mile connecting link between Beloit and Madison, attention was called to this improvement by Mr. G. S. Parker and Mr. C. E. Moore, of Janesville, who spoke of Rock county's aims and ambitions. The party then proceeded to Rockford for a picnic dinner, followed by an address on good roads by Mr. F. A. Cannon, of Madison, secretary of the Wisconsin Good Roads Association. Games were then enjoyed by the boys until time for starting home.

The outing was fully up to expectations and too much credit cannot be given Mr. Markham for his part, together with those who gave of their time and cars.

The final awards in the road contests will be awarded soon, but those in the corn-growing contests not until about December 1st.

Miss Mathild Krueger has been employed as county adviser under the auspices of Dunn County School of Agriculture. Her duties include health advice to the people of rural districts. She will visit the county schools and act as visiting nurse, and will advise regarding sanitary conditions, hygiene, and care of the sick. Miss Krueger is a graduate of the Illinois Training School for Nurses, of Chicago. She served six years as surgical nurse in Rush Medical College. She was for four years in charge of the Lutheran Hospital at La Crosse.



Don't Pay Taxes on Unproductive Land

EVERY cent that you pay in taxes on unproductive land is money wasted. You can eliminate this waste—not by getting rid of the taxes but by getting rid of the land—the *unproductive* part of it.

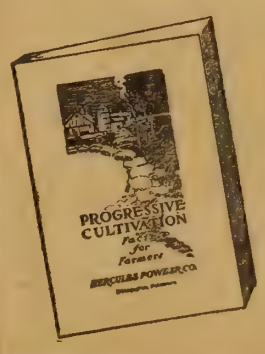
Take it out of the unproductive class—make it *pro*ductive by means of

HERCULES DYNAMITE

If you own land rendered useless by water, stumps, rocks, or by all three combined, Hercules Dynamite will clear it at the least possible expense.

If you have ever run a drainage ditch, pulled stumps, or removed rocks by hand power you know the amount of work involved. Hercules Dynamite will do the same job, and do it more thoroughly, at a small fraction of the cost in time, labor and money.

It will pay you to write us for an instructive and interesting book called "Progressive Cultivation". It is sent free on request. It treats fully not only the question of land clearing by means of dynamite but also subsoiling, tree planting, irrigation work, etc. Write for your copy today. Please use the coupon opposite.



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Summing Up Youths' Club Work.

Results of the Calf, Baby Beef and Pig Contests and Other Interests in Boys' and Girls' Club Work in State.

SOMETHING close to 25,000 boys and girls in Wisconsin are now engaged in the young people's contest and educational work carried on under the leadership of Mr. T. L. Bewick, of the Wisconsin College of Agriculture. Extension and development work is being directed in fifteen different projects, including stock-raising contests and canning clubs, and this department of the state fair, this year, proved to be one of the big features.

Owing to the large amount of clerical work involved in deciding the state championships announced as a part of the state fair program, some of the winners are just now being informed of their success. Championships were awarded on the basis of so many points for firsts, seconds, etc., in both the boys' and girls' divisions, and the splendid scores made by these winners indicate the success of this work. About 500 boys and girls exhibited at the fair, some of them in six or eight different divisions. In the work this year many prominent men of the state co-operated by offering prizes for the championships. Including state fair awards, the total premiums offered amounted to about $9,000.

Considerable interest centered in the calf, baby beef and pig-growing contests. These contests are of inestimable value to the live stock interests of the state. The plan is for a boy to take an animal at birth and raise it, the awards being made on the basis of gain, cost of production, care, etc. The grand championship of all breeds in the calf-feeding contest went to Carl Swensen, of Scandinavia, who showed a Holstein heifer, while the grand championship over all breeds in the pig-raising contest was awarded to a Chester White, shown by Frank Willwarth, of Sun Prairie. The baby beef-feeding contest was under the direction of the Wisconsin Live Stock Breeders' Association, although a part of the boys' and girls' department, and first prize was awarded to A. C. Callen, of Mineral Point, on his pure-bred Hereford. Some disappointment in this contest was expressed by the boys, as both breeding and butcher stock were permitted, the boys who were feeding steers and heifers intended for slaughter contending they should not have to compete with breeding animals. Next year breeding and feeding classes will probably be separated.

The special prize of a Holstein calf, offered by Mr. Fred Pabst, of Oconomowoc, went to the Sun Prairie High School as the best school exhibit, as previously announced, while the Linn Junior Farmers' Club, Walworth county, won the $100 special as the champion boys' and girls' club. This prize was offered by the Wisconsin Bankers' Association and the money is to be used for the purchase of pure-bred live stock or pure-bred grains. Frank Wilmarth, of the Sun Prairie school, was declared the champion boy, winning a total of $161.25 in cash, $100 of which was given by Mr. F. D. Underwood, of Wauwatosa, and the remaining $62.25 he won in individual classes. This lad won nine firsts, four seconds, three thirds, one fourth, four fifths and one sixth, giving him a total of 1,355 points.

The Sun Prairie club was declared the champion corn club, the Onalaska school the champion calf club, the Sun Prairie club the champion poultry club, the Jolly Dozen Club, of Elkhorn, the champion girls' sewing club, and the Bayfield school the champion garden and vegetable club. The three pure-bred Guernsey calves given by Mr. G. W. Browne to the stock-judging teams were awarded in this order to the winners: La Crosse County Agricultural School, Pewaukee High School and Mukwanago Boys' Club.

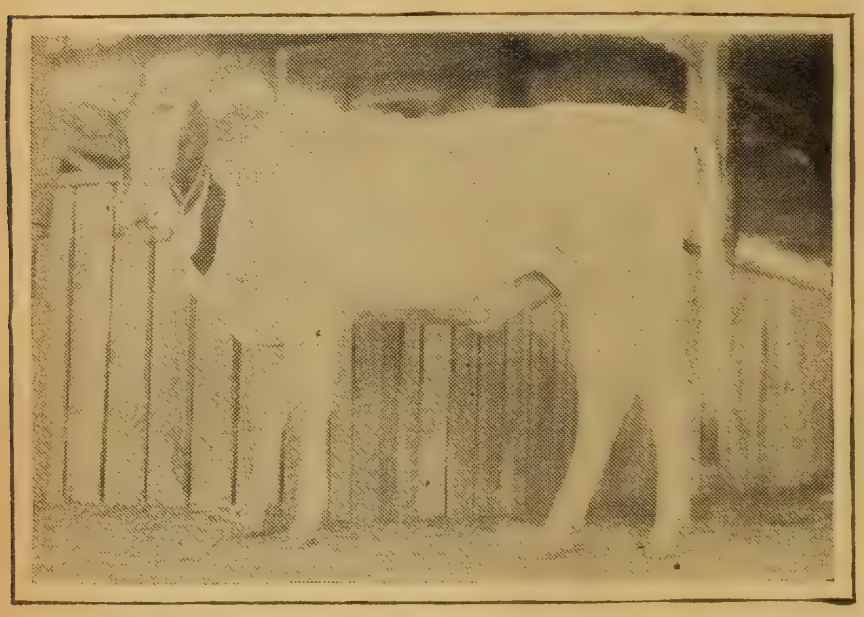
Miss Helen May Fatch, of Lake Geneva, a member of the Linn Junior Farmers' Club, was declared the champion girl, she winning one first, one second, one fourth, and one sixth, giving her a total of 195 points. Compared with the boys' scores, this sounds small, but it must be remembered the girls' work was confined to fewer activities. She was given $100 offered by Mr. Underwood for the girl securing the most points in the girls' divisions.

Bread making, sewing and canning made up the girls' work, very largely, and champions were declared in each division. Miss Wallarg Davidson, of West Allis, was found to be the champion girl breadmaker. Miss Elsie Miller, of Bayfield, won the sewing championship and Miss Fannie Stimson, of Sun Prairie, the canning championship.

In the horticultural work, Howard Haines, of Pewaukee, won first honors in the senior division in fruit judging and Spencer Ames, of Egg Harbor, the same honors in the junior division.

Scholarships in the young people's course at Madison were offered by the Merchants and Manufacturers' Association, of Milwaukee, to the county winners, those winning state championships being exempted. These awards were made in this order: First, Richard Ryan, of Sun Prairie, for Dane county; second, George E. Marvin, of West Allis, for Milwaukee county; third, Laurie Nourse, of Bayfield, for Bayfield county; fourth, Thomas Claridge, of Bayfield, for Bayfield county; fifth, Roger R. Taylor, of Pewaukee, for Waukesha county; and sixth, Christian Conrad, of Onalaska, for La Crosse county.

The Wisconsin State Fair cheese exhibit was purchased by A. Groosenbach. There were over 200 exhibits all told and the total weight of Swiss cheese alone was 3,000 pounds. There was about the same quantity of American cheese of various makes besides a splendid exhibit of brick, Limburger and other varieties.



CHAMPION CALF IN WISCONSIN BOYS' CALF CLUB CONTEST.

POULTRY AND PET STOCK.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg; Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Succes'rs to R.F.Johnson, Assumption, Ill.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

TURKEYS WE BUY 'EM. Write us what you have. THE R. E. COBB CO. 26 E. 3d St., St. Paul, Minn.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

FULL BLOODED COLLIE PUPPIES FOR sale. Farmers' prices. J.V. Northrup, Waupun, Wis.

FOR SALE—Full blooded Scotch Collie pups, males, $5, females $4. H. R. Platt, Route 3, Box 35, Baraboo, Wisconsin.

POULTRY JOURNAL

BIG 4 Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 29, Chicago, Illinois.

UPPER WISCONSIN

Good Year For Cucumbers.

This was a great year for cucumbers in Marinette county. It was a decidedly profitable season both to the growers and to the companies which operate the pickling vats at various locations in the county. The close of the season has brought forth some figures which show the extent of the business in a measure this season. To date 6,000 bushels of cucumbers have been received at the Crivitz pickling station and 2,600 at the Wausaukee station. Reports from other stations in the county have not been received. The delivery at the Peshtigo station was large and a new station with two pickling vats was erected at Porterfield during the summer to take care of the crop in that locality. Prices for pickles have been growing more remunerative each year, and, as the farmers grew to understand the handling of the crop better, the acreage was gradually increased until today it is one of the most important special crops in the county. Some idea of the returns made through this crop can be realized by the figures reported by some of the Marinette county growers: Delbert Fitch, one acre, $105; William Freele, one-half acre, $55; Edward Clark, two acres, $170; Earl Johnson, one acre, $70.

The big pickling companies recognize the fact that Upper Wisconsin is especially well adapted to this special crop. Libby, McNeill & Libby have for many years been encouraging the growth of cucumbers in this locality. Pickles grown in the upper part of the state are free of disease, they grow rapidly and are crisp and firm. Few crops give such big returns from a small outlay.

Howard I. Wood.

Barron County Fair.

At the annual meeting of the Barron County Agricultural Society the following officers were elected for the coming year:

President—H. W. Heintz, Rice Lake.
First Vice President—W. F. Colbert, Chetek.
Second Vice President—A. M. Crislaw, Brill.
Secretary—J. G. Rude, Rice Lake.
Treasurer—W. A. Demers, Rice Lake.
Directors—A. G. Strand, Rice Lake; James Hanson, Stanford; Wm. Bartlett, Barron; F. J. Krahenbuhl, Barron; F. H. Gardner and John Jacobson, Rice Lake.

The fair this year was a good one, but poor weather held down the attendance and it is doubtful whether the board can play even financially. Plans are being made, however, for a fair next year better than ever, and special emphasis will be laid on the dairy department. There is talk of a new building for dairy cattle.

Largest Yields Made by Pedigreed Rye.

W. W. Clark, secretary of the county order of Wood county, calls attention to the fact that the pedigreed rye is outyielding the common rye from two to fifteen bushels per acre. At the time Mr. Clark wrote his report, about the 10th of September, between 2,000 and 3,000 bushels had been threshed in the county and this is now ready for seed. There is a big demand for the pedigreed rye for seed and it will bring top prices, as it is a little more plump than common rye. Some fields in Wood county have yielded as high as forty-five bushels to the acre and Mr. Clark says one-half of this yield at present prices makes raising rye a profitable business.

Fine Creamery Record.

A splendid record was made in the fiscal year just ended by the Mellin creamery in Ashland county. In the year 1914 this creamery paid out $12,000 to farmers for butter fat. This was increased in 1915 to $37,000 and in the year just ended to $125,000. This means an increase of more than 1,000 per cent in three years. Three years ago this creamery was making fifty pounds of butter a week. Now they are making 200 pounds a day. Plans are being made for new buildings and equipment.

At Ladysmith Fair.

What is believed to be the first stump-puller demonstration ever conducted in connection with a county fair was put on recently at Ladysmith, Rusk county. Horse and hand-stump machines and dynamite did effective work on a large tract of virgin land adjoining the Rusk county fair grounds along the banks of the Flambau river. A stump piler, devised by a Rusk county settler, was used to pile up the refuse for burning. The land-clearing special had not been scheduled to stop at Ladysmith, but an extra date was found which happened to be convenient for the county fair. The demonstration was in charge of Carl D. Livingston, who has recently been chosen to head the new division of land clearing at the Wisconsin College of Agriculture.

NEW FARM HOME.
Property of A. J. Pinkerton, live stock farmer, Waupaca County, Wis.

Green County Fair.

Although rain interfered for two days, the attendance and receipts at the Green County Fair, held at Monroe, broke all records this year. The total attendance for the week was around 30,000 and the total receipts about $16,000. This is the sixty-second county fair held in Green county and the association will begin the new year with a comfortable balance in cash.

Barron Creamery Gains.

Notwithstanding the dry August in Barron county the Barron creamery received 454,894 pounds of cream, netting 129,931.7 pounds of butter fat. The business for the month showed about $45,000, which was an increase over the corresponding month of 1915. The price paid for butter fat was 34 cents net. The creamery patrons for the month numbered 863.

Increase in Land Values.

Mr. B. F. Williams, of Hillsdale, Barron county, recently sold his farm for $125 per acre. He bought the land in September, 1897, for $2.25 an acre. The farm is equipped with a fine set of buildings and the land is in a high state of cultivation. Mr. Williams moved to Barron county from Indiana.

Potatoes in Langlade.

In Langlade county potatoes are running 140 to 200 bushels to the acre, according to reports made at the Antigo warehouses. The crop in many places is not so discouraging as was at first feared.

A Fine New Dairy Building.

IT IS surprising what a commodious, practical and serviceable little dairy can be built for a very small cost. The Hemlock Manufacturers, 300 F. R. A. Bldg., Oshkosh, Wis., have prepared plans and specifications for dairy buildings of various sizes to suit the needs of the different farmers, and the plans are offered free to any farmer or dairyman who is thinking of building a dairy building. Send for a copy of the "Old Faithful" hemlock booklet. Mention The Wisconsin Farmer.—Adv.

FARMERS FLOCK TO EAGLE RIVER FOR VILAS COUNTY'S FIRST ANNUAL DAIRY SHOW.

When Nature Turns Outlaw

"Blow, winds, and crack your cheeks! rage! blow!—
You cataracts and hurricanoes, spout . . . . . "

Thus King Lear, in Shakespeare's tragedy, defies the elements. But man, even today, cannot challenge nature with impunity.

The unsinkable ship goes down like a rock from the impact of an iceberg. The fireproof building is burned. The monument, built for unborn generations, is riven by lightning or shaken down by an earthquake.

There are storms which make train service impossible, which delay the mails and which close the public highways to the usual traffic. Even in the cities there are times when the street cars do not run, and neither automobiles nor horse-drawn vehicles can be driven through floods or high-piled snowdrifts.

Such conditions increase the dependence on telephone wires, which themselves are not exempt from the same natural hazards. Fortunately, however, the Bell System has faced these dangers and well-nigh overcome them. Masses of wires are buried underground and lonely pole lines, even the most stoutly built, are practically paralleled by other lines to which their business can be transferred.

Each year the lines are stronger and the guardians of the wires are prepared to make repairs more quickly. So each year increasing millions of subscribers find their telephones more dependable and, within the limits of human power, they count upon their use in storm as well as in fair weather.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy *One System* *Universal Service*

Ask your neighbor to subscribe for The Wisconsin Farmer.

Do You Know What It Costs You for Horse Feed?

$750

U.S. Agricultural Department Bulletin No. 75 states that it costs $716.32 to feed eight horses one year — all you can raise on 40 acres — or five acres to each horse.

The Waterloo Boy One-Man Kerosene Tractor Does the Work of 8 Horses at Fuel Cost of Only $120 a Year.

It saves in fuel cost $175 a year, over a tractor of equal power, burning gasoline.

Geo. Wegener, Groton, S. D. writes: "We are pulling three 14-inch bottom plows with the Waterloo Boy Tractor—up hill and down hill through gumbo soil and everything."

Does all farm, field and road work—supplies belt power for every purpose.

We guarantee all Waterloo Boy machines.

Illustrated catalogs free. State in which machine you are interested.

Waterloo Gasoline Engine Co.
3803 W. 3rd Ave., Waterloo, Ia.

Waterloo Boy Cream Separator is in every respect a standard machine.

Waterloo Boy Milker satisfies the demand of the particular dairyman. In price and efficiency, it can't be beaten.

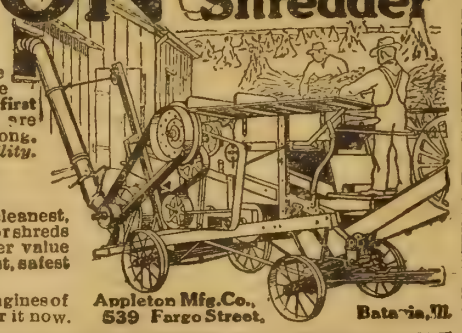
Waterloo Boy Kerosene Engine is a successful kerosene burner. Saves fuel cost.

APPLETON Husker and Shredder

Every year hundreds more farmers buy huskers, as they find the most economical, efficient way to save all the *value* of a corn crop is to husk the ears and make fodder of leaves and stalks. Appleton was the first successful husker. Appletons made years ago are giving good service today. Few parts, extra strong, mean long life, few repairs and sure *dependability*.

GUARANTEED TO DO MORE WORK WITH LESS POWER

than any husker of equal size. Appleton husks cleanest, shells least; has most efficient corn saver. Cuts or shreds leaves and stalks while husking ears. Fodder value saved from small acreage pays its cost. Easiest, safest to operate. Works in all conditions of corn.



Free Husker Book: describes 4 sizes for engines of 4 h.p. and up. Write for it now.

Appleton Mfg. Co., 539 Fargo Street, Batavia, Ill.

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WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others.

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: **"The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available—under which your advertisement would appear. Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER MADISON, WISCONSIN

FARM LANDS.

FOR SALE—A well improved 160 acre farm, good ten room house, two story, hip roof barn 28x44, lean 20x44. Other good outbuildings. Wind mill, good well, nice pine grove. Hundred acres under plow. Two miles from railroad. New town. $58 per acre if taken at once. Address Anton J. Roelike, Pierz, Minn.

324 ACRE Maple Grove stock farm now for sale, located 4 miles north of Lancaster, Mo., county seat of Schuyler county, 1 mile of Iowa line. Fine improved stock farm priced to sell to settle up partnership business. For particulars inquire and buy of owners, Sawyer & Sawyer, Lancaster, Missouri.

400 ACRE grain and stock farm in Clark county, S. Dak. Eight miles to town, thirteen miles to county seat. 140 acres cultivated, balance native grass. Spring water, good school, telephone and daily mail. $35 per acre. $7,650 cash, balance 6%. A bargain for some one. James E. Pickles, Elrod, S. Dak.

REAL BARGAINS in improved farms in Taylor, Marathon, Clark, Langlade counties in Wis. With and without stock and machinery. A natural dairy section. Very liberal terms. Lists & literature free. Loeb-Hammel Realty Co., (Inc.) Owners, Medford, Wis.

FARM LANDS.

960 ACRES—Florence county, choice cut over hardwood land; in solid body; 5 miles from county seat. Reasonable price and terms. Will divide. Write Peter McGovern Land Company, Florence, Wisconsin.

FORTY quarter sections east Missouri, 25 west Missouri river, South Dakota, farms, ranches best in state, for sale. If interested, write owner, C. E. Lennan, Mobridge, S. Dak.

SEEDS.

1916 GINSENG SEED for sale cheap. Guaranteed A No. 1 seeds. J. Treiber, 2310 Ohio Avenue, Madison, Wisconsin.

MAGAZINES.

CURRENT EVENTS, a quarterly magazine published by The Kansas City Southern Railway Co., contains reliable information concerning the cities and towns, lands, agricultural and mineral resources, opportunities for business in southern Missouri, western Arkansas, eastern Oklahoma, western Louisiana and southeast Texas. Sent free for one year to parties interested on request. Address Current Events, K. C. S. Bldg., Kansas City, Missouri.

OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

River Falls and Roberts Association.

To the Editor:—The number of cows in the River Falls and Roberts Association which produced forty pounds of butter fat or over in September is not very high, owing to the dry weather and flies, and it would pay all of our dairymen to have some green crop to feed during dry weather, or at least silage could be fed. If this green crop could be fed with a little grain it would help keep the cows up to the normal flow of milk.

There were nine cows which produced forty pounds of butter fat or over for the month of September, as compared with seventeen for the month of August. The record for butter fat for September was made by a registered Jersey producing 52.6 pounds. This cow is owned by L. W. Ash. Mr. Ash's herd also had the best average of any in the association—the average being 31.76 pounds. I am hoping to find many more cows in the forty-pound class for October. Our cows will be better cared for as the rush season of farm work closes and silage can be fed in place of corn fodder. Most of our cows are due to freshen in the fall or winter months and we find the fall cow has the advantage of the spring or early summer cow. She will be producing a large amount of fat during the winter when the price of fat is high, whereas the summer cow produces heaviest when the price is the lowest. The fall calf gets a better start in growth, gets the advantage of the winter feeding and is in fine trim to turn out upon the pasture in the spring, although my experience with a calf is if fed well in the barn the first summer it gets to be a larger animal than if it is turned out when it misses its grain and milk.

The following is the number of cows which produced forty-five pounds of fat or over for the month of September:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
J. L. Chapman					
Clover, G. H...	4	9-3-16	1330	3.4	45.2
Nellie, G. H....	3	7-18-16	1265	3.7	46.8
L. W. Ash					
Polly, R. J.....7		3-15-16	809	6.5	52.6
Gem, R. J.....4		7-6-16	970	4.7	45.6

C. G. Carlson, Official Tester.
J. M. May, Secretary

Wood County Association.

To the Editor:—The following from the record of the Wood County, Wisconsin, Cow-Testing Association is a list of cows which produced forty-five pounds of butter fat or more for the month of September:

Owner, name and breed	Age	When fresh	Pounds Milk	Per cent of fat	Pounds B. fat
J. C. Kieffer					
No. 1, R. H.....6		3-12-16	1680	3.9	66.5
No. 14, R. H.....6		7-10-16	1475	3.6	55.1
Wm. Schultz					
Brindle, G. H....7		4-30-16	1448	3.9	56.5
Bleemie, G. H...4		3-14-16	1280	4.6	58.9

J. L. Williams, Official Tester.

Alban and New Hope Association.

To the Editor:—The following is some of the results obtained by the Alban and New Hope Cow-Testing Association during the month of August.

Mr. Alfred Brekke had the best herd average, his Holstein cows giving an average of 917 pounds of milk and 35.7 pounds of butter fat per cow.

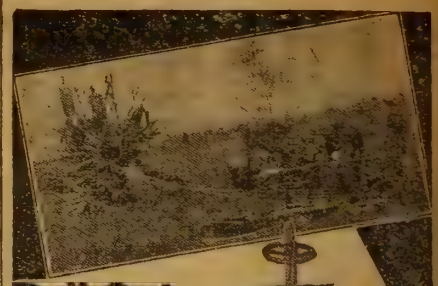
C. E. Ericksen's grade Guernsey cow produced the most in pounds of butter fat. She gave 1,105 pounds of milk and 51.9 pounds of butter fat.

There were only twelve cows that produced more than forty pounds of butter fat during this period, the reason for this being shortage of pasture, and quite a number of cows are having their resting period preparing for early winter and late fall freshening. This is a very good idea, because the farmer has more time to properly tend to his stock during the winter. He also gets better returns for his products during the winter months and is enabled to raise better calves from fall fresh cows. The farmers that had silage during the summer months secured the best results, as their herds did not shrink so much in milk yield. Every farmer ought to raise an extra acre or two of corn every year to prepare for summer drouths, as silage fed during this time means dollars in the dairyman's pocket. "More corn, more silos and more and better live stock means bigger profits for the farmer and the nation."

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. E. Ericksen					
Whiteface, G.G.	8	3-26-16	1105	4.7	51.9
M. J. Wrolstad					
Gr. Guern.....	5	7-6-16	886	5.6	49.6
Gr. Guern.....	9		1051	4.4	46.3

M. E. Smith, Official Tester.
M. J. Wrolstad, Secretary.

Ask your neighbor to subscribe for The Wisconsin Farmer.



Pull Out Stumps With the Famous Hercules!

Triple-Power

Pull an acre or more of stumps a day. Pull any stump in 5 minutes or less. Don't have loafer land when it's so easy and cheap to *pull the stumps out!* Make 1000% profit by using the Hercules. $1281.00 the *first year* on 40 acres! $750.00 every year after. Let us *prove* it.

Low Price and Book Free!

Get the facts. Read our book. Tells what all steel, triple power means. Shows many features of the Hercules. Shows many photos and letters from owners. Postal will do.

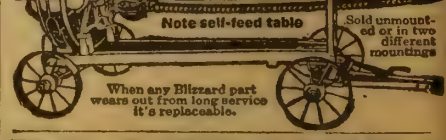
HERCULES MFG. COMPANY
159 25th St. Centerville, Iowa

TO SILO OWNERS—you who did and didn't see the Blizzard at your state fair

BLIZZARD Ensilage Cutters

Write today for catalog showing the simple construction and the mechanical superiority of the Blizzard. Also ask for booklet "What Users Say" in which farmers tell about the Blizzard: the power required, elevating ability, capacity, even cut silage, repair expense, etc. You probably have made up your mind not to go through another silo filling season without a cutter of your own. Perhaps you want a better one. Begin investigating now. Write for these booklets.

THE JOS. DICK MFG. CO.
Box 64, Canton, Ohio



PRICES LOWER NOW!

I have built this separator so good, after such an improved modern cream separator design, that **one sells another** and often a **dozen** or more in a **single neighborhood.** That's why the Galloway Cream Separator factories are working **night and day** right here in Waterloo. I sell you my new Galloway Sanitary Cream Separator on your choice of **five open fair and square selling plans** and guarantee it for ten years against defective workmanship and material, **backing up each sale** with a $25,000 bank bond.

GALLOWAY SANITARY CREAM SEPARATORS

Big, roomy, seamless, pressed steel supply tank, high crank shaft, short crank, oil splash lubrication, high carbon steel gear shafts, gear shaft bearings, very long, perfectly fitted, no spindly, wobbly legs, helical drive gears, large worm wheel, open sanitary base, sanitary drip pan, cream pail shelf hinged to be raised and lowered, strong, sanitary bowl, discs not fastened together, easily cleaned, perfectly sanitary, low speed crank, only 50 R. P. M.

THIS FREE BOOK Drop me a postal today for my big, 4-color book of separator facts FREE. Separators shipped from Waterloo, Iowa, Kansas City, Council Bluffs, St. Paul or Chicago.

WM. GALLOWAY CO.
Dept. 33 Waterloo, Iowa

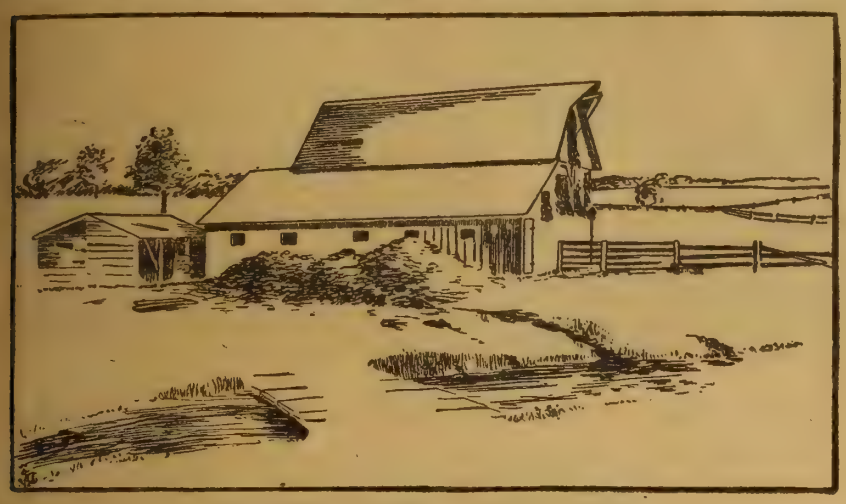
Getting Full Manure Values.

Unless the Wisconsin Farmer Takes Proper Care of Stable Manures and Distributes Properly He Is the Loser by Many Dollars.

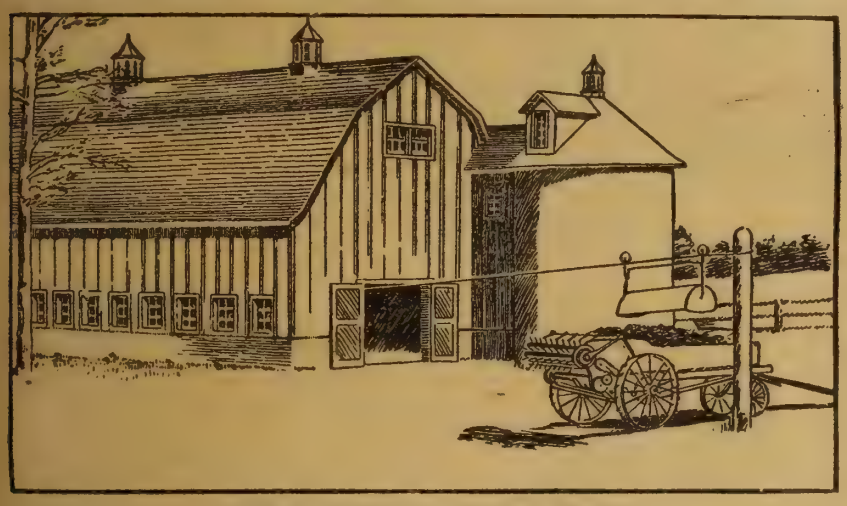
FARM fertility may be conserved by the proper distribution of farm manures. How often we have heard this, yet it must be rung in our ears more and more, for there is considerable waste as yet in this state of the farm manures. In some states, according to the Wisconsin Experiment Station, as high as 6 to 7 per cent of the total value of farm crops raised is spent in fertilizers. In Wisconsin some commercial fertilizer is used to good advantage, especially where tobacco or potatoes or other special crops are raised, but we ought to be able to get the most of our fertility from the farm without making purchases from the outside except in instances where some needed chemical quality of the soil is lacking. A well-fed horse produces about $25 worth of manure in a year; a dairy cow about $30 worth, a beef animal about $20 worth, a sheep about $3 worth and a hog about the same amount in value as the sheep. Why not sit down and figure out what the manure on your farm is worth and then figure also whether the full value is being gotten out of it. Live stock and legume crops are designated by the Wisconsin station workers as Wisconsin's two great fertilizer factories and they are working day and night. It only remains for those who manage the farm to get full value and avoid waste.

Fertility is lost by scanty bedding. Tight stable floors and liberal beddings save the liquid, the most valuable part of manures. If manure is left in open barnyards or under eaves much of the fertility runs off in drainage water. Loosely piled manures permits "fire-fanging." Manures should be packed closely and kept wet. Piling manures in the field instead of properly spreading them promotes an uneven growth of crops and causes waste.

The subject of fertility and the proper method of getting back to the land 80 per cent of the fertility which animals take out in feeds is an old one, but ever more important each year.



LEACHING TAKES A HEAVY TOLL.
Stable manure is worth too much to neglect. Proper care costs but little more.



SAVING FERTILITY MAKES MONEY.
Stable manure should be hauled direct to the fields, or stored in compact piles, or under a shed.

The Elkhorn Fair

A splendid exhibit of live stock and agricultural products crowded the buildings at the Walworth County Fair, held in Elkhorn. The fair suffered somewhat in attendance on Wednesday, which is usually an important day, owing to the fact that the report had been spread abroad that children under eighteen years of age would not be admitted. Thursday's crowd was a record breaker.

There were about 150 head of cattle on display, including some of the best herds in Walworth county, 100 sheep and 286 swine. In the horse division there were 166 head, and in the speed barn 100 race horses. The poultry show was exceptionally good, with 1,200 birds exhibited.

Among the exhibitors in the horse division were: Ceylon Court Farm, Lake Geneva, with thirteen head of Percherons, Belgians and Shires; Wm. Bellman, of Delavan, with Belgians and Percherons; D. K. Latta & Sons, of Clinton Junction, with Percherons; Cook Brothers, with a standard-bred stallion; Boynton Brothers, Janesville, with Hackneys and Arabians; Sam Wallace, of Beloit, standard-bred stallion, carriage horses, driving horses, grade roadsters, draft horses and four Arabians; Nathan Dickinson, of Lake Geneva, a Percheron stallion, Merlati; Fred Cobleman, Elkhorn; R. Whitte, Waukesha; Alfred Olsen, Elkhorn; Floyd Lean and Ed Hicks, Elkhorn; W. W. Briggs, Delavan, and Wm. Hurdis, of Elkhorn. Fred Coles, of Delavan, exhibited a string of Shetland ponies and George White, of Elkhorn, also showed two Shetland ponies.

There were thirty-one head of Jerseys in the dairy cattle division. Wm. Knight, of Eagle, Wisconsin, had the largest showing, with fifteen head. H. H. Loomer, of Delavan, showed ten head and Alfred Olsen, of Elkhorn, six head.

There were twenty-nine head of Ayrshires exhibited, of which seventeen were owned by Stephen Bull, Racine, and twelve by James Finn, of Whitewater. There were twenty-six head of Holsteins shown, fourteen being owned by Harry D. Dunbar, of Elkhorn; ten head by N. Dickinson, Lake Geneva, and two head by Moss Brothers, of Elkhorn. Birch & Thompson, of Lake Geneva, showed eighteen Herefords, and Boynton Brothers, of Janesville, eighteen Polled Durhams. Ira Inman, of Beloit, showed his fine herd of thirteen Brown Swiss. The Tilden Farms, of Delavan, showed eleven head of Guernseys. Altogether, the cattle show was very creditable, although the cold weather cut it down somewhat in numbers.

There were ninety-eight sheep shown, the exhibitors being as follows: M. F. Hogan, Wanakee, eleven Cotswold and two Oxfords; J. C. Ellis & Son, of Evansville, ten Rambouillets; W. G. Miles, of Evansville, eleven Hampshires, thirteen Shropshires and ten Southdowns; E. Crall & Son, of Evansville, thirteen Cheviots, seven Dorsets, nine Lincolns, one Cotswold, eight Merinos, three Oxfords and twelve Angora goats.

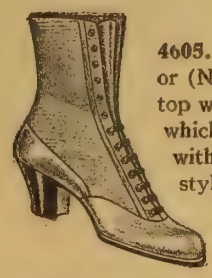
A new record from the standpoint of numbers was made in the swine division, where 286 head were shown. The largest previous number was 285, in 1914. An interesting exhibit was the Mule-Foot hog shown by Walter Knilans, of Richmond.

The largest exhibit by an individual breeder was that of W. W. Vaughn & Son, of Spring Prairie. These well-known breeders of "classy" porkers are showing fourteen head of Hampshires, twelve Duroc Jerseys and sixteen Chester Whites. W. G. Bartholf, of Spring Prairie, has twenty-three Durocs and seven Poland Chinas. Other exhibitors together with the number of entries in each class include: John D. Gant, Delavan, seventeen Durocs; H. J. Noblet, Elkhorn, four Chester Whites, six Durocs; Walter Beesecker, Delavan, seven Chester Whites; Rob Sturtevant, Delavan, eight Durocs; Roy C. Church, Elkhorn, ten Durocs; W. H. Esterly, Whitewater, six Poland Chinas; Theo. Bartleson, Springfield, seventeen Chester Whites; E. H. Parker & Son, Janesville, twenty-seven Durocs, two Hampshires; Heck Bros., Lyons, twenty Poland Chinas; George Lasch, Lyons, seven Poland Chinas; Moes Bros., Elkhorn, one Poland China; O. P. Coates, Elkhorn, ten Chester Whites; Cook Bros., Lyons, ten Chester Whites; C. H. Wiswell, Elkhorn, six Chester Whites; Whitmore Bros., Lyons, twenty-two Berkshires.

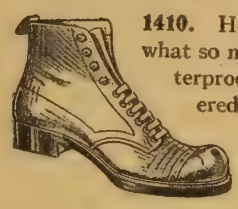
The success of the National Swine Show, which was held in South Omaha, Neb., last week means that the institution becomes a permanent one, with splendid future possibilities.

FOOT-Schulze Shoes are made *right*. But, more than this, they are ***sold*** right. They are distributed direct from manufacturer to the dealer and by him fitted to your feet. Never sold by mail. And not every dealer handling shoes can act as a distributor for Foot-Schulze Shoes. You'll generally find him the best merchant in the community. Put on a pair of Foot-Schulze Shoes—their comfort, durability and lasting good looks will prove they are better. Find the Foot-Schulze dealer—they're everywhere.

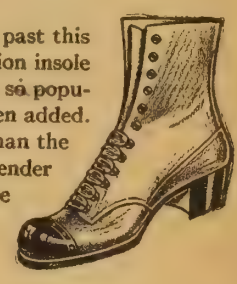
This Mark On the Sole Denotes Quality.



4605. Young woman's smart military lace boot in dull calf, or (No. 4213) patent leather. The combination of cloth top with the narrow strip at the eyelets lends that "touch" which takes it out of the class of the ordinary. Plain toe with medium narrow effect. Military heel. If you want style, (and wear, too) you'll make no mistake in selecting this shoe.



1410. Here's a ***waterproof*** shoe that's really dressy—just what so many business men want. The Web-Foot line, waterproofed by a thoroughly effective method. The covered piping just above the sole together with damp-proof interlinings furnishes a shoe that keeps water out remarkably well. A variety of lasts, medium or wider toes, to choose from, most any style you want. This is a real money's worth shoe.



4027. Because it has been the best seller in the past this Vici kid blucher must stand sponsor for the cushion insole line. But cushion insoles for women are becoming so popular that button and regular lace models have been added. Also lasts that are far neater and more graceful than the typical cushion insole pattern. If your feet are tender or give you trouble, you should try a pair of these Foot-Schulze cushion insole shoes. They're almost certain to relieve you.

Foot, Schulze & Company

Saint Paul

America's most popular buggy

is shown on page 1489 of our big General Catalog. It is illustrated in colors with full description of material and construction. Look in the catalog and see the price that made this buggy so popular.

Sears, Roebuck and Co., Chicago.

3766

National Swine Show Made Fine R

Members of the National Swine Growers' Association As

NEVER were ribbons coveted more devoutly by swine breeders than were those distributed at the National Swine Show held at South Omaha, Nebraska, last week. Conceived in the high purpose of benefiting the live stock industry of the United States and fostered by the National Swine Growers' Association, the success of this event was foreshadowed and foretold only in part. The state fair circuit had accomplished the important purpose of winnowing out the chaff so that the show last week was a round-up of the winners. They were there from nineteen states and fitted to a form never before excelled at any swine show. In all there were 1,409 swine in the pens and they were literally show hogs and not there for "sale purposes only." To be sure, there were a few dozen newly farrowed pigs, because laws of maternity will operate show or no show, but those who consider numbers only for purposes of comparison fail at a most important point. The record of getting together the best of all the breeds from all the swine states stands alone and unique in the history of all show-ring events.

With the holding of the first national show swine breeders enter upon a new epoch, because here is proof that men are willing to consider the great cause of swine improvement of first importance, giving to inter-breed rivalry a second rank. Surely an industry represented by $700,000,000 is deserving of an exposition of its very own and when 400 adherents of the principal breeds plight their troth at the same banquet board, as they did in Omaha last week, it may be accepted without mental reservation that what they purpose doing, that will they accomplish. It will doubtless be a still greater show in 1917, but the success of the first event insures it a permanent place among the list of purposeful institutions.

The location of the swine show placed a heavy responsibility upon the officers of the National Swine Growers' Association. There were strong claims put forward by cities more centrally located, but the inducement offered by Omaha proved to be most attractive, so that this hustling city landed the show. The location turned out to be an exceptionally advantageous one. The horse barns of the Union Stockyards proved to be ideal housing quarters, the individual stalls being easily converted into suitable pens. This building was well lighted, sanitary in every respect, and, with its broad aisles for visitors, it could scarcely be excelled in its adaptability to such a purpose. The attendance was all that could have been expected, certainly enough to tax the seating capacity of both ring sides. If fault could be found with any part of the show it would be that there was too much congestion in the judging quarters. For such an occasion there is needed ample room on both sides of the judging ring and visitors should be absolutely excluded from the ring itself. Wherever the 1917 show is located more ample provisions will have to be made in this regard because part of the educational value of the show is lost where there is too much congestion.

Visitors warmly welcomed the plan of issuing a complete catalog of all hogs entered for the show. Every entry was numbered and reference to the catalog enabled the visitor to quickly find the animal's name, together with the name and number of both sire and dam. The arrangements made by the committee in charge were, in this respect, far ahead of any of the swine departments of our state fairs. Every man at the ring side had a catalog in his hand and long before the ribbons were tied had mastered the breeding of the prospective winners. It is safe to say that thousands of swine breeders, coming from at least half the states in the Union, carried with them to their homes these show catalogs, marked by their own hands, showing the winners in all classes of the breed in which they were especially interested.

No special attempt had been made by the officers to feature educational exhibits, but the Nebraska Experiment Station had in-

1—Sievers' grand champion Poland China boar, Long Big Bone. 2—Jackson's first j Spotted Poland China boar, O. & K.'s Pride. 4—Sievers' grand champion Poland Ch nel 1st. 6—Economy Stock Farm's second-prize junior Duroc Jersey boar pig, Bu 8—Iowana Farms' winning senior yearling Berkshire litter.

stalled a miniature central hoghouse with skillfully arranged feed yards, pens and troughs. Among other things the self-feeder, which is coming into popular use, was located in these yards together with alfalfa racks, dipping tanks and other necessities and conveniences of a practical swine-breeding plant. The interest shown in this display would indicate that the National Swine Show has possibilities to develop in bringing to the show certain kinds of educational features. An eno by the experiment stations i breeding as well as for fatteni form and placed before the tribute materially to the inte were a number of commerci Many kinds of hog oilers we were shown in all sorts of v kinds received the special a there were sprayers, drinkin which are of interest to swine at a show of this character.

No such successful show possible had it not been for

1—Jensen & Sons' first-prize yearling Poland China boar, Big Bob. 2—Barr's grand champion Chester White boar, Willia 3—Meharry's firs boar, Cherry King Orion. 6—Barr's first-prize senior yearling Chester White sow, 7—Wickfield

ecord at Omaha, Neb., Last Week

bled at National Swine Show, South Omaha, Nebraska

ount of work has been done
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This could be put in chart
a manner that would con-
e show. To be sure, there
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lay. Commercial feedstuffs
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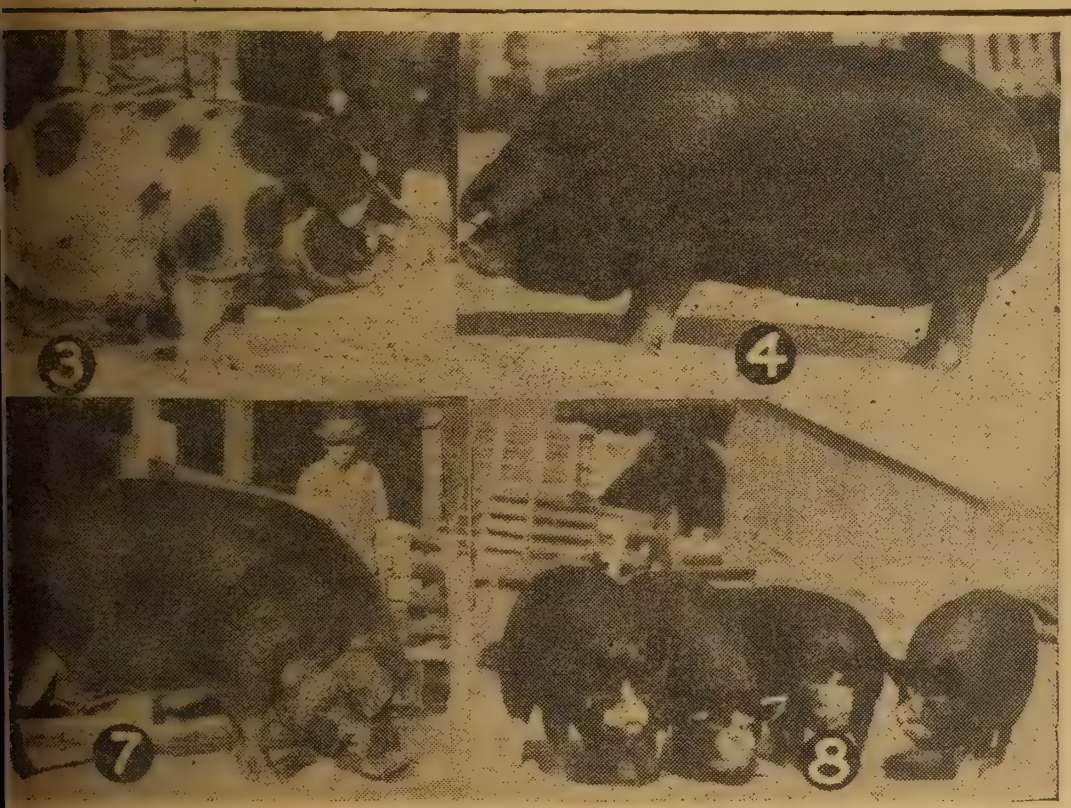
visitors. Then, of course,
self-feeders, etc., all of
d have an important place
ast week would have been
nent of the science of im-
munization. A certificate of health accompanied every hog entered, so that when the various herds were returned to the shipping point from which they started there will be advanced assurances that hog cholera will not be disseminated. Those who have fought the use of serum must be forced to acknowledge that without the use of this product there could have been no such thing as a successful National Swine Show. Its continued use means more comprehensive plans can be made for the shows in the future and there can be full and earnest co-operation between breeders with complete assurances that valuable hogs will not be swept away by the worst of all contagious diseases, hog cholera.

The various breed associations assumed a large responsibility when they selected the judges for the National Swine Show. They chose men who have long since been recognized as expert judges, and the work outlined for these judges in the show ring called for fair play and a square deal. The task of judging any one of the breeds shown last week was an exceedingly difficult one, but the records made, when summed up at the close of the show, indicated that a most satisfactory distribution of the premiums had been made. No one breeder had the inside track and no clique was in control, as the difficult feat of sorting out the winners was patiently undertaken by the judges. Ringsiders with catalog in hand sat in many instances, breathless for the final decision and in most cases the judge's verdict harmonized with the majority of the onlookers. If the judges catered especially to the big type it can only be said that this is the type that is enjoying supreme popularity at the present time, and there was so much quality in the winners that no man could say that too much emphasis had been placed on the importance of size and scale. The judges at the National Swine Show performed an important task for the swine breeders of the United States last week and we believe that they made such a record as to entitle them to the good wishes and good will of our best breeders.



r Duroc Jersey sow pig, Orion's Willetta. 3—Bock & Shirk's grand champion Big Maid 1st. 5—Johnson's first-prize junior Duroc Jersey boar pig, National Colo-op. 7—Jackson's grand champion Duroc Jersey boar, Orion Cherry King Junior.

As said before, there were 1,409 swine in the pens at the national show and exhibitors were present from nineteen states of the Union. The Hampshires led in point of numbers with 355 animals in all; the Duroc Jerseys followed closely with 350 head; the Chester Whites were third in the list, with 244 to their credit. The Poland Chinas came next with 211 head, then followed the Berkshires, 162; Spotted Poland Chinas, 33; Tamworths, 20; Yorkshires, 17, and Mule-Foot hogs, 17.. Although there was no classification for Tamworth, Yorkshire and Mule-Foot hogs, yet good exhibits in these three breeds were made by B. F. Davidson, Menlo, Iowa (Yorkshire); J. B. McCoy, Farragut, Iowa (Tamworth); J. W. Cox & Sons, Arapahoe, Nebraska (Mule-Foot). The states represented by exhibitors at this show included Colorado, Indiana, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, New Jersey, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Texas, Washington and Wisconsin.

As a detailed list of the prize winners is given in the following pages, it is scarcely necessary to make further comment on the work of the judges, although it is quite in order to say that more painstaking effort has never been made in an American show ring. The judges were selected by the various record associations and were considered by these associations to be men of the highest standing, each being an authority on the breed which he was called upon to judge. The work of placing the ribbons was much more difficult than is the same task at state fairs, because this was the show of prize winners. The East and the West met at Omaha and champions of the various circuits were brought together for the first time, thereby making the judging work exceedingly difficult. In spite of this, the results of the judging last week, taking them as a whole, proved to be exceedingly satisfactory. Ringsiders made no attempt to conceal their gratification when the ribbons were tied, while exhibitors graciously accepted the awards handed them, gratified in every case when a place was secured inside the monies.

Although the sum of $15,000 was paid out in premiums last week, it was apparent that this sum scarcely answered the needs of the association. Every breeder who entered at the National Swine Show involved himself in a heavy expense and, although eight premiums were given in each class, there were so many good entries in many of the classes that recognition should have been extended

or yearling Poland China sow, Orange Molly. 4—Patterson's aged Hampshire sow, Rose. 5—Swain & Sons' first-prize senior yearling Duroc nd champion Hampshire boar, Lookout Lad. 8—Rhode & Lewis' second-prize Hampshire sow, Keepsake Second.

further down the line. It would be encouraging to breeders if in the future an even dozen cash prizes could be given in each class and so much the better if an increase could be made in the amount of cash offered from the first to the last prize. The breeders' associations did their part and did it well and whether they can increase their premiums in the future remains to be seen, but in any event a permanently successful national show can only be maintained by giving to breeders who fit and show their hogs the most liberal kind of treatment. Even at that it is not expected that breeders will make a profit out of their winnings, and when it is suggested that the premiums be increased this is done mainly in order that those who show in the future will have their losses from showing cut down.

No report on the National Swine Show will be complete without the favorable commendation of those in charge. General Manager W. W. McFadden received the praise of all those who participated in the showing as exhibitors. He has taken an important part from the beginning in the inauguration of the National Swine Show, and, as president of the National Swine Growers' Association, he has in every instance used his influence in a non-partisan way to advance the cause of the pure-bred swine industry, with fairness to all breeds and partiality toward none. General Supt. E. Z. Russell carried through his part well in perfecting the details of the show and he deserves the highest commendation of the swine-breeding fraternity. As secretary of the National Swine Show, James J. Doty has worked incessantly to make the event a success and the enthusiasm shown by him has been an inspiration to his coworkers, thereby making it possible to bring together almost 1,500 of the best pure-bred hogs that have ever been placed under one roof at one time.

DUROC JERSEYS.

Prof. H. W. Mumford was called to judge an exceptionally strong show extending throughout all of the classes. He picked consistently the long, smooth, stretchy type with ability to move readily on their feet. There were many Durocs in the exhibit of the caliber that have been winning state fair championships. It was a blue-ribbon show all around. The aged boar class brought together the Ohio and Iowa purple winners. Orion Cherry King Jr. is not so wide nor thick as Great Wonder, but more inclined to the lengthy sort. Early maturity was most pronounced in the Waltemeyer boar. This was a ring of great Duroc sires. Swain won on Cherry King Orion in the senior yearlings. He is long, smooth and big, of the same type as the first-prize aged boar. Tommy Doyle, at the head of the junior yearlings, is a wonderful boar. He has width, smoothness and strong pasterns and all this combined with scale. The second junior yearling is long, stretchy and smooth, but not as thick as the Van Meter boar. Algo's Giant is a remarkable boar pig. Big, smooth and symmetrical, he stands on good pasterns. He was made junior champion here at Iowa. National Col. 1st was the first-prize junior pig at Ohio. He is a long, growthy type; hardly as near the ground as others below him in the prize list.

The aged sow class was the feature of the show. Twenty-one better sows have never been shown. Critic's Perfection harmonizes with her name. Her faults are few and hard to find; her virtues many. She is in the fittest shape and it may be long before as good a one is seen again. Her right to grand championship was little to be disputed. The senior yearling sow heading the class is big, deep and stretchy. She gave the aged sow a close rub when difference in age is computed. Johnson's junior yearling sow is a long, smooth one and has a chance to widen a little as she grows. This was one of the strongest classes of the show. There were many exceptional sows. Orion's Willetta 3d is a real Duroc type. She came into the junior purple. Her promise of size and growth is a strong feature. Orphan Belle headed the largest class of the show. She will be heard from in the future, if returned to the ring.

The round-up futurities for boar and sow pig brought together winners from the East and West. It was a convincing demonstration of what Duroc breeders are accomplishing. Classes were large and prizes liberal. The groups filled the ring so that there was little space left for them to be seen to advantage. Strength was prominent in all classes. It was a record Duroc Jersey show throughout.

Exhibitors: L. F. Atwater, Bangor, Wis.; C. F. Burke, Rocky Ford, Colo.; L. S. Berry, South Houston, Tex.; Geo. Briggs & Sons, Clay Center, Neb.; J. R. Breed, Hydro, Okla.; J. O. Bayne & Son, Aurora, Neb.; C. F. Barnes, Stillwater, Okla.; V. A. Briggs, Seward, Neb.; W. R. Crow & Sons, Hutchinson, Kan.; J. W. Cartwright, Burlington, Iowa; Carlson & Trier, Washington, Iowa; J. Young Caldwell, Williamsville, Ill.; Economy Stock Farm, Shenandoah, Iowa; Farley & Harney, Hampton, Neb.; C. D. Gillham, Waverly, Neb.; J. S. Golder, Oakland, Neb.; H. Hairsine, Missouri Valley, Iowa; Thos. Johnson, Columbus, Ohio; Ira Jackson, Tippecanoe City, Ohio; E. L. Jimison, Maquon, Ill.; E. E. Johnson, Genoa, Neb.; Ed M. Kern, Stanton, Neb.; Henry Koehlmoos, Pilger, Neb.; Robt. Leisy, Wisner, Neb.; Meridel Farm, Black Lick, Ohio; Moats Bros. & Co., Missouri Valley, Iowa; Jos. McGaughey, Wisner, Neb.; T. J. Overboe, Allen, Neb.; E. Z. Russell & Son, Omaha, Neb.; C. R. Steele, Ireton, Iowa; Henry Stuthman, Pilger, Neb.; I. J. Swain & Sons, Malvern, Iowa; Madison Spencer, Audubon, Iowa; W. M. Sells, Sidney, Iowa; Stoltenberg Bros., Florence, Neb.; C. J. Swale, Fredericksburg, Iowa; Fred Swan, Missouri Valley, Iowa; W. D. Stambaugh, Richfield, Neb.; Edgar Taylor, Plainview, Neb.; U. S. Indian School, Genoa, Neb.; G. Van Patten & Son, Sutton, Neb.; W. H. & A. D. Van Meter, Williamsville, Iowa; J. D. Waltemeyer & Son, Melbourne, Iowa; Wellendorf & Son, Algona, Iowa; R. Widle & Son, Genoa, Neb.; Wharton & Barkley, Allen, Neb.; G. F. Williams, Marlow, Okla.; W. J. Wilson, Malvern, Iowa.

Judge, Herbert W. Mumford, Urbana, Ill.

Aged Boar (14 shown)—1st Jackson on Orion Cherry King Jr.; 2d Waltemeyer & Son on Great Wonder; 3d Johnson on Oakland Orion's Cherry King; 4th Overboe on Top Model; 5th Stuthman on Grand Model 8th; 6th Moats Bros. & Co. on Giant Col.; 7th Caldwell on Roumas; 8th Crow on Crow's Joy.

Senior Yearling Boar (12 shown)—1st Swain on Cherry King Orion; 2d Spencer on Critic's Model 1st; 3d Meridel on Capital Taxpayer; 4th Breed on Prince Defender; 5th Taylor on Big Sensation; 6th Briggs on Illustrator Jr.; 7th Crow on Our Colonel; 8th Widle on Critic's Prince.

Junior Yearling Boar (19 shown)—1st Van Meter on Tommy Doyle; 2d Golder on Critic's Protection; 3d Van Meter on Model A. D.; 4th Breed on Cherry Chieftain; 5th U. S. Indian School on Nebraska Wonder; 6th Van Patten on Uneeda Wonder; 7th Spencer on Chief's Model 1st; 8th Wharton & Barkley on Col. Wonder.

Senior Boar Pig (25 shown)—1st Wellendorf on Algo's Giant; 2d Jackson on Willetta King Orion; 3d Waltemeyer on Grand Model 44th; 4th Widle on Col. Critic; 5th Kern on Sensation Wonder 4th; 6th Johnson on Variety Col.; 7th Carlson & Trier on Dutch Model; 8th Soltenberg on Bessie Wonder's Col.

Junior Boar Pig (29 shown)—1st Johnson on National Col. 1st; 2d Widle on Critic D. 3d; 3d Economy Stock Farm on Burke's On Top; 4th Crow on Crow's Futurity Col.; 5th Sells on Illustrator Sidney; 6th Golder on Critic's Again; 7th Van Meter on Cherry Chief Wonder 2d; 8th Williams on Select Chief.

Roundup Duroc Jersey Futurity for Boar Pig—1st Widle on Critic D. 3d; 2d Economy Stock Farm on Burke's On Top; 3d Crow on Crow's Futurity Col.; 4th Golder on Critic's Again; 5th Williams on Select Chief; 6th Steele on Educator Again; 7th Widle on Nebraska Critic; 8th Bayne & Sons on Futurity Winner; 9th Crow & Sons on Crow's Futurity Col. 3d; 10th Atwater on Money Musk.

Aged Sow (21 shown)—1st U. S. Indian School on Critic's Perfection; 2d Johnson on Volunteer's Defender Lady 2d; 3d Crow on Katherine Girl; 4th Caldwell on Highland Lady; 5th Kern on Sensation Queen; 6th Kern on Kern's Choice Lady; 7th Widle on Princess 3d; 8th Barne's on Select Waveland's Girl.

Senior Yearling Sow (12 shown)—1st Johnson on Fair Queen 1st; 2d Jackson on King Lady 13th; 3d Atwater on Defender Queen; 4th Crow on Golden Lassie; 5th Widle on Princess 10th; 6th Jackson on King Lady 14th; 7th Atwater on Defender Lady; 8th Swan on Lily A. 2d.

Junior Yearling Sow (22 shown)—1st Johnson on Oakland Garnet; 2d Carlson & Trier on Model Lady 2d; 3d Jackson on Lady Willetta; 4th U. S. Indian School on Banner Maid; 5th U. S. Indian School on Royal Gem; 6th Waltemeyer on Grand Lady 21st; 7th Johnson on Garnet Orion Girl; 8th Stoltenberg Bros. on Model Lady.

Senior Sow Pig (29 shown)—1st Jackson on Orion's Willetta 3d; 2d Johnson on Oakland Mischief 2d; 3d Waltemeyer on Grand Lady 22d; 4th Swale on Foxy Lady; 5th Breed on Queen Chiefess; 6th Atwater on Dixie Queen; 7th Jackson on Orion's Willetta 5th; 8th Johnson on Oakland Mischief 3d.

Junior Sow Pig (34 shown)—1st Briggs & Son on Orphan Belle; 2d Waltemeyer on Golden Lady 29th; 3d Jackson on Willetta 15th; 4th Widle on Critic's Beauty 1st; 5th Jackson on Willetta 16th; 6th Crow & Sons on Crow's Futurity Lady 1st; 7th Van Meter on Zoalena 2d; 8th Barnes on Select Lady 1st.

Aged Herd—1st Johnson on herd headed by Oakland's Orion Cherry King; 2d Jackson on herd headed by Orion's Cherry King Jr.; 3d Waltemeyer on herd headed by Great Wonder; 4th Crow & Sons; 5th U. S. Indian School; 6th Johnson; 7th Kern & Taylor; 8th J. Young Caldwell.

Young Herd—1st Jackson on herd headed by King Orion Cherry; 2d Waltemeyer on herd headed by Grand Model 44th; 3d Johnson on herd headed by National Col. 1st; 4th Widle & Sons; 5th Crow & Sons; 6th Johnson; 7th Swale; 8th Williams.

Herd Bred by Exhibitor—1st Johnson on herd headed by Oakland's Orion Cherry King; 2d Jackson on herd headed by Orion's Cherry King Jr.; 3d Jackson on herd headed by King Orion Cherry; 4th Waltemeyer; 5th Crow & Sons; 6th U. S. Indian School; 7th Widle & Sons; 8th Johnson.

Get of Sire—1st Jackson on herd sired by Orion Cherry King; 2d Jackson on herd sired by Orion Cherry King; 3d Waltemeyer on herd sired by Grand Model; 4th Waltemeyer; 5th Atwater; 6th U. S. Indian School; 7th Johnson; 8th Widle & Sons.

Produce of Dam—1st Jackson on produce out of Willetta I. J. 2d; 2d Johnson on produce out of Belle of Oakland; 3d Waltemeyer on produce out of Fancy May; 4th Johnson; 5th Widle & Sons; 6th U. S. Indian School; 7th Widle & Sons; 8th Crow & Sons.

Roundup Duroc Jersey Futurity for Sow Pig—1st Waltemeyer on Golden Lady 29th; 2d Widle & Sons on Critic's Beauty 1st 3d Crow on Futurity Lady 1st; 4th Van Meter on Zoalena 2d; 5th Barnes on Select Lady 1st; 6th Widle & Sons on Critic's Dream; 7th Crow on Crow's Futurity Lady 3d; 8th Van Meter on Theda Bara; 9th Widle on Critic's Beauty 2d; 10th Widle on Critic's Dream 2d.

Junior Champion Sow—Jackson on Orion's Willetta 3d.

Senior Champion Sow—U. S. Indian School on Critic's Perfection.

Grand Champion Sow—U. S. Indian School on Critic's Perfection.

Junior Champion Boar—Wellendorf on Algo's Giant.

Senior Champion Boar—Jackson on Orion Cherry King Jr.

Grand Champion Boar—Jackson on Orion Cherry King Jr.

THE POLAND CHINA SHOW.

If anyone still doubts the fact that Poland Chinas are both big and smooth, he should have seen the National Show. It was the greatest collection of big hogs with quality ever exhibited. The judges were never disappointed in finding this type to fill the moneys in each class. The aged boars each showed one thousand pounds or better of smooth, firm pork. Sievers' Long Big Bone is conceded to be a close approach to absolute perfection in his low-down type, smooth flesh and good balance. While it was a good fight, ringside favor for grand championship swung his way as soon as he headed the aged class. His closest contest was with Caldwell's senior yearling, a truly remarkable hog. But a few days too old for the junior yearling class, the Caldwell boar had remarkable size, being considerably over one thousand pounds in weight, and with it smoothness and uniform fleshing. He came to Omaha with the grand championship of Kansas in his possession. Smooth Big Bob won the blue among the junior yearlings for Jensen & Sons. A big, stretchy pig, he should make a good one to grow out. G. & A.'s King Joe acquired the junior purple in Iowa on his way here and won the junior championship in the warmer competition he met at Omaha. He is well fitted, has the bone, good feet and received popular favor as junior champion. The leading junior boar pig was again an Iowa winner. While in the ring before the ribbons were tied, Mr. Conrad sold him for $300. He is the long, smooth, stretchy kind that keeps growing.

The aged sows were one of the greatest classes of the show, averaging 800 pounds. It was a case here of all being good. Sievers' Big Maid 2d is nearly everything a Poland China sow should be; smooth, thin, but big and robust. She made a popular grand champion. Fair Queen, the senior yearling, is the same sort and made the competition for senior champion a warm one. Meharry had a big, smooth junior yearling at the top of the class. The junior champion at Des Moines came out to win the senior pig class. She had to give way to the junior pig, Pana Uhlan, when the championship was awarded on sows under one year.

Groups made a splendid showing. Sievers, with two grand champions, had a great aged herd; he also figured strongly in the other groups. Throughout the showing of herds, the ring was overflowing with big, smooth packers' type Polands.

The most favorable kind of commendation was accorded Chas. A. Marker, who judged the Poland classes. He performed a difficult task in a most creditable manner.

Exhibitors: John H. Andressen, Manilla, Iowa; Becker Bros., Richfield, Neb.; G. L. Burgess, Bement, Ill.; I. J. Conrad, Melbourne, Iowa; Fred B. Caldwell, Howard, Kan.; Fred Dralle, Mission Hill, S. D.; Phil Dawson, Endicott, Neb.; T. J. Dunbar, Coin, Iowa; Philip A. Frazier, Ft. Crook, Neb.; H. B. Francis, New Lenox, Ill.; W. J. Graham, Howard Lake, Minn.; H. Wade Gillis and Osbert Allender & Sons, Mt. Pleasant, Iowa; I. J. Gallagher, North Bend, Neb.; M. J. Hather, Ord, Neb.; Nels C. Jensen & Sons, Exira, Iowa; Joe Kramer, Elkader, Iowa; Kritzeck Bros., Howard Lake, Minn.; Will G. Lockbridge, Fayette, Mo.; Morris Lagoni, Hampton, Neb.; F. H. Lacy & Son, Indianapolis, Ind.; Anton Moore, Clearwater, Neb.; Carl Mark, Neola, Iowa; J. D. McDonald, North Bend, Wis.; J. C. Meese, Ord, Neb.; J. E. Meharry, Tolono, Ill.; Sam McKelvie, Fairfield, Neb.; McNutt & Meese, Ord, Neb.; Marlow & Son, Wellsville, Mo.; Meyer & Sons,

Fontanelle, Neb.; John Miller, Rock Valley, Iowa; D. H. Paul, Haverhill, Iowa; F. G. Paul, Marshalltown, Iowa; Fred Sievers, Audubon, Iowa; Mark I. Shaw, Monroe, Iowa; A. D. Severe, Dows, Iowa; Frank Stevens, Imogene, Iowa; W. E. Willey, Steele City, Neb.; Walter & Son, Effingham, Kan.; H. O. Williamson, Herman, Neb.; Alvin Windom, Nodaway, Iowa.

Judge, Chas. A. Marker, Auburn, Ill.

Consulting Judge, Thos. A. Shattuck, Hastings, Neb.

Aged Boar (10 shown)—1st Fred Sievers on Long Big Bone; 2d Meese on Meese's Rexall; 3d Graham on Big Price; 4th Windom on Expansion King Orphan; 5th Lagoni on Big Cloverdale 2d; 6th Gallagher on Long Hercules; 7th McDonald on McChief; 8th Andressen on Long Bob.

Senior Yearling Boar (6 shown)—1st Caldwell on Caldwell's Big Bob; 2d McKelvie on Mc's Sampson; 3d McNutt & Meese on Black Monarch; 4th Meharry on Double Wonder; 5th Dralle on Wonder Surprise; 6th McDonald on King James.

Junior Yearling Boar (11 shown)—1st Jensen & Sons on Smooth Big Bob; 2d Marlow & Son on Missouri Blue Valley; 3d Dawson on Robin Hood; 4th Sievers on Smooth Big Bone A.; 5th Andressen on Blue Valley King; 6th Hather on Orphan Wonder; 7th Meharry on Goldengate Wonder; 8th Hather on A Big Orphan.

Senior Boar Pig (19 shown)—1st Gillis & Allender on G. & A.'s King Joe; 2d Graham on Big Peter Jr.; 3d Kramer on K.'s New Banker; 4th Francis on Meritorious; 5th Dawson on Radio; 6th Meese on King Rexall; 7th McNutt on Illustrator; 8th Dawson on Radium.

Junior Boar Pig (17 shown)—1st Conrad on Long Orange; 2d Meese on Futurity A.; 3d Hather on Orphan Lad; 4th Graham on Big Peter 2d; 5th Lacy & Son on Giant Big Bone; 6th Graham on Big Peter 3d; 7th D. H. Paul on Futurity Wonder; 8th Williamson on Jumbo Chief.

Aged Sow (11 shown)—Sievers on Big Maid; 2d McDonald on Miss Big Knox; 3d Meharry on Orange Dolly; 4th Meharry on Illinois Patsy; 5th McDonald on Miss Price 4th; 6th Dawson on Belle Wonder; 7th Willey on Annie Price 36th; 8th Dunbar on Lillie Wonder.

Senior Yearling Sow (8 shown)—1st Miller on Fair Queen; 2d Walter & Son on Bob's Big Lady; 3d Graham on World Beater; 4th Meese on Miss Monarch Wonder; 5th Meyer & Sons on Bonnie Star; 6th Severe on Severe's Choice; 7th Graham on Record Breaker 2d; 8th McDonald on King's Lady 3d.

Junior Yearling Sow (14 shown)—1st Meharry on Orange Mollie; 2d Sievers on Smooth Maid 2d; 3d Walter & Son on U. S. Wonder; 4th Meese on Mastiff Queen 2d; 5th F. G. Paul on High Back Modesty; 6th Severe on Big Wonder Maid; 7th McDonald on Priceless Lady 2d; 8th Meese on Mastiff Queen 3d.

Senior Sow Pig (13 shown)—1st F. G. Paul on Big Black Modesty; 2d Walter & Son on U. S. Wonder 2d; 3d Meese on Monarch's Delight; 4th Graham on Big Peter's Best; 5th Dawson on Daisy Uhlan; 6th Walter & Son on U. S. Wonder 3d; 7th Meese on Monarch's Delight 2d; 8th Meharry on Miss Choice 2d.

Junior Sow Pig (22 shown)—1st Dawson on Pana Uhlan; 2d Hather on Orphan Lady 1st; 3d Graham on Winning Queen; 4th D. H. Paul on Sweet Look; 5th Willey on Omaha Girl; 6th McNutt on Miss Price; 7th Graham on Futurity Queen; 8th Meyer & Sons on Ak Sar Ben Queen.

Aged Herd—1st Sievers on herd headed by Long Big Bone; 2d Meharry on herd headed by Double Wonder; 3d McDonald on herd headed by Mc's Chief; 4th Meese; 5th Graham; 6th Dawson; 7th Willey.

Young Herd—1st Dawson on herd headed by Radio; 2d Graham on herd headed by Big Peter 2d; 3d Meese on herd headed by Futurity A.; 4th Hather; 5th Lacy; 6th McDonald; 7th Becker Bros.

Herd Bred by Exhibitor—1st Meese on herd headed by Meese's Rexall; 2d Sievers on herd headed by Smooth Big Bone A.; 3d Meese on herd headed by King Rexall; 4th McDonald; 5th Hather; 6th Graham; 7th Lacy; 8th Meyer & Sons.

Get of Sire—1st Walter & Son on herd sired by Big Bob Wonder; 2d Meese on herd sired by Big Monarch; 3d Sievers on herd sired by Smooth Big Bone; 4th Dawson; 5th Graham; 6th Hather; 7th Meyer & Sons; 8th Williamson.

Produce of Dam—1st Walter & Son on produce out of King's U. S.; 2d Sievers on produce out of Big Maid 1st; 3d Graham on produce out of Miller's Best; 4th Meese; 5th Hather; 6th Dawson; 7th McDonald; 8th Williamson.

Junior Champion Sow—Dawson on Pana Uhlan.

Senior Champion Sow—Sievers on Big Maid 1st.

Grand Champion Sow—Sievers on Big Maid 1st.

Junior Champion Boar—Gillis & Allender on G. & A.'s King Joe.

Senior Champion Boar—Sievers on Long Big Bone.

Grand Champion Boar—Sievers on Long Big Bone.

SPOTTED POLAND CHINA.

Exhibitors: A. S. Booco, Jeffersonville, Ohio; Bock & Shirk, Kempton, Ind.

Judge, Col. Thomas Vinnedge, Indianapolis, Ind.

Aged Boar—1st Bock & Shirk on O. and K.'s Pride; 2d Booco on Spotted Ohio Boy.

Senior Yearling Boar—1st Booco on Choice.

Junior Yearling Boar—1st Booco on Enormous 6th.

Senior Boar Pig—1st Booco on Michigan Boy 14th; 2d Booco on Michigan Boy 15th.

Junior Boar Pig—1st Bock & Shirk on Jeff; 2d Bock & Shirk on Tom Boy; 3d Booco on Michigan Boy 16th; 4th Booco on Michigan Boy 17th; 5th Bock & Shirk on Searchlight.

Aged Sow—1st Bock & Shirk on Queen Bess; 2d Booco on La Vern B. 4th; 3d Booco on Wonder Girl.

Senior Yearling Sow—1st Bock & Shirk on Packer's Model; 2d Bock & Shirk on Queen Bess 2d; 3d Booco on Nan Spot; 4th Booco on Indian Princess.

Junior Yearling Sow—1st Bock & Shirk on Stockholm Margaret; 2d Booco on Highland Queen; 3d Booco on Silver Maid III.

Senior Sow Pig—1st Booco on Riverside Model XI; 2d Bock & Shirk on Queen Alice O.; 3d Booco on Indian Velvet VII; 4th Bock & Shirk on Underwood's Daisy.

Junior Sow Pig—1st Booco on Perfect Lass 8th; 2d Bock & Shirk on Orphan Girl.

Aged Herd—1st Bock & Shirk; 2d Booco.

Young Herd—1st Booco; 2d Bock & Shirk; 3d Booco.

Herd Bred by Exhibitor—1st Bock & Shirk; 2d Booco.

Get of Sire—1st Booco; 2d Bock & Shirk; 3d Booco.

Produce of Dam—1st and 3d Bock & Shirk; 2d and 4th Booco.

Junior Champion Sow—Booco on Perfect Lass 8th.

Senior Champion Sow—Bock & Shirk on Queen Bess.

Grand Champion Sow—Bock & Shirk on Queen Bess.

Junior Champion Boar—Booco on Michigan Boy.

Senior Champion Boar—Bock & Shirk on O. K.'s Pride.

Grand Champion Boar—Bock & Shirk on O. K.'s Pride.

Special—$50.00 Silver Cup offered by the Nebraska State Board of Agriculture for the best boar and three gilts farrowed since February 1, 1916, won by Bock & Shirk.

BERKSHIRES.

The territory represented in the Berkshire ring was of wider scope than in any other breed. The west came halfway to meet the east in a record show. Silver Birch Farm, D. C. Bunn and Clark Bros. came from the state of Washington; Hamilton Farm, Colt Farm and C. H. Carter from New Jersey, Rhode Island and Pennsylvania. The exhibit was strong in all classes, contributing its share to make the First National Swine Show a pronounced success. Quality was found in all the entries, bearing out the claims of breeders for high dressing swine and firm pork.

The aged boars were headed by Longfellow's Double Rival, a boar of exceptional type in head and general make-up. He is long and stretchy, smooth throughout. Rival's Iowana Baron, having been off his feed, was down to third. Chas. Sutton's Silver Tip's Duke 7th is a strong Berkshire type. This is a son of Duke's Bacon 8th and proves a good argument for his sire. Mr. Lovejoy reversed the first and second junior yearlings just before tying the ribbons. Superbus Royal Master is smoother, has a finer ear and coat, but not the weight for age, stretch and promise of size of his litter brother placed second. Both are boars of splendid type. The senior boar pig, Imperial Rival, came out the junior champion of the show. He is a big, wide, early-maturing pig, with a good Berkshire head. He has not yet failed to take the blue wherever shown. Jenkins' junior boar pig is a big, wide, growthy kind. His size is one of his strong points. Rogers Bros.' second was a smooth, typey, right kind.

The aged sow class was one of the strongest of all the Berkshire competitions. Duke's Champion Lady 4th has great length, is a big, breedy sow, but might fill in stronger in the ribs. Iowana Peaceful 2d is a real Berkshire matron. She made a good run for the blue ribbon and had favor among many at the ringside. Iowana Farms pulled the blue in senior yearling sows with Iowana Lady 16th by Rival's Iowana Baron 2d. She has been beaten in previous shows by another entry of the same farm, but seems to thrive on the circuit and is growing better each week. With a strong back and loin she makes a thick, meaty sow. Symboleer's Ideal Lady has all the quality a Berkshire needs. She made a good top for the junior yearling class. Some of the other entries were more growthy, but none were as tidy and smoothly made. Hamilton Farm's senior sow pig is big, smooth and typey, with a good head. She lost when the junior purple was awarded to Jenkins' Superior Duchess 11th. The last has size and quality splendidly combined. Her weight for age, smoothness and type of head won her the junior championship.

Groups were strong. The herds were uniform in type throughout, showing the constructive efforts of years of breeding. Competition was keen and differences in placing awards close. Iowana Farms won the get of sire on herd sired by Rival's Iowana Baron 2d and the produce of sow on the produce of Rookwood Lady 52d. Iowana Farms have not been defeated in either get or produce this season.

The grand championships of both sexes were won by aged entries. Both the boar and sow were typical specimens of the breed. The junior champions were not far behind in merit to the older animals.

Exhibitors: Chas. E. Sutton, Lawrence, Kan.; Iowana Farms, Davenport, Iowa; Silver Birch Farm, Newport, Wash.; W. S. Corsa, Whitehall, Ill.; Hamilton Farm, Gladstone, N. J.; Colt Farm, Bristol, R. I.; C. H. Carter, West Chester, Pa.; Townsend Farms, New London, Ohio; Rogers Bros., Harrodsburg, Ky.; D. C. Bunn, Prosser, Wash.; Jenkins Bros., Orleans, Ind.; C. D. Nichols Live Stock Co., Cresco, Iowa; C. F. Curtiss, Ames, Iowa; Clark Bros., Prosser, Wash.; F. C. Mitchell, Sta. B., Omaha, Neb.

Judge, Wyman N. Lovejoy, Roscoe, Ill.

Aged Boar (7 shown)—1st Colt Farm on Longfellow's Double Rival; 2d Corsa on Duke's Fearnaught; 3d Iowana Farms on Rival's Iowana Baron; 4th Hamilton Farm on Rival's Baron Duke 2d; 5th Silver Birch Farm on Laurel's Duke 9th; 6th Hamilton Farm on Rookwood Champion 2d; 7th Iowana Farms on Iowana Rival Champion.

Senior Yearling Boar (4 shown)—1st Sutton on Silver Tip's Duke 7th; 2d Iowana Farms on Artful King 11th; 3d Iowana Farms on Iowana Rival 2d; 4th Hamilton Farm on Charmer's Duke 98th.

Junior Yearling Boar (7 shown)—1st Corsa on Superbus Royal Master and 2d on Superbus Royal Master 2d; 3d Townsend Farms on Pride of Townsend; 4th Colt Farm on Ames Rival 125th; 5th Carter on Lord Premier's Double; 6th Silver Birch Farms on Dominator.

Senior Boar Pig (13 shown)—1st Carter on Imperial Rival; 2d Rogers Bros. on Handsome Matchless; 3d Colt Farm on Successor's Creation; 4th Hamilton Farm on King Louis 49th; 5th Colt Farm on Rock River Lord Lee 16th; 6th Rogers Bros. on Majestic Rival 6th; 7th Bunn on Riverby Prince; 8th Hamilton Farm on Baron Duke 208th.

Junior Boar Pig (12 shown)—1st Jenkins Bros. on Baron's Superb 2d; 2d Rogers Bros. on Majestic Matchless 3d; 3d Townsend Farms on Duke's Bacon Jr.; 4th Jenkins Bros. on Superior's Baron Duke; 5th Rogers Bros. on Matchless Rival 10th; 6th Iowana Farms on Iowana Masterpiece 14th; 7th Corsa on Symboleer's Ideal Son; 8th Townsend Farms on Duke's Combination 18th.

Aged Sow (13 shown)—1st Hamilton Farm on Duke's Champion Lady 4th; 2d Iowana Farms on Iowana Peaceful 2d; 3d Hamilton Farm on Starlight Premier Duchess 2d; 4th Carter on Sterling Ruberta; 5th Silver Birch Farm on Silbirfa Julia; 6th Corsa on Fearnaught's Belle; 7th Iowana Farms on Iowana Peaceful 8th; 8th Corsa on Rival's Duchess 23d.

Senior Yearling Sow (9 shown)—1st Iowana Farms on Iowana Lady 16th; 2d Colt Farm on Successor's Duchess 19th; 3d Iowana Farms on Iowana Lady 32d; 4th Colt Farm on Successor's Duchess 20th; 5th Hamilton Farm on Master's Lady Value 3d; 6th Corsa on Fannie 17th; 7th Corsa on Fannie 18th; 8th Townsend Farms on Rosalie 15th.

Junior Yearling Sow (14 shown)—1st Corsa on Symboleer's Ideal Lady; 2d Corsa on Ideal Fannie's Princess; 3d Rogers Bros. on Matchless Belle 20th; 4th Hamilton Farm on Symboleer's Star Lady; 5th Colt Farm on Lorna Doone 9th; 6th Hamilton Farm on Symboleer's Lucindy 4th; 7th Townsend Farms on Townsend's Betty 2d; 8th Colt Farm on Lorna Doone 10th.

Senior Sow Pig (13 shown)—1st Hamilton Farm on Duchess 481st; 2d Rogers Bros. on Maximus Girl; 3d Rogers Bros. on Maximus Girl 2d; 4th Hamilton Farm on Louisiana 69th; 5th Silver Birch Farm on Silbirfa Royal 34th; 6th Silver Birch Farm on Silbirfa Bessie 28th; 7th Iowana Farms on Iowana Queen 29th; 8th Iowana Farms on Iowana Queen 31st.

Junior Sow Pig (16 shown)—1st and 2d Jenkins Bros. on Superior's Duchess 11th and Superior's Duchess 10th; 3d Rogers Bros. on Lady Maximus 9th; 4th Corsa on Symboleer's Ideal Girl; 5th Rogers Bros. on Majestic Beauty 14th; 6th Townsend Farms on Peerless Lady 14th; 7th Hamilton Farm on Matchless May 3d; 8th Silver Birch Farm on Silbirfa Bessie 25th.

Aged Herd—1st Corsa; 2d Colt Farm; 3d Hamilton Farm; 4th and 5th Iowana Farms; 6th Corsa; 7th Silver Birch Farm; 8th Townsend Farms.

Young Herd—1st Jenkins Bros.; 2d and 3d Rogers Bros.; 4th Hamilton Farm; 5th Townsend Farms; 6th Silver Birch Farm; 7th Colt Farm; 8th Iowana Farms.

Herd Bred by Exhibitor—1st Corsa; 2d Iowana Farms; 3d Iowana Farms; 4th Jenkins Bros.; 5th and 6th Rogers Bros.; 7th Silver Birch Farm; 8th Townsend Farm.

Get of Sire—1st Iowana Farms; 2d Corsa; 3d Colt Farm; 4th Jenkins Bros.; 5th and 6th Rogers Bros.; 7th Corsa; 8th Townsend Farms.

Produce of Dam—1st Iowana Farms; 2d Corsa; 3d Jenkins Bros.; 4th and 5th Rogers Bros.; 6th Iowana Farms; 7th Silver Birch Farms; 8th Colt Farm.

Senior and Grand Champion Boar—Colt Farm on Longfellow's Double Rival.

Junior Champion Boar—Carter on Imperial Rival.

Senior and Grand Champion Sow—Hamilton Farm on Duke's Champion Lady 4th.

Junior Champion Sow—Jenkins Bros. on Superior's Duchess 11th.

Silver Cup Special (Board of Agriculture)—Jenkins Bros.

Silver Cup Special (Hotel and Farm Paper)—Corsa.

CHESTER WHITES.

In commenting upon the excellence of the Chester White exhibit, Judge Wm. A. Hoover said: "This is the greatest hog show ever held anywhere." A more enthusiastic group of exhibitors would be hard to find. Preceding the showing Thursday the Chester White men started a parade with a band at the head. All appeared in the ring in white suits. It was a fine showing when the aged herds were in the ring and President and Mrs. Wilson appeared. This was the final comparison of aged boars for the year 1916 Barr won on Wm. A., and a fine type of sire he is. Barber's Long Wonder is a good quality boar, but hardly as big as the first. It makes an unbroken list of top places for Wm. A. this season. Barber's C. W. Wonder is a big, smooth and lengthy senior yearling hardly as neat about the shoulders as the second-prize boar. Tony Evans headed the junior yearling boars for Barber. He is long, smooth and growthy. Barr's Wm. Goods came second. He is wider, thicker and lower set than the first boar, but you might fault him a trifle in the back. Barr took the lead in senior boar pigs with Hiland Improver, a wide, thick, typey kind. Villa won the battle among the junior pigs

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for Barber. He is a smooth, firm-fleshed, good-headed boar. Queen Viola lead the aged sows. This was a great show of twelve smooth sows. Size was pronounced, but was not accompanied by coarseness. It was a ring of close competitions and took the judges the longest to place of any class out. Hiland Bell drew the blue in the senior yearling class. She is a splendid type, low set, thick, smooth and well fitted. Barr won again on the next class with Better Goods 2d. She is an early maturing kind, being thick, deep, wide and meaty. The second-prize sow had a little more stretch, but not the lardy type of the blue ribbon winner. Senior sow pig was also Barr's on Lenora Queen 2d, a pig of much the same type as Better Goods 2d. The second pig in this class was a good, smooth one. Armentrout's Kind took the junior class.

The groups were all won by W. T. Barr. Uniformity was their great advantage over the other herds exhibited. In this show herd nineteen of the twenty-one head were sired by Wm. A. Barber won most of the seconds. Barr won three championships and one grand championship on Wm. A. and two of his get. Barber's grand champion is a long, smooth, breedy sow with good pasterns. The Chester White show will be remembered by everyone who saw it as the strongest exhibit of this breed in the history of the white hog in America.

Exhibitors: W. E. Gaffey, Storm Lake, Iowa; Edw. Ross & Son, White Hall, Ill.; J. L. Barber, Harlan, Iowa; H. O. Bode, Friend, Neb.; W. T. Barr, Ames, Iowa; Thos. F. Kent, Walnut, Iowa; John C. Weddle & Son, Franklin, Ind.; C. A. Andrews & Son, Sheffield, Ill.; P. H. Sheridan, Vail, Iowa; W. P. Doolittle, Woodland, Mo.; Harry C. Crandall, Cass City, Mich.; M. Armentrout, Botna, Iowa; Chas. H. Murray, Friend, Neb.; Raymond E. Brown, Dunlap, Iowa; H. A. Derenthal, Wykoff, Minn.; John P. Coulson, Storm Lake, Iowa; Arthur Tomsen, Wabash, Ind.; Margaret F. Haverfield, Joy, Ill.; C. C. Paul, Laurel, Iowa; Bode & Murray, Friend, Neb.; L. M. Feland, Tipton, Ind.; R. H. Scott, Nelson, Mo.

Judge, Wm. A. Hoover.

Aged Boar (6 shown)—1st Barr on Wm. A.; 2d Barber on Long Wonder; 3d Gaffey on Joy Boy; 4th Bode on Bode's Combination; 5th Kent on Plain View Boy; 6th Ross & Son on Illinois Protection.

Senior Yearling Boar (8 shown)—1st Barber on C. W. Wonder; 2d Armentrout on Izzy O. K. Wonder; 3d Feland on Gallaway Ed; 4th Doolittle on Hercules; 5th Doolittle on White Eagle Boy; 6th Sheridan on Iowa Wonder; 7th Andrews & Son on Onward Lad; 8th Barr on Wm. King.

Junior Yearling Boar (10 shown)—1st Barber on Tony Evans; 2d Barr on Wm.'s Goods; 3d Barber on Supreme; 4th Gaffey on Proud Chief 2d; 5th Crandall on Good Enough; 6th Bode and Murray on Bode and Murray's Choice; 7th Barr on Prince Wm.; 8th Sheridan on White Wonder.

Senior Boar Pig (15 shown)—1st Barr on Hiland Improver; 2d Barber on Eden Valley Chief; 3d Gaffey on Chieftain Boy; 4th Tomsen on Schoolmaster Again; 5th Gaffey on Wm. A.'s Kind; 6th Barber on William Penn; 7th Sheridan on Iowa King; 8th Barr on Royal Chief.

Junior Boar Pig (16 shown)—1st Barber on Villa; 2d Brown on Brown's Kind; 3d Crandall on Postie; 4th Gaffey on J. B. Chief; 5th Crandall on School Boy; 6th Gaffey on Joy Boy 2d; 7th Barber on Single File; 8th Coulson on White Hall Hype.

Aged Sow (12 shown)—1st Barber on Queen Viola; 2d Barber on Grace A.; 3d Gaffey on Claire Babe 1st; 4th Armentrout on Queen; 5th Kent on Walnut Beauty; 6th Barr on Elmo's Princess; 7th Doolittle on Lola; 8th Armentrout on Best of All.

Senior Yearling Sow (10 shown)—1st Barr on Hiland Bell; 2d Crandall on Perfection Equal; 3d Barber on Wedding Belle; 4th Crandall on Cass City Belle; 5th Barber on Isabelle May; 6th Andrews & Son on Beauty A.; 7th Sheridan on Beauty; 8th Kent on Iowa Production 4th.

Junior Yearling Sow (16 shown)—1st Barr on Better Goods 2d; 2d Brown on Silver Cup 2d; 3d Crandall on Modern Tena; 4th Scott on Scotlea Heart's Delight; 5th Barr on Lenora 21st; 6th Barber on May Flower; 7th Sheridan on Western Girl; 8th Gaffey on Our Maid 3d.

Senior Sow Pig (20 shown)—1st Barr on Lenora Queen 2d; 2d Tomsen on Clover Blossom; 3d Barr on Lenora Queen 3d; 4th Crandall on Orange Bud Again; 5th Barber on Security; 6th Tomsen on Audra; 7th Barber on Security 2d; 8th Andrews & Son on Medoc Maid 3d.

Junior Sow Pig (11 shown)—1st Armentrout on Armentrout's Kind; 2d Barr on Princess; 3d Coulson on Queen Molly; 4th Coulson on Molly White; 5th Doolittle on Louise 2d; 7th Murray on White Lily; 8th Paul on Wonder Girl 1st.

Old Herd—1st Barr; 2d Barber; 3d Armentrout; 4th Kent; 5th Crandall; 6th Barber; 7th Doolittle; 8th Barr.

Young Herd—1st Barr; 2d Barber; 3d Tomsen; 4th Gaffey; 5th Crandall; 6th Andrews & Son; 7th Coulson; 8th Doolittle.

Herd Bred by Exhibitor—1st and 2d Barr; 3d Gaffey; 4th Kent; 5th and 8th Doolittle; 6th Barber; 7th Coulson.

Get of Sire—1st and 3d Barr; 2d and 5th Barber; 4th Crandall; 6th Kent; 7th Gaffey; 8th Andrews & Son.

Produce of Dam—1st Barr; 2d and 7th Gaffey; 3d Barber; 4th Crandall; 5th Kent; 6th Doolittle; 8th Andrews & Son.

Senior and Grand Champion Boar—Barr on William A.

Junior Champion Boar—Barr on Highland Improver.

Senior and Grand Champion Sow—Barber on Queen Viola.

Junior Champion Sow—Barr on Better Goods 2d.

HAMPSHIRES.

Pronounced by all breeders as the greatest exhibit of Hampshires ever seen, the National Show reached a climax in the aspirations of the belted swine men. It was a great show from start to finish. Wickfield Farm figured prominently, especially in the group classes, with a grand collection of show hogs. Iowa and Nebraska sent the largest number of exhibitors, while Indiana furnished a good herd as their representation. Mr. Goodenough had a difficult task and accomplished it with promptness and satisfaction to the exhibitors. All classes were filled and many exceptional Hampshires brought forward.

Aged boars were a magnificent class. Lookout Lad is a show boar if ever there was one. He is big, smooth, firm, without wrinkles and well belted. He rightly earned senior and grand championship. Paulsen's Cherokee Pattern is another great boar and loses no credit in being beaten by so good a type as Lookout Lad. Champ You'll Do is a grand pattern and well headed the senior yearlings. He is a very well marked boar and gave the aged winner a run for senior champion. Wickfield Farm's Chin Chin is a splendid kind, well meated and low set. The Senator won for E. N. Manley in the junior yearling class. He is a good type. Paulsen's Star 99th was reserve junior champion, losing the purple for underyear boars to Cahill & Sullivan's Sticker. The last is a grand Hampshire type.

The sow classes made a mark for future exhibits that will be hard to eclipse. Never before has there been so many high-class Hampshires in one show ring. Champions at earlier shows had to take less than the blue in their individual classes. The aged sows were seventeen grand females. Pollard's Maude's Best 3d is a wonderful show sow and also a producer, as she has raised three litters of pigs. She beat a splendid sow in Keepsake 2d, which took the red. Such a ring of aged sows is worth going far to see. Wickfield Farm won the senior yearling class on Hawkeye Sunbeam, a strong competitor when the purples were tied. She has high quality, is thick, wide, smooth and deeply fleshed. The junior yearling class was headed by Boulder's Beauty, a big, smooth sow with good pasterns. Wickfield Beauty had to claim second. Show Girl has been undefeated this year in the senior pig class. She is sired by Gen. Wickware, also the sire of Dream Girl, the red ribbon winner in this ring. Show Girl has quality, smoothness and a little the edge on type over her half-sister. Moore & Son's junior sow pig was the peach of the show. She was pronounced by Mr. Goodenough and Secretary Stone as the best Hampshire pig they had ever seen. She became junior champion, while Maude's Best 3d won from her the grand championship because of her matured smoothness and symmetry.

Herds went largely to Wickfield Farm, showing uniform, symmetrical animals in each group. Their aged herd was headed by Lookout Lad. Each blue ribbon for the five groups was won by Wickfield Farm entries. The get of General Wickware has won twenty-seven out of a possible twenty-nine firsts, repeating at this strongest of all shows. Reserve championships were awarded at the request of exhibitors who purchase their own ribbons, as was done at San Francisco.

It was a great Hampshire show made by typical Hampshire boosters. They except to carry on the good work by putting out a strong field in the next swine show.

Exhibitors: Simon Albrecht, Tiskilwa, Ill., V. K. Bartak, Ewing, Neb.; R. J. Boles, Ocheyedan, Iowa; C. S. Bratt, Arapahoe, Neb.; Cahill & Sullivan, Newboro, Neb.; T. C. Cole, Thurman, Iowa; J. S. Curren, Silver Creek, Neb.; C. S. Erb, Pleasantville, Iowa; Cary Feagins, Bussy, Iowa; Fisher-Parmer Co., Omaha, Neb.; Peter Hopley & Son, Atlantic, Iowa; E. N. Manley, Lyons, Neb.; E. L. McCoy, Rock Port, Mo.; C. L. Moore & Sons, Tremont, Ill.; Billie McFarland, Syracuse, Neb.; Vern Patterson, Fairmount, Neb.; R. C. Pollard, Nehawka, Neb.; C. P. Paulsen, Nora, Neb.; R. L. Pemberton, Le Grand, Iowa; Rhode & Lewis, Pine Village, Ind.; J. C. Root, Sta. B., Omaha, Neb.; C. O. Robertson, Atchinson, Mo.; Art Shaw, Oskaloosa, Iowa; Carl Schroeder, Avoca, Neb.; J. N. Summers, Malvern, Iowa; Donald Tracy, Benson, Neb.; C. J. Ward, Cameron, Mo.; Wickfield Farm, Cantril, Iowa; Mark Whitaker, Miami, Mo.; Ezra Williams, Oak Grove, Mo.; J. M. Womeldorf, Dallas, S. D.

Awards:

Judge, A. L. Goodenough, Morrison, Ill.

Aged Boar (8 shown)—1st Wickfield Farm on Lookout Lad; 2d C. P. Paulsen on Cherokee Pattern; 3d Rhode & Lewis on The Harvester; 4th Vern Patterson on Tatro's Model Jr.; 5th Bartak on Election; 6th Wickfield on General Wickware; 7th Hopley & Son on Guy; 8th Rhode & Lewis on Col. Hope.

Senior Yearling Boar (7 shown)—1st Rhode & Lewis on Champ You'll Do; 2d Wickfield on Chin Chin; 3d Tracy on Tracy's Model; 4th Boles on Col. George; 5th Womeldorf on King Piu; 6th Feagins on High Water; 7th Boles on Compeer's Col.; 8th Pemberton on Major Boy.

Junior Yearling Boar (13 shown)—1st Manley on The Senator; 2d Patterson on Manley's Duke; 3d Wickfield on Wickfield Lad; 4th Rhode & Lewis on Cambridge Boy; 5th Pemberton on Big Boy; 6th Cole on King of Meadowbrook; 7th Pollard on Corn Husker Boy; 8th Paulsen on Paulsen's Star 85th.

Senior Boar Pig (19 shown)—1st Paulsen on Paulsen's Star 99th; 2d Fisher-Parmer on Parmer's King 10th; 3d Curren on Neb. Boy; 4th McCoy on Concillio; 5th Wickfield on Silverheel; 6th Boles on Colonel's Best; 7th Boles on Col. A.; 8th Wickfield on Cornhusker.

Junior Boar Pig (42 shown)—1st Cahill & Sullivan on Sticker; 2d Wickfield on Spellbinder; 3d Rhode & Lewis on Renssaler Dudie; 4th Wickfield on Silver King; 5th Whitaker on Whitaker's Model; 6th Pollard on Blue Bird; 7th Whitaker on Gov. Major; 8th Cole on Everett True.

Aged Sow (17 shown)—1st Pollard on Maude's Best 3d; 2d Rhode & Lewis on Keepsake 2d; 3d Wickfield on Missouri Best 4th; 4th Wickfield on Lady Tone; 5th Patterson on Hulda 4th; 6th Rhode & Lewis on Hampshire Lady; 7th Fisher-Parmer Co. on Blackfoot Lady; 8th Pemberton on Susan.

Senior Yearling Sow (7 shown)—1st Wickfield on Hawkeye Sunbeam; 2d Rhode & Lewis on Dolly Messenger; 3d Patterson on Bessie Tipton; 4th Boles on R. J.'s Queen; 5th Paulsen on Silver Queen 178th; 6th Paulsen on Gene 1st; 7th Fisher-Parmer Co. on Fisher's Fancy.

Junior Yearling Sow (13 shown)—1st Rhode & Lewis on Boulder Beauty; 2d Wickfield on Wickfield Beauty; 3d Rhode & Lewis on Blanche L.; 4th Paulsen on Silver Queen 170th; 5th Wickfield on Wickfield Queen; 6th Pemberton on Pride's Pet; 7th Fisher-Parmer Co. on Fancy; 8th Bratt on Ruth.

Senior Sow Pig (15 shown)—1st Wickfield on Show Girl; 2d Wickfield on Dream Girl; 3d Roberson on Sunny Brook Queen; 4th Whitaker on Hazel Dell; 5th Pemberton on Scottish Lass 6th; 6th Paulsen on Silver Queen 179th; 7th Rhode & Lewis on Lucile Maid; 8th Rhode & Lewis on Lady Harris.

Junior Sow Pig (27 shown)—1st Moore & Sons on Moore's Queen; 2d Rhode & Lewis on Miss Dudie; 3d Wickfield on Fairy; 4th Boles on Mabel; 5th Whitaker on Teresa; 6th Wickfield on Farmon Miss Fairy; 7th Rhode & Lewis on Belvia D.; 8th Root on Kate A.

Aged Herd—1st Wickfield; 2d Rhode & Lewis; 3d Paulsen; 4th Rhode & Lewis; 5th Wickfield; 6th Patterson; 7th Boles; 8th Pemberton.

Young Herd—1st Wickfield; 2d Rhode & Lewis; 3d Cahill & Sullivan; 4th Whitaker; 5th Wickfield; 6th Cole; 7th Boles; 8th Boles.

Herd Bred by Exhibitor—1st Wickfield; 2d Wickfield; 3d Rhode & Lewis; 4th Cahill & Sullivan; 5th Whitaker; 6th Fisher-Parmer Co.; 7th Pemberton; 8th Boles.

Get of Sire—1st Wickfield; 2d Wickfield; 3d Rhode & Lewis; 4th Paulsen; 5th Cahill & Sullivan; 6th Whitaker; 7th Boles; 8th Pemberton.

Produce of Dam—1st Wickfield; 2d Rhode & Lewis; 3d Paulsen; 4th Wickfield; 5th Cahill & Sullivan; 6th Whitaker; 7th Pemberton; 8th Fisher-Parmer Co.

Junior Champion Sow—Moore & Sons on Moore's Queen.

Senior Champion Sow—Pollard on Maude's Best 3d.

Grand Champion Sow—Pollard on Maude's Best 3d.

Junior Champion Boar—Cahill & Sullivan on Sticker.

Senior Champion Boar—Wickfield on Lookout Lad.

Grand Champion Boar—Wickfield on Lookout Lad.

Reserve Junior Champion Sow—Wickfield on Show Girl.

Reserve Senior Champion Sow—Rhode & Lewis on Keepsake 2d.

Reserve Grand Champion Sow—Rhode & Lewis on Keepsake 2d.

Reserve Junior Champion Boar—Paulsen on Paulsen's Star 99th.

Reserve Senior Champion Boar—Paulsen on Cherokee Pattern.

Reserve Grand Champion Boar—Paulsen on Cherokee Pattern.

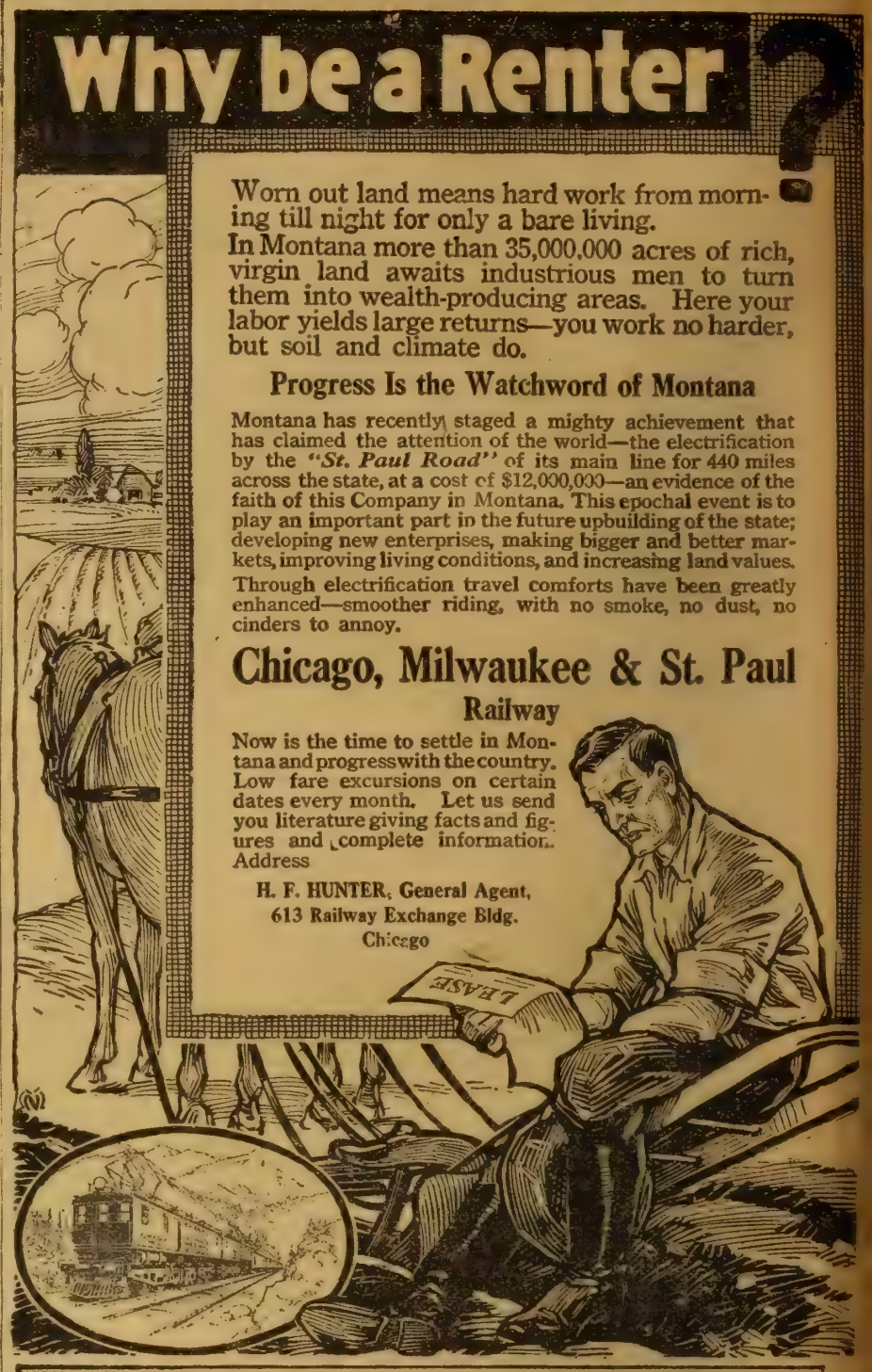
Special—Journal Stockman Silver Cup, Wickfield Farm.

SPECIALS.

Board of Agriculture Cup (Best Boar and 3 Gilts)—Duroc Jersey, R. Widle & Sons; Poland China, W. J. Graham; Berkshire, Jenkins Bros.; Chester White, John P. Coulson; Hampshire, Rhode & Lewis.

Hotel and Farm Paper Cup (4 best boars):—Poland China, J. C. Meese; Duroc Jersey, Ira Jackson; Berkshire, W. S. Corsa; Chester White, W. T. Barr; Hampshire, Wickfield Farm; Spotted Poland China, Bock & Shirk.

Sow and Litter Special—1st Farley & Harney (Duroc); 2d Edw. Ross & Son (Chester White); 3d Raymond E. Brown (Chester White); 4th J. S. Curren (Hampshire); 5th H. C. Glissman (Hampshire); 6th M. Lagoni (Poland); 7th R. J. Boles (Hampshire); 8th F. C. Mitchell (Berkshire); 9th A. D. Andrews & Son (Chester White); 10th W. E. Gaffey (Chester White).



Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Drinking Water With Meals.

Occasionally one hears conflicting assertions in regard to the wholesomeness of the practice of drinking water at meal time; these assertions being often based upon hearsay or unfounded impressions. Somewhat recent physiological studies indicate that while the drinking of water with meals has no apparent effect upon the utilization of the fats, sugars and starches, its copious use does result in the better digestion and absorption of the ingested protein—that tissue-building constituent which is the most abundant of the solids in lean meat, eggs and cheese, and that constituent which also characterizes certain other foods.

The conclusion to be arrived at, then, is that the use of water as a beverage, with meals, is a desirable practice. It may be added that drinking generous quantities of water during the course of the day is an important health measure in the upkeep of the general health of the body.

An unfortunate eating habit is that of depending upon water as an aid to swallowing food. If one has not learned to thoroughly masticate food—swallowing it without the aid of a beverage—then it would seem wise to subscribe to the creed of the "dry eaters."—[Inga M. K. Allison, Colorado Agricultural College.

To Clean White Felt Hats.

White felt hats may be cleaned quite satisfactorily by the following method.

Place the hat on a flat surface at all points.

Sprinkle crown and brim with coarse yellow corn meal and rub into the felt with a stiff bristle brush or a pad made of white crinoline.

It is betfer to begin at the center of the crown and work outward with a circular movement.

After the upper surface has been cleaned slip the crown of the hat through an opening cut in the lid of a box, which is a little larger than the hat.

This brings the under surface of the hat up and gives support for the brim.

Make the Lunch Hour Enjoyable

It should be borne in mind that very few schools are provided with a comfortable, attractive and sanitary place in which the lunch may be eaten. However, the following points should be observed during the lunch hour: (1) Room thoroughly aired before lunch hour. (2) Hands washed before eating lunch. (3) Desk clean—paper napkin used for tablecloth. (4) Upright position at desk. (5) Paper napkin in lap. (6) Elbows at side; never on desk. (7) Lunch eaten slowly and quietly. (8) No talking when mouth is full of food. (9) Knife is used only for cutting food. (10) Lunch eaten in order—dessert last. (11) Drinking of water when desired, but food must not be swallowed hurriedly by being washed down. (12) Pleasant conversation.

The Gift Box.

Have you ever been brought face to face with a birthday that you had entirely forgotten, or a new baby for whom you would like to make something dainty, but haven't the time?

Then you will appreciate the gift box idea. It is a pretty idea, too, because it shows one's interest and love for one's friends, and then it is a help to the giver, for always there is something for the birthday, the departing guest, the baby, for any occasion or any individual. Moreover, a gift box is economical even though it holds articles that may not be used for many months, for you may pick up many a dainty gift at bargain prices, put it away in the box and there it will be all ready at a time when perhaps you would have to pay much more for the same article.

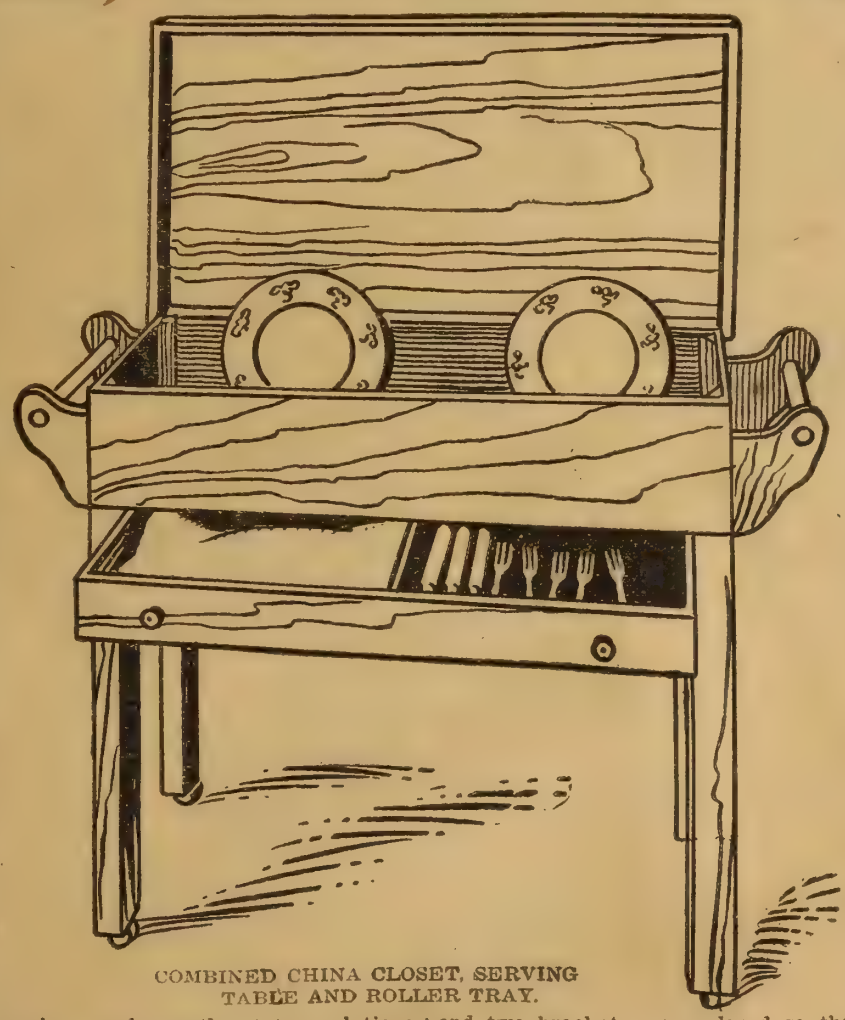
Start your box with a supply of tissue paper and dainty baby ribbon for tying packages. Pretty bits of china, handkerchiefs, daintily bound books, stationery, perfume, tiny note paper or games for the little folks, and pieces of your own needlework—towels, doilies, lingerie and baby apparel—may be added piece by piece and you will soon find yourself prepared for any unexpected demand.

It is a good idea to provide a nice assortment for your gift box and there add to it as opportunity presents itself so that it will never be empty; but never let it contain useless or unsuitable articles.

Once you have established a gift box you will never be without it.

Household Devices.

A number of labor-saving devices which will lessen the housewife's work may be constructed quickly and easily. The following contrivances actually being made and used by women county agents in the field and by the women who are working as their demonstrators in connection with the extension work, south, states relations service, can be made on the farm during spare time:



COMBINED CHINA CLOSET, SERVING TABLE AND ROLLER TRAY.

The "scrubbing chariot" consists of a comfortable padded frame on rollers which enables the housewives, in wiping the floors, to do the scrubbing with more ease and comfort and save a great many steps. This may be built at a very small cost, the material needed consisting of a three-fourths inch plank, twenty by ten inches, two-inch strips for the sides, which should be eight and one-half inches long by four inches wide, and a front piece of the same material twenty inches long and four inches wide. An ordinary soap box can be used for this by cutting down the size to about five inches high and knocking out one side. The padding for the bottom of the chariot may be made of burlap. Tack this around the inside of the chariot and place the whole thing on four rollers. Place a soap dish on one side and a little rack for the scrubbing brush on the opposite side. This contrivante, it is estimated, costs about 47 cents.

Another step-saving device made by the members of the demonstration club mentioned is a roller tray wagon. This convenience comprises a china closet, serving table, and roller tray all in one. This device was built by using a box five inches deep for the top and placing it on four wooden posts for legs. Dimensions: Top of table thirty-one and one-half inches long by sixteen and one-half inches wide and twenty-nine inches high, and a serving compartment five inches deep. The top of the table is put on hinges and straps or small chains fastened to it to keep the top from falling back too far when opened. The bottom of the serving compartment is five inches below this top. Around the sides of this compartment are little screw hooks on which the cups may be hung. In the compartment, which may be lined with white oilcloth, is space for serving dishes for six. Below the serving compartment is a drawer which is divided in the center by a one-half inch strip. One side is used for the linen and one side for the silver. The side used for the silver is lined with blue outing flannel because this serves the same purpose and is cheaper than felt. A spool was cut into halves to make the knobs for the drawer and a pair of these knobs was placed on each side so that the drawer could be used from either side. The legs were square pieces of wood one and one-half inches with rollers. Old rubber-tired wheels from toy wagons or discarded baby coaches may be used. This is an improvement because the tray rolls noiselessly. In some cases the legs from old tables can be used in place of having these made. At each end two brackets were placed so that the table could be pushed or pulled. When the soiled dishes were taken to the kitchen and washed, they were placed in this serving compartment with one handling only, the lid placed down and the roller tray rolled into the dining room, with the dishes and silver ready for setting the table at the next meal. It is not necessary to put them away because they are out of the dust when the top is down. The estimated cost of this convnience is:

Dry goods box	$0.25
1 yard blue outing flannel	.10
1 remnant white oilcloth	.15
2 hinges	.10
4 rollers	.15
1 can of mahogany stain	.30
Total	$1.05

With a small doily and a vase of flowers this roller tray answers the purpose of a serving table and makes a very attractive piece of furniture.

Another step saver that may be added to the list is the folding ironing board and cover. This device, which is hinged to the wall, is always ready and in place. It may be hooked up against the wall out of the way when not in use. The leg is hinged to the board and falls flat when the board is lifted. With it down and in use, the leg is not in the way, and skirts may be ironed without any lifting or changing. The directions for making follow:

Length, fifty-seven inches; rounded at free end. Width, attached end, fifteen inches; free end, ten and one-half inches. Leg, fifty-eight and one-half inches, to be changed to suit height of board; attached to board eleven inches from free end.

Board to be attached by hinges to the wall thirty-three inches from the floor. For use by a person above average height, the board should be higher, which will necessitate a longer leg. Board to be made of thoroughly seasoned wood one and one-half inches in thickness.

The pad may be made of any heavy material such as canton flannel or a partially worn-out blanket. Cut shape of board, allowing two inches on each side and end. Bring extra two inches to underside of board and tack firmly and smoothly in place.

The ironing sheet is made of unbleached muslin (homespun). Cut shape of board, allowing four inches on sides and end and hem all around. Attach tapes to opposite sides about ten inches apart. Tie the sheet on with these tapes. Make two sheets.

The cover and sheet may be left on when putting the board up by allowing sufficient space when adjusting the button or screw hook and eye which holds the board in place.

Recipes.

Watermelon Pickles.—Ten pounds watermelon rind, one quart vinegar, two pounds sugar, one-half ounce whole cloves, one-half ounce cinnamon stick. Cube the rind, peel and remove all red part and let stand in cold water several hours. Boil in water till clear. Remove from liquid, drain and place in large porcelain vessel. Boil vinegar, sugar and spices ten minutes and pour over the rind. For three days drain off this liquid, heat and pour over the rind. Seal in sterilized jars.

Cream of Pea Soup.—One can peas, one quart milk, three tablespoonfuls butter, two tablespoonfuls flour, one tablespoonful parsley, one-half teaspoonful celery salt, salt and pepper. Set aside one cup of peas. Mash the remainder through a sieve and put into a kettle with the milk. When this boils add flour and butter rubbed to a smooth paste, stirring continually. Add parsley and seasoning and just before serving one cracker rolled fine.

Stewed Stuffed Eggplant.—Three medium sized eggplants, three-fourths pound chopped raw beef or veal, three-fourths cupful raw rice, one pint can tomatoes, one-fourth cupful butter, one medium sized onion, chopped, one teaspoonful salt, one-eighth teaspoonful pepper, one-eighth teaspoonful cinnamon, one-eighth teaspoonful allspice. Halve the eggplants lengthwise and scoop out the centers. This can be done with a tablespoon, the large pieces being salted and peppered, dipped in batter and fried as fritters. Leave the shells with walls a half-inch thick. Mix together the seasonings, rice and meat and half fill each shell with the mixture to allow for the swelling of the rice. Fasten the halves together with skewers, and pack the eggplants in a deep stew pan. Fry the onion in the butter till light brown, add the tomato together with a little salt and pepper, and when boiling pour it over the eggplants with enough water to cover well. Stew gently, covered, until the eggplants are tender, but not broken—about an hour.

Sausage and Spaghetti in Tomato Sauce.—One pound sausages, one-half pound spaghetti, one pint can tomato soup, one-half cupful hot water. Prick the sausages thoroughly, place in a frying pan, cover with boiling water, and simmer until they are thoroughly done and well browned, about an hour. Break the spaghetti in small pieces, and cook in boiling salted water till tender. Drain, rinse with cold water, and drain again. Combine the sausages and spaghetti in the frying pan, add the soup diluted with the hot water, and let it stand till very hot.

Veal Loaf.—Three pounds ground veal, three-fourths-pound ground fat pork, one onion, two cupfuls fine soft breadcrumbs, two and one-half teaspoonfuls salt, one-fourth teaspoonful

SOMETHING FOR NOTHING

BUT YOU MUST BE PROMPT

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pepper, two eggs, juice of one lemon. Work the ingredients together thoroughly; shape into a long, narrow loaf, sprinkle with lemon-juice and place in a baking pan; roast for an hour and a quarter, basting with a little hot water to which has been added a tablespoonful of butter or drippings. Serve with creole sauce.

Creole Sauce.—One-half cupful white sauce, two tablespoonfuls minced onion, four tablespoonfuls minced green peppers, one half-pint can tomato soup. In making the white sauce, melt a tablespoonful of butter, add the onion and peppers, and cook very gently for ten minutes; then blend in a half tablespoonful of flour, stir in slowly a half cupful of milk, and let boil up as usual. Season to taste. Gradually beat in the tomato soup, stirring constantly to prevent curdling.

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Lives on Farm Bought in 1845.

Dear Young Folks:—I always enjoy reading the Young Folks' letters. I have been reading them for some time, but have never written before. I am twelve years old and am in the seventh grade. I walk one mile to school, but we have gravel road all the way. I have two brothers and one sister. My brothers are both married and my sister is in high school.

The farm of 120 acres on which we live was bought by my grandfather about 1845. The certificate, No. 5583, was signed by President James K. Polk. My papa is forty-four years old and has lived on this farm all his life.

We milk several cows and have a cream separator. Mamma sells the cream and gives the warm skimmed milk to the pigs. We have twenty-seven head of hogs, twenty head of cattle and seven head of horses and mules. We raise a good many chickens and a nice garden every year.

My sister and I have a piano and take music lessons through the summer. We both crochet, make tatting and embroidery. —Maude.

Mother's Helper.

Dear Young Folks:—My father takes this paper and I read the letters and riddles and enjoy them very much. We live on a large farm. We have fifteen cows to milk.

I have to get up early in the morning, because before I go to school I have to help mamma with such things as making the beds, sweeping the floors, washing the dishes and other little things. I have to take care of three geese, five ducks and a great many chickens.

We have a very tame colt named Duane. Its mother died when it was ten days old. My brother takes care of it.

I go to school every day. We have two miles to go to school, but we have a car and we children drive it, so it does not take us long.

I have a riddle for the young folks. What is a put up job?

My brother wants to answer Bernice's riddle: What does the buffalo on the new nickels stand for? He thinks the answer is because it can't lie down. —Leolinda.

Here Is Problem For the Boys.

Dear Young Folks:—I have been reading your letters for more than a year and I am very much interested in them. I hope you will be interested in mine, too.

I want to ask you something and I hope someone will answer it soon. I am going to make a bobsled and I want to make it as near like an automobile as possible. I can make it all but the steering part. I do not know how to make a device that would guide it. I would like if one of you boys who read these letters would tell me how I could make this part.

—William.

[Editor's Note.—If any of the boys can help William out and will send us a drawing and explanation we will see that it is published for the benefit of all the boys who read our paper.]

Answer to Jerusha's Riddle.

Dear Young Folks:—I am ten years old and in the fifth grade at school. I like to go to school very much. We live two miles from the schoolhouse and seven and a half miles from town. We have a pony that we ride to school. I have two brothers and one sister. I can tat, crochet, play the piano, bake cakes and make candy.

Jerusha asked the riddle: Down in the cellar there is a bright light, all saddled, all bridled, all ready for flight; silk was the saddle and brass was the bow; I've told you three times and yet you don't know. The answer to it is an awl. This is my riddle: Here sits an Indian on a stump; he is my son, but I am not his father.

—Melva.

Our Fashion Department.

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THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10c each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want, and inclose 10c for each number. We agree to fill all orders promptly and guarantee safe delivery.

Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1615—Ladies' camisole in kimono style. The pattern is cut in 3 sizes: Small, medium and large. It requires 1¼ yards of 36-inch material for a medium size.

1674—A dainty negligee. Ladies'house gown or negligee, with sleeve in either of two lengths and with or without yoke facings. The pattern is cut in three sizes: Small, medium and large. It requires 5¾ yards of 44-inch material for a medium size.

1833—Ladies' dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6⅞ yards of 44-inch material for a 36-inch size.

1614—Children's set, comprising a yoke dress with sleeve in wrist or elbow length, a slip and one-piece drawers. The pattern, comprising all styles illustrated is cut in 4 sizes: 1, 2, 4 and 5 years. The dress requires 2½ yards, the slip 2 yards and the drawers ¾ yard of 36-inch material, for a 2-year size.

1624 Coat-1558 Skirt—A jaunty suit for sport, outing and general wear.

The patterns are both cut in 4 sizes: 14, 16, 18 and 20 years. It requires 9 yards of 36-inch material to make this suit for a 16-year size. Two separate patterns, 10 cents for each pattern.

1839—A popular apron model. Cut in 3 sizes: Small, medium and large. It requires 2½ yards of 36-inch material for a medium size.

1475—Ladies' house or home dress, with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 8 yards of 36-inch material for a 36-inch size.

1829—A smart frock for mother's girl. The pattern is cut in 4 sizes: 6, 8, 10 and 21 years. It requires 3¾ yards of 36-inch material for an 8-year size.

1617—A smart junior dress in high or low neck, Empire style, with or without bolero, and with two styles of sleeve. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 5½ yards of 30-inch material for the dress, and two yards for the bolero, for a 14-year size.

1842—Girls' dress. A new design both practical and stylish. Cut in 4 sizes: 6, 8, 19 and 12 years. It requires 3⅝ yards of 44-inch material for an 8-year size.

1817 Waist-1818 Skirt—Ladies' costume. Waist 1817 cut in 8 sizes: 34, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. Skirt 1818 cut in 8 sizes: 22, 24, 26, 28, 30, 32, 34 and 36 inches waist measure. To make the costume of one material will require 5⅝ yards of 44-inch material for a medium size. The skirt measures 3 1-3 yards at the foot. Two separate patterns, 10 cents for each pattern.

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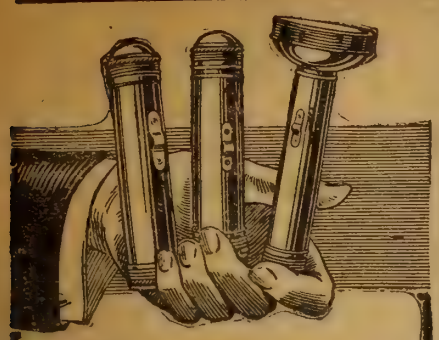

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TOLD IN THE HILLS

By MARAH ELLIS RYAN

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER III—Continued.

Twenty minutes after her offer they were mounted and clattering away over the crisp bronze turf. To Stuart the task of entertaining a lady was anything but a sinecure—more, it was easy to see that he was unused to it; and an ungallant query to himself was: "Why did she come, anyway?" He had not heard her reply to Tillie.

The air was crisp and cold enough to make their heavy wraps a comfort, especially when they reached the higher land; the sun was showing fitfully, low-flying, skurrying clouds often throwing it in eclipse.

"Snow is coming," prophesied the girl, with a weather eye to the north, where the sky was banking up in pale-gray masses; "perhaps not heavy enough to impede your trip south, to Owens, but that bit over there looks like a visiting card of winter."

"How weather wise you are!" he observed. "Now, I had noticed not the slightest significance in all that; in fact, you seem possessed of several Indian accomplishments—their woodlore, their language, their habit of going to nature instead of an almanac; and did not Mrs. Hardy say you knew some Indian songs? Who taught you them?"

"Songs came near getting us into a civil war at breakfast," she observed, "and I am not sure that the ground is any more safe around Indian than Scotch ones."

"There is something more substantial of the former race," he said, pointing ahead.

It was the hulking figure of a Siwash, who had seen them first and tried to dodge out of sight, and failing, halted at the edge of a little stream.

"Hostile?" queried Stuart, relying more on his companion's knowledge than his own; but she shook her head.

"No; from the reservation, I suppose. He doesn't look like a blanket brave. We will see."

Coming within speaking distance, she hailed him across the divide of the little stream, and got in reply what seemed to Stuart an inextricable mass of staccatos and gutturals.

"He is a Kootenai," she explained, "and wants to impress on our minds that he is a good Indian."

"He does not look good for much," was the natural remark of the white man, eyeing Mr. Kootenai critically; "even on his native heath he is not picturesque."

"No—poor imp!" agreed the girl; "with winter so close, their concern is more how they are to live than how they appear to people who have no care for them."

She learned he was on his way south to the Flathead Reservation; so he had evidently solved the question of how he intended living for the winter, at all events. He was, however, short of ammunition. When Rachel explained his want, Stuart at once agreed to give him some.

"Don't be in a hurry!" advised his commander-in-chief; "wait until we know how it is that he has no ammunition, and so short a distance from his tribe. An Indian can always get that much if he is not too lazy to hunt or trap, or is not too much of a thief."

But she found the noble red man too proud to answer many questions of a squaw. The fear, however, of hostilities from the ever-combative Blackfeet seemed to be the chief moving cause.

"Rather a weak-backed reason," commented Rachel; "and I guess you can dig roots from here to the reservation. No powder, no shot."

"Squaw—papoose—sick," he added, as a last appeal to sympathy.

"Where?"

He waved a dirty hand up the creek.

"Go on ahead; show us where they are."

His hesitation was too slight to be a protest, but still there was a hesitation, and the two glanced at each other as they noticed it.

"I don't believe there is either squaw or papoose," decided Stuart. "Lo is a romancer."

But there was, huddled over a bit of fire, and holding in her arms a little bundle of bronze flesh and blood. It was, as the Indian had said, sick—paroxysms of shivers assailing it from time to time.

"Give me your whisky flask!" Rachel said promptly; and dismounting, she poured some in the tin cup at her saddle and set it on the fire—the blue, sputtering flame sending the odor of civilization into the crisp air. Cooling it to suit baby's lips, she knelt beside the squaw, who had sat stolidly, taking no notice of the newcomers; but as the girl's hand was reached to help the child she raised her head, and then Rachel knew who she was.

(To be continued.)

International Sunday School Lesson.

Lesson for October 15, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Appeal to Caesar.

LESSON TEXT—Acts 25 (vv. 1-12).

GOLDEN TEXT—It is enough for the disciple that he be as his teacher, and the servant as his Lord.—Math. 10:25.

Teachers ought to urge their scholars to read Chapters 24, 25 and 26 thoroughly, and with the use of a map locate the places mentioned. The date of this lesson is A. D. 59, and it occurred at the crisis of the events which determined the way Paul should go to Rome, Nero being the emperor at that time.

I. Paul in the Prison at Caesarea (vv. 1-6). Paul was worn out, badly in need of rest, and is given during this imprisonment much freedom. He was accompanied by Luke, his physician, and probably some of his other friends. For almost twenty years Paul had been living a strenuous life, crowded full of labors that would have crushed an ordinary man. Now for some considerable time he had time to thoroughly master and assimilate the truth which he had been preaching, the results of which have come down to us in the form of letters, seven of which at least were written during and after the events of this lesson. His imprisonment also gave many of his friends opportunity to secure his counsel and guidance. The vindictiveness and hatred of the Jews is evident by this new plot whereby they sought the help of Festus against Paul. The corrupt Felix had been succeeded by a more upright man, Festus. The scheme of these enemies of Paul and of Jesus had already resulted in giving Paul an opportunity to preach Jesus as the Christ and the judge of men to persons who otherwise would not have been within the scope of his influence. Through his persecution he had reached leading officials and educated men of the Romans and of the Jews. Bunyan, in Bedford jail, and Luther in Wittenberg Castle, are illustrations of the principle that, "difficulties are the stones out of which all God's houses are built."

Felix, on giving up his office to his successor, left Paul bound (Ch. 24:27) though he knew he ought to be released, but by this vile, iniquitous act, he gave Paul another one of his desired opportunities to witness for Christ in high places. The shrewdness of Festus saved Paul from falling into the trap of the Jews, for God was guiding Festus, and at the same time guarding Paul.

II. Paul's Appeal to Caesar (vv. 7-12). The Jews made many and grievous complaints, but without bringing a single witness to prove their assertions. Doubtless these were the same old charges that had been brought before Felix through Tertullus two years before, and which now, as then, could not be proved. Paul was permitted to answer for himself, and he declared that he had broken neither the Jewish nor the Roman law. Most of the enemies of Christianity and of the Bible "lay many and grievous charges against it which they cannot prove." In all ages the enemies of God and his word mistake strong and confident charges and vilifications as proofs. Paul's life was absolutely clean, and he could say, "I have not sinned at all" (v. 8 R. V.) in any of the directions in which he was charged. Festus, as the newly appointed governor, desired to do the Jews a favor; literally, desired to gain their favor. Therefore, he said to Paul, "Wilt thou go up to Jerusalem, and there be judged of these things before me?" This amounted to an acquittal of Paul on the charges that would come under the Roman law.

There remained only such charges as would naturally come before the Sanhedrin, and the question was whether Paul would accept an informal acquittal from the Roman court on condition that he submit to a trial before his own people on the other count. Festus wished to throw upon Paul the responsibility of refusing to go to Jerusalem, and to avoid displeasing the Jews.

Festus got a courteous but a stinging and well deserved rebuke from his prisoner. Paul was perfectly willing to take any punishment he deserved, even unto death, but, having a clear conscience, he had no fear of Festus or any man. His appeal to Caesar was most unexpected. It confused Festus and baffled the Jews. The Lord's own words on his midnight visit to Paul in prison are here suggested (23:11.)

Festus could make but one decision, "Unto Caesar thou shalt go." Paul's sincere and open character was the means of his safety and power.

III. Paul and Agrippa (vv. 13-22). Agrippa was the king of the northern part of Palestine, a Jew and trained in religious ceremonies, but one who never mixed politics with religion, wearing his Judaism as a garment.

His father, Agrippa I, slew James the elder, the apostle.

The great grandfather, "The Great," caused the massacre of the infant innocents (Math. 2).

He married his own sister, Bernice, who came with him on this visit to Festus.

Festus declared Paul's cause unto the king.

JUST AS A SAMPLE

Below Is Copy of Signed Statement of a Representative Golden Prairie Farmer

"Hillsdale, Wyoming, Sept. 18, 1916.

"Federal Land Company,
Burns, Wyo.
Dear Sirs:

"I have lived in Wyoming 6 years on E½ Sec. 30-16-64 and have raised good crops each year. This year I had 22 acres of winter wheat that made 19 bushels per acre. I have raised oats that yielded 60 bushels per acre and potatoes have made specially good crops each year. Our garden has always been good.

"I had two cows when I came here and now have 40 head of cattle and have sold 2 head, and have bought only 1, but have traded some steers for heifers. I milked this season 12 cows and my cream check for month of June was $96.00 even."

(Signed) FRANK KESLAR.

If you have not already received our literature describing the Golden Prairie District and the bargains we are offering in our Hillsdale Ranch just now being placed on the market, don't delay longer but drop us a card and we will send you some most interesting literature.

FEDERAL LAND COMPANY
BURNS, WYOMING

SEND FOR

FREE FOLDER

About Fertile Farm Land in

UPPER WISCONSIN

This booklet will tell you about farm lands along the lines of the Chicago, St. Paul, Minneapolis & Omaha Ry. within a few hours of the wonderful markets of St. Paul, Minneapolis, Duluth, Milwaukee and Chicago, which are offered at low prices and on easy terms. It contains information of value to settlers looking for a location in a community offering an ideal climate, nearby markets and excellent educational facilities. The work is comprehensive and is profusely illustrated. Mailed free upon request. Ask for Booklet No. 32-I.

G. H. MacRAE, General Passenger Agent
C. St. P. M. & O. Ry., ST. PAUL, MINN.

WONDERFUL BEEF AND SHEEP FARM

STOCK farm that is hard to beat in Polk Co., Wisconsin, the heart of the clover and corn belt. 200 acres best clay loam soil. Splendid round barn 56 ft. in diameter, silo in center, all complete; fine house, granary and other buildings. 40 in field, 15 cleared and balance good pasture, largely woven wire fenced. **Handy location,** only 1 mile from school, 3½ creamery and store and 7 to railroad town, on road, rural route, etc. One of the best stock farms in Polk Co. and a bargain at only $40 per acre. Baker, G-110, St. Croix Falls, Wis.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

240 A. 4 mi. w. of Dorchester, Taylor Co., Wis.; 3½ mi. from Curtis; ½ mi. from school; near creamery and cheese factory; on main road, telephone line and mail route. 70 a. under cult.; 40 a. cleared to stump and in pasture. Stumps all ready to pull out, balance cut over. Frame house with cellar. Basement barn 40x80. Stream with running water all year round. Well. Milk house. Price $15,000, $3,000 down. A real bargain. Address JOSEPH LOEB, Owner, Medford, Wis.

HUNDRED THOUSAND BUSHEL RANCH

5,000 ACRES; best in Canadian West; 3,000 crop, 1,000 summer fallow, 1,000 grazing; fifty horses; three tractors; complete modern equipment and buildings; high state of cultivation; close to elevators; valid reason for selling. Will yield fine returns and double in five years. $100,000 will handle. Bruce Scott, Chamber of Commerce, Detroit, Mich.

A Great Chance For Poor Man

A SNAP at $600—40 acres 2½ mi. R. R. sta. Rich soil, half good surface, half rolling, on road in well settled and prosperous dairying region. $50 down in monthly installments. Baker, I-110, St. Croix Falls, Wisconsin.

FARM FOR SALE in Iron county, Michigan. 320 acres, 120 acres clear. Sixty-three head of graded Holstein cattle, 28 being milk cows, 5 head horses, machinery, buildings, etc. Fine chance for cattle raising. Sold on reasonable terms. Inquire Geo. Premo, Amasa, Mich.

CROPS, CATTLE, CREAMERIES. Famous Aitkin County. No other section offers so much, for so little cash. Dairy and garden products are abundant and bring high prices. Send for free literature to Arnold, the Land Agent, 153 Wolvin Bldg., Duluth Minn.

ONLY $38.00 PER ACRE

IMPROVED section corn and alfalfa land. 280 acres tilled. Good as Iowa land. Come and see. Details furnished. Sold direct or through agents. Other bargains. F. M. Barnes, Highmore, S. D. Cut this out.

RICH, well-watered, sheltered, cut-over dairy lands; clover abundant; quick responsive soil, offered homeseekers; write for our low prices, easy terms and descriptive circulars. Ellingson Cloverland Co., 311 Worden, Ave., Ladysmith, Wis.

POOR MAN'S CHANCE $5 down, $5 monthly, buys 40 acres productive land; some timber, near town. Price $200. $10 monthly buys 80 acres. Box 426-H, Carthage, Mo.

STOP! Listen! 80-acre farm, $850. 40-acre farm, $550. McGrath, Mountain View, Missouri.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Weiskopf's Holsteins.

THE Holstein herd of H. R. Weiskopf, Cleveland, Wis., combines rich breeding with high production ability. The junior herd sire is King Veeman Pontiac Alcartra, whose dam, Tobe De Kol Pet 2d Dorothy, 30.15 pounds butter from 656.8 pounds milk is a 75 per cent sister to the former world's champion senior three year old, Lady Tobe De Kol, 36.59 pounds, thirty days 141.24 pounds. His eight nearest dams average 30.51 pounds butter from almost 600 pounds milk. His sire is a son of King Segis Pontiac Alcartra, out of a twenty-nine-pound daughter of Sir Veeman Hengerveld. Below is a list of the cows with records above twenty-five pounds butter in seven days: No. 1. Molly Johanna Korndyke, as a senior two year old gave 30.62 pounds butter from 484.1 pounds milk, world's record when made. No. 2. Johanna Maud Hengerveld, 29.50 pounds butter from 586.7 pounds milk. No. 3. Lena Johanna Korndyke Segis, as a senior three year old 29.03 pounds butter from 674.2 pounds milk in seven days and 120.85 pounds butter from 2,819 pounds milk in thirty days. This heifer won $109 prize money last year, winning first on milk for thirty days. No. 4. Lilly Johanna Belle, 27.78 pounds butter from 511.9 pounds milk in seven days and 112.85 pounds butter from 2,298.6 pounds milk in thirty days. No. 5. Flora Johanna Korndyke Segis, 27.72 pounds butter from 540.2 pounds milk as a junior four year old. No. 6. Juliana Johanna Korndyke 26.18 pounds butter from 498.7 pounds milk as a junior three year old. No. 7. Alta Belle Johanna Rose 26.10 pounds butter from 533.1 pounds milk. This cow is the dam of Nos. 3 and 4 in this list and the best daughter of our old foundation cow, Vickery Johanna 23.10 pounds butter at twelve years. In their herd at present are nine daughters of Wase Korndyke Segis, the best son of the

IMP. DAIRY MAID OF THE GREE 31682, the A. R. cow advertised for sale on page 29 by W. G. Jamison & Son, Appleton, Wis.

first thirty-pound two year old. Also sixteen daughters of King Segis Pontiac Veeman, a son of the $50,000 bull out of a twenty-seven-pound daughter of a twenty-nine pound cow and she a daughter of Sir Veeman Hengerveld. The average records of the dams of these heifers average 26.28 pounds butter from over 500 pounds milk, most of them being tested as two and three year olds. See page 31.—Adv.

The Waukesha County Holstein Breeders' Sale.

THE breeding of pure-bred cattle has gotten past the stage of an experiment and a gamble, and is now on a business basis, and the buying of cattle in public sales must be put on the same basis. There are a great many ways in which a buyer may be deceived as to the soundness and breeding ability of an animal and cannot prove that the seller was knowingly cheating him. As the late Dr. H. B. Faville so aptly stated, "The reputation and integrity of the seller is fully as important to the buyer as the cattle," for the best looking cow on earth is worth but little if she is tubercular, a non-breeder or has abortion. The Waukesha Holstein Breeders' Association are holding sales that are absolutely on the square. The word of the manager is as good as a bond. Every buyer is considered a future customer, not a dummy to be bled. Every animal is examined before it enters the sale ring by a committee of the association, one of which is a veterinarian to insure the buyers only sound animals. No side bidding is permitted in order to bleed the buyer or raise the average of the sale. Every promise of the manager is kept to the letter and in event of any animal developing any unsoundness for which the seller is at fault the association stands ready to make an adjustment. The cattle to be sold in their sale October 23d are a high-class offering and we unhesitatingly recommend this sale to our readers. Catalogs may be obtained by writing to Wm. Baird, Waukesha, Wis See page 26.—Adv.

Durocs Shipped on Approval.

RILEY MARTINY & SON, Baraboo, Wis., breed Duroc Jersey swine and Guernsey cattle. They want to satisfy the public and if you order a boar or gilt of them they will ship same on approval and if you are not satisfied with the individual when you get him there is no sale. If you are going to need Guernseys keep this firm in mind, they can supply your wants. When writing please say you saw the advertisement in this journal. See page 28.—Adv.

Last Call for the Atwater Boar Sale.

NEXT Wednesday, October 18th, will be bargain day at the "Home of Big Durocs," the day L. F. Atwater sells those thirty-five big, stretchy March Duroc Jersey boars at Bangor, Wis. All those that attended the Minnesota and Wisconsin State Fairs and were interested in Durocs saw the Atwater show herd, the boars that were shown sell in this sale. Those that didn't attend the fairs no doubt read the report of the show and saw that Atwater was the heavy winner so it is useless to say that he is going to sell a grand lot of boars on the above date. You should have received your catalog by this time, if you haven't write at once. We were going to call attention to the best boars, in this write-up, but we have read the foot notes and they describe the boars better than we could

ANOTHER HOLSTEIN BREEDER PLEASED.

A. M. ANDERSON, a breeder of Holstein-Friesian cattle, who lives near Whitewater, Wisconsin, recently advertised some fine young bulls in The Wisconsin Farmer and sold them so quickly he was amazed. Read what he says:

I wish you would discontinue my advertisement for a short time, as I am entirely sold out of bulls anywhere near ready for service. The Wisconsin Farmer is certainly a good paper to advertise in, as I have found by experience. I sold a great many bulls, heifers and cows at satisfactory prices.

You may do as well with your stock if you let The Wisconsin Farmer carry your message to the farmers and breeders. They are watching The Wisconsin Farmer's live stock columns for announcements of pure-bred stock for sale. Send your advertisement today.

THE WISCONSIN FARMER Madison, Wis.

Guaranteed Circulation, 90,000.

in this limited space. W. C. Jenkins sells the day before and Geo. Willsie the day following, arrange to attend all three sales. Send your buying instructions to T. P. Shreve if you can't attend in person. No matter whether you have Atwater breeding in your herd or not, there will be good boars sold that will not conflict with the breeding you have in your herd. Don't forget the date and place. See page 27.—Adv.

Some Short-horn Bargains.

WE RECENTLY looked over the Short-horn herd owned by W. F. Wilcox, Milton, Wis., and were very much impressed with the class of cattle this breeder is raising. Mr. Wilcox is a breeder in the true sense of the word, having purchased two cows ten years ago, and the breeding herd that he now has are descendants of those two cows. At the present time several young bulls of serviceable age are being offered for sale. They are well-grown, nice-lined bulls and the price is very reasonable if taken at once. They are sired by a ton bull that was first-prize winner at Janesville as a yearling, and was second-prize bull at the same fair this year. His name is Rover's Last 408744, and he traces to the noted Choice Goods on his sire's side. His dam comes from the Duchess family, consequently you have a desirable cross of Scotch and milking Short-horn blood in his pedigree. Investigate this herd, write Mr. Wilcox for any information you wish and you can depend on what he tells you. His advertisement appears in this issue, and when writing, please say you saw the advertisement in The Wisconsin Farmer. See page 30.—Adv.

The Martin Brown Swiss Herd.

ANDREW MARTIN has an old established herd of Brown Swiss cattle—females in the herd with excellent milk and butter records. He has around sixty head in the herd and has something for sale at all times. Just at this time he has some outstanding bulls of serviceable age for sale. They come from high producing ancestors and are being priced reasonable. His address is West Salem, Wis., and if you will write him for description and prices you will get a prompt reply telling you exactly what he has that might suit you. Don't forget to mention The Wisconsin Farmer. See page 29.—Adv.

W. C. Jenkins Starts the Circuit.

NEVER before have the farmers and breeders of Wisconsin had such an opportunity to buy Duroc Jersey boars as they will have next week. W. C. Jenkins starts the circuit of sales at his farm near Bangor, Wis., Tuesday, October 17th. He will sell forty-five head—twenty of the best fall and spring boars he raised and with this small number you may know that they are good ones, and twenty-five gilts and sows. There is a scarcity of good brood sows in the state and here is an opportunity to buy some good sows. You can take them home and breed them, or if you wish you can leave them and Mr. Jenkins will breed them to his first-prize and senior boar at La Crosse, Orion Col. S. The boars are sired by sons of Disturber and High Model, the sows are of the most popular line of breeding. We have recently seen this offering and we believe they will appeal to all lovers of the Duroc, sale day. Make arrangements now to attend this sale, your time will be well spent. If it is impossible to attend be represented with a bid, same should be sent to T. P. Shreve in care of Mr. Jenkins. Remember the date and place—Bangor, Wis., October 17. See page 27.—Adv.

The Waukesha County Guernsey Breeders' Sale.

THE Waukesha Guernsey Breeders' Association will hold a two days' sale November 1st and 2d. The first day's offering will consist of some sixty head of richly bred registered animals, most of which will be females. The second day's offering consists of high-grade females and a number of richly-bred bulls of serviceable age and younger. The reputation of the Waukesha Guernsey breeders for good cattle and honorable selling methods is too well known to need further comment. The integrity of the sales organization is of as much importance to the buyer as the cattle to be sold. This year's offering of cattle is very high class and our readers do not want to miss the sale. Catalogs giving breeding and description may be obtained by writing F. E. Fox, Waukesha, Wis. When writing kindly mention The Wisconsin Farmer. See page 25.—Adv.

Booklet on Upper Wisconsin.

THE Chicago, St. Paul, Minneapolis & Omaha railway has issued a thirty-two page booklet describing fertile lands in Upper Wisconsin. This booklet is illustrated by recent pictures, including many beautiful farm scenes. The purpose of the booklet is to show how homes may be established on the cut-over lands in Upper Wisconsin. A good many of these homes have already been established along the Omaha railroad. Any person who has in mind getting land for investment or settlement will be interested in this booklet. Copies will be sent postpaid to anyone who will address G. H. MacRae, General Passenger Agent, C., St. Paul & O Railroad, St. Paul, Minn. Please ask for booklet 32-I. Please be kind enough to mention The Wisconsin Farmer when you write. See page 23.—Adv.

Remember That Big Col.-Chief Defender Sale.

THIS is the last opportunity we will have to call the attention of our readers to that good Duroc Jersey offering that Geo. Willsie will sell at Prosper, Minn., October 19th. This sale should be of special interest to Wisconsin Duroc breeders. Big Col. (now dead) was without a doubt one of the two best King the Col. boars the writer has ever seen and Wisconsin breeders can use some Col. breeding in their herds to good advantage. Many of the choice boars to be sold are out of daughters of Chief Defender which makes a cross that is very acceptable. There will also be boars sired by Chief Defender and these will add prestige to nearly any herd in the Northwest. We are very much interested in the outcome of this sale and if breeders and farmers appreciate good individuals backed up with good pedigrees, they'll attend this sale. As a special attraction Mr. Willsie will sell a senior yearling boar that is a real herd boar. He is sired by King the Col. 1st and his dam is by Fain's Select the boar that H. S. Fain sold to O. S. Larson. Here's a herd boar for someone. If you haven't received your catalog write for one at once. L. F. Atwater sells the day before—arrange to attend both sales. If you can't spare the time send your instructions to T. P. Shreve, Wisconsin Farmer representative, in care of Geo. Willsie. Get the catalog and when writing for same mention this publication. See page 28.—Adv.

KING VEEMAN PONTIAC ALCARTRA, the thirty-pound bull at the head of the herd of H. R. Weiskopf, Cleveland, Wis. See page 31.

Brunker to Sell Short-horns and Poland Chinas.

THURSDAY, October 26th, R. F. Brunker & Son, will sell fifteen Short-horn cows, heifers and bulls and fifty-five head of Poland Chinas at their farm, five miles south of Ridgeway, Wis. Of the bulls three are very choice roans that are good herd bull prospects. The balance are good reds of serviceable age. The females are in nice breeding condition. The young stuff is by Proud Baron, a grandson of the noted Arondale. Of the Poland Chinas eighteen are fall yearlings by Big Hidestretcher, eight March boars and gilts by Repeater, twenty good spring boars by Tom Mc. Here is a very good, smooth yearling boar. Also nine spring gilts by this boar. There will be some bargains in this sale. Get a catalog and attend. Kindly mention The Wisconsin Farmer when writing.—Adv.

Durocs From Manitowish.

WITH this issue of The Wisconsin Farmer, E. R. Perkins, Manitowish, Wis., started his card offering September pigs for sale. He has eleven sows that farrowed in September, and, as his facilities for handling Durocs is limited he does not care to winter so many consequently these fall pigs are for sale, to be shipped at weaning time. Mr. Perkins has a well-bred herd of Durocs, headed by two good boars, one of them a son of the noted Cherry Chief. He also has a few choice spring boars for sale, one litter sired out of a daughter of King the Col. Here's your chance, write Mr. Perkins and mention The Wisconsin Farmer. See page 28.—Adv.

The Hoskins' Chester Whites.

DON'T overlook the Chester Whites being offered by Art G. Hoskins, Dodgeville, Wis., for he has the goods. He has some of the best pigs of this breed that we have seen and they would look good in nearly any herd. As for breeding, they come from a line of ancestry that has made good. St. Elmo the champion of Illinois for several years, Hinshaw, grand champion of Wisconsin and Illinois in 1914, Col. Kent a boar that is well known in Iowa, and

NEXT WEEK'S SALE PROGRAM

Tuesday, October 17	Duroc Jerseys, W. C. Jenkins, Bangor, Wis. Holsteins and Guernseys, W. W. Clark, Grand Rapids, Wis.
Wednesday, October 18	Duroc Jerseys, L. F. Atwater, Bangor, Wis.
Thursday, October 19	Duroc Jerseys, Geo. H. Willsie, Prosper, Minn.

Last Chance Prices

THE cost of production of all magazines has been very seriously affected by the increase in cost of all materials, such as paper, ink, etc., and because of this many magazines are forced to increase their prices.

Owing to the fact that we have special arrangements with all magazines, we are in a position to make some special Last Chance, money-saving offers.

PICTORIAL REVIEW. After November 25, 1916, Pictorial Review will be included in all clubs at $1.50. Until that date we are able to offer the following clubs at prices which will never again exist.

The Housewife ...$ .50
Pictorial Review.. 1.50
McCall's Magazine .50
All for $2.00

The Housewife ...$ .50
Pictorial Review.. 1.50
Ladies' World 1.00
People's Home Journal ... .50
All for $2.25

The Housewife ...$ .50
Pictorial Review.. 1.50
Modern Priscilla .. 1.00
All for $2.30

The Housewife ...$ .50
Pictorial Review.. 1.50
Etude (Musical).. 1.50
All for $2.80

The Housewife ...$ .50
Pictorial Review.. 1.50
Woman's Home Companion.. 1.50
All for $2.90

The Housewife ...$ .50
Pictorial Review.. 1.50
Youth's Companion..... 2.00
All for $3.40

THE CHRISTIAN HERALD. After November 10, 1916, the price of the Christian Herald will advance to $2.00 a year. The Christian Herald is a non-denominational, religious weekly publication, well illustrated, and containing news of current events. The advance in the subscription price from $1.50 to $2.00 a year to the subscriber makes these offers particularly attractive at this time. Remember, the prices all advance November 10, 1916.

The Housewife ...$ .50
Christian Herald .. 1.50
McCall's Magazine .50
All for $1.75

The Housewife ...$ .50
Christian Herald .. 1.50
Ladies' World 1.00
All for $2.10

The Housewife ...$ .50
Christian Herald .. 1.50
Little Folks..... 1.00
All for $2.10

The Housewife ...$ .50
Christian Herald .. 1.50
Mother'sMagazine 1.50
All for $2.60

The Housewife ...$ .50
Christian Herald 1.50
Etude (Musical).. 1.50
All for $2.75

The Housewife ...$ .50
Christian Herald .. 1.50
Woman's Home Companion.. 1.50
All for $2.80

THE AMERICAN BOY. The subscription price of the American Boy, the biggest and one of the livest boys' magazines in America, will advance from $1.00 to $1.50 a year on November 10, 1916. The following special combination should be taken advantage of by our readers if they are anxious to save money.

The Housewife ...$ .50
American Boy.... 1.00
Today's Magazine .50
All for $1.25

The Housewife ...$ .50
American Boy.... 1.00
Little Folks..... 1.00
All for $1.60

The Housewife ...$ .50
American Boy.... 1.00
Modern Priscilla .. 1.00
All for $1.75

The Housewife ...$ .50
American Boy.... 1.00
Mother'sMagazine 1.50
All for $2.00

The Housewife ...$ .50
American Boy.... 1.00
Etude (Musical).. 1.50
All for $2.15

The Housewife ...$ .50
American Boy.... 1.00
Youth's Companion..... 2.00
All for $2.75

Two Special Offers for this Season

The Housewife ...$ .50
Ladies' World 1.00
People's Home Journal ... .50
All for $1.00
Save $1.

The Housewife ...$ .50
Today's Magazine .50
McCall's Magazine .50
All for $1.00

If you wish to take advantage of any of these offers and your subscription to any of the magazines offered above has not as yet expired, now is a good time to renew them, as we will have your subscription extended for one year from the expiration of your present subscription.

Remit by P. O. Money Order or Registered Letter and address:

THE HOUSEWIFE 30 IRVING PLACE NEW YORK

others of note. Write Mr. Hoskins for his prices on boars and gilts. Mention this paper, please.—Adv.

The Marshfield Sale.

AT Marshfield, Wis., October 17th, there will be held the usual fall sale of Holsteins and Guernseys. We have been advised by Mr. W. W. Clark, the manager, that this will be the best consignment of dairy cattle ever sold at the above place. There will be about fifty registered Holsteins, the consignors' names appear in the advertisement. The feature of the Holstein offering will be the herd of E. E. Butters. Mr. Butters has one of the best herds in central Wisconsin and some excellent animals will be sold from his herd. Several young cows will be sold that have good A. R. O. records. If you are interested in Guernseys you will be pleased with those that go in this sale. No matter what you want they will have it for you in the Marshfield sale. Grades and pure-breds of the above breeds. The catalog is descriptive and you should have one. Send your name and address to W. W. Clark, Grand Rapids, Wis., and he will be glad to mail you one of the catalogs. Be sure and mention this publication. See page 26.—Adv.

An Opportunity.

THE McCLURG BROS., Viroqua, Wis., are offering some real bargains in Durocs. They have an excellent litter by the champion, Lee's Defender, and they are offering the boars and gilts from this litter for sale. Two of the boars are outstanding. They also have others by that good two-year-old boar, Prince Defender that will please you. Royal King 4th is a son of the $2,650 Royal King and the pigs by him are showing up well. Don't overlook this herd, the boys have some good stuff and their prices range from $25 to $35. Crates and pedigrees furnished with every pig sold. They will also give you a year's subscription to the breed paper, the Duroc Bulletin with every order. Notice their advertisement in this issue. When writing, please say you saw the advertisement in The Wisconsin Farmer. See page 28.—Adv.

Desirable Holsteins For Sale.

WITH this issue of The Wisconsin Farmer, Kirkpatrick Bros., Reedsburg, Wis., change their advertisement, offering Holstein cows, heifers and bulls for sale. These gentlemen have a good herd of cattle and are progressive farmers and if you buy from them you will get cattle that are right in every way. They have an excellent breeding bull in King Pontiac Korndyke, a King of the Pontiac bred bull and a wonderful individual. They are offering a few cows that are bred to this bull and a number of them will freshen in the near future. Bulls and heifers by the above sire are being offered at reasonable prices. Investigate this good herd. Their farm is near town and you will be pleased with the Holsteins they breed. Mention The Wisconsin Farmer when writing. See page 26.—Adv.

The Broughton Shropshires.

IT'S time to think about buying that ram and if you are going to need a Shropshire why not buy where they breed the best. Arthur Broughton & Sons, Albany, Wis., have one of the best flocks of this breed to be found anywhere, this fact was demonstrated at the recent Wisconsin State Fair. Just at this time twenty-five yearling rams are being offered, every one suitable to head a flock of registered Shropshires. Write the above firm your wants and mention this publication. See page 29.—Adv.

Carey & Son Sell October 25th.

WEDNESDAY, October 25th, W. H. Carey & Son will sell sixty-five head of Poland Chinas at Argyle, Wis. This offering will consist of forty head of spring and fall boars and twenty-five gilts. The offering will be presented in nice condition and you will be able to buy worth the money in this sale. The catalog of the offering is ready and can be had for the asking. Write W. H. Carey & Son, Argyle, Wis., and mention The Wisconsin Farmer.—Adv.

Consigning to the Watertown Sale.

EDW. KARLEN, who has one of the good herds of Holsteins in western Wisconsin, located at Thorp, is selling one son of the great bull, Johanna McKinley Segis, in the Watertown sale, October 24-25th. He will also consign three high-class sons from some of his high-producing dams. These will be attractions in the above sale and it will pay you to look for them on the above date at Watertown.—Adv.

Marquardt Bros.' Milking Short-horns.

IF you are in the market for a bull that comes from Short-horns bred for milk you should investigate those being offered by Marquardt Bros., Milton Junction, Wis. They do things on their farms and they produce the kind that make good. It is a pleasure to recommend this herd of cattle.—Adv.

Short-horns for Sale.

WE have just been advised by E. E. Jones, Rockland, Wis., that he has for sale a number of heifers and young cows. Mr. Jones has one of the good herds in the state and if you want good Short-horns it will pay you to write him. Mention this paper. See page 30.—Adv.

Schoenfeld's Poland Chinas.

SOME fall yearling Poland China boars of great bone and length are offered for sale by C. J. Schoenfeld & Son, Fox Lake, Wis. The boars will weigh from 300 to 400 pounds. They are sired by Big Bone and Long Wonder, and Mr. Schoenfeld guarantees them to be the most promising lot of boars he has ever offered for sale. See his advertisement on page 26 and write him for further information.—Adv.

Karlen's Holstein Dispersion.

With the dispersion of the herd of F. J. Karlen, Winslow, Illinois, on October 4th and 5th one of the finest Holstein herds in the middle West was disbanded. As evidence of the high esteem in which this herd was held by breeders all over the United States, is the fact that many of the best breeders from New York to Texas were at the ring side and were heavy buyers. It is commendable, however, that the breeders in the vicinity both in northern Illinois and southern Wisconsin were awake to the value of the great herd, and did not let out-of-the-state breeders take all the good ones. Several of the eastern breeders told the buyers present what they considered such breeding worth in the East. The top price bull was $4,250 and was the cheapest animal sold in the sale considering his breeding, individual merit and ability as a breeder. The top price female was $3,550. This cow, Palmar Veritas De Kol Ormsby, is a wonderfully fine individual, and, although dry at the present time, shows every evidence of being a heavy producer.

SALE DATES.

Holstein-Friesian Cattle.

Oct. 23, Waukesha Holstein-Friesian Assn., Sale, W. L. Baird, Sec., Waukesha, Wis.
Oct. 24-25, Watertown Holstein Breeders' Consignment Sale, Watertown, Wis. S. E. Jones, Mgr.
Oct. 26-27, Lake Mills Holstein Breeders' Consignment Sale, Lake Mills, Wis. F. H Everson, Mgr.
Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.

Holstein, Jersey and Hereford Cattle.

Oct. 30-31, F. P. Merrick, Delavan, Wis.

Aberdeen Angus Cattle.

Nov. 9, Combination Sale, Roy Miller, Prosper, Minn and M. C. Willford, Canton, Minn. (Sale at Canton, Minn.)

Guernsey Cattle.

Nov. 1, Waukesha Co. Guernsey Breeders' Asso., Waukesha, Wis., F. E. Fox, Secy. Pure-bred females.
Nov. 2, Waukesha Co. Guernsey Breeders' Asso., Waukesha, Wis., F. E. Fox, Secy. Pure-bred males and grade-bred heifers and cows.

Short-horn Cattle.

Oct. 26, R. F. Brunker & Son, Ridgeway, Wis.
Nov. 2, Anoka Farms, Waukesha, Wis.
Nov. 3, Herr Bros. & Reynolds, Lodi, Wis.

Percherons.

Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Poland China Swine.

Oct. 19, Columbia County Asylum, Wyocena, Wis. S. C. Cushman, Supt.
Oct. 23, W. H. Carey & Son, Argyle, Wis.
Oct. 26, R. F. Brunker & Son, Ridgeway, Wis.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders' Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Oct. 17, W. C. Jenkins, Bangor, Wis.
Oct. 18, L. F. Atwater, Bangor, Wis.
Oct. 19, Geo. H. Willsie, Prosper, Minn.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., D. H. Gant, Delavan, Secy. (Sale at Madison, Wis.)

A milk producers' association was recently organized at Burlington with about 100 present. The officials are: President, W. J. Bauman; secretary, W. J. Robers; treasurer, S. M. Prout.

17 pages full of
our famous values in American Beauty Buggies, Sleighs, Farm Wagons and Auto Trailers. They start at page 1480 in our big General Catalog. Prices are usually far lower than elsewhere.
Sears, Roebuck and Co., Chicago.
9141

SUCCESSFUL DAIRYING

DEPENDS upon a number of different factors. One of the most important of these is the dairy animal. You can afford to buy only those which have been **bred for production.**

IT WILL PAY YOU TO COME TO

WAUKESHA WISCONSIN NOVEMBER 1-2

TWO BIG SALES

Nov. 1
Pure-Bred Females

Nov. 2
Pure-Bred Sires and Grade Cows and Bred Heifers

All of the animals offered in these sales will be as represented and from profit-producing families.

Waukesha County Guernsey Breeders' Association
Waukesha, Wis.

Frank E. Fox, Secretary

Auctioneers: Love, Perry, Benjamin and Hellen

Send today for a catalog

WAUKESHA COUNTY HOLSTEIN ASS'N

4TH SEMIANNUAL SALE

MONDAY, OCTOBER 23

95 HEAD PURE-BRED HOLSTEIN CATTLE

ARE you looking for foundation stock? If so, buy them from breeders who have the reputation of fair dealings. Thus far, to the best of our knowledge, no tubercular animals have ever passed through our sales. All animals are guaranteed to be breeders to the value of the purchase price. Every animal is inspected by a committee of three. We believe every animal to be sound and clean. No by-bidding allowed. Auctioneers, Perry, Mack and Love. The following men have consigned animals to this sale and stand back of their consignments to be exactly as represented:

W. B. Leonard, Brookfield, Wis.
S. F. Baird, Waukesha, Wis.
C. J. Will, Menomonee Falls, Wis.
Dr. M. W. Downing & Bro., Waukesha, Wis.
John J. Reid & Son, Oconomowoc, Wis.
Dr. David Roberts, Waukesha, Wis.
D. J. Howell, Waukesha, Wis.
E. G. & J. W. Muckleston, Waukesha, Wis.
W. D. McGill, Menomonee Falls, Wis.
Dr. B. O. Nobles, Milwaukee, Wis.
R. M. Aplin, Dousman, Wis.
J. J. Roets, Monches, Wis.
Rust Bros., West Allis, Wis.

Watch for Ad. in Next Week's Issue.

Catalogs ready next week. Write for one to

W. L. BAIRD, Sec'y **WAUKESHA, WIS.**

HOLSTEINS - GUERNSEYS

SALE OF GRADES AND PUREBREDS

THE DATE, OCT. 17 - PLACE, MARSHFIED, WIS.

THE sale will be held in the new sale pavilion that is now completed. There will be about fifty pure-bred Holsteins offered. A large consignment of grades. Quite a number of pure-bred and grade Guernseys. The following men will consign pure-bred Holsteins: O. J. Leu, Grand Rapids; Gavink and Tenpas, Arpin; Wm. Krause, Thorp; E. E. Butters, Marshfield; C. E. Pierce, Princeton; and F. H. Meyers, Pittsville.

Mr. Butters has sold his farm and is offering his entire herd with the exception of a few young animals. All the other consignors are offering choice stock of the best type and breeding. Several choice young cows are offered with records up to 22 pounds as two-year-olds.

Infeldt Bros. and several others are consigning some choice Guernsey bulls and heifers. Write for catalog to

W. W. CLARK - GRAND RAPIDS, WIS.

PUBLIC SALE

RIDGEWAY, WISCONSIN, OCT. 26

55 POLAND CHINAS - 15 SHORT-HORNS

18 LARGE, smooth yearling boars, 24 growthy spring boars, 13 big spring gilts. Sired by Tom McG's Big Tom, Big Hidestretcher by Hidestretcher and Repeater. Red and roan bulls of serviceable age sired by Proud Baron, G.'s of Arondale and seven cows and heifers. Everything registered. Write for catalog to

R. F. BRUNKER & SON - RIDGEWAY, WISCONSIN

IOWA COUNTY, ON LAKE TO RIVER ROAD

TOO LATE TO CLASSIFY.

ANDERSON'S BIG-TYPE POLAND CHINAS

TWO choice spring boars at $20 each, and a few open gilts at $20 each. Also a few early fall pigs at $10 each, and one choice herd boar, King of All, a bargain for $40. Your money's worth or your money back. Mention The Wisconsin Farmer and address

S. ANDERSON **ROUTE 8, GREEN BAY, WISCONSIN**

REG. GUERNSEY HEIFERS

10 to 14 months old, daughters and granddaughters of the richly bred sire,

GOODWILL'S HERO 17073

DAMS imported and richly home-bred animals. These animals are well grown, good, straight type and well bred. For further particulars tend for copy of pedigrees or color description. Address

Charles Schmidt **Wrightstown, Wisconsin**

Poland Chinas For Sale

FIVE yearling boars. Spring pigs of both sexes Boars fit for service and September pigs.

James Derivan **Fox Lake, Wisconsin**

HILLSIDE STOCK FARM

OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

POLAND CHINA BOARS

ONLY four spring boars but they are "dandies." Order one. Address

Mat W. Beres **Elroy, Wisconsin**

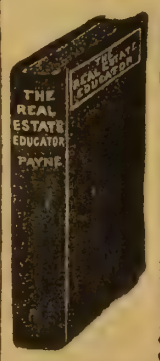
POLAND CHINA BOARS FOR SALE

10 GREAT fall yearling Poland China boars with great bone and length, sired by Big Bone and Long Wonder. These boars will be priced right. Address

C. J. Schoenfeld & Son **Fox Lake, Wis.**

The Real Estate Educator

By P. M. PAYNE---New Edition



A book for hustling Real Estate boosters, promoters, town builders and every man who owns, sells, rents or leases real estate of any kind. "Dont's" in Real Estate, "Pointers," *Specific Legal Forms*, &c., &c.

THE NEW 1916 EDITION CONTAINS THE TORREN'S SYSTEM OF REGISTRATION, AVAILABLE U. S. LANDS FOR HOMESTEADS. THE A. B. C.'S OF REALTY.

WORKMEN'S COMPENSATION ACT, INCOME TAX LAW, EMPLOYER'S LIABILITY ACT, STATUTE OF FRAUDS, HOW TO SELL REAL ESTATE, HOW TO BECOME A NOTARY PUBLIC, OR COM. OF DEEDS, AND OTHER USEFUL INFORMATION.

This book is an inspiration to the indifferent and a stimulus to the ambitious. Apart from the agent, operator or contractor, there is much to be found in its contents that will prove of great value to all who wish to be posted on Valuation, Contracts, Mortgages, Leases, Evictions, etc. The cost might be saved many times over in one transaction. *256 pages, cloth, postpaid, $1.00.* Remit by P. O. Money Order or Registered Letter.

The Reading Club, 30 Irving Place, New York.

Rural Clubs For Pleasure and Profit.

To the Editor:—There are about 25,000 farmers in Wisconsin who are members of the various community and neighborhood clubs. In addition there were held last year 21,159 meetings in the rural schoolhouse at which about 150,000 people were present. The rural club movement is an important one in Wisconsin and one that has been growing quietly for many years.

Early in the history of Wisconsin it was common to organize lyceums, debating clubs or singing societies.

Later agricultural societies were formed to promote agriculture and to encourage co-operation. These clubs were not numerous, although they were of importance in the local community. Few were in existence in 1885. The grange movement followed, the first one being organized in 1870. In 1874 there were 505 granges in the state. At present there are but fifty-five, most of them being found in the upper counties.

The American Society of Equity began establishing local unions in 1902, and there are at present about 375 locals, with a membership of about 12,000.

During the past five years there has been a heavy increase in the number of independent or local neighborhood clubs. They now number 250, having a membership reaching 10,000 people. C. J. Galpin.

Madison, Wisconsin.

Milk Producers Organize.

Sixty-five farmers producing milk in the neighborhood of Janesville, Wisconsin, have organized for the purpose of securing, if possible, a better market price for their milk. They assert that much milk has been sold for $1.55 per hundred pounds which cost $2.25 to produce, and they further assert that the price paid them for milk at Janesville is not so high as is paid for milk at Beloit and other places. The hope is that practically all producers may be gathered together in the organization and that agreement may be reached to raise prices to local dealers to a fair basis or induce some condensery or other outside interest to come in and utilize the local products at better figures than are now obtainable. The officers of the new association are: President, W. O. Auston; vice president, H. C. Hemingway; secretary, George Woodruff; treasurer, Hugunin.

COAL

$2.90 Per Ton!

GENUINE Pocahontas Lump, $2.90 per ton
(Genuine Pocahontas—see sworn statement)
Hercules *Selected!* ..... $2.80 per ton
(Clean extra hard coal—general use—extra high grade)
Master Hocking ..... $2.70 per ton
Shipped direct from the mines. All prices f. o. b. mines. Prices all smashed. Quality absolutely guaranteed—weight absolutely guaranteed. You pay only IF satisfied AFTER seeing the coal.
Write for booklet and photographs of coal.
Address me personally—B. E. PAGE, President

Hercules Coal Company
168 N. Michigan Avenue, Dept. G048 Chicago

For the Ambitious Young Man.

YOUNG men who look forward to owning farms of their own, instead of paying out rent for the use of worn-out soil, will do well to investigate the advantages and possibilities of Montana. Montana has a big agricultural future before it, and the young men who go there now will have the benefit of the increase in land values which will come with increase in population. An opportunity to investigate Montana lands cheaply is offered by the low-fare excursions run every month by the Chicago, Milwaukee & St. Paul Railway. Read the advertisement on page 20 and write H. F. Hunter, General Agent, 613 Railway Exchange Building, Chicago, for full information. Tell him you read the advertisement in this paper.—Adv.

Want to buy or sell a farm? Make it known by inserting an advertisement in THE FARMERS' MARKET. Six cents a word each insertion.

STATEMENT OF THE OWNERSHIP, management, circulation, etc., required by the act of congress of August 24, 1912, of The Wisconsin Farmer, published weekly at Des Moines, Iowa, for October 1, 1916.

State of Iowa, County of Polk, ss.

Before me, a Notary Public, in and for the state and county aforesaid, personally appeared J. W. Wickham, who, having been duly sworn according to law, deposes and says that he is the Assistant Business Manager of The Wisconsin Farmer, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—James M. Pierce, Des Moines, Iowa.

Editor—James Atkinson, Des Moines, Iowa.

Managing Editor—James Atkinson, Des Moines, Iowa.

Business Manager—James M. Pierce, Des Moines, Iowa.

Assist. Bus. Mgr.—J. W. Wickham, Des Moines, Iowa.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

The Wisconsin Farmer Pub. Co.
James M. Pierce, Des Moines, Iowa.
Dante M. Pierce, Des Moines, Iowa.
Frank Dunning, Bedford, Iowa.
J. L. Parrish, Des Moines, Iowa.
R. L. Parrish, Des Moines, Iowa.
B. N. Waller, Des Moines, Iowa.
J. H. Mather, Chicago, Ill.
R. S. Bibb, Kansas City, Mo.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

Bankers Life Ass'n, Des Moines, Ia.
Louisa Bird Hyde Estate, Des Moines, Ia.
Equitable Life Ins. Co., Des Moines, Ia.

J. W. WICKHAM,
Assist. Bus. Mgr.

Sworn to and subscribed before me this 30th day of September, 1916:

M. M. LOWMAN.

(My commission expires July 4, 1918.)
[Seal.]

When writing to advertisers kindly mention The Wisconsin Farmer.

When writing to advertisers kindly mention The Wisconsin Farmer.

W. C. JENKINS' SALE

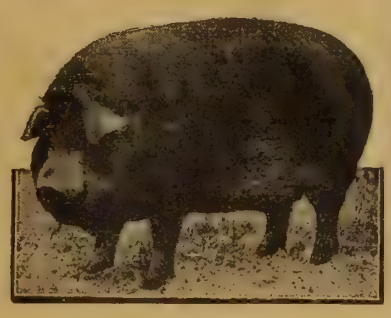
DUROC JERSEYS

BANGOR, WIS., TUES., OCT. 17

45 HEAD

25 SOWS
20 BOARS

45 HEAD



AN offering that will appeal to breeders and farmers alike. Some herd boar prospects and some great brood sows. Some great fall gilts and boars sired by **W. C.'s Disturber** by Disturber and **Col.'s Choice,** grandson of Chief's Col. Spring stuff by above boars and **Rego Col.** by High Model. One choice litter out of a granddaughter of old Tattletale. Also some Crimson Wonder breeding. The spring boars and gilts are of March farrow. Have more Durocs than I can winter, consequently these will be sold at your bid. They are in nice growing condition and will make good for you. This is the only fall sale where you will have a chance to buy sows and gilts. You will not be disappointed with the offering. J. L. McIlrath, auctioneer. Make arrangement to attend the sale. If you can't, send mail bids to T. P. Shreve, of The Wisconsin Farmer, in my care. **Be sure and write for my catalog.**

W. C. JENKINS BANGOR, WIS.

L. F. Atwater sells the following day.

AT THE HOME OF BIG DUROCS

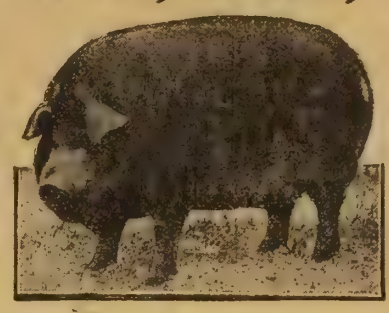
I WILL SELL

35 Boars of March Farrow 35

22 of them Breeder's Herd Boars
15 for the Better Farmer Trade

Bangor, Wis., Wed., Oct. 18

Sired by Lee's Defender by A's Defender, Prince Illustrator by Illustrator 2d, Model King by High Model—Son of Cherry Chief.



Sire of Dams—King the Col., Marion's Wonder, Lee's Defender, Illustrator, Col. Gano, Golden Model 2d.

AN assortment of breeding that has made good in every herd where it has been used. You take no chance with these blood lines. I have wanted to make a boar sale for three years, but never thought I had them good enough. I have them this year. Come and see how well I have succeeded. The tops of eighty spring boars, all of March farrow, and not a poor one in the offering. Not fat, but growthy, just what you want. My show boars included, they'll make good juniors next year. My sows are noted for size and quality. They are the dams of these boars. They'll improve most herds. Come to this sale, buy or look on, but come. If you can't, write T. P. Shreve, in my care, and tell him what you want. I'll guarantee his selection. Don't forget to write for a catalog. It contains Duroc history. When writing mention The Wisconsin Farmer. Auctioneer, J. L. McIlrath.

L. F. ATWATER **BANGOR, WIS.**

W. C. Jenkins sells the day before, and Geo. H. Willsie the day following. Arrange to attend all sales.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

Yearling Jersey Heifers

AND bulls of serviceable age sired by Hutzeland King, a grandson of King of St. Lambert's King. **Big-Type Poland China** spring pigs of both sexes for sale. Prices reasonable.
Lorenz Metzler - - New Franken, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS.

RED POLLED CATTLE.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

UNDERWOOD
RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD **AVOCA, WIS.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

The Maltby Polands.

DON'T forget that Chas. S. Maltby, Janesville, Wis., has some great spring pigs sired by that good two-year-old, Model Major 2d, now owned by E. W. Hendricks. Model Major 2d is one of the best Poland China boars in Wisconsin and he will be heard from. A herd boar sired by him will be a good investment. Write Mr. Maltby for prices and description. He has a well-bred herd.—Adv.

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
Ed. Bruins - - Fairwater, Wisconsin

LIVE STOCK AUCTIONEERS.

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones' Nat'l School of Auctioneering, 40 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, President.

Have YOU Engaged

AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage
R. B. HELLEN JEFFERSON, WISCONSIN
He can make you money in your live stock or farm sale. Rates reasonable.

H. O. TELLIER
AUCTIONEER
FARMINGTON, MINN.
THOROUGHLY versed on pedigrees of leading breeds of live stock.

ORVAL A. JONES
AUCTIONEER
14 N. Sacramento Blvd. CHICAGO, ILLINOIS
Let me help boost the hog sales in Wisconsin. Write for dates.

CHESTER WHITE SWINE.

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.
O. P. Coates - - Elkhorn, Wisconsin

CHESTER WHITE SWINE.

THE GREAT SCHOOLMASTER SALE OF CHESTER WHITES

Will sell Schoolmaster and boars and gilts

TUESDAY, OCT. 17, 1916

The kind that improves herds. Write for catalog, mentioning The Wisconsin Farmer.

HARRY CRANDALL
CASS CITY MICHIGAN

CHESTERS

For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN **BLOOM CITY, WIS.**
(Shipping point Viola)

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address
ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.
W. F. Miller **West Salem, Wis.**

Chester White Spring Gilts For Sale

BIG, growthy animals of good type, strong backs, heavy hams and big bone. Address
W. C. Scheibe **Burlington, Wis.**

CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address
L. A. Schultz **R. 1, Poynette, Wis.**

CHESTERS

75 AUGUST pigs from matured sows. Pairs not related, shipped at 3 months old, $25. We know the farmers' wants—no runts shipped. Quality assured. Correspondence solicited. Address
JOS. EGLEHOF **EDMUND, WIS.**

CHESTER WHITE SWINE.

Derenthal
Chester Whites
Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.
H. A. Derenthal - Wykoff, Minnesota

CHESTER WHITE FALL BOARS

AND spring pigs of both sexes, sired by Elder's A. B. R., a Wisconsin State Fair winner and from a prize-winning sire and dam. Pigs for sale are well grown and of show quality. Holstein bull for sale sired by King Pontiac Champion 8th, whose dam made 800 pounds of butter in a year. Prices reasonable.
A. H. & E. W. Kuhlman, Beaver Dam, Wis.

DOERR
Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address
J. A. DOERR **VIROQUA, WIS.**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITE spring boars sired by Eagle Chief and Highland John. Big, growthy boars with strong backs, wide, deep hams and heavy bone. I have been five years mating good sires and dams to produce this kind. Send for pedigrees and prices. Address W. O. Scheibe, Burlington, Wisconsin.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.
Wm. F. Belda - De Forest, Wisconsin

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. **Wm. C. Kirst, Tomah, Wisconsin**

CHESTER WHITES

CHOICE spring pigs of March and April farrow for sale. Big bone, well bred and growthy. Correspondence solicited. Write
Art. G. Hoskins **Dodgeville, Wisconsin**
(Also breeder of Milk Strain Short-horns)

BIG COL. CHIEF DEFENDER

The big Durocs you have read about. I sell

40 OF THEIR SONS 40

SPRING FARROW, AT

PROSPER, MINN., OCT. 19

I LOST **Big Col.** a month ago when fitting him for the fairs. He was a contender for the purple at the Minnesota fair and a prominent showman offered me a good price for him because he was a great individual as well as a sire. I will sell some of the growthiest boars to be offered this year. They are by **Big Col.** Many breeders have told me that they thought **Big Col.** the best son of **King the Col.** they ever saw. King the Col. breeding has certainly made good and no herd is complete without some of it. Also boars by **Chief Defender, litter mate to Disturber,** being by **Defender,** out of **Lucy Wonder 112th.** Where can you find better breeding? The dams by such boars as **Chief Select, Crimson Col., Crimson King, General Select** and by two herd boars. **Get size in your herd—these spring boars have it.** My catalog is descriptive of the offering and I want you to have one. Send your name and address. Mail bids should be sent to T. P. Shreve, Wisconsin Farmer representative, in my care. Auctioneer, H. S. Allen.

GEO. H. WILLSIE PROSPER, MINN.

Prosper is fifty miles west of La Crosse. Good connections from the Atwater sale the previous day.

DUROC JERSEY SWINE.

CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B. Model Wonder, Col. S. Jr., Orion, Cherry King Jr. ☞ **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
W. W. Goodrich Ft. Atkinson, Wisconsin

GEO. H. WILLSIE
Breeder of Big Durocs

Can supply your wants. Write.
Prosper - - - Minnesota

HORSES.

CLYDESDALES

STALLIONS and mares for sale. **AYRSHIRES**—Serviceable bulls and females. **DUROCS**—growthy boars and gilts. Only the very best of the three breeds. We invite visitors. Write your wants.
Jas. Van Etta - Lima Center, Wisconsin

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Hilbourne, Wis.

MODEL DUROC HERD

ON October 31st we will sell **60 Duroc Jersey sows, gilts and boars.** Well grown and well fed. Your opportunity to get good Durocs at a reasonable figure. Keep the date in mind. Send your name for catalog.

J. W. HIGGINS
GOTHAM WISCONSIN

Atwater's Duroc Boars

SOME just as good as sold in my sale—these were held for private sale. Write.
L. F. Atwater - Bangor, Wis.
"Home of Big Durocs"

BOARS
DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
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SEPTEMBER DUROC PIGS
at your own price—just make an offer

THESE are by a Cherry Chief boar that weighed close to 500 pounds at 16 months and Long Model Wonder, another big one that has only a few equals. Also a fine bunch of spring boars of champion blood lines at attractive prices. Address
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When writing to advertisers kindly mention The Wisconsin Farmer.

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DUROCS WITH SIZE AND QUALITY

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Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer.
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Grand Champion Duroc Boar at Wisconsin State Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
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COL.'S CHOICE --- WONDER CHIEF

By King the Col. By Cherry Chief

DUROCS THAT MADE GOOD

YOU have all heard about KING THE COL. and CHERRY CHIEF—your herd is not complete without some of that breeding. My brood sows are large. Let me ship you a spring boar. Guaranteed? Yes. Mention The Wisconsin Farmer and address
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SPRING boars by **five noted sires.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** son of the many times champion, **Grand Model,** heads our herd. Also two fall boars for sale. We sell "boars that please." Write

Geo. D. Sprain & Sons
West Salem, Wisconsin

WE SHIP on APPROVAL
Duroc Jersey BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

LINCOLN MODEL
DUROC HERD

Spring boars and spring gilts by

Lincoln Model

and S. & H.'s Col. From big, matured sows The pigs must suit you or no sale. Write your wants.

ALBERT L. HYZER
WEST SALEM WISCONSIN

DUROCS THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES AUGUSTA, WISCONSIN

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
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I AM OFFERING FOR SALE

CHIEF'S DEFENDER 186363 and PROF. C KING 2d 187655. Also spring pigs sired by these great Duroc herd boars. Address
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AND a few sows bred for August and September farrow for sale. Write BURN BRAE FARM. CHAS. A. PETERSON, ROSENDALE, WIS.

I WON THE SILVER TROPHY
AT THE
WISCONSIN STATE FAIR

ON the best litter of Duroc pigs. These and others of same breeding for sale. Thirty spring boars, 2 yearling boars and 40 spring gilts for sale. Sired by **Prof. King** by Indiana King and **Grandmaster,** junior champion Wisconsin, 1915. **Buy from a winning herd.** Write your wants.
J. W. THOMAS, NORTH BEND, WIS.

--PARKHURST--
DUROCS

LET us ship you a boar pig. They are well grown, of the most popular blood lines and we guarantee every boar. We welcome visitors and answer inquiries promptly. Try us.
E. H. PARKER & SON
Janesville Wisconsin

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address
JOHN L. FISHER JANESVILLE, WIS.

DUROCS AND GUERNSEYS

25 HEAVY-BONED fall and spring boars, Illustrator, Chief's Col., Defender and Crimson Wonder breeding. April pigs weigh over 150 pounds. Two-year-old bull for sale whose dam has three A. R. records averaging over 500 lbs. fat. His full sister made 415 pounds fat as a two year old. Have had 6 calves sired by him and 5 were nicely marked heifers. Reason for selling, owned his sire. Several fine bull calves.
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THE WAR

Hasn't affected the prices on

DUROC JERSEY BOARS

MY spring boars are sired by Professor C and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.
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GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
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SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write
John Borchardt & Son, Richland Center, Wis.

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Big Type Poland Chinas

OF EITHER sex. Some are state fair winners, and all sired by the grand champion, Jumbo Hadley, or D. & E.'s Hadley, and D. & E.'s Jumbo. All state fair winners, and sire of winners this year. Order a herd header from us. We can spare two of our herd boars. Visit us, or write us your wants.

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SIZE---QUALITY---BREEDING

Features Predominating in my Polands

JUMBO'S EQUAL 2d

CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH (Shipping Point Fennimore) MT. IDA, WISCONSIN

McDONALD CLEANS THE SLATE

WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin, Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address

J. D. McDONALD, NORTH BEND, WIS.

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.

M. MADSON & SONS MADISON, WISCONSIN

The Columbia County Asylum

Will Sell 40 BIG-TYPE POLAND CHINAS Thursday, October 19, 1916

BOARS and gilts from Columbia Pete, the biggest boned hog in the country. Others from Columbia Wonder, Columbia Orange, Smiley's Big Jumbo and E. W. Hendricks' Black Jumbo. Nothing better ever offered in the state. For catalog write to SUPT. S. C. CUSHMAN, Wyocena, Wisconsin.

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BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address

WM. SMILEY & SON, ALBANY, WIS.

GILTS RESERVED FOR SALE, FEBRUARY 22

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.

Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781

AND

ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address

P. W. YOUNG PROSPER, MINN.

POPULAR PROLIFIC

POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write

Olaf C. Olson, Strum, Buffalo County, Wis.

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OUR annual Brood Sow Sale on Feb. 15th will be the most pre-eminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address

J. C. Hendricks Box F, Hazel Green, Wis.

BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.

Chas. S. Maltby, Janesville, Wisconsin

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.

A. Menke & Sons, R. 1, Markesan, Wisconsin

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L.P. Martiny, Box F, Chippewa Falls, Wis.

BIG-TYPE POLAND CHINA July and August pigs sired by L.'s Big Orange and Fairview Jumbo for sale. Prices from $10 and up. Satisfaction guaranteed. J. Le Roy Larson, Iola, Wis.

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

Some Boars

A FINE assortment of spring boars (March)—individuals that will please—the **quality kind.**

Poland Chinas

Two **outstanding** fall boars. Your $$ worth or your $$ back. Write or come.

F. A. Morehouse - Lancaster, Wisconsin

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS Hazel Green Wis.

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING BANGOR, WIS.

BIG-TYPE POLAND BOARS

READY to ship boars that please. No better breeding and good individually. Sired by MONSTER BIG BONE by Black Big Bone and KING JOSEPH by Big Joe, also other noted boars. Write or come.

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Big Type Poland China

BOARS and gilts—well grown—of proven lines of breeding. Priced right.

Solomon Anderson, Green Bay, Wisconsin

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.

Phone 53 F. E. Purdy, Orfordville, Wis.

BIG TYPE POLAND CHINAS

SEPTEMBER pigs of both sexes sired by the great boars, BLACK EXPANSION and KING. Send for description and breeding. Address

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Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.

Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

SHEEP

SHROPSHIRE yearling rams all sold. After October 15th my yearling Shropshire flock header and my Oxford flock header will be for sale. Have a limited number of Shropshire, Hampshire and Oxford ram lambs left; also a few ewes. All stock registered. Address

Dane Stock Farm Oshkosh, Wis.

Hickory Dale

Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock flock headers. Address

Arthur Broughton & Sons Albany, Wis.

BROWN SWISS CATTLE.

Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.

ANDREW MARTIN, WEST SALEM, WIS.

HAMPSHIRE SWINE.

HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.

DANE STOCK FARM Oshkosh Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.

A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

HAMPSHIRE SWINE FOR SALE BY James Clemmens Kansasville, Wisconsin

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address

A. B. CORTTE LOMIRA, WISCONSIN

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YORKSHIRES

LONG-bodied, deep-sided fellows; true Yorkshire type. Registered boars or sows $15 and $20 until Oct. 1st. A. C. Kennedy, Wadena, Minn.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

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Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economica pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address

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200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

POLAND CHINA SWINE.

W. H CAREY & SON

WILL sell 40 spring and fall Poland China boars and 25 gilts at

ARGYLE, WISCONSIN, OCT. 25

Sired by Smooth Giant and Long Boy. Write for catalog and attend this sale.

Bargains, Poland Chinas

SPRING boars and gilts priced to sell. Order now. Big-type breeding. Address

L. E. Pease Millville, Wisconsin

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. E. Horn, New Auburn, Wis.

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A Few Grade and Pure-Bred GUERNSEY FEMALES For Sale

W. H. & B. L. Hanchett Sparta, Wis.

Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.

Geo. Lucia - Green Bay, Wisconsin

Guernsey Bull For Sale

THE richest Guernsey breeding. Born March 8, 1916. Sired by the richly-bred bull.

GOODWILL'S HERO

a son of Imp. Golden Hero of L'Etinnerie, and out of 526 lb. imported daughter of Gov. of the Chene. Dam, Primrose's Beauty of Pleasant View. Also a deep, rich breeding of the Governor of the Chene line. Address

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BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address

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Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address

J. D. McAllister Green Bay, Wis.

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WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.

W. G. Jamison & Son - Appleton, Wis.

Guernseys For Sale

NINE grade Guernsey yearling heifers and one pure-bred bull 7 months old, all good size and well marked, at $600. Address

E. H. Kiesling Jefferson, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman Fort Atkinson, Wisconsin

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

THREE Oaks Guernseys. Four pure-bred heifers 12 to 15 mos. at $160 to $200. Four grade heifers same age, $55 each. W. A. and R. E. Freehoff, Waukesha, Wisconsin.

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BEEF

As a rule, dairy cows when through milking, do not make good beef.

AYRSHIRES

when through milking fatten quickly, thus making the beef tender and delicious. Cut up to good advantage; bones are small; meat is red and well flecked with tallow. Calves bring highest prices for veal. Write for information and list of breeders.

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C. M. WINSLOW, Secy., 29 Park St., BRANDON, VT.

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Angus Herd for Sale

5 COWS, 4 calves at foot, 2 yearling heifers, 1 yearling bull, 1 herd bull. Cows by Abby's Duke 112094 and Pine Lawn Hero 93055. Bull by Tom June 170794. Will make attractive price on the lot or will sell individually. Write or come.

F. C. Lewis, Bridgeport, Grant County, Wis.

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IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

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30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. O. S. Hechtner, Chariton, Iowa.

SHORT-HORN CATTLE.

USE A SHORT-HORN BULL

ARE you raising beef? A Short-horn bull will give you more scale and bone and more pounds of flesh for a given amount of feed than any other breed. Are you a dairyman? A Short-horn bull will not reduce your milk supply and he will get you calves that will be quickly salable at a much higher price than you can get from a dairy bred bull. Are you a farmer? The Short-horn is the ideal for your purpose, because it is adapted to all conditions, of quiet temperament, takes on flesh readily, and yields a liberal flow of milk. The Short-horn always works improvement.

AMERICAN SHORT-HORN BREEDERS' ASS'N
13 Dexter Park Ave. Chicago, Illinois

WILCOX SHORT-HORNS

AM OFFERING several **Roan Bulls** of serviceable age. Priced reasonable for immediate sale. Write for pedigrees.
W. F. Wilcox - - Milton, Wisconsin

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son, Beaver Dam, Wisconsin

10 BULLS 20 FEMALES

Short-horns

OFFER 20 **cows** and **heifers**, red and roan, bred for milk and beef. Ten **bulls.** Also ten spring Duroc Jersey boars and sows. Priced reasonable. Write to
William Ley - Jonesdale, Wisconsin

RIVERDALE STOCK FARM

SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MILKING

SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little Evansville, Wisconsin

OAK LAWN FARM

Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.43/4 butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son - Burnett, Wisconsn

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address
JOHN CLAY WARRENS, WIS.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

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YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland. Write us. **William Bros., Bangor, Wisconsin.**

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

When writing to advertisers kindly mention The Wisconsin Farmer.

HOLSTEIN-FRIESIAN CATTLE.

Holsteins For Sale

2 OF MY young A. R. O. Holstein cows, 2 yearling heifers due to calve in Dec. All with calf by North Star Cornucopia Sir Beets. His dam's record 698.772 lbs. in 334 days. 2 heifer calves, one out of a 15.216 lb. two year old, and one out of an 18 lb. two year old, will be sold in Watertown sale October 25 and 26.
Charles Van der Schaaf - Sparta, Wis.

2 HOLSTEIN BULLS

OF SERVICEABLE age. One from Gordonia Johanna Aaggie Echo 151460 with 15.50 pound seven day record and sired by the richly bred bull Julip Segis Korndyke (80640). One sired by Daisy Johanna 5th, a 27-pound bull and the dam, Queen Liliuokalani De Kol 2d, 213904, a 12-pound Junior 2 year old sired by Julip Segis Korndyke. Price $85.00 and $125.00.
L. V. Garvens - Brookfield, Wisconsin

A RICHLY BRED

JOHANNA BULL

SIRED by the 26-pound bull, **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.** Address
GEO. GIBSON NASHOTA, WIS.

THREE REGISTERED HOLSTEIN BULLS FOR SALE

READY for service, sired by Johanna Spoffard Corona 71305. Also bull calves for sale sired by Butter Boy Mink Pontiac 133161 from A. R. O. dams. Chester White swine, both sexes, leading blood lines, for sale. Address
COOK BROS. BURLINGTON, WIS.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.
EARL NORWOOD, GAYS MILLS, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

HOLSTEINS WANTED

I WANT a carload of Holstein cows or heifers, high grades, for which I will exchange 80 or 160 acres of land, 3½ miles from Deep River, Itasca county, Minnesota, located on Chase Lake, good soil, has about $2,000 worth of timber, 160 rods of lake shore, at $25 per acre. If desired will give long time balance. This land is cheap but I need the cattle. For further particulars, address M. J. Barney, Owner, Lake Crystal, Minnesota.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter for the year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.
J. H. Henderson - Elkhorn, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write
W. H. S. Rhoda Watertown, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address
JOHN HASSE MONROE, WISCONSIN

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

PABST BLACKBERRY KORNDYKE

SIRE: Korndyke Segis Johanna, our $12,500 junior sire by Johanna McKinley Segis that is by King Segis and out of Johanna DeKol Van Beers 40.07. Korndyke Segis Johanna's dam Pontiac Lady Korndyke 38.03 by Pontiac Korndyke 2d, dam Lady Korndyke Pauline DeKol 29.14 by Pontiac Korndyke,

DAM: Pabst Blackberry at 3 years, 31.68 by a 29.42 (3 years), grandson of Hengerveld DeKol.

2D DAM: Pabst Pontiac Burke (3 yrs.) 23.24, by King Pontiac Champion, our senior sire by King of the Pontiacs

3D DAM: Edith DeKol Burke Hengerveld 33.86, by DeKol 2d's Butter Boy 3d.

This bull calf is consigned to the Watertown, Wis., sale October 25th and 26th, 1916. He is as good as his pedigree. If he brings more money than you care to pay, don't be discouraged, but take the interurban car at Watertown and visit the Pabst Stock Farm, a distance of 15 miles. We have over 30 young bulls out of high producing A. R. O. cows to select from.

Pabst Stock Farm
Dept. 30 Waukesha Co., Oconomowoc, Wis.

THE 30.90-LB. SHOW BULL NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.
FRED ALBRECHT WATERTOWN, WISCONSIN

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

KING PONTIAC PORTIA and Richland Sir Ormsby Korndyke

(Out of Aaggie Texal Wayne 2d 1,078 pounds)

ARE the sires of the HEIFERS we are offering for sale. All from A. R. O. dams up to 27 pounds. One heifer, half sister to a 36 pound cow. A limited number will be sold. Write for pedigrees and records. Address
C. C. FRIES & SON RICHLAND CENTER, WIS.

2 Yearling Sons of the Richly-Bred Holstein Bull KING HENGERVELD PONDYKE

THIS bull has 20 A. R. O. daughters, 2 with records over 30 pounds of butter in 7 days. He was sired by King of the Pontiacs, that has 175 A. R. O. daughters, 2 with records over 40 pounds. Bull No. 1, born December 18, 1914, ¾ white, good and straight. Dam, Kinsman Beauty, 19.25 lb. 7-day record, 675 pounds butter and 16,032 pounds milk in a year. She is a granddaughter of Pontiac Aaggie Korndyke. Price of bull $150. Bull No. 2, born September 24, 1915, ¾ white, very straight. Dam, Roberta Fearless Johanna, a show cow, calved on show circuit so not yet tested, but will be this fall. Her dam and grandam both have 7-day and yearly records 757-784 pounds of butter for the year. Price $125. Send for extended pedigrees. Address **DR. DAVID ROBERTS, R. 4, WAUKESHA, WIS.**

2 Richly Bred Holstein Yearling Bulls

BOTH sired by **King Pietertje Hengerveld Ormsby,** a full brother to **Pietertje Maid Ormsby.** Both are out of daughters of **Sir Aaggie Ormsby.** One an A. R. O. cow making 17.50 pounds butter as a three year old. These bulls are of **Ormsby** breeding on both sides. Send for extended pedigrees and prices. **HUTCHINSON BROTHERS & BURBACH, RANDOLPH, WISCONSIN**

450 HOLSTEINS AND GUERNSEYS COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.
EDGEWATER STOCK FARM FORT ATKINSON, WISCONSIN

10 REGISTERED HOLSTEIN COWS FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

OLATHE-HOLSTEINS
STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer **for sale** surplus stock of our own raising.
SILVER SPRINGS FARMS CO. - EAU CLAIRE, WISC.

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address
C. F. Dineen Cedarburg, Wisconsin

HILLSIDE STOCK FARM

OFFERS young Holstein bulls for light service. from a grandson of King of Pontiacs and A. R. O. cows with records up to 600 lbs. milk, 24.06 lbs. butter in a week. Straight, mostly white; $65 to $200; also 6 cows. Farm 1½ miles south of Reedsburg, Sauk county, Wis. Kirkpatrick Brothers.

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.
GROVE BROS. COLUMBUS, WIS.

LA BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutchie's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons Elgin, Illinois

HOLSTEIN-FRIESIAN CATTLE.

G. A. SCHULZ
Adell, Wisconsin
BREEDER OF HOLSTEIN CATTLE

FOR SALE
A BEAUTIFUL Holstein bull calf, ⅞ white, from a daughter of Pearl Longfield De Kol, the cow that took four Association prizes this year. His dam has a record of 23 lbs. butter as a three year old; 891 lbs. butter in 331 days as a four year old. Grandam has a record of 27.29 lbs. butter in 7 days and 28,050.5 milk and 1,215 butter in one year. The sire is a grandson of Hengerveld De Kol. Calf was born May 9, 1916.
Harry Keach **Glenbeulah, Wis.**

GREENBUSH STOCK FARM
TO increase your profits buy a bull sired by Princess Mercedes Piebe Champion 98024, whose dam has a record of 26.39 pounds butter in seven days as a four year old, and 667.4 pounds in one year as a two year old. Write for description and price.
R. B. Melvin, Prop. **Glenbeulah, Wis.**

FOR sale—7 registered Holstein heifers coming 2-yrs.old, granddaughters of King Lyons, bred in May and June to King Segis Alcartra Beauty Herd Sire 136938. Sire, King Segis Pontiac Alcaltra 76602, the $50,000 bull, grandson of King Segis, dam a 23½ lb. 2 year old daughter of Johanna McKinley Segis, the $25,000 son King Segis and Johanna De Kol Van Beers, the 40 lb. $7,000 cow with butter record as follows: 7 days, 40.07; 30 days, 151.39; 60 days, 288.45; 90 days, 416.71; 120 days, 541.35. He is a beautiful individual with all the dairy qualities we like. Will weigh 2,000 lbs. at 2 years. For prices and description address Jas. Doyle, Waldo, Wis.

2 Bulls
TWO good bulls of serviceable age, with good, A. R. O. backing on both sides. These bulls are under one year old, are large and straight and good all around individuals, three-fourths to seven-eighths white. If you are interested in stock of this kind write for price and pedigree. **Mountain Ash Stock Farm, J. B. Cain, Owner, Glenbeulah, Wisconsin.**

CARLOAD YEARLING HOLSTEIN
HEIFERS
AND a few two-year-olds for sale. Will sell them separately or as a whole.
August Meyer - Plymouth, Wisconsin

Registered Holstein Heifer
AND **bull calves** sired by **Pabst Canary Pontiac Champion 142885**, a grandson of King of the Pontiacs, that has 165 A. R. O. daughters. Write for pedigrees, description and prices.
Wm. Fenner - Sheboygan Falls, Wis.

For Sale
KING Piebe Champion, three years old. 1 bull from dam. A. R. O. 22,093 pounds, 16 mos. o.d. 3 bull calves, six weeks old for sale cheap if taken at once.
Fred Dankwert - Sheboygan, Wis.

Registered Holstein Cows
AND heifers to freshen in fall. Bred by Sir Veeman Hengerveld Wayne 9th and from 2 to 5-months-old bull calves. Address
J. P. Brill, Jr., R. 5, Sheboygan, Wis.

JOHN MELIUS
ADELL **WISCONSIN**
Breeder of registered Holstein cattle. Herd headed by the 28.65-pound bull,
KING OF SCOTT VALLEY 98813

REGISTERED HOLSTEIN
HEIFER calves, about two months old, sired by Piebe Champion 16th, a richly bred bull backed by high seven day and yearly records.
Ernst Markwardt - Sheboygan Falls, Wis

Bates
Stock Farm
75 HEAD Registered Holsteins to select from —herd headed by Walker Prilly Ormsby Wayne, whose dam and sire's dam average over 30 pounds of butter in seven days.
G. W. Bates, Prop. - Waldo, Wisconsin

MAPLEHURST
Dairy and Stock Farm
REGISTERED HOLSTEINS. Herd headed by a grandson of Johanna McKinley Segis. Stock for sale at all times. Address
T. H. THACKRAY, Proprietor
Route 30 **Glenbeulah, Wisconsin**

2 Well-Marked Bulls
1-2 to ⅞ white; 11 to 12 months old. Straight rumps, ready for service. Also heifer and bull calves for sale. All the young stock is sired by Piebe Champion 2d 91262, a richly bred bull backed by high seven-day and yearly records. Stock is priced for quick sale. Address
Henry W. Breher, R. 7, Sheboygan Falls, Wis.

2 WELL-MARKED BULLS
FOR SALE. Lake View Model Pontiac Aaggie, born January 2, 1914. One bull calf born November 24, 1915.
W. F. Liebenstein - Cascade, Wisconsin

Registered Holstein Stock for Sale at All Times
WM. LAUX
RANDOM LAKE **WIS.**

There are 40,000 Dairy Cows in
SHEBOYGAN COUNTY, WISCONSIN
The greater part of which are Holsteins. No matter how many you want or of what type, it will pay you to come to Sheboygan county. Thirty-six of the best pure-bred breeders are offering cattle for sale at the present time, and a great many high-grade springers and heifers are available.

1, Harry Keech, Glenbeulah, Wis.; 2, J. B. Cain, Glenbeulah, Wis.; 3, R. B. Melvin, Glenbeulah, Wis.; 4, T. H. Thackray, Glenbeulah, Wis.; 5, J. M. Rock, Plymouth, Wis.; 6, Emil Titel, Plymouth, Wis.; 7, Aug. Meyer, Plymouth, Wis.; 8, Struve Bros., Plymouth, Wis.; 9, C. J. Nehrling, Plymouth, Wis.; 10, G. W. Ubbelohde & Sons, Sheboygan, Falls, Wis.; 11, Truttschel Bros., Sheboygan Falls, Wis.; 12, Wm. Fenner, Sheboygan Falls, Wis.; 13, Pinehurst Dairy, Sheboygan Falls, Wis.; 14, Henry Walsh, Sheboygan Falls, Wis.; 15, Fred Dankwert, Sheboygan Falls, Wis.; 16, Adam Lorenz, Sheboygan Falls, Wis.; 17, D. E. Vanderhoff, Waldo, Wis.; 18, W. F. Liebenstein, Cascade, Wis.; 19, John Melius, Adell, Wis.; 20, G. A. Schultz, Adell, Wis.; 21, P. J. Liebenstein, Adell, Wis.; 22, Wm. Laux, Random Lake, Wis.; 23, O. C. Baum, Random Lake, Wis.; 24, R. C. Stolper, Random Lake, Wis.; 25, G. W. Bates, Waldo, Wis.; 26, J. Doyle, Waldo, Wis.; 27, B. C. Hicken, Adell, Wis.; 28, Walter Hammen, Adell, Wis.; 29, James Mulvey, Cascade, Wis.; 30, John Fellenz, Kewaskum, Wis.; 31, John Liezen, Oostburg, Wis.; 32, G. W. Weiberdink, Oostburg, Wis.; 33, J. P. Brill, Sheboygan, Wis.; 34, Ernst Markwardt, Sheboygan Falls, Wis.; 35, Henry Breher, Sheboygan Falls, Wis.; 36, H. R. Weiskopf, Cleveland, Wis.

Registered Holstein
CALVES of both sexes for sale. Bulls $40 and up; heifers $85 and up. Sired by Sir Ormsby Pontiac Merc des
B. C. Hicken **Adell, Wisconsin**

JAMES MULVEY
CASCADE, WISCONSIN
Breede of Registered Holstein Cattle
Stock for sale at al

D. E. VANDERHOFF
WALDO **WISCONSIN**
Breeder of Registered Holstein Cattle
Stock for sale at all times.

Holstein Calves for Sale
REGISTERED heifer and bull calves for sale sired by Dr. Johanna Sarcastic 74862.
Walter P. Hammen **Adell, Wis.**

Sire, Sir Pinehurst Champion, for Sale
A BULL calf from Vickery Vale Beechwood, that made 1,225 pounds butter in one year, and his four nearest dams average over 900 lbs. in a year. A bull from Vickery Vale 2d, that made 900 lbs. in a year, and is a full sister to Vickery Vale Beechwood. Address
EMIL TITEL, R. 27, PLYMOUTH, WIS.

SIRES in service—King Segis Concordia Hengerveld 96214. Sire King Segis De Kol Korndyke 56110. Dam, Sadie Vale Concordia 3d's Hengerveld 100308. King Korndyke Akkrummer Ormsby 166274. Sire, Sir Korndyke Hengerveld De Kol 41266. Dam, Akkrummer Ormsby 112773. Enrich the blood of your herd by using a bull bred for size, type, constitution and production and related in a close degree to King Segis, Hengerveld De Kol, Pontiac Korndyke, Sir Korndyke Hengerveld De Kol, Colantha 4th's Johanna, Mabel Segis Korndyke, Pontiac Clothilde De Kol 2d, Pietertje Maid Ormsby and Duchess Skylark Ormsby.
Pinehurst Dairy - Sheboygan Falls, Wis.

CLOVER MEAD FARMS
HERD SIRE
Dutchland Creamelle Ascalon Lad
FIVE dams average: 7 day, butter 28.97; milk 631.20; 30 days, butter 118.46, milk 2,565.20; 1 year, butter 995.00, milk 24,100.00. One yearling bull ready for service. Write for information.
C. J. Nehrling, Prop. - Plymouth, Wis.

HEIFER and BULL CALVES
FOR SALE sired by the 28-pound bull, King Johanna Abberkerk 149412, whose dam made 28.71 pounds of butter in seven days; 677.45 pounds butter in a year; 109 pounds of milk in one day. When in need of registered Holsteins write us.
STRUVE BROS. PLYMOUTH, WIS.

J. M. ROCK
PLYMOUTH, WIS.
Breeder of Registered Holstein Cattle
Stock for sale at all times.

Truttschel Brothers
Sheyboygan Falls, Wis.
HERD has A. R. O. 7 day records up to 30.2 lbs. butter. We offer choice bull calves from dams with records from 22 to 26.93 lbs. butter. Prices $75 each and up. Write or call.

For Sale
BULL calves, sire Johanna Segis Pontiac Polkadot; grandsire, King Segis Pontiac Polkadot, that is a full brother in blood to King Segis Pontiac Alcartra.
R. C. Stolper - Random Lake, Wis.

GERRIT J. WIEBERDINK
OOSTBURG, WISCONSIN
Breeder of pure-bred Holstein-Friesian cattle. Stock for sale at all times.

Registered Holsteins
FOR SALE—Cows from five to nine years old, price $125.00 to $200.00. Bull calves from $35.00 and up. Visitors welcome.
John J. Fellenz **Kewaskum, Wis.**

CLEVELAND HERD offers a 29.50 lb. 7-year-old cow—fine individual. Due December 3d by a 30-lb. Pontiac bull. Also two bull calves 7 months old, one from a 24-lb. cow and one from a 26.18 lb. junior 3-year-old, marked over half white, well grown. Send for pedigree and extra low price H. R. Weiskopf, Cleveland, Wis.

SPRUCE LAWN STOCK FARM
OFFERS two registered Holstein bull calves, one from 19.60 pound 2-year-old dam. Price $100. The other from 18.56 pound dam. Price $65. Also several grade yearlings for sale. Write you wants. Address **G. W. Ubbelohde & Sons, Sheboygan Falls, Wis.**

FOR SALE
THREE granddaughters of Sir Johanna De Kol. One granddaughter of Sir Veeman Hengerveld. Bred to Cedar Lawn Sir Johanna De Kol. Also four of his sons.
John H. Liezen - Oosterburg, Wis.

Holstein Calves For Sale
KING Segis Pontiac Beauty 112516, at head of herd, three years old, ten A. R. O. sisters. All bulls one year old sold. A few bull calves for sale, two heifers, one one-year-old, one three months, dark in color. Address Henry Walsh, Sheboygan Falls, Wisconsin.

Holstein Bull
KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Kigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer **Kaukauna, Wisconsin**

TWO SONS OF THE 27.56-POUND BULL
Sir Johanna De Colantha De Kol
THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
B. F. Winckler & Sons **Medina, Wis.**

Yearling Son
READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298**, whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by **above bull.** Both are well marked, more white than black. Price $125.00. Send for pedigrees.
Schley Brothers - Waukesha, Wis.

19.8-POUND YEARLING SON
Of the Richly Bred Ormsby Bull
BEAUTY PIETERTJE PRINCE ORMSBY
WHOSE sire is the 32.52 pound bull, **Beauty Pieterje Prince,** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.
Dopp Brothers - Ixonia, Wisconsin

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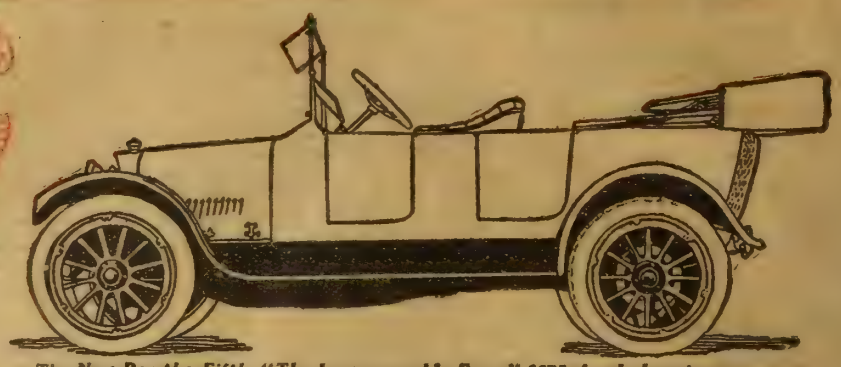

The New Reo the Fifth, "The Incomparable Four," $875, f. o. b. Lansing

Here's the Secret of Reo Reliability

DOUBTLESS YOU'VE WONDERED—knowing as you do, how absolutely dependable are Reo cars—how free from troubles and how low in upkeep cost:

YOU'VE WONDERED wherein lay the secret of that reliability that is Reo.

WELL, WE'LL TELL YOU. And then you'll wonder at its ridiculous simplicity.

YOU READ, IN THE ADS, how this engineer or that inventor has revolutionized the science of engineering and produced a wonder-working car.

YOU READ THAT every year—only this year it's another engineer. That revolutionary stunt of last year has been forgotten.

IT WAS AS IMPOTENT as a South American revolution—it didn't!

SO THE SECRET ISN'T to be found in any such feat or invention.

REO PERFORMANCE—reliability, dependability, uniformity of performance of all Reos, of whatever model or price—is the result of the taking of infinite pains in the designing, the making and the inspection of the Reo product.

IT'S THE LITTLE THINGS that count—not the big ones.

ANYONE—A BOY EVEN—can make a motor that will be "different." Or an axle, a transmission or a set of springs that might impress the tyro as new and wonderful.

BUT TO MAKE ANY of these vital units better—that is the task—that should be the aim. It has always been the Reo aim.

INFINITE CARE in the fabrication and then in the inspection, and finally in the testing of the assembled whole—that is the secret of Reo success in making, not the most but the best, automobiles.

IF THERE ARE 2000 PARTS in a motor car; and if there's an average of four machining operations on a part—that's 8000 chances for something to go wrong!

AND ONE DEFECTIVE PART—one, however small or seemingly insignificant—that does not fit absolutely, and you'd have a car that would be less than a Reo in performance—more than a Reo in cost of upkeep.

INFINITE PAINS, WE SAID: Perhaps that's too big a term. But if you could know how great is the task—how unremitting the care—to guard against even one little error creeping into any one of these 8000 places—you'd grant us the word "infinite."

"THOSE PESKY LITTLE TROUBLES that are always happening with other cars, are unknown to the Reo owner," says one Reo dealer, "and that's why the demand for Reos is so great."

WHEN YOU STOP TO THINK about it, the troubles you've had with other cars were not big troubles. Your motor didn't drop out of your car or your transmission strip or your frame break in two.

IT WAS THE LITTLE THINGS that pestered your motoring life—parts shaking loose or getting out of adjustment. Dust in bearings—oil leaks—everywhere. Squeaks and creaks and rattles.

ALWAYS THE DREAD WHEN STARTING out that you might not return. Always the fear when in a hurry that some pesky little trouble resulting from some pesky little defect, of which you were cognizant, might delay you. Wasn't there?

WELL THEREIN LIES the big difference between Reos and other cars—the big difference is in attention to the little things.

IT IS NOT UNCOMMON—in fact—it is the rule—for a new Reo owner to drive his car thousands of miles—a year, two years—without even seeing the inside of a garage or lifting the bonnet to make an adjustment or repair.

HONOR AND FAITH and a Good Intent—these and the attention to little things they dictate—result in Reo Reliability as it is known the world over, "The Gold Standard of Values" in automobiles and motor trucks.

REO MOTOR CAR COMPANY
LANSING, MICHIGAN

The New 7-passenger Reo Six Touring Car, $1150, f. o. b. Lansing

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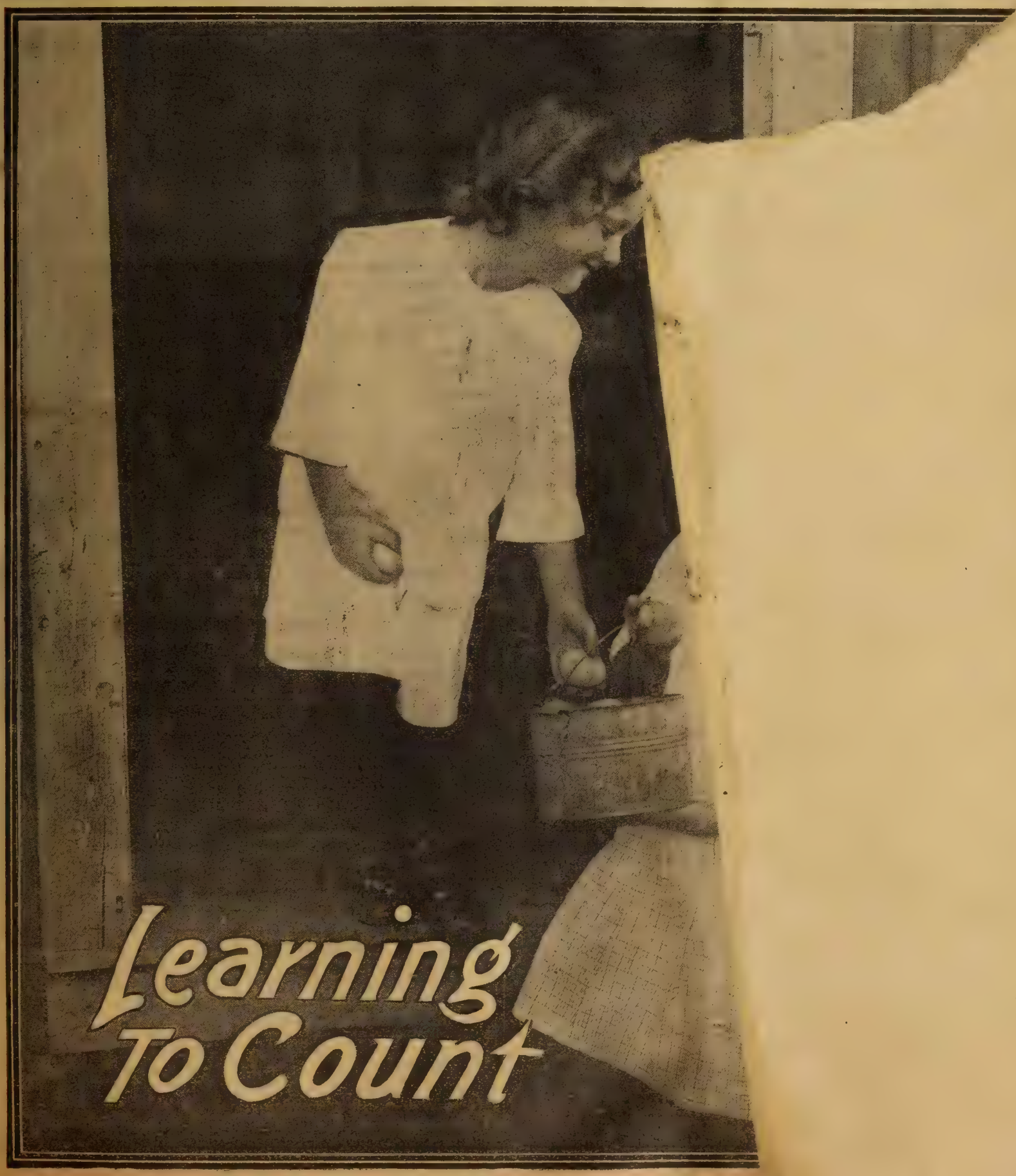
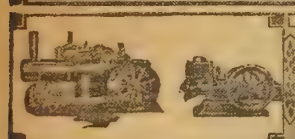
Ad

VOL. XLV. NO. 42. THURSDAY, OCTOBER 19, 1916. WHOLE NO. 1812


Learning
To Count

FARM MECHANICS



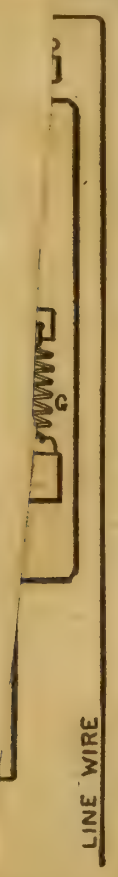
Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

A Noisy Car.

I have a nearly new Ford auto. When I speed it up to about twenty miles per hour, it makes a grinding, scraping and cutting sound, as though some parts were getting hot and dry. Some seem to think it is in the transmission; others tell me it is in the brakes; and others say it is in the differential. Please give me your opinion.

Answer.—The noise might come from any of the parts mentioned. Since your car is new, the trouble is most likely to be noisy differential gears. The noise may or may not indicate trouble. If the car were older the noise would probably come from ...linings on the brakes or transmission. It is possible that the ...gears are noisy. The ...d is often used in ... to locate a noise ...btain a nice, ... feet long ... pencil. ...up



...made from ...hree-eighths ... five inches ...d about 250 ...ouble cotton- ...e of the mag- ...e wound right ...t hand on the ...nt will flow in ...wo dry cells at ... should operate ...can be used if ...k.

... may be bought ...re costs $6 to $7

to Start.

...our paper the rea- ...al car, 1912 model, ...s equipped with a ... The compression ...also the ignition. I ...ly to the carburetor. ... freely to the car- ...ried everything pos- ...e trouble, but all my ...n vain. The car has ...l for over a year.

... of the starting ...hany owners of cars ...s are experiencing is ...oline. If possible, ob- ...bline that evaporates ...e hand, leaving a white ... make sure that the ig- ...ight. Clean the spark ...g the carbon from the ... is a spring to keep the button end of the lever up. By pressing down the button end of the key lever, L, the circuit is closed and the current from the batteries, MM, flows through the line wires to the sounder at the other end of the line, causing it to click. It clicks again when the circuit is broken. If the time between clicks is very short the operator considers it a dot; if longer, a dash. Use No. 12 or No. 14 galvanized steel wire for the line wire. While two line wires are better, only one is often used, the other being grounded at each end of the line, the ground forming the return circuit. The ground wire should extend deep enough to always be in moist ground. A small copper plate should be fastened to the end.

The sounder consists of a hardwood base, D, supporting two blocks, E. F, and the electro magnet, M. If E is made of wood a tack should be driven into it under the lower screw so that it will click. It is best to make E of metal. C is a brass bar with a piece ...oft iron, A, fastened to it. A ex- ...the poles of the horse- ... The

porcelains. Connect the wires to the plugs; lay them on top of the cylinders and turn the motor over, so as to see that each plug is giving a good spark. Then put the plugs back in place.

We presume you have a Model L Schebler carburetor. To adjust it proceed as follows: Adjust the auxiliary air valve so that it seats lightly. Close the needle valve completely and then open it four or five turns. Flood the carburetor by holding down the priming lever. Open the throttle about one-third the way and start the motor. Then adjust the throttle lever screw and the needle valve adjusting screw until the motor runs smoothly at the desired speed. Having obtained a good adjustment at low speed make no further change in the needle valve adjustment. Shift the pointers on the dials until a good adjustment on high and low speed is obtained. The final adjustments can best be made from the running board of the car while it is running. Remember that sooty, black smoke indicates too much gasoline.

With the spark fully retarded the ignition should occur just after the end of the compression stroke in each cylinder. The exhaust valve should close and the intake valve open soon after top center after the exhaust stroke. A properly timed motor having good compression, a good spark and the proper gas mixture cannot fail to run.

Ask your neighbor to subscribe for The Wisconsin Farmer.

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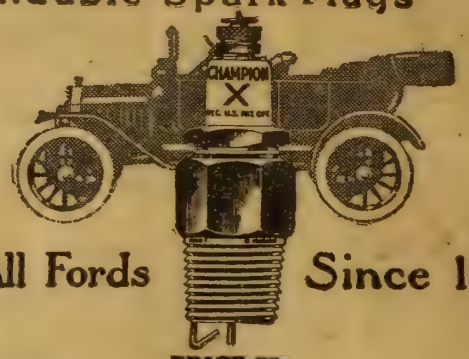

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Champion Spark Plug Company
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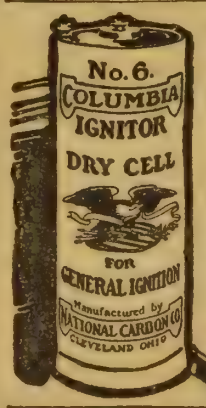

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The Wisconsin Farmer

THURSDAY, OCTOBER 19, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

FIRE PREVENTION.

FIRE PREVENTION DAY, which was observed in the cities last week, passed without any observance in the country. It might be well for all of us, however, to consider the matter here between ourselves for a few minutes. Having had the very unpleasant experience of seeing my business burned out three different times, the last one being less than three years ago, I have some very decided ideas on this subject and may perhaps be excused for obtruding them on my readers here in this manner.

It has always seemed to me that we should be far more careful in regard to fires in the country than in the city, for, while fires may spread over a large area more rapidly and cause a greater amount of devastation in the city, they have fire protection there, with trained men always on guard. In the country, however, it is altogether different. An overturned lantern or lamp, matches carelessly trampled under foot, a lace curtain blowing into any flame, and the next minute there is a conflagration against which there is no adequate protection in the great majority of our farmhouses today. For this reason we should all of us resolve to be exceedingly careful with fire, or with anything which might cause a fire, for not only is our hard-earned property at stake, but likewise the very lives of our loved ones.

Certain things are so fundamental in this respect that I hesitate to call attention to them, yet the large number of fires in the country, year after year, convinces me that many are not as prudent as they should be. That matches should be kept out of the reach of the children; that lanterns should be hung up in the barn securely, so as to minimize danger of overturning; that rubbish should not be allowed to accumulate, with spontaneous combustion always imminent; that open flames of any kind should not be allowed in close proximity to inflammable materials; that gasoline cans should be kept securely closed and removed at least twenty feet from any building—these things should be known to us all and observed by us all. Yet many—very many—are criminally careless in regard to matters of this kind.

Then there is the great danger at the holiday season: The lighted candles on the inflammable Christmas tree; the dangerous fireworks on Fourth of July, and so on. Shall we not take every precaution against accident? Scenes of joy and gladness may quickly be turned into scenes of sorrow and sadness, and we, who were responsible, will regret it all the rest of our lives.

Let us consider this matter of fire prevention at our farm neighborhood clubs, every now and then having a sensible talk on the subject. It is right in line with the improvement of the farm home; the substitution of electric lights, for instance, for the old coal-oil lamp, and so on. Whenever we think of farm improvement, let us likewise think of fire prevention, for the two are very closely connected. I am almost tempted to turn this preachment against unnecessary fire losses into a plea for the inauguration of electric lighting systems in our farm homes and outbuildings, for now that the storage battery has been perfected to such a high degree and generators have been put within the reach of most farm purses, there is little or no reason why the gasoline engine, which runs the cream separator a few minutes twice a day, should not be set to the task of generating the electricity with which to light farmhouse, barn, milk house and, in fact, all the buildings of the farmstead. We would then enjoy urban conveniences and minimize fire danger almost to the vanishing point.

Will you consider what I have said here and make up your mind to do everything possible to prevent the possibility of fire in your home, to the end that we may all dwell together in the country in greater comfort and security, unharrowed by any poignant thoughts of "what might have been."

FARM LOANS AT 4 1-2 PER CENT.

IT IS a little too soon to make any positive announcement, but I am privately advised that the federal farm-loan board is hopeful of making loans to farmers, under the new law, at as low a rate as 4½ per cent. This is practically 1½ per cent less than the interest which the farmers of Wisconsin, Iowa, Missouri and Illinois pay today (adding the commission and bonus to the rate which the mortgage bears on its face) and cuts in two the amount which farmers in the newer parts of our country are obliged to pay.

I am advised that members of the board are optimistic over the outlook, and believe that they will be able to dispose of the government land bonds (which, as I pointed out last week, will be in denominations as low as $25 and $100, and which I believe will find a ready sale) at as low a rate as 4 per cent, with ½ per cent all that is necessary to meet the administration expenses. The law prohibits loans being made to farmers at a rate more than 1 per cent above that which the bonds bear, so that, should the bond interest be 4 per cent, as is hoped, the mortgages cannot possibly carry more than 5 per cent. Inasmuch as the average rate here in the grain belt is given by investigators of the United States Department of Agriculture as 5.9 per cent, it can be readily seen we are in for a big saving, particularly in view of the fact that the farmers of Iowa are borrowers, on their farms, today to the extent of $204,242,722, Wisconsin farmers to the extent of $146,815,313, and so on. Were the farmers of Iowa and Wisconsin alone to save 2 per cent on their annual mortgage-interest charges, they would find themselves $7,021,160 better off at the end of each year, an amount well worth saving in these days of the high price of living.

I have good reason, moreover, to believe that farmers all over the country are already taking the necessary preliminary steps to avail themselves of the advantages of the new law. I have already told of the large number of letters of inquiry which I am receiving every day from farmers all over the grain belt. The same situation exists throughout the country generally. Here, for instance, is a report which a friend sends me from North Carolina, showing the formation already (several months before the land banks are open for business) of seven organizations of farmers seeking to obtain money from Uncle Sam at a lower rate of interest than they are now obliged to pay and for a longer period of time:

Seven applications for a charter to organize a National Farm Loan Association have been received as follows:

Chadbourn National Farm Loan Association, A. B. Bryan, secretary; $36,900 applied for.

Raeford National Farm Loan Association, W. F. McLellan, secretary; $22.750 applied for.

Youngsville National Farm Loan Association, S. A. Mitchell, secretary; $20,600 applied for.

East Arcadia National Farm Loan Association, Dr. J. D. DeVane, secretary; $20,700 applied for.

Council National Farm Loan Association, Ira W. Paul, secretary; $30,700 applied for.

Mecklenburg County National Farm Loan Association, H. M. Victor, secretary; $31,000 applied for.

Rutherfordton National Farm Loan Association, W. R. Hill, secretary; $21,750 applied for.

The loans applied for by these seven farmers' associations total $184,400, with farm property given as security valued at $463,530. It does not look as though Uncle Sam were taking many chances, with the security worth two and one-half times the loan and with at least seventy farmers (a minimum of ten to the association) standing back of one another's loan.

Letters continue to pour in upon me, asking for further details. I am only too glad to answer these to the best of my ability, and hope that the information, which I am thus enabled to give, will aid farmers in taking advantage of a law which, while it may not be perfect, seems to offer exceptional opportunities to the farmer anxious to increase his land holdings and to advance in his chosen field of activity.

A HOUSEHOLD TRAGEDY.

IN THE course of a year, I receive many thousands of letters, on divers subjects, from all sorts and conditions of people. There are few of these letters which do not interest me in some manner. Many of them are personal to the point of intimacy, although the writers and I have never seen each other. Some reveal the hearts of the writers as nothing else could possibly do.

In order to show you how interesting is this daily task of reading the mail and to attempt to solve the problem presented, I am going to take the liberty to reprint herewith a considerable portion of a letter written me by the wife of an Illinois farmer. Her letter deals with the age-old problem of the partnership between husband and wife; what are the rights and privileges of each, and so on. This woman is exceedingly capable; I should judge from her letter that she is well educated, extremely refined, highly talented and wonderfully capable withal. She does me the honor to read and to like what I write, for she says:

> I want to let you know how I enjoy your editorials. Your paper comes on Friday just before dinner. As soon as I have eaten my dinner I usually make a dive for the paper (providing that hubby or the hired man do not have it already) and I seek the comfortable davenport in the nice, cool living room and read your editorials, the story and the household page. The dishes have to wait and the two men have to seek consolation with the six other magazines and newspapers that come on that day.

Now, this woman, the wife of a hard-working, prospering Illinois farmer, has a grievance. On the surface, none are more fortunate than she. Although they do not yet own their farm, they possess most of the comforts of life and enjoy most of the conveniences of city folks. Yet, what she misses (having, according to her own story, been a working woman, earning her own money, before she was married) is an equal right in the partnership between husband and wife, money of her own, a voice as determining as her husband's in the family council which determines the ways and means of the household. I have her permission to quote from her letter, as follows:

> We have both worked hard. At the end of ten years of married life our wealth has increased many times. The stock has multiplied. All kinds of labor-saving machinery makes it easy for the hired men. We have an automobile. It is only a question of time before we will have a farm of our own. In spite of all this I, some days, cannot see that I have gotten very big returns for my amount invested. I have a nice home. Yes, but I had a good home before. A husband's love. Yes, but no access to his pocketbook. A very desirable position in the social life of our community. Yes, but I have won that by my own personality. An automobile and sixteen horses. Yes, but often when I want to go to town to some social doings I have to walk seven miles or stay at home. (I walk.) I have very respectable mail-order clothes, but not one dollar to go shopping on, so dear to a woman's heart. Our table is loaded with good things to eat. Because I am a good cook and spend half of the 365 days of the year cooking, baking, canning and preserving.
>
> My furniture is becoming somewhat old-fashioned and would not bring half its value on the market, although it will probably last a lifetime. I have no conomic value. It counts for little that I have cooked and scrubbed, mended and made over clothes, toiled for thirty-one different hired men, raised poultry and made butter. Every dollar spent in developing my own individuality is begrudged because I might get too high notions for a farmer's wife. Goodness knows all the money I have to spend as I please is the little bit of egg money that remains after the groceries are paid for. I am not allowed to have anything charged and never draw a check without permission and then have to prove that it is for necessities.
>
> My husband is hard working and saving, has no bad habits and never beats me or abuses me. In his heart he really thinks he is a kind and generous husband, and proud that he is able to support a wife so well. Many a time I have no doubt he smiles to himself on having so skillfully nut a curb on the extravagant ideas of his better half (?). How complacently he takes to himself the credit for this prosperity.
>
> I am being "supported." Yes, but I could support myself in other fields with one-tenth the back-breaking toil. I could take up office work tomorrow just where I laid it down, for I haven't allowed my brain to grow sluggish. I could teach school, for I haven't helped the neighbor children with their multiplication tables or algebra in vain. There are a dozen things that I could do. But I am no "quitter," so hubby need not worry.

My friends, there is a problem here—one so large that neither you nor I, individually, can solve it; yet, by counseling together, we may be able to improve conditions, not only in that household, but throughout the country generally. Shall we discuss this matter here between ourselves, in the hopes that the husband of this Illinois farm wife may himself be bettered and all of us enlightened? This brave little woman would not have written in such a vein, she adds, had it not been for the fact that her husband sold a carload of stock that day, and when she laughingly asked him to pay her off, he refused to turn over to her even a single dollar. Perhaps he had a good reason for refusing; perhaps there was a note coming due, some urgent indebtedness to meet. At least, however, he should have explained their financial affairs and refused her in such a manner that she would not have felt hurt and imposed upon. What advice shall I give her? Will all of you help me in this matter, which seems to me so vitally important not only in this one household, but throughout the country generally?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Wisconsin's Wealth in Crops.

THE government crop report covering the estimates on all crops in Wisconsin up to October 1st has just been issued. It is somewhat interesting to note the production which in many cases is practically the same as will be given on the final report.

In 1915 there were 40,825,000 bushels of corn raised in this state. On October 9th last year, this corn was worth 74 cents a bushel. On this basis of figuring, the corn crop last year was worth, in round figures, about $30,000.000. The estimate for production this year is 56,100,000 bushels. The final estimate will probably not reduce this figure. We have 15,285,000 bushels more of corn in Wisconsin this year than last. This tells only part of the story, as the corn this year is greatly superior in quality, having practically all matured. At this time corn is worth 79 cents a bushel. In round figures this means $44,000,000 or about $14,000,000 more than our corn crop was for last year.

In wheat, Wisconsin fell off in production this year, the total for 1915 being 4,662,000 bushels and the total for 1916 being 3,320,000 bushels, but wheat last year after harvest was only worth 97 cents a bushel. This means the wheat crop is worth $1.34 per bushel. This makes the crop this year worth $4,448,000, or in round figures $225,000 more money than it was last year.

In 1916 Wisconsin produced approximately 100,000,000 bushels of oats worth 33 cents a bushel, or $33,000,000. This year the production is approximately 80,000,000 bushels, worth 43 cents a bushel. This figures out $34,400,000 and makes the 1916 crop worth approximately $1,400,000 more than the 1915 crop.

In 1915 Wisconsin produced 26,000,000 bushels of potatoes worth 30 cents a bushel in October when most of the potatoes were sold. In 1916 it is estimated that the state will produce only 17,500,000 bushels, but the prevailing price is over $1 per bushel and the crop will bring in anywhere from $15,000,000 to $20,000,000.

The hay crop this year totals 4,375,000 tons as compared with 4,508,000 tons in 1915. This hay is worth $10.40 now, while most of it last year sold for $9 per ton. Hence, the deficiency in the crop is more than made up by the increased price. This is true of practically every product in the state.

The biggest gain in Wisconsin this year has been made by the tobacco growers who have produced about 20,000,000 pounds more tobacco than they did in 1915 and are selling it at from 33⅓ to 100 per cent more than they did a year ago. The production last year was 36,000,000 pounds and this year 55,000,000 pounds. There was some damage to tobacco in September from frost, but not so much as at first reported.

The apple crop in the state this year is only about half what it was in 1915. Prices are high for good apples, but unfortunately there is no very large amount of good apples on hand.

Taking it as a whole, from the figures quoted and based on the October 1st reports, it would seem that this is a tremendously rich year for Wisconsin despite the slump in yield on some crops. Last year Wisconsin produced between $90,000,000 and $100,000,000 in dairy products. This is very likely to be exceeded this year, as the prices paid for milk and for milk products is the highest which prevailing men have ever known. This is particularly true of cheese. Swiss cheese in 1915 in October was quoted at 18 cents—now it is 30 cents. Brick cheese a year ago was 13 cents and the recent quotation is 23 cents. Limburger has raised from 11 cents last year to 18 cents this year and block cheese from 15 cents to 25 cents, and similar advances are noted on practically all of the grades of cheese which are made in the state.

This looks like one of the very best years Wisconsin farmers have ever had. There was a dry spell for a few weeks in the summer which cut the milking production down some.

Wisconsin showed up fine last year during the wet season and fine this year during the dry season. The wet season had the largest yields, but the dry season will yield the biggest profits on account of the high prices. It is again proved that the Wisconsin farmer wins out in any kind of a year.

Our Editor-in-Chief at National Dairy Show.

THE National Dairy Show, in progress at Springfield, Massachusetts, this week, has brought together hundreds of the finest dairy cattle ever displayed in America. Early reports indicate that never before were the contests in the various classes so spirited; never before was interest in dairying (a branch of American farming which approximates in value $1,000,000,000 a year) so widespread or so keen; never before were dairymen and farmers generally so interested in the outcome, or so anxious to have the complete story of this stellar event in the dairy world told promptly, accurately and entertainingly.

The Wisconsin Farmer is pleased to be able to announce that its editor-in-chief, Mr. James Atkinson, is attending the National Dairy Show at Springfield this week, in person, and that he will write a full and detailed report of the big event, to appear in next week's issue of this paper. This insures the best, most accurate and most authoritative report which will be printed by any farm paper in the entire West, for Mr. Atkinson has won an enviable reputation in the journalistic world, combining an unsurpassed knowledge of the fine points of live stock with felicity of expression and conscientious accuracy of work. The Wisconsin Farmer is confident that Mr. Atkinson's report, in next week's paper, will be without a superior and that it will give to our readers such an intimate picture of this big national dairy show as will bring it home to all most vividly.

The National Dairy Show is of interest, not only as it brings together the kings and queens of the dairy world, for spirited contest in the show ring, but also as it assembles the largest and finest display of dairying accessories known. Mr. Atkinson's next week's Wisconsin Farmer, will accessory display and give a good idea est time-saving and labor-saving devices in the dairying industry. We are connothing bigger or better in a journalistic appear in any farm paper this year. for next week's Wisconsin Farmer and report of the world's biggest dairy ex- full.

Dirt in Milk.

GOOD breeding of dairy animals was not the only thing emphasized at the Dairy Cattle Congress held recently at Waterloo, Iowa. It is enough to have a well-bred dairy animal, of quantity production of high-test milk. These shows indicate plainly to us the value ding and the characteristics which may be but by good breeding, they tell only a part ry when they convince us that better stock ay on the dairy farm.

Exhibit of milk collected in sixteen western within the week preceding the dairy show special interest. There are a great many n Wisconsin who either furnish milk for sell milk which is sold for private conthrough the distributing houses. They terested in what was discovered concernilk which was picked up and exhibited at o. This milk was scored on a basis of 100 or perfect milk. Milk with a bacteria count was scored perfect and credited 35 points. her the bacteria count the lower the score good many of the samples were awarded on this part of the score card. Flavor and ounted 25 points in the score, and fat 10 Milk which tested 4 per cent butter fat was d 10 points and the score was cut down in tion to any percentage less than four. Solids fat counted 10 points, acidity 5 points and bottle cap 5 points. The lowest score was 53.77 and ghest 85.11. Each score represented the aver- f the score of nine bottles taken from different ery wagons in the cities where the milk was cted. In no case was any warning given the rman that his milk was to be taken or tested. best bottle of milk was picked up at Council fs, Iowa, from an unsuspecting farmer-dairyman se milk scored 94.25 points.

The writer and the inspectors who collected and ed the milk are acquainted with a number of dairymen whose samples were scored. Milk ich scored the lowest as a rule was cut most on bacteria count, several getting nothing on this re, and the count running from 250,000 to 00,000.

Two factors seem to enter very prominently into the matter of keeping milk free from dirt. First in importance is the man; second the surroundings in which the milk is produced. It may happen that a farmer or dairyman poorly equipped will get clean milk—at least within the 10,000 bacteria count, which is the standard set for certified milk. A man might give his cows so much personal attention in a poor barn that the presence of dirt and filth would be reduced to the minimum; but he could accomplish the same result much more easily with good equipment and plenty of running water. Large herds often suffer by reason of the fact that the dairyman cannot give the entire herd his personal attention, but must trust to hired men. There are hundreds and thousands of good hired men in the dairy business, and we regret to say there are a very large number of careless hired men. This is especially true where the hired men are not closely supervised by the owner of the dairy. Modern equipment is appreciated by the hired man who finds the task of keeping clean a much easier one and who will take more pride in a barn and dairy that is equipped with labor-saving and sanitary conveniences. The general average of this test, however, seemed to prove that the smaller dairy produced the cleaner milk, and especially the dairy which was directly supervised by its owner. If the owner makes his living by selling milk and does not look upon the dairy as a side line, it appears he is much more likely to have his place in a clean and sanitary condition. It is true in the dairy business as in almost every business that men and equipment count—men first, and equipment a mighty strong factor in putting efficiency into good intentions.

Learn Lessons on Draining Wisconsin Marsh Lands.

THE annual field meeting of the Wisconsin State Drainage Association was held at Racine last week. The meeting was well attended. With prop drainage in Wisconsin about 2,000,000 acres of wet marshes may be ready for the plow. This does not include tiling of unprofitable spots on thousands of farms. No one could have taken the field trip through Racine and Kenosha counties without being convinced of the possibility of draining marsh land. A number of instances were seen where before drainage one might easily drown a horse. After drainage this land is producing good crops and in a number of instances this year netting the owners $400 an acre. One of the visitors on the trip said that he would not have believed what he saw if it had been told him without seeing.

The first stop was made on the drained lands of W. J. Hansche. Three hundred acres are included in this drainage district with a fifteen-inch tile outlet to Lake Michigan. Mr. Hansche said if he had it to do over again, he would double the capacity of his outlet. One hundred twenty acres on his farm has been drained fifteen years and prior to that time had no productive value whatever. Now it is used for onions and yields 600 to 700 bushels to the acre. The same land has grown crops of corn and cabbage. Mr. Hansche estimates that drainage improved the value of this 120 acres 100 per cent. When asked what he would pay now for such land he said: "I wouldn't buy it. I would go out and buy some marsh and waste land and double my money by draining it."

Another stop was made at the F. W. Gunther farm in the Mt. Pleasant and Somers drainage district. This swamp included 2,500 acres. The drainage system has just been completed.

The third stop was at the A. P. Nelson farm in the Yorkville and Raymond district. Mr. Nelson's fine Holstein herd was grazing contentedly on an eighty that was not tillable until drainage made it so. Adjoining this eighty is a forty still unimproved. Although the same outlet runs alongside it, this forty grows nothing but wild hay, cattails and weeds. Mr. Nelson estimates the value of the drained land at $100 per acre. Before drainage it had no productive value and he failed when he made an effort to crop it, losing his time and money. Mr. Jaeger in this same district expects to get $400 an acre for his cabbage this year. Ten years ago this land was under a foot of water. Mr. Jaeger has used a little commercial fertilizer but no stable manure.

Another visit was made to the Irving G. Wheeler farm where a splendid crop of corn was raised this summer on fifty-five acres of peat soil. This soil was plowed for the first time two years ago. It was strictly a marsh piece before drainage. The corn stock this year which went into the silo measures eight to twelve feet.

The Wisconsin State Drainage Association elected the following officers: President, W. B. Coddington, of Plover; vice president, B. M. Vaughan, Grand Rapids; treasurer, A. C. Willard, Necedah; secretary, E. R. Jones, Madison. This association is doing a splendid work along a line greatly needed in Wisconsin.

International Show Is Next Important Event.

FROM first to last, the show season of 1916 has been a remarkably successful one and fair visitors as well as those who have followed the detailed reports of these affairs, as given by The Wisconsin Farmer, will enthusiastically endorse the above statement. These shows, taking them as a whole, constitute what may be called the preliminary events and they logically lead up to the climax—The International Live Stock Exposition—the date of which this year is December 2d to 9th.

The presence of foot-and-mouth disease in 1914 and 1915 prevented the holding of this great exposition, and it follows naturally, that there is a keener interest in this event than ever before, and we are calling our readers' attention to the Exposition, in the hope that the attendance this year will eclipse all former records.

There never has been a time when a livelier interest was shown in pure-bred animals of all breeds than was the case this year throughout the entire

show circuit and it is quite worth while for stockmen, who have their animals well fitted, to enter them at this final show. Entries must be sent to General Manager, M. H. Heide, Union Stockyards, Chicago, Illinois, before November 1st, that being the date when entries close.

There is a special reason why there should be relatively a larger number of entries in all classes this year than ever before, because a large delegation from South America will attend this show, for the special purpose of supplementing their herds with the best from this country. The various breeding associations have succeeded in establishing the most friendly kind of relations with the breeders of the southern countries, and it is no longer a secret that the United States will be looked to in the future to supply foundation material for all the leading breeds of live stock.

Flushing the Ewes.

IT BEHOOVES every sheep raiser to take the best of care of his flock this year, because both wool and mutton are high priced and destined to remain so for many years to come. It always pays to take good care of the flock, but we believe that sheep owners will find an unusual demand for their surplus during the next few years, as there will undoubtedly be many small farm flocks started.

The breeding season will soon be here, and it is a well-known fact that the condition of the ewes at breeding time has much to do with fertility. If possible, the ewes should be placed on succulent pasture for two or three weeks before the ram is turned with them, and in addition be fed from three-fourths to a pound of grain per head per day for two weeks before being bred. A good ration for this purpose is one composed of one-third each by weight of corn, oats, and wheat bran. If an ewe is in a thriving condition—gaining in flesh—she is much more certain to breed early, and there is also a bigger chance of her producing twins. To get all the ewes bred as nearly at the same time as possible shortens the lambing period, a matter of considerable importance to the flockmaster, and especially to the farmer whose sheep business is a side line.

It is important, too, that the ram be vigorous and strong, but on the majority of farms there is greater danger of the ewes being thin at this time of the year, especially if they have been nursing twin lambs through the hot summer months, and hence, the importance of giving them special attention at this time of flushing them, as it is called.

It is an excellent plan when turning the ram with the flock to paint his brisket with some color that will leave a mark on the wool of the ewes he serves. Twenty-one days later he should be painted with another color, so that the flockmaster may know how many of the ewes are "returning." The precaution of trimming the ewes about the dock should also be taken before the mating season opens.

Testing Associations Improve Dairy Conditions.

WHERE cow-testing associations have been formed, remarkable progress has been made by dairymen in increasing the production of individual cows. It may be accepted as generally true, that one-third of the cows used in the dairies of the corn belt are non-productive, and it stands to reason that the substitution of good cows in the place of these boarders, means more prosperity for the dairymen, at a smaller expenditure of labor.

Prof. O. E. Reed, of the Kansas Experiment Station, in a recent press bulletin, points out that the greatest advantage of the cow-testing associations is that of obtaining an exact record of each cow in the herd. Usually these associations do the work of testing between three hundred and four hundred cows, belonging to twenty-six individuals, thereby allowing one person to test each herd once during the month. From these monthly reports, the yearly records are calculated.

In addition to testing the milk and determining the yield, the amount and character of the food consumed is known, and the individual who makes the tests is placed in a position to advise the owner in regard to feeding methods. It has been found from actual experience, that the cows in the herds tested monthly show a substantial increase in the yield, as the direct result of more intelligent care they receive.

It is a well-known fact among the successful dairymen, that the same ration is not necessarily adapted to different cows in the herd. The individual that produces on the basis of 150 pounds of butter fat in a year can be carried through the winter on a very limited ration of grain, in conjunction with roughage of good quality. If she is fed liberally on grain, this will, in most cases, be converted into internal or external fat on the body, and this product is, of course, of no value unless the cow is disposed of for slaughter. On the other hand, the good cow will respond liberally to heavy feeding, it being in many cases desirable to feed as much as 12 or 15 pounds of grain daily, whereas her stall mate may be kept at a direct loss, even though she receives but 5 pounds of grain daily. The cow-testing associations have demonstrated in thousands of cases, that the proper way to feed cows is to apportion their ration in accordance with the amount of milk they produce.

One of the important benefits that comes from the work of the testing association is that it leads to community breeding, and this means that a part or all of the members of the association sooner or later undertake to handle one breed of cattle. There is an advantage in this, because members can co-operate in buying and selling their breeding stock, and they may trade herd sires, and thereby cut down expenses.

Turning Good, Deep, Honest Furrows.

AN EXAMINATION of fields that have already been fall plowed indicates that the old plan of skimming over three or four inches of the surface soil is being carried out as heretofore. In most cases the soil would be stirred more deeply, were it not for a lack of power, because nearly every man knows that deep-rooting crops, like corn, make a more vigorous growth on a deeply plowed soil, than will be the case when shallow plowing has been practiced. The advantages of deep plowing are set forth clearly in the volume, "Power and the Plow," by Ellis and Rumely, and from that volume, we now quote:

Deep furrows are more apt to be pulverized than shallow; hence to some extent the plow performs for the subsoil what pulverizing implements do for the surface layers. Three or four inches of the surface soil must be kept stirred as a dust mulch to check the capillary rise of water and consequent loss by evaporation. Underneath this mulch a dry crust inevitably forms during the growing season; hence the actual feeding area of the roots does not begin until a depth of five or six inches is reached. As between plowing eight inches and ten inches deep there is, therefore, a difference of at least 100 per cent in the zone available for the maintenance of the plant.

The moisture reservoir is increased in the same ratio. The deeper the moisture is stored, the greater is the assurance of an abundance for the needs of the crop, as each successive inch dries out more slowly. A soil weighing one ton per cubic yard weighs approximately 1,613 tons per acre, taken one foot deep. If such a soil will absorb and hold 20 per cent of moisture, and is plowed six inches deep, it will take up 161.3 tons of moisture per acre. A rainfall of 1.4 inches will supply this amount of moisture and fill up our six-inch reservoir; if the ground is plowed only three inches deep and the subsoil is hard, it would not be able to store a rainfall of more than seven-tenths of an inch, and should more water fall at one time, it will be lost and may wash the soil away with it. If plowed nine inches deep and put in good condition, such a soil reservoir would absorb and hold over two inches of rainfall at one time. A soil already containing considerable water would be filled up with less rain, and deep plowing would be still more important. Where the soils are light and winds drift them, shallow plowing may result in all the top soil down to the sole of the furrow, being blown away. Deep plowing, on the contrary, throws up heavier and rougher furrows, and tends to anchor the soil in place. Plowing deep, therefore, prevents both washing and drifting.

Deep plowing cannot be accomplished all at once on any new soil. Where the soil is heavy and compact, the prairie is apt to be covered with "short-grass" sod, indicating that only an inch or two of the surface is in condition to sustain plant growth. The soil underneath is apt to be cold and unproductive, hence must be mixed slowly with the upper layers and put into proper physical condition by good tillage and exposure to the sun and air. Fall plowing can be done more deeply on this account than spring plowing, owing to the weathering action of frost and snow. For a year or two after the ground is broken, the plowing should not be at the same depth as the first breaking, as this will expose undecomposed vegetation, the lack of moisture in dry climates retarding decay. The ultimate depth desired should be attained gradually, and afterward the depth should be varied from year to year, to avoid forming the "share hardpan." This is a hard, glazed condition of the sole of the furrow which renders it impervious to water. The trowel-like effect of the share and the tramping of the furrow horse's feet, bring it about.

Those who were fortunate enough to plow their corn land deeply last fall, have reaped a handsome reward this year for their forethought and foresight. In practically every case where deep plowing was practiced, the land stood the drouth better during the long period of dry weather in July and August, thereby furnishing a convincing argument in favor of stirring the soil deeply.

When soil has been repeatedly plowed to a depth of four or five inches, it would not be advisable to attempt to plow more than six or at the outside, seven inches deep this year, remembering that it is possible to bring up too much inert material at one time. Even this increased depth will call for much additional power, and at this point, the tractor owner will find himself in a position to do the work expeditiously, and without strain on man or beast.

It is the deep, honest furrow that counts after all in crop production, and this must be kept in mind, no matter whether the work is done by horse power on the one hand, or by gasoline or kerosene power on the other.

Increasing Consumption of Meat.

IN A RECENT issue of the Quarterly published by the American Short-horn Breeders' Association, reference is made to the campaign that is being waged against the consumption of meat. The Quarterly does not mince words, but points out that the attack on meat as a food product is frequently made under the guise of expert instruction. As thousands and tens of thousands of readers of this paper are engaged in animal production, this subject becomes of personal interest to each one, and we will, therefore, quote in part from that paper:

There is an apparent awakening to the extent of the campaigns being conducted in the interest of various manufactured foods, cereals and dairy products. The dairy people are aggressive and are assembling a fund of three-quarters of a million dollars—a much larger amount than they originally intended—and are laying the foundation for a broad and systematic campaign of publicity. That such an effort will bring results is a foregone conclusion.

Unfortunately there has been a tendency all too general to attack meat as a diet. A part of these attacks have been made under the guise of expert instruction. A part through lack of information and a part through an endeavor to stimulate a demand for some particular manufactured food as a substitute. Those who have been engaged in meat production have apparently proceeded on the assumption that these combined influences could not or would not adversely affect the consumption of meats. Happily the universal inclination toward a meat diet has, to a large extent, safeguarded the industry. But it is now conceded that the meat-producing interests are in need of an intelligently conducted campaign, educational in character, to instruct consumers in the matter of the food value of the variety of uses of the various cuts of the beef carcass.

A most important phase of such a campaign would be the instruction of the beef producers in the matter of holding down the cost of production. That beef may be produced profitably at a much lower range of prices than now prevails is common knowledge and the best interests of the industry will not be served if the tendency of the prices is higher. A lower range of prices of meats would unquestionably encourage greater consumption. The gradual reduction of the range area and privileges tends to improve the opportunity of the corn-belt farmer in the matter of beef production.

It is the forecast of authorities who have studied the question from every angle that the corn belt, regardless of the land values, must become and will eventually become the meat-producing territory of the future. It will be a fortunate day when this condition again exists. It will mean more general prosperity and the upbuilding and conserving of the soil. That the industry is in need of a campaign with the definite purpose of increasing production as well as extending consumption, the best informed agree.

What effect the close of the European war will have upon American meats is necessarily more or less of a conjecture; but from sources intimately identified with the meat-making interests, come the prediction that meat prices will decline. The European armies have been well fed at the government's expense, and, as a result of the most rigid economy on the part of those who remained at home and tilled the farms and conducted the various business activities. But when these soldiers go back to everyday pursuits relying upon their own resources, rigid economy will be the watchword in every household. If, as seems probable, our export demand is reduced, it is of the highest importance that a larger home consumption and a lower cost of production be encouraged.

A most important matter is touched on when attention is called to the need of stimulating home consumption by lowering the cost of production. This end can be attained first by a larger use of farm roughages, and secondly, by the improvement of grade herds, so that the largest possible proportion of the foods consumed are converted into valuable meat products. The pure-bred sire must be popularized, and particularly that type of sire that will impart early maturing qualities to the herd. There is no better way of increasing the demand for a product than by improving the quality of it; when coincidental with this improvement, there is made no advancement in price.

Reducing the Cost of Production.

THE more beef the American farmer can produce at a reasonable profit the better it will be for his land, because beef production tends to maintain fertility. From the standpoint of supply and demand, there is no reason why beef production should not be profitable for a long period of years. It is a well-known fact that the cattle in the United States, exclusive of dairy stock, decreased from 50,000,000 head in 1900 to 37,000,000 in 1915, while during the same period the population increased from 75,000,000 to 100,000,000. In other words, while our beef cattle decreased 13,000,000 head, our population increased by 25,000,000.

It is true that in spite of this condition and in face of the additional fact that European demand greatly increased our beef exports in 1915, the producer was unable to obtain profitable prices for his products last year, and much complaint was heard. Beef values have now returned to a profitable basis from the producer's point of view, and there are indications that there are better times ahead for the producer than there have been in the past.

One thing the cattle raiser should do is to pay special attention to methods of feeding. More roughage and less grain must be utilized from now on, because high-priced grain will be the rule in the future. We must utilize as nearly as possible 100 per cent instead of 60 per cent of the corn crop, which can be done by putting a part of it in the silo. Feeding tests have repeatedly shown that silage properly fed in the form of a balanced ration is one of the cheapest feeds that can be used, not only for growing, but also for fattening cattle. Legumes should be grown to supply at least part of the protein needed to balance the silage ration. Silage and alfalfa or clover make a well-balanced ration for beef-breeding cows and for growing stock intended to be roughed through the winter. For fattening cattle there is, of course, a limit to the amount of roughage that can be fed to advantage, but they even can consume large quantities of silage during the first thirty or sixty days of the feeding period, the exact amount depending upon the length of time the cattle are to be fed and their condition.

The important thing is to reduce the cost of producing a pound of beef to the lowest possible point, thereby making the profit that much more certain when the margin between feeding and fat cattle is narrow, as it often is.

LETTERS ON BARN EQUIPMENT.

Official Testers of Wisconsin Cow-Testing Associations Relate Their Judgment as to the Real Value of What Is Spoken of as Modern Barn Equipment.

Sanitary, Well-Lighted Barns are Economical.

To the Editor:—The three most profitable dairy farms in our association have what you would call special barn equipment. One member has wooden stalls equipped with steel stanchions. The other two have a complete arrangement of steel stalls, mangers and watering devices. I believe in installing modern barn equipment: First, because it is the most sanitary and the easiest to keep clean. Second, because I believe that it costs a farmer less money and time to install modern equipment than to be changing his wooden stalls every four or five years. Also the wooden stalls are excellent places for lice and mites and other insects to hide in. Third, a farmer with modern barn equipment will take more pride in seeing to it that his stock are in good condition, that is, he will take better care of them.

In summing it all up I think the most essential points about a dairy barn are good ventilation, plenty of good, large windows to supply light, clean stalls and mangers. From my observation I have noted that cold, dark, badly ventilated and dirty barns mean less profits for the dairyman; also it takes more grain and feed to keep up the milk yield when the cows are subject to chills in cold barns.

M. E. Smith,
Official Tester Alban and New Hope Cow-Testing Association, Portage county, Wis.

Cuts Down Work One-Half.

To the Editor:—The three most profitable farms are equipped with modern barn equipment and the most profitable herd have drinking cups. I also have a herd of cows in my association that have the same advantages as the most profitable herd as far as barn equipment is concerned and yet they are the lowest producers in the association, due to the lack of feed and care.

Several members have equipped their barns and find it half the work to care for the same herds.

Joseph Z. Feinberg,
Official Tester Rock County, Wis., Cow-Testing Association.

Good Men Usually Get Good Equipment.

To the Editor:—In my association the equipment of the dairy barns are on the average good. Some are a little more modern than others, but on the whole the majority are comfortable and fairly well equipped.

I think the equipment, as far as the comfort and sanitary conditions of the cows are concerned, will greatly add to the profits up to a certain point, and beyond that I think the increased profits are not so much due to the equipment, as to the man. Generally a man who has an up-to-date barn and equipment is up to date in his feeding and care of the cows also. I think one can go to extreme along the line of equipment.

I have seen herds on dirt floors in the old rigid stanchions that were making the owner a nice profit, but these same herds were well fed, well bedded and well taken care of, and with but a few exceptions this sort of a man will build a modern barn as soon as he is able. Swing stanchions add to the comfort of the cow and thereby add to the profits. Cement floors and gutters make conditions more sanitary, but a cold cement floor does not add to the comfort and production of the cow without a good layer of bedding.

I think, too, that a modern dairy barn is nice for the man, as it is really his home about two-thirds of the time.

T. L. Cuenot,
Official Tester for Fairwater Association, Green Lake county, Wis.

Increases Profits 10 to 50 Per Cent.

To the Editor:—A modern equipment will increase dairy profits all the way from 10 per cent to 50 per cent, other things being equal, that is a good bed and warm, dry stable. Water buckets will pay for themselves in one season.

A ventilating system keeps the barn dry and if kept around 40 to 45 degrees, with water with the chill taken off, gives the cow a chance to do her best.

My three most profitable dairies have partly modern equipment, swing stanchions, water in the barn in a tank, or run in the mangers, and a special ventilating system. The increased profit from the sanitary standpoint is about 50 per cent.

The Stanley Cow-Testing Association cannot boast very much as yet of modern equipment, but inside of two years, at the rate modern barns are being built, we will stand second to none.

R. F. Adams,
Official Tester Stanley Cow-Testing Association.

Many Interested in Better Barn Equipment.

To the Editor:—The most profitable dairy farms in my association are equipped with a well-known manufactured outfit and stationary stanchions. Two with the latter and one with the former. The man with the special equipment says he is very well satisfied and would not be without it. One of the men with stationary stanchions had the highest average production the past three months and promises well to have the highest for the year, as he gives his cows good care in spite of the [illegible] of stationary stanchions.

Judging fr[illegible]perience, it pays to install a [illegible]arn equipment. The conven[illegible]loing the barn work which [illegible]or, the comfort provided for [illegible] which they pay for at the [illegible]proved sanitary conditions [illegible]n brings higher prices for [illegible]duct produced, all goes to pay [illegible]f installing.

As yet [illegible]ot many modern barn equip[illegible]alled in the county, though [illegible]es well to come fast. A n[illegible]ve wood stalls and chains. [illegible]my notice that several r[illegible]ted.nts were being insta[illegible]mmet.

John Reckinger,
Langlade [illegible] Cow-Testing Association

Increa[illegible] Profits One-Fourth

To th[illegible]–The most profitable herd i[illegible]dsburg Cow-Testing Associ[illegible]wned by J. J. Marshall, [illegible]via. Mr. Marshall's herd c[illegible]leav of Holsteins, eight of which [illegible]grade cows, averaged for the si[illegible]ths that they were on test 5,842.5[illegible]nds of milk and 231.1 pound[illegible]utter fat at a feed cost of $14.5[illegible]e value of his total average prod[illegible]0.66, leaving a profit of $66.1[illegible].

M[illegible]'s dairy barn equipmer[illegible]ists of swing stanchions, con[illegible]floors and driveways. His bar[illegible]spotlessly clean and in wi[illegible]supplies his cows with an abu[illegible]bedding. Although lacking in equipment, Mr. Marshall makes up that lack by using good judgment and common sense in caring for his cattle.

The second best herd is a pure-bred Holstein herd of fifteen head, owned by Kirkpatrick Brothers, of Reedsburg. Their cows are not such heavy producers as Mr. Marshall's, but Kirkpatrick Brothers own a milk route, which accounts for the average profit of $66 per head for the six months. They have steel stanchions, stalls, manure carriers, water at every cow's place and all special equipment. They have a milking machine also. Their dairy house is nearly ideal.

The next profitable herd is owned by Wm. Alexander, of Ableman. His herd of eleven made an average profit of $53.10 for the six months. He has only common wood stanchions with dirt floors.

As most of the members of the association have fall cows, it is hardly a fair show for all of the members of the association. This association has only been running six months, so those are the only figures that are available.

As for what my judgment is on the question, I personally believe that modern dairy barn equipment has a great deal to do with the comfort of the herd. A person cannot do his work well and properly unless he is comfortable. So it is with the cow. Could John B. Irwin, of Minnesota, or Mr. Moscrip, also of Minnesota, have shattered all world's records if their cows had been put in a poor barn with dirt floors which would be often wet and muddy? You will agree with me that the chances were 100 to 1 against them.

In my estimation, a farmer who installs modern equipment will increase his profits 25 per cent. Nothing should be spared to increase the comfort of the cows.

I believe that the sooner farmers install good sanitary and comfortable equipment just so much sooner will dairying be advanced to its right position. I believe that the average dairyman is fifty years behind the time when it comes to dairying.

Alvin W. Wardas,
Sauk County, Tester for Reedsburg Association.

Cow Comfort Pays.

To the Editor:—Of the three most profitable dairy farms in my association two of them have what you call special barn equipment. The third farm is now finishing installing a modern system, with cement floors throughout. From experience and observation I think in most cases it will pay the farmer to install modern dairy barn equipment. I look at this from the standpoint of greater cleanliness and better sanitary conditions; also greater comfort for the cows and time and labor saved. As to just how much these improvements will pay, it depends upon the circumstances, with especial reference to feeding and interest taken in the stock. For the average herd a moderate amount of equipment will pay, but if too many costly fixtures are installed it is doubtful as to whether the added profits will pay for the layout.

C. M. Rydberg,
Official Tester Underhill Cow-Testing Association, Shawano county, Wis.

Tend to Prevent Cow Injuries.

To the Editor:—The dairyman in my association who by the records shows the greatest profit uses a special barn equipment. The next two in order of profit made use no special barn equipment, but one has homemade stalls and inside watering conveniences. From experience I find it pays, at least a majority of the farmers, to use some form of modern dairy equipment. There may be little if any direct profit derived. Such equipment facilitates feeding and watering live stock and also cleaning the stables. It also tends to prevent injuries from crowding or stepping, especially when a part of the cows are lying down.

J. L. Williams,
Official Tester Wood County Cow-Testing Association.

Better Stock and Lower Feed Cost.

To the Editor:—Where the dairymen in my association have special barn equipment you will find better looking stock and the feed cost is much smaller.

Ed Hoeft,
Official Tester East Troy Cow- Testing Association, Walworth county, Wis.

Comfortable Cow the Best Producer.

To the Editor:—From actual tests it has been proved that a cow which is more comfortable will actually produce more milk than one which is confined in a cramped and uncomfortable stable. The sanitary condition of a barn enters directly into the profits of the owner, as it will mean a saving of time and labor and also feeding costs. Besides the improved sanitary conditions will warrant and always bring an increased price for the dairy products.

Frances Woodward,
Official Tester Stratford Cow-Testing Association, Marathon county, Wis.

All Aim For Better Equipment.

To the Editor:—I am very pleased to note that The Wisconsin Farmer is publishing the list of the best record cows in the associations of the state. It stimulates interest in better dairying. Granting that a dairyman has a profitable herd, I certainly believe in a well-equipped barn and think it is a paying investment. Three of the most successful men in my association last year had such equipment in part, and where it was lacking they spent much time in trying to accomplish the work which proper equipment would have helped them do much more easily. Not all the best dairymen, to my observation, have the best equipment, but almost without exception they are working to that end.

M. Y. Graham.
Official Tester Dunn County, Wis., Cow-Testing Association No. 2.

EQUIPPING THE DAIRY BARN.

THE su[illegible]odern dairy barn equipment is one upper-most [illegible]inds of almost every Wisconsin farmer who is [illegible]o increase profits from the milk pail. Modern equipme[illegible]nice. It aids in keeping the dairy clean and in redu[illegible]work of the hired men. Recently we had letters of ex[illegible]from dairymen who are using milking machines. He[illegible]n are presented a series of interesting letters from offici[illegible]sters in this state. They have been asked to state wl[illegible]ir experience and observation leads them to believe [illegible]tern barn equipment pays. They have answered thi[illegible]n in an interesting, entertaining and practical way, [illegible]tters which appear here, and we feel sure every ma[illegible]s cows to milk will be interested in every letter.—T[illegible].

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New State Entomologist.

Dr. E. D. Ball, who has succeeded Prof. J. C. Sanders as entomologist of the Wisconsin Department of Agriculture, is among America's best-known scientific men. Dr. Ball was director and entomologist of the Utah Experiment Station since 1907, when selected by Commissioner C. P. Norgord to succeed Professor Sanders.

Dr. Ball was born in Vermont in 1870. He is a graduate of Iowa Agricultural College, 1895; post-graduate 1898; assistant entomologist Iowa Experiment Station, 1895-1898; assistant entomologist Colorado Experiment Station, 1898-1902; professor of zoology and entomology Utah Agricultural College, 1902-1907; director and entomologist of the Utah Experiment Station, 1907-1916; assistant in the inspection service in Iowa and Colorado; member of state horticultural commission of Utah. He has studied and published many bulletins and articles on the leaf hoppers affecting grasses and grains. He has the largest collec-

DR. E. D. BALL,
State Entomologist who succeeds Prof. J. C. Sanders.

tions and one of the largest private libraries of leaf hoppers in the United States. Dr. Ball has studied methods of controlling the codling moth and discovered the "driving spray method" by which the poison is placed in the calyx cup where the little worm feeds. This method revolutionized the handling of the codling moth in the entire western country and has recently been adopted in the eastern apple sections.

Dr. Ball discovered the cause of sugar beet blight after a number of government and state scientists had investigated for years without being able to find any explanation for the disease. This disease proved to be transmitted by beet leaf hopper, and by studying the distribution and occurrence of this insect millions of dollars have been saved to the sugar beet growers.

He has investigated the subject of "arsenical poisoning" and proved that the spraying of fruit orchards with arsenic for the codling moth was not causing the death of the trees that had been alleged, but that the trees were dying from entirely different causes.

The new entomologist owns a farm and a bearing apple orchard and has great faith in the future of the fruit industry.

When Your Battery Needs a Drink

A little thing like drinking water for a storage battery may not seem important, but—

If you use water which contains minerals, these minerals will be deposited on the battery plates and cause serious damage.

Pure water is what your battery must have. That means either distilled or rain water.

The soft, pure water that used to flow from a shingle roof into the old rain barrel was all right.

But in these days of metal and slate roofs and metal gutters, the best plan is to use *distilled water*. It costs little and is absolutely safe.

Other Things You Should Know

Look up the nearest Willard Service Station and get acquainted with the storage battery expert in charge. He'll gladly give you valuable hints on keeping out of battery troubles—and if you do need repairs or other help, he's the man to go to for his one biggest job is to give satisfaction to Willard owners.

Ask about our special free service to new Willard owners.

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Cleveland, Ohio

NEW YORK: 228-230 W. 58th St.
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ATLANTA: 8-10 East Cain St.
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INDIANAPOLIS: 316-318 North Illinois St.
DETROIT: 736-38-40 Woodward Ave.

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Willard Storage Batteries are for sale by car dealers, garages, and all Willard Service Stations and Factory Branches.

Willard STORAGE BATTERY

Sugar Beet Crop and Drouth.

To the Editor:—The sugar beet crop, wherever it is grown in the state, has done well, notwithstanding the hot and dry weather experienced the past summer. The fact that it takes six months for the sugar beets to mature, when grain crops will mature almost in less than one-half of the time, affords the beet plants a better chance to make growth for a profitable crop, particularly so in times when seasonal factors vary. Usually during the months of July and August root crops make their best growth.

It is observed that during the past number of weeks the sugar beet plant has developed a well-balanced top root and a vigorous root system. This may in part be due to deep tillage and general condition of the soil in the field. In times of dry weather the plant will seek moisture at lower depth and, therefore, a good root development. Judging by the climatic conditions prevalent this summer with warm, sunny, clear days and reasonably cool nights, we have every reason to believe that sugar beets with well-developed top roots will test high in sugar content and in food value.

No better illustration for comparison could have been more forcibly presented this season that the condition exhibited by the growth of the different farm crops due to lack of moisture during the growing period. It was clear wherever drouth prevailed that the oats, barley, wheat, hay and even potatoes have suffered considerably, and in many cases not even a half crop is harvested. This does not seem to be the case with sugar beets. They braced up well. Beets have not grown very much during the same time, but have held their own, and, as soon as better growing weather came, they picked up wonderfully.

This is only another demonstration that the average farmer should not entirely depend on one or two crops for "selling off" or crops that he can turn into money. That he may prosper at all times he must practice a system of crop rotation. He must not only practice rotation of crops for the purpose of meeting adverse conditions of weather for plant growth but he must formulate a rotation in which the method of culture and action of the plant each year will leave the soil in the best condition for the following crop. Sugar beets do well after alfalfa, clover, small grain and potatoes. Farmers can do nothing better than include a root crop as one member of rotation whenever it is possible to do so. It is best to make provision for the growth of several crops somewhat varied in habits of growth, so that when one fails the others may at least partly recompense the loss sustained. What is true of the sugar beet crop is in a measure true of any root crop.

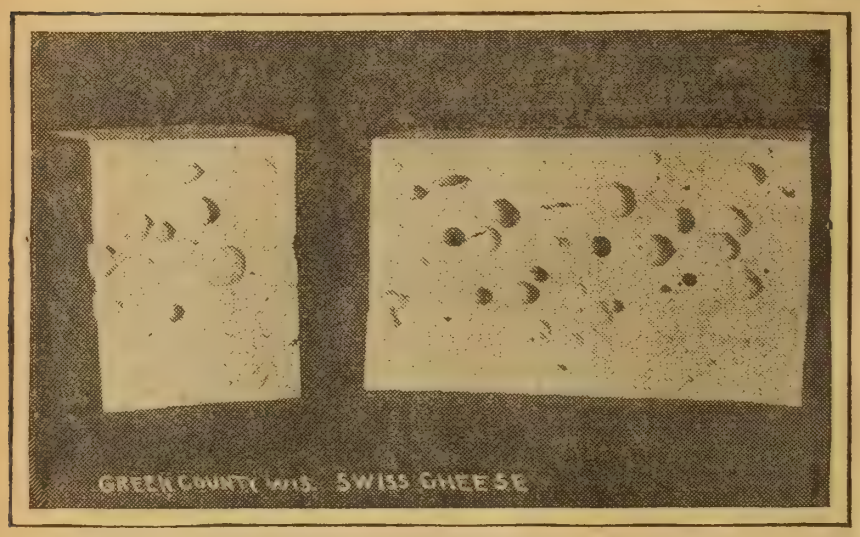
J. F. Wojta.

A new record was set in the St. Louis fur auction market when 2,000 silver fox skins were sold in less than an hour. The best price in this lot for a single skin was $1,060. The sales on silver fox skins amounted to $100,000.

The Wausau Canning Company has discontinued their local vineries. In this connection there is some talk of organizing a local institution.

CHEESE DAY AT MONROE.

Celebration Unique in the Dairy World Helps Spread Fame of Green County, Wisconsin, Where Cheese Production Is the Chief Industry.



SWISS CHEESE MADE BY SWISS CHEESEMAKERS AND AS GOOD AS ANY MADE IN SWITZERLAND.

BRANDS OF BRICK CHEESE MADE IN GREEN COUNTY, WISCONSIN.

GREEN COUNTY, Wisconsin, can well boast of its progress in dairying. The title of "premier cheese county" has been correctly bestowed, without doubt, considering that almost 12,000,000 pounds of the foreign types are manufactured yearly within its borders and the foresight of the first settlers in inaugurating dairying and cheesemaking promises to assert itself now in the perpetuation and further development of the industry through the holding of such celebrations as "Cheese Day."

On "Cheese Day" all Green county and a large part of those living in adjoining counties lay aside their daily tasks and gather at Monroe, the county seat, to take inventory of the great dairying resources of the county and to taste the cheese which has made this county famous. The third "Cheese Day" was held on Tuesday, October 10th, and surpassed from every standpoint the previous celebrations, it being estimated that 25,000 persons enjoyed the festivities. Cheese sandwiches, cheese pies and hot coffee were served to all, free of cost, and a better method to let the people know of Green county's food products and their delectable value could hardly be provided. The city was in gala attire for the occasion; the true Green county hospitality was everywhere evident and the success of the day more than exceeded the fondest anticipations.

Dairying has always been the big farming operation in Green county and cheesemaking was introduced in that county as early as 1854. Settled by Swiss colonists who brought from their native land a thorough knowledge of dairying and cheesemaking, this county was destined to forge ahead along these lines, and, while other farmers were stru[illegible] profitably with wheat, the [illegible]unty farmers were getting rich[illegible]heese. This was the foresigh[illegible] made this county, accordi[illegible] last federal census, the r[illegible]cally agricultural county in [illegible] with a per capita wealth of [illegible]aving gained the reputatio[illegible]ng cheese county, farmers [illegible]s are now determined th[illegible]e maintained and celebrati[illegible] "Cheese Day" are bound t[illegible] their part, as the 25,000 w[illegible]ated this year will be [illegible]dings wherever they go of [illegible]ers of Green county and th[illegible]e value of its cheese.

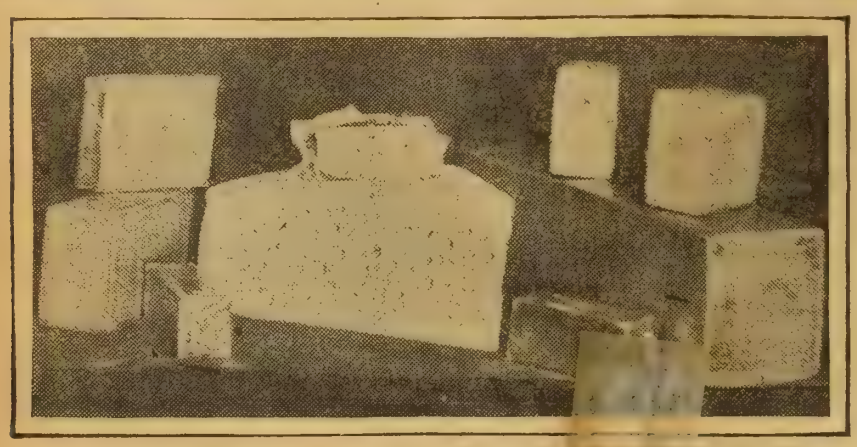
[illegible]s made on the farms m[illegible] 1870, when the co-operati[illegible] system was begun, and s[illegible]time the number of fact[illegible]ly owned by the farmers, h[illegible]ed to 153 by an official re[illegible]facturing in the neighbor[illegible],000,000 pounds of cheese, [illegible] the Swiss type. Mr. Fred Marty, of the state dairy and food commission, contends that there are now 170 factories in the county under license, while the official reports for 1915 show the manufacture of 11,743,395 pounds of cheese. Of this 6,100,000 pounds was Swiss, 3,040,000 pounds was Limburger, 1,580,000 pounds was brick and the remainder cheddar.

Dairying, of course, has kept pace with the cheese industry and in addition to the cheese factories there are three creameries and four condenseries, the total value of dairy products in 1915 being $3,785,074. The 38,992 dairy cows in the county produced during that year 196,312,000 pounds of milk. It is also interesting to note that there are 17,000 more dairy cows in the county than there are men, women and children, the population being 21,641. Green county is likewise one of the smallest counties in the state, only four townships square, and there are three or four cheese factories to each section.

With these statistics in mind it is immediately evident that almost every resident of the county is dependent either directly or indirectly on dairying and the subsequent turning of the milk into manufacturer products. It is, therefore, to be expected that such a celebration as "Cheese Day," planned primarily to promote this industry, should command such large support and co-operation.

The celebration has two angles to it. First attention is called to the cheese and dairying resources of the county, its great wealth and its prominence as a dairy county. This is the educational and promotion side. Second comes the social side, as "Cheese Day" is the one day when everyone turns themselves loose for a good time and the promoters of "Cheese Day" have seen to this side by providing games, dances, band concerts, etc. Mr. Burt Williams, democratic candidate for governor, was the speaker of the day and following his address there was a parade which was estimated to be two miles in length. This parade was made up of a number of dens of animals, floats representing the business firms of Monroe, decorated automobiles, patriotic tableaux, herds of pure-bred Brown Swiss, the original Green county cow, from the herd of Jacob Voegli at Monticello, all led by Swiss dairy maids handsomely garbed, ten bands and a steam calliope. Following the parade were band concerts by these bands, a program of Swiss wrestling, Swiss national games and singing and Swiss yodeling. The eve-

(Concluded on page 22.)



APPETIZERS WHICH ARE NOW SELLING [illegible]D PRICES.

YOUNG HERD ON GREEN COUNTY HILLS IN THE CHEESE NEIGHBORHOOD.

COW HERD IN GREEN COUNTY WHERE [illegible]RE EIGHTEEN COWS TO THE FA[illegible]

TYPE OF DAIRY BARN AND HOME OF PROSPEROUS FARMER.

POLITICAL ADVERTISEMENT | POLITICAL ADVERTISEMENT | POLITICAL ADVERTISEMENT | POLITICAL ADVERTISEMENT

What the American Producer Must Face After the War

The importance of the election this year cannot be exaggerated. The world is facing a readjustment that must come as soon as the European war is ended. The producers of America will once more have competition. For over two years they have been protected by a wall of war more effectively than they could have been by any protective tariff. When that wall is down there must be a barrier erected, for the flood will come from other countries and bring American standards and American ideals down to the lower levels. This is not a reflection on any country or any people. It is merely a statement of facts.

The Republican party stands for protection and preparedness against the competition that would be unfair to American producers. The Democratic party is against protection and would let this country go into the commercial war which must come, as illy prepared to protect itself as it is for military defense now. This is a question that affects every man, woman and child, and is in the thought of every thinking person.

Vacillating Foreign Policy

The only argument the Democrats make is that President Wilson "kept us out of war." Who kept Switzerland, Holland, Denmark, Sweden and Norway out of war? The same influence that kept the United States out of war. The people did not want war if it were possible to prevent it. But none of these countries came so near the verge of war as did ours. The changing attitude of our administration several times brought us close to war, only avoided by a humiliating back-down or by a refusal of the European powers to antagonize the United States.

In Mexico, we have lost more American lives than we lost during the Spanish-American war. Our fleet attacked and seized Vera Cruz and then came back. Our army is now on Mexican soil. Our National Guard was mobilized on the Rio

Grande. All this happened because of the vacillating policy of the President. Mr. Wilson has not kept us out of war in Mexico, but his blunders, if continued, will surely put us in deeper than we are now.

In the meantime we have lost the respect and confidence of our neighbors.

Cost of Democratic Legislation

Four years ago the Democratic party had the following plank in its platform:

> "We denounce the profligate waste of the money wrung from the people by oppressive taxation thru the lavish appropriations of recent Republican Congresses, which have kept taxes high and reduced the purchasing power of the people's toil. We demand a return to that simplicity and economy which befits a democratic government and a reduction in the number of useless offices, the salaries of which drain the substance of the people."

The following are the total appropriations by Congress for the last six years (Congressional Record, September 8, 1916):

1912, $1,026,682,881.72.
1913, $1,019,412,710.91.
1914, $1,098,678,788.40.
1915, $1,116,118,138.55.
1916, $1,114,937,012.02.
1917, $1,626,439,209.63.

The item for "preparedness" may be obtained by taking the difference for Army and Navy for 1915 and 1916. This amounts to $349,103,590. The balance excess is the additional cost to the country of Democratic legislation compared with the promise made in the platform. In addition to the figures of appropriations, there have been "authorized" expenditures amounting to $231,945,275; that much more must be added to the bill.

Has the change been worth the money?

Over 30,000 Additional Offices

Over thirty thousand additional offices have been created by the last congress.

Mr. Hughes is an advocate of the budget system, is against pork barrel methods and his record as Governor of New York shows that he will hew to this line no matter where the chips fall.

For the Principle of Arbitration

The Republican party stands for the principle of arbitration. The Democrats say that the Adamson bill averted a great strike. A compulsory arbitration bill would have averted this strike just as effectively and would have protected for the future. Under the Adamson bill, the trouble is merely postponed. The additional expense to the railroads of millions of dollars every year must be paid in the end by the farmers and shippers. But the principle involved in the Adamson bill of yeilding to force and legislating without investigation, is more important than even dollars and cents. Arbitration and not force is to be the method of decision in the future and the party which has yielded to a supposed political advantage is out of tune with the spirit of the American people. Fair play and justice, with a hearing for every one, is fundamental. On this issue, the Republican party makes a confident appeal to the hearts and minds of the American people.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Home Project Work of the Warren High School.

To the Editor:—One of the largest problems of the school today is to win the interest and co-operation of parents, especially in vocational education. The home project movement is a means by which this is being accomplished. The parent receives the lesson and, becoming interested, gives his support to the member of the family carrying on the work. This interest soon passes on from one phase of school work to another and the teacher and pupil are bound by closer ties than ever which are strengthened by the good will of parents.

Such work is now being carried on at the Warren Union High School at Roberts, consisting of a series of contests in which the students are taking much interest.

The first or alfalfa contest, in which a number of boys are engaged, is for the purpose of inducing more of that valuable crop to be grown. Each boy has a half-acre plot which is cultivated thoroughly. After this process the soil is limed and inoculated in order to insure better growth. But as the alfalfa is not sown until some time in July, some of the boys conceived the idea of planting early potatoes which insured them double income and kept the land in condition and gave them a fundamental lesson in management. The prize given the boy who can show the best stand of alfalfa in June, 1917, is a registered Guernsey bull calf given by the Guernsey Breeders' Association of St. Croix county.

The second series of contests is the corn acre contest in which a number of boys in the high school and graded school are participating. The boy who can show the finest and largest yield per acre of corn is entitled to a free trip to the International Stock Show, which will be held in Chicago some time in November.

The third group of contests is the truck garden contest. Sixteen boys and girls of the graded school in the village and the rural schools of the town have entered this contest, eight of which have their gardens on the school plots and the remainder preferring to have their gardens at home. The gardens are visited several times during the summer by the judges, Mrs. A. H. Aldridge, Mrs. W. S. Lamson and Mrs. W. H. Ash. Ten and five-dollar prizes are given for the best two gardens.

The money for these prizes is given by the business men of Roberts. These men are enterprising enough to have the surrounding territory increase in value, as it will mean a greater income for them in the future. It also shows that there is a social spirit existing and that the co-operation of school and community is a thing to be proud of. Moreover, it is the result of Principal Hammer's interest in the pupils and their occupations.

Not only are the students of the high school carrying on experiments but a number of the farmers in the town are carrying on experiments with lime and nitrogen, phosphorus and potassium fertilizers. This work is done in co-operation with the high school and the college of agriculture. This shows a whole-hearted co-operation that insures the projects the highest state of perfection.

The principal carries on experiments on the school plots. These experiments show the public the value of liming and inoculating for alfalfa. Large placards have been placed on posts so that those who pass by cannot fail to read the results for themselves.

As these different projects develop it is necessary for the principal to mark the progress by visiting the homes of the pupils. This gives him useful information, especially introducing him to the relations of the child to the home and also his environment. This will mean a closer correlation of school work with the daily life of the community.

The final results of this project work are to stimulate interest in agriculture, bind the home and the school closer, arouse the lithargic parents and enormously enhance the value of agricultural education.

Not only has the home project work been advanced but also the work in domestic science and farm mechanics. These two courses have provided a great deal of interest for the boys and girls, the boys making wagon boxes, self-feeders, milk stools, work benches, hay racks, etc. The girls are trained in the art of housekeeping and this will help to insure better homes in the future.

A five-day farmers' school in co-operation with the college of agriculture has been successfully held during the past three winters. The little town on these days reminds one of a homecoming or some other celebration.

May this good work ever increase and these relations so dear to us all be made stronger and more helpful, thus opening a larger vista for us and for our posterity in the future.

C. F. Guggisberg.

St. Croix Co., Wisconsin.

Stevens Point Potato Contest.

To the Editor:—It gives me great pleasure to be able to give you an outline of our potato contest and also the effects.

The idea in putting on this contest was to start the education of the young people to work together and gradually help them to learn the value of organization and co-operation not only in the raising of potatoes but any enterprise that they may wish to undertake.

Everything that I promised to do I did, and now the confidence of the child and also the parent is with us and you see the way is clear for me to go on and carry out my plans.

As to our show, it was a perfect success, although not quite all of the boys and girls brought in potatoes, as they did not raise any, owing to the season in this section. We had bins around a large room that would hold a peck and the potatoes were placed in them, making a nice display.

The farmers could hardly believe that the potatoes were all the same seed, as the quality of the potatoes was so different. It was a good education for them to see that in the radius of the county the soil was so different and the production so varying.

I gave the farmers a good straight talk and explained what I was trying to do for their children and the benefit it would be to them in years to come. They were very much enthused and promised their support in the future.

We are going to have another contest next year and we are going to add 100 more boys and girls to our list, making 200 in the contest for next year. We will keep adding on some each year till we have every family in the county working in one direction.

Our association is known as Sater's Potato Growing Association. We had badges for each child to wear.

Each year we will raise a new variety of potato that has not been tried in this section and in that way keep the children looking to try something new.

Charles C. Sater.

Stevens Point, Wisconsin.

Useful Hints in Blasting Stumps.

To the Editor:—It is very much easier to make the holes for the powder with proper tools than to do it with a bar and a sledge. A good auger can be bought for about $5 and it will save that amount in one within a day or two.

The most efficient and economical removal of stumps depends to a considerable extent on the exact proportioning of the charges under the stumps. This is difficult to do with a bar. An auger you can bore out holes just where you want it out. Roots will not stop your hole but force it to one side. This is another feature in the use of the auger as against the bar.

There is a good deal of difference between a wood auger and a dirt auger. You can bore in dirt with a wood auger, but it is slower. The dirt auger has a long, heavily twisted leading point. Almost every big hardware store will supply dirt augers.

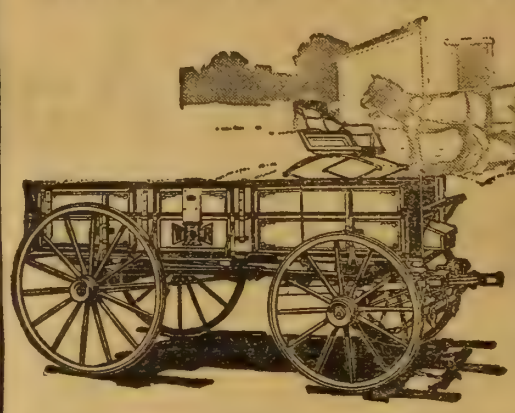
In the northwest blasters are accustomed to using what they call a spoon shovel. They usually have it made themselves at a blacksmith shop from an ordinary long-handled shovel. First they straighten the shank and make the blade stand almost straight with the handle. Then they turn up the edges of the blade almost at right angles and so have a narrow, deep spoon. If this is made from an ordinary shovel without first trimming the blade down it will be larger than it should and will force you to make the tunnel under the stump too big (you can't get the tamping back in as tight as the dirt was before). The spoon should be no more than two inches wide or deep.

Probably the most useful little tool of all, next to the auger, is a plain scraper. You get it made at a blacksmith shop from a half-inch iron rod. Turn one end over, like the toe of a boot and flatten it till it is thin, especially at the outer edges, and spreads out about an inch and a half long and nearly this wide. With this little tool you can enlarge a small auger hole as much as you want and you can enlarge it down where the powder is to go without making the rest of the hole, where the tamping goes, any larger.

Don't forget to equip yourself with a steel probing bar before you start to bore the holes under the stumps. This is just a quarter-inch rod with a handle at one end and a long sharp point at the other. You can run it down into the ground most anywhere and locate the proper position for the charges without guessing at them.

J. R. Mattern.

More for Your Money



International Harvester Wagons—Weber and Columbus

YOU can be sure of one thing when you buy a Weber or Columbus wagon—You get more service for your money. The good service they give is one of the strongest features of Weber and Columbus wagons. This service is the result of careful design and construction, such as is shown in the International fifth wheel.

Look between the front axle and bolster, where the king bolt goes through. There you will find the fifth wheel (an exclusive feature). Note the wide circular wearing surface of the two substantial fifth wheel plates. Those plates relieve the owner of a lot of trouble. They prevent breaking or bending of circle irons. They prevent the pitching of the bolster that breaks or bends king bolts. They take strain off the reach and keep the lower part of the front axle from sagging.

This one feature adds years to the life of the wagon, but, better even than that, it indicates the care and thought that have been given to every Columbus and Weber feature, and they are many.

Look over the Weber or Columbus wagon carefully, either at the local dealer's place or in the illustrated wagon folders we will send you on request. Then you will see why, if you want more for your money, your next wagon should be a Weber or Columbus.

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In and Around Wisconsin

Cabbage is selling as high as $35 per ton for the best grade. This is 700 per cent higher than the 1915 price. Cabbage of the best grade last year sold around $5, while the bulk of the crop sold at $1.50 to $2.50 per ton. Unfortunately the acreage this year is lower than last. The growers in Racine, Kenosha and Walworth counties will realize handsomely this year from their cabbage patches.

Owing to the increased business at the Lodi, Wisconsin, creamery another addition is to be added to the building. Mr. E. H. Tucker is manager and has rapidly extended the market for "American Beauty" brand of butter. The increase in production over last year is expected to run as high as 75,000 pounds. On account of better facilities to manufacture Mr. Tucker has increased pay for cream He uses electric power for operating his plant and motor trucks for hauling cream.

There have been some reports of hog cholera in Buffalo, Rock, Pepin, Dunn, Barron, Calumet, Dane, St. Croix and Eau Claire counties this year. A greater demand for serum from the state plant at Madison has been made than in any previous year. The serum plant has been enlarged and equipped with more modern apparatus, including refrigerator room for storing a million cubic centimeters of hog cholera serum. It is announced at the college of agriculture that all orders for serum will probably hereafter be filled promptly.

The Wisconsin Bankers' Association has decided to continue, for the coming year, the publication of special monthly bulletins in co-operation with the college of agriculture. The subjects for the year's series follow:

November, "Feed an Economic Dairy Ration;" December, "Wisconsin's Best Crop—the Child;" January, "Ways to Solve the Labor Problem;" February, "Meat Making as a Business;" March, "Washing Made Easier;" April, "That Vegetable Garden;" May, "Prevent Weeds from Seeding;" June, "Getting Started with Alfalfa;" July, "Fly Time and Milk Production;" August, "Sanitation in Stables, Pens and Pastures;" September, "The Right Sire and How to Manage Him," and October, "How the Short Course Helps."

Members of the Geneva Cow-Testing Association in Walworth county have taken advantage of the suggestion made by Frank Drake, official tester, and purchased a considerable quantity of feed for winter. This feed has been bought at summer prices and much of it at a price considerably lower than the present price. The present price on wheat middlings and wheat bran is about 10 per cent to 15 per cent higher than last year, while the price on brewers' grains and oil meal is about the same as it was last year. Members of this association, however, effected a big saving by making purchases at summer prices. Inasmuch as there seems to be no prospect of lower winter prices, it is apparent that Mr. Drake has been the means of saving the members of his association considerable money.

The frost which visited the tobacco-growing sections of southern Wisconsin in the middle of September did a considerable damage, but probably not so much as first reported. Buyers have visited the farms where there was frost damage and in the main settlements have been fairly satisfactory to the growers. One writer says the most comforting part of the situation is the exceptionally good prices for low-grade leaf. As high as 8 to 10 cents has been offered for frosted leaf and this is about as much as some growers expected to get for their crop when it was put in. Most of the frozen portion of the crop has been harvested. The receipts may equal those obtained from sound tobacco in former years. With the extra good prices on sound tobacco the growers will be in very good shape.

Someone has suggested a Wisconsin Pound-A-Day Club. To become a member of this proposed club a dairyman would have to have ten cows which, on the average, are producing at least 365 pounds of butter fat a year, or one pound for each calendar day. According to official records taken there are a number of Wisconsin farm dairymen who are eligible to membership in such a club. Here are a few who have earned this honor by records made in their herds:

Emil Titel, Plymouth, 506.7, (1915-1916); Christensen Bros., Royalton, 473.1, (1915-1916); F. F. Thielke, New Holstein, 417.6, (1915-1916); Max Starchaska, Bear Creek, 409.1, (1915-1916); Ira Farley, Weyauwega, 407.0, (1915-1916); S. L. Mann, Waukesha, 406.1, (1915-1916); Wm. O'Leary, East Troy, 401.2, (1914-1915); H. W. Carr, Waukesha, 399.1, (1915-1916); Charles Olson, Kewaunee, 384.0, (1914-1915); H. J. Druecker, New Holstein, 383.2, (1915-1916); A. R. Williams, Waukesha, 380.0, (1915-1916); J. C. Kieffer, Auburndale, 375.1, (1914-1915); Gust Weber, New Holstein, 370.7, (1915-1916); Matt Cherveny, Kewaunee, 368.3, (1914-1915).

Mishicot Association.

To the Editor:—The following list of cows produced forty-five pounds of butter fat or better during the month of September, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Walter Jander					
Nellie, N.	5	7-11	1392	4.4	61.24
Oscar Samz					
Molly, G. G.	6	9-1	1236	4.4	54.36
George Wuellner					
Polly, G. H.	6	3-16	1005	4.7	47.23
Nigger, G. H.	6	2-18	972	4.8	46.65
Jersey, G. J.	11	4-13	816	5.6	45.69
Brownie, N.	8	5-27	1126	4.0	45.12
Robert Hessel					
Reddie, N.	4	6-2	1113	4.1	45.63

E. H. Meinke, Official Tester.
Mishicot Association, Manitowoc county, Wis.

Stratford Association.

To the Editor:—Fifteen cows were in the forty-pound class for September in the Stratford Co-operative Cow-Testing Association. The record of cows which produced forty-five pounds of butter or more in this association in September is as follows:

Owner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Andrew Kaiser					
Gr. Hol.	5	2-25-16	592.0	8.4	49.6
Garrett Hughes					
Reg. Hol.	7	8-7-16	1197.9	3.9	26.7
Henry A. Ashbrenner					
Native	6	2-14-16	661.7	7.7	50.9

Harry A. Johnson, Official Tester.

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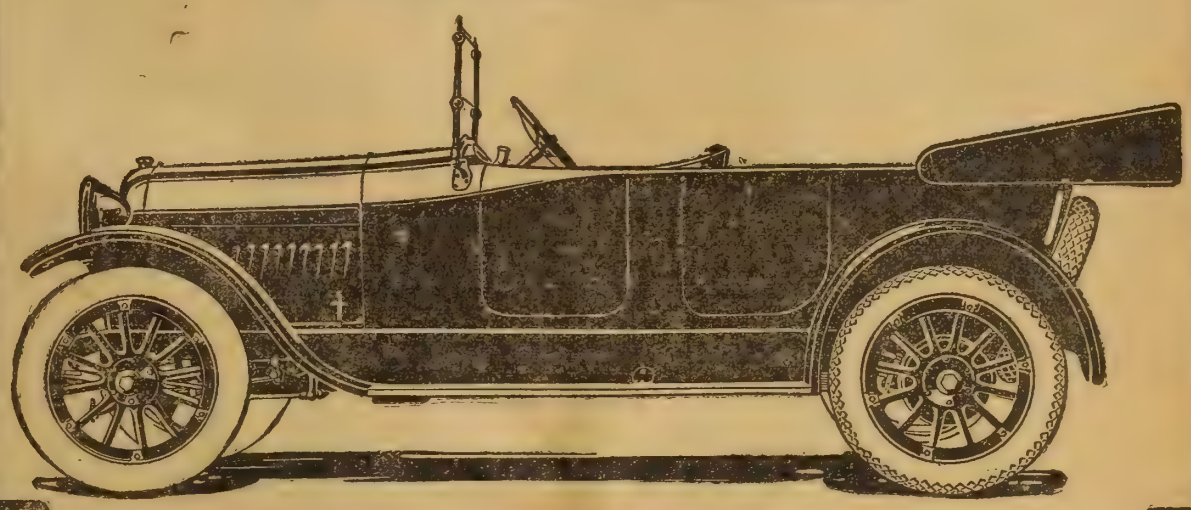

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DAIRY

Improving Farm Butter.

The adoption of more careful methods of handling milk and cream and improved practices in the making of farm butter will reduce rather than increase the trouble incident to home production of this food, say dairy specialists of the U. S. Department of Agriculture, and will result in a superior product which can be sold more easily and for a better price than the average farm butter. Last year about 30,000,000 pounds of butter, much of which originated on the farm, was washed or renovated because it was of such poor quality that it could not be profitably offered on the regular butter markets.

Cream alone should be churned. It may be skimmed as soon as it rises, or may be separated by a mechanical separator. The latter plan is the more efficient, and, though requiring a considerable initial outlay, often will be profitable. The cream should be set aside in a clean place by separate milkings. A temperature of 50 degrees Fahrenheit, or lower, should be maintained until from twelve to eighteen hours before churning time, when the various batches should be stirred together well and brought to a temperature of about 70 degrees Fahrenheit by placing the container in a bucket of warm water. One of the first acts of the farm housewife, who decides to adopt improved methods, should be to purchase a dairy thermometer. Temperatures play an important part in the development of flavors in butter, and always should be determined with fair accuracy. After the cream is mixed it should be kept at approximately 70 degrees Fahrenheit until just before churning time, when it should be reduced to about 58 degrees Fahrenheit where this is possible (or to such temperature not above 65 degrees Fahrenheit as to complete the operation of churning within twenty-five or thirty minutes).

The barrel type has been found by dairy specialists to be one of the most satisfactory churns. The dasher or plunger type requires a somewhat greater expenditure of labor. Earthenware churns are especially undesirable unless perfectly glazed, since, if pores are exposed, they absorb milk and cream which later decay. Churns with mechanical devices inside them are difficult to clean and sometimes injure the body of the butter.

The churn should be scalded preparatory to churning, but should be cooled with water before the cream is placed inside. The cream should be poured in through a coarse strainer. Every few minutes during the early part of the churning, gas should be allowed to escape from the churn. If the temperature is right the churning should require about twenty-five or thirty minutes. The process is completed when the granules of butter are about the size of large wheat kernels. The buttermilk should then be drained off and the butter granules repeatedly washed with cold water while still in the churn. The washings should be continued until all milk is removed. Under no circumstances should working be depended on to remove surplus milk.

When the butter is free from all milk it should be taken from the churn with a paddle and placed on a worker. The hands should never touch the butter, both on account of sanitary reasons and because the body warmth may melt the fat. The working should be done carefully, to avoid making the butter greasy. Before the butter is worked, fine salt should be added at the rate of about an ounce per pound of fat.

The butter should be prepared for market in a rectangular mold, since, when in this shape, the product is more easily wrapped and handled and is more pleasing to customers. Regular parchment butter-wrapping paper should be used around the prints, as ordinary waxed paper tears easily and sticks to the butter. The placing of the wrapped prints in pasteboard boxes is a desirable final step, as it portects the package, gives it a better appearance, and permits the use of the maker's name or trade-mark as an advertisement.

After the butter-making operations are completed, the churn should be rinsed carefully with warm water. It should then be scrubbed with hot water, cleansing powder and a fiber brush, and finally should be scalded and set in a clean, sunny place to drain and dry.

Shawano County Association.

To the Editor: The Shawano County Cow-Testing Association there are five cows which produced over forty pounds of butter fat for the thirty-day period ending September 30th. The high cow for September belongs to Mr. F[illegible]man, Underhill, Wisconsin. She is a grade Durham cow, twelve years of age, and freshened July 1st. She produced during the thirty days period 1,395 pounds of milk testing 4.8 per cent and yielding fifty pounds of butter fat. Mr. Dittman's herd of fifteen cows had the highest average for the month, which was 726.8 pounds of milk and 31.8 pounds of butter fat. This herd gave a return of $6.39 for every dollar's worth of feed cost.

C. Y. Rydburg, Official Tester.

Makes Bad Land Productive.

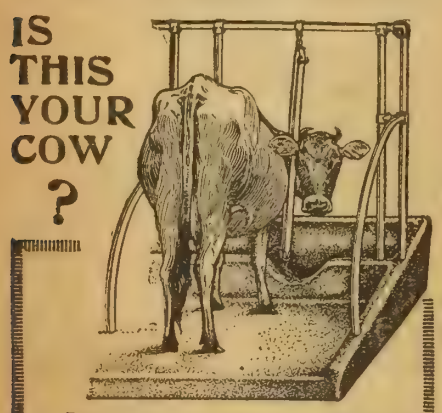
IT IS not necessary to pay taxes on unproductive land. Farmers can make their rough land productive by removing the stumps with Hercules dynamite. It is safe, easy to use, and clears the land at a very small expense. Hercules dynamite is manufactured by the Hercules Powder Co., 3 West 10th St., Wilmington, Del. The company has prepared an interesting and instructive booklet on "Progressive Cultivation," which any farmer may have for the asking. Write for a copy of the booklet, which tells not only about stump blasting, subsoiling, tree planting and irrigation work. Tell them you saw this notice in The Wisconsin Farmer.—Adv.

Metal Shoes Most Durable.

IF YOU have never tried a pair of American metal shoes you don't know how to appreciate them. They are made for service. The light steel or aluminum soles are durable, comfortable and cool, and they are easy to walk on. They are the most economical work shoe for men and boys and are good for school. Send to the manufacturers, the American Metal Shoe Co., 124 12th St., Racine, Wis., for the free shoe book.—Adv.

Keeps Work Shoes Soft.

WORK shoes stiff from water and damaged by farmyard acids are clumsy and uncomfortable. But an occasional treatment with P. & V. Farm Shoe Dressing, made by the Pfister & Vogel Leather Co., Milwaukee, will keep the work shoes soft and pliable and comfortable on the feet. Get a can from your dealer the next time you are in town or send to the company for a sample can. See page 17.—Adv.



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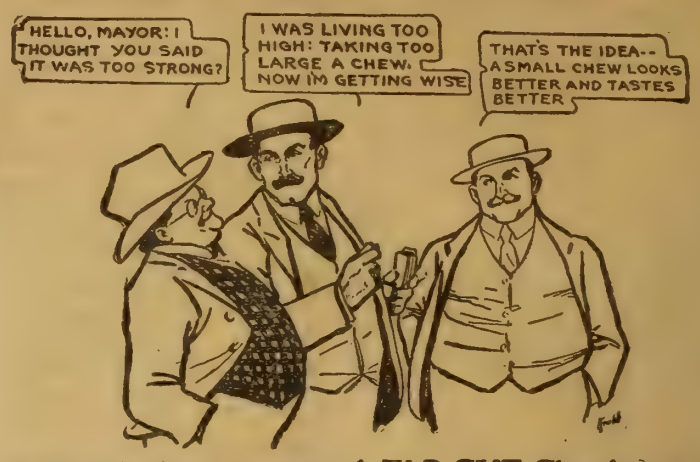

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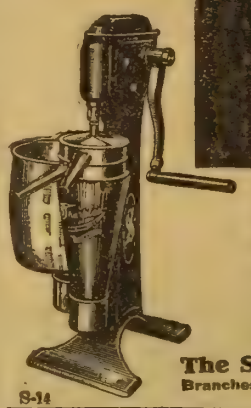

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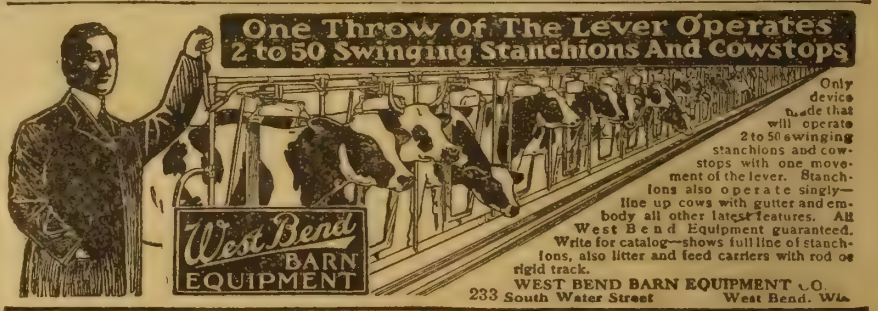

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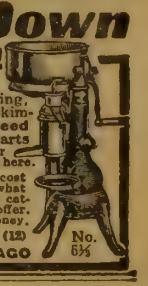

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No. 6½

Study Consolidated School.

Rock County, Wisconsin, Young People and Their Parents Interested in the Harlem School Just a Few Miles Over the Line.

WHATEVER is best for the farm boys and girls the business and farming interests of Rock county, Wisconsin, can be expected to support. If corn growing needs encouragement you will find them conducting corn-growing contests; if roads need improvement efforts will be made to interest the boys in this; if rural schools need improvement they can be found back of this proposition. So it is with pleasure that the writer notes the efforts being put forth in this county by the various interests to focus the attention of the coming generation on matters of such great importance.

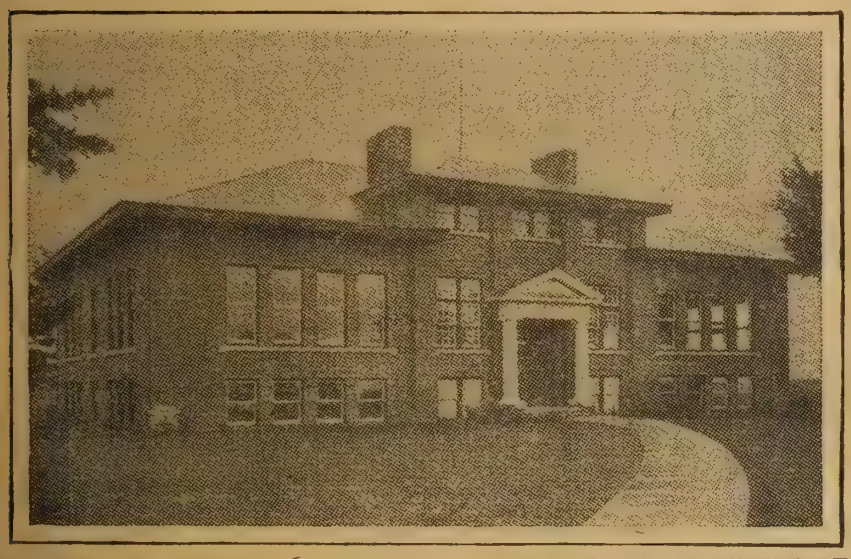
Rock county, we believe, now leads the state in boys' contest work. The acre and ten-acre corn contests will be concluded with the harvest and the show at Janesville about December 1st. The calf-raising contest has already been concluded, as has the road improvement contest. The baby beef contest at the county fair was a decided success. The rural school grounds improvement contest promises good results. These are merely five of the activities for the younger folks conducted under the direction of Mr. L. H. Markham, county Y. M. C. A. secretary, with the co-operation of business men, farmers, breeders and bankers.

Every year it is customary to give the boys in the corn and road contests an outing. The writer was asked to join the tour through southern Rock county and Winnebago county, Illinois, on Saturday, October 7th. About 200 boys in sixty automobiles made the trip, mention of which was made about the founding of the Harlem school was perfected in April, 1910, and the first school was organized the following September. Four one-room schools were taken in, the district now comprising about seventeen sections, and all the pupils either drive or come by the interurban. The school does not operate wagons, as is done in many places.

The building is a model of convenience and is the equal of many city schools. The first floor is devoted to class rooms, the basement to the manual training and domestic science departments and the chemistry and physic laboratories and everything is modern with toilets, running water, lights, heat, etc. As Mr. Earl M. Pallett jokingly remarked, there is just one objection to the school and that is that it takes an effort to get the children to go home in the evening. This longing to bake and cook and make wagon beds and other things in the manual training shop has led to the making of a rule that pupils cannot stay after a certain hour except by special permission.

The Harlem school brick building was erected at a cost of $13,695, not including equipment, from money voted by the four districts taken into the consolidation. This price included heat, water and plumbing. A spacious front lawn adds to the beauty.

Mr. Pallett, realizing the interest in the cost of operation as compared with the original four schools, prepared a chart for the occasion which showed the advantages of the consolidated school in dollars and cents. In 1908, before consolidation, the assessed valuation of the district now taken in was $200,038 compared with $532,631 in 1916, six years after consolidation. In 1909, the first year before consolidation, the assessed valuation was $354,425.



HARLEM, ILL., CONSOLIDATED SCHOOL DISTRICT BUILDING VISITED BY ROCK COUNTY YOUNG PEOPLE ON FARM TOUR.

In our last issue, ending with a picnic at Harlem Park, Rockford.

During the past year there has been considerable agitation for a concrete road connecting the twelve-mile link between the cities of Janesville and Beloit. There has also been much agitation favoring the consolidation of some of the small country schools with the idea of bringing greater efficiency into the school system. So the trip was twofold—first to give the boys an outing and secondly to acquaint them and their parents with the road and consolidated school work in Winnebago county.

The first stop was made at the Harlem consolidated school, situated in the country several miles from any town and between Roscoe and Rockford, Illinois, on the interurban. It was a treat to the eye to see such a magnificent building standing at a country crossroad with large cornfields on all sides and probably no better opportunity ever presented itself to become acquainted with the work of the consolidated school. It was not a school day, but the farm boys were at work in the manual training department and the farm girls were baking cookies to appease the appetites of the hungry tourists. Almost two hours were spent here inspecting the school and the grounds. The consolidated school idea is rapidly gaining a foothold in Wisconsin. Rock county, where the campaign is now on, does not have a single consolidated school. The consolidation which brought

In 1908 the total enrollment in the four schools was sixty-six. It fell to sixty-two in 1909, the year before consolidation, while in 1916 the enrollment was 115 in the consolidated school, an increase of almost 100 per cent, which tends to bear out the statement that such schools increase attendance. The cost per pupil in 1908 for the four schools was $27.41. In 1909 it was $28.56, while in 1916 it was only $25.93, which shows a decreased expense with better advantages. The cost per $100 valuation in 1908 was 89 cents. In 1909 it was 48 cents and in 1916 it was 56 cents, while statistics showed that in Winnebago county today there are ten one-room schools with higher taxes than the present Harlem consolidated school.

The Harlem school is more than a place to learn the A B C's. It is the meeting place for the community and it is estimated 2,730 persons used the school auditorium last year for this purpose, as thirty-nine meetings with an average attendance of seventy were held there.

The course includes all those usually taught in the country schools and in the seventh grade agriculture is added. As little text-book work as possible is given, the idea being to get pupils to do field work, and the work follows the seasonable sequence of farm operations when they are of most interest.

After finishing the eighth grade the pupil at this country school may go on into the high school, which now has nineteen pupils. On graduation a boy or girl may go into any university or college, the high school being accredited, and it is the only accredited school in the county outside the city of Rockford. During the four years in high school agronomy, animal husbandry, farm management, domestic science, domestic art, domestic economics and horticulture are taught in conjunction with the regular courses.

To keep interest high the school annually holds a fair for the exhibition of farm crops, plowing contests, etc., and these have proven very successful.

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Trapping Pays the Farmer.

A Fine Sport in Wisconsin and One Which Results in Good Profits Now Because of the Very High Price of Furs.

TRAPPING is a fine sport and Wisconsin farmers have found out that in the past two years it has been very profitable. Prices of furs are high. Southwestern Wisconsin is one of the important sections for trappers and farmers in that part of the state annually reap large financial returns from this work. Wisconsin has many wild animals which supply furs which are greatly in demand. Not only can furs be sold for cash in hand but they may be sent to the tannery and transformed into beautiful fur coats or robes, and this is what is done in many instances. Many farmers who feel that they could not afford the fur coats or robes or mittens or other articles of apparel at the prices charged for them at the stores are able to get these in just as good style and appearance, and much cheaper, by trapping the animals themselves. The fur market this year is seeking the farmer-trapper, and furs will be found on shoes, hats, caps, gloves, etc., as well as in coats, robes, muffs and scarfs.

Until two years ago the fur situation was very discouraging and farmers laid aside their traps because the prices did not warrant the effort. Now conditions are reversed and hundreds of farmers will be interested in trapping as a profitable side line for the winter.

Wisconsin is regarded as one of the leading fur-producing states. A leading tanner of the state recently furnished The Wisconsin Farmer with a list of such animals as may profitably be trapped. Raccoon, skunk, muskrat, mink and white weasel are the fur-bearing animals most numerous in Wisconsin. Wisconsin mink is especially good and is used in making fur pieces such as muffs, neckpieces, etc., as it requires too many of these skins to make a coat. Coon skins are made into fur sets and rugs and are often mounted. Muskrat hides are used chiefly for fur sets and the white weasel fur for trimming. Almost any farmer residing near a stream or lake can trap one or two of these animals.

Prices for skins vary according to color, size and quality. Muskrat skins are worth about 25 cents now, but as the winter comes on they are worth more. Skunks vary in prices from 50 cents up. Mink is worth $1 to $4, raccoons from 50 cents to $2.50, gray fox from $1 to $3, red fox from $3 to $10. Muskrat, skunks, raccoon and mink provide the greatest sport for trappers. These animals are found in almost all sections of the state. By all means get rid of the skunks on the farm, as they are easily trapped. Skunk skin often masquerades as Alaskan sable, black marten, Hudson seal and mink, and this is no secret either among trappers or dealers. Most of these animals are caught in steel traps, although pitfalls, etc., are used by many. Fur-bearing animals should not be shot, as the shot will injure some portion of the skin and often spoil it entirely. Skins of the older animals are best and animals should be trapped during cold weather. It is a great deal of sport to chase the coon at night, but if he is to be turned into money trap him.

It is important to take proper care of the skins. Don't overstretch them. To stretch, draw over a board, flesh side out. There is a tendency to overstretch to get an additional price, but this often lessens the price by injuring the skin. Skins should be removed immediately and hung in a shady place to dry. In skinning always leave the ears and nose and never leave bones in the tail or paws, as it is almost impossible to remove them when the skin is well dried. Remove all fat and meat before drying and always stretch when skin is green.

Skunks may be trapped in all sections of Wisconsin now. The season closes in Ozaukee and Washington counties February 2d, but not in other counties. Beaver and otter are protected at all times, but if beavers are doing damage they may be removed and destroyed under [illegible]on of the conservation comm[illegible]n.

The open season i[illegible]n for fisher, marten and mi[illegible]ember 15th to March 16th; [illegible]Novem-ber 1st to Februar[illegible]ept in Ozaukee and Wash[illegible]ounties, November 15th to [illegible] 16th), and muskrat from [illegible] 15th to March 16th, excep[illegible]ake St. Croix, Lake Pepin[illegible]pi river and all inland [illegible]us and sloughs tributary [illegible]here the open season is Ma[illegible]pril 11th. Muskrat are als[illegible] in the counties of Polk, [illegible]ce, Rusk, Lincoln, Langlade[illegible]Marinette, Florence, Oneida, [illegible], Ashland, Sawyer, Washbu[illegible], Douglas and Bayfield, w[illegible] may be trapped from N[illegible]t to April 21st. There is [illegible]t on either coons, skunks, m[illegible]ink. The gray fox season[illegible]bruary 1st, except in Dodg[illegible]erson coun-ties, where it [illegible]nuary 1st. There is no o[illegible] season for fur-bearing ani[illegible].

Resident tra[illegible] take out a license costin[illegible]esident $10. It is illegal [illegible]her, marten, mink or musk[illegible]aid of spear, gun or dog; to[illegible]t with ferret; to disturb or [illegible]skrat houses, or beaver ho[illegible]ver dams, or raccoon den [illegible]he purpose of capturing ra[illegible] to set traps within 100 fe[illegible]eaver house or dam. Steel [illegible]e used for tak-ing fur anim[illegible] season and the possession [illegible]kins during the closed season [illegible]vful, as is also the possessi[illegible] time of skins of fisher, marten, mink or muskrat showing that they have been shot or speared.

HIDES AND FURS.

Get the Top Fur Prices From

your furs—ship to Funsten! Men and boys make big money trapping. You can, too. It is easy to trap raccoon, muskrat, fox, etc. We teach how. John Haugstead of Waukon, Iowa, caught sixteen fine skunk in one hole with a Funsten Perfect Smoker. Price $1.50. Parcel Post $0.30 extra. Emil Theis of Boerne, Texas, caught in one setting fourteen animals in eighteen traps with Funsten Animal Bait. Price $1.00. Three books in one FREE. Trapper's Guide, Supply Catalog, Game Laws. Tells how to make money on fur and when and where to trap; preparing skins for shipment. Write today.

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Highest prices paid—prompt returns, correct grading. Our success—44 years of fair dealing in America's greatest fur market. Means more money for your furs. Before you send a shipment to anyone get our reliable fur report and price list. Supply catalog and shipping tags absolutely free—Summerfield's Animal Baits are guaranteed—$1.00 per bottle. Traps and supplies at lowest prices.

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.32, .35, .351 and .401 Caliber
SELF-LOADING RIFLES

When you look over your sights and see an animal like this silhouetted against the background, you like to feel certain that your equipment is equal to the occasion. It is, if you are armed with a Winchester Self-Loader. Not only does this rifle shoot surely, strongly and accurately, but it gives you a chance to get in a number of shots in quick succession. It is the rifle of rifles

FOR ALL KINDS OF HUNTING

HIDES AND FURS.

Something New to Consider In Selling Furs

We have created a fur commission of three experts who have judged furs for years, to protect you. They grade every pelt you send us and price it according to highest market reports. You don't have to rely on the judgment of only one man. This may sound unusual. But for a firm of our size it is simply good business. We are the largest firm in our line in America. It is up to us to be the leader. We have large customers to supply. *You* have to be protected and satisfied if we are to receive a steady supply of furs. And we believe we will make more in the end by giving *you* more. We want high-grade pelts, and are helping trappers to get them by our free premium system—to equip all trappers who trade with us.

FREE TO HUNTERS AND TRAPPERS—AUTOMATIC REVOLVERS, GUNS, TRAPS, etc.—who join our co-operative plan. So don't be tempted to sell furs elsewhere until you read the particulars of this plan. We believe it will make a big year for both of us if you take advantage of it. Write for our Fur Club News, Fur Market Reports, Premium List, and List of Prices. All of these will be mailed to you free, upon request.

S. SILBERMAN & SONS (Est. 1866), 1119-1125 W. 35th St., Chicago, Ill.
Largest Fur and Wool House in America [23]

$1,000,000 for Furs!

We have a million in cash ready to pay you for your furs. This means safe, prompt returns. We pay full prices shown on our price list. No deductions made on pretext of commission, transportation or anything else. **No one pays more.** If higher prices are quoted beware of deductions. Thousands of hunters and trappers make sure living by depending on our fair dealings. Farmers who quit others stay with us. Why run risks of losing a whole season's work by sending furs to someone you are not sure of? Remember, $1,000,000 in cash and a thirty-year reputation are behind our offer. Write today for price list. Then we will keep you posted on every turn in the fur market, so no one can mislead you. Originators of Classified Price List.

Becker Bros. & Co. Dept. E3, 416 N. Dearborn St., Chicago
Dept. E3, 129 W. 29th St., New York

TAYLOR PAYS MORE FOR FURS

Trapping pays big if you sell where you get the most money. St. Louis is world's greatest fur market and F.C. TAYLOR FUR CO. is oldest and largest house here. It will pay you to join the happy family of Taylor shippers.

TRAPPERS WRITE FOR THIS FREE BOOK

Our catalog-Booklet entitled *"Opportunities for pleasure and profit in trapping"* is different: you will say so when you get your copy. It's FREE if you mail a postal to-day. Our trappers supply department will help you get started. Write Today.

SHIP YOUR FURS TO
F.C. TAYLOR FUR CO.
135 FUR EXCHANGE BLDG. ST. LOUIS, MO.

TRAPPERS—FREE!

FUR NEWS, published monthly, tells all about raw furs, trapping, hunting, fishing, fur farming, hunting dogs, woodcraft, guns, roots and herbs, market prices. Lots of good stories; fine illustrations. Send 10c coin for copy and get FREE valuable illustrated Trapper's Guide.

FUR NEWS, 71 West 23d St., New York. Room 822

FALL PLANTING PAYS

Replant your orchard—set out fruit now—gain a year's growth over spring planting. Home grounds cannot grow too much fruit. Order now. Delivered immediately. Highest quality stock from our own nursery, Iowa grown. Lowest possible prices. Our 118-page four-color catalog describes and prices all varieties—a fruit grower's hand book—guide to the best in planting—fruits, vines, shrubs, plants. Free for a postal. Ask for our special 1916 fall offer. It will save you money.

GALLOWAY BROS. & CO.
Waterloo, Iowa

Want to buy or sell a farm? Make it known by inserting an advertisement in THE FARMERS' MARKET. Six cents a word each insertion.

UPPER WISCONSIN

Upper Wisconsin Fair.

The Gogebic (Mich.) and Iron (Wisconsin) Counties' Fair, held at Ironwood on September 13th, 14th, 15th and 16th, proved to be a success as an agricultural and live stock exposition, although rain on the first two days of the fair lessened the number of cattle shown and hindered the placing of exhibits in other departments. The vegetable, grain and especially the corn and potato exhibits were the best and fullest seen in years. The live stock exhibit was not as large, but was far better in quality of cattle shown than in former years. Most of the cattle shown were registered and high-grade Holsteins and Guernseys, as these are the most popular breeds in these northern counties. Pine Grove Farm, the only exhibitors from Iron county, took a good number of the best ribbons on Holstein herd headed by Star Jewel De Kol 131513; also several of the best on potatoes and grasses.

Success With Fall Pigs.

Fifty-seven fall pigs at the University farm, St. Paul, Minn., were recently marketed with a profit of $4.56 a head. Mr. R. C. Ashby, of the animal husbandry department, writes as follows of the feeding tests:

Eleven sows farrowed fall litters for the tests, and the pigs were weaned December 16th. They were put on feeding tests two days later. The records kept cover all feeds consumed by sows and litters from farrowing to weaning and from the time the actual feeding test was begun until it was finished.

The total cost of feed for sows and pigs up to weaning time was $186.81. From weaning time to the time of marketing, the feed cost $577.88, making a total cost of $13.42 a head. The feed was counted at these prices: Shelled corn, 75 cents a bushel; ground barley, 65 cents a bushel; shorts, $26 a ton; tankage, $55 a ton.

The pigs averaged 191¼ pounds when sold May 6th. They were sold at $9.65 in South St. Paul, a price equivalent to $9.40 at home. The selling price of $17.98 left a balance of $4.56 each. No account of manure is taken in these figures.

The pigs were fed in five lots, three lots from self feeders and two lots fed by hand. Those in the lots in which the self feeders were used did better than those in the other lots. The corn-fed lots required about seven bushels of corn, forty pounds of tankage and from thirty to forty pounds of shorts for each pig from weaning time to the close of the test.

The pigs were fed again alone. They were given no milk and did not have access to the cattle yards. Mr. Ashby thinks that when milk is available or when the pigs can pick up after cattle the margin will be correspondingly increased.

Advertising Upper Wisconsin.

Mention has previously been made in this paper of the publicity campaign which is to be carried on this month and next through the co-operation of the "Omaha" road and the Wisconsin State Department of Agriculture. A special train has been arranged and this train is now touring through Minnesota and will visit a number of points in northwest Iowa. At the time we go to press the train is, according to its schedule, at St. Peter, Minnesota. The balance of the schedule is as follows:

Mankato, Minn., October 20th and 21st.
Blue Earth, Minn., October 22d and 23d.
Winnebago, Minn., October 24th and 25th.
Vernon Center, Minn., October 26th.
Lake Crystal, Minn., October 27th.
Madelia, Minn., October 27th and 28th.
St. James, Minn., October 29th and 30th.
Mountain Lake, Minn., October 31st.
Windom, Minn., November 1st and 2d.
Adrian, Minn., November 3d and 4th.
Rock Rapids, Iowa, November 5th and 6th.
Luverne, Minn., November 7th and 8th.
Sibley, Iowa, November 9th and 10th.
Sheldon, Iowa, November 11th, 12th and 13th.
Hospers, Iowa, November 14th.
Alton, Iowa, November 15th and 16th.
Le Mars, Iowa, November 17th and 18th.

The exhibit train consists of three cars, and the trip will take up five weeks. The choicest Upper Wisconsin farm products are displayed. Mr. C. P. Norgord, commissioner of agriculture, will accompany the train at a number of points and other men of prominence in the agricultural development will aid with the work. This is one of the greatest advertising boosts that Upper Wisconsin has ever had and it will undoubtedly result in a great deal of good.

Michigan Potato Show.

The annual potato show of the Michigan Potato Growers' Association will be held at Escanaba, November 1st, 2d and 3d. This convention will be combined with a meeting of the Upper Michigan Cloverland Associations, the clover growers organizing three years ago, holding their first meeting at Menominee.

Quality of Beans Good.

The Oconto Falls Canning Company recently shipped a car of beans to a wholesale house in Marshalltown, Iowa. The quality of the beans was good and the carload was very much appreciated in Iowa. "Beans is beans" everywhere this year and the price is high.

For your winter's comfort get a

Summit Knit-Nek Vest

Designed especially for the man who must be outdoors during the cold, windy days of winter.

You simply can't get cold in one of these strong, light weight, cold-proof garments.

Made to keep you warm where you need it most—at the throat and the wrists.

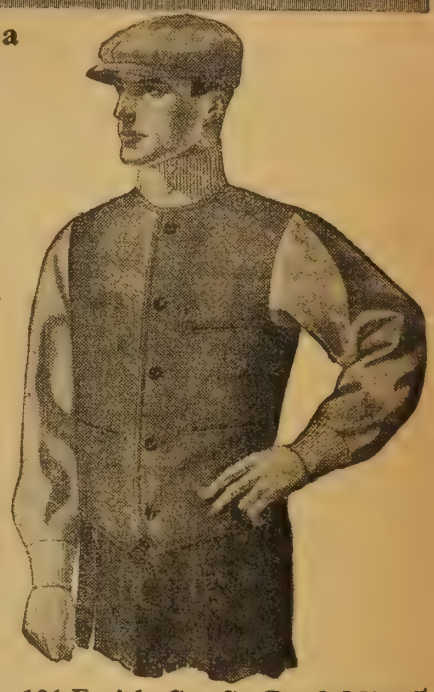
You can see how effectively the patented Knit-Nek fits around the throat, keeping out the cold and wind.

The wool wristlets do the same to your arms.

The leather lined body and leather sleeves are great cold resisting features.

Why not get one of these comfortable garments?

Write today for our interesting style book and give your dealer's name.



GUITERMAN BROS., Maker 186 E. 4th St., St. Paul, Minn.

Atlanta, 2⅛ in.
Whitby, 1⅞ in.

15c each
6 for 90c

ARROW COLLARS

The exquisite finish given by the domestic laundry which is found in Arrow Collars is made possible by the evenness and fineness of the fabric

CLUETT, PEABODY & Co., Inc., TROY, N. Y.

DU PONT

RED CROSS FARM POWDER

The Original and Largest Selling Farm Explosive

Why use expensive high speed dynamites when this slower, safer farm powder will save you from $3 to $5 per hundred pounds and for most farm uses do better work?

BIG BOOK FREE

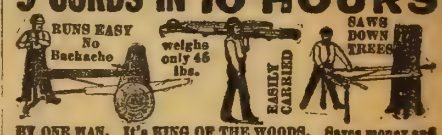
As pioneers and leaders in developing farming with explosives our booklet gives the latest, most reliable and best illustrated instructions. Write for HAND BOOK OF EXPLOSIVES No. 35 F.

DEALERS WANTED

We want live dealers in towns still open. Get the orders resulting from our *continous heavy advertising.* You need not carry nor handle stock. State jobber's name or bank reference when writing.

E. I. du Pont de Nemours & Company
Established 1802
World's largest makers of farm explosives
Wilmington, Delaware

9 CORDS IN 10 HOURS



BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B87 showing low price and latest improvements. First order gets agency.
Folding Sawing Machine Co., 161 West Harrison St., Chicago, Ill.

COAL Per Ton $2.90!

Here's your chance — Genuine (see sworn statement) Pocahontas, $2.90; Hercules *Selected!* (general use — extra high grade), $2.80; Master Hocking, $2.70 per ton. Shipped direct from the mines. All prices f.o.b. mines. Prices all smashed. Quality absolutely guaranteed — weight absolutely guaranteed. You pay only IF satisfied AFTER seeing the coal. *Write for booklet and free photographs of coal.*
Hercules Coal Company 168 North Michigan Avenue Dept. G-848 Chicago, Ill.

Dunn County Is Now in the Lead.

W. E. Anderson, of Dunn County Association No. 1, Has Best Cow in the State | Cow-Testing Association for Past Month.

WISCONSIN dairymen are widening the margin of advantage they have had over New York dairy farmers, their nearest competitors in cow testing. Prospects are good for the early formation of four more associations, which would bring the state's total up to fifty-seven. Dairymen near Kendall, Balsam Lake, Mt. Sterling and Prairie du Sac, who have seen that co-operative effort, applied continuously, pays in dairying, are seriously considering the formation of associations and the employment of testers.

Association	Tester	No. of cows tested	No. of cows producing 40 lbs. of fat	Fat production high cow	Owner
Dunn Co. No. 1	W. E. Anderson	501	35	63.4	A. Becker
Reedsburg	Alvin Wardas	330	29	68.5	J. J. Marshall
River Falls R.	C. G. Carlson	425	17	59.3	J. L. Chapman
Ontario & Norwalk	Julius Ausen	897	16	52.0	M. E. Schwarz
Langlade Co.	John Reckinger	436	14	66.1	Harry Lyons
Mishicot	E. H. Meineke	348	14	55.9	W. Bertolait
Wood Co. No. 1	J. L. Williams	500	13	58.1	J. C. Kieffer
Empire	Roy Monroe	503	12	50.3	N. Schneider
Happy Valley	Wm. Heebink	375	12	59.8	H. Martell
Baraboo	W. C. Johnson	400	11	58.0	L. Siebecker
Waupaca & B. R.	Geo. Moss	386	11	50.2	C. Peterson
Alban & New Hope	M. E. Smith	279	10	51.9	C. Erikson
Stratford	Harry Johnson	393	10	47.8	P. Harter
Stanley	Richard Adams	486	10	56.6	P. Stuttgeon
Shawano Co.	C. M. Rydberg	368	10	44.9	Wm. Hansen
Wrightstown, G. & B.	Frank Gaiser	422	9	62.8	Gus Bruss
Bloomer & E. P.	R. A. Boyd	520	8	49.8	A. A. Hall
Door County	Geo. Thull	314	8	48.2	Alf. Blinde
Kewaunee	Henry Brandt	350	8	50.9	G. Erikson
Rosendale E. & L.	Frank Lynn	450	6	57.0	Viema & Randall
Winnebago Co.	A. R. House	403	6	71.6	[illegible] Moseley
Geneva	Frank Drake	470	5	51.2	H. Dunbar
Lindira	W. A. Newman	329	3	44.4	C. Haskins
Winchester	T. J. Toolajian	520	1	40.1	C. C. Larson
Sparta	C. P. Chrysler	337	1	54.9	J. Leverish
Columbus	C. F. Wehrwein	298	1	52.8	H. H. Huggett

Reports made for the month to N. A. Negley, Madison, who represents the United States Department of Agriculture, the college of agriculture and the State Dairymen's Association in cow-testing work, indicate some economical business moves on the part of numerous associations. These include getting rid of undesirable animals which could not be maintained at a profit and purchasing feeds in carload lots. The Shawano association sold six worthless cows during the period, while seven consignments of feed, bought in large lots at cash prices and taken directly from the car by members to save storage and delivery charges, were noted in four other associations.

The accompanying table is a summary of the reports received from testers in charge of various associations.

Fruits and Garden

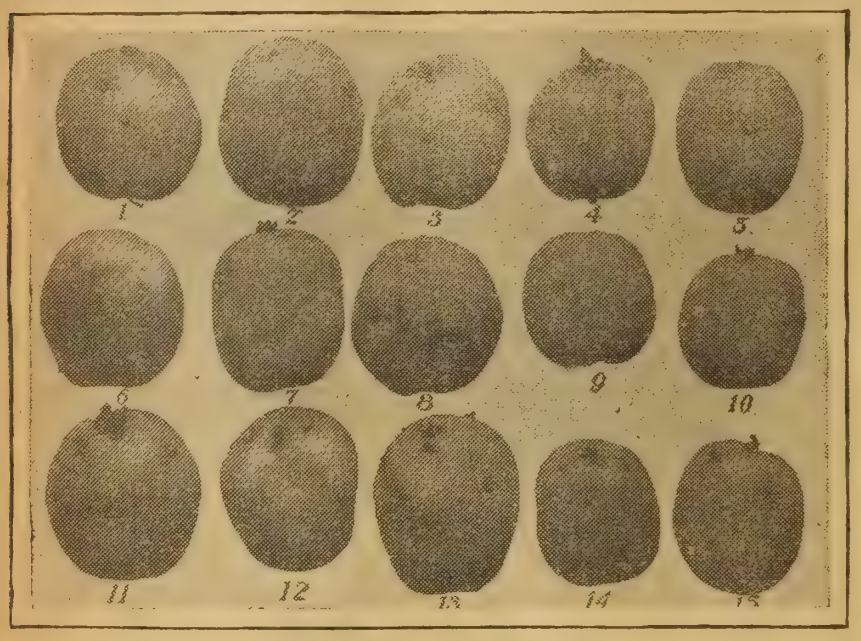
Nation's Greatest Potato Show at Eau Claire.

Notwithstanding the shortage in the potato crop in the Wisconsin counties which specialize on commercial varieties, arrangements are being made for a bigger potato show than ever this year. The annual event is to be held this year at Eau Claire, November 21st-24th. The season has offered unusual opportunities for investigation and in comparison with the wet summer and early frost last year gives a chance to study potato growing in practically all of its important lines. There were thirteen county exhibits at the Marinette show last year and it is understood that there will be several new ones in line this year which have not heretofore been entered in competition. County exhibits must show the product of ten or more growers and awards will be made exclusively on the merits of the stock show without reference to ornamentation of the boxes in which they are shown. The association has made an effort in advance to make clear its standard as to sizes, and it has been agreed that in the Rural New Yorker classes the accepted and approved size will be about ten ounces. In the showing of Triumph, Early Ohio and Irish Cobbler classes the approved size will be from six to eight ounces. Exhibitors are warned against washing potatoes or permitting them to be exposed to the light, as this tends to darken the skins. Cleaning should be done with a brush or cloth.

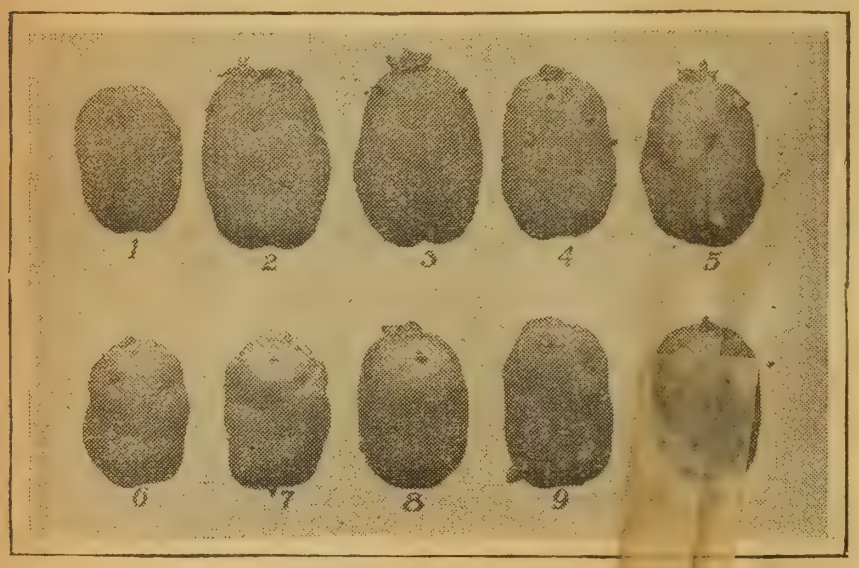
Special features of the Eau Claire show will be the attendance of potato loaders and shippers, representatives of community associations and boys' and girls' potato clubs. The exhibit of potatoes is expected to be the largest exhibit of standard market varieties ever shown in this country, and as such will attract as much or more attention than the national show. The officers of the Wisconsin Potato Growers' Association are, president, J. W. Hicks, of Prentice; vice president, O. C. Woodward, of Weyauwega; secretary and treasurer, J. G. Milward, of Madison.

The chairmen of committees at Eau Claire are as follows:

Entertainment—R. F. Kaiser, secretary civic and commerce association.
Transportation—George Wallace, general freight agent, Chicago, St. Paul, Minneapolis & Omaha railroad.
Publicity—W. L. Swift, of the Eau Claire Press.
Finance—Bankers' Agricultural Committee, of Eau Claire; Knute Anderson, chairman, Union National Bank; W. S. Woodruff, Eau Claire National Bank.



RURAL NEW YORKER TYPES.
General type of potato of this variety which is approved as a market standard for commercial growers.



GREEN MOUNTAIN TYPES.
A potato which has come to be popular in a number of W... best tuber-growing counties.

SIX STANDARD VARIETIES
Group A—Rural New Yorker. Group B—Green Mountain. Group C—Burbank. Group D—Triumph. Group E—Early Ohio. Group F—Irish Cobbler.

Lessons on Potato Harvest.

The potato harvest in Wisconsin has been on for some time and every grower should give particular attention to the selection of his seed for the 1917 crop. The crop is below normal, prices for commercial stock are already very high and good, sound, vigorous seed potatoes are sure to be high in price before the next planting season. All of which makes it more important that good seed be chosen now and properly stored.

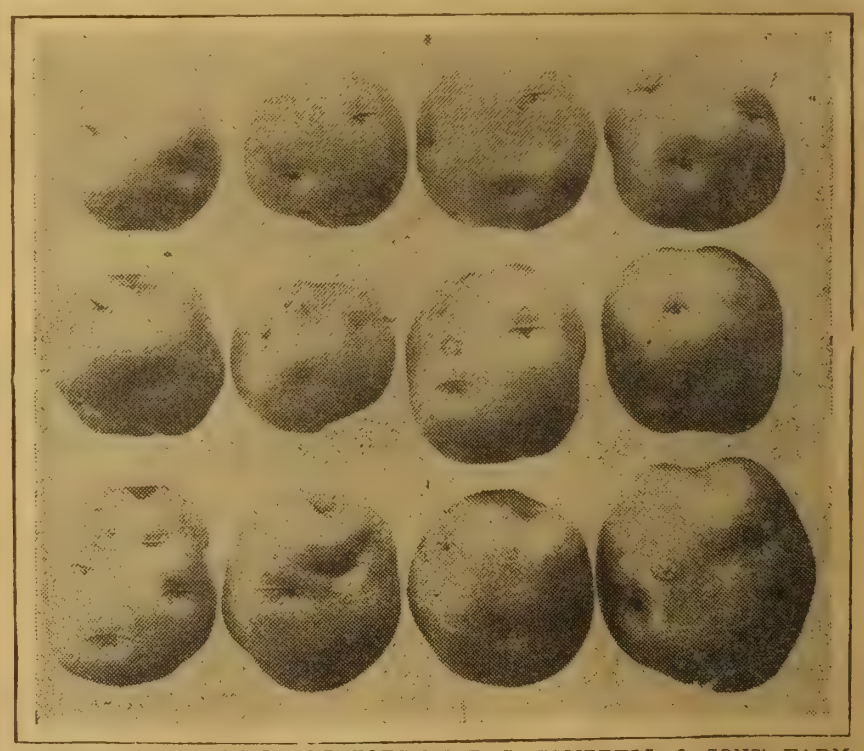
Field selection has been found the most satisfactory method of securing the seed and this is done best at harvest time when potatoes can be selected more easily for type than at any other time. The day of selecting seed stock from the bins in winter after a large amount of desirable stock has been sold from the field has passed with the better growers, who are now giving the improved methods of handling, storage and seed selection their careful attention. These three items are regarded as the fundamentals upon which permanent improvement must be based and interest is widespread throughout the potato-growing sections in the improvement of cultural methods and market standards. The average grower has not, as yet, taken advantage of the possibilities of seed selection for maintaining a high standard of commercial table stock, but this work has taken rapid strides in Wisconsin in the last two years, as has the growing of pure-bred seed as a separate phase of the industry.

Experiments have proven the value of the hill-selected seed. This is the method by which the seed stock is taken during harvest from hills where every potato is of uniform size, color and vigor. This means that the seed from the hill can be expected to produce like for like and it can be easily seen what a few years of such selection will mean to the grower who is endeavoring to grow a standard table potato. The old practice was to pick the largest and the best from the storage bin. But this has been abandoned in the commercial sections, to a great extent, as the large potato may have come from a hill with a half dozen small ones and such seed would produce likewise. So hill selection is being practiced more extensively each year.

Among Wisconsin growers who have been following field selection for many years are F. S. Campbell & Sons, of Three Lakes, Oneida county. The accompanying illustration showing a dozen Triumphs from one hill, which was photographed for Mr. J. G. Milward, secretary of the Wisconsin Potato Growers' Association, speaks for itself. This seed stock, it must be borne in mind, is from one field and every potato is of uniform size and vigor. Mr. Campbell has worked in hill selection for many years and the many fields of standard varieties now grown on the Campbell farm are from stock which was originally hill selected. Close attention to storage and improved methods of handling is also given by Mr. Campbell.

Late in August Mr. E. G. Wortley, director of the Bermuda Island Experiment Station, on a visit to Wisconsin, had an opportunity to visit Mr. Campbell's potato fields. Mr. Wortley is especially interested in Triumphs, as this is the principal variety grown on the Bermuda Islands, where the growers are anxious to secure seed stock from vigorous fields, comparatively free from such troubles known as leaf roll and the mosaic disease. Mr. Wortley, who is considered an expert on Triumphs, was highly pleased with the healthy condition of the foliage seen on some fields which he visited and was especially profuse in his praise of the work being done by Mr. Campbell and other growers in the matter of hill selection and commercial potato development work.

A practice in Wisconsin which is to be commended is the reservation of a limited amount of land for seed growing, but where this has not been done selection for type at harvest from the field should be done. The seed should then be stored at an even, cool temperature of approximately 35 degrees until the approach of planting time. It is then desirable to bring this seed to the light and induce, if possible, the starting of strong, vigorous sprouts just before planting. The influence of improper storage on quality is especially noticeable.



ONE HILL OF TRIUMPH POTATOES ON F. S. CAMPBELL & SONS' FARM, THREE LAKES, WIS.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Time to Get Busy in Poultry Yard.

This cool, comfortable weather has revived the interest in our flocks; has, in fact, revived interest in being alive. Before nothing seemed quite worth while.

In spite of the care, which we fondly hope was of the best, things went awry. Never since the writer has cared for poultry did our hens fall off so badly in the egg supply as this summer. It was just simply too hot, and that was all there was about it. Many a fat, healthy hen succumbed from the heat; hens that would have made good at the business of keeping us supplied with high-priced eggs next winter. Our hens were shut out of the hen house and took to the shrubbery where they did better.

The prices of eggs are rising and interest in getting ready to supply the winter trade is a natural consequence. Come to think of it, only a few weeks will elapse before the winter layers must be giving attention to their jobs. So hie away to the buildings and see what needs to be done; enough probably.

Well, one thing is cheering; that dropping board that was placed under the perches last spring has divided the work of cleaning the house to a small fraction. A handy boy is very desirable these days and, aside from a rather wry face, pulls the spring wagon for the purpose close to the door. First the dropping boards are cleaned off; only a few minutes' work, too, where formerly the droppings were mixed with the litter it required hours of back-breaking work. Have every reason to know how it was; have helped do it pretty nearly a hundred times.

SINGLE COMB WHITE LEGHORNS ON THE E. F. POMPLIN FARM, FOND DU LAC COUNTY, WISCONSIN.

Then the litter is to be raked out into the yards and burned. If it so happens that there are some cobs so much the better. Pour water over the fire when about half burned and there will be some good disinfectant in the shape of homemade charcoal. It is one of the best of appetizers and health-promoting substances imaginable.

The next thing, perhaps, is to remove the nests. They are in groups of six and ligthly tacked to the walls to keep them from being wobbly. They are easily loosened, and—horrors! rat holes, as you live! Rather carefully you work now; rats are pretty nearly a lot better than road dust. The dust box, by the way, is directly under the largest window, just as an easy chair is placed in the most desirable corner of our living room. Comfort goes a long ways for weal or woe in our flocks and the sooner we admit it the better.

Perches are left in the sun and wind a couple of days before being replaced, after their kerosene bath. When they are replaced that extra board is nailed onto the dropping frame. A very small space did a lot of mischief in letting

POULTRY FEEDING YARD ON E. F. POMPLIN FARM, FOND DU LAC COUNTY, WISCONSIN.

in a line with snakes, and this dread of reptiles is not confined to Eve's daughter alone. There is the straw where a nest has been made. And there goes one of them, a snaky, half-grown rodent! That explains where that last lot of young chickens disappeared. Must do better next time. Those nests are to be blocked up so there will be no hiding place for them. It seems that rats, in common with other pests, come at intervals.

The walls are swept, sprayed and followed with a plentiful sprinkling of lime, the windows washed, some broken lights replaced and new burlap tacked in the ventilation openings. The dust box is scraped to the bottom and refilled with fresh, moist earth from the garden. This kind of soil we find droppings through. All small details, aren't they? It is really a small affair though, all told, and each small item counts for much.

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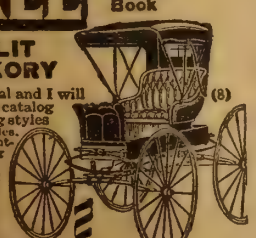

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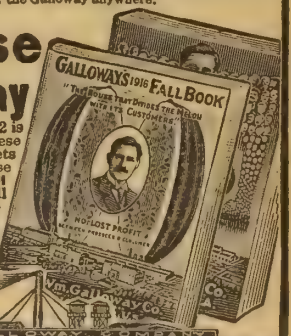

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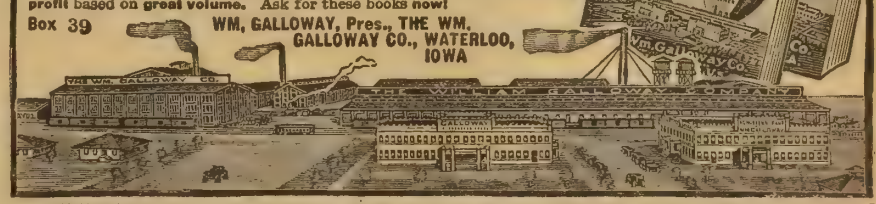

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Care of the Teeth.

We have commented time and again on the importance of taking care of the teeth, but we are going to bring up the subject again in the hope that every single boy and girl in every single home into which our paper goes will be taught how to properly care for his or her teeth.

It has been proved that bad teeth are the cause of many a child's backwardness in school—not only that but many undesirable tendencies and habits are directly traceable to decayed or crooked teeth. It is so easy nowadays to visit a dentist and have the teeth inspected periodically that there is no excuse for neglect. If the teeth are not right have them cared for by the dentist and then keep them clean and healthy.

Don't let the children neglect brushing their teeth and teach them how to do it properly. The teeth are full of crevices and crannies that cannot be gotten at by a sideways movement of the brush, but a careless boy will never think of brushing his teeth up and down unless you tell him to, and even then maybe he won't unless he has explained to him the danger of letting particles of food remain between the teeth. Either paste or powder may be used and some people prefer alternating the two. Paste contains considerable soap which is excellent for cleansing purposes, while powder not only cleanses but also gives a high polish because of the chalk which it contains. An occasional washing with salt is also beneficial.

After the teeth have their last brushing at night run a strand of dental floss between the teeth to dislodge any particles of food that may have been missed by the brush. Then rinse the mouth with water. This is very important, because such small particles, if allowed to remain between the teeth, will ferment and this fermentation results in the production of an acid that in time eats through enamel of the teeth and causes them to decay.

If the teeth are discolored by tartar they may be whitened by the use of lemon juice and powdered pumice. For this purpose wrap a bit of absorbent cotton around an orangewood stick, dip it in the lemon juice and then in the powdered pumice and rub the teeth briskly, being careful to get into the crevices. Rub gently next to the gums, so as not to loosen them from the teeth.

Home Canning Cheapest and Best.

To the Editor:—In regard to the relative cost of buying canned vegetables or canning them from the home garden I will give my experience in canning. For my small family of three, two rows each, 100 feet long, of beans, peas and tomatoes will produce enough vegetables for our summer use and also to can for winter, while eight rows of corn is more than sufficient.

One quart glass jar will hold twice as much of any of these vegetables as the ordinary tin can bought in town, because the vegetables are crammed into the jar and no excess of water is used.

The best grade of store goods (and that would hardly equal the quality of stuff fresh from the garden) retails at an average of two cans for a quarter, so one glass jar of vegetables is also worth a quarter. The average cost of jars is 75 cents per dozen and it takes about one gallon of gasoline for fuel for one boiler of jars. The ordinary boiler will hold eight jars, so for two dozen jars it would require three gallons of gasoline. Say the fuel cost of 75 cents and two dozen jars $1.50, the total cost would be $2.25 for the two dozen jars. They would equal four dozen cans of store goods at total cost of $6, leaving a balance of $3.75 in favor of home-canned goods. And that is assuming that the jars would have to be bought each year.

Assuredly, canning is hard work, but it only lasts a few days in each year and it means clean, pure food for the family, besides being always on hand and ready for use.

Of course, canned fruit costs more than canned vegetables, because of the sugar, but good canned fruit at the store costs more, too, and, as in the case of vegetables, the glass jar holds about twice as much. I am not lucky enough to have an orchard, but have found it cheaper to buy fresh fruit and can it than to buy the canned goods.

If the housewife figures in her labor I suppose it would be cheaper to buy canned goods, but if the average farmer's wife figured her labor at what it is worth and could get the money for it she wouldn't need to study home economics. Mrs. J. J. P.

Pretty Homemade Rug.

To the Editor:—One of our readers asked a few weeks ago how to make rugs from old coats and trousers and I would like to tell her how I make them.

Cut the material you want to use in pieces about four inches long by three inches wide and button-hole stitch the sides and round end with carpet chain, any color.

Make a foundation the size you want your rug, putting on the pieces as illustrated. Be sure to begin the outside row first, putting each row all

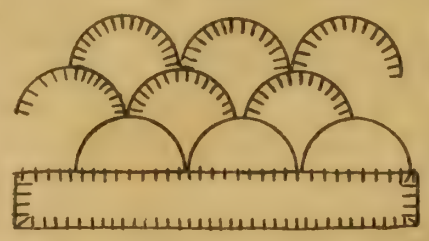

DIAGRAM SHOWING HOW TO SEW PIECES TO FOUNDATION.

around. Finish with a piece stitched all around in the center to cover the last ends.

Burlap or denim is a good foundation. I use denim.

For the benefit of M. C. O. about her braided rugs, hold the edges together, sewing as for overcasting through both braids. Use carpet chain. Round rugs are the best to make, but experience alone will teach you to sew them so they will lie flat and not cup. I have one on my floor over five feet across which lies perfectly flat and has been in use constantly for three years. A. E.

Likes Braided Rugs.

To the Editor:—I see by the paper that the lady who wanted to know how to sew her braided rug has had no reply, so I will tell her how from my experience.

I do not let the braids overlap, but join them together at the edges. I use heavy thread, No. 8, and double it. You can use black or white, whichever you prefer. Sew over and over, but do not take your stitches more than a quarter of an inch apart. Be very careful not to sew it too tight or too loose. After sewing around once or twice lay it on the floor each time around to make sure that it will not curl up or ruffle.

I use a dark strip all the way through and the other two a lighter shade of any pretty colors; or you could use all one solid color of dark or light, whichever you choose.

I hope I have made this plain so you will be able to make your rug.

I have made at least fourteen of these braided rugs and I like them better than any other kind, as they are heavy and stay in place.

I make mine oval-shaped, as I like them better than the round ones.

Mrs. H. A.

Geraniums That Do Not Bloom.

To the Editor:—I am a reader of this paper and find many helps in it.

Can anyone tell me what to do to make geraniums bloom? I have many nice geraniums, but they do not bloom. Please help me if you can. Mrs. G.

The School Lunch Basket.

At this season of the year when mothers are sending the children to school the old problem is before them of "what to give them" that they will eat and enjoy. It is more difficult to plan and prepare a lunch basket than it is to serve the meal at home, as there are many foods which will not carry well and many that must be served hot to be appetizing. The packing and arrangement of the lunch basket or box must be done carefully if it arrives with the food in any condition to eat after being jolted over country roads or joggled in the hands of the small person.

In preparing a luncheon for the school children two objects should be constantly in mind, wholesome, nutritious food and attractiveness of serving. The hearty, robust boy will demand food that the delicate girl would not care for, so the food must be suited to the person.

Many foods that were too moist to carry or dishes too troublesome may now be carried in wax paper and paper cups. Such foods as jellies, sauces, custards, cottage cheese and the like may be packed with little extra weight in these convenient little receptacles.

As the sandwich is the usual form of introducing bread into the diet of the lunch basket child, this should be served in sufficient variety of form and kind as well as a variety of fillings to escape monotony.

There are so many kinds of bread that this danger may be avoided. Whole wheat, steamed brown, graham, oatmeal, corn and rye bread may be varied with nut, raisin, date and currant, then with crackers, biscuits and rolls which may be filled after being hollowed out, with chicken or any meat salad, making a nice change from the usual sandwich.

Cup custards, egg cooked in the shell, baked beans, lettuce and celery sandwiches, small dishes of salad of various kinds, fresh fruits and many cold meats will give quite a variety. Nowhere can variety be more appreciated than in the lunch basket. The most delicious foods in the world will cease to be inviting if they appear day after day.

Another essential to the lunch basket is the surprise. Even the older children are not beyond the delight of a well-managed surprise in the form of a bit of candy well wrapped and placed at the very bottom of the basket. A little fruit, a handful of nuts or a pretty cake to be found and enjoyed at the last is always a whet to the appetite, for the thought of what may be hidden makes the plain food go down very easily. We who have grown older and have appreciated these joys can live them again in the pleasure of passing them on to the little people.—[Nellie Maxwell.

Recipes.

Mock Ice Cream.—Whip one pint of cream until stiff; sweeten with powdered sugar and flavor with vanilla. Put one heaping tablespoonful of gelatine in one-half cup of cold water, stand cup in hot water until gelatine is dissolved. When gelatine is cold stir into cream and add candied cherries or any kind of candied fruits, about one-half cupful that has been chopped, also one small cupful chopped walnut meats. Stir until mixture begins to thicken, then pour into a fancy mold that has bee wet with cold water. Stand on ice unti firm then turn out on platter and silc like ice cream.

Lyonnaise Potatoes.—Brown one third cup chopped onion in one-thir cup bacon drippings, and three cup cubed, cooked potatoes, salt and peppe and fry till nicely browned. Just befor serving sprinkle over one-third choppe parsley.

THE YOUNG FOLKS

All letters from boys and girls to this departme should be sent to office of The Wisconsin Farme Madison, Wisconsin.

A New Kind of Baby.

Dear Young Folks:—I have bee reading the letters in the paper and enjoy them very much.

I am going to write about our ca Her name is Tabby. One day I wen down to the barn and found her in th manger with six little kittens. Bu she didn't get to keep her babies lon because something killed them.

One day soon after that mamm missed one of her little chicks and w could not find it. That same day pa heard a little chick chirping, but cou not find it, so he called mamma an she found it in the manger with Tabb She had carried it down there to l her baby.

I am going to ask a riddle. Twel pears are hanging high; twelve m came riding by; each took a pear an left eleven hanging there. —Carl.

Wants to Be a Teacher.

Dear Young Folks:—I have be reading your letters and think the very interesting.

I am a little girl twelve years ol I go to Sunday school and day scho too. I live one mile and a half fro school. I am in the seventh grade.

I have four brothers and four s ters. One brother and one sister a married. My brother is in Michig training to be a minister. He has tw little girls.

We have two cows, eight hors four cats, two dogs and one white r bit named Billy. He stands on h hind feet and begs for something eat. I feed him apples, cabbage, ba and most any kind of plant.

Will some of the writers tell me h to press flowers to make them st their natural colors?

What do you Young Folks expect be when you get big? I want to be domestic science teacher and hope can. My favorite work is cooking.

We girls in this neighborhood had club this summer. We called it Bu Bee Club. We met once every tw weeks.

Will some of you girls send dir tions for a pretty yoke in crochet? surely love to crochet.

I enjoy reading the riddles and t to answer them, so will send o Patch upon patch and a hole in t middle.

I think the answer to Myrtle's Round as an apple, black as a bea tell me quick or I will pull your hair is a rubber ball. —Martha.

Likes to Go to Sunday School

Dear Young Folks:—As I am goi to write for the third time I hope m letter will be in print.

My papa has taken this paper f fifteen years now and we all like very much.

I am twelve years old and go school every day. I am in the sevent grade.

I can tat and crochet.

I like to go to Sunday school ve much. My mamma is our teach We get cards every Sunday. C class is called the Sunshine Class.

I am taking music lessons and I pl for Sunday school. —Rachel

SOMETHING FOR NOTHING

BUT YOU MUST BE PROMPT

A COMPLETE MANUAL OF CROCHET AND TATTING

By Anna Valeire

This book on crochet and tatting craft is most timely, as these arts in all their forms are very popular at the present time. It contains over sixty designs and combines new and original patterns of rare beauty combined with dainty simplicity and elegant taste. The abbreviations used to designate the different stitches in tatting and crocheting are given and their meaning explained in full. Instructions are given in detail for every design displayed in the book. Therefore, the novice in this art will have no trouble whatever in working the simple, though seemingly complicated, designs which have been compiled for her special benefit and in very little time will find that she may easily attempt the more complicated patterns intended for more advanced and experienced needleworkers. The lovely array of insertions, edgings and medallions suggest numerous ways in which they may be used to beautify both personal and household articles. The dainty tattings immediately bring to mind handkerchiefs of cob-web fineness. The simpler crochet insertions and edges suggest pretty bath-room sets and bed linen. There are no end of designs which may be used on dresses and lingerie; two yoke patterns which appear in the book make it particularly desirable. Designs for luncheon sets, scarfs, curtain edges and panels, and the new round pillow tops, and many more things which will suggest themselves to the worker are all contained in the wonderfully complete book on this fascinating art needlework.

This wonderful book of working size designs and explicit instructions will be sent Free and postpaid if you will send your order for any of the following combinations of magazines before November 10, 1916.

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The price of paper has increased over 100 per cent and the cost of inks and other materials entering into the manufacture of magazines has caused some publishers to increase their subscription price. The magazines offered below will accept orders from The Library Reading Club until November 10th at the prices which have prevailed for the past year. As an extra inducement for promptness, we will give a copy of Crochet and Tatting by Anna Valeire, to all who send us orders before November 10, 1916.

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The Housewife	.50	All for	$1.05
Today's Magazine	.50		
People's Home Journal	.50	$1.00	

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Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1571—Girl's overblouse dress with guimpe, having sleeve in either of two lengths. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 2 yards of 27-inch material for the guimpe or underwaist, and 4 yards for the dress for a ten-year size.

1854—Ladies' apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 4½ yards of 36-inch material for a medium size.

1553 Girls' one-piece pajamas. The pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. The 10-year size will require 3¾ yards of 36-inch material.

1547—Ladies' home or morning dress, with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5¾ yards of 44-inch material for a 36-inch size.

1855—Girls' dress with bloomers. The

pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 1⅛ yards of 36-inch material for the bloomers, and 3¼ yards for the dress for a 4-year size.

1529—Costume for misses and small women. (With sleeve in either of two lengths). The pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 7 yards of 44-inch material for an 18-year size.

1856—Juniors' coat, with fronts and collar rolled high or low. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 4⅛ yards of 54-inch material for a 14-year size.

1568—Ladies' costume. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 36 will require 6⅜ yards of 44-inch material.

1536—Girl's dress with sleeve in either of two lengths. The pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3 yards of 44-inch material for an 8-year size.

1876—Ladies' dress. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 44-inch material for 38-inch size.

1849 Waist-1871 Skirt—A very attractive dress. The skirt pattern is cut in 6 sizes: 20, 22, 24, 26, 28 and 30 inches waist measure. The waist is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It will require 3¼ yards of 36-inch material for the waist, and 4⅛ yards of 44-inch material for the skirt for a medium size. Two separate patterns, 10 cents for each pattern.

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International Sunday School Lesson.

Lesson for October 22, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Paul's Defense Before Agrippa.

LESSON TEXT—Acts 26 (vv. 1, 24-32).

GOLDEN TEXT—I was not disobedient unto the heavenly vision.—Acts 26-19.

It is possible to use the Bible either as a music box or a telephone. We should let it speak the words of the Lord Jesus to us and our pupils. This lesson occurred probably A. D. 59, perhaps in August, the day after last Sunday's lesson. This was the same hall where Agrippa had heard the people calling him a god (Acts 12). Paul, the center of all interest, is chained to his Roman guardians. The prisoner has been vehemently accused as one worthy of death and had appealed to Caesar, but Festus, not being well acquainted with Jewish laws and customs, could not make any definite charge against him before the Roman court. Hence he turns him over to Agrippa, who was well acquainted with matters of Jewish law.

I. Paul, the Preacher (vv. 1-23). This was one of the great occasions in the life of this great man. Paul was preaching to a king and a woman of great influence (a sermon which little changed their lives evidently), and also to the coming ages. This king and queen were wedded to their infamy. God had in mind on that day an audience in comparison with which that which Paul saw faded into oblivion. Notice his argument. (1) He begins with his own experience. In these verses there are forty personal pronouns.

Men do not need so much light as they do need heat, and Paul was speaking out of the hot throbs of his personal experience. Paul stood before them a living miracle, an incarnate argument. We might tremble at the doctrine of the resurrection. He knew it was a marvelous thing that God should raise the dead, but that change had been wrought in him which was equivalent to the miracle of raising one from the grave.

Paul's plea was for the Roman as well as the Jew. Considering his personal testimony, he declares that he is a true Jew of the strictest sect (vv. 4-8), and as such he lived in the "hope of the promise" as predicted by Isaiah and Daniel. That promise has been fulfilled in Jesus, the crucified, who rose again from the dead, and Paul adds, "I have seen him, for which hope's sake, King Agrippa, I am accused of the Jews." (2) (vv. 9-15) Paul tells the audience that he, himself, was once a zealous persecutor of the Christians, more so than those who are now persecuting him, "being exceedingly mad against them." He then relates his Damascus journey and the conversation held on the road with the risen Lord.

The gospel Paul preached was to lead men into the kingdom of God that they might receive forgiveness of sins and an inheritance among those who were fitted for that inheritance, who were the sanctified. For this cause the Jews went about to kill him.

II. Agrippa, the Doubter (vv. 24-32). Five ways are suggested as to the reception of Paul's message. The high priest's way was to hate him and oppose. Felix's way was "go thy way this time. When I have a more convenient season I will call." Festus' way (vv. 24-26) was to charge Paul with madness. Much learning (literally, many writings) was turning him mad, making him a lunatic, a dreamer, one who lived in the atmosphere of wild imaginings. Paul's reply was not harsh. "Most noble Festus" (Am. R.) "I am not mad, but speak words of soberness," words of eternal life and spiritual life (of sound sense) that were true and earnest. Paul thereupon appeals to King Agrippa to confirm his statements (v. 2-6). The crazy man is he who lives for this world rather than for eternity. The devil has cheated many a man out of eternal life by the method which Festus followed. He has also cheated many a Christian out of the larger life in the same way. Paul's appeal to Agrippa (vv. 27-29) is very suggestive.

Some people believe that the contents of the prophecies are of no present day value, and some are trying to break their force. Some declare they cannot be true, yet these prophecies are the ones that declare that "Jesus is the Christ, the Son of God." The literal translation of Agrippa's answer is, "In a little thou persuadest me to be a Christian." It is said that Agrippa said this in sarcasm, but, like many another attempted jest, it revealed the real state of the heart.

Agrippa saw the cost of further consideration of the claims of Christ and was unwilling to pay the price (vv. 30-32). Thus Agrippa's soul was lost, and yet he was within one step of eternal life. Paul with great dignity took advantage of Agrippa's ambiguous expression, and said: "I would to God that whether with little or with much, not only thou, but also all that hear me this day might become such as I am except (raising his fettered hands) these bonds." (Am. R.)

Paul was willing and glad to suffer anything for the sake of Jesus Christ, his Lord (II Cor. 12-10).

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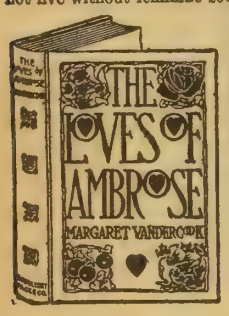

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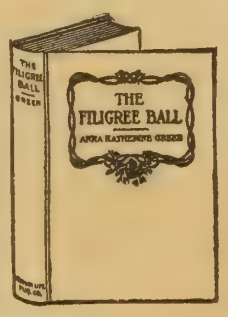

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PART III. "Prince Charlie"

CHAPTER III—Continued.

They did not speak, but after a little of the warm liquor had forced itself down the slight throat, Rachel left the cup in the mother's hands, and reached again for the whisky.

"You can get more from Davy MacDougall," she said, in a half conciliatory tone at this wholesale confiscation; "and—and you might give him some ammunition—not much."

"What a vanishing of resolves!" he remarked, measuring out an allowance of shot; "and all because of a copper-colored papoose. So you have a bit of natural, womanly weakness?"

The girl did not answer; there was a certain air of elation about her as she undid a scarf from her throat and wrapped it about the little morsel of humanity.

"Go past the sheep ranch," she directed the passive warrior, who stood gazing at the wealth in whisky and powder. "Do you know where it is—Hardy's? Tell them I sent you—show them that," and she pointed to the scarf; "tell them what you need for squaw and papoose; they will find it."

Skulking Brave signified that he understood, and then led Betty toward her.

"He is not very hospitable," she confided to Stuart, in the white man's tongue, "else he would not be in such haste to get rid of us."

And although their host did not impress one as having a highly-strung nervous organization, yet his manner during their halt gave them the idea that he was ill at ease. They did not tarry long, but having given what help they could, rode away, lighter of whisky and ammunition, and the girl, strange enough, seemed lighter of heart.

After they had reached a point high above the little creek, they turned for a look over the country passed. It lay in brown and blue-gray patches, with dashes of dark green on the highlands, where the pines grew.

"What is the white thing moving along that line of timber?" asked the girl, pointing in the direction they had come. It was too far off to see clearly, but with the aid of Stuart's fieldglass, it was decided to be the interesting family they had stopped with a little ways back. And the white thing noticed was a horse they were riding. It was getting over the ground at the fastest rate possible with its triple weight, for the squaw was honored with a seat back of her lord.

"I imagined they were traveling on foot, didn't you?" asked Stuart.

"What a fool he was to steal a white horse!" remarked the girl contemptuously; "he might know it would be spotted for miles."

CHAPTER IV.
A Trio in Witchland.

The noon was passed when they reached the cabin on Scot's Mountain, and found its owner on the point of leaving for the Maple range. But quickly replacing his gun on its pegs, he uncovered the fire, set on the coffee pot, and, with Rachel's help, in a very short time had a steaming-hot dinner of broiled bear steaks and "corn-dodgers," with the additional delicacy of a bowl of honey from the wild bees' store.

"I have some laid by as a bit of a gift to Mr. Hardy's lady," he confided to Rachel. "I found this fellow," tapping the steak, "in one o' the traps as I was a-comin' my way home; an' the fresh honey on his paws helped me smell out where he had spied it, and a good lot o' it there was that Mr. Grizzly had na reached."

"See here," said Stuart, noting that, because of their visit, the old man had relinquished all idea of going to the woods, "we must not interfere with your plans, for at best we have but a short time to stay." And then he explained the reason.

When the question of snow was taken into account, Davy agreed that Stuart's decision was perhaps wise; but "he was main sorry o' the necessity."

"An' it's to Owens ye be taken' the trail?" he asked. "Eh, but that's curious now. I have a rare an' good friend thereabouts that I would be right glad to send a word to; an' I was just about to take a look at his tunnel an' the cabin, when ye came the day, just to see it was all as it should be ere the snows set in."

"I should be delighted to be of any service to you," said Stuart warmly; "and to carry a message is a very slight one. Who is your friend?"

"It's just the man Genesee, who used to be my neighbor. But he's left me alone now these many months—about a year;" and he turned to Rachel for corroboration.

"More than a year," she answered briefly.

"Well, it is now. I'm losin' track o' dates these late days; but you're right, lass, an' the winter would ha' been ower lonely if it had na been for yourself. Think o' that, Charlie Stuart: this slim bit o' womankind substituting herself for a rugged build o' a man taller than you by a half head, an' wi' no little success, either. But," he added teasingly, "ye owed me the debt o' your company for the sending o' him away; so ye were only honest after all, Rachel Hardy."

Rachel laughed, thinking it easier, perhaps, to dispose of the question thus than by any disclaimer—especially with the eyes of Stuart on her as they were.

"You are growing to be a tease," she answered. "You will be saying I sent Kalitan and Talapa next."

"But Talapa has na gone from the hills?"

"Hasn't she? Well, I saw her on the trail, going direct south, this morning, as fast as she could get over the ground, with a warrior and a papoose as companions."

"Did ye now? Well, good riddance to them. They ha' been loafing around the Kootenai village ever since I sent them from the cabin in the summer. That Talapa was a sleepy-eyed bit o' old Nick. I told Genesee that same from the first, when he was wasting his stock o' pity on her. Ye see," he said, turning his speech to Stuart, "a full-blooded Siwash has some redeeming points, and a character o' their own; but the half breeds are a part white an' a part red, with a good wheen o' the devil's temper thrown in."

"She didn't appear to have much of the last this morning," observed Rachel. "She looked pretty miserable."

"Ah, well, tak' the best o' them, an' they look that to the whites. An' so they're flittin' to the Reservation to live off the government? Skulking Bob'll be too lazy to be even takin' the chance o' fightin' with his people against the Blackfeet, if trouble should come; and there's been many a straggler from the rebels makin' their way north to the Blackfeet, an' that is like to breed mischief."

"And your friend is at Owens?"

"Yes—or thereabouts. One o' the foremost o' their scouts, they tell me, an' a rare good one he is, with no prejudice on either side o' the question."

"I should think, being a white man, his sympathies would lean toward his own race," observed Stuart.

"Well, that's as may chance. There's many the man who finds his best friends in strange blood. Genesee is thought no little of among the Kootenais—more, most like, than he would be where he was born and bred. Folk o' the town know but little how to weigh a man."

"And is he from the cities?"

For the first time Davy MacDougall looked up quickly.

"I know not," he answered briefly, "an', not giving to you a short answer, I care not. Few questions make long friends in the hills."

Stuart was somewhat nonplussed at the bluntness of the hint and Rachel was delighted.

"You see," she reminded him wick-

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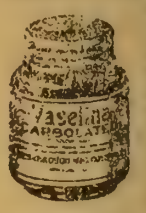

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The Housewife	$ .50	All for $2.00
American Boy	1.00	
Mother'sMagazine	1.50	
The Housewife	$ .50	All for $2.15
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edly, "one can be an M. D., an L. S. D., or any of the annexations, without Kootenai people considering his education finished. But look here, Davy MacDougall, we only ran up to say 'klahowya,' and have got to get back tonight; so, if you are going over to Tamahnous cabin, don't stop on our account; we can go part of the way with you."

"But ye can go all the way, instead o' but a part, an' then no be out o' your road either," he said, with eagerness that showed how loath he was to part from his young companions. "Ye know," he added, turning to Rachel, "it is but three miles by the cross-cut to Genesee's, while by the valley ye would cover eight on the way. Now, the path o'er the hills is no fit for the feet o' a horse, except it be at the best o' seasons; but this is an ower good one, with neither the rain nor the ice; an' if ye will risk it—"

Of course they would risk it; and with a draught apiece from an odorous, dark brown jug, and the gift of a flask that found its way to Stuart's pocket, they started.

They needed that swallow of brandy as a brace against the cold wind of the hills. It hustled through the pines like winged fiends let loose from the north. Dried berries from the bushes and cones from the trees were sent pattering to sleep for the winter and the sighs through the green roofing and the moans from twisted limbs told of the hardihood needed for life up there. The idea impressed Stuart so much that he gave voice to it, and was laughed at grimly by the old mountaineer.

"Oh, well, it just takes man to be man, an' that's all when all's said," he answered. "To be sure, there be times when one canna stir for the snow wreaths, but that's to be allowed for; an' then ye may ha' took note that my cabin is in shelter o' all but the south wind, an' that's a great matter. Men who live in the mountain maun get used to its frolics; but it's an ugly bit," he acknowledged, as they stopped to rest and look up over the seemingly pathless way they had come; "but I've been thankful for it many's the time, when, unlooked for, Genesee and Mowitza would show their faces at my door, an' she got so she could make that climb in the dark—think o' that! Ah, but she was the wise one!"

Stuart glanced at Rachel, who was more likely than himself to understand what was meant by the "wise one;" but he did not again venture a question. Mowitza was another squaw, he supposed, and one of the companions of the man Genesee. And the other one they had passed in the morning?—her name also was connected with the scout whim the white girl seemed to champion or condemn as the fancy pleased her. And Stuart, as a stranger to the social system of the wilderness, had his curiosity widely awakened. A good deal of it was directed to Rachel herself. Hearing MacDougall speak of the man to her, he could understand that she had no lack of knowledge in that direction—and the direction was one of which the right sort of a girl was supposed to be ignorant; or, if not ignorant, at least to conceal her wisdom in the wise way of her sisters.

This one did nothing of the sort; and the series of new impressions received made him observe the girl with a scrutiny not so admiring as he had always, until now, given her. He was irritated with himself that it was so, yet his ideas of what a woman should be were getting some hard knocks at her hands.

Suddenly the glisten of the little lake came to them through the gray trunks of the trees, and a little later they had descended the series of small circular ridges that terraced the cove from the timber to the waters, that was really not much more than an immense spring that happened to bubble up where there was a little depression to spread itself in and show to advantage.

"But a mill would be turned easily by that same bit o' water," observed MacDougall; "an' there's where Genesee showed the level head in locating his claim where he did."

"It looks like wasted power, placed up here," observed Stuart, "for it seems about the last place in Christendom for a mill."

"Well, so it may look to many a pair o' eyes," returned the old man, with a wink and a shrug that was indescribable, but suggested a vast deal of unuttered knowledge; "but the lad who set store by it because o' the water power was a long ways from a fool, I can tell ye."

Again Stuart found himself trying to count the spokes of some shadowy wheels within wheels that had a trick of eluding him; and he felt irritatingly confident that the girl looking at him with quizzical, non-committal eyes could have enlightened him much as to the absent ruler of this domain, who, according to her own words, was utterly degraded, yet had a trick of keeping his personality such a living thing after a year's absence.

The cabin was cold with the chill dreariness of any house that is left long without the warmth of an embodied human soul. Only the wandering, homeless spirits of the air had passed in and out, in and out of its chinks, sighing through them for months, until, on entrance, one felt an intuitive, sympathetic shiver for their loneliness.

A fire was soon crackling on the hearth; but the red gleams did not dance so merrily on the rafters as they had the first time she had been warmed at the fireplace—the daylight was too merciless a rival. It penetrated the corners and showed up the rude bunk and some mining implements; from a rafter hung a roll of skins done up in bands of some pliable withes.

Evidently Genesee's injunction had been obeyed, for even the pottery, and reed baskets, and bowls still shone from the box of shelves.

"It's a mystery to me those things are not stolen by the Indians," observed Stuart, noticing the lack of any fastening on the door, except a bar on the inside.

"There's no much danger o' that," said the old man grimly, "unless it be by a Siwash who knows naught o' the country. The Kootenai people would do no ill to Genesee, nor would any Injun when he lives in the Tamahnous ground."

"What territory is that?"

"Just the territory o' witchcraft—no less. The old mine and the spring, with the circle o' steps down to it, they let well alone, I can tell ye; and as for stealin', they'd no take the worth o' a tenpenny nail from between the two hills that face each other, an' the rocks o' them 'gives queer echoes that they canna explain. Oh, yes, they have their witches, an' their warlocks, an' enchanted places, an' will no go against their belief, either."

"But," said Rachel, with a slight hesitation, "Talapa was not afraid to live here."

"An' did ye not know, then, that she was not o' Kootenai stock?" asked the old man. "Well, she was not a bit o' it; Genesee bought her of a beast of a Blackfoot."

"Bought her?" asked Stuart, and even Rachel opened her eyes in attention—perhaps, after all, not knowing so much as the younger man had angrily given her credit for.

"Just that; an' dear she would ha' been at most any price. But she was a braw thing to look at, an' young enough to be sorry o'er. An' so when he come across her takin' a beating like a mule he could na stand it; an' the only way he could be sure o' putting an end to it was by maken' a bargain; an' that's just what he did, an' a'most afore he had time to take thought, the girl was his, an' he had to tek her with him. Well," and the old man laughed comically at the remembrance, "you should ha' seen him at the comin' home!—tried to get her off his hands by leavin' her an' a quit-claim at my cabin; but I'd have none o' that—no half-breed woman could stay under a roof o' mine; an' the finish o' it was he hed to bring her here to keep house for him, an' a rueful commencement it was. Then it was but a short while 'til he got hurt one day in the tunnell, an' took a deal o' care before he was on his feet again. Well, ye know womankind make natural nurses, an' by the time she had him on the right trail again he had got o' the mind that Talapa was a necessity o' the cabin; an' so ye may know she stayed."

"In what tunnel was he injured?" asked Stuart.

"Why, just—"

"There's your horse ranging calmly up toward the timber," observed Rachel, turning from the window to Stu-

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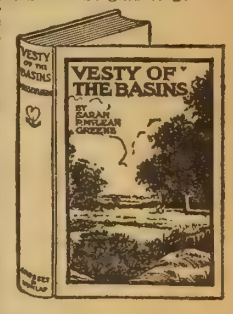

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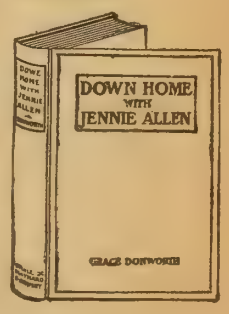

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art. "Do you want to walk to the ranch?"

"Well, not today;" and a moment later he was out of the door and running across the terraced meadow.

"Don't tell him too much about the tunnel," suggested the girl, when she and the old man were alone.

"Why, lass,"—he began; but she cut him short brusquely, keeping her eye on the form on the hillside.

"Oh, he may be all right; but it isn't like you, Davy MacDougall, to tell all you know to strangers, even if they do happen to have Scotch names—you clanish old goose!"

"But the lad's all right."

"Maybe he is; but you've told him enough of the hills now to send him away thinking we are all a rather mixed and objectionable lot. Oh, yes, he does too!" as Davy tried to remonstrate. "I don't care how much you tell him about the Indians; but that tunnel may have something in it that Genesee wouldn't want eastern speculators spying into while he's away—do you see?"

Evidently he did, and the view was not one flattering to his judgment, for, in order to see more clearly, he took off his fur cap, scratched his head, and then replacing the covering with a great deal of energy, he burst out:

"Well, damn a fool, say I."

Rachel paid not the slightest attention to this profane plea.

"I suppose he's all right," she continued; "only when somebody's interest is at stake, especially a friend's, we oughtn't to take things for granted, and keeping quiet hurts no one, unless it be a stranger's curiosity."

The old man looked at her sharply. "Ye dinna like him then?"

She hesitated, her eyes on the tall form leading back the horse. Just then there seemed a strange likeness to Mowitza and Genesee in their manner, for the beast was tossing its head impatiently, and he was laughing, evidently teasing it with the fact of its capture.

"Yes, I do like him," she said at last; "there is much about him to like. But we must not give away other people's affairs because of that."

"Right you are, my lass," answered Davy; "an' it's rare good sense ye show in remindin' me o' the same. It escapes me many's the time that he's a bit of a stranger when all's said; an' do ye know, e'en at the first he had no the ways of a stranger to me. I used to fancy that something in his build, or it may ha' been but the voice, was like to—"

"You are either too old or not old enough to have fancies, Davy MacDougall," interrupted the girl briskly, as Stuart re-entered. "Well, is it time to be moving?"

He looked at his watch.

"Almost; but come to the fire and get well warmed before we start. I believe it grows colder; here, take this seat."

(To be continued.)

Cheese Day at Monroe.

(Continued from page 8.)

ning program included free dancing on the public square, a mock police court, a carnival parade headed by the Monroe Dokie Band, and the day was brought to a close in a riot of carnival fun and glory.

One of the new educational features was a demonstration of Swiss cheese-making, Green county having long been known as the home of the Swiss cheese in the United States, and from this county are now being made large shipments to Europe. In fact, this county has practically captured the eastern markets with its foreign types of cheese and, though the making of these types originally began in the neighborhood of New Glarus, it has spread to adjoining counties, there now being quite a few factories in Dane, Iowa and Lafayette counties.

This demonstration was conducted by Fred Steinman, one of the well-known Swiss cheesemakers of the county. It was held in a booth on the public square and it gave thousands the opportunity to see at first hand how the Swiss cheese is made. Farmers delivered to this plant about 2,000 pounds of milk on the morning of the celebration and the cheese manufactured therefrom will be placed in the curing cellars and will be used next October at the fourth annual "Cheese Day" for sandwiches which will be given away.

"Cheese Day" also serves to draw back the curtain on the history of Green county and the settling at New Glarus seventy-one years ago of the little band of Swiss settlers who gave this industry its start. This band came over from Switzerland, via St. Louis to Galena, Illinois, from which place they walked into Green county, it resembling very largely from a typographical standpoint their native land. It is also interesting to note that in the early days when Limburger was being made some of the citizens of Monroe asked the village council to pass an ordinance prohibiting the Swiss from bringing their odoriferous Limburger into the city for shipment. But that day has all passed into history with the realization of the extent of this great industry and now Monroe joins with the entire county in paying homage to the dairy cow and the cheese.

Poland China Sale in Grant County.

The day was ideal, the roads were good and everything was in favor of the "boys" that held their first Poland China boar sale at Lancaster, Wis., October 10th. There was not room enough in the tent to hold the crowd, and many came to buy that were unable to get the boar they wanted. With the exception of a few that were a little under size, it was an exceptional offering of good boars. This being their first sale, a high average wasn't expected, yet the average made—$41—was entirely satisfactory to those concerned. Chris Kartman bought the snap of the sale by getting the fall boar that was second (and should have been first) at Milwaukee this year. At $75 he is the best we have seen made this year. This association will hold a sale of bred sows February 13th, and we feel sure it will be one of the good offerings of the winter. To Burly Dobson is due a great deal of credit for the success of this sale. Col. Ira Cottingham sold the offering in a very satisfactory manner. We follow with a list of those selling for $30 and over:

1.	Adolph Vesperman, Lancaster, Wis.	$42.00
2.	Albert H. Reyzek, Muscoda, Wis.	48.00
3.	Jas. Knutson, Livingston, Wis.	35.00
4.	Albert Keene, Lancaster, Wis.	33.00
5.	E. Muldoon, Lancaster, Wis.	36.00
8.	John Miller, Livingston, Wis.	37.00
10.	John Zenz, Bloomington, Wis.	50.00
11.	John Ertz, Lancaster, Wis.	44.00
12.	Oscar Kohlenberg, Lancaster, Wis.	52.00
13.	F. A. O'Brien, Verona, Wis.	42.50
14.	John Hoffman, Lancaster, Wis.	42.50
15.	Bidwell Bros., Lancaster, Wis.	36.00
16.	Albert Grovier, Fennimore, Wis.	37.00
17.	Thos. Wenzel, Lancaster, Wis.	36.00
18.	H. Wolf, Platteville, Wis.	31.00
19.	John Zenz	50.00
20.	E. Rice, Platteville, Wis.	41.00
21.	J. H. Clayton, Belmont, Wis.	45.00
22.	Jas. Hodoval, Potosi, Wis.	42.00
23.	A. Vine, Platteville, Wis.	45.00
24.	R. Rech, Lancaster, Wis.	47.00
26.	W. E. Shimmons, Lancaster, Wis.	31.00
29.	Geo. Flesch, Lancaster, Wis.	32.50
30.	Guy Walker, Lancaster, Wis.	48.00
31.	Alexander Bros., Fennimore, Wis.	33.00
32.	M. Mitchell, Stitzer, Wis.	31.00
33.	Ben H. Pegram, Lincoln, Ill.	32.50
34.	W. Schuppuer, Stitzer, Wis.	30.00
35.	Chris. Kartman, Cassville, Wis.	75.00
36.	W. L. Zipse, Wedhams Grove, Ill.	86.00
37.	E. Vesperman, Lancaster, Wis.	69.00
38.	Harry Beddick, Livingston, Wis.	39.00
39.	E. C. Lahff, Clevenville, Wis.	45.00
40.	P. F. Buelke, Plymouth, Wis.	42.00

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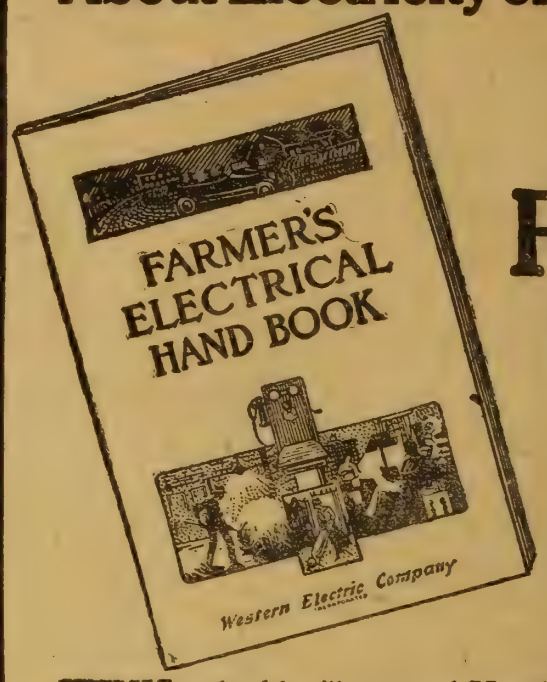

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HOW many of our readers have sawing jobs to do this winter? We presume that on almost every farm there is more or less of this work. There is a handier and better way than to use the old-fashioned cross-cut saw with a man at each end. There is now made what is known as the folding sawing machine, which was originally invented by M. O. Smith, a Michigan farmer. Mr. Smith found it often difficult to get help, so he rigged up the one-man folding sawing machine. The folding sawing machin not only obviates the necessity of an extra man, but it also permits sawing close to the ground. The one-man folding sawing machine does exactly the same work as two men with a cross-cut saw. The illustration used herewith gives a good idea of the machine in action. This machine is made by the Folding Sawing Machine Company, 161 West Harrison street, Chicago, and a booklet telling how the machine is operated, and giving scores of letters from farmers and settlers who have used the machine, will be sent to any reader of this paper upon request. See advertisement on page 15. The folding sawing machine is easily carried, easily set up, adjusted instantly, works easily on any ground, works rapidly, carries a thin saw which is guaranteed, carries the saw true and cuts thin, and does away with back-breaking work. The folding sawing machine is inexpensive and will be a great help on any farm where there is much wood cutting or felling of trees. We ask as a favor that readers of this paper will mention

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VETERINARY MATTERS

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Ailing Animals.

Lame Cows.

About four weeks ago one of my five-year-old cows became lame and now one of my three-year-old cows is affected the same way. They take short steps as if they were stiff, but the lameness seems to be in their shoulders. They are running on wild pasture all the time. They lie down a great deal.

It would be impossible to make a diagnosis from the few symptoms given. You had better have these cows examined by a veterinarian before more become affected.

Unknown Disease.

I will give you a description of two calves about nine months old that are a mystery to me and others who have seen them. They seem to have a disease that the local veterinarian is unable to combat, but he thinks it was caused by forage poisoning. The symptoms of the disease are large drops of blood that form on their hide and run down the hair on their shoulders, and as far back as their hips. The salivary glands are slightly swollen. They breathe with difficulty and there is a harsh, grating sound. As the disease progresses there is an offensive smell. They seem to be in no pain and are strong up to the day they die. They eat well during the early stages, but later on they refuse to eat at all. About a week after they are taken sick the disease proves fatal.

It is purely a case for your local veterinarian to decide upon, as he has a better chance than anyone else, since, having examined them, he knows what was present. There are very few diseases which will cause this condition. However, it might be that forage poisoning is the cause.

Blackleg Vaccine.

Would you please inform me through your valuable paper whether or not blackleg vaccine, in pellet form, loses its strength or effectiveness when you have it on hand for some little time. Some dealers keep it in stock and it probably has been on their shelves indefinitely. Would this be all right to use and would it be as effective as if obtained directly from factory?

There is a time limit for the use of this vaccine and this should be so stated on the box or bottle. It should not be used after return date.

Garget—Congestion of the Udder.

I should like to know more about garget in cows, the cause and cure. Also if one is infected will the whole herd be likely to contract the same by running together.

In true garget, which is a congestion of the udder usually following soon after calving, the application of camphorated ointment to the affected parts and with considerable massaging usually brings about recovery. Simple garget is not spread from one to the other. Sometimes there are lumpy conditions of the milk found and this comes from some unhealthy condition of the udder.

Law Questions

Title by Adverse Possession.

A Subscriber, Brocton, Minn.—My farm has been cultivated for twenty-seven years and fenced for fifteen years. The adjoining farm has been cultivated for seventeen years and there has been no dispute about the division line. Can I claim my land up to the fence by adverse possession, if said fence is over on the adjoining farm?

Answer.—Under the law of Minnesota you can lawfully claim your land up to the division fence by adverse possession.

Collection of Notes.

A Subscriber, Lyle, Minn.—At an auction sale in the state of Idaho, I took the promissory notes of three men. The notes were due February 11, 1916. Neither the interest nor any part of the principal of said notes has been paid. (1) What legal steps can I take to collect the money? (2) Can you give me the name of a good collector in Idaho?

Answer.—(1) You will have to bring a suit in court against the man who signed the notes. (2) We are unable to do so. Write to the county clerk of the county in Idaho where the transaction took place.

Partition Fences—Contract of Minor.

A Subscriber, Iron Mountain, Mich.—(1) I own land in Michigan on both sides of a township road. Have I a right to take away my fences on both sides of said road? (2) My land is cultivated on both sides of the road. My neighbor drives his cattle along the road and they break through the fences and damage my crops. Can I recover damages for this? (3) My neighbor at night tore down part of the partition fence between our farms and my stock got through the same into his field and he wants a dollar for the damages, can he collect it by law? (4) Should owners of adjoining farms keep up the partition fence together, or should each one keep up half of it? (5) Can a minor child lawfully buy a farm on credit?

Answer.—(1)) There is no law to prevent you from taking away your fences on both sides of the road. (2) If you have lawful fences and the cattle break through them and injure your crops you can recover damages from the owner of the cattle, but not if your fences are not lawful. (3) Your neighbor cannot collect damages by law. (4) Each owner should keep up half of the partition fence. (5) He cannot. The contract of a minor is not binding upon him by law.

Bull Law of Wisconsin.

Mr. O. A. Olson, Rose Lawn, Wis.—In the legal department of The Wisconsin Farmer of August 24th you state in answer to a subscriber at Rubicon, Wis., that a man has a right to allow a bull a year and a half old to run with his cows in his own pasture field. I have always been of the opinion that it was unlawful. I have a nice herd of registered Holsteins and keep a high-priced bull of my own. My neighbor allows his scrub bull to run with his cows in his pasture, and I am constantly afraid that his bull will break through and serve my cows and young heifers. I have told his owner to keep the bull up, but he won't do it. Can I compel him to shut his bull up?

Answer.—You cannot. The law of Wisconsin in relation to bulls is as follows, viz.—"No bull over six months old shall run at large; if the owner or keeper shall for any reason suffer such animal so to do he shall forfeit $5 to the person taking it up and be liable in addition for all damages done by such animal while so at large, although he escapes without the fault of the owner or keeper and the construction of any lawful fence shall not relieve such owner or keeper from liability for any damage committed by the bull upon the enclosed premises of an adjoining owner." Under this law if the bull breaks through into your field you can take him up and get $5 forfeit and sue the owner and recover all damages done by the bull.

While a bull is running in the pasture of his owner he is not running "at large."

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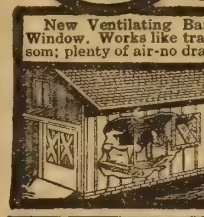

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Collected by Representatives of The Wisconsin Farmer

Anoka Farms Short-horn Sale.

THE annual offering of Short-horn cattle at Anoka Farms, Waukesha, Wis., Thursday, November 2d, will be entitled to take rank with the big events in the sale history of the breed. The writer, who has been thoroughly familiar with Anoka, its methods and sales, for many years, does not hesitate to class the cattle to be sold November 2d as carrying out in every particular the efforts of the management to improve each year's offering. Forty-five head will be sold, twenty-five females and twenty bulls, every animal carrying the Anoka stamp of excellence. Included will be all of the 1916 show herd, among them the ten head of youngsters that won at this year's Royal Show the coveted trophy offered by the Kansas City Stockyards Company, for the best ten head of Short-horns. The twenty head of bulls cataloged contain so much herd-heading material that individual mention seems needless. The majority of them are sired by Sultan Stamp, and are strong demonstrations of the right of that bull to rank among the great sires of the breed. Others are by Village Denmark, Regal Sultan and Imp. Rusper Champion. A good one in every way is Lavender Stamp by Sultan Stamp and out of an Avondale dam. A mellow-hided chap, with a strong head, good spring of rib, level and deep, he is an ideal proposition. Good Stamp by Sultan Stamp, should please anybody looking for a white bull. The fact that he was a junior champion at the 1916 Minnesota and Wisconsin State Fairs is all the statement needed to show that he is right in every way. A very breedy proposition is presented in Augusta Sultan 2d by Sultan Stamp, out of an Augusta dam. He has character, style, quality and finish, is a roan, level, even and close to the ground. This youngster was second at Minnesota and Wisconsin. Another good Sultan Stamp bull is offered in Loyal Stamp, a thick, level, well-ribbed roan, with lots of character. A strong breeding prospect will be found in Anoka Denmark 2d by Village Denmark, dam Imp. Maud 38th. This youngster is deep and well fleshed, very even in his lines, smooth and possesses the character that denotes prepotency. Proud Denmark by Village Denmark, out of an Uppermill Omega dam, is an even, smooth, well-fleshed, light roan that is not only good individually, but presents a very attractive combination of blood lines. A very strong senior calf will be found in Clipper Champion by Imp. Rusper Champion. He is red in color, is a very even, thick youngster, with a good head, strong back and lots of substance. Attention has been called to a few of the bulls in the sale, picked at random from the list. The story of the ones mentioned is the story of all in the sale. The female portion of the sale offering measures up with the bulls in every respect. In the next issue of this paper some individual mention will be made of the females cataloged. This offering must be considered as one of the most even and well-balanced lots of Short-horns that any breeder has ever offered. The handsomely illustrated catalog should have wide distribution. Write for it today to Anoka Farms Co., Waukesha, Wis., as per the advertisement on page 28. Kindly mention this paper when you write.—Adv.

Some Fine Jersey Offers.

WE have just had a letter from Fred Stubley, Black Earth, Wis., the breeder that has that fine herd of Imported and American-bred Jerseys. At this time he has for sale a dozen young cows, about twenty yearling heifers and bulls of different ages. He will sell a man a carload or in single lots. These are of Mr. Stubley's own breeding. The heifers and bulls are sired by his imported herd bull, Golden Maid's Viscount, a grandson of Double Time, whose official test for one year is 806 pounds of butter, the highest testing Jersey cow in Wisconsin. The cows are safe in calf to Noble of Avaranch, a son of the $15,000 bull, Noble of Oakland. As stated above Mr. Stubley has one of the best herds in Wisconsin and if you need Jerseys you will not be disappointed with his catalog. Write him for detailed description and in so doing kindly mention this publication. See page 30.—Adv.

The Lathrop Polands.

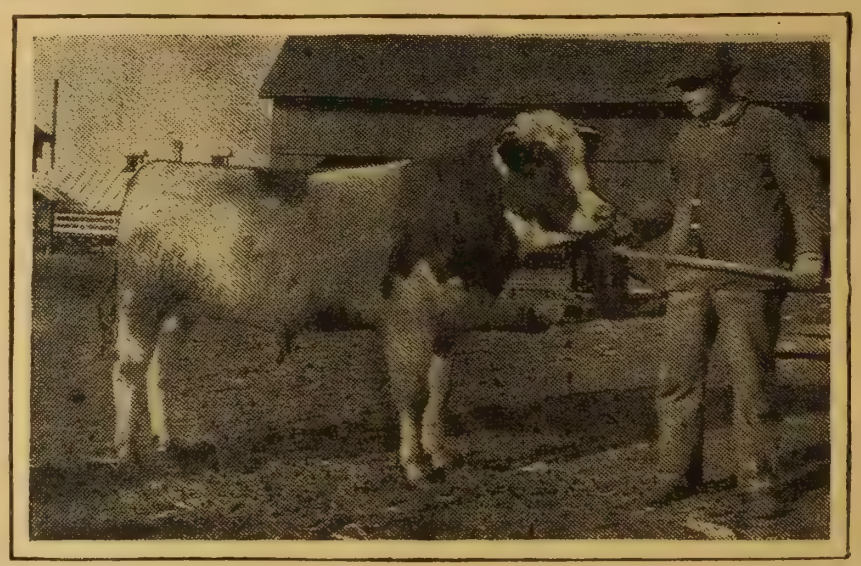
FRED LATHROP & SONS, Wauzeka, Wis., are one of the oldest breeders of Poland Chinas in the state of Wisconsin. They do a big business and a great deal of their trade is from their old customers, showing that they send out Polands that give satisfaction. Waukesha county has 147 voters and the Lathrops have sold sixty-five different men in this county. We mention these things to show that the Lathrop firm do business on the square. They breed big-type Polands and have a nice lot of boars ready for the trade at this time. Let them know your wants. When writing kindly say you saw the advertisement in The Wisconsin Farmer. See page 30.—Adv.

Ed Patterson Durocs.

REMEMBER that Ed Patterson, Jr., Bloomington, Wis., is a breeder of Duroc Jersey hogs and Short-horn cattle, and if you are in need of individuals of those breeds it will pay you to get his prices. We are certain he will give you a square deal. See page 29.—Adv.

Hagemeister Percheron Dispersion Sale.

ONE of Wisconsin's finest studs of Percheron horses will be dispersed at public sale Wednesday, November 15th. This is the stud of the late Henry F. Hagemeister, Green Bay, Wis. He took great pride in this stud of horses and spared neither time nor means in buying the best of breeding stock. The horses are being sold to settle the estate and the public will now have an opportunity to purchase at their own price the fine mares and stallions that Mr. Hagemeister kept for his own farm. We recently visited the farm and were greatly impressed with the horses seen there. They are without exception of high individual merit. They are big, but with strong backs, good hips, heavy bone, good feet and legs and good heads and necks. They represent both the blocky type and the more rangy type, but not the extreme either way. There are no "chunks" or no light weight "driving horse type." They are all black in color, except one gray stallion, one gray mare and two iron gray fillies. The aged stallion, Brilliant 47573, is one of the best stallions we have seen and farmers or breeders looking for a stallion are advised to look him over carefully. Many of the animals in the sale are sired by the imported stallion, Historique, one of the greatest Percherons ever imported to America. Nearly every animal in the sale also carries the blood of the great stallion, Baccarat, for which Mr. Kellog, a banker in Green Bay, paid $5,000. Many of the mares are out of daughters of Baccarat. It is a great lot of horses both in breeding and as individuals. Breeders and farmers who are raising horses, and stallion companies should plan to attend this sale. There will not be a poor animal or a blemished animal in the sale. Catalogs giving description and breeding are now off the press and will be sent on application to the Hagemeister Brewing Co., Green Bay, Wis. When writing for catalog kindly mention that you saw this write-up in The Wisconsin Farmer. See page 26.—Adv.



CONTEST COLANTHA CROWN DE KOL 98171, the twenty-seven-pound show bull owned by John Steel, Oconomowoc, Wis., whose advertisement appears on page 31.

Goodrich Offers Durocs for Sale.

DUROC spring pigs of either sex are offered for sale on page 29 by W. W. Goodrich, Ft. Atkinson, Wis. These were sired by Defender Major 2d 70335, a boar of good size and type. These pigs are from large, roomy sows and come from large litters. When writing kindly mention The Wisconsin Farmer. —Adv.

Shea Buys a Pathfiinder Boar.

WE have repeatedly called attention to that good herd of Duroc Jerseys owned by Dennis Shea, Melvina, Wis. This breeder is at all times on the lookout for something that might improve his herd and inasmuch as the great demand at the present time is for stuff sired by that great boar, Pathfinder, Mr. Shea was the first Wisconsin breeder to get some of this noted breeding in his herd. This boar was sired March 10, 1916, has great length, carries his width well from end to end, has an ideal head and ear and has plenty of scale. He is sired by the great Pathfinder and his dam is by Orion Chief 6th. As our readers know his present herd boars are sons of King the Col. and Cherry Chief, the most popular breeding at the present time and to follow them with this son of Pathfinder will get him a line of breeding second to none in the state. Shea has some wonderful spring boars for sale, as good as any we know of and if you are going to need a Duroc boar this fall get his prices. Write at once before the good ones are all sold. Good boars don't have to be peddled. Mention The Wisconsin Farmer. See page 28.—Adv.

A "Crackin' " Good Poland China Boar.

WHEN at the farm of Jacob Kreuscher, Somer, Wis., last week he told us that he would sell his senior herd sire, Long Prospect. Mr. Kreuscher has used him for three years, so is compelled to dispose of him. He is a "right good" boar, well up on his feet, extra heavy bone, a good back and hams. He is being offered at but little more than he would bring for pork, but he is so good that Mr. Kreuscher does not want to pork him. Send for breeding and price. See page 30.—Adv.

West's Victoria Swine.

ALTHOUGH we do not find Victoria swine as common as some of the other breeds, we find a few that convince us that they are profitable hogs to raise. They grow out quickly, are good rangers and are very prolific. If many farmers would use Victoria boars on their grade sows they would realize much larger profits from their swine breeding. The herd of H. P. West, Ripon, Wis., is one of the best in the state, a fact borne out by the winnings of this herd at the Wisconsin State Fair. He is now offering spring boars and gilts for sale on page 29.—Adv.

Herr Bros. & Reynolds' Short-horn Sale.

FORTY-EIGHT head of Short-horns, thirty-four females and fourteen bulls, will be sold at Lodi, Wis., Friday, November 3d, by Herr Bros. & Reynolds. Offerings of good Short-horns have been made by this progressive firm in the past, but the lot of cattle cataloged for the coming event will be by far the best they have ever sold. The firm of Herr Bros. & Reynolds is one of the most reliable in the Short-horns ranks. They have always recognized the value of a good bull, and a list of the sires used by them shows some of the best known bulls of the breed. Royal Sultan, the champion son of Whitehall Sultan, for which they refused $7,500, left an impress upon the herd that is enduring. After him came his son, Golden Sultan, a sire of champions. Then followed White Rock, a son of Whitehall Sultan; Royal Kintore, Cumberland's Prince by Cumberland's Last, and Cumberland's Ideal by Cumberland's Prince. The premier bull now in use is Master Ruby, a son of Archer's Hope. Master Ruby is proving himself a most prepotent sire, and the calves he is siring are meeting every exceptation of Herr Bros. & Reynolds. It is the get of the bulls mentioned that will be offered to the public at Lodi, Wis., November 3d. There will be both show and breeding propositions in abundance. The breeding of the cattle is of the best. There will be some young bulls by Master Ruby that should attract the attention of those wanting a bull carrying a line of breeding different from that now so much in evidence in the majority of herds. In addition there will be a number of females in calf to him. Master Ruby by Archer's Hope is out of a Brawith Bud dam, called by competent judges the best cow in the Dryden herd. He is a very impressive bull, with a wonderful head, great depth and thickness, carrying a wealth of evenly distributed flesh, has excellent heart girth and great spring of rib, a world of substance and everything else that goes to make up a truly great bull. Not only has he been a winner and a champion, but his get were winners at the Minnesota and Wisconsin State Fair this year. An opportunity to secure animals sired by this great breeding bull or cows in calf to him, should not be overlooked. Among the bulls by Master Ruby that are in the sale, might be mentioned Royal Ruby, out of Imp. Generosity, a Brawith Bud. He is a February calf, right in every way, third in his class at the Minnesota State Fair, and an excellent prospect in the International futurity, with all fees paid. Ruby's Archer is a Gwendoline, and a deep, smooth, well-ribbed youngster with quality and substance. Ruby's Chief, out of a Lancaster dam, is a November yearling, red, with a good head, thick, well balanced and close to the ground on good legs. There are outstanding young bulls by other strong sires. The entire offering is one of merit and will bear out any recommendation made regarding it. This sale follows that at Anoka Farms, Waukesha, Wis., November 2d and is the closing one in a series of four remarkable sales. It is worthy the support and patronage of all Short-horn men. Some of the most attractive cattle to be offered during that entire week of sales, will be presented at Lodi. The catalog tells the story. It can be secured by addressing Herr Bros. & Reynolds, Lodi, Wis., as per the advertisement on page 29. Kindly mention this paper when you write.—Adv.

For Those That Want Herd Boars.

THOSE that have been following the hog show at the various fairs have, no doubt, noticed the winning of Tommy Doyle, that good boar owned by the Van Meters, of Illinois. Tommy Doyle is sired by Cherry Chief's Wonder. Emmett Cook & Son, Richland Center, Wis., have a great spring litter by this boar out of an Illustrator sow. Tommy Doyle was first in class at Illinois and grand champion, also first in class at Omaha, so if you buy one of the Cook boars you get a half brother to this great show boar. Better get busy at once, for they only have a few for sale. Please mention The Wisconsin Farmer. See page 28.—Adv.

Richly Bred Ormsby Bull.

A 19.80-pound son of the 32.52-pound bull, Beauty Pietertje Prince Ormsby, is advertised for sale on page 31 by Dopp Bros., Ixonia, Wis. The dam of the bull for sale is the double Ormsby bred cow, Queen Ormsby Duchess. Send for a pedigree of this fine, richly-bred Ormsby bull.—Adv.

Big Demand for Shropshires.

THE Dane Stock Farm, Oshkosh, Wis., report a large demand for Shropshire rams. They have a goodly number of blocky, good type and of a heavy-shearing strain. The best of blood lines are represented. Write for

NEXT WEEK'S SALE PROGRAM

Monday, October 23d	Holstein-Friesians,	W. L. Baird, Sec., Waukesha, Wis.
Thursday, October 26th	Poland Chinas and Short-horns,	R. F. Brunker & Son, Ridgeway, Wis.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

High Quality Farm Land In the South

GOOD, fertile land that will grow all the crops you are familiar with in the North, and many more besides. Here is a wonderful opportunity to get away from the bitter winters, the short growing season and the frequent drouths of northern states. We offer you a new home in a mild climate of generous rainfall, where live stock thrives and vegetable growth continues the year 'round. Well drained, gently rolling upland, in the "Ozone Belt" of the southwestern Louisiana Highlands, "the land of perpetual growth."

$22 An Acre Until November 2 Easy Terms

After that date **the price will be** $25 per acre. Climate, soil, shipping facilities, market—all combine here to make this the ideal locality for dairying, cattle feeding, hog and sheep raising. All-the-year pasturage; two and three crops a year on the same ground. Beef, pork and mutton can be produced far more cheaply than in any northern state. **You can grow**

Corn.....40 to 70 bu. per acre.
Oats.....40 to 50 bu. per acre.
Corn Silage.....12 to 20 tons per acre.
Cane.....10 to 20 tons per acre.

Send for our big sixty-four page illustrated book—**"Where Soil and Climate are Never Idle."** It's **free,** absolutely without obligation. With it comes a map of Louisiana in full colors; plat of land; and our latest Bulletin—all **free** to you. Send today and learn about the wonderful development now going on in this region. A postal brings it.

Long-Bell FARM LAND CORPORATION

Directly affiliated with The Long-Bell Lumber Co.

416 R. A. Long Bldg. Kansas City, Mo.

JUST AS A SAMPLE

Below Is Copy of Signed Statement of a Representative Golden Prairie Farmer

"Hillsdale, Wyoming, Sept. 18, 1916.

"Federal Land Company,
Burns, Wyo.

Dear Sirs:

"I have lived in Wyoming 6 years on E½ Sec. 30-16-64 and have raised good crops each year. This year I had 22 acres of winter wheat that made 19 bushels per acre. I have raised oats that yielded 60 bushels per acre and potatoes have made specially good crops each year. Our garden has always been good.

"I had two cows when I came here and now have 40 head of cattle and have sold 2 head, and have bought only 1, but have traded some steers for heifers. I milked this season 12 cows and my cream check for month of June was $96.00 even."

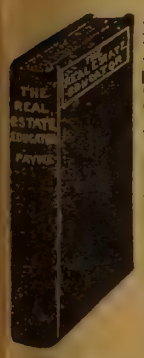
(Signed) FRANK KESLAR.

If you have not already received our literature describing the Golden Prairie District and the bargains we are offering in our Hillsdale Ranch just now being placed on the market, don't delay longer but drop us a card and we will send you some most interesting literature.

FEDERAL LAND COMPANY
BURNS, WYOMING

The Real Estate Educator

By F. M. PAYNE---New Edition



A book for hustling Real Estate boosters, promoters, town builders and every man who owns, sells, rents or leases real estate of any kind. "Dont's" in Real Estate, "Pointers," *Specific Legal Forms,* &c., &c.

THE NEW 1916 EDITION CONTAINS THE TORREN'S SYSTEM OF REGISTRATION, AVAILABLE U. S. LANDS FOR HOMESTEADS. THE A. B. C.'S OF REALTY.

WORKMEN'S COMPENSATION ACT, INCOME TAX LAW, EMPLOYER'S LIABILITY ACT, STATUTE OF FRAUDS, HOW TO SELL REAL ESTATE, HOW TO BECOME A NOTARY PUBLIC, OR COM. OF DEEDS, AND OTHER USEFUL INFORMATION.

This book is an inspiration to the indifferent and a stimulus to the ambitious. Apart from the agent, operator or contractor, there is much to be found in its contents that will prove of great value to all who wish to be posted on Valuation, Contracts, Mortgages, Leases, Evictions, etc. The cost might be saved many times over in one transaction. *256 pages, cloth, postpaid, $1.00.* Remit by P. O. Money Order or Registered Letter.

The Reading Club, 30 Irving Place, New York.

AUTOMOBILE SCHOOL

LEARN a business in 6 weeks. No books. Easy to learn. Good salary. Free catalog. National Auto School, 2814 No. 20th St., Omaha, Neb

YOUNG Man, would you accept a tailor-made suit just for showing it to your friends? Write **Banner Tailoring Co.,** Dept. 421, Chicago, get beautiful samples, styles, and a wonderful offer.

HAVE MORE POSITIONS than we can fill. Grand opportunities for young men. Telegraphy, Typewriting, Ry. Accounting, R. R. Wire. Wisconsin School of Telegraphy, Oshkosh, Wis.

breeding and description and please mention that you saw their advertisement in The Wisconsin Farmer. See advertisement on page 30.—Adv.

Inter-County Holstein Breeders' Sale.

WE ARE pleased to announce the third sale of the Inter-County Holstein Breeders. This association is made up of the Holstein breeders of Dodge and Jefferson counties, which comprises the oldest and leading center of Holstein breeding in Wisconsin. The breeders have been raising animals of high production ability and conformation for many years. A year ago these breeders formed an association to promote the breeding of Holstein cattle and to put the public sale of cattle on a better basis than they had been formerly. They have been highly successful in their sales and this one promises to be better still. The class of cattle in this community is very high and the breeders are consigning many of the best things in their herds. In the past sales they have been very particular to give the buyer sound animals. Colonel French, of the Iowana Farms was present at their sale last spring, and was very high in his praise of the cattle offered and the honorable methods of selling. In order to insure the buyer against any possibility of purchasing tubercular cattle all of the cattle will be tested under the supervision of the Wisconsin State Live Stock Sanitary Board. To further insure the buyer against loss through tuberculosis they give a sixty-day retest guarantee. Most of the consignors are breeders who are known for their integrity, and, as master breeders. Among them are such men as Tompkin Wright, of Waupun; Ed Schultz, Hartford, and the best breeders in the vicinity of Watertown. The cattle this year are of even higher quality than in previous sales. There are a goodly number of A. R. O. cows with creditable records. The offering of herd sires is one that Wisconsin Farmer readers should look into. There will be two thirty-pound bulls offered. One is a thirty-pound son of King Segis Champion Netherland, also a thirty-pound son of Sir Beets Cornucopia Netherland, also a twenty-nine-pound son of King Segis Korndyke Sadie Vale, also a grandson of King Korndyke Sadie Vale from a twenty-five-pound three year old. Space will not permit going into detail in regard to the many fine animals in the sale, but this may be obtained in the catalog. Send for a catalog to Francis Darcey, Watertown, Wis. Plan to attend this sale, for you will have an opportunity to buy high-class cattle at a fair price, through a sales organization that is on the square. See page 27.—Adv.

Olson & Mac's Chief.

O. C. OLSON, Strum, Wis., is the fellow that owned Mac's Chief and sold him to J. D. McDonald, the latter winning grand championship on this boar at Milwaukee. Mr. Olson has a large number of spring boars sired by this champion that are for sale. They are good and can be bought worth the money. He will not sell any gilts, as they are reserved for his bred-sow sale in February. Championship blood is worth something in any herd, and Olson is the only man that has anything by this boar of spring farrow for sale. Write him at once for prices and description. He has a big herd of Poland Chinas and a good lot throughout. Please mention The Wisconsin Farmer. See page 30.—Adv.

A Splendid Young Bull.

A BULL, the three nearest dams of which average 26.45 pounds of butter in seven days, is pretty sure to be worth investigation and purchase. John Steel, Oconomowoc, Wis., is offering such a bull, with an attractive pedigree, which includes noted producers. See his advertisement on page 31 and write him for extended pedigree and other information about this fine young bull.—Adv.

Berkshires of Quality.

OUR readers are acquainted with the Berkshire herd of A. P. Cortte, Lomira, Wis., through the advertisement and field notes which have appeared the past few years. We wish to inform our friends and his friends, that his crop of spring pigs this year are the equal and in some ways the superior to those of past years. He is now offering some excellent boars and gilts sired by Pabst Rivaleer 3d and King of Rivals. Send for a description and breeding of what he has for sale. See page 27.—Adv.

Extraordinary Bull at Lake Mills Sale.

BULLS from 1,000 pound yearly record dams have seldom, if ever, been offered at public sale in Wisconsin. But C. C. Fries & Son, Richland Center, Wis., have included King Aaggie Hengerveld, son of Aaggie Texal Wayne 2d (30.6 pound, 1,078 pounds in one year) in their consignment for their big Holstein-Friesian sale at Lake Mills, October 27th and 28th. It is worthy of attention by all Holstein breeders. Another extra good bull, Richland Pontiac Butter Boy, whose dam made an unusual record, is in the lot, also several daughters of dams whose records have been written about. See his advertisement on page 31 and write for further information.—Adv.

Jake Erwin, Bloomington, Wisconsin.

THE above breeder of Duroc Jerseys is one of the "old timers" in southwestern Wisconsin, and we believe we are safe in saying that he has sold as many "red hogs" in that part of the state as any other breeder. He sends out stuff that makes good, and if you order from him you will get a boar or

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: "**The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available—under which your advertisement would appear.

Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER **MADISON, WISCONSIN**

FARM LANDS.

REAL BARGAINS in improved farms in Taylor, Marathon, Clark, Langlade counties in Wis. With and without stock and machinery. A natural dairy section. Very liberal terms. Lists and literature free. Loeb-Hammel Realty Co., (not inc.) Owners, Medford, Wis.

IN Lincoln and Marathon Counties, Wis., we have some fine improved farms for sale at low prices; some have stock and machinery that can be bought reasonably. Write us for particulars. McLaughlin Land Co., Merrill, Wis.

MINNESOTA 320 near Iowa, small buildings, good soil, very low price, terms to suit. Grain elevator, store, running, near Mason City, at a bargain. Augustus Maloney, Mason City, Iowa.

CITY PROPERTY—FARM LANDS.

FOR SALE. House and lot, Madison, Wis. 68 acre farm, Cottage Grove, Wisconsin. 340 acres, unimproved, Wood county, Wisconsin. 200 acre farm, Fond du Lac, Wisconsin. 1320 acre farm, clay loam, highly improved, Michigan. Dr. Beebe, Wellston, Michigan.

FARM LANDS.

334 ACRE Maple Grove stock farm now for sale, located 4 miles north of Lancaster, Mo., county seat of Schuyler county, 1 mile of Iowa line. Fine improved stock farm priced to sell to settle up partnership business. For particulars inquire and buy of owners, Sawyer & Sawyer, Lancaster, Missouri.

400 ACRE grain and stock farm in Clark county, S. Dak. Eight miles to town, thirteen miles to county seat. 140 acres cultivated, balance native grass. Spring water, good school, telephone and daily mail. $35 per acre. $7,650 cash, balance 6%. A bargain for some one. James E. Pickles, Elrod, S. Dak.

FORTY quarter sections east Missouri, 25 west Missouri river, South Dakota, farms, ranches best in state, for sale. If interested, write owner, C. E. Lennan, Mobridge, S. Dak.

MONTANA LANDS.

FREE—320 acre Montana Homesteads. Send names of five interested parties for free circular. Bureau 342, Boulder, Montana.

TOO LATE TO CLASSIFY.

"Selecting and Developing the Jersey Herd"

is the title of an interesting booklet by Prof. Hugh G. Van Pelt. Describes the five essentials of a successful dairy cow. Explains how to develop the milk producing qualities and increase the vigor of the heifer calf. Write for this booklet today. It's free.

The American Jersey Cattle Club
338 West 23rd Street **New York City**

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires: University Johanna Excell and King DeKol Lyons (Registered Poland China hogs).
Marinette County Asylum - Peshtigo, Wis.

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).
Marinette County Asylum - Peshtigo, Wis.

LANDS AND HOMES

SEND FOR

FREE FOLDER

About Fertile Farm Land in

UPPER WISCONSIN

This booklet will tell you about farm lands along the lines of the **Chicago, St. Paul, Minneapolis & Omaha Ry.** within a few hours of the wonderful markets of St. Paul, Minneapolis, Duluth, Milwaukee and Chicago, which are offered at low prices and on easy terms. It contains information of value to settlers looking for a location in a community offering an ideal climate, nearby markets and excellent educational facilities. The work is comprehensive and is profusely illustrated. Mailed free upon request. **Ask for Booklet No. 32-I.**

G. H. MacRAE, General Passenger Agent
C. St. P. M. & O. Ry., ST. PAUL, MINN.

HOG, CORN and CATTLE FARM, ONLY $30.00 PER ACRE

780 ACRES, five miles from town 2,000 people. Lays level to gently rolling. Good set buildings, cost about $4,000. Soil best clay loam. $1,500 properly expended on this farm will put it in shape to cut 700 tons of hay. Write for full description. Real bargain, only 70 miles from Minneapolis. Easy terms. Charles W. Somers. 512 McKnight Bldg., Minneapolis, Minn.

HUNDRED THOUSAND BUSHEL RANCH

5,000 ACRES; best in Canadian West; 3,000 crop, 1,000 summer fallow, 1,000 grazing; fifty horses; three tractors; complete modern equipment and buildings; high state of cultivation; close to elevators; valid reason for selling. Will yield fine returns and double in five years. $100,000 will handle. Bruce Scott, Chamber of Commerce, Detroit, Mich.

GOOD CLAY LAND

FROM owners direct, in Wisconsin's Clover Belt, where it's a pleasure to live, where little money will buy and locate you. Near markets, schools churches. Good roads. Big crops of everything. Ideal for stock. Write or come. Flambeau River Lumber Co., Station D, Ladysmith, Wisconsin.

CATTLE WADING in clover everywhere. No wonder Aitkin county is the banner dairy county. Nature has fitted it for you. Investigate it before you select a location. You will miss it, if you don't. Free literature. Write Arnold, Land Agent, 153 Wolvin Bldg., Duluth, Minn.

FARM FOR SALE in Iron county, Michigan, 320 acres, 120 acres clear. Sixty-three head of graded Holstein cattle, 28 being milk cows, 5 head horses, machinery, buildings, etc. Fine chance for cattle raising. Sold on reasonable terms. Inquire Geo. Premo, Amasa, Mich.

ONLY $38.00 PER ACRE

IMPROVED section corn and alfalfa land. 280 acres tilled. Good as Iowa land. Come and see. Details furnished. Sold direct or through agents. Other bargains. F. M. Barnes, Highmore, S. D. Cut this out.

SEE this choice Wisconsin clover district, Rusk and Price counties, where success is sure for the dairyman, select from 20,000 acres offered at low prices and on easy terms. Ellingson Cloverland Co., 311 Worden Ave., Ladysmith, Wisconsin.

WANT TO TRADE A GOOD quarter of Lyman county, S. D., land for Holstein heifers and cows, want to get into Holsteins and will give a good deal. Write J. A. Robertson, Sr., Draper, S. D.

POOR MAN'S CHANCE **$5 down, $5 monthly,** buys 40 acres productive land; some timber, near town. Price $200. $10 monthly buys 80 acres. Box 425-H, Carthage, Mo.

WANT to buy well located farm from owner. Give description. D. Sample, Box 754, Chicago.

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.
HOMESTEAD COMPANY
Engraving Dept. **Des Moines, Iowa**

Another Breeder Well Pleased

THAT The Wisconsin Farmer is a splendid salesman for high-grade swine is again proved by this enthusiastic letter from W. J. Dane, proprietor of the Dane Stock Farm, Oshkosh, Wis. Mr. Dane says:

Enclosed find check to pay for my advertisement in The Wisconsin Farmer. I am well pleased with the inquiries and sales and service from my advertisement for Hampshire or belted swine, also sheep.

The Wisconsin Farmer carried Mr. Dane's advertisement to more than 90,000 possible buyers, more than 72,000 of whom live in Wisconsin.

These buyers are interested in what you have to offer. Let The Wisconsin Farmer carry them your message.

Send your advertisement today.

The Wisconsin Farmer **Madison, Wisconsin**

Guaranteed Circulation, 90,000.

SUCCESSFUL DAIRYING

DEPENDS upon a number of different factors. One of the most important of these is the dairy animal. You can afford to buy only those which have been **bred for production.**

IT WILL PAY YOU TO COME TO

WAUKESHA WISCONSIN NOVEMBER 1-2

TWO BIG SALES

Nov. 1

Pure-Bred Females

Nov. 2

Pure-Bred Sires and Grade Cows and Bred Heifers

All of the animals offered in these sales will be as represented and from profit-producing families.

Waukesha County Guernsey Breeders' Association

Waukesha, Wis.

Frank E. Fox, Secretary

Auctioneers: Love, Perry, Benjamin [and Hellen

Send today for a catalog

gilt of the same caliber. Jake is a good fellow and will appreciate your business and take good care of your order. Try him. Don't forget to mention The Wisconsin Farmer. See page 29.—Adv.

Another Duroc Find.

AS WE go over the state we are continually running across herds of cattle and swine that have been "hiding their light under a bushel." When we were in the vicinity of Lake Geneva, Wis., a few weeks ago, we stopped to see the Ceylon Court herds and visit our friend, Gilbert, who is farm superintendent. We were impressed with the swine herds that he showed us, but when he showed us the registration papers we were very pleasantly surprised. It developed that the foundation stock of the Duroc herd comes from the best strains of the breed. There are several daughters of the great boar, Defender, in the herd. There are also granddaughters of Professor, Proud Advance and Cherry Chief. If you want to change your blood lines you can do so here without going into Illinois or Iowa to buy breeding stock. Write for the breeding and description of the boars and gilts they now have for sale. See page 29.—Adv.

Burn Brae Farm Durocs.

CHAS. PETERSON, proprietor of the Burn Brae Farm, Rosendale, Wis., has a fine lot of Durocs for sale which he is advertising on page 28. They are not only of proven and popular lines of breeding, but are well grown and of good type. When in the market for boars or gilts write him.—Adv.

28.71-Pound Bull for Sale.

THE twenty-eight-pound bull that A. G. Pingle, Chilton, Wis., is offering for sale is one of exceptional merit. He sires heavy-producing heifers of good, straight type, that show lots of capacity and constitution. We advise our readers to investigate the pedigree of this animal.—Adv.

Downing's Bull Offering.

DOWNING PONTIAC BUTTERMAN has been a state fair champion three times. M. W. Downing & Bro., Waukesha, Wis., are offering one of his sons for sale, out of a twenty-one-pound junior three-year-old daughter of King Hengerveld Pondyke that has two thirty-pound daughters.—Adv.

Solomon Anderson's Polands.

BIG-TYPE Poland Chinas are bred by Solomon Anderson, Green Bay, Wis., and are giving satisfaction to all who buy them. He breeds right, feeds right and is pricing them right, so you will be right if you buy of him. See his advertisement on page 30.—Adv.

Do You Want Holsteins.

IF SO write W. H. S. Rhoda, Watertown, Wis., whose advertisement appears on page 30. He has several fine young bulls ready or nearly ready for service that will interest you. Prices reasonable for such high quality breeding and individuality.—Adv.

WISCONSIN FARMER readers who are in the market for registered Holstein heifers and young cows will do well to write to John Hasse, Monroe, Wis. He is offering a fine lot, a number of which are due to calve soon. See advertisement on page 31.—Adv.

GEO. GIBSON, Washota, Wis., is offering a richly bred Johanna bull for sale. His dam is of the heavy producing Nig Johanna Alcartra family, that prove to be great milk and butter producing cows wherever found.—Adv.

SALE DATES.

Holstein-Friesian Cattle.

Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.

Holstein, Jersey and Hereford Cattle.

Oct. 30-31, F. P. Merrick, Delavan, Wis.

Aberdeen Angus Cattle.

Nov. 9, Combination Sale, Roy Miller, Prosper, Minn and M. C. Willford, Canton, Minn. (Sale at Canton, Minn.)

Short-horn Cattle.

Nov. 2, Anoka Farms, Waukesha, Wis.
Nov. 3, Herr Bros. & Reynolds, Lodi, Wis.

Percherons.

Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders' Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)

HAGEMEISTER

Percheron Dispersion Sale

OF THE STUD OF THE LATE HENRY F. HAGEMEISTER

Green Bay, Wis., Wednesday, Nov. 15

BRILLIANT 47573.

Eleven stallions, thirty-three mares and fillies, ranging in age from sucking colts to mature animals. Undoubtedly the best lot of home bred and imported mares in any one stud in Wisconsin. To appreciate their high individual merit you must see them. An extraordinary lot of animals. The home bred animals are largely sired by Imp. Historique 71752 and out of daughters and granddaughters of Baccarat 11326. There are also five imported mares and eight fillies and mares out of both an imported dam and sire. Catalogs are now ready for mailing. Mention The Wisconsin Farmer and address

HAGEMEISTER BREWING COMPANY

GREEN BAY - - - - - - - - - WISCONSIN

PUBLIC SALE

RIDGEWAY, WISCONSIN, OCT. 2(

55 POLAND CHINAS - 15 SHORT-HORN

18 LARGE, smooth yearling boars, 24 growthy spring boars, 13 big sprir gilts. Sired by Tom McG's Big Tom, Big Hidestretcher by Hidestretch and Repeater. Red and roan bulls of serviceable age sired by Proud Baro G.'s of Arondale and seven cows and heifers. Everything registered. Wri for catalog to

R. F. BRUNKER & SON - RIDGEWAY, WISCONSI

IOWA COUNTY, ON LAKE TO RIVER ROAD

HORSES.

4 Stallions PERCHERONS 2 Mars

WE are offering 6 very high-class Percheron stallions and mares; 1 two-year-old and one yea stallion out of Diana 53532 by Phil Sheridan and 1 yearling stallion and a 2 and 3 year old re out of Karel 33640, a double bred Baccarat mare. The two-year-old stallion sired by Imp. Ha 74108 is particularly good. Send for prices and description.

JOHN KLOEHN - - FOREST JUNCTION, WISCON

HAMPSHIRE SWINE.

HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.

DANE STOCK FARM
Oshkosh Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.

A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

HAMPSHIRE SWINE FOR SALE BY

James Clemmens Kansasville, Wisconsin

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

LEFEBURES' BELGIA

A Large and Choice Colle of Stallions, Mares and C

for sale at all seasons of the r. Correspondence solicited. log mailed upon application

H. LEFEBURE & SONS, Fairfax, 8 miles west of Cedar Rapids

CLYDESDALES

STALLIONS and mares for sale. AYRSHIRES —Serviceable bulls an females. DUROC— growthy boars and gilts. Only the very be of the three breeds. We invite visitors. Write your wants.

Jas. Van Etta - Lima Center, Wisco in

Reg. Percherons, 39 heavy 3 14 yr. stallions, 68 rugged 2 yr. is. 61 yearlings. Can spare 2 g. mares. 24 reg. Belgian stallions. Sires and dams brought over France and Belgium. Fred Chid ler, R. 7, Charlton, Iowa.

PERCHERON Stallion for sale. Black, 00 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

Please mention this paper when writing

WAUKESHA COUNTY HOLSTEIN ASS'N

4TH SEMIANNUAL SALE MONDAY, OCTOBER 23

95 HEAD PURE-BRED HOLSTEIN CATTLE

ARE you looking for foundation stock? If so, buy them from breeders who have the reputation of fair dealings. Thus far, to the best of our knowledge, no tubercular animals have ever passed through our sales. All animals are guaranteed to be breeders to the value of the purchase price. Every animal is inspected by a committee of three. We believe every animal to be sound and clean. No by-bidding allowed. Auctioneers, Perry, Mack and Love. The following men have consigned animals to this sale and stand back of their consignments to be exactly as represented:

CATALOGS NOW READY WRITE FOR ONE TO

W. B. Leonard, Brookfield, Wis.
S. F. Baird, Waukesha, Wis.
C. J. Will, Menomonee Falls, Wis.
Dr. M. W. Downing & Bro., Waukesha, Wis.
John J. Reid & Son, Oconomowoc, Wis.
Dr. David Roberts, Waukesha, Wis.
D. J. Howell, Waukesha, Wis.
E. G. & J. W. Muckleston, Waukesha, Wis.
W. D. McGill, Menomonee Falls, Wis.
Dr. B. O. Nobles, Milwaukee, Wis.
R. M. Aplin, Dousman, Wis.
J. J. Roets, Monches, Wis.
Rust Bros., West Allis, Wis.

CATALOGS NOW READY WRITE FOR ONE TO

W. L. BAIRD, Sec'y **WAUKESHA, WIS.**

150 HEAD SQUARE DEAL

Inter-County HOLSTEIN ASSOCIATION SALE

Watertown, Wis., Nov. 14-15

SPLENDIDLY bred, well conformed cows—a goodly number bearing creditable A. R. O. records, such as 20-lb. three-year-old and 15-lb. two-year-old record. Heifers of individuality and excellent breeding. **Bulls**—a 30-lb. son of King Segis Champion—a 30-lb. son of Sir Beets Cornucopia Netherland—a 31-lb. grandson of King Segis Pontiac Polkadot—a 29-lb. son of King Korndyke Sadie Vale—a grandson of King Korndyke Sadie Vale from a 25-lb. three-year-old—a show bull, son of Aaggie Cornucopia Johanna Lad, all tuberculin tested under the direct supervision of the state veterinarian, consequently the sale carries the approval of the state department of agriculture. We also offer the 60-day retest guarantee. Our consignors are breeders who have played a noble part in keeping Dodge and Jefferson counties to the front in Holstein circles. Such names as Tomkins Wright, Waupun; Edwin M. Schultz, Hartford, cannot help but convince the buyers of the absolute integrity of our sale and the high class of stock offered. Catalog ready November 1st. Watch later announcements.

FRANCIS DARCEY, Sec'y **Watertown, Wis.**
SQUARE MEN **SQUARE CATTLE**

SHORT-HORN CATTLE.

WILCOX SHORT-HORNS

A MOFFERING several **Roan Bulls** of serviceable age. Priced reasonable for immediate sale. Write for pedigrees.
W. F. Wilcox - - Milton, Wisconsin

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son. Beaver Dam, Wisconsin

Bates Milking Short-horns

9 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son - Burnett, Wisconsn

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address
JOHN CLAY WARRENS, WIS.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marshioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland Write us. **William Bros., Bangor, Wisconsin.**

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

SHORT-HORN CATTLE.

RIVERDALE STOCK FARM SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little Evansville, Wisconsin

OAK LAWN FARM

Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. C. S. Hechtner, Chariton, Iowa.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. B. CORTTE LOMIRA, WISCONSIN

Please mention this paper when writing

GUERNSEY CATTLE.

REG. GUERNSEY HEIFERS

10 to 14 months old, daughters and granddaughters of the richly bred sire,

GOODWILL'S HERO 17073

DAMS imported and richly home-bred animals. These animals are well grown, good, straight type and well bred. For further particulars tend for copy of pedigrees or color description. Address
Charles Schmidt Wrightstown, Wisconsin

A Few Grade and Pure-Bred GUERNSEY FEMALES For Sale

W. H. & B. L. Hanchett Sparta, Wis.

Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.
Geo. Lucia - Green Bay, Wisconsin

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.
W. G. Jamison & Son - Appleton, Wis.

Guernseys For Sale

NINE grade Guernsey yearling heifers and one pure-bred bull 7 months old, all good size and well marked, at $600. Address
E. H. Kiesling Jefferson, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

THREE Oaks Guernseys. Four pure-bred heifers 12 to 15 mos. at $160 to $200. Four grade heifers same age, $55 each. W. A. and R. E. Freehoff, Waukesha, Wisconsin.

When writing to advertisers kindly mention The Wisconsin Farmer.

GUERNSEY CATTLE.

Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

BERKSHIRE SPRING PIGS

of both sexes of Premier and masterpiece breeding
O. R. FRAUENHEIM, RANDOM LAKE, WIS.

Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address
W. J. Heid Ft. Atkinson, Wis.

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

[OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address
J. D. McAllister Green Bay, Wis.

RED POLLED CATTLE.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

UNDERWOOD RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write
L. C. UNDERWOOD AVOCA, WIS.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin Gotham, Wis.

ABERDEEN ANGUS CATTLE.

ANGUS BULLS FOR SALE

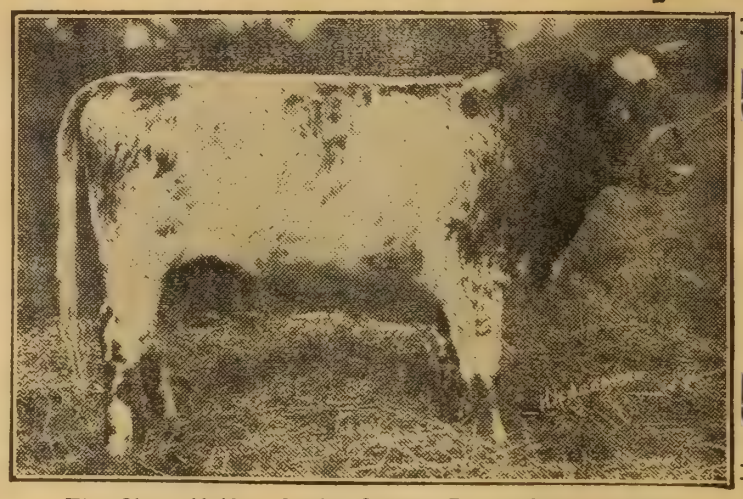
IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

Please mention this paper when writing

ANOKA FARMS INVITES YOU TO THE ANNUAL OFFERING OF

HIGH-CLASS SHORT-HORNS

WAUKESHA, WIS., THURSDAY, NOV. 2, 1916



The Show Heifer, Anoka Gloster B., by Sultan Stamp.

50 HEAD
20 TOP YOUNG BULLS
50 HEAD

The Show Bull, Good Stamp, by Sultan Stamp.

THE class of cattle for which Anoka is noted will be offered, all produced on the farm and the get of Imp. Rusper Champion, Village Denmark, Sultan Stamp, Regal Sultan and other strong sires. Not an old animal in the lot. Everything with a life of usefulness before it. Breeding, quality and type to suit the most critical. Attend this sale; you will be pleased with the offering. Write today for catalog. Mention Wisconsin Farmer and address

ANOKA FARMS COMPANY - - **WAUKESHA, WISCONSIN**

Cols. Jones and Reppert, auctioneers. Fred V. Johnson will represent this paper. Attention is called to the following sales: Weaver & Garden and John McDermott, Chicago, October 31; Carpenter & Ross, Chicago, Nov. 1; Herr Bros. & Reynolds, Lodi, Wis., Nov. 3.

DUROC JERSEY SWINE.

MODEL DUROC HERD

HAVE a fine assortment of spring boars. Will also sell a few sows and spring gilts. They are well grown and are priced to sell. Send your order. I guarantee satisfaction.

J. W. HIGGINS
GOTHAM WISCONSIN

LINCOLN MODEL DUROC HERD

Spring boars and spring gilts by

Lincoln Model

and S. & H.'s Col. From big, matured sows The pigs must suit you or no sale. Write your wants.

ALBERT L. HYZER
WEST SALEM WISCONSIN

--PARKHURST-- DUROCS

LET us ship you a boar pig. They are well grown, of the most popular blood lines and we guarantee every boar. We welcome visitors and answer inquiries promptly. Try us.

E. H. PARKER & SON
Janesville Wisconsin

DUROC JERSEY SWINE.

COL.'S CHOICE --- WONDER CHIEF

By King the Col. By Cherry Chief

DUROCS THAT MADE GOOD

YOU have all heard about KING THE COL. and CHERRY CHIEF—your herd is not complete without some of that breeding. My brood sows are large. Let me ship you a spring boar. Guaranteed? Yes. Mention The Wisconsin Farmer and address

DENNIS SHEA - - - MELVINA, WISCONSIN

DUROCS WITH SIZE AND QUALITY

WE ARE offering for sale, spring boars and gilts sired by **Lee's Defender, Prince Defender** and **Royal King 4th.** Prices from $25 to $35 according to quality. Crates, pedigrees and a year's subscription to Duroc Bulletin given with every order. Satisfaction guaranteed.

McClurg Bros. - - - - - - - - - Viroqua, Wisconsin

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer,

EMMETT COOK & SON - RICHLAND CENTER, WIS.

Grand Champion Duroc Boar at Wisconsin State Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address

B. W. LITTLE - - - JANESVILLE, WISCONSIN

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale, sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.

BURN BRAE FARM - - - ROSENDALE, WISCONSIN

GANT'S FARM DUROCS

25 TOP spring boars, one 600-lb. Jr. yearling, Illustrator-Cherry Chief breeding. Bred sow sale in February. **Gant's Farm, Delavan, Wis.**

I AM OFFERING FOR SALE

CHIEF'S DEFENDER 186363 and PROF. KING 2d 187655. Also spring pigs sired by these great Duroc herd boars. Address

M. T. CLARKE STEUBEN, WIS.

DUROCS

SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write

John Borchardt & Son, Richland Center, Wis.

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

DUROC JERSEY SWINE.

I WON THE SILVER TROPHY AT THE WISCONSIN STATE FAIR

ON the best litter of Duroc pigs. These and others of same breeding for sale. Thirty spring boars, 2 yearling boars and 40 spring gilts for sale. Sired by **Prof. King** by Indiana King and **Grandmaster,** junior champion Wisconsin, 1915. **Buy from a winning herd.** Write your wants.

J. W. THOMAS, NORTH BEND, WIS.

THE WAR

Hasn't affected the prices on

DUROC JERSEY BOARS

MY spring boars are sired by Professor C and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.

M. STOEHR - VIROQUA, WIS.

DUROCS AND GUERNSEYS

25 HEAVY-BONED fall and spring boars, Illustrator, Chief's Col., Defender and Crimson Wonder breeding. April pigs weigh over 150 pounds. Two-year-old bull for sale whose dam has three A. R. records averaging over 500 lbs. fat. His full sister made 415 pounds fat as a two year old. Have had 6 calves sired by him and 5 were nicely marked heifers. Reason for selling, owned his sire. Several fine bull calves

Allie S. Knudson R. 5, Brodhead, Wis.

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address

JOHN L. FISHER JANESVILLE, WIS.

SEPTEMBER DUROC PIGS

at your own price—just make an offer

THESE are by a Cherry Chief boar that weighed close to 500 pounds at 16 months and Long Model Wonder, another big one that has only a few equals. Also a fine bunch of spring boars of champion blood lines at attractive prices. Address

E. R. Perkins Manitowish, Wis.

HERR BROS. & REYNOLDS' SALE OF
SHORT-HORNS
LODI, WIS., FRIDAY, NOVEMBER 3, '16
WILL AFFORD AN OPPORTUNITY TO SECURE CHOICELY BRED SHOW AND BREEDING CATTLE

49 Head---15 Bulls

An offering of top Show and Breeding Cattle : :

49 Head---15 Bulls

Village Princess 6th and Village Princess 7th, Twin Heifers by Golden Sultan, First as Produce of Dam at 1916 Wisconsin State Fair. Included in the Sale.

49 Head---15 Bulls

Short-horns that will appeal to the buyer wanting the best.

Attend This Sale

WE are offering the best lot of Short-horns we have ever presented for public approval. They are the get of White Rock by Whitehall Sultan, Cumberland's Ideal by Cumberland Prince, Golden Sultan, a sire of champions, Master Ruby, a champion bull, and other outstanding sires. Practically every head in the sale was produced on our farms and is right in every way. Write for the catalog, mentioning The Wisconsin Farmer. Address

HERR BROS. & REYNOLDS — **LODI, WIS.**

Cols. Jones and Reppert, auctioneers. Fred V. Johnson will represent this paper. Attention is called to the following sales: Weaver & Garden and J. W. McDermott, Chicago, Oct. 31; Carpenter & Ross, Chicago, Nov. 1; Anoka Farms, Waukesha, Wis., Nov. 2.

DUROC JERSEY SWINE.

WE SHIP on APPROVAL
Duroc Jersey
BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.

Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

DUROCS
THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.

B. M. ARRIES — **AUGUSTA, WISCONSIN**

Atwater's Duroc Boars

SOME just as good as sold in my sale—these were held for private sale. Write.

L. F. Atwater - **Bangor, Wis.**
"Home of Big Durocs"

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address

W. W. Goodrich — **Ft. Atkinson, Wisconsin**

GEO. H. WILLSIE
Breeder of Big Durocs

Can supply your wants. Write.

Prosper - - - **Minnesota**

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B. Model Wonder, Col. S. Jr., Orion, Cherry King Jr. **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address

J. W. Higgins — **Gotham, Wisconsin**

DUROC JERSEY SWINE.

DUROCS

SPRING boars by **five noted sires.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** son of the many times champion, **Grand Model,** heads our herd. Also two fall boars for sale. We sell "boars that please." Write

Geo. D. Sprain & Sons
West Salem, Wisconsin

BOARS
DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address

J. Erwin, Bloomington, Grant County, Wis.

CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.

Ceylon Court Farm - Lake Geneva, Wis.

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address

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Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economica pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address

H. P. WEST — **RIPON, WISCONSIN**

CHESTER WHITE SWINE.

THE GREAT
SCHOOLMASTER
SALE OF
CHESTER WHITES

Will sell Schoolmaster and boars and gilts

TUESDAY, OCT. 17, 1916

The kind that improves herds. Write for catalog, mentioning The Wisconsin Farmer,

HARRY CRANDALL
CASS CITY — **MICHIGAN**

CHESTERS
For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address

L. J. McBAIN — **BLOOM CITY, WIS.**
(Shipping point Viola)

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Chester Whites
Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.

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Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address

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BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.

O. P. Coates - Elkhorn, Wisconsin

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CHESTER WHITES

LIVE and let live prices. August pigs from matured stock, up to Dec. 1st, single pigs $10, pair, male and female, $18. No runts shipped. Two good winter boars, best of blood lines, pedigrees furnished. Jos. Egelhof, Edmund, Wis.

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address

ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.

W. F. Miller — **West Salem, Wis.**

Chester White Spring Gilts For Sale

BIG, growthy animals of good type, strong backs, heavy hams and big bone. Address

W. C. Scheibe — **Burlington, Wis.**

CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address

L. A. Schultz — **R. 1, Poynette, Wis.**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.

Wm. F. Belda - De Forest, Wisconsin

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. **Wm. C Kirst, Tomah, Wisconsin**

CHESTER WHITES

CHOICE spring pigs of March and April farrow for sale. Big bone, well bred and growthy. Correspondence solicited. Write

Art. G. Hoskins — **Dodgeville, Wisconsin**
(Also breeder of Milk Strain Short-horns)

YORKSHIRE SWINE.

YORKSHIRES

LONG-bodied, deep-sided fellows; true Yorkshire type. Registered boars or sows $15 and $20 until Oct. 1st. A. C. Kennedy, Wadena, Minn.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

POLAND CHINA SWINE.

Big Type Poland Chinas

OF EITHER sex. Some are state fair winners, and all sired by the grand champion, Jumbo Hadley or D. & E.'s Hadley, and D. & E.'s Jumbo. All state fair winners, and sire of winners this year. Order a herd header from us. We can spare two of our herd boars. Visit us, or write us your wants.

DOBSON & EASTMAN - - - - LANCASTER, WISCONSIN

SIZE---QUALITY---BREEDING

Features Predominating in my Polands

JUMBO'S EQUAL 2d

CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH (Shipping Point Fennimore) MT. IDA, WISCONSIN

McDONALD CLEANS THE SLATE

WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin, Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address

J. D. McDONALD, NORTH BEND, WIS.

ANDERSON'S BIG-TYPE POLAND CHINAS

TWO choice spring boars at $20 each, and a few open gilts at $20 each. Also a few early fall pigs at $10 each, and one choice herd boar, King of All, a bargain for $40. Your money's worth or your money back. Mention The Wisconsin Farmer and address

S. ANDERSON ROUTE 8, GREEN BAY, WISCONSIN

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.

M. MADSON & SONS MADISON, WISCONSIN

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

Some Boars

A FINE assortment of spring boars (March)—individuals that will please—the **quality kind.**

Poland Chinas

Two **outstanding** fall boars. Your $$ worth or your $$ back. Write or come.

F. A. Morehouse - Lancaster, Wisconsin

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.

Phone 53 F. E. Purdy, Orfordville, Wis.

POLAND CHINA BOARS

ONLY four spring boars but they are "dandies." Order one. Address

Mat W. Beres Elroy, Wisconsin

POLAND CHINA BOARS FOR SALE

10 GREAT fall yearling Poland China boars with great bone and length, sired by Big Bone and Long Wonder. These boars will be priced right. Address

C. J. Schoenfeld & Son Fox Lake, Wis.

Poland Chinas For Sale

FIVE yearling boars. Spring pigs of both sexes Boars fit for service and September pigs.

James Derivan Fox Lake, Wisconsin

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.

A. Menke & Sons, R. 1, Markesan, Wisconsin

MARTINY'S POLAND CHINAS

100 BIG, vigorous, thrifty, heavy-boned March and Apr. pigs of Wis., Minn., Iowa and Neb. championship breeding. For 15 years my herd has been a prominent winner at the state fairs. Remember, my hogs are good enough to ship on approval. L.P. Martiny, Box F, Chippewa Falls, Wis.

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

W. H CAREY & SON

WILL sell 40 spring and fall Poland China boars and 25 gilts at

ARGYLE, WISCONSIN, OCT. 25

Sired by Smooth Giant and Long Boy. Write for catalog and attend this sale.

SMILEY POLANDS

BIG-TYPE POLANDS that make good. We have 200 spring pigs and the top boars are reserved for the mail order trade. Sired by great boars, MAJOR HADLEY, WISCONSIN JUMBO 2D, MONARCH and MAJOR MILLER, the best of big-type breeding. Satisfaction or no pay. Correspondence invited. Address

WM. SMILEY & SON, ALBANY, WIS.

GILTS RESERVED FOR SALE, FEBRUARY 22

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING BANGOR, WIS.

POPULAR PROLIFIC

POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write

Olaf C. Olson, Strum, Buffalo County, Wis.

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address

J. C. Hendricks Box F, Hazel Green, Wis.

BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.

Chas. S. Maltby, Janesville, Wisconsin

Bargains, Poland Chinas

SPRING boars and gilts priced to sell. Order now. Big-type breeding. Address

L. E. Pease Milliville, Wisconsin

HOLSTEIN-FRIESIAN CATTLE.

10 REGISTERED HOLSTEIN COWS

FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

Purebred Registered

HOLSTEIN CATTLE

One of the greatest investigations among dairy breeds was made by experts of the Wisconsin Experiment Station. Prof. F. W. Woll states that the "Holstein cows produced considerably more milk solids and fat than the cows of other breeds (19.5 per cent more butter fat than the Guernseys and 38 per cent more than the Jerseys), and they also give larger net returns for feed consumed." In all dairy breed competitions where Holsteins entered have been representative, they have produced a greater net profit for butter than any other breed entered. There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
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SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

Yearling HOLSTEIN BULL

SIRED by a 23-pound bull and out of a daughter of a 16-pound cow. Seven high-grade cows 30-32% pure, 2 to 5 years old, now bred to our richly-bred herd sire. Address

C. F. Dineen Cedarburg, Wisconsin

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address

Lawrence Robers Lyons, Wis.

BROWN SWISS CATTLE.

Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.

ANDREW MARTIN, WEST SALEM, WIS.

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Fina ncial Countess. For descriptions, pedigrees, pictures, etc., address

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FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

REGISTERED JERSEY COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - Fairwater, Wisconsin

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son Oconomowoc, Wis.

Yearling Jersey Heifers

AND bulls of serviceable age sired by Hutzeland King, a grandson of King of St. Lambert's King. **Big-Type Poland China** spring pigs of both sexes for sale. Prices reasonable.

Lorenz Metzler - - New Franken, Wis.

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS.

SHEEP.

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.

Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

SHEEP

SHROPSHIRE yearling rams all sold. After October 15th my yearling Hampshire flock header and my Oxford flock header will be for sale. Have a limited number of Shropshire, Hampshire and Oxford ram lambs left; also a few ewes. All stock registered. Address

Dane Stock Farm Oshkosh, Wis.

Hickory Dale

Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock flock headers. Address

Arthur Broughton & Sons Albany, Wis.

AYRSHIRE CATTLE.

The late James J. Hill was an enthusiastic friend of AYRSHIRES.

He maintained a large herd on his stock farm at Gladstone, Minn., and to encourage the breeding of PROFITABLE DAIRY CATTLE, he gave many bulls to farmers along his railroad lines. If a man of his ability saw the PROFIT in AYRSHIRES, isn't the breed at least worth your investigation?

AYRSHIRE BREEDERS' ASS'N

C. M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

POLAND CHINA SWINE.

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.

Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781

AND

ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address

P. W. YOUNG PROSPER, MINN.

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

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At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones' Nat'l School of Auctioneering, 40 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, President.

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AN auctioneer for your fall sale? If you want a man of ability and experience—a live, vigorous worker with a clear, distinct voice—who keeps up interest from start to finish—engage

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He can make you money in your live stock or farm sale. Rates reasonable.

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THOROUGHLY versed on pedigrees of leading breeds of live stock.

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14 N. Sacramento Blvd. CHICAGO, ILLINOIS

Let me help boost the hog sales in Wisconsin. Write for dates.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
E. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke,** ¾ white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $0.00 to $125.00. Address
...rstow & Son Randolph, Wis.

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for ...gree and price.

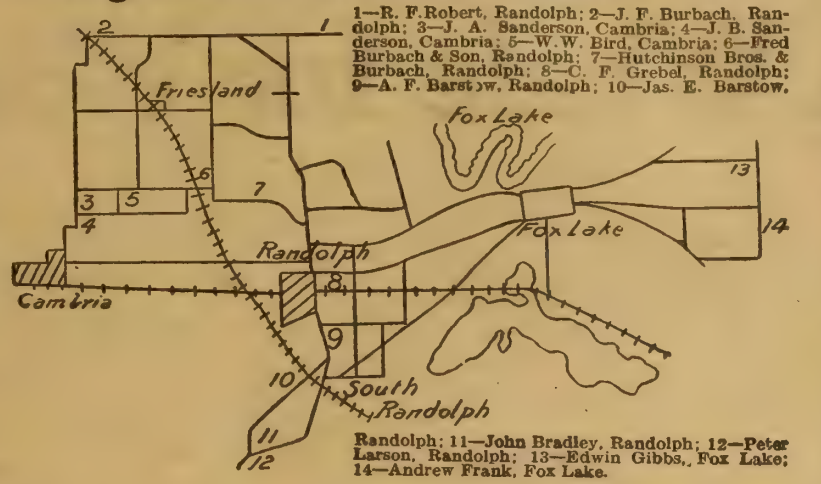
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE

HEADS our herd. His dam made 33.08 lbs as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

TWO SONS OF THE 37.56-POUND BULL

Sir Johanna De Colantha De Kol

...HESE bulls are good individuals, well marked, more white than black, well grown. They are ...h from A. R. O. daughters of the bull, Oak... Milk and Butter King. Price reasonable. ...d for extended pedigrees. Address
F. Winckler & Sons Medina, Wis.

...egistered Holstein Heifers

...EIFER calves and young cows for sale. Ten ... daughters of the 24.12-pound bull. Sir Korn... Zoldusky De Kol, that has 10 A. R. O. daugh... s. He is a grandson of Hengerveld De Kol, that ... 116 A. R. O. daughters. These heifers are bred ... the 40-pound bull, Johanna King Segis, a son of ... 40-pound cow, Johanna De Kol Van Beers. ...erling bulls and younger from A. R. O. dams ...h records from 14 to 30 pounds. High-grade ...ingers and young cows. Write us your wants.
F. McNutt Oxford, Wisconsin

...olstein Bull

...ING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac ...lkadot, a full brother in blood to the $50,000 ...e, King Segis Pontiac Alcartra. Dam, Rigtje ...engerveld Segis, A. R. O. record. A fine indi... ...ual and priced reasonable. Address
...Lindauer Kaukauna, Wisconsin

...earling Son

...EADY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three near... dams average over 30 pounds. Price $75.00. **...pound bull born March 17, 1916,** sired by ...ove bull. Both are well marked, more white ...n black. Price $125.00. Send for pedigrees.
...hley Brothers - Waukesha, Wis.

...-POUND SON OF THE 33.86-POUND BULL

...ABST BURKE DE KOL KING, whose dam ...holds two records of **31.16** and **33.86** pounds ...pectively for seven days, **644 pounds milk in ...ven days; 20,106 pounds milk and 845 ...unds butter** for the year. Dam of bull for ...e made **17.93 pounds butter and is a grand... ...ughter of Paul Beets De Kol.** Price $75.00.
...H. Henderson - Elkhorn, Wisconsin

...egistered Holstein Heifers

...ND young cows, fresh cows and springers, bred ... to KING LYONS NUDINE 3D 144643, a ...54 pound son of King Lyons Nudine. Send ... pedigree, description and price. Address
...OHN HASSE MONROE, WISCONSIN

...HIGH-GRADE HOLSTEIN HEIFERS

...AVE on hand 60 head of choice, high-grade ... Holstein heifers for sale. They are nicely mark... ... good size and in fine condition. Some of them ...e springing. Can load you up a load of fine ...ffers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN

...ULL calves, sired by Johanna Bonhuer Pieter ... 113138, whose 14 nearest dams average over ... pounds butter in 7 days, out of dams with 7 ...y and yearly records. C. Tochterman Jr., ...onroe, Wisconsin.

YEARLING HOLSTEIN BULLS

...EADY for immediate service; sired by King ... Colanthus De Kol Korndyke, a 25 pound ...andson of Pontiac Korndyke. The dams are ...anddaughters of Hengerveld De Kol, Sir Sadie ...ornucopia and Mercedes Julips Pietertjes Paul.
...red Harford Kaukauna, Wis.

HOLSTEIN CALVES

...VE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 ...eeks old, out of heavy-milking dams, $15 each, ...ated f. o. b. cars. First check takes them. Write
...C. Kenyon & Sons Elgin, Illinois

PABST BLACKBERRY KORNDYKE

SIRE: Korndyke Segis Johanna, our $12,500 junior sire by Johanna McKinley Segis that is by King Segis and out of Johanna DeKol Van Beers 40.07. Korndyke Segis Johanna's dam Pontiac Lady Korndyke 38.03 by Pontiac Korndyke 2d, dam Lady Korndyke Pauline DeKol 29.14 by Pontiac Korndyke,

DAM: Pabst Blackberry at 3 years, 31.68 by a 29.42 (3 years), grandson of Hengerveld DeKol.

2D DAM: Pabst Pontiac Burke (3 yrs.) 23.24, by King Pontiac Champion, our senior sire by King of the Pontiacs

3D DAM: Edith DeKol Burke Hengerveld 33.86, by DeKol 2d's Butter Boy 3d.

This bull calf is consigned to the Watertown, Wis., sale October 25th and 26th, 1916. He is as good as his pedigree. If he brings more money than you care to pay, don't be discouraged, but take the interurban car at Watertown and visit the Pabst Stock Farm, a distance of 15 miles. We have over 30 young bulls out of high producing A. R. O. cows to select from.

Pabst Stock Farm

Dept. 30 Waukesha Co., Oconomowoc, Wis.

SON OF 1,000 POUND YEARLY RECORD DAM

at Lake Mills Holstein-Friesian Sale, October 27-28

KING Aaggie Hengerveld, son of Aaggie Texal Wayne 2nd (30.6 pound, 1078 pounds in one year), is in the first class consignment for this sale. Another good one is Richland Pontiac Butter Boy, dam, 31.76 pounds at 4 years, 1 month, 2 days. Both these grand individuals are fit to head any herd. Ready for heavy service. Then there are Houwtje Calamity Vale, A. R. O. 26.958 pounds, 4.03 per cent fat, and several daughters of King Pontiac Portia from dams up to 27 pounds.
C. C. FRIES & SON - - RICHLAND CENTER, WIS.

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

THE 30.90-LB. SHOW BULL NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.
FRED ALBRECHT WATERTOWN, WISCONSIN

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COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.
EDGEWATER STOCK FARM FORT ATKINSON, WISCONSIN

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Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.
GROVE BROS. COLUMBUS, WIS.

2 HOLSTEIN BULLS

OF SERVICEABLE age. One from Gordonia Johanna Aaggie Echo 151460 with 15.50 pound seven day record and sired by the richly bred bull Julip Segis Korndyke (80640). One sired by Daisy Johanna 5th, a 27-pound bull and the dam, Queen Liliuokalani De Kol 2d, 213904, a 12-pound Junior 2 year old sired by Julip Segis Korndyke. Price $85.00 and $125.00.
L. V. Garvens - Brookfield, Wisconsin

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.
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Of the Richly Bred Ormsby Bull

BEAUTY PIETERTJE PRINCE ORMSBY

WHOSE sire is the 32.52 pound bull, **Beauty Pieterje Prince,** and whose dam is the double Ormsby bred cow, **Queen Ormsby Duchess.** Send for extended pedigree and prices.
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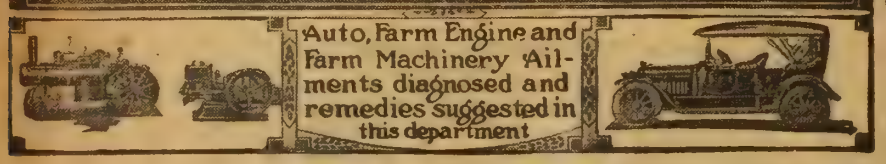
VOL. XLV. NO. 43. THURSDAY, OCTOBER 26, 1916. WHOLE NO. 1813

NATIONAL DAIRY SHOW
OCT. 12 - 21, 1916

FARM MECHANICS



Questions and Answers.

Low-Tension Magneto for Lighting.

I have a low-tension magneto from another car. Can I fix it so as to make my lights by running it with my fan belt? If so, how can I connect it up?

Answer.—You could probably use your generator to charge a storage battery and run your lights from the battery. The rated voltage of the battery should be about 20 per cent less than the voltage of the generator. You should also have an automatic cutout to disconnect the battery from the generator as soon as the motor stops and to reconnect the battery with the generator when the motor starts again. A six-volt, eighty-ampere battery is often used for requirements similar to yours. The generator for charging it should generate eight to ten volts and not less than six amperes.

Engine Does Not Run Smoothly.

I have a new Ford car. It does not run smoothly when throttled down, running idle. It goes by jerks. The motor hits fine when pulling, and it pulls well. Can you tell me what will remedy this? Also mention some hints on adjusting vibrators on Ford cars.

Answer.—The spark plug gap may be too close, a vibrator may not be properly adjusted, the spark plugs may be dirty, the gas mixture may be too rich or too lean, or the valves may need grinding. Remove the spark plugs, take them apart and wash all the carbon off the porcelain with kerosene. When replacing the porcelain do not screw down the packing nut on the porcelain very tight. Adjust the spark gap to the thickness of a smooth dime. If the compression is good in all the cylinders your valves are all right. If the compression is poor in one or more cylinders grind the valves. To adjust the carburetor start the engine and place the throttle lever in the sixth notch and the spark lever in the fourth notch. Screw the needle valve to the right until the engine begins to misfire. Then very slowly turn the needle valve to the left until the motor reaches its highest speed, then tighten the binding screw on the needle valve. Black, sooty smoke indicates too much gasoline. Turn the needle valve to the right for less gasoline.

To adjust a vibrator start the engine and turn the adjusting screw up until the vibrator stops buzzing. Then screw down until the explosion in the cylinder becomes regular, after which give the screw another quarter turn. If the platinum points are pitted file them flat so that they make good contact, using a very fine file and not removing any more of the platinum than necessary.

Using an Old Auto Engine.

I have an old Reo twin-cylinder auto. The engine has exceptionally good power. Would it be possible to put a jack shaft on the rear end, and run the jack shaft to the transmission sprocket? I have an eight-tooth sprocket to put on the jack shaft, and the transmission sprocket has nine teeth. I was figuring on it for power for a silo filler, but local machinists discouraged me by saying that in order to get the power, I would have to run the motor so fast that a chain drive would not stand, and that the motor would overheat. Then I decided to wait and fix a wood saw on it for a trial and see how it worked. Would appreciate your advice.

Answer.—With such small sprockets we believe your chain drive would work fairly well, as the speed of the chain in feet per minute would not be very great. Your engine, too, could be run at a moderate speed for such an engine, say 800 to 1,000 R. P. M. At this speed a 4½x5 engine, two cylinder, should develop ten to twelve horse power. You should run with the transmission on high, as the transmission gears would soon wear out if run continually on low. Your jackshaft with the pulley and sprocket in place should be carefully balanced, as it will run somewhat faster than the engine.

Lacing a Belt.

Please publish in your Farm Mechanics Department directions and diagram for lacing a five-inch belt.

Answer.—Figure 1 shows a single lacing suitable for single belts and Figure 2 shows a double lacing suitable for heavy belts, a rawhide or "whang" lacing being used. This lacing is in common use on farm machine belts, but nearly all machine shops are now using a soft metal wire lacing. Wire lacing comes in coils of about fifty feet, directions for using being printed on the package. As comparatively small holes may be used the belt is not weakened so much as when leather lacing is used.

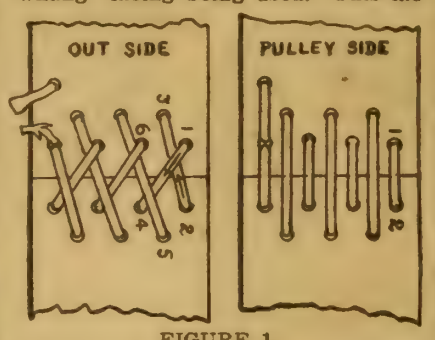


FIGURE 1.

The first thing to do is to trim the edges of the belt square. If this is not done the belt will not run well on the pulleys. For a five-inch belt punch a series of holes as shown in the figures. The holes should not be larger than necessary, as the larger the holes the weaker the belt. It will be noted that the lacing runs parallel with the belt on the pulley side. When making a single lace as shown in Figure 1 insert the lacing from the pulley side in holes 1 and 2 and pull the ends through equally on the opposite side.

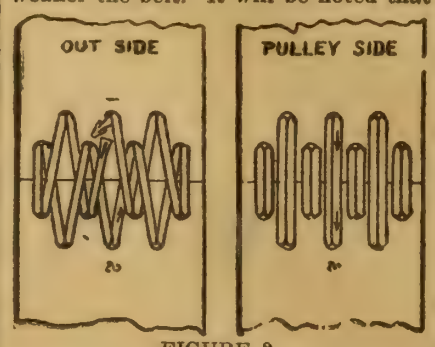


FIGURE 2.

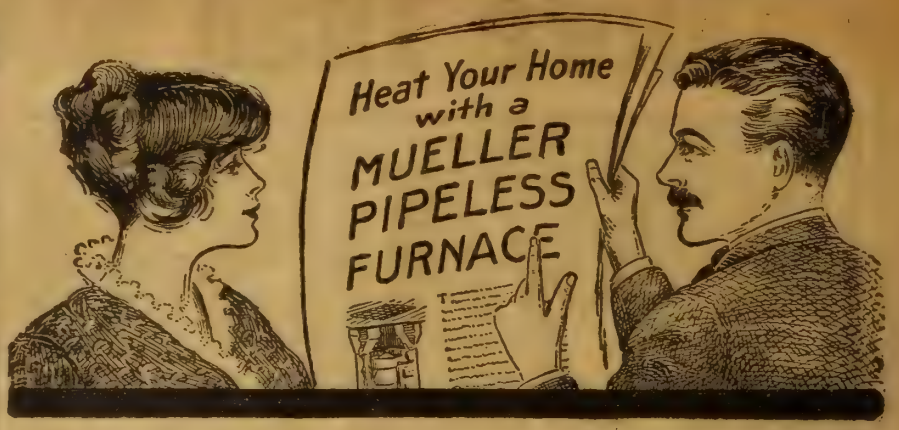
Then pass the lace from hole 2 to hole 3 and from hole 1 to hole 4 on the outside of the belt. Then pass the lacings on the pulley side from 3 to 5 and from 4 to 6. Continue until the end holes are reached; bring one end through the extra hole and fasten one end in the other by means of a slot and fork as shown. The methods of lacing a double lace is quite similar, but the lace is started and ended at the middle of the belt, holes 1 and 2, Figure 2.

The distance of the first row of holes from the edge of the belt should be about one and one-half times the thickness of the belt.

Running on Dry Cells.

Please tell me whether or not a 1915 Reo car equipped with self starter could be run on magneto without the use of the storage battery in case the battery is dead. Would it be possible to crank the car by hand without the use of batteries? Would it be necessary to change the wiring?

Answer.—The motor cannot be run on magneto without a battery. Dry cells may be used for ignition in case the storage battery is dead. The 1915 Reo cars were regularly equipped with a set of dry cells. To use the dry cells in place of the storage battery, turn the ignition switch to the position marked "Dry Battery," and remove the fuse mounted beside the cutout on the generator. Some of the generators on the 1915 model were equipped with a generator switch. If your generator was so equipped you will notice markings "Summer Driving," "Off" and "Winter Driving." It is only necessary to turn the switch to the "Off" position to allow the use of dry cells. In this case it is not necessary to remove the fuse. You would not be able to crank your motor with dry cells, as they would not supply enough current. Nearly all self-starting motors may be cranked by hand by removing the nut on the end of the starting shaft and putting on a starting crank.



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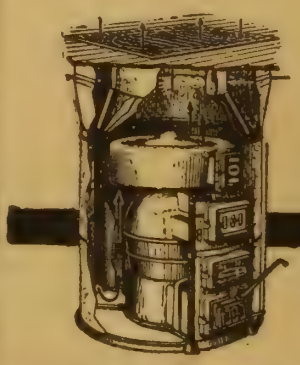

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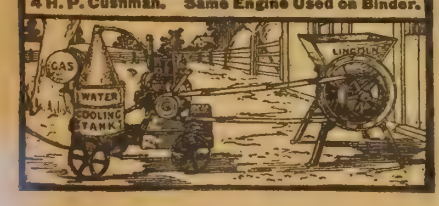

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The Wisconsin Farmer

THURSDAY, OCTOBER 26, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE REVOLT OF THE FARMERS.

NOTHING is more interesting to me these days than to note how the eyes of those who dwell in our cities are being opened to the political importance of the farmer. Never was there a time, within my memory, when measures were being made to conform to farm needs and men were studying farmers' welfare so much as now. Never was there a time when the farmers themselves were so convinced of the necessity and value of organizing for mutual protection and advancement. Thus it has come about that we are undergoing a political revolution in which the farmer is the central figure.

I have been greatly interested in the farmers' political movement in North Dakota ever since it began, and I have already written, at some length, in regard to it. But the revolution which began there has not confined itself to that state. The farmers of Iowa have revolted against similarly pernicious and insidious corruption and bid fair to make their vote and influence felt at the forthcoming election as never before. Perhaps the movement is an outgrowth of the co-operative idea, which has spread throughout the grain belt as nowhere else in the entire country, finding its greatest manifestation, I believe, in Wisconsin, where hundreds upon hundreds of co-operative societies of various kinds are now in flourishing existence. Whatever its inception, the fact is that the farmers' revolution against commercial unfairness and political injustice is spreading in a truly remarkable manner. It is hardly to be wondered at, therefore, that those who looked on first in alarm are now beginning to investigate, or that, having investigated, they should find that here is a revolution, the effects of which are progress rather than retrogression, the leaders of which are patriots rather than rebels.

I have just spent an interesting half hour reading an account of the farmers' movement in North Dakota, published by one of the leading magazines of New York City, which sent a noted progressive leader (candidate for United States senator in New York a year or two ago and one of the best-posted political economists in the country) to North Dakota to investigate the "revolution" now in progress. This investigator was surprised, in the first place, to find that the men at the head of the revolution are not wild-brained socialists or mad anarchists, but that they are progressive, prosperous farmers who own and who till their own farms, who pay heavy taxes and are the representative citizens of the community. He was surprised, in the second place, to find that so many of our national political reforms have come from the grain belt and from this very class of citizens. Here is his testimony on this matter:

> These rugged and embattled farmers swept everything before them and nominated a ticket of their own, from governor down to constable, pledged to a new program and a new life for agriculture in the Northwest. This farmers' revolt occurred in the flood time of the present year in North Dakota, and the bridges were down and the streams were swollen. But some farmers tied their clothes on their backs and swam across the opposing stream and some farmers drove as far as twenty-four miles around to get to the primary polling place and register their will.
>
> When this economic and political storm broke in North Dakota, it broke all at once in the present summer. But it has been brewing for ten years. In fact, it is but the latest phase of the agricultural revolution which has been at the basis of much of our progress during the last generation. The grangers and the populists are gone, but it would refresh and stimulate many a restive radical and shock many a calm conservative to look into the original program of the populists and find how much of it is part and parcel of the legislative history of state and nation.

But having found that the men at the head of the farmers' revolt are high-minded men, and that they are kin to those who have given the nation its greatest reforms, this eastern investigator was surprised most of all at the erroneous conception the city man, in general, has of this agricultural revolution. It astounded him to think that there are those who would dismiss the movement with scorn or sarcasm or ill-timed attack of a petty and personal character, when the aims are so far-reaching and unselfish and the leaders so patriotic and deserving. That it will not do to dismiss this revolution of the farmers of the grain belt in any hasty manner, calling it a mere "flash in the pan," or attacking the honesty and integrity of the revolutionists, is asserted by this eastern investigator in this manner:

> My judgment is that this latest addition to the political propagandism of the country needs intelligent examination, sympathy, guidance, limitation and perhaps modification, and not attack and misrepresentation. The men of North Dakota are not in danger of becoming a race of socialists. They are sturdy individuals, with a stake in the soil and stern notions of property rights. But in that commonwealth, as in so many others in the United States, the ruling political class have had narrow vision. It is another case of building a political dam without a spillway, and when the break comes it seems dangerous.
>
> Whether it is permanently dangerous in a political sense depends upon whether it is sympathetically handled by the alleged wise ones in the republican leadership. For it is a republican movement; it is in complete control in North Dakota, and it is spreading rapidly through the surrounding states.

I am looking to the November election to demonstrate, once and for all, not only in North Dakota and Iowa, but elsewhere throughout the entire grain belt, that the farmer has awakened to his political importance, his personal influence and his patriotic possibilities. We are doing more this year, my friends, than electing a president, governors, congressmen, and so on; we are emancipating the people of 6,000,000 farms and placing in their strong hands the reins of government, which I hope and pray they will never drop or lay down to the end of time.

FARM-LOAN SWINDLES.

WORD comes to me from a number of sources that frauds are being perpetrated on farmers under the guise of the new farm-loan law. The situation has become so serious that the Federal Farm Loan Board has issued a public warning, in the course of which it says:

> Farmers who borrow through the National Farm Loan Associations are not required to pay any advance commissions. So all of these enterprises requiring payments from farmers are declared by the board to be fraudulent and the attention of the department of justice has been called to the matter and an attempt will be made to bring the offenders to justice.

The trouble has come about largely in this manner: The new law provides not only for the creation of federal land banks (to loan through farm-loan associations to individual farmers on their land) but also for joint stock land banks, to be formed by ten or more persons; these joint stock land banks to be authorized to issue farm-loan bonds, under the supervision and direction of the Federal Farm Loan Board, after their minimum capital stock of $250,000 has been paid in full. The government limits the amount of the bonds which these joint stock land banks can issue to fifteen times the amount of their capital stock and surplus. The interest on loans made by these private land banks, under government supervision, is limited to 1 per cent in excess of the interest on the bonds they issue, and the principal is to be paid back on the annual installment plan, as is provided for the regular federal land-bank loans. The law is very explicit on these points, but inasmuch as it is all new and untried, I can very readily see where there is likely to be confusion and chance for the unscrupulous to prey upon the trusting.

That this is just the case has been proved in a number of ways, for the reports are numerous of men using the new law as a means of collecting commissions and bonuses from farmers who thought they were patronizing Uncle Sam direct, but were merely taken in by private promoters. So numerous are the stories of graft that the Federal Farm Loan Board has issued this notice:

> In several states it was called to the attention of the board that the joint stock land banks were being organized by questionable means by stock salesmen or promoters who are taking advantage of the farmers' desire for loans on the amortized plan to sell stock to farmers. Farmers are advised that there is no necessity for subscribing to the stock of any private corporation for the purpose of obtaining such a loan, and are cautioned not to do so except upon an investment basis. The board suggests that farmers make no investment in such land banks until they have first inquired of the Federal Farm Loan Board in Washington as to the character and responsibility of such organizations. No joint stock land banks can be organized except with the approval of the Federal Farm Loan Board.

I am in receipt of several complaints, which lead me to believe that many farmers will be victimized unless they are extremely careful. I want to repeat what I have before suggested, in this connection; that farmers who are proposing to form local loan associations should write to the Federal Farm Loan Board, at Washington, for the proper blanks and all necessary information. Above all, do not pay any sum, for commission or any other purpose, to any individual, no matter how plausible his talk, or how glittering seems the chance to get a farm loan under the new system at a low rate of interest. The federal land banks will be ready for business about the first of February; they are not even located now. All that can be done at present is to form local associations, draw up articles of agreement, and so on, but no loans can be secured for three months at least, and no money should be paid for any purpose whatever until the banks are actually open and ready for business.

I am in receipt of an article written especially for this paper by a representative of the Federal Farm Loan Board, supplementing my numerous editorials on the subject. I will print this article in a week or two. Watch it, read it carefully, write the Federal Farm Loan Board, at Washington, for blanks and particulars, and, above all, keep aloof from men who represent that they are able to give you the advantages of the new law right away, ahead of its actual operations, which are dependent upon the locating and the opening of the twelve federal land banks, to start with.

A PICTURE OF WAR.

A STRIKING picture of the contrasts of war—waving grain, lowing herds, farmers plowing alongside batteries wheeling into action and soldiers dropping in their tracks, their lifeblood ebbing out at the base of grain shocks—is given by a soldier on the firing line in Belgium. I find it so interesting, so thought-compelling, that I am going to reproduce part of it here, so that we may all of us look upon it, together, for a few minutes:

> One can hardly tell where peace ends and war begins in this country. I saw a field with one or two rather fresh shell holes in it, from which the grain was being harvested. Farmers carry their operations up to and even beyond our gun positions. In fact, we drove our guns and wagon into a field which had been fertilized and partly plowed. A field of oats was neatly shocked in front, and some of the shocks had to be moved out of the way. In some cases we have had to put barbed wire around our aiming posts to prevent the cows from knocking them over. It is something of a nuisance to have to drive the beasts out of the way of our shooting irons. Even when carrying on his operations in the war zone the Belgian farmer maintains his reputation as a careful and skillful tiller of the soil; indeed, fields actually under fire appear to be cleaner and better cultivated than some of those farther back.

Is there not something in this picture—both the farmers and the fighters in the foreground and the shocked grain in the background—which serves to hold us back from war, even though there are among us some who, largely because of personally selfish reasons, would plunge us into the awful maelstrom in which sixteen nations across seas now find themselves? What if the hand of the Great Artist should paint such a picture here in peaceful, prosperous America, where you and I, while the rest of the world is fighting, have been permitted to go about our daily toil, serenely confident that the shades of night would find us returning to a peaceful home, which the despoiling hand of militarism had not touched? Supposing it was your field of shocked oats or wheat which the soldiers trampled down in order to make way for the cannon, belching their death-destroying shells clear across the county. Supposing it was your fine cattle which poked their inquisitive noses against the hot mouths of these cannon, to be pushed back by the bayonet and the barbed-wire entanglement, so that death might go hurtling through the air to lay low a man who had never done you or yours any harm. Supposing it was your home which the flames destroyed, your little ones whom the stray bullet or the shot and shell sacrificed, your wife who dropped at your feet, her lifeblood gurgling out in awful protest against the criminal uselessness and waste of it all. Does not the picture fairly scream against war, with its barbaric injustices, its pangs for the innocent, its far-reaching effects which unborn generations must shoulder? Can you and I, to whom has been granted the privilege of bringing bumper crops through to maturity, look upon this picture and then do or say aught which would plunge our beloved nation into war?

We who have escaped so long from war's ruthlessness, shall we not do everything possible to preserve our neutrality, to keep sweet peace enshrined in our midst? Shall any voice, which we might raise, be for war? Rather, shall it not be for such peace, with national honor, as shall continue to keep us the flagbearer of civilization, the hope of a world which by this time is sadly chastened and sick unto death of the war which is devastating so large a part of it?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

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ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Report of National Dairy Show.

WISCONSIN made a splendid showing at the National Dairy Show, held at Springfield, Mass., last week, and every dairyman reader of this paper will be interested in the detailed report of that show which appears elsewhere in this issue of The Wisconsin Farmer. It is gratifying to note that, in two of the five dairy breeds shown at the National, the names of Wisconsin breeders figured prominently. In the Ayrshire classes, the Seitz herd was well to the front and captured many blue ribbons as well as the junior championship in the bull classes. In addition, this herd won the $100 cash prize for the best twelve animals exhibited in the name of the state. One condition in the payment of this premium was that the herd had to be selected by a representative of the experiment station, or by a committee named by the state breed association. This premium was a coveted one, and the state of Wisconsin should be proud of the record made in capturing it.

In the Brown Swiss classes, the Ayers entries were more than a match for all the competitors combined. Out of six championship and grand championship honors, three were won by the Ayers herd, and the credit is all the greater when it is considered that some of the most renowned Canadian herds were entered at the National show.

The Wisconsin Farmer points with pride to its extended report of this show, which was held 1,200 miles away. It is accompanied by a number of illustrations of winners at this great show. Thousands of our readers who could not attend the National are interested in the outcome of the ring contests engaged in last week, and we make the suggestion that this issue of The Wisconsin Farmer be preserved, because the National was indeed a historic event to dairymen. The winning animals at that show and their progeny will be the dominating forces in years to come, and the types set up by the judges will be the ones that will be patterned after in future years.

Our readers will find the beginning of this report on page 8, and it is there complete in every detail.

Some Suggestions About Farm Drainage.

IN A BULLETIN entitled "The Principles and Practice of Land Drainage," published by the Wisconsin station some time ago, a brief but comprehensive summary of some of the important points in farm drainage was given, and these are contained in the following brief paragraphs:

Don't dodge the wet spots in cultivated fields. A few dollars spent in drainage will make these spots yield valuable crops, and will make the cultivation of the whole field more convenient.

Don't be content with raising marsh grass on muck and peat marshes. Drainage is the step that begins their adaptation to tame grasses and other farm crops.

Don't condemn the muck and peat marshes on which timothy has died but once. Drain thoroughly and then apply barnyard manure or commercial fertilizers, as is done on uplands. In other words, give the marshes a square deal.

Don't wait for nature to drain the wet lands without assistance. Nature alone did not remove the stumps and stones from the wooded, stony lands. Neither does she irrigate the arid lands of the West without the aid of man.

Don't let damaging water get on to land, if it can be prevented. An ounce of prevention is worth a pound of cure in drainage.

Don't think it takes a wizard to lay tile properly. Have a survey made sufficient in detail to show that there is sufficient fall. An intelligent use of this fall will then insure success.

Don't install a part of a drainage system to which the remainder of the system cannot later be joined with advantage.

Don't let the waste banks of ditches grow up to weeds. Get them sodded and make them both valuable and attractive.

Don't let outlet ditches remain idle when they should be working. Have surface ditches and tile to keep them busy.

Don't spend a dollar for small ditches or tile on a marsh, until an outlet is assured.

Don't fail to give land drainage the attention and thought it deserves.

Comment is scarcely necessary on these suggestions. However, we would like to call special attention to the necessity of having a survey made of the land to be drained in all cases where the fall is light. Many instances can be found where the fall is not more than an inch or two in each hundred feet, and in cases of that kind guesswork in laying the tile is never in order. By having a survey made and following this up by stretching a line over the tile, an absolutely uniform grade may be obtained without any depressions to fill with silt. To be sure, it adds to the cost of the drainage to make a survey and to stake out a system in a suitable manner, but it must be remembered that tile drainage must be well-nigh perfect, otherwise it is wholly or partially useless.

We do not deny the practicability of laying the tile accurately without a survey when there is abundance of fall, but in that case the work must be done at a time when there is sufficient water in the soil to indicate the depth of the grade, on every foot of the line. In the absence of water, the use of a grade line or the drainage level must be insisted upon. We have known many individuals who considered themselves to be expert drainage men, who have made costly blunders by assuming the responsibility of running a line without a level, in the absence of water.

Wisconsin County Farm Experiments.

SOME interesting facts have been brought out this year at the Wisconsin Auxiliary Farms. By auxiliary farms are meant the various county farms which have co-operated with the experiment station workers in distributing pure-bred seeds and in holding various demonstrations. Weed eradication and smut control have been discussed extensively. At all of these auxiliary farms, soy beans have been given a trial. Soy beans seem to do well on soil which is properly drained, and may be depended upon for a catch crop on like soils subject to long dry periods.

There have been some experiments in growing Sudan grass. Members of the experiment association recommend Sudan grass as a reliable substitute for millet. Sudan grass has not, however, proved a certain crop in this climate and on Wisconsin soils. There have been many failures with it in the state. These may have been largely due to lack of knowledge concerning the handling of the crop. Grain sorghums, milo, feterita and kafir were given same trial at some of the county farms. It is suggested by some of the experiment workers that these crops may make good silage substitutes for corn. However, these crops are largely designed to be raised where there is not enough moisture for corn, and it is our opinion that the average Wisconsin farmer is wasting his time experimenting with milo, feterita and kafir.

The work at the auxiliary farms is educational in character and is a work of great importance. We believe that a great deal of attention should be paid to bettering the yields on crops now known to be successful in this climate. It is very interesting at times to study the development of crops imported from foreign countries, but it is likely to be more profitable to make a strenuous effort to increase the yield on crops already established in this state.

Wisconsin Land-Clearing Conference.

DEAN H. L. RUSSELL, of the Wisconsin College of Agriculture, made a statement at the first land-clearing conference, held recently at Rhinelander, Wisconsin, which is significant. He said that it will take fully half as much money to reclaim Wisconsin cut-over lands as it has taken to build the Panama canal. Land clearing will cost hundreds of millions of dollars before all available lands in Wisconsin will be opened to farming. And when the clearing is done and the land farmed, Upper Wisconsin will be the greatest dairy section on this continent. When Dean Russell makes this statement, he means that Upper Wisconsin will some day give the world more dairy products than the great dairy state of New York. Or to put it closer to home, more dairy products than the state of Wisconsin now produces. To reclaim this great territory means to give to this state and nation a rich agricultural and dairy section larger than either Holland, Belgium, or Denmark. Western irrigation projects reclaiming a few thousand acres or even a few hundred thousand acres dim into insignificance compared to this big problem in our own dooryard. When these acres are reclaimed, subdued and made tillable, they will represent a value four times their present worth and the cost of reclamation added, says Dean Russell. These outstanding statements were the body blows delivered in the interest of a greater Wisconsin at the land-clearing conference, which was the culmination of an educational campaign promoted by the Wisconsin College of Agriculture, manufacturers of stump pullers and explosives, The Wisconsin Advancement Association, landowners, bankers, and the Northwestern and Soo Line railroads. These same agencies have been responsible for the two land-clearing special trains and the demonstrations conducted in thirty-one towns, including eighteen counties and attended by between 20,000 and 25,000 people. The special train traveled 3,000 miles. It has been the most important single factor in developing Upper Wisconsin since the days when the lumberjacks first went into the uncut forests.

Financing this great undertaking of reclaiming an empire is the big problem. The land is owned by lumber companies or settlers. The lumber companies have preferred to sell the land without clearing it.

Interest has been aroused by the demonstrations. Now, the problem is where to get the money to continue the work. Of late years we have been looking largely to the banker to finance agricultural enterprises. The banker's business activities must extend further than industrial lines. The bankers have realized this as much as anyone else, and they have been doing a great deal of good before anyone suggested it. They have helped to bring in cattle. In Rusk county, Mr. Ben Faast advises us, they have loaned money for fencing timber or brush land when the settler has agreed to seed the land to clover, and pasture stock on it. They have loaned money for the purchase of dairy and beef stock. They have loaned money for the purchase of stump pullers, pilers, and dynamite. They have even gone so far as to loan money for the entire stumping operation, allowing a certain loan per acre as each piece was cleared up. If the farmer agreed to clear ten acres and the estimate of the cost was $15 per acre, the bankers have been willing to let him have $15 on each acre as it is cleared. Such a plan extended through twenty or thirty Wisconsin counties would accomplish wonders in a few years. It is not enough to get the settler located.

We believe the bankers of this state may be depended upon to do their part on any legitimate enterprise. Money is plentiful at this time, and if land which is cleared is worth four times what it was before it was cleared, it would seem feasible that some plan for getting the money for the comparatively inexpensive cost of clearing, could be arranged. Every man who owns cut-over land should be clearing as much of it each year as he possibly can. Any good, well-drained Upper Wisconsin soil can be made a profitable farm. There will be other conferences on this subject of financing the land-clearing business, and The Wisconsin Farmer hopes there may be some definite results.

Raising Poultry on Wisconsin Farms.

ATTENTION of our readers has previously been called to the possibilities of the poultry business in this state. Wisconsin is well adapted to the raising of poultry, and, what is more to the point, it is well situated for the disposal of poultry and poultry products at a good profit. We are not referring to the few poultry men who raise fancy birds for exhibition at the state fair and the poultry shows. There is a splendid profit in the poultry business for the man who raises poultry to sell the stock, or the eggs on the open market. A year ago this month, according to statistics in the department of agriculture, eggs in Wisconsin were selling at an average of 23.2 cents per dozen. The average for the same time in October this year is 28.1 cents per dozen, or an advance of about 6 cents a dozen. A good many of our readers can remember back to the time when eggs sold at 6 cents a dozen in the late spring and early summer weeks. It was not so long ago that eggs could be bought three dozen for a quarter, and even our younger people will remember the time when many eggs were sold off the farm at two dozen for a quarter.

Poultry offers a profitable side line for the average Wisconsin farmer, not only in the sale of eggs, but also in the sale of meat. The best judges on meat prices, other than poultry, assert that there is not going to be much decline in beef, pork or mutton at least for two or three years. The demand for beef is increasing and the supply diminishing year by year. There is every reason to believe that poultry for table use will demand a good price for years to come. We would like to see more poultry on Wisconsin farms, and the better grade of poultry.

Shredding Fodder Means Convenience in Feeding.

IT IS conceded by the majority of stockmen that the silo offers the best solution for those who are in a position to use a considerable quantity of corn fodder. The placing of corn in the silo at the proper time and in the proper manner means that it will practically all be saved, the percentage of deterioration being so small as to be almost negligible. In spite of this fact, dry corn fodder is used extensively for feeding purposes, and the question comes up as to the best way of handling this product so that it will feed out well.

There is considerable waste in feeding the dry fodder direct from the shock. It is bleached out in the field and its feeding value is lessened day by day. Furthermore, its economical use requires that the corn be snapped out or husked out, and this is an expensive proposition from the standpoint of labor. It is true fattening cattle may be fed liberally on corn fodder if there is plenty of hogs in the yards, but taking all things into consideration, it is a wasteful and extravagant plan of feeding.

The use of the shredder solves the problem in most cases, because it means that the fodder is stored in a comparatively short space of time, and if precaution is taken that it is dry at the time of shredding, there will be very little loss from deterioration of the product.

When the fodder is shredded, it means that the corn is separated from stover then and there so

that each may be handled separately in feeding. Shredded fodder may be fed with practically no waste attending its use, because the stalks and leaves are so mixed together that cattle will not separate them, but consume the product in its entirety. An additional advantage is that the shredding of fodder does away with much disagreeable work that must otherwise be done during periods of storms. There is no meaner task on a stock farm than to go to field daily regardless of weather conditions and chop out a few shocks of fodder and haul them to the yards. In windy weather it is an abominable task, and there is a heavy waste from handling, because the best part of the fodder is apt to be blown away. It is shattered a great deal by handling, whereas the shredding is usually done before the fodder is brittle.

A few precautions must be taken in the shredding of fodder. In the first place, it should be allowed to dry out thoroughly, and this means that it will require practically a month or possibly five weeks in the shock. Unless well dried out, it is apt to mold in the mow or stack, and there will be a heavy loss because of this. After allowing the fodder to dry out, it is a serious blunder to do the work of shredding while there is external moisture on it, either in the form of water or snow. Where fodder is wet, there will be too much heating, and we have known instances where an entire stack has been spoiled just because it was shredded at the wrong time. It might be added that shredding of fodder makes the product much better adapted to use as bedding than where the stalks are fed whole. Where there is a liberal supply of shredded material on hand, one can usually afford to feed it in quantities, so that there will be some waste from the mangers, and in that case it will furnish a splendid material for bedding the stalls, yards or pens.

Warning and Advice to Wisconsin Hog Men.

J. B. KEENAN, instructor of agriculture at the Fennimore school, Grant county, sounds a warning to farmers against hog cholera. He says that up to this time there has not been discovered any methods of curing hog cholera, and that the only safeguard is prevention. He points out that hogs, men, horses, dogs, cats, birds, and even flies, may start the cholera by carrying disease germs. Hog cholera, like all other germ diseases, goes where it is invited and stays only when it is well treated. We quote from Mr. Keenan's letter to the farmers of Grant county:

Take, for instance, tuberculosis. Where do we find the most cases of it? Why, in the crowded homes in the crowded cities, where there is dirt, and where water and fresh air are complete strangers. So it is true with cholera, because unclean yards, poorly ventilated hog houses, poor food, and hogs of low vitality all work together to make the success of the germ greater. Ask yourself these questions:

Are my barnyards clean?
Wouldn't it be better to put fresh, clean straw in for bedding?
Do my hogs have a house or pen that is clean?
Do they get enough sunlight and ventilation?
Am I feeding them enough good, wholesome food?
Does it pay to have runts, sickly, deformed and ruptured hogs around?
Does it pay to raise scrubby hogs?
Why not get some pure-bred stock and sell the scrubs?

Besides all these questions, we can do much more. It is found that charcoal is good for hogs, not saying it will prevent hog cholera, but it will keep them in better physical condition. A day spent spraying your yards and hog houses with some good germicide is a day well spent, because it makes it all the more safe. A little whitewash in the hog house often means much. Plenty of good, clean water to drink, and food that is not half rotten or molded is another safeguard.

All of these preventions, along with vaccination, all add to lessening the danger of an outbreak of that disease which is today causing great losses in some sections of the country. Do we want Grant county wiped out, the county noted for its great hog production? No, of course, we don't. Then let us all work together to clean up our hog houses and yards and take every precaution you can for yourself and your brother farmer.

Mr. Keenan has made a good statement of the case as to the matter of prevention. Grant county, as noted, is famous for its number of hogs and for the quality, and it would indeed be a calamity for the cholera to get any foothold in this favored section. Wisconsin has a fine record in that hog cholera has made little progress here. We agree with Mr. Keenan that we want to keep the cholera out.

Another Successful Creamery-Laundry.

THE Wisconsin Farmer first brought to the attention of the farmers and creamery men of this state the fact that a successful laundry, patronized largely by farmers, had been established at Chatfield, Minnesota. Since the first article on this subject was published in The Wisconsin Farmer now about three years ago, there have been established several co-operative laundries in this state, most of them backed by companies which had already been making a success in the creamery business. The creamery-laundry which is said to have secured the largest number of farmer patrons in Wisconsin, is that at River Falls, which is written up in this issue of The Wisconsin Farmer. We believe it will pay readers of The Wisconsin Farmer to call this article to the attention of their creamery manager. The creamery-laundry renders a great service to the farm housewife, and should be encouraged. There is some prejudice against a laundry in the same building as a creamery. This can be obviated either by entirely separate rooms for the laundry, or for a building aside which will be close enough to utilize the creamery power. Very few creameries in these days have any space available for a laundry, and if a laundry is decided upon as a side line, something must be done to get room. In the case of the River Falls company, the old creamery building was turned into a laundry. There are a great many creameries in Wisconsin which will build anew within the next few years, and it is well to keep in mind this possible opportunity to utilize the old structure. In connection with this subject, we do not wish to forget to give proper credit to the Wisconsin College of Agriculture, which took up the creamery-laundry three years ago this winter and invited one of the Chatfield, Minnesota, men to speak at a special session farmers' week at Madison. Nor can we overlook the good which has been accomplished from the generous donation of $300 by former Dean Henry, for the purpose of enlisting creamery interest in this important subject.

The Importance of Plenty of Scale in Hogs.

IT IS not too early to begin rounding into shape the hogs that will be used for breeding purposes to raise the 1917 crop. Those who handle pure breds are generally shrewd enough to emphasize the qualities most sought after by the general public, and they select their breeding stock accordingly. The same careful attention is not given to grade hogs, and the one mistake that is made more frequently than all others is the selection of individuals having insufficient scale or size.

One must recognize the fact that there is a constant tendency for animals fed freely on corn to become too refined or, in other words, too small. Corn is lacking in mineral matter and there is, therefore, a tendency when it is liberally fed to reduce the size of bone and frame of farm animals. Because of this, it is exceedingly important, in selecting gilts for breeding purposes, that those of good size and stretch be selected first. It is possible to overdo the matter by going too much to coarseness and not making allowance for feeding qualities, but for the average grade herd it is our opinion that a mistake had better be made in this direction than in the opposite, namely, that of getting the breeding stock too much refined.

It is scarcely necessary to say that a pure-bred male should be used even in raising hogs for the farm, because if they are rightly selected, this will impart feeding qualities and uniformity to the herd. This is not equivalent to saying that all pure breds are good enough to use even on grade herds. Look for plenty of size in the male with reasonably heavy weights for a given age. There is a sufficient supply of pure-bred foundation stock in the corn belt to meet the needs of the situation, and it is not necessary to pay an exorbitant price for males to use on grade herds.

While the practice of crossing the breeds is quite common, it is seldom justified excepting possibly in the first cross. To carry the matter on further, introduces the element of variation, and the herd will not be uniform either in color or size. Where a good start has been made with Poland Chinas, by all means use a pure-bred Poland China male; whereas, if Duroc Jersey blood predominates in the herd, let the Duroc Jersey be used again and again until all the hogs in the herd show good color and form, and so on through all the breeds. In these days of high-priced feed, an extra 25 or 50 cents per hundred on a carload of hogs amounts to something, and one may easily spring the market as much as this if he has a uniform bunch of hogs and they are well finished.

It is an easy matter to find men who will take sides on the question of using gilts or old sows for breeding purposes. Ordinarily it is a good thing to have a few of each. The old sow will bring through larger litters, but, of course, there is considerable outlay for wintering, whereas the gilt may raise a fairly good litter and be ready for market ninety days after her pigs are weaned. This plan has been followed by many successful men for a series of years with good results. Mature stock is more to be advocated in the case of those who handle pure breds, where closer attention is given in caring for the litter and where great importance is attached to growthiness. The old sow's pigs will be larger and studier at six months than will pigs from a gilt, and this is of some importance to those who are raising pure-bred hogs.

Sturdy Wire Fencing the Best.

IN THE following communication, one of our subscribers calls attention to the importance of using material of good quality and ample strength, in the building of far fences:

It is unfortunate that we cannot at once adapt ourselves to what is best. To begin with, in many farm necessities and equipments, it seems we must experiment a great deal before finding out what is best. This is what I had to do after I began fencing with woven wire. Some way I conceived the idea that a fence made by steel would last almost a lifetime, but what a mistake. I am not certain yet that I have arrived at perfection.

There are reasons why I failed to get good and durable wire fences: For a long time fence makers, not knowing any better, flooded the country with rolls of wire fencing made of very light wire. The parallel strands were usually of No. 11 wire, and the web or stay wires were of No. 16. Each wire fencing factory for a number of years tried to produce a fence cheaper per rod than others, and that is the main reason why our fences were not only weak, but very short-lived.

To make a bad matter worse, most of us did not employ good and durable timber for posts, and the posts when set were not deep enough in the ground along the lines of fences, and the end and corner posts were not at all well braced. Disappointment was the general result, and we were almost ready to condemn "steel" as farm fencing.

A brighter day dawned. We found it was not the cheap, light fencing we wanted. Then we learned to employ the very best timber for posts, and set them deeply, and braced securely. Now we are largely using the re-enforced concrete posts, for they are the most durable and the most satisfactory of any. They are cheaper, too, than those made from red cedar or yellow locust timber. These two kinds are the very best timber posts we know anything about.

To conclude, I will say that for the woven web I can fully recommend the all No. 9 wire as being the only kind one should stretch up. It is strong and when well put up lasts many years. Whatever kind of posts used, I recommend setting the line ones twenty feet apart and three feet in the ground. The corner, or end posts, anchor and brace strongly and set them in the ground four feet. It does not begin to pay any farmer to buy light web for farm fencing, or to carelessly put it up with posts of a short life. Employ the best material and the best workmanship all the way through and the results will be satisfactory.

Of course, it must be understood that the process used in steel making has much to do with the lasting quality of the product. Many instances can be found where the wire on fences erected twenty-five years ago is still in good condition, whereas other fences, built ten years ago with wire of the same weight, have entirely rusted out. In some cases the depreciation has been due to improper galvanizing, while in others the composition of the wire itself has contributed largely to its corrosion. It is doubtless true that the heavy forms of fencing proved to be the cheapest in the end, and it is possible to practice false economy by placing the posts too far apart. The favorable comment made by this subscriber on the concrete post, is borne out by the experience of men who have used this type of post, particularly so when it has been manufactured with plenty of re-enforcing material. Concrete, in itself, has a crushing strength, but has no tensile strength, and for that reason there must be ample re-enforcement.

Cows Make $50 a Year.

WHILE no figures are available showing the profit realized on the cows in the average dairy, yet it is fair to assume that this profit is not more than $25 per head after allowing market prices for food consumed. It will, therefore, interest our readers to hear from a dairyman who is able to make at least double this profit, as indicated in the following communication from an Illinois subscriber:

One of the most essential things in dairying is to know how much it costs to feed the cows. This is a matter of which a great many keepers of cows do not keep a close enough account. Without knowing the cost of the feed consumed by the cows, it is impossible for one to know how much money the cows are making for him. It is just as necessary to know the cost of feeding a cow as it is to know how much milk she produces or the quality of that milk.

On our farm we have for years kept a close record of the feed bill of our cows. We figure that $60 will feed a cow producing 10,000 pounds of milk for one year. The feeds that we raise on our farm are alfalfa, clover, silage and oats. The feeds that we buy are cottonseed meal, oil meal and bran. In arriving at our cost of $60 per cow a year, we figure the feeds grown on our farm at their full market value. We value the silage in accordance with its feeding value, as compared with feeds that we buy.

Our cows yield an average profit of $50 a year. We know that some cows yield better than this, but most keepers of cows do not get this amount of profit because their cows are not good enough and, of course, they cannot afford to feed $60 worth of feeding stuffs in a year. So the first essential in profitable dairying is good cows. A cow that will yield 10,000 pounds of milk in a year is a good one and she must be given a plentiful supply of the proper kinds of feeds.

When we commenced to keep cows a good many years ago we did not feed as well as we do now. We have been paying close attention to the feed bills since and, while we do not claim that our methods of feeding are absolutely correct, we are thoroughly convinced that good feeding pays big. We have found that the nearer we feed a cow to her full capacity, the less energy she will waste, for when she gets full she will lie down and chew her cud in contentment.

As to what a maintenance ration for a cow for one year would cost, we are not at all sure about that. If we had a cow that we intended to keep for ten years without milking or fattening her, we should judge her annual cost would be about $25, to say nothing of her care. For ten years this would amount to about $250 in addition to the work of caring for her during this period. Suppose we add $15 worth of feed to the $25 estimate. The cow would probably pay for her keep, and perhaps she would return a little profit besides. For that extra $15 she would produce about $35 worth of milk and butter fat.

So far, we have but little, if any, profit for ourselves. We must get the profit by adding more expense. Of course, it comes from what the cow can consume over and above her maintenance. Suppose we add to her maintenance ration $25 worth of feed. A well-bred dairy cow will return for that extra $25, $50 to $60 worth of milk and butter fat. If we add $10 worth more feed we will get more milk and butter fat in proportion. Hence, with good cows, more feed means more milk and butter fat, and more milk and butter fat mean more money to add to our bank account.

The secret of success in dairying lies in the fact that the cows of high productive capacity must be fed liberally on grain, whereas those that are inclined to convert feed into fat must be carried along on the cheaper forms of feed. It must be borne in mind, as pointed out by this subscriber, that the profit from a dairy cow is realized on the food consumed over and above that required to maintain her. It is poor business to attempt to carry a dairy herd through the winter on corn and corn fodder, because in that case a real milk-making food is not supplied and the income from the dairy products will not actually cover the cost of the food consumed.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

The Making of Hominy.

To the Editor:—I saw your articles on hominy and thought I would tell you how I make it. We always make it as soon as the weather gets cool enough, so it will keep a few days without souring. I use box lye. My mother used hardwood ashes and made, what she called, white lye, by boiling the ashes and letting them settle. She then boiled the hulls off the corn in the lye. I use about two or three quarts of water and a heaping tablespoon of dry lye to a quart of corn. Let it boil—put the corn in and keep boiling and stirring. The water will get thick and the hulls will slip between the thumb and finger. Run cold water over and stir and stir. Boil up several times, changing and stirring. Towards evening, one wants to pick the swelled-up kernels out and eat them. Some eat them with milk; we like them best heated in butter or drippings, exactly like potatoes. My father, G. G. Younglove, was a miller in Little Green, between Mt. Hope and Woodman, Grant county. He cracked the corn, then mother washed the hulls off in cold water. The hulls floated. She poured the water through a sieve. She stirred and stirred and poured and poured, and she boiled it all day in the water she washed it in. That is, I had to stir and stir until it got quite thick. Then the kettle was set back and stirred once in a while. It was so good with rich milk for the evening meal, and sliced and fried for breakfast, with sorghum. By the way, I wish I could get some sorghum. Making it must be another lost art. I always take a farm paper.

Mrs. I J. Dietrick.

Crawford Co., Wisconsin.

Effect of Modern Dairy Barn Equipment.

To the Editor:—In this association the three highest-producing herds, and at the same time the three most profitable herds, were kept in approximately modern barns. The best two herds had patented swing stanchions set in wooden frames with wooden mangers. They had drinking cups for each two cows, box pens for calves and fairly good ventilation systems. The third best herd had special equipment of stanchions, stalls, mangers and cow, calf and bull pens, with a good system of ventilation, but there were no drinking bowls in the barn.

I believe it pays to install modern dairy barn equipment if for no other reason than its moral effect on hired help and growing children, as they seem to take more interest in caring for cattle properly when they have proper equipment to work with.

I do not believe the high production of these three herds was the direct result of the modern equipment, but was the result of the interest taken in the herds by their owners and the modern equipment in these barns was the visible sign of that interest which had caused the farmers to grade up their herds and dispose of poor producers for years back. However, the increased comfort of the cows is undoubtedly no small factor among the causes of their good performance.

Ross H. Root,

Tester, Westby Cow-Testing Association.

Best-Paying Dairies Well Equipped.

To the Editor:—Two of the three most profitable farms in our association have special dairy barn equipment. They have steel stanchions and stalls, concrete feed troughs, with galvanized lift mangers, drinking fountains, manure carriers, concrete floors with planking where the cows stand and a special system of ventilation. The third farm has none of this modern equipment. His stable is in quite a dark log barn. He intends to build next year and will put in all modern equipment. I believe that the comfort of the cow, through the installation of modern and sanitary equipment, will increase profits, but just how much I am not prepared to say. I would think at least 8 per cent.

Erwin H. Meinke,

Official Tester, Mishicot Cow-Testing Association, Manitowoc county, Wis.

In and Around Wisconsin.

The annual session of the Wisconsin Buttermakers' Association will be held at Sparta, December 5th-7th.

On October 1, 1916, the department of agriculture report shows 22,408,699 pounds of cheese in storage in 126 storages. This is approximately the same as cheese in storage a year ago.

The Fond du Lac Association of Commerce has established a rural development bureau. There are great possibilities in this big county and if the men at the head of this bureau can interest farmers and work with farmers they may accomplish a great deal of good. Fond du Lac county is rich, but has plenty of room to grow richer.

There are approximately 6,000 rural school-teachers in Wisconsin. Of this number 4,339 receive from $40 to $49 per month. About one-fourth of the school-teachers in the rural schools of Wisconsin are paid salaries ranging from $60 to $69 per month. There are four teachers in the rural schools receiving from $80 to $89 per month and only two who receive less than $40 per month.

There is considerable interest in sheep raising throughout the state, owing to the present high price of mutton and also wool. For instance, in Fond du Lac county, where sheep have been neglected for a number of years, a considerable number may be seen. Almost every county in Wisconsin is adaptable to sheep raising. There is apparently no prospect of an early decline in the revenues to be made in sheep.

The Central Wisconsin Dairymen's Butter and Cheesemakers' Advancement Association met recently at Vesper. The next meeting, date of which has not been decided definitely, will be held at Thorpe. The following are scores of butter and cheese exhibited:

CHEESE.

J. G. Fischer, Stratford	94
E. Toelle, Auburndale	94¼
W. F. Naulin, Marshfield	95
O. E. Dix, Auburndale	95½
C. A. Voight, Chili	93¼
Cloverhill D. Co., Rozellville	95¼
G. Ridderbush, Marshfield	91½
R. Schmitz, Unity	93½
A. B. Johnson, Vesper	94½
Jos. Brickheimer, Vesper	93¾
J. Sternot, Arpin	90
W. Bymers, Junction City	93½
O. Klemme, Thorpe	90½
Geo. Hauser, Arpin	93¾
Geo. Trepkino, Arpin	93½
Jos. Henseler, Marshfield	93¾

BUTTER.

E. Beck, Vesper (Print)	94
H. Ames, Pittsville (Tub)	93½
Ed. Beck, Vesper (Tub)	91

A great many Wisconsin buttermakers are interested in the National Convention and butter exhibit which will be held at Minneapolis, November 14th-16th. Wisconsin buttermakers have doubtless practically all arranged for their exhibit by this time. The butter must be in Minneapolis by the last of October. Those who have not yet received their entry blanks should write at once to M. H. Meyers, 888 44th St., Milwaukee, Wisconsin. It is urged that all exhibitors thoroughly chill their packages of butter before wrapping in burlap. Mr. Geo. H. Bekendorf recommends that this chilling process take at least twenty-four hours in a cold refrigerator.

The Columbia Cheese Company, of Newark, New Jersey, has had representatives in Wisconsin canvassing for cheese and a good many regular shipments have been arranged for. There has never been a time when Wisconsin cheese has been in such great demand or the price so uniformly high. This is indeed the great day for the cheesemaker.

An interesting local celebration was recently held at Loyal, Clark county. Six years ago a stallion owner in this county offered a substantial prize for the best colt from his sire. Farmers who used this sire brought their colts to Loyal this fall to have them judged. This was just a part of the regular village fair which included exhibits of cattle, vegetables, fruits and poultry. The live stock features of the meeting were in the main suggested by the Wisconsin Live Stock Breeders' Association. It was a good-sized fair, all starting from the efforts of J. B. Bashford six years ago to interest the farmers of the community in better horses.

IF you want to buy a product of any kind that you do not find advertised at this time, write us. We will try to tell how to get it.

THE WISCONSIN FARMER
Madison - Wisconsin

Waste Land Turned Into Money-Making Soil

You can't get the maximum income from your farm when stumps and boulders are eating up the profits. Every obstruction on your farm is not only an obstacle to your farm work but to your farm earnings as well.

BURTON

"Good Luck" Dynamite

enables you to easily, quickly and cheaply clear your farm, restoring what was once a money-wasting section of land to a rich, productive, profitable soil.

"Good Luck" Dynamite is safer to use and costs less because a smaller charge is required. It can also be used—and *is* being used by hundreds and hundreds of farmers—for ditching, subsoiling and tree-planting.

Our distributing facilities enable us to guarantee prompt deliveries

Ask your dealer for Burton "Good Luck" Dynamite. If you can't locate a Burton dealer, write at once. If [you] have] any perplexing farm clearing problems to solve, write us and we will help you.

BURTON BURTON

Burton Powder Co.,
712 Empire Bldg., Pittsburgh, Pa.
1618 Fisher Bldg., Chicago, Ill.

DON'T TAKE JUST ANY ROOFING

—Get the kind that is made—not on the "how fast"—but on the "how good" principle.

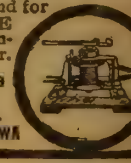
Send for catalogue, sample and prices to

NEPONSET PAROID ROOFING

YAWKEY-CROWLEY LUMBER CO.
Madison, Watertown or Waupun, Wisconsin

STEEL GIANT STUMP PULLERS

DEVELOP single, double, triple power. Pull the biggest stumps. Patented features insure speed, safety and ease of operation. One man and team clears an acre a day. Thirty days free trial. Ironclad guarantee. Investigate this popular puller. Send for catalogue No. E and special introductory offer.



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Ride in a Bush Car. Pay for it out of your commissions on sales. I am daily shipping cars to Bush Agents. Agents getting big orders. Big profits for you. Write at once for my 48-page catalog giving full details.

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Letz Feed Mills

Grind all grain and forage crops—cob corn with or without husk, alfalfa, clover, millet seed—even oat hulls fine as dust in one grinding. 10 days free trial. Valuable feeding book sent free.

LETZ MFG. CO., 208 East St., Crown Point, Ind.

Tell what you have for sale in a little advertisement in THE FARMERS' MARKET. Does not cost much and may be worth a lot to you. Six cents a word each insertion.

Rhinelander Clearing Conference.

Land Clearing and the Financial Problem Involved in Connection With It Were Discussed by Prominent and Influential Men.

THE first land-clearing conference, held recently at Rhinelander, Wisconsin, decided after some debate to gather more facts and meet later to discuss them. A committee was appointed, composed of Dean H. L. Russell, of the college of agriculture; C. P. Norgord, commissioner of agriculture; Ford Allen, dairy commissioner of the Northwestern-Omaha lines; W. H. Killen, industrial commissioner of the Soo Line, and Carl Livingston, of the college of agriculture engineering division, who has been in charge of the land-clearing demonstration work. This committee will investigate the subject of finance. There is no disagreement as to the advisability of clearing millions of acres of stump land in Upper Wisconsin. There is a considerable financial problem involved. When this committee has been able to gather more information on the subject and to confer with bankers and railroad men and others, another land-clearing conference will be called, at which some definite action will probably be taken. At a conference recently held the discussion was largely informal, the main object being to arrive at some plan which will result in the farmer-settlers doing more clearing each year than they have been doing. The subject of organizing farmers' clubs for purchasing machinery for co-operative work was discussed. It was also suggested the town boards might buy a machine and furnish a man five months of the year to clear land in his town at so much per acre. Another plan was for bankers to advance money for fencing and sowing clover seeds so that good pasturage may be provided on the new lands. It was thought also advisable to urge bankers to make loans for the purchase of stump-pulling machines and also for the purchase of explosives in carload lots in order that the work of these two agencies might be accomplished at a minimum cost. Mr. Ben Faast, of Eau Claire, explained the plan which has been adopted by several banks in Russ county. These banks loaned money for the purpose of encouraging clearing, although not directly for tools with which to clear land. Dean Russell suggested that the Upper Wisconsin banks dispose of their first mortgage paper in southern Wisconsin and use this money over again. As stated, all of these suggestions were taken under advisement.

Dean Russell presided at the conference, which was attended by about seventy interested persons. Mr. Livingston was made secretary and in calling attention to the purposes of the gathering Dean Russell dwelt upon the wonders of Upper Wisconsin as an agricultural section; that it surpasses the older sections in its dairying possibilities; its nearness to the great markets and that the only barrier to the rapid development of this section is the stumps. "The question is the best method to carry on this work begun by these demonstrations," he said. "What is it? During the next few years half as much will be spent in clearing as it cost to dig the Panama canal and it is important to learn the cheapest as well as the best methods of clearing. We all know of the productiveness of this stump land, once it has been cleared, so all that remains is the working out of some plan by which every settler can carry on the work."

C. P. Norgord, commissioner of agriculture, also spoke of the possibilities of Upper Wisconsin and advocated the use of sheep, goats and cattle until the green woods rot, as it is a great forage crop and pasturing among the stumps is profitable. Mr. Faast spoke along similar lines, referring to his experience in Rusk county, and advocated the use of dairy rather than beef cattle, as the market is better and it also starts a settler into dairying in which he expects Upper Wisconsin to eventually lead. Mr. E. O. Browne, a banker of Rhinelander, spoke of the banker's viewpoint of the land clearing work. In the past he said the banks had not had to consider the farmer. He spoke of the local work that has been done in various communities and expressed himself as believing that much good can be accomplished by some statewide move towards financing and promoting the work. Others who spoke were Dale Bumstead, of Duluth; A. J. Kirstin, of Escanaba, Mich.; Wm. C. F. Zimmerman, of Davenport, Iowa; F. A. Williamson, W. J. Bissell and A. D. Campbell, of the Wisconsin Advancement Association; William Martin, vice president of the Soo Line; T. W. Haverstad, of the Soo Line; Omaha lines; Frank Hayes, of Superior; Mr. Livingston and others connected with the land-clearing special who told of the good work accomplished.

The arrangements at Rhinelander were in charge of W. D. Juday, county agricultural representative. The crowd was not only large at the demonstration but very attentive, showing a splendid interest in this work. The final demonstrations of the present tour, which began at Birchwood on September 18th, were held this week at North Crandon and Armstrong Creek.

An added feature at Rhinelander was the showing of the motion picture film "Seeing Upper Wisconsin," which the Soo Line has prepared for extension work in other sections. It was the first showing and a splendid film of four reels, showing in detail the possibilities of the country and calling attention to its great resources.

Potato Show at Antigo.

The Langlade County Potato Show is to be held at Antigo, November 15th. There are a number of silver cups and cash prizes and other small prizes.

The winter course in the Wisconsin Dairy School at Madison begins Wednesday, November 8th, and continues for the customary period of twelve weeks.

Same HUDSON SUPER-SIX Again Breaks Ocean to Ocean Record

On Return Trip Across America It Beats Best Previous Time and Establishes World's Endurance Record

The same Hudson Super-Six Touring Car which ran from San Francisco to New York in 5 days, 3 hours and 31 minutes, started back from New York on its arrival there and again made the transcontinental trip in shorter time than any other car ever made it.

Last spring the wonder record for the one-way trip made by a famous eight was 2⅓ days longer than the time required by the Super-Six.

No other automobile ever made the round-trip against time. Yet in both the going and return trips the Hudson Super-Six lowered the best previous one-way record.

In a little more than 10 days the Super-Six covered 6,952 miles.

Counting all stops, and slowing down to the speed restrictions of 350 cities, towns and villages each way, the average time from San Francisco to New York and back to San Francisco was almost 700 miles a day.

In the last leg of the return trip, between Elko, Nevada, and San Francisco, heavy mountain rains were encountered. In the going trip that distance was covered in 20½ hours. On account of the rain and mud, 35 hours were required on the return. Under similar road conditions as were met in the going trip the return would have been under 5 days.

Hudson Holds Every Worth-While Record

There are no important world's records which refer to a stock car that the Hudson Super-Six hasn't won. The best former records are too easy for the Super-Six. The events are too easily won. For instance, in the 24-hour record, 1819 miles, it exceeded the best former record by 52%.

And the Super-Six made the best time in the world's greatest hill-climb up Pike's Peak. The best time for 100 miles. The greatest distance covered in one hour and the fastest time for a stock chassis at the rate of 102½ miles an hour.

Such Endurance Is Convincing

Here we prove again that the Hudson Super-Six has more endurance than we have ever claimed for it.

What can be more convincing than that round trip across the continent made with a Hudson Super-Six light weight 7-passenger phaeton? Previous records were made with roadsters and stripped cars, but the Hudson at all times carried three, and sometimes four, passengers, and with its baggage weighed in excess of 5,000 pounds.

No Engineer Hopes to Excel It

Remember that the Super-Six is a Hudson invention controlled by Hudson patents.

A hundred cars have motors of like cylinder capacity. Many cars have more cylinders. But in the Super-Six vibration has been reduced to almost nothing. That adds 80% to efficiency.

The Super-Six is not one of the passing sensations. Ours is not one of those claims to motor supremacy which yields in a year or two to another. Mark what these records mean. There is plenty of evidence now to convince you that it cannot be superseded.

Save $175 Now

For many reasons, now is the time to get a Hudson Super-Six.

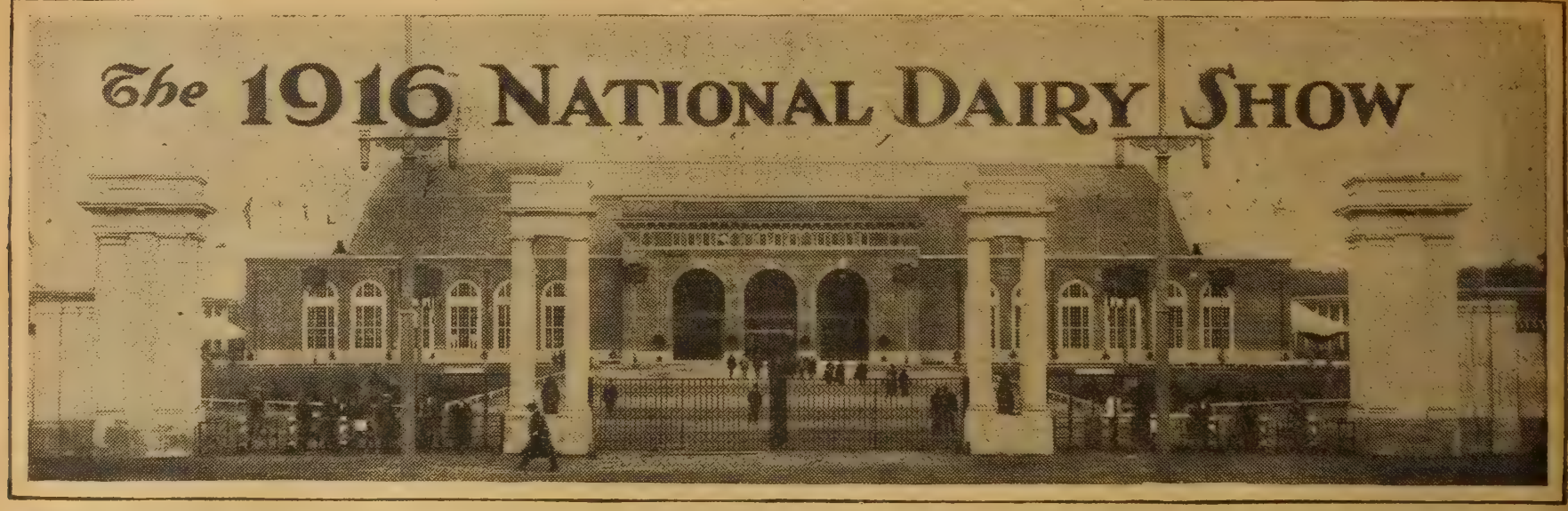
In the first place you can get delivery now. Last summer thousands had to wait, and thousands must wait next spring.

Then by buying now you can save $175. The price will be advanced December 1. The models will not be changed. You get the same Super-Six motor, the same wonderful chassis, and the same beautiful body. Your car you get now will be identical with those we shall sell after December 1, except for some minor details.

Phaeton, 7-passenger	$1475	Touring Sedan	$2000	Town Car	$2750
Roadster, 2-passenger	1475	Limousine	2750	Town Car Landaulet	2850
Cabriolet, 3-passenger	1775	*(Prices f. o. b. Detroit)*		Limousine Landaulet	2850

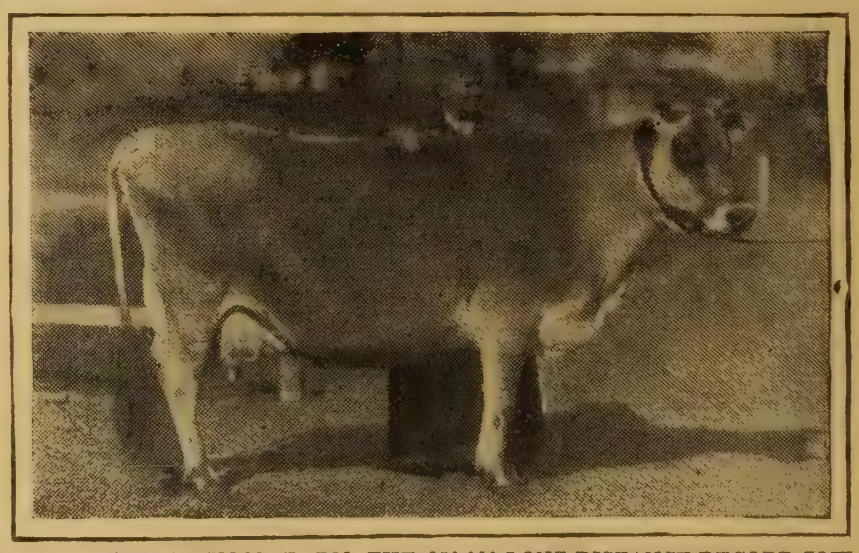
HUDSON MOTOR CAR COMPANY, DETROIT, MICHIGAN

The 1916 National Dairy Show



NEW ENGLAND furnished the setting for the tenth National Dairy Show, the first event following that memorable occasion when the live stock industry of the United States was jeopardized by the breaking out of foot-and-mouth disease at the Chicago show in 1914. From that scourge there has been a complete recovery and the whole dairy industry faces a brighter future today than ever before, because the National Dairy Council has succeeded in uniting into one compact organization not only the breeders of dairy cattle through their respective associations but the milk producers, the creamery, butter and cheese manufacturers, and in addition the milk dealers, the ice cream manufacturers and the dairy machinery equipment and supply interests, each having its own organization to zealously guard its affairs. With these separate branches of the dairy industry combined it can be easily understood why an eastern meeting place should be chosen for at least one of these great gatherings, and those who attended last week were unanimous in expressing themselves favorably to the choice of the officers of the council in locating the event at Springfield, Mass.

It fell to the lot of the National Dairy Council to dedicate the grounds and buildings of the Eastern States Agricultural and Industrial Exposition, an institution designed to foster progressive agriculture in all its branches throughout the New England and the eastern states. On an area comprised of nearly 200 acres there has been erected what experts have described as the finest exposition plant in the country, or, for that matter, anywhere in the world. The coliseum is 200x300 feet and the roof is supported by ten steel arches of 200-feet span and these are seventy feet high. To the west of the coliseum stands machinery hall, a structure of irregular ground plan, its dimensions being 301 feet, 220 feet, 234 feet and about 300 feet. On the east stands the horse and cattle barns, with stall room for 1,200 head. The four corners of the main building under the seats furnish suitable quarters for conventions and exhibits and all available space was crowded last week. The relation of the outer wings to the main building is such that there is no exposure of animals during the showing period. The judging ring, 100x200 feet, was taxed last week to furnish space for all classes, so to begin with this first great show to test out the new structures had but little elbow room to spare. In the matter of seating capacity for visitors the available space was highly inadequate. In past years there has been nothing to compare with the national of 1916 in attendance. The 6,000 seats surrounding the judging arena were gobbled up early in the day, while thousands in the overflow crowds filled the stables, the machinery hall and the boys' demonstration building. Under such circumstances complaint would be made naturally, particularly so because many who came to witness the judging failed to get within hailing distance of the classes while showing. They packed the center and sides of the judging ring itself, making it exceedingly inconvenient for those in the seats to follow the work of the judges. There was growling, to be sure, from those who proposed to follow the work of the judges as they sat at the ringside, catalog in hand, but what could be done? The show was in charge of Mr. W. E. Skinner, the same Skinner who so successfully managed the International Live Stock Exposition for so many years. With this expert showman it was simply a case of using every available foot of space whether in the ring or out of the ring and let the matter go at that. The show was simply too big for its housing quarters. In every respect possible the wishes of the visitor were catered to. Every animal led into the ring was numbered and cataloged and when the premiums were placed thousands of catalogs were instantly marked. Every man, woman and child present seemed to be interested in dairy cows and an amazingly large percentage of them were familiar with the blood lines of many of the winners. No such appreciation of pure blood can be found in the central states as was shown by the New Englanders last week.



SOPHIA 19TH OF HOOD FARM, THE $50,000 LONG DISTANCE RECORD COW OF THE WORLD.

An important part of the National Show was the exhibits made by the boys' and girls' demonstration clubs of the ten eastern states. The membership in these clubs number 148,000 youths between the ages of ten and eighteen. Congress appropriated the sum of $15,000 to be used in illustrating the work of these clubs and this was done in a masterly way last week at Springfield. There were demonstrations in canning of fruit and vegetable products and upward of a thousand exhibits of home-canned materials were on display. Thirty-nine boys entered a pig and each pen was well placarded with information as to the cost of every pound, the kind of feed used, the age, the weight, etc. Clothing exhibits were made by the girls, because garment making is given special attention in all these demonstration clubs. Then there were handicraft displays, fruit and potato exhibits as well as corn—all offered in competition for valuable prizes, including, among other things, numerous pure-bred dairy bulls. This was the first demonstration of this character ever fostered by the federal government and it was well received. It will be far reaching and beneficial in its effect. It enlists the interest of boys and girls. They are started along lines of sensible industry and there is a pleasing hope of splendid achievement in their lives.

In the household economics division daily demonstrations were given in the use of milk, butter and cheese, because it is believed by those in charge of the affairs of the National Dairy Council that there is not as yet a full appreciation of these materials as to their food value. Some interesting classes were held by Miss Laura Comstock, of the Massachusetts Agricultural College, as she demonstrated the use, for example, of sour milk in making quick breads, cookies, cakes, pie fillings and cottage cheese. Instruction was also given in the use of milk for children and invalids and the attention given to these lectures during the week indicated that the dairy cow is likely to be a more important factor as an agency of food supply in the future than she has been in the past.

In another department the hand of the National Department of Agriculture was shown. This was a demonstration to show that "blood will tell." Here stood nine cows, each with her record placarded on the stall. Some were mere boarders of the costly kind, because the cost of producing a pound of butter fat in some instances ran as high as 36 cents per pound, while other cows in the row produced butter as low as 12 cents. The problem, therefore, is to get rid of the boarders as quickly as possible. Use the scales and the testers, say the experts in charge of the cows, and feed your grain and hay only to cows that will use them at a profit. Thousands of visitors were impressed as they studied the record of these nine cows with the great basic truth involved, because they had it plainly demonstrated to them by the records that some cows can make economical use of one pound of grain for every three pounds of milk produced, while a stall mate will be wasteful and unproductive on the same ration, requiring possibly a much larger proportion of roughage and less grain. This

FIRST AGED HERD HOLSTEIN-FRIESIANS, OWNED BY R. E. HAEGER.

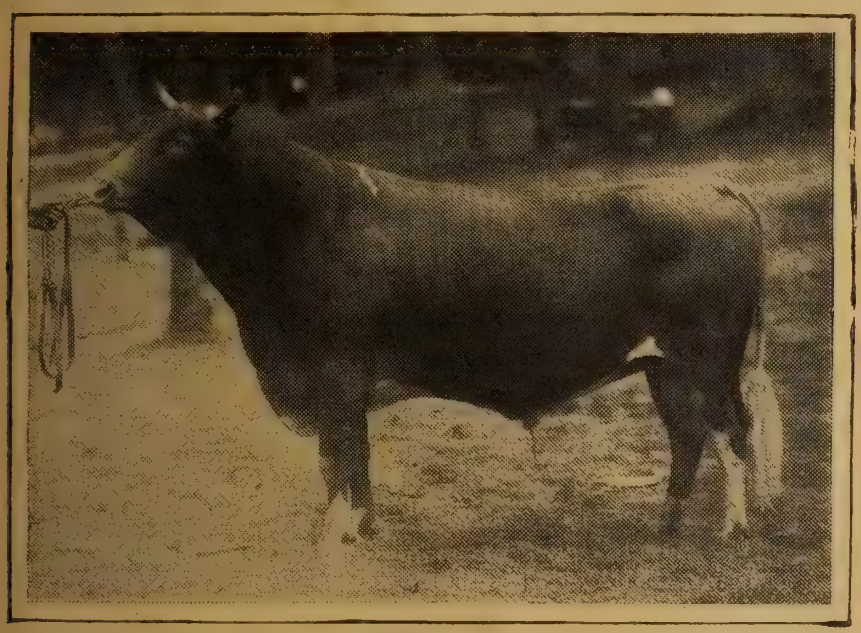
FIRST PRIZE ADVANCED REGISTRY GUERNSEY COW AND TWO OF HER PROGENY OWNED BY C. H. MACKEY

proved to be a practical and useful exhibit. It was alive and people are drawn to living things.

No such exhibits have ever been made by manufacturers of dairying utensils as was shown at Springfield last week and a mere list of the names of the exhibitors would occupy several columns of space in this paper. At a reasonable rental charge the National Dairy Show realized the sum of $67,000 for the space leased to these firms. Every conceivable type of labor-saving device to be used in the dairy, creamery and cheese factory was on display, and, taken as a whole, this department was highly educational. Special reference should be made to the interest that was taken in milking machines, and the four companies which exhibited in this department found themselves to be important centers of interest during the entire week. The labor question on the dairy farms of New England and the eastern states has reached the point where the industry is menaced because of the scarcity of workers, and more and more the milking machine is being looked to as a solution of part of the labor difficulties. In recent years these machines have been so radically improved that now they have passed the experimental stage, so that under a sensible system of management just as good milking may be done by these machines as by hand. The metal barn equipment exhibits were noteworthy. The emphasis that is now being placed on sanitation in dairy matters has resulted in popularizing this modern form of equipment and that explains why the booths of the Lowden Machinery Company, of Fairfield, Iowa, and the James Manufacturing Company, of Ft. Atkinson, Wisconsin, were popular centers during the entire period of the show. Here could be found not only sanitary stalls and stanchions but also calf and bull pens, hog pens, litter carriers, feed trucks, as well as ventilators and ventilation equipment—all an important part of modern equipment required on every dairy farm.

It should be gratifying to breeders of pure-bred dairy cattle of the central West to find that the best herds of this region are more than a match for the renowned herds of the East when pitted against them in the show ring. In four breeds out of the five the best premiums were captured by central West breeders, namely, in the Holsteins, Guernseys, Ayrshires and Brown Swiss. In the latter two Wisconsin herds carried away the premier honors; while Iowa and Illinois came to the front in the Guernseys and Holsteins. The judges in these four breeds frankly admitted the superior dairy type that had been worked out by the breeders of the central West. In every instance the cattle had plenty of scale to be characteristic of the breed, but they had a marvelous degree of dairy quality and they were fitted to a point never before excelled in an American show ring. Only in the Jersey classes did the volume of honors go to eastern and southern breeders and it was in this Channel Island breed where the North, the South, the East and the West met in contest. They were there from California, Texas and Kentucky, as well as from New York and Pennsylvania and all the New England states, resulting in the greatest show of Jersey cattle that has ever been made in this country, but to win highest honors in four out of the five breeds, as was done by central West breeders, this is a creditable record indeed and one that we believe will be fully appreciated by the home people.

Eighteen teams from the various agricultural colleges took part in the judging contest at the National Dairy Show. Each team composed of three judges was called upon to pass on eight classes of males and females in four of the leading breeds and it is interesting to note that the corn belt again came to the front. The students representing the University of Nebraska scored the highest with 3,632 points out a possible 4,800. Second in the list was Kansas State Agricultural College with 3,534, and third the Iowa State College with 3,530 points. Included in this competition were students from Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Vermont and Rhode Island. It will be observed, therefore, that competition was not lacking in this contest and the outcome demonstrates that in educational matters the East is by no means in the lead. The highest individual in this contest came from Nebraska, Mr. W. F. Roberts, who won the De Laval scholarship of $400. Two of the four trophies that were offered by the various record associations for the teams scoring highest in their respective breeds were captured by the central West, the Kansas team winning the trophy offered by the Guernsey Cattle Club, while the Nebraska team won the trophy offered by the Holstein-Friesian Association. This contest was the largest that has ever been held in connection with the dairy show and it unquestionably accomplished much in the direction of fixing in the minds of young men the type of dairy cows that give the best account of themselves in production.



MARSH'S HAYES' CHERUB 2D, SENIOR AND GRAND CHAMPION GUERNSEY BULL.

HAYES' MOSS ROSE, JUNIOR CHAMPION HEIFER, OWNED BY W. W. MARSH.

GUERNSEYS.

It was a case of the East battling with the central West in the Guernsey classes at the National, the latter leading by a large margin. The Marsh and Jean Duluth herds had contested all season and these were the herds that confronted those of the New England and eastern states. The Marsh bull, Hayes' Cherub 2d, came through, a winner in his class, but met defeat in the senior championship class by his two-year-old son, Ladysmith's Cherub, the purple ribbon winner of the final show. This defeat is all the more interesting when it is considered that Hayes' Cherub 2d was the grand champion bull at Iowa and Minnesota State Fairs. And it was practically the same story over in the female classes from the time the first blue ribbon was captured by the Marsh entry, Princess Bergere, until she was made grand champion Guernsey cow of the show against the wonderful calf from the Marsh herd, Hayes' Moss Rose. The Frazier herd from the Old Bay state, offered some stiff competition in a number of classes as a perusal of the award list will show, but the most coveted ribbons were brought west of the Mississippi by the Marsh and Duluth herds. The tail end of many of the classes was not at all creditable for a National show. The judging by a committee of three was tedious at times for the onlookers, but the good ones were discovered in the end and the ribbons placed mainly where they properly belonged. The ringside interest shown in the Guernsey classes indicated that New Englanders (who unquestionably made up the great body of the audience) have a special fondness for this Channel Island breed.

Exhibitors: C. W. Barron, Cohasset, Mass.; Bedminster Farms, Far Hills, N. J.; Branford Farms, Groton, Conn.; L. & A. G. Buckley, Valley Falls, N. Y.; Chas. D. Cleveland, Eatontown, N. J.; Jean Duluth Farms, Duluth, Minn.; Mrs. N. Fabyan, Geneva, Ill.; D. K. S. Fisher, Buxton, Md.; Gayhead Farms,

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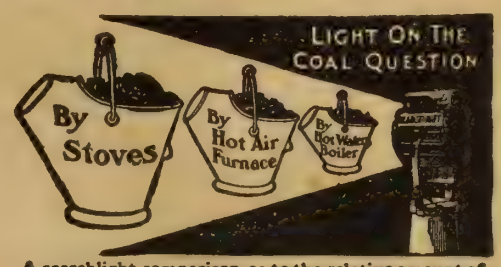

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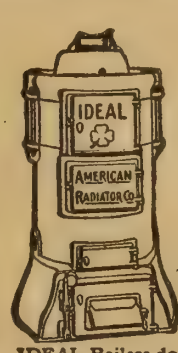

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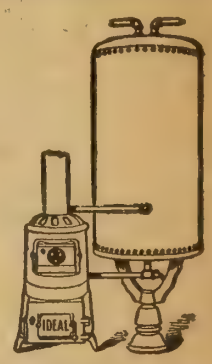

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Judges: C. L. Hill, Rosendale, Wis.; J. L. Hope, Madison, N. Y.; F. G. Benham, Canandaigua, N. Y.

The awards:

Bull 3 Years or Over (11 shown)—1st Marsh on Hayes Cherub 2d; 2d Buckley on Imp. Roberts Criterion of Bellevue; 3d Bedminster Farms on May King of Bedminster; 4th Mackey on Imp. Masher's Galore; 5th Lehmann on Pinecrest King France; 6th Frazier on Florham Monarch.

Bull 2 Years and Under 3 (7 shown)—1st Marsh on Lady Smith's Cherub; 2d Jean Duluth Farms on Starlight's Excelsior; 3d Frazier on Tosterin's Lad of Great Hill; 4th Barron on Don Iago of Linda Vista; 5th Branford Farms on Florham May King; 6th Whitney on Nyebrook May King.

Bull 1 Year and Under 2 (8 shown)—1st Cleveland on Sunnybrook Aristocrat; 2d Sherman & Armer on Florham Nestor; 3d Jean Duluth Farms on May Rose Yeksa Starlight; 4th Frazier on Uplands May Sequel; 5th Mackey on Aristocrat of Harbor Hill; 6th Wendover Farms on Wendover's Charmer.

Bull Calf 6 Months and Under 12 (14 shown)—1st Jean Duluth Farms on Marathon Rose King; 2d Marsh on Flora's Momento; 3d Buckley on Fisherman's Chief of Rockstone; 4th Wendover Farms on May King's Best of Bedminster; 5th Barron on Helen's Golden Count; 6th Branford Farms on Branford May Rose Lad.

Bull Calf Under 6 Months (10 shown)—1st Marsh on Kitchener's Empress; 2d Barron on Dewdrop's Golden Noble; 3d Marsh on Lady Smith's Bo-peep; 4th Marsh on Nonpareil Blossom; 5th Mackey on Esquire of Harbor Hill; 6th Jean Duluth Farms on Lady Gree's May King.

Cow 5 Years or Over (17 shown)—1st Marsh on Princess Bergere; 2d Frazier on Florham Minuet; 3d Lehmann on Thelma Glenwood; 4th Branford Farms on Laurentie; 5th Marsh on Rose des Howards; 6th Lehmann on Ragapple.

Cow 4 Years and Under 5 (7 shown)—1st Frazier on Ultra Lady; 2d Marsh on Polly of Briquet; 3d Marsh on Figtree 4th; 4th Buckley on Imp. La Fleur Jardin; 5th Marsh on Hayes' Golden Cherry 11th; 6th Seaman on Sunshine of Follyland.

Cow 3 Years and Under 4 (11 shown)—1st Frazier on Florham Princess; 2d Marsh on Hayes' Express 9th; 3d Buckley on Atwood's Dancaway; 4th Marsh on Lady Elizabeth of Maple Farm; 5th Frazier on Imp. San Toy's Star; 6th Jean Duluth Farms on Jean Duluth Phyllis.

Heifer 2 Years and Under 3 (19 shown)—1st Marsh on Hayes' Mabel; 2d Jean Duluth Farms on Jean Duluth Coronet; 3d Frazier on Huld of Ledyard; 4th Marsh on Bo-peep Marie of Iowa; 5th Frazier on Upland's Ellen; 6th Mackey on Harbor Hill Hope.

Heifer 18 Months and Under 24 (13 shown)—1st Marsh on Mar's Blossom; 2d Frazier on Upland's Ruby; 3d Marsh on Figtree of Prairie; 4th Marsh on Cherub's Jersey Rose of Prairie; 5th Jean Duluth Farms on William's May Rose of J. D.; 6th Lehmann on Raymond's Princess.

Heifer 12 Months and Under 18 (9 shown)—1st Gayhead Farms on Criterions Prinette; 2d Marsh on Mac's Fernleaf; 3d Jean Duluth Farms on Lizette's May Rose; 4th Marsh on Carduns of the Prairie; 5th Marsh on Hayes' Express 11th; 6th Barron on Glenwood Boy's Topsy.

Heifer Calf 6 Months and Under 12 (27 shown)—1st Marsh on Cherub's Fleurie Mar; 2d Cleveland on Sunnybrook Mignonette; 3d Jean Duluth Farms on Chene's May Rose; 4th Marsh on Cherub's Lily La Pine; 5th Jean Duluth Farms on Gree's May Rose of J. D.; 6th Marsh on Memento's Snowdrop.

Heifer Calf Under 6 Months (10 shown)—1st Marsh on Hayes' Moss Rose; 2d Gayhead Farm on Gayhead's May Queen; 3d Frazier on Upland's Faith; 4th Buckley on Anna Josephine of Bellview; 5th Bedminster Farm on Polly of Bedminster; 6th Marsh on Hayes' Golden Cherry 16th.

Cow With Official Yearly Record (7 shown)—1st Marsh on Princess Bergere; 2d Lehmann on Thelma Glenwood; 3d Wendover Farm on Florham Charm; 4th Cleveland on Jason's Enchantress of Upper Freehold; 5th Wendover Farm on Imp. Daisy of Ida Cottage; 6th Barron on Madge Cole of Westwood.

Exhibitors' Herd (6 shown)—1st and 3d Marsh; 2d Frazier; 4th Duluth Farm; 5th Buckley; 6th Mackey.

Breeder's Young Herd (7 entries)—1st Marsh; 2d Duluth; 3d Frazier; 4th Buckley; 5th Smith; 6th Mackey.

Breeder's Calf Herd (6 shown)—1st Duluth Farm; 2d Marsh; 3d Mackey; 4th Frazier; 5th Barron; 6th Branford Farm.

Produce of Cow (6 shown)—1st Marsh on produce of Hayes' Golden Cherry 3d; 2d Frazier on produce of Princess Pretoria; 3d Duluth Farm on produce of Imp. Lady Minnie; 4th Frazier on produce of Imp. Donnington Emerald 2d; 5th Duluth Farm on Coquette of Haddon; 6th Seaman.

Advanced Registry Cow With 2 of Progeny (2 shown)—1st Mackey; 2d Smith.

Dairy Herd, 5 Cows in Milk (5 shown)—1st Marsh; 2d Frazier; 3d Buckley; 4th Lehmann; 5th Branford Farm.

Get of Sire, 4 Animals (10 shown)—1st Frazier on get of Ne Plus Ultra; 2d Marsh on get of Hayes' Cherub 2d; 3d Duluth Farm on get of May King of Bedmister; 4th Frazier on get of Longwater Cavalier; 5th Branford Farm on get of May Rose King 4th; 6th Buckley on get of Imp. Roberts' Criterion of Bellview.

Senior Champion Bull—Marsh on Ladysmith's Cherub.

Junior Champion Bull—Cleveland on Sunnybrook Aristocrat.

Grand Champion Bull—Marsh on Ladysmith's Cherub

Senior Champion Cow—Marsh on Princess Bergere.

Junior Champion Cow—Marsh on Hayes' Moss Rose.

Grand Champion Cow—Marsh on Princess Bergere.

HOLSTEINS.

In the Holstein classes the herds from the central West swept the boards literally from top to bottom. Take out the entries of the Iowana Farms, the Galloway-Messer Farms and R. E. Haeger—all from the heart of the corn belt—and the story would be a short one, as the eastern and New England states failed utterly to check the superior forces from the middle West. The grand champion bull, Oak De Kol Ollie Homestead shown by the Iowana Farms ended the show season in a blaze of glory, as he captured the purple just two weeks before at the Waterloo Dairy Congress. Judge Moscrit, who knows the Holland breed as well as any living man at home or abroad, pronounced this five-year-old bull "a good one from end to end, a type of Holstein sire that you'll ramble a long way to find another one as good." In both the bull and cow classes the Galloway-Messer Farms forced the issue with younger offerings capturing the junior championships on Korndyke Pontiac Ormsby and Nellie Segis Pontiac. The roll of honor was completed with Minerva Beets from the Haeger herd, the winner of purple in the cow classes. This means that the best ribbons in the Holstein classes must leave the eastern territory to be flounted by the breezes of the broad prairies. Comment on the work of Judge Moscrit is unnecessary, save only that he captured the good will and wishes of both exhibitors and visitors. His work in the ring demonstrated beyond a shadow of doubt that when the right man is put in the right place, the single judge system far excels that of a committee of three. Some of the entries farther down the line in most of the classes gave indication that a few corn-belt Holstein crosses might work a vast change for the better in eastern herds.

Exhibitors: Baird Bros., Waukesha, Wis.; Balsam Farm, Dixville Notch, N. H.; A. W. Dodd, Mansfield Centre, Conn.; M. W. Downing & Bro., Waukesha, Wis.; Gray & Son, Greenwich, N. Y.; R. E. Haeger, Algonquin, Ill.; Gardner Hall, Jr., South Willington, Conn.; Highlawn Farm, Auburn, Mass.; Iowana Farm, Davenport, Iowa; Kelsey Ranch, Lexington, Mass.; S. J. Lobdell, Wells, Vt.; E. K. Loomis, Putney, Vt., Lothian Riverside Stock Farm, Novelty, Ohio; Mt. Hermon School, Mt. Hermon, Mass.; John H. O'Brien, Wellesley, Mass.; Prentiss & Son, Alstead, N. H.; L. H. Ruggles, Furnace, Mass.; R. M. Stone & Son, Marcellus, N. Y.; Woodcrest Farm, Rifton, N. Y.; Galloway-Messer Farms, Waterloo, Iowa; Prentiss & Gregory, Alstead, N. H.; H. A. Moyer, Syracuse, N. Y.

Judge, W. S. Moscrip, North St. Paul, Minn.

The awards:

Bull 3 Years or Over (7 shown)—1st Iowana Farms on Oak De Kol Ollie Homestead; 2d Haeger on Paul Calamo Korndyke; 3d Lotmian Farm on Pietertje Hengerveld Sir Korndyke; 4th Mt. Hermon School on Mt. Hermon Aaggie Creamelle; 5th Haeger on Paul Calamo Korndyke 14th; 6th Kelsey Ranch on Count Pontiac Spofford.

Bull 2 Years and Under Three (7 shown)—1st Galloway-Messer Farms on King Segis Johanna Ormsby; 2d Haeger on Joe Calamo Hengerveld; 3d Mt. Hermon School on Mt. Hermon Sir Colantha Battels; 4th Prentiss & Gregory on The King; 5th Balsam Farm on Balsam Raggle Apple Burke; 6th Hall on King Segis Pontiac Wellington.

Bull 1 Year and Under 2 (8 shown)—1st Haeger on King Segis Arcady Posch; 2d Balsam Farm on Balsam Korndyke Segis; 3d Galloway-Messer Farms on King Segis Pontiac Combination; 4th Balsam Farm on Balsam Changeling Segis; 5th Mt. Hermon School on Mt. Hermon Colantha Korndyke; 6th Hall on King Segis Inka Fayne.

Bull Calf 6 Months and Under 1 Year (12 shown)—1st Galloway-Messer Farms on Korndyke Pontiac Ormsby; 2d Hall on King Segis Colantha Pontiac; 3d Prentiss on Maplemont King Colantha; 4th Haeger on King Segis Pontiac Bonheur; 5th Balsam Farms on Balsam Segis Korndyke; 6th O'Brien on King Alcartra Abbekirk.

Bull Calf Under 6 Months (8 shown)—1st Haeger on King Segis Pontiac Isaac; 2d Haeger on King Segis Pontiac Nora; 3d Mt. Hermon School on Mt. Hermon Sir Colantha Milo; 4th Kelsey Ranch on Lincoln Colantha Korndyke Lad; 5th Prentiss on Maplemont King De Kol Segis; 6th Moyer on Joh Lyons.

Cow 5 Years or Over (14 shown)—1st Haeger on Minerva Beets; Woodcrest Farm on Paula of Chagrin Falls; 3d Mt. Hermon School on Miss Gladice Butter Boy; 4th O'Brien on Johanna Alexantha; 5th Iowana Farms on Johanna Rue Burke 2d; 6th Haeger on Netherland Clothilde Idyl Burke.

Cow 4 Years and Under Five (8 shown)—1st Haeger on Princess Hengerveld; 2d Balsam Farm on Woodside Queen Beets De Kol 2d; 3d Haeger on Fannie Vale Mercedes 2d; 4th Haeger on Beulah Shepard Empress; 5th Hall on Highlawn Mercedes; 6th Mt. Hermon School on Lady Creamelle of Mt. Hermon 3d.

Cow 3 Years and Under Four (7 shown)—1st Galloway-Messer Farms on Jewel Walker Gerben of Cedarside; 2d Hall on Braeside Amarilla Colantha; 3d Haeger on Mohamet Osma Butter Girl; 4th Highlawn Farm on Countess Colantha Ramsdell; 5th Balsam Farm on Korndyke Rag Apple Patty; 6th Iowana Farms on Iowana Prima Donna.

Cow 2 Years and Under 3 (7 shown)—Mt. Hermon School on Mt. Hermon Gladice Colantha; 2d Haeger on K. S. P. Spofford Beets; 3d Prentiss on Maplemont Pietje Lyons; 4th Gray on Dora Burke Segis; 5th Haeger on Aconeth Lady Hengerveld; 6th Iowana Farms on Rollingdale Model Julia.

Heifer 18 Months and Under 2 Years (10 shown)—1st Galloway-Messer Farms on Nellie Segis Pontiac; 2d Haeger on K. S. P. Idol Rose; 3d Mt. Hermon School on Mt. Hermon Lady Gladice Colantha; 4th Hall on Braeside Amarilla Colantha 2d; 5th Galloway-Messer Farms on Abbie Burke Cornucopia 2d; 6th Hall on Maplemont Pietje Manor Beets.

Heifer 1 Year and Under 18 Months (7 shown)—1st Haeger on Nancy Calamo Korndyke; 2d Iowana Farms on Iowana Fayne Julia; 3d Mt. Hermon School on Mt. Hermon Colantha Beauty; 4th Hall on Martje Segis Johanna; 5th Balsam Farms on Balsam Segis Johanna; 6th Prentiss on Maplemont Pietje Segis.

Heifer 6 Months and Under 1 Year (23 shown)—1st Haeger on Lady Calamo Korndyke; 2d Highlawn Farm on Pearl Model; 3d Mt. Hermon School; 4th Galloway-Messer Farms on Jewel Walker Segis Pontiac; 5th Mt. Hermon School on Mt. Hermon Colantha Catrina; 6th Galloway-Messer Farms on Delphia Segis Mercedes.

Heifer Calf Under 6 Months (15 shown)—1st Haeger on Tatalus Calamo Korndyke; 2d Mt. Hermon School on Mt. Hermon Colantha Princess; 3d Mt. Hermon School on Mt. Hermon Colantha Mildred; 4th Galloway-Messer Farms on Eudora Maid Pontiac Ormsby; 5th Stone on Shelter Valley Dora Lyons; 6th Hall on K. S. P. W. Maud.

Cow Having Official Record, Ring Rating Only (8 shown)—1st Woodcrest Farm on Paula of Chagrin Falls; 2d Hall on Braeside Amarilla Colantha; 3d Iowana Farm on Johanna Rue Burke 3d; 4th Woodcrest Farm on Woodcrest Ina De Kol 3d; 5th Hall on Highlawn Mercedes; 6th Woodcrest Farm on Woodcrest Rita Plum 2d.

Exhibitor's Herd (7 shown)—1st Haeger; 2d Galloway-Messer Farm; 3d Mt. Hermon School; 4th Haeger; 5th Iowana Farms; 6th Balsam Farm.

Breeder's Young Herd (4 shown)—1st Haeger; 2d Mt. Hermon School; 3d Balsam Farm; 4th Prentiss.

Breeder's Calf Herd (6 shown)—1st Haeger; 2d Galloway-Messer Farm; 3d Mt. Hermon School; 4th Stone; 5th Highlawn Farm; 6th Hall.

Get of Sire (8 shown)—Galloway-Messer Farm on get og King Segis Pontiac Combination; 2d Haeger on get of Paul Calamo Korndyke; 3d Haeger on get of King Segis Pontiac; 4th Mt. Hermon School on get of Colantha Sir Walker Korndyke; 5th Galloway-Messer Farm on get of King Segis Johanna Ormsby; 6th Balsam Farm on get of Dutchland Sir Rag Apple Creamelle.

Produce of Cow (6 shown)—1st Galloway-Messer Farm on produce of Daisy Mercedes Johanna Ormsby; 2d Mt. Hermon School on produce of Miss Gladice Butter Boy; 3d Haeger on produce of Queen Spofford Beets; 4th Iowana Farm on produce of Johanna Rue Burke; 5th Balsam Farm on produce of Jane De Kol Manor Beets; 6th Hall on produce of Braeside Amarilla Colantha.

Advanced Registry Cow With 2 of Produce (6 shown)—1st Mt. Hermon; 2d Hall; 3d Iowana Farm; 4th Balsam Farm; 5th Hall.

Senior Champion Bull—Iowana Farm on Oak De Kol Ollie Homestead.

Junior Champion Bull—Galloway-Messer Farms on Korndyke Pontiac Ormsby.

Senior Champion Cow—Haeger on Minerva Beets.

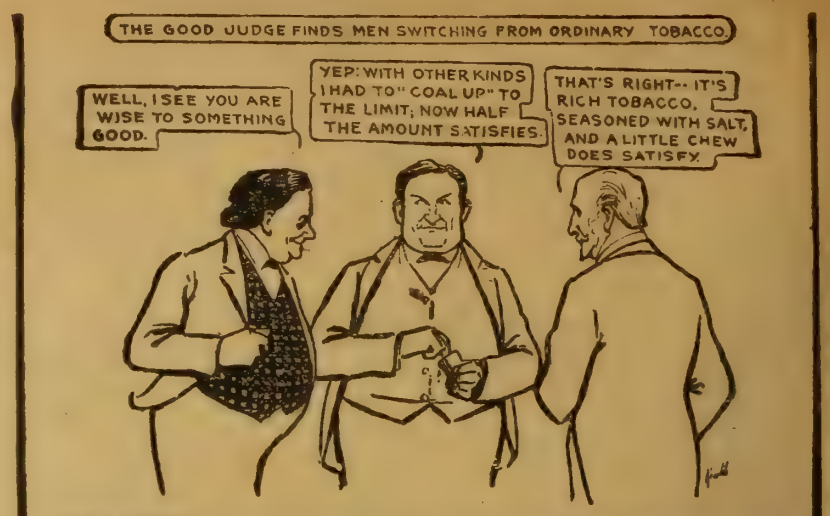
Junior Champion Cow—Galloway-Messer Farms on Nellie Segis Pontiac.

Grand Champion Bull—Iowana Farm on Oak De Kol Ollie Homestead.

Grand Champion Cow—Haeger on Minerva Beets.

JERSEYS.

New standards were set in the classes of this popular Channel Island breed at the National last week. They were there from the East and from the West, as well as from both the North and South. Not only were the best American bred herds of the continent entered, but the Island had been searched in recent times for "sure enough" winners. There were 295 Jerseys in the stalls and every one bearing an entry tag, so that this breed carried away highest honors in point of numbers. Unfortunately the heavens were opened and the rain descended during the two days when the Jerseys were assigned the ring and for this reason the interest lagged, otherwise the Jersey judging would have been the main feature of the National. From the beginning the judging interest centered in the newly imported bull, Golden Fern's Noble, considered to be one of the greatest show bulls and sires that ever left the Island of Jersey, and purchased by Mr. Ross Proctor, of Barryville, N. Y., at a cost of $25,000. He is a seven-year-old bull and a little past his prime for show ring purposes, but withal good enough in the opinion of the judges to be first in a class of sixteen aged bulls, good enough to capture the senior championship and finally good enough to carry off the grand championship ribbon for the best Jersey bull any age. His five-year-old son was his chief contender in the aged clas-



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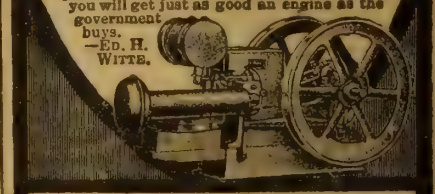

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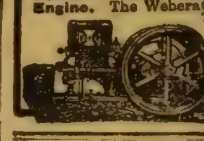

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but finally fell to second place. Eighteen of this noted sire's get were entered at the Nationad and the group of these shown by Mrs. H. H. Galbraith, of Knoxville, Tenn., won second place in the get of sire class. A daughter also won junior championship in the cow classes. Another feature of the Jersey exhibit was the world's "long distance" dairy cow, Sophia 19th of Hood Farm. Here is an eleven-year-old cow that has produced 5,216 pounds of butter, but her greatest fame comes from her record of producing more than 1,000 pounds of butter a year for three consecutive years, her best year's production for a twelve months' period being 1,175 pounds of butter. It goes without saying that this cow captured first place in class for official record cow with a record beginning after five years of age. A notable record was made by A. V. Barnes, of New Canaan, Vt., in winning first and second in a class of thirty-one aged cows, first for dairy herd of five cows and the female grand championship, the latter honor captured by the six-year-old cow, Gloria Benedictine.

Exhibitors: Allen Dale Farms, Shelbyville, Ky.; Catherine S. Auchincloss, Darien, Conn.; A. V. Barnes, New Canaan, Conn.; F. J. Bannister, Kansas City, Mo.; George Batten, Montclair, N. J.; Robert J. Blackburn, Dayton, Ohio; George T. Chaffee, Rutland, Vt.; Colt Farm, Bristol, R. I.; T. S. Cooper & Sons, Coopersburg, Pa.; Geo. E. Davis, Becket, Mass.; Dreamwold (Thomas W. Lawson), Egypt, Mass.; Thomas Dyer, Springfield, Mass.; Mrs. Nelle Fabyan, Geneva, Ill.; E. C. Lasater, Falurrias, Tex.; Mrs. Harry Galbraith, Knoxville, Tenn.; R. Y. Gibson, Jacksonville, Ill.; Hood Farm, Lowell, Mass.; Kingston Bros., Avon, Ill.; F. C. McQuade, Chatham, N. Y.; M. D. Munn, St. Paul, Minn.; William Ross Proctor, Barryville, N. Y.; George T. Slade, White Bear Lake, Minn.; R. T. Story, Freehold, N. Y.; L. V. Walkley, Southington, Conn.; J. P. Otis, Norwell, Mass.

Judges, Hugh G. Van Pelt, Waterloo, Iowa; Tom Demsey, Westerville, Ohio; W. D. Warner, Pawling, N. Y.

The awards:

Bull 3 Years or Over—1st Proctor on Imp. Golden Fern's Noble; 2d Galbraith on Noble's Sultan Golden Fern; 3d Bannister on Noble's Handsome Prince; 4th Barnes on Fanvic's Prince; 5th Blackburn on Cora's Oxford Raleigh; 6th Lasater on Noble's Eminent Lad.

Bull 2 Years and Under 3 (17 shown)—1st Bannister on Flora's Queen Raleigh; 2d Allen Dale Farm on Harmony's Golden Jolly; 3d Lasater on Windsor's Nobleman of F.; 4th Walkley on Golden Veno; 5th Walkley on Raleigh's Du Con; 6th Lasater on Eminent's Nobleman of F.

Bull 1 Year and Under 2 (17 shown)—1st Allen Dale Farm on Meadow Queen's Fairy Lad; 2d Slade on Noble Prince Jolly; 3d Lasater on Aldan's Noble of Texas; 4th Galbraith on Sam Loate's Warrier; 5th Bannister on Golden Fern's Pathfinder; 6th Lasater on Lady Windsor Aldam.

Bull Calf 6 Months and Under 12 (13 shown)—1st Kingston on Majesty's Cora's Noble; 2d Lasater on Sultana's Eminent Lad; 3d Bannister on Society Lad; 4th Allen Dale Farm on Golden Ben Ali; 5th Galbraith on Golden Fern's Figgis Fox; 6th Fabyan on Golden Lad O' Dreamwold.

Bull Calf Under 6 Months (15 shown)—1st Galbraith on Champion Goddington; 2d Allen Dale Farm on Bella's Fairy Boy; 3d Lasater on Miss Nora's Village Knight; 4th Welkley on Harbinger's Oxford Lad; 5th Hood Farm on Magnetic Pogis; 6th Blackburn on Mabel's Noble Raleigh.

Cow 5 Years or Over (31 shown)—1st Barnes on Gloria Benedictine; 2d Barnes on Imp. Maitland's Ruth; 3d Walkley on Oxford Majesty's Gypsy; 4th Barnes on Golden Jolly's Wonder; 5th Lasater on Aldan's Golden Fern; 6th Colt Farm on Raleigh's Finance.

Cow 4 Years and Under 5 (13 shown)—1st Hood Farm on Lass 89th of Hood Farm; 2d Bannister on Agatha's Maiden Fern; 3d Walkley on Premier's Golden Maid; 4th Galbraith on Chesnut 4th; 5th Bannister on Warder's Fern Blossom; 6th Dreamwold Farm on Figgis Foxy Maid O' Dreamwold.

Cow 3 Years and Under 4 (10 shown)—1st Barnes on Bonnie Beauty of Granville; 2d Walkley on Warder's Primrose; 3d Hood Farm on Champion's Torono's Chloe; 4th Kingston on Fern's Pine Daisy; 5th Bannister on Golden Fern's Silver Thread; 6th Blackburn on New Wave.

Cow 2 Years and Under 3 (18 shown)—1st Walkley on Rower's Charm; 2d Walkley on Sweet Bread Lady; 3d Munn on Burnweb's Helen; 4th Bannister on Indulate Nena; 5th Hood Farm on Sophie's Torono's Daisy; 6th Allen Dale Farm on Knollwood's Fairy Gem.

Heifer 18 Months and Under 2 Years (11 shown)—1st Bannister on Fern's Oxford Ever; 2d Allendale Farm on Butter Lad's Blanchia; 3d Bannister on Golden Fern's Jolly Beauty; 4th Lasater on Nobleman's Leonette of F.; 5th Kington on Noble's Leda; 6th Blackburn on Minette's Sultana.

Heifer 1 Year and Under 18 Months (17 shown)—1st Bannister on Houpla's Panola; 2d Lasater on Eminent Lad's Brightness; 3d Walkley on Oxford's Dream; 4th Kington on Noble's Pride Princess; 5th Galbraith on Goddington's Cowslip; 6th Colt Farm on Dolly of Oaklands.

Heifer 6 Months and Under 12 (23 shown)—1st Lasater on Aldan's Noble Jessica; 2d Bannister on Noble's Champion Gauntlet; 3d Blackburn on Prue's Milkmaid; 4th Allendale Farm on May Fair's Dainty Belle; 5th Colt Farm on Viola's Golden Pansy; 6th Blackburn on Algier's Fairy.

Heifer Calf Under 6 Months (18 shown)—1st Walkley on Curly's Fairy Second; 2d Bannister on La Cima Louise; 3d Lasater on Cowslip's Golden Queen of Falfurrias; 4th Lassater on Cowslip's Handsome Grace; 5th Blackburn on Lady Noble Raleigh; 6th Galbraith on Golden Fern's Bright Jewel.

Cow Having Official Yearly Record begun at 5 Years or Over—1st Hood Farm on Sophia 19th of Hood Farm; 2d Hood Farm on Lass 47th of Hood Farm; 3d Allen Dale Farms on Fairy Lad's Pallas; 4th and 5th Dreamwold on Figgis Queen O' Dreamwold and Dreamwold's Royal Maid; 6th Barnes on Morny Cannon's Queen Bess.

Cow Having Official Yearly Record Begun Under the Age of 5 Years—1st, 2d and 3d Hood Farm on Lass 89th of Hood Farm, Lass 64th of Hood Farm and Figgis 97th of Hood Farm; 4th Barnes on Imp. Maitland's Ruth; 5th Lasater on Majesty's Madam of Falfurrias; 6th Allen Dale Farm on Fairy's Lad's Pallas.

Exhibitor's Herd—1st Bannister; 2d Walkley; 3d Lasater; 4th Allen Dale Farms; 5th Galbraith; 6th Kington Bros.

Young Herd—1st Allen Dale Farms; 2d Lasater; 3d Kington Bros.; 4th Slade; 5th Chaffee; 6th Dreamwold.

Breeder's Calf Herd—1st Lasater; 2d Allen Dale Farms; 3d Kingston Bros.; 4th George T. Chaffee; 5th Dreamwold.

Get of One Sire—1st Walkley on get of Imp. Oxford Majesty; 2d Galbraith on get of Golden Fern's Noble P.; 3d Bannister on get of Golden Fern's Noble P. S. 4570 H. C.; 4th Allen Dale Farms on get of Fairy Glen's Raleigh; 5th Lasater on get of Aldan's Noble; 6th Dreamwold on get of Figgis' Fox o' Dreamwold.

Produce of One Cow—1st Bannister of produce of Cowslip's Noble Eda; 2d Allen Dale Farms on produce of Ben Ali's Frolic; 3d Kington Bros. on produce of Noble's Maggie; 4th Lasater on produce of Lady Windsor's Princess; 5th Galbraith; 6th Dreamwold on produce of Maid-o-the-Marshes.

Dairy Herd, 5 Cows in Milk—1st Barnes; 2d Walkley; 3d Bannister; 4th Lasater; 5th Allen Dale Farms.

Senior Champion Bull—Proctor on Imp. Golden Fern's Noble.

Junior Champion Bull—Allendale Farm on Meadow Queen's Fairy Lad.

Senior Champion Cow—Barnes on Gloria Benedictine.

Junior Champion Cow—Bannister on Fern's Oxford Ever.

Grand Champion Bull—Proctor on Imp. Golden Fern's Noble.

Grand Champion Cow—Barnes on Gloria Benedictine.

AYRSHIRES.

It was the East against the central West in the Ayrshire classes and honors were well divided. A few herds from Canada only added interest to the fray. The Seitz herd from Wisconsin upheld the honors for the grain belt and when judge Kildee had finished his work on Thursday evening he had placed some of the best ribbons on entries from this herd, including the junior championship in the bull classes and also first place on exhibitor's herd, first on calf herd and first on get of sire. In addition the Seitz herd won the $100 cash prize for the best group of twelve animals exhibited in the name of the state in which they were owned. Still another herd from the corn belt—the real cattle region of old U. S. A.—figured prominently in the Ayrshire classes, the Galloway-Messer entries furnishing the winner of the junior championship in the cow classes an exceedingly attractive senior yearling and none other than the grand champion female at the Waterloo Dairy Cattle Congress. She was defeated for highest honors by the Iroquois Farm's aged cow, Auchenbrain 6th, one of the best individuals that has been found on the show circuit for many a day.

Exhibitors: G. H. Dunsmon, Swanton, Vt.; John A. Ness, Auburn, Maine; River Valley Stock Farm, Orford, N. H.; Adam Seitz, Waukesha, Wis.; C. B. Stevens, St. Johnsbury, Vt.; Woronoake Heights, Woronoco, Mass.; J. H. Black, Lachute, Que., Canada; Iroquois Farm, Cooperstown, N. Y.; R. R. Ness, Howick, Que., Canada; Hector Gordon, Howick, Que., Canada; J. P. Cavers, Ormstrom, Que., Canada; J. T. Elder, Glenelm, Que., Canada.

Judge, Prof. H. H. Kildee, University of Minnesota, St. Paul, Minn.

Bull 3 Years or Over (6 shown)—1st River Valley Farm on Hillside Bonnie Scotland; 2d Seitz on Bargenock Rising Star; 3d J. A. Ness on Copestone's Masterpiece; 4th Woronoake Heights on Stonehouse Pansy Boy; 5th Stevens on Lochfergus Ensign; 6th Dunsmore on Archer of Fayre.

Bull 2 Years and Under 3 (5 shown)—1st J. A. Ness on Strathglass Gold Chunk; 2d Black on Imp. Hobsland Piecemeal; 3d Seitz on Cavalier's Kilnford Ringmaster; 4th Dunsmore on Halton Messenger of Fayre; 5th Iroquois Farm on Patricia Baron.

Bull 1 Year and Under 2 (7 shown)—1st Seitz on Cavalier's Lord Rosebery; 2d R. R. Ness on Burnside Ypres Masterpiece; 3d Stevens on Pleasant View Not Likely; 4th Seitz on Cavalier Fond Stamp; 5th Iroquois Farm on Netherall Keystone; 6th Dunsmore on Messenger Croker of Fayre.

Bull Calf 6 Months and Under 1 Year (14 shown)—1st Seitz on Cavalier's Lord Stuart; 2d Stevens on Howie's Golden Bar; 3d R. R. Ness on Burnside Flomaster; 4th Galloway-Messer Farm on Dalpeddar Good Gift; 5th Stevens on Pleasant View Hugh; 6th Iroquois Farm on Iroquois Ardbar.

Bull Calf Under 6 Months (6 shown)—1st Seitz on Cavalier's Kilnford Marquis; 2d Iroquois Farm on Iroquois Brother Alex; 3d Stevens on Pleasant View Joe; 4th Gordon on Master's Derby; 5th River Valley Farm on River Valley Lad; 6th Dunsmore on Raymond of Fayre.

Cow 5 Years or Over (21 shown)—1st Iroquois Farm on Auchenbrain Hattie 6th; 2d Wendover Farm on Imp. Hobsland Miss May; 3d Woronoake Heights on Imp. Lessnessock Madeline; 4th Cavers on Pickens Pearl 2d; 5th Seitz on Imp. Kilnford Belle 4th; 6th Iroquois Farm on Barcheskie's Favorite Rose.

Cow 4 Years and Under 5 (9 shown)—1st R. R. Ness on H lehouse Randy 9th; 2d Seitz on Bargenock Carnation; 3d J. A. Ness on Copestone Lily of Maplegrove; 4th River Valley Farm on River Valley Kirsty; 5th J. H. Ness on Lily Mayflower 3d of Maplegrove; 6th River Valley Farm on River Valley Morton Main.

Cow 3 Years and Under 4 (7 shown)—1st Elder on Mapleleaf Jean; 2d Iroquois Farm on Lady Voca of Avon; 3d Woronoake Heights on Springhill Pansy 2d; 4th River Valley Farm on River Valley Molena; 5th Dunsmore on Glenna of Fayre; 6th Iroquois Farm on Hobsland Rosie.

Cow 2 Years and Under 3 (16 shown)

(Concluded on page 16.)

Better Mondays on the Farm.

Co-operative Laundry Backed by Same People and Officers as the Creamery Is Offering Valuable Help to 250 Farm Houses in Pierce County, Wisconsin.

"BLUE MONDAY," through the organization and operation of the River Falls Co-operative Laundry, has become a thing of the past on some 250 farms in Pierce county, Wisconsin. A long step has been taken in lessening the burdens of the farmer's wife. No longer need the farm woman of that favored community live in dread of Monday and Tuesday with its back-breaking rubbing, rinsing and wringing, for the opportunity to be relieved of this work lies at her door and last year 246 farm patrons took advantage of it.

The River Falls Laundry has the largest farm trade of any in Wisconsin. It was patterned after the co-operative laundry at Chatfield, Minnesota, which has been in successful operation for several years. The River Falls plant is now in its second year, having passed through the first year with a small profit. From all parts of the United States, and even from England, come inquiries as to how it was organized and along what line it is being operated.

Recently an editor of The Wisconsin Farmer had the pleasure of spending a half day in this laundry, which is in reality the outgrowth of the very successful co-operative creamery at River Falls. Although separate associations, the stockholders of both the creamery and the laundry are very much the same, and the steam is furnished from the creamery, although the laundry association is just now considering putting in its own steam plant as an economy step. But the two are very closely identified. The laundry now occupies the old building vacated by the creamery when it moved into its new building two years ago this month, and it was the erection of this new creamery that really brought about the organization of the laundry. With an available building, the "Home Culture Club," an organization of farmers' wives, started the ball rolling that resulted in the River Falls Co-operative Laundry, the purpose being to equip and operate it at actual cost, so that as many persons as possible could take advantage of this opportunity to have their washing done away from home.

During the first year the amount of work done totaled $7,609.21, at an expense of $7,566.08, which left the laundry a profit of $143.13 net. This was even better than had been anticipated, as 876 persons took advantage of the laundry, 246 of whom were farmers, 580 city patrons, and fifty out-of-town patrons. There was considerable expense attached to starting a new venture which will not come in after years. During the first eight months of the present year the laundry has had a larger patronage than for the same period last year, and the officials of the association feel very gratified at the way things are going. Expenses are heavy, wages last year alone amounting to $4,589. Steam bought fro the creamery cost $465. Other expenses for insurance, water, lights, etc., amounted to $1,066.26.

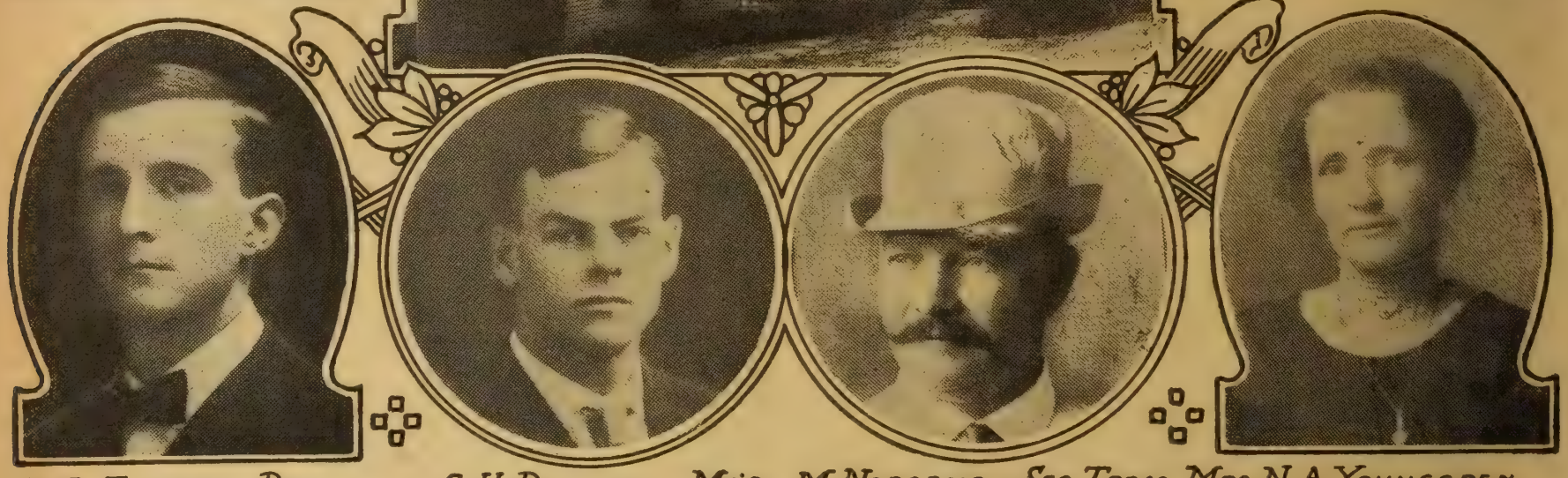
Stockholders were not disappointed at not receiving a dividend the first year, as it was a public enterprise and convenience, and it has proven such to the residents of Pierce county. The capital stock is $5,200, of which $3,455 is represented by equipment, $1,000 by real estate, and $1,180 by building account. Both the laundry and the creamery are organized under the Wisconsin co-operative laws and no stockholder can hold more than twenty-five shares, and he is entitled to only one vote, regardless of his holdings.

The entire effort in the organization was to bring the farmers into the laundry enterprise and induce the farm women to patronize it. The creamery was owned by farmers, so why not the laundry? This led to extended work among the farmers' wives, and, while the larger part of the work turned out is for River Falls patrons, it is pleasing to note that the amount of work done for farmer patrons last year reached the total of $2,103.08. There are eighty-four farmer stockholders owning $2,180 worth of stock and 15 citizens of River Falls as stockholders, owning $3,020 worth of stock. D. E. Fowler, a Holstein breeder, is president; Mrs. Nancy Younggren, a farm woman, is vice president; M. Norseng, merchant, is secretary-treasurer; and S. Schuyler Hamilton, merchant and Mrs. Nettie Bliss, a farm woman, are members of the board with the officers.

Business has been increasing rapidly since the very first, and during the past summer the average was nearly $175 per week, which is quite an increase over the corresponding months the year previous. Prices are kept as low as possible and vary with the kind of work that is done. Rough, dry work is done for 5 cents a pound, and this means the average farmer's family washings so reasonable as to be within reach of all.

The laundry is equipped with two large and one small washer, soap tank, extractor, dry room, five-roll mangle, body ironer, starch cooker, and a complete equipment of machines for shirt, collar and cuff work with electric irons, and ironing boards for ironing pieces that cannot be put through the mangle or body ironer. The building is bright, well lighted and sanitary, while a twenty-six-inch exhaust fan has been installed to insure good ventilation. The machinery is run by two motors—a three horse power and a seven and one-half horse power—and can be run by either, or both, as necessary. The laundry and creamery co-operate in the use of steam which is furnished for both plants by a thirty-horse-power boiler located at the creamery. Water is secured both from the city main and from a tank located overhead and filled from a well inside the building. All condensation from the machines is carried to this tank and this results in a slight economy in the matter of heat and time.

Farmers bring in their laundry and call for it themselves. All work is cash upon delivery of the work. The laundry is brought in at the street door, where it is marked and sorted. It then passes through the washers and extractor and the flat work is run



D E FOWLER—PRES C H PETTEE—MGR M NORSENG—SEC. TREAS MRS. N. A. YOUNGGREN VICE PRES.

BUNDLE MACHINES—MANGLE AND BODY-IRONER

ON THE ROUTE

Scenes in River Falls, Wis., Co-operative Laundry, which is largely patronized by farmers' wives who are relieved of the drudgery of wash-day.

WASHERS AND EXTRACTOR

through the mangle, while the rough, dry work is placed in the dry room. It is then taken into the sorting room, where it is sorted and wrapped up and placed in readiness for delivery. The work can be delivered two days after it is brought, unless it is shirt and cuff and collar work. The work is done at the rate of 5 cents per pound for washing and drying as well as the ironing and folding of all flat work. If hand or body ironing is done, an extra charge is made by the hour.

As before stated, the object of the enterprise is to do family washing at actual cost. Instead of each household owning and using a small equipment of washing apparatus, the community has organized and collectively owns and operates for its own benefit an efficient and adequate laundry. Most patrons admit that the work cannot be done as cheaply at home if all items are taken into consideration and no home laundry will get the clothes as clean and white as they are when they return from the laundry. All the fuss and muss of wash day is taken from the home, and life is thereby made pleasanter for the women and men folks.

The equipment used would cost about $3,500, while the cost of operation at present amounts to about $130 per week, everything taken into consideration. In the neighborhood of $200 worth of work could be handled per week without any considerable increase in cost of operation. Without the flat ironer and the shirt, cuff and collar machinery, the cost of equipment could be easily cut in half, while the cost of operation would amount to less than half.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Increasing the Egg Production.

To the Editor:—A normal chick has in its body about 3,000 ovules which under favorable conditions could be developed into eggs. Think for a moment what that means! Just this, that an ordinary hen, if given the correct care and handled in a manner so as to promote the maximum of egg production, would be able to lay 300 eggs per year over a period of ten years. Let me cite you an instance of one test which will show just what is happening. The professor in charge of the investigations at one of our foremost experiment stations selected a flock of hens that had been bred from the best layers that could be obtained. A careful record of the egg production of each hen was kept. At the end of a year one hen had laid six eggs; another had laid 259.

Please do not stand up and say that this test showed an abnormal variation. On the contrary, if we will omit two or three of the best layers in this flock it can be easily demonstrated that the variation shown was no greater than that of an ordinary flock of farm hens.

Let me lay down this principle: Success with poultry comes by means of the same methods as success with dairying, or any other line of animal husbandry. Blood will tell. The 300-egg hen which was so widely advertised a short time ago was not the result of a chance selection of a good producer. She was the result of years of careful breeding and close selection of the best layers. If we could bring every member of our flocks to that production there would be received plenty of remuneration from our flocks.

There is no best breed for all purposes. No, nor even for egg production. This is proven by the egg contests that have been carried on throughout the country the last few years. Some breeds won in one contest, other breeds won in others. The only safe rule to follow is to select that breed which you like best. Then stick to it.

There is no way of keeping individual records of the different members of your flock except by means of the trap nest. At any rate, do not neglect to trap nest in the winter. It is then that the better layers show themselves. Most any hen can lay in the summertime. The winter layers are your most profitable birds. In the winter there is more time for the average farmer to attend to his nests. Other work is not usually so pressing.

Going to the basket and getting the setting of eggs from the production of the poor layer along with those of the good layer will not get you anywhere in breeding for egg production. Breed from year-old hens. Before that you do not know their record. Mate them with mature males. If you value the vitality of your stock do not breed from immature birds. Early maturity is a desirable point in any line of production. Early hatchings from hens that have laid early is an important point in breeding for egg production.

While breeding for egg production is a factor which must not be neglected in any attempt to increase the production of your flock, feeding for egg production is quite as important. That no best rule has yet been found for the feeding of poultry for egg production does not mean that any old thing will do to feed the flock of laying hens. You cannot expect hens to lay eggs if they are not fed the food from which eggs are produced. That we do not know all of these foods nor the correct proportions of the different food elements does mean that no progress has been made along these lines.

When we consider the fact that 65½ per cent of the egg is water we begin to realize the importance of this material as a factor in egg production. And you cannot get the hen to cut down on the amount of water in the egg, either. The only recourse is to supply her with the amount of water she needs. Let this be fresh and clean. The best of poultry feeding will not make profitable egg production if there is not a constant supply of fresh water accessible. An easily constructed homemade drinking fountain can be used with good results if you do not care to invest in those on the market.

The price of the food and its palatability, as well as the health of the hens, are factors which must be considered in feeding poultry for egg production. Linseed meal is an excellent food and is a constituent of most of the commercial foods which are on the market. Clover leaves are good food and the hens relish them. As a rule, hens do not relish cooked food. It is a mistake to cook anything, with the exception of potatoes. These are best when cooked.

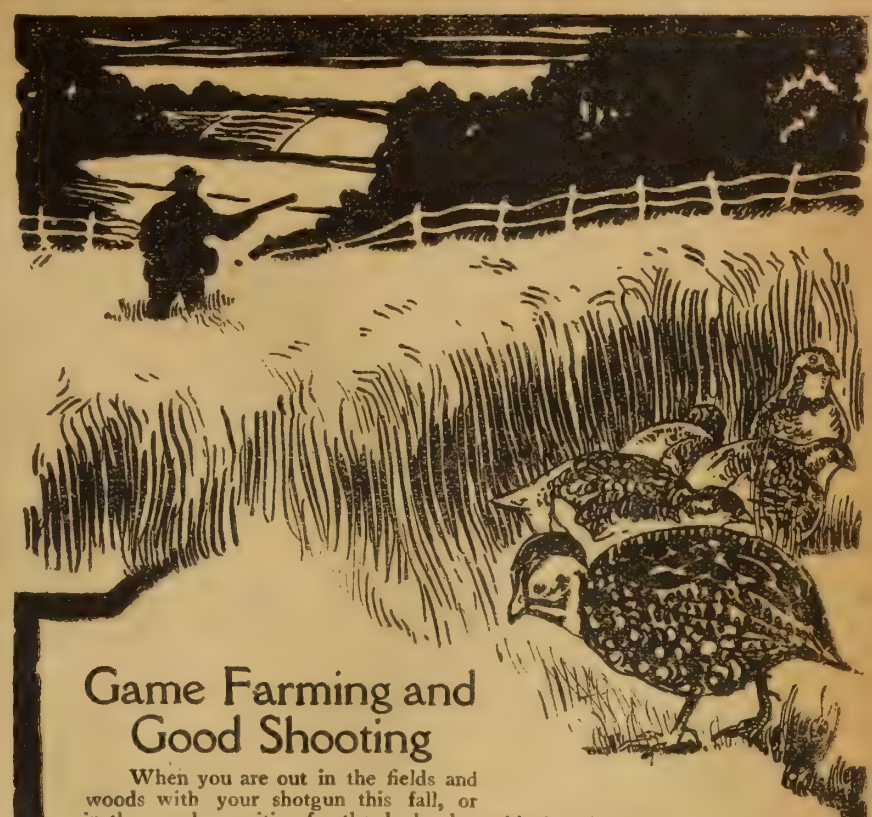
J. H. Hulett.

Taylor County Plowing Contest.

The third annual plowing contest in Taylor county, provided a great day of demonstrations and entertainment in the town of Halway, October 10th. Interest was greater than in former years, as the town voted an additional $25 in prizes at the spring election, the money to be used for the purchase of a bull calf. Also all the banks in the county donated this year for the first time, so the winner will have $100 cash and a registered bull calf for his trouble.

The forenoon was taken up to agricultural topics, Price County Agent Richards taking up the subject of, "Care of the Dairy Sire," and Farmers' Institute Conductor John Imrie talked on "Swine Raising in Connection With Dairying." The plowing took place in the afternoon, eight contestants vying with each other for the prize. Following were the contestants: John Kohn, E. Ketelhut, Gunder Nelson, Earl Packard, Harry Jensen, Ray Harry, Cornelius and John Weinzinger. Prof. F. M. White had charge of the contest, with Mr. Imrie and Mr. Richards to assist with the judging.

When the scores were totaled Earl Packard stood high with a score of 95 points, John Kohn came second thereby winning the Tamworth boar donated by the county agent; Gunder Nelson, who had come thirty miles to attend the contest, won the cultivator donated by the International Harvester Company for third prize; Harry Jenson won fourth place, the prize being a horse collar donated by Fred Meier, of Holway.



Game Farming and Good Shooting

When you are out in the fields and woods with your shotgun this fall, or in the marshes waiting for the ducks, bear this fact in mind—*your shooting would be much better if scientific game farming were conducted more extensively in this country.*

Game farming is being carried on much more extensively than formerly, especially so during the past year. Evidence is plentiful to the effect that eventually we will pay as much attention to this important subject as have the people of Europe for many years. The wonderful grouse shooting in Scotland is one example of the results obtained there.

Game farming not only means much to the sportsman through an increase in game but also to the people as a whole through decrease in price and a greater supply of game birds for the table.

Those conducting game farms find both profit and pleasure in the work. Why do not you become a game farmer? Write us for our booklet, "Game Farming for Profit and Pleasure". You will find it well worth reading. Please use the coupon below.

When You Buy Loaded Shotgun Shells

How much do you know about the powder you shoot in the fields or at the traps? You should be thoroughly informed regarding it and specify a given powder when you buy shells.

If you will write us we will gladly tell you all about the two Hercules Smokeless Shotgun Powders, Infallible and "E. C.". These powders are of unusually high and uniform quality. They give even patterns, high velocity, light recoil. You can always depend upon them. The next time you buy loaded shells specify either Infallible or "E. C." Smokeless Shotgun Powder. They may be obtained in all standard makes of shells.

Game Breeding Dept., Room 199
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POULTRY AND PET STOCK.

S. C. R. I. REDS
FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Onro, Wis.

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg. Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Successors to R.F.Johnson, Assumption, Ill.

HATCHING EGGS; prize-winning S.C. Reds White Wyandottes, Buff Orpingtons, S. C White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

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DAIRY

October Butter Scores.

The result of the October butter-scoring contest, at Madison, has just been made known. Those whose butter scored 90 or over, who consented to the publication of their names, are as follows:

Jacob Ringger, R. 4, Durand	93.00
C. F. Wolzien, Black Creek	92.50
John Mogenzen, Wyocena	93.50
Alfred Nelson, Fennimore	92.62
Alfred Schulz, Phlox	91.50
J. H. Quaie, Platteville	92.37
Henry A. Paul, S. Superior	91.75
Geo. B. Wegner, Nashkora	92.37
H. P. Nielsen, Deerfield	92.37
Camilla Anderson Weyauwega	93.37
Frank Shepherd, Mt. Sterling	91.00
O. Christenson Nelsonville	93.37
F. S. Root Rudolph	92.87
B. B. Cobb Sun Prairie	90.62
C. C. Siepert, Franksville	92.62
M. Christopherson, New Franken	91.62
H Ames, Pittsville	92.87
Carl Gmur, Amboy, Ill	91.00
Henry Donner, Dayton	92.50
T. J. Hanlon, Prescott	91.87
Chas. Cartwright, New Richmond	91.12
H. C. Jochumson, Bark River, Mich.	90.50
W. A. Moyes, Ironton	91.62
Gilbert Streich, Johnson Creek	93.75
Central Wisconsin Creamery Co., Reedsburg,	91.25
Newburg Corner's Creamery Co., R. 2, Bangor	91.37
Jos. J. Bartel, R. 37, Peebles	91.37
Jos. Jager, Thorp	92.00
F. C. Thompson, R. 40, Mukwonago	93.37
Oscar Thompson, Black River Falls	91.25
Albert Long, Stetsonville	92.00
F. M. Werner, Waterloo	92.75
Alfred Waldhart, Medford	92.25
C. M. Sanford, R. 2, Amherst Jct.	91.37
H. A. Johnson, R. 2, Westby	91.87
G. P. Sauer, Cedarburg	92.87
Hugh H. Heiney, Platteville	91.62
Paul Macauley, Elmwood	92.87
Valton Creamery Co., Valton	91.87
P. E. Peterson, Herney	93.62
R. A. Garlick, Neshkora	90.50
John J. Windfeldt, Ogema	92.00
Hubert Bartel, New Holstein	94.00
Geo. Schroeder, White Creek	91.00
Carl Kulibert, Weyauwega	91.50

Butter Scoring at Madison.

E. H. Farrington, of the dairy school at Madison, urges more Wisconsin buttermakers to send their product to Madison for scoring. The dairy school is making a commendable effort to better the quality of butter in the state. The purpose of scoring exhibitions is not so much to discover who has the best, as to discover who has poor butter and help him to better it. An effort will be made to help any buttermaker who desires to be helped. In several instances Mr. Farrington and his associates have been able to advise buttermakers and help them to the extent of raising their scores three or four points. Mr. Farrington speaks of another way in which scoring exhibitions may help the buttermakers. He says:

It will be remembered that we make a moisture and salt determination of the butter sent by each exhibitor as well as giving the butter a commercial score. This information concerning the moisture content may be very valuable to the creameries as an evidence that they are not in the habit of making butter containing an illegal percentage of moisture.

A creamery recently had a shipment of butter seized because of excessive moisture and immediately appealed to us for instruction concerning the best thing to do to prevent this in the future, as well as inform them how to rework the butter already made so as to bring it below the legal limit on moisture content. This buttermaker, like a good many others, has been in the habit of testing each churning of butter made for moisture. Other buttermakers possibly may get caught in the same way at any time unless they know the moisture content of each churning. The accuracy of their apparatus as well as their method of making moisture determination can be easily checked by sending a package of butter occasionally to our scoring exhibitions where moisture tests of each entry of butter is made regularly.

Influence of Age on Value of Dairy Cows.

A bulletin has recently been prepared by the U. S. Department of Agriculture, showing the results of an investigation of the influence of age on the value of dairy cows and farm work horses. The information set forth in this publication was secured by personal interviews and correspondence with a large number of the best informed farmers and live stock breeders in the United States, and includes 1,844 estimates on the values of dairy cows at different ages, so that the facts may be looked upon as accurate and dependable. Most of the estimates were obtained from New York, Pennsylvania and the north-central states, but the average include figures from nearly every important agricultural district in the United States.

Four breeds of cattle, Holsteins, Guernseys, Jerseys and Ayrshires, were used in the investigation, but no attempt was made to compare breeds in any way. In order to get a scale of values which would vary only according to the age of animal, arbitrary values for animals at three years of age were assumed as the starting point, and four classes of three year olds were used for each breed, namely, the $80 grade cow, the $100 grade, the $200 pure bred and the $300 pure bred. Furthermore, to eliminate all factors except age, a cow that was with calf at three years of age was considered to be in the same stage of pregnancy each succeeding year, and in the case of pure bred stock, changes in the advanced registry of the cow herself, or of animals related to her, were not considered. Having assumed the value of the animal at three years of age, estimates were then secured, stating what such an animal in good health would be worth each year from birth to fourteen years of age.

The results obtained are intended to be of use in buying and selling cows and in taking live stock inventories. As the result of this investigation, it is demonstrated that the price of dairy cows in good health is greatest between the ages of five and seven years, and most of them reach their maximum value at six years of age.

Old cows and calves are cheaper in the northeastern states than in the north-central states, while cows between the ages of four and eight years are cheaper in the north-central states. The bulletin suggests that this is due to the lower price of feed in the latter district.

At the ages of four and eight, cows are priced about the same. The promise of a longer period of usefulness of the younger cows is balanced by the demonstrated worth of the older animals.

The prices of fourteen-year-old pure breds are much greater than those of grades, which is partly due to their greater milk production and partly to the fact that they may yet produce valuable calves.

Cows depreciate rapidly in value after their eighth year.

The difference in value of the various classes of cows of the same breed is greatest when the animals are in their prime and least when they are calves and old cows. The pure bred has a much greater value in her prime as compared with the grade, because she has a much greater productive power, which is at its height during this period.

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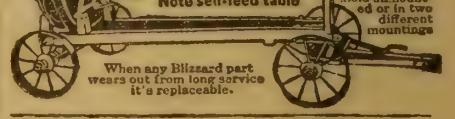

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Word From The Cow Testers.

HEREWITH we publish records made by some of Wisconsin's good dairy cows in September and verified by the official tests made under the direction of cow-testing associations. It is very interesting to note that unprofitable cows are being eliminated from the herds of members of associations, and also that preparation has been made for winter by co-operative purchasing of dairy feeds.—The editor.

Forty-Five-Pound Cows in Manitowoc County.

A report has come to The Wisconsin Farmer from H. R. Brewster, official tester of the Manitowoc Cow-Testing Association, Manitowoc county. In this report Mr. Brewster states that there has been seventeen non-profitable cows sold within the past month; there have been two new sires purchased and a co-operative live stock shipping association organized. The report which is herewith given covers the month ending August 31st, and in that period there were twenty-one forty-five-pound cows, which is a very good record considering the fact that this was the tag end of the dry season and many of the cows were drying up. In September and October a good many of the cows freshen. Many of the members of this association are feeding grain and silage. The following is a list of cows in the association which produced forty-five pounds of butter fat or better for a thirty-day period, ending September 1st:

Owner, name and breed	Age	Lbs. milk	Per cent fat	Lbs. B. fat
Christ Muth				
Dolly D., R. G..	6	1215.2	4.2	51.0
Pauline, R. H..	4	1382.6	3.5	48.4
Canary, R. H...	4	1016.8	4.5	45.8
Artasia, R. H...	4	1252.4	3.7	46.4
Canary M., R.H.	4	1128.2	4.0	45.1
Adolph Otto				
Lady, R. H.....	8	1528.3	3.8	58.1
Estata, R. H...	7	1419.8	3.5	49.7
Nels Johnston				
Ruth 2d, R. H..	4	1352.0	3.5	47.3
M. H. O'Connell Sons				
No. 2, R. H.....	7	1388.9	3.3	45.8
No. 3, R. H.....	9	1336.2	3.6	45.1
No. 8, R. H.....	8	1444.6	3.4	49.1
Joe Brennan				
Bell, R. G.....	9	1092.0	5.0	54.6
Queen, R. G....	6	945.0	5.3	49.1
Aug. Voelkerson				
Nancy, G. J....	7	780.4	6.0	46.8
Dady, G. J.....	5	1051.7	4.8	50.5
Pat Cahill				
No. 1, G. H.....	6	1199.6	3.8	45.6
No. 12, G. H....	7	1314.5	3.5	46.0
No. 15, G. H....	7	1411.7	3.7	52.2
No. 17, G. H....	7	1153.1	3.9	45.0
No. 20, G. H....	9	1296.8	3.6	46.7

Chilton Association Report.

To the Editor:—The following table gives the names and records of the cows in the Chilton Cow-Testing Association, Calumet county, which produced forty-five pounds of butter fat or over during the thirty-day period ending October 13, 1916. During the month six unprofitable cows were disposed of:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Alex Pilling					
Minnie, G. G.....	5	2-16	690	7.3	50.37
Oscar Pilling					
No. 3, G. H.....	5	7-29	900	5.4	48.60

The report ending September 13th is as follows:

John Fuchs					
Bessie, G. H.....10		4-6	1116	4.1	45.76
Harry Merrill					
Alice, G. H.....	4	7-18	1306	3.5	45.71
Louis McGath					
Sweetheart, G. G.	8	2-2	837	6.4	53.57
Oscar C. Pilling					
No. 3, G. H.....	5	7-28	1190	3.9	46.41
Alex Pilling					
Susie, G. H.....	8	2-15	1141	4.5	51.34
Mayer Bros.					
Grace, G. D.....	8	4-16	961	4.7	45.16

Oscar F. Kossman, Official Tester.
Edwin T. Weeks, Sec.-Treas.

Reedsburg Cow-Testing Association.

To the Editor:—The Reedsburg Cow-Testing Association has completed six months' work. It was the first association organized in Sauk county. Other farmers have seen the benefit of this movement and have organized an association at Baraboo and the prospects are bright for another association at Sumter. Our association has been very successful in weeding out the boarders. Eleven head have been sold to date. The best herd up to date is that owned by J. J. Marshall, of Cazenovia. The cows in this herd have averaged 5,842 pounds of milk for the six months' period and 231 pounds of butter fat at a feed cost of $14.56. The value of the product was $80.66, making a net profit per cow for six months of $66.10. Below is a list of the cows producing 240 pounds for the 183-day period ending October 6th. Also report of the cows showing forty-five pounds of butter fat or better for the month ending at the same time.

RECORD FOR SIX MONTHS.

Owner, name and breed	Age	When fresh	Lbs. milk	Lbs. B. fat
Kirkpatrick Bros.				
Helena, R. H...	6	April	8298	349.8
J. J. Marshall				
Blue, G. H.....	8	Mar.	6934	316.2
Speckled, G. H..	7	Mar.	5772	289.4
Beauty, G. H....	6	April	7790	266.8
Diana, G. H.....	7	April	5395	256.1
Rachel, G. H....	7	April	6659	246.7
Fred Thorne				
Dolly, G. J.....	7	April	5438	296.7
Wm. Alexander				
No. 13, G. H.....	9	May	4815	244.7

THIRTY-DAY RECORD.

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Frank Groat					
Mandy, G. G.....	4	Sept.	1080	5.6	60.5
Bess, G. G.....	5	Sept.	1080	5.2	56.2
Fred Thorne					
Miranda, G. J...	4	Sept.	948	5.8	55.0
J. J Marshall					
Speckled, G, H,..	7	Mar.	1002	5.4	54.1
Frank Groat					
Lizzie, G. G.....	6	Sept.	900	5.8	52.2
Kirkpatrick Bros.					
Helena, R. H....	6	Mar.	1112	4.6	51.6
J. J. Marshall					
Blue, G. H.....	8	Mar.	990	5.2	51.5
Carl Koenig					
No. 9, G. S.....	8	June	939	5.2	48.8
Fred Thorne					
Dolly, G. J.....	7	April	834	5.7	47.5
John Geise					
Bessie, G. H.. ..	3	Aug.	1080	4.3	46.4
Daisy, G. H.....	8	Aug.	1140	4.0	45.6

Alvin W. Wardas, Official Tester.

Bought Six Cars of Feed.

To the Editor:—The following table gives the names and records of the cows in the Eastern Fond du Lac County Cow-Testing Association which produced forty-five pounds of butter fat or over during the thirty-day period ending October 4, 1916. This association bought co-operatively six carloads of feed during the month:

Owner and breed	Age	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
Louis Seibel					
Gr. Hol. ..	4	5-30-16	1305	3.6	47.0
Geo. Vetter					
Gr. Jer.....	7	6-1-16	1246	4.3	53.6
Herman Vetter					
Gr. Hol....	8	4-27-16	1705	4.1	69.9
Gr. Hol....	8	4-3-16	1504	4.3	64.5
Gr. Hol....	9	6-23-16	1163	4.4	51.1
Gr. Hol....	5	5-17-16	1504	3.6	54.1

M. H. Duel, Official Tester.
E. M. Redmond, Secretary.

Ousted Six Boarders.

To the Editor:—The following table gives the names and records of the cows in the Alban and Newhope Cow-Testing Association which produced forty-five pounds of butter fat or over during the thirty-day period ending September 30, 1916. This association sold during the month six unprofitable cows and bought two carloads of feed. Four new silos have been erected and two old barns have been fitted with modern equipment:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. E. Ericksen					
Whiteface, G.G.	8	3-26-16	1111	5.2	57.8
Otto Halvorsen					
Beauty, N.	7	6-28-16	1155	4.6	53.1
Star, N.	12	5-19-16	1005	5.2	52.3
Gunder Dobie					
Native	8	8-22-16	1185	3.9	46.2
Tom Olson					
Gr. Hol.	8	7-29-16	1370	3.4	45.9

M. E. Smith, Official Tester.
M. J. Wrolstad, Secretary.

Tested 889 Cows.

To the Editor:—The following table gives the names and records of cows in the Ontario, Norwalk and Wilton Cow-Testing Association, Monroe county, which produced forty-five pounds of butter fat or over for the thirty-day period ending September 30, 1916. The total number of cows tested was 889:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
F. H. Marvin					
Lu Ella, R. G.	7	8-1-16	825	5.5	45.4
Wm. Brandon					
No. 19, G. G....10		3-14-16	969	5.0	48.3
Elmer Buchalz					
Bally, G. H.....	7	6-15-16	963	4.7	45.1
F. A. Noth					
No. 7, G. H.....	7	5-10-16	1230	4.1	50.4
No. 16, G. H....	3	8-12-16	1212	4.0	48.5

Julius Ansen, Official Tester.
F. H. Marvin, Secretary.

Sold Unprofitable Cow.

To the Editor:—One unprofitable cow was sold by the members of the Mishicot, Manitowoc County Cow-Testing Association in September. The following is a list of cows in the association which produced forty-five pounds of butter fat or over for the thirty-day period ending September 30, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Walter Zander					
Nellie, N.....	5	7-11	1392	4.4	61.24
Oscar Sarnz					
Molly, G. G.....	6	9-1	1236	4.4	54.36
George Wuellner					
Polly, G. H.....	6	3-16	1005	4.7	47.23
Nigger, G. H.....	6	2-18	972	4.8	46.65
Jersey, G. J.....11		4-13	816	5.6	45.69
Robert Hessel					
Reddie, N.....	4	6-2	1113	4.1	45.63
Brownie, N.....	8	5-27	1126	4.0	45.72

E. H. Meineke, Official Tester.

Breeders Banquet at Waukesha.

To the Editor:—The Waukesha County Guernsey Breeders' Association will give a banquet at the Hotel Waukesha, Waukesha, Wisconsin, to Guernsey breeders and friends at 7:30 p. m., October 31st. This is the evening previous to the big two-day Guernsey sale.

The purpose of this banquet is to entertain visitors and to give the Waukesha breeders an opportunity to meet their friends from a distance and get acquainted. We request that those planning to attend please notify F. E. Fox, Waukesha, Wisconsin, secretary of the Waukesha County Guernsey Breeders' Association. It is expected that there will be a large number in attendance. The secretary is anxious to know who will be present so that he may make the necessary reservations.

F. E. Fox, Sec.

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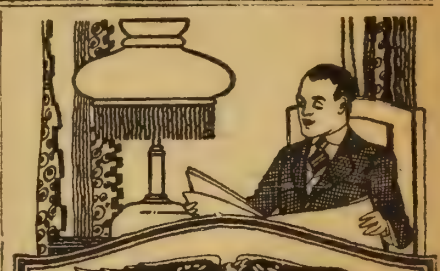

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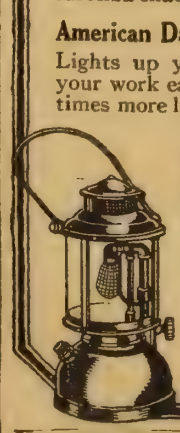

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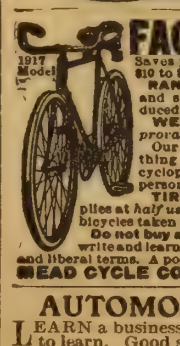

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1916 National Dairy Show

(Continued from page 11.)

—1st Seitz; 2d R. R. Ness on Burnside Maggie Finlayson 5th; 3d Wendover Farm on Harperland's Spicy Lady; 4th D. T. Ness on Edgewood Trim; 5th Iroquois Farm on Burnside Spotty; 6th Wendover Farm on Princess Bright Eyes.

Heifer 18 Months and Under 2 Years (13 shown)—1st Galloway-Messer Farm on Nona Spencer; 2d R. R. Ness on Iroquois Averice; 3d R. R. Ness on Burnside Tipperary Blossom; 4th Wendover Farm on Ryanogue White Silk; 5th Seitz on Cavalier's Rosewood; 6th River Valley Farm on River Valley Molena 2d.

HAEGER'S GRAND CHAMPION HOLSTEIN COW, MINERVA BEETS.

Heifer 1 Year and Under 18 Months (10 shown)—1st J. A. Ness on Envious Lucy 2d; 2d Galloway-Messer Farm on Rose Good Gift; 3d Wendover Farm on Ryanogue Lady Peggy; 4th Seitz on Cavalier's Roseleaf; 5th Bryson on Emeline of Poine Round; 6th Woronoake Heights on Woronoake Delight.

Heifer Calf 6 Months and Under 12 (21 shown)—1st Iroquois Farm on Burnside Randy; 2d Galloway-Messer Farm on Good Gift Nona; 3d Seitz on Cavalier's Lavender; 4th R. R. Ness on Burnside Maggie Finlayson 6th; 5th Wendover Farm on Ryanoque Miss May 2d; 6th Iroquois Farm on Iroquois Fairy Babe.

Heifer Calf Under 6 Months (12 shown)—1st Wendover Farm on Ryanoque Peggy's Lady; 2d Seitz on Cavalier's May Flower; 3d Wendover Farm on Wendover Farm Spicy Lady; 4th Iroquois Farm on Iroquois Brown Bess; 5th Seitz on Cavalier's Lady Bountiful; 6th J. H. Ness on Envious Jane.

Cow With Official Record (7 shown)—1st Wendover Farm on Imp. Castleman's Biddy 2d; 2d Woronoake Heights on Imp. Lochfergus Ruby; 3d Stevens on Isaleigh Rosetta 2d; 4th J. A. Ness on Lady Mayflower of Maplegrove; 5th Woronoake Heights on Imp. Lessnessock Madeline; 6th Wendover Farm on Imp. Hobsland Miss May.

Cow With Official Record Begun Under 5 Years (8 shown)—1st Wendover Farm on Imp. Castleman's Biddy 2d; 2d Elder on Mapleleaf Jean; 3d Seitz on Imp. Kilnford Belle 4th; 4th Woronoake Heights on Springhill Pansy 2d; 5th Wendover Farm on Rooney's Annie's Granddaughter; 6th Densmore on Alice of Fayre.

Exhibitor's Herd—1st Seitz; 2d Iroquois Farm; 3d J. A. Ness; 4th River Valley Farm; 5th Woronoake Heights; 6th Stevens.

Young Herd—1st Galloway-Messer Farm; 2d Seitz; 3d R. R. Ness; 4th River Valley Farm; 5th J. A. Ness; 6th Densmore.

Breeder's Calf Herd—1st Seitz; 2d R. R. Ness; 3d Dunsmore; 4th J. A. Ness; 5th River Valley Stock Farm.

Get of Sire—1st Seitz on get of Bargenock Gay Cavalier; 2d R. R. Ness on get of Hobsland Masterpiece; 3d Galloway-Messer Farm on get of Auchenbrain Good Gift; 4th Seitz on get of Bargenock Gay Cavalier; 5th J. A. Ness on get of Barcheskie Copestone; 6th Iroquois Farm on get of Charming Pete.

Produce of Cow—1st Galloway-Messer Farm on produce of Nona 2d of Avon; 2d Seitz; 3d Wendover Farm on produce of Imp. Broomberry Lady Peggy; 4th R. R. Ness on produce of Hobsland Barbara; 5th Iroquois Farm; 6th R. R. Ness on produce of Miss Lillian of Barcheskie.

Advanced Registry Cow With 2 of Progeny—1st Wendover Farm on Hobsland Miss May; 2d Seitz on Killford Belle 4th; 3d R. R. Ness on Hobsland Barbara 5th; 4th J. A. Ness on Lady Mayflower of Maplegrove; 5th River Valley Farm on Southwick Kirsty; 6th Dunsmore on Flora Hallon.

Dairy Herd of 5 Cows—1st Iroquois Farm; 2d Seitz; 3d J. A. Ness; 4th Woronoake Heights; 5th River Valley Farm; 6th Dunsmore.

Senior Champion Bull—J. A. Ness on Strathglass Gold Chunk (Imp.)

Junior Champion Bull—Seitz on Cavalier's Lord Rosebery.

Senior Champion Cow—Iroquois Farm on Auchenbrain Hattie 6th.

Junior Champion Cow—Galloway-Messer Farm on Nona Spencer.

Grand Champion Bull—J. A. Ness on Strathglass Gold Chink (Imp.)

SEITZ'S BARGENOCK'S RISING STAR, SECOND-PRIZE AGED AYRSHIRE BULL.

Grand Champion Cow—Iroquois Farm on Auchenbrain Hattie 6th.

Assembled Herd of 12 Head—1st Seitz.

BROWN SWISS.

The work of Judge Frandsen in the Brown Swiss ring last week will do more to hasten the day when the real dairy type will be fixed within this breed than any event in recent years. He persistently demanded the "form" that has been demonstrated over and over again in other breeds to be associated with "function," with the result that the winners in the female classes were animals of marked dairy character. Ayers carried off the purples in the bull classes, winning the grand championship bull prize on Merney's 2d Son, a grand champion at Iowa and Minnesota State Fairs, also at the Southwest Dairy Show and the Dairy Cattle Congress held at Waterloo, Iowa. Hull captured both championships in the cow classes, winning the grand championship with his beautiful senior calf, Vera of Lakewood. This radically reversed the rating made two weeks before by Judge W. A. McKerrow, who placed the Ayers entries, Jane C. and Columbus Merney, above the Hull heifer. Judge Frandsen liked the Hull heifer from the beginning and gave proof of his admiration for her when he placed her above the two-year-old heifer, Reuben's Ruth, when they met for final honors. The uniformity of the Ayers type, taking the whole herd through, resulted in capturing the blue on aged as well as young herd.

Exhibitors: H. W. Ayers, Honey Creek, Wis.; Bonnie Brook Farm, South Sudbury, Mass.; Foxhill Farm, Westwood, Mass.; Geo. W. Harris & Sons, Wethersfield, Conn.; Hull Bros., Painsville, Ohio; T. N. Vail, Lyndonville, Vt.

Judge, Prof. J. H. Frandsen, Lincoln, Neb.

Bull 3 Years or Over (6 shown)—1st Ayers on Merney's 2d Son; 2d Hull on Mercedes De Kololo; 3d Vail on Tom Phylis; 4th Fox Hill Farm on Clarence of Harris Hill; 5th Harris on Oscar of Harris Hill.

Bull 2 Years and Under 3 (3 shown)—1st Hull on Tom of Walhalla; 2d Foxhill Farm on Splendor of Hinton Way; 3d Harris on Zerelda's Son.

Bull 1 Year and Under 2 (5 shown)—1st Ayers on Merney's Nephew; 2d Hull on McAvoy H.; 3d Vail on Vettendorf; 4th Bonnie Brook Farm on Doeskin; 5th Bonnie Brook Farm on Wachusett.

Bull Calf 6 Months and Under 12 (4 shown)—1st Hull on Edgar H.; 2d Harris; 3d Ayers on Toney; 4th Vail on Trius; 5th Vail on Thurgen.

Bull Calf Under 6 Months (6 shown)—1st Ayers on Bobbie; 2d Bonnie Brook Farm on Monadnock; 3d Harris; 4th Hull on Milo H.; 5th Vail on Tom Phylis.

Cow 5 Years or Over (17 shown)—1st Hull on Lottie G. D.; 2d Ayers on Browney B.; 3d Hull on Swiss Valley Girl 7th; 4th Harris on Actress 4th; 5th Harris on Zerelda.

Cow 3 Years and Under 5 (6 shown)—1st Hull on Rhona of Lakeview; 2d Hull on Innis of Lakeview; 3d Vail on Geneva of Speedwell; 4th Ayers on Zelia; 5th Harris on Mawnantuck Girl 3d.

Heifer 2 Years and Under 3 (8 shown)—1st Hull on Rueben's Ruth; 2d Hull on Ruth Wilson 2d; 3d Ayers on Zell's Merney; 4th Vail on Vittiken; 5th Vail on Winan.

Heifer 18 Months and Under 2 Years (7 shown)—1st Hull on Swiss Valley Girl 9th; 2d Ayers on Master's Cuma; 3d Ayers on Master's Alpha; 4th Hull on Bessie May 2d; 5th Harris on Colette.

Heifer 1 Year and Under 18 Months (8 shown)—1st Hull on Reuben's Ruth 3d; 2d Bonnie Brook Farm on Bernice of Bonnie Brook; 3d Hull on Georgia Maid; 4th Vail on Phylis Tratzen; 5th Bonnie Brook Farm on Irma of Bonnie Brook.

Heifer Calf 6 Months and Under 12 (9 shown)—1st Hull on Vera of Lakeview; 2d Ayers on Columbus Browney; 3d Ayers on June C.; 4th Harris; 5th Hull on Olive of Lakeview.

Heifer Calf Under 6 Months (9 shown)—1st Ayers on Columbus Merney; 2d Ayers on Queen of Campus; 3d Hull on Swiss Valley Girl 10th; 4th Hull on Cressie of Lakeview.

Cow With Official Record, Ring Placing (6 shown)—1st Hull on Lottie G. D.; 2d Vail on Nell W.; 3d Harris on Actress 4th; 4th Harris on Zerelda; 5th Harris on Mawnantuck Girl.

Cow With Official record Begun at 2 Years (6 shown)—1st Vail on Kunary; 2d Hull on Swiss Valley Girl 7th; 3d Hull on Innis of Lakewood; 4th Vail on Princess of Speedwell; 5th Hull on Rhona of Lakeview.

Exhibitor's Herd—1st Hull; 2d Ayers; 3d Vail.

Young Herd—1st Hull; 2d Ayers; 3d Vail.

Breeders Calf Herd—1st Hull; 2d Ayers; 3d Vail.

Get of Sire—1st Hull on get of Reuben; 2d Ayers on get of Columbus; 3d Hull on get of McAvoy of Lakeview; 4th Vail on get of Speedwell.

Produce of 1 Cow—1st Ayers on produce of Merney; 2d Hull on produce of Ruth H. 4th; 3d Hull on produce of Swiss Valley Girl; 4th Vail on produce of Nell W.

Senior Champion Bull—Ayers on Merney's 2d Son.

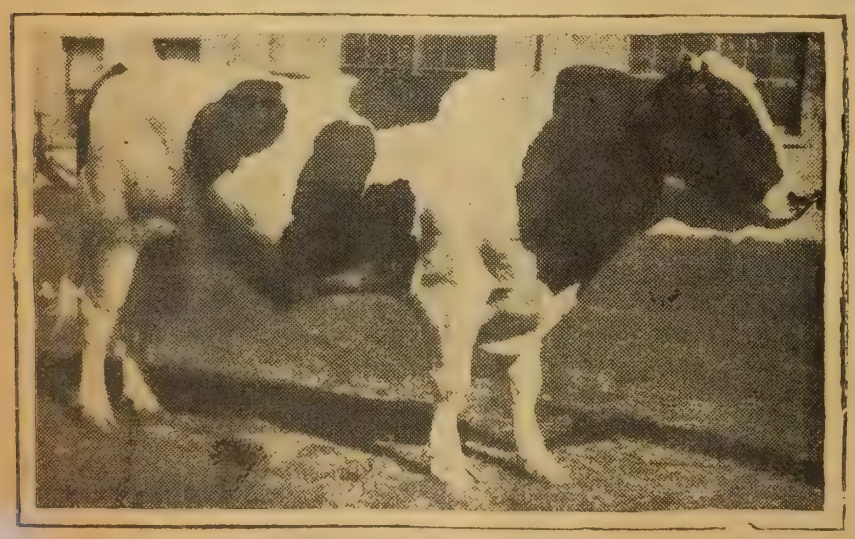
Junior Champion Bull—Ayers on Merney's Nephew.

Senior Champion Cow—Hull on Reuben's Ruth.

Junior Champion Cow—Hull on Vera of Lakeview.

Grand Champion Bull—Ayers on Merney's 2d Son.

Grand Champion Cow—Hull on Vera of Lakeview.



GALLOWAY-MESSER FARM'S KING SEGIS JOHANNA, FIRST-PRIZE TWO-YEAR-OLD HOLSTEIN BULL.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Lame Cows.

About four weeks ago one of my five-year-old cows became lame and now one of my three-year-old cows is affected the same way. They take short steps as if they were stiff, but the lameness seems to be in their shoulders. They are running on wild pasture all the time. They lie down a great deal.

It would be impossible to make a diagnosis from the few symptoms given. You had better have these cows examined by a veterinarian before more become affected.

Garget—Congestion of the Udder.

I should like to know more about garget in cows, the cause and cure. Also if one is infected will the whole herd be likely to contract the same by running together.

In true garget, which is a congestion of the udder usually following soon after calving, the application of camphorated ointment to the affected parts and with considerable massaging usually brings about recovery. Simple garget is not spread from one to the other. Sometimes there are lumpy conditions of the milk found and this comes from some unhealthy condition of the udder.

Bog Spavin.

I have a horse that was kicked about six months ago on the hind leg at the lower part of the hock joint right where the spavin usually comes. The place has healed up but the joint seems to be larger than the other, so when you stand directly in front of the horse it looks as though he has large bone spavin. It is soft. What can I do for it or can anything be done?

It is very probable your horse has a bog spavin brought about through injury. If the enlargement does not inconvenience the animal any it might do well to leave it alone. However, if it seems to get larger you might get results by use of the following blister: Take pulverized cantharides, two drams, and mix with vaseline or lard, one ounce. There is enough to blister two or three times, according to the size of the bog. Rub in well and in three days grease. Repeat the blister in a few weeks as soon as the skin is healing up nicely. It may be necessary to blister several times before the enlargement is reduced.

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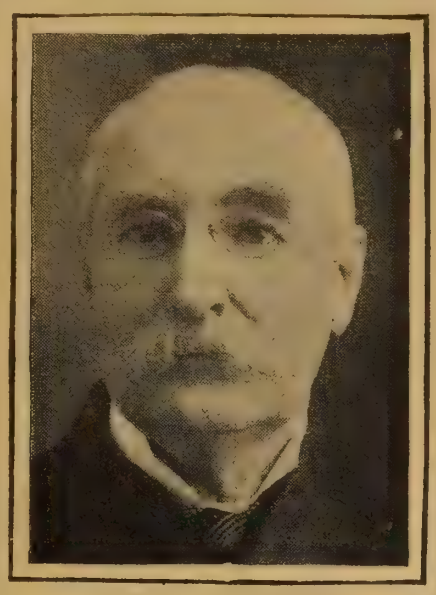
DEATH OF EBEN E. REXFORD

Wisconsin Song Writer and Author on Floral and Garden Topics Dies of Typhoid Fever in Hospital at Green Bay.

EBEN E. PEXFORD, Shiocton, Wisconsin, well-known throughout the country as a song writer and contributor to floral and horticultural magazines, ied October 18th of typhoid fever in ie hospital at Green Bay. Mr. Rexord was best known because of his ong, "Silver Threads Among The old." He was also author of "Only Pansy Blossom," and other songs ot so well known. He lived in the tmosphere of music and flowers. He as organist at a church in Shiocton r twenty-five years. Mr. Rexford's avorite flower was the gladiolus. He as an expert on floriculture and garening, and his views on these subcts were regarded as authority. mong the works of his pen may be cluded the following: "Brother and ove," "A Poem of the War," "Home loriculture," "Grandmother's Garen," "Flowers and How to Grow hem," "Four Seasons in a Garden," Indoor Gardening," "Amateur Garening," A book of poems entitled, Pansy and Rosemary." The deceased as a member of the Author's Club Boston and the Press Club of Chiago, and at the time of his death ad two books in press, entitled, "A C's of Vegetable Gardening" and The Makings of a Home."

While Mr. Rexford was widely nown throughout the country, he ever courted popular favor and was rely seen in public outside of his ome village. A year ago there was me talk of the University of Wisnsin recognizing him as a distinuished citizen of the state. On account of the fact that Mr. Rexford was nable to be present at the recogni-on services at Madison, the intent of ie University authorities was never ade public. Mr. Rexford was in the East, looking after the publication of a book at the time.

Mr. Rexford was born in Johnsburg, N. Y., July 16, 1848. He was educated at Lawrence University, Appleton, Wisconsin, and was married in 1890 to Mrs. Harriett Marsh. The articles and books which he wrote on flowers and gardening were eminently practical, and the outgrowth of his rich experiences at his own home place. He was invariably spoken of as the author of "Silver Threads Among the Gold," and this rare contribution to American ballads was his chief bid to fame.



EBEN E. REXFORD.
Author of "Sil er Threads Among the Gold," a Wisconsin horticulturist who died last week.

EBEN E. REXFORD, SONG WRITER AND LOVER OF FLOWERS, LIVED IN THIS HOUSE AT SHIOCTON, WIS.

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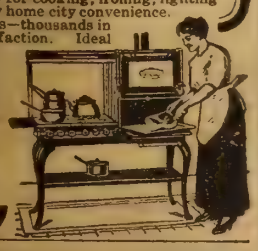

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Wean Spring Foals Before Winter Comes.

Now is the time to wean spring foals.

Allowing them to roam with their mothers on frosty nights, when pastures are short and the natural milk supply is limited, puts young foals in poor condition to make good growth during the winter.

"It is best to separate the mare and foal at once and place the youngster in a comfortable box stall, where it can be handled and halter broken," says J. G. Fuller, of the Wisconsin Horse Breeders' Association.

"Where there is but one foal it may be advisable, just prior to weaning, to train it by tying it several times for an hour or two beside its mother in a double stall. But in any event, when the foal is once removed from the mare, it is best to keep them separate until the foal is entirely weaned. The mare can be 'dried up' easily by hand, feed being given sparingly during the process.

"When there are two foals of about the same age, weaning is an easier matter. They can be handled together and soon become used to the halter after having been tied for several times, and can be led about with little trouble. Small amounts of a mixed grain ration, fed four or five times daily, may be given them. Grain consisting of oats and bran, four parts of the former to one of the latter, makes a satisfactory ration for foals at this stage. Good quality alfalfa or clover hay is preferable for roughage. As foals drink frequently, a supply of fresh water within easy reach at all times is essential."

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Simple Tests For Textiles

It is most important these days for the buyer of any material to be able to discover any adulteration, artificial dressing or misrepresentation in the goods she wishes to purchase. There are a great many tests that may be used to determine the genuineness and value of materials, but only a few that are practical for the home.

If the buyer is not absolutely sure that the material in question is as represented it is best to ask for a small sample and apply some of the home tests before making the purchase.

For instance, to ascertain if a material is all linen and not mixed with cotton, apply a drop of water. The moisture spreads rapidly on linen, but will remain unabsorbed on cotton for some time. However, this is not always a safe test, as cotton and linen are often heavily sized with dressing which prevents the water from being absorbed. Another test for cotton and linen is a drop of glycerine. Linen will become transparent, but cotton will not be affected. Crushing in the hands will show the difference between cotton and linen, as linen wrinkles more than cotton. Sizing may be discovered by rubbing the materials between the hands to see if the dressing will come out. Washing, also, will remove the dressing and reveal the true nature of the material.

Cotton and wool mixtures when moistened wrinkle more than pure wool materials.

In examining materials it is well to know that cotton fibers are short with fuzzy ends, while linen fibers are long and have even ends. Wool fibers are short, kinky and stiff. Silk fibers are long, straight and lustrous.

The nature of the material may also be ascertained by burning a small sample. Cotton burns quickly with flame. Linen burns in the same way, but does not catch so readily, as it has less oil in the fiber and less air in the woven cloth. Wool burns slowly, giving off an odor like burnt feathers and leaving a gummy residue. Silk burns more slowly than wool and with less odor, and leaves a crisp ash.

Cut Shoe Bill.

With a little thought and care of shoes the family shoe bill may be reduced at least one-third. The present-day liquid polish used on shoes is apt to crack the leather and ruin it. Most liquid dressings have a certain amount of acid and this destroys the oils in the leather. If one must use liquid dressings once in two weeks wash off every bit of dressing from the shoes and apply a liberal coating of castor oil and set the shoes in an airy place for two days. The elasticity of the leather will be renewed and the shoes become soft and pliable. Wipe shoes carefully before applying the next coat of liquid dressing.

Hygiene of the Ears.

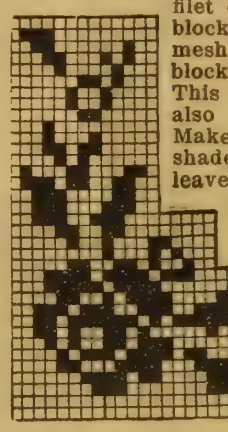
Earache in children is best treated by using hot water. This not only gives the most prompt relief from pain but is also one of the best remedies employed to stop inflammation and prevent a running ear. Fill the ear with water as hot as it can be borne, using a common medicine dropper. Next remove a dropperful of water and replace it with a dropperful of hot water, pressing the bulb between the thumb and finger three or four times to mix thoroughly. Keep this up for twenty minutes and repeat every two to four hours as needed to control the pain. In case the pain continues after two or three treatments, a physician should be consulted. Boils in the ear are treated in the same manner.

Eczema of the external portion of the ear is usually relieved by the application of zinc oxide ointment, keeping the surface covered continuously. This can be procured under this name from any druggist. Children with sensitive ears should protect them by wearing a little plug of cotton in the ear when out of doors in cold or windy weather, especially if driving in an open vehicle.

Frozen or frosted ears should first be thawed out by very cold water or snow and then covered by olive oil or vaseline. In case an insect gets into the ear, drop a few drops of sweet oil (olive oil) in the canal and then wash out gently with warm water, using a medicine dropper. The insect will usually float out. A foreign body should be treated in the same way, but if it does not come out easily a physician should be seen at once. Under no circumstances should the removal be attempted by means of forceps or other instruments, as the foreign body is very apt to be pushed down so far in the canal that it will be very difficult to remove.

Rose Design For Doily.

The accompanying illustration shows a block pattern of corner for doily in filet crochet, the white blocks representing the mesh and the black blocks the solid crochet. This is a pretty design also for cross-stitch. Make the rose in two shades of pink and the leaves in green and dull brown. Done in cross-stitch on linen the pattern is



suitable for table runners or dresser scarfs.

Terms Used in Recipes and Menus.

Anglaise (al) English style. Something plain roasted or plain boiled.
Au Gratin. Covered with sauce, bread-crumbs, etc., and browned in the oven or under a salamander.
Aspic. Savory jelly.
Blanc-Mange. A white, sweet-food. A sweet cream set in a mold.
Bouillon. A plain, clear soup. Unclarified beef broth.
Braise or Braising. A slow cooking process. Meat cooked in a closely covered stewpan or brasiere to prevent evaporation so that the meat thus cooked retains not only its own juices but also those of the articles added for flavoring.
Caramel. Burnt sugar. A substance made by boiling sugar to a dark brown.
Compote. Usually applied to a delicately prepared dish of stewed fruit, or fruits and jelly.
Consomme. Clear, strong gravy soup. The clarified liquor in which meat or poultry has been boiled.
Croutons. Thin slices of bread cut into shapes and fried; used for garnishing dishes and in soups.
Escallops. Thin, round steaks of veal called "collops."
Eclair. A French pastry filled with cream.
Emince. Finely sliced or shred.
Filet. The under cut of a loin of beef, mutton, veal, pork and game.
Foie Gras. Fat goose liver.
Fricassee. A white stew of chicken or veal.
Forcemeat. Meat for stuffing.
Fritter, Beignets. Anything dipped in batter, crumbed or egged and fried.
Glace. Frozen, iced.
Gumbo. The American term for okra soup or other preparations from okra.
Mayonnaise. A cold salad sauce, or dressing.
Souffle. Literally "puffed up." A very light baked or steamed pudding, an omelet.
Tutti-Frutti. A mixture of various kinds of fruits or cooked vegetables.

Tells How to Cook Kahl.

To the Editor:—In answer to the lady who would like to know how to cook kahl I will tell her how I cook it. First wash the kahl well, cut fine and boil with a small piece of pork until the kahl is tender. Then add a little oat meal or flour to make a gravy. Be sure not to use too much water. Salt to taste. If onion is liked, a little may be added. Kahl also may be put up for winter use the same as other vegetables. Miss M. B.

Household Hints.

To prevent pie crust puffing up in the middle when baked, prick in several places with a fork before putting in the oven.

A basin of cold water placed in an oven will soon lower the temperature.

To clean enameled bathtubs rub with salt moistened with lemon juice. Then wash with hot water and soapsuds.

Sprinkle carpets before sweeping with salt. It keeps the dust down effectively and the carpets will look fresher. Salt also prevents moths attacking carpets.

Oil stains can be removed from linen and cotton goods by rubbing the material on both sides with talcum powder. The powder should be left on for a few hours and then brushed off.

To clean wicker chairs wash with salt and water, then rub as dry as possible and place in the open air to finish drying.

Fresh grape stains may be removed from white goods by slowly pouring boiling water through the stain.

Cheese Recipes.

Cheese Squares.—Out of a pint of milk take enough to wet a quarter of a cup each of flour and cornstarch, seasoned with a half teaspoon each of salt and paprika. Add this to the remainder of the milk, scalded in a double boiler. Stir constantly until the mixture thickens, then occasionally for twenty minutes. Add the yolks of two eggs beaten up with a quarter cup of creamed butter and a half cup of grated cheese. As soon as these are cooked turn out into a shallow pan, and when cold cut in shapes. Lay these in a baking pan apart from each other, cover thickly with grated cheese, reheat and brown in a quick oven.

Cheese Timbales.—One level tablespoon butter, one level tablespoon of flour, one-half cup of milk, one-half level teaspoon of salt, one-fourth level teaspoon of paprika, one-fourth cup fresh soft bread crumbs, one-fourth cup of grated American cheese, one egg. Melt the butter, add the flour, salt and paprika. Mix well, gradually add the milk, cheese and bread crumbs. Cook three minutes, and then stir in the egg, well beaten. Butter six timbale molds well. Place one-half a pimento-stuffed olive in the bottom. Add the mixture. Place the cups in a pan of hot water and cook fifteen minutes in a moderate oven. Allow to stand three minutes, and remove from the molds. Serve hot with creamed peas.

Cheese Custard.—Remove the crusts from half a loaf of bread and cut in slices. Cut these in one-inch squares and put a layer in a buttered baking dish. Sprinkle thin sliced cheese over; add a dash each of salt and paprika. Alternate layers of bread and cheese, using one cupful of cheese and seasoning as directed above. Beat two eggs, add one pint milk and pour the mixture over the bread and cheese. Bake about one-half hour in a moderate oven; unless oven is very moderate it would be well to set this in a pan of hot water.

Nut and Cheese Roast.—One cup grated cheese, one cup chopped English walnuts, one cup bread crumbs, two tablespoonfuls chopped onions, one tablespoonful butter, juice of one-half lemon, salt and pepper. Cook onion in butter and a little water until tender. Mix other ingredients and moisten with water in which onion has been soaked. Put into shallow water baking dish and brown in oven.

Cheese Souffle.—Two tablespoonfuls butter, three tablespoonfuls flour, one-half cup milk, one-half teaspoonful salt, one-half cup grated cheese, three eggs, cayenne. Mix butter, flour and milk as for white sauce, remove from fire, add salt, cayenne, cheese and well-beaten egg whites. Put into buttered baking dish and bake in slow oven about twenty minutes. This should be served immediately from oven.

Creamed Cheese and Eggs.—One-half teaspoonful salt, three hard boiled eggs, one tablespoonful flour, one cup milk, speck of cayenne, one-fourth cup grated cheese, bread crumbs. Make a thin white sauce with the flour, milk and seasonings, add the cheese and stir until melted. Add chopped eggs to this sauce. Put into a buttered baking dish, cover with buttered crumbs and bake in a moderate oven until brown.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer Madison, Wisconsin.

Has She a Twin?

Dear Young Folks:—I have been reading the Young Folks' page and think it very interesting. I am eleven years old. My birthday is the 2d of January. Have I a twin? I am taking music lessons on the organ. We have a car and I take lots of joy rides.

I live three and one-half miles from town. The people hold a fair there. They call it "The Community Fair."

I have one and one-half miles to go to school and I am in the fourth grade.

As my letter is getting rather long I will close for this time, hoping to see this in print. —Grace.

A Visit to the City.

Dear Young Folks:—If you will allow me a little space, would like to join the Young Folks' page. I am ten years old. I go to school every day. There are four of us in the family. I have one sister.

I made a visit to the city last fall. My uncle took me around the city where I saw many sights. He also took me through the park, where I saw many animals and birds.

I am the oldest child in the family and I have many pets. We have a piano in our home and I have learned to play a few pieces on it.

I would like an answer to my riddle from some of the young people.

A boy said to his sister, "I saw something down town that would tickle you." "Oh," she said, "was it a monkey?" "No." "Was it a dancing bear?" "No, it was a ————." What was it? —Alice.

Is Going to Buy an Organ.

Dear Young Folks:—I am a girl nearly fourteen years old and I want to send a letter to the Young Folks' page. I have read all of your letters. I am in the eighth grade and I like to go to school very much.

I live on an eighty-acre farm. I have a cow and a calf of my own. The cow's name is Beauty and the calf's name is Buster. I want to see the calf and buy an organ. I have seventy chickens of my own, too, and when I get the organ I will sell them and take music lessons.

We live four miles from town. I like to go to town, and do so every time I get a chance.

I have four brothers and two sisters and I think a great deal of them. We all love to play out of doors together.

I help my mother just as much as I can. I love to cook and do housework. —Jessie.

Last Chance Prices

THE cost of production of all magazines has been very seriously affected by the increase in cost of all materials, such as paper, ink, etc., and because of this many magazines are forced to increase their prices.

Owing to the fact that we have special arrangements with all magazines, we are in a position to make some special Last Chance, money-saving offers.

PICTORIAL REVIEW. After November 25, 1916, Pictorial Review will be included in all clubs at $1.50. Until that date we are able to offer the following clubs at prices which will never again exist.

The Housewife ...$ .50 Pictorial Review... 1.50 McCall's Magazine .50	All for $2.00
The Housewife ...$ .50 Pictorial Review... 1.50 Ladies' World .... 1.00 People's Home Journal ... .50	All for $2.25
The Housewife ...$ .50 Pictorial Review... 1.50 Modern Priscilla .. 1.00	All for $2.30
The Housewife ...$ .50 Pictorial Review... 1.50 Etude (Musical)... 1.50	All for $2.80
The Housewife ...$ .50 Pictorial Review... 1.50 Woman's Home Companion.. 1.50	All for $2.90
The Housewife ...$ .50 Pictorial Review... 1.50 Youth's Companion..... 2.00	All for $3.40

THE CHRISTIAN HERALD. After November 10, 1916, the price of the Christian Herald will advance to $2.00 a year. The Christian Herald is a non-denominational, religious weekly publication, well illustrated, and containing news of current events. The advance in the subscription price from $1.50 to $2.00 a year to the subscriber makes these offers particularly attractive at this time. Remember, the prices all advance November 10, 1916.

The Housewife ...$ .50 Christian Herald .. 1.50 McCall's Magazine .50	All for $1.75
The Housewife ...$ .50 Christian Herald .. 1.50 Ladies' World 1.00	All for $2.10
The Housewife ...$ .50 Christian Herald .. 1.50 Little Folks..... 1.00	All for $2.10
The Housewife ...$ .50 Christian Herald .. 1.50 Mother'sMagazine 1.50	All for $2.60
The Housewife ...$ .50 Christian Herald 1.50 Etude (Musical)... 1.50	All for $2.75
The Housewife ...$ .50 Christian Herald .. 1.50 Woman's Home Companion.. 1.50	All for $2.80

THE AMERICAN BOY. The subscription price of the American Boy, the biggest and one of the livest boys' magazines in America, will advance from $1.00 to $1.50 a year on November 10, 1916. The following special combination should be taken advantage of by our readers if they are anxious to save money.

The Housewife ...$ .50 American Boy.... 1.00 Today's Magazine .50	All for $1.25
The Housewife ...$ .50 American Boy.... 1.00 Little Folks..... 1.00	All for $1.60
The Housewife ...$ .50 American Boy.... 1.00 Modern Priscilla .. 1.00	All for $1.75
The Housewife ...$ .50 American Boy.... 1.00 Mother'sMagazine 1.50	All for $2.00
The Housewife ...$ .50 American Boy.... 1.00 Etude (Musical)... 1.50	All for $2.15
The Housewife ...$ .50 American Boy.... 1.00 Youth's Companion..... 2.00	All for $2.75

Two Special Offers for this Season

The Housewife ...$ .50 Ladies' World .... 1.00 People's Home Journal ... .50	All for $1.00 Save $1.
The Housewife ...$ .50 Today's Magazine .50 McCall's Magazine .50	All for $1.00

If you wish to take advantage of any of these offers and your subscription to any of the magazines offered above has not as yet expired, now is a good time to renew them, as we will have your subscription extended for one year from the expiration of your present subscription.

Remit by P. O. Money Order or Registered Letter and address:

THE HOUSEWIFE 30 IRVING PLACE NEW YORK

International Sunday School Lesson.

Lesson for October 29, 1913.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

The Voyage.

LESSON TEXT—Act 27:1-38.

GOLDEN TEXT—Commit thy way unto Jehovah; trust also in him, and he will bring it to pass.—Ps. 37:5.

Paul sailed from Caesarea August, A. D. 59 (Ramsey), a few days after his address before Agrippa. He reached Malta about November 15th. Paul knew how to meet mobs, but none of his adventures are more outstanding than the one we are studying today. Luke, his physician, was a companion, and the historian, Josephus, states that on board the ship there were more than 600 people traveling with Paul. Paul was a man of distinction, a Roman citizen. He had his own hired house in Rome. Aristarchus may possibly have been his servant to furnish comfort for the journey. Ramsey believes Paul had received hereditary property, thus making him a Roman citizen of rank, of learning and of standing financially.

I. Fair Weather and Contrary Winds (vv. 1-12). Sidon was about seventy miles north of Caesarea on the coast of Palestine. Here Paul received liberty to go ashore and visit his Christian friends. Myra is in Asia Minor. It requires fourteen days to reach this point from Sidon, a distance of about 400 miles. Here, instead of going up the Aegean sea route, often used in going to Rome, the centurion found a grain ship bound from Alexandria to Italy, and put his prisoners on board. September 1st they started for Italy. The direct course would have been westward, but the wind was contrary, and the progress was slow. On the 23d they were opposite Cnidus, the southwest point of Asia Minor, 130 miles from Myra. September 25th they entered the harbor of Fair Haven, near the middle of the south shore of the island of Crete. The fast day, October 5th, the day of the great atonement, was observed in this place. The question of going farther was a debatable one, yet the commander persisted, and about the 10th of October they sailed for Fair Haven.

II. The Hurricane (vv. 13-20). Taking advantage of a gentle wind they put out of Fair Haven, and almost immediately encountered the hurricane. It was perhaps hard for Paul during those fourteen days to discern the wise, gentle hand of God. (Jonah 1-4). God's most faithful servants do not always find smooth sailing. (Phil. 4:6, 7; Isaiah 26:3; John 16:33), but they may, no matter how fiercely tempest tossed, know that God has not ceased to look upon them with favor. Sometimes the best thing for us to do, when thus tempest tossed, is "to lighten the ship" (v. 18).

III. The Message of Cheer: "I Believe God" (vv. 20-26). Neither sun nor stars having shone for many days, and all hope that any should be saved seemingly taken away, yet God is able to save in the darkness as well as in the sunshine, in the tempest as well as in the calm, and there was in that boat one man at least whose hope was not gone, for God had said to him, "Thou must bear witness at Rome also" (23:11). Paul's message of cheer in the midst of this despair and after they had been so long without food, immediately stamped him as a leader of wisdom and power.

Paul could make this promise because "an angel of God whose I am and whom I serve" had come to him and assured him that God would redeem the promise made two years before. This implies that Paul had given himself to prayer. Observe how one godly man can save many ungodly men (Gen. 18:22-33). God's vision came to Paul, but Paul used it for the comfort and cheer of the whole ship's company (II Cor. 1-4). A modern illustration of a similar experience was that of Mr. Moody and General Howard, returning from Europe on the steamship Spree in 1892.

General Howard relates that Mr. Moody did a great deal to cheer the passengers, by both his words and his actions, during those days of stress and storm. The darker and stormier the night, the more likely are the angels of God to appear if we are indeed his (v. 23: Cf. Ch. 18:9-23:11).

Sometimes these angels stand beside us and we do not see them, we are taken up with the darkness and the howling of the storm. It is a great thing to be able to look up to the infinite God and say, "I am his." To make this statement intelligently, and with deep realization of its meaning will give significance and solemnity to all.

IV. Paul, the Life Saver (vv. 27-37). Paul did not stop with simply saying that God was his, but went on to say, "Whom also I serve." Many say they are God's but do not prove it by their lives of service. Paul loved to think and speak of himself as the servant of God (Rom. 1:9; II Tim. 1:3; Titus 1:1). Some of the sailors thought to launch the boat, leaving the passengers to their fate.

All the hurricanes that ever struck the sea or the ships of the sea could not prevent the fulfillment of God's promises, and Paul fully accepted the significance of God's word "fear not."

Our Fashion Department.

All Patterns, 10 Cents Each.

THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10c each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want, and inclose 10c for each number. We agree to fill all orders promptly and guarantee safe delivery.

Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1636—Ladies' dress. The skirt is a three-piece model. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 44-inch material for a 36-inch size.

1496—Ladies' house dress with reversible closing. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 44-inch material for a 36-inch size.

1749—A stylish waist model, with or without chemisette and peplum and with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3½ yards of 36-inch material for a 36-inch size. Without peplum, ⅝ yard less.

1591—Ladies' night dress, perforated for sack length and short sleeve. It is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 4 yards of 27-inch material for the sack style and 7 yards for the gown style for a 36-inch size.

1857—Ladies' corset cover and drawers. The pattern is cut in 3 sizes: Small, medium and large. It requires 3¾ yards of 36-inch material for a medium size.

1878—Girls' one-piece dress, with or without shield. The pattern is cut in

4 sizes: 6, 8, 10 and 12 years. It requires 3⅛ yards of 44-inch material for a 6-year size.

1866—Ladies' dress, with removable chemisette. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6⅜ yards of 44-inch material for a 36-inch size.

1862—Juniors' skirt and blouse. The pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 3⅛ yards of 36-inch material for the waist, and 2⅞ yards for the skirt, for a 16-year size.

1858 Waist-1853 Skirt.—A dress of dignified simplicity, comprising ladies' waist pattern 1858 and ladies' skirt 1853. The waist pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. To make the entire dress for a medium size will require 6½ yards of 36-inch material. Two separate patterns, 10 cents for each pattern.

1609—Girls' dress, with or without bolero, with sleeve in either of two lengths. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3⅝ yards of 44-inch material for a 6-year size.

1865—Boy's Russian coat suit, with straight trousers. The pattern is cut in four sizes: 3, 4, 5 and 6 years. It requires 3⅜ yards of 44-inch material for a 5-year size.

1850—Ladies' yoke apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 5¼ yards of 36-inch material for a medium size.

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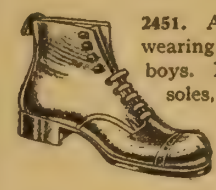
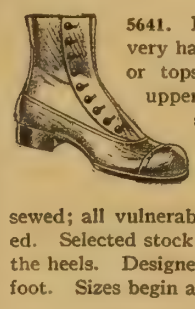


2451. A sturdy, long-wearing, dressy shoe for boys. Dull calf, heavy soles, durable inner soles and counters—real economy if you consider the cost "by the year, not by the pair."



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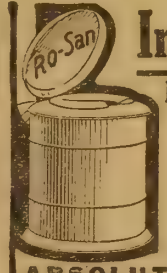

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FOR A BIG CORN CROP IN 1917.

Wisconsin Experiment Association Urges Careful Attention to the Curing of Seed Corn—There Are Better Ways Than the Old-Fashioned Ones.

PROSPECTS for a profitable corn crop in Wisconsin next season depend very largely now on the curing of the seed that has already been selected. Many Wisconsin farmers have gathered two and three times the amount of seed

Seed corn tree, six feet long and eight inches through, with nails two and one-half inches apart, will cure corn to plant fifteen acres.

they expect to use next year in order to be prepared for any emergency such as confronted them this past year and the care in curing now will do much towards supplying seed that will have strong germinating qualities when it is tested for planting next spring.

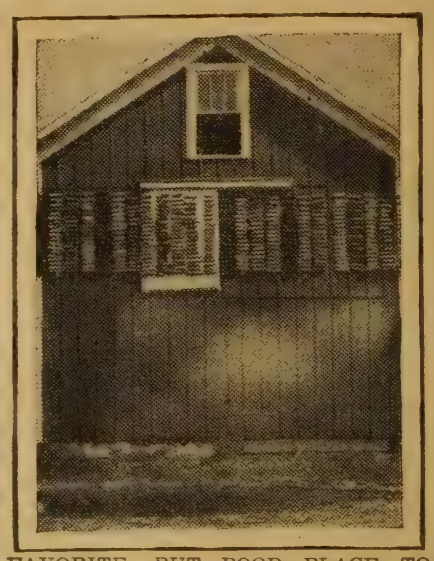
Most of the seed has been selected. This operation should be concluded in Wisconsin before the heavy frosts, during September. There may be some corn in the cribs that has not been exposed to the heavy frosts that have visited the entire state to date and the farmer who failed to select his seed from the field should go over his crib and select the ears he considers best suited for seed and then hang them properly for drying. Only those ears should be retained for seed which are of a medium size, straight of row and uniform of kernel, and in going over the ears for drying, whether field or crib selected, all imperfect ears should be discarded. All sections of the state secured ripe corn this year and with the proper care of the seed there should be sufficient seed to tide Wisconsin over two or three seasons, even if a mature crop should not be secured next year.

During the past few weeks the writer, in his travels throughout the state, has noticed considerable seed corn being cured on windmills, fences and other poor places. On some farms it seems that the methods of many years ago still prevail despite the fact that experiments have proven that had samples furnished by farmers been properly selected and cured the yields would have increased from 25 to 30 per cent with little additional labor or expense. There are too many good places on every farm for curing seed properly to use the poor methods. Corn hung on the south side of a building is exposed to sudden changes in temperatures which, influencing the moisture content, make it subject to injury by frost, and this is especially true when the sun strikes it. Under the porch, in the stable, over bins of grain in the granary and damp and poorly ventilated rooms are all poor places and should be avoided when almost every corn grower can use the attic, furnace room, a heated house room, tool or wagon shed or any dry and well-ventilated building.

Tests carried on by the Wisconsin Experiment Association several years ago proved conclusively that artificial heat is necessary to produce good seed corn in Wisconsin. Corn cured indoors with artificial heat gave an average germination test of 88.3 per cent, while that cured outdoors without artificial heat gave a test of only 51 per cent. For curing large quantities a kiln house should be provided, but, as the average farmer wishes only to cure sufficient seed for his own use, the simpler methods appeal mostly to him.

For small amounts of seed the farm kitchen or the furnace room are probably best. Fifteen medium-sized ears will plant an acre, so that the simple hanging devices will take care of enough seed for the ordinary farm. An attic, well ventilated and warmed by a chimney passing through or directly over a heated room, makes a good place, but whatever place is chosen the essential thing to bear in mind is perfect ventilation of air around the ears, no exposure to sunlight and no overheating while moist.

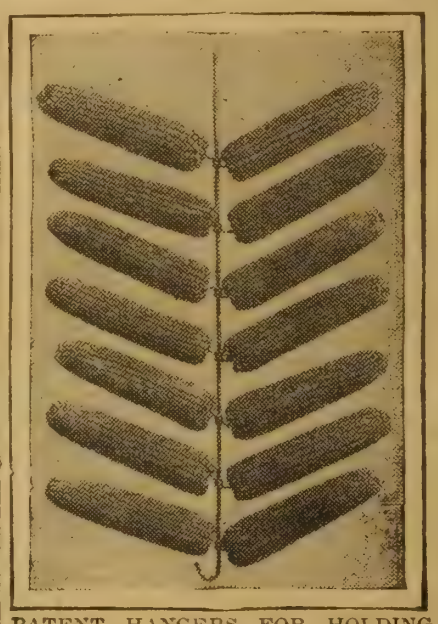
Wire racks are very convenient and may be made from electrically welded lawn fencing and the cutting of the fencing into these racks can be done without any waste. The "corn tree" is also a handy device and, as it is portable, it can be moved about and placed between windows or in currents of air so that every ear will dry well. Such a tree, six feet high, with nails two and one-half to three inches apart, will hold enough seed ears to plant fifteen acres. It is so easy to secure good seed corn by curing with



FAVORITE, BUT POOR PLACE TO CURE CORN.

artificial heat and be sure of having a high germinating seed that no other method except fire drying can be equally recommended for Wisconsin.

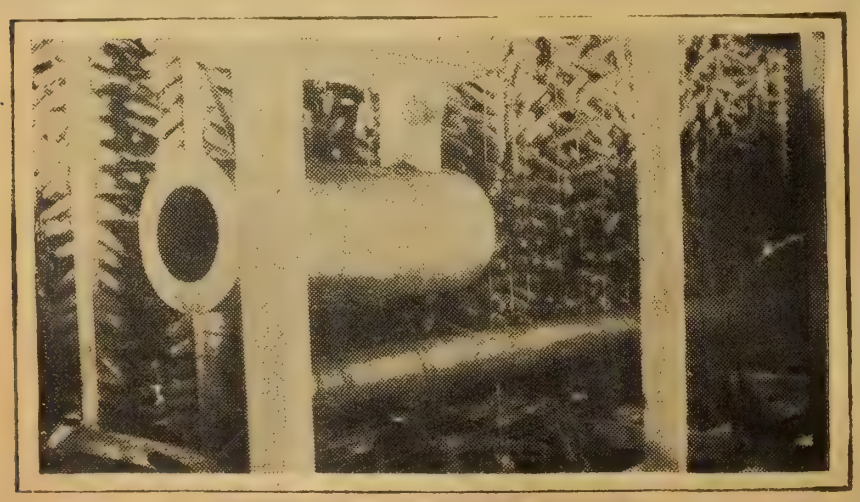
Many farmers have built special houses for kiln drying or remodeled



PATENT HANGERS FOR HOLDING CORN.

with the idea of providing a place to cure seed corn as well as a work shop which will be warm during the winter. In the successful houses of this sort the ears are piled on slat or wire floors, instead of being racked, thus

DOUBLE STRING METHOD OF HANDLING SEED CORN.



INTERIOR OF A SEED DRYING HOUSE.

saving much labor at time of selection. In these cases a constant current of heated air must pass up through the corn or it will mold. When corn is dry and the ears are solid and cannot be twisted the curing is complete and the corn, if kept in a dry place where there is no circulation of air, will not be injured by freezing weather.

After hanging in the shed or lying on the racks for two months the seed ears should be as dry as a bone and contain less than 10 per cent of moisture. They can remain where they dried or be stored in mouse-proof barrels, boxes or crates during the winter, but in either case they must not be exposed to a damp atmosphere, as they will absorb moisture and be injured. Some farmers place the thoroughly dried seed ears in the center of a wheat bin and fill the bin with loose dry wheat.

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Here is a book you can carry easily in in your coat pocket that will tell you instantly and to a penny just how much money is coming to you when you sell your hay, grain or stock at the market price. It is Ropp's New Lightning Calculator—a wonderful time and labor saver for the busy man. It never makes a mistake—and answers a thousand perplexing questions that arise on every farm.

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UPPER WISCONSIN

Dairying Pays in Polk County.

If any substantiation were needed of the often heard predictions as to the dairying possibilities of Upper Wisconsin, Polk county affords it. This county, once a lumberman's paradise, is rapidly being turned to farming and is becoming one of the state's great dairy centers.

Dairying has been the backbone of this county ever since the farmer followed the lumberjack as he went farther into the interior and today the quantities of butter and cheese shipped from this county is surprising when it is considered that only two decades ago a dairy herd was a curiosity.

MRS. ANNIE JENSEN'S FARM, NEAR LUCK, POLK CO., WIS.—200 ACRES IN THIS FARM—MONTHLY CREAM CHECKS AVERAGE ABOUT $150.

Recently we overheard an enthusiastic Polk county resident objecting to Polk county being classed with other counties in Upper Wisconsin.

TYPICAL POLK COUNTY ALFALFA FIELD ON W. F. HOWEY FARM, NEAR BALSAM LAKE, POLK CO.—FORTY-FIVE DAYS AFTER CUTTING.

"It is more like some of our southern counties than it is like some of the northern counties," he remarked, and in this he was correct to the extent that Polk county belongs to that series of Upper Wisconsin counties which have been longer under the plow and which have had a great many more years of development in an agricultural way. It lies in the great St. Croix valley; its growing season is considerably longer than many counties in the same latitude and it is in the Golden Glow corn belt for this reason. However, Polk county was once covered with timber and stumps just as the counties that are now opening up to development were a few years ago. Farming has been carried on in this county for thirty years, more or less, and there still remains considerable stumping and clearing to be done, so that Polk county affords a splendid example of what may be expected of other Upper Wisconsin counties in the future.

Today the dairy cow is queen and with the great development going on in the cheese and butter factories, of which there are thirty-six, mostly cooperatively owned, is following the building up of many pure-bred dairy herds. The scrub sire is no more. The unprofitable cow is rapidly being sent to the shambles and we have the authority of Mr. C. E. Lee, assistant dairy and food commissioner, that the creameries in this county are making such progress that the records of today will be insignificant when compared with those of a few years hence. This comes about through a desire of the farmer to provide good milk and cream, to build up his herd to the highest standard and through the effort of the factory operators to make a product that ranks with the best. The Holstein breeders now have an active association with sixty-five members. The Guernsey breeders are organized and on a recent trip through the county the writer was surprised to see so many splendid herds.

The butter production of the county is estimated at 3,000,000 pounds annually, cheese at 1,500,000 pounds. The Soo Railroad reported that from stations on its lines 1,760,000 pounds of butter were shipped last year to outside markets and one station alone, Luck, a village of less than 400 persons, shipped 492,000 pounds. These figures do not include shipments on other roads, but serve to convey the importance of dairying in this county. Luck creamery products are sold in New York City.

BUILDINGS ON M. KIRK'S FORTY-ACRE FARM, NEAR LUCK, WIS.—TWENTY-TWO COWS KEPT AND PRACTICALLY NO FEED BOUGHT OUTSIDE.

Polk county is unusually interesting and unique in many ways. It is typically rural—we do not recall a county of 23,000 where the proportion of population is so largely rural. There is not a village of more than 900 persons in the county and yet its fifteen banks hold more than $3,000,000 of deposits, mostly farmers' money, and dairying has been the big farming operation. The 1910 census showed that approximately half the acreage of the county was then under cultivation.

No mention of the county would be complete without reference to the rural school system or the work of Mr. John S. Klinka, county agricultural representative. There are twenty-seven state graded schools in the county. In this respect Polk county leads the state, Dane and Milwaukee counties having given way to Polk county recently. These schools are all modern and in addition there are 100 one-room schools, and all are doing a splendid work in agricultural lines.

Mr. Klinka has been serving as agricultural representative for three years and is doing a splendid work along the lines of better dairying through encouraging the building of silos, growing of alfalfa, better barns, etc. Potatoes are also an important crop and he is doing special work in these lines as well as with pure-bred grains, etc. Clovers and grasses thrive in this county, as in other Upper Wisconsin counties, and clover can be seen growing wild by the roadsides. There are several beef herds in the county, as well as swine, but Polk county farmers years ago staked their monthly fortunes on the dairy cow and they are winning, with good monthly cream checks.

Most of Polk county was originally covered with hardwood with a mixture of white pine around the lakes and in the eastern section. This leaves the settler with a little different clearing problem than the settler in those counties which once grew only the big pines, but, while hardwood stumps are rotting, excellent pasture is secured among the stumps and no doubt this led many of the first settlers into dairying, that they might utilize this land while awaiting the help of nature in rotting the stumps and in this way keeping down the cost of clearing.

Dairying in Polk County.

Interest in dairying is increasing rapidly in Polk county. At a recent county fair there were eleven exhibits of creamery butter which scored above 91½. There were three exhibits of dairy butter scoring 90 or over and four exhibits of cheese scoring 92 to 95. The best creamery butter was exhibited by Oscar Rydquist, St. Croix Falls, and the score was 95½. More than twenty farmers in the vicinity of the Georgetown creamery in Polk county received $50 or over in cream checks for the month of September. The highest check paid was $125.62 and there was another for $111.73.

Oneida County Potato Show

Farmers of Oneida county, one of the foremost potato-producing regions of the state, are holding their annual "spud show" at Rhinelander this week. Mr. W. D. Juday, county agricultural agent, writes that farmers selected liberal amounts of show stock on the fields at digging time. One of the purposes of this county show is to get the best possible entries for the exhibition at Eau Claire, November 21st and 24th, under the auspices of the Wisconsin Potato Growers' Association. Oneida county hopes to win first place in county exhibits at the state association show.

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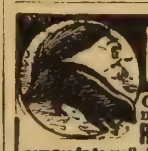

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER IV—Continued.

"Well, I will not," she answered, looking about her; "don't let your gallantry interfere with your comfort, for I've a chair of my own when I visit this witchy quarter of the earth—yes, there it is."

And from the corner by the bunk she drew forward the identical chair on which she had sat through the night at her only other visit. But from her speech Stuart inferred that this time was but one of the many.

"What are you going to do here, Davy MacDougall?" she asked, drawing her chair close beside him and glancing comprehensively about the cabin; "weather-board it up for winter?"

"Naw, scarcely that," he answered good-humoredly; "but just to gather up the blankets or skins or aught that the weather or the rats would lay hold of, and carry them across the hills to my own camp till the spring comes; mayhaps he may come with it."

The hope in his voice was not very strong, and the plaintiveness in it was stronger than he knew. The other two felt it, and were silent.

"An' will ye be tellin' him for me," he continued, after a little, to Stuart, "that all is snug an' safe, an' that I'll keep them so, an' a welcome with them, against his return? An just mention, too, that his father, Grey Eagle, thinks the time is long since he left, an' that the enemy—Time—is close on his trail. An'—an' that the day he comes back will be holiday in the hills."

"The last from Grey Eagle or yourself?" asked Stuart teasingly. But the girl spoke up, covering the old man's momentary hesitation.

"From me," she said coolly; "if any name is needed to give color to so general a desire, you can use mine."

His face flushed; he looked as if about to speak to her, but, instead, his words were to MacDougall.

"I will be very glad to carry the word to your friend," he said; "it is but a light weight."

"Yes, I doubt na it seems so to the carrier, but I would no think it so light a thing to ha' word o' the lad. We ha' been neighbors, ye see, this five year, with but little else that was civilized to come near us. An' there's a wide difference atween neighbors o' stone pavements an' neighbors o' the hills—a fine difference."

"Yes, there is," agreed the girl; and from their tones one would gather the impression that all the splendors of a metropolis were as nothing when compared with the luxuries of "shack" life in the "bush."

"Can yet hit the trail down at the forks without me along?" asked MacDougall, with a sudden remembrance of the fact that Rachel did not know the way so well from the "Place of the Tamahnous" as she did from Scot's Mountain. She nodded her head independently.

"I can, Davy MacDougall. And you are paying me a poor compliment when you ask me so doubtfully. I've been prowling through the bush enough for this past year to know it for fifty miles around, instead of twenty. And now if your highness thinks we've had our share of this fire, let us 'move our freight,' 'hit the breeze,' or any other term of the woolly West that means action, and get up and git."

"I am at your service," answered Stuart, with a graciousness of manner that made her own bravado more glaring by contrast. He could see she assumed much for the sake of mischief and imitation to himself; and his tone in reply took an added intonation of refinement; but the hint was lost on her—she only laughed.

"I tell you what it is, Davy MacDougall," she remarked to that gentleman, "this slip of your nation has been planted in the wrong century. He belongs to the age of lily-like damsels in sad-colored frocks, and knights of high degree on bended knee and their armor hung to the rafters. I get a little mixed in my dates sometimes, but believe it was the age when caps and bells were also in fashion."

"Dinna mind her at all," advised the old man; "she'd be doin' ye a good turn wi' just as ready a will as she would mak' sport o' ye. Do I not know her?—ah, but I do!"

"So does the Stuart," said Rachel; "and as for doing him a good turn, I proved my devotion in that line this morning, when I saved him from a lonely, monotonous ride—didn't I?" she added, glancing up at him.

"You look positively impish," was the only reply he made; and returning her gaze with one that was half amusement, half vexation, he went out for the horses.

"You see, he didn't want me at all, Davy MacDougall," confided the girl, and if she felt any chagrin she concealed it admirably. "But they've been talking some about Genesee down at the ranch, and—and Stuart's interest was aroused. I didn't know how curious he might be—Eastern folks are powerful so"—and in the statement and adoption of vernacular she seemed to forget how lately she was of the East herself; "and I concluded he might ask questions, or encourage you to talk about—well, about the tunnel, you know; so I just came along to keep the trail free of snags—see?"

The old man nodded, and watched her in a queer, dubious way, as she turned, a moment later, to speak to Stuart at the door, she noticed it, and laughed.

"You think I'm a bit loony, don't you, Davy MacDougall? Well, I forgive you. Maybe, some day, you'll see I'm not on a blind trail. Come and see us soon, and give me a chance to prove my sanity."

"Strange that any mind could doubt it," murmured Stuart. "Come, we haven't time for proofs of the question now. Good-by, MacDougall; take care of yourself for the winter. Perhaps I'll get back in the summer to see how well you have done so."

A hearty promise of welcome, a hand-clasp, a few more words of admonition and farewell, and then the two young people rode away across the ground deemed uncanny by the natives; and the old man went back to his lonely task.

On reaching the ranch at dusk, it was Rachel who was mildly hilarious, seeming to have changed places with the gay chanter of the dawn. He was not sulky, but something pretty near it was in his manner, and rather intensified under Miss Hardy's badinage.

She told the rest how he divided his whisky with the squaw; hinted at a fear that he intended adopting the papoose; gave them an account of the conversation between himself and Skulking Brave; and otherwise made their trip a subject for ridicule.

"Did you meet with Indians?" asked Tillie, trying to get the girl down to authentic statements.

"Yes, my dear, we did, and I sent them home to you—or told them to come; but they evidently had not time for morning calls."

"Were they friendly?"

"Pretty much—enough so to ask for powder and shot. None of the men sighted them?"

"No."

"And no other Indians?"

"And—why?"

"Only that I would not like Talapa to be roughly unhorsed."

"Talapa! Why, Rachel, that's—"

"Yes, of course it is—wtih a very promising family in tow. Say, suppose you hustle Aunty up about that supper, wont you? And have her give the Stuart something extra nice; he has had a hard day of it."

CHAPTER V.
A Visit in the Nighttime.
Yahka Kelapie.

The snows had dropped a soft cloak over the Kootenai hills, and buried the valleys in great beds of crystallized down. Rachel's prophecy had proven a true one, for the clouds that day had been a visiting card from winter.

That day was two weeks gone now; so was Stuart's leave-taking, and at the ranch life had dropped into the old lines, but with an impression of brightness lost. Miss Margaret had not yet got over the habit of turning quickly if anyone entered the room, and showing her disappointment in a frown when it was not the one looked for.

Aunty Luce declared she "nevah did see a chile so petted on one who wasn't no kin."

All of them discovered they had been somewhat "petted" on the genial nature. Again the evenings were passed with magazines or cards; during his stay they had revived the primitive custom of taking turns telling stories, and in that art Stuart had proven himself a master, sometimes recounting actual experiences of self or friends, again giving voice to some remembered gem of literature; but, whatever the theme, it was given life, through the sympathetic tendencies of the man who had so much the timber of an actor—or rather an artist—the spirit that tends to reproduce or create.

If Rachel missed him, she kept quiet about it, and ridiculed the rest if any regrets came to her ears. No one minded that much; Rachel ridiculed everyone—even herself. Sometimes she thought Fate seemed more than willing to help her. One night, two weeks after that ride from the "Place of the Tamahnous," she was struck with a new conviction of the fact.

Andrews had gone to Holland's for the mail and domestic miscellany. A little after sun-up he had started, and the darkness was three hours old, and yet no sign or sound. The rest had finally given up the idea of getting any letters that night, and had gone to bed. As usual, Rachel—the night owl of the family—was left the last guard at the warm hearth. Upstairs she could hear Jim's voice in the "boys'" room, telling Ivans some exploit whose character was denoted by one speech that made its way through the ceiling of pine boards:

"Yes, sir; my horse left his'n half a length behind every time it hit the ground."

Ivans grunted. Evidently he had listened to recitals from the same source before, and was too tired for close attention; anyway, the remarks of this Truthful James drifted into a monologue, and finally into silence, and no sound of life was left in the house.

She had been reading a book Stuart had sent back to her by Hardy, the day he left. She wondered a little why, for he had never spoken of it to her. It was a novel, a late publication, and by an author whose name she had seen affixed to magazine work; and the charm in it was undeniable—the charm of quiet hearts and restful pictures, that proved the writer a lover of the tender, sympathetic tones of life, rather than the storms and battles of human emotions.

It held the girl with a puzzling, unusual interest—one that in spite of her would revert from the expressed thoughts on the paper to the personality of the man who had sent it to her, and she found in many instances a mystifying likeness.

She sat there thinking drowsily over it, and filled with the conviction that it was really time to go to bed; but the big chair was so comfortable, and the little simmer of the burning wood was like a lullaby, and she felt herself succumbing, without the slightest rebellion, to the restful influence. She was aroused by the banging of a door somewhere, and decided that Andrews had at last returned; and remembering the number of things he had to bring in, concluded to go out and help him. Her impulse was founded as much on economy as generosity, for the late hour was pretty good proof that Andrews was comfortably drunk—also that breakages were likely to be in order.

It was cloudy—only the snow gave light; the air was not cold, but had in it the softness of rain. Over it she walked quickly, fully awakened by the thought of the coffee getting a bath of vinegar, or the mail mucilaged together with molasses.

"Oh, here you are at last!" she remarked, in that inane way people have when they care not whether you are here or in the other place. "You took your own time."

"Well, I didn't take any other fellow's!" returned the man from the

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dark corner where he was unsaddling the horse.

Andrews was usually very obsequious to Miss Rachel, and she concluded he must be pretty drunk.

"I came out to help you with the things," she remarked from her post in the doorway; "where are they?"

"I've got 'em myself," came the gruff tones again from the corner. "I reckon I'll manage without help. You'd better skip for the house—you'll catch cold likely."

"Why, it isn't cold—are you? I guess Aunty left a lunch for you. I'll go and warm the coffee."

She started, and then stopped.

"Say, did you get any letters for me?"

"No."

With a grumble about her ill-luck, she started back toward the house, the late arrival following a little ways behind with something over his shoulder. Once she looked back.

"I rather think Andrews gets on dignified drunks," she soliloquized; "he is walking pretty straight, anyway."

She set the coffee pot on the coals and glanced at the bundle he had dropped just inside the door—it was nothing but a blanket and a saddle.

"Well, upon my word!" she began, and rose to her feet; but she did not say any more, for, in turning to vent her displeasure on Andrews, she was tongue-tied by the discovery that it was not he who had followed her from the stable.

"Genesee!" she breathed, in a tone a little above a whisper. "Alah mika chahko!"

She was too utterly astonished either to move toward him or offer her hand; but the welcome in her Indian words was surely plain enough for him to understand. It was just like him, however, not to credit it, and he smiled a grim understanding of his own, and walked over to a chair.

"Yes, that's who it is," he remarked. "I am sorry, for the sake of your hopes, that it isn't the other fellow; but—here I am."

He had thrown his hat beside him and leaned back in the big chair, shutting his eyes sleepily. She had never seen him look so tired.

"Tillikum, I am glad to see you again," she said, going to him and holding out her hand. He smiled, but did not open his eyes.

"It took you a long time to strike that trail," he observed. "What brought you out to the stable?"

"I thought you were Andrews, and that you were drunk and would break things."

"Oh!"

"And I am glad to see you, Jack."

He opened his eyes then. "Thank you, little girl. That is a good thing for a man to hear, and I believe you. Come here. It was a good thing for me to get that word from Kalitan, too. I reckon you know all that, though, or you wouldn't have sent it."

She did not answer, but stopped to lift the pot of coffee back from the blaze. The action recalled him to the immediate practical things, and he said:

"Think I can stay all night here?"

"I don't know of any reason to prevent it."

"Mowitza was used up, and I wanted a roof for her; but I didn't allow to come to the house myself."

"Where would you have slept?"

"In my blanket, on the hay."

"Just as if we would let you do that on our place!"

"No one would have known it if you had kept away from the stable, and in your bed, where you ought to be."

"Shall I go there at once, or pour your coffee first?"

"A cup of coffee would be a treat; I'm dead tired."

The coffee was drunk, and the lunch for Andrews was appropriated for Genesee.

"Have you come back to the Kootenai country for good?" she asked, after furnishing him with whatever she could find in the pantry without awakening the rest.

"I don't know—it may be for bad," he replied doubtfully. "I've taken the trail north to sound any tribes that are hostile, and if troops are needed they are to follow me."

"Up into this country?"

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"I reckon so. Are you afraid of fighting?"

She did not answer. A new idea, a sudden remembrance, had superseded that of Indian warfare.

"How long since you left Fort Owens?" she asked.

"Fifteen days. Why?"

"A friend of MacDougall's started in that direction about two weeks ago. Davy sent a kind message by him; but you must have passed it on the way."

"Likely; I've been in the Flathead country, and that's wide of the trail to Owens. Who was the man?"

"His name is Stuart."

He set the empty cup down and looked in the fire for a moment with a steadiness that made the girl doubt if he had either heard or noticed; but after a little he spoke.

"What was that you said?"

"That the man's name was Stuart."

"Young or old?"

"Younger than you."

"And he has gone to Fort Owens?"

"Started for there, I said."

"Oh! then you haven't much faith in a tenderfoot getting through the hostiles or snowbanks?"

"How do you know he is a tenderfoot?"

He glanced up; she was looking at him with as much of a question in her eyes as her words.

"Well, I reckon I don't," he answered, picking up his hat as if to end the conversation. "I knew a man called Stuart once, but I don't know this one. Now, have you any pressing reason for loafing down here any longer? If not, I'll take my blanket and that lounge and get some sleep. I've been thirty-six hours in the saddle."

In vain she tried to prevail on him to go upstairs and go to bed "right."

"This is right enough for me," he answered, laying his hat and gloves on a table and unfastening his spurs. "No, I won't go up to the men's room. Good night."

"But, Jack—look here—"

"I can't—too sleepy to look anywhere, or see if I did look;" and his revolvers and belt were laid beside the growing collection on the table.

"But Hen will scold me for not giving you better lodging."

"Then he and another man will have a shooting match before breakfast tomorrow. Are you going?"

He was beginning to deliberately unfasten his neckgear of scarlet and bronze. She hesitated, as if to make a final protest, but failed and fled; and as the door closed behind her, she heard another half-laughing "Klahowya!"

Early in the morning she was downstairs, to find Aunty Luce half' wild with terror at the presence of a stranger who had taken possession of the sitting room during the night.

"Cain't see his face for the blanket," she whispered shrilly, "but he's powerful big; an'—an' just peep through the door at the guns and things—it's wah times right ovah again, shueh as I'm tellen yo' chile."

"Be quiet, Aunty, and get breakfast; it's a friend of ours."

"Hi-yi! I know all 'bout them kind o' friends, honey; same kind as comes South in wah times, a trampen' into houses o' quality folks an sleepen' whah they liked, an' callen' theyselves friends. He's a moven' now!—less call the folks!"

The attempted yell was silenced by Rachel clapping her hand over the full lips and holding her tightly.

"Don't be a fool!" she admonished the old woman impatiently. "I let the man in last night; it's all right. Go and get him a good breakfast."

Aunty Luce eyed the girl as if she thought her a conspirator against the safety of the house, and despite precautions, managed to slip upstairs to Tillie with a much-garbled account of thieves in the night, and war-times, and tramps, and Miss Rache.

Much mystified, the little woman dressed quickly, and came down the stairs to find her husband shaking hands quite heartily with Genesee. Instantly she forgot the multitudinous reasons there were for banning him from the bosom of one's family, and found herself telling him he was very welcome.

"I reckon in your country a man would wait to hear someone say that before stowing his horse in their stables, or himself in their beds," he observed.

His manner was rather quiet, but one could see that the heartiness of there greeting was a great pleasure, and it may be, a relief.

"Do you call that a bed?" asked Tillie, with contemptuous warmth. "I do think, Mr. Genesee, you might have wakened some of us, and given us a chance to treat a guest to something better."

"I suppose, then, I am not counted in with the family," observed Rachel, meekly, from the background. "I was on hand to do the honors, but wasn't allowed to do them. I even went to the stable to receive the late-comer, and was told to skip into the house, and given a general understanding that I interfered with his making himself comfortable in the hay-mow."

"Did she go out there at night, and alone, after we were all in bed?" And Tillie's tone indicated volumes of severity. (To be continued.)

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Herr Bros. & Reynolds Short-horn Sale.

ONE of the most desirable lots of Short-horn cattle to be offered at public sale this fall will be presented at Lodi, Wis., Friday, November 3d, by Herr Bros. & Reynolds, a firm of breeders that have forced their way to the front through hard work and constructive breeding operations. For this sale they have listed forty-eight head—thirty-five females and thirteen bulls, nearly all produced by the owners, all richly bred along Scotch lines and possessing very marked individual merit. Many of the younger things in this sale are by Master Ruby, their champion bull, and one of the best sons of Archer's Hope, conceded by competent judges to be the greatest breeding bull in Canada. Others are the get of White Rock by Whitehall Sultan, Cumberland Ideal, a grandson of Cumberland's Last and Golden Sultan by White Rock. The females in this offering are all good young ages and those of breeding age are practically all bred to Master Ruby, a fact which should give them added value in the eyes of the buying public. There are only four females in the sale that are over three years old, and one of them, Lucille, sells with a heifer calf at foot by Master Ruby. The other three, Shirly by Ceremonious Crown, Sultan's Gift by Golden Sultan and Lancaster Lady 5th are all in calf to Master Ruby. There are some outstanding show propositions in the younger females that should certainly attract the attention of those wishing the best. Lodi Wimple by Cumberland Ideal is a senior yearling good in every way, while Lady Holly by White Rock and out of Christmas Holly, the show cow that sold at their last sale, is a fast goer in any company. Princess 6th and Princess 7th are a pair of twin heifers by Golden Sultan that are right in every way. They won first at the Wisconsin State Fair this year for produce of dam. There are five junior yearling heifers by White Rock that are an extra good bunch, all running very even as to size and quality. Two senior heifers and one junior heifer by the same bull are listed and they deserve special attention sale day. One of the seniors is a Duchess of Gloster and the other is an Acanthus heifer out of a Golden Venus dam by Royal Robin. There is much of merit throughout the entire offering. In former sales buyers have secured some very desirable bargains at Herr Bros. & Reynolds. In fact several animals were sold at their last year's sale on which the purchasers more than doubled their money. For the coming sale they are sending forward the very best that their herds afford and their enterprise in this matter should certainly meet with hearty appreciation. Catalogs can be secured by addressing Herr Bros. & Reynolds, Lodi, Wis. When you write kindly mention this paper. See page 29.—Adv.

How Comfort Came to Father.

By Walt Mason.

IN labor savers nothing's greater than yonder little radiator, that keeps my shanty warm; while it's on deck the weather agent may bring along his whole blamed pageant—I laugh at wintry storm. When I was young the winter weather made all sit up and roar together, so much of grief it brought; day after day we had to rustle, and wear out morals, mind and muscle, to keep the old house hot. In autumn, when the winds were gusty, we'd polish stoves all red and rusty, and pack them from the shed; and while with stovepipes we were fussing, a mile away you'd hear us cussing enough to raise the dead. Oh, comrade, did you ever teeter around a punk old-fashioned heater, that ate up elm and oak? And have you ever, gentle reader, packed in the logs of birch and cedar, until your back was broke? No wonder Daddy was a snarled: the open fireplace in the parlor would make him gasp and cough; when he sat there to thaw his system, a streak of fire flashed out and kissed him, and burned his whiskers off. The rooms wherein no stoves were roaring were colder than the waters pouring down Greenland's frozen hills; one room would roast us to the center, and when the next room we would enter, we'd have attacks of chills. The stovepipes evermore were choking, and then the stoves would do some smoking that drove us out of doors; and we would stand out there a-freezing and saying bitter things and sneezing, and raising frenzied roars. But times have changed and now the blizzard may whoop until it strains its gizzard, there's comfort in my home; 'twas brought here by that radiator; no more, to feed the "heater's" crater, for cordwood do I roam. No more am I a weary toiler; down cellar there's an Ideal boiler, I 'tend to twice a day; and day and night the house is cheery, there is no room that's cold or dreary, and life is glad and gay. See page 9.—Adv

Meinking's Poland Chinas.

R. MEINKING, the pioneer Poland China breeder of the state, located at Bangor, Wis., has about twenty spring boars that would look good at the head of most herds. Mr. Meinking does not raise the extreme big-type kind and no doubt many of our readers prefer Polands of the medium type, if so Mr. Meinking can supply your wants to your satisfaction. Get his prices and don't forget to mention The Wisconsin Farmer. See page 28.—Adv.

Waukesha Guernsey Sale.

GUERNSEY breeders will be particularly interested in the sale of Guernsey cattle to be held November 1st and 2d by the Waukesha Guernsey Breeders' Association. They are dividing the sale into two days and are offering an exceptionally high class of animals. The first day they will sell only registered females and a few high-class bulls, most of which will be from high record A. R. cows. It will be an outstanding offering of females, a number of which have completed very creditable Advance Registry records. Most of the heifers offered are from A. R. sires and a number are from A. R. dams as well. The second day a fine lot of high-class grades and a number of good bulls will be sold. A sale of grades is an innovation in Waukesha county. The Guernsey Breeders' Association has received requests for a sale of grade cattle in connection with its sale of registered cattle, so this year have complied with this request. It is becoming more apparent each year that the integrity and reputation of the seller is of equal or even of more importance to the buyer than the breeding of the animals offered. This is of even more importance at a public sale than when buying cattle at private treaty, as the opportunity of talking with the seller and of examining the cattle is more limited. We are pleased to be able to recommnd the Wauksha Guernsey breeders as men of honor, who consider every promise an obligation, and every buyer is entitled to know exactly what he is buying. No side bidding is allowed and every animal offered is straight and right; defects, if any, are announced. Send for a catalog to F. E. Fox, Waukesha, Wis., and kindly mention The Wisconsin Farmer when writing.—Adv.

Sold His Surplus Bull Supply

M. B. MAGOON, Whitewater, Wis., has found The Wisconsin Farmer a valuable salesman for his live stock. A recent advertisement sold his four bulls in a very short time. Read what he says:

My last advertisement in The Wisconsin Farmer did fine, as I sold the four bulls that I had within a short time. When your field man is in the vicinity of Whitewater have him call on me, as I will have some yearling bulls to advertise.

What The Wisconsin Farmer has done for Mr. Magoon and many other breeders it may do for you if you will let it carry your message to the over 90,000 possible buyers who read The Wisconsin Farmer every week.

The Wisconsin Farmer Madison, Wis.

Guaranteed Circulation, 90,000.

Miller Chester Whites.

WE recently stopped a few minutes at the fine farm of W. F. Miller, West Salem, Wis. He is a breeder of Chester Whites and still has some boars that will suit the buying public. These will not last long, so if you are going to need a boar of this breed better send in your order at once. See page 31.—Adv.

An Angus Sale Out of the Ordinary.

THERE will be a sale of Aberdeen Angus cattle at Canton, Minn., on Thursday, November 9th, that should appeal to all men who are interested in this good breed of beef cattle. Wisconsin especially needs more and better beef cattle and there are fewer good herds of Angus cattle in that state than of any other breed. This sale will contain animals suitable for foundation stock or to improve the herd that you already own. M. C. Willford, Canton, Minn., and Roy Miller, Prosper, Minn., have been breeding Angus cattle for many years and we believe we are safe in saying that they have two of the best herds in that state. The tops of these two herds have been selected for this sale, for it is their ambition to make this the greatest sale of Angus cattle ever held in the Northwest. The following bulls have been used in these herds: Elgin Eric by Earl Eric of Ballindalloch, dam imported and bred by the king of England; Banner Boy E. by Woodlawn Blackbird Prince, a double-bred Blackbird; Black Eagle C. by Black Woodlawn, and Thickset Idol by Glenfoyl Thickset 2d, a bull that was grand champion at Chicago and a winner at several of the state fairs. By this array of breeding you can see that they have had the very best for several years. Mr. Willford's present bull is Protector E., an outstanding two-year-old bull sired by the champion, Prince Felzer, dam a Pride cow. This was the highest-priced bull in the Escher sale last year. There will be some calves in the sale by this bull and many of the females are safe in calf to him. Mr. Miller's present bull is a three-year-old, Erwin Lad W., sired by Belfast by Black Woodlawn, dam an Erica cow. The young stuff that Mr. Miller has by this bull proves that he is a sire of worth. There will be thirty females in the sale and ten bulls. There will be ten two-year-old heifers with calves at foot or to freshen in a short time, five open heifers and the balance of the females will be young cows with calf or calves at foot. There will be two tried bulls and eight of serviceable age around a year old. Watch next week's issue for an account of some of the outstanding females that go in the sale of the five popular families. Write for the catalog at once. It is full of pictures of the cattle that go in this sale. Please say you saw the advertisement in The Wisconsin Farmer. See page 25.—Adv.

PART OF THE HOLSTEIN HERD OF GEO. H. GIBSON, NASHOTA, WIS., WHOSE ADVERTISEMENT APPEARS ON PAGE 30.

NEXT WEEK'S SALE PROGRAM

Wednesday, November 1st	Guernseys, Waukesha County Guernsey Breeders' Association, Waukesha, Wis.
Thursday, November 2d	Short-horns, Anoka Farms Company, Waukesha, Wis. Guernseys, Waukesha County Guernsey Breeders' Association, Waukesha, Wis.
Friday, November 3d	Short-horns, Herr Bros. & Reynolds, Lodi, Wis.
Saturday, November 4th	Ponies, Heyl Pony Farm, Washington, Ill.

Anoka Farms Short-horn Sale.

THE importance of the annual Short-horn sales at Anoka Farms is so firmly established that the simple announcement of the date on which the sale is to be held is all-sufficient to attract wide-spread attention. For the November 2d sale there has been listed the entire 1915-16 crop of calves, consisting of forty-five head—twenty bulls and twenty-five females, the get of Sultan Stamp, Regal Stamp, Village Denmark, Imp. Rusper's Champion and other noted sires. Included in this list is all the 1916 show stock, among them the first-prize calf herd at the leading shows and the ten head of youngsters that won the 1916 Royal, the coveted trophy given to the Short-horn exhibitor showing the best ten head of Short-horns bred by exhibitor. Some brief mention has already been made regarding some of the outstanding young bulls in this offering. The female portion of the sale measures up in every way with the bull offering, both as regards blood lines and individual merit. There are twenty-five young females in the sale representing all the popular tribes, and so good individually that any particular mention seems unnecessary. Victoria Anoka by Village Denmark, out of a dam by Premier is an outstanding show proposition, while Lavender Anoka 4th by Regal Stamp is a very thick, even, well-lined, mossy-coated heifer of an approved pattern. Calceolaria 7th by Regal Stamp is an extra good heifer from one of the most dependable families at Anoka and Anoka Missie 3d by Village Denmark is a very even, smooth heifer, out of a dam by Whitehall Sultan. Anoka Augusta 4th by Regal Stamp, is a fit representative of the popular August tribe, while a beautiful heifer is listed in Anoka Clipper 4th by Sultan Stamp. Anoka Augusta 3d is a very promising youngster that was imported in dam. Anoka Blossom by Sultan Stamp was first at Iowa, Minnesota and Wisconsin this year, and Anoka Clipper 3d by Regal Stamp was second at the same fairs. These are two of the top things in the offering. Lavender Anoka 3d by Imp. Rusper's Champion is a fine prospect and a heifer of very attractive type is offered in Anoka Broadhooks. These are only a few of the good things listed, but will suffice to give our readers some idea of the high value of the offering. Both Mr. Harding, the president of Anoka Farms and George Sim, the manager may well feel proud of the offering they have prepared for the coming sale. It is the best lot of youngsters that has ever been sent forward at Anoka, and when that statement is made it covers about all that can possibly be said in favor of a sale offering. No better Short-horns are produced anywhere than are to be found at Anoka Farms, and in the coming sale will be listed forty-five animals that will give striking evidence as to the merit of this great Wisconsin establishment as a progressive, constructive breeding farm. Catalog should have wide distribution. Send for it today, mentioning this paper when you write. Address Anoka Farms, Waukesha, Wis. See page 29.—Adv.

Sanitation Avoids Sickness.

FARMERS lose millions of dollars each year from illness. Much of this illness could be avoided if people made every possible effort to live in rooms which get sunlight and fresh air. Good ventilation, clean houses and premises, and the removal of danger of infection from the outhouse will do much toward preventing this illness. The invention of the sanitary chemical indoor closet has done away with the necessity of putting up with insanitary outhouses. During the past year thousands of farmers have torn down their outhouses and installed these chemical closets. The Rowe indoor closet, manufactured by the Rowe Sanitary Mfg. Co., 1026O Rowe Bldg., Detroit, Mich., is one of the most satisfactory of these. Read the description in the advertisement on page 19 and write for information. Tell them you read the advertisement in this paper.—Adv.

Aberdeen Angus Females for Sale.

THERE has been considerable inquiry for Angus cows and heifers, but most of the breeders refuse to price any females. We recently called on E. F. Ganz & Son, Alma, Wis., and found them with more cows and calves than they can conveniently stable, consequently they are offering to sell three four-year-old cows with heifer calves at foot and rebred and three yearling heifers out of the three cows mentioned above. This is certainly a breeding herd. There are twelve breeding cows in the herd, twelve calves at foot and twelve yearlings out of these cows. Nearly all of the calves dropped on this

WILLFORD AND MILLER SALE

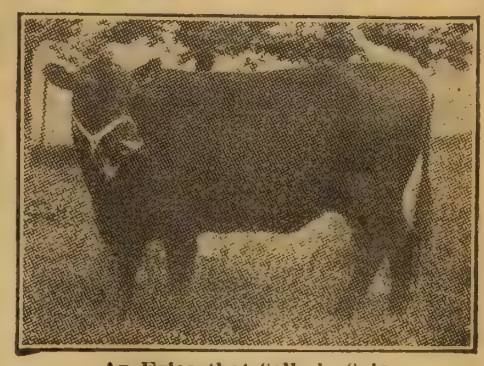
ABERDEEN ANGUS CATTLE

CANTON, MINNESOTA, THURSDAY, NOV. 9, '16

(50 MILES WEST LA CROSSE, WISCONSIN)

45 HEAD, 33 VERY CHOICE FEMALES, 12 OUTSTANDING BULLS

Two Pride Cows that Sell in Sale.



An Erica that Sells in Sale.

The best offering of this breed ever put up in the Northwest. Show cows and breeding cows, calves at foot, bred and open heifers. Bulls for herd headers. Notice the families represented: Eleven **Prides,** six **Queen Mothers,** four **Heatherblooms,** three **Trojan Ericas,** three **Blackbirds.** The females are bred to or have calves at foot by **Protector E.,** a Pride, by the champion, Prince Felzer, or **Erin Lad W.,** an Erica by Belfast. These cattle will improve your herds. Col. H. O. Tellier, auctioneer. T. P. Shreve, field man for The Wisconsin Farmer. Write for the illustrated catalog. Address

M. C. WILLFORD, CANTON, MINN. or R. M. MILLER, PROSPER, MINN.

farm have been heifers. If you want Angus it will pay you to investigate this herd. Alma is located on the river just north of Winona, Minn. Good train service on the C., B. & Q. Write for description and mention The Wisconsin Farmer.—Adv.

Hagemeister Percheron Sale.

LAST week we endeavored to give a general idea of the offering of Percherons in the Hagemeister sale to be held November 15th at Green Bay, Wis. The sale is one that will make Percheron history in Wisconsin, for the horses to be sold represent the best breeding ever owned in the state. It is largely a Baccarat-Historique sale, as a majority of the animals in the sale are rich in the blood of one or both of these two great imported stallions. Baccarat 11326 in his time was one of the most-talked-of stallions of the breed. He was purchased by R. R. Kellogg, of Green Bay, for more money than had ever been paid for a Percheron stallion up to that time. The late Henry F. Hagemeister purchased him at the dispersion of Mr. Kellogg's stud. Baccarat mares have been in great demand by the best breeders in the country and it is easy to understand when you see the type and conformation of their offspring. Historique 71752 was imported by Mr. Hagemeister and his worth as a breeding animal may be judged at this sale. There are five of his sons and nearly twenty of his daughters in this sale. Two of the stallions and six mares are sired by him and out of daughters of Baccarat; one stallion and eight mares are by him and out of imported mares. The stallion now at the head of the herd and the one to which most of the mares are bred is Brilliant 47573. He is an outstanding individual weighing over a ton. He has a beautiful neck and head; a clear, quiet, large eye; good back, rounded hips and strong, heavy limbs; in fact, it is practically impossible to fault him in any point. He will be sold in the sale, as will also the junior stallion, McDougal 94905. Every animal is straight and not a weakness or flaw on a single animal. It is without exception the finest lot of mares we have seen in one herd. The animals are all black in color except one gray stallion, one gray mare and two iron gray fillies. Catalogs giving description and breeding are now ready and will be mailed on request to the Hagemeister Brewing Co., Green Bay, Wis. See page 28.—Adv.

Schmidt's Guernsey Heifers.

A FINE lot of registered Guernsey heifers are advertised for sale on page 30 by Chas. Schmidt, Wrightstown, Wis. They are daughters and granddaughters of the richly bred bull, Goodwill Hero 17072, that comes from an imported son and daughter of Governor of the Chene. These heifers are from imported and richly home-bred cows. They are ten months of age and are well grown, of good type and well marked. Mr. Schmidt reports a brisk demand for registered Guernseys and sends us the following list of sales: Registered bull to W. H. Francis, Polk county, Wisconsin; registered bull to F. Foster, Abrams, Wis.; registered bull to James Turriff, West De Pere, Wis.; registered bull to Geo. Lucia, secretary of the Brown County Guernsey Association, Green Bay, Wis.; two heifers and a bull to T. Franske, Forest Junction, Wis., and four heifers and a bull to Frank Kniskern, Middle Inlet, Wis.—Adv.

Menke's Poland Chinas.

ATTENTION is called to the advertisement of A. Menke & Son, Markesan, Wis., which appears on page 28. They are offering you your choice of seventy-nine big-type Poland China spring pigs farrowed in March. They carry heavy bone; have length and stretch, and are well bred. They are also offering several likely Shorthorn bulls, some of which are ready for service. Write for further particulars.—Adv.

Lefebures' Belgians.

H. LEFEBURE & SONS, Fairfax, Ia., have been importing and breeding Belgian draft horses for nearly a third of a century. Many of the best Belgians in the United States have been imported by the Lefebures. This firm has a decided advantage over the average American when it comes to buying Belgian horses for the reason that they are of Belgian descent, speak the language and have been in closer touch with conditions. While that in a way would cut no figure at the present time, yet the experience thus gained is of a decided advantage to the breeder and developer of high-class Belgian horses in this country. Over fifty Belgian mares are maintained on the Lefebure Farms and a majority of them are raising colts annually. A representative of this journal recently had the pleasure of looking over the Belgians on the many Lefebure Farms and was very much impressed with the uniformity and merit found. The weanling colts are largely sired by the prize-winning stallion, Jule's Remi, an imported stallion that stands at the head of this stud. At the present time this firm has for sale a number of imported stallions that are tried sires and are right in every particular. They also have a fine lot of two year olds that are ready for sale. The Lefebure Belgians have bone, weight and the size demanded by the draft horse admirers of this country. They can please those in the market for a Belgian stallion. See page 28 and write for catalog, kindly mention The Homestead.—Adv.

Durocs at Augusta, Wisconsin.

B. M. ARRIES, Augusta, Wis., has some good Duroc Jerseys and if you want a good boar or a few good gilts you can find them in this herd. When this breeder started in the "game" he bought excellent sows and they have made good for him. The produce will make good for you. Mr. Arries also has a yearling boar that he cannot use to advantage any longer and he is being priced very low, he is one of the best boars of his age that we know of for sale. Write this breeder and tell him what you want. Mention this journal. See page ..—Adv.

Holstein Breeders Take Notice.

EVERY Holstein breeder who is using a herd sire from a dam with a record of twenty-five pounds or less should investigate the bull advertised on page 30 by Dopp Brothers, Oconomowoc, Wis. This young bull is a highly desirable animal both as an individual and in blood lines. His dam is a 23.05-pound daughter of the great bull, Sir Clyde, that has forty-five A. R. O. daughters, four with records from thirty to 33.07 pounds butter in seven days, three others with records over twenty-seven pounds and eighteen others from twenty to 25.70 pounds. More than 50 per cent of his daughters have records ranging from twenty to thirty-three pounds of butter in seven days. The sire of the young bull for sale is a son of the 32.52-pound bull, Beauty Pietertje Prince, whose sisters and daughters are steadily making large records. The dam of this youngster's sire is a 24.29-pound sister of Pietertje Maid Ormsby, a former world's record cow, that made 35.56 pounds of butter in seven days. She is of rich Ormsby breeding on both sides of her pedigree. This is a richly bred young bull, as his extended pedigree will show. Send for it and look it over if in need of a herd header. When writing kindly mention The Wisconsin Farmer.—Adv.

Heyl Pony Farm Sale.

THE Heyl Pony Farm, Washington, Ill., will hold their annual public sale Saturday, November 4th. The offering consists of seventy head of Shetland, Welsh and Hackney ponies. The Welsh ponies are mostly sired by the grand champion stallion, Gwindy Brennin. There are also a number of imported stallions and mares. This is an opportunity for the breeder who wishes to establish a herd or to buy show-ring winners to get the most desirable kind. There are also a large number of well-broken ponies for children's use. Send for a catalog, which gives description and breeding, to the above address. See advertisement on page 27.—Adv.

Chris Kartman Buys Herd Boars.

CHRIS KARTMAN, the popular Poland China breeder living at Cassville, Wis., has one of the best bred herds of big-type Poland Chinas in the state of Wisconsin and he has recently added two herd boars that would be a credit to any herd. One boar is sired by Fessy's Timm, the junior champion of Nebraska last year and he by Big Timm, the grand champion of Nebraska. His dam is by old A Wonder and his grandam, King's Pride is by Long King by Chief Price. It would be hard to write a better pedigree and individually the boar is deserving of this good breeding. This boar is out of the same dam as the two junior yearlings that sold in an Iowa sale for $515 and $500. Mr. Kartman also bought Giant Wonder the best fall boar that was shown at Milwaukee this year. Mr. Kartman will hold a sow sale February 16th and the offering will be bred to these two boars. We have recently seen some of the gilts that will go in this sale and if they continue to do well it will be one of the best offerings of the winter. Mr. Kartman has some spring boars for sale—if you are in need of a boar write him for description. Please mention The Wisconsin Farmer. See page 28.—Adv.

The Smiley Poland Boars.

WM. SMILEY & SON, Albany, Wis., have one of the good Poland China herds of the state and we feel safe in saying that it is one of the oldest established herds in the state. Every breeder of pure-bred swine that does much business has some dissatisfied customers—this goes with the business and these dissatisfied customers tell their troubles to the field man; but we are glad to say that evidently Smiley & Son send out Poland Chinas that give satisfaction, for we have heard very little complaint about boars or sows purchased from this firm. They maintain a large herd and in this way they can cull their herd closely so that only the very best animals are sent out. They do a large mail order business, for they have a reputation for square dealing. They are now offering spring boars that are above the average. They are not overly fat, but the kind that continue to do well for you and make you a satisfied customer. You needn't be afraid to send them a mail order. Tell them about what you want and your order will be well taken care of. Don't forget to mention The Wisconsin Farmer when writing. See page 28.—Adv.

Dineen's Holsteins.

A YEARLING registered Holstein bull is advertised for sale on page 30, by C. F. Dineen, Cedarburg, Wis. Mr. Dineen has a "herd" that will be "heard" from, as he intends to do A. R. O. testing in the near future. Several of the cows in the herd already have very creditable records. One of these Mechtilde Daisy Longfield, has a record of 22.45 pounds of butter in seven days. She also has four A. R. O. daughters, one of which, as a three year old, made 22.39 pounds of butter in seven days. A son of this cow now stands at the head of the herd and is the sire of the yearling bull advertised for sale. Mr. Dineen is also advertising several high-grade cows 30-32 pure. These are bred to his good herd sire. For pedigrees

When you see an article advertised in The Wisconsin Farmer that your local storekeeper should have in stock, ask him to sell it to you. Tell him the name of the article you want. If he cannot supply it, please write and tell us his name and address, and give us the name of the article you tried to buy. Maybe we can help you get it.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

and further information, write to the above address. When writing or visiting Mr. Dineen, kindly mention that you saw his advertising in The Wisconsin Farmer.—Adv.

A Good Place to Buy Breeding Stock.

WHEN we had finished looking over the Holstein herd of Fred Pabst, Oconomowoc, Wis., and had seen the fine big cows that make up the herd; when we saw the list of records that have been made and saw the preparation that is being made to improve the conditions for doing A. R. O. testing; when we saw the open-air method of raising young stock and every precaution being taken to preserve and protect the health of every animal in the herd we were strongly impressed with the one idea, namely, that here was a good place to buy breeding stock. A limited description such as we are able to give here cannot convey to you the work that Mr. Pabst is doing. An entire acticle could be written on the open-air method of raising calves, or on the breeding of his herd sires, or the records made by the cows in the herd or the new test barn which is now under construction. It is only by a visit or several visits that you will be able to comprehend how carefully Mr. Pabst is conducting this great herd, and the men who buy breeding stock here benefit by the work that has been done and the work that will be done. There are a great many who already have benefited by the continuous official testing that Mr. Pabst is carrying on. Among these are Schley Brothers, who bought a bull whose dam, I believe, made thirty-one pounds and the bull has, therefore, increased more than $1,000 in value. H. F. Parks, Elkhorn, Wis. purchased a bull from a small record cow in the Pabst herd. She later made thirty-one pounds and last year increased her record to over thirty-three pounds. There are many others that have been equally fortunate. You not only buy a good individual from a sire and dam of rich breeding, but you also get the advantage of the future records that the animals will be given the opportunity to make. There were four thirty-pound records made last spring in this herd, and the work has but just begun. A fine new test barn is now being built in which every convenience and comfort will be installed for making large records. We unhesitatingly advise the readers of The Wisconsin Farmer to visit this herd or to send for a list of the young bulls for sale when in the market for a herd sire. See page 30.—Adv.

Kloehn's Percheron Offering.

A FEW days ago we had the pleasure of visiting the farm of John Kloehn, Forest Junction, Wis., and looking over his Percheron horses. His farm is only a mile from the station and is one of the best in the vicinity. His Percheron herd traces largely to the mare, Karel 33640, bred by the Hagemeister Stock Farm. She is a double-bred Baccarat, for whom R. B. Kellogg paid $5,000, being out of a daughter and sired by a grandson of this noted stallion. Mr. Kloehn is offering a yearling stallion and two mares out of Karel and two fine stallions out of her daughter, Diana. This daughter was sired by Phil Sheridan by Achilles and is an excellent individual. Three of the animals for sale were sired by Imp. Haricot, that was imported by Fred Pabst and used by him for several years. He comes of Brilliant breeding on both sides. Our readers who are in the market for a right good yearling or two-year-old stallion or two or three-year-old mares should write to the above address. See page 28.—Adv.

Some Good Scotch Bulls.

WE HAVE had several people ask where they could buy a straight Scotch Short-horn bull and for the benefit of those prospective buyers want to suggest that they visit the Kennedy herd of Short-horns at Janesville and look at the Scotch bulls he has for sale. There are two bulls in the lot, that in our estimation, are great herd bull prospects. They are rich roan in color, having a fine Scotch coat of hair, very thick, heavy bone, deep-bodied fellows and bred along the most popular lines. If you want topped bulls Mr. Kennedy has some that will also suit you. Don't overlook these bulls—remember that Mr. Kennedy is laying the foundation for one of the best herds of Scotch Short-horns in the Northwest. Write for pedigree and detailed description and don't fail to mention The Wisconsin Farmer. See page 29.—Adv.

Chesters, Jerseys and Collies.

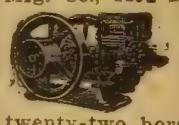
WITH this issue of The Wisconsin Farmer, John Pellett, Viola, Wis., starts his advertisement calling attention to the registered stock he has for sale. We have seen some of the Chesters he has for sale and they are a nice representative lot of this popular breed. They ar well bred and are being priced for quick sale. Mr. Pellett also breeds Jersey cattle and if you are interested in this breed you will be interested in his cattle. Scotch Collies are useful as well as ornamental—Mr. Pellett has some nicely marked pups of this breed for sale. Write for prices and description of any of the above breeds that you are interested in. Don't forget to mention The Wisconsin Farmer. See page 31.—Adv.

Holts' Jerseys.

DO you need a registered Jersey bull? If so, we advise you to investigate those advertised for sale on page 27 by Henry Holt & Son, Oconomowoc, Wisconsin. These were sired by the bull, Inez Rosaries Oxford, and are out of heavy producing dam of good type and conformation. The cows in this herd have particulary good udders, being both large and well quartered. They are large cows themselves and the bulls offered for sale are of good size. For description and further information in regard to breeding write to the above address.—Adv.

Cheaper Farm Power.

IT HAS long been recognized that if kerosene could be used in the so-called gasoline engines for general farm use, that it would greatly reduce the cost of fuel and make farm power much less expensive. Engineers and manufacturers everywhere have been working for some time to perfect an engine for the use of kerosene on the farm instead of gasoline. The Ottawa Mfg. Co., 1191 King St., Ottawa, Kan., are now making the announcement of a complete line of kerosene engines for farm use. This line includes all sizes from one and a half horse power to twenty-two horse power. They claim that their actual horse power, depending upon the size of the engine, is from one-fourth to six horse power greater than they are rated. This line of engines offers the readers of this paper an opportunity to buy actual horse power at a very low cost and also by the use of kerosene to cut down the expense of operating these engines to a minimum. Doubtless many readers of this paper will be interested in the Ottawa engine. Full particulars may be had by addressing Ottawa Mfg. Co., 1191 King St., Ottawa, Kan. See page 2. —Adv.



John Steel's Holsteins.

WISCONSIN may well be proud to be the home of such a herd of Holstein cattle as that of John Steel, Oconomowoc, Wis. Mr. Steel established this herd over twenty years ago. He is a careful, discriminating judge of Holsteins and has selected his breeding stock very carefully. He has selected for type and conformation as well as production. That he has chosen well is shown by the high records which his cows have made during the past two years. The bull at the head of the herd is Contest Colantha Crown De Kol, a 27.96-pound son of Dutchland Colantha Contest Boy, he by Colantha Johanna Lad. At the present time Mr. Steel is offering a very desirable young bull for sale on page 30. He is sired by the above bull and is out of a 23.71-pound daughter of Aaggie Cornucopia Johanna Lad Jr. 6th. Mr. Steel also has several other young bulls out of dams with records above twenty pounds. These bulls are well grown and are well marked. He has an extended pedigree for each animal, which will be sent to prospective buyers.—Adv.

Bruins' Jerseys.

THE ribbons won by the herd of Jersey cattle owned by Ed Bruins, Fairwater, Wisconsin, speaks very highly for the type of animals that make up this herd. Mr. Bruins has been one of the leading importers and breeders of the middle West for many years. His herd now consists of more than fifty head of imported and home bred animals of proven lines of blood. Not only are his Jerseys of the right type to win at the leading state fairs and dairy shows, but they are also proving themselves as producers at the pail. Register of Merit testing is continually being done and a fine lot of records have and are being made. At the present time Mr. Bruins is offering a few registered heifers and young cows for sale. For pedigrees and further information in regard to these animals, write to the above address. See page 27.—Adv.

Hinman's Guernseys.

ONE of the best Guernsey herds in the Fox River Valley is that of A. H. Hinman, Allenville, Wis., whose advertisement appears on page 30. We were looking over this herd a few weeks ago and were highly pleased with the animals we saw there. The cows are large, roomy animals of good, straight type and good dairy conformation. The herd is headed by King Pin of Woodland, a bull whose sire and dam and grandsire and grandam are all in the advance register. At the present time Mr. Hinman is offering some very well-bred young bulls for sale. For pedigrees and description write to the above address.—Adv.

Schoenfeld's Poland Chinas.

IT is just as important when buying Poland China breeding stock that you get the animal that belongs to the pedigree, as it is to get a registered animal, as certificates of registration that are uncertain or false make your boar or sow of no greater value than a grade animal. Practically the only way you have of identifying Poland Chinas is by the ear marks. C. J. Schoenfeld & Son, Fox Lake, Wis., claim to ear mark all breeding stock, so that you may be sure of getting the right animal. They are advertising fall yearling boars sired by Big Bone and Long Wonder, on page 28. —Adv.

THE FARMERS' MARKET brings buyers and sellers together. Read what you can buy. Advertise what you can sell. Six cents a word each insertion.

Want to buy or sell a farm? Make it known by inserting an advertisement in THE FARMERS' MARKET. Six cents a word each insertion.

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: **"The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available —under which your advertisement would appear.

Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER — **MADISON, WISCONSIN**

FARM LANDS.

WILL sell 300 acres at $40 per acre, 5 miles west of Eau Claire, Wisconsin, on main road. 270 acres cultivated. 30 acres pasture and timber. No stumps, no stone, level land, black, sandy loam soil. Seven-room house, chicken house, granary, two stables. Good clover land, is worth $80 per acre with little fixing. Will leave $10,000 in farm at 6%. Wirt Monroe, Mt. Hope, Wisconsin.

140 ACRES in Winnebago county, 3½ miles from Omro; good soil, running water, flowing well. Best of soil, level, some timber, fair building. Only $110 per acre. Have other splendid bargains in improved farms and unimproved lands. The list that can't be matched. W. E. Webster, Hudson, Wis.

REAL BARGAINS in improved farms in Taylor, Marathon, Clark, Langlade counties in Wis. With and without stock and machinery. A natural dairy section. Very liberal terms. Lists and literature free. Loeb-Hammel Realty Co., (not inc.) Owners, Medford, Wis.

IN Lincoln and Marathon Counties, Wis., we have some fine improved farms for sale at low prices; some have stock and machinery that can be bought reasonably. Write us for particulars. McLaughlin Land Co., Merrill, Wis.

MINNESOTA 320 near Iowa, small buildings, good soil, very low price, terms to suit. Grain elevator, store, running, near Mason City, at a bargain. Augustus Maloney, Mason City, Iowa.

CALIFORNIA FARMS for sale. Write for list. A. R. Waite, Shawnee, Oklahoma.

FARM LANDS.

80 ACRES with stock, only $4,000. 1½ mile station in Polk County, Wis. Only 45 miles Twin Cities. To include dandy young team mares, four good cows, young stock, hogs, chickens, full equipment and immediate possession. Neat, well painted buildings insured for $1100. House 16x24 on full basement. Good barn 18x30 with large addition, concrete floors, stanchions, etc. 12 acres plowed, more cleared, clay loam soil, rolling surface. 40 acres will make nice field. Many nice features. Two-room graded school handy. A BIG SNAP AT $4000. Baker, C-110 St., Croix Falls, Wis.

FOR Sale. A fine farm of nearly one hundred sixty acres, handy to the village of Oregon, Wisconsin. Good improvements. Price for quick sale, $28,000.00, of which $14,000.00 must be paid down, balance to run. Address or call on Norris Getts, Oregon, Wisconsin.

FORTY or eighty acres with fair buildings, good clay soil, no waste land, close to town, $25 per acre; $100 cash, balance long time. Frank M Doyle, Ladysmith, Wiscousin.

MILK WAGON.

FOR SALE—Milk wagon [with glass doors and windows, cheap if taken at once. H. Burlock, Wauzeka, Wisconsin.

CREAMERY.

COMBINED Creamery, Cheese and Ice Cream factory. Good location. Sale cheap. Wittenberg Creamery, Wittenberg, Wis.

LANDS AND HOMES

German or Swiss Grain Farmers

THE Denver and Salt Lake Railroad invites correspondence with those desiring homestead land in Northwestern Colorado, best adapted to grain raising. Individuals and colonies wanted. Address W. H. Paul, General Freight Agent, Denver and Salt Lake Railroad, 814 Ideal Building, Denver, Colorado.

RICH, well-watered, sheltered, cut-over dairy lands; clover abundant; quick responsive soil, offered homeseekers; write for our low prices, easy terms and descriptive circulars. Ellingson Cloverland Co., 311 Worden, Ave., Ladysmith, Wis.

WANT TO TRADE A GOOD quarter of Lyman county, S. D., land for Holstein heifers and cows, want to get into Holsteins and will give a good deal. Write J. A. Robertson, Sr., Draper, S. D.

WANTED! Your address if interested in dairy farms. Will send new list twenty improved all-purpose farms for sale cheap. Stannard, "The Land Man," Springville, Lawrence Co., Indiana.

PROSPERITY IN CANADA

$90,000,000 in new wealth added in 1913. Enormous crops and low taxation make farmers rich. Wheat average, 36.16 bushels per acre in Alberta, 28.75 bushels per acre in Saskatchewan, 38.50 bushels per acre in Manitoba. Taxes average $24 and will not exceed $35 per quarter section, includes all taxes; no taxes on improvements. Free schools and full religious liberty, good climate. Get your farm home from the Canadian Pacific Railway. 20 years to pay. Good land from $11 to $30 per acre; irrigated land from $35, and the government guarantees your land and water titles. Balance, after first payment, extended over nineteen years, with interest at 6%; privileges of paying in full any time. Before final payment becomes due your farm should have paid for itself. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land itself. Particulars on request. Ready-made farms for sale. Special easy terms. Loans for live stock. In defined districts, after one year's occupation, under certain conditions, we advance cattle, sheep and hogs to farmers up to a value of $1,000. We want you if we can afford to help you. We own the land; we want the land cultivated. Our interests are mutual. Buy direct and get your farm home from the CANADIAN PACIFIC RAILWAY. Send for free book. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Ave., Calgary, Alberta, Canada.

SALE DATES.

Holstein-Friesian Cattle.

Nov. 14-15, Intercounty Holstein Breeders' sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.

Aberdeen Angus Cattle.

Nov. 9, Combination Sale, Roy Miller, Prosper, Minn and M. C. Willford, Canton, Minn. (Sale at Canton, Minn.)

Percherons.

Nov. 15, Hagemeister Stock Farm, Green Bay, Wis.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders' Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 15, J. D. Gant, Delavan, Wis.

Guernsey Cattle.

Feb. 26, George W. Pagel, Zumbrota, Minn.

Ask your neighbor to subscribe for The Wisconsin Farmer.

JUST AS A SAMPLE

Below Is Copy of Signed Statement of a Representative Golden Prairie Farmer

"Hillsdale, Wyoming, Sept. 18, 1914.

"Federal Land Company,
Burns, Wyo.
Dear Sirs:

"I have lived in Wyoming 6 years on E½ Sec. 30-16-64 and have raised good crops each year. This year I had 22 acres of winter wheat that made 19 bushels per acre. I have raised oats that yielded 60 bushels per acre and potatoes have made specially good crops each year. Our garden has always been good.

"I had two cows when I came here and now have 40 head of cattle and have sold 2 head, and have bought only 1, but have traded some steers for heifers. I milked this season 12 cows and my cream check for month of June was $96.00 even.

(Signed) FRANK KESLAR.

If you have not already received our literature describing the Golden Prairie District and the bargains we are offering in our Hillsdale Ranch just now being placed on the market, don't delay longer but drop us a card and we will send you some most interesting literature.

FEDERAL LAND COMPANY
BURNS, WYOMING

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has land and city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,20 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

FARM FOR SALE in Iron county, Michigan 320 acres, 120 acres clear. Sixty-three head of graded Holstein cattle, 28 bearing milk cows, 5 head horses, machinery, building etc. Fine chance for cattle raising. Sold on reasonable terms. Inquire Geo. Premo, Amasa, Mich.

DAIRYING IN AITKIN COUNTY, MINN. will prove your royal road to fortune. Its soil, grasses, water, location, low prices and our easy terms, all are unequaled anywhere else. Write for literature. ARNOLD, Land Agent, 153 Welv. Bldg., Duluth, Minnesota.

ANNUAL PUBLIC SALE OF **70 HEAD OF SHETLAND, WELSH AND HACKNEY PONIES**

At the Heyl Pony Farm, November 4, 1916

OFFERING consists mostly of ponies sired by or bred to grand champion, King Larigo. Welsh ponies will be sired by grand champion, Gwindy Brennin. There will be imported mares and stallions as well as home-bred ones. We will offer ponies for the show ring, ponies for the breeder to establish a herd and well-broke ponies for children's use. Send for catalog which tells the whole story. **HEYL PONY FARM, Washington, Ill.**

Flaws in October Butter.

Twenty per cent of the butter at the October scoring in Madison scored below 90 per cent. Sixty-six per cent scored between 90 and 93 per cent. A study of the blanks sent in by exhibitors shows 33 per cent pasteurized cream used, while 67 per cent was churned in the raw state. Forty-six per cent of butter scored was made from cream one and two days old. In criticizing this butter, Mr. O. A. Storvick, of Albert Lea, says:

This lot of butter was a little irregular, as to appearance of packages, there being mostly the regulation twenty-pound tubs, but also a number of ten-pound tubs. As a whole, entries in a contest, make a better appearance when the packages are all of one kind and size. As to workmanship it is a pleasure to state that the Wisconsin buttermakers are making fine progress, most of the entries were exceptionally well made. A few tubs contained butter that was a little pasty or gummy in body possibly due to difficulty in securing a perfect granule in the churning process. Thin cream is very difficult to churn exhaustively and yet procure the much desired flaky or irregular granule. The butter made from thin cream, especially from cows well along the period of lactation and in colder weather is apt to come in form of a "shot granule" which is prone to cause a close grained body, and unless the utmost care is taken may be pasty or gummy showing that the moisture is separated into very minute particles. Mottles were practically eliminated; a few entries showed up a little cloudy, others a little patchy in color, but not sufficiently visible to warrant a cut in the score. The salt was well dissolved and I do not remember a single cut on account of gritty salt. This is gratifying, especially now, as the weather is getting a little colder and more difficulty is experienced unless care is taken in having wash water and salt at about the same temperament as the buttermilk.

A number of the entries showed plainly the effects of less frequent deliveries of cream, perhaps also feed conditions had an effect on the flavor. Some of the entries were criticized as having a peculiar moldy or musty flavor perhaps due to improper care of the separators or cream being kept in cellars. A number of entries lacked character, rather flat which no doubt could be overcome by the use of a vigorous, clean flavored starter, but as a whole there were many fine samples of butter and, although not so many real high scores, the buttermakers really are to be complimented on this lot of butter, considering the difficulty at the time of the year in producing the highest scoring butter.

Atwater's Duroc Jersey Sale.

L. F. Atwater, Bangor, Wis., demonstrated the fact that good boars could be sold at public auction in Wisconsin as well as in any other state. Last Wednesday he sold thirty-five head of the best Duroc boars ever sold at auction in the Northwest. The common comment was the great length, good feet and arched backs that were found on the Atwater farm. It was a great offering throughout and those in attendance showed their appreciation of the offering by their spirited bidding. The top of the sale was $105, bought on mail order for R. W. Swartzley, Columbus, Neb. This western breeder saw the Atwater Durocs at Omaha and when he passed up some of the good Iowa sales and bought his boar in this sale it showed that he appreciated the Atwater Durocs. Mr. Writman, of Illinois, bought the next highest boar—$102.50. In our estimation R. C. Church, Elkhorn, Wis., bought the bargain of the sale, paying $85 for Number 11. Brian Rundell made a good buy when he bought Number 1 to put at the head of his Duroc herd at Hammond. Grant county was well represented, McKevitt Bros., of Bloomington, paid $75 for one, Jacob Erwin, of same town also made a good buy at that figure and Elmer C. Napp, Fennimore, followed suit and landed Number 5 at $75. Two-thirds of the offering went to head pure-bred herds. Mr. Atwater expressed himself as being well satisfied with the result of his first boar sale. The thirty-five head averaged $50.05. Col. J. L. McIlrath sold the offering in a very efficient manner. We follow with a list of those selling for $30 or over:

1. B. L. Rundell, Hammond, Wis. $ 85.00
2. Wis. Col. of Agric., Madison, Wis. 50.00
3. Bennett J. Melin, Redwing, Wis. 67.50
4. R. W. Swartzley, Columbus, Neb. 105.00
5. Elmer C. Napp, Fennimore, Wis. 75.00
6. H. J. Willgruk, Chaston, Wis. 35.00
7. McKevitt Bros., Bloomington, Wis. 75.00
10. Webb Bros., Poynette, Wis. 55.00
11. R. C. Church, Elkhorn, Wis. 85.00
13. John McCallum, Clinton, Minn. 42.50
14. Henry Fenske, Rio, Wis. 55.00
16. Chas. Staraut, West Salem, Wis. 37.50
17. Riley Martiny & Son, Baraboo, Wis. 55.00
18. W. C. Hitchcock, Menomonie, Wis. 42.50
19. Christ Bual, West Salem, Wis. 45.00
20. J. L. Erwin, Bloomington, Wis. 75.00
21. M. Whitman, Mourse Center, Ill. 102.50
22. Lein Bros., Joliet, Ill. 30.00
23. Hass Bros., Galesville, Wis. 37.50
24. E. E. Wyatt, Tomah, Wis. 32.50
25. Thomas B. Berry, Wilton, Wis. 35.00
26. J. Barclay, Bangor, Wis. 32.50
27. H. W. Schilling, Onalaska, Wis. 50.00
30. Henry Mawier, Verona, Wis. 32.50
31. W. C. Edge, Fennimore, Wis. 47.50
32. L. R. Hoard, Cataract, Wis. 52.50
33. O. A. Fanstad, Owatonna, Minn. 42.50
34. La Crosse Co. Asylum, West Salem, Wis. 35.00
35. Fred S. Sprain, West Salem, Wis. 30.00
36. Jacob Dietyman, Kendall, Wis. 35.00
37. Thos. Jonesfi Cambria, Wis. 30.00

Willsie's Duroc Jersey Sale.

The Duroc Jersey boar sale held at Prosper, Minn., by Geo. H. Willsie, resulted in an average of $34 on thirty-eight head. Some of the boars had not done well and were not sold. A few Chesters were also sold, but not included in this average. Taking all into consideration it was a good sale. The boars were not as well fitted as they might have been and incidentally brought more money, but those in attendance got the benefit of this and the boars they purchased will give satisfaction, we are confident of that. The top of the sale was Number 23, an outstanding son of that good sire, Chief Defender. Mr. Morrison, of Minnesota, secured a bargain when he got this boar for $100. Few better boars have been sold this year. Number one, a linebred King the Col. was one of the snaps of the sale and was purchased by Henry Hansen, Renville, Minn. A McKevitt, Bloomington, Wis., made a good selection in Number 33, buying him at $46. Col. H. S. Allen did good work on the block. We follow with a list of those selling for $30 or over:

1. Henry Hansen, Renville, Minn. $60
2. E. R. Shumway, Caledonia, Minn. 45
3. S. C. Kittsley, Calmar, Ia. 35
4. P. Gallagher, Decorah, Ia. 37
5. C. A. Stortz, Decorah, Ia. 37
6. R. Wicks, Prosper, Minn. 37
7. F. T. Flynn, Preston, Minn. 32
17. N. J. Amble, Peterson, Minn. 32
18. Melvin Kline, Caledonia, Minn. 31
23. R. E. Morrison, Clinton Falls, Minn. 100
25. John Castirson, Mabel, Minn. 33
30. Julius Tosstenson, Canton, Minn. 36
33. McKevitt Bros., Bloomington, Wis. 46
34. Archie Bryant, Mabel, Minn. 52
35. C. W. Hale, Stewartsville, Minn. 33
36. Ben Johnson, Prosper, Minn. 43
37. C. W. Hale 33
38. Link Bros., Joliet, Ill. 35
40. Archie Bryant 40
41. Archie Bryant 40
42. Archie Bryant 40
43. Archie Bryant 40

W. C. Jenkins' Duroc Sale.

The sale of boars and sows held at Bangor, Wis., by W. C. Jenkins resulted in a satisfactory average. There were some boars and a few gilts sold that should not have been listed for a sale, as they cut the average of the sale materially. The top of the sale was $75, that amount being paid for the good Tattletale sow, number one in the catalog. She was a good buy at that figure. Mr. Jenkins' herd boar was driven into the ring and he made a decided hit with the crowd. He is a boar with scale, has a wonderful back, smooth and in fact one of the best boars in the state. He is sired by Col. S. Jr., out of an Orion Chief dam. Many of the buyers that bought sows and gilts in the sale paid Mr. Jenkins a service fee and left them to be bred to this good boar. Fred Leonard & Son and Geo. Brooks, Jr., made good buys. The average was a little under $30. Col. J. L. McIlrath, officiated on the block in a satisfactory manner. We follow with a list of those selling for $30 or over:

SOWS.

1. John Johnson, Viroqua, Wis. $75.00
2. Owen Williams, Bangor, Wis. 60.00
19. Fred Leonard & Sons, Jefferson, Wis. 50.00
20. Geo. Brooks, Jr., Sparta, Wis. 60.00
31. Randall Bros., Coonvalley, Wis. 30.00

BOARS.

3. Roben Hohn, Melvina, Wis. 54.00
4. John Lakel, Tomah, Wis. 35.00
5. Hans Johnson, Portland, Wis. 32.00
6. L. I. Roberts, Bangor, Wis. 30.00
7. J. L. Jones, Rockland, Wis. 30.00
16. Roy Horsfall, Bloomington, Wis. 42.50
38. W. H. Meir, Bangor, Wis. 30.00
49. W. R. Paff, Bangor, Wis. 30.00

TOO LATE TO CLASSIFY.

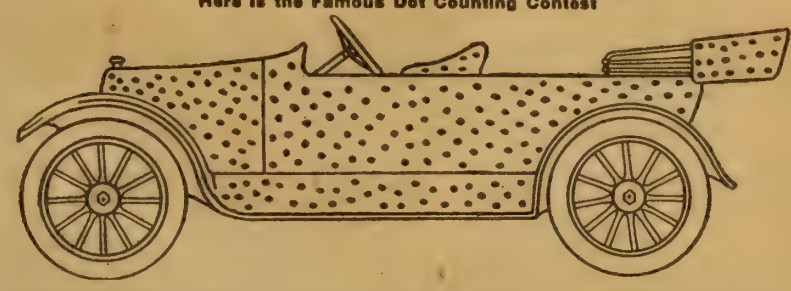
Your Chance—Chester Whites

ALL ages, either sex, boars big enough for service. Fall pigs by **Pay Streak,** 2d junior yearling at Milwaukee, 1916. Everything as represented or money back.

Wm. F. BUTTS **EVANSVILLE, WIS.**

Count the Dots and Win a Prize

Here is the Famous Dot Counting Contest



You see in the picture, an Automobile covered with dots. By being careful and thinking you can count the number of dots on this Auto. If you can do this, we will send you as a prize, *a surprize package of beautiful season and greeting post cards,* lithographed in rich colors and also a certificate of entry in our grand contest for an Saxon Automobile. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

SAXON AUTO GIVEN AWAY

Remember the Saxon will absolutely be given away at the close of the grand contest. In case of a tie a Saxon will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

THE AUTO MAN, Dept. 300 Des Moines, Iowa

JERSEY CATTLE.

OAK GROVE JERSEY FARM

WE are overcrowded, as we are just rebuilding our barns and have very little calf stable room. We now have 15 calves and 22 cows yet to freshen, so are making **very low prices** on these richly-bred young bulls to move them quickly. Sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and of Noble of Oaklands.**

No. 1—Out of **Volunteer's Sally,** that has a record of 597 pounds butter. She is also a dam of a 594 pound junior 2 year old that holds the state record for her age. **Price $100.**

No. 2—Out of **Koffee of Oak Grove,** now on semi-official test and making a fine record. This young bull won 1st at Elkhorn fair. **Price $75.** Send for extended pedigrees; further description.

WM. KNIGHT - - - - **EAGLE, WISCONSIN**

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Fina ncial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - **Wauwatosa, Wis.**

FREDRCH ID. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son **Oconomowoc, Wis.**

REGISTERED JERSEY

COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - **Fairwater, Wisconsin**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS.

TOO LATE TO CLASSIFY.

DUROC JERSEY BOARS

OF March farrow with size and quality, heavy bone and long, deep bodies, of the best of breeding. Write for prices. Address

W. G. BARTHOLF **BURLINGTON, WIS.**

ANGUS BARGAINS

HERD of 11 head of high-grade heifers, 3 months to 4 years old, 1 herd bull 2 years old. Will sell individually or the lot for $600. Address

Frank Green & Son, **R. 1, Oregon, Wis.**

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher **Oregon, Wisconsin**

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address

C. F. DINEEN, CEDARBURG, WISCONSIN

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley **R. 3, La Crosse, Wis.**

RED POLLED CATTLE.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

UNDERWOOD

RED POLLS

COWS, HEIFERS, BULLS. Not culls. If you want good cattle write

L. C. UNDERWOOD **AVOCA, WIS.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin **Gotham, Wis.**

SHEEP.

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.

Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

SHEEP

SHROPSHIRE yearling rams all sold. After October 15th my yearling Hampshire flock header and my Oxford flock header will be for sale. Have a limited number of Shropshire, Hampshire and Oxford ram lambs left; also a few ewes. All stock registered. Address

Dane Stock Farm **Oshkosh, Wis.**

Hickory Dale Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock flock headers. Address

Arthur Broughton & Sons **Albany, Wis.**

ENTIRE FLOCK eighty high grade Shropshire breeding ewes for sale. Ten dollars per head. Albert F. Karcher, Burlington, Wisconsin.

AYRSHIRE CATTLE.

Mr. Hugh J. Chisholm maintains a prize herd of AYRSHIRES at Strathglass, his beautiful farm in Westchester County, N. Y.—every animal a beauty and a profit-maker in the dairy. Mr. Chisholm discarded a very popular and widely advertised breed in favor of AYRSHIRES when he really investigated their merits. It will pay you to investigate this handsome, profitable breed.

AYRSHIRE BREEDERS' ASS'N

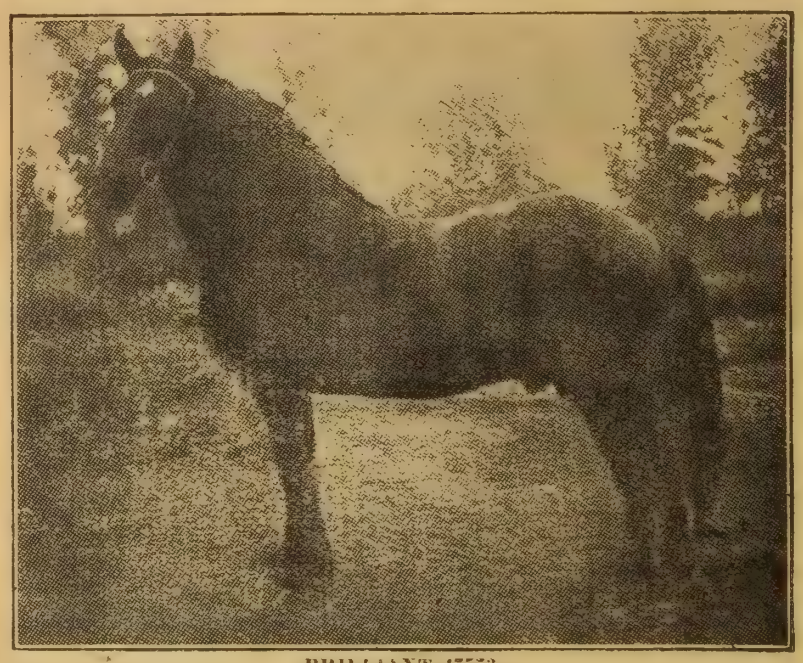
C. M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

HAGEMEISTER

Percheron Dispersion Sale

OF THE STUD OF THE LATE HENRY F. HAGEMEISTER

Green Bay, Wis., Wednesday, Nov. 15



BRILLIANT 47573.

Eleven stallions, thirty-three mares and fillies, ranging in age from sucking colts to mature animals. Undoubtedly the best lot of home bred and imported mares in any one stud in Wisconsin. To appreciate their high individual merit you must see them. An extraordinary lot of animals. The home bred animals are largely sired by **Imp. Historique 71752** and out of daughters and granddaughters of **Baccarat 11326.** There are also **five imported mares** and eight fillies and mares out of both an imported dam and sire. Catalogs are now ready for mailing. Mention The Wisconsin Farmer and address

HAGEMEISTER BREWING COMPANY

GREEN BAY - - - - - - - - - - WISCONSIN

HORSES.

4 Stallions PERCHERONS 2 Mares

WE are offering 6 very high-class Percheron stallions and mares; 1 two-year-old and one yearling stallion out of **Diana 53532** by Phil Sheridan and 1 yearling stallion and a 2 and 3 year old mare out of Karel 33640, a double bred **Baccarat** mare. The two-year-old stallion sired by Imp. Haricot 74108 is particularly good. Send for prices and description.

JOHN KLOEHN - - FOREST JUNCTION, WISCONSIN

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

CLYDESDALES

STALLIONS and mares for sale. **AYRSHIRES**—Serviceable bulls and females. **DUROCS**—growthy boars and gilts. Only the very best of the three breeds. We invite visitors. Write your wants.

Jas. Van Etta - Lima Center, Wisconsin

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

POLAND CHINA SWINE.

POLAND CHINA BOARS

ONLY four spring boars but they are "dandies." Order one. Address

Mat W. Beres Elroy, Wisconsin

POLAND CHINA BOARS FOR SALE

10 GREAT fall yearling Poland China boars with great bone and length, sired by Big Bone and Long Wonder. These boars will be priced right. Address

C. J. Schoenfeld & Son Fox Lake, Wis.

When writing to advertisers kindly mention The Wisconsin Farmer.

POLAND CHINA SWINE.

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address

J. C. Hendricks Box F, Hazel Green, Wis.

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.

Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781

AND

ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address

P. W. YOUNG PROSPER, MINN.

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

Bargains, Poland Chinas

SPRING boars and gilts priced to sell. Order now. Big-type breeding. Address

L. E. Pease Millville, Wisconsin

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

Please mention this paper when writing

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

Big Type Poland Chinas

OF EITHER sex. Some are state fair winners, and all sired by the grand champion, Jumbo Hadley or D. & E.'s Hadley, and D. & E.'s Jumbo. All state fair winners, and sire of winners this year. Order a herd header from us. We can spare two of our herd boars. Visit us, or write us your wants.

DOBSON & EASTMAN - - - - LANCASTER, WISCONSIN

SIZE---QUALITY---BREEDING

Features Predominating in my Polands

JUMBO'S EQUAL 2d

CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH (Shipping Point Fennimore) MT. IDA, WISCONSIN

McDONALD CLEANS THE SLATE

WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin, Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address

J. D. McDONALD, NORTH BEND, WIS.

ANDERSON'S BIG-TYPE POLAND CHINAS

TWO choice spring boars at $20 each, and a few open gilts at $20 each. Also a few early fall pigs at $10 each, and one choice herd boar, King of All, a bargain for $40. Your money's worth or your money back. Mention The Wisconsin Farmer and address

S. ANDERSON ROUTE 8, GREEN BAY, WISCONSIN

MADSON'S BIG-TYPE POLAND CHINAS

SPRING boars, March and April farrow, well grown, good type, several now weigh close to 200 lbs., sired by CORRECT I AM, Junior champion at Minnesota and Illinois State Fairs, TRIUMPH by Hidestretcher, grand champion Wisconsin State Fair. Three milking Short-horn bulls for sale.

M. MADSON & SONS MADISON, WISCONSIN

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

Some Boars

A FINE assortment of spring boars (March)—individuals that will please—the **quality kind.**

Poland Chinas

Two **outstanding** fall boars. Your $$ worth or your $$ back. Write or come.

F. A. Morehouse - Lancaster, Wisconsin

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING BANGOR, WIS.

Poland Chinas For Sale

FIVE yearling boars. Spring pigs of both sexes Boars fit for service and September pigs.

James Derivan Fox Lake, Wisconsin

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.

A. Menke & Sons, R. 1, Markesan, Wisconsin

BIG-TYPE POLAND CHINA

SPRING crop of boars at farmers' prices while they last at $25 and $30 each. Brood sow sale will be held February 16, 1917.

CHRIS KARTMAN - CASSVILLE, WIS.

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS Hazel Green Wis.

POPULAR PROLIFIC POLANDS

LET me ship you a guaranteed spring boar. Several for sale by MAC'S CHIEF, the great McDonald boar that will be heard from. His pigs will be in demand. Order early. Also SHORT-HORN BULLS of milking strain for sale. Write

Olaf C. Olson, Strum, Buffalo County, Wis.

BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.

Chas. S. Maltby. Janesville, Wisconsin

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. Registered Holsteins.

Marinette County Asylum - Peshtigo, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.

Phone 53 F. E. Purdy, Orfordville, Wis.

ANOKA FARMS'

SHORT-HORN OFFERING

ANOKA MISSIE 3D BY VILLAGE DENMARK.

WAUKESHA, WISCONSIN THURSDAY NOVEMBER 2, 1916

BANDMASTER, ONE OF THE TOP BULLS.

WILL present the opportunity of the year for buyers to secure the very best that is to be found in the Short-horn world. For this sale there has been listed the entire 1915-16 crop of calves, consisting of 45 head, 20 bulls and 25 females, the get of Sultan Stamp, Regal Stamp, Imp. Rusper Champion, Village Denmark, and other celebrated sires. Included in the offering will be the first prize calf herd at the leading 1916 shows as well as the ten head of youngsters that won at the Kansas City Royal Show the trophy for the best ten head of Short-horns bred by exhibitor, the most coveted trophy of the show. This will be the most desirable lot of cattle that has ever been sold from the Anoka herd, and gives the buying public an opportunity to select a herd bull or some attractive young females from a herd that is famous for the results accomplished in its constructive breeding operations. The catalog tells the story, and will be sent upon application. Mention The Wisconsin Farmer and address

F. W. HARDING, PRESIDENT
GEORGE SIM, MANAGER

ANOKA FARMS, WAUKESHA, WISCONSIN

Colonels Jones and Reppert, auctioneers. Fred V. Johnson will represent this paper. Attention is called to the sales of Garden & Weaver and J. W. McDermott, Chicago, October 31st; Carpenter & Ross, Chicago, November 1st, and Herr Bros. & Reynolds, Lodi, Wis., November 3d.

SHORT-HORNS OF MERIT

Will be sold at Lodi, Wis., Nov. 3, 1916, by

HERR BROS. & REYNOLDS

48 Head--13 Bulls and 35 Females--48

AN offering of show and breeding stock that is right in every way. Many of the younger things are the get of Master Ruby, a champion bull, sired by Archer's Hope. Others are by White Rock by Whitehall Sultan; Cumberland's Ideal, a grandson of Cumberland's Last; Royal Kintore, and Golden Sultan. This is a lot of Short-horns that will fulfill everything that can be said for them, and will in no way disappoint the buying public. They are all bred along the most popular Scotch lines and have individual merit of the highest order. Practically all females of breeding age are in calf to Master Ruby. Write for the catalog, mentioning The Wisconsin Farmer, to

HERR BROS. & REYNOLDS **LODI, WISCONSIN**

Colonels Jones and Reppert, auctioneers. Fred V. Johnson will represent this paper. Attention is called to the sale of Weaver & Garden and J. W. McDermott, Chicago, October 31st; Carpenter & Ross, Chicago, November 1st; Anoka Farms, Waukesha, Wis., November 2d.

SHORT-HORN CATTLE.

USE A SHORT-HORN BULL

ARE you raising beef? A Short-horn bull will give you more scale and bone and more pounds of flesh for a given amount of feed than any other breed. Are you a dairyman? A Short-horn bull will not reduce your milk supply and he will get you calves that will be quickly salable at a much higher price than you can get from a dairy bred bull. Are you a farmer? The Short-horn is the ideal for your purpose, because it is adapted to all conditions, of quiet temperament, takes on flesh readily, and yields a liberal flow of milk. The Short-horn always works improvement.

AMERICAN SHORT-HORN BREEDERS' ASS'N

13 Dexter Park Ave. Chicago, Illinois

OAK LAWN FARM

Short-horns of Quality

FOR sale at reasonable prices 4 head of registered Short-horn cows. Also 15 young bulls and 6 young heifers from 2 to 10 months old, all sired by Denmark 8th, a very good Villager bull.
J. E. KENNEDY, JANESVILLE, WISCONSIN

RIVERDALE STOCK FARM

SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little Evansville, Wisconsin

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son - Burnett, Wisconsn

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address
JOHN CLAY WARRENS, WIS.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

SHORTHORNS

YOUNG stuff for sale—bulls or females—sired by Nominee Cumberland by Prince Cumberland
Write us. William Bros., Bangor, Wisconsin.

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer.
H. B. Drake & Son. Beaver Dam, Wisconsin

WILCOX SHORT-HORNS

AM OFFERING several **Roan Bulls** of serviceable age. Priced reasonable for immediate sale. Write for pedigrees.
W. F. Wilcox - - Milton, Wisconsin

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address
J. Warren Hoyt Rosendale, Wisconsin

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. C. S. Hechtner, Charlton, Iowa.

HOLSTEIN-FRIESIAN CATTLE.

YOU CAN'T BEAT IT

WE have for sale a young Holstein bull from a 23.05-pound four-year-old daughter of SIR CLYDE that has 45 A. R. O. daughters, four with records above 30 pounds. He is sired by a son of BEAUTY PIETERTJE PRINCE, that is out of a daughter of SIR ORMSBY HENGERVELD DE KOL. It is some breeding. Send for extended pedigree and price. Address

DOPP BROS. **OCONOMOWOC, WIS.**

A RICHLY BRED
JOHANNA BULL

SIRED by the 26-pound bull, **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.** Address

GEO. GIBSON **NASHOTA, WIS.**

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.

GROVE BROS. **COLUMBUS, WIS.**

2 HOLSTEIN BULLS

OF SERVICEABLE age. One from Gordonia Johanna Aaggie Echo 151460 with 15.50 pound seven day record and sired by the richly bred bull Julip Segis Korndyke (80640). One sired by Daisy Johanna 5th, a 27-pound bull and the dam, Queen Liliuokalani De Kol 2d, 213904, a 12-pound Junior 2 year old sired by Julip Segis Korndyke. Price $85.00 and $125.00.

L. V. Garvens - Brookfield, Wisconsin

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.

JOHN STEEL - OCONOMOWOC, WIS.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address

L. Lindauer **Kaukauna, Wisconsin**

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.

EARL NORWOOD, GAYS MILLS, WIS.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the **year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.

J. H. Henderson - Elkhorn, Wisconsin

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and KingiDeKol Lyons (Registered Poland China hogs).

Marinette County Asylum - Peshtigo, Wis.

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE **MONROE, WISCONSIN**

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford **Kaukauna, Wis.**

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons **Elgin, Illinois**

HILLSIDE STOCK FARM

OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

WE KNOW YOU LIKE THIS BREEDING

CHARTED PEDIGREE
OF THE
Pure-Bred Holstein-Friesian Bull
Korndyke Segis Johanna

No. 127132 H.-F. H.-B.
Born November 17, 1913.
Owned by—

PABST STOCK FARM,
Oconomowoc, Wis.

The average of the records for his dam and sire's dam are as follows:

Milk	632.40
Butter	39.05
Per cent fat	4.94
30-day record:	
Milk	2,630.50
Butter	154.16
Per cent fat	4.69

Why not buy a bull calf by this sire and out of one of our A. R. O. cows with high 7-day and yearly records. Over 30 to select from at $100 and up.

SIRE—**Johanna McKinley Segis**
954 A. R. S. (44367) Sire of—

Uneeda Korndyke Abigail	33.02
Uneeda Korndyke Abigail, 30 days	124.00
Uneeda Korndyke Charlotte	29.35
Uneeda Korndyke Abbie	28.00
Winana Jennie 2d, 2 years	27.10
Uneeda Korndyke Beryl, 4 years	26.61
Oakfield Korndyke Segis	25.57
Oakfield Korndyke Segis, 30 days	104.91
Uneeda Korndyke Countess, 3 years	24.35
Uneeda Korndyke Beauty, 2½ years	23.57
Johanna Woodland Segis, 3 years	23.51
Paula McKinley, 3 years	22.78
Abbie Korndyke Segis, 3½ years	21.26
Uneeda Korndyke Bertina, 2 years	21.20
Uneeda Korndyke Abronia	20.63
Uneeda Korndyke Adeline, 3 years	20.42
Uneeda Korndyke Agnes, 4½ years	20.39

34 A. R. O. daughters, 1 above 30 lbs.
6 above 25 lbs., 15 above 20 lbs.
9 sons with 33 A. R. O. daughters.
6 daughters with 6 A. R. O. daughters.

DAM—**Pontiac Lady Korndyke**
11276 A. R. O. (92700)

Butter	38.03
Milk	601.40
Per cent fat	5.06
30-day record:	
Butter	156.93
Milk	2,496.70
Per cent fat	5.02
Dam of—	
Fairview Korndyke Rag Apple, 2 years	19.86

2 sons with 22 A. R. O. daughters.

Pabst Stock Farm DEPT. 30 **Oconomowoc, Wis.**

THE 30.90-LB. SHOW BULL
NORTH STAR VERA SIR BEETS 97406

AS we now have four crops of calves by this sire, we are compelled to offer him for sale. He is a show bull as his picture shows him. He is perfectly gentle and quiet, even with strangers, is a quick, sure server, and we guarantee him to be absolutely right in every way. He was born December 24, 1911. Sire, SIR BEETS CORNUCOPIA NETHERLAND, that was never defeated in the show ring. Dam, HAPPY HOME VERA ORMSBY, A. R. O. record 30.90. First check for $500 gets him.

FRED ALBRECHT **WATERTOWN, WISCONSIN**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST **WEST ALLIS, WISCONSIN**

KING PONTIAC PORTIA
and
Richland Sir Ormsby Korndyke
(Out of Aaggie Texal Wayne 2d 1,078 pounds)

ARE the sires of the HEIFERS we are offering for sale. All from A. R. O. dams up to 27 pounds. One heifer, half sister to a 36 pound cow. A limited number will be sold. Write for pedigrees and records. Address

C. C. FRIES & SON **RICHLAND CENTER, WIS.**

10 REGISTERED HOLSTEIN COWS FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

2 Richly Bred Holstein Yearling Bulls

BOTH sired by **King Pietertje Hengerveld Ormsby,** a full brother to **Pietertje Maid Ormsby.** Both are out of daughters of **Sir Aaggie Ormsby.** One an A. R. O. cow making 27.50 pounds butter as a three year old. Those bulls are of **Ormsby** breeding on both sides. Send for extended pedigrees and prices. **HUTCHINSON BROTHERS & BURBACH, RANDOLPH, WISCONSIN**

450 HOLSTEINS AND GUERNSEYS COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.

EDGEWATER STOCK FARM **FORT ATKINSON, WISCONSIN**

OLATHE-HOLSTEINS
STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer for sale surplus stock of our own raising.

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Yearling Son

READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

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30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

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LA BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutchie's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

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Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

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Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

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of both sexes of Premier and masterpiece breeding

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GRANDSON of Glenwood Boy of Haddon Hall Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

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Send for description. Prices reasonable. Address

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10 to 14 months old, daughters and granddaughters of the richly bred sire,

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DAMS imported and richly home-bred animals. These animals are well grown, good, straight type and well bred. For further particulars tend for copy of pedigrees or color description. Address

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Brown Swiss

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HAVE a fine assortment of spring boars. Will also sell a few sows and spring gilts. They are well grown, and are priced to sell. Send your order, I guarantee satisfaction.

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Hasn't affected the prices on

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C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

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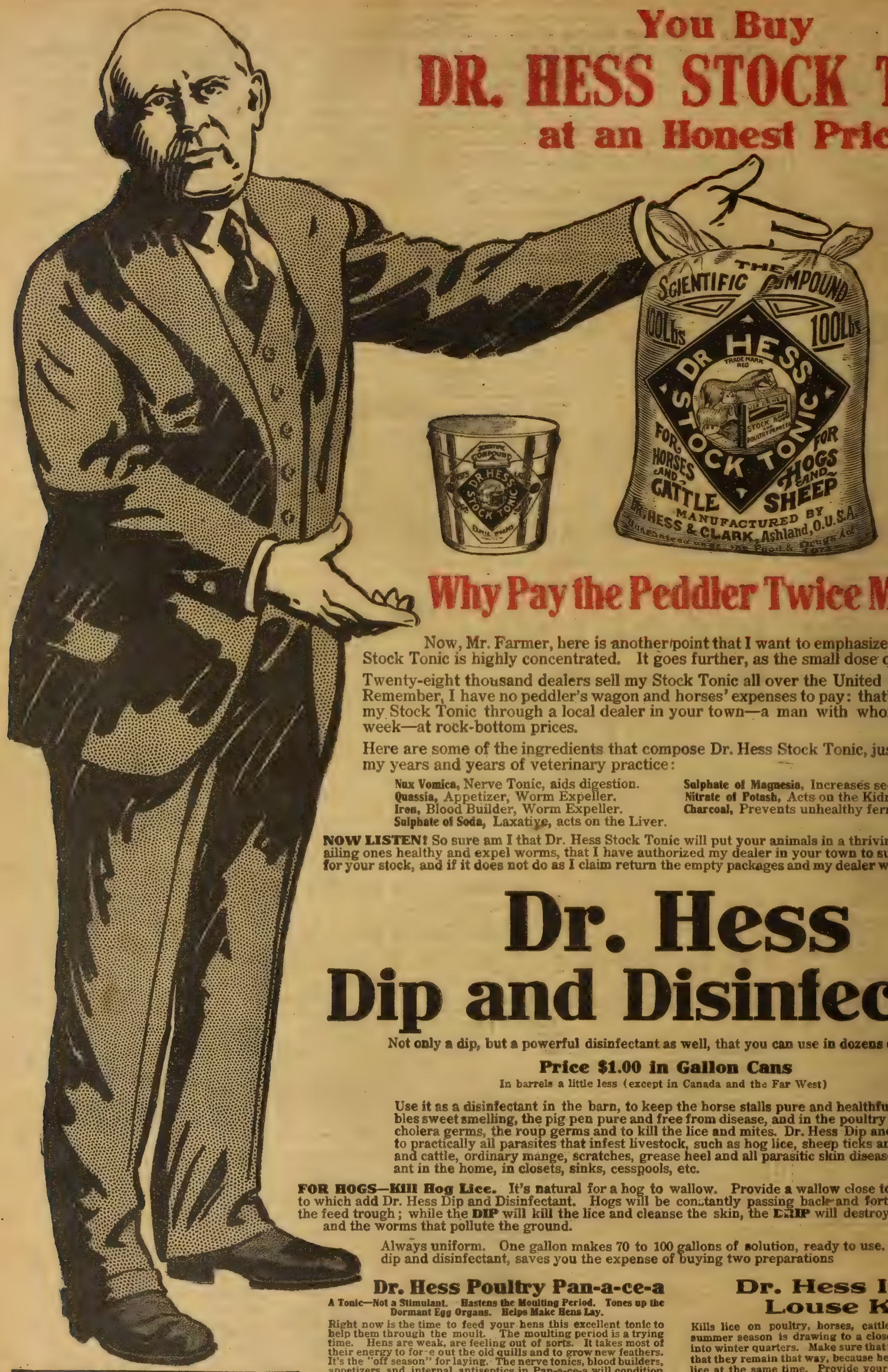

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Smaller package as low as 50 cen (except in Canad and the far We and the South).

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Now, Mr. Farmer, here is another point that I want to emphasize: That is, Dr. Hes Stock Tonic is highly concentrated. It goes further, as the small dose quantity proves.

Twenty-eight thousand dealers sell my Stock Tonic all over the United States and Canad Remember, I have no peddler's wagon and horses' expenses to pay: that's why I can sell yo my Stock Tonic through a local dealer in your town—a man with whom you trade ever week—at rock-bottom prices.

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Nux Vomica, Nerve Tonic, aids digestion.
Quassia, Appetizer, Worm Expeller.
Iron, Blood Builder, Worm Expeller.
Sulphate of Soda, Laxative, acts on the Liver.
Sulphate of Magnesia, Increases secretion.
Nitrate of Potash, Acts on the Kidneys.
Charcoal, Prevents unhealthy fermentation.

NOW LISTEN! So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make th ailing ones healthy and expel worms, that I have authorized my dealer in your town to supply you with enoug for your stock, and if it does not do as I claim return the empty packages and my dealer will refund your mone

Dr. Hess Dip and Disinfectant

Not only a dip, but a powerful disinfectant as well, that you can use in dozens of ways.

Price $1.00 in Gallon Cans

In barrels a little less (except in Canada and the Far West)

Use it as a disinfectant in the barn, to keep the horse stalls pure and healthful, to keep the cow st bles sweet smelling, the pig pen pure and free from disease, and in the poultry house to drive out th cholera germs, the roup germs and to kill the lice and mites. Dr. Hess Dip and Disinfectant is deat to practically all parasites that infest livestock, such as hog lice, sheep ticks and scab, lice on horse and cattle, ordinary mange, scratches, grease heel and all parasitic skin diseases. Use as a disinfect ant in the home, in closets, sinks, cesspools, etc.

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Always uniform. One gallon makes 70 to 100 gallons of solution, ready to use. My Dip, being both dip and disinfectant, saves you the expense of buying two preparations

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...tor Back Fires.

...a Model 38 Kissel car. When ...tor is picking up under load with ... spark down, it seems to back fire through the carburetor. What is the trouble and the remedy?

Answer.—Your trouble is probably caused by a leaky inlet valve. It might also be caused by carbon accumulations in the cylinder, causing preignition. Grinding the valves and cleaning out the carbon should stop the trouble.

Preventing Pipes From Freezing.

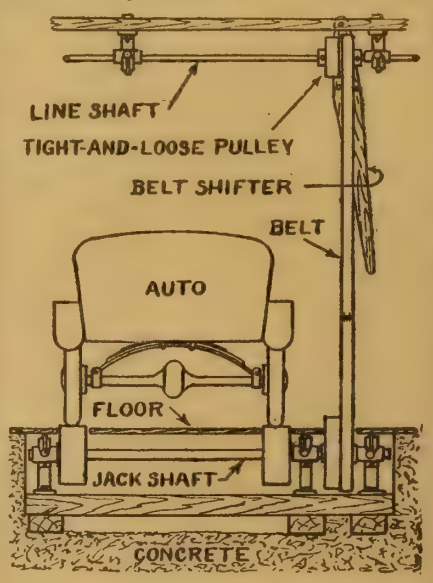
I wish to put a cistern holding about five barrels overhead in my pump house, so as to have running water in the house, which is only about ten feet away. I intend to have some means of opening a valve in the cistern from the house during the winter, so that the pipes that are exposed will not freeze. My cistern is to be a double-walled tank, having a 4-inch dead-air space. I was thinking of packing six inches of hay or straw around the tank. Do you think this would prevent freezing? Would sawdust be better for packing? Could you suggest a way of improving my plans?

Answer.—Six inches of sawdust around the tank and pipes should prevent freezing if the water is not allowed to stand too long. Air space and sawdust packing furnish no heat themselves; they merely help to retain the heat that is already in the water. In cold weather the water would freeze unless some heat is added by occasionally pumping some more water into the tank. Sawdust is a better packing than straw, although straw is good. People in the cities on very cold nights sometimes leave their faucets open enough so that the water slowly trickles out. This prevents their pipes from freezing.

Using Auto For Power.

Can a Ford auto be used successfully for grinding corn on cob, also for shelling corn? If so, how many bushels of corn on the cob may I expect to grind per hour; also how many hole sheller will it pull successfully? Please state how the power may be best applied.

Answer.—The figure shows how any automobile may be used for power with fair success. A jack shaft is mounted under a floor in the garage or barn. Two wide pulleys are mounted on the jack shaft, so that the rear



wheels of the auto run on them. A third pulley on the jack shaft drives a tight and loose pulley on the line shaft. The corn sheller, feed grinder or other machine to be driven is belted to the line shaft. The front axle of the auto must be securely blocked so that the car cannot move forward. There is but little tendency for the wheels of the auto to run off the pulleys sidewise.

You could reasonably expect about as much power from your Ford car as from a 10-horse-power gasoline engine. The Ford engine is rated more than double that amount, bu' it would not be advisable to expect it to pull twenty horse power continually. You should be able to pull a six-hole corn sheller, or any machine requiring about ten horse power.

Motor Hard to Start.

My Ford car which has run about 7,000 miles, of late is very hard to start. I open the carburetor a quarter turn, but this seems to have no effect. What can be the trouble? The fan belt rubs a little on the timer Could it be possible that this would retard the electricity? After the moto' is warm it works to perfection. While removing carbon from the cylinders, I noticed a wire in the water jacket. Have all Ford motors this wire in there; if so, for what purpose? When my car is to be reversed, it makes a loud grinding noise. What causes this?

Answer.—Your trouble is most likely in the "commutator," or timer. It may be that some of the parts are worn, or it may be that all that is wrong is some gummy oil on the roller contact points. A thin oil should be used, as a heavy, gummy oil causes bad contact, making the ignition poor until the motor becomes hot enough to thin the oil.

The wire in the water jacket is probably a "core wire." The water space and similar cavities in the cylinder are made by cores placed in the mold in which the cylinder is cast. These cores are made of sand, molasses and flour, or some similar compound of sand and paste. The cores are held in place in the mold by means of wires. These wires are removed after the cylinder is cast, the one remaining in your cylinder having been overlooked by the casting cleaner. As soon as the molten iron is poured into the mold the paste of the core burns out, making the sand easy to remove after the casting cools.

The fan belt rubbing the timer would have no effect on the running of the car unless it rubs hard enough to shift the cover. It will wear a hole through the cover if allowed to rub continually. The loud, grinding noise is due to a worn lining on the reverse drum. The lining should be replaced.

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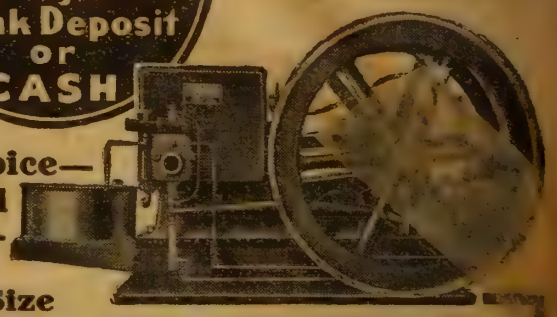

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THURSDAY, NOVEMBER 2, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE DUTY OF EVERY FARMER TO VOTE.

I WANT to urge upon all my readers that, no matter how inclement the weather may be next Tuesday, no matter how much work they may have on hand, they avail themselves of the right of franchise and perform their duty to themselves, to their fellow men and to the government by voting. I want to urge upon the farmers of Wisconsin, Iowa, Missouri, Kansas—every state where my words carry—that they emulate the splendid example set them by their brother farmers in North Dakota at the primaries this summer, when, despite the floods which swept away the bridges and made the rivers and streams well-nigh impassable, they tied their clothes on their backs and swam across, in order that their votes might be counted. Those men deserve to stand alongside the embattled farmers at Lexington who fired the shot that was heard 'round the world.

We Americans possess no birthright greater than the right of suffrage. It is this, fully as much as the sun, the rain, the seed and the careful cultivation, which makes our farms yield productively, which makes of us good farmers and good citizens. Do you think, for an instant, that, no matter how favorable the climate and the soil might be, we would go on, year after year, raising bumper crops if that which we raised were taken from us by the iron hand of oppression? And so long as we have the right of suffrage, can the iron hand of oppression ever be laid upon us without our consent? Is it not lack of the ballot, fully as much as anything else, which keeps affairs so unsettled in Mexico, with revolutions attendant and such a retarding of the progress of civilization as would not be tolerated for an instant if the people, who till the soil, were given a voice and a vote, together with the right to reap the fruits of what they sowed? A people who are ground under the heel of a tyrant whom they cannot overthrow by their votes, who know, by long experience, that the crops which they raise will be seized by the hand of militarism or despotism, are not the people who can be relied upon or expected to make two blades of grass, two ears of corn, grow where but one grew before. Seed, soil, climate and cultivation are not the only factors in our prosperity by any means, important and necessary as they are; a stable government, based upon the consent of the majority of the governed, is an equally great factor in the production of bumper crops and the advancement of our agricultural prosperity.

That is why—if, for no other than a purely selfish reason—I want every one of my farmer readers to vote every time he is entitled to cast a ballot, whether the office at stake is township trustee, governor or president of the United States. The same principle is involved in the election of all these offices: The free choice of a free people. There may be times when we contemplate the task of voting with something of dismay. The weather is inclement; the roads are well-nigh impassable; the team is needed for other and apparently more important work on the farm; one vote more or less will not determine the election. But before a question of whether or not we shall surrender the ballot for all time and content ourselves with the dictation of self-appointed rulers, such petty matters as I have named dwindle into utter insignificance. And a nation composed of individuals who vote only when the weather is fair, the horses idle and a trip to town is a thing of pleasure alone, is a nation which, sooner or later, will voluntarily surrender the ballot and allow itself to be ruled by those who have only their own private and selfish interests to serve.

I am not asking my readers to vote for this man, or not to vote for that man; I am simply urging that they vote. I believe no citizen puts more thought and conscience into the act of marking a ballot than the farmer does. He studies men and measures in a calm, reflective manner, weighing one against the other, determining in his own mind which will more nearly bring about the greatest good to the greatest number. He is unmoved by the prejudices and passions which sweep across great cities; his mind is not inflamed by the frothings of false prophets; his eyes are not blinded by the dust of unimportant issues, thrust into the campaign to becloud the vision of those who take their opinions ready-made from the boss shop. Following the furrow, or working about the feed lot, the farmer finds his brain busy with things far away from him, upon which he looks with an impartial eye. Thus it has come about that the greatest moral and political reforms of our time have originated on the farms of the middle West, that the farmer vote is never wrong. I want to urge upon all my farmer-readers that this splendid record of patriotic citizenship be maintained by the individual, no matter at what personal cost, next Tuesday. The enfranchisement, the prosperity, the peace, the very future of 6,000,000 farmers are at stake today as never before; will the sunset on next Tuesday be a burning glare of shame for that which we failed to do, or a blush of pride for that which we have done so well?

FARM BORROWING MADE EASY.

I WANT to call the attention of my readers to an article which they will find upon another page this week, written expressly for this paper by Mr. Frank R. Wilson, publicity agent of the Federal Farm Loan Board. I asked Mr. Wilson to write an authoritative article, telling just how farmers should proceed in order to avail themselves of the new law, and he promptly complied. In parts, it exactly duplicates the information and advice which I have already set forth on this page, but, inasmuch as it is written by an associate of the men who are to establish the banks and administer the law under which they operate, I think farmers will find it well worth their time to read the article in its entirety, regardless of whether all the facts are new to them or not.

The more I talk this new law over with my farmer friends, and the more I read the letters which they write to me on the subject by the score, the more convinced I am that the board will not have any difficulty loaning money even here in the grain belt, where the banks, insurance companies and private investors have met the need in the past probably better than it has been met any place else in the entire country. The main things which my farmer-correspondents want to know are these: When will the banks be ready to do business, and what will the prevailing rate of interest be? Mr. Wilson assures us that the banks will be ready by February first. Chairman Norris, of the Federal Farm Loan Board, has publicly stated that he hopes the rate will be as low as 4½ per cent. I would be more inclined to predict 5 per cent, to begin with, which will save us quite a fortune and which will put the farmer on the same plane with the merchant and the manufacturer in this important matter of getting the necessary capital at a reasonable rate.

I particularly urge upon my readers that they note the explanation which Mr. Wilson gives of the necessity of each farmer-borrower taking stock to the amount of 5 per cent of his loan. So many correspondents have asked me why this was necessary; if it were not simply red tape, which would eventually be dispensed with. I think they will find the explanation enlightening and convincing.

I hope I will see the new federal land banks so distributed that the grain belt will secure at least three; preferably four. I should be able to make the announcement of their location some time before the last of the year; I hope so, at any rate. In the meantime, let me again suggest that the preparatory work of forming the local associations, drawing up and signing the necessary articles be attended to at once, so that the desired loans can be made in ample time for farming operations next spring. It is not necessary to wait for the actual opening of the banks in order to form local associations and arrange for the appraisement of the farms pledged as security for the loans. Get all this attended to this winter, so the loans can be placed next February and March, in ample time to permit a good year's activity on the farm.

SPENDING MONEY IN THE FARM HOME.

I EXPECTED quite a sheaf of letters as a result of printing the complaint of the Illinois farm woman, whose husband allows her little or no money of her own, but I was not prepared for the avalanche which came. Letters are pouring in upon me from all over the country. Thus far the writers are fairly well divided between support of the Illinois farm woman and criticism. For the present, I am going to maintain strict neutrality, reserving the right to have my say at the last.

This week I am going to print a letter taking the part of the woman, one criticizing her and one which, while it does not actually take sides, gives such good advice as can hardly fail to benefit us all. First, for the letter of approval, from Mr. A T. Remer, of Aulne, Kansas:

I have read the article in your paper of Oct. 19th, regarding the Illinois farmer's wife. I have traveled much, being in the nursery business, and have seen life in many ways. Now I think that a man has no right to be absolute boss. It hurts me to see a good woman from the farm standing around looking and wishing and hating to ask her lord for a little money to get something she prizes and that men know naught of. In plain words it makes me mad. I think there should be one pocketbook and one check book. I want my wife to feel that she has the same right to both as I have. She has helped earn it and it belongs to her by every right. She has as good a right to her half as I have to mine.

Now comes the howl that so many women are careless with money—that they know not the value of it. I do not believe that for one moment. Every woman who helps earn and save knows the worth of money and many of them will make a man ashamed of himself in that line. It is no wonder that many bright women get weary when they compare their married life with the one they had before.

I say, my friend farmer's wife, have a good understanding with hubby and maybe he will see the light and come across just fine and you will both smile and you will not have to walk. Learn to drive the auto and take the kiddies and go. I think a man is a man when he is four square; a woman the same. No four-square man or woman will take what they are not willing to give in life. And, brother Pierce, I hope that you will drum this question into the hearts of your readers until we will know true partnership in life.

Now for the letter severely criticizing the Illinois farm woman. The peculiar part of it is that while a man commends her, a woman condemns her. The writer of the following letter does not wish her identity disclosed, but I quote her verbatim:

I don't believe the Illinois farmer's wife deserves one little bit of sympathy. She gives herself enough pity. I rather think she has forgotten to "count her blessings." Maybe she doesn't know how to spend money. I am sure she has a high enough opinion of herself and it is so very disgusting to hear a woman complain about her husband's shortcomings and parade her own good qualities.

It seems to me if a man provides plenty of good clothes and good food for his family and keeps up the running expense on a farm he has about all the expense he can manage. I know that it takes money to operate a farm. I think farmers should have up-to-date machinery. I am sure we women have plenty. There is so much talk about the poor farmer's wife, and it is absurd, to say the least. No one has more to do with than we have. We have power washers, separators, furnaces, polished floors and vacuum cleaners, refrigerators, bath rooms and water systems in our houses; we have plenty of butter, cream and eggs, vegetables and our own meat; we wear tailor-made clothes and have automobiles. Do you think we need any pity? Of course we work, but who wants to be a "parasite"? Our husbands are not stingy if we use any judgment in the use of money. I always feel free to use my husband's check book, but I always make sure that he has the money to spare before buying anything that isn't a necessity.

Now don't imagine that this comes from a newly-wed who hasn't had any experience, for I have been married for fourteen years.

And last, but by no means least, the letter of advice, from Mr. Henry Falk, of Uniondale, Indiana, who writes a most splendid letter, as follows:

Will you please allow an old sexagenarian to enter your sanctum and interrupt you a little?

We have come to talk of the married lady's troubles you spoke of on October 19th under the title, "A Household Tragedy." The parts of her letter published savor very much of disappointment brought about by a picture overdrawn in her younger days, and which has failed to materialize.

Now this wife of a hard-working farmer we think needs to be given to understand that hard work alone will not insure them a home of their own. With that idea in mind this man, no doubt, exerted himself to the utmost that he might become able to pay for a home of their own, a task which she herself seems to think is almost completed.

Doubtless the auto was bought for service and not for pleasure alone. The thought of becoming the owner of a home may afford him greater pleasure than would driving his auto a distance of seven miles or more to some social gathering while his stock and his crops demand his presence and attention.

Were I called upon to write a motto for that lady's home I could do no better than write, "No success without labor, frugality and love." And then, in case the husband is in the habit of spending the money for drink, tobacco and other unnecessary things, the same words may be arranged to read, "No frugality! Labor and love without success."

If we get nothing more out of this discussion than the good, sound sense contained in the last paragraph of Mr. Falk's letter, it will not have been in vain. I am going to print letters in regard to this matter from week to week, for the discussion is most interesting and valuable. If you will turn back to your paper of October 19th, you will find the original letter which occasioned the controversy. Read it over again, in the light of the rejoinders printed this week, and let me know how you feel on the subject.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

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First and Best Report of Dairy Show.

NO DOUBT a great many of our readers wonder how The Wisconsin Farmer was able to get a complete report of the National Dairy Show at Springfield, Mass., in advance of any other farm paper of general circulation in this state. As was stated last week, The Wisconsin Farmer was personally represented at the National Dairy Show, and this is the only way in which a farm paper can get an accurate and early report of what happens.

The Wisconsin Farmer, as a publication appealing to the farmer-dairymen of this great dairy state, feels that it must assume the responsibility of giving its readers the facts concerning such important institutions as the Waterloo Dairy Show and the National Dairy Show. As is always the case with The Wisconsin Farmer, our ambition is to give our readers something better than they can get in any other publication. The pick of dairy stock of the middle West, including Wisconsin, was seen at these two great dairy shows. Wisconsin was well represented at each show. However, Wisconsin should have had more exhibits than were shown from this state. It is for the purpose of encouraging such exhibits and giving Wisconsin the place where she belongs, at the head of the dairy states, that The Wisconsin Farmer gives so much attention to institutions like the Waterloo and National Dairy Shows.

We may again be pardoned for calling attention to the fact that no such reports of these great dairy exhibitions have been published in any other Wisconsin farm paper.

Wisconsin's "Swine Week."

EMPHASIS is placed each year during farmers' week at the Wisconsin College of Agriculture on some one branch of farming or breeding. Last year it was on dairying, because of the anniversary of Dr. S. A. Babcock's discovery of the dairy test of that name, and this year it will be on swine breeding, so that the week starting Tuesday, February 6th, has been suitably set aside as "Wisconsin Swine Week."

The arrangements for this event have been practically completed. Prominent men interested in swine breeding have been secured to give addresses and demonstrations, and the slogan will be "More and Better Swine." In this everyone interested in live stock in Wisconsin should join, as it is hoped to bring before the attention of the farmers of the state better than ever before the importance of this branch of live stock farming, and the fact that quality counts in swine as well as in everything else. As speakers, the college of agriculture has arranged for the best that are obtainable, and swine breeding from every angle will be discussed as well as the production of swine for pork in conjunction with the dairy herds of the state.

Swine breeders of Wisconsin have already taken an active part in arranging for "Swine Week," and it will be worth every breeder's time to put his shoulder to the wheel and boost. There will be a banquet on the evening of February 6th for the swine breeders who are in attendance, and it is thought plates will be laid for at least 400 diners. This will be one of the big events, and a complete program of the week will be announced as soon as completed.

Two bred sow sales will also be held at Madison during that week and as a part of "Swine Week." These will be held in the live stock pavilion. The Wisconsin Duroc Jersey Breeders' Association plans to sell fifty head of bred sows, representing the tops of about forty herds. This will be on Wednesday, February 7th. On the evening of that day the sale of Poland Chinas by the Wisconsin Poland China Breeders' Association will take place. This association plans to consign about fifty head, the tops of something like forty prominent herds. Twenty Duroc Jersey breeders and twenty-two Poland China breeders have signified a willingness at this writing to consign sows. The plan is to include in the sale stock from as many different herds as possible, and it behooves the swine breeders to co-operate in making these two sales and "Swine Week" events long to be remembered. Entries may be sent to either Mr. J. D. Gant, Delavan, Wisconsin, secretary of the Duroc Jersey association; Mr. Robert Smiley, Albany, Wisconsin, president of the Poland China association, or Mr. T. P. Shreve, field representative for The Wisconsin Farmer.

Find Good Potatoes For Wisconsin Show.

THE annual convention and show of the Wisconsin Potato Growers' Association, at Eau Claire, November 21st-24th, promises to embrace a broader field of work this year than ever before. The arrangements for the show and convention are nearing completion and Mr. J. G. Milward, state secretary, anticipates this year's show will excel all others, despite the poor potato season. Late advices indicate that, from a quality standpoint, the showing of potatoes will be up to former standards, as the men in charge of assembling the county exhibits report that on investigation they have discovered more good stock than was thought obtainable, considering the unfavorable season.

Special sessions will be devoted to the work of the county agricultural representatives; potato club work among the boys and girls and potato-cooking demonstrations, all in addition to the regular program. Separate sections will be provided for those interested in these special lines of work. Prof. K. L. Hatch will preside at all sessions devoted to county agricultural representative work, and the different representatives doing potato-extension work will report the work under progress. Experts will be present to assist in the discussion of diseases, use of fertilizers, control of insects, stable manures and methods of cultivation, and this section of the convention is expected to prove of inestimable value.

The cooking demonstration will be directed by Miss Elizabeth Kelley, the woman's club of Eau Claire, and the Eau Claire County Training School co-operating. Mr. T. L. Bewick will be in charge of the boys' and girls' potato club work, and a special session in the interest of the young people and their teachers has been arranged. School will be dismissed for the occasion in counties contiguous to Eau Claire, to permit teachers and pupils to attend. There will be a special potato-judging and scoring contest for the boys and girls, and a limited amount of standard seed stock will be given to those who show proficiency in judging. A set of standard Wisconsin potatoes will also be given to teachers, which material will be in shape to be taken home from the convention for use in the schools.

County organizers are now at work selecting their show stock, and much of the success depends upon their efforts. These men are in charge of the county showings, and growers in their respective counties should get in touch with them:

Name	Post office address	County
O. C. Wooward	Weyauwega	Waupaca
D. C. Wayward	Weyauwega	Waupaca
James Gunderson	Wautoma	Waushara
Luman, Darling Co.	Wautoma	Waushara
Ben Hansen	Grand Rapids	Wood
W. E. Morton	Marinette	Marinette
W. D. Juday	Rhinelander	Oneida
F. G. Swoboda	Antigo	Langlade
Oscar Gunderson	Eagle River	Vilas
John Swenehart	Crandon	Forest
H. H. Humphrey	Wausau	Marathon
J. M. Coyner	Amherst Junction	Marathon
A. H. Cole	Merrill	Lincoln
R. Kolb	Medford	Taylor
R. B. Clark	Medford	Taylor
Griffith Richards	Phillips	Price
G. R. Ingalls	Eau Claire	Eau Claire
John Klinka	Balsam Lake	Polk
R. L. Cuff	Barron	Barron
Sam Williams	Earl	Washburn
C. P. West	Hayward	Sawyer
S. J. Uhrenholdt	Hayward	Sawyer
C. B. Post	Ashland	Ashland
A. C. Bouttin	Bayfield	Bayfield
O. B. George	Oconto	Oconto
George Briggs	Grantsburg	Burnette
J. H. Walz	Superior	Douglas
George T. Vorland	Colfax	Dunn

The complete program will soon be ready for announcement. It is enough to say now that the convention promises to be of especial interest to all interested in potato industry, and this is the time to plan to be present.

The Unprofitable Side of Thin Cream.

EVEN though cream is bought by test, there is still a tendency among Wisconsin dairy-farmers to skim a rather thin cream for their creameries. The prevailing opinion seems to be that the larger quantity of cream, the larger the cream check despite the fact that a rich cream is more profitable than a thin cream. If the losses in Wisconsin, in the way of skim milk and useless handling of thin cream were accurately known, we suspect the amount would be almost unbelievable.

During an investigation of creameries recently in a western Wisconsin county, Mr. C. E. Lee, dairy specialist of the food and dairy commission, found two creameries where the average test of cream delivered by the farmers was around 12 per cent. The highest was 17 per cent and some went as low as 9 per cent. This, he points out, is a wanton waste of skim milk, and the expense of handling this cream was prohibitive, considering that the same amount of butter fat, on which basis the farmers are paid, could have been hauled to the two creameries in two-thirds less cans. According to this same authority, if the average test had been 35 per cent instead of 12 per cent, the farmer who delivered nine cans, for instance, would have only needed three cans. Skim milk is certainly worth 40 cents a hundred as feed today on the farm, and it is astonishing that the farmers serving these two particular creameries should haul away so much skim milk when the hogs and calves back on the farm can utilize it. Testing 36 per cent the cream would have contained identically the same amount of fat as it did, testing 12 per cent, and the saving of this skim milk with a high-testing cream is not to be laughed at, nor the lessened cost of handling, both by the farmer and the creameries, to be overlooked. It seems to us that in a case like this the buttermakers should demand a richer cream if the farmers do not wish to furnish it voluntarily, as thick cream has its advantages from the creamery standpoint also. Smaller vats and ripeners are needed; there is a saving in fuel and ice in heating and cooling; less loss in the buttermilk; pasteurization is more satisfactory and a better product can be made.

This is a condition that is state wide, and shown by dairy authorities to be due to negligence on many dairy farms in the operation of the separators. Cream of nearly any richness may be obtained by skimming milk with the separator on the farm, and users have learned that the richness of cream may be changed by adjusting the cream screw. There are other causes for differences in test aside from regulation of the cream screw, one of which is the way in which the machine is run. This cream comes from the separator when the milk is excessively warm; the speed of the bowl is too low; the milk forced through too rapidly and an excessive amount of skim milk or warm water is used to flush out the bowl when through skimming.

Rich cream is obtained by skimming cold milk; increasing the speed of the separator bowl; reducing the flow of milk into the bowl; keeping the bowl flushings out of the cream can, and by increasing the richness of the milk skimmed. By keeping in mind these suggestions, as set forth by Prof. E. H. Harrington, of the Wisconsin Dairy School, in his recent circular on "The Care of Milk and Cream," every dairyman should be able to skim a rich cream, and there is no doubt that such is to his advantage and that of the creamery which takes his product. The aim of every dairy farmer should be to skim a cream testing 35 to 40 per cent.

For Better Wisconsin Farm Homes.

MODERN equipment is one of the big needs of the farm home today. Every mother and daughter is looking forward to the day when they will, in their own homes, enjoy the same conveniences that their city friends and neighbors enjoy.

During a recent investigation by the Wisconsin College of Agriculture, to learn which conveniences the farm woman mostly desires in her home, replies were received to letters sent a large number in which all asked for the modern bathroom and modern lighting. Telephones were numbered among the principal conveniences, but they are to be found on most farms today. The demand for running water and sewage disposal, such as required with bathrooms, was almost unanimous, which brings to mind the thought that, if the women were consulted and the family means were sufficient, that every farm home would be modern in this respect. The old system of filling coal oil lamps and keeping the chimneys clean is burdensome, and with modern gas-light[illegible] system available, the average farm woman is keeping in pretty close touch with this kind of equipment. Electricity is no longer impossible with lighting plants in most of the smaller cities, and even private plants may be installed. Where electricity is obtainable the women were found to lean strongly toward the electric washing machines, which do away with a big part of the drudgery on "blue Monday" and other electric conveniences such as irons, toasters, etc.

The conclusion brought out by the answers to the letters sent to the farm women is that women today are giving the matter of modern home equipment more thought and study than ever before. Every one who has visited a modern farm home has departed with the thought of how convenient and comfortable. It is just as essential that the farmer make his family comfortable as his cows, although we realize that it is mutually agreed in the family circle that, with limited means, the money-makers should be given first consideration. This calls to our mind the recent statement before one of the hearings of the federal farm-loan board by Mr. P. W. Goebel, president of the American Bankers' Association, in discussing the merits of the new federal farm-loan act. After pointing out the value of long-time loans, as provided for under this act, Mr. Goebel said:

The result of these long-time loans will also be that more of the income from the farm can be placed into equipment for the farm; equipment not only to bring larger returns in dollars to the farmer, but that will make the family feel like they want to stay there. To my notion the greatest lure of the city is the fact that these farmers' wives and daughters come into the city to visit friends perhaps who have

modern equipment in their houses. It appeals to them more strongly than anything else, and makes them more dissatisfied with farm life than anything else. Now, with the bugaboo that the mortgage is going to come due in two or three years—"I don't know how I am going to be able to renew it, or I don't know what I have to pay; there may be stagnation in land values"—with that bugaboo removed, why, anyone who has the welfare of the farmer at heart can readily advise him, "Now, put some money into your house and make it modern so you can make your family feel that they have the same chances for comfort and pleasure as the average laborer has in the city."

Mr. Goebel strikes a good point in that modern equipment makes for contentment in the family. Once a person knows no such convenience as a bathroom, he does not feel uncomfortable without it. But in this day and age almost everyone travels to some extent, and in every rural neighborhood there is some family setting the example, so that those in the most distant sections can anticipate the conveniences and comforts that may be added to the farm home.

Country Best Place to Rear Children.

IN MILWAUKEE last week, the American Association for the Study and Prevention of Infant Mortality held its annual meeting. There were numbers of speakers, and care of children was touched upon from all points. Infant mortality prevention in the rural districts was discussed by Miss Elizabeth B. Kelley, extension worker for the department of home economics of the Wisconsin College of Agriculture, and she brought out several interesting and vital facts, saying in part:

The country is the best place to rear children from the standpoint of health is clearly shown by the mortality records, but these same records also show that the death rate among infants from birth to one year is greater in the country than in the city. This high rate of infant mortality in rural districts is due mainly to three causes: lack of nurses, lack of domestic help, and a poor grade of country doctors. At the time of childbirth, the city woman can either remain in her own home and employ a competent physician and a trained nurse, or go to a well-equipped maternity hospital, but the rural mother, with a few exceptions, must rely upon the services of the country physician who is often young and unskilled, and frequently hard to locate at the time of need, or upon a midwife who, oftentimes, has had no training, and who does not understand the simplest rules of sanitation. In some cases the child is delivered only by the help of a neighbor or the woman's husband.

Miss Kelley laid stress on the fact that too often the farm woman did not rest enough, either before the birth of her child, or afterwards, because the burden of the family duties bore so heavily upon her. Machinery, she said, was one solution of the problem. Continuing, she said:

The farm woman can no more remedy the lack of domestic help than the farmer can remedy the lack of "hands" on the farm. Like him, she must turn to power machinery to solve her problems. The husband has the seeder, the planter, the cultivator, the mower, the reaper, all run by power, so the wife must have first, running water in the house, then the bread mixer, the dishwasher, the meat grinder, the washing machine, the vacuum cleaner.

I feel that it is just as necessary, and even more necessary, that a campaign of education on this subject be started among the farm men as well as among farm women. Both must be made to realize that it is their patriotic duty to give to the state a race of boys and girls strong in body and mind, and the quickest, most logical way to do this is to care for the woman during the child-bearing period.

One striking feature of Miss Kelley's address was an idea which she brought out about the conservation of the mother's health during the child-bearing period, in its relation to the future of the farm boys and girls. "To me," she said, "the secret of keeping the boy and girl on the farm lies in the health and contentment of the mother. Boys and girls leave the farm during their adolescent period—that time of their lives when their imaginations are the most lively, their sensibilties are the keenest, their wills are the most selfish, their ideals of life the most exaggerated. If the mother is broken in health, if her nerve force is gone, if the hardships of her early life are upon her, it is impossible for her to guide with a firm, steady, sympathetic mind the turbulent, riotous thoughts of her boys and girls. She is prone to complain of her own trials and wish for her offspring a better life than she had, and to the farm woman this always lies in the path of the city. So, if we are to keep our boys and girls on the farm, we must remedy the evils that attend upon childbirth in the country."

For Better Grades in Wisconsin.

ONCE in a while we find a man who insists that all dairymen should have pure-bred cows. Of course, he doesn't mean it if he stops to think. Even though there might be a distinct advantage in pure-bred cows on all dairy farms, the consummation of this idea is an absolute impossibility. We quote from a communication signed by the Wisconsin Live Stock Breeders' Association:

If all the grade and native cows in the state of Wisconsin were sold and an effort was made to fill their places with registered dairy cows, it would be impossible to find enough pure-bred dairy cows in the whole United States to take the place of those which had been sold. Even if all the pure-bred females were kept for breeders, it would be many years before there would be enough pure-bred dairy cows to establish our dairies on their present basis.

Were the farmers able to go out and buy pure breds, it would still be impossible from a financial standpoint. The dairymen of the state cannot afford to sell their good grades and buy pure breds—expense would be out of all reason.

If the pure breds were available and if the farmers were financially able to get them, it is still questionable whether it would be advisable. Not everyone can be successful with pure-bred cows. Some men have been eminently successful and many others only moderately so, while the great mass of breeders are never heard from because of what they accomplish. Some, indeed, are failures as breeders of registered stock of any kind.

All cannot have pure-bred cows, and if everyone could it would not be advisable, because many would not succeed with them. Because everyone cannot have pure breds does not mean that everyone cannot have better stock than now. Every dairyman should seek to improve the stock he has. If you are keeping only native cattle there is no reason why a good registered sire should not be used to breed up a herd of good grades. If now owning grades, try to get better grades. To do this use a bred-for-production sire, keep careful dairy records and eliminate the "boarders."

"Handsome is as handsome does" in the dairy business. The farmer who is dependent on his cream checks is more interested in what his cows produce than in their appearance. Those of our readers who have followed the work of cow testing in this state have noticed that it is not always the pure-bred herds that head the list of good producers. It is quite frequently the grade herd which has been improved by the use of pure-bred sires. One great advantage of the pure bred is that it provides an opportunity for improving the natives and grades.

Wisconsin Cattle Go to Texas.

FOUR carloads of grade Holsteins were recently shipped from Green county, Wisconsin, to Texas, and six carloads more are soon to follow. A number of Texas citizens recently visited Wisconsin and picked out the cattle. The visitors are backed by the Texas Bankers' Association, which is operating along co-operative lines which were suggesed by the activities of Wisconsin bankers in Upper Wisconsin. Thus our own good plans are working for our own good interests, even if the results do come in from a long distance. There are a number of states which can make profitable use of Wisconsin surplus cattle as well as Upper Wisconsin can make use of them, and bankers in other states can afford to be just as liberal along these lines as Wisconsin bankers have been. There are now about fifteen communities in Texas where good live stock is being bought on the co-operative plan and where the bankers are helping the farmers to get started in the dairy business. As might be expected the cows are paying the entire bill. It is simply a case of the banker advancing ready cash with which to meet the original purchase price.

Free Shows For Wisconsin Fairs.

MR. G. A. BRIGGS, superintendent of privileges at the Sauk county, Wisconsin, fair, writes in a very interesting way in the Baraboo News on the subject of clean shows for county agricultural and live stock exhibits. Mr. Briggs very properly takes up the subject of state aid and calls attention to the law which provides a report from officers of county fairs which receive state aid. This report must, under the terms of the statutes, show that all gambling devices, the sale of intoxicating liquors, and all immoral exhibitions were prohibited. A penalty is attached for any fair officer who makes a false statement in his report.

It might as well be settled fir t as last that the state of Wisconsin cannot be a part to county fairs unless such fairs are properly conducted. When the state gives money for premiums, the state becomes a party to the conduct of the fair, and as such has some rights as to the character of the exhibitions which shall be presented. It is true that the immoral shows have, as a rule, been entirely separated from the agricultural and live stock exhibits. It is also true that these shows have been seen only by special admission, and that no one had to buy a ticket and go in, no matter how much balli-ho work was done on the outside of the tent. Mr. Briggs now shows that there is not much demand for these cheap side-show attractions and that neither the fair management nor the showmen themselves have been making any money out of them. At the 1915 fair in Sauk county there were two shows which might he characterized as the "pike" class, and the total receipts for the week were $45 for both shows, the society netting only $11, and having to pay for two ticket sellers out of that. Although contracts had been made by the Sauk county fair management this year with two carnival attractions, both companies canceled. One stated in letter that the side-show business was no longer profitable and that its talent would be sold for free attractions.

The free attraction is much better for more reasons that one. In the first place the free attraction must be a moral show, because it is out in the open, where everyone, including the women, can see it. In the second place it gives the fair visitors good, wholesome entertainment without extra cost. The manager of the free show does not stoop to whispered suggestions as to the immoral character of his show, because it is no use. He does not exaggerate an act which speaks for itself before all the people. There is no dissatisfaction on the part of the fair visitors, for the free show costs nothing extra. On the contrary, they look upon it as good measure and are correspondingly pleased. The free open-air show is by all means best. It must be a moral show, and in nine cases out of ten it is a better show than one held under cover, where the glitter is all in the spiel of the "come-back" outside the tent.

Fourth Conference on Marketing and Farm Credits.

AN IMPORTANT conference will be held at the Sherman Hotel, Chicago, Illinois, from December 4th to 9th, the same week as the International Live Stock Exposition. This will be the fourth event of this kind, and there has been a tendency each succeeding year to carry through a program of high educational value. More and more it is being realized that the marketing of farm produce is as vitally important as the raising of it, and it is a well-known fact that single handed the producer is helpless to improve conditions.

At the December meeting, considerable attention will be given to the question of marketing milk, and part of the program will be devoted to questions relating to the co-operative marketing of grains. The local, terminal and export markets will all be considered by experts who have made a practical study of the matter. The auction system of disposing of farm produce will be taken up in detail, and instruction will be given regarding the matter of grading produce and preparing it for shipment in suitable containers.

Another part of the program of this meeting will be devoted to phases of live stock marketing problems, and there will be representatives of ranchmen, corn-belt feeders, commission men, farm buyers and co-operative live stock shipping associations—each given an opportunity to present problems that require co-operative effort in their solution.

Provision has been made for the consideration of the federal farm-loan act, and it is expected that those in attendance as well as those who address the convention will present many suggestions looking to the improvement of this act.

The question of transforming the tenant-operated farm into a home ownership proposition will be taken up at this meeting, and in connection with it federal and state relationships will be considered.

We desire to call attention to the fact that these meetings are open to all, and it is not necessary to be an accredited delegate in order to participate in the program, though, of course, only delegates have the privilege of casting votes. We predict that the meeting will be well attended this year, owing to the fact, as before stated, that it comes during the same time as the International Live Stock Exposition, and there is no reason why both meetings cannot be given considerable attention during the week.

The Sensible Feeding of Ensilage.

THOSE who are called upon to feed ensilage for the first time during the coming winter should have their attention called to the fact that mistakes are likely to be made unless certain precautions are taken in the manner of handling the ensilage.

To begin with, it is assumed that the diameter of a silo in any given case is proportionate to the number of animals in the herd. The late Professor King, of the Wisconsin Experiment Station, estimated that a dairy cow would require daily ensilage taken from five square feet. This would mean that a herd of thirty cows would require the use of 150 square feet, or the entire surface of a silo fourteen feet in diameter. A silo sixteen feet in diameter would feed forty cows daily if enough of the ensilage were used to keep the product from spoiling. Of course, by using a greater depth of ensilage each day, a much larger number of cows could be fed, but we are speaking at this time of the minimum that must be used if the ensilage keeps properly.

Generally speaking, two inches of ensilage should be removed every day. Otherwise a more or less spoiled product will be used continuously. If there is not enough live stock to use two inches of ensilage daily from the surface, part of the product must be thrown out in order to keep it from spoiling. This may seem at the time like a tremendous waste, but in the end it will be much more economical than will be any attempt to use all the product in a spoiled condition.

Discouraged too Quick on Corn.

IT IS evident that there was not enough corn acreage in Wisconsin in 1916. In Rock county alone the acreage slumped 5,000 as compared with the year previous. The acreage of corn in Rock county is 88,924. In 1915 the corn crop in Rock county, as in many Wisconsin counties, was almost a failure, according to assessors' figures, being only 359,396 bushels from 94,222 acres. In 1914, with about the same acreage, Rock county produced over 2,750,000 bushels. This year there is a good deal of corn on a decreased acreage and also a good quality of corn. It invariably follows that a poor year will discourage some from trying the same crop the next season, but as a general proposition southern Wisconsin is pretty safe for corn, especially the acclimated varieties. Those who are now wrestling with the feed problem may be sorry that they permitted last year's partial failure to discourage them.

Farm Borrowing Made Easy.

Procedure Under New Law Set Forth by Frank R. Wilson, of the Federal Farm Loan Board, in an Article Written Expressly For This Publication.

NO PIECE of legislation passed by congress in more than a decade has aroused the interest that has been aroused by the adoption of the federal farm loan act. This nation-wide interest is indicated by the fact that within the past three months more than 100,000 inquiries have com[illegible] done[illegible]

[illegible] inquiries [illegible] thorough knowledge of the bill and its requirements and ask for blanks upon which the petition of their national farm loan association may be registered.

It was a common criticism of this measure when it was up for adoption that it would be impracticable to get the farmers to get together into groups of ten or more to form these national farm loan associations for the purpose of borrowing from the federal land banks. The nature of the replies seems to be a complete refutation of that charge. The letters seem to indicate that thousands of farmers are familiar with the principles of co-operation and they see in this measure not a machine to make it easier for them to get into debt but a machine to enable them to transform their debt into an asset that will yield returns.

Under the federal farm loan act a mortgage is not a disgrace but an investment. Under it farmers will be able to get money just as business men have been able to get money at reasonable rates of interest and the payments will be distributed through a period of years so that farmers will be in a position to pay off the mortgage out of the fruits of the investment.

For a measure of such gigantic import the federal farm loan act is going to be put into practice within a remarkably short time. In spite of the fact that the measure did not become a law until July, the board which will administer it has been named and is half through with its preliminary work of dividing the country into twelve federal land bank districts. To gain information to assist it in this work the board has made a tour of the northern states and is now touring the southern states. It expects to fix the district boundaries before the end of this year, establish the banks during January and be doing business by February 1st.

However, there is no occasion for farmers to wait until the banks are actually opened to take the first steps to gain the advantages of this act. They can be organizing their national farm loan associations now and getting all ready to get their charters as soon as the federal land banks are located. Then the loans can be made with no delay.

The great majority of the questions asked by farmers have to do with the steps they are required to go through to take advantage of the act. The process is just as simple as the organization of a literary society or a club. Ten or more farmers who want to borrow must get together in a meeting and draw up articles of association, prepare applications for loans and the affidavits that go with them, elect a president, a vice president and a secretary-treasurer, and a board of not less than five directors, and then send their application for a charter to the federal land bank of that district. The federal land bank will then approve the application and send it on to the federal farm loan board at Washington, which will issue the charter.

To simplify this work of organization the federal farm loan board is now having prepared blank forms of articles of association so that the work of forming local loan associations will be reduced to the mere operation of getting the men together, resolving and signing their names and swearing to the paper. On this application it will be necessary for each borrower to list the amount he desires to borrow, together with the value of his land to be used as security.

The local loan association is required to name a loan committee of three who must pass upon the value of the lands and make a written report to the federal land bank. Their [illegible] is subject to the approval of [illegible] praiser of the bank who inspects [illegible] operty later.

[illegible] become members of this local association a borrower must [illegible] to purchase stock in the association equal to 5 per cent of the amount he is going to borrow. Many farmers stumble over this requirement. They do not see why they should be made to buy something to get a loan. As a matter of fact, they do not buy this stock. It is a temporary investment that stands only while their loan stands. When the borrower pays off his loan he gets his money back and may use it as the last payment on his loan.

The object of requiring this 5 per cent investment is very plain after an inspection of the machinery of this co-operative banking system. The federal land banks start business each with a paid-up capital of $750,000. If private subscription does not take this stock at the end of thirty days the government will take it. When a bank has loaned $50,000 to national farm loan associations it has the right to issue and sell $50,000 of bonds against the $50,000 worth of mortgages taken as security for the first batch of loans. Then this money is again loaned and another batch of mortgages is taken. This process is repeated over and over until the capital of the bank is loaned twenty times. Now it will be seen that unless provision were made for increasing this capital the bank would have to stop doing business when its loans aggregated $15,000,000. But each farmer who borrows $1,000 invests 5 per cent or $50 in his local loan association and the loan association then invests it in federal land bank stock. So when the bank lends $1,000 it increases its capital one-twentieth so it can lend another $1,000. So the increase of the capacity of the bank is automatic and the well never runs dry so long as the bank can sell its bonds.

Farmers invariably want to know what rate of interest they are going to be required to pay under this system. It's impossible for anybody to tell yet except to say that it will not be over 6 per cent and it will probably be considerably less. The rate of interest depends upon the price at which the bonds will sell. The law says the interest rate shall not exceed the bond rate by more than 1 per cent. This margin is to pay the cost of operating the bank. So if the bonds sell for 4 per cent the farmer will get his money back for 5 per cent or less. The bonds ought to sell cheaply, because they are secured by mortgages on real estate worth twice the face of the obligation against them, plus all the assets of the national farm loan associations.

The bonds are free of all form of taxation even including the income tax and the income derived from the bonds is also free of the income and every other form of tax.

All loans under this co-operative system are to be made on the amortization plan, which means that they will be paid off in annual or semiannual installments through a long or short period of years. Mortgages may run from five to forty years at the option of the borrower.

This provision of the bill is plainly of great advantage to the farmer. Digging a fortune out of the land is slow business at the best. The seasons come around only so fast and tragedies in the way of crop losses and herd diseases make frequent visitations. It requires a long time to develop a herd of live stock to the point of yielding returns. The long time amortized loans contemplate that a farmer may use the money to stock up his farm or otherwise put it into condition to pay back the mortgage out of the fruits of the investment.

Borrowers will be able to get loans equal to 50 per cent of the value of the land, plus 20 per cent of the value of the improvements. But it is predicted that a renter of good repute who has not saved the 50 per cent necessary will be able to execute a second mortgage for part of the remaining 50 per cent at such a rate that his total interest and amortization payments on both mortgages will be less than rental under the present system. And he will then have an additional incentive to put his farm into a permanent productive plant.

The interests of the farmer are well safeguarded in the federal loan act. No landlord will be able to borrow on land which is leased. No speculator may borrow. None but actual farmers may borrow and they may borrow only on the land upon which they are working. The size of the loans is limited to $10,000, because unlimited loans would make it possible to use the bill for purposes of land monopoly, whereas, the purpose of the bill is to favor farmers of medium-sized operations and to enable them to till the land more profitably and effectively.

Farmers who join these national farm loan associations are not under unlimited liability for the debts of their associates as some critics of the measure have tried to make out. If one member of this group of ten or more should default and the sale of his farm did not satisfy the mortgage, then the deficit could be made up out of the stock which the members had purchased amounting to 5 per cent of their loans. If the losses were so severe that this 5 per cent would not meet them these members could be assessed another 5 per cent and no more. But when it is realized that the mortgage in the first place represented only half of the appraised value of the land it will be appreciated that the danger of loss from any joint liability is very remote.

The big idea in the federal farm loan act is co-operation and the idea is applied in the formation of these little national farm loan associations. These organizations at first seem like barriers, but it will be seen that they are in reality the guardian of the borrower's interests. They provide the machinery for excluding bad risks, for no member can be admitted without receiving a two-thirds vote of the directors. These local loan associations also provide the machinery through which the farmers govern their own bank, for each association has a vote in the election of the directors of the banks. Even if the private bankers should buy all the stock of the federal land banks they could not vote. The voting is limited to the associations of farmers and the government. The federal farm loan board names three directors for each bank and the farm loan associations name six.

The federal farm loan act simply recognizes the fact that the farm lands of America constitute a mighty, but at present chaotic, mass of value. This measure provides the machinery for assembling this great mass of credit so that it may be used as security to attract timid capital from hiding to the end that this capital may be available to the men who till this land to enable them to till it more advantageously. It ought to drive away the terror of mortgage foreclosure, make an end of disaster as the result of panics, increase the percentage of farm ownership, contribute to more diversified and more intensive farming and have an elevating social effect because of the co-operation and business-like association which it enforces.

Better Milk Prices Are Justified.

Some of the Facts Which Have Been Brought Out in the "Milk Wars" and Other Controversies Regarding Prices.

THE "milk war," as the daily press has termed the negotiations between producers and distributors, has not been confined to Wisconsin, but it has been nation wide in its scope. In every state farmer-dairymen, realizing the greater cost of producing milk, have sought better prices from the users of milk and the recent success of the producers in the New York and Chicago territory, who have been granted substantial increases is still fresh in the minds of many of our readers. It is a situation that is national.

In Wisconsin the fight has centered largely in the territories which supply cities with their daily supply of milk and the condensing plants. The Chicago prices dominate to a large extent the prices paid in the southern tier of counties, where the Chicago Milk Producers' Association are organizing local associations. From these counties considerable milk finds its way to the Chicago market. In the eastern half the Milwaukee prices govern largely. Milwaukee also is affected by the Chicago scale. The condenseries that fall within the territories that supply the cities are, naturally, governed largely by the city prices.

So general has been the demand for higher prices for milk this fall that the consumer has been caused to ask "Why this universal demand from the producers?" No doubt there are many city folk who think the farmers have gone into a mighty trust, but the law of supply and demand applies to the milk trade as well as every other trade. Farmer-dairymen are just beginning to realize what organization means to them in the way of better prices and better marketing conditions. The Chicago "strike" last spring demonstrated this, and when the Chicago producers sought more money for the six months, beginning October 1st, they were granted it without withholding their milk as was necessary last spring.

Cheese and butter prices are at top-notch. There seems to be no other way of arriving at what is actually the market value of 100 pounds of milk. One farmer can produce milk cheaper than his neighbor, so there appears no means of reducing to a mathematical certainly the actual marketable value of a quart of whole milk as it comes from the cow.

One hundred pounds of 3.5 per cent milk will make a trifle over ten pounds of cheese. With the American types bringing 20 cents a pound, this places the market value at close to $2 per hundred. Swiss cheese is worth now an average of 30 cents a pound, and 100 pounds of milk will make a fraction over 10 pounds of cheese, making this milk worth $3 per 100. When turned into butter at present prices, milk is worth close to $2 per hundred when the value of the skim milk as a feed is considered.

The following Chicago quotations on October 20, 1915, and October 20, 1916, are interesting:

	1916 Cents	1915 Cents
CHEESE.		
Twins	20	14¾
Daisies	21	14¾
Young Americas	21½	15
Longhorns	20½	15
Swiss	28-32	18-20
Limburger	19½	14
Brick	23	14¾
BUTTER.		
Extras	34½	27
Extra Firsts	33½-34	18-20
Firsts	32½-33	24-25

It is readily seen, figuring ten pounds of cheese from each hundred pounds of milk, what the increase in the market value of milk should amount to to keep pace with the increase in the price of these milk products. Milk of the farmer who is patronizing the American cheese factories is worth about $2 per hundred; Swiss from $2.80 to $3.20; Limburger about the same as American, and brick $2.30, as compared with American cheese values of $1.50 last year; Swiss $1.80 to $2 and brick and Limburger $1.50. Unfortunately the farmers are not getting these prices from the cheese factories, as the season's supplies were contracted for to a large extent early in the season before the present prices prevailed.

The same holds true of the creameries which are now getting 35 and 36 cents for their best product. Allowing a 20 per cent overrun a hundred pounds of 3.5 per cent milk will make 4.2 pounds of butter, which, at 36 cents, means $1.52 worth of butter from 100 pounds of milk. The skim milk is certainly worth 40 cents per hundred from a feeding standpoint this fall, which, on this basis, brings the market value of milk up to $1.92 per 100 pounds at the October prices, and these will increase as winter progresses.

There are many other conditions entering in which the producer of milk for cities has to contend with that do not confront the cheese factory or creamery patron. One is that of regulation by the health departments of cities, which require certain standards in the barns and herds, all of which is expensive. Another is the larger investment in cans, every city shipper having to have two sets; another is the can losses, failure of dealers to pay, which is not infrequent in many cases where there are a large number of small dealers. There have been some heavy losses in Milwaukee on this account. Where there is no effective organization, such as exists in Milwaukee, the turn-back must be accounted for. This is milk turned back because the market is oversupplied. These are all factors governing prices, and when the food value of milk is taken into consideration there should be little complaint from city consumers when the farmer is receiving only $2 per 100 pounds, or about 4 cents a quart for his product.

Milwaukee shippers, through the Milwaukee Cream and Milk Shippers' Association, have sought a price for the six months, beginning November 1 t, that is about on a par with the Chicago winter prices—$1.50 per eight-gallon can f. o. b. Milwaukee. This is an average of about $2 per hundred for 3.5 milk and represents an increase of 32 cents a can over the average last winter, or 1 cent a quart, which is just about in keeping with the increase in the value as measured by butter and cheese quotations.

Your HUDSON SUPER-SIX Will Advance $175

You who now own a Super-Six will gain in the increase—no change in models

Your Super-Six will be worth more next year. And those who buy then must pay $175 more. When cars under way are completed we must add to the price the added cost of materials. Price advances December 1st.

This is another unexpected attraction in the Hudson Super-Six.

The usual car, the first season, depreciates some 30 per cent. In addition to that, on later models makers often reduced the price. So the one-year drop in value averaged 40 per cent or more.

The Super-Six motor—almost without friction—hardly depreciates at all. And that's the chief part of a car.

The Super-Six price will advance with materials for we never shall lessen our standards. So December 1st, when materials on hand are exhausted, the price will advance $175. And you who own the Super-Six will share that added value.

No Pretensions

That very announcement will reveal the strength of the Hudson position. Most weaker cars, we believe, will not dare to advance. Some way will be found to avoid it.

But the Hudson Company, on its Super-Six, will never make pretensions.

Hudson profits, considering our size and output are very small indeed. They have always been so, and all insiders know it. Our very balance-sheet proves that our margins are minimum.

On December 1st, we start using materials bought under this year's contracts. Prices on all of them have advanced enormously.

On a Hudson-grade car makers can lessen the quality without making the difference apparent at once. But that would be treason to Hudson standards.

So we do—and do frankly—what is obviously necessary. We add the extra cost of materials.

No Advance on Sold Cars

You who have already ordered—either open or enclosed Super-Sixes—will get delivery at the price agreed up to December 1st.

And many Hudson dealers, probably, have some cars yet to sell of our present production. We have 3500 cars under way, all of which will be sold at present prices.

If you can get one, get it. Buying now will save you $175. And the present model will not be changed, unless in some minor refinements.

Another World Record

The Super-Six, as you know, holds a hundred records which no other car ever met. These include all the world's stock touring car records up to 100 miles. They include the 24-hour record of 1819 miles, where we broke the stock car record by 52 per cent.

They include the Pike's Peak hill-climb—the world's greatest event of its kind. The Super-Six won over 20 competitors.

Now we add the ocean-to-ocean record—from San Francisco to New York. The most sought-for record in America. That trip was made by a Super-Six in 5 days, 3 hours and 31 minutes—beating the record by 15 hours.

And that same car turned around at New York and went back to San Francisco in faster time than any other car ever made the ocean-to-ocean trip. It was the first car ever to make a round trip across the continent against time. The time for the round trip was 10 days, 21 hours, 3 minutes. That was only 2½ days longer than the best one-way trip made by a famous eight.

So the Super-Six today stands supreme. And there is no probability that a rival can match it, because we own the patents.

These are all-important facts.

Phaeton, 7-passenger	$1475	Touring Sedan	$2000	Town Car	$2750
Roadster, 2-passenger	1475	Limousine	2750	Town Car Landaulet	2850
Cabriolet, 3-passenger	1775	*(Prices f. o. b. Detroit)*		Limousine Landaulet	2850

HUDSON MOTOR CAR COMPANY, DETROIT, MICHIGAN

TOP PRICES FOR FARM MILK.

George F. Comings, of Eau Claire County, Has Solved the Problem of Earning Larger Revenues For Milk Production on His Splendid Dairy Farm.

THE OLATHE HERD OF HOLSTEINS ON SILVER SPRING FARM, EAU CLAIRE COUNTY, OWNED BY GEORGE F. COMINGS & SONS.

IF EVERY dairyman could dispose of his milk and cream so as to eliminate the middleman and his profits it would seem that an ideal condition had been created. The retailer or distributor, who acts as the middleman between the producer and the city consumer, has, no doubt, been for years the stumbling block in the matter of securing better prices for milk products in the cities and any plan which would enable the producer to avoid this middle profit by selling his product direct from the farm to the consumer is certain to arouse the interest of every farmer-dairyman today with prices of everything entering into the production of milk steadily increasing. Such a plan has been worked out and operated successfully for many years on the farm of Mr. George F. Comings, three miles from the city of Eau Claire, Wisconsin. On this farm an arrangement has been made where the milk produced there is sold direct to consumers in the city of Eau Claire and if there be any profit for a middleman it goes into the pockets of Mr. Comings and not a third party. For twelve years Mr. Comings has operated a city retailing business in connection with his dairy farm in Eau Claire county. He is a great believer in organization among farmers; he has had sufficient experience in producing and retailing milk to know what it costs to produce a hundred pounds; what it costs to distribute it to the consumers, and whether the producer or the retailer is getting the long end of the profit. He has operated under a careful cost system; his cows have been watched; their milk weighed; the cost of their feed computed, and everything about the producing end figured down to a fine basis. The same business methods have been applied to the wagon-end or distributing end of the farm, and after this careful study and a dozen years' experience Mr. Comings is quite firmly convinced that the distributors—the middlemen—are reaping the lion's share of the profit.

Mr. Comings is certain that if milk is charged to the wagon in bulk at 4½ cents a quart and 25 per cent cream at 20 cents a quart and is bottled and delivered to the consumer's doorstep at 7 cents for milk and 30 cents for cream, the distributing end is the one with very much the larger per cent of profit. This being the case, the reader naturally asks the question as to what profit the distributors in Chicago are reaping when they buy their milk delivered in Chicago for approximately 3¾ cents per quart and sell it in quarts for 9 cents. The same question might also be asked of Milwaukee, where the distributors are paying about 3½ cents a quart and selling it for 7 cents.

Mr. Comings also believes that the distributor would have the best end of the milk business if he paid 5 cents per quart for 3½ per cent milk and 20 cents for 25 per cent cream, and this belief is based upon his long experience in both producing and distributing. This has made him a strong believer in organization among dairymen, for it is the only way they can force up the prices unless they can evolve some plan for disposing of their own product directly and to eliminate the distributor. The farmer, he says, ought not to sell good, clean 3½ per cent milk for less than 4 cents per quart in bulk at their doors.

Silver Springs Farm, as Mr. Comings' place is better known, is the home of a Holstein herd of about fifty-five head, of which forty-five are pure breds. Since Mr. Comings took this place, about fourteen years ago, he has always sold the product of his herd from his own wagons to consumers in the city of Eau Claire. He has built up a reputation for good milk and pure dairy products and a glimpse at the picture of his barn herewith shows how Silver Spring Farm and pure dairy products are advertised in big letters thereon to the passers-by.

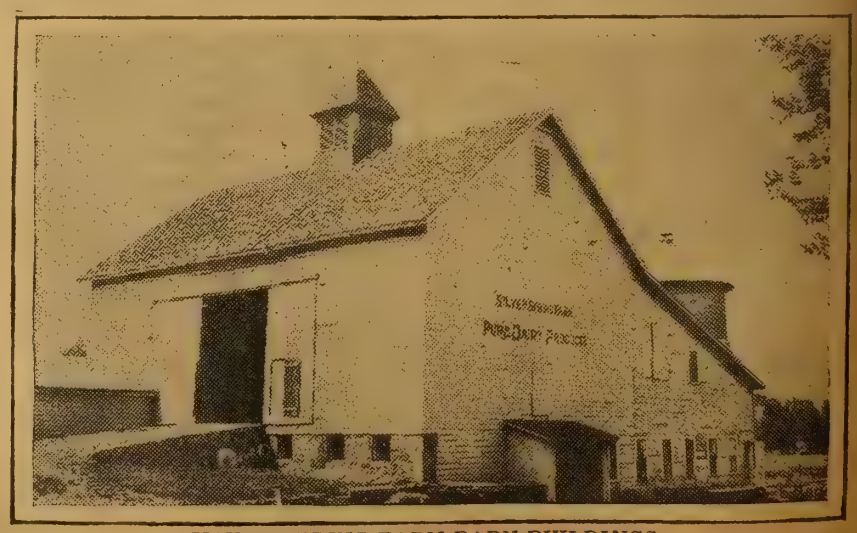
An ideal arrangement in the conduct of the farm and distribution of the dairy products has been worked out by turning the operating end over to his two sons, George H. Comings and Willard S. Comings. Mr. Comings has retired from active management, and, as his son George was more interested in the breeding and producing end, he was given charge of the herd, while Willard, just fresh from college, took charge of the dairy or wagon-end of the business. The business has been incorporated and the producing and distributing of the products is kept as separate as if two different farms. When the division was made it was agreed that the wagon end should pay $1.65 per hundred pounds the year round for the milk, which is a fraction less than 4 cents a quart. This milk is retailed in the city of Eau Claire at 5 cents to large users, 6 cents to a middle class of users and 7 cents in bottles to the ordinary household trade. The daily production is about 250 quarts, and on this basis the distributing and the producing ends are both expected to show a profit. Even at these prices Mr. Comings believes the wagon end will produce the greatest per cent of profit and it is needless to say the investment is not so large In speaking of the investment in a small dairy like this and charging milk at 4½ cents a quart to the wagon, Mr. Comings, in a letter in these columns last spring anent the Chicago strike situation, said: "If one should invest $4,000 to $6,000 in three delivery rigs, milk and bottling house, ice house and all the paraphernalia required to run a retail business in nice shape and had a business of the size, say 800 quarts of milk and fourteen gallons of cream daily, which is proportionate to the business done by our wagon for many years, in a small city like ours, he would make a much better per cent on his investment and earn a much larger salary than any dairy farm can pay in producing these goods at 4½ cents per quart for milk and 20 cents for 25 per cent cream."

The farm is well equipped, has two silos and silage was fed during the hot months of the past summer with good results, taking to some degree the place of the dried pasturage. The average milk production of thirty-five pounds daily during June fell to twenty-eight during July, but it is thought silage and a good grain ration was all that kept it up that well. Careful records are kept on all the stock so that the exact profit from every animal is

OLATHE QUEEN DE KOL, ONE OF THE HIGH PRODUCERS IN THE COMINGS HERD.

SIR BESS ORMSBY MERCEDES COMBINES GOOD BREEDING.

COMFORTABLE AND HOMELIKE IS THE COMINGS HOMESTEAD.



SILVER SPRING FARM BARN BUILDINGS.

always at hand. The silos are eighteen feet across and it required some fast feeding to keep it from spoiling, which leads to the belief that an eighteen-foot silo is too large in diameter for summer feeding. There are 320 acres in the farm, half under cultivation. Considerable attention is also being paid to the breeding end and improving the milk production.

If it were possible for every farmer-dairyman to operate along a similar plan there could be none of the dissension that has existed between producers and distributors as has existed this past summer in the big cities of Chicago and Milwaukee. It takes the distributors entirely out of the business, as the producer is also the distrobutor and places the farmer-producer in the position to realize the profit taken by the city retailer or distributor who pays the farmer one price, charges the consumer another and pockets the difference. Of course, it is impracticable that every dairyman could make such an arrangement, especially in the larger cities, but it is practicable in the smaller cities where the dairyman may organize his own route and retail his milk and cream direct to the consumer. In an arrangement like this the producer realizes he is deriving all the profit from his labor, that he is not being exploited by the big city distributing concerns. although there might still exist, for one reason or other, the thought that the consumer is getting his milk and his cream at a price below its actual value.

Mr. Comings' ambition is to breed a herd of high-producing cows that will test from 3½ to 3¾ per cent fat and is working constantly with this aim.

Since the first of January the Comings. herd of 25 to 30 cows has averaged around 1,000 pounds a day

One of the first herd sires used was Sir Ormsby Pietertje De Kol 39100, a three-fourths brother to Pietertje Maid Ormsby. On the daughters of this bull was used a son of Sir Piebe Aaggie Hengerveld and Dairy Queen De Kol, a cow belonging to Mr. J. Erickson's herd of ten cows, that won first prize in the Wisconsin cow competition, her record being 871.7 pounds of butter in one year. Her milk showed an average test of 3.92 per cent for the year. The cow, Olathe Queen De Kol, illustrates this combination, for her sire is Sir Daisy Queen De Kol and her dam is a daughter of Sir Ormsby Pietertje De Kol. In selecting a bull to use on these heifers Mr. Comings bought of Mr. Erickson the young bull whose picture is shown here. He combines the breeding of both former herd sires, being a son of Daisy Queen De Kol and Sir Pietertje Ormsby Mercedes 37th, a grandson of Pietertje Maid Ormsby.

Our Legal Department.

Law Questions.

Beaver Dam—Damages.

A Subscriber, Gordon, Wis.—Beavers built a dam across a creek on my land, which caused the water to overflow on my hay land and damaged the hay. Can I collect damages from the state of Wisconsin? Please let me know right away.

Answer.—Oh, no! Not in a thousand years.

No Widow's Pension.

A Subscriber, Iron Mountain, Mich.—I have a sister in Florence, Wis., who is a widow and has four little children, and she has a hard time to make a living. Is there a law in the state of Wisconsin granting pensions to widows with children and if so how much are they allowed?

Answer.—There is no law in Wisconsin granting pensions to widows with children.

Land Sale—Foreclosure—Redemption.

A Subscriber, Balsam Lake, Wis.—I bought a farm in this part of Wisconsin from a real estate man. The land is frozen nearly every month in the year. This year there was freezing weather in June and July, and it is impossible for me to raise anything on the land. When I bought the farm, I paid part cash and gave a mortgage on the farm to secure the balance of the purchase price. (1) Can I get back the money I paid on the farm? (2) If the holder of the mortgage should foreclose it, how long can I stay on the place after foreclosure?

Answer.—(1) You cannot get back by law the money you paid on the farm. (2) After the foreclosure sale, you have one year in which to redeem the land from the foreclosure sale, and you can hold possession of the land during said year.

No Light on Buggies Required.

A Subscriber, Oostburg, Wis.—Does the law of Wisconsin require a man traveling on the public road in a buggy to carry lights on it in the evening? (2) If there be no lights carried must the driver give the whole track when meeting another vehicle?

Answer.—(1) The state law does not require lights on a buggy, but in towns there may be ordinances to that effect. (2) He is not required to give the whole track.

Scrub Bull With Heifers—Damages.

A Subscriber, Rice Lake, Wis.—A farmer who rents out pasture, took in some well-bred heifers to pasture, for a certain party. He then took in a scrub bull to pasture for another party and turned the bull in the same pasture with the heifers. Had he a right to do so and if not, what remedy has the owner of the heifers?

Answer.—He had no right to do so and the owner of the heifers can sue him for damages and recover judgment against him.

Conditional Sale of Cow.

A Subscriber, Brookfield, Wis.—I bought a cow from a man and paid cash for her. The cow was sold to me on one week's trial. She was very poor and thin when I drove her home, but the seller said that was because she had been kept in a poor pasture and that she would be all right in a couple of weeks, but she was sick and on the sixth day after I got her, I notified the man to take her and get me another cow, but he failed to do so, and on the sixteenth day she died of tuberculosis. Can I get my money back from the seller?

Answer.—As you bought the cow on trial it was a conditional sale and your notice to the seller rescinded the bargain, so you can sue the seller and get a judgment against him for the price you paid.

Suit for Slander—Sick Witness.

A South Dakota Subscriber.—(1) What is the law in South Dakota in relation to slander? (2) If a person is sick in bed and lives thirty miles from the county seat, can he be compelled to go there and testify as a witness in court?

Answer.—(1) A person who is slandered in South Dakota may bring suit against the slanderer and recover a judgment for damages, amount to be fixed by a jury. If the judgment is for less than $50 he cannot recover costs of suit. (2) Under such circumstances the person should have his doctor give a certificate of his condition and have same presented to the court.

Note Attachment—Exemptions.

A South Dakota Subscriber.—(1) Can the holder of a promissory note in South Dakota, which will become due in the fall of 1917, prevent the maker of the note from shipping goods or stock to another state, without paying the note? (2) What amount of property does the law allow a person to hold exempt from his debts in South Dakota?

Answer.—(1)) If the holder of such a note can show that the maker of it is about to ship his goods and stock to another state for the purpose of cheating or defrauding his creditors or to delay or hinder them in the collection of their debts he can bring a suit and have the goods and stock attached and held for payment of the note, even though the note is not due. (2) The law allows exempt to every person wearing apparel, family pictures, bible, school books and other books to the value of $200, pew in church and burial lot, and provisions and fuel for one year. To the head of a family it allows a homestead of 160 acres in the country or one acre in town, with improvements thereon not exceeding $5,000 in value, and also personal property to the value of $750 and to a single person personal property to the value of $300.

Father and Children—Will.

A Subscriber, Friendship, Wis.—Two years ago I moved from Iowa to Wisconsin, and last fall my wife died. I have four pieces of furniture, viz., a davenport, side-board, dresser and a kitchen cabinet which my wife bought with money she saved from eggs and poultry sold from the farm since we moved to Wisconsin. My children are all grown and have left me and they want to take said furniture away from me. (1) Can they do so by law? (2) If I should make a will what amount must I give to each child to make the will good?

Answer.—(1) We think your children cannot take the pieces of furniture away from you by law. (2) You can make a will and disinherit every child if you wish. You are not required by law to give them anything.

Buys Machine on Trial.

A Subscriber, Endeavor, Wis.—Some time ago two agents came to my place to sell an ensilage cutter to me. They came several times, and I finally agreed to take a machine. They wanted me to sign a written order, but I refused to do so, and agreed to take a machine on trial and to pay for it if it proved satisfactory to me. After trying the machine four or five days, it smashed up in bad shape. It was represented to be from four to six horse power, and with my five-horse-power engine, it ran hard. Can I be compelled to pay for repairs on the machine, or to pay the price for it?

Answer.—According to the contract as stated, you cannot be compelled to pay for the machine, or for repairs on it, unless the injury to the machine was caused by your negligence or carelessness in operating it.

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WE TAN Your Hides

AND SAVE YOU 50%

Don't pay fancy prices for furs. Don't sell your hides and furs for a few dollars when they would be worth many times as much to you made up. Send them to us and we'll make useful and valuable articles at cost.

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Funsten Pays Cash for Furs

Ship to Funsten—get top market prices. There's big money in trapping the Funsten way. John Haugsted of Waukon, Iowa, got 16 fine skunks in one hole with a Funsten Perfect Smoker—price $1.50. Emil Theis of Boerne, Texas, caught in one setting 14 animals in 18 traps with Funsten animal bait—price $1.00. Write for latest price list on coon, mink, skunk, muskrat, etc., free. Our big three books in one—Trapper's Guide, Game Laws, Supply Catalog—FREE to trappers.

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Send Your Name Today

TRAPPERS

Remember this—we pay higher prices for your furs than any other house—and

WE CHARGE NO COMMISSION

Send us a trial shipment today—let us PROVE our claims to you. Our higher prices, liberal grading and fair dealings have made us the Fastest Growing Fur House in America. Send for FUR price list, Trappers' Guide, State Game Laws, Catalogue of Trappers' Supplies—ALL SENT FREE—with particulars of our great FREE GIFT to trappers.

HILL BROS. FUR CO. 330 N. MAIN ST. ST. LOUIS, MO.

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WE CHARGE NO COMMISSION

CASH for FURS

Highest prices paid—prompt returns, correct grading. Our success—44 years of fair dealing in America's greatest fur market. Means more money for your furs. Before you send a shipment to anyone get our reliable fur report and price list. Supply catalog and shipping tags absolutely free—Summerfield's Animal Baits are guaranteed—$1.00 per bottle. Traps and supplies at lowest prices.

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Mason's Square Deal Direct Buying Plan Nets More Money For Furs. We pay top prices for Skunk, Coon, Mink, Possum, Fox and all kind of FURS, Hides and Roots. WE CHARGE NO COMMISSION. Foxey Trappers Club gives FREE inside dope on fur markets and saves you money on traps and supplies. Send for our BIG FREE PRICE LIST, Tags, Reports and particulars on Foxey Trappers Club, To-day Sure.

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And pay highest prices for **Coon, Mink, Skunk, Possum, Muskrat,** and all other **Furs, Hides** and **Ginseng.** Best facilities in America. Send for Free Price List and Shipping Tags. No commission charged.

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FOR ROBES and COATS. Low prices. HONEST WORK. PRICE-LIST on request. DON'T ORDER ANY TANNING till you find what we can save you. COATS, ROBES, CLOAKS, GLOVES, MITTENS and other GARMENTS made to order. Shipping tags free. Highest ref's. LAX ROBE TANNING CO., 204 Front St., La Crosse, Wis.

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We pay highest prices for Furs and sell you Guns, Traps, Supplies, etc., AT FACTORY COST. Write for FREE CATALOG, TRAPPERS' GUIDE and Fur Price List. E. W. BIGGS & CO., 157 Biggs Bldg., Kansas City, Mo.

Farmers' Open Forum

Suggestions for Better Rural Schools.

To the Editor:—There has been much discussion over our public school system, and indeed it needs it. All sorts of remedies, consolidated schools, training schools for teachers, etc., have been pointed out, but we have gotten nowhere for the simple reason that we talk about it, then feeling our duty is done, turn to the more important matters of hogs, cattle, etc. Visiting the schools does help, unless the teacher happens to be one of the sort who makes you feel she regards you as a spy meddling with what is none of your business, or one of the superior sort who read or heard somewhere that school-teaching methods have improved so that a teacher of a few years ago would not know how to conduct a modern school, which information she passes on to you freely, making you feel little and behind the times. This superior young person, fresh from a small training school, goes on making the children memorize what they ought to reason out, mispronouncing words, using poor English, and otherwise making you feel that paying wages to such teachers ought to be classified as misappropriation of public funds. I do not speak from hearsay when I tell of a teacher (training school graduate) who handed back a written language lesson with the remark: "I don't take no unneat papers." Another from the same school says cheerily: "Joe, spell git." "G-e-t—git," says Joe." "Right," and the lesson went merrily on. Another finished product alternately coaxed and scolded through a lesson period trying to teach a "stupid" pupil, "that the skeleton is a bony structure," instead of taking a few sticks and showing her the difference between a structure and a pile of material. I am not complaining about what my children get in school, for what they do not get in school they get at home, and—well—they can guess at what is not told them. But many pupils need to be shown, and very carefully. Now, the teachers are not wholly at fault. Our advanced schools seem to pay so much attention to the social side of life, and when a training school or high school student has to devote two or three days previous, and two or three days following the bi-weekly dances, to the discussion of what she is going to wear and do, and what she did wear and do, she should not be expected to do so very much in mental work. And furthermore, the parents who want their children educated further than the country school course, are between the "upper and nether millstones." Let them go unfinished, or put them in the midst of—to say the least—distracting surroundings. I am facing this problem now. My thirteen-year-old son has finished the course; my twelve-year-old daughter has two years more. I am alone with them, need to stay on the farm to supply the money, and not a high school anywhere in this county, that I know of, but has its dances as regularly as tearing off last month's calendar leaf. And this added to private, public, charitable and social hops by wholesale, insomuch that a county daily asked what had become of the high school student who used to burn the midnight oil over his studies, and answered its question by saying, "Down at the opera house decorating for the class dance, you will find him." Small wonder our teachers never stay in the community to attend divine services, but must hasten home to the dance, or can stay for one out at her school.

Now, I believe we can solve our school problems when we farmer folks want to. Consolidated schools here are out of the question. Our boys and girls are obliged to help night and morning at the farm work. But how is this for a rough plan. Eleven or twelve months' school. Three in winter for advanced pupils, eighth to twelfth grades. Two acres school grounds. Two-room schoolhouse, one room for manual training and domestic science. A sixth teacher for every five schools who will teach one day in five in each school, using the second room for her classes in music, manual training, domestic science, experimental work in agriculture (soils, seeds etc.) and high school work. The two acres to be used for crops, same to be exhibited and sold to help defray expenses. The expenses: Nothing compared to expense of sending six to twelve of our most ambitious boys and girls to town school, besides losing them from the community perhaps forever.

When school boards squabble over a seven or eight months' term, only having eight because of the state aid, and get the cheapest teacher they can, we cannot expect so very much.

Subscriber.

How Farmers Can Help the Butter Maker.

To the Editor:—Volga creamery butter has been awarded the following scores so far this season:

Wisconsin Buttermakers' Ass'n, Eau Claire, score	93
Polk County Buttermakers' annual meeting, March 30th, Osceola, first prize, score	96
Wisconsin Scoring Contest, Madison, May	94
Wisconsin Scoring Contest, Madison, June	92.83
Wisconsin State Fair, Milwaukee	95
Polk County Fair, St. Croix Falls	91.50
Northern Wisconsin State Fair, Chippewa Falls	94
Polk County Buttermakers' Meeting, October 19th, Osceola, first prize, score	96
Average score for eight times exhibited	94.04

This is all hand separator cream delivered to this creamery and I want to say that much credit is due the patrons for delivering the cream in good condition. Without good cream no buttermaker can make high-scoring butter. The farmer can help to make high-scoring butter by the following:

First, having the milking done in a cleanly manner, separate milk at once in a separator which has been washed and scalded thoroughly each time it is used.

Second, by cooling the cream well in cold water before mixing with cream from previous separation.

Third, by making more frequent deliveries of this clean, sweet and cold cream through his creamery. I would suggest deliveries not less than four times a week and three times a week in winter.

Albert Erickson,
Buttermaker, Co-operative Creamery Association, Amery, Wis.

Drinking Cups Increase Dairy Profits.

To the Editor:—There is a good deal of discussion among our people concerning barn equipment and the different makes which are, of course, largely a matter of personal choice, although some outfits are more convenient than others. All dairymen with whom I have talked claim a large increase in profits by having drinking cups for the cows, so the cows can drink whatever they want to. Dairymen who have water for their cows claim an increase for the season of from $6 to $12 per cow.

William R. Burhopp.
Willowmore Farm, Wood Co., Wis.

Summit Knit-Nek Vest

Why not enjoy your winter's outdoor work? You will if you wear a Summit Knit-Nek Vest.

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UPPER WISCONSIN

Practical Experience on Wisconsin Farm.

To the Editor:—In 1911 I purchased eighty acres of cut-over land about two and one-half miles from the village in which I live (Colby, Wisconsin) paying $1,600 therefor. The land was really the worst looking piece of land in the neighborhood, quite low and covered with a heavy growth of poplar and willow brush in addition to a great many pine and hemlock stumps.

I had no idea of making a farm of it, but immediately l t a contract for brushing twenty acres at $6 per acre, for the purpose of opening up the land in order to sell at a profit.

After the land had been brushed I let a contract to log and burn the same tract at $6 per acre. I dynamited most of the stumps myself after banking hours and on holidays, using 60 per cent dynamite until this last season, when I used what is called 30 per cent stumping powder.

After the land had been cleared and stumped I had intended to let it rest until I found a purchaser, but owing to the fact that my clearing had been done late in the fall and during the winter, the brush sprouted and grew several feet the next season, and I was compelled to do the work over again.

My experience has shown that, on land cleared during the months of June, July and August, the brush will not sprout again to any great extent, but when cleared later they will make rapid growth the next season.

Now in order to keep the brush down, it was necessary to plow and seed, to have a barn in which to harvest the crop, to have a man on the farm to do the harvesting, and a house in which the man might live while doing it.

I first built by barn 38x60, of balloon frame construction, such as you have often shown in The Wisconsin Farmer, cement floors throughout. I thought that there would be ample room in this barn for many years as my adjoining neighbors on the north, south, east and west assured me that, while their land was all right in every respect, the Lord had made a poor job of his earth building as far as my land was concerned, and that it would not grow crops of any kind.

Four years after the barn was comp ted, I had it full from loor to peak, —about forty-five tons of hay besides considerable grain— and had the satisfaction of selling some of those neighbors pedigreed seed rye grown on the land.

For an eighty-acre farm in this section I would not advise building a barn less than 36x80, and larger if the pocket book would permit.

Last season I built a comfortable farm home on the land; also a tile-block silo, 12x32. I wish that I might say something to impress upon the mind of every farmer reading this article the necessity of a silo.

My own experience has proven it, and the checks presented for payment at our counter shows who has the silo and who has not.

When I had done my first harvesting, I did not consider it good farming to sell the hay and grain; consequently I purchased four cows. I now have fourteen and some young stock. I have lately purchased a registered Holstein sire and one registered cow as a foundation for the herd which I expect to have later on.

I have tried to show my evolution as a farmer, and I wish I might truthfully say that my farming experience has raised me from penury to affluence, but the fact is that, until this last season, my farm has not paid expenses and I have not thus far had any dividends, but I am satisfied that, with the natural increase in land values, and the additional increase in value by reason of the improvements which I have paid for out of my salary, I have made an investment which will in time yield a better rate than loaning money at the current rate.

Did I say that I have had no dividends? That is wrong; I get them every day, in the five-mile walk to and from the farm, a trip I make nearly every nice day, and arrive home tired, hungry, dirty, but a happy man, in blowing the stumps and burning the brush, noting the changing landscape, in the newly turned furrow, which must be plowed true to line, in the smell of the fresh earth, my earth mind you, in the field of waving grain, growing where naught but brush grew before, in creating something good to look upon out of what had previously been an eyesore.

In my business I find ingratitude, unkindness, and those who betray the confidence I have shown in them. When I look into the eyes of the dumb beasts on my farm, I see there no unkindness, no ingratitude; each one is faithfully doing the work they are there to do.

And then I am able to meet my farmer-customer on his own ground, shake his calloused hand with one equally as hard, sympathize with his misfortunes, for in my farm experience I have them as well as he, rejoice in his prosperity, for if his crops are good, mine are equally good; if perchance he cusses by reason of a wet spell in haying time or an early frost, I am able to cuss understandingly and as fluently, by the aid of my farm papers, and with my farming experience I am able to discuss with him breeds and types, seeds and results; thereforce, I hope that in due time and in his estimation, if not my own, I shall have graduated from the ranks of the would-be to the full-fledged farmer.

Colby, Wis. M. C. K. Andrews.

Buy Up-State Farms.

Two members of the staff of the college of agriculture of the University of Arizona will soon be Marinette county farmers. Prof. J. F. Nicholson, agronomist and superintendent of the experiment station farms, has purchased 160 acres of land and Prof. S. B. Johnson, horticulturist, has purchased eighty acres. The two tracts of land adjoin one another and will be developed jointly. The lands lie a short distance west of Wausaukee.

Professor Nicholson was born in southern Wisconsin and is a graduate of the Wisconsin College of Agriculture. He has always been greatly interested in dairy farming and it is that form of farming to which he will devote his efforts on his Marinette county land.

A Yellow Pine Stave Silo.

To the Editor:—I erected a silo in 1915. This silo is of stave construction, 12x24, two-piece yellow pine. I have a pit five feet deep, making a total of 12x29, which I figure holds about 160 tons. It took seven and one-half acres of corn to fill it this year.

We will feed this winter thirteen cows, seven yearlings and a bull.

When gravel can be obtained at a reasonable cost, I would prefer the concrete silo, but here we have to pay $1.90 per yard for gravel f. o. b. station, which makes the cost of concrete silo almost prohibitive.

P. A. Peterson, Prop.,
Douglas Co., Wis. Riverside Farm.

Dairymen Find Special Equipment Profitable.

To the Editor:—I think that modern barn equipment adds greatly to the comfort of the cows, the sanitary conditions of the barn, and to the convenience in doing the work, but it is impossible to determine exactly how much the production would be increased by installing modern equipment, because there are always some other conditions that enter into such trials, such as the weather, the quality of feeds, and care, which are apt to vary the production one way or the other.

The man in my association whom I would consider the most profitable dairymen has a special equipment, the second has the equipment of another make, and the third one has still another system installed.

F. W. Drake,
Walworth Co., Wis. Official Tester, Geneva Cow-Testing Assn.

Ginseng root has been selling at $5 a pound. In the vicinity of Antigo, Wisconsin, several growers have made a good haul this year. One grower dug 3,000 pounds of green root. There is a ready market at this time for all ginseng.

Another Letter from the President of Fairbanks, Morse & Co., to every Farmer in the United States

Office of the Fairbanks, Morse & Co. Chicago

Subject: 1,000-lb Scale $14.85 500-lb Scale - 12.50

Here's another big surprise for you - as big, if not bigger, than was the "Z" Engine. Every farmer knows about that.

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Cordially yours,
C. H. Morse Jr. President.
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see the scale and you'll buy it. A reputable dealer selling a reputable scale certainly is a strong combination.

If you don't know the local Fairbanks-Morse dealer, write us.

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CHICAGO

Hemlock Round Barn at the State Fair Grounds at Marshfield, Wis., just completed by the Central Wisconsin State Fair Association. It is 160 feet in diameter and has stalls for 250 head of cattle, and a judging space in the center with seats for 1,000 people. That's *some barn!* It is said to be the largest barn in the world and we certainly don't know of one any larger. Outside of the 198,000 White Cedar Shingles (best there is) every stick in it is "Old Faithful" HEMLOCK.

"Now, I wonder why the Central Wisconsin State Fair people built 'the largest barn in the world' of

'Old Faithful' HEMLOCK Lumber"

There's nothing to wonder at in that, brother. "Old Faithful" HEMLOCK has been the farmers' standby for more than two hundred years, since long before the Revolution. It's mighty economical wood to build with. If kept away from the soil and from moist corners, it doesn't rot in a century. It takes and holds paint and stain in fine shape and holds nails like a vise. It is light and clean to handle and contains no pitch. Besides, you can get it always **from your own local lumber dealer,** where you can deal with a man you know and can see what you're getting.

You can be sure that when the Central State Fair people invested in 110,000 feet of lumber to build 'the biggest barn in the world', they investigated pretty carefully and knew what they were doing when they planked their money down.

C–T. H. M.

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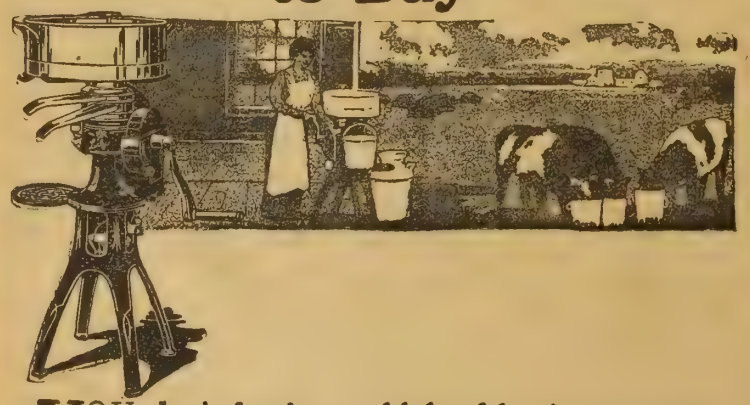
The Cream Separator to Buy



YOU don't begin to think of buying a cream separator until you are convinced that a separator will pay. When you come to buy, though, you want the one that pays best. How are you going to judge? Will these suggestions help you?

First, buy from a responsible, reputable concern. That still leaves you a number of separators to choose from.

Second, buy a separator that has proved itself a close, clean skimmer. This narrows your choice down still further. Let us send you a letter from the president of the Iowa Federation of Cow Testing Associations on this point.

Third, buy an easy running separator that requires but one adjustment, and that one you can make yourself. By this time your choice has narrowed down to two separators—a **Primrose** or a **Lily.** Either one of these, by any test you choose to put it to, will prove itself the separator to buy.

The local dealers who handle these machines can give you conclusive proof of the superiority in close skimming, handiness, cleanliness and length of service of **Primrose** and **Lily** cream separators. A letter to the address below will make it easy for you to investigate these separators as much as you please.

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Experiments in Alfalfa Fields.

Interesting Facts Learned by Pupils in Agricultural Classes at Warren Union High School, Roberts, Wisconsin.

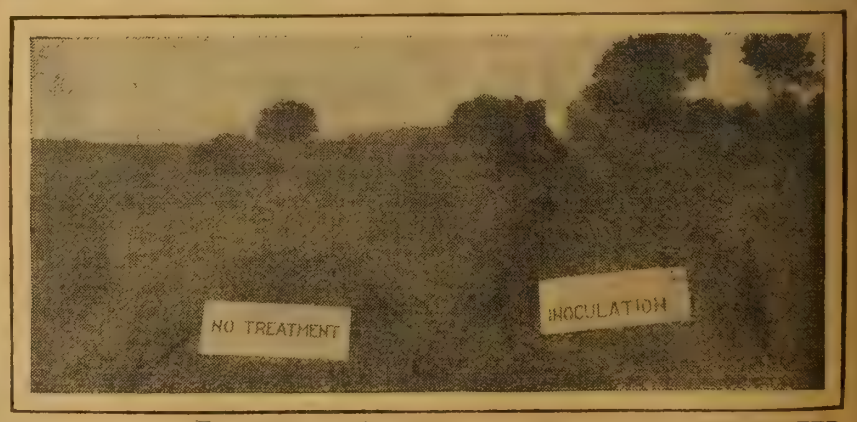
THE accompanying illustrations are self-explanatory and show the results of some very interesting experiments which have been carried on near Roberts, St. Croix county, Wisconsin. As our readers know, there has been some very interesting work accomplished through the Warren Union High School, at Roberts, and under the direction of Prof. Jno. M. Hammer and others. The Warren Union High School has ground devoted to agricultural experiment work. During the past season they have been experimenting in the effect of lime and inoculation on the yield of alfalfa. Nothing could more approximately illustrate the results and the yields under different treatment of the soils as shown by the photographs. These experiments emphasize the same conclusions which have been reached by the workers of the Wisconsin Experiment Station, at Madison, and others who have been conducting experiments with alfalfa under the direction of the various county orders. In this particular case the original state of the soil used for the experiments was exactly the same, so that the effect of liming and inoculation is strongly emphasized.

NO TREATMENT OF SOIL AS COMPARED TO SOIL TREATED WITH LIME. NOTE DIFFERENCE IN THE YIELDS.

It is just such experiments as these which have been conducted at a number of the county farms of the state under the dir tion of workers in the Wisconsin Experiment Association and the Wisconsin Alfalfa Order. It is apparent that we still have a great deal to learn about the successful growing of alfalfa in Wisconsin, esp cially on some of the heavier soils.

CULTURE INOCULATION AT LEFT AND SOIL INOCULATION AT THE RIGHT. THE SOIL INOCULATION RESULTED IN LARGEST YIELD.

SHOWING DIFFERENCE OF YIELD OF ALFALFA ON UNTREATED SOIL AND SOIL LIMED AND INOCULATED.



ALFALFA YIELDS IN SOIL, THE YIELD AT LEFT BEING IN UNTREATED SOIL AND AT RIGHT IN SOIL INOCULATED BUT NOT LIMED.

Over 3,000 butter and cheesemakers of this and other states have been enrolled in the Wisconsin Dairy School, established in 1890.

Farmer's Interest in His Creamery

Pointers on Relationship of Buttermaker and Patron, by C. E. Lee, of Madison, Before Waterloo Dairy Congress.

THE managers and officers of the leading co-operative creameries are beginning to ask the question, "Are we doing our duty to the farmers of the community who entrust us to handle twenty to thirty million dollars a year?" During the past summer two Wisconsin factories with a combined output of over 1,000,000 pounds of butter realized that the quality of their product and method of marketing was causing a loss of 1 to 2 cents per pound. An individually owned creamery located less than 100 miles from these two plants for the month of March last sold two-thirds of its output at nearly 3 cents net per pound higher price.

Last May a patron of a Wisconsin creamery that had not had the advantage of a regularly organized cow-testing association remarked that the average production of his herd for last year in butter fat sold to the creamery alone was $140. One cow produced over 600 pounds of butter fat. These and other illustrations could be given to prove that the farmers as a class have advanced by making a study of their problems. Not only do they study the cows but they are beginning to know the soil, its management and productive value.

They are becoming familiar with modern methods of managing the co-operative creameries. On many sections the farmers are not satisfied with the creamery building that formerly answered the purpose. They do not hesitate to erect the best structure that can be put up in order that efficiency may not be hampered. They have even said: "A few years ago a man in charge of the creamery who had the capacity of earning $75 to $85 per month answered our needs; not so today. One hundred and fifty dollars per month may not mark the limit." This is a plain warning to the buttermakers or creamery manager that they must be better trained.

This higher standard is demanded in order that the factory industry may be placed upon a higher plane and the men behind the work when making certain requests may receive a hearing. The industry is of such magnitude as to attract men with special training, age and experience. It has no place for those who think that to be a creamery operator and a skillful maker requires but a few months' training. A few weeks ago a new creamery was dedicated. About 2,000 people gathered for the occasion because it was one of the institutions of the county that had helped to make the homes, the farms, the banks and the business houses. The president of the company told the people that the success of the enterprise was largely due to the man who for eight years had been the buttermaker and the manager.

It is not out of place to mention the fact that butter made in the bulk of the creameries will in the future have a more difficult battle to fight than it has ever had. The competing forces are each year perfecting their organization. We must hold our own.

The buttermaker should be able to assist the farmer not only in outlining for him a method that will result in a higher grade of cream being produced but to gain his confidence and thus be placed in a position to advise him on other subjects and to inform him of better methods in other farm activities.

In the creamery it is not only the problem of starter making, cream pasteurization and cream ripening and churning, but the making of one churning of butter that is a counterpart of a thousand churnings. In other words, uniformity. This does not refer to the flavor alone, but to the texture or body control, the color and the salt.

During the past few years a number of problems have been studied by the men called upon to further the cause of factory operation. The makers have taken hold of these same questions and together some definite solutions have been reached. In other lines, to the outsider it may appear that we have simply marked time. The factory managers are still working on the problem of the quality of the raw material. They feel that good butter is not the result of what can be done to improve the deteriorated product, but rather how to prevent contamination. They say the farm is the place to begin methods and frequently is next in order. Unfair competition still exists in some places.

In Wisconsin, as well as in other states, certain counties or sections can be referred to as examples of progress along these lines. Men employed by the state or the county as inspectors or instructors can in co-operation with the local men accomplish a great deal more than the factorymen can do working alone. These local men can open the field and take the lead. As an example, in a certain community, the creamery had once closed because of lack of quality and co-operation. It was reopened and for a year or two the task seemed hopeless. The state department was called upon and a careful study was made of the situation. Two different meetings were held, where all of the cream producers were asked to be present. In short, the result was marvelous. The words of the owner of the creamery were: "I have 109 wide-awake patrons and they have awakened to the fact that by producing good cream they get the benefit in price paid for butter fat. This creamery always paid Chicago butter quotation for butter fat, but now we are able to pay ½ to 2½ cents above Chicago." In a certain county the creamerymen formed a county unit, where all of these problems could be discussed and all cards placed on the table face up. The first meeting that they held was the beginning of many lines of activity that will result in much good. In Wisconsin the factory licensing law has already accomplished a great deal to improve factory conditions in general. Operators have made many improvements, thus making it possible for the makers to have a better place in which to do their work. The makers must comply to certain rules and regulations. This all counts for efficiency and is but a step for still greater progress.

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FREE TO HUNTERS AND TRAPPERS—AUTOMATIC REVOLVERS, GUNS, TRAPS, etc.—who join our co-operative plan. So don't be tempted to sell furs elsewhere until you read the particulars of this plan. We believe it will make a big year for you if you take advantage of it. Write for our Fur Club News, Fur Market Reports, Premium List, and List of Prices. All of these will be mailed to you free, upon request. (25)

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It tells of experiments in feeding live stock both ground and unground grain, alfalfa and kaffir corn—also shows how 25% can be saved—shows values of different foods—tells about balanced rations—describes

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Don't Send Any Money

Here's an opportunity of a lifetime! You can become the owner of a brand new 1917 Five Passenger Buick Touring Car through our wonderful plan, without one cent of cost. It requires no experience—just a few weeks' spare time work in your own community. We have already given away dozens of automobiles to men and women living in all parts of the United States. If YOU want this next Buick Car, drop us a postcard saying, "Without obligating me, send me your plan by which I can get a Buick Automobile FREE." Address

WOMAN'S HOME WEEKLY
Dept. H, Minneapolis, Minn.

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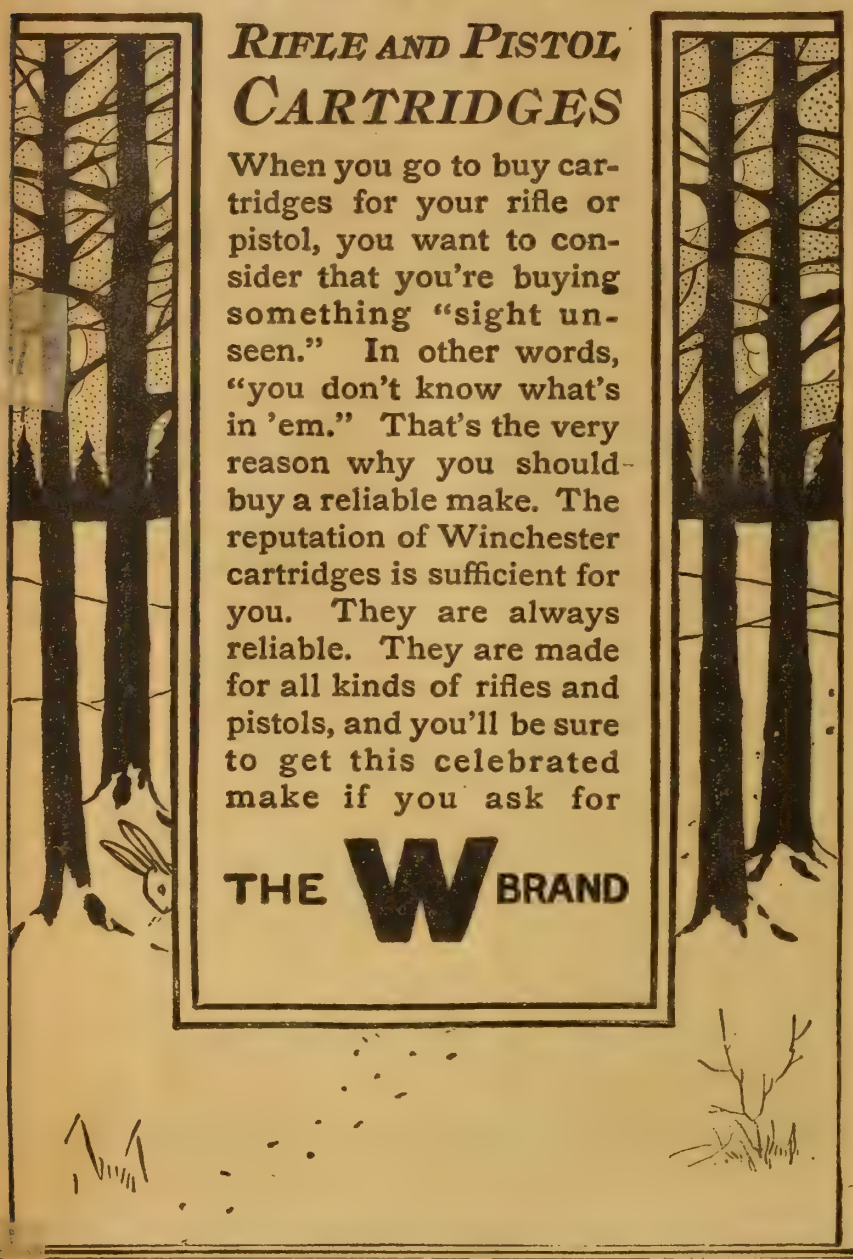

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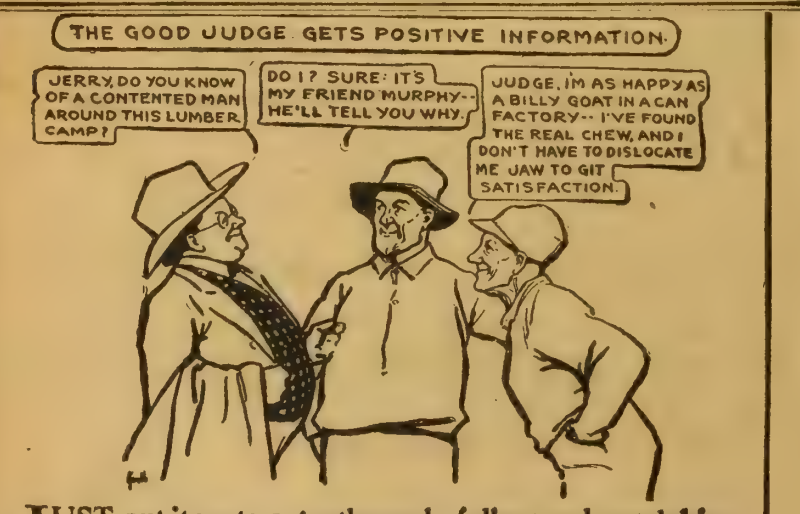
When you go to buy cartridges for your rifle or pistol, you want to consider that you're buying something "sight unseen." In other words, "you don't know what's in 'em." That's the very reason why you should buy a reliable make. The reputation of Winchester cartridges is sufficient for you. They are always reliable. They are made for all kinds of rifles and pistols, and you'll be sure to get this celebrated make if you ask for

THE W BRAND

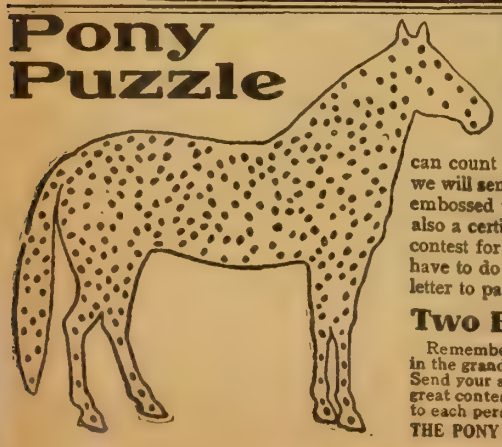


JUST put it up to a gentlemanly fellow and watch him take to the tobacco that calls for a *small* sized chew. A few facts like these appeal to his common sense:—

W-B CUT Chewing is *rich* tobacco. It's shredded, you get next to *all* the good tobacco taste. The touch of salt helps bring out the flavor. It's not sweetened and flavored to death—you don't have to keep grinding and spitting.

Made by WEYMAN-BRUTON COMPANY, 50 Union Square, New York City

Pony Puzzle



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Here is a Shetland pony covered with dots. By being careful any boy or girl can count the dots on this pony. If you can do this we will send you as a prize, a packet of five beautiful embossed postcards lithographed in rich colors, and also a certificate for 1500 Free Votes in our grand contest for two beautiful Shetland ponies. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

Two Beautiful Ponies Given

Remember the Ponies will absolutely be given away in the grand contest which we will tell you all about. Send your answer at once so you can be entered in this great contest. In case of a tie for a pony one will be sent to each person so tied. Full particulars by return mail.

THE PONY MAN Dept. 204 Des Moines, Iowa

In and Around Wisconsin

COMING EVENTS.

Wisconsin Potato Growers' Association and State Potato Show, Eau Claire, Wis., November 21st to 24th.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.

International Live Stock Exposition, Chicago, Ill., December 2d to 9th.

Wisconsin Dairymen's Convention, Waupaca, Wis., December 5th to 7th.

Wisconsin Buttermakers' Association, Sparta, Wis., December 5th to 7th.

Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

Madison is to have 8 cent milk as a result of the high price of feeds, the poor pastures and the consequent advance of milk sold from the farmer to the dairy. Milk which the dairies had been buying at $1.60 is now costing $2. The same condition prevails in most Wisconsin cities.

C. T. Williams, of Farmer City, Illinois, has a freak ear of corn which counts twenty-one rows around. It is said that one may count a million ears and never find any that are not an even number of rows. The freak ear will be exhibited at the Bloomington Corn Show and other shows.

Neil McLean, a Walworth county farmer and breeder, recently shipped twenty-three head of grade Holsteins to J. N. Davis, Miltonville, Kansas. This is but a sample of sales made in Wisconsin to Kansas and the Southwest. Kansas City is trying to get the National Dairy Show next year and it is expected that such a move would greatly stimulate interest in dairying in that section.

A physician at Jackson, Wisconsin, has a Plymouth Rock pullet which is accused of having an ear for music. The doctor recently drove from his farm to Milwaukee, twenty miles, to a theater. After the show he found the pullet at roost on the running board. Miss Plymouth Rock had ridden all the way to town and waited until after the show. Whether she had a ticket for the opera or merely took in a movie the doctor doesn't know, but she was taken inside the car and given a nice warm ride home.

Quite a large number of purchasers of milk in quantities from farmers have conceded to the $2 average winter milk price, the same scale which was demanded some weeks ago by the Illinois Milk Producers' Association. The Borden plants at Monroe, Monticello and other points announced the new scale of prices several days ago. October milk has been selling at these plants at $1.90, November deliveries will bring $2.10, December the same, January $2.05, February $2 and March $1.85. In the main, those who are affected by the new scale of prices have previously been selling their milk at $1.60 per hundredweight.

Producers of milk must reckon with the ice cream demand of these later years. It is said that the factories in Milwaukee sent out more ice cream in one day during the hot spell last year than they did in a week during the previous summer. Smaller factories sent out around 25,000 gallons of ice cream a day and the larger ones as high as 150,000 gallons a day. Not only is there a strong demand for ice cream in hot weather but there is a steady and regular demand throughout the whole year. The lad who had ice cream once a year on the Fourth of July is an unknown in these days when "sundaes" are almost a daily occurrance and when the Sunday dinner usually is topped off with the favorite family dish, ice cream. The American people have been educated to eat ice cream and the demand will increase rather than diminish.

American shippers exported $283,101,181 worth of breadstuffs during the eight months ending August 31st, according to an analysis of August trade issued recently by the department of commerce. That was a decrease of $89,327,613 from the same period a year ago, but August exports of $34,687,007 represented an increase of more than $5,000,000 over August of 1915. Meat and dairy products exported in August showed an increase of $2,000,000 over the previous August.

Want to buy or sell a farm? Make it known by inserting an advertisement in THE FARMERS' MARKET. Six cents a word each insertion.

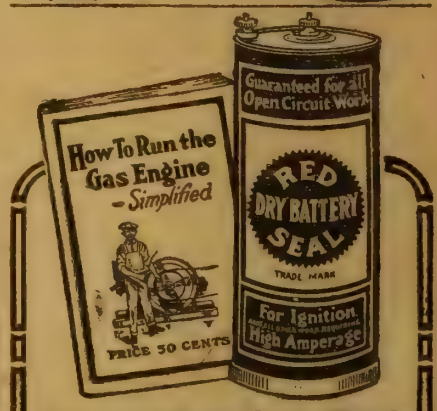
Steady, All-Day Hauling

A big day's work from your tractor if you equip with *time-tried* Columbia Batteries. Choose them for engines, autos, lanterns, phones, bells and blasting. *High-powered*—they cost no more, but last longer.

National Carbon Company
Cleveland, Ohio

Fahnestock spring-clip binding posts—no extra charge. An exclusive feature on Columbia.

Columbia Batteries



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Guaranteed—Ask Your Dealer

Give dealer's name and we will send you free book—"How to Run the Gas Engine—Simplified"—used as text book by State Agricultural Colleges and High Schools. Also catalog of Everything Electrical for Home and Farm.

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Ever Tried It?

Once you see how this dressing will keep the leather in your work shoes soft and pliable, protecting it from barnyard acids and keeping out water, you will never be without it. Made in the tannery from the animal greases used in heavy leather. Get it from your dealer; if he hasn't it, send 10c for full size can.

PFISTER & VOGEL LEATHER CO.
Milwaukee, Wisconsin

P. & V. FARM SHOE Dressing
THE TANNER'S OWN DRESSING

Let Us Furnish You FREE POWER FOR 30 DAYS

IF you own an automobile you have 20 to 40 horse power going to waste. Fits any car, can be put on in 5 minutes. Runs the washing machine, feed grinder, sheller, wood saw, pump, etc. CHEAPEST POWER ON EARTH. Our FREE FOLDER fully explains the AUTO-PULLEY and many things you should know about power. A postal will bring you a copy tomorrow.

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Send for the new edition:
"Where Soil and Climate Are Never Idle"

—just off the press—profusely illustrated—one of the best land books ever published. Sixty-four pages of absorbingly interesting facts regarding **The Highlands of Louisiana,** the land of mild climate and perpetual growth. Learn the full truth about the remarkable opportunities there, why the price of the land is so low, the terms so easy. You need this information; it's valuable. Remember, the book is FREE, absolutely without obligation. With it comes a map of Louisiana in full colors. Simply send your name and address on a postal.

Long-Bell FARM LAND CORPORATION
416 R. A. LONG BUILDING,
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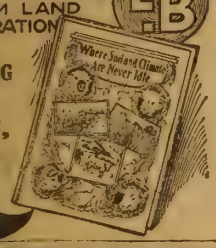

THE "TALE" OF A PIG

Send post card at once for this interesting free story. There's money for you in every line of it.

CORN CROP SHORT SAVE YOUR FEED

Don't buy corn and pay high prices. Learn how 55,000 wide awake farmers make their feed go a third to a half farther and prevent hog cholera by feeding correct, cooked rations. Also get our 10 day trial offer on

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Cook feed and warm the water for your hogs, cattle, sheep and poultry this winter. It pays. All sizes of cookers. Used everywhere. Attractive prices. Handy for cooking feed, scalding hogs, rendering lard, etc.

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To almost any problem that arises on your farm.

FREE to Landowners Only —who have not had a copy. This big 160 page book—Ropp's New Calculator (worth 60c) will be sent free and postpaid. We will also mail you our catalog of—

SQUARE DEAL FENCE

the only wire fence that has the famous self-grasping, double-grip, Square Deal Lock. Other lasting qualities are heavy 99 3-4% pure galvanizing, one-piece stay wires and wavy strand wires. Write today.

KEYSTONE STEEL & WIRE COMPANY
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MORE MONEY

for tenant more money for owner, in our Active Fertilizers.
Just ask nearest office for booklet. Agents wanted.

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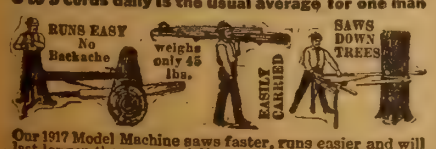
SAWS { ANY WOOD IN ANY POSITION ON ANY GROUND 4 in. to 5 ft. Through

1 Man With a Folding Sawing Machine Beats 2 MEN With a Cross-cut Saw
5 to 9 cords daily is the usual average for one man



Our 1917 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or strongest man. Ask for catalog No. M87 and low price. First order gets agency.
Folding Sawing Mach. Co., 162 W. Harrison St., Chicago, Ill.

Farmers Hold Many Open Country Institutes.

F. L. Luther, superintendent of farmers' institutes, is receiving many well-filled applications for one and two-day meetings from communities located out in the "open country."

And, although it will mean much cross-country traveling, the institute workers expect to accept the invitations of many of the cross-road and rural committees. For a large part, these meetings will be held this year in two important sections of the state. The first will include the central area of the state having light soil and marsh-land problems to solve, while the second region will take in the northeastern counties, where much of the country is in an undeveloped condition.

Conductors and speakers at these institutes will be men having wide experience and close sympathy with the particular needs of the regions visited. They will lead conferences on soil fertility, drainage and live stock management in the central areas of the state, while land clearing, field-crop culture, and development questions in general will be emphasized in the northeastern sections.

About 130 regular two-day farmers' institutes will be held this season, and at more than fifty places women's conferences will be held in connection.

A number of state agricultural organizations have been asked to cooperate in the farmers' institute work during the winter of 1916-17. These will include the Wisconsin Agricultural Experiment Association, the State Horticultural Society, the State Drainage Association, the Wisconsin Live Stock Breeders' Association, and the Wisconsin Potato Growers' Association.

Something New For Tobacco Growers.

To the Editor:—I have some interesting information for tobacco growers, and it is based on actual experience, too. Am located in the heart of the bright tobacco belt in North Carolina.

The tobacco plant is one of the tenderest and quickest to feel drouth. The roots do not penetrate deeply, and because of the large spread of the leaves and the close growth, it is one that requires an immense amount of moisture to carry it through its growing season and give it good quality and heavy yield.

The year 1913 was very dry. Of course, we didn't anticipate that it would be, but it just happened that we selected the spring of that year to try out the new subsoiling with dynamite theory; at least it was new to us at that time.

Other land planted to tobacco didn't do well here that year. The subsoiled land had a good crop being in the best of growing condition all season.

The theory is, I believe, that deep breaking of the soil by blasting puts it into a condition to conserve moisture against dry spells that are almost sure to occur some time during every growing season; also to allow excess rainfall to drain down into the soil beyond the reach of the roots. In other words, prevent a water-logged soil.

I have had a great deal of experience raising this crop and find it always does best on land that has been deeply broken. And it did particularly well in the blasted field—so well that it commanded a price above the market. Based on our experiment, I really believe the farmers in the bright belt could add $50 to the yield of every acre if they would break up the subsoil by blasting, and the work wouldn't cost half that and wouldn't have to be repeated for several years. In the dark belts of Ohio, Kentucky and Virginia they should be able to greatly increase the quality and quantity of their crops by this method.

I would like to see every tobacco farmer try this for himself on a small plot. But there is a right and wrong way of doing it and the soil must be dry when the blasting is done, so I would advise writing for instruction book and reading up on it before going ahead.

I have tried the subsoiling on corn and on tree holes, too, but haven't had as good success on them as on tobacco.

James R. Brown.

When you buy Prince Albert *you are getting quality!*

Quick as that P. A. flavor strikes-in, you'll realize you've received all you paid for in *tobacco quality*—not coupons or premiums! State or national restrictions on coupons or premiums can in no way affect Prince Albert's sale. Quality has been the only inducement Prince Albert has ever offered smokers!

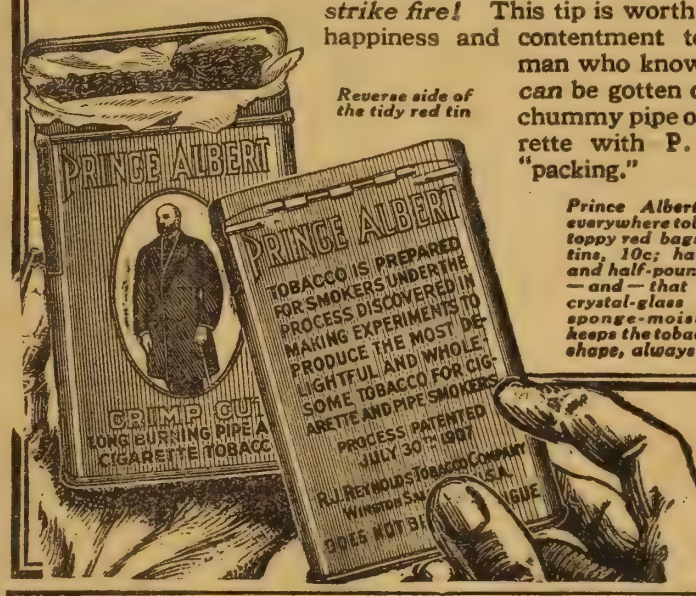
You've heard many an earful about the Prince Albert patented process that *cuts out* bite and parch and lets you smoke your fill without a comeback! *It proves out every hour of the day!*

PRINCE ALBERT
the national joy smoke

will open the doors wide for you to come in on a good time with a jimmy pipe or makin's cigarettes. You'll think the smoke-lid is off for fair, firing up as the smoke-spirit strikes you—*without a regret!*

All that delight can be yours soon as you lay in a stock of P. A. and jam that friendly old pipe brimful or roll some cigarettes—*and strike fire!* This tip is worth a lot in happiness and contentment to every man who knows what *can* be gotten out of a chummy pipe or a cigarette with P. A. for "packing."

Copyright 1916 by R. J. Reynolds Tobacco Co.



Reverse side of the tidy red tin

Prince Albert can be had everywhere tobacco is sold in toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors—and—that clever pound crystal-glass humidor with sponge-moistener top that keeps the tobacco in such fine shape, always!

R. J. Reynolds Tobacco Co.
Winston-Salem N. C.

WIN A XMAS SURPRISE PACKAGE

4		7
	7	3
6	4	

SOLVE THIS PUZZLE

Here is the "Missing Number Puzzle" which will make you think. What numbers placed in the vacant squares will make a total of fifteen for each column when added either up and down or across?

Is It Easy? If you fill in the missing figures and send us your name and address, we will send you as a prize, a **Christmas surprise package, containing 42 assorted pieces of beautiful Christmas cards, seals, tags and stickers. This is one of the most artistic Christmas packages put out.** We will also send a certificate of entry in our grand contest for a $395 Saxon Automobile. All you have to do is to enclose 2 two cent stamps in your letter to pay postage and cost of mailing.

Saxon Car Given Away

Remember the Saxon car will absolutely be given away at the close of the grand contest. In case of a tie, a Saxon car will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars free.

SAXON EDITOR, 560 Popular Bldg., Des Moines, Iowa

A ROLLER FEED MILL

WILL GRIND A WAGON LOAD OF FEED FOR 10 CENTS.

THIS is the **Famous Howell Roller Mill** you have heard so much talk about. The new improved mill for the scientific grinding of grain. Old style Burr and Stone Mills are out of date. Thousands of them are being annually replaced by the Famous Howell Roller Mills. Grind twice as fast as the best burr mill made. Does not heat the feed. Grinds Graham and Rye flour as well as feed. Has big capacity. Requires little power. No burrs or stones to wear out. Guaranteed to last a life time. Made in 13 sizes suitable for any size engine. Save one-half your time, gasolene and money by using a Howell Roller Mill. Write for Catalog F-16. We will send it free, together with the **Famous Howell Roller Feed Mill Puzzle.**

R. R. HOWELL & CO., Manufacturers, Minneapolis, Minn.

14¾ ECONOMY FENCE

Before you buy any more fence, write for facts about our 26-inch ECONOMY HOG FENCE at 14¾c. per rod. Many other styles and prices.

Keystone Steel & Wire Co.
5856 Industrial St. PEORIA, ILL.

FARM SEEDS WANTED

We are in the market and prepared to pay cash for any quantity of Timothy, Clovers, Timothy and Clovers mixed—also other field seeds. Send us samples, description, state quantity you have and quote cash price per bushel f. o. b. your station. No lot too small nor too large. Address

HYDE SEED FARMS Pattonsburg, Mo.

Get a Handy "French Flasher"

With An All-Metal Case—Enameled in Colors

Non-Short-Circuiting

More popular than ever! The unbeatable quality flashlight—Now in all-metal cases and beautifully enameled in blue, red, brown, green and black fiber; also in nickel finish—and pocket size flashlights in gold plate with your favorite emblem on the case. Ask your dealer to show them to you.

"French Flasher" batteries fit flashlight cases of any make and give better and longer lasting service.

French Battery & Carbon Co.
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Manufacturers of the famous family of French Dry Cells

Just Out FREE

I want to send you my big free book of nifty new 1916 buggies. I want you to see the stunning rigs and the bargains I am offering this season at prices that save you from $20 to $40. Think of it! You can now get a light-running, easy riding, long life, genuine,

SPLIT HICKORY

$39.25 and up. Guaranteed 2 years. Remember I give 30 days free road test to prove the quality. Catalog shows hundreds of other snappy styles — all at money saving prices. Write for the big Free Book today.

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THE OHIO CARRIAGE MFG. CO.
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PULL OUT THE STUMPS!

The HERCULES

All Steel Triple Power Stump Puller pulls an acre of stumps a day—increases the value of your land 100%. Makes room for *money* crops. Guaranteed for 3 years against breakage from any cause. Send name for fine free book, 30 days free trial offer and special low-price proposition.

HERCULES MFG. CO.
95 25th Street,
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Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co.
65 Elm St., Quincy, Ill.

Please mention this paper when writing

GRAND CHAMPIONS AT THE NATIONAL DAIRY SHOW

PROCTOR'S GRAND CHAMPION JERSEY BULL, IMP. GOLDEN FERN'S NOBLE. THE $25,000 PRIZE BEAUTY.

IOWANA FARMS' GRAND CHAMPION HOLSTEIN BULL, OAK DE KOL OLLIE HOMESTEAD.

MARSH'S GRAND CHAMPION GUERNSEY COW, PRINCESS BERGERE.

BARNES' GRAND CHAMPION JERSEY COW, GLORIA BENEDICTINE.

Self-Feeder For Pigs.

The value of the self-feeder method of fattening pigs was demonstrated in an experiment recently carried out at the experimental farm of the bureau of animal husbandry at Beltsville, Maryland. The object was to determine the value of this system as compared with the ordinary method of hand feeding.

The pigs used in the experiment were grade Berkshires farrowed in the fall of 1915. They averaged ninety-three pounds per head when the experiment started. They were fairly uniform in size and age, but were not the best pigs in the fall farrow.

The hand-fed lot were fed three times daily, the amount being governed by the appetites. The ration given the hand-fed hogs was composed of five parts corn meal, four parts middlings and one part tankage. The corn meal and supplements were mixed dry. Just before feeding the amount to be fed was weighed and then mixed into a thick slop, enough water being used to make the slop pour out of the bucket without sticking. The feeding was done at 7 and 11:30 o'clock in the forenoon and 4:30 o'clock in the afternoon.

The self-fed lot had free access at all times to corn meal, middlings and tankage in separate compartments of a self-feeder. Close watch was kept on the feeder and a supply of each feed maintained.

Both lots of pigs were kept in dry lots a quarter of an acre in size. The pigs were given ample room for exercise and sufficient shelter. The pigs in both lots had access to a mineral mixture composed of—

Charcoal	1 bu.
Hardwood ashes	1 bu.
Salt	8 lbs.
Air-slaked lime	8 lbs.
Sulphur	4 lbs.
Pulverized copperas	2 lbs.

SUMMARY OF RESULTS.

Feeding period, Feb. 22 to May 2, 1916—70 days.

	Hand-fed lot.†	Self-feeder lot.§
Number of pigs	9	9
Average initial weight, pounds	94.00	92.00
Average final weight, pounds	167.50	205.00
Average gain per pig, pounds	73.50	113.00
Average daily gain, pounds	1.04	1.61
Feed eaten daily per pig:		
Corn meal, pounds	2.13	5.46
Middlings, pounds	1.70	.81
Tankage, pounds	.42	.28
Average daily ration, pounds	4.25	6.55
Pounds of feed per 100 pound gain	410.00	405.00
Cost of 100 pounds gain	$6.24	$5.67

† Ration: 6 parts corn meal, 4 parts middlings, 1 part tankage.

§ Ration: Corn meal, middlings, tankage.

The cost per ton of feed used in the experiments was as follows: Corn meal, $27; middlings, $30; tankage, $50.

All the pigs in the self-feeder lot maintained keen appetites during the seventy days of feeding. The hand-fed pigs averaged ninety-four pounds per head and the self-fed pigs ninety-two pounds per head at the beginning of the test. At the end of seventy days the hand-fed pigs averaged 167.5 pounds and the self-fed pigs 205 pounds, 37.5 pounds more than the hand-fed pigs. The self-fed pigs consumed a greater quantity of feed per head during the test than the hand-fed pigs, but it took only 405 pounds of feed to produce 100 pounds of gain in the case of the self-fed pigs at a cost of $5.67, while the hand-fed pigs produced 100 pounds of gain at a cost of $6.24.

The self-fed pigs made a better showing, surpassing the hand-fed lot in both rate and economy of gains. The results of the experiment clearly show that for quick fattening the self-feeder is very practicable.

Rider AGENTS Wanted

1917 Model

in each town to ride and show a new 1917 model "RANGER" bicycle. Write for our *special offer* on a sample to introduce. DELIVERED FREE on approval and 20 days' trial. Send for big free catalog and particulars of *most marvelous offer* ever made on a bicycle. You will be astonished at our *low prices* and *remarkable terms*. 94 STYLES, sizes and colors in Ranger bicycles. Most complete line in America. Other guaranteed models $11.95, $14.75 and $17.60. A few good second-hand bicycles taken in trade $3 to $8 to clear.

Tires, lamps, wheels, sundries, parts and all bicycle supplies *at half usual prices*. Do not buy until you get our catalog and offers. *Write Now.*

MEAD CYCLE CO., DEPT. S-184, CHICAGO

THE GENUINE SMITH STUMP PULLERS

W. SMITH GRUBBER CO.
CATALOG FREE—DEPT. 48 LA CRESCENT, MINN.

DAIRY

Illustrating Cow Testing Work.

Exhibit at Waupaca Fair—By George L. Moss, of Waupaca and Butternut Ridge Association.

I AM enclosing some pictures of an exhibit which I had at the Waupaca County Fair. It consists of eleven tubs of butter, being the production for a year of the best cow in our Waupaca and Butternut Ridge Cow-Testing Association. Five tubs represent our association average. Three and a half tubs represent the average for the state. Two tubs were the average production of the poorest cows in our association. The picture of the poorest cow in the association was on exhibition and the picture of the best cow was shown on the tubs of butter. The ration which the best cow was fed was shown in glass jars, and it included ground oats, ground corn, oil meal, and R. K. D. feed. A Babcock tester, milk scales, milk sheet, record boo , milk strainer, charts and posters completed the exhibit. It was as attractive as we knew how to make it, and I was very much pleased at the interest which our fair visitors took in the exhibit. Many valuable lessons were learned from this exhibit. The exhibit was taken by a leading hardware merchant, of Weyauwega, and placed on display in their windows for ten days. Another picture sent herewith shows our members unloading dried brewers' grains bought co-operatively. As tester for the association, I have been instrumental in purchasing and distributing forty tons of this feed the past month at Waupaca and Weyauwega.

We are thinking about the meeting of the Wisconsin Dairymen's Association, to be held at Waupaca, December 5th, 6th and 7th; and we want to try to make it the best and most profitable meeting ever held in the history of this organization. Our business men are enthusiastic concerning this meeting, and I believe they will back us up in any reasonable efforts to entertain and instruct those who come.

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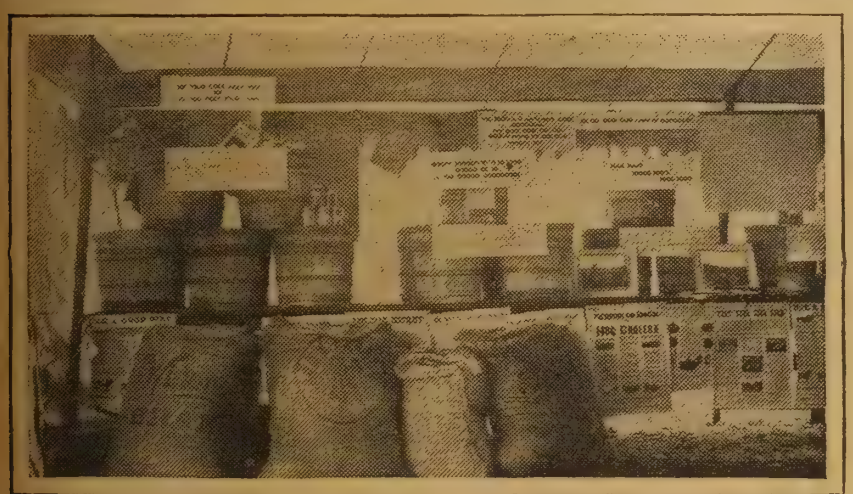

EXHIBIT OF COW-TESTING ASSOCIATION AT WAUPACA COUNTY FAIR.

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The paper is interdenominational and admirably suited for every home. All those who subscribe now to the American Messenger for 1917 at fifty cents will receive the paper until January 1, 1918. New subscribers will thus receive the issues for October, November, and December, 1916, free of cost, if they subscribe at once. If you do not know the paper, send for a free sample copy.

Address, AMERICAN MESSENGER, Dept. 5, Park Ave. and 40th St., New York City, N.Y.

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Fall Care of Rose Bushes.

Lovers of roses still have some work to do in their gardens before the winter sets in if they are to expect the best results next year. Some methods of combating diseases of these plants cannot be followed during the growing season and advantage should be taken of the fall months.

In general, whatever the disease, the affected portions of the plants should be cut out in the fall and the bushes sprayed.

It is assumed, however, that spraying will not have been delayed until fall, but will have been carried on as a control measure at frequent intervals since spring. The diseased wood removed in the fall, together with the old leaves and debris under bushes, should be burned. In case of attacks by rusts, canker and leaf spots the diseased wood or leaves should be removed and burned even during the growing season.

For powdery mildew the control sprayings for the summer spores should be with lime-sulphur or potassium sulphide. After cutting back in the fall the plants should be sprayed with lime-sulphur or strong Bordeaux mixture. The control spraying for rusts should be ammoniacal copper carbonate. The fall spraying should be with a strong Bordeaux mixture. For leaf spot, leaf blight and anthracnose the control sprays may be either Bordeaux mixture or ammoniacal copper carbonate and the fall spraying should be with the former.

Leaf blotch, also known as black spot, is a common and very injurious disease. The first symptoms are the appearance of irregularly shaped blackish spots on the upper surface of nearly full-grown leaves. In this stage the trouble may be controlled by several sprayings with ammoniacal copper carbonate or Bordeaux mixture, but if these precautions are not taken another stage of the fungus develops in the same spots. The fungus in this later stage lives over the winter on fallen leaves and sets up a new infection in the spring which can only be prevented by raking up and burning the fallen leaves and spraying the dormant bushes with strong Bordeaux mixture.

Another disease to which roses are subject is canker, which starts with the appearance of small reddish patches on the green parts, generally of one-year-old growth. Such infected areas may increase until the entire stem is surrounded and may extend for several inches along the branch. The only advice to be given is to cut away rigorously all diseased branches, and it may be necessary to cut back entire brushes if badly infected. Cover the exposed surfaces made by this cutting with paint or tar. This diseased material must be burned and the dormant bushes sprayed with strong Bordeaux mixture in both the autumn and early spring.

Potato Bread and Rolls.

Excellent bread can be made by using three pounds of boiled and mashed potato and two and one-fourth pounds of good bread flour, according to the baking specialists of the United States Department of Agriculture. The bread so compounded has a rich brown crust and tender and elastic crumb. It has an appetizing odor and a very agreeable taste, which is preferred by many to that of bread made wholly from flour. When made according to the directions given below, potato bread contains more mineral matter, fiber and moisture, but otherwise, in composition and nutritive value, is practically the same as ordinary bread. Its higher moisture content helps to keep it fresh several days longer than ordinary bread. In localities where there is a surplus of potatoes or where they are very cheap, potato bread costs less to make than all-flour bread. This would prove an excellent way in which to utilize cull potatoes. Even, however, where the relative market price of potatoes and flour are such that there is no economy in substituting potato for flour, the individual flavor and keeping quality of potato bread make it desirable as a variant in the family diet.

Potato bread as known abroad is made generally with potato flour, about ten parts of this commonly being used with ninety parts of wheat flour or a mixture of rye and wheat flours. As potato flour and dried potato flakes are not accessible to the American housewife the specialists conducted a series of successful experiments in using boiled potatoes with flour.

It was found that a mixture of boiled potatoes and wheat flour in the proportions given in the accompanying recipes, gave a very desirable loaf, a trifle smaller than that made from all flour, but wholesome and nutritious. Figured to a basis of equal moisture content the boiled potato would represent 25 per cent and the flour 75 per cent of the mixture.

The following methods for making potato bread, worked out in the baking laboratory, are recommended:

For the straight dough method, for four one-pound loaves, the following ingredients are required: Three pounds of boiled and peeled potatoes, two and one-fourth pounds of good bread flour, three level tablespoonfuls of sugar, one and one-half level tablespoonfuls of salt; two cakes of compressed yeast, four tablespoonfuls of lukewarm water.

Wash thoroughly and boil in their skins about twelve potatoes of medium size. Cook them until they are very tender. Drain, peel and mash them while hot, being careful to leave no lumps. Allow the mashed potato to cool until lukewarm. To three pounds (five solidly packed one-half-pint cupfuls) of the mashed potato add the yeast, which has been rubbed smooth in a cup with three tablespoonfuls of lukewarm water. To get all the yeast, rinse the cup with the remaining tablespoonful of water and add this also to the potato. Next add the salt, the sugar and about four ounces of the flour (one scant half-pint of sifted flour). Mix thoroughly with the hand, but do not add any more water at this stage.

Cover the mixing bowl to avoid the formation of a crust on top and place out of the way of drafts to rise, where the temperature cannot fall below 80 degrees Fahrenheit or be much higher than 88 degrees Fahrenheit. Where the housewife has no thermometer she should see that the dough in all the risings is kept moderately warm, but not up to blood heat. Any water used in mixing the dough should be moderately warm, but by no means hot. This sponge, if kept at the proper temperature, should, after two hours, become quite light.

To this well-risen sponge, which now will be found to be quite soft, add the remainder of the flour, kneading thoroughly until a smooth and elastic dough has been formed. The dough must be very stiff, since the boiled potato contains a large amount of water which causes the dough to soften as it rises. Do not add water to the dough unless it is absolutely necessary to work in the flour. Set the dough back to rise again, temperature at about 86 degrees Fahrenheit, until it has trebled in volume, which will require another hour or two. Then divide the dough into four approximately equal parts, reserving a tiny lump weighing two or three ounces for an "indicator." Shape the sample into a ball and press it into the bottom of a small tumbler with straight sides. The glass should be slightly warmed. Note the volume of the ball of dough in the tumbler and mark the glass at twice this volume.

Mold the four portions into loaves and place in greased pans which have been slightly warmed. Place the glass containing the "indicator" beside the pans and let all rise, under proper temperature, until the "indicator" shows that it has doubled in volume. Then place the loaves in the oven and bake in a good, steady heat for 45 minutes.

Where no oven thermometer is at hand a convenient test for the oven will be to put a teaspoonful of flour in an earthen dish in the oven. If this flour becomes light brown evenly throughout in five minutes' time the oven is right for bread baking. If the flour scorches in that time the oven is too hot.

Potato bread by the sponge method requires for four one-pound loaves: Three pounds of boiled and peeled potatoes, two and one-fourth pounds of good bread flour, three level tablespoonfuls of sugar, one and one-half level tablespoonfuls of salt, one cake of compressed yeast, four tablespoonfuls of water.

Boil, peel and mash the potatoes as directed in the straight dough method. In the evening take one and one-half pounds, or two and one-half pounds solidly packed half-pint cupfuls, of the cool mashed potato, add to it the salt, four ounces of flour (one scant half-pint cupful) and the yeast rubbed smooth with the water, reserving one spoonful to rinse the cup.

In the morning add the remainder of the potato, the sugar and the rest of the flour. Knead thoroughly until a smooth and very stiff dough is formed. After working the dough set it to rise according to the directions given for the second rising under the straight dough method. Thereafter handle the dough exactly in the same way as is given under the straight dough method.

Very good rolls can be made from a similar mixture of boiled potatoes and flour by adding shortening and sugar. The following proportions will yield one dozen small rolls: Eight ounces of boiled and peeled potatoes, six ounces of sifted flour, one-third cake of compressed yeast, three-fourths level teaspoonful of salt, two tablespoonfuls of sugar, two tablespoonfuls of butter.

Two tablespoonfuls of powdered milk added to the dough will greatly improve the quality of the rolls. Although milk itself or cream may be used, it must be borne in mind that they will increase the liquid content.

Boil, peel and mash the potatoes as directed for bread making. Add in order to this the salt, the powdered milk (if used), the yeast rubbed smooth and mixed with the water, and lastly two tablespoonfuls of flour. Let this mixture stand at a temperature of about 86 degrees Fahrenheit until the dough begins to collapse. Add to this sponge the butter, the sugar and the remainder of the flour and, if necessary, enough more flour to make a very stiff dough. Knead thoroughly until a smooth dough which is no longer sticky has been formed. Set back to rise again and when the dough has trebled in volume knead lightly, form into small balls and place, not too close together in greased pans. Allow to rise until double in volume, as shown by the "indicator," and bake twenty minutes in a moderately hot oven.

To Make Geraniums Bloom.

To the Editor:—One of the readers wanted to know what she should do to make her geraniums bloom. Perhaps she has her plants in too large pots. The smaller the pots are the more the plants will bloom. Or it might be that the ground she used was too old. At any rate, I would advise her to try the smaller pots. I have beautiful geraniums and they bloom the year around and I hope this lady will have success in making hers bloom like mine. Miss D. S.

Spending-Money For the Farm Girl.

When the children are old enough to ask for money to spend they should be given the opportunity to earn it. Money that comes at the cost of time and effort will be more wisely spent than that which costs nothing. Usually that which costs little is lightly valued.

There are new ways coming up all the time by which girls may earn a little money besides the usual methods of caring for the young animals, fowls and bees, and without the discouraging prospect of seeing it go into father's pocket without a word to the caretaker. It is so easy to forget the rights of a child.

Now that the supply of foreign preserves and jams is cut off, it is possible for the farm girl to establish quite a market for delicious home-prepared jellies, jams, marmalades and pickles. City people are usually glad to pay good prices for such home delicacies.

Chow chow made from green tomatoes, watermelon pickles, sweet spiced pickles made from green muskmelons that didn't ripen, and many other kinds may be put up in small attractive glasses, bottles or jars and neatly labeled with the name of the maker. Such attractive table necessities could not fail to find a market.

The South Carolina woman who makes the famous pin-money pickles started with just this idea. She put up her products in attractive jars labeled with her name and picture. Now her pin-money pickles may be bought in all sections of the United States.

Nuts from the farm woodlot put into small sacks, baskets of home-grown fruits arranged to please the eye, and vegetables of various kinds in small peach baskets will find a ready market. Two carrots, a beet, a bunch of celery and three turnips arranged in a basket will sell faster and bring a higher price than those marketed in the usual way. A person living near a town, where many people are doing light housekeeping, will find an especially good market for such baskets.

Sage, marjoram, thyme and parsley are all easily grown and so generally used that the demand for them is quite large.

A few flower pots holding a plant or two of parsley would be welcome in many homes for garnishing foods. Parsley will grow in a kitchen window and keep green all winter.

A unique way of marketing sausage is to shape it like an ear of corn and place it in a husk. When this is smoked the sausage has a most delicious flavor and is a market novelty that few people will pass by. The husk should be saved when husking corn and well dried. The sausage is tied at the top with a strip of husk.

There is also a great demand for fancy yokes, chocheted lace, initials and monograms if they are well made.

It is not too late to use the following pickle recipes for making pickles to sell:

Green Tomato Pickles.—Select a peck of firm, green tomatoes; slice, add six medium-sized onions, also sliced; use a cupful of salt and put the mixture in layers; let stand overnight. In the morning drain and cook in two quarts of good cider vinegar, two pounds of brown sugar, an ounce of cloves, and two ounces of cinnamon (stick). Cook until the tomatoes are tender, but not mushy. When cold, stir in a cupful of grated horseradish and two tablespoonfuls of mustard.

Ripe Cucumber Relish.—Select twelve large cucumbers, and three onions; grate them fine; press the pulp dry, then add red pepper or chopped red pepper; salt to taste and add enough vinegar to make the mixture the consistency of prepared horseradish. Seal. —[Nellie Maxwell.

Recipes.

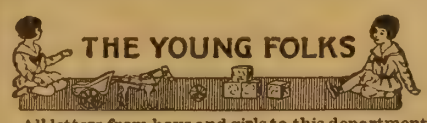
Jellied Prunes.—One pound of prunes, cooked, one package of gelatine, one cupful of cold water, one cupful of sugar, one-half cupful of orange marmalade or juice of one lemon. Wash the prunes, soak in cold water to cover overnight, and cook until tender. Cut each prune in three or four pieces, discarding the stone (there should be about five cupfuls of prunes and liquid). Dissolve the gelatine, softened in the cold water, in the hot prune juice, add the sugar and marmalade, or the lemon juice, stir until beginning to thicken, then turn into a mold. Set aside in a cool place. When cold serve with sugar and cream.

Bran Muffins.—Two cupfuls of bran, one cupful of whole wheat flour, three teaspoonfuls of baking powder, one-half tablespoonful of salt, three tablespoonfuls of shortening, two tablespoonfuls of molasses, and one-half cupfuls of thick sour milk, one-half teaspoonful of soda. Sift together the flour, baking powder, salt and soda; add the bran, melted shortening, molasses and milk and mix thoroughly. Bake in hot, well-buttered muffin pans about half an hour.

Deviled Ham.—Cut cold boiled or baked ham in slices of uniform thickness. Mix together two tablespoonfuls of flour, one tablespoonful of mustard, half a teaspoonful, each of salt and paprika, then add Worcestershire sauce to stir to a paste. Spread a little of this paste on both sides of the ham and broil about two minutes on each side. Serve hot for breakfast, luncheon or supper.

Lima Bean Salad.—Cook one cupful of fresh or dried Lima beans until tender and the liquid is evaporated. Let chill; mix half a large, mild onion to a smooth pulp; add a tablespoonful of finely-chopped parsley, a tablespoonful of finely-chopped capers, two tablespoonfuls each, of finely-chopped green pepper and olives, half a teaspoonful or more of salt, half a teaspoonful of paprika, one-third of a cupful of olive oil and one-fourth of a cupful of vinegar and pour over the chilled beans. Mix all thoroughly and turn into a chilled serving dish. Garnish with slices of pickled beet and sprigs of parsley.

Scotch Gingerbread.—Sift together two cupfuls of flour, half a cupful of granulated sugar, half a teaspoonful of soda, one teaspoonful of baking powder, three-fourths of a teaspoonful of cinnamon, half a teaspoonful of mace or grated nutmeg and one-fourth of a teaspoonful of salt. Add half a cupful of small, seeded raisins, half a cupful of sliced stem-ginger (crystallized or preserved) and one-fourth of a cupful of blanched almonds, chopped very fine. Heat half a cupful, each, of molasses and butter to the boiling point and stir into the dry ingredients. Lastly, beat in two eggs beaten light without separating. Bake in a loaf one hour or in a sheet half an hour. The oven should be of moderate heat.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Letter From the Border.

Dear Young Folks:—Will you allow a far-away Texas girl who lives on the United States border to join your happy circle?

I live near the town of Mission, which is situated on the border. A person looking across the Rio Grande river can see Mexico. You can see the thatched Mexican huts and see the Mexicans plowing their fields and herding their goats. Many farmers in the Lower Rio Grande valley hire the Mexicans to work for them on account of their cheap labor.

I live on a sixty-eight-acre farm and like country life best. We moved here from Madison, Wisconsin, four years ago, coming here for mother's health. The climate is wonderful here and many homeseekers will come this month to make this their winter home.

We have a car and every Sunday afternoon we take a long ride. Sometimes we go across the country to see Wm. J. Bryan's winter home. Next summer we are planning to go back to Madison in the car. —Grace.

A Visit to the Country.

Dear Young Folks:—My mother takes the paper and I enjoy it very much. I go to town school. I am twelve years old and in the seventh grade.

I am going to tell you about a trip to the country. A girl friend and myself went to visit another girl friend. When we got to the place where she was to meet us she was not there. It was raining, but we started out to walk. It was four and a half miles and we had never been there before. We stopped at about every house to get a drink.

When we finally got to her house she was not there. Her grandma was there and she was sure glad to see us. She said Florence, our friend, had gone to milk the cows. Pretty soon we saw her coming and ran out to meet her. She was surprised to see us, but she was glad, too.

The next day we went out horseback riding. Florence put us both on a horse named Queen. The horse started to run and we were afraid, but the next day when we went riding we were not afraid at all and pretty soon we ran races. Now we can ride as fast as the horse will go.

We are going to visit Florence again some time. The reason she didn't come to meet us was that it was raining so hard she thought we would not come. She said she would sure come the next time whether it was raining or not. —Iantha.

Answer to Carl's Riddle.

Dear Young Folks:—I have been reading the letters you have written and I think they are very nice. I go to school every day. I am ten years old and am in the fifth grade. I like my teacher very much. It is two miles from our house to school, but I enjoy walking. I have a brother who goes, too, so it isn't so lonesome.

In the summer when we have vacation I help my sisters and brothers with the work. I also have lots of fun playing house with my doll. I have two pet kittens.

I think the answer to Carl's riddle --twelve pears are hanging high, twelve men came riding by, each took a pear and left eleven hanging there—is that one man named "Each" took the pear. —Ruth.

How to Press Flowers.

Dear Young Folks:—I am a little girl eleven years old and I am very much interested in your letters.

I am going to tell you how to press flowers. Someone asked in one of the letters how to do it. Take a shoe box and fill it about half full of dry sand. Then put in a layer of flowers and fill the box full of dry sand. Put the box where it will not get wet and leave it for about three weeks. After the three weeks are up take the flowers out and they will be the same color and same shape as when you put them in.

—Dorothy.

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Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1482—A new shirt waist model. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2½ yards of 36-inch material for a 36-inch size.

1894—Ladies' aprons. Cut in one size only. It will require ⅞ yard of 36-inch material for No. 1, and 1¼ yards for No. 2. Price, 10 cents.

1428—Ladies' negligee or dressing sack and cap. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2⅜ yards of 36-inch material for a 36-inch size. For the cap, ⅞ yard of 27-inch net, all over embroidery, or lawn, percale, dimity, dotted Swiss and silk are suitable.

1881—A practical cover-all apron. The pattern is cut in 3 sizes: Small, medium and large. It requires 5⅜ yards of 36-inch material for a medium size.

1589—A simple frock for mother's girl. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. Size 8 years will require 1¾ yards of 36-inch material for the guimpe, with 2⅛ yards for the dress.

1904—Girls' dress with shield. Cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3¾ yards of 44-inch material for an 8-year size.

1880—Boys' suit. The pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 2⅛ yards of 36-inch material for the blouse, and 1 yard of 44-inch material for the trousers for the 8-year size.

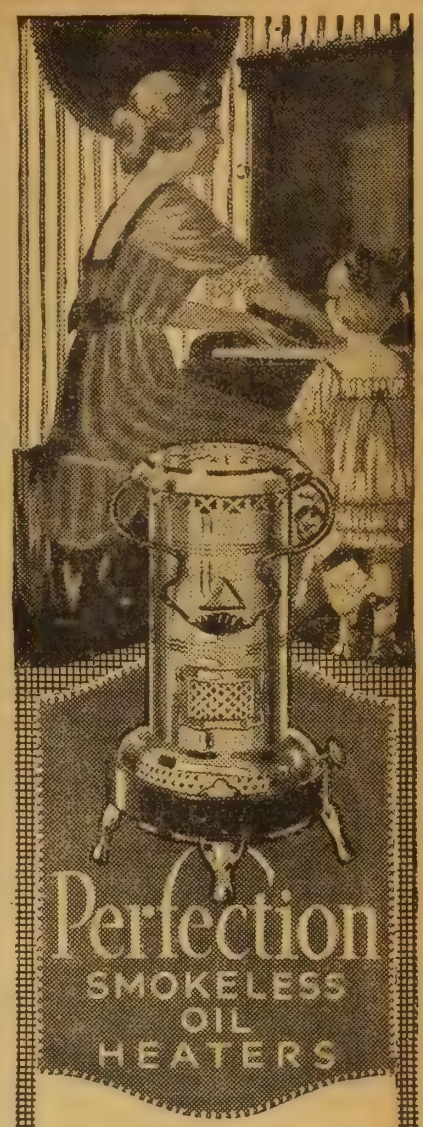
1884—Ladies' house dress, with or without pockets and with sleeve in either of two lengths. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6¼ yards of 44-inch material for a 36-inch size.

1890—A smart coat and cap for the little miss. The pattern is cut in 5 sizes; 4, 6, 8, 10 and 12 years. It requires 3 yards of 36-inch material for an 8-year size, and ¾ yard of 24-inch material for the cap.

1581—Costume for misses and small women, with sleeve in either of 2 lengths. The pattern is cut in 3 sizes: 16, 18 and 20 years. Size 16 will require 6⅜ yards of 36-inch material.

1886-1825—A new fall model. Waist 1886 cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. Skirt 1825 cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 6⅛ yards of 44-inch material for the entire dress in a medium size. The skirt measures 3¼ yards at the foot. Two separate patterns, 10 cents for each pattern.

1888—Girls' yoke dress in Moyanage style. The pattern requires 3½ yards of 44-inch material for a 12-year size.



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International Sunday School Lesson.

Lesson for November 5, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

Shipwrecked at Melita (Malta).

LESSON TEXT—Acts 27:38—28:10.

GOLDEN TEXT—Jehovah redeemeth the soul of his servants; and none of them that take refuge in him shall be condemned.—Ps. 34:22.

Paul was at Malta three months, from the last of November to the last of February, A. D. 59. A bay on the north shore is still called St. Paul's bay. Much help on this lesson can be secured by reading Mr. James Smith's book on the "Voyage and Shipwreck of St. Paul," Sir William Ramsey's, "St. Paul, the Traveler," and "Everyday Men," by Robert Elliott Thompson.

I. Paul safely ashore (27:38-44). As the day dawned the ship was lightened for a third time to enable them to approach nearer to the shore. This time the main cargo of wheat was thrown out, heretofore having been saved as long as possible. The sailors were familiar with Malta, but not with this part where the ship now lay. Discovering a small creek, they perceived a certain bay with a beach upon which they might run the ship, and hold it without its going to pieces before they could land. It would have been impossible to escape if they ran upon the rocks in a heavy sea. The words "taken up anchor" (v. 40) indicates that the sailors had cast them overboard, but attached to the ship. Now they cut the cables and permitted themselves not to be anchored, but to blow with the storm that they might land upon the beach. Approaching the inlet, where the waters of the bay met that of the sea, "where the two seas met," the vessel would not answer to its helm. The ship probably drew about eighteen feet of water, and the bottom stuck in the clinging mud and clay, and the forepart began to break away from the rear, due to the violence of the waves. Here Paul had his most narrow escape (v. 42). Not alone was he on the point of losing his life by the sea, but the sword hung over his head, not that of a lawful executioner, but of a selfish murderer.

Before it was danger from the sailors; now it is the soldiers, but the centurion proved true, and all of the prisoners were saved for Paul's sake. It would be interesting speculation as to how many of those saved realized that they were not saved for Paul's sake, but for the sake of his Savior, and how many of them were duly grateful. On this second stage of the journey, after having left Caesarea with the larger ship, there were probably 276 persons, by God's guaranty was "there shall be no loss of any man's life," and his word is sure.

II. Paul's continued service (28:1-10). This island is today and has been since 1800 under British rule. It was then governed by the Romans. (1) Comfort (vv. 1, 2). The term "barbarian" does not indicate rudeness or uncivilized people, but merely those of non-Greek birth. These people kindled a fire because of the cold and of the rain. They received everyone, prisoners and soldiers like brothers, and, in the persons of Paul and Luke, they certainly entertained angels unawares. (Heb. 13:2). (2) Co-operation (v. 3): The fire would need continual replenishing. Again Paul's energy is conspicuous. Though the greatest of men then living, he was ready to do the humblest duty. Whether counseling about a difficulty or comforting under dangers, he was ready to relieve distress at all times, and thus held up the banner of the cross and proved his Christian spirit.

As Paul gathered the roots and put them upon the fire there came out a viper, probably benumbed by the cold, which fastened itself upon his hand. There are now no venomous serpents in Malta, but this is no reason to believe that in the earlier days, when sparsely inhabited, this common European serpent, known as the viper, or possibly the Egyptian asp, may not have been here. It was natural for superstitious nations to expect that this was the vengeance of a god brought upon Paul because no doubt he was a murderer. Having scaped from the wreck, Paul could not escape from the sword of divine justice, and the goddess of justice, Nemesis, the avenger, suffered him not to live. With perfect composure, doubtless arising from God's promises that Christ had made to his servants (Mark 16: 18; Luke 10:19), and also the promises that he should preach the gospel in Rome, Paul shook the viper from his wrist. They then changed their minds, thinking that he must be a god (see Act 14:8-19).

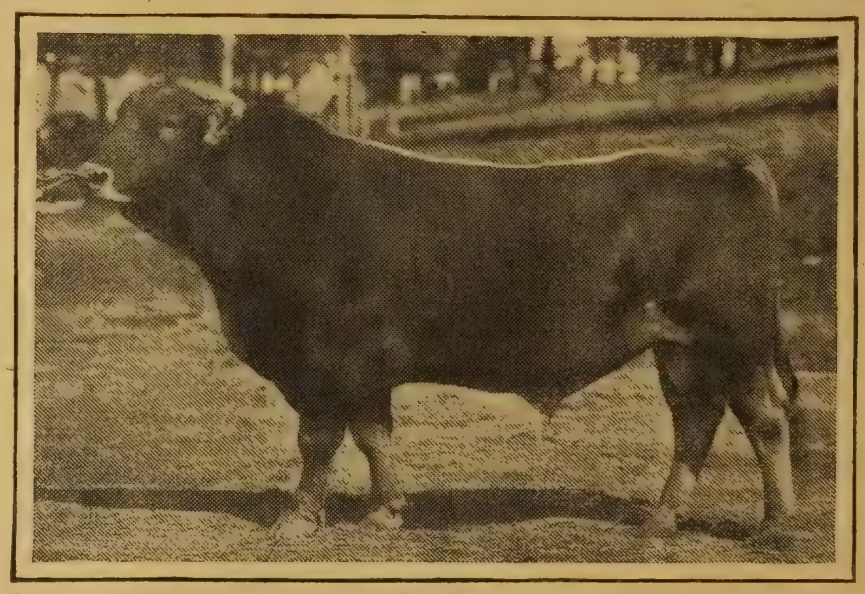
No reference is made to Paul's preaching, though, of course, that is taken for granted.

His words and deeds went along with his preaching.

They honored him with many honors, and loaded them with such things as were necessary, such as clothing and provisions, not of necessity, but out of kindness and love.

Service is one of the ways by which we can show to the world our life of faith.

Note also how these soldiers and sailors also profited by the life of service which Paul rendered.



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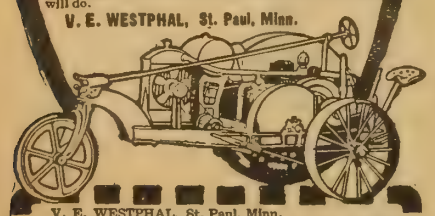

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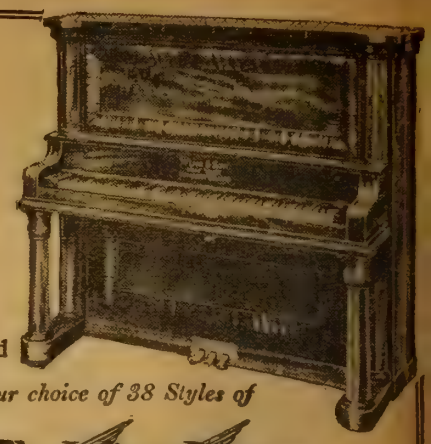

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VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Diseased Pigs.

I would like to know what is the matter with my pigs. They are Chester Whites and are five months old. Ever since I weaned them there has been ar ailment with a few of them. There seems to be a weakness in the back or hind legs. I don't know which. Their hind ankles turn forward sometimes when they walk and often they will walk a few steps then drag their hind legs. They eat and drink well and seem healthy every other way. I fed old corn all summer and fed shorts and oil meal in slop with some milk.

It would be hard to say what is the exact cause of the trouble in your pigs. The feed may be to blame in that it is too fattening and does not give the required strength. It might pay you to gradually change the feed either in part or the whole.

Pigs Have Cracked Noses.

We have a bunch of spring pigs, several of which have cracked noses. These pigs seem to be doing well and it does not seem to bother them, except when they sneeze. These pigs are fed ground corn and wheat made into a slop, and also tankage mixed with salt is kept before them. Is this food all right for growing pigs?

Your pigs are probably troubled with necrotic rhinitis. This condition is usually associated with necrosis of the snout and frequently also of the lips and is of rather common occurrence in small pigs. It is one of the conditions that constitutes the disease called sniffles. It is not possible to efficiently treat these cases because of the difficulty of applying medicaments to the lesion and further because of the destructive changes in the bones of the nose and face. The feed you are using seems all right to us.

Abscess Formation From Inflammation.

Please prescribe for my cow. In July she stuck her teat with a barb from the wire. It is swollen and caked and nothing but matter comes. Her bag has broken, but it doesn't get any better. What can I do for her? Will the milk ever come back in that teat? She is a good cow and I hate to lose her.

This should have been attended to at the time of injury. This quarter should be opened freely with the knife and this should be done be a veterinarian, as there is danger of getting considerable blood from a wound made in this region. After perfect drainage is established the wound should have some good antiseptic wash applied. This should be attended to, as gangrene may be next in order and cause much trouble. There is not much chance of this teat being serviceable again.

Necrobacillosis.

Can you tell me what is the matter with my pigs' eyes and how to treat them? They are pigs from three to five weeks old, well-bred Duroc Jerseys. If the days were cold they were farrowed in a sanitary pen in a good hog house. If the weather was good the sows nested in the rape patch or around the straw stack and ranged for pasture and rape, run in the lot after fattening cattle, had some corn, slop and good water. The pigs' eyelids become inflamed, slightly swollen and moist looking, then swell shut, and by the time they open again the pig is blind, and, of course, starves to death, as well as getting knocked about by its mates. No discharge appears to come from the eye. These are all the symptoms I could see. I had the same trouble with my spring pigs, together with sores around the head which would make holes until I wondered at the pigs living as long as they did. I lost half of my spring crop, so would like very much to have your advice.

This trouble is known as Necrobacillosis and is often found in small pigs. It is found in different forms, such as you find in your herd. It is hard to treat such troubles effectively because of the concentration of disinfectants which would be required to kill the germ. The strength required would be injurious to the pigs in other ways. About all that can be done is to clean and disinfect quarters and play a watchful, waiting game.

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Green Cut Bone For Poultry.

No place with a large number of hens on it is complete in its equipment without a bone mill, and the owner of a bone cutter that does not make use of it daily during the season for high-priced eggs is making a mistake. Yet one finds many of these machines standing idle.

Green cut bone, with a reasonable amount of fresh, lean meat on it, is undoubtedly the very best kind of animal food that can be had for the winter layers. It is a live, animal food and the nearest of any of the meat foods to the natural, wild products that the hen picks up in the shape of bugs and worms while wandering about the field in summertime.

A hen has to find the material to form an egg from the food she gets, and a chemical analysis of green bone shows that it contains every element contained in the white, the yolk and the shell of the egg. This accounts for the avidity with which green bone is devoured by the hen. Instinct in all animals, a taste and a desire for foods that are suitable for them, causes the hen to leave any other food at any time for a mess of green bone.

In warm weather, when the hens have free range, insects supply this craving for animal food and this is one reason why hens lay better in summer than in winter. During the fall and winter, or when confined, bugs and worms cannot be obtained and the hen has to wait days and sometimes weeks to accumulate from the insufficient food supplied her—insufficient not in quantity but in egg making elements—enough material to make the egg.

But when given a regular allowance, say one-half to one ounce to a fowl once a day or every other day, of this egg-making material, rich in every constituent of the egg, the hen no longer has to wait, each organ receives its necessary nourishment, the egg is formed quickly and the hen lays it.

Be sure that the bone and meat is fresh—stale pieces will not answer, and, if the flock is not accustomed to eating it, feed lightly on the start, for overfeeding will cause trouble.

A dollar a day profit on 100 hens during the late fall and winter means no grocery bills to pay. It is not done by all, nor is it easily done, but it is done right along, which means that anyone can do it by securing a bone cutter.

There is plenty of work in the Upper Wisconsin woods this year, according to reports. This will be a great help to the settlers who are trying hard to get a start.

In the Chicago yards on Wednesday, October 18th, one carload of cattle sold at $11.65, which at that time was the record price for beef cattle in this country.

Tell what you have for sale in a little advertisement in THE FARMERS' MARKET. Does not cost much and may be worth a lot to you. Six cents a word each insertion.

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER V—Continued.

"Yes," answered Genesee; for Rachel, with a martyr-like manner, said nothing, and waited her lecture; "she thought it was your man Andrews."

"Yes, and she would have gone just as quickly if it had been Indians—or—or—anybody. She keeps me nervous half the time with her erratic ways."

"I rather think she's finding fault with me for giving you that coffee and letting you sleep on the lounge," said Rachel; and through Tillie's quick disclaimed her own shortcomings were forgotten, at least for the time. The little matron's caution, that always lagged woefully behind her impulse, obtruded itself on her memory several times before the breakfast was over; and thinking of the reasons why a man of such character should not be received as a friend by ladies, especially girls, she was rather glad when she heard him say he was to push on into the hills as soon as possible.

"I only stopped last night because I had to; Mowitza and I were both used up. I was trying to make MacDougall's, but when I crossed the trail to your place, I reckoned we would fasten to it—working through the snow was telling on her; but she is all right this morning."

Rachel told him of her visit to the old man, and his care of the cabin on the Tamahnous ground; of rumors picked up from the Kootenai tribe as to the chance of trouble with the Blackfeet, and many notes that were of interest to this hunter of feeling on the Indian question. He commented on her Chinook, of which she had gained considerable knowledge in the past year, and looked rather pleased when told it had been gained from Kalitan.

"You may see him again if I have to send for troops up here, and it looks that way now," he remarked, much to the terror and satisfaction of Aunty Luce, who was a house divided against itself in her terror of Indian trouble and her desire to prove herself a prophetess.

Jim was all anticipation. After a circus or a variety show, nothing had for him the charm that was exerted by the prospect of a fight; but his hopes in that direction were cooled by the scout's statement that the troops were not coming with the expectation of war, but simply to show the northern tribes its futility, and that the government was strengthening its guard for protection all along the line.

"Then yer only ringin' in a bluff on the hostiles!" ventured the sanguinary hopeful disgustedly. "I counted on business if the 'yaller' turned out," meaning by the "yaller" the cavalry, upon whose accoutrements the yellow glints show.

"Never mind, sonny," said Genesee; "if we make a bluff, it won't be on an empty hand. But I must take the trail again, and make up for time lost in sleep here."

"When may we look for you back?"

It was Hardy who spoke, but something had taken the free-heartiness out of his tones; he looked just a trifle uncomfortable. Evidently, Tillie had been giving him a hint of second thoughts, and while trying to adopt them, they fitted his nature too clumsily not to be apparent.

His guest, however, had self-possession enough for both.

"Don't look for me," he advised, taking in the group with a comprehensive glance; "that is, don't hurt the sight of your eyes in the business; the times are uncertain, and I reckon I'm more uncertain than the times. I'm obliged to you for the sleep last night, and the cover for Mowitza. If I can ever do you as good a turn, just sing out."

Hardy held out his hand impulsively. "You did a heap more for us a year ago, for which we never had a chance to make return," he said in his natural, hearty manner.

"Oh, yes, you have had," contradicted Rachel's cool tones from the porch; "you have the chance now."

Genesee darted one quick glance at her face. Something in it was evidently a compensation, and blotted out the bitterness that had crept into his last speech, for with a freer manner he took the proffered hand.

"That's all right," he said easily. "I was right glad of the trip myself, so it wasn't any work; but at the present speaking the days are not picnic days, and I must 'git.' Goodby, Mrs. Hardy, goodby; boys."

Then he turned in his saddle and looked at Rachel. "Klahowya—tillikum," he said, lifting his hat in a final farewell to all.

But in the glance toward her she felt he had said "thank you" as plainly as he had in the Indian language called her "friend."

"Oh, dear!" said Tillie, turning into the house as he rode away. "I wish the man had staid away, or else that we had known more about him when we first met him. It is very awkward to change one's manner to him, and—and yet it seems the only thing to do."

"Certainly," agreed Rachel, with an altogether unnecessary degree of contempt, "it is the only thing for you to do."

Tillie sat down miserably under this stroke, the emphasis denoting very plainly the temper of the speaker.

"Oh, don't be ugly, Rache," she begged. "I really feel wretched about it. I thought at first all the freedom of social laws out here was so nice, but it isn't. It has a terrible side to it, when the greatest scamp is of as much account as the finest gentleman, and expects to be received on the same footing. He—he had no right to come imposing on us at the first;" and with this addition to her defense, Tillie tried to ensconce herself behind the barricade of injured faith, but feeling that her protests were only weakening her argument.

"To the best of my recollection," said the girl, with a good deal of the supercilious in her manner, "he neither came near us nor advanced any desire for friendship on his own account. We hunted him up, and insisted on talking natural history and singing songs with him, and pressing on him many invitations to visit us, invitations which he avoided accepting. He was treated, not as an equal of the other gentlemen but as a superior; and I believe it is the only time we ever did him justice.

"Yes, he did seem very nice in those days; but you see, it was all false pretense. Think of the life that he had come from, and that he went back to! It's no use talking, Rachel—there is only a right way and a wrong way in this world. He has shown his choice, and self-respecting people can only keep rid of him as much as possible. I don't like to hurt his feelings, but it makes it very awkward for us that we have accepted any favors from him."

"The obligation rests rather lightly on your shoulders to cause you much fretting," said the girl bitterly; "and he thought so much of you, too—so much."

Her voice, that began so calmly, ended a little uncertainly, and she walked out of the door.

Hardy, coming in a moment later, found Tillie divided between penitence and pettishness, and fighting her way to comfort through tears.

"I know I'm right, Hen, about the whole question," she whispered, when safely perched on the stronghold of his knee, "and that is what makes it so aggravating."

"To know you're right?"

"No; but to have Rachel, who

A Twelve-Time Christmas Gift

Can you think of a more acceptable Christmas gift than a year's subscription to Pictorial Review? Frankly, we can't. Month after month, as this welcome visitor arrives at the home of a friend, it will be a constant reminder of your thoughtfulness.

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216-226 West 39th Street
New York

SOMETHING FOR NOTHING

BUT YOU MUST BE PROMPT

A COMPLETE MANUAL OF CROCHET AND TATTING

By Anna Valeire

This book on crochet and tatting craft is most timely, as these arts in all their forms are very popular at the present time. It contains over sixty designs and combines new and original patterns of rare beauty combined with dainty simplicity and elegant taste. The abbreviations used to designate the different stitches in tatting and crocheting are given and their meaning explained in full. Instructions are given in detail for every design displayed in the book. Therefore, the novice in this art will have no trouble whatever in working the simple, though seemingly complicated, designs which have been compiled for her special benefit and in very little time will find that she may easily attempt the more complicated patterns intended for more advanced and experienced needleworkers. The lovely array of insertions, edgings and medallions suggest numerous ways in which they may be used to beautify both personal and household articles. The dainty tattings immediately bring to mind handkerchiefs of cob-web fineness. The simpler crochet insertions and edges suggest pretty bath-room sets and bed linen. There are no end of designs which may be used on dresses and lingerie; two yoke patterns which appear in the book make it particularly desirable. Designs for luncheon sets, scarfs, curtain edges and panels, and the new round pillow tops, and many more things which will suggest themselves to the worker are all contained in the wonderfully complete book on this fascinating art needlework.

This wonderful book of working size designs and explicit instructions will be sent Free and postpaid if you will send your order for any of the following combinations of magazines before November 10, 1916.

THE REASON FOR THE INCREASED COST OF MAGAZINES

The price of paper has increased over 100 per cent and the cost of inks and other materials entering into the manufacture of magazines has caused some publishers to increase their subscription price. The magazines offered below will accept orders from The Library Reading Club until November 10th at the prices which have prevailed for the past year. As an extra inducement for promptness, we will give a copy of Crochet and Tatting by Anna Valeire, to all who send us orders before November 10, 1916.

Last Chance Prices!

		Price Now	After Nov. 10th
The Housewife	$ .50	Both for $1.00	$1.10
Home Needlework	.75		
The Housewife.....	.50	Both for $1.25	$1.30
Modern Priscilla.....	1.00		
The Housewife	.50	Both for $1.65	$1.95
Pictorial Review.....	1.50		
The Housewife.....	.50	Both for $1.60	$2.00
Christian World.....	1.50		
The Housewife.....	.50	Both for $1.00	$1.60
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Etude (devoted exclusively to music).....	1.50		
The Housewife.....	.50	Both for $1.55	$1.60
Mother's Magazine.....	1.50		
The Housewife.....	.50	All for 85c	$1.00
People's Popular Monthly	.25		
Today's Magazine.....	.50		
The Housewife.....	.50	All for $1.00	$1.05
Today's Magazine.....	.50		
People's Home Journal ...	.50		

Remember In order to obtain the book of Crochet and tatting free it will be necessary for you to send your order before November 10, 1916.

Remit by P. O. Money Order or Registered Letter and Address all orders to

LIBRARY READING CLUB
30 Irving Place, New York

knows she is in the wrong, take that high-handed way about the affair, and end up by making me feel ashamed. Yes, she did, Hen—just that. I felt so ashamed I cried, and yet I knew I was right all the time—now what are you laughing at?"

CHAPTER VI.

Neighbors of the North Park.

Reveille! Boots and saddles! Taps! About the Hardy ranch the changes were rung on all those notes of camp, from early morn till dewy eve, by the melodious imitations of Jim.

Stories of grizzlies and black bear had grown passé; even the more rare accounts of wild horses spotted in some secluded valley failed to stir his old-time interest. All else had drifted into nothingness to him, for the "yaller" had come.

It had been stationed in the North Park for ten days—days of wild commotion at the ranch, for North Park was only two miles away, following the little branch of Missoula Creek that flowed north to the Kootenai river. The necessary errands to and fro between the two points of residence were multitudinous, for Jim could remember but one thing at a time of late; and the retraced steps he took would have tired out

Our readers frequently write and ask where they can buy some product that they need. If your local dealer or merchant cannot supply you, tell us his name and address—maybe we can be helpful to you and to him. We are here to serve both of you.

THE WISCONSIN FARMER
MADISON WISCONSIN

anyone less curious. He was disappointed, at first, to find that only one company had been sent up to guard the gate into the Kootenai country. It did not look as if they feared any outbreak or active service, and if it had not been in the most miserable seasons, they would have had much the appearance of a pleasure party; but the rains were in the valleys and the snows were on the hills, and camp life under those circumstances is a breeder of rayless monotony.

"And your ranch up here has proved the oasis in our desert," declared Fred Dreyer in a burst of gratitude to Rachel, just as if the locating of the sheep farm in that particular part of the world was due to the sagacity and farsightedness of Miss Hardy; "and when Mr. Stuart told us at the Fort that we should have so charming a neighbor, I wanted to throw up my plate and give three cheers. We were at mess—at dinner, I mean. But I restrained my enthusiasm, because my leave to come along was only provisional at that time, and depended on my good behavior, but once here, my first impulse was to give you a big hug instead of the conventional hand shake, for there are no girls at the Fort, and I was hungry for the sight of one."

It was not, as one may suppose, one of the uniformed warriors of the camp who expressed himself with this enthusiasm, though several looked as if they would like to, but it was the most petite little creature in petticoats—to her own disgust; and to mitigate the femininity of them as much as possible, they were of regular army blue, their only trimming belt and bands of the "yaller," an adornment Jim openly envied her, and considered senseless when wasted on a girl. She was Miss Frederick Dreyer, the daughter of Major Dreyer, of the Fort, and the sweetheart of most of the men in it, from the veterans down.

"They all think they own me," she confided plaintively to Rachel, "just because I'm little. It's only a year and a half since they quit calling me 'Baby Fred'—think of that! When you're owned by a whole regiment, it's so hard to gather up any dignity, or keep it if you do get hold of it; don't you think so?"

"I have had no experience in that line," answered Rachel. "You see I have never been owned by a regiment, nor by anybody else."

"How delightfully independent you are!" and Miss Fred, encircled by comrades, seemed really to envy the other her loneliness in the world. "No orderly forever on duty at your heels, and—"

"And no lieutenant," put in Rachel; and then they both laughed, and the younger told the elder she was ridiculous, for the lieutenants were not a bit worse than the rest.

"Worse? Not at all. I could even imagine circumstances under which they might b preferable, and I'm not gifted with much imagination, either."

"I know someone who thinks you are, and an enviable imagination at that," laughed Miss Fred.

Rachel opened her eyes a little in questioning, but did not speak.

(To be continued.)

Get This Big "Home Folks" Stove Book FREE

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Filled From Cover to Cover with the latest, up-to-date designs of beautiful stoves and ranges—in a great variety of the newest styles and sizes. And every one the **top notch in quality** at a money-saving wholesale price. Send for this book today—get the Kalamazoo offer on the kind of stove or range you want. Newest improvements—big work-saving features—ranges with white enameled splasher backs and oven door fronts, etc.

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We make Ranges, Gas Ranges, Furnaces and White Enameled Metal Kitchen Kabinets. We have three catalogs. Please mention which you want.

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15c each; 6 for 90c

ARROW COLLARS

FITS EXTREMELY WELL AND GOES WITH THE PREVAILING STYLE IN BROAD END TIES AND FOUR-IN-HANDS.

ASHBY 2⅛ in.
LEXICON 2½ in.

CLUETT, PEABODY & CO., INC., *Makers*

New KEROSENE LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests by U. S. Government and 34 leading Universities show that it

Burns 50 Hours on One Gallon

common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Three million people already enjoying this powerful, white, steady light, nearest to sunlight. **Won Gold Medal** at Panama Exposition. Greatest invention of the age. Guaranteed.

$1000 Reward will be given to the person who shows us an oil lamp equal to the new **Aladdin** in every way (details of offer given in our circular). We want **one user in each locality** to whom we can refer customers. To that person we have a special introductory offer to make, under which one lamp is **given free.** Write quick for our 10-Day Absolutely Free Trial Proposition and learn how to get **one free.** **Yours FREE**

MANTLE LAMP COMPANY, 110 Aladdin Building, CHICAGO, ILL.
Largest Kerosene (Coal Oil) Mantle Lamp House in the World

Men With Rigs Make $100 to $300 Per Mo. Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "*I sold 51 the first seven days.*" Christensen, Wis., says: "*Have never seen an article that sells so easily.*" Norring, Iowa, says: "*98 per cent of homes visited bought.*" Phillips, Ohio, says: "*Every customer becomes a friend and booster.*" Kemerling, Minn. says: "*No flowery talk necessary. Sells itself.*" Thousands who are coining money endorse the Aladdin just as strongly. **NO MONEY REQUIRED.** We furnish stock to reliable men to get started. Ask for our distributor's plan, and learn how to secure an appointment and make big money in unoccupied territory. State occupation, age, whether you have rig or auto; whether can work spare time or steady; when can start; townships most convenient for you to work.

DO YOUR OWN SHREDDING

with a **ROSENTHAL Corn Husker and Shredder**

Most **economical and satisfactory** way of handling your corn crop. **No delay, no extra help.** Do it in **your own spare time.** Two sizes for individual use, 6 to 15 h. p. Also make three larger sizes for custom work. Over 20 years in the field. Write for catalog and Free Farmers Account Book. State h.p. of your engine.

SOLD ON TRIAL YOU TAKE NO RISK

ROSENTHAL CORN HUSKER CO. Box 15 Milwaukee, Wis.
Also Makers of Feed Cutters and Silo Fillers

Bunker's Polled Durhams.

WHY not use a Short-horn without horns in your herd F. S. Bunker, Kilbourn, Wis., has one of the best Polled Durham herds in the state. The price is second consideration when Bunker goes out to buy a herd bull or a female for his breeding herd—this breeder has the goods, and if you want good cattle of this breed communicate with him. He doesn't raise the kind you can buy for $60 or $75 and if you want that kind, save your stamp or railroad fare, but if you appreciate breeding and individuality you'll appreciate the Bunker cattle. In writing please mention The Wisconsin Farmer.—Adv.

Jake Erwin's Durocs.

ONE of the breeders that made a good buy in the Atwater sale was Jake Erwin, Bloomington, Wis. He bought a boar that has great stretch, good feet and bone and of the very best breeding. Mr. Erwin has some good sows in his herd and the results from this cross should prove beneficial. If you are in need of anything in the line of Duroc Jerseys write Mr. Erwin and have him describe what he has for sale—he will treat you right. He is one of those good fellows that are in the swine game in Grant County.—Adv.

RKD

THIS MARK
YOUR GUARANTEE

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Arcady Farms Feeds

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Arcady Farms Milling Co.
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WANTED

An agent in every county to represent our new Steel Wall Cabinets. Every home should have one to protect valuable papers, accounts and books. Want man or woman who can thoroughly cover the county—exclusive right given to first applicant. Send postal stating county wanted, and full information will be sent to you first mail. Address **The Steel Cabinet Co.**, Grover Hill, Ohio.

A Home in the Dairy Belt!

SEND for circulars describing our Company's Cut over lands, direct to you, on the easiest terms. A little money does the work when you deal with us. Send for illustrated literature describing this favored section. Flambeau River Lumber Company, Station D, Ladysmith, Wis.

A NATURAL DAIRY COUNTRY. Aitkin County. Lands cheap from our Company. All the time you want. Come and see them. A little money will start you on the road to independence and prosperity. Come, see, or write, Arnold, Land Agent, 153 Wolvin Bldg., Duluth, Minnesota.

A WARNING TO DAIRYMEN

INTENDING to locate in Aitkin county! We shall not long be able to offer our choice, low-priced lands. They are going fast. Act now. Arnold, Land Agent, Rock Island Railway, 153 Wolvin Bldg., Duluth, Minn.

FARM FOR SALE in Iron county, Michigan, 320 acres, 120 acres clear. Sixty-three head of graded Holstein cattle, 28 being milk cows, 5 head horses, machinery, buildings, etc. Fine chance for cattle raising. Sold on reasonable terms. Inquire Geo. Premo, Amasa, Mich.

SEE this choice Wisconsin clover district, Rusk and Price counties, where success is sure for the dairyman, select from 20,000 acres offered at low prices and on easy terms. Ellingson Cloverland Co., 311 Worden Ave., Ladysmith, Wisconsin.

WANTED TO HEAR FROM OWNER OF good farm for sale. State cash price and description. D. F. Bush, Minneapolis, Minnesota.

Girls, What is this Dolly's Name?

B-B- D-M-L-

CAN you fill in the blank spaces above and complete the doll's name? You can do this if you try. Just write to Aunt Mary and tell her what the name of this dolly is and she will tell you how you can get a beautiful doll 15 inches tall and jointed at the shoulders and hips. This is not a cloth doll to stuff but a real baby doll beautifully dressed in an auto coat and a cute hat. You will be the proudest girl in your neighborhood when you get this doll and she is yours for just a little easy work. Aunt Mary has a doll for every little girl, so be sure to write and tell her your name and address today so she can send you her big free offer. Address your letter to

Aunt Mary
700 Popular Bldg.
Des Moines, Iowa

Results of Spraying.

Final spraying on experimental orchards was completed under the direction of the Wisconsin College of Agriculture last month. Fruit spraying meetings were held on the following farms: Thos. Roach, Fond du Lac; J. J. Schelling, Racine; W. A. Toole, Baraboo; T. D. Allegar, Wyocena. In order to keep down expenses lime sulphur has been used this year by the demonstrators. This is made possible to cut the cost to about 1¼ cents per gallon for the spray used. The lime sulphur mixed at the rate of one gallon to forty gallons of water has been found satisfactory except on extremely hot days when it has had a tendency to burn the foliage and fruit.

Data has been obtained this year which shows that the average cost for spraying varies from 4 to 15 cents a bushel of fruit, depending upon the yield. An increased value is noted at once in the quality of the fruit produced where trees have received the spray, the difference being from almost worthless fruit to that which brings 75 cents or $1 a bushel.

At Baraboo about fifty fruit trees have been under special test. The cost here has been found to run at about 1¼ cents for each year in the life of the trees, which are all between ten and twenty years old.

Investigations at Wyocena seem to indicate a cost of about 15 cents a tree, straight through the experiments. Some trees of larger size, bearing an estimated crop this year of three barrels, will cost about 20 cents each for "insurance."

The oldest trees in the demonstrations are near Racine, some of them being nearly forty years of age, in good bearing vigor and costing an average of 30 cents apiece for spraying.

With Our Advertisers.

Must Give It to Grant County.

THAT the breeders in Grant county are progressive was demonstrated at the Duroc Jersey boar sales of W. C. Jenkins and L. F. Atwater. Seven registered Duroc Jersey boars went to Grant county from these two sales. Three men gave $75 each for boars and the other four bought boars averaging around $40. The swine breeders of this county—both breeds—are without a doubt the livest bunch in the state, they do not tolerate "scrub" boars in that county. If the breeders of beef cattle in that county had the "pep" that the swine breeders have they too could help Grant county gain that recognition which it rightfully deserves. —Adv.

Here's Your Opportunity.

FOR the first time in five years, Williams Bros., Bangor, Wis., are offering some of their good young Shorthorn cows for sale. In that length of time they have sold many outstanding heifers and bulls and if they had barn room for these cows that are going to freshen they would not be offered now. Among the lot is three roan cows that would look fine in any herd. They are choice individuals and are safe in calf to a good roan bull. The cows are all young—from four to seven years old and they are being priced for quick sale. If you are interested get on the train and take a look at these cattle. Bangor is the second station east of La Crosse on the Northwestern and Milwaukee railroads.—Adv.

Marinette County Farm Holsteins and Polands.

ATTENTION is called to the advertisement of the Marinette County Farm, Peshtigo, Wis., which appears on page 29. They maintain a fine herd of Holstein cattle and big-type Poland China swine. The two Holstein bulls in service are University Johanna Excell and King De Kol Lyons, two excellent individuals of choice breeding. At the present time they are offering a few registered Holstein females for sale at very reasonable prices as well as a few choice young bulls. In Poland Chinas they are offering spring boars and open gilts. Send to them for pedigrees and prices.—Adv.

The Martin Brown Swiss.

MR. ANDREW MARTIN, West Salem, Wis., is one of the pioneer Brown Swiss cattle breeders of the state. Practically his entire herd has been bred and raised on his farm, the herd bulls being the only addition he has made to his herd for several years. His Brown Swiss cows are producers, many of them have advanced registry records. He is a breeder and raises cattle to sell and if you are interested in this breed it will pay you to correspond with the owner. He has one of the good herds of the state. When writing for prices will you kindly mention The Wisconsin Farmer.—Adv.

Martiny's Big Boar Bargains.

L. P. MARTINY, Chippewa Falls, Wis., increases his space and calls attention to the boar bargains that he has. He is offering spring and fall boars sired by two excellent herd boars—namely Chief Price, the boar that was good enough to win first in the senior yearling class at Milwaukee this year and Select Major, the boar that headed the junior yearling class at the same show. Mr. Martiny's Poland China herd is too well known to Wisconsin Farmer readers to need much comment. He has an excellent reputation as a breeder and if you order from Mr. Martiny you can rest assured that the boar you get will be right in every way. Get his prices at once and in writing please mention The Wisconsin Farmer. See page 30.—Adv.

Dairying Pays in Montana

BUTTER-FAT prices are considerably higher than in Eastern states—markets are nearer, climate is better, water is purer, and the rich virgin soil produces more and better fodder. Thousands of acres of ideal pasture land at small cost. The local demand for dairy products is greater than the supply.

The ***"St. Paul Road"*** recently has in a most convincing manner, demonstrated its faith in the future of Montana, expending over $12,000,000 in Electrifying its main line across the state. This mighty achievement will prove a most important factor in the future development of the resources and opportunities of this vast commonwealth—opening new industries, creating larger markets, and generally improving living conditions. Electrification has also greatly increased the pleasure of travel—elimininating smoke, cinders and other annoyances unavoidable with steam traction.

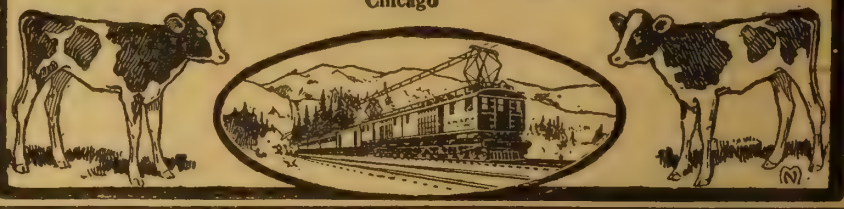
Chicago, Milwaukee & St. Paul Railway

Write for literature giving full and reliable information about Montana and its opportunities. Address

GEO. B. HAYNES
General Passenger Agent

H. F. HUNTER, General Agent
613 Railway Exchange Bldg.

Chicago



THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: **"The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available—under which your advertisement would appear.

Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER **MADISON, WISCONSIN**

FARM LANDS.

80 ACRE DAIRY FARM in Marinette county, all under the plow. 80 rods to cheese factory, 2 miles to village, macadam roads, splendid soil, fair buildings, good well, telephone, mail route, 7 good cows, team horses, all kinds machinery. $6,500. M. H. Maxwell, Marinette, Wisconsin.

SPLENDID CORN FARMS in southwestern Minnesota famous corn belt. Near Iowa. Owner, Calvin Young, Mapleton, Minn.

CREAM WANTED.

FARMERS, attention. We want separator cream at 3c above Elgin, also whey cream at 1c above Elgin, butter market, for butter fat, delivered in good condition. Payments twice a month. Write us. Dorschel Produce Co., Green Bay, Wisconsin.

HONEY.

HONEY. Pure, extracted, white clover, from my apiaries. Guaranteed first-class. 2 60-lb. cans, $12.60; 1 60-lb. can, $6.60; 6 10-lb. pails, $7.20; 6 5-lb. pails, $3.75. Write M. E. Eggers, Station G, R. 1, Eau Claire, Wisconsin.

When writing to advertisers kindly The Wisconsin Farmer.

INVESTMENTS.

ATTENTION, investors. A new brick business block, rented for $1,400 a year, for sale. Price, only $13,500. Mortgage $5,000. Harding & Ryan, Waukesha, Wisconsin.

JACKS FOR SALE.

BLACK Jack, good bone, head and ear, white points, 5 years old, 14½ hands high. $350.00. M. B. Guthrie, Mexico, Mo.

CREAMERY.

COMBINED Creamery, Cheese and Ice Cream factory. Good location. Sale cheap. Wittenberg Creamery, Wittenberg, Wis.

MILK WAGON.

FOR SALE—Milk wagon with glass doors and windows, cheap if taken at once. H. Burlock, Wauzeka, Wisconsin.

TELEGRAPHY.

LEARN TELEGRAPHY. Short hours. Positions guaranteed. Write Signal Dept., Northwestern Telegraph School, Eau Claire, Wis.

NURSERY salesmen wanted. Home territory. Highest commissions, payable weekly. No investment. We deliver and collect. Perry Nursery Co., Rochester, N. Y. Est. 21 yrs.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Don't Overlook This Sale of Angus Cattle.

THIS is the last chance we will have to call attention to those high-class Aberdeen Angus cattle to be sold at Canton, Minn., November 9th, by M. C. Willford and R. M. Miller. We believe this is the best offering of this breed ever put up for public appraisement in the Northwest. Forty-five head will be sold, thirty-three females and twelve bulls. In our last issue we mentioned the herd bulls that have been used in this herd. They were the best money could buy. Note some of the females that will be sold. One double-bred Trojan Erica, safe in calf sired by the noted Earl Eric of Ballindalloch. A show cow in every respect. One granddaughter of the above bull bred to Protector E., May 22d. She is an outstanding Pride. One Pride cow with calf at foot by Protector E. and rebred. One Erica cow with heifer calf at foot and rebred to Erin Lad W. One Blackbird granddaughter of Prince Ito, safe in calf to Erin Lad W. One six-year-old Pride cow, safe in calf since February. A show cow in every respect. If you want a show heifer, one of the Blackbirds will appeal to you. She will sell open. Space won't permit the mentioning of all the good ones. Among others, there will be eleven Prides, six Queenmothers, four Heatherblooms, three Trojan Ericas, and three Blackbirds. If you admire the "doddies" you can't afford to miss this sale. There will be nine or ten cows with calves at foot, ten bred two-year-old heifers and a few open heifers. Ten bulls of serviceable age, some of them suitable to head pure-bred herds and two tried sires. Remember that the tops of two of the best herds in the state have been selected for this sale and no inferior animals have been cataloged. Canton is located about fifty miles west of La Crosse—you can get to and from the sale the same day. The catalog contains illustrations of many of the animals in the sale, by all means get one of these and make arrangements to attend this good sale. When writing for catalog please say you saw the advertisement in The Wisconsin Farmer. See advertisement on page 27 and don't forget the date and place.—Adv.

Get Animals Ready For Winter.

WITH the approach of winter the farmer is naturally seeing to it that his stock is in best possible condition. One of the first things he wants to be assured of is that his animals are free from worms. Then follow closely such matters as appetite and digestion. He wants his animals to eat well and digest well; to get the benefit of all or at least of the greatest possible amount of the feed they consume. Along this line readers will always be interested in the series of advertisements of Dr. Hess & Clark, now running in these columns. It is not doubted that a good stock tonic has a very proper place in animal feeding. And Dr. Hess stock tonic lays claim to being one of the very best preparations of this kind on the market. As a worm expeller it is admittedly of high value. Don't take it for granted that your stock do not have worms. Many a man who supposes his horses, for example, to be entirely free from worms is greatly surprised at the worms that will pass when he starts in to feed Dr. Hess stock tonic. With the purging of worms, the other good effects follow naturally—such as toning up the animal system, aiding the digestion and putting the animal in good condition generally. To put it briefly, Dr. Hess stock tonic expels worms and makes all animals healthy. There will be no trouble in finding this tonic in your town, as there are now some 28,000 Hess & Clark dealers in the United States and Canada.—Adv.

Buys Herd Boar Prospect.

FOR the past month Burlie Dobson, of the firm of Dobson & Eastman, Lancaster, Wis., has been trying to find a boar that would do to place at the head of their herd. Burlie is very particular about what he uses and the boar must be right in every way before he can do service in their herd. He wants them big, but he does not want them big at the expense of quality. We have just had a letter from this firm advising that they purchased a fall boar in Illinois sired by Big Ben out of a daughter of Big Jumbo Jr. In the first place this breeding is of the very biggest. Smooth Price, the sire of Big Ben, is also the sire of Big Joe, Oakland's Equal and other noted boars. Those that have seen Big Ben say that he is one of the smoothest big boars doing service today. The dam of the boar purchased is sired by Big Jumbo Jr. by Big Jumbo out of a daughter of Chief Price. This is some new breeding for Wisconsin—it has made good in the central West and it should do equally well for the Wisconsin breeders. See page 30.—Adv.

McDonald Claims February 8th for Sow Sale.

THOSE that are interested in good Poland Chinas will be pleased to learn that J. D. McDonald will sell bred sows at West Salem, Wis., February 8th. Mr. McDonald has without any doubt one of the best herds in the Northwest and it has been some time since he has held a sale of bred sows, but he surely has the goods this year and when sale day comes you can expect to find one of the greatest offerings of Poland China sows that will be sold this winter. Most of his show herd will be included. This sale will follow the association sale at Madison and it will be one of the feature sales of the winter season. See page 30.—Adv.

F. A. Morehouse Buys Herd Boar.

READERS of The Wisconsin Farmer might as well get familiar with the name Morehouse, for he has a herd of Poland Chinas in Grant county that will make a reputation for him. He has just purchased a spring boar sired by that good Illinois boar, Big Ben, and out of Great Lady C. Again. Big Ben is by Smooth Price out of Mollie Jones 5th by Longfellow. Great Lady C. Again is by Pawnee Nelson 2d by Pawnee Nelson out of Great Lady C. by Great Wonder. Those that are posted on Poland China history will remember that Great Lady C. was considered the greatest sow ever bred by Mouw. The Morehouse boar comes from a great line of breeding and inasmuch as he is a good caretaker we feel confident he has a boar that we will hear from in the future. For those that are in need of a spring boar we want to suggest that you write Mr. Morehouse about the boars he has for sale. We think he has twenty spring boars as good as we have seen on one breeder's farm. Get his prices and description. Address F. A. Morehouse, Lancaster, Wis., and please mention The Wisconsin Farmer.—Adv.

Underwood Buys New Herd Bull.

B. C. UNDERWOOD, the popular breeder of Red Polls at Avoca, Wis., has strengthened his herd of Red Polls by placing a son of J. D. Diana 2d Proctor 23929 at the head. The dam of J. D. Diana 2d Proctor is Diana 2d that was the world's champion Red Poll cow for four consecutive yearly official tests, the sire is Proctor Knott. The dam of the Underwood bull is Liza 26494 and she was the world's champion Red Poll cow two years in succession. She was sired by Nailor, that won eighteen championships. Diana 2d has a record of 546 pounds of butter fat and Liza 515 pounds butter fat, so one will see that Mr. Underwood has a herd bull that should do him a great deal of good. A few young bulls are being offered for sale and this would be a good place to place your order. Don't forget to mention The Wisconsin Farmer. See page 28.—Adv.

P. W. Young's Big Joe Boar.

WITH all due rspects to the other good Poland China boars in the country, P. W. Young, Prosper, Minn., has the best we have ever seen of his age. Those that follow the Poland China breed will remember reading about that sensational Big Joe litter that sold in an Iowa sale last fall. Mr. Young recently purchased the best boar of that litter. As above stated he is sired by Big Joe and his dam, Bessie Price, is by Good Luck. It is almost impossible to describe this good boar on paper. He was a year old last February and weighs now 850 pounds. Notwithstanding his immense size, he has quality from end to end. He would even suit the medium type men, for he is good all over. He has plenty of stretch, great depth, excellent spring of rib, an ideal head with prominent eyes, and a rainbow back, he is right on his toes, extra heavy bone, in fact here is a boar that is hard to fault. If this boar proves to be a good breeder Percy will have three boars the like of which cannot be found in another herd in the country. This boar will be bred to a limited number of Master's Giant and Orange Wonder sows for his sow sale February 6th. Keep this boar in mind. See page 30.—Adv.

THE NOTED AYRSHIRE HERD SIRE THAT STANDS AT THE HEAD OF THE HERD OF STEPHEN BULL, RACINE, WIS. SEE PAGE 26.

Breeding of the Pellett Chesters.

THE foundation stock for the John Pellett Chester White herd, Viola, Wis., came from some of the noted breeders. Those that are posted, will appreciate the following boars that are the sires of the Pellett offering. Perfecto 49395 was by Mc's Model, a prize winner and a good individual. S. M. Wonder is the sire of some of the stuff, he is the Derenthal herd boar. Sunny Side King 38187 is by Minnesota Chief 25641. Mr. Pellett has a fine litter of fall pigs out of Pellett's Pearl she by Combination C. by Combination 2d and a granddaughter of that great show and breeding sow, Sister 1st. Besides the Chester White boars and gilts that are being offered for sale Mr. Pellett is also offering some choice Jersey bulls and heifers. If you need anything in the above breeds write the owner for details. Mention this publication. See page 31.—Adv.

A Sale of Quality.

ONE hundred and fifty head of select registered Holsteins consigned by breeders who have made Dodge and Jefferson counties famous as Holstein centers, breeders whose reputations are unquestionably good. That you may be convinced of their fairness they have merited the department of agriculture's approval on the sale by allowing the state veterinarian full sway in the matter of tuberculin testing. They also offer the sixty-day retest guarantee. J. W. Goldthorpe, Milton Junction, offers a 31.82-pound grandson of King Segis Pontiac Polkadot, a fifteen-pound two year old and several choice young cows. O. E. Sette, E. G. Bennet, Dolon Brothers, all of Juneau, send splendid animals, several with creditable A. R. O. records; daughters of Fobes Tritomia Mutual De Kol; granddaughters of Homestead Jr. De Kol. O. E. Mullen, Henry Wieman, John Bergin, F. G. Lehman, Watertown, will have cows and heifers of the Homestead Jr. De Kol and Johanna McKinley Segis strains that are bound to interest prospective buyers. Wm. Goodrich, Ft. Atkinson, will consign a choice lot of cows and heifers from his well-known herd of black and whites. Fred Albrecht, Watertown, includes a daughter of a twenty-pound junior two year old and a thirty-pound son of Sir Beets Cornucopia Netherland. Edwin D. Gibbs, Fox Lake, offers some very choice animals, one a winner at the fall fairs. His females are bred to his handsome thirty-three pound son of Sir Colantha Aaggie. E. C. Brill, Steevartville, N. J., out of courtesy to some of his friends at Watertown, has consigned a perfect individual yearling, thirty-pound son of King Segis Champion. Mr. Brill is the owner of Mabel Segis Korndyke, the eighty-pound world's champion four-year old, a thirty-six-pound cow and several thirty-pound cows. This young bull is a prize. Aug. Seefeldt, Theresa, includes a daughter of Homestead Junior De Kol; heifers similarly bred and a twenty-nine-pound son of King Korndyke Sadie Vale. James Mullen, Watertown, offers a show bull, son of Aaggie Cornucopia Johanna Lad, also a twenty-two-pound cow of conformity breeding. All animals are guaranteed to be breeders. All animals are for sale without reserve; all animals are just as represented. If not your money back. Tomkins Wright, Waupun, consigns eighty head including a twenty-six-pound daughter of Sir Johanna Korndyke; young cows and heifers; daughters of Johanna Bonheur 2d Segis and Sir Piebe A. Aggie Hengerveld, a son of an eighteen-pound junior two year old. Wm. Rhoda, Watertown, consigns ten head including splendidly bred young cows and heifers, one a twenty-two-pound cow. These animals are in calf to his well-known sire, Pabst Maplecrest King. Edwin M. Schultz consigns among others a twenty-pound three year old, a twenty-one-pound full age, a son of King Korndyke Veeman from a twenty-five-pound three year old. The females are in calf to King Korndyke Veeman, a thirty-three-pound son of King Korndyke Sadie Vale, the noted forty-pound bull. In view of the foregoing we believe we have coupled quality with integrity. For catalogs write Intercounty Holstein Association, Francis Darcey, Secretary, Watertown, Wis. Auctioneers, Hoeger, Hock and Hellen, S. T. Wood in the box. Catalog compiler, L. S. & P. Co. See page 28.—Adv.

Jones' National School of Auctioneering.

OF ALL the schools in the country devoted to special lines of instruction, none stands higher than Jones' National School of Auctioneering, Chicago, Ill. For over a decade it has been recognized as the leading auctioneering school, the one where complete courses in every branch of auctioneering is taught. Every instructor is a practical and experienced man in his line and the students receive the benefit of first-hand information. In this age of specialization, it is the thoroughly equipped man who wins, and any person contemplating entering the auctioneering profession will consult his best interest by taking a course at the Jones school. A very complete catalog will be sent to any address upon application. Write Jones' National School of Auctioneering, 40 North Sacramento boulevard, Chicago, Ill. See page 26.—Adv.

Here They Are.

THE particular buyer of Poland Chinas can find three spring boars at Dobson & Eastman's, Lancaster, Wis., that will give satisfaction. On October 22d these boars weighed 303, 309 and 290 pounds respectively and you all know the D. & E. standard of quality. We saw these boars a short time ago and consider them three of the best herd-boar prospects in the state. The real good ones are scarce this year so if you want a Poland China boar to make a noice about write for one of these. They also have a few that will weigh around 260 pounds that come a little cheaper, and for a short time they will offer for sale a limited number of fall pigs. Write your wants,

The Wisconsin Farmer Brought More Inquiries and Buyers Than Any Other Paper.

WHEN L. F. Atwater, Bangor, Wisconsin, planned his sale of Duroc Jersey swine, he placed his advertisement in The Wisconsin Farmer, which goes into more than 90,000 farm homes each week. The farmers were interested. They came to his sale and bought his pigs. Now he writes to thank The Wisconsin Farmer:

I had a good sale, and The Wisconsin Farmer brought more inquiries and buyers than any other paper. I thank you for the excellent service.

In those 90,000 farm homes where The Wisconsin Farmer circulates each week, are many breeders who would be interested in your sale. Let next week's Wisconsin Farmer tell them what you have for sale. Write today.

THE WISCONSIN FARMER MADISON, WIS.

Guaranteed Weekly Circulation 90,000. Over 72,000 in Wisconsin

your order will be honorably handled. We will appreciate it if you will mention The Wisconsin Farmer when writing to advertisers. See page 30.—Adv.

Oak Grove Jersey Herd.

THERE are a few men interested in every breed of cattle, who seem to be naturally adapted to the business, as we say "born cattle men." They know good producing cattle almost instinctively; they know how to feed and care for cattle and enjoy the work of tending. One such man is William Knight, Eagle, Wis., proprietor of The Oak Grove Jersey Farm. On this farm is one of the best herds in Wisconsin, if we can judge a herd by its production ability. They are equally good in type and made a very creditable showing at the 1915 Wisconsin State Fair. His herd won first on aged bull; bull under a year; first on two-year-old heifer; second on senior heifer calf and several third prizes. Every animal shown was in the money. At the Elkhorn Fair this year there were more Jerseys shown than of any other breed, yet his herd won all the firsts in both male and female classes, except in one class. He won fifteen ribbons on fifteen head. At the Janesville Fair his herd won one champion; five firsts, four seconds and two third prizes. Mr. Knight intends to show at all the state fairs in the middle West next fall and will, we believe, make a name for his herd. As for production his herd ranks with any in the state. Although he has been doing register of merit testing but two years he has some fifteen that have qualified or are now on test. Among the records made is that of Sally of Oak Grove. She made 594.10 pounds butter in a year as a junior two year old, which makes her the highest record Jersey heifer of her age in Wisconsin. She is also a show animal and won first in her class at the state fair. Her dam is also in Mr. Knight's herd and made 597 pounds butter in a year. High production and good type can only be secured by good blood lines, and we find this truth demonstrated again in this herd. Mr. Knight is a student of pedigrees and has been very particular in buying proven blood lines. His present herd sire is Oak Grove Noble Lad 122654, an outstanding individual that won first at the Wisconsin State Fair. He is by a son of Noble of Oaklands, that sold for $15,000 and out of a register of merit daughter of Eminent, that sold for $10,000. His dam when fifteen years old made 429 pounds butter in 249 days. Her sire, Eminent, has eigthy-eight register of merit daughters. Mr. Knight has been remodeling his barn and when completed it will be a model for sanitation and convenience. He has forty stanchions and next spring will build a new and larger barn for his calves and young stock. At the present time he is making some very low prices on young bulls to move them quickly as he has twenty-three cows due to freshen during the next three months and is already crowded in his calf barn. We advise our readers to buy a herd sire now and save money. You will not only buy a right good animal, but one that will grow into money every day, as Mr. Knight intends to put all cows on test as fast as they freshen. Write for pedigrees and prices. See advertisement on page 30.—Adv.

It's Up to You, Duroc Breeders.

ALL preliminaries for the Duroc Jersey Breeders' Association sale to be held during "Swine Week" at Madison, has been completed, so now it is up to you, Mr. Duroc Breeder to make this sale a success. It has been decided to sell fifty head of bred Duroc Jersey sows, these will be sold in the live stock pavilion at the College of Agriculture, the afternoon of February 7th. At the present time we have entries from twenty breeders throughout the state and we want that many more. Every man that claims to be a breeder of Duroc Jersey swine should be represented in this sale. It will not be a money-making proposition, but is being held with the idea of boosting the Duroc Jersey breed. Plain or inferior animals are not wanted for this sale, those kind do not boost any breed, but each breeder should send the best sow that he has on his farm—the good ones will advertise your herd, the poor ones will do likewise. It is impossible to see all the Duroc Jersey breeders in person, but we need your co-operation just the same. If you haven't made an entry for this sale do so at once. Write J. D. Gant, Secretary, Delavan, Wis., or T. P. Shreve, care The Wisconsin Farmer, Madison, Wis. Write whether you can consign or not and let us know that we have your co-operation, there might be something you could do in your locality to boost the game. We would suggest that the good sows for this sale be bred so as to freshen the fore part of March, for those that will buy at this sale want early litters. It's up to you, now get busy.—Adv.

Spring Boars Weighing From 230 to 270 Pounds.

WE HAVE just had a letter from Dennis Shea, Melvina, Wis., advising that he has just weighed many of his Duroc Jersey boars of spring farrow and they weigh from 230 to 270 pounds. We don't doubt this in the least, for when we were on his farm about a month ago he had at that time as good a lot of boars as any breeder in the state. With all due respects to the other Duroc breeders of the state, we will say that Mr. Shea has a herd that is second to none. We doubt if there is another breeder in the state that has a better bunch of brood sows. By using a son of King the Col. and Cherry Chief this breeder has had the most popular blood lines known to the breed. If you want good spring boars of this breed Shea has them and they are priced from $25 to $45 each. He has two that will make junior show boars that he is holding at $60. Melvina is the first station south of Sparta on the Sparta-Viroqua branch of the Milwaukee, the railroad facilities are the very best. You'll make no mistake if you buy from Shea. The gilts are reserved for this bred sow sale, January 30th. We will appreciate it if you will mention this paper when you place your order. See page 31.—Adv.

Home With His Jersey Cattle.

E. E. WYATT, proprietor of the Wyatt Dairy Farm, Tomah, Wis., who is advertising his pure-bred Duroc Jerseys on page 31 writes as follows: "I have returned home from my extended tour of the fairs with my cattle and hogs and everything is in fine condition. While at the Mondovi Fair I succeeded in capturing the first prize in the dairy cow competition contest. In this contest there were ten cows entered and all completed the test. The four-year-old cow, Euphemia's Pauline 319894, landed the $25 prize for largest butter fat production in forty-eight hours. She won by a margin of five points over her nearest competitor which was a grade Jersey. Euphemia's Pauline was sired by St. Lambert's Ridgewood King 73247, sire of three in the register of merit class, including King's Miss Kenna 248228, the champion economical producer of the Wisconsin University Dairy Herd. Her dam, L.'s Euphemia 202404, is also an officially tested cow with a record of 312 pounds of fat as a three year old. In the show at this place there were more than eight Jerseys and our herd bull, Maiden's Varsity King, was first and grand champion bull. In the cow class, Bumble's Leda Stella 354227, won first and later was made grand champion female. Rissa's Pretty Pedro 209364 won second prize and Daisy Bumble's Gem was third, all from my herd. In the two-year-old class, first and second were captured by Nemo's Molly Marguerite 344462 and Bumble Lambert's Lady 354229 respectively all bred and owned in the same herd. The latter two were sired by the present herd bull, Maiden's Varsity King 102974. A little later I will write you giving a summary of our entire showing at the nine fairs attended this year including the Central Wisconsin State Fair, the Northern Wisconsin State Fair and the Interstate Fairs."—Adv.

The Higgins Durocs.

WITHIN the next few weeks many farmers are going to buy boars and for those that want information relative to Duroc Jerseys we wish to call attention to the J. W. Higgins herd at

CONSIGNED by Tompkins Wright, Waupun, Wis., to the Intercounty Holstein sale November 15th, at Watertown, Wis. See page 28.

Gotham, Wis. He has sorted eighteen spring boars for the trade and every one of them is a good one. Mr. Higgins is a good feeder and these boars are in excellent shape for service. They have good bone, stand on the best of feet, good cherry colors and will weigh from 225 to 260 pounds. We do not hesitate to recommend this herd of Durocs. Get his prices, the boars will please you. Gotham is on the Milwaukee between Lone Rock and Richland Center. See page 31.—Adv.

Olaf Olson, Strum, Wisconsin.

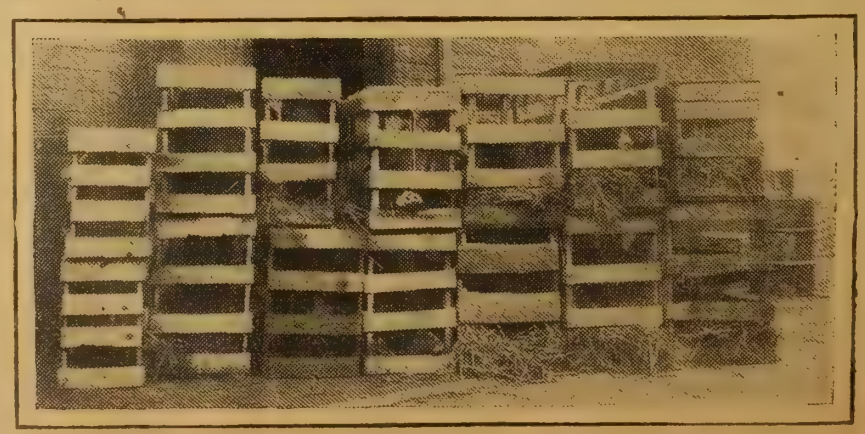
THE above breeder is fortunate in having the get of the grand champion boar, Mac's Chief, and the spring boars and gilts sired by this good boar are for sale. They are big, stretchy, well-grown fellows and they will suit you. Mr. Olson had expected to hold a bred sow sale this winter, but we have just been advised that he has decided to sell the gilts at private treaty, so here is your chance. Get busy and buy a son or a daughter of a grand champion. Mr. Olson also breeds Short-horns and at this time he has some young bulls for sale. They are of the milking strain and the price quoted is very reasonable. Notice his advertisement in this issue and write at once for details. We will appreciate it if you will mention The Wisconsin Farmer when writing. See page 30.—Adv.

Take Notice Poland China Breeders.

WE are glad to report that the Poland China breeders of the state are taking hold of the sale proposition in a loyal manner. For the benefit of those that are not posted we wish to say that on February 7th during "Swine Week"—the Poland China Breeders' Association will hold a sale of bred sows, same to be sold in the live stock pavilion at the College of Agriculture, Madison, Wis. It is the desire of the committee to have fifty bred sows from fifty Poland China herds in the state of Wisconsin and if all Poland China breeders will co-operate this is not an impossibility. At the present time twenty-two breeders of the state have expressed their willingness to consign to this sale and we need that many more. There are many breeders throughout the state that have not

THE twenty-nine-pound son of King Korndyke Sadie Vale, which will be sold at the Intercounty Holstein Breeders' Sale at Watertown, November 15th.

been seen in person and cannot be and these men should send their entries direct to Robert Smiley, president of Poland China Breeders' Association, or to T. P. Shreve, of The Wisconsin Farmer. The outcome of this sale will depend on the co-operation of the Poland China breeders of the state. Only the best should be consigned to this sale. If you will all put your shoulder to the wheel and boost your favorite breed you can make this sale the feature of "Swine Week." Send in your entries at once.—Adv.



A SHIPMENT OF POLAND CHINA BOARS FROM THE GRANT CO. BOAR SALE GOING TO MINNESOTA, IOWA ILLINOIS AND WISCONSIN.

Pease Pays the Express.

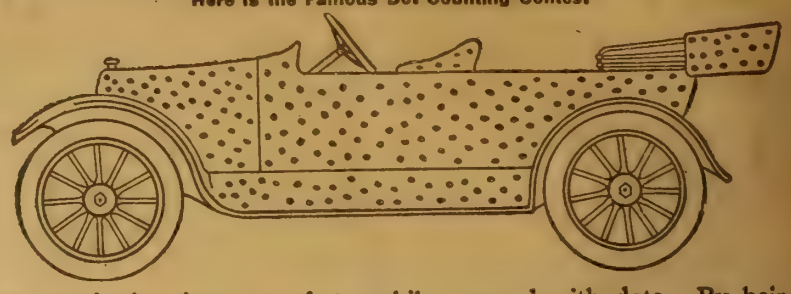
LOOK up the Poland China advertisement of L. E. Pease in this issue for it contains information that is valuable. He has sold his farm and his good Poland Chinas must be sold by December 1st. Besides selling you the best bargain prices he will pay the express charges to your station. There are some good buys for someone and "first come first served." Here's an opportunity. His address is Millville, Wis, but his shipping point is Bridgeport, on the Milwaukee railroad. Mention this paper. See page 27.—Adv.

Schley's Holsteins.

A SON of the thirty-pound bull, Pal King Pontiac Lad, is offered for sale on page 29 by Schley Brothers, Waukesha, Wis. The bull advertised for sale is a year old and ready for immediate service, although his dam has not as yet been tested, but is capable of producing a creditable record, when put on test. They are offering a young

Count the Dots and Win a Prize

Here is the Famous Dot Counting Contest



You see in the picture, an Automobile covered with dots. By being careful and thinking you can count the number of dots on this Auto. If you can do this, we will send you as a prize, *a surprize package of beautiful season and greeting post cards*, lithographed in rich colors and also a certificate of entry in our grand contest for an Saxon Automobile. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

SAXON AUTO GIVEN AWAY

Remember the Saxon will absolutely be given away at the close of the grand contest. In case of a tie a Saxon will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

THE AUTO MAN, Dept. 300 Des Moines, Iowa

AYRSHIRE CATTLE.

ALDEBARAN FARMS A. R. AYRSHIRES

YEARLING AYRSHIRE BULL ready for service. ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address

STEPHEN BULL RACINE, WISCONSIN

AYRSHIRE — THE PERFECT COW

Mr. Lott Hall, of Gouverneur, N. Y., says that Bell's Perfection bore her first calf when she was two. Has had 10 calves—always been healthy—milked nearly 11 months each period, giving from 40 to 50 lbs. when fresh. That's a typical AYRSHIRE record—duplicated time and time again. Better investigate this long-lived, prolific, productive, PROFITABLE breed.

AYRSHIRE BREEDERS' ASS'N

C. M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

LIVE STOCK AUCTIONEERS.

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones' Nat'l School of Auctioneering, 4 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, President.

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FARMINGTON, MINN.

THOROUGHLY versed on pedigrees of leading breeds of live stock.

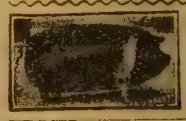
ORVAL A. JONES

AUCTIONEER

14 N. Sacramento Blvd. CHICAGO, ILLINOIS

Let me help boost the hog sales in Wisconsin. Write for dates.

HAMPSHIRE SWINE.



HAMPSHIRES

SPRING pigs of both sexes and weanlings for sale

DANE STOCK FARM Oshkosh Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.

A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

WILLFORD AND MILLER SALE

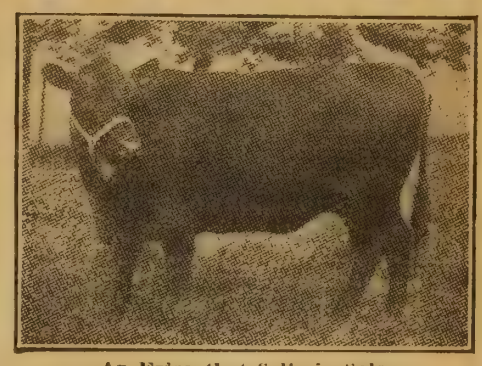
ABERDEEN ANGUS CATTLE

CANTON, MINNESOTA, THURSDAY, NOV. 9, '16

(50 MILES WEST LA CROSSE, WISCONSIN)

45 HEAD, 33 VERY CHOICE FEMALES, 12 OUTSTANDING BULLS

Two Pride Cows that Sell in Sale.



An Erica that Sells in Sale.

The best offering of this breed ever put up in the Northwest. Show cows and breeding cows, calves at foot, bred and open heifers. Bulls for herd headers. Notice the families represented: Eleven **Prides**, six **Queen Mothers**, four **Heatherblooms**, three **Trojan Ericas**, three Blackbirds. The females are bred to or have calves at foot by **Protector E.**, a Pride, by the champion, Prince Felzer, or **Erin Lad W.**, an Erica by Belfast. These cattle will improve your herds. Col. H. O. Tellier, auctioneer. T. P. Shreve, field man for The Wisconsin Farmer. Write for the illustrated catalog. Address

M. C. WILLFORD, CANTON, MINN. or **R. M. MILLER, PROSPER, MINN.**

bull from a twenty-pound dam. He is well marked, being more white than black. Send for an extended pedigree. Prices are very low, quality considered. When writing kindly mention that you saw their advertisement in The Wisconsin Farmer.—Adv.

Constance's Durocs and Jerseys.

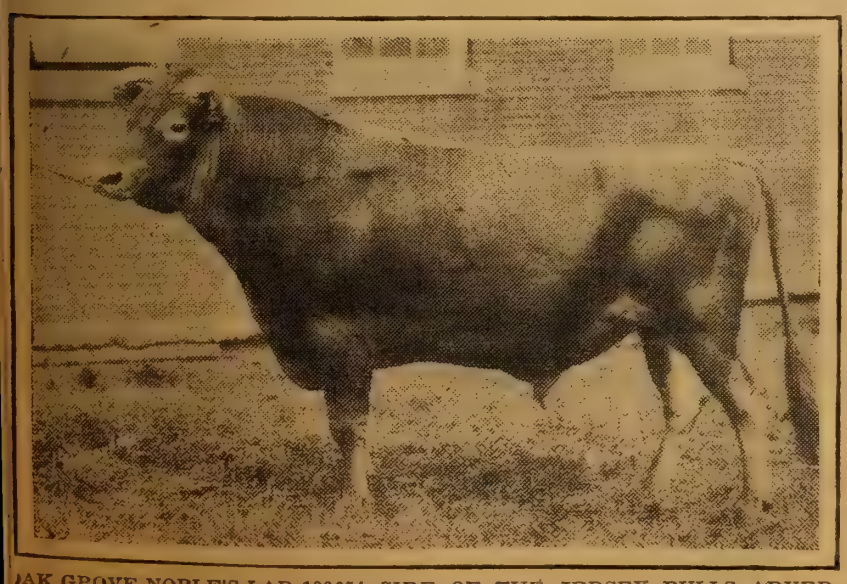
WHEN visiting the farm of F. R. Constance, Waupaca, Wis., last week, we saw as fine a lot of fall boars as we have seen. They are well grown, with strong, heavy bone, and with good backs and hams. They are entitled to be good, for they are well bred on both sides. They were sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Lee's Defender, it will be remembered, was grand champion at the 1914 Wisconsin State Fair and Corrector was first-prize yearling. These full boars are out of daughters of Crimson Lad by Marion's Wonder, a Wisconsin grand champion boar; Lee's Defender and Challenger. Mr. Constance is also offering fall pigs to be delivered at weaning time. These are sired by Victoria's Corrector by Corrector. The herd of Jersey cattle is one worthy of merit. Although official testing has not as yet been done, records of every animal are kept under the direction of the Waupaca Cow-Testing Association. They are offering a choice yearling bull for sale and several high-grade cows and yearling heifers. For further particulars in regard to breeding and prices write to the above address. See page 31.—Adv.

Kirst's Chester Whites.

HAVE you purchased that Chester White yet, if not get the prices and description of the Wm. Kirst Chester Whites at Tomah, Wis. Mr. Kirst is a good caretaker and, while he hasn't as large a herd as some breeders, he has good hogs and is enjoying a nice business. He will not ship out a poor pig and if you want a boar and a few gilts he can supply you to your satisfaction. Write him at once and mention this journal. See page 31.—Adv.

ALDEBARAN FARMS, located at Racine, Wis., and owned by Stephen Bull, assistant secretary of the J. I. Case Threshing Machine Co., were very fortunate in being able to secure such an outstanding Ayrshire bull, as they did in Aldebaran Findlayson 16292. He is sired by the famous Findlayston 8882, and out of Thoughtless Beauty of Hobsland 27976, an imported cow making her advance registry records as a two year old and that was recently sold in the East at $1,000. Mr. Bull took great pains and spent many weeks in picking this young animal and he very impressively showed his class in being placed first in the two year old class at the Wisconsin State Fair this year and at the Elkhorn County Fair, the only two fairs at which the Aldebaran herd were exhibited. He has sired some very fine young stock, well marked and nicely bodied. A young bull is advertised for sale on page —. This bull was born September 30, 1915, is well grown and ready for immediate service. He is very well marked being three-fourths white. He is also richly bred being backed by several generations of advance registry blood. His dam, both grandsires, both grandams, two great grandsires and one great grandam all being advance registry animals. Ayrshire breeders will appreciate what this means. His own dam, Laurie Lorain, has a record of close to 600 pounds of butter in a year. Her sire, dam and grandsire are A. R. animals. This young bull was sired by Aldebaran Findlayston. Send for an extended pedigree and prices of this bull. When writing kindly mention that you saw their advertisement and this write-up in The Wisconsin Farmer. See page 26.—Adv.

IN A LETTER from W. G. Bartholf, Burlington, Wis., to The Wisconsin Farmer he writes: "Enclosed find copy of advertisement which please run on my three months' contract then discontinue and I will run the balance of the advertisement in January and February on bred sows. Yours truly, W. G. Bartholf. P. S. These boars are sired by Valley G. Model Wonder and Hickory Grove Peter. Three of as good sires as I ever owned. We showed at Beloit, Madison, Watertown, state fair, Elkhorn and Beaver Dam and won forty-two firsts, twenty-nine seconds, eleven thirds, one fifth, one seventh and five champions two champions being over all breeds. The boars I am offering are all good boned and good length and good backs." We might add to this that we have seen Mr. Bartholf's pigs both at home and one the show circuit and can conscientiously recommend them to our readers. See his Duroc Jersey advertisement on page 31.—Adv.



OAK GROVE NOBLE'S LAD 122654, SIRE OF THE JERSEY BULLS ADVERTISED FOR SALE ON PAGE 30 BY WM. KNIGHT, EAGLE, WIS.

TOO LATE TO CLASSIFY.

I PAY THE EXPRESS

ON POLAND CHINAS

HAVE sold my farm. Hogs must be sold. Choice spring boars and gilts, also fall sows. You get my best, and I'll pay the express to your station. Write your wants. Address

L E. PEASE, MILLVILLE, WISCONSIN SHIPPING POINT, BRIDGEPORT

Berkshires For Sale

2 YEARLING boars, prize-winners and good breeders. Spring boars and sows of excellent breeding. For reasonable prices and description, call or write W. W. Powell, Victory, Wis.

GUERNSEY CATTLE.

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

SALE DATES.

Holstein-Friesian Cattle.

Nov. 14-15, Intercounty Holstein Breeders' Sale, Watertown, Wis. Francis Darcey, Watertown, Wis., Secretary.

Aberdeen Angus Cattle.

Nov. 9, Combination Sale, Roy Miller, Prosper, Minn., and M. C. Willford, Canton, Minn. (Sale at Canton, Minn.)

Percherons.

Nov. 15, Hagemeister Stock Farm. Green Bay, Wis.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb, 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 15, J. D. Gant, Delavan, Wis.

Guernsey Cattle.

Feb. 26, George W. Pagel, Zumbrota, Minn.

GUERNSEY CATTLE.

A Few
Grade and Pure-Bred
GUERNSEY FEMALES
For Sale
W. H. & B. L. Hanchett Sparta, Wis.

Registered Guernsey Heifers

AND **young cows**, from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.
Geo. Lucia - Green Bay, Wisconsin

Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address
W. J. Held Ft. Atkinson, Wis.

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address
J. D. McAllister Green Bay, Wis.

REG. GUERNSEY HEIFERS

10 to 14 months old, daughters and granddaughters of the richly bred sire,

GOODWILL'S HERO 17073

DAMS imported and richly home-bred animals. These animals are well grown, good, straight type and well bred. For further particulars send for copy of pedigrees or color description. Address
Charles Schmidt Wrightstown, Wisconsin

Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

BERKSHIRE SPRING PIGS
of both sexes of Premier and masterpiece breeding
O. R. FRAUENHEIM, RANDOM LAKE, WIS.

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.
W. G. Jamison & Son - Appleton, Wis.

Guernseys For Sale

NINE grade Guernsey yearling heifers and one pure-bred bull 7 months old, all good size and well marked, at $600. Address
E. H. Kiesling Jefferson, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wisconsin

HAGEMEISTER

Percheron Dispersion Sale

OF THE STUD OF THE LATE HENRY F. HAGEMEISTER

Green Bay, Wis., Wednesday, Nov. 15

BRILLIANT 47573.

Eleven stallions, thirty-three mares and fillies, ranging in age from sucking colts to mature animals. Undoubtedly the best lot of home bred and imported mares in any one stud in Wisconsin. To appreciate their high individual merit you must see them. An extraordinary lot of animals. The home bred animals are largely sired by **Imp. Historique 71752** and out of daughters and granddaughters of **Baccarat 11326.** There are also **five imported mares** and eight fillies and mares out of both an imported dam and sire. Catalogs are now ready for mailing. Mention The Wisconsin Farmer and address

HAGEMEISTER BREWING COMPANY

GREEN BAY - - - - - - - - - WISCONSIN

---

150 HEAD **SQUARE DEAL**

Inter-County HOLSTEIN ASSOCIATION SALE

Watertown, Wis., Nov. 14-15

SPLENDIDLY bred, well conformed cows—a goodly number bearing creditable A. R. O. records, such as 20-lb. three-year-old and 15-lb. two-year-old record. Heifers of individuality and excellent breeding. **Bulls**—a 30-lb. son of King Segis Champion—a 30-lb. son of Sir Beets Cornucopia Netherland—a 31-lb. grandson of King Segis Pontiac Polkadot—a 29-lb. son of King Korndyke Sadie Vale—a grandson of King Korndyke Sadie Vale from a 25-lb. three-year-old—a show bull, son of Aaggie Cornucopia Johanna Lad, all tuberculin tested under the direct supervision of the state veterinarian, consequently the sale carries the approval of the state department of agriculture. We also offer the 60-day retest guarantee. Our consignors are breeders who have played a noble part in keeping Dodge and Jefferson counties to the front in Holstein circles. Such names as Tomkins Wright, Waupun; Edwin M. Schultz, Hartford, cannot help but convince the buyers of the absolute integrity of our sale and the high class of stock offered. Catalog ready November 1st. Watch later announcements.

FRANCIS DARCEY, Sec'y **Watertown, Wis.**

SQUARE MEN **SQUARE CATTLE**

HORSES.

4 Stallions PERCHERONS 2 Mares

WE are offering 6 very high-class Percheron stallions and mares; 1 two-year-old and one yearling stallion out of **Diana 53532** by Phil Sheridan and 1 yearling stallion and a 2 and 3 year old mare out of Karel 33640, a double bred **Baccarat** mare. The two-year-old stallion sired by Imp. Haricot 74108 is particularly good. Send for prices and description.

JOHN KLOEHN - - FOREST JUNCTION, WISCONSIN

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin **Gotham, Wis.**

SHEEP.

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.

Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

SHEEP

SHROPSHIRE yearling rams all sold. After October 15th my yearling Hampshire flock header and my Oxford flock header will be for sale. Have a limited number of Shropshire, Hampshire and Oxford ram lambs left; also a few ewes. All stock registered. Address

Dane Stock Farm **Oshkosh, Wis.**

Hickory Dale Shropshires

FOR SALE—25 choice yearling rams, sired by F Minton and Tanner Rams. All are flock headers. Address

Arthur Broughton & Sons **Albany, Wis.**

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

CLYDESDALES

STALLIONS and mares for sale. **AYRSHIRES**—Serviceable bulls and females. **DUROCS**—growthy boars and gilts. Only the very best of the three breeds. We invite visitors. Write your wants.

Jas. Van Etta - Lima Center, Wisconsin

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

PERCHERON Stallion for sale. Black, 1,900 lbs., fine sire and sound. Will sell cheap. Write Schwert Bros., Wauzeka, Wis.

BROWN SWISS CATTLE.

Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.

ANDREW MARTIN, WEST SALEM, WIS.

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address

A. E. CORTTE LOMIRA, WISCONSIN

HOLSTEIN-FRIESIAN CATTLE.

1 ROYAL BRED HOLSTEIN BULL CALF 5 A. R. O. HOLSTEIN COWS and HEIFERS

THIS IS WHAT WE CONSIGN TO THE

INTER-COUNTY SALE at WATERTOWN, WISCONSIN, NOVEMBER 14-15, 1916

THE 4 nearest dams of this bull calf average 31.36 lbs. of butter in 7 days. Dam and grandam both have large yearly records. He is a very nice, growthy individual, very nicely marked and fit to head any herd. Come and get him at your own price.

THESE cows and heifers are all nice, large individuals and out of large yearly record dams. Two are daughters of a 26-lb. cow, one of them a 20.2-lb. three year old. They are bred to King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days.

WISCONSIN STAR STOCK FARMS, ED M. SCHULTZ, HARTFORD, WISCONSIN

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address

Lawrence Robers **Lyons, Wis.**

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

ABERDEEN ANGUS CATTLE.

ANGUS BARGAINS

HERD of 11 head of high-grade heifers, 3 months to 4 years old, 1 herd bull 2 years old. Will sell individually or the lot for $600. Address

Frank Green & Son, R. 1, Oregon, Wis.

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

ANGUS

COWS, calves at foot, and bred heifers for sale. One or a dozen. Write for description. Address

E. F. Ganz & Son **Alma, Wisconsin**

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanley's Othello. Also cows and heifers and Oxford rams for sale. C. S. Hechtner, Chariton, Iowa.

Purebred Registered

HOLSTEIN CATTLE

The world's champion advanced registry milk producer is the purebred registered Holstein-Friesian cow, Lutscke Vale Cornucopia, owned in the state of Washington. In 365 days this wonderful cow produced 31,239.4 lbs. of milk or over 15,000 quarts, exceeding the best previous milk producing record of 30,451 lbs. made by the Holstein Tilly Alcartra. The big "Black and White" cattle, not only by individual performances, but by matchless qualities and achievements as a breed, are proving their superior worth all over the world.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America

F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address

C. F. DINEEN, CEDARBURG, WISCONSIN

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address

JOHN HASSE MONROE, WISCONSIN

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford **Kaukauna, Wis.**

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

FOR SALE

HOLSTEIN bulls sired by a son of **Pontiac Korndyke, ¼** white—well grown. I will also price a few heifers and cows.
Peter Larson - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

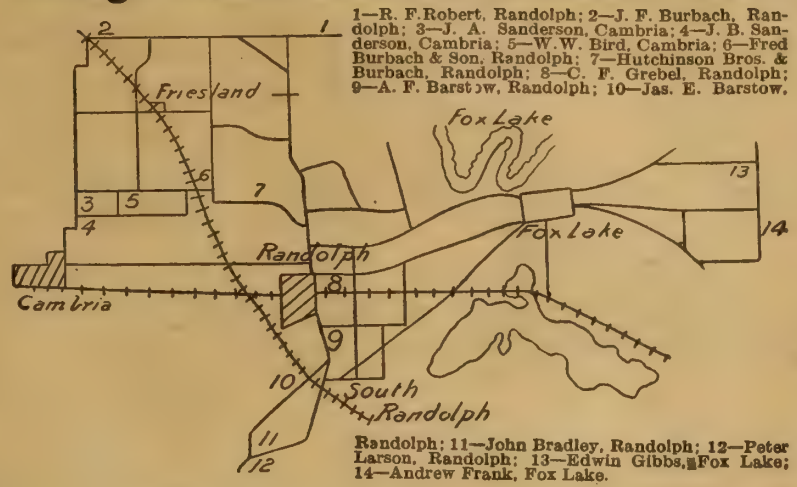
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE

HEADS our herd. His dam made 33.08 lbs as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
B. F. Winckler & Sons Medina, Wis.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
U. F. McNutt Oxford, Wisconsin

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer **for sale** surplus stock of our own raising.
SILVER SPRINGS FARMS CO. - EAU CLAIRE, WISC.

Yearling Son

READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.
Schley Brothers - Waukesha, Wis.

LA BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutche's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $35 up, depending on breeding and age. When you want a herd header write
W. H. S. Rhoda Watertown, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. O. Tochterman Jr., Monroe, Wisconsin.

WE KNOW YOU LIKE THIS BREEDING

CHARTED PEDIGREE OF THE
Pure-Bred Holstein-Friesian Bull
Korndyke Segis Johanna

No. 127132 H.-F. H.-B.
Born November 17, 1913.
Owned by—
PABST STOCK FARM, Oconomowoc, Wis.

The average of the records for his dam and sire's dam are as follows:

Milk	632.40
Butter	39.05
Per cent fat	4.94
30-day record:	
Milk	2,630.50
Butter	154.16
Per cent fat	4.69

SIRE—**Johanna McKinley Segis**
954 A. R. S. (44367) Sire of—

Uneeda Korndyke Abigail	33.02
Uneeda Korndyke Abigail, 30 days	124.00
Uneeda Korndyke Charlotte	29.35
Uneeda Korndyke Abbie	28.00
Winana Jennie 2d, 2 years	27.10
Uneeda Korndyke Beryl, 4 years	26.61
Oakfield Korndyke Segis	25.57
Oakfield Korndyke Segis, 30 days	104.91
Uneeda Korndyke Countess, 3 years	24.35
Uneeda Korndyke Beauty, 2½ years	23.57
Johanna Woodland Segis, 3 years	23.51
Paula McKinley, 3 years	22.78
Abbie Korndyke Segis, 3½ years	21.26
Uneeda Korndyke Bertina, 2 years	21.20
Uneeda Korndyke Abronia	20.63
Uneeda Korndyke Adeline, 3 years	20.42
Uneeda Korndyke Agnes, 4½ years	20.39

34 A. R. O. daughters, 1 above 30 lbs.
6 above 25 lbs., 15 above 20 lbs.
9 sons with 33 A. R. O. daughters.
6 daughters with 6 A. R. O. daughters.

DAM—**Pontiac Lady Korndyke**
11276 A. R. O. (92700)

Butter	38.03
Milk	601.40
Per cent fat	5.06
30-day record:	
Butter	156.93
Milk	2,496.70
Per cent fat	5.02
Dam of—	
Fairview Korndyke Rag Apple, 2 years	19.86

2 sons with 22 A. R. O. daughters.

Why not buy a bull calf by this sire and out of one of our A. R. O. cows with high 7-day and yearly records. Over 30 to select from at $100 and up.

Pabst Stock Farm DEPT. 30 Oconomowoc, Wis.

KING PONTIAC PORTIA
and
Richland Sir Ormsby Korndyke

(Out of Aaggie Texal Wayne 2d 1,078 pounds)

ARE the sires of the HEIFERS we are offering for sale. All from A. R. O. dams up to 27 pounds. One heifer, half sister to a 36 pound cow. A limited number will be sold. Write for pedigrees and records. Address
C. C. FRIES & SON RICHLAND CENTER, WIS.

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

450 HOLSTEINS AND GUERNSEYS

COWS, HEIFERS, CALVES AND

PURE-BRED bulls. Single shipments or carload lots. We have our own private sanitary shipping yard. We aim to please. Call, wire or write.
EDGEWATER STOCK FARM FORT ATKINSON, WISCONSIN

10 REGISTERED HOLSTEIN COWS

FROM 4 TO 10 YEARS OLD

5 SIRED by Sir Johanna Fayne Mooie, a line bred son of Sir Johanna Fayne, whose daughters are making wonderful 7-day and yearly records. 3 sired by Fobes Fayne De Kol, the 30-pound son of Homestead Jr. De Kol. All safe in calf to Johanna Chief De Kol, that is 62% the same blood as Johanna De Kol Van Beers. 2 bulls nearly ready for service. EDWARD O. MUELLER, Appleton, Wis.

HILLSIDE STOCK FARM

OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons Elgin, Illinois

2 HOLSTEIN BULLS

OF SERVICEABLE age. One from Gordonia Johanna Aaggie Echo 151460 with 15.50 pound seven day record and sired by the richly bred bull Julip Segis Korndyke (80640). One sired by Daisy Johanna 5th, a 27-pound bull and the dam, Queen Liliuokalani De Kol 2d, 213904, a 12-pound Junior 2 year old sired by Julip Segis Korndyke. Price $85.00 and $125.00.
L. V. Garvens - Brookfield, Wisconsin

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.
JOHN STEEL - OCONOMOWOC, WIS.

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

YOU CAN'T BEAT IT

WE have for sale a young Holstein bull from a 23.05-pound four-year-old daughter of SIR CLYDE that has 45 A. R. O. daughters, four with records above 30 pounds. He is sired by a son of BEAUTY PIETERTJE PRINCE, that is out of a daughter of SIR ORMSBY HENGERVELD DE KOL. It is some breeding. Send for extended pedigree and price. Address
DOPP BROS. OCONOMOWOC, WIS.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.
EARL NORWOOD, GAYS MILLS, WIS.

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.
GROVE BROS. COLUMBUS, WIS.

18-POUND SON OF THE 33.86-POUND BULL

PABST BURKE DE KOL KING, whose dam holds two records of **31.16** and **33.86** pounds respectively for seven days, **644 pounds milk in seven days; 20,106 pounds milk and 845 pounds butter** for the **year.** Dam of bull for sale made **17.93 pounds butter and is a granddaughter of Paul Beets De Kol.** Price $75.00.
J. H. Henderson - Elkhorn, Wisconsin

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons (Registered Poland China hogs).
Marinette County Asylum - Peshtigo, Wis.

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. **BANGOR, WISCONSIN**

OAKLAWN FARM
SHORT-HORNS

BULLS A fine assortment of SCOTCH bulls—rich roans and reds, the herd heading kind. Also a few Scotch-topped bulls from heavy milking dams. Two cows and a few heifers. Write your wants. Address

J. E. Kennedy **Janesville, Wisconsin**

RIVERDALE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

H. Wehmhoff - **Burlington, Wis.**

MILKING
SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little **Evansville, Wisconsin**

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher **Oregon, Wisconsin**

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son, Beaver Dam, Wisconsin

WILCOX
SHORT-HORNS

AM OFFERING several **Roan Bulls** of serviceable age. Priced reasonable for immediate sale. Write for pedigrees.

W. F. Wilcox - - **Milton, Wisconsin**

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son - **Burnett, Wisconsn**

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address

JOHN CLAY **WARRENS, WIS.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES **ROCKLAND, WISCONSIN**

President, Wisconsin Short-horn Association

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

YEARLING Milking Short-horn bull of serviceable age sired by Clara's Prince. Write for pedigree and price. Timblin Bros., Eden, Wisconsin.

JERSEY CATTLE.

OAK GROVE JERSEY FARM

WE are overcrowded, as we are just rebuilding our barns and have very little calf stable room. We now have 15 calves and 22 cows yet to freshen, so are making **very low** prices on these richly bred young bulls to move them quickly. Sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and of Noble of Oaklands.**

NO. 1—Out of **Volunteer's Sally,** that has a record of 697 pounds butter. She is also a dam of a 594 pound junior 2 year old that holds the state record for her age. **Price $100.**

NO. 2—Out of **Koffee of Oak Grove,** now on semi-official test and making fine record. This young bull won 1st at Elkhorn fair. **Price $75.** Send for extended pedigrees; further infor'tion.

WM. KNIGHT - - - **EAGLE, WIS.**

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - **Wauwatosa, Wis.**

FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

"What is Accomplished by Testing Cows"

is the title of our booklet which tells you how to increase the production of your herd. Cows from herds of known production sell for more money. Send today for your copy of this helpful booklet It's free.

The American Jersey Cattle Club
338 West 23rd Street New York City

ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son **Oconomowoc, Wis.**

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - **Fairwater, Wisconsin**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS.

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address

J. Warren Hoyt **Rosendale, Wisconsin**

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

POLAND CHINA SWINE.

The GRAND CHAMPION POLAND CHINA Boar AT WISCONSIN

IS the sire of the SPRING BOARS AND GILTS that I am offering for sale. Buy the GET OF A CHAMPION. I have them—you need them—let's get together. Write for pedigree. Some Short-horn bulls for sale.

O. C. OLSON **STRUM, WIS.**

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green **Wis.**

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING **BANGOR, WIS.**

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

DOBSON & EASTMAN
POLAND CHINA OFFERS

THREE spring boars that weigh over 300 pounds each—they should head registered herds, real toppers. Also a few that weigh around 260 pounds. A limited number of fall pigs for sale. Write your wants; you know our guarantee. Address

DOBSON & EASTMAN, **LANCASTER, WISCONSIN** **The Utmost in Polands**

SIZE---QUALITY---BREEDING

Features Predominating in my Polands

JUMBO'S EQUAL 2d

CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH **(Shipping Point Fennimore)** **MT. IDA, WISCONSIN**

McDONALD CLEANS THE SLATE
WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin, Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address

J. D. McDONALD, NORTH BEND, WIS.

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.

M. MADSON & SONS **MADISON, WISCONSIN**

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - **River Falls, Wisconsin**
(35 miles S. E. St. Paul)

BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.

Chas. S. Maltby, **Janesville, Wisconsin**

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley **R. 3, La Crosse, Wis.**

POLAND CHINA BOARS

ONLY four spring boars but they are "dandies." Order one. Address

Mat W. Beres **Elroy, Wisconsin**

POLAND CHINA BOARS FOR SALE

10 GREAT fall yearling Poland China boars with great bone and length, sired by Big Bone and Long Wonder. These boars will be priced right. Address

C. J. Schoenfeld & Son **Fox Lake, Wis.**

Poland Chinas For Sale

FIVE yearling boars. Spring pigs of both sexes Boars fit for service and September pigs.

James Derivan **Fox Lake, Wisconsin**

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.

A. Menke & Sons, R. 1, Markesan, Wisconsin

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address

J. C. Hendricks **Box F, Hazel Green, Wis.**

BIG-TYPE POLAND CHINAS

BOARS and gilts for sale sired by **Big Bone Chief 224483, North Side Wonder 237211** and **Giant Mastodon 245127,** out of large matured sows. Eight sows farrowed 83 and raised 76 pigs. Also a few extra good fall boars. Prices right to move them quick. 23 years a breeder. Come and see them or write.

Fred Lathrop & Sons, R. 2, Wauzeka, Wis.

MASTER'S GIANT 190781
AND
ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address

P. W. YOUNG **PROSPER, MINN.**

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

Bargains, Poland Chinas

SPRING boars and gilts priced to sell. Order now. Big-type breeding. Address

L. E. Pease **Millville, Wisconsin**

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.

Phone 53 **F. E. Purdy, Orfordville, Wis.**

DUROC JERSEY SWINE.

MODEL DUROC HERD

HAVE a fine assortment of spring boars. Will also sell a few sows and spring gilts. They are well grown, and are priced to sell. Send your order, I guarantee satisfaction.

J. W. HIGGINS
GOTHAM WISCONSIN

I WON THE SILVER TROPHY AT THE WISCONSIN STATE FAIR

ON the best litter of Duroc pigs. These and others of same breeding for sale. Thirty spring boars, 2 yearling boars and 40 spring gilts for sale. Sired by **Prof. King** by Indiana King and **Grandmaster**, junior champion Wisconsin, 1915. **Buy from a winning herd.** Write your wants.
J. W. THOMAS, NORTH BEND, WIS.

LINCOLN MODEL DUROC HERD

Spring boars and spring gilts by

Lincoln Model

and S. & H.'s Col. From big, matured sows The pigs must suit you or no sale. Write your wants.
ALBERT L. HYZER
WEST SALEM WISCONSIN

DUROCS AND GUERNSEYS

25 HEAVY-BONED fall and spring boars, Illustrator, Chief's Col., Defender and Crimson Wonder breeding. April pigs weigh over 150 pounds. Two-year-old bull for sale whose dam has three A. R. records averaging over 500 lbs. fat. His full sister made 415 pounds fat as a two year old. Have had 6 calves sired by him and 5 were nicely marked heifers. Reason for selling, owned his sire. Several fine bull calves.
Allie S. Knudson R. 5, Brodhead, Wis.

THE WAR

Hasn't affected the prices on

DUROC JERSEY BOARS

MY spring boars are sired by Professor C and Prince Wilhelm, two well-bred boars. The pigs are well-grown and are being priced worth the money. I'll try hard to please. Write.
M. STOEHR - VIROQUA, WIS.

BOARS

DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address
J. Erwin, Bloomington, Grant County, Wis.

GANT'S FARM DUROCS

25 TOP spring boars, one 600-lb. Jr. yearling, Illustrator-Cherry Chief breeding. Bred sow sale in February. **Gant's Farm, Delavan, Wis.**

I AM OFFERING FOR SALE

CHIEF'S DEFENDER 186363 and PROF. KING 2d 187655. Also spring pigs sired by these great Duroc herd boars. Address
M. T. CLARKE STEUBEN, WIS.

DUROCS

SIRED by **Richland Defender**, he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write
John Borchardt & Son, Richland Center, Wis.

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B, Model Wonder, Col. S. Jr., Orion, Cherry King Jr. **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

DUROC JERSEY SWINE.

SPRING BOARS 230 Pounds to 270 Pounds — DUROCS at $25, $35, $45

NO BREEDER HAS A BETTER LOT

SIRED by a son of KING THE COL., a son of CHERRY CHIEF, a son of LEE'S DEFENDER and many of the dams trace to MARION'S WONDER. You get BREEDING and INDIVIDUALITY. I'll ship you a good boar—try me. Address
DENNIS SHEA - MELVINA, WISCONSIN
(10 miles from Sparta on the Milwaukee R. R.)

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

E. R. CONSTANCE & SONS WAUPACA, WIS.

Grand Champion Duroc Boar at Wisconsin State Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
B. W. LITTLE - - - - JANESVILLE, WISCONSIN

DUROCS WITH SIZE AND QUALITY

WE ARE offering for sale, spring boars and gilts sired by **Lee's Defender, Prince Defender** and **Royal King 4th.** Prices from $25 to $35 according to quality. Crates, pedigrees and a year's subscription to Duroc Bulletin given with every order. Satisfaction guaranteed.
McClurg Bros. - - - - - - - - - Viroqua, Wisconsin

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer.
EMMETT COOK & SON - RICHLAND CENTER, WIS.

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.
BURN BRAE FARM - - - ROSENDALE, WISCONSIN

DUROCS

SPRING boars by **five noted sires.** Well grown and bred in the purple. For sale at "let live" prices. **Grand Model 21st,** son of the many times champion, **Grand Model,** heads our herd. Also two fall boars for sale. We sell "boars that please." Write

Geo. D. Sprain & Sons
West Salem, Wisconsin

--PARKHURST-- DUROCS

LET us ship you a boar pig. They are well grown, of the most popular blood lines and we guarantee every boar. We welcome visitors and answer inquiries promptly. Try us.
E. H. PARKER & SON
Janesville Wisconsin

DUROC JERSEY BOARS

OF March farrow with size and quality, heavy bone and long, deep bodies, of the best of breeding. Write for prices. Address
W. G. BARTHOLF BURLINGTON, WIS.

SEPTEMBER DUROC PIGS

at your own price—Just make an offer

THESE are by a Cherry Chief boar that weighed close to 500 pounds at 16 months and Long Model Wonder, another big one that has only a few equals. Also a fine bunch of spring boars of champion blood lines at attractive prices. Address
E. R. Perkins Manitowish, Wis.

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
W. W. Goodrich Ft. Atkinson, Wisconsin

GEO. H. WILLSIE
Breeder of Big Durocs

Can supply your wants. Write.
Prosper - - - Minnesota

WE SHIP on APPROVAL
Duroc Jersey BOARS and GILTS

HAVE a large number to select from out of large matured sows sired by **Fisher's Volunteer** tracing to the noted Champion Volunteer. Have some excellent March pigs that will please you. If our pigs were not good we wouldn't offer to ship on approval. Write your wants.
Riley Martiny & Son, Baraboo, Wisconsin
Breeders of Guernsey Cattle

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address
Ed Patterson, Jr.. Bloomington, Wis.

CEYLON COURT FARM DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

Atwater's Duroc Boars

SOME just as good as sold in my sale—these were held for private sale. Write.
L. F. Atwater - Bangor, Wis.
"Home of Big Durocs"

Model Durocs

READY to fill your orders for spring boars. Order now and save express. Address
J. W. Higgins Gotham, Wisconsin

VICTORIA SWINE.

Registered Victoria Swine

EXPERIENCE has proven that they are the best cross that can be used for economical pork production. Fall boars, gilts and spring pigs out of prize-winning sires and dams. Address
H. P. WEST RIPON, WISCONSIN

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

DUROC JERSEY SWINE.

DUROCS THAT PLEASE

IF you want a spring boar or gilt, I can suit you. March pigs of the very best breeding with size and quality. Price is right. Write at once.
B. M. ARRIES AUGUSTA, WISCONSIN

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address
JOHN L. FISHER JANESVILLE, WIS.

CHESTER WHITE SWINE.

Derenthal Chester Whites
Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.
H. A. Derenthal - Wykoff, Minnesota

DOERR Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address
J. A. DOERR VIROQUA, WIS.

CHESTERS

For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN BLOOM CITY, WIS.
(Shipping point Viola)

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.
O. P. Coates - Elkhorn, Wisconsin

CHESTER WHITE PIGS FOR SALE

AUGUST pigs at let-live prices—from matured stock. Singles, pairs and trios. No runts shipped. Feed scarce and must sell. Two winter boars of best breeding. Pedigrees furnished.
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Your Chance--Chester Whites

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The "War" Catch-phrase and the Falsity of It —The Real Issue

The Democratic campaign has been framed on the catch phrase "Wilson kept us out of war."

It is not true, and is absolutely at variance with facts.

Under our constitution, the only power that can declare war is Congress. The President cannot declare war.

But the President can, by his policy, place our country in a position where war is inevitable if the opposing country accepts the challenge.

Did Wilson keep us out of war with Mexico?

We invaded Mexico, bombarded and captured Vera Cruz and would have been in war if the Mexican Government had fought back.

We sent an army into Mexico and it is still there. **If the Mexican Government dared to pit its army against ours there would be war now. It is not Mr. Wilson's fault that we are not at war.**

And yet these invasions of another country have produced no results to make us proud.

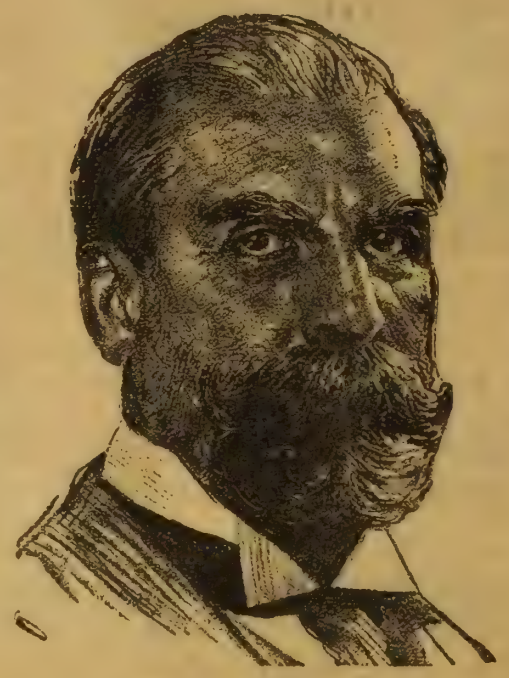
More American lives have been lost—lives of private citizens, soldiers and marines—in this Mexican "peace" than were lost during the Spanish-American war. We have submitted to humiliating conditions and awful outrages without resenting them, and yet we have paid the price of a war.

We could have prevented every outrage and saved thousands of lives if we had had a firm Mexican policy.

Did Wilson keep us out of war with any European nation?

Not at all.

No European nation would fight us. The same condition kept us out of war that kept Holland out of war and Switzerland, and Spain, and Norway, and Denmark. None of them wanted to get into war and neither did the United States. No nation involved in the European



struggle wished to add us to its list of enemies.

Our foreign policy has been weak and humiliating to us, in contrast to that of small countries like Switzerland, Holland, Norway and Sweden.

A Four Billion Dollar Congress

The last Democratic Congress has passed appropriation bills at a rate which will give it the name of a "Four Billion Dollar Congress," and this in direct opposition to the Democratic platform of 1912 which denounced Republican appropriations and demanded a return to economy and a reduction in the number of public offices.

Over thirty thousand additional offices have been created during President Wilson's administration.

Mr. Hughes stands for the constructive policy of a budget system against "Pork Barrel" methods; he is in favor of a reduction in expense, and economy in government.

Aside from the great issues that are temporary at this time, there is no greater question involved than that of making our government careful in appropriations and clean in expenditures.

The Farmer Pays the Adamson Bill

The Democratic party expects to gain votes through the Adamson Bill, which is merely a measure to postpone trouble, passed without consideration or investigation. It will place a burden of millions of dollars in future years upon the farmers of the country, who in the end must "pay the freight." The plea is made for Mr. Wilson that he raises wages.

It is fair to add that he also raises expenses, increases taxes and **places the burden on the people for a proposition which is purely political.**

The threatened strike could have been avoided by an arbitration law just as easily as by the Adamson Bill.

The Real Issue

When the European war is ended and the readjustment of conditions comes, America will need a line of defense which will be no less important than the army and navy. It will be the defense of our producers against the competition of other countries where prices are low and the standards of living are not up to those of America.

There is only one party that proposes to enact this preparedness into law, and that is the Republican party, which stands always for the protection of American farmers and American trade.

Many of the other issues of this campaign will be settled in a few months, but the consequence of no protection of our producers and our workmen would lead to disaster that would never be overcome.

On this question the Republican party deserves the support of every man who produces and who labors.

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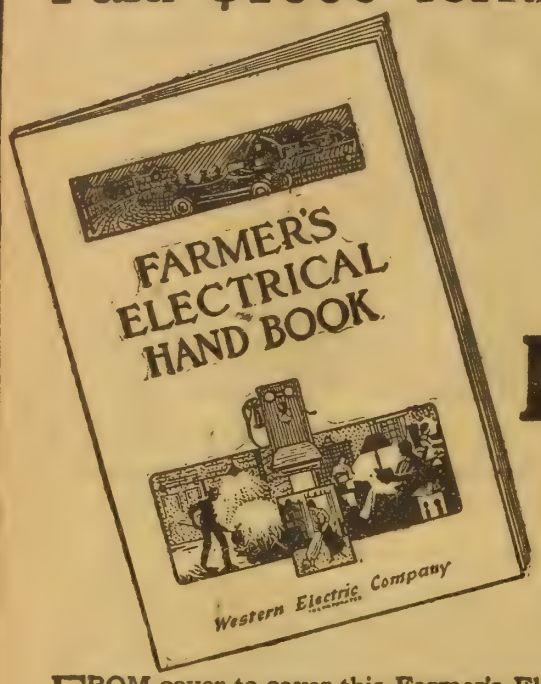

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FARM MECHANICS

Auto, Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

Making an Electric Magnet.

Please give me some information as to how I can make an electric magnet to be operated by dry cells.

Answer.—An electro-magnet is made by wrapping insulated copper wire around a soft iron core. The core becomes a magnet when a current of electricity flows in the wire. The strength of the magnet depends upon the number of turns of wire around the core, the amount of current, the size of the core, the size of the wire, and the shape of the magnet. For use with dry cells, single cotton covered or enameled wire may be used. For city current, use double cotton covered wire. The finer the wire, the greater the number of turns for a given space, and the stronger the magnetism for a given amount of current. The core is usually bent U shape, half the wire being wound right hand on one leg of the U, and the remainder of the wire wound left hand on the other leg.

Oscillating Magneto.

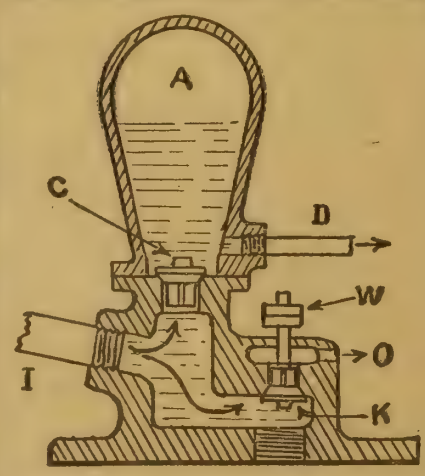
Can a stationary engine having jump spark ignition be successfully operated with an oscillating magneto? If not, why not? Does an oscillating magneto have any parts that have to be renewed every few months? What is the horse power of a gasoline engine having a four-inch bore and five-inch stroke, running at 500 R. P. M.? It has two flywheels, each weighing seventy pounds.

Answer.—The oscillating magneto will work all right on a jump spark engine, but some special parts are usually necessary to adapt it to the engine. The same applies to any high-tension magneto, the only magneto easily applied being the low-tension, belt-driven type. If you are considering an oscillating magneto, you better write to the manufacturers, giving the size, type and make of your engine, and obtain their advice as to the best method of installing the magneto. An oscillating is as durable as a magneto of any other type. Your engine should develop three horse power. Within reasonable limits, the weight of the flywheel does not affect the horse power.

How a Water Ram Works.

Please publish a diagram and explain how a water ram works. How does a gyro-motor, that is, a motor with a flywheel that runs so fast that it can't fall over, work?

Answer.—The accompanying diagram shows a sectional view of a water ram. The water enters through the inlet pipe I, flows down, and out of the ram past check valve K, which is held down by the weights, W. The water escapes at several openings, O, above valve K. When the flow of water becomes quite strong, it raises check valve K, and the momentum of the flowing water causes pressure enough to raise check



valve C, and the water flows into the air receiver A. As soon as the pressure above and below C is equalized, valve C closes, K opens, and the operation is repeated. A comparatively steady flow is maintained in the discharge pipe D by the air pressure in A. Water rams are generally used to force water from a small stream up to a house or barn several feet above the water level. The water is piped to I from some distance up stream, so as to get considerable fall.

The gyro-motor maintains its position for the same reason that a moving bicycle remains upright. The mathematical principal is difficult to explain.

Master Vibrator.

What is a master vibrator on a Ford car, and what is the use of it?

Answer.—A master vibrator is an attachment to take the place of all four vibrators, the attachment being wired so that the vibrator of the master vibrator operates all the coils. The contact screws on all the coil vibrators are screwed down so as to make continuous contact. The advantage claimed is that there is only one set of vibrator points to adjust for the whole engine, and that more even ignition is secured. Master vibrators are not furnished regularly with Ford cars.

Uses Too Much Gasoline.

My Ford car uses too much gasoline. What causes this? How can the carburetor be adjusted? How does the Ford timer regulate to spark at the right time? How can you test the spark plugs and the battery? Can a Ford car be started on high gear? What is the easiest way to start a Ford car, with the engine running?

Answer.—Too rich a mixture is the usual cause of an excessive use of gasoline. It may also be caused by running with the spark too much retarded, or by poor compression. Good compression is necessary to get the power out of the fuel. Keep the mixture as lean as possible without interfering with the running of the motor. Too lean a mixture causes misfiring and backfiring in the carburetor; too rich a mixture causes waste of fuel, carbon trouble, misfiring, and overheating. For a lean mixture, turn the dash-adjusting button to the right. To adjust a Ford carburetor, start the motor, advance the throttle to the sixth notch, and retard the spark to the fourth notch. Turn the dash adjustment to the right until the engine begins to misfire. Then, very slowly, turn it to the left until the best running position is found. Black smoke from the exhaust indicates too rich a mixture. If you fail to cut down your gasoline consumption by adjusting the carburetor, it may be that the carburetor needs a new float valve. Considerable gasoline may be saved by running with the throttle closed when going down hill.

The Ford timer consists of a small, round metal box, in which a small roller turns around. The roller is mounted on a swinging arm attached to the end of the cam shaft. Around the rim of the box are four insulated contact points; when the roller touches one of these points, it closes the electrical circuit between the magneto and the coil to which the wire runs from that point, and a spark occurs in the cylinder connected to that coil. The rim of the box may be rotated backward and forward a short distance. In this way the spark is advanced or retarded. The spark plugs may be tested by taking them out, laying them on top of the cylinders, and turning the motor over rapidly by hand. The spark may then be seen at the points. The part of the plug above the porcelain must not touch the cylinder. The Ford car as regularly equipped carries no battery. If the spark is all right, the magneto is all right.

It is not advisable to start any car on high gear. Too sudden a strain is put upon the parts, which will show up as increased wear if the practice is continued. To start the car with the engine running, speed up the engine, press on the clutch pedal, and throw the hand lever forward, the clutch pedal being in neutral position. Then press the clutch pedal as far forward as it will go. This starts the car on low. After the car gains speed, allow the clutch pedal to drop entirely back, which puts the car on high speed. Then slightly close the throttle.

The Wisconsin Farmer

THURSDAY, NOVEMBER 9, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

SOME WRONG IDEAS OF THE FARM LOAN LAW.

I WANT to correct three erroneous impressions which I find prevail in some minds in regard to the new federal farm loan law and my explanation of its workings.

In the first place, I am not organizing national farm loan associations, nor have I any interest whatever in the law except so far as I can assist deserving farmers to take advantage of it, if they find, after careful investigation, that it enables them to borrow money on better terms than they are able to secure it from other sources. The law plainly states that "ten or more natural persons who are the owners, or about to become the owners, of farm land qualified as security for a mortgage loan may unite to form a national farm loan association." Nobody is authorized to form associations unless they are eligible under this classification; in fact, the Federal Farm Loan Board has issued a warning against men who are seeking to form associations unless they intend to borrow money themselves on their own farm land. Much as I might like to help men whom I know to be deserving, I could not organize an association, under the new law, unless I wished to borrow on my own farm land, which is not the case at present. Notwithstanding the fact that the law is plain on this point, I am in receipt of a number of letters similar to this one from a Wisconsin representative of one of the large insurance companies:

> I had a farmer in today and he wanted me to write to you in regard to a loan on his farm of $2,500. He saw in the paper that you had formed a farmers' loan association. His farm is all right and he is O. K. We both hope to hear from you soon.

The thing for that Wisconsin farmer (and all others who wish to borrow under the new law) to do is to write to the Federal Farm Loan Board, at Washington, for association blanks, circulars and other general information and then find nine other farmers in the vicinity who will join in organizing a local association. There is no expense connected with any of this preparatory work. But above all things; do not be taken in by any designing and unscrupulous "promoter" who claims to be able to help you out, upon payment of some sort of commission or bonus.

In the second place, the law is designed to help individuals, no matter whether a local association of ten farmers can be formed in their neighborhood or not. It is not designed altogether to help farmers who can find neighbors or friends who wish to go into an association with them. Let me quote a portion of the law:

> That whenever, after this act shall have been in effect one year, it shall appear to the Federal Farm Loan Board that national farm loan associations have not been formed, and are not likely to be formed, in any locality, because of peculiar local conditions, said board may, in its discretion, authorize federal land banks to make loans on farm lands through agents approved by said board. Such loans shall be subject to the same conditions and restrictions as if the same were made through national farm loan associations.

The law went into effect on July 17, 1916. Therefore, any time after July 17, 1917, an individual may borrow just the same as though there were a local association, provided none has been formed and the Federal Farm Loan Board is convinced there is no possibility of one being formed in the near future. If the co-operative plan fails to work out, the individual farmer is not shut off from the advantages of the law, as all too many farmers now think is the situation.

In the third place, the law will eventually aid the worthy tenant who has not the necessary money to buy a farm of his own. While it plainly specifies that the loan can be for no more than 50 per cent of the appraised value of the land and 20 per cent of the value of the improvements thereon, I believe that Mr. P. W. Goebel, president of the American Bankers' Association, is right when he says that second mortgages on farms bought by worthy tenants will be considered first-class investments for trust companies, investment banks, insurance companies and individuals. Let me quote Mr. Goebel's opinions somewhat at length:

> I have heard several gentlemen say, "But how are you going to advance the interests of the tenant farmer that has not got the 50 per cent saved up to buy his land?" Why, if the tenant is the right kind of man there will be no trouble whatever. And here the personal equation comes in. The government must require absolutely the same maximum requirements from everybody that does business with these banks, and the local banker will take into consideration the personal equation of a man wanting to buy the land; and, as a banker, I would not hesitate to say that I would loan freely on second mortgages. I would not in a commercial bank; but in a trust company or investment bank I would lend freely on second mortgages so long as I could see that the interest and the amortized payment on the first mortgage and the interest on the second mortgage and taxes and upkeep of the land would still be less than the rental value of the land.
>
> We will say a young man who has worked for a farmer for a number of years, or a man of middle age whom I have known for years who has rented a place, comes to me and he says, "I have $1,000 and I have two span of horses and some cows and some sows—enough reasonably to stock eighty acres of land. I have got to pay $50 an acre for the land. I can get a loan through the National Farm Loan Association, of Staunton township, for $2,000. Will you loan me the other $1,000?"
>
> Now it is a very easy proposition to figure it out. I will figure that on the first mortgage of $2,000 he will pay $120 interest at 6 per cent. I am figuring now on the maximum. He will pay $20 on the amortization fund. Now, I loan him the $1,000 at 7 per cent, if you please. He will pay me $70, and I will figure that his taxes cost him $50, which makes a total of $290.
>
> Now that eighty acres of land, if he rented it, would cost him anywhere from $325 to $400 a year rental. It goes without saying that he will take more interest in that piece of land as an owner than as a renter. He will take better care of it and improve it. It will be improved rather than deteriorated. It does not take a great stretch of imagination to see that this man with the $1,000 I loaned him can pay on an average of $100 a year on the principal. In other words, he can retire the $1,000 I am loaning him in ten years. Then, he will simply have a proposition that with any intelligent work at all he will absolutely make a living, and the small sum he pays yearly to retire his loan finally will hardly be taken into consideration.

The law is not perfect; I can see many flaws in it, but let us give it a fair trial and adapt it to all needs, if possible. By limiting the amount of individual loans to $10,000 it prevents the absent landlord from using Uncle Sam as a convenient banker for large sums borrowed on immense tracts of land. If its actual workings shall include the worthy tenant, with only a portion of the purchase price saved up, it will have gone far toward solving a very vexatious problem and toward improving agricultural conditions all over the country. Let us hope and work for the best.

I might add, by way of postscript, that a representative of the Federal Farm Loan Board has been kind enough to compliment me on the soundness of my advice on this subject, writing me as follows:

> I think you are doing some of the most effective work that is being done by farm paper editors in behalf of the farm loan act. Every one of your editorials indicates that you have a thorough grasp of the farm loan act.

I have put in a great deal of time studying this law and its probable workings and effects. I have talked with members of the Federal Farm Loan Board, with bankers, insurance agents and borrowing farmers, and I have come to the conclusion that the new law, while not perfect, bids fair to give us financial relief and to place the farmer on the same business plane as the merchant and manufacturer.

PARTNERSHIP IN THE FARM HOME.

I COULD easily fill this page of mine, and many others, with interesting letters which come to me in regard to the complaint of the Illinois farmer's wife that she is never allowed any spending money of her own and has no voice in the financial affairs of their farm home. I have just spent an hour reading over a few of the many letters received within the last few days, picking out first one and then another to share with you here this week. I would lay one down and say to myself, "That one must go sure;" then I would pick up another and it seemed so much more interesting and sensible I would say, "Well, I'll run this one this week and leave the others until next week." The more of the letters I read, the more undecided I am as to which is the best or which would do the most good. I am going to leave the matter to Fate and pick out a couple, at random, without looking.

Well, here's the first one I picked up; it's from a man well along in years, although even at that he's fifteen years my junior. He makes his wife his full partner in everything and shares the joys of his children as though he were one of them. I believe I'll print his letter practically in full; it is so good:

> I do love to read your page and note how earnestly and conscientiously you write each and every word in explanation of first this and that question presented to you. My heart (and I am fifty-two) goes out to the Illinois farmer's wife. I am going to give you a little description of my family and how we work and get along. As I said, I am fifty-two and my wife is forty-eight. We have three daughters and two boys, two girls and two boys grown and one daughter married.
>
> Well, when there is any business to be transacted on this farm mamma and I talk it over. If it is selling corn, wheat, hogs, cattle or anything else, we get together; and improvement to be made, we get together again and talk it over; anything needed for the children, we get together again; and so on down the line. We have but one pocketbook on this place and if either of us or the children need anything it is open and we help ourselves. Well, I have always taught my children not to be wasteful or extravagant and have talked these things over with my wife. To make a long story short, she is my life partner in every sense. The result is that we have no quarrels nor differences, because by getting together and reasoning things out we see what each likes. If we didn't do this we might do something that neither of us would like.
>
> Now if that Illinois farmer will just walk over and put his arm around that good wife's shoulder and say, "Wife, let's talk it over," and make her see and know she is respected as being capable and appreciated, that wife will have no cause to write any more letters. If he is too narrow to see where he is drifting, God help him, for I can't. After supper (especially at this time of year) we generally all get around the organ (daddy is the organist) and play and sing a whole bunch of good old-time songs. Then in a moment you will probably hear a wagon or two coming up the hill. "Well," someone will say, "where are you boys and girls going?" "We are going over to Daddy Scott's to play and sing." What happy thoughts for a man in his old days. I would not give up the love of all those young people for any wealth. Then at Sabbath school you can see it in their eyes and hear it as they sing.

I leave it to each and all of you, isn't that a splendid letter; isn't that an ideal household partnership? It makes a man feel as though his work were not in vain when something he writes brings such a letter as that.

Here is the second one, picked at random; it's from a young woman, whose advice shows she has a remarkably sound head on her shoulders. She does me the honor to say that she and her husband like my paper better than any other they take and that she reads it as thoroughly and as carefully as her "liege lord." If the world were full of as logical thinkers and cheery comrades as this young farm woman discloses herself to be, by her letter, it would be a fine place, indeed, and you and I would have few, if any, problems to discuss between ourselves here. I will just print part of her letter, it is rather long:

> Today I have been very tired and my work has not been of the nature to make me feel that I am an "empress," but instead of feeling resentful and complaining of my surroundings I am satisfied and happy. The secret of it all is that my husband and I are partners. Before I married, six years ago, I held a very responsible position and averaged from $100 to $150 a month and I do not resent the loss of that, for every carload of cattle, every sow and pigs and every team of mules that is bought and sold on our farm I discuss with my husband. I know how much is gained or lost on everything and my husband and his brother talk to me about crops and stock and politics. I do not mean that I advise them what to do, for nothing is further from my mind than to appear egotistical, especially as my husband has been farming twenty years and I have been interested for six.
>
> I have the conveniences that we can afford and I go to town to parties and come home refreshed and talk about what has happened and whom I saw—and I do not walk to town either. My spending money is not handed out to me as though I was some dependent relative. My husband sees that I have a bank account and he knows me well enough to feel sure I will not be extravagant. What prompted me to write this letter was the letter in the paper that arrived today (the October 19th number) from an Illinois farmer's wife telling you about everything she possessed but freedom. I have always felt that men in this part of the country were more considerate of their wives in every way than men in the East and West and the more I read about the lack of companionship in those parts of the country the more I am certain that there is something very wrong with the men, or the women are to blame. In the first place, had I been the Illinois farmer's wife I would have begun ten years ago to assert myself as an equal to my husband. Probably she did, but from her letter she has not succeeded very well.

When I started this discussion I reserved the right to express my personal convictions later. I fear there will be no good ideas left for me, if the letters continue. The more I look over my correspondence the more firmly I become convinced that this page of mine is the best on the weeks when I turn it over the most to my farmer correspondents. About all the usefulness I can see for myself, just now, is to introduce the various speakers and then retire as gracefully as I can to the background.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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National Dairy Show For Wisconsin.

THE Wisconsin Farmer is advised that the National Dairy Show, held last month in Springfield, Massachusetts, will be held either in the West or South next year. Kansas City, Missouri, has put in a bid for the show, and Atlanta, Georgia, would like to have it.

It seems to The Wisconsin Farmer that Milwaukee would be the logical place for this show in 1917. Our only thought has been that such a plan might interfere with the Wisconsin State Fair, which would be held only a month previous to the dairy show. The National Dairy Show is the biggest dairy exhibition in the country, and the cream of dairy pure-bred stock is exhibited at this show. Wisconsin breeders take a prominent part in the show, regardless of where it is held, and they won championships in two of the breeds at Springfield. There are a good many thousand farmers and breeders in Wisconsin, Illinois, Minnesota, Iowa and Michigan, who would be directly benefited if the National Dairy Show could be held in this territory, and there is no better place in this territory to hold the show than Milwaukee. Milwaukee could easily accommodate the crowds. Such a show was once held at Milwaukee, but it was not a tremendous success as we understand. The show has grown each year and is a much larger institution than when it was held in Wisconsin years ago.

A decision as to the next meeting of the National Dairy Show will be made by January 1, 1917. If Wisconsin interests care to make a bid for the show it is time to get busy.

The Wisconsin Farmer would be glad to hear from any of its readers on this subject. If the breeders of the state will go after this show, they can probably land it. An objection to Kansas City getting the show is the fact that the American Royal, a beef show, is held about the same time. Other cities which might entertain the National Dairy Show have fall fairs or exhibitions which would interfere. The Wisconsin Farmer merely recites the fact that this show might be secured if sufficient interest is manifested by Wisconsin people, and if it develops that there is a united sentiment favorable to the show, we would be glad to do all in our power to help land it for Wisconsin.

Would Copy Wisconsin Cow-Testing Plans.

OUR interest which has been aroused by the splendid work being done by the co-operative creameries of La Crosse county, Wisconsin, in co-operating with their patrons to secure a better raw product is further increased by the general tendency among cream buyers and others to aid farmers to weed out the unprofitable cows from their herds. This spirit is manifest in the following letter from a subscriber, Mr. Gust Johnson, of Kensington, Minnesota:

> Could you give me some advice how to start a cow-testing association. There are too many poor cows in this neighborhood that the farmers think are O. K. I am buying cream while our local creamery is closed. If I could get the farmers to start testing I would go out myself next summer and test the cows for them, but I do not know how to start.

Mr. Johnson is on the right tract. There are too many cows, not only in Minnesota, but also in Wisconsin, that the farmers consider O. K. The theory though, we believe, that this cow or that cow is a profitable cow, just because she looks handsome or is a pet, is losing support among farmers who are discovering that it is as impossible to judge a cow's milk-pail record by looking at her as it is to judge the speed of a horse by the eye. Minnesota, like Wisconsin, is doing much association testing, although Wisconsin leads in organizations. It might be well for Mr. Johnson to first work up interest in testing among those who haul cream to him, and then call upon the Minnesota College of Agriculture for some assistance in starting an organization. Mr. W. A. McKerrow, University Farm, St. Paul, is directing this work and will be pleased to co-operate in any locality in organizing testing work.

Every community must have a leader and Mr. Johnson shows the right spirit when he offers to do the testing himself if the farmers will join with him.

Is the Farmer Getting His Share?

MANY significant things are being brought out by the high prices that now prevail for butter and cheese. This is especially true in cheese factories, which are paying for fat on the basis of Elgin butter quotations, and we suspect there is now more pondering over factory statements by Wisconsin farmer-dairymen than has been done in many a month, to figure out just who is really profiting most from the high price of these products.

One of our subscribers, Mr. K. H. Spangrud, of Jackson county, has submitted two factory statements for June and August. These statements appear correct from the records thereon, but Mr. Spangrud is given to wonderment why his check is not a trifle larger with cheese prices so high.

The August statement shows an average price for cheese of 16 cents at the factory, which paid in that month 35 cents for fat. Mr. Spangrud's 6,230 pounds of 3.6 per cent milk should make about 623 pounds of cheese, which, at 16 cents, is worth $129.68. For this milk he received a check for $78.47—a difference of $51.28 between what the cheese was worth, according to the statement, and what he received. Of course, out of this comes the assessment per pound for caking, which is not given, but it should not be more than 2 cents per pound. This would allow $12.70 for making and there is still a difference of $38.70.

It is difficult to offer an opinion, but it appears that the patron in this instance is not getting a price for his milk commensurate with the value of the cheese. It may be, however, that it is agreed that the factory shall pay the Elgin butter quotations for fat, plus a certain amount per pound, in which case the patron is without cause for complaint and the factory is the richer.

Where cheese factories are paying for fat on the butter basis, they are certainly ahead of the game with cheese at the prevailing prices. We assume that this is the case in the factory whose statement is mentioned above, and it is up to the farmers in such instances to insist on butter fat prices commensurate with the value of the cheese made.

Throughout Wisconsin, as elsewhere, interest is especially keen now in milk prices. But we fear the farmer, in looking at the price he receives, is overlooking the serious question of cost of production. Quality is an important factor, but it is as necessary to watch the cost of producing 100 pounds of milk as it is to watch the rise in the selling price. The consumer, up to this time, has had to pay the increase, but when the demand decreases because the consumer can't pay the price, the farmer-dairymen will be face to face again with the factor of cost production.

Wisconsin Baby Beef Contest.

ARRANGEMENTS have been made for the round-up of the Wisconsin First Boys' Baby Beef Contest, at Madison, on November 22d and 23d. This contest was started last spring under the auspices of the Wisconsin Live Stock Breeders' Association. The purpose is to interest young folks in Wisconsin in profitable beef production. About seventy boys will bring to Madison their baby beeves, grown and fed under the rules of the contest, and prizes ranging from $50 for the best beef to $4 for the winner of fifteenth place will be awarded. In addition, the transportation charges are guaranteed to the boys who do not win a cash prize, and some splendid animals are expected to be shown, as interest has been very keen in the contest.

The animals will be judged from a beef standpoint—what they are worth to the butcher. One of the three judges will be an experienced butcher and meat judge and will have charge of the carcass demonstration after the judging on foot. This demonstration will be a part of the program arranged for the contestants, and it will be worth while for every farmer interested in beef production to arrange to attend this roundup.

The winners in the baby beef contests at seven fairs will show their animals together with individual entries made from other parts of the state. The fairs at Mineral Point, Baraboo, Elkhorn, Janesville, Lodi, Richland Center and Lancaster each awarded $150 at the fall shows to the winners in the county contests and the winners of the first three places at each fair are entered at Madison, which, it is expected, will bring the number of animals shown up to about seventy. Many animals have improved considerably since fair time and will improve more, so that they will figure largely in the placings at the roundup whether or not they won at the county fairs. Calves entered must have been dropped since September 1st, a year ago, and the awards will be made on the basis of the boy with the best calf. Records have not been required like those in the dairy calf contests, the theory being that the boy who fed the best will have an animal worth the most money when it is ready for market.

Each boy must grow, groom, break and show his one entry. The calves may be of any breed—pure bred, cross bred, grade, steer or heifer—and the boy must be under twenty-one years of age. He does not have to own the animal shown and no restrictions are placed upon the kind or amount of feed or methods of feeding, although a brief feeding record must be kept.

Baby beef production is growing to be an extensive branch of the cattle business and many feeders and packers predict that profitable beef production is narrowing down to baby beef. It is, undoubtedly, a special line yet, and the showings of Wisconsin boys should be interesting from the standpoint of what can be accomplished. Thus far the contest has proven so successful that one of much greater scope is planned for next year.

Milwaukee Milk Increase.

FARMER-DAIRYMEN who ship their cream and milk to the Milwaukee city market have signed contracts with the Milwaukee dealers and distributors, converting the winter supply which will net these producers the best prices they have ever received for milk and cream for city consumption. The new price scale averages $1.50 per eight-gallon can of milk f. o. b. Milwaukee, for the six months, November 1st to April 30th, and for cream, 9 cents over the Chicago butter quotations for butter fat. The new prices became effective November 1st and will probably be followed by a slight increase in the retail price of milk and cream in Milwaukee.

This is an increase of approximately 1 cent per quart for milk over the prices paid the producers last winter. This means in the aggregate an increase of $1,600 daily to the farmers in the Milwaukee territory over last year. This is at the rate of $584,000 a year for the same quantity of milk when compared with last winter's average prices, as Milwaukee uses about 5,000 cans daily. The average for the coming six months is 15 cents a can, or about ½ cent a quart raise over the October, 1916, prices.

The average last winter for the six months covered by the new scale was 1.18 1-3 cents per can, f. o. b. Milwaukee, which netted the producers about $1.03. The freight per can is estimated at 15 cents, which leaves the producers under the new scale a net price of $1.35, a fraction over 4 cents per quart for milk testing 3.5 per cent with a 3-cent increase for each point above that standard. The October, 1916 price was $1.35 per can f. o. b., or $1.20 net. Milwaukee shippers are pleased with the outcome of their negotiations which extended during the entire month of October. The increase was granted without any strikes and because the shippers, through the Milwaukee Milk and Cream Shippers' Association, had placed themselves in position to ask and receive a price for their milk considerate with the marketable value of milk when turned into butter and cheese. The association controls about 2,200 of the 5,000 cans used daily by the city of Milwaukee and is increasing its membership rapidly. The negotiations were pleasant throughout; the dealers showed a greater tendency than in the former years to deal fairly, and the best of feeling is said to prevail between producers and distributors.

The new Milwaukee prices are about on a par with the winter Chicago prices. Reduced to pounds, the Milwaukee average is practically $2 per 100 for 3.5 per cent milk, or $1.50 per can f. o. b. against $1.60 per can in Chicago, f. o. b. As the shipments into Chicago average longer, the freight is a trifle higher and the can losses considerably greater, which about equalizes the two scales. This is the first time the Milwaukee shippers have been able to sign up on a six months' basis, the dealers in former negotiations always demanding that prices be agreed on monthly.

It is pleasing to The Wisconsin Farmer to note that the farmers in the Milwaukee district are no longer required to act as philanthropists to the residents of that city in providing them with milk at a price below its cost of production. Milwaukee enjoyed 6-cent milk too long. It was raised to 7 cents during the summer and the new scale may force it a little higher. As the Milwaukee and Chicago prices act as the standard for the Wisconsin dairying sections supplying cities and condensing plants, it is probable that the new scales will do much toward lifting prices in other communities.

Mr. Jackson's Work in La Crosse County.

MR. E. M. JACKSON has just completed the first year of field work among the farmers of La Crosse county in the interest of eight co-operative creameries. When these creameries organized and employed Mr. Jackson, it was the first move of its kind made in Wisconsin, but after a year's trial, we are informed the experiment has met with unqualified success; that it will be continued in La Crosse county and doubtless will spread to other counties when they learn of what Mr. Jackson has accomplished.

Cream is always good when it comes from the cow. Poor cream is, therefore, due to careless handling, indifference, or poor surroundings, and no patron need furnish any creamery with poor cream except by choice. This La Crosse creameries appreciated, and Mr. Jackson was employed at a salary of $1,800 per year to impress these facts upon the patrons with the additional facts that better cream meant

better butter, better prices, and lessened expense in handling. Mr. Jackson's report tells of splendid work and co-operation by the farmers. Many new milk houses have been built; special tanks for cooling. Many farmers were shown the value of better feeding from their own standpoint. Where separators were in the barns, Mr. Jackson sought their removal. His entire work was to follow out the lines which mean better cream production, that the creameries he represented might produce a better product, pay their patrons a better price, and have left for themselves a better profit. This same plan was worked out some years ago by the government at Algona, Iowa, and the work there accomplished wonders.

The La Crosse county creameries entered into this arrangement of their own accord. They had to seek the co-operation of the patrons; they could not compel it. All Mr. Jackson could do was to ask the farmers to follow the best methods. He could not force them. So that the work accomplished has been carried on under handicap, and if this much could be done without police powers, we are led to wonder what could have been accomplished had Mr. Jackson been given the police powers of a dairy and food inspector to use where necessary.

Some Remarkable Wisconsin Sales.

THOSE of our readers who are engaged in breeding pure-bred live stock as well as those who believe in the policy of improving grades by the use of pure-bred sires will be especially interested in the report of some public sales, held in Wisconsin last week, and reported in this issue of The Wisconsin Farmer. Some splendid averages were made in beef as well as in dairy cattle and the spirited character of the bidding indicated that there is a great revival among breeders in the interest taken in improved animals.

The Walworth county combination sale resulted in disposing of ninety-two animals for the total sum of $14,370. In the main the animals in this offering were young, and the returns meant the realization of a satisfactory profit to the breeders in every case.

A splendid record was made by the sale of the Waukesha County Guernsey Breeders' Association which resulted in disposing of seventy-one head for the grand total of $18,880. This organization is working up an enviable reputation for superior Guernseys, and those who make purchases from the Waukesha County Guernsey Breeders' Association have the assurance that they are receiving in every animal sold exactly what is described and guaranteed in the catalog.

Turning now to the record of beef cattle sales, we find that on November 3d Herr Bros. & Reynolds disposed of forty-four animals for a grand total of $16,620. The cattle in this offering were young and they were in prime condition, practically all of them having been bred from Herr & Reynold's foundation stock. It takes no mathematician to determine for himself that the returns from this sale represent a handsome profit, and that is not all, because the animals sold will give a good account of themselves wherever they go. If they are rightly handled, they will make their new owners money in every case.

But the most notable record of all was made by the Anoka Farms, at Waukesha, where forty-three head of cattle sold for $43,700, or an average of more than $1,000 per head. It is doubtful if any herd of Short-horn cattle in the United State is better known than the one owned by Mr. Frank W. Harding. An examination of the sale list in this issue of The Wisconsin Farmer will show that nearly all the animals sold were young—mere calves, in reality. The splendid price realized is but a fitting tribute to the honesty and integrity of the owner of this herd. The list of sires that have been used on the Anoka Farms generation after generation is a most notable one, so that there is coursing through the veins of all the animals in this sale the best Short-horn blood in the world—signal proof that good blood will tell.

Such events as these are making important agricultural history for Wisconsin, and every man who believes that live stock is the cornerstone of sound agricultural practice should rejoice in these splendid records made by breeders of dairy and beef cattle.

House the Implements.

TAKE care of the farm machinery is now time-worn advice, but nevertheless, good advice. Prices are likely to be higher when the spring buying season begins, as the raw product used in many implements has already advanced, and if there were no other incentive to house the implements over winter and thus reduce their depreciation than the prospect of higher prices it would be a profitable move for every farmer.

Co-operation for the purpose of securing an equitable price for farm products is one way of making the farm pay. But, since the difference between the selling price and the cost of production represents the profits an equally efficient method of securing the desired end is to reduce the cost of production. So it remains that this cost can be reduced, as statistics show, by the proper care of the implements on the farm, the life of which, if only increased a single year, would mean a tremendous saving in the aggregate to the farmers of Wisconsin.

The government estimates that something like $175,000,000 is invested in farming machinery annually in the United States, and other investigations have estimated the depreciation at from 5 to 8 per cent annually. So it is readily evident that an item that concerns so large a percentage of the cost of production is well worth serious consideration. With prospect of higher prices because materials, such as steel, used in cultivators, drills, harrows, has advanced, it certainly is the duty of every implement owner to reduce his costs by prolonging the life of every implement as long as possible.

Millions of dollars of farm machines stand uncared for in Wisconsin, exposed to the elements of the seasons. Every traveler is familiar with the many barnyards that are littered with cultivators, spreaders, drills, plows, etc., standing out in the rain and snow, the metal parts rusting and the wooden parts decaying. A touch of comedy is added to the spectacle of a corn grower who has cultivated the corn for the last time, leaving his cultivator at the end of the row, to be discovered during harvest. There it stands until the binder finds it in its way. Rusty and forlorn it is pulled aside and left there until spring, as no one needs a cultivator in October. Many farmers, we agree, prevent this depreciation through proper care, but not all, although Wisconsin may be said to be ahead of her sister states in this respect.

It has been figured that 75 per cent of the depreciation on farm machinery comes from exposure to the weather. The life of machinery is not only shortened, but its efficiency is lessened and the quality of work it will do is lowered. A building costing around $200 will house most of the machinery on the average farm, and we do not recall a Wisconsin farmer who has gone to this expense who will not say that it has been a paying investment. Then it means something to the careful farmer to have his implements all together, where he can go over them during the winter, make the necessary repairs, order the new parts that are needed before the spring rush begins and have them ready for work when the frost disappears.

Various estimates have been made as to the average life of important farm machines. Whatever the correct figures may be, it remains that a casual investigation will disclose the fact that the average life is shorter than it should be, due more to careless handling than wear and tear. The greater part of the average machine is not subject to wear, and if not broken should last indefinitely. Wooden parts are affected more by exposure than metal, but both are materially injured.

Care of machinery may be divided into three divisions—repairing, housing and painting. Winter is the time to get the needed repairs, not after the machine has been pulled from storage, or from some fence corner in the spring. Work is less pressing in the winter, and it can be done then to better advantage. Painting prolongs the life and improves the looks, and lead and linseed oil is affected as little by weather as anything that can be used.

Splendid Prospects For International Live Stock Exposition.

FOOT-AND-MOUTH disease prevented the holding of the International Live Stock Exposition in Chicago during the last two years, but this year, as the country is free from all such forms of contagious diseases, the exposition will be held at the Union Stockyards, Chicago, from December 2d to 9th, and it promises to be bigger and better than ever. The purpose which this exposition serves is outlined by Dean Davenport, director of the Illinois Experiment Station, who, in a recent communication sent to B. H. Heide, general superintendent of the International Exposition, says:

The International Live Stock Exposition, held annually at the Union Stockyards in Chicago, has one advantage over all other live stock shows on the face of the earth namely: It is held on the very grounds where thousands of animals are handled in a commercial way every day of the year. This gives an atmosphere to the exposition such as cannot be created upon any grounds in connection with the ordinary fair or national exposition. When a great collection of pure-bred live stock is brought together at any other point it makes its own atmosphere which is inevitably that of the show ring and of the breeding pen. The purpose for which all of these high-class animals are bred and owned is often lost sight of, especially by the masses of the people who are not themselves experts. Indeed, some of our foremost breeders have, in times past, themselves mistaken the means for the end and animals have been bred primarily for show purposes.

It is different at the International in Chicago. One has only to look about him to see the purpose for which all this breeding is done, namely, the commercial supply of meat and labor. This gives a healthy atmosphere to the exposition, such as in the end will be felt throughout the length and breadth of the cattle and horse producing interests of this great country. At no other point have the breeding and butchering interests been so intimately associated. Nowhere else has the production of high-class animals and the final disposition of the consumer been brought so close together. This is why it is that the influence of the exposition is wholly healthy to the live stock interests, whether represented by the breeder or by the consumer. This is why it is that no one, who has the slightest interest in live stock or its production can afford to miss seeing with his own eyes the truly wonderful display that is brought together annually on the grounds of the exposition. Such quarters have never before been provided in this country; such facilities have never before been offered for seeing the animals, either by the casual observer or the one who has given them careful study. This is because the management has been more than liberal, realizing, as few managements do, the real need of a live stock exposition.

We have frequently referred to the fact that the International Exposition affords the best possible opportunity that is presented during the whole year to study the effect of using good blood in the herds and flocks. Not only are pure breds entered in large numbers, but there is an enormous number of grades, and these grades have been produced and brought up to the high points of excellence, which they represent by using pure-bred sires on grade foundation stock generation after generation. Young men who expect to make stock production their life work can hardly afford to lose the opportunity that the International affords of studying the outcome of successful breeding methods, and if we mistake not the attendance this year at the International will eclipse all former records.

Letters From Wisconsin Farmers.

ON PAGE 8 of this issue will be found a number of letters from farmers in this state who own automobiles. These letters give practical experiences and will be of interest to every reader, regardless of whether he drives a car or not. This is the third page of letters which have appeared in The Wisconsin Farmer in the past few weeks. The two previous topics were milking machines and barn equipment. The Wisconsin Farmer desires to extend its sincerest thanks to those who have written letters for these special articles and to add that the columns of this paper are always open to readers who have any interesting practical experiences.

Our Farm Forum will be maintained a regular department the same as it was all last year, and in this department a variety of topics will be discussed by our readers. We hope not only to reiterate through the Farm Forum columns the old-time truths which make farming pleasant and profitable, but also to give to the readers many new and practical ideas.

Men Who Are Making America.

WE ARE in receipt of so many inquiries from subscribers asking the name of the national weekly which is publishing the series of articles on "Men Who Are Making America," of which commendatory mention was made by Mr. Pierce in his "Family Circle Talks," in The Wisconsin Farmer of September 28th, we take this occasion to state that the magazine mentioned was Leslie's Weekly. The series is still in progress and is proving to be one of the biggest and best magazine features now being published.

Some Good Dairy Rations.

ONE of our subscribers, Mr. M. S. Elam, asks for information in regard to the feeding of a dairy herd made up of Jerseys. He has a supply of alfalfa and clover hay on hand, corn is selling at from 80 to 85 cents a bushel, oats 45 cents a bushel. Oil meal is worth $41.50 a hundred and cottonseed meal $41 a hundred. Bran is selling for $26 a ton and standard middlings for $29 a ton. The question with Mr. Elam is to bring his dairy herd to the point of highest production and at the same time he desires to reduce the cost of production to the lowest possible point.

This problem was submitted to Mr. L. S. Gillette, of the dairy husbandry department of the Iowa Agricultural College, who points out that the first prerequisite to economical feeding of the dairy herd is a liberal use of such roughages as clover and alfalfa. One may safely feed all the ensilage and hay that the dairy herd will clean up. One must bear in mind, according to Mr. Gillette, that the right interpretation must be placed upon the matter of economy when it comes to handling dairy cows. If a Jersey cow capable of giving thirty pounds of milk a day is fed only enough for twenty pounds in order to cut down the feed bill, the carrying out of this policy will be false economy. The cows should be fed enough to produce a maximum flow of milk, and the cow that is milking heavily should not be allowed to gain perceptibly in weight. This gain or loss in weight will be affected by the amount of grain fed, and it is, therefore, important to adjust it properly.

Coming now to the foods mentioned. Mr. Gillette points out that corn can be used to give the cow energy, and it is the cheapest source of energy of any of the foods. Cottonseed meal is preferred rather than oil meal, particularly so when there is a supply of ensilage, alfalfa and clover hay at hand. Bran is cheaper than oats and more desirable than middlings for dairy cows. A very good ration would be one made up of two parts of corn-and-cob meal by weight, one part cottonseed meal and one part bran. Feed one pound of this mixture for every two and one-half or three pounds of milk that the cow produces. This grades the ration in accordance with the capacity of the cow.

Another good mixture would be one composed of four parts of corn-and-cob meal, three parts each of ground oats and bran, and one part cottonseed meal. This mixture is more bulky than the first, a little cheaper from the energy standpoint, and less liable to throw the cow off feed. Five pounds of the first mixture mentioned would be equal to seven of the second in nutritive value. It should be remembered that five pounds of alfalfa is more than equal to four pounds of bran in feeding value, and some dairymen have succeeded in cheapening their ration by cutting the alfalfa hay into small lengths and mixing it with the grain ration. Where a cutting outfit is at hand, it is advisable to follow this plan.

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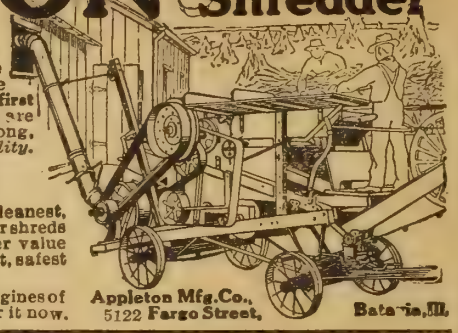

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With Wisconsin County Agents.

Facts of Interest Fresh From the Fields of This State—Illustrating the Work of County Agricultural Agents.

THE following reports from the counties named give some interesting facts in connection with the county agricultural representatives' work in Wisconsin. These men are familiarly spoken of as the "county agents." The term is rather misleading, but it has been used extensively by the federal department of agriculture in its literature and it is difficult to get away from the name. In Wisconsin official life these men are spoken of as "county agricultural representatives."

Ashland County.—Representative Post aided the farmers of the county in assembling and presenting at the state and county fairs, exhibits which indicated the variety and excellence of the county's crops. At the state fair he was able to interest a considerable number in the farming opportunities of his county. Ashland, is, as yet quite new agriculturally. New settlers are coming in and need just such assistance as the agricultural representative can give. At the county fair he served as superintendent of the live stock department.

Barron County.—The county representative has been urging the farmers of this county to grow better potatoes by proper selection of seed and by furnishing proper field conditions for growth. He reports that last year the potato exhibits of the county were of very medium quality. This year at the Northern State Fair at Chippewa Falls, Barron got first on their county booth; first, second and third on Rural New Yorker exhibits; first and third on Green Mountains and first on Burbanks. As a result of this exhibition many inquiries were made for seed potatoes.

Burnett County.—Since his appointment in June Representative Briggs has devoted considerable time to the improvement of farm crops and the raising of better live stock. He has already helped to organize several farmers' clubs. During the past month he has been working with his farmers in selecting field potato hills that show good, rigorous growth, have good, sound tubers, and many of them in a hill. The hills were marked and before the whole field of potatoes was dug, those selected were first and will be used for planting next year.

Douglas County.—The representative acted as general superintendent of the newly established county fair. There were exhibited at least twice as much stock and at least three times the amount of agricultural exhibits ever shown in the county. He has aided ten farmers in building silos.

Eau Claire County.—G. R. Ingalls spends more time teaching, perhaps, than any other Wisconsin agricultural representative. He teaches agriculture to students of the county teachers' training school the first three days of the week. It is thought that these young men and women who go out as teachers into the rural schools of the county can do much in the way of co-operating with the county representative in all things of an agricultural nature and from reports, this co-operation has been mutually helpful and profitable. The last three days of the week during the month Mr. Ingalls spent among the farmers inspecting potatoes, giving information about handling soy beans and other farm crops.

Forest County.—Swenehart has probably done more work than any other county representative in the state in helping to organize village, city and business people into commercial and development clubs. The purpose in doing this is to stimulate greater interest and to create a more hearty co-operative spirit between the farmer and the business man. The result of the summer's work ended in a large gathering of farmers and city people at a fall harvest festival. Farmers exhibited products of the shop and store at the same time and place. Speakers were secured, exhibits judged and prizes awarded. Taking it all in all, a wholesome spirit prevailed and much good for the entire community has resulted.

Langlade County.—Through the efforts of the agricultural representative, 436 cows were tested, ninety-four producing sufficiently well to be placed on the honor list.

Lincoln County.—More than thirty different alfalfa field plots are grown in this county under the direction of the representative. Of these practically 90 per cent are successful.

Oneida County.—Recently a party of University Regents accompanied by President C. R. Van Hise and Dean H. L. Russell, visited this county to acquaint themselves with the nature of the county representative work. They visited the farms of several men with whom the county representative has co-operated and learned of his real usefulness to the farmers. They were surprised to hear them talking about rhizoctonia, potash and bordeaux mixture, and to hear them say that by the improvement of their potato crop, they had sold their last year's product for seed at an increase of fifty cents a bushel over the market quotations. They also saw many pure-bred animals selected for the farmers by the county representative.

Polk County.—More than two hundred varieties of agricultural products were shown and about fifty farms represented in the county exhibit assembled and shown at the state fair under the direction of the agricultural representative. Agricultural representative Klinka has, during the past year, made the following trips with groups of young men and farmers to different places of interest: 100 men to stockyards at South St. Paul; seventy-five men to Spooner Experiment Station; and twenty men to Short-horn and Guernsey herds in St. Croix county. During the past month, Mr. Klinka judged twenty-six school gardens, helped to plan several barn-ventilating systems, surveyed a marsh for drainage and aided farmers in the selection of seed corn.

Portage County.—The Portage County Calf Club, encouraged by Mr. Coyner, was a great success. There were thirteen contestants, one of whom was a girl. Their ages ranged from ten to eighteen years old. Each contestant cared for his or her own animal and kept careful records concerning it. There was not an inferior calf in the entire lot.

Price County.—It often falls to the county representative's lot to see to it that the local county fair be made a success from the standpoint of numbers and variety of farm exhibits. By virtue of his position and his work, the agricultural representative is able to suggest and to advise farmers how to put up and locate such exhibits. The county fair, the stump-pulling demonstration and the harvest festival were signal successes due largely to the efforts of the county representative working co-operatively with local committees.

Rusk County.—Among the leading lines of work carried on by the representative during the past month may be mentioned testing sixteen head of cattle for tuberculosis, judging exhibits at the local county fair and assisting in buying a carload of high-grade Guernsey heifers. Perhaps no one thing has helped the representative work in Rusk county as much as the potato booth at the county fair. It was the talk of the fair, and a big boost for better potatoes in the county. The members of the Boys' and Girls' Club sent in splendid exhibits and the county has around 1,500 bushels of pure seed for sale.

Sawyer County.—The representative co-operated in holding a large land-clearing demonstration. The business men supported the demonstration and did all in their power to make it a success. Among some of the other things the county representative did last month may be mentioned the following: Tested milk, cauterized calves horns, selected seed corn for farmers of the county, judged exhibits at the Indian fair on the reservation and worked with the Boys' and Girls' Clubs of the county.

Taylor County.—More than ever before the representative is being called upon to aid in making the local county fair an educational and financial success. He also helped to hold the county's Third Annual Plowing Contest. Relative to the benefit one farmer derived from similar contest last year, the representative reports "Mr. ————, who won the Tamworth boar at the Plowing Contest last year, has developed it into a splendid animal. He had one litter of pigs which proved to be so popular that he could have sold dozens of them if he had them. Among some of the other leading lines of effort this month were the soliciting of farmers to pledge almost 400 cows toward the formation of a cow-testing association, assisting in selecting seed corn, and aiding in carrying on poultry projects.

Vilas County.—With the advent of more new silos each succeeding year, this county is rapidly developing into a dairy section. The county representative was especially busy last month assisting four different farmers in the building of stone and concrete silos. Among some of his other leading lines of work may be mentioned, working among farmers in assisting them to secure exhibits for the Vilas county state fair booth, acting as one of the judges at the Taylor county fair and assisting in picking corn.

Walworth County.—While in charge of the county exhibit at the state fair, the representative distributed over 1,000 booklets including the names of the county's foremost live stock breeders and growers of pure-bred grains.

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The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Hominy in War Days.

To the Editor:—I read with interest what you had to say about "hominy" and "samp." Those words take me back to '54, or about that time, when as a boy I lived in Wayne county, New York. Long about a couple of weeks or so after the corn was cut and "stooked" mother would say, "Boys, you go and husk a basket of corn, pick out the best ears, and shell it and take it to the mill and have it ground half samp and the other half corn meal." When we would get it home mother would spread a sheet upstairs near where the stove pipe came through the floor and spread the samp and meal out to allow the air to come in contact with it so it would not get "het." We boys could hardly wait for mother to "hatch up" a Johnny cake made out of that yellow corn meal. My, but it was good! Then the next day she would cook a kettle of samp which we would eat in milk, not milkman's milk but cow's milk.

The corn was ground in an old-fashioned "grist mill" which ran two burr of stone (I guess that is the proper way of describing it). As a rule, we would find "Uncle West," the miller (a veteran of the war of 1812), sprawled out on two or three half-filled sacks "pecking" the working side of a burr.

A few years ago my wife bought a package of hominy. It had a commercial taste, as though the goodness was all worked out of it. It was made of white corn. I wrote the manufacturer and suggested that they use yellow corn, as that was the kind the old-fashioned Yankees were used to. I don't recall to mind what their reply was, but it was to the effect that it would not do to use yellow corn. The white hominy reminded me of the face of a corpse about as much as anything.

Those old-fashioned custom grist mills of "befor de wah" days take a grist of wheat, corn and oats, buckwheat or anything. It would be put in the hopper, then the miller would take a measure that held a tenth of a bushel and take his "toll," a measure for each bushel, and the customer take home the rest. Then mother used to make hulled corn. She knew just how much good beech and maple ashes to use to make a lie to remove the hulls. I tell you, those yellow corn products used to lay up alongside a fellow's ribs in great shape. During those early days, owing to the war between the allied powers and Russia, wheat went up to $2.50 a bushel and the ordinary people had to live on corn meal. I acquired a fondness for corn bread at that time that has always stayed with me, and when in the army, if I could get hold of a little corn meal, hard-tack lost all its charms for me.

S. E. Chandler.

Hennepin Co., Minnesota.

Mechanical Milker a Labor Saver.

To the Editor:—I have noticed some comment in your paper regarding milking machines. I have used a mechanical milker for three years and I find it one of the greatest labor-saving devices for the modern dairyman. Any man with ordinary intelligence can operate it and the cleaning of it is the easiest part. Furthermore, I consider the milking much cleaner than with hand milking. Orie Steele.

Rock Co., Wisconsin.

Mr. H. E. Krueger, of Beaver Dam, sustained his reputation as a grain grower and seed breeder at the recent international wheat show, held in Wichita, Kansas. He won first on hard red spring wheat; first on durum wheat; first on soft wheat; first on two-rowed barley; first on hulless barley; first on six-rowed barley, and sweepstakes on six-rowed barley.

In and Around Wisconsin

COMING EVENTS.

Wisconsin Potato Growers' Association and State Potato Show, Eau Claire, Wis., November 21st to 24th.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.

International Live Stock Exposition, Chicago, Ill., December 2d to 9th.

Wisconsin Dairymen's Convention, Waupaca, Wis., December 5th to 7th.

Wisconsin Buttermakers' Association, Sparta, Wis., December 5th to 7th.

Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

The Wisconsin Live Stock Breeders' Association issues the following:

To prevent the introduction of hog cholera, it is wise to quarantine all animals and persons coming from a suspected farm; to pasture hogs at some distance from highways, railways and contaminated streams; to feed a laxative diet, avoiding much new corn. When cholera appears in the community, have an experienced person vaccinate all healthy hogs with hog-cholera serum. Disinfect often all troughs, pens and yards with quicklime. Serum will not give good results if worms, indigestion or other diseases are present. Keep the hogs healthy.

Mr. V. E. Brubaker has been recommended for the appointment of agricultural representative for Bayfield county, Wisconsin. Mr. Brubaker was born and raised on a large farm in southwestern Ohio. He is a graduate of the College of Agriculture of the Iowa State University, having specialized in horticulture and animal husbandry. For some time he has been associated with the growers' service department of the H. J. Heinze Company, with headquarters at Grand Rapids, Michigan.

J. L. Tormey, secretary of the Wisconsin Short-horn Breeders' Association, recently received a telegra from a leading buyer in California, asking whether a carload of Wisconsin registered "milking" Short-horns could be secured for early delivery. The purchasers desire young stock from dams having a record of 300 or more pounds of butter fat in a year. Such telegrams are considerable encouragement to the milking Short-horn breeders. The Short-horn interests of the state are planning to hold a special sale and exhibition in Madison this winter. The American Short-horn B eeders' Association has offered $250 in prizes for this exhibit.

The junior sire, King Segis Johanna, out of the thirty-one-pound three year old owned by the Pabst Stock Farm, of Oconomowoc, was consigned to the Watertown sale, which took place on the 25th and 26th of October. We are much pleased to report that three prominent breeders of Wisconsin, Messrs. Mucklestone, Howell and Schwartz, were enterprising and far-sighted enough to pool their interests and purchase this splendid young bull for their combined use. The bidding was rather brisk, but the purchase price of $1,625 was low considering the splendid breeding and conformation of this young animal.

It must be considered that the sire's dam has a record of thirty-eight pounds and the sire's dam a record of over forty pounds, and the dam of the calf a record of thirty-one pounds as a three year old and the third dam a record of over thirty-three pounds, which makes an exceptionally good average. It must be further considered that the pedigree is strong in Pontiac Korndyke breeding combined with that of Hengerveld De Kol and De Kol 2d's Butter Boy 3d, and it is easily seen that this combination should result in high production and breeding of an exceptionally superior type.

This co-operation between neighboring farmers is certainly worthy of emulation, as the offspring from this bull will be decidedly more valuable than if each man had purchased a bull at $500 or around that sum.

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New 1917 Velie Six Touring Sedan Complete —Substantial Limousine Top with Removable Glass Sides.

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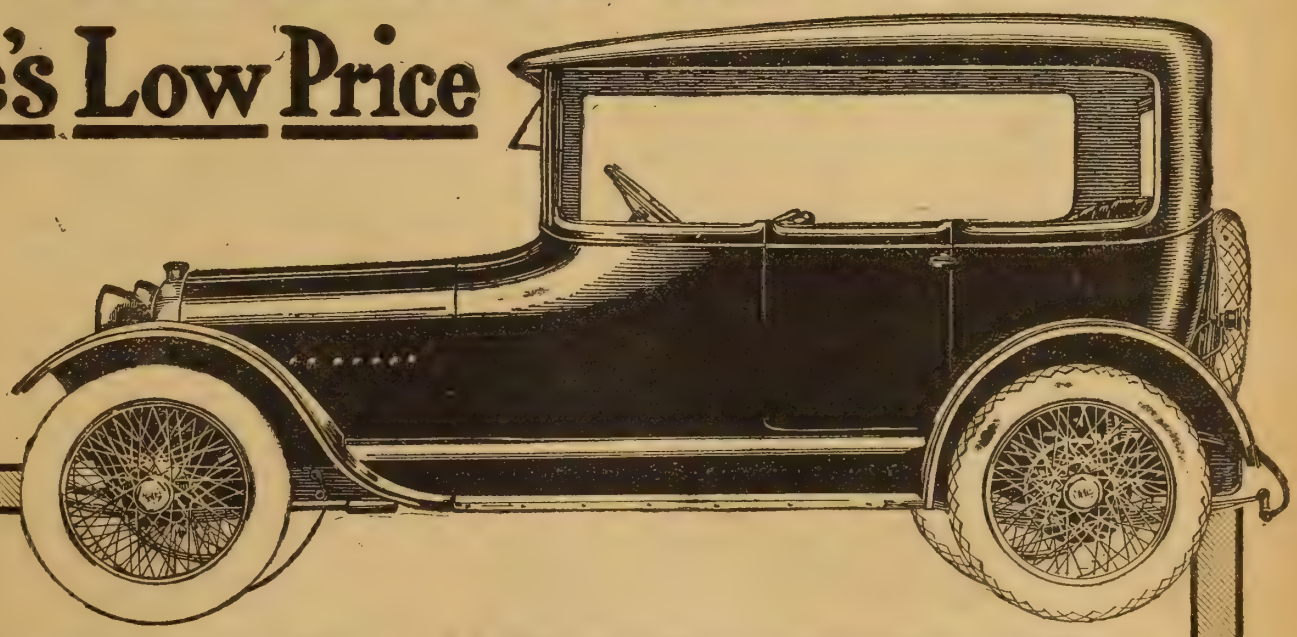

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It is a closed car and open car all in one—instantly adaptable for winter or summer—rain or shine—an *exclusive* car that you will be proud of in any company.

WITH the Velie's fine genuine leather upholstery, it is a body that well befits the powerful Velie Continental motor equal to any road and grade—Timken Axles front and rear—multiple disc clutch—long, easy-riding underslung springs. And with it goes all the accessories and equipment of the complete car—push button starting—double bulb headlights—automatic ignition—vacuum feed—rear gasoline tank.

See this remarkable car at your nearest Velie dealer's. There are eight new Velie body styles. Touring Car, $1085. 7-passenger Six, $1550. Ask for Catalog.

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$1085-Velie Biltwel Six Touring Car

Uses of Automobile on the Farm.

Letters to The Wisconsin Farmer Show That Our Readers Regard the Automobile as Having a Most Important Place in Connection With Rural Life.

At Sixty-Nine Years Drives His Own Car.

To the Editor:—Being an old man past sixty-nine years of age, I do not drive my auto for pleasure as much as a younger man would, and have made no long trips—the longest being one of about 100 miles for pleasure through Clark and Wood counties earlier in the season, but I use the car for business whenever occasion requires and the roads are in decent shape.

Up to last spring I used a small car and used the original set of tires for three seasons, making about 7,000 miles with them, and they were in fair shape when I took them off and might have made a thousand or two more miles with proper care, as the hind tires were relined, but didn't want to be caught in trouble on the road and put on a new set of tires. I never exposed the tires to much mud, or extreme heat or sun, if avoidable, generally leaving car in garage when in towns on business and at home always kept car on plank floor and kept tires properly inflated, it being my conviction that a car is like all other farm machinery and will suffer more from rough usage and exposure to mud and rain and the sun's heat than from actual and intelligent use, which includes the avoidance of striking sharp stones, nails, tacks and glass while driving.

As to the mileage per gallon of "gas," there is a great variation, as in heavy roads or cold weather the car uses more gasoline than in warm weather, my small car in warm weather and good roads averaging around twenty miles to the gallon. On one memorable occasion in July, 1913, I filled up the gas tank at a garage about 11 o'clock a. m., drove seventy-seven miles, according to the speedometer, which I figured was about correct, did business in three widely separated places as an insurance adjuster, and arriving home about 6 o'clock p. m., measured contents of gas tank and found only a little over two gallons used, but the roads were fine and only two of us in the car. I have a new heavier car now and as near as I can judge it makes about fifteen miles per gallon of gasoline, and I use my car principally in attending to business, being interested as an officer in two mutual companies (fire and windstorms) and a member of four different banks, in board of education work and other places. I do not use car much in winter and rough weather, preferring then to travel on railroad when possible, and also keeping always a good driving team.

P. N. Christensen.

Marshfield, Wisconsin.

Use Car to Deliver Vegetables.

To the Editor:—I must say that myself and family get untold pleasure out of my car. We live a mile from town and go in almost any kind of weather. The car is in the shed and any one of us that can run it has the privilege to do so. I let the children, who are able to run it, run it whenever they wish if it is in good working condition. In this way we get a great deal of pleasure from it.

We go on many fishing trips and picnics which we would not have enjoyed if it were not for the car.

The largest number of miles we have traveled without having the tire off the wheel is about 4,000 miles. We notice the tires last much longer if we keep them pumped up well.

Besides pleasure driving our car has been valuable to us in fair time. We have a truck garden and raise small quantities of many different articles. We also raise many different kinds of fruit and some grains. This year I went to five different fairs and took an auto load of things. I took as high as thirty-five articles, including fruit and grains, which I could not have sent any other way, and had them arrive in good condition. My children also peddle vegetables and fruits to people around town with the car. In this way our customers receive good, fresh edibles right out of the garden.

We also drive our car in winter. Indeed the side curtains are on it is comfortable riding. We have had the car five years and it is still running well, in spite of the hard driving. We know it would be impossible to get along without it now.

J. E. Schroeder.

Grant Co., Wisconsin.

Auto Cheaper Than Another Team Would Be.

To the Editor:—We have a car out of which we get a great deal of pleasure, because it takes us places where we want to go so much quicker than horses could. For instance, we can go to Dodgeville, the county seat, a distance of eight miles, after the chores are done in the evening, and whatever is going on there, whether it is a band concert or church service, we can enjoy it just as well as those who live only half the distance away. It brings us closer to the city.

We have not taken any long tours or not further than to be able to return the same day. We have taken several such trips and enjoyed them, when without the automobile we would not have gone at all. It brings us closer to our friends and helps to make new acquaintances.

I get from sixteen to twenty miles from a gallon of gasoline. I think a person can save gasoline by using good judgment in the use of the feed and ignition levers and in the general care of the engine.

I have worn out the first set of tires, which went from 3,500 miles to 4,000 miles. I think tires wear more in mud where there is flint and on rough, frozen roads. Also care in slowing down for corners will save considerable, but straight going on smooth roads does not wear tires but very little, in my opinion.

My wife gives music lessons and uses the car in getting from place to place. I have hauled calves and sheep to market and potatoes home from town, which has saved me time. I have had the automobile two seasons now and have run over 5,000 miles. It has cost for gasoline and all other expenses about 3 cents a mile. I have no doubt some drivers have driven on less, but it saves me from keeping another team of horses, which would cost more than that and would not get us where we are now able to go.

Roy Farwell.

Iowa Co., Wisconsin.

Carries Cream to Station.

To the Editor:—I have driven an automobile for eleven years and have had no accident worse than running over an occasional chicken. The speed limit with me has always been and is now eighteen miles per hour. We have taken no long trips except to go to the tractor demonstration at Madison this fall. I have made as high as 9,000 miles on one tire. I find that if the tires are kept well inflated they will last longer than if they are permitted to run soft. My car hauls everything we have to haul about the farm, weighing up to 1,000 pounds. I take the cream to the station every morning in the car. Have driven in the wintertime whenever it was possible.

Math Michaels.

Fond du Lac Co., Wisconsin.

Don't "Monkey" Too Much With the Car.

To the Editor:—When we bought our car six years ago, the first consideration we had in mind was business and pleasure as a second thought. While we have not taken any extended trips, yet we have spent many a pleasant day, as it enables us to get out together, there being my wife and five small children. The first two years I ran the car I kept close track of running costs with all kinds of loads and all kinds of roads. For two years my mileage was twenty-one and one-half miles to the gallon of gasoline. As for tires I did not have any trouble running six years on two sets of tires. I have two or three tires now running with 10,000 miles to their credit. Don't run tires with low air pressure, but keep it up to the pressure suggested by the makers of the tires. Our car is used about every day, winter and summer. The cost of repairs on our car in six years has been very little. I do not run too fast—take it slow—keep the proper amount of oil on hand and don't court trouble by trying to change things from the way they were the day you bought the car.

H. A. Martin,

Richland Co., Wis. Breeder of Red Polled Cattle and Berkshire hogs.

Drives Car Nearly All Winter.

To the Editor:—We have a great deal of pleasure out of our automobiles. It gives us an opportunity to go to entertainments, parties, picnics, on pleasure rides and also hunting and fishing and out on Sundays. We have taken one trip through eastern and northern Wisconsin and have found the automobile a very great help when we have had to get the doctor in a hurry.

I have been averaging about twenty miles to a gallon of gasoline and to get the best wear out of the tires I have been changing them around, namely, reverse the order of running. I always keep the tires fully inflated and repair small injuries to the casing with rubber gum. We have been getting about 4,000 miles out of our tires. I seldom use a team on the road any more, but use the car for business trips except when I have to haul heavy loads. I have been driving nearly all winter unless the snow gets too deep. It is always warmer riding in an auto than with a team and buggy.

O. J. Leu,

Proprietor Linden Farm, Wood county, Wis.

Where His Car Came in Handy.

To the Editor:—I bought my car the 16th of August, three years ago, and the right front casing was never off until last Saturday. It had been driven 5,500 miles. That casing is good for 500 more miles. The tire is over three years of age. The others were driven from 4,000 to 5,000 miles. Have just put new ones on this summer. So you see my tire expense is very small. I always know for sure that they have the right amount of air pressure. I carry a tire tester in my car at all times. I have only had one blowout and three punctures on all of my trips. Keep a tester and use it. We use our car for our trips to town, for business and theater in the evening. I had two breakdowns in harvest with machinery and then is when the car came into play for real profits. The team went ahead mowing and I drove away for repairs. I broke the axle in my hay loader one evening just at quitting time. I did the milking, went four miles with the car, drove out into a farmer's field where stood an old hay loader like mine, drove up in front of it so that the lights of the car shone well in the old loader, took out the axle in the night and tied it on the fenders and got home at 10:30 o'clock, fixed up while the dew was on the next morning and was ready for haying again. I drive in the wintertime lots.

I cannot tell you just how much pleasure we get from our machine, that is hard to answer. We make so many trips of pleasure, such as picnics, field days and fairs away from our own town, that if we did not have a car we could not attend at all. It is too many hard trips for our team when they are working hard.

In regard to long trips, we went to the "Dells" of the Wisconsin river last Saturday and Sunday. We drove that trip, 148 miles, on seven and one-half gallons of gasoline, or twenty miles to the gallon. Last summer we went to visit the cyclone country on "Boma Ridge." We made eighteen and one-half miles to the gallon of gasoline. We climbed five big hills on that road; you know Crawford county is rough. I have had the car over three years. When it was new I kept track of gas on a 150-mile trip. I made that on ten gallons.

Our car has had good care, has been kept clean and polished with a preparation we buy. It shines like a new car. Have never had a breakdown of any kind. Have always come home with its own power. Have pulled in one car with it and pulled a forty-horse-power machine that was broken down in sand, out of the road backwards.

Don't hit stony places in the road hard with your tires. Drive carefully for safety and tire expense. My experience has been not to use a high level of cylinder oil. It makes dirty spark plugs and a logy engine.

Richland Co., Wis. R. A. Robbins.

A 12,000-Mile Tire Record.

To the Editor:—A year ago we took a 1,000-mile trip through Iowa in our car and we certainly had a fine time. We had no bother to speak of and made an average of eighteen and one-half miles to the gallon of gasoline.

We get a great deal of pleasure out of our car, but it is difficult to estimate how much, as sometimes the roads are bad and we cannot take the car out and have to take a horse and buggy instead. I ran one tire between 12,000 and 15,000 miles. My experience is that you must keep the air at the right pressure. My tires are 34x4 and they should have seventy-five to eighty pounds' pressure at all times. You ask a good many men how much pressure of air they have in their tires and they will tell you seventy or seventy-five pounds. Then if you will put the tester on and get the truth of the matter you will find they only have thirty-five or forty pounds.

We use our car for hauling anything which we can get into the car and it certainly saves the horses many a hard trip. I predict that it will not be very long before you will find an automobile truck on every farm.

Al Beaumont.

Lafayette Co., Wisconsin.

Auto a Good Paying Farm Investment.

To the Editor:—We get a great deal of pleasure from our car. We have taken some trips, not long, but one-day trips. Have gone to Dixon, Illinois, a distance of sixty-five miles; have gone to Delavan, about the same distance. Gone to Platteville, same distance; Madison, forty-five miles; Milwaukee, 105 miles; Watertown, seventy miles.

We get around thirteen miles to fourteen miles to a gallon of gasoline. I find that coasting on down grades helps in mileage. We average about 4,500 miles on one tire, keeping tires well inflated. Tires below what the makers recommend rim cut, loosen the fabric and cause to blow out in short time.

I find that the farmer needs an auto as much as he needs a team of horses, at times for repair work when a machine is broken, when horses are tired and many other times. The auto will pay for itself as much as any machine when used with judgment.

Green Co., Wis. L. G. Legler.

Flinty Roads Hard on Tires.

To the Editor:—My family and I get a great deal of pleasure out of our automobile and we use it also a great deal for business. We live about five miles from town and we find the car is certainly a very handy thing to make a quick trip in the busy time.

With our car we have been able to get on the average of from eighteen to twenty miles on a gallon of "gas." I have not discovered any methods of driving or caring for the car which will make a much better record than this. I have gotten about 4,000 miles out of one of my tires. This is not such a very good mileage, but the roads in this locality are very hard on tires owing to the flinty hills.

I took one trip to Randolph, Nebraska, with my car a year ago. It was a little over 500 miles. It was certainly a very enjoyable trip. We made it in a little better than two days.

I think that the automobile is by far the best means of communication between town and the country.

J. M. Blotz,

Garrison Grove Stock Farm, Breeder of Short-horn cattle, Iowa county, Wis.

Fruits and Garden

Keeping Celery.

J. R. Hepler, of the horticulture department of the Wisconsin College of Agriculture, gives the following advice for methods of storing celery:

Keep the roots moist and the tops dry. Take up the celery, roots and all, trim off a few of the outside leaves and plant it in the cellar or a hotbed pit. If the ground drys out moisten the roots, but take care not to let any water touch the tops, otherwise the celery will rot.

The crate-storage method is to use half-blanched celery and pack it in bundles of ten or a dozen stalks; the bundles are placed in crates. If kept at a temperature of about 32 degrees celery may be preserved three or four months by this method.

For Christmas use the green variety is preferable to the half-blanched variety and may be kept planted in the cellar at a temperature ranging from 40 degrees to 45 degrees. A slight freeze will not hurt it, but a severe one will.

For protecting celery out in the field nail two boards together V-shaped, invert them over the row and turn a furrow of dirt over it for covering. Celery protected in this manner should be used before the ground freezes solid.

Score in Potato Judging.

The score card has been arranged for boys' and girls' potato clubs' judging contest to be held at the annual Wisconsin Potato Show at Eau Claire, November 21st to 24th. These judging classes are open to all boys and girls between the ages of twelve and eighteen years. The first prize is $5 and one-half bushel of standard seed. The second prize is $4, the third prize is $3 and the fourth and fifth prizes $2 and $1 respectively. In each instance standard seed is also given as a prize.

The perfect score in the judging is represented by 100 points. Fifty-five points are allowed for conformity to correct type. The points allowed for a perfect score in this division are: Uniformity, 12; shape, 15; size, 8; surface, 10; eyes, 10. Forty-five points are allowed for quality and condition divided as follows: Skin, 15; flesh, 12; disease, 15; neatness in arrangement, 3. All exhibits must be true to variety and no sample unworthy of merit will receive a premium, regardless of competition. A range of one ounce below or above the suggested limit of size is considered reasonable. The suggested sizes for varieties are as follows: Rural New Yorker and Green Mountain, ten ounces; Early Ohio and Early Rose, eight ounces; Triumph and Irish Cobbler, seven to eight ounces. Any general infestation of disease disqualifies exhibit and severe cutting on such sample is recommended.

A Wisconsin Orchard Which Pays.

To the Editor:—It was my privilege to visit M. F. Foley's orchard just outside Baraboo, situated on an eastern and northern slope, nice clay soil, a heavy crop of clover on the ground. This orchard was planted ten years ago with four-year-old trees and has borne for the last five years—the last three years so heavy that the trees have had to be propped up to prevent breaking.

Wealthy, McIntosh and 156 Northwestern Greening are annually producing from ten to thirty-five bushels per tree of perfect, large-sized fruit. My visit October 5th found the Wealthy all sold at $3.10 per barrel—the Greenings held at $3.50 and soon after picked and shipped to South Dakota in three carload lots. This orchard is in clover and cultivated one year and reseeded. Mr. Foley usually sprays three times. First, when the blossom shows pink; second, when the petals are falling—then ten days after. This year he did not spray the third time, yet his fruit was perfect. When Mr. Foley saw the big promise of a crop at the time of the great heat and drouth he drew on nearly 1,000 barrels of water and that is one cause of the bountiful crop. It is the man behind the orchard that makes this great success.

Mr. Foley is preparing forty acres about three miles east on the south side of the river to plant next spring to Wealthy, McIntosh, Jonathan, Northwestern Greening, Salome and some Delicious. These are to be set 32x32 feet. The old orchard is 28x28 feet, which was too close. Mr. Foley furnished 137 bushels to help make the show at the Wisconsin State Fair this year. Wisconsin, but for a few localities, would have had very little or no free fruit this year.

There are tens of thousands of acres of just as good orchard grounds as Mr. Foley's. All it wants are men with brains and muscle to select, prepare, plant, prune, spray and harvest.

Polk Co., Wis. Geo. J. Kellogg.

Electrical Stump Blasting.

To the Editor:—Electrical blasting has many advantages over the old style cap and fuse method. It is much safer and cuts down the cost of stump blasting from one-third to one-half on large stumps. It is almost impossible to remove these by placing the entire load in one hole, resulting in only a portion of the stump being blown out.

By the use of a small inexpensive blasting machine and the employment of electrical firing one may place from two to four different charges, according to the size of the stump, equally spaced. Usually I allow one extra pole for each foot in diameter across top of stump up to five feet. These should be drilled with a one and one-half inch auger, slanting underneath to about the center of stump.

All the holes should be drilled before any are loaded. If one should be loaded before all are drilled there is danger of drilling into the cap of the loaded charge and causing an explosion, with serious results.

With the several charges so distributed under each side of the stump properly connected, loaded and spaced, Mr. Stump is bound to come out no matter how big and tough he may be.

Stumps on high uplands are more easily blasted than those on low, wet lands, especially the green, tough ones. Where stumps on low lands have been filled in around it is many times necessary to drill two or three holes about even with the top of the ground or a few inches below, slanting downward about half way the distance through the stump, and fire these charges electrically simultaneously. This cuts the entire top off below the surface out of the way of plowing and cultivating.

My several years' experience in stump blasting has enabled me to compile the following table which may be of assistance to the amateur blaster for the blasting of green or freshly cut stumps:

Diameter of stump in feet	2	3	4	5	6
Number of holes per stump	2	3	4	4	5
Number of pounds 40 per cent dynamite per stump	3	4½	6	8	10

Use from one-third to one-half less for decayed or partly decayed stumps.

A. H. Harris.

A Few High Cows for September.

Reports Compiled From Leading Cow Associations of the State Show Records Which Are Being Made.

The following is a condensed summary of the work done during the month of September by the leading cow-testing associations of Wisconsin:

Association	Tester	No. of cows tested	No. of cows producing 40 lbs. of fat	Fat production of high cow	Owner
Manitowoc	H. R. Brewster	450	40	58.1	A. Otto
Chilton	O. Kossman	387	32	53.6	L. McGrath
Reedsburg	A. W. Wardas	311	27	60.5	F. Groat
Fond du Lac	M. H. Duel	430	21	69.9	H. Vetter
Ontario, Norwalk, and Wilton	J. Ausen	889	30	50.4	F. A. North
Stratford	Harry Johnson	387	15	50.9	H. H. Asenbrener
Waupaca & B. R.	George Moss	350	14	66.1	Peterson & Miller
Dunn Co. No. 1	E. H. Meineke	339	13	61.24	W. Zander
Mishicot	W. F. Anderson	468	12	53.7	C. Harshman
Rosendale	F. Lynn	460	11	68.0	C. A. Peterson
Alban and New Hope	M. F. Smith	280	11	57.8	C. E. Erickson
Baraboo	W. C. Johnson	452	9	57.1	L. R. Siebecker
Wood Co. No. 1	J. L. Williams	480	9	66.5	J. C. Keiffer
Empire	R. H. Monroe	434	9	62.4	E. A. Quick
Ozaukee Co.	C. G. Carlson	410	9	52.6	L. W. Ash
River Falls and Roberts	F. W. Hutchison	420	8	56.0	T. Clausing
Columbus	C. F. Wehrwein	437	7	47.3	A. Goldner
Bloomer & E. P.	R. A. Boyd	412	7	52.5	J. H. Kelly
New Holstein	F. Hinrichs	390	7	58.7	H. J. Duecker
Door County	G. Thull	273	7	44.16	R. Wolfgram
Barron County	W. J. Markoff	412	6	45.7	G. J. Gleiter
Happy Valley	W. Heebink	356	5	61.4	C. Hanson
Shawano County	C. M. Rydberg	372	5	53.0	F. Dittman
Rock County	J. Z. Feinberg	357	5	54.1	W. Rowald
Eau Claire County	E. Sutton	340	5	46.0	D. B. Strader
Stanley	R. F. Adams	428	4	54.8	J. Birkholz
Linn	G. Hedrick	397	4	53.0	P. J. Weter
Mauston	W. A. Newmann	315	4	50.3	F. Noonan
Wrightstown	F. A. Gaizer	403	4	44.7	G. Bruss
Kewaunee	H. F. Brandt	461	4	54.2	G. Erickson
Sparta	C. P. Chryster	318	2	47.8	J. W. Leverich
Wood Co. No. 3	L. W. Townsend	190	1	40.0	Piert & Hutchins
Winchester	I. H. Toolajian	400			

A Wisconsin dairy institution

The growth of a live Wisconsin dairy institution is illustrated by the success of the Twin Town Cheese Factory in Barron county. This factory started July 1st and there were twenty-two patrons that month. In October the number had increased to fifty-three, more than doubled.

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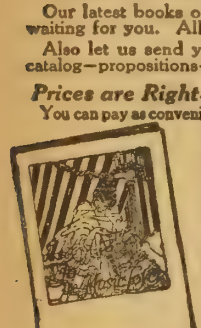

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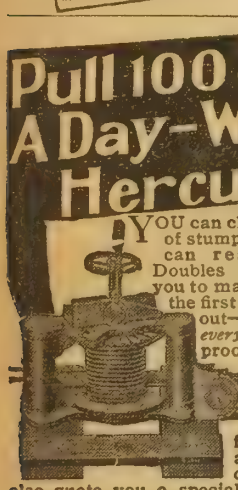

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International Exposition Judges.

Names of Those Who Will Be Judges in the Various Classes at the Coming Show Held in Chicago from December 2d to 9th.

THE executive committee of the International Live Stock Exposition has taken special pains this year to obtain the services of men for the work of judging who have special qualifications for passing upon the various breeds and upon the classes within the breeds. It will be noted that the list of judges include two from South America, namely, Pedro T. Pages, who will judge in the breeding Short-horns, and Carlos M. Duggan, who will judge the grade and cross-bred steers and determine the championship in the steer classes. Following is a complete list of the judges:

CATTLE.

Short-horn (Breeding)——Pedro T. Pages, Buenos Aires, Argentina; (milking) H. Barton, Macdonald College, Montreal, Que.; (fat) James Tomson, Carbondale, Kan.

Aberdeen Angus (Breeding and fat classes)—John D. Evans, Sugar Grove, Ill.; H. J. Hess, Waterloo, Iowa; A. A. Armstrong, Camargo, Ill.

Hereford (Breeding and fat classes)—Frank W. VanNatta, Fowler, Indiana.

Red Polled (Breeding and fat classes)—Adolph P. Arp, Eldridge.

Galloway (Breeding and fat classes)—E. A. Trowbridge, Columbia, Missouri.

Polled Durhams (Breeding classes)—J. P. Rusk, Urbana, Illinois.

GRADE AND CROSS-BRED AND CHAMPION.

Steers—Carlos M. Duggan, Buenos Aires, Argentina.

Carload Fat Classes (Two and three years old)—Eugene Tamblyn, Union Stockyards, Chicago, Ill.

Carload Fat Classes (Yearlings)—Thos. Cross, Union Stockyards, Chicago, Illinois.

Short Fed Specials — Thos. Cross, Union Stockyards, Chicago, Ill.; Eugene Tamblyn, Union Stockyards, Chicago, Illinois.

Carload Feeder Cattle—Harry Schirding, Petersburg, Illinois.

Carload Cattle—Championships—Thos. Cross, Union Stockyards, Chicago, Ill.; Eugene Tamblyn, Union Stockyards, Chicago, Ill.; Jas. Brown, (Referee), Union Stockyards, Chicago, Ill.

Steers Entered for Slaughter—John Gosling, Kansas City, Mo.

Carcass Cattle—Samuel T. White, Chicago, Ill.

SHEEP.

Shropshire—H. Noel Gibson, Dundee, Ill.; J. C. Duncan, (Alternate), Lewiston, N. Y.

Hampshire (Breeding and fat classes)—Wm. H. Renk, Sun Prairie, Wis.

Southdown (Breeding and fat classes)—H. L. Compton, Monroe, Ohio.

Lincoln (Breeding and fat classes)—John T. Lethbridge, Glencoe, Ontario.

Cotswold (Breeding and fat classes)—J. D. Brien, Ridgetown, Ontario.

Dorset (Breeding and fat classes)—Walter C. Coffey, University of Illinois, Urbana, Ill.

Oxford Down (Breeding and fat classes)—J C. Williamson, Xenia, Ohio.

Cheviot—F. E. Dawley, Fayetteville, N. Y.

Leicester (Breeding and fat classes)—G. B. Armstrong, Teeswater, Ontario.

Romney—Walter C. Coffey, Urbana, Illinois.

Exmoor Horn—David McKay, Fort Wayne, Indiana.

Rambouillet—W. H. Cole, Spring Grove, Ill.; E. L. Davis, Flint, Mich.; John E. Webb, Southport, Ind.

Grade and Cross-bred Champion—David McKay, Fort Wayne, Ind.

Carload Sheep—Geo. Myers, Union Stockyards, Chicago, Ill.

Carcass Sheep—H. A. Phillips, Union Stockyards, Chicago, Ill.

SWINE.

Berkshire (Breeding and fat classes)—W. E. Spicer, Bushnell, Ill.

Poland China (Breeding and fat classes)—J. M. Kemp, Kenny, Ill.

Duroc Jersey (Breeding and fat classes)—R. C. Watt, Cedarville, Ohio.

Hampshire—Chas. Marker (Breeding classes), Auburn, Ill.; Harry Booth (Fat classes), Union Stockyards, Chicago, Ill.

Chester White — I. T. Cummins (Breeding classes), Xenia, Ohio; Harry Booth (Barrow classes), Union Stockyards, Chicago, Ill.

Yorkshire (Breeding and fat classes)—D. A. Gaumnitz, South St. Paul, Minn.

Tamworth (Breeding and fat classes)—C. C. Roup, Iowa City, Iowa.

Grade and Cross-bred—Felix Gehrman, Union Stockyards, Chicago, Ill.

Champions—C. A. Marker, Auburn, Ill.; Felix Gehrman, Union Stockyards, Chicago, Ill.

Carload Swine—E. R. Gentry, Union Stockyards, Chicago, Ill.

Carcass Swine—D. A. Gaumnitz, South St. Paul, Minn.

HORSES.

Clydesdale—Andrew McFarlane, Palo, Iowa; George Hutton, Madison, Wis.; W. L. Carlyle, Stillwater, Okla.

Percheron—John DeLancey, Northfield, Minn.; Robert Graham, Toronto, Ontario; A. L. Robison, Jr., Pekin, Ill.

Shire—William Bell, Wooster, Ohio; Alex Galbraith, Edmonton, Alta.; C. F. Curtiss, Ames, Iowa.

Belgian—Harry McNair, Union Stockyards, Chicago, Ill.; Robert Graham, Toronto, Ontario; Prof. W. H. Pew, Ames, Iowa.

Suffolk Punch — Richard Stericker, Aurora, Ill.

Drafters — William Bell, Wooster, [illegible]

Harry McNair, Union Stockyards, Chicago, Ill.; Andrew McFarlane, Palo, Iowa.

Sixes—C. F. Curtiss, Ames, Iowa.

JUDGES FOR COLLEGE CLASSES.

Most Instructive Carcass—D. A. Gaumnitz, South St. Paul, Minn.

Block Demonstration—D. A. Gaumnitz, South St. Paul, Minn.

Sheep Breeding Experimental Classes—E. L. Shaw, Washington, D. C.

Committee on Judges—R. B. Ogilvie, Union Stockyards, Chicago, Ill.; C. F. Curtiss, Ames, Iowa; Thomas Clark, Beecher, Ill.; Dr. G. Howard Davison, Milbrook, New York.

Potato Show Program.

The fifth annual meeting of the Wisconsin Potato Growers' Association and potato show will be held at Eau Claire, November 21st-24th. The regular sessions will be held at Fournier's Pavilion and the potato exhibits will be housed in the same building. The annual business session will be held Tuesday afternoon, November 21st. The same evening a public meeting will be held, presided over by C. P. Norgord, Wisconsin commissioner of agriculture. There will be addresses by J. W. Barron, of Eau Claire, the mayor; J. W. Hicks, of Prentice, president of the state association, and Dr. H. E. Horton, of Chicago. On Wednesday morning the topic will be potato extension work and K. L. Hatch will preside. Speakers announced for the meeting are C. P. Norgord, J. M. Coyner, of Stevens Point; George Briggs, of Grantsburg; R. L. Cuff, of Barron; G. M. Householder, of Ladysmith; Miss Elizabeth Kelley, of Madison, and E. L. Luther, superintendent of farmers' institutes. Wednesday afternoon addresses will be by J. W. Henceroth, of Chicago (illustrated); Dr. H. J. Wheeler, of Boston, and W. R. McClellan, of Greeley, Colorado. In the evening Lou D. Sweet, of Denver, president of the National Potato Growers' Association, will give an illustrated lecture. The speakers for Thursday morning are L. R. Jones, R. E. Vaughn and J. W. Brann, of the Wisconsin College of Agriculture, and a letter from E. J. Wortley, director of the Bermuda experiment station, will be read. The afternoon session will be devoted to addresses by W. A. Hayes, of Milwaukee, representing the Soo Line; H. P. Henry, of the federal department of agriculture, at Washington, and O. H. Benson, in charge of boys' and girls' potato club work in the United States. The Thursday evening program will be in charge of the citizens' committee of Eau Claire. A special business session will be held Friday forenoon, November 24th, at which committees will report and remarks will be made by C. L. Fitch, of Ames, Iowa, and E. P. Miller, of Chicago. The final session, Friday afternoon, November 24th, will be devoted exclusively to boys' and girls' potato club work. The framers of this program feel that they have prepared for one of the best potato meetings ever held in the state or nation.

UPPER WISCONSIN.

Learning to Pack Apples.

Practical lessons in improved methods of packing apples for market were given to a special class of interested people at Bayfield recently under the joint auspices of the Bayfield Fruit Association and the college of agriculture, University of Wisconsin.

Association employes and students in agricultural courses at the local high school were given practical instructions in packing a large consignment of Wealthy apples by R. H. Roberts, horticultural extension worker of the college of agriculture.

Growers in the vicinity of Bayfield who saw the packing demonstrations, as well as others who favor improved methods, are of the opinion that what is known as the "tier" system of box packing will be largely used hereafter for the first grade fruit. Barrels will probably be used for second grade product. Bayfield apple growers have been using the box pack during the past few years in preference to barrels. However, as many of them did not use close discrimination in the grading and packing, results were not always satisfactory. The "jumble" method of box packing, followed here for a time, has many of the same features which make barrel packing undesirable for the first grade apples.

Among the faults common to "jumble" packing are: Non-uniformity in size, insufficient grading for blemishes, too much variation in color, poor appearance in retail trade and lower keeping qualities.

Growers find it difficult to pack apples tightly by the "jumble" system, and hence when shrinkage occurs fruit becomes injured from shifting about in the boxes.

There seems to be a strong sentiment for the marketing of first grade fruit in standard boxes under the supervision of local associations. Providing the Bayfield district adopts this method of marketing it is certain that it will have more effect than any other one item in standardizing the output from year to year.

Get Big Cream Checks.

Fifty farmers in Barron county received $100 or more from the Barron creamery during the month of October. The list of patrons of this creamery for the month included 859 persons. The largest check was $172.52 given to Tvedt Brothers.

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GIVEN

(51)

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DAIRY

Nearing the Pound-a-Day Class.

To the Editor:—More members join for the new year. The Columbus Cow-Testing Association has just finished its year's work and is now starting on the fifth year, bigger and better than ever.

Last year there were only 318 cows in the association, but the dairymen of Columbus county are appreciating the value of this work and already 491 cows are entered for the new year.

Mr. W. L. Fritz was elected president and Mr. C. F. Wehrwein retained as tester for the coming year.

Mr. A. L. Leffingwell owns the banner cow of the association that made the most fat and the most profit. She is a grade Jersey and produced 450.3 pounds of fat, making $101.87 profit over feed. She lacked a few pounds only of being able to enter the cow-testing exhibit at the state fair, which was composed of the ten highest-producing cows from the fifty-three associations of the state.

Mr. H. H. Huggett has the highest milk producer. She is a pure-bred Holstein making 11,345 pounds of milk.

Mr. A. L. Leffingwell also had the herd that produced the most fat and had the highest profit. His herd made an average of 324.9 pounds of fat and a profit of $60.83 per cow. Following are the ten highest butter fat producing cows in the association:

Owner	Breed	Age	Milk	Test	Fat	Feed Cost	Profit
A. L. Leffingwell	Gr. Jer.	5	8,431	5.34	450.3	$48.89	$101.87
Henry Westphal	Gr. Hol.	4	10,418	4.09	425.9	46.79	88.20
A. L. Leffingwell	Gr. Jer.	6	10,527	3.82	403	48.89	81.22
H. H. Huggett	P-b. Hol.	5	11,345	3.51	398.3	51.64	76.60
A. L. Leffingwell	Gr. Jer.	6	6,453	5.87	379	39.64	79.73
H. H. Huggett	Gr. Hol.	7	10,899	3.37	367.8	51.64	67.34
A. L. Leffingwell	Gr. Jer.	6	6,075	6.04	367.4	36.29	79.09
Henry Westphal	Gr. Hol.	5	10,963	3.35	366.9	46.79	70.75
Jones Bros.	P-b. Hol.	8	9,457	3.80	359.5	44.58	72.98
Henry Westphal	Gr. Hol.	5	11,010	3.19	350.8	42.47	69.76

Following are the ten herds having the highest average fat production:

Owner	Av. Milk	Av. Fat	Av. Feed Cost	Av. Profit
A. L. Leffingwell	6,351.9	324.9	$42.92	$60.83
Henry Westphal	8,920.7	304	43.28	53.77
H. H. Huggett	8,173.8	291.9	44.71	48.44
W. H. Breyer	6,339.1	277.3	46.21	43.66
John R. Jones	7,632.7	274.6	36.03	50.83
Wm. Bartel	7,371.9	271.7	54.96	30.14
L. L. Fritz	7,212.7	265.1	40.17	41.81
Jones Bros.	6,514.2	250.8	35.36	43.51
L. A. Wright	5,129.8	233.5	43.60	32.24
Jay Waterworth	6.584.5	232.4		

Ten herds had the following number of cows that produced over 300 pounds of fat for the year:

H. H. Huggett, five; A. L. Leffingwell, six; W. L. Fritz, one; Henry Westphal, six; C. J. Steinbach, three; W. H. Breyer, three; Wm. Bartel, one; Jones Bros., three; Jay Waterworth, three.

C. F. Wehrwein, Tester.
Columbus, Wisconsin.

Straining Milk.

The strainer is one of the most difficult articles about the dairy to keep in a sweet-smelling condition, yet if properly cared for it is very sanitary and effective. We still have in mind a strainer we used to see when a child, that always seemed to possess a sickish odor. Milk strained through this was very unhealthful.

It is not the chief aim of the strainer to rid the milk of all dirt. The strainer is only supposed to take out the hair, straw or any large object, but fails to remove all the dirt. The only safe plan is to prevent dirt getting in the milk when it is being drawn. The strainer is limited in its efficiency as well as other things.

A few years ago the strainer attached to the pail was all the rage, but it did not prove satisfactory. Most of the strainers were made of wire and wire strainers absolutely will not exclude the dust. The device soon got in such shape that it could be used for neither strainer nor pail and is now used but very little.

There is nothing that will keep out the dirt as well as cloth. The cloths must be carefully washed, scalded and sunned, and the same cloth should not be used more than once without being boiled. It is best to rinse them in cold water before putting them in the hot, soapy water. If they are put in the hot water first all the albumen in the milk is cooked and it is almost an impossibility to get them clean by merely washing. Common baking soda is better to use in washing the strainers, and, owing to its cheapness, one need not stint themselves. At least two layers of the cloth should be used in straining and three is better. This will be sure to capture all the dirt particles that happen to be in the milk. The ordinary twenty-four-pound flour sacks make excellent strainer cloths. It is essential that they be boiled frequently and hung in the sun as much as possible to keep them smelling sweet and clean.

If the milk is separated the strainer cloths may be fastened over the top of the bowl and the milk strained while pouring it in.

The milk should be strained as soon as possible after being drawn. It is impossible to keep out all the dirt, no matter where the milk is drawn, and it should never be left to stand for any length of time before being strained.

Fine Interest in Dairy Stock.

To the Editor:—Through an accident, I fell from a scaffold on a building we were shingling and hurt one of my hips. To see if any bones were out of place, I went to an osteopath, and while he was fixing me up he told me about his "farm" of a few acres a little ways out of the city, and especially about his Holstein cattle.

If I was interested in the story, and I certainly was, the doctor was a great deal more so. With a fine flush of pride, he told me that he had some heifers out of the old Rag Apple Thorndyke stock of Pennsylvania, some of which hold very high records. One bull of that line, if I mistake not, cost his owner $2,500. The doctor got out his herd book and showed me the picture of the father and the grandfather of his choicest heifer. Out at his "farm" the doctor spends his spare time and here he is working, not only for his own interests, but surely for the betterment of the dairy system of this country. It did me good to listen and I am sure it was a rest from an exacting life for him to talk to me about it.

More men than we know are working along similar lines to this for the upbuilding of a better dairy stock. One man in Connecticut has a herd of Guernseys of good strain. He could sell his calves at fine figures, but he prefers to let them go to his neighbors at a very low figure, so that the dairy life of the community may be advanced. This man is a business man of New York. Dairying is not a side issue with him, however. He takes a real interest in the farm and its stock.

It is not only the very rich and the professional men, however, who are doing work like this for the purpose of enhancing the worth of the dairy cattle of the United States. I know of a number of practical farmers who are putting every surplus dollar they have into better stock. This is their way of investing their farm earnings. Instead of putting it into the bank to draw interest, they choose to buy fine-blooded bulls, calves and cows.

Every one of us may add his mite to the great upward drift for thoroughbred stock. We need not leave it to the wealthy or the bankers and doctors to put better stock on the pastures of the country. By choosing our best cows for breeding purposes and crossing them with sires of known worth in a little while, we may revolutionize not only our own stock holdings, but so inspire those who live around us that the general stock population of the country around us will be improved in a most striking way.

E. L. V.

One application of crude oil kills both lice and nits on hogs. The most convenient method of applying the oil is by means of a hog oiler, of which there are several good types. They are always ready and require little attention. The best oiler allows the pig to rub the oil on any part of the body. The oil can also be applied with a sprinkler, spray pump, broom or brush. If there is any indication of skin disease the parts may be scrubbed with a broom or brush so as to get the oil well into the skin. When crude oil is used the appearance of skin and hair is greatly improved.—[From bulletin of Nebraska Agricultural College.

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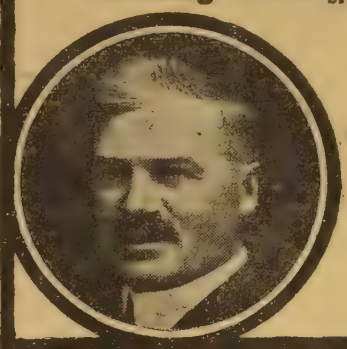

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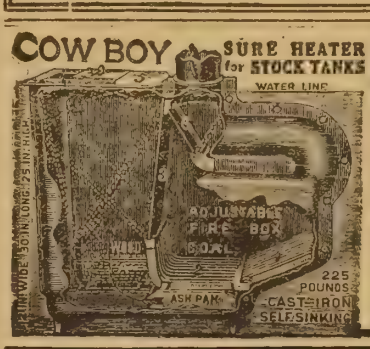

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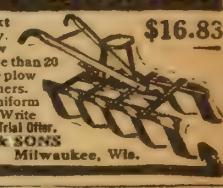

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"READIN' "RITIN' AND "RITHMETIC ONLY A PART OF REGULAR COURSE AT SUN PRAIRIE WISCONSIN SCHOOL

FRED J. HOLT - PRINCIPAL

Upper left group—Members of the Sun Prairie, Wis., High School, who took part in the Wisconsin State Fair agricultural contests. These young people attended the fair. Upper right group—Sun Prairie girls who took part in baking, canning and sewing contests at the State Fair. Lower view at left is a picture of the Sun Prairie High School, seat of strenuous agricultural activities. Lower right group—Sun Prairie judging team who won honors at the fair. From left to right these boys are, Warren Bull, Walter Renk, Hartford Drunasky, Elmer Virchow, Elmer Graff and Clayton Bull.

WHAT has a high school to do with agriculture? Many a father in Wisconsin, on laying aside his daily paper, directed this question to others about him after the state fair at Milwaukee recently when the Sun Prairie high school, for the second successive year, won the honor of champion agricultural school of Wisconsin. In the old days high schools had nothing to do with agriculture. Less than a hundred of them in Wisconsin today give it any attention, but the success of Sun Prairie in the boys' and girls' agricultural contest work at the state fair this fall focused attention on what a rural high school may do along these lines.

The agricultural prominence of the Sun Prairie school may be said to have begun when Mr. Holt swung from a train at Sun Prairie in August, 1915, to become principal. Prior to that time agriculture had been a part of the school work, but it remained for Mr. Holt to inject personal enthusiasm and practical ideas. The support given this department of the high school, formerly lukewarm, is now of the most fervid sort. The agricultural department of the school is the pride of Sun Prairie. The attention of 25,000 boys and girls engaged in the young people's work in Wisconsin is riveted on the splendid showing made at Milwaukee by Sun Prairie. The school won between $600 and $700 worth of premiums, including the $125 pure-bred Holstein bull calf given by Fred Pabst; it boasts of the champion boy, Frank Wilmarth; the champion pig club; champion corn club and the champion poultry club. Individual winnings in grains, horticulture, garden, live stock and corn were almost too numerous to mention.

The honor of champion school stands as a tribute to the work of the agricultural department. Until Mr. Holt began his work among the boys and girls nothing of this kind was done. This is the sixth year of agriculture at Sun Prairie. The first year Mr. Holt took hold twenty-one boys were taking it; this year there are thirty-nine and every new boy is a farm boy. In the high school there are now sixty girls; last year fifty. Last year six pupils took part in the exhibit at Milwaukee, compared with thirty-three this year, and most of Sun Prairie went to the fair to see their accomplishments.

That the work is very practical is indicated by the work of the champion boy, Frank Wilmarth, whose success serves as an encouragement to all. Frank had entries in practically every department at the state fair and with Richard Ryan, who won the Dane county championship, he plans to have a carload of stock and exhibits of his own breeding next year. This is how he is taking advantage of the agricultural course, as outlined to the writer.

All of his winnings he will put into stock and pure-bred grains. He plans to buy a pure-bred Holstein heifer and, with the Pabst bull calf won at Milwaukee, this will give him his start with a dairy herd. Next he plans to buy two pure-bred Chester White sows to which he can breed the Chester White boar of his own raising which won first prize at the fair over all breeds. This young boar he bought when a pig and these two sows will give him two litters next spring that will be eligible to compete next fall. Richard Ryan also has a Chester White sow and he will work with Frank along this plan. Next Frank plans to buy a baby beef calf to be finished for the fair.

This boy owes much to the Sun Prairie agricultural school. The work he is carrying out on his father's farm, but at school he has been able to study breeds, how to judge and the knowledge secured there he has put to practical use at home. What the school is doing for Frank Wilmarth it is doing for other boys and girls, as indicated by their winnings.

There is little of the pedagogue about Mr. Holt. He believes that agricultural high school work to be of value must be practical—the lessons learned in school must be carried home. This is the theory on which he has succeeded. He is opposed to the school farm. It is expensive; the work can only be carried on there during school days; there is too much opportunity to forget. If carried to the home farm the boys are interested 365 days in the year; the parents take more interest and likewise derive much benefit from the application of improved methods, and this plan aids in interesting neighbor boys in the school.

Mr. Holt is a strong believer in extension work. When he hears of a farm boy that should be in school he jumps into his automobile and goes to see him and keeps going until he enrolls him or the boy refuses. After school hours he takes his automobile and visits the farms where the students are carrying out their work.

During the first year the study of plant life and the scientific way of going at things occupies the attention of the agricultural pupil. The second year he continues his plant life study, but begins animal husbandry and the study of breeds with judging. Through the third year animal husbandry is continued and during the fourth year farm engineering, farm management and surveying are taken up. With one year of manual training for every agricultural boy this comprises the agricultural work in addition to mathematics, science, English and history.

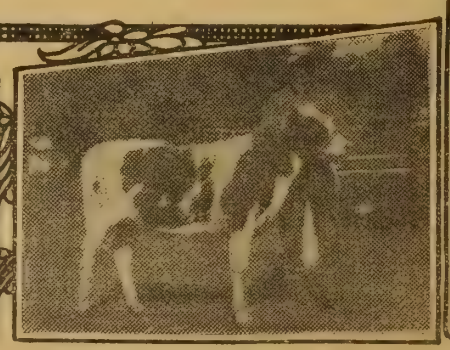
Animal husbandry work has been especially interesting and practical. The textbook is used very little and many practical ideas have been followed by Mr. Holt. In horse judging the judging class is taken down to the town hitchrack and a team is picked out at random to be judged. There is a twofold reason for this. First, give the boys practical, everyday judging; second, interest the owner of those horses in better horses and many farmers whose teams have been judged have been known to sell and buy new teams later. The class is also taken to all near-by live stock sales and this year to the Waukesha sales.

Mr. Holt is working out a new project this year to judge cattle and horses. The boys will be taken to a near-by farm; the owner will set his value on his animals; the boys will hold a mock sale and their decisions in bidding will be used as the basis for credits in their judging work.

Mr. Holt has organized the high school pupils into nine clubs—corn, potato, garden, calf, poultry, pig, baking, canning and sewing. For the girls in the home economics department the school is well equipped and most of the girls take first-year agriculture, while six are now taking animal husbandry.

Frank Wilmarth (on right) who won boy's championship at Wisconsin State Fair, and Richard Ryan (on left) who won Dane county boy's championship.

Frank Wilmarth and his Chester White pig which won first prize at the Wisconsin State Fair this year.



Wilmarth and his pure-bred Holstein calf awarded to champion boy by Fred Pabst, of Pabst Stock Farm.

Fannie Stimson (left), winner of canning contest, and Carol Bacon (right), second in the state baking contest.

NEWS OF THE SALE RING

Waukesha County Holstein Breeders' Sale.

The fourth sale of the Waukesha Holstein Breeders was held Monday, October 23d. It was unfortunate to hold it on Monday, as it is practically impossible to get a crowd of buyers at any sale on Monday. It was true in this case, and the home county buyers got the benefit. Nearly all of the cattle stayed right in the county. H. E. Anderson, Whitewater, was a heavy buyer, as was also W. J. Wright, Waukesha, and Geo. Eising, of Waukesha, and J. M. Bischel, Waukesha. Patrick Cudahy, of the Cudahy Packing Company was present and purchased a number, while Mr. Southcot took home many of the best ones for Gustav Pabst. Although prices were not high they represent the actual prices paid. Had side bidding been permitted or indulged in prices would easily have averaged $25 to $50 per head more. The Waukesha Holstein breeders, however, are to be congratulated on the honorable manner in which they conduct their sales and will eventually win out by these methods. Breeders will learn to avoid the sales where they get "stuck" and if the sales are to continue as a success they will have to be conducted along more honorable lines than have some in the past. New York state breeders are now reaping the reward for the unscrupulous methods practiced by some of her breeders and we are glad to see that the Wauke sha breeders are building on a permanent basis.

FEMALES.

Ashburn Hengerveld Lockhart Maid, July 3, 1913; Geo. W. Eissing, Waukesha, Wis. $200
Ashburn Hengerveld Pauline, Nov. 21, 1913; P. Cudahy 155
Ashburn Hengerveld Pontiac Queen, Sept. 29, 1915; H. E. Anderson, Whitewater, Wis. 150
Ashburn Segis Pontiac Louise, July 29, 1915; W. G. Gittings, Racine.. 135
Ashburn Pontiac Hengerveld, Oct. 23, 1915; H. E. Anderson..... 150
Ashburn Jane Pontiac Ormsby, Dec. 5, 1915; H. E. Anderson..... 150
Ashburn Segis Pontiac Dean, Mar. 18, 1915; Gustav Pabst, Dousman, Wis. 210
Briar Diamond Abbekerk De Kol, Oct. 8, 1913; Geo. Eissing..... 170
Wild Rose Faune, Feb. 22, 1913; W. G. Gitting, Racine, Wis..... 155
Lady May De Kol 4th, Oct., 22, 1913; H. E. Anderson 145
Jessie Piebe De Kol Fobes, Feb., 6, 1915; Connell Bros., Colgate, Wis. 150
Daisy Mink Pietertje, April 6, 1915; H. E. Anderson 140
Brookvale Walworth, Oct., 16, 1914; P. Cudahy 170
Brookvale Jane Ormsby, March 26, 1915; T. W. Blackman, Wilutka, Okla. 200
Bairdland Segis De Lores, Aug. 20, 1912; Gustav Pabst 400
Bairdland Pontiac Belle, Feb. 12, 1916; Geo. Eising 100
Bairdland Johanna Perfection, Feb. 24, 1916; Hazen Canniff, Waukesha, Wis. 155
Bonair De Kol Ormsby, Oct., 1, 1910; W. J. Wright, Waukesha, Wis.... 155
Bonair Ormsby Colantha, Dec. 15, 1913; Ben Backhuber, Elkhorn, Wis. 180
Bonair De Kol Ormsby 2d, May 22, 1914; T. W. Blackman 205
No. 31, Jan. 1, 1916; J. T. Raht, Waukesha, Wis. 135
Lady Gladice Hengerveld 2d, Dec. 5, 1912; Adam H. Graser, Waukesha, Wis. 300
Cressy Pietertje Johanna 5th, Dec. 2, 1915; T. C. Bown, Waukesha.. 90
Mock Pietertje, Mar. 15, 1916; B. A. Clark, Mukwanago, Wis..... 90
Vashti Korndyke, Oct. 29, 1908; Geo. W. Eissing 310
Downing Pontiac Abbekerk Polly, Sept. 27, 1915; Ray Biggs 200
Downing Pontiac Pietertje Betsy, Oct. 5, 1915; Ray Biggs..... 200
Flora Quineilo Pontiac, May 19, 1915; W. H. Swartz, Waukesha, Wis. 140
Isabel Hengerveld Pontiac, Aug. 8, 1915; W. H. Swartz 150
Aaggie De Kol Pietertje Longfield, Aug. 27, 1914; W. J. Wright..... 200
Bessie Piebe De Kol 2d, Aug. 29, 1914; W. J. Wright 170
Flora Ringwood Pontiac, Aug. 27, 1914; W. J. Wright 190
Fyra Ormsby Pontiac, S pt. 1, 1914; W. J. Wright 150
Mechthilde Rose Pontiac, Mar. 13, 1914; Gustav Pabst 270
Aaggie Barbetta Pontiac, Aug. 26, 1914; J. M. Bischel & Son, Dousman, Wis. 230
Belle Inka De Kol Pontiac, Aug. 26, 1914; G. W. Jeffery, Colgate, Wis. 240
Mechthilde De Kol Bessie, Nov. 23, 1912; D. W. Powell, Waukesha, Wis. 205
Bessie Piebe Pontiac, Oct. 18, 1913; Owen Mullen, Watertown, Wis... 200
Flora Douglas Pietertje Pontiac, Jan. 8, 1913; C. U. Chapman, Waukesha, Wis. 230
Aaggie Pietertje Ringwood, July 15, 1910; A. C. Roam, Waukesha, Wis. 250
Flora Pietertje Douglas 2d, Oct. 31, 1908; Ed Hanernick, Manitowoc, Wis. 225
Flora Pietertje Ringwood, May 31, 1911; Patrick Cudahy, Cudahy, Wis. 240
Elderwood Hattie Mooie, Nov. 26, 1908; Geo. Eising..... 325
De Freule Snowball, March 15, 1914; J. M. Bischel, Dousman, Wis..... 200
De Freule Johanna Alcartra, March 2, 1915; H. E. Anderson..... 135
De Freule Ringwood Lass, April 26, 1915; A. Torhorst, Waukesha, Wis. 150
Snowball Pride 2d, Dec. 6, 1910; Herman Buth, Dousman..... 205
Elderwood Aaggie Piebe, Nov. 2, 1909; A. Will, Waukesha, Wis.... 275
Piebe Mercedes Johanna, July 18, 1915; G. W. Mayer, Milwaukee, Wis. 125
Canary Mercedes Piebe, Aug. 6, 1915; Connell Brothers, Colgate, Wis. 150
Diano Johanna Korndyke, April 21, 1915; Ray Biggs, Waukesha, Wis. 135
Diano Woodcrest Lady Korndyke, March 22, 1915; John Spitzer & Son, Brookfield, Wis..... 190
Josephine Fobes De Kol, September 18, 1912; W. G. Gittings..... 160
Melchoir Soldene Pietertje, July 10, 1909; Connell Brothers..... 155
Pirtie Ormsby, Feb. 25, 1908; Geo. Eising 195
Jessie Amanda Pride, Dec. 4, 1914; Gramling Brothers, Dousman, Wis. 150
Lucile Mooike Pride, March 17, 1915; W. J. Wright..... 175

MALES.

Roberts Zora Wayne, April 22, 1916; Ottmeier & Poutsch, Ft. Atkinson, Wis. 45.00
Roberts De Kol Pontiac Colantha, June 29, 1915; Coombs Brothers, Honey Creek, Wis..... 110
Brookvale King Pontiac Ormsby, Nov. 10, 1915; B. A. Clark, Mukwanago, Wis. 130
Bonair Ormsby Gem, Oct. 1, 1915; Bert Garvens, Brookfield, Wis.... 100
Downing Pontiac King, March 15, 1916; Chas. Honeyager, Waukesha, Wis. 70
McKinley Fay Segis, Feb. 9, 1916; W. J. Leonard, Brookfield, Wis... 190
Nockadair King Segis Pontiac, Nov. 30, 1915; J. M. Bischel & Son..... 55
Downing Pontiac Duke, Nov. 29, 1915; Frank Jacobs, North Prairie, Wis. 45
Downing Pontiac Dandy, Jan. 1, 1916; Geo. H. McDowell, Waukesha, Wis. 75
Sir De Freule Gerben C lantha, Sept. 23, 1915; W. H. Stewart, Mukwanago, Wis. 50
Major Inka Akkrummer Johanna, Dec. 16, 1916; Northern Hospital for the Insane, Logansport, Ind... 85
Diano Johanna Korndyke, April 21, 1915; Ray Biggs..... 135
Sir Johanna Alderly Korndyke, July 15, 1915; A. K. Carmachael, Waukesha, Wis. 85
Model Jetze De Kol of South Lawn, Sept. 15, 1915; Jos. C. Bernhardt, Cassville, Wis..... 100

Waukesha County Guernsey Breeders' Sale.

The ninth semiannual sale of the Waukesha County Guernsey Breeders' Association was one of the most successful they have ever held. In spite of the high price of feed which prevails, there were a large number of buyers present and bidding was brisk. Although prices did not range as high perhaps as in former years, considering the quality of the animals offered, yet it was by far the best sale of dairy cattle held in Wisconsin this fall. The Waukesha Guernsey breeders have demonstrated that honorable sale methods are the ones that hold the business. The confidence which the buyers have shown in this association has made their sales record breakers in "boom times" and in slack times has made their sales profitable. Geo. W. Brown, state agent for the Overland automobile, purchased several of the best things in the sale, paying $975 for Mapeline Alice, an A. R. cow of excellent type. Gustav Pabst purchased two fine cows at good prices. Among the out-of-state buyers were those from Connecticut, Maryland, Texas, Minnesota and Illinois, while nearly every section of Wisconsin was represented among the buyers. Following is a list of the sales:

Imp. Beauty of Somerset II, Mar. 22, 1913; W. R. Young, Wichita Falls, Texas $225
Geraldine of Phantom Lake, May 3, 1915; G. M. Chapman, Waukesha, Wis. 200
Imp. Godolphin Phyllis IV., Jan. 8, 1909; H. P. West, Ripon, Wis... 240
Jane of the Cedars, Jan. 4, 1916; Groves & Murphy, Aitken, Minn. 130
Bertelle of Kentrevor, Jan. 1, 1913; F. W. Wallin, Madison, Wis..... 200
Sequel's Royal Dairy Maid, Jan. 6, 1916; Groves & Murphy..... 205
Tricksey of Sunny Valley, Jan. 13, 1907; W. E. Fisher, Wauwatosa, Wis. 200
Imp. Pearl of la Hougue, Apr. 14, 1911; J. A. McCoomb, Lima Center, Wis. 240
Coral Queen, Sept. 16, 1907; Wm. Barber, Edgerton, Wis..... 190
Alice of Clovernook, Mar. 21, 1906; J. W. Price, Waukesha, Wis..... 150
Glenwood's Algenia, Apr. 2, 1915; Groves & Murphy..... 200
Tulita Martin, Apr. 6, 1913; N. E. Nelson, Dousman, Wis..... 195
Mapeline Alice, Mar. 16, 1912; G. W. Brown, Waukesha, Wis..... 975
Imp. Bouvee Eva III., Oct. 11, 1911; Wm. Barber, Edgerton, Wis..... 200
Thya, Aug. 13, 1906; Frank Richardson, Lake Crystal, Minn..... 200
Little Trowel, Feb. 23, 1912; O. H. Giles, Mansfield, Wis..... 210
Park's Pine Cliff Beauty, May, 1913; Jacob J. Blanik, Algona, Wis. 190
Nobles Tilley, May 22, 1913; Groves & Murphy 305
Tricksey's Waukesha, Mar. 29, 1912; Willard Porter, Mukwanago, Wis. 295
June Morning, June 9, 1912; John H. Williams, Waukesha, Wis.... 295
Trislette of Sunny Valley, July 12, 1910; Paul Mitchell, Brookfield, Wis. 255
Imp. Lady Mythop II., Nov. 20, 1910; Gustav Pabst, Oconomowoc, Wis. 715
Little Gem's Pearl, May 17, 1906; Wm. M. Jones, Waukesha, Wis.. 160
Raymond's Masher of Bonnie Neuk, Mar. 12, 1912; Goodhand Kingston & Son, Waukesha, Wis..... 170
Stella of Sarnia, Oct. 6, 1915; Aug. Busse, Waukesha, Wis..... 160
Jessie's Dairymaid, Jan. 21, 1913; R. R. Schwartz, Troy Center, Wis. 255
Pride of Uhlma's Yekstang, May 6, 1914; Frank Richardson..... 220
Carlotta's Queen, May 8, 1912; Frank Richardson 410
Imp. Teresa of St. Croix, Sept. 13, 1912; Frank Richardson..... 260
Imp. Minnehaha of the Courtil Blicq, June 2, 1908; C. F. Bundy, Eau Claire, Wis..... 225
Glenwood Pansy, Sept. 29, 1915; Louis F. Corey, Poplar Grove, Ill. 140
Sequel's Royal Mignonne, Oct. 22, 1915; R. J. Hungerford, New Medford, Conn. 150
McKerrow's Whimsome Governess, Apr. 2, 1915; F. W. Wallin..... 325
McKerrow's Daisy 2d, June 21, 1915; Michael Larson, Jr., Northland, Wis. 270
Annie Laurie of Bonnie Neuk, Jan. 15, 1916; Groves & Murphy..... 150
Nancy's Gem, Jan. 30, 1908; Frank Horn, Baltimore, Md..... 335

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Ada's Yekstang, Aug. 8, 1910; Ralph Trott, Whitewater, Wis... 325
Imp. Fillpail IV. of the Hall, May 14, 1908; Geo. W. Brown..... 815
Imp. Billy's Frances Fillpail, Apr. 21, 1911; Dr. Wayne R. Munn, Janesville, Wis. 300
Imp. Daisy of Pulias, Mar. 26, 1907; W. E. Fisher, Wauwatosa, Wis. 300
Selma of Pinehurst II., July 12, 1904; Jacob J. Blanik..... 355
Kate of Sunny Valley, Nov. 1, 1911; Geo. W. Brown..... 700
Fantine of Avondale, Dec. 3, 1906; Frank Richardson 475
Queen of the Rue Cohu, July 15, 1910; J. E. Stephens, Prairie City, Ill. 250
Zenita of Hillstead, Aug. 10, 1909; S. M. Shoemaker, Eggleston, Minn. 350
Governess of the Clos Hoquet, June 21, 1911; Gustav Pabst..... 500
Queen of Lima, Mar. 24, 1907; C. D. Akin, Farmington, Minn..... 165
Thyas' Beulah, July 10, 1911; Eugene H. Sanborn, Middleton, Wis. 240
Peggotty Glenwood, Apr. 14, 1911; Groves & Murphy..... 415
Jennie's Florinda 2d, Mar. 15, 1913; J. W. Wallin..... 200
Peggotty's Violet of Waukesha, Aug. 26, 1915; Michael Larson, Jr. 200
Creamland Thistle, Feb. 10, 1916; R. J. Hungerford 125
Dorinda Lilly of Sunnyside, July 23, 1915; R. P. Guptell, Elcho, Wis. 200
Imp. Brickfield Beauty V., May 15, 1910; Ruth Jenkins, Wales, Wis. 230
Nugget's Olivia, June 9, 1915; Frank Richardson 170
Gemsey of Echo Farm, Apr. 4, 1916; Aug. Busse 140
Vera of Sunny Side, Mar. 1, 1913; Ruth Jenkins 215
Violet's Beauty, Oct. 28, 1913; Groves & Murphy..... 265
Donnington's Glenwood of Bonnie Neuk, Mar. 19, 1912; Julius M. Price, Waukesha, Wis..... 190
Selma's Mainstay's Heifer, Nov. 14, 1915; R. P. Guptell..... 170
Imp. McKerrow's Roberta Sequel, Feb. 28, 1915; W. C. Young..... 270
Esther of Glyndwr, Feb. 8, 1912; Geo. Lawson, Oconomowoc, Wis. 200
Park's Isabella Pet, Apr. 22, 1915; Groves & Murphy..... 265
Twinkle of Elderwood, Apr. 23, 1914; H. P. West..... 155
Wood Ford's Susan, Dec. 28, 1907; Harry Leppla, Appleton, Wis.... 235
Squire's Plymouth Maiden, Apr. 6, 1914; Geo. McKerrow & Sons Co. 235
Esther Yekstang, Feb. 17, 1914; B. H. Beach, Elkhorn, Wis..... 230
Queen's Betty of Bonnie Neuk, Aug. 1, 1911; R. J. Hungerford.. 215
Naomi of the Cedars, Aug. 8, 1915; Delbert W. Fox, Waukesha, Wis. 150
Princess Gloria, Feb. 24, 1911; B. H. Beach 185
Castor's Valeria, Feb. 9, 1912; Geo. W. Brown 200

Walworth County Combination Sale of Dairy Cattle.

The first semiannual combination sale of dairy cattle of Walworth county was held October 30th and 31st at Delavan, Wis. Everything considered it was a success. Although prices did not range high, the consignors feel that they have made a successful beginning and that they have demonstrated to the buyers their interest to hold a square sale. A detailed list of all animals selling over $100 is given below:

FEMALES.

Kayewood Colantha Princess, Feb. 12, 1914; McCanna's Edgewood Stock Farm; Burlington, Wis....$265
Lady Hilldale Segis, Feb. 26, 1916; A. M. Hanson, Whitewater, Wis... 105
Kayewood Gwendolyn De Kol, Mar. 18, 1907; McCanna's Edgewood Farm 300
Kayewood Ada Powers Johanna, Feb. 18, 1914; Michael Westphal, Elkhorn, Wis. 180
Kayewood Zonia Johanna, Oct. 15, 1913; Howard Pick, Elkhorn, Wis. 270
Heifer Calf; Francis Moss, East Troy, Wis. 115
Lady Kayewood Josephine, Oct. 9, 1913; McCanna's Edgewood Farm 200
Kayewood Eric Colantha, Dec. 7, 1915; Geo. Hummel, Delavan, Wis. 200
Sadie Tamora Badger De Kol, July 11, 1910; Alb Huber, Darien, Wis. 160
Anna Badger Tamora, Oct. 30, 1910; Frank Hawes, Whitewater, Wis. 140
Carrie Woodlawn Beechwood, Dec. 2, 1914; M. E. Cusack, Darien.... 100
Mabel Sir Beechwood, Oct. 8, 1908; Alb Huber 140
Lyndenhurst Sadie Johanna Wayne, Oct. 25, 1914; C. Roy McCanna, Burlington, Wis. 125
Lyndehurst Aaggie Wayne Johanna, Sept. 22, 1914; Kniep Bros., Elkhorn, Wis. 165
Lyndenhurst Iehlean Johanna Wayne, Oct. 28, 1914; McCanna's Edgewood Farm 170
Lyndenhurst Daisy Johanna Wayne, Nov. 17, 1914; Kneip Bros..... 155
Lyndenhurst Lillie Johanna Wayne, Mar. 16, 1915; Merton Matterson, Walworth, Wis. 130
Lyndenhurst Blanche Wayne Johanna, Jan. 12, 1915; Kneip Bros., 140
Lyndenhurst Mithilda Wayne, Feb. 1, 1915; Ed Willmore, Elkhorn, Wis. 145
Belvoir Pontiac Artis Korndyke, Nov. 8, 1914; McCanna's Edgewood Farm 180
Johanna Beets Cornucopia, Mar. 27, 1915; W. J. Pester, Whitewater, Wis. 135
Johanna Artasia Beets, April 27, 1915; W. J. Pester 135
Canary Fobes Vale De Kol, Dec. 12, 1913; Benj. Berg, Lake Mills, Wis. 255
Fannie Douglas Johanna Friend, Dec. 16, 1905; McCanna's Edgewood Farm 160
Rollingdale Model Ward, Dec. 26, 1911; Jesse S. Harris, Richmond, Wis. 170
Wayside Rose De Kol Mercedes, Sept. 30, 1911; Roy C. McCanna.. 175
Aaggie Kathleen Van Sickle, Mar. 24, 1909; Henry Shaw, Ft. Atkinson, Wis. 170
McCanna Princess Gem De Kol, Feb. 7, 1914; Fred Herdis 185
Fancy De Kol of Burlington, May 13, 1912; Frank Cusack 165
Fall Breeze Durand of Burlington, Nov. 5, 1912; H. Ellsworth, Elkhorn, Wis. 105
Jessie Fobes Homestead Mercedes, Feb. 13, 1908; Cook Bros., Burlington, Wis. 165
Lucy Colanthus, Oct. 21, 1908; Cook Bros. 200
Olivet De Kol Beauty, Sept. 1, 1909; Geo. Pope, Darien, Wis..... 200
Pauline Vickery De Kol 2d, Mar. 18, 1913; Alb. Huber 195
Upland Bunny Artis De Kol, Dec. 21, 1914; F. A. Swaboda, East Troy, Wis. 125
Upland Pietertje Fayne 2d, Nov. 7, 1913; Frank Cusack 175
Upland Lady Lahman 2d, Dec. 21, 1913; F. A. Swaboda 165
Colanthus Korndyke 3d, Feb. 4, 1915; McCanna's Edgewood Farm 130
Johanna Wakatomica Nell, June 22, 1914; F. A. Swaboda..... 170
Mechthilde Queen Jonker, Mar. 6, 1911; McCanna's Edgewood Farm 145
Rollingdale Johanna Hadria, April 5, 1911; McCanna's Edgewood Farm 115
Pretoria Abbekerk, Feb. 17, 1911; McCanna's Edgewood Farm..... 175
Mildred Abbekerk Korndyke, Jan. 27, 1913; H. E. Culver, Honey Creek, Wis. 170
Pretoria Model Abbekerk, Nov. 20, 1915; W. G. Marshall, Whitewater, Wis. 180
Pretoria Abbekerk Pearl, Dec. 27, 1914; W. G. Marshall 180
Minita Bessie De Kol 3d, April 16, 1915; Alb. Huber..... 105
Artrude, Feb. 8, 1913; McCanna's Edgewood Farm 165
Groverland Hijlaard Korndyke, Mar. 14, 1912; Fred Wobige, Clinton, Wis. 250
Polka Dot Unka Mink Princess De Kol, Jan. 8, 1905; Fred Wobig.... 215
Polka Dot Veeman Corona, Nov. 10, 1914; C. W. Randall, Darien, Wis. 200
Minnie Duchess Korndyke, Nov. 14, 1913; Hurbirg Johannesen, Delavan, Wis. 125
Lady Dorothy Mooie, Aug. 28, 1913; H. Johannesen 100
Female; Geo. A. Stirmel, Walworth, Wis. 100
Daisy Johanna Pietertje, Jan. 4, 1906; H. E. Ellsworth..... 100
Susie Burke Johanna, Dec. 12, 1906; E. B. Adams & Son, Racine, Wis. 300
Sadie Pel, Nov. 24, 1902; H. E. Ellsworth 115
Elendjay De Kol Alban; Aug. 19, 1911; Wm. Ganz, Lyons, Wis..... 275
Johanna De Kol Champion, Dec. 14, 1915; Jesse S. Harris, Richmond, Wis. 165
De Kol Mechthilde Ormsby, July 5, 1907; Henry Shaw, Fort Atkinson, Wis. 195
Rag Apple Cornucopia 4th, Sept. 9, 1914; H. W. Halback..... 130
Lady Johanna Pet Clothilde, Dec. 23, 1914; Alb. Huber..... 150
Lilith Pet De Kol Burke, Feb. 5, 1909; Roy E. Marshall, Darien... 120
Nellie Corona Korndyke, Oct. 9, 1913; Fred Hardis, Elkhorn, Wis. 150
Celandina Elgin 2d, April 4, 1904; A. G. Hibbard, Darien, Wis..... 100
Female, Mar. 5, 1911; Al Huber.... 175
Waldemere's Grey Lass, June 13, 1914; F. Stubley..... 115
Derry's Princess Grey, Mar. 15, 1915; Alfred Olson..... 100
Osiris Rosalind, Dec. 26, 1910; Alfred Olson 145
Clover Blossie, Dec. 12, 1914; W. W. Showers, Mazomanie, Wis..... 180
Eminents Silver Bell, Feb. 23, 1911; Wm. Knight 150
Floraiska, Jan. 20, 1905; Fred Stubley 105
Rosinette's Beauty, Aug. 21, 1914; Wm. Knight 115
Zanzibar's Dairy Belle, Nov. 6, 1912; Hertell Bros., Chilton, Wis..... 135
Bessieiska, Mar. 19, 1910; Fred Stubley 130
Derry Lad's Maid, Apr. 13, 1916; Geo. W. Wright..... 115
Bessie's Emblem, Nov. 4, 1913; Alfred Olson 125
Oxford Majesty's Pure, Sept. 12, 1914; Alfred Olson..... 125
Carlaiska, Jan. 30, 1909; Scott Deane, Freeport, Ill..... 125
Eurybia's Bessie Carline, Nov. 18, 1911; Alfred Olson..... 105
Manxiska, Nov. 22, 1912; Alfred Olson 140
Noble's Molly, May 12, 1912; Fred Stubley 170
Patsy's Bo Pee, Dec. 25, 1911; F. F. Showers, Delavan, Wis..... 105
Jacoba Irene's Grinnella, May 1, 1915; Hurtel Bros., Chilton, Wis.. 155
Lotty of Oak Grove, Dec. 15, 1912; Hurtel Bros. 110
Orloff King's Ida, June 5, 1905; Geo. Wright 105
Hallowe'en Fox's Dutchess, July 18, 1913; Geo. H. Wright..... 115

BULLS.

Bull; Fred Milland, Delavan, Wis... 110
King Segis Pontiac 3d, June 22, 1909; Cook Bros. 325
Pearl Johanna Rose, Oct. 26, 1914; H. E. Culver..... 130
King Lilith Paul De Kol, Feb. 1, 1915; Chas. Schmalling, Delavan. 120
Plymouth's Son, Dec. 19, 1910; W. O. Douglas, Janesville, Wis..... 125
Oak Grove's Nobleman, Feb. 23, 1915; Alfred Olson..... 125

Anoka Farms' Short-horn Sale.

The most remarkable sale of Short-horn cattle ever held in this country occurred at Anoka Farms, Waukesha, Wis., November 2d, when forty-three head of cattle, twenty-four females and nineteen bulls all under two years of age and many of them spring calves, sold for $43,700, an average of $1,016 per head. It was a fitting tribute to the constructive breeding operations at Anoka Farms, and emphasized the standing of this institution as one of the great breeding establishments of the world. The attendance was large and representative, the bidding spirited and the result of the sale should be an inspiration to Short-horn lovers everywhere. The majority of the offering was the get of Sultan Stamp, the great son of Whitehall Sultan, and his son, Royal Stamp, a bull that has proven his worth to follow in the footsteps of his illustrious sire and grandsire. Others were by Imp. Rusper Champion, Village Denmark by Imp. Villager, Princely Sultan by Whitehall Sultan, Imp. Right Sort. At the opening of the sale an exhibit was made of the ten calves that won the trophy at the Kansas City Royal for the best ten head of Short-horns bred and shown by exhibitor. In the sale these ten head sold for a total of $19,050. The top of the sale was $5,200, paid by Mr. Kirkwood, of Sni-a-Bar Farm, Kansas City, Mo., for the yearling bull, Good Stamp by Sultan Stamp, the contending bidder being A. J. Ryden, Abingdon, Ill. Mr. Kirkwood also paid $2,050 for Augusta Sultan, a January calf by Sultan Stamp, and $1,200 for Kilblean Champion, a January calf by Imp. Rusper Champion. At $1,850 C. D. Smith, Memphis, Tenn., secured Lavender Stamp, an October yearling by Sultan Stamp and Carr W. Pritchett, Steamboat Springs, Colo., paid $2,500 for the January calf, Loyal Stamp by Sultan Stamp. Bandmaster Junior, an outstanding February calf by Imp. Right Sort, went to A. J. Ryden, Abingdon, Ill., at $1,950 and at $1,675 Regal Sultan, a yearling son of Regal Stamp, sold to E. E. Moore & Son, West Liberty, Iowa. The top for females was $1,850 paid by Carpenter & Carpenter, Baraboo, Wis., for Anoka Clipper 3d, a yearling daughter of Regal Stamp. McMillan & McMillan, Lodi, Wis., paid $1,600 for the ten months Augusta Anoka 3d and Sni-a-Bar Farm took Lovely Anoka 3d, a January calf at $1,300. McMillan & McMillan also secured Anoka Clipper 4th an October yearling by Sultan Stamp, at $1,650, and F. A. Gillespie, Tulsa, Okla., paid $1,250 for Anoka Blossom 2d, a September year-

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ing by Sultan Stamp. Carpenter & Ross, Mansfield, Ohio, secured Anoka Broadhooks 3d, a yearling by Imp. Russ- ier Champion, at $1,000, and a like mount was paid by Heart's Delight Farm, Chazy, N. Y., for Victoria Anoka, n October yearling by Village Den- mark. Fifteen head sold for $1,000 or etter. The cattle were presented fit o the minute and were a high credit o the work of the master hand of Manager George Sims and his assis- ants. Short talks were made by F. . Tomson, of the Short-horn Asso- iation, and Peter G. Ross. The high- lass methods so characteristic of all ransactions at Anoka Farms prevailed hroughout the sale. Col. Carey M. ones presided on the block and did ne of the greatest day's work in his areer. He was ably assisted by Col. 'red Reppert. The result of the sale vas a fitting commendation of the ontinuous progressive work in the in- erest of the Short-horns by Frank V. Harding. No one man has done or s doing more for the breed than Mr. Harding, and this sale but serves to mphasize the fact that he is the peer f any Short-horn breeder on either ide of the ocean. The following de- ailed report tells the story of one of he greatest Short-horn sales ever held:

FEMALES.

Anoka Clipper 4th, Calced 1915; McMillan & McMillan, Lodi, Wis.	$1,650
Anoka Blossom 2d, calved 1915; F. A. Gillispie, Tulsa, Ok.	1,250
Anoka Clipper 3d, calved 1915; Carpenter & Carpenter, Baraboo, Wis.	1,850
Victoria Anoka, calved 1915; Heart's Delight Farm, Chazy, N. Y.	1,000
Anoka Broakhooks 3d, calved 1915; Carpenter & Ross, Mansfield, Ohio	1,000
Anoka Columbia, calved 1913; James Brown, Chicago, Ill.	775
Lavender Anoka 4th, calved 1915; C. D. Smith, Memphis, Tenn.	875
Augusta Anoka 3d, calved 1916; McMillan & McMillan	1,600
Lovely Anoka 3d, calved 1910; Sni-a-Bar Farm, Kansas City, Mo.	1,300
Augusta Anoka 4th, calved 1916; Carpenter & Carpenter	750
Lavender Anoka 3d, calved 1915; F. R. Edwards, Tiffin, Ohio	650
Calceolaria Anoka 7th, calved 1915; Dr. H. W. Emery, Eldora, Iowa	475
Clipper Anoka 5th, calved 1916; Jackson & White, Hurley, S. D.	925
Missie Anoka 4th, calved 1915; W. C. Rosenberger, Tiffin, Ohio	725
Roan Beauty, calved 1915; J. W. McDermott, Kahoka, Mo.	500
Alcartaz Anoka, calved 1915; Parks Salter, Augusta, Kan.	325
Aconite 4th, calved 1915; Parks Salter	550
Anoka Gloster B., calved 1915; Parks Salter	525
Winifred 9th, calved 1915; C. J. McMaster, Altona, Ill.	750
Miss Marshall, calved 1915; Carpenter & Ross	525
Anoka Maid, calved 1915; Parks Salter	475
Moss Rose 44th, calved 1916; Jas. Brown, Chicago, Ill.	475
Secrecy, calved 1916; Parks Salter	350
Anoka Sally, calved 1915; Parks Salter	375

BULLS.

Good Stamp, calved 1915; Sni-a-Bar Farm	$5,200
Lavender Stamp, calved 1915; C. D. Smith	1,850
Clipper Champion, calved 1915; J. R. Mansfield, Wisner, Neb.	400
Proud Denmark, calved 1915; A. M. Rawlins, Springfield, Ohio	900
Augusta's Sultan 2d, calved 1916; Sni-a-Bar Farm	2,050
Loyal Stamp, calved 1916; Carr W. Pritchett, Steamboat Springs, Colo.	2,500
Kiblean Champion, calved 1916; Sni-a-Bar Farm	1,200
Sandmaster Champion, calved 1916; A. J. Ryden, Abingdon, Ill.	1,950
Anoka Raphael, calved 1916; Alex Mitchell, Jasper, Minn.	375
Denmark Archer, calved 1916; Sni-a-Bar Farm	525
Regal Sultan 2d, calved 1916; J. B. McMillan, Rock Rapids, Iowa	1,000
Village Archer 2d, calved 1916; Charles Scheidecker, Sandwich, Illinois	625
Anoka Denmark 2d, calved 1915; J. F. Jones, Kirkland, Ill.	500
Regal Knight, calved 1915; G. J. Theiss, Rembrandt, Iowa	450
Regal Sultan, calved 1915; E. E. Moon & Son, West Liberty, Iowa	1,675
King Lancaster, calved 1915; T. J. Quealy, Cokeville, Wyo.	900
Rusper Sultan, calved 1915; South Dakota Agr. College, Brookings, S. Dak.	925
Sultan Goods, calved 1915; S. P. Smith, Kansasville, Wis.	500
Anoka Stamp 3d, calved 1915; J. B. Brown, Solon, Iowa	525

SUMMARY.

24 females	$19,675; average	$ 819
19 bulls	24,025; average	1,264
43 cattle	43,700; average	1,016

Herr Bros. & Reynolds Short-horn Sale.

A successful sale of Short-horn cattle was made at Lodi, Wis., November 3d by Herr Bros. & Reynolds. The sale came the day following that of the sensational event at Anoka Farms, Waukesha, Wis., and was the closing sale in a four days' circuit. As a consequence the buying, especially of bulls was not up to the standard of the preceding days, but the average of $382 on the forty-four head sold was a satisfactory one, representing not only a profit to Herr Bros. & Reynolds, who raised practically all of the cattle in the sale, but also leaving plenty of opportunity for the buyer to find his investments profitable ones. The cattle were presented in good condition and were a credit to the men making the sale. Herr Bros. & Reynolds are among the most reliable breeders of Short-horns in the country, and they added to their already wide circle of friends by the high-class manner in which they conducted the sale, as well as by the excellent lot of cattle that they presented. The top of the sale was $800, paid by Robert Failon, Neponset, Ill., for the two-year-old Wimple heifer, Bonnie Girl, sired by White Rock by Whitehall Sultan. E. Ogden & Son, Maryville, Mo., gave $725 for Roan Wimple, a yearling heifer by Cumberland Ideal, and the cow, American Beauty, with a bull calf at foot by Master Ruby, the good bull in use at Lodi, went to Ray Harney, Ponca, Neb., at $555. The bull demand was not as keen as the quality of the offering warranted, but they brought remunerative prices. The top of the sale on bulls was $505, reached twice. Robert R. Hawkey, Belvidere, Ill., paid that figure for the yearling Missie's Ruby by Master Ruby, out of a dam by Choice Master, and at the price he is a decidedly good investment. Henry Kopp, Galesville, Wis., paid $505 for Future Sultan, an outstanding good bull by White Rock, out of a Broadhooks Sultan dam, and he also purchased Master Gloster, a Duchess of Gloster son of Master Ruby at $405. The attendance at the sale was good, and the bidding prompt. There was much interest manifested in the get of Master Ruby, the outstanding son of Archer's Hope that is the premier bull at the Lodi establishment. He was shown in the ring at the opening of the sale, and it was the consensus of opinion of all the good judges present that he is entitled to rank with the good bulls of the country. Col. Carey M. Jones sold the cattle in his usual efficient manner and was assisted by Colonel Martin. The detailed list of sales follows:

FEMALES.

American Beauty, calved 1909; Ray Harney, Ponca, Neb.	$555
Lady Holly, calved 1914; McMillan & McMillan, Lodi, Wis.	500
Roan Wimple, calved 1914; E. Ogden & Son, Maryville, Mo.	725
Village Lady, calved 1914; J. E. Kennedy, Janesville, Wis.	400
Belle Cecilia 4th, calved 1914; J. E. Kennedy	350

Our readers frequently write and ask where they can buy some product that they need. If your local dealer or merchant cannot supply you, tell us his name and address —maybe we can be helpful to you and to him. We are here to serve both of you.

THE WISCONSIN FARMER
MADISON -:- WISCONSIN

Sadie, calved 1916; Eben E. Jones, Rockland, Wis.	480
Lady Wimple, calved 1915; Wm. Herkelmann, Elwood, Ia.	425
Kintore Queen, calved 1915; C. J. McMaster, Altona, Ill.	390
Gloster Maid, calved 1915; J. M. Blotz & Son, Dodgeville, Wis.	430
Gloster Girl, calved 1915; C. J. McMaster	375
Roan Mina, calved 1914; Wm. Herkelmann	390
Bonnie Girl, calved 1914; Robert Failon, Neponset, Ill.	800
Village Gem 3d, calved 1908; Chas. Schweidecker, Sandwich, Ill.	370
Juno, calved 1915; Williams Bros., Bangor, Wis.	250
Missie's Rose, calved 1915; J. E. Kennedy	375
Golden Acanthus, calved 1915; C. J. McMaster	540
Lancaster Lady 5th, calved 1906; Conedale Farm, Winona, Minn.	215
Shirley 2d, calved 1913; Frank Roelke, Dane, Wis.	325
Royal Duchess, calved 1908; Ray Harney	315
Village Princess 6th, (twin) calved 1915; Leslie Smith, St. Cloud, Minn.	460
Village Princess 7th (twin), calved 1915; J. C. Andrews, West Point, Ind.	365
Jealous Lady, calved 1915; Garden & Weaver, Wapello, Ia.	410
Golden Lady 2d, calved 1915; J. E. Kennedy	295
Choice Wimple, calved 1915; Bellows Bros., Maryville, Mo.	475
Daisy, calved 1914; B. C. McClenahan, LaFayette, Ill.	460
Ruth 2d, calved 1915; G. Marco, La Crosse, Wis.	285
Scottish Lady 3d, calved 1915; Wm. Herkelmann	355
Alfani 2d, calved 1914, and c. c.; J. H. Bear & Sons, Spring Grove, Wis.	315
Golden Secret, calved 1915; Conedale Farms	310
Lancaster Maid 3d, calved 1916; J. C. Andrews	405
Lucile, calved 1908; E. Ogden & Son	425
Golden Dora, calved 1915; G. Marco	285
Beauty, calved 1915; J. E. Kennedy	300

BULLS.

Future Sultan, calved 1915; Henry Kopp, Galesville, Wis.	505
Royal Ruby, calved 1916; G. Marco	500
Candidate, calved 1915; Ray Harney	260
Missie's Ruby, calved 1915; Robert R. Hawkey, Belvidere, Ill.	505
Malcolm, calved 1915; G. Stachbucke, Darlington, Wis.	200
Cumberland Rock, calved 1915; O'Neill Bros., Shullsburg, Wis.	500
Lancaster Sultan, calved 1913; C. A. Saunders, Manilla, Ia.	200
Ruby's Chief, calved 1915; Conedale Farm	200
Roan Duke, calved 1915; Ray Harney	285
Ranger, calved 1915; W. L. Hutchinson, Arlington, Wis.	200
Master Gloster, calved 1914; Henry Kopp	405

SUMMARY.

33 females	$13,160; average	$400
11 bulls	3,760; average	341
44 cattle	16,620; average	382

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: "**The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available—under which your advertisement would appear.

Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER — **MADISON, WISCONSIN**

FARM LANDS.

HERE'S WHERE THE COWS roll out the milk heavy with cream. The dairyman's country, Aitkin county. It's our Company's land. We can sell it for a few dollars per acre. Investigate. Send for literature. Arnold, Land Agent, Rock Island Railway, 153 Wolvin Bldg., Duluth, Minnesota.

640 ACRES, all tillable, 12 miles from Rapid City, 4 miles to station, 5-room house, cattle sheds, fenced and cross-fenced, good water, wells 10 feet deep, good roads, $12.50 acre, half cash, balance to suit at 6 per cent. W. P. Casey. Rapid City, S. D.

WISCONSIN farm consisting of 287 acres, having good buildings, situated seven miles from good market. For information, write to Morris Johnson, Osseo, Wisconsin.

FORTY or eighty acres with fair buildings, good clay soil, no waste land, close to town, $25 per acre; $100 cash, balance long time. Frank M. Doyle, Ladysmith, Wisconsin.

FOR sale—111-acre well improved farm, 3 miles northeast of Weyauwega, Wisconsin. Richard Kuehn, Weyauwega, Wisconsin.

TELEGRAPHY.

LEARN TELEGRAPHY. Short hours. Positions guaranteed. Write Signal Dept., Northwestern Telegraph School, Eau Claire, Wis.

CALVES—BOTH SEXES.

HOLSTEIN, Short-horn and Guernsey calves, either sex. A few exceptionally fine ones. $12.50 to $35, shipped by express at little cost. For information, write Ed Howey Co., South St. Paul, Minn.

POSITION WANTED.

POSITION wanted — by experienced buttermaker. Married. Cooperative creamery preferred. Furnish reference. Address, Frank Peroutky, Forestville, Wis.

POLAND CHINA SWINE.

BIG Polands. Good, growthy spring boars at reasonable prices. Harold Schmeider, Oregon, Wisconsin. Phone 9616.

PLYMOUTH ROCKS.

FEW fine, pure-bred Buff Rock cockerels $1.50. Clinton Berry, Kilbourn, Wis.

LEGHORNS.

FOR sale, full-blooded white, Single-comb Leghorn cockerels. C. Magnuson, Spirit Lake, Ia.

GUERNSEY CATTLE.

TWELVE Guernsey grade heifers, cheap for quick sale. G. D. Fellows, Algoma, Wis.

Famous Four Burr Mills

GRIND ALL of your ear or shelled corn at **15 to 20 bushels per hour.** Other grain in proportion. These mills will earn their cost in **one week's grinding** at the present **high price** of feed. **Send for free catalog.**

Bovee Furnace Works
104 W. 8th St. Waterloo, Iowa

FARM IN FLORIDA!

THIRTY acres, houses, barns, stock, machinery. The land, the climate, the bargain! Are you the buyer? Fishing, hunting, oranges, health —yours at a sacrifice. A M. Chase, Marshfield, Wisconsin.

BIG POULTRY PROFITS THIS WINTER

Raise Chicks in the Winter with a
MODEL COAL-BURNING HOVER
52-IN. CANOPY $15.00

Only hover at $15 with genuine magazine. Costs but 2c a day to run. Will burn hard or soft coal, or wood. Guaranteed.
FREE—Big poultry book. Tells how to raise more chicks, make bigger profits. Write now.
Model Incubator Co 60 Henry St., Buffalo, N.Y. 89 Barclay St., N.Y. City

BIG 4 **POULTRY JOURNAL**
Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

POOR MAN'S CHANCE—$5.00 down, $5.00 monthly, buys 40 acres productive land; some timber, near town, price $200.00. $10.00 monthly buys 80 acres. Box 425-H, Carthage, Mo.

POULTRY AND PET STOCK.

S. C. R. I. REDS

FOR SALE—Hatching eggs from prize pens, half price for balance of season. Won 9 ribbons on 15 birds at Wisconsin State Fair, 1915; 4th pullet and 3d young pen at Chicago Coliseum, 1915. Winnebago Poultry Yards, R. 23, Omro, Wis.

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg. Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Succes'rs to R. F. Johnson, Assumption, Ill.

HATCHING EGGS: prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

TURKEYS WE BUY 'EM. Write us what you have. **THE R. E. COBB CO.** 26 E. 3d St., St. Paul, Minn.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

SINGLE COMB BUFF AND WHITE Leghorn cock'els. Charles Schmit, Hortonville, Wis.

WHITE and Barred Rocks from prize-winning stock. Yearling hens and males. Early pullets and cock'ls. Mrs. J. F. Bloom, R. 1, Stillwater, Minn.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

The Dust Bath.

So much has been said about the hen's need of a dust bath that few poultry raisers do not provide some sort of a box for this purpose.

While it cannot be denied that the dust bath is very necessary to the health of the hens—for it is their only way of cleansing themselves—it is questionable whether some have the right idea concerning the advantages of the bath. It has been the theory that hens desired and needed something exceedingly dry and dusty, the idea being that the dust would suffocate the lice when the hens used it. Working on this theory many poultry keepers provide boxes of dry road dust or finely sifted ashes, often adding a quantity of dusting powder.

It must be admitted that this material will finish the lice if the hens use it, but they do use it only because they have no chance to select their own. Hens having nothing else will often be found trying to dust in the floor litter. But let the hens make their own selection between the dry dust box and the earth and none of them will be found in the dust box. They will invariably select a spot where the earth is powdered as fine as dust, but with some moisture in it. This moist, powdered earth removes all scurf and dirt from the skin and the bases of the feathers, acting somewhat like damp sawdust sprinkled over a floor and then swept.

Scurf and dirt on the skin and at the base of the feathers make a harbor for lice, but when the hens are allowed to clean themselves in the right way few lice remain. Lice on most animals come from lack of cleaning or lack of the means to clean themselves in their own natural way. If hens are allowed to keep their bodies clean and the poultry keeper will keep the house clean little trouble will be had with lice.

Want to buy or sell a farm? Make it known by inserting an advertisement in THE FARMERS' MARKET. Six cents a word each insertion.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Let Us Play.

It would be almost wicked to let these beautiful days slip by without enjoying every minute possible. Almost the middle of November—and as we write the sky is as blue as summer, not a cloud to be seen, the warmth of the sun and the bite of the frost combined to just the most enjoyable degree. Such days cannot last long, so let us crowd as much out-of-doors enjoyment into them as is possible.

There may be things yet to do in the garden—things that would be called work were it not for the glorious sunshine, the faint breeze, the friendly advances of Mr. Squirrel, who stops the important business of storing away his winter's supply of nuts and acorns to chatter and scold from the branches of the old oak, and the feeling as we put the garden in order for its long rest that we are putting the finishing touches to a task well done and nature smiles graciously upon all workers alike.

Or it may be that you are one of those who have finished such out-of-door tasks, in which case forget about the lunch dishes, hide the mending basket securely away and go for a walk through the woods or across the pastures. We can mend today while the sun shines, to be sure, but we can't visit the fields tomorrow if it rains. Surely such days were meant to add to the joy of the joyous and ease the hurt of the sorrowing, and nature has for us pleasures innumerable in field and wood if we but go and find them.

Don't forget the boys and girls. How they do love a bonfire and good things to eat in the woods! How they will hurry their Saturday's chores if a picnic is in sight for the afternoon! Let us have one more happy romp with the kiddies before the cold and snows forbid.

Store Fruits and Vegetables.

Be prepared to meet the high cost of living by storing fruits and vegetables now, is the advice of M. F. Ahearn, professor of landscape gardening in the Kansas State Agricultural College.

Do not pay winter prices for fruits and vegetables, says Professor Ahearn, when by a simple reorganization of the cellar or some digging in the garden, storage room can be provided for the preservation of large quantities of this class of food.

If the fruit shrivels or becomes spongy and decays the fault in most cases can be traced to the storage room and may be corrected wholly or in part. The cellar must be well ventilated if fruit is to be kept successfully for any length of time. Temperature and humidity are factors quite as important as ventilation. The best temperature for fruit is 33 degrees or a little above.

It is not well to allow much fluctuation in the temperature. In the farm cellar uniformity of temperature is maintained by means of ventilation, which should be watched closely. While the weather remains warm in the fall the windows are closed by day and opened by night.

Apples may be packed either in barrels or in boxes. The preference is usually given to the boxes. In the case of apples that are to be kept for a considerable time it is a good plan to wrap each one separately in a piece of paper.

Favorable conditions of moisture and temperature are obtained by burying the fruit in pits, points out Professor Ahearn. To prevent apples tasting of the earth they should be placed in boxes, barrels or other containers which keep them from direct contact with the soil, or the pit may be lined with boards.

Storage requirements for vegetables differ widely. The sweet potato and the squash are kept successfully only when the temperature is high and constant and the humidity is low. Root crops and cabbage can best be stored in pits. For storing cabbage in this manner the heads are pulled with the roots and leaves attached, and placed upside down. Earth is placed on the pile until the plants, including the roots, are entirely covered.

Fall Propagation of Roses.

Climbing roses are propagated mostly by hardwood cuttings made in the fall. Many cut-flower roses may be propagated in the same way.

Hardwood cuttings are taken from the dormant wood of winter, while softwood, or greenwood, cuttings are taken when the plants are in active growth. To make a hardwood cutting, good, strong, well-ripened shoots of the past summer's growth should be selected. These are better if cut between the time the leaves fall and freezing weather. If left until after cold weather there is danger of injury from freezing. They should be cut into pieces of five or six inches, with the upper cut just above a bud, and should be tied in bundles with raffia or with string that does not rot easily if exposed to dampness. After labeling plainly they should be buried in moist sand, tops down, and placed in a cool cellar or buried in the open ground below danger of frost. They should be planted in the open ground in the spring about or a little before corn-planting time, so that one or two eyes, or not over one inch of the cutting, is above the ground, which will leave four or five inches in the ground. Care must be taken not to injure the calluses that have formed while the cuttings were buried. Sometimes better results are obtained by planting in partial shade.

Frequently cuttings made in winter or early spring do nearly as well as those made in the fall, but in the North there is always danger of the wood being injured during the winter.

How to Sew Braided Rugs.

To the Editor:—A reader of the Home page in a recent issue requested someone to tell her how to sew braided rugs. As I enjoy the helps given in this department I will tell her how I sew them.

Let the edges of your braid meet. Take a large needle, fill it with No. 20 thread, two ply, and proceed to sew the edges together with what is called a shoemaker's stitch, which is made in the following manner: Under through braid, back under through braid, hiding your stitches in the folds of your cloth.

I find this the best way to sew my rugs. Some overcast the edges together, but the threads wear off and let your braids loose.

—Mrs. S. E. S.

Winter Care of Geraniums.

To the Editor:—Mrs. G. asks help to make her geraniums bloom. If they grow and look thrifty without blooming she probably has them in too large pots. They should pretty well fill the pot with roots in order to bloom well. Otherwise, they make a mass of leaves and branches with very scant bloom. Some kinds of geraniums are better bloomers than others, while certain varieties bloom well in the open ground, but not in the window, and vice versa.

Give them all the sunshine possible in winter, keep the foliage clean by frequent shower baths of tepid water, and if you have varieties suited to indoor blooming there should be no such thing as failure, as the geranium is considered one of the best of house or bedding plants.

This is how I manage to have a large bed of geraniums in summer without much trouble: Before frosts come I take small slips and plant thickly in shallow boxes of soil about four inches deep and as wide and as long as is convenient for the window sill. Two boxes to a window are easier to handle. By spring they will be nice little plants ready to grow and bloom all summer. It does not matter if they crowd a little in the boxes. By cutting off the lower leaves to admit the sun and an occasional turning of the boxes to keep them growing straight, they need not be shifted till planting time comes.

I hope Mrs. G. will succeed as well as I have by this method.

Can anyone who has had experience with drying green peas tell me how it is done, whether in sun or shade or oven? Also, how do you cook them after they are dry? I would very much appreciate this information. L. S.

The Hot Cake Season Again.

To the Editor:—Could some of the readers of the Home department tell me how to make good hot cakes, or pancakes, as some people call them? My hot cakes are inclined to get soggy. Someone told me to add a little corn meal, which would do away with that trouble, but it makes them tough. Will not some of the good cooks send in their tried recipes?

Would like to tell the readers how I get my cream to sour for churning during the wintertime. I always keep some buttermilk when I churn and add a little of it to the sweet fresh cream the day before I want to churn, and set it near the stove to keep it a little warm. In this way the cream gets sour quickly and the butter is not stale as it sometimes is when cream sours slowly. I also stir my cream twice every day. —Mrs. S. H.

Farm Women Form Homemakers' Clubs.

A movement is now on among the farm women of the state to have, where such groups have not already been established, organizations which shall aid them in the business of homemaking.

The method of organizing homemakers' clubs is very simple, and entirely in the hands of any community of energetic, up-to-date farm women who feel the need of working and pleasuring together. The constitution for these clubs and programs for bimonthly meetings have been worked out at the home economics department of the college of agriculture at Madison, and copies will be sent on request to women who are interested in the movement.

The primary subjects for consideration by the clubs during the winter are questions pertaining to clothing, food, child welfare and better household arrangements. The program for the first meeting after a club has been organized is devoted to the subject of bread making, and the recipes discussed at this meeting are used in preparing refreshments for the next one, so that the method may thus be tested and the value of the results discussed by the members of the club.

Recipes.

Potato Soup.—Three potatoes of medium size, four cups skim milk, one small onion, four tablespoons butter, two tablespoons flour, one and one-half teaspoons salt, one-half teaspoon celery salt, or two tablespoons celery, cut in small pieces, one-eighth chopped parsley, little cayenne pepper or paprika. Boil the potatoes and when soft rub them through a sieve. Slice the onion and scald this and the celery with the milk. Take out the onion and add the milk slowly to the potatoes. Melt two tablespoons butter, into which mix the dry ingredients, and stir into the boiling soup. Boil one minute; strain, add the remainder of the butter, and sprinkle with the parsley when ready to serve. The parsley improves the looks and adds a little to the flavor, but m be omitted if this is more convenient

Cinnamon Rolls.—Roll biscuit dou to an oblong shape one-half inch thi spread with melted butter and sprin with sugar and cinnamon. Roll lik jelly roll, cut off inch slices, place greased muffin tins and bake in qu oven fifteen minutes.

Date Cake.—One egg, two cupf sugar, one tablespoonful butter, o half cupful English walnut me chopped fine, one cupful dates, sto and cut fine, one cupful boiling wa to which has been added one scant t spoonful soda, one and one-half cup flour, one teaspoonful vanilla. B one hour in a very slow oven.—Mrs. N

THE YOUNG FOLKS

All letters from boys and girls to this departm should be sent to office of The Wisconsin Far Madison, Wisconsin.

Mother Must Be Proud of H.

Dear Young Folks:—I have enjo your letters and the riddles v much. This is my first letter. I a little boy ten years old and I hav brother eight. Our papa is dead our mamma is improving a homest in Wyoming.

My brother and I work all we to help mamma. I want some of girls to tell how to make baking p der biscuits, then I will cook mamma. She said she was goin to let Dick and me be her girls. Sh going to make me an apron. I h been washing dishes a long time.

I am in the fifth grade and brother and I like to read your lett

I hope the girls won't forget to s in some easy recipes for me.

—Orv

Crochet Directions For Mart.

Dear Young Folks:—I saw Mart request for a crocheted yoke, so I m sending one that I think is very p ty. I love to crochet and think thi an easy yoke to make, as I have m several. Use No. 30 crochet cot It is a clover pattern.

Chain twenty to start.

First row—Join in third stitch m needle to form picot; four treble, p chain, four treble, two chain, turn

Second row—Chain five, four treb two chain; chain two, four trebl two chain; chain two, one treble, t

Third row—Chain three, three t in two chain; chain two, four trebl two chain; chain two, four treble in picot.

Start clover—Chain fourteen, jo sixth stitch from needle; chain five, in same place; chain five, join in place; turn, five treble in first pic Take off needle and slip through row, treble, fill picot with five tre ten trebles in second picot; ten tr in third picot; fill up stem with double crochet.

Fourth row—Chain five, continue beginning for next three rows.

Seventh row—Chain fourteen, jo sixth stitch from needle. Make t picots like in third row, turn, trebles in first picot; take threa needle and slip through in fifth five trebles in same picot; five trebl next picot; five trebles in next p slip through first leaf, chain four make three more picots, five trebl first picot. Take thread from ne and slip through center of next leaf trebles in same picot, ten trebles in picot, ten trebles in third picot, nine double crochet for stem. Fi next clover with five trebles in se picot, ten trebles in third picot, double crochet for stem. This m second clover.

Continue, increasing as before, you have ten clovers for armhole. three rows without increasing shoulder. Make same as front, three leaves in place of ten in fro

Edging—Chain eight, two trebles twice on needle, chain two, two trebles, skip three chain; continue around Fill up with double trebles; three treble, chain four, join in last stitch to picot; three trebles, chain four, three trebles, join in chain two; continue.

Beading—Chain four, join in eight picot, turn; same on other seven slip stitch on bottom of eight picot, chain seven, join to picot, fill up with seven slip st continue. The beading goes on the tom of the yoke and the edging ar the armholes and neck. —B.

International Sunday School Lesson.

Lesson for November 12, 1916.
(By E. O. SELLERS, Acting Director of Sunday School Course.)

World's Temperance Sunday.

LESSON TEXT—Romans 14:13-15:3.

GOLDEN TEXT—It is not good to eat flesh, nor to drink wine, nor to do anything wherby thy brother stumbleth. —Rom. 14:21.

The early Christian church had two outstanding problems, the question of the Sabbath days (two of them) and the question of eating meat offered to idols. This lesson suggests the solution of the latter. Our modern problem of intoxicating liquors is very much the same as this ancient one of the early Gentile Christians.

I. "Let us not, therefore, judge one another" (vv. 13-15). There are certain acts which are universally conceded to be right and within the Christian law of liberty. There are also other acts which are as plainly prohibited. There are a large number of acts which lie in the region between these two, and men ought to be careful how they condemn one another for these latter things. Where good and true men differ, their acts, on the matter of the Sabbath (See Col. 2:16), or on temperance, must be determined as being unto the Lord, sincerely, conscientiously. It is not for us to judge (v. 13), literally, to pronounce judgment. They have a right to their opinion and to their liberty of thought and action, but (vv. 14, 22, 23) as for Paul or the Christian, he must have a clear conscience. He must have faith, and be assured that he is right: otherwise he is condemned by God and by his own conscience, and is not a sincere Christian disciple. The word "therefore" in verse 13 points back to verse 12, which ought to be carefully pondered. As we have each to render our accounts to God, we should stop judging one another. Food is a very proper thing, and laws are also proper, yet love is the ruling principle of the Christian life.

We ought to have our liberty curtailed rather than have our souls lost. If we magnify our liberty to the sacrifice of our brother's soul we "walk no longer in love." The demands of Christian love are more to the true followers of Christ than the permissions of Christian liberty. The privilege of eating and drinking while it injures others, however harmless to yourself, is not to be tolerated.

The word "stumbleth" here used (v. 21) implies a movable trap or snare, literally any impediment placed in the way so as to cause another to fall. We must never forget that even a weak brother is "a brother for whom Christ died."

II. "Let not your good be evil spoken of" (vv. 16-23). The kingdom of God is not meat and drink, but it is a life of righteousness, peace and joy in the Holy Ghost. Our liberty is to be so used that it shall not be evil spoken of. The real proof that we are in the kingdom of God and the kingdom of God is in us is not found in our scrupulousness or lack of it, in our eating and drinking, but in the manifestations of righteousness in our lives, and of having peace in our hearts (15:13). This peace must be manifested toward our fellow men (v. 19; Ch. 15:18) and being filled with "joy in the Holy Ghost." The object of our pursuit is to be the things which make for peace, the things whereby we may fill one another up, not the exploitation of some pet hobby, for the kingdom of God does not consist of riding hobbies.

In this matter of temperance reform we all recognize that alcohol has many uses besides that for drinking purposes, and that there are various opinions about drinking various forms of it, and various ways of advancing the temperance cause, all of which are honestly held by many good men, but Christian patriotism demands that every true-hearted man or woman, everyone who is loyal to his country, to humanity and to his God, should take Paul's position, (1) That he will not be a stumbling block in the way of the weak and of the young. (2) That he will not do anything to destroy his brother for whom Christ died. (3) That he will deny himself anything for their sake. (4) That his attitude will be that of love and not of selfishness. This places temperance on a high moral plane, but the world is also beginning to recognize that the temperance question is also an economic one.

It is well to have faith, but it is also well to have the love that does not injure others by the exercise of that faith. The question is, "Are you perfectly sure this thing is right?" When in doubt as to wether any action will please God, doubt your doubts, and avoid that act.

III. "We then that are strong" (15:1-3). This section is in reality a continuation of Chapter 14. Paul is continuing his thought that we are not to please ourselves, but rather to live such lives as will edify or build up our neighbor. Our strength is not given to us that we may glory or lord it over our weaker brethren, but rather that we may serve them.

To please my neighbor does not mean that "when in Rome do as the Romans do," but rather to live such a life that my action will be for the good and edification of my brother, thereby pleasing God (Gal. 1:10).

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PART III. "Prince Charlie"

CHAPTER VI—Continued.

"Why, it was Mr. Stuart. He talked about you a good deal at the Fort. You know there are several officers who have their wives with them and he was asking them lots of questions about typical western girls, but they didn't seem to know any, for at a military fort girls don't remain girls long—unless they're half boys, like me. Someone always snaps them up and tacks 'Mrs.' to their name, and that settles them."

"Poor girls!"

"Oh, bless you! they would say that same thing of anyone who visited a fort and did not become married, or engaged—well, I should think so!"

"Do you come in for your share of commiseration?" asked Tillie, who was listening with interest to this gossip of military life that seemed strange for a woman to share.

"Me? Not a bit of it. I am not worth their notice in that respect. They haven't begun to treat me as if I was grown up, yet; that's the disadvantage of being little—you never can impress people with a belief in your own importance. Yesterday, Lieutenant Murray had the impudence to tell me that, when all was said and done, I was only a 'camp follower' hanging onto the coattails of the army, and likely to be mustered out to the regiment at the discretion of the superior officers—my lords and masters! What do you think of that?"

"That you must have made things rather warm for the poor lieutenant to provoke a speech so unnatural to his usual courtesy," answered Rachel. "Whatever Mr. Stuart may credit me with, I have not imagination enough to conceive that speech being unprovoked."

"Well, if you're going to champion his High-Mightiness, I'll tell you nothing more. Mr. Stuart said you were so sympathetic, too."

"I should say it was the Stuart who was imaginative," laughed Rachel; "ask Tillie."

"But, he did say that—seriously," insisted Miss Fred, turning to Tillie. "When Mrs. Captain Sneath was curious about you, he said you had a delicate imagination that would find beauty in things that to many natures would be commonplace, and topped off a long list of virtues by saying you were the most loyal of friends."

Tillie sat looking at Rachel in astonishment.

"What have you been doing with the man?" she asked; "giving him some potion brewed by an Indian witch? A sure 'hoodoo' it must be, to warp a man's judgment like that! And you were not so very nice to him, either."

"Wasn't she?" asked Fred in amazement. "Well, I think it would be hard to be anything else to so charming and so clever a man. Do you know he is very rich?"

"No," answered Tillie. "We only knew that he was a physician out here for a change of air. He is splendid company."

"Well, I should think so! We were all in love with him at the Fort. Mrs. Sneath says he has given up medicine, and—I believe it's something of a secret, but it doesn't matter in this far-out corner of the world—he is something of a writer—a writer of fiction. The way I heard it was through the captain, who used to know him at college. He says that the Stuart, as you call him, is most likely out here studying up material for some work—a novel, may be. Wouldn't you love to read it?"

"I can't say unless I have some idea of the class of work. What has he done?"

It was Rachel who was the questioner, and who, in the light of a reasonable cause for his presence in the Kootenai, felt herself all in a moment a bit of a fool for some of her old fancies.

"I don't know—wish I did," said Miss Fred promptly. "He writes under an assumed name. Mrs. Sneath wouldn't tell me, for fear I'd bother him about it, I suppose; but if he comes up here to camp, I'll find out before he leaves—see if I don't."

"He is not likely to pay a visit up here in this season of the year," remarked Rachel. "I thought he was going east from Owens."

"He did talk like that when he first went down there, and that's what made Captain Sneath decide he was studying up the country; for all at once he said he might stay out west all winter, and seemed to take quite an interest in the Indian question—made friends with all the scouts down there, and talked probabilities with even the few 'good' Indians about the place. He told me he might see me again, if I was coming up with the company. So he is studying up something out here—sure."

Nobody answering this speculation, she was silent a bit, looking at Rachel, who had picked up a book off the table; and then she began to laugh.

"Well—" and Rachel glanced over at her, noting that she looked both amused and hesitating—"well, what is it?"

"I was only thinking how—how funny it would be if you happened to be that 'something.'"

But Rachel's answering laugh, as she pushed the book away, signified that it was the least probable of all fancies.

"It is you who should write romances, instead of the Stuart," she replied—"you and Tillie here. She has a good deal of the same material in her—that of a match-maker. She has spied out life partners for me in all sorts of characters out here, from Davy MacDougall down to Jim. They are wonderfully anxious to get rid of me."

Just outside the gate the blue military garb showed the coming of the usual afternoon callers from Camp Kootenai, among them the major, commander of the company, the only occasional rebel being his petite noncommissioned officer in petticoats. A tall young fellow in lieutenant's uniform halted on his way out to exchange greeting; and if the daughter complained of the young soldier's lack of deference, the father had no reason to, for in his eyes, as he saluted, shone something nearer affection than mere duty—a feeling that he shared with every man in the command, for Major Dreyer was a universal favorite.

"No later news of that scout, Genesee?" asked the younger as they separated.

"No; but we can expect him soon now, for that red shadow of his, Kalitan, just loped into camp. And, by the way," added the older officer, "he mentioned that he passed our friend Stuart back at the settlement. He is coming up this way again."

"Tell Miss Fred that, Major. When I saw her, an hour ago, she needed something to put her in a good humor."

"Ah! Good evening, Lieutenant.

"Good evening, Major."

The minute the subordinate's back was turned, Miss Fred, with a running jump that would have done Jim credit, landed almost on the Major's shoulder. He gave her a fericious hug, and dropped her plump on her feet with a stern—

"Attention!"

Quick as light the little hand was raised in salute, and the little figure gathered together its scattered dignity to make a soldierly appearance.

"Private Dreyer, I have been met on the outposts with a message telling me of a disorganized temper that should belong to your command. What have you to say for yourself?"

Instantly the role of the soldier was dropped, and that of the girl with a temper took its place.

"Oh, he told you, did he?" she asked, with a wrathful glance at the figure retreating toward camp. "Well, just wait until I go riding with him again! He's called me a camp follower, and—and everything else that was uncivil."

"Ah! And what did you do?"

"I? Why nothing, of course."

"Nothing?"

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"Well, I did threaten to go over and turn them out of the cabin that was built for me, but—"

"But that was a mere trifle in this tropical climate. I've no doubt it would do them good to sleep under the stars instead of a roof; and then it would give you an opportunity to do some wholesale nursing, if they caught colds all around."

"Just as if I would!"

"Just as if you would not! And Lieutenant Murray would come in for the worse medicine and the biggest doses."

"If his constitution is equal to his impudence, it would take stupendous doses to have any effect. I wish he could be sent back to the Fort."

"Won't sending him up among the Indians do just as well?"

"Y-yes. Are you going to, papa?"

"Ah! now you grow inquisitive."

"I do think," said Tillie, "you plague her a great deal."

"They just treat me as if I was a joke instead of a girl," complained Fred. "They began it before I was born by giving me a boy's name, and it's been kept up ever since."

"Never mind, Baby," he said soothingly; "if I had not made a boy of you I could not have had you with me, so the cause was vital."

They both laughed, but it was easy to see that the cause was vital to them and their companionship very much of a necessity. Its interruptions since her babyhood had been few and short, and her education, picked up on the frontier, had taught her that in the world there was just one place for her—in the saddle, and beside her father, just as her mother had ridden beside him before Fred was born.

CHAPTER VII.

"A Woman Who Was Lost—Long Ago!"

THE next morning, bright and early, Kalitan called at the ranch; and Miss Fred, accustomed as she was to the red men, grew rather enthusiastic over this haughty, graceful specimen, who gave her one glance at the door and walked past her into the house—as she afterward described it, "just as if she had been one of the wooden door posts."

"Rashell Hardy?" was all he said; and without more ado Miss Fred betook herself up the stairs to do his implied bidding and hunt Miss Hardy.

"I rather think it's the grand mogul of all the Kootenais," she said, in announcing him. "No, he didn't give any card; but his personality is too striking to be mistaken, if one has ever seen him or heard him speak. He looked right over my head, and made me feel as if I was about two feet high."

"Yes, but he looks like a young faun. That one never came from a scrub race."

"I'll ask him to stay to dinner," laughed Rachel; "if anything will cure one of a tendency to idealize an Indian, it is to see him satisfying the inner man. Come down and talk to him. It is Kalitan."

"Oh, it is Kalitan, is it? And pray what is that—a chief rich in lineage and blooded stock? His assurance speaks of wealth and power, I should say, and his manner shows one a Fenimore Cooper spirit come to life. How am I as a guesser?"

"One of the worst in the world. Kalitan is really a handsome humbug in some ways. That superb manner of his is the only stock in trade he possesses beyond his swift feet; but the idea of importance he manages to convey speaks wonders for his strength of will. Come along!"

"Klahowya, Rashell Hardy?" he said; and stepping solemnly forward, shook her hand in a grave, ceremonious fashion. Rachel told him the other lady was her friend, by way of introduction, and he widened his mouth ever so little in a smile, but that was the only sign of acknowledgement he gave; and when Rachel spoke to him in English he would not answer, but sat stolidly looking into the fire until she saw what was wrong and addressed him in Chinook. "Rashell Hardy need not so soon forget," he reminded her briefly; and then went on with his speech to her of where he had been; the wonders he had done in the way of a runner, and all else of self-glorification that had occurred in the past months. Many times the name of his chief was uttered in a way that impressed on a listener the idea that among the troops along the frontier there were two men who were really worthy of praise—a scout and a runner. "Kalitan tired now—pretty much," he wound up, as a finale; "come up Kootenai country to rest, maybe, while spring comes. Genesee he rest, too, maybe—maybe not."

"Where, Kalitan?"

"S'pose camp—s'pose maybe Tamahnous cabin; not here yet."

"Coming back?"

Kalitan nodded and arose.

"Come see you, maybe, sometime, often," he said, as if conferring a special honor by promised visits; and then he stalked out as he had stalked in, only checking his gait at sight of Aunty Luce coming in from the kitchen with a dish of cold meat. She nearly dropped it in her fright, and closed her eyes in silent prayer and terror; when she opened them the enemy had left the porch.

"Good Lawd, Miss Rache!" she gasped. "He's skeered me before bad enough, but this the fust time he evah stopped stock an' glare at me! I's gwine to complain to the milantary—I is, shuah."

"You are a great old goose!" said Rachel brusquely. "He wasn't looking at you, but at that cold meat."

There seemed a general gathering of the clans along the Kootenai valley that winter. With the coming north of Genesee had come the troops, then Kalitan, then their mercurial friend of the autumn—the Stuart; and down from Scot's Mountain came Davy MacDougall, one fair day, to join the circle that was a sort of reunion. And among the troops were found many good fellows who were so glad of an evening spent at the ranch that never a night went by without a party gathered there.

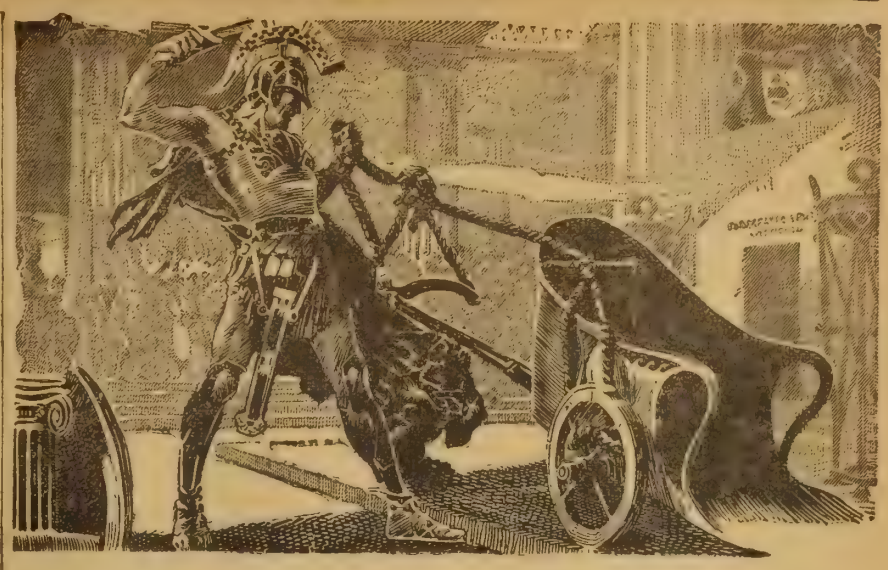
"The heft o' them does everything but sleep here," complained Aunty Luce; "an' all the other ones look jealous 'cause Mr. Stuart does that."

For Hardy and his wife had insisted on his stopping with them, as before, though much of his time was spent at the camp. There was something about him that made him a companion much desired by men; Rachel had more opportunity to observe this now than when their circle was so much smaller. That gay good humor, with its touches of serious feeling, and the delicate sympathy that was always alive to earnest emotion—she found that those traits were keys to the hearts of men as well as women; and a smile here, a kind word there, or a clasp of the hand, were the only arts needed to insure him the unsought friendship of almost every man in the company.

"It's the gift that goes wi' the name," said MacDougall one day when someone spoke of the natural charm of the man's manner. "It's just that—no less. No, o' course, he does na strive for it; it's but a bit o' nature. A blessin', say you, Miss? Well, mayhap; but to the old stock it proved but a curse."

"It seems a rather fair life to connect the idea of a curse with," remarked the Major; "but I rather think he has seen trouble, too. Captain Sneath said something to that effect, I believe—some sudden death of wife and children in an epidemic down in Mexico."

(To be continued.)



Doing "the Impossible"

The Gordian knot is the ages-old symbol of the seemingly impossible. Alexander the Great gave it a place in legendary history when, unable to untie it, he cut it in twain with his sword.

This famous incident of antiquity has its modern counterpart in the real work of the men whose vision and unrestricted initiative brought forth the great Bell System.

In the development of the telephone, one Gordian knot after another has been met with. Yet each new obstacle yielded to the enterprise of the telephone pioneers. Every difficulty was handled with a will and a courage which knew not failure.

Man's words have been given wings and carried wherever his will directs. Electrical handicaps have been overcome one by one.

The feeble current of telephone speech has had a way hewn for its passage through all physical impediments, until the entire country, from the Atlantic to the Pacific, is within hearing of a child's faint cry.

This record of the Bell System for past achievements is an earnest of future accomplishment. New problems are being met with the same indomitable spirit, which guarantees a more comprehensive as well as a more perfect service.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

A Herd Worthy of Consideration.

WE recently had an opportunity to inspect the breeding of the Duroc Jersey herd owned by E. R. Perkins, Manitowish, Wis., and inasmuch as we have seen some of the foundation sows, we feel that Mr. Perkins is offering Durocs that should appeal to our readers in the market for registered swine of this breed. Eleven sows represented the initial purchase on the part of this breeder and a mention of the breeding will show that he did not purchase a "cold-blooded" animal. Four of the sows in the breeding herd were sired by a son of Marion's Wonder and in traveling over the state, inspecting the various Duroc Jersey herds, we have come to the conclusion that Marion's Wonder was the greatest sire ever used in this state. The dams of these four sows represent the Golden Models. Three other sows are sired by Newcombe's Defender, a boar bred by McKee Bros., and sired by the great Defender; $10,000 was refused for the last mentioned boar, the only Duroc Jersey boar twice grand champion at the International. Two of the best breeding matrons in Mr. Perkins' herd are daughters of King the Col. 1st, he a son of King the Col., the boar that has more sons heading pure-bred herds than any sire living or dead. The dam of these two is by the noted Iowa boar, Advance Critic. Two sows that are producing good litters on this farm are sired by Defender's Gold Model by the grand champion, Lee's Defender, out of Golden Queen 38th by the sire that made the Golden Model popular—Golden Model 2d. These sows are out of dams by the one and only Illustrator, also a grand champion. By the way, one of these sows has a spring litter by King Royal by the Royal Champion by the $2,650 boar, Royal King, he in turn by the sire of the Omaha first-prize winners and champion—Orion Cherry King. Now if there is a herd in the state that contains better breeding we have not seen it. Mr. Perkins was unfortunate this year in having a complete failure, consequently he must sell some of his Durocs. In this instance the slogan, "one man's loss is another man's gain' is very true, for the original investment is a great deal more than he expects to get for the produce. He has spring boars and gilts to sell and about fifty fall pigs. These will practically be sold at your own price and he will pay the express to your station and furnish a certificate of registry with each pig sold. We know the price he is asking, and while it is far below the real value of the individual, you get the benefit. It will pay you to investigate. We will appreciate it very much if you will mention The Wisconsin Farmer when writing the owner. See page 23.—Adv.

Orion Cherry King Jr.—National Champion.

THE National Swine Show recently held in Omaha, Neb., was without a doubt the greatest show of the kind ever held in the world, and any breeder that was "in the money" at that show has reason to feel proud indeed. By winning the grand championship, Orion Cherry King Jr., gains the distinction of being the best Duroc Jersey boar on exhibition at this great show. Sons of this boar are scarce in the middle West, though he is a recognized sire in the East. E. H. Parker & Son, Janesville, Wis., are fortunate in having a son of this grand champion at the head of their herd. Orion Cherry King Jr. is by Orion Cherry King, one of the leading sires of the present day, so the Parker boar comes from a line of breeding that is no accident. The Parkers will give the breeders of the Northwest a chance to get some of this blood in their herds, for on February 8th, they will sell fifty head of Duroc Jersey sows, bred to this yearling son of Orion Cherry King Jr., and to a son of The Pal's Col. by Pal's Col. This is the first public sale ever made by this firm and we have been advised that the public will get the best he has, in this his first sale. Keep the date in mind. Spring boars weighing up to 275 pounds are being offered from this herd and they are dandies, as good as any breeder has. The Parker guarantee goes with every boar sold. Write your wants, but don't wait until all the tops are gone. Please say you saw the advertisement in The Wisconsin Farmer. —Adv.

Twenty-eight Boars Sold, Twenty Left.

PECULIAR circumstances surround the breeder of pure-bred swine. We recently received two letters from swine breeders, in the same mail. One said that he had only sold four boars and the other breeder said that he was entirely sold out of boars and gilts. This is the first year that either breeder had ever done any advertising and the prices quoted were practically the same. It is to be expected that the Smileys are enjoying a good trade, for they have one of the good herds of the state and make satisfied customers. We were at their farm last week and saw twenty boars—in two lots—that are ready for shipment. We saw that many more in the feeding lot. Up to that time they had sold twenty-eight spring boars, but don't think that the best ones are all gone, for you know that some buyers are not willing to pay the price. Get in touch with Wm. Smiley & Sons, Albany, Wis., and when writing please mention the fact that you saw the advertisement in The Wisconsin Farmer. See page 26.—Adv.

Hampshires Continue to Gain in Popularity.

WHILE talking "hog" to a farmer recently he showed us a circular that he had received from a prominent Hampshire breeder. This farmer had become interested in Hampshires and had written the breeders that are advertising in this paper. One of them was A. M. Laird, Prairie du Chien, Wis., and when he replied to this farmer's inquiry he enclosed a circular containing testimonials from twenty men to whom he has sold Hampshires since January. This circular "turned the trick" and Mr. Farmer purchased two gilts and a boar from Mr. Laird, and if he writes Mr. Laird what he told us, his testimonial will be on the next circular. This proves again that a satisfied customer is your best advertiser. We are well acquainted with the Laird herd of Hampshires and his method of doing business and we are glad to say that he gives "value received." We were at this farm a short time ago and most of the spring boars were sold then, but if you want a real herd boar, write about Kornfalfa King, his senior herd boar that is for sale, inasmuch as he can't use him to advantage. He has some great gilts of March, April and May farrow, well grown and nicely marked. These must be sold to make room for the fall pigs, and you get the benefit. If you want a pair or trio of fall pigs they will be shipped at weaning time at very reasonable figures. Mr. Laird's farm is devoted to the raising of Hampshires, that is his business and if you buy from him your order will be handled in a businesslike manner. Recent shipments have been made to Massachusetts, Mississippi, Georgia, North and South Dakota, Nebraska, as well as his adjoining states. His advertisement appears on page 26 of this issue. Write for particulars and please mention this paper.—Adv.

Harford's Holsteins.

YOU will be impressed with the pedigrees of the young bulls advertised for sale on page 25 by Fred Harford, Kaukauna. Mr. Harford has been using bulls of exceptional merit from the time he started his breeding operations. Two of his former herd sires have one or more daughters with records over thirty pounds butter in seven days, one was a son of Hengerveld De Kol; one by Sir Sadie Cornucopja and one from Mercedes Julip Pietertje Paul. The cows in his herd are what you would expect to find sired by such bulls. They are large, many weighing 1,600 pounds and better, are broad hipped, straight rumped and with large, square udders. He contemplates doing official testing this winter. Go up and look over his herd or write for pedigrees of his young bulls. When writing kindly mention The Wisconsin Farmer.—Adv.

Lang & Co. Offer Draft Stallions.

W. A. LANG & CO., Greeley, Iowa, well-known for many years as importers and breeders of Belgian and Percheron horses, have an announcement on page 24 offering high-class stallions ranging in age from weanlings to six year olds. A representative of this journal recently visited their barns and found a collection of heavy-boned, good-middled, drafty stallions, part of which are imported and the balance American bred. This firm has always been a stickler for heavy bone and the horses to be found in their barns are evidence that this very important factor has not been lost sight of. They are in position to furnish the prospective purchaser of a high-class Belgian or Percheron stallion, the kind that will meet with his approval. This firm has always given liberal guarantees and satisfactory terms to purchasers. Anyone interested should visit their barns before purchasing. When writing, kindly mention this journal.—Adv.

THE champion Jersey herd at the Northern Wisconsin Fair, Chippewa Falls, 1916. Owned by L. M. Krippner, Rice Lake, Wis. The junior champion bull is offered for sale. See advertisement and write for detailed description.

Henderson's Holsteins.

HAVE you written to J. C. Henderson, Elkhorn, Wis., for a pedigree of the Holstein bull he is advertising for sale on page 25. If you have not and are in the market for a herd sire, we advise you to do so, as he is well worth the money. He is sired by the thirty-three pound bull, Pabst Burke De Kol King, and out of a 17.93-pound grand daughter of Paul Beets De Kol. Mr. Henderson has been doing A. R. O. testing the past year and has made some very creditable records, but as he told the writer, the cows have just started for they responded very readily to heavy feeding. He has been getting them in condition for some time and when they freshen again he will undoubtedly increase their records very materially. The dam of Pabst Burke De Kol King, gave 644 pounds milk and made 33.86 pounds butter in seven days; in a year she gave 20,106 pounds milk and made 845 pounds butter. The dam of the young bull offered for sale made 17.93 pounds butter in seven days and we believe will increase this very materially at her next freshening. Send for an extended pedigree of this bull.—Adv.

Good Durocs and Guernseys.

WE recently visited the farm of Riley Martiny & Son, Baraboo, Wis., and were favorably impressed with the class of stock they are raising on that up-to-date stock farm. Registered Duroc Jerseys and Guernsey cattle are the features of the farm and they have excellent specimens of the two breeds. Just at this time we will call special attention to a dozen spring boars that they have for sale, and right here we want to say that they are good and any breeder that will order one of them will be pleased. They have been well grown, and there is not a cull in the lot. We saw what they called their culls, they were in the feed lot, but many breeders would send them out on mail orders and at that they are far superior to many boars that are in service. The price on the spring boars is $25 and $35 and the boar will be shipped on approval. This is evidence that they are selling good Durocs, for they would not make this offer if the boars were inferior. Dairymen that are in need of a few fresh cows can find them in this herd. The Martinys are getting registered Guernseys as fast as possible, consequently they are offering ten head of grade Guernseys for sale. They have recently freshened or are due to freshen in a short time and their barn accommodations are limited. These cattle are being priced very cheap, one or the ten, for quick sale. This offer is worth investigating. Write relative to the breed you are interested in. This firm is on the square and will treat you right. Please mention this paper when writing. See page 23.—Adv.

Who Wants a Herd Boar?

THERE has been a great demand this fall for desirable herd boars of the different breeds, and the breeders that have had to buy have found difficulty in finding desirable boars. There are plenty of good boars suitable to do service in a grade herd, but when one goes out to buy a boar good enough to place at the head of a registered herd of good sows, he will find out that he has a job on his hands. Some time ago we called attention to the good yearling Duroc Jersey boar that we found in the B. M. Arries herd at Augusta, Wis. He is one of the best yearlings that we have seen. At the time we were on this farm Mr. Arries did not want to sell this boar, and we did not blame him, for he had sired some wonderful pigs. We have recently had a letter from the owner advising that he would offer this boar for sale, that he either had to sell the boar or the gilts and since the gilts have done so well he wishes to retain most of them in the herd, consequently the boar is offered for sale. The price is $100 and here is a boar that is worth the money. Mr. Arries has a few boars sired by this fellow that are very choice—they will please you. Get his prices on them. Please mention The Wisconsin Farmer when writing. See page 23.—Adv.

The Krippner Jersey Herd.

THOSE that attended the Northern Wisconsin Fair at Chippewa Falls this year were impressed with the excellent showing of Jersey cattle. Four good herds were represented and according to the awards, L. M. Krippner, Rice Lake, Wis., had the best herd there. In the first place Mr. Krippner has an excellent bull at the head of his herd, namely Camelia's Golden Lad 88384. He is a bull of great breed character and stamps that in his offspring. He was the grand champion bull of the show and his son was junior champion bull. Mr. Krippner also had both female championships. To make a long story short he won thirteen firsts at this good fair. At the present time the junior champion bull is being offered for sale and anyone wanting to buy a herd bull need not look farther, for this bull will suit the most critical. Besides being a good individual he comes from a high-producing dam. A nine-months old bull is also for sale. Both of these bulls are sired by the grand champion menticned above. Write this breeder for description. A picture of his Jerseys is shown in this issue. See page 24.—Adv.

Chesters by the Hundreds.

HARRY CRANDELL, Cass City, Mich. has one of the largest, if not the largest herd of Chester Whites in the North. Not only has he a large herd but the herd boars and breeding matrons are the best that money could buy. He has a few spring boars that are suitable to head pure-bred herds and at the present time he is offering 10 head of spring gilts. These will be sold open or held until bred to any one of his noted herd boars. Besides the spring stuff, 300 fall pigs can be picked from to supply the demand for Chester Whites of this age. He is offering these fall pigs at very reasonable prices and now would be a good time for Wisconsin breeders to buy from Mr. Crandell, for they can get new blood in their herds and the express rate on pigs is not very high. His address is

Sold Several Young Bulls and Heifers.

GEORGE H. GIBSON, Nashota, Wisconsin, breeder of Holstein cattle recently started an advertisement in The Wisconsin Farmer. Now he writes to tell of his sales and to express his satisfaction with the results obtained from his advertisement. He says:

I have been having excellent results from my advertisement of Holstein cattle, which started in The Wisconsin Farmer in August. Patrick Cudahy, Cudahy, Wis., purchased a young bull and three heifers from me last week. He saw my advertisement in The Wisconsin Farmer. I have also sold several other young bulls.

The Wisconsin Farmer reaches 90,000 possible buyers each week. Farmers look in The Wisconsin Farmer when they wish to purchase new stock, because The Wisconsin Farmer regularly publishes more live stock advertising than any other Wisconsin farm paper. It may put you in touch with prosperous farmers and breeders who wish to buy the kind of stock you have to offer.

Send your advertisement today and see what The Wisconsin Farmer can do for you.

The Wisconsin Farmer Madison, Wis.

Guaranteed Circulation, 90,000.

Cass City, Mich., and it will pay you to get his prices and descriptive booklet. When writing please say you saw the advertisement in The Wisconsin Farmer. See page 23.—Adv.

Inter-County Holstein Sale.

HOLSTEIN men have come to realize that there is as much difference between public sale organizations as there is between cattle. Some sale organizations go on the principle that when a man buys cattle in a sale he takes his own chances. They even go so far as to state that they refuse any responsibility for cattle entered. On the other hand, there are a few sales where the sales organization stand back of every animal sold. You always take the word of the sales company that the animals are high class and are straight and right. We never yet saw a sale advertise that they were offering a lot of mediocre, defective cattle. In the one case the sales company stands back of its promises, while the other organization admits that their advertisements were merely to get buyers. The Inter-County Holstein Breeders' Association is one association that holds itself responsible for cattle sold under its management. It is almost impossible to have every animal straight and right, as some defects may appear later which were not perceptible at the time the animal was sold. In the last sale of this association one cow proved to be a shy breeder; another had a hole in her teat when she came in. When notified of it the association refunded the entire purchase price on the first animal and refunded $50 on the second animal. You do not need to fear that if you buy here that it means an adjustment with every consigner. The associaion makes all adjustments themselves. In order to further protect the buyers, they have all the animals tuberculin tested under the direct supervision of the state live stock sanitary board and then give a sixty-day retest guarantee. The consignment this year is one of unusual quality. There will be a number of excellent bulls offered, including three bulls from dams with records over thirty pounds. One of these is a yearling ready for service. He is nine-tenths white in color and an outstanding individual, being very well grown and good and straight. He is sired by King Segis Champion, a show bull that has won heavily in the East. He is also royally bred, being by King Segis, that Col. Kelly says is the "greatest bull living or dead." His dam is the thirty-six-pound cow, Aaggie Pauline Sarcastic, called the highest record show cow of the breed. The dam of the bull to be sold is Springdale Johanna Rue, that made 30.24 pounds of butter in seven days. She is a daughter of Hillside Vale, that has eighteen A. R. O. daughters, two with records of 31.22; 30.24. J. W. Goldthorpe is consigning a thirty-one-pound grandson of King Segis Pontiac Polkadot, that is 100 per cent the same blood as the $50,000 bull, King Segis Pontiac Alcartra. Fred Almrecht is consigning a thirty-pound son of Moscrips' noted grand champion bull, Sir Beets Cornucopia Netherland. Tompkins Wright, Waupun, Wisconsin, is consigning ten head of excellent females, one a twenty-six-pound daughter of Johanna Korndyke. Ed Schultz, Hartford, is consigning a fine lot of females and other good ones are being consigned by other leading breeders of the two counties. Send for a catalog to Francis Darcey, Watertown, Wisconsin, and plan to attend the sale. When writing kindly mention The Wisconsin Farmer. See page 25.—Adv.

The Maplewood Holstein Herd.

NEAR Kilbourn, Wis., made famous by "The Dells," there is a herd of Holstein cattle that has never been heard about, yet is deserving of considerable publicity, for the owner has been "doing things" with his cows. To show that this man got off on the right foot, we will call attention to the fact that the original cow, purchased was a half sister to the first forty-pound cow, Johanna De Kol Van Beers. The bull heading this herd at the present time is Duke Colantha Johanna Mercedes, a two year old out of a twenty-eight-pound dam and a grandson of the noted Colantha 4th Johanna and Hengerveld De Kol. Preceding this bull in service was King Fobes Oak De Kol 60046, a three-fourths brother to Minnesota's first thirty-six-pound cow. At the present time six sons of the last-mentioned bull are being offered for sale and of this lot there are three that are outstanding in every respect and good enough to deserve a berth in the best herds. They are out of A. R. O. dams and are old enough for service. This herd has only been established a few years, yet the owner has put A. R. O. records of from seventeen to twenty pounds on ten of the young things in the herd. R. C. Walker is the owner of this good herd of cattle and we are pleased to recommend what he has for sale. His address is Kilbourn, Wis., and if you will write him your wants your letter will receive prompt attention. We will appreciate it if you will mention The Wisconsin Farmer when writing. See page 25.—Adv.

Save Your Hides.

HORSE and cattle hides, properly tanned, can be made into warm and handsome fur coats, robes, gloves, mittens, caps and other fur products. You can save money by sending your cattle and horse hides to John Figved, Milwaukee, to be made into fine furs at factory prices. The Figveds have been tanners for several generations, and Figved tanning has always stood for quality and square dealing. Write to the John Figved Robe and Tanning Co., Milwaukee, Wis., for their price list and catalog. Tell them you saw their advertisement in The Wisconsin Farmer.—Adv.

Schultz's Consignment to the Inter-County Holstein Breeders' Sale.

THE Inter-County Holstein Breeders' sale to be held November 15th at Watertown, Wisconsin, will offer the best lot of Holsteins to be sold in public sale this year. The consignment of Ed M. Schultz, Hartford, Wisconsin, contains several that it will pay our readers to investigate. The bull calf he will offer is a very nice individual of large size and nicely marked. His sire, King Korndyke Veeman, is sired by the forty-one-pound bull, King Korndyke Said Vale, and is out of the best daughter of Sir Veeman Hengerveld, with a record of 33.13 pounds of butter in seven days. This bull calf is out of Johanna Star Blanche with a record of twenty-five pounds of butter in seven days as a three year old and 17,219 pounds of milk and 677 pounds of butter in one year at two years of age. She is out of Piebe Estata Dora with a record of 26.2 pounds of butter in seven days and 19,565 pounds of milk and 885.9 pounds of butter in seven days, including his dam as a three year old. He also offers two daughters of Johanna Star Colantha, that has a record of twenty-six pounds of butter in seven days at six years of age and 17,012 pounds of milk and 727.2 pounds of butter in one year at four years of age. One of these has a record of 20.2 pounds of butter in seven days at three years of age and has four dams in pedigree that average 875 pounds of butter and 19,648 pounds of milk in one year. One is a 21.7 pound cow, made at five years, with a record of 590.4 pounds of butter and 13,275 pounds of milk in one year at two years of age. She is a grand daughter of a 32.8 pound cow. One is a daughter of a 23.5 pound three year old

CONSIGNED by Ed D. Gibbs, Fox Lake, Wis., to the Intercounty Holstein sale, Watertown, Wis., on November 15th.

and has six dams in pedigree that average 781.3 pounds of butter and 18,781 pounds of milk in one year, including her dam as a two year old. He will also offer five A. R. O. cows and they are all good individuals of large size. They are all out of large yearly record dams and four of them are sired by bulls that have large yearly record dams. Send for a catalog showing pictures, description and breeding to Francis Darcey, Watertown, Wis. See page 25.—Adv.

Hagemeister's Percheron Sale.

THIS is the last call for the sale to disperse the great stud of Percheron horses owned by the late H. F. Hagemeister, Green Bay, Wisconsin. We have visited this stud twice during the past summer and have looked over each individual. It is our belief that there is no better lot of Percherons in any one stud in the middle West—certainly not in Wisconsin. The mares are big, drafty animals with heavy, smooth limbs, good hips, strong backs and good heads. An evidence that they are uniformly good is shown by the fact that there is not a blemished animal in the forty-three that are offered in the sale. It is largely a Baccarat-Historique sale, the majority of the animals being very close descendants of these two royally bred imported stallions. There will be twenty-two sons and daughters of Historique that was imported by Mr. James Boyd from France, where Mr. Boyd purchased him of Mr. Avaline, president of the Percheron Society of France. Many of these sons and daughters are out of daughters of Baccarat, whose name and record as a breeding stallion is familiar to Wisconsin Percheron breeders. Mr. Kellog purchased him at the highest price ever paid for a Percheron stallion at that time. At a sale in Green Bay a few years ago his daughters sold at the highest average ever made in the state. The present offering is a credit to these two great stallions. There will also be five imported mares sold and their offspring. Among the eleven head of stallions are the two that stand at the head of the stud and to whom the mares offered for sale are bred. These are Brilliant 47573 and McDougal 94905. Send for a catalog to the Hagemeister Brewing Company, Green Bay, Wisconsin. See page 24.—Adv.

Great Demand For Registered Swine in the South.

WE have just received a letter from Col. Orval A. Jones, a brother to Carey M. Jones, written from Jacksonville, Fla., where he had the honor of conducting the first pure-bred live stock sale ever held in that state. He advises that there is an excellent outlet in the southern states for registered stock and especially swine. Besides cattle, he sold eighty-five head of Duroc Jersey hogs—twenty of which were pigs not yet weaned, that were sold singly and including these pigs the eighty-five head averaged $50. This shows conclusively that there is always a market for the good stock. Colonel Jones' services are in demand all over the United States because he makes successful sales. Most of his sales are in the central and southern states, but many of our northern breeders would do well by securing his services. His address is 14 N. Sacremento Blvd., Chicago, Ill. If you contemplate holding a sale of pure-bred stock, see if he has an open date—he'll give satisfaction. See page 24.—Adv.

PROTECTOR E. 195462, the Pride bull at the head of the M. C. Willford Angus herd, Canton, Minn. Many of the females in the Willford-Miller sale at Canton, November 9th, have calves at foot by this bull or are bred to him. He is an outstanding individual.

NOW FOR THE INTERNATIONAL

GREATEST AND BEST

LIVE STOCK SHOW

OF THE YEAR AT

CHICAGO, DEC. 2 TO 9

AT UNION STOCKYARDS

DAILY SALES OF PURE-BRED LIVE STOCK

CLYDESDALE SALE
Tuesday, Dec. 5th, 1:00 P. M.
For particulars write
J. A. H. JOHNSTONE
Union Stockyards Chicago

50 HIGH-CLASS ANGUS 50
Wednesday, Dec. 6th, 1:00 P. M.
For catalog write
CHAS. GRAY
Union Stockyards Chicago

50 SELECTED-SHORT-HORNS 50
Thursday, Dec. 7th, 1:00 P. M.
For catalog write
F. W. HARDING
Uuion Stockyards Chicago

50 CHOICE HEREFORDS 50
Friday, Dec. 8th, 1:00 P. M.
For catalog write
R. J. KINZER
1012 Baltimore Ave., Kansas City, Mo.

SHEEP AND SWINE SALES, TUESDAY, WEDNESDAY AND THURSDAY

Many new improvements, new features, thirty national conventions, daily sales of all breeds, etc. A season of learning, entertainment, brilliant evening shows, and

A TRIP TO CHICAGO

Lowest Rates on All Railroads

Ask For New Stove Catalog No. 432.

THE new catalog of the Kalamazoo Stove Company is ready to be sent to those of our readers who request it. Those who are thinking of getting either a heater or kitchen range will probably want to see this new book of stove styles right away, because the season is here when buying will likely not be long delayed. The manufacturers feel that in this new catalog of heaters, base burners and kitchen ranges they are showing the highest quality and that they are selling them at remarkable money-saving, factory-to-you prices. Almost everyone has heard of the Kalamazoo Company and there is no way of knowing just how many stoves and ranges they have sold to Wisconsin Farmer readers. They sell their goods direct to the consumers by mail and are known from coast to coast for quality goods and for satisfying their customers. In their new catalog they want to call particular attention to their new Kalamazoo Crown Heater. It's in mission design and has all the elegance and beauty, which heretofore has only been found in the big base burners. Another new design to which the manufacturer calls attention to is the Kalamazoo Mission Steel Range, which has been designed for efficiency and beauty. The present prices are not guaranteed after December 1, 1916, therefore Wisconsin Farmer readers, who write now for Catalog No. 432 and buy prior to December 1st may be confident that they have saved some money—a dollar saved is as good as a dollar earned. Those who think they may buy a stove or heater or base burner or a kitchen range, are invited to write to the Kalamazoo Stove Company, Kalamazoo, Mich., and get Catalog No. 432. —Adv.

The Madson & Sons' Poland Chinas.

MADSON & SONS, Madison, Wis., are too well known as breeders of Poland Chinas to need much comment at this time. The Madsons are among Wisconsin's best hog men—they are good caretakers and if you visit their farm you will not find any stunted pigs. Those that are good enough to keep are worth taking care of. The spring boars that they are offering are well grown, many of them weighing right at 250 pounds and they are sired

by Correct I Am and Triumph, both show boars and good sires. The usual Madson guarantee goes with every boar sold and that is worth a great deal in buying a boar. Get their prices at once, for it's time for you to buy that boar. When writing please mention The Wisconsin Farmer. See page 26.—Adv.

Selling of Guernsey Dairy.

A. I. STUBBS, West Salem, Wis., has sold his fine dairy farm adjoining that town, and on November 21st he will sell his entire herd of registered and grade Guernseys, numbering about fifty head. In this sale will be some choice, young bulls of the most desirable breeding. Of the female offering, there will be several attractions. Inasmuch as Mr. Stubbs has been supplying milk and cream to patrons in West Salem and La Crosse for the past few years, it is only natural that the best of the females have been retained in this herd, and ordinarily it is only at dispersion sales that the public have the opportunity to buy the cream of a man's herd. There will be twenty-five registered Guernseys, and as above stated, several of them have substantial A. R. records. There will be a few calves and open heifers, the balance are in milk now and most of them are safe in calf to the noted Holden 4th. He is selling some grades that are excellent producers, and they will increase the earning capacity of many dairy herds. As previously stated, this is a complete dispersion sale, the farm has been sold to Mr. Quackenbush, of North Bend, Wis., and Mr. Stubbs must give possession December 1st, consequently nothing is reserved—you get the benefit. You should have a catalog and if you write, saying you saw the advertisement in The Wisconsin Farmer, you will receive one. Write A. I. Stubbs, West Salem, Wis., and don't forget the date—November 21st. See this page.—Adv.

Buys Good Herd Boar.

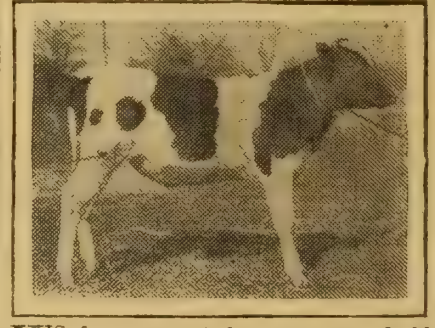
L. E. PEASE, the progressive young breeder of Poland Chinas living near Millville, Grant county, Wis., was fortunate in getting a herd boar from the P. W. Young herd, Prosper, Minn. The boar is a fall yearling that weighs right at 500 pounds and is sired by Master's Giant, in our estimation one of the best breeding boars in the state of Minnesota. His dam is Defender's Choice by Pawnee Defender out of Dorr's Expansion. We need more such boars in Wisconsin. Mr. Pease has a few spring boars for sale that will please you. His shipping point is Bridgeport. If interested in good Polands write for prices and mention The Wisconsin Farmer. See page 26.—Adv.

Here's an Opportunity.

IT IS not customary to sell registered swine, especially sows and gilts, during November or December, yet sometimes conditions necessitate such sales and such is the case with A. L. Hyzer, West Salem, Wis. Mr. Hyzer has rented a farm in Iowa, to take possession December 1st, and at the first he thought he would leave his hogs on the present farm and go ahead with the sow sale that he has advertised for February 1st, but after due consideration he has decided to sell at West Salem, Wis., November 21st, even though he cannot expect to get the real value for his hogs. This will be closing-out sale—everything in the way of registered swine will be sold, and as is the case in all closing-out sales, it is bargain day for the buyers. There will be eight tried sows, several of which cost Mr. Hyzer over $100. There are fifteen fall yearlings that will make money for some of the breeders if they will buy them and put them in their winter sales. Of the spring gilts, the fifteen will be sold that he had reserved for his own breeding herd. These sows are by Lincoln Model, an Ohio Chief bred boar and a first-prize winner at Sioux City, Iowa, Educator, the great Swan boar, King the Col., S. & H.'s Col. and the noted Golden Model 31st. There will be ten boars—two by King the Col., two by Lincoln Model, one by Educator and five by S. & H.'s Col. The best sows have been bred either to Lincoln Model or Logan Col., he by King the Col. This sale offering will be in nice condition and the breeders of the state can well afford to attend this sale, for if the inquiries for brood sows continue to come in as they are now, good sows are going to sell high in the sales the coming winter. The catalogs are now ready and can be had for the asking. If you can't attend this sale, send your buying instructions to T. P. Shreve, in care of A. L. Hyzer, West Salem, Wis. When writing for a catalog, we will appreciate it very much if you will mention The Wisconsin Farmer. See this page.—Adv.

NEXT WEEK'S SALE PROGRAM

Tuesday, November 14	Holstein-Friesians, Francis Darcey, Sec., Watertown, Wis. Holstein-Friesians, Ed M. Schultz, Watertown, Wis.
Wednesday, November 15	Holstein-Friesians, Francis Darcey, Sec., Watertown, Wis. Percherons, Hagemeister Brewing Company, Green Bay, Wis. Holstein-Friesians, Ed M. Schultz, Watertown, Wis.



HIS four nearest dams average 31.26 pounds butter in seven days. Consigned by Ed M. Schultz, Hartford, Wis., to the Intercounty sale, Watertown, Wis., November 15th.

Increasing Dairy Profits.

BEING good to your cows by housing them in clean, sanitary, comfortable stalls means increased dairy profits. Contented cows, well cared for, are best milk producers. Louden steel stalls and stanchions, manufactured by the Louden Machinery Co., 1708 Court St., Fairfield, Iowa, are designed to promote the cows' health and comfort, and thereby increase dairy profits. They are smooth, sanitary, comfortable, and easy to care for, simplifying the work of tending the cows. The Louden Company publishes a catalog which gives complete details about these efficient steel stalls and stanchions. It will be sent free to any dairyman or farmer wishing it. They also publish a book of Louden barn plans, which will help the farmer in building his new barn or remodeling his old one. This book will be sent on receipt of 10 cents to pay the postage. Wisconsin Farmer readers will find both of these books worth having. When writing, please mention that you read about the Louden stalls in this paper.—Adv.

Crouch's Horses at International.

SEVENTY-FIVE head of Percheron and Belgian stallions and mares will be exhibited at the International Live Stock Exposition at Chicago next month by J. Crouch & Son, Lafayette, Ind. Both imported and American-bred animals will be included in the exhibit, and the horses will all be up to the high standard for which the Crouch establishment is noted.—Adv.

Stoehr Having Good Sales.

M. STOEHR, Viroqua, Wis., advises that he has sold out on spring boars of March farrow. He has some April and May pigs that he is pricing cheap for quick sale, will sell you a pair or a trio. He will also sell his junior herd boar, Professor C., a well-bred boar and the sire of some of the best Durocs on his farm. Investigate this offer. See page 23.—Adv.

Those Wanting Berkshires.

THOSE of our readers that are interested in Berkshire swine should take note of the W. W. Powell advertisement that appears in this issue of The Wisconsin Farmer. Mr. Powell is located at Victory, Wis., which is on the C., B. & Q. between Prairie du Chien and La Crosse. At this time he is offering two yearling boars that are proven sires also spring boars and gilts of the most fashionable breeding. Mr. Powell showed his Berkshires at La Crosse Fair this year and no doubt many of our readers saw his hogs at that fair. Write him for prices and description. Don't forget to mention this publication. See page 24.—Adv.

MR. C. J. Schoenfeld & Son, Fox Lake, Wis., whose advertisement appears on this page have one of the largest Short-horn herds in the state which is headed by Village Mystic, weight over 2,400 pounds. He is proving himself a great breeder. His sire is the noted Imp. Villager and his dam is Imp. Glaures Girl 12th, that weighed over 1,900 pounds, and their herd is noted for their milk record for the past twenty-five years. There wasn't a day that this great herd didn't furnish milk to either the creamery or cheese factory, as some of their cows are rich in Bates breeding. Write them for prices on either bulls or heifers.—Adv.

SALE DATES.

Guernsey Cattle.

Feb. 26, George W. Pagel, Zumbrota, Minn.

Hereford Cattle.

Dec. 8, American Hereford Breeders' Assn., Chicago, Ill.

Short-horn Cattle.

Dec. 7, American Short-horn Breeders' Assn., Chicago, Ill.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.

Aberdeen Angus Cattle.

Dec. 5, American Clydesdale Assn., Chicago, Ill.
Dec. 6, American Aberdeen Angus Assn., Chicago, Ill.

CLOSING-OUT SALE

Registered DUROCS

West Salem, Wis., Tuesday, Nov. 21

AM moving to Iowa and my registered DUROCS must be sold—you get the benefit. 8 TRIED SOWS, 15 YEARLING SOWS, 15 GILTS, by LINCOLN MODEL (sells in sale), EDUCATOR, KING THE COL., S. & H. COL. and GOLDEN MODEL 31st. Best ones are now bred to Lincoln Model or Logan Col. (by King the Col). 10 yearling and spring BOARS by the above sires. There will be snaps in this sale, come or send bids to T. P. Shreve. Catalogs are now ready—write for one.

A. L. HYZER - - WEST SALEM, WIS.

CLOSING OUT MY GUERNSEY DAIRY

WEST SALEM, WIS., TUESDAY, NOV. 21ST

HAVING sold my farm, must close out my dairy herd consisting of 25 registered Guernseys and 20 grade Guernseys—a few bulls. Several A. R. cows. Most of the offering in milk. Many in calf to the noted HOLDEN 4TH. Your opportunity—don't forget the date.

A. I. STUBBS WEST SALEM, WISCONSIN

TOO LATE TO CLASSIFY.

SHORT-HORN BULL FOR SALE

ONE red, milking strain Short-horn bull. Good individual, excellent pedigree. 100 White Wyandotte cockerels from the largest flock in the county. Write

Art G. Hoskins Dodgeville, Wis.

TOO LATE TO CLASSIFY.

CLOSING-OUT AUCTION SALE OF REG. ANGUS CATTLE

BY

J. D. HATCH LANCASTER, WIS.

TO be held on his farm, 2½ miles north of town, TUESDAY, NOVEMBER 21, 1916, 42 head, 32 cows and heifers, 10 bulls. Sale of cattle commences at 2 o'clock. Send for list of cattle giving particulars.

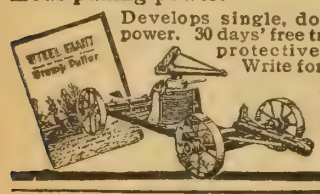
THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

PULL YOUR STUMPS

Use the All-Steel Giant Stump Puller

that has speed and strength with enormous pulling power.



Develops single, double, triple power. 30 days' free trial. Strong, protective guarantee. Write for catalog E

LaPlant-Choate Mfg. Co. 755 Eastlack Ct. Cedar Rapids Iowa

Delivered TO YOU FREE

A sample 1917 model "Ranger" bicycle, on approval and 30 DAYS TRIAL.

Write at once for large illustrated catalog showing complete line of bicycles, tires and supplies, and particulars of most marvelous offer ever made on a bicycle. You will be astonished at our low prices and remarkable terms.

RIDER AGENTS Wanted—Boys, make money taking orders for Bicycles, Tires and Sundries from our big catalog.

Do business direct with the leading bicycle house in America. Do not buy until you know what we can do for you. WRITE TO US.

MEAD CYCLE CO., DEPT. S-184, CHICAGO

It Is Best For You

as well as for your horse to have Capewell nails used in shoeing. The shoes can be put on better, the nails will hold longer, and the hoofs will not be damaged.

The best nail in the world at a fair price—not the cheapest regardless of quality. Ask for "The Capewell" nail.

THIS CHECKED HEAD OUR TRADE MARK

TRAPPERS!

WE buy for cash and pay highest prices for all furs, hides and ginseng. Best facilities in America. Send for free price list and shipping tags. No commission charged.

Henry Streiff Fur Co., Dept. N. Monroe, Wis.

65 quarts per hour

is the skimming capacity of our new No. 10 Economy King Cream Separator, which we sell at $17.95. Ideal for three cows or less. See page 1478 of our big General Catalog for particulars.

Sears, Roebuck and Co., Chicago.

Ailing Animals.

Diseased Pigs.

I would like to know what is the matter with my pigs. They are Chester Whites and are five months old. Ever since I weaned them there has been an ailment with a few of them. There seems to be a weakness in the back or hind legs. I don't know which. Their hind ankles turn forward sometimes when they walk and often they will walk a few steps then drag their hind legs. They eat and drink well and seem healthy every other way. I fed old corn all summer and fed shorts and oil meal in slop with some milk.

It would be hard to say what is the exact cause of the trouble in your pigs. The feed may be to blame in that it is too fattening and does not give the required strength. It might pay you to gradually change the feed either in part or the whole.

Pigs Have Cracked Noses.

We have a bunch of spring pigs, several of which have cracked noses. These pigs seem to be doing well and it does not seem to bother them, except when they sneeze. These pigs are fed ground corn and wheat made into a slop, and also tankage mixed with salt is kept before them. Is this food all right for growing pigs?

Your pigs are probably troubled with necrotic rhinitis. This condition is usually associated with necrosis of the snout and frequently also of the lips and is of rather common occurrence in small pigs. It is one of the conditions that constitutes the disease called sniffles. It is not possible to efficiently treat these cases because of the difficulty of applying medicaments to the lesion and further because of the destructive changes in the bones of the nose and face. The feed you are using seems all right to us.

Give our readers a chance to buy what you have for sale. Advertise it in THE FARMERS' MARKET. Six cents a word each insertion.

DUROC JERSEY SWINE.

SPRAIN DUROCS

BREEDERS have been buying our boars because they are above the average. Still have some good ones left, sired by five noted boars. Order now.

"DUROCS THAT PLEASE"

Geo. D. Sprain & Sons
West Salem, Wisconsin

IF you want big boars with heavy bone I can supply your wants,

DUROC JERSEYS

that sire the kind that top the market. Boars must suit you or no sale. Letters promptly answered. Address

ALBERT HYZER WEST SALEM, WIS.

DUROCS and GUERNSEYS

LENGTHY, heavy-boned spring boars sired by **Col's Defender 2nd,** and **Valley G,** the 1000-pound brother to Illustrator. April pigs, some of them weigh over 200 lbs. We have shipped C. O. D. for last ten years and never had but one shipped back. Registered Guernsey bulls and bull calves with most popular breeding, some from A. R. dams, one 2-yr.-old whose dam has three A. R. records averaging over 500 lbs. fat. Reasonable. Allie S. Knudson, R.5, Brodhead, Wis.

Duroc Boars

OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts for sale. Write your wants. Address

M. STOEHR VIROQUA, WIS.

BOARS

DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address

J. Erwin, Bloomington, Grant County, Wis.

SEPTEMBER DUROC PIGS

at your own price—just make an offer

THESE are by a Cherry Chief boar that weighed close to 500 pounds at 16 months and Long Model Wonder, another big one that has only a few equals. Also a fine bunch of spring boars of champion blood lines at attractive prices. Address

E. R. Perkins Manitowish, Wis.

GANT'S FARM DUROCS

25 TOP spring boars, one 600-lb. Jr. yearling, Illustrator-Cherry Chief breeding. Bred sow sale in February. **Gant's Farm, Delavan, Wis.**

A BOOK ON FEEDING FARM ANIMALS.

Illinois Scientist Prepares Useful Volume.

Under the title "Principles of Feeding Farm Animals," Prof. Sleeter Bull, of the Illinois Agricultural College, has prepared a 400-page book that will appeal strongly to students of feeding problems. The feeding value of all classes of grains and forages is given in detail and feeding methods are outlined for all classes of live stock, young and old. The results of the very latest experiments conducted at the various stations are contained in this volume so that the whole subject of feeding farm animals is brought up to the very minute by Professor Bull. With our high-priced grains it becomes a complex question to know how to feed breeding and fattening animals so that a profit can be realized on the feeding process. Because of this the time is ripe for just such a publication as this. The volume sells for $1.75 and arrangements have been made by The Wisconsin Farmer whereby the book can be furnished to subscribers at this price.

The use of concrete for farm building foundations is becoming more general each year. Rat-proof foundations may be built with concrete and a good concrete mixer will be found profitable to those who have any considerable amount of concrete work to do.

DUROC JERSEY SWINE.

UNTIL DECEMBER 1ST I'LL OFFER FOR SALE

DUROC BOARS

AT bargain prices. Fed right, bred right, priced right. The type the feeders want. Let me ship you a boar and a pair of SPRING GILTS. Inquiries promptly answered. Write

J. W. HIGGINS GOTHAM, WISCONSIN

MARTINY DUROCS

Large, Growthy, Spring Boars $25 and $35

PAY for them when you get them home. They are good or we wouldn't make this offer. Send your order at once. Also offer for sale 10 grade Guernseys, recently freshened. Address

RILEY MARTINY & SON BARABOO, WISCONSIN

Otter Creek Farm Durocs

DUE to the fact that half my sows are sired by DIRECTOR, I offer him for sale. Farrowed March 4, 1915, by Great Wonder 123407, out of a Marion's Wonder-Lee's Defender dam. A big-type boar, heavy bone and very smooth—an excellent sire and a real herd boar. **PRICE $100.**

A FEW CHOICE SPRING BOARS AND GILTS

B. M. ARRIES AUGUSTA, WISCONSIN

SPRING BOARS — DUROCS

230 Pounds to 270 Pounds at **$25, $35, $45**

NO BREEDER HAS A BETTER LOT

SIRED by a son of KING THE COL., a son of CHERRY CHIEF, a son of LEE'S DEFENDER and many of the dams trace to MARION'S WONDER. You get BREEDING and INDIVIDUALITY. I'll ship you a good boar—try me. Address

DENNIS SHEA MELVINA, WISCONSIN

(10 miles from Sparta on the Milwaukee R. R.)

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS WAUPACA, WIS.

Grand Champion Duroc Boar at Wisconsin State Fair

KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address

B. W. LITTLE JANESVILLE, WISCONSIN

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer,

EMMETT COOK & SON RICHLAND CENTER, WIS.

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.

BURN BRAE FARM ROSENDALE, WISCONSIN

--PARKHURST--

DUROCS

LET us ship you a boar pig. They are well grown, of the most popular blood lines and we guarantee every boar. We welcome visitors and answer inquiries promptly. Try us.

E. H. PARKER & SON
Janesville Wisconsin

DUROC JERSEY

BOARS

OF March farrow with size and quality, heavy bone and long, deep bodies, of the best of breeding. Write for prices. Address

W. G. BARTHOLF BURLINGTON, WIS.

DUROCS

SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write

John Borchardt & Son, Richland Center, Wis.

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address

W. W. Goodrich Ft. Atkinson, Wisconsin

GEO. H. WILLSIE

Breeder of Big Durocs

Can supply your wants. Write.

Prosper Minnesota

DUROC BARGAINS

HAVE picked 15 of the best DUROC JERSEY BOARS for the mail order trade. Will not ship the poorer ones. If you order of me you'll get a good boar or none at all. Also breed Shorthorns. Address

Ed Patterson, Jr., Bloomington, Wis.

CEYLON COURT FARM

DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.

Ceylon Court Farm - Lake Geneva, Wis.

Atwater's Duroc Boars

SOME just as good as sold in my sale—these were held for private sale. Write.

L. F. Atwater - Bangor, Wis.

"Home of Big Durocs"

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B, Model Wonder, Col. S. Jr., Orion, Cherry King Jr. ☞ **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

DUROC JERSEY SWINE.

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address

JOHN L. FISHER JANESVILLE, WIS.

CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall

CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write

Harry Crandell Cass City, Mich.

Derenthal

Chester Whites

Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.

H. A. Derenthal - Wykoff, Minnesota

DOERR Chester Whites

HERD established 20 years. I know the type you want and can supply you. PEACEMAKER and STELMO blood. You get value received if you buy from me. Give us a trial. Address

J. A. DOERR VIROQUA, WIS.

CHESTERS

For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address

L. J. McBAIN BLOOM CITY, WIS.
(Shipping point Viola)

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.

O. P. Coates - Elkhorn, Wisconsin

CHESTER WHITE PIGS FOR SALE

AUGUST pigs at let-live prices—from matured stock. Singles, pairs and trios. No runts shipped. Feed scarce and must sell. Two winter boars of best breeding. Pedigrees furnished.

Jos. Eglehof Edmund, Wisconsin

Your Chance---Chester Whites

ALL ages, either sex, boars big enough for service. Fall pigs by **Pay Streak,** 2d junior yearling at Milwaukee, 1916. Everything as represented or money back.

Wm. F. BUTTS EVANSVILLE, WIS.

SUNNY SIDE CHESTERS

CHOICE March and April pigs of both sexes—best blood lines. Choice Jersey cattle and Scotch Collie pups. All stock registered. Write for prices. Address

John Pellett R. 2, Viola, Wisconsin

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address

ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.

W. F. Miller West Salem, Wis.

CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address

L. A. Schultz R. 1, Poynette, Wis.

PADDY by SCHOOLMASTER

CHESTER WHITES

C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A. L. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.

Wm. F. Belda - De Forest, Wisconsin

CHESTERS

LET me ship you a Chester White spring pig that will please. Bred, fed and priced right. Write. **Wm. C. Kirst, Tomah, Wisconsin**

CHESTER WHITES

CHOICE spring pigs of March and April farrow for sale. Big bone, well bred and growthy. Correspondence solicited. Write

Art. G. Hoskins Dodgeville, Wisconsin
(Also breeder of Milk Strain Short-horns)

MULE-FOOT SWINE.

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OAK GROVE JERSEY FARM

WE are overcrowded, as we are just rebuilding our barns and have very little calf stable room. We now have 15 calves and 22 cows yet to freshen, so are making **very low** prices on these richly bred young bulls to move them quickly. Sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and of Noble of Oaklands.**

NO. 1—Out of **Volunteer's Sally,** that has a record of 597 pounds butter. She is also a dam of a 594 pound junior 2 year old that holds the state record for her age. **Price $100.**

NO. 2—Out of **Koffee of Oak Grove,** now on semi-official test and making fine record. This young bull won 1st at Elkhorn fair. **Price $75.** Send for extended pedigrees; further infor'tion.

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IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

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FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

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COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

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100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS.

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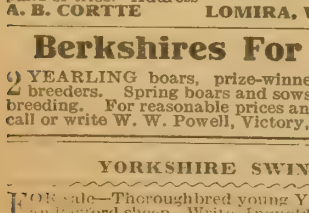
30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanrey's Othello. Also cows and heifers and Oxford lams for sale. C. S. Hechtner, Chariton, Iowa.

AYRSHIRE CATTLE.



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YEARLING AYRSHIRE BULL ready for service, ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address

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RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

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Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.

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Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address

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Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

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Send for description. Prices reasonable. Address

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10 to 14 months old, daughters and granddaughters of the richly bred sire,

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DAMS imported and richly home-bred animals. These animals are well grown, good, straight type and well bred. For further particulars send for copy of pedigrees or color description. Address

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(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

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OF THE STUD OF THE LATE HENRY F. HAGEMEISTE

Green Bay, Wis., Wednesday, Nov. 15

BRILLIANT 47573.

Eleven stallions, thirty-three mares and fillies, ranging in age from sucking colts to mature animals. Undoubtedly the best lot of home bred and imported mares in any one stud in Wisconsin. To appreciate their high individual merit you must see them. An extraordinary lot of animals. The home bred animals are largely sired by Imp. Historique 71752 and out of daughters and granddaughters of Baccarat 11326. There are also five imported mares and eight fillies and mares out of both an imported dam and sire. Catalogs are now ready for mailing. Mention The Wisconsin Farmer and address

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GREEN BAY - - - - - - - - - **WISCONSIN**

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WE are offering 6 very high-class Percheron stallions and mares; 1 two-year-old and one yearl stallion out of **Diana 53532** by Phil Sheridan and 1 yearling stallion and a 2 and 3 year old n out of Karel 33640, a double bred **Baccarat** mare. The two-year-old stallion sired by Imp. Har 74108 is particularly good. Send for prices and description.

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IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars.

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A Large and Choice Collection of Stallions, Mares and Colts

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SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

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STALLIONS and mares for sale. **AYRSHI** —Serviceable bulls and females. **DUROC** growthy boars and gilts. Only the very be the three breeds. We invite visitors. W your wants.

Jas. Van Etta - **Lima Center, Wisco**

Reg. Percherons, 39 heavy 3 a yr. stallions, 68 rugged 2 yr. 41 yearlings. Can spare 25 mares. 24 reg. Belgian stall Sires and dams brought over f France and Belgium. **Fred Cha ler, R. 7, Chariton, Iowa.**

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Ram and Ewe Yea lings and Rams

SHROPSHIRE, Oxford, Hampshire, So down, Rambouillet, Delaine, Cheviot, M ino, Cotswold, Angora goats. The best fl lies of each breed represented. Our winning the fairs are proof of the quality.

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SHROPSHIRE yearling rams all sold. A October 15th my yearling Hampshire ra header and my Oxford flock header will be sale. Have a limited number of Shropshire, Ha shire and Oxford ram lambs left; also a few e All stock registered. Address

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FOR SALE—25 choice yearling rams, sired Minton and Tanner Rams. All are f headers. Address

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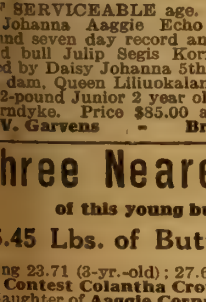
WE KNOW YOU LIKE THIS BREEDING

CHARTED PEDIGREE
OF THE
Pure-Bred Holstein-Friesian Bull
Korndyke Segis Johanna

No. 127132 H.-F. H.-B.
Born November 17, 1913.
Owned by—
PABST STOCK FARM,
Oconomowoc, Wis.

The average of the records for his dam and sire's dam are as follows:

Milk	632.40
Butter	39.05
Per cent fat	4.94
30-day record:	
Milk	2,630.50
Butter	154.16
Per cent fat	4.69



Why not buy a bull calf by this sire and out of one of our A. R. O. cows with high 7-day and yearly records. Over 30 to select from at $100 and up.

SIRE—**Johanna McKinley Segis**
954 A. R. S. (44367) Sire of—

Uneeda Korndyke Abigail	33.02
Uneeda Korndyke Abigail, 30 days	124.00
Uneeda Korndyke Charlotte	29.35
Uneeda Korndyke Abbie	28.00
Winana Jennie 2d, 2 years	27.10
Uneeda Korndyke Beryl, 4 years	26.61
Oakfield Korndyke Segis	25.57
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Uneeda Korndyke Countess, 3 years	24.35
Uneeda Korndyke Beauty, 2½ years	23.57
Johanna Woodland Segis, 3 years	23.51
Paula McKinley, 3 years	22.78
Abbie Korndyke Segis, 3½ years	21.26
Uneeda Korndyke Bertina, 2 years	21.20
Uneeda Korndyke Abronia	20.63
Uneeda Korndyke Adeline, 3 years	20.42
Uneeda Korndyke Agnes, 4½ years	20.39

34 A. R. O. daughters, 1 above 30 lbs.
6 above 25 lbs., 15 above 20 lbs.
9 sons with 33 A. R. O. daughters.
6 daughters with 6 A. R. O. daughters.

DAM—**Pontiac Lady Korndyke**
11276 A. R. O. (92700)

Butter	38.03
Milk	601.40
Per cent fat	5.06
30-day record:	
Butter	156.93
Milk	2,496.70
Per cent fat	5.02
Dam of—	
Fairview Korndyke Rag Apple, 2 years	19.86

2 sons with 22 A. R. O. daughters.

Pabst Stock Farm DEPT. 30 **Oconomowoc, Wis.**

ROYAL BRED HOLSTEIN BULL CALF
A. R. O. HOLSTEIN COWS and HEIFERS
THIS IS WHAT WE CONSIGN TO THE
TER-COUNTY SALE at WATERTOWN, WISCONSIN, NOVEMBER 14-15, 1916

HE 4 nearest dams of this bull calf average 31.36 lbs. of butter 7 days. Dam and grandam h have large yearly records. He very nice, growthy individual, y nicely marked and fit to head herd. Come and get him at r own price.

THESE cows and heifers are all nice, large individuals and out of large yearly record dams. Two are daughters of a 26-lb. cow, one of them a 20.2-lb. three year old. They are bred to King Korndyke Veeman, whose two nearest dams average over 37 lbs. butter in 7 days.

SCONSIN STAR STOCK FARMS, ED M. SCHULTZ, HARTFORD, WISCONSIN

Richly Bred Aaltje Salo Bull

ORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She es from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ity, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds ter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters ding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY ANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
THUR RUST **WEST ALLIS, WISCONSIN**

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OTH sired by **King Pietertje Hengerveld Ormsby,** a full brother to **Pietertje Maid Ormsby.** Both are out of daughters of **Sir Aaggie Ormsby.** One an A. R. O. cow making 17.50 pounds ter as a three year old. These bulls are of **Ormsby** breeding on both sides. Send for extended igrees and prices. **HUTCHINSON BROTHERS & BURBACH, RANDOLPH, WISCONSIN**

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SITIVELY MUST SELL 100 head of registered and high-grade Holstein and Guernsey cattle, any age. You make take your choice from 400 head of big ducers, no boarders among them. Special price on high-grade calves. Also extra fine SERVICE LLS. Everything guaranteed as represented. **Edgewater Stock Farm, Ft. Atkinson, Wis.**

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EADY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

HOLSTEIN BULLS

SERVICEABLE age. One from Gordonia Johanna Aaggie Echo 151460 with 15.50 nd seven day record and sired by the richly d bull Julip Segis Korndyke (80640). One d by Daisy Johanna 5th, a 27-pound bull and dam, Queen Liliuokalani De Kol 2d, 213904, 2-pound Junior 2 year old sired by Julip Segis rndyke. Price $85.00 and $125.00.
V. Garvens - Brookfield, Wisconsin

hree Nearest Dams

of this young bull average
.45 Lbs. of Butter in 7 Days

ng 23.71 (3-yr.-old); 27.67; 27.96. He is sired **Contest Colantha Crown DeKol** and out of aughter of **Aaggie Cornucopia Johanna Lad 6th.** Send for an extended pedigree.
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-POUND SON OF THE 33.86-POUND BULL

ABST BURKE DE KOL KING, whose dam nolds two records of **31.16** and **33.86** pounds pectively for seven days, **644 pounds milk in ven days; 20,106 pounds milk and 845 unds butter** for the year. Dam of bull for e made **17.93 pounds butter and is a granddughter of Paul Beets De Kol.** Price $75.00.
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FFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¾ brother to Minota's first 36-lb. cow, and out of A. R. O. dams. rite **R. C. Walker, Kilbourn, Wisconsin.**

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Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
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YOU CAN'T BEAT IT

WE have for sale a young Holstein bull from a 23.05-pound four-year-old daughter of SIR CLYDE that has 45 A. R. O. daughters, four with records above 30 pounds. He is sired by a son of BEAUTY PIETERTJE PRINCE, that is out of a daughter of SIR ORMSBY HENGERVELD DE KOL. It is some breeding. Send for extended pedigree and price. Address
DOPP BROS. **OCONOMOWOC, WIS.**

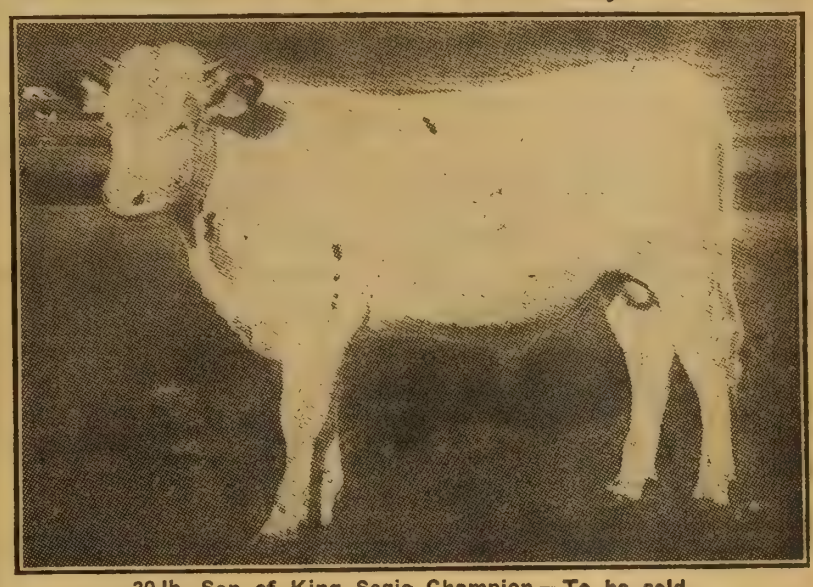
LA BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutche's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write
W. H. S. Rhoda **Watertown, Wis.**

Quality Plus Integrity the Foundation Upon Which We Build.
On November 14-15 at Watertown, Wisconsin



30-lb. Son of King Segis Champion.—To be sold.

WE SHALL dispose of 150 head of choice registered Holsteins, consigned by some of the best known breeders in the state—practically all residing in Dodge and Jefferson counties—all men of integrity. The sale shall be conducted absolutely on the square, just as our spring sale was, which caused Colonel French, vice president of the Holstein-Friesian Association of America, to say: "Would that there were more such sales throughout the country." All cattle are tested for tuberculosis under supervision of the state department of agriculture. We also offer the sixty-day retest guarantee as an evidence of good faith.

The females—cows and heifers—are practically all choice individuals of the Homestead Junior De Kol, Fobes Tretomia Mutual De Kol, King Korndyke Sadie Vale, Colantha Sir Aaggie, Sir Johanna Korndyke strain of breeding. Records such as 26-pound full age, 20-pound 3 year old, 16-pound 2 year old, daughters of 20-pound 2 year olds and high-record, full-age cows, daughters of 30-pound bulls.

Bulls: A 30-pound son of King Segis Champion, a 30-pound son of Sir Beets Cornucopia, 31.83-pound grandson of King Segis Pontiac Polkadot, a 29-pound son of King Korndyke Sadie Vale, a grandson of King Korndyke Sadie Vale from a 25-pound 3 year old. Write for catalogs to

FRANCIS DARCEY, Sec'y Inter-County Holstein Ass'n, Watertown, Wis.

HOLSTEIN-FRIESIAN CATTLE.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.
EARL NORWOOD, GAYS MILLS, WIS.

A few choice registered

Holstein Cows and Heifers

BRED to the 29.50 pound bull, Maplecrest Hengerveld De Kol, that combines in the closest possible degree the heavy producing blood of Pontiac Aaggie Korndyke and Friend Hengerveld De Kol. One of his sons for sale from Lady Johanna Pauline. A. R. O. Record 20.90.
GROVE BROS. **COLUMBUS, WIS.**

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SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
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MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address
C. F. DINEEN, CEDARBURG, WISCONSIN

Registered Holstein Heifers

AND young cows, fresh cows and springers, bred to KING LYONS NUDINE 3D 144643, a 23.54 pound son of King Lyons Nudine. Send for pedigree, description and price. Address
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WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons **Elgin, Illinois**

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
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IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

A RICHLY BRED JOHANNA BULL

SIRED by the 26-pound bull, **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.** Address
GEO. GIBSON **NASHOTA, WIS.**

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A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons (Registered Poland China hogs).
Marinette County Asylum - Peshtigo, Wis.

HIGH-GRADE HOLSTEIN HEIFERS

HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

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OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin.

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address
Lawrence Robers **Lyons, Wis.**

BROWN SWISS CATTLE.

Brown Swiss

60 HEAD IN HERD

CHAMPIONS and A. R. cows. Offering young bulls out of record dams. Inspection invited.
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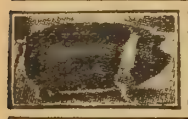
LAIRD'S GIANT HAMPSHIRE HOGS

BARGAINS in spring boars. Gilt-edged gilts bred for March farrow. A few mammoth tried sows, 500 to 800 lbs., bred or open. My Hampshires are the large, smooth kind. Bargain prices for quick action. Changes in farm plans make more room necessary. Write today for Hampshire booklet, prices, etc. This is your opportunity.

A. M. LAIRD - - PRAIRIE DU CHIEN, WIS.



HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.

DANE STOCK FARM
Oshkosh Wisconsin

LAIRD'S FAMOUS HAMPSHIRES

GOOD enough for the State Fair; good enough to ship C. O. D. Write today.

A. M. LAIRD, PRAIRIE DU CHIEN, WIS.

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. BANGOR WISCONSIN

USE A SHORT-HORN BULL

ARE you raising beef? A Short-horn bull will give you more scale and bone and more pounds of flesh for a given amount of feed than any other breed. Are you a dairyman? A Short-horn bull will not reduce your milk supply and he will get you calves that will be quickly salable at a much higher price than you can get from a dairy bred bull. Are you a farmer? The Short-horn is the ideal for your purpose, because it is adapted to all conditions, of quiet temperament, takes on flesh readily, and yields a liberal flow of milk. The Short-horn always works improvement.

AMERICAN SHORT-HORN BREEDERS' ASS'N
13 Dexter Park Ave. **Chicago, Illinois**

GREEN VIEW STOCK FARM OFFERS 7 Pure-Bred SHORT-HORN BULLS

7 to 17 months old, and a few choice

POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

OAKLAWN FARM SHORT-HORNS

BULLS A fine assortment of SCOTCH bulls—rich roans and reds, the herd heading kind. Also a few Scotch-topped bulls from heavy milking dams. Two cows and a few heifers. Write your wants. Address

J. E. Kennedy Janesville, Wisconsin

RIVERDALE STOCK FARM SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

H. Wehmhoff - Burlington, Wis.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little Evansville, Wisconsin

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher Oregon, Wisconsin

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

ABERDEEN ANGUS CATTLE.

ANGUS BARGAINS

HERD of 11 head of high-grade heifers, 3 months to 4 years old, 1 herd bull 2 years old. Will sell individually or the lot for $600. Address

Frank Green & Son, R. 1, Oregon, Wis.

ANGUS

COWS, calves at foot, rebred, and yearling heifers for sale. One or a dozen. Write for description.

E. F. Ganz & Son Alma, Wisconsin

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son, Beaver Dam, Wisconsin

WILCOX SHORT-HORNS

AM OFFERING several **Roan Bulls** of serviceable age. Priced reasonable for immediate sale. Write for pedigrees.

W. F. Wilcox - - Milton, Wisconsin

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son - Burnett, Wisconsn

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address

JOHN CLAY WARRENS, WIS.

POLAND CHINA SWINE.

The GRAND CHAMPION POLAND CHINA Boar AT WISCONSIN

IS the sire of the SPRING BOARS AND GILTS that I am offering for sale. Buy the GET OF A CHAMPION. I have them—you need them—let's get together. Write for pedigree. Some Short-horn bulls for sale.

O. C. OLSON STRUM, WIS.

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green Wis.

BIG-TYPE POLAND CHINA

SPRING crop of boars at farmers' prices while they last at $25 and $30 each. Brood sow sale will be held February 16, 1917.

CHRIS KARTMAN - CASSVILLE, WIS.

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.

Phone 53 F. E. Purdy, Orfordville, Wis.

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

I PAY THE EXPRESS ON POLAND CHINAS

HAVE sold my farm. Hogs must be sold. Choice spring boars and gilts, also fall sows. You get my best, and I'll pay the express to your station. Write your wants. Address

L. E. PEASE, MILLVILLE, WISCONSIN SHIPPING POINT, BRIDGEPORT

DOBSON & EASTMAN POLAND CHINA OFFERS

THREE spring boars that weigh over 300 pounds each—they should head registered herds, real toppers. Also a few that weigh around 260 pounds. A limited number of fall pigs for sale. Write your wants; you know our guarantee. Address

DOBSON & EASTMAN, LANCASTER, WISCONSIN The Utmost in Polands

SIZE---QUALITY---BREEDING

Features Predominating in my Polands

JUMBO'S EQUAL 2d

CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH (Shipping Point Fennimore) MT. IDA, WISCONSIN

McDONALD CLEANS THE SLATE WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin, Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address **J. D. McDONALD, NORTH BEND, WIS.**

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.

M. MADSON & SONS MADISON, WISCONSIN

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

BOARS POLANDS GILTS

SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.

Chas. S. Maltby, Janesville, Wisconsin

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley R. 3, La Crosse, Wis.

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis.

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalag. We hold the states record on account of superiority. Address

J. C. Hendricks Box F, Hazel Green, Wis.

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING BANGOR, WIS.

MASTER'S GIANT 190781 AND ORANGE WONDER 235901

TWO of the greatest breeding boars in the Northwest. If you want a HERD BOAR, I have them that must suit you. Quality Polands with size. Mention The Wisconsin Farmer and address

P. W. YOUNG PROSPER, MINN.

BRED GILTS

POLAND China service boars all sold. Now booking orders for bred gilts that are extra choice, also fall pigs, either sex, that are hard to beat. James Derivan, Fox Lake, Wis.

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.

A. Menke & Sons, R. 1, Markesan, Wisconsin

Please mention this paper when writing

G. A. SCHULZ
Adell, Wisconsin
BREEDER OF HOLSTEIN CATTLE

FOR SALE

A BEAUTIFUL Holstein bull calf, ⅞ white, from a daughter of Pearl Longfield De Kol, the cow that took four Association prizes this year. His dam has a record of 23 lbs. butter as a three year old; 891 lbs. butter in 331 days as a four year old. Grandam has a record of 27.29 lbs. butter in 7 days and 28,050.5 milk and 1,215 butter in one year. The sire is a grandson of Hengerveld De Kol. Calf was born May 9, 1916.
Harry Keach **Glenbeulah, Wis.**

GREENBUSH STOCK FARM

TO increase your profits buy a bull sired by Princess Mercedes Piebe Champion 98024, whose dam has a record of 26.39 pounds butter in seven days as a four year old, and 667.4 pounds in one year as a two year old. Write for description and price.
R. B. Melvin, Prop. **Glenbeulah, Wis.**

FOR sale—7 registered Holstein heifers coming 2-yrs.old, granddaughters of King Lyons, bred in May and June to King Segis Alcartra Beauty Herd Sire 136938. Sire, King Segis Pontiac Alcaltra 76602, the $50,000 bull, grandson of King Segis, dam a 23½ lb. 2 year old daughter of Johanna McKinley Segis, the $25,000 son King Segis and Johanna De Kol Van Beers, the 40 lb. $7,000 cow with butter record as follows: 7 days, 40.07; 30 days, 151.39; 60 days, 288.45; 90 days, 416.71; 120 days, 541.35. He is a beautiful individual with all the dairy qualities we like. Will weigh 2,000 lbs. at 2 years. For prices and description address Jas. Doyle, Waldo, Wis.

2 Bulls

TWO good bulls of serviceable age, with good, A. R. O. backing on both sides. These bulls are under one year old, are large and straight and good all around individuals, three-fourths to seven-eighths white. If you are interested in stock of this kind write for price and pedigree. **Mountain Ash Stock Farm, J. B. Cain, Owner, Glenbeulah, Wisconsin.**

CARLOAD YEARLING HOLSTEIN
HEIFERS

AND a few two-year-olds for sale. Will sell them separately or as a whole.
August Meyer - Plymouth, Wisconsin

Registered Holstein Heifer

AND **bull calves** sired by **Pabst Canary Pontiac Champion 142885**, a grandson of King of the Pontiacs, that has 165 A. R. O. daughters. Write for pedigrees, description and prices.
Wm. Fenner - Sheboygan Falls, Wis.

For Sale

KING Piebe Champion, three years old. 1 bull from dam, A. R. O. 22,093 pounds, 16 mos. old. 3 bull calves, six weeks old for sale cheap if taken at once.
Fred Dankwert - Sheboygan, Wis.

Registered Holstein Cows

AND heifers to freshen in fall. Bred by Sir Veeman Hengerveld Wayne 9th and from 2 to 5-months-old bull calves. Address
J. P. Brill, Jr., R. 5, Sheboygan, Wis.

JOHN MELIUS
ADELL, WISCONSIN
Breeder of registered Holstein cattle. Herd headed by the 28.65-pound bull.
KING OF SCOTT VALLEY 98813

REGISTERED HOLSTEIN

HEIFER calves, about two months old, sired by Piebe Champion 16th, a richly bred bull backed by high seven day and yearly records.
Ernst Markwardt - Sheboygan Falls, Wis

Bates Stock Farm

75 HEAD Registered Holsteins to select from —herd headed by Walker Prilly Ormsby Wayne, whose dam and sire's dam average over 30 pounds of butter in seven days.
G. W. Bates, Prop. - Waldo, Wisconsin

MAPLEHURST
Dairy and Stock Farm

REGISTERED HOLSTEINS. Herd headed by a grandson of Johanna McKinley Segis. Stock for sale at all times. Address
T. H. THACKRAY, Proprietor
Route 30 Glenbeulah, Wisconsin

2 Well-Marked Bulls

1-2 to ⅞ white; 11 to 12 months old. Straight rumps, ready for service. Also heifer and bull calves for sale. All the young stock is sired by Piebe Champion 2d 91262, a richly bred bull backed by high seven-day and yearly records. Stock is priced for quick sale. Address
Henry W. Breher, R. 7, Sheboygan Falls, Wis.

FOR SALE

6 REGISTERED Holstein heifer-calves, ranging in age from Dec. 12, 1915, to April 10, 1916; nicely marked, more white than black, from heavy producing dams, some with A. R. O. records. Also a few registered Holstein cows.
P. J. Liebenstein, R. 19, Adell, Wisconsin

Registered Holstein Stock for Sale at All Times
WM. LAUX
RANDOM LAKE WIS.

There are 40,000 Dairy Cows in
SHEBOYGAN COUNTY, WISCONSIN

The greater part of which are Holsteins. No matter how many you want or of what type, it will pay you to come to Sheboygan county. Thirty-six of the best pure-bred breeders are offering cattle for sale at the present time, and a great many high-grade springers and heifers are available.

1, Harry Keech, Glenbeulah, Wis.; 2, J. B. Cain, Glenbeulah, Wis.; 3, R. B. Melvin, Glenbeulah, Wis.; 4, T. H. Thackray, Glenbeulah, Wis.; 5, J. M. Rock, Plymouth, Wis.; 6, Emil Titel, Plymouth, Wis.; 7, Aug. Meyer, Plymouth, Wis.; 8, Struve Bros., Plymouth, Wis.; 9, C. J. Nehrling, Plymouth, Wis.; 10, G. W. Ubbelohde & Sons, Sheboygan, Falls, Wis.; 11, Truttschel Bros., Sheboygan Falls, Wis.; 12, Wm. Fenner, Sheboygan Falls, Wis.; 13, Pinehurst Dairy, Sheboygan Falls, Wis.; 14, Henry Walsh, Sheboygan Falls, Wis.; 15, Fred Dankwert, Sheboygan Falls, Wis.; 16, Adam Lorenz, Sheboygan Falls, Wis.; 17, D. E. Vanderhoff, Waldo, Wis.; 18, W. F. Liebenstein, Cascade, Wis.; 19, John Melius, Adell, Wis.; 20, G. A. Schultz, Adell, Wis.; 21, P. J. Liebenstein, Adell, Wis.; 22, Wm. Laux, Random Lake, Wis.; 23, O. C. Baum, Random Lake, Wis.; 24, R. C. Stolper, Random Lake, Wis.; 25, G. W. Bates, Waldo, Wis.; 26, J. Doyle, Waldo, Wis.; 27, B. C. Hicken, Adell, Wis.; 28, Walter Hammen, Adell, Wis.; 29, James Mulvey, Cascade, Wis.; 30, John Fellenz, Kewaskum, Wis.; 31, John Liezen, Oostburg, Wis.; 32, G. W. Weiberdink, Oostburg, Wis.; 33, J. P. Brill, Sheboygan, Wis.; 34, Ernst Markwardt, Sheboygan Falls, Wis.; 35, Henry Breher, Sheboygan Falls, Wis.; 36, H. R. Weiskopf, Cleveland, Wis.

7 Registered Holstein Heifers 7

SIRED by **Sir Ormsby Pontiac Mercedes**, well marked and well grown. B. C. Hicken, Adell, Wisconsin.

JAMES MULVEY
CASCADE, WISCONSIN
Breede of Registered Holstein Cattle
Stock for sale at all times.

D. E. VANDERHOFF
WALDO WISCONSIN
Breeder of Registered Holstein Cattle
Stock for sale at all times.

Holstein Calves for Sale

REGISTERED heifer and bull calves for sale sired by Dr. Johanna Sarcastic 74862.
Walter P. Hammen **Adell, Wis.**

Sire, Sir Pinehurst Champion, for Sale

A BULL calf from Vickery Vale Beechwood, that made 1,225 pounds butter in one year, and his four nearest dams average over 900 lbs. in a year. A bull from Vickery Vale 2d, that made 900 lbs. in a year, and is a full sister to Vickery Vale Beechwood. Address
EMIL TITEL, R. 27, PLYMOUTH, WIS.

SIRES in service—King Segis Concordia Hengerveld 96214. Sire King Segis De Kol Korndyke 56110. Dam, Sadie Vale Concordia 3d's Hengerveld 100308. King Korndyke Akkrummer Ormsby 166274. Sire, Sir Korndyke Hengerveld De Kol 41266. Dam, Akkrummer Ormsby 112773. Enrich the blood of your herd by using a bull bred for size, type, constitution and production and related in a close degree to King Segis, Hengerveld De Kol, Pontiac Korndyke, Sir Korndyke Hengerveld De Kol, Colantha 4th's Johanna, Mabel Segis Korndyke, Pontiac Clothilde De Kol 2d, Pietertje Maid Ormsby and Duchess Skylark Ormsby.
Pinehurst Dairy - Sheboygan Falls, Wis.

CLOVER MEAD FARMS
HERD SIRE
Dutchland Creamelle Ascalon Lad

FIVE dams average: 7 day, butter 28.97; milk 631.20; 30 days, butter 118.46, milk 2,565.20; 1 year, butter 995.00, milk 24,100.00. One yearling bull ready for service. Write for information.
C. J. Nehrling, Prop. - Plymouth, Wis.

HEIFER and BULL CALVES

FOR SALE sired by the 28-pound bull, King Johanna Abberkerk 149412, whose dam made 28.71 pounds of butter in seven days; 677.45 pounds butter in a year; 109 pounds of milk in one day. When in need of registered Holsteins write us.
STRUVE BROS. PLYMOUTH, WIS.

J. M. ROCK
PLYMOUTH, WIS.
Breeder of Registered Holstein Cattle
Stock for sale at all times.

28-lb. HOLSTEIN BULL

BORN March, 1916, light in color, good-type dam, a 28.02-lb. 4-yr.-old daughter of Sir Rigtje of Pinehurst, whose dam made 23,451 lbs. milk and 918 lbs. butter in year 1910. Grandam of calf made 26.93; sired by a 26.32-lb. Johanna bull. Write or call.
Truttschel Brothers, Sheboygan Falls, Wis.

For Sale

BULL calves, sire Johanna Segis Pontiac Polkadot; grandsire, King Segis Pontiac Polkadot, that is a full brother in blood to King Segis Pontiac Alcartra.
R. C. Stolper - Random Lake, Wis.

GERRIT J. WIEBERDINK
OOSTBURG, WISCONSIN
Breeder of pure-bred Holstein-Friesian cattle. Stock for sale at all times.

Registered Holsteins

FOR SALE—Cows from five to nine years old, price $125.00 to $200.00. Bull calves from $35.00 and up. Visitors welcome.
John J. Fellenz **Kewaskum, Wis.**

CLEVELAND HERD offers a 29.50 lb. 7-year-old cow—fine individual. Due December 3d by a 30-lb. Pontiac bull. Also two bull calves 7 months old, one from a 24-lb. cow and one from a 26.18 lb. junior 3-year-old, marked over half white, well grown. Send for pedigree and extra low price H. R. Weiskopf, Cleveland, Wis.

SPRUCE LAWN STOCK FARM

OFFERS two registered Holstein bull calves, one from 19.60 pound 2-year-old dam. Price $100. The other from 18.56 pound dam. Price $65. Also several grade yearlings for sale. Write you wants. Address **G. W. Ubbelohde & Sons, Sheboygan Falls, Wis.**

FOR SALE

THREE granddaughters of Sir Johanna De Kol. One granddaughter of Sir Veeman Hengerveld. Bred to Cedar Lawn Sir Johanna De Kol. Also four of his sons.
John H. Liezen - Oosterburg, Wis.

Holstein Calves For Sale

KING Segis Pontiac Beauty 112516, at head of herd, three years old, ten A. R. O. sisters. All bulls one year old sold. A few bull calves for sale, two heifers, one one-year-old, one three months, dark in color. Address Henry Walsh, Sheboygan Falls, Wisconsin.

TWO SONS OF THE 27.56-POUND BULL
Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are sired from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Write for extended pedigrees. Address
F. Winckler & Sons **Medina, Wis.**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt **Oxford, Wisconsin**

OLATHE-HOLSTEINS
STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer **for sale** surplus stock of our own raising.
SILVER SPRINGS FARMS CO. - EAU CLAIRE, WISC.

Yearling Son

READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298**, whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.
Schley Brothers - Waukesha, Wis.

THESE FREE BOOKS NOW READY!

ASK TODAY! These books are now ready to mail. I want you to get your copies. The first edition of my big 1916 catalog was exhausted in four months. The second edition is just off the press. That is why I say, ASK TODAY. Galloway's Fall Book, 96 pages in size **printed in four colors** is also just off the press. I want you to have it. In fact,

I WANT THESE BOOKS IN EVERY FARM AND CITY HOME

I want you to compare the quality of goods and prices I offer with those you have been used to paying and figure out the saving for yourself. You will easily see that these books will save you from $100 to $500 on your fall buying of Gasoline Engines, Cream Separators, Manure Spreaders, Farm Tractors, Wagons, Buggies, Harness, Farm Implements and Farm Machinery, Dairy Supplies, Metal Grain Bins, Fanning Mills, Disc Drills, Farm Shop Tools, Cement Mixers, Feed Grinders, Roofing Materials, Sewing Machines, Trunks and Bags, Washing Machines, Stoves and Ranges, Kitchen Utensils, Silverware, Dishes, Carpets, Rugs, Furniture, Clothing and Shoes for the entire family, and Farm Hardware and Sporting Goods. Ask now for these two books and commence saving at once.

NEW MODEL 1917 SPREADER! NOW READY

I just wish you could see it! Better built than ever! The beater bolts are ☆ inch larger, with lock nut. Beater-bar bolts increased in size and strength. Beater teeth longer and stronger, which means they now tear the toughest manure **finer than ever and spread it easily.** Heavier bolts hold the beater bars in the beater head. The rear shaft increased in strength—higher carbon steel used. Additional strength in the beater bracket. Larger drive sprockets, which mean **lighter draft than ever.** Fifth wheel castings are larger and increased in strength. The spreader box steadier in turning. The rear conveyor shaft is now made of 40 carbon steel. Pressed steel tongue. All metal parts thoroughly coated with asphaltum weather-proof paint. Spreader box is better finished and painted. These and other qualities make the Galloway Spreader **more invincible than ever in actual field work!** No big four or three-horse team is necessary to handle the Galloway. **Two average farm horses can spread anywhere with the Galloway.** Complete details of this new spreader are in the new books. They tell how and why Galloway made the spreader famous and illustrate the **Galloway invincible roller feed, Galloway patented automatic stop** uniform clean-out push board and the new everlasting steel beater with V-rake. These improvements and inventions make the Galloway worth at least $50.00 more than the average spreader, **but not one cent more is charged you for them.** Write today.

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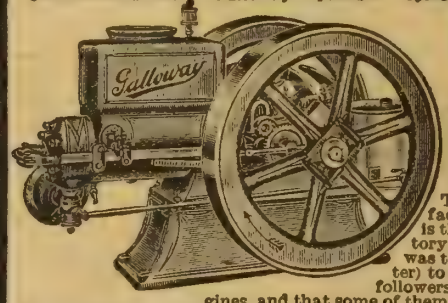

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In my new 100-page FALL BOOK and also the 250-page catalog I will tell you why an engine of the **heavier type is best** and give you **complete details.** Every style and size of Galloway engines illustrated and fully described. You can get the facts about these engines by sending for these two great books. They are filled from cover to cover with interesting, instructive engine facts. Tell you how to select the type of engine best suited to your needs. Postal will get them. Ask for them before the editions are exhausted.

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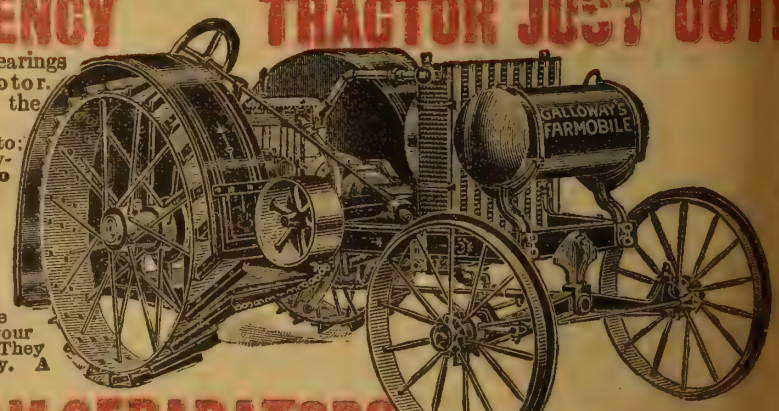

Built with anti-friction bearings—21 sets Hyatt roller and ball bearings in this tractor. Four cylinder, Waukesha Tractor motor. Water-cooled, working parts protected; 12 h. p. guaranteed on the draw bar, 20 h. p. on the pulley; turns short; weighs 5,000 lbs. We have exclusive manufacturing right on its new patented transmission. **On no other tractor can you secure it.** It is the secret of **this tractor's wonderful efficiency.** Will do any portable engine job—sawing, silo filling, corn shelling, road grading, will handle 28-inch grain separator, do feed grinding, etc., handle three 14-inch bottoms 8 or 9 inches deep in clover or timothy sod. Double chain drive; gears run in oil-tight case in oil bath; rear wheels 58 in. high; the famous Waukesha motor; Holly carburetor; Kingston magneto; Waukesha governor, engine never races. **Only two levers to control this tractor.** It is as far ahead of one and two cylinder tractors as four and six cylinder cars are ahead of the old style one and two cylinder cars. This modern farm tractor is fully described in our two new books. My 250-page book and my 96-page book are yours for the asking. Get your copies while the supply lasts. They tell the whole story. Ask today. A postal will get them. ➤

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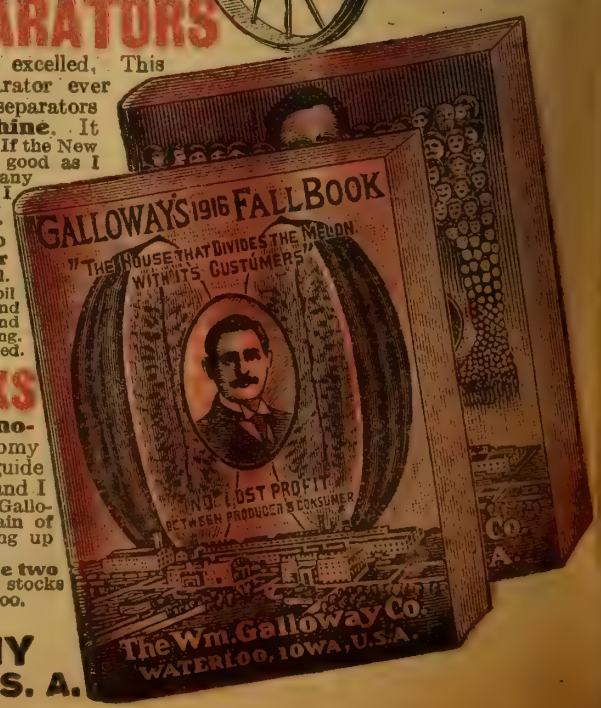

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By all means, drop a postal to me asking for these books. Don't put it off. **Economy is wealth.** Saving money is **earning money.** You can practice economy and **save money** if you have these books in your home, and **use them** as a guide in buying. I have worked hard to get these books out for the fall buying season and I want you to see my efforts. **Come to Waterloo** if possible. I want to entertain you at the Galloway Club. I want you to eat one or more meals with me. I want to show you my great chain of factories right here in Waterloo. I want you to see the merchandise departments I am opening up this fall and the great stocks of merchandise we have for the heavy fall and winter trade.

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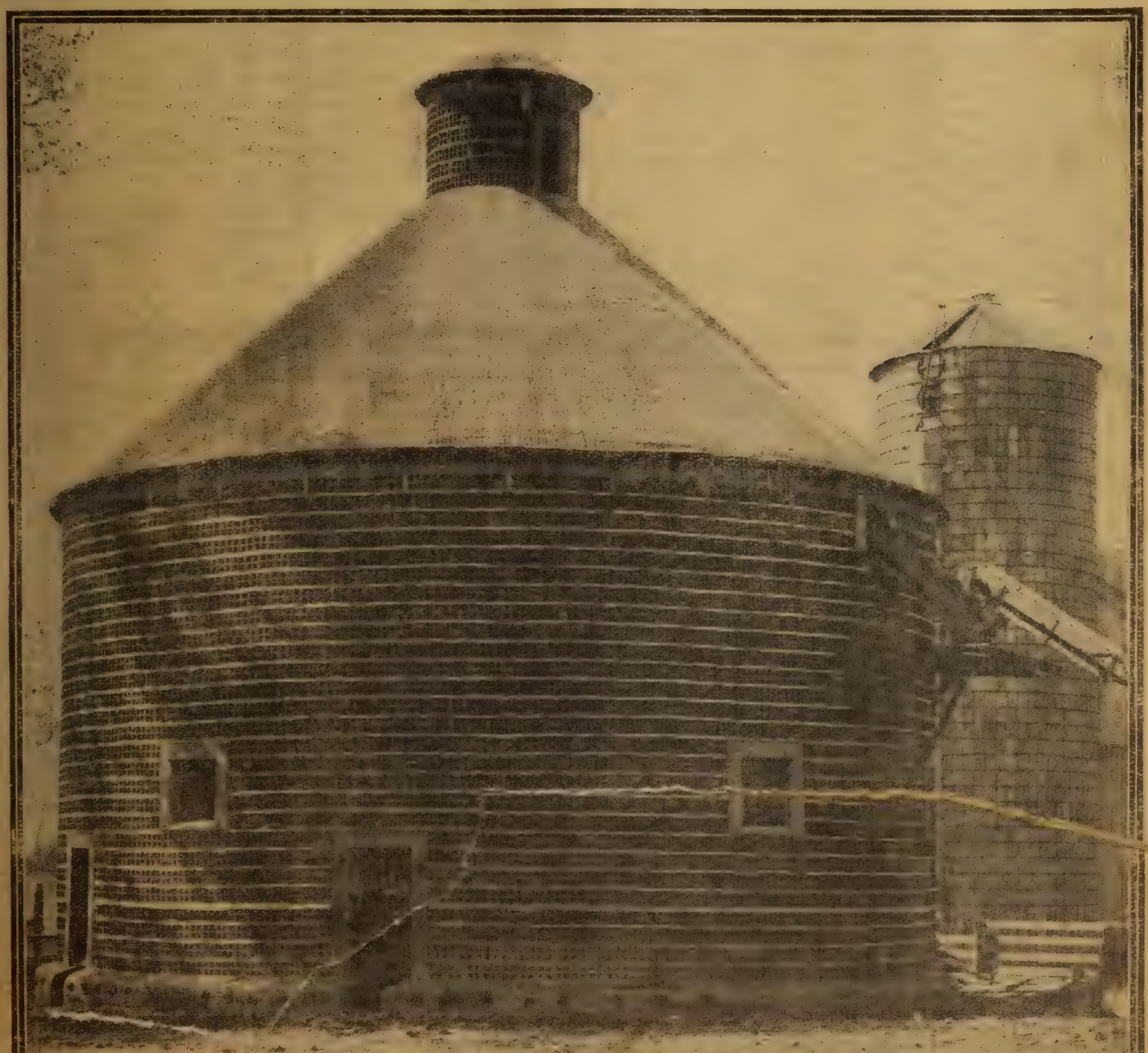
VOL. XLV. NO. 46. THURSDAY, NOVEMBER 16, 1916. WHOLE NO. 1816



PROOFS OF CORN-BELT PROSPERITY

FARM MECHANICS

Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

Motorcycle Requires Priming.

I have a "Raycycle" motorcycle, five horse power. I would like to know how to feed the gasoline into the cylinder without priming. The engine will run just as long as the engine is primed.

Answer.—The only way to feed gasoline properly into the cylinder is through a mixing valve or a carburetor on the intake, and doubtless your motor is already equipped with such a device. Evidently your motor is not getting enough gasoline. You may not have the needle valve open enough, or there may be some lint or dirt in the mixing valve or in the gasoline line. The writer knows of a similar case in which the motor refused to run, because the gasoline was entirely shut off on account of the stop cock being closed.

Spark Plug Trouble.

What is the matter with a tractor when it coats up one plug, and sometimes both plugs, every time you throw out the clutch? The spark is good after I take the plugs apart and clean them. I have shut off the cylinder drips as much as I can, but some oil still goes to that cylinder.

Answer.—The chances are that your engine is getting a little too much oil, though too much fuel could also cause the trouble. White smoke from the exhaust indicates too much oil; black smoke, too much gasoline. It is an easy matter to cut down on the fuel supply, but not so easy to stop ignition trouble caused by oil working up past the piston rings. A fair amount of oil is necessary to keep the cylinder from scoring. If the piston is too small, or if the rings fit poorly, it is hard to prevent the oil from working up; about the only remedy being a new piston or new rings. Slightly rounding the upper edge of the ring, keeping the lower edge sharp, tends to pump the oil down, and sometimes will stop the trouble.

Transmission Grease Trouble.

I have a Model T Ford that leaks grease around the brakes on the rear wheels. What can I do to stop it? The rear axles have been removed and cleaned, new felt washers put on, and there is not too much grease in the differential. I understand that a hole is sometimes bored in the axle housing to let the grease out before it gets to the wheels. Can you tell me where to bore the hole, and how large to make it?

Answer.—A hole one-fourth of an inch diameter, drilled on the under side of the axle housing near each spring hanger, is said to prevent the grease from working out. This hole tends to balance the air pressure inside the housing. However, it gives a chance for dust to get into the housing. It is very hard to keep the grease from working out if the car has that tendency.

Draw-Bar Horse Power.

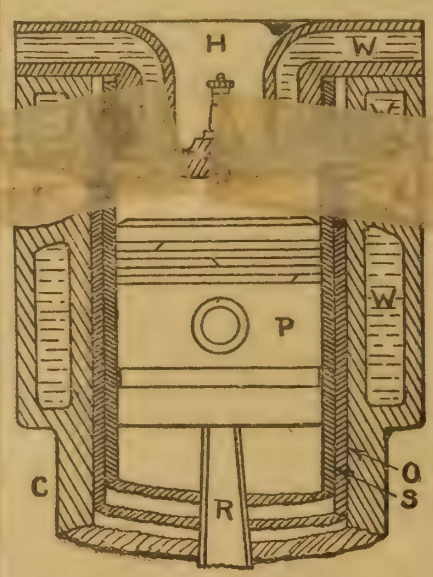
Please tell me how much horse power a thirty-two horse power engine will develop on the drawbar if the tires are thirty-two inches diameter; the speed on low, eight miles per hour; the speed on second, fifteen miles per hour; and the speed on high, twenty-five miles per hour. On low speed, the engine makes one revolution to eight of the wheel. On second speed, the engine makes one revolution to four of the wheel. On high, the engine makes one revolution to two of the wheel.

Answer.—It is usually considered that about one-half of the engine horse power may be used at the drawbar, the other half being lost in driving the tractor. This rule would give you sixteen horse power at the drawbar. Figuring the drawbar pull of sixteen horse power, you would have a pull of 750 pounds at eight miles per hour, 400 pounds at fifteen miles per hour, and 240 pounds at twenty-five miles per hour. As a rule, a tractor will not pull more than 70 per cent of its own weight.

The Sleeve Valve Motor.

Please explain what the sleeve valve on a motor means and does.

Answer.—There are two types of four-cycle motor in common use—the poppet-valve type and the sleeve-valve type, the latter being of comparatively recent design and not so well known as the former. The intake and exhaust of the ordinary motor are regulated by valves pushed up at the proper time by cams on a shaft geared to the crank shaft. These valves are known as "poppet" valves. The sleeve-valve type of motor has no poppet valves and no cam shaft. The inlet and exhaust are controlled by ports in two sleeves sliding up and down inside the cylinder. The figure shows a sectional view of the sleeves, cylinder and cylinder head. O and S are the sleeves, C the cylinder, P the piston, H the cylinder head, and R the connecting rod. W is water jacket space, I is the intake port, and E the exhaust port. The black parts of the sleeves represent holes or ports. As one sleeve slides up, the other slides up or down, as may be necessary to bring the ports in line at the proper time. In the position shown, the inlet port is open and the exhaust closed. The [illegible] are moved up and down by [illegible] eccentrics on an eccentric [illegible] similar to cams on a cam shaft. [illegible] very smooth and free [illegible]



H[illegible] of Motor.

How [illegible] will a Ford engine [illegible] engine speed if attach[illegible] pulley.

Answer.—[illegible] of an engine does not [illegible] of the pulley to which it is [illegible] The Ford engine is rated [illegible] over twenty-two horse [illegible] doubtless would develop [illegible] under test. When used as [illegible] ary engine, it should not be [illegible] to pull much over twelve hor[illegible] continually. "Horse power" is [illegible] urement of the rate at which work is done—33,000 foot pounds per minute. The power that moves one pound 33,000 feet in one minute is a horse power. A horse power will also move 33,000 pounds one foot in a minute. The work done in each case is the same. The first case corresponds to a small pulley running at a high speed, the pull being small and the speed great; the second case corresponds to a large pulley running at a comparatively low speed, but exerting a much greater pull on the shaft.

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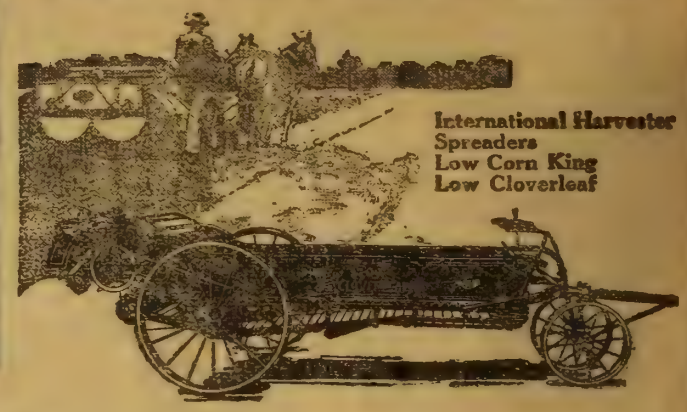

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Low Corn King
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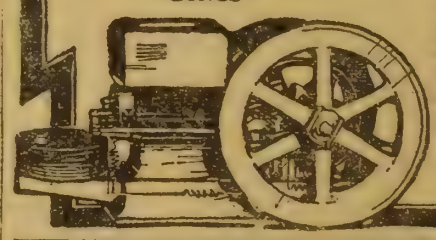

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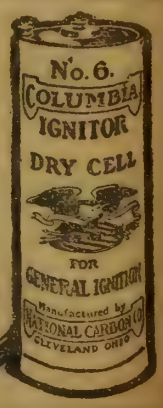

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The Wisconsin Farmer

THURSDAY, NOVEMBER 16, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

A TIMELY HEALTH HINT.

I DO not want to pose as an authority on all matters, and sometimes hesitate about writing on subjects which appear vitally important to me, because of the fear that someone will accuse me of being a "know-it-all." I would be derelict to my duty, however, if I did not preach a little health sermon at this time of the year.

I have the greatest respect and admiration in the world for the average doctor. He sees to it that we are brought into the world in the full possession of our bodily vigor and mental attainments, and does his best to prevent our leaving it before our time. He drives many miles, through all kinds of weather, to answer the frantic summons from the farm home and wrestles with the grim angel until one or the other is exhausted and cries quits. He is unselfish, self-sacrificing and deserving of the highest praise. Yet greatly as I respect and admire the average doctor, if there is anything I can do to prevent his coming to my house I shall certainly strive to do it. I like the doctor, but I do not relish the circumstances which bring him to my home. This being the case with us all, anything which you and I can do in the way of preventing sickness should be done most thoroughly and constantly. If "an apple a day keeps the doctor away," should we not all be orchard patrons, year in and year out?

At this time of the year there is great danger from pneumonia, one of the worst diseases which the medical fraternity has to combat. It is likewise a preventabl disease, to a large extent. Can we do better, therefore, than to talk together for a few minutes on how to keep the doctor away—much as we like him personally—at this season when pneumonia germs are all too prevalent?

The health commissioner of one of our states has issued a timely warning against shutting out fresh air from our homes, and particularly from our bedrooms. Those of us who remember the days of our youth can recall waking up in the morning, in our attic bedroom, with a little drift of fine snow on the coverlid. The window may have been shut, but the north wind of winter has a way of finding all the cracks and crannies, rely on that. Nowadays we protect ourselves against the invasions of the wind and snow by sealing up our bedrooms hermetically, until neither snow nor fresh air can enter. It is this overcautious policy which has caused the health commissioner, referred to, to declare that "weather strips make doctor's trips." Let us have the fresh air of our boyhood nights, though we have to pile the blankets and the comforters high on the bed. Better be obliged to jump from the protecting warmth of the covers into an icy-temperatured room and rub ourselves into a warm glow than to get up feeling dull and loggy, with pneumonia germs playing fast and loose in our lungs. "Don't be afraid of cold air and fresh air," continues the timely warning. "Get hardened to the cool air as the chill of autumn comes on, so you will not shiver every time a draft hits you. Sleep with the windows wide open, even in the coldest nights, and always breathe fresh air." Simple, is it not, and yet upon it may depend the health, the very lives, of ourselves and our loved ones.

Many of our agricultural colleges are doing a splendid work in sending out bulletins, giving simple and effective home remedies for common ailments and accidents. This work should be encouraged until it is widespread. Here, for instance, is some splendid advice sent out by the Department of Farmers' Institutes of the University of Wisconsin. It is all very simple and easy to do, and what an amount of pain and suffering and sorrow it may save us:

Earache—Hot cloths or a hot-water bottle at the ear will often relieve the pain. A few drops of sweet oil in the ear, with a plug of cotton to retain the oil, is good for severe cases, but a doctor should also be called in.

Sore throat—Gargle often with equal parts of alcohol and water, or equal parts of listerine and water. Take a laxative.

Fever—Keep patient in bed in a quiet, dark room. Sponge frequently with cool water, and keep him covered with light covering. Give simple food, such as milk or milk toast. If fever runs high, a doctor should be called.

Burns—The seriousness of a burn is determined by the amount of tissue involved. If one-third of the skin of the body is involved in a burn, regardless of the depth, it is serious and may cause death, even with the best of treatment. Especially is this true of scalds. Ice water is good for fresh burns; guard against infection with dirty hands. Cover the wound with cold boric acid compresses. Carron oil (equal parts of limewater and linseed oil) is also good for burns. Blisters should be punctured at their base with a sterile needle, but the skin should be allowed to remain as a protection. Cut and soak clothing away from a burn; do not pull it off.

I wish all our agricultural colleges would make their advice as timely, as effective and as easily understood as this. What is more important than the physical welfare of those we love? I want to ask all of you, who do not have a copy of the original bulletin, to cut out this article and keep it in some handy place, where you can find it readily in an emergency. It is far from the doctor's office in town to some of our farm homes, and the roads will soon be none too good. Let us take what precautions we can against the ravages of disease and accident, to the end that there may not be undue regrets and recriminations, when it is too late.

A DISHEARTENED FARM WOMAN.

I AM going to print only one more letter in response to the plaint of the Illinois farm woman. Next week I shall give my own views on the subject. The letter which I am going to give you this week is from a mother of six children, the oldest ten. I cannot bring myself to believe that her case is a representative one, yet her letter contains so much pathos, so many heartaches, it seems to me I should not fail to print it. Perhaps her husband will read it, identify the writer and do what he can to atone for his thoughtlessness before it is too late. Here is the letter:

Eleven long years since we were married and started on nothing. We got everything on time. Now the husband farms 200 acres of land. I have tried to help, God knows, to do my share of the work. I am tired, disheartened and discouraged. What pleasures are there for me? I go home about twice a year (mother lives nine miles from me) and to see my brother once a year (he lives ten miles). Nowhere do I get to go and always the excuse is that the horses have worked too hard, "I am tired," the children's clothes are not nice enough, or there are too many kids. So, after so long a time, I have given up. I get to town once every four or five years. Hubby carries the pocketbook and, as I buy, he pays. Never a dollar do I get. Men, don't your wives earn a dollar a year? How much pleasure she would get out of a dollar all her own. Now, he is good in some ways, but he thinks it is awful if he has to stay home a whole week. He says home is the place for a woman, but my home is a prison. Oh, how I have longed when he would drive away after groceries or to one of the neighbors, to go along, just to get away from work a few minutes. But he always says he can't bother with me and the children, or why do I want to tag him around.

Well, my work will soon be finished on earth. The doctors, four of them, say an operation has to come. For five years now, I have dragged through and my strength is going every day. I wonder how much longer I can go. But hubby hasn't got the money for the operation.

So, men, I speak to one and all, look at your wife and her work, take her with you, for life is short, and when health is gone, what is left of life? Do you think you can find someone to take her place and be a mother to your children and help you as she has done? She may help, but only to spend what your wife has helped to make. Don't make the mistake not to show her how she stands with you or your love for her. Don't wait until she is cold in death to say those things. Make her life happier and easier now. How long since she got a new dress, suit or coat? I know how I have longed for one. Eleven long years is a long while to wait for one, isn't it? I guess I will always be longing, too.

Just as a chain is no stronger than its weakest link, so our country life, our prosperity and our civilization are no stronger than their weakest links. So long as there are farm women who do not get a new dress in eleven years, who get to town only once in four or five years and who are never entrusted with a dollar, just so long will our agricultural prosperity suffer and our national advancement be retarded. We cannot judge our nation by its millionaire class alone; neither can we judge it by those isolated families wherein the wife is considered a mere beast of burden, entitled to no sympathy and no remuneration for her work. The salvation of our country lies with the great middle class, wherein the wife is considered an equal with the husband and both work together for the family good. But here I am giving my own ideas, when I announced in the beginning I would withhold them until next week. Let me suggest that you read all the letters which I have printed on this subject and then, after I have expressed my views next week, write me what you think of my little preachment on the subject. I have been intensely interested in all the letters written me—and they have come by the hundred. It is impossible to print them all, but I have given a fairly good selection from the best.

PRESIDENT WILSON RE-ELECTED.

THE presidential election has taught us two important things: First, the value of the individual vote, even when fifteen million are cast; second, the importance of the grain belt and the West in determining national issues. If the election had had no other result it would have justified itself many times over.

I want to call your attention, briefly, to a few facts in connection with the re-election of President Wilson. The first is this: A difference of only one vote in each township and precinct in only one state would have defeated President Wilson and have elected Mr. Hughes. If one farmer in each rural township and one town man in each urban precinct had failed to vote or had voted differently, the result in the entire nation would have been changed. Now, do not misunderstand me; I am not lamenting that they voted as they did, nor am I even suggesting that they might have voted otherwise and have suited me better. I am simply trying to impress upon you the value of the individual vote.

When Tuesday morning dawned and we were confronted with the presidential election, it was raining in various parts of the country. Many a farmer looked out across his fields and decided that while it was too wet to continue husking corn it was not too wet to drive to the polls. Had it not rained he might have been tempted to continue his work in the cornfield, arguing that one vote, more or less, would not affect the general result. But one vote to the township and precinct in only one state would have changed the result completely. Hereafter, when election day comes around, let us bear this fact in mind, and no matter how much we are tempted to forego the privilege and duty of voting, let us exercise our prerogative to the utmost, for upon our vote alone may hinge the destiny of the entire nation.

The other matter I want to call your attention to is this: Never was there a time when the grain belt and the West held the balance of political power as they do today. The rural population exceeding the urban here simply means that never before was the farmer's voice and vote so decisive. Last Tuesday night it was positively announced that Mr. Hughes had been elected president; the nation went to bed and to sleep convinced that this had been the result of the battle of ballots. Mr. Hughes had carried all of New England, New York, New Jersey and Pennsylvania—the states with the largest electoral college vote. Yet one by one the overwhelming majority which Mr. Hughes had secured in the East was overcome by the returns, the next day, from the grain belt and the West. With the exception of Iowa and possibly Minnesota (at this writing, the official count may be necessary to determine that state exactly) the trans-Mississippi West swung into line for President Wilson so unanimously that the Eastern lead for Mr. Hughes was wiped out and the president was re-elected. We have proved, once and for all, that New York and New England are not the entire nation, that they cannot dictate and dominate without consulting us, that we of the West have the deciding voice at the last.

I am not going to express my views of the national election at any length here this week, although I may do so next week. I just want to call your attention to still another fact: The rural vote of the grain belt and the West re-elected President Wilson. Perhaps this letter from a grain-belt farmer to the president gives the explanation. It was written from Velva, North Dakota, October 23d:

Dear Mr. Wilson:—At night when I come home and find my family all together, the boys and mother around the table, I kind of feel that we owe something to the man in the White House who is responsible for the peace that we enjoy. I feel that it is my duty to support such a man as you and while I am not a democrat and never voted for a democrat before, I am for four years more of Wilson.

How many farmers—and town men, too—voted as did this man, because they believed the president had kept us out of war and that for this they owed him a debt which a vote but feebly repaid? Throughout all of the international crisis, it has been the grain belt and the middle West which have upheld the president all the time, never wavering in loyalty to him, without regard to party differences. Thousands upon thousands of grain belt farmers must have had this same idea in mind, that was expressed by the North Dakota farmer, when they drove to the polls last Tuesday. Their vote determined the nation.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

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The Election in Wisconsin.

SENATOR ROBERT M. LAFOLLETTE has been returned by the voters of Wisconsin to the United States Senate by a plurality which will be 75,000 or more. Governor Emanuel Philipp and the balance of the republican state ticket have been elected. The governor's majority is somewhat less than that of Senator LaFollette, which was expected, owing to the fight which was centered upon the state administration. Mr. Hughes carried Wisconsin for president by a plurality reported to be about 20,000.

A great many thousand farmers voted for Governor Philipp. In the absence of the official returns, it appears that Governor Philipp was strong in many of the rural communities of the state. The governor's attitude on taxation doubtless caused his reelection, and his supporters will expect a careful and economical administration of state affairs for the next two years. There has been some effort to discredit Senator LaFollette in this state, but it is plainly evident, from the reports, that a large majority of the voters appreciate the splendid service which he is giving Wisconsin in the congress of the United States.

The next legislature will be republican.

Offical Testing in Wis consin.

MR. ROY T. HARRIS, supervisor for dairy tests in Wisconsin, advises that interest was never stronger in official and semi-official dairy testing and that the demand for testers almost exceeds the supply. Coincident with this information is the news that two more cow-testing associations have been added to the already strong list in Wisconsin. This gives Wisconsin fifty-four cow-testing associations, considerably more than any other state.

The new associations are the Amherst & Nelsonville Cow-Testing Association, the second to be organized in Portage county, and the Sauk-Prairie Cow-Testing Association, the third in Sauk county. Mr. William Swensen is president of the Amherst & Nelsonville Association; Mr. Arthur Peterson is secretary and Mr. Frank Moss, tester. The Sauk-Prairie Association has as its officers: President, Mr. W. J. Welch; secretary, Mr. C. A. Bickford, and tester, Mr. Earl Clingman. Both associations have just started operation.

It is encouraging to see the interest that is being taken in both official and association testing. It means that Wisconsin dairymen are rapidly coming to realize that the test and the scales are the only accurate judges of a cow's productive value. The official and semi-official tests are for the pure-bred breeders and the greater demand for this class of testing naturally follows the big demand for Wisconsin foundation stock. Dairying has reached the place where a breeder of pure breds who wishes to sell his animals at a good price must sell with them an official test of their producing ability. Buyers of bulls are demanding animals from dams with heavy milk production records and buyers of females are looking for cows with good records of heifers from dams that are known to be heavy milkers and high testers. Mr. Harris says that were it not for the high price of feed he believes it would be impossible to supply testers for all the breeders who wish to run official or semi-official tests this winter. The increasing cost of feed has discouraged many, especially the beginners, who fear the feeding expense. This, however, should not discourage any breeder who has an animal that he thinks can make a good record, for the buyers today are looking for dairy stock with good milk and fat records.

The cow-testing associations are doing a splendid work for the farmer-dairyman. They are aiding him to weed out his "boarders" and there should be such an organization in every neighborhood. The dairyman who isn't a member of some association should do his own weighing and testing. Thousands are doing it in Wisconsin. These associations have found for many a farmer high-producing females. They have opened the eyes of many to the good ones in their herds as well as the "boarders" and they are paving the way for much of the official and semi-official testing that is being done.

Wisconsin Boys Interested in Beef.

IN THIS issue of The Wisconsin Farmer will be found a number of letters from boys on Wisconsin farms who have been interested in the raising of baby beef. Aside from the contest feature which has been conducted under the auspices of the Wisconsin Live Stock Breeders' Association, and under the personal supervision of Mr. Ray Baker, assistant secretary, the experiences which these boys have given will be of general interest. It is also profitable to consider the feeding which has been done and the weight put on the calves, and many other points which the young men have come up against in their work. There is room for a great many more beef cattle in Wisconsin, and with the present high prices, and splendid markets, beef ought to be profitable even at the prevailing high cost of feed. The young men in their letters direct attention to the feeding problem and we feel sure our readers will be glad to look over their letters.

Use of Pure-Bred Boar.

OCCASIONALLY one hears of a farmer-dairyman who has been keeping a few hogs to utilize his by-products, and has become discouraged and quit the hogs. Recently we visited one of these farmers who had some spring pigs almost ready for the block, but who didn't think he was getting anywhere with his hogs because he didn't have a pure-bred herd. He was working toward the pure breds and high-producing grades in his dairy herd, but he had failed to apply the rule that blood counts in hogs as well as cattle, and, although using a pure-bred bull, he was using a grade boar.

It should be borne in mind that pure-bred sows are unnecessary for the production of profitable market hogs. But to raise the "prime medium butchers" that are in demand by the packers the pure-bred boar is necessary. Just as much pork can be raised from good grade sows mated with a good pure-bred boar as with pure-bred sows, and we quote from a recent circular of the Wisconsin Live Stock Breeders' Association, which touches the farmer who is breeding primarily for the block:

> Any boar is high priced regardless of his cost, if, given proper care and management, he cannot develop the future usefulness and profit producing ability of his get. Expensive sires must, of course, compensate their owners by producing offspring superior to former generations and carrying popular blood lines. It is considered wise, however, to leave the high-priced sire in the hands of established pure-bred breeders, who, by long years of experience, are enabled to know the value of pedigrees and have learned the "ins and outs" of the breeder's art.
>
> But this should not keep farmers from buying a pure-bred boar. There are plenty of them that are not high priced and that have all the qualifications needed for improving herds of common swine. One or two litters from the pure-bred boar often show increased value sufficient to pay for him. They cost no more to raise—often less—than litters sired by scrubs and they often make one-third more of marketable meat. We have breeds of swine that have been developed for years solely to turn corn, forage crops and by-products into pork in the shortest possible time. From the good individuals representing these breeds we get the type that is crowding the "razor back" out of existence.

Many Wisconsin farmers are making the mistake of using a grade boar. There is an increasing demand by the best dairymen for hogs in combination with their cattle and this will prove a profitable undertaking where discretion is used in selecting the breed best suited and nothing but a good pure-bred boar to head the herd. In breeding this fall for pigs use the best sires—the result will tend to encourage rather than discourage, as has been the experience of the farmer mentioned above who has not seen that the lack of a pure-bred boar is the cause of his discouragement rather than the lack of an entire pure-bred herd.

Wisconsin Community Institute.

A UNIQUE community institute will be held in Fond du Lac Wednesday, Thursday and Friday, December 6th, 7th and 8th, under the joint supervision of the Fond du Lac Chamber of Commerce. The departments which will have charge of this meeting are those affecting rural development, civics, retail merchants and publicity. We quote from the Daily Commonwealth, of Fond du Lac, as follows:

> The meeting is planned with a view of serving the farming community and demonstrating to that community the fact that the city of Fond du Lac appreciates the good will of the people residing in this vicinity and whose stability and high character contribute so much to the prosperity and growth of this city.
>
> The welfare of the city of Fond du Lac and that of the people residing in the surrounding territory is linked together. The relationship between city and country should be cordial and sympathetic. A closer personal acquaintance and a more comprehensive understanding between the people of the city and those of the surrounding country will contribute much toward a good fellowship that will prove of large value to all.
>
> It is proposed that on each of the three days of the institute there shall be a program which shall be of special interest to the progressive farmer and also to the women who have done so much toward bringing the farm home up to the high standard which it occupies today. It is proposed that the speakers at these meetings shall be men and women of state-wide reputation—speakers who will be able to discuss comprehensively the various questions which are engaging the attention of farmers and farm women. These speakers are being furnished by the extension division of the University of Wisconsin and the program is certain to be one of much practical value.

This institute should arouse considerable interest among the farmers of Fond du Lac county, where an enviable spirit prevails. While Fond du Lac is generally considered a well-developed section of the state, at the same time it would be easily possible to largely increase the field of this splendid county by closer co-operation of the farming and other business interests affected.

Making Money Out of Looks, Type and Pedigree.

SOME staggering figures were used in valuing some of the entries at the recent National Dairy Show. One Jersey cow was known to be insured for $50,000, while the grand champion Jersey bull of the show cost his owner $25,000 in gold on the island of Jersey. Doubtless there were many animals in all the dairy breeds that would readily sell for more than $1,000. When one considers these values it would seem to become apparent at once that the handling of high-class pure-bred animals must be left to men of wealth, because a man without capital could not get credit for the purchase of a single individual on the basis of these figures.

This phase of dairying was discussed in a recent issue of the Rural New Yorker by the secretaries of two important dairy record associations. W. H. Caldwell, of the American Guernsey Cattle Club, was asked if there is any way for a farmer with very limited capital to make money in pure-bred stock and here is his reply:

> We have some small breeders who have done well. There is a demand for all good stock as soon as it is put on the market either cows or bulls, and it is hard to get stock for starting a herd just now. Some breeders put out young stock with near-by farmers and pay them good prices for the calves and young stock. A young farmer who could induce the nearest breeder to sell him a choice heifer or two and to furnish him service might build up a herd for himself. He should choose the breed that leads in his neighborhood, because of convenience in securing service and in finding a market. Buyers are always looking for good stock in any locality where there is a group of breeders of any one breed. A farmer who starts with good stock and knows how to feed and care for it to secure good development, might do well. Better to start with one or two good ones from strains that combine high productiveness and also good type for the show room. Such stock comes high at the start, but there is always a market for the increase at paying prices, and the herd will pay in milk production, too.

The same problem was discussed by the treasurer of the Holstein-Friesian Association and here is his view of the matter:

> The small farmer can raise pure breds for the breeder with prestige and an established market. Some of our leading breeders encourage their neighbors to keep the stock and raise calves for them. Sometimes they lend them a young bull which the farmer raises to maturity, and uses for two of three years or until the owner wants it for sale to a customer. The farmer gets its use in return for raising it, and builds up his own herd without cash outlay. Sometimes heifers are put out with farmers with the privilege of keeping the calves at a fixed price or selling them to the breeder. Some breeders furnish breeding service to small farmers who have pure-bred heifers, the farmer to sell back the calf or to keep it and pay for the service. If it is a heifer calf, the farmer usually keeps it. It is better to get a start with pure-bred stock somehow. That is where the money is. Grades are good for regular dairying, but the pure breds pay both ways.

Another prominent dairyman pointed out that he would just as soon make money out of "looks and type and pedigree as from milk." His claim was that he could sell young stock from cows worth $1,000 at prices ranging from $150 to $500 and where that can be done there is more money in it, according to this man, than there is in selling dairy products. As we see it, the whole matter simmers down to one thing, namely, to the natural aptitude of the individual. The breeder of pure-bred live stock, whether it be dairy or beef cattle or animals of any other class, must love his work in the beginning and he must be painstaking in the care that he gives his animals. He must be willing to thumb over records and to take pains with keeping pedigrees in order and his certificates in classified form. Furthermore, he must be a reasonably good salesman and he must be farsighted enough to understand that he is living in an advertising age. Happily most of these characteristics may be acquired by those who have succeeded in having first demonstrated their ability to obtain satisfactory returns from a herd on a straight dairy or beef basis. The day will never come when more than a small proportion of the breeders of any class of stock will handle pure breds, but in this line there is and always will be an opportunity to realize most satisfactory profits by those who are in the business of raising pure-bred foundation stock.

Fighting Weeds and Insects.

WHERE snow has not covered the ground as yet it is well to gather up all the vegetable matter and burn it. In this way many weed seeds will be destroyed. Clean fence corners and clean spaces along the highways will go a long ways towards eradicating weeds. Those who have fall plowed their land, and properly disposed of the vegetable matter, and who have kept this up for several years, will find that they have solved the weed problem and killed most of the insect eggs, thus doing away with two pests which cost the farmers of this country $100,000,000 every year.

In and Around Wisconsin

COMING EVENTS.

Wisconsin Potato Growers' Association and State Potato Show, Eau Claire, Wis., November 21st to 24th.
Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.
International Live Stock Exposition, Chicago, Ill., December 2d to 9th.
Wisconsin Dairymen's Convention, Waupaca, Wis., December 5th to 7th.
Wisconsin Buttermakers' Association, Sparta, Wis., December 5th to 7th.
Wisconsin State Horticultural Society, at Madison, December 12th, 13th and 14th.
Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

The high school at Viola, Wisconsin, has an agricultural library which is quite liberally used. The instructor in agriculture in this high school has charge of the distribution of the books which are loaned free to farmers. Books and other literature on almost any subject pertaining to farming is furnished upon application.

The Janesville Creamery is advertising in the Rock county papers for more milk on the basis of $2.10 per hundredweight for November and December, $2.05 for January, $2 for February and $1.85 for March. These quotations call for 3.5 per cent milk and 3 cents per point are added for milk which tests better than 3.5 per cent. This creamery announces that 15,000 pounds more milk per day are needed than is now offered.

Supt. and Mrs. T. H. Moore, of the Dunn County Asylum Farm, recently submitted their report which shows that the average cost of maintenance for a year was $3.31 per inmate. The cost for the preceding year was $3.18. The farm netted a profit of $7,707.93 for the fiscal year recently closed, which is over $400 less than the profit last year. The sale of barn, farm and garden products netted the institution $7,660.83 cash in addition to more than $5,500 worth consumed at the institution. Such a conduct of a county farm lessens the expenditure on the taxpayers.

Wisconsin has a frog farm at Cooksville, near the Dane and Rock county lines. A Chicago company leased the place, taking an option upon it, for the purpose of buying should the frog experiment be a success. Frogs are shipped there by the thousands in crates and dumped in the pond prepared for them, which contains clear water, from eight inches to a foot and a half in depth. The frogs are fed twice a year. Only the legs are shipped to the Chicago market. Strangers are not welcomed by the management, as the frogs seem scared and seek to hide.

In an address recently before the Columbus Dairy Improvement Association, George C. Humphreys, of the college of agriculture, said that too much feeding might be as injurious to dairy stock as too little. He suggested an analysis of feed should be made to determine whether some rich and expensive element might be substituted for a cheaper grain. Generally, he said, feed one pound of grain to four pounds of 3.5 per cent milk and about three pounds of silage for every 100 pounds of live weight. He advised the dairyman to consult the tastes of the cow occasionally and treat each animal in proportion to her needs. Above all, don't be afraid to buy good feed if it comes out in the milk pail.

During the present road-building season 1,158 miles of state-aid roads were constructed in this state, at a cost of $3,631,026. In addition there was built 352 state-aid bridges at a cost of $540,068. The total spent on state-aid roads and bridges this year is $4,171,094, just about the same amount as was expended in the same manner in 1915. Wisconsin now has 4,850 miles of state-aid highways built within the past five years. Next year about 1,300 miles will be added at an approximate cost of $4,500,000. The state-aid roads built this year included 215 miles of stone and macadam, fifty-nine miles of concrete, 102 miles of clay and stone, 300 miles of crushed gravel and pit-run gravel roads and the balance simply graded and drained, but not surfaced.

A. K. Schmidt, secretary of the American Society of Equity at Chippewa Falls, does not take such a scared view of the potato market as we get from the market papers and the city dailies. Mr. Schmidt thinks that potatoes may be cheaper next spring than they are now. Farmers have been filling their cellars and caves and warehouse men have been holding back large quantities of potatoes, according to Mr. Schmidt, and in the spring these will all be unloaded. There are a good many people in the cities and towns who are now paying $2 per bushel or better who will hope that Mr. Schmidt is right about the lower prices in the spring.

In September there were eighty barn fires in Wisconsin. The total loss was over $117,000. Fifty-eight of these fires were caused by lightning and in only one instance was a barn damaged by fire where it was equipped with lightning rods. In the same month there were twenty fires due to threshing outfits. Match fires were the cause of many thousands of dollars' loss.

The first Farmers' Week program of the 1916-17 season will be held at Ellison Bay, forty miles north of Sturgeon Bay, Door county, November 21st-23d. L. F. Graber and L. S. Bullock will talk on field crops and live stock.

The efforts of farmers near Janesville, Rock county, Wisconsin, to secure a market for their milk have already resulted in the location of a cheese factory in Janesville. The factory will pay Chicago Milk Producers' Association prices from the start and will use 10,000 pounds of milk daily.

HUDSON SUPER-SIX
Excels All in Endurance

Save $175 Before December 1st

Things the Super-Six does are less important than the way it does them. In breaking world's records it has hardly shown an effort. And after 7000 record-breaking miles, a Super-Six motor showed no evidence of wear in any part or bearing.

The Hudson Super-Six, in most cities, has broken all local records. Most of you have seen them broken.

It has elsewhere broken all worth-while records which have any bearing on stock cars. But all these wondrous things are done without a sign of effort.

Most stock motors go to pieces in attempting speedway tests. Also in hill-climbing feats. They never arrive at all.

But most of our stock-car records were won with a single Super-Six. It made a speed record exceeding 102 miles per hour. It broke all touring car speed records up to 100 miles. It ran 1819 miles in 24 hours, exceeding the record by 52 per cent.

Yet that Super-Six motor, after 3800 miles of that terrific strain, showed no wear whatever. The motor's condition was to experts almost unbelievable.

Another Super-Six broke the ocean-to-ocean record, solely because of endurance. It ran from San Francisco to New York in 5 days, 3 hours and 31 minutes. Then the same 7-passenger Super-Six turned around and went back to San Francisco. The round trip was made in 10 days, 21 hours, 3 minutes. It was the first car to ever finish in a coast to coast and return trip against time.

Last spring the best one-way time made by a famous 8 was 7 days, 11 hours, 52 minutes. In 2½ days more the Super-Six made the round trip. No test of endurance ever equaled that.

That's What You Want

That's why men buy the Super-Six—men wise in motor cars. Not for excessive speed or power. But to render every-day performance without vibration, wear or effort.

The Super-Six at half capacity can match another car's supreme exertion. That means a long-lived motor, low upkeep, small repairs.

The great fact is that the Super-Six has almost ended vibration. It has reduced motor friction to almost nil.

Made Hudson Supreme

The Super-Six has made the Hudson undisputed king. It now outsells any other fine car with a price above $1100. In six months we have quadrupled our output, but 3500 cars per month still fail to meet demands.

Yet this is the first season of the Super-Six. Last spring it entered the market a stranger, with all a stranger's uncertainties. And men have only begun to realize what this new-type motor means.

The end of the season will find 25,000 running. It finds the Super-Six in possession of all the worth-while records. It finds a car so perfect that not one change is necessary for the coming year.

Then every motorist must concede the Super-Six supremacy. And men who have bought cars with a lesser motor will realize their mistake.

The Super-Six is not one of the passing sensations. Ours is not one of those claims to motor supremacy which yields in a year or two to another. Mark what these records mean. There is plenty of evidence now to convince you that it cannot be superseded.

You Can Save $175 Now

By buying now you can save $175. The price will be advanced December 1st. The models will not be changed. You get the same Super-Six motor, the same wonderful chassis, and the same beautiful body. Your car you get now will be identical with those we shall sell after December 1st.

On that date we start a second production of the Super-Six. Material costs have increased enormously. That forces this raise in price.

Phaeton, 7-passenger	$1475	Touring Sedan	$2000	Town Car	$2750
Roadster, 2-passenger	1475	Limousine	2750	Town Car Landaulet	2850
Cabriolet, 3-passenger	1775	*(Prices f. o. b. Detroit)*		Limousine Landaulet	2850

HUDSON MOTOR CAR COMPANY, DETROIT, MICHIGAN

BABY BEEF IN WISCONSIN.

Boys Who Are Entered in the Wisconsin Live Stock Breeders' Association Baby Beef Contest Write in an Interesting Way of Their Experiences.

FROM LEFT TO RIGHT—TYPES OF SHORT-HORN, ANGUS, SHORT-HORN AND HEREFORD BABY BEEF

[Editor's Note.—A baby beef contest has been conducted under the auspices of the Wisconsin Live Stock Breeders' Association, and the wind-up of this contest and a show of calves raised will take place at Madison, November 22d and 23d. The Wisconsin Farmer presents herewith some interesting notes from some of the boys who have been entered in this contest.]

Feeds According to Appetite.

To the Editor:—The calf which I have entered in the baby beef contest is a grade Short-horn steer, born October 10, 1915. He was not at first intended for baby beef, so his feed was not recorded, nor was any attempt made to hurry his growth. His feed through the winter consisted of skim milk with a little oil meal, a little silage, hay and bran. It was not until March 1st that I learned of the baby beef contest and began to feed him for it. At that time he weighed 300 pounds.

At first I fed him about six pounds of silage daily, a little bran and mixed hay and fifteen pounds of skim milk with three teaspoons of oil meal. This was gradually increased with the exception of milk, which was fed in the same quantity all the time. May 1st our stock of silage gave out and he has had none since. Then I began to feed oats and June 1st I added corn. All corn has been in the form of cob meal. Since July 1st he has been fed steadily, except for slight variations, as his condition warranted. By watching him closely and feeding according to his appetite and his general condition, I have had no trouble by getting him off feed. The total feeding period to date from March 1st to October 30th has been 240 days and his weight now is 800 pounds, making a gain of 500 pounds. He has been kept in a pen in the barn all summer and has not been on pasture, getting all his exercise from frequent runs in the barnyard.

The total amount of feed he has had since March 1st, the average daily ration and its cost at current prices is about as follows:

	Total cost
Bran—240 days, average daily feed, 1½ pounds	$ 4.32
Oil Meal—240 days, average daily feed, .6 pounds	2.85
Corn—150 days, average daily feed, 8 pounds	18.00
Milk—240 days, average daily feed, 15 pounds	7.20
Hay—240 days, average daily feed, 3 pounds	5.10
Silage—Sixty days, average daily feed, 6 pounds	1.15
Oats—180 days, average daily feed, 2.5 pounds	5.60
Total	$44.22

I have estimates from the following prices: Oats, $1.40 per bushel; bran, $24 per ton; oil meal, $38 per ton; corn, $30 per ton; skim milk, 20 cents per hundredweight; hay, $14 per ton.

Walter Murray.

Outagamie Co., Wisconsin.

Pay Attention to Dam of Calf.

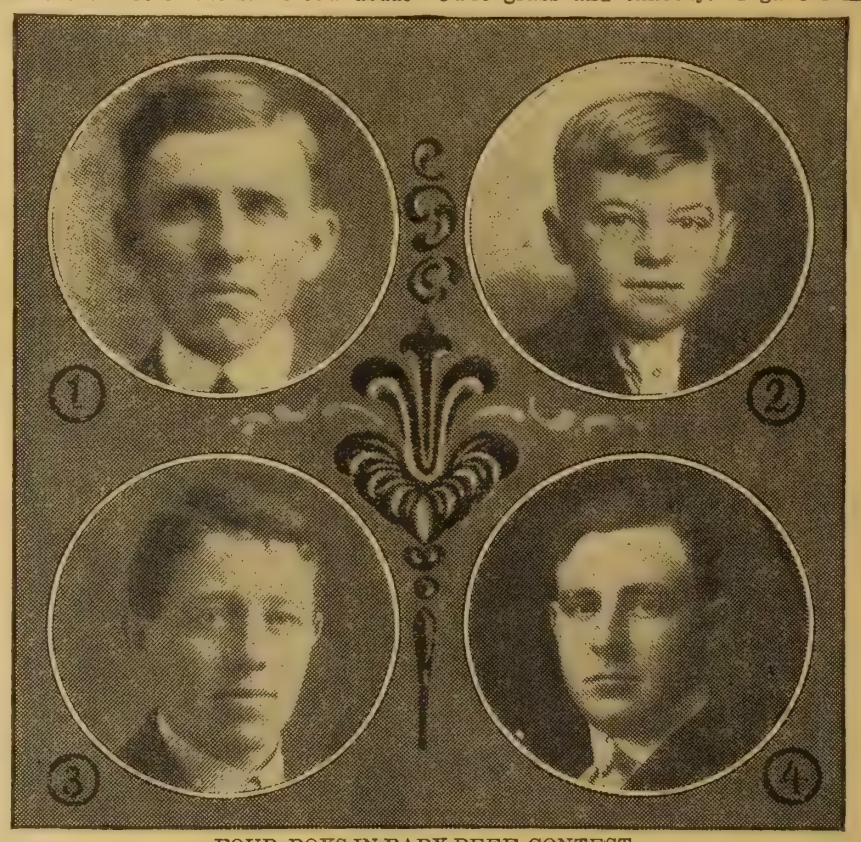
To the Editor:—I wish to tell you of my experience in raising my calf for the baby beef contest and also a few facts that I learned.

The calf was born September 15, 1915. He was a growthy fellow and attracted my attention from the first by his liveliness and good appetite. He nursed the cow for a week and then was placed on new milk which was supplemented by skim milk when the animal was a month old. He had clover before him at all times and was fed a grain ration consisting of ground oats, two parts, wheat bran, one part, and a little oil meal mixed in. The animal had free access to salt and water at all times. He weighed 400 pounds at six months of age, at which time he was entered in the contest, but after a month or two he "went off feed" and did not recover until he had lost his calf fat and consequently I was forced to stop feeding him for the contest and will make a two-year-old steer out of him.

In choosing a calf to feed for baby beef much attention should be paid to the dam of the calf, as a number of calves sired by the same bull will vary greatly in their ability to produce beef and the calves of the same cow usually have the same type and conformation when they are sired by the same bull.

Leslie Foster.

Walworth Co., Wisconsin.



FOUR BOYS IN BABY BEEF CONTEST.
1—Walter Murray, Sugar Bush, Wis.; 2—Wm. Radl, Jr., Lodi, Wis.; 3—A. C. Crellin, Mineral Point, Wis.; 4—Lauren E. Huston, Eagle, Wis.

Cost of Feeding a Baby Beef.

To the Editor:—I started feeding a baby beef steer April 16, 1916. He weighed 380 pounds and now, October 22d, weighs 840 pounds. I have been feeding him 184 days to October 22d and his average gain per day is two and one-half pounds. He was born October 15, 1915. He was taken right away from his mother and fed whole milk for a week. Then the milk was gradually mixed with skim milk and in another week he was having a full feed of skim milk, measuring four quarts per day. At the age of four weeks he began to eat oats and hay. The hay was old June grass. He was kept on this ration until April 16, 1916, when I entered him in the baby beef contest. Then I began to increase his skim milk until he got twenty pounds per day—ten pounds of feed. Then I began to feed him corn, oats, oil meal, bran, fifty-six pounds of corn, thirty-two pounds of oats, ten pounds of oil meal and ten pounds of bran. He gained three and seven-tenths pounds per day on the average on this ration and the next time I mixed the feed I had eighty pounds of ground corn, twenty pounds of oil meal and thirty pounds of ground oats and ten pounds of bran. He also made good gains on this mixture. I found the corn and oats did more good being ground than when it was whole. I gave him two pounds of this ration to a hundredweight of beef three times a day. I also found that he ate his meal and hay better if I fed him before I watered him. The hay he received was June grass and timothy. I gave him all the water he wanted to drink and a little salt two or three times a week. After corn began to get big enough to feed I took his skim milk away and gave him green corn, October 20, 1916.

In Wisconsin it does not pay breeders of dairy cattle to let their calves nurse the cow. It increases the cost and the thing we recommend is to reduce the cost in supplementing other fats that cost less than butter fat at 40 cents per pound.

Geo. W. Smith.

Dodge Co., Wisconsin.

Ration Which Put on Weight.

To the Editor:—The calf I am feeding in the baby beef contest was born the first week in February. I started to feed my calf the 22d day of July and I have fed it up until now. I started this calf with one-third cracked corn and two-thirds ground oats. I fed it this way for three weeks. Then I increased the corn and fed less oats and now I am feeding two-thirds corn and one-third oats with a little bran and a little cottonseed meal and timothy hay, while we have no other hay to feed and I have increased the weight on him about eighty pounds a month.

Wm. Radl, Jr.

Columbia Co., Wisconsin.

Picking Flesh Builders.

To the Editor:—When I first heard of the baby beef contest I grew much interested in it and I entered a heifer and a steer. They were both grade Aberdeen Angus. The heifer came the last of September and the steer the last of October, 1915. It was late when I began feeding, as I didn't know whether or not Sauk county was going into the contest.

I find that calves take much care and attention and I don't believe a person can do too much for them. A calf must be properly broken and handled gently and not abused. The main thing is to pick out the right kind, that is, the best shape and those that will put on the best flesh. A calf must not be long legged, wild, but must be short, bulky and have thick, loose hide.

My calves nursed 193 days after I began feeding. When I first started feeding I fed ground oats, oil meal and corn gluten. I kept increasing the quality and quantity of their feed. They also got good clover hay and a sufficient amount of exercise.

Currying and brushing does a lot of good. Washing them makes their hair sleek, soft and smooth. If a calf is handled kindly they become tame and gentle, but if they are abused they become wild and afraid. I broke mine when they were small. I played with them and handled them every day. I would curry and brush them whenever I had the time.

I showed them at the Sauk County Fair at Baraboo and showed them again at two other contests. The heifer won third place and the steer fifth. My contestants had pure-bred Short-horns and mine were grade Aberdeen Angus. I have learned a lot about the care and handling of cattle and hope to do better next year.

In figuring up the cost of the feed I found out they only cost me $27 apiece. I think when a person can feed a calf for eight months for $27 it is cheap enough as well as profitable. I like to handle cattle and take an interest in doing it. I think a contest of this kind is an ideal thing, because a boy takes more interest and better care of his calf, for he always thinks he would like to win the prize.

Howard Roser.

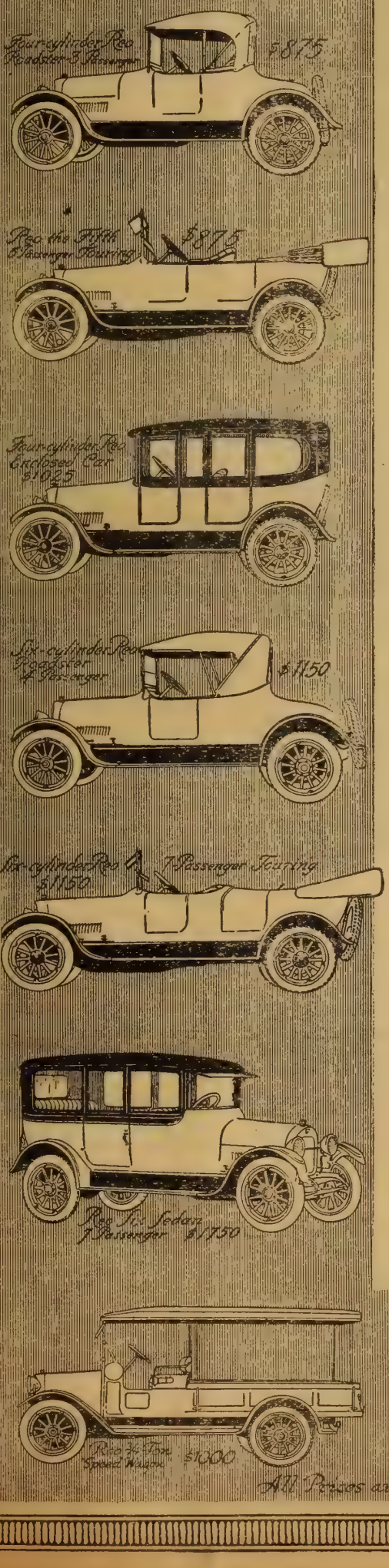
Sauk Co., Wisconsin.

Kindness to Calves Pays.

To the Editor:—In regard to my calves that won second and third prizes at Richland County Fair, will say that they were pure-bred Red Polled heifers which were born March 15th and 18th. They nursed one cow until April 23d and one cow each from that time on. The weight of each calf when put on feed was eighty-seven pounds and ninety-four pounds. From April 23d until September 26th each calf was fed two bushels of oats, two bushels shelled corn and twenty pounds oil meal, besides having free access to hay. During the worst fly time I kept them in a darkened stall. Their weight September 26th was 495

(Concluded on page 22.)

Reo



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Nor could one say that Reo mechanics are all more skilled—others can hire good mechanics too.

That's why we say that if you took Reo design and Reo specifications and had the car made up in some other plant, still it would not be a Reo.

It's the Reo spirit—that indefinable but still tangible thing that pervades the whole Reo organization from General Manager down to the Last Man in the Shops, that gives to this product the quality that has come to be known as Reo.

We like to call it good intent—for after all that is the determining factor.

It is the desire of the Reo Folk to make the best automobiles it is possible to make.

Not the most, but the best. Not quantity, but quality, is the Reo goal.

And every Reo man—from the Chief Engineer to the Final Inspector—is imbued with that spirit, is actuated by that desire to make good, dependable automobiles. Better than others.

Visit the Reo plant. You will be welcome—the doors are always open. Reo Folk, proud of their work, are glad to show you through. Note the atmosphere of the place. Watch the workers—listen to the remarks you'll hear.

No one asks—"How many did we make yesterday?" as you hear in so many factories nowadays.

For that isn't the thought uppermost in the minds of Reo workmen.

It's how many parts were discarded, turned back by the inspectors—because of some error so slight it would "pass" in most plants.

There's no secret—no necromancy—about Reo quality or how it gets into the product.

It's the result of that fervent desire of the Reo Folk to make Reo cars excel—and the eternal vigilance that results from that desire—that is responsible for Reo quality, Reo stability, Reo low cost of upkeep, and finally, Reo preference—Reo demand.

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Farmers' Open Forum

Cows Take Kindly to Mechanical Milker.

To the Editor:—We have a milking machine which has been in constant use for four years and has given us splendid satisfaction.

With the same care that anyone would give any kind of milking containers or whatever comes in contact with milk, the machine will produce the cleanest milk. A few times our power has been off and the cows give less milk by hand. On an average it

COLANTHA SIR KORNDYKE DE KOL.

Owned by J. N. Stansfield, Lawrenceville, Ill. Picture taken when this bull was a yearling and weighed 1,460 pounds. Three nearest dams averaged thirty-two pounds of butter in seven days and 123 pounds in thirty days.

is easier to get young cows accustomed to the milking machine than to hand milking for cows with small teats—especially this is true when on a full flow of milk and the machine is sure to be appreciated. We milk cows that give as high as thirty-seven pounds at a milking.

Our milking machine has never injured an udder that we know of. We have had a few off cows, but no more than before we had the machine. Any-

SON OF COLANTHA, TEN DAYS OLD.

one that can and will use ordinary sense should have no trouble with a mechanical milker. However, it depends a little on the man, as we know one man who tells he is having considerable trouble with his machine. His herd are Jerseys and that might make a difference. Another man we know, who resides near here, has used a milking machine for two or three years and likes it. We feel that we would be seriously handicapped to have to do without the milker.

J. N. Stansfield.

Lawrence Co., Illinois.

Drives His Car in Winter.

To the Editor:—We take great pleasure in reading the pages of The Wisconsin Farmer and were very much interested in those articles on the farmers' experience with their automobiles.

I have run a car now for six years and would be lost without a car of some kind. The first car cost $950 at Madison. It was some car. We had a great deal of pleasure—especially when the weather was warm and the horses tired, as we could take our car and get to town, a distance of seventeen miles in an hour. If we happened to be in a hurry we could get back home for milking without any trouble in the same length of time. We got a good many nice rides in the long summer evenings, which if we had to take with our horses that were working hard all day, would have been out of the question.

We also use our car to run errands about the farm, such as going about the pasture to give the cattle salt and

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Becker Bros. & Co. Dept. E3, 416 N. Dearborn St., Chicago Dept. E3, 129 W. 29th St., New York

count them and carry lunch in harvest and haying.

We never took any very long trips. We always had to get back for milking, so never got any further than Madison and Baraboo, but we enjoyed those trips very much.

We figure that we can get about seventeen miles on a gallon of gasoline. I have never discovered any method of increasing the mileage on "gas," only to shut off the engine and coast down hill and we have lots of hills in our country. The largest number of miles we ever made on any one tire was 6,000. To take care of the tire cuts get them repaired at once and keep tire pumped up to the required pressure. Always carry a reliable tire gauge in the car and use it, because you can't tell by looks just what pressure you might have, especially in warm weather. I think this will add to the life of the tires as much as anything you could do.

When it comes to winter driving our car is on the go when one would think it most impossible, but we came to the conclusion that it does the work easier than it could be done with a team, care and time taken into consideration, and for comfort they have a team skinned a mile. On a cold, windy day have your side curtains on and you would not know anything about the weather, and I think that they could be used a lot more and will be, once the road is broken. They can be driven with as much pleasure as in the summertime, because you can make a long drive in a short time. Anyone who has driven a team as much as I have on cold nights in winter can appreciate a little more speed.

From experience and trying what I have read on the subject of increasing mileage from gasoline, I can say that keeping the mixture as low as the motor will permit and still perform properly will increase your mileage per gallon. Also a clean motor, that is, one free from carbon, will help to give a greater number of miles per gallon, and in driving if one does not accelerate, that is, go from a slow speed to a faster one too rapidly, the mileage may be increased, as in opening the throttle wide when the car is moving slowly tends to flood the motor.

Moddy S. Price.

Iowa Co., Wisconsin.

Sold Six Grade Cows.

To the Editor:—I have done quite a lot of building this summer. I put up two barns for different parties and I also have a large barn to take care of. I have thirty-eight head of cattle, eighteen head of pure-bred Holsteins. I just finished a weekly A. R. O. test of one of my cows. She gave 541.5 pounds of milk, making 23.90 pounds of butter fat in seven days.

I find it pays to raise good cows and also feed well. I also sold six grade cows averaging $76 apiece.

I have bought 120 acres of land on which I expect to put buildings next spring and then I will give you the cost of building as near as possible. I am sending you herewith a picture of the cow that made the A. R. O. record.

Chas. Pitzke.

Taylor Co., Wisconsin.

In all but semitropical portions of the United States geraniums must be taken indoors for winter. Florists usually make cuttings in the fall to grow new plants in greenhouses for spring use. This practice is, of course, impracticable for the average householder. The latter may take up growing plants and hold them in a dormant condition by storing upright in boxes of dry soil in a cellar having a temperature of from 40 degrees to 50 degrees Fahrenheit. The plants may be placed close together with only a little dry soil among the roots.

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Girls, What is this Dolly's Name?

B - B - D - M - L -

CAN you fill in the blank spaces above and complete the doll's name? You can do this if you try. Just write to Aunt Mary and tell her what the name of this dolly is and she will tell you how you can get a beautiful doll 15 inches tall and jointed at the shoulders and hips. This is not a cloth doll to stuff but a real baby doll beautifully dressed in an auto coat and a cute hat. You will be the proudest girl in your neighborhood when you get this doll and she is yours for just a little easy work. Aunt Mary has a doll for every little girl, so be sure to write and tell her your name and address today so she can send you her big free offer. Address your letter to

Aunt Mary
700 Popular Bldg.
Des Moines, Iowa

Lessons in Recent Calf Contest.

What the Calf Contest Has Meant to Boys and Girls of Rock County Who Took Part in It—By Allen B. West, of Janesville.

AT THE prize-winners' stock parade at the Janesville Fair much interest centered in the calves which were led by the proud winners of the Rock County Calf Club contest.

First came George Arnold, of Rock Prairie, with a Polled Durham calf, and next Leman Rood, of Milton, with a Holstein, for the contestants were not limited to any particular breed. The next three boys, Frank Moore, of Clinton; James Wixom, of Milton Junction, and Wesley Stoney, of Clinton, also led Holsteins. Glen Cary, of Wilton Junction, led a Guernsey and then came two girls, the first, Lucy Kellogg, Janesville, also with a Guernsey, and Erma Hall, of Rock Prairie, with another Holstein.

The calves were a fine-looking lot. "Each one," said Mr. W. E. Markey, of Madison, "is the best of the breed. Never before have I seen or judged such a fine bunch of stock. The exhibit is on a par with those shown at the state fair."

And the young people who led them looked happy, as well they might, for in addition to the prizes won at the Janesville Fair, where the first prize had been awarded a pure-bred Brown Swiss bull calf, the second to a pure-bred Ayrshire calf, the third to a pure-bred Duroc Jersey pig, the fourth to a Holstein calf and the others generous cash prizes, these boys and girls had also won prizes in their respective districts, where contests had been previously held, and where the three winners in each of the four districts had been selected and allowed to exhibit at the Janesville Fair.

A FEW WINNERS IN ROCK COUNTY CALF CONTEST. TAKEN ON J. H. GREEN FARM, NEAR CLINTON, WIS.

The prizes they had received from the districts were: For best calf, a $25 pure-bred pig, and for second and third $15 and $10. The basis on which the awards were made were as follows: On gain made, 25 per cent; economy of production, 25 per cent; record kept, 25 per cent, and best calf, by score card, 25 per cent.

George Arnold's Polled Durham calf had gained 512 pounds; James Wixom's Holstein had gained 513 pounds, which was the greatest gain made. Other weights gained were between 457 and 317 pounds, the last being a Guernsey.

The boys and girls who had won the prizes knew just how these calves had been brought to their present state of perfection, for from February 1st to August 1st they had carefully fed and cared for them with their own hands, following the directions sent out by the United States Department of Agriculture in co-operation with the University of Wisconsin. They had weighed the rations and computed the cost and, as required, kept daily records.

Thirty-one boys and five girls, thirty-six in all, had taken part in the contest, which had been inaugurated by the Rock County Breeders' Association, of which James Van Etta, of Lima, is president, the success of which was due to the work of the special committee which had it in charge and the committees in the four districts, and to L. A. Markham, county secretary of the Y. M. C. A., who, seeing in it the great opportunity it offered to the boys of the county, was active in securing their enrollment and encouraging them in their work.

Though the prize winners were especially happy over the results, the other contestants had gained with them lessons and experience of greater value than any prizes. The contest was a county-wide object lesson on the value of scientific care and feeding. In no other way could boys and girls be taught the lesson so effectively. Nor were they the only learners. The whole community profited by their interest in the contest.

Said one farmer, "I think after this I'll care for my calves in that way;" and another, "I've raised calves for years, but I've learned more about it this summer than ever before."

The boys and girls and their interested friends learned the necessity of keeping accurate accounts with one's stock, and the fact that grain and forage raised upon the farm have definite values whether fed to stock or sold in the market.

They learned also that good stock pays. One girl sold her calf for $100 and used the money to pay her expenses at school. A fourteen-year-old boy who unaided selected his calf, buying it from a neighbor for $50, sold it at the close of the contest for $150.

But best of all the boys and girls learned that the farm has all sorts of interesting problems awaiting solution and that they have no need to leave it to find wider fields for their expanding energies.

National Swine Growers Meet.

Pure-bred swine breeders generally will be interested in the announcement that the National Swine Growers' Association will hold its annual meeting at the Ft. Dearborn Hotel, Chicago, on Monday, December 4th, at 6 o'clock p. m. This is the organization under whose auspices the National Swine Show was held in Omaha in October. From all quarters has come the most favorable kind of commendation of that event and there is much enthusiasm among swine breeders generally over the prospect of holding the second show.

This paper is exceedingly anxious that this meeting be well attended. The swine business of the great central West is in a flourishing condition and every prospect pleases. The National Swine Growers' Association is proving to be the best means yet discovered for inducing the adherents of all breeds to join hands in the common cause of swine improvement. Friendly rivalry will continue as heretofore, but in the end the work of this association will result not only in improving the pure-bred swine of the country but in working a vast improvement in the grades.

"There are 6,361,502 farms in the United States. On 3,643,546 of these farms 15,387,515 hogs are slaughtered annually. If hogs were slaughtered on the remaining 2,717,956 farms at the same rate 11,000,000 fewer hogs would go to market annually," is the calculation made by Earl S. Girton in a new bulletin issued from the agricultural extension department at Iowa State College on "Dressing and Curing Pork on the Farm." This would effect a great saving to the farmers who do not slaughter hogs at the present time, since pork products purchased at local shops must be sold for such prices as to allow a profit to the country shipper, packer and retail butcher as well as to cover freight on the hogs to market and on the product back to the retailer.

How many of our readers will see this and then write and tell us how many different kinds of food products they now buy in packages which they used to buy in bulk, or did not buy at all?

We would like to know. If you will take the time to write, it would please us.

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DAIRY

Miscellaneous Milk Troubles.

To the Editor:—"I would starve to death before I would eat a bite of anything made from that milk!" It was in the suburbs of a small town and the members of the family were discussing pro and con where they might be able to procure the milk supply in the place of the former source which was no longer in business. "What's the matter with it?" demanded the worried housewife, who found it hard to supply her family with good, wholesome food even after the wherewithal was earned to buy it.

"That cow is kept in a small, dark, dirty stall all through the winter, with nothing of cleanliness; the manure hangs to her sides in great chunks the whole winter through. It is just possible the situation is better through the summer, but next winter will find conditions unchanged."

Now, the writer happened to know about the cow in question, about the uncleanliness, and an incident was recalled that explains how slovenly, dirty methods, are never safe, even with the best of conditions. There are always ways and means to feed us our peck of dirt on short order. The boy was milking in the grassy, clear yard. The cow, which happened to be a good one, was fat and sleek. She gave a pail "full up" and the boy calmly set it brimming with foam on the grass while he tied the cow to a new, clean spot for the night.

While the cow was being given attention a cat and dog which were standing near helped themselves to their nightly portion of the milk. A youngster who saw the performance considered it his bounden duty to inform the lad of what had occurred. "Well, I reckon we strain our milk," was the indignant reply.

This occurred in a small town where it would pay a man, and pay well, to supply customers with good, wholesome milk. It is being eagerly sought at a maximum price. In fact, milk and butter, good fresh butter, are practically an unknown quantity where the cream is shipped and the skim milk fed to pigs and calves. In common with many other things there is a complete revolution in the matter of dairy products in comparison to that of even a few years ago.

A woman whose cleanliness was above suspicion made butter which was sold at the store. With no really good reason she changed the base of operations and drove seven miles to another town when her own was adjoining the farm where she lived. We needed some extra butter at threshing time and purchased some of her. The awful taste and odor of butter was personally experienced just once before. When a child we just simply had to have farm animals and if the real supply was short stick horses and milk weeds for "cows" filled in the deficiency.

Now, what was the good of having "cows" unless they did one some real benefit? The big, juicy milk weeds were broken off to permit the milk to run out by "milking time." With a small pail that had been presented by an adoring aunt at the Yuletide we very importantly went to "milk."

Somehow the affair did not pan out according to expectations, so all there was for it was to "suck the cow!" Unless you have tasted milkweed or butter made from a cow that eats milkweeds, please do not say you have tasted the worst ever!

A cow was once brought to this place that was purchased from what was seemingly a good neighbor. The odor of the milk was peculiar. It was nauseous. The butter was soft and inferior in quality. Finally the milk was discarded and the cow turned dry. She seemed listless and altogether out of sorts, losing flesh rapidly in spite of the best of feed and care. It afterwards came out through a tenant of her former owner that she was not healthy. He had at one time milked her and refused to use the milk any longer, so she was offered for sale. Without a test to prove definitely that cow had tuberculosis.

One time we traced an unpleasant odor and taste of what should have been good butter to a very simple source. Through a temporary illness a woman, experienced in buttermaking, cared for the dairy part of the household for a couple of weeks. The queer taste of the butter could not be located until we were able to be about the house again. Churning was just begun. The churn and all utensils were carefully scalded and there was the trouble. Instead of rinsing plentifully with cold water immediately after the hot was poured off the cream was poured into the churn "because the weather is so cold I am afraid the butter will be slow."

The cold water would have closed the pores of the wood that the hot water opened, causing the unpleasant odor and taste. Both hot and cold baths were necessary, the former to keep the butter from sticking to the utensils as well as for sanitary reasons.

Another source of malodorous butter is that of the cloth strainer. Without meaning to say that it is impossible to keep one of them sanitary, it is a fact that it is a strenuous business. Unless such strainer is thoroughly sterilized the milk and cream soon acquire an odor and taste that is far from wholesome. If kept sanitary, then the cloth strainer does what a wire concern cannot possibly do. We plead guilty to using them, and after being washed several times with cold water they are boiled—boiled, remember—in a solution of bicarbonate of soda. There is one for each day and they are taken through the wash with the table linen.

There are a lot of other simple causes for unwholesome milk and butter, but a few simple principles applied in a common-sense manner would usually find the trouble, which varies with conditions. Subscriber.

Butter at Its Best.

To the Editor:—Once in a while a churning of butter will come with a flavor that is undoubtedly a little bit "off." The experienced buttermaker quickly detects this slipping down in the standard, but it is not always so easy to determine just where the fault lies. It is a pretty good guess, however, that the ripening has not been done just right, for it is easier to fail here than at most any other point. What, then, is good ripening?

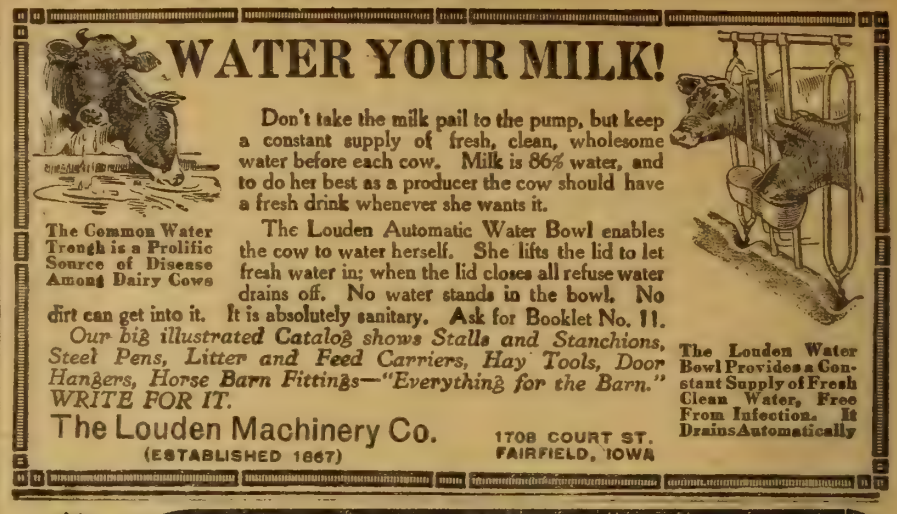
We use a common milk can for this purpose—two of them when we have a flush of cream. As the cream comes from the separator we receive it in a milk pail. This is at once—and by that I mean just what I say, at once—taken to the well platform and set into a tub of water just drawn. While cooling it is stirred to get out any animal heat there may be in it. A long-handled spoon is used for this purpose. Care is taken to reach clear to the bottom and all round on the sides of the pail.

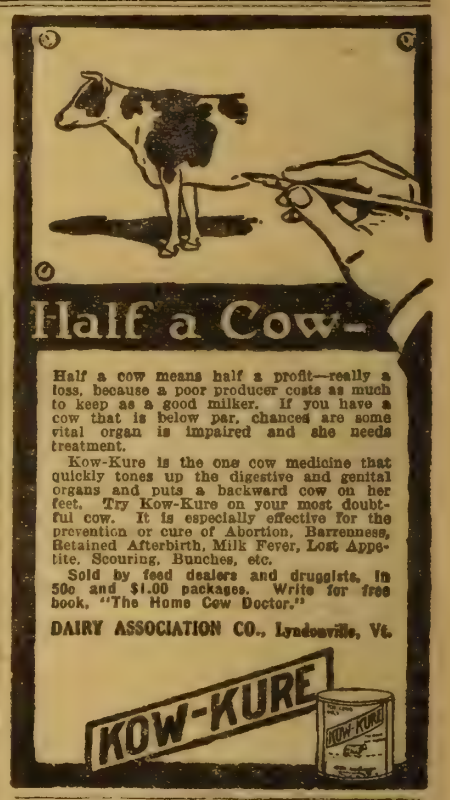
When thoroughly cooled the cream is taken in and poured into the milk can, when it is set away to stand until time to churn. If we have other messes of cream, all are thoroughly mixed in the can. Just here we used to have trouble. Two messes of cream in the same can and not well mixed are sure to come to grief. I remember the time when we left much butter in the cream after churning, just because the different messes were not completely mixed. Now we have a cone-shaped device for the stirring. This is open at the bottom and provided with a long rod for a handle. This will reach to the very bottom of the can, and if pains are taken there is no need of improper agitation and consequent poor mixing. You can get such a stirring arrangement of the manufacturer of dairy implements.

If the churning is not to be done in a day or two, we let the cream can stand where it will be cool and where no bad odors will reach it. By the way, any odors are bad for butter. The purer the air in which milk and cream are kept the better the butter will be. A few hours before the churning is to be done the cream can is brought out and set in a warm place and the cream frequently stirred. The sooner the ripening can be done the better. We never have used a starter in ripening, although that can be done very successfully after a little experience.

When ripe enough we cool the cream down to the proper temperature for churning. This varies a little according to the time of the year and the temperature outside the can. Fifty degrees is about right for summer and 65 for other seasons. By following these rules we have had our best success, and I am not ashamed to say that we have had very good success with our butter. E. L. V.

More than ninety-three high schools in Wisconsin now give courses in agriculture as a part of their work. These courses include practical projects in animal husbandry, poultry raising, cultivation of grains, forage crops and a wide variety of garden vegetables. In many instances the community is benefited by these projects. Some prejudice has been encountered in this work, but in the main the courses are developing splendidly and accomplishing a great deal of good.





UPPER WISCONSIN

The Conrath Bank Plan.

In one of our recent issues we mentioned the fact that Mr. Ben F. Faast, president of the Conrath State Bank, in Rusk county, Wisconsin, had spoken briefly before the Land Clearing Conference at Rhinelander, relative to a land-clearing plan. The Wisconsin Farmer has been furnished with the details of the plan as carried out by the Conrath State Bank. The bank offers to loan money to farmers and new settlers for the following purposes:

1. For the fencing of timber or brush land.
2. For buying stock (dairy or beef).
3. For buying a stump puller, a piler, or dynamite.
4. For stumping land and making it ready for the plow.

More complete details of the plan are explained in the following:

Under plan No. 1 we will loan you the full amount necessary to buy wire and fence posts if you will agree to scatter clover seed and pasture stock on this land during the greater part of the season. The pasturing of stock is of great help in clearing land.

Under plan No. 2 we will loan you the entire cost of the stock you buy, providing this stock is tuberculosis tested and is approved by the county representative. It will pay you to buy good cows and heifers and to pasture this stock on your cut-over lands.

Under plan No. 3 we will loan you the entire cost of a stump puller or a stump piler, providing you buy a good machine at reasonable cost. We will help you try to secure a low price direct from the manufacturer. If we loan you the entire cost of this machine you must agree to stump and pile at least five acres of your land during the first year.

We will also loan you the full cost of dynamite and will try to secure for you this dynamite at reduced prices.

In many cases it would be better for three or four farmers to buy a stump puller and build a Conrath stump piler to be used co-operatively. This will reduce the cost to each farmer. We will loan you the money on a joint note.

Under plan No. 4 we will loan you the entire cost of stumping your land and making it ready for the plow, providing the cost of this stumping does not exceed what we believe to be a fair estimate of what the cost should be. If you will do the work yourself we will pay you by the acre as each acre is completed. As an example—if you want to stump and pile ten acres and the estimated cost will be $150 or $15 an acre, we will loan you the full $150. This money is to be left in the bank and to be paid to you at the rate of $15 per acre as each acre is completed and approved.

The Wisconsin Farmer is in receipt of a circular which has been issued recently by the Conrath State Bank, which loans money to farmers and settlers on one to twenty years' time. The bank will also loan money on special terms for any farmer or settler who desires to erect a barn or silo. One of the statements in the circular advises farmers that it pays to borrow money to improve cut-over land and build farm homes.

Certainly no bank could engage in any more practical business than that outlined in the plan herein given. While the bank is helping the farmer and settler, it is also making new customers whose volume of business will be increased as their land is improved.

Tour By Burnett County Dairymen.

County Agent Klinka, of Polk county, took a company of Burnett county dairymen and farmers through the western part of Polk county recently. They were accompanied by County Agent Briggs, of Burnett county.

The first stop was made at the Seven Pines Farm belonging to C. E. Lewis. Dinner was served at Milltown high school. An interesting feature of the day's exercises was the inspection of the Milltown Co-operative Laundry. The party also visited the A. J. Miller Holstein dairy farm and later called upon the following breeders: Geo. A. Nelson, Ayrshire; Christ Tretsven, Guernsey; Henry Peterson, Short-horn; H. F. Taylor, Jersey; Carl Johnson, Holstein; Fred N. Nelson, Brown Swiss; Frank Nelson, Guernsey.

There were about forty Burnett counties in the party and they expect to purchase considerable stock from their Polk county neighbors.

Fencing a Problem For Settler.

To the Editor:—I am sending you my renewal and wish to say to you I have enjoyed The Wisconsin Farmer very much and would be sorry to miss it from the reading table.

Now a word about the settler and the land speculator of northern Wisconsin. The settler often begins on a new land with little more than his bare hands to make a farm of the wild land. As soon as possible he secures a few milk cows to help feed himself and family. Now begins the difficulty of fencing, surrounded by a land speculator who will not furnish his share of the line fences and whom the settler cannot compel to do so. The burden of helping the speculator fence his land falls on the settler who already has all the burden he can carry. The land speculator is making money off the efforts of the settler without bearing his share of the burden. Can this matter be remedied?

This may seem a small matter, but it is often only a straw that breaks the camel's back. Nellie Covant.

Wood Co., Wisconsin.

Wood Association No. 1.

To the Editor:—The following table gives the names and records of cows in this association which have produced more than forty-five pounds of butter fat during October:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds fat
J. T. Holland					
Belle, No. 2, G.H.	6	9-20-16	1435	3.7	53.1
Peter Hockstra					
Carrie, G. H.	6	9-28-16	1392	3.6	50.1
A. Osenga					
Annie, G., H.	5	9-27-16	1352	3.6	48.6
Henry Homan					
Minnie, G. H.	6	10-6-16	1333	3.4	45.3
Simon Joosten					
No. 7, G. H.	8	9-11-16	1278	3.5	44.7

J. L. Williams, Official Tester.
Wood County, Wis., Association No. 1.

Watch for the date of your nearest institute this winter and plan to be there with all the family. It will be worth while and you will learn something that will help next year's work.

What Does Winter Mean to Your Battery?

Maybe you live where you can drive your car all winter long.

Or maybe in your locality the roads are hub-deep in snow, ice, and mud until spring.

It doesn't matter whether you live in Florida or Alaska—you need Willard Service for your battery's sake.

If you drive, your battery must be in working order—your starter must not fail no matter what the weather may be.

If you store your car, your battery must not be neglected—you want it to be in good condition when spring and good roads come.

If your winters are cold, your battery ought to have regular inspection, for if it is not properly charged it will freeze.

The Willard Service Station is there to help you. There you can have your battery well cared for, filled and charged. Or for a small sum, you can leave it there all winter where it will receive regular, expert attention. Or you can learn how to take care of it yourself, whether you run or store your car.

It doesn't pay to run any risks. Write for list of Willard Service Stations and let us do the worrying. Ask for booklet F-71 "Will She Start" on winter care for your battery.

WILLARD STORAGE BATTERY COMPANY
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JUDGING A DAIRY COW.

Points Which Must Be Taken Into Consideration—As Given by George C. Humphrey, of Wisconsin Experiment Station.

Good Dairy Head.

WHAT is a good dairy cow? The ability to judge by the dairyman, if ever important is very essential now, with the increasing costs of feed, and the question Prof. G. C. Humphrey has answered in his bulletin, "Judging Dairy Cows," just issued by the Wisconsin Experiment Station.

It is not only necessary to emphasize the need of increasing the size of Wisconsin herds but it is even more necessary to improve the production of the cows. The aim on every farm should be to have better cows and to accomplish this a dairyman must be a good judge of a good cow when he buys or sells, and to know the family history of his cows, whether their ancestry be pure-bred or grades. Prof. Humphrey has endeavored to point out what is a good cow and the need of every dairyman being a good judge. This he sums up in the following:

Makes fewer mistakes in buying cattle.

Gets better prices for his surplus stock.

Selects and builds up a herd of cows of uniform type, size, breed and quality.

Receives a higher and more uniform production of milk and butter fat.

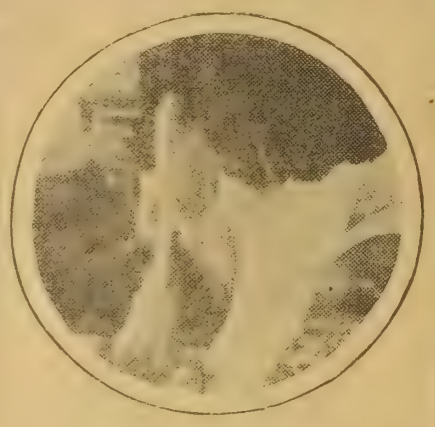
Makes greater returns over and above the cost of feed and care.

Uses better sires and secures better calves.

Has better success in feeding and showing cattle at fairs and expositions.

Has greater satisfaction and pleasure in owning and managing a dairy herd.

Cows which are heavy producers usually have certain well defined characteristics and experiments indicate that cows having certain so-called dairy characteristics are the more economical producers. The dairy cow is best defined by naming her essential features and these are: Good size for her breed, good feed capacity, dairy disposition, a good udder, good constitution and health; dairy breeding, large capacity for milk and butter-fat production, and power to produce offspring of her type and breeding. Where one is able to consider all parts of the body and judge these essential features he is not likely to err seriously in his judgment.



GOOD DAIRY UDDER.
The skin should stretch readily when the udder is milked out.

LOOK FOR THE WEDGES.
The body should be wedge shaped when viewed from the front and top of the withers, wider at the hip bones and at the floor of the chest than at the point of the withers.

GOOD DAIRY UDDER.
The udders should be large, well proportioned and well balanced, extend well forward and high up between the thighs.

These characteristics have led to the term, "triple wedge shape characteristics," as this wedge indicates a big barrel, which means feed capacity; fullness of flanks with well sprung ribs that show digestive capacity while the sharp ends of the wedge show dairy temperament. These characteristics with the need of properly developed udders, milk veins, etc., are taken up in detail together with the methods of scoring at judging exhibitions.

GREAT DIGESTIVE CAPACITY IS ESSENTIAL.
Fullness of flanks and good depth from the hips to the lower line of the rear flank and of the udder, together with well-sprung ribs, far apart indicate a large digestive capacity.

Montana Pays Big Poultry Profits

It costs less than a $1.00 a year to maintain a hen in Montana, and eggs bring highest prices. Poultry and eggs are much in demand—the climate is right—feed cheap—markets exceptionally good.

A New Era of Development

The Electrification by the *"St. Paul Road"* of its main line across Montana at the cost of $12,000,000 has directed the eyes of the world toward this great commonwealth. This stupendous achievement will help the state forward and upward, developing new industries, improving living conditions, increasing land values, and broadening the farmers' markets.

Again Electrification has greatly enhanced the pleasures of travel—eliminating smoke and cinders, and creating clean, smooth travel over the mountains.

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It is especially valuable to Christian Endeavor and other Young People's Societies. Each issue contains stories of fascinating interest, suitable for home reading and other articles relating to the family life. The American Messenger endeavors to present a comprehensive view of the progress of the Kingdom, both at home and abroad; to tell of the forward movements that are being initiated for the uplift of humanity and the betterment of mankind; to call attention to those phases of Christian work and thought that are of unusual interest; to record the manifold activities of the Christian Church; and to spread abroad the cardinal teachings of Jesus Christ, as revealed in the Gospel which He proclaimed as the message of God.

The paper is interdenominational and admirably suited for every home. All those who subscribe now to the American Messenger for 1917 at fifty cents will receive the paper until January 1, 1918. New subscribers will thus receive the issues for October, November, and December, 1916, free of cost, if they subscribe at once. If you do not know the paper, send for a free sample copy.

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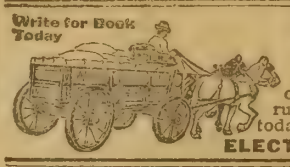

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POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Omro Poultry Institute.

The first of a series of farmers' poultry institutes which will be held at various places in Wisconsin this winter was conducted last Thursday and Friday at Omro, Winnebago county, with splendid success. The attendance was very good and interest ran high and Mr. E. T. Luther, state superintendent of farmers' institutes, expressed himself as much pleased with the innovation in institutes.

Emphasis was laid on the need of more and better eggs for Wisconsin, the type of fowls needed on the farms to produce these eggs and the necessity of good marketing conditions in order to bring about the greatest returns from poultry. It was an institute program primarily for farmers and those interested in egg production rather than the fancier who is breeding for the show pen. The speakers at the two-day session were Mr. J. G. Halpin and Mr. J. B. Hayes, of the state experiment station at Madison; Mrs. A. J. Schloerb, of Omro; Mr. G. W. Harkett, of North Freedom, and Mr. Luther.

As dairymen have discovered that it is profitable to choose herd sires from high-producing dams, poultry raisers are also learning that high-producing flocks are headed by males from good laying hens. The demand for cockerels from eggs of high-producing hens is becoming greater each year, the speakers pointed out, as the farmer has found that the primary value of a hen is the eggs she produces, and to secure such pullets close attention must be paid to the egg records of the mother fowls. The trap-nest is, therefore, to the poultryman what the Babcock test and the scales are to the dairyman, so particular attention was given at Omro to the use of the trap-nest to learn what a hen is doing and at the same time keep a check on the male birds.

Three pens of good and poor laying hens were shown as a demonstration of the fact that the successful egg producer and flock owner must trap-nest. In one pen was Wisconsin Queen, whose record is 258 eggs in twelve months, and at her side a flock mate who in four years has never laid an egg. In another pen were flock mates, one hen with a year's record of 220 eggs, the other with twenty-eight eggs. In the third pen were flock mates, one with a record of 213 eggs, the other with seven eggs for the year. To the eye one looked to be as good as the other. The value of the trap-nest, it was shown, was that males should be chosen from the settings of the high-producing hens, as they could be expected in turn to thus improve the flock production.

Although the trap-nest has no competitor in this line, the expert may judge somewhat by the eye which hens are good layers. This may be summed up as follows:

Good layers are:
First off the roost in the morning.
Last to roost at night.
Usually singing and always happy and busy.
Always heavy eaters.
Healthy and free from parasites.
Late molters.
Have prominent and bright eyes.
Fire red and velvety combs.
Wide, pliable pelvic bones.
Deep abdomen.
Reasonable long and wide back.
Short head.
Loose yellow color in their shanks after heavy laying.
Loose yellow tinge in ear lobes
Loose rich red color of combs.

Marketing from both the farmer's standpoint and that of the egg buyer was discussed with demonstrations of candling, etc. The value of good, fresh eggs was emphasized and especially the need of close attention to the layers. There were also discussions of feeding problems, disease, etc.

Following the lectures Mr. T. L. Bewick organized a Boys' and Girls' Poultry Club, which will work along poultry lines during the coming year under the direction of Mr. Gustav Sell, teacher of agriculture in the Omro high school. In connection with the institute was held a comparison show which brought out a good lot of fowls to be judged by Mr. Geo. A. Wells, of Oshkosh. This was under the direction of the Winnebago County Poultry Association, of which C. H. Larrabee is president and Mrs. A. J. Schloerb secretary and treasurer.

Our Diamond No. 24 Corn and Cob Grinder

is our new all purpose mill that with from 6 to 10 horse power gives an output of from 10 to 30 bushel per hour. Grinds and crushes corn and cob and small grain of all kinds, made after 30 years of experience in building Feed Grinders and fully guaranteed. Let us send you descriptive circular telling about new features on this grinder, also folder "A" which describes the famous

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With one of our Diamond Line of Saw Frames you can make from $10.00 to $15.00 per day, this winter sawing wood for yourself and others. Printed matter mailed free, so write today.

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THE WISCONSIN FARMER
MADISON WISCONSIN

Wisconsin Poultry Show.

The thirteenth annual show of the Wisconsin Poultry Association will be held at the stock pavilion, college of agriculture, Madison, Wisconsin, January 5, 1917.

One of the big features of this year's exhibition will be a "zone show" of the National Partridge Wyandotte Club, to include specimens of this well-known breed from five states—Iowa, Illinois, Minnesota, Michigan and Wisconsin. Attractive prizes and special cups will be offered in this and other breed competitions. In all more than a thousand birds are expected for the event, representing some of the most successful poultrymen in the middle West. Emphasis as usual will be placed upon utility characteristics rather than upon fanciers' points.

The judges who will officiate at the show are W. H. Stanfield, Hillsdale, Michigan, and George Wells, Oshkosh. Officers of the Wisconsin Poultry Association for this year are: M. C. Gerard, Stoughton, president; W. H. Ashcraft, Janesville, first vice president; John F. Johns, Dodgeville, second vice president; J. J. Flad, Madison, superintendent; J. P. Love, Waukesha, treasurer; J. G. Halpin, Madison, secretary.

The Turkey Situation.

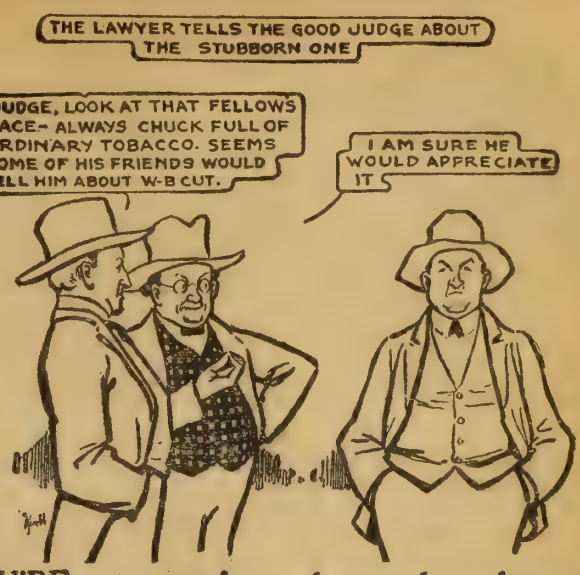
According to James A. Halpin, head of the poultry department of the Wisconsin College of Agriculture, there is no reason to expect any reduction in the number and quality of turkeys raised in Wisconsin this year. For a time there were fears that the Thanksgiving bird would be knocked off the Badger menu. An average of 30 cents per pound for turkeys at retail is expected throughout this state.

Regarding the turkey situation, Mr. Halpin says:

Raising turkeys has never been one of the state's big industries at any time, although some mighty fine specimens are produced here. In some regions of the state turkey raising is on the increase, while elsewhere the reverse is true, and it is declining in popularity. The reasons why farmers quit turkey raising are chiefly because of troublesome diseases which they fail to understand, the unscrupulous hunter who takes pot shots at tame birds, and also because of neighbors who object to the turkey's wandering habits.

Missouri, Oklahoma, Texas and Kentucky are leading turkey raising states at present, as natural conditions in the south and west seem favorable to their best production. Reports from these places tell of extra heavy supplies of high-grade birds, which will be sent north and west to the large markets within a few weeks.

Tell what you have for sale in a little advertisement in THE FARMERS' MARKET. Does not cost much and may be worth a lot to you. Six cents a word each insertion.



YOU'RE not sorry for gophers and monkeys with their faces all swelled out—they are built that way, pockets in their cheeks to hold stuff till it's feeding time. But you can't help feeling sorry for a man with a big wad of old kind of tobacco—he isn't even getting satisfaction. W-B CUT is *rich* tobacco—full of satisfaction—a *little chew*, is *right size*, and it cuts out so much chewing and spitting.

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WIN A XMAS SURPRISE PACKAGE

4		7
	7	3
6	4	

SOLVE THIS PUZZLE

Here is the "Missing Number Puzzle" which will make you think. What numbers placed in the vacant squares will make a total of fifteen for each column when added either up and down or across?

Is It Easy? If you fill in the missing figures and send us your name and address, we will send you as a prize, a Christmas surprise package, containing 42 assorted pieces of beautiful Christmas cards, seals, tags and stickers. This is one of the most artistic Christmas packages put out. We will also send a certificate of entry in our grand contest for a $595 Saxon Automobile. All you have to do is to enclose 2 two cent stamps in your letter to pay postage and cost of mailing.

Saxon Car Given Away

Remember the Saxon car will absolutely be given away at the close of the grand contest. In case of a tie, a Saxon car will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars free.

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ARE now in the market. Excellent quality, standard weight cockerels and pullets. High-class exhibition and common laying stock. Satisfaction guaranteed or no sale. Winnebago Poultry Yards, R. 23, Omro, Wis.

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg. Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Succes'rs to R.F.Johnson, Assumption, Ill.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

TURKEYS WE BUY 'EM. Write us what you have. THE R. E. COBB CO. 26 E. 3d St., St. Paul, Minn.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys, bantams and guineas. Also incubator eggs. Bare Poultry Co., Box 650, Hampton, Iowa.

SINGLE COMB BUFF AND WHITE Leghorn cock'els. Charles Schmit, Hortonville, Wis.

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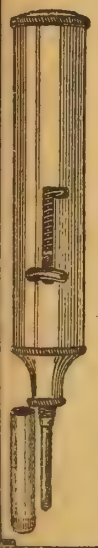

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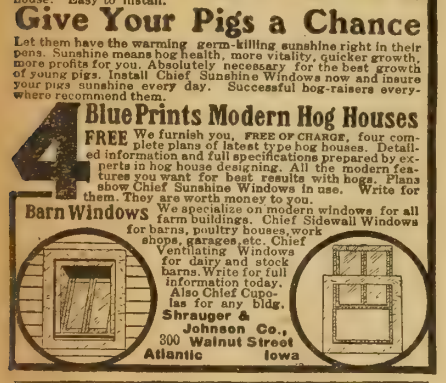

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Meetings During the International

Various Record Associations Will Hold Sessions During Week of the Big Exposition, December 2d to 9th.

SUCH information as is available in advance indicates that the International Live Stock Exposition which will be held at the Union Stockyards, Chicago, December 2d to 9th, will have the largest attendance in its history. It has been customary in the past for the various record associations to hold their annual meetings during the period of this show and this year the same plan will be followed. In the following list will be found the meeting place and time of each gathering that will be held during the week:

December 4th to 9th—National Conference on Marketing and Farm Credits, Hotel Sherman.

MONDAY, DECEMBER 4TH.

8:00 p. m.—American Cheviot Society, Stockyard Inn.
8:00 p. m.—National Swine Growers' Association, Fort Dearborn Hotel.
8:00 p. m.—Percheron Society of America, Florentine Room, Congress Hotel.

TUESDAY, DECEMBER 5TH.

5:00 p. m.—American Cotswold Association, Stockyard Inn.
7:00 p. m.—American Berkshire Association, Stockyard Inn.
7:00 p. m.—American Shire Horse Association, Live Stock Record Building (2d floor).
7:30 p. m.—American Shropshire Registry Association, Live Stock Record Building (Assembly Hall).
8:00 p. m.—American Hereford Cattle Breeders, Down Town.
8:00 p. m.—American Rambouillet Sheep Breeders' Association, Live Stock Record Building (2d floor).
8:00 p. m.—Chester White Swine Record Association, La Salle Hotel.
8:00 p. m.—International Live Stock Exposition Association, Live Stock Record Building.

WEDNESDAY, DECEMBER 6TH.

1:00 p. m.—American Poland China Association, Live Stock Record Building (2d floor).
2:00 p. m.—Red Polled Cattle Club of America, Live Stock Record Building (Assembly Hall).
7:30 p. m.—American Aberdeen Angus Breeders' Association, Palmer House.
8:00 p. m.—American Association of Importers and Breeders of Belgian Horses, Live Stock Record Building (Assembly Hall).
8:00 p. m.—American Galloway Breeders' Association, Sherman Hotel.
8:00 p. m.—American Hampshire Sheep Association, Live Stock Record Building (2d floor).
8:00 p. m.—American Polled Hereford Breeders' Association, Live Stock Record Building (2d floor).
8:00 p. m.—American Short-horn Breeders' Association, Congress Hotel.
8:00 p. m.—Lincoln Sheep Breeders' Association, Live Stock Record Building (Sheep Breeders' Office).
8:00 p. m.—White Swine Congress, La Salle Hotel.

THURSDAY, DECEMBER 7TH.

10:00 a. m.—Welsh Pony and Cob Society, Live Stock Record Building (Assembly Hall).
1:30 p. m.—American Southdown Breeders' Association, Live Stock Record Building (Assembly Hall).
2:00 p. m.—American Milk Goat Registry Association, Live Stock Record Building (2d floor).
7:30 p. m.—The Polled Durham Breeders' Association, Grand Pacific Hotel.
7:30 p. m.—American Yorkshire Club, Hotel Sherman.
8:00 p. m.—American Oxford Down Record, Live Stock Record Building (2d floor).

FRIDAY, DECEMBER 8TH.

10:00 a. m.—Illinois State Veterinary Medical Association, Sales Ring, Union Stockyards.
1:00 p. m.—American Romney Breeders, Live Stock Record Building (2d floor).
2:00 p. m.—American Shetland Pony Club, Down Town.

Ailing Animals.

Necrobacillosis.

Can you tell me what is the matter with my pigs' eyes and how to treat them? They are pigs from three to five weeks old, well-bred Duroc Jerseys. If the days were cold they were farrowed in a sanitary pen in a good hog house. If the weather was good the sows nested in the rape patch or around the straw stack and ranged for pasture and rape, run in the lot after fattening cattle, had some corn, slop and good water. The pigs' eyelids become inflamed, slightly swollen and moist looking, then swell shut, and by the time they open again the pig is blind, and, of course, starves to death, as well as getting knocked about by its mates. No discharge appears to come from the eye. These are all the symptoms I could see. I had the same trouble with my spring pigs, together with sores around the head which would make holes until I wondered at the pigs living as long as they did. I lost half of my spring crop, so would like very much to have your advice.

This trouble is known as Necrobacillosis and is often found in small pigs. It is found in different forms, such as you find in your herd. It is hard to treat such troubles effectively because of the concentration of disinfectants which would be required to kill the germ. The strength required would be injurious to the pigs in other ways. About all that can be done is to clean and disinfect quarters and play a watchful, waiting game.

Cough in Pigs.

During the last two weeks my pigs, old and young, have contracted a cough and they seem to be losing steadily. It is a dry, rasping cough and some are running from the nose like a cold. Some say it is caused from lung worms. They eat well and seem to be healthy and thrifty every other way, only are not gaining since they got it. They run in the pasture with the cows and have corn, ground feed and skim milk for rations. They have good quarters with cement floors. Kindly advise me what to do for them.

There are so many things which will cause a cough and subsequent unthriftiness that without close observation one may not be able to diagnose with any degree of accuracy. The trouble may be lung worms, chronic pneumonia, digestive disturbance or some other trouble, but this trouble will have to be determined by close observation by a competent or professional man.

Lack of Milk Supply.

I have several sows that have farrowed and some that are to farrow soon. I am having trouble with them losing the pigs. The pigs are strong and healthy when farrowed, but the sows do not seem to have any milk for them, that is, none that they can get. The sows lie flat on their udder and once in a while they will let the pigs nurse. But they get weak and then die. They have all been fed well, having plenty of skim milk, ground rye and oats, corn and water. I have had the local veterinarians out, but they don't seem to know what the trouble can be. Could you advise me what to do?

It is hard to say just what the trouble is in your herd. However, if the cows do not let the pigs nurse as they should this would cause a lessening of the milk supply. Try a change of feed, say, for instance, get hold of a good quality of alfalfa and boil it in a quantity of water and mix the ground feed into the alfalfa water or tea and feed this to them.

Injury From Slipping.

I have a black nine-year-old Kentucky bred mare that has gone lame on her left hind leg. I drove her to town one evening and she was all right until she slipped on the pavements. As I drove her I saw she was lame. She has not done anything for three days, but is still lame. Can a horse get a spavin slipping in that way? Is there a cure for it? Would shoes help her? She is a valuable animal and I do not want to lose her.

Since you say your horse is a valuable one we would say you did not exercise the best of judgment in neglecting her for so long a time. This animal should have been examined by a veterinarian at once and he could probably have found the seat of the injury. Yes, she could cause a spavin to start from injury in slipping, but this may not be the trouble with your animal. Blistering a spavin three or four times at intervals of two to three weeks with a good blistering agent often brings about a cure.

The Baraboo News suggests that all bridges on the country roads be painted white so that they may be more easily seen at night. The idea is a good one and might save a good many accidents in these days of swiftly running automobiles.

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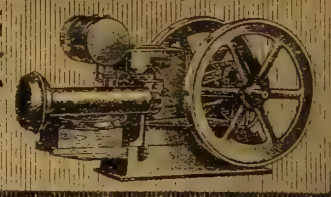

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SAXON EDITOR, 563 Popular Bldg., Des Moines, Iowa

Fruit & Garden

land Selection of Fruit Pays.

hough it is poor business to put ge apples only in the top of the , R. S. Mackintosh, horticultural cialist, University Farm, St. Paul, s that time used in picking, grad- and packing apples by hand is well nt. A uniform grading system, a d box and careful handling are uisites of high prices for Minne- a fruit. All apples should be care- y picked by hand from the tree be- e they become "hard ripe," Mr. ckintosh says. Those which be- ne "water-cored" must be picked ecially early.

rades, particular attention being i to the varieties of apples, should carefully separated. All fruit ed in the boxes of any grade uld be uniform in shape and each de must have a size limit, below ch none in the grade falls. Not re than 10 per cent of the first- de apples should vary from the ndard type or size.

egular apple barrels, or bushel or f-bushel baskets for the local mar- , are most convenient for packing ice apples. The first few layers uld be packed with the stems down after each half-bushel is put in barrel should be shaken to settle fruit. The top should be put on ly to keep the apples in place. A ew or a lever press is best for put- on the top.

fter the barrel is filled and the d nailed securely in place, it should turned over and should have the iety, the grade and the size of the allest apple written on the other l. This end is to be opened as the

When hand packing and grading is ne carefully by all fruit growers of state there will be a considerably reased incentive for consumers to Minnesota apples.

Studying Bean Blight.

Visconsin is one of the first five tes in the Union in the production beans, having about 20,000 acres ually in this crop. At present all the three grades of navy beans, rrowfat, medium and pea are held unusually high quotations, $5.70 per hel being the average. This is the hest harvest-time prices in the mid- West for a number of years.

he Wisconsin crop this year was naged considerably by blight dis- es known as anthracnose. This ease attacks the leaves and pods of plant. A study of this blight is ng made by the Wisconsin Experi- nt Station and is hoped in time to e this state a disease-resistant va- ty which may be as successful as new Wisconsin cabbage.

he Strawberry Outlook.

o the Editor:—The berry patches uld receive good care the coming ter. The prospect for a crop of ries in 1917 is not remarkably ght. This is true because in large tions of country the weather was y unfavorable for plant making. It s too hot and too dry to root the ners. Also, September was so very that it was simply impossible to rt new beds at that time. as is en done in favorable years. But if you have an old plantation ich has borne a crop, or two or ee crops, you need not despair of owing a good home supply of ber- s next summer. To get the best re- ts there are two points to look after hinning and winter protection. It uld have been better if the thinning been done in July or August, but en yet it is not too late. There are ir times too many plants for a good ld of fruit. The problem is how to nove three and leave one, disturb- that one as little as possible. n small patches it may be done with toe, but in large patches it is better take a horse and cultivator, tearing ough hit or miss. For some rea- ns it is better to do this in the fall, en late, than to wait for spring. t if it is done very early in spring is far better than not to do it at all.

Another way is to go in with a two-horse stirring plow, turning down three-fourths of the plants and leaving narrow rows, say eight inches or a foot wide. The need for this thinning depends somewhat upon the variety, for, while some varieties set plants very closely, others are slow plant makers and do not thicken up for some years. Examine your beds and if you find that they are set closely—an inch or two apart—you must thin to get a profitable crop. If however, they are spaced five or six inches apart no thinning is needed in your case.

Winter protection must not be neglected if you would be sure of a crop. It is true that some seasons the winter conditions are all favorable, there may be just the right supply of moisture and snow may come early and continue late and this affords all the mulching which is required. But such winters are the exception, not the rule. It is wise to provide against the probable unfavorable season.

Mulch, by all means, and apply the mulch as soon as the ground is frozen. In case there is severe freezing and thawing while the ground is dry, earlier mulching is more necessary than when the ground is wet. A variety of materials may be used, depending upon which is the more convenient or cheaper. The point to guard is that you get as little weed seed as possible in your mulching. A half rotten hay stack bottom is the best material, or partly rotted wet straw. Marsh hay or clean, dry straw are good. Forest leaves will do if you can make them stay in place, not blowing off the first wind storm. Shredded corn fodder will answer the purpose, or whole cornstalks, but these are less desirable. Strawy litter from the horse stable will do it, but in this you are apt to get troublesome weeds started.

In using mulch bear in mind that the point aimed at is to keep the surface frozen. It is very possible to use more than needed, and that is harmful. And yet the writer has found by experience that it is better to use too much than not enough.

Subscriber.

Does It Pay to Feed a Dairy Cow?

To the Editor:—Mr. C. E. Erickson's grade Guernsey cow yielded the largest amount of butter fat of any cow in our association for the thirty-day period ending October 10, 1916. Her total production was 1,111 pounds and 578 pounds of butter fat. Mr. Alfred Brekke's herd of Holsteins and Henry Wogsland's herd of Guernseys averaged 32.3 pounds of butter fat per cow during the month. Mr. Brekke's herd produced the largest amount of milk. The average pounds of butter fat per cow for the entire association for this period was 20.9. What would this mean to the farmers that had the lowest averages if the cow ever obtained the average production that the above-named farmers had? Here is an example of what it would mean:

The cost of feed of the best herd was $20.10; value of product $52.59; profit $32.49. Number of cows, five. Cost of feed for the poorest herd was $18.70; value of product $45.90; profit, $27.20. For every dollar's worth of feed fed to the best five cows they returned $2.60, while the poorest cows only returned $2.40 for every dollar's worth of feed. Does it pay to feed a dairy cow? Think this over, you farmers that aren't in a cow-testing association.

The following is the record of cows in the Alban and New Hope Association which produced forty-five pounds of butter fat for the thirty-day period ending October 10, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
C. E. Ericksen Whiteface, G.G.	8	3-26-16	1111	5.2	57.8
Tom Olson Gr. Hol.	8	7-29-16	1350	3.4	45.9
Gunder Dobie Native	8	8-22-16	1185	3.9	46.2
Otto Halverson Beauty, N.	7	6-28-16	1155	4.6	53.1
Star, N.	12	5-19-16	1005	5.2	52.3

M. E. Smith, Official Tester.
M. J. Wrolstad, Secretary.

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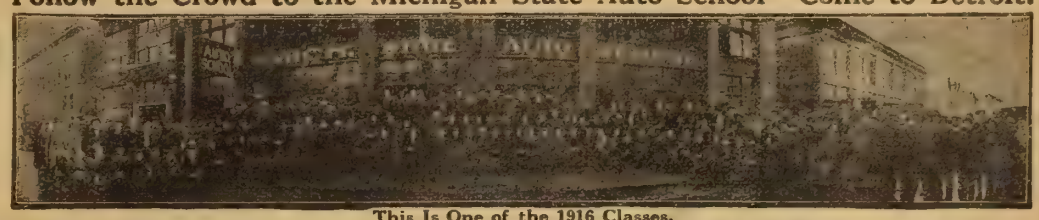

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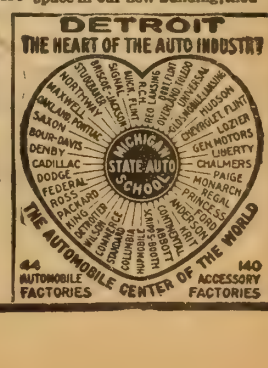

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PART III. "Prince Charlie"

CHAPTER VII—Continued.

"Married! That settles the romance," said Fred; "but he is interesting, anyway, and I am going immediately to find out what he has written and save up my money to buy copies."

"I may save you that expense in one instance," and Rachel handed her the book Stuart had sent her. Tillie looked at her in astonishment, and Fred seized it eagerly.

"Oh, but you are sly!" she said, with an accusing pout; "you've heard me puzzling about his work for days and never gave me a hint."

"I only guessed it was his, he never told me; but this morning I charged him with it, and he did not deny. I do not think there is any secret about it, only down at the Fort there were several ladies, I believe, and—and some of them curious—"

"You're right," laughed the Major; "they would have hounded him to death. Camp life is monotonous to most women, and a novelist, especially a young, handsome fellow, would have been a bonanza to them. As it was, they tried to spoil him; and look here!" he said suddenly, "see that you say nothing of his marriage to him, Babe. As he does not mention it himself it may be that the trouble, or—well, just remember not to broach the subject."

"Just as if I would!" said his daughter after he had left. "Papa never realizes that I have at all neared the age of discretion. But doesn't it seem strange to think of Mr. Stuart being married? He doesn't look a bit like it."

"Does that state of existence impress itself so indelibly on one's physical self?" laughed Rachel.

"It does—mostly," affirmed Fred. "They get settled down and prosy, or else—well, dissipated."

"Good gracious! Is that the effect we are supposed to have on the character of our lords and masters?" asked Mrs. Hardy unbelievingly.

"Fred's experience is confined to barrack life and its attendant evils. I don't think she makes allowance for the semi-artistic temper of the Stuart. He strikes me as having just enough of it to keep his heart always young, and his affections, too—on tap, as it were."

"What queer ideas you have about that man!" said Fred suddenly. "Don't you like him?"

"I would not dare say no with so many opposing me."

"Oh, you don't know Rachel. She is always attributing the highest of virtues or the worst of vices to the most unexpected people," said Tillie. "I don't believe she has any feeling in the question at all, except to get on the opposite side of the question from everyone else. If she would own up I'll wager she likes him as well as the rest of us."

"Do you, Rachel?" But her only answer was a laugh. "If you do, I can't see why you disparage him."

"I did not."

"Well, you said his affections were always on tap."

"That was because I envy him the exhaustless youth such a temperament gives one. Such people defy time and circumstances in a way we prosaic folks can never do. It is a gift imparted to an artist, to supply the lack of practical ingredients that are the prime ones to the rest of creation."

"How you talk! Why, Mr. Stuart is not an artist!"

"Isn't he? There are people who are artists though they never draw a line or mix a color; but don't you think we are devoting a great deal of time to this pill-peddler of literary leanings?"

"You are prejudiced," decided Fred. "Leanings, indeed! He has done more than lean in that direction—witness that book."

"I like to hear him tell a story, if he is in the humor," remarked Tillie, with a memory of the cozy autumn evenings. "We used to enjoy that so much before we ever guessed he was a story-teller by profession."

"Well, you must have had a nice sort of a time up here," concluded Fred; "a sort of Tom Moore episode. He would do all right for the poet-prince—or was it a king? But you—well, Rachel, you are not just one's idea of a Lalla."

"You slangy little mortal! Go and read your book."

Which she did obediently and thoroughly, to the author's discomfiture, as he was besieged with questions that taxed his memory and ingenuity pretty thoroughly at times.

He found himself on a much better footing with Rachel than during his first visit. It may have been that her old fancy regarding his mission up there was disappearing; the fancy itself had always been a rather intangible affair—a fabrication wrought by the shuttle of a woman's instinct. Or, having warned Genesee—she had felt it was a warning—there might have fallen from her shoulders some of the responsibility she had so gratuitously assumed. Whatever it was, she was meeting him on freer ground, and found the association one of pleasure.

"I think Miss Fred or your enlarged social circle has had a most excellent influence on your temper," he said to her one day after a ride from camp together, and a long, pleasant chat. "You are now more like the girl I used to think you might be—the girl you debarred me from knowing."

"But think what an amount of time you had for work in those days that are forfeited now to dancing attendance on us women folk!"

"I do not dance."

"Well, you ride, and you walk, and you sing, and tell stories, and manage at least to waste lots of time when you should be working."

"You have a great deal of impatience with anyone who is not a worker, haven't you?"

"Yes," she said, looking up at him. "I grow very impatient myself often from the same cause."

"You always seem to me to be very busy," he answered half vexedly; "too busy. You take on yourself responsibilities in all directions that do not belong to you; and you have such a way of doing as you please that no one about the place seems to realize how much of a general manager you are here, or how likely you are to overburden yourself."

"Nonsense!"

She spoke brusquely, but could not but feel the kindness in the penetration that had given her appreciation where the others, through habit, had grown to take her accomplisments as a matter of course. In the beginning they had taken them as a joke.

"Pardon me," he said finally. "I do not mean to be rude, but do you mind telling me if work is a necessity to you?"

"Certainly not. I have none of that sort of pride to contend with, I hope, and I have a little money—not much, but enough to live on; so, you see, I am provided for in a way."

"Then why do you always seem to be skirmishing around for work?" he asked, in a sort of impatience. "Women should be homemakers, not—"

"Not prospectors or adventurers," she finished up amiably. "But as I have excellent heath, average strength and understanding, I feel they should be put to use in some direction. I have not found the direction yet, and am a prospector meanwhile; but a contented, empty life is a contemptible thing to me. I think there is some work intended for us all in the world; and," she added, with one of those quick changes that kept folks from taking Rachel's most serious meanings seriously—"and I think it's playing it pretty low down on Providence to bluff him on an empty hand."

He laughed. "Do you expect, then, to live your life out here helping to manage other people's ranches and accumulating that sort of western

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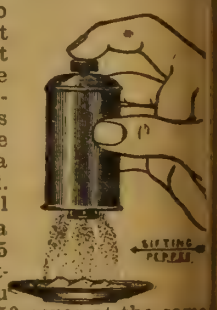

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logic in extenuation?" She did not answer for a little; then she said:

"I might do worse."

She said it so deliberately that he could not but feel some special thing was meant, and asked quickly:

"What?"

"Well, I might be given talents of benefit to people, and fritter them away for the people's pastime. The people would never know they had lost anything, or come so near a great gain; but I, to cheat, would know it. After the lights were turned out and the curtain down on the farce, I would realize it was too late to begin anew, but that the same lights and the same theater would have served as well for the truths of Christ as the pranks of Pantaloon—the choice lay only in the will of the worker."

Her eyes were turned away from him, as if she was seeking for metaphors in the white stretch of the snowfall. He reached over and laid his hand on hers.

"Rachel!"

It was the only time he had called her that, and the caress of the name gave voice to the touch of his fingers.

"Rachel! What is it you are talking about? Look around here! I want to see you! Do you mean that you think of—of me like that—tell me?"

If Miss Fred could have seen them at that moment it would have done her heart good, for they really looked rather loverlike; each was unconscious of it, though their faces did not lack feeling. She drew her hand slowly away, and said, in that halting, yet persistent, way in which she spoke when very earnest and yet not very sure of herself:

"You think me egotistical, I suppose, to criticise work that is beyond my own capabilities, but—it was you I meant."

"Well?"

His fingers closed over the arm of the chair instead of her hand. All his face was alight with feeling. Perhaps it was as well that her stubbornness kept her eyes from his; to most women they would not have been an aid to cool judgment.

"Well, there isn't anything more to say, is there?" she asked, smiling a little out at the snow. "It was the book that did it—made me feel like that about you; that your work is—well, surface work—skimmed over for pastime. But here and there are touches that show how much deeper and stronger the work you might produce if you were not either lazy or careless."

"You give one heroic treatment, and can be merciless. The story was written some time ago, and written under circumstances that—well, you see I do not sign my name to it, so I can't be very proud of it."

"Ah! that is it? Your judgment, I believe, is too good to be satisfied with it. I shouldn't waste breath speaking, if I was not sure of that. But you have the right to do work you can be proud of; and that is what you must do."

Rachel's way was such a decided way, that people generally accepted her "musts" as a matter of course, Stuart did the same, though evidently unused to the term; and her cool practicalities that were so surely noting his work, not himself, had the effect of checking that first impulse of his to touch her—to make her look at him. He felt more than ever that the girl was strange and changeable—not only in herself but in his influence. He arose and walked across the floor a couple of times, but came back and stood beside her.

"You think I am not ambitious enough; and you are right, I suppose. I have never yet made up my mind whether it was worth my while to write, or whether it might not be more wise to spare the public."

"But you have the desire—you must feel confidence at times."

"How do you know or imagine so much of what I feel?"

"I read it in that book," and she nodded toward the table. "In it you seem so often just on the point of saying or doing, through the people, things that would lift that piece of work into a strong moral lesson; but just when you reach that point you drop it undeveloped."

"You have read and measured it, haven't you?" and he sat down again beside her. "I never thought of—of what you mention in it. A high

(Continued on page 20.)

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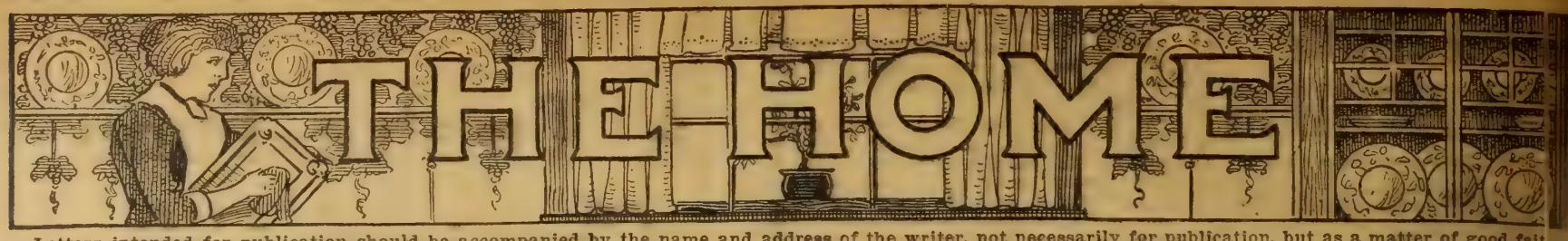

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All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

A Quick Method of Cleaning Silver Without Rubbing.

An easy and effective method of cleaning tarnished silverware by boiling in a soda and salt solution in contact with a clean piece of aluminum or zinc is recommended to housewives by the United States Department of Agriculture as a result of studies made by its specialists in home economics. The necessary procedure is so simple that it may be followed successfully in practically any home.

The cleaning system known as the electrolytic method has been well recognized for several years.

The tarnish which occurs on silver is not due to oxidation, but is dependent entirely upon the action of sulphur. In most cases the source of the sulphur causing tarnish is rubber, wool, foods like eggs and the sulphur in the air due to burning illuminating gas and coal. The electrolytic cleaning method depends on the facts that this tarnish of silver sulphide is slightly soluble in the hot solution employed, and that it is broken down chemically and its silver content redeposited on the ware when the proper electrical conditions prevail. The presence of both the silver and the aluminum or zinc in the hot solution provides the necessary electrical conditions. Under this method, therefore, practically all the silver in the tarnish is returned to the object being cleaned. When silver polishes are used, on the other hand, all the silver in combination in the tarnish is removed.

In the cleaning method recommended by the department the necessary materials are a graniteware cooking utensil deep enough to allow the silverware to be covered by the solution; a clean piece of aluminum or zinc, preferably the former; and baking or washing soda. The solution, consisting of a teaspoonful of baking or washing soda and a like amount of table salt to each quart of water, is brought to a boil in a graniteware or enameled utensil. A sheet of aluminum or clean zinc is dropped in. The tarnished silverware is then immersed in the solution so that it is in contact with the sheet of aluminum or zinc. The tarnish should disappear in a few seconds. The silver object should then be removed from the solution, rinsed and dried with a soft cloth.

Aluminum is much more satisfactory than zinc for use in this cleaning process, since it does not become coated with a layer of carbonates which would interfere with the chemical reaction. Zinc does form carbonates and, if used, must be cleaned frequently in dilute hydrochloric acid. A small sheet of aluminum may be purchased especially for silver cleaning purposes or a piece of an old aluminum utensil well cleaned may be used. Utensils which would later be used in cooking operations should never be employed in cleaning silverware by the electrolytic method. If very large pieces of silver are to be cleaned and a container is required larger than can be placed conveniently on the stove, the hot solution may be poured into such a vessel and the silver object then immersed. The method is most effective, however, when the solution boils during the cleaning process, and efficiency is rapidly lowered as the temperature of the solution falls below the boiling point.

The electrolytic method gives the cleaned silver a satiny finish after several cleanings. If a burnished surface is desired the silver must from time to time be polished lightly with some abrasive polishing material such as powdered whiting. The study made by the department specialists included a comparison of the amount of silver lost when the whole tarnish was removed by polishing and when the electrolytic method was used. It was found that when whiting paste was used as an abrasive spoons lost nearly 0.01 of a gram of silver each, approximately twenty-five times as much as when the "handmade" electrolytic method was employed.

Art in the Home.

Art in the home means refinement in the home. Art in the home means the application of art principles to our everyday life. The modern conception of the application of art to practical life is based on the conception of serviceability plus attractiveness. I take it that the home is the place in which both adults and children find a haven. A true home must meet not only our physical needs but also our social and aesthetic ones. The question then is, what can the application of art principles do for us toward a well-rounded everyday life.

The home should be a restful place. Not forgetting the work end of the house, we must also remember that a house should prove a boon to tired nerves. The restful air which many houses possess is due partly, at least, to the elimination of discordant elements. Just as we plan out the arrangement of the rooms in regard to their size and location, so we must plan out the color scheme of our house, taking account of each room as regards the amount of light it receives, the purpose of the room and the furniture which must go into it.

Color harmony (that is, sameness of color effect) is extremely essential in producing the restfulness in appearance for which we are striving. Especially we should be careful to cover the large areas, such as the walls, the floors and ceilings, with tones that we are certain will give us the effect we desire. If we are uninstructed in the use of color and must depend on our own judgment, the safest thing for us to do is to keep to tones for the large areas which are very much alike in color, although they may vary a good deal in regard to light and dark. For instance, a brown wall with a darker brown rug and a cream or light brown ceiling would probably prove a harmonious and restful combination, especially for the north side of the house (the side receiving the coolest light, in the artist's parlance). The stronger the color that we use the more careful we must be of the combinations into which we place it. This does not mean at all that fairly strong colors cannot be used in our homes, but their use presents greater difficulties and we are more sure of harmonious results if we select colors, especially for the large areas, which have been weakened or neutralized by the addition of gray. Cheerfulness in the room can easily be attained through touches of brighter colors in the smaller things, as cushions, flowers, vases, etc.

We should be careful not to overcrowd the house with too many things. Most of us need a good-sized closet in which to keep the various souvenirs of travels, the various odds and ends which friends may have bestowed upon us, and the many vases and other objects which naturally collect in the course of a number of years of housekeeping. The associative value of an object rightly endears it to us and a part of the individuality of the home depends upon such associations, but it is not necessary that we should keep all or even half of our possessions in constant view.

A few vases, attractive in color and extremely simple in form, but well-proportioned, help the living room, but most of us have too many of them that do not justify their existence. Why give a place in the room to objects that, week after week, have to be dusted when they are neither attractive nor useful? Let us put these things in the closet where they belong, from which storeroom they can be brought out as the occasion demands. When selecting a vase in which to put flowers, an extremely simple one of a color subordinate to and harmonious with the flowers should be chosen.

The same that has been said about vases can well apply to the other objects that are usually found in the living room. I speak particularly of the living room because I am assuming that the space in the workrooms will be occupied by objects necessary for service. I am also assuming that the bedrooms will be extremely simply furnished. Even the dining room is less apt to have unserviceable furnishings than is the living room; so it is all the more necessary that in the living room, where so many interests collect, where we shall find, probably, musical instruments, the books and magazines of the various members of the family, that we should be careful to keep the essential things as simple and effective as possible and of quiet and harmonious colors. The lamp, the easy chairs, all contribute their part toward the effects of the whole. A few plants often add much to the attractiveness of a room. One of the charms of the home is the note of personality pervading it, and the homemaker who will take the time to plan can make that personality all the more effective through the application of the principles of serviceability and attractiveness, expressed in terms of simplicity and appropriateness. Let us not forget that this can be carried out in a home already established, even if the task seems hopeless. Simply by rearranging the furniture already owned, putting the lighter colored furniture into one room and the darker into another, the homemaker has often greatly improved the attractiveness of her house. Then, when the pieces of furniture which suit the convenience, but not the color scheme of their respective rooms, have been treated to a good rubbing down with sandpaper or paint remover, stained the desired tone, and waxed, and discordant curtains or rugs subdued by the dye pot, the transformation is marked and unity begins to emerge from chaos, and "that tired feeling" to be replaced by the joy of living.

In her attempts to create the right atmosphere in the home the homemaker will find a silent, but a very powerful, ally in the pictures she places upon the walls. A home may well have a collection of pictures, just as it has books, for reference and study. Children should be encouraged to collect pictures of the wonders of nature, of brave deeds or of fine achievements in the way of splendid buildings, and be encouraged to look at them just the same as they read good books. The pictures on our walls may rightly appeal to us for a variety of reasons and we have a perfect right to select those meaning most to ourselves, but a picture which is constantly before us should be one that is not only interesting in subject but one that also has been carried out well. There is a wide range of pictures, from the pictures of stately, dignified buildings with their suggestions of power and grandeur or the beautiful renditions of nature, to the intimate pictures of home life, from which to choose. If one feels incompetent to judge of the artistic worth of the picture, the safest plan is to buy the standard things, just as in literature.

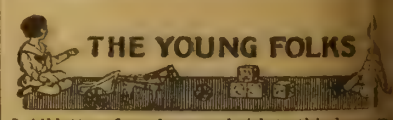
The home, the school, the church, could greatly increase their power and influence for good by placing suitable pictures upon their walls. I believe there is another source for good pictures than the ones so far suggested, and that is in enlargements of the amateur photograph. Almost every locality has some beauty places—some spots where hill, stream or trees and sky meet in picturesque union, which, if photographed, even by a kodak, when the effect of light is such as to accentuate the important elemen the scene, could be enlarged into effective pictures. The task o photographer shows itself here i lecting effects composed of larg simple masses of contrast. These tographs of the environment, if ly done, can help carry out one most important functions of namely, to help us visualize h life in terms of the ideal, in ter beauty! And the chances are t one that the home life carried on environment controlled by ideas der, refinement and true beauty itself reflect these qualities and grew stronger in the right kin vigor and serviceableness.—[Jo Ankeney, University of Missouri

To Keep Cider Sweet.

To keep apple cider sweet fill jars with fresh cider and add a spoonful of sugar to each quart. rubber and cap in position and tially tighten. Sterilize in hot bath outfit for ten minutes; i water-seal outfit for eight minute the steam-pressure outfit, under pounds of steam, for four minute the aluminum pressure cooker two minutes. Remove the tighten the covers, invert to coo test for leakage. Apple cider c in this way will keep perfectly.

Lice on House Plants.

To the Editor:—I am a read your paper and find many good in it. Therefore, I am coming w question of my own. Can any readers tell me what to do when plants have lice? I have used remedies, but none seem to Please help me if you can. —R



All letters from boys and girls to this depa should be sent to office of The Wisconsin F Madison, Wisconsin.

The Daisy's First Winter.

One little girl who reads the Y Folks' page has sent us a poem o own which she calls "The D First Winter." She says that doesn't suppose we will print Laura—that's her name—is goi be surprised when she opens the this week. We are glad to Laura's little poem and suggest other girls and boys who like to send us original stories and poem our column. We are sure all young folks would enjoy them. is Laura's poem:

Somewhere in a meadow on this earth grew
A dear, bright little daisy, I think all knew.
The bobolinks, blackbirds sang, and whistled,
And near by the ground was very thistled.

Now this little daisy knew not about winter,
For this was her first year of real enter.
Her white petals dropped one after other
But another one grew, so she did bother.
She was always happy and content

"How favored I am," said the white daisy,
"I never stop blooming and I neve lazy."
"But you must remember," said a rough burdock,
"That winter is coming." And it her a shock.
"I never grow again on this old spot?"

Good Record at School.

Dear Young Folks:—I love to the Young Folks' page. I am a eight years old and I go to sc every day. I was never absent tardy. I have a mile to go. We

miles from town and three miles hurch. I love to go to Sunday I have three little pigs two old and I feed them every nd morning. —William.

tional Sunday School Lesson.

O. SELLERS, Acting Director f Sunday School Course.)

From Melita to Rome.

sson for November 19, 1916.

ON TEXT—Acts 28:11-31.

EN TEXT—I am not ashamed gospel; for it is the power of o salvation to everyone that be—Rom. 1:16.

is lesson we see somewhat of man side of Paul's character. n appreciated fellowship more Look up Acts 17:15; 18:5; I ; I Tress. 3:1, 2; II Tim. 4:21.

e Sea Journey (vv. 11-14). Paul lita (Malta) probably February, 60. From there to Syracuse distance between eighty and es. From the island of Syra- ow a part of Italy) to Rhegium day's sail. From Rhegium to was 180 miles. Puteoli (mod- zuoli) is in the Bay of Naples, miles from the modern city of Paul and his band who had much for the Maltese were y honored with many honors.

ese verses we have a picture of eking out his brethren wherever nt, thanking God and taking as they came to meet with d converse with him. It is a upon which we ought to ponder and be grateful that it reveals side of Paul little known and ated.

e Land Journey (vv. 14, 15). oll, Paul and his companions heir march of 140 miles to the Rome. After a march of sixty ey reached the famous Appii i. e., "The market of Appius." aul is met by the first dele- from the church at Rome, who aiting to welcome him and nd escort them to the capital second delegation met them at ree Taverns, or "The Three as we would call stores in the sense. These Christians had no small cost, as they had to ty-six miles to the Appii Forum ty-three to the Three Taverns, n walk the same distance back ity. Thus it was that the sight friends cheered Paul and he God. We can well imagine of those souls, the communion by those pilgrims as they jour- oward the imperial city. n see in the letters which Paul rom Rome plain signs of his for sympathetic friends and can how he must have felt upon us greeted on his journey. We o imagine something of the and inspiration which must me to those Christians who met nous soldier of the cross and privilege of escorting him to

In Rome (vv. 16-29). Having into the city the centurion Ju- o had become a friend of Paul, d the prisoners to the captain uard. This officer we are told iberal-minded man, one of the d people in the corrupt life of Paul was probably first taken orum, which was the center of power and magnificence and ich was the "house of Caesar." :22.) Paul was not sent to for it was against the law to Roman into prison without a ut he was permitted to dwell self in "his own hired house." se, there was a soldier who him. This was the city where d so long desired to preach the (Rom. 1:14-16.) As in other he first turned to the Jews, for his own people no matter how e had suffered at their hands. them together that he might preach unto them Jesus and sought to conciliate them.

In Paul's preaching he always emphasized that a Messiah was risen from the dead as a guaranty of all other resurrections. In his day, as in this present one, there were those who spoke against this, and yet that resurrection was to conquer the world and to save it from moral ruin. Those present had had no word out of Judea. (v. 21). At a later and a public meeting (v. 23) there came unto him, that is, into his lodgings, great numbers to whom Paul sounded the Gospel of the kingdom and gave his personal testimony. He proved out of the law of Moses and out of the prophets, common ground for them all, that the Messiah had truly come, the prophecies of the kingdom of God had been fulfilled, and that Jesus by his life and death and teaching had shown the Jews how perfectly the latter were fulfilled. This Paul did from morning till evening, following the same line as in his speech before Agrippa and in other places where he had been testifying. All of his explanations and testimonials centered in Jesus. It was no abstract mental theory for an improved order of society, but a definite reign of a definite person, Jesus of Nazareth. Paul is a great example for any Bible student to follow.

As on so many other occasions, Paul's preaching caused a division (v. 26).

And again he turns to the Gentiles (v. 28).

Paul told them plainly what lay at the root of their unbelief (v. 27), and though they refused the salvation it was none the less of God.

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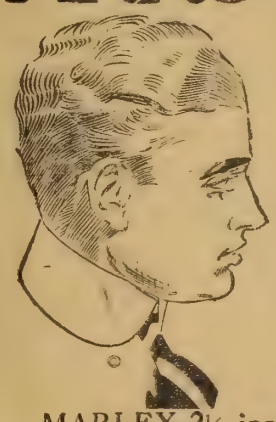

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Told in the Hills.

(Continued from page 17.)

moral lesson," he repeated; "but to preach those a man should feel himself fit; I am not."

"I don't believe you!"

"What do you know about it?" he demanded so sharply that she smiled; it was so unlike him. But the sharpness was evidently not irritation, for his face had in it more of sadness than any other feeling; she saw it, and did not speak.

After a little he turned to her with that rare impetuosity that was so expressive.

"You are very helpful to me in what you have said: I think you are that to everyone—it seems so. Perhaps you are without work of your own in the world, that you may have thought for others who need help; that is the higest of duties, and it needs strong, good hearts. But do you understand that it is as hard sometimes to be thought too highly of as to be accused wrongfully? It makes one feel such a cheat—such a cursed liar!"

"I rather think we are all cheats, more or less, in that respect," she answered. "I am quite sure the inner workings of my most sacred thought could not be advertised without causing my exile from the bosom of my family; yet I refuse to think myself more wicked than the rest of humanity."

"Don't jest."

"Really, I am not jesting," she answered. "And I believe you are oversensitive as to your own shortcomings, whatever they happen to be. Because I have faith in your ability to do strong work, don't think I am going to skirmish around for a pedestal, or think I've found a piece of perfection in human nature, because they're not to be found, my friend."

"How old are you?" he asked her suddenly.

She laughed, feeling so clearly the tenor of his thought.

"Twenty-two by my birthdays, but old enough to know that the strongest workers in the world have not been always the most immaculate. What matter the sort of person one has been, or the life one has lived if he comes out of it with knowledge and the wish to use it well? You have a certain power that is yours, to use for good or bad, and from a fancy that you should not teach or preach, you let it go to waste. Don't magnify peccadillos!"

"You seem to take for granted the fact that all my acts have been trifling—that only the promises are worthy," he said impatiently.

"I do believe," she answered, smiling brightly, "that you would rather I thought you an altogether wicked person than an average trifler. But I will not—I do not believe it possible for you deliberately to do any wicked thing; you have too tender a heart, and—"

"You don't know anything about it!" he repeated vehemently. "What difference whether an act is deliberate or careless, so long as the effect is evil? I tell you the greater part of the suffering in the world is caused not by wicked intents and hard hearts, but by the careless desire to shirk unpleasant facts, and the soft-heartedness that will assuage momentary pain at the price of making a lifelong cripple, either mentally, morally or physically. Nine times out of ten the man whom we call soft-hearted is only a moral coward. Ah, don't help me to think of that; I think of it enough—enough!"

He brought his clenched hand down on the arm of the chair with an emphasis that was heightened by the knitted brow and compressed lips. He did not look at her. The latter part of the rapid speech seemed more to himself than to her. At least it admitted of no answer; the manner as much as the words kept her silent.

"Come! come!" he added, after a little, as if to arouse himself as well as her. "You began by giving me some good words of advice and suggestion; I must not repay you by dropping into the blues. For a long time I've been a piece of drift-wood, with nothing to anchor ambition to; but a change is coming, I think, and—and if it brings me fair weather, I may have something then to work for; then I may be worth your belief in me—I am not now. My intentions to be so are all right, but they are not always to be trusted. I said, before, that you had the faculty of making people speak the truth to you, if they spoke at all, and I rather think I am proving my words."

He arose and stood looking down at her. Since he had found so many words, she had seemed to lose hers; anyway, she was silent.

"It can't be very pleasant for you," he said at last, "to be bored by the affairs of every renegade to whom you are kind, because of some fancied good you may see in him; but you are turning out just the sort of woman I used to fancy you might be—and—I am grateful to you."

"That's all right," she answered in the old brusque way. To tell the truth, a part of his speech was scarcely heard. Something in the whole affair—the confidence and personal interest, and all—had taken her memory back to the days of that cultus corrie, when another man had shared with her scenes somewhat similar to this. Was there a sort of fate that had set her apart for this sort of thing? She smiled a little grimly at the fancy, and scarcely heard him. He saw the ghost of a smile, and it made him check himself in what he was about to say, and walk toward the door.

She neither spoke nor moved; her face was still toward the window. Turning to look at her, his indecision disappeared, and in three steps he was beside her.

"Rachel, I want to speak to you of something else," he said rapidly, almost eagerly, as if anxious to have it done with; "I—I want to tell you what that anchor is I've been looking for, and without which I never will be able to do the higher class of work, and—and—"

"Yes?"

He had stopped, making a rather awkward pause after his eager beginning. With the one encouraging word, she looked up at him and waited.

"It is a woman."

"Not an unusual anchor for mankind," she remarked with a little laugh.

But there was no answering smile in his eyes; they were very serious.

"I never will be much good to myself, or the rest of the world, until I find her again," he said, "though no one's words are likely to help me more than yours. You would make one ambitious if he dared be and—"

"Never mind about that," she said kindly. "I am glad if it has happened so. And this girl—it is someone you—love?"

"I can't talk to anyone of her—yet," he answered, avoiding her eyes; "only I wanted you to understand—it is at least a little step toward that level where you fancy I may belong. Don't speak of it again; I can hardly say what impelled me to tell you now. Yes, it is a woman I cared for, and who was—lost—whom I lost—long ago."

A moment later she was alone, and could hear his step in the outer room, then on the porch. Fred called after him, but he made no halt—did not even answer, much to the surprise of that young lady and Miss Margaret.

The other girl sat watching him until he disappeared in the stables, and a little later saw him emerge and ride at no slow gait out over the trail toward camp.

"It only needed the finale," she soliloquized, "to complete the picture "Woman! woman! What a disturbing element you are in the universe—man's universe!"

After this bit of trite philosophy, the smile developed into a noiseless laugh that had something of irony in it.

"I rather think Talapa's entrance was more dramatic," was one of the reflections that kept her company; "anyway, she was more picturesque, if less elegant, that Mrs. Stuart is likely to be. Mrs. Stuart! By the way, I wonder if it is Mrs. Stuart? Yes, I suppose so—yet, 'a woman whom I cared for, and who was lost—long ago!'—Lost? Lost?"

CHAPTER VIII.
"I'll Kill Him This Time."

RUMORS were beginning to drift into camp of hostile intents of the Blackfeet; and a general feeling of uneasiness became apparent as no word came from the chief of their scouts, who had not shown up since locating the troops.

The Major's interest was decidedly alive in regard to him, since not a messenger entered camp from any direction who was not questioned on the subject. But from none of them came any word of Genesee.

Other scouts were there—good men, too, and in the southern country of much value; but the Kootenai corner of the state was almost an unknown region to them. They were all right to work under orders, but in those hills, where everything was in favor of the native, a man was needed who knew every gully and every point of vantage, as well as the probable hostile.

While Major Dreyer fretted and fumed over the absentee, there was more than one of the men in camp to remember that their chief scout was said to be a squaw man; and a[mong] of them shared his own expresse[d] of that class, conjectures we[re] afloat as to the probability of [his] coming back at all, or if it came [to] question of fighting with the no[rth] Indians, whether he might [be] found on the other side.

"You can't bet any money [on] squaw man," was the decision [of] of the scouts from over in Idah[o], who did not happen to be a [half] man himself, because the wife [of] nearest neighbor at home ob[jected] "No, gentlemen, they're a risk [to] This one is a good man; I allo[w] —a very good man, I may say, [no] fighter from away back; but th[ere] we have to consider is that [his] w y he's with his own people, [as] may say, having taken a squa[w] and been adopted into the tribe [as] tell you, sirs, it's jest as reas[on] that he will go with them as [against] them—I'm a tellin' you!"

Few of these rumors were he[ard] the ranch. It was an understood[ing] among the men that the young [lady] at Hardy's were to hear noth[ing] camp affairs that was likely to [cause] alarm; but Stuart heard them, [as] the rest of the men; and like [them] he tried to question the only [man] camp who shared suspicion—K[alitan] But Kalitan was unapproacha[ble] English, and even in Chinook [would] condescend no information. He [had] less had none to give, but the [impres]sion of suppressed knowledge [that] managed to convey made him [the] ject of close attention, and [any] tempt to leave camp would hav[e] hailed as proof positive of [many] tangible suspicions. He made [no] attempt. On the contrary, aft[er] arrival there from the Gros V[entre] he seemed blissfully content [to] all winter on government ration[s] do nothing. But he was not bli[nd] any means and understanding E[nglish] though he would not speak [it]; chances were that he knew [more] the thought of the camp th[an] guessed of his; and his stubb[orn] sentment showed itself when [three] Kootenai braves slouched into [camp] one day, and Kalitan was not [allowed] to speak to them save in the pr[esence] of an interpreter, and when [one] fered in the person of a white [scout] Kalitan looked at him with [utter] able disdain, and turning his ba[ck] not a word.

The Major was not at camp. [He] just left to pay his daily [visit] Hardy's; for. despite all persu[asion] he refused to live anywhere b[ut] his men, and if Fred did not [come]

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ee him in the morning, he was in luty bound to ride over to her quarers in the afternoon.

The officer in command during his bsence was a Captain Holt, a man who had no use for an Indian in any apacity, and whose only idea of setling the vexed question of their rights vas by total extermination and graveoom—an opinion that is expressed by nany a white man who has had to leal with them. But he was divided etween his impulse to send the trio n a double-quick about their business nd the doubt as to what effect it would have on the tribe if they were ent back to it in the sulks. Ordinarly he would not have given their state f mind a moment's consideration; but he situation was not exactly ordiary, and he hesitated.

After stowing away enough provender in their stomachs to last an ordiary individual two days, and stowing he remainder in convenient receptacles about their draperies, intercourse was resumed with their white osts by the suggestive Kalitan.

Just then Stuart and Rachel rode nto camp. They had taken to riding ogether into camp, and out of camp, nd in a good many directions of late; nd in the coffee-colored trio she at once recognized the brave of the bear laws whom she had spoken with durng that "olallie" season in the western hills, and who she had learned since was a great friend of Genesee's. She spoke to him at once—a great deal more intelligibly than her first attempt —and upon questioning, learned that she was well remembered. She heard herself called "the squaw who rides" by him, probably from the fact that she was the only white woman met by their hunters in the hills, though she had not imagined herself so well known by them as his words implied.

He of the bear claws—their spokesman—mentioned Kalitan, giving her for the first time an idea of what had occurred. She turned at once to Captain Holt—not protesting, but interested—and learned all she wanted to.

"Kalitan does not like your southern scouts, for some reason," she said, "and I rather think it was his dignity rather than his loyalty that would suffer from having one of them a listener. Let them speak in my presence; I can understand them, and not arouse Kalitan's pride, either."

The Captain, nothing loath, accepted her guidance out of the dilemma, though it was only by a good deal of flattery on her part that Kalitan could at all forget his anger enough to speak to anyone.

The conversation was, after all, commonplace enough, as it was mostly a recital of his—Kalitan's—glories; for in the eyes of these provincials he posed as a warrior of travel and accumulated knowledge. The impassive faces of his listeners gave no sign as to whether they took him at his own valuation or not. Rachel now and then added a word, to keep from having too entirely the appearance of a listener, and she asked about Genesee.

The answer gave her to understand that weeks ago—five weeks—Genesee had been in their village; asked for a runner to go south to the Fort with talking paper. Had bought pack horse and provisions and started alone to the northeast—may be Blackfoot Agency, they could not say; had seen him no more. Kalitan made some rapid estimate of probabilities that found voice in—

"Blackfoot—one hundred and twenty miles; go slow—Mowitza tired; long wau-wau (talk); come slow—snows high; come soon now, may be."

That was really the only bit of information in the entire "wau-wau" that was of interest to the camp—information that Kalitan would have disdained to satisfy them with willingly; and even to Rachel, whom he knew was Genesee's friend, and his, he did not hint the distrust that had grown among the troops through that suspicious absence.

He would talk long and boastfully of his own affairs, but it was a habit that contrasted strangely with the stubborn silence by which he guarded the affairs of others.

"What is the matter back there?" asked Rachel, as she and Stuart started back to the ranch. "Ill-feeling?"

"Oh, I guess not much," he answered; "only they are growing careful of the Indians of late—afraid of them imposing on good nature, I suppose."

"A little good nature in Captain Holt would do him no harm with the Indians," she rejoined; "and he should know better than to treat Kalitan in that suspicious way. Major Dreyer would not do it, I feel sure, and Genesee won't like it."

"Will that matter much to the company or the command?"

He spoke thus only to arouse that combative spirit of hers; but she did not retort as usual—only said quietly:

"Yes, I think it would—they will find no man like him."

They never again referred to that conversation that had been in a way a confession on his part—the question of the woman at least was never renewed, though he told her much of vague plans that he hoped to develop "when the time comes."

Three days after the visit of Bearclaws and his brethren, Stuart and Rachel were again at the camp; this time accompanying Fred, who thought it was a good enough day to go and see the "boys."

Surely it was a good enough day for any use—clear and fresh overhead, white and sparkling underfoot, and just cold enough to make them think with desire of the cheery wood fires in the camp they were making for. From above, a certain exhilaration was borne to them on the air, sifted through the cedars of the guardian hills; even the horses seemed enthused with the spirit of it, and joyously entered into a sort of a go-as-you please race that brought them all laughing and breathless down the length of "the avenue," a strip of beaten path about twenty feet wide, along which the tents were pitched in two rows facing each other—and not very imposing looking rows, either.

There were greetings and calls right and left, as they went helter-skelter down the line; but there was no check of speed until they stopped, short, at the Major's domicile, that was only a little more distinguished on the outside than the rest, by having the colors whipping themselves into shreds from the flagstaff at the door.

It was too cold for ceremony; and throwing the bridles to an orderly, they made a dash for the door—Miss Fred leading.

"Engaged, is he?" she said goodhumoredly to the man who stepped in her path. "I don't care if he is married. I don't intend to freeze on the place where his door step ought to be. You tell him so."

The man on duty touched his cap and disappeared, and from the sound of the Major's laughter within, must have repeated the message verbatim, and a moment later returned.

(To be continued.)

Ask your neighbor to subscribe for The Wisconsin Farmer.

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One Wisconsin Farmer seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: "**The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available—under which your advertisement would appear.

Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER — **MADISON, WISCONSIN**

FARM LANDS.

LOW-PRICED LANDS on easy terms. None to speculators. Aitkin county. Ideal dairying conditions in soil, climate, water, grasses. Busy creameries on every hand. Get our literature. Read. Investigate. Arnold, Land Agent, Rock Island Ry., 153 Wolvin Bldg., Duluth, Minn.

FINE LAKE SHORE farm of 40 acres, house, barn, poultry house, good well, some fruit trees, overlooking beautiful lake, stocked with all kinds of fish; good clay loam soil and land mostly open; for sale by owner. Price $4,500; easy terms. A. B. Wesner, Centuria, Wisconsin.

FOR Sale—Eighty acres good clay loam land, partially improved, in an excellent location, basswood, maple, birch and oak timber. $25 per acre. $200 cash, long time on balance. Write K. E. Russell, La Crosse, Wis.

WISCONSIN farm consisting of 287 acres, having good buildings, situated seven miles from good market. For information, write to Morris Johnson, Osseo, Wisconsin.

240 ACRES land one mile from Niagara, Marinette county. Hardwood land. Will sell or exchange for Holstein cattle. C. T. Ellis, Madison, Wisconsin.

CALVES—BOTH SEXES.

HOLSTEIN, Short-horn and Guernsey calves, either sex. A few exceptionally fine ones, $12.50 to $35, shipped by express at little cost. For information, write Ed Howey Co., South St. Paul, Minn.

LEGHORNS.

SINGLE COMB White Leghorn cockerels for sale at $1.00 each. Oscar Berg, Edgar, Wis.

HONEY.

HONEY. Pure, extracted, white clover, from my apiaries. Guaranteed first-class. 2 60-lb. cans, $12.60; 1 60-lb. can, $6.60; 6 10-lb. pails, $7.20; 6 5-lb. pails, $3.75. Write M. E. Eggers, Station G, R. 1, Eau Claire, Wisconsin.

POLAND CHINA SWINE.

BIG Polands. Good, growthy spring boars at reasonable prices. Harold Schmeider, Oregon, Wisconsin. Phone 9616.

TELEGRAPHY.

LEARN TELEGRAPHY. Short hours. Positions guaranteed. Write Signal Dept., Northwestern Telegraph School, Eau Claire, Wis.

GUERNSEY CATTLE.

REGISTERED Guernsey bull calves for sale. Also few heifer calves, Fred C. Hansen, Tigerton, Wisconsin.

TWELVE Guernsey grade heifers, cheap for quick sale. G. D. Fellows, Algoma, Wis.

WYANDOTTES.

BUTTERCUP and White Wyandotte cockerels, prices reasonable. Mrs. Marcus Hanson, Cashton, Wisconsin.

DUCKS.

FAWN AND WHITE and Penciled Runners young and old winners. Roland Benedict, Bristol, Wisconsin.

FREE

THIS WONDERFUL LAND BOOK

CONTAINING intensely interesting facts and pictures about that remarkable section of mild climate and perpetual growth:

The Highlands of Louisiana

Every farmer in America interested in good land and *greater* opportunity should have this new *Free Book.* Tells all about climate, soil, crops and health, what is being accomplished there, why the present remarkably low price of the land is possible, with Small Down Payment, Easy Terms. With Map of Louisiana.

Its a wonderful book, profusely illustrated, and it is absolutely FREE. Nor will there be the slightest obligation in sending for it. Simply write your name and address on a postal and send it to

Long-Bell FARMLAND CORPORATION L B

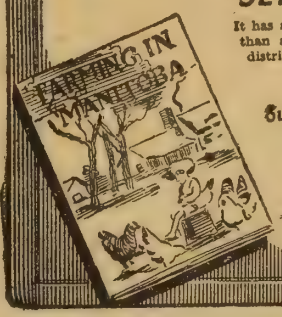
416 R. A. Long Bldg., Kansas City, Mo.

HAVE YOU AN OLD NEIGHBOUR FARMING IN MANITOBA

Perhaps you will find a letter from him in the attractive little book, "FARMING IN MANITOBA," published by the Provincial Government of Manitoba. Or, even if you have no old neighbour who is making good in the Banner Province of the Canadian West, you will find that booklet of vast, practical interest to you. IT HAS A MESSAGE FOR YOU in a collection of plain, unvarnished letters from successful farmers in Manitoba, who came from the States and different parts of the world to the country where land is cheap as well as good. Grain Growing, Stock Raising, Mixed Farming—they all yield a bigger profit in Manitoba than where you now reside.

SEND FOR THIS FREE BOOKLET

It has a message also for your wife. Manitoba has MORE to offer you than any other part of the world. We are not selling lands—but distributing information only.



ADDRESS YOUR ENQUIRIES TO

Superintendent of Immigration and Colonization

Room C

439 MAIN STREET

WINNIPEG, MANITOBA

FARM IN FLORIDA!

THIRTY acres, houses, barns, stock, machinery. The land, the climate, the bargain! Are you the buyer? Fishing, hunting, oranges, health—yours at a sacrifice. A M. Chase, Marshfield, Wisconsin.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

SEND FOR

FREE FOLDER

About Fertile Farm Land in

UPPER WISCONSIN

This booklet will tell you about farm lands along the lines of the **Chicago, St. Paul, Minneapolis & Omaha Ry.** within a few hours of the wonderful markets of St. Paul, Minneapolis, Duluth, Milwaukee and Chicago, which are offered at low prices and on easy terms. It contains information of value to settlers looking for a location in a community offering an ideal climate, nearby markets and excellent educational facilities. The work is comprehensive and is profusely illustrated. Mailed free upon request. **Ask for Booklet No. 32-I.**

G. H. MacRAE; General Passenger Agent
C. St. P. M. & O. Ry., ST. PAUL, MINN.

DO NOT RENT LAND

YOU can buy land outright in eastern Oklahoma for what one or two years' rental would cost in an old well settled country. If you have the energy to clear virgin land and settle on it, you can have a farm of your own in a well settled state. The one and three-quarter million prosperous people in the state made a garden of a wilderness and there is room for another million. Write for a copy of "Current Events" and other information to Immigration Bureau, K. C. S. Ry., 506 K. C. S. Bldg., Kansas City, Mo.

RICH RUSK COUNTY LANDS, owners direct, on easy terms. Ideal dairy creamery country. Write FLAMBEAU RIVER LUMBER COMPANY, Station D, Ladysmith, Wisconsin.

Baby Beef in Wisconsin.

(Continued from page 6.)

pounds and 5,401 pounds, making a gain of 411 pounds for one and 443 pounds for the other.

I am a farmer boy thirteen years old and this is my first exhibit of any kind at a fair and the best thing I learned

MACK H. McCLARY, MUSCODA, WIS.

was that the kinder one is to his calves the better they will do.

Mack H. McClary.

Richland Co., Wisconsin.

OUR LEGAL DEPARTMENT

THIS department is edited by a practicing lawyer, who has had years of experience at the bar. He will give accurate and reliable answers to all legal questions when they are of sufficient importance to be of practical interest to any considerable number of our readers. Subscribers who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delaying printed answers, those to whom it is important to receive an immediate reply by mail should remit $1.00, addressed as above.

Law Questions.

Settlement of Estate.

A South Dakota Subscriber.—My uncle is administrator of my aunt's estate in South Dakota. The estate consists of 296 acres of good land and some personal property. Six months have passed since my uncle was appointed administrator, and he has not yet settled the estate, which is to be divided among fifteen heirs. Can he be forced to settle the estate and what steps are necessary to compel him to do it?

Answer.—An estate in South Dakota cannot be settled by an administrator in less than one year. If an administrator fails to make an accounting of his administration at the end of one year after his appointment the court will compel him to do so. Any heir or other person interested in the estate can apply to the court for an order directing the administrator to present a full account of his proceedings.

Transporting Children to School.

Mr. E. C. Bremer, Forsyth, Mont.—In a certain school district in Montana the school board uses a wagon to transport children to and from school. The school board has changed the route of this wagon and taken it off of one of the main roads in the district, so that children living on said road have to travel a mile to get on the wagon. (1) Had the school board a right to do this? (2) Can the parents of the children recover damages on account of the wagon being taken off the road?

Answer.—(1) The transportation of children to and from school in Montana is under the control of the school boards of the various districts, hence the school board in the case mentioned had a right to change the route of the wagon and take it off one of the main roads in the district. (2) They cannot recover damages.

Husband and Wife—Custody of Child.

A Subscriber, Glencoe, Minn.—A and B are husband and wife and have a son three months old. B left her husband and he forcibly retained the custody and care of the child. The child was born in another state while the mother was visiting her parents. The child is not nursing, but being fed from the bottle. A is of good moral character and is abundantly able and willing to give the child proper care and his mother assists him to do so. Can the child's mother or her parents take the child away from its father by law?

Answer.—A father is by law the natural guardian of his own child and entitled to the care and custody thereof, and in this case the father being of good character and able and willing to care for and support his child, the mother and her parents cannot take the child by law away from its father.

Will of Single Person—Marriage.

A Subscriber, Ostrander, Minn.—If a single man or woman in either Missouri or Colorado, makes a will and afterwards marries, will such will stand good in law when the maker dies?

Answer.—Under such circumstances the will would not stand good in either Missouri or Colorado. When the man would die leaving a widow she would get the portion of his estate allowed her by law, notwithstanding such will.

Miller-Willford Angus Sale.

The joint sale of registered Aberdeen Angus cattle made by R. C. Miller and M. C. Willford at Canton, Minn., November 9th, was a success. The class of cattle sold justified higher average and many of the buyers took advantage of the prevailing prices. Some of the best cows ever included in a Minnesota auction were sold at prices below their value. C. L. Long, T. A. Taylor, L. Gruber and C. J. Bjorklund were good bidders and buyers and secured many bargains. Mr. Willford's herd bull, Protector E., was a favorite of all those present. Several breeders expressed a desire to own this bull and Mr. Willford consented to sell him in the auction. H. E. Hansen, of Mapleton and W. J. Sharp, Amboy, Minn., immediately got busy and bought the bull jointly. In the purchase of this bull we believe these gentlemen purchased the best two-year-old Angus bull in the Northwest. The price paid was $1,025. An average of $176 was made on the entire offering, and while they should have brought more money, the owners expressed themselves as being pleased with the outcome. Col. H. O. Tellier, got every dollar it was possible to get and worked hard for the success of the sale. We follow with a complete sale report:

FEMALES.

Erica P. 3d, Feb., 1910; C. L. Sorg, Hastings, Minn.	$280
Blackbird of Gleneyrie, Oct., 1909; P. Abrahamson, Lanesboro, Minn.	200
Viewlawn Blackbird 4th, Aug., 1914; J. C. Rollins, Prosper, Minn.	185
Blackbird Lassie R. C., May, 1914; T. C. Roberts, Little Cedar, Ia.	235
Oakfield Marie, July, 1910; W. T. Donald, Prosper, Minn.	175
Pride Marie, Feb., 1914; C. A. Ryon, Canton, Minn.	170
Pride Leola 2d, April, 1913; C. L. Sorg	170
Pride Leola 4th, June, 1913; T. A. Taylor, Northfield, Minn.	120
Viewlawn Iola, June, 1913; Nell Cocker, Lanesboro, Minn.	180
Viewlawn Virginia, Sept., 1913; Walter Cocker, Lanesboro, Minn.	145
Pine Creek Lady, May, 1906; Harry Little, Prosper, Minn.	140
Viewlawn Alvena, Jan., 1908; C. J. Bjorklund, Bowman, N. D.	140
Viewlawn Hattie, Jan., 1909; Jas. C. Rollins	170
Twin Grove Belle 3d, May, 1912; O. H. Johnson, Mable, Minn.	110
Twin Grove Belle 6th, July, 1912; C. J. Bjorklund	125
Etora, Jan., 1908; W. P. Donald	350
Canton Pauline, May, 1909; C. L. Sorg	190
Canton Portia, May, 1908; Paul Wheaton, Caledonia, Minn.	200
Ridgelawn Pet, April, 1914; T. C. Roberts	150
Ridgelawn Pride Donna, Jan., 1914; Peter Abrahamson	155
Rosegay Queen M., Jan., 1914; J. C. Rollins	175
Rosegay's Choice Queen, April, 1914; T. A. Taylor	135
Metz Heatherbloom 3d, Nov., 1913; O. H. Johnson	135
Metz Heatherbloom 4th, Jan., 1914; C. L. Sorg	155
Ridgelawn Heather, Oct., 1914; L. Gruber, Lansing, Iowa	150
Heroine of Newton 8th, Nov., 1913; L. Gruber	105
Minnesota Daisy, Feb., 1906; C. J. Bjorklund	100
Minnesota Beauty, Nov., 1907; C. J. Bjorklund	100
Canton Presto W., May, 1915; T. A. Taylor	180
Canton Pricilla, May, 1915; T. A. Taylor	120
Canton Anola Pride, Oct., 1915; L. Cruber	120

BULLS.

Bull, Dec., 1915; H. Manuel, Prosper, Minn.	100
Double Black 2d, July, 1915; Thos. Mallon, Sisseton, S. D.	200
Joe Diamond 2d, Sept., 1915; G. L. Pounder, Delavan, Wis.	200
Protector E., April, 1914; H. E. Hansen, Mapleton, and W. J. Sharp, Amboy, Minn.	1,025
King of Algona 7th, April, 1915; J. Kimball, Canton, Minn.	135
Mayville King; D. T. Grant, Preston, Minn.	100
Royal Prince L. 2d, July, 1914; C. A. Omacht, Preston, Minn.	125
Canton Pride, Sept., 1915; P. J. Snyder, Wadena, Minn.	100
Canton Parnell, Sept., 1915; G. Austin, Mable, Minn.	100
King of Algona 8th, April, 1915; L. Gruber	125

SOME of the Angus heifers offered for sale by E. F. Ganz & Son, Alma, Wis. Cows with calves at foot for sale. See the advertisement on page 26.

Will you let us send you this Grand Collection of 22 Winter Blooming Bulbs at our expense? See offer below.

MOST people like to have flowers growing and blooming in the house during the winter months. In this special offering we have had our nurseries make up a collection of extra large bulbs in a great assortment of colors and especially selected of varieties that will grow and blossom freely indoors. Simple directions for potting and culture will be sent with the bulbs so that you can easily make a big show with them. The bright flowers will make your rooms more cheerful and the perfume from them will go all over the house.

The bulbs can be planted in pots as in illustration, or in any other dishes you may have in the house. They will commence to blossom in about 60 days after being brought into the warm rooms.

Just read our offer, fill out the coupon and mail to us at once, and we will have our nurseries send you the 22 fine *Winter Blooming Bulbs* by next parcel post. Right now is the proper time to get them started for indoor blooming.

SPECIAL MONEY-SAVING OFFERS

The Housewife	$ .50	All For $1.40
Ladies' World	1.00	
People's Home Journal or Today's Magazine	.50	
22 Bulbs	FREE	You Save One Dollar
The Housewife	$ .50	All For $1.40
McCall's Magazine	$ .50	
People's Home Journal or Today's Magazine	.50	
22 Bulbs	FREE	You Save 75 Cents

These are limited offers and orders will be accepted only up to and including December 31, 1916.

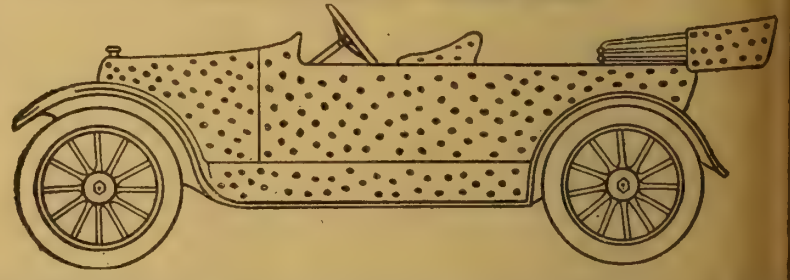
Remit by P. O. Money Order or Registered Letter and address all orders to

THE FLORTICULTURE CLUB

30 Irving Place New York

Count the Dots and Win a Prize

Here is the Famous Dot Counting Contest



You see in the picture, an Automobile covered with dots. By being careful and thinking you can count the number of dots on this Auto. If you can do this, we will send you as a prize, *a surprize package of beautiful season and greeting post cards,* lithographed in rich colors and also a certificate of entry in our grand contest for an Saxon Automobile. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

SAXON AUTO GIVEN AWAY

Remember the Saxon will absolutely be given away at the close of the grand contest. In case of a tie a Saxon will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

THE AUTO MAN, Dept. 300 Des Moines, Iowa

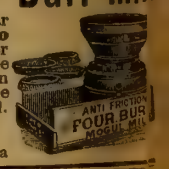
Famous Four Burr Mills

GRIND ALL of your ear or shelled corn at 15 to 20 bushels per hour. Other grain in proportion. These mills will earn their cost in one week's grinding at the present high price of feed.

Send for free catalog.

Bovee Furnace Works

104 W. 8th St. Waterloo, Iowa



TOO LATE TO CLASSIFY.

FOUR REG. HOLSTEIN BULLS FOR SALE

TWO of them old enough for service. Sired by the 29-lb. bull, Fairmont Pietje Ormsby, whose dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and priced reasonable. L. Lindauer, Kaukauna, Wis.

GUERNSEYS

REGISTERED bull calves 4 to 8 months old. Herd tuberculin tested. EDW. H. KILLING, JEFFERSON, WISCONSIN.

Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

Some Attractions.

WE made a "hurry-up" trip to West Salem, Wis., to see what A. L. Hyzer was going to sell on November 20th. We knew this was to be a closing-out sale, but didn't know whether everything was to be sold, but all the Durocs go, the best and the poor, and you breeders take the tip and buy one of the yearlings or two year olds that he is selling. One senior yearling by Lincoln Model is some sow, one of those 700-pound kind. A two-year-old Advance Critic sow is a typical brood sow and the dams of some of the best things in the sale. A King the Col. yearling will be an attraction in many sales. A daughter of Golden Model 31st would look good in your herd. If some of you breeders want a sow for a senior yearling next fall, one will be sold in this sale. There are several good fall yearlings in this offering. Some of the spring gilts are good prospects. Some good farmer boars will be sold. The best sows have been bred to Lincoln Model and Logan Col., the latter a son of King the Col. Don't overlook this sale, for there are going to be some bargains. If you can't attend send bids to T. P. Shreve in care of Mr. Hyzer. Write A. L. Hyzer, West Salem, Wis., for a catalog and be sure to attend. See page 24.—Adv.

Fenner's Holsteins.

WE stopped in to see the herd of Wm. Fenner, Sheboygan Falls, last week and had a very pleasant visit with the proprietor. During the past year he has been running an advertisement in The Wisconsin Farmer with the Sheboygan County Holstein Breeders and is pleased with the results obtained. He is now running an advertisement on page 27 in which he is offering heifer and bull calves. These were sired by Pabst Canary Pontiac Champion 142885, one of the best bred bulls in Sheboygan county. This bull was sired by King Pontiac Champion, that has forty-two A. R. O. daughters, twenty-one of which have records from twenty to 26.74 pounds butter in seven days, which is a very creditable showing, as his daughters are all young cows. King Pontiac Champion is a son of King of the Pontiacs, that has 175 A. R. O. daughters, two with records over forty pounds. The dam of Mr. Fenner's bull is a daughter of Sir Hengerveld Model Johanna and is, therefore, a half sister to two thirty-pound cows. It will be seen therefore, that these calves are well bred. Write Mr. Fenner for further particulars.—Adv.

Angus Sale November 21st.

WE have just received the following letter from J. D. Hatch, relative to the Aberdeen Angus cattle that he sells at Lancaster, November 21st. "I have been breeding Angus cattle for thirteen years and have always used excellent sires, they having been International prize winners or closely related to them. My present herd bull is Kenman, a three-year-old son of Prince Felzer, the champion bull owned by Escher. My herd will be sold in just good breeding condition and there will be some snaps, as it is a closing-out sale. I am selling cows that I wouldn't offer before. The hired help proposition is getting too strong for me and I have rented my farm." Write the above for a list of the cattle that sell. See page 24.—Adv.

The Harvey Little Short-horns.

IT isn't necessary to say much about Harvey Little's milking Short-horns, for his greatest trouble is to raise enough cattle to supply the demand. When you buy from this breeder one often has to get in the "waiting list." He now has a few young bulls coming on that will be ready for service in a short time and if you are going to want a herd bull from a record dam get "in the line" at once. His address is Harvey H. Little, Evansville, Wis. Don't forget to mention The Wisconsin Farmer when writing for the records of some of the Short-horns in this herd. See page 26.—Adv.

Sows Bred to King Defender.

IN THIS issue of The Wisconsin Farmer can be seen an illustration of King Defender, the 1,000-pound grand champion boar owned by John L. Fisher, breeder of Duroc Jerseys and Holstein cattle, Janesville, Wis. King Defender is without a doubt the largest boar that ever won grand championship at the Wisconsin State Fair. Some of the best sows in the Fisher herd are being bred to this champion and they will be offered for sale at private treaty in due time. At the present time Mr. Fisher has three yearling boars sired by the great King the Col. and out of a litter sister to the champion, Lee's Defender. These boars can be bought reasonable. He also has some very choice spring boars that you should investigate. Keep this herd in mind, we will have more to say about King Defender at the proper time. Get a line on those boars and when writing please mention The Wisconsin Farmer. See page 25.—Adv.

The Herds at River Falls, Wisconsin.

MR. P. N. COLLINS is one of the biggest breeders of pure-bred stock in the northern part of Wisconsin. He is located at River Falls and has a herd of big-type Poland Chinas, a herd of Short-horn cattle and a flock of Oxford sheep. Mr. Collins recently purchased a son of the 1,000-pound Black Jumbo, and, as this breeder is an excellent caretaker we feel confident that he will be able to show one of the best yearling boars in the state next year. At the present time he has several spring boars for sale, and every one carries a good pedigree and are well grown. He also has a few bulls and heifers that he is pricing very reasonably. Investigate this herd. River Falls is practically on the line between Wisconsin and Minnesota, with the best of shipping facilities. His advertisement appears on page 24 of this issue. Write your wants.—Adv.

KING DEFENDER 176355, first-prize aged boar, senior champion and grand champion Wisconsin State Fair, 1916, weighs 1,010 pounds. The big-type Duroc. Owned by John L. Fisher, of Janesville, Wis., who will offer at private sale forty sows and gilts bred to this boar. See page 25.

Those Grant Co. Angus.

DON'T forget that the Hauk Bros., Cassville, Wis., have one of the best herds of the "doddies" in the state—a good breeding herd and an excellent sire at the head. They have some choice young bulls coming on and if you are going to need a bull of this breed, don't pass up this firm, it's a good outfit to deal with. See page 26.—Adv.

John H. Bear & Son's Short-horns.

MESSRS. JOHN H. BEAR & SON, breeders of Short-horn cattle and Poland China hogs, Spring Green, Wis., write: "The young Short-horn bulls offered by Green View Stock Farm, Spring Green, Wis., are sired by Royal Sultan 390142, one of the best grandsons of Whitehall Sultan. He weighed 2,250 pounds the day he was three years old, he was a smooth, deep-bodied roan. The dams of these bulls are of the following families, Young Mary, Arabella, Favorite, Duchess of Gloster, Rose of Sharon. Most of these cows are good milkers. Anyone in the market for a good bull will do well to see these bulls before buying farm in village limits."—Adv.

Defender's Gold Model.

THE above is the name of one of the best bred Duroc Jersey boars that ever did service in the state of Wisconsin. He is sired by Lee's Defender by A.'s Defender by old Defender, and his dam, Golden Model 38th was by the great Golden Model 2d. This boar is the sire of the spring boars that E. H. Parker & Son have for sale at Janesville, Wis. They have some "real" spring boars, get their prices and mention this publication when writing. See page 25.—Adv.

The Madson Polands.

MADSON & SONS, Madison, Wis., have Poland China spring boars that will suit. They have been well grown and in excellent shape and we feel sure they will give satisfaction. The Madsons are good breeders and strictly on the square. Write them your wants.—Adv.

SALE DATES.

Hereford Cattle.

Dec. 8, American Hereford Breeders' Assn., Chicago, Ill.

Short-horn Cattle.

Dec. 7, American Short-horn Breeders' Assn., Chicago, Ill.

Aberdeen Angus Cattle.

Dec. 5, American Clydesdale Assn., Chicago, Ill.
Dec. 6, American Aberdeen Angus Assn., Chicago, Ill.

Guernsey Cattle.

Feb. 26, George W. Pagel, Zumbrota, Minn.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.

THE FARMERS' MARKET brings buyers and sellers together. Read what you can buy. Advertise what you can sell. Six cents a word each insertion.

Wisconsin Farmer Readers Need Good Cattle

THAT The Wisconsin Farmer reaches prosperous, discriminating live stock buyers is proven by the experience of Truttschel Brothers, Sheboygan Falls, Wisconsin. They are convinced of the value of The Wisconsin Farmer as an advertising medium. Read their letter:

We are going to increase our advertising space in The Wisconsin Farmer for the coming year. Every bull which we sold this year has been sold through our advertisement in The Wisconsin Farmer. We are very much pleased with the service you have given us and the results of our advertisement. We find that the readers of The Wisconsin Farmer appreciate the difference between good cattle and poor ones and are willing to pay a reasonable price to get good ones.

Many of these appreciative readers of The Wisconsin Farmer would no doubt be interested in the stock you have to offer. Why not tell them about it? The Wisconsin Farmer reaches more than 90,000 possible buyers each week. Let it carry your message to them. Send the copy for your advertisement today.

The Wisconsin Farmer Madison, Wisconsin

Guaranteed Weekly Circulation, 90,000.

NOW FOR THE INTERNATIONAL

GREATEST AND BEST

LIVE STOCK SHOW

OF THE YEAR AT

CHICAGO, DEC. 2 TO 9

AT UNION STOCKYARDS

DAILY SALES OF PURE-BRED LIVE STOCK

CLYDESDALE SALE
Tuesday, Dec. 5th, 1:00 P. M.
For particulars write
J. A. H. JOHNSTONE
Union Stockyards Chicago

50 HIGH-CLASS ANGUS 50
Wednesday, Dec. 6th, 1:00 P. M.
For catalog write
CHAS. GRAY
Union Stockyards Chicago

50 SELECTED SHORT-HORNS 50
Thursday, Dec. 7th, 1:00 P. M.
For catalog write
F. W. HARDING
Union Stockyards Chicago

50 CHOICE HEREFORDS 50
Friday, Dec. 8th, 1:00 P. M.
For catalog write
R. J. KINZER
1012 Baltimore Ave. Kansas City, Mo.

SHEEP AND SWINE SALES, TUESDAY, WEDNESDAY AND THURSDAY

Many new improvements, new features, thirty national conventions, daily sales of all breeds, etc. A season of learning, entertainment, brilliant evening shows, and

A TRIP TO CHICAGO

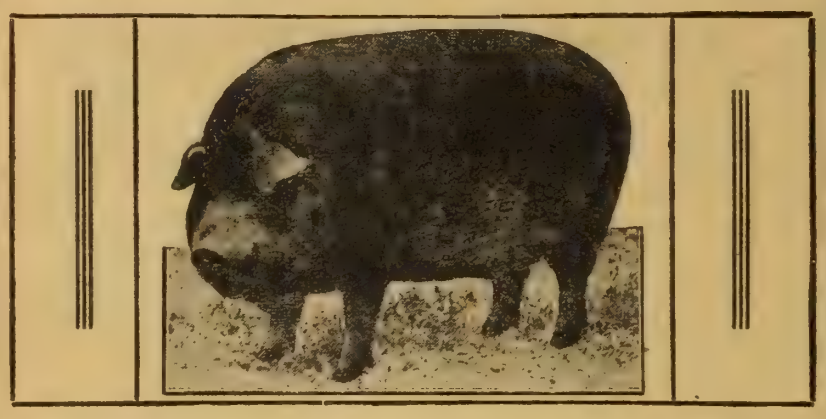
Lowest Rates on All Railroads

NEXT WEEK'S SALE PROGRAM

Monday, November 20 { **Duroc Jerseys, A. L. Hyzer, West Salem, Wis.**

Tuesday, November 21 { **Guernseys, A. I. Stubbs, West Salem, Wis.**

CLOSING-OUT SALE OF
35 DUROC JERSEYS
WEST SALEM, WIS.
MONDAY, NOVEMBER 20



5 VERY choice brood sows of the best breeding—King the Col., Advance Critic, Golden Model 31st, Lincoln Model. Bred now for early farrow. A few outstanding **fall yearlings and spring gilts.** Also boars—I am moving to Iowa and these hogs must be sold. Don't overlook this sale, for, owing to the time of the year, I don't expect to get full value. Am selling some wonderful sows, big and smooth, the kind we like to keep. If you can't attend send bids on the good sows to T. P. Shreve, Wisconsin Farmer representative, in my care. Auctioneer, Col. Fred Faves. Write for catalog at once.

A. L. HYZER **WEST SALEM, WIS.**

HORSES.

4 Stallions PERCHERONS 2 Mares

WE are offering 6 very high-class Percheron stallions and mares: 1 two-year-old and one yearling stallion out of **Diana 53532** by Phil Sheridan and 1 yearling stallion and a 2 and 3 year old mare out of Karel 33640, a double bred **Baccarat** mare. The two-year-old stallion sired by Imp. Haricot 74108 is particularly good. Send for prices and description.

JOHN KLOEHN - - **FOREST JUNCTION, WISCONSIN**

CLYDESDALES

STALLIONS and mares for sale. **AYRSHIRES**—Serviceable bulls and females. **DUROCS**—growthy boars and gilts. Only the very best of the three breeds. We invite visitors. Write your wants.

Jas. Van Etta - Lima Center, Wisconsin

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin **Gotham, Wis.**

CLOSING-OUT AUCTION SALE OF
REG. ANGUS CATTLE
BY

J. D. HATCH **LANCASTER, WIS.**

TO be held on his farm, 2½ miles north of town, TUESDAY, NOVEMBER 21, 1916, 42 head, 32 cows and heifers, 10 bulls. Sale of cattle commences at 2 o'clock. Send for list of cattle giving particulars.

ENGRAVING Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.

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Engraving Dept. **Des Moines, Iowa**

W. A. LANG & CO.
Importers and Breeders of
BELGIANS and PERCHERONS

IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars

W. A. LANG & CO. **GREELEY, IOWA**

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

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HEREFORDS
BULLS FOR SALE

OF serviceable age. Pasture raise and not pampered. Well bred individuals. A few good calves. Come and see them before you buy.

J. J. F. WINTERS **SPARTA, WIS.**

POLLED DURHAM CATTLE.

KITTY CLAY HERD

POLLED DURHAM yearling bull ready for immediate service, well grown, good type. Sired by Badger Boy 46th, a deeply bred Polled bull. Dam, Champion Rose 4th, that is now giving 1,000 pounds of milk per month. Price right. Address

J. Warren Hoyt **Rosendale, Wisconsin**

POLLED DURHAMS

HEIFERS, bred and open. Yearling bulls. Write for sale list. F. S. Bunker, Kilbourne, Wis.

POLAND CHINA SWINE.

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis.

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

DOBSON & EASTMAN
POLAND CHINA OFFERS

THREE spring boars that weigh over 300 pounds each—they should head registered herds, real toppers. Also a few that weigh around 260 pounds. A limited number of fall pigs for sale. Write your wants; you know our guarantee. Address

DOBSON & EASTMAN, LANCASTER, WISCONSIN **The Utmost in Polands**

SIZE---QUALITY---BREEDING
Features Predominating in my Polands
JUMBO'S EQUAL 2d
CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH **(Shipping Point Fennimore)** **MT. IDA, WISCONSIN**

McDONALD CLEANS THE SLATE
WITH HIS BIG POLAND CHINAS

WINNING senior and grand champion sow at Minnesota and Wisconsin; also senior, junior and grand champion boar at Wisconsin. Silver Trophy for the Premier Futurity Herd. Heaviest winner on the grounds. This should be recommendation enough—buy from the champion herd. Address

J. D. McDONALD, NORTH BEND, WIS.

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.

M. MADSON & SONS **MADISON, WISCONSIN**

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

Master's Giant Orange Wonder Young's Big Joe

NO breeder has three better Poland China boars. They will make my bred sow sale, February 6, 1917.

P. W. Young **Prosper, Minn.**

BIG POLANDS

Black Jumbo
THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green Wis.

BOARS POLANDS GILTS
SIRED BY MODEL MAJOR 2D

THE largest two-year-old P. C. in Wisconsin. Out of Big-Type sows of the most fashionable breeding. No better pigs at prices asked. Come or write.

Chas. S. Maltby, Janesville, Wisconsin

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley **R. 3, La Crosse, Wis.**

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

The GRAND CHAMPION POLAND CHINA Boar AT WISCONSIN

IS the sire of the SPRING BOARS AND GILTS that I am offering for sale. Buy the GET OF A CHAMPION. I have them—you need them—let's get together. Write for pedigree. Some Short-horn bulls for sale.

O. C. OLSON **STRUM, WIS.**

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalog. We hold the states record on account of superiority. Address

J. C. Hendricks **Box F, Hazel Green, Wis.**

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

H. MEINKING **BANGOR, WIS.**

BRED GILTS

POLAND China service boars all sold. Now booking orders for bred gilts that are extra choice, also fall pigs, either sex, that are hard to beat. James Derivan, Fox Lake, Wis.

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

BIG-TYPE POLANDS

AM offering 70 March pigs of lengthy and heavy-boned type that are sure to please. Also choice Short-Horn bulls one to ten months. Collyne Victor 387634 in service. Reasonable prices.

A. Menke & Sons, R. 1, Markesan, Wisconsin

STOP, LOOK, READ

GOOD Poland China fall boars. Spring pigs, both sexes, and one yearling boar, at reasonable prices. Call or write.

Phone 52 **F. E. Purdy, Orfordville, Wis.**

DUROC JERSEY SWINE.

--PARKHURST--
DUROCS

LET us ship you a boar pig. They are well grown, of the most popular blood lines and we guarantee every boar. We welcome visitors and answer inquiries promptly. Try us.

E. H. PARKER & SON
Janesville Wisconsin

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address

JOHN L. FISHER JANESVILLE, WIS.

BOARS
DUROC JERSEYS

IF you want a good boar or some good gilts I can suit you and the prices will also suit. I guarantee to please you. Address

J. Erwin, Bloomington, Grant County, Wis.

DUROCS and GUERNSEYS

LENGTHY, heavy-boned spring boars sired by **Col's Defender 2nd,** and **Valley G,** the 1000-pound brother to Illustrator. April pigs, some of them weigh over 200 lbs. We have shipped C. O. D. for last ten years and never had but one shipped back. Registered Guernsey bulls and bull calves with most popular breeding, some from A. R. dams, one 2-yr.-old whose dam has three A. R. records averaging over 500 lbs. fat. Reasonable. Allie S. Knudson, R.5, Brodhead, Wis.

Duroc Boars

OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts, for sale. Write your wants. Address

M. STOEHR VIROQUA, WIS.

DUROC JERSEY
BOARS

OF March farrow with size and quality, heavy bone and long, deep bodies, of the best of breeding. Write for prices. Address

W. G. BARTHOLF BURLINGTON, WIS.

CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.

Ceylon Court Farm - Lake Geneva, Wis.

Atwater's Duroc Boars

SOME just as good as sold in my sale—these were held for private sale. Write.

L. F. Atwater - Bangor, Wis.
"Home of Big Durocs"

SEPTEMBER DUROC PIGS
at your own price—just make an offer

THESE are by a Cherry Chief boar that weighed close to 500 pounds at 16 months and Long Model Wonder, another big one that has only a few equals. Also a fine bunch of spring boars of champion blood lines at attractive prices. Address

E. R. Perkins Manitowish, Wis.

GEO. D. SPRAIN & SONS
BREEDERS OF
DUROC HOGS AND HOLSTEIN CATTLE
WEST SALEM - - - WISCONSIN

GANT'S FARM DUROCS

25 TOP spring boars, one 600-lb. Jr. yearling, Illustrator-Cherry Chief breeding. Bred sow sale in February. **Gant's Farm, Delavan, Wis.**

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B, Model Wonder, Col. S. Jr., Orion, Cherry King Jr. ☞ **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

GEO. H. WILLSIE
Breeder of Big Durocs
Can supply your wants. Write.

Prosper - - - Minnesota

DUROC JERSEY SWINE.

UNTIL DECEMBER 1ST I'LL OFFER FOR SALE
DUROC BOARS

AT bargain prices. Fed right, bred right, priced right. The type the feeders want. Let me ship you a boar and a pair of SPRING GILTS. Inquiries promptly answered. Write

J. W. HIGGINS GOTHAM, WISCONSIN

MARTINY DUROCS
Large, Growthy, Spring Boars $25 and $35

PAY for them when you get them home. They are good or we wouldn't make this offer. Send your order at once. Also offer for sale 10 grade Guernseys, recently freshened. Address

RILEY MARTINY & SON BARABOO, WISCONSIN

Otter Creek Farm Durocs

DUE to the fact that half my sows are sired by DIRECTOR, I offer him for sale, Farrowed March 4, 1915, by Great Wonder 123407, out of a Marion's Wonder-Lee's Defender dam. A big-type boar, heavy bone and very smooth—an excellent sire and a real herd boar. **PRICE $100.**

A FEW CHOICE SPRING BOARS AND GILTS

B. M. ARRIES AUGUSTA, WISCONSIN

SPRING BOARS — DUROCS
230 Pounds to 270 Pounds at $25, $35, $45

NO BREEDER HAS A BETTER LOT

SIRED by a son of KING THE COL., a son of CHERRY CHIEF, a son of LEE'S DEFENDER and many of the dams trace to MARION'S WONDER. You get BREEDING and INDIVIDUALITY. I'll ship you a good boar—try me. Address

DENNIS SHEA - - - MELVINA, WISCONSIN
(10 miles from Sparta on the Milwaukee R. R.)

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS WAUPACA, WIS.

Grand Champion Duroc Boa r at Wisconsin State Fair
KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address

B. W. LITTLE - - - JANESVILLE, WISCONSIN

Big-Boned Boars. The Best Is None Too Good
950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer,

EMMETT COOK & SON - RICHLAND CENTER, WIS.

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.

BURN BRAE FARM - - - ROSENDALE, WISCONSIN

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address

W. W. Goodrich Ft. Atkinson, Wisconsin

DUROCS

SIRED by **Richland Defender,** he by Defiance, dam by Marion's Wonder. Boars and gilts for sale. Priced cheap. Write

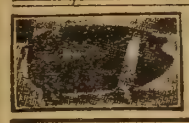
John Borchardt & Son, Richland Center, Wis.

HAMPSHIRE SWINE.

LAIRD'S GIANT HAMPSHIRE HOGS

BARGAINS in spring boars. Gilt-edged gilts bred for March farrow. A few mammoth tried sows, 500 to 800 lbs., bred or open. My Hampshires are the large, smooth kind. Bargain prices for quick action. Changes in farm plans make more room necessary. Write today for Hampshire booklet, prices, etc. This is your opportunity.

A. M. LAIRD - - PRAIRIE DU CHIEN, WIS.



HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.

DANE STOCK FARM
Oshkosh Wisconsin

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address

A. B. CORTTE LOMIRA, WISCONSIN

Berkshires For Sale

2 YEARLING boars, prize-winners and good breeders. Spring boars and sows of excellent breeding. For reasonable prices and description, call or write W. W. Powell, Victory, Wis.

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

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THOROUGHLY versed on pedigrees of leading breeds of live stock.

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Let me help boost the hog sales in Wisconsin.
Write for dates.

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CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall
CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write

Harry Crandell Cass City, Mich.

Derenthal
Chester Whites
Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.

H. A. Derenthal - Wykoff, Minnesota

CHESTERS
For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address

L. J. McBAIN BLOOM CITY, WIS.
(Shipping point Viola)

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.

O. P. Coates - Elkhorn, Wisconsin

CHESTER WHITE PIGS FOR SALE

AUGUST pigs at let-live prices—from matured stock. Singles, pairs and trios. No runts shipped. Feed scarce and must sell. Two winter boars of best breeding. Pedigrees furnished.

Jos. Eglehof Edmund, Wisconsin

Your Chance--Chester Whites

ALL ages, either sex, boars big enough for service. Fall pigs by **Pay Streak,** 2d junior yearling at Milwaukee, 1916. Everything as represented or money back.

Wm. F. BUTTS EVANSVILLE, WIS.

SUNNY SIDE CHESTERS

CHOICE March and April pigs of both sexes—best blood lines. Choice Jersey cattle and Scotch Collie pups. All stock registered. Write for prices. Address

John Pellett R. 2, Viola, Wisconsin

CHESTERS

EITHER sex, that have size and breeding. Satisfaction or no pay. Address

ADOLPH NUTTLEMAN, WEST SALEM, WIS.

Chester Whites

HAVE some great March pigs of championship breeding. I won't ship a poor pig. Try me.

W. F. Miller West Salem, Wis.

CHESTER WHITES

A CHOICE lot of March pigs. The lengthy and heavy-boned type at farmers' prices. Address

L. A. Schultz R. 1, Poynette, Wis.

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

CHESTER WHITES

A FEW choice March and April boars for sale. Sired by W. B.'s Wonder and Modeler's Best.

Wm. F. Belda - De Forest, Wisconsin

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

SHEEP.

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.

Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

SHEEP

SHROPSHIRE yearling rams all sold. After October 15th my yearling Hampshire flock header and my Oxford flock header will be for sale. Have a limited number of Shropshire, Hampshire and Oxford ram lambs left; also a few ewes. All stock registered. Address

Dane Stock Farm Oshkosh, Wis.

Hickory Dale
Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock headers. Address

Arthur Broughton & Sons Albany, Wis.

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. **BANGOR, WISCONSIN**

GREEN VIEW STOCK FARM OFFERS

7 Pure-Bred SHORT-HORN BULLS

7 to 17 months old, and a few choice

POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

OAKLAWN FARM SHORT-HORNS

BULLS A fine assortment of SCOTCH bulls—rich roans and reds, the herd heading kind. Also a few Scotch-topped bulls from heavy milking dams. Two cows and a few heifers. Write your wants. Address

J. E. Kennedy **Janesville, Wisconsin**

RIVERDALE STOCK FARM SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

H. Wehmhoff - Burlington, Wis.

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher **Oregon, Wisconsin**

THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

SHORT-HORN BULL FOR SALE

ONE red, milking strain Short-horn bull. Good individual, excellent pedigree. 100 White Wyandotte cockerels from the largest flock in the county. Write

Art G. Hoskins **Dodgeville, Wis.**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son, Beaver Dam, Wisconsin

WILCOX SHORT-HORNS

AM OFFERING several **Roan Bulls** of serviceable age. Priced reasonable for immediate sale. Write for pedigrees.

W. F. Wilcox - - Milton, Wisconsin

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little **Evansville, Wisconsin**

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son - Burnett, Wisconsn

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

SHORT-HORN COWS AND HEIFERS

FOR sale sired by Prince Broadhooks and Victor Fashion, two richly bred bulls. Cows bred to Sultan's Last. Yearling and two-year-old Shropshire rams for sale. Address

JOHN CLAY **WARRENS, WIS.**

JERSEY CATTLE.

OAK GROVE JERSEY FARM

WE are overcrowded, as we are just rebuilding our barns and have very little calf stable room. We now have 15 calves and 22 cows yet to freshen, so are making **very low** prices on these richly bred young bulls to move them quickly. Sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and of Noble of Oaklands.**

NO. 1—Out of **Volunteer's Sally,** that has a record of 597 pounds butter. She is also a dam of a 594 pound junior 2 year old that holds the state record for her age. **Price $100.**

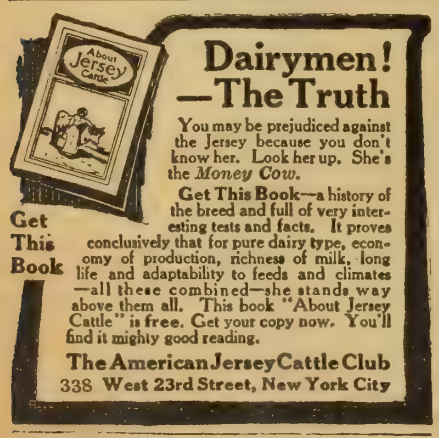
NO. 2—Out of **Koffee of Oak Grove,** now on semi-official test and making fine record. This young bull won 1st at Elkhorn fair. **Price $75.** Send for extended pedigrees; further information.

WM. KNIGHT - - - EAGLE, WIS.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Financial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - Wauwatosa, Wis.
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.



Dairymen! —The Truth

You may be prejudiced against the Jersey because you don't know her. Look her up. She's the *Money Cow.*

Get This Book—a history of the breed and full of very interesting tests and facts. It proves conclusively that for pure dairy type, economy of production, richness of milk, long life and adaptability to feeds and climates—all these combined—she stands way above them all. This book "About Jersey Cattle" is free. Get your copy now. You'll find it mighty good reading.

The American Jersey Cattle Club
338 West 23rd Street, New York City

REGISTERED JERSEY

COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - Fairwater, Wisconsin

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS.

CHAMPIONS FOR SALE

OFFERING the **Junior Champion Jersey bull** of the Northern Wis. Fair, 1916, also nine month old bull, both sired by the **Grand Champion, Canella's Golden Lad 88384.** Both out of high producing dams. Priced right for quick sale. For description, etc., address

L. M. Krippner **Rice Lake, Wis.**

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son **Oconomowoc, Wis.**

ABERDEEN ANGUS CATTLE.

ANGUS

COWS, calves at foot, rebred, and yearling heifers for sale. One or a dozen. Write for description.

E. F. Ganz & Son **Alma, Wisconsin**

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

STOCK BUYER.

IF in need of grades or pure-bred Holsteins, consult me. Am able to get what you want. Address D. E. Buckley, Hartford, Wisconsin.

GUERNSEY CATTLE.

CLOSING OUT MY GUERNSEY DAIRY

WEST SALEM, WIS., TUESDAY, NOV. 21ST

HAVING sold my farm, must close out my dairy herd consisting of 25 registered Guernseys and 20 grade Guernseys—a few bulls. Several A. R. cows. Most of the offering in milk. Many in calf to the noted HOLDEN 4TH. Your opportunity—don't forget the date.

A. I. STUBBS **WEST SALEM, WISCONSIN**

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address

J. D. McAllister **Green Bay, Wis.**

REG. GUERNSEY HEIFERS

10 to 14 months old, daughters and granddaughters of the richly bred sire,

GOODWILL'S HERO 17073

DAMS imported and richly home-bred animals. These animals are well grown, good, straight type and well bred. For further particulars send for copy of pedigrees or color description. Address

Charles Schmidt **Wrightstown, Wisconsin**

Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

BERKSHIRE SPRING PIGS

of both sexes of Premier and masterpiece breeding

O. R. FRAUENHEIM, RANDOM LAKE, WIS.

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman **Fort Atkinson, Wisconsin**

Registered Guernsey Heifers

AND **young cows,** from yearlings to 5-year-olds. **2 fine yearling bulls** sired by a son of Imp. Golden Hero of L' Et, whose dam was a 526-lb. daughter of Gov. of the Chene. Both of these bulls are from imported cows, one with an A. R. O. record—Gov. of Chene and Masher Sequel breeding. Send for charted pedigrees and pictures.

Geo. Lucia - Green Bay, Wisconsin

Yearling Guernsey Bull For Sale

BORN September 8, 1915. Dam, Agness of Oak Grove 24249. A. R. 445 pounds fat. Daughter of Starlight Excelsior. Sire, Miss Luetilius Hambro 28330, whose four nearest dams average 656 pounds butter fat. His sire, Langwater Hambro, sold for $1,000. Bull calves from 2 to 7 months old for sale. Address

W. J. Held **Ft. Atkinson, Wis.**

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one is A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.

W. G. Jamison & Son - Appleton, Wis.

Guernseys For Sale

NINE grade Guernsey yearling heifers and one pure-bred bull 7 months old, all good size and well marked, at $60Q. Address

E. H. Kiesling **Jefferson, Wisconsin**

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

AYRSHIRE CATTLE.

ALDEBARAN FARMS A. R. AYRSHIRES

YEARLING AYRSHIRE BULL ready for service, ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address

STEPHEN BULL **RACINE, WISCONSIN**

AYRSHIRE THE PERFECT COW

Mr. Hugh F. Whitney, of Paulaski, N. Y., was induced to buy a popular breed, but ofter some time discarded it and bought AYRSHIRES. Those who once own AYRSHIRES seldom change. But just watch the number of breeders who will CHANGE TO AYRSHIRES the next year or two. If you will investigate this hardy, healthy, prolific, PROFITABLE breed, you will understand WHY. Address

AYRSHIRE BREEDERS' ASS'N

C. M. Winslow, Sec'y, 29 Park St., Brandon, Vt.

HOLSTEIN-FRIESIAN CATTLE.

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer **for sale** surplus stock of our own raising.

SILVER SPRINGS FARMS CO. - EAU CLAIRE, WISC.

Yearling Son

READY for service, of the **30 pound bull, Pabst King Fontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers - Waukesha, Wis.

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¾ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams. Write **R. C. Walker, Kilbourn, Wisconsin.**

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons **Elgin, Illinois**

HOLSTEIN-FRIESIAN CATTLE.

Purebred Registered

HOLSTEIN CATTLE

The preliminary report of tests covering the period since 1909, and just published by the Iowa Agricultural Experiment Station, states that the average of records made by first generation heifers by a purebred Holstein sire, shows an increase of 71 per cent milk and 42 per cent fat, at an average age of 3½ years, over the record of their scrub dams at an average age of 6 years. These dependable reports show very plainly that the introduction of a purebred Holstein bull to a herd of common cows will materially increase production and profits. There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.

JOHN STEEL - OCONOMOWOC, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt **Oxford, Wisconsin**

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 27-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address

L. V. GARVENS **BROOKFIELD, WIS.**

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons (Registered Poland China hogs).

Marinette County Asylum - Peshtigo, Wis.

HILLSIDE STOCK FARM

OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

HOLSTEIN BULL

BORN February 21, 1916. ¾ white. Good individual, sired by a son of Pontiac Korndyke and out of a daughter of De Colantha Johanna, champion. Price $100. Address
Peter Larson Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

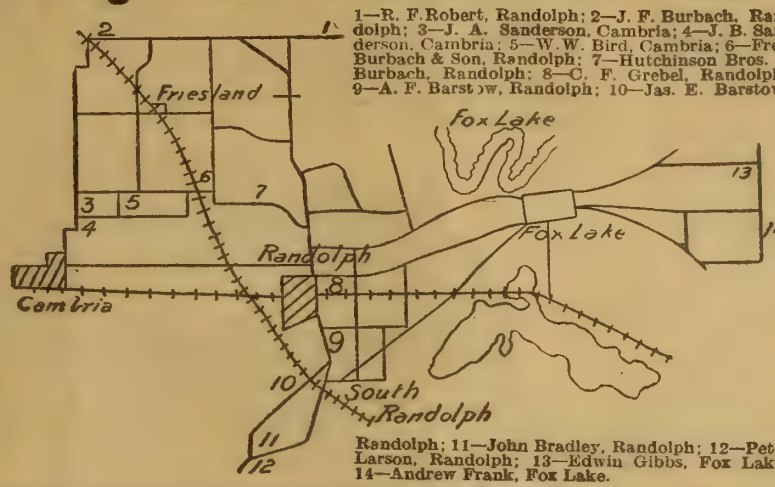
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are safe in calf to our great herd sire, **King Pietertje** former world's record cow, **Pietertje Maid Ormsby.** heifers. They are right in every way. **from A. R. O. dams** with good records. They are **Hengerveld Ormsby,** full brother to the Send for pedigrees or come and see these **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE

HEADS our herd. His dam made 33.08 lbs as a four year old. His five nearest dams average 33.89. His dam have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

WE KNOW YOU LIKE THIS BREEDING

CHARTED PEDIGREE OF THE Pure-Bred Holstein-Friesian Bull
Korndyke Segis Johanna

No. 127132 H.-F. H.-B.
Born November 17, 1913.
Owned by—
PABST STOCK FARM, Oconomowoc, Wis.

The average of the records for his dam and sire's dam are as follows:

Milk	632.40
Butter	39.05
Per cent fat	4.94
30-day record:	
Milk	2,630.50
Butter	154.16
Per cent fat	4.69

Why not buy a bull calf by this sire and out of one of our A. R. O. cows with high 7-day and yearly records. Over 30 to select from at $100 and up.

SIRE—**Johanna McKinley Segis**
954 A. R. S. (44367) Sire of—

Uneeda Korndyke Abigail	33.02
Uneeda Korndyke Abigail, 30 days	124.00
Uneeda Korndyke Charlotte	29.35
Uneeda Korndyke Abbie	28.00
Winana Jennie 2d, 2 years	27.10
Uneeda Korndyke Beryl, 4 years	26.61
Oakfield Korndyke Segis	25.57
Oakfield Korndyke Segis, 30 days	104.91
Uneeda Korndyke Countess, 3 years	24.35
Uneeda Korndyke Beauty, 2½ years	23.57
Johanna Woodland Segis, 3 years	23.51
Paula McKinley, 3 years	22.78
Abbie Korndyke Segis, 3½ years	21.26
Uneeda Korndyke Bertina, 2 years	21.20
Uneeda Korndyke Abronia	20.63
Uneeda Korndyke Adeline, 3 years	20.42
Uneeda Korndyke Agnes, 4½ years	20.39

34 A. R. O. daughters, 1 above 30 lbs.
6 above 25 lbs., 15 above 20 lbs.
9 sons with 33 A. R. O. daughters.
6 daughters with 6 A. R. O. daughters.

DAM—**Pontiac Lady Korndyke**
11276 A. R. O. (92700)

Butter	38.03
Milk	601.40
Per cent fat	5.06
30-day record:	
Butter	156.93
Milk	2,496.70
Per cent fat	5.02
Dam of—	
Fairview Korndyke Rag Apple, 2 years	19.86

2 sons with 22 A. R. O. daughters.

Pabst Stock Farm DEPT. 30 Oconomowoc, Wis.

23.13-lb Holstein Bull Ready for Service

THE sire of this young bull was King Segis Concordia Hengerveld 96214 and he is out of Pinehurst Grace 119959, a cow with a 7-day record of 23.13 pounds. The sire of King Segis Concordia Hengerveld was King Segis De Kol Korndyke 56110 (54 A. R. O. daughters, including Mabel Segis Korn with a 7-day record of 40.32 and a 30-day record of 165.22). His dam was Sadie Vale Concord 3d's Hengerveld 100308 with a 7-day record of 28.46. The sire of Pinehurst Grace was Sir Piebe Job Sarcastic (9 A. R. O. daughters) while the dam was Parthenia Piebe De Kol, A. R. O. 18.26. Going back to the third generation on the sire's side we find King Segis (87 A. R. O. daughters—9 from 30 to 35 pounds). King Segis De Kol Korndyke was out of Pontiac Clothilde De Kol 2d 69991, with a 7-day record of 37.21. The sire of Sadie Vale Concord 3d's Hengerveld was Hengerveld De Kol 23102 (116 A. R. O. daughters—10 above 30 pounds), while the dam of this cow was Sadie Vale Concordia 3d, with a 7-day record as a 2 year old of 16.81. The grandsire of Pinehurst Grace on the sire's side was Sir Piebe Heng De Kol (25 A. R. O. daughters) and the grandam, Job's Sarcastic. The grandsire of Pinehurst Grace on the dam's side was Gem Pietertje Paul De Kol (23 A. R. O. daughters) while the grandam was Echo Parthenia (1 A. R. O. daughter). Note the rich breeding of this young bull. He is priced right. Send for a more complete pedigree.

PINEHURST DAIRY SHEBOYGAN FALLS, WIS.

28-LB. HOLSTEIN BULL

BORN February, 1916, nearly ready for service. Dam, Eagle Rigtje Belle, A. R. O. record 4 years, 2 months, 28.02. Sire, Sir Elmer Johanna Wit, traces twice to Sir Johanna De Kol. His three nearest dams average 4.11% fat. Every dam in pedigree from 3.8% to 4%. His dam will be put on test in about 60 days and shows promise of increasing her record. Address

TRUTTSCHEL BROS. SHEBOYGAN FALLS, WIS.

Taken when 6 mos. old. Now weighs about 600 lbs.

MUST REDUCE OUR HERD AT ONCE

POSITIVELY MUST SELL 100 head of registered and high-grade Holstein and Guernsey cattle, any age. You make take your choice from 400 head of big producers, no boarders among them. Special price on high-grade calves. Also extra fine SERVICE BULLS. Everything guaranteed as represented. **Edgewater Stock Farm, Ft. Atkinson, Wis.**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam. Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST WEST ALLIS, WISCONSIN

Holstein Bull

KING Hengerveld Segis Pontiac 168188, born September 20, 1915. Sire, King Segis Pontiac Polkadot, a full brother in blood to the $50,000 sire, King Segis Pontiac Alcartra. Dam, Rigtje Hengerveld Segis, A. R. O. record. A fine individual and priced reasonable. Address
L. Lindauer Kaukauna, Wisconsin

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.

EARL NORWOOD, GAYS MILLS, WIS.

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.
Wisconsin Star Stock Farms

His two nearest dams averaged over 29 lbs. butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,834 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.
Ed M. Schultz, Hartford, Wis.

YOU CAN'T BEAT IT

WE have for sale a young Holstein bull from a 23.05-pound four-year-old daughter of SIR CLYDE that has 45 A. R. O. daughters, four with records above 30 pounds. He is sired by a son of BEAUTY PIETERTJE PRINCE, that is out of a daughter of SIR ORMSBY HENGERVELD DE KOL. It is some breeding. Send for extended pedigree and price. Address
DOPP BROS. OCONOMOWOC, WIS.

TWO SONS OF THE 27.56-POUND BULL
Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
B. F. Winckler & Sons Medina, Wis.

YEARLING HOLSTEIN BULLS

READY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will also price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address
C. F. DINEEN, CEDARBURG, WISCONSIN

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred heavy-producing cows. Call and see our herd or write
WM. FENNER, SHEBOYGAN FALLS, WIS.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

HOLSTEIN

BULL calves, sired by Johanna Bonhuer Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write
W. H. S. Rhoda Watertown, Wis.

LA BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutche's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

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HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

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FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address
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READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
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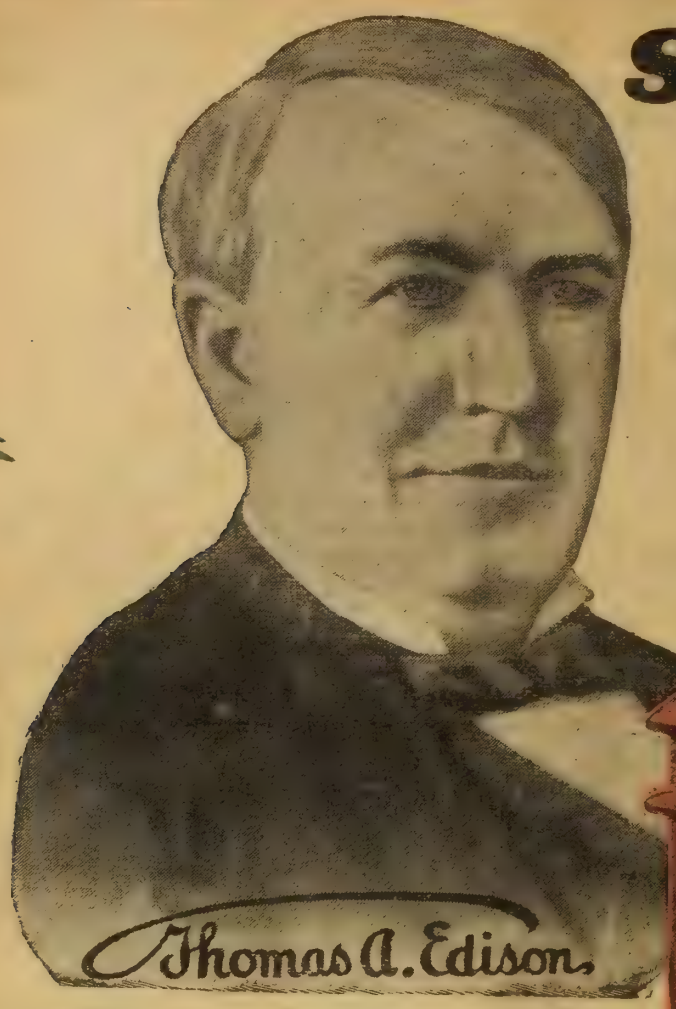

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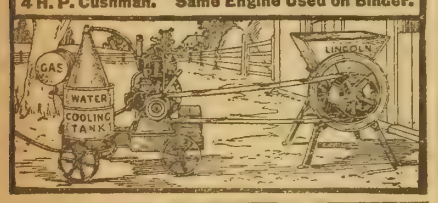

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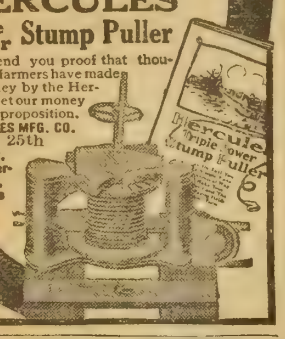

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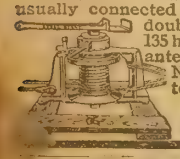

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Questions and Answers.

Power Required For Sawing.

Which requires the most power to pull, the circle type saw or the band saw, as used on portable sawmills?

Answer.—The band saw requires somewhat less power, but is more easily broken. Band saws are generally used for resawing, as they make a smoother cut with less waste.

Winding Magnet Coils.

In winding an electro-magnetic coil, must I wind it like thread is wound on a spool? That is, should I begin at one end of the core with the first layer and wrap until the other end is reached; then rap back over the first layer and wrap until the other end is reached; then wrap back over the first layer, etc., until the coil is complete?

Answer.—A magnet coil is usually wound the same as thread is wound on a spool. For horseshoe magnets one coil is wound right hand, the other left hand.

A Wiring Diagram.

Would you please tell me how to wire a four-point switch? I want to run a motor, a call bell, and an electric light from a storage battery. How should it be wired?

Answer.—Figure 1 shows how to wire this outfit; B is the battery, S

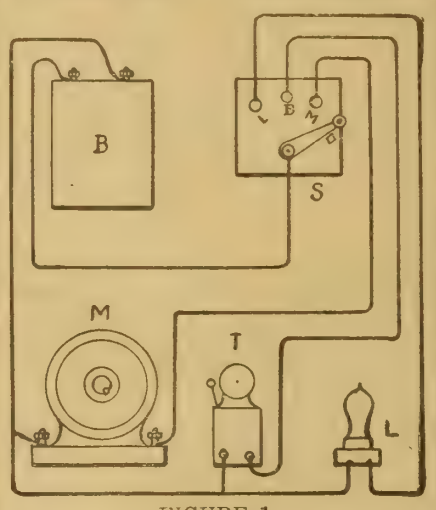

FIGURE 1.

the switch, M the motor, L the light, and T the bell. In wiring a group of this kind, only think of one circuit at a time. The current must flow from one terminal of the battery to the instrument, and then back to the battery. Take the motor, for instance. Place the switch on the point marked M. The current must flow from the battery to the switch handle, and from the handle to binding post M, and from there to the motor. Then it returns over the other wire to the battery.

Adjusting a Schebler Carburetor.

I have a 1917 Studebaker car equipped with a Schebler carburetor. It is using too much gasoline. A bluish smoke comes from the exhaust. How can I adjust the carburetor to give more or less air? Can I take the plug out in the bottom and drain it? What should I do with the torage battery this winter?

Answer.—The air valve is located in the arm extending out from the side of the body of the carburetor. We are not sure whether you have a Model L or a Model R. To adjust a Model L air valve, loosen the lock nut that clamps the knurled head adjusting screw over the air valve. For less air, screw the screw in; for more air, out. The screw should be adjusted so that the valve seats firmly, but lightly. In some cases a lighter spring under the air valve is desirable. The adjusting screw on Model R is located under the valve. After adjusting the air valve, do not fail to lock the screw. Model R has a large cap over the air valve. Turning this cap to the right makes the mixture richer; turning to the left makes the mixture lean.

The whole float chamber of the Model I is removed by unscrewing the nut at the bottom. Model R carburetors are regularly furnished with a drain cock at the bottom. If the cock has been removed and the hole plugged, remove the plug to drain the carburetor. The bluish smoke you mention probably is due to too much oil rather than to carburetor trouble. Too much oil causes poor ignition and on this account might be the cause of an excessive use of gasoline.

A storage battery kept fully charged will not freeze except in very cold weather. The battery should be recharged every month, even if it is not used. While charging or discharging, a storage battery generates heat enough to keep it from freezing.

Batteries for Telegraphy.

Please tell me how many 6x8 gravity batteries I would need to operate a telegraph line a mile and three-quarters long, with twenty-ohm instruments. Would I need a relay? How many amperes should a 6x8 gravity battery test? How many volts should it test? How much difference in amperes between a 6x8 and a 5x7 battery? How should the batteries be wired?

Answer.—Using No. 12 gauge iron wire for the line, you would require six gravity cells to operate your line without a relay. The cells should be connected in series, that is, copper to zinc. Each cell should test a little over one volt. The amperage is rather uncertain, as it is affected by the newness of the battery, the amalgamation, length of use, etc. When not in use the 6x8 might test as high as thirty amperes and the 5x7 about half as much. A heavy drain would soon reduce the output to a fraction of an ampere.

An Electric Engine.

I wish you would explain to me how to make an electric engine, using two magnets out of an electric horn run by batteries.

Answer.—Figure 2 shows how such an engine may be constructed. MM are the magnet coils, wound of very fine wire, one right, the other left. The magnet cores are fastened in an iron base, T, which is bolted to a wooden base. BB are the crank-shaft bearings, supported on the wooden base. The bearing with the screw in it must be metal; the other bearing may be wood. F is the flywheel; R the connecting rod, driving the crank shaft, S. R should be brass or wood, and have a soft iron armature, A, fastened to it as shown. I is the commutator, consisting of a metal disk with a strip of insulation half way around it; the insulation being shown back on the drawing. S is a spring brass brush, resting on the commutator. The heavy dark lines show the method of wiring. Rod R must work freely in a hole through T. The commutator must be set on the crank shaft, so that the current flows through the magnets

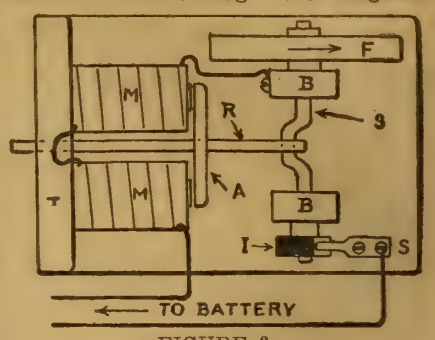

FIGURE 2.

when armature A is moving toward the magnets, the brush resting on the insulating strip of the commutator when the armature is moving away from the magnets.

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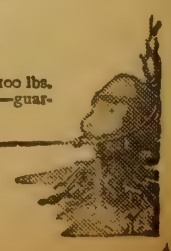

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The Wisconsin Farmer

THURSDAY, NOVEMBER 23, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

WE ARE THANKFUL.

THURSDAY of next week is Thanksgiving Day. Let us take a few minutes to recount some of the things for which we have cause to be thankful this year.

In the first place, we are thankful that we continue to be at peace with the world, that fields which were planted to corn and grain in the spring were permitted to bring their crops through to maturity and the harvest and were not terribly harrowed by shot and shell, moistened by the red blood of our sons—yours and mine.

In the second place, we are thankful that, having brought our crops through to maturity, we are privileged to receive good prices for them, so that the work of our hands and our heads is receiving a wage well worth our arduous labor under the burning sun of summer.

Next, we are thankful that prosperity is widespread throughout the land, not being confined alone to those of us who are the producing class in the nation's granary, but that it is being enjoyed likewise by those who find their life's work in factory and mill, in the large centers of population as well as in the wide reaches of the country.

We are thankful that the comforts and pleasures of life are keeping pace with our increased efforts and our larger earnings, so that never before was country life so richly and wholly satisfying, nor were men and women of the farms so proud of their calling, or so willing to remain there, turning unhearing ears and unseeing eyes to the allurements of the town and city.

We are thankful that our children of the country are coming to see, more and more each year, that the farm offers bigger and better opportunities to do the really-worth-while things of life than does the city, and that, even when they have gone from us to attend school and college, they return to us, eager to resume the work where they dropped it, in furrow and feed lot, to the end that that which we have begun in such high hope shall be finished by those whom we love and those who love us.

We are thankful that men of all ranks and callings are realizing today, as never before, that the interests and the welfare of the farmer must be considered above all others, and that those who sit in high places are shaping laws to give us long-withheld relief and to advance our prosperity, to the end that our beloved nation may take still higher rank among the great powers of the world.

We are thankful that the future begins to unfold before us bright and fair to look upon, unmarred by any cloud of fear; that the horizon of agricultural prosperity stretches as far as eye can reach, unbroken by any rift of doubt, on and on to the very edges of that promised land wherein He dwells, who, "watching over Israel, slumbers not, nor sleeps."

We are thankful that those whom the good Lord entrusted to our care are still with us, occupying their wonted places in the family circle; that there are no empty chairs pushed back against the wall; that, as the shades of night begin to gather and we approach our home, there comes to our ears the welcome sound of loved and loving voices, that shining faces are at the window to greet us, that life is full of pleasure and that we and those of our household are strong to enjoy them.

For all this, and much more, we of this family circle are thankful—oh, so very, very thankful this Thanksgiving Day.

HARNESS PRICES ON THE ADVANCE.

I WONDER how many of my readers know that if they were to buy the new set of harness now which they need, instead of waiting until next spring, they would save themselves from $15 to $25? Even in these days of eighty-cent corn, this is a sum well worth saving.

The hide and leather business is undergoing a great upheaval at the present time. Prices are advancing rapidly. I was advised by a prominent harness manufacturer today that he had just received a carload of leather, which cost him $22,000. He was obliged to pay seventy-two cents a pound, in carload lot, for the identical grade of harness leather which cost only thirty-eight cents two years ago. In short, two years of the European war have caused the price of leather to double. Nor is this all. Everything that goes into the making of a set of harness, from the buckles to the hames, is advancing in price. If you were to ask me why this is so, I would explain it on the ground of the frantic demand of the warring nations of Europe for our leather products—shoes and harness predominating. I have before me, as I write, a report showing that the exports of leather of all kinds from the United States during the year ending June 30, 1916, amounted to $80,073,887. For the same period ending June 30, 1914, (a month before the war began) the total was $36,668,869, or less than one-half that of the last year. Our exports of boots and shoes for the past year were practically three times what they were two years ago, while our combined exports of leather, boots, shoes, harness and other leather products for the last year were $90,000,000 more than two years ago. With such a record-breaking demand from Europe, and our shoes and harness going there in such unprecedented quantity, there is ground for the advance which is beginning to make itself felt to such an extent here at home.

You and I who paid $3 or $4 for a pair of shoes a year or two ago now find these same shoes selling for $5 and $6 and we are lucky, under the circumstances, to get them for that. As I write, a newspaper was laid on my desk, an item on the first page stating that the leading leather and shoe manufacturers and retailers of Boston predict that shoes will retail for $20 and even $30 a pair in the not far distant future. Harness is simply keeping pace with our other leather products. Harness sets for which we are now paying $65 will sell for $85 and $100 in the spring, when the demand and need are greatest.

I am advised by prominent manufacturers, however, that it is not too late to take time by the forelock in this particular instance. Harness have not yet advanced, although leather and everything which goes into its making is already advancing steadily. Next spring, when sales are being freely made, the increased prices will be asked, but today the old prices still prevail. This is because shops are full of harness and the advance in the price of the raw material has been so sudden that it has not yet reached the consumer nor affected the stock which was on hand when the advance took place. But the present conditions will not continue long and those among you who believe in preparedness, when it saves you money on as important an item as harness, would do well to take my advice and buy before the prices advance.

Nor must we make the mistake of blaming the harness manufacturers, for while it is true that shoes and harness are going up in price, it is also true that green hides are bringing thirty-three cents a pound in Chicago today, while forty cents is predicted, whereas twenty years ago they were bringing only five cents a pound; also that corn is bringing ten times as much today as it did in 1895. The harness manufacturer whom I interviewed on the subject was well within his facts when he said: "It takes fewer bushels of corn or wheat and less hogs and cattle to buy harness today than it used to, even at the increased prices obtaining today." Let us not delay, however, until even our high corn prices avail us nothing when it comes to paying the increase in the manufactured products which we need. Saving a dollar is just as important as earning one. If you need harness now, or will need it in the spring, buy it at once, before the price advances.

THE PARTNERSHIP OF HOME.

LAST week I promised to give my views this week on the complaint of the Illinois farmer's wife, who is allowed no voice in the family's business affairs, who has no spending money of her own and who, notwithstanding the fact that they have an automobile and sixteen horses, is obliged to walk to town, six miles, when she wishes to attend any social function. I have printed a number of letters on the subject, reserving the right to give my own opinion last.

I want to preface my remarks with the statement that I realize my responsibility full well. I must say that which will fit the particular case under discussion and at the same time do good in thousands of other farm homes, where, perhaps, the identical situation prevails. Moreover, I am so fortunate as to have a following of readers who place their confidence in me and look to me for sound logic. If I fail them in this, I will never be able to regain the proud position I once held. I have a following made up of readers like the one who wrote me, just last week:

We have taken your paper for thirty years and always liked it. I hope nothing will be said to lessen my opinion of it.

I sincerely hope that that which I shall say on this subject will not lose me the good opinion of this farm family which has taken my paper for so many years. I value the friendships of many years' standing more than anything else in all the wide world, aside from the love of the members of my immediate family.

Here are my honest, earnest views on the subject we have had under discussion for several weeks past:

The husband who does not take his wife into full partnership with him on all matters, without any exception whatever, is not only making an awful mistake, but is guilty of criminal carelessness. The wife who does not make every sacrifice to assist her husband to get a foothold in the struggle for life is not only undeserving of our sympathy, but should be most emphatically condemned. The husband, being the stronger of the two physically (not mentally, do not misunderstand me), should be the one to give in first when a clash is unavoidable.

I believe that every man—whether he be farmer, merchant, day laborer or millionaire—should discuss his business affairs with his wife, down to the very most minute detail. If he is a farmer he should tell her just how much his corn crop is worth or has brought, what the dispersion sale of his herd has realized him, what he proposes to buy in the way of more land or more animals or more labor-saving machinery in order to make his farming operations easier or more profitable, what system of rotation of crops he proposes to follow, and so on and on. He should tell her how much money they have in the bank, what notes are outstanding, what his ambitions are and in every way possible make her a partner of his thoughts as well as of his acts.

I believe that every woman—no matter whether she live in the country or in the city or town—should go to her husband with the cares and perplexities of her household work and ask his advice, should tell him what comforts and conveniences she wishes to buy, and ask him if the family finances are in such shape that the expenditure will be justified or is possible, should ask him to aid her in inculcating moral principles into the children's minds and in bringing them up to be God-fearing men and women. I believe that husband and wife should work together for the advancement of one another and of every member of the family, talking everything over together, no matter whether it be the sale of a pound of butter or the purchase of a tractor. In no other way, in my opinion, can married life be made an absolute success.

I believe that married life is, of necessity, a series of give and take, that there must be sacrifices on both sides. The husband may find it necessary to give up little personal extravagances until the family affairs justify them again. The wife may find it necessary to do without things which she had to work with in her father's home and which she believed then to be absolutely indispensable. But if the two love each other they will welcome the personal sacrifice and will struggle together without recrimination or regret until the time comes when smiling fortune, blessing their fields and making them to yield abundantly, enables them to have those things which they have long craved and long been denied, to be enjoyed all the more for the long waiting and hoping.

The husband who does not give his wife every convenience which they can afford is guilty of a neglect which is well-nigh criminal. The wife who does not do the best she can with that which they can afford, without complaining or nagging, is guilty of a selfish thoughtlessness which cannot be condemned too strongly. The partnership which does not consider the physical, mental and spiritual welfare of each partner absolutely equally is doomed to failure, sooner or later.

These are my honest convictions on the subject under discussion, and I offer them to you for whatever they may be worth. If, after weighing them, you find them wanting, will you let me know? But if, on the other hand, you find them good, will you hug them to your hearts and build your own lives upon them, to the end that the peace which passeth all understanding shall prevail upon the hearthstones of millions of happy farm homes in a land abundantly blessed with plenty and prosperity?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

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ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

An Article of Importance to Wisconsin Dairymen.

IN EACH issue The Wisconsin Farmer publishes one or more feature stories illustrative of some phase of Wisconsin farm life. This week one of our editors writes an interesting article concerning the Spaanum farm, in Dane county, and discusses the problem of cooling milk and other farm products right on the farm. Mr. Spaanum has a hillside farm and he has worked out a plan whereby he gets the largest possible use of every foot of his ground devoted to dairy barn and surroundings. He explains the plan of his cooling system and what it means to have rooms always available in the hottest weather, with temperatures as low as 36 to 40 degrees. Our readers who went through the recent hot summer will certainly appreciate this article concerning Mr. Spaanum's farm, and we hope it will arouse such an interest that many will be anxious to have an ice house and proper storage facilities on their own farms.

Conclusions on Upper Wisconsin Investigation.

MR. J. C. McDOWELL, agriculturist for the United States Department of Agriculture, in co-operation with Mr. W. B. Walker, assistant, have just issued a bulletin, "Farming on the Cut-Over Lands," after a careful survey and study of 801 farms typical of this area in Wisconsin, Minnesota and Michigan. Mr. McDowell will be remembered as one of the principal speakers at the 1915 meeting of the Wisconsin Dairymen's Association, and after a year's work in Upper Wisconsin, he speaks with considerable authority on this subject.

In his summary, Mr. McDowell makes the following important conclusions of interest to stump-land farms:

Net profits increase as tillage area increases. How to enlarge the tillable area economically is the first and most important agricultural problem.

With average yield and average price, potatoes furnish a satisfactory cash crop in practically all parts of the district. Hay, clover seed, peas, beans, hairy vetch, seed corn, rye, wheat, barley, small fruits and garden vegetables are other valuable cash crops.

Silos are increasing rapidly wherever corn can be grown.

On dairy farms of all sizes the quality of cows as indicated by receipts per cow is a major factor in determining labor income.

A large amount of family labor is available, much of which is not used to advantage and the crop area per horse is too small. Irregular fields with stumps prevent the most efficient use of machinery.

Hog production may be combined with dairying where corn matures and on farms growing rye, barley, soy beans or Canadian field peas as corn substitutes. Sheep and beef cattle production are not common as major propositions, but are furnishing satisfactory incomes on a few farms. Dairying combined with cash crops is profitable financially when production per cow is high and crops above the average.

Mr. McDowell's conclusions, it appears, agree with the general belief that in dairying lies the greatest possibilities for Upper Wisconsin. Beef, swine and sheep are being raised, he says, profitably in many instances, but the area studied seems to be better adapted to dairying, as it grows the dairyman's crops. The increasing number of silos indicates the drift in this direction, but even dairying, he has found, is not profitable except where the production per cow is high and the crop averages high. The quality of the cows is of major importance, and he recommends the use of better bulls, more cow-testing associations to weed out the boarders, and co-operative enterprises to secure better stock. The problem is one of aiding the settler to get better live stock and co-operative ownership of sires is suggested as one remedy as well as the well-known Ashland plan, whereby business men stand sponsor for better stock imported. Dairy cows, with young animals and bulls, his report show, comprise 63 per cent of the animals in the cut-over area. Sheep and beef cattle comprise less than 7 per cent, hogs less than 6 per cent, poultry 3 per cent, and work horses and colts 20 per cent.

The relation existing between income and size of business, as measured by tillable area, is discussed very fully. The "little farm well tilled" may succeed, and frequently does, Mr. McDowell says, but the prospects are brighter for the larger farm if it has sufficient area under the plow. This tends to point out the necessity of clearing the land as rapidly as possible, and the survey brought out the fact that the farms with a larger percentage of tillable ground brought the largest labor income per year. How large the farm should be depends upon the farmer's resources. Another important point is that, while family labor is plentiful, much of it is wasted on non-producing projects.

Mr. McDowell handles the entire subject without gloves, and, though the bulletin may not please unscrupulous real estate promoters, it gives the settler-farmer a splendid idea of the work before him.

Activity in Beef Breeds in Wisconsin.

WHERE one type of farming or live stock breeding forms a very large part of the activities of the farmers of any one state as dairying does in Wisconsin, it is but natural for many to assume that it is a one crop or a one live stock type state. This has been true to some extent of dairy farming in Wisconsin, although both the beef and swine industry are making rapid progress, and many more farmers are raising sheep with success each year.

Wisconsin was considered, only a short time ago, a strictly dairy state by outsiders, and to a large extent by our own people. The fact that dairying is the big factor no doubt has prompted such conclusions, but it should also be borne in mind that some of the foremost breeders and feeders of beef cattle live within this state. This was emphasized recently, when the honor of holding the greatest Short-horn sale in America fell to a Wisconsin breeder—Mr. Frank Harding, of Anoka Farms.

An informal "inventory" of the beef cattle interests of Wisconsin, taken recently by the Wisconsin Live Stock Breeders' Association, brings to light the fact that there are more than 500 regularly enrolled members of national beef-cattle clubs in this state. The membership in the Red Polled Cattle Club of America heads the list with a total of 241 active breeders, and other clubs are represented as follows: American Polled Durham Association, 131; the American Hereford Breeders' Association, 47; American Galloway Breeders' Association, 25; Aberdeen Angus Association of America, 35. By official figures there are about 580 Short-horn breeders in Wisconsin who own purebred females, but only a small number of these are members of the American Short-horn Breeders' Association, which is a stock company and the membership in thus restricted.

Unusual activity in all the beef breeds has been noted during the past few months, and this has been especially true with the Angus industry. Within only a few months 185 bulls of this well-known beef type were transferred to Wisconsin breeders. Our readers who have kept track of the various sales this year appreciate the fact that breeders in other states are buying from Wisconsin breeders, and we do not doubt but that, were the statistics available, it would surprise every breeder if he knew how much live stock was shipped from Wisconsin each year through private and public sale to other states for breeding purposes. While no exact figures are available on the sales of beef cattle to the open market, the demand for well-fitted animals for this purpose is reflected in the growing activity among breeders, who largely supply the feeding stock.

Interest in Dairy Show For Wisconsin.

ALREADY steps have been taken looking toward the location of the National Dairy Show at Milwaukee in 1917. Mr. W. H. Reese, of the Milwaukee Manufacturers' Association, and Mr. Lefeber attended the show at Springfield, Mass., this year. An effort has been made to get the National Dairy Show for the state fair grounds, but we are advised that the officials of the show would not consider this proposition. The National Dairy Show people have more recently been offered the auditorium in Milwaukee and it is reported that they are considering this proposition. Another report is that the National Dairy Show has contracted to show at Springfield, Mass., for five years on the new grounds built this year. We are inclined to think this report is incorrect as one of the directors of the National Dairy Show advises us that nothing definite will be decided before about the first of the year.

In this connection The Wisconsin Farmer has received a letter from Dr. Royal Klofonda, of Brillion, Wis. He writes:

Wisconsin is entitled to the National Dairy Show for 1917. Its breeders have furnished the state fairs and dairy shows with large numbers of almost undefeatable dairy cattle. There is never an exhibition held but what Wisconsin carries away a large proportion of ribbons. In order to accomplish this feat, large sums of money are spent in preparation for the benefit of all. It is no more than right that Wisconsin should be the next home of the National Dairy Show. Because ancient history records a partial failure does not prove that there will be a repetition. With more thorough management and hearty co-operation from all industries, a National Dairy Show in Wisconsin can be made a certain success. We suggest state breeders' associations invite the co-operation of each county organization, boys, and girls' clubs and various other organizations, thus creating a local interest which is the proper course towards a gain in rural attendance. Past tendency has been to rely too much on the lesser half—our city cousins. Wouldn't it be nice to have the whole "rural family" at the National Dairy Show at Milwaukee in 1917?

One more suggestion: How does it appeal to you to combine the Wisconsin State Fair and the National Dairy Show in 1917 into one grand exposition.

The Wisconsin Farmer has been somewhat backward about pushing the National Dairy Show for Wisconsin for fear it might hurt the Wisconsin State Fair, but we understand the state fair officials are enthusiastic for the event. This is certainly showing the proper spirit.

Among the prominent western breeders and dairymen who are directors in the National Dairy Show association are W. J. Gillett, Rosendale, Wis.; Charles L. Hill, Rosendale, Wis.; W. B. Barney, Des Moines, Iowa; John Irwin, Minneapolis, Minn.; Col. George Watson French, of Iowana Farms, Davenport, Iowa. Most of the gentlemen are exhibitors at the national shows and would be glad to have the show come west each alternate year. New York and New England dairy interests may try to keep the show in the East, but it seems likely some western city will win it in 1917.

Demand For Better Buttermakers.

THERE probably was never the demand for good, efficient buttermakers as exists today. Competition between creameries is becoming keener each year; those which turn out the finest product are receiving the premiums paid for good butter and successful creameries which a few years ago were content with a $75-a-month buttermaker are now looking for the man with the capacity to earn $125 or $150, or more. The more the creamery owners, which in Wisconsin means the farmers as the larger number of our creameries are co-operative, realize that quality counts the greater the demand for efficient buttermakers. In one Wisconsin community in which two creameries churned over 1,000,000 pounds of butter a year, it was found last summer they were losing from 1 to 2 cents a pound because of poor quality and marketing. An individually owned creamery a few miles away was selling its product at 2 to 3 cents a pound higher, and this competition is bringing the creamery owners to realize that the best is none too good.

These facts were in line with those very pointedly brought out last week by Dean Farrington, of the Wisconsin Dairy School, before the national convention of buttermakers at Minneapolis. Every buttermaker, he says, should answer the question, "Would I hire myself in my own creamery?" as the time is passing when students in creamery operation can hope to get a job and hold it without having a thorough and practical education backed by ideas and ideals. Inability of the dairy school to fill half the applications received for buttermakers, he considers a sign of the big demand for trained men and also an indication that creamery operators are coming to see the folly of turning out nothing but the best butter; a product that will command the highest market.

In summing up the qualifications of buttermakers, Dean Farrington quoted from the following, prepared by the owner of a large creamery business:

First, a man who knows what it is to be clean; who has a working knowledge of sanitation in a plant, and who does not need to wade through milk and cream with his boots on to get his work done.

Second, a man who has some experience in this line of business in other places.

Third, a man who knows how to exact obedience from those working with him. He must be a leader.

Fourth, a man who does not slight the details, and who keeps his eyes open.

There is also the demand now, Mr. Farrington says, for the buttermakers with personal pride, for whom there is a great opportunity for real missionary services in the communities where they work. Buttermakers who will reach outside and work with their patrons to improve their herds, weed out the boarders, and deliver a cream that is sweet and clean.

Wisconsin Interested in Milk Conference.

A CALL has been issued for the first national meeting of milk producers, to be held in Chicago, Tuesday, December 5th. This call was issued by the milk producers of Chicago dairy district, an organization numbering over 12,000 milk farmers and including some in southeastern Wisconsin. The meeting will be held under the auspices of the National Conference on Marketing and Farm Credits, which holds its fourth annual meeting in Chicago December 4th-9th, at the Hotel Sherman. The call states that milk producers of America are finding themselves forced to quit the business in large numbers on account of the high production cost. This high production cost involves high prices of lands, high prices of feed, higher prices and scarcity of labor and modern equipment and sanitary requirements for the dairy of today. The milk producers say they must either reorganize their methods of producing and distributing milk, or go out of business and leave to the farmers of the more distant sections the task of supplying the centers.

The real purpose of the conference is to work out some fair and equitable method for co-operative sales of milk and for contract prices which cover a longer than the customary six months' period. If

the producer can know for many months ahead just what price he is going to receive for milk, he will be better able to gauge his expense.

Mr. Frank T. Holt, of Kenosha, Wisconsin, is acting president, and W. J. Kittle, 29 South LaSalle Street, Chicago, is secretary of the association which is making this call.

Wisconsin Dairymen's Convention.

THE forty-fifth annual meeting of the Wisconsin Dairymen's Association will be held at the court house in Waupaca, December 5th-6th-7th. In 1872 a call for such a meeting was issued in Wisconsin by W. D. Hoard, Stephen Favill, W. S. Greene, Chester Hazen, H. F. Dousman, A. D. Favill and H. C. Drake. The first meeting was held at Watertown. From the time this organization was perfected until today dairy products in this state have increased from $1,000,000 to $100,000,000 in value annually. As many dairymen as can possibly attend the sessions of this convention should do so. It is expected there will be an unusually large attendance from the Fox River Valley district, and from central and upper Wisconsin.

The program will include addresses by Math Michels, Peebles; Noel Negley, Madison; George Moss, Waupaca; Dean H. L. Russell, Madison; W. J. Dougan, Beloit; C. E. Lee, Madison; A. J. McGuire, St. Paul, Minnesota; W. H. Clark, Rice Lake; John Michels, Peebles; J. G. Poynton, Fort Atkinson; George McKerrow, Pewaukee; J. Q. Emery, Madison; F. G. Swoboda, Antigo; F. M. White, Madison; F. R. Constance, Waupaca; A. J. Glover, Fort Atkinson. This array of talent will provide a feast for our dairymen, and we repeat that the attendance should be large. Waupaca is situated on the Soo line and can be reached from the south via Fond du Lac, and from the north via Appleton and Neenah-Menasha. From the west there is direct connection to Waupaca from Stevens Point, Marshfield and Chippewa Falls.

Increased Value of Wisconsin Dairy Products.

WISCONSIN farmers and dairymen are profiting by the present high prices of dairy products. As we write this, butter sales on the Elgin call board run from 36½ to 38 cents and the statement is made that prices will continue to advance and the end is not yet. There is apparently a constantly diminishing supply and a constantly increasing demand for export. Furthermore the cheese industry is making unusual demands for milk.

The price of butter on the Elgin call board November 10, 1913, was 31 cents. In 1914 on the corresponding day it was 33 cents. In 1915, on November 13th, it was 30 cents. This year on November 12th it was 36½ cents and some of the best fifty-tub lots brought 37 and 38 cents. This is an increase of more than 20 per cent over the corresponding dates for last year.

We quote a few items from cheese reports the middle of November:

Sheboygan—Seven hundred and eighty-two longhorns offered on call board and all sold at 26 cents. On the corresponding date a year ago there were 741 cases of longhorns offered on the Sheboygan call board and they sold at 15½ cents.

Plymouth—Six factories offered 419 boxes of cheese on the call board and they were sold as follows: Twenty-two twins at 26 cents; seventy-five daisies at 26¼ cents; thirty daisies at 26 cents; 118 cases longhorns at 26 cents, and 176 boxes square prints at 26⅜ cents. There were no Americas offered. Sales a year ago on the corresponding date on the Plymouth board were: Twenty-five twins at 14¾ cents; twenty-five cases Young Americas at 15½ cents; 310 daisies at 15½ cents; 496 cases longhorns at 15½ cents, and 420 boxes of square prints at 16 cents. The editor of one of our dairy papers commenting on the 1916 quotations on the Plymouth board November 13th, says: "Last week we thought someone was crazy, but with the still higher prices staring us in the face, we don't know what to think. They are sure some high fliers."

Appleton—Twelve factories, offered 327 boxes of cheese November 14th and these were sold as follows: Seventy-three cheddars and 254 boxes twins all 26 cents.

Muscoda—One hundred and ten boxes of twins offered, but all were withdrawn refusing a bid of 23 cents.

Spring Green—Nine hundred and nineteen daisies sold at 25¼ cents. Not only is the market on all dairy products high, but the demand is strong.

As usual the factories which have earned the reputation for turning out a good product are getting the top prices. It will be noted by the above figures that factories are getting an advance of about 20 per cent on butter over 1915 prices and an advance on cheese of about 66 2-3 per cent, but it is apparent that this is one year when we should make every lick count in the dairy business.

High Values Should Encourage Sheep Production.

THERE were upwards of 3,000,000 more sheep in the United States in 1909 than there were in 1915 and during that time the average value of sheep increased from $4.12 to $5.17 per head. Wool values started upward, even before the European war, and they have been climbing ever since. In 1910 the United States imported 263,000,000 pounds of raw wool, while last year the amount ran up to 308,000,000 pounds. If we look for an explanation as to why the number of sheep has decreased in this country we will find the cause in the gradual encroachment of agriculture on the grazing lands of the West, thereby causing an increase in the cost of sheep raising and incidentally, it may be added, creating the opportunity for the states of the central West.

We find that the eastern experiment stations are making a heroic effort to induce farmers of those states to increase the number of sheep on their farms. They are unquestionably soil builders, a ton of sheep manure having the value of $4.45, while manure from cattle is worth but $2 per ton, considering nitrogen worth 16 cents a pound, phosphoric acid 8 cents and potash 5 cents.

A few of the essentials in the problem of sheep raising are referred to in a bulletin from the Pennsylvania station. These include: The willingness of the farmer to pay the proper attention to his flock at the critical times of the year; the production of lambs of early maturity that should preferably be marketed before the first of July; the control of parasites in the flock by the sale of early lambs, rotation of pastures and flock management; the protection of sheep from dogs, by community interest in sheep, by enforcing dog laws and keeping sheep in protected quarters at night; the utilization of pasture to the greatest degree; the feeding of corn silage with clover or alfalfa hay, supplemented with grain, to the breeding ewes at definite periods; the selection of breeding sheep that possess merit in wool, as well as in mutton character; consitutional vigor and health as a result of breeding and care in a foundation flock; cheap equipment which offers protection, plenty of ventilation and a dry bed; the marketing of products of wool and mutton with an understanding of market values and demand.

It is pointed out in this bulletin that from fifteen to twenty-five ewes are a sufficient number for anyone without experience to undertake as the nucleus of a farm flock. It is resumed that a beginning is made with grades, but in any event the use of a pure-bred ram is strongly advised. Experiments at the Wisconsin and other stations have shown that pure-bred mutton rams sire lambs that make greater gains, reach a higher condition of flesh at less cost in amount of feed consumed, and command a higher market price than lambs sired by a scrub ram. The suggestion is made in this bulletin that one or two pure-bred ewes should be added to the females of a grade flock. The lambs from the latter may be kept and gradually the owner can eliminate his grades as the number of pure breds increase, so that in a few years, after experience is obtained in handling the sheep, something worth while will then be on hand to work with. While sheep require relatively little labor in their care, at the same time special attention is needed during the breeding and lambing season, and that is why experience in the handling of a small flock is needed before it is taken up on anything like an extensive scale. It is scarcely necessary to refer to the ability of sheep as weed destroyers, because it is a well-known fact that they will consume upwards of 90 per cent of all that troublesome weeds found on the farm. To be sure they need something besides weeds, but this is an advantage that must not be lost sight of when sheep are being considered only from the standpoint of mutton and wool production.

Many Diseases of Hogs Traceable to Lice.

IN TIMES past there has been a tendency on the part of some experiment tations to belittle the injurious effects of internal and external swine parasites. In some cases these institutions seem to have been filled with a fear that somebody was likely to reap a big profit as the result of marketing products that would destroy these parasites. Within the last twenty-four months we heard a station worker state that there was practically no connection between the presence of parasites and cholera, the inference being that hogs depleted in their vigor by internal and external pests were no more liable to contract a contagious disease than were healthy hogs. Now, as a matter of fact, every successful swine breeder knows better than this, and while no sensible man makes the claim that you can bring a herd of hogs to such a high condition of health that they will not contract disease, still there is a degree of immunity in bounding vigor, and for that reason every possible means should be utilized to reduce the injurious results that come either from external or internal agencies.

The South Dakota station has recently called attention to the fact that the first pigs to succumb to pneumonia are those that have been badly infested with lice. It is not contended that pneumonia is contracted directly because of the presence of the lice, but, rather, that the animal is weakened and made susceptible to the attack and means used to destroy lice greatly lessen the danger of bringing into the herd a contagious disease.

This station recommends dipping, but, of course, as the season is getting late, dipping is not practicable and other means must be resorted to, which leads directly to the recommendation of the hog oiler. "There are many machines on the market called hog oilers," says Dr. J. T. Dinwoodie, "which overcome the difficulty, inconvenience and danger of dipping animals in winter. The hog oilers take advantage of the fact that all lousy hogs scratch." It is recommended that those who do not have the improved type of oiler will get good results by soaking rope or other material in crude oil and afterward wrapping it around a post at a height of about two feet, so that the hogs have access to it. From time to time it should be saturated with more oil. Sometimes the oil is applied with a paint brush while the pigs are at the feeding trough. It should be put on along the back and down between the ears, and no harm will come if it is used so freely that it runs down the sides. In this way hogs become so besmeared that their sleeping quarters are soon brought into condition, so that lice cannot exist there. One must understand that lice do not breathe like the higher animals, but depend for their existence upon the admission of air through the pores of the skin. Just as soon as the little pests come into contact with oil, these pores are stopped up, which brings about their complete destruction.

Deceitfulness Practiced in Baling Hay.

STANDARDIZATION may be said to be the motto of the age in which we are now living. This fact was forcibly brought to the attention of those in attendance at the last farm credits and farm marketing conference held in Chicago. One of the speakers called attention to the fact that the buyer of produce for several large hotels in New York City was criticized for purchasing so many western apples while passing by the eastern product. His reply was, "I never buy anything that I have to look at before making the purchase." In other words, this man transacted business only with those who could furnish him a standard product, that is, a product that was absolutely up to the specifications in every sense.

More and more this principle is dominating the business world and it will surprise some of our readers to be told that serious abuses are practiced sometimes in the baling of hay. It is known as "veneering or facing the bales" and it is accomplished by feeding to the baling machine an occasional forkful of hay that is higher grade than the bulk of the lot being baled, and manipulating the forkful in such a way that the high-grade hay covers the outside of the bale, giving to it the appearance of being a product of one quality, whereas it is in reality of infinitely lower grade than it appears.

This practice has become so common that the National Hay Association has requested the department of agriculture to co-operate with it in trying to eliminate this form of unfairness. One result of this abuse is that buyers of the central markets are making a much closer examination of baled hay than they ever did before and it may be safely assumed that when they find an inferior product that has been simply "dressed up" to sell the shipper is going to be considerably disappointed with his returns.

It would be impossible to use language too strong in condemning this practice, not only because it is morally and legally wrong but because in the end it will operate against the best interests of hay producers.

Damage From Rabbits and Mice.

MANY a man has become discouraged in his attempts to establish an orchard by the depredations of rabbits and mice, and because of this the following communication from the well known Wisconsin horticulturist, George J. Kellogg will be of interest to many of our readers:

Give the boy 25 cents for every rabbit he will kill on your grounds, little or big, the year round. This will pay the boy and every rabbit saved in this way may be worth a dollar to you if you have twenty five nice apple trees that have been planted only a year or two. Every tree of the right kind, well started, is worth a dollar and each year's growth is worth a dollar more and you can't afford to run any rabbit risk.

The boy, the gun, the trap and a good dog are the best protection. Three cornstalks tied about the tree in November will keep the rabbits off the limbs. If a deep snow comes hire another boy, watch the drifts and stamp down the snow. I have used good newspapers tied about the trees, which will last one winter. Woven lath and wire veneer which costs only a few cents is good. Brown building paper is also good, but don't use black, as it will kill the tree where it touches it. One rabbit will do $25 worth of damage in one night.

Many growers of orchards know all these things but they need to be reminded of them "lest they forget."

Now about the mice. They are everywhere. I have had them come across the highway to get at my rose garden. The roses were mulched, but were not covered with soft dirt, so they got under them and bushes worth dollars were worthless in the spring. If I had covered them with inverted sod and soft dirt, or if I had taken old oyster cans and given the mice a little cornmeal and Paris green I would have saved my roses.

For the apple trees and shrubs and roses clear away the leaves and grass, mound up with fresh dirt about six inches and when the mice come to that fresh dirt they will go around. If there is any grass or a cornstalk on that mound the mice will climb. They will climb ever so far up a tree or shrub to get fresh bark if the snow drifts. I have known mice to get clear to the tops of apple trees. In case of deep snows tramp down around your trees and save the destruction of the mice. If damage by mice is seen as soon as the snow goes off by banking up with soft dirt it will often save the tree. By grafting, by inarching, connecting the top and the root with a scion or four scions you can sometimes save a valuable tree.

As Mr. Kellogg has been interested in horticultural problems for a period of eighty years, the beginner can well afford to benefit by his counsel. There is no question but what, under certain circumstances, one rabbit is able to do $25 worth of damage in a single night, and in advising fruit growers to encourage the boys in rabbit destruction. He is taking a most effective way of exterminating these pests. It is a wise thing to have a little cash circulating among the farm boys, and if they can succeed in exterminating tree pests, the money they earn in this way will prove to be an exceedingly good investment from the standpoint of the orchard owner.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Good Care and Regular Feeding.

To the Editor:—I was one of the entrants in the baby beef contest at Madison under the auspices of the Wisconsin Live Stock Breeders' Association.

My calf is a pure-bred Red Polled heifer, which has been fed and cared for by myself and was shown at the Richland County Fair, winning first prize. She weighed 470 pounds April 28th and on October 30th weighed seventy-five pounds. She was calved September 17, 1915. I have fed her whole milk from a pail twice a day and ground feed three times a day since April 28th. My experience has taught me the necessity of good care and regular feeding to produce good calves.

Wayne Martin.

Richland Co., Wisconsin.

Rest Rooms For Farmers.

To the Editor:—You will be interested to know something about our ladies' rest rooms. These rooms are made great use of, particularly by the women from the country. We have found that they make these rooms headquarters as soon as they come to town. Here they leave their outside coats and rubbers and quite frequently packages until they are ready to go home. We do not find they make much use of the rest room as a visiting place, for the reason that they prefer to come out into the main store and see what is going on. Our store is equipped with rest rooms for both men and women and both rooms are supplied with toilet facilities. We find quite frequently both men and women make use of the separate rest rooms for changing clothing. The men especially find it convenient for putting on clean collars or a new tie.

These conveniences have been a great help to us in our business. They make our store headquarters for a very large number of farmers and members of their families. You will see the women folks especially make for the rest room as soon as they come to town. A great many of our women customers from the country, especially in the wintertime, do their trading without their heavy coats or wraps or rubbers on. This is much more comfortable for them and makes the store more like home to them. Furthermore, the wraps do them a great deal more good when they go out again into the cold.

Every general or department store should be supplied with rest rooms. In a small town like ours these rest rooms are used almost exclusively by the farmers. The fact that they have all of their wraps and togs and packages in our rest rooms seems to anchor them to our store and the convenience which we provide is well worth all it costs.

John Hersig,

Manager People's Mercantile Association, Mt. Horeb, Wis.

FARMERS' STORE, MOUNT HOREB, WISCONSIN.

Tractor May Save Team.

To the Editor:—We have had some experience with a tractor this year, although this has been limited to filling three silos and two hours grinding grain, and plowing twenty-five acres on rolling prairie. I rather expect my tractor purchase will permit me to sell one team, but have not had enough experience yet to be absolutely sure.

T. A. Dowling.

Iowa Co., Wisconsin.

Mishicot Association.

To the Editor:—On account of poor late pastures our cows are not showing up the way they should, although those farmers which did summer feeding in addition to pasturage, are getting pretty good records and will also have a longer milking period. The record for thirty days ending October 31st, showing cows which produced forty-five pounds of fat or over is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Oscar Samz					
Dolly, G. G.	5	9-22	1317	4.1	53.99
Molly G. G.	6	9-1	1146	4.1	46.99
George Barthels					
Splendet, N.	6	9-16	1155	4.6	53.13
Jennie, N.	6	9-26	1359	3.7	50.28
Pet, N.	5	9-29	1215	4.0	48.60

E. H. Meineke, Official Tester.
Albert Johannes, Secretary.

Buttermakers' Program.

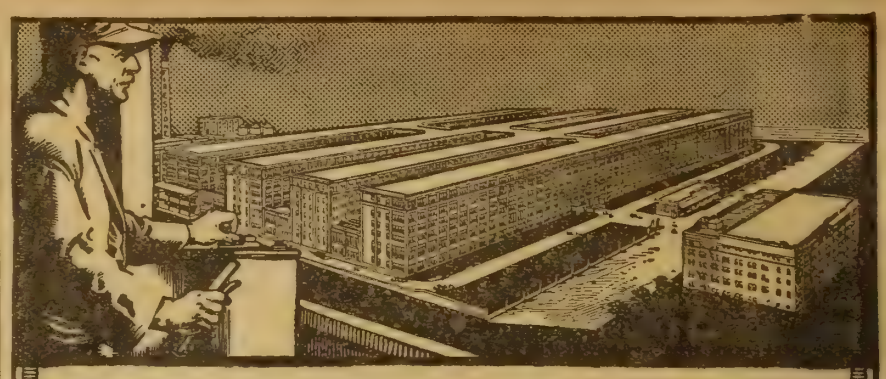
The annual session of the Wisconsin Buttermakers' Association will be held this year at Sparta, December 5th, 6th and 7th. The program announced includes the following:

Tuesday, December 5th—Addresses by Pres. E. J. Morton, of Chetek; Mayor F. P. Stiles, of Sparta; Lauritz Olson, of De Pere, and Prof. R. A. Moore, of Madison. Meetings in the armory.

Wednesday, December 6th—Inspection of butter exhibit. Addresses by L. Dickey, Glenwood City, on uses of gasoline engine in creamery; E. M. Jackson. La Crosse, on "How We Are Bettering Our Creamery Conditions." Reports of officers.

Wednesday, December 6th—H. B. Hoiberg, of Coon Valley, on "Hot Water Heaters in Creamery;" E. H. Farrington, Madison, on "Value of Skim Milk to Creamery Patrons;" Prof. M. Mortensen, Ames, Iowa, on "Business Correspondence;" R. M. Washburn, of St. Paul, Minn., on "The Buttermaker's Business."

Thursday, December 7th—Prof. F. G. Kraege, Fort Atkinson, on "Importance of Proper Methods of Ventilating a Creamery;" Prof. G. H. Benkendorf, on "The Buttermaker's Duty in the Proper Marketing of His Factory's Butter;" Hon. J. G. Weigle, Wisconsin Dairy and Food Commissioner, on "What the New License Law Has Accomplished;" Prof. E. G. Hastings, of Madison, on "The Cause and Prevention of Mold." Discussion of pasteurization, by H. E. Griffin, of Mt. Horeb, on the affirmative side and V. S. Keppel, of Holmen, on the negative side.



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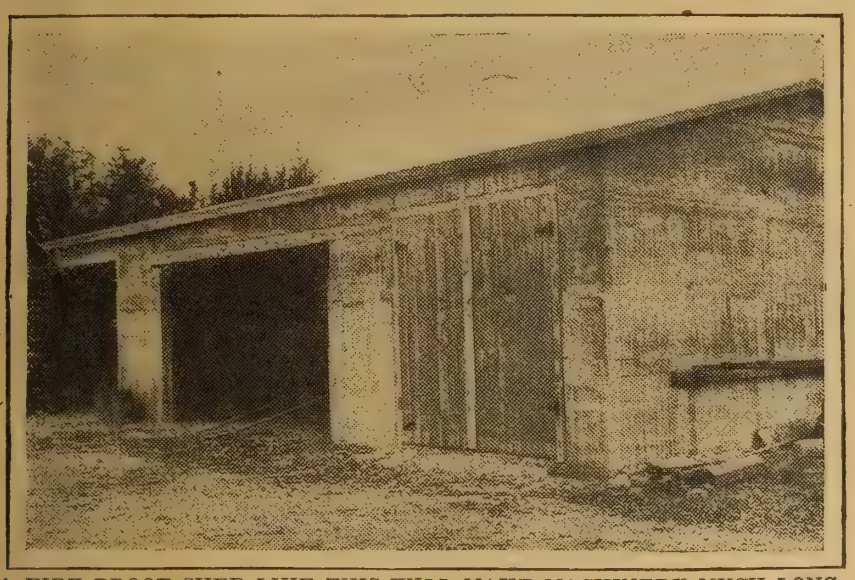
Take Care of Farm Machinery.

Plans Should Be Made at Once to Get All Machinery Under Cover—A Shed For Implements Is the Best Plan.

ONE of our best agricultural engineers has figured that 75 per cent of depreciation on agricultural implements may be saved by properly caring for such implements in the wintertime. In one of the accompanying views farm machinery is seen left out in the barnyard. There is a good deal of carelessness connected with this scene. While the farmer is otherwise well equipped, while the cattle are well housed and the grain stored in modern barns, the valuable implements are allowed to remain out in the rain and snow and sleet.

MACHINERY SHOWN IN THIS PICTURE IS TOO VALUABLE TO BE NEGLECTED.

Implements should be put away as soon as their usefulness for the season is ended. By this time of the year all repairing of implements should be finished. The implement shed shown with this article is of fireproof construction and a very serviceable shed. Those who do not care to put so much money in a shed can easily make a very good one from lumber. Be sure to put on a good roof. A hollow tile shed is splendid protection from the blasts of winter, but, like the concrete, is more expensive than wooden structures. However, these permanent materials are well worth their cost.



A FIRE-PROOF SHED LIKE THIS WILL MAKE MACHINERY MUCH LONGER LIVED.

It is better even at this late day in the fall to build a good shed than to wait until another season cuts the value of implements by depreciation. Rain and snow result in rust of working parts on a machine and rotting of the wood. It is advisable to apply a coat of paint before the implements are stored for the winter. At any rate, the machines should be well oiled and greased.

An end of the machinery shed may be partitioned off for a shop and this convenience will be appreciated many times during the year. In this shop each of the farm tools should have its place and they should be returned to this place after use?

An implement shed should be ten to eighteen feet in width and long. It is best to have a door along the exposed side. If there is no door the exposed side should not face the north or west, as most of the worst storms of winter come from that direction. In many sections the rains come from the east and it is not advisable to face an open shed to the east. The south in most instances will be best. Any open shed will have some rain and snow whisked into it by the changeable winds of winter and spring.

Sleet on painted implements will almost invariably damage the paint and in some cases cause it to peel off entirely.

Machinery is now much higher in price than in former years and it pays to take good care of it. Those who have not provided a special shed may find a covering somewhere and this should be arranged for at once.

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It's a mistake to think that you too cannot have IDEAL Heating. Just read these reasons, then send for our free book "IDEAL Heating" and you will see how easy it will be for you to have these comforts and conveniences.

"Come right in, folks, where it's warm all over—radiators make a heap of difference"

Reason 1. IDEAL heating can be put in a house, new or old, without tearing out partitions, walls, or floors, or disturbing present heating arrangements. No dirt, fuss, or confusion.

Reason 2. Not necessary to have water pressure because IDEAL boilers use the same water for years. The outfit may the first time be filled with a bucket.

Reason 3. Not necessary to have a cellar because IDEAL boiler may be placed in side room or "lean-to." Thousands of boilers are so placed.

Reason 4. The savings in fuel (IDEAL boilers burn any local fuel) soon pay the original cost of the outfit and the absence of labor and attention, and repairs of IDEAL heating, repay many times the cost.

Reason 5. The cost, as illustrated below, is not large. Consider that you buy an IDEAL outfit for a lifetime of service with no further upkeep expense, and when you are through with it, it's just as good as when first bought. It's the only equipment you can buy which is never worth less than you pay for it. In the meantime, it gives you unequaled heating service with less fuel bill per season and it increases the value of your property more than any one thing will do.

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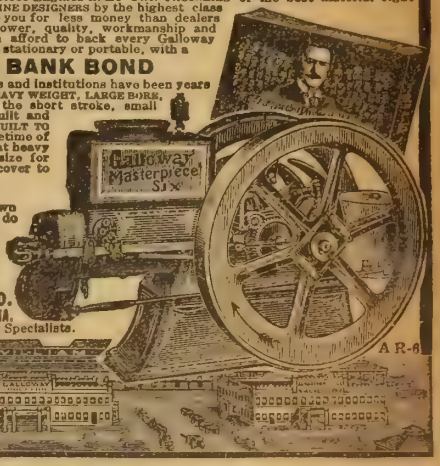

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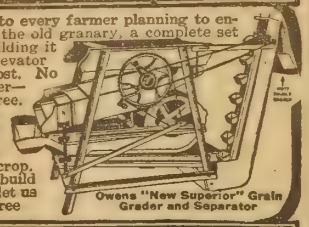

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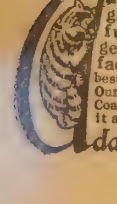

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UPPER WISCONSIN.

Wisconsin No. 25 Corn.

Mr. E. J. Delwiche, in charge of the Ashland station, writes concerning the new early dent variety of corn, known as Wisconsin No. 25 and said to be ten days earlier in maturing that Wisconsin No. 8. He states that at the Spooner station Wisconsin No. 25 is yielding more than seventy-five bushels of shelled corn an acre and this corn was fit for seed on September 10th and ripe ears could have been selected as early as September 1st. This variety also did well at Conrath on heavy silt loam soil. A number of farmers in Upper Wisconsin who gave this new variety a test this year report favorably. There were several hundred acres of No. 25 planted in 1916 and a considerable amount of good seed will probably be available. Mr. Delwiche recommends Wisconsin No. 25 for either crib or silo. It grows from seven to nine feet high, is leafy and not coarse in stalk. The ears are medium size and a deep golden color. The kernels are deep, well dented and much harder than most dent varieties, although not flinty. Twelve to sixteen rows to the ear is the rule. The proportion of corn to cob averages 85 per cent.

Green Manuring in Northern Counties.

On Upper Wisconsin and Minnesota farms there is a scarcity of manure because of the small herds with which many of the settlers are obliged to start. The Northeast Minnesota Experiment Station at Duluth has been experimenting with rutabagas for green manure. A crop is raised among the trees and after this is harvested the ground is disked and a crop of rye sown. This is turned under the following June and the ground then put into some root crop. M. J. Thompson, superintendent of the northeast station, says that this plan of green manuring will bring excellent results if done with care to prevent the possible souring of the soil.

Work of the Grange in Upper Wisconsin.

To the Editor:—Agricultural events which originate with the farmers and then are carried to the towns and cities always seem to bring forth a bigger attendance of farmers than events which start in the town and then are carried to the farmers.

This was the case with the recent Grange Fair which was held in Grover township in Marinette county. Three local granges of the southern part of the county combined in the event and arranged a fair in which exhibits could be entered from any part of the county, but it was understood that the exhibits would mainly be from the south half of the county. Inasmuch as the farmers themselves had originated this event, they took a great amount of interest in it and made it a very successful affair in every way. They invited the commercial bodies of the city of Marinette to be present, and at noon about 100 business men of the city drove to the fair in automobiles and partook of a lunch which was served by the wives of the members of the grange. Besides the exhibits of general agricultural products, there was a special school exhibit of products raised by the children of seven or eight schools in the neighborhood where the fair was held. There was also an exhibit of pure-bred and grade dairy cattle, which brought forth a very favorable showing. Public-spirited citizens of Wausaukee put their automobiles at the disposal of new settlers of that locality and drove them to the scene of the fair, in order that they might become better acquainted with the good dairy herds of the southern part of the county. It was figured that the attendance at this fair, which lasted only one day, was over 2,000, and it will be realized that this showing was large, because the fair was held in the country instead of in a town. Two tractors gave demonstrations of plowing, and this was followed with great interest.

Besides other benefits of the fair, a better spirit of co-operation between the towns and country people was engendered. The week after the fair a committee of the grange visited Marinette and met with the business men at a noonday luncheon. The average members stated that they were so well pleased with the co-operation they had had from the business men of the city that they wanted to express their appreciation, and to assure the city business men that they would be glad to work with them in all endeavors to develop both the city and the country. The upshot of this meeting was a plan for a farmer's market in the city of Marinette. The granges appointed a committee to work on the matter in conjunction with a committee from the city, and it is likely that the market plan will go through in a short time.

Spurred on by the success of the first grange fair, it has been decided to make it an annual event, and already plans for a bigger and better fair for next year are being made. Almond King, of Omro, state master of the grange, was present and was one of the speakers at the fair this year.

Howard I. Wood.
Marinette Co., Wisconsin.

Minnesota Potato Show.

Minnesota potato growers will hold their annual meeting at St. Paul at the University Farm, January 3d. Minnesota potato growers admit that Wisconsin's potato show last year was one of the best ever held in the country. They maintain that Minnesota is just as good a potato state as Wisconsin and they are planning a little friendly rivalry in the way of a big show of their own this year. Whether they can come up to Wisconsin remains to be seen.

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This proves that the Moline Universal meets the pressing need of American farmers for a practical machine that will take the place of horses.

You can rely upon this tractor for *All Field Work*, from preparing the seed bed to harvesting the crop—pulls the usual 5-horse load; gives you 10 to 12-H. P. for belt work. One man operates both implement and tractor.

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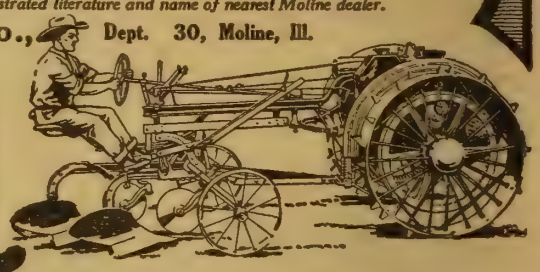

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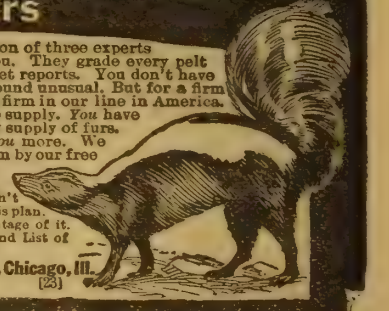

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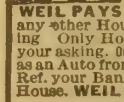

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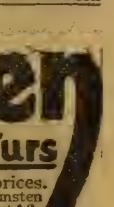

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MEASURING HAY IN STACK

A Simple Rule Whose Application Will Accurately Determine Tonnage in Hay Stacks, Being Applicable Only to Long Stacks.

THE problem of measuring hay in the stack is met with very frequently on grain-belt farms. Thousands of tons of hay are sold in the stack every year, for which it is necessary to have some method of measurement, and besides, an estimate of the amount of hay in the stack which will be used for feeding is often desirable. To determine the tons of hay in any given stack is difficult because of the peculiar and varying shapes in which stacks are built and also because of the variation in the compactness of hay, which makes it hard to find an accurate factor for calculating tons when the cubic feet have been found.

However, a method has been worked out recently based on several years' investigation in measuring hay stacks of various shapes and sizes and it may be depended upon to give a reliable estimate of the tons of hay in any ordinary stack. It is probably as accurate for practical purposes as any method

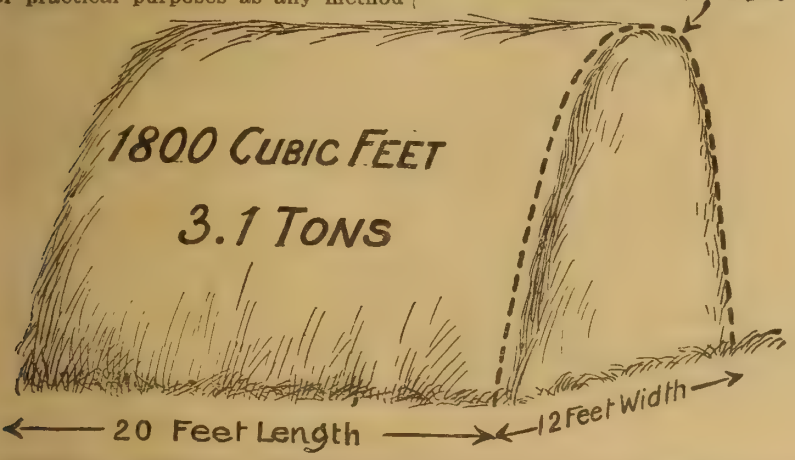

FIGURE 1—HAYSTACK WITH SLOPING SIDES—MEASUREMENTS NECESSARY FOR DETERMINING WEIGHT OF STACK ARE INDICATED.

that can be used and may readily be understood by recalling a few common rules of arithmetic.

In order to illustrate this method let us consider the ordinary stack or rick as shown in Figure 1. The first step is to find the number of cubic feet which it contains, and, therefore, it must be measured. A long tape is best for this purpose. The procedure is as follows: First, measure the length or long way of the stack as indicated in Figure 1; then take the width, which is also indicated in the figure; and then the "over." This last measurement is the distance from the ground close to one side of the stack up over the top to the ground on the opposite side. The "over" is shown in Figure 1 by the dotted line near the end of the stack. It may be taken over the middle of the stack as well as near the end, but can be shown in a drawing better at the end. In Figure 1 the length of the stack is twenty feet, the width twelve feet and the "over" thirty feet.

With these measurements we may readily calculate the number of cubic feet in the stack. This is done by multiplying the length by the width, then multiplying this result by the "over" and dividing the whole result by four. For instance, multiplying the length, twenty feet, by the width, twelve feet, gives us 240; multiplying this result by the "over," which is thirty feet, gives us 7,200; and by dividing this last result by four we get 1,800, which is the number of cubic feet in the stack.

This rule will hold good for all ordinary haystacks with this modification: If the stack to be measured is very tall or has a rather flat top and sides that are straight up and down, like the stack in Figure 2, the number to divide by is three instead of four. In other words, if the stack is shaped like the one in Figure 2 use three to divide by in order to find the cubic feet, but if it is shaped like the one in Figure 1, with sloping sides and a rigid top, use four as the divisor.

To make this clearer let us find the cubic feet in the second stack, which is shown in Figure 2. Its length, as may be seen, is twenty-five feet and its width eighteen feet. By multiplying twenty-five by eighteen we get 450. This figure multiplied by the over, which is thirty-six feet, gives us 16,200. Then by dividing by three, the correct number for this shape of stack, we get 5,400 as the number of cubic feet in the stack.

We are now ready to calculate the tons of hay in these stacks. This consists in dividing the number of cubic feet in the stack by the number of cubic feet in one ton of hay. The latter figure will vary according to the kind of hay and the period of time it has been in the stack. The federal department of agriculture has investigated this matter and determined the cubic feet per ton for timothy or timothy and clover hay mixed, and, according to their investigation, hay which has been standing in the stack less than thirty days will average approximately 590 cubic feet per ton; hay standing from thirty to sixty days will average 580 cubic feet per ton; and hay standing from sixty to 155 days will average 515 cubic feet per ton.

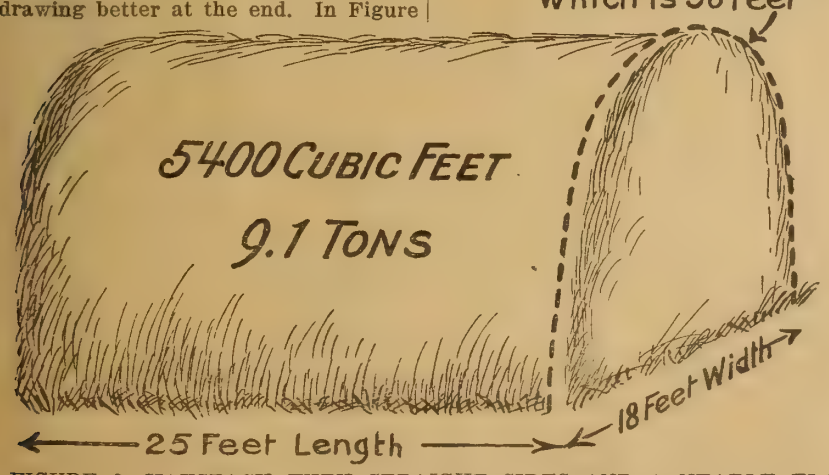

FIGURE 2—HAYSTACK WITH STRAIGHT SIDES AND A NEARLY FLAT TOP—NECESSARY MEASUREMENTS ARE INDICATED.

Assuming that the stack in Figure 1 had been standing for fifty days at the time it was measured, with the foregoing figures we may determine the weight of hay in it by dividing the total number of cubic feet in this stack by 580, which is the number of cubic feet per ton in stacks from thirty to sixty days old. This gives us 1,800 divided by 580 or 3.1 tons. In the case of the stack in Figure 2, which we may assume had been standing less than thirty days, its weight is found by dividing 5,400 by 590, the number of cubic feet per ton in stacks less than thirty days old; the result is 9.1 tons. In a similar manner the weight in tons for any stack of clover or timothy hay may be calculated if the number of cubic feet is known, together with the approximate length of time the stack has been standing.

Is Your Gun Rusty?

THERE are many trusty old shotguns in this country that once were cleaned and oiled *and used* with great frequency. Today they lie idle, rusty, almost forgotten. Yours may be one of them.

What is the reason for this? Does the lure of the fields and woods no longer hold attractions? Have we lost our love for good sport?

No—these things are not responsible for the rusty gun. *The absence of game is the cause.* And the cause must be done away with before the gun is used again as it once was.

The cure lies in game farming—in the breeding of game birds to replace those we have lost.

Already, in many places, good shooting has been restored by game farming. The same thing can be done where you live. You can take part in it if you will.

A game farm is easy to establish and maintain. Also there is money in it as well as pleasure. The prevailing scarcity of game has resulted in high prices being paid for game birds and their eggs. The demand from city markets is always greater than the supply.

We will gladly tell you how you can run a game farm and make it pay, or how you can induce others to raise game for you to shoot. Write today for our 64 page booklet, "Game Farming for Profit and Pleasure". It is sent free on request. You will find it interesting reading. Please use the coupon below.

When Your Gun is in Use Again

When you begin using your gun again remember to load it with powder that can be depended upon for accuracy at all times. Ask your dealer for shells loaded with Hercules Smokeless Shotgun Powder—either Infallible or "E. C.". Both can be obtained in all standard makes of shells. They are of high and uniform quality—give light recoil, high velocity, even patterns.

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Gentlemen:—Please send me a copy of "Game Farming for Profit and Pleasure". I am interested in game breeding from the standpoint of _____

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Law Questions.

Landlord and Tenant—Repairs.

A Subscriber, Edgerton, Wis.—(1) Is a tenant on a farm required by law to keep the fences and buildings in as good repair as they were when he took the place as tenant? (2) If the land owner sees that certain work about the crops is necessary and the tenant is unable or unwilling to perform such work, has the owner a right to do it and charge it to the tenant?

Answer.—(1) He is. (2) A landlord has no right to go upon a rented place to do the tenant's work unless there is an agreement to that effect in the renting contract.

Foreclosure of Mortgage.

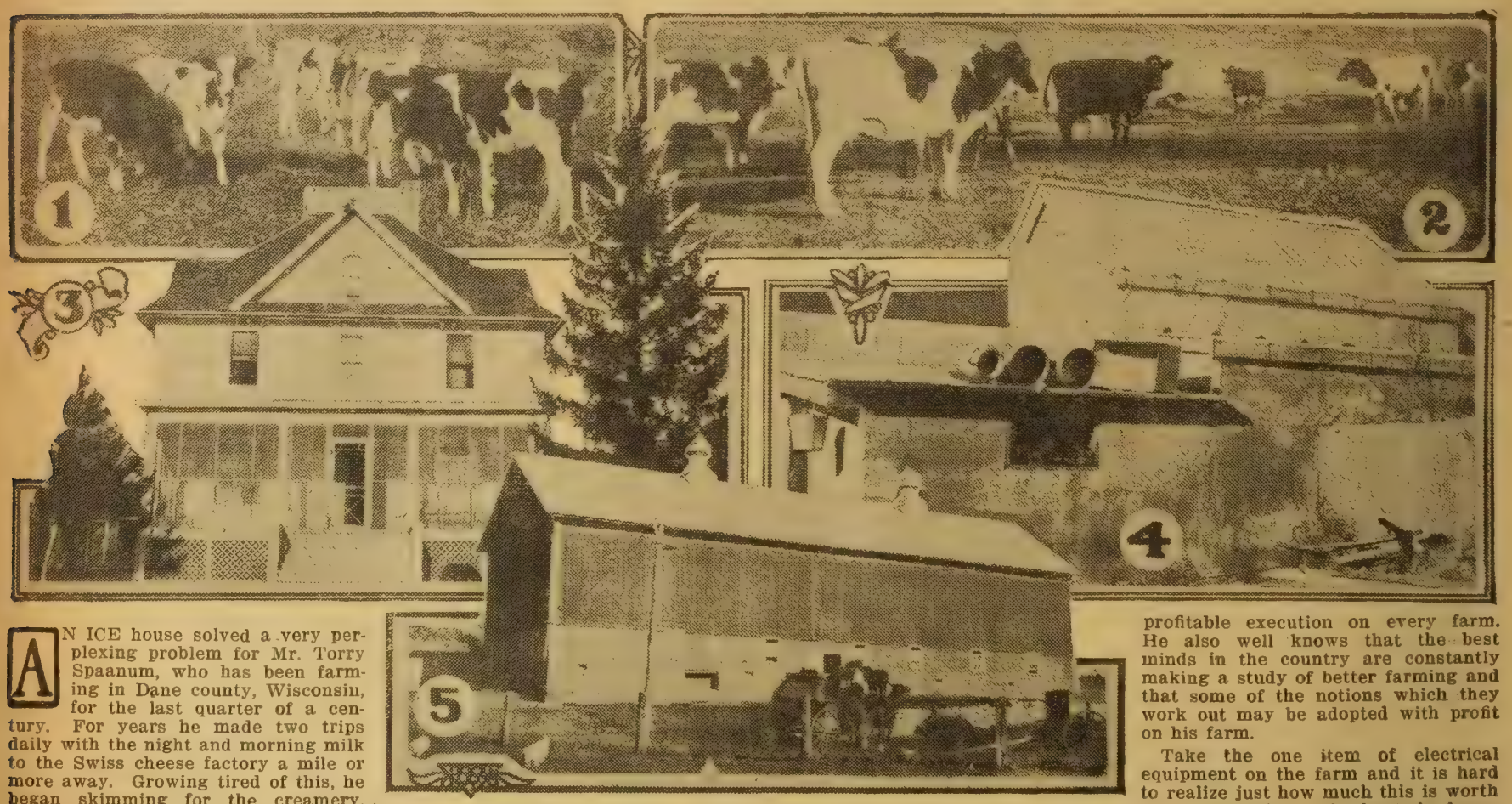
A Subscriber, Butternut, Wis.—I bought a piece of land, and gave a mortgage on it for $550 to secure five notes of $100 each payable on or before the end of each year respectively. The last note will be due in 1919. (1) Can the holder of the mortgage foreclose it if I am unable to pay the second note, the interest being paid in full? (2) When can the holder of the mortgage foreclose it? (4) Can I pay off all the notes at any time? (4) If the holder of the mortgage forecloses it will he have to notify me and how long will I have to redeem the land?

Answer.—(1) It depends upon the terms and conditions of the mortgage. It may provide for foreclosure when any note is due and unpaid. (2) Foreclosure can be made whenever the mortgage provides for it. (3) You can. (4) You must be notified and you can redeem the land at any time before it is sold.

America's most popular buggy
is shown on page 1489 of our big General Catalog. It is illustrated in colors with full description of material and construction. Look in the catalog and see the price that made this buggy so popular.
Sears, Roebuck and Co., Chicago.

SOLVES COOLING PROBLEM.

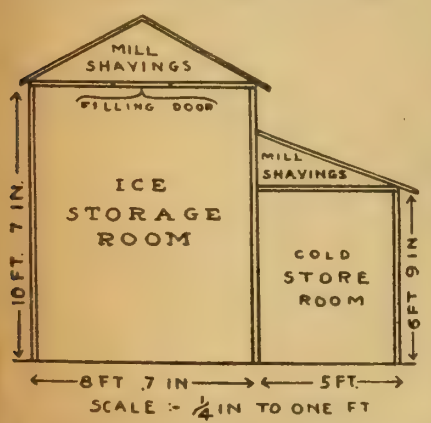
Dane County, Wisconsin, Farmer Saves a Great Deal of Hard Work and Delivers Best Cream to His Creamery Through the Aid of Ice House and Cooling System.



SCENES ON THE SPAANUM FARM, DANE COUNTY, WIS.
(1) Some of Mr. Spaanum's young stuff. (2) A view of the Spaanum herd. (3) A homelike farm home, modern and convenient. (4) Mr. Spaanum's dairy house in foreground and ice house at back. (5) The Spaanum dairy barn, where ideal use is made of a side-hill location, with the aid of concrete retaining walls.

AN ICE house solved a very perplexing problem for Mr. Torry Spaanum, who has been farming in Dane county, Wisconsin, for the last quarter of a century. For years he made two trips daily with the night and morning milk to the Swiss cheese factory a mile or more away. Growing tired of this, he began skimming for the creamery. But that took a long trip to town in all kinds of weather and on all kinds of roads. Now the Spaanum farm is equipped with an ice house, which in two years has saved many a trip to town, given a great deal of time for other work and enabling Mr. Spaanum to deliver cream to his factory which ranked first in sweetness and flavor.

This ice house has been in use two summers. Mr. Spaanum says if he should lose the ice house by fire or a cyclone and be unable to get another he fears that he would have to quit dairying, because this splendid convenience has nearly spoiled him for heavy work. What he has done may be done on any Wisconsin farm where ice is plentiful. The cost of such an ice house is soon paid by increased efficiency and convenience, to say nothing of the time saved. In this cooler butter and eggs and other farm produce may also be stored awaiting convenient time for marketing or better prices. Mr. Spaanum now makes a



FRONT ELEVATION OF ICE HOUSE.

trip to town with cream only once in four days in hottest weather and his buttermaker says that cream from the Spaanum farm reaches the churns in better condition than that brought in by any other patron. The ice house is, of course, only one method to accomplish proper care of cream. Some prefer cooling tanks with circulating water, but where ice can be gotten as easily as it can from the lakes in Dane county, the ice house is the best. To the writer Mr. Spaanum says: "I hope you will convince every farmer that an ice house is worth its weight in gold."

There are other interesting conveniences on the Spaanum farm. A gasoline engine which runs the separator also generates power for a dynamo, which charges electric batteries and provides electric lights for every farm building. This plant cost about $400 installed and Mr. Spaanum is just as enthusiastic about his electric lights as he is about his ice house. He can step to a barn door and turn a switch and make every stall in the barn almost as light as day. He can turn another switch and flood the hay loft and granary with light. This electric convenience reduces the fire hazard—the expense is small. During eight months of the year the batteries may be kept charged without extra expense, as the engine must be operated for the separator. During the other four months of the year the engine must be run only an additional half hour. In four years Mr. Spaanum has spent nothing for repairs on his electric equipment. He has a windmill which puts water into a tank which serves the dairy barn, hog house, troughs, water tanks, etc., so that by turning a faucet there is water available for any of these places. Mr. Spaanum has brought his farm out of the old lantern classes. Under the new modern system he says he can save the help of one man during a considerable part of the year.

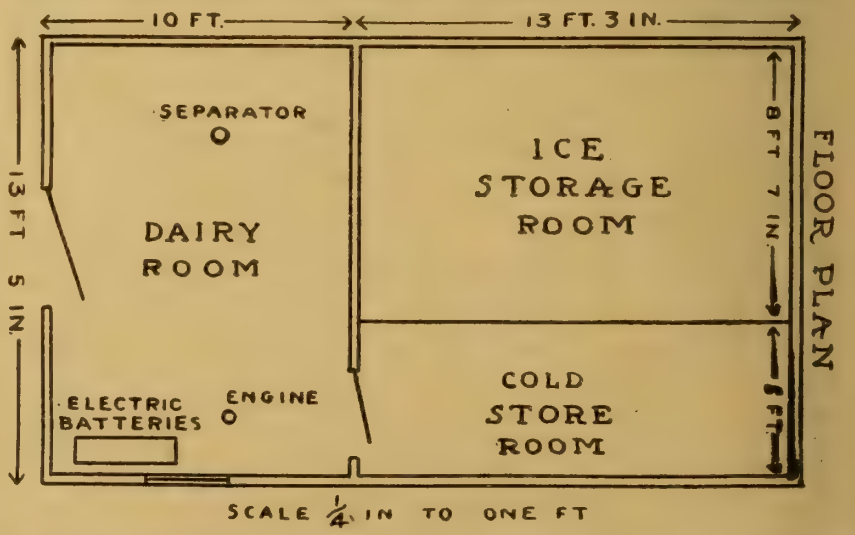
Mr. Spaanum has modern dairy equipment and a system of barn ventilation and has made liberal use of concrete and stone for retaining walls on his hillside farm. Although essentially a dairyman, Mr. Spaanum keeps enough hogs to utilize his skim milk. Looking back over the years he said he made a mistake in not long ago picking out a good dairy breed and sticking to it. He is now building up a Holstein herd and has recently purchased a pure-bred Holstein bull calf of splendid breeding. This successful Wisconsin farmer has tested his cows for twenty years, always selling off the "boarders." His cream checks average about $200 per month from thirty grade cows and he skims a cream testing about 35 per cent. He grows enough corn for his 12x40 silo and husks enough to finish his hogs for the block. He has had alfalfa for a number of years, at one time as much as thirty acres.

This successful dairyman is setting an example for his neighbors. He has a modern, comfortable home, clean and sanitary barns and fine stock, but one of the first things he shows a visitor is his ice house.

Progress is the spirit of the day on Wisconsin dairy farms and Mr. Spaanum may well be called a leader along many progressive lines. Whenever anything new is suggested he does not turn up his nose at it and say that it is not practical, but he takes a little time to carefully investigate. He well knows that there are many newfangled ideas which cannot be put into profitable execution on every farm. He also well knows that the best minds in the country are constantly making a study of better farming and that some of the notions which they work out may be adopted with profit on his farm.

Take the one item of electrical equipment on the farm and it is hard to realize just how much this is worth to the men who work about the barns or the women who look after the affairs of the home. A great many people might have urged that this farm could be run without this equipment, and so it might, but Mr. Spaanum has found his investment in this regard to be worth while. Water can be pumped by hand or drawn from a well and Mr. Spaanum could run his farm with water secured in that way. But he has learned that his time and energy can be put to more profitable things, and it is just this discrimination in applying the conveniences and comforts which pay that has placed Mr. Spaanum in the forefront of successful farmers of his neighborhood.

Ice House on the Spaanum Farm.



THE above is a floor plan of Mr. Spaanum's ice house adjoining his dairy. There is a cooling room five feet wide, about seven and one-half feet high and thirteen feet long where the cream is cooled and his butter and eggs and other products are stored. The average temperature of this room the past summer was 34 to 38 degrees in the hottest weather. As soon as the cream is separated it goes to the Mt. Horeb creamery. The ice storage room is eight feet by thirteen feet and ten feet high and has a capacity of thirty-two tons. Mr. Spaanum did the carpenter and concrete work on this ice house and, although no accurate record was kept, he thinks the cost was about $200 aside from his labor. The house is built into a side hill with concrete walls on a sandstone base. Inside of the concrete are 2x8 studdings, the space between being filled with mill shavings and these are held in place by a water-proof paper. Outside of this are nailed inch strips. By nailing the outside layer of lumber to these strips a small dead air space is formed. The storage room is filled with ice from overhead.

Mr. Spaanum buys his ice in Mt. Horeb, as he has no lake or stream near by. He pays 40 cents a ton, and figures that the cost is about $1.20 a ton, including hauling, or a total of $40 to fill his ice room to capacity. Where a farmer has a lake or stream near by this cost can be greatly reduced.

Cow-Testing Reports.

Langlade County Association.

To the Editor:—In September there were 437 cows under test and forty-one dry. The average production for 437 was fairly good in spite of the fact that thirty-three dried off during the month and thirty milked but part of the month, freshening too late. There were eighty-nine two year olds in the number tested and seventy-three three year olds. The average production of milk and fat was 455.2 and 23.62 pounds respectively with an average per cent of fat of 5.19. This makes a total of 198,922.4 pounds of milk and 10,321.94 pounds of butter fat. The total amount of this butter fat at Elgin prices was $3,303.02, or $94.40 for each of the thirty-five members of the association. If all the 1,400 farmers in this county received a similar income each month from a dairy herd of twelve to fourteen head the county would be doing $1,500,000 worth of business every year. This would not include the surplus stock sold. We figure there are about 7,500 dairy cows in this county, or enough to organize fifteen associations, each with more cows than the one now operating. If each association showed figures equivalent to the foregoing it would mean an $800,000 a year business—a sum far in excess of the business actually done. Where can we find a better argument for getting into the cow-testing associations?

In September Head & Swensen's Guernsey, Molly, again took the lead, producing 57.25 pounds of fat. Two notable examples of Jersey persistency are those of Bert Wright's grade Jersey, Blossom, which freshened in March, still making a little better than forty pounds of fat at twenty-two years of age and Chas. Shotte's grade Jersey, Susie, freshening last December and still in the honor list.

Bert Wright's herd has again the highest average for the month, making 805.1 pounds of milk and 37.23 pounds of fat with 4.62 per cent test for eight cows. Chas. Schott's herd has the highest test—7.27 per cent and average 32.02 pounds of fat.

September list of forty-five-pound cows is as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Head & Swensen					
Molite, G. G...	8	6-20	1218.0	4.70	57.25
Chas. Schotte					
Topsy, G. J....	7	2-1	648.0	8.10	52.49
Blaine Stewart					
Belle Leila, R.J.	4	6-9	892.8	5.50	49.10
Chas. Schotte					
Susie, G. J.....	8	1915	546.0	8.80	48.05
Harry Guenthner					
Blue Bell, G. J.	6	8-10	960.0	4.90	47.04
Texas, G. J....	7	2-21	825.0	5.70	47.03
Harry Lyon					
Spot, G. J.....	8	2-19	576.0	8.00	46.08
Wm. Borcher					
Brownie, N....	6	5-15	1077.0	4.20	45.23

John Reckinger, Official Tester.

Feeding Silage and Grain.

To the Editor:—Most of the farmers in the Baraboo Cow-Testing Association are feeding silage and grain. Those who have clover and alfalfa hay and home-grown grains, such as oats and corn, are not buying much feed, except some bran. While feed is high priced, the price of milk and butter fat is also high. The following table gives the names and records of the cows in this association which have produced more than forty-five pounds of butter fat during the thirty-day period ending October 23d:

Owner and breed	Lbs. milk	Per cent fat	Lbs. B. fat
Rollo Webster, G. H.....	980	5.3	51.9
L. R. Siebecker, G. H.....1176		4.3	50.6
Edward Egerer, Guern...	967	5.0	48.4
Glenn Johnson, Guern....	930	4.9	46.0
Edward Egerer, Guern...	747	6.1	45.6

Official Tester, Baraboo Cow-Testing Association.

River Falls and Roberts Association.

To the Editor:—There were twelve cows in this association which produced over forty pounds of butter fat in October. This is an increase of three in this production classed over the month previous. There are a great many dry cows during this time and there are 432 cows in the association, of which 288 were under test in October. Every member of our association is using a pure-bred sire. This shows that they are leaning towards more and better profits.

The following table gives the names and records of the cows in the association which have produced more than forty-five pounds of butter fat during the period of thirty days ending October 30, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Olton Bros					
Topsy, G. H....	4	9-25-16	1146	4.4	50.4
H. R. Taylor					
Sis 2d, G. S. H..	6	9-8-16	1080	4.9	52.9
W. N. Benedict					
Beauty, G. J...	8	9-18-16	1050	4.3	45.1
J. L. Chapman					
Clover, G. H....	4	9-3-16	1563	3.3	51.6
Nellie, G. H....	3	7-18-16	1293	3.5	45.2

C. G. Carlson, Official Tester.
J. M. May, Secretary.

Reedsburg Association.

To the Editor:—Fall pastures have been comparatively good so that little feeding of grain was done. Members of this association have sold a head of "boarders" during the month, indicating that they are progressive and do not wish to waste high-priced feeds on unresponsive cows.

The following list gives the names and records of all cows that produced forty-five or more pounds of butter fat during the month of October ending November 6, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Wm. Alexander					
No. 8, H. J.....	6	Aug.	1070	5.3	56.7
Wm. Hahn					
Beauty, G. H....	7	Sept.	1364	4.0	54.6
Wm. Vander Ohe					
No. 9, G. H.....	4	Oct.	1352	4.0	54.1
Fred Thorne					
Miranda, G. J....	4	Aug.	1073	5.0	53.7
Frank Groat					
Mandy, G. G.....	4	Sept.	992	5.3	52.6
Smith Bros.					
No. 5, C. H.....	7	Oct.	1048	5.0	52.4
Frank Groat					
Clara, G. G.....	3	Oct.	868	6.0	52.1
Percy Alexander					
No. 3, G. J.....	6	Oct.	939	5.5	51.7
John Geise					
Lottie, G. H.....	8	Sept.	1246	4.1	51.1
Wm. Alexander					
No. 13, G. H.....	9	May	884	5.6	49.5
H. L. Maxham					
No. 1, G. H.....	8	Sept.	1311	3.7	48.5
Kirkpatrick Bros.					
Helena, R. H.....	6	Apr.	1097	4.3	47.2
Frank Groat					
Lizzie, G. G.....	6	Sept.	952	4.8	45.7
John Geise					
Frieda, G. H.....	4	Sept.	1200	3.8	45.6
Daisy, G. H.....	8	Aug.	1128	4.0	45.1

Alvin W. Wardas, Official Tester.

Cow Testing.

To the Editor:—Our October report shows two cows in the fifty-pound list. The high cow belongs to Naber Farm Company, Cecil, Wisconsin, and is a grade Holstein. She produced 822 pounds of 65 per cent milk or 51 pounds of fat.

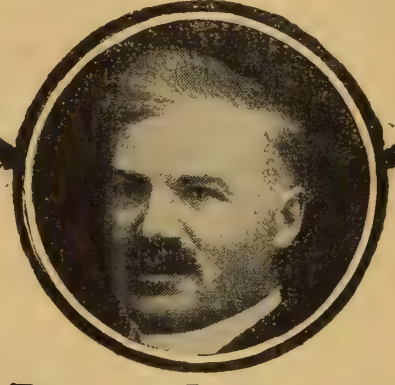
The other cow belongs to Alfred Olson, of Underhill, and is a grade Guernsey. She produced 915 pounds of milk and 50.3 pounds of fat. The high herd in fat production belongs to Julius Bartlett, Underhill, Wisconsin. This herd consists of twelve cows which average 703.4 pounds of milk and twenty-six pounds of fat covering a thirty-day period.

C. M. Rydberg,
Official Tester.

Our readers frequently write and ask where they can buy some product that they need. If your local dealer or merchant cannot supply you, tell us his name and address—maybe we can be helpful to you and to him. We are here to serve both of you.

THE WISCONSIN FARMER
MADISON -:- WISCONSIN

Dr. Roberts has no more fear of contagious abortion in cows than if the disease did not exist, if cows are free from tuberculosis. He is absolutely master of the situation. You can do what Dr. Roberts does if you will do what he tells you to do.



Dr. David Roberts' ANTI-ABORTION Drives Out Cow Abortion

The owners of over 5000 herds of cattle in the U. S. say that Dr. David Roberts' Anti-Abortion Treatment does wipe out contagious abortion. These people speak from experience. They *know*—they do not *guess*. They are to be believed rather than people who merely give it as their opinion that contagious abortion cannot be successfully treated. Let us give you one example—one of the 5000—which gives indisputable proof.

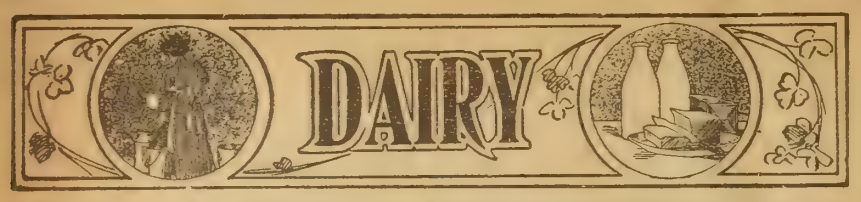
A Minnesota Example

Less than three years ago Dr. Roberts went to Minnesota and bought a herd of pure-bred Holsteins known to be afflicted with contagious abortion. It was a desperate case. Many treatments had been tried without success. But Dr. Roberts did not hesitate. He began his treatment on the infected animals and all traces of the infection were wiped out. The cows and heifers dropped healthy calves, carried full time—a good strong calf for every cow. Three of the cows made butter records of 14 lbs., 19 lbs. and 22 lbs. of butter per week. One has since treatment been given a yearly butter record of 721.49 lbs. and 18,563 lbs. of milk.

Dr. Roberts' Anti-Abortion Treatment is shipped, with instructions, direct from the laboratories at Waukesha.

Kinsman Beauty (and Calf) No. 139476
Owned by Dr. Roberts
Year's Record:
675.60 lbs. Butter
16,032.50 lbs. Milk

DR. DAVID ROBERTS VETERINARY CO.
950 Wisconsin Avenue, Waukesha, Wisconsin



The Neighbor's Dairy.

Any dairyman may learn valuable lessons from his neighbor's cow. Men may not have been conscious of this yet. It certainly has been one of the greatest factors in upbuilding the business. In proof of this one has only to consider the locality wherein one man has founded a dairy herd. Soon some progressive man followed his lead. Then others came into line. Before many years practically every farm in the community was devoted more or less to dairying.

In a western state there is a city of more than 10,000 that has sprung up in a very few years through mining, manufacturing and railroad development. Milk was, of course, required by the citizens of the city. Dairies filled with red cows or cows which were red with white faces were common. Two years there was not a herd of first-class dairy cows in the county. Then one enterprising young man came from the East and established a dairy with cows either high grade or pure bred of one of the popular breeds. Many doubts were expressed as to the probable success of his venture. Yet it was to be plainly discerned that men were interested. In a year or less it was very evident that cows of that herd were yielding about double the amount of milk that was being secured from other cows. The cows of that dairy were very much in demand by buyers. However, none were sold. Finally an appeal was made to the state agricultural college. A man was secured to go to dairy sections and to buy real dairy cows. Through that and other efforts the country was finally quite well stocked with dairy cows.

Neighbors have opportunities to swap ideas. If they are real neighbors they will do that. In one state it is estimated that the average butter fat production is 140 pounds per cow. There is one herd the record of which, including a number of two-year-old heifers, is above 400 pounds. This herd is neighbor to all herds in the state. All dairymen might learn from it. Many are learning valuable lessons in breeding, selection and feeding.

A dairyman in a country where the climate is comparatively mild learned quite by accident that those of his cows which had only the shelter of a shed open on one side did very much better for him than did those closely housed. He accordingly constructed a large open shed and thereafter used his fine, large barn only during milking hours. Neighbors saw the wisdom of his practice and have adopted his method. They are no longer building large, expensive barns, but have open sheds with a small milking room instead. They are saving money and have healthier cows and are getting better results. On all farms are things of interest and lessons to be learned. He who observes the good and the undesirable things of his neighbor's herd and dairy and who obtains a profitable lesson therefrom is wise.

Care of Milk Cans.

In justice to the farmer, milk dealers should give considerable attention to the question of washing the cans before they are returned. If the cans are allowed to go back unwashed to the farmer, it is a very difficult task for him, with his limited facilities, to clean them.

In a circular letter recently sent to milk dealers by the Dairy Division of the department, it was pointed out that bacterial counts, made from cans which had been washed and rinsed in the ordinary manner, showed that there were from 300,000 to 18,000,000 bacteria in each can, with an average of 4,600,000. If ten gallons of milk were put into one of these cans there would be added more than 100 bacteria to each cubic centimeter of the milk. That is to say, this is the least number that would be added. Whereas, it was pointed out, with a little steaming these same cans could have been rendered practically sterile.

One dealer who recently installed a modern washing machine employed a bacteriologist to test the results. It was found that less than 200,000 bacteria were in a can, and among them were no undesirable types. Bacterial counts of cans treated by a less efficient steaming device which this dealer had formerly employed ran as high as 20,000,000 bacteria to the can, including some undesirable kinds.

There are a number of different types of cleaning machines on the market. The aim of all the efficient ones, however, is the thorough cleansing with washing powder and water, rinsing, sterilization with steam, and rapid drying. After this the can should be covered and kept from contamination.

One of the simplest of the machines is a jet device, by means of which sprays of cold and hot water and of steam are successively forced into the can. This type also is equipped sometimes with a drying attachment by means of which a draft of dry air is forced into the can. Another type is the brush machine, in which cans are brushed out with washing powder and water and then rinsed. After washing they may be steamed by a spray of steam. Some of the largest machines are fitted with powerful pumps, the cans in an inverted position being run through the machine and sprays of soap and water, rinse water, hot water, and steam successively forced into them under considerable pressure. They are then dried in the same machine.

The drying of the cans is an important factor, for it not only leaves them in a much better condition, but it tends to prevent rust. The cover also must not be neglected. It is as important that it be as thoroughly cleansed and sterilized as the can itself. It is not a good plan to put the cover on the can until the latter is quite dry. In the interval the can should be kept in a clean place where there is no dust or contamination.

On the farm, cans, pails, and other utensils may be sterilized very efficiently with an inexpensive sterilizer, which is fully described in Farmers' Bulletin 748. This bulletin may be obtained upon application to the department.

Liberal Feeding of Dairy Cows.

The successful stockman has ever been a liberal feeder. The stingy feeder or the one who measures out feed in meager quantities is never to be ranked among the successful. A visit to a barn recently where records of high rank, and one of them possibly a world's record, are being made, showed the boys feeding a large variety of concentrates in liberal quantities along with first-class alfalfa and silage. True, each cow was being fed according to the amount of her milk production, yet the allowance was very generous. To feed each cow in proportion to her daily milk flow is economical and need not detract from feeding an amount that will stimulate her greatest milk flow.

A higher feed bill usually goes with cheaper production per unit. Recently some figures from a herd were shown. One cow that had eaten more feed than any other in the herd had at the same time produced butter fat at one-third the cost, as shown by some others in the herd. A hearty, rugged dairy cow has a vigorous appetite. To feed her well is to enable her to develop her full capacity. Judgment, of course, must be used and feeds that are economical and suitable must be supplied. For heaviest production and for cheapest production liberal feeding gives best results.

A Good Canadian Cow.

There are nine Holstein cows which, under official test, have produced over forty pounds of butter (not butter fat) in seven consecutive days. One of these is the Canadian cow, May Echo Sylvia. Lately she produced 39.36 pounds of butter fat in seven days. In thirty consecutive days this cow produced 135.8 pounds of butter fat and 854 pounds of milk. In sixty days she produced 258.7 pounds of fat and 7,927 pounds of milk. In ninety days the yield was 370.9 pounds of fat and 11,703 pounds of milk. For seven, thirty, sixty and ninety days May Echo Sylvia produced more milk than any other cow among those that have been given official test for corresponding periods. In a single day she produced at one time 4.48 pounds of fat and 102 pounds of milk. Her sire is Inka Sylvia Beets Posch 122780 and her dam May Echo Verbelle 223724. She is not only owned in Canada but was also bred there.

It is cows of this kind that are invaluable as producers of stock for breeding purposes. It would be hard to pay too much for a bull calf, individually good, out of such a cow. Similarly a heifer out of such a cow is invaluable. Men buying dairy bulls are sometimes more interested in the producing capacity of the dams of the bulls they are about to purchase than the individuality of the bulls themselves. This, to a certain extent, is a mistake. We should first look for individuality of the animals themselves and then study pedigrees. Even the small dairyman can afford to buy high-priced bulls, for, under proper management, such sires will increase the efficiency of the herd enough to more than justify the price.

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Wisconsin Experimental Station Favors Explosives for Clearing

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BEAUTIFUL XMAS SURPRISE PACKAGE FREE

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Here are seven sheep in a pen. By drawing three straight lines you can put each one in a pen by himself. If you can do this we will send you as a prize, a Christmas surprise package, containing 42 assorted pieces of beautiful Christmas cards, seals, tags and stickers. This is one of the most artistic Christmas packages put out. We will also send a certificate of entry in our grand contest for a $395 Saxon Automobile. All you have to do is to enclose 2 two cent stamps in your letter to pay postage and cost of mailing.

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Remember the Saxon car will absolutely be given away at the close of the grand contest. In case of a tie a Saxon car will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

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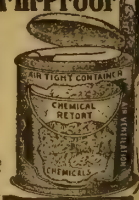
Put a warm Comfort Toilet in your home, a guarantee of healthy, sanitary conditions. Germ-life killed by chemicals in retort. Emptied once a month—no trouble. Needs no other attention. Boards of Health endorse it. Write now for literature, prices, etc. Agents Wanted—Exclusive territory.



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Madison, Wis.

POULTRY

department is edited by a competent poultryman, who will be pleased to answer questions concing diseases, poultry management, etc., when they can be answered through the department. ns will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed uiries. Address all letters relating to poultry topics to this office.

Poultry Partnership.

A. S." is an experienced poultry and desires to know how the ds of both poultry and eggs l be divided where the work and ence is balanced against the l:

se tell me if you can, what is sual equitable arrangement to between a landowner, who fur- the feed and poultry house, and ne who proposes to furnish the nd care. One who is experienced ing geese, chickens and turkeys large scale, both for eggs and t purposes.

umstances would play an im- t part, whether the one who fur- the labor is a tenant on the d's farm. Also, whether a or a paid employe. If the for- the opportunity the poultry have in the matter of picking ttered grain would amount to erable in favor of the one who urnish the labor. If the latter, d would all come from the land- This may seem like a small item, counts for a good deal where ing must be purchased.

ming that the proposed chicken is a tenant and not a farmer, at his experience would count ood deal in the matter of get- e most from each 100 pounds of bout the best thing that could would be to break the net pro- n two. No mention is made as is to furnish the poultry; this need to be weighed in the bal- nd allowance made. So many enter into an arrangement of d that an outsider with no defi- owledge of the case cannot say ly, though a general plan can en that would no doubt be le to your case.

extensive farmer, a professor University of Illinois, hires a to farm his half section of fer- d. The poultry flock is a fix- the place, just the same as the and cows. The tenant must he hands, for which he gets ll the poultry that is needed e use is the tenant's right. The s from what is sold is divided nd share alike between land- l tenant, the latter to raise as as little poultry as he sees fit. same with the butter made, llord usually taking his share r use on his own table.

er tenant who lived on a farm was given the use of a poultry. This was something n just market stuff, the land- ing worked up a good trade in d eggs for hatching at very ative prices, such as farmers pay for heads of their yards. dlord to furnish everything, nt to supply the labor, with ilege of using all eggs not or sitting purposes. This was nall flock and there were only ough surplus eggs for home tion.

enant was likely to move at and so a stipulated sum was d for each chicken. The mar- e at that time was about 35 cents for a three-months-old chicken, and to encourage the tenant to do a good job in the matter of care 50 cents each was to be paid for the chickens at three months old. The tenant was rather a rolling stone and desired to change quarters before the chicks were all the stipulated age. However, the woman, for she it was who was the business end of the family, was cheerfully paid the 50 cents each and the chickens taken to the home of the landlord, where a clean colony house awaited. It was very satisfactory to both employer and employe. The former was short on time to care for the chickens and the latter was short on everything only time and so it helped her to make fully as much money during the ten weeks they worked at the place, as her husband did on the farm.

The writer has been in the poultry business most a lifetime and other duties are crowding so hard that an offer of an experienced poultryman who would do the work and to get half the net proceeds would be hailed with delight. This would mean a man who could make the most from the investment, especially in the matter of feed, which is, everything considered, pretty high.

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Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 50c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 28, Chicago, Illinois.

Farmer's Garden

State Horticultural Program.

The annual convention of the Wisconsin State Horticultural Society will be held in the assembly chamber of the state capitol, at Madison, December 12th, 13th and 14th. A tentative program has been arranged by Secretary Frederic Cranefield, and this will include addresses as follows:

Prof. H. S. Roberts, Prof. G. W. Kiett, Prof. R. A. Vaughn, H. F. Wilson and probably S. B. Fracker, on the subject of insects and diseases.

An address by Dr. E. D. Ball, who succeeds Prof. J. G. Sanders, as state entomologist.

"Taking an Orchard Census," by A. A. Ashbahr.

Annual students' speaking contest.

Discussion of dust control or dust spray.

Mrs. C. O. Strong, of West Allis, and Mrs. G. W. Moore, of East Milwaukee, will talk about community work.

Mr. F. Kern will give an address on marketing fruits in Michigan.

J. G. Moore, and William Tool, Sr., will speak. C. M. Secker and Mrs. S. H. Whittlesey, will handle the subject "Cranberries."

One session will be devoted to the state fair.

In connection with the annual meeting will be held the annual winter apple show which has attracted attention for a number of years and will be well worth seeing.

Ailing Animals.

Sterility in Twins.

After buying a year old heifer calf I am told she is a twin, the other one being a steer. Will my heifer ever have a calf?

The heifer born as a twin with a bull is usually hermaphrodite and barren. However, we do not think this is always the case.

Bots.

I have a bay mare that has bot worms and I would like to know how to cure them.

Bot-fly larvae do not require special treatment unless they lodge in the rectum, in which case they may be dislodged by injecting tobacco water. If plenty of rock salt is allowed for horses to lick they will thus be protected against intestinal parasites to a slight but useful degree.

Yank Out Those Stumps

The Kirstin method clears your land for the plow.

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TURN your sullen, gloomy, profit-eating stump lands into happy, smiling fields that bear rich crops, and put money into the bank for you.

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The horse power machine for the big jobs, for the fields of many stumps; it will pull anything it tackles, and, because of its triple power, prevents strain to man, horse and machine. Will clear two acres from a single setting.

The One Man Puller gets the biggest stumps. Double leverage gives you a giant's power; a push on the handle means a pull of tons to the stump. Clears an acre from one anchor.

Every Kirstin guaranteed for 15 years, flaw or no flaw, your money back if the Kirstin bond does not live up to its promise. We guarantee the Kirstin method to clear land *ready for the plow* from 10% to 50% cheaper than any other method.

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Warranted saving of 10% to 50% over all other methods.
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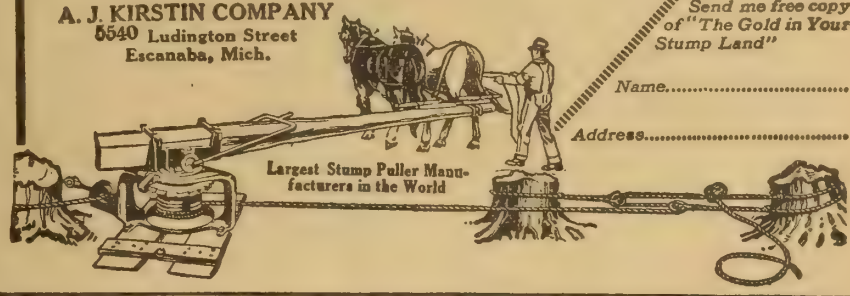

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Ask your merchants for the goods you see advertised in The Wisconsin Farmer, and tell them where you saw the advertisements.

If there are any goods advertised in this publication that you cannot buy at your regular places of trading, write us what the articles are, and tell us the names of your local dealers.

The Wisconsin Farmer, Madison, Wisconsin

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THE WINNEBAGO REDS
ARE now in the market. Excellent quality; standard weight cockerels and pullets. High-class exhibition and common laying stock. Satisfaction guaranteed or no sale. **Winnebago Poultry Yards, R. 23, Omro, Wis.**

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg. Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Succes'rs to R.F.Johnson, Assumption, Ill.

"ARISTOCRAT" Silver Wyandottes. Cocks, cockerels, hens and pullets. Better than ever. Write me your wants. Frank Faha, Jr., Box 620, Dyersville, Iowa.

BABY CHICKS and eggs from trap nested, pedigreed Barred Rocks and S.C.White Leghorns with wonderful egg records. Write for circular to Amos G. Norman, Dept. D, Chatsworth, Illinois.

HATCHING EGGS; prize-winning S.C. Reds; White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

TURKEYS WE BUY 'EM. Write us what you have.
THE R. E. COBB CO.
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HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys, bantams and guineas. Also incubator eggs. Bare Poultry Co., Box 650, Hampton, Iowa.

SINGLE COMB BUFF AND WHITE Leghorn cock'els. Charles Schmit, Hortonville, Wis.

WHITE and Barred Rocks from prize-winning stock. Yearling hens and males. Early pullets and cock'ls. Mrs. J. F. Bloom, R. 1, Stillwater, Minn.

FIFTY varieties chickens, ducks, geese, turkeys, guineas. Low prices to make room. Catalog free. Dell Walrath, Box S, Janesville, Minn.

BUFF (to the skin) Orpington hens, bred to lay in winter. Orders now booked for spring delivery. Mrs. E. J. Kennedy, Tigerton, Wis.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good fait
All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Thanksgiving Day.

We plow the fields, and scatter
The good seed o'er the land,
But it is fed and watered
By God's almighty hand.
He sends the snow in winter
The warmth to swell the grain.
And the soft refreshing rain.
All good gifts around us
Are sent from heaven above,
Then thank the Lord, Oh, thank the Lord
For all his love.

The Colonial Thanksgiving Table.

It was thirteen years after the arrival of the Pilgrims before Thanksgiving Day was officially recognized by the state, though it was observed generally in the churches and in the homes. A bountiful dinner was an important part of the home festivities and the National Museum in Washington contains a collection of clothing, jewels, cutlery, dishes and glassware which graced those early-day feasts.

There was no centerpiece of flowers or fruits for the table in those days, but instead that place was occupied by the turkey, which was served whole on a huge platter, the carving being the duty of the master of the house. The first course of the dinner was soup. It was brought on in a large soup tureen and individual bowls were filled from it with a pewter spoon. The dinner proper was served on huge plates and included besides the turkey, roast pig, baked squash, white and sweet potatoes, parsnips and preserved fruits. The jelly was served in individual jelly dishes which had tops and tiny glass feet. Celery was served in a big cut glass vase and the salt was put on the table in a glass salt dish as large as a saucer. The drinking glasses were very heavy and evidently meant for service and not for beauty. The knives, forks, spoons, sugar bowls and cream pitchers were usually of pewter.

Thanksgiving Menus.

Thanksgiving dinner isn't a really, truly Thanksgiving dinner unless it is the old-fashioned roast-turkey kind. Of course, a turkey dinner and all the "fixings" takes time and work, but if things are made ready by slow and easy stages a few days in advance nobody need be played out when the great day arrives.

Many things, such as puddings, mince and pumpkin pies, cakes, salad dressing, etc., can be prepared a day or two ahead and even the vegetables can be gotten ready to cook the day before. Here are some menu suggestions for the entire day:

BREAKFAST

Baked apples with thick cream
Buttered toast Bacon
Fresh doughnuts Coffee

DINNER.

Oyster stew
Pickles Celery
Roast turkey chestnut stuffing giblet sauce
Mashed potatoes Baked Squash
Creamed onions Cranberry sherbet
Suet pudding Foamy sauce
Nuts Raisins Pumpkin pie
Coffee

SUPPER

Chicken salad
Brown bread sandwiches
Cup custards Pound cake
Preserves Tea

In preparing the oyster stew each oyster should be carefully handled to remove all bits of shell the liquor from the oysters being strained and added to the water in which the oysters are cooked. Drop the oysters into the boiling liquor, cook until the edges curl and remove with a skimmer. Add the milk and when boiling hot season with a generous quantity of butter, turn in the oysters, add salt and pepper and serve at once.

Chestnut stuffing is delicious. It requires a pound of blanched chestnuts. Boil them until tender, then put through a ricer. Add a cupful of bread crumbs, a half cupful of butter, one and one-half tablespoonfuls of poultry dressing, one-half cupful of raisins, salt, pepper, celery salt and cayenne pepper to taste. Mix thoroughly and stuff the turkey.

Cranberry sherbet is very easy to make. Strain stewed cranberries, add sugar to taste, a tablespoonful or two of lemon juice with a cup of water to a cup of the cranberry juice; freeze and serve in sherbet cups, with the turkey.

The chicken salad should contain a generous portion of apple and celery.

Letter From Champion Bread Baker.

Interest grows year by year in the girls' and boys' clubs and the good they are accomplishing for the young people. The state fairs are helping along the good work by conducting contests between the various clubs over their respective states. That the girls and boys themselves are interested and that they are getting something worth while out of the club work is attested by a letter written by the champion bread maker among the girls at the last Wisconsin State Fair, Miss Mildred Wassweiler. Miss Wassweiler is enthusiastic over her club work and the girls' profitable week at the fair. She writes:

MILDRED WASSWEILER (LEFT), WINNER OF FIRST PRIZE, AND WALBERG DAVIDSON (RIGHT), WINNER OF SECOND PRIZE.

The bread-making contest was held on Wednesday, September 13, 1916, at the Wisconsin State Fair. This contest is held for the purpose of bringing the girls of the different clubs together.

An entry fee of $1 is charged to help cover the expenses of the camp. This fee is charged to campers only. In paying the fee, the campers receive their meals and lodging for the entire week of the fair. The girls who do not stay at the camp pay only about half the entry fee.

Uniform caps and aprons are worn by all girls taking part.

The booths that the girls worked in this year were provided with all necessary utensils, a table, and a wonderful new electric stove. Two girls worked in one booth instead of one because of lack of space.

About nine o'clock we started and had to be finished by noon. All ingredients for the bread had to be brought to your booth before the contest began. Girls from the camp came over earlier and made the slow method, while girls from outside started at nine and made the quick method of the same recipe of bread.

After making and kneading the bread and placing it back in the bowl to rise we had a chance to wash all soiled dishes and straighten up our booth.

The sewing contest was carried on during the bread-making contest. My team, the West Allis team, received third place in the sewing contest.

When the bread was about ready to be baked the electric ovens were turned at high and kept there about fifteen minutes, then turned at low and left there a while, then turned off. After the first fifteen minutes the bread was placed in the oven. During the whole process of baking the oven doors had to be left closed. Every time the oven doors were opened the heat escaped and delayed the process of baking.

The electric stoves were fine. The ovens baked the bread a lovely brown. The crust of the bread was not baked hard and no shortening or milk was put on the bread before or after baking. I think the electric stoves bake bread just as well as any other stove.

This contest was very interesting. It showed the ability of girls of 'teen age, and also the different work accomplished by other clubs. Every girl who took part in the contest experienced something different. I found out that it is just as easy to work when hundreds of people are watching you as it is to work all by yourself. At the state fair the people crowded around the booths and asked many questions and even criticized the work of the girls and the method of work.

I went into this contest just for fun, not thinking of a prize at all, and the first morning of the contest I was positive our team would not take any prize, but the result was just opposite. Our team took first in the bread-making contest.

Wherever a contest of this kind is carried on I hope many girls will enter. If you haven't organized a club, organize one as soon as possible.

Perhaps there are those who would be interested in knowing the recipe we followed in making our bread. It calls for one-half cupful of boiling water, one-half cupful of scalded milk, one tablespoonful of sugar, one tablespoonful of lard, one-half yeast cake dissolved in one-fourth cupful of lukewarm water and about three cups of sifted flour. This recipe makes only one loaf.

Put the lard, sugar and salt in a bowl, pour on scalded milk and the boiling water. When lukewarm add the dissolved yeast cake and gradually the sifted flour. Mix it very thoroughly, then beat it briskly until it is very smooth. Turn on a floured board. The dough should come out of the bowl a smooth, compact mass, leaving the bowl clean. Knead until the mixture is smooth and elastic to the touch and bubbles seem to appear under the surface. Return to the bowl, cover with a clean cloth. Let rise until it has doubled in size. Toss on a slightly floured board and knead. Shape into loaves, place in greased pans. Cover and let rise again to double its bulk. Brush top with milk or butter if desired and bake in a hot oven.

Those interested in organizing a club should write for information to Mr. Buick, 316 Breeze Terrace, Madison, Wisconsin, who is at the head of the organized girls' and boys' clubs of the state.

Light Hot Cakes Without Eggs.

To the Editor:—The man of the house wishes me to tell Mrs. S. H. how I make hot cakes that are neither soggy nor tough. I bake fifteen sized cakes every morning an that number I use one pint of b milk or thick sour milk, a pin salt, one rounded teaspoonful of sifted with one cupful of salt. third cupful of corn meal and a spoonful of melted drippings or

The first morning I stir up a larger batch so that I have left one cupful of batter. I set this for a "starter" and add the oth gredients to it each morning.

If Mrs. S. H. will follow direct am sure she will find her cakes and light and very economic they do not require any eggs.

Mrs. E. P

THE YOUNG FOLKS

All letters from boys and girls to this dep should be sent to office of The Wisconsin Madison, Wisconsin.

My Pet Crows.

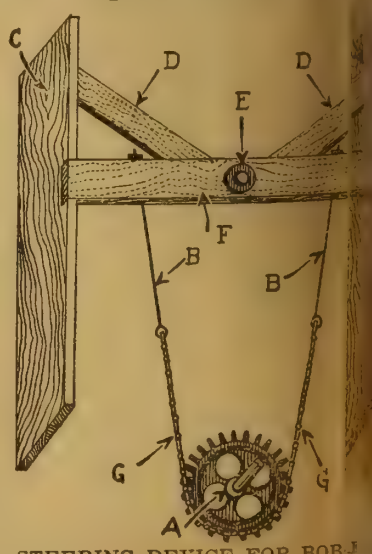
Dear Young Folks:—I have tw crows which we got last summe grove. Sometimes they are na My grandma stays with us and s a flower garden and the crows be the pretty flowers. They like re When mamma washes they p the clothespins and bite off th tons. They are not afraid of an and will even bite the kitten tail. I have two brothers and thr ters. One brother and one sist younger than I. We all go to c school except one sister who g high school. —A

Steering Part of Bobsle

Dear Young Folks:—I saw in cent issue of this paper where was wanting to know how to m the steering part of a bobsled. am just a boy myself, so I don't If I have my plan exactly right but I think it would be a good id I am sending a diagram so th boy can easily see how to ma steering device.

A is an old sprocket wheel o bicycle. In the center of the is a rod that comes up in the b B B represents rods that c chains to brace bar, C C the r D D the brace boards, E w through which comes a rod con body to runners, F cross bar a a chain coming around the sp wheel, the ends being fastened rods lettered B.

In making the sled be s brace it well. Make the r sharp, but not too sharp, bec you do it will sink in and m hard to guide. I think I have



STEERING DEVICE FOR BOB

everything plain and I would l to hear what success the boy h with my plan. —Jo

SOMETHING FOR NOTHING

BUT YOU MUST BE PROMPT

A COMPLETE MANUAL OF CROCHET AND TATTING

By Anna Valeire

This book on crochet and tatting craft is most timely, as these arts in all their forms are very popular at the present time. It contains over sixty designs and combines new and original patterns of rare beauty combined with dainty simplicity and elegant aste. The abbreviations used to esignate the different stitches in tting and crocheting are given and eir meaning explained in full. Instructions are given in detail for very design displayed in the book. herefore, the novice in this art will ave no trouble whatever in working the simple, though seemingly mplicated, designs which have en compiled for her special benefit nd in very little time will find that e may easily attempt the more mplicated patterns intended for ore advanced and experienced edleworkers. The lovely array of sertions, edgings and medallions iggest numerous ways in which ey may be used to beautify both ersonal and household articles. The inty tattings immediately bring to ind handkerchiefs of cob-web fineess. The simpler crochet insertions nd edges suggest pretty bath-room ts and bed linen. There are no id of designs which may be used on esses and lingerie; two yoke patrns which appear in the book make particularly desirable. Designs r luncheon sets, scarfs, curtain ges and panels, and the new round llow tops, and many more things hich will suggest themselves to the orker are all contained in the onderfully complete book on this scinating art needlework.

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1525—A new and practical frock for mothers' girl. The pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3⅝ yards of 36-inch material for an 8-year size.

1542—A smart boys' blouse with convertible collar and straight or French cuff. The pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 2 yards of 36-inch material for a 10-year size.

1889—Girls' one-piece dress. The sleeve is a comfortable bishop model, finished with a neat cuff. The pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 3¾ yards of 36-inch material for an 8-year size.

1885—A comfortable undergarment, consisting of ladies' combination corset cover and drawers. The pattern is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3⅝ yards of 36-inch material for a medium size.

1425—Ladies' house dress with long or short sleeve. It is cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6¼ yards of 36-inch material for a 36-inch size.

1909—A new coat dress for misses and small women. Cut in 4 sizes: 14,

16, 18 and 20 years. Size 16 requires 6 yards of 44-inch material. The dress measures about 3 yards at the foot.

1900—Ladies' dress. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 36 requires 6⅜ yards of 44-inch material. The skirt measures about 3⅜ yards at the lower edge.

1908—Ladies' night gown. Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 6⅛ yards of 36-inch material for a 36-inch size.

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9741—Childrens' Rompers in high or round neck edge. The pattern is cut in 4 sizes: 6 months, 1, 2 and 3 years. It requires 2¼ yards of 36-inch material for a 3-year size.

1906—Girls' dress. Cut in 4 sizes: 6, 8, 10 and 12 years. It requires 1 yard of lining 36 inches wide for the underwaist and 3¼ yards of material for the dress, for an 8-year size.

1899 Waist-1898 Skirt—Ladies costume. Waist 1899 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1898 cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 7¾ yards of 44-inch material for a 36-inch size for the entire dress. The skirt measures about 2⅝ yards at the foot. Two separate patterns 10 cents for each pattern.

International Sunday School Lesson.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Lesson for November 26th.

A Living Sacrifice.

LESSON TEXT—Romans 12.

GOLDEN TEXT—Present your bodies a living sacrifice, holy, acceptable unto God, which is your spiritual service.—Rom. 12:1 R. V.

The first eleven chapters of this letter teach and illustrate the great principles of the Christian life. Paul calls it "my Gospel." Its fundamental principle is that justification regenerates men, and nothing else. The second section is the practical application of these truths.

I. The Exhortation to Gratitude (vv. 1-2). "Therefore," because of the work of Christ on our behalf, we are to present our bodies as living sacrifices unto God, to be used for his glory and service. (See chapter 6:13, 16, 19). Paul urges, he beseeches; he is winsome, though he might command. To "present" technically means, "bring an offering to God." The body is the sum of all human faculties, physical and spiritual. It must not be defiled by being yielded as an instrument to sin, for it is the temple of God. (I Cor. 3:16, 17). A "Living Offering," (not as the bodies of slain animals offered by Jews) is a consecration of the body, and not a destruction of life. The original means that this—the offering of ourselves as a living sacrifice—is a reasonable, rational service. God has the right of ownership of every member of our body, and there never was a day when there was greater need of insisting upon a Christianity that affects the bodies of men than today. Hands, lips, ears, eyes—every member should be constantly presented to him who purchased it by the blood of his own Son. (I Cor. 6:20; I Pet. 1:18-19.) This is a spiritual, religious service because it is our spirit which presents the offering of the body which he inhabits. Too many of us are "fashioned according to this age.'

II. The Expression of Gratitude (vv. 3-8). Or the right use of the gifts of God. (1) Avoid "self-conceit" (vv. 3-5). These verses indicate how important this subject is. Conceit is entertaining an exaggerated opinion of one's own ability. The church has many members, and they do not all have the same office; there is a variety in the unity of the body. So in the church there are many "members in one body," each of which is important; all are essential. (2) "Prophecy" (v. 6), not necessarily foretelling, but the revelation of spiritual truth and experience according to the proportion of our faith (Ps. 39:3), the living, spiritual experience of the presence of God within us. (3) "Ministry" (v. 7). The business side of the church, collecting of its money and the distribution of the poor. Some can best attend to such business. Many churches fail by not selecting wise leaders for this work. (4) "He that teacheth." The true pastor is a combined prophet, pastor and teacher. We are all teaching, whether we wish to or not. It is a privilege as well as an obligation.

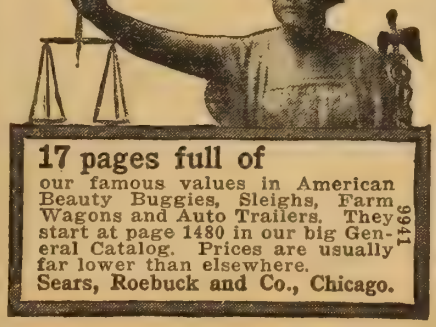
III. Conduct Toward All Men (vv. 9-21). The renewed soul needs guidance, encouragement and instruction. (1) "In love" (v. 9). The hypocrite wears a mask. Notice the close connection of "abhor that which is evil" with "cleave to that which is good." The word for cleave means literally to glue it, so that nothing can separate you from love which is the supreme good. "In honor preferring one another" (v. 10). Let others carry the banner—few of us can stand this acid test. (3) "Diligent in business" (v. 11). Whatsoever your hands find to do, do it with your might, being fervent or boiling in spirit, the reverse of the previous exhortation, in which we are thus to serve the Lord. Few need exhortation to be diligent in their own business, but all of us need this exhortation with regard to the "king's business." (4) "Rejoicing in hope (v. 12). Triumphing over trials and difficulties in the way. Looking for that "blessed hope" (Titus 2:13). (5) Patience and tribulation (v. 12). The Latin "tribulum" was the threshing instrument or roller whereby the husbandman separated grain from the husk. Sorrow, distress and adversity are the means for separating men from the chaff of their lives. Sometimes small annoyances, long continued, become great tribulations. (See Joshua 24:12.) (6) Continuing in the school of prayer (v. 12). Steadfast, urgent, pressing, persevering prayer (Luke 21:1). (7) "Given to hospitality" (v. 13); literally, pursue it.

The word "condescend' is not strong enough—it should be literally "borne away" from the living things along the line of the things that are humble.

(8) Living peaceably with all men (v.18); being ready for peace and to do more than your share of reconciliation.

(9) Overcoming evil with good (vv. 19-21). The heaping of coals upon the enemy's head is not the object but the result of returning good for evil.

The only real victory is, "Be not overcome by evil, but overcome evil with good."



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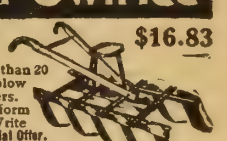

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER VIII—Continued.

"Major Dreyer says you may enter;" and then, laughing and shivering, the Major's daughter seized Rachel with one hand, Stuart with the other, and making a quick charge, darted into the ruling presence.

"Oh, you bear!" she said, breaking from her comrades and into the bear's embrace; "to keep us out there—and it so cold! I came over specially for—"

And then she stopped. The glitter of the sun on the snow had made a glimmer of everything under a roof, and on her entrance she had not noticed a figure opposite her father, until a man rose to his feet and took a step forward as if to go.

"Let me know when you want me, Major," he said; and the voice startled those two muffled figures in the background, for both, by a common impulse, started forward—Rachel throwing back the hood of her jacket and holding out her hand.

"I am glad you have come," she said heartily, and he gripped the offered member with a sort of fierceness as he replied:

"Thank you, Miss."

But his eyes were not on her. The man who had come with her—who still held her gloves in his hand—was the person who seemed to draw all his attention.

"You two are old neighbors, are you not?" remarked the Major. "Fred, my dear, you have met Mr. Genesee, our scout? No? Mr. Genesee, this is my daughter; and this, a friend of ours—Mr. Stuart."

An ugly devil seemed alive in Genesee's eyes, as the younger man came closer, and with an intense, expressive gesture, put out his hand.

Then, with a bow that might have been an acknowledgment of the introduction, and might have been only one of adieu to the rest of the group, the scout walked to the door without a word, and Stuart's hand dropped to his side.

"Come back in an hour, Genesee," said the Major; "I will think over the trip to the Fort in the meantime."

"I hear. Good morning, ladies;" and then the door closed behind him, and the quartette could not but feel the situation awkward.

"Come closer to the fire—sit down," said the Major hospitably, intent on effacing the rudeness of his scout. "Take off your coat, Stuart; you'll appreciate it more when outside. And I'm going to tell you right now, that, pleased as I am to have you all come this morning, I intend to turn you out in twenty minutes—that's all the time I can give to pleasure this morning."

"Well, you are very uncivil, I must say," remarked Fred. "But we will find some of the other boys not so unapproachable. I guess," she added, "that we have to thank Mr. Man-with-the-voice for being sent to the right-about in such short order."

"You did not hear him use it much," rejoined her father, and then turned to the others, neither of whom had spoken. "He is quite a character, and of great value to us in the Indian troubles, but I believe is averse to meeting strangers; anyway, the men down at the Fort did not take to him much—not enough to make him a social success."

"I don't think he would care," said Fred. "He impressed me very much as Kalitan did when I first met him. Does living in the woods make people feel like monarchs of all they survey? Does your neighbor ever have any better manners, Rachel?"

"I have seen him with better—and with worse."

"Worse? What possibilities there must be in that man! What do you think, Mr. Stuart?"

"Perhaps he lacks none of the metal of a soldier because he does not happen to possess that of a courtier," hazarded Stuart, showing no sign that the scout's rudeness had aroused the slightest feeling of resentment; and Rachel scored an opinion in his favor for that generosity, for she, more than either of the others, had noted t meetings, and Genesee's entire dis gard of the Stuart's feelings.

Major Dreyer quickly second Stuart's statement.

"You are right, sir. He may be sulky as Satan—and I hear he is times—but his work makes amends f it when he gets where work is neede He got in here last night, dead-be from a trip that I don't believe a other man but an Indian could ha made and get back alive. He has h good points—and they happen to points that are in decided demand here."

"I don't care about his good poin if we have to be turned out for hi said Fred. "Send him word he c sleep the rest of the day, if he is tir out; maybe he would wake up mo agreeable."

"And you would not be ousted fr my attention," added her fath pinching her ear. "Are you jealous Squaw-man-with-a-voice?"

"Is he that?" asked the girl, with great deal of contempt in her to "Well, that is enough to hear of hi I should think he would avoid wh people. The specimens we have se of that class would make you asham you were human," she said, turning Rachel and Stuart. "I know papa sa there are exceptions, but papa is i aginative. This one looks rather pr perous, and several degrees clea than I've seen them, but—"

"Don't say anything against him til you know you have reason, Fre suggested Rachel. "He did me a fav once, and I can't allow people to t about him on hearsay. I think he worse than few and better than ma and I have known him over a year."

"Mum is the word," said F promptly, proceeding to gag hers with two little fists; but the exp ment was a failure.

"If she takes him under her wi papa, his social success is an assur fact, even if he refuses to open mouth. May I expect to be presen to his interesting family tomorr Rachel?"

Rachel only laughed, and asked Major some questions about the ports from the northeast; the attit of the Blackfeet, and the snowfall the mountains.

"The Blackfeet are all right no he replied, "and the snows in the h to the east are very heavy—that what caused our scout's delay. south of us I hear they are not nea so bad, for a wonder, and am glad hear it, as I myself may need to m a trip down to Fort Owens."

"Why, papa," broke in his c manding officer, "you are not goin turn scout or runner, are you, leave me behind? I won't stay!"

"You will obey orders, as a sol should," answered her father. If I instead of sending, it will be beca it is necessary, and you will have bow to necessity, and wait until I get back."

"And we've got to thank Mr. Squ man for that, too!" burst out F wrathfully. "You never thought of ing until he came; oh, I know it hate him!"

"He would be heart-broken if knew it," observed her father dr "By the way, Miss Rachel, do know if there is room in the ra stables for another horse?"

"They can make room, if it is necessary. Why?"

"Genesee's mare is used up e worse than her master by the lo hard journey he has made. Our st that is in good condition can st our accommodations all right, but fellow seemed miserable to think poor beast had not quarters equa his own. He is such a queer fel about asking a favor that I thought

"And the thought does you cred said the girl with a suspicious m ture in her eyes. "Poor, brave witza! I could not sleep very sou myself if I knew she was not cared and I know just how he feels. D say anything about it to him, b will have my cousin come over and her, before evening."

"You are a trump, Miss Rach

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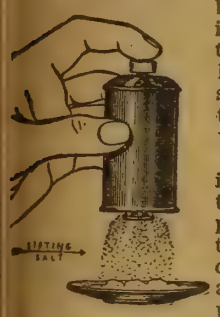

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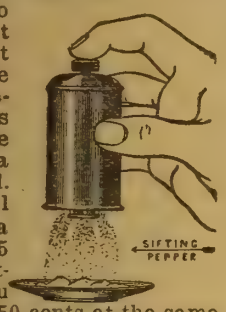

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said the Major emphatically; "and if you can arrange it, I know you will lift a load off Genesee's mind. I'll wager he is out there in the shed with her at this moment, instead of beside a comfortable fire; and this camp owes him too much, if it only knew it, to keep from him any comforts for either himself or that plucky bit of horseflesh."

Then the trio, under guard of the Lieutenant, paid some other calls along the avenue—were offered more dinners, if they would remain, than they could have eaten in a week; but in all their visits they saw nothing more of the scout. Rachel spoke of his return to one of the men, and received the answer that they reckoned he was putting in most of his time out in the shed tying blankets off his bunk around that mare of his.

"Poor Mowitza! she was so beautiful," said the girl, with a memory of the silken coat and wise eyes. "I should not like to see her looking badly."

"Do you know," said Stuart to her, "that when I heard you speak of Mowitza and her beauty and bravery, I never imagined you meant a four-footed animal?"

"What, then?"

"Well, I am afraid it was a nymph of the dusky tribe—a woman."

"Naturally!" was the one ironical and impatient word he received as answer, and scarcely noted.

He was talking with the others on multitudinous subjects, laughing, and trying to appear interested in jests that he scarcely heard, and all the while the hand he had offered to Genesee clenched and opened nervously in his seal glove.

Rachel watched him closely, for her instincts had anticipated something unusual from that meeting; the actual had altered all her preconceived fancies. More strong than ever was her conviction that those two were not strangers; but from Stuart's face or manner she could learn nothing. He was a much better actor than Genesee.

They did not see any more of him, yet he saw them; for from the shed, off several rods from the avenue, the trail to Hardy's ranch was in plain sight half its length. And the party, augmented by Lieutenant Murray, galloped past in all ignorance of moody eyes watching them from the side of a blanketed horse.

Out a half mile, two of the riders halted a moment, while the others dashed on. The horses of those two moved close—close together. The arms of the man reached over to the woman, who leaned toward him. At that distance it looked like an embrace, though he was really but tying a loose scarf, and then they moved apart and went on over the snow after their comrades. A brutal oath burst from the lips of the man she had said was worse than few.

"If it is—I'll kill him this time! I'll kill him!"

CHAPTER IX.

After Ten Years.

MAJOR DREYER left the next day, with a scout and small detachment, with the idea of making the journey to Fort Owens and back in two weeks, as matters were to be discussed requiring prompt action and personal influence.

Jack Genesee was left behind—an independent, unenlisted adjunct to the camp, and holding a more anomalous position there than Major Dreyer dreamed of; for none of the suspicious current of the scout ever penetrated to his tent—the only one in the company who was ignorant of them.

"Captain Holt commands, Genesee," he had said before taking leave; "but on you I depend chiefly in negotiations with the reds, should there be any before I get back, for I believe you would rather save lives on both sides than win a victory through extermination of the hostiles. We need more men with those opinions; so, remember, I trust you."

The words had been uttered in the presence of others, and strengthened the suspicions of the camp that Genesee had been playing some crooked game. None knew the reason for that hastily-decided trip of the Major's, though they all agreed that that "dirty skunk of a squaw man" was posted. Prophecies were rife to the effect that more than likely he was playing into the hands of the hostiles by sending away the Major and as many men as possible on some wild-goose chase; and the decision arrived at was that observation of his movements was a matter of policy and readiness to meet an attack from the hills a probable necessity.

He saw it—had seen it from the day of his arrival—and he kept pretty much out of the way of all except Kalitan; for in watching Genesee they found they would have to include his runner, who was never willingly far away.

During the first few days their watching was an easy matter, for the suspected individual appeared well content to hug the camp, only making daily visits to Hardy's stable, generally in the evening; but to enter the house was something he avoided.

"No," he said, in answer to Hardy's invitation; "I reckon I'm more at home with the horses than with your new company. I'll drop in sometime after the Kootenai valley is clear of uniforms."

"My wife told me to ask you," said Hardy; "and when you feel like coming, you'll find the door open."

"Thank you, Hardy; but I reckon not—not for a while yet."

"I'd like you to get acquainted with Stuart," added the unsuspicious ranchman. "He is a splendid fellow, and has become interested in this part of the country."

"Oh, he has?"

"Yes," and Hardy settled himself, Mexican fashion, to a seat on his heels. "You see he's a writer, a novelist, and I guess he's going to write up this territory. Anyway, this is the second trip he has made. You could give him more points than any man I know."

"Yes—I might."

"Rachel has given him all the knowledge she has about the country—the Indians, and all that—but she owns that all she learned she got from you; so, if you had a mind to be more sociable, Genesee—"

The other arose to his feet.

"Obliged to you, Hardy," he said; and only the addition of the name saved it from curtness. "Some day, perhaps, when things are slack; I have no time now."

(To be continued.)

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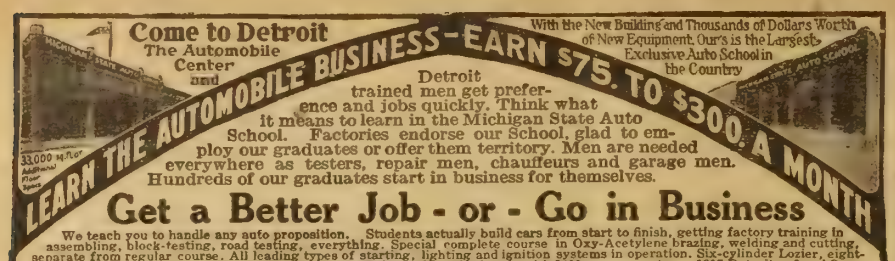

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In and Around Wisconsin

COMING EVENTS.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.

International Live Stock Exposition, Chicago, Ill., December 2d to 9th.

Wisconsin Dairymen's Convention, Waupaca, Wis., December 5th to 7th.

Wisconsin Buttermakers' Association, Sparta, Wis., December 5th to 7th.

Wisconsin Beekeepers' Association, Madison, December 7th and 8th.

Wisconsin State Horticultural Society, at Madison, December 12th, 13th and 14th.

Wisconsin Poultry Association Show, at Madison, January 1st to 5th.

Wisconsin Cheesemakers' Association, at Fond du Lac, January 10th to 12th.

Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

The photograph shown herewith is that of a corn display in the lobby of the First National Bank, Grand Rapids, Wisconsin. This picture was sent to The Wisconsin Farmer by Mr. Earle Pease, vice president of the bank and a gentleman who has been keenly interested in agricultural development in his own community and in the state at large. This is a splendid corn display, considering the latitude of Grand Rapids and which is ordinarily considered at the north end

CORN EXHIBIT IN FIRST NATIONAL BANK BUILDING, GRAND RAPI WIS., NOVEMBER, 1916.

of the corn belt. This corn was raised on both heavy and light soils and the display was made without any offer of premiums or cash prizes. The exhibit was gotten up purely for the purpose of creating greater interest in pure-bred corn in Wood county. It is a find illustration of the splendid co-operation which exists in this section between farmers and bankers.

W. D. Morgan, of Rusk county, has just purchased a caterpillar tractor ditching machine which he expects to operate on the Deer Trail drainage project in that county this winter.

Quite a notable farm sale was consummated recently in Green county where 171 acres situated near the city of Monroe was sold by E. Van South to Herman Gempeler at $300 per acre, or a total of $51,300. Mr. Gempeler also purchased the live stock and other personal property on this farm, paying an additional $16,000 for the same. This sale sets a new record for land values in Green county and indicates the possibilities of big values of good dairy farms.

Horse breeders of Grant county, co-operating with local business men and the Wisconsin Live Stock Breeders' Association, will hold their first annual colt show on Saturday, November 25th, at Bloomington. The local committee is made up of M. F. Woodhouse, Arthur McKeavitt and Thomas McNamara. W. L. Houser, of Mondovi, will act as judge. There will be two sections, one for grade foals and one for get of sire with liberal cash prizes. In section one comes colt and filly foal and in section two classes for groups of three foals each in Percherons, Belgians, Clydesdales Shires. Grant county is an impor horse breeding county and a big s ing is expected.

The annual meeting of the Wis sin Progressive Poultry and Pet S Association, of Monroe county, held recently in Sparta and the lowing officers elected: M. A. lick, president; J. C. Johnson, president; J. L. Herbst, secret The next show will be held in Sp January 10-16, 1917.

The annual convention of the beekeepers' association will be at the capital, Madison, on Decen 7th-8th. The growth of the indu during the last year has been enc aging and technical problems of rearing and disease prevention wil discussed. N. F. France, of Platt is president and Gus Dittmer, of gusta, is secretary.

Manitowoc county farmers rec witnessed a novel sight at the H Rideker farm in the village of M cot. A complete barn, 44x75 feet, erected in one day. Work on

structure was begun early in the m ing and there were about seventy on the job. By night the building finished and a dance was held to brate the event. The barn was ere on a foundation of one which burned recently and is almost an act duplicate. The building was ned and all material on the groun advance. Even the doors were in their places before the crew Experienced carpenters cut the ber, planks and boards and sup tended the work and the barn is as good as it would have been were built in the regular way.

Kewaunee county farmers are terested in two pure-bred Gu seys which were recently bo at Waukesha. These animals been placed with the George F. nik and Jacob J. Blahnik herds. two cows are Beauty of Linden and Selma of Pinehurst II, the for being purchased from William Ne Pelouze, of Oconomowoc, and the ter from F. E. Fox, of Wauke There are not nearly so many bred animals in Kewaunee count there should be. The leaders are to see these animals representi splendid breed brought to the co and they expect this to be an imp to the pure-bred stock business. years ago Waukesha county had a small handful of pure-bred bree and now there are 3,000 pure Guernseys in the county, and prob a larger number of pure-bred steins. The Jerseys are also be ing popular in Waukesha county, these facts show that the boo which has been done for the Guer breed has helped rather than hind the progress of other good breeds in the county.

EWS OF THE SALE RING

gemeister's Percheron Sale.

dispersion sale of the Percheron of the Hagemeister Stock Farm, Bay, Wis, held Wednesday, No- r 15th, while not a record maker ces, was one of the best horse held in Wisconsin for some time. s as fine an offering of Perche- as we have seen in any sale in nsin. There were no sensational but all the animals went at a price, that was satisfactory to eeders and yet will pay the buy- d interest on his investment. The st buyer at the sale was H. C. ms, Philadelphia, Pa. He bought f the tops, paying from $510 to r four and an average of $400 for head. Sidney Guttenstein, Mil- e, Wis., was the next largest taking six mares and two stal- t around $2,600. The mare, Tulip, the female offering at $580. She ine, big, showy mare, weighing ounds and only a three year old. of the line of breeding that made rd famous, viz.: Sired by His- e, and out of a daughter of at. Another daughter of His- , named Isola, brought $575. Col. alker and Col. J. H. Denhardt ted the sale in an efficient man- he average for stallions of $289, ares at $343 does not seem high, is includes a large number of ng colts, which reduced the aver- y materially. A detailed list of e is given below:

t, C. Schmidt, Wrightstown,	$400
gal, Sidney Guttenstein, Mil- ee, Wis.	410
e, Julius Gillon, Scott, Wis.	305
ack Duke, J. Allmaros, New ford, N. D.	300
, E. J. Tetzlaff, DePere, Wis.	500
, Alex Johnson, Denmark,	170
i, S. Guttenstein	385
r, J. Allmaras, New Rock- N. D.	285
h, Lorenz Metzler, New	

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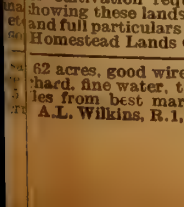

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Franken, Wis.	150
Homer, Oakland Farm, Wayne, Ill.	170
Fearnaught, Harvey Larson, Denmark, Wis.	110
Pride, S. Guttenstein	470
Tia, S. Guttenstein	180
Tempest, H. C. Williams, Philadelphia, Pa.	1,355
Immunite, S. Guttenstein	300
Henriette, Alex Johnson	355
Iena, H. C. Williams	285
Intrepide, H. C. Williams	365
Intrigue, Sidney Guttenstein	405
Idabel, Henry Banan, Scott, Wis.	250
Toinette, Wm. Belitz, Cleveland, Wis.	170
Infelice, Henry Banan	185
Iva, Sidney Guttenstein	200
Prudence, Wm. Beilitz, Cleveland, Wis.	210
Theba, H. C. Williams	255
Patricia, S. Guttenstein	310
Fern, H. C. Williams	550
Hester, B. L. Rundell, Hammond, Wis.	350
Faustine, H. C. Williams	510
Tulip H. C. Williams	580
Hortense, H. C. Williams	325
Imogene, B. L. Rundell	365
Isabenda, Ganschow Bros., Bonduel, Wis.	290
Thilby, H. C. Williams	305
Irma, J. L. Larson, Denmark, Wis.	375
Belle Biue, B. L. Rundell	315
Tyne, Alec Johnson	375
Twilight, Ganschow Bros.	335
Ida, Wm. Belitz	370
Penelope, J. E. Barstow, Randolph, Wis.	320
Isola, H. C. Williams	575
Thevonia, H. C. Williams	300
Isabella, Oaklawn Farm, Wayne, Ill.	445

SUMMARY.

11 stallions	$ 3,185; average....$289.54
31 mares	... 10,980; average.... 343.12
42 head	.... 15,232; average.... 329.41

Heyl's Pony Sale.

A successful sale of Shetland ponies was made at Washington, Ill., by George A. Heyl & Son. Dr. Hervey, of Wisconsin, and Miss Mary Judy, of Tallula, Ill., were the largest buyers. The list follows:

FEMALES.

Orvetta Larigo, foaled 1913; Hamilton Farms, New Jersey	$380
Ola Larigo, foaled 1914; Reiner Bros., Indiana	275
Irene Kathleen, foaled 1909; Miss Mary Judy, Tallula, Ill.	130
Sultana of Uyasound, foaled 1909; Miss Judy	125
Normaline, foialed 1907; Miss Judy	125
Mc's Beauty, foaled 1910; R. F. Kreipi, Kansas	130
Milla, foaled 1905; Miss Judy	50
Atlanta, foaled 1905; Miss Judy	50
Mona Ceasar, foaled 1905; Miss Judy	50
Harum Daisy, foaled 1911; Dr. Hervey	125
Maple Leaf Larigo, foaled 1914; Miss Judy	125
Bessie Larigo, foaled 1913; A. T. Trimble, Hopedale, Ill.	150
Iona Larigo, foaled 1913; Miss Judy	150
Martha Larigo, foaled 1913; Dr. Hervey	100
Serene Larigo, foaled 1914; Miss Judy	95
Tina Larigo, foaled 1914; Miss Judy	95
Lena Larigo, foaled 1915; Hamilton Farm	225
Larigo's Starlight, foaled 1915; Dr Hervey	125
Jemico Larigo, foaled 1915; Dr. Hervey	140
Larigo's Maid, foaled 1915; Dr. Hervey	125
Envilla Trinket, foaled 1915; G. Rider, Eureka, Ill.	60

STALLIONS.

Trinket Larigo, foaled 1913; Hamilton Farm	$480
Harum McDougal, foaled 1911; Thos. McCoy, Illinois	150
Teddy Mc., foaled 1912; Archie Davis, Tremont, Ill.	200

Inter-County Holstein Sale.

The Holstein sale held by the Intercounty Holstein Breeders' Association, at Watertown, Wis., was a real sale. as is shown by the average obtained. It was by far the best Holstein sale held in Wisconsin this season. Individually the animals were mostly of high quality, although many of them were "cold blooded" as to pedigrees. It demonstrated, however, that the buyers have learned that the best bred cow in the world if a non breeder or a poor individual is the most expensive. This association would not accept culls for their sale and every animal was guaranteed to be straight and right. They even gave a sixty-day retest guarantee, one that was a real protection to the buyer. Because of this the buyers were not afraid to pay a reasonable price, as they felt their purchases were on a business basis and not a gamble on which "they took their own chances" as has been the attitude of some sales managers in the past. There were six exceptionally good bulls in the sale and this sale demonstrated that good bulls are in demand. Ted Lehman & Darcey purchased the thirty-pound bull consigned by E. C. Brill for $775. One consigned by Ed Gibbs, Fox Lake, brought $450. One consigned by Seifeld brought $600. The thirty-pound bull consigned by Goldthorp brought $400. Fred Albrecht's aged bull sold for $380 and one other bull sold for $500. The majority of the animals were purchased by Wisconsin buyers, a few going to Illinois, Minnesota and Michigan. Plans are already on foot for the spring sale and the consignors have agreed to put in some very high-class animals. If their plans materialize as they now promise, it will be one of the best sales of high-class animals ever pulled off in the state.

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THE WISCONSIN FARMER — MADISON, WISCONSIN

FARM LANDS.

40 ACRES, house and barn, five acres cleared, clay loam soil, main road, three miles from town, on mail route, telephone line. $25.00 per acre. $200 down, balance to suit. More good land adjoining this if you want more. Henry Wilson, Ladysmith, Wis.

FORTY or eighty acres with fair buildings, good clay soil, no waste land, close to town, $25 per acre; $100 cash, balance long time. Frank M. Doyle, Ladysmith, Wisconsin.

FOR SALE—Fifty-four acres, good dairy farm, three miles out on main road. Easy terms. Owner, Box 545, Evansville, Wisconsin.

ORPINGTONS.

TWENTY Buff Orpington cockerels; twenty Buff ducks; twenty White Runner ducks; twenty Fawn and White ducks; ten Penciled Runner ducks; twenty Pearl guineas. Fine healthy stock from prize winners. Will sell at reduced prices. Mrs. R. E. Benedict, Bristol, Wisconsin.

SALESMAN WANTED.

WANTED—Salesman. Salary and expenses. Experience and capital unnecessary. Permanent. Free outfit. General Agency opening. Goods warranted three years. New plan. Fairview Nurseries, Rochester, N. Y.

MONEY TO LOAN.

MONEY TO LOAN ON FARMS. 6% with any pre-payment privilege desired. Security must be twice the amount of the loan. Address 206 Washington Bldg., Madison, Wisconsin.

LEGHORNS.

SINGLE COMB White Leghorn cockerels for sale at $1.00 each. Oscar Berg, Edgar, Wis.

FOR sale, full-blooded white, single comb Leghorn cockerels. C. Magnuson, Spirit, Wis.

GIRL WANTED.

WANTED, girl for general house work on a farm. Mrs. Ernest Biddick, Livingston, Wis.

FARM LANDS.

BE YOUR OWN BOSS! Get a farm home in the rich corn and clover belt of Northwestern Wisconsin, along new Soo Line between Twin Cities and Twin Ports. This wonderfully prosperous dairy and stock region has never been "boomed." Well settled and prosperous, but prices still reasonable. Big OPPORTUNITY. Rich soil, hardwood timber, plenty rainfall, long crop season, improved roads, good schools and creameries everywhere. ONLY 50 MILES BIG MARKETS. Improved or unimproved $15 per acre and up. Investigate at once. Map and list free. Baker, N-110, St. Croix Falls, Wisconsin.

WE CANNOT DESCRIBE here the ideal conditions in Aitkin county. In our folder we do, however. Every farmer and dairyman should have a copy and see how easy it is to acquire a home. Arnold, Land Agent, 153 Wolvin Bldg., Duluth, Minnesota.

WISCONSIN farm consisting of 287 acres, having good buildings, situated seven miles from good market. For information, write to Morris Johnson, Osseo, Wisconsin.

240 ACRES land one mile from Niagara, Marinette county. Hardwood land. Will sell or exchange for Holstein cattle. C. T. Ellis, Madison, Wisconsin.

EIGHTY ACRES improved farm, near Marshfield, at bargain price. First-class condition. Terms reasonable. R. Williams, Marshfield, Wis.

FOR RENT OR SALE—Illinois and elsewhere, special proposition. Investigate. Wood, R 705, 230 So. La Salle St., Chicago, Illinois.

GUERNSEY CATTLE.

FOR Sale—Pure-bred Guernsey bulls, from four to eighteen months old. Adolph Suhr, Cochrane, Wisconsin.

CHESTER WHITE SWINE.

REGISTERED Chester White shoats, 100 to 125 lbs., for sale, cheap. Scott Ely, Cumberland, Wisconsin.

TELEGRAPHY.

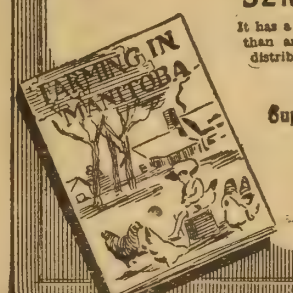
LEARN TELEGRAPHY. Short hours. Positions guaranteed. Write Signal Dept., Northwestern Telegraph School, Eau Claire, Wis.

HAVE YOU AN OLD NEIGHBOUR FARMING IN MANITOBA

Perhaps you will find a letter from him in the attractive little book, "FARMING IN MANITOBA," published by the Provincial Government of Manitoba. Or, even if you have no old neighbour who is making good in the Banner Province of the Canadian West, you will find that booklet of vast, practical interest to you. IT HAS A MESSAGE FOR YOU in a collection of plain, unvarnished letters from successful farmers in Manitoba, who came from the States and different parts of the world to the country where land is cheap as well as good. Grain Growing, Stock Raising, Mixed Farming—they all yield a bigger profit in Manitoba than where you now reside.

SEND FOR THIS FREE BOOKLET

It has a message also for your wife. Manitoba has MORE to offer you than any other part of the world. We are not selling lands—but distributing information only.



ADDRESS YOUR ENQUIRIES TO

Superintendent of Immigration and Colonization

Room C

439 MAIN STREET

WINNIPEG, MANITOBA

160 ACRE FARMS IN WESTERN CANADA FREE

Canadian Farmers Profit From Wheat

The war's devastation of European crops has caused an unusual demand for grain from the American Continent. The people of the world must be fed and wheat near $2 a bushel offers great profits to the farmer. Canada's invitation is therefore especially attractive. She wants settlers to make money and happy, prosperous homes for themselves by helping her raise immense wheat crops.

You can get a Homestead of 160 acres FREE and other lands at remarkably low prices. During many years Canadian wheat fields have averaged 20 bushels to the acre—many yields as high as 45 bushels to acre. Wonderful crops also of **Oats, Barley and Flax.**

Mixed farming as profitable an industry as grain raising. The excellent grasses full of nutrition are the only food required for beef or dairy purposes. Good schools, churches, markets convenient, climate excellent.

Military service is not compulsory in Canada, but there is an extra demand for farm labor to replace the many young men who have volunteered for the war. The Government is urging farmers to put extra acreage into grain. Write for literature and particulars as to reduced railway rates to Supt. of Immigration, Ottawa, Canada, or

Geo. A. Hall,
123 2d St., Milwaukee, Wis. Canadian Gov't Agt.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Walcowis Farms' Holsteins.

WE always enjoy a visit to the Walcowis Farms owned by Nathan Dickenson & Son, Lake Geneva, Wis., for there is always something new and interesting being developed in the way of Holstein records. Boyd, the son, has proven himself to be a careful and discriminating judge of good cattle, and the winnings of this herd at the big fairs and dairy shows places it as one of the foremost in the state. One of the cows won grand champion honors at the Wisconsin State Fair this year and the young stock were prominent winners. I have asked Boyd to make out a list of the winnings of the herd, and I hope to be able to publish this in an early issue. He is not satisfied, however, with merely show ring records, but is continually doing official and semiofficial testing. They already have over twenty A. R. O. cows and eight with yearly records. Several others will finsh their yearly records in the near future. Among the yearly record cows is Lady Walcowis De Kol that at two years and thirteen days gave 17,110 pounds milk and made 643.91 pounds butter. The senior herd sire is Cornucopia Pontiac Johanna, a 24.95-pound son of the great bull, King of the Pontiacs, that has 192 A. R. O. daughters, two with records over forty pounds, fifteen daughters with records over thirty pounds. Cornucopia Johanna Pontiac himself has seventy A. R. O. daughters, three with records from twenty-three to 27.71 pounds butter in seven days. At the present time they are offering a fine young bull sired by Cornucopia Johanna Pontiac. His dam is a sixteen-pound two-year-old daughter of the thirty-three-pound bull, Sir Pietertje Lyons Hengerveld. This young bull is very well grown for his age, is long bodied and as straight as a line. His pedigree is a "cracking" good one. Those of our readers who want a bull of good breeding and outstanding as an individual should send for the pedigree and a picture of this young animal.—Adv.

Pinehurst Dairy Holsteins.

WHEN visiting the Pinehurst Dairy, Sheboygan Falls, last week we, of course, looked over the herd and paid especial notice to the young stock. They give their calves extra good care on this farm and grow them out in good shape. They are kept in a special barn that is a model of sanitation and convenience. We saw one young bull that impressed us particularly, and we persuaded Mr. Crampton, the manager, to run an advertisement on him in The Wisconsin Farmer. He is well grown, well marked and of good type. His sire is a 28.46-pound son of the thirty-seven-pound bull, King Segis De Kol Korndyke, that is full brother to King Segis Pontiac. In his veins is combined the blood of Hengerveld De Kol, King Segis, Pontiac Korndyke and Sadie Vale Concordia. The dam of the young bull offered for sale is Pinehurst Grace, that made 23.13 pounds butter in seven days. She is a daughter of Sir Piebe Johanna Sarcastic, the sire of Pinehurst Piebe, that as a three year old made 28.13 pounds butter in seven days. Her dam has three A. R. O. daughters showing that she comes rightly by her heavy production ability. It will be seen that this young bull has inherited heavy producing blood from both his sire and dam. This combined with his good individuality makes him a very desirable animal. Send for an extended pedigree and picture of this bull and when writing will you kindly mention that you saw this advertisement in The Wisconsin Farmer. See page 24.—Adv.

An Announcement.

WE have just had a letter from E. J. Wilson, of Renville, Minn., advising that he has decided to close out his Durocs on January 4th. This comes as quite a surprise to many, for Mr. Wilson has one of the good herds of the state that represents a considerable outlay of cash. E. J. is field man for the Duroc Bulletin in Minnesota, and, as it is necessary for him to be away from home practically all of the time, he has decided to rent his farm and incidentally close out his good herd of registered Duroc Jerseys. Seventy head of sows and gilts will make up this offering and some of the best sows owned in the state of Minnesota will go in this sale. There will be forty sows a year old last fall, all sired by his noted Chief's Col. 40th, a winner of first at Minnesota, Wisconsin, Michigan and Peoria, Ill. He is sired by the great Chief's Col. and his dam is Helen Duchess by Ohio Chief. This herd contains some of the best breeding known. You should get your name on the list for a catalog at once. Watch this paper for further announcement pertaining to this offering. Address E. J. Wilson, Renville, Minn., and please mention The Wisconsin Farmer.—Adv.

Jamison & Son's Guernseys.

IF you want some choice registered Guernsey cows write to W. G. Jamison & Son, Appleton, Wis. They are offering two high-class individuals, one already in the advance registry. They are also offering several choice young bulls sired by Governor Paget and most of them from advance registry dams. You not only buy a good bull when you buy of these breeders but you buy one that will grow into money, as they are continually doing A. R. testing which adds value to every animal. Send for pedigrees and prices on the animals offered for sale. See page 24.—Adv.

Sprain & Sons Enjoy Good Trade.

WE have just had a letter from Geo. D. Sprain & Sons, West Salem, Wis., advising that they are sold out of Duroc Jersey boars. They have enjoyed an excellent mail order business, nineteen out of twenty-four boars were sold to new costumers, and at very satisfactory prices—not the $15 and $20 kind, the Messrs. Sprain don't cater to that class of buyers. There are three good boars in this herd that we believe will be heard from. Grand Model 21st is a yearling son of the noted champion, Grand Model. Royal Top Col. is a recent addition to this herd and one of the best yearling boars in the state. He is sired by Put's Top Col. he by the noted Morton's Top Col. His dam is by Ohio Chief's Advance. There is aspring boar in this herd that we consider a great prospect. He is sired by the champion, Prince Illustrator, and out of a Col. Gano dam. With the care he will receive at the hands of Fred Sprain we predict that he will make a creditable showing next year. Three of the best sows in the state are owned by this firm, two of them are by Lee's Defender out of Marion's Wonder dams and one is sired by King the Col. These sows will weigh 700 pounds each and each sow raised a fine litter last spring. Sprain and Hyzer were dated for a bred sow sale this winter, but inasmuch as Mr. Hyzer is going to move to Iowa this sale has been called off, Hyzer having sold his Durocs November 20th and Messrs. Sprain cannot hold a sale without drawing too heavily on their breeding herd. A limited number of spring gilts are being offered at this time. If you are interested write and mention The Wisconsin Farmer. See page 23.—Adv.

Robers' Holsteins.

REGISTERED Holstein heifers sired by the 31.17-pound bull, Sir Wayne Johanna De Kol, are advertised for sale on page 24 by Lawrence Robers, Lyons, Wis. These heifers are of good type, well grown and from heavy producing dams. Send for pedigree and description.—Adv.

Wincklers' Holsteins.

THE two bulls offered for sale on page 24 by B. F. Winckler & Sons, Medina, Wis., are right good individuals and worthy of the attention of our readers. They are both more white than black, are well grown and of good type. They were sired by the 27.56-pound bull, Sir Johanna De Colantha De Kol and out of daughters of the twenty-eight-pound bull, Oakhurst Milk and Butter King, a son of the $10,000 The Milk and Butter King. Send for the pedigrees and further description of these two bulls. When writing kindly mention The Wisconsin Farmer.—Adv.

John Swenson and E. J.'s Crimson Wonder.

EASTERN Minnesota and Wisconsin needs more and better Durocs and for those that appreciate breeding and individuality, we wish to say that the best sales to be made in the Northwest this winter will be advertised in The Wisconsin Farmer. Some time ago a representative of this paper visited the leading breeders in Minnesota that expect to make sow sales this winter. Some of the herds did not come up to our expectation and their business was not solicited, but we will say right here that the "cream" of the Duroc Jersey bred sow sales to be held in that state will be advertised in The Wisconsin Farmer. One of the best breeders and caretakers in the state of Minnesota is John Swenson, of Willmar. When he started in with the Durocs he bought sale toppers, he has taken care of the produce and today he has without any doubt one of the very best herds in the Northwest. Big Wonder the 1913 Iowa champion for which $1,500 was paid helped put Mr. Swenson on the map. Mr. Swenson kept up the reputation of his herd by sending his herd boar, E. J.'s Crimson Wonder to the Minnesota State Fair this year where he was awarded grand championship. He is one of the best boars that ever won a purple ribbon at this fair. A great assortment of breeding will be offered the public and most of the offering will be bred to a grand champion boar. This is one sale that you should attend. Send in your name now so you will be sure to get the catalog. Please mention this paper when writing.—Adv.

Cortte's Berkshires.

YOU Berkshire breeders should visit the herd of A. P. Cortte, Lomira, Wis., and see his sows and spring pigs. I believe you will agree with me that they are good ones. The spring pigs were sired by Pabst Rivaleer 3d and King of Rival's. They are of good type, well grown and are good prospects for next fall's show ring. Go look them over or write him for description, breeding and prices.—Adv.

Lindauer's Holsteins.

WHEN you want a right good herd sire you can find one to fill your needs in the herd of L. Lindauer, Kaukauna. He is now advertising a yearling bull sired by King Segis Pontiac Polkadot, a full brother in blood to the $50,000 Arfman-Lawson bull, Segis Pontiac Alcartra. Send pedigree of this bull. See p... Adv.

Don't "Cut" the Price on Yo...

DURING the past three w... have had several letters fr... tered swine breeders regar... sales of spring boars. Some r... best trade they have ever had... entirely sold out; others say t... have been very slow. These ... peculiar conditions that exist ... the breeders, perhaps young ... business, that one would expe... have the least trade, are mak... sales, others, some of them old ... ers report slow sales. We do ... to be prophets, but the bree... remember that similar condi... isted last year. The farmers d... boars until they are ready to ... and most of them buy during ... ter part of November and ... part of December. More bo... sold during November last y... at any other time and many ... castrated their boars early ... could have sold them privat... believe that many boars wil... during November this year ... that take good care of their ... profit by the wait. We know ... eral breeders that have starte... prices" and we believe tha... poor policy. In the first pla... $35 is no big price to receive ... boars, especially at the pre... when all kinds of feed are so ... farmer should be willing to ... price for a good boar, but ... that many try to buy their ... $15 and $20. Any breeder that ... boars that are worth $35 for $... ering the reputation of his ... himself as a breeder. Yet we ... is done and it makes hard co... for the breeder that is spe... time and money getting a ... herd established. Better "p... boars rather than cut prices, ... ahead in the long run.—Adv.

Truttschel Bros.' Holste...

THE herd of Holstein catt... that it will pay any Holst... er to go a long way to see. ... that make up the herd are ou... We visited the herd last w... you boys can take our word ... some herd. The cows are b... animals, weighing from 1,40... pounds, are wide across the h... deep, well-sprung barrels, an... rumps. These cows are th... producers you would expect ... mals to be. A year ago thir... tested averaged twenty-thre... butter in seven days and s... these were two year olds. ... year old made twenty-six po... as a three year old made thi... Eagle Rigtje Belle, as a fou... made 28.02 pounds. She is t... a young bull which these me... vertising for sale on page 2... a daughter of Sir Rigtje of ... that has nine A. R. O. dau... over twenty-one pounds butte... days. Her dam, Bessie Wa... made 26.93 pounds butter ... days. She also has three ... daughters two with records ... and 28.02 pounds respectiv... sire of the bull offered for s... Elmen Johanna Wirt, whose ... 26.30 pounds butter in seven ... is now on yearly test. He is ... son of Sir Johanna De Kol, ... fifty-three A. R. O. daughte... includes the first forty-pound ... hanna De Kol Van Beers. S... not permit mentioning all o... sirable things in the pedigr... choice young bull. He co... ancestors testing high in b... six of his nearest dams av... per cent fat. As an indi... is what you would expect in ... of his breeding, being larg... good type. Send for an exte... gree and price.—Adv.

The Maltby Polands

HAVE you purchased tha... China boar, yet if not it'... you to investigate the herd o... Polands owned by Chas Malt... ville, Wis. This breeder h... the good herds of the state. ... breeder that brought out th... two-year-old boar, Model Maj... doing service in the E. W. ... herd. It goes without sayin... must have been some boar on... would have found a home on... dricks farm. Mr. Maltby has ... standing spring boars by him ... will please you. Besides be... by a great boar, they are out... lent big brood sows of the ... breeding. Write this man yo... he has the goods. Mention ... when writing. See page 22.—Adv.

Don't Overlook This Hrd.

ANY man that can bring alo... like Mac's Chief is a go... taker. Olaf C. Olson, Stri... bought this boar when a pig ... ried him along in good shap... D. McDonald got his "eagle ... him and those that follow t... game know the rest. Olson i... breeder in the state that h... boars sired by this grand ... He also has boars by other ... are also outstanding in ever... He has a large herd of Po... you'll make no mistake in u...

Results Better Than Ever.

WISCONSIN breeders who advertise in The Wisconsin Farmer once generally come back, year after year, because they find that advertisements in The Wisconsin Farmer are a paying investment. H. B. Drake, Beaver Dam, Wisconsin, has advertised in The Wisconsin Farmer for twenty-five years, and he says this year that results are better than ever. Here's his letter:

I have been an advertiser in The Wisconsin Farmer off and on for the past twenty-five years and am pleased to state that the results of my advertising are better today than they have ever been before.

If you have surplus stock for sale an advertisement in The Wisconsin Farmer may mean many extra dollars in your pocket because of the increased sales which it may bring to you. Some Wisconsin breeders, readers of The Wisconsin Farmer, are no doubt wanting your stock. Tell them about it. Send the copy for your advertisement today. It will go to more than 90,000 possible buyers.

The Wisconsin Farmer -:- Madison, Wis.

Guaranteed Circulation, 90,000.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

ar from this herd. Get busy before l the good ones are gone. You get e pick from twenty-four at this time. ention The Wisconsin Farmer when iting.—Adv.

Royal King.

GOOD boar or a good bull will put a breeder "on the map" quicker an anything else. When the John- n Bros., of Winnebago, Minn., paid 650 for the Duroc Jersey boar, Royal ng, no doubt many thought they re crazy, but this fact alone has ad- rtised the Johnson Bros., herd as thing else could have done. Royal ng is a wonderful boar. Now as a ee year old he is very smooth, has high, arched back a good head and and with the best of feet and bone: ce the Omaha show some jealous eders have been trying to pick the of the great boar, Orion Cherry ag, to pieces. It may be true that champion boar at Omaha did not ve the best feet, but that does not essarily mean that all the sons of ion Cherry King have poor feet. yal King has as good feet as a boar r stood on, and his get are right on their toes. E. H. Parker & Sons, nesville, Wis., have a son of the aha champion, Orion Cherry King and the best part of this boar is his d legs and feet—they are just about fect. We have recently seen seven ghters of Orion Cherry King and ry one has good feet, so don't be led by reading the advertisements some breeders that "knock" this line breeding for personal gain. On uary 9th, Johnson Bros. will sell ty-five of the best Duroc Jersey sows t ever entered a sale ring. This l be a sale that Wisconsin breeders well afford to attend. The sale ertisement will appear in The Wis- sin Farmer in due time, but make ns now to attend this sale.—Adv.

Chief Invincible.

HEN talking about the great boars of the breed, Chief Invincible ed by F. M. Washburn, Lake Crys- Minn., must be considered. The and at the present time is for size quality and Chief Invincible has t. We feel safe in saying that he ne of the five largest boars of the oc Jersey breed in America. To ribe this boar so that our readers ld appreciate him would almost be ssible. He has all the qualifica- s that are needed to make a great . We recently spent the day with Washburn and looked over one of greatest herds in the country. A made up of the most fashionable ding and individuality they are best that money could buy. Chief ncible has made good in this herd those that attend the winter sale see some great gilts by this 1,000- d boar. There will be daughters of Cherry King, Pathfinder, Educa- Chief Col. 40th, Critic D., Golden l 21st, Col. Wonder, King the King of Col. Again, Chief Invin- , etc. No breeder will put up a r offering bred to a better boar. sale will take place January 8th make your plans now to attend great sale of Durocs. The adver- ment for this sale will appear in time—watch for it, it will contain mation valuable to all lovers of uroc breed.—Adv.

The Steele County Breeders.

RE are several Duroc Jersey eders located around Owatonna, , that are live wires. They have ed an association and expect to the breed in their vicinity. On ary 3d, they will hold their second al bred sow sale. Fifty head have picked from five herds and by ng the ten tops from five herds one d naturally expect to find a supe- offering and those that attend this will not be disappointed. These ers have some excellent boars in herds. R. E. Morrison has a son of the noted Big Col. Oscar egaard has a son of King the Col., is far above the average. And in arple herd we found a son of the is champion, Tommy Doyle. This will be advertised in The Wiscon- armer and it will be one worth at- ng.—Adv.

A Good Guernsey Bull.

yearling Guernsey bull adver- sed for sale on page 24 by W. J. Ft. Atkinson, Wis., is one you to investigate if you are in the et for a herd header. He is ready ard service being born September 5. His dam Agnes of Oak Grove, 445 pounds of fat and is a daugh- f the great bull, Starlight's Ex- r. His sire is Miss Luctilius Hom- whose four nearest dams average 656 pounds of butter fat in a year and his sire, Lang Water Hombro sold for $1,000. It will be recognized that this is an exceptionally well-bred bull. Mr. Heid also has several young bulls ranging from two to seven months of age. Send for extended pedigrees and prices on these animals.—Adv.

International Sort-horn Sale.

FIFTY-FIVE Short-horns will be sold Thursday, December 7th, during the week of the International Live Stock Exposition at Chicago under the auspices of the American Short-horn Breeders' Association. A very strong consignment of bulls and females is included, coming from herds of America's best breeders and showmen. These are animals which have been carried in the show herds of the consignors during the past season and will be shown at the International. A notable offering from start to finish and a splendid opportunity to strengthen your Short-horn herd is here presented. Catalogs are ready. Apply to the American Short-horn Breeders' Association, 13 Dexter Park Avenue, Chicago.—Adv.

Schley Bros.' Holsteins.

WHEN you can get as good a young bull for the price as those advertised for sale on page 24 by Schley Bros., Waukesha, Wis., don't pass it up. These bulls were sired by the thirty-pound bull, Pabst King Pontiac Lad, whose three nearest dams average over thirty pounds butter in seven days. The dam of one of the bulls offered for sale made twenty pounds butter in seven days. These bulls are both well marked being more white than black, are well grown and of good type. Send for extended pedigrees.—Adv.

Van's Wonder Sold.

WE have just been advised that F. S. Vanderhyde, West Concord, Minn., has sold to the Cerro Gordo Farms, Mason City, Iowa, his noted Duroc Jersey boar, Van's Wonder. This boar was grand champion at the Minnesota State Fair, 1915, and has proven to be an excellent sire. The Cerro Gordo Farms are fortunate in securing such a boar to head their herds. Mr. Vanderhyde will hold a bred sow sale January 2d and same will be advertised in this publication. Watch for later announcements, as this will be one of the good sales to be held in Minnesota this winter.—Adv.

McClurgs' Duroc Jerseys.

BIG, stretchy, Duroc Jersey boars, of March and April farrow are being offered by McClurg Bros., Viroqua, Wis. They have fourteen spring boars on hand that are good, at least they are good enough to ship on approval, which certainly is fair enough and they are well bred. Some are by Prince Defender, one of the best Duroc Jersey boars in the state of Wisconsin. A few are by Royal King 4th, a big, stretchy son of the noted $2,650 boar, Royal King. Lee's Lefender is the sire of one good litter of March boars. We know that the McClurg Bros., will give you a good deal, they are energetic and wish to make satisfied customers. Besides having the boar recorded for you they will give you a year's subscription to the breed's official paper, the Duroc Bulletin. Write this firm your wants and in so doing kindly mention The Wisconsin Farmer. See this page.—Adv.

Rhoda's Holsteins.

WHEN you need a Holstein herd sire we advise you to write to W. H. S. Rhoda, Watertown, Wis. Will is one of the best judges of Holsteins we know of and he can supply you with a herd bull of which you will be proud. Write him whenever you want Holsteins of any description. Grades or pur breds. You can't beat the combination of breeding and individuality. He is out of a 23.05-pound four-year-old daughter of Sir Clyde, that has forty-five A. R. O. daughters, four with records over thirty pounds butter in seven days. His sire is Beauty Pietertje Prince, that is out of a daughter of Sir Ormsby Hengerveld De Kol, the sire of Pietertje Maid Ormsby. These are proven lines of breeding that cannot be excelled. Send for the pedigree of this bull. See page 24.—Adv.

Phillipi's Sheep.

THE flocks of sheep owned by Geo. Phillipi, Bear Creek, Wis., are among the foremost in the state. Mr. Phillipi is a sheep breeder exclusively and keeps ten breeds. He has the only pair of Persian sheep in Wisconsin, having purchased these at the San Francisco Exposition at a big price. These are the sheep whose lamb produce the very expensive Persian lamb fur. The winnings of Mr. Phillipi's sheep at the leading fairs in Wisconsin are evidence of the high quality and type of the sheep he breeds. When in the market for a ram or a few ewes write him. See advertisement on page 23.—Adv.

Lucia's Guernseys.

SOME fine registered Guernsey heifers and young cows are advertised for sale on page 24 by Geo. Lucia, Green Bay, Wis. The heifers are yearlings and two year olds, while the cows range from two to five years old. They are straight and right and our readers are advised to investigate them if in the market for Guernsey females. Mr. Lucia is also offering two yearling bulls ready for service, both are sired by a son of Imp. Golden Hero of L'Etinery, whose dam was a 526-pound daughter of Gov. of the Chene. Both of these bulls are from imported cows, one of which has already completed a creditable advance registry record. Send for extended pedigree and prices.—Adv.

How many of our readers will see this and then write and tell us how many different kinds of food products they now buy in packages which they used to buy in bulk, or did not buy at all?

We would like to know. If you will take the time to write, it would please us.

THE WISCONSIN FARMER
MADISON, WISCONSIN

Services of Expert Live Stock Photographer

Up-to-date live stock breeders are more and more using photographs in advertising their herds. It is the modern way of doing things, and The Wisconsin Farmer is meeting the situation by offering the services of a skilled live stock photographer. Appointments may be made by mail at any time. For estimates of cost and other information write The Wisconsin Farmer.

AYRSHIRE CATTLE.

ALDEBARAN FARMS **A. R. AYRSHIRES**

YEARLING AYRSHIRE BULL ready for service, ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address
STEPHEN BULL RACINE, WISCONSIN

AYRSHIRES
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SALE DATES.

Guernsey Cattle.
Feb. 26, George W. Pagel, Zumbrota, Minn.

Hereford Cattle.
Dec. 8, American Hereford Breeders' Assn., Chicago, Ill.

Short-horn Cattle.
Dec. 7, American Short-horn Breeders' Assn., Chicago, Ill.
Jan. 3, Minnesota Short-horn Breeders' Association, South St. Paul, Minn.

Duroc Jersey Swine.
Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Steele Co. Combination Sale, W. V. Gousseff, Mgr., Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.
Feb. 26, Geo. Pagel, Zumbrota, Minn.

SALE DATES.

Poland China Swine.
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

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Dec. 5, American Clydesdale Assn., Chicago, Ill.
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CHESTER WHITES
C. EVANS by COMBINATION 2d

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FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
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Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.

JOHN STEEL - OCONOMOWOC, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

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TWO of them old enough for service. Sired by the 29-lb. bull, Fairmont Pietje Ormsby, whose dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and price reasonable. **L. Lindauer. Kaukauna, Wis.**

A RICHLY BRED JOHANNA BULL

SIRED by the 26-pound bull, **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.** Address

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WE have for sale a young Holstein bull from a 23.05-pound four-year-old daughter of SIR CLYDE that has 45 A. R. O. daughters, four with records above 30 pounds. He is sired by a son of BEAUTY PIETERTJE PRINCE, that is out of a daughter of SIR ORMSBY HENGERVELD DE KOL. It is some breeding. Send for extended pedigree and price. Address

DOPP BROS. **OCONOMOWOC, WIS.**

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STAND FOR BEAUTY-PRODUCTION

OUR HERD is composed of 45 registered females, of Ormsby and Piebe blood. Herd sire: Sir Bess Ormsby Mercedes, son of Sir Pietertje Ormsby Mercedes 37th and Daisy Queen DeKol, A. R. S. O. 871.7 lbs. butter in one year, average per cent fat 3.92. She was one of the "ten best cows" in Wisconsin Cow Competition. We are breeders exclusively, and offer **for sale** surplus stock of our own raising.

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READY for service, of the **30 pound bull, Pabst King Pontiac Lad 129298,** whose three nearest dams average over 30 pounds. Price $75.00. **20 pound bull born March 17, 1916,** sired by above bull. Both are well marked, more white than black. Price $125.00. Send for pedigrees.

Schley Brothers - Waukesha, Wis.

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READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda **Watertown, Wis.**

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WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutche's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

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HAVE on hand 60 head of choice, high-grade Holstein heifers for sale. They are nicely marked, good size and in fine condition. Some of them are springing. Can load you up a load of fine heifers. Give me a call. J. L. Turner, Darien, Wis.

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¾ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams. Write **R. C. Walker, Kilbourn, Wisconsin.**

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons **Elgin, Illinois**

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 27-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address

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REGISTERED HOLSTEINS

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YEARLY RECORDS COUNT! HERE IS THE BULL YOU WANT.

PABST LULU KING 181211

Calved April 28, 1915

SIRE: **Maplecrest King De Kol, by Friend Hengerveld De Kol Butter Boy, the sire of Banostine Belle De Kol, 365 days 1,322.9 lbs. butter, and three others over 1,200 lbs.**

DAM: **Pabst Lulu Lady, at 2 years, 2 months. Butter 365 days, 849.21 lbs. Milk 365 days, 20,002.9 lbs. Second place in Association Prize List 1914, by King Pontiac Champion, 43 A. R. O. daughters, a 31 lb. son of King of the Pontiacs.**

2d DAM: **Seven days, 28.55 lbs., 365 days, 627 lbs. butter, 14,562.4 lbs. milk.**

WELL MARKED AND SPLENDID INDIVIDUAL.

The low sum of $575.00 will buy him. Over 130 cows to freshen. All A. R. O. Write for prices on bull calves $100 and up.

PABST STOCK FARM

OCONOMOWOC DEPT. 30 WISCONSIN

23.13-LB. HOLSTEIN BULL

READY FOR SERVICE

See pedigree in The Wisconsin Farmer issue of November 16th. Sire, **KING SEGIS CONCORDIA HENGERVELD,** whose two nearest dams average 32.83. Dam made 23.13 lbs. butter in 7 days. Priced right. Address

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A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST **WEST ALLIS, WISCONSIN**

28-LB. HOLSTEIN BULL

Taken when 6 mos. old. Now weighs about 600 lbs.

BORN February, 1916, nearly ready for service. Dam, Eagle Rigtje Belle, A. R. O. record 4 years, 2 months, 28.02. Sire, Sir Elmer Johanna Wit, traces twice to Sir Johanna De Kol. His three nearest dams average 4.11% fat. Every dam in pedigree from 3.8% to 4%. His dam will be put on test in about 60 days and shows promise of increasing her record. Address

TRUTTSCHEL BROS. SHEBOYGAN FALLS, WIS.

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.

Wisconsin Star Stock Farms

His two nearest dams averaged over 29 lbs. butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,834 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.

Ed M. Schultz, Hartford, Wis.

WE CAN SPARE A FEW HOLSTEIN HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way.

Hutchinson Brothers & Burbach - - - Randolph, Wisconsin

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POSITIVELY MUST SELL 100 head of registered and high-grade Holstein and Guernsey cattle, any age. You make take your choice from 400 head of big producers, no boarders among them. Special price on high-grade calves. Also extra fine SERVICE BULLS. Everything guaranteed as represented. **Edgewater Stock Farm, Ft. Atkinson, Wis.**

YEARLING HOLSTEIN BULLS

READY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will also price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

TWO SONS OF THE 27.56-POUND BULL.

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

B. F. Winckler & Sons **Medina, Wis.**

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred heavy-producing cows. Call and see our herd or write

WM. FENNER, SHEBOYGAN FALLS, WIS.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey **Grafton, Wisconsin**

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OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address

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HOLSTEIN

BULL calves, sired by Johanna Bonhuer 1 113138, whose 14 nearest dams average 27 pounds butter in 7 days, out of dams w day and yearly records. C. Tochterman Monroe, Wisconsin.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by Colanthus De Kol Korndyke, a 25 grandson of Pontiac Korndyke. The dan granddaughters of Hengerveld De Kol, Sir Cornucopia and Mercedes Julips Pietertjes **Fred Harford** **Kaukauna,**

GUERNSEY CATTLE.

Three Fine Yearling Sons

Dusk Glenwood 162

GRANDSON of Glenwood Boy of Haddon Corolette's Son, that together have 37 Ad Registry daughters with records up to 960 p fat in a year.

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Send for description. Prices reasonable. Ad

J. D. McAllister **Green Bay,**

Imported Guernsey B

(imported in dam) now 14 months of age. dam gave 35 lbs. per day with first calf. S pedigree. Price reasonable. **9 months ol** out of **Imp. Confidante of Sarnia** and si Cardinal Point.

BERKSHIRE SPRING PI

of both sexes of Premier and masterpiece br

O. R. FRAUENHEIM, RANDOM LAKE.

Registered Guernsey Hei

AND **young cows,** from yearlings to olds. **2 fine yearling bulls** sired by of Imp. Golden Hero of L Et, whose dam 526-lb. daughter of Gov. of the Chene. B these bulls are from imported cows, one A. R. O. record—Gov. of Chene and Mas quel breeding. Send for charted pedigre pictures.

Geo. Lucia - Green Bay, Wisc

Yearling Guernsey B For Sale

BORN September 8, 1915. Dam, Agnes Grove 24249. A. R. 445 pounds fat. ter of Starlight Excelsior. Sire, Miss L Hambro 28330, whose four nearest dams a 656 pounds butter fat. His sire, Langwater bro. sold for $1,000. Bull calves from months old for sale. Address

W. J. Held **Ft. Atkinson**

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REGISTERED bull calves 4 to 8 month Herd tuberculin tested. **EDW. H. LING, JEFFERSON, WISCONSIN.**

ATTENTION

PURE-BRED Guernsey bulls, two of serv age, and eight calves at special prices for days. A rare chance to get some of the best lines of the breed. Address

S. A. Merriman **Fort Atkinson, Wisc**

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W. G. Jamison & Son **Appleto**

SONS of the Guernsey bull, KING P WOODLAND, whose parents and gra ents are Advance Registry animals. Th for sale are from A. R. O. cows. Prices $1 dress A. H. Hinman, Allenville, Wisconsin.

RED POLLED CATTLE.

RED POLL

YOUNG bulls for sale. My herd bull is a J. D. Diana 2d Proctor 23929. Writ wants. Address L. C. Underwood, Avoc

Red Poll Headquarte

OFFERING two bulls of serviceable age Also a limited number of heifers. Cho viduals. Write **J. W. Salter & Sons, Unit**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and year-old heifers, bred and open. A few bred top bull calves. A great opportunity foundation stock. Correspondence invited.

H. A. Martin **Gotham**

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COWS, HEIFERS and CALVES all sol One bull of serviceable age and two bull for spring delivery, will go at $100 per hea

E. F. Ganz & Son **Alma, Wisc**

ANGUS BULLS FOR SA

IF you are going to need a **good** herd b our prices before you buy. We ha goods. **Hauk Bros., Cassville, Wisc**

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KITTY CLAY HERD

POLLED DURHAM yearling bull ready mediate service, well grown, good type, by Badger Boy 46th, a deeply bred Polle Dam, Champion Rose 4th, that is now givin pounds of milk per month. Price right.

J. Warren Hoyt **Rosendale, Wisc**

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HEIFERS, bred and open. Yearling bulls for sale list. F. S. Bunker, Kilbourne.

STOCK BUYER.

IF in need of grades or pure-bred Holstein sult me. Am able to get what you want dress D. E. Buckley, Hartford, Wisconsin.

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THE WISCONSIN FARMER

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FAIRBANKS
Scale-1000 lb. Size
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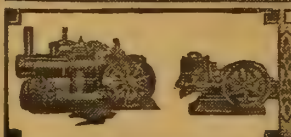


Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

Automatic Spark Advance.

How many degrees past dead center should the spark be advanced for each hundred revolutions per minute? Do you know of any automobile successfully using the Atwater-Kent system, or any other system of automatic spark advance?

Answer.—The general practice is about one-half a degree for each 100 revolutions per minute. The design of the motor has considerable to do with it. The Atwater-Kent system is operating successfully on several makes of automobiles.

Repairing a Blow Torch.

Will you please give directions for making a burner and spraying nozzle for a kerosene blow torch? I have nearly all the parts of a blow torch and I want to make one for thawing out frozen water pumps. Is a kerosene torch the same as a gasoline torch?

Answer.—It is not practical to make a blow torch burner without special tools, nor is it practical to repair a worn-out burner. The needle valve seat wears until it becomes too large. The best thing to do then is to send to the factory for a new burner. Kerosene is seldom used in blow torches, as it is too hard to vaporize.

Battery Ignition Trouble.

I have a Cadillac 30 automobile. It runs all right on magneto, but only gives a faint spark on battery. The controlling relay buzzes strongly. What is the trouble?

Answer.—The trouble is probably in the condenser of the spark coil. However, before changing the condenser, make sure that there are no short circuits in the wiring, that all your battery connections are tight, and that your batteries are not worn out. Also make sure that the battery connection to the timer has no loose ends sticking out from under the binding post. If one wire from the frayed end of the cable touches the timer case the current will be short circuited.

Dirt in Gasoline.

I have a Mitchell car that is equipped with a Stromberg carburetor. It floods badly sometimes, while again it may not flood at all. I gave the needle valve a good grinding, but this did not improve it. I then bought a new needle and valve, but I still have the same trouble. Sometimes the car will stop. There may be plenty of gasoline in the tank, but the carburetor will be dry. What is the trouble?

Answer.—Your trouble is probably not with your carburetor, but with your gasoline. There must be some particles of lint or dirt in it that clog the small gasoline passages of the carburetor or get under the float valve and keep it from seating. This causes the flooding. You should clean your carburetor, gasoline pipes and gasoline tank thoroughly. When filling the tank strain the gasoline through a piece of chamois skin. If this does not remedy the trouble the float valve of the carburetor is sticking and the working parts of the float mechanism should be adjusted to work more freely.

Voltage of Generator.

I have a direct current dynamo that generates ninety volts. I would like to cut that down to ten or twelve volts. Please give the data for a resistance coil that will reduce the voltage from ninety to ten. In what way will the amperage be changed? When the engine slows down the voltage of the generator drops. Would the voltage drop proportionately through the resistance coil? Could the coil be made so that the voltage would be the same regardless of the voltage of the generator? What would be the voltage of the dynamo at 1,770 R. P. M. if it generates 125 volts at 2,400 R. P. M.?

Answer.—You did not state what amperage you desire your coil to transmit. The greater the amperage the larger and longer the wire must be. To transmit ten amperes use about 700 feet of No. 12 iron wire, B. and S. gauge. The voltage after passing through the resistance is proportional to the voltage of the generator. It cannot be otherwise when a single resistance coil is used. There are voltage regulators made of many coils, some of which may be cut out by short circuiting them when the voltage drops. If 2400 R. P. M. produces 125 volts, 1770 R. P. M. will produce about 92 volts.

Recharging Dry Cells.

How can an ordinary dry cell be recharged?

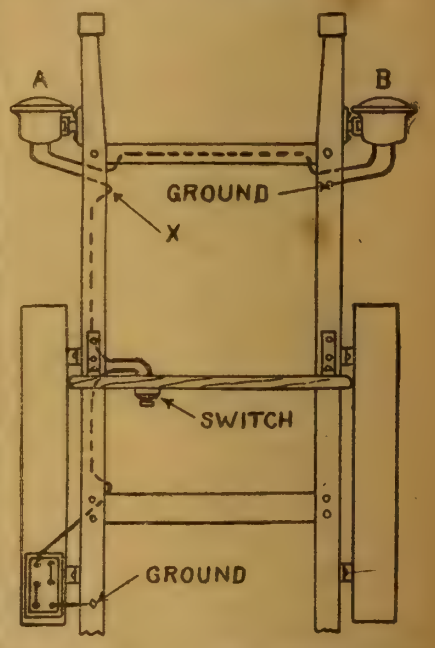
Answer.—It is not practical to recharge a dry cell. Some additional current may be obtained from an exhausted cell if the pasteboard cover is removed, a few holes punched through the zinc and the cell covered within one inch of the top by a weak solution of sal ammoniac in a glass or earthen jar. After standing in the solution twenty-four hours the cell may be used as a wet battery. It is not as strong as a new cell, however.

Wiring Auto Headlights.

I would like to have published an illustration showing how to wire two headlights on an auto from a storage battery.

Answer.—The illustration shows the series system of wiring headlights. When this system is used the lamps must be only half the voltage of the battery. Ground one battery terminal. Connect the other battery terminal with the switch. From the switch run a wire to headlight A. From headlight A run a wire to headlight B. From headlight B run a wire to the frame and ground it.

If you wish to use lights of the same voltage as the battery the lights must be wired in multiple. This is done as follows. Ground one terminal of the battery; run a wire from the other terminal to the switch and from the switch to headlight A as before. Then run a wire from headlight A to the frame and ground it. Run a wire to the main wire and from this wire to headlight B. Every connection should be soldered and taped.



From B run a wire to the frame and ground it. For wire use low-tension cable or regular light wire. It must be well insulated at all points and should lay inside the frame wherever possible so as to be out of the way of injury.

Engine Loses Power While Hot.

We have a six-horse-power gas engine that has been in use eight years. It runs fine excepting that it loses some power when it has been run an hour or two on a heavy pull. The compression is quite good, but not perfect. What is the trouble?

Answer.—When your engine begins to lose power stop it and turn it over by hand to see if the pistons or any of the bearings are sticking. Also try the compression. Examine the valves to see if they stick. The chances are that your trouble is due to loss of compression when the oil becomes thin from the heat. It may be that the heat expands the exhaust valve stem enough to make it open too early. If the gasoline supply pipe is where it becomes quite hot part of the gasoline may vaporize in the pipe and interfere with the flow of the gasoline through the needle valve.

The Wisconsin Farmer

THURSDAY, NOVEMBER 30, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

A STRONG VOICE FOR PEACE.

I WANT thus publicly to thank my good friend, Mr. John Schuette, president of the Manitowoc Savings Bank, of Manitowoc, Wisconsin, for his letter praising my recent editorial, entitled "A Picture of War." It is indeed encouraging to have such words of praise from so substantial a citizen.

Just to what extent we can take the results of the recent presidential election as a voice of America against war, there will doubtless be considerable difference of opinion. Practically the entire East, with the notable exception of Ohio (where the railroad vote is heavy) went against President Wilson, whose re-election was urged on the ground that "he has kept us out of war." On the other hand, however, President Wilson carried all but four states west of the Mississippi river. The trans-Mississippi east has undoubtedly been more directly affected, and has profited to a greater extent, by the European war than has the trans-Mississippi west, notwithstanding that $2 wheat and $1 corn are now almost realized facts. The East has dabbled in "war bride" stocks, and has manufactured munitions of war in such immense quantities that it would prosper more by a continuation of war than by its cessation. The thought is most abhorrent to me, but I undoubtedly believe there is a large proportion of our population which voted in the hopes that the European war would continue [illegible] might wax still richer on the [illegible] blood sacrifices of their brothers across [illegible] there are those who would be [illegible] to plunge our own beloved country into war, in order to fatten off their nation's perils and needs. Out here in the grain belt we cannot understand such an unpatriotic attitude. We have indeed prospered, as a result, largely, of the war and the grain and live stock prices which have resulted therefrom, but there are few among the farming class here in the grain belt who would not willingly forego their added profits if, by so doing, they could bring the awful war to a close.

It is not always easy to oppose those who speak with voices as loud and insistent as do those who are now clamoring for war to continue, so I appreciate Mr. Schuette's letter all the more. Here is what he is so kind as to say:

> I was pleased when I read your able editorial "A Picture of War." It was encouraging. At this time it takes courage to say anything which will tend to dampen the intense propaganda for militarism made by directly interested parties. If it were not for these, our people could not be swerved from our traditional military policies. But, of course, by a gigantic effort to inculcate the war spirit, which is acclaimed to be the most noble, heroic and patriotic, and calling those not agreeing cowards and traitors, we must expect that this will bring them converts, especially because the pacifist is not directly interested and does not have an organization to combat them.
>
> I feel sure if all papers would paint wars in their true colors as you did, and advocate universal peace, and the United States take the initiative for its consummation, war could be abolished.

I can only add that I hope and pray my good friend will do what he can to bring about the day when war shall, indeed, be abolished, and we find the actual realization of that which the poet had in mind when he sang:

> Till the war-drum throbbed no longer, and the battle-flags were furled
> In the Parliament of Man, the Federation of the World.

I shall do what little I can to hasten the day. Perhaps, by working together, all of us, we can so influence public opinion that war and its horrors may be banished from our midst and our children and our children's children may know of war only as they read it in their histories and aged grandfathers tell it to the little tots gathered around their knee in an everlasting and international peace which nothing shall ever shatter.

HUNGRY FOR THE FARM AGAIN.

I AM in receipt of a letter which tells, more vividly and eloquently than any words of mine possibly could, the heartaches and disappointments which lie behind the glare and glamor of the lights of a great city. The letter was written to me by a young man who left the farm four years ago and who now longs to return to "God's country" where he can live his life honestly and usefully, far away from the hideous mockery and make-believe which masquerades for existence in all too many of our large cities. I do not know the writer personally, but I can see him (in my mind's eye) seated at a little table in a back-hall bedroom on the third or fourth floor of a large brick building hiving scores of other struggling workers. He is dreaming of fields knee-deep in clover, of lowing herds winding homeward in the dusk, of the whirr of the reaper, of the tinkle of cowbells and the sound of a cheery "halloa" from the house as the work horses come down the lane with a happy youngster perched astride the off horse, making glad the heart of his proud father. It is a far cry from such sights and sounds to the clatter of the elevated railroad grinding past the third floor of a city tenement and a homesick man writing to an editor he never saw, in the hope that somewhere, somehow, sometime soon, he may get a chance to go back to the farm. Here is the letter, exactly as it came to me:

> Mr. Pierce:—I am writing you in the hope that you can refer me to some up-to-date farmer who could use a good, all-around man this winter to help on the farm. I am a young man, twenty-five years old, a German, born and raised on a farm. When my folks died, four years ago, I gave it up and came to the city to learn the automobile business. For the past three years I have been a follower of the gasoline circuit as a racing mechanic and only left that position to take another one here in Chicago as final tester for a new automobile company, but I don't like it at all, and for that reason, I am writing you this letter.
>
> I don't like the looks of the "bright lights" and all the rest that goes with them any more, and want to get back again where I belong; back where, when one's work is done, he can sit down beside a big base burner and a good old coal-oil lamp, and read the daily paper in peace and quiet, and then to bed, instead of coming home, changing clothes in a hurry, catching a car for downtown to meet some friends, and after the show, going to an expensive supper, so that when one does finally get home it's time to go right back to work again.
>
> Yes, I want to get back again and live the days of early youth on the farm once again, away from all the noise, the entertainments and all the rest of it. So if you can refer me to some good farmer that can use a good man for the winter to help him in the work (and I can do it all, from milking in the morning, to carrying in the coal at night) I would be pleased to hear from you as soon as possible. You surely must know of a good many, but, of course, I don't want to get out on some little, old, run-down place, but a rather up-to-the-minute place where my services would be appreciated.
>
> As I have said before, I don't care about the wage part of it at all, as long as I get my meals and a little change for spending money. I have enough money, myself, to lay around for a couple of years if I should so choose to do, but I want to get back out in God's own country, and if you can tell me of such a place, I sure would appreciate it very much.

It is you, my friends, who must answer this letter, rather than myself. I am simply the postman who brings this application for a position to your door. There must be many among you who need such a one, as much as he needs you. I do not know him, excepting as his letter reveals his character and aspirations to me; but I do know that a man such as he appears to be, who is working for the love of work and has had the business foresight, skill and thrift to accumulate means of his own, who combines mechanical skill with all kinds of agricultural knowledge, and who leaves the city for the country of his own free choice, should find a hearty welcome on many a grain-belt farm home. A man who has had four years' experience as an automobile mechanic would surely be a valuable man about a farm in keeping the family automobile in repair, the machinery in good working order and in performing the hundred and one tasks that call for mechanical genius and skill.

Will not those of you to whom such a thing appeals as a plain, matter-of-fact, business proposition, if not as a matter of sentiment, write to me regarding it, so that I may promptly advise this young man waiting in Chicago for my answer? By working thus together it may be that we will be able to secure you just the kind of help that every farmer needs and find a deserving young man the kind of a home his heart longs for, where life will be richer, not in dollars and cents, perhaps, but in all that goes to make up the best rewards of honest toil and service, such as cannot be found amid the grime and noise and confusion of a big, rushing, roaring city.

FARM LOANS TO THE TENANT.

THREE or four weeks ago, in the course of an article descriptive of the workings of the federal farm-loan law, I quoted a statement made by Mr. P. W. Goebel, president of the American Bankers' Association, to the effect that second mortgages on farms thus bought by worthy tenants will be considered first-class investments for trust companies, investment banks, insurance companies and individuals. You may recall that Mr. Goebel cited the instance of a deserving tenant possessing $1,000 in cash, a span of horses, some cows and some sows. He has this tenant go to his local banker and explain that he can buy eighty acres of land for $50 an acre, borrow $2,000 from the federal land bank and, by paying down $1,000 (which he has on hand) need only $1,000 more, which Mr. Goebel declared he could raise by means of a second mortgage, which investors would be glad to take. The publication of the article setting forth this illustration by Mr. Goebel brought me the following letter from Mr. Anthony Sand, of Center Point, Iowa:

> I am a reader of your valuable paper and take great interest in it. I read Mr. P. W. Goebel's article, but he failed to state where this land could be bought for $50 an acre, where eighty acres would rent for from $325 to $400 a year, or where a man with $1,000 invested in the land and perhaps $800 in stock could make a living on eighty acres and pay $290 expenses and $100 on the purchase price of the land in a year. If I am not asking too much I would like to ask Mr. Goebel where this land can be bought for that price. Land around here is selling for from $150 to $225 an acre and renting for from $4 to $7 an acre.

I felt sure that Mr. Goebel would be perfectly willing to give the information desired, so I forwarded Mr. Sand's letter to him, with the result that this reply, from Mr. Goebel, has just reached me:

> Answering your letter of November 18th in regard to my suggestion for a second mortgage in case of farmers who have patronized the new federal farm loan bank for their first mortgage, will say that, of course, I was simply using this as an illustration, but I had in view land in the central western part of Kansas and parts of Oklahoma. The principal point I aimed to make was that where the interest, including amortization payments, on the first mortgage and the interest and a reasonable reduction of the principal on the second mortgage each year, together with taxes and so on, was within the rental value of the land, it was safe to make the second mortgage loan, always taking into consideration the ability and integrity of the man behind the mortgage.
>
> I am perfectly aware that in many sections of Iowa and other states so favorably located the per cent of the principal that the rental value represents is so small that this could not be done, but also as a rule in those same states the insurance companies are making such a low rate that it will be a considerable period before the land banks will do much business.

Mr. Goebel shares the opinion of many bankers in this section of the country, to-wit: That the new federal farm-loan banks will not find as ready a market for their funds in Wisconsin, Iowa, Illinois, Nebraska and Missouri as they will in the sections of the country where land values are not so high. At the same time, I incline to the belief that they will find enough farmers desirous of borrowing from them (because of the low rate of interest and the installment plan of repayment) to keep them going from the very first. I am in receipt of a letter today from the president of a large loan company in Omaha, in which he frankly says: "The day of the 7 per cent farm loan is over for good around here." This concern has been loaning heavily on lands in the irrigated section of western Nebraska, and has reduced its interest rates 1 per cent in the last year. Is there any connection between such a reduction and the prospect of the new federal land banks making serious inroads on their business? I am inclined to believe so.

Speaking of the possibility of tenants using the new law to obtain loans to enable them to buy farms of their own, I want to tell, briefly, of a couple of instances which have just come to my attention. I personally know of two men, here in the grain belt, who, after three years as farm tenants, have made and saved enough to buy places of their own, one buying 160 acres of $100 Iowa land and the other 390 acres of western Montana land, at what price I do not know. These two men have had an annual income of about $10 an acre from their land for each of the three years, and by thrift and frugality have been enabled to save between $6,000 and $8,000 in three years, enough to pay 50 per cent of the purchase price of their land. Men like this are good risks for a second mortgage any time and any place, for, after all, it is the man that counts fully as much as the security given. I can readily see where investors would be perfectly willing to take a second mortgage on land owned by either of these two men, because they know that they are worthy, industrious, and will work the land efficiently. Mr. Goebel was probably only "supposing" the illustration he cited, but he had ample grounds for the statements which he made.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

MEMBER AGRICULTURAL PUBLISHERS' ASSOCIATION
MEMBER AUDIT BUREAU OF CIRCULATIONS

SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

A Splendid Issue.

ATTENTION of our readers is called to a number of interesting special articles in this issue of The Wisconsin Farmer. These articles are a fulfillment of a promise that we would constantly aim to improve The Wisconsin Farmer and make it each week of more interest to our 90,000 readers. A report of the Wisconsin Potato Growers' Convention and Show, at Eau Claire, will be found on page 5. The Wisconsin Baby Beef Contest and Show, at Madison, is also reported in this issue, and Alvin Morley in a letter to this paper gives his experiences in raising the animal which won first prize in the contest. Some especially interesting matters are discussed in the departments this week and surely every reader who has a child in school will be interested in the niftiest little country school building in Wisconsin, which is just being completed in the town of Maine, Marathon county. Many interesting matters are coming up this winter which will be of special interest to farmers, and we believe that it will pay every reader to pay regular attention to these articles and read them carefully. The editors of The Wisconsin Farmer are making a careful study each week of the field we are aiming to cover, and trying to give the very best that can be secured. They are also studying other farm papers, not with a view to imitating, but rather with a view to giving our own splendid company of subscribers something better than they can secure in other papers.

Wisconsin County Agent Keeps Busy.

A RECENT estimate has been made of the extensive work done by County Representative L. L. Oldham in Walworth county. There are 2,200 cows in four cow-testing associations in this county; three additional farmers' clubs have been organized; talks, demonstrations and encouragement have been given to nine other clubs; three boys' and girls' clubs have been brought into existence, etc. In addition to this, Mr. Oldham has conducted experiments covering marsh lands, alfalfa, grains, and has helped with automobile farm tours, oats smut demonstrations, and many other important matters. He made 703 calls discussing with farmers such subjects as orchard spraying, commercial fertilizers, balanced rations, use of disinfectant methods, preparing animals for the show ring, etc. Demonstrations were given on eleven farms.

Walworth county now has twelve farmers' clubs, three having been organized in the past year with a total membership of 1,456 each in less than a year. Mr. Oldham has been responsible directly or indirectly for nearly $40,000 worth of live stock.

Wisconsin Corn and Other Crops.

OUR readers will not be surprised to learn that the November estimate of the corn yield in Wisconsin is 62,600,000 bushels. This estimate is made by the Federal Department of Agriculture. This same department reported a little over 40,000,000 bushels of corn in 1915. The November estimate on corn in Wisconsin is 61,000,000 bushels higher than the October 1st estimate. The corn crop in this state is much bigger and better than some people had judged it would be. In fact, on September 1st there were those who feared it might not be much larger than last year. On the contrary it is 50 per cent greater than last year, and the quality is much better.

Otherwise than corn, the November report of the Federal Department of Agriculture as it affects Wisconsin crops, is not materially different from the October report. The only discouraging feature is the yield of potatoes, which is estimated at 14,000,000 bushels, or not much more than half of the final report on yield in 1915. However, potatoes were worth more than three times as much November 1, 1916, as they were November 1, 1915.

A notable increase in crops is in tobacco, which is estimated at nearly 56,000,000 tons this year—an increase of almost 20,000,000 tons over the 1915 yield.

The increase in yields is not so marked as the increase in prices. We have about 17,000,000 bushels less oats this year than last year, but the price is increased almost 33 1-3 per cent.

It is fortunate for Wisconsin that the corn crop has matured so well. Farmers, as a rule, are in a quandary as to whether this corn ought to be sold at the present high market, fed, or held for a higher market. Of course, a very large per cent in Wisconsin must be fed, as in this manner we will keep up our dairy production.

We have quoted so many advances in prices of cheese and butter that it begins to be an old story. When cheese can be sold at 25 cents a pound at the factories, and butter at 35 cents to 37 cents and 38 cents, the price of feed does not become such a big problem. It remains to be figured out, however, where the farmer is getting his full advantage of the advance in dairy products.

The November crop report gives Wisconsin 878,000 barrels of apples, which is approximately 100,000 barrels more than the October estimate.

Wisconsin Rural Teacher.

IT MAY not be generally known among our readers, but the district school-teacher who returns for the second year and renders satisfactory services receives $2 per month from the state. During the third year they receive $4 a month, and after that $8 a month. So there is some incentive for a rural teacher to improve herself and to give such satisfactory service as will result in her reemployment year after year. The purpose of this law evidently was to get away from the idea that a school-teacher could make no advancement in salary and remain in the same district. Furthermore it has been difficult to keep the best school-teachers in the country.

Miss Ella V. McDonald, of Oconto county, has advised her teachers relative to the information which must be secured before teachers are eligible to state pay. Among the things which the state wants to know are the following:

Does the teacher keep the school room tidy and clean and does she preserve good order?
Is the school property equipped and if not is the teacher using good judgment and persistence in trying to remedy the defect?
Is the teacher doing indifferent work on any subject or subjects?
Does the teacher show skill in selection and use of material outside textbook work?
Does the teacher show evidence of preparing for her work and is she skillful in stimulating thought and adapting herself to her work?
Does the teacher look after the grounds and outbuildings and pay attention to ventilation, light, proper seating, hygienic and sanitary precautions?
Is the teacher interesting the community in the work of the school?
Does the teacher attend teachers' associations and read educational literature?

In other words, the state wants to know whether the teacher is making a profession out of her work or simply holding down her job.

Wisconsin Prices in War Days.

IN THE light of the present-day prices for produce our readers may be interested in the following table for prices for products in Wisconsin in 1857 and 1864, given by a Sauk county farmer:

Year 1857—Flour, per sack, $4.25; oil, per gallon, $1.50; sugar, six pounds for $1; calico, per yard, 20 cents; tea, per pound, $1; matches, per box, 10 cents; nails, per pound, 7 cents; dressed pork sold at 5 cents per pound. Today it is worth 10½ cents on foot. Ginseng sold at 20 cents per pound. Today it is worth $7 per pound. Dairy butter sold at 15 cents per pound. Now worth 35 to 40 cents. Eggs, 10 cents per dozen. Now worth 28 to 38 cents.

Year 1864—Calico, per yard, 40 cents; sheeting, per yard, 62 cents; cotton flannel, per yard, 60 cents; blue denim, per yard, 60 cents; ticking, per yard, 70 cents; sugar, four pounds for $1; salt, per barrel, $5; kerosene, per gallon, $1.25; raisins, per pound, 40 cents; clothes pins, per dozen, 20 cents; suspenders, per pair, 85 cents; chickens sold for 15 cents each, now worth 50 cents to $1; wood sold for $1 per cord.

One difference between 1857 and 1916 is that the farmers of this state were paying a tremendous price in the early days for what they had to buy, and getting very little for what they had to sell. We are at least a great deal better off today, because our farm products demand a good price.

Wool Is Sky High in Price.

IT LOOKS now as if sheep breeders were to have their innings, indicated by the fact that scoured wool has already sold in American markets for upward of $1 per pound. Of course, most of the 1916 clip is out of the hands of the producer, and the middleman is reaping the big reward this year. Prospects, however, are bright for the 1917 clip, and there are those who are predicting that as high as $1.50, or even $2, will be paid for scoured wool next year.

The American Sheep Breeder, in a recent issue, undertakes to explain the cause of present prices. England needs wool and more wool for war purposes, and has commandeered the clip of the United Kingdoms, and has embargoed the clips of New Zealand and Australia. This leaves the United States and South America as the only large open markets. It is estimated that already 30,000,000 pounds have been imported into the United States from the 1916 clip of South America, and most of this has been purchased at from 47 to 51 cents per pound. Nowhere is there cheap wool in sight, and this accounts for the strength of the wool market at the present time.

This wool situation will no doubt have the effect of enlarging the flocks for next year, and, as we are just entering upon the breeding season, it behooves every flock owner to carry through as many head as possible. The breeding flock may be wintered cheaply by those who have on hand a goodly supply of legume hay, either red clover or alfalfa, and the flock that is fed liberally on either of these forms of roughage and receives, in addition, toward spring a little grain daily, such a flock will go through the lambing period in good shape, and there is no telling what their fleece will be worth next spring, but it is safe to say that values will be reached that have never before been approached in the American markets.

An Experience With Hog Cholera.

IN THE following communication one of our subscribers describes an experience that he passed through in getting hog cholera on his farm, causing himself considerable loss, the whole transaction growing out of a kind act that he performed for one of his neighbors. He writes:

Cholera is one of the worst enemies the hog breeder has to contend with and, to a large extent, I believe the farmers can control this dread disease. Of course, if he has never had the disease among his hogs he may be at a loss as to how to proceed at first, but I believe that if he has it once he will know it again, and, of course, be better prepared to handle it in case of a second outbreak.

Early last spring a man drove a bunch of stock hogs by my farm and one little red sow gave out from driving, or so he said, and he asked me to take care of it till he came with another bunch in a few days. I did so, but, rather fearing she might be diseased, I kept her some distance from the other hogs and the third day she died. I buried her and thought no more about it, as the man was positive that none of his hogs were diseased. But in about two months the hogs that had run in the same field after this one was there, began to lie around and look sleepy and one or two seemed to have no appetite. I had never had any trouble of this kind and so merely thought hogs wormy or lazy on account of warm weather. Being exceeding pressed getting ready for crops the herd was neglected until several got sick and they soon began to die and when they once began to die they went in a hurry. I guess about every hog cholera cure was tried that ever was heard tell of and even tried several of the widely advertised preparations that were sold under a "positive guarantee" seemed some few would get well any way they were doctored or not, but by far the number died that got sick.

Finally a neighbor's hogs began to get sick we both ordered serum from our state department and both herds were vaccinated and so far the ones that were not sick at the time of vaccination are still well and about half of the ones affected are still alive, and all seem to be in good health now and ready for the market. Nearly all of the little pigs that were following dams that were vaccinated died and it was our experience that the disease was more fatal to little pigs and shoats than larger hogs. Should we ever have another outbreak of the disease, serum will be ordered at once and all will be vaccinated carefully and separate well ones from sick ones.

I believe a man can ward off disease of this nature to a great extent by keeping his hogs in good health and especially by keeping them free from lice and worms. I have always had pretty good success in keeping my hogs healthy, but find it more difficult to keep them in good health through the winter season, when they are more or less confined.

While the science of immunization against disease may not yet have reached a point where every herd can be saved by the serum treatment, it is nevertheless true that the loss among healthy hogs, that are properly treated with good serum, is so small as to be almost negligible. This being the case, two important factors should be kept in mind by every man who is caring for a herd of hogs.

In the first place, they must be kept free from internal and external parasites. The former are sometimes not easily detected, as one must wait until the effect shows up by the hogs indicating a lack of thrift. As a precaution, therefore, it is usually advisable to administer sensible doses of form remedies. Lice are usually detected shortly after they make their appearance by the observing caretaker, and they should be fought at once, either by spraying, or by the use of hog oilers.

The other factor relates to safeguarding the herd against real hog cholera, either by the use of serum only, or by the employment of the simultaneous system, which means permanent immunity. As a general proposition, one can afford to let well hogs alone, excepting in those instances where they are shipped from time to time for breeding purposes. The custom seems to be well-nigh established of immunizing breeding animals, but thousands and tens of thousands of grade herds are taken through to the finish without any treatment whatever. The prudent man who is engaged in hog raising on anything like an extensive scale will keep himself closely in touch with a skilled veterinarian whose services he can rely upon should disease break out in his herd.

The instance here related, regarding the care of the pig for a neighbor, should remind us of the necessity of maintaining a temporary quarantine in the case new purchases are made of either males or females when these have not been immunized by the serum treatment. Where an individual hog house is available, it involves but little trouble to move one of those houses to an isolated point and make a temporary yard with woven wire, so that the stranger hog may be kept there long enough to demonstrate that there is no infection in his system.

WISCONSIN POTATO SHOW.

Poor Potato Year With Yield Cut in Two Does Not Mar Success of Nation's Best Potato Show—Oneida County Carries off the Honors.

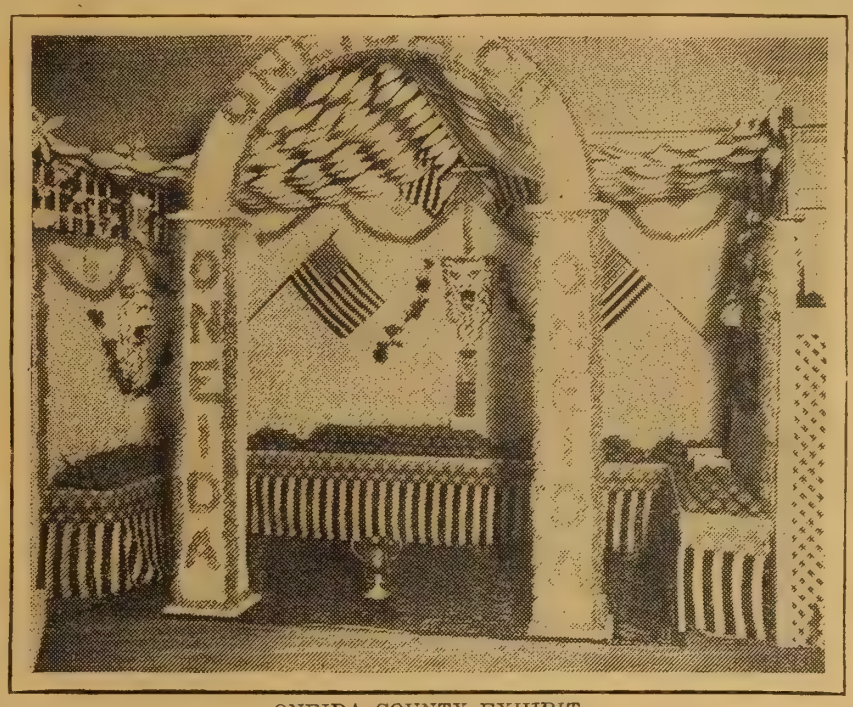
A FEW SPEAKERS PROMINENT AT WISCONSIN POTATO SHOW.

From left to right—F. G. Swoboda, Langlade county agent; J. M. Coyner, Portage county agent; H. P. Henry, St. Paul, Minn., expert in markets and rural organization, an employe of the federal department of agriculture; George M. Briggs, agricultural agent, Burnett county; R. L. Cuff, agricultural agent, Barron county; O. H. Benson, in charge of boys' and girls' club work, federal department of agriculture; G. M. Householder, agricultural agent, Rusk county.

DESPITE the fact that this has been a poor potato year in Wisconsin, the annual show held at Eau Claire was an unqualified success, both from the standpoint of exhibits and attendance. Although the yield in this state has been cut down from a normal amount of 35,000,000 bushels to less than 15,000,000 bushels, and the quality is 80 per cent as compared with a ten-year average of 89 per cent, a large exhibit of good quality was assembled. Estimates give the 1916 average yield in state as only forty-seven bushels he acre, while the ten-year average 102 bushels. But potatoes, though rce, are very valuable and potato wers are enthusiastically looking forward to bigger things in the future. The show this year demonstrated one thing, if nothing else, and that is that the very best cultural methods count for much as the high quality stock that was to be seen at Eau Claire last week did not come from fields where the hit-and-miss methods had been employed.

This has been an unusually severe year on the potato growers and this was reflected largely in the individual exhibits at the state show which were far below the average in numbers, while there were more county exhibits this year than ever before, fifteen in number, and two more than at Marinette last year. The open class entries dropped to about half, but the quality of the stock shown was good and the judges agreed that the quality of the county exhibits, taken as a whole, was above the usual standard and by far the best that has ever been offered at the state show. It is true that a bad year will be reflected to some extent in the show stock, but the county managers were able to get together some splendid samples regardless of the unfavorable season. The open classes fell off principally because the counties needed the best stock in their booths and this naturally brought about a shortage of good stuff for individual entry. In this respect was there the only indication of a bad season, if one were to judge entirely by the show itself.

The work which has been done along the line of standardization by the Wisconsin growers in the past two years reflected to a great extent the importance which the show and the state association have over this industry in Wisconsin. Less than eight varieties were to be found in the entire show, which tends to bear out the belief that the best growers have learned the value of picking standard varieties and sticking to them. There were many counties which last year had four and five varieties that dropped to two this year; some with three varieties last year dropped to one or two varieties this year and the same held true in the open classes. The Green Mountain, Rural New Yorker, Triumph and Burbank were the only four varieties seen in any abundance with the Green Mountain and Rural New Yorker easily in the lead in quantity. This has all come about through the work of the state association, supported by the state show, and the old theory that to have a winning county exhibit it were necessary to see how many kinds of potatoes could be crammed into a booth has been entirely dissipated.



ONEIDA COUNTY EXHIBIT.

First-prize winner at Eau Claire Potato Show. Oneida county has won first on county exhibit for three consecutive years.

It was indeed gratifying to find such splendid displays when the impression had gotten abroad that there were no good potatoes. There will evidently be plenty of good seed next year, although it will be high in price because of the ruling market prices on table stock, but to these growers belong the credit, for when blight was threatening they sprayed, when it was dry they cultivated properly and gave their stock careful attention. The exhibits proved beyond doubt that the man is a big factor in potato growing as well as soil and weather and the big yields and the good quality stock invariably came from the fields that had had the best cultural care during a hard season.

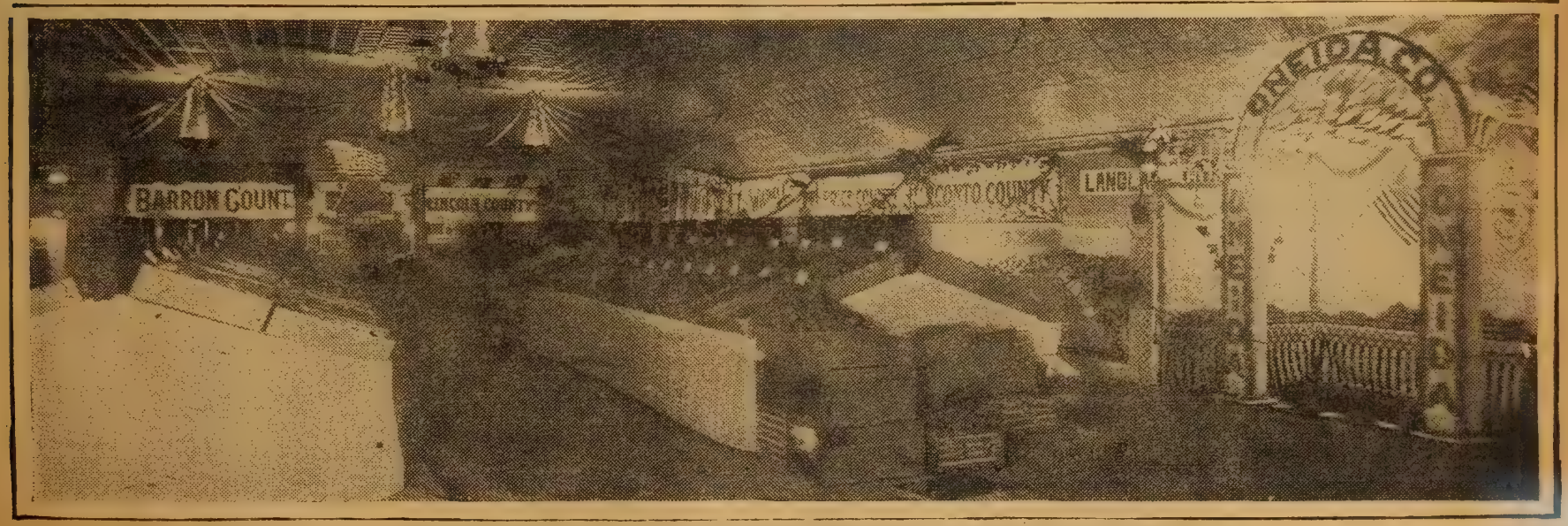
Oneida county for the third successive time won the banner for the best county display. This tends to not only prove that Oneida county grows good potatoes but it is also a testimonial to the work of selection that is being carried on year after year and to a large quantity of good stock from which to make show selection.

The county awards were made as follows:

County	Score
1. Oneida	92 2-3
2. Barron	90 1-2
3. Rusk	87 2-3
4. Lincoln	84 2-3
5. Price	84 1-6
6. Langlade	84
7. Oconto	83 2-3
8. Sawyer	82
9. Waupaca	81 2-3
10. Wood	81 1-3
11. Forest	80 1-3
12. Portage	77 5-6
13. Bayfield	76 1-6
14. Eau Claire	74 1-6
15. Dunn	67 5-6

Greater interest was evident this year than ever before in the county exhibits and the arrangements of the booths was especially attractive, although this is not taken into consideration in the awarding of the county ribbons. The quality of the potatoes shown was what counted. The judging was done by Prof. C. L. Fitch, of Iowa; C. W. Waid, of Michigan, and Prof. A. L. Stone, of Wisconsin, and

(Concluded on page 18.)



GENERAL VIEW OF POTATO SHOW HELD AT EAU CLAIRE, WIS., LAST WEEK.

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Farmers' Open Forum

[Editor's Note.—On another page will be found a report of the Wisconsin Baby Beef Contest, at Madison. Mr. Morley, whose letter is given herewith, won first prize on his Short-horn steer, and fourth on his Short-horn heifer.]

Putting Meat on Short-horn Calves.

To the Editor:—I entered two calves in the baby beef contest at Madison. They were a steer and a heifer and both were pure-bred Short-horns. The heifer was dropped October 30, 1915,

A. J. MORLEY, BARABOO.
Exhibitor in Wisconsin Baby Beef Contest, 1916.

and the steer October 25th of the same year. I began feeding oats and bran to the heifer just as soon as I could get her to eat it. I fed her for about eight months, twice a day, just on oats and bran. This was before I heard of the baby beef contest. Her dam was a good beef cow and was a medium milker. I soon put the heifer with a nurse cow after I heard of the contest. The steer also had a good nurse cow soon after. It took lots of patience to break them to lead and stand right. One of the biggest jobs I had was keeping them clean. I found that contentment was a good point to aim for. While I fed my calves just oats and bran to start with, I worked in a little oil meal, then a little corn meal, then some cottonseed meal and also a little molasses and salt in water with which to dampen their feed. In addition to this they had fairly good hay before them all the time. The heifer weighed 350 pounds when I began and now (November 18th) weighs 916 pounds, an average of about 2.8 pounds a day for 204 days. The steer weighed 503 pounds when I began feeding him and now weighs 1,060, an average gain of 3.41 pounds per day for 163 days. I discovered that it took about four pounds of grain to put on one pound of flesh. I think the contest is fine and I have learned a great many things by experience and have an ambition to learn more. A. J. Morley.

Sauk Co., Wisconsin.

PURE-BRED SHORT-HORN CALVES EXHIBITED AT BABY BEEF CONTEST BY A. J. MORLEY, SAUK COUNTY.

Suffrage and Race Suicide.

To the Editor:—Being a reader of your paper I was very much interested in a writeup on suffrage and race suicide in a recent issue.

It may be that I do not understand it right, anyway I am for woman suffrage and don't think race suicide has anything to do with suffrage. Anyone that will practice race suicide will do so if she has the ballot or not. You say Colorado and Missouri have less births than Wisconsin. I think I can give you some enlightenment on this question, as I was born and raised in Wisconsin and have also been in Colorado. Wisconsin is an agricultural state with a farm on every forty or eighty acres. Colorado is a mining state and a health state. Nearly every county in Colorado has a hot spring and nearly every large city has a sanitarium of some kind. I don't think that Colorado has half the female population in proportion that Wisconsin has.

I was in Duluth some time ago and saw about 200 women working in an office. About half of these are married women that have to go out and work to help support their families and Minnesota is not a suffrage state, either. Nearly half the women clerks in the largest department stores in Minneapolis are married and will have to continue to do the same, as their drunken, good-for-nothing husbands can't support their families.

Well, Mr. Pierce, I believe in giving my mother, wife and sister the same chance that I want myself. Here in the West there are at least ten good-for-nothing men to every one woman. Nearly every day one or more men come to my house asking my wife for something to eat. Still the same loafers think they are better than the woman who feeds them for nothing. Everybody has a right to their own opinions, but give everybody the same chance in this world. If there is race suicide in a family I am sure it is agreed on by the two sexes.

Sutton, N. D. C. L. Anderson.

At Your Local Stores.

OUR readers will find many lines of goods advertised in The Wisconsin Farmer that are on sale, or should be on sale, at the stores in which they trade.

Ask your merchants for the goods you see advertised in The Wisconsin Farmer, and tell them where you saw the advertisements.

If there are any goods advertised in this publication that you cannot buy at your regular places of trading, write us what the articles are, and tell us the names of your local dealers.

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UPPER WISCONSIN

Settler's Fence Problems.

In our issue of November 16th Mrs. Nellie Covant, of Wood county, wrote concerning the fence problem met by the settler. Mrs. Covant was under the impression that a settler cannot compel owners of the adjoining woods to share in the expense of the partition fence. We took the liberty of submitting Mrs. Covant's letter to Hon. W. C. Owen, attorney general for the state of Wisconsin, who has outlined in a letter to this paper very clearly the rights of the settler in the matter of fencing. Whenever a settler is occupying his land for the purpose of farming he may force the land holder or woodsman adjoining to share in the fence expense. Mr. Owen writes as follows:

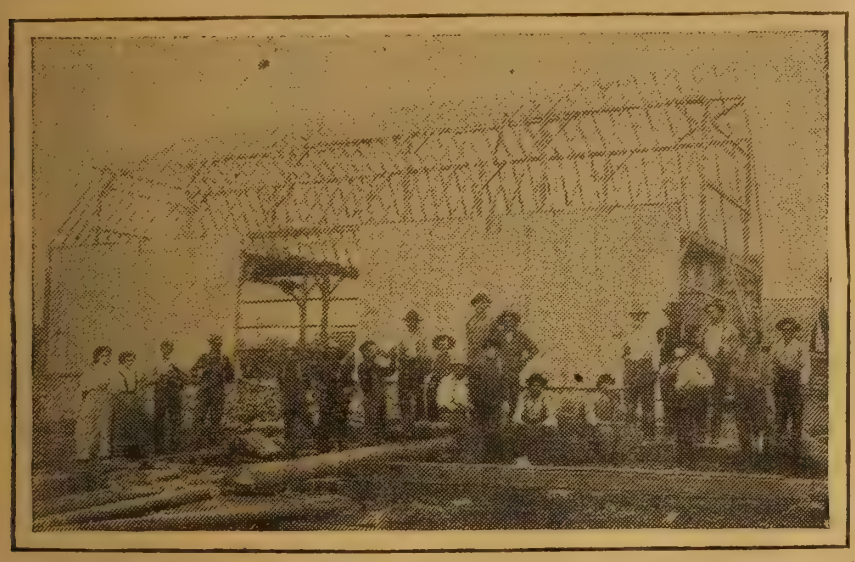
I have your communication of the 9th inst., in which you request information concerning the law of this state relative to the construction of partition fences between adjoining lands. You refer to the fact that settlers sometimes buy a tract of land in the midst of the woods and clear it, or part of it. You say you understand there is a law governing the line fence between two farms. But you are not certain whether this helps out the settler who wants to fence all around his clearing, or whether, under the existing law it is necessary for him to build the entire fence himself.

The law upon this subject will be found by reference to section 1391 of the statutes, which provides in part as follows:

"The respective occupants of adjoining lands, used and occupied for farming purposes, AND THE RESPECTIVE OWNERS OF ADJOINING LANDS WHEN THE LANDS OF ONE OF SUCH OWNERS IS USED AND OCCUPIED FOR FARMING PURPOSES shall keep and maintain partition fences between their own and next adjoining premises in equal shares so long as either party continues to so occupy the same, and such fences shall be kept in good repair throughout the year unless the occupants of the lands on both sides otherwise mutually agree.

The language capitalized above was inserted in the law by the legislature of 1915. Prior to that time owners of adjoining lands were required to maintain partition fences only when the land of both was used and occupied for farming purposes. The amendment, however, requires the owner of vacant and unoccupied land to bear this proportion of the expense of building and maintaining a partition fence if his neighbor is occupying the adjoining land for farming purposes. While under the law as existing before the amendment the settler under the circumstances mentioned in your letter can compel the adjoining owner to bear his proportion of the expense of building a partition fence, the amendment of 1915 changes the law in this respect so that now the settler can compel the owner of adjoining land to bear his proportion of the expense of building the fence, even though such adjoining land be not occupied for farming purposes.

It is very plain from the attorney-general's letter that our Upper Wisconsin subscriber was mistaken and that she really has a right to force the owners of big tracts of wooded land to share the expense of line fences. This is provided, of course, that she is occupying her own property for the purpose of farming and we are taking it for granted that this is the case.



SAMPLE OF BARNS BEING BUILT IN TAYLOR COUNTY, WIS.—TAKEN ON THE CHARLES PITZKE FARM.

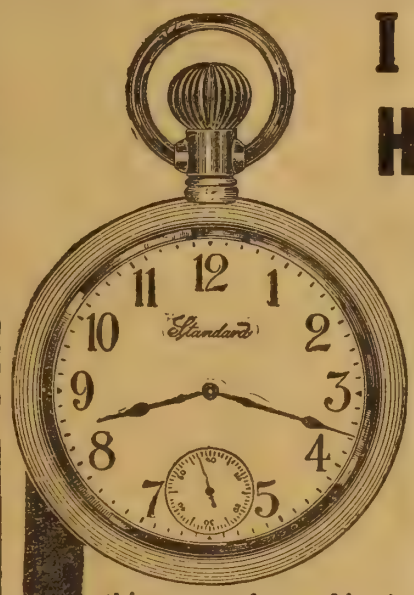
Julia of Maple Lane, 23.9 pounds of butter in seven days. Owned by Charles Pitzke, Taylor county, Wis.

BEGINNERS IN UPPER WISCONSIN GETTING A FINE START—ON THE CHARLES PITZKE FARM, TAYLOR COUNTY.

Favor Free County Fair.

At a recent meeting of the county board in Langlade county an expression was asked for as to whether the board favored a free county fair again in 1915. Every member of the board voted yes.

A number of readers of this paper have been asking about the care and management of Belgian hares. One subscriber wants to know if the male hare will kill the young ones if they are allowed to run together. Should they be penned up, or is it better to allow them to run loose? Those who have encountered the various problems connected with raising Belgian hares will confer a favor on a considerable number of subscribers by preparing a communication for this paper on the subject.



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What is more, I will send you this Stock Tonic with the distinct understanding that it is to be used for two whole months at my risk—that if at the end of two months feeding the Stock Tonic has not been entirely satisfactory no charge is to be made. I simply want you to make a two months' trial of my Stock Tonic with the understanding **that if it does not fatten up your live stock—kill the worms—that if it has not paid you to feed it**—no charge is to be made. Then as a special inducement and to pay you for the trouble in making the test I will **give you—Absolutely Free—one of the Stockman's Watches shown above.**

I Will Prove To You

that my Stock Tonic will positively rid your live stock of worms, fatten them up and keep them in the pink of condition. I will prove to you that you will actually get **more milk from your cows,** that you will **fatten your hogs, steers, sheep and poultry** for market in less time, that you will **save grain, prevent disease** and **make more money from each animal you own.** I have such absolute faith in Wilbur's Stock Tonic that **I take all the risk** in this trial feeding.

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It is composed of twelve separate ingredients—plainly printed on every package—each one carefully selected and absolutely pure. These ingredients are acknowledged by veterinarians everywhere to be the **finest tonics, appetizers, digestive aids and worm dispellers known to medical science.** Each one has a special purpose. A compound of these herbs, roots, etc., is absolutely sure to **condition any animal—keep the blood clear—the system free from worms and disease and force the animal to put on fat rapidly.** I have proved it so often **there is no doubt about it.** I have made and sold this Tonic for over thirty years and over a million of the best stock raisers in America are feeding it every day—I have thousands upon thousands of the finest kind of letters from all parts of the country telling me of the wonderful results from feeding this Stock Tonic. Now all I want to do is to **show you that what it will do for others it will do for you.** And as a special inducement just to get you to make this trial—at my risk—**I am going to send you one of the handsome Stockman's Watch.**

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SEND NO MONEY. Just find out by actual test on your own stock that **my tonic will make money for you.** I have a watch all ready for you if you send that coupon right away. **You can't possibly lose anything**—you have everything to gain. **Isn't it worth a postage stamp? Do it now—at my risk—fill out the coupon and mail it to me at once.**

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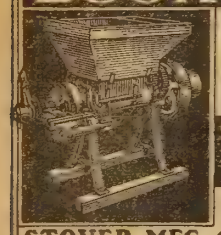

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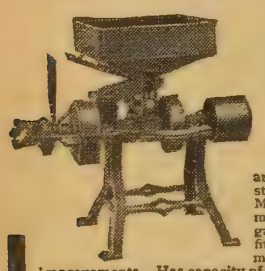

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OUR LEGAL DEPARTMENT

THIS department is edited by a practicing lawyer who has had years of experience at the bar. He will give accurate and reliable answers to all legal questions when they are of sufficient importance to be of practical interest to any considerable number of our readers. Subscribers who desire questions answered in this department should base them upon a brief, plain, concise statement of the actual facts. To insure immediate attention inquiries should be addressed to "The Legal Department," in care of this paper; but as the inquiries sent are at times very numerous, thus delayingprinted answers, those to whom it is important to receive an immediate reply by mail should remit $1.00, addressed as above.

Law Questions.

Account Outlaws in Five Years.

Mr. C. R. Fleming, Independence, Wis.—How long can an open account run in the state of Iowa before it is outlawed?

Answer.—Five years from and after the date of the last item charged in the account.

Written and Verbal Contracts.

A Subscriber, Frederic, Wis.—(1) Is the testimony of a foreigner who is not naturalized, acceptable in a court in Wisconsin? (2) Is a verbal contract binding in law if there is one witness to it?

Answer.—(1) Such testimony is acceptable in court. (2) Contracts for the sale of land or any interest therein and leases for more than one year must be in writing—also contracts not to be performed in one year and contracts for the debts or obligations of another person and contracts where the consideration is marriage must be in writing. Other contracts made verbally with one witness are good.

Accident to Colt in Pasture.

A Subscriber, Benson, Minn.—A takes in other people's stock to pasture on his farm for pay. B put a colt in A's pasture agreeing to pay A $1 per month. The colt got fast in a slough in said pasture and was found dead by A and A did not immediately notify B of the fact, on account of having so many horses in the pasture, that he did not then know exactly who owned said colt. B demands that A shall pay him the full value of the colt. Is A liable for the price of the colt to B?

Answer.—We are of the opinion that B cannot recover the price of the colt from A by law. If B should sue A for the value of the colt B would have to prove to the satisfaction of the court or jury that the loss of the colt was the result of carelessness or negligence on A's part and it would be likely that the court or jury would consider that it was an accident and not A's fault.

Widow's Pension—Correction.

Mr. W. B. Kellogg, Attorney, Madison, Wis., writes us as follows: I notice in your Legal Department a question from a correspondent at Iron Mountain, Mich., concerning widow's pensions in Wisconsin. You state that there is no law in Wisconsin granting such pensions. You probably overlooked Section 573-f (doubtless due to the defective index to our statutes) in which certain aid to widows and others who have in their care dependent children, is provided for. Under this section the judge of a juvenile court, or a county court where the child resides, may grant aid on the following conditions: There must be one or more children living with, or dependent upon, the mother, one or more of whom shall be under the age of fourteen; the mother must be a legal resident of the county, and a widow or the wife of a husband who is incapacitated for work, or who has been sentenced to a penal institution for a year or more, or who has continuously deserted her for a year or more, during which time all provisions of law have been used to enforce support and none has been obtained; the mother or other person must be of good moral character, and the proper person to have the custody of the children, and the period of aid must be likely to continue longer than one year, and the aid must be reasonably necessary to save the child from neglect or danger to health; the aid granted shall be sufficient to enable the mother to properly care for the child or children and shall not exceed $15 per month for the first child and $10 per month for each additional child, nor exceed $40 per month in all.

I thank Mr. Kellogg for his correction of my mistake and also Mr. James E. Dimmick, treasurer of Jackson county, Wisconsin, for calling attention to same error.—[Editor Legal Department Wisconsin Farmer.

Fraudulent Transfer of Property.

A Subscriber, Dickinson, N. D.—A man in North Dakota owns property and is in debt. If he should transfer and deed his property and real estate to his wife can his creditors collect their claims?

Answer.—In such a case if it can be proved that the man transferred his property to his wife for the purpose of avoiding the payment of his debts his creditors could take the property to pay their just claims.

Trespass—Fences—Damages.

A Subscriber, Forestville, Wis.—I own two forty-acre tracts of land in Wisconsin, and a road runs between them. I have a gate in each fence along the road, through which I pass from one forty to the other. My neighbor's cows come upon my land every day and I have told my neighbor several times to keep them out, but he will not do so. I have stretched wires at the two gates, but the cows break through the fence, wires and all. What can I do about it by law?

Answer.—If your fence and gates are lawful you can recover damages by law for the injury his cows do. If your fences or gates are not lawful you cannot recover damages.

Land Sale—No Commission.

A Subscriber, Rapid City, S. D.—On the 8th day of June, 1916, a certain man in Butte county, S. D., whom I will call, John Doe, entered into the following contract with me, viz.: "I hereby agree to take net to me $9,000 net for my 280 acres in Butte county, S. D. Possession and crops all go free if sold before July 1, 1916. If not sold until after July 1, 1916, crops do not go with it, $2,000 (to be cash) and balance five years, semiannual interest. This good from sixty days from date. (Signed) John Doe." About three days after I got this contract, I tried to sell said farm to B who was a new man in the country and wanted a farm and he said he would go and see it. I was the first man who presented the matter to him. Some time later I asked John Doe for an extension of the time, but he did not answer me and later the man B went to see the farm and on the 25th day of August bought it and got his deed for it. John Doe refuses to pay me any commission. Can I collect commission from him by a suit at law?

Answer.—We are of the opinion that you cannot collect commission from John Doe by law. The document set forth above is not a contract to pay commission, nor a contract at all; it is a mere promise by John Doe to take a certain price for his land if sold within sixty days. He does not promise to pay you or anyone else a commission and you are not named in the writing.

Drainage Into Public

A Subscriber, Sherwood, neighbor and I own adjoin and a public road runs alo of both farms. A considera both farms next to the road is low, and overflowed at times by water, so my neighbor and I constructed a ditch on our division line running out to the road, in which there was an old ditch which had run along the road for the last thirty years. We opened up about six rods of this old ditch in the road and run our drainage water into it from our new ditch on the line. The six rods of ditch opened by us in the road conducts the water to a running stream near a bridge. The town authorities object to our outletting our ditch into the road ditch. Have we a right to do so?

Answer.—You and your neighbor have no right to outlet your ditch of drainage water in the public road without the consent of the town authorities. They can prevent you from doing so by law.

ASK NOW — THIS BOOK WILL SET YOU RIGHT ON SEPARATORS

This new book is chock full of cream separator facts. It tells you why I can sell you the best separator ever built at less money than any other cream separator manufacturer or distributor. It tells you the inside secrets of cream separator building and selling. It tells you all about my

FOUR NEW SELLING PLANS, CASH OR TIME

It is full of dairy facts and knowledge. That's why I want you to ask for it today. It tells you HOW I build the New Galloway Sanitary bath-in-oil cream separator right here IN MY OWN FACTORIES in Waterloo. It tells you why cream separators no better are sold for twice and three times as much as I ask for

THE NEW GALLOWAY SANITARY BATH-IN-OIL CREAM SEPARATOR

If you knew all there was to know about building a cream separator and built one for yourself IT WOULD NOT BE A BETTER MACHINE. It would not run any easier, skim any closer, and could not be built of BETTER MATERIAL, no more wear and satisfaction be BUILT INTO IT by skilled workmen. WE BUILD THE QUALITY INTO GALLOWAY SANITARY CREAM SEPARATORS, and you get the service out. That's why we back every one of these machines with a

$25,000 GUARANTEE BANK BOND

Which with the reputation of the Wm. Galloway Company protects you as NO OTHER manufacturer or selling agent of cream separators will do.

90 DAYS' TRIAL ON YOUR FARM

And if you buy it I guarantee it for ten years against flaws or defects in workmanship or material. I WANT YOU TO GET THIS BOOK. It tells the whole story and is free for the asking. In addition I will send you my big fall book of standard quality merchandise. Address

Wm. Galloway, Pres., The Wm. Galloway Co., Dept. 33, Waterloo, Iowa

Cream Separator Manufacturing Specialists

The Great Galloway Factories

R-32

Made in 4 Practical Sizes

875 lbs. capacity $34.50
600 lbs. capacity $39.50
750 lbs. capacity $44.50
950 lbs. capacity $49.50

Guaranteed for 10 Years.

Sold on 90 Days' Trial.

Bee Men to Meet.

The thirty-eighth annual convention of the Wisconsin State Beekeepers' Association will be held in the assembly chamber of the state capitol building, Madison, Wisconsin, December 7th and 8th. The first day, Thursday, will be taken up with reports and other business until the afternoon session when addresses will be delivered as follows:

President Address, N. E. France.
Bee Work at the University, C. H. Aeppler.
Instruction in Apiculture, Mr. Moe.
Extension Work in Beekeeping, E. F. Phillips, Washington, D. C.
Establishing a Trade Name for Honey, E. R. Root.
Election of officers.

Further time will be given on Friday to hear addresses as follows:

Marketing Honey, Edwin Hassinger, Jr., Greenville, Wis.
Better Beekeeping, Mrs. Wm. Haberman, Lodi, Wis.
State Fair, A. L. Klebber, Reedsburg, Wis.
Co-operative Honey Advertising, G. W. Williams, Redkey, Ind.

Will Take Bull Census.

The Wisconsin Live Stock Breeders' Association is attempting to get a bull census in each county in the state. To accomplish this they are interesting secretaries and other officers of community breeders' associations and also the county superintendents of schools. The local cow testers will help where associations are formed.

How many of our readers will see this and then write and tell us how many different kinds of food products they now buy in packages which they used to buy in bulk, or did not buy at all?

We would like to know. If you will take the time to write, it would please us.

THE WISCONSIN FARMER
MADISON, WISCONSIN

Give our readers a chance to buy what you have for sale. Advertise it in THE FARMERS' MARKET. Six cents a word each insertion.

In and Around Wisconsin

COMING EVENTS.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.
International Live Stock Exposition, Chicago, Ill., December 2d to 9th.
Wisconsin Dairymen's Convention, Waupaca, Wis., December 5th to 7th.
Wisconsin Buttermakers' Association, Sparta, Wis., December 5th to 7th.
Wisconsin Beekeepers' Association, Wisconsin State Horticultural Society, at Madison, December 12th, 13th and 14th.
Wisconsin Poultry Association Show, At Madison, January 1st to 5th.
Wisconsin Cheesemakers' Association, at Fond du Lac, January 10th to 12th.
Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

The Oconomowoc Poultry & Pet Stock Association will hold its annual show in the auditorium in Oconomowoc, December 6th-10th. W. H. Stanfield will be the judge.

Reports coming in from the Wyoming valley of Pennsylvania say that the Wisconsin Hollander disease-resistant cabbage has been tried out there and been very successful. The Pennsylvania and truck growers are anxious to secure more seed.

The South-Central Wisconsin Poultry Association will hold its third annual show at Orfordville the week of December 11th-16th. Besides the usual cash prizes, there will be several fine silver cups offered. James Greenwald, of Cedarburg, is to do the judging. Russell Williams is secretary of the association.

Green county is to have its first stretch of concrete road which will connect the city of Monroe with the county farm, a distance of about three miles. The county supervisors appropriated $5,000 in 1914 and have just added another $5,000 and a request has been made for $5,000 from the state highway fund.

There is talk of a $1,000,000 bond issue for good roads in Washington county. The subject of bonds and roads has been discussed at some length in several counties. Outagamie county has already placed a $700,000 bond issue covering a period of ten years. Walworth county is talking of $600,000 to $800,000 in bonds.

The American Society of Agricultural Engineers will meet in Chicago December 27th-29th. Among the Wisconsin men prominent in these proceedings are:

F. M. White, director of agricultural engineering, at the college of agriculture, who is president of the society.
E. R. Jones, chairman of the committee on drainage.
P. S. Rose, associate editor of the American Thresherman, Madison, Wis.
F. N. G. Kranich, Madison Plow Company, Madison, Wis.
W. F. McGregor, superintendent of the experiment department of the J. I. Case Threshing Machine Co., Racine, Wis.

The Wisconsin branch of the American Society of Equity met recently in Fond du Lac. The report of the secretary shows sixty-seven new locals in twenty-one counties of the state. The state branch receipts for the year were $28,332.18 and disbursement $27,841.50. There is talk of increasing the clubs from $3 to $4 a year. One of the most important matters discussed at the convention was the percentage which the farmer actually receives for a dollar's worth of farm products. One of the speakers showed that at present the farmer gets about 44 cents out of every dollar he produces. It was generally agreed that he ought to have at least 60 cents.

In Waukesha county the past year the value of automobiles as shown by the assessor has increased from $475,200 to $637,216. This is on the basis of an average value in 1916 of only $333 per car. This would indicate that there is easily more than a million dollars' worth of automobiles in Waukesha county. While automobiles increased, the number of horses in Waukesha county was reduced from 12,957 in 1915 to 12,453 in 1916. The number of cattle in the country increased in the year from 46,845 to 48,325 and the value in round numbers is $2,000,000. This valuation is on the basis of the assessment and not the real valuation.

There is talk of a $1,000,000 bond issue in Green county for roads. Of course, this would have to be submitted to the taxpayers and the money could not be available by 1917.

Mr. H. C. Stanley, of Wyocena, was discussing the price of potatoes the other day. He remarked that potatoes sold in 1860 for $2.50 a bushel. That is the highest price he has ever paid, but he recently bought a fine lot for this year's use from a grower at Caledonia at $2 a bushel.

Mr. John Imrie, of Roberts, assisted by W. Allsperger, of Sturgeon Bay; O. P. Zeasman, of Madison, and W. L. Houser, of Mondovi, will conduct farmers' institutes as follows: November 21st-24th, Friendship, Niebull, Strongs Prairie; Adams county; Glen Oak, Marquette county; December 19th-22d, Babcock, Wood county; Mather, Juneau county; Valley Junction and Tomah, Monroe county; January 2d-5th, Packwaukee and Endeavor, Marquette county; Bancroft and Coddington, Portage county; January 9th-12th, Camp Douglas, New Lisbon, Necedah, Juneau county; Custer, Portage county; January 23d-26th, Merrilan, City Point, Black River Falls, Millston, Jackson county.

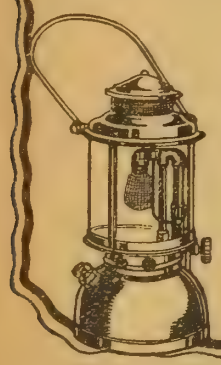
Denatured alcohol and water, mixed half and half, will stand temperatures as low as 32 below zero, and this solution is recommended for the automobile radiator when the car is to be driven in winter. In ordinary weather half or three-quarters of a gallon will keep the water from freezing and alcohol may be added to this mixture until the half-and-half solution is obtained for coldest weather. F. M. White, of the Wisconsin College of Agriculture, writes that glycerine will prevent evaporation, but it is more expensive than alcohol. As alcohol boils at a lower temperature than water the driver of an auto must not worry if the mixture heats quickly when the engine is running.

PORTABLE LAMPS **AMERICAN** DARK CHASERS

Gifts For Father and Mother

Mother will thoroughly enjoy an "American" Portable Lamp. Makes home bright, cheerful and attractive. Lights up every corner of the big living room. Mother will be able to sew or read in comfort for hours at a time without eye strain.

The American Portable Lamp gives ten times more light than a kerosene lamp. Simple, easy to operate. Lights with a match. Carry it anywhere. Tip it over—no danger. Costs one-half cent per hour to run.

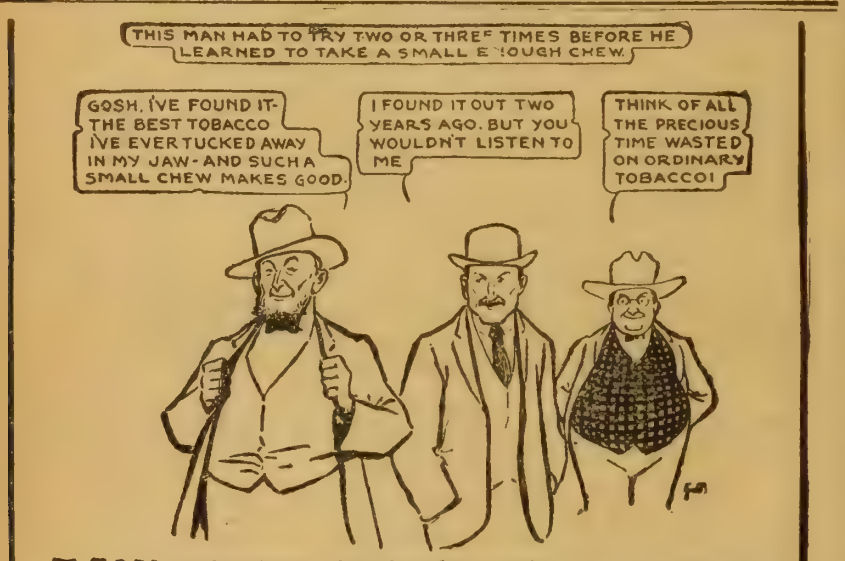


AMERICAN DARK CHASER LANTERN

helps father do the chores quicker and easier. Gives twenty times more light than a kerosene lantern. Lights with a match.

Write for circulars and name of nearest dealer.

AMERICAN GAS MACHINE CO.,
669 Clark St., Albert Lea, Minn.



YOU probably realize the change that two years have made among tobacco users. Hundreds of W-B CUT users waited months before they were willing to try it. Changing from one old kind of tobacco to another never seemed to improve matters. But common sense was bound to win. *Rich* tobacco, shredded, lightly salted—no excess sweetening—that's as far as tobacco satisfaction can go, and what a big difference it makes!

Made by WEYMAN-BRUTON COMPANY, 50 Union Square, New York City

New KEROSENE LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests by U. S. Government and 84 leading Universities show that it

Burns 50 Hours on One Gallon

common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Three million people already enjoying this powerful, white, steady light, nearest to sunlight. **Won Gold Medal** at Panama Exposition. Greatest invention of the age. Guaranteed.

$1000 Reward will be given to the person who shows us an oil lamp equal to the new **Aladdin** in every way (details of offer given in our circular). We want **one user in each locality** to whom we can refer customers. To that person we have a special introductory offer to make, under which one lamp is **given free.** Write quick for our 10-Day Absolutely Free Trial Proposition and learn how to get **one free.** **Yours FREE**

MANTLE LAMP COMPANY, 116 Aladdin Building, CHICAGO, ILL.
Largest Kerosene (Coal Oil) Mantle Lamp House in the World

Men With Rigs Make $100 to $300 Per Mo. Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "*I sold 51 the first seven days.*" Christensen, Wis., says: "*Have never seen an article that sells so easily.*" Norring, Iowa, says: "*98 per cent of homes visited bought.*" Phillips, Ohio, says: "*Every customer becomes a friend and booster.*" Kemerling, Minn., says: "*No flowery talk necessary. Sells itself.*" Thousands who are coining money endorse the **Aladdin** just as strongly. **NO MONEY REQUIRED.** We furnish stock to reliable men to get started. Ask for our distributor's plan, and learn how to secure an appointment and make big money in unoccupied territory. State occupation, age, whether you have rig or auto; whether can work spare time or steady; when can start; townships most convenient for you to work.

Pull Out The Stumps With The Hercules

Triple-Power **Portable Stump Puller**

Biggest stump pulled in five minutes or less. Clears an acre of land a day. Makes your stump land **money** land. 30 days' free trial—3 year guaranty. Get our new book and special low price offer **now.**

HERCULES MFG. CO., 959 25th St., Centerville, Ia.
HERCULES HAND POWER—Pulls 120,000 Lbs. Ask About It.

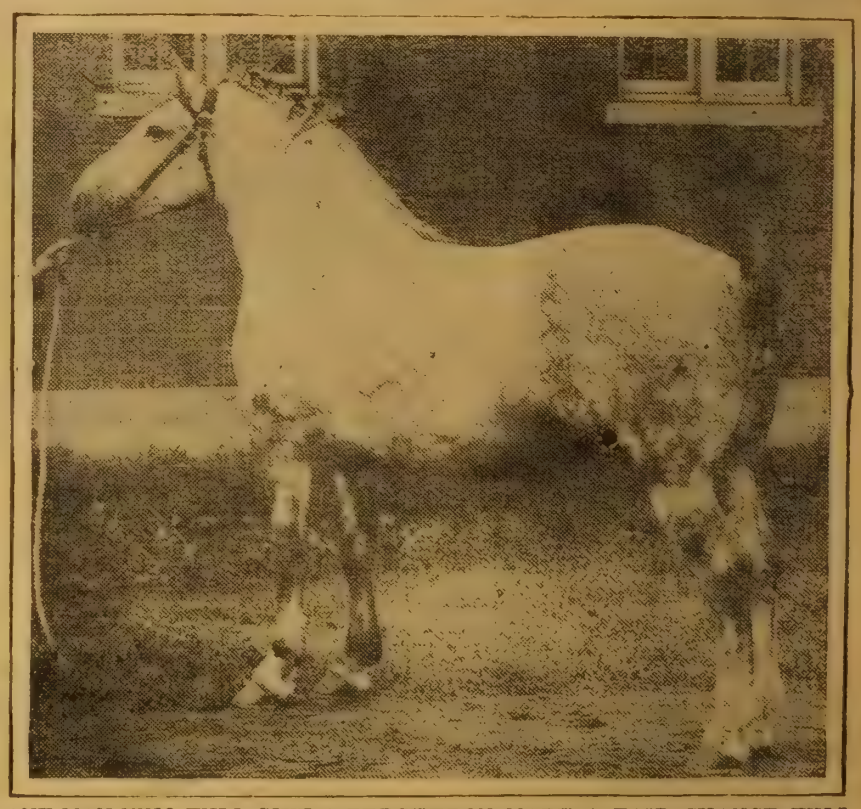
When writing to adverisers kindly mention The Wisconsin Farme

An Ardent Faith in Percherons.

Does All the Farm Work With Pure-Bred Mares and Makes Good Profit From the Sale of His Colts—By George Baker.

I BELIEVE that any farmer who is a reasonably good horseman is making a serious mistake if he doesn't have a pair or two of good Percheron mares. Of course, they cost more to begin with, but with the right kind of care they will soon pay for themselves several times over. They don't eat any more than a grade of the same size and temperament and it doesn't take any more work to take care of them. There is a very marked difference, however, in the selling price of their produce. A good pure-bred colt will bring from $250 to $300 at weaning time, whereas an equally good grade colt will seldom bring more than $100 to $125. You hear a good deal said these days about the horse being a thing of the past and that it no longer pays to raise good horses. Any farmer who advocates such an idea either has the wrong kind of horses or else cares so little about his horses that they are a constant source of trouble to him. If horses are not properly handled, are poorly fed and roughly treated they have little chance to make money for their owner.

There never has been a time in the history of American agriculture when it paid a farmer so well to raise good draft horses. Good draft geldings have been sold right off the farm during the past year for $250 to $350. Even grade weanlings find a ready sale this fall to farmers who see the need of heavy draft horses for farm work. I know a number of farmers who have sold their pure-bred colts right from the teat for $250 to $300. This isn't a very big price, but at the same time that amount is big interest on a $500 to $600 mare. More farmers ought to use Percheron mares. I have a pair of mares, one a nine year old and one a six year old, that I have had about five years. In that time they have raised me eight colts. I have sold two of the colts, one for $900 and the other for $1,000. The other five colts I still own would bring an average of at least $500 apiece. The other colt died. Any farmer who would use this pair of mares properly would make money even if he had to pay $1,500 for them. If I loaned that much money for five years at 5 per cent it would return me $375. In that same length of time the mares raised me two colts that brought $1,900, to say nothing of the five colts I still own. Furthermore, the mares don't owe me a cent for their feed or care, because their work has easily paid for that. I farm with Percheron mares because it pays.



ANY MAN WHO WILL GIVE A PERCHERON MARE A FAIR CHANCE WILL MAKE MONEY OUT OF HER.

A GOOD PURE-BRED MARE REQUIRES NO MORE FEED AND CARE THAN A GRADE.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Baby Beef Show at Madison.

Sauk County Boy Gets First Prize and Short-horn Cup and Sells His Two Calves to Big Breeders For a Good Sum.

BEEF production in Wisconsin has undoubtedly been given a splendid stimulus through the baby beef contest, conducted during the past eight months for boys under the direction of the Wisconsin Live Stock Breeders' Association. The final round-up was held at Madison last week with twenty-two boys showing baby beeves, all of their own feeding and finishing, and the success of the entire undertaking was such that plans are already being made for such a contest next season with another round-up at Madison next November.

The baby beef contest, as it has been termed, was started last spring and held, in connection with various county fairs, all under the direction of the state association. It was required that the county prize winners exhibit at the Madison round-up, to decide the state championship. It was only required that a boy take a steer or heifer on entering the contest, and the final awards were made on the fitness for market, regardless of the cost of finishing. Thirty-seven boys entered forty-seven calves in the state round-up, but only twenty-one showed twenty-six calves, but this was considered especially satisfactory, and it was a fine lot of calves that were led before Mr. J. G. Imboden, of Illinois, who placed the awards. The exhibitors were as follows:

Hereford—A. B. Callin, Mineral Point, one steer; Lee Jewell, Mineral Point, one heifer; Rolland Donovan, Waterloo, one steer and one heifer; C. Emil Fabian, Lake Geneva, two heifers; C. Elwyn Thompson, Lake Geneva, two heifers.

Short-horn—Alvin Morley, Baraboo, one steer and one heifer; Floyd Grosinske, North Freedom, one heifer; Laren E. Husten, Eagle, one steer; Lester Hatch, Lake Geneva, one steer; Rolland B. Webb, Poynette, one heifer; James Hogan, Wannakee, one steer; Geo. W. Smith, Jr., Burnett, one steer; Walter Hartmann, Lodi, two heifers; William Radl, Jr., Lodi, one steer; John McCann, Janesville, one steer; Robert Gray, Milton, one heifer; Will A. Loy, Stitzer, one heifer; Walter Murray, Sugar Bush, one steer; Wendell Kelly, Mineral Point, one steer.

Angus—Wendell Kelly, Mineral Point, one steer; Howard Roser, North Freedom, one heifer and one steer.

Red Polled—Mack H. McClary, Muscoda, two heifers; Rayne Martin, Gotham, one heifer.

First honors went to a pure-bred Short-horn steer, exhibited by Alvin Morley, of Baraboo, who also won fourth place with a pure-bred Short-horn heifer. Both of these animals were later bought by Herr Bros. & Reynolds, of Lodi, at private sale, they paying $150 for the steer and $175 for the heifer. Second prize was awarded to the Short-horn heifer shown by Robert Gray; third to the Hereford heifer shown by Lee Jewell, and fifth to a Hereford steer shown by A. B. Callin. There were fifteen prizes, the other ten finishing in this order: Sixth and ninth, Walter Hartman; seventh and thirteenth, Wendell Kelley; eighth and eleventh, Howard Roser, each with two calves each; tenth. Floyd Grosinske; twelfth Will A. Loy; fourteenth, William Radl, Jr.; and fifteenth, George W. Smith, Jr. The prizes were $50 for first, $40 for second, $30 for third, $25 for fourth, $20 for fifth, $15 for sixth, $125.50 for seventh, $10 for eighth, $7.50 for ninth, $5 for tenth, and $4 each for the next four, with the expenses guaranteed to every exhibitor who did not win enough to cover his expenses. Several special prizes were also awarded. First and second prize winners won $25 additional offered by A. S. Leonard to apply on a trip to the International; a $25 cup was offered by the Wisconsin Short-horn Breeders' Association to the winner, if a Short-horn, and 25 per cent was added to the prize money to wininng steer calves if Short-horns, offered by the American Short-horn Breeders' Association.

FIRST-PRIZE WINNING CALF, SHOWN BY ALVIN MORLEY, OF BARABOO, AND BOUGHT BY HERR BROS. & REYNOLDS FOR $150.

The winning steer shown by Alvin Morley was a splendid individual, and, although he only took second when shown at the Sauk county fair, Alvin was not discouraged. The way he came back was surprising. This steer, being a Short-horn, won for him, in addition to the $50, the Short-horn cup, the bonus of 20 per cent, and $25 on the trip to the International. His heifer that took fourth was also a nice individual, and his experience in feeding and raising these calves is best expressed in his own words, given in the Farm Forum Department of this issue on page 6.

Following the judging there was held a banquet for the boys, at which W. L. Houser, of Mondovi, acted as toastmaster and J. C. Robinson, of Evansville, spoke of the plans for next year. This banquet was followed by an address by Mr. Imboden on baby beef production and was an inspiring talk to the boys. Mr. Imboden is known as one of the best versed men on this subject in the county. A carcass demonstration was conducted by T. G. Paterson, of Madison, in which the desirable points of a beef were pointed out from the butchers' standpoint.

Fourteen head of those exhibited were sold for slaughter purposes, and three were sold at private sale for breeding purposes. Herr Bros. & Reynolds, who bought the Morley calves, also bought the pure-bred Short-horn heifer shown by Floyd Grosinske, paying $175 for this animal.

The Plankington Packing Company, of Milwaukee, bought the fourteen head sold for beef, and the Hereford heifer of Lee Jewell, of Mineral Point, which took third place in the ring, topped the sale at 12 cents a pound. Her total weight was 850 pounds. Wendell Kelley's 955-pound Short-horn steer brought 11½ cents and Howard Roser's Angus steer and heifer, each weighing 760 pounds, also 11½ cents. The low price for these animals was 9 cents, the range being from 9 to 12 cents, and the average for the fourteen head was $10.50 per hundred.

The show was held in the live stock pavilion under the superintendency of George Brainard, and the boys who showed had the time of their lives, as several expressed it.

The engineering department, Wisconsin College of Agriculture, has issued plans for about 100 stump pilers, and this indicates that the Land Clearing Special is bearing fruit. If stump pilers are in demand there must be also a demand for stump pullers, and an increased interest in clearing up cut-over lands.

The strawberry bed may be mulched with clean straw to a depth of about four inches. This will prevent freezing and thawing in the spring.

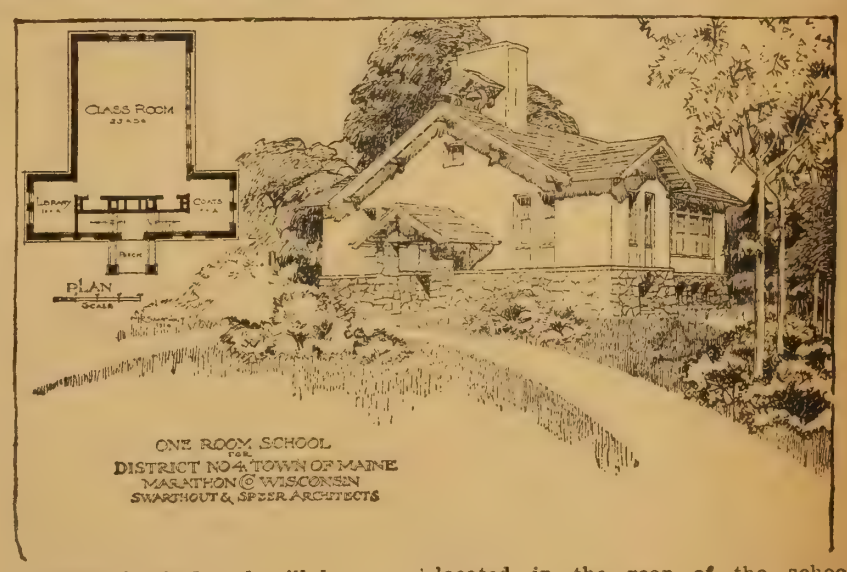
THIRD-PRIZE WINNER, SHOWN BY LEE JEWELL, OF MINERAL POINT, (SEVEN-YEAR-OLD BOY). TOPPED MARKET SALE AT 12 CENTS.

A Modern Schoolhouse.

Town of Maine in Marathon County Expends $5,500 and Has One of the Fanciest Modern Schoolhouses in the State.

NO, THE accompanying picture is not an illustration of a country gentleman's home. It is a rural schoolhouse in Wisconsin, situated in the town of Maine, Marathon county, and we believe this is one of the most attractive one-room school buildings in the state. The illustration was furnished to us by Prof. J. E. Giessel, county superintendent of schools of Marathon county. Professor Giessel has been able to interest the school districts of his county in better buildings.

This school building has sufficient floor space to accommodate fifty pupils. This is more room than is needed for the schoolroom in district No. 4, but it was purposely built large to permit the use of the schoolhouse for social center purposes. This building is just being finished and will be occupied this winter.



The main portion of the building is 27x46 feet, with a wing on either side 10x15 feet in size. One wing is a cloakroom and the other is used as a library. The main classroom is 25x36 feet. The first story floor is six feet above grade with the entrance at grade level and with cement steps leading up to the main floor. A small floor plan of the building is shown in the accompanying illustration. The building is in every sense modern in construction. In the first place, it is practically fireproof. The main classroom is lighted from a battery of windows on the pupils' left-hand side. The walls of the building are of rubble stone masonry up to the first story floor line and the balance of the masonry wall is of hollow tile twelve inches thick, on which exterior and interior plaster is directly applied. The roof is finished with reddish brown asphalt shingles. A pleasing effect is secured by this finish, together with the exterior wood finish stained dark brown, the white plaster and dark gray rubble stone basement wall. With a background of green this modern schoolhouse presents an imposing appearance, well-balanced from every point of view. This is a good example of a combination of good materials and well thought out architectural design.

The conveniences in this modern schoolhouse are strictly up to date. The building is provided with dry closets in the basement. These are ventilated with stack heaters and do away with the annoyance which comes from having toilets housed in outbuildings located in the rear of the school grounds where they are difficult of access in disagreeable weather. In almost every country school in Wisconsin some effort is being made towards the establishment of a library and this design provides a very appropriate place for installing the same.

The contract cost of the building as shown in the accompanying illustration was $5,035. Adding to this the architect's fees, cost of site and improvement of site, the total expenditure is $5,550.

When we asked Professor Giessel whether it is advisable for school districts to spend so much money on a school building he promptly answered in the affirmative. The building is safe, serviceable and artistic and is within the reach of the average Wisconsin farming community.

POULTRY

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning diseases, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

The Winter Care of Hens.

To the Editor:—The subject of caring for poultry during the winter months has always been a subject which has taken up the attention of many of our foremost writers upon poultryology. However, the one topic in which we believe much has been neglected is the care of "hens," a care which develops itself into a kind of its own, we would say, a particular care. The reason is obvious. A hen and a pullet are two different subjects. A pullet from her early chickhood has been building up the bodily frame and functions, while it has been in a constant building-up process. On the other hand, the hen has been not only neglecting herself but has been destroying herself, you might say, in the natural functions she has performed, i. e., the production of eggs. She has put out every effort to bring forth a large number of eggs. Some might surmise that this function is a commercial one and she does this for the sake of formality. While in some instances it may be true, nevertheless in the case of our latter-day 300-egg hen it has become a case of man-made birds. Nevertheless, the fact remains true that these functions of laying are those given the fowls for a purpose, and this purpose is reproduction of its own kind. Every animal, whether man or beast, longs to reproduce its own kind and every effort is put forth to achieve this end. It is, therefore, with this object in view that a hen strives to lay her eggs as often as she can in order to beget her kind. When we say "as often as she can" we, of course, do not mean the 300-egg hen, because she is a man-made specie, and, of course, is in a class all her own, but the hen which lays a clutch of eggs and then gets broody and after rearing a family again starts out on another clutch, etc. These hens are the ones that are resting with nature. They have brought forth their young and in that time or period after incubation have been resting up and made amends for the drain upon nature, for you know nature is an exact and precise mother, demands reparation for any drains upon her and something must be done to return to her bodily organs these drains; hence the period when a hen stops laying or goes on strike.

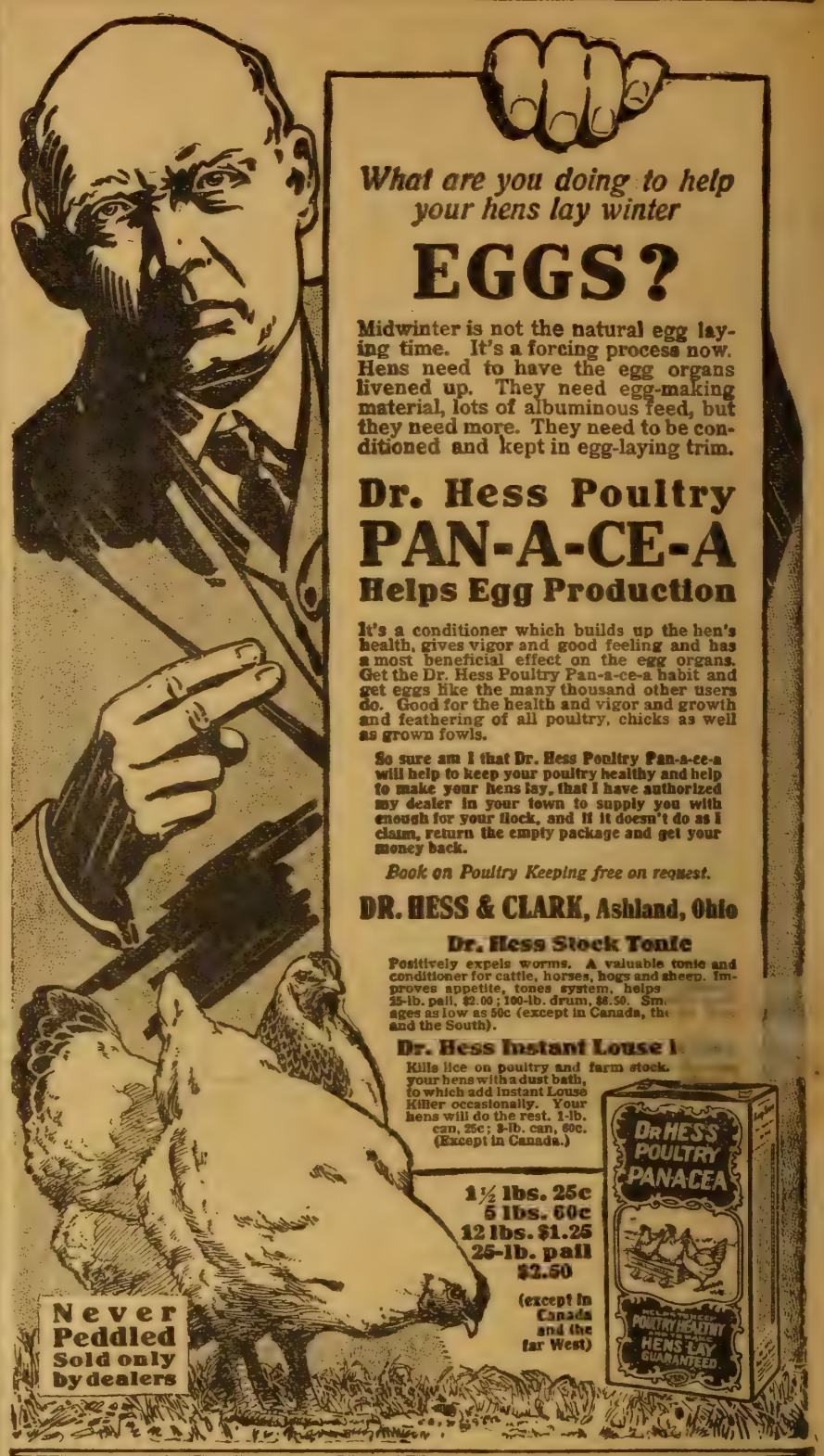
We now will take up the subject of the care of these hens that have worked all spring and summer and late into the fall. These hens are totally "dry," you might say, of eggs, and are wanting some kind of a rest and a time to rebuild their run-down systems. You notice the thin, ragged condition of a hen that is molting? She has the forlorn look of an old, broken-down human being that has been the subject of much toil, hardship, etc. So it is. She is, and has been, that subject in her sphere of life. However, she is striving with nature to rebuild. You realize that the natural period of a hen, as a living being, is only three to four years. True, they are known to have lived up to ten and more years; however, it is only in rare instances this has occurred. The length of time allotted a chicken is about three years. She is short lived, matures quickly, reaches the laying period quickly and if she is going to die of any ailment a chicken ailment takes her quickly. Therefore, she is a specie of quick-live, quick-dead kind. She feathers out quickly and sheds and takes on a new coat of feathers within a few weeks. It is with this consideration in view that she sets out to rebuild her shattered system and goes at it in a systematic manner. She has the real method down pat, if you allow her to have her own natural way, in the country, for instance, where she can pick up every bit of the desired kind of mineral, food and liquid necessary to remake new feathers, new skin, new inside organs, etc. She has this one big advantage over her city sister in this respect. While upon the other hand the city sister of the rural hen has to have every item of this bill of fare of rebuilding her system supplied to her. Hence the difference in advantage.

Again one may help the laying hen with her rebuilding process by a little kindly aid. Some feeds which will help furnish her with the necessary elements to rebuild her bodily needs can be added to her diet. For instance, the addition of oil meal, sunflower seed and corn help to make feathers, furnishing oil, etc. Then the bone elements necessary for the rebuilding of her worn-out limbs, bones of each and every different part of her body are furnished by the lime in the corn, the lime she picks up in the fields, in oyster shells, etc. The elements depleted in her egg-laying organs are replenished by a good, substantial diet of grain, like oats, wheat, corn, etc., and the meat picked up in bogs, meat scraps, etc. All these elements are made natural for her to absorb. We can aid her by giving her plenty of such daily and plenty of good, clean water, lots of room to range in, good, warm quarters, that shelter her from freezing winds. The mere fact that a coop is open fronted is no indication that it is a cold coop. With proper attention she can be kept as warm as she can bodily with no great extra effort upon the part of the keeper. We would, therefore, advise our friends to do their utmost to help their feathered friends along with an extra molting diet, and bring them up to laying conditions again as speedily as possible. For the winter laying hen is the paying hen. She does not take notice of the cold, wintry days like a new laying pullet does and she is not checked by its influence as a pullet is. Plenty of good corn, wheat, oats, grit, oyster shells, meat scraps, fine alfalfa, clover will go a long ways towards this upbuilding process so much needed to bring up the hen to the condition she requires to lay her eggs again in the winter months. Give plenty of care during the cold winter months; see that they get lots to eat, lots to drink, lots of straw and chaff to scratch and dig in, in order to induce exercise and produce eggs.

A hen is very sensitive and will respond to kind treatment with a glad hand, and we assure you that the man that counts the dollars by the cents will realize that he has "sense." If he cares for his feathered friends in a kindly manner she will bring him dollars.

C. L. Pre Fontaine.

Fond du Lac Co., Wisconsin.



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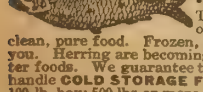

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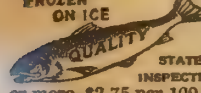

HERRING, in boxes, $3.50 per 100 lbs.; $2.00, 50 lbs. In lots of 500 lbs. or more, $3.25 per 100 lbs. In sacks, $3.00 per 100 lbs.; $1.60, 50 lbs. In lots of 500 lbs. or more, $2.75 per 100 lbs. (*net weight*). Guaranteed strictly fresh or money refunded. Order your fish early AND SAVE MONEY. We are going to please you. It's been our business for years. Price list on request. PIONEER FISHERIES CO., Dock H, TWO HARBORS, MINN

The Sensible Use of Grit.

Charcoal, grit and oyster shell are fully as important as the dust bath for hens. Even flocks having range will consume large quantities of these materials to advantage, and when the birds are closely confined a supply is absolutely necessary. The usual method is to keep supplies of these materials before the birds at all times, so that they may eat of them at will. Mixing the grit, charcoal and oyster shell with the grain or mash is not advisable, as the birds receive either too little or too much.

Grit should be of a stone that will not become round through rubbing; it should be hard and sharp and wear off like shale, never becoming round and ball-like. Grit made from limestone is not good, as it will grind into little round balls which do not do the work of grinding the feed. Limestone grit supplies some lime, it is true, but it is better to secure the lime through crushed oyster shell.

Charcoal is very important in the poultry ration. It will be found a great help in correcting bowel disorders. Most fowls are very fond of the charcoal and will eat quantities of it. As a usual thing they will consume from two to three times as much charcoal as grit. Heavy feeding of rich feeds to induce egg production is likely to produce some slight bowel disorders, but unless the feeding is radically wrong a supply of charcoal before the fowls all the time will correct these disorders.

Crushed oyster shell is consumed in smaller quantities than either of the other essentials, but is none the less important.

POULTRY AND PET STOCK.

THE WINNEBAGO REDS ARE now in the market. Excellent quality. A standard weight cockerels and pullets. High-class exhibition and common laying stock. Satisfaction guaranteed or no sale. **Winnebago Poultry Yards, R. 23, Omro, Wis.**

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg. Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Succes'rs to R. F. Johnson, Assumption, Ill.

"ARISTOCRAT" Silver Wyandottes. Cocks, cockerels, hens and pullets. Better than ever. Write me your wants. Frank Faha, Jr., Box 620, Dyersville, Iowa.

BABY CHICKS and eggs from trap nested, pedigreed Barred Rocks and S.C. White Leghorns with wonderful egg records. Write for circular to Amos G. Norman, Dept. D, Chatsworth, Illinois.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

TURKEYS WE BUY 'EM. Write us what you have. THE R. E. COBB CO. 26 E. 3d St., St. Paul, Minn.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys, bantams and guineas. Also incubator eggs. Bare Poultry Co., Box 650, Hampton, Iowa.

SINGLE COMB BUFF AND WHITE Leghorn cock'els. Charles Schmit, Hortonville, Wis.

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FIFTY varieties chickens, ducks, geese, turkeys, guineas. Low prices to make room. Catalog free. Dell Walrath, Box S, Janesville, Minn.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

DAIRY

Profit in Caring For the Calves.

A great deal of care and attention must be given calves during the first six months, if they are to be reared successfully, says H. H. Kildee, of the Minnesota Experiment Station. But such care is well warranted and is highly paid for by the greater number of calves saved from the ravages of scours and other diseases and by their better quality when they mature.

To guard against navel infection, which so frequently causes the death of calves, the following method has proved to be very efficient.

Draw liquid from navel cord as soon as calf is born.

Apply tincture of iodine liberally to cord, both internally and externally.

Dust compound alum powder on the cord every few hours for one day.

Whether the young calf should be left with the cow for a few days or be taken away immediately is a question on which practical dairymen are not agreed. In most cases it is the practice to leave the calf and cow together for two or three days, so that the calf may secure the first milk, or colostrum, at the normal temperature which is quite essential in starting the digestive system properly. Then, too, the calf assists in relieving the inflammation in the cow's udder at this time.

For the first three weeks after the calf is taken from the dam it should be fed from two to three and one half pounds of whole milk three times a day. Care should be taken to feed this milk at body heat after it is drawn and before it becomes cool. When the calf is three weeks of age it must be fed twice a day and skim milk can gradually and slowly substituted for a like amount of whole milk. Three more weeks should be used in getting the calf onto a whole ration of skim milk. When it reaches the age of six weeks it should be receiving from twelve to sixteen pounds of warm milk a day. Great care should be taken not to overfeed the calf with milk, as more calves are injured by overfeeding than by underfeeding.

The Open Shed For Dairy Cows.

The open shed is finding favor among progressive farmers and dairymen as the proper method of winter shelter. Their belief is founded upon four things: Disease, accident, logic and experience. Experience is the farmer's test for all things and the several years that the open shed shelter has been in brought down the balance heavily on the side of the open shed.

In the two decades just past the scourge of tuberculosis has been prevalent in all dairy districts. Tuberculosis is a germ disease. Germs thrive in darkness, in dampness, in filthiness and where fresh air is lacking. In all farms it has been a constant warfare to fight down those three conditions. Naturally in fighting tuberculosis practical, hard-headed men sought to provide conditions wherein the damp, the dark and the filthy would be avoided and where fresh air would be provided in abundance. Someone thought of the open shed that was giving such splendid results for the steer feeders. This idea was tried out and found to be good. Cows were found to be more healthy. While some men were putting in large windows and increasing the size of air shafts the more radical were using the open shed with fresh air and sunlight in abundance. An experiment station tried out the idea and reported satisfactory results.

Dairymen who were enlarging their herds sometimes found that they had insufficient stall shelter. In the emergency, as they considered it, they turned some of the cows to the shelter of an open shed. To their surprise the ones in the open shed did better and apparently were in better health and were more contented than the ones in the barn which were supposed to be more favored.

The experience of one typical of those who learned from accident that the open shed is most desirable is as follows: He turned three or four newly purchased cows into a back shed expecting but little of them during the winter. Much to his surprise those cows kept up their milk flow and were always more contented and less subject to indisposition of any sort. The owner, quick to put into practice a good idea, even though it might be comparatively new, built a long shed almost of horseshoe shape, leaving a large open interior court and with the open part of the horseshoe opposite the prevailing wind. His results were eminently satisfactory.

During the second or third winter his open shed plan was put to a very severe test. There had been no cold weather until January. Then overnight the temperature went to 16 degrees below zero. His cows dropped off less in the amount of milk flow than did those in a neighbor's barn where the cows had been housed regularly and had been made delicately sensitive to all changes in the weather. The idea was shown to be good and has been largely adopted.

The advantages as found for the open shed are that it is more healthful for the cows. It is cheaper. The cows are cared for with less labor. The cows are cleaner. Cleaner milk is secured. It has been found advisable to build a small milking room in conjunction with the open shed. In this room a few of the cows may be milked and turned into another section of the yard and others put in for milking. Men who have built large barns to hold the entire herd are using them at milking time, but for the one just establishing his dairy he will find it more economical to build the open shed and a small milking room.

Our readers frequently write and ask where they can buy some product that they need. If your local dealer or merchant cannot supply you, tell us his name and address—maybe we can be helpful to you and to him. We are here to serve both of you.

THE WISCONSIN FARMER
MADISON WISCONSIN

Importance of Clean Stripping.

What is the reason for clean stripping being of so much importance in the process of milking? The udder of a cow, composed of a solid mass of glandular substance separated into cells or divisions, is divided into two parts by a membrane from the front to the back, making two distinct halves. These halves are not divided and yet the front and back part are distinct from each other, each quarter being connected with the teat which belongs to it by the small cells or divisions.

The upper part of the udder is made up wholly of fat, while the lower part has very little fat. Consequently with this structure the udder is not a simple reservoir of milk. The udder, in fact, can hold very little milk, the combined spaces or ducts in it are found to be insufficient to hold half a pint of milk, even in a cow giving several quarts at a milking. The milk, therefore, is produced in the udder as the milking proceeds and the cow may prevent the flow of milk by repressing this action.

The giving of the milk is a voluntary act of the cow and as she lets it down the milk flows from the cells of the udder into the passage leading into the teats. Necessarily the milk from the upper part of the udder can only come down and the glandular substance in this part of the udder being mostly fat which is mingled with the serum or milky fluid that escapes from the glands by a change of the substance into milk. Thus the richness of the strippings is accounted for and the necessity demonstrated for every possible drop of milk being obtained in the strippings, because the failure to do clean stripping not only results in a loss of the richest of the milk but also acts injuriously against the cow in subsequent milkings.

To Make Buttermilk From Skim Milk.

Buttermilk is at a premium these days, and so great is the demand that it is cutting some figure in the matter of selling cream or making butter. The writer knows exactly how much less labor there is in selling cream, instead of making butter, and is ever on the alert in favor of the former.

According to the Missouri College of Agriculture, buttermilk can be made from separated milk by keeping it at a temperature of 68 to 70 degrees Fahrenheit for from eighteen to twenty-four hours, or until it has formed a smooth curd. As soon as the milk thickens, it should be churned thoroughly for about a half an hour, until the curd is broken up into fine particles.

Separated milk does not make buttermilk with just as good flavor as when skimmed by hand, because there is no butter fat left in it. This is a score for the separator though, and the deficiency can be remedied by adding a per cent of whole milk to the skim milk to be churned; about one pound of whole milk to eight of the other.

Buttermilk is a healthy, nourishing and nutritious drink, and is a valuable by-product in the dairy. It is being sold over the confectioner's counter, and is a stanch rival to the drinks being sold with a string of lingo to their names. The demand cannot be supplied, and when we wish to do a town friend a favor, we know what to do; take a jug of buttermilk, fresh from the churn, chill it, and take it to town, dressed in the garb of a burlap sack soaked in cold water.

Once there was on record a case of buttermilk killing a chicken-eating hog. Or rather, it was a combination of buttermilk and pig weeds.

Watch the potato bin carefully for decaying tubers. Some fields contained a good many decaying tubers this autumn.

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IF you are selling cream or making butter, and have no separator, or are using an inferior or half worn-out machine, you are wasting cream every day you delay the purchase of a De Laval.

You can't afford to wait until next spring. It means too much loss. Let the De Laval start saving cream for you right now, and it will soon pay for itself.

See the nearest De Laval agent right away and let him show you what the De Laval will do for you. If you do not know the De Laval agent, write direct for any desired information.

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Arcady Farms, Lake Forest, Ill., have successfully and economically raised over 100 head of calves each year on RKD Calf Meal—fed *nothing else* from the time the calves were only 4 to 12 days old. Ask your dealer or write us.

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Only $2 Down
One Year to Pay!

$24 Buys the New Butterfly Jr. No. 2. Lightrunning, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 95 quarts per hour. Made also in four larger sizes up to 6 1-2 shown here.

10 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog, folder and "direct-from-factory" offer. Buy from the manufacturer and save money.

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Cow-Testing Reports.

Waupaca and Butternut Ridge.

To the Editor:—Owing to our short list of forty-pound cows in September, the list was not sent in for publication, so both September and October are included herewith. Cows are beginning to freshen now and these reports will begin to look better. I had twenty in the forty-pound class in October and fourteen in September. I am enclosing a picture of the horse and wagon with which I make the trip from farm to farm. I am anxious to see as many of our official cow testers and farmers interested in dairying as

Geo. L. Moss, cow tester, Waupaca county, travels from farm to farm in this rig. His association has thirty members, 480 cows, and the tester is on the job twenty-seven days a month.

can possibly come at the Dairymen's State Convention to be held in Waupaca, December 5th to 7th.

The following table gives the names and records of the cows in Waupaca and Butternut Ridge Association producing more than forty-five pounds of butter fat in the thirty-day period ending October 1, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Fred S. Jorgensen					
Jessie, G. H.	10	4-17-16	1243	3.7	46.0
E. F. Schroeder					
Beauty, G. J.	10	5-24-16	769	6.0	46.1
Nig, N.	4	4-10-16	1004	4.8	48.2
E. O. Frihart					
Brownie, G. G.	6	3-28-16	952	5.7	53.4
C. A. Peterson & G. R. Miller					
Marnas, R. G.	8	1-15-16	905	7.2	66.1
Golden Lady, R. G.	9	6-7-16	1031	4.4	45.4

The following is a similar report for the thirty-day period ending November 1, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of milk	Pounds B. fat
Fred Jorgensen					
Jessie, G. H.	10	4-17-16	978	4.8	46.9
E. L. Schroeder					
Ethel, G. G.	2	8-17-16	888	5.3	47.1
John C. Backes					
Spot, G. G.	6	10-3-16	972	5.9	57.3
Theo. A. Bauer					
Carrie, G. J.	5	10-6-16	732	6.2	45.4
E. E. Hani					
Fae, G. J.	5	9-20-16	1098	4.2	46.1
Ira Farley					
Brownie, N.	10	9-19-16	1218	5.3	64.6
C. A. Peterson & G. R. Miller					
Ruth, G. G.	5	8-28-16	1005	4.8	48.2
Marnas, R. G.	8	1-15-16	812	5.6	45.5
Golden Tidy, R. G.	9	6-7-16	1113	4.4	49.0

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

Winnebago's Yearly Report.

To the Editor:—The Winnebago County Cow-Testing Association ended its first year of work October 31, 1916. The annual meeting was held October 28th in the Webster manual training building in Omro. The treasury showed a gain of $34.34. Mr. W. P. Bussey was re-elected president; N. A. Rasmussen, vice president; Levi Brunson, secretary and treasurer. The directors for the coming year are: Ganem Washburn, E. E. Mackie, T. A. Fanow, G. W. Searles, Archibald R. House, who continues as tester.

All the farmers were well pleased with the productions of their herd and are going to better it this coming year. A large number of the farmers found it more profitable to feed a balanced ration than to feed the guessing way. Throughout the association the cows are in a better condition to produce this year than last. Out of the entire number of cows tested sixty-two went to the stockyards. Our best cow produced 9,575 pounds of milk, testing 5.02; making 481.4 pounds of butter fat valued at $159.45. She consumed $49.98 worth of feed, making a profit of $109.47. She returned $3.19 for every dollar's worth of feed. She is owned by H. R. Mosely, Omro, Wisconsin.

The second highest is a grade Guernsey owned by C. H. Slayton. She produced 8,327 pounds of milk, testing 5.76, making 480.3 pounds of butter fat, valued at $166.62. She consumed $53.08 worth of feed, leaving a profit of $107.54, returning $3.02 for every dollar in feed.

The third highest was the largest milk produced. She is a pure-bred Holstein and is owned by M. L. DeVoin. She produced 12,823 pounds of milk, testing 3.37, making 432.4 pounds of butter fat, valued at $145.37. She consumed $61.36 worth of feed, leaving a profit of $84.01, returning $2.36 for every dollar in feed.

Following are the twelve highest butter fat producers:

H. R. Moseley, G. G.	481.4
C. H. Slayton, G. G.	480.3
M. L. DeUoin, P. B. H.	432.4
M. C. Mackie, G. D.	429.6
N. A. Rasmussen, P. B. G.	420.5
Tenant Bros., P. B. G.	406.5
Levi Brunson, G. J.	406.0
Ray Ward, G. G.	405.2
T. A. Farrow, G. G.	404.8
H. P. Zellman, P. B. J.	387.0
A. C. Marshall, Native	384.3
G. E. Washburn, G. J.	381.1

Following are seven herds having highest average fat production:

H. R. Mosely	357.5
L. E. Brunson	342.0
Tenant Bros.	333.2
G. E. Washburn	319.6
J. J. Shrig	316.2
N. A. Rasmussen	307.3
C. H. Slayton	306.9

Following are the herds having cows over 300 pounds:

	No. of cows
G. E. Washburn, G. & P. B. J.	15
Tenant Bros., G. J.	11
H. R. Mosely, G. & P. B. G.	11
L. E. Branson, G. & P. B. G.	11
Milton Mackie, G. G.	6
H. R. Meilahn, G. D.	5
W. P. Bussey, G. J.	5
T. A. Farrow, G. G.	5
N. A. Rasmussen, G. & P. B. H.	5
Ray Ward, G. G.	4
Jerry Shea, G. G.	4
H. P. Zellmar, G. & P. B. J.	4
M. L. DeUoin, G. & P. B. H.	4
C. H. Slayton, G. & P. B. G.	3
A. Lloyd, G. & P. B. G.	3
E. Mackie, G. G.	3
F. Barnett, G. J.	3
J. J. Shrig, P. B. J.	2
Ed Rau, G. & P. B. H.	2
J. T. Thrall, G. G.	2

A. R. House,
Official Tester, Winnebago County Cow-Testing Association.

Not Scared at Feed Price.

To the Editor:—The following is a summary of the work done by the Alban and New Hope Cow-Testing Association, Rosholt, Wisconsin, for the thirty-day period ending November 10, 1916. During this time we have found five "boarder" cows, all of which have been sold and which would have been fed at a loss to their owners all through the winter had they not been tested. One pure-bred sire has been bought to replace an inferior sire. Ten dairy cows have been purchased by four of our members.

This goes to show that our people are not scared of the present high prices of feed. All they need to do is to get the right kind of dairy animals. For the past month we had twenty-one cows producing over forty pounds of butter fat. This is some improvement over last month, when we had only eleven in this list.

The cows in our association which produced forty-five pounds of butter fat or 800 pounds of milk during the thirty-day period ending November 10, 1916, are as follows:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Otto Halvorson					
Beauty, N.	7	5-19-16	1162	4.6	53.5
C. E. Ericksen					
Whiteface, G.G.	8	3-26-16	941	5.3	52.7
J. P. Madsen					
Bessie, G. G.	6	9-17-16	1054	5.0	52.7
Susie, G. G.	7	9-29-16	1054	4.8	50.6
Sadie, G. G.	5	10-6-16	927	5.3	49.1
Alfred Brekke					
Whity, G. H.	8	9-21-16	1361	3.5	47.6
M. J. Wrolstad					
Gr. Guern.	9	6-28-16	868	5.4	46.9
Norman Dahlen					
Native	3	10-9-16	920	5.1	46.9
Tom Olson					
Gr. Hol.	8	7-29-16	1290	3.6	46.4
Native	4	8-12-16	884	5.2	46.0
Gr. Guern.	4	9-14-16	1079	4.3	46.4
Gunder Dobie					
Native	8	8-22-16	1185	3.9	46.2

M. E. Smith, Official Tester.
M. J. Wrolstad, Secretary.

Geneva Association.

The following table is a list of the cows producing forty-five pounds of butter fat or over for a period of thirty days ending October 31st:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Dallas Davis					
Hartog, R. H.	7	10-1-16	1395	4.2	58.6
Wm. Rouse					
Rosie W., G. H.	5	9-20-16	1259	4.3	54.1
Emil Papenfus					
Blossom, G. H.	4	9-25-16	1169	4.5	52.6
Nigger, G. H.	4	9-27-16	1287	3.8	48.9
Kittie, G. H.	4	9-22-16	1008	4.8	48.4
Dallas Davis					
Pansy, G. H.	7	10-1-16	1569	3.0	47.1
Ora Taylor					
Dora, R. J.	7	9-6-16	719	6.5	46.7

F. W. Drake,
Official Tester, Geneva Cow-Testing Association.

Will you let us send you this Grand Collection of 22 Winter Blooming Bulbs at our expense? See offer below.

MOST people like to have flowers growing and blooming in the house during the winter months. In this special offering we have had our nurseries make up a collection of extra large bulbs in a great assortment of colors and especially selected of varieties that will grow and blossom freely indoors. Simple directions for potting and culture will be sent with the bulbs so that you can easily make a big show with them. The bright flowers will make your rooms more cheerful and the perfume from them will go all over the house.

The bulbs can be planted in pots as in illustration, or in any other dishes you may have in the house. They will commence to blossom in about 60 days after being brought into the warm rooms.

Just read our offer, fill out the coupon and mail to us at once, and we will have our nurseries send you the 22 fine *Winter Blooming Bulbs* by next parcel post. Right now is the proper time to get them started for indoor blooming.

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The Housewife	$ .50	All For $1.40
Ladies' World	1.00	
People's Home Journal or Today's Magazine	.50	
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The Housewife	$ .50	All For $1.40
McCall's Magazine	$ .50	
People's Home Journal or Today's Magazine	.50	
22 Bulbs	FREE	You Save 75 Cents

These are limited offers and orders will be accepted only up to and including December 31, 1916.
Remit by P. O. Money Order or Registered Letter and address all orders to
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Here are seven sheep in a pen. By drawing three straight lines you can put each one in a pen by himself. If you can do this we will send you as a prize, a Christmas surprise package, containing 42 assorted pieces of beautiful Christmas cards, seals, tags and stickers. This is one of the most artistic Christmas packages put out. We will also send a certificate of entry in our grand contest for a $395 Saxon Automobile. All you have to do is to enclose 2 two cent stamps in your letter to pay postage and cost of mailing.

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SAXON EDITOR, 563 Popular Bldg., Des Moines, Iowa

THE FARMERS' MARKET brings buyers and sellers together. Read what you can buy. Advertise what you can sell. Six cents a word each insertion.

Fruits and Garden

On Beekeeping in Wisconsin.

To the Editor:—Should Wisconsin farmers keep bees? Much depends on the farmer, his location and his condition. There are some of us who would keep bees simply for the pleasure there is in it and the delightful and most wholesome of all sweets, even if there was no revenue or profit in it. As to the profit in beekeeping. There are, of course, some who keep bees and others whom the bees keep. In other words, there are some beekeepers who find it profitable and others who do not, but the last statement is also true of all other lines of farming. I live in a dairy section where the Swiss cheese industry predominates. Not many keep sheep, because they say it doesn't pay. Now I do not believe this and my experience with sheep refutes this idea. Fads and fancies affect most of us and those of us who are not affected are indirectly influenced. I would not farm without sheep, but the neighbors around here do not see it in that way. (Again I spoke of the pleasure in keeping bees, but there are persons who think it is anything but fun to get stung. (This expression has a literal as well as figurative meaning.)

The question is best settled by ascertaining who in the family is interested to the extent they would care to read up and become somewhat posted. Then an occasional visit to an experienced beekeeper will suggest many new ideas and ways of doing things. The key to success may be briefly summed up in this way: To do the right thing at the right time, and much might be written as to the fun of it. Especially is comb honey production really a fine art. To do the right thing at the right time you will wish to become a botanist and nature student and there is no bigger fun than that, but the beginner about this time may be especially interested in proper wintering. To begin with, I better state that I have followed largely the method of cellar wintering. For this I shall give a few reasons. First, however, let me state that until recently the idea was general that the bees sort of hibernated during winter, but some recent experiments carried on at Washington has revolutionized this idea. About two years ago Dr. Phillips read papers before most beekeepers' associations on Washington experiments in wintering bees. Dr. Phillips maintained that bees do not hibernate. While different methods of outdoor wintering has been practiced, the idea in general was that bees hibernated. The idea now for outdoor wintering is based on the idea of some cover protection to keep cold out and conserve the heat of colony. A double wall arrangement with a dead air space in which sawdust or dry leaves is filled in. Then a strong colony with plenty of good stores generally winters all right, but I stated that my method was to winter the bees in cellar, and this I believe to be the best. I had better give some reasons: First, if bees do not hibernate a uniform temperature is the main thing to be sought. For this purpose a good cellar is no doubt the best. Especially is this an important point in this climate where the temperature changes so rapidly. Then if there is any excuse in the fine barns and houses of protection for our live stock the same logic applies to our bees. As to food and shelter, the bees deserve the same consideration as does our other live stock. Here it is a question of the conservation of heat and stores. It is true that an animal fat and in good shape with plenty of food will endure our hard winters and inclement weather, but we think protection better.

Any further discussion on this subject may not be in place here. The recent numbers of Gleanings and American Bee Journal have extensively illustrated articles on the subject of outdoor wintering. An argument that I have seen repeatedly given is that outdoor colonies will commence to breed up earlier. I suppose this argument is true, but still I should wish to be cautious until we know more about it. The warm spring sun frequently induces bees to come out simply to be chilled. The spring problem with me is rather to keep the bees quiet until warm, settled weather arrives about soft maple bloom.

For farms that only have a few colonies and have no special cellar arrangement for them I would suggest that bees could be placed in a dark corner and a canvass or blanket be hung around and over them. The idea being to keep the bees in a dark place, as you cannot successfully shut up or imprison bees. H. H. Moe.

Green Co., Wisconsin.

Ailing Animals.

Blackleg Vaccine.

Would you please inform me through your valuable paper whether or not blackleg vaccine, in pellet form, loses its strength or effectiveness when you have it on hand for some little time. Some dealers keep it in stock and it probably has been on their shelves indefinitely. Would this be all right to use and would it be as effective as if obtained directly from factory?

There is a time limit for the use of this vaccine and this should be so stated on the box or bottle. It should not be used after return date.

Paralysis.

I have a fifteen-year-old mare that seemed to get lame in one hind leg and then staggered. Finally she got so she could not move any of her limbs, but seemed to want to eat. She has been that way for three days. Everything else seems to be all right. We have not given her any medicine. She is now so weak that she cannot move her head.

If your animal was as bad as you state she is probably beyond all help by now. She probably has become paralyzed from some cause or other. We would not be able to give cause or nature of trouble without an examination.

Scratches.

Please tell me how to cure scratches. One of my horses I believe has scratches. His hind feet crack and get sore when he gets mud on them. They swell up when he stands overnight. I have been using lard.

Most cases of scratches will yield to a daily application of tincture of iodine for a while and then every other day. The fetlock should always be well cleaned with a dry brush before applying iodine. If this does not cure, dry clean the parts and use an ointment composed of one-half of gray mercurial ointment and vaseline. This should be applied by rubbing well into the parts and then with a soft rag rub off all excess so dust will not gather.

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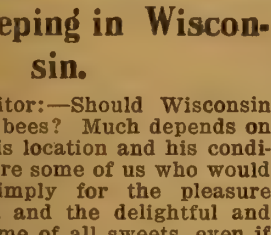

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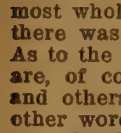

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Reduces Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from Bruises or Strains; stops Spavin Lameness, allays pain. Does not blister, remove the hair or lay up the horse. $2.00 a bottle at druggists or delivered. Book 1 M free.

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THE present high cost of paper, ink, labor, in fact everything that goes into a farm paper or magazine has brought notices from practically all the leading publishers to the effect that there will be a general raise in subscription prices, effective within the next few weeks. In fact, it is doubtful if the special clubbing combination advertised below can ever again be purchased at these prices. We, therefore, suggest that you pick out your club and send in your order today, as we cannot guarantee these prices longer than fifteen days beyond the date of issue in which these bargain offers appear.

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People's Popular Monthly	.25
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CLUB NO. 18.

Cosmopolitan	$1.50
Ladies' World	1.00
Wisconsin Farmer	1.00
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CLUB NO. 19.

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Metropolitan	1.50
Wisconsin Farmer	1.00
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CLUB NO. 20.

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The Wisconsin Farmer, Madison, Wis.

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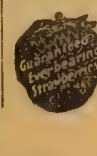

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THE HOME

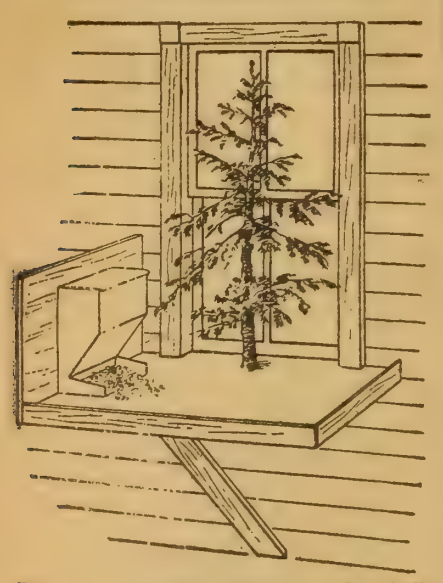
Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Feeding Winter Birds.

Those who enjoy the companionship of the wild birds should remember that an ample food supply is the most important means of attracting and keeping about the place those which remain with us during the winter months. During this season the natural food supply is necessarily limited and birds respond readily to such attention.

The list of winter foods is long and the means of making it available for the birds varied. Suet, pork rinds, bones with shreds of meat and pieces of cooked meats tied to the limbs of trees will prove a source of delight to the feathered pets and, if placed within sight of the house, to the family itself, particularly the children. Before the ground is covered with snow the practice of daily throwing out a handful of bread crumbs, cracked corn or wheat will always bring eager banqueters. Birds having once been attracted in this way will greatly miss their daily ration when snow and ice arrive and this mode of feeding is impossible.

But the birds need not go hungry, for there are many devices for protecting the food from the weather, and they are so simple that even a twelve-year-old boy can make them. A coconut shell with a hole bored in one end is a good example. The cavity is filled with chopped suet and nuts or other food mixture and the nut is suspended by a wire from a limb. The size of the hole regulates the character of the guests. If the hole is small large birds cannot enter. They will eat the coconut meat as well as



FOOD TRAY SHELTERED BY EVERGREEN BOUGHS.

the food mixture placed within. There are any number of foods that may be used for the mixture. The list includes cut-up apples, birdseed, buckwheat, crackers, cracked corn, bread crumbs, hemp seed, millet, nut meats of all kinds, whole or rolled oats, peppers, popcorn, pumpkin or squash seeds, raw or boiled rice, sunflower seeds and wheat. Cans with small openings may be used instead of coconuts, or baskets of different sizes may be made of wire netting and fastened to a tree, or, with less trouble still, food mixtures in melted fat may be poured into holes in limbs of trees or over evergreen branches.

Illustrations of two food trays are given herewith. One is mounted on a pole and may be placed near a window or at any desired point about the place. The raised ledge about the edge and the evergreen branches used as a canopy shield the food against wind and rain and snow, and added protection may be afforded if the tray is placed in the shelter of a wall. A shelf placed next the house beneath a window may be provided with a tiny evergreen tree and a food box which may be filled with any desired food and will supply the bird guests for many days without refilling.

More elaborate devices may be made in the form of food hoppers and

FOOD SHELF PROTECTED FROM WIND AND STORM.

food houses provided with solid roofs and with glass on one or more sides. In these the food is perfectly sheltered from the weather, but the simple contrivances here illustrated are very effective.

Sauerkraut.

Sauerkraut does not ripen thoroughly in less than two months and, therefore, it should be made as early in the winter as possible. Fifteen heads of cabbage make about the right amount for home use. Good, firm heads should be selected and shredded as for slaw, though not quite so fine. Line the bottom of an earthen crock in which the kraut is to be made with large, clean cabbage leaves. Then put in a layer of the shredded cabbage to the depth of one inch. Sprinkle this with salt. It will require about two or three teaspoonfuls of salt. Mash the cabbage with a wooden masher until the juice runs out. Continue this process, alternating the cabbage and the salt until the cabbage is all used up. Each layer of cabbage should be sprinkled with the same amount of salt and mashed well. Lay more clean cabbage leaves over the top and cover with a clean white cloth and a plate turned upside down, fitted into the crock. Put a weight on the plate to keep it down. Set the jar in a cool place in the cellar for the kraut to ripen.

Wants Christmas Ideas.

To the Editor:—I have been an interested reader of this paper for some time and I have decided to write a few lines myself in answer to the request of Mrs. S. H. for good pancake recipes. We have them quite often for breakfast and think them good. Soak a couple of slices of dry bread overnight, or a few minutes in the morning, just so they are soft. Then pour off the cold water and crush the bread fine. Add one egg, a pinch of salt, one cupful of buttermilk or sour milk to which one level teaspoonful of soda has been added, a scant half cupful of corn meal and three-fourths of a cupful of flour. Beat thoroughly and bake a nice brown on a well-greased griddle. I use a tin or granite cup for measuring the milk, meal and flour, and I soak the bread in cold water. We never have scraps of dry bread to waste. If one uses too much bread it will make the cakes sticky. I hope someone will try this recipe and like the cakes as well as we do. I never like soggy cakes of any kind and these are never soggy.

As it is nearing Christmas I wonder if some of the readers could tell us how to make some little inexpensive gifts that are dainty and pretty. Where one has lots of friends they like to remember at Christmas time it takes so much to get each one a little remembrance, and, besides, it is not nearly so nice oftentimes as some homemade article such as dainty aprons, pin cushions, pin holders, guest or bath towels with crocheted lace, or doilies. If anyone has something new, please pass it on. Give us some new ideas and tell us how to make the same pretty things you are making and we will be very grateful.

Maggie.

Interested in Orval.

To the Editor:—This is my first attempt at writing to your paper, but I enjoy reading the many other letters published. The one from little Orval in Wyoming interested me in particular, for I am a widow with one child, a boy about nine years old. I am very poorly most of the time, so want to try to teach my boy to cook and be my helper and he seems just as anxious to help me as I am to have him. He goes to school every day. Well, Orval, here is a recipe for baking powder biscuits. To half a sifter full of flour add one and one-half teaspoonfuls of baking powder and a scant teaspoonful of salt. Sift together, then take one heaping tablespoonful of lard and mix thoroughly with the flour. Use just enough sweet milk or water to mix this to a soft dough. Roll half an inch thick and bake seven minutes in a hot oven.

Here is another recipe that is splendid and so simple I think a little boy can easily make it. It is for nut ginger bread. One cupful of molasses, one cupful of sour milk, one cupful of lard or butter, two eggs, one cupful of sugar, five cupfuls of flour, one teaspoonful of baking soda, one tablespoonful of grated nutmeg, one cupful of any kind of nut meats, chopped fine. Add nuts and flour last.

Mrs. Brownie Jones.

Treatment of Plants For Lice.

To the Editor:—In answer to Ruth's request for a remedy for lice on house plants I am sending the following: Fill a basin with strong, clean soapsuds. Turn the plant upside down, watching so the earth does not fall from around the plant, and rinse the top, swaying gently back and forth through the suds until the lice disappear. Then sprinkle tobacco around the plant. Repeat the washing process whenever lice make their appearance. I have tried this on my plants and it freed them from lice. The suds won't hurt the plants. Mrs. F. F.

Will "B. M." Write Again?

To the Editor:—I wish you would ask "B. M." to give us more fully the directions for the yoke pattern printed in a recent issue. She says "chain 20 to start. 1st row, join in third stitch from needle to form picot, 4 tr. 2 ch. 4 tr. 2 ch. turn." Now she does not say whether to miss any stitches and put this along on the chain of twenty or not, and I would like very much to have her explain. Also, is the yoke round or square and which is the top and which the bottom? How do you make the shoulder strap and the back? Are they made separately and sewed into place or are they crocheted right onto the front? Please, B. M., won't you help me out? I love to crochet and I want to make this yoke if you will just explain it a little further.

M. W. F.

Recipes.

Peanut Brittle.—One cupful of sugar, one-half to three-fourths cupful shelled peanuts. Chop the peanuts. Heat the sugar in a frying pan. When melted add the peanuts, mixing them thoroughly. Spread on a platter or a tin baking sheet and press into shape with a knife. Cut into squares and when cool break into pieces.

Fruit Cake.—One cupful granulated sugar, one-half cupful lard, two eggs, saltspoonful salt, one teaspoonful baking soda, one tablespoonful vinegar, one-third cupful preserved citron (cut fine), one-third cupful orange peel (cut fine), one-third cupful lemon peel (cut fine), one teaspoonful each ground cinnamon, cloves, allspice and ginger, one and one-half cupful water, one pint sifted flour, one cupful nutmeats, one cupful seedless raisins, one cupful currants. Cream together sugar with lard, add well beaten eggs, salt, ground cinnamon, cloves, allspice and ginger, molasses, milk or water, baking soda dissolved in the vinegar, flour, nutmeats, raisins, currants, citron, orange and lemon peel. Then add enough more flour to make the batter thick. Beat well. Bake in loaf tins in moderate oven abou one hour or until it falls away from sides of pan.

Cabbage Salad.—Shred cabbage very fine and plunge into cold water to crisp. Drain and dress with sour cream, sugar, salt and, if not quite sour enough, a very little vinegar may be added. A few blanched and chopped pecan meats are a delicious addition to this salad.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Shocking Oats With Wheelbarrow.

Dear Young Folks:—I am a little farm girl eight years old. My two cousins from Chicago were out to visit us this summer and we had a good time. My cousins liked to ride horses and they tried to milk the cows. They wanted to help shock oats, so they took the wheelbarrow out in the field and put the bundles on it and then wheeled it to the place to make a shock. The neighbors all laughed at them and they didn't like to hear about shocking with a wheelbarrow.

My papa just bought a new automobile and we have had a few rides.

My brother and I go to school. We live two miles from school. We have three months of school this fall. My little sister wants to go the last day. The teacher took our pictures the other day. It will be a funny one, because we were all eating apples and laughing.

It won't be long until Christmas and we are all expecting Santa Claus to bring us something.

—Grace Marguerite.

More Help For Orval.

Dear Young Folks:—This is the first time I have ever written to your page. I like to read your letters very much. I am twelve years old and am in the sixth grade at school. Our school was out yesterday. The teacher gave us stars if we didn't whisper, and I was the lucky one. The teacher gave me a picture of a little girl. I think it is very pretty and I am glad I got it.

I am going to tell Orval how to make baking powder biscuits. One quart of flour, three teaspoonfuls of baking powder, a large tablespoonful of lard, one teaspoonful of salt and enough milk to mix a soft dough. Roll out on a mixing board, cut with a biscuit cutter and bake in a hot oven.

—Edith.

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[illegible] contents being always clean. Price 50 cents a pair, postpaid.

We will send you a pair for 25 cents, postpaid, if you will send us 50 cents at the same time for a yearly subscription to The Housewife.

THE HOUSEWIFE.

In it you have a magazine containing the best literary and artistic efforts of the foremost writers and illustrators of the day. Anna Steese Richardson, organizer of the Better Babies Movement, will write for The Housewife a series of articles on the professions and businesses open to the girl starting out in life. Mabel Potter Daggett will write strong articles for The Housewife on matters of world-wide interest. Helen Christine Bennett will write articles and aim to show the young wife how to start housekeeping right. Lilian Dynevor Rice, who is known to hundreds of thousands all over the United States, will continue as Department Editor of The Housewife. The departments which she will supervise will embrace practical, seasonable cookery, embroidery, crocheting and needlework of all kinds, gardening and helpful household hints. Harold Vincent Milligan, organist and well-known writer on musical subjects, will contribute articles to The Housewife on music for the home. Among the prominent writers of fiction we have scheduled for the year is Holworthy Hall, one of America's brightest young authors. His first serial "The Frying Pan" commences in the November issue of The Housewife and is interestingly and attractively illustrated by Walter Tittle. Taken all in all, The Housewife for the year 1917 will be the best magazine published at 50 cents a year.

Or, you may obtain a pair for 25 cents, by sending us an order for any one of the following combinations of magazines, if your order is received before January 1, 1917.

The Housewife	$ .50	All for $1.00
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The Housewife	$ .50	All for $1.00
McCall's Magazine	.50	
People's Home Journal	.50	
The Housewife	$ .50	All for $ .85
People's Popular Monthly	.25	
Today's Magazine	.50	
The Housewife	$ .50	Both for $1.25
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The Housewife	$ .50	Both for $1.60
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Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1924—Children's dress in empire style and with long or short sleeve. The pattern is cut in 4 sizes: 2, 4, 6, and 8 years. It requires 3⅛ yards of 44-inch material for a 6-year size.

1780—Ladies' breakfast sack and cap. The pattern is cut in 3 sizes: Small, medium and large and requires 3⅜ yards of 36-inch material for the sack and ⅞ yard for the cap for a medium size.

1925—Girls' slip. The pattern is cut in 5 sizes: 2, 4, 6, 8 and 10 years. It requires for size 6, 2 yards of 36-inch material.

1929—Ladies' kimono or lounging robe. The pattern is cut in 4 sizes: 34, 38, 42 and 46 inches bust measure. It requires 7⅛ yards of 36-inch material for a 38-inch size.

1504—Ladies' combination camisole and envelope skirt drawers. The pattern is cut in 3 sizes: Small, medium and large and requires 3¼ yards of 36-inch material for a medium size.

1523—Ladies' apron with or without trimming and belt. The pattern is cut

in 3 sizes: Small, medium and large. it requires 6¾ yards of 36-inch material for a medium size.

1507—An attractive model for home or business wear. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 7¼ yards of 36-inch material for a 36-inch size.

1939—Girl's dress with blouse and skirt attached to an underwaist, sleeve in either of two lengths. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 requires 4⅜ yards of 44-inch material.

1797—A simple dress for mothers' girl. Pattern is cut in 4 sizes: 4, 6, 8 and 10 years. It requires 2¾ yards of 36-inch material for a 6-year size.

1935 Waist-1916 Skirt—A smart tailored dress. Waist pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 7 yards of 36-inch material for a 36-inch size for the entire dress. Two separate patterns, 10 cents for each pattern.

1808—Dress for misses and small women. Pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 6¼ yards of 36-inch material for an 18-year size.

1801—A practical girls' apron and cap. Pattern for this combination is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 2½ yards of 36-inch material for a 10-year size, for the apron and ¾ yard for the cap.

International Sunday School Lesson.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Lesson for December 3, 1916.

Jesus Christ the First and the Last.

LESSON TEXT—Rev. 1.

GOLDEN TEXT—Fear not; I am the first and the last, and the living one; and I was dead, and behold, I am alive for evermore.—Rev. 1:17, 18.

The lesson committee have departed, seemingly, a long way from anything like chronological order. Paul had nothing to do with the writing of the Revelation, yet this lesson illustrates the preeminence which Jesus Christ had in the mind and labors of the great apostle (Col. 1:18).

I. Introduction, (vv. 1-3.) We would suggest that all Bible students and teachers, if possible, read the introduction to the Book of Revelation in Scofield's Reference Bible. The book proper is "The Revelation of Jesus Christ." John, the beloved disciple, who wrote the Gospel and Epistles, was the one who saw the visions recorded therein. Many of the things are historical, others are prophetically set forth. The latter are "shortly to come to pass." (See also II Peter 3:8.) John tells not only what God said but what he himself saw. The late Doctor Brooks, of St. Louis, omitted this book from his study for many years until he saw the comments recorded in verse 3. The time of the writing of this book has variously been stated as from A. D. 60 to A. D. 96; the writer was certainly John the Beloved. The place of writing was the island of Patmos in the Aegean sea, not far from Ephesus. The real author, however, is Jesus Christ, the Son of God.

II. Salutation (vv. 4-8). "The servant of Jesus who records his message was John, and the message was to be to "the seven churches which are in Asia;" that is, the western portion of Asia Minor, of which Ephesus on the Aegean sea was the principal city. These churches are definitely named in verse 11. There is good reason to think that these churches represented the seven successive epochs of church history. If so, no age is exclusively Ephesian, or Philadelphian, or Laodicean. The grace, favor, loving kindness, is a free gift from Christ, who is here giving a threefold title, namely: First begotten from the dead, witness and prince.

III. Vision (vv. 9-18). What John saw on the isle of Patmos he was to write upon a parchment roll and send it to the seven churches, each of which needed a message. Under the figure of seven candlesticks are enumerated seven churches. Into the midst of these churches, actually present in them, is one like unto the Son of Man. (See also Matthew 18:20.) Like a human being, Jesus was, but now clothed with the garment of his eternal glory, girded about with the girdle worn by priests and kings, a symbol of his power and strength (Isaiah 11:5; Eph. 6:14). His head and his hands, his feet and his eyes are all referred to, each having its symbolical significance. In his right hand are the seven stars (v. 16), the angels of the churches, pastors or leaders, possibly guardian angels (v. 20). They are held in his right hand, signifying that they are protected, upheld and controlled by his wisdom and power. (See Jeremiah 22:24). From his mouth goes a sharp, two-edged sword; the spirit of the Word of God sharper than any two-edged sword (Hebrews 4:12). And his countenance was as the sun shining in its strength, the glory, such as was manifested in the transfiguration, such as Paul saw near Damascus, is here referred to.

IV. The Command. John had enjoyed a tender intimacy with the Lord during his earthly life and yet he was stricken down with the overpowering majesty and glory which had been revealed. Now he realized, as perhaps never before, the significance of the ever-living Christ, and he is hereby specifically commanded to record this vision as he had seen it and the messages which the Lord had for the churches. The word mystery (v. 20) has reference to something which has hitherto been hidden to men and which is now about to be revealed. The revelation was to these churches, and it is to us also.

Jesus is not a mere vision, but he is a living reality, unveiled for the time from the unseen.

Jesus is a living fact which we are to communicate to men. The seven stars (v. 20) are messages in his own right hand.

The churches are the lamp stands, Christ himself is the light, the sun (v. 16).

The message John is commanded to deliver have a fourfold application (1) to the churches actually addressed, but which have long since passed away; (2) to all churches in all times, admonishing them to discover their true spiritual state; (3) to individuals, "he that hath an ear," that they shall claim the promises made "to him that overcometh" and (4) they are phophetic of the different phases of spiritual history, following the days of John, the writer, (a) Beginning; (b) persecution; (c) worldliness; (d) pristly formalism; (e) reformation; (f) testimony to the word and the name.

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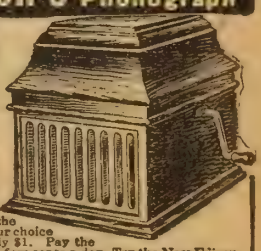

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Wisconsin's Potato Show.

(Continued from page 5.)

they were unanimous in their praise of the quality of the exhibits. The counties which exhibited and those growers who furnished the exhibits for the county booths were:

Oneida County.—Green Mountains, Triumphs and Rurals. Growers: H. Blumenstein & Son, E. M. Delong, Herman Schoeneck, Elmer Lytle, Walter Myers, Charles Peterson, Charles Gustafson, Robert Luethy, C. D. Packard, F. S. Campbell and C. S. Kinney.

Langlade County.—Rurals and Triumphs. Growers: Schroeder Bros., Charles Parsons, Louis Winter, Moss & Lavis, John Summ, Adam Guenther and Robert Bonner.

Oconto County.—Irish Cobblers, Rurals and Triumps. Growers: Walter Racine, O. B. George, John Anderson, Holt Lumber Co., Northern Potato Co., Thomas Bardon, William Kohop, Ellis Whiting, Thomas Caldie and George Buyer.

Waupaca County.—Rurals only. Growers: H. W. Crane, Edward Hartfield; Van Boyce, H. C. Frihart, F. R. Constance, M. Frihart, A. D. Larson, E. Kapitzke, E. Jorgenson, O. C. Woodard, Mrs. M. Kapitzke, A. Jorgenson, J. W. Christensen, D. C. Hayward, W. J. House, D. Thiel and the county asylum farm.

Price County.—Rurals, Green Mountains and Triumphs. Griffth Richards and C. A. Young in charge. County's first exhibit.

Wood County.—Triumphs and Rurals. Growers: George Zeaman, Ronert Leu, Louis Zeaman, Frank Matthews, Anton Arnold, J. C. Matthews, M. H. Jackson, Carl Huser and Mary Gundee.

Bayfield County.—Early Ohios, Burbanks, Green Mountains, Russet Burbanks, Kings. Growers: J. H. Hauser, Herman Sence, J. D. Hauser, L. A. Dodd, Othmam Bollinger, John Mayberg, A. M. Thompson and H. Nourse.

Portage County.—Triumphs and Rural New Yorkers. Growers: William Scribner, Robert Carlson, John Ebest, Louis Skogland, Albert Stottenberg, Albert Gumney, L. E. Gorden, C. A. Smith, Peter Peterson, H. Rasmussen and Charles Benjamin.

Eau Claire County.—Triumphs, Rurals, Green Mountains and Early Ohios. Growers: C. H. Barlund, G. P. De Busman, William Zimmerman, J. H. Krigstad, W. D. Garnett, Raymond Basher and Hy Harlicher, Jr.

Forest County.—Rurals, Triumphs and Green Mountains. Growers: Anton Rindal, Henning Hausen, Charles Marshall, Joseph Schaeuzer, C. J. Rasmussen, August Dregen and Chris Wiegan.

Dunn County.—Green Mountains and Triumphs. Martin Truvog and Hans Teppin in charge.

Rusk County.—Green Mountains and Rurals. Growers: J. Z. Arpin, H. Hermanson, John Hurless, J. A. Schmidt, John S. Schmidt, Ed Stahl, E. D. Nheingaus, A. A. Huddan, C. M. Pienney and C. P. Coon.

Lincoln County.—Green Mountains only. Growers: A. J. Berger, Walter Holoway, Charles Keyers, Ray Wisner, R. H. Clark, Chris Jensen, George Patterson, Frank Wrabets, John Frawley, A. E. Kennedy and August Raulean.

Barron County.—Rurals and Green Mountains. Growers: C. Marwold, Carl Grendale, J. H. Johnson, C. Hazelberg, A. T. Johnson, E. H. Thompson, Cedar Lake Farm, E. Kringle and G. Kringle.

Sawyer County.—Triumphs, Green Mountains and Rurals. Growers: Nels Mowers, Charles Rynda, S. J. Urenholdt, Fred Rang, Peter Gullickson, Gunnas Mosback, C. P. West, Olaf Cook, Maxia Jacquis and Theodore Larsen.

The boys' and girls' and school exhibits under the direction of T. L. Bewick, of Madison, was the largest in the history of the state show. There were more than seventy entries by boys and girls which indicates the importance this work has become. Rusk, Price, Bayfield and Sawyer counties had exhibits of potatoes raised in school work. There were also the usual exhibits by the plant pathology department of the college of agriculture on potato diseases and their control; potato cooking demonstrations and any number of other good things, making it worth while for the potato grower to be present.

Possibly no part of the four-day program was of more interest than that devoted to the county agricultural representative work. Too much cannot be said of the success these young men attributed to the show, not only in participation in the program but in taking part in arranging the county exhibits. The following were active in exhibit arrangement: C. P. West, of Sawyer county; R. L. Cuff, of Barron county; R. A. Kolb, of Lincoln county; G. M. Householder, of Rusk county; John Swenehart, of Forest county; R. G. Ingalls, of Eau Claire county; J. M. Coyner, of Portage county; John Hauser, of Bayfield county; W. D. Juday, of Oneida county; F. G. Swoboda, of Langlade county, and Griffith Richards, of Price county. Messrs. Coyner, Householder and Cuff and George Briggs, county representative of Burnett county, discussed the county agent work in Upper Wisconsin as it related to potato development and this furnished a splendid conception of the actual work going on in this state for potato improvement.

In Portage county, which leads the state in potato acreage with 31,000 acres, Mr. Coyner has found a condition that exists in a large part of the state—mixture of varieties; varieties not of the proper type and an acreage out of proportion to total acreage. In this county there have been grown as high as a hundred varieties, but standardization is being talked and with a lesser acreage it is thought the yield can both be improved and increased. Mr. Briggs told of his problems in this almost entirely new county where potatoes were selling for $1.43 in the village of Grantsburg. Too many varieties is the trouble and inability to get together show stock kept Burnett county from having an exhibit. This was due to poor cultural methods, Mr. Briggs said, the great need being for spraying and scab treatment.

Spraying for blight was the big subject discussed by all and Mr. Cuff told of splendid results farmers in Barron county had secured. Mr. Householder discussed the importance of spraying also, and urged farmers on new land not to plant seed that had not been treated for scab and black scurf. "Don't contaminate this land," was his advice and in outlining a program for 1917 he said the first purpose in every county should be to organize a leader, be he man or boy, in every community. He dwelt on the importance of boys' and girls' work. In Rusk county 328 this year planted a peck of standard, pure seed loaned by their school with the result that on every farm where yields were obtained there will be available four and one-half bushels of this seed next spring. "The importance of this young folks' work is too often underestimated," he said. "The fact that each peck loaned these children averaged a yield of four and one-half bushels shows the splendid start we have made in standardization."

The program was as varied as it was interesting. One afternoon was devoted to marketing and transportation with addresses by W. A. Hayes, of the Soo Railroad, and H. P. Henry, of the United States Department of Agriculture. One forenoon was given over to diseases and insects with addresses by Dr. L. R. Jones, R. E. Vaughan and J. W. Bran, all of the college of agriculture. Warehouse problems were discussed by E. P. Miller, of Chicago; soil fertility by J. W. Henceroth, of Chicago; boys' and girls' club work by O. H. Benson, of the United States Department of Agriculture, and Mr. Berwick, practical lessons in potato growing by Mr. Swoboda; seed standards in Colorado by W. R. McClellan, of Colorado; methods of potato culture by Dr. H. J. Wheeler, of Boston; and Lou D. Sweet, of Denver. There was also much of interest to the women, as Miss Elizabeth Kelley, of Madison, talked on the woman's part in the food problems of today, in addition to cooking demonstrations by Miss Monroe, of the state normal school, at Eau Claire, and Miss Amory, of the state university. It was a program full of merit and varied enough to interest everyone.

No mention of the show and convention would be worthy without mention of the work of the retiring officers and the splendid co-operation given them by the business men of Eau Claire through the civic and commerce association. No stone was left unturned to insure the success of the affair and Eau Claire lived up to every promise it made when it asked the convention at Marinette to choose that city.

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THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: "**The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

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Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER **MADISON, WISCONSIN**

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BUY Oil, Coal, Gas, Timber and Corn Land in Oklahoma. Will sell you from 40 to 320 acres of land in southeast Oklahoma (recently Indian lands) that has enough oak timber on it to pay for it, right in the heart of the oil, coal, gas, mineral fields of Oklahoma. Any 40 acres may be worth a million dollars. Fine corn land, heavy, rich, black, inexhaustible soil. On this land you can produce pork for 3 cents a pound. Price for quick action while it lasts, $4 per acre. Terms if desired. Write today. C. M. Davison, Beaver Dam, Wisconsin.

WANTED—A portable saw mill at Washburn, Wis., and vicinity. Good money to be made by the right party. Inquire of W. S. Powell, R. F. D. No. 1, Box 42 A.

FOR SALE—10-acre truck farm, half-mile from Eau Claire, with buildings; 40 acres not improved; this one cheap. J. F. W. Ritsch, Eau Claire, Wisconsin.

FOR SALE or exchange for wild land in southwestern Nebraska, live stock farm of 760 acres 2½ miles from town. Write Albert Ferdon, Pittsville, Wisconsin.

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240 ACRES land one mile from Niagara, Marinette county. Hardwood land. Will sell or exchange for Holstein cattle. C. T. Ellis, Madison, Wisconsin.

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GUERNSEY CATTLE.

FOR Sale—Pure-bred Guernsey bulls, from four to eighteen months old. Adolph Suhr, Cochrane, Wisconsin.

GIRL WANTED.

WANTED, girl for general house work on a farm. Mrs. Ernest Biddick, Livingston, Wis.

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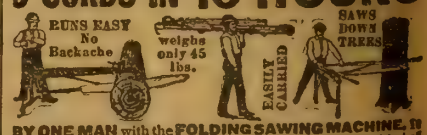

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER IX—Continued.

"Well, he doesn't seem to me to be rushed to death with work," soliloquized Hardy, who was abruptly left alone. "He used to seem like such an all-around good fellow, but he's getting surlier every day. Maybe Tillie was right to hope he wouldn't accept the invitation. Hello, Stuart! Where are you bound for?"

"Nowhere in particular. I thought that Indian, Kalitan, was over here."

"No; Jack Genesee came over himself this morning. That mare of his is coming up in great shape, and you'd better believe he's proud over it. I reckon he saw you coming that he took himself away in such a hurry. He's a queer one."

"I should judge so. Then Kalitan won't be over?"

"Well, he's likely to be before night. Want him?"

"Yes. If you see him, will you send him to the house?"

Hardy promised; and Kalitan presented himself, with the usual interrogation:

"Rashell Hardy?"

But she, the head of the house in his eyes, was in the dark about his visit, and was not enlightened much when Stuart entered, stating that it was he who had wanted Kalitan.

That personage was at once deaf and dumb. Only by Rachel saying, "He is my friend; will you not listen?" did he unbend at all; and the girl left them on the porch alone, and a little later Stuart went upstairs, where he heard him walking up and down the room. She had heard a good deal of that since that day the three had called upon the Major, and a change had come over the spirit of their social world; for where Stuart had been the gayest, they could never depend on him now. Even Rachel found their old pleasant companionship ended suddenly, and she felt, despite his silence, he was unhappy.

"Well, when he finds his tongue he will tell me what's the matter," she decided, and so dismissed that question.

She rode to camp alone if it was needful, and sometimes caught a glimpse of Genesee if he did not happen to see her first, but he no longer came forward to speak, as the rest had—only, perhaps, a touch of his hat and a step aside into some tent, and she knew she was avoided. A conventional young lady of orthodox tendencies would have held her head a little higher next time they met, and not have seen him at all; but this one was woefully deficient in those self-respecting bulwarks; so, the next time she happened to be at the end of the avenue, she turned her steed directly across his path, and called a halt.

"Good-morning, Miss Rachel."

"Klahowya, tillikum," she answered, bringing him back to a remembrance of his Chinook. "Jack Genesee, do you intend ever to come to see us—I mean to walk in like your old self, instead of looking through the window at night?"

"Looking—"

"Don't lie," she said coolly, "for I saw you, though no one else did. Now tell me what's wrong. Why won't you come in the house?"

"Society is more select in the Kootenai hills than it was a year ago," I answered with a sort of defiance. "Do you reckon there is any woman in the house who would speak to me if she could get out of it—anyone except you?"

"Oh, I don't count."

"I had an 'invite' this morning," he added grimly—"not because they wanted me, but because your new friend over there wanted someone to give him points about the country; so I've got him to thank for being wanted at all. Now, don't look like that—or think I'm kicking. It's a square enough deal so far as I'm concerned, and it stands to reason a man of my stamp hasn't many people pining for him in a respectable house. For the matter of that, it won't do you any good to be seen talking to me this long. I'm going."

"All right; so am I. You can go along."

"With you?"

"Certainly."

"I reckon not."

"Don't be so stubborn. If you didn't feel like coming, you would not have been at that window last night."

His face flushed at this thrust which he could not parry.

"Well, I reckon I won't go there again."

"No; come inside next time. Come, ride half way to the ranch, and tell me about that trip of yours to the Blackfeet. Major Dreyer gave you great praise for your work there."

"He should have praised you;" and her own color deepened at the significance of his words.

"I met Kalitan on his way to the ranch, as I came," she said in the most irrelevant way.

He looked at her very sharply, but didn't speak.

"Well, are you going to escort me home, or must I go alone?"

"It is daylight; you know every foot of the way, and you don't need me," he said, summing up the case briefly. "When you do, let me know."

"And you won't come?" she added good-naturedly. "All right. Klahowya!"

She moved out of his way, touched Betty with the whip, and started homeward. She rather expected to meet Kalitan again, but there was no sign of him on the road; arriving at the house, she found that youth ensconced among the pillows of the largest settee with the air of a king on a throne, and watching with long, unblinking stares Miss Fred, who was stumbling over the stitches of some crochet work for the adornment of Miss Margaret.

"I'm so glad you've come!" she breathed gratefully. "He has me so nervous I can't count six; and Mrs. Hardy is taking a nap, and Aunty Luce has locked herself upstairs, and I never was stared so out of countenance in my life."

"I rather think that's a phase of Indian courtship," Rachel comforted her by saying; "so you have won a new admirer. What is it Kalitan?"

He signified that his business was with the "Man-who-laughs," the term which he designated Stuart.

"Mr. Stuart left the house just after you did," said Fred; "I thought, perhaps, to catch you."

"No, he didn't go my way. Well, you look comfortable, Kalitan; and if you had the addition of another crazy-patch cushion for your left elbow you might stand a little longer wait—think so?"

Kalitan thought he could; and there he remained until Stuart arrived, flushed and rather breathless from his ride from somewhere.

"I was out on the road, but did not see you," said Rachel, on his entrance.

"This is likely enough," he answered. "I didn't want you to—or anyone else. I'm not good company of late. I was trying to ride away from myself." Then he saw Kalitan, propped among the cushions. "Well," he said sharply; "what have you brought me?"

Kalitan answered by no word, but thrust his hand inside his hunting shirt and brought forth an envelope, which he gave into the eager hands reaching for it.

Stuart gave it one quick glance, turning it in his hand to examine both sides, and then dropped it in his pocket and sat down by the window. Rachel could see it was a thick, well-filled envelope, and that the shape was the same used by Stuart himself, very large and perfectly square—a style difficult to duplicate in the Kootenai hills.

"You can go now, if you choose Kalitan," she said, fearing his ease would induce him to stay all night, and filled with a late alarm at the idea of Tillie getting her eyes on the peaceful "hostile" and her gorgeous cushions; and without any further notice of Stuart, Kalitan took his leave.

When Rachel reentered the room, a moment later, a letter was crisping into black curls in the fireplace, and the man sat watching it moodily.

All that evening there was scarcely question or answer to be had from Stuart. He sat by the fire, with Miss Margaret in his arms—her usual place of an evening; and through the story telling and jollity he sat silent, looking, Jim said, as if he was "workin' hard at thinkin'."

"Tomorrow night you must tell us a story," said Miss Fred, turning to him. "You have escaped now for—oh, ever so many nights."

"I am afraid my stock is about exhausted."

"Out of the question! The flimsiest of excuses," she decided. "Just imagine a new one, and tell it us instead of writing it; or tell us the one you are writing at now."

"Well, we will see when tomorrow comes;" and with that vague proposal Miss Fred had to be content.

When the morrow came Stuart looked as if there had been no night for him—at least no sleep; and Rachel, or even MacDougall himself, would not think of calling him Prince Charlie, as of old.

She was no longer so curious about him and that other man who was antagonistic to him. She had been fearful, but whatever knowledge they had of each other she had decided would not mean harm; the quiet days that had passed were a sort of guarantee of that.

Yet they seemed to have nerved Stuart up to some purpose, for the morning after the burning of the letter he appeared suddenly at the door of Genesee's shack, or the one Major Dreyer had turned over to him during his own absence.

From the inside Kalitan appeared, as if by enchantment, at the sound of a hand on the latch. Stuart, with a gesture, motioned him aside, and evidently to Kalitan's own surprise, he found himself stepping out while the stranger stepped in. For perhaps a minute the Indian stood still, listening, and then, no sounds of hostilities coming to his ears, an expressive gutteral testified to his final acquiescence, and he moved away. His hesitation showed that Rachel had not been the only one to note the bearing of those two toward each other.

Had he listened a minute longer, he might have heard the peace within broken by the voices that, at first suppressed and intense, rose with growing earnestness.

The serious tones of Stuart sounded through the thin board walls in expostulation, and again as if urging some point that was granted little patience; for above it the voice of Genesee broke in, all the mellowness gone from it, killed by the brutal harshness, the contemptuous derision, with which he answered some plea or proposition.

"Oh, you come to me now, do you?" he said, walking back and forth across the room like some animal fighting to keep back rage with motion, if one can imagine an animal trying to put restraint on itself; and at every turn his smoldering, sullen gaze flashed over the still figure inside the door, and its manner, with a certain calm steadfastness of purpose, not to be upset by anger, seemed to irritate him all the more.

"So you come this time to lay out proposals to me, eh? And think, after all these years, that I'm to be talked over to what you want by a few soft words? Well, I'll see you dead first; so you can strike the back trail as soon as you've a mind to."

"I shan't go back," said Stuart, deliberately, "until I get what I came for."

The other answered with a short, mirthless laugh.

"Then you're located till doomsday," he retorted, "and doomsday in the afternoon; though I reckon that won't be much punishment, considering the attractions you manage to find up here, and the advantages you carry with you—a handsome face, a gentleman's manners and an honest name. Why, you are begging on a full hand, Mister; and what are you begging to? A man that's been about as good as dead for years—a man without any claim to a name, or to recognition by decent people—an outlaw from civilization."

"Not so bad as that, Jack," broke in Stuart, who was watching in a sort of misery the harsh self-condemnation in the restless face and eyes of Genesee. "Don't be so bitter as that on yourself. You are unjust—don't I know?"

"Your opinion may go for a big pile among your fine friends, but it doesn't amount to much right here. And you'd better beat a retreat, sir. The reputation of the highly respected Charles Stuart, the talented writer, the honorable gentleman, might get some dirty marks across it if folks knew he paid strictly private visits to Genesee Jack, a renegade squaw man; and more still if they guessed that he came for a favor—that's what you called it when you struck the shack, I believe. A favor! It has taken you a good while to find that name for it."

"No, it has not, Jack," and the earnestness of purpose seemed to rise superior to the taunts and sarcasm of the other. "It was so from the first, when I realized—after I knew—I didn't seem to have thoughts for anything else. It was a sort of justice, I suppose, that made me want them when I had put it out of my power to reach them. You don't seem to know what it means, Jack, but I—I am homesick for them; I have been for years, and now that things have changed so for me, I—Jack, have some feeling! and realize that other men can have!"

Jack turned on him like a flash.

"You—you say that to me!" he muttered fiercely.

"You, who took no count of anybody's feelings but your own, and thought God Almighty had put the best things on this earth for you to use and destroy! Killing lives as sure as if they'd never drawn another breath, and forgetting all about it with the next pretty face you saw! If that is what having a stock of feeling leads a man to, I reckon we're as well off without any such extras."

Stuart had sat down on a camp stool, his face buried in his hands, and there was a long silence after Genesee's bitter words, as he stood looking at the bent head with an explicable look in his stormy eyes. Then his visitor arose.

"Jack," he said with the same patience—not a word of retort had come from him—"Jack, I've been punished every day since. I have tried to forget it—to kill all memory by every indulgence and distraction in my reach—pursued forgetfulness so eagerly that people have thought me still chasing pleasure. I turned to work, and worked hard, but the practice brought to my knowledge so many lives made wretched as—as—well, I could not stand it. The heart sickness it brought me almost drove me melancholy mad. The only bright thing in life was—the children—"

"And then," continued Stuart, without any notice save a quick closing of the eyes as if from a blow, "and then they died—both of them. That was justice, too, no doubt, for they stayed just long enough to make themselves a necessity to me—a solace—and to make me want what I have lost. I am telling you this because I want you to know that I have had things to try me since I saw you last, and that I've come through them with the conviction that there is to be no content in life to me until I make what amends I can for the folly of the boy you knew. The thought has become a monomania with me. I hunted for months for you, and never found a trace. Then I wrote—there."

"You did!"

"Yes, I did—say what you please, do what you please. It was my only hope, and I took it. I told her I was hunting for you—and my purpose. In return I got only this," and he handed toward Genesee a sheet of paper with one line written across it. "You see—your address, nothing more. But, Jack, can't you see it would not have been sent if she had not wished—"

"That's enough!" broke in the other. "I reckon I've given you all the time I have to spare this morning, Mister. You're likely to strike better luck in some different direction than talking sentiment and the state of your feelings to me. I've been acquainted with them before—pretty much—and don't recollect that the effect was healthy."

"Jack, you will do what I ask?"

(To be continued.)

Ask your neighbor to subscribe for The Wisconsin Farmer.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Minnesota Aberdeen Angus Association Sale.

ALL those interested in good beef cattle should be interested in the sale of Aberdeen Angus cattle to be made by the Minnesota Aberdeen Angus Breeders' Association at the stockyards, South St. Paul, Minn., Tuesday, December 12th. The offering consists of fifty-five head, representatives of the leading families of the breed. The bulls are the growthy kind with plenty of size and substance to do heavy service. The females are in thrifty, useful breeding condition. The breeders who have contributed these cattle are prepared to sell at farmers' prices if necessary, but they are consigning cattle that should prove attractive to the veteran breeders of the Northwest. Here is a good place for the beginner to get some foundation cattle. The Aberdeen Angus Breeders' Association is co-operating with the Minnesota Association in every way possible to make this sale a success. Every animal that has been consigned to this sale has been inspected and tested and this rigid examination should appeal to the prospective buyer. Never before have the breeders of any state put forth such strenuous efforts and spent so much money to secure good cattle. These breeders have been planning on this sale for almost a year, and for several years they have been liberal buyers of the best seed stock they could select from the leading herds throughout the country. Those in the market for Aberdeen Angus cattle can well afford to attend this sale. We could give much detailed information relative to the individual consignors, but we do not deem that necessary at this time. The catalog will give you all the detailed information. Write for one at once and arrange to attend this sale. For catalog address, P. Abrahamson, secretary, Lanesboro, Minn., and please mention The Wisconsin Farmer. See page 21.—Adv.

The Bunker Polled Durhams.

THERE is more noise made about some herds, but there are few better herds of double standard Polled Durhams than the one owned by F. S. Bunker, Kilbourn, Wis. The feature of the Bunker herd is the smoothness, the thickness and the massiveness that predominates in this herd. This herd will compare with the best Short-horn herds in the Northwest—minus the horns. Two great bulls are doing service in this herd—one is a red son of the noted Cumberland's Type, and we don't know of a better bull of his age in the state. The other one is Sultan Goods, a son of Royal Silver by Whitehall Sultan, out of Missie Sultana 2d by Fond Memory. The latter is an intensely bred Whitehall Sultan yearling and we predict for him a great future in the Bunker herd. Even though all kinds of feed is high Mr. Bunker does not neglect his cattle and he is one of the best caretakers we know of. Just now he is offering for sale two bulls, one a dark roan, a very choice eleven-month-old calf and the other is ten months old and almost as good. Write him your wants, for he has the goods. Please mention this paper. See page 21. —Adv.

Scientific Trapping Methods.

PROFITS would be increased and much less slaughter of fur-bearing animals would be avoided if scientific trapping methods were adopted. The smoking-out method is one of the best, for by this means desirable animals can be secured uninjured and non-marketable animals need not be killed. Funsten Bros. & Co., 1134 Funsten Bldg., St. Louis, Mo., manufacture a very successful smoking equipment in three detachable sections, consisting of a bellows, smoke chamber, and nozzle. It is light, easy to operate, and costs only a nominal sum. Because of this outfit a den of animals in from ten to twenty minutes will be forced to come out for fresh air, and they are so weakened and dazed by the fumes that they can be easily caught alive in traps, nets or slip noose, or they can be killed with a club or rifle. Write the company for further information concerning this smoking outfit.—Adv.

Durocs and Guernseys Sold.

RILEY MARTINY & SON, Baraboo, Wis., who have been advertising Duroc Jersey spring boars and Guernsey cattle for sale advise that they are sold out of boars and have also sold all the Guernseys that they can spare at this time. Just now they have a fine assortment of fall pigs that they are offering for sale at reasonable prices. They can sell you a pair or trio unrelated. This farm also specializes on seed corn and we have been advised that they are now taking orders. Write the Martinys your wants and in so doing kindly mention The Wisconsin Farmer. See page 23.—Adv.

Stockman's Watch Free.

A CHANCE to get a handsome New York standard watch free is offered to stockmen by the Wilbur Stock Food Co., 138 Huron St., Milwaukee, Wis., manufacturers of Wilbur's stock tonic and Wilbur's poultry tonic. The watch will go free to the first thousand readers of this paper who fill out the coupon in the Wilbur advertisement on page 7 and mail it to the company. The coupon also calls for a two months' trial of Wilbur's stock tonic and a free package of Wilbur's poultry tonic. Read the advertisement on page 7 and if you want one of these handsome watches fill out the coupon and mail it promptly.—Adv.

Madson & Son's New Herd Boars.

M. MADSON & SONS, Madison, Wis., pioneer Poland China breeders of the state have recently purchased three boars that should do a great deal of good in their herd. Perhaps the best one at the present time is a son of Choice Expansion he by Great Expansion by Dorr's Expansion. The writer weighed Choice Expansion December 20th and you all know that this is right in the midst of the breeding season and this boar weighed 920 pounds. He is one of the biggest, smooth boars that we know of. The dam of the Madson boar is Lady Defender, a sow that sold in the Gerlich & Barker sale last winter for $200. This young boar has the size and quality and many of the Madson sows have been bred to him. The next purchase was a son of Big Carver, the first prize yearling at the Illinois State Fair this year. He is sired by Smooth Big Bone. The dam of the young boar is Wonder Girl by Mouw's Wonder out of the noted Long Girl. This is certainly big-type breeding. Eight boars and gilts from this litter made an average of $60 each in a recent sale so you may know that the Madson boar came from a good producing sow. The Madsons also purchased a son of Big Ben, the boar that sired the noted herd boar, Disher's Giant and Giant Ben. The dam is a Big Bone bred sow. This firm has purchased three exceptionally good big-type boars and with the care they will receive at the hands of the Madsons we feel sure that Madison, February 6th, have or will be heard from next year. The sows that will be sold in their annual sow sale at Madison, February 6th have or will be bred to these good boars.—Adv.

Herefords For Sale.

J. J. F. WINTERS, Sparta, Wis., has a few Hereford bulls that he is offering for sale. They range in age from calves six or seven months old to bulls of serviceable age. Some of them are sired by Fred 439050 that traces through his sire to such noted bulls as Corrector, Lamplighter and Beau Donald. Through his dam, Grace 277715, Fred traces to Eaton Commander, an imported bull, and to Protector. The bulls being offered by Mr. Winters are not fat, but they are in a good, rugged growing condition. If you are interested in some Hereford bulls, especially youngsters, go see the stock this breeder has for sale. If you write him for more information, kindly mention The Wisconsin Farmer. See page 21.—Adv.

High Prices of Hides and Furs.

NEVER have hides and furs been as high as now. Cow and steer hides weighing about ninety pounds are worth more than a live steer a few years ago. Wolf, fox and other furs are bringing unusually high prices. Much valuable information pertaining to domestic and wild animals and their skins is published by the Northwestern Hide & Fur Co., Minneapolis, Minn. This is an old reliable firm that can be trusted by readers of this paper who have hides and furs to ship. Write to them about your hides and furs, or send for their interesting literature. They will send it free if you will mention this paper when writing.—Adv.

Another Booster For the Poland Chinas.

W. L. PROCTOR, Darlington, Wis., was one of the good buyers at the Poland China sales last winter and he now has a fine bunch of big-type brood sows. Mr. Proctor is an enthusiastic breed booster and the Poland China breeders should feel proud to have him in their ranks. He recently purchased a spring boar from Dobson & Eastman to head his herd and in our estimation he secured one of the two best spring boars raised by this firm, this year. Keep your eye on this breeder, we feel that he is going to make good.—Adv.

Heifer Calf For Sale.

IN THIS issue of Wisconsin Farmer, M. J. Hogan, Reedsville, Wis., is advertising a week old very high-grade Holstein heifer calf for sale. This calf is nicely marked and can be bought for $25. If interested write Mr. Hogan at the above address.—Adv.

Figure on the J. C. Hendricks' Sale.

ONE of the "feature" sales to be held in the Northwest the coming winter will be the Poland China sow sale to be made by J. C. Hendricks, at Hazel Green, Wis., February 15th. No sale of the season will contain a variety of better or more popular breeding. We will not go into detail relative to the sale offering, but no doubt some of our readers would be glad to know what blood lines are going to be represented. The offering will be sired by fifteen different boars and will be bred to five different boars. There will be tried sows by Big Bug, Long Expander, Chief Price Jr., and Big Orange. The gilts are by High Wonder, Repeater, North Side Wonder, Smooth Price, Big Ben, Columbus Pan, Orphan Blue Wonder, Giant Wonder, Great Orphan, Giant Nelson, M.'s Longfellow, Orange Boy, Biggest Yet and King Joe. We feel safe in saying that no sale of the winter will contain as much popular and up-to-date breeding. As for the individuals, you can rest assured that they will be the right kind or they will not be listed. Joe won't sell a poor one—he didn't last year and you'll not be disappointed this winter. At the proper time we will have more to say about this herd of big-type Poland Chinas.—Adv.

Hampke's Holsteins.

CHAS. HAMPKE, secretary of the Manitowoc County Holstein Breeders' Association, Manitowoc, Wis., is advertising Holstein bull calves for sale on page 22. These were sired by Recreation King Johanna Rue, a grandson of Johanna Rue 3d Lad, one of the grandest bulls living and is the sire of Findore Pride Johanna Rue, the world's record cow when made. Mr. Hampke's cows averaged fifty-one pounds of milk a day last winter and he expects to exceed it this winter. He intends to do official testing soon, which will make these calves worth double the money. When writing kindly mention The Wisconsin Farmer.—Adv.

Silver Spring Farm Co. Offering.

THE Silver Spring Farm Co., Eau Claire, Wis., have a large and select herd of Holstein cattle, but owing to the increased demand for their milk they deem it necessary to sell some of the youngsters that they now have on hand. Some of the best producing blood known to the breed is represented in this herd and the young bulls and heifers that they are offering for sale at this time are very desirable individuals. It will pay you to investigate this offer. The prices quoted is very reasonable—made especially to encourage quick sales. Their advertisement appears in this issue. Write them at once and please mention The Wisconsin Farmer. See page 23.—Adv.

IN sending in copy for change in advertisement W. F. Belda, breeder of Chester White Swine, De Forest, Wis., writes: "I have an exceptionally good boar left that is ready for heavy service. He is a grandson of Combination 2d and has size, conformation and good, heavy bone. He ought to be at the head of a first-class young herd." Mr. Belda's advertisement appears on page 23.—Adv.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

SALE DATES.

Short-horn Cattle.

Dec. 7, American Short-horn Breeders' Assn., Chicago, Ill.
Jan. 3, Minnesota Short-horn Breeders' Association, South St. Paul, Minn

Aberdeen Angus Cattle.

Dec. 5, American Clydesdale Assn., Chicago, Ill.
Dec. 6, American Aberdeen Angus Assn., Chicago, Ill.

Hereford Cattle.

Dec. 8, American Hereford Breeders' Assn., Chicago, Ill.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Steele Co. Combination Sale, V. Gousseff, Mgr., Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan. Sec. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.
Feb. 26, Geo. Page, Janesville, Wis.
Feb. 26, George [illegible] Minn.

Poland [illegible] Swine.

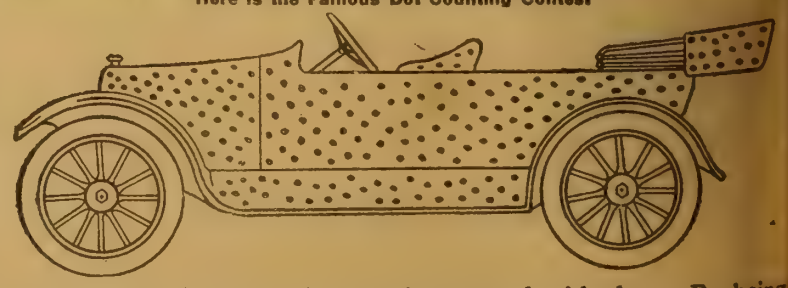
Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

The American Society of Animal Nutrition will hold a meeting at Urbana, Illinois, December 1st and 2d. The officers of this association are W. A. Cochel, president, Manhattan, Kansas; John M. Evvard, vice president, Ames, Iowa; F. B. Morrison, secretary and treasurer, Madison, Wisconsin. Mr. Morrison is assistant director of our Wisconsin Agricultural Experiment Station.

Good winter window boxes are made by using small evergreens. Cedars are perhaps best for this purpose. Sometimes small branches are cut and set in. Small-rooted plants set in the soil are better.

Count the Dots and Win a Prize

Here is the Famous Dot Counting Contest



You see in the picture, an Automobile covered with dots. By being careful and thinking you can count the number of dots on this Auto. If you can do this, we will send you as a prize, *a surprize package of beautiful season and greeting post cards,* lithographed in rich colors and also a certificate of entry in our grand contest for an Saxon Automobile. All you have to do is to enclose a two cent stamp in your letter to pay postage and cost of mailing.

SAXON AUTO GIVEN AWAY

Remember the Saxon will absolutely be given away at the close of the grand contest. In case of a tie a Saxon will be given to each person so tied. Send at once so you can be entered in this great contest. Full particulars by return mail.

THE AUTO MAN, Dept. 300 Des Moines, Iowa

MINNESOTA
ABERDEEN ANGUS BREEDERS' ASS'N
SHOW AND SALE
AT STOCKYARDS SOUTH ST. PAUL, MINN.
TUESDAY, DECEMBER 12, 1916

55 Pure-bred Registered Aberdeen Angus Bulls, Cows and Heifers.

27 BULLS ready for heavy service.

28 COWS and HEIFERS bred to good bulls

BEAR in mind that the leading breeders of Minnesota are behind this sale. There are listed Blackbirds, Pride of Aberdeens, Queen Mothers, Barbaras and top-notch representatives of other leading families. The Association's paramount object is to create a central trading point regardless of expense. The breeders who have consigned the cattle are prepared to sell them at farmers' prices. Anyone interested in this good breed of beef cattle can well afford to attend this sale. The consignors are: P. Abrahamson, Walter M. Falkenhagen, Hi- [illegible] C. F. Kirk, E. A. Kjos, Geo. H. Milne & Sons. [illegible] Thos. P. Phillips, Geo. E. Purves, and John [illegible]. W. H. Cooper, auctioneer. For further infor- [illegible] catalog, address

P. ABRAHAMSON, Sec'y or **M. A. JUDY, Sale Mgr.**
Lanesboro, Minnesota — 817 Exchange Ave., Chicago

Services of Expert Live Stock Photographer

Up-to-date live stock breeders are more and more using photographs in advertising their herds. It is the modern way of doing things, and The Wisconsin Farmer is meeting the situation by offering the services of a skilled live stock photographer. Appointments may be made by mail at any time. For estimates of cost and other information write The Wisconsin Farmer.

JERSEY CATTLE.

Fewacres Farm's Jerseys

IF you are in the market for a pure-bred registered Jersey bull, let us write you about some of our youngsters, ranging in age from one to ten months old. A variety of bloodlines to choose from, including Nobles of Oaklands, Oxford Majesty, Jacoba Irene, Loretta D. and Fina ncial Countess. For descriptions, pedigrees, pictures, etc., address

FEWACRES FARM - - - **Wauwatosa, Wis.**
FREDRICH D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle.

OAK GROVE JERSEY FARM

WE are pricing our young bulls very low as we are crowded for calf stable room and have 22 cows to freshen. We are offering two sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and Noble of Oaklands.**

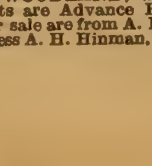
No. 1—Born Feb. 9, 1916. Out of **Volunteer's Sally**, that made 597 lbs. butter. Her daughter made 594 lbs. butter as a 2 year old and holds state record for her age. **Price $100.** Send for extended pedigree.

No. 2—Born Dec. 18, 1915. Out of **Koffee of Oak Grove,** in 305 days made 413.8 lbs. butter. She finishes her record Dec. 21st as a 2 year old. This bull won 1st at the Elkhorn fair. **Price $75.** Send for extended pedigree.

WM. KNIGHT - - - **EAGLE, WIS.**

The All-Around Jersey

is the *farmer's* cow. She's his friend and pride—the beautiful, gentle, ever-paying milk machine that lifts the mortgage, builds up the fertility of the farm, and puts the whole business on a sound, paying, permanent basis. She adapts herself to all climates and all feeds and does not need fancy care. She matures early and lives long. And she's so sleek, clean cut and handsome, as to be the family pet and pride. She produces well and sells well. Learn about her in our fine, free book, "About Jersey Cattle." Write for it *now.*



THE AMERICAN JERSEY CATTLE CLUB
338 West 23d St., N.Y. City

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
Ed. Bruins - - **Fairwater, Wisconsin**

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son **Oconomowoc, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write
FRED STUBLEY BLACK EARTH, WIS

AYRSHIRE CATTLE.

ALDEBARAN FARMS A. R. AYRSHIRES

YEARLING AYRSHIRE BULL ready for service, ¼ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address
STEPHEN BULL **RACINE, WISCONSIN**

Sees Some Country With His Car.

To the Editor:—I do my own repair work on my automobile, which I have had now for four years. I overhaul it once every year. I bought my car in the month of May and one of the tires was never removed until this spring. I put on two new tires on Christmas Eve and haven't had any tire trouble since. I have had several different makes and haven't had any complaint about them, all having given the service expected and more.

I have been on the road with my car when anybody else could travel. I use the car all winter when roads are fit and use the car for hauling a lot of different things. I would not be able to say exactly my mileage for tires, because my speedometer has worked only part of the time off and on. We never leave anyone behind and when we have company we haul as many as nine grown up passengers in a five-passenger car.

I tell you we have seen some country since we got our car that we never saw before. My car has never been in a garage overnight. I carry an extra rim and keep my tires pumped up every time I go to town. I live on the state and county highway, the main traveled road between Mineral Point and Galena. One way of moving closer to town is to buy an automobile.

Lafayette Co., Wis. L. J. White.

Tires Did Not Rot.

To the Editor:—I have owned and driven an automobile since July 15, 1905. I have not had an opportunity to take any long tours—not over 100 miles per day. I got ninety-four miles on five gallons of gasoline with a six-cylinder 1916 model. This was on very good roads with two passengers. I have used a motometer for three years and it has paid for itself several times. In the spring, fall and winter I was running with the motor too cold, losing power and wasting gasoline. I now blanket the radiator and keep the temperature about 180 degrees. I have made 7,000 miles on three tires and 6,500 on another and have never had a blowout. This was covering a period of four years' running, notwithstanding the fact that agents advised me tires would rot out in two years. I did not have any such trouble with mine. I have always used a tire-testing gauge and always keep a tire up to twenty pounds to the inch and keep all the small cuts filled with mastic.

I haul to and from town anything I can get in the rear seats. In all my experience I have never had a collision and never been stalled on the road. H. E. Emigh.

Fond du Lac Co., Wisconsin.

When writing to advertisers kindly mention The Wisconsin Farmer.

HEREFORD CATTLE.

HEREFORDS
BULLS FOR SALE

OF serviceable age. Pasture raise and not pampered. Well bred individuals. A few good calves. Come and see them before you buy.
J. J. F. WINTERS **SPARTA, WIS.**

POLLED DURHAM CATTLE.

D. S. POLLED DURHAM bulls and heifers. The best herd in the Northwest. Write F. S. Bunker, Kilbourn, Wisconsin.

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

TOO LATE TO CLASSIFY.

CALF FOR SALE

ONE week old very high-grade Holstein heifer calf, well proportioned and nicely marked. Price $25. Write now. Address
M. J. Hogan **R. 1, Reedsville, Wis.**

MAPLE LAWN RED POLLS

SEVERAL well-bred, registered bulls, to 9 months old, for sale at reasonable prices.
L. F. Biglow & Son **Brooklyn, Wis.**

17 REGISTERED Holstein cows and heifers due to freshen soon. Best of breeding at farmers' prices. D. E. Buckley, Hartford, Wis.

SHEEP.

Registered Bred Ewes

RAMS all sold. Must now reduce my ewe flock on account of change of farm plans. Will not show at fairs in the future. Offer 25 Oxford, Hampshire and Shropshire bred ewes from $15 to $20 each, also 10 ewe lambs. My stock is of the low-down, blocky type. Address
DANE STOCK FARM **OSHKOSH, WIS.**

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.
Geo. A. Phillipi - **Bear Creek, Wisconsin**
(Formerly Welcome)

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FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock headers. Address
Arthur Broughton & Sons **Albany, Wis.**

GUERNSEY CATTLE.

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

AYRSHIRES

Can supply your wants if you want
HEIFERS OR BULLS
from A. R. dams. Also breeder of
Clydesdales and Durocs
Write your wants Address
JAS. VAN ETTA **LIMA CENTER, WIS.**

GUERNSEY CATTLE.

GO TO W. J. HEID
FT. ATKINSON, WIS.,
FOR GUERNSEY BULLS

FROM 2 to 10 months old; also a few females. Best of breeding and good size. Come and see them, or write for description and prices.

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address
J. D. McAllister **Green Bay, Wis.**

Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

BERKSHIRE SPRING PIGS

of both sexes of Premier and masterpiece breeding
O. R. FRAUENHEIM, RANDOM LAKE, WIS

GUERNSEYS

REGISTERED bull calves 4 to 8 months old. Herd tuberculin tested. **EDW. H. KIESLING, JEFFERSON, WISCONSIN.**

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman **Fort Atkinson, Wisconsin**

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.
W. G. Jamison & Son - **Appleton, Wis.**

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

HOLSTEIN BULL

BORN February 21, 1916. ¾ white. Good individual, sired by a son of Pontiac Korndyke and out of a daughter of De Colantha Johanna, champion. Price $100. Address
Peter Larson Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

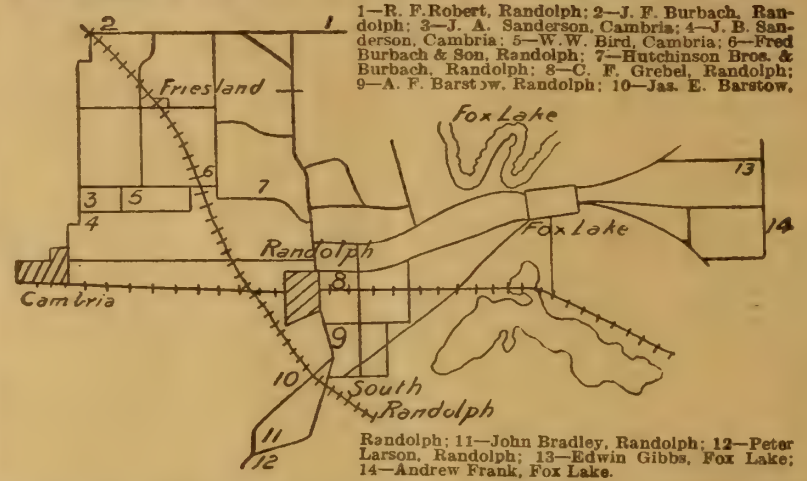
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE

HEADS our herd. His dam made 33.08 lbs as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
Edwin D. Gibbs - Fox Lake, Wisconsin

REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

YEARLY RECORDS COUNT! HERE IS THE BULL YOU WANT.

PABST LULU KING 181211

Calved April 28, 1915

SIRE: Maplecrest King De Kol, by Friend Hengerveld De Kol Butter Boy, the sire of Banostine Belle De Kol, 365 days 1,322.9 lbs. butter, and three others over 1,200 lbs.

DAM: Pabst Lulu Lady, at 2 years, 2 months. Butter 365 days, 849.21 lbs. Milk 365 days, 20,002.9 lbs. Second place in Association Prize List 1914, by King Pontiac Champion, 43 A. R. O. daughters, a 31 lb. son of King of the Pontiacs.

2d DAM: Seven days, 28.55 lbs., 365 days, 627 lbs. butter, 14,562.4 lbs. milk.

WELL MARKED AND SPLENDID INDIVIDUAL.

The low sum of $575.00 will buy him. Over 130 cows to freshen. All A. R. O. Write for prices on bull calves $100 and up.

PABST STOCK FARM

OCONOMOWOC DEPT. 30 WISCONSIN

23.13-LB. HOLSTEIN BULL

READY FOR SERVICE

See pedigree in The Wisconsin Farmer issue of November 16th. Sire, **KING SEGIS CONCORDIA HENGERVELD,** whose two nearest dams average 32.83. Dam made 23.13 lbs. butter in 7 days. Priced right. Address
PINEHURST DAIRY, SHEBOYGAN FALLS, WIS.

MUST REDUCE OUR HERD AT ONCE

POSITIVELY MUST SELL 100 head of registered and high-grade Holstein and Guernsey cattle, any age. You make take your choice from 400 head of big producers, no boarders among them. Special price on high-grade calves. Also extra fine SERVICE BULLS. Everything guaranteed as represented. **Edgewater Stock Farm, Ft. Atkinson, Wis.**

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.
JOHN STEEL - OCONOMOWOC, WIS.

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin.

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¾ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams. Write **R. C. Walker, Kilbourn, Wisconsin.**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons Elgin, Illinois

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 27-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address
L. V. GARVENS BROOKFIELD, WIS.

Registered HOLSTEIN BULL CALVES

FROM world's record and 38-pound A. R. O. backing. Well marked and nice, thrifty and satisfaction guaranteed. We are breeders, not dealers. Write at once to get Johanna [illegible] in your herd. PRICE $50, EXPRESS PREPAID. Address
CHAS. HAMPKE, MANITOWOC, WISCONSIN
THE LITTLE FELLOW WITH THE BIG HEART

WE CAN SPARE 15 HEAD OF REG. HOLSTEIN FEMALES

YOU may take your choice of any age, assort them as you wish. We have a herd of 52 to select from. Our yearling heifers are by King Johanna Melchior Fayne 101866. Heifer calves by King Elgin Johanna Rue Wa Wa 136698; two-year-old heifer by Sir Johanna Beechwood Fayne 127695; a yearling bull, Valley Champion 165427, for sale. Born June 8, 1915, 7-8 white, very promising. Call and see our herd or write for description. Prices reasonable.
J. P. Goelzer & Sons Plymouth, Wisconsin

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

28-LB. HOLSTEIN BULL

BORN February, 1916, nearly ready for service. Dam, Eagle Rigtje Belle, A. R. O. record 4 years, 2 months, 28.02. Sire, Sir Elmer Johanna Wit, traces twice to Sir Johanna De Kol. His three nearest dams average 4.11% fat. Every dam in pedigree from 3.8% to 4%. His dam will be put on test in about 60 days and shows promise of increasing her record. Address
TRUTTSCHEL BROS. SHEBOYGAN FALLS, WIS.

Taken when 6 mos. old. Now weighs about 600 lbs.

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.

His two nearest dams averaged over 29 lbs butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,83 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.
Wisconsin Star Stock Farms Ed M. Schultz, Hartford, Wis.

YEARLING HOLSTEIN BULLS

READY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will also price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

YOU CAN'T BEAT IT

WE have for sale a young Holstein bull from a 23.05-pound four-year-old daughter of SIR CLYDE that has 45 A. R. O. daughters, four with records above 30 pounds. He is sired by a son of BEAUTY PIETERTJE PRINCE, that is out of a daughter of SIR ORMSBY HENGERVELD DE KOL. It is some breeding. Send for extended pedigree and price. Address
DOPP BROS. OCONOMOWOC, WIS.

HILLSIDE STOCK FARM

OFFERS Holstein bulls and heifers from A. R. O. cows, sired by King Pontiac Korndyke Champion 109198. Also seven cows bred to above sire, some due to freshen soon. Priced to sell. Come or write. Kirkpatrick Bros., 1½ miles south of Reedsburg, Sauk county, Wisconsin.

HOLSTEIN

BULL calves, sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.
EARL NORWOOD, GAYS MILLS, WIS.

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.
Fred Harford Kaukauna, Wis.

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons. (Registered Poland China hogs).
Marinette County Asylum - Peshtigo, Wis.

HOLSTEIN-FRIESIAN CATTLE.

Purebred Registered
HOLSTEIN CATTLE

Purebred registered Holstein cows hold all records, and the bright and shining high marks of production which enthuse Holstein owners and amaze the world are, forty-four and forty-two hundredths lbs butter and 808.5 lbs. milk in 7 days; one hundred seventy-one and four hundred ninety-seven thousandths lbs.butter and 3,242.6 lbs. of milk in 30 days; and fifteen hundred and six and thirty-six hundredths lbs. of butter and 31,-239.4 lbs. of milk in 365 days. The Holstein cow in her rapid forward march of progress is so profuse with remarkable achievements that even the above wonderful figures are "subject to change without notice."

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 113, Brattleboro, Vt.

Mountain Ash Stock Farm

HIGH grade Holstein calves 15-16 pure, well-marked, from heavy-producing dams, $18.00 crated. Can locate cows and heifers for you. Write me your wants.
J. B. Cain **Glenbeulah, Wis.**

AT A REASONABLE PRICE

A SON of our noted herd sire, Cornucopia Pontiac Johanna 48355, that is by King of the Pontiacs (192 A. R. O. daughters) The bull for sale was born March 10, 1916. He is very well grown and of show ring conformation. His dam is an A. R. O. daughter of the 33-pound bull, Sir Pietertje Lyons Hengerveld. Send for extended pedigree—picture. Price very reasonable.
N. Dickinson & Son **Lake Geneva, Wis.**

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

SHORTAGE of milk compels sacrifice of 5 young calves. Owing to increase in number of our milk customers, we are compelled to sell some unusually fine bull calves 1 to 2 months old, A. R. O. breeding on both sides. Price for quick sale, $35 to $50. Also a few heifer calves.
SILVER SPRING FARM CO. - EAU CLAIRE, WIS.

FOUR REG. HOLSTEIN BULLS FOR SALE

[illegible] enough for service. Sired by [illegible] the 2[illegible] bull, Fairmont Pietje Ormsby. Those dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and price reasonable. **L. Lindauer. Kaukauna, Wis.**

TWO SONS OF THE 37.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
F. Winckler & Sons **Medina, Wis.**

0-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $75 up, depending on breeding and age. When you want a herd header write
H. S. Rhoda **Watertown, Wis.**

BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, it is own cousin to Dutche's Skylark Ormsby, a dairy queen of the world; if you want Ormsby bod speak soon, for bull calves never stay on s farm till they are a year old; our prices are asonable. E. E. Rosenkrans, Oconomowoc, Wis.

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred ivy-producing cows. Call and see our herd or ite
M. FENNER, SHEBOYGAN FALLS, WIS.

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SEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address
F. DINEEN, CEDARBURG, WISCONSIN

REG. HOLSTEIN BULLS

BRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey **Grafton, Wisconsin**

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Also bull calves also for sale. Address
Clarence Robers **Lyons, Wis.**

REGISTERED HOLSTEIN BULLS

BRED by King Piebe Jessie De Kol and out of good, heavy-producing dams. Bulls well-marked over half white. R. W. Hume, Endeavor, Wis.

Tell what you have for sale in a little advertisement in THE FARMERS' MARKET. Does not cost much and may be worth a lot to you. Six words a word each insertion.

DUROC JERSEY SWINE.

UNTIL DECEMBER 1ST I'LL OFFER FOR SALE
DUROC BOARS

AT bargain prices. Fed right, bred right, priced right. The type the feeders want. Let me ship you a boar and a pair of SPRING GILTS. Inquiries promptly answered. Write
J. W. HIGGINS **GOTHAM, WISCONSIN**

Otter Creek Farm Durocs

DUE to the fact that half my sows are sired by DIRECTOR, I offer him for sale, Farrowed March 4, 1915, by Great Wonder 123407, out of a Marion's Wonder-Lee's Defender dam. A big-type boar, heavy bone and very smooth—an excellent sire and a real herd boar. **PRICE $100.**

A FEW CHOICE SPRING BOARS AND GILTS
B. M. ARRIES **AUGUSTA, WISCONSIN**

SPRING BOARS — DUROCS
230 Pounds to 270 Pounds at $25, $35, $45

NO BREEDER HAS A BETTER LOT

SIRED by a son of KING THE COL., a son of CHERRY CHIEF, a son of LEE'S DEFENDER and many of the dams trace to MARION'S WONDER. You get BREEDING and INDIVIDUALITY. I'll ship you a good boar—try me. Address
DENNIS SHEA - - - **MELVINA, WISCONSIN**
(10 miles from Sparta on the Milwaukee R. R.)

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS **WAUPACA, WIS.**

Grand Champion Duroc Boar at Wisconsin State Fair
KING DEFENDER---940 POUNDS

OFFERING for sale spring boars and gilts sired by him. The best pigs I ever raised. Also pigs by CRITIC TOP NOTCHER, half brother to Critic B, the Nebraska grand champion. Order from me and get good Durocs. Mention The Wisconsin Farmer and address
B. W. LITTLE - - - **JANESVILLE, WISCONSIN**

Big-Boned Boars. The Best Is None Too Good
950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer.
EMMETT COOK & SON - **RICHLAND CENTER, WIS.**

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.
BURN BRAE FARM - - - **ROSENDALE, WISCONSIN**

E. J.'s Crimson Wonder
Grand Champion Minn. 1916
Big Wonder
Grand Champion Iowa 1913

Some wonderful Duroc Jersey sows have been bred to these boars and will be sold by

John Swenson at Willmar, Minn.

Friday, Jan. 5, '17

This is one of the sales you should attend. Write at once for catalog. Watch later issues.

READ THIS

Closing out one of the best Duroc Jersey herds in Minnesota at

Renville, Minn., January 4, 1917

Other business makes this change necessary. **70 HEAD 40 Fall Yearlings, 10 Spring Yearlings, 10 Fall Gilts (1916) and 10 Tried Sows.** A sale of **breeding and individuality.** Write now for a catalog of this **feature sale** and watch for sale adv. in the December 21st issue. Address
E. J. WILSON RENVILLE, MINN.
Mention The Wisconsin Farmer

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address
JOHN L. FISHER **JANESVILLE, WIS.**

CEYLON COURT FARM DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - Lake Geneva, Wis.

Duroc Boars

OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts for sale. Write your wants. Address
M. STOEHR **VIROQUA, WIS.**

Atwater's Duroc Boars

SOME just as good as sold in my sale—these were held for private sale. Write.
L. F. Atwater - **Bangor, Wis.**
"Home of Big Durocs"

DUROC BOARS FOR SALE

BY Prince Defender, Royal King 4th, and Lee's Defender. Big, stretchy fellows. Shipped on approval. **McCLURG BROS., Viroqua, Wis.**

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B. Model Wonder, Col. S. Jr., Orion, Cherry King Jr. **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

Our DUROCS Are in Demand

BOARS all sold. Offer a limited number of gilts. Place your order early. Herd headed by Royal Top Col. and Grand Model 21st. Address
Geo. D. Sprain & Sons, West Salem. Wis.

GEO. H. WILLSIE
Breeder of Big Durocs

Can supply your wants. Write.
Prosper - - - **Minnesota**

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DUROC JERSEY SWINE.

DUROCS and GUERNSEYS

LENGTHY, heavy-boned spring boars sired by **Col.'s Defender 2d** and **Valley G.** the 1,000-pound brother to Illustrator. April pigs, some of them weigh over 200 lbs. We have shipped C. O. D. for last ten years and never had but one shipped back. Registered Guernsey bulls and bull calves with most popular breeding, some from A. R. dams, one 2 year old whose dam has three A. R. records averaging over 500 lbs. fat. Reasonable. Allie S. Knudson, R.5, Brodhead, Wis.

DUROC FALL PIGS

Offering Durocs, pairs or trios.
SEED CORN
of best varieties for sale. Write your wants to
Riley Martiny & Son, Baraboo, Wisconsin

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
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E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall
CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write
Harry Crandell **Cass City, Mich.**

Derenthal
Chester Whites
Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.
H. A. Derenthal - **Wykoff, Minnesota**

CHESTERS
For sale that will please

SPRING and FALL boars by IDEAL COMBINATION and IOWA BOY. Excellent individuals. IOWA BOY by Iowa 1st for sale. Write your wants. Address
L. J. McBAIN **BLOOM CITY, WIS.**
(Shipping point Viola)

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BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.
O. P. Coates - **Elkhorn, Wisconsin**

CHESTER WHITE SOWS AND GILTS

BRED for March and April farrow to Pay Streak and King Cole, a son of Chief Keokuk. Also August and September boars sired by Pay Streak, 2d prize junior yearling at the 1916 Wis. State Fair. Wm. F. BUTTS, Evansville, Wis.

CHESTER WHITES

FOUR choice spring boars for sale that will please. Also an extra good herd header, a grandson of Combination 2d. Write for description and prices. Address
Wm. F. Belda **De Forest, Wisconsin**

IF YOU WANT
CHESTER WHITES
write W. F. Miller, West Salem, Wisconsin.

Adolph Nuttleman

BREEDER of Chester Whites. Let me know your wants.
WEST SALEM **WISCONSIN**

CHESTER WHITE PIGS FOR SALE

AUGUST pigs at let-live prices—from matured stock. Singles, pairs and trios. No runts shipped. Feed scarce and must sell. Two winter boars of best breeding. Pedigrees furnished.
Jos. Eglehof **Edmund, Wisconsin**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin **Gotham, Wis.**

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. BANGOR, WISCONSIN

GREEN VIEW STOCK FARM OFFERS

7 Pure-Bred SHORT-HORN BULLS

7 to 17 months old, and a few choice

POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

RIVERDALE STOCK FARM

SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

H. Wehmhoff - Burlington, Wis.

WILCOX SHORT-HORNS

AM offering several **red bulls** of serviceable age. They are a nice dark red and the finest in the land. Have one that weighs 650 pounds at 8 months old. Priced reasonable for immediate sale. Write for pedigrees. Address

W. F. WILCOX MILTON, WISCONSIN

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher Oregon, Wisconsin

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son. Beaver Dam, Wisconsin

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little Evansville, Wisconsin

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

KITTY CLAY HERD

HORNLESS SHORT-HORNS AND SHORT-HORNS

YOUNG bulls and heifers sired by Kitty Clay's Duke, that is out of the best family of milking Short-horns in existence. Also several Buff Wyandotte cockerels. Address

J. Warren Hoyt Rosendale, Wis.

THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son - Burnett, Wisconsin

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanrey's Othello. Also cows and heifers and Oxford lams for sale. C. S. Hechtner, Chariton, Iowa.

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

The Home of CHAMPION POLANDS

I HAVE a spring boar that will please you. They are well grown and from sows that have been winners. My hogs please the critical buyers, they'll please you. Gilts reserved for bred sow sale, February 8th. Order now.

J. D. McDONALD NORTH BEND, WISCONSIN

DOBSON & EASTMAN POLAND CHINA OFFERS

THREE spring boars that weigh over 300 pounds each—they should head registered herds, real toppers. Also a few that weigh around 260 pounds. A limited number of fall pigs for sale. Write your wants; you know our guarantee. Address

DOBSON & EASTMAN, LANCASTER, WISCONSIN The Utmost in Poland

SIZE---QUALITY---BREEDING

Features Predominating in my Polands

JUMBO'S EQUAL 2d

CHAMPION OF SOUTHWESTERN WISCONSIN

OFFERING boars and gilts by the above sire for sale—they will please you. If they don't, return them at my expense. "Where Good Sows are crossed with Good Boars." Correspondence solicited.

C. S. FLESCH (Shipping Point Fennimore) MT. IDA, WISCONSIN

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptional big, husky fellows.

L. P. MARTINY, CHIPPEWA F[illegible], WIS.

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left

M. MADSON & SONS MADISON, WISCONSIN

HAMPSHIRE SWINE.

LAIRD'S GIANT HAMPSHIRE HOGS

BARGAINS in spring boars. Gilt-edged gilts bred for March farrow. A few mammoth tried sows, 500 to 800 lbs., bred or open. My Hampshires are the large, smooth kind. Bargain prices for quick action. Changes in farm plans make more room necessary. Write today for Hampshire booklet, prices, etc. This is your opportunity.

A. M. LAIRD - - PRAIRIE DU CHIEN, WIS.

HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.

DANE STOCK FARM
Oshkosh Wisconsin

LIVE STOCK AUCTIONEERS.

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones' Nat'l School of Auctioneering, 40 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, President.

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FARMINGTON, MINN.

THOROUGHLY versed on pedigrees of leading breeds of live stock.

ABERDEEN ANGUS CATTLE.

Buena Vista Aberdeen Angus

COWS, HEIFERS and CALVES all sold out. One bull of serviceable age and two bull calves for spring delivery, will go at $100 per head.

E. F. Ganz & Son Alma, Wisconsin

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

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Halftones made from pictures or drawings of stock for your letterheads, post cards, catalog advertising. Quick service, best work, reasonable prices. Write for information.

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W. A. LANG & CO.

Importers and Breeders of

BELGIANS and PERCHERONS

IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars

W. A. LANG & CO. GREELEY, IOWA

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address

A. P. CORTTE LOMIRA, WISCONSIN

Berkshires For Sale

2 YEARLING boars, prize-winners and good breeders. Spring boars and sows of excellent breeding. For reasonable prices and description, call or write W. W. Powell, Victory, Wis.

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

Model Major 2d

IS considered by many as being the best 2-year-old POLAND CHINA BOAR in the state. I have spring boars sired by him that are **GREAT.** Why not buy where you can get the BEST?

CHAS. S. MALTBY JANESVILLE, WIS.

Master's Giant Orange Wonder Young's Big Joe

NO breeder has three better Poland China boars. They will make my bred sow sale, February 6, 1917.

P. W. Young Prosper, Minn.

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green Wis.

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley R. 3, La Crosse, Wis.

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

BOARS! BOARS! BOARS!

POLAND CHINAS

Weighing from 225 to 300 pounds

Some of them sired by

MAC'S CHIEF

Grand champion Boar Wis. State Fair

I guarantee satisfaction in every respect. Address

OLAF C. OLSON
STRUM - WISCONSIN

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Watch for this great sale to get your bred sows. Write for catalog. We hold the state's record on account of superiority. Address

J. C. Hendricks Box F, Hazel Green, Wis

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING BANGOR, WIS

BRED GILTS

POLAND China service boars all sold. Now booking orders for bred gilts that are extra choice, also fall pigs, either sex, that are hard to beat. James Derivan, Fox Lake, Wis.

BIG-TYPE BOAR **LONG PROSPECT** FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis

POLAND CHINA June pigs for sale, either sex $20 each, boars ready for service. Also Red Polled cattle. Martin Lueck, Hamburg, Wis

Please mention this paper when writing

More Than 90,000 Circulation

THE WISCONSIN FARMER

VOL. XLV. NO. 49. THURSDAY, DECEMBER 7, 1916. WHOLE NO. 1819

A WISCONSIN FARM HELPER.

MUCH of the opposition in the past to the county agricultural representative in Wisconsin, as elsewhere, has been founded on the theory that these men are "book or swivel-chair farmers" and not practical. This has been the objection of many old-timers, however untrue the fact might be, but as the system of county advisers works out and succeeds in Wisconsin the original prejudices are rapidly being dissipated. The county agent must be everything from a botanist to a veterinarian at times, which requires book knowledge, but they have been found to be practical as well, which speaks much for their success in this state. "I don't want none of those book farmers advising me," is a phrase often heard in the past, but not so frequently now. One Wisconsin agricultural representative, Mr. G. R. Ingalls, of Eau Claire county, is always immune from such reference. Farming, operating his own farm, he defies any suggestion that he is not practical, for on his own farm he is carrying out the work that he is asking his neighbors and the farmers of his county to accomplish. "What I can do you can do as well or better," is his motto.

No mention of Mr. Ingalls' work as a county agricultural representative would be complete without some reference to the farming resources of this county. In all that is progressive Eau Claire county is a leader and as a dairy county it is rapidly forging to the front. Mr. Ingalls in his extension work operates upon three theories—to improve the live stock on the farms, improve the soils and then improve the marketing conditions. With these three objects in mind he has been carrying on his work as representative during the last three years. Half of his time he devotes to the teaching of agriculture in the county training school, half to his extension work as representative, and in between times he directs the work on his own farm. The big problem in the county is the liming of the soils, they being acid, and soil work is one of Mr. Ingalls' biggest tasks. Two cow-testing associations are doing much to weed out the unprofitable dairy cows; seventy-five carloads of lime which have been bought under Mr. Ingalls' direction have gotten splendid results; more than $7,000 worth of stock has been sold through the efforts of the representative, and at every minute of the day he is at the call of farmers who wish any kind of advice. There are 1,600 farms in the county, more than 400 with silos, an increase of 33 per cent last year, and the activity in farmhouse building indicates the progress being made in upbuilding the county agriculturally.

Mr. Ingalls is doing with his farm just what he advises others to do. He has 105 acres in his farm, bought since he became county representative, and now has a herd of twenty-three Guernseys. When he began pointing out the need of liming the soils to overcome the acidity and bring about general improvement, he began experiments at home and this fall used twenty tons on his own farm, **a ton to the acre.** Liming has brought good results wherever used, as the soil is light in many places, and in addition to improving the physical condition it also makes it more compact. With his dairy herd he is testing and following the best methods. He sells only the cream. The skim milk he keeps for the young stock. His cream he sells in the city of Eau Claire, 25 per cent bringing $1 per gallon, 30 per cent $1.20 per gallon. In his county work Mr. Ingalls has found co-operation with the rural schools very essential. Through these schools he drives home the necessity of treating oats for smut, potato seed with formalin against scab, etc. He is also carrying on several student trial experiments with corn and other grains. This work is done by the pupils in the training school and forms the basis for excellent study in soil and crop improvement.

WAIST HIGH IN BUCKWHEAT.

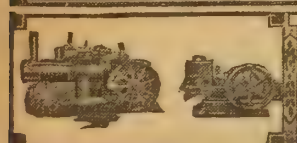
TYPICAL EAU CLAIRE CO. CORN.

Eau Claire county is well settled; it might be referred to as one of the old counties, so that Mr. Ingalls' problems are far different from those of the representatives in new or Upper Wisconsin counties. There are many fine herds of dairy cattle in the county. The county farm has a splendid herd; many farmers are meeting with splendid success with sheep and swine. All grass and grain crops do well and increased yields are coming from soil improvement work.

But the services of a well-trained and well-equipped agent like Mr. Ingalls are not confined entirely to the particular work which he does at the experiment station or the advice which he is able to give farmers on their own places. Mr. Ingalls renders a special service in connection with such events as the recent Wisconsin Potato Growers' State Convention and Show, which was held at Eau Claire. He had a great deal to do with making the preliminary arrangements for the show and helping to carry out these arrangements. A county farm adviser must also know where a great deal of agricultural information is stored away. In this respect he is somewhat like a lawyer who may not have all of the law in his head, but knows just how to find it in the law books. When Mr. Ingalls gets a tough problem which he cannot solve instantly, he commands the services of the state and federal departments and can draw on them without expense either to himself or his farmer clients, for information which they have been unable to work out.

THE FINE HOLSTEIN HERD AT THE EAU CLAIRE COUNTY FARM IS AN IDEAL TO WHICH BREEDERS MAY WORK.

FARM MECHANICS



Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

The Knight Motor.

Is the Knight motor actually superior to the poppet valve motor, and is it all that is claimed for it? If so, why is it not more generally used? Is the Knight motor more difficult to start than other motors? Will a high-speed motor last as long as one that does not run so fast?

Answer.—Automobile designers have different opinions on the above questions. The Knight motor undoubtedly has some advantages over the poppet valve type and there is no good reason why it should be harder to start. It runs very smoothly and tests have shown it to be very durable. The construction is patented and Mr. Knight has refused to license manufacturers until he was sure that they would turn out high-grade work, as he did not want the reputation of the motor to suffer on account of poor workmanship. This, and the high royalty demanded, has prevented the motor from being used extensively. Other things being equal, the high-speed motor is not as durable as a medium-speed motor. The lighter the piston and connecting rod the longer a motor will last at high speed.

Mechanical Schools.

I have seen your advertisements of mechanical schools and would like for you to advise me which is the best. Please give me the correct address of the papers "Machinery" and "The American Machinist."

Answer.—All the schools advertised in this paper are reliable, and, therefore, we would hesitate to recommend one as better than the rest. You should write to all of them for their literature and see which offers the course most suitable to your needs. After all, it is up to the student to make good, regardless of the equipment and instructors of the school. If a young man wishes to become a mechanic it is well for him to take a course in some school, but before he goes he should make up his mind to get on his overalls, work hard ten hours a day and get his hands dirty if need be. He should not, however, underestimate the value of a little "book learning," as arithmetic and drawing are essential to a good mechanic. Many students in mechanical schools fail to receive much benefit simply because they expect the school to do the work for them. There is no royal way to learning—the student must dig for himself.

"Machinery" is published by the Industrial Press, of New York City. "The American Machinist" is published by the Hill Publishing Co., also of New York City. No street number is necessary.

A Quarter-Twist Belt.

Some time ago I noticed a cut of two belt wheels in your paper, the shafts being at right angels. Please publish another diagram showing how the wheels run. Will they run successfully?

Answer.—Up and down belts will run very well on a quarter twist if the belts are not too short. They will not stay on the pulleys if not run in the direction for which they are lined up. In lining up the pulleys the thing to

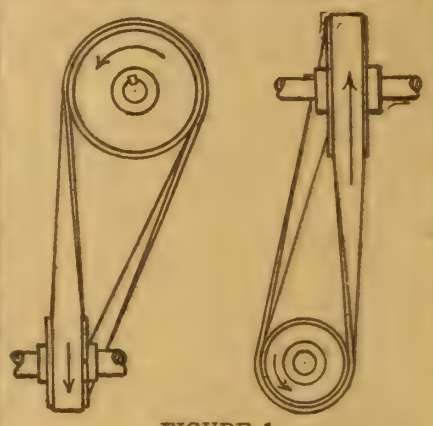


FIGURE 1.

keep in mind is that the belt must run onto each pulley straight. Figure 1 shows the direction of belt travel and how the pulleys should line up. The outside rim of the upper pulley comes in line with the center of the face of the lower pulley and the outside rim of the lower pulley comes in line with the center of the face of the upper pulley.

Connecting a Rheostat.

I have a three K. W. direct current generator for a lighting system. Please show me how to connect a rheostat to the generator.

Answer.—Figure 2 shows the internal wiring connections of your gen-

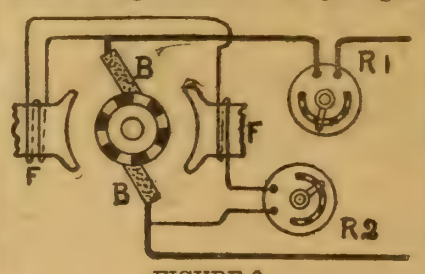


FIGURE 2.

erator; BB are the brushes, FF the field coils. The fine wires are the field circuit; the heavy wires are the armature or main line circuit. If you wish to use a rheostat to regulate the current or to reduce the voltage between the lights and the generator, open up one main line wire and connect the rheostat at R1. If you wish to use the rheostat to regulate the voltage generated by the dynamo, open up the field circuit and connect in the rheostat at R2.

Specific Gravity Too Low.

I have a 1916 Maxwell auto equipped with a Prestolite forty-ampere, twelve-volt storage battery. The gravity of the electrolyte in all the cells except one is less than 1.100, although the generator appears to be all right as the ammeter usually registered about fifteen amperes. There is a considerable gathering of white stuff which looks like frost on and around the iron parts that hold the battery in place. The wooden box, which is yet whole, is not as solid as it should be. Do the battery cells leak? It takes more water for the five cells that are the lowest gravity. The battery has never failed to run the starter or lights. What is the trouble and the remedy?

Answer.—Since your battery appears to be working all right we believe it would be best for you to let it alone, always keeping enough pure water in each cell to cover the plate at least half an inch, however. Your electrolyte is weaker than it should be. If you wish to correct this, give your battery a full charge, remove the electrolyte and add enough pure sulphuric acid to it to make the specific gravity about 1.230. Immediately replace the electrolyte and recharge the battery.

When the battery is fully charged some of the electrolyte is given off in the form of spray. If this spray comes into contact with iron it unites with the iron and forms a white substance, which is iron sulphate, commonly called copperas. Your cells do not leak unless you have to fill them every day or two.

Engine Misfires.

My 1915 Ford touring car, that has been run about 3,500 miles, has been giving trouble lately; misfiring on low throttle, or at a slow speed in high gear. It pulls and hits perfectly at a speed above ten miles per hour, and also pulls well in low. It will sometimes run smoothly below ten miles per hour, but when speeded up will begin missing. It will also miss when running idle. The coil points have been dressed; new spark plugs applied; the timer and compression tested and found all right. The magneto contact point has been cleaned, and the carbon removed from the engine; the carburetor has been adjusted for the correct gas mixture; yet the trouble has not yet been located. A few hints that might locate the trouble would surely be appreciated.

Answer.—It may be that the magneto is losing its strength, due to the insulation on the magnet coils becoming rotten. Sometimes the magnets themselves lose part of their magnetism, but this is not usually the case unless the magneto has been connected to a storage battery or otherwise misused. The insulation of the magnet coils, however, is very likely to become bad after the car has been in use two years or more, as the oil tends to rot it. In this case, the best thing to do is to get a new set of coils. These coils may be obtained from a Ford dealer, mounted on a plate, so that they may be put on easily.

There is another possible cause of your trouble. The float valve of the carburetor may be leaking. Sometimes this is caused by a little lint or dirt under the valve, but it may be due to the valve seat being worn, or the valve itself corroded by impurities in the gasoline.

An air leak into the intake, either at the gaskets or around the intake valve stems, will cause misfiring, especially at low speeds.

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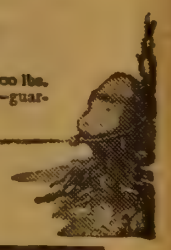

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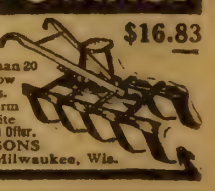

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The Wisconsin Farmer

THURSDAY, DECEMBER 7, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

"AMERICA" FREE ON REQUEST

MANY of my readers will doubtless remember that about a year and a half ago I offered to send out printed slips containing all four stanzas of our national hymn, "America," to whoever requested them, for use at farmers' institutes, short courses, homecomings and all manner of farm gatherings. The response to my offer was widespread, the requests fairly swamping me for a time. Altogether, I distributed approximately 50,000 copies, being only too glad to render this small favor to my appreciative readers.

Belated requests for these slips continue to reach me every little while, the latest being from Mr. R. S. Foster, of Biggsville, Illinois, who writes me, under date of November 24th:

Dear Mr. Pierce: If you have any more copies of "America" for free distribution, I wish you would please send me a number, for use in our community club. We will all appreciate it very heartily.

I sent the slips desired, expressing the hope (in a personal letter to Mr. Foster) that all who attend the club meeting may join, in heartiest fervor, in the grand old words, singing all four stanzas:

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died,
Land of the pilgrims' pride,
From every mountain side,
Let freedom ring.

My native country, thee—
Land of the noble, free—
Thy name I love;
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet freedom's song;
Let mortal tongues awake;
Let all that breathe partake;
Let rocks their silence break—
The sound prolong.

Our fathers' God, to Thee,
Author of liberty;
To Thee, we sing;
Long may our land be bright
With freedom's holy light,
Protect us by Thy might,
Great God, our King.

The fact that such requests as Mr. Foster's continue to come to me, at this late date, convinces me that there is just as great a demand for these slips today as there was when I first offered them, a year ago last summer. Accordingly, I am going to renew my offer: To any of my readers, whose names are now on the subscription list of this paper, who will write to me and make the request, I will send a number of copies of "America," all four stanzas, neatly printed on a slip of paper, without one cent of expense to them, either for the printing or for the postage. These slips can be distributed at any meeting: Church, school, institute, farmers' club, family reunions, Christmas entertainments, homecomings; any place where farmers or their families congregate for any kind of exercises, and with the words before them all can join in the inspiring and uplifting hymn which has kindled the fires of patriotism in millions upon millions of the farmers of this, our beloved, country.

Do not hesitate to write and ask me for these slips, they are yours for the asking, and I am only too glad to serve you in this manner. At this time, when we are at peace with all the world and are enjoying a prosperity such as no nation ever knew before, shall we not unite in returning thanks to Him who has made all this possible and in singing our hymn of praise for a country, "sweet land of liberty," wherein all these blessings have been vouchsafed to us?

"Shall we stand and unite in singing 'America?'"

LIFE INSURANCE AGAIN.

IT HAS been some months now since I wrote advising my readers to carry life insurance, but reprints of my articles continue to come to me from various sources. You may recall that I cited the instance of a young friend who had taken out a policy for $1,000 when he was eighteen years old and who paid $26 a year for twenty years, at the end of which time the company gave him $500, in cash, upon the surrender of his policy. He thus received twenty years of $1,000 protection at a total cost of $20, or only $1 a year.

I want to repeat my former advice and I hope all will take it in the kindly spirit in which it is given. By all means investigate the life insurance matter; it is a duty which you owe yourself and all who are dependent upon you. It is a bleak, black day upon the farm when the head of the family dies, leaving an insufficient amount of ready cash to pay the burial expenses and tide the dependent family over until money can be realized from the crops or herds. A little forethought, a little good, sound business sense manifested in taking out an insurance policy, may save the wife and little ones from many and many a night of worry, many and many a day of hardship.

I learned, from the large number of letters which my former articles brought to me, that many of my readers have an altogether wrong impression of this insurance matter. The big companies conduct their business in a most scientific manner; they estimate, by the law of averages, until they can tell remarkably accurately just how many death losses to expect within a given period of time. There is nothing haphazard about the manner in which they do business today. Let me urge that you put preconceived impressions and prejudices behind you, obtain the literature of some reliable company and study it carefully. I would hate very much to think that any reader of mine, whom I might have influenced, would let his family suffer want because he failed to look into this life insurance matter thoroughly. My advice to all of you is this: Do it now, before it is too late. It will cost you nothing to investigate, for all the large insurance companies have literature which they send free on request. If you hesitate to write them direct, write to me and I will obtain the desired information for you. Remember, I am always glad to serve my readers in any way possible.

THE FARMER'S DEBT TO ELECTRICITY.

THE custom has grown up in this country of setting apart certain days and weeks in recognition of our national achievements; either along agricultural or industrial lines of activity. This week is known as Electrical Week, especial attention being paid to the remarkable progress we have made along this line in the last generation.

I wonder how many of my readers ever stop to think of the great debt the farmer owes to electricity and to those geniuses who have harnessed it to his use. We have grown so accustomed to the efficient, silent work of this marvelous hired hand of the farm we seldom think how wonderful are its many and manifold usages. Especially is this true today, when the storage battery has been perfected to such an extent that the cream separator, attached to the proper generator, develops enough electricity to keep our storage battery charged sufficiently to light the house and the outbuildings, displacing altogether the old, dangerous and insufficient kerosene lights. I do not know of any line of improvement along which we are making greater progress on the farm today than this one of lighting our buildings with electricity.

Let us stop for a minute to consider the electrical progress which we have made. It is only a little over a century and a half since Benjamin Franklin, he of "Poor Richard Almanac" fame, startled the world with the now-seemingly simple statement that electricity and lightning are one and the same thing; also, that our houses could be protected from the danger of lightning by rearing above them sharp-pointed pieces of metal, duly connected with the ground. Let me quote from an account written by a friend of Franklin, who lived at the same time he did, in the same city:

In the same year (1752) Franklin received the astonishingly bold and grand idea of ascertaining the truth of his doctrine by actually drawing down the lightning by means of sharp-pointed iron rods raised into the region of the clouds. Even in this uncertain state his passion to be useful to mankind displayed itself in a powerful manner. Admitting the identity of electricity and lightning, and knowing the power of points in repelling bodies charged with electricity, and in conducting their fires silently and imperceptibly, he suggested the idea of securing houses, ships, etc., from being damaged by lightning, by erecting pointed rods that should rise some feet above the most elevated part, and descend some feet into the ground or water. The effect of these he concluded would be either to prevent a stroke by repelling the cloud beyond the striking distance or by drawing off the electrical fire which it contained; or, if they could not affect this, they would at least conduct the electric matter to the earth without any injury to the building.

Such was the birth of the lightning rod, the value and efficacy of which millions of farmers now realize. It was the forerunner of a hundred appliances and devices which make farming more profitable and easy.

It is a far cry from Benjamin Franklin flying a kite in a storm, watching his cord and its pendant key to see if he could, indeed, draw electricity from the clouds, to the electric-lighted farmhouse, the electrically-operated cream separator or feed grinder, the electric-starting automobile and the hundred and one other devices to be found on our farms today. What would Benjamin Franklin have thought had he gone into the wheat fields of Kansas last summer and seen farmers threshing by electricity, for the first time in the history of the world, so I am informed. What would he have thought had he stood in warerooms, as I have, and seen shipments of gasoline engines, generators and storage batteries going to farms all over the grain belt, in order that houses, barns, milk houses and outbuildings might be made as light by night as the sun makes them by day? Benjamin Franklin's experiments seem childish today to us who are so accustomed to the aid which electricity gives on every side, but the extent of the debt which we owe this great American—and all the others who have followed in his footsteps—can hardly be overestimated.

I do not understand electricity; it remains as much of a marvel to me today as it did in my youth. No one understands it fully; no one can predict to what further uses it may be put in the years to come. One thing is sure—it has helped the farmer fully as much as the city man, and we do well to set apart a week in its honor and remember the men who have done so much for us in its development and extension.

THE UPLIFT OF THE FIELDS.

I AM reading, with the greatest of interest, a series of articles appearing in one of the best of our large magazines (The American), written by that cheery philosopher of rural life, David Grayson, and I want to pass along a couple of the good things he has to say. Here is his tribute to the spiritually elevating effect of work in field and garden:

I say truly, having now reached the point in my life where it seems to me I care only for writing that which is most deeply true for me, that I rarely walk in my garden or upon the hills of an evening without thinking of God. It is in my garden that all things become clearer to me, even that miracle whereby one who has offended may still see God; and this I think a wonderful thing. In my garden I understand dimly why evil is in the world, and in my garden learn how transitory it is.

Have not many of you been impressed with the same conviction as you strolled through your garden or fields, looked upon evil (in the form of weeds or stunted vegetable life) and then see how easily, after all, evil may be dispelled from our midst, leaving the crop to come through to maturity (and the soul to paradise) unhindered by the things which hold back development: Weeds, sin and the like?

That David Grayson senses the fine things of country life, and has the power to express them far better than any of us, is proved by this little description of one of the common odors of the country. He writes:

Just now I have come in from work, and will note freshly one of the best odors I have had today. As I was working in the corn a lazy breeze blew across the meadows from the west, and after loitering a moment among the blackberry bushes sought me out where I was busiest. Do you know the scent of the blackberry? Almost all the year round it is a treasure-house of odors, even when the leaves first come out; but it reaches crescendo in blossom time when, indeed, I like it least, for being too strong. It has a curious fragrance, once well called by a poet "the hot scent of the brier," and aromatically hot it is and sharp like the briers themselves. At times I do not like it at all, for it gives me a kind of faintness, while at other times, as today, it fills me with a strange sense of pleasure as though it were the very breath of the spicy earth. It is also a rare friend of the sun, for the hotter and brighter the day, the hotter and sharper the scent of the brier.

Do not our large, national magazines do well to give the place of honor to such matter, making the man in the city long to get back to the country again, where he can breathe deeply, think nobly and live righteously? I think so, indeed.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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Renew Your Subscription.

NOW that the long winter nights are upon us once more, the family reading matter becomes a more important problem than ever before. We should see to it that every member of the household is provided with that which will inspire, interest and instruct.

We have striven faithfully to make The Wisconsin Farmer better, more practical and more entertaining this year than ever before, and we are encouraged by the thousands of commendatory letters which have come to us from appreciative subscribers. In fact, the response to our efforts has been so widespread and so hearty that we are given strength to attempt still greater things in the winter and the year which are before us. We propose to make The Wisconsin Farmer for the next few months more entertaining and interesting to every member of the farm household than it has ever been before in the sixty-eight years of its existence.

If we are to succeed in our efforts we must continue to have the hearty support of all our subscribers. To this end, we earnestly urge that all subscribers, whose subscriptions expire in the near future, renew without delay. They cannot afford to miss a single copy, and we must know that they are to continue in our great family of readers, if our plans are to carry as extensively as we now plan that they shall. But this is not all. Thoroughly as The Wisconsin Farmer covers Wisconsin, Minnesota and North Dakota, there may be friends or neighbors in your community who are not regular subscribers. How could you do them and us a greater favor than by suggesting to them that they become regular subscribers, so that they, too, may have the benefit of the articles which we are preparing and the advice which our force of competent experts give week after week? So let us suggest these two things: Renew your own subscription promptly and send in as many new ones as possible. We shall do our share by making The Wisconsin Farmer bigger, better and more valuable this winter, and throughout the entire coming year, than ever before.

It Is Folly to Neglect the Cow's Care.

OUR pride in Wisconsin as a dairy state was somewhat shocked recently when we stopped at a certain Wisconsin farm and found a dairyman who believes that the cow produces, regardless of her surroundings. So why go to the expenses of making her comfortable! Occasionally we still find this old type of dairymen—those who do not believe in good cow homes and good equipment, but fortunately they are the exceptions nowadays.

This farmer had eighteen cows, all grades to be sure, that he was neglecting for no other reason than he thought an animal is an animal and that care has nothing to do with milk production. They were munching at a straw pile in a cold wind on the north side of a tumble-down barn which, at the best, was none too warm. Throughout the cold winter he admitted he turned his cows out both at day and at night, regardless of the weather, and only drove them into shelter at milking time. On a cold, snowy night they would often have to seek the shelter of the building, and our conclusions would be that he gives their feed about as much attention as their care.

This man was complaining that his cows did not do more for him. He felt that they should produce a heavier flow of milk. His neighbors he said were getting better results from their cows. Their cream checks for the same number of cows were higher than his. The question every up-to-date dairyman would ask is, why should he expect them to do anything for him. Care is as important a factor in milk production as good blood, good breeding and good feeding. No cow, who is turned out to endure the rigors of winter, both night and day, can be expected to reward her owner very handsomely in the milk pail. She needs care; a good, warm stall in which she may rest at night; good, well-balanced feeds, and then if she doesn't do her duty by her owner, as judged by the scales and the test, she can expect nothing better than the shambles. The dairyman who begrudges the feed his cows eat, pays for it in the end. The good feeder nets the profit, for milk is nothing more than the converted feed the cow eats.

Each state and each community still has a few of this type of dairymen. But the value of good dairy equipment as well as good cows is rapidly becoming recognized, and sooner or later this type of dairyman will pass out of the industry. No reader of this paper, who followed the recent series of contributions by Wisconsin cow testers, can deny the value of good equipment. Every tester brought out forcibly the improvements in barns and barn equipment that had followed the membership of many farmers into testing associations. Good care and attention are essential to dairying success and good barns and good equipment are essential to good care.

Wisconsin's First Colt Show.

GRANT, the extreme southwestern county of Wisconsin, which is almost as noted for its hills as it is for its fine grass-fed steers and large shipments of hogs which find their way to the Chicago market, is doing many things in a live stock way that ought to make other communities sit up and take notice. While other counties are working to improve dairying, Grant county is also endeavoring to improve the quality of its horses, steers and hogs.

The swine breeders of this county organized last winter the first swine breeders' community association in Wisconsin. Now, Grant county has assumed another title of leadership by holding the first colt show of its kind in this state, and the success of the recent show at Bloomington was such that it will be an annual event hereafter, and will serve as the model for similar shows in other important horse breeding centers.

The Bloomington show brought out a crowd of about a thousand interested farmers and business men. It was held on Saturday, November 25th, and when it is remembered that the day was cold and Bloomington is an inland town, several miles from any railroad, it is all the more remarkable that the attendance should be so large. Twenty-five foals were shown and led before Mr. W. L. Houser, of Mondovi, for the ribbons, and the awards were made as follows:

Grade and Draft Colt Foal.—W. T. Thornton, of Bagley, first; Lynass Bros., of Bloomington, second.
Grade Draft Filly Foal.—Edward C. Covier, of Lancaster, first; M. Schmit, of Glen Haven, second.
Best Trios From the Same Sire.—Percheron group: W. T. Thornton, of Bagley; J. L. Erwin and Lynass Bros., of Bloomington. Belgian group: Edward Schmit, Harry Perkins, of Glen Haven, and Mat Ertz, of Bloomington.

The show was held under the auspices of the Wisconsin Live Stock Breeders' Association and the Bloomington committee, of which M. F. Woodhouse was chairman, assisted by Arthur McKevitt and Thomas McNamara. This committee raised $170 in that community, to be offered as prizes, and too much cannot be said of the part this community spirit played in the success of the show. This is the kind of co-operation that wins, and as only foals from pure-bred sires were shown, the event should be especially helpful to the horse-breeding operations in that county. Grant county already leads all other Wisconsin counties in horse breeding, having 101 pure-bred stallions in service in that county, but the best is none too good and the breeders are never self-satisfied.

WISCONSIN SWINE WEEK.

TO STUDY the swine industry of Wisconsin as a meat-producing business is one of the aims of "Wisconsin Swine Week" to be held at Madison, February 5th to 8th. At this meeting of breeders, feeders, drovers and consumers demonstrations will be given to show how pork can be produced at a profit by the use of forage crops, by new practices, such as the use of the self-feeder and the hogging down of corn, and by preventing and controlling the common diseases which attack the swine herd.

The Farm Auto Truck Next.

WAUKESHA COUNTY, WISCONSIN, has ten automobile trucks owned and operated by farmers, as shown by the last assessor's books. In addition to this Mr. John Ross, assessor of incomes for the county, writes us that a number of farmers have fixed over their small cars and are utilizing them for carrying purposes. These farmers, of course, have bought larger cars. "There is certainly a growing demand for a truck machine," writes Mr. Ross. Not long since the writer was in Waupaca and found the county board discussing the question of whether a truck would not simplify the road-oiling work of the county. There are two or three trucks already used in this state for oiling roads. Another place where the automobile truck is coming in handy is in collection of cream, and a number of creamery men are figuring on buying trucks to take up cream throughout the country. The automobile truck is used quite extensively near Chicago by dairies who ship their milk to the distributing stations by automobile rather than milk trains. The farmer and dairyman is looking over the automobile truck each season with increased interest. A writer in our forum department said recently that it would not be many years until most of the farmers own automobile trucks. The truck will become common in the country just as soon as the country people see that it will save them money and time.

James H. S. Johnstone Dead.

OLD-TIME readers of The Wisconsin Farmer will remember Mr. James H. S. Johnstone, who was editor of this paper twenty-three years ago when the present owner and publisher purchased The Wisconsin Farmer. Mr. Johnstone died at his home in Chicago, November 24th, after a brief illness of pneumonia.

He was one of the most widely known writers on live stock topics in this country. Mr. Johnstone was born in Glasgow, Scotland, in 1861. His father was for a number of years general manager of the Caledonia Railway. Mr. Johnstone came to the United States in 1888. Since that time he has occupied positions as editor of The Wisconsin Farmer, pure-bred and horse editor of the Chicago Live Stock World and Short-horn World, and associate editor of the Farmers' Review. He was author of the Horse Book, recognized as a standard textbook on horse breeding, buying and handling. A man of wide observation and much study, he was thoroughly posted and was looked upon as an authority on matters pertaining to the live stock industry.

For over a quarter of a century Mr. Johnstone had been a familiar figure at every big live stock show in the country and his advice was often sought in matters pertaining to such exhibitions. He was the originator of the draft horse futurities which have become such a popular feature in many of the big shows.

Washburn County Rural Survey.

NOTHING could more clearly show the development of Upper Wisconsin than a survey of the rural districts recently made by the teachers and pupils of Washburn county. While this county is away up in the woods, and has less than 1,000 farms, including every small patch cleared for farming, some notable development has occurred. Here are a few interesting figures in paragraph forms, showing some things rural Washburn county has:

171 silos.
5 farmers' clubs.
8 literary societies.
25 boys' and girls' clubs.
30 farms with registered stock.
8 farms with registered horses.
98 pianos in farm homes.
25 bath rooms with running water.
29 basement furnaces.
85 acres of alfalfa.
2 farms with more than 600 acres in cultivation.
4 farms with electric light or gas plants.
3 cultivated cranberry bogs.
360 rural children in club and school work.

Washburn county, though far removed from the supposed source of educational wisdom in this great state, is the first county in the state to have a county-wide boys' and girls' club composed of members of local clubs. This work is accomplishing wonders in the way of interesting the young people in educational matters.

Implement Show in Milwaukee Next Week.

THE eleventh annual convention and manufacturers' exhibition, under the auspices of the Wisconsin Implement and Vehicle Dealers' Association, will be held at the Auditorium, Milwaukee, December 12th, 13th and 14th. The Wisconsin Farmer takes the liberty of quoting from a letter which we have received from Mr. F. R. Sebenthall, of Eau Claire, secretary and treasurer of the association:

I am pleased to call your attention to the eleventh annual convention and manufacturers' exhibition of the Wisconsin Implement and Vehicle Dealers' Association. This will be held in the Auditorium, Milwaukee, December 12, 13 and 14, 1916. While this is a trade organization, and the exhibition is given by the manufacturers of farm equipment for the benefit of the retail dealer, nevertheless the user of farm tools is invited to not only visit the show, but to take part in the convention proceedings as well. The retail implement dealer goes to study trade conditions and to post himself so as to render better and more efficient service to his farmer customer. The farmer should attend the exhibition and note the latest "up-to-the-minute" improvements in farm machinery that the manufacturer has to offer. The dealer and his customer, the farmer, can spend valuable time in studying the equipment that goes to make up a modern farm plant, and all should co-operate to the end that the development of agriculture shall obtain its greatest results. The display of modern farm machinery will this year be the largest and best ever given in this country. Every foot of space in the Auditorium is given over to exhibition purposes, and the machinery will be displayed in motion, making a very attractive demonstration of the usefulness of each implement. Farmers can

bring their boys, agricultural schools can bring their students and the teachers can learn something to their advantage. You will all be welcome, and it is entirely free, as no admission fee is charged. A special invitation is extended to all interested parties, and all will be made welcome.

Mr. Sebenthall extends the invitation of the association in a very cordial way. The writer was present at the 1915 exhibition in Milwaukee, and it was certainly an inspiring sight. Those of our readers who desire to see what is up to date in the machinery line could not spend a day or two more profitably than by attending this exhibition in Milwaukee next week.

Banish 173 Unprofitable Cows.

THE last report of the State Cow Testing Organization shows five new associations organized at Prairie du Sac, Amhurst and Nelsonville, Medford, Rice Lake and Cedar Lake, and Bone Lake. During the month a total of 173 cows owned by members of the various associations in Wisconsin were proved to be unprofitable and were taken from the herds of which they had been a part. In the same thirty-day period ten carloads of feed were purchased by co-operation of members of the associations.

The monthly report for the state also shows that scrub and grade bulls are being ousted from the best herds. Nineteen pure-bred bulls were bought by men who have their herds regularly tested, and eight of these were to replace grade and scrub sires. In the same thirty-day period the cow testers found six separators which were losing ½% to 1% of fat and these were either readjusted or replaced.

In the month referred to, Fletcher Brothers, of Rosendale, carried off the honors for high cow. One cow in their herd produced eighty-five pounds of fat. One cow in the H. R. Moseley herd in Winnebago county produced seventy-three pounds of fat and one cow in the J. H. Kelley herd near Bloomer produced 72.2 pounds of fat.

Put It in Black and White.

OUR attention has recently been called to an instance that shows up in an ideal way the folly of renting land with only a verbal understanding between the two parties to the transaction. This is a case where corn ground was leased on the half-and-half basis, but only a verbal understanding exists at the present time between landlord and tenant. The former was of the opinion that he would have the use of the stalk fields while the tenant, after the corn is out, turns his cattle into these fields; hence the disagreement.

Now, every man who has had experience along this line knows exactly what this means, and, among other things, it generates a bad feeling between two individuals who should be on the best of terms. It would not be surprising if the case found its way into the courts for final settlement, though this would be an utterly foolish proceeding from the standpoint of the landowner, because the custom seems to be thoroughly established that the renter has the use of the stalk fields unless a contract to the contrary exists.

There is another complexity in this transaction that shows, in a forceful way, the necessity not only of having a written lease, but of having it specific in its terms. It seems that the renter is not dividing the fields half and half, but, on the other hand, is picking his own part of the crop from the good rows and selecting the landlord's share from the lean rows. This instance would indicate that the renter is a "bad actor," and, as we see it, the landlord has simply made a very poor bargain.

While we believe most emphatically in the written lease, still, after all is said and done, chief reliance must be placed in the honor of the man who puts in and takes off the crop. If, as in this case, he is unfair to the landowner by husking out the good part of the fields for himself and the poor part for the owner, he is only creating a reputation that will forever prevent him from getting another farm in that locality. Temporarily, the renter might gain by hogging the good part of the crop, but in the end he will be the loser. The incident suggests, however, the wisdom of including in the terms of the lease the manner in which the corn must be husked out. Where the land is rented on the half-and-half plan, it is the custom for each party to get every other load, and it might not be amiss to embody this plan of division in the lease.

If any of our readers have had to deal with instances of this kind, and have succeeded in effecting any sort of settlement with an unfair renter, we would be glad if they will furnish to us the result of that experience.

Use Farm Scales in Determining Weight of Products.

A RECENT issue of The Wisconsin Farmer contained a somewhat detailed description of the method used in determining the amount of hay in stacks when the length, width and height of the stacks are known. This information was given for the benefit of those who have no means of weighing hay, though it is not intended to convey the idea that under any conditions the tonnage in a stack can be determined as accurately by measurement as by weighing.

The article referred to is commented on by one of our subscribers, Mr. D. Dement, who says, in a recent communication, that he has been engaged in raising several hundred tons of alfalfa per year. He has sold many ricks of hay by the same rule that was given in The Wisconsin Farmer, that is, the rule for determining the number of cubic feet in the stack. As a result of this experience he points out that alfalfa hay that has settled from three to five months will run from 325 to 343 cubic feet per ton. The variation shows within this narrow limit on stacks twelve feet wide, from thirty to sixty feet long and twenty feet or more high when stacked. According to Mr. Dement's formula alfalfa hay is a heavy product, because ordinary mixed hay will run slightly over 500 cubic feet per ton.

In closing his letter, Mr. Dement points out that, in his opinion, nearly all crib measurements on corn as well as stack measurements are made in favor of the buyer and, therefore, he advises the use of a good scale, believing that this is one of the best investments that can be made on the farm. If any of our readers have had the experience of first measuring hay stacks and afterwards weighing them out on good farm scales, we would be glad, indeed, to have the result of that experience, and particularly would we desire to obtain a statement of the number of cubic feet required for one ton, not only in the case of alfalfa, but also in the case of clover, timothy or of mixed hay.

Do Alfalfa Roots Fill Up Tile Drains?

NEARLY all the experiment stations of the central West have been endorsing the plan of growing alfalfa very strongly during the last decade. These institutions have given substantial aid to the cause by determining the character of soil conditions that must prevail if this crop makes a thrifty growth. They have proven, for instance, that soil containing acid is no place for alfalfa, and they have furthermore ascertained that this acidity may be corrected by applying anywhere from one to three tons of ground limestone per acre, the exact amount depending upon the acidity of the soil.

In addition to the work of the stations county agents in nearly every case are working hard to popularize alfalfa. In doing this they emphasize, in the first place, the large tonnage that can be obtained from a given area and, secondly, they make a point of the great feeding value of the crop whether fed in the form of cured hay or used as a pasture for hogs. The result of this agitation by the county agents alone has unquestionably resulted in the seeding of thousands and tens of thousands of acres of alfalfa, and now that the enthusiasm has almost been worked to the sticking place we encounter an objection to this crop. The point has been raised that alfalfa growing on tiled land will sooner or later stop up the drains. A few specific instances of this have been called to our attention, but the number of cases is so small compared with the number of persons who have had no trouble and who are enthusiastic over the crop that we are inclined to attach little importance to this characteristic of the crop.

We would like to get some statistics in regard to this matter and we suggest to those of our readers who have grown alfalfa on tiled land that they take the time to write The Wisconsin Farmer stating whether or not this unfavorable effect has ever been encountered. In those cases where tile drains have been stopped up by root growth we would like to know the approximate depth of the tile and furthermore it would be interesting to have a general description of the type of soil. The answers received to this inquiry will be used for the benefit of all Wisconsin Farmer readers. We would like to hear from those who have grown the crop in tiled land without having any such injurious results follow as well as from those who have had their drains stopped up by alfalfa root growth.

Disappointed After Retiring From the Farm.

A CASE is referred to in a recent issue of the Blue Valley Bulletin which shows that the disposal of the farm and retirement to town do not always bring with it that life of contentment and pleasure which is contemplated in advance. Reference is made to a successful farmer who had an auction sale two years ago last March and then moved to town. He rented his farm for cash, and figured that in the future he could take life easy and not have any worry and no hard work. He rented a house and lot in a near-by town and bought an automobile, with all plans formulated to enjoy life in all its serenity.

Since that time there has been a great change, and next March this man is going to move back onto his own farm. He found that the cash rent was just about enough to pay his taxes and the necessary repairs on the property in town, and he had to skimp along a good deal in order to buy gasoline for his automobile. The house he rented was not in good shape, and when he asked for repairs there was no response. If these were to be made he must make them himself. One trouble followed another, with the result that life was not filled with contentment and pleasure, but, rather, with fretfulness and annoyance. He was disappointed with his social standing in town, and he found that merchants, who were glad to see him come into town from the farm, were too busy to visit with him, now that he had lots of time to visit. Their energies were devoted to the care of their business, and to them there was no difference between the idle man and the ordinary loafer. He found that a town had an atmosphere of its own, and this was strange to him. Only the rooster crowed in the language that he could understand, while an occasional "moo" of a cow thrilled him, because it brought back to him the memories of farm scenes and farm experiences.

As the result of his two years' "torture," as he calls it, this town is going to lose one of its citizens, and his old farming community will find him back where he belongs. His neighbors understand him and his two years' experience, while it has cost him some money, has yet taught him a valuable lesson, namely, that the chief pleasures of life come to each individual while engaged in his daily tasks. As the years creep over us, we must get away from the more strenuous duties of farm life, but this does not mean that all farm duties should be shunned. The work of managing a farm takes up part of our time, and there can be found at all seasons of the year, many pleasant tasks to occupy our physical forces as well as our mental powers.

The story of this individual could be matched by the experience of thousands of others, all of which would point to the conclusion that, on the average, the later years of life can be spent more pleasantly right out on the farm, amid familiar surroundings, than it can possibly be amid the clamor and roar of our towns and cities. We need the society of our old neighbors, and there are opportunities always to take part in the social, religious and business affairs of our own locality.

High Values Should Encourage Sheep Production.

THERE were upwards of 3,000,000 more sheep in the United States in 1909 than there were in 1915 and during that time the average value of sheep increased from $4.12 to $5.17 per head. Wool values started upward, even before the European war, and they have been climbing ever since. In 1910 the United States imported 263,000,000 pounds of raw wool, while last year the amount ran up to 308,000,000 pounds. If we look for an explanation as to why the number of sheep has decreased in this country we will find the cause in the gradual encroachment of agriculture on the grazing lands of the West, thereby causing an increase in the cost of sheep raising and incidentally, it may be added, creating the opportunity for the states of the central West.

We find that the eastern experiment stations are making a heroic effort to induce farmers of those states to increase the number of sheep on their farms. They are unquestionably soil builders, a ton of sheep manure having the value of $4.45, while manure from cattle is worth but $2 per ton, considering nitrogen worth 16 cents a pound, phosphoric acid 8 cents and potash 5 cents.

A few of the essentials in the problem of sheep raising are referred to in a bulletin from the Pennsylvania station. These include: The willingness of the farmer to pay the proper attention to his flock at the critical times of the year; the production of lambs of early maturity that should preferably be marketed before the first of July; the control of parasites in the flock by the sale of early lambs, rotation of pastures and flock management; the protection of sheep from dogs, by community interest in sheep, by enforcing dog laws and keeping sheep in protected quarters at night; the utilization of pasture to the greatest degree; the feeding of corn silage with clover or alfalfa hay, supplemented with grain, to the breeding ewes at definite periods; the selection of breeding sheep that possess merit in wool, as well as in mutton character; consitutional vigor and health as a result of breeding and care in a foundation flock; cheap equipment which offers protection, plenty of ventilation and a dry bed; the marketing of products of wool and mutton with an understanding of market values and demand.

It is pointed out in this bulletin that from fifteen to twenty-five ewes are a sufficient number for anyone without experience to undertake as the nucleus of a farm flock. It is resumed that a beginning is made with grades, but in any event the use of a pure-bred ram is strongly advised. Experiments at the Wisconsin and Missouri stations have shown that pure-bred mutton rams sire lambs that make great gains, reach a higher condition of flesh at less cost in amount of feed consumed, and command a higher market price than lambs sired by a scrub ram. The suggestion is made in this bulletin that one or two pure-bred ewes should be added to the females of a grade flock. The lambs from the latter may be kept and gradually the owner can eliminate his grades as the number of pure breds increase, so that in a few years, after experience is obtained in handling the sheep, something worth while will then be on hand to work with. While sheep require relatively little labor in their care, at the same time special attention is needed during the breeding and lambing season, and that is why experience in the handling of a small flock is needed before it is taken up on anything like an extensive scale. It is scarcely necessary to refer to the ability of sheep as weed destroyers, because it is a well-known fact that they will consume upwards of 90 per cent of all that troublesome weeds found on the farm. To be sure they need something besides weeds, but this is an advantage that must not be lost sight of when sheep are being considered only from the standpoint of mutton and wool production.

The Farmers' Open Forum

WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Letter From Champion Boy Farmer.

To the Editor:—I was born on the farm in the town of Sun Prairie sixteen years ago. When I entered high school I selected agricultural work because it appealed to me as being my forte. My interest in this work was not enlarged during my freshman year because I was simply getting my bearing, as it were. In my sophomore year more interest was noticeable and in my junior year, with five other boys, we were sent to the state fair at Milwaukee, where we competed with boys from all parts of the state. This encouraged me in this line of work, because in the final ranking I found that my few short years in agricultural work had made me second place boy of Wisconsin. With that as an incentive the new year's work was entered into with an enthusiasm that knew no bounds. I concluded to ask my parents if they would allow me to have a certain portion of the farm on which I might raise corn, potatoes, garden products and stock. They readily agreed to this, and, as a result, I showed in a great many of the departments at the 1916 state fair, and the awarding of places made me the champion boy of the state.

All grains and stock which I have made an effort to produce have come from the best seeds and foundation stock obtainable. I early realized that in order to improve farm conditions in our state and make my work something that would stand out as worthy of anyone to follow I would have to produce something which was better than anything that had been produced and from which production I would be able to gain a great deal of information for future use.

I attribute my success to an everlasting "stick-to-it-iveness," coupled with a co-operative spirit of the very best kind from my mother and father, together with most helpful advice and encouragement possible to receive from those who were vitally interested in my securing the best education along agricultural lines, as well as other lines that the state afforded.

These things put together, coupled with the fact that after I had planted seeds and had started stock, I never at any time let up in my enthusiasm, and during dry weather and wet I took into consideration those things necessary to overcome any bad results which might come out if I allowed the things to slip by as seemingly is done by one who becomes easily discouraged.

All work of plowing, planting, taking care of materials which I raised was under my own direct supervision, and the work which I was capable of doing in lines of judging, etc., was only made possible after diligently laboring over various assignments given in class instruction in school, and actually observing at sales of cattle and horses, which we were asked to attend. Frank Willmarth.

Better Milk Prices For Farmers.

To the Editor:—In your issue of November 2d you quote from statements I have made in regard to the production and distribution of milk. I am exceedingly happy over the fact that through a very imperfect organization the dairymen in northern Illinois and southern Wisconsin, by collective efforts, have succeeded in securing an advance in the price of milk.

For many long years they have been producing and selling milk below the cost of production. I hope these dairymen as well as other farmers will set themselves industriously to the task of a much more perfect organization, so perfect and strong that they will never accept again less than $2 for 100 pounds of clean Holstein milk, this as an average price for the whole year.

I hope at the marketing conference which is to be held in Chicago early in December some plan may be devised to compel the distributors to adopt a systematic method of delivery. It is a blistering injustice to compel consumers to pay over 8 cents per quart for milk when only 4 cents is paid to the producers!

On such a basis of prices the distributors—if system takes the place of anarchy in delivery—will make twice the profits the producers can.

It seems to me The Wisconsin Farmer should give every possible aid and encouragement to farmers in their efforts to organize, for without organization the standardizing of farm products is impossible and the getting of standards of quality is about the first step in better marketing conditions.

Geo. H. Comings.

Experience with Pop Corn.

To the Editor:—Perhaps some of your readers would like to know about the pop corn I grew. This pop corn is a superior quality and I secured the seed from California three years ago. In 1914 I raised a fine crop, but in 1915 it was a failure. Again this last year I got a fine crop and this makes me feel positive that this pop corn will grow in Wisconsin under average conditions. Everybody says they never saw such fine corn. Now I will tell you how I cared for this corn: I planted it the 15th of May, but the weather was so cold it seemed to stand still for three weeks. The weather then turned warm and the corn fairly jumped up. Then I used ashes around the hills to start it along. The stocks of this pop corn were on an average eight or ten feet high and two ears on the stalk. The soil in which I grew the corn was a sandy loam. The ground was well manured. I have never seen pop corn which pops better. It grew in Chippewa county in the town of Howard.

I am only a boy eleven years of age, but I can raise pop corn all right. This corn is white and it is known as the Elkhorn Mammoth. If any of your readers want to know more about this pop corn I will be glad to tell them.

Clifford Bonner.

Chippewa Co., Wis.

Work For Fall and Winter.

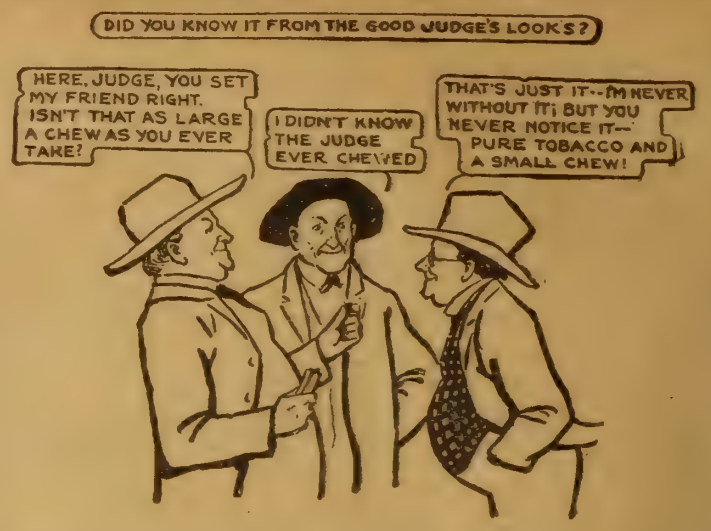
To the Editor:—Getting rid of grass, weeds and undergrowth about the farm at this time of the year is one of the best protective measures the farmer can use against crop damages the following year and years to come. Weeds, matted grass, dead vegetation and brambles along the fences, roadsides, margin of fields, banks of little streams or ditches are the natural hibernating and often breeding places of many destructive insects besides the natural seed house of our ever-present enemy, the weed. This vegetation gives grasshoppers, chinch bugs, army worms, cutworms, white grubs and other insects most favorable conditions for a reappearance the following spring and summer. The Hessian fly has often been known to lay its eggs on the volunteer wheat or rye and many times has been found to have laid them on the grass along the fence. The white grub is found to be present in nearly all places already mentioned and I believe nearly every farmer is well enough acquainted with its habits and work to be willing to try to improve the present condition by doing away with this natural nursery.

I, therefore, have suggested to the farmers of this community or any community that they fall plow sod lands intended for other than grass crops another year and clear up roadsides, fence margins and all waste lands, ditch banks and similar places by burning over, pasturing, or in case of ditch banks, by plowing or disking in the fall. This will tear up the roots and expose the eggs of the grasshopper to excessive moisture and cold of winter and will also turn up those insects which hibernate in the ground. Burning vegetation where possible will destroy many insects and many weed seeds. Culture methods are perhaps the better in the case of the grasshoppers.

Sheep are one of the greatest enemies of weeds, and where sheep can be turned into a field or a flock herded along the roadside they will effectively clear up waste vegetation and in addition the trampling of their feet will destroy many insects. The sheep at the same time turn waste material into mutton and all they require is a little grain for finishing. Frequently when sold they return a profit, but I hold that even if they merely pay for the extra grain they eat their function in destroying weeds and keeping down insects make their use well worth while. J. B. Keenan.

Agricultural Instructor, Grant Co.

During 1915 nearly 800 million dollars were paid out by old line life insurance companies in the United States and Canada to living policyholders and beneficiaries. Over one-fourth of this amount was paid to living policyholders as premium savings, surrender values and endowments. The above figures clearly demonstrate the value of life insurance to all classes of people. The fact that over one-fourth of the payments last year by old line companies was made to living policyholders shows the great value of life insurance not only as a protection but as a savings institution.



IT seems as though most men had just been waiting and waiting for W-B CUT Chewing. Naturally it should be that way. Tobacco satisfaction and not a big chew is what tobacco lovers want. You couldn't get it the old way—cheap tobacco and *excess sweetening*. But *rich* tobacco, shredded, lightly salted, that's what makes *tobacco satisfaction*—that's why W-B CUT is winning all this popularity.

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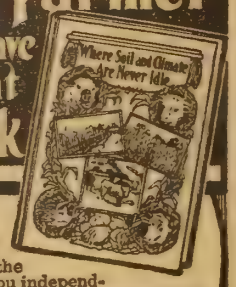

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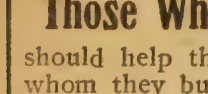

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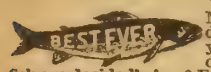

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OUR DAIRY DEPARTMENT

ALL communications relating to dairy matters should be addressed to this office. Inquiries of general interest regarding dairy management and production will be promptly answered.

Waupaca and Butternut Ridge.

To the Editor:—Honors for the month ending November 20th, in the Waupaca and Butternut Ridge Cow-Testing Association go to a grade Guernsey owned by William Rossey, of Weyauwega. Her record for the month was 1,324 pounds of 5.4 per cent milk, making 71.5 pounds of fat. Mr. Rossey is a firm believer in cow testing. He says he has raised production and cut down feeding costs by belonging to our association. Thirty-nine cows succeeded in getting into the forty-pound class in our association this last month. The following tables gives the names and records of the cows in this association which produced forty-five pounds of butter fat or over for the month:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Ed Munsch					
Honor Bright, G. G.	9	11-5-16	809	5.9	47.7
John Hanson					
Edith, N.	5	10-28-16	1141	4.6	52.5
Peterson & Miller					
Marnas, R. G.	8	1-15-16	782	6.2	48.5
E. F. Schroeder					
Belle, G. G.	4	10-5-16	1014	4.8	48.7
E. O. Frihart					
Brownie, G. G.	6	3-28-16	1007	5.0	50.3
Bea, G. J.	7	6-11-16	815	5.7	46.5
Daisy II, G. J.	10	10-20-16	1042	4.8	50.0
Herman Becker					
Nigger, G. J.	10	10-14-16	871	5.2	45.3
John Jensen					
Blackie, G. H.	8	10-11-16	1147	4.6	52.8
Frank Bauer					
Cora, N.	5	10-2-16	1274	4.0	51.0
Eva, N.	6	10-28-16	1432	3.8	54.4
May, N.	3	10-14-16	1364	3.4	46.4
John C. Backes					
Alice, G. G.	3	10-22-16	986	4.9	48.3
E. E. Howie					
Clara, G. H.	5	11-4-16	1135	4.4	49.9
Ira Farley					
Belle, G. H.	5	10-25-16	1460	4.5	65.7
Brownie, N.	11	9-19-16	1004	5.8	58.2
Jessie, G. H.	7	11-4-16	1174	4.9	56.2
Wm. Rossey					
Dandy, G. G.	6	10-26-16	1324	5.4	71.5

Geo. L. Moss, Official Tester.
Wm. Kneip, Secretary.

Across the Years in Dairying.

To the Editor:—When we look back we like to see that we have done something worth while. After twenty-five years on the farm it gives me satisfaction to see that we have made some progress in dairying. May I set down a few of the things which show that we have not been standing still all this time?

A quarter of a century ago we had three cows. None of them tested more than 3 or 3½ per cent of butter fat. We had no such thing in our part of the country then as a Babcock test, but I sent away and got a little device for determining the relative value of milk given by different cows. It had two tubes about five-eighths of an inch in diameter with a scale attached to show how deep the cream was. With this I tried my cows out and could not help being surprised at the difference in the value of the various cows' milk. In some cases a cow would stand at least one-third higher than another.

Today we have about thirty head of cattle. Some of our cows are now giving milk that tests 5½, or 2 per cent above that reached by the cows of those first years on the farm. We do not say this to boast. The top is a long way above our heads yet, but the going is good in that direction and we mean to keep on.

And then a quarter of a century ago we had no bull of our own, but had to depend on service at some neighbor's. It brings some sense of shame and regret to my mind to be compelled to confess that we were not very particular in those days to breed from any but ordinary sires. In fact, nobody had anything except average bulls. In all that section of the country then there was not a single pure-bred bull. Now they are everywhere. We have one of our own, a fine type of the Guernsey stock, that we breed from. Here, too, we are looking for better things.

As for the quality of our cows, we have some choice pure breds and a lot of nice grades. Our calves for 1916 were certainly the finest bunch we ever had. One thing had a bearing on that and that is we had milk right from the separator to feed them. Here is a good pointer. Never feed cold milk to calves. If you have to set a kettle on the stove to warm the milk fed, do it. It will pay.

But I think about the best thing we have learned while these years have been passing is that care is worth wellnigh as much as breeding or feeding. Some day we will all waken to the fact that good treatment and kindness have a real money value. This is about the last thing the average farmer thinks of. And it is why so many of us make an indifferent success or fail altogether. Choice in selecting the best calves for the home dairy, picking out the cows for breeding purposes and saving only the best calves year after year from the best cows, taking the best possible care of all stock, being good and kind to every living creature—these are the touchstones of dairy success. E. L. V.

The high school at Viola, Wisconsin, has an agricultural library which is quite liberally used. The instructor in agriculture in this high school has charge of the distribution of the books which are loaned free to farmers. Books and other literature on almost any subject pertaining to farming is furnished upon application.

Eben F. Jones' Short-horns.

THOSE that follow the Short-horn game in Wisconsin know that Eben E. Jones, Rockland, Wis., is a breeder of choice Short-horns. His cattle were well up in the money at many of the leading fairs during the past season. At any time you are in the market for a good young bull or a few heifers it will pay you to write to Mr. Jones and let him describe what he has for sale. This is one of the best herds in the state.—Adv.

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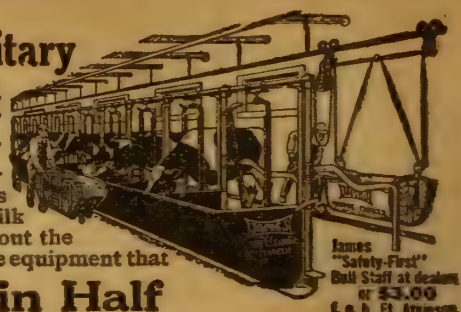

enables you to do your present work in half the time—keeps hired help contented—improves cow comfort, therefore increases milk yield—makes sanitation possible about the barn. Why not get acquainted with the equipment that

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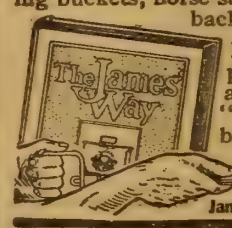

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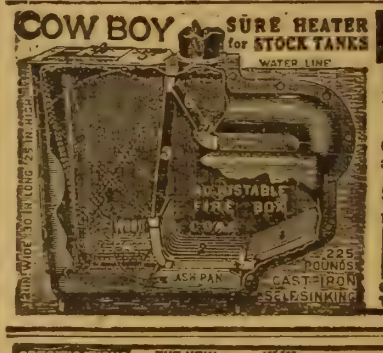

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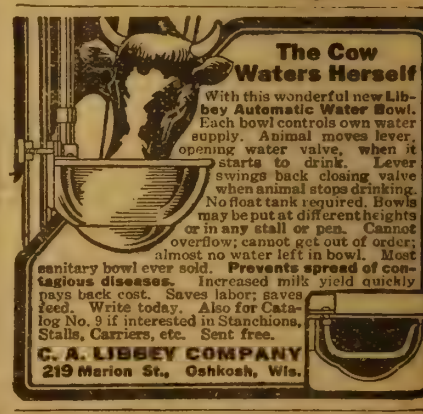

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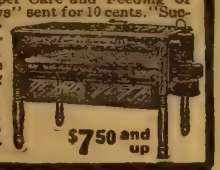

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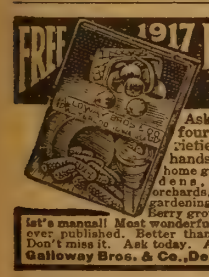

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POULTRY DEPARTMENT

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The "Why" of Not Getting Eggs From Pullets.

It is not difficult to secure a profitable supply of eggs from pullets which have been properly grown during their growing period. The great problem, the demerit mark lodged against the majority of poultry keepers, is that they have not been able to properly mature their growing stock. This, of course, must be set down as a failure for this year and resolutions to do better next year are in order.

Egg production, taken that the pullets have been properly grown, depends on three things—proper feed, proper housing and proper care. The most important of these is proper feed.

Of course, it goes without saying growing pullets should not be yarded in flocks with cockerels. One reason for it is that the latter nag the former too much, keeping them in a constant state of excitement.

Another reason, and probably a more important one, is that the cockerels can stand, and should have, heavier feeding than it would be wise to give pullets. Pullets should not be forced to premature laying.

They should be grown rapidly as it is possible with good, sound grains. Meat should be given sparingly and concentrated ground feed should be allowed but once a day. Pullets for early and steady laying should be the progeny of hens that possessed that trait; they should have been hatched not later than the middle of May; they should not have been fed too heavily of stimulating food; and never in their period of growth, or when placed in winter quarters, should they be overcrowded.

A pullet that begins laying at six or seven months of age, or, in other words, in the months of November or December, will, as a rule, be a more reliable egg producer than the one at a more tender age. Many pullets are raised outdoors during the summer, and are often allowed to remain outdoors way up until winter sets in. Such care will not secure eggs from pullets even if hatched early. Young birds exposed to all sorts of weather, especially at night, surely cannot remain in the pink of condition as will those which from little up are made to roost at night in an open shed or in fresh-air houses.

Another point not to be overlooked is their feed and the manner in which it is given. An overfat pullet will not only be tardy in starting, as a general thing, but will be an unreliable layer throughout her first laying year. Therefore, it is important that the pullets get the right amount of feed of the right kind and at the right time. There can be no rule established to govern quantity, but it is important that the proper material be secured and fed and that the meals be regularly given.

The quantity to be fed at a time, however, can be determined quite accurately with individual flocks by keeping a close watch on the appetites of the pullets. But what might be right with one flock might be entirely wrong with another. Just all that a pullet will greedily eat is a good method provided the quality of the food is up to the standard of purity and is so balanced that it will fit the object required.

Pullets must not be quartered in houses that close up tight at night. More colds and other cases of sickness are bred from such a coop than when the young fowls are allowed to roost out on trees or fences. The pullet house should be practically an open-front one. Cold air is no detriment so long as the fowls are not exposed to cold rain or snow and there are no drafts in the house. Fresh air is beneficial rather than detrimental. Given these conditions, there is no reason, except the ancestry of the pullets or hens, why a satisfactory supply of eggs should not be produced.

Ask your neighbor to subscribe for The Wisconsin Farmer.

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. Place your name and address to it, then, to know its cost, count the number of words. The rate is six cents per word, each insertion. For instance, if your advertisement, including the address, has 15 words, one insertion would cost 90 cents, which is one cent for every thousand copies printed. Note the low cost, and read what small advertisements in The Wisconsin Farmer have done for others

One **Wisconsin Farmer** seed corn advertiser says: "We are getting a nice response to our advertising. We will come back with a larger advertisement." Another says: "**The Wisconsin Farmer** has done good work helping me to sell lots of stock." And another writes: "Please discontinue my advertisement in **The Wisconsin Farmer.** I am getting pretty well sold out for the present."

These small advertisements did not have the advantage of the classified headings now available—under which your advertisement would appear.

Any "Wanted," "For Sale," or "To Exchange" advertisement will receive prompt attention and insertion will be made in first issue possible.

THE WISCONSIN FARMER **MADISON, WISCONSIN**

HONEY.

HONEY. Pure, extracted, white clover, from my apiaries. Guaranteed first-class. 2 60-lb. cans, $12.60; 1 60-lb. can, $6.60; 6 10-lb. pails, $7.20; 6 5-lb. pails, $3.75. Write M. E. Eggers, Station G, R. 1, Eau Claire, Wisconsin.

POULTRY.

FULL BLOODED POULTRY for sale—Single Comb Rhode Island Reds, White China geese, White Indian Runner ducks, Single Comb Anconas. Mrs. Wm. O'Leary, Honey Creek, Wis.

MONEY TO LOAN.

MONEY TO LOAN ON FARMS. 6% with any pre-payment privilege desired. Security must be twice the amount of the loan. Address 206 Washington Bldg., Madison, Wisconsin.

PORTABLE SAW MILL.

WANTED—A portable saw mill at Washburn, Wis., and vicinity. Good money to be made by the right party. Inquire of W. S. Powell, R. F. D. No. 1, Box 42 A.

DAIRY EQUIPMENT.

COLLAPSIBLE Ensilage Cars and Automatic Litter Carriers direct from factory to farm at prices never before made. Common Sense Co., Janesville, Wisconsin.

WYANDOTTES.

PREMIUM White Wyandottes, $2. Heavy weighers and layers. Eggs $8. 100 Mammoth Toulouse geese. Fairvue Poultry Farm, Montello, Wisconsin.

TELEGRAPHY.

LEARN TELEGRAPHY. Short hours. Positions guaranteed. Write Signal Dept., Northwestern Telegraph School, Eau Claire, Wis.

GUERNSEY CATTLE.

FOR Sale—Pure-bred Guernsey bulls, from four to eighteen months old. Adolph Suhr, Cochrane, Wisconsin.

TURKEYS.

WHITE Holland turkeys. Rose Comb Brown Leghorn cockerels. Thos. Hamilton, Loyal, Wisconsin.

FARM LANDS.

BUY Oil, Coal, Gas, Timber and Corn Land in Oklahoma. Will sell you from 40 to 320 acres of land in southeast Oklahoma (recently Indian lands) that has enough oak timber on it to pay for it, right in the heart of the oil, coal, gas, mineral fields of Oklahoma. Any 40 acres may be worth a million dollars. Fine corn land, heavy, rich, black, inexhaustible soil. On this land you can produce pork for 3 cents a pound. Price for quick action while it lasts, $4 per acre. Terms if desired. Write today. C. M. Davison, Beaver Dam, Wisconsin.

I OWN three farms. Will sell one farm consisting of 160 acres in order to stock up other farms. 40 acres in tame hay, about 15 acres seeded down this fall with rye, balance in pasture. Part ready for plow, no stone or stumps, black loam soil. 30 acres good hard timber. House, barn and other buildings, about 6 miles from town; on mail route, telephone line, they gather cream every morning. Will consider good heifers, prefer Guernsey or milk cows, might consider automobile if good or young horses. Price $40 per acre. Can arrange terms. Henry Wilson, Ladysmith, Wisconsin.

"ESIDARAP SNEMYRIAD." Read backward. "Dairymen's Paradise." That's what Aitkin county is. The balance of our Company's lands are going fast. Get a home while you can buy cheaply. Write Arnold, Land Agent, Rock Island R'y, 153 Wolvin Bldg., Duluth, Minn.

700 ACRES of fine saw timber, white and red oak, good corn and grass land when timber is removed, one and one-half miles from town. Lumber, ties, mining props and cord wood can be handled profitably. For price and terms write C. F. Higley, Rolla, Mo.

SNAP IN 40 ACRES: Clay loam soil; lies gently rolling; 8 acres natural meadow; 2 miles from station; only $450; terms to suit. The Ev. Luth. Colonization Co., Merrill, Wis.

102 ACRES, 35 cultivated, balance timber. Black loam; 2 miles station; creek through it. Cheap for cash. Terms. E. O. Bonesville, Caryville, Wis.

FOR SALE or exchange for wild land in southwestern Nebraska, live stock farm of 760 acres 2½ miles from town. Write Albert Ferdon, Pittsville, Wisconsin.

FOR RENT OR SALE—Illinois and elsewhere, special proposition. Investigate. Wood, R 705, 230 So. La Salle St., Chicago, Illinois.

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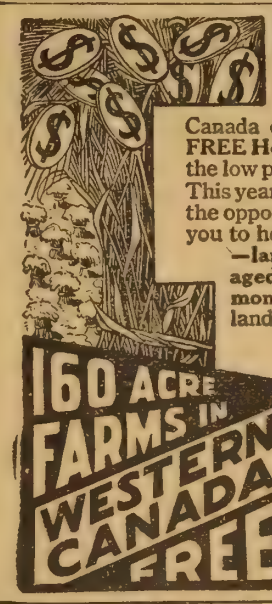


Raise High Priced Wheat on Fertile Canadian Soil

Canada extends to you a hearty invitation to settle on her **FREE Homestead lands of 160 acres each** or secure some of the low priced lands in **Manitoba, Saskatchewan and Alberta.** This year **wheat is higher** but **Canadian land just as cheap,** so the opportunity is more attractive than ever. Canada wants you to help **feed the world** by tilling some of her fertile soil **—land similar to that** which during many years **has averaged 20 to 45 bushels of wheat to the acre.** Think of the **money you can make** with wheat around **$2 a bushel** and land so easy to get. Wonderful yields also of **Oats, Barley and Flax. Mixed farming** in Western Canada is as **profitable an industry as grain growing.**

The Government this year is asking farmers to put increased acreage into grain. Military service is not compulsory in Canada but there is a great demand for farm labor to replace the many young men who have volunteered for service. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature as to reduced railway rates to Supt. of Immigration, Ottawa, Can., or to

GEO. A. HALL,
123 2d St., Milwaukee, Wis.
Canadian Government Agent.

TO SETTLE AFFAIRS

OF company will sacrifice 16, 604 acres, admirably situated for cattle purposes. All kinds of forage, fruit and truck crops can be raised. Conveniently located between Miami and West Palm Beach; on canals and near railroad. Price $10 acre, reasonable terms, might consider sub-dividing. Pasture all year round. Full information A. W. Cain, 1010 Bisbee Bldg., Jacksonville, Florida.

HOMESTEAD LANDS

INDIAN RESERVATION LANDS. Under Act of Congress passed 1908. No improvements. Residence or cultivation required. Large blue print map showing these lands with proposed railroads, etc., and full particulars for $1. Address No. Minnesota Homestead Lands Co., Duluth, Minn.

Minnesota With 15,000,000 Acres

OF land fit for agriculture, and yet unoccupied, this state offers homes for thousands of farmers. Are you going to be one? Maps and literature sent free. Fred D. Sherman, Commissioner of Immigration, Rm.200, State Capitol, St. Paul, Minn.

FOR SALE or exchange, 160 acres; 25 clear, balance pasture; no bldgs.; located in Monroe county; easy terms. A. A. Crawford, Mather, Wis.

SOME extra large, choice, heavy-boned Mammoth Bronze turkey toms and hens. Stock for sale, prices reasonable. O.C.Olson, R.2, Strum, Wis.

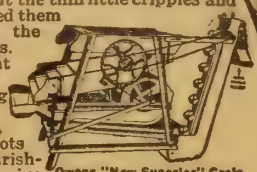
PROSPERITY IN CANADA

THOUSANDS of farmers in Western Canada have sold their crops this year for more than the total cost of their land. Land at $15 to $30 per acre has produced crops worth $40 to $75 an acre. Stock raising and dairying are equally profitable—hogs and beef highest in country's history. Irrigation districts producing more alfalfa and fodder crops than ever before. Get your farm home from the Canadian Pacific Railway. Last year I asked you to take advantage of this opportunity—you might have paid for your farm with the 1916 crop—again I extend the invitation. Good land from $11 to $30 per acre; irrigated land from $35; 20 years to pay; government guarantees land and water titles. Pay in full at any time if desired. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land. Ready-made farms sold on special easy terms. Loan for live stock after one year's occupation, subject to certain reasonable conditions explained on request. Low taxes; no taxes on improvements. Free schools; full religious liberty; good climate, and the best neighbors in the world. Other farmers becoming rich in Western Canada; you have the same opportunity. Buy direct from the Canadian Pacific Railway. Write for free book and full information. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Avenue, Calgary, Alberta, Canada.

WANTED to hear from owner of good farm for sale. Send description—price. O. O. Mattson, 2954 Cedar Ave., Minneapolis, Minnesota.

Feed the Cripples Plant the Fat Boys

Don't cut your grain crop one-third to one-half by sowing seed as it comes out of the bin. Grade out the thin little cripples and feed them to the hogs. Plant only the big fat grains, with lots of nourishment to give the stalks a good start, and



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The Owens grain grader and cleaner will insure that you plant good seed and save you the dockage when you sell your grain. Book mailed free.

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Change your granary into a modern elevator. Tell us size of your building and capacity you want. We draw plans showing how to make the change in easy, economical way. Also get our plans showing a modern elevator suitable for any farmer. No Charge.

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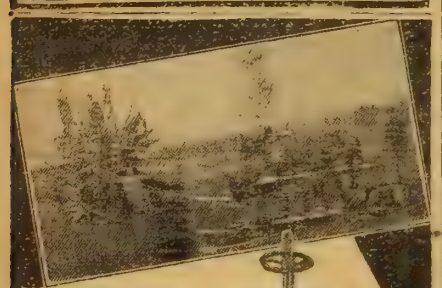
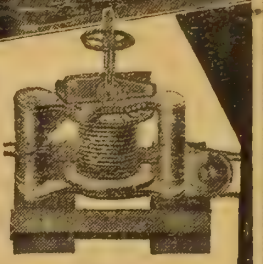


Pull Out Stumps With the Famous Hercules!



Triple-Power

Pull an acre or more of stumps a day. Pull any stump in 5 minutes or less. Don't have loafer land when it's so easy and cheap to *pull the stumps out!* Make 1000% profit by using the Hercules. $1281.00 the *first year* on 40 acres! $750.00 every year after. Let us *prove* it.

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In and Around Wisconsin

COMING EVENTS.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.

International Live Stock Exposition, Chicago, Ill., December 2d to 9th.

Wisconsin Beekeepers' Association, Madison, December 7th and 8th.

Wisconsin State Horticultural Society, at Madison, December 12th, 13th and 14th.

Wisconsin Poultry Association Show, At Madison, January 1st to 5th.

Wisconsin Cheesemakers' Association, at Fond du Lac, January 10th to 12th.

Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

According to the reports of assessors in Kewaunee county, that county has 7,841 horses, 28,289 cattle, 1,486 sheep and 7,486 swine. There are 573 automobiles in the county.

Jackson county will soon have the services of an agricultural representative. This will be the nineteenth county in Wisconsin to take up this work. The man who will be in the field in Jackson county has not yet been selected.

Reports from Waushara county say that a very small per cent of the potato crop has been stored. Farmers have been selling preferring to take advantage of a certain high market rather than take chances on a better one in the spring.

Milk dealers in the vicinity of Stevens Point have accepted the terms of a new city ordinance which requires testing of dairy cows for tuberculosis. The local board of health insisted that only milk from tuberculin-tested animals be sold in the city. A conference with producers brought a satisfactory agreement.

The officers of the Wisconsin Potato Growers' Association were all re-elected for another year at the closing session of the convention at Eau Claire recently. J. W. Hicks, of Prentice, is president; O. Woodard, of Weyauwega, vice president, and J. G. Milward, of Madison, secretary. It is probable the 1917 show will be held in Madison. Selection of the city has been left to the executive committee.

The Brown county board of supervisors recently appropriated $5,000 for purchasing pure-bred Holstein cattle. These cattle are to be the foundation of a herd. Approximately $100,000 has been spent in the last ten years for support of the Brown county asylum and almshouse. The board is going to make an effort to put these institutions on a self-supporting basis and they believe that good live stock will be a big help.

The Upper Wisconsin Product Special run under the auspices of the Wisconsin Immigration Bureau, recently completed a schedule of 19 points on the Omaha Railroad through Iowa and Minnesota. About 9,000 people witnessed the exhibit, including the moving pictures and lantern slides, and listened to addresses by B. G. Packer, Director of Immigration; F. S. McCabe, Industrial Commissioner of the Omaha Road, and President J. W. Hicks, of the Wisconsin Potato Growers' Association.

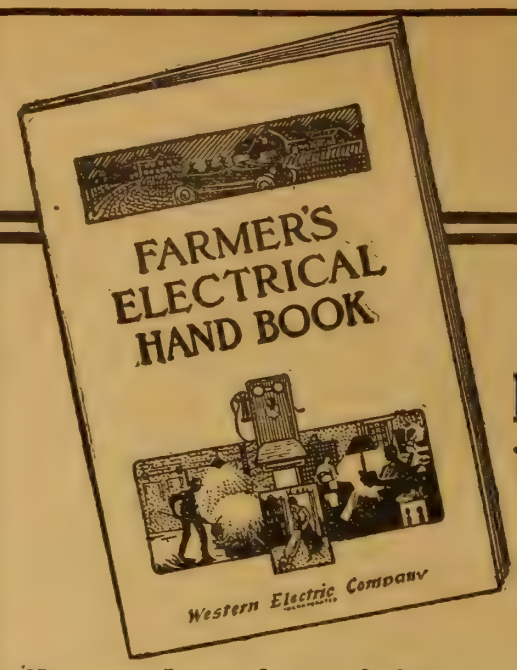
The annual congress of live stock men under the management of the Minnesota Live Stock Breeders' Association will be held at St. Paul at the University farm January 1st to 6th. This is in connection with Farmers' and Homemakers' Week. Live Stock, rural credits, soils, farm management and cattle diseases will be the chief subjects emphasized. Dr. W. L. Williams, of Cornell University, will speak on cattle diseases; Herbert Quick, chairman of the new Federal Farm Loan Board, will talk on rural credits; Dr. Cyril G. Hopkins will discuss soil; Mrs. Grace R. Darling, of Milwaukee, will talk on child welfare; Miss Alice M. Loomis, of the University of Nebraska, will speak on various phases of home management.

Edward Wittwer & Bro. established a new level for milk prices in Green county. They have contracted with the patrons of the Moritz factory in Washington township for a period of thirteen months at $1.50 and $2.00 per hundred pounds. The $2.00 rate went into effect December 1st and continues for seven months and the $1.50 rate will apply to the remaining six months. No milk test is required. This is an unusual contract—especially the length of time.

The first public market day was held recently in La Crosse, Wisconsin. The event was a success from the standpoint of buyers, but there were not a very large number of farmers present offering their products. The day was cold and windy, however, and those who had charge of the affair feel that it will be a greater success in better weather. About 500 people presented themselves at the big tent which was used as a market house. A good many farmers visited the market to see how the experiment would turn out, but they had nothing to sell. They promised hereafter to bring in their produce. One interesting feature of the day was the fact that grocers met several farmers on their way into town and purchased their entire loads at good prices.

This is just one of many affairs to get the producer and the consumer closer together so that they may share in the profits which come from the sale of produce.

During the five-year period ending January 1, 1915, 147 fraternal and assessment societies had closed their business and the total amount of fraternal and assessment insurance had increased during that five years only 200 million dollars. During the same period not a policyholder in an old line company had lost the value of his protection and every policy had been fulfilled in accordance with its terms, and the amount of old line life insurance had increased during the five-year period over six billion dollars.



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Kindly mention this paper when writing

Work of Wisconsin Milk Producers

Association Whose Members Produce Milk For Milwaukee and Other Centers Has Done Some Good Work.

WHEN a handful of farmer-dairymen, interested in securing a fair, equitable price for their milk, met in Milwaukee last winter to organize the Milwaukee Milk and Cream Shippers' Association, the day of 6 cents a quart milk on the doorsteps of Milwaukee citizens began to fade. That was the beginning of a new era of milk prices for the producers in the Milwaukee territory, consisting of the counties of Milwaukee, Waukesha, Jefferson, Dodge, Washington, Racine and Ozaukee, and today these producers are getting, without any strikes, but through organization, the best prices they have ever received.

Every farmer knows that when milk sells at 6 cents delivered on the doorstep there isn't much profit in dairying for him with feeds at the present level of prices. So the new association, still an infant, began its fight for better prices with the result that Milwaukee producers are getting a cent more per quart this year than last winter, although the price to Milwaukee residents has been pushed up to 8 cents, a 2-cent increase. The producers realize the dealers are benefiting probably more than they, but $2 milk could never have been secured with milk at 6 cents per quart in Milwaukee and they hope for a better adjustment at future price-fixing dates. The new prices are for the six months beginning November 1st and are $1.50 f. o. b. Milwaukee for an eight-gallon can of milk and 8 cents per pound butter fat over the average Chicago quotations each month on butter for their cream.

No organization can succeed unless it has some definite reason for its existence. That probably accounts for the success of the Milwaukee Milk and Cream Producers' Association, for it has brought together all of the larger shippers in the Milwaukee territory and now serves as the medium through which the shippers can deal with the dealers on prices and other conditions governing prices. To succeed such an organization must do something; must add some accomplishments, and the fact that the milk scale has been forced up to $2 a hundred average for the winter months without resorting to strikes, etc., indicates its growing power.

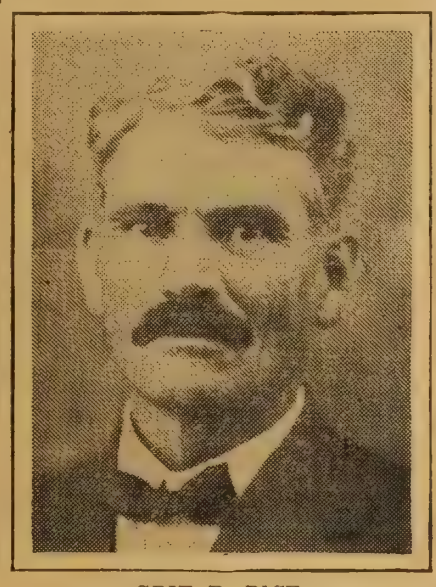
Prior to the organization of this association there existed for nine years a voluntary organization known as the Milwaukee Milk Producers Association. It did a good work in its way, but its control over the market was uncertain and the members were not able to enforce their demands. The Milwaukee dealers could control the milk supply and when threats were made they drew upon other territory.

During the four years prior to 1913 the winter price average paid Milwaukee producers was 93¾ cents per can as compared with this winter's price of $1.50. In 1913 the price was increased to $1.14 per can; and in 1914 the old association succeeded in forcing the price up to $1.23, but their strength waned and in 1914 the dealers forced it back to $1.14½. All these prices are for the eight-gallon can, f. o. b. Milwaukee.

This drop in price in the winter of 1914 meant a loss of $200,000 to the dairymen in the Milwaukee territory, but they were forced to take it. Last fall prices were a little better; business conditions had improved and the producers secured an increase to $1.18½ per can, f. o. b. Milwaukee. This was a 4 cents per can increase. But no active steps at forcing milk prices up so that the farmers need no longer serve as philanthropists to the city of Milwaukee were taken until this spring when the new association, an outgrowth of the old, sprang into existence.

Immediately there began negotiations for increases in the summer prices and following the Chicago trouble this was granted in July. In October they had sent the price to $1.35 per can and during last month signed the six months' scale for $1.50 per can as compared with $1.18½ last year, $1.14¼ two years ago, $1.23 three years ago, $1.14 four years ago and an average of 93¾ cents during the preceding four years. During all these years the dealers have insisted on making the prices each month and it was only this fall that the producers won out in their demands for a six months' price agreement.

E. S. ROBBINS,
President Milwaukee Milk and Cream Producers' Association.



GRIF R. RICE,
Secretary and treasurer, Milwaukee Milk and Cream Producers' Assn.

These increased prices for the farmer-dairymen have come entirely through organization. Were not this organization able to control enough of the city's milk supply it could not negotiate to such advantage. The dealers have always preferred to deal with individuals; they know it is to their advantage, but the Milwaukee situation is not local. In every big city-supply district the dairymen have organized for their own protection.

The association now controls about 2,200 of the 5,500 cans of milk used daily by Milwaukee. This all comes from a health department inspected area. Were these 2,200 cans diverted into other channels it would seriously cripple Milwaukee's supply with the health department restricting the area. This the dealers realize and the negotiations that led to the new prices were conducted with the best of feeling apparent by all parties.

In July the association bought a creamery at Burwood, Milwaukee county, which is being operated to care for the surplus or turn-back when the city market is oversupplied. This was done at a cost of $3,000, but the butter has been selling for 2 cents above Elgin and the creamery is netting the association a pront of $150 per month. It can handle 150 cans daily, but the plan is to increase its capacity to about 900 cans. Surplus in other sections is turned to cheese factories or creameries and when it is possible for the association to so organize plants to take care of surplus milk it will be possible, in case of a crisis, to cut off Milwaukee's supply and turn it into these factories. This would mean no loss to the farmers and would be one method of forcing up the prices. The association also has other plans in view which will be unfolded as conditions warrant.

Operating expenses are covered by a tax of 2 cents per can on all milk and 10 cents per can on cream shipped by members. If every shipper were a member this could be reduced to about ¼ cent per can. The association keeps the records of all shipments and collects from the dealers for members.

There are now 750 members paid up who ship about 50 per cent of Milwaukee's supply. There are probably 1,200 shippers who are not members, but are profiting by the new prices secured by the association, as the association price stands for all.

The association is incorporated under the state laws for $10,000. Each member buys one share at $10 and is limited to one share. Of this amount $7,500 has been subscribed by the 750 members and there remains $2,500 in stock to be sold. Offices have been opened in the First National Bank, Milwaukee, and the officers are: President, E. S. Robbins; first vice president, Charles Dineen; second vice president, Edward Harland; secretary-treasurer, general manager, G. R. Rice. All these officers with the following directors operate their own farms: Albert Fuller, William Kerler, Thomas White, Michael O'Connel, Charles Schwerman, Robert McLevy, Edward Makovsky, John Wick and the officers named above.

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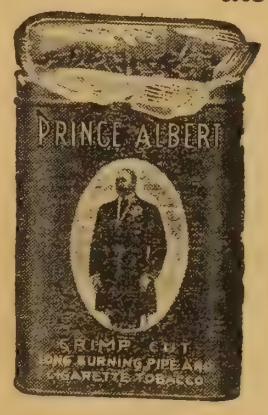

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER IX—Continued.

"Not this morning, sonny," answered the other, still, with that altogether-aggressive taunt in his tone. "I would go back to the ranch if I was you, and by this time tomorrow some of them may make you forget the favor you want this morning. So long!"

And with this suggestion to his guest to vacate, he turned his back, sat down by the fire, and began filling a pipe.

"All right; I'll go, and in spite of your stubbornness, with a lighter heart than I carried here, for I've made you understand that I want to make amends, and that I have not been all a liar; that I want to win back the old faith you all had in me; and, Jack, if my head has gone wrong, something in my heart forbade me to have content, and that has been my only hope for myself. For I have a hope, and a determination, Jack, and as for anyone helping me to forget—well, you are wrong there; one woman might do it—for a while—I acknowledge that, but I am safe in knowing she would rather help me to remember."

Genesee wheeled about quickly.

"Have you dared—"

"No, I have not told her, if that is what you mean, why—why should I?"

His denial weakened a little as he remembered how closely his impulse had led him to it, and how strong, though reasonless, that impulse had been.

The stem of the pipe snapped in Genesee's fingers as he arose, pushing the camp stool aside with his foot, as if clearing space for action.

"Since you own up that there's someone about here that you—you've taken a fancy to, I'm going to tell you right now that you've got to stop that! You're no more fit than I am to speak to her, or ask for a kind word from her, and I give you a pointer that if you try playing fast and loose with her, there'll be a committee of one to straighten out the case, and do it more completely than that man did who was a fool ten years ago. Now, hearken to that—will you?"

And then, without waiting for an answer, he strode out of the shack, slamming the door after him, and leaving his visitor in possession.

"I've got to show him, by staying right in these hills, that I am in earnest," Stuart decided, taking the seat his host had kicked aside and stretching his feet out to the fire. "No use in arguing or pleading with him—there never was. But give him his own lead, and he will come around to the right point of view, though he may curse me up hill and down dale while he is doing it; a queer, queer fellow—God bless him! And how furious he was about that girl! Those two are a sort of David and Jonathan in their defense of each other, and yet never exchange words if they can help it—that's queer, too—it would be hard telling which of them is the more so. Little need to warn any man away from her, however; she is capable of taking very good care of herself."

There was certainly more than one woman at the ranch; but to hear the speech of those two men, one would have doubted it; for neither had thought it necessary even to mention her name.

CHAPTER X.

The Telling of a Story.

"BUT you promised! Yes, you did, Mr. Stuart—didn't he, Mrs. Hardy? There, that settles it; so you see this is your evening to tell a story. The protracted twilight, with its cool grays and purples, had finally faded away over the snow, long after the stars took up their watch for the night. The air was so still and so chill that the bugle call at sunset had sounded clearly along the litte valley from camp, and Fred thought the nearness of sound made a house seem so much more homelike. After the bugle notes and the long northern twilight, had come the grouping of the young folks about the fire, and Fred's reminder that this was to be a "story" night.

"But," declared Stuart, "I can think of none, except a very wonderful one of an old lady who lived in a shoe, and another of a house marvelously constructed by a gentleman called Jack—"

Here a clamor arose from the rebels in the audience, and from Fred the proposal that he should read or tell them of what he was working on at present, and gaining at last his consent.

"But I must bring down some notes in manuscript," he added, "as part of it is only mapped out, and my memory is treacherous."

"I will go and get them," offered Fred. "No, don't you go! I'm afraid to let you out of the room, lest you may remember some late business at camp and take French leave. Is the manuscript on the table in your room? I'll bring it."

And scarcely waiting either assent or remonstrance, she ran up the stairs, returning immediately with hands full of loose sheets and two rolls of manuscript.

"I confiscated all there was in reach," she laughed. "Here they are; you pay no money, and you take your choice."

She was such a petite, pretty little creature, her witchy face alight with the confidence of pleasure to come; and looking down at her, he remarked:

"You look so much a spirit of inspiration, Miss Fred, that you had better not make such a sweeping offer, lest I might be tempted to choose you."

"And have a civil war on your hands," warned Rachel, "with the whole camp in rebellion."

"Not much; they don't value me so highly," confessed Fred. "They would all be willing to give me away."

"A willingness only seconded by your own." This from the gallant lieutenant on the settee. "My child, this is not leap year, and in the absence of your parent I—"

"Yes, I know. But as Captain Holt commands in papa's absence, I don't see what extra responsibility rests on your shoulders. Now, Mr. Stuart, all quiet along the Kootenai; go ahead."

"Not an easy thing to do," he answered ruefully, trying to sort the jumbled lot of papers she had brought him, and beginning by laying the rolls of manuscript on the table back of him, as if disposing of them. "You have seized on several things that we could not possibly wade through in one evening, but here is the sketch I spoke of. It is of camp life, by the way, and so open to criticism from you two veterans. It was suggested by a story I heard told at the fort."

Just then a wild screech of terror sounded from the yard, and then an equally wild scramble across the porch. Everyone jumped to their feet, but Rachel reached the door first, just as Aunty Luce, almost gray from terror, floundered in.

"They's come!" she panted, in a sort of paralysis of fright and triumph of prophecy. "I done tole all you chillen! Injuns! right here—I seed 'em!"

Hardy reached for his gun, the others doing the same; but the girl at the door had darted out into the darkness.

"Rachel!" screamed Tillie, but no Rachel answered. Even Hardy's call was not heeded; and he followed her with something like an oath on his lips, and Stuart at his elbow.

Outside, it seemed very dark after the brightness within, and they stopped on the porch an instant to guide themselves by sound, if there was any movement.

There was—the least ominous of sounds—a laugh. The warlike attitude of all relaxed somewhat, for it was so high and clear that it reached even those within doors; and then, outlined against the background of snow, Stuart and Hardy could see two forms near the gate—a tall and a short one,

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and the shorter one was holding to the sleeve of the other and laughing.

"You and Aunty Luce are a fine pair of soldiers," she was saying; "both beat a retreat at the first glimpse of each other. And you can't leave after upsetting everyone like this; you must come in the house and reassure them. Come on!"

Some remonstrance was heard, and at the sound of the voice Hardy stepped out.

"Hello, Genesee!" he said, with a good deal of relief in his manner; "were you the scarecrow? Come in to the light, till we make sure w're not to be scalped."

After a few words with the girl that the others could not hear, he walked beside her to the porch.

"I'm mighty sorry, Hardy," he said as they met. "I was a little shaky about Mowitza today, and reckoned I'd better make an extra trip over; but I didn't count on kicking up a racket like this—didn't even spot the woman till she screeched and run."

"That's all right," said Hardy reassuringly. "I'm glad you came, whether intentionally or by accident. You know I told you the other day—"

"Yes—I know."

Rachel and Stuart had entered the house ahead of them, and all had dropped back into their chosen points of vantage for the evening when assurance was given that the Indians belonged to Aunty's imagination; but for those short seconds of indecision Tillie had realized, as never before, that they were really within the lines of the Indian country.

Aunty Luce settled herself sulkily in the corner, a grotesque figure, with an injured air, eyeing Genesee with a suspicion not a whit allayed when she recognized the man who had brought the first customs of war to them—taking nocturnal possession of the best room.

"No need tell me he's a friend o' you all!" she grunted. "Nice sort o' friend you's comin' to, I say—lives with Injuns; reckon I heard—umph!"

This was an aside to Tillie, who was trying to keep her quiet, and not succeeding very well, much to the amusement of the others within hearing, especially Fred.

Genesee had stopped in the outer room, speaking with Hardy; and, standing together on the hearth, in the light of the fire, it occurred to the group in the other room what a fine pair they made—each a piece of physical perfection in his way.

"A pair of typical frontiersmen," said Murray, and Miss Fred was pleased to agree, and add some praise on her own account.

"Why, that man Genesee is really handsome," she whispered; "he isn't scowling like sin, as he was when I saw him before. Ask him in here, Mrs. Tillie; I like to look at him."

Mrs. Tillie had already made a movement toward him. Perhaps the steady, questioning gaze of Rachel had impelled her to follow what was really her desire, only—why need the man be so flagrantly improper? Tillie had a great deal of charity for black sheep, but she believed in their having a corral to themselves, and not allowing them the chance of smutching the spotless flocks that have had good luck and escaped the mire. She was a good little woman, a warm-hearted one; and despite her cool condemnation of his wickedness when he was absent, she always found herself, in his presence, forgetting all but their comradeship of that autumn, and greeting him with the cordiality that belonged to it.

"I shall pinch myself for this in the morning," she prophesied, even while she held out her hand and reminded him that he had been a long time deciding about making them a visit.

Her greeting was much warmer than her farewell had been the morning he left—possibly because of the relief in finding it was not a "hostile" at their gate. And he seemed more at ease, less as if he need to put himself on the defensive—an attitude that had grown habitual to him, as it does to many who live against the rulings of the world.

She walked ahead of him into the other room, thus giving him no chance to object had he wanted to; and after a moment's hesitation he followed her, and noticed, without seeming to look at any of them, that Rachel stood back of Stuart's chair, and that Stuart was looking at him intently, as if for recognition. On the other side, he saw the lieutenant quietly lay his hand on Miss Fred's wrist that was in shadow, just as she arose impulsively to offer her hand to the man whom she found was handsome when he had the aid of a razor. A beard of several weeks' growth had covered his face at their first meeting; now there was only a heavy mustache left. But she heeded that silent pressure of the wrist more than she would a spoken word, and instead of the proffered hand there was a little constrained smile of recognition, and a hope given that Aunty Luce had not upset his nerves with her war cries.

He saw it all the moment he was inside the door—the refined face of Stuart, with the graciousness of manner so evidently acceptable to all, the sheets of manuscript still in his fingers, looking as he stood there like the ruling spirit of the cheery circle; and just outside that circle, though inside the door, he—Genesee—stood alone, the fact sharply accented by Miss Fred's significant movement; and with the remembrance of the fact came the quick, ever-ready spirit of bravado, and his head was held a trifle higher as he smiled down at her in apparent unconcern.

"If it is going to make Aunty Luce feel more comfortable to have company, I'm ready to own up that my hair raised the hat off my head at first sight of her—isn't quite settled into place yet;" and he ran his fingers through the mass of thick, dark hair. "How's that, Aunty?"

"Umph!" she grunted, crouching closer to the wall, and watching him distrustfully from the extreme corner of her eye.

(To be continued.)

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A Few Wisconsin Road Problems

Manitowoc County Convention of Road Supervisors Takes Up Matters of Importance to Every Farmer Who Uses the Roads.

A COUNTY road convention of unusual importance was held November 17th at Manitowoc, Wisconsin. The idea started with several members of the county board and good roads enthusiasts in the Manitowoc Chamber of Commerce. Someone named this gathering the Pathmasters' Convention. While the gathering was primarily intended for road superintendents, town chairmen and supervisors it outgrew the original idea of a conference and developed into a mass convention in the interest of better roads in Manitowoc county. A large number of persons, not supervisors, nor directly connected with the building of roads were present. Frank Muth, county highway commissioner, and C. W. Meisnest, county superintendent of schools, were enthusiastic supporters of the meeting. Out of a total of about 375 superintendents and supervisors in this county 250 were present. The convention in a large measure has dispelled some local prejudices against increased expenditures for good roads. Among the subjects discussed were: "Travel and Macadam Roads;" "Use of the Road Drag;" "Concrete Culverts and Bridges;" "Powers and Duties of Town Boards and Road Superintendents," and other problems which came up in the question box.

A banquet was served at Turner Hall. The speakers were: J. S. Smith, editor of the Wisconsin Motorist; A. R. Hirst, Wisconsin State Highway Engineer; F. X. Murphy, chairman of the transportation board, Manitowoc Chamber of Commerce.

The motto of the convention was: "Good roads. One hundred cents on the dollar. Sixty minutes to the hour."

Subjects of importance discussed may be classified as follows:

Surface.—Should roads be filled, and if so, should the work be done in the spring or fall, or both?

What is the cheapest in the long run considering cost, up-keep and service, gravel, macadam or concrete?

Mud Holes.—Mud holes increase the cost of travel. They can be prevented by properly crowning the road. They can be filled up and dried by using road drags.

Loose Stones.—These spoil hoofs and tires. They can easily be raked off. Whose duty is it to do it? Stone chips can be rolled smooth and packed, but why would it not be better to use finely crushed filler?

Mountain Peaks.—These should not be used as substitute for road crowns. Should dirt and sod from the side of the road be dumped into the center, and what is the Wisconsin law on this subject?

Railroad Crossings.—Railroad crossings are man killers. The greatest danger can be avoided by providing a gradual approach to crossings and having crossings planked inside and out, level with the top of the rails. Sudden rises to crossings have stalled many autos in front of onrushing trains.

Guide Boards.—The Wisconsin law requires them with black letters two inches or higher on white boards. Letters painted with lamp black and boiled linseed oil will last for thirty years. Warning and speed limit signs are just as important.

Miscellaneous.—Should each town own and operate a stone crusher?

Narrow passageways cause collisions. In case of swamp road have turn outs at convenient intervals.

Obstructions to view are dangerous. Drivers can better see how wide the road is if the weeds are cut. Whose duty is it to remove obstructions to view of curves and railroad tracks?

One town in Manitowoc county has eight road districts; another has thirty-five. What is the best number?

Vehicles will not slip over the edge of fills and bridges if there is a strong railing.

It was generally agreed at the conference that township chairmen should call their road superintendents together before spring work starts and have a township conference.

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Potato Show Awards.

The following are the standard variety awards at the recent Wisconsin Potato Show held at Eau Claire:

Rural New Yorker—1st E. H. Thompson, Mikana; 2d Mrs. Ed Thompson, Mikana; 3d Ed Kringle, Rice Lake; 4th Clark G. Kuney, Three Lakes; 5th F. S. Campbell & Sons, Three Lakes; 6th Moss & Lavis, Kempster; 7th J. W. Smith, Kent; 8th Eric Michelson, Pembine; 9th Anton Follstad, Elcho; 10th Charles Beard, Elcho; 11th Gust Kringle, Rice Lake; 12th Cedar Lake Stock Farm, Mikana.

Green Mountain—1st A. T. Johnson, Angus; 2d T. S. Campbell & Son, Three Lakes; 3d W. P. Jensel & Sons, Rhinelander; 4th John F. Hauser, Bayfield; 5th S. J. Uhrenholt, Hayward; 6th John Chelmo, Webster; 7th Ralph H. Clark, Tomahawk; 8th Hall L. Brooks, Tomahawk; 9th John Peterson, Webster.

Burbank—1st Gust Kringle, Rice Lake; 2d Chas. Parsons, Antigo; 3d John F. Hauser, Bayfield; 4th Ed Kringle, Rice Lake; 5th Karl Hazelberg, Barron; 6th Mr. Risten, Leef.

Triumph—1st T. S. Campbell, Three Lakes; 2d J. W. Smith, Kent; 3d Eric Nickelson, Pembine; 4th W. L. Quaas, Dunbar; 5th Lewis Winter, Antigo; 6th Mr. Peterson, Webster; 7th John F. Hauser, Bayfield.

Early Rose—1st John F. Hauser, Bayfield; 2d E. R. Risten, Webster.

Irish Cobbler—1st F. S. Campbell & Son, Three Lakes; 2d Oscar Nelson, Antigo; 3d J. M. Nelson, Antigo.

Any Other Variety—1st John F. Hauser, Bayfield; 2d Swan Olson, Hayward; 3d J. Lassig, Rhinelander; 4th J. G. Grandine, North Crandon; 5th Mr. Dorriet, Webster; 6th John Chelmo, Webster; 7th Chas. Parsons, Antigo.

Growing Onions.

In an address before the ninth annual convention of vegetable growers in Chicago recently, L. R. Jones, of the Wisconsin College of Agriculture, discussed clear seed and sanitation; also crop rotation. In discussing the onion he said:

Its worst diseases are borne on the seed or sets and persist in the soil. Yet we wish to grow onions without rotation. For the smut, formalin should be used as a soil disinfectant by attaching a drip tank to the seeder, applying formalin in the drill. This simple measure may double the yield. Use one pint formalin to sixteen gallons water at the rate of one gallon to 185 feet of row, 200 gallons per acre. In addition it is to be noted that with this and also with smudge or anthracnose and the rot the germs are distributed on the bulbs from diseased fields. The practice of plowing under old bulbs as fertilizer on the onion soil is decidedly unsanitary and sure to bring trouble sooner or later. Put them on potatoes or other fields.

Law Questions.

Peddler's License.

A Subscriber, Blue River, Wis.—(1) What is the cost of a peddler's license in Wisconsin? (2) Is such license good for the sale of any kind of goods? (3) How can a person obtain a peddler's license? (4) Does the law allow a cripple, or a person unable to do manual labor, to peddle goods without a license?

Answer.—(1) With a two-horse vehicle or automobile $75 per year; with a one-horse vehicle $45 per year; with a push cart $30 per year; with a pack on foot $20 per year. (2) It is. (3) Apply for the license to the secretary of state at Madison, Wisconsin. (4) It does not.

Fraud in Horse Deal—Set-Off.

A Subscriber, Weyerhauser, Wis.—Last spring I bought a team and gave my note for the price and a chattel mortgage on a sleigh and wagon to secure the note. The team was misrepresented to me when I bought it. Can the holder of the note collect it and take the sleigh and wagon on the mortgage?

Answer.—If the man who sold the team to you still holds the note and mortgage and sues you for the debt you can defend by proving his misrepresentation and set off your claim for damages against his claim on the note, but if he has sold the note and mortgage before due, to an innocent purchaser, such purchaser can take the sleigh and wagon.

It will soon be time to cut scions of apple trees for use in grafting next year. Store these in sand or sawdust. They should neither become dry enough to shrivel nor moist enough to start growth.

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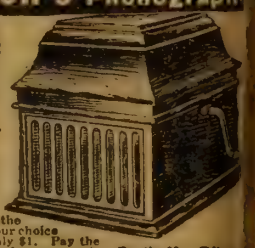

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VETERINARY

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. Thoroughly good and reliable veterinary remedies are advertised from time to time on these pages. If they were not good and reliable they could not appear in our paper. Our readers are requested to look them over. You may find here some remedy which will exactly fit your case. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Probably Tuberculosis.

I have a cow, three years old, that was fresh in January, 1916. She gave milk five months. She is a full-blooded Jersey cow. She took sick and lost all her flesh, her milk gave out and she went dry all at once. She has swelling of the glands. The swelling is right under the throat. She eats well and drinks well. I never have heard her cough and she has no running of the nose. She had one calf and is not with calf now.

It is possible your cow is affected with tuberculosis even if she hasn't a cough. If you prize this cow we would advise you to have her examined and tested by a competent veterinarian.

Bloody Milk.

I would like to know what is the matter with my cow. She is nine years old. She seems in good health but she has been giving bloody milk out of one of her teats for six weeks. Have given her saltpeter, but she is getting worse instead of better.

There are so many causes of bloody milk that it would be hard to prescribe here unless we knew the cause. If you are feeding the cow on high-grade feed cut her ration down some. See that she gets no irritating food, such as acrid plants, moldy plants, etc. There may be some trouble in the teat itself, such as tubercle or tumerous growth, and there would be very little help for such a condition.

Digestive Disturbance.

My cow has recently lost her appetite and she is getting very poor and weak. This cow is four years old. She went entirely dry. She has been sick for about two months. Her eyes are sunk back in her head. Her weakness is mostly in her hind parts. We have given her one small dose of linseed oil, but have given her no other treatment.

We are not positive as to what ails your cow, but it may be a severe digestive disturbance. However, it may be some other trouble which would call for a close examination by a veterinarian. Try the following, which you may get at any drug store: Fluid extract of nux vomica (two ounces), fluid extract of gentian root (two ounces). Have this put up at the drug store and give two teaspoonfuls as a dose in a pint of water. Repeat this three times a day. Give the animal any food she will eat.

Piles.

We have a three-year-old black Jersey heifer that prematurely lost her first calf last fall. She was milked, however, and is not quite dry now. Is due to freshen December 21st. A few days ago she seemed to become constipated and when the bowels move there is a protrusion of the bowel, with bleeding. If replaced will appear all right till next movement. Are we likely to lose her when she freshens?

Your cow is affected with piles from some cause or other. Try giving her a pint of raw linseed oil every day or every other day. Apply externally fluid extract of hamamelis, and inject some into rectum. If there is much itching and pain apply an ointment composed of extract belladonna, one dram, and vaseline, eight drams. Apply externally. She may calve with some trouble, but may be all right after calving.

Leucorrhea.

Will you please tell me what ails one of my cows. She freshened last May and cleaned herself, then she did not come in heat until August 10th. I had her bred, but she came in heat again around September 20th and I had her bred to another bull. She has come in heat twice since, but I did not breed her. I noticed a whitish discharge comes from her every now and then. She is around nine years old and a Holstein. Has been in good pasture all summer, with plenty of water and salt. She is also in not very good condition, always poorer than the rest of the herd.

Your cow in all probability is affected with leucorrhea. This has either been brought about through some internal or external influence that has had a bad effect on the mucous membranes of the passage. Treatment with injections of antiseptic solutions, such as a teaspoonful of lysol to a pint of water made in large quantities, may benefit milder cases. In obstinate ones stronger solutions may be used after the womb has been washed out by a stream of tepid water until it comes clean. A rubber tube is inserted into the womb, a funnel placed in its raised end and the water and afterwards the solution poured slowly through this. If the neck of the womb is so close that the liquid cannot escape a second tube may be inserted to drain it off. As injections may be used chloride of zinc, one-half dram to a quart of water, or sulphate of iron, one dram to a quart of water. Three drams of sulphate of iron and one-half ounce ground ginger may also be given in the food daily.

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Wisconsin Farmers' Institutes.

Farmers' institutes for the remaining dates in December and for January are as follows:

W. C. Bradley, conductor: Rib Lake, December 12th and 13th; Stetsonville, December 14th and 15th; Hurley, 19th and 20th; Mellen, 21st and 22d; Holcombe, January 2d and 3d; Jim Falls, January 4th and 5th; Rockland, January 9th and 10th; Wilton, January 11th and 12th; Bryant, January 16th and 17th; Birnamwood, January 18th and 19th; St. Cloud, January 23d and 24th; Sheboygan Falls, January 25th and 26th; Pulaski, January 30th and 31st.

David Imrie, conductor: Stone Lake, December 12th and 13th; Exeland, December 14th and 15th; Gordon, December 19th and 20th; Gilman, December 21st and 22d; Arpin, January 2d and 3d; Riverside, January 4th and 5th; Oakdale, January 9th and 10th; Rudolph, January 11th and 12th; Silver Lake Resort, January 16th and 17th; Valders, January 18th and 19th; Lake Park, January 23d and 24th; Medina, January 25th and 26th; Abrams, January 30th and 31st.

H. D. Griswold, conductor: Mikana, December 12th and 13th; Dallas, December 14th and 15th; Loyal, December 19th and 20th; Granton, December 21st and 22d; Prairie du Chien, January 2d and 3d; Mt. Hope, January 4th and 5th; Praag Factory, January 9th and 10th; Modena, January 11th and 12th; Royalton, January 16th and 17th; Amherst, January 18th and 19th; Ring, January 23d and 24th; Stephensville, January 25th and 26th; Cedarburg, January 30th and 31st.

E. C. Jacobs, conductor: New Auburn, December 12th and 13th; Sand Creek, December 14th and 15th; Cleghorn, December 19th and 20th; Osseo, December 21st and 22d; Eleva, January 2d and 3d; Fairchild, January 4th and 5th; Ridgeway, 9th and 10th; Montfort, January 11th and 12th; Seymour, January 16th and 17th; Shiocton, January 18th and 19th; De Pere, January 23d and 24th; Forest Junction, January 25th and 26th; Pt. Washington, January 30th and 31st.

W. H. Clark, conductor: Weyerhauser, December 12th and 13th; Bruce, December 14th and 15th; Maiden Rock, December 19th and 20th; Plum City, December 21st and 22d; Athens, January 2d and 3d; Unity, January 4th and 5th; Prairie du Sac, January 9th and 10th; Avoca, January 11th and 12th; Caroline, January 16th and 17th; Big Falls, January 18th and 19th; Lamartine, January 23d and 24th; Eden, January 25th and 26th; Denmark, January 30th and 31st.

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Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

Lighting the Farm Home.

Home lighting is an important question and it confronts us squarely when the evenings lengthen and the season arrives when the family spends many hours working, reading, playing by artificial light. A poor light is the poorest economy. Adequate lighting facilities are more expensive in the beginning than a kerosene lamp, but equally expensive is expert care of the eyes once they have been strained by working in a poor light.

Time was when the kerosene lamp was about the best that could be done for the farm home, and an improvement it surely was over the tallow dip. But that time has passed. Today, with gasoline lamps, denatured alcohol lamps, home gas and electric plants perfected, the farm home may be as well lighted as the city home.

In selecting the type of plant to be installed many things must be considered—initial outlay for installation, adaptability to existing conditions,

The shaded reading lamp that may be used in any room is an important part of the home lighting system.

cost and convenience of operation. The light giving good service with minimum cost, safety and efficiency is the one to be sought.

To begin with, the simplest and least expensive system, the sum of $5 to $10 will purchase one or more very efficient oil or gasoline lamps. These lamps are so perfected that they rival even electricity in the light they produce. They may be had in bracket form, to be carried from room to room, or as a hanging lamp, a combination of the two making a very satisfactory system for an ordinary six or seven-room house.

It is desirable, however, to have a lamp for each room. For this purpose there are many lighting systems using gasoline in common use. These are constructed with a reservoir for the gasoline, placed at a convenient, yet safe, distance from the burner, the gas being produced by passing the gasoline through a small tube over or around the heated burner, the gas burning inside a mantle, thus producing a white light. Some of these are self-generating and may be lighted by

A central ceiling lamp throws the light to all parts of the room so that there are no dark, shadowy corners.

simply applying a match, while others must be generated. It is estimated that $25 will cover the cost of supplying such lights to each room of a seven-room house, even including the basement, or for perhaps twice this sum the whole system may be operated from a central low pressure supply tank which is placed in the basement or outside of the building. The placing of the gasoline supply tank outside the building is a favorable point, though the individual lamps are considered safe.

Nor is it any longer necessary for a farm to be located on an electrical line in order to have electric lights if that is the type preferred, for any farm may have these by installing its own little plant. The perfection of the gasoline engine and the modern filament electric light globe make this possible. Of course, the original cost of such a plant runs up to $200 to $500, but besides the lighting they furnish power for washing, pumping water, and make possible for the farm housewife such conveniences as the electric iron, toaster, vacuum cleaner, sewing machine motor, so that her labor is materially cut down. Electric lights are safe. They are safe for the house and they are safe for the outbuildings. They save caring for lamps, and after the first cost they are considerably cheaper per candle power hour than kerosene lamps.

The arrangement of lamps should be given careful thought. A study of conditions will save many a desire to change the location of a lamp after it has once been installed.

Cretonne Work Basket.

To the Editor:—Somewhere I have seen a work basket made of cretonne and mounted on legs made of broom sticks. I thought it was very pretty and I want to make one, but do not know how to go about it. I thought perhaps some of the readers of the Home page may have made similar baskets and can tell me how to do it. As I remember it the basket is round and the three broom sticks cross beneath the basket and stand on the floor. The basket is lined with silkoline. I want to know how large to make the circle of the bag and how to fasten the broom sticks to it. Should there be a wire in the top of the back to fasten the broom sticks to or is there a draw string in the top of the bag? If any of the readers know how this is done I would be pleased to have them tell us how. E. B.

Food Value of Corn.

A comparison of the various articles of food shows that a pound of corn worth 3 cents is equal in food value to 64 cents' worth of eggs, 41.5 cents' worth of round steak, to 35 cents' worth of cabbage, to 14 cents' worth of potatoes or to 10 cents' worth of bread. Based on its food value, corn in the form of meal or hominy is the cheapest foodstuff obtainable. Mush, hominy or corn flakes, when prepared in the home, are wholesome, readily digested and cost less than one-tenth as much as the average priced breakfast food.

Would Take Things in Her Own Hands.

To the Editor:—In the issue of October 19th among the editorials I read one entitled "A Household Tragedy," and, having read many other similar complaints, I will give you my views on the subject.

It seems this lady is very capable. She says she could teach. It seems she has been assisting her husband in addition and multiplication with a very little subtraction, but when it came to division he did not care to divide, so after vain attempts to get him to do so she quit.

She might write to all the papers published and state her grievance and get good advice, but I believe if her husband ever learns division she will have to teach it to him. Where there's a will there's a way. She says they have sixteen horses, yet she walks seven miles. If I could walk seven miles I could catch a horse, harness and hitch him if my husband or hired man would not do it for me. If he refused his help I would tell him I would walk no more and would get the horse myself if I could. If I could not I would walk rather than stay at home. But I would not walk back. I would telephone him to come after me. If he refused I would get a livery to take me home. If he was angry I would be angry also that he had not done as I wished. I would tell the livery man that my husband would settle with him. I would go on about my work as usual, and if his manner was cold and haughty I would be cold and haughty also. If he would talk about my actions, so much the better; I would argue the case with him to the finish. I would show to him my every thought on the subject; I would tell him I had meditated much on the subject of partnership between man and wife; that I knew my rights; that for ten years I had been trying to tell him I had rights to some dividend, but could not make him see it, and now I demanded those rights of him.

When shopping I would look at some article I wanted (in his presence if possible). If a dress, I would ask him if he did not think it pretty and if he did not think it would be becoming to me. If I decided I wanted it and he could afford it I would say, "Please do this up for me and Mr. ——— will settle for it." Perhaps he would call me to task about it on the way home or after our arrival. If he joked about it and twitted me for having high-fangled notions I would joke him about his purse—that the straps were rather tight and needed loosening. If he got angry I would meet him on that score. I would show him I was not afraid of him, his jokes or his anger, that I was his life partner and his equal in every respect.

I fancy I hear this woman say, "I would never enjoy wearing that dress." No, nor would I, but I would wear it—I would act as proud of it as though he had brought it home to me as a gift.

I cannot go on and tell just what I would do in everything, but I would divide for him if necessary until he learned division was as necessary as addition. Perhaps this woman would not like the break in the peace of the home, but there was never a battle where the right principle was fought for and upheld but that the bond was stronger when peace was declared. As it is they are drifting apart; she is cherishing ill feeling toward the man she loves; he has placed the purse between them, and as the purse gains in size so the rift is widening. She is his slave; he is her master. He is a good, kind, loving master, but her master nevertheless. Will she undertake the task of teaching him division or will she quit at addition and multiplication? Is she a "quitter?"

—Nellie.

Recipes.

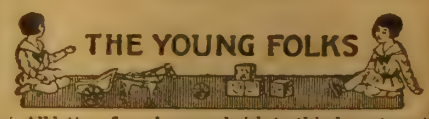
Baked Sliced Ham.—Two pounds sliced ham, two teaspoonfuls minced onion, two teaspoonfuls minced parsley, juice of half a lemon to each slice of ham. Slice the ham one-half inch thick; remove fat nearly to the lean and chop it fine. Mince the onion and parsley, mix with the fat and spread over the ham, which should be put into a dripping pan. Squeeze over the ham the lemon juice, and bake till tender in a moderate oven, from thirty to forty minutes. Make a gravy from the drippings in the pan.

Cream of Celery Soup.—One and one-half cupfuls lamb or chicken stock, one and one-half cupfuls milk, one-half cupful cream, twelve stalks celery, one potato, one small onion, two sprigs parsley, bit of bay leaf, few grains mace, two tablespoonfuls butter, one and three-fourths tablespoonfuls flour, salt and pepper to taste, few grains soda. Prepare vegetables and chop them all together till very fine; add to the stock and let simmer till tender, about thirty minutes. Heat the milk, mace and bay leaf together in a double boiler, add the stock and vegetables, together with the soda and then stir in the butter and flour, which should be creamed together. Season to taste, cook ten minutes, add cream, which should be scalded, and serve at once.

Sweet Cider Jelly.—Two tablespoonfuls gelatine, one-half cupful cold water, three cupfuls sweet cider, sugar, one-half cupful boiling water. Soak gelatine five minutes in the cold water. Dissolve in the boiling water, add cider and sugar to taste. Stir until the sugar is dissolved. Strain into a mold, first dipped in cold water, and chill.

Carrot Pudding.—One-half cupful butter, one cupful sugar, one cupful grated raw carrot, one cupful grated raw potato, one and one-half cupfuls flour, one-half cupful raisins, two eggs, one teaspoonful soda, one-half teaspoonful cinnamon, one-half teaspoonful cloves, one-half teaspoonful nutmeg. Cream butter; add sugar and eggs; beat thoroughly; add grated vegetables and soda. Mix dry ingredients and fruit and add gradually to first mixture. Pour into buttered molds and steam three hours. Serve with foamy sauce.

Foamy Sauce.—Two egg whites, one cupful powdered sugar, one-fourth cupful cream, one teaspoonful vanilla. Beat eggs; add sugar gradually and continue beating; add milk and vanilla.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Liked Melva's Letter.

Dear Young Folks.—I surely enjoy reading the letters from boys and girls. I read them aloud to my sister Jennie and to my mamma. We all enjoy them. I am twelve years old and am in the seventh grade. I go to a country school. We call it the City View School. Our teacher bought a swing and a store-keeping outfit for us. The boys made us some shelves for our store. We play in the woodshed with our store on rainy days.

I can do fancy work and crochet and I like to get new patterns for crocheted lace. We have a sewing club in school called the Busy Fingers. We learn to crochet and such things.

I think I liked Melva's letter the best of any I ever read. She asked the riddle: Here sits an Indian on a stump; he is my son, but I am not his father. The answer to it is his mother. —Hazel.

The Two Sisters.

The two sisters have no mother or father. They live on the farm with their grandparents. They like it very much out there. Their names are Helen and Gertrude.

One day they asked their grandma if they could go out walking and she said they could if they would not go too far.

They went down the lane that led to the road and little Gertrude, who was always into mischief, said, "Let's go a little bit farther." Helen said, "You can if you want to, but I won't." So Helen went home.

Her grandma asked her where Gertrude was and she said, "She went a little farther on." Her grandma said if little girls didn't mind something would happen to them.

As Gertrude was walking along the road she saw something that looked like eyes. It happened to be the eyes of a wolf. It scared her, so she began to scream and call for her grandma, but her grandma did not hear and could not return her call. She ran all the way home, not turning at all, but keeping right on straight till she came to the lane that led to the house. When she got to the house she was tired and out of breath.

When she went in the house her grandma said that naughty little girls always got into trouble and Gertrude promised that she would always mind after that, because she had learned a lesson. Her grandma said that she thought it was best to do right.

After that when Gertrude went out walking she didn't go any farther than her grandma told her to.

—Tiny Johnson, Age 12.

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Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1665—Girls' combination waist and drawers. Pattern is cut in 5 sizes: 2, 4, 6, 8 and 10 years. It requires 2¼ yards of 36-inch material for a 6-year size.

1940—Ladies' dress, consisting of a one-piece overdress and an underwaist, with sleeve in either of two lengths. Pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2½ yards of 44-inch material for the underwaist, and 3⅞ yards for the overdress for a 36-inch size.

1921—Ladies' house dress with sleeve, in wrist or elbow length. Pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6¼ yards of 44-inch material for a 36-inch size.

1497—Girls' coat with two styles of collar. Pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 2½ yards of 54-inch material for a 10-year size.

1915—A popular ladies' apron. Pattern is cut in 3 sizes: Small, medium and large. Medium size requires 4⅛ yards of 36-inch material.

1926—Ladies' gymnasium suit. Pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 6⅞ yards of 44-inch material.

1919 Waist-1928 Skirt—A smart dress for business or general wear. Skirt pattern is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Waist in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 6⅛ yards of 36-inch material for a medium size for the entire dress. Two separate patterns, 10 cents for each pattern.

1771—A waist for general or dressy occasions. Pattern is cut in 6 sizes:

34, 36, 38, 40, 42 and 44 inches bust measure. It requires 3 yards of 36-inch material for a 36-inch size.

1931. A smart frock for dancing, party or best wear. Pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 3 yards of 27-inch material for the dress and 1 yard for the bolero, for an 8-year size.

1532—Juniors' dress. Pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 5¾ yards of 36-inch material for a 14-year size.

1515—Girls' middy dress with skirt attached to an underwaist and with sleeve in either of two lengths. Pattern is cut in 5 sizes: 6, 8, 10, 12 and 14 years. It requires 4½ yards of 44-inch material for a 10-year size.

1594—A fashionable skirt. Pattern is cut in 6 sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 4 yards of 44-inch material for a 24-inch size.

International Sunday School Lesson.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Lesson for December 10, 1916.

Faithful Unto Death.

LESSON TEXT—Rev. 2:1-17.
GOLDEN TEXT—Be thou faithful unto death, and I will give thee the crown of life.—Rev. 2:10.

This passage most wonderfully illustrates that dominating purpose of Paul's life. More than most lessons a map will be necessary to locate distinctly the places mentioned. There are interesting stories in connection with each of the seven cities and churches. It might be wise to give to seven different people the task of bringing information to the class regarding each one mentioned.

I. Ephesus, Whose Love is Waning (vv. 1-7). The key word to these messages is the word "overcometh." In each of the messages our Lord describes himself in a different way according to the peculiar needs of that particular church. Here he is represented as holding the stars (messengers of the churches, Ch. 1:20) in his right hand, and keeping them secure, controlling them while he walks in the midst of the seven golden lamp stands, literally churches. The symbolism of "lamp stand" is used because the churches were intended to be light bearers as they held forth the light given by the oil of the Spirit (Math. 5:16; Phil. 2:16; Zech, 4:2-6). Ephesus was the capital of a province said to be one of the richest in the Roman empire. In it was the great temple of Diana. Here Paul had labored and had various experiences, and to Ephesus he had written a letter (See lesson 8, third quarter) but there were good things to be found in this Ephesian church (vv. 2,3). Forty years after being founded, John writes this message. He knew their "works," their general moral conduct, especially its active and passive sides through its trials, its dealing with impostors and its practical energy and enterprise; and its patience (literally steadfast assurance) in bearing witness for Christ. Jesus knew of their never wearying endurance. Surely these things would indicate pretty nearly a model church. Jesus says: "No, there is something seriously wrong," so seriously wrong that unless repented of he would remove them out of their place.

II. Smyrna, the Church With a Crown of Life (vv. 8-11). Smyrna was forty or fifty miles from Ephesus, and at this time a city of 250,000 inhabitants. To this church the Son of Man (Ch. 1:11) sends another message. It is interesting to note that this church and the one at Philadelphia received from the Master unqualified praise. It had works, activities; it also had tribulations, riches and poverty (for thou art rich) rich in good works, rich toward God, rich in treasures laid up in heaven; however, it was in the midst of persecution. It was here that Polycarp labored, who afterward, as bishop of Smyrna, was martyred (see v. 10). Of Polycarp it is said that rather than save his life by renouncing Christ he cried out, "Eighty and six years have I served him, and he has done me no ill; how then can I blaspheme my king who hath saved me." The crown is eternal life, the crown of victory. The second death is the final condemnation which sinners undergo at the judgment seat of God.

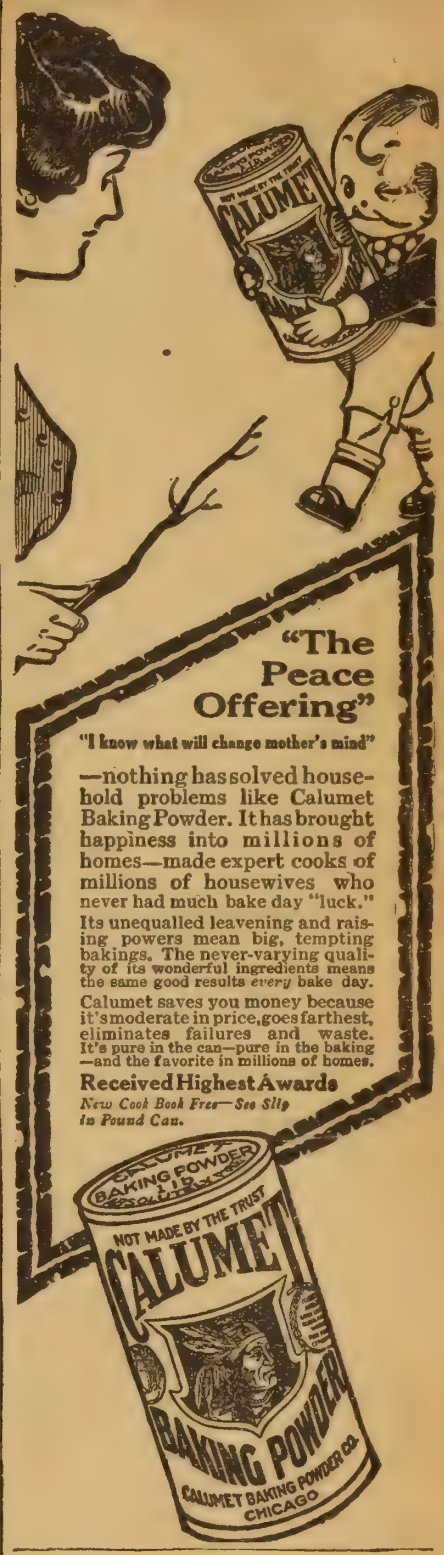
III. Pergamos, the Church in a Stronghold of Faith (vv. 12-17). Our glorified Lord knew that the church in Pergamos was in a peculiarly difficult situation, that it was Satan's headquarters, his "throne" (v. 13); hence they were in especial need of a defender and the Lord is represented as "he that hath a sharp, two-edged sword," the word of God (Heb. 4:12-13; John 5:22). Pergamos was almost fifty miles north of Smyrna, a city of about 17,000 inhabitants, and the capital of the province. To it were brought many of the early Christians who were compelled to suffer martyrdom. Again we have a church whose works are commended, whose steadfastness is mentioned in that they "held fast to my name, and not denied the faith"—martyrs (vv. 13). However, dangers threatened them for there had been a compromise with the world and with other systems of faith, what we would call today liberality in doctrine and breadth in view in teaching: (1) Some of their number had accepted and practiced the doctrine of Baalim (Jude 11; Num. 31-16). (2) These teachings cast a stumbling block before the children of Israel (v. 14). This was done by persuading the Israelites to join in the idolatrous feasts and revelings of the heathen, and also their impurity of worship.

In the remaining part of the chapter we have some glimpses of the remaining four churches, the good that was to be cherished and the evil that was to be overcome.

Perhaps the most suggestive of all is that of Laodicea, the lukewarm church. Lukewarmness is one of the most deadly evils to overcome, and hence the highest and most glorious of all the promises suggested ends with "I will give him to sit down with me in my throne as I also overcame and sat down with my father in his throne" (Am. R. V.)

Anton Schneider raised sugar beets this year on two tracts of land and averaged over fourteen tons to the acre. The same land has been in sugar beets for four years and this does not look like sugar beets impoverish the soil. However, a more intensive cultivation with a rotation of corn, potatoes, grain and beets seems to appeal to most of the farmers in the beet growing sections.

A good time to get rid of a few rabbits about the orchard is after the first snowfall. Organize a hunt and get a few of them before they injure the fruit trees. They are good to eat at this time.



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UPPER WISCONSIN

Potato Crop in Rusk County

To the Editor:—The potato crop in Rusk county this year averaged about 50 per cent of the normal crop. The average yields of our large fields run about 125 bushels. On the sand loam soils of the county the Green Mountain was planted almost exclusively, while on the heavy clay and clay loam soils the Rural New Yorker predominated. The Rural New Yorker this year held its type slightly better than the Green Mountain and matured fully ten days later. On old fields where the seed was not treated common scab was very prevalent. Our experiments on new land where seed treated by soaking in formaldehyde solution proved conclusively that the disease can be easily controlled. Tip burn was the most serious factor in cutting down the yield this year. Fields that we sprayed twice or more with Bordeaux mixture suffered much less from tip burn and repaid well for the treatment. The bugs were very destructive on the older fields. Where arsenate of lead and Paris green was added to the Bordeaux mixture the bugs were controlled without loss.

This year spring plowing on clover sod proved to be better than fall plowing on the sand loam soils. On the heavy clay soils fall plowing showed an increase in yield over spring-plowed land.

Pure seed of Green Mountain and Rural New Yorker varieties are being disseminated generally throughout the county and within the next two years we expect Rusk county to be producing first-class seed potatoes in large quantities. G. M. Householder.
Rusk Co. Agl. Agt.

RUSK COUNTY EXHIBIT AT RECENT POTATO SHOW—THIS EXHIBIT WON THIRD PRIZE.

Production in Douglas County.

Assessors' reports in Douglas county show that potatoes was the leading crop in 1915, there having been 86,155 bushels produced. Oats was second with a total of 71,086 bushels.

Besides the above the following crop yields per bushel were given for the past year: Wheat, 5,266; corn, 2,210; barley, 2,986; rye, 5,341; flaxseed, 85; cranberries, 30; apples, 102; strawberries 508; blackberries, 40; currants, 1; clover seed, 203.

There were 965 bushels of sugar beets raised in the county. In all there were 13,806 tons of hay raised during the year 1915.

The land as apportioned for various crop purposes for this year is as follows: Wheat, 631; corn, 1,108; oats, 3,412; barley, 216; rye, 717; flaxseed, 1; potatoes, 1,124; cabbage, 5; land used for apple orchards, 16; strawberries, 15; raspberries, 3; currants, 1. Over half of the land in cultivation in the county is used for the raising of grasses.

There are 4,186 milk cows in the county, according to the report. These have a total value of about $127.471. All other cattle add up to only 1,569 in number and have a total of 21,353. The county has 2,300 horses whose value is estimated at $182,403. There are about the same number of sheep in the county as there are hogs. The former number 454 and the latter 424. The total value of the hogs is more than twice that of the sheep. The sheep value of the county is placed at $1,231 and that of hogs at $2,766.

There were 690,990 pounds of butter made in the county last year. Over a third of this was made on the farm and the rest was manufactured in the four creameries of the county. There were 185,578 pounds of butter made on the farm with an estimated value of $43,556. The creamery made butter value was estimated at $164,479 for a total of 405,402 pounds. Besides the milk that was sold to creameries, farmers sold 843,745 gallons directly.

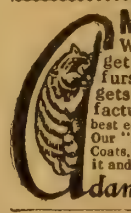
Quarantine Regulation is Raised.

We are all happy to know that the quarantine regulation, caused by a scare over supposed foot-and-mouth disease at the Kansas City Stockyards, has been raised. The Wisconsin Farmer receiving the following telegram dated December 4th:

Bureau of Animal Industry has raised quarantine regulation here and business is back in normal channel.
KANSAS CITY STOCKYARDS CO.

Give our readers a chance to buy what you have for sale. Advertise it in THE FARMERS' MARKET. Six cents a word each insertion.

HIDES AND FURS.



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Live Stock and Commercial Notes.

Gathered by Representatives of The Wisconsin Farmer.

Swinehart's Short-horn Dispersion.

THE Short-horn herd of R. L. Swinehart, Avoca, Wisconsin, will be dispersed in public sale on Tuesday, December 19th. Short-horn cattle have been bred on this farm for forty-five years and nothing but a pure-bred sire has been used on this farm for sixty years. The herd is headed by Collynie Sultan 387633 by Browndale 334947 and out of Browndale Maid 3d 76024. His sire, Browndale, is by Avondale 245144, whose record as a sire is so well known that it needs no further comment. Browndale was bred by Carpenter & Ross and is out of Maxwelton Mina 2d. The dam of Collynie Sultan is Browndale Maid by Sultan 291836. The cows in the herd of breeding age are in calf to Collynie Sultan, that is of fine roan color and of Young Mary, Duchess of Gloster, White Rose and other well-established lines of breeding. As a whole the animals are good milkers, having been now being in milk and doing very creditably. Send for a catalog of the sale to R. L. Swinehart, Avoca, Wisconsin. J. A. Tormey will be sales manager and G. P. Finnegan and Jess Miller will be the auctioneers. Avoca is fifty miles west of Madison on the Prairie du Chien division of the C. M. & St. P. Railroad. It is very easily reached from all points in Wisconsin, Minnesota, North and South Dakota and Iowa. It will pay western buyers to attend this sale. Connections from the west are easily made by the way of North Mc-Gregor, Iowa. When writing for a catalog kindly mention that you saw their advertisement in The Wisconsin Farmer. See page 20.—Adv.

One Hundred Short-horns.

ROCK COUNTY, WIS., has started something that other counties could well pattern after. A county Short-horn Association was formed some time ago and they now have about fifty members. This fact was a surprise to many, for no one thought there were not many Short-horn breeders in that county. The association is now ready to supply the wants of the prospective Short-horn buyer. About 100 head of cattle are for sale at this time. This includes cows and heifers and bulls of serviceable age. If you want cattle of the most fashionable Scotch breeding, the association can supply your wants. If you want milking Short-horns the best herds in the state are in Rock county and by writing J. E. Kennedy, secretary, Janesville, Wis., you can get all information you desire. If you want one you get the pick of about a head, if you want a carload, we know of no better place to buy. Write the secretary and please mention The Wisconsin Farmer.—Adv.

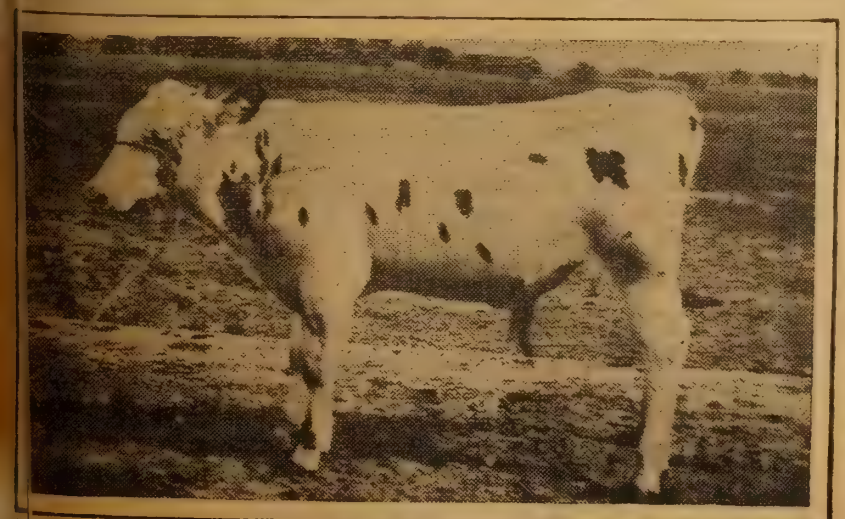
Aberdeen Angus Notes.

FOR the past several months we have been trying to get a "line" on the best herds of beef cattle in the state of Wisconsin and we are glad to say that we have found many good herds that had never been heard of before, outside of their own immediate locality. What is the use of buying and raising good cattle if you don't let the people know about them? There are more good Aberdeen Angus cattle in Grant county than in any other county in the state of Wisconsin and the herd of "doddies" owned by R. A. Austin & Son, of Lancaster, is one of the best three herds that we have seen in the state. Mr. Austin, senior, is one of the older breeders of the state. He recently moved to town and sold a half interest in the herd to his son, Bert E., who is an enthusiastic cattle man and a good caretaker, and is one of the younger generation of cattlemen who are going to put Wisconsin on the map as a beef cattle state. This firm has a herd of some eighty registered Angus cattle representing the most popular families of the breed, namely, Blackbird, Trojan Erica and Erica, Queen Mother and Barbara. The past spring fifty-four cows dropped fifty-four calves and raised fifty-three, which certainly shows that they have a working herd of cows and the calves are on the farm to show for themselves. At the present time eight bulls are being offered for sale. They range in age from around ten months to a year and a half and we have not seen a better lot of young Angus bulls this year. They are thick, sappy fellows, very rugged, good lines, nice heads and well bred. The prices range from $100 to $175 and no matter how many miles you travel to see this herd you will be impressed with their cattle. The advertisement appears in this issue and if you are interested in this breed you will like the bulls they are offering for sale. Write for further information and in doing so kindly say you saw the advertisement in The Wisconsin Farmer. See page 20.—Adv.

THE 23.13-POUND BULL ADVERTISED FOR SALE ON PAGE 22 BY THE PINEHURST DAIRY, SHEBOYGAN FALLS, WIS.

The Villagers.

GOOD Short-horns are always in demand, yet as with all breeds of cattle certain blood lines are favored by discriminating buyers. For the past few years the blood of the great bull, Villager, has been very popular, and as more and more of this sire's sons and daughters come to maturity, the more this line of breeding is appreciated. Perhaps the best bull of this breeding in the state of Wisconsin is Village Denmark 8th, he by the renowned Village Denmark, said to be the best son ever sired by Villager. Village Den-



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Direct From Factory to User

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and return to me within one year if not perfectly satisfactory. Remember we manufacture in our own factories and sell direct from factory to farm. Remember that no speader is as good as the Galloway that does not have these modern improvements, and remember again that other spreaders can't have them because they are patented Galloway features and can be found on no other spreader.

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pay for this spreader on your own terms. Buy it now, use it all winter and spring, pay for it next fall when it suits you. Complete particulars of these six easy selling plans in my new free book which tells all about Galloway spreaders, engines, separators, tractors and farm implements built in my own chain of factories right here in Waterloo.

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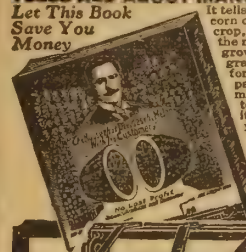

It tells you how to double your corn crop--increase your wheat crop, and by the judicious use of the manure crop on your farm grow three bushels of small grain where you grew two before. A postal gets it. 250 pages. Tells how to handle manure with least labor. How to increase your corn crop 15 to 25 bushels per acre. How a Galloway spreader will pay for itself in one year by increasing crop profits. How we save you $25 to $50 and still give you a better spreader. How and why a Galloway spreader handles easier with two horses than other spreaders with three and often four. How a run out, unproductive farm was turned into a gold mine crop producer. How to build a manure pit to preserve fertility, etc.

Only 42 in. High at Center of Box

All four wheels under the load. A compact, low down, modern spreader without an equal on the market today.

WM. GALLOWAY.

Note These 1917 Improvements.

Look at the above picture.

A--Shows the new all steel V-shape rake which spreads manure evenly over the beater for wide, even spreading.

B--Shows adjustable automatic tension to make the comb handle load any height above the box.

C--Shows guard which throws all manure over to the beater.

D--Shows the Galloway patent roller feed lever.

E--Shows the stronger than ever beater teeth fastened in all steel beater bar with locknuts

F--Shows chain drive, pulls direct from both rear wheels. Remember--a DOUBLE chain drive.

G--Shows where feed lever operates in feed sprocket which moves the endless apron force feed direct back to the beater.

H--Shows you how strong the feed wheel is.

I--Shows arrows pointing to drive sprockets on both rear wheels.

THE WM. GALLOWAY CO.,
Waterloo, Iowa.
Gentlemen:—
I am well satisfied in every way with spreader, and also with treatment I accorded me by your Company, and must say I saved at least $40.00 by buying from you with interest figured in on the money. Yours very truly,
P. L. Watson, Randolph, Nebraska.

Made and Shipped Direct From Our Great Factories in Waterloo,

WM. GALLOWAY CO.,
Waterloo, Iowa.
Gentlemen:—
I want to thank you for your courtesy and square dealing in my purchase of a manurer No. 8 that you shipped me. It is giving me the best of satisfaction. I have been in active business more than 25 years and I wish to say I never received more kind or fairer treatment than I have from your house. Some people say, keep your money at home. I have as good a spreader as money can buy, and by buying from you I kept $35.43 in my own pocket which is the nearest home I can keep it. Some said that a 65 bushel machine was too large, but I am using mine with a team that weighs 1,800 lbs. with perfect satisfaction. Very truly yours,
Mr. Wm. H. Adams, R. 1, Pound, Wis.

WM. GALLOWAY, PRES., WM. GALLOWAY CO., WATERLOO, IOWA

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Address. **American Tract Society, Dept. 5, Park Ave. and 40th St., New York City, N.Y.**

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IS it not a fact that the things you want the most seem the hardest to get? Have you wished and waited, oh, so long, for some little luxury that you wanted very much, yet hesitated to buy? A tasteful set of Rogers Silver Ware for your table? Or a pretty brooch; a nice book, a pair of gloves; a shopping bag, or any one of a hundred other nice things that you did not wish to spend money for?

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THE PEOPLE'S HOME JOURNAL

80 Lafayette Street, New York

mark 8th is a rich roan, very thick, has a wonderful spring of rib, is evenly fleshed, exceptionally good at the shoulders, a typical Villager head, and having great scale. With a little fitting we feel safe in saying that he would easily weigh 2,400 pounds. Not only is this bull a good individual himself but he is a prepotent sire. He puts his stamp on every calf he sires. This good bull is owned by J. E. Kennedy, Janesville, Wisconsin, and should be classed among the best in the state, in fact, any state. In our estimation he is one of the three best bulls in the state of Wisconsin. Incidentally, we might mention the fact that Mr. Kennedy has a half dozen outstanding young bulls for sale—well bred and suitable to head herds of pure-bred Short-horns. We like to recommend these bulls, for we feel sure they will give satisfaction. See advertisement on page 21.—Adv.

Production and Individuality Combined.

A HOLSTEIN bull in which is combined high producing blood and outstanding individuality is advertised for sale on page 22 by The Pinehurst Dairy, Sheboygan Falls, Wisconsin. His sire is the twenty-eight-pound bull, King Segis Concordia Hengerveld 96214, that is a son of the thirty-seven-pound bull, King Segis De Kol Korndyke. This makes him a half-brother to Mabel Segis Korndyke, that made 40.32-pounds of butter in seven days and 165.22 pounds in thirty days. King Segis De Kol Korndyke is out of Pontiac Clothilde De Kol and sired by King Segis. He is, therefore, a full brother to the great bull, King Segis Pontiac, whose sons have sold for such phenomenal prices as $35,000, $25,000, $20,000, etc. The dam of King Segis Concordia Hengerveld (sire of the bull for sale) is Sadie Vale Concordia Hengerveld, a daughter of Hengerveld De Kol, claimed by many to be the greatest transmitting sire of the breed. He had 116 A. R. O. daughters, ten above thirty pounds and his daughters' daughters have made wonderful records. The dam of the yearling bull for sale is Pinehurst Grace, that made 23.13 pounds of butter in seven days. She is a daughter of Sir Piebe Johanna Sarcastic, that has nine A. R. O. daughters, four of which have records from twenty to 28.63 pounds butter, all making their records at three years old, which is a remarkable showing. This yearling bull is an outstanding youngster himself, being well grown, of good, straight type and showing constitution and capacity. He is a good individual, not by accident, but because it has been bred into him in every blood line. He also inherits high milk producing blood in every line of his pedigree. There is every reason to believe that he will transmit to his offspring these desirable qualities of good type and high production, as it has been strongly intensified in his blood. His dam will be tested again as soon as she freshens and there is no doubt that she will increase her record very materially as she is capable of a much larger production now than when three years old. Send for an extended pedigree and photograph of this young bull.—Adv.

Menke Buys a Good Boar.

IN A letter received a few days ago from A. Menke & Son, Markeson, Wis., they state: "We have bought a son of Black Jumbo, which we intend to use. We have some gilts for sale which we are going to breed to him. We also have some choice boars on hand at present, which are good, stretchy fellows weighing around 250 pounds sired by Prairie Chief 251053, which will be priced to move quickly. We have three choice bulls ready for service. Also a choice lot of calves sired by Collynie Victor 387634." Our readers are well acquainted with Black Jumbo, and the kind of sons he sires. Menke & Son are to be congratulated on their foresight in purchasing such a boar and the gilts bred to him are worth a lot more money than if they had been bred to a boar of mediocre quality and breeding. The Short-horn bulls sired by Collynie Victor 387634 must be good ones, as he was good enough to win first at several big shows. Write for further description. See advertisement on this page.—Adv.

Kartman Poland Chinas.

IF YOU want Poland Chinas that have stretch and size and with as good breeding as can be found you should write Chris Kartman, Cassville, Wis. Tell him what you want and he will try hard to please you. He will not sell any gilts, for they are reserved for his bred sow sale which will be held February 16th. This is one of the winter sales that you do not want to forget. See page 23.—Adv.

Short-horn Bulls.

IF YOU need a Short-horn bull investigate those being offered for sale by W. F. Wilcox, Milton, Wis. He has reds and roans and they are being priced very reasonable. His advertisement appears in this issue. Write at once and mention this paper. See page 21.—Adv.

Lost Without Wisconsin Farmer.

W. H. EASTERLY, proprietor of Walnut Knoll Farm, near Whitewater, and owner of the Walnut Knoll herd of Poland China hogs writes us that he hasn't had The Wisconsin Farmer for several issues and that he is lost without it. We shall certainly see to it that Mr. Easterly doesn't miss another issue. Mr. Easterly recently bought an extra good boar of the Smiley breeding. He has an advertisement on this page of this issue which will be of interest to hog men. Please be sure to mention The Wisconsin Farmer when you write to him.—Adv.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

SALE DATES.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Steele Co. Combination Sale, W. V. Gousseff, Mgr., Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.
Feb. 26, Geo. Pagel, Zumbrota, Minn.
Feb. 26, George W. Pagel, Zumbrota, Minn.

SWINEHART STOCK FARM

SHORT-HORN DISPERSION SALE

AVOCA, WIS., TUESDAY, DEC. 19, 1916

(50 Miles West of Madison on C. M. & St. P. Ry.)

33 Head of Registered SHORT-HORNS

Including the 3-year-old bull, **COLLYNIE SULTAN 387633** and 32 females ranging in age from a yearling to mature cows

THEY are of Young Mary, Arabella, White Rose, Duchess of Gloster and other well-established lines of breeding. Roan, red and white in color. Fifteen now in milk. Send for a catalog and come to the sale. We will also sell one Percheron stallion, Rayon D'Or 43205, and nine high-grade Percherons from colts up to three year olds. G. P. Finnegan and Jess Miller, auctioneers. J. A. Tormey, sales manager.

R. L. SWINEHART, PROP. **AVOCA, WISCONSIN**

'Sale will be held regardless of weather.

TOO LATE TO CLASSIFY.

CHIEF INVINCIBLE

One of the largest, longest, highest back

DUROC JERSEY BOARS

in America. On **JANUARY 8TH** I sell 50 sows as good as ever entered a sale ring. Bred to or sired by **CHIEF INVINCIBLE.** A sale you should attend. Send your name for catalog.

F. M. WASHBURN, LAKE CRYSTAL, MINN.

HEREFORD CATTLE.

HEREFORDS

BULLS FOR SALE

OF serviceable age. Pasture raise and not pampered. Well bred individuals. A few good calves. Come and see them before you buy.

J. J. F. WINTERS **SPARTA, WIS.**

CHESTER WHITE

BOARS for sale. My herd boar, Prince True A No. 1, and 20 young boars of April and farrow, weight about 200 to 225 pounds. bred or open. Satisfaction guaranteed. grees furnished. Address

Carl Hickcox **Spring Green.**

SHORT-HORNS---BIG-TYPE POLA

CHOICE bulls, 1 to 15 months of good b ing. Collynie Victor 387634 in service. stretchy boars ready for service and gilts. pigs of both sexes for sale. Prices reasonabl

A. Menke & Sons, R. 1, Markesan, Wisco

Good Short-horn

FOR SALE. 20 choice bulls and heifers. P reasonable. Standard Scotch breeding a the right type and quality. Richard Mau Son, Fox Lake, Wisconsin.

A CRACKIN good big-type Poland bo spring farrow for sale. Well grown a Smiley breeding. W.H. Easterly, Whitewater

ABERDEEN ANGUS CATTLE.

ANGUS

CHOICE bulls of the fashionable families 15 months old. Thick, sappy, rugged f that are guaranteed in every way. Your bu solicited. R. A. Austin & Son, Lancaster,

Buena Vista Aberdeen An

COWS, HEIFERS and CALVES all sold One bull of serviceable age and two bull for spring delivery, will go at $100 per head

E. F. Ganz & Son **Alma, Wisc**

ANGUS BULLS FOR SA

IF you are going to need a **good** herd bu our prices before you buy. We hav goods. **Hauk Bros., Cassville, Wisc**

SALE DATES.

Short-horn Cattle.

Jan. 3, Minnesota Short-horn Breed Association, South St. Paul, Mi

Hereford Cattle.

Dec. 8, American Hereford Bree Assn., Chicago, Ill.

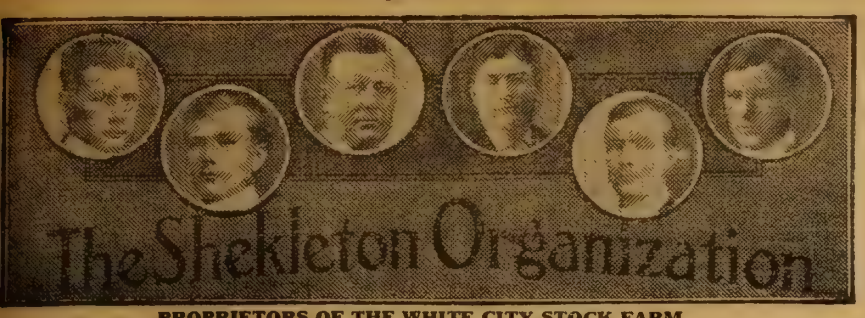
Percheron, Belgians, Shires.

Jan. 30-31-Feb. 1-2, Breeders' Sale C. W. Hurt, Mgr., Bloomington,

Poland China Swine.

Feb. 6, Percy Young, Prosper, Mi
Feb. 6, M. Madson & Sons, Madison,
Feb. 7, Wisconsin Poland China B ers, Assn., J. F. Diley, Rush L Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North F Wis. (Sale at West Salem.)
Feb. 13, Grant County Poland C Breeders' Assn., Lancaster, Wis., lie Dobson, Secy.
Feb. 14, E. W. Hendricks, Hazel G Wis.
Feb. 15, J. C. Hendricks, Hazel G Wis.
Feb. 16, Chris Kartman, Cassville,
Feb. 16, Gerlick & Barker, Mani Minn.
Feb. 22, William Smiley & Son, Alt Wis.

HORSES.



PROPRIETORS OF THE WHITE CITY STOCK FARM.

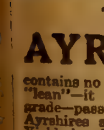
WE have never offered to our trade a more superior lot of Percheron and Belgian stallions, in both imported and American bred stock, than we can now show. Our imported horses are young and thoroughly acclimated, many of them having made seasons in 1915 and 1916 and are tried and tested sires. Our American bred horses were selected from the best breeders in America and are out of noted sires and dams and are horses of great quality in every respect. We have especially selected ten black and dark gray 2 and 3 year old Percheron stallions weighing 10 tons. These are all outstanding horses and should be purchased by those who need a sire for full-blooded mares. Among them is Coco, 1st prize 2 year old and reserve champion at the Wis. State Fair. This colt is black in color and weighs a ton. To the early buyer we offer one of the greatest collections of ton stallions to be seen in any importing barn this winter. We have no old, worn out, picked over stallions on hand. Let us know your wants, or better still, come and spend a day or two. A hearty welcome awaits you. Send 25 cents in stamps for large horse hanger, which shows the picture of a number of stallions now on hand, our main farm and sales stable and our firm's picture. Will sell several of our choice Iowa farms on easy terms.

FRANK P. SHEKLETON & SONS — **LAWLER, CHICKASAW CO., IOWA**

We are 50 miles west of Prairie du Chien, Wis., on the Milwaukee R. R., making direct connections for Lawler.

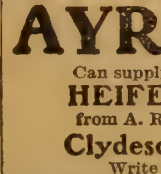
W. A. LANG & CO.
Importers and Breeders of
BELGIANS and PERCHERONS

IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars
W. A. LANG & CO. — GREELEY, IOWA



Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

LEFEBURES' BELGIANS



A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

JERSEY CATTLE.

Fewacres Farm's Jerseys

ARE heavy producers. Irene's Cherry 285828, a senior two year old, just completed a world's record of 12,571.6 pounds milk and 753,629 pounds butter fat. Write us about our young bulls for sale. Pedigrees and further description on request.

FEWACRES FARM - - - WAUWATOSA, WIS.
FRED D. UNDERWOOD, Prop. — **A. M. SERSTED, Supt. Cattle**

OAK GROVE JERSEY FARM

WE are pricing our young bulls very low as we are crowded for calf stable room and have 22 cows to freshen. We are offering two sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and Noble of Oaklands.**

No. 1—Born Feb. 9, 1916. Out of **Volunteer's Sally**, that made 597 lbs. butter. Her daughter made 594 lbs. butter as a 2 year old and holds state record for her age. **Price $100.**
Send for extended pedigree.

No. 2—Born Dec. 18, 1915. Out of **Koffee of Oak Grove,** in 305 days made 413.8 lbs. butter. She finishes her record Dec. 21st as a 2 year old. This bull won 1st at the Elkhorn fair. **Price $75.**
Send for extended pedigree.

WM. KNIGHT - - - EAGLE, WIS.

"Selecting and Developing the Jersey Herd"

is the title of an interesting booklet by Prof. Hugh G. Van Pelt. Describes the five essentials of a successful dairy cow. Explains how to develop the milk producing qualities and increase the vigor of the heifer calf. Write for this booklet today. It's free.

The American Jersey Cattle Club
West 23rd Street — **New York City**

REGISTERED JERSEY
COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**
Ed. Bruins - - Fairwater, Wisconsin

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.
H. Holt & Son — **Oconomowoc, Wis.**

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from advanced Registry dams. I can please you. Write
FRED STUBLEY — **BLACK EARTH, WIS**

AYRSHIRE CATTLE.

ALDEBARAN FARMS A. R. AYRSHIRES

YEARLING AYRSHIRE BULL ready for service. ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address
STEPHEN BULL — **RACINE, WISCONSIN**

The brimming pail of
AYRSHIRE MILK
contains no waste. It is neither too "fat" nor too "lean"—it is STANDARD MILK, 3.94 per cent grade—passes all city and state requirements. Ayrshires are profit makers for the milkman. Yield abundantly to a ripe old age. Write for information and names of nearest breeders.

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Can supply your wants if you want
HEIFERS OR BULLS
from A. R. dams. Also breeder of
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Write your wants Address
JAS. VAN ETTA — **LIMA CENTER, WIS.**

NGRAVING Halftones made from pictures or drawings of stock for your letterheads, post rds, catalog advertising. Quick service, best rk, reasonable prices. Write for information.
HOMESTEAD COMPANY
graving Dept. — **Des Moines, Iowa**

HAMPSHIRE SWINE.

WARNING!
ORDER BRED SOWS EARLY

HAMPSHIRES in great demand. Boars all sold and orders for bred sows and gilts coming fast. A few Jumbo sows. Our gilts large and smooth. Write today.
A. M. LAIRD — **PRAIRIE DU CHIEN, WIS.**

HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.
DANE STOCK FARM
Oshkosh — **Wisconsin**

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.
WILLIAMS BROS. — **BANGOR, WISCONSIN**

USE A SHORT-HORN BULL

ARE you raising beef? A Short-horn bull will give you more scale and bone and more pounds of flesh for a given amount of feed than any other breed. Are you a dairyman? A Short-horn bull with milking ancestry will maintain your milk supply and will sire calves that will be quickly salable at a much higher price than you can hope for from a dairy bred bull. Are you a farmer? The Short-horn is the ideal for your purpose, because it is adapted to all conditions, of quiet temperament, takes on flesh readily, and yields a liberal flow of milk. The Short-horn always works improvement.
AMERICAN SHORT-HORN BREEDERS' ASS'N
13 Dexter Park Ave. — **Chicago, Illinois**

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100 Short-horns to Select From—100

BULLS and females. One or a carload. Write now. **ROCK COUNTY SHORT-HORN BREEDERS' ASSN., J. E. Kennedy, Secy.** - - **JANESVILLE, WIS.**

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30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanrey's Othello. Also cows and heifers and Oxford lams for sale. C. S. Hechtner, Chariton, Iowa.

SHEEP.

Registered Bred Ewes

RAMS all sold. Must now reduce my ewe flock on account of change of farm plans. Will not show at fairs in the future. Offer 25 Oxford, Hampshire and Shropshire bred ewes from $15 to $20 each, also 10 ewe lambs. My stock is of the low-down, blocky type. Address
DANE STOCK FARM — **OSHKOSH, WIS.**

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.
Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

Hickory Dale
Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock headers. Address
Arthur Broughton & Sons — **Albany, Wis.**

CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall

CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write
Harry Crandell — **Cass City, Mich.**

Derenthal
Chester Whites
Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.
H. A. Derenthal - Wykoff, Minnesota

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.
O. P. Coates - Elkhorn, Wisconsin

CHESTER WHITE SOWS AND GILTS

BRED for March and April farrow to Pay Streak and King Cole, a son of Chief Keokuk. Also August and September boars sired by Pay Streak, 2d prize junior yearling at the 1916 Wis. State Fair. Wm. F. BUTTS, Evansville. Wis.

CHESTER WHITES

FOUR choice spring boars for sale that will please. Also an extra good herd header, a grandson of Combination 2d. Write for description and prices. Address
Wm. F. Belda — **De Forest, Wisconsin**

IF YOU WANT
CHESTER WHITES
write W. F. Miller, West Salem, Wisconsin.

Adolph Nuttleman

BREEDER of Chester Whites. Let me know your wants.
WEST SALEM — **WISCONSIN**

PADDY by SCHOOLMASTER
CHESTER WHITES
C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

GREEN VIEW STOCK FARM OFFERS
7 Pure-Bred SHORT-HORN BULLS
7 to 17 months old, and a few choice
POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address
Harvey H. Little — **Evansville, Wisconsin**

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,
H. B. Drake & Son, Beaver Dam, Wisconsin

RIVERDALE STOCK FARM
SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.
H. Wehmhoff - Burlington, Wis.

WILCOX SHORT-HORNS

AM offering several **red bulls** of serviceable age. They are a nice dark red and the finest in the land. Have one that weighs 650 pounds at 8 months old. Priced reasonable for immediate sale. Write for pedigrees, Address
W. F. WILCOX — **MILTON, WISCONSIN**

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.
Geo. Wenham & Sons, Ft. Atkinson, Wis.

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.
Fox & Gallagher — **Oregon, Wisconsin**

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write
E. E. JONES — **ROCKLAND, WISCONSIN**
President, Wisconsin Short-horn Association

KITTY CLAY HERD HORNLESS SHORT-HORNS AND SHORT-HORNS

YOUNG bulls and heifers sired by Kitty Clay's Duke, that is out of the best family of milking Short-horns in existence. Also several Buff Wyandotte cockerels. Address
J. Warren Hoyt — **Rosendale, Wis.**

THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.
Geo. Smith & Son - Burnett, Wisconsin

POLLED DURHAM CATTLE.

D. S. POLLED DURHAMS. An extra good dark roan bull 11 mos. old and a dark red 10-mo.-old bull. They'll suit. F. S. Bunker, Kilbourn, Wis.

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

HOLSTEIN-FRIESIAN CATTLE.

Holstein Bulls

WE have young bulls for sale out of tested dams and some out of daughters of Paul Ormsby and sired by Beauty Pietertje Prince Ormsby. A bull with such breeding as the above cannot fail to improve your herd. Write for full pedigree and prices. Address

DOPP BROS. **OCONOMOWOC, WIS.**

Mountain Ash Stock Farm

HIGH grade Holstein calves 15-16 pure, well-marked, from heavy-producing dams, $18.00 crated. Can locate cows and heifers for you. Write me your wants.

J. B. Cain **Glenbeulah, Wis.**

AT A REASONABLE PRICE

A SON of our noted herd sire, Cornucopia Pontiac Johanna 48355, that is by King of the Pontiacs (192 A. R. O. daughters) The bull for sale was born March 10, 1916. He is very well grown and of show ring conformation. His dam is an A. R. O. daughter of the 33-pound bull, Sir Pietertje Lyons Hengerveld. Send for extended pedigree—picture. Price very reasonable.

N. Dickinson & Son **Lake Geneva, Wis.**

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

SHORTAGE of milk compels sacrifice of young calves. Owing to increase in number of our milk customers, we are compelled to sell some unusually fine bull calves 1 to 2 months old. A. R. O. breeding on both sides. Price for quick sale, $35 to $50. Also a few heifer calves.

SILVER SPRING FARM CO. - **EAU CLAIRE, WIS.**

A RICHLY BRED JOHANNA BULL

SIRED by the 26-pound bull, **Korndyke Pontiac Piebe Burke.** Dam is of the heavy-producing Nig Johanna Alcartra family. Bull for sale born December, 1915, so is ready for heavy service. **From the kind of blood that will improve your herd.** Address

GEO. GIBSON **NASHOTA, WIS.**

FOUR REG. HOLSTEIN BULLS FOR SALE

TWO of them old enough for service. Sired by the 29-lb. bull, Fairmont Pietje Ormsby, whose dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and price reasonable. **L. Lindauer, Kaukauna, Wis.**

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

B. F. Winckler & Sons **Medina, Wis.**

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda **Watertown, Wis.**

LA BELLE VIEW FARM HOLSTEINS

WE offer for sale two fine Ormsby-bred bulls 6 months old, sired by Hillvale Champion, that is own cousin to Dutche's Skylark Ormsby, the dairy queen of the world; if you want Ormsby blood speak soon, for bull calves never stay on this farm till they are a year old; our prices are reasonable. E. E. Rosenkrans, Oconomowoc, Wis.

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred heavy-producing cows. Call and see our herd or write

WM. FENNER, SHEBOYGAN FALLS, WIS.

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address

C. F. DINEEN, CEDARBURG, WISCONSIN

VALLEY VIEW STOCK FARM

OFFER registered Holstein bulls 5 to 12 months old sired by a son of a 24.6-lb. cow, and out of good A.R.O. and untested dams. Price $55 to $75.

Wm. Buddenhagen & Son **Neillsville, Wis.**

HOLSTEIN

BULL calves, sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address

Lawrence Robers **Lyons, Wis.**

REGISTERED HOLSTEIN BULLS

SIRED by King Piebe Jessie De Kol and out of good, heavy-producing dams. Bulls well-marked, over half white. R. W. Hume, Endeavor, Wis.

HOLSTEIN-FRIESIAN CATTLE.

WE KNOW YOU LIKE THIS BREEDING KORNDYKE SEGIS JOHANNA

The average records of his dam and sire's dam are as follows:

Seven Days.		Thirty Days.	
Milk	632.4	Milk	2630.5
Butter	39.05	Butter	154.16
Per cent fat	4.94	Per cent fat	4.69

SIRE: Johanna McKinley Segis, 34 A. R. O. daughters, by King Segis, 87 A. R. O. daughters, and out of Johanna De Kol Van Beers, 40.07 in 7 days, by Sir Johanna De Kol, 65 A. R. O. daughters.

DAM: Pontiac Lady Korndyke, 7 days 38.03, by Pontiac Korndyke, 137 A. R. O. daughters.

Why not buy a bull calf by this sire or our senior sire,

KING PONTIAC CHAMPION

out of one of our A. R. O. cows, with 7 day and yearly records; $100 and up?

PABST STOCK FARM

OCONOMOWOC DEPT. 30 **WISCONSIN**

28-LB. HOLSTEIN BULL

BORN February, 1916, nearly ready for service. Dam, Eagle Rigtje Belle, A. R. O. record 4 years, 2 months, 28.02. Sire, Sir Elmer Johanna Wit, traces twice to Sir Johanna De Kol. His three nearest dams average 4.11% fat. Every dam in pedigree from 3.8% to 4%. His dam will be put on test in about 60 days and shows promise of increasing her record. Address

TRUTTSCHEL BROS. **SHEBOYGAN FALLS, WIS.**

Taken when 6 mos. old. Now weighs about 600 lbs.

WE CAN SPARE 15 HEAD OF REG. HOLSTEIN FEMALES

YOU may take your choice of any age, assort them as you wish. We have a herd of 52 to select from. Our yearling heifers are by King Johanna Melchior Fayne 101866. Heifer calves by King Elgin Johanna Rue Wa Wa 136698; two-year-old heifer by Sir Johanna Beechwood Fayne 127695; a yearling bull, Valley Champion 165427, for sale. Born June 8, 1915, 7-8 white, very promising. Call and see our herd or write for description. Prices reasonable.

J. P. Goelzer & Sons **Plymouth, Wisconsin**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST **WEST ALLIS, WISCONSIN**

23.13-LB. HOLSTEIN BULL

READY FOR SERVICE

See pedigree in The Wisconsin Farmer issue of November 16th. Sire, **KING SEGIS CONCORDIA HENGERVELD,** whose two nearest dams average 32.83. Dam made 23.13 lbs. butter in 7 days. Priced right. Address

PINEHURST DAIRY, **SHEBOYGAN FALLS, WIS.**

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.

Wisconsin Star Stock Farms

His two nearest dams averaged over 29 lbs. butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,834 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.

Ed M. Schultz, Hartford, Wis.

2 Richly Bred Holstein Yearling Bulls

BOTH sired by **King Pietertje Hengerveld Ormsby,** a full brother to **Pietertje Maid Ormsby.** Both are out of daughters of **Sir Aaggie Ormsby.** One an A. R. O. cow making 17.50 pounds butter as a three year old. These bulls are of **Ormsby** breeding on both sides. Send for extended pedigrees and prices. **HUTCHINSON BROTHERS & BURBACH, RANDOLPH, WISCONSIN**

YEARLING HOLSTEIN BULLS

READY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will also price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

MUST REDUCE OUR HERD AT ONCE

POSITIVELY MUST SELL 100 head of registered and high-grade Holstein and Guernsey cattle, any age. You make take your choice from 400 head of big producers, no boarders among them. Special price on high-grade calves. Also extra fine SERVICE BULLS. Everything guaranteed as represented. **Edgewater Stock Farm, Ft. Atkinson, Wis.**

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A. R. O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt **Oxford, Wisconsin**

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons **Elgin, Illinois**

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.

JOHN STEEL - OCONOMOWOC, WIS.

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.

EARL NORWOOD, GAYS MILLS, WIS.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey **Grafton, Wisconsin**

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 37-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address

L. V. GARVENS **BROOKFIELD, WIS.**

YEARLING HOLSTEIN BULLS

READY for immediate service; sired by King Colanthus De Kol Korndyke, a 25 pound grandson of Pontiac Korndyke. The dams are granddaughters of Hengerveld De Kol, Sir Sadie Cornucopia and Mercedes Julips Pietertjes Paul.

Fred Harford **Kaukauna, Wis.**

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons. (Registered Poland China hogs).

Marinette County Asylum - Peshtigo, Wis.

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¾ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams. Write **R. C. Walker, Kilbourn, Wisconsin.**

17 REGISTERED Holstein cows and heifers due to freshen soon. Best of breeding at farmers' prices. D. E. Buckley, Hartford, Wis.

GUERNSEY CATTLE.

GO TO W. J. HEID

FT. ATKINSON, WIS.,

FOR GUERNSEY BULLS

FROM 2 to 10 months old; also a few females. Best of breeding and good size. Come and see them, or write for description and prices.

Three Fine Yearling Sons of Dusk Glenwood 16207

GRANDSON of Glenwood Boy of Haddon and Corolette's Son, that together have 37 Advance Registry daughters with records up to 960 pounds fat in a year.

OLDEST GUERNSEY HERD IN BROWN COUNTY

Send for description. Prices reasonable. Address

J. D. McAllister **Green Bay, Wis.**

Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

BERKSHIRE SPRING PIGS

of both sexes of Premier and masterpiece breeding

O. R. FRAUENHEIM, RANDOM LAKE, WIS

GUERNSEYS

REGISTERED bull calves 4 to 8 months old. Herd tuberculin tested. **EDW. H. KIESLING, JEFFERSON, WISCONSIN.**

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman **Fort Atkinson, Wisconsin**

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.

W. G. Jamison & Son - Appleton, Wis.

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin **Gotham, Wis.**

MAPLE LAWN RED POLLS

SEVERAL well-bred, registered bulls, to 9 months old, for sale at reasonable prices.

L. F. Biglow & Son **Brooklyn, Wis.**

When writing to advertisers kindly mention The Wisconsin Farmer.

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

DOBSON & EASTMAN POLAND CHINA OFFERS

THREE spring boars that weigh over 300 pounds each—they should head registered herds, real toppers. Also a few that weigh around 260 pounds. A limited number of fall pigs for sale. Write your wants; you know our guarantee. Address

DOBSON & EASTMAN, LANCASTER, WISCONSIN — **The Utmost in Polands**

The Home of CHAMPION POLANDS

I HAVE a spring boar that will please you. They are well grown and from sows that have been winners. My hogs please the critical buyers, they'll please you. Gilts reserved for bred sow sale, February 8th. Order now.

J. D. McDONALD — **NORTH BEND, WISCONSIN**

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.

M. MADSON & SONS — **MADISON, WISCONSIN**

BOARS! BOARS! BOARS! POLAND CHINAS

Weighing from 225 to 300 pounds

Some of them sired by

MAC'S CHIEF

Grand champion Boar Wis. State Fair

I guarantee satisfaction in every respect. Address

OLAF C. OLSON
STRUM - WISCONSIN

FALL PIGS

By JUMBO'S EQUAL 2D

CHAMPION southwestern Wisconsin. Poland Chinas with size, quality and breeding. Write

C. S. FLESCH — **MT. IDA, WIS.**
(Shipping point, Fennimore)

BIG-TYPE POLAND CHINA

SPRING crop of boars at farmers' prices while they last at $25 and $30 each. Brood sow sale will be held February 16, 1917.

CHRIS KARTMAN - CASSVILLE, WIS.

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalog. We hold the state's record on account of superiority. Address

I. C. Hendricks — **Box F, Hazel Green, Wis.**

Big Type Poland China

BOARS and gilts—well grown—of proven lines of breeding. Priced right.

Solomon Anderson, Green Bay, Wisconsin

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis.

POLAND CHINA June pigs for sale, either sex, $20 each, boars ready for service. Also Red Polled cattle. Martin Lueck, Hamburg, Wis.

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING — **BANGOR, WIS.**

Model Major 2d

IS considered by many as being the best 2-year-old POLAND CHINA BOAR in the state. I have spring boars sired by him that are **GREAT.** Why not buy where you can get the BEST?

CHAS. S. MALTBY — **JANESVILLE, WIS.**

Master's Giant Orange Wonder Young's Big Joe

NO breeder has three better Poland China boars. They will make my bred sow sale, February 6, 1917.

P. W. Young — **Prosper, Minn.**

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green — **Wis.**

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley — **R. 3, La Crosse, Wis.**

BIG-TYPE POLAND CHINAS

MARCH pigs of both sexes for sale at reasonable prices. Also Guernsey bull calves of the best of breeding. Write C. Horn, New Auburn, Wis.

DUROC JERSEY SWINE.

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer,

EMMETT COOK & SON — **RICHLAND CENTER, WIS.**

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS — **WAUPACA, WIS.**

SPRING BOARS — DUROCS

250 Pounds to 300 Pounds at $25, $35, $45

NO BREEDER HAS A BETTER LOT

SIRED by a son of KING THE COL., a son of CHERRY CHIEF, a son of LEE'S DEFENDER and many of the dams trace to MARION'S WON DER. You get BREEDING and INDIVIDUALITY. I'll ship you a good boar—try me. Address

DENNIS SHEA — **MELVINA, WISCONSIN**
(10 miles from Sparta on the Milwaukee R. R.)

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.

BURN BRAE FARM — **ROSENDALE, WISCONSIN**

READ THIS

Closing out one of the best Duroc Jersey herds in Minnesota at

Renville, Minn., January 4, 1917

Other business makes this change necessary. **70 HEAD** **40 Fall Yearlings, 10 Spring Yearlings, 10 Fall Gilts (1916) and 10 Tried Sows.** A sale of **breeding and individuality.** Write now for a catalog of this **feature sale** and watch for sale adv. in the December 21st issue. Address

E. J. WILSON RENVILLE, MINN.
Mention The Wisconsin Farmer

E. J.'s Crimson Wonder

Grand Champion Minn. 1916

Big Wonder

Grand Champion Iowa 1913

Some wonderful Duroc Jersey sows have been bred to these boars and will be sold by

John Swenson at Willmar, Minn.

Friday, Jan. 5, '17

This is one of the sales you should attend. Write at once for catalog. Watch later issues.

SAVE $$$$

BUY DUROC JERSEYS

of me. What do you want?

J.W. HIGGINS — **GOTHAM, WIS.**

Duroc Boars

OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts for sale. Write your wants. Address

M. STOEHR — **VIROQUA, WIS.**

CEYLON COURT FARM

DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.

Ceylon Court Farm - Lake Geneva, Wis.

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address

JOHN L. FISHER — **JANESVILLE, WIS.**

DUROC FALL PIGS

Offering Durocs, pairs or trios.

SEED CORN

of best varieties for sale. Write your wants to

Riley Martiny & Son, — **Baraboo, Wisconsin**

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address

W. W. Goodrich — **Ft. Atkinson, Wisconsin**

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

POLAND CHINA SWINE.

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POLAND China service boars all sold. Now booking orders for bred gilts that are extra choice, also fall pigs, either sex, that are hard to beat. James Derivan, Fox Lake, Wis.

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LENGTHY, heavy-boned spring boars sired by **Col.'s Defender 2d** and **Valley G,** the 1,000-pound brother to Illustrator. April pigs, some of them weigh over 200 lbs. We have shipped C. O. D. for last ten years and never had but one shipped back. Registered Guernsey bulls and bull calves with most popular breeding, some from A. R. dams, one 2 year old whose dam has three A. R. records averaging over 500 lbs. fat. Reasonable. Allie S. Knudson, R. 5, Brodhead, Wis.

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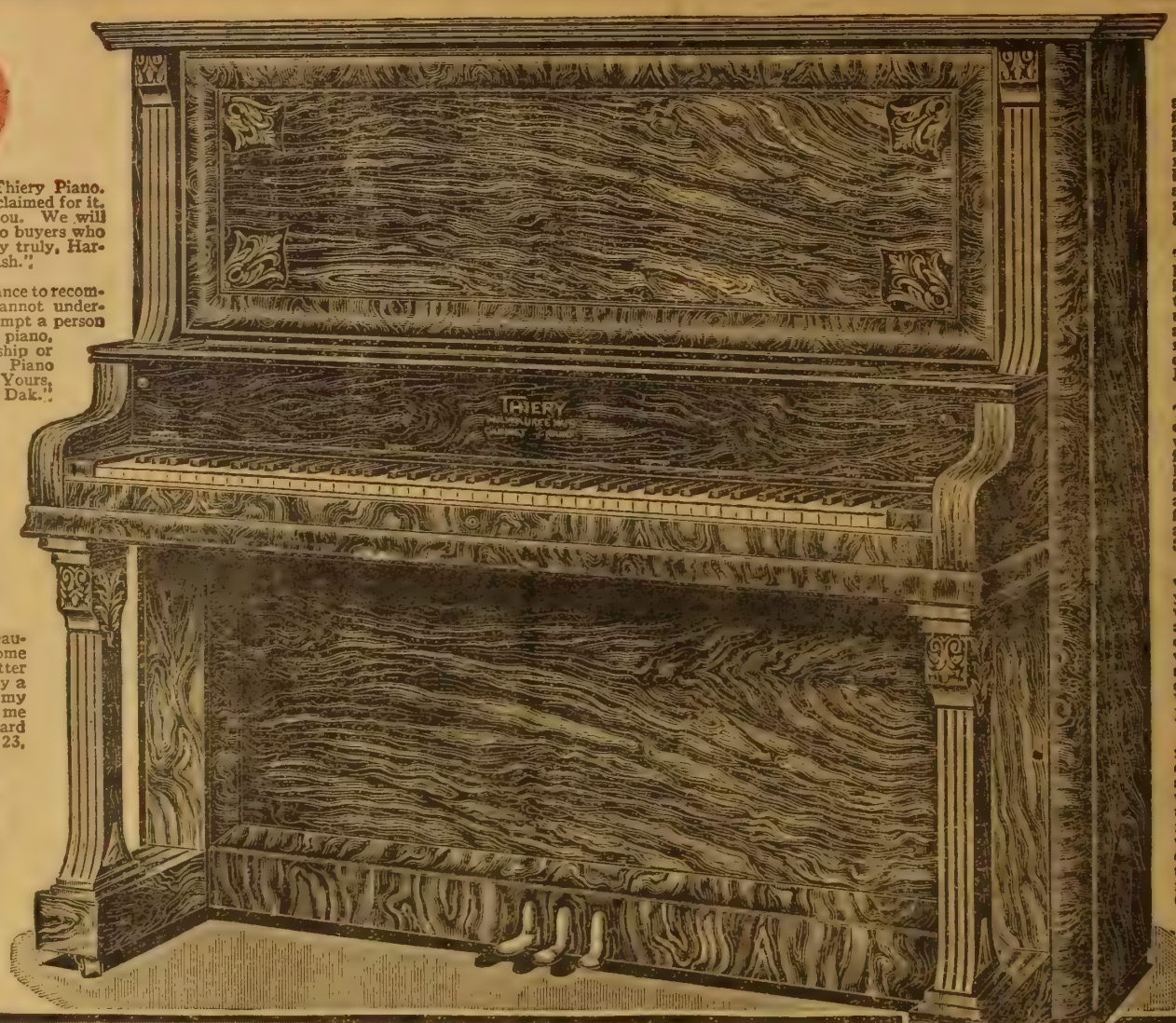

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THE WISCONSIN FARMER

VOL. XLV. NO. 50. THURSDAY, DECEMBER 14, 1916. WHOLE NO. 1820

The 1916 International Exposition.

WITH cattle plague swept from the land, thereby removing a menace that threatened a great industry for an eighteen months' period, the 1916 International Exposition proved, last week, to be literally a "march of triumph," an unmatched achievement in the presentation of improved farm animals. Its record was unique not only in the large number of entries and in the quality of same, but in the proportion of the number of animals entered that were to be found in the pens, stalls and yards. Factors over which stockmen have no control may be expected to shrink an entry list from 3 to 5 per cent, but not so this year, as it was less than 1 per cent by official count. This great show has rooted itself deeply in the esteem of men, whose leadership counts for something worth while in progressive agriculture, the men who give their best endeavors to the improvement of farm animals. In assigning credit for this year's event, much must be given to the Internationals of years gone by, because here's where men's ideals have been heightened and their pride of accomplishment stimulated. Here's where the type has been fixed toward which our breeders aimed, and proudly must the record be viewed when we contemplate the fact that not in a single important class or breed have we followed after false gods. True as the needle to the pole, the officials of this great show have held its purpose in the creation of animal form of greater utility.

BELLOWS' GRAND CHAMPION SHORT-HORN BULL, VILLAGE SUPREME.

HAZLETT'S GRAND CHAMPION HEREFORD BULL, BOCALDO 6TH.

The magnitude of this exposition can scarcely be comprehended, excepting by those who were present to inspect it. Outside of the carload lots there were 1,670 cattle, 1,110 horses, 916 swine and 846 sheep. These were the numbers entered in advance of the show, and a stall and pen count during the show, as before stated, indicated that less than 1 per cent of the entries were missing when the gates opened on Monday morning. In the main these entries were pure breds, because there were only eighty-seven grade and cross-bred cattle, eighty-four grade hogs, 114 grade sheep and eighty-two grade drafters. Taking out this small number of grades, it will be seen at a glance that the number of pure-bred entries in cattle, sheep and horses, especially, far exceeded the record of any of our state fairs. But numbers alone did not tell the tale, nor was this the main feature of the exposition, but, on the other hand, it was the quality of the live stock on display that brought forth the most favorable kind of comment from visitors. The state fair circuits had eliminated everything but the best, and breeders from the East and from the West as well as from the North and from the South were in Chicago to contend for the highest honors obtainable in any American show ring. In some of the classes the American breeders met contenders from the Canadian provinces, thus adding spice to the competition and attaching to the winners in such classes a greater glory than if but one country contended. The large entry list deserves all the more favorable mention because of the foot-and-mouth disease scare that occurred the week before the show, but which fortunately turned out to be a false alarm, though serious enough for a time to bring three states under quarantine regulations. This, in itself, was significant, because it shows that breeders of pure-bred live stock are determined to bring the great cause which they represent to the front, and no ordinary circumstance could thwart the plans of those who are prepared to participate in this event.

If breeders did their part well in furnishing a large entry list of well-fitted animals, their record was but matched by the attendance during every day of the show. Two years had lapsed since the holding of the last International Exposition, and stockmen were apparently hungering for another event of this kind. They jammed the aisles, the pens and the amphitheater from the time the doors were first opened until they were closed at the end of the week, with the result that the record eclipsed by far all former events. They came by the thousands and tens of thousands, and prepared as the Windy City always is to absorb an immense crowd, the hotels last week were filled to overflowing. Fortunately, this great show is spread over a wide area, and only this fact prevented uncomfortable and possible undesirable crowding and jamming. General Manager B. H. Heide believes in a policy of preparedness, and every lieutenant was in his place to aid the visitor in getting every possible advantage from the great show. On every hand could be heard the most favorable kind of comment upon the management, and special credit must be given to Mr. Heide, who was immediately in charge, and to the board of directors for the important part played by them in putting on this great show. In all of its branches this exposition is educational primarily and fundamentally, but no part of the program, carried out last week, received such painstaking attention as that given to the domestic science lectures and demonstrations which were carried on during the afternoon of each day. The officers of the International were fortunate in securing the services of experts from the Iowa Agricultural College, and visitors to these meetings proved to be especially interested in the ways and means of meeting the high cost of living without impairing health or losing any of the comforts of daily life. It was shown by these experts that meat could be largely used without involving the family in exorbitant expenses, and to this end ways and means of preparing the cheaper cuts were discussed and illustrated. Men and women alike stared in wonderment when told that round-steaks as well as chucks were even richer in nutrients than the finest sirloins and porterhouse cuts, and their wonderment still further increased when it was shown before their very eyes that these cheaper meats could, by the alchemy of sensible cooking, be made just as tender and just as palatable as the high-priced

parts. The management of the International is to be most favorably commended in carrying out the extensive domestic science program that was enjoyed so much by visitors last week, and we venture to say that thousands in attendance went away with greater belief in the value of meat as a diet and with increased knowledge in regard to its preparation.

A most instructive exhibit had been installed by the University of Illinois and at any time during the week scores of visitors could be found around this exhibit, pencil and paper in hand, jotting down facts and figures relating to certain farm practices. Special interest was being taken in the division of the miniature 160-acre farm which was divided on a scientific basis into sixty-four acres of corn, sixteen acres of oats, sixteen acres of wheat, eighteen acres of alfalfa and the balance of the land devoted to blue grass, to rye, clover, rape and the farmstead. Unquestionably thousands of visitors made a plat of this little farm during the week and no man can say to what extent this exhibit might influence the introduction of more sensible crop rotation in the future. Of special interest in this exhibit was the yields of grain from fields of similar area treated in unlike fashion. Where corn was grown continuously for sixteen years, for example, the average yield was thirty-one bushels per acre. Where it was alternated with oats and clover, but with no fertilizer the yield was sixty bushels per acre, whereas the same kind of land rotated with corn, oats, clover and which in addition received manure, lime and phosphate, produced an average yield of ninety bushels per acre when put in corn. Every conceivable kind of destructive insect was on display in this exhibit and instruction given in methods of destroying crop, garden and orchard enemies. The possibilities of changing the character of a given crop was well illustrated by samples of corn on display. It was shown, for example, that the oil in a series of years could be increased almost 2 per cent and, furthermore, the stalks, by breeding for low or high ears, can be altered in a few years so that not the least resemblance remains of the original parent stalk. Even the habit of twin ear production is one than can be well nigh fixed, as a type has been produced at the University of Illinois that will show two ears to the stalk in practically 70 per cent of the entire crop. The inspection of this exhibit made an agreeable diversion for visitors after studying the various classes of live stock, and well it might because the crops here on display and the economic production of same constitute the fundamentals upon which the live stock industry is based.

A most significant event for stockmen was the placing of the grand champion ribbon in the individual classes on a thirteen-month-old youngster and, in addition, the capturing of the grand championship prize in the carload lots by yearlings. The winning calf was found by Senor Carlos M. Duggan, the South American judge, in the grade and cross-bred classes, and the little Hereford-Short-horn was good enough to sweep all competition aside and finally land on top. His tidy weight of 1,130 pounds meant that he fitted into a class that will generally command a premium in the market. Steaks and roasts from this type of an animal are not wasty, as are those from a bigger carcass, and, furthermore, an animal of this weight and brought to that point at thirteen months means that the gains have been made more cheaply than they could possibly be put on heavier cattle. If there are those who were disappointed because a more mature animal did not capture the purple, a little reconsideration would be in order because certainly the arguments are in favor of popularizing the young steer. Senor Duggan either knowingly or unknowingly emphasized a principle in animal production when he selected this calf that American stockmen can well afford to consider. Two stockyard judges, Messrs. Cross and Tamblyn, reached the same conclusion as the foreign judge when they passed on the carload lots save only that they found the champions among the yearlings instead of the calves. They passed by the heavier cattle in their search for quality and for dressing ability, so that stockmen of America may safely conclude that the day of the early maturing type has arrived. It was not so much that the two year olds were weak, because as a matter of fact they were strong classes, and the crown was placed in the individual as well as the carload classes unquestionably where it properly belonged.

A novel feature characterized the opening of the International this year, a feature which gave to farm youths the center of the stage during the opening hour. It involved the showing of thirty baby beeves. In the main it was an exhibit of the juvenile steer feeders of Iowa, the boys and the girls who took part in the contest carried on by the Iowa Beef Producers' Association. Something more than merely picking the best individual animal was required of the judge in this class, as 50 per cent counted for quality and finish, 25 per cent for economy of gain and 25 per cent for rate of gain. The blue was landed by Leon Mitchell, of Marcus, Iowa, on an Angus; second Duran H. Summers, Melbourne, Iowa, on a Short-horn; third G. Alden Wright, Mt. Pleasant, Iowa; fourth Glenn A. Windom, Nodaway, Iowa, and fifth Henry Kruse, Council Bluffs, Iowa. The exhibitor in each case, whether boy or girl, had fed out the animal shown for a period of twelve months beginning November 1, 1915, and ending one month ago. Most creditable gains had been made during the year and in some instances these ran as high as 850 and even 900 pounds, the cost of gains ranging all the way from 6 to 10 cents per pound. No feature of the entire International brought forth more favorable comment than this, the first class of the show. There were over 200 entries in this Iowa contest and only the tops were shown last week, but this is unquestionably a movement that will contribute in a practical way to the development of animal industry on the farms of the corn belt in the future. This work was encouraged by the Union Stockyards in providing for a regular class for the best steer or heifer under thirty months old and there were six entries in this class, the blue being captured by a twelve-month roan Short-horn calf fed out by Ralph Peak, of Winchester, Ill. His brother, George Peak, won second and a Michigan boy, Melville Taylor, captured third. Mark Peak won fourth on a Short-horn and John H. Turner, DeWitt, Iowa, won fifth on an Angus.

The student judging contest which took place on the first day of the show brought into line three institutions that had never before participated in this event, namely, Massachusetts, Virginia and Arkansas. Their entry into the fray brought the number of teams up to fifteen while the largest number that ever participated before was thirteen. No representation was present from MacDonald College of Quebec, Canada, nor from the province of Manitoba, most of the students from these institutions being now in the trenches. Dean J. H. Shepperd, of North Dakota, has had this contest in charge for many years and its success is in a large measure due to his splendid management. Several classes of horses, cattle, sheep and swine were passed on by expert judges and afterwards rated by the students. When the smoke of battle had cleared it was found that the Indiana boys were the victors with 3,970 points. They were pushed to the limit by the boys from the Iowa Agricultural College, who landed second with 3,950 points. Then came Ohio with 3,877, followed by Texas with 3,814; Kansas, 3,749; Missouri, 3,676; Kentucky, 3,525; Pennsylvania, 3,492; Nebraska, 3,468; Minnesota, 3,386; Virginia, 3,336; Arkansas, 3,219; Ontario, 3204; South Dakota 3,149; Massachusetts, 3,136.

Some idea of the importance that is being attached to the educational value of the International Exposition by stockmen was indicated by the presence of a delegation of over 600 farmers from North Dakota. Special trains had been chartered and members of the party were mainly made up of farmers and stockmen, although they were accompanied by a few bankers, merchants and newspaper men. Those in charge of this delegation made the claim that it was a movement originated by well-to-do farmers who realized the importance and necessity of developing the live stock industry. North Dakota has made a splendid record in wheat production but these men appreciate the fact that they are depleting the land and if live stock farming is to be engaged in the foundation stock must be of the very best, asserted one of the most prominent men in this delegation. Coming in a body in this way an example has been set that might well be emulated by farmers of the northwestern and even the eastern and southern states. The International has become a fixed institution and its standards are as high as found in any coun-

(Continued on page 5.)

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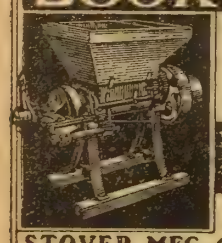

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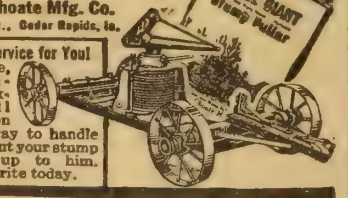

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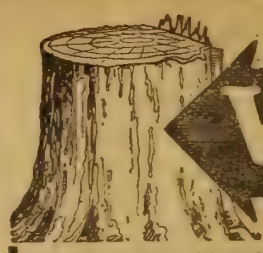

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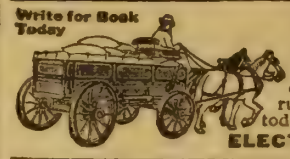

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The Wisconsin Farmer

THURSDAY, DECEMBER 14, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

THE INTERNATIONAL.

I WANT to congratulate the stockmen of the country and the officials of the International on the magnificent exhibit which was made in Chicago last week. I have been attending fairs and expositions, and following the progress of farming and the live stock industry in this country, for many years, and I am conservative and accurate when I say that no such exhibit of high-grade live stock was ever made in America before. I am equally glad to be able to report that never was the attendance or the interest in a fair or exposition so great.

My readers are well aware that we have not had an International for the past two years. There were moments, within the last month, when some feared we would not be able to hold the show this year. But at the last minute the last vestige of doubt disappeared and the stock came to Chicago by the carload, never in such quantities and never of such high grade before. When I call your attention to the fact that there were almost 5,000 head of stock exhibited at the International last week, in addition to the carload lots, and that more than 90 per cent of this was pure-bred stock, you will get a slight idea of the magnitude and the excellence of the exposition. When I go on to say that the entries actually in place were 99 per cent of those made in advance of the printing of the catalog, a record which I do not believe has ever been equaled in this country, you will get still another idea. And when I go on to tell you that there were between 60,000 and 70,000 people on the grounds one day alone, you can hardly fail to comprehend the vastness of the show which was held in Chicago last week.

I cannot begin to tell you how proud I am to be able to narrate these facts. We are at the high tide of farming prosperity in America just at the present; never were our fields or herds more productive, never were prices better. But we must not be satisfied with this. We must build for the future. A few weeks after the war broke out (in August, 1914,) I printed an editorial on this page, calling upon the stockmen of the country to meet the situation fairly and squarely, to begin building up and breeding up their herds, so that America would take advantage of the big opportunity which was hers, and be enabled to supplant the European countries as the premier stock-breeding nation of the world. I pointed out the advantages of pursuing such a policy. I urged stockmen, in the strongest language at my command, to cull out the runts in their herds, to get only the best blood and to breed constantly toward perfection.

Last week's International convinced me that what I urged two years ago has been done by thousands of stockmen all over this great country of ours. We are indeed attaining that perfection which will make us the greatest live stock nation in the history of the world. I congratulate the stockmen of America upon their success in measuring up to a great opportunity in such a big way. The future is bright with promise. Let us join hands to retain our leadership, our prosperity and our just pride in the advancement of the live stock industry of the country.

FARM-LOAN BLANKS READY.

IT IS no exaggeration to say that I have received 1,000 letters of inquiry, within the last few months, in regard to the workings of the new federal farm-loan law. The gist of the more recent of these letters is this: "How can I go about it to join or to form a local association, through which I may borrow from the government?" I am glad to be able to say that I now have definite, official information on this subject. A member of the Farm Loan Board writes to tell me that they have the blank form of the articles of association printed and ready for distribution. If farmers who are interested will write to the Federal Farm Loan Board, Treasury Department, Washington, D. C., these blank forms will be sent to them without cost. The member of the board who sends me this information adds this advice to prospective farmer-borrowers:

When these articles reach you, call a meeting of the prospective members of your association, adopt these articles, and have each member sign them and acknowledge them. Fill in the blank space at the top with the name your association adopts. Then, at your first meeting, elect a board of five or more directors and have the directors meet and elect a president, a vice president, a secretary-treasurer, and a loan committee of three members. The loan committee may begin at once to value the lands of the members and prepare its written report of these valuations, which must be unanimous. Do not send the signed articles of association to Washington, but hold them until the federal land bank of your district is located. Then, write to the bank asking for forms which include an application for a charter. When these come, fill them out and send them, together with the articles of association and the report of the loan committee, to your federal land bank.

The next question that naturally arises is this: "When will these federal land banks be open for business, so that the money we need will be actually forthcoming?" I am now able to announce, also officially, that the names of the twelve cities where these banks are to be located will undoubtedly be made public by Christmas. The Farm Loan Board returned to Washington a week or ten days ago, after having traveled 20,000 miles, held fifty meetings and taken testimony from hundreds of farmers and as many city men. A member of the board advises me that they have received letters of inquiry from fully 200,000 farmers, which shows how widespread is the interest in the new law and its possibilities in the way of reduced interest, longer time in which to repay the loans and the installment method of repayment. The board has issued this official statement in regard to its hearings:

The testimony showed that farmers have been required to pay exorbitant rates of interest and unnecessary commissions and have been laboring under the handicap of too short loans. The hearings also disclosed the fact that since the farm loan act has been passed interest rates in most parts of the country have been reduced to a marked degree to meet the new co-operative competition.

Members of the board expressed great pleasure over the great degree of co-operation that has been given them by chambers of commerce, by state agricultural colleges, by newspapers and farm papers, by county agents, and by bankers. Particular pleasure was expressed over the fact that bankers in most parts of the country did not resent the creation of this governmental agency to finance farmers, but rather took the broad view that the farm loan act would so stimulate prosperity in the rural districts that the cities would reflect this prosperity and that eventually its benefits would be felt in every line of commercial activity.

The board also expressed pleasure over the fact that farmers in most cases voiced the belief that a loan limited to 50 per cent of the security would serve their necessities, and that this limitation would contribute to make the bonds so secure that lower rates of interest would result.

I shall continue, from time to time, to give further information and advice on the subject, and I renew my invitation to my readers to write me for particulars or my opinion on various phases of the law. It is the province and purpose of this page of mine to be useful to the individual reader in a sort of advisory capacity. I would not be doing my full duty as a publisher if I did not welcome questions, invite letters and give advice and information to the best of my ability. So never hesitate to write me; I shall do the very best I can in reply.

FARM DOORS AND FARM HEARTS WIDE OPEN.

TWO things have impressed me greatly in the several hundred letters which have come to me within the last week in regard to the young Chicago automobile mechanic who wishes to abandon the "great white way" and get back to the country lanes. First, the large number of farmers here in the grain belt today who need the services of a mechanic fully as much as a man to plow, feed the stock and husk corn. Second, the large number of hired men who graduate into farm tenants and eventually into landowners.

I am not going to print any extended extracts from any of the letters which have reached me, for most of them were written in confidence and I am not at liberty to publish them. Nor could I do so, even if I had permission, for they would fill page after page of this paper, to the exclusion of all our many interesting departments. I am going to print a few sentences, taken at random, from some of the letters, to show to what an extent our farmers are adopting the tractor, the gasoline engine and the automobile as aids to farming and thereby find themselves in need of the services of a mechanic, such as this Chicago man represents himself to be.

Here, to begin with, is a letter from a farmer living near Necedah, Wisconsin:

We have three gasoline engines and a full barn equipment of farm machinery, even to a threshing machine and silo filler, wood saw and so on. I expect to buy an automobile soon. We also have a milking machine.

Surely farming has changed from man labor to machine labor when such a condition exists, not alone on isolated farms, but generally throughout the grain belt, as these letters indicate. Here, to continue, is an extract from a letter from a prosperous stock farmer of Crystal Lake, Illinois:

We have a farm of 600 acres; have our own electric lights and water-under-pressure system; also four gasoline engines, a tractor and an automobile to keep in repair, which makes just such a man highly desirable.

A change, indeed, from the days of "the man with the hoe"; nowadays "the man on the tractor." But let us proceed. Here is a part of the letter written by a farmer living near Cylinder, Iowa:

We have a 12-25 tractor, an automobile and a three-horse-power gasoline engine to do the washing and odd jobs. We take a couple of daily papers, three farm papers (of which yours is by all odds the best) and have about 170 volumes of the best fiction to read at spare moments.

Here is a portion of the letter written by a man living near Whiting, Iowa, who has 500 acres under cultivation and who says:

All of our plowing is done with a 15-30 tractor, as well as our threshing and silo filling.

The missionary work done by the tractor demonstrations of last year and this year is bearing good fruit, for it is really remarkable the number of letters from farmers who are using tractors and who mention this fact as one of the reasons why the Chicago mechanic should go to their place to live and to work.

Now, let me quote a few sentences from different letters showing how our farm hands of today are the farm tenants of tomorrow and the landowners of day after tomorrow. I will not identify the writers, but what they write is characteristic of the policy of advancement in effect in the entire grain belt today:

"We had one young man stay with us for five years, when he went west to enter in the sheep business with his uncle. Another young man, from Ohio, a German, stayed with us for three years, then married and now owns eighty acres of well-improved land two miles from us and is one of the best farmers in the county. Three brothers from Putnam county, Missouri, worked for us something near five years."

"I have a farm of 320 acres, 200 acres under cultivation. I have all up-to-date farming machinery, such as tractor and automobile. I am getting along in years and want someone I can depend on, with a view to renting to him in the future."

"The young man that is now with us has been with us the past four years, winter and summer, but now has rented a place and is going to be married."

"I have a man with me at the present time that has been with me for the last ten years, and his wages are one-fourth of all the grain raised. Now he is going to have a place of his own."

Over and over again, the same story is told: There is a chance for the hired hand to save money and eventually to rent a place, then to own one for himself. The door of opportunity is not shut on the farm today, even with land as high priced as it is. A few years as a hired man, a few years as a tenant, then land ownership and prosperity; it is a cycle of possibilities as yet hardly realized.

In conclusion, I am going to print one letter almost in full, for it shows how the door of opportunity is opening to this young man of the city, if he proves himself worthy. The letter comes to me from a Wisconsin subscriber. It is addressed to the Chicago man whose pitiful plea to get back to the farm inspired it, and runs as follows:

I am an elderly man and retired farmer, who could find no enjoyment in city surroundings, I am living in this country village near by where I have a fine home. I have reserved part of the farm where I have spent my time the past ten years and have it planted to an orchard—all my own work until two years ago it began to bear, and then help was necessary to gather the crop, and meanwhile I am getting more feeble.

Now, I wish to get some one to be a companion to me—go to and from the orchard with an automobile and with a truck to do the necessary work. I also shall have a tractor next year to do cultivating and am building a house for a laborer and family; also a fruit house to take first-class care of the products. I am in such circumstances that I do not care about what the proceeds of the orchard amount to, but the last two years it has been profitable, and I intend to return in improvements all and more than what it produces. The orchard now contains fifty acres, but will be enlarged nearly as many more.

Here is a chance for the young farm-mechanic to be more than a hired hand, more than a tenant. He is wanted as a companion, amid ideal surroundings. I fancy he will answer this letter among the very first, for if he is indeed worthy (as I hope he is and believe, from his letters to me) he will be glad to cheer and assist the declining years of this aged man and make the fruit venture the unqualified success which it deserves to be.

I shall have more to say of this young man and his plans in the near future; this must suffice for this time.

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-In-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Ave. Des Moines, Ia. | 201 Washington Bldg. Madison, Wis.

To either of which communications relating to subscription or advertising may be addressed.

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SUBSCRIPTION RATES—Single subscriptions, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance, $5.00. Subscription prices in Canada, $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing give the same name and initials as you gave before or state both the old and new names, and explain why you make the change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address WISCONSIN FARMER, MADISON, WISCONSIN

Long Evenings Made Short.

THERE is an old proverb which runs like this: "He that can read and meditate will not find his evenings long or life tedious." Surely this more aptly and truthfully applies to the farmer, in winter, than to any other man, at any other time.

The season is upon us when those of us who read and meditate find the time passing most pleasantly and profitably. To this end, those of us who have the task of making The Wisconsin Farmer interesting, practical, instructive and entertaining to every member of the farm household, are devoting ourselves with redoubled vigor to our work. It is our earnest effort to make The Wisconsin Farmer of still more value to all its 90,000 subscribers in the next year than ever before in its history. Our plans are already laid for such a winter course of good reading as no other farm weekly in the grain belt ever gave to its readers. We cannot announce all these plans yet, but they will disclose themselves week by week.

Last week our editor-in-chief, Mr. James Atkinson, our staff photographer, Mr. Alfred Morris, and a dozen of our assistant editors, field men and department editors were in Chicago attending the International Live Stock Show, a full and detailed report of which will be found elsewhere in this paper this week. We are convinced that this is the most accurate, readable, authentic and interesting report of the International which any farm paper will publish, and we call our readers' attention to it with just pride.

While we ars thus engaged in giving readers of The Wisconsin Farmer the very best possible reading matter, timely and entertaining to all, it is incumbent upon our readers that they co-operate with us by renewing their subscriptions promptly, so as not to lose a single issue of The Wisconsin Farmer and to assure us that we can count on their support in the coming year as we go ahead with our big plans. But that is not all; there may be friends and neighbors who do not yet realize or know, by personal experience, that The Wisconsin Farmer is the best farm paper in Wisconsin, Minnesota and North Dakota. Why not do them a favor by loaning them your copy, telling them how good The Wisconsin Farmer is all the year round, and securing from them an order for the paper to be sent to their address? We want to urge upon every one of our subscribers that they become a committee to get new subscriptions, so that our reading circle may enlarge and still more of us may have the opportunity to read and meditate, so that none will "find his evenings long, or life tedious." We will do our share; will you do yours?

Wisconsin Stock Buying Tour.

THE State Bank of Exeland has taken a forward step in the interest of dairying in Sawyer county. The officials of this bank recently took twenty-eight farmers from their county to Waupaca county. The purpose of the tour was to secure a carload of better breeding dairy stock. Mr. F. W. Kasl, of the State of Exeland, and C. P. West, county agricultural representative, accompanied the party. D. S. Bullock, representing the Wisconsin Live Stock Breeders' Association, and T. A. Hoverstad, agricultural commission of the Sioux Line Railway, also made the tour. Mr. Bullock gave a number of short talks at farms visited and in these he discussed the dairy cows, barns and silos and the feeding of dairy cattle. The farmers bought a number of head of good stock.

At one farm they found a cow twenty-three years of age, still kept in the herd because she is making a good milk record. She produced 427 pounds of fat at nineteen years of age and had been fed silage all her life. This was considered a very striking evidence for the skeptical, who say that silage eats out the lining of the stomach and causes loss of teeth.

The members of the party were out for the best stock they could get, and they visited Guernsey, Holstein, Jersey and Ayrshire herds. Breeders of the county furnished automobiles for the party, which in two days visited thirty-two farms. Mr. D. F. Burnham, editor of the Waupaca Post, and a progressive dairyman, gave a dinner for the party. Mr. Earl Whipple, of the Delavan Hotel, Waupaca, also gave a dinner for the visiting farmers, city officials and the county board.

A new creamery has been started at Exeland, and the farmers and their banker, Mr. Kasl, are apparently starting out on the right road to keep this creamery well supplied with good raw material.

Feed and Shelter For More Stock.

THE all-important subject in farming communities in Wisconsin is to get better live stock. We are pleased to note that this matter is being given splendid attention in Wausau county. Mr. A. G. Burg, of the Marathon County School of Agriculture, writes that many farmers of his county have an abundance of feed and stable room for stock, but that they have not the capital with which to finance better dairying. On this account they sell their surplus hay and other feeds to the local markets rather than feeding it to the stock and thus keeping up the fertility of the soil. Not long ago fourteen bankers of Marathon county organized an association and appointed a committee to work out a plan whereby farmers could borrow money with which to purchase cattle. The plan is in many ways similar to the Ashland dairy plan and the conditions may be summarized as follows:

The party desiring further cattle makes an application, for the number and price he is willing to pay. Upon receiving the application an investigation is made by a member of the county agricultural school to see whether the farmer in question has sufficient feed and shelter for more stock. If he is favorably recommended, either the principal of the school or the county field man help him in the selection of his stock. The loan is secured by a chattel note on the stock owned by the farmer and is paid in regular monthly installments of 25 per cent of the milk check which the farmer obtains at the cheese factory or creamery.

Mr. Burg writes us that many farmers are taking advantage of this splendid opportunity and the representatives of the different breeds are endeavoring to build up good herds, and in this manner it is hoped to get the largest possible use out of the forage raised on the farms in Marathon county.

Increase in Wisconsin Bank Resources.

IT WOULD naturally be expected that the increased prices which our farm produce is bringing, and the fact that mills and factories of this state are working steadily, would result in an increased supply of money. This is shown to be true by the recent report of the Wisconsin banking department. On November 10, 1915, the total resources of Wisconsin state and mutual savings banks and trust companies of this state, was $253,941,928.61. The last bank call was November 17, 1916, which is practically a year from the date of the statement referred to above. The banking commissioner, Mr. Albert E. Kuolt, advises us that the total resources of Wisconsin banks on the November 17, 1916, call is $298,617,175.61. This is an increase of $44,617,175.65. To increase $44,000,000 in a year is a fine record. So far as we can remember this is one of the best records made in the state, and it certainly indicates a very healthy financial condition for Wisconsin.

Wisconsin Beekeepers.

THE annual meeting of the Wisconsin State Beekeepers' Association, which was held in Madison, in the senate chambers at the state capitol last Thursday and Friday, was one of the best ever held by that organization. About 125 beekeepers and others interested in the production of honey were in attendance at the three sessions. The program was varied and included many topics of interest to beekeepers.

N. E. France, of Platteville, president, who with Gus Dittmer, of Augusta, secretary, were re-elected for another year, made his annual report in which he also discussed the work as state inspector during the past year. As usual the prevalence of American and European foul brood came in for major consideration and Mr. France explained the good work which has been accomplished towards eradicating and controlling this disease in the hives in Wisconsin. Some good results have come from the work, although the foul-brood has not been stamped out, but several speakers pointed out that, with its increasing prevalence in other states, it has become a matter for every individual beekeeper to give his attention. Unless this is done it is difficult to combat the disease which will spread if any keeper allows it to prevail on his premises.

Prices for honey are high at this time, and the beekeepers were pleased with general business conditions. Mr. France reported that about 2,500,000 pounds of honey are produced annually in Wisconsin and that there are about 11,000 beekeepers in the state. The problem for the beekeeper, one speaker pointed out, is to make the honey market an all-year market. At present it differs from other industries in that the price is not set by supply and demand so much as the products of other industries. "Now," as Father Francis Jager, of the University of Minnesota, said, "there is not enough honey on the market or available to last beyond January 1st. After that people will forget about honey and the market will be bare." Father Jager spoke on the need of better co-operation. The present situation is where one farmer sells honey for 6 cents; another undersells him. So that national as well as state co-operation in both production and marketing are needed of the beekeepers are to profit.

The meeting opened Thursday with the routine business followed by addresses that afternoon by Mr. France; C. W. Aeppler, of Madison; Dr. E. F. Phillips, of Washington; and E. R. Root, of Medona, Ohio. The Friday session was devoted to addresses by Edward Hassinger, Jr., of Greenville, Wisconsin; Mrs. William Haberman, of Lodi, G. C. Chase, of Rhinelader; A. L. Kleeber, of Reedsburg; and G. W. Williams, of Redkey, Indiana. Much interest was also shown in the question box and informal discussions.

Of Interest to Wisconsin Dairymen

IN THIS issue will be found reports by our editors of the Wisconsin State Dairymen's Convention, held last week at Waupaca, and the Wisconsin Buttermakers' Convention, held at the same time at Sparta. The latter convention has usually been held in midwinter, but it was thought best this year to advance the date. It would seem better to hold the conventions a different week. Many would like to be present at both. The greatest good from these conventions, however, is the educational work done in the community where the meeting is held. The success of each meeting may be measured largely by the increased attendance over former years.

Determination of Sex in Breeding.

NOW and then a question comes to our office as to whether there is any method known for determining sex in live stock, and, of course, we have to report that, in spite of the many theories that exist in regard to this matter, no one has ever been able to find any of them applicable. We all know that from a herd of cows the calves will, on the average, during a series of years, and usually every year, be half males and half females. It is a matter that is governed by natural law, and probably also to some extent by chance.

Some progress has been made in the study of sex in plants, but it is not of such a nature as to enable anyone to make any use thereof for sex control. It has been found that such plants as strawberries, some varieties of which are male and others female, half of the pollen grains produced by the male plants are destined to produce male offspring after fertilizing an ovule, while the other half are destined to produce female plants. This being the case, the chances are that half the spermatozoids secreted by a male animal will, upon fertilizing an egg of a female of the same species, produce male and the other half female offspring, because the same laws of breeding hold true for both plant and animals, but the knowledge of this fact is of no direct practical value, because it is impossible to control the movement of the spermatozoids. It does, however, have an indirect value, because it shows why breeding in early or late heat, or the physical condition of the female or male at the time of breeding, or a lot of other things that have been supposed to have an influence upon the determination of sex, cannot influence the sex of offspring.

Overfeeding of Lambs.

IT IS a practical impossibility to entirely avoid loss from death among lambs that are being fattened for the market. There is, however, a big difference in the percentage of loss in flocks handled by different men. One feeder will lose 4 or 5 per cent of his lambs during a sixty or ninety-day feeding period, while another will hold the loss down to 1 per cent, or less. The question of why there should be such a difference naturally suggests itself for consideration in these days of high-priced feed and high cost of feeding stock.

One cause of loss is overfeeding, especially during the first three or four weeks of the feeding period. Sudden changes in the feed is dangerous, and when a lamb comes from the range country into the feed lot, the change in feed is often too sudden and too marked for the lamb to adapt itself thereto. In starting lambs on feed, do not be in too great a hurry to get them to eat a lot of grain. Feed hay alone for a few days until they have learned to fill up on this. Then add grain gradually. Start with one-tenth of a pound per head per day and increase this by one-tenth of a pound every other day till one pound per day is being consumed. In this way one pound of grain will be fed at the end of twenty-five days.

After that there will be little danger of loss and the amount of grain may be gradually increased up to the full amount it seems desirable to feed. Whether a heavy grain ration, say two pounds a day, or a light ration of one to one and a quarter pounds, is to be fed will depend upon the size and vigor of the lambs, the length of time they are to be fed, and the relative value of grain and roughage. One can fatten a lamb on a pound of corn and two of alfalfa per day, or on two of corn and one of alfalfa. With the former ration a longer feeding period is required, but in a year like this when alfalfa is relatively cheap and corn very dear, increase in weight will be made at a lower cost per pound of gain. Danger of loss from death in the feed lot is also reduced when a light grain ration is fed. Overcrowding with grain is responsible for nine-tenths of feed-lot losses.

The 1916 International Exposition.

(Continued from page 2.)

try, so that it is a pleasing sign of the times to find such an increasing interest in this great show as was indicated by the visit of these North Dakota farmers.

BREEDING CATTLE.

Short-horns.

Exhibitors: Anoka Farms, Waukesha, Wis.; G. P. Arnold, Galesville, Wis.; E. J. Augspurger, Pulaski, Iowa; A. F. & G. Auld, Guelph, Ontario; Bellows Bros., Maryville, Mo.; John B. Berryman, Downers Grove, Ill.; A. W. Book, Dixon, Ill.; H. G. Bowers, Elmwood, Ill.; L. F. Boyle, Hennepin, Ill.; E. W. Brockett, Atwater, Ohio; M. H. Broderick, Muncie, Ind.; James Brown, Dundee, Ill.; Cahill Bros., Rockford, Iowa; Carpenter & Carpenter, Baraboo, Wis.; Carpenter & Ross, Mansfield, Ohio; Geo. J. Dickison & Sons, Sault Ste. Marie, Mich.; Doughoregan Manor Farm, Ellicott City, Md.; Frank R. Edwards, Tiffin, Ohio; F. H. Ehlers, Tama, Iowa; S. G. Eliason, Montevideo, Minn.; Robert Failon, Neponset, Ill.; A. R. Fenner, Avoca, Iowa; I. M. Forbes & Son, Henry, Ill.; Fox & Gallagher, Oregon, Wis.; C. C. Francis, Centerville, Pa.; H. E. Garrison, Jacksonville, Ill.; G. A. Gillespie, N. Muskogee, Okla.; Wm. Herkelmann, Elwood, Iowa; Herr Bros. & Reynolds, Lodi, Wis.; W. J. Hill, Northcote, Minn.; Eben E. Jones, Rockland, Wis.; Owen Kane, Wisner, Neb.; Kansas State Agricultural College, Manhattan, Kan.; J. A. Kilgour, Sterling, Ill.; Lespedeza Farm, Hickory Valley, Tenn.; H. C. Lookabaugh, Watonga, Okla.; E. J. Mason, Calamus, Iowa; Theo. Martin, Bellevue, Iowa; Jos. Miler & Sons, Granger, Mo.; W. H. Miner, Chazy, N. Y.; C. L. McClellan, Lowden, Iowa; Finlay McMartin & Sons, Claremont, Minn.; J. W. McDermott, Kahoka, Wis.; L. C. Oloff, Ireton, Iowa; J. F. Prather, Williamsville, Ill.; Purdy Bros., Harris, Mo.; Rapp Bros., St. Edward, Neb.; H. Rees & Sons, Pilger, Neb.; W. C. Rosenberger, Tiffin, Ohio; C. A. Saunders, Manilla, Iowa; Leslie Smith & Son, St. Cloud, Minn.; Stanton & Hales, Wheaton, Ill.; The Allen Cattle Co., Colorado Springs, Colo.; The Otis Herd, Willoughby, Ohio; D. Tietjen, Bellevue, Iowa; E. J. Thompson & Son, Hurley, S. D.; Tomson Bros., Carbondale, Kan.; Frank Toyne & Son, Lanesboro, Iowa; University of Illinois, Urbana, Ill.; Uppermill Farm, Wapello, Iowa; Robert Ward & Sons, Benton, Ill.; David Warnock & Son, Loveland, Colo.; W. W. Washburn, Crawfordsville, Ind.; J. G. Westrope, Harlan, Iowa; J. Carl Williams, Bryant, Ind.; Michael Wagner, Fremont, Ohio. Judge, Pedro T. Pages, Buenos Aires, Argentina.

Bulls: Aged (19 shown)—1st Auld on Burnbrae Sultan; 2d Edwards on Pride of Albion; 3d Prather on Silver Knight; 4th Martin on Woodlawn Villager; 5th Hill on Royal Silver; 6th Carpenter & Ross on Maxwalton Renown; 7th Herr Bros. & Reynolds on Master Ruby; 8th Carpenter & Ross on Revolution; 9th Rosenberger on Maxwalton Pride; 10th Westrope on Scottish Rex. Two year olds (10 shown)—1st Carpenter & Ross on Maxwalton Pride 2d; 2d Gillispie on Maxwalton Commander; 3d Lespedeza Farm on Lespedeza Sultan; 4th Bellows Bros. on Parkdale Baron; 5th Herkelmann on Cumberland Standard; 6th Fenner on Choice Cumberland; 7th Kilgour on Champion Goods; 8th Fox & Gallagher on Maxwalton Amateur; 9th Hill on Thaxton's Secret; 10th Prather on Superior Knight. Senior yearling (14 shown)—1st Bellows Bros. on Village Supreme; 2d Forbes & Son on O. K.; 3d Rees & Sons on Violet's Dale; 4th Bellows Bros. on Parkdale Rex; 5th Ward & Sons on Senator; 6th Lespedeza Farm on Imperial Mistletoe; 7th Rapp Bros. on Thaxton's Master; 8th Uppermill Farm on Improved Dale; 9th Miner on Memory's Masterpiece; 10th Uppermill Farm on Royal Commander. Junior yearling (15 shown)—1st Hill on Type's Model; 2d Rapp Bros. on Royal Pride; 3d Kilgour on Fair Acres Diamond; 4th Thompson & Son on Golden Goods; 5th Brown on Thaxton's White Star; 6th Kilgour on Gloster's Gift; 7th Ward & Son on Cottonwood Sultan; 8th Prather on Silver Crown; 9th Kane on Dale's Commander; 10th Carpenter & Ross on Maxwalton Minstrel. Senior calf (47 show)—1st Allen Cattle Co. on Western Star; 2d Anoka Farms on Good Stamp; 3d McClellan on Gainford Marshall; 4th and 5th Upermill Farm on Villager's Diamond and Villager's Coronet; 6th Carpenter & Ross on Maxwalton Manor; 7th Oloff on Marr's Avon 2d; 8th E. J. Thompson & Son on Fair Sultan; 9th Hill on Duke of Northcote; 10th University of Illinois on Sultan Goods; 11th Smith & Son on Clansman; 12th Anoka Farms on Lavender Stamp; 13th Kilgour on Gloster's Favorite; 14th Uppermill Farm on Villager's Heir; 15th Herr Bros. & Reynolds on Ruby's Knight; 16th Eliason on Secret Star; 17th Kilgour on Fair Acres Goods; 18th Carpenter & Ross on Maxwalton Sensation; 19th Rosenberger on Vain Sultan; 20th Uppermill Farm on Villager's Victor. Junior calf (41 shown)—1st Bellows Bros. on King Baron; 2d and 3d Bowers on Marquis Again and Village Valentine; 4th Carpenter & Ross on Maxwalton Gladiator; 5th Kane on Wellington Dale; 6th Lespedeza Farm on Sultan's Brace; 7th Anoka Farms on Faultless Dale; 8th Jones on Collynie Cumberland; 9th Westrope on Imperial Rex; 10th Herkelmann on True King; 11th Martin on Gloster Model; 12th Ward & Sons on Sultan's Bud 3d; 13th Rapp Bros. on Pride's Emblem; 14th Herkelmann on Cumberland's Goods 2d; 15th Forbes & Son on Marquis of Linwood; 16th Eliason on Archer's Monarch; 17th Rees & Sons on Cedarlawn's Best; 18th Carpenter & Ross on Maxwalton Dover; 19th Carpenter & Carpenter on Collynie Cullen 3d; 20th Anoka Farms on Kilblean Champion.

Females: Aged (9 shown)—1st Gillespie on Maxwalton Roan Lady; 2d and 3d Carpenter & Ross on Maxwalton Mina 8th and Maxwalton Rosebud; 4th Carpenter & Carpenter on Maxwalton Queen; 5th Herkelmann on Lady Devergoil; 6th Arnold on Gloster Lassie; 7th Martin on Rose of Autumn 24th; 8th Failon on Maxwalton Gloster; 9th Williams on Eliza Broadhooks 2d. Two year old (18 shown)—1st Lespedeza Farm on Fair Gift; 2d Gillespie on Countess 16th; 3d Toyne & Son on Bonnie Belle 14th; 4th Rees & Sons on Lady Violet 7th; 5th Allen Cattle Co. on Lavender Maid; 6th Rapp Bros. on Trilby Allen; 7th Rosenberger on Sittyton Mary Ann 3d; 8th Rapp Bros. on Village Lady; 9th Eliason on Dairsie Lass 3d; 10th Uppermill Farm on Village Blythesome 3d. Senior yearling (14 shown)—1st Auld on Queen Elizabeth; 2d Gillespie on Lucile; 3d Carpenter & Carpenter on Collynie Best; 4th Lespedeza Farm on Lespedeza Rosebud; 5th Edwards on Hampton's Queen; 6th Toyne & Son on Eastlawn's Lassie; 7th Rees & Sons on Lady Violet 8th; 8th Allen Cattle Co. on Royal Rose; 9th Auld on Countess Missie; 10th Rapp Bros. on Village Blossom. Junior yearling (28 shown)—1st Carpenter & Ross on Lady Dorothy; 2d Rosenberger on Viola; 3d Washburn on Village Venus 2d; 4th Rees & Sons on Lenora Goods; 5th Auld on Evelyn; 6th Rapp Bros. on Sweetheart; 7th Carpenter & Ross on Maxwalton Augusta 15th; 8th Rosenberger on Elsie; 9th Toyne & Son on Lovely Goods; 10th Herr Bros. & Reynolds on Duchess Last. Senior calf (38 shown)—1st Auld on Britannia; 2d Purdy Bros. on Lady Victoria; 3d Allen Cattle Co. on Divide Susan; 4th Purdy Bros. on Miss Lovely; 5th Gillespie on Anoka Blossom 2d; 6th Bellows Bros. on Queen of Beauty 33d; 7th and 8th Kane on Miss Daybreak 3d and Wellington Clipper 3d; 9th Allen Cattle Co. on Victory. 10th Hill on Northcote Gipsy Maid. Junior calf (37 shown) 1st Bellows Bros. on Parkdale Victoria; 2d Uppermill Farm on Villager's Graceful; 3d Eliason on Miss May 5th; 4th Anoka Farms on Lovely Anoka 3d; 5th Kilgour on Dainty Duchess 3d; 6th Ehlers on Fairview Flora; 7th Boyle on Grand Duchess; 8th Carpenter & Carpenter on Collynie Mint Drop 2d; 9th Cahill Bros. on Spicy Clara; 10th Rapp Bros. on Barmpton Flower.

Herds and Champions: Senior champion bull—Auld on Burnbrae Sultan. Junior and grand champion bull—Bellows Bros. on Village Supreme. Senior champion cow—Lespedeza Farm on Fair Gift. Junior and grand champion cow—Carpenter and Ross on Lady Dorothy. Aged herd—1st Gillespie; 2d Lespedeza Farm; 3d Carpenter & Ross; 4th Hill; 5th Prather; 6th Rees & Son; 7th Edwards; 8th Rosenberger. Young herd (7 shown)—1st Reese & Son; 2d Auld; 3d Carpenter & Ross; 4th Rapp Bros.; 5th Lespedeza Farm; 6th Carpenter & Ross; 7th Prather. Calf herd (12 shown)—1st Bellows Bros.; 2d Allen Cattle Co.; 3d Kane; 4th Cahill Bros.; 5th Purdy Bros.; 6th Anoka Farms; 7th Kilgour; 8th Auld. Two animals, either sex, produce of 1 cow (6 shown)—1st Gillespie; 2d and 6th Carpenter & Ross; 3d Rees; 4th Uppermill Farm; 5th Lespedeza Farm. Four animals, either sex, get of 1 sire (16 shown)—1st Gillespie; 2d Anoka Farms; 3d Kane; 4th Uppermill Farm; 5th Bellows Bros.; 6th Allen Cattle Co.; 7th Auld; 8th Rees & Son.

Milking Short-horns.

Cow 3 years or over (in milk) (9 shown)—1st, 2d and 3d Otis Herd on Walby Lady 2d, Jewel, and Imp. Fillpail Baroness; 4th, 5th and 6th McMartin & Sons on Roan Maud, Naomi 2d and Beatrice; 7th, 8th and 9th Brockett on Lady Rosemary 62d, Roanoke Maid and Miss J. L. Beck. Cow under 3 years (3 shown)—1st Otis Herd on Lady of Glenside; 2d McMartin & Sons on Beulah; 3d Brockett on Betsy. Group of 4 cows (2 shown) 1st Otis Herd; 2d McMartin & Sons; 3d Brockett. Bull, calved prior to Jan. 1, 1916, and not over 30 months, from register of merit dams (4 shown)—1st and 2d Otis Herd on British Prince and Knight's Jeweler; 3d Brockett on Village Dairyman; 4th McMartin & Sons on Star of North 2d.

Argentina Silver Trophy.—Dr. Celedonia Pereda, Buenos Aires, Argentina, offered a silver trophy for the best three Short-horn steers bred and owned by exhibitor, the trophy to be won twice in sucession to become the property of the winner. For this four entries were made, one each by Carpenter & Ross, Bellows Bros., Harding and Uppermill Farm. Bellows Bros. won the trophy this year.

Herefords.

Exhibitors: J. C. Adams, Moweaqua, Ill.; Wm. Andrews & Sons, Morse, Iowa; J. C. Andras, Jr., Manchester, Ill.; C. T. Bailey & Sons, Lowell, Ind.; J. H. Bereman, Aurora, Ill.; Frank Bieth & Son, Joliet, Ill.; R. L. Calhoon, Bronson, Mich.; J. Crouch & Son, Lafayette, Ind.; W. H. Curtice, Eminence, Ky.; W. A. Dallmeyer, Jefferson City, Mo.; Jesse Engle & Sons, Sheridan, Mo.; Enochs & Wortman, Jackson, Miss.; H. J. Fluck, Goodenow, Ill.; Clem Graves, Bunker Hill, Ind.; Robert H. Hazlett, El Dorado, Kan.; L. W. Hill, Locust Dale, Va.; James V. Hill, Roundhead, Ohio; La Vernet Stock Farm, Jackson, Miss.; Luce & Moxley, Shelbyville, Ky.; H. E. Morrison & Son, Oxford, N. H.; Mousel Bros., Cambridge, Neb.; Warren T. McCray, Kentland, Ind.; Claude E. Puckett, Warren, Ill.; James Price, Onalaska, Wis.; J. C. Robinson & Son, Evansville, Wis.; E. H. Taylor, Jr., Versailes, Ky.; E. J. Taylor, Fremont, Mich.; J. E. Thompson, Martinsville, Ill.; Cyrus A. Tow, Norway, Ia.; University of Illinois, Urbana, Ill.; John W. Van Natta, Lafayette, Ind.; Watson & Puckett, Apple River, Ill.; C. A. Watson, Apple River, Ill.; C. Raymond Watson, Scales Mound, Ill.; J. Martin Webb, New York City; W. L. Yost, Kansas City, Mo. Judge, Frank W. Van Natta Fowler, Ind.

Bulls: Aged (10 shown)—1st Hazlett on Publican 4th; 2d Crouch & Son on Tippecanoe 7th; 3d McCray on Farmer; 4th Fluck on Thoughtfull; 5th E. H. Taylor, Jr. on Weston Prince, Two year old (9 shown)—1st Hazlett on Bocaldo 6th; 2d E. H. Taylor, Jr. on Beau Franklin; 3d Yost on Ardmore; 4th McCray on Martin Fairfax; 5th Robinson & Son on Maple's Lad 61st; 6th C. A. Watson on Gay Master. Senior yearling (8 shown)—1st Bereman on Perfect Donald 2d; 2d Curtice on Beau Perfection 48th; 3d La Vernet Stock Farm on Vernet Prince 31st; 4th C. A. Watson on Masquerader; 5th Yost on Don Arbour 2d; 6th Fluck on Engineer; 7th J. Watson Webb on Shelburne Reel 2d; 8th E. J. Taylor on Nugget. Junior yearling (14 shown)—1st Crouch & Son on Tippecanoe Fashion; 2d McCray on Brummel Fairfax; 3d Yost on Patrician 31st; 4th Mousel Bros. on Carl Mischief; 5th E. H. Taylor, Jr. on Tuleyries Fairfax 2d. Senior calf (31 shown)—1st Yost on Prince Donald; 2d Hazlett on Rialto 2d; 3d E. H. Taylor, Jr. on Beau Heriod; 4th McCray on Lawrence Fairfax; 5th Adams on Dale Beau Donald; 6th Bereman on Indian Columbus; 7th Curtice on Beau Perfection 62d; 8th Crouch & Son on Dewharst Perfection; 9th Bailey & Sons on Lanthus Donald 5th; 10th Price on Bright Donald 2d; 11th Andrews & Sons on Bonnie Brae 99th; 12th Robinson & Son on Maples Lad 82d; 13th C. A. Watson on Don Rupert; 14th Bereman on British Bandit; 15th Robinson on Maples Lad 83d; 16th Mousel Bros. on Superior's Mischief; 17th and 18th E. H. Taylor, Jr. on Woodford 8th and T. Fairfax 5th; 19th Dallmeyer on Lord Wilton Dare; 20th Luce & Moxley on Rosa's Beau. Junior calf (22 shown) 1st Yost on Bonnie Donald; 2d Mousel Bros. on Mischief Mixer 6th; 3d E. H. Taylor, Jr. on Woodford 9th; 4th Curtice on Perfect Donald 5th; 5th Mousel Bros. on Frank Mischief; 6th Luce & Moxley on Prince Rupert; 7th E. H. Taylor, Jr. on Prime Crusader; 8th Robinson & Son on Beau Welcome; 9th La Vernet Stock Farm on Vernet Prince 50th; 10th Andrews & Sons on Bonnie Brae 101st.

Females: Aged (10 shown)—1st and 2d E. H. Taylor, Jr. on Juliet and Bonnie Lass; 3d McCray on Margaret Fairfax; 4th E. H. Taylor Jr. on Cline Iris; 5th and 6th La Vernet Stock Farm on Maple Lass 28th and Vernet Queen 8th; 7th Crouch & Son on Cherry Lass; 8th Yost on Donna Perfect 9th; 9th McCray on Dolly Fairfax; 10th Robinson & Son on Beauty. Two year old (11 shown)—1st E. H. Taylor, Jr. on Matron Donald; 2d La Vernet Stock Farm on Vernet Princess 23d; 3d E. H. Taylor, Jr. on Mousel's Empress; 4th Crouch & Son Lady Elect; 5th Robinson & Son on Maple's Lass 38th; 6th Yost on Dorothy Donald 6th; 7th McCray on Venus; 8th E. H. Taylor, Jr. on Disturber's Lassie 12th; 9th L. W. Hill on Rosetta Fairfax; 10th C. A. Watson on Lady Directress; 11th McCray on Miss Standard 1st. Senior yearling (16 shown)—1st La Vernet Stock on Vernet Princess 27th; 2d Bereman on Prime Lass Britisher; 3d E. H. Taylor, Jr., on Belle Blanchard; 4th Yost on Lady Gay D. Bond; 5th Andrews & Sons on Miss Brae 71st; 6th Hazlett on Oma; 7th Crouch & Son on Corrector Lassie; 8th Engle & Sons on Belle Blanchard 6th; 9th Robinson & Son on Maple's Lass 56th; 10th Curtice on Belle Perfection 57th. Junior yearling (18 shown)—1st Hazlett on Toyah; 2d Andrews & Sons on Miss Brae 70th; 3d and 4th E. H. Taylor, Jr., on Woodford Lady 3d and Woodford Lady 5th; 5th Engle & Sons on Belle Blanchard 10th; 6th Bereman on Missie Columbus; 7th McCray on Jessica Fairfax; 8th Yost on Jean A. Donald; 9th Dallmeyer on Jane Dare; 9th Robinson & Son on Maple's Lass 68th. Senior calf (20 shown)—1st E. H. Taylor, Jr., on Majestic Lady; 2d Hazlett on Oleen; 3d La Vernet Stock Farm on Vernet Princess 41st; 4th E. H. Taylor, Jr., on Belle Woodford 17th; 5th Hazlett on Bloss 13th; 6th Luce & Moxley on Princess "R" 72d; 7th La Vernet Stock Farm on Vernet Princess 38th; 8th Yost on Bonnie Doris; 9th Robinson & Son on Maple's Lass 71st; 10th Bailey & Sons on Lauthus Maid 15th. Junior calf (20 shown)—1st Mousel Bros. on Belle Mischief; 2d Hazlett on Yerba Santa; 3d Yost on Bonnie Princess; 4th La Vernet Stock Farm on Vernet Princess 45th; 5th E. H. Taylor, Jr., on Belle Woodford 8th; 6th Luce & Moxley on Princess R. 75th; 7th McCray on Florena Fairfax; 8th Yost on Bonnie Dowager; 9th Mousel Bros. on Dona Mischief; 10th E. H. Taylor, Jr., on Belle Woodford 9th.

Herds and champions: Senior and grand champion bull—Hazlett on Bocaldo 6th. Junior champion bull—Crouch & Son on Tippecanoe Fashion. Senior and grand champion cow—E. H. Taylor, Jr., on Juliet. Junior champion heifer—McCray on Primrose. Aged

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herd (6 shown)—1st E. H. Taylor, Jr.; 2d Davies; 3d Yost; 4th Crouch & Son; 5th McCray; 6th Robinson & Son. Young herd (8 shown)—1st E. H. Taylor, Jr.; 2d Davies; 3d Hazlett; 4th Engle & Sons; 5th Andrews & Sons; 6th McCray; 7th Robinson & Son; 8th Curtice. Calf herd (10 shown)—1st E. H. Taylor, Jr.; 2d Hazlett; 3d Yost; 4th Mousel Bros.; 5th Luce & Moxley; 6th Davies. Two animals, either sex, produce of 1 cow (10 shown)—1st Hazlett; 2d Davies; 3d McCray; 4th E. H. Taylor, Jr.; 5th Davies. Four animals, either sex, get of 1 sire (10 shown)—1st Hazlett; 2d Yost; 3d Engle & Sons; 4th and 5th Davies.

Aberdeen Angus.

Exhibitors: Hobart Ames, Grand Junction, Tenn.; R. H. Anderson & Sons, Newell, Iowa; A. A. Armstrong, Camargo, Ill.; C. D. & E. F. Caldwell, Burlington Junction, Mo.; J. S. Caldwell & Sons, Chillicothe, Mo.; L. B. Canum, Aledo, Ill.; Congdon & Battles, No. Yakima, Wash.; U. L. Clark, Hunters Creek, Mich.; Davis Bros., Reeder, N. D.; P. J. Donohoe, Holbrook, Iowa; Escher & Ryan, Irwin, Iowa; Chas. Escher, Jr., Botna, Iowa; John D. Evans, Sugar Grove, Ill.; John S. Goodwin, Naperville, Ill.; Edw. Grosch, La Moille, Ill.; Harrison & Harrison, Indianola, Neb.; Sam H. Hill & Son, Christoval, Texas; L. R. Kershaw, Muskogee, Okla.; Patrick Leahy, Williamsburg, Iowa; J. W. McClung & Son, Indianola, Neb.; J. D. McGregor, Brandon, Manitoba; L. McWhorter & Son, Aledo, Ill.; F. J. Roberts, Atlantic, Iowa; Sutton & Porteus, Lawrence, Kan.; C. L. Taggart, Washington, Pa.; J. Garrett Tolan, Farmingdale, Ill.; F. B. Turnbull, Cedarville, Ohio; University of Illinois, Urbana, Ill.; Wilson Bros., Muncie, Ind.; Woodcote Stock Farm, Ionia, Mich. Judges, O. E. Bradfute, Xeni, Ohio; H. J. Hess, Waterloo, Iowa; John D. Evans, Sugar Grove, Ill.

Bulls: Aged (9 shown)—1st Ames on Black Poe; 2d Armstrong on Broadus Norwood 3d; Kershaw on Ben Hur of Lone Dell; 4th Congdon & Battles on Barbarian of Rosemere; 5th Donohoe on Brookside Edward; 6th McGregor on Black Abbott Prince; 7th Wilson Bros. on Grange Hall Ito; 8th Cutler on Black Quality's Ito; 9th Tolan on Prism's Goods 2d. Two-year-old (6 shown)—1st C. D. & E. F. Caldwell on Blackcap Bertram; 2d Congdon & Battles on Knight of Rosemere; 3d J. S. Caldwell & Sons on Don Pronto; 4th Anderson & Sons on Lord Melamere 2d; 5th Congdon & Battles on Laddie of Rosemere; 6th Kershaw on Edgar of Rosemere. Senior yearling (6 shown)—1st Congdon & Battles on Prizemere; 2d C. D. & E. F. Caldwell on Blatant; 3d Ames on Ames Plantation Ito; 4th Armstrong on Broadus Elwood; 5th Kershaw on Prince Penn; 6th Clark on British Monarch 2d. Junior yearling (9 shown)—1st C. D. & E. F. Caldwell on Epistos; 2d Congdon & Battles on Meraman of Tierra Alta; 3d Kershaw on Inverne of Rosemere; 4th Congdon & Battles on Cherokeer; 5th Cutler on Enos of Woodcote; 6th Ames on Ames Plantation Elite; 7th Taggart on Fairfield Bob; 8th Congdon & Battles on Ericmere 2d; 9th Leahy on Beuin of Quietdale. Senior calf (15 shown)—1st McGregor on Edgar of Glencarnock 3d; 2d Anderson & Sons on Erman 2d; 3d Ames on Empson; 4th Wilson Bros. on Queen's Edward; 5th Roberts on Quo Vadis 5th; 6th C. D. & E. F. Caldwell on Eidart; 7th J. S. Caldwell & Son on Exito; 8th Goodwin on Edmore B.; 9th Cutler on Marshall of Woodcote 2d. Junior calf (12 shown)—1st Congdon & Battles on Quality Lad of Rosemere 2d; 2d J. S. Caldwell & Sons on Bradin C.; 3d Ames on Ames Plantation Beau; 4th Armstrong on Broadus Brookman 3d; 5th Leahy on Blackcap Glen; 6th McClung & Son on Quandary 3d; 7th Reed on Banter R.; 8th Cutler on Black Monarch of Woodcote; 9th Congdon & Battles on Blackburr of Rosemere; 10th Ames on Ames Plantation King.

Cows: Aged (17 shown)—1st Congdon & Battles on Quissy of Meadow Brook; 2d C. D. & E. F. Caldwell on Pride Petite; 3d J. S. Caldwell & Sons on Majesty Queen; 4th Escher on Eulima 28th; 5th J. S. Caldwell & Sons on Ito's Pride "C."; 6th Ames on Blackbird of Rosemere 10th; 7th Donohoe on Twin Burn Pride 2d; 8th Kershaw on Blackbird Lassie of Alta 19th. Two-year-old (15 shown)—1st J. S. Caldwell & Sons on Hilldale Pride; 2d C. D. & E. F. Caldwell on Pride of Autumn; 3d Congdon & Battles on Bell Eclipser of Newell 3d; 4th McClung & Son on Queen Milly of Sun Dance 3d; 5th Cutler on Erica of Woodcote 12th; 6th Kershaw on Twin Burn Pride 5th; 7th Ames on Blackbird 163d; 8th C. D. & E. F. Caldwell on Elassona Erinna. Senior yearling (12 shown)—1st Ames on Blackbird Perfection 6th; 2d Congdon & Battles on Kensington Lady E.; 3d Leahy on Glenmere Blackcap 4th; 4th Goodwin on Elizabeth Anna; 5th Donohoe on Erica Roberts 10th; 6th C. D. & E. F. Caldwell on Blackbird Velvet; 7th J. S. Caldwell & Sons on Minetto; 8th Leahy on Glenmere Heather Lass 2d; 9th Cutler on Erica of Woodcote 17th; 10th Congdon & Battles on Blackbird of Rosemere 20th. Junior yearling (10 shown)—1st Congdon & Battles on Heather of Rosemere 4th; 2d C. D. & E. F. Caldwell on Eritus 2d; 3d Kershaw on Blackbird 185th; 4th Anderson & Sons on Pride of Elchier 22d; 5th Leahy on Glenmere Black Lass; 6th J. S. Caldwell & Sons on Hilldale Bloom; 7th Congdon & Battles on Pride of Rosemere 9th; 8th Cutler on Erica of Woodcote 19th; 9th J. S. Caldwell & Sons on Hilldale Emily; 10th Grosch on Clever Maggie. Senior calf (13 shown)—1st C. D. & E. F. Caldwell on Esthonia 15th; 2d Kershaw on Muskogee Rose 2d; 3d J. S. Caldwell & Sons on Hilldale Pride 9th; 4th Ames on Ames Plantation Quennie; 5th J. S. Caldwell & Sons on Baretta; 6th Leahy on Glenmere Blackbird 19th; 7th Goodwin on Rosebud Alpha Xi; 8th Cutler on Blackcap of Wootcote 4th; 9th Goodwin on Black Empress Also; 10th Sutton & Porteus on Lola Heatherson. Junior calf (10 shown)—1st Congdon & Battles on Queen of Rosemere 5th; 2d C. D. & E. F. Caldwell on Blackcap Echo 3d; 3d Donohoe on Brookside Blackbird 50th; 4th Donohoe on Blackbird Roberts 15th; 5th Kershaw on Muskogee Dona 3d; 6th Sutton & Porteus on Erica Heatherson 2d; 7th Cutler on Blackbird Diana Woodcote 5th; 8th Ames on Ames Plantation Pride; 9th Congdon & Battles on Pride of Rosemere 10th; 10th Kershaw on Blackbird of Rosemere 25th.

Herds and Champions: Senior champion bull—C. D. & E. F. Caldwell on Blackcap Bertram. Junior and grand champion bull—C. D. & E. F. Caldwell on Epistos. Senior and grand champion cow—J. S. Caldwell & Sons on Hilldale Pride. Junior champion heifer—Ames on Blackbird Perfection 6th. Aged herd (5 shown)—1st Congdon & Battles; 2d C. D. & E. F. Caldwell; 3d Ames; 4th J. S. Caldwell & Sons; 5th Kershaw. Young herd (4 shown)—1st C. D. & E. F. Caldwell; 2d Congdon & Battles; 3d J. S. Caldwell & Sons; 4th Leahy. Calf herd (5 shown)—1st Congdon & Battles; 2d J. S. Caldwell & Sons; 3d C. D. & E. F. Caldwell; 4th Leahy; 5th Kershaw. Four animals, either sex, get of 1 sire (5 shown)—1st C. D. & E. F. Caldwell; 2d Anderson & Sons; 3d Leahy; 4th Congdon & Battles; 5th Kershaw. Two animals, either sex, produce of 1 cow (6 show)—1st C. D. & E. F. Caldwell; 2d Congdon & Battles; 3d J. S. Caldwell & Sons; 4th Donohoe; 5th McClung & Son.

Red Polled.

Exhibitors: R. S. Caughey, Chatsworth, Ill.; George Ineichen & Son, Geneva, Ind.; Joseph Kestel, New Lenox, Ill.; J. W. Larabee, Earlville, Ill.; S. J. Smith, Chadwick, Ill. Judge, Adolph P. Arp, Eldridge, Iowa.

Bulls: Aged (4 shown)—1st Larabee on Teddy's Charmer; 2d Ineichen & Son on Woodroe W.; 3d Larabee on Marker; 4th Smith on Falstaff 6th. Two-year-old (2 shown)—1st Ineichen & Son on Principle; 2d Larabee on Prosper. Senior yearling (1 shown)—1st Smith on Falstaff Time. Junior yearling (3 shown)—1st Larabee on Billy Charmer; 2d Kestel on Luna Boy 2d; 3d Smith on Teddy's Choice. Senior calf (3 shown)—1st Ineichen & Son on Teddy's Chief; 2d Smith on Uncle Jake; 3d Larabee on Johnny Charmer. Junior calf (5 shown)—1st Larabee on Homer; 2d Smith on Falstaff's Crusader; 3d Larabee on Jimmy Charmer; 4th and 5th Ineichen & Son on Orval and King Pin.

Cows: Aged (5 shown)—1st Larabee on Susie 2d; 2d Ineichen & Son on Cozy 2d; 3d Smith on Red Ruby 3d; 4th Larabee on Red Rose; 5th Smith on Lady Stowe. Two-year-old (6 shown)—1st and 2d Smith on Lady Stowe 4th and Miss Ruth; 3d Larabee on Jello; 4th Ineichen & Son on Ella Lee; 5th Larabee on Lady Aster. Senior yearling (4 shown)—1st Larabee on Lady Chramer; 2d Ineichen & Son on Pearl Lee; 3d Smith on Lady Corporal; 4th Ineichen & Son on Gay Lass. Junior yearling (5 shown)—1st Ineichen & Son on Zelnett; 2d Larabee on Miss Charmer; 3d Ineichen & Son on Mary Jay; 4th Larabee on Marie Charmer; 5th Smith on Red Ruby 5th. Senior calf (5 shown)—1st Larabee on Bessy Charmer; 2d Ineichen & Son on Crown Cosy; 3d Kestel on Jane; 4th Ineichen & Son on Ruby; 5th Smith on Ruby's Poinsetta. Junior calf (8 shown)—1st Ineichen & Son on Bell Ell; 2d Larabee on Tidy; 3d and 4th Ineichen & Son on Rosy Rose and Zellro; 5th Smith on Pet's Golden Rule.

Herds and Champions: Senior champion bull—Larabee on Teddy's Charmer. Junior and grand champion bull—Larabee on Billy Charmer. Senior and grand champion cow—Larabee on Susie 2d. Junior champion heifer—Ineichen & Son on Zelnett. Aged herd—1st Larabee; 2d Ineichen & Son; 3d Smith; 4th Ineichen & Son; 5th Larabee. Young herd—1st Larabee; 2d and 5th Ineichen & Son; 3d Kestel; 4th Smith. Calf herd—1st Larabee; 2d and 3d Ineichen & Son; 4th Smith. Two animals, either sex, produce of 1 cow—1st and 3d Larabee; 2d and 5th Ineichen & Son; 4th and 6th Smith. Four animals, either sex, get of 1 sire—1st and 3d Larabee; 2d Ineichen & Son; 4th Smith; 5th Kestel.

Galloways.

Exhibitors: H. & G. Croft, Bluff City, Kan.; James Frantz, Bluffton, Ohio; C. S. Hechtner, Chariton, Iowa; James P. Milliken, Media, Ill.; O. H. Swigart & Sons, Salisbury, Mo.; G. W. White & Son, Chariton, Iowa. Judge, E. A. Trowbridge, Columbia, Mo.

Bulls: Aged (3 shown)—1st H. & G. Croft on Choicemaster; 2d Frantz on Musketeer; 3d Hechtner on Pathfinder King. Two-year-old (3 shown)—1st Swigart & Sons on Myrtle's Standpatter; 2d H. & G. Croft on A. Carnot; 3d Frantz on Nob. Senior yearling (1 shown)—1st Frantz on Pride's Othello 3d. Junior yearling (3 shown)—1st Swigart & Sons on Evaline's Othello; 2d Swigart & Sons on Scott's Orion; 3d H. & G. Croft on Ivan of Greenbush. Senior calf (6 shown)—1st Frantz on Queer Lad; 2d H. & G. Croft on Jerome D.; 3d Milliken on Chief of Maple Glen; 4th Swigart & Sons on Lord Graham; 5th White & Son on Duke of Klemme. Junior calf (7 shown)—1st H. & G. Croft on Viceroy; 2d Frantz on Hensol of M. G.; 3d H. & G. Croft on Ralph of Greenbush; 4th Hechtner on Pride's Optimist; 5th Swigart & Sons on George Washington.

Cows: Aged (4 shown)—1st H. & G. Croft on Little Mary 2d of L. F.; 2d Swigart & Sons on Nellie Melville; 3d Frantz on Merry Lady; 4th Swigart & Sons on Idel of M. G. Two-year-old (4 shown)—1st H. & G. Croft on Carlotta of L. F.; 2d Frantz on Merry Belle; 3d and 4th Swigart & Sons on Othello's Nell and Lady Stanley 10th. Senior yearling (4 shown)—1st H. & G. Croft on Meadow Queen; 2d H. & G. Croft on Lady 2d of Greenbush; 3d Frantz on Verna of M. G.; 4th H. & G. Croft on Gwendoline 2d. Junior yearling (4 shown)—1st H. & G. Croft on Floss 6th of Greenbush; 2d Milliken on Signet of Maple Glen; 3d Swigart & Sons on Othello's Pride 5th; 4th Frantz on Scottish Emma. Senior calf (3 shown)—1st Swigart & Sons on Nellie 2d of Avondale; 2d H. & G. Croft on Evelyn of Greenbush; 3d Frantz on Diana of M. G. Junior calf (5 shown)—1st H. & G. Croft on Gwendoline 3d of Greenbush; 2d Swigart & Sons on Kindness 3d of Avondale; 4th Swigart & Sons on Lucy 2d of Avondale; 5th H. & G. Croft on Luella of Greenbush.

Herds and Champions: Senior champion bull—H. & G. Croft on Choicemaster. Junior champion bull—Swigart & Sons on Evaline's Othello. Senior champion cow—H. & G. Croft on Carlotta of L. F. Junior champion cow—H. & G. Croft on Meadow Queen. Aged herd (3 shown)—1st H. & G. Croft; 2d Swigart & Sons; 3d Frantz. Young herd (3 shown)—1st H. & G. Croft; 2d Swigart & Sons; 3d Frantz. Four animals, either sex, get of 1 sire (3 shown)—1st H. & G. Croft; 2d Swigart & Sons; 3d Frantz. Two animals, either sex, produce of 1 cow (4 shown)—1st H. & G. Croft; 2d Swigart & Sons; 3d Frantz; 4th H. & G. Croft.

Polled Durhams.

Exhibitors: Achenbach Bros., Washington, Kan.; E. J. Augspurger, Pulaski, Iowa; Albert Hultine, Saronville, Neb.; Leemon Stock Farm, Hoopston, Ill.; J. H. Miller, Peru, Ind.; W. H. Miller & Son, Mulberry, Ind.; W. W. Rose & Sons, Rossville, Ind.; Ed Stegelin, Straight Creek, Kan. Judge, J. P. Rusk, Urbana, Ill.

Bulls: Aged (2 shown)—1st Augspurger on Wanderer's Marvel Jr.; 2d Miller on Intense Sultan. Two-year-old (2 shown)—1st and 2d Miller on Baron Sultan X. and Sultan Crown. Senior yearling (1 shown)—1st Hultine on Gloster Count. Junior yearling (3 shown)—1st and 2d Hultine on Roselawn Marshal and Sultan Jr.; 3d Miller & Son on Chaneur Boy 3d. Senior calf (6 shown)—1st Rose & Sons on Royal Marshal; 2d Hultine on Royal Goods; 3d Achenbach Bros. on Intensified Sultan. Junior calf (5 shown)—1st and 2d Miller on Invincible Sultan and Imperial Dale; 3d Leemon Stock Farm on Lee Dale Model.

Cows: Aged (3 shown)—1st Achenbach Bros. on Sultana; 2d Hultine on Fern Goods; 3d Miller on Queen of Miami 5th. Two-year-old (4 shown)—1st Miller on Queen of Miami 9th; 2d Leemon Stock Farm on White Bess X.; 3d Achenbach Bros. on Choice Sultana; 4th Hultine on Winsome. Senior yearling (3 shown)—1st Miller on Lady Dorothy; 2d Achenbach Bros. on Sultana Frances; 3d Hultine on Brampton Sultana. Junior yearling (4 shown)—1st Miller on Miami Clipper; 2d Hultine on Siren 2d; 3d Leemon Stock Farm on Lee Dale's Duchess; 4th Achenbach Bros. on Sultana Minute 2d. Senior calf (7 shown)—1st Rose & Sons on Crimson Scarlet; 2d Hultine on Gloster Princess 21st; 3d Achenbach Bros. on Sultana Felice; 4th Miller on 34th Miami Victoria. Junior calf (9 shown)—1st Leemon Stock Farm on Lee Dale Mayflower; 2d Miller on Imperial Sultana; 3d Leemon Stock Farm on Lee Dale Sultana; 4th Achenbach Bros. on Sultana Martha.

Herds and Champions: Junior champion bull—Miller on Invincible Sultan. Senior champion cow—Miller on Queen of Miami 9th. Junior champion cow—Rose & Sons on Crimson Scarlet. Aged herd (1 shown)—1st Miller. Young herd (3 shown)—1st Miller; 2d Hultine; 3d Achenbach Bros. Calf herd (5 shown)—1st Rose & Sons; 2d Miller & Son; 3d Leemon Stock Farm; 4th Achenbach Bros. Two animals, either, produce of 1 cow (4 shown)—1st and 2d Achenbach Bros.; 3d Miller; 4th Hultine. Four animals, either sex, get of 1 sire (5 shown)—1st Miller; 2d Rose & Sons; 3d Leemon Stock Farm; 4th Achenbach Bros.

FAT CATTLE.

Short-horns.

Exhibitors: S. A. Dunlap, Williamsport, Ind.; Wm. Herkelmann, Elwood,

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Ia.; Iowa State College, Ames, Ia.; Kansas State College, Manhattan, Kan.; Ohio State University, Columbus, Ohio; Geo. J. Peak, Winchester, Ill.; University of Illinois, Urbana, Ill.; Wm. Huffman, Washington C. H., Ohio; Pennsylvania State College, State College, Pa.; Purdue University, Lafayette, Ind.; Clifford Tague, Kirkman, Ia.; Herr Bros. & Reynolds, Lodi, Wis. Judge, Jas. Tomson, Carbondale, Kan.

Steer or heifer: Two year old (10 shown)—1st and 2d Kansas State College on Merry Dale and King Dale; 3d University of Illinois on King of Diamonds; 4th Peak on Waloper; 5th Pennsylvania State College on Penn's Colonel; 6th Iowa State College on Walnut Glen Duke; 7th Ohio State University on Ohio's Rosedale; 8th Dunlap on Sultan Pride. Senior yearling (8 shown)—1st and 2d Kansas State College on Barmpton Dale and Gallant Dale; 3d University of Illinois on Illni Model; 4th Iowa State College on Choice Master; 5th Purdue University on Double Lavender; 6th and 7th Huffman on Tom and Dick; 8th Pennsylvania State College on Penn's Chief. Junior yearling (13 shown)—1st Kansas State College on Archer Dale; 2d Herkelmann on Johnnie; 3d Purdue University on Jim Junior; 4th University of Illinois on Silver Model; 5th Purdue University on Kilbride; 6th Iowa State College on Meadow View Prince; 7th Ohio State University on Ohio's Nabob; 8th Tague on Stubby Rex. Senior calf (9 shown)—1st Herr Bros. & Reynolds on Lightning Flash; 2d Iowa State College on Royal Choice; 3d University of Illinois on Major Goods; 4th Purdue University on Deacon; 5th Iowa State College on Matador; 6th Kansas State College on Barmpton Prince; 7th Huffman on Bob. Junior calf (3 shown)—1st Peak on King Floto; 2d Ohio State University on Ohio's Lavender; 3d Pennsylvania State College on Bell Boy. Champion—Kansas State College on Merry Dale. Herd of 3d head, owned by exhibitor—1st and 2d Kansas State College; 3d Herkelmann; 4th Iowa State College; 5th Peak.

Aberdeen Angus.

Exhibitors: C. D. & E. F. Caldwell, Burlington Junction, Mo.; University of California, Davis, Cal.; Condon & Battles, North Yakima, Wash.; University of Illinois, Urbana, Ill.; Iowa State College, Ames, Ia.; Purdue University, Lafayette, Ind.; L. R. Kershaw, Muskogee, Okla.; University of Nebraska, Lincoln, Neb.; J. S. Caldwell & Sons; Ohio State University, Columbus, Ohio; John S. Goodwin, Naperville, Ill.; Pennsylvania State College, State College, Pa.; University of Missouri, Columbia, Mo.; R. M. Anderson & Sons, Newell, Ia. Judges, John D. Evans, Sugar Grove, Ill.; H. J. Hess, Waterloo, Ia.; A. A. Armstrong, Camargo, Ill.

Steer or heifer: Two year old (14 shown)—1st University of California on University of California Jock; 2d Condon & Battles on Loyal of Meadow Brook; 3d Caldwell on Billie Berg; 4th Purdue University on On Time; 5th University of Illinois on Ebenezer. Senior yearling (11 shown)—1st University of Nebraska on Tom; 2d Kershaw on Best Ever; 3d Caldwell on Blackbird Lad; 4th Iowa State College on Thick Set Dan; 5th Iowa State College on Buttress. Junior yearling (8 shown)—1st Ohio State University on Ohio's Ideal; 2d Caldwell & Sons on The Attraction; 3d Purdue University on Martha's Prince; 4th University of Nebraska on Quality Prince; 5th Purdue University on Martha's Prince. Senior Calf (7 shown)—1st Iowa State College on Iowa White Sox; 2d Kansas State College on Rosegay Lad; 3d Purdue University on Fyvie Prince; 4th Goodwin on Ruddy; 5th University of Missouri on Defiance. Junior calf (3 shown)—1st Caldwell on Luckfly; 2d Iowa State College on Pandeau Jr.; 3d Anderson & Sons on Prince. Champion—University of California on University of California Jock. Herd of 3 head, owned by exhibitor—1st Iowa State College; 2d Purdue University; 3d Caldwell; 4th Iowa State College.

Herefords.

Exhibitors: Wm. Andrews & Sons, Morse, Ia.; Kansas State College, Manhattan, Kan.; Purdue University, Lafayette, Ind.; Cyrus A. Tow, Norway, Ia.; University of Missouri, Columbia, Mo.; H. J. Fluck, Goodenow, Ill. Judge, Frank W. Van Natta, Fowler, Ind.

Steer or heifer: Two year old (6 shown)—1st Tow on Fairview Byron; 2d Andrews & Sons on Bonny Boy 133d; 3d Purdue University on Purdue's Britisher 139th; 4th and 5th Kansas State College on Capper 148th and Beau Fancy 142d. Senior yearling (5 shown)—1st and 2d Tow on Hazford Lad 6th and Standard P. 159th; 3d Kansas State College on Beau Hessler 150th; 4th Iowa State College on Majuba; 5th University of Missouri on Distinction 149th. Junior yearling (2 shown)—1st Fluck on Fluck's Ensign; 2d University of Missouri on Suspense 168th. Senior calf (3 shown)—1st Tow on Bondsman's Boy; 2d University of Missouri on Discretion 153d; 3d Kansas State College on Don Hessler 167th. Junior calf (none shown). Champion—Tow on Fairview Byron. Herd of 3 head, owned by exhibitor—1st Tow; 2d Kansas State College; 3d University of Missouri.

Galloways.

Exhibitors: Kansas State College, Manhattan, Kan.; University of Nebraska, Lincoln, Neb.; Jas. P. Milliken, Media, Ill. Judge, E. A. Trowbridge, Columbia, Mo.

Steer or heifer: Two year old—1st Kansas State College on Meserve Pathfinder; 2d University of Nebraska on Donald. Yearling—1st Kansas State College on Medallion; 2d and 3d Milliken on Magic and Diamond; 4th University of Missouri on Foreman. Calf—1st Kansas State College on Kingsley of Hillair. Champion—Kansas State College on Medallion. Herd of 3 head, owned by exhibitor—1st Kansas State College.

Polled Durhams.

Exhibitors: C. E. Simons & Son, Geneva, Ind.; W. H. Miller & Sons, Mulberry, Ind. Judge, J. P. Rusk, Urbana, Ill.

Steer or heifer: Two year old—1st Simons & Son on Mist. Yearling—1st Miller & Sons on Jenny Marshal; 2d Simons & Son on Princess Violet. Calf—1st Miller & Sons on Marshall's Kind. Champion—Miller & Sons on Marshall's Kind.

Grades and Cross Breds.

Exhibitors: Iowa State College, Ames, Ia.; Escher & Ryan, Irwin, Ia.; Fauquier Breeders' Association, Rectortown, Va.; Jas. Price, Analaska, Wis.; D. D. Van Voorhis, Beecher, Ill.; Hobart Ames, Grand Junction, Tenn.; Wm. Herkelmann, Elwood, Ia.; Fred Albright, Rossville, Ill.; G. D. Anderson, Newell, Ia.; L. R. Kershaw, Muskogee, Okla.; C. L. Taggart, Washington, Pa.; University of Illinois, Urbana, Ill.; University of California, Davis, Cal.; Kansas State College, Manhattan, Kan.; A. A. Armstrong, Camargo, Ill. Judge, Carlos M. Duggan, Buenos Aires, Argentina.

Steer or heifer: Two year old (11 shown)—1st Iowa Staet College on Ben Brackie; 2d Escher & Ryan on King Edward; 3d Van Voorhis on Surprise; 4th Fauquier Breeders' Association on Ivanhoe; 5th Price on Refiner Boy. Senior yearling (8 shown)—1st Escher & Ryan on The Kaiser; 2d Iowa State College on Carranza; 3d Herkelmann on George; 4th Iowa State College on Hayner's Best; 5th Ames on Gaston. Junior yearling (19 shown)—1st Kershaw on College Choice; 2d University of Illinois on Black Queen; 3d Fauquier Breeders' Association on Greenway Age; 4th Anderson on Sunnyslope Prince; 5th Taggart on Bud. Senior calf (10 shown)—1st University of California on California Favorite; 2d Iowa State College on Johnny Walker; 3d Anderson on Sunny Boy; 4th Armstrong on Broadus Victor; 5th University of Missouri on Dictator. Junior calf (12 shown)—1st Escher & Ryan on Carranza; 2d Ames on Silver Dale; 3d Anderson on Sunnyslope Uno; 4th Anderson on Sunnyslope J. C.; 5th Allbright on Peach Blossom. Champion—University of California on California Favorite. Herd of 3 head, owned by exhibitor—1st Escher & Ryan; 2d Iowa State College; 3d Kansas State College; 4th Voorhis. Get of sire, any breed, pure bred, grade or cross bred—1st Kansas State College; 2d Escher & Ryan; 3d Iowa State College.

Champions.

Pure breds, grades and crosses, steer or heifer: Two year old—University of California on University of California Jock (Angus); reserve, Kansas State College on Merry Dale (Short-horn). Yearling—Escher & Ryan on The Kaiser (grade); reserve, Kansas State College on Barmpton Dale (Short-horn). Calf—University of California on California Favorite (grade); reserve, Peak on King Floto (Short-horn). Grand champion of the show—University of California on California Favorite (grade Hereford); reserve, University of California on University of California Jock (Angus). Champion herd, consisting of one two year old, one yearling and one calf—Escher & Ryan; reserve, Kansas State College.

Carlots Fat Cattle.

For the third time Mr. Ed P. Hall, of Mechanicsburg, Ill., won the grand championship prize in the carload lots, his previous winnings having been made in 1910 and 1912. His load of Angus yearlings were pronounced by Judges Cross and Tamblyn to be the equal in quality, smoothness and finish of any load that has ever won the purple before. In the two-year-old class A. E. Price, Grant Park, Ill., was the winner, with Pinnell & Bennett, Kansas, Ill., second on a carload of Herefords. The following is a complete list of all the winning in the carload classes. Grand Champion Load: Ed P. Hall, Mechanicsburg, Ill., Angus. Champions By Ages: Yearlings—1st E. P. Hall, Angus; 2d J. W. Frazier, Rardin, Ill., Hereford; 3d Miller Bros., Olds, Iowa, Angus. Two year olds—1st A. E. Price, Grant Park, Ill., Angus; 2d Pinnell & Bennett, Kansas, Ill., Hereford; 3d E. P. Hall, Angus. Corn Belt District: Yearlings—1st E. P. Hall, Angus; 2d J. D. Waters & Son, Dawson, Ill., Short-horn; 3d W. C. White, Carrollton, Mo., Angus; 4th C. C. Jackson, Earlham, Iowa, Angus; 5th Hyland Farms, Sharpsburg, Ill., Short-horn. Two year olds—1st A. E. Price, Angus; 2d J. D. Waters, Short-horn; 3d C. H. Redfield, Newell, Ia., Angus; 4th C. J. Hammett, Hartville, Mo., Angus; 5th Paul Ehlers, Lamoille, Ia., Angus. South Central District: Yearlings—1st Miller Bros., Angus; 2d Miller Bros., Angus. Two year olds—1st A. E. Price, Angus; 2d Springer & Johnson, Manhattan, Kan., Hereford; 3d Foster Bros., Earlham, Ia., Hereford; 4th and 5th J. H. Cummings, Short-horn. Southwest District: Yearlings—1st J. W. Frazier, Hereford; 2d J. G. Imboden, Decatur, Ill., Hereford; 3d Dan Casement, Manhattan, Kan., Hereford; 4th J. W. Frazier, Hereford; 5th Lacy Bros., Kansas, Ill., Hereford. Two year olds—1st Pinnell & Bennett, Hereford; 2d J. G. Imdoben & Son, Decatur, Ill., Hereford; 3d and 4th Pinnell & Bennett, Hereford; 5th W. W. Crabb, Delavan, Ill., Hereford. Short-Fed Specials: Yearlings—1st J. W. Crabb, Mixed; 2d L. H. White, Mixed. Two year olds—1st J. G. Imboden, Hereford; 2d E. C. Mathiesen, Bryant, Ia., Hereford; 3d V. Fedderson, Bryant, Ia., Short-horn. Champion Carload: Two year olds—J. G. Imboden, Hereford.

BREEDING SWINE.

Poland Chinas.

Strong competition was met with in the showing of Poland Chinas at the International. The ribbons were well distributed among the various exhibitors and none got more than his share. However, B. F. Dorsey & Sons, Versailles, Ill., succeeded in capturing a few more ribbons than any other one exhibitor. The classes were small in some of the aged lots, but the animals shown were nearly all first-class individuals. The big type of animal was in evidence in the Polands this year and the high quality also was very noticeable. The outstanding boar, Max Sampson, of Sam McKelvie, was made senior and grand champion boar when he defeated the junior champion, Big Jumbo Wonder, owned by J. W. Garvey. The senior boar is a large, smooth, well-fleshed individual and was an outstanding boar in the classes in which he competed. B. F. Dorsey & Sons won the senior and grand champion sow ribbons on May's Quality and the junior champion sow ribbon on Handsome. The senior sow is a wonderful, big-type Poland of great length and fleshing and was easily of grand champion caliber.

Exhibitors: Bean Creek Farm, Hudson, Mich.; G. L. Burgess, Bement, Ill.; B. F. Dorsey & Sons, Versailles, Ill.; Michael Doyle, Elwood, Ill.; Howard B. Francis, New Lenox, Ill.; J. W. Garvey, Thayer, Ill.; S. McKelvie, Fairfield, Neb.; University of Nebraska, Lincoln, Neb. Judge, J. M. Kemp, Kenny, Ill.

Boars: Two years or over (4 shown)—1st Burgess; 2d Dorsey & Sons; 3d Doyle; 4th Bean Creek Farm. Twelve months and under 18 (3 shown)—1st McKelvie; 2d Dorsey & Sons; 3d Bean Creek Farm. Six months and under 12 (3 shown)—1st Garvey; 2d Dorsey & Sons; 3d Bean Creek Farm. Under 6 months (4 shown)—1st and 3d Burgess; 2d Dorsey & Sons; 4th Bean Creek Farm.

Sows: Two years or over (4 shown)—1st Dorsey & Sons; 2d and 3d Burgess; 4th Bean Creek Farm. Eighteen months and under 24 (2 shown)—1st Dorsey & Sons; 2d Bean Creek Farm. Twelve months and under 18 (5 shown)—1st Garvey; 2d and 4th Dorsey & Sons; 3d Burgess; 5th Bean Creek Farm. Six months and under 12 (3 shown)—1st and 2d Dorsey & Sons; 3d University of Nebraska. Under 6 months (5 shown)—1st and 2d Dorsey & Sons; 3d and 4th Burgess; 5th Bean Creek Farm.

Herds and champions: Boar and 3 sows over 1 year (3 shown)—1st Dorsey & Sons; 2d Burgess; 3d Bean Creek Farm. Boar and 3 sows over 1 year, bred by exhibitor (2 shown)—1st Dorsey & Sons; 2d Bean Creek Farm. Boar and 3 sows under 1 year (4 shown)—1st and 2d Dorsey & Sons; 3d Burgess; 4th Bean Creek Farm. Boar and 3 sows under 1 year, bred by exhibitor (4 shown)—1st and 2d Dorsey; 3d Burgess; 4th Bean Creek Farm. Four pigs under 6 months, produce of same sow (3 shown)—1st Dorsey & Sons; 2d Burgess; 3d Bean Creek Farm. Four swine, get of same boar, bred by exhibitor (4 shown)—1st and 2d Dorsey & Sons; 3d Burgess; 4th Bean Creek Farm. Senior and grand champion boar—McKelvie on Max Sampson. Junior champion boar—Garvey on Big Jumbo Wonder. Senior and grand champion sow—Dorsey & Sons on May's Quality. Junior champion sow—Dorsey & Sons on Handsome.

Chester Whites.

An improvement in the quality and smoothness of the Chester White swine was noticeable at the International this year. The showing in all classes was excellent, but the classes were not large, especially in aged stuff. I. T. Cummins, Xenia, Ohio, was judge of the white hogs and Harry T. Crandell, Cass City, Mich., was the leading prize winner, taking many firsts and all the purple ribbons but one. The senior and grand championships in the boar class were won by Mr. Crandell on Schoolmaster, a heavy hog of excellent type, having an enviable past record as a prize winner. The junior champion boar, Schoolboy, owned by Mr. Crandell, is a son of the senior and grand champion boar. In the sow class the senior champion, Model Tena, was made grand champion in a close contest with the junior champion, Miss Repeater, owned by Andrews & Sons, of Sheffield, Ill.

Exhibitors: Adams Bros., Litchfield, Mich.; C. A. Andrews & Sons, Sheffield, Ill.; F. E. Bone, Ava, Ill.; Harry T. Crandell, Cass City, Mich.; E. D. Funk, Shirley, Ill.; Ed Ross & Son, Whitehall, Ill.; University of Illinois, Urbana, Ill. Judge, I. T. Cummins, Xenia, Ohio.

Boars: Two years or over (3 shown)

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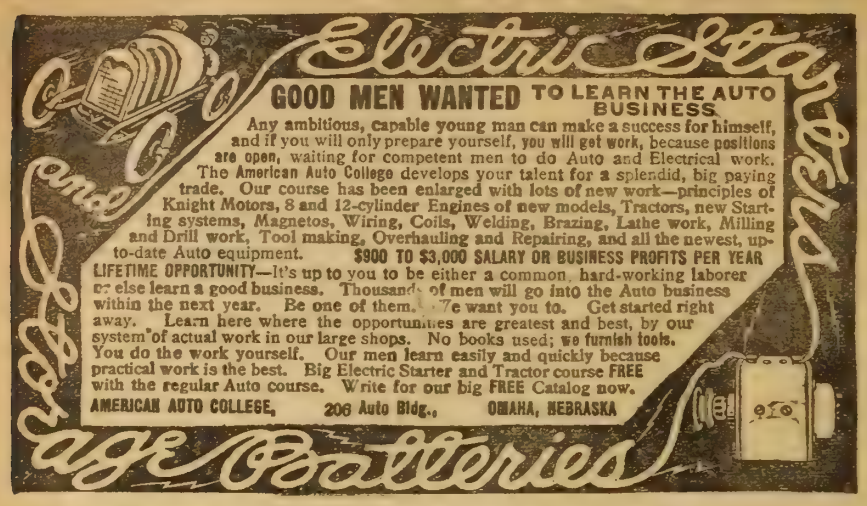

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Wisconsin Farmer	1.00
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Sows: Two years or over (3 shown) 1st Andrews & Sons; 2d Adams Bros.; 3d Crandell. Eighteen months and under 24 (4 shown)—1st Crandell; 2d and 3d Andrews & Sons; 4th Adams Bros. Twelve months and under 18 (5 shown)—1st Crandell; 2d Andrews & Sons; 3d and 4th Funk; 5th Adams Bros. Six months and under 12 (9 shown)—1st and 4th Andrews & Sons; 2d Crandell; 3d University of Illinois; 5th Bone. Under 6 months (7 shown)—1st and 2d Crandell; 3d Funk; 4th Bone; 5th Adams Bros.

Herds and champions: Boar and 3 sows over 1 year (4 shown)—1st and 2d Crandell; 3d Funk; 4th Adams Bros. Boar and 3 sows over 1 year, bred by exhibitor (2 shown)—1st Crandell; 2d Adams Bros. Boar and 3 sows under 1 year (5 shown)—1st and 2d Crandell; 3d Andrews & Sons; 4th Bone; 5th Adams Bros. Boar and 3 sows under 1 year, bred by exhibitor (3 shown)—1st Crandell; 2d Adams Bros.; 3d Andrews & Sons. Four pigs under 6 months, produce of same sow (3 shown) 1st Bone; 2d Adams Bros.; 3d Andrews & Sons. Four swine, get of same boar, bred by exhibitor (5 shown)—1st Andrews & Sons; 2d Crandell; 3d Funk; 4th Adams Bros.; 5th Bone. Senior and grand champion boar—Crandell on Schoolmaster. Junior champion boar—Crandell on Schoolboy. Senior and grand champion sow—Crandell on Model Tena. Junior champion sow—Miss Repeater.

Duroc Jerseys.

The opinion was current among Duroc Jersey breeders at the International this year that the showing of red hogs was not as large as in 1913, but the quality and character of stock displayed more than equaled that of the former show. The animals were all of a high standard which made the decisions in the different classes very close. The boar classes were especially puzzling for the judge. R. C. Watt, Cedarville, Ohio, tied the ribbons and his work met with general good favor. Most of the awards went to Ohio breeders, chief among whom were Ira Jackson, of Tippecanoe, and Thomas Johnson, of Columbus. These men divided honors evenly in the championships, Mr. Johnson taking the purple ribbons on senior and grand champion boar and also on senior champion sow, while Mr. Jackson won the prizes on junior champion boar and junior and grand champion sow. The ringside interest in the red hogs was especially keen this year which indicates the growing popularity of this breed of hogs.

Exhibitors: J. Y. Caldwell, Williamsville, Ill.; John L. Fischer, Janesville, Wis.; J. W Garvey, Thayer, Ill.; John S. Goodwin, Naperville, Ill.; Ira Jackson, Tippecanoe City, Ohio; Thos. Johnson, Columbus, Ohio; Mahan Bros., Osborn, Ohio; Henry W. Matern, Lostant, Ill.; W. H. & A. D. Van Moeter, Williamsville, Ill.; H. W. Mumford, Ann Arbor, Mich.; L. L. Shultz, Oxford, Ohio; University of Nebraska, Lincoln, Neb. Judge, R. C. Watt, Cedarville, Ohio.

Boars: Two years or over (6 shown) —1st Johnson; 2d Mahan Bros.; 3d and 4th Mumford; 5th Mahan Bros. Eighteen months and under 24 (2 shown)—1st Goodwin; 2d Jackson. Twelve months and under 18 (6 shown)—1st Van Moeter; 2d Mahan Bros.; 3d Jackson; 4th Mahan Bros.; 5th Mumford. Six months and under 12 (6 shown)—1st Jackson; 2d Mumford; 3d Mahan Bros.; 4th Shultz; 5th Matern. Under 6 months (11 shown)—1st Caldwell; 2d Mumford; 3d Jackson; 4th Mahan Bros.; 5th Matern.

Sows: Two years or over (6 shown) —1st and 2d Mahan Bros.; 3d Matern; 4th Johnson; 5th Jackson. Eighteen months and under 24—1st Johnson; 2d Jackson; 3d Mahan Bros.; 4th Jackson; 5th Mumford. Twelve months and under 18 (8 shown)—1st and 2d Jackson; 3d Mahan Bros.; 4th and 5th Johnson. Six months and under 12 (7 shown)—1st and 2d Jackson; 3d Mahan Bros.; 4th Mumford; 5th Matern. Under 6 months (7 shown)—1st and 2d Jackson; 3d and 4th Mumford; 5th Johnson.

Herds and Champions: Boar and 3 sows over 1 year (4 shown)—1st Johnson; 2d Jackson; 3d Mahan Bros.; 4th Matern. Boar and 3 sows over 1 year, bred by exhibitor (3 shown)—1st Jackson; 2d Mahan Bros.; 3d Matern. Boar and 3 sows under 1 year (7 shown)—1st and 2d Jackson; 3d Mumford; 4th Mahan Bros.; 5th Matern. Boar and 3 sows under 1 year, bred by exhibitor (7 shown)—1st and 2d Jackson; 3d Mumford; 4th Mahan Bros.; 5th Matern. Four pigs under 6 months produce of same sow (5 shown)—1st Jackson; 2d and 3d Mumford. Four swine get of same boar, bred by exhibitor (6 shown) —1st Jackson; 2d Mahan Bros.; 3d Johnson; 4th Jackson; 5th Mumford. Senior and grand champion boar—Johnson on Oakland Orion Cherry King. Junior champion boar—Jackson. Senior champion sow—Johnson on Fairy Queen 1st. Junior and grand champion sow—Jackson.

Hampshires.

Alhough the Hampshire showing was lacking in the number of exhibitors, from the standpoint of quality of stock shown it was a decided success. Judge Charles Marker, of Auburn, Ill., declared that some of the classes were exceedingly close and that the standards were high throughout all the classes. The championship sow classes were especially close and difficult to judge. The J. Crouch & Son sow pulled away from the others in the senior champion class and also defeated the junior champion from the Wickfield Farm in the contest for grand championship. In the boar classes Wickfield Farm won both the senior and grand championships on Lookout Lad, a big, stretchy fellow of straight lines and sound, strong feet.

Exhibitors: J. A. Connell, Joliet, Ill.; J. Crouch & Son, Lafayette, Ind.; John R. Lewis, Rensselater, Ind.; Wickfield Farm, Cantril, Ia.; Charles E. Bunn, Peoria, Ill.; University of Nebraska, Lincoln, Neb. Judge, Charles Marker, of Auburn, Ill.

Boars: Two years or over (4 shown) —1st Wickfield Farm; 2d Lewis; 3d Crouch & Son; 4th Connell. Eighteen months and under 24 (1 shown)—1st Lewis. Twelve months and under 18 (2 shown)—1st Lewis; 2d Wickfield Farm. Six months and under 12 (3 shown)—1st Bunn; 2d and 3d Wickfield Farm. Under 6 months (7 shown)—1st and 3d Lewis; 2d and 4th Wickfield Farm; 5th Bunn.

Sows: Two years or over (7 shown) —1st and 3d Crouch & Son; 2d Wickfield Farm; 4th and 5th Lewis. Eighteen months and under 24 (6 shown)—1st and 4th Wickfield Farm; 2d and 3d Lewis; 5th Connell. Twelve months and under 18 (6 shown)—1st Crouch & Son; 2d Wickfield Farm; 3d and 4th Lewis; 5th Connell. Six months and under 12 (7 shown)—1st and 3d Wickfield Farm; 2d Lewis; 4th Crouch & Son; 5th University of Nebraska. Under 6 months (5 shown)—1st Lewis; 2d and 3d Wickfield Farm; 4th Connell; 5th Crouch and Son.

Herds and Champions: Boar and 3 sows over 1 year (6 shown)—1st and 5th Wickfield Farm; 2d Crouch & Son; 3d and 4th Lewis. Boar and 3 sows over 1 year, bred by exhibitor (1 shown) —1st Crouch & Son. Boar and 3 sows under 1 year (4 shown)—1st and 4th Wickfield Farm; 2d Lewis; 3d Bunn. Boar and 3 sows under 1 year, bred by exhibitor (2 shown)—1st Wickfield Farm; 2d Bunn. Four pigs under 6 months produce of same sow (2 shown) —1st Wickfield Farm; 2d Lewis. Four swine, get of same boar, bred by exhibitor (4 shown)—1st and 2d Wickfield Farm; 3d Lewis; 4th Bunn. Senior and grand champion boar—Wickfield Farm on Lookout Lad. Junior champion boar—Lewis. Senior and grand champion sow—Crouch & Son on Ranck's Rosie. Junior champion sow—Wickfield Farm.

Yorkshires.

Three exhibitors brought out the Yorkshire showing at the International this year. Although these white, giant hogs are not common in the corn belt, they were objects of considerable interest at the show because of their great size. All the championships were won by B. F. Davidson, of Menlo, Iowa.

Exhibitors: John Campbell, Lynn, Ind.; B. F. Davidson, Menlo, Ia.; University of Illinois, Urbana, Ill. Judge, Andrew Boss, University Farm, St. Paul, Minn.

Boars: Two years or over (3 shown) —1st and 2d Davidson; 3d Campbell. Twelve months and under 18 (1 shown) —1st Davidson. Six months and under 12 (1 shown)—1st Campbell. Under 6 months (2 shown)—1st Davidson; 2d Campbell.

Sows: Two years old over (4 shown) —1st and 3d Davidson; 2d and 4th Campbell. Eighteen months and under 24 (3 shown)—1st Davidson; 2d and 3d Campbell. Twelve months and under 18 (4 shown)—1st and 3d Davidson; 2d and 4th Campbell. Six months and under 12 (4 shown)—1st and 3d University of Illinois; 2d and 4d Campbell. Under 6 months (2 shown)—1st Campbell; 2d Davidson.

Herds and Champions: Boar and 3 sows over 1 year (2 shown)—1st Davidson; 2d Campbell. Boar and 3 sows over 1 year, bred by exhibitor (2 shown) —1st Davidson; 2d Campbell. Boar and 3 sows under 1 year (2 shown)—1st Davidson; 2d Campbell. Boar and 3 sows under 1 year, bred by exhibitor (2 shown)—1st Davidson; 2d Campbell. Four pigs under 6 months, produce of same sow (2 shown)—1st Davidson; 2d Campbell. Four swine get of same boar, bred by exhibitor—1st Davidson; 2d Campbell. Senior champion boar—Davidson on Lake Park Fashion. Junior champion boar—Davidson. Senior champion sow—Davidson. Junior champion sow—Davidson. Grand champion boar—Davidson. Grand champion sow —Davidson on Deer Creek Martha 5th.

Berkshires.

The Berkshires made a good showing this year at the International. Although the classes were rather small in many exhibits, the quality was exceptionally fine and drew forth much favorable comment from the ringside. W. E. Spicer, Bushnell, Ill., was judge of this breed of hogs and his work met with entire satisfaction. In the boar classes the senior and grand champion ribbons went to the East on Baron's Successor, a big, lengthy hog of good type, owned by the Hood Farm. He stood easily over the junior champion, Duke's Bacon Jr., of the Townsend Farms. In the sow classes Duke's Champion Lady 4th was made senior champion and later grand champion. She is a smooth, deep sow of good breed type. The junior sow was Classy Stumpy, of the Sutton Farm.

Exhibitors: Brae Burn Farm, Lake Forest, Ill.; Leon B. Crawford, Hayesville, N. C.; Nelle Fabyan, Geneva, Ill.; J. W. Garvey, Thayer, Ill.; Hamilton Farm, Gladstone, N. J.; Hood Farm, Lowell, Mass.; Jenkens Bros., Orleans, Ind.; McCollister & Barnett, Geneva and Logansport, Ind.; Sheffield Farm, Glendale, Ohio; Chas. A. Steward, Plano, Ill.; Sutton Farms, Lawrence, Kan.; Townsend Farms, New London, Ohio. Judge, W. E. Spicer, Bushnell, Ill.

Boars: Two years or over (5 shown) —1st Hood Farm; 2d and 5th Fabyan; 3d Hamilton Farm; 4th Townsend Farm. Eighteen months and under 24

(2 shown)—1st Crawford; 2d Fabyan. Twelve months and under 18 (3 shown)—1st Townsend Farms; 2d Fabyan; 3d Brae Burn Farm. Six months and under 12 (6 shown)—1st Fabyan; 2d Steward; 3d Hamilton Farm; 4th Brae Burn Farm. Under 6 months (13 shown) 1st and 5th Townsend Farms; 2d Jenkens Bros.; 3d McCollister & Barnett; 4th Hamilton Farm.

Sows: Two years or over (5 shown)—1st and 3d Hamilton Farm; 2d and 5th Fabyan; 4th Townsend Farms. Eighteen months and under 24 (7 shown)—1st Sutton Farm; 2d Brae Burn Farm! 3d Hamilton Farm; 4th and 5th Fabyan. Twelve months and under 18 (10 shown)—1st and 2d Hamilton Farm; 3d Brae Burn Farm; 4th Fabyan; 5th Townsend Farms. Six months and under 12 (11 shown)—1st Sutton Farm; 2d and 4th Hamilton Farm; 3d and 5th Brae Burn Farm. Under 6 months—1st and 2d Jenkens Bros.; 3d and 4th Hamilton Farm; 5th Townsend Farms.

Herds and champions: Boar and 3 sows over 1 year (5 shown)—1st Hamilton Farm; 2d and 4th Fabyan; 3d Townsend Frams; 5th Brae Burn Farm. Boar and 3 sows over 1 year, bred by exhibitor (4 shown)—1st and 3d Fabyan; 2d Townsend Farms; 4th Brae Burn Farm. Boar and 3 sows under 1 year (7 shown)—1st Jenkens Bros.; 2d Hamilton Farm; 3d Brae Burn Farm; 4th Fabyan; 5th Townsend Farms. Boar and 3 sows under 1 year, bred by exhibitor (7 shown)—1st Jenkens Bros.; 2d Brae Burn Farm; 3d Fabyan; 4th Townsend Farms; 5th Sutton Farm. Four pigs under 6 months, produce of same sow (4 shown)—1st Fabyan; 2d McCollister & Barnett; 3d Townsend Farms; 4th Sutton Farm. Four swine, get of same boar, bred by exhibitor (5 shown)—1st Iowana Farms; 2d Fabyan; 3d Brae Burn Farm; 4th Jenkens Bros.; 5th Townsend Farms. Senior and grand champion boar—Hood Farm on Baron's Successor. Junior champion boar—Townsend Farms on Duke's Bacon Jr. Senior and grand champion sow—Hamilton Farm on Duke's Champion Lady 4th. Junior champion sow—Sutton Farm on Classy Stumpy.

Tamworths.

Two exhibitors, Adams Bros., Litchfield, Mass., and University of Illinois, Urbana, Ill., presented the showing of Tamworths at the International. The majority of the firsts went to Adams Bros. In the champion classes honors were divided, the prize for champion boar going to Adams Bros. and for champion sow to the University of Illinois. The breed was judged by C. C. Roup, Iowa City, Iowa.

FAT SWINE.

The interest in the show of fat barrows was keen at all times at the International this year and the exhibits compared favorably with the best shows of former years. The classes were well filled, running from five to fifteen entries in the leading breeds, and the quality was uniformly good. Few inferior animals were shown and the competition was very close in most of the classes. The grand champion barrow class was judged by three men, W. A. Spicer, C. A. Marker and Felix Gehrman, and the purple ribbon, after due deliberation, was tied on the Poland China barrow of H. B. Francis, New Lenox, Ill. The reserve grand champion was the Chester White barrow of Harton & Son, Rushville, Ind., who pushed the Poland China very hard for the grand championship. The black hog was a little larger and smoother, which were the main points that gave it the decision.

Duroc Jerseys.

Exhibitors: J. W. Garvey, Thayer, Ill.; Iowa State College, Ames, Iowa; Ira Jackson, Tinnecanoe City, Ohio; H. W. Mumford, Ann Arbor, Mich.; Ohio State Unviersity, Columbus, Ohio; Pennsylvania State College, State College, Pa.; Purdue University, Lafayette, Ind.; University of Illinois, Urbana, Ill.; University of Minnesota, University Farm, St. Paul, Minn.; University of Missouri, Columbia, Mo.; University of Nebraska, Lincoln, Neb.. Judge, R. E. Watt, Cedarville, Ohio.

Barrows: Under 6 months (3 shown)—1st Pennsylvania State College; 2d Purdue University; 3d University of Missouri. Six months and under 12 (4 shown)—1st and 2d University of Missouri; 3d University of Illinois. Twelve months and under 18 (4 shown)—1st and 2d Purdue University; 3d Pennsylvania State College. Three barrows under 6 months (3 shown)—1st Purdue University; 2d University of Missouri; 3d Ira Jackson. Three barrows 6 months and under 12 (4 shown)—1st University of Missouri; 2d Jackson; 3d University of Illinois. Three barrows 12 months and under 18 (1 shown)—1st Purdue University. Champion barrow—University of Missouri. Champion pen of 3 barrows—University of Missouri. Association specials: Barrow under 6 months (3 shown)—1st Pennsylvania State College; 2d Purdue University; 3d University of Missouri. Barrow over 6 months (4 shown)—1st and 2d University of Missouri; 3d University of Illinois.

Poland Chinas.

Exhibitors: G. L. Burgess, Bement, Ill.; B. F. Dorsey & Sons, Versailles, Ill.; Howard B. Francis, New Lenox, Ill.; Iowa State College, Ames, Iowa; Pennsylvania State College, State College, Pa.; University of Illinois, Urbana, Ill.; University of Missouri, Columbia, Mo.; University of Nebraska, Lincoln, Neb. Judge, J. M. Kemp, Kenny, Ill.

Barrows: Eighteen months and under 24 (8 shown)—1st Francis; 2d Iowa State College; 3d and 4th Francis; 5th Iowa State College; 6th Burgess. Twelve months and under 18 (2 shown)—1st and 2d Francis. Six months and under 12 (7 shown)—1st University of Illinois; 2d and 3d Francis; 4th University of Illinois; 5th University of Nebraska; 6th Pennsylvania State College; 7th University of Missouri. Under 6 months (7 shown)—1st Francis; 2d University of Nebraska; 3d Burgess; 4th Francis; 5th University of Nebraska; 6th Burgess; 7th University of Missouri. Three barrows 18 months and under 24 (3 shown)—1st and 2d Francis; 3d Burgess. Three barrows 12 months and under 18 (1 shown)—1st Francis. Three barrows 6 months and under 12 (6 shown)—1st University of Illinois; 2d, 3d and 4th Francis; 5th University of Missouri; 6th Pennsylvania State College. Three barrows under 6 months (4 shown)—1st Francis; 2d University of Nebraska; 3d Burgess; 4th University of Missouri. Five barrows, any age, get of one sire (7 shown)—1st and 2d Francis; 3d University of Nebraska; 4th Burgess; 5th University of Missouri. Champion barrow—Francis. Champion pen of barrows—Francis.

Berkshires.

Exhibitors: Iowana Farms, Davenport, Iowa; Iowa State College, Ames, Iowa; Ohio State University, Columbus, Ohio; Pennsylvania State College, State College, Pa.; Purdue University, Lafayette, Ind.; Sheffield Farm, Glendale, Ohio; University of Illinois, Urbana, Ill.; University of Missouri, Columbia, Mo. Judge, W. E. Spicer, Bushnell, Ill.

Barrows: Under 6 months (8 shown)—1st Purdue University; 2d Sheffield Farm; 3d Pennsylvania State College. Over 6 months and under 12 (4 shown)—1st and 4th Iowana Farms; 2d and 3d University of Illinois. Over 12 months and under 18 (6 shown)—1st and 3d Iowana Farms; 2d University of Illinois; 4th Iowa State College. Three barrows under 6 months (4 shown)—1st Purdue University; 2d Sheffield Farm; 3d Pennsylvania State College; 4th University of Missouri. Three barrows over 6 months and under 12 (3 shown)—1st and 3d Iowana Farms; 2d University of Illinois. Three barrows over 12 months and under 18 (4 shown)—1st and 4th Iowana Farms; 2d University of Illinois; 3d Iowa State College. Champion barrow—Iowana Farms on aged barrow. Champion pen of barrows—Iowana Farms.

Chester Whites.

Exhibitors: Adams Bros., Litchfield, Mich.; C. A. Andrews & Sons, Sheffield, Ill.; F. E. Bone, Ava, Ill.; Harry T. Crandell, Cass City, Mich.; E. D. Funk, Shirley, Ill.; W. E. Harton & Son, Rushville, Ind.; J. K. Milner, Thorntown, Ind.; Bert Myers, Mentone, Ind. Judge, Harry Booth, U. S. Y., Chicago, Ill.

Barrows: Over 18 months and under 24 (2 shown)—1st and 2d Milner. Over 12 months and under 18 (7 shown)—1st Harton & Son; 2d and 3d Ross & Son; 4th and 5th Milner; 6th and 7th Funk. Over 6 months and under 12 (12 shown)—1st and 8th Ross & Son; 2d and 3d Harton & Son; 4th and 5th Bone; 6th and 7th Myers. Under 6 months (11 shown)—1st Harton & Son; 2d and 3d Adams Bros.; 4th and 5th Myers; 6th and 7th Andrews & Sons; 8th Ross & Son. Three barrows over 18 months and under 24 (1 shown)—1st Milner. Three barrows 12 months and under 18 (2 shown)—1st Milner; 2d Funk. Three barrows 6 months and under 12 (6 shown)—1st Harton & Son; 2d Ross & Son; 3d Bone; 4th Myers; 5th Funk; 6th Andrews & Sons. Three barrows under 6 months (5 shown)—1st Adams Bros.; 2d Myers; 3d Andrews & Sons; 4th Ross & Son; 5th Bone. Five barrows, get of one side (7 shown)—1st Harton & Son; 2d Milner; 3d and 6th Ross & Son; 4th Myers; 5th Funk; 7th Andrews & Sons. Champion barrow—Harton & Son. Champion pen of 3 barrows—Harton & Son.

Hampshires.

Exhibitors: Chas. E. Bunn, Peoria, Ill.; J. A. Connell, Joliet, Ill.; John R. Lewis, Rensselaer, Ind.; Vern Patterson, Fairmont, Neb.; Mike Sharp, Coal Valley, Ill.; University of Nebraska, Lincoln, Neb.; Wickfield Farm, Cantril, Iowa. Judge, Harry Booth, U. S. Y., Chicago, Ill.

Barrows: Over 18 months and under 24 (1 shown)—1st Patterson. Over 12 months and under 18 (1 shown)—1st Lewis. Over 6 months and under 12 (6 shown)—1st and 4th University of Nebraska; 2d and 6th Wilson; 3d and 5th Bunn. Under 6 months (6 shown)—1st, 2d and 4th Sharp & Son; 3d Wickfield Farm; 5th and 6th Connell. Three barrows 6 months and under 12 (3 shown)—1st University of Nebraska; 2d Bunn; 3d Wilson. Three barrows under 6 months (3 shown)—1st Sharp & Sons; 2d Wickfield Farm; 3d Connell. Five barrows, get of one sire—1st Sharp; 2d Connell. Champion barrow—Sharp. Champion pen of 3 barrows—Sharp.

Tamworths.

Pennsylvania State College made three entries, winning two firsts and one second. No other entries were made in these classes. C. C. Roup, Iowa City, Iowa, judged the exhibit.

Grades and Cross Breds.

Exhibitors: Adams Bros., Litchfield, Mich.; Andrews & Pervier, Sheffield, Ill.; F. E. Bone, Ava, Ill.; G. L. Burgess, Bement, Ill.; Harry T. Crandell, Cass City, Mich.; J. W. Garvey, Thayer, Ill.; Kansas State Agricultural College, Manhattan, Kan.; Ohio State University, Columbus, Ohio; Pennsylvania State College, State College, Pa.; Arthur Tomson, Wabash, Ind.; University of Minnesota, University Farm, St. Paul, Minn. Judge, Felix Gehrman.

Barrows: Weighing 250 pounds and under 350 (6 shown)—1st and 2d Tomson; 3d Bone. Weighing 200 pounds and under 250 (6 shown)—1st and 2d Ohio State University; 3d Kansas State Agricultural College. Weighing 150 pounds and under 200 (5 shown)—1st and 2d Bone; 3d Pennsylvania State College. Three barrows, each weighing 250 pounds and under 350 (1 shown)—1st Tomson. Three barrows, each weighing 200 pounds and under 250 (1 shown)—1st Kansas State Agricultural College. Three barrows, each weighing 150 pounds and under 200 (2 shown)—1st Bone; 2d Pennsylvania State College. Champion barrow—Tomson. Champion pen of 3 barrows—Tomson.

Grand Champions.

Grand champion barrow of show—Francis on a Poland China; reserve, Harton & Son on a Chester White. Grand champion pen of barrows—Francis on Poland Chinas; reserve, Harton & Son on Chester Whites.

Clay Robinson College Specials.

Barrow under 12 months (5 shown)—1st University of Missouri; 2d University of Illinois; 3d Purdue University. Best 5 head of barrows under 2 years (5 shown)—1st University of Illinois.

Carlot Hog Awards.

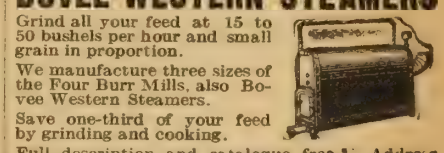
The carlot hogs were the object of great interest at the International and large crowds followed Eck. R. Gentry, head hog buyer for Armour & Co., as he went from pen to pen, judging the different entries in this showing. The decisions of Mr. Gentry were received with entire satisfaction. George Runkle, of Industry, Ill., won the first prize in the carlot class of hogs weighing 350 pounds and over and this lot was later awarded the grand championship of the show. With the exception of the Kansas Agricultural College and Notre Dame University all the prize winners were from Illinois. Exhibitors: Geo. N. Runkle, Industry, Ill.; T. E. Burner, Augusta, Ill.; M. Weinberg, Rushville, Ill.; Kansas Agricultural College, Manhattan, Kan.; F. Pierce, Huntsville, Ill.; G. E. Phillips, Delavan, Ill.; A. R. Hamilton, Augusta, Ill.; Notre Dame University, Notre Dame, Ind. Judge, Eck R. Gentry, Union Stockyards, Chicago, Ill. Carlot, 350 pounds and over—1st Runkle on Berkshires. Carlot 250 pounds and under 350—Notre Dame University on Hampshires. Carlot 200 pounds and under 250—1st Burner on Berkshires; 2d Weinberg on Poland Chinas; 3d Kansas Agricultural College on Duroc Jerseys. Carlot 150 pounds and under 200—1st Pierce on Poland Chinas; 2d Phillips on Chester Whites; 3d Hamilton on Hampshires. Grand champion carlot—Runkle on Berkshires.

HORSES.

Percherons.

Exhibitors: B. F. Anderson, Adrian, Mich.; John Anderson, Sterling, Ill.; Annington Farm Co., Dickerson, Md.; C. B. Augustin, Bloomington, Ill.; D. Augustin, Carlock, Ill.; Bell Bros., Wooster, Ohio; Emmons Blaine, Lake Mills, Wis.; T. B. Bowman, Boone, Neb.; Burgess Stock Farm, Wenona, Ill.; Casey Bros., Iowa City, Iowa; W. S. Corsa, White Hall, Ill.; Crawford & Griffin, Newton, Ia.; J. Crouch & Son, Lafayette, Ind.; Wm. Crownover, Hudson, Ia.; John Drews, Mapleton, Minn.; Dunhams, Wayne, Ill.; Delchester Farms, Edgemont, Pa.; Harry Early, Liscomb, Ia.; L. E. Edson, Paw Paw, Mich.; Finch Bros., Joliet, Ill.; Finch Stock Farms, Fargo, N. D. and Moorhead, Minn.; Geo. Frerichs & Sons, Gilman, Ill.; Hamilton Farms, Gladstone, N. J.; Harvest Farms Co., Mayville, Wis.; R. W. Hoit, Beason, Ia.; Luther Huston, Blandinsville, Ill.; Logan J. King, Lockport, Ill.; T. J. King, Plainfield, Ill.; I. S. Lavery, Lavery, Pa.; R. G. Leeds, Richmond, Ind.; S. Metz & Son, Homewood, Ill.; Scott J. Miller, Chillicothe, Mo.; Mooseheart Farm, Mooseheart, Ill.; Jake W. Miller, Ancona, Ill.; E. M. Nichols, Princeton, Ill.; Notre Dame University, Notre Dame, Ind.; Geo. M. Oyster, Jr., Washington, D. C.; J. J. Prendergast, Garfield, Ill.; Henry Riley, Lewistown, Ill.; D. K. Roth, Gibson City, Ill.; Rowe Bros., Maple Park, Ill.; S. S. Russell & Son, Neponset, Ill.; J. H. Serven, & Sons, Prairie City, Ill.; Philip Sheets, Bloomington, Ill.; W. L. Simpson, Purcellville, Va.; J. O. Singmaster & Son, Keota, Ia.; Smith & Houston, London, Ohio; Leslie Smith & Son, St. Cloud, Minn.; Trumans' Pioneer Stud Farm, Bushnell, Ill.; R. P. Wait, Reynolds, Ill.; E. W. Walker & Son, Mazon, Ill.; F. W. Weinrich, Geneseo, Ill.; E. B. White, Leesburg, Va.; Woodside Farms, Sandusky, Ohio; Whittington & McClusky, Crawfordsville, Ind. Judges, John DeLancey, Northfield, Minn.; Robert Graham, Toronto, Ontario; A. L. Robinson, Jr., Pekin, Ill.

Stallions: Aged (30 shown)—1st Singmaster & Son on Lagos; 2d Serven & Sons on Jasmine; 3d Dunhams on Lyce; 4th Frerichs & Sons on Kontact; 5th Bell Bros. on Libretto; 6th C. B. Augustin on Giron B.; 7th D. Augustin on George P.; 8th Annington Farm on Major Grey; 9th Hoit on Lent. Four year old (16 shown)—1st Crouch & Sons on Mu; 2d and 3d Bell Bros. on Milord and Macron; 4th Singmaster & Son on Majorat; 5th Bell Bros. on Malentender; 6th Crouch & Son on Manco; 7th Harvest Farms Co. on Calculator; 8th and 9th Trumans' Pioneer Stud Farm on Monsaury and Metteur; 10th Hamilton Farm on Maire; 11th Bell Bros. on Malakof. Three year old (17



shown)—1st Singmaster & Son on Ivan; 2d Crouch & Son on Monogram; 3d White on Plurius; 4th Casey Bros. on John Mc.; 5th Corsa on Iocarno; 6th D. Augustin on Marly Forrest; 7th C. B. Augustin; 8th Singmaster & Son on Nandou; 9th D. Augustin on Rostrand; 10th C. B. Augustin on Olbert's Captain. Two year old (31 shown)—1st and 2d Singmaster & Son on Fairhope and Keota Jalap; 3d Annington Farm Co. on Prince Gray; 4th and 5th Crouch & Son on Bradford W. and Prince; 6th Dunhams on Prince; 7th White on Bonhomme; 8th Dunhams on Copic H.; 9th Singmaster & Son on Eugene; 10th D. Augustin on Rollermann; 11th White on La Beau; 12th T. J. King on Wonder. Yearling (29 shown)—1st Crouch & Son on Walbank; 2d Corsa on Carvalentine; 3d Crouch & Son on Houstonia Robin; 4th D. Augustin on Olbertin; 5th White on Sam; 6th Russell & Son on Hyvon; 7th Singmaster & Son on Lagnot; 8th Dunhams on Apollo. Foal (16 shown)—1st Huston on Chancellor; 2d Dunhams on Lowden; 3d Oyster on Joslyn; 4th Annington Farm Co. on Annington King; 5th Roth; 6th Mooseheart Farm on Mooseheart Pink; 7th Metz & Sons on Gerome.

Mares: Aged (17 shown)—1st Dunhams on Pink Brillante; 2d Oyster on Lactine; 3d Delchester Farms on Legitime; 4th Crouch & Son on Jarville; 5th Oyster on Havane; 6th Hamilton Farms on Limonade. Four year old (7 shown) 1st and 2d Woodside Farm on Alicia and Alice; 3d Hamilton Farm on Lady Carnot; 4th Mooseheart Farm on Primrose; 5th Dunhams on Modestie; 6th and 7th D. Augustin on Myrtle R. and Roseland. Three year old (17 shown)—1st Crouch & Son on Irma; 2d White on Favorita; 3d Singmaster on Naine; 4th Corsa on Carante; 5th Hamilton Farm on Folito II; 6th Bowman on Hildecar. Two year old (26 shown)—1st Dunhams on Turquoise; 2d Singmaster & Son on Keota Jumelee; 3d White on Mainette; 4th Crouch & Son on Ina; 5th Corsa on Carjante; 6th Singmaster & Son on Keota Kyrielle. Yearling (24 shown)—1st Crouch & Son on Lady Radisnoir; 2d Singmaster & Son on Keota Clarice; 3d Frerichs & Sons on Mayflower; 4th B. F. Anderson on Frances; 5th Annington Farm Co. on Annington Queen; 6th Corsa on Carwinsome; 7th Dunhams on Kathleen. Foal (10 shown)—1st Huston on Shinola; 2d Oyster on Naudain; 3d Dunhams on La Mascotte; 4th Frerichs & Sons on Susie; 5th Hoit on Amorita.

American Bred: Stallion 3 years and over (17 shown)—1st Singmaster & Son on Ivan; 2d Crouch & Son on Monogram; 3d White on Plurius; 4th C. B. Augustin on Giron B.; 5th Casey Bros. on John M. C. 6th Harvest Farms Co. on Calculator. Stallion under 3 (26 shown) 1st Singmaster & Son on Fairhope; 2d Crouch & Son on Walbank; 3d Singmaster & Son on Keota Jalap; 4th Annington Farms Co. on Prince Gray; 5th and 6th Crouch & Son on Bradford W. and Prince. Aged mare (18 shown)—1st Dunhams on Pink Brilliante; 2d Crouch & Son on Irma; 3d White on Favourita; 4th, 5th and 6th Woodside Farms on Alicia, Alice and Cozette.

American Bred: Mares: Three years or over (18 shown)—1st Dunhams on Pink Brilliante, 2d Crouch & Son on Irma; 3d White on Favourita; 4th, 5th and 6th Woodside Farms on Alicia, Alice and Cozette; 7th Bowman on Carchepet; 8th Corsa on Carnante; 9th Mooseheart Farm on Primrose. Under 3 years—1st Dunhams on Turquoise; 2d Crouch & Son on Lady Radisnoir; 3d Singmaster & Son on Keota Jumelee; 4th Crouch & Son on Ina; 5th Corsa on Carjante; 6th Annington Farm Co. on Annington Queen.

Groups and Champions: Stallion and 3 mares, any age (7 shown)—1st Crouch & Son; 2d Dunhams; 3d Singmaster & Son; 4th Corsa; 5th White; 6th Hamilton Farm. Stallion and 3 mares, any age, American bred (6 shown)—1st Crouch & Son; 2d Singmaster & Son; 3d Dunhams; 4th Corsa; 5th White; 6th Bowman. Three animals, get of 1 sire, bred in United States (15 shown)—1st Corsa; 2d Singmaster & Son; 3d White; 4th Crouch & Son; 5th Augstin; 6th Hamilton Farm. Two animals, produce of 1 dam, bred in United States (9 shown)—1st Woodside Farms; 2d Dunhams; 3d Frerichs & Sons; 4th Corsa; 5th White; 6th Augstin. Three mares, any age (7 shown)—1st Dunhams; 2d Woodside Farms; 3d Singmaster & Son; 4th Crouch & Son; 5th Corsa; 6th Bowman. Five stallions, any age (4 shown)—1st Singmaster & Son; 2d Bell Bros.; 3d Crouch & Son; 4th Augstin. Champion American-bred stallion—Singmaster & Son on Ivan; reserve, Crouch & Son on Walbank. Champion American-bred mare—Dunhams on Pink Brillante; reserve, Dunhams on Turquoise. Senior champion stallion—Singmaster & Son on Lagos; reserve, Crouch & Son on Mu. Junior champion stallion—Crouch & Son on Walbank; reserve, Singmaster & Son on Fairhope. Senior champion mare—Dunhams on Pink Brillante; reserve, Oyster, Jr., on Lactine. Junior champion mare—Dunhams on Turquoise; reserve, Crouch & Son on Lady Radisnoir. Champion stallion—Singmaster & Son on Lagos; reserve, Crouch & Son on Mu. Champion mare—Dunhams on Pink Brillante; reserve, Dunhams on Turquoise.

The Percheron Society of France gave a trophy for the best five imported stallions. Won by Bell Bros.

Canadian Percheron Horse Breeders' Association Special. Won by J. Crouch & Son.

Futurities: Male (29 shown)—1st Crouch & Son on Walbank; 2d Corsa on Carvalentine; 3d Crouch & Son on Houstonia Robin; 4th D. Augustin on Olbertin; 5th White on Sam; 6th Singmaster & Son on Lagnot; 7th Crouch & Son on J. Willard; 8th D. Augustin Rosonnet; 9th Early on Powhattan; 10th Dunhams on Napoleon; 11th D. Augustin on Olbertell; 12th Early on Pontiac. Female (24 shown)—1st Crouch & Son on Lady Radisnoir; 2d Singmaster & Son on Keota Clarice; 3d Annington Farm Co. on Annington Queen; 4th B. F. Anderson on Frances; 5th Frerichs & Sons on Mayflower; 6th Corsa on Carwinsome; 7th Dunhams on Kathleen; 8th and 9th Crouch & Son on Maryette and Peace; 10th White on Perfection; 1th Corsa on Carcile; 12th D. Augustin on Roxanna.

Percheron Specials: Stallions: Three year or over (17 shown)—1st Singmaster & Son on Ivan; 2d Crouch & Son on Monogram; 3d White on Plurius; 4th C. B. Augustin on Giron B.; 5th Casey Bros. on John M. C. Under 3 years (26 shown)—1st Singmaster & Son on Fairhope; 2d Crouch & Son on Walbank; 3d Singmaster & Son on Keota Jalap; 4th Annington Farms Co. on Prince Gray; 5th and 6th Crouch & Son on Bradford W. and Prince; 7th Corsa on Carvalentine; 8th Huston on Chancellor.

Percheron Specials: Mares: Aged (17 shown)—1st Dunhams on Pink Brillante; 2d Lactine; 3d Delchester Farms on Legitime; 4th Crouch & Son on Jarville; 5th Oyster on Havanne; 6th Hamilton Farms on Limonade. Four years and under 5 (7 shown)—1st and 2d Woodside Farms on Alicia and Alice; 3d Hamilton Farm on Lady Carnot; 4th Mooseheart Farm on Primrose; 5th Dunhams on Modestie; 6th and 7th D. Augstin on Myrtle R. and Roseland. Three year old (17 shown)—1st Crouch & Son on Irma; 2d White on Favourita; 3d Singmaster & Son on Naine; 4th Corsa on Carnante; 5th Hamilton Farm on Folito; 6th Bowman on Hildecar; 7th Woodside Farms on Cozette; 8th B. F. Anderson on Loraine. Two year old (26 shown)—1st Dunhams on Turquoise; 2d Singmaster & Son on Keota Jumelee; 3d White on Mainette; 4th Crouch & Son on Ina; 5th Corsa on Carjante; 6th Singmaster & Son on Keota Kyrille; 7th Dunhams on Baron's Favorite; 8th Singmaster & Son on Elyn; 9th Corsa on Carma; 10th White on Syncopatian.

Belgians.

Exhibitors: Bell Bros., Wooster, Ohio; Crawford & Griffin, Newton, Ia.; J. Crouch & Son, Lafayette, Ind.; William Crownover, Hudson, Ia.; J. H. Etchison, Alexandria, Ohio; Finch Stock Farms, Fargo, N. D., and Moorhead, Minn.; Finch Bros., Joliet, Ill.; C. G. Good, Ogden, Ia.; William Hartman, Baring, Mo.; Charles Irvine, Ankeny, Ia.; L. Jones, Alma, Kan.; Henry Lefebure & Sons, Fairfax, Ia.; Markey Bros., Reynolds, Ill.; S. Metz & Son, Homewood, Ill.; Michael Meyer & Son, Elwood, Ind.; E. Leroy Pelletier, Pontiac, Mich.; D. K. Roth, Gibson City, Ill.; J. Rousselle & Sons, Seward, Neb.; Rowe Bros., Maple Park, Ill.; Harvey Smith, Boswell, Ind.; Irvin A. Snyder, Paris, Ohio; Trumans' Pioneer Stud Farm, Bushnell, Ill.; L. E. Van Arsdale, Blandinsville, Ill.; E. W. Walker Son, Mazon, Ill. Judges, Harry McNair, Robert Graham, Prof. W. H. Pew.

Stallions: Aged (17 shown)—1st Irvine on Alfred de Bree Eyck; 2d Crouch & Son on Distingue; 3d Crawford & Griffin on Belvedere; 4th Pelletier on Baron; 5th Bell Bros. on Domino. Four year old (8 shown)—1st and 2d Crouch & Son on Bonnot de Hamal and Diamond; 3d Irvine on Cannon; 4th Crouch & Son on Gotha; 5th Roth on Fox 2d de Furness. Three year old (7 shown)—1st and 2d Irvine on Irvinedale Jean and Irvinedale Rowdy; 3d and 4th Crouch on Justification and Innovation. Two year old (17 shown)—1st Crouch & Son on King; 2d Finch Bros. on First Chance; 3d Lefebure & Sons on Indigene; 4th Crouch & Son on Romeo; 5th Bell Bros. on Camille. Yearling (11 shown)—1st Crouch & Son on Ideal; 2d Irvine on Irvinedale Victor; 3d and 4th Crownover on Clifton Wonder and Paramouth Farceur; 5th Meyer & Sons on Kaptif. Foal (9 shown)—1st Meyer & Sons on Roger; 2d Walker & Sons on Mouton; 3d Roth on Major; 4th Lefebure on Claron du Belcan; 5th Van Arsdale on Faro de Aelbeke.

Mares: Aged (10 shown)—1st and 2d Crouch & Son on Indigote and Jeannette de Bruges; 3d Crownover on Omerine; 4th Finch Bros. on Gamine; 5th Good on Margot. Four year old (2 shown)—1st Irvine on Fadette; 2d Crouch & Son on Urane. Three year old (2 shown)—1st and 2d Crouch & Son on Jument and Jacqueline. Two year old (8 shown)—1st, 2d, 3d and 4th Crownover on Lista, Salome, Rosette and Lauretta; 5th Crouch & Son on Demoiselle. Yearling (7 shown)—1st Finch Bros. on Beauty's Clean Sweep; 2d Crownover on Paramount Lola; 3d Irvine on Jupiter's Belle; 4th Crouch & Son on Nellie; 5th Crownover on Paramount Delsaut. Foal (5 shown)—1st Walker & Son; 2d and 3d Snyder on Queen de Rolleghem and Topsy de Rolleghem II; 4th Lefebure on Marinette.

Groups and Champions: Three Mares property of one exhibitor—1st and 2d Crouch & Son. Five stallions, any age, property of exhibitor—1st Crouch & Son; 2d Irvine. Champion stallion—Irvine on Alfred de Bree Eyck. Reserve—Crouch & Son on King. Champion mare—Crownover on Lista. Reserve—Crouch & Son on Jument.

Futurities: Male (11 shown)—1st Crouch & Son on Ideal; 2d Irvine on Irvinedale Victor; 3d and 4th Crownover on Clifton Wonder and Paramount Farceur; 5th Meyer & Sons on Kaptif; 6th Finch Bros. on Banner Bearer; 7th Good on C. De Vlad; 8th Irvine on Payton's Choice. Female (7 shown)—1st Finch Bros on Beauty's Clean Sweep; 2d Crownover on Paramount Lola; 3d Irvine on Jupiter's Belle; 4th Crouch & Son on Nellie; 5th Crownover on Paramount Delsant; 6th and 7th Good on Oakdale Fusia and Oakdale Queen.

Shires.

Exhibitors: Burgess Stock Farm, Wenona, Ill.; Charles Cappel, Logansport, Ind.; W. C. Faber, Paw Paw, Ill.; Finch Bros., Joliet, Ill.; Gordon Bros., Lockport, Ill.; Hawthorne Farm, Lake County, Ill.; Frank Jackson, Dewey, Ill.; Thomas Kiddoo & Son, Joy, Ill.; S. Metz & Son, Homewood, Ill.; McCray & Fowler, Fithian, Ill.; McGrail Bros., Gibson City, Ill.; J. H. Richert, Mendota, Ill.; J. Rousselle & Son, Seward, Neb.; Rowe Bros., Maple Park, Ill.; W. H. Simmons, Oxford, Ind.; L. N. & O. B. Sizer, Fisher, Ill.; A. G. Soderberg, Osco, Ill.; George J. Stoll, Chestnut, Ill.; Jacob Stoll, Chestnut, Ill.; Chas. H. & V. A. Summers, Malvern, Ia.; William Tilton, Logansport, Ind.; Trumans' Pioneer Stud Farm, Bushnell, Ill.; G. C. Williams, Dewey, Ill.

Stallions: Aged (5 shown)—1st Trumans' on Wrydeland's President; 2d Burgess Stock Farm on Bocadden Hereford; 3d Trumans' on Whitacre Bay Diamond; 4th Jackson on Tattan Merry Boy; 5th Trumans' on Kirtling Bold Lion. Four year old (5 shown)—1st Sizer on Tatton Eldorado; 2d Summers on Stumbling Court Manners 2d; 3d and 4th Trumans' on Horbling Titanic and Haverbrack Prince William. Three year old (7 shown)—1st, 2d, 3d and 4th Trumans' on Royal Friar 2d, Boro Royalty 2d, Royal Moors and March Patriot. Two year old (13 shown)—1st Burgess Stock Farm on Reformer M.; 2d and 3d Trumans' on Eaton Guardsman and Dunsmore's Prince; 4th Summers on Rock's Golden Conqueror; 5th Kiddoo & Son on Royal Fame. Yearling (24 shown)—1st and 2d Trumans' on Wrydeland's Drayman and Dovecoto Royal; 3d Geo. J. Stoll on Logan Hengist; 4th and 5th McCray & Fowler on Pilot's Surprise and Royal Wenona. Foal (7 shown)—1st McCray & Fowler on Royal Fear None; 2d Williams on Merry Major; 3d Trumans' on Trumans' Sumney; 4th McCray & Fowler on Fearless Eldorado; 5th Hawthorn Farm on Hawthorn Blusterer.

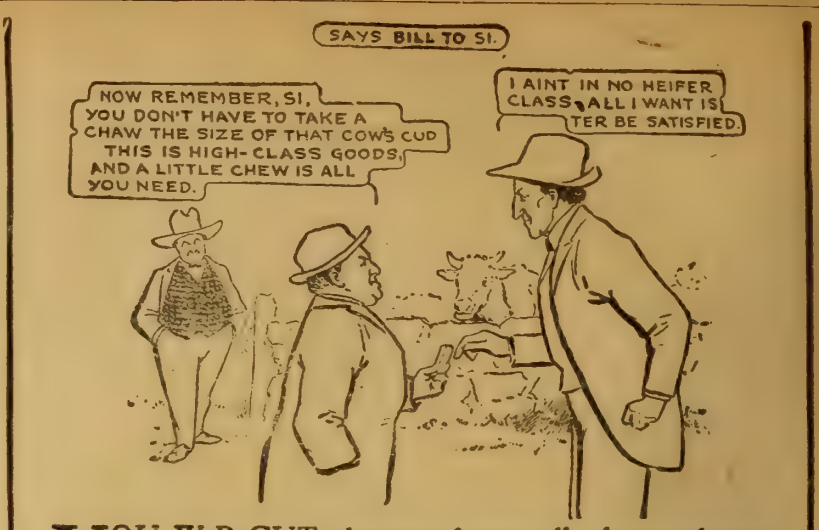
Mares: Aged (12 shown)—1st Trumans' on Woodfield Starlight; 2d Soderberg on Wallington Sunbeam; 3d Hawthorn Farm on Normanby Sweet Briar; 4th Trumans'; 5th McCray & Fowler on Belle 2d. Four year old (1 shown)—1st Sizer on Tatton Model. Yeld mare 4 years old (not in milk) (8 shown)—1st Trumans'; 2d and 3d McCray & Fowler on Coldham Surprise and Park Farm Aline; 4th Sizer on Elder Sunset; 5th Trumans' on Horbling Boncer. Three year old (10 shown)—1st Hawthorn Farm on Royal Tulip; 2d Trumans' on Springfield Gipsy; 3d Geo. J. Stoll on Princess Lea; 4th Kiddoo & Son on Favorite Duchess; 5th Soderberg on Osco Lily. Two year old (4 shown)—1st Sizer on Fatton Mettle; 2d Hawthorn Farm on Eureka Pearl; 3d and 4th McCray & Fowler on Pilot's Royal Pride and Park Farm Beauty; 5th Kiddoo & Son on Wallington Lilly. Yearling (16 shown)—1st McCray & Fowler on Royal Bonny; 2d Geo. J. Stoll on Locking Fashion; 3d Hawthorn Farm on Elder Moonlight; 4th McCray & Fowler on Royal Nun; 5th Hawthorn Farm on Gothic Belle. Foal, American bred (5 shown)—1st Geo. J. Stoll on Lockinge Starlight; 2d Cappel on Cappel's Narcissans; 3d Williams on Merry Matchless Gloss; 4th McCray & Fowler on Royal Princess.

Herds and Champions: Stallion and 3 mares, any age (6 shown)—1st Trumans'; 2d Sizer; 3d and 5th McCray & Fowler; 4th Kiddoo & Son. Three animals, 4 years and under, get of 1 sire (8 shown)—1st Sizer; 2d and 5th McCray & Fowler; 4th Kiddoo & Son; 3d Geo. J. Stoll. Two animals, 4 years and under, produce of 1 dam (6 shown)—1st Sizer; 2d and 5th McCray & Fowler; 3d Geo. J. Stoll; 4th Summers. Best grade Shire mare or gelding, any age (3 shown)—1st Trumans' on Trumans' Champion; 2d and 3d Summers on The Triar and Grey Cloud. Five best stallions, any age, owned by 1 man or firm (4 shown)—1st and 2d Trumans'; 3d and 4th McCray & Fowler. Senior and grand champion stallion—Trumans' on Wrydeland's President. Junior champion stallion—Burgess Stock Farm on Reformer M. Senior and grand champion mare—Trumans' on Woodfield Starlight. Junior champion mare—Sizer on Tatton Mettle. Best American-bred mare, 2 years and under—Sizer on Fatton Mettle. Best American-bred mare, any age—Sizer on Fatton Mettle.

American Bred: Yearling stallion and futurity (20 shown)—1st Jacob Stoll on Logan Hengist; 2d and 3d McCray & Fowler on Pilot Surprise and Royal Wenona; 4th Jacob Stoll on Chester Hengist; 5th and 6th McCray & Fowler on Royal Prince Albert and Fearless Conqueror; 7th Geo. J. Stoll on Lockinge Sailor; 8th McCray & Fowler on Royal George Walton; 9th Trumans on Eureka Menestral. Yearling mare and futurity (14 shown)—1st McCray & Fowler on Royal Bonny; 2d Geo. J. Stoll on Lockinge Fashion; 3d McCray & Fowler on Royal Nun; 4th Williams on Tatton Lass; 5th McCray & Fowler on Royal Frolic; 6th Hawthorn Farm on May Flower B.; 7th Kiddoo & Sons on The Lily; 8th Summers on Rampton Clara; 9th Summers on Sherwood Queen. Two-year-old stallion (12 shown)—1st Burgess Stock Farm on Reformer M.; 2d Trumans' on Dunsmore's Prince; 3d Summers on Rock's Golden Conqueror; 4th Kiddoo & Sons on Royal Fame; 5th McCray & Fowler on Royal Menestral; 6th Cappel on Cappel's Roan Boy; 7th McCray & Fowler on Royal Prince Harold; 8th McGrail Bros. on Lostant Jim; 9th Trumans on Serven's Hengist; 10th Finch Bros. on Kinsman's Rowdy. Two-year-old mare (12 shown)—1st Sizer on Tatton Mettle; 2d Hawthorn Farm on Eureka Pearl; 3d McCray & Fowler on Pilot Royal Pride; 4th McCray & Fowler on Park Farm Beauty; 5th Kiddoo & Sons on Wellington Lily; 6th Hawthorn Farm on Eureka Belle; 7th Sizer on Queen Diamond; 8th Hawthorn Farm on Oak Duchess II; 9th Mare on Mare's Blue Bell 1st; 10th Hawthorn Farm on Lockinge Queen Eva.

Clydesdales.

Exhibitors: F. L. Ames, North Easton, Mass.; Garrick Andrews, Cambridge, Neb.; Clyde Aylesworth, Hebron, Ind.; Barron Bros., Elkton, S. D.; Bedminster Farms, Far Hills, N. J.; Belair Farm, Collington, Md.; George A. Cluett, Williamstown, Mass.; Conyngham Bros., Wilkes Barre, Pa.; Ethelwold Farm, Mondovi, Wis.; Fairholme Farms, New Market, N. J.; H. Harris



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Stallions: Aged (12 shown)—1st F. E. Wilson on Baron Ascot; 2d Conyngham Bros. on Glencaple; 3d Graham Bros. on Alert; 4th Kennedy on Winsome Duke; 5th Conyngham Bros. on Golden Knight Three year old (7 shown)—1st Ames on Fairholme Footprint; 2d Cluett on Diamond; 3d Graham Bros. on Bonnie Flisk; 4th Fairholme Farms on Tammarlane; 5th Fairholme Farms on Fairholme Warrior. Two year old (11 shown)—1st, 2d and 3d Graham Bros. on Peer, Examiner and Reminder; 4th Conyngham Bros. on Knight of Braeview; 5th McLay Bros. on King Marshall. Two year old (bred in U. S.) (9 shown)—1st Conyngham Bros. on Knight of Braeview; 2d McLay Bros. on King's Marshall; 3d Williams on Balfour; 4th Soderberg on Fairview Prince; 5th Ames on Lyon of Longwater. One year old (12 shown)—1st Conyngham Bros. on Heather Knight; 2d Graham Bros. on Mendel's Prince; 3d Conyngham Bros. on Scottish Knight; 4th McLay Bros. on El Rey; 5th Fairholme Farms on Fairholme Prince. Foal (bred in U. S.) (11 shown)—1st Merna on Gen. Douglas Haig; 2d Kennedy on Winsome Prince; 3d Fairholme Farms; 4th Kennedy on Prince Winsome; 5th McLay Bros. on King's Joy.

Mares: Aged (12 shown)—1st Fairholme Farms on Harviestown Baroness; 2d Conyngham Bros. on Pride 5th of Drumlanrig; 3d McLay Bros. on Buchlyvie Lady; 4th-5th Conyngham Bros. on Rosebud of Warylip and Bonnie Rose. Three year old (12 shown)—1st Cluett on Lady Lister; 2d Conynham Bros. on Elma; 3d Barron Bros. on Lady May; 4th Ames on Hillcrest Eva's Gem; 5th Kennedy on "Tibbie C." Two year old (18 shown)—1st Conyngham Bros. on Mary Carey; 2d Fairholme Farms on Fairholme Duchess; 3d Belair Farms on Belair Lady Aberdeen; 4th Conyngham Bros. on Signet's Rose; 5th Graham Bros. on Diana's Choice. Two year old (bred in U. S.) (7 shown)—1st Conyngham Bros. on Mary Carey; 2d Fairholme Farms on Fairholme Duchess; 3d Cluett on Osceola Queen; 4th Iowa State College on Pearl Refiner; 5th McLay Bros. on King's Baroness. Yearling (15 shown)—1st Belair Farms on Belair Baroness; 2d Cluett on Osceola Duchess; 3d Graham Bros. on Mendel Princess; 4th T. E. Wilson on Flora of Claremont; 5th Conyngham Bros. on Hillside Bonnie. Foal (bred in U. S.) (7 shown)—1st Fairholme Farms; 2d Cluett on Favorite Maid; 3d Iowa State College on Pearl's Queen; 4th Soderberg on Winsome's Favorite; 5th Conyngham Bros. on Lady Betty.

Groups and Champions: Stallion and 3 mares, American bred—1st Conyngham Bros.; 2d Fairholme Farms; 3d Soderberg; 4th McLay Bros.; 5th Ethelwold Farms. Stallion and 3 mares (open class—1st and 3d Conyngham Bros.; 2d Cluett; 4th Soderberg. Three get of 1 sire, American bred—1st Conyngham Bros.; 2d Cluett; 3d Soderberg; 4th Kennedy; 5th Iowa State College. Two produce of 1 dam, American bred—1st Conyngham Bros.; 2d and 5th Fairholme Farms; 3d Cluett; 4th Kennedy; 6th Iowa State Colege. Senior champion stallion—Ames on Fairholme Footprint. Reserve—Cluett on Diamond. Senior champion mare—Fairholme Farms on Harviestown Baroness. Reserve—Cluett on Lady Lister. Junior champion stallion—Graham Bros. on Peer. Reserve—Conyngham Bros. on Heather Knight. Junior champion mare—Conyngham Bros. on Mary Carey. Reserve—Fairholme Farms. Champion stallion, bred in U. S.—Conyngham Bros. on Heather Knight. Reserve—Merna on Gen. Douglas Haig. Champion mare bred in U. S.—Conyngham Bros. on Mary Carey. Reserve—Fairholme Farms. Grand champion stallion—Ames on Fairholme Footprint. Grand champion mare—Fairholme Farms on Harviestown Baroness.

Futurities: Male (10 shown)—1st and 2d Conyngham Bros. on Heather Knight and Scottish Knight; 3d McLay Bros. on El Rey; 4th Fairholme Farms on Fairholme Prince; 6th McLay Bros. on Silver King; 7th Houser on Parader; 8th Barron Bros. on Arcadia Prince. Female: 1st Belair Farms on Belair Baroness; 2d Cluett on Osceola Duchess; 3d T. E. Wilson on Flora of Claremont; 4th Conyngham Bros. on Hillside Bonnie; 5th Houser on Perilla; 6th McLay Bros. on Jessamine; 7th Houser on Poppy; 8th Soderberg on Maid's Darling.

Suffolk-Punch.

Exhibitors: Hawthorn Farm, Lake County, Ill.; F. W. Okie, Marshall, Va.; Trumans' Pioneer Stud Farm, Bushnell, Ill. Judge, Richard Stericker, Aurora, Ill.

Stallions: Aged (4 shown)—1st and 2d Hawthorn Farm on Ashmoor Romeo and Darsham Onyx; 3d Okie on Piedmont's Sundown. Three year old (1 shown)—1st Trumans' on Tangent F. Two year old (2 shown)—1st Hawthorn Farm on Hawthorn Morston; 2d Okie on Piedmont's Defender. Yearling (5 shown)—1st and 2d Hawthorn Farm on Hawthorn Vespasian and Hawthorn Rufus; 3d Okie on Piedmont's Scott. Foal (5 shown)—1st, 2d and 3d Hawthorn Farm on Hawthorn Marshall, Hawthorn Pride and Hawthorn Victor.

Mares: Aged (4 shown)—1st Hawthorn Farm on Burgh Damsel; 2d Okie on Sudbourne Ruby; 3d Hawthorn Farm on Teazel. Three year old (2 shown)—1st and 2d Hawthorn Farm on Framlingham Gala and Bawdsey Judy. Yearling (6 shown)—1st and 2d Hawthorn Farm on Hawthorn Duchess and Hawthorn Dorothy; 3d Okie on Piedmont's Twilight. Foal (5 shown)—1st, 2d and 3d Hawthorn Farm on Hawthorn Choice, Hawthorn Rosetta and Hawthorn Fancy.

Herds and Champions: Stallion and three mares, any age (5 shown)—1st and 2d Hawthorn Farm; 3d Okie. Two, the produce of dam—1st and 3d Hawthorn Farm; 2d Okie. Three, the get of sire—1st and 3d Hawthorn Farm; 2d Okie. Champion stallion—Hawthorn Farm on Hawthorn Morston. Champion mare—Hawthorn Farm on Hawthorn Darling.

THE SHEEP SHOW.

In the fat sheep classes at the International Mr. Frank Kleinheinz, of the University of Wisconsin, failed only by the smallest possible margin to land the grand championship ribbon. He was defeated by Jess Andrews, who showed an exceptionally good Shropshire yearling wether. Reserve championship went to the University of Illinois on a Southdown wether. Several educational institutions took a prominent part in the fat classes, notably the University of California, the Iowa Agricultural College and, as before stated, the University of Illinois. The last won first prize and championship in the Southdown classes. In the fat Cheviots the University of Illinois swept the boards, winning on yearling wethers, wether lambs and also on a pen of three wether lambs. In the breeding classes of Shropshires another Wisconsin firm came well to the top, as Broughton & Sons captured first premium in an entry list of twelve in the yearling ram class. They also won second in the ram lamb class. In the carload lots the championship was won by a load of grade Hampshires exhibited by the Butterfield Live Stock Company of Idaho. These passed over the scales at an average weight of 118 pounds, and they sold at auction at the close of the show for $21.25 per hundred pounds, this being $10 per hundred higher than ever has been paid for the winning lambs at the International. All in all, the sheep show was a most successful one and well it might be because both wool and mutton are now precious products on the American market.

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Don't get fooled on separators only assembled by so-called manufacturers and priced at figures you positively know a satisfactory sanitary cream separator can not be built for. Stand the Galloway side by side with cheaper machines and you'll see the difference in material, workmanship, true down to date design and skimming qualities. Stand it beside the highest priced machine. Test them side by side for months. Higher priced machines will not run any easier nor skim any closer—can't be more perfectly sanitary nor better built!

Note these few strong, simple, sanitary parts. Easy to wash clean—no rough edges—no sharp corners. Bowl catches any foreign matter in the milk. Only two shafts in the whole gearing—both of high-carbon steel, in long, perfectly fitted bearings. All gear shaft and both bowl spindle bearings supported by one casting—the gear case. All working parts run in spray of oil. Simple, effective driving clutch on crank shaft.

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State Buttermakers Hold Meeting

Dane County Buttermaker Carries Off First Prize—Exhibit of Butter Was Smaller Than Last Year but of Higher Quality.

INASMUCH as Wisconsin butters a sixth of the nation's bread, it is not surprising that the convention of the Wisconsin Buttermakers' Association at Sparta, Monroe county, last week, was a great success. Over 400 buttermakers were present. They reflected optimism and prosperity. Business has been good for the past year. Prices have been the highest in history. The demand for good butter is heavy and the future is very promising. While the butter exhibit was smaller than at Eau Claire last year, the quality was the best ever shown at a Wisconsin convention. There were 122 tubs scored, against 185 at Eau Claire. Not all buttermakers, apparently, have adjusted themselves to the change in time of the convention. C. E. Lee, who has judged butter at this convention for years, says he has never seen a more uniform high quality exhibit.

L. L. Bolstead, of Basco, Dane county, won first prize with a score of 96.50 . Mr. Bolstead also won state honors in 1913. He is the buttermaker in a small co-operative creamery and if his tub showed anything it showed special quality in flavor, indicating that it had been made from cream of a high standard. Last year he won second and at that time would probably have been first had he not overworked his butter a trifle, having to submit to a cut on body. But that proved a lesson to him and this year with a tub splendid in texture and flavor he easily won the gold watch offered the state winner. G. P. Sauer, of Cedarburg, Ozaukee county, who is always in the high list, won second, while H. E. Griffin, of Mt. Horeb, Dane county, took third.

Mr. Lee, in discussing the lessons to be learned from the exhibit, said the outstanding feature was that the winning butter came from creameries which are demanding a high-quality product from the farmer and that the farmer must realize that if his creamery is to pay him the top price he must deliver to it a product from which butter that will command the best price can be churned. The entire exhibit, so far as texture was concerned, was very uniform. Low-scoring tubs were usually so scored because of rank flavor, probably due to a tainted, poor raw product. "The lesson these buttermakers must learn is to demand the very best product from the farmers," Mr. Lee said. In the judging Mr. Lee was assisted by William Schneider, of Johnson Creek, and O. A. Storvick, of Albert Lea.

The convention program teemed with good things and there were many interesting addresses of interest to both farmers and buttermakers. In the latter class fell an address by E. M. Jackson, instructor or field man for the co-operative creamery in the La Crosse river valley. This association is the first in Wisconsin to employ a field man whose purpose is to work with the patrons in improving the quality of their cream and milk. Mr. Jackson has just completed a year's work and it has proven so successful from the creamery operator's standpoint that several creameries in other counties are planning to go together and employ instructors. Jackson county is soon expected to fall in line. Mr. Jackson went over his work in detail; explained how he had worked from farm to farm with the creamery patrons in pointing out the value of good, clean, high-testing cream, etc., from both the patrons' and creameries' standpoint. As a result, he told of scores of barns being whitewashed, milk and dairy houses being erected, new separators installed, engines installed to operate the seperators, etc.

Prof. E. H. Harrington talked on the value of skim milk; Prof. M. Mortenson, of Ames, Iowa, on business correspondence; Prof. R. M. Washburn, of St. Paul, on the business of the buttermaker; H. B. Holbery, of Coon Valley, on the advantage of hot-water heaters; Prof. F. G. Kraege, of Fort Atkinson, on the importance of creamery ventilation, and Prof. G. H. Benkendorf, of Madison, on the marketing situation. The usual debate existed over pasteurization and Commissioner Weigle, of the dairy and food commission, explained the benefits derived from the license law; Prof. E. G. Hastings, of Madison, the cause and prevention of mold, and L. Dickey, of Glenwood City, discussed the kerosene engine as a source of power. Prof. R. A. Moore addressed a record crowd.

The present officers were re-elected for another year. They are: President, E. J. Morrison, Chetek; vice president, C. Jorgenson, Rose Lawn; secretary, G. H. Benkendorf, Madison; treasurer, F. Werner, Waterloo.

The state and district winners were:

STATE PRIZES.

1st, L. L. Bolstead, Basco; 2d G. P. Sauer, Cedarburg; 3d, H. E. Griffin, Mt. Horeb; 4th, Paul Mehnert, River Falls; 5th, Alex Larson, Nashotah.

DISTRICT PRIZES.

First District—1st, F. C. Thompson, Muwwanago; 2d, W. J. Clark, Lake Beulah.

Second District—1st, J. J. Bartel, Peebles; 2d, L. M. Kohel, Beaver Dam.

Third District—1st, R. J. Else, Helenville; 2d, F. M. Werner, Waterloo; 3d, H. J. Herreman, Black Earth; 4th, A. W. Newman, Black Earth.

Fourth District—1st, Olaf Larson, Gays Mills; 2d, J. H. Quale, Platteville.

Fifth District—1st, M. Mickelson, Westby; 2d, J. D. Simpson, Viroqua; 3d, G. N. Marvin, Black River Falls; 4th, Julius Kretzschmar, New Lisbon; 5th, J. Rasmussen, Leon; 6th, Hans Christensen, Tomah; 7th, Wm. Mehlus, Bangor.

Sixth District—1st, Chris. Christensen, Neillsville; 2d, Joseph Rayer, Thorp.

Seventh District—1st, Grant Winner, Osseo; 2d, L. C. Olson, Galesville.

Eighth District—1st, Lauritz Olsen, West De Pere; 2d, Hubert Bartel, New Holstein; 3d, H. F. Recknagel, Seymour.

Ninth District—1st, L. G. Rogers, Clear Lake; 2d, L. M. Sorenson, Clear Lake; 3d, Homer Townsend, Chetek; 4th, Roy Hayton, Stanley.

Tenth District—1st, Carl Jorgenson, Rose Lawn; 2d, Aug. Lange, Jr., Chelsea.

Special prize to member of the association securing highest score at Minneapolis—Peder Kristensen, Cushing.

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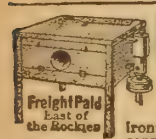

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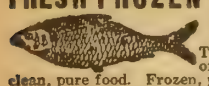

Taken from the ice cold waters of Lake Superior, insuring good, clean, pure food. Frozen, packed and shipped direct to you. Herring are becoming one of the most popular winter foods. We guarantee these strictly fresh. We do not handle COLD STORAGE FISH. Prices: 100 lbs., $3.50 per 100 lb. box; 500 lbs or more, $3.25 per 100 lb. box; 100 lbs. (in sacks) $3.25 per 100 lbs. (in Minn. only); 500 lbs. or more, $3.00 per 100 lbs. State inspected. Address

Johnson, Hendrickson & Co., Dock I, Two Harbors, Minn.

BEST EVER

Many articles of food have doubled in price, don't you think the following quotations on fresh frozen fish are decidedly low? Fresh Frozen Lake Superior Herring $3.50 per 120-lb. box. Lots of 500 lbs. or more $3.25 per 120-lb. box. Specially packed "trial box" Herring $2.00 per 60-lb. box. Pickerel, round 8c per lb. Pike, round 11c per lb. Every shipment examined by government food inspector.

JOHN DEGERSTEDT & CO.

Lock Box 532 Two Harbors, Minn.

FRESH WEATHER FROZEN FISH

HERRING, In boxes $3.50-100 lbs.; $2.00-50 lbs. Lots 500 lbs. or more $3.25-100 lbs. In sacks $3.00-100 lbs; $1.60-50 lbs. Lots 500 lbs. or more $2.75-100 lbs. (Net Wt.). Guaranteed strictly fresh or money back. Order early. Save money. We will please. It's been our business for years. Price list on request.

Pioneer Fisheries Co., Dock H, Two Harbors, Minn.

TO SETTLE AFFAIRS

OF company will sacrifice 16, 604 acres, admirably situated for cattle purposes. All kinds of forage, fruit and truck crops can be raised. Conveniently located between Miami and West Palm Beach; on canals and near railroad. Price $10 acre, reasonable terms, might consider sub-dividing. Pasture all year round. Full information A. W. Cain, 1010 Bisbee Bldg., Jacksonville, Florida.

240 ACRES for sale; well fenced, partly hog tight; 8-room house, barn 50x52; new, good outbuilding, well improved; soil black loam, all tiled; forced to sell; $150.00 per acre; ½ mile town, on state road. Write. Fred Eisele, Avoca, Minnesota.

FOR sale, 62 acres, good wire fences, 4-r. house, large orchard, fine water, tools, telephone. R. F. D., 5 miles from best market. Price $1,600. Easy terms. A.L. Wilkins, R.1, Bx.50, Union, N.Y.

FOR SALE or exchange, 160 acres; 25 clear, balance pasture; no bldgs.; located in Monroe county; easy terms. A. A. Crawford, Mather, Wis.

WANTED to hear from owner of good farm for sale. Send description—price. O. O. Mattson, 2954 Cedar Ave., Minneapolis, Minnesota.

POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Rid Flock of Loafers Now.

"Sort your flock now and save money."

This is the advice which J. G. Halpin, in charge of poultry husbandry at the Wisconsin College of Agriculture, regularly offers at this season of the year. He has found that it does not pay to keep hens through the winter that are not laying and for this reason urges everyone to dispose of the loafers.

The best layers, according to Mr. Halpin, are the hens that are first off the roost in the morning and the last to go to roost at night; those that are active and have free crops at night; those that always seem to be busy; and those that are bright eyed and go about singing.

The comb usually shrinks, becomes hard, light colored and rough when laying ceases. The skin on a laying hen is usually smooth, oily and pliable; her abdomen is large, she has a wide pelvic arch and a good depth from keel to pelvis.

Late molting hens are the best layers. Contrary to general opinion, repeated tests show that heavy-producing hens molt late and molt rapidly.

Now is the time to watch the pullets. Don't let them roost in small coops about the yard. They crowd into these places and spend the night huddled together to keep warm; in the early morning when they come out into the chill fall air they are very apt to take cold, and their constitutional vigor is reduced. Good, warm, well-ventilated houses should be provided for the chickens and the pullets should be made to roost in them if they are to be good winter layers.

The Uniform Flock Is the Business Flock.

To the Editor:—At a farmers' institute recently a woman in the audience asked the speaker regarding the matter of preparing fowls for market, that is, in the method of dressing and packing for shipping to city markets.

After a few inquiries the speaker found that the difficulty lay not in regard to the picking and packing but in the size of the packet, so "that it will be all uniform." Now, the uniform business should have begun before the chickens were hatched. The flock should have been uniform, which means all of one breed, and the individuals of that breed as near alike as possible.

"Like" will not always "beget like" in a parti-colored breed, but in general form, as well as size, if the flock has been bred with any attention to the characteristics the carcasses should be very uniform. And do try to keep in mind that it requires a pure-bred fowl first of all, and not only that, it should be kept along one line of families—strain we call it in poultrydom, and the fewer ancestors it runs back to the more uniform the lot.

If a uniform flock, as regarding the breeding, then the only other consideration in the matter is that of age. For best results a chicken should be marketed at about two pounds, while the price is yet high—broiler price, in fact, though farmers say "frying" price. Failing in this, then never try to dispose of them until well rounded out. If there is anything a commission man will not thank you for it is a long, lanky, unripe chicken. You will not thank him, either, when your draft arrives.

It is far preferable to market them as they get into the right condition. No one thinks of lumping all of his hogs or cattle off in the same lot and selling without regard to size or condition. Then why chickens? O, this old, haphazard manner that some of us have of trying our level best to "queer" the whole poultry business! If it were any other one produce it would not have stood the strain half as long as it has, but in spite of all the neglect and abuse heaped upon its luckless head the poultry industry is flourishing and, taking it as a whole, it is paying out 200 per cent on the investment.

If you prefer to dress your marketable poultry, all right. But be certain that it is ready for market. Plan to ship chickens of the same hatch and plan your receptacles accordingly. If you prefer, a neat box that will hold about a dozen can be made more attractive, and attractiveness counts in no place more than in selling poultry products, whether stock or eggs.

Another factor in favor of a uniform flock is that of producing eggs uniform in color and size and even shape has to do with catching the eye of a good customer. This will be found to count more, too, with the coming of co-operative circles that are being formed to dispose of poultry products in the most satisfactory manner. Then, and then only, will the matter be accorded the consideration it deserves. When it comes to a definite question of an extra dollar in the pocket, or loss of it, then will the average person be willing to see.

Subscriber.

Ask your neighbor to subscribe for The Wisconsin Farmer.

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. The rate is six cents per word, each insertion. Note the low cost to reach our 90,000 circulation.

THE WISCONSIN FARMER MADISON, WISCONSIN

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TELEGRAPHY taught, positions secured, at the oldest, largest and most thorough equipped railroad training school in Wisconsin. Established 1897, under same management for 19 years. Investigate, ask for our new rate sheet, special inducements. Wisconsin School of Telegraphy, Oshkosh, Wis.

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MONEY TO LOAN ON FARMS. 6% with any pre-payment privilege desired. Security must be twice the amount of the loan. Address 206 Washington Bldg., Madison, Wisconsin.

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COLLAPSIBLE Ensilage Cars and Automatic Litter Carriers direct from factory to farm at prices never before made. Common Sense Co., Janesville, Wisconsin.

WYANDOTTES.

PREMIUM White Wyandottes, $2. Heavy weighers and layers. Eggs $8. 100 Mammoth Toulouse geese. Fairvue Poultry Farm, Montello, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

NORTHERN Wisconsin-grown pure-bred Holstein bull calves from $50 up. Best lines of breeding, A. R. O. dams. Barker Farm, Chippewa Falls, Wisconsin.

FOR sale—Reg. Holstein bull and heifer calves, also heifers and young cows with A. R. O. records. Joseph Stein, Cleveland, Wis.

SHETLAND PONIES.

SHETLAND ponies make fine Christmas presents. Yearlings and bred mares $40 to $90. Adam Seitz, Waukesha, Wisconsin.

BUFF ROCKS.

BUFF Rocks! Splendid breeders for sale. Frank Kramer, Ft. Atkinson, Wisconsin.

FARM LANDS.

BUY Oil, Coal, Gas, Timber and Corn Land in Oklahoma. Will sell you from 40 to 320 acres of land in southeast Oklahoma (recently Indian lands) that has enough oak timber on it to pay for it, right in the heart of the oil, coal, gas, mineral fields of Oklahoma. Any 40 acres may be worth a million dollars. Fine corn land, heavy, rich, black, inexhaustible soil. On this land you can produce pork for 3 cents a pound. Price for quick action while it lasts, $4 per acre. Terms if desired. Write today. C. M. Davison, Beaver Dam, Wisconsin.

DON'T POSTPONE BUYING. Land in Aitkin county, the great dairy district, will double in price in a few years. Farmers, take your choice from our lands at a few dollars per acre. Act quickly. Arnold, Land Agent, Rock Island Railway, 153 Wolvin Bldg., Duluth, Minn.

FARM LANDS.

A GOOD 120 at bargain price of $5,500, about $45 per acre. Fronts on nice little fishing lake. Good, nearly new 6-room house, on knoll near lake, hip-roofed frame barn 26x36, silo, old stable, granary 16x20, nearly new, and other improvements. Very handy location on improved state road, rural route, etc. 1 mile creamery and store, near consolidated school, only 6 miles Luck. Level and gently rolling field of around 30-35 acres, balance fine hardwood timbered pasture except a few acres in low land and lake. Rich clay loam soil (sand loam near lake), nice little orchard, some saw timber. An exceptionally nice dairy and stock farm, handily located and at a right price. Come at once. $2,000 will handle. W. M. Christensen, Cashier, Luck, Wis.

FOR SALE—1,080 acres in solid block of red and black loam land, about 100 acres cleared, balance mixed hardwood timber and grass, good buildings; insured for $2,500; fencing and other improvements; good spring water, two trout streams; Bellwood station and Northern Pacific sidetrack on land. State road from Superior to Ashland, just completed through land. In the fruit belt. Best land, location and bargain in northern Wisconsin. Address M. J. Bell, care Bell Lumber Co., Minneapolis, Minn.

FARMS bought, sold and exchanged. No matter where located I bring buyers and sellers together. If you want to Buy, Sell or Trade any kind of business or property anywhere at any price, write me. Established 1881. Bank references. Address Frank P. Cleveland, Real Estate Expert, 1605 Adams Express Bldg., Chicago.

NOTICE: The Official Milking Machine is low priced, classy, simplest, easiest to clean and most sanitary. None better regardless of price. Sold on "Your Money Back" guarantee. Mail orders solicited and I'll send an expert to install and start machine. Reliable agents wanted. Address F. C. Coward, Distributor, Elkhorn, Wis.

WISHING to retire on account of age, I offer for sale a controlling interest in a prosperous bank of $30,000 capital, carrying with it the presidency at a good salary, together with a nice, brick cottage home and eighty acres irrigated land near town, in a flourishing, South Texas community. Address "L" care of this paper.

SNAP IN 40 ACRES: Clay loam soil; lies gently rolling; 8 acres natural meadow; 2 miles from station; only $450; terms to suit. The Ev. Luth. Colonization Co., Merrill, Wis.

SEVERAL tracts choice cutover hardwood land for sale. Surrounded by improved dairy farms in wonderful central Wisconsin. Adam Paulus, (owner), Marshfield, Wis.

103 ACRES, 35 cultivated, balance timber. Black loam; 2 miles station; creek through it. Cheap for cash. Terms. E. O. Bonesville, Caryville, Wis.

FOR SALE or exchange for wild land in southwestern Nebraska, live stock farm of 760 acres 2½ miles from town. Write Albert Ferdon, Pittsville, Wisconsin.

$12,000 BUYS 160 acres, good soil, $3,000 improvements. Oscar Thompson, R. 1, Morris, Minn.

FOR SALE—Prize-winning, full blooded Buff Orpington cockerels. I have some beauties. Mrs. Harry Hardwick, Route 1, Edgerton, Wis.

FOR SALE—10. mo. Guernsey bull sired by richly bred Glenwood, Blue ribbon calf. A dandy. Price reasonable. W. A. Lawson, Rosendale, Wis.

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IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly ev ery state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

AUTOMOBILE SCHOOL

LEARN a business in 6 weeks. No books. Easy to learn. Good salary. Free catalog. National Auto School, 2814 No. 20th St., Omaha, Neb.

WANTED to hear from owner of good farm for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

POULTRY AND PET STOCK.

THE WINNEBAGO REDS

ARE now in the market. Excellent quality, standard weight cockerels and pullets. High-class exhibition and common laying stock. Satisfaction guaranteed or no sale. **Winnebago Poultry Yards, R. 23, Omro, Wis.**

HOUNDS: Coon, Fox, Wolf, Deer, and Rabbit Hounds; pedigreed and eligible to reg. Young and old stock for sale. Sent on ten days' trial. Money back guar. Otis Slater & Son, Oconee, Ill., Succes'rs to R.F.Johnson, Assumption, Ill.

Single Comb White Leghorn Cockerels

FOR sale. March hatch, of a great laying strain, at $2.00 each. A rare opportunity to get high-bred birds at a low price. Greenwood Poultry Farm, Route 5, West Allis, Wisconsin.

"ARISTOCRAT" Silver Wyandottes. Cocks, cockerels, hens and pullets. Better than ever. Write me your wants. Frank Faha, Jr., Box 620, Dyersville, Iowa.

BABY CHICKS and eggs from trap nested, pedigreed Barred Rocks and S.C.White Leghorns with wonderful egg records. Write for circular to Amos G. Norman, Dept. D, Chatsworth, Illinois.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys, bantams and guineas. Also incubator eggs. Bare Poultry Co., Box 650, Hampton, Iowa.

SOME extra large, choice, heavy-boned Mammoth Bronze turkey toms and hens. Stock for sale, prices reasonable. O.C.Olson, R.2, Strum, Wis.

SINGLE COMB BUFF AND WHITE Leghorn cock'els. Charles Schmit, Hortonville, Wis.

WHITE and Barred Rocks from prize-winning stock. Yearling hens and males. Early pullets and cock'ls. Mrs. J. F. Bloom, R.1, Stillwater, Minn.

FIFTY varieties chickens, ducks, geese, turkeys, guineas. Low prices to make room. Catalog free. Dell Walrath, Box S, Janesville, Minn.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

DAIRY

Wisconsin Dairymen's Meeting.

Waupaca Proved to Be a Good Center For This Annual Gathering and a Great Deal of Good Was Accomplished by the Meeting.

THE forty-fifth annual meeting of the Wisconsin Dairymen's Association, the pioneer of agricultural organizations in Wisconsin, was held last week at Waupaca, Waupaca county. It may be truly stated that this was the best meeting ever held by the association. The attendance was large, the meeting hall being taxed at every session and farmers came for miles by auto and by team to listen to the gospel of better dairying.

Waupaca proved to be a splendid place for the meeting. The center of a cow-testing circuit that has attracted to itself considerable attention, because of the work accomplished in weeding out the unprofitable cows, the use of only tried and pure-bred sires and co-operative buying of feeds, this meeting drew naturally from a section where farmers are interested in every progressive note in dairying. So it was a fitting recommendation to the work of the Waupaca and Butternut Ridge Association that this should be the best meeting of the dairymen's association, the principal activities of which is the cow-testing association work. There also exists in Waupaca a spirit of co-operation between business man and farmer that is entitled to special mention. Much of the success of the meeting is due to the business men of that city who entered into the occasion with much interest.

When this association was first organized, forty-five years ago, Wisconsin's dairy products were worth less than $1,000,000 annually. It would be interesting to know at this time what they are worth, although the last available statistics place the value at more than $110,000,000. Large as this increase has been there is abundant room for improvement and no better description of the increase that has come during the life of this association is available than this excerpt from a greeting from ex-Gov. W. D. Hoard, one of the organizers, who was unable to attend because of his advanced age:

Standing where I do in these later years, I can see the broad panorama of dairy development in all lines spread out before me over these forty-five years of the life of the Wisconsin Dairymen's Association. Nearly all of our especial features, such as the Dairy School at Madison, the Farm Institutes, the expansion of dairy husbandry, in many ways found their origin in the Wisconsin Dairymen's Association.

What a wonderful force it has been, working upon the minds of our farmers to the enlargement of their knowledge and judgment in the making of prosperous dairy farmers. My vision and memory of all these mighty results cannot last many years more, but I am glad I have lived amid these fruitful years, and I bid you be of good cheer. Keep your eyes to the front. Be forward looking. Have faith in the renovating power of sound knowledge and the stimulating effect of a broader intelligence.

Here is a simple question for every farmer to ask of himself: Who are the most prosperous dairy farmers, the best representatives of this great industry? Are they the most intelligent and progressive or the most ignorant and unprogressive? Apply those questions as a touchstone to your own lives and you need not fear the result.

As the principal activity of the association now throughout the year is the cow-testing work, the report of Mr. Noel Negley, assistant to Mr. H. C. Searles, state superintendent of these associations, was very interesting. It revealed that this association has to its credit the organization of 184 associations with 5,660 members and 83,864 cows and that there are now in operation in Wisconsin fifty-five associations with 1,681 members and 26,425 cows.

The program was well balanced and there was something of interest to the farmers at every session during the three days. Mr. George Moss, tester of the Waupaca and Butternut Ridge Association, gave a report on his three years of work in that section, pointing out the lessons that have been learned by those for whom he tests. He emphasized the value of good care and good feeding. It is essential to have good animals, but a good cow with poor care and poor feed is a failure with the poor cow. This was illustrated by the experience of one member whose cow gave 295 pounds of fat before he took up the careful study of feed and care. Now this same cow has a record for nine months of 459 pounds of fat and should run close to 600 pounds for the year. In nine months this cow has given this farmer a net profit of $119. His expenditure of $46 for feed would have startled him two years ago and Mr. Moss has figured that it was worth $50 a month to this farmer to be a member of the association. He also presented other lessons, all bearing on the value of association work. But to get the greatest good from association work he pointed out that the farmer must take an interest himself; he cannot rely entirely on the tester who comes once a month, as successful testing is an everyday job if the boarders are to be eliminated and the cows brought to a state of highest production.

Considerable interest was manifest in the milk contest conducted by Mr. C. E. Lee, of the dairy and food commission. Something like a dozen samples were submitted and subjected to the sediment test and the test for flavor. From this contest Mr. Lee drew a few lessons in pointing out how to produce the right kind of milk on the farm. The prizes in this contest were awarded with Anton Peterson, first; Guy Anderson, second; F. R. Constance, third; Fred Jorgenson, fourth, and C. C. Boyce, fifth.

The election of officers resulted in choosing Mr. Math Michels, of Peebles, to succeed himself as president, and Mr. Paul C. Burchard, of Fort Atkinson, to continue as secretary. Wausau, Marathon county, extended an invitation for the meeting next December.

Mr. W. J. Dougan, of Beloit, who supplies that city with milk, spoke on making clean milk and pointed out that there are three essentials embodied in the idea of clean milk—the cow, the utensils and the dairyman. The factor overshadowing all he considers the man himself. Others who spoke were Mayor Holly, who gave the address of welcome; Senator C. H. Everett, of Racine; President Michels; Mr. W. H. Clark, of Rice Lake; Mr. John Michels, of Peebles; Mr. J. G. Poynton, of Fort Atkinson; Mr. A. J. McGuire, of St. Paul; J. Q. Emery, of Edgerton; F. G. Swoboda, of Antigo; A. J. Glover, of Fort Atkinson; F. M. White, of Madison, and F. R. Constance, of Waupaca. An interesting sidelight was a visit to the dairy farm of Mr. John Erickson, of Waupaca, who has built up his herd from the profits of the farm and every female is of his own breeding. Not in twenty years has he bought a female. An entertainment in the school auditorium and a banquet the following evening all tended toward the success of the meeting.

Ask your neighbor to subscribe for The Wisconsin Farmer.

Here's Where it Tells-

It isn't a question of sentiment whether or not your cows are in the pink of condition—but it does make a big difference in your bank account. Since you are keeping cows for milk instead of for meat, better see to it that their milk-producing organs are kept working normally.

At the first sign of decreasing milk-flow, look for the cause. Ten to one it is due to some trouble with the digestive or genital organs, and such disorders are best set right by the use of Kow-Kure, a cow medicine backed by twenty years of success. Try Kow-Kure on your poor milkers and watch results. Hundreds of doubting cow owners have been convinced that this old remedy has no equal for the prevention and cure of Abortion, Barrenness, Retained Afterbirth, Milk Fever, Lost Appetite, Scouring, Bunches, etc.

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Write for our free treatise, "The Home Cow Doctor"

Dairy Association Co.
Lyndonville, Vt.

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A DANDY CHRISTMAS PRESENT

It has a backward and forward movement; a sliding seat; and a swinging pailholder: adjustable to fit any ordinary sized milk pail. You can adjust the height of the pail up or down. It is built of steel and will last a lifetime. Big seller. Every farmer wants it. Send $1.50 for sample and our proposition to AGENTS.

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25 CENTS CALF RENNETS

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DE LAVAL CREAM SEPARATOR

WITH the certainty of the highest prices ever known for butter this winter, no producer of cream can afford to run another month without a modern De Laval Cream Separator.

This is true whether you have no separator, or an inferior make of machine, or even an old model De Laval machine.

The waste of butter fat is relatively greatest in winter, either with gravity skimming or a poor separator.

At present cream and butter prices, a new De Laval machine will almost surely save its cost within three months, and go on doing so thereafter.

There can surely be no good reason to delay the purchase another week, and if it may not be convenient to pay cash, it may be purchased on such terms that the machine will easily pay for itself.

See your De Laval agent immediately or, if you don't know him, address the nearest De Laval main office as below for any desired particulars.

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Galloway Bros. & Co., Dept. 35 Waterloo, Ia.

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wis.

PICTURES IN THE MIND.

By R. Q. Wickham.

The artist paints a picture,
It's perfect of a kind,
But really not to be compared
To pictures in the mind.

Those pictures in the mind that rise
Like snow-white clouds in summer skies,
In distant space they seem so clear,
But overhead they disappear.

Now welcome these mind pictures,
The retrospective kind;
That take us away from the present
From this everlasting grind.

That carry us back to childhood
And the scenes along the way—
To the brightest spot on mother earth,
To where we used to play.

It makes no difference who we are,
Or where on earth we roam—
These pictures flash across the mind
And take us way back home.

It matters little whom we love
This one or another,
The loveliest picture in our mind
Is that of sainted mother.

God bless good moving pictures,
Of every make and kind;
But shower a generous blessing on
Those pictures in the mind.

Eldridge, Cal., Nov. 18, 1916.

Scalloped Facings Attractive

The scalloped facings may be of interest to the woman who has more time than money at her disposal. They are just as strong and serviceable as the plain facings, and add a decorative touch to the garments upon which they are used. Ruffles finished in this way are very pretty and require no other trimmings.

The facing is laid along the edge of the garment to which it is to be sewed right side of facing to right side of garment, pinned in place, and cut into points or round or square scallops. Next the facing is basted at its lower edge to the garment and stitched in about an eighth-inch seam. The facing is then turned to the wrong side of the garment, care being taken to work to out well on the shaped edge and to make the turn come exactly on the line of sewing. The raw straight edge is turned under once and hand hemmed to the garment.

Apple Sirup.

It may not be practical for the average fruit farmer to make apple sirup as a commercial proposition, but during seasons when there are a large number of culls and windfalls, or when markets are glutted, it is a matter of business economy to utilize by-products, and a method of making apple sirup is furnished by H. C. Gore, of the bureau of chemistry of the department:

Wash apples, remove all decayed and worm-eaten spots, and press out juice as usual for cider making. Be sure the juice does not ferment or "work," as only sweet cider should be used for sirup making. The sterilizing, reducing vat, or kettle, should be a third larger than required to hold contents.

Add five ounces of powdered calcium carbonate to seven gallons of apple cider. Powdered calcium carbonate (carbonate of lime), or, to give it its common name, precipitated chalk, is a low-priced, harmless chemical available at any drug store. Boil in kettle or vat vigorously for a period of five minutes. Pour the liquid into vessels, preferably glass jars or pitchers, allow to stand six to eight hours, or until perfectly clear. Pour the clear liquid into preserving kettle. Do not allow sediment at bottom to enter. Add to the clear liquid one level teaspoonful of lime carbonate and stir thoroughly. The process is completed by boiling down rapidly to a clear liquid. Use density gauge or candy thermometer and bring it up to 220 degrees Fahrenheit, or, without thermometer, reduce bulk to one-seventh of original volume. To see whether it is cooked enough, test as you would sirup or candy, by pouring a little of it into cold water. If boiled enough, it should have the consistency of maple sirup. It should not be cooked long enough to harden like candy when tested. When the test shows that the sirup has been cooked enough, pour it into fruit jars, pitchers, etc., and allow it to cool slowly. Slow cooling is important, as otherwise the suspended matter will not settle properly and the sirup will be cloudy. A good way to insure slow cooling is to stand the vessels full of sirup in a bucket or a wash boiler of hot water. They may also be placed in a fireless cooker. The white sediment which settles out during cooling is called "malate of lime" and is a harmless compound of lime with the natural acid of the apple. When the sirup is cooled it should be stored in fruit jars or bottles. Place the rubber cap or cork in position and tighten. Then place the bottles or cans of sirup in hot water and sterilize for twelve minutes in hot-water or wash-boiler outfit, ten minutes in water-seal outfit, eight minutes in steam-pressure outfit under five pounds of steam, or five minutes in aluminum pressure cooker under fifteen pounds of pressure.

Apple sirup made by this method is a very palatable and high-grade product. It has a flavor much like the thick sirup or jelly which is so often formed when apples are baked with a little sugar. As shown by experiments made by the government experts, this apple sirup can be used in cooking with good results, as well as for table purposes.

Reducing High Cost of Living.

To the Editor:—I want to write a few lines on home problems. I hear so much just now about reducing the high cost of living and it seems to me that if housewives would be more careful in the autumn in laying in supplies for the winter the cost of living would not be so high.

Take, for instance, butter. If packed when fresh in the fall it will keep all winter. My method is to wash the butter thoroughly in fresh water until the water runs clear. Then salt, using one ounce of fine dairy salt to one pound of butter. Work three different times, the last time making into rolls the size desired. Put these in a nice, clean, whole jar. One or two-gallon jars will do. Then make a strong brine and pour over your butter. As you make more butter put it in the jar until the jar is nearly full. Then tie a strong paper over the top of the jar to keep out dust. When you want to use any of the butter all you need to do is to get a small roll, put it in some fresh water for a short time to freshen out some of the salt, and there you have better butter at a cost of half the market price you would pay were you to buy from others.

Another thing housewives can do to keep down expenses is to cure and dry their own beef. It will keep until late in the summer. The way we cure it is to cut the choicest cuts of the hind quarter in pieces of two and one-half to three pounds, salt dry for eight to ten days, then take out of the salt, wash the salt off, let dry, and smoke for two weeks with hickory sawdust or other old hickory wood which is handy. You will have as nice dried beef cured in this way as you can find anywhere. We much prefer it to the canned stuff on city markets.

Then there are the vegetables which may be canned or packed in sand and put in the cellar for winter use. Apples, also, must be picked over quite often and those that cannot be kept may be made into apple butter or canned for sauce. Eggs will keep nicely if put in some dry oats when fresh and kept in a dry, cool place. Do not put them in the cellar or any place where it will be damp, because they would not keep.

These are just some of the things that we can do to reduce the high cost of living, but I think each one of them is quite a little item in itself.

Mrs. B. H. B.

Charcoal For Rancid Lard.

To the Editor:—To restore rancid lard to its former sweetness is a simple matter. Melt the lard to a boiling heat, add thereto a couple of pieces of charcoal the size of hen eggs or larger, according to quantity to be renovated, and boil slowly for one hour. Then strain through a fine cloth. All the impurities will be absorbed by the charcoal.

Someone asked how to get rid of lice on house plants. Finely powdered natural tobacco will drive away or kill all insects that bother plants, shrubs, etc. Sprinkle the tobacco over the plants and you need not fear that it will harm the tenderest of them.

C. F. C.

Inexpensive Christmas Gifts.

To the Editor:—In answer to "Maggie's" request for Christmas ideas I will try to send a few. The "hot pan holder" is a useful and inexpensive gift. Buy either flannel or woolen goods, double it to the thickness you want and cut it about eight inches square. If you can crochet, you may baste the sides together, then crochet all around the edges with any color thread that you want. Then at one corner put a bone ring to hang it up by. If you cannot crochet you may embroider the edges. A little note may accompany the holder. For instance:

Lift a hot pan with me
And you shall soon see
I pay my fee.
Then do not fail
To hang me on a nail.

The safety-pin holder is another nice gift. Buy either white or colored ribbon one inch wide. Then get tin rings and crochet around them. These rings can be bought for 5 cents a dozen. Cut the ribbon in different lengths, from five to seven or eight inches, and tie or sew to the rings, and pin the safety-pins into the rings.

Very pretty towels may be made by buying toweling by the yard, hemming in towel lengths and crocheting a pretty edge or embroidering initials.

If you have many friends to remember you might write each one a letter (a long one) and then instead of using sealing wax use a gay Christmas seal.

Corset bags are made some, too. Buy linen goods, double it once and cut it about six inches wide and one yard long. Then sew the sides and bottom and hemstitch the top. Make a casing and run a ribbon through it. Then embroider the person's initials and you have a very pretty gift.

I am thirteen years old and have never written before, but I hope my little suggestions will help "Maggie."

Brown-Eyed Susan.

Christmas Candies.

Marshmallows.—Soak one envelope of gelatine in ten tablespoonfuls of cold water, boil one pint of granulated sugar in ten tabelspoonfuls of water until it threads, add gelatine to sirup and let stand until partly cooled. Add a few grains of salt and desired flavoring to taste and beat with a whip until it is too stiff to beat longer and then beat with a large spoon until it is soft enough to settle into a sheet. Dust granite pans thickly with powdered sugar, pour in candy about a half inch deep and set in cold place until thoroughly chilled, then turn out, cut into cubes and roll in powdered sugar. This will make more than 100 marshmallows. Nuts, chocolate, fruit juices in place of water, or chopped candied fruits may be added, or the plain marshmallows rolled in grated cocoanut before being sugared. Dates stuffed with this confection are delicious.

Christmas Cream.—Two cupfuls of white sugar, one-half cupful of corn sirup, one-fourth cupful of water. Boil until it will spin a long thread when dropped from a spoon. Pour over the stiffly beaten whites of one egg, flavor with three-fourths teaspoonful of orange flavoring, add nuts if desired, and beat until stiff.—M. H.

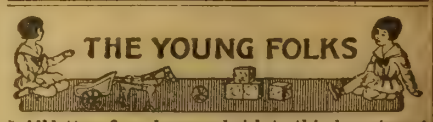
Raisin Drops.—Chop fine one cupful of raisins and work into them a third of their weight in sugar, using a few drops of strained honey to bind. Mold into any shape desired and dip into melted chocolate.

Peach Dainties.—Strain the juice from a jar of peaches, and put them through a fine sieve. To each pint add a cup and a half of sugar. Bring to the boiling point very slowly, stirring constantly. When a drop of the mixture will stay set on a plate, remove from the fire and drop on waxed paper; when cold dip in melted chocolate.

Candied Nuts.—Boil equal parts of water and sugar. To test, dip in a clean steel knitting needle, pull it out and if when the sirup which clings to the needle is cool it cracks, the sirup is ready. Have ready some blanched nut meats of any kind desired. Dip into the sirup. If they are not thoroughly coated, dip again, and a third time if necessary. Dry on sheets of waxed paper.

Pulled Candy.—One cupful of sugar, one-third cupful of water, one tablespoonful of butter, lemon, orange or vanilla flavoring. Boil without stirring. Try by dropping in cold water. It should keep its shape in a hard ball. Pour on greased surface. Add flavoring and coloring matter if desired. As soon as it can be handled pull until stiff. Twist or braid and cut with scissors.

Fondant.—To five cupfuls of sugar add one and one-half cupfuls of water and one-fourth of a teaspoonful of cream of tartar. Stir until the sugar is dissolved, but no longer. Cook slowly to the soft ball stage. Wipe down the crystals from the sides of the vessel with a damp cloth wrapped around a fork. When done pour the sirup on a platter. When cool enough to allow the fingers to be held in it, stir with a wooden spoon until it creams. Then knead until smooth. Wet and wring a small towel, place over the fondant, and allow it to remain for an hour. This may be used for making creams, fudge, stuffed dates, chocolate creams, fruit centers, maple creams, caramel creams, cocoanut creams, etc.



All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Leaves.

Dear Young Folks:—I am a boy eleven years old and in the sixth grade. I live on a farm about a mile from town. I have a dog named Rover, a cat named Beauty and a colt named Betty. I am sending you a poem that I wrote the other day. I called it "Leaves:"

First thing that is to appear
In the springtime of the year
Are the little buds so small;
Soon the summertime will call.

Now in shady summer woods
Birds are bulding in the leaves;
They are twittering in the trees;
They are sporting in the breeze.

Now in silent autumn woods
The trees are turning brown,
For the leaves are falling down—
Softly, softly, without sound.

Some are red; some are yellow;
Some are orange; few are green.
Oh, the happy autumn woods,
Prettiest woods ever seen.

Children rake them up in piles
In the fields and off the lawn,
Then at evening and at dawn
Fires are seen everywhere.

Thus like persons are the leaves,
For a world they have the trees;
Once they were in their prime,
Now they sigh for such a time.

—John Vincent Burland.

Grace's Twin.

Dear Young Folks:—I have been reading the Young Folks' page and I thought I would write a letter to let Grace know that she has a twin. I am eleven years old and my birthday is on the second of January.

I live on a farm of 400 acres. I like to live in the country. I go to a new school which was built this summer and I am in the sixth grade.

During vacation this summer I visited my uncle, who lives near a lake. I had a boat ride and picked some water lilies. —Paul.

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1917—Ladies' dressing or house sack. The pattern is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 3 yards of 44-inch material for a 36-inch size.

1918—Children's rompers with round collar or square neck outline and with long or short sleeve. The design is cut in 3 sizes: 2, 4 and 6 years. It requires 3 yards of 36-inch material for a 4-year size.

9821—Ladies' one-piece corset cover, in round, square or "V" neck edge. Pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 1⅞ yards of 36-inch material for a medium size.

1923—Coat dress for misses and small women. The pattern is cut in 4 sizes: 14, 16, 18 and 20 years. It requires 5½ yards of 44-inch material for a 16-year size.

1793—A neat dress for mother's girl. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 3¾ yards of 44-inch material for a 12-year size.

1941—Girl's dress with or without peplum. The pattern is cut in 4 sizes: 8, 10, 12 and 14 years. It requires 5½ yards of 36-inch material for the dress with peplum, and without peplum 4½ yards for a 10-year size.

1552—Ladies' apron, with sleeve protector and cap. The pattern is cut in 3 sizes: Small, medium and large. It

embraces all styles illustrated, and requires 5⅛ yards of 36-inch material for the apron, ¾ yard for the cap and ⅞ yard for one pair of sleeve protectors, for a medium size.

1653—Girls' dress with or without pockets, and with sleeve in either of two lengths. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2¼ yards of 44-inch material for a 4-year size.

1933 Waist-1914 Skirt—A dressy costume. Waist pattern 1933 is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 9 yards of double width material for a medium size for the entire dress with tunic and oversleeves. Two separate patterns, 10 cents for each pattern.

1519—Girls' coat and cap. Pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2¼ yards of 44-inch material for the coat and 1⅝ yards of 27-inch material for the cap, for a 4-year size.

1548—Boys' suit, consisting of a blouse with side closing. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 2½ yards of 44-inch material for a 4-year size.

1772—A simple, attractive dress for home and porch. The pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5½ yards of 44-inch material for a 36-inch size.

International Sunday School Lesson.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Lesson for December 17th.

The Holy City.

LESSON TEXT—Rev. 21:1-7, 22-27.

GOLDEN TEXT—Behold, the tabernacle of God is with men, and he shall dwell with them, and they shall be his people.—Rev. 21:3.

As we approach the end of the year, our minds turn from the imperial city, where last we have any authentic record of Paul, to the eternal city in which he has so long resided. In lesson ten we studied Jesus Christ in his resurrection glory, the source of all power, King of Kings and Lord of Lords for the redemption of the human race. In Lesson 11 we studied the glorified Christ who is actually working through his churches as the representative of his kingdom upon earth. The succeeding chapters describe in symbols and pictures the discipline and training of God's people during the long generations that followed. In the lesson for today, we have a vision of the final triumph of Christianity when it shall have accomplished its work of redemption in this world.

I. The New Heaven and the New Earth (vv. 1-7). John in vision saw the consummation of the work of Christianity, the visible answer to the prayer which Jesus Christ taught his disciples to pray, "thy kingdom come, thy will be done on earth as in Heaven." Heaven, as well as earth, has been invaded and polluted by sin, but both alike are to be made new. (I Peter 3:10, 11, 13). The true Jerusalem, of which Solomon's was but a type, is of heavenly and divine origin. It comes down out of heaven from God. We know nothing of the inhabitants of the universe of which we are a part, but here we have some scriptural indication of that place where God's children are to be with him eternally. The kingdom of God is among you, but it is eventually to be with God and Jesus in a peculiar and beautiful way. John's announcement came from out of heaven and out of the throne. (1) It was a tabernacle of God with men; rather he shall tabernacle with men. He is to pitch his tent among us (John 1:14 R. V. marg.) It is to be done eventually and permanently. This dwelling of God among us lies at the foundation of the blessedness and glories which are to follow. (2) They shall be his people. Israel had been his people; all nations are to be his people in the fullest sense. (3) God himself shall be with them, not only his tabernacle, but he, himself visibly, personally. (4) He shall be their God, acknowledged in all his infinite claims, and he to them all that God is of love, power, wisdom, holiness and glory. (5) He shall wipe away every tear from their eyes. There will not be a single grief or heartache, unsatisfied longing or tear, for God shall wipe them away, and they will stay wiped away. (6) Death shall be no more. Of all the enemies, death is the last one which shall be taken from the earth. It is sweet to know that this last enemy is to be conquered. (7) There shall be no mourning, crying or pain any more. Every sorrow, agony, remorse, gloom, disappointment gone forever; death, tears, mourning all passed away. It is hard for us to comprehend the majesty and sweep of this great and glorious promise. (See I Cor. 15).

II. The Coming Light and Glory (vv. 22-27). The intervening verses are a wonderful description of the foundation walls and gates of the city. There will be no temple in that city, for it will not be needed. Instead of the temple which stands for the temple of earth there is to be the presence of God, himself, but the lamb is also in the midst of it. Nothing can more forcefully impress upon us the deity and preeminence of Jesus Christ, the atoning lamb, slain before the foundation of the world. This city is to be a city of light and glory. It will not be an illumination by gas nor electricity, for the glory of the Lord shall lighten it.

Summary. What are the lessons for our day from this vision of the new heaven and the new earth? First: That the golden age of the Bible has not yet taken place. There are better times to come than anything the world has yet seen. Second: We have here the positive assurance of the success of our leader and the victory of Christianity in its conflict with evil. Third: The golden ideal of heaven is the means by which we can test our daily lives and the whole course of our conduct. The question we should constantly ask is, "Are we going to this heavenly ideal?" Fourth: The gates of that city are open; an angel is at each gate, and shall keep out all evil. God desires that all men everywhere should repent, and is not willing that any should perish.

When the final assize shall have passed, no one will say that God did not give him a chance nor seek to inspire him to a place of eternal joy at his right hand.

Again there is to be federation of the forces of good. Today we too often find Christian people divided.

Invitation. "And the Spirit and the bride say come, let him that heareth say come, and let him that is athirst come, and whosoever will let him take of the water of life freely."

When turning a hem in a skirt try taking up the extra fullness at the top of the hem with a gathering string. Care should be taken to keep the string taut, otherwise there is a possibility of stretching the skirt. The result is a much straighter line of sewing on the right side of the garment than can be obtained with the small darts so frequently used.

Selling seaweed is one of the functions of the Philippine fishermen. The native women make use of it in the preparation of a dessert much like gelatine.

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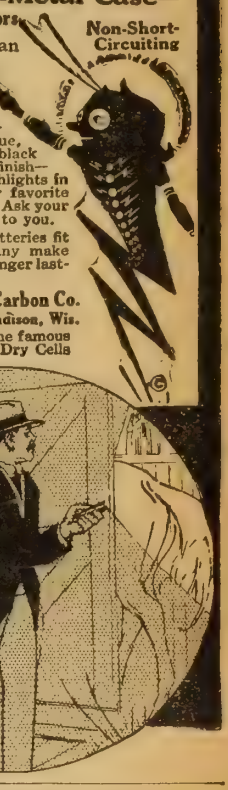

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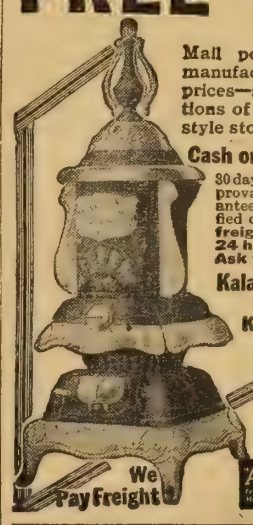

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER X—Continued.

"Have you ever been scared so badly you couldn't yell, Aunty?" he asked, with a bland disregard of the fact that she was just then in danger of roasting herself on the hearth for the purpose of evading him. "No? That's the way you fixed me a little while back, sure enough. I was scared too badly to run, or they never would have caught me."

The only intelligible answer heard from her was: "Go 'long, you!"

He did not "go 'long." On the contrary, he wheeled about in Tillie's chair, and settled himself as if that corner was especially attractive, and he intended spending the evening in it—a suggestion that was a decided surprise to all, even to Rachel, remembering his late conservatism.

Stuart was the only one who realized that it was perhaps a method of proving by practical demonstration the truth of his statement that he was a Pariah among the class who received the more refined character with every welcome. It was a queer thing for a man to court slights, but once inside the door, his total unconcern of that which had been a galling mortification to him was a pretty fair proof of Stuart's theory. He talked Indian wars to Hardy, and Indian love songs to Hardy's wife. He coolly turned his attention to Liteutenant Murray, with whom his acquaintance was the slightest, and from the lieutenant to Miss Fred, who was amused and interested in what was, to her, a new phase of a "squaw man;" and her delight was none the less keen because of the ineffectual attempts in any way to suppress this very irregular specimen, whose easy familiarity was as silencing as his gruff curtness had been the day they met him first.

Beyond an occasional remark, his notice was in no way directed to Rachel—in fact, he seemed to avoid looking at her. He was much more interested in the other two ladies, who by degrees dropped into a cordiality on a par with that of Aunty Luce; and he promptly took advantage of it by inviting Miss Fred to go riding with him in the morning.

The man's impudence and really handsome face gave Fred a wicked desire to accept, and horrify the lieutenant and Tillie; but one glance at that little matron told her it would not do.

"I have an engagement to ride tomorrow," she said rather hurriedly, "else—"

"Else I should be your cavalier," he laughed. "Ah, well, there are more days coming. I can wait."

A dead silence followed, in which Rachel caught the glance Genesee turned on Stuart—a smile so mirthless and with so much of bitter irony in it that it told her plainly as words that the farce they had sat through was understood by those two men, if no others, and puzzled and eager to break the awkward silence, she tried to end it by stepping into the breach.

"You have totally forgotten the story you were to tell us," she said, pointing to the sheets of manuscript in Stuart's hand; "if we are to have it tonight, why not begin?"

"Certainly; the story, by all means," echoed Fred. "We had it scared out of our heads, I guess, but our nerves are equal to it now. Are you fond of stories. Mr.—Mr. Genesee?"

"Uncommonly."

"Well, Mr. Stuart was about to read us one just as you came in; one he wrote since he came up in these wilds—at the fort, didn't you say, Mr. Stuart? You know," she added, turning again to Genesee—"you know Mr. Stuart is a writer—a romancer."

"Yes," he answered slowly, looking at the subject of their discourse as if examining something rare and curious; "I should reckon—he—might be."

The contempt in the tone sent the hot blood to Stuart's face, his eyes glittering as ominously as Genesee's own would in anger. An instant their gaze met in challenge and retort, and then the sheets of paper were laid deliberately aside.

"I believe, after all, I will read you something else," he said, reaching for one of the rolls of manuscript on the table; "that is, with your permission. It is not a finished story, only the prologue. I wrote it in the South, and thought I might find material for the completion of it up here; perhaps I may."

"Let us have that, by all means," urged Tillie.

"What do you call it?"

"I had not thought of a title, as the story was scarcely written with the idea of publication. The theme, however, which is pretty fairly expressed in the quotation at the beginning, may suggest a title. I will leave that to my audience."

"And we will all put on our thinking caps and study up a title while you tell the story, and when it is ended, see which has the best one to offer. It will be a new sort of game with which to test our imaginations. Go on. What is the quotation, to begin with?"

To the surprise of the listeners, he read that old command from Deuteronomy, written of brother to brother:

Thou shalt not see thy brother's ox or his sheep go astray; thou shalt in any case bring them again unto thy brother.

And with all lost things of thy brother's, which he hath lost and thou hast found, shalt thou do likewise.

In any case thou shalt deliver him the pledge again when the sun goeth down.

Stuart ceased after those lines, and looked for comment. He saw enough in the man's face opposite him.

"Oh, go on," said Rachel. "Never mind about the suggestions in that heading—it is full of them; give us the story."

"It is only the prologue to a story," he reminded her; and with no further comment began the manuscript.

Its opening was that saddest of all things to the living—a death bed—and that most binding of all vows—a promise given to the dying.

There was drawn the picture of a fragile, fair little lady, holding in her chilling fingers the destiny of the lives she was about to leave behind—young lives—one a sobbing, wondering girl of ten, and two boys; the older, perhaps eighteen, an uncouth, strong-faced youth, who clasped hands with another boy several years younger, but so fair that few would think them brothers, and only the more youthful would ever have been credited as the child of the little woman who looked so like a white lily.

The other was the elder son—an Esau, however, who was favorite with neither father nor mother; with no one in fact, who had ever known the sunny face and nature of the more youthful—an impulsive, loving disposition that only shone the brighter by contrast with the darker-faced, undemonstrative one whom even his mother never understood.

And the shadow of that misunderstanding was with them even at the death bed, where the Jacob sobbed out his grief in passionate protests against the power that would rob him, and the Esau stood like a statue to receive her commands. Back of them was the father, smothering his own grief and consoling his favorite, when he could, and the one witness to the seal that was set on the three young lives.

Her words were not many—she was so weak—but she motioned to the girl beside the bed. "I leave her to you," she said, looking at them both, but the eyes, true to the feeling back of them, wandered to the fairer face and rested there. "The old place will belong to you two ere many years—your father will perhaps come after me;" and she glanced lovingly toward the man whom all the world but herself had found cold and hard in nature. "I promised long ago—when her mother died—that she should always have a home, and now I have to leave the trust to you, my sons."

"We will keep it," said the steady voice of Esau, as he sat like an automaton watching her slowly drifting from them; while Jacob, on his knees, with his arms about her, was murmuring tenderly, as to a child, that all should be as she wished—her trust was to be theirs always.

"And if either of you should fail or forget, the other must take the care on his own shoulders. Promise me that too, because—"

The words died away in a whisper, but her eyes turned toward the Esau. He knew too bitterly what it meant. Though only a boy, he was a wild one—people said a bad one. His father had pronounced him the only one of their name who was not a gentleman. He gambled and he drank; his home seemed the stables, his companions fast horses and their fast masters; and in the eyes of his mother he read, as never before, the effect that life had produced. His own mother did not dare trust the black sheep of the family, even though he promised at her death bed.

A wild, half-murderous hate arose in him at the knowledge—a hate against his elegant, correctly-mannered father, whose cold condemnation had long ago barred him out from his mother's sympathy until even at her death bed he felt himself a stranger—his little mother—and he had worshipped her as the faithful do their saints and like them, afar off.

But even the hate for his father was driven back at the sight of the wistful face, and the look that comes to eyes but once.

"We promise—I promise that, so help me, God!" he said earnestly, and then bent forward for the first time, his voice breaking as he spoke. "Mother! mother! say just once that you trust—that you believe in me!"

Her gaze was still on his face; it was growing difficult to move the eyes at will, and the very intensity of his own feelings may have held her there. Her eyes widened ever so little, as if at some revelation born to her by that magnetism, and then—"My boy, I trust—"

The words again died in a whisper; and raising his head with a long breath of relief, he saw his father drop on his knees by the younger son. Their arms were about each other and about her. A few broken, disjointed whispers; a last smile upward, beyond them, a soft, sighing little breath, after which there was no other, and then the voice of the boy, irrepressible in his grief, as his love, broke forth in passionate despair, and was soothed by his father, who led him sobbing and rebellious from the bedside—both in their sorrow forgetting that third member of the family, who sat so stoically through it all, until the little girl, their joint trust, half blind with her own tears saw him there so still and as pathetically alone as the chilling clay beside him. Trying to say some comforting words, she spoke to him, but received no answer. She had always been rather afraid of this black sheep—he was so morose about the house, and made no one love him except the horses; but the scene just drew her to him for once without dread.

"Brother," she whispered, calling him by the name his mother had left her; "dear brother, don't you sit there like that;" and a vague terror came to her as he made no sign. "You—you frighten me."

She slipped her hand about his neck with a child's caressing sympathy, and then a wild scream brought the people hurrying into the room.

"He is dead'!' she cried, as she dropped beside him; "sitting there cold as stone, and we thought he didn't care! And he is dead—dead!"

But he was not dead—the physician soon assured them of that. It was only a cataleptic fit. The emotion that had melted the one brother to tears had frozen the other into the closest semblance to stone that life can reach, and still be life.

The silence was thrilling as Stuart's voice ceased, and he stooped for the other pages laid by his chair.

(To be continued.)

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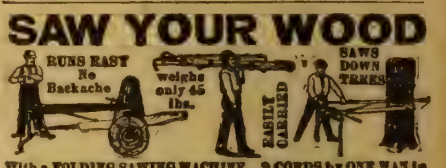

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Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Edgewood Farm Holsteins.

THE Edgewood Farm, Pewaukee, Wisconsin, owned by F. A. W. Kieckhefer, have long been noted as one of Wisconsin's largest dairy farms. It was one of the first farms in Wisconsin where certified milk was produced, and its dairy barns are models in every way. Great care is taken to keep the animals in the best of health, which is very essential in the production of certified milk. At the present time they are offering two fine yearling bulls for sale on page 22. One of these was born May 13, 1915, so is now a year and a half old and can do heavy service immediately. He has been well developed, is of good type and is well marked, being over three-fourths white. His dam, Ollie Ormsby, is a good individual and a good producer. She gave up to 47.5 pounds milk per day on ordinary herd care, milking but twice a day, and she tests about 4 per cent fat. She is sired by a grandson of Duchess Ormsby Piebe Burke, that sired the forty-one-pound cow, Sadie Vale Concordia 4th, and she is out of a grand daughter of Duchess Ormsby Butter King, making her a double-bred Ormsby. The bull for sale is sired by a son of King Hengerveld Pondyke, that has sixteen A. R. O. daughters, two above thirty pounds. He in turn is by King of the Pontiacs, that has 182 A. R. O. daughters, ten above thirty pounds and two above forty pounds. The dam of this bull will be put on test when she freshens again and is a creditable candidate for a good record. The other bull for sale was born October 4, 1915, and is also of good type and is over one-half white. He is a very desirable animal. His fourteen nearest dams average over twenty-seven pounds butter in seven days, which is an average back of but few bulls in the state. In him is combined some of the greatest blood of the breed, viz; King Segis, Blanche Lyons De Kol, the thirty-three-pound cow; Betta Lyons Netherland, the thirty-four-pound cow; Colantha 4th Johanna, the thirty-five-pound cow; King Segis Pontiac; Pontiac Korndyke, and others of equal high production ability. The dam and dam's dam were tested last year and made very creditable records and will undoubtedly increase these records when tested again. Send for extended pedigrees of these two bulls, as they will interest you if you are in need of a herd sire.—Adv.

Buying a Future.

WHEN you buy a herd sire you are always buying a future, as he never produces an immediate profit. You always exercise great care in seeing that he is a good individual and from good ancestry so as to insure as large a profit as possible in the future. There is another factor which you should consider, as it will go a long ways in producing you a larger profit and that is the future opportunity the sire and dam will have to become noted. The herd on the Pabst Stock Farm will have an opportunity to be one of the best-known herds in the United States. The cows in the herd will be given every opportunity to increase their seven-day records and to make yearly records. A new testing barn is just being completed which will provide every facility for both the cattle and the herdsmen to produce large records. The future for this herd is very bright. Any animal purchased from this herd will undoubtedly increase in value within the next year or two. At the present time a very attractive bull is advertised for sale on page 22. You breeders who want an outstanding herd sire should send for a picture and pedigree of this animal. His dam as a junior two year old made 849.21 pounds of butter in a year and gave 20,029 pounds of milk. She was second in her class in the National Association in 1914. There are but few two year olds that ever made such a record. If you want a good one here it is.—Adv.

Fruit Brothers' Guernseys.

THOSE of our readers who have been following the reports of the Waukesha Guernsey Breeders' Association and the reports of the yearly records made by Guernsey cows will have some idea of the kind of cattle that make up the herd of Fruit Brothers, Waukesha, Wisconsin. Animals from this herd have topped the sale several times, one animal selling in the last sale for $975.50. They have also been making some very creditable records. At the present time they are offering some choice yearling bulls for sale that will interest our readers. One of these, born October 29, 1915, was sired by May King's Vrangue of Ingleside, that has five A. R. daughters and six more now on test, going at a very creditable rate. This bull in turn was by May King of Ingleside, that was by Imp. King of the May. He not only is the sire of producers but is an excellent individual, being first prize bull at the National Dairy Show. The dam of the bull for sale is a daughter of Langwater Hayes Rosie King of the May, that has three A. R. daughters and is a son of Imp. King of the May. It will be seen, therefore, that this bull is of King of the May breeding on both sides of his pedigree. Fruit Brothers are also offering another yearling bull ready for service. He was sired by Maybelle's Champion, whose sire is a half brother to the noted bull, Holden 4th. The dam of this bull is out of Moline Butter Girl, a daughter of Lawton Standard, that has three A. R. daughters. Send for extended pedigrees of the two bulls. They are being offered reasonably. See page 21.—Adv.

Short-horn Show and Sale.

ONE of livest state associations in this country, is the Minnesota Short-horn Breeders. This association was formed a few years ago, and no state has come into prominence faster as a Short-horn state, than Minnesota. There is a reason, inside the boundaries of this state some of the greatest herds of the red, white and roan in America are owned. On January 3d the Minnesota Short-horn Breeders' Association will conduct a sale and show at the South St. Paul Stockyards. On the morning of the sale Professor Curtiss will judge the cattle consigned to this sale. Having seen previous sales held by this good association we are glad to say that the offering to be sold January 3d is far superior to any sale ever held at the South St. Paul yards. We have seen many of the Short-horns that are tested and of the seventy head to be sold, the majority are good enough to go into any herd. At the present time there is a great demand for bulls of serviceable age and we want to call special attention to the bull offering of this sale. About twenty-five head have been listed—Scotch and Scotch-topped and some of them have been winners in the shows during the past season. Of the females, one will have a grand assortment of the most fashionable Scotch families, cows representing the popular "topped" families, and for those that want milking Short-horns we are glad to say that some of the best owned in Minnesota

COLONEL of Waukesha, sire of one of the yearling Guernsey bulls advertised for sale on page 21 by L. J. Wendt, Waukesha, Wis.

are listed for this sale. No breed is more popular than the Short-horn. Many Wisconsin breeders are "behind the times." If you have the desire to improve your herd, suitable animals can be found in this sale. This will be a great sale and show and all lovers of the breed should be on hand. The sale will start at 1:30 p. m. In the evening there will be a big banquet. We will have more to say next week. In the meantime, write P. S. Jordan, Secy., Morris, Minn., for one of the instructive catalogs. Will appreciate it if you will mention The Wisconsin Farmer when writing for catalog.—Adv.

A Richly Bred Glenwood Bull.

A SON of Stranford's Glenwood of Pinehurst 3d 16202 is advertised for sale on page 21 by L. J. Wendt, Waukesha, Wisconsin. This bull was born December 5, 1915, so is ready for service. He has a good straight top line and is well marked. His sire is one of the best Guernsey bulls ever owned in Wisconsin. He is a double grandson of the noted bull, Glenwood Boy of Haddon, which is proof of his rich breeding. But he has not only inherited the blood of outstanding individuals but has proven to be one himself. He has been shown fourteen times as a calf, yearling and two year old and has never gone below second place, being first nine times and junior champion five times. His first heifer was junior champion at the National Dairy Show and his daughters made up the first prize breeder's young herd at the same show. The dam of the yearling bull for sale is Lillie Belle of Elder Lawn, a Glenwood-bred cow sired by Eagle Boy 2d. This bull won second at the 1911 Wisconsin State Fair against heavy competition. Send for an extended pedigree of this bull and when writing kindly mention The Wisconsin Farmer.—Adv.

Inter-County Holstein Breeders' Association.

THE Inter-County Holstein Breeders' Association formed by the breeders of Dodge and Jefferson counties is one of the youngest, but one of the best, in the state. The two counties have been known for years as the home of many of the best type and heaviest producing animals of the breed. The two counties are full of cattle of the same blood lines that produced these world's record cows. With such cattle as these the breeders have been able to build up a large association in a short time. Not only have they got animals of good type and heavy production ability but they realize the value of honorable business methods. At the present time they are offering both males and females for sale. They can supply mature animals. Whatever you want in the way of Holsteins can be obtained by writing to the secretary of the association, Francis Darcey, Watertown, Wisconsin.—Adv.

The Duroc Jersey Combination at Owatonna.

STEELE county, Minnesota, has a few live wires in its boundary and some of these are men breeding the Duroc Jersey. They know that they have Duroc Jerseys that compare favorably with the best, consequently on the 3d day of January, the day following the Vanderhyde sale at West Concord, Minnesota, the Steele County Duroc Jersey breeders will give the public an opportunity to see the class of "red hogs" raised around Owatonna, Minnesota. The sale will be held in that town. The writer visited the farms of the various breeders that will make this sale, and we do not hesitate to say that they are selling individuals in this sale that would do credit to many herds. Forty-five head have been cataloged and this number has been selected from five herds, so it stands to reason that it should be a good offering, for when one picks eight or ten from the top of his herd one naturally expects to find as good pedigrees as known to the breed and they have been bred to good boars. One of the three best King the Col. boars that we know of is being used in one of the herds, and some of the good sows are sired by him or bred to him. Another good breeder is using a son of the champion and $1,500 boar, Tommy Doyle. This is some boar and any good breeder will make no mistake if you buy a saw bred to him. Another good boar in this locality is sired by Chief Defender. This boar will make a large one, and we feel sure that some of the best sows in this sale will be safe in pig to this boar. We will have more to say about this sale in next week's issue, but in the meantime get one of the catalogs, for this is a sale worthy of your consideration. You should attend the whole circuit, but if you can't, send your buying instructions to T. P. Shreve, Wisconsin Farmer representative. Please mention this paper when writing to W. V. Gousseff, sale manager, Owatonna, Minnesota, for catalog. See page 18.—Adv.

A Show Bull of Butter Breeding.

IF LIKE produces like, as is the common conviction, we will be interested in seeing the daughters of the young bull advertised for sale on page 21 by Fox Brothers, Waukesha, Wisconsin. He has had good type and high production ability bred into him for generations and intensified in every line of his pedigree. His dam, Beatrix B., is a fine cow and a heavy producer. At two years and five months of age she gave 9,024 pounds of milk and made 428 pounds of fat, which is a very creditable record. She is a daughter of Atwood Prince, whose daughters have been great show winners and good producers. His get of

A PAIR of Dane's September Hampshire weanlings advertised on page 19. Would make a nice Christmas present for your boy.

sire was never defeated. He has seven A. R. O. daughters that at an average of three years five months averaged 460 pounds fat. Among these is Honor Bright, that made 694.65 pounds butter and 12,674 pounds milk at four years of age. The sire of the bull for sale is King Talladeen of Chestnut Hill, that has been first and champion at several leading state fairs and dairy shows and whose offspring have been heavy prize winners. His dam was Talladeen 17,510, that gave 11,907 pounds of milk and made 635.5 pounds of fat. If any young bull is entitled to have good-producing daughters of ideal show ring type this young bull surely is. Send for his extended pedigree. It shows many other just as interesting facts in regard to the blood in this bull's veins. When writing please mention that you saw their advertisement and write up in The Wisconsin Farmer.—Adv.

The Grand Champion, E. J.'s Crimson Wonder.

JANUARY 5TH, the day following the E. J. Wilson Duroc sale, John Swenson will sell fifty head of sows at Willmar, Minn. This will be one of those good sales that we said would be advertised in The Wisconsin Farmer—no matter how far you may have to travel you will not be disappointed with the offering after you get there. There will be daughters of grand champions, for John has two grand champions doing service in his herd. In next week's issue there will appear a half-page advertisement relative to this good sale and you will be interested in it. Watch for it, read the announcement carefully and be sure to write for one of the catalogs.—Adv.

Vanderhyde's Duroc Sale January 2, 1917.

A SALE of Duroc Jersey bred sows that should appeal to Wisconsin and Minnesota buyers will be made by that veteran breeder and showman, F. S. Vanderhyde, at West Concord, Minn., January 2d. Van has been a breeder in the strict sense of the word and he has produced the kind that have won in the strongest competition. Fifty head have been cataloged for this sale, consisting of five tried sows among which will be Roxy, a six-year-old sow that has been the dam of Mr. Vanderhyde's winners for the past four years. She is the dam of Van's Wonder, the 1915 champion at the Minnesota State Fair. Three yearling daughters, one fall gilt and three spring gilts out of Roxy go in this sale. Here is one of the best producing sows in the Northwest and would be an excellent buy for someone wanting to get a start with registered Durocs. Ther will be seventeen fall yearlings and we want to say now that there are some choice sows of this age going in the sale. The twenty-eight spring gilts are up to standard and taken all in all this will be one of the good Duroc Jersey sale offerings of the winter. To show that he has the goods we might mention the fact that in 1915 the Vanderhyde Duroc Jerseys won four out of the six championships at the Minnesota State Fair. This is a sale that all good Duroc Jersey breeders should attend, for there will be desirable stuff in this sale. You should attend in person, but if you cannot you can send your buying instructions to T. P. Shreve who will represent The Wisconsin Farmer at this sale. Your business will receive honorable attention. Send at once for one of the catalogs—it will give you more information than we can in this limited space. Watch next week's issue of The Wisconsin Farmer for more information. Please mention this paper when you write for a catalog. See page 19.—Adv.

It Has Been Bred Into Him.

THERE are three very important things to consider in buying a bull of the dairy breed: First, butter production ability of his ancestors; second, conformation of the bull himself, and, third, whether or not these two most desirable characteristics have been bred into him and intensified in every line of his pedigree. We ran across a yearling bull of this description a few days ago when we visited the Norton Farms at Racine, Wisconsin. He is a cracking good individual and his dam is an equally good animal. She is a big, roomy heifer with a good, big udder well quartered and good teats. A glance at her pedigree shows that she ought to be a good one, as it has been bred into her. His dam has a record of 24.44 pounds butter in seven days and is a grand daughter of Hengerveld De Kol. Her sire is a son of Homestead Girl De Kol Sarcastic Lad, that has 106 A. R. O. daughters, forty-seven of which have records from twenty to 31.18 pounds of butter in seven days. He is also the only bull of the breed to have 3,800-pound junior two-year-old daughters that have given over 19,000 pounds of milk each in a year. The sire of the bull for sale is a son of Pontiac Butter Boy, that has fifty-nine A. R. O. daughters, four with records from 30.12 to 32.34 pounds and twenty-five others with records from twenty to 29.58 pounds butter in seven days. He is a half brother to Hengerveld De Kol and Pontiac Clothilde De Kol, two of the greatest animals in the breed. The pedigree of this young bull explains where he comes by his good conformation. His dam will be tested at her next freshening and is a creditable candidate for a good record. Send for a picture and extended pedigree. When writing kindly mention The Wisconsin Farmer. See page 22.—Adv.

January 4th—Important.

ON the above date, E. J. Wilson, Renville, Minnesota, holds his closing-out sale of Duroc Jerseys. Seventy head have been cataloged which will consist of some outstanding sows and gilts—bred in the "purple" and excellent individuals bred to good boars. Make note of this and be sure to look for the half-page advertisement that will appear in the December 21st issue of The Wisconsin Farmer. This will contain the details of the sale and all breeders of Duroc Jerseys should be interested in this sale.—Adv.

Bloomington Horse Sale.

MGR. C. W. HURT, of the Breeders' Sale Co., claims Jan. 30th and 31st and February 1st and 2d for their annual sale of draft horses of the different breeds at Bloomington, Ill. The sale will be held in the commodious pavilion of the Bloomington Live Stock Commission Co. Manager Hurt will be glad to hear from all who have horses to sell. Address him at Arrowsmith, Ill.—Adv.

McBain's Chester Whites.

WE HAVE just had a letter from L. J. McBain, Bloom City, near Viola, Wis., in which he says that he has sold all of his spring boars, but

has a few long, rugged fall yearlings that he will sell worth the money. These boars are being priced reasonable and they will give satisfaction. Mr. McBain recently purchased an extra good herd boar, a son of the noted Iowa boar, Demonstrator, and out of a daughter of Controller. Here is a good boar and if you want a few gilts bred to this boar write McBain your wants and we feel sure that he will send you Chester Whites worth the money.—Adv.

SALE DATES.

Short-horn Cattle.

Jan. 3, Minnesota Short-horn Breeders' Association, South St. Paul, Minn.

Percheron, Belgians, Shires.

Jan. 30-31-Feb. 1-2, Breeders' Sale Co., C. W. Hurt, Mgr., Bloomington, Ill.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County Poland China Breeders' Assn., Lancaster, Wis., Burlie Dobson, Secy.
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Steele Co. Combination Sale, W. V. Gousseff, Mgr., Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.
Feb. 26, Geo. Pagel, Zumbrota, Minn.
Feb. 26, George W. Pagel, Zumbrota, Minn.

In and Around Wisconsin

COMING EVENTS.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.

Wisconsin Poultry Association Show, At Madison, January 1st to 5th.

Wisconsin Cheesemakers' Association, at Fond du Lac, January 10th to 12th.

Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

There will be a $750,000 bond issue to build roads submitted to the voters of Eau Claire county at the next election in the spring. The issue is to cover cost of 110 miles of concrete roads covering the main arteries of travel in the county.

Washington county will also vote on a bond issue for roads next spring. The amount asked for is $500,000. The purpose is to build concrete roads across the county, two or three each way. Good roads boosters are planning to make a strong campaign to get this bond issue.

Clint Clark, of Pardeeville, Wisconsin, recently drew a homestead near Havre, Montana, said to be worth $15,000. The two most sought for tracts in the drawing were No. 79 and 80, and they were both drawn by men named Clark, although the two men could establish no relationship. The two men thought it was a very lucky day for the Clarks. They paid $2.50 an acre for the land and will pay 50 cents an acre a year for five years.

Reports from the Liberty and Clifton Cheese Factory, in Grant county, show that about 8,000 pounds of milk is handled daily, and this is considered some milk for this season of the year. The factory is running every day and will continue all winter. Theodore Bertrand, cheesemaker and manager, secured notable recognition at the last state fair for the fine cheese made in his place. This cheese brings the topnotch price and that is certainly saying something in these times.

Wisconsin rejoices with California in the winning of the steer championship at the International Live Stock Exposition at Chicago. California's Favorite, the grand champion of this, America's greatest live stock show, was raised at the University of California under the personal direction of Gordon H. True, University of Wisconsin graduate, class of 1894, the son of former state senator, John M. True, of Baraboo, who served as secretary of the Wisconsin State Fair for many years.

An order amending the rules of the potato quarantine against Canadian shipments has just been issued by the secretary of agriculture. Hereafter shipments to the United States will be admitted at any port provided they are accompanied by a certificate of soundness, such statement to show that not to exceed 10 per cent of the potatoes show traces of disease. Under the former rules potatoes were admitted only through a few ports where inspection could be made. Application for importation of potatoes must be made to the federal horticultural board, and application must state port of entry.

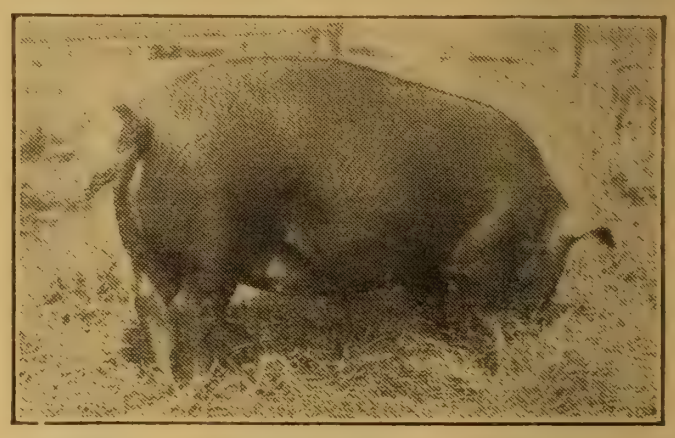
Over 600 men, farmers from North Dakota, stopped in Madison recently and spent a day at the college of agriculture. They were en route to the International Live Stock Show in Chicago, and made several stops in Minnesota and Wisconsin before visiting the state capital. It is said the total wealth owned and controlled by the men in this party was over $120,000,000. This would mean an average wealth of the men in the party of nearly $200,000 and indicates that it was rather a wealthy company. Members of the party were loud in their praise of the college of agriculture and the work done there.

Mr. E. S. Robbins, president of the Milwaukee Milk Producers' Association gives it as his opinion that the high cost of living will drive many men from the cities to the farms. He says that, while the population of the country has increased 100 per cent in twenty-five years, the percentage of farms has decreased. The sudden rise in prices of farm products, he believes, will start people toward the country and change the disposition of country people to flock to the cities. Mr. Robbins says that an embargo on wheat and other farm products would be unfair unless there is also to be an embargo on manufactured products.

DUROCS

Will be sold at OWATONNA, MINN.

WEDNESDAY, JAN. 3, '17



45 HEAD—the tops of 5 herds. Tried sows, yearlings, gilts. The "sifting committee" picked only the best from the 5 herds. You would expect good ones and we have them. Absolutely no culls. We want this sale to make a good reputation for us—will do our part. Sows bred to sons of King The Col., Tommy Doyle, Chief Defender's and A's Defender. A sale worthy of your consideration. Our sale follows Vanderhyde's. Attend both if possible. Send bids to T. P. Shreve, Wisconsin Farmer representative. We want you with us. Col. H. S. Duncan, auctioneer. Write now for a catalog to

W. U. GOUSSEFF

Sale Manager **OWATONNA, MINN.**

Services of Expert Live Stock Photographer

Up-to-date live stock breeders are more and more using photographs in advertising their herds. It is the modern way of doing things, and The Wisconsin Farmer is meeting the situation by offering the services of a skilled live stock photographer. Appointments may be made by mail at any time. For estimates of cost and other information write The Wisconsin Farmer.

The Wisconsin Farmer Sells His Stock.

NATT KIMBALL, of Black River Falls, Wisconsin, is a believer in The Wisconsin Farmer. A few weeks ago he published an advertisement for Red Polled cattle in The Wisconsin Farmer, and here is what he says about the results:

I have received numerous letters and made some good sales through my advertisement in The Wisconsin Farmer.

The Wisconsin Farmer can do the same for any Wisconsin breeder. It goes into more than 36.8 per cent of the farm homes in Wisconsin. Its circulation is 90,000, about 80 per cent of which is in Wisconsin.

The Wisconsin Farmer has proved itself an able salesman for many a farmer and breeder's stock. It goes into more than 90,000 farm homes every week. If you have stock to sell, let it carry your message to the prosperous, progressive farmers and breeders who want good stock. Send your copy today.

The Wisconsin Farmer -:- Madison, Wis.

Guaranteed Circulation, 90,000.

SHORT-HORN HERD BOOK.

New Volume Now Ready For Distribution.

Vol. 89 of the American Short-horn herd book is now ready for distribution. It contains 30,000 pedigrees, of which 11,000 are bulls, numbered from 437,001 to 448,000, and 19,000 cows, numbered from 217,001 to 236,000. The charge for this volume to non-members is $2 and application should be made for it to American Short-horn Breeders' Association 13 Dexter Park Avenue, Chicago, Illinois.

Entomologists of the United States Department of Agriculture have demonstrated that all species of lice which infest poultry may be quickly destroyed by the application of a very small quantity of sodium fluorid, according to the annual report of the chief of the bureau of entomology just issued.

Parched sweet corn or pop corn is appreciated these cool winter evenings. Was any raised on the place this year? Pop corn should be stored in a cool room.

Thoroughly rotted manure makes good mulching for shrubs. It may be spaded into the soil in the spring. A thin covering over the lawn is also desirable to hold the snow and work into the soil during the spring.

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d 19Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write J. W. Salter & Sons, Unity, Wis.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.
H. A. Martin Gotham, Wis.

MAPLE LAWN RED POLLS

SEVERAL well-bred, registered bulls, to 9 months old, for sale at reasonable prices.
L. F. Biglow & Son Brooklyn, Wis.

TOO LATE TO CLASSIFY.

High Grade Holstein

HEIFER calves, 15-16 pure, from high producing dams, $18 crated. Also two bulls 11 and 9 mos. old from A. R. O. dams. Good individuals, nicely marked, 7-8 white. As we are short of room will price these right. Also bull calves. Send for pedigree and price. Mountain Ash Stock Farm, J. B. Cain, Glenbuelah, Wis.

VANDERHYDE ANNUAL DUROC JERSEY BRED SOW SALE

West Concord Minnesota TUESDAY, JAN. 2,'17

50 Head--- Tried Sows Yearlings and Gilts 50

My Entire Show Herd

THE attraction will be ROXY 325204, one of the greatest producing sows of the breed—every one of her litters has contained prize winners. Five tried sows, dams of my winners—17 fall yearlings and 28 spring gilts. King the Col., Crimson Wonder Again, Orion Chief, High Model, Van's Crimson—in fact the most popular breeding and the fact that I have won more prizes at the northern fairs than any other exhibitor, speaks for the individuality. An offering that will please the discriminating buyer. AM GIVING YOU THE BEST I HAVE. If you can't attend in person let T. P. Shreve, of The Wisconsin Farmer, do your buying, I'll guarantee his selection. The catalog gives detailed information and you should have one—WRITE AT ONCE. H. S. Duncan, auctioneer; T. P. Shreve, field man.

F. S. VANDERHYDE, West Concord, Minn.

I start the leading Minnesota Duroc circuit—go from my sale to the Owatonna sale, then Wilson and Swenson.

SHORT-HORN CATTLE SHOW AND SALE

Under the Auspices of the

Minnesota Short-horn Breeders' Association

to be held at the stockyard's pavilion

South St. Paul, Minnesota

Wednesday, Jan. 3, 1917

ON JANUARY 3d the Minnesota Short-horn Breeders' Association will conduct at the South St. Paul Stockyards a combination Short-horn Cattle Show and Public Sale. Prominent members of the Association are contributing to this sale a very choice collection of breeding Short-horns, selected by a special committee for their quality. On the morning of the sale all of the cattle consigned will be judged by Prof. C. F. Curtiss, of the Iowa Agricultural College. This cattle show will be one of the most interesting live stock events ever held in the Northwest. The sale proper will begin at 1:30 p. m. The offering includes

70 High-Class Short-horns 70

About one-half of the offering will consist of bulls of serviceable age, the balance cows and heifers of extra quality. There will be straight Scotch cattle, Scotch-topped sorts, as well as consignments from famous herds of milking Short-horns. Whatever you want in Short-horns you will find at South St. Paul. The Minnesota Short-horn Breeders' Association is consigning only choice animals to this sale, selected by a special committee of the association and bearing health certificates from the state. Don't miss this great sale. Col. H. O. Tellier, Auctioneer. For further particulars and catalog write, mentioning The Wisconsin Farmer, the

Minnesota Short-horn Breeders' Association, P. S. Jordan, Sec'y
Morris, Minnesota

HEREFORD CATTLE.

HEREFORDS
BULLS FOR SALE

OF serviceable age. Pasture raise and not pampered. Well bred individuals. A few good calves. Come and see them before you buy.

J. J. F. WINTERS **SPARTA, WIS.**

SHEEP.

Registered Bred Ewes

RAMS all sold. Must now reduce my ewe flock on account of change of farm plans. Will not show at fairs in the future Offer 25 Oxford, Hampshire and Shropshire bred ewes from $15 to $20 each, also 10 ewe lambs. My stock is of the low-down, blocky type. Address

DANE STOCK FARM **OSHKOSH, WIS.**

Ram and Ewe Yearlings and Rams

SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.

Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

Hickory Dale

Shropshires

FOR SALE—25 choice yearling rams, sired by Minton and Tanner Rams. All are flock headers. Address

Arthur Broughton & Sons **Albany, Wis.**

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

CHESTER WHITE SWINE.

PADDY by SCHOOLMASTER

CHESTER WHITES

C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

When writing to advertisers kindly mention The Wisconsin Farmer.

CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall

CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write

Harry Crandell **Cass City, Mich.**

Derenthal

Chester Whites

Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.

H. A. Derenthal - Wykoff, Minnesota

CHESTER WHITE

BOARS for sale. My herd boar, Prince Triumph A No. 1, and 20 young boars of April and May farrow, weight about 200 to 225 pounds. Gilts bred or open. Satisfaction guaranteed. Pedigrees furnished. Address

Carl Hickcox **Spring Green, Wis.**

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.

O. P. Coates - Elkhorn, Wisconsin

CHESTER WHITE SOWS AND GILTS

BRED for March and April farrow to Pay Streak and King Cole, a son of Chief Keokuk. Also August and September boars sired by Pay Streak, 2d prize junior yearling at the 1916 Wis. State Fair. Wm. F. BUTTS, Evansville, Wis.

CHESTER WHITES

FOUR choice spring boars for sale that will please. Also an extra good herd header, a grandson of Combination 2d. Write for description and prices. Address

Wm. F. Belda **De Forest, Wisconsin**

IF YOU WANT

CHESTER WHITES

write W. F. Miller, West Salem, Wisconsin.

Adolph Nuttleman

BREEDER of Chester Whites. Let me know your wants.

WEST SALEM **WISCONSIN**

HORSES.

PROPRIETORS OF THE WHITE CITY STOCK FARM.

WE have never offered to our trade a more superior lot of Percheron and Belgian stallions, in both imported and American bred stock, than we can now show. Our imported horses are young and thoroughly acclimated, many of them having made seasons in 1915 and 1916 and are tried and tested sires. Our American bred horses were selected from the best breeders in America and are out of noted sires and dams and are horses of great quality in every respect. We have especially selected ten black and dark gray 2 and 3 year old Percheron stallions weighing 10 tons. These are all outstanding horses and should be purchased by those who need a sire for full-blooded mares. Among them is Coco, 1st prize 2 year old and reserve champion at the Wis. State Fair. This colt is black in color and weighs a ton. To the early buyer we offer one of the greatest collections of ton stallions to be seen in any importing barn this winter. We have no old, worn out, picked over stallions on hand. Let us know your wants, or better still, come and spend a day or two. A hearty welcome awaits you. Send 25 cents in stamps for large horse hanger, which shows the picture of a number of stallions now on hand, our main farm and sales stable and our firm's picture. Will sell several of our choice Iowa farms on easy terms.

FRANK P. SHEKLETON & SONS **LAWLER, CHICKASAW CO., IOWA**

We are 50 miles west of Prairie du Chien, Wis., on the Milwaukee R. R., making direct connections for Lawler.

W. A. LANG & CO.
Importers and Breeders of

BELGIANS and PERCHERONS

IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars

W. A. LANG & CO. **GREELEY, IOWA**

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address

A. P. CORTTE **LOMIRA, WISCONSIN**

Berkshires For Sale

2 YEARLING boars, prize-winners and good breeders. Spring boars and sows of excellent breeding. For reasonable prices and description, call or write W. W. Powell, Victory, Wis.

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, **Fairfax, Iowa**
8 miles west of Cedar Rapids

HAMPSHIRE SWINE.

WARNING! ORDER BRED SOWS EARLY

HAMPSHIRES in great demand. Boars all sold and orders for bred sows and gilts coming fast. A few Jumbo sows. Our gilts large and smooth. Write today.

A. M. LAIRD **PRAIRIE DU CHIEN, WIS.**

HAMPSHIRE

SPRING pigs of both sexes and weanlings for sale.

DANE STOCK FARM
Oshkosh Wisconsin

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

BOARS ALL SOLD---BUT SAY

you should see our fall pigs— **THE BEST WE EVER RAISED. Do you want one or more? The "UTMOST IN POLAND CHINAS."**

DOBSON & EASTMAN LANCASTER, WIS.

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

The Home of CHAMPION POLANDS

I HAVE a spring boar that will please you. They are well grown and from sows that have been winners. My hogs please the critical buyers, they'll please you. Gilts reserved for bred sow sale, February 8th. Order now.

J. D. McDONALD NORTH BEND, WISCONSIN

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.

M. MADSON & SONS MADISON, WISCONSIN

BOARS! BOARS! BOARS!

POLAND CHINAS

Weighing from 225 to 300 pounds

Some of them sired by

MAC'S CHIEF

Grand champion Boar Wis. State Fair

I guarantee satisfaction in every respect. Address

OLAF C. OLSON
STRUM - WISCONSIN

FALL PIGS

By JUMBO'S EQUAL 2D

CHAMPION southwestern Wisconsin. Poland Chinas with size, quality and breeding. Write

C. S. FLESCH MT. IDA, WIS.
(Shipping point, Fennimore)

HENDRICKS' BIG-TYPE

POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalog. We hold the state's record on account of superiority. Address

J. C. Hendricks Box F, Hazel Green, Wis.

Poland China Gilts

WEIGHT 200 to 250 pounds now. Bred for March and April farrow to a son of McChief, grand champion at Wisconsin. Address

C. Horn New Auburn, Wisconsin

Big Type Poland China

BOARS and gilts—well grown—of proven lines of breeding. Priced right.

Solomon Anderson, Green Bay, Wisconsin

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis.

POLAND CHINA June pigs for sale, either sex, $20 each, boars ready for service. Also Red Polled cattle. Martin Lueck, Hamburg, Wis.

A CRACKIN' good big-type Poland boar of spring farrow for sale. Well grown and of smiley breeding. W.H. Easterly, Whitewater, Wis.

Please mention this paper when writing

INVESTIGATE MY POLAND CHINAS

THEY have **quality** and **size** and are of the very best big-type blood lines. Offering spring boars and gilts and will hold the latter until bred. Your money's worth or money refunded. Also

SHORT-HORNS AND OXFORDS

for sale. Get my price list and mention Wisconsin Farmer.

P. N. Collins - River Falls, Wisconsin
(35 miles S. E. St. Paul)

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING BANGOR, WIS.

Model Major 2d

IS considered by many as being the best 2-year-old POLAND CHINA BOAR in the state. I have spring boars sired by him that are **GREAT.** Why not buy where you can get the BEST?

CHAS. S. MALTBY JANESVILLE, WIS.

Master's Giant Orange Wonder Young's Big Joe

NO breeder has three better Poland China boars. They will make my bred sow sale, February 6, 1917.

P. W. Young Prosper, Minn.

BIG POLANDS

Black Jumbo

THE KING OF BIG POLANDS

OFFERING a few boars at private treaty that will please you. Sows and gilts reserved for BRED SOW SALE, FEB. 14th. Write your wants.

E. W. HENDRICKS
Hazel Green Wis.

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley R. 3, La Crosse, Wis.

BRED GILTS

POLAND China service boars all sold. Now booking orders for bred gilts that are extra choice, also fall pigs, either sex, that are hard to beat. James Derivan, Fox Lake, Wis.

DUROC JERSEY SWINE.

CHIEF INVINCIBLE

One of the largest, longest, highest back

DUROC JERSEY BOARS

in America. On **JANUARY 8TH** I sell 50 sows as good as ever entered a sale ring. Bred to or sired by **CHIEF INVINCIBLE.** A sale you should attend. Send your name for catalog.

F. M. WASHBURN, LAKE CRYSTAL, MINN.

Big-Boned Boars. The Best Is None Too Good

950-POUND COOK'S DEFENDER

OUR Durocs have size and quality. They are guaranteed in every respect. Will sell boars and gilts. Your letters promptly answered. Write, mentioning The Wisconsin Farmer.

EMMETT COOK & SON - RICHLAND CENTER, WIS.

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS WAUPACA, WIS.

SPRING BOARS 250 Pounds to 300 Pounds at **DUROCS** $25, $35, $45

NO BREEDER HAS A BETTER LOT

SIRED by a son of KING THE COL., a son of CHERR Y CHIEF, a son of LEE'S DEFENDER and many of the dams trace to MARION'S WON DER. You get BREEDING and INDIVIDUALITY. I'll ship you a good boar—try me. Address

DENNIS SHEA - - MELVINA, WISCONSIN
(10 miles from Sparta on the Mil waukee R. R.)

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.

BURN BRAE FARM - - - ROSENDALE, WISCONSIN

READ THIS

Closing out one of the best Duroc Jersey herds in Minnesota at

Renville, Minn., January 4, 1917

Other business makes this change necessary. **70 HEAD 40 Fall Yearlings, 10 Spring and 10 Tried Sows.** A sale of **breeding and individuality.** Write now for a catalog of this **feature sale** and watch for sale adv. in the December 21st issue. Address

E. J. WILSON RENVILLE, MINN.
Mention The Wisconsin Farmer

E. J.'s Crimson Wonder

Grand Champion Minn. 1916

Big Wonder

Grand Champion Iowa 1913

Some wonderful Duroc Jersey sows have been bred to these boars and will be sold by

John Swenson at Willmar, Minn.

Friday, Jan. 5, '17

This is one of the sales you should attend. Write at once for catalog. Watch later issues.

SAVE $$$$

BUY DUROC JERSEYS

of me. What do you want?

J.W. HIGGINS GOTHAM, WIS.

CEYLON COURT FARM

DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.

Ceylon Court Farm - Lake Geneva, Wis.

BOARS ALL SOLD

REMEMBER my **Duroc Jersey sow sale January 31st**

L. F. ATWATER BANGOR, WIS.

Our DUROCS Are in Demand

BOARS all sold. Offer a limited number of gilts. Place your order early. Herd headed by Royal Top Col. and Grand Model 21st. Address

Geo. D. Sprain & Sons, West Salem. Wis.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B, Model Wonder, Col. S. Jr., Orion, Cherry King Jr. **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

DUROC BOARS FOR SALE

BY Prince Defender, Royal King 4th, and Lee's Defender. Big, stretchy fellows. Shipped on approval. **McCLURG BROS., Viroqua, Wis.**

GEO. H. WILLSIE

Breeder of Big Durocs

Can supply your wants. Write.

Prosper - - - Minnesota

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

DUROCS and GUERNSEYS

LENGTHY, heavy-boned spring boars sired by **Col.'s Defender 2d** and **Valley G.** the 1,000-pound brother to Illustrator. April pigs, some of them weigh over 200 lbs. We have shipped C. O. D. for last ten years and never had but one shipped back. Registered Guernsey bulls and bull calves with most popular breeding, some from A. R. dams, one 2 year old whose dam has three A. R. records averaging over 500 lbs. fat. Reasonable. Allie S. Knudson, R.5, Brodhead, Wis.

Duroc Boars

OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts for sale. Write your wants. Address

M. STOEHR VIROQUA, WIS.

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address

JOHN L. FISHER JANESVILLE, WIS.

DUROC FALL PIGS

Offering Durocs, pairs or trios.

SEED CORN

of best varieties for sale. Write your wants to

Riley Martiny & Son, Baraboo, Wisconsin

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address

W. W. Goodrich Ft. Atkinson, Wisconsin

LIVE STOCK AUCTIONEERS.

ORVAL A. JONES

Auctioneer.

14 N. Sacremento Blvd. Chicago, Ill.
Pedigreed Live Stock and Real Estate.

H. O. TELLIER

AUCTIONEER
FARMINGTON, MINN.

THOROUGHLY versed on pedigrees of leading breeds of live stock.

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. **BANGOR, WISCONSIN**

100 Short-horns to Select From-100

BULLS and females. One or a carload. Write now. **ROCK COUNTY SHORT-HORN BREEDERS' ASSN., J. E. Kennedy, Secy. - - JANESVILLE, WIS.**

GREEN VIEW STOCK FARM OFFERS

7 Pure-Bred SHORT-HORN BULLS

7 to 17 months old, and a few choice

POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

RIVERDALE STOCK FARM

SHORT-HOR NS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

B. Wehmhoff - Burlington, Wis.

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES ROCKLAND, WISCONSIN

President, Wisconsin Short-horn Association

KITTY CLAY HERD

HORNLESS SHORT-HORNS AND SHORT-HORNS

YOUNG bulls and heifers sired by Kitty Clay's Duke, that is out of the best family of milking Short-horns in existence. Also several Buff Wyandotte cockerels. Address

J. Warren Hoyt - Rosendale, Wis.

THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son - Burnett, Wisconsin

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little Evansville, Wisconsin

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son, Beaver Dam, Wisconsin

WILCOX SHORT-HORNS

AM offering several **red bulls** of serviceable age. They are a nice dark red and the finest in the land. Have one that weighs 650 pounds at 8 months old. Priced reasonable for immediate sale. Write for pedigrees, Address

W. F. WILCOX MILTON, WISCONSIN

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher Oregon, Wisconsin

SHORT-HORNS---BIG-TYPE POLANDS

CHOICE bulls, 1 to 15 months of good breeding. Collynie Victor 387634 in service. Also stretchy boars ready for service and gilts. Fall pigs of both sexes for sale. Prices reasonable.

A. Menke & Sons, R. 1, Markesan, Wisconsin

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

GUERNSEY CATTLE.

A Guernsey Show Bull Backed by Show and Production Records

DAM, Beatrix B, that at two years, five months of age, made 428 pounds of fat and gave 9,024 pounds of milk testing 4.74% fat. She is a daughter of Atwood Prince, whose offspring have been heavy prize winners and whose get of sire was never defeated. His seven A. R. daughters average 460 pounds fat at three years, five months. Sire, King Talladeen of Chestnut Hill, that has been first and champion at several leading fairs, has sired many prize winners. His dam made 635 pounds fat from 11,907 pounds of milk. Price $125. Two other yearling bulls of Glenwood breeding for sale from A. R. cows. Can also spare a few females. Send for our sale list or, better yet, come and visit Waukesha. If we haven't got what you want some of our fellow breeders will have.

FOX BROTHERS WAUKESHA, WISCONSIN

Reg. Guernsey Bulls

READY FOR SERVICE

ONE sired by May King's Vrangue of Ingleside and from a good daughter of Langwater's Hayes Rosie King of the May. One sired by Maybelle's Champion and out of Moline's Butter Girl. Well marked, well grown, good type and priced right. Send for pedigrees.

Fruit Bros. Waukesha, Wisconsin

GO TO W. J. HEID

FT. ATKINSON, WIS.,

FOR GUERNSEY BULLS

FROM 2 to 10 months old; also a few females. Best of breeding and good size. Come and see them, or write for description and prices.

Yearling Guernsey Bull

BORN December 5, 1915, sired by Stranford Glenwood of Pinehurst 3d. Dam also of Glenwood breeding. One other bull ready for service. Price right. Send for extended pedigrees.

L. J. Wendt Waukesha, Wisconsin

GUERNSEYS

REGISTERED bull calves 4 to 8 months old. Herd tuberculin tested. **EDW. H. KIESLING, JEFFERSON, WISCONSIN.**

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

J. A. Merriman Fort Atkinson, Wiscosinn

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.

W. G. Jamison & Son - Appleton, Wis.

Imported Guernsey Bull

(imported in dam) now 14 months of age. His dam gave 35 lbs. per day with first calf. Send for pedigree. Price reasonable. **9 months old bull** out of **Imp. Confidante of Sarnia** and sired by Cardinal Point.

BERKSHIRE SPRING PIGS

of both sexes of Premier and masterpiece breeding

O. R. FRAUENHEIM, RANDOM LAKE, WIS

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

ABERDEEN ANGUS CATTLE.

ANGUS

CHOICE bulls of the fashionable families 10 to 15 months old. Thick, sappy, rugged fellows that are guaranteed in every way. Your business solicited. R. A. Austin & Son, Lancaster, Wis.

Buena Vista Aberdeen Angus

COWS, HEIFERS and CALVES all sold out. One bull of serviceable age and two bull calves for spring delivery, will go at $100 per head.

E. F. Ganz & Son Alma, Wisconsin

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanrey's Othello. Also cows and heifers and Oxford lams for sale. C. S. Hechtner, Chariton, Iowa.

SWINEHART STOCK FARM

SHORT-HORN DISPERSION SALE

AVOCA, WIS., TUESDAY, DEC. 19, 1916

(50 Miles West of Madison on C. M. & St. P. Ry.)

33 Head of Registered

SHORT-HORNS

Including the 3-year-old bull,

COLLYNIE SULTAN 387633

and 32 females ranging in age from a yearling to mature cows

THEY are of Young Mary, Arabella, White Rose, Duchess of Gloster and other well-established lines of breeding. Roan, red and white in color. Fifteen now in milk. Send for a catalog and come to the sale. We will also sell one Percheron stallion, Rayon D'Or 43205, and nine high-grade Percherons from colts up to three year olds. G. P. Finnegan and Jess Miller, auctioneers. J. A. Tormey, sales manager.

R. L. SWINEHART, PROP. AVOCA, WISCONSIN

Sale will be held regardless of weather.

JERSEY CATTLE.

Fewacres Farm's Jerseys

ARE heavy producers. Irene's Cherry 285828, a senior two year old, just completed a world's record of 12,571.6 pounds milk and 753,629 pounds butter fat. Write us about our young bulls for sale. Pedigrees and further description on request.

FEWACRES FARM - - - WAUWATOSA, WIS.

FRED D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle

OAK GROVE JERSEY FARM

WE are pricing our young bulls very low as we are crowded for calf stable room and have 22 cows to freshen. We are offering two sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and Noble of Oaklands.**

No. 1—Born Feb. 9, 1916. Out of **Volunteer's Sally**, that made 597 lbs. butter. Her daughter made 594 lbs. butter as a 2 year old and holds state record for her age. **Price $100.** Send for extended pedigree.

No. 2—Born Dec. 18, 1915. Out of **Koffee of Oak Grove,** in 305 days made 413.8 lbs. butter. She finishes her record Dec. 21st as a 2 year old. This bull won 1st at the Elkhorn fair. **Price $75.** Send for extended pedigree.

WM. KNIGHT - - EAGLE, WIS.

REGISTERED JERSEY

COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - Fairwater, Wisconsin

JERSEYS

100 FEMALES in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son Oconomowoc, Wis.

POLLED DURHAM CATTLE.

DS. POLLED DURHAMS. An extra good, dark roan bull 11 mos. old and a dark red 10-mo.-old bull. They'll suit. F. S. Bunker, Kilbourn, Wis.

Please mention this paper when writing

AYRSHIRE CATTLE.

ALDEBARAN FARMS A. R. AYRSHIRES

YEARLING AYRSHIRE BULL ready for service, ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address

STEPHEN BULL RACINE, WISCONSIN

AN AYRSHIRE OPPORTUNITY

WHEN we got home from the National Dairy Show with our show herd, we found our barns were full to overflowing. We have over 100 head, so as to reduce our herd we have decided to sell about twenty females—heifer calves or bred heifers. Here is an opportunity to get as good as there is in the U. S. or Canada. Prices very reasonable to make them sell quickly. Bulls ready for service and younger from A. R. O. cows. Send for pictures and prices. Address

ADAM SEITZ WAUKESHA, WISCONSIN

AYRSHIRES

Can supply your wants if you want

HEIFERS OR BULLS

from A. R. dams. Also breeder of

Clydesdales and Durocs

Write your wants Address

JAS. VAN ETTA LIMA CENTER, WIS.

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN BULLS

SIRED by King Hiebe Jessie De Kol and out of good, heavy-producing dams. Bulls well-marked, over half white. R. W. Hume, Endeavor, Wis.

REG. Holstein Bull calves for sale. Sired by relatives of world's record cow, Dutchess Skylark Ormsby. I can save you 50% on the price of your next bull; write for chart. Mark W. Rich, Buffalo Lake, Minn.

HIGH grade Holstein heifer calves, well marked, sired by registered bulls and out of heavy producing cows, $18.00 crated. Registered bull calves for sale. Paul McFarland, Watertown, Wis.

When writing to advertisers **please** mention The Wisconsin Farmer.

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred heavy-producing cows. Call and see our herd or write

WM. FENNER, SHEBOYGAN FALLS, WIS.

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address

C. F. DINEEN, CEDARBURG, WISCONSIN

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin.

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address

Lawrence Robers Lyons, Wis.

HOLSTEIN-FRIESIAN CATTLE.

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

HOLSTEINS FOR SALE

THREE granddaughters of Colantha Johanna Lad, bred to our herd bull, a son of Pontiac Korndyke, $225.00 each. Also nine of his sons, $50.00 to $125.00. Address
Barstow & Son Randolph, Wis.

HOLSTEIN BULL

BORN February 21, 1916. ¾ white. Good individual, sired by a son of Pontiac Korndyke and out of a daughter of De Colantha Johanna, champion. Price $100. Address
Peter Larson Randolph, Wis.

John Bradley
Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

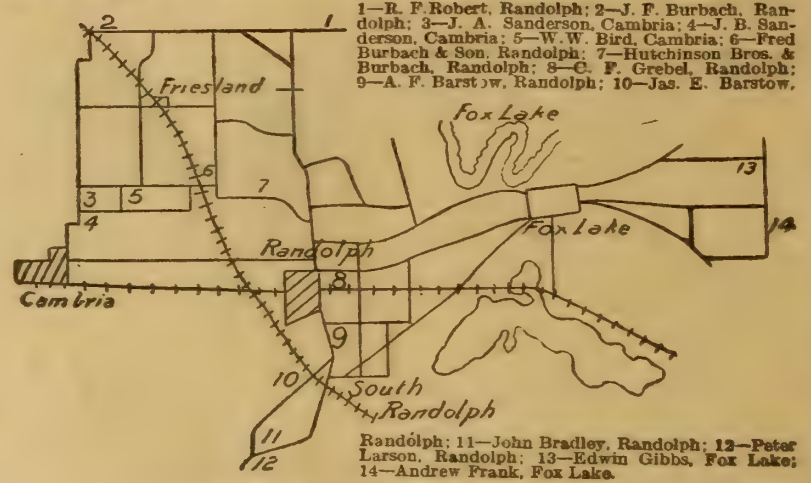
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are **from A. R. O. dams** with good records. They are safe in calf to our great herd sire, **King Pietertje Hengerveld Ormsby,** full brother to the former world's record cow, **Pietertje Maid Ormsby.** Send for pedigrees or come and see these heifers. They are right in every way. **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



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Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

COLANTHA SIR AAGGIE RAG APPLE

HEADS our herd. His dam made 33.08 lbs as a four year old. His five nearest dams average 33.89. Four have been world's record cows. Bulls sired by him from A. R. O. cows for sale.
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REG. HOLSTEINS

Cattle of choice breeding.
J. A. Sanderson - Cambria, Wisconsin

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HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
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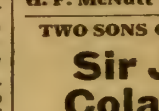


FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

WE KNOW YOU LIKE THIS BREEDING
KORNDYKE SEGIS JOHANNA

The average records of his dam and sire's dam are as follows:

Seven Days.		Thirty Days.	
Milk	632.4	Milk	2630.5
Butter	39.05	Butter	154.16
Per cent fat	4.94	Per cent fat	4.69

SIRE: Johanna McKinley Segis, 34 A. R. O. daughters, by King Segis, 87 A. R. O. daughters, and out of Johanna De Kol Van Beers, 40.07 in 7 days, by Sir Johanna De Kol, 65 A. R. O. daughters.

DAM: Pontiac Lady Korndyke, 7 days 38.03, by Pontiac Korndyke, 137 A. R. O. daughters.

Why not buy a bull calf by this sire or our senior sire,

KING PONTIAC CHAMPION

out of one of our A. R. O. cows, with 7 day and yearly records, $100 and up?

PABST STOCK FARM
OCONOMOWOC DEPT. 30 WISCONSIN

WELL GROWN, WELL MARKED HOLSTEIN BULL

BORN December 1, 1915. Ready for immediate service. Sire, Crown Pontiac Korndyke, a richly bred son of Pontiac Butter Boy, that has 59 A. R. O. daughters, 4 above 30 pounds, and that is a half brother of Hengerveld De Kol and out of the same dam as Pontiac Clothilde De Kol. Dam, Stellaris Burke Pontiac 3d 255567, a big, roomy heifer with a fine large udder and good teats. She will be tested when she freshens again. Her dam is a 24.44-pound granddaughter of Hengerveld De Kol. Good type and high production have been bred into him in every line of his pedigree. Buy him now. He will soon be worth twice what we ask now. Send for pedigree. Address
NORTON FARMS RACINE, WISCONSIN

WE CAN SPARE 15 HEAD OF REG. HOLSTEIN FEMALES

YOU may take your choice of any age, assort them as you wish. We have a herd of 52 to select from. Our yearling heifers are by King Johanna Melchior Fayne 101866. Heifer calves by King Elgin Johanna Rue Wa Wa 136698; two-year-old heifer by Sir Johanna Beechwood Fayne 127695; a yearling bull, Valley Champion 165427, for sale. Born June 8, 1915, 7-8 white, very promising. Call and see our herd or write for description. Prices reasonable.
J. P. Goelzer & Sons Plymouth, Wisconsin

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

MUST REDUCE OUR HERD AT ONCE

POSITIVELY MUST SELL 100 head of registered and high-grade Holstein and Guernsey cattle, any age. You make take your choice from 400 head of big producers, no boarders among them. Special price on high-grade calves. Also extra fine SERVICE BULLS. Everything guaranteed as represented. **Edgewater Stock Farm, Ft. Atkinson, Wis.**

Two Good Holstein Bulls Ready For Service

NO. 1—Born May 13, 1915, ¾ white, a good individual. His dam is a double bred Duchess Ormsby. Sire, a son of King Hengerveld Pondyke, that has two 30-pound daughters. PRICE $90.00.
No. 2—Born October 4, 1915. Over ½ white. His 14 nearest dams average over 27 lbs. butter in 7 days. Combines the blood of Johanna Bonheur Lyons and King Segis Pontiac. Send for extended pedigree. PRICE $200.00. We can spare a carload or less of high-grade Holstein heifers. Some sired by a 27-pound bull. Address **EDGEWOOD FARMS, PEWAUKEE, WISCONSIN**

DODGE AND JEFFERSON COUNTIES

THE two greatest Holstein counties in Wisconsin. Holsteins from these two counties have made Wisconsin famous. You can buy the same kind of blood now. Our breeders can now supply you with both males and females of all ages. Write Francis Darcey, Watertown, Wisconsin, Secretary, Inter-County Holstein Breeders' Association.

Purebred Registered
HOLSTEIN CATTLE

$123,000 has been expended in the past eight years, by the Holstein-Friesian Association of America, in advertising the merits of the great "Black and White" breed. To the farmer who owns Holstein cattle, this far reaching publicity work is a positive benefit. The continually increasing interest in Holstein cattle throughout America makes for an advance in values, and the breeder of Holstein cattle, wherever he may be, reaps greater profits on the rising market prices of his stock.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 163, Brattleboro, Vt.

AT A REASONABLE PRICE

A SON of our noted herd sire, Cornucopia Pontiac Johanna 48355, that is by King of the Pontiacs (192 A. R. O. daughters) The bull for sale was born March 10, 1916. He is very well grown and of show ring conformation. His dam is an A. R. O. daughter of the 33-pound bull, Sir Pietertje Lyons Hengerveld. Send for extended pedigree—picture. Price very reasonable.
N. Dickinson & Son Lake Geneva, Wis.

Mountain Ash Stock Farm

HIGH grade Holstein calves 15-16 pure, well-marked, from heavy-producing dams, $18.00 crated. Can locate cows and heifers for you. Write me your wants.
J. B. Cain Glenbeulah, Wis.

FOUR REG. HOLSTEIN BULLS FOR SALE

TWO of them old enough for service. Sired by the 29-lb. bull, Fairmont Pietje Ormsby, whose dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and price reasonable. **L. Lindauer. Kaukauna, Wis.**

VALLEY VIEW STOCK FARM

OFFER registered Holstein bulls 5 to 12 months old sired by a son of a 24.6-lb. cow, and out of good A.R.O. and untested dams. Price $55 to $75.
Wm. Buddenhagen & Son Neillsville, Wis.

HOLSTEIN

BULL calves, sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.
EARL NORWOOD, GAYS MILLS, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull. Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
B. F. Winckler & Sons Medina, Wis.

LA BELLE View Farm offers something new in young Holstein bulls. No. 1, from a 21½ lb. daughter of Pontiac Hengerveld Parthenea, that has 65 A. R. O. daughters 24 to 36 lbs. butter in 7 days. No. 2, from 18 lb. Jr. 2-year daughter of Sir De Kol Nonesuch, 6 A. R. O. daughters. Both young bulls by a grandson of Sir Ormsby Hengerveld De Kol and is also cousin to Duchess Skylark Ormsby. E. E. Rosenkrans, Oconomowoc, Wis.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address
Fred Kohlwey Grafton, Wisconsin

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons Elgin, Illinois

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 27-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address
L. V. GARVENS BROOKFIELD, WIS.

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons. (Registered Poland China hogs).
Marinette County Asylum - Peshtigo, Wis.

G. A. SCHULZ
Adell, Wisconsin
BREEDER OF HOLSTEIN CATTLE

GREENBUSH STOCK FARM

TO increase your profits buy a bull sired by Princess Mercedes Piebe Champion 98024, whose dam has a record of 26.39 pounds butter in seven days as a four year old, and 667.4 pounds in one year as a two year old. Write for description and price.
R. B. Melvin, Prop. - **Glenbeulah, Wis.**

CARLOAD YEARLING HOLSTEIN
HEIFERS

AND a few two-year-olds for sale. Will sell them separately or as a whole.
August Meyer - **Plymouth, Wisconsin**

FOR sale—7 registered Holstein heifers coming 2-yrs.old, granddaughters of King Lyons, bred in May and June to King Segis Alcartra Beauty Herd Sire 136935. Sire, King Segis Pontiac Alcatra 76602, the $50,000 bull, grandson of King Segis, dam a 23½ lb. 2 year old daughter of Johanna McKinley Segis, the $25,000 son King Segis and Johanna De Kol Van Beers, the 40 lb. $7,000 cow with butter record as follows: 7 days, 40.07; 30 days, 151.39; 60 days, 288.45; 90 days, 416.71; 120 days, 541.35. He is a beautiful individual with all the dairy qualities we like. Will weigh 2,000 lbs. at 2 years. For prices and description address Jas. Doyle, Waldo, Wis.

For Sale

BULL calves, sire Johanna Segis Pontiac Polkadot; grandsire, King Segis Pontiac Polkadot, that is a full brother in blood to King Segis Pontiac Alcartra.
R. C. Stolper - **Random Lake, Wis.**

J. M. ROCK
PLYMOUTH, WIS.
Breeder of Registered Holstein Cattle

Stock for sale at all times.

CLOVER MEAD FARMS
HERD SIRE
Dutchland Creamelle Asoalon Lad

FIVE dams average: 7 day, butter 28.97; milk 631.20; 30 days, butter 118.46, milk 2,565.20; 1 year, butter 995.00, milk 24,100.00. One yearling bull ready for service. Write for information.
C. J. Nehrling, Prop. - **Plymouth, Wis.**

MAPLEHURST
Dairy and Stock Farm

REGISTERED HOLSTEINS. Herd headed by a grandson of Johanna McKinley Segis. Stock for sale at all times. Address
T. H. THACKRAY, Proprietor
Route 30 **Glenbeulah, Wisconsin**

Registered Holstein Cows

AND heifers to freshen in fall. Bred by Sir Veeman Hengerveld Wayne 9th and from 2 to 5-months-old bull calves. Address
J. P. Brill, Jr., **R. 5, Sheboygan, Wis.**

JAMES MULVEY
CASCADE, WISCONSIN
Breede of Registered Holstein Cattle
Stock for sale at all times.

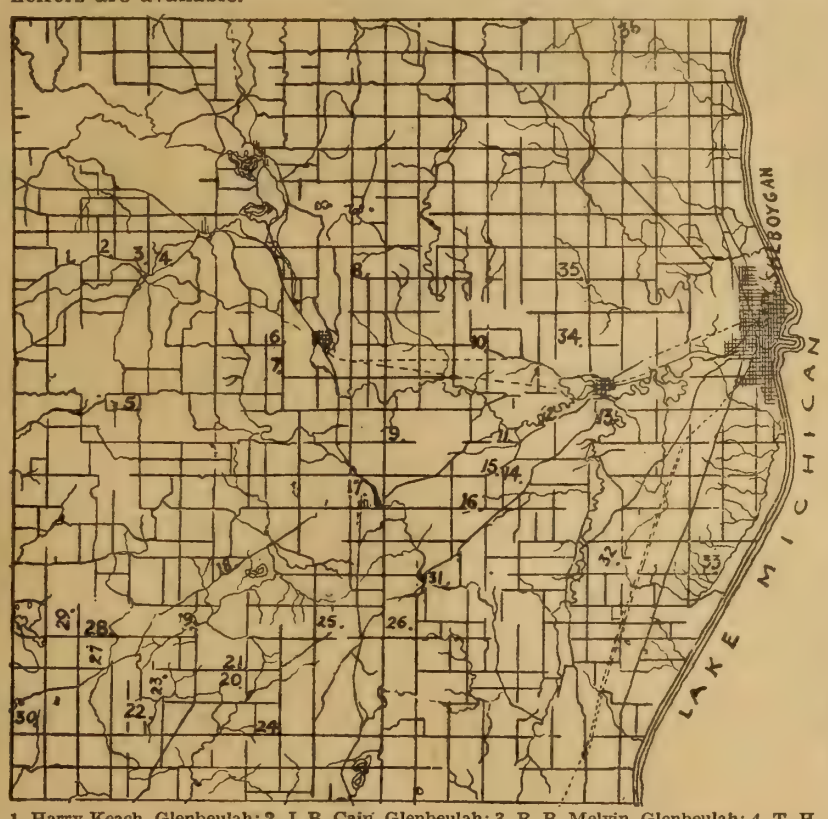
Bates
Stock Farm

75 HEAD Registered Holsteins to select from —herd headed by Walker Prilly Ormsby Wayne, whose dam and sire's dam average over 30 pounds of butter in seven days.
G. W. Bates, Prop. - **Waldo, Wisconsin**

Registered Holstein Stock for Sale at All Times
WM. LAUX
RANDOM LAKE **WIS.**

There are 40,000 Dairy Cows in
SHEBOYGAN COUNTY, WISCONSIN

THE greater part of which are Holsteins. No matter how many you want or of what type, it will pay you to come to Sheboygan county. Thirty-two of the best pure-bred breeders are offering cattle for sale at the present time, and a great many high-grade springers and heifers are available.



1, Harry Keach, Glenbeulah; 2, J. B. Cain, Glenbeulah; 3, R. B. Melvin, Glenbeulah; 4, T. H. Thackray, Glenbeulah; 5, J. M. Rock, Plymouth; 6, Emil Titel, Plymouth; 7, Aug. Meyer, Plymouth; 8, Struve Bros. Plymouth; 9, C. J. Nehrling, Plymouth, 10, G. W. Ubbelohde & Sons, Sheboygan Falls; 12, Wm. Fenner, Sheboygan Falls; 13, Pinehurst Dairy, Sheboygan Falls; 14, Henry Walsh, Sheboygan Falls; 15, Fred Dankwert, Sheboygan Falls; 17, D. E. Vanderhoff, Waldo; 19, John Melius, Adell; 20, G. A. Schultz, Adell; 21, P. J. Liebenstein, Adell; 22, Wm. Laux, Random Lake; 24, R. C. Stolper, Random Lake; 25, G. W. Bates, Waldo; 26, J. Doyle, Waldo; 27, B. C. Hicken, Adell; 28, Walter Hemmen, Adell; 29, James Mulvey, Cascade; 30, John Fellenz, Kewaskum; 31, John Liezen, Oostburg; 32, G. W. Weiberdink, Oostburg; 33, J. P. Brill, Sheboygan; 34, Ernst Markwardt, Sheboygan Falls; 35, Henry Breher, Sheboygan Falls; 36, H. R. Weiskopf, Cleveland. All of Wisconsin.

FOR SALE

A BEAUTIFUL Holstein bull calf, ⅞ white, from a daughter of Pearl Longfield De Kol, the cow that took four Association prizes this year. His dam has a record of 23 lbs. butter as a three year old; 891 lbs. butter in 331 days as a four year old. Grandam has a record of 27.29 lbs. butter in 7 days and 28,050.5 milk and 1,215 butter in one year. The sire is a grandson of Hengerveld De Kol. Calf was born May 9, 1916.
Harry Keach - **Glenbeulah, Wis.**

JOHN MELIUS
ADELL WISCONSIN
Breeder of registered Holstein cattle. Herd headed by the 28.65-pound bull,
KING OF SCOTT VALLEY 98813

D. E. VANDERHOFF
WALDO WISCONSIN
Breeder of Registered Holstein Cattle
Stock for sale at all times.

2 Well-Marked Bulls

1-2 to ⅛ white; 11 to 12 months old. Straight rumps, ready for service. Also heifer and bull calves for sale. All the young stock is sired by Piebe Champion 2d 91262, a richly bred bull backed by high seven-day and yearly records. Stock is priced for quick sale. Address
Henry W. Breher, R. 7, Sheboygan Falls, Wis.

FOR SALE
6 REGISTERED Holstein heifer-calves, ranging in age from Dec. 12, 1915, to April 10, 1916; nicely marked, more white than black, from heavy producing dams, some with A. R. O. records. Also a few registered Holstein cows.
P. J. Liebenstein, R. 19, Adell, Wisconsin

Registered Holstein Heifer

AND **bull calves** sired by **Pabst Canary Pontiac Champion 142885,** a grandson of King of the Pontiacs, that has 165 A. R. O. daughters. Write for pedigrees, description and prices.
Wm. Fenner - **Sheboygan Falls, Wis.**

For Sale

KING Piebe Champion, three years old. 1 bull from dam, A. R. O. 22,093 pounds, 16 mos. o.d. 3 bull calves, six weeks old for sale cheap if taken at once.
Fred Dankwert - **Sheboygan, Wis.**

2 Bulls

TWO good bulls of serviceable age, with good, A. R. O. backing on both sides. These bulls are under one year old, are large and straight and good all around individuals, three-fourths to seven-eighths white. If you are interested in stock of this kind write for price and pedigree. **Mountain Ash Stock Farm, J. B. Cain, Owner, Glenbeulah, Wisconsin.**

Sire, Sir Pinehurst Champion, for Sale

A BULL calf from Vickery Vale Beechwood, that made 1,225 pounds butter in one year, and his four nearest dams average over 900 lbs. in a year. A bull from Vickery Vale 2d, that made 900 lbs. in a year, and is a full sister to Vickery Vale Beechwood. Address
EMIL TITEL, R. 27, PLYMOUTH, WIS.

HEIFER and BULL CALVES

FOR SALE sired by the 28-pound bull, King Johanna Abberkerk 149412, whose dam made 28.71 pounds of butter in seven days; 677.45 pounds butter in a year; 109 pounds of milk in one day. When in need of registered Holsteins write us.
STRUVE BROS. **PLYMOUTH, WIS.**

SIRES in service—King Segis Concordia Hengerveld 96214. Sire King Segis De Kol Korndyke 56110. Dam, Sadie Vale Concordia 3d's Hengerveld 100308. King Korndyke Akkrummer Ormsby 166274. Sire, Sir Korndyke Hengerveld De Kol 41266. Dam, Akkrummer Ormsby 112773. Enrich the blood of your herd by using a bull bred for size, type, constitution and production and related in a close degree to King Segis, Hengerveld De Kol, Pontiac Korndyke, Sir Korndyke Hengerveld De Kol, Colantha 4th's Johanna, Mabel Segis Korndyke, Pontiac Clothilde De Kol 2d, Pietertje Maid Ormsby and Duchess Skylark Ormsby.
Pinehurst Dairy - **Sheboygan Falls, Wis.**

7 Registered Holstein Heifers 7

SIRED by **Sir Ormsby Pontiac Mercedes,** well marked and well grown. B. C. Hicken, Adell, Wisconsin.

GERRIT J. WIEBERDINK
OOSTBURG, WISCONSIN
Breeder of pure-bred Holstein-Friesian cattle. Stock for sale at all times.

REGISTERED HOLSTEIN

HEIFER calves, about two months old, sired by Piebe Champion 16th, a richly bred bull backed by high seven day and yearly records.
Ernst Markwardt - **Sheboygan Falls, Wis**

Registered Holsteins

FOR SALE—Cows from five to nine years old, price $125.00 to $200.00. Bull calves from $35.00 and up. Visitors welcome.
John J. Fellenz **Kewaskum, Wis.**

CLEVELAND HERD offers a 29.50 lb. 7-year-old cow—fine individual. Due December 3d by a 30-lb. Pontiac bull. Also two bull calves 7 months old, one from a 24-lb. cow and one from a 26.18 lb. junior 3-year-old, marked over half white, well grown. Send for pedigree and extra low price H. R. Weiskopf, Cleveland, Wis.

SPRUCE LAWN STOCK FARM
OFFERS two registered Holstein bull calves, one from 19.60 pound 2-year-old dam. Price $100. The other from 18.56 pound dam. Price $65. Also several grade yearlings for sale. Write you wants. Address **G. W. Ubbelohde & Sons, Sheboygan Falls, Wis.**

FOR SALE

THREE granddaughters of Sir Johanna De Kol. One granddaughter of Sir Veeman Hengerveld. Bred to Cedar Lawn Sir Johanna De Kol. Also four of his sons.
John H. Liezen - **Oosterburg, Wis.**

Holstein Calves for Sale

REGISTERED heifer and bull calves for sale sired by Dr. Johanna Sarcastic 74862.
Walter P. Hammen **Adell, Wis.**

Holstein Calves For Sale
KING Segis Pontiac Beauty 112516, at head of herd, three years old, ten A. R. O. sisters. All bulls one year old sold. A few bull calves for sale, two heifers, one one-year-old, one three months, dark in color. Address Henry Walsh, Sheboygan, Falls, Wisconsin.

A RICHLY BRED ORMSBY

YEARLING Holstein bull, born January 28, 1916. His dam is a half sister to the sire of Ormsby Jane Segis Aaggie, the world champion 90-day cow. His sire is a son of the 32-lb. bull,
BEAUTY PIETERTJE PRINCE
and from a sister to **Pietertje Maid Ormsby,** the former world's record cow. Send for pedigree of this fine bull. Price right. Address
Dopp Brothers **Ixonia, Wisconsin**

Three Nearest Dams
of this young bull average
26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.
JOHN STEELE **OCONOMOWOC, WIS.**

17 REGISTERED Holstein cows and heifers due to freshen soon. Best of breeding at farmers' prices. D. E. Buckley, Hartford, Wis.

23.13-LB. HOLSTEIN BULL
READY FOR SERVICE

See pedigree in The Wisconsin Farmer issue of November 16th. Sire, **KING SEGIS CONCORDIA HENGERVELD,** whose two nearest dams average 32.83. Dam made 23.13 lbs. butter in 7 days. Priced right. Address
PINEHURST DAIRY, SHEBOYGAN FALLS, WIS.

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.
Wisconsin Star Stock Farms

His two nearest dams averaged over 29 lbs. butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,834 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.
Ed M. Schultz, Hartford, Wis.

YEARLING HOLSTEIN BULLS

READY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will also price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

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STAND FOR BEAUTY-PRODUCTION

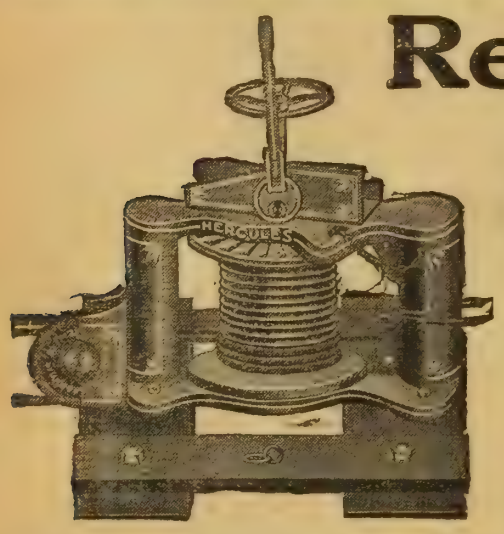
SHORTAGE of milk compels sacrifice of young calves. Owing to increase in number of our milk customers, we are compelled to sell some unusually fine bull calves 1 to 2 months old. A. R. O. breeding on both sides. Price for quick sale, $35 to $50. Also a few heifer calves.
SILVER SPRING FARM CO. - **EAU CLAIRE, WIS.**

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write
W. H. S. Rhoda **Watertown, Wis.**

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¾ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams.
Write **R. C. Walker, Kilbourn, Wisconsin.**



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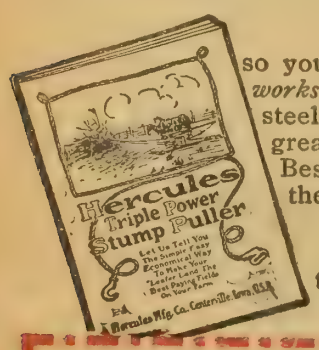

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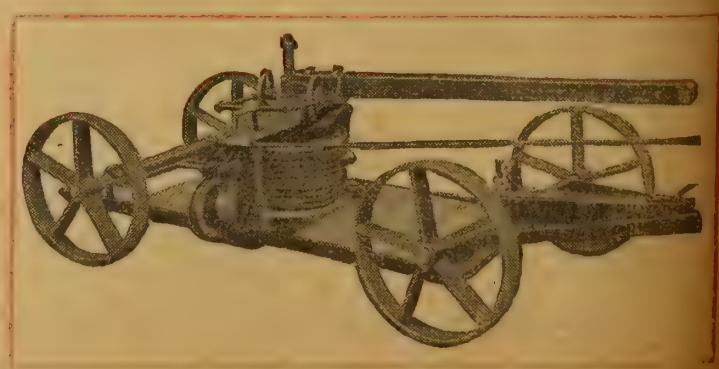

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THE WISCONSIN FARMER

VOL. XLV. NO. 51. THURSDAY, DECEMBER 21, 1916. WHOLE NO. 1821

Wisconsin Hog Farm Which Pays.

THIRTY years ago, when L. F. Atwater was logging on the Wisconsin river in western Wisconsin, no one realized that he would be the constructive, successful hog breeder that he is today. In fact, it was just eight years ago that Mr. Atwater "fell" into the breeding of pure-bred Duroc Jersey swine, many said "Atwater is crazy." But Mr. Atwater had foresight, and his first litter from this boar and the farm-sale sow brought him seven sow pigs and two boar pigs. The two boars he sold for $25; the seven sow pigs he kept. All of these were pure breds. Previously he had raised a few grade Durocs and pure-bred Polands as a side-boar sale this fall. Mr. Atwater, at the very beginning, went straight at many problems at which most beginners would shudder. His first move was a trip to the Iowa State Fair. He had good stuff, but in Iowa he was out of his class. "But I learned something," he told the writer, "and my four boars I sold right there

HOG SALES PAVILION ON L. F. ATWATER FARM NEAR BANGOR, LA CROSSE COUNTY, WISCONSIN. THIS PLACE HAS PAID FOR ITSELF MANY TIMES OVER.

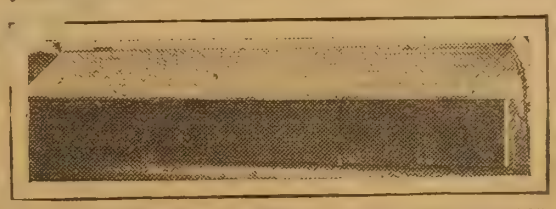
MR. ATWATER'S FEEDNG BARN AND HOG HOUSE. FENCES ARE BEING TORN OUT THIS WINTER AND REPLACED WITH INDIVIDUAL RUNS FOR EACH SOW AND LITTER.

and his success as a breeder covers that period, although he has farmed for twenty-nine years. The Atwater Farm, near Bangor, La Crosse county, Wisconsin, is a splendid example of what hard work and close application to right principles will accomplish. Eight years ago, on October 23d, Mr. Atwater turned up at a neighboring farm sale in his county. He was not really in the market for pure-bred Durocs, having on his farm already a few pure-bred Polands and grade Durocs, but a Duroc sow and her two boar pigs were going cheap, and these he bought for $26. That was the beginning of the Atwater herd and the "home of big Durocs," and the story since then is one of constructive breeding; of success by a man who just sort of tumbled into the pure-bred swine game. For the benefit of those who are not familiar with the show-ring records it might be added here that Atwater Durocs have been consistent winners of the blues and purples at all the recent state fairs and at the recent national swine show at Omaha, and in his herd have been many grand champions. This all the result of the purchase of the sow and two boar pigs that opened Mr. Atwater's eyes to the possibilities of swine breeding in Wisconsin, and especially in La Crosse county. His next buy was a $50 boar at the state fair, at Milwaukee, and it was then that line to his Jersey herd, but with entry into the pure-bred Durocs, he gradually began disposing of his other sows and boars.

Once into the pure-bred game, Mr. Atwater decided to go into it on the right basis. He is a breeder who believes that a fellow must go ahead, or go backward; there is no standing still. So he looked over the farm papers and picked out the good breeders and went to Iowa, where, at four sales, he bought four sows, which gave him twelve sows as a foundation for his herd. It was while in Iowa on this purchasing trip that he booked his first sow sale, and when the Iowa breeders asked if he was sure he would have the stock to sell, he replied, "Why, sure, I'll raise them." And raise them he did, and his first sale went off successfully, and each year since then he has held one with his first at a good price." Then he went to the Minnesota State Fair, and at the first showing he had the grand champion sow, and after that nothing was too big for Mr. Atwater to undertake. In looking over the work of eight years, he is in position to advise beginners, and his advice is to always start with the best. Never let price be a consideration. Never be easily satisfied. Too many of our breeders fail in this. Never think the herd is now good enough; it must go ahead or drop back. By all means advertise. Mr. Atwater says he lost just a year because he didn't advertise heavily enough; "afraid to spend my money," as he expressed it. The first year that Mr. Atwater had nothing but Durocs, he kept a close account of those finished for market. He had 147 spring pigs that averaged 130 pounds when he first began fitting for the block. On warm slop and corn, these pigs gained an average of two pounds a day; during one week they averaged two and one-third pounds daily, and when they went to the Chicago market at an average of 284 pounds, one carload topped the Chicago market, 15 cents, on a market with 47,000 receipts. The last week the gain fell to one and one-third pounds daily,

SLEEPING QUARTERS AND CONCRETE FEEDING FLOOR FOR HOGS. THIS TYPE OF FEEDING FLOOR USED EXCLUSIVELY ON ATWATER FARM.

HORSE BARN AND CHICKEN HOUSE TO THE LEFT ON THE ATWATER LA CROSSE COUNTY FARM.



THE MACHINERY SHED IS AN IMPORTANT FARM BUILDING IN MR. ATWATER'S OPINION.

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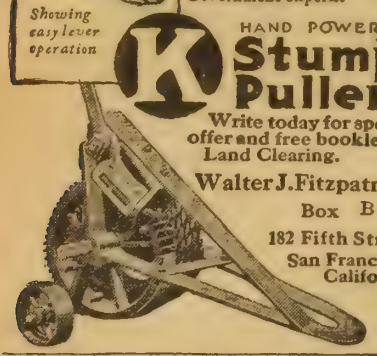

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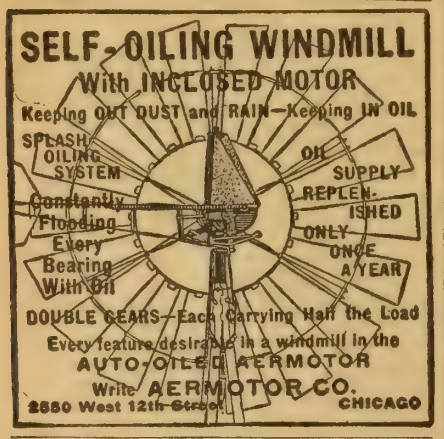

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but he found the hogs took less feed, so that the corn was worth 97 cents a bushel after they reached 200 pounds and only 83 cents prior to topping the scales at 200 pounds. When the daily gain begins to fall, and they eat lightly, he believes the marketing time has arrived.

Mr. Atwater has lived on this farm for twenty-nine years, fourteen years as a renter and fifteen years as an owner. He has two hundred acres, and his fifty acres of corn this year was the finest he has ever raised. Dairying for the first twenty years was his mainstay, but as he has found greater profits and less work with hogs, he has not given his Jersey herd the same close attention of recent years. He has always used a pure-bred sire and bought nothing but tried sires, which accounts for the good grade cows he now has, his cream check from sixteen cows one year amounting to $1,780. Starting as a renter, after he had spent his younger years on his father's farm and in the lumber camps, he has built up this farm until it is one of the best in the county, and equipped with every convenience that goes for comfort.

Mr. Atwater believes that the Wisconsin swine breeder should strive for two types—one for the dairyman and one for the corn-belt feeder. Of course, all strive for the big types (there are always plenty of the small ones) but the dairyman, Mr. Atwater believes, prefers the medium type, with skim milk, oats and middlings, will make as big a hog as the rangy fellow, that the feeder desires to give only corn and water. Mr. Atwater, in all his experience, never fed any oil meal or tankage—sticking to corn, oats, barley, white middlings, skim milk and buttermilk. He has been using a self-feeder the past year for his pigs and has found it satisfactory. He mixes in the feeder white middlings and powdered oats for suckling pigs, and has found that, with the feeder, they do not show the tendency to overload.

Mr. Atwater has had splendid success with his sows. Probably it is because he lives with them at farrowing time, and stays with the young until they are past the critical stages. Last year his twenty-seven sows averaged eight and one-third pigs, and he likes the sow which farrows about eight or nine pigs, as his experience has been that they are stronger and healthier at birth than those from prolific sows are at a week old. Pig losses, he has found, come mostly at night, and he believes it will pay any breeder, during farrowing season, to employ a night man. That has been Mr. Atwater's method, and it has paid.

Mr. Atwater's buildings are all especially adapted to successful swine production. They are comfortable and numerous, and during the past summer he equipped all his feeding yards with concrete feeding floors, something no swine man will do without once he has them. Water is conveniently piped to every trough; his feed heaters are well located and everything is so arranged as to make the work easy and efficient.

There are other interesting things about the Atwater farm aside from his swine breeding. There is the electric-lighting plant that supplies all the buildings; the house and the laundry. Mrs. Atwater irons with electricity; has the little table conveniences, such as toasters, etc.; her washer is run by electricity, all supplied by the plant located in the dairy house. The batteries are charged by the pump that runs the separator and pumps water into a tank that supplies the residence and the farm buildings. Every convenience to be found in a city home is to be found in the Atwater residence. The lighting plant cost about $750, and the maintenance cost is practically nothing. "I couldn't live without it," Mr. Atwater says.

The pure-bred breeder who holds sales will be interested in the sales pavilion. It is a necessity on every farm holding sales, and Mr. Atwater figures that the original cost of $350 was paid the first year. His sale fell on a bad, cold day, and without a heated pavilion he knew he would not have had the record crowd he did have. It is 30x30 feet, with a 10x10 sale ring. Around the sides are five tiers of seats with accommodations for about 350 buyers.

[illegible]er is doing some reconstruction work this winter in providing his hog house with individual runs for the sows and their litters, and also plans an addition to take care of his increasing herd. He never rings his pigs, prefering to let them root, and is a believer in generous feeding, but considers this a problem for individual study.

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Law Questions.

Hired Man Quits—Wages.

A Subscriber, Avoca, Minn.—A hired a man to work for him on his farm during the season of 1916 until corn husking time. The man worked only six weeks, and for a certain reason quit on the first day of May. A refuses to pay him his wages until the end of the season. Has A a right to do this?

Answer.—The hired man is entitled to be paid for the actual value of his work, deducting therefrom any damage which the farmer suffered on account of the hired man quitting before the time agreed upon. The farmer should pay the man what is right now.

Sale of Diseased Sheep—Damages.

A Subscriber, Rock Elm, Wis.—In February, 1916, I bought a flock of sixty-four sheep from a man who lives thirty miles from here and paid cash for them. He guaranteed the sheep to be free from disease of any kind, and I brought them home. About two weeks afterwards they began to die, and I called a veterinary who examined them and he pronounced the disease "liver rot, or flute worm" and said that it was contracted in the summer time and would prove fatal in winter. The veterinary gave me some medicine to use, but it did no good, and the sheep continued to die until grass started in the spring. I lost about thirty sheep. Can I recover damages from the seller and if so how much?

Answer.—You can sue the seller of the sheep for damages and if you can prove on the trial of the case that the sheep were diseased when you bought them you will get judgment against the seller for the value of the sheep you lost, estimated on the basis of the market price of so many sound sheep.

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The Wisconsin Farmer

THURSDAY, DECEMBER 21, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

MERRY CHRISTMAS, ONE AND ALL!

I WANT to take this opportunity to wish you, one and all—my many good friends, who have borne with me so patiently throughout the year now coming to a close—A Merry Christmas!

You and I have become better acquainted since last Christmas. Today I feel as though I knew you all; each and every one of you; man, woman and child. I cannot say just how this feeling of personal acquaintanceship came into existence. I have not looked upon the faces of many of you. I have not had the pleasure of opening your door and eating a meal or spending the night with many of you. Yet, I have come to feel as though I knew you, intimately, all the little peculiarities of your nature and character, what you like and dislike, what you think, and so on and on. Perhaps it is because, when I sit down to write this page of my views, I always stop before I write a word and look over at you (figuratively speaking) where you sit in your easy chair, waiting for me to begin. I think of what effect my words will have upon your mind; will they uplift and inspire?—if so, then they will be good words, and I shall be glad I spoke them. Even before I have commenced to write, I like to think of what your answer would be, if you could speak to me by word of mouth, as so many of you speak (to my great delight) by frequent letters. I feel as though I were gathering my own little family about me, as the shades of night begin to fall, and talking to them of the things which have come up in business and in our family life since last we gathered together. I believe that is how and why I have come to think of all my hundreds of thousands of weekly readers as being intimate personal friends, whose faces I know, although I never saw them.

Knowing you then as I do, it has seemed to me that we talked more intimately on more personal subjects during the past year than ever before: Our mutual hatred of war, our love of our native land, our desire to keep the boys and the girls on the farm with us, our sorrows, our successes—a host of things very near and very dear to all of us. Last Christmas I sent you a holiday greeting, but, hearty and sincere as I meant it to be, it did not carry the burden of friendship and affection which this year's greeting carries. We have been tempered by prosperity and adversity both this past year. We have been granted material blessings far beyond our just desserts; yet, at the same time, we have had our prosperity and our peace darkened by the thought of the awful, the useless, the barbaric slaughter across the seas, of loved ones falling in field and trench, of world-cousins giving up their lifeblood so nobly and yet so needlessly. We cannot discuss these things without being drawn still closer together. That is one reason why my holiday greeting, cheery as I want and intend it shall be, sounds rather solemn this time: A Merry Christmas, and millions of human beings, fighting and dying on blood-stained battlefields; how can it be "Merry," even to us in the midst of our peace, happiness and prosperity?

As I write these words, a newspaper was placed upon my desk. It announces that four of the dozen of warring nations of Europe have joined hands to ask for peace. I pray God it is true. Would it not be a Merry Christmas, indeed, if peace were to be restored?—if all the world were to go forth on Christmas morning, at the sound of the church bells, to kneel together at the feet of Him who was the Prince of Peace? What greater Christmas gift could the Old World (and the New, too) know than a peace which would take the men out of the trenches and keep them out? Would it not be Christmas, indeed, in millions of homes in Europe, if father and husband should be able to come home from the war, throw off his gun and pack, and clasp his loved ones to his embrace? Put yourself in his place—you home-loving, family-loving reader sitting at your ease, planning for a Merry Christmas. Does not your heart ache for him?

My friends, I am too full of this subject to write any more; let us ponder it together, in silence. We who give presents on Christmas morn to our loved ones, what greater gift could we give the world than a united public sentiment against war? Shall we stop with hanging baubles and gewgaws upon our own little Christmas trees and fail to hold high a lantern of hope to cheer the men in the trenches, a hope that the day shall soon dawn when war shall disappear from our midst, from all the world, never to be known again so long as time lasts?

I wish you, one and all, a Merry Christmas. You deserve it. May your presents be to your liking and may all of your loved ones come to you, their faces bright and shining, to say that Christmas was never happier, sweeter or more like Christ's birthday than this one. I wish this for you, with all my heart:

The crops may fail, and leave us with our plans all gone ter smash,
The mortgage may hang heavy, and the bills use up the cash,
But whenever comes the season, jest so long's we've got a dime,
There'll be something in that stockin'—won't there, Mary?—every time.
And if, in among our sunshine, there's a shower or two of rain,
Why we'll face it bravely smilin', and we'll try to not complain,
Long as Christmas comes and finds us here together, me and you,
With the little feller's stockin' hanging up beside the flue.

THE VALUE OF GOOD READING MATTER.

I AM delighted to see that our rural schools are co-operating with our traveling library commissions, women's clubs and other interested organizations, to provide better reading matter for our young folks. This is something which should have been done long ago.

Just how much damage is done to the young mind by reading the trash which is printed in book form and in magazines and newspapers, it would be difficult to say. One thing is certain: The danger to the juvenile mind was not ended when "Deadwood Dick," "Nick Carter," "Jesse James," and the other dime novels of crime and outlawry ceased to be generally circulated. There is many a pernicious story circulating today in high-priced binding and in national magazines which does the young mind fully as much injury as did those thrillers of a few decades ago. Perhaps they do even more damage, in the aggregate, for parents knew that dime novels were bad and could issue strict orders against them, whereas today there is little or no way of telling just what reading matter is safe to put into the hands of our young folks.

It is because of this condition of affairs that I believe the movement to have a Good Book Week once a year is a good thing. The idea originated, I am told, with the Boy Scouts and quickly spread to the libraries and public schools. Perhaps the danger is not so great to the country boy as to the city boy, for the farm child has no public library to patronize as has the city child (except so far as the traveling library caters to his wants) and there is less general, desultory reading in the country than in the city. But it is a good thing to stop once a year and call parents' attention to the great importance of giving their children only the very best in the reading line.

I am not going to set myself up as a mentor or censor and make out an arbitrary list of books and magazines, saying you shall read only these and none others. There is great difference of opinion on this subject. Personally, I am a great admirer of Mark Twain. His stories of Tom Sawyer are masterpieces, yet some libraries frown upon them, because of the pranks played by Tom and his boon companion, Huckleberry Finn. We all have different opinions on what is harmful and what is not. I sincerely hope, however, that before any of my adult readers let any book or magazine come into the hands of their children, they will look it over and see for themselves if there is anything degrading in it, or anything which might lessen their children's faith in the Divine Creator, in the goodness of the world in general and in the ultimate triumph of virtue no matter how often imperiled. If I can be of any service to you in this respect, call upon me. If there is any doubt in your mind as to whether a book or magazine or paper is the proper reading for your young folks and you will write and ask me, I will give you my own opinion and I will ask experts along this line and let you know what they say.

OUR EVER-PRESENT FIRE DANGER.

AT THIS season of the year it may not be amiss for me to sound a little fire warning, for the danger is an ever-present one. I do not know any more terrifying emotion than to be wakened, in the middle of the night, by the cry of "Fire," or to see the flames leaping from one's home or place of business. Fire seems so relentless, so cruel, so persistent, that anything we can do to prevent its ravages should certainly be done.

Let me urge upon all of you that you be particularly careful this winter. The main causes of fire on the farm, so the authorities advise me, are open lanterns, left on the floor of barn or outbuilding where they are likely to be overturned, kerosene lamps left in proximity to curtains or other inflammable articles, and overheated stoves and furnaces. All of these dangers come from carelessness. If we must use lanterns in the barn instead of electric lights, why do we not take every precaution against accident; why do we persist in leaving them standing about on the floor, or perched precariously on manger or feed box, in close proximity to hay and other inflammable matter, with thousands of dollars' worth of property at stake? Will we not all see to it that when we use a lantern in the barn hereafter, we hang it firmly on a hook or a nail, out of reach of any draft, where there is no danger? We can see equally well and we minimize the danger of fire to the vanishing point.

I have talked to you several times of late about the advisability of installing artificial-lighting systems, to take the place of the old-time coal-oil lamp, and I know many of my readers are doing this. Now, that the storage battery has been perfected, and it is possible for almost any prosperous farmer to have electric lights in his home and outbuildings (the current being generated while the cream separator or the feed grinder is running) the danger of lace curtains blowing against the lamp chimney, catching fire and spreading the flames to the entire farmhouse, is growing less day by day. But we have not all reached the stage of prosperity, where we think we can afford the electric lights, while some of us, being able to afford them, have omitted installing them. Shall we not see to it that our lamps are placed in the middle of a solid table, where the children cannot pull them over, and far from curtain and other fluttering things which might easily catch on fire?

Stoves and furnaces are an always-present danger, in below-zero weather, if we are not careful. Flues and chimneys should be cleaned out frequently, and it is none too safe to burn them out, as so many farmers are in the habit of doing, especially if the roof is dry. Some of these cold mornings it is very easy to build up too large a fire, in the hope of getting the house heated quickly, before the wife and little ones arise, but it is never safe to go far away and leave stove or furnace untended while the draft is open. I have known of too many farmhouses being burned down as a result of drafts being left wide open while the fire-builder went about other early-morning chores. Let us be more careful on this point than ever before, now that winter is fairly upon us.

There is always an extra danger of fire about Christmas time, when many of our farmhouses contain Christmas trees, with lighted candles upon them, and many of us dress up as Santa Claus, to please the youngsters. The cotton which we use in our Santa Claus "make-up" catches fire rapidly, as do also the dry needles of the Christmas tree, and that which was intended for a scene of jollity may easily and quickly become a scene of danger and mourning. The fire marshal of one of our grain-belt states has issued some timely "holiday thoughts on fire prevention," and I am going to quote some of them for your guidance:

Fire may turn your Merry Christmas into a sad one. "A house of merriment is better than a house of mourning."

Instill the maxim of "Safety First" in the minds of each member of your family.

Put out the blaze quickly if it occurs; so keep your fire extinguishers in good condition, and water near at hand.

Risk no lives. Tell Santa Claus to use discretion in the matter of combining long cotton whiskers, inflammable garments and burning candles.

Every bit of inflammable decoration should be discarded. Use asbestos or mineral wool in place of cotton for snow, and tinsel in place of tissue-paper garlands and bells.

Extra care should attend the Christmas tree and its decorations. See that it stands securely, that the candles are properly protected and that children are not allowed to light them.

Never hang decorations near open gas jets, nor near lights of any kind.

Take time from your festivities to keep an eye on the stove or furnace.

Will you pledge yourself to be unusually careful this holiday season and the entire winter? Fire is too dangerous, too devastating, too cruelly costly, for any chances to be taken. "Safety first" always; remember that, please.

James M. Pierce

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AMES M. PIERCE

ATKINSON, Editor-in-Chief

ESTABLISHED IN 1848

ed at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Avenue
Des Moines, Iowa

20? Washington Bldg.
Madison, Wis.

To either of which communications relating to subscriptions or advertising may be addressed.

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SUBSCRIPTION RATES—Single subscription, $1.00 a year. In clubs of ten, 75 cents a year and an extra copy to getter up of club. In clubs of 100 or more, 25 cents a year. Single subscription three years in advance, $1.50; five years in advance, $2.50; ten years in advance. $5.00. Subscription price in Canada $1.50 a year. Remit by draft, registered letter, postoffice or express money order. In changing address, send both the old and new addresses. In renewing, give the same name and initials as before or state both the old and new names and explain why you change. In case of errors or failure to receive the paper within two weeks, promptly notify the publisher. Address

The Wisconsin Farmer Madison, Wis.

Renew Now and Avoid Delay.

Those readers of The Wisconsin Farmer whose subscriptions expire within the next few weeks should lose no time in sending in their renewals, so as not to miss a single issue of the paper. We offer this as a friendly suggestion to all those who welcome the weekly visits of The Wisconsin Farmer and who would be loath, indeed, to let a week go by without reading our many departments, editorials and miscellaneous features.

When the subscription season is at its height (as it will be now in a few weeks) the letters pour in upon us in such large quantities that, notwithstanding every effort of an increased force of clerks, it is next to impossible to make the alterations and the extensions on the mailing list so as to insure every renewing subscriber receiving every copy, without missing a single issue, and every new subscriber receiving his paper the week the remittance is sent in. But if those whose subscriptions expire shortly, and those who are planning to subscribe for the first time, will take our suggestion and send in their remittance at once, we can insure such service as will give them every issue just at a time of the year when the papers are better and more entertaining than ever.

This promises to be an unusually busy winter in agricultural affairs. Congress is in session and matters of weighty moment to the farmer are to come up for discussion. Our own state legislatures will be in session and The Wisconsin Farmer will report all matters which materially affect the welfare of the farmers of Wisconsin, as they come up for public discussion and legislative passage. We firmly believe that no one of our present subscription family of 90,000 members can afford to miss a single issue of The Wisconsin Farmer and to this end we urge a prompt renewal, now, while there is plenty of time for our circulation force to handle the matter. But this is not all; let every reader of The Wisconsin Farmer make himself a committee of one to get at least one new subscriber, so that the good things he enjoys in this paper may be shared by others. We will do our share by making The Wisconsin Farmer better this winter, and throughout the coming year, than it has ever been before. Will you do yours, by renewing promptly and by asking your neighbors and friends to subscribe and send in their subscriptions, wherever possible?

Wisconsin Community Institute Work.

Almost 1,000 farmers were gathered together recently at a dinner given in the armory at Fond du Lac under the auspices of the Fond du Lac Association of Commerce. This dinner was the culmination of the community institute, mention of which has been previously made in these columns. The purpose of this institute was to bring into closer relationship the progressive forces of the town and country, and we wish to congratulate the people of Fond du Lac county on the result.

There is some difference between a community institute and a farmers' institute. The farmers' institute takes up only practical farm topics, but a community institute has a little wider significance. At a farmers' institute one hopes to get some ideas which will help him in his farm work. At a community institute the thought is more generally directed toward the public or community welfare. There has been considerable work done in the cities and towns through clubs and organizations which look to social and civic improvement. There has also been considerable done in the country through various organizations of farmers. The community spirit is broad enough to include both town and country and to emphasize topics which are of equal importance to both these divisions.

The Wisconsin Farmer is pleased to commend the spirit which has been manifested in Fond du Lac county. We hope it will not be said: "This community work is being done for the benefit of the farmer." As a matter of fact, the city and citizens of Fond du Lac will get the greatest benefit. In a city of 18,000 or 20,000 like Fond du Lac we doubt if there are 10 per cent of the people who really understand what a wonderful farming community immediately surrounds them. To rush out into the fresh air of the open country for an hour's sight seeing or joy riding is by no means getting acquainted with the farmer. Usually the best glimpse that town people get of country people is at the county fair, and we are glad to see that all interests in Fond du Lac county are getting behind the fair. We believe that the country people, as a rule, understand the city people and city business methods much better than city people understand country people. As a general rule, the farmer is a great deal better business man and all the members of the farm circle are more intelligent and prosperous than the average town person gives them credit for.

We doubt if the average citizen of Fond du Lac knows that in 1915 the county produced 561,000 bushels of corn for grain and 290,790 tons of corn for silage; 4,516,716 bushels of oats, being an average of sixty-two bushels to the acre; 1,349,228 bushels of barley, an average of forty-one bushels to the acre; 58,044 bushels of rye; 407,619 bushels of potatoes, an average of ninety-three bushels to the acre; 1,209 bushels of beans; 2,880 crates of strawberries, a yield of 180 crates per acre; 157,958 tons of hay, a yield of 2.1 tons to the acre; has nearly 19.000 horses, aggregating in value $1,750,000; has almost 80,000 cattle, worth more than $3,000,000; has over 17,000 sheep and over 62,000 hogs. According to the last available census report, the average farm in Fond du Lac county is worth $10,452. There are about 4,250 of these farms, making an aggregate wealth of about 45,000,000.

It is worth while for any city to get acquainted with the country people around the county. There are not many farmers whose names you need to be ashamed to have on your visiting list.

Wisconsin Grange Opposes Embargo.

The State Grange of Wisconsin recently held a meeting at Tomahawk. There were 125 delegates present—a large number of whom were from the Upper Wisconsin counties. The Grange took notice of the discussion which is being carried on in the city press, relative to an embargo on foodstuffs, and declared emphatically against such an embargo. The Wisconsin Farmer has been furnished a copy of the resolutions, which are as follows:

Whereas: There is active agitation at this time to have congress place an embargo on farm products to reduce the high cost of living, and

Whereas: The cost of manufactured articles the farmer has to buy has increased in price at a higher percentage than has farm products, therefore, be it

Resolved: That the state grange of Wisconsin believes that an embargo of any kind is not a solution of the high cost of living. Be it further

Resolved: That we utterly oppose any embargo that makes farm products the sole object of action, and if such action is taken we must insist that all manufactured articles be included in such embargo. Be it further

Resolved: That a copy of these resolutions be forwarded to each senator and representative from the state of Wisconsin.

GEO. H. DAWES.
Secretary State Grange of Wisconsin,
Tomahawk Lake, Wis.

The Wisconsin Grange has not a very large membership, but it has enrolled a goodly number of representative farmers, especially in the upper counties of the state.

On their way to the Tomahawk Convention the delegates paid a visit to the co-operative packing plant at Wausau. The Grange has accepted the invitation to send a delegate to the meeting of the American Federation of Organized Producers and Consumers, to be held soon in Chicago.

Tuberculosis and Cattle Sales in Wisconsin.

The need of keeping Wisconsin dairy herds free of tuberculosis is readily apparent on examination of statistics, showing the extent of interstate shipments from this state. As all cattle shipped out must be tuberculin tested, it is possible to secure exact statistics on this point, and from figures compiled by C. P. Norgord, commissioner of agriculture, it is noted that, in the year ending June 30, 1916, a total of 28,232 cattle crossed the boundaries of Wisconsin for other states. Of this number Illinois took by far the most—11,659; Kansas was second with 3,181, Iowa third with 2,265, Minnesota fourth with 2,037, and South Dakota fifth with 1,273. Every state in the Union came to Wisconsin last year for dairy cattle. Most of these shipments, except to Illinois, were probably pure breds and good grades for building up other herds. Illinois, especially that section in the Chicago milk district, always buys heavily of old cows for milking purposes, and when they have served this purpose they are sent to the shambles.

This large interstate trade indicates that the entire country is looking to Wisconsin for foundation stock. If the business is to continue and prosper, Wisconsin must establish a reputation for clean herds. This, however, is not the only reason for clean herds, as healthy animals should be the ambition of every farmer as a protection for his own health, that of his family and his fellow man. There is also the question of cleaning up the herds in the older sections of the state, that this disease may never get a start in the newer sections. There are no statistics showing the exchange of cattle within the state, but thousands of animals are going into the newer communities each year—communities where the percentage of reactors at this time is very small.

Within the past year there were 28,309 tests made in the southern section with 2,443, or 8.6 per cent, reactors; 8,271 tests in the central section with 382, or 4.6 per cent, reactors, and 3,445 tests in the northern section with 85, or 2.4 per cent, reactors. These figures show that the newer sections are much freer from the disease than the older sections.

In interstate trade the state accredited list which was begun last winter promises to fill a long-felt want. It is a list eligible to farmers who have their herds tested by assistant state veterinarians, and this plan has just been approved by the National Live Stock Sanitary Board in its recommendation that the Wisconsin plan be made use of by other states. This board also favors uniform laws to assist in compiling these lists. Advantages of this accredited list in Wisconsin may be summarized as follows:

It is an effective means for keeping clean the new and developing dairy region of northern Wisconsin. There are now in Wisconsin 432 clean accredited herds, tested yearly, and a list of these herds is available to northern purchasers.

It is easily apparent that it is of great advantage for owners of herds to get on the accredited list.

Herds may be placed on the accredited herd lists through inspections by inspectors of the department of agriculture. Herds on this list can be shipped to other states without further testing.

With other states taking up this plan of accredited lists, it will provide for the buyer of cattle an assurance that the stuff he buys is free from tuberculosis and enable the seller to ship without further testing and build up a reputation for a clean herd. This is the selling side of the proposition—the question of personal health should not be overlooked.

Wisconsin Dairymen's Resolutions.

Probably a more constructive set of resolutions was never endorsed by the Wisconsin Dairymen's Association than those adopted at the recent meeting of the organization at Waupaca. They are important to the dairy interests in that they call attention of dairymen to the big things which confront that industry today and we quote them as follows:

Resolved, That we favor the enactment and enforcement of just and effective laws and regulations for the shipment of cattle in interstate commerce.

Resolved, That we favor a national law providing for the like kind of assistance in controlling the spread of tuberculosis as is now extended by the national government in the case of foot-and-mouth disease, with provision made for the reasonable compensation of the owners of slaughtered cattle.

Resolved, That we favor the reenactment of the state law requiring that the tuberculin test shall be applied to all cattle offered for sale as breeding stock or milk animals.

Resolved, That we earnestly recommend to the members of the state legislature that the annual appropriation to the Wisconsin Dairymen's Association be fixed at not less than $6,000 in order that it may meet the increasing demands upon it for efficient work in the supervision of cow-testing associations. We make this recommendation because it is our opinion, that the cow-testing associations present one of the greatest movements for the advancement of dairy farming that is in existence today.

Resolved, That we approve the oleomargarine law proposed by the National Dairy Union and that we commend to dairymen everywhere, the active and intelligent support of this measure, and that we urge upon our representatives in congress to work for the early passage of this law as a measure of great importance alike to the dairy industry of the state and to all consumers of dairy products.

Resolved, That we favor the adoption of reasonable national standards for all dairy products, and the enactment of suitable legislation by congress for their effective enforcement.

The association, in these resolutions, has undertaken six big projects—none more important to our mind than the request for an additional appropriation from the legislature to carry on the cow-testing work which is proving so effective at present. The association now receives $4,500 aid from the state. It asks for an increase to not less than $6,000. This would enable the organization to further extend its activities in the weeding out of unprofitable cows and in increasing the production of those already profitable. Through the fifty-five active associations now in operation about 4,000 cows will be weeded out this year.

Wisconsin 1917 Automobile Show.

Our readers will be interested in the Wisconsin Automobile Show which is to be held in the auditorium at Milwaukee, January 5th-11th. Inasmuch as farmers own such a large per cent of automobiles in this state, the show is just as much a farmers' show as it is anybody's. It is expected that the attendance of farmers will be the largest in the history of the automobile shows in this state.

The show itself will exceed former exhibitions. A few years ago this show was easily housed on the main floor of the auditorium. This year it will be necessary to use the stage, Kilbourne, Juneau and Walker halls, the 5th street rotunda, all of the main hall corridors and the north and south rest rooms. For the first time in the history of the show it will be necessary to exhibit pleasure cars in the basement. The normal capacity of the auditorium for pleasure cars is about eighty, but space has been reserved for over 100. The demand for space in all departments has made it necessary to rearrange the entire show.

In order not to displease any of the manufacturers or dealers it was necessary to allot space by drawing and eight distributors cheerfully accepted their lot of basement space.

Mr. Bart J. Ruddle, secretary of the show, has been a busy man for the past two or three weeks dealing with decorators, carpenters, electricians, painters, flower girls and others who are arranging a symphony of green, white and pink embellished with a

flood of light from 5,000 specially arranged nitrogen lamps.

The following pleasure cars will be on exhibition at the show:

King, Regal, Oldsmobile, Monroe, Ross Eight, Haynes, Grant Six, Elgin, Maxwell, Pierce Arrow, Buick, Paige, Chandler, Hudson, Locomobile, Ford, Liberty, Marmon, Studebaker, Cole, Packard, Scripps-Booth, Marion-Handley, Winton, Hupmobile, Stearns-Knight, Franklin, Reo, Crow-Elkhart, Patterson, Pullman-Premier, Detroit Electric, Velie, Cadillac, Jeffery, Dodge, KisselKar, Allen, Oakland, Inter-State, Apperson, Sun, Mitchell, Lexington, Willy's-Knight, Overland, Saxon, McFarlan, Peerless, Auburn, H. A. L. Stephens, Moline-Knight, Briscoe, Pathfinder, Empire, Dort, Chevrolet, Moon.

We feel sure that any of our readers who can take in the automobile show will be well repaid for their time and effort.

Power on Wisconsin Farms.

Under existing conditions the labor problem is one of great magnitude for the farmer. This is especially true on the dairy farms of Wisconsin, where extra help is needed every day in the year. Help is not only getting scarcer, but there is also a demand for better help, and $50 a month with board is no longer an unheard-of wage. Help that was once obtainable for $20 or $30 now demands $30 or $40.

This situation forces the farmer to study more than ever plans to reduce the amount of hired help required and at the same time make farm work more attractive. One way is the general introduction of mechanical power, and it was this subject that Mr. F. M. White, of Madison, discussed in a practical and interesting way at the recent state dairymen's convention at Waupaca. Mr. White cited statistics showing that the average of Wisconsin farms is 118 acres; that four horses are required for the field operations and that the average investment in horse power is from $600 to $1,000 per farm. As the horse eats, whether he is idle or at work, an additional cost of $90 per horse for feed and keep, or $360 per year, must be added to each farm. By these figures the cost of horse labor for producing the dairy farm products, such as corn and the grains, is 26 per cent; the cost of man labor 18.1 per cent, a total of 44.1 per cent charged to horse and man labor. This cost, Mr. White believes, can be cut by using the tractor, which can be made profitable and a labor saver. This can be done by using them for other things besides field operations.

But there are other numerous jobs about the farm where power may be applied to reduce the need of help. Pumping water is one of them, and with the best type pump, it will require one man an hour to pump the 500 gallons used on the average dairy farm daily. At 25 cents an hour, this is a cost of $91.25 a year, when a small gas engine will do the same job for $3.22 a year with gasoline costing 18 cents a gallon. Mechanical power in this one operation would save $83.03 in one year, easily the cost of an engine which should last at least ten years. Some time will be needed to start the engine and care for it. Allowing for this, Mr. White figures the saving in pumping water alone would be at least $39.40 a year on the average farm.

Twenty per cent of Wisconsin farms sell butter and another 25 per cent sell butter fat, so that the engine can be used to operate either the churn or the separator as well as pump water. The saving with the separator will be proportional to the saving in operating a pump, and this small engine has also been found serviceable on the washing machine and the grindstone. Larger engines that can be used for these purposes can also be used to operate corn shellers, feed grinders, silage cutters, grain graders and root cutters. The farm electric lighting plant can also be relied upon for power, and this is an equal saving with the gasoline engine.

Wisconsin Implement Dealers' Convention.

The eleventh annual meeting of the Wisconsin Implement and Vehicle Association was held last week in the new auditorium at Milwaukee with an attendance of almost 1,000 dealers and manufacturers. In connection with the meeting there was here a manufacturers' exhibit which was said to be the largest ever held in the state.

The Wisconsin association is one of the livest state organizations in the implement and vehicle field. Its exhibit is always a treat for the man interested in farm and dairy machinery and it is worth the time and expense of any farmer to attend. The Wisconsin association has always made special efforts to interest the farmers in its meetings and its exhibits and there was a large number of them present this year. Some were guests of dealers. The program overflowed with good things of interest to the trade as well as buyers. The delegates were entertained royally and great credit is due the Milwaukee manufacturers, jobbers and exhibitors in their co-operation with the state officers.

Rising costs in the raw materials which go into the manufacture of all implements focused attention of the convention. As the situation has become more acute during the past year than ever in history it was but natural that the manufacturers, jobbers and dealers should be vitally interested in this question as well as the farmer, who is the man who ultimately must pay the increase. Many speakers, during question box discussions, brought out that, though the price of farm implements and machinery have increased, the increased value of farm products has more than made up the difference. Measured in terms of farm produce, implements are really cheap compared to what they have been in former years. Every farmer can realize that just half as much 80-cent corn is needed to buy a certain product as 40-cent corn. Going back two decades when corn was around 11 to 12 cents it does not seem absurd that a $90 implement in these days of 80-cent corn is cheaper than the same implement in the days of 11 and 12-cent corn, if it were to be paid for in corn.Take the dairyman, for instance, who is now getting from $2.10 to $2.25 for 100 pounds of 3.5 per cent milk. Only a few years ago in many Wisconsin sections he received less than half this amount and certainly the increase in the cost of dairy and farm machinery has not kept pace with the increase in the price received for milk. It is true feeds cost more for the dairyman, but were he to buy his machinery in milk he would find that the situation would be identical to that of the corn grower.

Mr. E. W. McCullough, secretary of the National Implement and Vehicle Dealers' Association, discussed the rise in steel prices. This, he believes, is due largely to the unusual demand and this seems to be borne out by the market reports which show steel beams quoted at $70 a ton and every mill in the country booked with enough orders today to run them through, at full time, until 1918. Railroads are big users of steel and are buying heavily now at present prices so that chances for any reduction in prices are not expected for some time. Even at $70 a ton it is impossible to secure steel beams for delivery under eighteen months and if this condition becomes more acute it is the general opinion implements will go even higher. Peace negotiations will probably not affect the market for some time, it was said.

There was a general interchange of ideas of doing an implement business and what the prospects are for the future. The belief that one way to reduce costs is to arrange for a "settlement upon delivery" basis was renewed. Under this plan a farmer who gives his note shall give one payable at a certain time with interest so that it would be negotiable. The binder twine situation was also discussed and Mr. C. A. Lukins, of Chicago, said that farmers this year paid an unnecessary amount of $15,000,000 for twine over last year because of the alleged sisal fiber monopoly. Mr. F. R. Sebenthall, secretary, predicted that unless the government broke up this monopoly in another year binder twine would advance 100 per cent. This resulted in the association adopting a resolution calling on congress to take some steps to curb the alleged trust.

Mr. Oliver E. Remy, secretary of the Wisconsin State Fair, told the convention of new orders of the board which will prevent all mail order concerns from exhibiting at the fair. Other important speakers were Mr. J. A. Craig, of Janesville; Mr. Thomas Witten, of Trenton, Mo., and Mr. W. D. James, of Ft. Atkinson. The association also adopted resolutions favoring 1-cent letter postage; indorsed the Stevens bill which permits a manufacturer to set the price at which his product may be sold; indorsed the federal reserve law and the cost system of the federal trade commission. Mr. E. J. Williams, of Randolph, was chosen president to succeed Pres. D. W. Allaby, of Mauston. Mr. H. A. Schultz, of Portage, was named vice president and Mr. F. R. Sebenthall, of Eau Claire, who has been secretary-treasurer for many years, was re-elected.

Who Gets the Butter Money?

The natural question of every farmer, when butter on the Elgin board is quoted around 40 cents, is who gets the larger part of the 40 cents? The city consumer probably throws the blame for high prices on the dairyman, never taking into account that butter on its way to the table passes through the hands of a number of middlemen, all of whom must extract their profit. Therefore, the question remains of what per cent of the retail price goes to the farmer.

Mr. B. H. Hibbard and Mr. Asher Hobson, of the college of agriculture, in co-operation with the United States Department of Agriculture, have attempted to answer the question in a bulletin, "The Marketing of Wisconsin Butter," which has just come from the press. Their conclusions show that the farmer receives about two-thirds of the money paid for butter and that this is a larger proportion than is received by him from other dairy products. The retailer is second, receiving more than the manufacturer, but the following table speaks for itself:

	Cents	Per cent
Farmer	23.33	67.7
Hauling	1.50	4.3
Creamery	2.33	6.7
Railway	.80	2.3
Storage	.18	0.5
Shrinkage	.23	0.7
Receiver, jobber, broker	1.75	5.0
Packaging	1.00	2.9
Retailer	3.43	9.9
	34.55	100.0

The entire subject of marketing is discussed at length and some interesting conclusions are given. More Wisconsin creameries are privately owned than co-operatively owned; the average cost of making a pound of butter is estimated at 2.33 cents and a glance at the above table shows the big item of expense of hauling, this item being almost as much as the amount the receiver, jobber and broker receives per pound.

The striking fact concerning butter production in Wisconsin is the high proportion made in factories and the relatively low production on farms. While first in factory production in 1909, the date of the last census, Wisconsin was sixteenth in dairy or farm butter. There has been a steady decrease in farm-made butter each year since 1879, when less than 5,000,000 pounds were made in creameries against 32,000,000 pounds on the farms. In 1909 this had reversed itself with only 28,000,000 pounds on farms and 103,000,000 pounds in the creameries. Two-fifths of the farm butter is now consumed on the farms, and, as Wisconsin farmers sell less than 13 per cent of the total butter output of the state, an interesting point arises as to why the manufacture of butter on the farm continues at all. This table tells the story:

Reason	Number	Per cent
More profitable	63	24.42
Hauling of milk	96	37.20
Dissatisfied with creamery	13	5.04
More and better by-products	43	16.63
No milk market	22	8.54
Make for family — sell surplus	21	8.17
Total	258	100.00

From a close study of these causes it is concluded that the majority of farmers who make butter are forced to do so through circumstances and that very few make butter at home when they have a choice of convenient markets for their milk and cream.

Spraying Is the Watchword.

Wisconsin State Horticultural Society Holds Good Meeting and Has High Quality of Fruit Notwithstanding Poor Fruit Season of 1916.

START the 1917 fruit season with a firm determination to spray thoroughly. This was the big lesson learned at the annual convention of the Wisconsin State Horticultural Society, held at Madison last week. This convention was well attended and the program was well balanced. The fruit show in connection was a good one [illegible] standing poor yields and the short fruit crop in 1916. The growers who sprayed properly were able to exhibit fine apples. The season just passed was the most unusual in twenty years. In the spring rain interfered with

MRS. N. A. RASMUSSEN, WINNEBAGO, PROMINENT WOMAN AT HORTICULTURAL CONVENTION.

spraying and scab and other fungous diseases made unusual headway. Dry and hot weather damaged the fruit later in the season. To a large extent high prices offset small yields, both for tree fruit and small fruit. This was also true of vegetables. In his annual report Secretary Edward Cranefield reviewed the work at the ten trial orchards conducted by the society. Experiments with grapes at

VICTOR FELTER, DES MOINES, IOWA, SPEAKER AT STATE HORTICULTURAL CONVENTION.

Sparta showed that grapes may be profitably grown anywhere in Monroe county. Mr. Cranefield holds that the Gays Mills orchard still ranks as best in the state. The experiments carried on this year prove that a high quality of fruit may be raised even in a poor year if proper spraying methods are used. The orchardist must not forget that if the spray is washed off by rain the night after it is put on, the trees should be sprayed again next day. The following interesting statistics on Wisconsin orchards have been gathered by Mr. A. A. Asbahr, working in connection with Mr. Cranefield on the Wisconsin orchard census:

Of the 386 orchards listed 249 were sprayed and of the total number of spray rigs 121 were operated by hand power and 128 by gasoline.

Of the whole number of Wealthy apple trees listed, 127,423, 36.5 per cent are one to five years, 10 per cent six to ten years, 4.6 per cent eleven to twenty years and 48.0 per cent over twenty years.

Of 14,952 Duchess trees listed 48.4 per cent are one to five years, 17 per cent six to ten years, 22.1 per cent eleven to twenty years and 12.5 per cent over twenty years.

While, as stated above, the work as a whole is incomplete, there is one exception and that is Door county or that portion north of Sturgeon Bay as directions were given to cover this territory fully. From the number of reports turned in, 116, there is good reason to believe that Mr. Asbahr followed instructions faithfully and the figures here given are as nearly accurate as can be obtained.

In this territory there were found 104,553 apple trees and 334,522 cherry trees. Computing 100 trees to the acre, the average in Door county, this gives 4,390.75 acres of orchards, 76 per cent of which are cherry and 34 per cent apple.

Of the cherry 80.9 per cent are one to five years, 18 per cent six to ten years, 11 per cent eleven to twenty years and none over twenty years.

In Bayfield county only the territory immediately adjacent to the cities of Bayfield and Washburn were covered, showing 36,906 apple trees and 33,417 cherry trees.

J. F. Harrison, of Excelsior, Minn., warned beginners with orchards not

A. A. ASBAHR, of Madison, who has been assisting with orchard census.

to have too many varieties. He recommends the home orchard be close to the house, but the commercial orchard be further away. Mr. Harrison pastures eighteen to twenty calves in his orchards. When asked whether calves might not die from eating poison fruit, he said he sprayed his trees four times yearly and he never lost any calves from poisoning. When the apples begin to fall he takes the calves out of the orchards and when the picking is done he turns them back in again. For the farm orchard he recommends trees set twenty feet apart and for the commercial orchard twenty-five feet apart.

Better apples and more honesty in market were recommended by Prof. J. G. Moore, of the Horticultural Department, University of Wisconsin. The discussion brought out the fact that there is a market for small apples as well as for fancy apples, but that a great mistake is made sometimes by trying to pass off small ones for fancies. Mr. Moore advocated a grading and packing law, so that culls will be marked culls on the outside of the barrel or package. He also recommended fruit-clearing associations to aid in marketing their fruit; advocated a law compelling orchard owners to properly care for their orchards. This is advocated on the basis that it is unfair to the grower who sprays his trees to have his neighbor's orchard a place for disease breeding.

The marketing problems were discussed by F. Kern, of Bayfield; insect and pest control was handled by G. H. Townsend, Prof. R. H. Roberts, Prof. H. F. Wilson, Prof. S. B. Fracker and Prof. E. D. Ball, of the state department of agriculture; Prof. L. R. Jones and Prof. G. W. Kiett. Others who spoke on various phases of fruit or flower growing were C. L. Richardson, of Chippewa Falls; Mrs. S. H. Whittlesey, of Cranmoor; C. M. Secker, of Mather; Mrs. N. A. Rasmussen, of Oshkosh; William Toole, Sr., of Baraboo; F. M. Edwards, of Madison; T. J. Turner, of Bayfield; H. G. Scott, of Hebron, Ill.; Charley Hey, of Dixon, Ill.; Robert Blackwood, of Lake Geneva; Nic Zweifel, of Milwaukee; Mrs. C. E. Strong, of West Allis; Robert J. Sampson, of Lake Geneva; and Mrs. John Geiger, of Oshkosh. Five-minute round-table talks added greatly to the interest in the programs.

N. A. Rasmussen, of Oshkosh, was re-elected for another year; D. E. Bingham, of Sturgeon Bay, vice president, and L. G. Kellogg, of Ripon, treasurer. The executive committee is expected to rename Mr. Cranefield as secertary.

The students' essay contest was won this year by C. B. Blosser, of the college of agriculture, with H. W. Albertz second. There was also considerable interest in a pie contest and Mrs. George Johnson, 1424 Morrison street, Madison, won first both on her apple and cranberry pies. Mrs. E. S. Cooper was second in apple and Mrs. T. E. Holly third. Mrs. Joseph Shelton was second in cranberry and Mrs. Ed Larson third, all of Madison.

In the apple show first award on best five plates commercial varieties went to M. F. Foley, Baraboo. Awards for best plate other varieties were as follows: Ben Davis, Theo. Kurtz, Jr.; Fameuse, H. H. Harris; Gano, J. E. Baer; Gem, L. B. Irish; Golden Russet, Theodore Kurtz; Grimes Golden, D. E. Bingham; Jonathan, G. H. Townsend; King, G. H. Townsend; Maiden Blush, N. A. Rasmussen; McIntosh, M. F. Foley; McMahon, H. H. Harris; Newell, J. E. Baer; N. W. Greening, M. F. Foley; Northern Spy, G. H. Townsend; Patten's Greening, L. B. Irish; Pewaukee, A. K. Bassett; Plum Color, N. A. Rasmussen; Salone, M. F. Foley; Seeknofurther, D. E. Bingham; Scott's Winter, J. E. Baer; Tolman's Sweet, J. E. Baer; Utter, A. K. Bassett; Wagner, Richard Gilbert; Wealthy, H. H. Harris; Windsor, D. E. Bingham; Wolf River, H. J. Harris; New York Imperial, N. A. Rasmussen. On peck displays firsts were awarded as follows: Fameuse, H. H. Harris; Gano, J. E. Baer; Golden Russet, Henry Simon; Jonathan, G. H. Townsend; King, G. H. Townsend; McIntosh, M. F. Foley; McMahon, G. A. Freeman; N. W. Greening, M. F. Foley; Tolman's Sweet, Theodore Kurtz; Wealthy, N. A. Rasmussen; Windsor, M. F. Foley; Wolf River, J. E. Baer.

Banquet For Holstein Breeders.

To the Editor:—The first annual meeting and banquet of the Western Wisconsin Holstein-Friesian Breeders' Association was held at the La Crosse County School of Agriculture, Tuesday, December 12th, with an attendance of over sixty.

This association was organized one year ago with an initial membership of nineteen. Since that time it has grown until at the present time there are fifty-eight members. The association has been very active during the year and through its influence about $6,000 worth of stock has been sold out of our community to other states. Twenty-three inquiries for carload lots of Holsteins have come in from thirteen different states.

An attractive design for the association stationery has been worked out and many of the individual members are using this stationery for their own advertising purposes. Definite plans for more advertising have been launched and a more active year even than our first is expected.

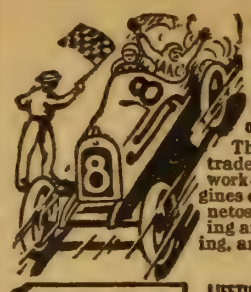
At the banquet Professor Kildee, of the University of Minnesota, was signed to speak, but he was forced to send a substitute. Mr. McQuire, a prominent man in agricultural circles, took Mr. Kildee's place and spoke very interestingly on the value of rural organization and how associations can develop and grow. He laid special stress on the duties of individual members if the association were to be a success.

E. L. Liddle, Sec.
Onalaska, Wisconsin.

A good ration, suggested by J. G. Halpin, to keep in a hopper constantly before the flock is made of three parts of corn and one part of oats, with a dry mash of equal parts of bran, middlings, ground corn and one-half part gluten feed. If milk is not available for mixing the mash add one part of meat scrap to it or put the meat scrap in the hopper and let the hens help themselves. Some form of animal feed, such as green feed and oyster shells, are very essential. Hens cannot make profits for the owner unless they are abundantly fed and secure the necessary elements for economical egg making.

The South St. Paul Angus Sale.

THERE was a good crowd in attendance at the Angus sale made by the Minnesota Aberdeen Angus Breeders' Assn. Buyers were on hand from North Dakota, South Dakota, and Wisconsin, besides the local Minnesota buyers. As a result the sale was very satisfactory. Some of the females could have brought more money, but the cattle were not in the best condition and there were also some cattle that should not go through a sale ring. Several real choice young bulls were sold at very reasonable figures. Those connected with the sale expressed themsedves as being well pleased with the outcome. Twenty-five bulls brought $4285, average $171 thirty females $3865, average $139, fifty-five head $8150, average $148. Col. W. H. Cooper did excellent service on the block.



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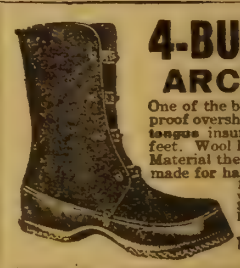

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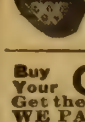

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1916 Crops Close to Five-Year Average.

Wisconsin Corn Yield Below Normal, But Exceeded Last Year Considerably—Live Stock in Good Condition.

Barron County.—The corn crop for the whole county was very poor, with no corn in some localities. This was due to the planting of late varieties and the early frost. Farmers who planted northern grown corn had a fairly good yield. A great many planted seed from New York, Iowa, Nebraska, Minnesota and other states and got a poor stand. The average yield for the county was thirty-five to forty bushels per acre. The corn crop is 50 per cent better than last year and about 85 per cent of five-year average. There [illegible] stock on feed than last year, [illegible] high price of feed. There is [illegible] factory. contagious abortion and some hog cholera in the county.—William Bartlett.

Buffalo County.—The corn harvest is completed throughout the county. Those who have silos made good use of such corn as could not mature. The corn that is shredded is fairly good and the fodder is fine. The average yield per acre is about twenty-eight bushels and the total crop will compare favorably with last year's. Cattle and hogs are in good condition and will go into winter quarters in fine shape. There is no contagious disease among either cattle or hogs, but farmers are selling off close for fear of shortage of feed.—James G. Bates.

Burnett County.—The early frost did some damage to the corn in some localities, but the matured corn is about 20 per cent more than the crop of 1915 and about 15 per cent above a five-year average. The live stock is in fine shape and, as many or more than an average number are on feed. Although the buyers are paying big prices, the farmers are in general keeping all they can care for during the winter.—A. G. Peterson.

Chippewa County.—A very good crop of corn has been harvested this year, about one-third to one-half better than last year, as last year was almost a failure. This year's crop is about an average of the last five years. Potatoes were very poor, in some places only one-fifth of a crop. The average was one-third to one-half a crop. Oats and small grain were good, and hay extra good. Prices run about as follows: Oats, 51 cents; potatoes, $1.40 to $1.50; butter, 45 cents; eggs, 40 cents. The cattle are in good condition and are on pasture as no snow has fallen yet. There is no disease among the cattle.—Ernest Nertzel.

Crawford County.—Corn was not what was expected in the early part of the season. Drouth and hot winds cut down the yield, although the quality is fair. The average yield would be close to thirty bushels per acre. The yield and quality are better than last year, owing to the early frost last season, but would not rank much more than half a crop with the two or three years previous to last. Cattle feeding has been cut down some on account of two poor corn crops. The hog crop is somewhat light also. No cases of contagious diseases among the live stock have been reported.—H. H. S.

Door County.—The corn crop this season was very satisfactory. Very little corn in this county is husked, as most of it is put into the silos. About 75 per cent of the crop matured. A corn show was held at the county fair with 1,500 ears entered by the boys' club. The variety was the Wisconsin No. 12, the variety grown mostly here. Not many beef cattle are on feed as most of the farmers are in the dairy business.—L. E. Burmingham.

Green Lake County.—Small grains averaged about two-thirds of a crop. Corn is better than last year, about equals the average of the last five years. Less cattle are being wintered than last year and hogs have been marketed somewhat earlier than usual on account of the high price of feeds.—G. B. W.

Iowa County.—Corn is a fair crop. The northern half of the county surpassed the southern both in yield and hardness. The silage of this year's crop is fine. As a whole this year's crop will average above 50 per cent more than 1915, but not as good as 1914, and a little below the last five-year average. Live stock is in fine shape and the county is absolutely free from disease of any contagious form. There are more cattle on feed than usual at this time of the year, especially milk cows, due to the price of milk.—Art G. Hoskins.

Iron County.—Practically all the corn raised in this county is cut in silos or fed as dry fodder, as only a small per cent matures to ear corn. The acreage of corn planted is somewhat on the increase. Live stock is in fine condition. There are very few cattle on feed for beef in this locality. A larger number than usual of yearlings and cows are disposed to local butchers. Potatoes yielded about three-fourths of a crop and are worth $1.60 a bushel.—J. A. Becker.

Jackson County.—The average corn yield per acre is estimated at about forty bushels, exceeding the 1915 crop, which was almost a failure in this county except for silage. This year's crop was about an average of the last five years. Few cattle are being fed. No contagious diseases have been reported.—C. S. Ristow.

La Crosse County.—Crops as a whole have yielded below the average. Rye and oats produced about the usual amounts, while wheat and barley were about three-fourths crops. Corn was about an 80 per cent crop and some of this was not matured owing to unfavorable weather conditions. Live stock, though less in number than usual is in thrifty condition.—S. J. D.

La Fayette County.—Many farmers were disappointed in their corn crops, as the yield was not as great as was expected before husking. The average yield for the county is estimated at about forty bushels per acre of good, well-matured corn, which is about 50 per cent better than 1915. About the same number of cattle are on feed as in previous years, possibly a few more. Cows are being kept on account of the unusually high price of milk and of the favorable prospects for high prices next year. There is no contagious disease among the stock.—W. F. Pease.

Lincoln County.—Not much corn is raised in Lincoln county, as frost comes too early to ripen corn. What corn is raised is used for silage. Farmers here are trying to get more cows and some are beginning to weed out the boarders and replace with better ones. There are about 10 per cent more than last year. There is no disease among the cattle.—G. A. Patterson.

Oconto County.—The corn crop was unusually light and poor in quality, with the exception of a few fields that ripened well. About the same number of cattle as in other years are on feed in this locality. A large number of young horses are for sale. Prices for farm produce are good: Hay, $12 a ton; potatoes, $1.25 to $1.50; butter 46 cents; eggs, 45 cents; chese, 26 cents; beans, $6.50; peas, $4; straw, $6.—William J. Hinker.

Outagamie County.—The corn crop throughout the county was about 60 per cent of normal, being quite a little below the average crop of the past five years. Potatoes also average far below any former year. Winter grains are looking very good at this time of the year. Not as many cattle as usual are on feed on account of corn and other feeds being very high. There are no diseases among the live stock. There is a splendid crop of young pigs. Clover seed is being hulled and is of very good quality.—Harry Leppla.

Richland County.—The corn crop was about two-thirds of a normal yield and the quality was poor. It is below the average for the last five years. About the usual number of cattle are being kept. Farmers with stalk fields do not have to feed their cattle yet, but most of the farmers are feeding silage to milk cows.—E. C. Stewart.

Rusk County.—The corn crop in the southwestern part of the county near the lakes was exceptionally good and fully matured. In some parts of the county the frost did considerable damage to the corn. An average yield would be about seventy-five bushels to the acre. The corn yield in the county was considerably better than last year, but hardly up to the average for the last five years. Live stock, especially cattle appear to be in a fair, thriving condition and exceptionally free from any disease. Cattle have been sold off more closely this fall than in previous years and there will not be as many fed as formerly.—T. M. Thomas.

Marquette County.—Corn will average about twenty-five bushels per acre this year. It is much better quality than last year and will average with the last five years. Potatoes are not a fourth of a crop. They will not average twenty-five bushels to the acre. Beans are also a very poor crop, averaging about five bushels per acre. Small grain was good. More acres than usual are being sown to rye. All live stock is in good health, but some are thin in flesh. Only about 50 per cent of the steers are being fattened on acount of the price of feed.—J. M. Williams.

Polk County.—Corn has been a fair crop, much ahead of 1915, but hardly up to the average for the last five years. In some cases the yield has been up to sixty bushels per acre, but these are rare. The average would be much below that figure. Owing to the high cost of feeds most of the best stock went to market direct from pastures. Top steers are selling around a nickel. Hogs are about $7.50. Dairy stock is in good condition. Butter on local market is selling for 44 cents per pound.—Wallace Fountain.

Portage County.—Most of the corn raised here was put in silos, the average yield of silage being about eight tons per acre, with about twenty-five bushels of corn in it. Part of the crop froze before it was fully mature. The potato crop yield was light, but the quality was fair and the acreage large, so we still have on hand a good supply. The grain crop was small, but hay was very good. Live stock in general is in very good condition with no sign of infectious disease. About 10 per cent more dairy cattle are kept than ever before. In spite of the extremely high prices of feed they are being fed well and produce well as shown by the testing associations and creameries. The year has been about average, as the short crops were well made up by the better ones.—Arthur H. Peterson.

Sauk County.—The corn crop was immeasurably superior to the 1915 crop, at least in quality. The yield per acre [illegible] ranging from fifteen to seventy-five bushels per acre. As far as can be seen in this vicinity the yield per acre fell below the average for the last five years.—R. F. Klemm.

Washburn County.—Fall work is finished. The corn crop is as good as the average for the past five years and 50 per cent better than the 1915 crop. Cattle are healthy and in fine condition. Stock buyers are active. About the usual number of stock cattle are being carried over winter. There is some increase in the number of cows being kept. Some hay is being shipped out.—L. D. Gainhart.

Washington County.—On the whole the corn crop this fall was better than it was in 1915. The corn was far more matured this season than a year ago, but the largest part of the fodder was frosted throughout the county before harvesting. The average for the county may go as high as sixty bushels per acre. The number of acres in corn this fall would not run much, if any, ahead of former years. The number of live stock in this locality has increased during the last year, and in fact during the last five years. Contagious abortion is the only disease causing loss among cattle in this locality. Many farmers will be short of feed by spring.—Milo P. Salter.

Waukesha County.—Corn is a silage crop in this part of the county, very

(Concluded on page 18.)

COMPARE FOR YOURSELF! HERE ARE THE FACTS!

"You are the judge or jury. Here are the facts." —Wm. Galloway.

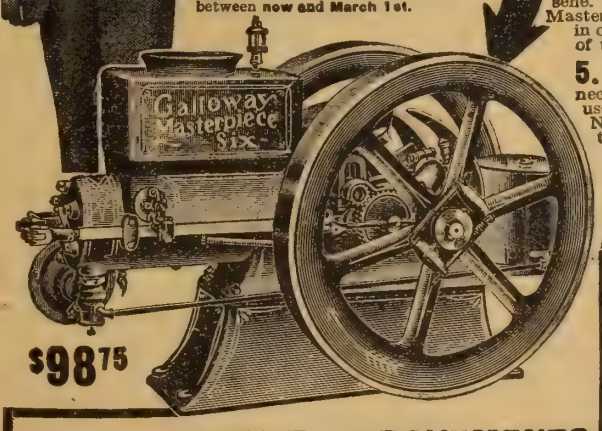
For years and years I have told you to compare the Galloway engine with any other engine! That's what my customers have done and that's why the annual sales of Galloway engines run up into the **thousands** upon **thousands!** I have told you to **compare the design** of the Galloway Masterpiece Engine, the **material, the workmanship** and its **finish** and the

SIX 1917 SELLING PLANS --CASH OR TIME

on which I sell them with **any engine made,** whether it costs more or less. If you pay less for an engine than for a Galloway Masterpiece you could **not possibly** be getting as good an engine. If you pay more it would only be **paying too much.** No matter what size or style engine you want **I build them** here in Waterloo in my own great chain of factories to **fill every want.** My 1¾, 2¼, 4 h. p. and other sizes are just **as scientifically designed, built, machined** and **finished** as my mogul engines from 12 to 16 h.p.

$25,000 Legal Bank Bond ABSOLUTELY PROTECTS

every one of my customers and proves my willingness to have **every claim** and statement I make **fully investigated.** I want you to **try** a Galloway engine on your farm—in your own shop! That's why I prepared my new 1917 special proposition. I want a Galloway Masterpiece 1917 model gas, kerosene or distillate engine in **every township** between **now and March 1st.**

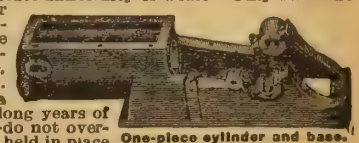


$98.75

GALLOWAY'S ENGINE TALK NO. 1

These monthly engine talks are to show you **why you should not buy an engine of any make** or kind until you have thoroughly investigated my new 1917 model Galloway Masterpiece engines—portable and stationary—from 1 3-4 h. p. to 16 h. p.

1. Cylinder and base of all Galloway engines from 4 to 16 h. p. cast in one piece. Cylinder, piston, connecting rod, crank shaft and flywheels always in perfect alignment. Absolute uniformity of wear. Only scientific successful method of construction for large, heavy duty, heavy weight engines. Two-piece cylinder and frame castings cannot be kept in line. Galloway engine cylinders will not score, nor pistons become worn in short time.



One-piece cylinder and base. Note wide bearings.

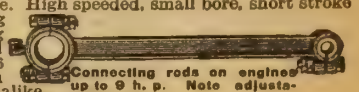
2. Masterpiece engine bearings extra wide and heavy lined—makes for long years of service. Wide bearings run smoother—do not overheat. Main bearing caps of special design held in place firmly on crank shaft by heavy steel studs locked with [illegible] am nuts—cannot work loose. Elevated hard oil cups on main bearings from 4 h. p. up insure easy oiling in operation.

3. Highest carbon drop forged steel crank shafts up to 9 h. p. Larger engines have crank shafts cut and turned from solid steam hammered billet of high carbon steel. Every crank tested in excess of hardest power strain.

4. Our own Economy carburetor saves gasoline—gives better mixture—more power—than any carburetor we ever used. Makes gasoline power more satisfactory than kerosene. Designed by our engine builders. Only on Masterpiece engines. Simple in construction—few parts. Starts easy in cold weather. Adjustable air valve. We challenge comparison of this Economy carburetor side by side with any other device.

Steel drop-forged cast cranks on all Masterpiece engines up to 9 H. P.

5. Masterpiece connecting rods have adjustable bearings. Note this steel I-Beam connecting rod on engines up to 9 h. p. Twelve and 16 h. p. connecting rods made from steam hammered billets of high carbon steel Die castings used in connecting rod boxes equal in quality to those on high-priced automobiles. Note length of connecting rods (see catalog). A short connecting rod causes piston to cramp in cylinder and score sides of same. High speeded, small bore, short stroke engines most always have short connecting rods. Crank pin bearings on connecting rods lubricated by automatic hard oil cups. Will last for years. Twelve and 16 h. p. connecting rods are made from high carbon steel, are standarized and exactly alike.



Connecting rods on engines up to 9 h. p. Note adjustable boxes.

NOTE THESE 1917 IMPROVEMENTS

My 1917 model is a mechanical masterpiece from which it gets its name. A master stroke in engine designing built by master engine builders. Superior materials, skilled workmanship, every part standardized, interchangeable, alike. Develops away above rated horse power. Bearings adjustable. No lost motion. Economy carburetor, worth $15 more on any engine, costs nothing extra on Galloway. Cuts down fuel bills. Uses any fuel. Valves in the head exactly like highest class automobile motors. Double ball governor. Large, heavy flywheels. Big bore, long stroke, heavy weight, perfect balance. Perfect lubrication, winter or summer. Magneto (extra) supplies blue-hot spark. Make and break ignitor, never misses fire. Easily started, no cranking; needs no batteries. Cylinder and water pot frost proof. Compare the 1917 Masterpiece engine size for size, bore, stroke, weight and low speed, which means easy running and long satisfactory ergine life. Make comparison, then be your own judge. Galloway engines honestly rated; scientifically, accurately, handsomely built. Our description the truth. Engines shipped from Waterloo, Council Bluffs, Iowa, Kansas City, St. Paul or Chicago, whichever is nearest you.

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All steel flexible trucks. Won't tip over. Regular Galloway Masterpiece engine complete with friction clutch pulley, tongue, belt, belt tightener, everything but the saw. Complete description in catalog. Ask for it today.

READ THESE LETTERS FROM GALLOWAY ENGINE USERS

ONCE THEY WERE HESITATING IN YOUR POSITION. NOW THEY KNOW.

I don't think my 6 h. p. engine can be beat. It hasn't cost me much for fuel as I use only about 6 or 7 gallons of kerosene per week. I call that cheap fuel. J. E. Dailey, Odell, Neb.

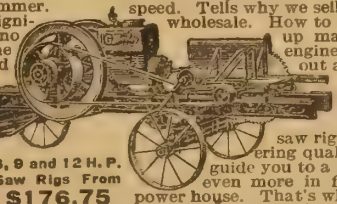
I am well pleased with my 4 h. p. engine. I have given it a fair test and it has proven satisfactory in every respect, and I am well pleased with it, besides I saved money by ordering from the Galloway Company. I shall order more from you in the future. H. L. Frye, Clarksburg, Mo.

I have run gasoline engines of different makes for the past seven years. I find the 15 h. p. Galloway the simplest, most powerful and best governed engine I ever saw run and $225.00 cheaper to me. Henry Wenham, Milton, Wisconsin.

The 6 h. p. engine is working fine. It filled three silos this fall and sawed wood last winter. It worked o. k. every time, Ed Murdock, Fonda, New York.

FREE BOOK OF ENGINE FACTS

I want you to have this new book about Galloway Masterpiece engines. It tells you how to pick out, size up and judge an engine. Gives you engine secrets and facts. Tells why to insist on heavy weight, large bore, long stroke and low speed. Tells why we sell direct to farm or shop at wholesale. How to install an engine and hook up machinery. How Galloway engines are built. How to lay out and build a cheap, efficient power house. Why our prices on high-class portable and stationary engines and saw rigs are so low considering quality. This book will guide you to a saving of $250 or even more in fitting up a farm power house. That's why I want you to get it. Ask today. A postal gets it. Address me as below.



6, 9 and 12 H. P. Saw Rigs From $176.75 to $318.50

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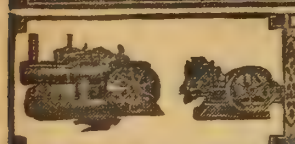
Gasoline Engine Manufacturing Specialists—Not Jobbers or Dealers.

FARM MECHANICS



Auto, Farm Engine and Farm Machinery Ailments diagnosed and remedies suggested in this department

Questions and Answers.

The Motsinger Auto-Sparker.

I own a small dynamo. It is called "The Motsinger Auto-sparker." I would like to know where this machine is made, as I would like to get some repairs for it.

Answer.—It is made by the Motsinger Device Mfg. Co., Lafayette, Ind.

Using a Water Ram.

In a recent issue I notice that a water ram can be used to force water from a stream up to a house. Can it be used to force water from a spring, taking water from a stream for power? I have a spring that never goes dry, but runs only about ten gallons per minute. I desire to have the water raised by a ram about twenty feet. There is a small creek near by that never goes dry. Could I use this creek water to work the ram and force the spring water to the desired place? I have very little fall from the spring—about three feet in one hundred feet. I could get all the fall necessary if I use the creek water.

Answer.—The creek could not be used to force the spring water by means of a water ram. Your spring furnishes water enough to operate a No. 5 ram successfully. With a four-foot fall you should be able to force about a gallon per minute up a distance of twenty feet. You could get this fall and keep the ram near the spring by placing the ram in a pit near the spring and running a ditch or tile drain from the pit to take care of the waste water. This ram would require a two-inch supply pipe and a three-fourths-inch discharge pipe. It would cost about $15.

Charging a Battery.

I would like to ask whether I can charge a sixteen-volt, thirty-five ampere hour Willard starting battery from a Delco-light farm lighting plant. How should it be connected, and how long would it take to charge it? Would I have to run the generator, or could the small battery be charged direct from the large one? The plant is thirty-two volt.

Answer.—You can use your Delco-light system to charge the starting battery. There are several ways in which the connections can be made. The easiest thing to do is to connect the positive terminal of the starting battery to the positive terminal of the Delco battery, and the negative terminal of the starting battery to the negative terminal of the Delco battery without disturbing the connections of the Delco battery. Then start the generator and charge both batteries at the same time. The smaller battery will charge more rapidly on account of its lower voltage. It should be watched at first, and, if by gasing and excessive heat, it shows that it is charging too rapidly, disconnect it at once. Trouble of this kind is not likely to be experienced, however. Another way to connect the starting battery for charging would be to cut one of the main line wires near the generator, between the generator and the house lamps, and connect the battery to the two ends, being sure to connect the positive end to the positive terminal of the battery. Then start the generator and charge the battery through the house lights. Pull the house light switch before stopping the generator, so that there is no chance for the current from the battery to flow backward through the generator. You can also charge your small battery direct from the large one, connecting plus to plus and minus to minus.

Motor Hard to Start.

I have a Model 75 Overland car with a "Dixie" high tension magneto on it. The car is hard to start when it stands still for a while. Could I fasten dry-cells to the magneto for starting?

Answer.—You could not use dry cells with the magneto. The starting trouble is more likely to be with your carburetor, or with the gasoline you are using, than with the magneto. The Sumter Magneto Co., which makes the Dixie magneto, is now making a snap coupling for their magnetos which is said to be a great aid in starting. Possibly this coupling could be applied to your magneto.

Tractor Gearing.

I enclose a sketch of a tractor that I am figuring on building. If you can help me out on the speed I will be very much obliged to you. The drivers are five feet in diameter. The differential is on the rear axle. Gear F has sixty teeth; gear E has eleven teeth; gear B has seventy-eight teeth. The teeth on gear B are smaller than the teeth on gears E and F. What size must gears A, C and D be to give the tractor a speed of three miles per hour with the engine running 600 R. P M.?

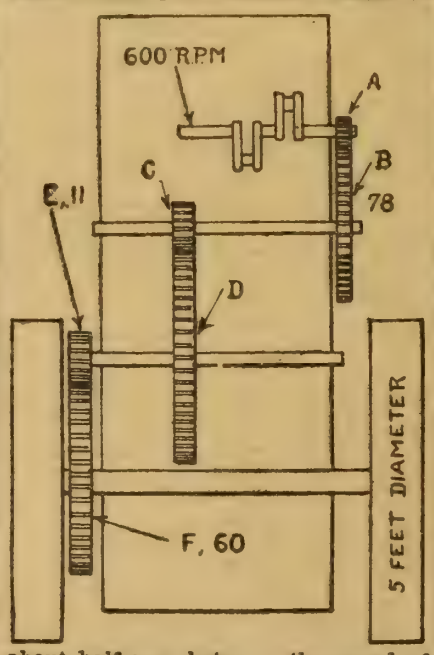
Answer.—The figure is a diagram of the arrangement of the gearing. In working a problem of this kind first find how many R. P. M. the drivers must make. This is equal to 5,280 times the number of miles per hour divided by the product of sixty times the circumference of the drive wheel. The circumference of the drive wheel may be found by running a tape around it; or the circumference may be found by multiplying the diameter by 3.1416. In the present case,

$$\text{R. P. M. of axle} = \frac{5280 \times 3}{60 \times 3.1416 \times 5} = 16.8 \text{ R. P. M.}$$

The shaft on which D and E are mounted will run

$60 \times 16.8 \div 11 = 92$ R. P. M., nearly.

The speed of the jack shaft on which B and C are mounted should be



about half way between the speed of the crankshaft and the rear jack shaft, that is, half way between 92 and 600. If A has thirty-three teeth B will make about 250 R. P. M. The ratio between the two jack shafts will then be 92 to 250, which is 1 to 2.72, nearly. C and D may be any set of gears having this ratio. If C has twenty teeth D should have twenty times 2.72, equals fifty-four teeth.

Concrete Posts For the Farm.

The question as to whether the use of concrete posts on the farm is a practicable proposition or not depends on local conditions. There is no longer any question as to whether they will stand up, providing they are made right. Concrete alone will not stand any stress to amount to anything except in compression and if it is to be used in any place like fence posts it must be re-enforced with steel. Wire has been largely used in the past for re-enforcing, but even the heaviest of wire has not proven satisfactory for a fence that is subject to heavy service. For light service they do very well and are about 10 cents a post cheaper. For insured satisfaction they should be re-enforced with one-fourth-inch steel rods, one in each corner of the post. Good, big posts, square or nearly square, will stand the best of any.

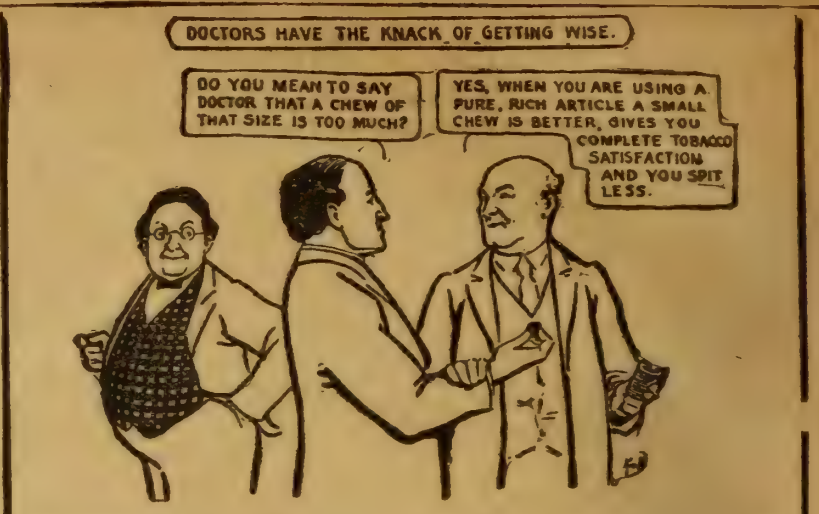
The gravel should be screened from the sand and the posts mixed one part of cement, two parts of sand and four parts of gravel (that will pass over a sand screen). It takes a very short time to pour a half dozen posts, usually not over a half hour after things are ready, but they must be left in the form for four or five days before being moved, so the process of making is relatively slow. Concrete corner posts are all right if made large enough, braced and well re-enforced in the corners. They must be poured in position and are quite expensive.

Concrete is the only post material that gets stronger as it gets older. It is fireproof and substantial. Figured for the number of years concrete posts will stand, they would be very much cheaper than the cedar post with an average life of eight to ten years.

The man that owns his own farm, has gravel handy and will make posts at odd times, will find it pays. Nothing will improve the looks of a place any more than a row of concrete posts. Begin around the house and put them in as you make them. Keep making them and set them away until you have a supply made. Don't set any until they have seasoned three months.—[Ralph L. Patty, South Dakota State College.

An amortization loan is one in which a part of the principal is paid each time the interest is paid. An amortization loan of $1,000 at 6 per cent running twenty years will require an annual payment of $87.18, while if it is at 5 per cent the payments will be $80.24, i. e., twenty payments of $80.24 will pay the interest and the principal.

Tell what you have for sale in a little advertisement in THE FARMERS' MARKET Does not cost much and may be worth a lot to you. Six cents a word each insertion.



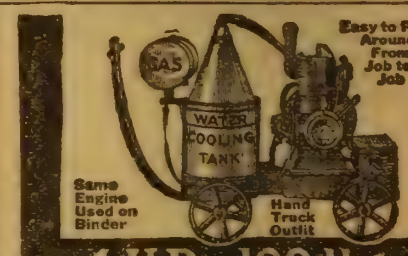
GET this under your scalp lock: "If you won't take a little chew don't take any"—that's the W-B CUT Chewing message you hear gentlemen telling each other all over the country. It's common sense applied to chewing tobacco. W-B is *rich* tobacco shredded and lightly salted—and you bet men are glad that it has come about at last.

Made by WEYMAN-BRUTON COMPANY, 50 Union Square, New York City

Where else can you buy a 1½-horse-power gasoline engine of standard manufacture for $28.95? Weighs 278 pounds. Pulls from 15 per cent to 40 per cent more that rated strength. See page 1460, new General Catalog.
Sears, Roebuck & Co. - Chicago.

Famous Four Burr Mills AND BOVEE WESTERN STEAMERS

Grind all your feed at 15 to 50 bushels per hour and small grain in proportion.
We manufacture three sizes of the Four Burr Mills, also Bovee Western Steamers.
Save one-third of your feed by grinding and cooking.
Full description and catalogue free. Address
BOVEE FURNACE WORKS
104 W. 8th Street Waterloo, Iowa



4 H.P.—190 lbs.

The 4 H. P. Cushman Handy Truck is the most useful outfit ever built for farm work. Engine weighs only 190 lbs., and entire outfit only 375 lbs.

Besides doing all farm and household jobs, this 4 H. P. Cushman may be lifted from truck and hung on rear of binder during harvest to save a team. In wet weather it saves the crop.

Light Weight Cushman Engines

Built for farmers who need an engine to do many jobs in many places instead of one job in one place. Throttle Governed, with Schebler Carburetor. Run very quietly and steadily—not with violent explosions and fast and slow speeds like old-style heavy-weights. Engine Book free.
CUSHMAN MOTOR WORKS
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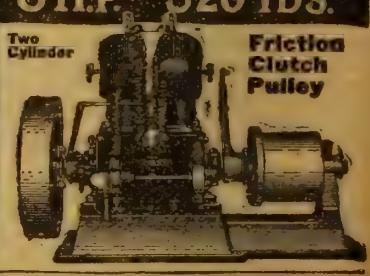
8 H.P.—320 lbs.



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LEARN a business in 6 weeks. No books. Easy to learn. Good salary. Free catalog. National Auto School, 2814 No. 20th St., Omaha, Neb.

In and Around Wisconsin

COMING EVENTS.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.
Wisconsin Poultry Association Show, At Madison, January 1st to 5th.
Automobile Show, Milwaukee, Wis., January 5th to 11th.
Wisconsin Cheesemakers' Association, at Fond du Lac, January 10th to 12th.
Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

There is some talk of a malted milk factory in Door county. This would call for a large increase in dairy cows in that section and would put Door county on the dairy as well as the fruit map of the state.

The report of the shipping association at Ellsworth, under the auspices of the American Society of Equity, shows shipment of some large bulls to the St. Paul market recently. David Gotzman shipped a Holstein bull weighing 2,230, Fred Tuebert one weighing 2,090 and Alfred Krause one weighing 2,140. On the day these were shipped the equity society handled six cars out of Ellsworth for South St. Paul.

Matters are progressing looking to the establishment of a cheese factory at Janesville for the manufacture of Greek cheese. This is a new kind of cheese to most Wisconsin farmers, and it is said is made in only two other places in the country. However, the market for this brand is said to be good and farmers, especially those interested in the Rock County Milk Producers' Association, are doing everything they can to get the new factory located and in operation.

Frank McKevitt, a well-known stockman residing near Bloomington, Grant county, was recently thrown from his horse and killed. His lifeless body was found in the pasture not far from his home. McKevitt had a splendid knowledge of Angus cattle and Duroc hogs and he was making quite a success with his live stock. He had been a leading figure in the colt show recently held at Bloomington, and was a man who will be greatly missed by the stockmen of southwestern Wisconsin.

Holstein breeders of Fond du Lac county have organized a county association. It is estimated that one-seventh of the cows in that county are Holsteins, and the first action of the new association was to plan for a consignment sale in the spring and to meet again at Fond du Lac on January 4th. The officers are: President, S. H. Bird, Byron; vice president, S. C. Stanchfield, Fond du Lac; secretary, C. H. Brugger, Empire; treasurer, C. M. Corcoran, Fond du Lac. Directors: Elton E. Gillett, Rosendale; F. J. Bristol, Oakfield; S. M. Randall, Waupun, together with the officers. Committee on by-laws: Elton S. Gillett, C. M. Corcoran and Wm. F. Braatz, Ladoga.

Holstein breeders of Fond du Lac county were recently organized through the efforts of prominent men of the county. The officers chosen are: S. H. Bird, Byron, president; S. C. Stanchfield, Fond du Lac, vice president; C. H. Brugger, Empire, secretary; C. M. Corcoran, Fond du Lac, treasurer; E. E. Gillett, Rosendale; F. J. Bristol, Oakfield, and S. M. Randall, Waupon, with the other officers, constitute the board of directors. It was decided to donate a calf for the boys' judging contest list at the county fair. There is talk of a sale pavilion for the combined use of the several breeders' associations of the county. The following breeders were present at the meeting: S. C. Stanchfield, E. C. Peebles, C. H. Brugger, S. H. Bird, C. M. Corcoran, K. W. Merrill, H. G. Peebles, S. W. Peebles, W. H. Mullen, Charles Barberry, J. Roach, C. H. O'Neil, E. S. Gillett, August Volbrecht, A. E. Tulledge, W. A. Smith, L. H. Brown, O. S. Fenner, T. J. Madigan, A. W. Marchant, B. Clapham, J. E. Peebles, Peter Hammen, Alfred Backhaus, William Braatz, Ed Braatz, Paul Roessler, T. S. Ellsworth, W. H. Fisher, Carl Hayes, S. M. Randall, H. W. Bennett, A. W. Root, Dennis O'Hearn, Sam Stanchfield, H. Cantzler, A. L. Williams, W. F. Braatz, Fletcher Bros., C. W. Keyes, Otto Pfeifer, W. A. Lohae, A. A. Briggs, H. J. Forest. There are some splendid Holstein herds in the county and the leading breeders are anxious to co-operate to advance the interest of all.

In connection with the recent community institute at Fond du Lac, a grain show was held and the following won first awards: Barley, Vaughn West, Ripon; oats, Vaughn West, Ripon; white dent corn, Charles Zimmerman, Peebles; yellow dent corn, H. R. Burg, Peebles; flint corn, John Dunisch, Eden; spring wheat, Charles Ahner, Van Dyne; winter wheat, Vaughn West, Ripon; winter rye, Vaughn West, Ripon; red clover seed, Chris Immel, Fond du Lac; alsike clover seed, Joseph Steffon, Peebles; timothy seed, Vaughn West, Ripon; early potatoes, Willion Zahn, Fond du Lac; late potatoes, A. D. Chesley, Campbellsport; alfalfa, Albert Murray, Ripon.

The Wisconsin Farmer recently gave an account of the first market day in La Crosse. This experiment started out as only a partial success, for while the people of La Crosse came in large numbers to purchase produce, the farmers failed to bring in their stuff. A later report shows that the second trial of market day showed about 200 farmers present with produce, and all of this was taken away before the day ended. One farmer who brought in a whole carcass of beef sold the entire offering in less than an hour. Chickens sold at 14 to 16 cents, potatoes $1.60 to $1.80 per bushel, turkeys 26 to 30 cents a pound, butter 36 to 40 cents and other prices were in proportion. The market square in La Crosse has been a market in name only for years, but it now promises to fulfill its mission.

VETERINARY MATTERS

PROFESSIONAL Veterinary advice through this department to regular subscribers only. We do not answer veterinary inquiries for the benefit of "neighbors." Parties desiring information will be required to send their names in full with their address. No question will be answered by mail unless accompanied by a fee of one dollar. In order that correct information may be given, the symptoms should be accurately described, stating of how long standing, together with color and age of animal, and what treatment, if any, has been resorted to. All veterinary inquiries should be addressed to this office.

Ailing Animals.

Digestive Disturbance.

I have a mare colt that was born in April. I weaned her at five months old and she hasn't looked the same or felt the same since. She seems to have good health but her hair looks rough and she looks sleepy. She gets some bran, oats and hay. She has been sick. I would like to know if you could tell me what is the matter with her.

Your colt is probably afflicted with digestive disturbances. Would advise you to have your veterinarian give this colt a good examination and prescribe for it.

Abscess on Jaw.

I have a spring calf that has a large lump nearly the size of a teacup under the jaw. It came there about two weeks ago and seems to be growing larger. Apparently it causes no pain, as the calf eats all right and is doing well. The lump is about half way between the throat and point of jaw bone. Please tell me what you think it is and what to do for it. Should I lance it? I feed kafir corn fodder.

This may be an abscess pure and simple or it may be an abscess from lumpy jaw. You had better have your veterinarian treat this if you want to get quick results.

Paralysis.

I have a black seven-year-old mare that aborted last spring. In about a month she became lame, not having much use of her leg, and shrunk away in one whole hind quarter. Our home veterinarian injected medicine in hip and said she would get well and hip fill in after cooler weather. She seems to be a trifle better in the use of her leg, but the hip has failed to fill out. We would like to know if you think, as our veterinarian did, that she will ever become well again. She has had the absolute run of the pasture since this happened.

There was probably some paralysis following parturition in this mare and later atrophy of the muscles took place. Have your veterinarian give you some good nerve tonic for this mare and inject her hip again.

Question of Ear Mark.

Two neighbors here had a lawsuit over a calf that was born in the spring of 1914, both proving the steer, and the steer in question had both men's ear mark. A's mark was a notch on the bottom lobe of the left ear, being put there when the calf was only about nine or ten months old, so he says, and B's ear mark was slit straight out just below the point of the right ear, being placed there in the spring of 1916, so says B. There was considerable controversy as to which cut or brand was put on first. Now is it possible for a good veterinarian to tell by a medical method which brand or cut was put on first? Is there any way by which it is possible to tell which is the oldest cut? Does the age of calf make any difference in the looks of a scar after it has been healed over for six or more months?

Your question is rather a difficult one, but we would say that it would be very difficult to say which mark was made first, even by an expert, and even appearances of the mark might lead one astray then.

Swelling of Limbs.

I have a seven-year-old mare that is bothered with a swelling in the limbs, commencing at the joints and then going up until the whole leg is swollen. It remains swollen for different lengths of time. It seems that hard work or hard driving will start this swelling, and standing in the barn makes it worse. This mare at one time almost had poll evil and at the present time this swelling seems to have gone to one of these lumps. When this mare was two years old she had the distemper. At that time it got hard on her breast and never broke.

Why haven't you had this mare examined long ago by a competent veterinarian? This mare's system is probably in a run-down state from her former troubles. Try giving her rest and freedom in the pasture and give her one tablespoonful of liquor potassi arsenitis in a half pint of water as a drench every morning. Remember this is poisonous and don't give any more than stated. This may help to put her in better condition if followed up for some time.

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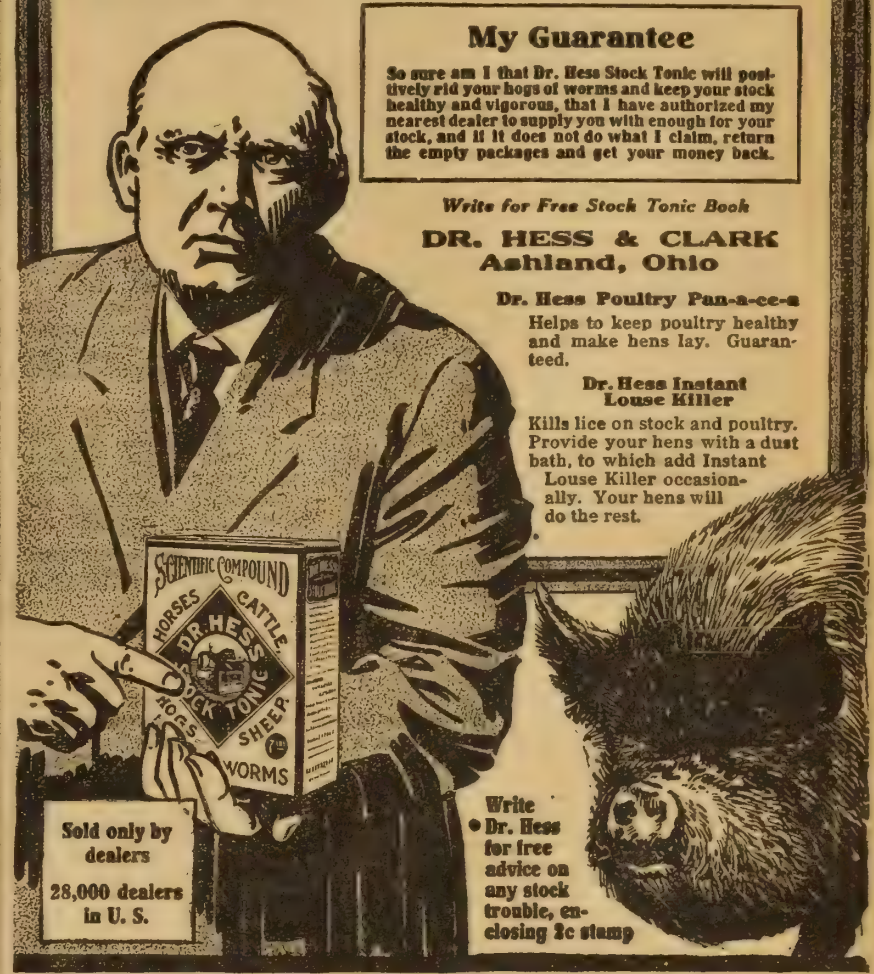

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DAIRY

Moisture in Cheese.

The amount of moisture which shall be permitted in Wisconsin cheese has always been a thorn in the side of many of our cheesemakers. Differences of opinion as to what constitutes the proper percentage of moisture have prevented any definite agreement and every legislature for the last dozen years has had to fight with this problem. As the coming legislature and the Wisconsin Cheesemakers' Association at their first meeting in Fond du Lac county in January will have the matter up for consideration again it is interesting at this time to note the result of moisture tests and investigations of Wisconsin cheese made during the past summer by Prof. J. L. Sammis, of the Wisconsin Dairy School, Mr. L. J. Schenkenberg cooperating.

To learn how much moisture the general run of Wisconsin cheese contained in 1916, 567 samples were collected from about twenty-five cheese dealers who were asked whether the samples submitted were considered fit for (1) export; (2) southern trade, or (3) too soft and moist for either purpose. Of this number 243 samples, or 43 per cent, were considered too moist for the dealer's trade, although the average moisture content in this class decreased from 41.45 per cent between May and September. From May 25th to September 1st the moisture content of cheese in the southern trade decreased from 39.24 per cent to 37.68 per cent and a slight decrease also in the export class. Professor Sammis on the basis of these figures draws the following interesting conclusions:

For the months of April, May and June the best place to draw the dividing line between the "southern trade" and "too moist" classes is at 40 per cent moisture, and that ninety-two out of the ninety-nine export cheese, and seventy-five out of the eighty-five southern trade cheese (or 90 per cent of all) fall within this limit, containing less than 40 per cent moisture. On the other hand 101 out of 128 'too moist" cheese would be excluded, as containing over 40 per cent of moisture. The best place to draw the dividing line as to moisture for the months of July and August is found to be at 39 per cent, but here only 82 per cent of the export and southern trade cheese would pass as containing less than 39 per cent moisture, while onl. 63 per cent of the "too moist" cheese be excluded as containing more than 39 per cent moisture.

This variation from 40 to 39 per cent corresponds to the fact well known to cheese dealers that in the cooler months of spring, a somewhat softer cheese can safely be shipped to the south than could be used for the same markets later in the season.

If the proposed moisture limit were set at about the dividing line between export and southern trade cheese at 36 per cent or less, over half of the state's cheese would have to be made firmer than at present.

If it is considered that the export and southern trade cheese now contains a satisfactory amount of moisture, and that it is only the "too moist" cheese which needs to be improved, the proposed limit would appear to stand at about 39 or 40 per cent. Since a standard of 40 per cent before and 39 per cent after July 1st of each year would not be practical, it is likely that 39 per cent is the preferable figure, which would prove acceptable to the majority of cheesemakers. If the standard were set at 39 or even 40 per cent, it can be seen that the moisture content of about one-third of the entire output would be reduced, and a great improvement effected.

Preventing Moldy Butter.

Placing butter tubs, covers and liners in water heated to 150 degrees Fahrenheit or above for a few minutes previous to packing is about the cheapest and most effective method of preventing mold, according to E. G. Hastings, college of agriculture, in an address before the Wisconsin Buttermakers' Convention here today.

"Cuts of several cents a pound on moldy butter are as common as they are wholly needless and preventable," stated Mr. Hastings. "To presume that poor refrigeration in storage and transit is the cause of moldy butter is to hit wide of the mark. The three chief essentials for mold growth are food, moisture and air. If tubs and paper have been so stored that no growth of molds has taken place on them, if the cream has been properly handled, there will be no vegetative growth of the mold spores on the paper, tubs, or in the cream."

In his summary the speaker mentioned the following points:

Unsalted butter has been found more likely to develop mold than the salted product.

Rubbing tubs with salt and soaking them in brine, and similar precautions cannot take the place of processes by which the molds on paper and tub shall be actually destroyed.

Mold is not likely to develop on salted butter placed in containers and wrappers which have been kept dry in storage before packing.

Mold is easily killed by hot water or steam, at much less expense than by the use of certain chemical agents.

As a still further precaution, it is advisable to pasteurize all cream and thus destroy all mold spores in the product at the outset.

Water For the Cows in Winter.

If water and fresh air cost something for our animals they would be used to a better advantage. Hens require water to lay eggs. Cows no less require an abundance of water to give milk. To be convinced, it is only necessary to read the analysis of a pound of milk or an egg.

That the water must be "good and pure" goes without saying, but that one thing has been harped upon so long as to become tiresome. Going a trifle deeper into the question, do our cows get water at all through zero weather? An accusation of this kind would, of course, cause any self-respecting farmer to become indignant, and with some reason, because no one would permit an animal to suffer for water if only from a humanitarian standpoint.

They "get water," but from where? In all too many cases it is from a tank where a hole has been cut through ice twelve inches thick, out in the open, where the cold wind is blowing, causing her to get yet another hump in her already crooked back. Other animals often refuse to drink as much water as necessary under this kind of condition, but cows just simply cannot drink; their teeth cause them pain, and the result is that they do without.

It is with a good deal of amusement that we read about giving our cows "fresh cold water" if we would prosper. The fresh may be all right, but we have seen cows leave a tank of such in hot weather and snatch the really warm water flowing from a heated pipe, in preference. Cows are built this way, and by observance it is possible to learn what is better for them.

Few are the cases where water is "piped to the stalls," on the general farm, where the dairy cow is a side line. Few are the times we can follow the advice of the ones who have modern improvements to the letter; but certain it is that in the main we can profit by each and every experiment. The point is that the cow needs water at least 20 degrees above freezing, or warmer, and how to get it on the average farm.

A tank heater may be purchased at a small cost and will pay for itself many times over in one winter.

HONOR ROLL OF BUTTER-MAKERS.

Following are the names of the buttermakers who have received the highest scores at the conventions of the Wisconsin Buttermakers' Association since it was organized at Madison in 1902:

	Score
1902, Geo. H. Holmes, Baraboo	98.00
1903, G. G. McIntyre, Whitewater	98.00
1904, W. H. Larson, Neenah	97.00
1905, I. W. Stryker, Lomira	97.00
1906, F. E. Anderson, Somers	97.50
1907, F. E. Anderson, Somers	96.00
1908, L. P. Holgerson, Troy Center	97.00
1909, G. P. Sauer, East Troy	96.66
1910, F. E. Raven, Bloomer	96.50
1911, I. W. Stryker, Nashotah	96.50
1912, I. W. Stryker, Nashotah	97.50
1913, L. L. Bolstead, Basco	97.50
1914, John E. Mattson, St. Croix Falls	96.16
1915, H. H. Whiting, Johnson Creek	97.00
1916, L. L. Bolstead, Basco	96.50

Cow-Testing Reports.

Sparta-Tomah Association.

To the Editor:—The Sparta-Tomah Cow-Testing Association had twenty-one cows during the month ending December 10, 1916, which produced forty pounds of fat or over. Ray Augstin had the highest herd average for the month. His herd of eight Holsteins produced an average of 945 pounds of milk, 4.2 per cent test, or 39.7 pounds average fat. The highest producing cow was a Holstein (grade) owned by J. W. Leverich, of Sparta. She gave 1,386 pounds of milk of 4.2 per cent fat, or 58.2 pounds. She is a four year old. The seven cows producing forty-five pounds of fat or over for thirty days ending December 10th, are as follows:

Owner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
J. W. Leverich					
Gr. Hol.	4	11-20-16	1386	4.2	58.2
Gr. Hol.	7	8-13-16	1110	4.3	47.7
R. B. Robertson					
Gr. Guern.	5	11-12-16	975	4.8	46.8
N. J. Hansen					
Gr. Guern	6	11-20-16	1134	4.3	48.7
Ray Austin					
Gr. Hol.	6	11-25-16	954	4.9	46.7
Gr. Hol.	4	11-21-16	996	4.7	46.8
George Jordan					
Gr. Guern.	5	8-30-16	1032	4.6	47.4

C. P. Chrysler, Official Tester.
W. J. Brennan, Sec.-Treas.

River Falls and Roberts Association.

To the Editor:—The following table shows the names and records of cows in the River Falls and Roberts Association, which produced forty-five pounds of butter fat or over for the thirty-day period, ending November 27, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
M. R. Pritchett					
Linnie, G. G.	3	10-6-16	1131	4.5	50.8
J. L. Chapman					
Clover, G. H.	4	9-3-16	1662	3.2	53.2
Belle 3d, R. H.	3	10-24-16	1640	3.5	57.4
Glen Batten					
Fanny, G. G.	9	10-31-16	1085	5.3	57.5
Betty, G. G.	7	9-21-16	976	5.2	50.7
S. E. Batten					
No. 11, G. H.	11	10-30-16	1534	3.6	55.2
L. W. Ash					
Daisy, R. J.	3	10-26-16	896	5.3	47.5
H. A. Rundell					
Lillie, G. G.	6	10-17-16	1048	5.6	59.7
Wm. Lamb					
Mildred, G. J.	5	10-30-16	1089	4.2	58.3
Lady, G. J.	4	10-21-16	1305	4.0	52.2

J. M. May, Secretary.
C. G. Carlson, Offcial Tester

Wrightstown-Greenleaf-Brillion Association.

To the Editor:—The following table gives the names and records of the cows in the Wrightstown-Greenleaf-Brillion Association, which have produced forty-five pounds of butter fat or over for the thirty-day period ending November 30, 1916:

Owner, name and breed	Lbs. milk	Per cent fat	Lbs. B. fat
Aug. Tamm			
No. 6, H.	1314	3.8	50.0
J. F. Kloehn			
Spottie, H.	1531	3.8	58.1
A. Meulemans			
Jennie, H.	1371	3.8	52.0
H. Boumgartner			
Fannie, G.	822	6.2	51.9
Peggy, G.	930	5.0	46.5

F. A. Fraiser, Official Tester.
M. Phillips, Secretary.

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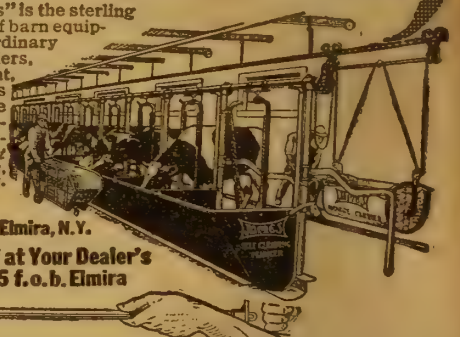

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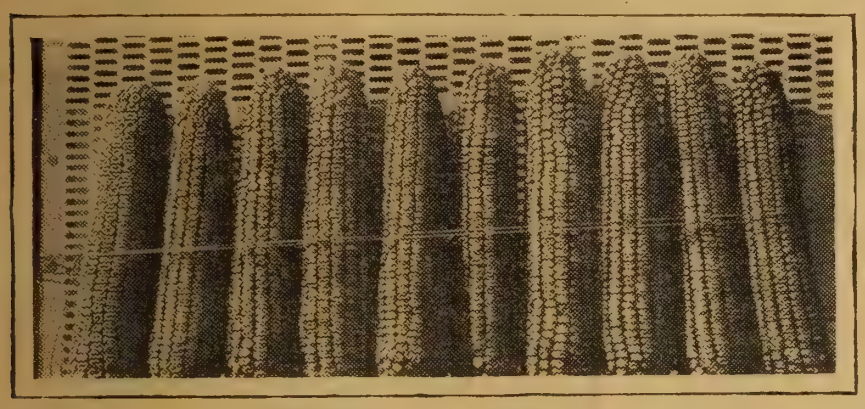
UPPER WISCONSIN

Wisconsin No. 25 Corn.

To the Editor:—I am glad to send some word to your valuable paper regarding my experience with Wisconsin No. 25 corn. I am really more anxious about hearing from other people and of their success and experience than I am of telling my own. I believe, however, that Mr. Delwiche, in charge of our experiment station, has not overestimated the value of our Wisconsin No. 25 corn. I believe that with a little co-operation by those who are growing this variety, the type and yields may be brought to a standard which will surpass the older varieties. Usually pick from 200 to 300 bushels for seed and out of this I select 200 ears for my own seed. From my crop of 1915 I sold seventy bushels of seed corn at $8 a bushel and ten bushels at $5 a bushel, making a total of $610. My corn took second place in the state-wide grain exhibit at the University of Wisconsin in the winter. I believe that with proper care and attention good corn can be raised in the Upper Wisconsin country. But a great deal depends upon the seed and the variety must be acclimated. The Wisconsin No. 25 is a cross between the Wisconsin No. 8 and an early yellow dent variety, secured in the northern part of the southern peninsula of Michigan. The cross was made in 1911 and the new variety was first grown at the experiment station in Spooner in that year. The standard for this variety is a deep yellow with a somewhat reddish tinge, a rather deep kernel, and twelve to sixteen (preferably fourteen) rows. I expect my 1916 corn crop to run about $86 to the acre. The Wisconsin No. 25 corn has run about seventy-five bushels to the acre, and I expect that a good part of my seed will bring me $3 a bushel. I am certain that any Upper Wisconsin farmer with good soil and good cultivation methods combined with the right seed can make a success with corn in Upper Wisconsin. I did it with a wet year and also with a dry year and am well pleased at the returns for my efforts.

C. A. Correll.

Marinette Co., Wisconsin.



WISCONSIN NO. 25 CORN—1916.
This picture loaned to Wisconsin Farmer by E. J. Delwiche in charge of Oakland Junction Station.

Trying Molasses in Feed.

A number of farmers in the vicinity of Ladysmith are going to try out molasses as a stock food this winter and believe it will prove very profitable mixed with other foodstuffs.

Mike Arts, who lives near Tony, is one of the first, if not the first, to try feeding molasses to stock. He had a lot of clover hulling that his cows absolutely refused to eat, throwing it out of their way with a toss of the head.

A report to The Wisconsin Farmer from Rock county says Mr. Arts purchased a barrel of molasses at 28 cents a gallon and reduces it by mixing it with water as he uses it. He uses two or three quarts of molasses a day, sprinkling the solution on the clover hullings, which his cows then eat with the greatest avidity. Every particle of the feed is now licked up, slick and clean.

Molasses at 28 cents a gallon costs about 3 cents per pound, so that it cannot be classed as a highly expensive food when it is considered that ordinary feed is worth over 2 cents per pound.

The molasses used by Mr. Arts is ordinary New Orleans table molasses and if there is sufficient demand a cheaper grade can be secured that will be just as valuable as a feed and considerably lower in price. An additional economy can be gained by shipping it in carload lots.

Thinks No. 25 Corn Best.

To the Editor:—I have raised Wisconsin No. 8, No. 12 and No. 25 corn, and this is my third season for the No. 25. I keep dairy cows and raise hogs. I never cut corn fodder for cattle if I have enough other rough feed. I raise corn and barley to fatten the hogs. If corn gets ripe I feed it and sell the barley. If not I turn my stock in and dairy it down. My No. 25 corn this year was planted the last week in May and was all in the crib November 1st, and yielded about forty bushels to the acre. There is not a rotten ear in my corncrib at this time. No. 25 is larger both in ear and stock than No. 8 and just as early. It is somewhat smaller both in stalk and ear than No. 12, but I find that it is much more certain of ripening. I think it would be best for silage, though it would sacrifice a little in bulk to get the matured grain. I have also raised some of the flint types in this northern country. So far as I can judge from my own experience No. 25 is the most satisfactory corn to raise.

George H. Gose.

Marinette Co., Wisconsin.

More Cheese Factories.

Two more cheese factories have been erected in Rusk county, which is showing a remarkable development in the dairy industry. The new factories are at Tony and Flambeau. Rusk county is not only adding to her own wealth but helping swell the dairy receipts of the state, and, furthermore, is a good market for southern Wisconsin dairy stock.

How a County Agent Keeps Busy.

Mr. John S. Klinka, of Polk county, recently made a report of his work as agricultural representative. Some idea of the character of work which such a man does may be gathered from the following table:

No. of letters and circulars written	2,445	4,234
No. of conferences and phones	232	479
No. of calls made at farms.	232	463
No. of meetings and lectures	47	50
No. of attendance at these.	...	2,589
No. of herds of cattle tested for tuberculosis	18	9
No. of head of cattle tested for tuberculosis	138	94
No. of herds vaccinated for blackleg	8	22
No. of head vaccinated for blackleg	95	182
No. of preliminary surveys.	9	22

Mr. Klinka conducted two short courses for boys, assisted in organizing a cow-testing association; made twenty-nine surveys for drainage projects; assisted in planning twenty barns; helped to conduct corn and potato contests; helped to get up the state fair exhibit; assisted in installing a septic tank, and conducted five excursions of farmers, including trips to St. Paul; to Washington county, Minn.; to St. Croix county and through Burnett county.

Superior as Grain Market.

Almost 100,000,000 bushels of grain passed through the Superior, Wisconsin, elevators and mills within the past fiscal year, according to a statement of grain tax collected by the city treasurer. A tax of ¼ mill is levied on wheat and flax and 1-8 mill on all other grains, and this nets the city of Superior about $20,000 a year. Of the total taxed during the past year, 67,000,000 bushels was wheat and flax.

Gets $4,500 For Potatoes.

C. P. Coon, of Belden, Rusk county, Wisconsin, disposed recently of 3,074 bushels of potatoes for a total sum of $4,500, on an average of about $1.45 per bushel. Mr. Coon is one of the progressive potato growers of Upper Wisconsin and his name has been prominent in the work of the Wisconsin Potato Growers' Association.

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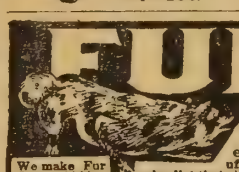

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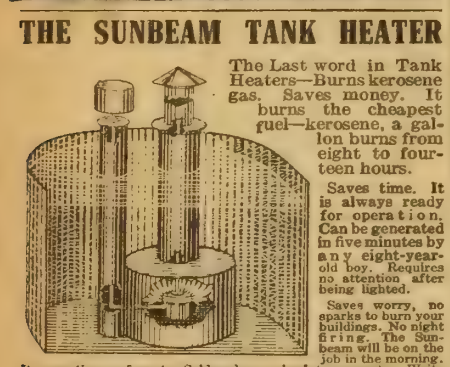

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BABY CHICKS and eggs from trap nested, pedigreed Barred Rocks and S.C.White Leghorns with wonderful egg records. Write for circular to Amos G. Norman, Dept. D, Chatsworth, Illinois.

HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

How Are Your Hens Laying?

To the Editor:—He who succeeds in getting hens to lay in the winter—all winter and every winter—has learned the secret of financial success in poultry raising. It is not an easy thing to do, yet is being done by many right along and all who do it make good money out of their business whether in a large way or on a small scale.

Winter is nature's rest period for the hen; a wise provision for the protection of her young. But science can change nature very materially in nearly all domestic animals and in none more radically than in the barnyard fowls. Flocks of hens that are allowed to shift for themselves for two or three generations will not lay a dozen eggs each from October to March if the weather stays cold and even later if the weather stays rough. This statement can be verified on many farms every year in almost any neighborhood. Again there are farms where attention is given to the breeding and care of the poultry and where 40 to 50 per cent of eggs are gathered right along through the winter.

Now, what makes the difference? Simply attention to the breeding, feeding and general care of the flock. Among the hens there will occasionally be one or more that will molt earlier than the average. She or they will usually commence laying soon after the molt is completed, and, in most cases, such hens will lay more or less all winter if their conditions are anything like favorable. Such hens are worth their weight in nickels as breeders, providing they are pure bred or nearly so. I would emphasize "pure bred" because they are on the whole the best. One may cross pure-bred fowls and from the first cross get some extra good layers, sometimes surpassing the parents on either side, but if these half breeds are used for breeding purposes it will almost always be found that their progeny are poor layers.

Do not fail to save all your early laying pullets from your pure-bred stock, for the pullets that begin laying comparatively young, especially in the fall, will usually prove a splendid winter layer and consequently a good breeding hen from which to raise winter layers.

Continue this method of selecting young breeders for a generation or two and you will have a flock from which you can reasonably expect winter eggs regularly, provided they have the necessary care and feeding.

A second essential in securing a good egg yield in winter is the housing of the layers. This should be done before the cold weather sets in, anyway before the snow comes. If laying pullets and hens are allowed to run out, even in a light snow, it will at once stop most of them from laying, and once checked in cold weather it is not easy to get them started again. House the layers if you want winter eggs. It is not so essential that the house be really warm or expensive, but it should be dry and practically wind proof on west, north and east sides. The south side should be more or less open and should have a large open space of at least 3x4 feet for every fifty fowls. This opening may have a muslin screen which can be closed in case of severe storms from the south. The birds must have fresh air to insure good health. If the house is small a good scratching shed will be appreciated by the fowls and will pay large returns on the slight expense of building it.

If you are living on a rented place and do not want to buy lumber and build a henhouse, or, if your means will not admit of your doing so, a very good and comfortable house can be constructed with almost no expense at all by using simple posts and poles or cheap old lumber, making double walls which can be covered with straw. By making the spaces in the side walls several inches thick and packing the straw quite solid the house will be free from drafts and very comfortable. The third essential in getting winter eggs is the feed. This should consist of a variety of grains, as corn, oats, wheat and barley, together with corn and oats chop and wheat bran and shorts. Pumpkins, beets, turnips and any other vegetables usually raised on the farm can be fed, as much as the fowls will eat either raw or cooked, with good results.

It is a simple matter at this season of the year and all winter as well to cut up a pumpkin or some turnips or beets and put them on the stove in some suitable vessel and let them cook for an hour or so when they will be soft. Into this when cool enough work the bran or meal with the hands until thoroughly mixed when the fowls will relish it immensely. You can look for eggs from a laying strain when they are fed liberally with vegetables thus prepared and plenty of grains.

Subscriber.

Importation of sugar beet seeds into the United States in the nine months ending September 18th, one-half million pounds, broke all previous records, according to a department of commerce statement. This exceeded by more than a million pounds imports in the calendar year 1913-1914 and was almost twice as much as in the full year 1912. Russia is now the chief source of supply whereas, prior to the war, Germany held the bulk of the trade. Total imports of sugar beet seeds in the fiscal year ended June 30th were 9,042,090 pounds, of which Russia furnished 5,881,946 pounds.

THE FARMERS' MARKET

WANTED—FOR SALE—TO EXCHANGE

THIS department is to bring the buyer and the seller together. You may want help. You may have live stock, poultry and eggs, or machinery for sale. Maybe you want to sell or to buy a farm. Think how you can advertise now. Write your copy for the advertisement. The rate is six cents per word, each insertion. Note the low cost to reach our 90,000 circulation.

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NOTICE: The Official Milking Machine is low priced, classy, simplest, easiest to clean and most sanitary. None better regardless of price. Sold on "Your Money Back" guarantee. Mail orders solicited and I'll send an expert to install and start machine. Reliable agents wanted. Address F. C. Coward, Distributor, Elkhorn, Wis.

WISHING to retire on account of age, I offer for sale a controlling interest in a prosperous bank of $30,000 capital, carrying with it the presidency at a good salary, together with a nice, brick cottage home and eighty acres irrigated land near town, in a flourishing, South Texas community. Address "L" care of this paper.

IT'S so E. Z. to get a farm here. We help worthy families to locate and succeed. Write. Let us show you what others are doing in this rich dairying district near Duluth. Arnold, Com'r, D. & I. Ry., 519 Wolvin Bldg., Duluth, Minn.

SEVERAL tracts choice cutover hardwood land for sale. Surrounded by improved dairy farms in wonderful central Wisconsin. Adam Paulus, (owner), Marshfield, Wis.

FOR SALE or exchange for wild land in southwestern Nebraska, live stock farm of 760 acres 2½ miles from town. Write Albert Ferdon, Pittsville, Wisconsin.

POLAND CHINA SWINE.

REGISTERED Poland China boars for sale. Truman Austin, Leon, Wis.

DUROC JERSEY SWINE.

FOR SALE—Two Duroc Jersey spring boars from matured stock. H. A. Brager, Mount Horeb, Wis.

LANDS AND HOMES

PROSPERITY IN CANADA

THOUSANDS of farmers in Western Canada have sold their crops this year for more than the total cost of their land. Land at $15 to $30 per acre has produced crops worth $40 to $75 an acre. Stock raising and dairying are equally profitable—hogs and beef highest in country's history. Irrigation districts producing more alfalfa and fodder crops than ever before. Get your farm home from the Canadian Pacific Railway. Last year I asked you to take advantage of this opportunity—you might have paid for your farm with the 1916 crop—again I extend the invitation. Good land from $11 to $30 per acre; irrigated land from $35; 20 years to pay; government guarantees land and water titles. Pay in full at any time if desired. We will lend you up to $2,000 in improvements in certain districts, with no security other than the land. Ready-made farms sold on special easy terms. Loan for live stock after one year's occupation, subject to certain reasonable conditions explained on request. Low taxes; no taxes on improvements. Free schools; full religious liberty; good climate, and the best neighbors in the world. Other farmers becoming rich in Western Canada; you have the same opportunity. Buy direct from the Canadian Pacific Railway. Write for free book and full information. J. S. Dennis, Assistant to the President, Canadian Pacific Railway, 82 Ninth Avenue, Calgary, Alberta, Canada.

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COME away from the snow. Homes, Farms, Lands in Southern States. Big crops. Low prices. Lists free. Geo. M. Heath, American National Bank, Richmond, Virginia.

TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART III. "Prince Charlie"

CHAPTER X—Continued.

A feeling that the story on paper could never convey was brought to every listener by the something in his voice that was not tears, but suggested the emotion back of tears. They had always acknowledged the magnetism of the man, but felt that he was excelling himself in this instance. Tillie and Fred were silently crying. Rachel was staring very steadily ahead of her—too steadily to notice that the hand laid on Genesee's revolver at the commencement of the story had gradually relaxed and dropped listless beside him. All the strength in his body seemed to creep into his eyes as he watched Stuart, trusting as much to his eyes as his ears for the complete comprehension of the object in or back of that story. In the short pause the author, with one sweeping glance, read his advantage—that he was holding in the bonds of sympathy this man whom he could never conquer through an impersonal influence. The knowledge was a tenfold inspiration—the point to be gained was so great to him; and with his voice thrilling them all with its intensity, he read on and on.

The story? Its finish was the beginning of this one; but it was told with a spirit that cannot be transmitted by ink and paper, for the teller depended little on his written copy. He knew it by heart—knew all the tenderness of a love story in it that was careless of the future as the butterflies that coquette on a summer's day, passing and repassing with a mere touch of wings, a challenge to a kiss, and then darting hither and yon in the chase that grows laughing and eager, until each flash of white wings in the sun bears them high above the heads of their comrades, as the divine passion raises all its votaries above the commonplace. Close and closer they are drawn by the spirit that lifts them into a new life; high and higher, until against the blue sky there is a final flash of white wings. It is the wedding by a kiss, and the coquettings are over—the sky closes in. They are a world of their own.

Such a love story of summer was told by him in the allegory of the butterflies; but the young heart throbbing through it was that of the woman-child, who had wept while the two brothers had clasped hands and accepted her as the trust of the dying; and her joyous teacher of love had been the fair-haired, fine-faced boy, whose grief had been so great and whose promises so fervent. It is a very old story, but an ever-pathetic one—that tragedy of life; and likewise this one, without thought of sin, with only a fatal fondness on her part, a fatal desire for being loved on his, and a season's farewell to be uttered, of which they could speak no word—the emotions that have led to more than one tragedy of soul. And one of the butterflies in this one flitted for many days through the flowers of her garden, shy, yet happy, whispering over and over, "His wife, his wife!" while traveling southward, the other felt a passion of remorse in his heart, and resolved on multitudinous plans for the following of a perfection of life in the future.

All this he told—too delicately to give offense, yet too unsparingly not to show that the evil wrought in a moment of idle pastime, of joyous carelessness, is as fatal in its results as the most deliberate act of pre-conceived wickedness.

And back of the lives and loves of those two, with their emotional impulses and joyous union of untutored hearts, there arose, unloved and seemingly unloving, the quiet, watchful figure of the Esau.

Looking at his life from a distance, and perhaps through eyes of remorse, the writer had idealized that one character, while he had only photographed the others; had studied out the deeds back of every decided action, and discovered, or thought he had, it was the lack of sympathy in his home life that had made a sort of human porcupine of him, and none had guessed that, back of the keen darts, there beat a pulse hungry for words such as he begged from his mother at the last—and receiving, was ready to sacrifice every hope of his, present or future, that he might prove himself worthy of the trust she had granted him, though so late.

Something in the final ignoring of self and the taking on his own shoulders the responsibilities of those two whom his mother had loved—something in all that, made his appear a character of heroic proportions, viewed from Stuart's point of view. He walked through those pages as a live thing, the feeling in the author's voice testifying to his own earnestness in the portrayal—an earnestness that seemed to gain strength as he went along, and held his listeners with convincing power until the abrupt close of the scene between those two men in the old New Orleans house.

Everyone felt vaguely surprised and disturbed when he finished—it was all so totally unlike Stuart's stories with which he had entertained them before. They were unprepared for the emotions provoked; and there was in it, and in the reading, a suggestion of something beyond all that was told.

The silence was so long that Stuart himself was the first to lift his eyes to those opposite, and tried to say carelessly:

"Well?"

His face was pale, but not more so than that of Genesee, who, surprised in that intent gaze, tried to meet his eyes steadily, but failed, faltered, wavered, and finally turned to Rachel, as if seeking in some way his former assurance. And what he saw there was the reaching out of her hand until it touched Stuart's shoulder with a gesture of approving comradeship.

"Good!" she said tersely; "don't ever again talk of writing for pastime—the character of that one man is enough to be proud of."

"But there are two men, said Fred, finding her voice again, with a sense of relief; "which one do you mean?"

"No," contradicted Rachel, with sharp decision; "I can see only one—the Esau."

Stuart shrank a little under her hand, not even thanking her for the words of praise; and, to her surprise, it was Genesee who answered her, his eyes steady enough, except when looking at the author of the story.

"Don't be too quick about playing judge," he suggested; and the words took her back like a flash to that other time when he had given her the same curt advice. "Maybe that boy had some good points that are not put down there. Maybe he might have had plans about doing the square thing, and something upset them; or—or he might have got tangled up in a lariat he wasn't looking for. It's just natural bad luck some men have of getting tangled up like that; and maybe he—this fellow—"

Fred broke out laughing at his reasoning for the defense.

"Why, Mr. Genesee," she said gleefully, "an audience of you would be an inspiration to an author or actor; you are talking about the man as if he was a flesh and blood specimen, instead of belonging to Mr. Stuart's imagination."

"Yes, I reckon you're right, Miss," he said, rising to his feet, with a queer, half-apologetic smile; "you see, I'm not used to hearing folks read—romances." But the insolent sarcasm with which he had spoken of the word at first was gone.

The others had all regained their tongues, or the use of them, and comment and praise were given the author—not much notice taken of Genesee's opinion and protest. His theories of the character might be natural ones; but his own likelihood for entanglements, to judge by his reputation, was apt to prejudice him, rendering him unduly charitable toward any other fellow who was unlucky.

"My only objection to it," said Tillie, "is that there is not enough of it. It seems unfinished."

"Well, he warned us in the beginning that it was only a prologue," reminded her husband; "but there is a good deal in it, too, for only a prologue—a good deal."

"For my part," remarked the lieutenant, "I don't think I should want anything added to it. Just as it stands, it proves the characters of the two men. If it was carried further, it might gain nothing, and leave nothing for one's imagination."

"I had not thought of that," said Stuart; "in fact, it was only written to help myself in analyzing two characters I had in my head, and could not get rid of until I put them on paper. Authors are haunted by such ghosts sometimes. It is Miss Fred's fault that I resurrected this one tonight—she thrust on me the accidental remembrance."

"There are mighty few accidents in the world," was Genesee's concise statement, as he pulled on his heavy buckskin gloves. "I'm about to cut for camp. Going?" This to the lieutenant.

After that laconic remark on accidents, no further word or notice was exchanged between Stuart and Genesee; but it was easily seen that the story read had smoothed out several wrinkles of threatened discord and discontent. It had at least tamed the spirit of the scout, and left him more the man Rachel knew in him. Her impatience at his manner early in the evening disappeared as he showed improvement; and just before they left, she crossed over to him, asking something of the snows on the Scot Mountain trail, his eyes warming at the directness of her speech and movement, showing to any who cared to notice that she spoke to him as to a friend; but his glance turned instinctively from her to Stuart. He remembered watching them that day as they rode from camp.

"But what of Davy?" she repeated; "have you heard any word of him?"

"No, and I'm ashamed to say it," he acknowledged; "I haven't been to see him at all since I got back. I've had a lot of things in my head to keep track of, and didn't even send. I'll do it, though, in a day or so—or else go myself."

"I'm afraid he may be sick. If the snow is not bad, it's a wonder he has not been down. I believe I will go."

"I don't like you to go over those trails alone," he said in a lower tone; "not just now, at any rate."

"Why not now?"

"Well, you know these Indian troubles may bring queer cattle into the country. The Kootenai tribe would rather take care of you than do you harm; but—well, I reckon you had better keep to the ranch."

"And you don't reckon you can trust me to tell me why?" she said.

"It mightn't do any good. I don't know, you see, that it is really dangerous, only I'd rather you'd keep on the safe side; and—and—don't say I can't trust you. I'd trust you with my life—yes, more than that, if I had it!"

His voice was not heard by the others, who were laughing and chatting, it was so low; but its intensity made her step back, looking up at him.

"Don't look as if I frighten you," he said quickly; "I didn't come in here for that. You shouldn't have made me come, anyway—I belong to the outside; coming in only helps me remember it."

"So that was what put you in such a humor. I thought it was Stuart."

"You did?"

"Yes; I know you don't like him—but, I think you are prejudiced."

"Oh, you do?" And she saw the same inscrutable smile on his face that she had noticed when he looked at Stuart.

"There—there," she laughed, throwing up her hand as if to check him, "don't tell me again that I am too anxious to judge people; but he is a good fellow."

"And you are a good girl," he said warmly, looking down at her with so much feeling in his face that Stuart, glancing toward them, was startled into strange conjectures at the revelation in it. It was the first time he had ever seen them talking together.

"And you're a plucky girl, too," added Genesee, "else you wouldn't stand here talking to me before everyone. I'll remember it always of you. Tillikum, good-night."

(To be continued.)

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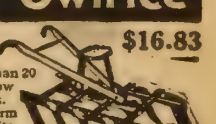

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80 Lafayette Street, New York

THE HOME

H. C. L. and the Dodge Family.

Let us read from the diary of a girl in the year 1916:

December 1st: I am Priscilla May Dodge, age fifteen. I don't like "May" and I can't bear to be called "Prissy." Mother says I'm rather boyish, but I claim that's from association with Jack, my brother, and I surely am glad he's not a sissy.

Well, we're poor and this is all about how poor we are. It's all I have to write about. There's six of us—father, a big, strong, hard-working man; mother, the dearest, most comfortable and chubbiest woman alive; little Ben, our four year old; baby Elizabeth, Jack and I. That's all and it's a plenty.

Yesterday was Thanksgiving and it was hard to find one thing to be thankful for. Father—the best one ever—tried so hard, but financially H. C. L. kept us from having a turkey—and plum pudding—and pumpkin pie—things which as long as I can remember we've had, and in plenty. Little Ben, Jack and I and even baby Betty made a dismal attempt at gayety. But mother understood and so did father. Oh, yes, they're what we have to be thankful for.

December 6th: I don't see whatever we're going to do. Today Jack and I gave up eating butter. It wasn't anything unselfish, we had to. Oh, yes, potatoes are $2.50 a bushel and Christmas looks like a great, big, dark, dismal, unhappy day awaiting us, for only this evening when Jack and I got to talking vociferously about Christmas and presents and—father said with a big hurt in his voice, "We won't be able to have much this year—." His voice trailed off into silence. We knew it was because of H. C. L. Oh, dear, how awful to be poor.

December 9th: I'm so glad Betty is too little to know and to be disappointed in Christmas, but little Ben's just had one Christmas he can remember and it isn't likely he'll have another soon. I was so cross after school that I started right in front of him to rebel against that benevolent personage called Santa Claus and the thought he'd not bring us any presents, and Ben's eyes filled with tears. Then I tried to comfort him, saying of course Santa'd bring him something because he'd been so good. And when Jack came home from practice he and I swore we'd fill up the stockings and not disappoint Ben's expectancy of old Santa. It looks pretty hopeless, with H. C. L. staring us in the face. But never mind. We have a plan.

December 11th: I tended Mrs. Ralston's baby tonight, who is so hateful, when I was just dying to play with our own Betty. Maybe—what a hollow-sounding word—we'll have a Christmas yet. Whatever shall we do! Father and mother talk quietly together after we're all in bed. But I'm not asleep. They're terribly worried, poor dears.

December 12th: Jack and I have ordered a bouncing big "turk" for Christmas, for $10. We don't dare to tell mother and we are shaking in our shoes. Mine are so thin pretty soon I won't have any to shake in unless our plan is a success. Jack says he'd like to biff those who control H. C. L., but it wouldn't do much good, I guess.

December 13th: Mother has been complaining about the dark rings under my eyes and I'm pretty sleepy. Yet Jack is sure, and so am I, that if it works—our plan, I mean—it is worth a sleepless night or two.

December 14th: We've launched our little boat. Here's hoping! My mind has been so full of H. C. L. that I found myself writing in school today, for the "lowest common multiple," H. C. L. Imagine! My mind seems awfully vacant and tired. I'm so sleepy.

December 16th: Why do some people put themselves out to be so horrid when you're poor? Mazie Gardner, who's got everything she wants, began at noon to tell all she was going to get for Christmas and then turned and said, "What are you going to get, Prissy?" Oh, I don't like her. I simply walked off, head up, and when I got around the corner I started to run. I had to get home before I began to cry. Jack found me on my bed and he's great as a comforter.

December 17th: I took Ben when I went down to the grocery and I saw him wistfully eyeing some dangerously red-colored candy, but H. C. L. warned me just in time and we turned away.

December 18th: You'd never know our family for the same one. The past week things have gone badly. Potatoes have soared higher. Milk we cannot buy. Today father had to give our pup away, because he surely does eat lots and H. C. L. won't let him stay. Oh, dear, Zip will be so lonesome. He'll never have anyone like Benny to love him. Oh, dear, poor us, poor everybody.

December 22d: It's come—our turk—and the money to pay for it, and four times more. They've accepted our story—Jack's and mine—and it's published in the Young Folks' Magazine and the Dodge family has two gifted members, hitherto unknown. It's a dead secret until Christmas, and best of all we earned the money all ourselves, and not by tending Mrs. Ralston's pesky child. Three busy days ahead.

December 25th: The best day of all the year is over and just to see little Ben's face when he opened his stocking and to see the merry twinkle in father's eyes and to see mother's happy smile fairly made me dance for joy. Well, the night father said the H. C. L. was going to keep us from having any Christmas we resolved it shouldn't, but that it should help us have a merry time, and it has.

Our plan worked splendidly and if you want to read the account of our life just before Christmas and all about H. C. L., just turn to the Christmas "Young Folks" and there it is in print.

As Jack and I walked home from church tonight, with the snow crunching under our feet and the sky radiant with stars, he said to me, "What a wonderful Christmas day," and laughingly added, "all on account of H. C. L." Tonight I feel like saying," Blessings on H. C. L.," for it bought our Christmas for us and has made us all truly happy.

Why—here I have never said what H. C. L. is, have I? The High Cost of Living, to be sure.

MISS FRANCES DOLLIVER.

Fifteen-year-old daughter of the late United States Senator, J. P. Dolliver, of Iowa, who has written this story for our Christmas number.

The correct way of preparing tea is to take the freshly drawn water at the first boil, scald the teapot, then add tea a teaspoonful for each person and one for the pot; cover with the water, then let stand five minutes, add enough water to serve, allow it to stand a minute, then pour.

Appropriate Christmas Recipes.

Plum Pudding.—One cupful chopped suet, one cupful molasses, one cupful sweet milk, one cupful raisins, one cupful currants, one-fourth pound candied citron, sliced fine, one-fourth pound candied orange peel sliced fine, one teaspoonful soda dissolved in a little hot water, one-half teaspoonful cloves, one teaspoonful cinnamon, flour, one cupful chopped nut meats. Flour fruit and nuts and sift spice with more flour. Make as stiff with flour as fruit-cake batter, and steam five hours.

New England Mince Meat.—Four pounds lean meat (ground) one and one-half pounds suet, eight pounds chopped apples, one pound brown sugar, four pounds raisins, three pounds currants, one-half pound citron cut fine, one quart boiled cider, four cupfuls meat-stock, one cupful vinegar, one pint grape juice, one pint cherry or other fruit juice, one tablespoonful salt, one tablespoonful pepper, mace, allspice, cloves, nutmeg, cinnamon. Mix above ingredients, adding the spices to taste. Cook, then add the juice of two oranges, two lemons and one tablespoonful almond extract. Almond nut meats are a delicious addition.

Christmas Charlotte Russe.—Beat one cup and a half of cream, one-third cup of sugar and half a teaspoonful of vanilla until firm. Take out part of the cream to use in piping. Through the rest of the cream mix six lady fingers, cut in small squares, one slice of fine-grained chocolate cake, cut in small squares and half a dozen candied cherries, cut in slices. Fill glasses. Pipe the plain cream above the mixture and garnish with cherries.

Almond Cookies.—One pound blanched, ground almonds, two cupfuls sugar, one tablespoonful powdered cinnamon, one teaspoonful cloves, two teaspoonfuls baking powder, one teaspoonful allspice, one tablespoonful powdered aniseed, four eggs, flour. Mix the sugar with the almonds, add the spices, egg yolks, baking powder, the stiffly beaten egg whites, and sufficient flour to roll. Roll out fairly thin, cut in fancy shapes—diamonds, hearts, etc.—and bake in a moderate oven.

Candied Squash.—One dozen large pieces squash, one cupful brown sugar, two tablespoonfuls butter, salt. Place squash in casserole, sprinkle with salt, cover with the brown sugar and butter, bake in a moderate oven twenty to thirty minutes, turning once or twice.

THE YOUNG FOLKS

Saint Nick's Suggestion.

Saint Nick went his rounds in an automobile,
And something got wrong with the gear;
It skidded and slewed till the roadway was strewed
With boxes and things far and near;
And when he got fixed, all the labels were mixed,
Which led to surprises quite shocking.
For a pompous professor of history found
A little tin horn in his stocking.

The girls got the toys that were meant for the boys,
Which made a great hullabaloo,
And some of the grown folks got nothing at all
And nobody knew what to do;
'Till someone suggested the happy idea
Of calling Saint Nick to the phone,
To ask him to come and to straighten things out,
As the least he could do to atone.

"I'm sorry," his saintship replied,
"I really can't come, for you see
From my home at the Pole is too much of a ride
More than once in a winter for me;
But I beg to suggest that you take all the gifts
That you find you don't want, every one,
Including the wraps and mittens and caps,
And give to the poor that have none."

—Minna Irving.

Wishes You a Merry Christmas.

Dear Young Folks:—This is the first time I have ever written to your page because we have only taken the paper a few months, but we all like it just fine and I enjoy reading your letters. Every time the paper comes and I read your letters I think I will write to you, but the weeks go so fast.

I am a farm girl thirteen years old. I am in the sixth grade at school. I like to go to school, especially this term, because we have such a good teacher. There are twenty-three pupils who attend our school. I have two brothers and one of them goes to school with me. It is drawing near Christmas time and I wish every one of the Young Folks a Merry Christmas. We are going to have a program at our school the Saturday before Christmas and we will have a Christmas tree. —Velma.

International Sunday School Lesson.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Lesson for December 24, 1916.

Unto Us a Son is Given.

LESSON TEXT—Isaiah 9:1-7.

GOLDEN TEXT—For unto us a child is born, unto us a son is given; and the government shall be upon his shoulders; and his name shall be called Wonderful, Counselor, the Mighty God, the Everlasting Father, the Prince of Peace.—Isa. 9:6.

The Christmas lesson naturally and logically follows the three lessons we have just had from the book of the Revelation where Jesus in his glory had been portrayed, and the ultimate success of his work is foreseen in the new heaven and the new earth. Isaiah saw his visicn of his first coming. John saw the vision of his second coming, when what he began the first time shall ultimately be accomplished. The prophecy here spoken was uttered during the reign of Ahaz, B. C. 738 to 723. The king of Assyria was attacking Syria. The tribes of northern Israel were carried away as captives. Judah was in danger of invasion (See II Kings 15:29.) Isaiah was preaching in his home city, Jerusalem. His vision of the Messiah Savior was not more than 800 years before John saw the vision of the glorified Jesus.

I. Darkness Versus Light (vv. 1-5). We need to go back into the eighth chapter to get the full historical situation of this part of the lesson. Ahaz, trembling in Jerusalem, had with him the Prophet Isaiah, the wisest and greatest man in his kingdom, yet Ahaz listened not to his words of warning and rebuke. He doggedly pursued his own course and sought help in every other quarter than the right one. This explains Isaiah's words, "The people that walked in darkness." Primarily he may have referred to those of the lands of Zebulon and Naphtali, the Galilee of the nations (John 1:46; 7:52) and the light which shone in them, which was the light of the world, Jesus of Nazareth (John 8:12). But there is a larger application in this verse to the whole world which lay in darkness until Jesus came, and the whole world has seen or shall see the great light (Luke 1:78-79). With the coming of light comes the increase of joy (v. 3 R. V.) In Israel there is to be, through Christ, a wonderful increase (Isa. 49:20-22; Zech. 10:8). In Christ there is to be great joy, the joy of harvest and of victory. The religion of Jesus Christ is preeminently the religion of joy (Acts 8:8; Phil. 4:4; I Peter 1:8) but the Child that was to be born was to be a Deliverer too, for the "yoke of burden" was a tax of $1,800,000 that had recently been levied by the king of Assyria. It was a night of thick darkness for Israel. Then, even as now, we have the moral darkness. (Read Rom. 1:20-32.) But the prophet saw the joy of deliverance. Jerusalem had been left in peace, Hezekiah succeeded his father, Ahaz, and entered upon a religious revival in the kingdom. The people who had walked in darkness had seen a new light. The prophet saw the dawning rays through the midst of this darkness of ignorance being removed. He also saw the coming of the Light of Men 700 years later, and the multiplication of the nations, the increase of their joy.

II. Unto Us a Son is Born (vv. 6-7). The greatest joy for Israel in Isaiah's time was in this vision of the Messiah, the promised Savior. Isaiah is looking ahead seven centuries. We are looking back nineteen. He was to be king over his people. Name and title is here given. (1) "Wonderful" because of his nature, being both human and divine. The word made flesh and dwelt among us. (2) "Counselor," one who has the wisdom to guide himself and others. No one guided by him has ever failed of true success. (3) "The Mighty God." He was truly God so that we can trust him to the uttermost. He can also save to the uttermost. (4) "Everlasting Father," expressing his divine loving kindness and self-identification with the Father. (5) He is also "Prince of Peace," the one who rules so that peace and prosperity abide in his kingdom. He brings peace between man and God, and between man and man. He is the peace of the soul as well as bringing peace to the soul. The completeness of this picture which Isaiah saw is the one which St. John saw, of which we have been recently studying. These two verses are marvelous ones, not only because of the clear prediction of Jesus of Nazareth, made more than seven centuries before his first advent, but marvelous also for the fullness and richness of the revelation they contain concerning the person, character and work of Christ.

Our Lord's earth life began at Bethlehem, but he was from all eternity (John 8:56-58; John 1:1-2).

As a man is not at peace with God he cannot be at peace with himself or his fellows; but as Jesus restores peace between man and God, he also restores peace to the heart of the individual (Phil. 4:7).

Sunday school officers and teachers should realize the difference between the peace with God (Rom. 5:1) and the peace of God (Phil. 4:7).

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People's Popular Monthly	.25	
Wisconsin Farmer	1.00	
Regular price per year	$2.00	You Save 55c

CLUB NO. 6A.

Home Needlework	$ .75	Our Price For All Three **$1.45**
Home Life	.25	
Wisconsin Farmer	1.00	
Regular price per year	$2.00	You Save 55c

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Today's Magazine	$ .50	Our Price For All Four **$1.45**
People's Home Journal	.50	
People's Popular Monthly	.25	
Wisconsin Farmer	1.00	
Regular price per year	$2.25	You Save 80c

CLUB NO. 8A.

Ladies' World	$1.00	Our Price For All Three **$1.90**
Boys' Magazine	1.00	
Wisconsin Farmer	1.00	
Regular price per year	$3.00	You Save $1.10

SPECIAL CLUB NO. 9A.

McCall's Magazine	$ .50	Our Price For All Four **$1.60**
1 McCall's Pattern (free)		
Today's Magazine	.50	
1 May Manton Pattern (free)		
People's Home Journal	.50	
Wisconsin Farmer	1.00	
Regular price per year	$2.50	You Save 90c

(You select any McCall's or May Manton Patterns from the first issue you receive of McCall's or Today's.)

SPECIAL CLUB NO. 10A.

Chicago Examiner (5-day per week edition)	$2.50	Our Price For All Three **$2.90**
People's Home Journal	.50	
Wisconsin Farmer	1.00	
Regular price per year	$4.00	You Save $1.10

In the event that none of the above combinations suit you, write us just what publications you want and we will be pleased to quote you a special rate. Direct all orders and inquiries to the

Club Department

The Wisconsin Farmer, Madison, Wisconsin

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Knits a pair of ribbed-top hosiery, with reinforced heel and toe, in 30 minutes. Equals old-fashioned hand-knit and wearproof hosiery that stores don't have. Over 100,000 in use. A money-making proposition. Yarns furnished at cost. Catalog and samples of work free.

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Taken from the ice cold waters of Lake Superior, insuring good, clean, pure food. Frozen, packed and shipped direct to you. Herring are becoming one of the most popular winter foods. We guarantee these strictly fresh. We do not handle Cold Storage Fish. Prices: 100 lbs., net in box, $4.00; 500 lbs. or more, $3.75 per 100 lbs.; 100 lbs. (in sacks) $3.50 per 100 lbs. (in Minn. only); 500 lbs. or more, $3.25 per 100 lbs. State inspected.

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Our Winter Production of

Fresh Frozen FISH

WILL start as soon as cold weather sets in. Your name and address on a postal will bring our price-list.

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EAT MORE FISH

THE FINEST FLAVORED come from the waters of Green Bay. Fresh Frozen Large Round Herring 4c per lb.; Dressed Herring 4½c; Perch 5c. Lots of 500 lbs. or more ¼c lb. less. Write for complete price list of everything in Fresh, Smoked, Salt and Spiced Fish. BADGER FISH CO., Dept. F, Green Bay, Wisconsin.

BEST EVER

Many articles of food have doubled in price, don't you think the following quotations on fresh frozen fish are decidedly low? Fresh Frozen Lake Superior Herring $3.50 per 120-lb. box. Lots of 500 lbs. or more $3.25 per 120-lb. box. Specially packed "trial box" Herring $2.00 per 60-lb. box. Pickerel, round 8c per lb. Pike, round 11c per lb. Every shipment examined by government food inspector.

JOHN DEGERSTEDT & CO.

Lock Box 532 . . . Two Harbors, Minn.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

All Attractions In Johnson Bros.' Sale.

THE demand at the present time is for Duroc Jerseys with popular blood lines and you'll sure have a chance to buy that kind in the Johnson Bros. sale at Winnebago, Minn., Tuesday, January 9th. Seldom has the buying public ever had a chance to bid on such an attractive lot of Duroc Jerseys. Everyone who knows Durocs knows Royal King, the Royal grand champion and a son of the noted Orion Cherry King and the boar that cost Johnson Bros. $2,650. Not only have these boys purchased the best boar they could find, but they have purchased the best sows in the best sales all over the United States. This statement is verified by the various sale reports that you have seen during the past few years. There will be no spring gilts in this sale, but there are some great yearlings and tried sows. One of the largest junior yearlings we know of goes in this sale. She is by Cherry Chief, out of a Proud Col. dam, and is safe in pig to Royal King. Can you beat it? A Proud Col. sow was one of the tops in the Dr. Still closing-out sale. She goes in this sale. Another Cherry Chief-Proud Col. yearling is bred to Royal King. Six tried sows by King the Col. that are eye-openers. One yearling sired by Royal King would be the top in most sales. One yearling by Illustrator. Two seniors by the noted Educator, and one fall yearling by Premier Gano, out of an Educator dam. One choice senior yearling by the famous Chief Invincible. One of the best tried sows is a daughter of Fancy Col. There will be a few by Grand Model 15th out of a King the Col. dam. We could fill a page talking about this sale offering and then we couldn't do justice to it. You can appreciate the breeding, but you can't imagine seeing forty-five head of sows the like of which will be sold by the Johnson Bros. on January 9th. Most of the offering has been bred to Royal King and the others have been bred to a son of Chief's Col., out of a dam by Future Fame, he by L. E.'s Valley Chief, and to Valley Chief's Col., a litter mate to the last mentioned boar. If some of the Duroc men in Wisconsin would buy two or three of the sows that will sell in this sale and take good care of them, their reputation would be made quicker than by buying a dozen of the inferior kind. Make your plans early to attend this sale. F. M. Washburn sells at Lake Crystal, Minn. (near Mankato), on the 8th and Winnebago is only a few stations south of there, so arrange now to attend both sales. Mail bids should be sent to T. P. Shreve, field man for The Wisconsin Farmer, in care of Johnson Bros., Winnebago, Minn. Write at once for the catalog and please mention this publication.—Adv.

A Thirty-one-Pound Bull For Sale.

IT IS the ambition of every progressive Holstein breeder to head his herd with a thirty-pound bull, as he realizes the benefits to be derived in owning the offspring of such a sire. An opportunity to purchase a thirty-one-pound yearling bull is offered to the readers of The Wisconsin Farmer by Reuben Klofanda, Racine, Wis., on page 23. Mr. Klofanda's herd has been attracting the attention of Holstein breeders throughout the middle West, both by their excellent type and by the large, vigorous cows and their high production ability. We made a trip to his farm a few weeks ago to see his herd, and we can assure you it is a trip well worth making. Here we found a herd of large, strong, vigorous cows, of good, straight conformation, with well-sprung, deep barrels, large, well-hung udders; wide hips, and showing constitution and capacity. An examination of the seven-day and yearly records verified our conviction that they were heavy producers. In several instances there are three or four generations of females in the barn and one can easily see why they are of this good type and of high production ability. It has been developed and intensified by the use of good sires and dams. The dam of the yearling bull offered for sale is a show cow of ideal dairy type. In seven days she made 31.02 pounds butter. In thirty days she made 130.47 pounds butter or six pounds more than four times her seven-day record or an average of 32.61 pounds butter in seven days for four weeks. She is a large cow, weighing close to 1,600. Her dam is also in the herd and is a show cow weighing over 1,700 pounds. The sire of the bull is out of Colantha Piebe of Elm Court that is also in the herd and is of show-ring quality and weighs over 1,600 pounds. Both the dam and sire's dam are daughters of Lad of Home Farm, a son of Colantha 4th's Lad, which was out of the same dam as Colantha 4th's Johanna. In this young bull is combined the blood of Colantha 4th, dam of the first thirty-five-pound cow; Sir Johanna De Kol, sire of the first forty-pound cow; Sarcastic Lad, grand champion at the St. Louis World's Fair, and others of equally good transmitting ability. Send for an extended pedigree and picture of this fine young bull, or better yet visit the herd and see his dam, two granddams and sire's sister and you will be convinced that this is the type of cows you want your next crop of calves to be. The price asked for this bull is very low, considering the type and breeding he represents. When writing or visiting the farm kindly mention Wisconsin Farmer. See page 23.—Adv.

E. J. Wilson's Closing-Out Sale.

WE ALWAYS regret to see a good herd of any breed closed out, but we realize that this move is sometimes necessary. Such a condition exists at the farm of E. J. Wilson, Renville, Minn. A few years ago Mr. Wilson purchased his foundation for a Duroc herd and for this he bought the best sows money could buy from all parts of the United States. The first sale he held made the highest average of any sale offering ever sold in the Northwest, so you may know that he had the goods. Owing to his unlimited knowledge of the Duroc Jersey breed, his services were desired by the Duroc Bulletin and for the past eighteen months he has been field man for this publication. In view of the fact that this position makes it necessary for him to be away from home most of the time, he deems it advisable to close out his herd of Duroc Jerseys; consequently, on Thursday, January 4th, his entire herd will be sold at his farm near Renville, Minn. Seventy head of sows suitable to go into the best herds will make up this offering. The half-page advertisement appears on page 20 of this issue gives information relative to the breeding. Individually they are outstanding and will please the critical buyer. We saw this herd a short time ago and the tried sows are wonderful individuals and no herd has sows of better blood lines. The forty-seven yearlings out of these sows would look good in any herd. The majority of the offering is sired by Chief's Col. 40th, a boar that weighed 925 pounds at the Minnesota fair in 1913 and was shown by Harry Browning and was first in class at Minnesota, Wisconsin, Michigan and Peoria, Ill. His dam was Helen Duchess, she by Ohio Chief, out of Helen Blazes. There are ten spring yearlings by the great Dexheimer boar, Col. Protection. One two year old by Defender, one three year old by Van's Crimson. She was champion at North Dakota in 1914. One four year old by Superba. Others by Big Wonder, the $1,500 Iowa champion, and King the Col. The advertisement tells you what the offering has been bred to—herd boars that will please you. Wisconsin and eastern Minnesota need more and better Durocs and this sale contains sows that will improve most herds. One of the sales that critical buyers should arrange to attend. If it is impossible for you to get away, be represented. T. P. Shreve, Wisconsin Farmer representative, will attend this sale and will gladly handle any mail bids sent to him in care of E. J. Wilson. If you want to read a catalog that contains Duroc history, send for the catalog of this sale. Don't forget the date, January 4th. When writing for catalog please mention The Wisconsin Farmer.—Adv.

Remember the Short-horn Sale at South St. Paul.

START the new year out right by buying a few registered Short-horn cows, and the best place to go for them would be to the sale that will be held at the South St. Paul Stockyards on Wednesday, January 3d. This sale will be made under the auspices of the Minnesota Short-horn Breeders' Association and the state association guarantees every animal that goes through the sale ring. Never has there been a more opportune time to buy beef cattle. The population of this country is increasing and the production of beef cattle is decreasing; incidentally, we are going to have high prices for beef. There are only two countries that have any cattle for sale at this time and they are the United States and Argentina. When the European war is over those countries now at war are going to want breeding stock and they must buy from the United States or Argentina. In the face of these conditions do you see any reason why beef cattle will not command a good figure for years to come? Getting back to our subject, there will be some seventy head of Short-horns sold on the above date. This offering will consist of bulls of serviceable age, some of which are good enough to head the best herds. There will be Scotch and Scotch-topped cows and heifers, calves at foot and cows well along in calf. There will also be some milking Short-horns from one of the best herds in the state. These cattle have all been tested and can be shipped into any state. We have seen some of the cattle that will be sold in this sale and are glad to say that they are desirable specimens of the breed. Wisconsin needs more good beef cattle and this is a sale that Wisconsin breeders and farmers can well afford to attend. For a catalog you should write J. S. Jordan, secretary, Morris, Minn., but don't forget that the sale will be held in So. St. Paul, January 3d. Please mention The Wisconsin Farmer when writing. See page 22.—Adv.

John Swenson Great Sale Offering.

FOR some time we have called our readers' attention to the herd of Duroc Jerseys owned by John Swenson, Willmar, Minn., because he has one of the best herds of this breed in the Northwest. We mentioned the fact that the best sales to be held in Minnesota this winter would be advertised in this publication—not all of the sales, but those having the best individuals. John Swenson is one of the "headliners" and his half-page advertisement appears on page 21 of this issue. He has listed fifty head that any breeder would be proud of. In the first place, Mr. Swenson is a caretaker. He owns a large herd and after culling, those that he retains get the best of care and you will find the offering in bloom sale day. The sale will be held at Willmar, Minn., Friday, January 5th, and will close the week's circuit that starts at F. S. Vanderhyde's on January 2d. To our knowledge, John Swenson is the only Duroc breeder in the Northwest that has, at the head of his herd, two boars that have been grand championship winners at the state fairs. Big Wonder won at Iowa in 1913 and E. J. Wilson and John Swenson paid $1,500 for him and later Mr. Swenson bought Mr. Wilson's interest. This boar has made good and you will like the sows and gilts that go in this sale sired by him. E. J.'s Crimson Wonder was the sensation at the Minnesota State Fair this year. He weighed right at 1,000 pounds and is the acceptable type. About forty head in this sale are safe in pig to this boar and no herd will be complete without some of this blood. We feel safe in saying that you will see twelve tried sows in this sale as good as you ever saw go through one sale ring. They are good mothers and have raised good litters and they are being offered only as attractions. They are by Big Wonder and the noted Chief Defender. You couldn't ask for better breeding. The fact that this sale offering was selected from some 300 head of Durocs should be convincing evidence that the offering is one of merit. This is a sale that our readers who are interested in Durocs should attend, for it will contain sows that will improve herds. Get one of the catalogs, study the blood lines and then arrange matters to attend this sale, but if you find it impossible to get away send bids to T. P. Shreve, field man for The Wisconsin Farmer. Letters or wires should be sent in care of John Swenson, Willmar, Minn. Write for the catalog and please say you saw the advertisement in The Wisconsin Farmer.—Adv.

Lindauer's Holsteins.

FOUR sons of Fairmont Pietje Ormsby are advertised for sale on page 23 by L. Lindauer, Kaukauna, Wisconsin. His dam made twenty-nine pounds of butter in seven days and is a sister to Sadie Vale Concordia 4th, that made forty-one pounds butter in seven days. These young bulls are good individuals and are being priced right. Send for pedigrees and price.—Adv.

Eminent and Golden Fern Jerseys.

THE Eminent and Golden Fern families of Jerseys have long been recognized as among the highest producing families of the breed. Both on the island and in the United States they have been eagerly purchased by the best judges of Jersey cattle, and have sold at long prices. They continue to show their high production ability wherever found whether in the barns of millionaires, in the hands of experienced and scientific feeders or in the ordinary breeders' barns with ordinary herd care. The herd of Ora P. Taylor, Elkhorn, is a demonstration of the production ability of these cows. When we stepped into his barn a few days ago and looked over his herd, we immediately exclaimed, "Mr. Taylor you have a good producing herd, or our observation of what goes to make a good producer is wrong." The majority of the cows are of large size, with uniformly large udders, well quartered, and with especially good front and rear attachments. There is scarcely one in the herd that could not be lead into the show ring wihout getting into the money. After looking over the herd and learning th records which the various animals have made, we again came to the conclusion that cows possessing certain characteristics are almost certain to be heavy producers. The record of the Geneva Cow-Testing Association show that twenty-four head in this herd, including quite a number of two year olds averaged close to 325 pounds of fat last year. This was with ordinary herd care and milked but twice a day. Eleven daughters of Eminent Fancy Lad averaged 350 pounds of fat and showed an average profit above cost of feed of close to $125 per head. At the present time Mr. Taylor is advertising a yearling bull for sale on page 22. He is out of one of these heavy-producing daughters of Eminent Fancy Lad, and is sired by Noble Reindeer, that is out of Golden Fern Reindeer. Eminent Fancy Lad is out of Eminent's Silver Gate a daughter of the great bull, Eminent. For a complete pedigree and further information in regard to this bull write to the above address.—Adv.

That Combination Sale at Owatonna.

THERE will be some good buys made at Owatonna, Minn., Wednesday, January 3d. Owatonna is in Steele county and the Duroc Jersey breeders have formed a county association and on the above date they are going to sell fifty head of bred sows. We, and the men making the sale, realize that one should have some reputation as a breeder or showman to make the most successful sales, and inasmuch as these breeders have never made very much noise, they do not expect extraordinary prices. Now we do not mean to infer that the offering is not worthy of a high average, for there will be sows in this sale as good as will be found in the entire circuit; but to prospective buyers we believe that this will be a good sale to attend. We recently saw the sows that will go in this sale and can truthfully say that it is an offering that should do credit to the association. There will be sows sired by the great King the Col., others by the 1,000-pound Chief Invincible, V.'s Golden Model, B. & V.'s Orion and V.'s King the Col. They have been bred to sons of King the Col., Tommy Doyle, Chief Defender and Lee's Defender. The breeders who are consigning to this sale are R. E. Morrison, C. W. Holmes, Oscar Prestegaard, O. A. Farsted, W. W. Arms. The older breeders through the Northwest could well afford to attend this sale and help boost these new breeders. They will no doubt be good buyers at some of the winter sales and naturally should expect some co-operation. It was through the efforts of W. V. Gousseff, county agent, that this association was formed and he has been working hard for the success of this sale and you can rest assured that he will only accept the good ones for this sale. The sale will be held in Owatonna in a heated building and all will be comfortable. Get one of the catalogs at once by writing W. V. Gousseff, Owatonna, Minn. Send mail bids to T. P. Shreve, field man for The Wisconsin Farmer, in care of Mr. Gousseff.—Adv.

Dopp Brothers' Holsteins.

DUCHESS ORMSBY blood is intensified in both the sire and dam of the bull advertised for sale on page 23 by Dopp Brothers, Oconomowoc, Wisconsin. His sire is out of a sister to the former world's record cow, Pietertje Maid Ormsby, and he was sired by the thirty-two-pound bull, Beauty Pietertje Prince. The dam of the bull for sale is a half sister to the sire of Ormsby Jane Segis Aaggie, the world's champion ninety-day cow. His dam is also a granddaughter of Sir Clyde, that has forty-five A. R. O. daughters, four with records over thirty pounds and twenty-one from twenty to twenty-eight pounds. Every line in the pedigree of this bull shows that high production ability has been bred into him for generations, and there is every reason to

Pleased With Results.

W. A. LAWSON, Rosendale, Wisconsin, believes in The Wisconsin Farmer as an advertising medium for the farmer and breeder. He knows. He has tried it. He writes:

Wish you would discontinue my cattle advertisement, as I have nothing to sell except a few head which I expect to show. Would like to say I am well pleased with the way your paper got results.

If you have any surplus stock let The Wisconsin Farmer put you in touch with buyers. It will carry your advertisement into more than 90,000 farm homes, 75 per cent of them in prosperous, progressive Wisconsin—the great dairy district of the United States.

The Wisconsin Farmer, Madison, Wis.

Guaranteed Circulation, 90,000.

believe that he will sire heavy-producing daughters. Send for a pedigree of this bull.—Adv.

Last Call For the Vanderhyde Duroc Sale.

THIS is the last opportunity we will have to call attention to that sale of good Duroc Jersey bred sows that will be sold by F. S. Vanderhyde at West Concord, Minn., Tuesday, January 2d. This is one of the good sales that we want to urge our readers to attend, for it is an offering that will justify the trip. There will be several attractions in this sale—we mentioned Roxy in last week's issue, one of the best brood sows in the country. There will be one tried sow sired by the noted Col. Gano. One by Van's Crimson, the boar that has sired Van's showyard winners. One yearling by B. & V.'s Orion he by Orion Chief. Five spring gilts by the champion, Van's Wonder, out of a Model Chief 3d sow—good sows. Four spring gilts by V.'s King the Col. out of a Lee's Defender dam. Four spring gilts by Latest Fashion he by the $800 Fashion. Space won't permit us to mention all of the good ones. The offering has been bred to the following boars. Van's Crimson, V.'s King the Col. by King the Col., Long Wonder by Col. High Model out of a Big Wonder—this is some boar and you will want a sow bred to him. There will also be three gilts by Col. Algo Jr., a half brother to the junior champion at Omaha. Just make up your mind you are going to attend a good Duroc Jersey circuit and start in at this sale. From there the crowd will go to the combination sale at Owatonna, Minn., the following day, then to E. J. Wilson's on the 4th and close the circuit at John Swenson's. If you haven't received your catalog, write for same at once and attend the sale if possible. If you can't send your bids to T. P Shreve, Wisconsin Farmer representative. Please mention this paper when writing for a catalog.—Adv.

Yearly Record Holsteins.

A YEARLING bull backed by several generations of high yearly records is advertised for sale on this page by the Pinehurst Dairy, Sheboygan Falls, Wis. This bull is King Segis Concordia Rigtje, born December 13, 1915, so is ready for immediate service. He was sired by the thirty-two-pound bull, King Segis Concordia Hengerveld, that is a son of King Segis De Kol Korndyke whose dam made thirty-seven pounds of butter in seven days. King Segis De Kol Korndyke is the sire of the first forty-pound heifer of the breed and is a full brother to King Segis Pontiac, whose sons have sold for a larger sum than any other bull of the breed. The dam of the young bull offered for sale as a two year old made 704 pounds of butter and gave 16,313 pounds of milk in a year. Her dam as a junior three year old made 550 pounds of butter and gave 14,083 pounds of milk in a year. Her grandam made 918.76 pounds of butter and gave 23,485 pounds of milk in a year. Such high production ability consistently transmitted from one generation to the next is almost conclusive evidence that this young bull will sire heavy-producing daughters. As an individual he cannot be faulted, as is shown by his picture on this page. He is of good, straight type, large and growthy and is three-quarters white. He weighed 115 pounds at birth and has been kept in good growing condition ever since, so that at the present time he is large for his age. Send for a picture and extended pedigree of this young bull if in the market for a herd sire. When writing kindly mention The Wisconsin Farmer.—Adv.

Frauenheim's Guernseys.

AN exceptionally good, young, imported Guernsey bull is advertised for sale on page 22 by O. R. Frauenheim, Random Lake, Wis. This bull is named Imported Ford of Sarnia. He was born July 20, 1915, so is now eighteen months of age and ready for immediate service. He is an excellent individual, being well grown, of good straight conformation and is well marked. His dam, Blanche Flower, is a fine imported heifer and a good producer, giving thirty-five pounds of milk per day with her first calf. She is a daughter of the bull, Raymond 60th, that has more daughters under advanced registry test than any other bull of the breed. He now stands at the head of the Anna Dean Farms. He was first-prize bull in 1910, 1911 and 1912 and is the son of the noted bull, Masher 635, that has thirty-five A. R. daughters and eight A. R. sons. The sire of the bull offered for sale is Flower Boy of the Cloture 3377 P. S., a great son of Masher Sequel, out of a prize-winning daughter of Robert's Golden Jewel. Our readers who want a richly bred bull of good individual merit should write for the extended pedigree of this animal. Mr. Frauenheim is also a breeder of Berkshire swine and has a few very choice boars for sale at the present time. They are of Premier and Masterpiece breeding, being sired by Skylark of Three Oaks. This boar was sired by Pointer Star Longfellow 6th, that is of Star Masterpiece breeding on both sides and his dam was Bessie of Three Oaks, a granddaughter of Sittyton Boy 4th and Aldora Premier 3d. For further information in regard to these animals write to the above address. When writing kindly mention The Wisconsin Farmer.—Adv.

INTERIOR AND EXTERIOR OF THE BARN ON THE ALDEBARAN FARMS, OWNED BY STEPHEN BULL WHOSE ADVERTISEMENT APPEARS ON PAGE 18.

Angus Cattle Sales Good.

E. F. GANZ & SON, Alma, Wis., breeders of Aberdeen Angus cattle report recent sales made from the Buena Vista herd. To Fred J. Kurtz, River Falls, Wis., they sold a four-year-old cow with calf at foot, a yearling heifer and a bull calf. The females were of the Dimple family and the bull was a Ruth. To Fred C. Smith, River Falls, Wis., they sold a four-year-old cow with calf at foot, a yearling heifer and a bull calf of the same families as above. These buyers are progressive Pierce county farmers that realize the value of pure-bred cattle over the scrubs and inasmuch as we have seen the Buena Vista herd we feel confident that the above gentlemen made no mistake in buying their foundation from this herd. If you are interested in the "doddies" write Ganz & Son for a description of what they have for sale.—Adv.

A Coming Ayrshire Herd.

WE predict that the Ayrshire herd of Stephen Bull, Racine, Wis., will make Ayrshire breeders throughout the United States "sit up and take notice," as the expression goes, within the next two years. Mr. Bull has set his ideals very high in his purchases of both males and females, as to breeding, conformation and production ability. He has a large number on advance registry test and will put on every cow as soon as she freshens if she freshens in good condition. Those now on test are going at a very creditable rate and show promise of making splendid records. A demonstration of the high standard Mr. Bull has set, is shown in the barns which he has constructed. Every convenience and sanitary device to maintain the cows in good, healthy, vigorous condition has been incorporated into his stables. The accompanying illustrations show the exterior and interior of his dairy barn and there can be no doubt that his herd will be free from disease in such surroundings. At the present time he is advertising a yearling bull, ready for service from an A. R. dam, which has a record of over 500 pounds of butter in a year. His dam, both grandams and both grandsires are in the advance registry. The bull himself is an outstanding individual three-fourths white, well grown and of good, straight type. Send for his picture and pedigree. When writing will you kindly mention that you saw this write-up in The Wisconsin Farmer?—Adv.

Hasse Holsteins.

THE great demand for registered Holstein females will soon deplete the available supply in Wisconsin, or so it would seem. But there always seems to be a few more show up somewhere. It is a fact, though, that the big, square, well-uddered cows and the most promising heifers are not as plentiful as they were a few years ago. John Hasse, Monroe, Wisconsin, is now offering a few of this kind for sale and we advise our readers to look them up, as the opportunities to get this kind of cattle are getting scarcer every month.—Adv.

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

EMINENT SILVER GATE 222085. GOLDEN FERN'S REINDEER 222090.

The Jersey herd of O. P. Taylor, Elkhorn, is made up largely of granddaughters of these two cows. See page 22.

Too Late to Classify.

HOLSTEIN BULLS Ready For Service

BACKED by large 7-day and yearly records. King Segis Concordia Rigtje, born Dec. 13, 1915. Sire, King Segis Concordia Hengerveld, 3 junior 2-year-old daughters above 15 lbs., one 18.391 lbs. He is 32-lb. son of King Segis De Kol Korndyke, sire of the first 40-lb. heifer. 1st dam, junior 2-year-old, 17.29 lbs. 7 days, 16,313.0 lbs. milk, 704.087 lbs. butter 1 year. 2d dam, junior 3-year-old, 14,083.0 lbs. milk, 550.6 lbs. butter. 3d dam, 23,485.0 lbs. milk, 918.76 lbs. butter. Weighed 115 lbs. at birth—large, growthy, handsome individual. Priced right. Send for extended pedigree and further information. Address PINEHURST DAIRY, SHEBOYGAN FALLS, WISCONSIN

BATES' SHORT-HORNS

NOTED for **Milk** and **Beef.** A few extra good young bulls for sale; also Champion bred Durocs. Choice gilts bred to Critic, Top Notcher. Inspection invited.
B. W. LITTLE, R. 7, JANESVILLE, WIS.

SHORT-HORNS POLANDS OXFORDS

CAN supply your wants in the above breeds. Write or come.
P. N. Collins **River Falls, Wis.**
(35 miles S. E. St. Paul)

2 Richly Bred Reg. Guernsey Cows

AND a yearling bull for sale. No. 1—**Imp. Daisy Maid II of the Gree**—has an A. R. record and has 2 A. R. daughters. She is an imported granddaughter of Gov. of the Chene. No. 2—**Tidy's Girl,** a daughter of Raymond of Homestead whose dam gave **13,000 lbs. milk in a year.** Both were bred in May to Gov. Pagenta, a son of Gov. of the Chene. Bull 13 months old, out of Tidy's Girl and sired by Gov. Pagenta.
W. G. Jamison & Sons **Appleton, Wis.**

Yearling GUERNSEY BULL

READY for service. Sired by **Auriculas King of the May** and out of a granddaughter of **Yoeman,** whose dam has given 10,700 lbs. of milk and 487 lbs. fat in a year. Price right. Send for pedigree.
W. L. Breitrick **Greenville, Wis.**

YEARLING GUERNSEY BULL

SIRED by **Bond of Maud Iris** (whose dam made 45.7 lbs. of fat as a 2-yr.-old) and out of a daughter of Benton Harbor. The bull for sale is an outstanding individual.
Emory C. Meltz **Appleton, Wisconsin**

When writing to advertisers kindly mention The Wisconsin Farmer.

The Right Kind of an Individual.

ONCE in a while we field men run across an animal that is a little better than the majority of good ones we see. Such was the case a few days ago when we stopped at the farm of Emory Meltz, Appleton, Wis. He has a yearling Guernsey bull that you have to take your hat off to when it comes to size, development and type. He is eleven months old, but better grown than many we have seen at fourteen to fifteen months of age. He is out of a daughter of Dr. Brophy's great bull, Benton Harbor, that won grand sweepstakes at the 1907 National Dairy Show and sired the first-prize bull calf at the same show. Benton Harbor has four A. R. O. daughters with a record of 524 pounds fat and several others now or soon to be put on test. Mr. Meltz owns three of his daughters and they are all doing very well. The sire of the bull for sale is Bond of Maud Iris, whose dam, Maud Iris, gave 8,433 pounds of milk and made 457.09 pounds of butter. Send for a pedigree and price of this good bull. When writing kindly mention that you saw his advertisement on this page in The Wisconsin Farmer.—Adv.

A Winter in California.

NO ONE needs a change occasionally more than do the farmers and their women folks. Winter is the farmer's vacation time. After the hard season's toil and when the plentiful harvest is put by, why not enjoy a trip to California. There the farm folks can enjoy the splendid mild climate, and recuperate and build up new life and energy, while folks back home are freezing in the zero blasts. The trip can be made so pleasantly and so economically now by the Sante Fe route, that every tired farmer and farm wife should give serious consideration to the opportunity for a health-promoting trip this winter. Write to C. L. Seagraves, Industrial Commissioner, A. T. & S. F. Ry., 2248 Railway Exchange, Chicago, for the California books. They will be sent to you free if you will tell him you read the advertisement in this paper.—Adv.

The Belted Hogs.

BUSINESS in Hampshires continues to be good," part of the contents of a letter received from A. M. Laird, Prairie du Chien, Wis. Mr. Laird says that his gilts simply cannot be beaten at the price, they are in nice condition and are bred to King Haakon, a General Allen bred boar and without a doubt one of the best boars in the Northwest. Mr. Laird gives an iron-clad guarantee with every sow and if you want the sows better get your order

JOHNSON BROS.' ROYAL KING

DUROC JERSEY SOW SALE

WINNEBAGO, MINNESOTA, TUES., JANUARY 9, 1917

45 HEAD

10 TRIED SOWS
25 Jr. & Sr. YEARLINGS
10 FALL YEARLINGS.

BRED TO

ROYAL KING ($2,650), the Royal Champion and two sons of CHIEF'S COL., dam by FUTURE FAME.

ATTRACTIONS NEVER BEFORE EQUALED

TRIED SOWS: 1 Proud Col., 1 Chief's Col. 40th, 6 King The Col., 1 Proud Chief, 1 Fancy Col. YEARLINGS: 2 by Cherry Chief, dam by Proud Col., 1 by Royal King, 1 by Illustrator, 2 by Educator, the tops of Swan's 1915 summer sale, 1 by Premier Gano, dam by Educator, 1 by Chief Invincible, 3 by Grand Model 15th, dam by King The Col. Others by Royal King and Col. Golden Orion.

No herd in the country has better breeding than we have and we will divide with you. Whenever we have purchased Durocs we have always bought the tops, now you get the benefit. No breeder has too much of these popular blood lines.

IF YOU WANT THE BEST YOU'LL ATTEND OR BE REPRESENTED AT OUR SALE

Get one of our catalogs; it contains the pedigrees of boars that have made Duroc history, and sows that are known wherever Durocs are raised. The greatest boars of the breed are represented in this sale. Send all bids to T. P. Shreve, in our care. Cols. Duncan and Kraschel, auctioneers.

JOHNSON BROS. - - WINNEBAGO, MINN.

F. M. Washburn sells at Lake Crystal, Minn., the day before. Attend both sales and get the cream of the breed.

in soon for Laird sells Hampshires. See page 21.—Adv.

Bulls Well Damed and Sired.

IT IS important to have a bull out of a good dam, and it is equally important that his sire be good. Breeders of both grade and pure breds realize that a bull is half of the herd if a good one and more than half the herd if a poor one, as his opportunity to improve or injure the herd is as great as all the females in the herd. Bulls that will improve your herd are advertised for sale on page 23 by C. Tochterman, Jr., Monroe, Wisconsin. He has been making some very high seven-day and yearly records and has a record of the production ability of his cows. At the present time he is offering bull calves, some ready for service, out of the Advance Registry cows. These bulls were sired by Johanna Bonheur Pietertje 113138, whose fourteen nearest dams average over twenty-seven pounds butter in seven days. When writing kindly mention this paper.—Adv.

Morehouse Makes Good Sales.

F. A. MOREHOUSE is one of the coming Poland China breeders of Grant county, Wis. This is the first year that he has done any publicity work and we have just had a letter from him advising that up to date, November 27th, he has sold forty head of spring boars and gilts at an average of $30 per head. This is certainly a good business and anyone saying that a new breeder can't sell hogs in Wisconsin is mistaken. Mr. Morehouse said that he was one of the breeders that got "cold feet" and castrated about a dozen boars a short time ago thinking he had too many. He is now sold out and could sell more if he had them. Mr. Morehouse's postoffice is Lancaster and those interested in Polands will do well to keep your eye on him. He will have a couple of the good ones in the combination sale at Madison.—Adv.

Madson's Poland Chinas.

WHEN you are buying big-type Poland Chinas be sure to get in touch with M. Madson & Sons, Madison, Wisconsin, whose advertisement appears on page 19. They are developing the type that combine easy feeding qualities with large size. The aim of all swine breeding operations is the pork barrel, and the type that produce a pound of pork the cheapest is the type to breed. At the present time this firm is offering some very attractive young boars that will interest you.—Adv.

Garvens' Holsteins.

TWO good young Holstein bulls are advertised for sale on page 23 by L. V. Garvens, Brookfield, Wisconsin. They are both out of A. R. O. dams of choice breeding. One is sired by the twenty-seven-pound bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Send for pedigree.—Adv.

SALE DATES.

Short-horn Cattle.

Jan. 3, Minnesota Short-horn Breeders' Association, South St. Paul, Minn.

Holstein Cattle.

Jan. 30, Harry Dunbar Dispersion Sale, Elkhorn, Wis.

Percheron, Belgians, Shires.

Jan. 30-31-Feb. 1-2, Breeders' Sale Co., C. W. Hurt, Mgr., Bloomington, Ill.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County Poland China Breeders' Assn., Lancaster, Wis., Burlie Dobson, Secy.
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 2, F. S. Vanderhyde, West Concord, Minn.
Jan. 3, Steele Co. Combination Sale, W. V. Gousseff, Mgr., Owatonna, Minn.
Jan. 4, E. J. Wilson, Renville, Minn.
Jan. 5, Jno. Swenson, Willmar, Minn.
Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 1, A. Hyzer-Sprain, West Salem, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, J. D. Gant, Delavan, Wis.
Feb. 26, Geo. Pagel, Zumbrota, Minn.
Feb. 26, George W. Pagel, Zumbrota, Minn.

1916 Crop Close to Five-Year Average.

(Continued from page 7.)

little being husked. The corn silage is very good, with plenty of mature corn in it. Hay was heavy and the weather conditions were good for haying. Potatoes were very small and few in a hill, but have a very good flavor.—W. J. Mann.

Winnebago County.—The corn crop is practically a failure, so is the potato crop. The 1915 crop of corn was poor, but it was about four times the yield of 1916. Very little corn was husked as nearly all of it was used to fill the silos. There is no contagious disease among the stock, but farmers are reducing their stock on account of scarcity of feed. Forty bushels of shelled corn has been considered an average yield here, but this year's crop will scarcely make fifteen bushels. As it was killed before ripening there is very little nutrition in it. The barley crop was of a fine color and looked well, but the yield was light.—S. L. Smith.

Wood County.—The corn crop was fairly good in this section this year except in a few fields where the corn was a little soft. The average yield is about thirty bushels per acre, running

Services of Expert Live Stock Photographer

Up-to-date live stock breeders are more and more using photographs in advertising their herds. It is the modern way of doing things, and The Wisconsin Farmer is meeting the situation by offering the services of a skilled live stock photographer. Appointments may be made by mail at any time. For estimates of cost and other information write The Wisconsin Farmer.

AYRSHIRE CATTLE.

ALDEBARAN FARMS **A. R. AYRSHIRES**

YEARLING AYRSHIRE BULL ready for service. ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address

STEPHEN BULL RACINE, WISCONSIN

AN AYRSHIRE OPPORTUNITY

WHEN we got home from the National Dairy Show with our show herd, we found our barns were full to overflowing. We have over 100 head, so as to reduce our herd we have decided to sell about twenty females—heifer calves or bred heifers. Here is an opportunity to get as good as there is in the U. S. or Canada. Prices very reasonable to make them sell quickly. Bulls ready for service and younger from A. R. O. cows. Send for pictures and prices. Address

ADAM SEITZ WAUKESHA, WISCONSIN

AYRSHIRES

Can supply your wants if you want

HEIFERS OR BULLS

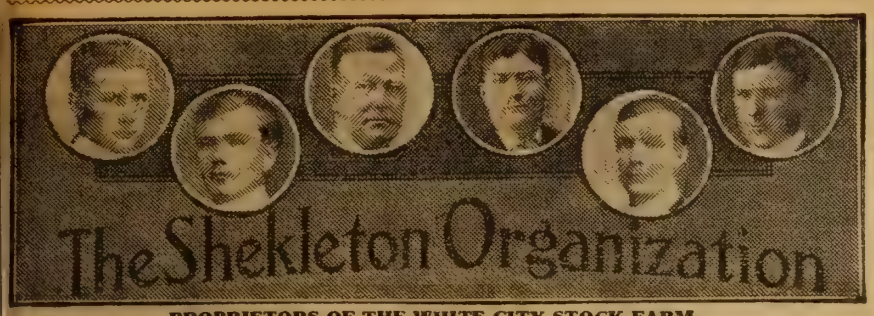
from A. R. dams. Also breeder of

Clydesdales and Durocs

Write your wants Address

JAS. VAN ETTA LIMA CENTER, WIS.

HORSES.



PROPRIETORS OF THE WHITE CITY STOCK FARM.

WE have never offered to our trade a more superior lot [illegible] on and Belgian stallions, in both imported and American bred stock, than we can now be he[illegible]ted horses [illegible]ot [illegible]nd thoroughly acclimated, many of them having made seasons in [illegible] and 1916 and are tried and tested sires. Our American bred horses were selected from the best breeders in America and are out of noted sires and dams and are horses of great quality in every respect. We have especially selected ten black and dark gray 2 and 3 year old Percheron stallions weighing 10 tons. These are all outstanding horses and should be purchased by those who need a sire for full-blooded mares. Among them is Coco, 1st prize 2 year old and reserve champion at the Wis. State Fair. This colt is black in color and weighs a ton. To the early buyer we offer one of the greatest collections of ton stallions to be seen in any importing barn this winter. We have no old, worn out, picked over stallions on hand. Let us know your wants, or better still, come and spend a day or two. A hearty welcome awaits you. Send 25 cents in stamps for large horse hanger, which shows the picture of a number of stallions now on hand, our main farm and sales stable and our firm's picture. Will sell several of our choice Iowa farms on easy terms.

FRANK P. SHEKLETON & SONS LAWLER, CHICKASAW CO., IOWA

We are 50 miles west of Prairie du Chien, Wis., on the Milwaukee R. R., making direct connections for Lawler.

PUBLIC SALE REGISTERED PERCHERONS

LA VALLE, WIS., DECEMBER 28, '16

BEUCHAT, Pearson, Morley and others will sell 31 STALLIONS AND MARES, from weanlings to matured horses. Many sired by GEMIN 62590 (70189), the 2,400-pound show horse. An outstanding lot of young mares and big, useful brood mares. Sale will be held at the Alfred Beuchat farm, eighty rods from the North-Western Railroad. Sale called at 10:30. Col. J. J. Shreve, auctioneer. Send for catalog to

ALFRED BEUCHAT **LA VALLE, WIS.**

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

W. A. LANG & CO.

Importers and Breeders of

BELGIANS and PERCHERONS

IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars
W. A. LANG & CO. GREELEY, IOWA

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

bout the same as the last five years xcept last year, when it was a total ailure. Not many cattle have been ed around here, as there was a short- ge of hay and corn a year ago and hey were sold off. Those remaining vere grass fattened and are nearly old off now. Cattle are in good, healthy ondition. Common rye yielded twelve

ING SEGIS CORNUCOPIA RIGTJE, the yearling bull advertised for ale on page 17 by The Pinehurst Dairy, heboygan, Wis.

o fifteen bushels per acre, pedigreed ye twenty to twenty-five bushels per cre, potatoes twelve to fifteen bush- ls and poor in quality. Hay was a ood crop and was put up in good hape. Corn fodder was stored in good ondition.—Fred E. Weber.

CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall

CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write

Harry Crandell **Cass City, Mich.**

Derenthal

Chester Whites

Home of Champions

MOST Chester herds need more size and better backs. I am breeding that kind. Let me ship you a boar. Guaranteed. Write for sale list.

H. A. Derenthal - Wykoff, Minnesota

CHESTER WHITE

BOARS for sale. My herd boar, Prince Triumph A No. 1, and 20 young boars of April and May farrow, weight about 200 to 225 pounds. Gilts bred or open. Satisfaction guaranteed. Pedigrees furnished. Address

Carl Hickcox **Spring Green, Wis.**

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.

O. P. Coates - Elkhorn, Wisconsin

Chester White

GILT SALE—That will farrow in April. For breeding and prices write

Wm. F. Belda **De Forest, Wis.**

CHESTER WHITE SOWS AND GILTS

BRED for March and April farrow to Pay Streak and King Cole, a son of Chief Keokuk. Also August and September boars sired by Pay Streak, 2d prize junior yearling at the 1916 Wis. State Fair. Wm. F. BUTTS, Evansville, Wis.

PADDY by SCHOOLMASTER

CHESTER WHITES

C. EVANS by COMBINATION 2d

SPRING boars and gilts for sale by above boars. Only the tops shipped. Order early and get the pick. A.L. Gray, Mt. Hope, Grant Co., Wis.

IF YOU WANT

CHESTER WHITES

write W. F. Miller, West Salem, Wisconsin.

POLAND CHINA SWINE.

OUR POLANDS MAKE GOOD

BECAUSE we don't send out poor animals. The **spring boars** that we have for sale have heavy bone, good length and backs, and bred in the purple. Sired by **Major Hadley, Big Hadley, Major Miller** and **Monarch.** The Smiley guarantee with every boar. Write your wants to

WM. SMILEY & SON, ALBANY, WIS.

BOARS ALL SOLD---BUT SAY

you should see our fall pigs— **THE BEST WE EVER RAISED. Do you want one or more? The "UTMOST IN POLAND CHINAS."**

DOBSON & EASTMAN **LANCASTER, WIS.**

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.

L. P. MARTINY, CHIPPEWA FALLS, WIS.

Anderson's POLAND CHINAS

SERVICE boars all sold. Have a few choice gilts at $25.00 each, and a few choice fall pigs at $10.00 each. Write at once, mentioning The Wisconsin Farmer, to

SOL ANDERSON **ROUTE 8, GREEN BAY, WISCONSIN**

The Home of CHAMPION POLANDS

I HAVE a spring boar that will please you. They are well grown and from sows that have been winners. My hogs please the critical buyers, they'll please you. Gilts reserved for bred sow sale, February 8th. Order now.

J. D. McDONALD **NORTH BEND, WISCONSIN**

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.

M. MADSON & SONS **MADISON, WISCONSIN**

BOARS! BOARS! BOARS!

POLAND CHINAS

Weighing from 225 to 300 pounds

Some of them sired by

MAC'S CHIEF

Grand champion Boar Wis. State Fair

I guarantee satisfaction in every respect. Address

OLAF C. OLSON
STRUM - WISCONSIN

Master's Giant
Orange Wonder
Young's Big Joe

NO breeder has three better Poland China boars. They will make my bred sow sale, February 6, 1917.

P. W. Young **Prosper, Minn.**

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalog. We hold the state's record on account of superiority. Address

J. C. Hendricks **Box F, Hazel Green, Wis.**

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).

Marinette County Asylum - Peshtigo, Wis.

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow. You get the pig and if suited send me the price is the way I sell. Write your wants. Address

W. T. Hartley **R. 3, La Crosse, Wis.**

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

CHESTER WHITE SWINE.

Adolph Nuttleman

BREEDER of Chester Whites. Let me know your wants.

WEST SALEM **WISCONSIN**

BIG POLANDS

FEB. 14

IS the day I sell 50 Poland China sows. Many are by Black Jumbo, the largest boar in the state, and they are bred to Model Major 2d, the largest 2-year-old in the state. Get on my mailing list.

E. W. HENDRICKS
Hazel Green **Wis.**

BIG-TYPE POLAND CHINA

SPRING crop of boars at farmers' prices while they last at $25 and $30 each. Brood sow sale will be held February 16, 1917.

CHRIS KARTMAN - CASSVILLE, WIS.

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write

R. MEINKING **BANGOR, WIS.**

Model Major 2d

IS considered by many as being the best 2-year-old POLAND CHINA BOAR in the state. I have spring boars sired by him that are **GREAT.** Why not buy where you can get the BEST?

CHAS. S. MALTBY **JANESVILLE, WIS.**

FALL PIGS

By JUMBO'S EQUAL 2D

CHAMPION southwestern Wisconsin. Poland Chinas with size, quality and breeding. Write

C. S. FLESCH **MT. IDA, WIS.**
(Shipping point, Fennimore)

Poland China Gilts

WEIGHT 200 to 250 pounds now. Bred for March and April farrow to a son of McChief, grand champion at Wisconsin. Address

C. Horn **New Auburn, Wisconsin**

BIG-TYPE BOAR **LONG PROSPECT** **FOR SALE**

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

A CRACKIN good big-type Poland boar of spring farrow for sale. Well grown and of Smiley breeding. W.H. Easterly, Whitewater, Wis.

E. J. WILSON'S CLOSING-OUT SALE

DUROC JERSEY BRED SOWS

RENVILLE, MINNESOTA, THURSDAY, JANUARY 4, '17

70 HEAD 70

8 TRIED SOWS
47 FALL YEARLINGS
5 SPRING GILTS
10 FALL GILTS.

5 spring gilts by Chief's Col. 40th, out of a King The Col. Dam.

ATTRACTIONS

Tried sows and the best money could buy, sired by the GREATEST BOARS OF THE BREED—DEFENDER, SUPERBA, VAN'S WONDER, KING OF COLS., BIG WONDER and KING THE COL.

CONTINUED

The 47 YEARLINGS are by CHIEF'S COL. 40th, he by Chief's Col. out of Helen Duchess by Ohio Chief. Their dams are the tried sows mentioned above.

70 HEAD 70

THIS sale offering is bred to **Gano Chief** by **Col. Gano**, dam by **Ohio Chief**; **Wonder's Defender** by **Big Wonder**, dam by **Defender**; **Col. Protection 3d** by **Col. Protection**, dam by **Pal's Col.** YOU get the BENEFIT at a CLOSING-OUT SALE. It is with regret that I close out my herd of Duroc Jerseys, but on account of other business interests I cannot devote the necessary time to my Durocs. Those that follow this breed know that I have purchased some of the best sows money could buy. The eight tried sows have never been priced before—they are wonderful brood sows, as you can see by the 60 head that are in this sale, out of them. EVERY ANIMAL WILL BE SOLD, REGARDLESS OF PRICE. This is one of the FEATURE SALES OF THE SEASON. Sows that will improve any herd.

I especially invite breeders that appreciate good **Durocs**, but if you can't attend in person SEND BIDS to T. P. SHREVE, WISCONSIN FARMER REPRESENTATIVE, in my care. The CATALOGS are now ready and I have one for YOU—just send your name and address and mention The Wisconsin Farmer. Col. H. S. Duncan, auctioneer.

E. J. WILSON - - - RENVILLE, MINN.

Attend these sales: F. S. Vanderhyde, West Concord, Minn., January 2d; Combination sale, Owatonna, Minn., January 3d; E. J. Wilson, Renville, Minn., January 4th; John Swenson, Willmar, Minn., January 5th.

VANDERHYDE ANNUAL DUROC JERSEY BRED SOW SALE

West Concord Minnesota **TUESDAY, JAN. 2, '17**

50 Head--- Tried Sows Yearlings and Gilts 50

My Entire Show Herd

THE attraction will be ROXY 325204, one of the greatest producing sows of the breed—every one of her litters has contained prize winners. Five tried sows, dams of my winners—17 fall yearlings and 28 spring gilts. King the Col., Crimson Wonder Again, Orion Chief, High Model, Van's Crimson—in fact the most popular breeding and the fact that I have won more prizes at the northern fairs than any other exhibitor, speaks for the individuality. An offering that will please the discriminating buyer. AM GIVING YOU THE BEST I HAVE. If you can't attend in person let T. P. Shreve, of The Wisconsin Farmer, do your buying, I'll guarantee his selection. The catalog gives detailed information and you should have one—WRITE AT ONCE. H. S. Duncan, auctioneer; T. P. Shreve, field man.

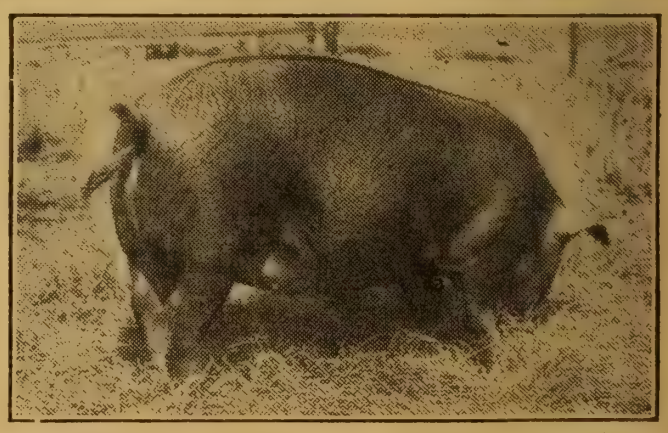
F. S. VANDERHYDE, West Concord, Minn.

I start the leading Minnesota Duroc circuit—go from my sale to the Owatonna sale, then Wilson and Swenson.

DUROCS

Will be sold at **OWATONNA, MINN.**

WEDNESDAY, JAN. 3, '17



45 HEAD—the tops of 5 herds. **Tried sows, yearlings, gilts. The "sifting committee" picked only the best from the 5 herds. You would expect good ones and we have them. Absolutely no culls. We want this sale to make a good reputation for us—will do our part. Sows bred to sons of King The Col., Tommy Doyle, Chief Defender's and A's Defender.** A sale worthy of your consideration. Our sale follows Vanderhyde's. Attend both if possible. Send bids to T. P. Shreve, Wisconsin Farmer representative. We want you with us. Col. H. S. Duncan, auctioneer. Write now for a catalog to

W. U. GOUSSEFF

Sale Manager ***OWATONNA, MINN.***

JOHN SWENSON'S ANNUAL
DUROC JERSEY SOW SALE
Willmar, Minn., Friday, January 5, 1917

50 HEAD 50

12 Tried Sows
5 Fall Yearlings
33 Spring Gilts

50 HEAD 50

REMEMBER

this is the only herd in the Northwest with two grand champion boars in service,

Big Wonder

Grand Champion of Iowa, 1913,

E. J.'s Crimson Wonder

Grand Champion Minnesota, 1916

11 TRIED sows by Big Wonder and Chief Defender, and one by Van's Crimson, that was first-prize under-year sow at Minnesota, 1915. Five fall yearlings sired by the Iowa champion, Big Wonder. Thirty-three spring gilts. Four granddaughters of King the Col. Fifteen by Big Wonder. Three by the grand champion, Prince Illustrator. Others of "purple" breeding. **Forty have been bred to the Minnesota champion, E. J.'s Crimson Wonder.** PLEASE NOTE—I picked this sale offering from 300 head and will say that there is not a poor one in the sale. Every tried sow is a good producer—not one with a spoiled udder. No breeder will have thirty-three better spring gilts, in breeding or individuality. **I am offering you the best I have—help yourself. "Where the best boars meet good sows."** I use this means to tender you a personal invitation to attend my sale. I want you to be my guest, whether you are a buyer or not. If it is impossible for you to get away, send your buying instructions to T. P. Shreve, field man for The Wisconsin Farmer. I'll guarantee his selection. If you could see the catalog you would, in a measure, appreciate the offering. If you'll write I'll mail you one. Col. H. S. Duncan, auctioneer. Mention The Wisconsin Farmer when writing.

John Swenson - Willmar, Minnesota

Make the circuit. Start at Vanderhyde's, West Concord, Minn., and end at my place. You'll enjoy the week.

SHEEP.

Registered Bred Ewes

RAMS all sold. Must now reduce my ewe flock on account of change of farm plans. Will not show at fairs in the future. Offer 25 Oxford, Hampshire and Shropshire bred ewes from $15 to $20 each, also 10 ewe lambs. My stock is of the low-down, blocky type. Address
DANE STOCK FARM OSHKOSH, WIS.

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SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.
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WARNING! ORDER BRED SOWS EARLY

HAMPSHIRES in great demand. Boars all sold and orders for bred sows and gilts coming fast. A few Jumbo sows. Our gilts large and smooth. Write today.
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CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address
A. P. CORTTE LOMIRA, WISCONSIN

DUROC JERSEY SWINE.

CHIEF INVINCIBLE

One of the largest, longest, highest back

DUROC JERSEY BOARS

in America. On **JANUARY 8TH** I sell 50 sows as good as ever entered a sale ring. Bred to or sired by **CHIEF INVINCIBLE.** A sale you should attend. Send your name for catalog.

F. M. WASHBURN, LAKE CRYSTAL, MINN.

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WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS WAUPACA, WIS.

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.
BURN BRAE FARM - - - ROSENDALE, WISCONSIN

DUROCS and GUERNSEYS

LENGTHY, heavy-boned spring boars sired by **Col.'s Defender 2d** and **Valley G.**, the 1,000-pound brother to Illustrator. April pigs, some of them weigh over 200 lbs. We have shipped C. O. D. for last ten years and never had but one shipped back. Registered Guernsey bulls and bull calves with most popular breeding, some from A. R. dams, one 2 year old whose dam has three A. R. records averaging over 500 lbs. fat. Reasonable. Allic S. Knudson, R. 5, Brodhead, Wis.

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OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts for sale. Write your wants. Address
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GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address
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40 Duroc Sows

HAVE been bred to sons of Pathfinder and King the Col. and will be sold January 30. One of the best offerings ever sold in the state. Send name for mailingilist.
Dennis Shea Melvina, Wis.
(10 miles from Sparta)

SAVE $$$$
BUY DUROC JERSEYS

of me. What do you want?

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CEYLON COURT FARM
DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.
Ceylon Court Farm - - Lake Geneva, Wis.

DUROC JERSEY SWINE.

DUROC PIGS

SEPTEMBER and October Duroc pigs at $15 a pair. Can also supply spring stock at prices you will be glad to pay. Have a few light weight spring boars that are right in every way at $15. Our herd has nothing but the very best blood lines of the Duroc family.
E. R. Perkins Manitowish, Wis.

DUROC GILTS

BRED to Cook's Defender for sale. Only a few, order early. Address
Emmett Cook & Son, Richland Center, Wis.

DUROC BOARS FOR SALE

BY Prince Defender, Royal King 4th, and Lee's Defender. Big, stretchy fellows. Shipped on approval. **McCLURG BROS., Viroqua, Wis.**

GEO. H. WILLSIE
Breeder of Big Durocs

Can supply your wants. Write.
Prosper - - - Minnesota

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GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address
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DUROC FALL PIGS

Offering Durocs, pairs or trios.

SEED CORN

of best varieties for sale. Write your wants to
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BOARS ALL SOLD

REMEMBER my **Duroc Jersey sow sale January 31st**
L. F. ATWATER BANGOR, WIS.

Our DUROCS Are in Demand

BOARS all sold. Offer a limited number of gilts. Place your order early. Herd headed by Royal Top Col. and Grand Model 21st. Address
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BURT DUROC FARMS

70 BOARS and 70 sows by Professor B. Model Wonder, Col. S. Jr., Orion, Cherry King Jr. **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

SHORT-HORN CATTLE SHOW AND SALE

Under the Auspices of the

Minnesota Short-horn Breeders' Association

to be held at the stockyard's pavilion

South St. Paul, Minnesota

Wednesday, Jan. 3, 1917

ON JANUARY 3d the Minnesota Short-horn Breeders' Association will conduct at the South St. Paul Stockyards a combination Short-horn Cattle Show and Public Sale. Prominent members of the Association are contributing to this sale a very choice collection of breeding Short-horns, selected by a special committee for their quality. On the morning of the sale all of the cattle consigned will be judged by Prof. C. F. Curtiss, of the Iowa Agricultural College. This cattle show will be one of the most interesting live stock events ever held in the Northwest. The sale proper will begin at 1:30 p. m. The offering includes

70 High-Class Short-horns 70

About one-half of the offering will consist of bulls of serviceable age, the balance cows and heifers of extra quality. There will be straight Scotch cattle, Scotch-topped sorts, as well as consignments from famous herds of milking Short-horns. Whatever you want in Short-horns you will find at South St. Paul. The Minnesota Short-horn Breeders' Association is consigning only choice animals to this sale, selected by a special committee of the association and bearing health certificates from the state. Don't miss this great sale. Col. H. O. Tellier, Auctioneer. For further particulars and catalog write, mentioning The Wisconsin Farmer, the

Minnesota Short-horn Breeders' Association, P. S. Jordan, Sec'y
Morris, Minnesota

JERSEY CATTLE.

Fewacres Farm's Jerseys

ARE heavy producers. Irene's Cherry 285828, a senior two year old, just completed a world's record of 12,571.6 pounds milk and 753,629 pounds butter fat. Write us about our young bulls for sale. Pedigrees and further description on request.

FEWACRES FARM - - - WAUWATOSA, WIS.
FRED D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle

OAK GROVE JERSEY FARM

WE are pricing our young bulls very low as we are crowded for calf stable room and have 22 cows to freshen. We are offering two sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and Noble of Oaklands.**

No. 1—Born Feb. 9, 1916. Out of **Volunteer's Sally**, that made 597 lbs. butter. Her daughter made 594 lbs. butter as a 2 year old and holds state record for her age. **Price $100.** Send for extended pedigree.

No. 2—Born Dec. 18, 1915. Out of **Koffee of Oak Grove**, in 305 days made 413.8 lbs. butter. She finishes her record Dec. 21st as a 2 year old. This bull won 1st at the Elkhorn fair. **Price $75.** Send for extended pedigree.

WM. KNIGHT - - - EAGLE, WIS.

"What is Accomplished by Testing Cows"

is the title of our booklet which tells you how to increase the production of your herd. Cows from herds of known production sell for more money. Send today for your copy of this helpful booklet It's free.

The American Jersey Cattle Club
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ELMDALE FARM ... JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son Oconomowoc, Wis.

YEARLING JERSEY BULL

BORN Oct. 15, 1915, ready for service; straight type, good spring of rib; sire of Golden Fern breeding, dam a granddaughter of Eminent; she and her sisters are heavy producers, eleven of them in my herd averaged close to 350 lbs. of fat last year. Send for pedigree, price right.

Ora P. Taylor Elkhorn, Wis.

REGISTERED JERSEY COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - Fairwater, Wisconsin

JERSEYS

100 FEMALES in my herd. Imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS

ABERDEEN ANGUS CATTLE.

ANGUS

CHOICE bulls of the fashionable families 10 to 15 months old. Thick, sappy, rugged fellows that are guaranteed in every way. Your business solicited. R. A. Austin & Son, Lancaster, Wis.

Buena Vista Aberdeen Angus

COWS, HEIFERS and CALVES all sold out. One bull of serviceable age and two bull calves for spring delivery, will go at $100 per head.

E. F. Ganz & Son Alma, Wisconsin

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. **Hauk Bros., Cassville, Wisconsin**

HEREFORD CATTLE.

HEREFORDS

BULLS FOR SALE

OF serviceable age. Pasture raise and not pampered. Well bred individuals. A few good calves. Come and see them before you buy.

J. J. F. WINTERS SPARTA, WIS.

When writing to advertisers kindly mention The Wisconsin Farmer.

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WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. BANGOR, WISCONSIN

USE A SHORT-HORN BULL

ARE you raising beef? A Short-horn bull will give you more scale and bone and more pounds of flesh for a given amount of feed than any other breed. Are you a dairyman? A Short-horn bull with milking ancestry will maintain your milk supply and will sire calves that will be quickly salable at a much higher price than you can hope for from a dairy bred bull. Are you a farmer? The Short-horn is the ideal for your purpose, because it is adapted to all conditions, of quiet temperament, takes on flesh readily, and yields a liberal flow of milk. The Short-horn always works improvement.

AMERICAN SHORT-HORN BREEDERS' ASS'N
13 Dexter Park Ave. Chicago, Illinois

100 Short-horns to Select From—100

BULLS and females. One or a carload. Write now. **ROCK COUNTY SHORT-HORN BREEDERS' ASSN., J. E. Kennedy, Secy. - - JANESVILLE, WIS.**

GREEN VIEW STOCK FARM OFFERS 7 Pure-Bred SHORT-HORN BULLS

7 to 17 months old, and a few choice

POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

RIVERDALE STOCK FARM SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

H. Wehmhoff - Burlington, Wis.

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

KITTY CLAY HERD HORNLESS SHORT-HORNS AND SHORT-HORNS

YOUNG bulls and heifers sired by Kitty Clay's Duke, that is out of the best family of milking Short-horns in existence. Also several Buff Wyandotte cockerels. Address

J. Warren Hoyt Rosendale, Wis.

THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

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MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little Evansville, Wisconsin

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son, Beaver Dam, Wisconsin

WILCOX SHORT-HORNS

AM offering several **red bulls** of serviceable age. They are a nice dark red and the finest in the land. Have one that weighs 650 pounds at 8 months old. Priced reasonable for immediate sale. Write for pedigrees. Address

W. F. WILCOX MILTON, WISCONSIN

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher Oregon, Wisconsin

SHORT-HORNS---BIG-TYPE POLANDS

CHOICE bulls, 1 to 15 months of good breeding. Collynie Victor 387634 in service. Also stretchy boars ready for service and gilts. Fall pigs of both sexes for sale. Prices reasonable.

A. Menke & Sons, R. 1, Markesan, Wisconsin

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

GUERNSEY CATTLE.

A Guernsey Show Bull Backed by Show and Production Records

DAM, Beatrix B, that at two years, five months of age, made 428 pounds of fat and gave 9,024 pounds of milk testing 4.74% fat. She is a daughter of Atwood Prince, whose offspring have been heavy prize winners and whose get of sire was never defeated. His seven A. R. daughters average 460 pounds fat at three years, five months. Sire, King Talladeen of Chestnut Hill, that has been first and champion at several leading fairs, has sired many prize winners. His dam made 635 pounds fat from 11,907 pounds of milk. Price $125. Two other yearling bulls of Glenwood breeding for sale from A. R. cows. Can also spare a few females. Send for our sale list or, better yet, come and visit Waukesha. If we haven't got what you want some of our fellow breeders will have.

FOX BROTHERS WAUKESHA, WISCONSIN

Reg. Guernsey Bulls READY FOR SERVICE

ONE sired by May King's Vrangue of Ingleside and from a good daughter of Langwater's Hayes Rosie King of the May. One sired by Maybelle's Champion and out of Moline's Butter Girl. Well marked, well grown, good type and priced right. Send for pedigrees.

Fruit Bros. Waukesha, Wisconsin

GO TO W. J. HEID FT. ATKINSON, WIS., FOR GUERNSEY BULLS

FROM 2 to 10 months old; also a few females. Best of breeding and good size. Come and see them, or write for description and prices.

Yearling Guernsey Bull

BORN December 5, 1915, sired by Stranford Glenwood of Pinehurst 3d. Dam also of Glenwood breeding. One other bull ready for service. Price right. Send for extended pedigrees.

L. J. Wendt Waukesha, Wisconsin

GUERNSEYS

REGISTERED bull calves 4 to 8 months old. Herd tuberculin tested. **EDW. H. KIESLING, JEFFERSON, WISCONSIN.**

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

IMPORTED GUERNSEY BULL

(Imported in dam,) 18 months of age. Dam, Blanche Flow of Sarnia, gave 35 pounds of milk with first calf. She is a daughter of Raymond 60, that has more daughters on A. R. test than any other bull of the breed. Sire, Flower Boy of the Cloture 3377 P.S. This young bull is a show animal and well marked. Send for complete pedigree.

Berkshire Spring Boars and Gilts

of Premier and Masterpiece breeding, good type, well grown and in thrifty condition. Address

O. R. FRAUENHEIM, RANDOM LAKE, WIS

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address

S. A. Merriman Fort Atkinson, Wiscosinn

HOMESTEAD FARM GUERNSEYS

WE ARE offering two registered cows—one in A. R. Several choice young bulls, sired by Imp. Governor Paget, mostly from A. R. cows. Write for prices and description.

W. G. Jamison & Son - Appleton, Wis.

FOR SALE—10. mo. Guernsey bull sired by richly bred Glenwood, Blue ribbon calf. A dandy. Price reasonable. W. A. Lawson, Rosendale, Wis.

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanrey's Othello. Also cows and heifers and Oxford lams for sale. C. S. Hechtner, Chariton, Iowa.

POLLED DURHAM CATTLE.

D. S. POLLED DURHAMS. An extra good dark roan bull 11 mos. old and a dark red 10-mo.-old bull. They'll suit. F. S. Bunker, Kilbourn, Wis.

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WHY YOU SHOULD BUY A BULL CALF FROM PABST STOCK FARM

Our stock is healthy, grown in open sheds under sanitary conditions. We are breeders, not dealers, and there is no opportunity for introducing disease into our herd.

You want the robust kind, full of vim and vitality. Our stock is that kind.

You want the best blood lines. Send for pedigrees of bull calves. They will prove our assertion that the breeding is second to none.

Our herd is large. Over 140 freshening this season. Gives you opportunity to select from a large number.

Last, but not least, we have the kind with splendid udders that make good at the pail.

Write Your Wants. We Can Please You.

PABST STOCK FARM
OCONOMOWOC DEPT. 30 **WISCONSIN**

WELL GROWN, WELL MARKED HOLSTEIN BULL

BORN December 1, 1915. Ready for immediate service. Sire, Crown Pontiac Korndyke, a richly bred son of Pontiac Butter Boy, that has 59 A. R. O. daughters, 4 above 30 pounds, and that is a half brother of Hengerveld De Kol and out of the same dam as Pontiac Clothilde De Kol. Dam, Stellaris Burke Pontiac 3d 255567, a big, roomy heifer with a fine large udder and good teats. She will be tested when she freshens again. Her dam is a 24.44-pound granddaughter of Hengerveld De Kol. Good type and high production have been bred into him in every line of his pedigree. Buy him now. He will soon be worth twice what we ask now. Send for pedigree. Address

NORTON FARMS **RACINE, WISCONSIN**

23.13-LB. HOLSTEIN BULL

READY FOR SERVICE

See pedigree in The Wisconsin Farmer issue of November 16th. Sire, **KING SEGIS CONCORDIA HENGERVELD,** whose two nearest dams average 32.83. Dam made 23.13 lbs. butter in 7 days. Priced right. Address

PINEHURST DAIRY, **SHEBOYGAN FALLS, WIS.**

HOLSTEINS AND GUERNSEYS

REGISTERED and high grade cows and heifers—service bulls. Carload or less. High grade calves, $18.00 each crated. Write us. We have what you want. Address

EDGEWATER STOCK FARM **FT. ATKINSON, WISCONSIN**

HOLSTEINS

I OFFER for sale, at very reasonable prices, splendidly bred and beautifully marked registered and high grade Holstein cattle of both sexes and all ages. Let me know your wants.

EARL NORWOOD, GAYS MILLS, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull. Sir Korndyke Zoidusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.

H. F. McNutt **Oxford, Wisconsin**

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address

B. F. Winckler & Sons **Medina, Wis.**

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda **Watertown, Wis.**

LA BELLE View Farm offers something new in young Holstein bulls. No. 1, from a 21½ lb. daughter of Pontiac Hengerveld Parthenea, that has 65 A. R. O. daughters 24 to 36 lbs. butter in 7 days. No. 2, from 18 lb. Jr. 2-year daughter of Sir De Kol Nonesuch, 6 A. R. O. daughters. Both young bulls by a grandson of Sir Ormsby Hengerveld De Kol and is also cousin to Duchess Skylark Ormsby. E. E. Rosenkrans, Oconomowoc, Wis.

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write

W. C. Kenyon & Sons **Elgin, Illinois**

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address

Lawrence Robers **Lyons, Wis.**

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

SHORTAGE of milk compels sacrifice of young calves. Owing to increase in number of our milk customers, we are compelled to sell some unusually fine bull calves 1 to 2 months old. A. R. O. breeding on both sides. Price for quick sale, $35 to $50. Also a few heifer calves.

SILVER SPRING FARM CO. - **EAU CLAIRE, WIS.**

A RICHLY BRED ORMSBY

YEARLING Holstein bull, born January 28, 1916. His dam is a half sister to the sire of Ormsby Jane Segis Aaggie, the world champion 90-day cow. His sire is a son of the 32-lb. bull,

BEAUTY PIETERTJE PRINCE

and from a sister to **Pietertje Maid Ormsby,** the former world's record cow. Send for pedigree of this fine bull. Price right. Address

Dopp Brothers **Ixonia, Wisconsin**

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.

JOHN STEELE **OCONOMOWOC, WIS.**

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey **Grafton, Wisconsin**

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 27-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address

L. V. GARVENS **BROOKFIELD, WIS.**

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons. (Registered Poland China hogs).

Marinette County Asylum - Peshtigo, Wis.

REGISTERED HOLSTEIN BULLS

SIRED by King Hiebe Jessie De Kol and out of good, heavy-producing dams. Bulls well-marked, over half white. R. W. Hume, Endeavor, Wis.

17 REGISTERED Holstein cows and heifers due to freshen soon. Best of breeding at farmers' prices. D. E. Buckley, Hartford, Wis.

HOLSTEIN-FRIESIAN CATTLE.

A 31.02 POUND BULL FOR SALE

RACINE JOHANNA PIEBE MERCEDES 188460. Born December 8, 1915. Well marked, of excellent conformation and well grown. His dam, **Ella Mercedes of Elm Court,** made **31.02 pounds butter** in seven days; **130.47** in thirty days and **829.78** in a year. She is a big cow weighing over 1,600 pounds; her dam weighs over 1,700. His sire, **Racine Sir Johanna Piebe,** is a show bull. His dam is a show cow and weighs close to 1,600 pounds. In seven days she made 24.49 and 808.82 pounds butter in a year. Send for his complete pedigree and picture. **Large size, good, straight type** and **heavy production ability** have been bred into this bull for generations. Come to our farm and see his dam, grandam and sisters. They are the type you will want in your calves. Am also offering a straight, well-grown heifer, born May 15, 1916, out of Lady Johanna of Elm Court, a half sister to Colantha Piebe of Elm Court; calf is sired by Count of the Pontiacs.

Reuben Klofanda **R. 1, Racine, Wis.**

WE CAN SPARE 15 HEAD OF REG. HOLSTEIN FEMALES

YOU may take your choice of any age, assort them as you wish. We have a herd of 52 to select from. Our yearling heifers are by King Johanna Melchior Fayne 101866. Heifer calves by King Elgin Johanna Rue Wa Wa 136698; two-year-old heifer by Sir Johanna Beechwood Fayne 127695; a yearling bull, Valley Champion 165427, for sale. Born June 8, 1915, 7-8 white, very promising. Call and see our herd or write for description. Prices reasonable.

J. P. Goetzer & Sons **Plymouth, Wisconsin**

A Richly Bred Aaltje Salo Bull

BORN February 28, 1915. Ready for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address

ARTHUR RUST **WEST ALLIS, WISCONSIN**

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.

His two nearest dams averaged over 29 lbs. butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,834 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.

Wisconsin Star Stock Farms **Ed M. Schultz, Hartford, Wis.**

Two Good Holstein Bulls Ready For Service

NO. 1—Born May 13, 1915, ¾ white, a good individual. His dam is a double bred Duchess Ormsby. Sire, a son of King Hengerveld Pondyke, that has two 30-pound daughters. PRICE $90.00.

No. 2—Born October 4, 1915. Over ½ white. His 14 nearest dams average over 27 lbs. butter in 7 days. Combines the blood of Johanna Bonheur Lyons and King Segis Pontiac. Send for extended pedigree. PRICE $200.00. We can spare a carload or less of high-grade Holstein heifers. Some sired by a 27-pound bull. Address **EDGEWOOD FARMS, PEWAUKEE, WISCONSIN**

2 Richly Bred Holstein Yearling Bulls

BOTH sired by **King Pietertje Hengerveld Ormsby,** a full brother to **Pietertje Maid Ormsby.** Both are out of daughters of **Sir Aaggie Ormsby.** One an A. R. O. cow making 17.50 pounds butter as a three year old. These bulls are of **Ormsby** breeding on both sides. Send for extended pedigrees and prices. **HUTCHINSON BROTHERS & BURBACH, RANDOLPH, WISCONSIN**

DODGE AND JEFFERSON COUNTIES

THE two greatest Holstein counties in Wisconsin. Holsteins from these two counties have made Wisconsin famous. You can buy the same kind of blood now. Our breeders can now supply you with both males and females of all ages. Write Francis Darcey, Watertown, Wisconsin, Secretary, Inter-County Holstein Breeders' Association.

YEARLING HOLSTEIN BULLS

READY for service and younger, sired by Johanna Chief DeKol, that is 62% the same blood as Johanna DeKol Van Beers, the 40-lb. cow. From official tested dams sired by a 30-lb. bull. I will also price a few heifer-calves. Prices reasonable. Edward O. Mueller, Appleton, Wis.

RIVERVALE FARM

OFFERS some fine Holstein bull calves, very light in color, from A. R. O. dams and granddams and sired by Korndyke Pontiac Piebe Burke, a grandson of Piebe DeKol Burke, at very reasonable prices. Address

Geo. H. Gibson **Nashotah, Wis.**

AT A REASONABLE PRICE

A SON of our noted herd sire, Cornucopia Pontiac Johanna 48355, that is by King of the Pontiacs (192 A. R. O. daughters) The bull for sale was born March 10, 1916. He is very well grown and of show ring conformation. His dam is an A. R. O. daughter of the 33-pound bull, Sir Pietertje Lyons Hengerveld. Send for extended pedigree—picture. Price very reasonable.

N. Dickinson & Son **Lake Geneva, Wis.**

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred heavy-producing cows. Call and see our herd or write

WM. FENNER, SHEBOYGAN FALLS, WIS.

VALLEY VIEW STOCK FARM

OFFER registered Holstein bulls 5 to 12 months old sired by a son of a 24.6-lb. cow, and out of good A.R.O. and untested dams. Price $55 to $75.

Wm. Buddenhagen & Son **Neillsville, Wis.**

HOLSTEIN

BULL calves, sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

REGISTERED

Holstein-Friesian Bull

AND heifer calves for sale. Write. Fries & Tulloch, Genoa, Wisconsin.

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¼ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams.

Write **R. C. Walker, Kilbourn, Wisconsin.**

HIGH grade Holstein heifer calves, well marked, sired by registered bulls and out of heavy producing cows, $18.00 crated. Registered bull calves for sale. Paul McFarland, Watertown, Wis.

High Grade Holstein

HEIFER calves, 15-16 pure from high producing dams, $18 crated. Also two bulls 11 and 9 mos. old from A. R. O. dams. Good individuals, nicely marked, 7-8 white. As we are short of room will price these right. Also bull calves. Send for pedigree and price. Mountain Ash Stock Farm, J. B. Cain, Glenbuelah, Wis.

FOUR REG. HOLSTEIN BULLS FOR SALE

TWO of them old enough for service. Sired by the 29-lb. bull, Fairmont Pietje Ormsby, whose dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and price reasonable. **L. Lindauer, Kaukauna, Wis.**

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address

C. F. DINEEN, CEDARBURG, WISCONSIN

REG. Holstein Bull calves for sale. Sired by relatives of world's record cow, Dutchess Skylark Ormsby. I can save you 50% on the price of your next bull; write for chart. Mark W. Rich, Buffalo Lake, Minn.

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. S. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write **J. W. Salter & Sons, Unity, Wis.**

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin **Gotham, Wis.**

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L. F. Biglow & Son **Brooklyn, Wis.**

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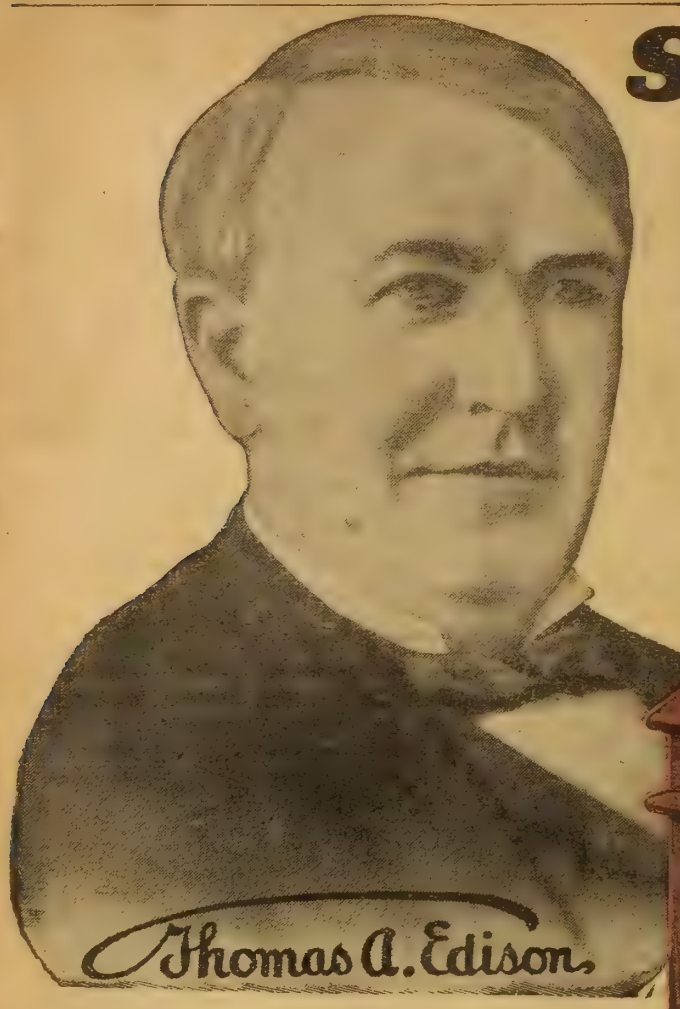

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Get the New Edison in your home on free trial. Entertain your family and friends with the latest up-to-date song hits of the big cities. Laugh until your sides ache at the funniest of funny minstrel shows. Hear the grand old church hymns. Hear the crashing brass bands, the waltzes, the two-steps, the solos, the duets and quartettes. You will sit awe-striken at the wonderful grand operas as sung by the world's greatest singers. You will be moved by the tender, sweet harmony of quartettes singing those old melodies that you have heard all your life. Take your choice of any kind of entertainment. All on free trial. Then, after the trial, send the outfit back at our expense if you choose. Or keep it on our great rock-bottom offer. **Send the coupon today.**

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If, after the free trial, you decide to keep Mr. Edison's superb new instrument, send us only $1. Pay the balance on easiest kind of monthly payments.

Think of it—a $1.00 payment, and a few dollars a month to get this wonderful new style outfit—Mr. Edison's great phonograph with the Diamond Stylus reproducer, all the musical results of the highest price outfits—the same Diamond Amberol Records—yes, the greatest value for $1.00 down balance on easiest monthly terms. Convince yourself—free trial first! No money down, no C. O. D., not one cent to pay unless you choose to keep the instrument. Send the coupon now full particulars.

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THE WISCONSIN FARMER

VOL. XLV. NO. 52. THURSDAY, DECEMBER 28, 1916. WHOLE NO. 1822

Badger Farmers Had Good Year.

NINETEEN SIXTEEN has proven a bumper year for Wisconsin farmers. Prosperity is the central note in every section of the state. Blessed by a good average crop which is commanding splendid prices and an increased activity in all branches of farming, a retrospect at this season is one of pleasant recollection with the knowledge that 1917 will usher in a new year, resplendent with glowing prospects.

Crops have been good, though the yield in many cases fell below that of previous years, but the higher prices more than make up in the total cash receipts what was lost in yield. The live stock industry was never on a firmer footing, with the one exception of horses; the dairy products industry is in its glory with butter and cheese prices touching new high levels The Wisconsin banks are overflowing with cash, deposits being the largest in history: money is not only easier in tone but more plentiful, thus providing the means for greater development this coming spring. There is a heavy demand for everything the farm produces, at prices the best in years.

No review of the year in Wisconsin agriculture would be complete without special emphasis given the crop situation, the live stock industry and the dairy products industry. In the words of Commissioner C. P. Norgord, of the department of agriculture, "Nineteen sixteen has set new records for Wisconsin farmers. Nineteen seventeen gives promise at this season of being better." There exists every reason for the optimism for the future that prevails in all the agricultural sections of the state as well as in commercial and industrial lines. The passing year has set new paces; 1917 must follow with even greater successes.

Just one glance at the government's crop statistics on Wisconsin will set one to realizing the wealth of the Wisconsin farmer. In all the principal crops, excepting corn, the yields were lower than the year 1915, but the higher prices offset any loss that might come through decreased production. All 1916 estimates are preliminary, the government's final figures not being available until two weeks hence, but on good authority The Wisconsin Farmer is advised that the government reports will show big increases in the values of all crops and in live stock.

Corn this year yielded 62,640,000 bushels against 40,825,000 bushels in 1915. The farm value of corn on these figures was 90 cents this year against 70 cents last year. The yield per acre of thirty-six bushels was two bushels over the ten-year average. Wisconsin farms in 1916 yielded 81,141,000 bushels of oats, worth 47 cents, against 99,975,000 bushels last year, worth 33 cents. So the decreased production was offset by the increased price, but at that the oat yield of thirty-seven bushels per acre was four bushels better than the ten-year average. Hay, with 4,379,000 tons, worth $11 per ton, yielded a total income of close to $50,000,000 in 1916, against 4,508,000 tons, worth $9.50, in 1915. This yield was a third of a ton better than the ten-year average per acre and though a little smaller than in 1915 the total cash value is considerably greater. Barley this year yielded 20,670,000 bushels, against 23,288,000 bushels in 1915, and was two bushels better than the ten-year average, but barley now is worth $1.02, against 54 cents last year. Spring wheat yield this year was only 1,776,000 bushels, as compared with 2,362,000 bushels last year, but wheat is worth $1.55 at the time of that estimate, against 90 cents a year ago. So it goes with all the crops, with the result that these four principal grain crops, with hay, yielded Wisconsin farmers in 1916 a total farm value, by government estimates, of $160,000,000.

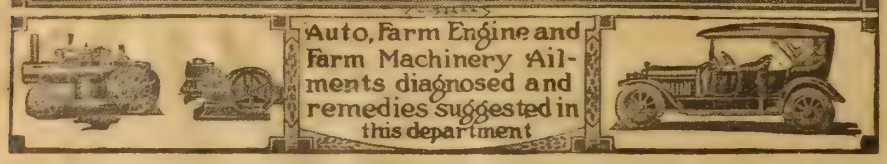
Tobacco and potatoes are important cash crops in Wisconsin and this has been an especially good tobacco year. The government's preliminary estimate shows a yield of 55,755,000 pounds, against 36,900,000 pounds last year. Last year tobacco had a farm value of only 6 cents, and, though statistics are not available yet for 1916, it is undoubtedly more than double last year, which places the 1916 tobacco crop as one of the most valuable in years. Potatoes are yielding Wisconsin farmers more money despite the fact that there was only about a 40 per cent harvest. The preliminary estimate is for 14,006,000 bushels, against 25,926,000 bushels last year, but the farm value this year was $1.38, against 40 cents at the same time last year. From a standpoint of yield it has been a very poor potato year with the 1916 yield only forty-seven bushels per acre, against a ten-year average of 102 bushels. "But every farmer would rather dig one bushel for the same money that two bushels would bring," remarked J. G. Milward, secretary of the Wisconsin Potato Growers' Association. The unfavorable season produced much tip burn, rot and other potato diseases, but those who sprayed and followed the advanced cultural methods were well repaid and the potato growers will enter the 1917 season with a far better idea of the value of such methods. During the year eighty-one growers produced certified seed. This was a decrease over the previous year, but was occasioned by more than forty growers voluntarily withdrawing from certification because of the poor season.

Fruits have suffered with potatoes, but there is the same lesson to be learned from 1916 experiences for the fruit grower as the potato grower. Wet weather in spring made it difficult to spray effectively. This resulted in much scab; the codling moth unmolested ruined the apples, with the result that the yield this year fell to 878,000 barrels, as compared with 1,473,000 barrels last year. The 1916 crop was only 56 per cent of a full crop, but the farm value of these apples this year was $3 per barrel, against $2.30 per barrel last year. These are the government figures. Much good fruit was produced, but only in the orchards that had the best care, and as Secretary Cranefield, of the state horticultural society, sized up the situation, "Nineteen sixteen has taught growers that those who succeed are the ones who spray; if washed off at night they spray again next morning and thus keep everlastingly at it." So 1917 will doubtless mean more spraying and better orchards. Other fruits suffered accordingly and hot weather hurt the gardeners. Cabbage and onions made splendid returns for many farmers. With these crops it was the old story of good individual yields in an off season with prices high and the up-to-the-minute farmer made the profit.

The live stock industry offers much to be proud of, as 1916 has seen an increase in all branches except horses. This has been especially true in sheep and beef. Dairying can always be depended upon to make its annual gains and the swine industry has taken a big jump with the increased price of pork. Eradication of the foot-and-mouth disease brought about a big stimulation in the cattle business and Mr.

(Continued on page 8.)

FARM MECHANICS



Questions and Answers.

The Wizard Spark Coil.

Please tell me where I can get new platinum points for a "Wizard" spark coil. I got this coil with an Olds gasoline engine some seven or eight years ago, but am not able to get the required points.

Answer.—We think that your coil was made by the Hercules Electric Co., of Indianapolis, Indiana. Write to them, describing your coil.

Oil For Cooling.

What is your opinion of oil, such as lubricating oil, for use in auto radiators? Water freezes so quickly in real cold weather; draining while out to parties or neighbors is very unhandy, and alcohol evaporates so quickly.

Answer.—We do not advise the use of oil for cooling. Oil soon ruins the hose and may not cool the motor enough, as oil does not absorb as much heat or radiate it as fast as water. Alcohol and water is the most popular anti-freeze mixture, about 50 per cent alcohol being commonly used. This mixture freezes at 15 degrees below zero.

The Magnetic Compass.

Please explain how a compass is made. Why does the needle always point to the north? Would it be possible for me to make a compass that would work satisfactorily?

Answer.—A compass is made of a magnetized needle of hardened steel, mounted so that it will turn freely on a pivot at the center of the needle. The needle is usually mounted in a small case with a glass cover. The case must be brass or some other material that cannot be magnetized. You might be able to make one. Obtain a heavy sewing needle about two inches long and magnetize it by rubbing it on a strong magnet. Paste the needle flat on a cardboard disk and support the disk so that it will balance on the point of a brass pin soldered in an upright position at the center of a brass case. A fiber case is just as good. Put an N on the cardboard near the end of the needle that points north; also mark the east, south and west positions on the disk. One end of any magnet is positive, the other negative; and the positive pole of one magnet attracts the negative pole of another. The earth is a hugh magnet with its poles nearly, but not quite, at the North and South poles. The positive pole of the earth attracts the negative pole of the magnet and the negative pole of the earth attracts the positive pole of the magnet. This force tends to swing the magnet into a north and south position. The needle does not point absolutely north, as the magnetic pole of the earth is not located exactly north. There are charts that give the exact direction the needle will point at various places on the earth.

Brake Bands Rub.

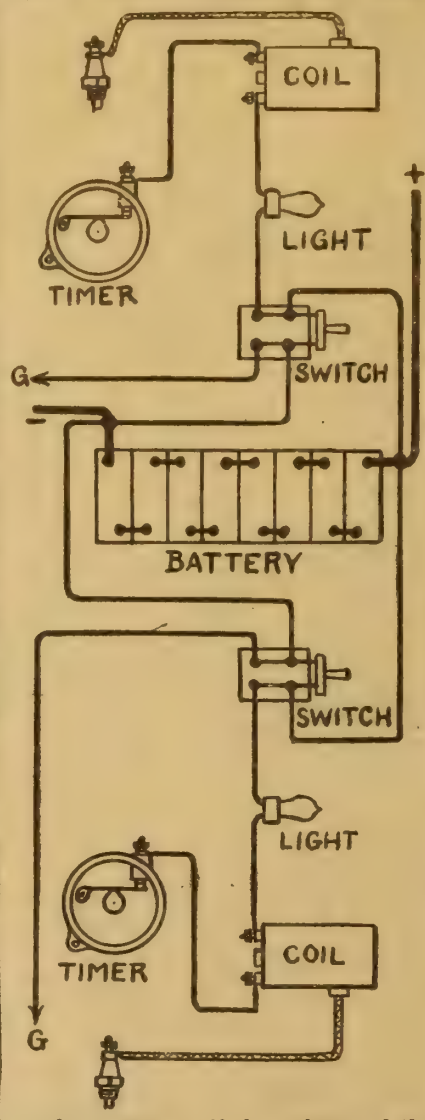
I have a new Ford car and have run it about four months. It has been giving me some trouble. I cannot speed it very high. There is a rubbing sound under the reverse brake, and a hissing sound in the right back wheel. I do not think that this wheel can be turned when it is raised off the ground. What can be the trouble?

Answer.—The brake bands in the transmission may be adjusted too tight. This overloads the motor and prevents the car from speeding up. The hub brake drum on the right rear wheel may also be rubbing. If so the drum will be hot after the car has gone some distance. There may be something wrong with the differential. Jack up both rear wheels off the floor at the same time. You should then be able to whirl the wheels easily by hand, the wheels turning in opposite directions. Lack of speed could be caused also by the high speed band or the clutch not being adjusted tight enough. You should send to the Ford Company for the Ford Manual, which explains very clearly how the transmission bands and clutch are adjusted.

Running Engine From Lighting System Battery.

Would like some information as to how to connect a gas engine to a storage battery. I have a thirty-two-volt electric lighting plant. The engine is jump spark. I also have another engine of the same make in a building away from the house. There are electric lights in the building. Would like to know how to connect this engine with the storage battery.

Answer.—We publish a complete wiring diagram of this outfit. The light is used for resistance and would



not be necessary if the voltage of the battery were less than twelve volts. Some coils are wound with high enough resistance to work all right even on thirty-two volts, but others would burn out unless a lamp or other resistance was used. The candle power of the lamp should be great enough to let enough current through to operate the coils. The heavy wires are the wires leading from the battery to the house lights, and the connections may be made anywhere along the line, not necessarily near the battery. Your second engine can, therefore, be connected to the light wires in the building.

Tractor Hitch For Two Binders.

How would be the best way to hitch two binders to a twelve-horse-power kerosene tractor?

Answer.—Special attachments are required, fitted to your make of binder. As a rule, these attachments would be difficult to make on the farm. It would be better for you to buy them direct from the maker of your binder, or from the dealer.

Electric Tail Light For Ford Car.

Please tell me how to wire for a tail light on a Model T Ford car. What voltage and candle-power bulb must I use?

Answer.—If your car is already equipped with electric headlights, solder a wire to the light wire running from the lighting switch to the first headlight. Run this wire to the tail light, and from the other terminal of the tail light run a wire to the frame and ground it, soldering the wire to the frame. If you have no electric lights on your car run a wire from the magneto terminal on the coil box to a lighting switch on the dash. Run a wire from the switch to the tail light and from the tail light to the frame and ground it. In either case use a two-candle-power lamp. Use a twelve-volt lamp unless you have trouble with them burning out. In this case it would be better to use a four-candle-power sixteen-volt lamp. In case you wish to use batteries instead of the magneto, wire the same as above, running the wire from the battery to the switch, from the switch to the lamp and ground one terminal of the lamp and one terminal of the battery. Four or six-volt lamps should be used for battery lighting.

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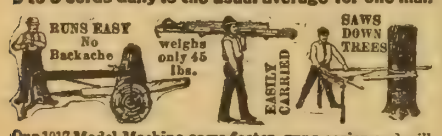

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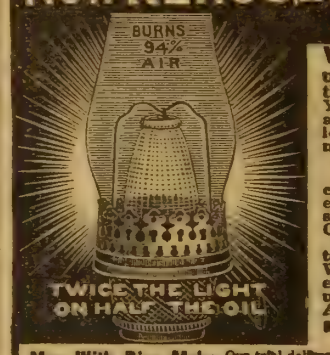

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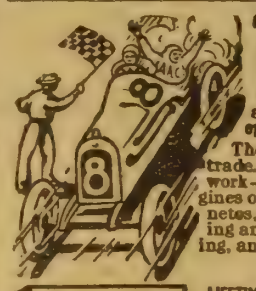

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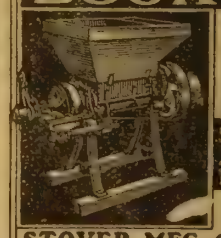

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The Wisconsin Farmer

THURSDAY, DECEMBER 28, 1916.

FAMILY CIRCLE TALKS
BY THE PUBLISHER

SHALL WE HAVE PEACE?

I AM in receipt of a letter from a farmer living near Rio, Wisconsin, who does me the honor to compliment my writings and to ask my opinion on a most vital topic. Let me quote a portion of his letter:

I have known you, through your writings, for the last two years and I do not think I shall be able to invest a dollar to better advantage than to take your splendid paper another year. I feel that your editorials alone are worth the price; believe me, I am honest about this. When I honestly appreciate anything and think it is worthy of praise I am not afraid or backward about saying so. I want to say that I enjoy your paper and so do my two sons, who are farmers and farming with me. We enjoy everything in it, especially the editorials.

Now, in regard to the great conflict in Europe you stand on entirely neutral ground. So do I, still I am free to express my views; and my views are that on the whole Germany is acting as honorably in this controversy as its enemies are. The majority of this neighborhood is against me on this point, however. How glad I would be if I could only get your views on the rights of the United States to put an embargo on arms, ammunitions and foodstuffs. Also your views on the proposal made by Germany for peace, whether it is proposing it for some selfish purpose or if it is honest in its expression that the shedding of blood has been carried on enough. I hope you will see your way clear to give us some enlightenment on these great questions.

As my correspondent intimates, I have endeavored to maintain strict neutrality throughout the entire great war. President Wilson asked us all to do this, at the beginning of hostilities, and most of us here in the grain belt have done as he requested. Still, there are some things upon which I feel so deeply that I would be derelict to my duty if I were not to speak plainly and emphatically, and it is no breach of neutrality or good faith to speak out. Here are my views, as briefly as I can give them:

If I had the power I would place an embargo upon arms and ammunition this very day. I would never place an embargo upon foodstuffs, so long as our production exceeded our actual home demands. I would compel the warring nations to arbitrate their differences at once and get the men out of the trenches (never to return again) before Christmas. This is what I would do had I the power.

None of us here know the honesty of intentions which prompts Germany to propose peace at the present time. We can only hope for the best, giving her the benefit of the doubt. Someone must make the first overtures; why not Germany? Having proposed peace (whether at the cost of pride humbled or not, it is not for us to question, in view of the great end to be sought) the other nations owe it to themselves, to the world and to posterity to give the proposal due consideration, not to dismiss it hastily or angrily or with bragging insinuations of what they will do "when they get good and ready." I wonder how many of you have seen the message which Wm. J. Bryan, our foremost pacifist, sent to Lloyd George, the new British premier, in regard to Germany's peace proposals? Here it is:

As a friend of the nations at war, as a Christian and a lover of humanity, I respectfully but most earnestly appeal to you to use your great influence to secure your government's consent to negotiations.

There is no dispute that must necessarily be settled by force. All international disputes are capable of adjustment by peaceful means. Every guarantee that can possibly be secured by war can be stated as a condition precedent to peace.

Do not, I pray you, by refusing an exchange of views, assume responsibility for a continuation of the unspeakable horrors of this unparalleled conflict. Your decision may mean life or death to millions.

What was Lloyd George's reply? He stood up before his fellowmen and quoted Abraham Lincoln, than whom a greater lover of peace never lived, as authority for the war continuing, using Lincoln's words thus:

We accepted this war for an object, and a world object, and the war will end when the object is attained under God. I hope it will never end until that time.

Tell me, my friends, what principles are at stake in the struggle in Europe which justify Lincoln's words being used against Lincoln's principles at this time? What can be laid in the balance to outweigh the lives of millions upon millions of men, the heartbreak and tears of millions upon millions of women and little children? There is an unutterable sadness about the holiday season to me this year, because the war continues. What does it matter what actuated Germany to propose peace; could anything be more desirable than that Christ should walk between the trenches and the men should throw down their guns at sight of Him, and wives and mothers should be made glad and heart-whole, and little children should sing again for joy, and all the world should rejoice, because war has been banished from our midst, and the sun should come up in its splendor on fields no longer harrowed by shot and shell but by the tools of the husbandman? Let us have peace, I say, no matter who proposes it; to place a stumbling block before it is a crime against all mankind.

"AMERICA" ON REQUEST.

I WANT to repeat my offer to send printed slips containing all four stanzas of "My Country, 'Tis of Thee" to any subscriber who will express the wish to have them. At this season of the year, what could be more appropriate than to conclude our public exercises with the stirring words of "America"? There is a possibility that peace may be restored in Europe in the near future. Should not all of us join in singing our national hymn, with greater fervor than ever before, making the welkin ring with the inspiring words:

Our fathers' God, to Thee,
Author of liberty,
To Thee we sing.
Long may our land be bright
With freedom's holy light,
Protect us by Thy might,
Great God, our King.

I have had these slips printed for your convenience. All you have to do is to send me your name, your address, and the number desired and I will send them to you without delay and without a cent of expense to you. I am only too glad to do this for you.

A NEW YEAR MESSAGE.

I LIKE to think of all of you as sitting down some time around the close of the year to take stock of how the world has treated you since last New Year's Day. Not that I believe in living in the past too much, but I do believe in looking back, now and then, at the last milestone to be sure we are advancing and to reckon the pace at which we are traveling.

Some of us have had a better year this time than others; that is inevitable. "One man's meat is another's poison," the old saying goes. Some go in for dry farming, and others come to ruin through drouth. So it goes. But have not all of us at least some one thing for which to be more than usually thankful as this year comes to a close? Do we always realize how well off we are? I never yet passed a cripple or a blind man but I thanked God that he had let me come to a ripe old age, strong of limb and enjoying good health. Compared to physical and mental vigor, and the companionship of loved ones in the family circle, what is all the wealth of Morgan and Rockefeller?

This thought was borne upon me most strongly by a letter which I received a short time ago and which I purposely held over until now, to give it to you as a sort of New Year's message. Perhaps, if you had read the letter in the original, just as it came to me, you would have thought, "How can a New Year message ever be made out of this?" for there were many misspelled words, many grammatical mistakes, many peculiar phrases. But the big idea was there, and nothing like a few mistakes in writing could hide it. The big idea was just this: We all of us have something to be thankful for, though it may seem small at times.

I am going to print this letter with just enough corrections of spelling and phraseology to convey the man's thought to all of you, so that not a particle of it may be lost. I do not want your mind to be the least bit distracted by grammatical mistakes and the like. What I want is for you to see this great-hearted immigrant farmer, in his northern Wisconsin home, writing me this personal letter out of the fullness of his heart, shaming us all when we dare to cry or complain because we do not have all of the world's goods we crave. Listen to this; it is my New Year's message to you, written by a Holland farmer who came to this country but seven years ago and whose way has been hard, very hard:

About a year ago, things looked pretty dark to me and my dear beloved woman and little ones. The early frost took all my corn and potatoes, there was nothing for us to live on and the mortgage on our little place was about to be foreclosed. There were a lot of bills and notes due, as is usually the case when things go wrong. We had worked hard, worried much and suffered lots, and we believe if it had not been for your encouragement and the articles in your paper we would have felt almost like giving up. But we (my wife and I) took chances. We put a mortgage on almost everything we had that was worth anything at all, in order to secure about $400 to pay a little here and a little there so as to keep up our credit and to show our good and honest intentions. Then we read your letters about Christmas, sometimes with tears in our eyes. We honestly and faithfully prayed the little Christ Child to give us courage and strength to try another year, and, thank the good Lord, this year it looks a whole lot better.

The first good luck we had was on the 22d of February. The stork brought us a good, big, healthy baby boy on George Washington's birthday and we named him after George Washington. That same night when I came home from the doctor I put my team in the barn, and there was a nice young heifer calf jumping and kicking through the barn. I honestly felt so glad and happy that day that I took the calf in my arms and took it into the house to show my woman, who was in bed. Everything turned out as well as we could wish for.

Then the third day of March a certain person came to our place and asked us how we were getting along with our farm and how we stood with the real estate man from whom we bought. I told him as well as I could how things were with us. It was always the same story—I had so many expenses and I did not have a dollar in the house. Then he says, "I know you and your woman so well that I know you are too honest to try to beat anybody and I feel sorry for you and for your family. If there is any way of going after that man I will give you the money to pay for your farm on 5 per cent interest." Five days after that everything was all right, and now we have a good, clear title.

When the spring opened the cows and heifers came fresh and everything was in our favor. We get a nice little cream check so that we are able to pay off very little by very little, but every little helps.

Then about August and September I began to read in your paper about this fair and that fair, until I was pretty near all fair myself and my woman laughed sometimes about my ideas about fairs and cattle and things. She laughed and said, "You are a farmer that can't buy a pitchfork, let alone doing these things." But about the middle of September our county fair was held and they allow pure-bred and grade cattle. I had a nice bunch of well-built and good-looking grade stock heifers and cows from pure-bred bulls and your paper made me so crazy that I had the nerve to take some of them to the show grounds. Best of all, I had keen competition and still I got two blue ribbons and one red one, that is, two firsts and one second premium. Believe me, dear friend Mr. James M. Pierce, that was a time. I promised my woman and little children that if papa got the premiums he would go to the butcher shop and buy a good chunk of fresh meat—and that was something we had not had for a couple of years. Believe me, we had a good time for a couple of days.

Now we have a nice little farm on a good road, with R. F. D., telephone line, only a mile and a quarter from the railroad, lumber yard, pickle factory, and about a mile and a half from the Catholic church and Catholic school. We are both Catholics and our oldest little girl is about five years old and goes to school every day. We have very kind and honest Sisters who teach school, and it don't make any difference to which church you go, all are very, very welcome at our school. We have Catholics and non-Catholics, Indians and white people—all sorts and conditions—but parents are all well satisfied.

But I think I must close. I wish I could talk with you once because I feel so good. I still have all kinds of notes, bills and debts to pay, but it is coming slowly. I have got so far that if I need a little money I go to either one of the banks and they help me on my note. Excuse me for bothering you so long with this letter. I have only been seven or eight years in this country and it may be hard for you to read, but if you can pick anything out of it that is worth a little room in your paper I would like to read it and give other poor, hard-working farmers a little courage, because all farmers cannot ride in automobiles. Some of them are happy with a wooden wheelbarrow.

My friends, I am not going to attempt to add anything to this message, written for you by this humble but thankful immigrant farmer. He wrote far better than I can write; you can feel his heartbeat in every word, see the sparkle of his honest eyes in every sentence, see the whole big-hearted man in every paragraph. There is a proverb in the land from which he came which says, "Better whole than patched with gold." This man is a whole man; his patches are not of gold, but of human sympathy and loving kindness and simple heartedness and honest thankfulness. I take off my hat to this man. I hope some day to cross the threshold of his humble home and shake his hand. I would rather meet him there, in his little home, than to dine at the White House.

Take this man's New Year's message home to yourself, each and every one of you. If the birth of a heifer calf can make bright a dark day to one man, who has suffered so much, how many, many blessings has the old year brought to you, to make you thankful? Shame on those who cry over that which they failed to win and ignore that which they have won. There is a new year dawning now in a few days. Shall we all of us strive to follow the example of the farmer from over the seas, make the best of everything, see the rainbow shining through the storm clouds and thank God for the many blessings he has given us even when he chasteneth us most?

James M. Pierce

THE WISCONSIN FARMER

A WEEKLY JOURNAL OF AGRICULTURE, HORTICULTURE, STOCK RAISING AND ALLIED INDUSTRIES

BY JAMES M. PIERCE

JAMES ATKINSON, Editor-in-Chief

ESTABLISHED IN 1848

Entered at Des Moines Postoffice as second-class matter

PUBLISHED EVERY THURSDAY

1912 Grand Avenue
Des Moines, Iowa

201 Washington Bldg.
Madison, Wis.

To either of which communications relating to subscriptions or advertising may be addressed.

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The Wisconsin Farmer Madison, Wis.

The Greatest Value That Comes to the Farm.

The cheapest good thing that comes to the farm is the reliable farm paper. All around us we hear of big advances in prices of almost everything we have to buy, and yet the farm paper is the same price. If properly read and its contents given serious thought, the farm paper, at its present price, is so cheap that no farmer can afford to be without it. There is considerable talk of advance in prices of farm papers, but The Wisconsin Farmer has not yet considered a request for a higher price from its readers.

The renewals and complimentary letters accompanying, which pour into the office of The Wisconsin Farmer, are sufficient evidence to us that this paper is well thought of in the homes of its readers. And it is our highest ambition that The Wisconsin Farmer shall be received each week with favor and appreciation, and that we may be able to accomplish some good.

In a sense the newspaper is a practical example of working out the theories of co-operation. If we should have only a hundred subscribers to The Wisconsin Farmer, the publisher would lose thousands upon thousands of dollars each year on the publication. It is only by clubbing together, working in co-operation as it were, that we are able to gather together a large family of readers, and offer such a good paper at so low a price.

Every reader realizes that his best chance for advancement in his farm work lies in brushing up against others who have made a success and getting hold of new ideas. But it is not possible for every reader of The Wisconsin Farmer to get around over the country and brush up against hundreds of farmers, scientists, students, etc. He must employ someone to do this work for him, and he does this when he purchases a subscription to a good farm paper like The Wisconsin Farmer. Editors of The Wisconsin Farmer devote their entire energies to studying farm conditions and collecting farm experiences. They have access to the best thought along agricultural lines. They spend a large amount of time on the road, at stock farms, grain farms, experiment farms, etc., and their sole object is to gather valuable information for the readers of this paper. If a farmer were to employ individually a man to go out and gather this information for him, he would have to spend several thousand dollars a year, including salary and traveling expenses, and then he would get the services of only one man. If he employed ten or a dozen men to work for him along this line, think how many thousands of dollars he would have to spend. These men get this information and relate it through the columns of The Wisconsin Farmer. They are careful in preparation of the matter. They confer among themselves, and they get pictures and drawings to illustrate their points. And we concentrate the best of all this information, boiled down into good readable style, for the benefit of our readers at only a dollar a year.

Send in your renewal today, and take advantage of the service which this organization is able to give. The facilities at the disposal of The Wisconsin Farmer cannot be excelled by any agricultural publication in the whole country. Prompt renewal of subscriptions means that not a single issue will be missed. In handling so many thousands of subscriptions a few weeks later, we are not always able to get the renewal on the list the same week it is received, so we urge prompt renewal. It will be a favor to the publisher if you will recommend The Wisconsin Farmer to your neighbors who are not already subscribers.

Wisconsin Corn Contest.

Jackson county, Wisconsin, produced some good corn this year, and one of the most successful corn contests in the state was put on there under the direction and with the support of the Jackson County Bank, of Black River Falls. On page 6 of this issue will be found a picture of a portion of the exhibits in this contest, which was closed November 4th last. This picture we reproduce through the courtesy of John H. Mills, cashier of the bank mentioned.

There were sixty-eight entries all told in this contest and the corn was well arranged, as shown in the picture referred to. The exhibits will be on display at the bank until after the first of the year.

A. H. Wright, of the agronomy department, Wisconsin College of Agriculture, judged this contest and gave a very interesting and practical address on the general subject of corn raising. As the address had been widely advertised there was a splendid audience of interested farmers, and we have no doubt this good work on the part of the bank, in connection with the college of agriculture, will stimulate corn growing in Jackson county. Those who go through Black River Falls, Jackson county, by rail, will see a rather rugged country and will perhaps remember that not many years ago this town was amost wiped off the map by a flood. Back away from the rough ground along the Black river is some well-developed farming country, the soil being rich and productive. The contest conducted by the Jackson County Bank has proved to farmers of the country what can be done in the way of raising corn, if the proper seed varieties are selected and proper cultivation methods used. The officials of the Jackson County Bank are to be congratulated upon the success of this contest and the farmers are to be commended for taking such general interest in the subject of "more and better corn for Jackson county." The Wisconsin Farmer was privileged to give a silver loving cup as one of the prizes in this successful contest.

Selection and Treatment of Bulls.

When it is a well-known fact that the dairy bull is the foundation of all successful dairying, it seems strange that so many dairymen remain indifferent in the selection of bulls. A herd will improve or deteriorate accordingly as the dairyman selects a good bull or an inferior bull, so that what appears a saving in the original purchase is but a trifle compared with what a real good bull can do in improving the milking qualities of a herd. It was along these lines that Mr. John Michels, of Peebles, Fond du Lac county, talked at the recent meeting of the Wisconsin Dairymen's Association. His experience in handling we are quoting from his address, as in this one thing so many dairymen, even with good sires, fall down:

During the first year of his life, there is no better place for a bull than a good pasture in summer and a box stall in the barn in the winter. This will supply a maximum of fresh air, sunshine and exercise so needful to a young animal. The bull should also be taught at this time to lead with a halter as well as get used to a stanchion. At one year old, a ring is placed in his nose and the bull taught to lead by his ring.

After he is one year old, there is nothing safer, more convenient and generally more useful in the handling of a bull than a properly constructed bull run with breeding pen adjoining. The bull run is fifty feet square which is large enough to provide the necessary exercise. Some shade must be provided. In my own bull pen, I have a number of large trees and running water, which makes conditions about ideal as regards shade and water.

The breeding pen has a total length of sixteen and one-half feet and is three and one-half feet wide in front and four and one-half feet at the rear end. When a cow is to be bred she is tied in the stanchion, the bull pen gate opened, and the bull allowed to run into the breeding pen. Opening the bull pen gate closes the breeding pen, thus making it impossible for the bull to get out. A breeding pen not only makes breeding cows an absolutely safe matter, but also saves a great deal of labor.

Special attention is called to the stanchion in the breeding pen. I have found it one of the best places in which to hold the bull when it is desired to disinfect him. In addition to securing him in the stanchion, I also tie him to the front of the manger by means of a rope in his ring. The bull is never tied except when he is being disinfected and when his pen is being cleaned out. The best place for a bull in the winter is a box stall in the cow barn where the bull is in sight of the cows.

One of the greatest losses suffered in the dairy business is the killing of bulls before they have been able to prove their value. The final test of the value of a bull is his offspring and no bull should be disposed of until he has offspring in milk. The reason so many bulls are killed when young is the fear that they will become too unruly to handle. With a bull pen like the one described, it matters not how vicious a bull may become, he can always be handled with absolute safety.

Frequently we see bulls at large in pastures. Mr. Michels condemns this practice in strong terms. It wastes the energy of the animal, is dangerous to attendants and the public and when running with heifers they are often served too young. Frequently we see children riding bulls. This is also a treacherous form of amusement and however gentle a bull may seem it should always be remembered that he is a bull and should be treated as such at all times.

Problems For Wisconsin Fruit Growers.

If ever Wisconsin fruit growers had a stiff program of work outlined for them it was done at the recent state meeting of the Wisconsin State Horticultural society by Prof. J. G. Moore, of Madison, department of horticulture, college of agriculture. Mr. Moore came out boldly and declared that Wisconsin horticulture's greatest needs are better apples and more honest packing. He accused the Wisconsin growers of the very criticisms they had made previously at the same convention of growers in Illinois, Michigan and New York. It is a long task, Mr. Moore said, but the big duty of progressive fruit growers during the coming ten or twenty years in Wisconsin is to improve the quality first and then build up a reputation for honesty in marketing that will stand for all time.

No business ever succeeded on dishonest lines. The same holds true with the fruit business. Certainly there are good apples in Wisconsin and there are fruit growers who are as honest as the day is long, but unfortunately they must suffer for the sins of others. The man who puts his fancy apples on top of the barrel and sells them for fancy apples with culls in the middle may fool the buyers for a time, but in the end he will suffer. That also applies to the grower of small fruits, the potato growers, grain growers; in fact, it applies to every man who has something to sell. Every product should come up to expectations and Mr. Moore said that many growers who had censured the commission man were often wrong—that it was the commission man who was right in detecting the culls in the packs. Mr. Moore's indictment of the fruit growers was undoubtedly with the purpose of rousing them to greater ideals and a greater industry rather than with the idea of discouragement. Sometimes the truth cuts, but then sometimes it is only the truth that can right conditions. The man who is packing fruits dishonestly knows it—if the shoe fits he may wear it, but it is unfortunate that those who are working for a reputation should suffer from the actions of the unscrupulous. Packing and grading laws as suggested might improve conditions, but the fact remains that it is something the fruit growers themselves must take into their own hands and work for the common good.

Mr. Frederic Cranefield, secretary, in approving Mr. Moore's general indictment, pledged the support of the society to better fruit and more honesty and this brought on considerable discussion as to the reason for conditions. The farm orchard was attacked. Mr. Cranefield holds it is a menace to the fruit industry. It must not be understood he opposes the home orchard. In fact, he thinks every farmer should have a home orchard—one just large enough to supply his home needs and one which he can look after properly with his other farm duties. The farm orchard he attacks is the one too large to be given necessary care and too small to make it worth while to employ caretakers or neglect other farm work for it. This situation, he says, provides a market for the fruit buyer—the fellow who scours the state for apples and takes culls and whatever is offered and sends them to the market as select Wisconsin apples. This buyer is a free lance—he has no reputation to maintain. There are many similar problems confronting the commercial fruit growers, but these serve to indicate the importance of the work ahead.

Co-operative marketing and clearing associations was suggested by Mr. Moore as one method of raising Wisconsin reputation in fruit marketing. These associations could do their own packing and grading and turn the culls to cider. Inquiries which are made by outside buyers each year indicate they would be glad to buy in large quantities from such associations. Mr. House has given the fruit growers something to think about and, though he may have overreached himself to some degree, some splendid good should be the result.

Farmers' Packing Plant in Minnesota.

An event of unusual importance to the farmers of southern Minnesota occurred at Faribault recently, when the new Faribault Packing & Provision Company plant was dedicated. One thousand farmers interested in the concern gathered in the cooling room of the new $172,000 plant where they were banqueted and toasted by a number of prominent speakers. There are more than 1,000 stockholders in the new plant, holding $400,000 in stock, and the subscribers are almost all farmers. Eventually they expect to make a $500,000 investment in this property. The building dedicated with such ceremony will be opened for business January 2d. An interesting feature of the stock sale was the fact that business men of Faribault guaranteed to pay the overhead cost of obtaining the necessary funds to open up such a plant. The new plant has a daily capacity of 1,000 hogs and 100 cattle, and the stockholders will be able to furnish a large portion of the animals slaughtered. There are seven buildings all erected after the latest plans for packing house construction It is planned to treble the capacity of the plant in the near future if the venture is successful. While there is no aim to make this a literally co-operative institution, the stockholders are pledged to stand together for the best interests of the concern, and with the considerable amount which they have invested it seems they will be likely to do this. In an address at the banquet Dean A. F. Woods, of the Minnesota College of Agriculture, said, "You will succeed if you stand together and stick to it." Dean Woods also said that the success of this plant and similar plants which are being organized throughout the country will mean that consumer and producer will be brought closer together. If this can be effectually accomplished it is expected to mean bigger profits to the producer and smaller cost to the consumer. Minnesota state officials were in attendance at the dedication and representative citizens from points in the state delivered short addresses.

Inasmuch as New Richmond, La Crosse, Wausau and Madison, Wisconsin, either have similar plants or are selling stock for the purpose of erecting the same, the Faribault experiment will be watched with keen interest. The La Crosse plant has not been a success under farmer ownership. The plant has been closed down until the annual meeting of the stockholders January 10th. A. W. Johnson, secretary of the Farmers' Co-operative Company, of La Crosse, advises The Wisconsin Farmer that the company was able to make a small profit the first of the year when hogs were sell-

ing cow, but that when the market advanced the company did not have sufficient capital to handle the business. Mr. Johnson says that the plant may reasonably be valued at $50,000, which is about 20 per cent of the outstanding stock. Efforts to reorganize failed because not enough of the stockholders would attend a meeting or vote on the proposition by mail. At the annual meeting January 10, 1917, some disposition of the business may be made. The officials say that they ought to be able to make money if they could have sufficient working capital. It will remain for the stockholders either to arrange for the continued operation of the plant on an agreed basis, or sell the plant and divide the proceeds. If a majority of the stockholders do not attend the annual meeting it will be a difficult matter for the directors to handle, and Mr. Johnson advises us that it might be necessary to resort to the courts. Those most interested, however, hope for some happier solution of the problem. If the string of farmers' packing houses could be operated successfully it would no doubt protect the farmers' market, and at the same time give the stockholders an opportunity to participate in the supposed big profits of packing. One difficulty seems to be to get a united action of any kind on the part of so many stockholders. Successful managers of packing plants are also scarce, and good berths with higher salaries than struggling concerns want to pay, are awaiting such managers. No one wants to discourage the farmer in his efforts to better market his farm products.

The Mechanical Milker.

A rather comprehensive study of the labor cost of handling dairy herds of from fifteen to fifty cows with and without the use of milking machines has recently been completed by the office of farm management of the U. S. Department of Agriculture. In this study 109 New York dairy farms, fifty-six of which used mechanical milkers, and 160 Ohio, Michigan and Illinois dairy farms, 100 of which employed milking machines, were visited and data gathered direct from the farmers themselves. The conclusions reached, therefore, may be said to be the average opinion of 269 practical dairymen, of whom 156 used mechanical milkers and 113 milked by hand.

In general, the facts that this investigation brought out may be stated as follows: That the larger the herd the more advantageous the use of the mechanical milker proved; that the average time required to milk a herd of fifteen cows or less by hand was seven minutes per cow and five minutes by machine; that in herds of fifty cows or more hand milking required slightly less than seven minutes per cow and machine milking 4.15 minutes. Thus the average cost of hand milking in small herds was $10.91 per cow per year and in large herds $10.45. Mechanical milking in small herds, including interest on the investment in the necessary machinery, depreciation, etc., amounted to $11.77 per cow per year and in large herds the cost was reduced to $7.34 per cow per year. These figures bring out clearly the well-known fact that the size of a dairy herd does not materially reduce the cost of hand milking and that the mechanical milker can be more economically used in herds ranging from thirty to fifty cows in size than in those ranging from ten to twenty.

While machine milking cost more per cow in a small herd than hand milking, it does not necessarily follow that one shouldn't use a mechanical milker in herds of fifteen cows or less, but rather that this should be determined by each individual farmer himself. For, notwithstanding that machine milking may cost slightly more per cow in a small herd, time and labor are saved, and in many instances the saving of labor, which is usually hard to get, is an important item. These studies also brought out clearly the fact that one man can handle more cows with a mechanical milker than he can if obliged to milk by hand—a matter of considerable importance on small farms where the owner wishes to avoid employing hired labor, except during rush times in the harvest season.

The average cost per cow per year of machine milking, in herds of thirty to fifty cows, was found to be as follows: Interest on the investment, 61 cents; gas and oil for running the engine, 84 cents; repairs, 25 cents; depreciation, $1.49; labor, $6.03—total $9.22. Hand milking the same size herds cost $10.11 per cow per year. Interest on the investment will, of course, vary with the cost of the machine employed. The depreciation charge made was based upon the assumption that a milking machine and engine will last about twelve years; in other words, a depreciation charge of 8 per cent was made.

Every dairyman visited who used a mechanical milker—156 in all—was asked whether, in his opinion, the milker had in any way influenced the production of his herd. To this 124 answered that they had observed no difference in yield, while sixteen said the milker had slightly increased the flow and sixteen claimed that it had slightly diminished the amount of milk. This would indicate that the man who handles a milking machine with reasonable intelligence and care need not fear a reduction in the yield of milk. In a similar manner it was shown that there is no danger of the machine producing sore teats, garget, or other udder troubles.

Index of Articles Published in 1916.

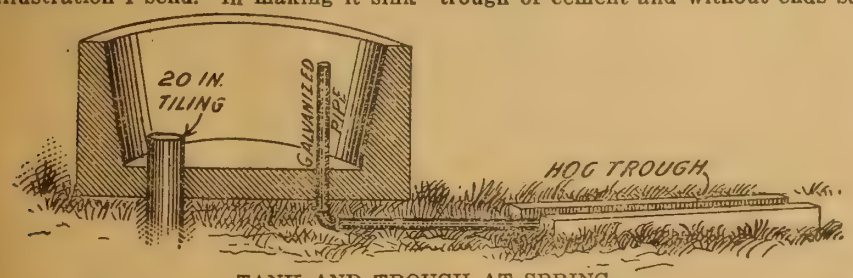
The Wisconsin Farmer has issued an index of all articles published in this paper during the year 1916. Copies of this index will be furnished free to any subscriber who will drop us a letter or postal card and ask for the same. This index will be found of great value by those who have been keeping a file of their papers, or expect to have such file bound. To secure your copy of the 1916 index, write to The Wisconsin Farmer at once before the supply is exhausted.

Watering Place and Spring.

H. A. Caldwell, Minnehaha County, South Dakota.

IN YOUR paper I saw where James B. Wood, of Morgan county, Illinois, wanted a description of a watering place over a spring.

A year ago I fixed a watering place over a flowing spring the same as the illustration I send. In making it sink one or one and one-fourth inch galvanized pipe down through the tank just under the surface or on top of the ground as you want it. Then run a piece of the pipe out to where you want your hog trough. Make the hog trough of cement and without ends so



TANK AND TROUGH AT SPRING.

a piece of tiling in the spring the size you want (if the spring flows strong, a twenty-inch tile), then make your cement tank around it (either round or square) and for the overflow put in a the water will flow through it and be clean for the hogs to drink. When the tank is finished bank around it so it will be dry. This will not be very expensive either.

Corn and Alfalfa Experiments.

Manager of the Wisconsin Industrial Farm at Waukesha Gives the Results of Some Interesting Tests Which He Has Made.

DURING the past year Mr. J. T. Hill, manager of the Wisconsin Industrial School Farms at Waukesha, Waukesha county, has been conducting corn and alfalfa experiments, the results of which are quite forcibly shown by the accompanying illustrations. The added value of using only tested, standard varieties of seed corn should be common knowledge to every farmer, but unfortunately there are many still following the old methods. Mr. Hill's experiment with Wisconsin No. 7 shows very conclusively the value of good seed, as Wisconsin No. 7 tested seed yielded forty-five bushels as compared with five bushels of ordinary crib-selected and untested corn. The same amount of seed was sown on adjoining plots of equal size with similar soil conditions and cultural care. The illustration speaks for itself. Much of the untested seed failed to germinate; that which ripened was of poor quality, all in great contrast to Wisconsin No. 7.

Wisconsin No. 7 tested seed corn yield compared with common, bin selected, untested seed.

The alfalfa experiments brought out the value of seeding without a nurse crop. The same plan was followed on similar sized plots and on similar soils. One was seeded without a nurse crop and was more than knee high when the accompanying picture was taken. One was seeded with a nurse crop and was partly crowded out by the nurse crop. On the same day the one seeded with a nurse crop was not half so high and the stand very thin as compared with the other plot.

There has been much discussion in Wisconsin in recent years relative to seeding alfalfa with and without nurse crops. This experiment, as well as others, tends to show that the best results come when alfalfa is seeded alone, provided soil conditions are right. This is especially true of the first seeding. The soil is preferably plowed in the fall and limed if necessary. In the spring the land is disked and harrowed often enough up to about the first of June or July so as to get all the weeds out of the way. The soil is then inoculated and the alfalfa seeded at not less than twenty pounds to the acre. If the season is favorable the first crop may be secured before the first week in September.

Seeding without a nurse crop is rather costly as far as labor is concerned, but for the beginner it is the surest method. On fields which have grown alfalfa good results are secured by seeding alfalfa with a nurse crop, such as barley or oats. A thick seeding of oats or barley have choked out many otherwise successful alfalfa crops and precautions must be observed. Not over one bushel of alfalfa should be sown and if with oats they should be cut for hay when in the milk stage. The nurse crop requires less labor and trouble.

ALFALFA WITHOUT THE NURSE CROP.

ALFALFA SEEDED WITH NURSE CROP. SOWN AT SAME TIME AND PICTURE TAKEN AT SAME TIME AS ACCOMPANYING PICTURE.

Farmers in Badger Legislature.

A TABLE recently compiled shows that there are thirty-four farmers in the Wisconsin legislature this year, thirty-two in the lower house and two in the senate. Other businesses and professions represented in the legislature this year and the number include thirteen attorneys, thirteen merchants, ten mechanics, nine real estate men, seven retired, seven bankers, six contractors, four lumbermen, four liquor dealers, five publishers, four manufacturers, three druggists, two hotel keepers, two physicians, two public officials, two salesmen, one clergyman, one clerk, one jeweler, one civil engineer, one accountant, one laborer and one who does not give any occupation. The assembly is made up of seventy-nine republicans, fourteen democrats and seven socialists. The political complexion of the senate is twenty-three republicans, seven democrats and three socialists.

Fair Officers Elected.

Wilbur Ross was re-elected president of the Douglas County Fair Association at the recent annual meeting. Other officers are: W. McCullough, vice president; T. J. Roth, treasurer, and F. E. Spring, secretary. The receipts of the last fair were $26,720.20 and the expenditures $26,425.79.

In and Around Wisconsin

COMING EVENTS.

Winter Course Wisconsin Dairy School, Madison, Wis., November 8th to February 1st.

Wisconsin Poultry Association Show, at Madison, January 1s to 5th.

Automobile Show, Milwaukee,. Wis., January 5th to 11th.

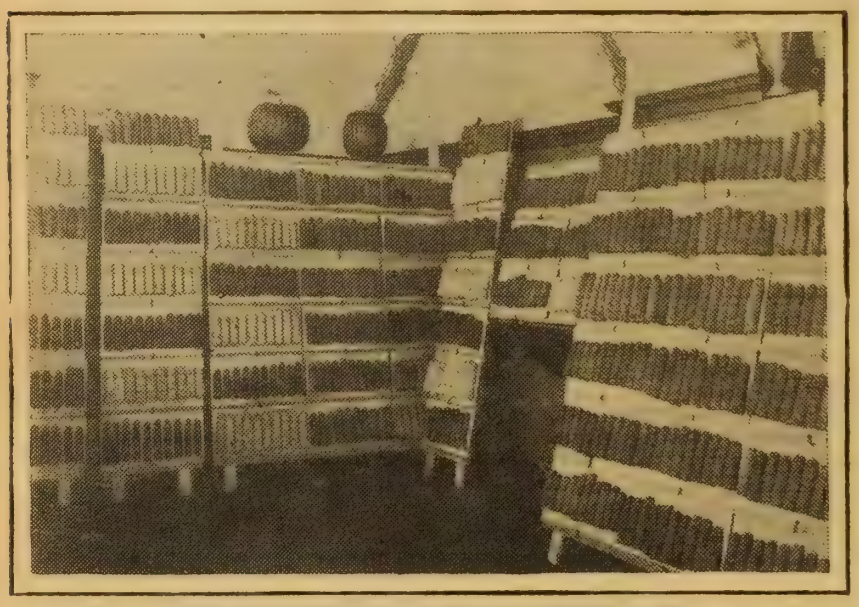
Wisconsin Cheesemakers' Association, at Fond du Lac, January 10th to 12th.

Farmers' Week (Swine Program), Madison, Wis. Beginning February 6, 1917.

A report on the cheese sales on call board at Spring Green, Wisconsin, dated December 18, 1916, is as follows: 556 boxes single daisy cheese 22 1-8; 100 boxes single daisy cheese 22 3-16; 59 boxes twin cheese 21½; 238 daisies withdrawn.

Chas. Hampke, secretary of the Manitowoc County Holstein-Friesian Breeders' Association, recently sold to Lewis Van Hulle. Oconto, Wisconsin, a bull sired by Recreation King Johanna Rue 105355; dam Dottie Squeezer Hambe 179424. This young bull captured first prize at the Oconto County Fair and those who are following his record are expecting to see some splendid results.

The annual winter convention and business meeting of the Wisconsin State Drainage Association will be held in Madison, February 13th. Mr. Warren Moore, of Ladysmith, will speak on drainage engineering problems in northern Wisconsin. Other addresses of interest are as follows: "What the drainage district has done for my farm," A. P. Nelson, Racine; "Raising onions on peat soil," E. A. Witte, Sprague; "Sugar beets in marsh soils," A. L. Dibble, Madison; "Tiling deep peat," O. R. Zeasman, Madison.



CORN DISPLAY IN JACKSON COUNTY, WIS.
Portion of corn exhibited in connection with contest put on by the Jackson County Bank, Black River Falls.

The southern Wisconsin corn and tobacco growers' meeting was held at Edgerton. There are a number of splendid exhibitions. The first prize winners were as follows: Golden Glow Corn—Tom Olson, Edgerton; Silver King Corn—Robert Rusch, Edgerton; any other variety of dent corn —W. E. Calladay, Lake Kengonsa; Single Ear Dent Corn—Harold Hall, Edgerton. Harold Hall also won first on tobacco and sweepstakes with 350 points.

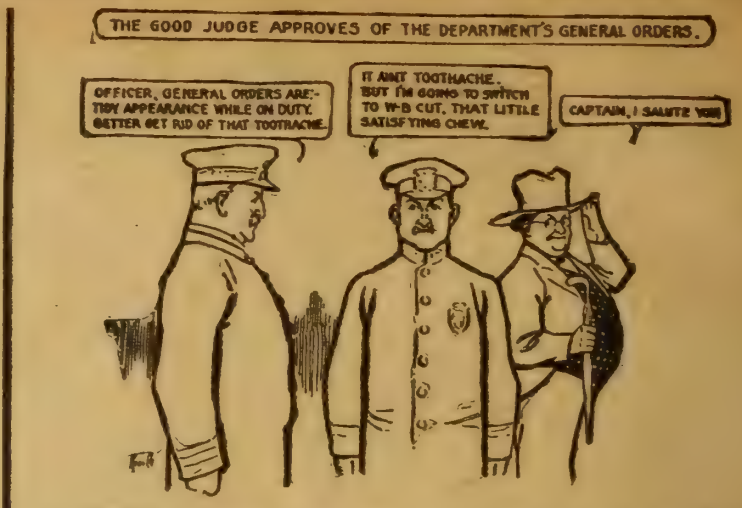
Growers of sugar beets will be interested in the announcement of the Rock County Sugar Company, which proposes a bonus on sugar beets provided the high prices of sugar keeps up. The contracts of this company call for $6 per ton for beets. The bonus provides for an additional dollar for every dollar in excess of $6 per 100 pounds that sugar commands at the time the beets are delivered. In other words, if sugar is $7 per hundred at the time the company will pay the $6 according to contract and an extra dollar on every ton of beets. The fractional increases in sugar quotations will bring corresponding increases to growers. The extra dividend will be paid on February 15, 1917. This chance of bonus is open to everybody.

According to Dr. A. S. Alexander, of the college of agriculture, the number of horses in Wisconsin in the last ten years has increased from 595,900 to 712,000. Ten years ago the average horse was worth $91 and today the average value is $124, indicating that Wisconsin is also furnishing some stock for other states. Dr. Alexander shows that in the past ten years Wisconsin has furnished 7,000 head of horses for North Dakota.

The question of a county agricultural representative is now being agitated in Door county. A number of cheese factories are being erected in this county and there is a good prospect for development of a dairy business. In these matters a county agent would help. There are also many facts concerning fruit growing and spraying wherein a live county agent could usually earn more than his salary by disseminating the proper information.

Mr. Philip Hoffman, of Dodge county, recently delivered two lots of pigs. The first lot weighed 1,900 pounds and consisted of nine spring pigs and the other lot, consisting of eight last fall pigs, weighed 2,060 pounds. The seventeen pigs weighed 3,960 pounds—almost two tons, averaging 232 pounds each, and Mr. Hoffman received a check of $360.37 at the rate of $9.10 per hundred. Mr. Hoffman has ten pigs left which are probably sold by this time and for which he expected to receive $215. This makes a total of $575.37 for twenty-seven pigs.

The annual seed show held at Princeton, Green Lake county, Wisconsin, Thursday, December 14th, was a grand success. This show was held under the auspices of the Princeton Commercial Club. The officers are: O. C. Olman, president; Dr. G. J. Recek, vice president; Geo. V. Kelly, secretary; H. J. Maxwell, treasurer. Prizes were won as follows: Clover—Ezra Westfield, first; Carl Ott, second; Wm. Prachel, third. Winter Wheat—John Koats, first; Z. W. Kohnke, second; A. G. Oelke, third. Rye—Lawrence Moshuda, first; Walter Bartol, second; Wm. Summerfeldt, third. Oats—Wm. Summerfeldt, first; Ridney Frost, second; Ed Golz, third. Beans—John J. Bartol, first; Wm. Saunke, second; Wm. Prachel, third. Flint Corn—Anton Naparallo, first; Otto Berger, second; J. W. Kohnke, third. Late Potatoes—Ezra Westfield, first; Wm. Prachel, second; Otto Suanke, third. White Dent Corn —Ezra Westfield, first; Wm. Page, second; Ed Bartol, third. Early Potatoes—John M. Codzoch, first; Ed Golz, second; Ezra Westfield, third. Yellow Dent Corn—Ed Golz, first; Wm. Golz, second; Henry Zuelolz, third. Addresses were delivered by Professor Lung and Professor James, of the Wisconsin College of Agriculture, Madison. Seeds and "Building Up a Dairy Herd" were the topics respectively.



GIVE a man a chance—whether he is on the force or a private citizen. It's the *satisfaction*, the *good tobacco taste* that wins him over to W-B CUT chewing. There are other things that help:—the gentlemanly appearance that the little chew permits; the easing up on so much grinding and spitting; last and not least, the economy—but it's the *tobacco satisfaction* that turns the trick every time.

Made by WEYMAN-BRUTON COMPANY, 50 Union Square, New York City

Entries have already closed for the Wisconsin Poultry Show to be held at Madison, January 1 to 5, 1917. One of the interesting features of this show will be an interstate competition between seven agricultural colleges, each of which will enter a display of market eggs. The poultry departments of the agricultural colleges of Indiana, Connecticut, Massachusetts, Michigan, Missouri, Kansas and California will compete. Officers of the state association are: M. C. Gerard, Stoughton, president; J. F. Love, Waukesha, treasurer; J. C. Halpin, Madison, secretary; directors, Wm. Bell, Arlington; Frank Cooper, Merrimack; Mrs. L. A. Ross, Belleville, and T. O. Evans, Dousman.

Although promised and provided with the hardest kind of competition the University of Wisconsin won forty-five premiums including fourteen firsts and six championships on its exhibit of sheep entered in the classes of the recent International Live Stock Exposition. The judge found in a class of thirty-one strong contenders a Wisconsin Southdown wether which was good enough to be made the reserve champion of the entire show. The Badger institution was also accorded a silver trophy valued at $50 for exhibiting the best lamb sired by a pure-bred ram from a western range ewe. Of the fifteen Internationals which have been held the Wisconsin station flock has won ten of the carcass championships. Frank Kleinheinz, known to flockmasters in all sections of the state, has fed each of these champions.

Mr. Ben L. Edgarton recently returned to Oshkosh from a visit in Madison county, New York. His reports on the apple crop in New York this year astonish our Wisconsin folks. Mr. Edgarton said that the best price being offered for apples was 30 cents per 100 pounds at the cider mills or about 15 cents a bushel. Apples arrived at the cider mill which he visited in such quantities that the price was lowered to 10 cents a bushel and Mr. Edgarton said he saw open fields lined with 8,000 or 10,000 bushels of apples in a pile. While these apples are not all of the finest grade, it is apparent that New York is much better supplied with such fruit this year than Wisconsin. The same gentleman also reports that there is also a good crop of potatoes this year in the section of New York which he visited and potatoes were selling at $1 per bushel.

Law Questions.

Compelling Road Work.

A Subscriber, Neillsville, Wis.—I bought a forty-acre farm six years ago, and the buildings on it stand near a laid out road about 200 yards from the main road. The laid out road has never been worked and is so rough, that in the spring it is impossible to drive a team over it. A neighbor and I use it and other farmers use it in the winter time to haul wood to the river. I have requested the town board to have the road worked, but they have not done so. How can I proceed to have said road fixed up?

Answer.—The town board of supervisors have the care and supervision of such roads as you mention and it is their duty to keep them in repair, but if they neglect to do so there is no adequate way to compel them. Under some circumstances a writ of mandamus might be obtained from the court requiring them to have the road repaired, but such a proceeding would be expensive and probably not successful in your case.

Rent of Estate—Aliens.

A Subscriber, Lena, Wis.—(1) My mother died in Wisconsin last fall and left a will of her property to us children. I worked her farm in the summer of 1916, and agreed with our family to pay $100 for the use of the farm. Some of the family want to handle that money and others ask me to hold it till the law calls for it. My mother's will was not probated at the time of said agreement. What should I do about the matter? (2) A foreign born man was living in this country in 1860 and became a naturalized citizen of the United States. Two years later he returned to his native country and there married a woman of that country. Later he returned with his sons to this country. Can his sons vote in this country without naturalization papers?

Answer.—You should hold the money till the executor of your mother's estate is appointed and then pay it to him. He is the proper person to receive it and give you a receipt for the same. (2) The sons being foreign born are aliens and in order to have a right to vote in Wisconsin must get their first papers by declaring their intention to become citizens of the United States.

Horse Deal—Blindness—Settlement.

A Subscriber, Athens, Wis.—A year ago I bought a horse for $235 on trial for sixty days and paid $35 cash and gave my note for the balance payable in six months with 7 per cent interest. The horse was guaranteed by the dealer to be perfect and sound. When the horse was delivered to me its left eye was sore, but the dealer said it was only a cold, and that the eye would be all right in a few days, and I accepted the horse. Several weeks afterwards the eye became worse, and I took the horse back to the dealer—but he gave me some salves and medicine and told me to keep the horse a while longer and use the medicine and the eye would be cured. When the note became due, the horse was blind in the left eye and the other eye was affected. Then a settlement was made between me and the dealer and he allowed me $50, and I then paid him $80 on the note, leaving a balance of $70. The horse is now totally blind in both eyes and I refuse to keep it. Can I compel the dealer to take back the horse and refund my money?

Answer.—You cannot compel the dealer to take back the horse and refund your money. The settlement made between you and the dealer when the note was due and he allowed you $50 and you paid $80 on the note, settled the matter of the blindness of the horse, and you are liable to him for the $70 and interest thereon.

The Farmers' Open Forum
WITH CONTRIBUTIONS FROM READERS OF THE WISCONSIN FARMER

Did Best in Box Stall.

To the Editor:—My baby beef entered in the Wisconsin State Contest was born January 3, 1916. On the 15th day of August he weighed 620 pounds. On October 28th he weighed 860 pounds. I kept my calf in the barn all the time. I kept him tied up part of the time. I found that he was not eating enough, so I gave him a

GEO. E. DAY, IOWA COUNTY, WIS BABY BEEF RAISER.

box stall where he could get more exercise and noticed that he did much better. He has been sucking all the time. I have been feeding him grain ever since he was six weeks old. He did not eat feed very well until he was five months old. George E. Day.
Iowa Co., Wisconsin.

Noon Lunches at School.

To the Editor:—Am glad to inform the readers of The Wisconsin Farmer on the subject of noon lunches in our school.

Being obliged to stay at home this winter, I was employed as teacher in the district school here.

With a school of forty-five pupils, ranging from the first through the eighth grades, didn't give me very much chance to introduce my special work.

Realizing, however, how necessary it is to have something hot with the usual cold midday lunch, I brought the subject before the parents of the district.

Its installment has proven a greater success than I anticipated.

The equipment costs between $5 and $10. It consists of a two-wick kerosene stove, a granite pail which we are using for a kettle until we receive an extra large double boiler that has been ordered; a small milk can with a fitted cover, dish pans, stirring spoons, measuring cup, ladle and a large dry goods box with an oilcloth on the top which serves for the kitchen table. The lower part has curtains in front of it and holds the cooking utensils. Each pupil provides himself with a cup and spoon and for current expenses for provisions brings 5 cents a week. Our dishes are simple, but nourishing. Milk is the main ingredient.

So far we have made creamed soups, like potato, pea, bean, rice and bread soups.

Besides these we have had creamed potatoes and cocoa.

Sometimes we are planning to have stock soups with vegetables, and when apples do not appear so much in their lunch baskets we will have some freshly made apple sauce.

The potatoes are cooked at home, but creamed or made into soup at school.

The program in the state manual allows one period a week for domestic science work. We do some cooking each day, but use very little school time for the same.

Two girls, different each day in the week, begin the cooking at the morning intermission. After the bell rings one or the other occasionally tends to it. At twelve o'clock each pupil takes his lunch to his desk and is served with the hot additional food.

An effort is made to have each pupil take more time for the noon lunch and be orderly and neat in eating.

Thirty-five out of forty stay for lunch and no one has missed bringing money to defray expenses for provisions. Last Friday we had a box social and an illustrated lecture. The proceeds will be used to defray the cost of the cooking equipment and other needed articles in the school.

Sophie M. Schaefer.
Brown Co., Wisconsin.

Early Reminiscences.

To the Editor:—I think the country in which we live is the best in the world. It has been my home most of the time since September, 1844, when my father and family came from Stuben county, New York, and located on Rolling Prairie four and one-half miles northeast of where Beaver Dam now stands. This name was given to the city because a colony of wild beavers had built a dam across the river at that place and still occupied it. Father located on the old Blackhawk Indian Trail where they passed across father's land as they went from their camp on the Mississippi river to Milwaukee with their furs, or whatever they had to trade for what they needed, but they always had whisky on the bill of fare and they always made my folks a call and begged provisions. We had to give them what they wanted or there would be war in the camp. Their trail lay across father's land and when he fenced it so they had to make a crook in their trail they did not like it. It made them a little cross and almost ready for war when they had a good supply of firewater, as they called it. As soon as they were a little drunk it would not do to cross them.

The next fall after father went there, which was about a year, my brother and I were digging potatoes. Brother dug and I picked up. Father had gone to Beaver Dam. The Indians came along and wanted some potatoes. My brother being older than myself told them he could not give them any as they belonged to the smoky man, as that was what the Indians called the white people, but they insisted on having some potatoes and one old Indian held up both hands and said he wanted as many as he had fingers on both hands. Brother told him to take so many and the Indian gave a whoop and all the Indians came and took off their large blankets and picked up all we had dug—as much as ten or twelve bushels—and packed them on their ponies and went on their way laughing and hooting. You bet that surprised us boys. When father came home he wanted to know how many potatoes we had for him to haul to the house. We did not have any, as all we dug were on the way to the Mississippi.

At night the prairie wolves made the nights hideous with their howling. There were twenty or more in one drove. When father got a crop of winter wheat in and it looked fine the wild deer would come into it, from ten to twenty in one drove, and we boys had to take the dog early in the morning and drive them out. Sometimes a big buck deer would stand his ground and drive us out. That was a great country and now the land is selling for $150 per acre, but Beaver Dam is not a progressive city—nothing like Antigo. In 1883 there were no sidewalks here and what is main street now was all filled with stumps. Now we have one of the most wide-awake cities to be found—all the latest improvements—and it has made steady growth all of the time, but this past season it has taken a new pace and there is more building done and being done this past summer than in several years. The city is building an up-to-date high school building with all of the latest improvements. It is second to none in the state. A large mill company has also located here. Their mill and whole plant is one of the best, if not the best, to be found anywhere. The whole plant covers forty acres. Another mill has just located here called the Fish Lumber Company and the man at the head of it is one of the most progressive men to be found. The city is pushing north. They have platted some farm land at the north and have built several dwellings. They have a store in the north end of the city and it is doing a great business. There has been many dwellings built and a number more started. If you want to live in a large city come to Antigo. It has the farm and dairy business to back it up. Langlade county is bound to be the banner dairy county in the state. H. F. Marsh.
Langlade Co., Wisconsin.

Save 10% to 50%
in clearing for the plow

WE mean just that. Pulling the stumps is not enough. They must be cleared away. The Kirstin Method not only pulls stumps, but gets rid of them after they're pulled and saves you 10% to 50% of the usual cost of turning barren stump land into harvest fields. We guarantee that.

15 Year Guarantee Flaw or no Flaw

Kirstin Stump Puller
One Man — Horse Power

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The horse power machine has proved itself on big jobs on over 35,000 farms. Because of its triple power, it pulls anything it tackles, without strain to man, horse or machine It will clear more than two acres from a single setting. Has started many a farmer on the road to fortune.

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Measuring a Circular Hay Stack.

By Use of a Simple Rule an Accurate Computation May Be Made on a Tonnage Basis.

AN ARTICLE appeared in a recent issue of this paper describing a method commonly used for measuring hay in the ordinary long haystack or rick. Some farmers, however, have circular haystacks and may desire to estimate the tonnage in stacks of this shape. For this purpose, therefore, a different rule must be applied.

First, measure the circumference and height of the stack. The circumference is easily measured with a tape-line thrown around the stack near the bottom, as indicated by the dotted line in Figure 1. To determine the height accurately is more difficult, but for practical purposes a reliable estimate can be made in this manner: Secure two light poles, one of which is nearly as tall as the stack that is to be measured; the other may be considerably

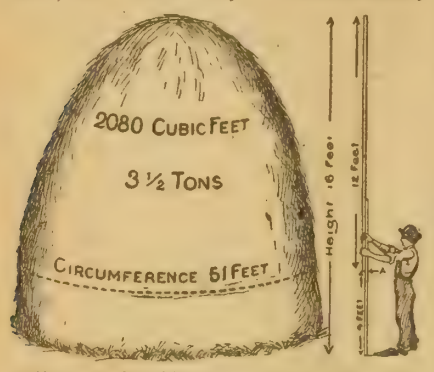

Figure 1.—Circular haystack with sloping sides. Measurements for determining weight of stack are indicated. Letter A shows mark on short pole opposite lower end of long pole.

shorter. Let one man hold these poles one against the other and near the stack, as shown in Figure 1, so that the longer pole may be moved up or down while the shorter pole remains on the ground. Let another man stand about thirty feet away and indicate when the end of the long, movable pole is just even with the top of the haystack. When this adjustment has been made a mark is made on the shorter, stationary pole, opposite the lower end of the movable pole. Letter A in Figure 1 shows this point. Then the distance from this point to the ground is measured on the short pole and to this measurement is added the length of the long pole. The result is the height of the haystack.

After the measurements of the circumference and the height have been obtained the next step is to calculate the number of cubic feet in the stack. To do this, multiply the height by the circumference, then multiply by the circumference again and divide by twenty. For example, the haystack shown in Figure 1 has a height of sixteen feet and a circumference of fifty-one feet. Applying the foregoing rule,

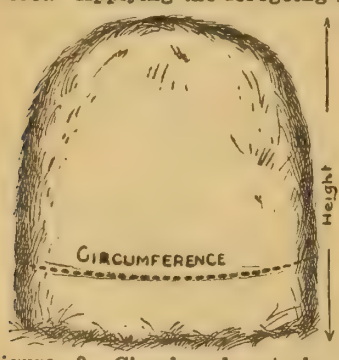

Figure 2.—Circular haystack with rather flat top and steep, straight sides. Necessary measurements for determining weight of stack are indicated.

we have sixteen multiplied by fifty-one, which equals 816; multiplying by the circumference again we get 41,616; and dividing this figure by twenty we get a result of 2,080 cubic feet.

This rule holds good for determining the number of cubic feet in circular haystacks having a shape similar to that in Figure 1. A slight change is necessary if the stack has a rather flat top and steep sides like the one shown in Figure 2; in this case the number used to divide by in the last step is fifteen instead of twenty. Otherwise the procedure is the same as that given above.

We are now ready to calculate the tonnage. This is done by dividing the number of cubic feet found in the haystack by the number of cubic feet in one ton of hay. The latter figure varies according to the kind of hay and the length of time it has been standing in the stack, but for timothy or mixed clover and timothy hay the figures in the following estimates may be used. Hay that has been standing in the stack less than thirty days averages 590 cubic feet per ton; from thirty to sixty days, 580 cubic feet per ton; and from sixty to 155 days, 515 cubic feet per ton.

If we assume that the stack in the example given above has been standing for fifty days, then the tons of hay it contains may be found by dividing 2,080, the number of cubic feet in the stack, by 580. The result is three and one-half tons. On the other hand, if we had assumed that the stack was less than thirty days old we would have divided by 590 instead of 580.

Badger Farmers Had Good Year.

(Continued from page 1.)

Raymond Baker, assistant secretary of the Wisconsin Live Stock Breeders' Association, assured the writer that 1916 has been satisfactory in every way to the live stock interest with much encouragement for 1917.

The government report shows 1,680,000 milk cows in Wisconsin for the year, putting Wisconsin at the lead; 1,310,000 cows other than milk; 2,140,000 hogs; 712,000 horses and 664,000 sheep. The forthcoming final report is expected to show an increase in all, while the December report shows the values of farm animals to have increased materially during the year. Hogs are worth $8.80 against $7.30 a year ago; beef animals at $5.90 against $5.70 a year ago; sheep at $5.70 per head against $5.10 in 1915, and milk cows worth an average of $66.70 against $62.70 in 1915.

The interest in both beef and sheep has been specially strong in all sections. For years the number of sheep in Wisconsin has fallen off as much as 100,000 yearly; this year it is thought they held their own, and in 1917 an increase should be registered. Wool is bringing unusual prices. With the settling of new lands in the northern part of the state, there is greater demand for sheep for brushing down, and mutton is also profitable. The baby-beef show, held in conjunction with several county fairs and at Madison in November, focused attention on the beef industry with the result that many pure-bred sires of the beef types have been imported into the state this year. Wisconsin swine sales have established new price records, which speaks well for the pure-bred herds already established. Many of the boars bought at these sales are staying in Wisconsin, and this means a better swine industry. In the dairy cattle line there has been a steady demand for good stuff; more cattle are probably being bought privately than ever before, and the 1916 figures should show a substantial increase in numbers.

The close of 1916 finds the dairy products industry in its most profitable condition. "The state has never seen such prosperity in this line as now," remarked Mr. George Wiegle, dairy and food commissioner. Cheese prices are at new high levels and promise to go higher, and the butter market is strong. Cheese, now quoted on the boards at 26 cents a year ago was as low as 15 and 14 cents. The government's figures show the farm value of butter now at 35 cents against 28 cents a year ago. The Elgin quotations have been up to 42 cents.

The outstanding feature of the year in dairy products development has been the putting into force of the new law licensing buttermakers and cheesemakers and setting certain standards of cleanliness before such factories could secure licenses. As a result the dairy and food commission has been able to put the dairy products business on a higher plane and is now preparing statistics which will give an accurate idea of the cheese and butter production of Wisconsin. Cheese production in 1916 is estimated to have exceeded 250,000,000 pounds. Butter production 150,000,000 pounds. Mr. Wiegle makes these rough estimates from figures furnished the commission by factories. This means an increase of 60,000,000 pounds of cheese in two years, an increase of 20,000,000 pounds of butter in the same period. In 1910 Wisconsin produced more than half the nation's cheese and a sixth of the butter—the ratio is now even greater. With the prevailing high prices the importance of this industry to Wisconsin is readily apparent. An increase of 12 to 14 cents a pound on 250,000,000 pounds of cheese is $30,000,000 to $35,000,000. That is the extra price that went into the pockets of Wisconsin cheese factory patrons in 1916 as compared with 1915. The same held true with the creameries.

The dairy and commission figures will also show an increase of 400 cheese factories since 1910 and a decrease of ninety creameries. This gives Wisconsin in round figures 2,400 cheese factories and during the past year many creameries have turned to making cheese to take advantage of the high prices. On present market value this cheese and butter business at the close of 1916 on these estimates is an item of $175,000,000.

Milk prices are also higher in all sections. The condensing plants are paying better prices; in Milwaukee and other city-producing territories prices have risen in keeping with the prices set by the cheese market.

Then there is the poultry industry—small, but very important with the farm value of eggs, by government report, at 31 cents a month ago. For fresh eggs many farmers are getting as high as 48 cents, according to J. G. Halpin, secretary of the state association. There are 9,000,000 hens in Wisconsin, laying a total of 900,000,000 eggs yearly, and Mr. Halpin, at present prices, estimates the farm value of a hen at 75 cents.

These lines of farming, as mentioned, embrace the principal activities of Wisconsin farmers. As prices on all products are higher, the Wisconsin farmer is, therefore, more able than ever to meet rising costs in the things he must buy. In other words, he has the buying power and this is not better shown than by the enormous increase in the purchase of automobiles in this state during 1916 by farmers.

Official figures in the secretary of state's office show that when the last 1916 license was issued a week ago there were 115,645 automobiles registered in Wisconsin in 1916 as compared with 79,790 in 1915. This is an increase of 35,000 over last year. Of the 115,645 it is estimated 40,000 are new cars—bought during the year and the average value is estimated at $800. This means that Wisconsin has about $90,000,000 in automobiles and it has been figured 40 per cent are owned on rural routes, excluding the small cities.

The closing year was also a good one for the state fair. Secretary Remey has even better plans for 1917 which will see the erection of a new poultry building costing $25,000 and a complete water and sewage system on the fair grounds. There will be many improvements in premium classifications, etc., with the hope of making the 1917 fair the greatest in Wisconsin's history.

No recital of the year's activities would be complete without mention of the campaign for better roads. During the year the state, towns, cities and villages built 1,227 miles of improved road under the direction of the state highway commission at a total cost of $4,171,096. Most of this was borne by the towns and villages as the state aid fund for both 1916 and 1917 only totals $921,700, and it is apportioned to the counties and towns as they improve the roads. For 1917 a comprehensive plan has been laid out and about $4,600,000 will be spent for better roads as already voted by the towns and other units of government.

The 1916 road improvement was divided as follows:

Graded but not surfaced	486 miles
Concrete	59 "
Stone macadam	215 "
Gravel macadam	302 "
Other permanent surfaces	63 "
Non-permanent surfaces	100 "
Total	1,227 miles

The influence the agricultural college, the farmers' institutes, the experiment association and other bodies are playing in Wisconsin agriculture is also of great importance in a review of the year. Interest is now keener in boys' and girls' club work and community endeavor than ever before and great strides have been made during the year along these lines. Farmers' institutes went off very successfully and Superintendent Luther has a splendid set of them outlined for 1917. The farmers' course at Madison the first week in February will be featured this year as "Swine Week" by the college of agriculture, and this promises to be of as great importance as the 1916 farmers' week.

All in all, 1916 has been a splendid year for Wisconsin farmers. They have every reason to look towards 1917 with encouragement and optimism.

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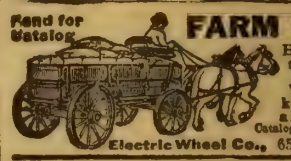

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Unique Plan to Increase Dairy Herds.

Within five years, between 1910 and 1915, there was a decrease of dairy cows in the state of Illinois to the amount of nearly 44,000. To keep pace with the growing population it would be necessary to increase the dairy herds by 300,000 head. This deficiency, growing as we might say at both ends, is startling, and, viewed from a cold business proposition, explains to a great extent why dairy products are so high.

A plan that was started a few years ago that did not meet with much favor was to agitate legislation against butchering heifer calves. What seems a far better plan which is being worked out by the dairy extension movement is to send experts out into the country to buy calves that farmers do not care to raise. The calves would be taken to a farm prepared to care for them, where they would be kept until old enough to eat dry feed, when they would be turned over to the calf clubs of the state. The calves could be purchased cheaper than the older ones, and, in the meantime, the children of the calf clubs would profit by the experience of caring for the youngsters at an earlier age and longer time.

It is planned to raise 500 calves a year and $20,000 would be required; $12,000 is already pledged. The calves would be sold through the bankers to the calf clubs at cost, the idea being to build up the dairy industry of the state.

In the past year eight clubs have been formed and 120 carloads of high-grade dairy cows have been placed in the state by the extension movement.

The Care of the Cream.

The quality of creamery butter depends on the cleanliness and care given to the cream by the community where the cream is gathered, after all. A man who would not touch butter from the store, no matter how seemingly it was all right, would eagerly buy creamery butter at 10 cents more on the pound that had been made from the cream in the selfsame community, with the comfortable assurance that "Creamery butter is always right!"

As a matter of fact, it is not always all right, as many of us who at times must buy butter can testify. It is sometimes strong, just as country butter is not quite as sweet as it should be. Indeed, many times a woman will let the cream that is intended for the cream man set carelessly around, when if it were for her own churn there would be a different story.

A couple of farmers' wives were comparing notes about their work. They had done this, and they had done that, that busy morning. Among other things, one of them, who is counted as a No. 1 housekeeper, told of "emptying the cream." "Everything about the cupboards were full," she explained, "and it does take such a long time to get it all into the can and the things washed up!"

Well, the only saving feature about it is that the cream was not poured into the can while warm. But to let some half dozen or more dishes of cream set in the cupboard that hot weather instead of placing in the can as soon as cool and keeping at somewhere near the required temperature for anything like good results! It is downright carelessness, and then when the cream fails to test as it should someone else is blamed.

Carelessness and all attending evils pay us back in our own coin. It is not until the average person finds that it is hitting his pocketbook that he particularly cares, and the sooner it is fully understood that in most cases it is not the fault of the cow, neither that of the creamery that the check is not what it should be, the sooner will the trouble be remedied.

Pride in the Dairy.

No man has a better right to feel a pride in his work than the man who does well any work connected with the business of dairying. No matter whether it be the proprietor, the manager, the most humble helper, the farm boy, the woman, pride is justifiable and public esteem is deserved. One dairyman who has forced his way from a very humble beginning has expressed himself as preferring a thousand times his business of producing clean milk from healthy cows and having only a few whitewashed shacks for buildings to that of the brewer who employs hundreds of men and who has a fine home on the hill and an auto for almost every hour of the day. This dairyman was producing special milk for babies and gloried in the high class of the product with which he supplied his patrons at all times. His patrons, too, were pleased and pointed with satisfaction and pride to the fact that they purchased milk from that particular dairy for their youngsters.

A good barn that is sanitary and well lighted, a herd of high-yielding cows, a silo filled with first-class silage, a bull from famous or high-producing families are all objects worthy of any man's pride. The one who takes pride in his dairy and in his work connected therewith is the one who will be happy and who will progress. The city milkman who has his place always open to inspection and who has a standing invitation to the public to visit his place at any and all times will find it to have a helpful effect upon his patronage and that his business will grow.

The pride of a dairyman is always the pride a man feels when he has performed in a creditable manner some difficult task. It is never the false pride that prevents a man from doing hard work. It is the pride that spurs him on to a greater effort and greater achievement.

Delivering Milk in Bottles.

To the Editor:—The plan of delivering milk in bottles is by far a more cleanly and sanitary method of getting the milk into the hands of consumers than dipping it from a can and it is a system of retailing that must come into use by all dealers sooner or later. There are, however, some milk sellers who are going to keep on with the old way of dipping the milk from the can as long as possible.

In dipping milk from a delivery can there is a loss of from one to three quarts in forty. Some claim that they can fill forty quart bottles from a can which holds forty quarts, but I have found, after several trials, using a one-gallon hand filler with care, that a can holding forty quarts of milk is cleaned out thoroughly in filling thirty-nine quart bottles and that a can holding twenty quarts would fill only nineteen and one-half quart bottles and by careful hand filling practically no milk was wasted.

I know there is some extra expense about delivering milk in bottles, but modern trade conditions are calling more and more for their use. From the loss of bottles I estimate like this: For every bottle delivered daily it will be necessary to buy two new bottles annually and perhaps more, that is, if one delivers 150 quarts a day in bottles he will need to buy 300 new bottles per year.

In one way there is a good deal of extra work attached to handling milk in bottles in the way of filling, washing bottles, etc. On the other hand, it saves work, for when the milk is bottled and the bottles placed in cases it can be delivered and handed out to customers much easier and quicker than when dipped from a can. A dozen bottles, including the case, weighs about thirty-one pounds. Of course, a good motor-driven vehicle or a heavy wagon and strong horses are required to handle a bottle delivery route successfully. Subscriber.

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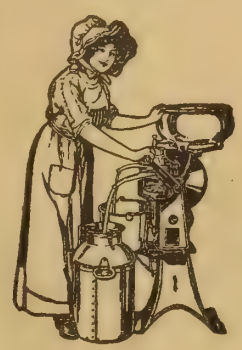
As a matter of fact, it is very easy to prove De Laval superiority. All that is needed is a careful comparison with any other machine, either as to design and construction, or, more important still, as to performance. But such proof is no longer necessary to a well-informed dairyman or farmer. He has seen proof of De Laval superiority piled up and multiplied so many times that it is no longer open to question by anyone. It is an accepted fact.



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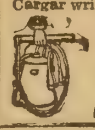

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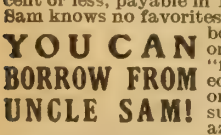

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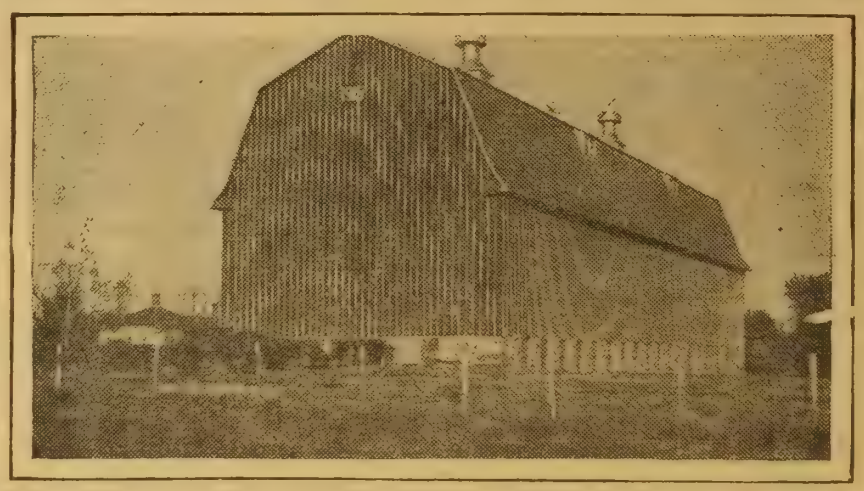
UPPER WISCONSIN

Fine Home For Good Dairy Cows

Forty Years Ago John Cater Settled in Wisconsin Wilderness—His Son Has Recently Erected a Fine Barn on the Old Farm.

THE illustrations shown herewith were taken for The Wisconsin Farmer on the E. S. Cater farm, near the village of Knowlton, Marathon county, Wisconsin. Mr. Cater's father, John Cater, settled in the wilderness in this section forty years ago. This barn is full length of the pen, is a chicken coop with a number of large windows facing the south. Mr. Cater has a little herd of Holstein cattle, in which he takes great pride, and with which he is very successful. He believes that the cow that is comfortable is most likely to give a profitable flow



END VIEW OF A WELL-PROPORTIONED, ROOMY BARN—ON THE E. S. CATER FARM, MARATHON COUNTY, WISCONSIN.

36x120 feet, has sixteen-foot posts. The roof is fourteen feet with fifteen feet hips. The barn is modern, though, having cement floors, steel stanchions, individual adjustable mangers, calf, bull and maternity pens. This barn will comfortably house sixty head of stock. Our Wisconsin readers will wonder at once where Mr Cater has his silo, as a dairy farm which could afford such a splendid barn as this would certainly not forget the silo. There is a large round silo, 16x30 feet, built of stone, on the side of the barn not seen in either of these pictures. Conveniently located near by is a big stone pig pen, 20x80 feet, with cement floor, feeding troughs and partitions. Above, and the

of milk providing, of course, due attention is paid first to her breeding and later to her feeding. Mr. Cater has not neglected the matter of ventilation which he regards as important to the life and health of the cow, especially since a cow takes into her system several times as much air each day as food. With good equipment like these described, and with attention to the cows and their wants, any Wisconsin farmer can make good profit with good dairy cows. Added to the profits which accrue with the use of better equipment is the pleasure one gets out of his work. The owner, his boys and the hired man are just as interested in better equipment as are the cows.

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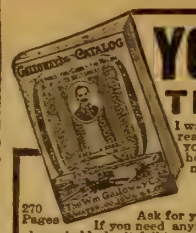

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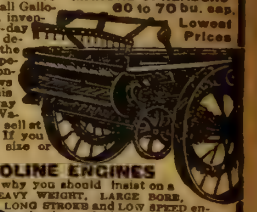

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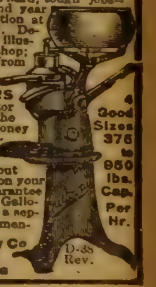

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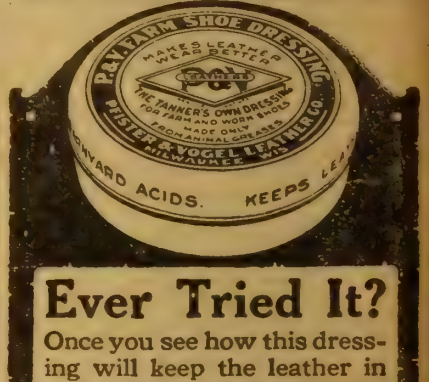

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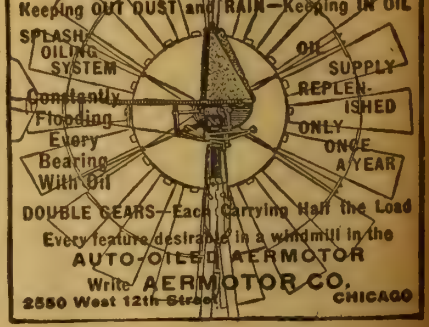

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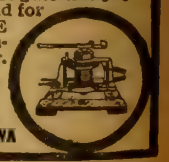

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Cow-Testing Reports.

Rations Which Increase Profits.

To the Editor:—The A. F. Barstow herd made the best record this month with an average of 1,043 pounds of milk and 34.5 pounds of fat. Within the month another car of feed was purchased, and nine inferior cows were sold out of our herds. One member increased his profit $15.05 through increased production by the use of a ration of corn, oats, bran and oil meal, in preference to ground oats alone, which he fed last month. Another member fed bran, barley, brewers' grains and oil meal, this month, instead of just bran and barley, which was fed last month. His feed cost decreased $9.21 and the total milk production increased 1,204 pounds, making a net increase in profits of $19.01.

The following table gives the names and records of cows in the Columbus, Wis., Association, which produced forty-five pounds of butter fat or over, for the thirty-day period ending December 12, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Julius Heyden					
No. 19, G. H.....	5	10-28	1485	4.6	68.3
Henry Westphal					
White, G. H.....	6	9-25	1224	3.3	40.5
August Soldnu					
Malvina, P. B. H.	3	11-11	1377	3.7	50.9
Madge, P. B. H..	9	9-19	1371	3.4	46.6
Spotty, G. H.....	3	10-9	1038	5.0	51.9
John Senhenn					
Shorty, G. H.....		10-18	1315	3.5	46.0
Lady Mary, G. H.	9	10-7	1218	3.8	46.3
Stubby, G. H....	9	10-18	1173	4.1	48.1
John Bradley					
Zora, P. B. H....	6	10-8	1536	3.8	58.4
J. E. Barston					
Nellie, G. H.....	9	11-14	1503	3.3	46.6
Dummie, G. H...	6	10-30	1353	3.5	47.4
New Year's					
Greeting, P. B. H.		11-12	1245	3.7	46.1
Puzzle, G. H.....	6	11-9	1377	4.3	59.2
Wm. Myers					
Cora, G. J.....	9	10-7	1074	4.9	52.6
Molly, G. J.....	9	11-10	1041	5.1	53.1
A. F. Barstow					
Maud 2d, P. B. H.	9	10-17	1482	3.3	48.9
Sapphin, P. B. H.	8	10-8	1485	3.7	54.9

C. F. Wehrwein, Official Tester.

Grade Guernsey Wins Honors.

To the Editor:—With my forty-five-pound list I am sending a picture of our champion cow, in this association, for the past year. She was dry when the picture was taken. She won first prize at the Winnebago County Fair, as a dairy cow, also a $15 prize for being exhibited with the highest butter fat record for the first nine months' work in the cow-testing association. She is a grade Guernsey. Her record for the year is 9,575 pounds of milk, testing 5.02 making a total of 481.4 pounds of fat. She also produced a nice heifer calf October 31, 1916. She is owned by H. B. Mosley, of Omro, Wis. The following is the first monthly report of the Winnebago Cow-Testing Association, which started its record year of work November 1, 1916. Mr. J. W. Thall, of Pickett, Wis., had the largest number of cows producing forty pounds of fat or over, the total number being nine. H. E. Washburn, was second in this list with eight cows. The following are the cows in the association which produced forty-five pounds of fat, or over, for the thirty-day period ending November 30, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
J. W. Thrall					
Myrtle of Appleton, G. G...	7	9-29-16	978	4.7	46.0
Newel's Beauty, G. J.	10	10-12-16	1062	4.6	48.9
Frank Brooks					
No. 12, G. D...			1098	4.4	48.3
H. R. Mosely					
Daisy, G. G...	9	10-31-16	990	4.7	46.5
Mabel, G. G...	3	10-31-16	840	5.7	47.9
G. E. Washburn					
Bessie, G. J...	6	10-9-16	771	5.9	45.5
Black Wallie, G. J.	7	10-2-16	750	6.0	45.0
Spots, G. J....	7	10-12-16	999	5.7	56.9
Nubbs, G. J...	7	10-16-16	681	6.1	47.7
Lynda, P. B. J.	5	10-11-16	1027	5.9	60.7

Archibald R. House, Official Tester.
Levi Brunson, Secretary.

Baraboo Association.

To the Editor:—There are at this time thirty-one herds in this association. Eight of them ar small and have gone together making four herds and permitting me to test two in one day. This makes it a twenty-seven-day job of testing each month. The Holsteins are at the head of the list with twelve herds. The Guernseys second with ten; Jerseys eight and in addition we have one pure-bred milking Short-horn herd owned by Albert Templin. For the past month the Guernseys made the best record. Martiny & Son head the list with the best cow which made 65.2 pounds of butter fat in thirty days.

The following is a list of cows which gave forty-five pounds of butter fat or over in the thirty-day period ending November 23d:

Owner and breed	Lbs. milk	Per cent fat	Lbs. B. fat
Martiny & Son, R. G.....1252		5.2	65.2
Martiny & Son, R. G.....1155		5.0	57.8
Martiny & Son, R. G.....1248		4.2	52.4
L. M. Wichern, G. G.....1240		4.2	52.1
L. R. Siebecker, G. H....1330		3.9	51.9
Glenn Johnson, G. G.....1163		4.4	51.2
Ed Egerer, G. G.....1015		5.0	50.8
L. M. Wichern, G. G.....1434		3.5	50.2
Martiny & Son, R. G.....1080		4.6	49.7
Glenn Johnson, G. G..... 890		5.5	49.0
L. R. Siebecker, G. H....1042		4.6	47.9
Rollo Webster, G. H..... 795		5.9	46.9
L. W. Wichern, G. G..... 954		4.8	45.8
L. M. Wichern, G. G..... 772		5.7	45.0

W. E. Johnson, Official tester, Baraboo Association.

Reedsburg Association.

To the Editor:—During November twenty cows produced forty pounds of butter fat or over. Several of our farmers seem inclined to skimp a little on feeding, and this has cut down the size of our list. The following table shows the cows in our association which produced forty-five pounds of butter fat or over for the thirty-day period, ending December 6, 1916:

Owner, name and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Wm. Van der Ohe					
No. 10, G. H.....	4	Nov.	1530	3.8	58.1
No. 5, G. H.....	6	Oct.	1260	4.2	52.9
Frank Groat					
Pepper, G. G.....	6	Oct.	1140	4.5	51.3
Wm. Hahn					
Molly, G. H.....	5	Oct	1020	4.8	49.0
Sorge Seamans					
Big Black, G. H..		Nov.	1110	4.3	47.7
J. J. Marshall					
E. Ellenson					
Gr. Jersey	8	11-5	831	5.6	46.5
H. V. Bartlett					
Gr. Jersey	6	10-31	948	5.9	55.9
Gr. Jersey	4	11-21	1032	5.6	57.8
J. H. Kelly					
Gr. Hol.	4	10-9	1413	4.2	59.3
Gr. Hol.	2	10-26	1152	4.0	46.1
Gr. Hol.	2	11-10	1158	3.9	45.2

During November twenty-one cows made forty pounds or more of butter fat. These cows are getting the following feeds, silage, hay, dried brewers' grains, bran, ground oats and barley.

R. A. Boyd, Official Tester.
H. V. Bartlett, Secretary.

Barron-Dallas Association.

To the Editor:—A grade Holstein holds the record according to the last monthly report of the Barron-Dallas Cow-Testing Association. The following table gives a list of cows which produced forty-five pounds of butter fat or over for the thirty-day period, ending December 15, 1916:

Owner, name and breed	When fresh	Lbs. milk	Per cent fat	Lbs. B. fat
A. Borgen				
No. 2, G. H...	11-16-16	1164	4.6	53.5
No. 8, G. H...	10-12-16	1295	4.5	58.2
Huset Bros.				
Litago, G. D..	10-4-16	732	6.2	45.5
Star, G. D....	11-12-16	1150	4.2	48.3
Poor Farm				
No. 19, G. H..	11-20-16	1050	4.8	50.6

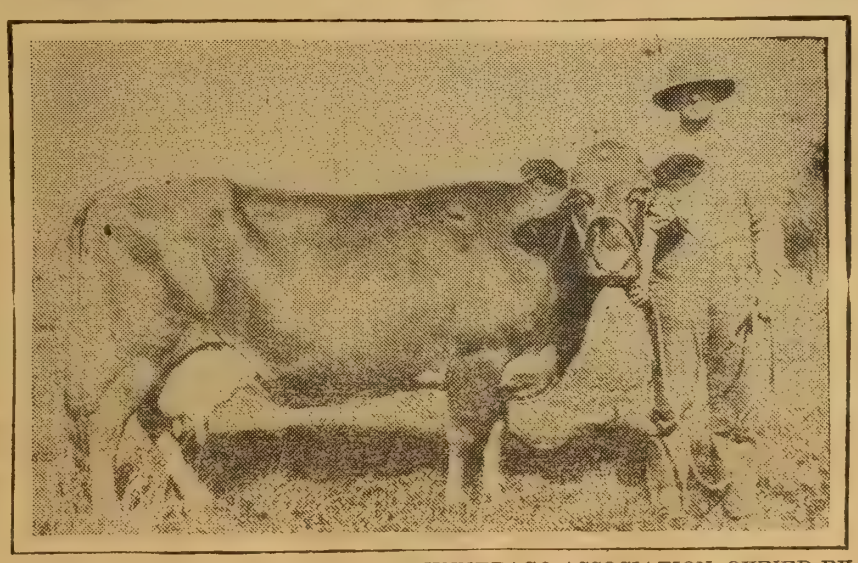
S. McBrayer, Official Tester.
W. M. Black, Secretary.

The False Blossom Disease of Cranberries.

The "false blossom" disease of cranberries, which has been an important factor in reducing the cranberry crop in Wisconsin, is discussed and suggestions for methods of culture which may prove beneficial in combating the disease are made in a professional paper, Bulletin No. 444, recently issued by the United States Department of Agriculture. While the disease has had its principal development in Wisconsin, it has also appeared in Massachusetts, New Jersey, Oregon and Washington. Most of the cases in the latter states can be traced to Wisconsin vines used for planting.

The disease appears to bring about a retrogression of the floral parts of many of the blossoms of the affected plants to foliage leaves, the resulting "false blossoms" failing to produce fruit. The affected plants have a tendency to develop lateral branches from the usually latent buds below the fruit buds. These lateral branches are slender and weak and fail to produce normal flowers or fruit. In other instances the end of the flowering shoot, instead of forming a fruit bud for the next season as under normal conditions, continue to grow and produces a long, slender runner. The result of these abnormal developments is that cranberry plants in bogs where this malformation occurs generally show an excessive growth, usually forming a deep, dense mass of vines.

The cause of the false blossom disease is not certain, but specialists of the department who have made studies of the abnormal condition believe it to be due to a disturbance of the nutrition of the plants. No evidence has been found that insects or fungi cause the trouble. Malformed plants, when transplanted and kept under more favorable conditions, tend to return to the normal form. It is, therefore, suggested that owners of bogs in which the plants are affected by the disease take steps to make the soil and nutritive conditions for the plants as favorable as possible. This involves sanitary measures such as clean cultivation, thorough drainage, pruning and fertilization where needed. In cases where half or more of the plants in an area are affected it is best to mow off the vines, properly drain the bog and apply ground rock phosphate, which, it is believed, is beneficial. In cases where the disease has a considerable development it will probably be best to scalp the bog and replant with healthy vines. It is not known whether diseased vines may transmit the abnormality to normal plants, but, at all events, diseased plants should be carefully avoided in making new plantings.



GRADE GUERNSEY, HIGH COW IN WINNEBAGO ASSOCIATION, OWNED BY H. R. MOSLEY, OMRO, WIS.

Owner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
Bell, G. H.....	6	Nov.	1536	3.0	46.1
James Carroll					
No. 3, G. H.....	6	Oct.	1077	4.2	45.2
Fred Thorne					
Miranda, G. J....	4	Aug.	981	4.6	45.1

Alvin W. Wardas, Official Tester.

Eagle Point and Bloomer Association.

To the Editor:—The following report shows the cows in the Eagle Point and Bloomer Cow-Testing Association which produced forty-five pounds of butter fat or over for the thirty-day period ending December 5, 1916:

Owner and breed	Age	When fresh	Pounds milk	Per cent of fat	Pounds B. fat
B. Leland					
Gr. Jersey	4	11-1	945	5.9	55.8
F. Stock					
Gr. Guern.....	5	11-5	966	5.3	51.2
Gr. Hol.	6	6-20	1038	4.8	49.8
Gr. Hol.	5	11-3	1251	3.6	45.0
L. P. Martiny					
P. B. Guern.....	5	10-25	996	5.0	49.8

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TOLD IN THE HILLS

By Marah Ellis Ryan

Author of "That Girl Montana," "The Bondwoman," "My Quaker Maid," Etc., Etc.

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PART IV.---One Squaw Man.

CHAPTER I—Lamonti.

THE next morning awoke with the balmy air of spring following the sunrise over the snow—a fair, soft day, with treachery back of its smiles; for along in the afternoon the sky gathered in gray drifts, and the weather wise prophesied a big snowfall.

All the morning Genesee wrote. One page after another was torn up, and it was the middle of the afternoon before he finally finished the work to his satisfaction, did it up in a flat, square package, and having sealed it securely, called Kalitan.

"You take this to the express office at the station," he said; "get a paper for it—receipt; then go to Holland's—to the bank store; give them this," and he handed a slip of written paper. "If they give you letter, keep it carefully—so," and he took from his shirt pocket a rubber case the size of an ordinary envelope. Evidently Kalitan had carried it before, for he opened a rather intricate clasp and slipped the bit of paper into it.

"All good—not get wet," he said, picking up the larger package. "The arrow fly down; come back how soon?"

"Send this," pointing to the package, "the first thing in the morning; then wait until night for the stage from Pacific that brings the mail—maybe if road is bad it will not come till next morning."

"Kalitan wait?"

"Yes, wait till the stage comes, then ask for letter, and keep your eyes open; watch for bad whites. Klahowya!"

Watching Kalitan start off with that package, he drew a long breath of relief, like a man who had laid down some burden; and leaving the avenue and the camp behind, he struck out over the trail toward Hardy's, not even stopping to saddle a horse. He was going to have a "wau-wau" with Mowitza.

He had barely entered the stable door when Tillie came across the yard, with a shawl thrown over her head and looking disturbed.

"Oh, is it you, Mr. Genesee?" she said, with a little sigh of disappointment; "I thought it was Hen or one of the others come back. Did you meet them?"

"Yes; going up the west valley after stock."

"The west valley! Then they won't get back before dark, and I—I don't know what to do!" and the worried look reached utter despair as she spoke.

"What's up? I can ride after them if you say so."

"I don't know what to say. I should have told Hen at noon; but I knew it would put him out of patience with Rachel, and I trusted to her getting back all right; but now, if the snow sets in quickly, and it threatens to, she may get lost, and I—"

"Where is she?"

"Gone to Scot's Mountain."

An energetic expletive broke from his lips, unchecked even by the presence of the little woman who had seemed a sort of madonna to him in the days a year old. The madonna did not look much shocked. She had an idea that the occasion was a warrant for condemnation, and she felt rather guilty herself.

"One of the Kootenai tribe came here this morning, and after jabbering Chinook with him, she told me Davy MacDougall was sick, and she was going to ride up there. Hen was out, and she wouldn't listen to Miss Fred and me—just told us to keep quiet and not tell him where she was, and that she would get back for supper; so we haven't said a word; and now the snow is coming, she may get lost."

Tillie was almost in tears; it was easy to see she was terribly frightened, and very remorseful for keeping Rachel's command to say nothing to Hardy.

"Did that Indian go with her?"

"No; and she started him back first, up over that hill, to be sure he would not go over to the camp. I can't see what her idea was for that."

Genesee could—it was to prevent him from knowing she was going up into the hills despite his caution.

"There is not a man left on the place, except Jim," continued Tillie, "or I would send them after her. But Jim does not know the short-cut trail that I've heard Rachel speak of, and he might miss her in the hills; and—oh, dear! oh, dear!"

Genesee reached to the wooden peg where his saddle hung, and threw it across Mowitza's back.

In a moment Tillie understood what it meant, and felt that, capable as he might be, he was not the person she should send as guardian for a young girl. To be sure, he had once before filled that position, and brought her in safety; but that was before his real character was known.

Tillie thought of what the rest would say, of what Stuart would think, for she had already bracketed Rachel and Stuart in her match-making calendar. She was between several fires of anxiety and indecision, as she noted the quick buckling of straps and the appropriation of two blankets from the hanging shelf above them.

"Are you—can you get someone to go for me—from the camp?" she asked hurriedly. He turned and looked at her with a smile in his eyes.

"I reckon so," he answered briefly; and then, seeing her face flushed and embarrassed, the smile died out as he felt what her thoughts were. "Who do you want?" he added leading Mowitza out and standing beside her, ready to mount.

She did not even look up. She felt exactly as she had when she told Hen that she knew she was right, and yet felt ashamed of herself.

"I thought if you could spare Kalitan—" she hesitated. "She knows him, and he has been with her so often up there, no one else would know so well where to look for her—that is, if you could spare him," she added helplessly.

"The chances are that I can," he said in a business-like way; "and if I was you I'd just keep quiet about the trip, or else tell them she has an Indian guide—and she will have. Can you give me a bottle of brandy and some biscuits?"

She ran into the house, and came back with them at once. He was mounted and awaiting her.

"Kalitan has left the camp—gone over that hill;" and he motioned rather vaguely toward the ridge across the valley. "I'll just ride over and start him from there, so he won't need to go back to camp for rations. Don't you worry; just keep quiet, and she'll come back all right with Kalitan."

He turned without further words, and rode away through the soft flakes of snow that were already beginning to fall. He did not even say a goodby; and Tillie, hedged in by her convictions and her anxiety, let him go without even a word of thanks."

"I simply did not dare to say 'thank you' to him," she thought, as he disappeared. And then she went into the house and eased Fred's heart and her own conscience with the statement that Kalitan, the best guide Rachel could have, had gone to meet her. She made no mention of the objectionable character who had sent Kalitan.

By the time of sunset, Scot's Mountain was smothered in the white cloud that had closed over it so suddenly, and the snow was still falling straight down, and so steadily that one could not retrace steps and find tracks ten minutes after they were made. Through the banked-up masses a white-coated unrecognizable individual plowed his way to MacDougall's door, and without ceremony opened it and floundered in, carrying with him what looked enough snow to smother a man; but his eyes were clear of it,

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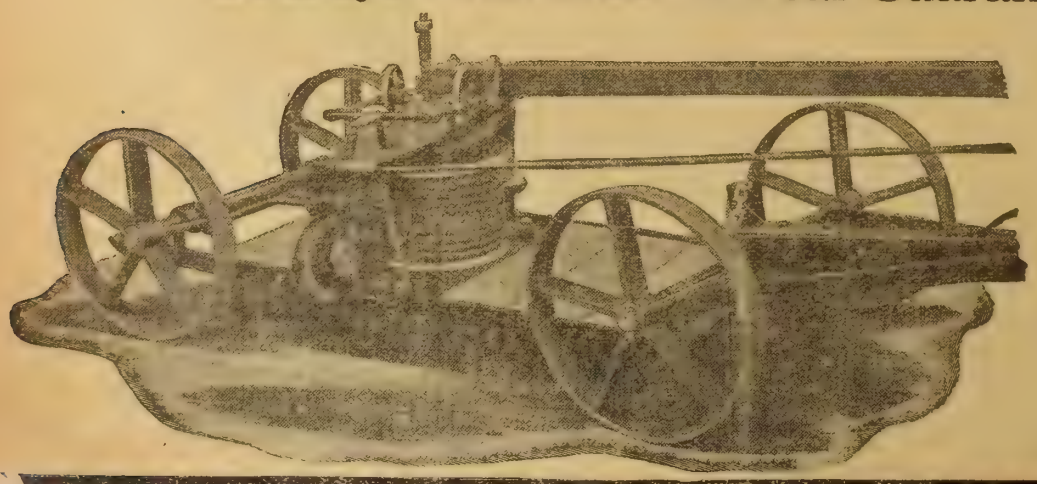

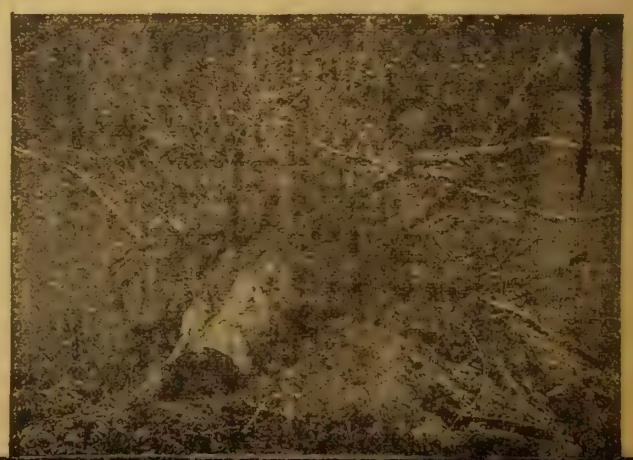

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and a glance told him the cabin had but one occupant.

"When did she leave?" was the salutation MacDougall received, after a separation of six weeks.

"Why, Jack, my lad!"

"Yes, that's who it is, and little time to talk. Has she been here?"

"The lass—Rachel? She has that—a sight for sore eyes—and set all things neat and tidy for me in no time;" and he waved his hand toward the clean-swept hearth, and the table with clean dishes, and a basket with a loaf of new bread showing through. "But she did na stay long wi' me. The clouds were comin' up heavy, she said, and she must get home before the snow fell; an' it snows now?"

"Well, rather. Can't you see out?"

"I doubt na I've had a nap since she left;" and the old man raised himself stiffly from the bunk. "I got none the night, for the sore pain o' my back, but the lass helped me. She's a rare helpful one."

"Which trail did she take?" asked Genesee impatiently.

He saw the old man was not able to help him look for her, and did not want to alarm him; but to stand listening to comments when every minute was deepening the snow, and the darkness—well, it was a test to the man waiting.

"I canna say for sure, but she spoke o' the trail through the Maples being the quickest way home; likely she took it."

Genesee turned to the door with a gesture of despair. He had come that way and seen no sign of her; but the trail wound above gulches where a misstep was fatal, and where a horse and rider could be buried in the depths that day and leave no trace.

At the door he stopped and glanced at Davy MacDougall, and then about the cabin.

"Are you fixed all right here in case of being snowed in?" he asked.

"I am that—for four weeks, if need be; but does it look like that out?"

"Pretty much. Goodby, Davy;" and he walked back and held out his hand to the old man, who looked at him wonderingly. Though their friendship was earnest, they were never demonstrative, and Genesee usually left with a careless klahowya!

"Why, lad—"

"I'm going to look for her, Davy. If I find her, you'll hear of it; if I don't, tell the cursed fools at the ranch that I—that I sent a guide who would give his life for her. Goodby, old fellow—goodby."

Down over the mountain he went, leading Mowitza, and breaking the path ahead of her—slow, slow work. At that rate of travel, it would be morning before he could reach the ranch; and he must find her first.

He found he could have made more speed with snowshoes and without Mowitza—the snow was banking up so terribly. The valley was almost reached when a queer sound came to him through the thick veil of white that had turned gray with coming night.

Mowitza heard it, too, for she threw up her head and answered it with a long whinny, even before her master had decided what the noise was; but it came again, and then he had no doubt it was the call of a horse, and it was somewhere on the hill above him.

He fastened Mowitza to a tree, and started up over the way he had come, stopping now and then to call, but hearing no answer—not even from the horse, that suggested some phantom-like steed that had passed in the white storm.

Suddenly, close to him, he heard a sound much more human—a whistle; and in a moment he plunged in that direction, and almost stumbled over a form huddled against a fallen tree. He could not see her face. He did not need to. She was in his arms, and she was alive. That was enough. But she lay strangely still for a live woman, and he felt his pocket for that whisky flask; a little of the fiery liquor strangled her, but aroused her entirely.

"Jack?"

"Yes."

"I knew if I called long enough you would come; but I can only whisper now. You came just in time."

"How long have you been there?"

"Oh, hours, I think. I started for the gulch trail, and couldn't make it with snow on the ground. Then I tried for the other trail, but got lost in the snow—couldn't even find the cabin. Help me up, will you? I guess I'm all right now."

She was not, quite, for she staggered woefully; and he caught her quickly to him and held her with one arm, while he fumbled for some matches with the other.

"You're a healthy-looking specimen," was the rather depreciating verdict he gave at sight of the white, tired face. She smiled from the pillow of his shoulder, but did not open her eyes; then the match flickered and went out, and he could see her no more.

"Why didn't you stay at home, as I told you to?"

"Didn't want to."

"Don't you know I'm likely to catch my death of cold tramping here after you?"

"No," with an intonation that sounded rather heartless; "you never catch cold."

The fact that she had not lost her old spirit, if she had her voice, was a great point in her favor, and he had a full appreciation of it. She was tired out, and hoarse, but still had pluck enough to attempt the trip to the ranch.

"We've got to make it," she decided, when the subject was broached; "we can make it tonight as well as tomorrow, if you know the trail. Did you say you had some biscuits? Well, I'm hungry."

"You generally are," he remarked, with a dryness in no way related to the delight with which he got the biscuits for her and insisted on her swallowing some more of the whisky. "Are you cold?"

"No—not a bit; and that seems funny, too. If it hadn't been such a soft, warm snow, I should have been frozen."

He left her and went to find the mare, which he did without much trouble; and in leading her back over the little plateau he was struck with a sense of being on familiar ground. It was such a tiny little shelf jutting out from the mountain.

Swathed in snow as it was, and with the darkness above it, he felt so confident that he walked straight out to where the edge should be if he was right. Yes, there was the sudden shelving that left the little plot inaccessible from one side.

"Do you know where we are, my girl?" he asked as he rejoined her.

"Somewhere on Scot's Mountain," she hazarded; the possessive term used by him had a way of depriving her of decided opinions.

"You're just about the same place where you watched the sun come up once—maybe you remember?"

"Yes."

He had helped her up. They stood there silent what seemed a long time; then he spoke:

"I've come here often since that time. It's been a sort of a church—one that no one likely ever set foot in but you and me." He paused as if in hesitation; then continued: "I've wished often I could see you here again in the same place, just because I got so fond of it; and I don't know what you think of it, but this little bit of the mountain has something witched in it for me. I felt in the dark when my feet touched it, and I have a fancy, after it's all over, to be brought up here and laid where we stood that morning."

"Jack," and her other hand was reached impulsively to his, "what's the matter—what makes you speak like that now?"

"I don't know. The idea came strong to me back there, and I felt as if you—you—were the only one I could tell it to, for you know nearly all now—all the bad in me, too; yet you've never been the girl to draw away or keep back your hand if you felt I needed it. Ah, my girl, you are one in a thousand!"

He was speaking in the calmest, most dispassionate way, as if it was quite a usual thing to indulge in dissertations of this sort, with the snow slowly covering them. Perhaps he was right in thinking the place witched.

(To be continued.)

One of the worst storms in the history of Yucatan, Mexico, cut down the production of sisal so that receipts of the product at Progreso during November were 45.7 per cent below normal.

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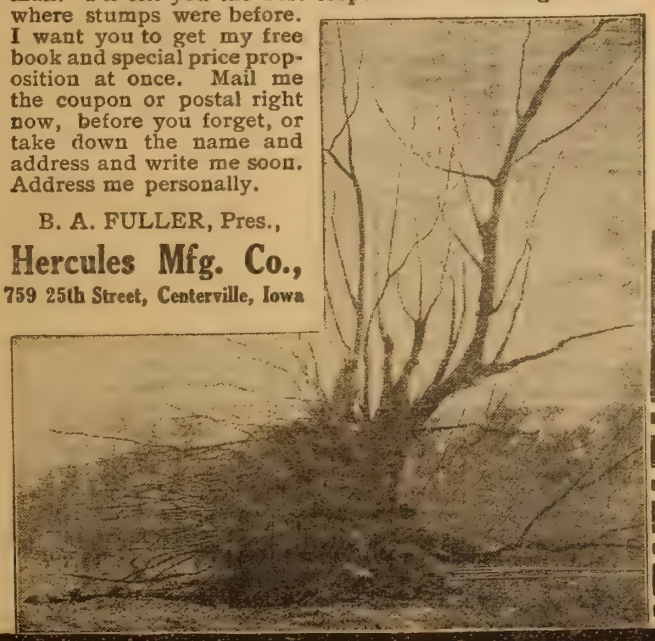

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THE HOME

Letters intended for publication should be accompanied by the name and address of the writer, not necessarily for publication, but as a matter of good faith. All communications intended for this department should be addressed to Editor Home Dept., Wisconsin Farmer, Madison, Wisconsin.

Noon Meal For Child.

There is no reason why the ordinary family dinner should not be suitable for school children or served in a way that adapts it to their needs, according to Farmers' Bulletin 712, School Lunches. The usual first course of meat and vegetables contains nothing, except the meat, which cannot be given even to the youngest children. The vegetables, provided they are carefully prepared by simple methods, are specially needed and can often be made attractive to children by being served with a little meat gravy. As a substitute for the meat itself, milk can be provided in the case of the younger children. These articles, with the bread and butter, provide most of the food needed.

The dessert course is suitable for children as well as for grown people, unless it consists of rich pastries or puddings. The latter are not considered wholesome for children, if for no other reason than that they are likely to lead to overeating. Such desserts as fruit, fresh or cooked, with cake; cereals with milk, or cream, and sugar; custards and custard puddings; gelatine dishes; simple ice cream; water ices; and other simple desserts may be given.

Whether or not the family meal is healthful for children depends not only on the food materials selected, but

CAROLEEN LUEVERNIA ERICKSON
Eight-months-old daughter of Mr. and Mrs. L. B. Erickson.

also on the way in which they are cooked. Simple methods are to be preferred from the standpoint of health as well as from that of the housekeeper's time. All dishes that are likely to contain overheated and scorched fats, such as foods carelessly fried in a pan in a small amount of fat, should be avoided. Deep-fat frying is open to fewer objections, since, if properly done, foods will absorb little fat and the fat will not scorch. Vegetables cooked in water or in their own juices and seasoned with salt and a little butter or cream are easier to prepare than those that are served with white sauce, scalloped, or cooked in other elaborate ways.

What is said above applies equally to all meals. There is, however, one special precaution that applies to the noon meal when it is hurried. This refers to tough, hard foods that are likely to escape proper mastication. It is a mistake to think that the foods given to children must always be soft or finely divided, for children's teeth need exercise quite as much as their muscles do. When time for eating is limited, however, it is well to omit foods that are difficult to chew, and in extreme cases it may be necessary to serve only soft or finely divided foods—sandwiches made from crustless bread with finely chopped fillings, for example. Before resorting to this, however, it is well to make sure that the time for eating and for insistence on good table manners is not unnecessarily cut short. The advantage of putting the meal on the table promptly and of having foods served in individual portions, or at least ready to eat when they are brought to the table, should be kept in mind. To have the meat already sliced and the dessert in cups instead of in one large dish from which individual portions must be served, and to follow the same general plan with other foods, may change a hurried meal into one at which there is plenty of time for attention to details essential to health and good manners.

If special lunches, different from those prepared for the family in general, are to be given to school children, the following are suggested as bills of fare. They are only typical and many others might be given which might be just as good.

Suggested bills of fare for the home lunch:

1. Eggs, boiled, coddled, poached or scrambled; bread and butter; spinach or other green; cake.
2. Beef stew with vegetables; milk; crisp, thin tea biscuits; honey.
3. Dried bean or pea puree; toast; baked apple; cookies.
4. Vegetable-milk soup; zwieback; rice with maple sugar and butter or with milk or cream.
5. Potato chowder; crackers; jelly sandwiches.
6. Cold meat; creamed potatoes; peas; bread and butter; frozen custard or plain ice cream and plain cake.
7. Lamb chop; baked potatoes; bread and butter; sliced mixed fruits; cookies.
8. Baked omelet with spinach, kale or other greens; bread and butter; apple sauce; cake.
9. Milk toast; string beans; stewed fruit; cake.
10. Boiled potatoes; codfish gravy; bread and butter; lettuce; custard.

Care of House Plants.

To the Editor:—The aphis or plant louse which infests house plants can be gotten rid of by sponging the plant with a weak soapsuds and rinsing with tepid, clear water, by keeping the soil drier and by keeping the plant in a cooler atmosphere. Too much moisture and too high a temperature will cause the aphis to breed very rapidly.

The plants should be changed into clean pots that have been scalded and thoroughly cleaned, and new dirt that has been made steaming hot by setting it in the oven, and then cooled. Then set the plants in a place where the temperature is cooler, water sparingly, and I think you will not be troubled any more.

A covering of air-slaked lime one-fourth inch deep over the dirt in the pots is said to help keep down the aphis. I used to have lots of trouble with the different kinds of aphis. Some I got on plants bought at the greenhouses and some were home bred, I suppose, but now I have no trouble with them, even on house roses, which is one of the plants they dearly love. A temperature of 60 degrees is a good one for plants.

Mrs. C. M. Clark.

Geraniums.

To the Editor:—I want to give my experience with geraniums for the benefit of the ladies who asked about these flowers. In the spring I plant my geraniums out of doors in rich soil. I wash the painted pots (tin cans are best) in hot soapsuds in order to kill all germs, and put them away in a dry place until needed. In the fall I take slips with bud on each, fill the pots with virgin soil (earth from the woods) or mix the soil with a little bone meal or poultry manure, and then plant the young slips, cover each with a glass and set away in a cool, dark place for two or three days.

When the slips have formed roots I set them in the sunshine. Don't forget to water freely. Three things are necessary, namely, sunshine, moisture and rich soil.

In case you have no fertilizer such as I have named, give an occasional watering with bloody water. This will be easy at butchering time.

When geraniums are troubled with lice lay the plant sideways with a dish of soapsuds underneath and wash the whole plant. If there are worms in the ground take some slaked lime, put in water and let stand twenty-four hours, then drain and water the plants.

My geraniums bloom when five inches high. N. N.

How to Cook a Ham.

To the Editor:—Some time ago I was at a picnic where they had a most delicious ham. It had a hard shell about an inch thick, which was as hard as baked clay. I could tell from the flavor that it was seasoned with pepper, mustard, cloves and garlic, but I haven't the slightest idea how to go about to prepare it and I have been wondering if any of the Home department readers could tell me. I am sure that we have many good cooks among our number and it is quite likely that some of them know how such a ham is prepared. —Eloise.

The rational meal contains at least one food from each of the following groups:

Carbohydrate: Bread, crackers, macaroni, rice, cereal, breakfast food and other cereal foods.

Protein: Lean meats, poultry, fish, oysters, milk, cheese, eggs, legumes and other protein rich foods.

Fat: Butter, cream, lard, culinary fat, salt pork, chocolate and other fatty foods.

Ash: Spinach, peas, lettuce, potatoes, apples, oranges, berries and other vegetables and fruits raw or cooked.

Flavor: Sirup, honey, jelly, dried fruits, candies and other sweets.

Salt Beads.

To the Editor:—I have read many helpful things on the Home page and I would like to have some of the readers tell me how to make salt beads with cornstarch, salt and water. I used to know how to make them and they were very pretty, but I have forgotten how much of each to take.

R. R.

Recipes.

Cranberry Shortcake.—Two cupfuls sifted flour, four teaspoonfuls baking powder, pinch of salt, one-fourth cupful sugar, one-fourth cupful shortening, one egg, one-third cupful milk, stewed cranberries. Mix and sift baking powder, salt and sugar with flour. Rub or chop the shortening in. Add the well-beaten egg to the milk and add gradually to the other mixture. Use only enough milk to make a soft dough—the amount may vary. Divide the dough into two parts and shape one portion to fit a greased pie tin. Brush over the top with melted butter and place the remaining dough on top. Bake twenty minutes in a hot oven. Split; place the stewed cranberries, which have been well sweetened, between the layers and on top. Cover all with a layer of whipped cream and ornament with a border of whipped cream run through a pastry tube.

Doughnuts.—Three eggs, one cupful sugar, one pint whole milk, two teaspoonfuls baking powder, nutmeg to taste, and enough flour to stiffen so a spoon will stand upright. Roll out and cut into desired shapes and fry in hot fat.—Mrs. R. T. Judd.

Oat Meal Cookies.—Pour one cupful of very hot lard over two cupfuls of oatmeal and set aside until cold; then add one well beaten egg, one cupful of sugar, one-half cupful of sour milk, one-half teaspoonful each of baking soda and salt, one cupful of chopped and seeded raisins, one teaspoonful of powdered ginger, one-half teaspoonful of powdered mace and enough flour to make a stiff dough. Do not knead the paste, but drop it from a spoon onto well-greased tins. Bake in a hot oven for ten minutes.

Glazed Onions.—Melt one-half cup butter in a saucepan, then put in as many peeled onions as will fit in without crowding. Move about until all are quite well coated with butter, sprinkle with tablespoonful of sugar, then pour over them a well flavored soup stock or dissolve a little beef extract in hot water and salt well. Simmer until the onions are tender, take off the lid of the saucepan, and let the stock simmer down to about half a cupful.

THE YOUNG FOLKS

All letters from boys and girls to this department should be sent to office of The Wisconsin Farmer, Madison, Wisconsin.

Why We Celebrate Christmas.

Dear Young Folks:—I like to read our page very much and can hardly wait for the paper to come.

At school our teacher put ten subjects on the board and let us choose from them. I took this one, "Why We Celebrate Christmas." This is what I wrote:

"When Mary and Joseph went to Bethlehem Mary rode and Joseph walked and led the ass. They were going there to an inn. When they got there the inn was full of people, so there was not room for them. Then they thought of the cave back of the inn and went there. That was the place where the shepherds slept on stormy nights with their sheep, and there were mangers all around inside the cave.

"Mary and Joseph slept in the cave that night and there a baby boy was born to Mary, and He was the Savior whom all had expected for a long time.

"All of the shepherds were awakened by an angel who came and told them that a Savior was born in Bethlehem. The shepherds went to Bethlehem, but everything was quiet, so they went to the cave and found the little baby lying in the manger. This is why we celebrate Christmas."

I am ten years old and am in the sixth grade. I go to a consolidated school. —Alice.

Androclus and the Lion.

Dear Young Folks:—I enjoy reading your letters and I am going to tell you the story of "Androclus and the Lion."

Once upon a time there lived a slave whose name was Androclus. One day he ran away from his master and ran into the woods. There he found a cave and when he went in he fell asleep. After a while a lion came in and Androclus awoke. He was afraid, but the lion did not want to hurt him. There was a thorn in the lion's paw. When Androclus pulled it out he and the lion became friends.

But one day some soldiers were passing through the woods and found Androclus. In those days when any slave ran away from his master he had to fight a hungry lion, and they said Androclus should do this. But when the lion came in he saw that it was his old friend and he would not touch him, and the people said that Androclus should be free. —Charlie.

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THIS department is prepared especially for The Wisconsin Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10c each, postage prepaid. Full directions for making, as well as the amount of material required, accompany each pattern. When ordering, all you have to do is to write your name and address plainly, tell us the correct number and size of each pattern you want, and inclose 10c for each number. We agree to fill all orders promptly and guarantee safe delivery.

Catalog of Fall and Winter Fashions

Send 10c in silver or stamps for our up-to-date 1916 large fall and winter catalog, containing over 400 designs of ladies', misses', and children's patterns, as well as the latest embroidery designs, also a concise and comprehensive article on dressmaking, giving valuable hints to the home dressmaker. Address all orders for patterns and catalogs to WISCONSIN FARMER, Madison, Wis.

1930—A practical ladies' apron. Pattern is cut in 3 sizes: Small, medium and large. It requires 4⅞ yards of 36-inch material for a medium size.

1920—Ladies' one-piece yoke dress, with or without folds. Pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5½ yards of 44-in. material for 36-in. size.

1798—A comfortable and convenient garment. Pattern is cut in 3 sizes: Small, medium and large. It requires 8½ yards of 36-inch material for a medium size.

1661—Girls' overblouse dress with guimpe, having two styles of sleeve. Pattern is cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3½ yards of 36-inch material for the dress and 2 yards of 27-inch material for the guimpe for an 8-year size.

1936—A simple school dress with sleeve in either of two styles. Pattern is cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 3¼ yards of 36-inch material for a 6-year size.

1913—A serviceable set of bags. These three attractive models are cut in 1 size. It requires for No. 1, ¾ yard of 36-inch material, for No. 2, ⅝ yard, and No. 3, ½ yard.

1804—A seasonable and becoming model. Pattern is cut in 4 sizes: 2, 4, 6 and 8 years. It requires 3½ yards of 36-inch material for a 6-year size.

1937—A charming dress for party, dancing and best wear. Pattern is cut in 3 sizes: 12, 14 and 16 years. It requires 3¼ yards for the dress and 3 yards for the overblouse, for a 14-year size, in 27-inch material.

1817—A new and attractive shirt waist. Pattern is cut in 8 sizes: 34, 36, 38, 40, 42, 44, 46 and 48 inches bust measure.

It requires 2½ yards of 36-inch material for a 36-inch size.

1448—Costume for misses and small women, with sleeve in either of two lengths, and with five-gore skirt. Pattern is cut in 3 sizes: 16, 18 and 20 years. It requires 6⅜ yards of 36-inch material for a 16-year size.

1555—Ladies' dress, with sleeve in either of two lengths. Pattern is cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5¾ yards of 44-inch material for a 36-inch size.

1427—Ladies' two-piece circular skirt (in raised or normal waistline). Pattern is cut in 5 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 2¾ yards of 48-inch material for a 24-inch size.

International Sunday School Lesson.

(By E. O. SELLERS, Acting Director of Sunday School Course.)

Lesson for December 31, 1916.

Christ's Coming and coming to Christ (Review).

READING LESSON—Rev. 22:6-14; 16: 21.

GOLDEN TEXT—The spirit and the bride say, come. And he that heareth, let him say, come. And he that is athirst let him come. He that wills, let him take of the water of life freely. —Rev. 22:17.

It is possible in lessons one to nine to review the past quarter's work, in a logical, chronological manner, but lessons seven and nine are not in their proper chronological setting. These lessons extend over five years of Paul's life from about 58 A. D. to 63 A. D. They are five wonderful years, and the last of the authentic years we have of the life of this wonderful man. The review should, of course, center in Paul, his conduct, character and teachings.

The first twelve chapters of the Book of Acts, in which we have chiefly been studying, cover a period of about sixteen years, A. D. 30-46, with Jerusalem as the center. The rest of the Book of Acts cover another period of approximately sixteen years from 46 to 62, and is the record of the foreign missionary work of Paul and his companions, Paul being, of course, the central character. The series for this quarter close with the vision of the final triumph of Christianity as seen by John in the Revelation. Maps should be employed if possible to show the journeys of Paul. The risen Christ and the enduement of the Holy Spirit were the vision and the power which wrote this first Church History, and which have been writing Church History ever since. The home church (Chs. 2-7) began with about 120 praying men and women. Peter's first sermon brought into "the way" 3,000 more. From time to time others were added. Persecution and deliverances, the first martyr, Stephen, and the dissatisfaction which led to the choice of the deacons, are the outstanding events of this period. The home mission period, with Jerusalem as the center and Palestine as the field (Chapters 8-12) covers a period of about ten years. Persecution scattered the disciples throughout the country. Paul was converted on the road to Damascus, Philip goes to Samaria, and Peter carries on the work throughout Lydda, Joppa and Caesarea. In this section we have the story of Philip and the Ethiopian, of Peter curing the palsied man at Lydda, the raising of Dorcas and Paul and Barnabas returning to Jerusalem with help to those at that city who were suffering from famine. Then begins the period of foreign missions, covering about sixteen years, from about A. D. 47 to 62. The principal characters begin, of course, with Paul and Barnabus, though Paul soon takes his place of leadership. Paul's first missionary journey lasted for about two years, from say A. D. 47 to 49, Barnabus being his principal companion. Returning to Antioch from Jerusalem, Paul soon began his second journey, this time taking with him Silas. Again there is a period of about two years, from A. D. 50 to 52. Paul had his Macedonian vision during this time, and the gospel first entered Europe, beginning with the conversion of the Philippian jailor. Paul's preaching at Athens and his service at Corinth are perhaps the most outstanding features of this journey. Paul's third journey lasted nearly three years, A. D. 53 to 56 or 57. He revisited the Asia Minor churches to strengthen them, spends nearly three years at Ephesus, and has some outstanding adventures as, for instance, the riot at Ephesus about the shrines of Diana. Returning to Jerusalem to take part in the feast, he is told of the ultimate persecutions which he must endure. For a long time he has desired to preach the gospel in Rome. Every one of the trials, hindrances, oppositions and attacks proved to be the means by which he gained that desired end.

In this particular quarter, in lesson one, we see Paul's calmness in persecution, his prudenc under danger. In lesson two, his delicate courtesy and shrewdness in seizing every opportunity that he might witness for his Lord. In lesson three is manifested his unshaken belief in everything found in the Scriptures, and his wise use thereof in leading men to Christ. In lesson five, his fearlessness amidst danger and his absolute confidence in God. In lesson six, his humility. In lesson seven, his well balanced common sense and his love of peace among his brethren. In lesson eight, we see him longing for human companionship and sympathy, and have an evidence of his love of his own countrymen, and yet his faithfulness declaring the ord of God to them as well as to the Gentiles.

Last Sunday we stood with Isaiah, looking down through the centuries to the man of Galilee 700 years hence. Today, as we review this quarter and the lessons of the past year, we are looking back nearly two thousand years to the one who wrought out our salvation on Calvary, but we may also turn our faces the other way, and look for him whose returning will bring peace to the earth, and at whose coming the brightness of his glory shall cover the earth even as the waters cover the sea.

We have seen the breaking down of "armed peace."

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SUBSCRIPTION rates are going up. Dozens of publications have already announced new subscription prices, and hundreds of others are preparing to do likewise. The cost of paper, ink, labor, etc., has increased over 50 per cent in the last year and the present unsettled market conditions indicate another sharp advance.

Most publishers are rapidly withdrawing all low rate offers. We were fortunate in making contracts for the fall and early winter subscription season months ago, but these contracts are expiring now and we cannot believe that many will be renewed. We, therefore, urge you to take advantage of one of the special offers indicated below. This may be the last time that they will appear. We cannot guarantee them to be good more than fifteen days from the date of issue of this paper, so send in your order today.

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Club Department

The Wisconsin Farmer, Madison, Wisconsin

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THIS department is to bring the buyer and the seller together. You may have live stock, poultry and eggs or machinery for sale. You may want to sell or buy a farm. Write your copy for the advertisement. The rate is six cents per word, each insertion.

The Wisconsin Farmer, Madison, Wis.

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640 ACRES in famous Imperial Valley, Southern California. No district in America where hogs and stock matures as rapidly or marketed as cheaply. Green alfafa year round. Leading products; alfalfa, barley, corn, wheat. Fruit any day in the year direct from the tree. Every acre of this soil equal to best in vicinity. 10 year terms. Price 25 per cent less than similar surrounding lands. Progressive cultivation will pay all deferred payments. A. H. Morrison, 1044 Pine St., San Francisco, California.

SPLENDID stock range on Lake shore. 256 acres, 110 open, all natural blue grass and clover pasture. Clay loam soil, some maple timber, fine trout stream. 5-room house, 2 barns, other outbuildings. 6½ miles Milltown, on Soo line; 60 miles Twin Cities. A snap at $7,200—$28 per acre, easy terms. Baker G-110, St. Croix Falls, Wisconsin.

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POULTRY DEPARTMENT

THIS department is edited by a competent poultryman, who will be pleased to answer questions concerning disease, poultry management, etc., when they can be answered through the department. Questions will not, however, as a rule, be answered by mail, and stamps need not, therefore, be inclosed with inquiries. Address all letters relating to poultry topics to this office.

Roup, a Contagious Disease.

To the Editor:—Lucky is the poultry keeper who does not have to doctor one or more of his fowls during the present season, the climatic conditions being so changeable as to thwart in his endeavors to maintain health in his stock. It is possible for a fowl to contract a cold of a catarrhal nature and to spread the disease before its owner is aware that such disease exists, and especially is this liable to happen in the case of a large flock of birds, the latter escaping individual observation.

It only stands to reason that any single fowl suffering with disease of an epidemic nature is a danger to the whole flock so long as it is privileged to drink at the same water vessel as its companions.

The poultry keeper will, therefore, be wise to keep an observant eye on his birds, and to stamp out even the slightest signs of disease of a catarrhal nature. When a fowl is heard to sneeze that should be regarded as a danger signal, and no time should be lost in removing the bird from its companions. When new birds are bought, or when birds return from the show they should be placed in quarantine for a few days before placing them with the flock. A bird may seem apparently well, and yet there may be lurking in its system the germs of roup, whose activity has not reached the stage of detection. They look as innocent as lambs whilst in their system lurks the contagious germ of destruction.

It will be well to suggest to the reader that it requires something more than doses of medicine to successfully doctor this disease.

Isolation, a proper dietry, and systematic attention play as important a part in the successful treatment of disease as do the finest medicines procurable. It is impossible to cure a fowl of disease of a roupy nature by simply visiting the roosting quarters at night and administering medicine. Apart from the fact that disease is liable to spread when isolation is not carried out, the bird with a roupy ailment cannot properly assimilate grain food, and requires a light, nourishing dietry to assist it in fighting against the disease. Then, again, a bird suffering with roup requires external as well as internal treatment to effect a cure, and such treatment cannot be given to a bird running with the entire flock. In some light and airy building should be placed coops for the reception of any birds that may fall sick and to which they can be confined until a cure is effected.

As to dieting, moist mash foods should be used, such as bread and milk, rice boiled in milk, or other mashes of a light and nourishing nature. The water supply should be pure and should be frequently changed.

A few crystals of permanganate of potash should be dissolved in each supply of water to render it antiseptic.

What is commonly known as "one eye cold" is a form of roup the seriousness of which it should be difficult to exaggerate. So serious are the effects of the disease upon a neglected bird, however, that it should be regarded as one of the worst diseases classed with those of roupy nature. The disease more often than not crops up in a way that disarms suspicion, and the poultry keeper will do well to be on the lookout for it, and to lose no time in an endeavor to stamp it out whenever it is detected. A flock of birds may represent the picture of health on one day and on the following day the attendant may notice that one or more of them have a little froth in the corner of one eye.

The matter may give rise to no alarm, when, a few hours later, it is noticed that the frothiness has increased considerably, and that the affected eye seems to cause the owner of that organ much inconvenience.

It is then that no time must be lost in isolating the bird and giving relief, otherwise the loss of an eye will be experienced by the sufferer. This form of roup claims a great many victims when allowed to get a firm hold in the poultry house. It is that little quantity of froth in the eye which is liable to pass unnoticed in a large flock of birds, and the origin of which is apt to spread before alarm is given. Poultry keepers will do well to pay periodical visits to the roosting quarters at night, and, by the aid of artificial light, examine the eyes of their birds, when any bird showing signs of the disease can be isolated and doctored.

Epsom salts should be mixed with their soft food, and the antiseptic referred to above should be placed in their water supply. Aside from this application the following may be applied with a medicine dropper or syringe, these solutions having been successfully used in the treatment of roup: First, one dram of permanganate of potash to a quart of water, second, one ounce of boric acid to a quart of water, third, one ounce of peroxide of hydrogen to three ounces of water.

The roosting quarters should be disinfected thoroughly, to prevent further cases of this contagious disease. Use every means of prevention, examine the birds carefully and you will never have a case so advanced which is commonly called the one-eye cold.

F. F. Hunstock.

Ailing Animals.

Unthrifty Mare.

I have a seven-year-old mare that has been poor for two years. She eats well. When I work her she seems to get a little better but when she stands in the barn she gets poorer. She runs out to good hay and has all the feed she wants and plenty of salt. She has plenty of life all the time. I feed her bran and corn. There is a tank of water in the lot all the time.

It might be well to have your mare examined by a veterinarian.

Stiffness.

I have a calf four months old that I am feeding corn, water and straw. The last week it is very stiff in the hind legs. Cannot help itself up. Its appetite is very good. Can you tell me what is the cause of the calf acting in such a manner? No treatment has been given.

It would be hard to say what the trouble is in this case without a thorough examination. This should be made by a competent veterinarian because of there being so many causes of stiffness.

Worms.

Please give some good remedy for worms in horses and colts, and for mares in foal if a different medicine is needed for them. I notice that some of my horses are passing worms and I do not know what to do for them.

To horses and to mares not in foal give the following: Give to each animal one dram of copper sulphate, one and one-half drams of powdered charcoal and one and one-half drams of fenugreek. Give this amount night and morning for eight or ten days and follow with a brisk purge of one-half ounce of aloes and a pint of linseed oil. The first mentioned may be given to mares without using the aloes and oil. Oil of turpentine, one-half ounce, given in small amount of linseed oil is very effective if given for three to five days.

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The Southeastern Land Show, to be held in Atlanta, February 1-15, 1917, is planning the distribution of about 100 stock farms to those making application for same while in attendance at the Land Show. The farms will contain from ten to 100 acres in each tract and will represent a money value of from $1,000 to $10,000. Full particulars will be furnished anyone desiring same upon application to the

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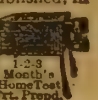

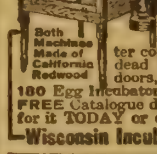

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HATCHING EGGS; prize-winning S.C. Reds, White Wyandottes, Buff Orpingtons, S. C. White and Brown Leghorns, $1.50 per 15. Ledge View Poultry Farms, Box W.F., Fond du Lac, Wis.

58 BREEDS Fine Pure-bred Chickens, Ducks, Geese, Turkeys, Guineas, at low prices. America's Finest Poultry Farm. 8000 Prizes. Large Catalogue 4 cents. A. A. ZIEMER, Box 15 AUSTIN, MINNESOTA

HATCHING EGGS; S. C. Reds, prize-winners all leading shows. Eggs $1.50, 15; $8, 100. Order from this ad. Address C. L. Pre-Fontaine, Box 600, Fond du Lac, Wisconsin.

BREEDERS Cheap, all varieties chickens, ducks, geese, turkeys, bantams and guineas. Also incubator eggs. Bare Poultry Co., Box 650, Hampton, Iowa.

2949 COCKERELS, hens and pullets, 49 varieties chickens, geese and ducks. Eggs in season. Aye Bros., Blair, Neb., Box 1. Free book.

SOME extra large, choice, heavy-boned Mammoth Bronze turkey toms and hens. Stock for sale, prices reasonable. O.C.Olson, R.2, Strum, Wis.

WHITE and Barred Rocks from prize-winning stock. Yearling hens and males. Early pullets and cockerels. Mrs. J.F.Bloom, R.1. Stillwater, Minn.

FIFTY varieties chickens, ducks, geese, turkeys, guineas. Low prices to make room. Catalog free. Dell Walrath, Box S, Janesville, Minn.

EGGS for hatching from Barred Rocks, E. B. Thompson's Ringlets, $1.25 per 15, prepaid. D. S. Thorosen, Shell Lake, Wisconsin.

ARE YOU GOING TO BUY LAND?

IF so, get a copy of our journal first. It has lands, city property and stocks of goods advertised in its columns from nearly every state, so that you can find just what you're looking for in its columns. Established 19 years and reaches 76,200 readers. Send 25c for one year's subscription or $1.00 for five years. Department F, Farm and Real Estate Journal, Traer, Iowa.

Live Stock and Commercial Field Notes

Collected by Representatives of The Wisconsin Farmer

Remember the Johnson Bros.' Sale.

THIS is our last chance to impress upon our readers the importance of buying a few real good hogs. You realize that one or two choice sows, of any breed, will do you more good than a half dozen of the kind that most of the farmers raise. The man that raised the good seed stock, no matter what breed, can always find an outlet, for that class of stock is always in demand. The Johnson Bros. know that the good ones are the cheapest. These brothers have been raising Duroc Jerseys for the past nine years, but no one ever heard of them until two years ago when they went out and bought Royal King, at $2,650. The fact that they paid that amount did more to put them on the map than anything else. This is the record price of recent years and every one interested in the "red hog" was talking about the Johnson Bros. Next they went out and bought the best sows they could find to cross with Royal King. Last winter they held a sale—their first one—and made the highest average of any breeder in the state—$87.50. Now it wasn't the personality of the Johnson Bros., it was the fact that they had the goods to offer and the buying public wanted it. We know men that have been breeding Durocs for twenty years and couldn't make a $40 average if they sold thirty of their tops. If you belong to that class, get out of the rut, buy a good sow or two and take care of them, ship your others to the market and in the end you will be money ahead besides the satisfaction of owning a good herd of hogs that you need not make excuses for. The Johnson Bros. will hold their second Duroc Jersey sow sale at Winnebago, Minn., on Tuesday, January 9th, and this will be a good place to buy those sows for that foundation herd. Mr. Duroc Breeder, a sow or two from this herd will tone up your own herd somewhat. The half page advertisement which appears in this issue tells you something of the breeding and individuality; they are as good as the breeding. If you attend the sale you'll buy a sow. Get one of the catalogs, it is full of Duroc Jersey history. Attend F. M. Washburn's sale at Lake Crystal the day before then go to Winnebago, for the 9th. You will enjoy the two sales. If you care to send bids same should be sent to T. P. Shreve in care of the Johnson Bros., Winnebago, Minn. See page 21.—Adv.

Dodge and Jefferson County Holsteins.

THERE are probably no two counties that have contributed more to the reputation of Wisconsin as the home of good dairy cattle than Dodge and Jefferson counties. For years the Holstein herds in these two counties have compelled the attention of the United States by the heavy production records that they have made. The same blood lines that have produced these world's record cows are scattered throughout the herds in the two countries and may be purchased by our readers. There is a great deal of official testing done by breeders in these two counties, and scores of high record cows are developed every year. this section of the state has also been particularly free from tuberculosis and other diseases, there being no universal outcropping of the disease as there has been in some states, or in some sections of this state. There is no better section of the state to visit when in the market for good producing cows of good type and conformation. For full information in regard to what is available write to Francis Darcey, secretary of the Intercounty Holstein Breeders' Association, Watertown, Wis. See page 23.—Adv.

Arthur Rust's Holstein Herd.

THE Holstein herd of Arthur Rust, West Allis, Wis., dates back for more than thirty years. His father and uncles imported twelve head from Holland way back in the early eighties. By careful observation and attention they learned that certain types and certain characteristics are essential in a cow of heavy production ability. They early began exhibiting cattle at the Wisconsin State Fair, and have been among the heaviest prize winners for many years. These prizes for type and conformation, combined with the high records which the cows have produced, are evidence that they have developed the proper kind of cattle. Readers of The Wisconsin Farmer who are in need of a herd sire will do well to write to Mr. Rust and find out what he has for sale. A good bull from this herd will add both good type and high production ability to your next crop of calves. For further information write to the above address. See page 23.—Adv.

Riverdale Short-horns.

HENRY WEHMHOFF, Burlington, Wis., proprietor of Riverdale Farms, under date of December 20th, writes as follows: "I wish to report the sale I made recently of a fine lot of Short-horns to S. Metz & Sons, the noted horse breeders and importers of Homewood Ill. The cattle are to be shipped to their 2,000-acre ranch at Pendleton, Ore. Since my advertisement started in August I have sold twenty-five or thirty head, all to breeders who have seen my advertisement in The Wisconsin Farmer. I have advertised for several years off and on in your paper and am pleased to be able to state that I have always received excellent results." At the present time Mr. Wehmhoff is offering a few choice young cows with first calf and a few mature cows for sale. He also has three fine yearling bulls for sale red and roan in color, sired by Orange Clipper. He will also sell a few October heifer and bull calves sired by Clipper Sultan, a grandson of Whitehall Sultan. Our readers who are in want of Short-horns should write him. See page 22.—Adv.

Washburn's Chief Invincible Sale.

MONDAY, January 8th is "Chief Invincible day" in the Duroc Jersey fraternity, for that is the date that F. M. Washburn sells fifty head of this breed in his new sale pavilion at his beautiful farm near Lake Crystal, Minn. With all due respects to the other good Duroc Jersey boars we consider Chief Invincible one of the greatest of the breed, and all progressive breeders should have one or more of his daughters in their herds. As a sire, this boar is just making his reputation. Few breeders can put up a better sale offering than will be sold by Washburn on the above date. No breeder will have better tops than can be found in this sale. One of the attractions will be a spring gilt by Orion Cherry King—individually she is good. A yearling by Pathfinder is the largest thing of the age in the sale—she will certainly make the 800-pound kind and is safe in pig to Chief Invincible. A Cherry Chief sow out of a Proud Col. dam will be in demand. There are four outstanding fall sows sired by the champion, Illustrator and out of a King the Col. dam. If you want an Educator son of the $10,000, The Milk and Butter King. Send for extended pedigrees of the bulls advertised for sale. When writing kindly mention that you saw their advertisement in The Wisconsin Farmer.—Adv.

Constance is Pleased.

WE ARE always glad to hear from our breeder friends in regard to their herds. A letter typical of the many we receive is herewith published. This is from F. R. Constance, Wapaca, Wis., who has been an advertiser for the past few weeks in The Wisconsin Farmer. He writes as follows: "Just shipped a fall boar today to Mr. Frank Wreestruck, Milladore, Wis. This pig was sired by Victoria's Corrector and out of Challanger's Wonder Lady. Victoria's Corrector's sire was Corrector 146659 by Sensation Wonder 125593 and his dam a daughter of Lee's Defender, so you see the blood is right. The pig is right also and will make a fine boar if given a chance. Recently we shipped a yearling fall boar by Lee's Defender to Ed Patterson, Jr., Bloomington, Wis. The dam of this boar is a daughter of Crimson Lad by Marion's Wonder. Mr. Patterson, who is an advertiser in The Wisconsin Farmer, writes that he was well pleased with this boar. He certainly is a fine fellow and will do a lot of good. We sold a litter mate to this boar to Emblojaard Dairy Farms, Marquette, Mich., some time ago, and have retained another litter mate as one of our herd boars. Inquiry is good for both Durocs and Jerseys. We have a nice bunch of sows bred for spring farrow and the gilts you saw when here are developing into a fine bunch. We expect to have a couple of good

NEXT WEEK'S SALE PROGRAM

Tuesday, January 2d	Duroc Jerseys, F. S. Vanderhyde, West Concord, Minn.
Wednesday, January 3d	Short-horns, Minnesota Short-horn Breeders' Association, South St. Paul, Minn.
	Duroc Jerseys, W. U. Gousseff, Mgr., Owatonna, Minn.
Thursday, January 4th	Duroc Jerseys, E. J. Wilson, Renville, Minn.
Friday, January 5th	Duroc Jerseys, John Swenson, Willmar, Minn.

there is a good one in this sale. Critic D. breeding is the big noise in Nebraska, a fall sow by that boar sells in this sale. Golden Model 21st is the sire of one of the good ones. There will be three gilts by the well-known Col. Wonder, etc. The catalog is full of that kind of breeding and as far as the individuality is concerned they are good as you'll find. When you see the gilts that go in this sale sired by Chief Invincible, you'll then agree that he is above the ordinary. Most of the offering has been bred to Chief Invincible for early farrow and the gilts sired by him have been bred to Golden Superba, a son of that well-known boar, I Am Golden Model Again, and his dam, Fancy Superba is by the noted Superba. The boar is quite a likely individual and should cross nicely on Chief Invincible gilts. Don't pass this sale by—you need better sows and Washburn has them to sell and not only that, they are bred to one of the best five boars in the United States. The best come higher, but it pays in the long run. Write at once for the catalog—look it over carefully and if you find it impossible to get away, mark the ones you prefer and send your instructions to T. P. Shreve and your bids will be handled in an honorable manner. Don't forget the date and place—Lake Crystal (near Mankato) Minnesota, Monday, January 8th. Johnson Bros. sell the day following. Arrange to attend both sales. See page 20.—Adv.

Wincklers' Holsteins.

RICH production blood is back of the yearling bulls advertised for sale on page 23 by B. F. Winckler & Sons, Medina, Wis. They are sired by Sir Johanna Colantha De Kol, whose dam made 27.56 pounds of butter in seven days. In this sire is combined the blood of the noted Johanna and De Colantha families. The bulls advertised for sale are out of daughters of Oakhurst Milk and Butter King, that is a ones at Madison next February for the sale. We also have a fine lot of fall pigs on hand for sale. We have six or eight fine high-grade yearling Jersey heifers for sale also." See page 21. —Adv.

Knudson's Richly Bred Durocs.

AT THE present time Allic S. Knudson, breeder of Guernseys and Duroc Jerseys at Brodhead, Wis., is offering twenty very choice spring and fall gilts. If you want Durocs that carry the blood of "nobility" Knudson has them. These gilts are sired by Valley G., he a litter brother to the great champion, Illustrator, and Col.'s Defender, a Colonel-Defender bred boar. They are safe in pig to a yearling son of Taxpayer Chief, that is a litter brother to Taxpayer 13th, the grand champion boar at the World's Fair, 1915. The dam of Taxpayer Orion is by Joe Orion 2d, a boar that was a grand champion at the Chicago International, and she is a litter sister to John's Orion that was first in class at Chicago. This is the most desirable breeding known and you will make no mistake if you buy a few gilts from Mr. Knudson. Write him and mention The Wisconsin Farmer. His spring boars are all sold which shows that he raises a class of Durocs that are in demand. See page 21.—Adv.

Last Call For Swenson.

DON'T forget the John Swenson Duroc Jersey sale at Willmar, Minn., Friday, January 5th. That is the day and place that he will sell those fifty tried sows and gilts that you have heard so much about. Remember that the entire offering is either sired by or bred to a grand champion boar, something that no other breeder can feature in the Northwest. This sale is worthy of your presence and you will be the loser if you do not attend. Willmar is on the Great Northern west of St. Paul and the railroad facilities are the very best. If it is absolutely impossible for you to attend, write or wire bids to T. P. Shreve, in care of John Swenson, Willmar, Minn., but attend in person if you can. See page 21. —Adv.

That Pure Bates Cattle Herd.

WE recently spent the day with B. W. Little, Janesville, Wis., who owns that herd of pure Bates Short-horn cattle. This is the purest herd of strictly Bates cattle in the Northwest and the fact that this herd has been established for some forty years goes to show that it is as pure as possible to make, for no outside blood has been used in the herd. In 17th Duke of Waysie, Mr. Little has what we consider one of the best Bates bulls we have ever seen—besides being a bull of scale his offspring are desirable individuals and the heifers sired by him are making good at the pail beyond expectations. At the present time Mr. Little has some bulls of serviceable age that are now ready for shipment. Their dams are big, rugged cows that have given from 8,000 to 10,000 pounds of milk in a year and being sired by the above bull, gives one reason to think that they will make good at the head of a herd. They are being priced for immediate sale and if you are interested in milking Short-horns, write Mr. Little for a more detailed description of the bulls. Kindly mention the fact that you saw the advertisement in this paper. See page 22. —Adv.

Parker's Prolific Porkers.

E. H. PARKER & SON, Janesville, Wis., are now offering bred sows that will appeal to anyone wanting good Duroc Jerseys. In the first place, they are bred along the most popular lines known to the breed being out of sows by such noted boars as Illustrator, Marion's Wonder, Lee's Defender, Orion Chief, Defiance and others. They are bred to a son of Orion Cherry King Jr., the boar that was the grand champion at the Omaha Swine show. This boar has been named King Orion and he is one of the best yearling boars in the state. Others are bred to a son of the Chief's Col. he by the noted Chief's Col. The Parkers have some fifty head to sell and as we have recently seen them we are glad to say that they will give satisfaction. These can be purchased now at a lower figure than if you wait until the later part of February, besides you will get the pick of the lot. Investigate this offer. This firm is absolutely on the square and you will get a good deal if you buy of the Parkers. Write them for further description and please mention The Wisconsin Farmer. See page 21.—Adv.

For Those That Want a Scotch Bull.

THE real outstanding, straight Scotch Short-horn bulls, that can be bought are very scarce, but one is being advertised on page 19 of this issue that is "one in a hundred." He is a white in color, will be two years old in January, has been tuberculin tested and is right in every way. Few bulls carry a better pedigree. He is sired by the noted Royal Silver, that carried the blood of such noted bulls as Choice Goods, Whitehall Sultan, Premier, The Lad For Me and back to that famous cow, Princess Alice. The dam of the white bull is Missie Sultana 2d—a Marr Missie. We have recently seen this bull and will say that he is one of the best prospects that we know of. He has not been pampered in any way, but will satisfy the critical buyer. Those needing a choice pure Scotch herd bull should investigate this one. He is owned by F. S. Bunker, Kilbourn, Wis. Kilbourn is on the main line of the Milwaukee between the Twin Cities and Chicago.—Adv.

Last Call For Wilson's Duroc Sale.

THIS is the last opportunity we will have to call your attention to the closing-out sale of E. J. Wilson which will be held at Renville, Minn., Thursday, January 4th. This is one of the sales that the breeders should attend, for it contains an offering that is desirable. Seventy head of sows will be sold, mostly yearlings and tried sows and the best bred lot that has been sold for some time. Arrange now to attend this sale, but if you can't, send buying instructions to T. P. Shreve, field man for The Wisconsin Farmer. Don't forget the date and place.—Adv.

Last Call For Washburn's Sale.

DON'T forget that next Monday is the day that F. M. Washburn sells one of the best offerings of bred Durocs that ever went through a sale ring in the Northwest. As you know, the sale will be held on the farm near Lake Crystal, Minn., which is ten miles from Mankato. If you want to get in on the good things get busy at once and arrange to attend this sale. If you can't come send bids. See page 20.—Adv.

Guernsey Herd Bull.

FRANK E. SWAN, Wauwatosa, Wis., is offering for sale his Guernsey herd bull, Billy of Paradise Spring City, which is advertised on page 19. This bull is five years old, a sure breeder and easily managed. In addition Mr. Swan will sell several young bulls and A. R. cows that are out of the herd bull. These animals are priced right and anyone interested in them should

Field Men for The Wisconsin Farmer.

H. S. Hoard, eastern half of Wisconsin. Address Room 201, Washington Building, Madison, Wis.

T. P. Shreve, western half Wisconsin and eastern Minnesota. Address Room 201, Washington Building, Madison, Wis.

Fred V. Johnson, Wisconsin, Illinois, Indiana, Ohio, Michigan and Kentucky. Address 924 Hearst Bldg., Chicago, Ill.

Carlos C. Palmer, eastern half of Iowa and Minnesota and swine division in Illinois. Address 2714 High St., Des Moines, Iowa.

W. S. Steele, northwest Iowa, South Dakota, western Minnesota. Address Box 109, Sioux City, Iowa.

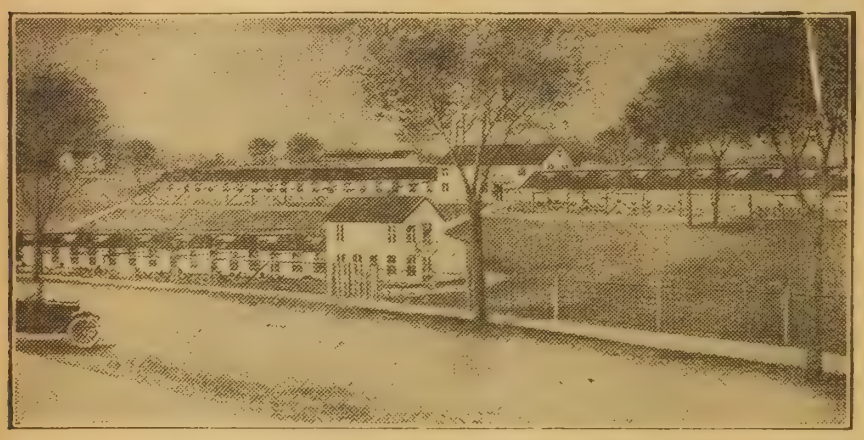
M. T. White, western Iowa and northeastern Nebraska. Address 4015 Izard St., Omaha, Neb.

A. T. Cole, Missouri. Address 3900 Holmes St., Kansas City, Mo.

call or write Mr. Swan for further information.—Adv.

Studebaker 1917 Almanac.

THE Studebaker almanac and weather forecast for 1917 contains a great many short, practical articles and information which will be interesting and valuable to readers of this paper. The articles are classified for handy reference. Besides the usual almanac calculations the new edition contains valuable information concerning agriculture, dairying and stock raising and helpful hints for the farm women. Then there are some valuable suggestions concerning the care and upkeep of automobiles which will be helpful to thousands of farmers. The articles are compiled by expert mechanics and will save many a big repair bill and unnecessary expense, if closely followed. It explains the correct method of caring for the car in summer and winter, what to do when anything goes wrong, how to overhaul the motor when necessary. Electric motors and stationary engines also receive attention, for the benefit of the farm owners who have these conveniences installed on their places. Readers of this paper who wish a copy of this valuable book should write to the headquarters of the Studebaker Company, mentioning that you saw the advertisement in this paper.—Adv.



BIRD'S-EYE VIEW OF THE FRANK FOY POULTRY FARM, CLINTON, IOWA.

ANY of our readers in need of good breeding stock, should send for Foy's big book, "Poultry and Squabs For Profit," advertised elsewhere in this paper. A copy will be mailed free to those who are interested, by addressing the Frank Foy Poultry Farm, Clinton, Iowa.

Buy a Good Herd Sire.

STUART REID, Oconomowoc, Wis., sends us the following letter under date of December 15th. "Mr. Forrest Gunderson and myself have purchased Sir Pietertje Ormsby Mercedes 43d from E. C. Schroeder, Moorhead, Minn. A word concerning Sir Pietertje Ormsby Mercedes 43d. As his name indicates he is a son of Sir Pietertje Ormsby Mercedes. His dam, Aaggie Wayne Peep, has a record of 34.59 pounds butter and 657.2 pounds milk in seven days at six years. She also crossed the thirty-one-pound mark at four years of age. She has a semiofficial record of 1,250.35 pounds butter and 27,762.5 pounds milk. This makes her one of the highest semiofficial cows of the breed. Aaggie Wayne Peep is the world's champion long distance cow for her age. She has three year records that average 1,030 pounds butter at the average age of four years. Tilly Alcartra is the only other cow to equal this, but her records were made at full age. This makes Sir Pietertje Ormsby Mercedes 43d the highest semiofficial record bull in Wisconsin."—Adv.

High Prices For Hides.

PRICES offered for hides and furs have increased to a surprising extent. Louis Andersch, of the Andersch Bros. hide and fur dealers, Minneapolis, urges farmers to skin every dead farm animal. Cow hides are worth more than five times as much as they were a few years ago, and horse and sheep hides are valuable. A number of farm boys supplied themselves with a liberal fund of Christmas money through the sale of muskrat and skunk skins. Mr. Andersch will be glad to quote prices on skins and furs to any Wisconsin Farmer reader who will write him, mentioning this paper. See page 10.—Adv.

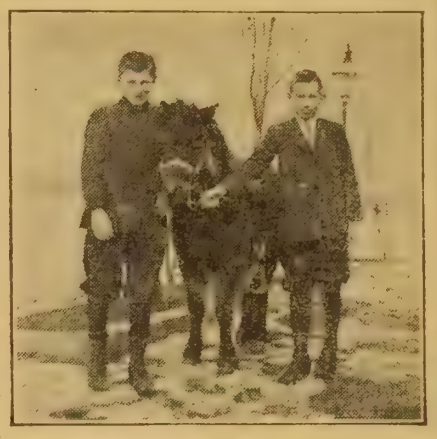
Derenthal Fall Pigs.

IF interested in Chester Whites, investigate the fall pigs—either sex—being offered by H. A. Derenthal, Wykoff, Minn. This breeder has what we consider one of the best herds in the Northwest and we have just had a letter from him saying that he has the best lot of fall pigs he ever raised. This is a strong statement, knowing that he has had some great litters in previous years. They are sired by two of his best boars, namely: Ignatz, the junior champion at North Dakota, Minnesota and La Crosse, 1915, and Callaway's Kind, first at Minnesota and grand champion at La Crosse, 1916. The pigs will please you, send him an order. Bred sows will be offered later. Please mention The Wisconsin Farmer. See page 22.—Adv .

CHILDREN ARE WINNING PONIES.

Victor Harris, of Ashland County, Wis., is One of 445 Children Who Have Won Shetland Ponies.

EVERY child should have a chance to win a free pony like that won by Victor Harris, of Ashland county, Wis. The picture shows Victor with his pony "Jay" given to him by the Pony King. Read how The Pony King is giving away more ponies, in the advertisement on the back page of this paper. Victor writes that he received his pony on December 22d, and he has already taught "Jay" how to shake hands with him. "Jay" is one of the most beautiful of all the 445 ponies that have been given away by The Pony King to boys and girls. A number of those ponies have been given away to boys and girls in Wisconsin, and The Pony King writes us that he would like to give away several more ponies to families that read this paper. We would advise any child who wants a free pony to turn to the back page of this paper and read the announcement of The Pony King. With a very little effort, many other children have received free ponies, and there is a good chance for you to receive one also. At least send for the free Pony Picture Circular and read all about it. All you need to do is to send your name to The Pony King, 307 Webb Bldg., St. Paul, Minn. Parents will do well to have their child send in his or her name. Just turn to the back page and write the name on the coupon.—Adv.



Victor Harris and his fine little Shetland pony. See the free pony advertisement on the back page of this paper.

THE pure Bates Short-horn bull at the head of the B. W. Little herd at Janesville, Wis., 17th Duke of Waysie. Several young bulls are being offered sired by this bull. Here is one of the best Bates herds in the country. See advertisement on page 22.

Fisher Making Good Sales.

WE have just been advised that T. J. Cartern, Monroe, Wis., has joined the Duroc Jersey fraternity. He purchased a lot of very fine sows from Allic Knudson, Brodhead, Wis., and just recently purchased a very fine King the Col. boar from John L. Fisher, Janesville, Wis. This boar is out of A.'s Model a litter mate to the champion, Lee's Defender, and, as we have recently seen this boar, we feel that he will do Mr. Carter a great deal of good. In a recent letter from Mr. Fisher he reports the following recent sales. Boars to C. H. Olson, Blanchardville, Reitan Bros., Bonduel; John Graham, Dunbarton; John Lankenan, Peotone, Ill.; Harry Arnold, Milton, Wis. He still has about fifteen boars for sale, one of them being a litter mate to the boar sold to Mr. Carter. Jumbo, a spring boar by Long Wonder is also for sale, he is one of the largest spring boars that we have seen this year. Write your wants. See page 21.—Adv.

La Belle View Farm Holsteins.

THE two Holstein bulls offered for sale by E. E. Rosenkranz, Oconomowos, Wis, on page 23 will attract the attention of our readers. In them is combined blood that cannot help but produce heavy milking cows. They are both sired by a grandson of Sir Ormsby Hengerveld De Kol, the sire of the great cow, Pietertje Maid Ormsby. Their sire is also a cousin of the world's yearly record cow, Duchess Skylark Ormsby. One of the bulls for sale is out of a 21.50-pound daughter of Pontiac Hengerveld Parthenea, that has sixty-five A. R. O. daughters with records ranging from twenty-four to over thirty-six pounds of butter in seven days. Send for the extended pedigrees of these two choice bulls, and when writing kindly mention that you saw this write-up in The Wisconsin Farmer. —Adv.

Baird Bros. Make Good Records.

UNDER date of December 12th Baird Bros., Waukesha, Wis., write as follows: "We are more than pleased with the results that we are getting by testing some of the daughters of Sir Urmagel Burke, that is a thirty-one-pound bull with a thirty-five-pound sister. It looks to us more than ever that blood will tell. Three of his four-year-old daughters are on test at present. Two of them have just made twenty-three pounds of butter in seven days. The third one has made 24.78 pounds and is still improving. Her dam made 24.53 pounds at four years and 29.68 at six years. We believe she is better than her dam and are looking forward to the time when she will make a considerable better record, as she is only in ordinary working clothes at the present." See page 22.—Adv.

Holsteins of Both Sexes.

EARL NORWOOD has a good herd of Holstein cattle at Gays Mills, Wis., and has at this time some beautifully marked registered and high-grade cattle of both sexes that he is offering for sale. These cattle will please you and he will make prices that are attractive. If interested write.—Adv.

Bulls From A. R. O. Dams.

IF YOU are going to need a Holstein bull in the near future, visit the herd owned by R. C. Walker, Kilbourn, Wis. He has several young bulls sired by King Fobes Oak De Kol, and out of A. R. O. dams that are being priced far below their real value. He needs the barn room and the buyer will get the benefit, so get busy. Say you saw the advertisement in The Wisconsin Farmer and write him for breeding and records. See page 23.—Adv.

HORSES.

PROPRIETORS OF THE WHITE CITY STOCK FARM.

WE have never offered to our trade a more superior lot of Percheron and Belgian stallions, in both imported and American bred stock, than we can now show. Our imported horses are young and thoroughly acclimated, many of them having made seasons in 1915 and 1916 and are tried and tested sires. Our American bred horses were selected from the best breeders in America and are out of noted sires and dams and are horses of great quality in every respect. We have especially selected ten black and dark gray 2 and 3 year old Percheron stallions weighing 10 tons. These are all outstanding horses and should be purchased by those who need a sire for full-blooded mares. Among them is Coco, 1st prize 2 year old and reserve champion at the Wis. State Fair. This colt is black in color and weighs a ton. To the early buyer we offer one of the greatest collections of ton stallions to be seen in any importing barn this winter. We have no old, worn out, picked over stallions on hand. Let us know your wants, or better still, come and spend a day or two. A hearty welcome awaits you. Send 25 cents in stamps for large horse hanger, which shows the picture of a number of stallions now on hand, our main farm and sales stable and our firm's picture. Will sell several of our choice Iowa farms on easy terms.

FRANK P. SHEKLETON & SONS **LAWLER, CHICKASAW CO., IOWA**

We are 50 miles west of Prairie du Chien, Wis., on the Milwaukee R. R., making direct connections for Lawler.

LEFEBURES' BELGIANS

A Large and Choice Collection of Stallions, Mares and Colts

for sale at all seasons of the year. Correspondence solicited. Catalog mailed upon application.

H. LEFEBURE & SONS, Fairfax, Iowa
8 miles west of Cedar Rapids

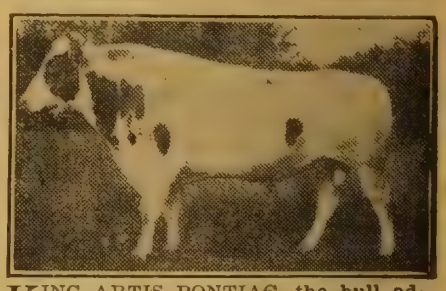
W. A. LANG & CO.
Importers and Breeders of
BELGIANS and PERCHERONS

IMPORTED and home-bred stallions from weanlings up to 6-yr.-olds. Write for particulars
W. A. LANG & CO. GREELEY, IOWA

Reg. Percherons, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams brought over from France and Belgium. **Fred Chandler, R. 7, Chariton, Iowa.**

Bulls That Will Please.

JOHN H. BEAR & SON, Spring Green, Wis., have a small, but select herd of Short-horn cattle, Scotch and Scotch topped. These gentlemen are good caretakers and if you visit their farm, adjoining town, you will find their cattle in good condition, showing that they have not been neglected. At this time they have a few bulls of serviceable age that are far above the ordinary and if a prospective buyer could see them, it would not take him long to make his purchase. You are perfectly safe in sending this firm your check and leave it to their good judgment to send you a bull—they will send you a bull worth the money. Write them your wants, we gladly recommend their herd.—Adv.



KING ARTIS PONTIAC, the bull advertised for sale on page 22 by Ed Schultz, Hartford, Wis.

Buy Bred Sows.

ART G. HOSKINS, is that good Chester White breeder living near Dodgeville, Wis., and for a short time he will offer Chester White gilts bred and safe in pig to Paddy 2d, he by Paddy by the noted Schoolmaster. On

SIR PIETERTJE ORMSBY MERCEDES 43d, recently purchased by J. J. Reid & Son and Mrs. M. Gunderson & Sons, Oconomowoc, Wis.

TOO LATE TO CLASSIFY.

PURE SCOTCH SHORT-HORN BULL

SULTAN GOODS. White, January, 1915, tuberculin tested, right, bred by Anoka Farms. Sire, Royal Silver (sold for $4,000). Combines the blood of Choice Goods, Sultan, Premier, The Lad For Me and Princess Alice. Dam, Missie Sultana 2d, a Marr Missie. Few such bulls for sale—your opportunity. Address F. S. BUNKER, KILBOURN, WISCONSIN

the dam's side they come from the very best breeding, and, as we saw these gilts some time ago we will say that they will give satisfaction. Mr. Hoskins also has a large flock of White Wyandotte chickens and is offering a few choice cockerels for sale. Write this breeder and let him fill your order. —Adv.

Fewacres Farm Jerseys.

JERSEY breeders will watch with interest the Jersey herd of Fewacres Farm owned by Fred D. Underwood, Wauwatosa, Wis. No money or pains has been spared in selecting good breeding stock both good as to breeding and in type. Official testing has been done for more than a year and the many fine records made is evidence of the good judgment shown in selecting the foundation stock. One of the cows in the herd, Irene's Cherry 285828, a senior two year old, recently completed a record of 12,571.6 pounds of milk and made 753.62 pounds of butter fat, equivalent to 942 pounds of 80 per cent butter. This is a wonderful two-year-old record. A young bull purchased from this herd will continue to grow into money, as his dam and other near relatives increase their records. Write for pedigrees and description of the young bulls they have for sale, when in need of a herd sire. See page 22.—Adv.

Kitty Clay Short-horn Herd.

THE Clay family of milking Short-horns has long been known as one of the heaviest producing families of the breed. For years members of this family have won milking contests at the International and at leading state fairs. The records made in private and semiofficial test by a large number of the members of this family range from 9,000 to well over 11,000 pounds of milk per year. The Kitty Clay herd owned by J. Warren Hoyt, Rosendale, Wis., is no exception to this rule, and the cows are showing fine production records. The herd is headed by Kitty Clay's Duke, a young bull of exceptional breeding. He will intensify the already high production blood in this herd. A few of his sons are advertised for sale on page 22. Send for pedigrees and prices.—Adv.

Wenham's Milking Short-horns.

JEFFERSON COUNTY is the home of many fine herds of dairy animals, and among these is the herd of milking Short-horns owned by Geo. Wenham & Sons, Ft. Atkinson, Wis. It is one of the few pure Bates herds now to be found. The herd was established nearly forty years ago with animals of Bates breeding and nothing but sires of Bates breeding have been used since. As might be expected, the cows are good milkers and high testers, One family having a test of 6 per cent fat for several generations. The entire herd is of Clay Buttercup and Wild Eyes lines of breeding, two of the heaviest producing families of the breed. Our readers will make no mistake in buying a herd sire or females from this herd. See page 22. —Adv.

Heid's Guernseys.

A FEW registered Guernsey females can be spared by W. J. Heid, Ft. Atkinson, Wis., so he wrote us a few weeks ago. We pass this information on to our readers for we know that if they knew this herd as we do they would waste no time before writing. The herd is an exceptionally good one, as great care has been used in the selection of breeding stock. Not only are the animals well bred, but have been given good care and are well grown. Mr. Heid also has a few young bulls, one or two of which are nearly ready for service, write for pedigrees and description and prices. When writing kindly mentfon The Wisconsin Farmer. See this page.—Adv.

Short-horns Are Worth Money.

WE can see no reason why beef cattle will not be high for several years to come and the Short-horn is the most popular farmer's cow. Williams Bros., Bangor, Wis., are crowded for winter quarters for their herd of Short-horns and for that reason they will sell a limited number of their young cows that are fresh or will freshen soon. These boys have a "clean" herd of cattle and if you buy from them you'll be pleased with the treatment accorded you. Their advertisement appears in this issue and, as good Short-horn females are scarce, we would suggest you write the above firm. See page 22.—Adv.

Grant County Angus.

GRANT COUNTY, WIS., is the leading county for registered Aberdeen Angus cattle in the northwest—Hauk Brothers, Cassville, are one of the leading breeders in that county—enough said, write them you wants.—Adv.

THERE will be assembled at the Western Live Stock Show at Denver, January 20th-27th, over 500 Short-horn bulls. This will be an opportunity for Western ranchmen. A public sale Friday, January 26th, held in connection with the show, will include sixty bulls selected from the tops of the 500 or more on the grounds. This sale offering will be picked with discriminating care, with the special purpose of providing high-class bulls of the type held in highest favor in Colorado and adjoining states. The sale will be held under the auspices of the American Short-horn Breeders' Association, Chicago,

RIVERDALE STOCK FARM

SHORT-HORNS

HAVE a few young cows with first calf; also a few mature cows, for sale. Three choice young bulls ready for service,reds and roan color, sired by Orange Clipper. Bull and heifer calves, born in October, sired by Clipper Sultan, a grandson of Whitehall Sultan. Prices reasonable. Address H. Wehmhoff Burlington, Wis.

and the buyers' interests will be fully safeguarded.—Adv.

SALE DATES.

Holstein Cattle.

Jan. 30, Harry Dunbar Dispersion Sale, Elkhorn, Wis.
May 1-2, Stephenson Farm Herd, of Kenosha, at Lake Mills, Wis.
May 8-9, Lake Mills Holstein Breeders' Consignment Sale.

Percheron, Belgians, Shires.

Jan. 30-31-Feb. 1-2, Breeders' Sale Co., C. W. Hurt, Mgr., Bloomington, Ill.

Poland China Swine.

Feb. 6, Percy Young, Prosper, Minn.
Feb. 6, M. Madson & Sons, Madison, Wis.
Feb. 7, Wisconsin Poland China Breeders, Assn., J. F. Diley, Rush Lake, Secy. (Sale at Madison, Wis.)
Feb. 8, J. D. McDonald, North Bend, Wis. (Sale at West Salem.)
Feb. 13, Grant County Poland China Breeders' Assn., Lancaster, Wis., Burlie Dobson, Secy.
Feb. 14, E. W. Hendricks, Hazel Green, Wis.
Feb. 15, J. C. Hendricks, Hazel Green, Wis.
Feb. 16, Chris Kartman, Cassville, Wis.
Feb. 16, Gerlick & Barker, Mankato, Minn.
Feb. 22, William Smiley & Son, Albany, Wis.

Duroc Jersey Swine.

Jan. 8, F. M. Washburn, Lake Crystal, Minn.
Jan. 9, Johnson Bros., Winnebago, Minn.
Jan. 26, W. H. & A. D. Van Meter, Williamsville, Ill.
Jan. 29, W. G. Krueger, Hawkeye, Iowa. (Sale at West Union, Iowa.)
Jan. 30, Dennis Shea, Melvina, Wis.
Jan. 31, L. F. Atwater, Bangor, Wis.
Feb. 2, Geo. Wilsie, Prosper, Minn.
Feb. 7, Wisconsin Duroc Jersey Breeders' Assn., J. D. Gant, Delavan, Secy. (Sale at Madison, Wis.)
Feb. 8, E. H. Parker & Son, Janesville, Wis.
Feb. 15, Gant's Farm, Delavan, Wis.
Feb. 26, George W. Pagel, Zumbrota, Minn.

Hereford Cattle.

Mar. 24, Minn. Hereford Breeders' Assn., South St. Paul, Minn.

Grant County Short-horn Breeders' Association.

A year ago the Short-horn breeders of Grant county, Wisconsin, formed a Grant County Short-horn Breeders' Association, but, other than forming the association, nothing has been accomplished during the past year. On December 21st the annual meeting of the association was held at Lancaster, and from the enthusiasm that was manifested at this meeting, it appears that Grant county will be heard from and gain the distinction as a Short-horn county. Twenty breeders were present, there being at the present time twenty-six members in the association. The next meeting will be held in June, at which time they expect to have a membership of fifty active Short-horn breeders. Robt. Griswold, Livingston, president; Wm. McCormick, Lancaster, vice president; Jay Martin, Bagley, secretary-treasurer for the ensuing year.

The "Baby Beef" show, held at the various county fairs, was gone into quite thoroughly and this association expects to push the "Baby Beef" shows that are to be held at Bloomington and Lancaster. They have promised to give $20 in prize money, $10 at each fair, to the first three winners, showing individuals sired by a pure-bred Short-horn sire.

This is an excellent start on the part of this association, and several of the members expressed a willingness to enter a steer or two for their boy or daughter.

The question of holding a public sale was discussed and met with favor. It was practically decided to hold a sale next fall, perhaps in October, though this will be settled definitely at the June meeting.

We are indeed glad to see Grant county start something with the Short-horn breed. There are more good herds of this breed in the southwest corner of Wisconsin than in any other county in the state, yet, unless there is organization on the part of the breeders, the county will not gain that recognization that it rightfully deserves.

Cattle raising in Cuba is a prospect that has attracted many Americans. At the close of the Spanish-American war Cuba was practically without cattle, but importations began in 1899. A number of Americans seeing the possibilities in the new industry emigrated to Cuba. In the last few years the extremely high price of pasture land in the United States and the prices offered for meat animals have renewed interest in the possibilities of cattle raising where land is still cheap.

Services of Expert Live Stock Photographer

Up-to-date live stock breeders are more and more using photographs in advertising their herds. It is the modern way of doing things, and The Wisconsin Farmer is meeting the situation by offering the services of a skilled live stock photographer. Appointments may be made by mail at any time. For estimates of cost and other information write The Wisconsin Farmer.

GUERNSEY CATTLE.

A Guernsey Show Bull Backed by Show and Production Records

DAM, Beatrix B, that at two years, five months of age, made 428 pounds of fat and gave 9,024 pounds of milk testing 4.74% fat. She is a daughter of Atwood Prince, whose offspring have been heavy prize winners and whose get of sire was never defeated. His seven A. R. daughters average 460 pounds fat at three years, five months. Sire, King Talladeen of Chestnut Hill, that has been first and champion at several leading fairs, has sired many prize winners. His dam made 635 pounds fat from 11,907 pounds of milk. Price $125. Two other yearling bulls of Glenwood breeding for sale from A. R. cows. Can also spare a few females. Send for our sale list or, better yet, come and visit Waukesha. If we haven't got what you want some of our fellow breeders will have.
FOX BROTHERS WAUKESHA, WISCONSIN

IMPORTED GUERNSEY BULL

(Imported in dam,) 18 months of age. Dam, Blanche Flow of Sarnia, gave 35 pounds of milk with first calf. She is a daughter of Raymond 60, that has more daughters on A. R. test than any other bull of the breed. Sire, Flower Boy of the Cloture 3377 P.S. This young bull is a show animal and well marked. Send for complete pedigree.
Berkshire Spring Boars and Gilts of Premier and Masterpiece breeding, good type, well grown and in thrifty condition. Address
O. R. FRAUENHEIM, RANDOM LAKE, WIS

FOR SALE—My Guernsey herd bull, Billy of Paradise Spring City 21162. Born Oct. 15, 1911. My reason for selling him is that I have so many of his daughters. He is a sure breeder and gentle as a calf. I also have a few young bulls sired by him out of A. R. cows and cows now on test. Come and see them. Will make the price right. Address
Frank E. Swan Wauwatosa, Wis.

YEARLING GUERNSEY BULL

SIRED by Bond of Maud Iris (whose dam made 45.7 lbs. of fat as a 2-yr.-old) and out of a daughter of Benton Harbor. The bull for sale is an outstanding individual.
Emory C. Meltz Appleton, Wisconsin

ATTENTION

PURE-BRED Guernsey bulls, two of serviceable age, and eight calves at special prices for thirty days. A rare chance to get some of the best blood lines of the breed. Address
S. A. Merriman Fort Atkinson, Wiscosinn

GUERNSEYS

REGISTERED bull calves 4 to 8 months old. Herd tuberculin tested. EDW. H. KIESLING, JEFFERSON, WISCONSIN.

SONS of the Guernsey bull, KING PIN OF WOODLAND, whose parents and grandparents are Advance Registry animals. The bulls for sale are from A. R. O. cows. Prices $100. Address A. H. Hinman, Allenville, Wisconsin.

FOR SALE—10. mo. Guernsey bull sired by richly bred Glenwood, Blue ribbon calf. A dandy. Price reasonable. W. A. Lawson, Rosendale, Wis.

GUERNSEY heifers four months old, bull calf six months old for sale. Glenwood breeding. Address F. P. Smith, R. 1, Neilsville, Wisconsin.

TWO YEARLING **GUERNSEY BULLS**

BOTH sired by the richly bred bull, Doras Boy of Sunny Valley 24470, whose dam made over 700 pounds of fat in a year. No. 1—Born September 15, 1917. Dam, Michelle 37644. No. 2—Born December 25, 1915. Dam, Imp. Queen of the Lillies 28547. Both well grown and well marked. Priced right.
TAMARACK FARM, DOUSMAN, WIS.
Gustav Pabst, Prop. Fred Southcott, Mgr.

2 Richly Bred Reg. Guernsey Cows

AND a yearling bull for sale. No. 1—Imp. Daisy Maid II of the Gree—has an A. R. record and has 2 A. R. daughters. She is an imported granddaughter of Gov. of the Chene. No. 2—Tidy's Girl, a daughter of Raymond of Homestead whose dam gave 13,000 lbs. milk in a year. Both were bred in May to Gov. Pagenta, a son of Gov. of the Chene. Bull 13 months old, out of Tidy's Girl and sired by Gov. Pagenta.
W. G. Jamison & Sons Appleton, Wis.

GO TO W. J. HEID

FT. ATKINSON, WIS.,

FOR GUERNSEY BULLS

FROM 2 to 10 months old; also a few females. Best of breeding and good size. Come and see them, or write for description and prices.

Yearling GUERNSEY BULL

READY for service. Sired by Auriculas King of the May and out of a granddaughter of Yoeman, whose dam has given 10,700 lbs. of milk and 487 lbs. fat in a year. Price right. Send for pedigree.
W. L. Breitrick Greenville, Wis.

Yearling Guernsey Bull

BORN December 5, 1915, sired by Stranford Glenwood of Pinehurst 3d. Dam also of Glenwood breeding. One other bull ready for service. Price right. Send for extended pedigrees.
L. J. Wendt Waukesha, Wisconsin

AYRSHIRE CATTLE.

ALDEBARAN FARMS **A. R. AYRSHIRES**

YEARLING AYRSHIRE BULL ready for service, ¾ white, well grown, good, straight type. Dam has an Advanced Registry record of over 500 pounds of butter in a year. This youngster is backed by rich Advance Registry breeding. His dam, both grandams and both grandsires being Advance Registry animals. Send for pedigree and price. Address
STEPHEN BULL RACINE, WISCONSIN

AN AYRSHIRE OPPORTUNITY

WHEN we got home from the National Dairy Show with our show herd, we found our barns were full to overflowing. We have over 100 head, so as to reduce our herd we have decided to sell about twenty females—heifer calves or bred heifers. Here is an opportunity to get as good as there is in the U. S. or Canada. Prices very reasonable to make them sell quickly. Bulls ready for service and younger from A. R. O. cows. Send for pictures and prices. Address
ADAM SEITZ WAUKESHA, WISCONSIN

YORKSHIRE SWINE.

FOR sale—Thoroughbred young Yorkshire hogs and Oxford sheep. Write Ingvoldstad Lumber Co., 707 Central Ave., N. E. Minneapolis, Minn.

AYRSHIRES

Can supply your wants if you want
HEIFERS OR BULLS
from A. R. dams. Also breeder of
Clydesdales and Durocs
Write your wants Address
JAS. VAN ETTA LIMA CENTER, WIS.

SHEEP.

Ram and Ewe Yearlings and Rams

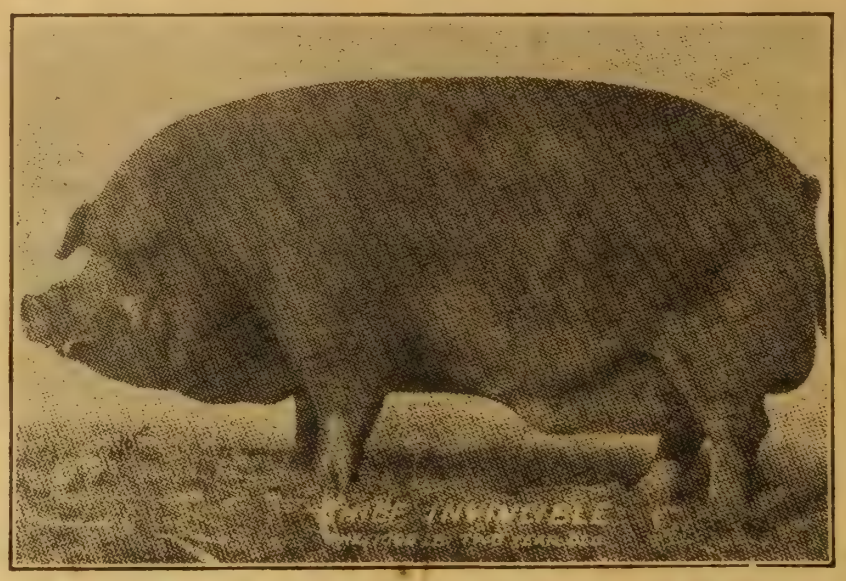
SHROPSHIRE, Oxford, Hampshire, Southdown, Rambouillet, Delaine, Cheviot, Merino, Cotswold, Angora goats. The best families of each breed represented. Our winnings at the fairs are proof of the quality.
Geo. A. Phillipi - Bear Creek, Wisconsin
(Formerly Welcome)

CHIEF INVINCIBLE DUROC JERSEY BRED SOW SALE

LAKE CRYSTAL, MINNESOTA, MONDAY, JANUARY 8, 1917

50 HEAD

Tried Sows
Spring Yearlings
Fall Yearlings
Spring Gilts



BRED TO

Chief Invincible

One of the largest, highest-backed, best-footed boars in America

MANY FEATURE SOWS

NOT a poor foot, a poor back or an undersized sow in the sale—every one is a good individual, and notice the following breeding: One of the largest yearlings to be sold this year, sired by **Pathfinder**; one fall sow by the champion, **Critic D.**; one spring gilt by the famous **Orion Cherry King**; four fall sows by **Illustrator**, out of a **King the Col.** dam; one choice tried sow by **Cherry Chief**, dam by **Proud Col.**; one yearling by **Educator**; four by **Chief's Col. 40th**; three by **Winning Wonder**; one by **Golden Model 21st**; five by **I Am Golden Model Again**; three by **Col. Wonder**, besides the spring gilts by the 1,000-pound **Chief Invincible.** The "aristocracy" of the Duroc Jersey breed will go through my sale ring on January 8th. Come and help christen my new sale pavilion—you'll be comfortable this year. No better Durocs were ever sold in Minnesota. Those sired by **Chief Invincible** have been bred to **Golden Superba** by **I Am Golden Model Again**, dam by **Superba.** Write for one of my catalogs; it will interest you. Send all mail bids to T. P. Shreve, field man for The Wisconsin Farmer, in my care. Mention The Wisconsin Farmer when writing.

F. M. WASHBURN - - - - - - LAKE CRYSTAL, MINNESOTA

Johnson Bros. sell at Winnebago the day following. Arrange to attend the two greatest Minnesota sales.

POLAND CHINA SWINE.

HENDRICKS' BIG-TYPE POLANDS

OUR annual Brood Sow Sale on Feb. 15th will be the most preeminent offering we have ever been able to produce by 15 different sires. Wait for this great sale to get your bred sows. Write for catalog. We hold the state's record on account of superiority. Address
J. C. Hendricks **Box F, Hazel Green, Wis.**

Model Major 2d

IS considered by many as being the best 2-year-old POLAND CHINA BOAR in the state. I have spring boars sired by him that are **GREAT.** Why not buy where you can get the BEST?
CHAS. S. MALTBY **JANESVILLE, WIS.**

Master's Giant Orange Wonder Young's Big Joe

NO breeder has three better Poland China boars. They will make my bred sow sale, February 6, 1917.
P. W. Young **Prosper, Minn.**

FALL PIGS By JUMBO'S EQUAL 2D

CHAMPION southwestern Wisconsin. Poland Chinas with size, quality and breeding. Write
C. S. FLESCH **MT. IDA, WIS.**
(Shipping point, Fennimore)

FEBRUARY 22nd

WE SELL 50 POLAND
BRED SOWS
WAIT
WM. SMILEY & SONS **ALBANY, WIS.**

Poland China Gilts

WEIGHT 200 to 250 pounds now. Bred for March and April farrow to a son of McChief, grand champion at Wisconsin. Address
C. Horn **New Auburn, Wisconsin**

BIG-TYPE BOAR LONG PROSPECT FOR SALE

ONE of the best Poland China boars in Wisconsin. He is too good to be slaughtered, but am offering him at $65. Fall pigs of both sexes for sale. Jacob Kreuscher, Jr., Somers, Wisconsin.

POLAND CHINA SWINE.

The Home of CHAMPION POLANDS

I HAVE a spring boar that will please you. They are well grown and from sows that have been winners. My hogs please the critical buyers, they'll please you. Gilts reserved for bred sow sale, February 8th. Order now.
J. D. McDONALD **NORTH BEND, WISCONSIN**

BOARS ALL SOLD---BUT SAY

you should see our fall pigs— **THE BEST WE EVER RAISED. Do you want one or more? The "UTMOST IN POLAND CHINAS."**
DOBSON & EASTMAN **LANCASTER, WIS.**

Martiny's Big Boar Bargains

A SELECTED lot of Poland China spring and fall boars sired by CHIEF PRICE, the 700 lb. 1st prize senior yearling, and SELECT MAJOR, the 1st prize junior yearling at the 1916 Wisconsin State Fair, and other noted boars.

10 SPRING BOARS WEIGHED 2,070 POUNDS

on October 17th in just breeding condition. They measure 45 to 48 inches length, 44 to 46 inches around heart and flank and have 7 to 8 inch bone. The fall yearlings are exceptionally good, big, husky fellows.
L. P. MARTINY, CHIPPEWA FALLS, WIS.

Anderson's POLAND CHINAS

SERVICE boars all sold. Have a few choice gilts at $25.00 each, and a few choice fall pigs at $10.00 each. Write at once, mentioning The Wisconsin Farmer, to
SOL ANDERSON **ROUTE 8, GREEN BAY, WISCONSIN**

MADSON & SONS' POLANDS

ARE offering March and April boars that weigh 250 pounds, sired by CORRECT I AM and TRIUMPH. Buy the big type that have quality, the easy-feeding kind. 2 Short-horn bulls left.
M. MADSON & SONS **MADISON, WISCONSIN**

BIG POLANDS — FEB. 14

IS the day I sell 50 Poland China sows. Many are by Black Jumbo, the largest boar in the state, and they are bred to Model Major 2d, the largest 2-year-old in the state. Get on my mailing list.
E. W. HENDRICKS
Hazel Green **Wis.**

Big-Type Poland Chinas

75 BOARS and gilts of spring farrow You get the pig and if suited send me the price is the way I sell. Write your wants. Address
W. T. Hartley **R. 3, La Crosse, Wis.**

POLANDS

BOARS and gilts of spring farrow ready to ship. Everything guaranteed and priced according to individuality and breeding. Write
E. MEINKING **BANGOR, WIS.**

REGISTERED POLAND CHINAS

A FINE lot of spring boars, also a few spring gilts (on approval). Bred gilts for spring farrow later. (Registered Holsteins).
Marinette County Asylum - Peshtigo, Wis.

POLAND CHINA SWINE.

BOARS! BOARS! BOARS! POLAND CHINAS

Weighing from 225 to 300 pounds

Some of them sired by

MAC'S CHIEF

Grand champion Boar Wis. State Fair

I guarantee satisfaction in every respect. Address
OLAF C. OLSON
STRUM - WISCONSIN

HAMPSHIRE SWINE.

HAMPSHIRES

OR "BELTED" SWINE

MUST reduce swine at once. Have two spring boars left that I retained to cross on gilts, now for sale at $25 each; 3 July males at $15 each; September pairs at $20 the pair if taken before January 1st. Part of them are sired by my heavy-boned, blocky boar, Dane's Model 25929.
DANE STOCK FARM **OSHKOSH, WIS.**

WARNING! ORDER BRED SOWS EARLY

HAMPSHIRES in great demand. Boars all sold and orders for bred sows and gilts coming fast. A few Jumbo sows. Our gilts large and smooth. Write today.
A. M. LAIRD **PRAIRIE DU CHIEN, WIS.**

MULE-FOOT SWINE.

200 IMMUNE Mule-Foot hogs, all ages. Sired by and bred to champion boars. Reg. Hampshire sheep. Chas. D. Thompson, Letts, Ind.

LIVE STOCK AUCTIONEERS.

ORVAL A. JONES

Auctioneer
14 N. Sacremento Blvd. **Chicago, Ill.**
Pedigreed Live Stock and Real Estate.

H. O. TELLIER

AUCTIONEER
FARMINGTON, MINN.
THOROUGHLY versed on pedigrees of leading breeds of live stock.

JOHNSON BROS.' ROYAL KING

DUROC JERSEY SOW SALE

WINNEBAGO, MINNESOTA, TUES., JANUARY 9, 1917

45 HEAD

10 TRIED SOWS
25 Jr. & Sr. YEARLINGS
10 FALL YEARLINGS.

BRED TO

ROYAL KING ($2,650), the Royal Champion, FANCY'S VICTOR and two sons of CHIEF'S COL., dam by FUTURE FAME.

ATTRACTIONS NEVER BEFORE EQUALED

TRIED SOWS: 1 Proud Col., 1 Chief's Col. 40th, 6 King The Col., 1 Proud Chief, 1 Fancy Col. YEARLINGS: 2 by Cherry Chief, dam by Proud Col., 1 by Royal King, 1 by Illustrator, 2 by Educator, the tops of Swan's 1915 summer sale, 1 by Premier Gano, dam by Educator, 1 by Chief Invincible, 3 by Grand Model 15th, dam by King The Col. Others by Royal King and Col. Golden Orion.

No herd in the country has better breeding than we have and we will divide with you. Whenever we have purchased Durocs we have always bought the tops, now you get the benefit. No breeder has too much of these popular blood lines.

IF YOU WANT THE BEST YOU'LL ATTEND OR BE REPRESENTED AT OUR SALE

Get one of our catalogs; it contains the pedigrees of boars that have made Duroc history, and sows that are known wherever Durocs are raised. The greatest boars of the breed are represented in this sale. Send all bids to T. P. Shreve, in our care. Cols. Duncan and Kraschel, auctioneers.

JOHNSON BROS. - - WINNEBAGO, MINN.

F. M. Washburn sells at Lake Crystal, Minn., the day before. Attend both sales and get the cream of the breed.

DUROC JERSEY SWINE.

E. J.'s Crimson Wonder

Grand Champion Minn. 1916

Big Wonder

Grand Champion Iowa 1913

Some wonderful Duroc Jersey sows haye been bred to these boars and will be sold by

John Swenson at Willmar, Minn.

Friday, Jan. 5, '17

This is one of the sales you should attend. Write at once for catalog. Watch later issues.

King Defender

GRAND champion Wisconsin State Fair, heads my herd of Duroc Jerseys. Am offering fall and spring boars of the most fashionable breeding for sale. Sows bred to King Defender will be offered later. Write your wants. Address

JOHN L. FISHER **JANESVILLE, WIS.**

Duroc Boars

OF early farrow all sold, some summer boars offered at reasonable prices. Will also sell Professor C, one of my well-bred herd boars. A limited number of spring gilts for sale. Write your wants. Address

M. STOEHR **VIROQUA, WIS.**

DUROC PIGS

SEPTEMBER and October Duroc pigs at $15 a pair. Can also supply spring stock at prices you will be glad to pay. Have a few light weight spring boars that are right in every way at $15. Our herd has nothing but the very best blood lines of the Duroc family.

E. R. Perkins **Manitowish, Wis.**

BOARS ALL SOLD

REMEMBER my **Duroc Jersey sow sale January 31st**

L. F. ATWATER **BANGOR, WIS.**

Our DUROCS Are in Demand

BOARS all sold. Offer a limited number of gilts. Place your order early. Herd headed by Royal Top Col. and Grand Model 21st. Address

Geo. D. Sprain & Sons, **West Salem. Wis.**

DUROC JERSEY SWINE.

LAST CALL FOR E. J. WILSON'S CLOSING-OUT DUROC SALE

RENVILLE, MINNESOTA, JAN. 4, 1917

ONE of the feature sales of the season. Next Thursday is the day—if you can't get there wire your bids to T. P. Shreve in care of **E. J. WILSON, RENVILLE, MINNESOTA**

THE TIME THE PLACE THE MAN

FRIDAY, JAN. 5, 1917 WILLMAR, MINNESOTA JOHN SWENSON

WILL SELL 50 DUROC JERSEY SOWS sired by or bred to a grand champion boar. A sale that you should attend or be represented. Write or wire bids to T. P. Shreve in care of

JOHN SWENSON **WILLMAR, MINNESOTA**

DUROC HOGS and JERSEY CATTLE

WE are offering well-grown, good-type Duroc fall boars and gilts at reasonable prices, sired by Lee's Defender, Corrector and Model Lady's Trade Mark. Fall pigs at weaning time—they are strong and vigorous.

YEARLING Jersey bulls and several high-grade cows and yearling heifers. We belong to the cow testing association; can tell you what each cow is producing.

F. R. CONSTANCE & SONS **WAUPACA, WIS.**

BURN BRAE DUROCS---The Good Kind

WE have 50 spring pigs for immediate sale sired by Burn Brae Golden Model and Burn Brae Orion. They have size and quality. Every pig guaranteed. Write or wire.

BURN BRAE FARM - - - ROSENDALE, WISCONSIN

CEYLON COURT FARM DUROCS

BOARS and gilts of March and April farrow of **Professor, Defender, Proud Advance** and **Cherry Chief** breeding. The most and richest popular lines of blood represented in our herd. Prices reasonable. Send for pedigrees.

Ceylon Court Farm - Lake Geneva, Wis.

BURT DUROC FARMS

70 BOARS and 70 sows by Professor B. Model Wonder, Col. S. Jr., Orion, Cherry King Jr. **We ship on approval and give 10 days' trial.** Write for our new guaranteed descriptions. Burt Duroc Farms, Brodhead, Wis.

DUROC FALL PIGS

Offering Durocs, pairs or trios.

SEED CORN

of best varieties for sale. Write your wants to

Riley Martiny & Son, Baraboo, Wisconsin

SAVE $$$$

BUY DUROC JERSEYS

of me. What do you want?

J.W. HIGGINS **GOTHAM, WIS.**

DUROC GILTS

BRED to Cook's Defender for sale. Only a few, order early. Address

Emmett Cook & Son, Richland Center, Wis.

DUROC BOARS FOR SALE

BY Prince Defender, Royal King 4th, and Lee's Defender. Big, stretchy fellows. Shipped on approval. **McCLURG BROS., Viroqua, Wis.**

DUROC JERSEY SWINE.

Fancy Bred Durocs

20 EXTRA good spring and fall gilts from 225 to 400 pounds, sired by the 1,000-lb. Valley G. and Col.'s Defender 2d, and bred to Taxpayer Orion, sired by a litter brother to the world's fair champion, Taxpayer 13th, dam by Joe Orion 2d, a champion at Chicago International. (Boars all sold.) Registered males and females. Priced reasonable.

ALLIC S. KNUDSON, R. 5, Brodhead, Wis.

Parker's Prolific Porkers

BRED GILTS FOR SALE

DUROCS safe in pig to King Orion, son of the grand champion at Omaha, and Pal's Chief by The Chief's Col. Illustrator, Orion Chief, Marion's Wonder, Defender and King of Col.s breeding. Guaranteed in every respect. Write

E. B. Parker & Son **Janesville, Wis.**

40 Duroc Sows

HAVE been bred to sons of Pathfinder and King the Col. and will be sold January 30. One of the best offerings ever sold in the state. Send name for mailinglist.

Dennis Shea **Melvina, Wis.**

(10 miles from Sparta)

GEO. H. WILLSIE

Breeder of Big Durocs

Can supply your wants. Write.

Prosper - - - Minnesota

E. E. WYATT, Tomah, Wis.

GET my prices on **Duroc Jerseys**—boars and gilts, out of matured dams. Letters answered promptly.

FOUR OAKS STOCK FARM

OFFERS registered Duroc spring pigs (April farrow) either sex for sale. These were sired by Defender Major 2d 70335 and are out of large, prolific sows. Price $20 to $30. Address

W. W. Goodrich **Ft. Atkinson, Wisconsin**

BERKSHIRE SWINE.

CORTTE'S BERKSHIRES

FEBRUARY and March pigs of either sex for sale. These are sired by Pabst Rivaleer 3d—King of Rivals, well grown. Good prospects for next fall show rings. Reasonable prices on singles, pairs or trios. Address

A. P. CORTTE **LOMIRA, WISCONSIN**

SHORT-HORN CATTLE.

WE WILL SELL YOUNG SHORT-HORN COWS

TO freshen in December. Several roans and reds, choice individuals and in calf to a Scotch bull. Write or come—they'll not disappoint you.

WILLIAMS BROS. BANGOR, WISCONSIN

100 Short-horns to Select From—100

BULLS and females. One or a carload. Write now. ROCK COUNTY SHORT-HORN BREEDERS' ASSN., J. E. Kennedy, Secy. - - JANESVILLE, WIS.

SHORT-HORNS POLANDS OXFORDS

CAN supply your wants in the above breeds. Write or come.

P. N. Collins River Falls, Wis.
(35 miles S. E. St. Paul)

WILCOX SHORT-HORNS

AM offering several **red bulls** of serviceable age. They are a nice dark red and the finest in the land. Have one that weighs 650 pounds at 8 months old. Priced reasonable for immediate sale. Write for pedigrees, Address

W. F. WILCOX MILTON, WISCONSIN

BATES' SHORT-HORNS

NOTED for **Milk** and **Beef.** A few extra good young bulls for sale; also Champion bred Durocs. Choice gilts bred to Critic, Top Notcher. Inspection invited.

B. W. LITTLE, R. 7, JANESVILLE, WIS.

MILKING SHORT-HORNS

HAVING several choice young bulls from dams giving 10 to 12,000 pounds of milk. I have a well-bred herd and keep records of production. Inspection invited. Address

Harvey H. Little Evansville, Wisconsin

GREEN VIEW STOCK FARM OFFERS 7 Pure-Bred SHORT-HORN BULLS

7 to 17 months old, and a few choice

POLAND CHINA BOARS

Farm joins the village. Address John H. Bear & Son, Spring Green, Wis.

RIVERDALE STOCK FARM SHORT-HORNS

YEARLING HEIFERS AND BULLS FOR SALE. Sired by the choicely bred bull, **Orange Clipper 433897.** Straight Scotch and Scotch top—some from heavy milking dams. We can supply the type you like best—red or roan color. Prices reasonable.

H. Wehmhoff - Burlington, Wis.

SULTAN BRED SHORT-HORNS

WE can offer a few yearling, 2-year-old heifers and young cows and yearling bulls, mostly of Sultan breeding. They were sired by BROADHOOKS' PRINCE, VICTOR FASHION and ROYAL CORONET'S BEST. Their dams represent the best imported and American strains. Prices right. We have been breeding for over 25 years. Address, mentioning Wisconsin Farmer,

H. B. Drake & Son, Beaver Dam, Wisconsin

FOXHALL STOCK FARM

OUR offering in Scotch Short-horns this year is probably the best we have had to offer our patrons in years. We have several young bulls of serviceable age, high in quality and rich in breeding, and these are priced to sell. Could also spare a few females.

Fox & Gallagher Oregon, Wisconsin

SHORT-HORNS---BIG-TYPE POLANDS

CHOICE bulls, 1 to 15 months of good breeding. Collynie Victor 387634 in service. Also stretchy boars ready for service and gilts. Fall pigs of both sexes for sale. Prices reasonable.

A. Menke & Sons, R. 1, Markesan, Wisconsin

Good Short-horns

FOR SALE. 20 choice bulls and heifers. Prices reasonable. Standard Scotch breeding and of the right type and quality. Richard Maurer & Son, Fox Lake, Wisconsin.

KITTY CLAY HERD HORNLESS SHORT-HORNS AND SHORT-HORNS

YOUNG bulls and heifers sired by Kitty Clay's Duke, that is out of the best family of milking Short-horns in existence. Also several Buff Wyandotte cockerels. Address

J. Warren Hoyt Rosendale, Wis.

THE GREAT WORLD'S FAIR HERDS

40 Short-horn bulls and heifers sired by Village Mystic. 100 big-boned Poland China boars and sows sired by Big Bone and Long Wonder. Call at Prairie Lawn Stock Farm or write C. J. Schoenfeld & Son, Fox Lake, Wis.

MILKING SHORT-HORN BULLS

EIGHT to nine months old; red, roan and white color. Sired by Milkman, that is out of a 4.4% butter fat cow that gave over 60 lbs. of milk per day. Send for prices and description.

Geo. Smith & Son - Burnett, Wisconsin

Bates Milking Short-horns

2 YEARLING bulls ready for service from heavy-milking dams and backed by generations of **heavy-milking—high-testing cows.** They combine **Clay Buttercup** and **Wildeyes** breeding, the two best Bates families. Prices reasonable.

Geo. Wenham & Sons, Ft. Atkinson, Wis.

Bates SHORT-HORNS

OFFERING choice bulls old enough for service sired by 17th Duke of Wapsie. Herd established 40 years. Correspondence invited.

B. W. Little Janesville, Wis.

SHORT-HORNS

SCOTCH and Scotch-topped. Herd headed by Collynie Sultan by Roan Sultan, out of Marchioness dam. If interested write

E. E. JONES ROCKLAND, WISCONSIN
President, Wisconsin Short-horn Association

HEREFORD CATTLE.

HEREFORDS BULLS FOR SALE

OF serviceable age. Pasture raise and not pampered. Well bred individuals. A few good calves. Come and see them before you buy.

J. J. F. WINTERS SPARTA, WIS.

RED POLLED CATTLE.

RED POLLS

YOUNG bulls for sale. My herd bull is a son of J. D. Diana 2d Proctor 23929. Write your wants. Address L. C. Underwood, Avoca, Wis.

Red Poll Headquarters

OFFERING two bulls of serviceable age for sale. Also a limited number of heifers. Choice individuals. Write J. W. Salter & Sons, Unity, Wis.

RED POLLED HEIFERS

HAVE a choice lot of yearlings, two and three-year-old heifers, bred and open. A few well-bred top bull calves. A great opportunity to buy foundation stock. Correspondence invited.

H. A. Martin Gotham, Wis.

MAPLE LAWN RED POLLS

SEVERAL well-bred, registered bulls, to 9 months old, for sale at reasonable prices.

L. F. Biglow & Son Brooklyn, Wis.

CHESTER WHITE SWINE.

BUY NOW and save express. Offering the pick of 300 fall

CHESTER WHITE PIGS

100 CHOICE spring gilts and a few boars. I have a large herd and believe in small profits and quick sales. I'll appreciate your order and will please you. Write

Harry Crandell Cass City, Mich.

CHESTER WHITE SPRING

BOARS and gilts sired by **Elmo D** and out of daughters of the 800-lb. boar, **Monroe.** Pigs well grown and good heavy bone. Send for prices.

O. P. Coates - Elkhorn, Wisconsin

CHESTER WHITE FALL PIGS

HAVE a fine lot of fall pigs, sired by CHAMPIONS. The best lot we ever raised, they'll please you.

H. A. DERENTHAL WYKOFF, MINN.

CHESTER

SOWS and gilts of fine quality and growth and of best blood lines. Safe in pig, at farmers' price. White Wyandotte cockerels from a big flock of high laying quality.

ART G HOSKINS DODGEVILLE, WIS.

Adolph Nuttleman

BREEDER of Chester Whites. Let me know your wants.

WEST SALEM WISCONSIN

Chester White

GILT SALE—That will farrow in April. For breeding and prices write

Wm. F. Belda De Forest, Wis.

CHESTER WHITE SOWS AND GILTS

BRED for March and April farrow to Pay Streak and King Cole, a son of Chief Keokuk. Also August and September boars sired by Pay Streak, 2d prize junior yearling at the 1916 Wis. State Fair. Wm. F. BUTTS, Evansville, Wis.

IF YOU WANT

CHESTER WHITES

write W. F. Miller, West Salem, Wisconsin.

HOLSTEIN-FRIESIAN CATTLE.

WHY YOU SHOULD BUY A BULL CALF FROM PABST STOCK FARM

Our stock is healthy, grown in open sheds under sanitary conditions. We are breeders, not dealers, and there is no opportunity for introducing disease into our herd.

You want the robust kind, full of vim and vitality. Our stock is that kind.

You want the best blood lines. Send for pedigrees of bull calves. They will prove our assertion that the breeding is second to none.

Our herd is large. Over 140 freshening this season. Gives you opportunity to select from a large number.

Last, but not least, we have the kind with splendid udders that make good at the pail.

Write Your Wants. We Can Please You.

PABST STOCK FARM

OCONOMOWOC DEPT. 30 WISCONSIN

HEAD YOUR HERD WITH A WINNER

GET INDIVIDUALITY WITH BREEDING. Would you like to head your herd with a brother to the junior champion Holstein bull at the Minnesota State Fair, 1916, or the junior champion bull at the Waterloo Dairy Cattle Congress, 1916? DO YOU want some of that blood that won for us the Premier Breedership at the Southwestern Dairy Show and the Waterloo Dairy Cattle Congress, 1916? DO YOU want some of the blood that enabled us to win the Wisconsin Farm Management Contest, 1915? DO YOU want to breed individuality and production into your herd? If so, NOW is your chance. We offer some 20 choice young bulls from 1 to 15 months old bred in these lines. They are sired by our senior herd sire, Bairdland Segis Sir Prize, and out of daughters of Sir Urmagel Burke, a 31-lb. bull, with a 35-lb. sister. These daughters are making from 18 to 25 lbs. as 3 and 4 year olds. WHAT would one of these youngsters be worth to you? Write us your wants or come and see them. Herd tuberculin tested. Each animal guaranteed to be a breeder.

BAIRD BROS. - - - - WAUKESHA, WISCONSIN

A PROVEN HOLSTEIN BULL FOR SALE

IN order to avoid inbreeding we offer for sale our great herd sire, King Artis Pontiac, born Jan. 25, 1911. His daughters have made records up to 20 pounds butter in 7 days at 2 years of age.

His two nearest dams averaged over 29 lbs. butter in 7 days and his sire's dam has a record of 31.7 lbs. butter in 7 days and 21,834 lbs. of milk and 1,076 lbs. butter in one year. Write for pedigree and photo.

Wisconsin Star Stock Farms Ed M. Schultz, Hartford, Wis.

30-POUND YEARLING HOLSTEIN BULL

READY for service for sale; also a yearling bull from a 23-pound dam. Younger bulls from dams with records up to 30 pounds. Prices from $85 up, depending on breeding and age. When you want a herd header write

W. H. S. Rhoda Watertown, Wis.

HEIFERS BULLS

HOLSTEINS

A. R. O. backing—write.

FRIES & TULLOCH GENOA, WIS.

REG. HOLSTEIN BULLS

SIRED by Cedarlawn Champion 3d, whose two nearest dams average almost 24 pounds butter in 7 days with first calf. One bull out of a granddaughter of Sir Johanna De Kol, sire of the 40-pound cow, Johanna De Kol Van Beers. Address

Fred Kohlwey Grafton, Wisconsin

HOLSTEIN

BULL calves, sired by Johanna Bonheur Pieter 113138, whose 14 nearest dams average over 27 pounds butter in 7 days, out of dams with 7 day and yearly records. C. Tochterman Jr., Monroe, Wisconsin.

JERSEY CATTLE.

Fewacres Farm's Jerseys

ARE heavy producers. Irene's Cherry 285828, a senior two year old, just completed a world's record of 12,571.6 pounds milk and 753,629 pounds butter fat. Write us about our young bulls for sale. Pedigrees and further description on request.

FEWACRES FARM - - - WAUWATOSA, WIS.
FRED D. UNDERWOOD, Prop. A. M. SERSTED, Supt. Cattle

OAK GROVE JERSEY FARM

WE are pricing our young bulls very low as we are crowded for calf stable room and have 22 cows to freshen. We are offering two sired by **OAK GROVE NOBLE LAD 122654, a grandson of Eminent and Noble of Oaklands.**

No. 1—Born Feb. 9, 1916. Out of **Volunteer's Sally**, that made 597 lbs. butter. Her daughter made 594 lbs. butter as a 2 year old and holds state record for her age. **Price $100.** Send for extended pedigree.

No. 2—Born Dec. 18, 1915. Out of **Koffee of Oak Grove,** in 305 days made 413.8 lbs. butter. She finishes her record Dec. 21st as a 2 year old. This bull won 1st at the Elkhorn fair. **Price $75.** Send for extended pedigree.

WM. KNIGHT - - EAGLE, WIS.

YEARLING JERSEY BULL

BORN Oct. 15, 1915, ready for service; straight type, good spring of rib; sire of Golden Fern breeding, dam a granddaughter of Eminent; she and her sisters are heavy producers, eleven of them in my herd averaged close to 350 lbs. of fat last year. Send for pedigree, price right.

Ora P. Taylor Elkhorn, Wis.

REGISTERED JERSEY

COWS AND HEIFERS

WITH **register of merit records** or breeding. Both imported and American bred. **2 yearling bulls ready for service** from dams having records over 500 pounds butter in a year. Send for pedigrees. **Prices reasonable.**

Ed. Bruins - - Fairwater, Wisconsin

ELMDALE FARM . . . JERSEYS

REGISTERED bulls ranging in age from 9 to 15 months, sired by Inez Rosarie's Oxford, from heavy producing cows of choice type and breeding. Send for pedigrees, description and price.

H. Holt & Son Oconomowoc, Wis.

JERSEYS

100 FEMALE in my herd, imported and American bred. Young bulls for sale from Advanced Registry dams. I can please you. Write

FRED STUBLEY BLACK EARTH, WIS

ABERDEEN ANGUS CATTLE.

ANGUS

CHOICE bulls of the fashionable families 10 to 15 months old. Thick, sappy, rugged fellows that are guaranteed in every way. Your business solicited. R. A. Austin & Son, Lancaster, Wis.

Buena Vista Aberdeen Angus

COWS, HEIFERS and CALVES all sold out. One bull of serviceable age and two bull calves for spring delivery, will go at $100 per head.

E. F. Ganz & Son Alma, Wisconsin

ANGUS BULLS FOR SALE

IF you are going to need a **good** herd bull get our prices before you buy. We have the goods. Hauk Bros., Cassville, Wisconsin

GALLOWAY CATTLE.

30 GALLOWAY bulls for sale, 14 to 18 months of age, sired by Standard Favorite and Stanrey's Othello. Also cows and heifers and Oxford lams for sale. C. S. Hechtner, Chariton, Iowa.

HOLSTEIN-FRIESIAN CATTLE.

REG. HOLSTEINS

Bulls for sale of various ages.
R. F. Roberts - Randolph, Wisconsin

HOLSTEIN BULL

BORN February 21, 1916. ¾ white. Good individual, sired by a son of Pontiac Korndyke and out of a daughter of De Colantha Johanna, champion. Price $100. Address
Peter Larson Randolph, Wis.

BARSTOW & SON

WANTS to buy two high-record white Holstein heifers to breed to a son of Pontiac Korndyke.
Barstow & Son Randolph, Wis.

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

John Bradley

Randolph Wisconsin

A FEW yearling bulls and younger from A. R. O. dams with creditable records. Send for pedigree and price.

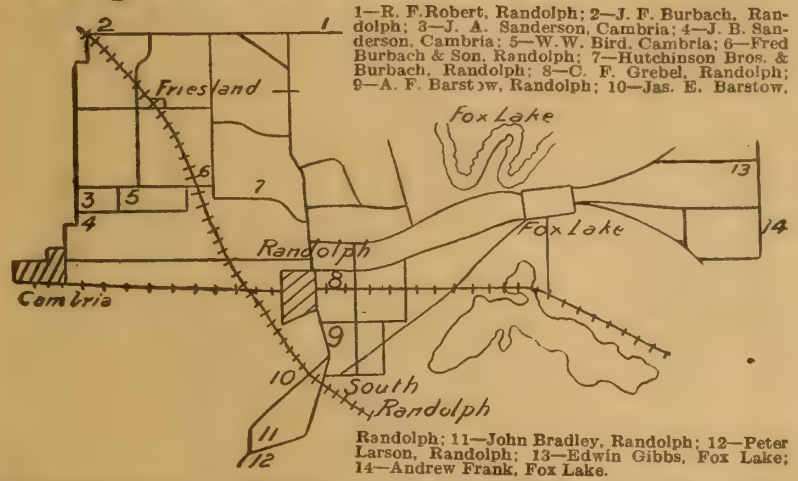
Registered Holstein Bulls

FROM A. R. O. dams with records up to 24 pounds butter in seven days. **Four registered Holstein cows,** good producers, choicely bred and of good type. Send for pedigrees and price.
Fred W. Burbach & Son - Randolph, Wis.

WE CAN SPARE A FEW HEIFERS

OF CHOICE De Kol Wit breeding. They are safe in calf to our great herd sire, **King Pietertje** former world's record cow, **Pietertje Maid Ormsby.** heifers. They are right in every way. **from A. R. O. dams** with good records. They are **Hengerveld Ormsby,** full brother to the Send for pedigrees or come and see these **Hutchinson Brothers & Burbach, Randolph, Wis.**

Portage Prairie Holstein Breeders' Ass'n



1—R. F. Robert, Randolph; 2—J. F. Burbach, Randolph; 3—J. A. Sanderson, Cambria; 4—J. B. Sanderson, Cambria; 5—W. W. Bird, Cambria; 6—Fred Burbach & Son, Randolph; 7—Hutchinson Bros. & Burbach, Randolph; 8—C. F. Grebel, Randolph; 9—A. F. Barstow, Randolph; 10—Jas. E. Barstow, Randolph; 11—John Bradley, Randolph; 12—Peter Larson, Randolph; 13—Edwin Gibbs, Fox Lake; 14—Andrew Frank, Fox Lake.

Registered Holstein HEIFERS

AND cows for sale. Sired by or bred to King Pabst Pontiac Hengerveld 129297. Also a few bulls for sale from heavy producing dams.
J. F. Burbach Cambria, Wisconsin

Bulls Bulls

IF YOU want a sire write or come and see them. They are right and the price is right. Sired by **Captain Aaggie Homestead De Kol 99485,** a son of Aaggie Bell Pietertje 67562. Bulls up to fourteen months of age.
James E. Barstow - Randolph, Wisconsin

REG. H

Cattle of c
J. A. Sanderson - C

SIR PONTIAC CHIEF 3D

HEADS our herd, a son of a 35-pound sire. Will price a few females bred to this bull.
J. B. Sanderson - Cambria, Wisconsin

REGISTERED HOLSTEIN COWS

FOR SALE, choicely bred, of high individual merit and good producers. Write or call and see them.
Chas. F. Grebel - Randolph, Wisconsin

FOR HIGH-GRADE OR REGISTERED HOLSTEINS

Yearling Holstein Bulls

READY for service and younger, sired by the richly bred bull **Wisconsin Star Champion 110275,** whose dam made 28.70 pounds butter as a five year old. These bulls are from good producing cows and are well developed and well marked. Prices right.
Andrew Frank - Fox Lake, Wisconsin

Registered Holsteins

BULLS from A. R. O. dams, of the right type to improve your herd. Prices reasonable.
W. W. Bird - - Cambria, Wisconsin

High Grade Holstein

HEIFER calves, 15-16 pure, from high producing dams, $18 crated. Alsotwo bulls 11 and 9 mos. old from A. R. O. dams. Good individuals, nicely marked, 7-8 white. As we are short of room will price these right. Also bull calves. Send for pedigree and price. Mountain Ash Stock Farm, J. B. Cain, Glenbuelah, Wis.

FOUR REG. HOLSTEIN BULLS FOR SALE

TWO of them old enough for service. Sired by the 29-lb. bull, Fairmont Pietje Ormsby, whose dam is a sister to the 41-lb. cow, Sadie Vale Concordia 4th. Fine individuals and price reasonable. **L. Lindauer, Kaukauna, Wis.**

AT A REASONABLE PRICE

A SON of our noted herd sire, Cornucopia Pontiac Johanna 48355, that is by King of the Pontiacs (192 A. R. O. daughters) The bull for sale was born March 10, 1916. He is very well grown and of show ring conformation. His dam is an A. R. O. daughter of the 33-pound bull, Sir Pietertje Lyons Hengerveld. Send for extended pedigree—picture. Price very reasonable.
N. Dickinson & Son Lake Geneva, Wis.

REGISTERED HOLSTEIN BULL

AND heifer calves sired by Pabst Canary Pontiac Champion 142885, and out of well-bred heavy-producing cows. Call and see our herd or write
WM. FENNER, SHEBOYGAN FALLS, WIS.

HOLSTEINS FOR SALE

MEQUON FARM offers Holstein bull calves sired by a 23-lb. grandson of King of the Pontiacs, out of high-testing cows, at very reasonable prices. One bull ready for service. Address
C. F. DINEEN, CEDARBURG, WISCONSIN

LA BELLE VIEW HOLSTEIN bulls keep moving. I told you so and there is a reason, we never have a yearling. People know good breeding and appreciate low prices. Only two youngsters left and they are dandies, from splendid A. R.O. dams and by a grandson of the famous bull, Sir Ormsby Hengerveld De Kol, that had world record dghts. and granddghts. to his credit. Satisfaction guar. E.E. Rosenkrans, Oconomowoc, Wis.

Maplewood HOLSTEINS

OFFERING 6 bulls of serviceable age, sired by **King Fobes Oak DeKol,** ¼ brother to Minnesota's first 36-lb. cow, and out of A. R. O. dams.
Write **R. C. Walker, Kilbourn, Wisconsin.**

HOLSTEIN CALVES

WE offer for sale choice, beautifully marked, 15-16 pure-bred heifer or male calves 1 to 2 weeks old, out of heavy-milking dams, $15 each, crated f. o. b. cars. First check takes them. Write
W. C. Kenyon & Sons Elgin, Illinois

REGISTERED HOLSTEIN HEIFERS

FROM 5 months to 15 months of age sired by the 31.17 lb bull, Sir Wayne Johanna De Kol. Two bull calves also for sale. Address
Lawrence Robers Lyons, Wis.

REGISTERED HOLSTEIN BULLS

SIRED by King Piebe Jessie De Kol and out of good, heavy-producing dams. Bulls well-marked, over half white. R. W. Hume, Endeavor, Wis.

REG. Holstein Bull calves for sale. Sired by relatives of world's record cow, Dutchess Skylark Ormsby. I can save you 50% on the price of your next bull; write for chart. Mark W. Rich, Buffalo Lake, Minn.

A 31.02 POUND BULL FOR SALE

RACINE JOHANNA PIEBE MERCEDES 188460. Born December 8, 1915. Well marked, of excellent conformation and well grown. His dam, **Ella Mercedes of Elm Court,** made **31.02 pounds butter** in seven days; **130.47** in thirty days and **829.78** in a year. She is a big cow weighing over 1,600 pounds; her dam weighs over 1,700. His sire, **Racine Sir Johanna Piebe,** is a show bull. His dam is a show cow and weighs close to 1,600 pounds. In seven days she made 24.49 and 808.82 pounds butter in a year. Send for his complete pedigree and picture. **Large size, good, straight type** and **heavy production ability** have been bred into this bull for generations. Come to our farm and see his dam, grandam and sisters. They are the type you will want in your calves. Am also offering a straight, well-grown heifer, born May 15, 1916, out of Lady Johanna of Elm Court, a half sister to Colantha Piebe of Elm Court; calf is sired by Count of the Pontiacs.
Reuben Klofanda R. 1, Racine, Wis.

HOLSTEIN BULLS Ready For Service

BACKED by large 7-day and yearly records. King Segis Concordia Rigtje, born Dec. 13, 1915. Sire, King Segis Concordia Hengerveld, 3 junior 2-year-old daughters above 15 lbs., one 18.391 lbs. He is 32-lb. son of King Segis De Kol Korndyke, sire of the first 40-lb. heifer. 1st dam, junior 2-year-old, 17.29 lbs. 7 days, 16,313.0 lbs. milk, 704.087 lbs. butter 1 year. 2d dam, junior 3-year-old, 14,083.0 lbs. milk, 550.6 lbs. butter. 3d dam, 23,485.0 lbs. milk, 918.76 lbs. butter. Weighed 115 lbs. at birth—large, growthy, handsome individual. Priced right. Send for extended pedigree and further information. Address
PINEHURST DAIRY, SHEBOYGAN FALLS, WISCONSIN

WELL GROWN, WELL MARKED HOLSTEIN BULL

BORN December 1, 1915. Ready for immediate service. Sire, Crown Pontiac Korndyke, a richly bred son of Pontiac Butter Boy, that has 59 A. R. O. daughters, 4 above 30 pounds, and that is a half brother of Hengerveld De Kol and out of the same dam as Pontiac Clothilde De Kol. Dam, Stellaris Burke Pontiac 3d 255567, a big, roomy heifer with a fine large udder and good teats. She will be tested when she freshens again. Her dam is a 24.44-pound granddaughter of Hengerveld De Kol. Good type and high production have been bred into him in every line of his pedigree. Buy him now. He will soon be worth twice what we ask now. Send for pedigree. Address
NORTON FARMS RACINE, WISCONSIN

A Richly Bred Aaltje Salo Bull

BORN **February 28, 1915. Ready** for immediate service. His dam, Aaltje Salo Netherland Mechthilde 78488, as a five year old made 23.35 pounds butter in seven days, 38 days after calving. She comes from a long line of heavy-producing ancestors. She not only has inherited this heavy-producing ability, but also transmits it. She has three A. R. O. daughters, one with a record of 28.63 pounds butter as a four year old. Her grandam, Aaltje Salo 5th's Netherland, has eight A. R. O. daughters holding the world's record for five years. The sire of the bull for sale is the 27-pound bull, DAISY JOHANNA 5TH, 1st prize two year old at the Wisconsin State Fair. Address
ARTHUR RUST WEST ALLIS, WISCONSIN

Two Good Holstein Bulls Ready For Service

NO. 1—Born May 13, 1915, ¾ white, a good individual. His dam is a double bred Duchess Ormsby Sire, a son of King Hengerveld Pondyke, that has two 30-pound daughters. PRICE $90.00. **No. 2**—Born October 4, 1915. Over ½ white. His 14 nearest dams average over 27 lbs. butter in 7 days. Combines the blood of Johanna Bonheur Lyons and King Segis Pontiac. Send for extended pedigree. PRICE $200.00. We can spare a carload or less of high-grade Holstein heifers. Some sired by a 27-pound bull. Address
EDGEWOOD FARMS, PEWAUKEE, WISCONSIN

TWO HOLSTEIN BULLS EIGHT MONTHS OLD

SIRED by Johanna Chief De Kol, that has 62½% of the same breeding as Johanna De Kol Van Beers, 40.07 lbs., with 7 tested daughters. First bull out of a 20.51-lb. dam, she sired by a grandson of De Kol Burke. Second bull out of a 19.50-lb. four year old, she a granddaughter of Sir Johanna Fayne, with a 31-lb. daughter. Also a few heifer calves nearly one year old by the above sire. Prices reasonable. Address
Edward O. Mueller, Appleton, Wisconsin

HOLSTEINS AND GUERNSEYS

REGISTERED and high grade cows and heifers—service bulls. Carload or less. High grade calves, $18.00 each crated. Write us. We have what you want. Address
EDGEWATER STOCK FARM FT. ATKINSON, WISCONSIN

DODGE AND JEFFERSON COUNTIES

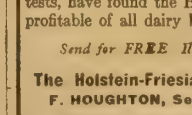
THE two greatest Holstein counties in Wisconsin. Holsteins from these two counties have made Wisconsin famous. You can buy the same kind of blood now. Our breeders can now supply you with both males and females of all ages. Write Francis Darcey, Watertown, Wisconsin, Secretary, Inter-County Holstein Breeders' Association.

TWO HOLSTEIN BULLS

OF serviceable age, both from A. R. O. dams of choice breeding. One sired by the 27-lb bull, Daisy Johanna 5th, and one by Julip Segis Korndyke. Price $85 and $125.50. Address
L. V. GARVENS BROOKFIELD, WIS.

REGISTERED HOLSTEINS

A NICE lot of young bulls closely approaching serviceable age. Can spare a few females. Sires, University Johanna Excell and King DeKol Lyons. (Registered Poland China hogs).
Marinette County Asylum - Peshtigo, Wis.



Purebred Registered

HOLSTEIN CATTLE

The Virginia State College and Polytechnic Institute has developed, from its Holstein herd, seven of the highest record cows in the state, including Dione De Kol, holder of the state record for 7- and 30-days' milk and fat production. They also developed V. P. I. Viney Veeman, holder of the state record for senior two-year-olds. The leading state colleges and public institutions, by all tests, have found the Holsteins to be the best and most profitable of all dairy breeds.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America
F. HOUGHTON, Sec'y, Box 143, Brattleboro, Vt.

OLATHE-HOLSTEINS

STAND FOR BEAUTY-PRODUCTION

SHORTAGE of milk compels sacrifice of young calves. Owing to increase in number of our milk customers, we are compelled to sell some unusually fine bull calves 1 to 2 months old. A. R. O. breeding on both sides. Price for quick sale, $35 to $50. Also a few heifer calves.
SILVER SPRING FARM CO. - EAU CLAIRE, WIS.

A RICHLY BRED ORMSBY

YEARLING Holstein bull, born January 28, 1916. His dam is a half sister to the sire of Ormsby Jane Segis Aaggie, the world champion 90-day cow. His sire is a son of the 32-lb. bull,

BEAUTY PIETERTJE PRINCE

and from a sister to **Pietertje Maid Ormsby,** the former world's record cow. Send for pedigree of this fine bull. Price right. Address
Dopp Brothers Ixonia, Wisconsin

Three Nearest Dams

of this young bull average

26.45 Lbs. of Butter in 7 Days

being 23.71 (3-yr.-old); 27.67; 27.96. He is sired by **Contest Colantha Crown DeKol** and out of a daughter of **Aaggie Cornucopia Johanna Lad Jr. 6th.** Send for an extended pedigree.
JOHN STEELE OCONOMOWOC, WIS.

Registered Holstein Heifers

HEIFER calves and young cows for sale. Ten daughters of the 24.12-pound bull, Sir Korndyke Zoldusky De Kol, that has 10 A.R.O. daughters. He is a grandson of Hengerveld De Kol, that has 116 A. R. O. daughters. These heifers are bred to the 40-pound bull, Johanna King Segis, a son of the 40-pound cow, Johanna De Kol Van Beers. Yearling bulls and younger from A. R. O. dams with records from 14 to 30 pounds. High-grade springers and young cows. Write us your wants.
H. F. McNutt Oxford, Wisconsin

TWO SONS OF THE 27.56-POUND BULL

Sir Johanna De Colantha De Kol

THESE bulls are good individuals, well marked, more white than black, well grown. They are both from A. R. O. daughters of the bull, Oakhurst Milk and Butter King. Price reasonable. Send for extended pedigrees. Address
B. F. Winckler & Sons Medina, Wis.

HIGH grade Holstein heifer calves, well marked, sired by registered bulls and out of heavy producing cows, $18.00 crated. Registered bull calves for sale. Paul McFarland, Watertown, Wis.

17 REGISTERED Holstein cows and heifers due to freshen soon. Best of breeding at farmers' prices. D. E. Buckley, Hartford, Wis.

Who Wants a Pony?

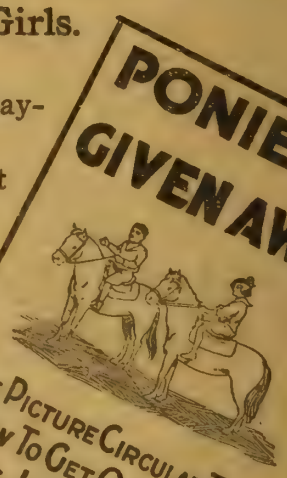
I am the Pony King of America. **I give Ponies away to Boys and Girls.**
I have given away 445 Shetland Ponies to 445 Boys and Girls—all over the United States.

Now I am going to Give Away Five more Ponies—beautiful, silky, long-haired playful Shetland Ponies—five of the finest Shetland Ponies I could find. I picked them out myself.

I am going to Give them Away to Boys and Girls and I want every family that takes this paper to stand an equal chance.

If you are a Boy or Girl send me your name right away. If you are the Father or Mother of a Boy or Girl, send in your Child's name. I will enter the name in my big Free-for-All Pony Club that starts right away.

No matter where you live, no matter how young, every child will stand the same good chance to get a Pony, with Buggy, Harness, Saddle, Bridle and Blanket. Be sure to send in your name right now.



"Crescent," a beautiful little pony, was given to Cecelia Garot of Kewaunee Co., Wisconsin. Cecelia sent in her name, just like 444 other children who have received free ponies from the Pony King. Cecelia writes: "My little Shetland pony "Crescent" got here Wednesday and I was so happy I could hardly wait to see him. So many people came to see him and they thought he was the sweetest little pony they ever saw. Some people said I would not get a pony, but I knew The Pony King would do all he said. I am sending you my picture showing myself and my friend and my sister shaking hands with "Crescent." He just loves soda pop and eats sugar right out of my hand."

Harold A. Pierce of Waushara Co., Wisc., sent in his name and The Pony King sent him a nice pony named "Sportsman." Harold writes that "Sportsman" can now do 21 tricks, including telling how old he is rolling over, standing on his hind feet and shaking hands. The Pony King also sent ponies to Victor Harris of Ashland Co., Sheldon Adams and Alfred Hokenstad of Dane Co., Pearl Kerr and Lawrence Fox of Grant Co., Keith Walker of Juneau Co., and Roy Podewells of Rock Co.

Pony Pictures Free

I want to send a **colored Pony Picture Circular free** to every Boy and Girl that sends in his or her name. It gives the names and shows the pictures of the five Ponies I am giving away, out on the farm where they live, with children riding them. It shows one of the ponies hitched to the beautiful Buggy I am going to give away, with six children taking a ride. It shows a picture of The Pony King out on the Pony Farm, talking to 15 children who live near the farm and who come over to ride the Ponies. It shows a picture of Harold Kutzler and "Rob Roy", the Pony I gave him. It shows a picture of Frank McKissak and "Wuzzy", the Pony I gave him. It also tells all about the five beautiful Shetland Ponies I am now going to give away and how to win one. Every boy and girl should get this Pony Picture Circular. I will send it free to every child who sends in his or her name.

Children Be sure to take this chance to get a Pony. Don't wait. Write your name and address in the corner below, cut it out and send it to me. I will then send you the Colored Pony Picture Circular free and you will have an equal chance to get one of the Real Live Ponies I am going to give away soon. You stand just the same chance as any other child and it doesn't cost you a cent. Get your pencil and write your name now.

Parents Please show this free offer to your child and send in the coupon. You will be interested in the Pony Circular I send and your child will enjoy it. He or she stands the same good chance as any other child to win one of the five Shetland ponies I am giving away, no matter where you live. Remember, I am giving Five Ponies at one time—not just one—so you see there are five chances to win one. Send in your child's name.

THE PONY KING, 307 Webb Bldg., St. Paul, Minn.

WRITE YOUR NAME HERE AND SEND IT TO ME

THE PONY KING, 307 WEBB BLDG., St. Paul, Minn.

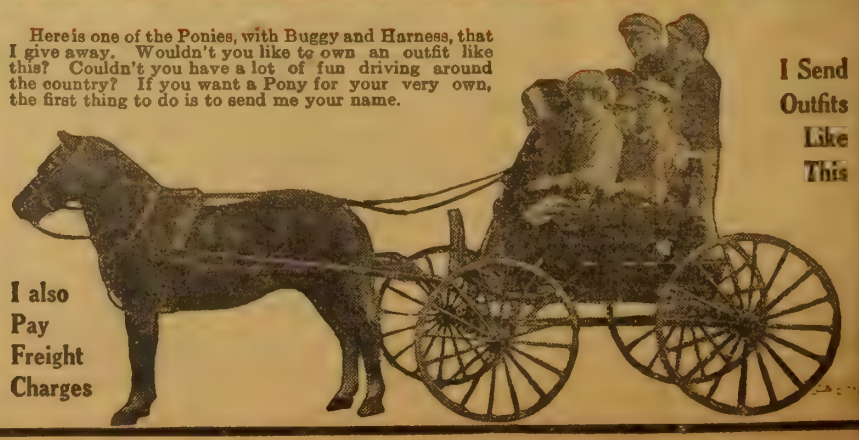
Please send me the **Free Pony Pictures** and enter my name in your **Pony Club** so I will have the same chance. I want one of the ponies you are giving away.

My name is_____

P. O._____ Age_____

State_____ R.F.D._____

Here is one of the Ponies, with Buggy and Harness, that I give away. Wouldn't you like to own an outfit like this? Couldn't you have a lot of fun driving around the country? If you want a Pony for your very own, the first thing to do is to send me your name.



I Send Outfits Like This

I also Pay Freight Charges

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